

Comune di  
Brindisi



REGIONE PUGLIA



Comune di  
Mesagne (BR)



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## PARCO EOLICO "MONDONUOVO"

Documento:

**PROGETTO DEFINITIVO**

N° Documento:

**PEMN\_P15.01**

ID PROGETTO:

**PEMN**

DISCIPLINA:

**P**

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## Relazione di calcolo - parte A

FOGLIO:

**A4**

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Nome file:

**PEMN-P15.01\_Relazione di calcolo - parte A**

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**Relazione di calcolo strutturale impostata e redatta secondo le modalità previste nel D.M. 17 Gennaio 2018 cap. 10 “Redazione dei progetti strutturali esecutivi e delle relazioni di calcolo”.**

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D.M. 17/01/18 cap. 10.2 Affidabilità dei codici utilizzati

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## INTESTAZIONE E CONTENUTI DELLA RELAZIONE

### Progetto

# RELAZIONE DI CALCOLO PRELIMINARE DELLE FONDAZIONI DEGLI AEROGENERATORI M01 – M05 – M07 – M09 DA INSTALLARSI NEL COMUNE DI MESAGNE (BR) E INERENTI IL PARCO EOLICO "MONDONUOVO"

Contenuti della relazione:

RELAZIONE DI CALCOLO STRUTTURALE

- Origine e Caratteristiche dei Codici di Calcolo
- Affidabilità dei codici utilizzati
- Validazione dei codici
- Tipo di analisi svolta
- Modalità di presentazione dei risultati
- Informazioni generali sull'elaborazione
- Giudizio motivato di accettabilità dei risultati

STAMPA DEI DATI DI INGRESSO

- Normative prese a riferimento
- Criteri adottati per le misure di sicurezza
- Criteri seguiti nella schematizzazione della struttura, dei vincoli e delle sconessioni
- Interazione tra terreno e struttura
- Legami costitutivi adottati per la modellazione dei materiali e dei terreni
- Schematizzazione delle azioni, condizioni e combinazioni di carico
- Metodologie numeriche utilizzate per l'analisi strutturale
- Metodologie numeriche utilizzate per la progettazione e la verifica degli elementi strutturali

STAMPA DEI RISULTATI

Il Progettista:

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## RELAZIONE DI CALCOLO STRUTTURALE

### Premessa

La presente relazione di calcolo strutturale preliminare, in conformità al §10.1 del DM 17/01/18, è comprensiva di una descrizione generale dell'opera e dei criteri generali di analisi e verifica. Segue inoltre le indicazioni fornite al §10.2 del DM stesso per quanto concerne analisi e verifiche svolte con l'ausilio di codici di calcolo. La seguente relazione descrive le analisi compiute per il dimensionamento preliminare delle strutture di fondazione di un aerogeneratore tipo Vestas V162 – 6.0 MW da installare in numero pari a 11 nel Comune di Mesagne (BR). Il proponente è la società E.ON CLIMATE & RENEWABLES ITALIA S.R.L. con sede a Milano (MI) via Amerigo Vespucci, 2. Gli aerogeneratori, costituenti il parco eolico denominato “Mondonuovo”, saranno installati ad un'altitudine media di 70 m s.l.m. e su un'area pianeggiante compresa tra la contrada Fosica (SS605), contrada Piantata e la contrada Petrosina.

Nella presente parte sono riportati i principali elementi di inquadramento del progetto riguardante le strutture, in relazione agli strumenti urbanistici, al progetto architettonico, al progetto delle componenti tecnologiche in generale ed alle prestazioni attese dalla struttura.

I tabulati di calcolo sono stati concepiti tenendo conto

- delle valutazioni geologiche e geotecniche inerenti gli elaborati di merito redatti dal geol. Giuseppe Masillo e
- dei carichi applicati in fondazioni dedotti dall'elaborato di riferimento (Foundation load V162-5.6 MW HH125) rilasciato dalla Vestas

che devono ritenersi parte integrante della presente.

A seguito di quanto riportato nella relazione geologica, le fondazioni di seguito calcolate sono di tipo profonde e più precisamente piastre su pali.

**Si precisa che l'elaborazione presente è da ritenersi PRELIMINARE, quindi passibile di variazioni in fase di progettazione esecutiva, soprattutto in relazione a eventuali scelte diverse relativamente agli aerogeneratori da utilizzare ed a una più diretta condivisione dei calcoli e di esigenze realizzative con i fornitori degli stessi. Inoltre dovranno essere fatte valutazioni più puntuali a seguito di indagini geologiche più accurate.**

### Descrizione generale dell'opera

La presente relazione è riferita al calcolo delle opere di fondazioni del tipo di aerogeneratori Vestas V162-6.0 MW che dovranno essere installati nel parco eolico Mondonuovo. In particolare, si è ritenuto opportuno suddividere la relazione di calcolo in parte “A” e parte “B” in relazione alla classificazione del sottosuolo nell'area in funzione dei valori della velocità di propagazione delle onde di taglio VS, identificate nella relazione geologica. La presente parte “A” fa riferimento a 4 aerogeneratori denominati M01, M05, M07 e M09.

La singola piastra di fondazione sarà prevista di forma circolare (in fase esecutiva potrà essere ipotizzata anche di forma circolare tronco-conica ossia con un'altezza perimetrale inferiore a quella più interna) di diametro pari a 23,00 m e spessore pari a 2,50 m. Inoltre per le caratteristiche del terreno sono stati ipotizzati 24 pali di fondazione trivellati per ogni singolo aerogeneratore, di diametro pari a 1.20 e profondità di infissione uguale a 37,00 m. Il calcolo si è avvalso dei carichi in fondazione comunicati dal produttore Vestas con un elaborato preliminare (Foundation load V162-5.6 MW HH125), passibili di variazione in fase esecutiva, che sono i seguenti:

- Fx: 47400.0 [daN];
- Fy: 47400.0 [daN];
- Fz: -763300.0 [daN];
- Mx: 580890000.0 [daN cm];
- My: 580890000.0 [daN cm];
- Mz: -132500000.0 [daN cm]

Descrizione generale dell'opera	
Fabbricato ad uso	
Ubicazione	Comune di MESAGNE (BR) (Regione PUGLIA)
	Località MESAGNE (BR)
	Longitudine 17.856, Latitudine 40.525
Numero di piani	
Numero vani scale	
Numero vani ascensore	
Tipo di fondazione	FONDAZIONE SU PALI

#### Principali caratteristiche della struttura

Struttura regolare in pianta	SI
Struttura regolare in altezza	SI
Classe di duttilità	B
Travi: ricalate o in spessore	
Pilastr	
Pilastr in falso	
Tipo di fondazione	FONDAZIONE SU PALI
Condizioni per cui è necessario considerare la componente verticale del sisma	

#### Parametri della struttura

Classe d'uso	Vita Vn [anni]	Coeff. Uso	Periodo Vr [anni]
IV	50.0	1.0	50.0

#### Fattore di struttura/comportamento

1

### Quadro normativo di riferimento adottato

Le norme ed i documenti assunti quale riferimento per la progettazione strutturale vengono indicati di seguito.

Nel capitolo "normativa di riferimento" è comunque presente l'elenco completo delle normative disponibili.

#### Progetto-verifica degli elementi

Progetto cemento armato	D.M. 17-01-2018
Progetto acciaio	D.M. 17-01-2018
Progetto legno	D.M. 17-01-2018
Progetto muratura	D.M. 17-01-2018
<b>Azione sismica</b>	
Norma applicata per l'azione sismica	D.M. 17-01-2018

### Azioni di progetto sulla costruzione

Nei capitoli "modellazione delle azioni" e "schematizzazione dei casi di carico" sono indicate le azioni sulla costruzioni.

**Parco Eolico “Mondonuovo” – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

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Nel prosieguo si indicano tipo di analisi strutturale condotta (statico, dinamico, lineare o non lineare) e il metodo adottato per la risoluzione del problema strutturale nonché le metodologie seguite per la verifica o per il progetto-verifica delle sezioni. Si riportano le combinazioni di carico adottate e, nel caso di calcoli non lineari, i percorsi di carico seguiti; le configurazioni studiate per la struttura in esame *sono risultate effettivamente esaustive per la progettazione-verifica.*

La verifica della sicurezza degli elementi strutturali avviene con i metodi della scienza delle costruzioni. L'analisi strutturale è condotta con il metodo degli spostamenti per la valutazione dello stato tensodeformativo indotto da carichi statici. L'analisi strutturale è condotta con il metodo dell'analisi modale e dello spettro di risposta in termini di accelerazione per la valutazione dello stato tensodeformativo indotto da carichi dinamici (tra cui quelli di tipo sismico).

L'analisi strutturale viene effettuata con il metodo degli elementi finiti. Il metodo sopraindicato si basa sulla schematizzazione della struttura in elementi connessi solo in corrispondenza di un numero prefissato di punti denominati nodi. I nodi sono definiti dalle tre coordinate cartesiane in un sistema di riferimento globale. Le incognite del problema (nell'ambito del metodo degli spostamenti) sono le componenti di spostamento dei nodi riferite al sistema di riferimento globale (traslazioni secondo X, Y, Z, rotazioni attorno X, Y, Z). La soluzione del problema si ottiene con un sistema di equazioni algebriche lineari i cui termini noti sono costituiti dai carichi agenti sulla struttura opportunamente concentrati ai nodi:

$$\mathbf{K} * \mathbf{u} = \mathbf{F} \quad \text{dove} \quad \mathbf{K} = \text{matrice di rigidezza}$$

$\mathbf{u}$  = vettore spostamenti nodali

$\mathbf{F}$  = vettore forze nodali

Dagli spostamenti ottenuti con la risoluzione del sistema vengono quindi dedotte le sollecitazioni e/o le tensioni di ogni elemento, riferite generalmente ad una terna locale all'elemento stesso.

Il sistema di riferimento utilizzato è costituito da una terna cartesiana destrorsa XYZ. Si assume l'asse Z verticale ed orientato verso l'alto.

Gli elementi utilizzati per la modellazione dello schema statico della struttura sono i seguenti:

Elemento tipo <b>TRUSS</b>	(biella-D2)
Elemento tipo <b>BEAM</b>	(trave-D2)
Elemento tipo <b>MEMBRANE</b>	(membrana-D3)
Elemento tipo <b>PLATE</b>	(piastra-guscio-D3)
Elemento tipo <b>BOUNDARY</b>	(molla)
Elemento tipo <b>STIFFNESS</b>	(matrice di rigidezza)
Elemento tipo <b>BRICK</b>	(elemento solido)
Elemento tipo <b>SOLAIO</b>	(macro elemento composto da più membrane)

## Modello numerico

In questa parte viene descritto il modello numerico utilizzato (o i modelli numerici utilizzati) per l'analisi della struttura. La presentazione delle informazioni deve essere, coerentemente con le prescrizioni del paragrafo 10.2 e relativi sottoparagrafi delle NTC-18, tale da garantirne la leggibilità, la corretta interpretazione e la riproducibilità

Tipo di analisi strutturale	
Carichi verticali	SI



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

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Statica non lineare	NO
Sismica statica lineare	SI
Sismica dinamica lineare	NO
Sismica statica non lineare (prop. masse)	NO
Sismica statica non lineare (prop. modo)	NO
Sismica statica non lineare (triangolare)	NO
Non linearità geometriche (fattore P delta)	NO

Di seguito si indicano l'origine e le caratteristiche dei codici di calcolo utilizzati riportando titolo, produttore e distributore, versione, estremi della licenza d'uso:

Informazioni sul codice di calcolo	
Titolo:	PRO_SAP PROfessional Structural Analysis Program
Versione:	19.0.0
Produttore-Distributore:	2S.I. Software e Servizi per l'Ingegneria s.r.l., Ferrara
Dati utente finale:	Ing. Claudio Coscarella
Codice Utente:	Licenza gratuita
Codice Licenza:	START-UP (build 2019-01-184)

Un attento esame preliminare della documentazione a corredo del software **ha consentito di valutarne l'affidabilità e soprattutto l'idoneità al caso specifico**. La documentazione, fornita dal produttore e distributore del software, contiene una esauriente descrizione delle basi teoriche e degli algoritmi impiegati, l'individuazione dei campi d'impiego, nonché casi prova interamente risolti e commentati, corredati dei file di input necessari a riprodurre l'elaborazione:

Affidabilità dei codici utilizzati
2S.I. ha verificato l'affidabilità e la robustezza del codice di calcolo attraverso un numero significativo di casi prova in cui i risultati dell'analisi numerica sono stati confrontati con soluzioni teoriche.
E' possibile reperire la documentazione contenente alcuni dei più significativi casi trattati al seguente link: <a href="https://www.2si.it/it/prodotti/affidabilita/">https://www.2si.it/it/prodotti/affidabilita/</a>

Modellazione della geometria e proprietà meccaniche:	
nodi	338
elementi D2 (per aste, travi, pilastri...)	1
elementi D3 (per pareti, platee, gusci...)	320
elementi solaio	0
elementi solidi	0

*Parco Eolico "Mondonuovo" – Progetto Definitivo*  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

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<b>Dimensione del modello strutturale [cm]:</b>	
X min =	-1150.00
Xmax =	1150.00
Ymin =	-1150.00
Ymax =	1150.00
Zmin =	-100.00
Zmax =	-80.00
<b>Strutture verticali:</b>	
Elementi di tipo asta	NO
Pilastrì	SI
Pareti	NO
Setti (a comportamento membranale)	NO
<b>Strutture non verticali:</b>	
Elementi di tipo asta	NO
Travi	NO
Gusci	NO
Membrane	NO
<b>Orizzontamenti:</b>	
Solai con la proprietà piano rigido	NO
Solai senza la proprietà piano rigido	NO
<b>Tipo di vincoli:</b>	
Nodi vincolati rigidamente	NO
Nodi vincolati elasticamente	NO
Nodi con isolatori sismici	NO
Fondazioni puntuali (plinti/plinti su palo)	SI
Fondazioni di tipo trave	NO
Fondazioni di tipo platea	SI
Fondazioni con elementi solidi	NO

## Modellazione delle azioni

Si veda il capitolo **"Schematizzazione dei casi di carico"** per le informazioni necessarie alla comprensione ed alla ricostruzione delle azioni applicate al modello numerico, coerentemente con quanto indicato nella parte *"2.6. Azioni di progetto sulla costruzione"*.

## Combinazioni e/o percorsi di carico

Si veda il capitolo **"Definizione delle combinazioni"** in cui sono indicate le combinazioni di carico adottate e, nel caso di calcoli non lineari, i percorsi di carico seguiti.

<b>Combinazioni dei casi di carico</b>	
APPROCCIO PROGETTUALE	Approccio 2
Tensioni ammissibili	NO
SLU	SI
SLV (SLU con sisma)	SI
SLC	NO
SLD	SI
SLO	NO
SLU GEO A2 (per approccio 1)	NO
SLU EQU	SI
Combinazione caratteristica (rara)	SI
Combinazione frequente	NO
Combinazione quasi permanente (SLE)	NO
SLA (accidentale quale incendio)	NO

### Principali risultati

I risultati devono costituire una sintesi completa ed efficace, presentata in modo da riassumere il comportamento della struttura, per ogni tipo di analisi svolta.

Nella presente relazione di calcolo sono riportati i seguenti risultati che il progettista ritiene di interesse per la descrizione e la compressione del/i modello/i e del comportamento della struttura:

per l'analisi modale:

- periodi dei modi di vibrare della struttura
- masse eccitate dai singoli modi
- massa eccitata totale

deformate e sollecitazioni:

- spostamenti e rotazioni dei singoli nodi della struttura
- reazioni vincolari (nel caso siano presenti nodi vincolati rigidamente)
- pressioni sul terreno (nel caso siano presenti elementi di fondazione)
- sollecitazioni sugli elementi d2 nelle combinazioni di calcolo più significative

- tensioni sugli elementi d3 nelle combinazioni di calcolo più significative
- sollecitazioni sui macroelementi da elementi d3 nelle combinazioni di calcolo più significative

La presente relazione, oltre ad illustrare in modo esaustivo i dati in ingresso ed i risultati delle analisi in forma tabellare, riporta una serie di immagini:  
per i dati in ingresso:

- modello solido della struttura
- numerazione di nodi e ed elementi
- configurazioni di carico statiche
- configurazioni di carico sismiche con baricentri delle masse e eccentricità

per le combinazioni più significative (statisticamente più gravose per la struttura):

- configurazioni deformate
- diagrammi e involucri delle azioni interne
- mappe delle tensioni
- reazioni vincolari
- mappe delle pressioni sul terreno

per il progetto-verifica degli elementi:

- diagrammi di armatura
- percentuali di sfruttamento
- mappe delle verifiche più significative per i vari stati limite

#### **Informazioni generali sull'elaborazione e giudizio motivato di accettabilità dei risultati.**

Il programma prevede una serie di controlli automatici (check) che consentono l'individuazione di errori di modellazione. Al termine dell'analisi un controllo automatico identifica la presenza di spostamenti o rotazioni anormali. Si può pertanto asserire che l'elaborazione sia corretta e completa. I risultati delle elaborazioni sono stati sottoposti a controlli che ne comprovano l'attendibilità. Tale valutazione ha compreso il confronto con i risultati di semplici calcoli, eseguiti con metodi tradizionali e adottati, anche in fase di primo proporzionamento della struttura. Inoltre, sulla base di considerazioni riguardanti gli stati tensionali e deformativi determinati, si è valutata la validità delle scelte operate in sede di schematizzazione e di modellazione della struttura e delle azioni. Si allega al termine della presente relazione elenco sintetico dei controlli svolti (verifiche di equilibrio tra reazioni vincolari e carichi applicati, comparazioni tra i risultati delle analisi e quelli di valutazioni semplificate, etc.).

## Verifiche agli stati limite ultimi

Nel capitolo relativo alla progettazione degli elementi strutturali agli SLU vengono indicate, con riferimento alla normativa adottata, le modalità ed i criteri seguiti per valutare la sicurezza della struttura nei confronti delle possibili situazioni di crisi ed i risultati delle valutazioni svolte. In via generale, oltre alle verifiche di resistenza e di spostamento, devono essere prese in considerazione verifiche nei confronti dei fenomeni di instabilità, locale e globale, di fatica, di duttilità, di degrado.

## Verifiche agli stati limite di esercizio

Nel capitolo relativo alla progettazione degli elementi strutturali agli SLU vengono indicate, con riferimento alla normativa adottata, le modalità seguite per valutare l'affidabilità della struttura nei confronti delle possibili situazioni di perdita di funzionalità (per eccessive deformazioni, fessurazioni, vibrazioni, etc.) ed i risultati delle valutazioni svolte.

## RELAZIONE SUI MATERIALI

Il capitolo Materiali riporta informazioni esaustive relative all'elenco dei materiali impiegati e loro modalità di posa in opera e ai valori di calcolo.

## NORMATIVA DI RIFERIMENTO

1. D.Min. Infrastrutture Min. Interni e Prot. Civile 17 Gennaio 2018 e allegate "Norme tecniche per le costruzioni".
2. Circolare 21/01/19, n. 7 C.S.LL.PP "Istruzioni per l'applicazione dell'aggiornamento delle Norme Tecniche delle Costruzioni di cui al decreto ministeriale 17 gennaio 2018"
3. D.Min. Infrastrutture e trasporti 14 Settembre 2005 e allegate "Norme tecniche per le costruzioni".
4. D.M. LL.PP. 9 Gennaio 1996 "Norme tecniche per il calcolo, l'esecuzione ed il collaudo delle strutture in cemento armato, normale e precompresso e per le strutture metalliche".
5. D.M. LL.PP. 16 Gennaio 1996 "Norme tecniche relative ai <<Criteri generali per la verifica di sicurezza delle costruzioni e dei carichi e sovraccarichi>>".
6. D.M. LL.PP. 16 Gennaio 1996 "Norme tecniche per le costruzioni in zone sismiche".
7. Circolare 4/07/96, n.156AA.GG./STC. istruzioni per l'applicazione delle "Norme tecniche relative ai <<Criteri generali per la verifica di sicurezza delle costruzioni e dei carichi e sovraccarichi>>" di cui al D.M. 16/01/96.
8. Circolare 10/04/97, n.65AA.GG. istruzioni per l'applicazione delle "Norme tecniche per le costruzioni in zone sismiche" di cui al D.M. 16/01/96.
9. D.M. LL.PP. 20 Novembre 1987 "Norme tecniche per la progettazione, esecuzione e collaudo degli edifici in muratura e per il loro consolidamento".
10. Circolare 4 Gennaio 1989 n. 30787 "Istruzioni in merito alle norme tecniche per la progettazione, esecuzione e collaudo degli edifici in muratura e per il loro consolidamento".
11. D.M. LL.PP. 11 Marzo 1988 "Norme tecniche riguardanti le indagini sui terreni e sulle rocce, la stabilità dei pendii naturali e delle scarpate, i criteri generali e le prescrizioni per la progettazione, l'esecuzione e il collaudo delle opere di sostegno delle terre e delle opere di fondazione".
12. D.M. LL.PP. 3 Dicembre 1987 "Norme tecniche per la progettazione, esecuzione e collaudo delle costruzioni prefabbricate".
13. UNI 9502 - Procedimento analitico per valutare la resistenza al fuoco degli elementi costruttivi di conglomerato cementizio armato, normale e precompresso - edizione maggio 2001
14. Ordinanza del Presidente del Consiglio dei Ministri n. 3274 del 20 marzo 2003 "Primi elementi in materia di criteri generali per la classificazione sismica del territorio nazionale e di normative tecniche per le costruzioni in zona sismica" e successive modificazioni e integrazioni.
15. UNI EN 1990:2006 13/04/2006 Eurocodice 0 - Criteri generali di progettazione strutturale.
16. UNI EN 1991-1-1:2004 01/08/2004 Eurocodice 1 - Azioni sulle strutture - Parte 1-1: Azioni in generale - Pesi per unità di volume, pesi propri e sovraccarichi per gli edifici.
17. UNI EN 1991-2:2005 01/03/2005 Eurocodice 1 - Azioni sulle strutture - Parte 2: Carichi da traffico sui ponti.
18. UNI EN 1991-1-3:2004 01/10/2004 Eurocodice 1 - Azioni sulle strutture - Parte 1-3: Azioni in generale - Carichi da neve.
19. UNI EN 1991-1-4:2005 01/07/2005 Eurocodice 1 - Azioni sulle strutture - Parte 1-4: Azioni in generale - Azioni del vento.
20. UNI EN 1991-1-5:2004 01/10/2004 Eurocodice 1 - Azioni sulle strutture - Parte 1-5: Azioni in generale - Azioni termiche.
21. UNI EN 1992-1-1:2005 24/11/2005 Eurocodice 2 - Progettazione delle strutture di calcestruzzo - Parte 1-1: Regole generali e regole per gli edifici.
22. UNI EN 1992-1-2:2005 01/04/2005 Eurocodice 2 - Progettazione delle strutture di calcestruzzo - Parte 1-2: Regole generali - Progettazione strutturale contro l'incendio.
23. UNI EN 1993-1-1:2005 01/08/2005 Eurocodice 3 - Progettazione delle strutture di acciaio - Parte 1-1: Regole generali e regole per gli edifici.
24. UNI EN 1993-1-8:2005 01/08/2005 Eurocodice 3 - Progettazione delle strutture di acciaio - Parte 1-8: Progettazione dei collegamenti.
25. UNI EN 1994-1-1:2005 01/03/2005 Eurocodice 4 - Progettazione delle strutture composte acciaio-calcestruzzo - Parte 1-1: Regole generali e regole per gli edifici.
26. UNI EN 1994-2:2006 12/01/2006 Eurocodice 4 - Progettazione delle strutture composte acciaio-calcestruzzo - Parte 2: Regole generali e regole per i ponti.
27. UNI EN 1995-1-1:2005 01/02/2005 Eurocodice 5 - Progettazione delle strutture di legno - Parte 1-1: Regole generali – Regole comuni e regole per gli edifici.
28. UNI EN 1995-2:2005 01/01/2005 Eurocodice 5 - Progettazione delle strutture di legno - Parte 2: Ponti.
29. UNI EN 1996-1-1:2006 26/01/2006 Eurocodice 6 - Progettazione delle strutture di muratura - Parte 1-1: Regole generali per strutture di muratura armata e non armata.
30. UNI EN 1996-3:2006 09/03/2006 Eurocodice 6 - Progettazione delle strutture di muratura - Parte 3: Metodi di calcolo semplificato per strutture di muratura non armata.
31. UNI EN 1997-1:2005 01/02/2005 Eurocodice 7 - Progettazione geotecnica - Parte 1: Regole generali.
32. UNI EN 1998-1:2005 01/03/2005 Eurocodice 8 - Progettazione delle strutture per la resistenza sismica - Parte 1: Regole generali, azioni sismiche e regole per gli edifici.
33. UNI EN 1998-3:2005 01/08/2005 Eurocodice 8 - Progettazione delle strutture per la resistenza sismica - Parte 3: Valutazione e adeguamento degli edifici.
34. UNI EN 1998-5:2005 01/01/2005 Eurocodice 8 - Progettazione delle strutture per la resistenza sismica - Parte 5: Fondazioni, strutture di contenimento ed aspetti geotecnici.

NOTA sul capitolo "normativa di riferimento": riporta l'elenco delle normative implementate nel software. Le norme utilizzate per la struttura oggetto della presente relazione sono indicate nel precedente capitolo "RELAZIONE DI CALCOLO STRUTTURALE" "ANALISI E VERIFICHE SVOLTE CON L'AUSILIO DI CODICI DI CALCOLO". Laddove nei capitoli successivi vengano richiamate norme antecedenti al DM 17.01.08 è dovuto o a progettazione simulata di edificio esistente.

## CARATTERISTICHE MATERIALI UTILIZZATI

### LEGENDA TABELLA DATI MATERIALI

Il programma consente l'uso di materiali diversi. Sono previsti i seguenti tipi di materiale:

1	materiale tipo cemento armato
2	materiale tipo acciaio
3	materiale tipo muratura
4	materiale tipo legno
5	materiale tipo generico

I materiali utilizzati nella modellazione sono individuati da una sigla identificativa ed un codice numerico (gli elementi strutturali richiamano quest'ultimo nella propria descrizione). Per ogni materiale vengono riportati in tabella i seguenti dati:

Young	modulo di elasticità normale E
Poisson	coefficiente di contrazione trasversale $\nu$
G	modulo di elasticità tangenziale
Gamma	peso specifico
Alfa	coefficiente di dilatazione termica
Fattore di confidenza FC m	Fattore di confidenza specifico per materiale; (è riportato solo se diverso da quello globale della struttura)
Fattore di confidenza FC a	Fattore di confidenza specifico per l'armatura (è riportato solo se diverso da quello globale della struttura)
Elasto-plastico	Materiale elastico perfettamente plastico per aste non lineari
Massima compressione	Massima tensione di compressione per aste non lineari
Massima trazione	Massima tensione di trazione per aste non lineari
Fattore attrito	Coefficiente di attrito per aste non lineari
Rapporto HRDb	Rapporto di hardening a flessione
Rapporto HRDv	Rapporto di hardening a taglio

I dati soprariportati vengono utilizzati per la modellazione dello schema statico e per la determinazione dei carichi inerziali e termici. In relazione al tipo di materiale vengono riportati inoltre:

1	cemento armato	Resistenza Rc	resistenza a compressione cubica
		Resistenza fctm	resistenza media a trazione semplice
		Coefficiente ksb	Coefficiente di riduzione della resistenza a compressione da utilizzare nello stress block
2	acciaio	Tensione ft	Valore della tensione di rottura
		Tensione fy	Valore della tensione di snervamento
		Resistenza fd	Resistenza di calcolo per SL CNR-UNI 10011
		Resistenza fd (>40)	Resistenza di calcolo per SL CNR-UNI 10011 per spessori > 40mm
		Tensione ammissibile	Tensione ammissibile CNR-UNI 10011
		Tensione ammissibile (>40)	Tensione ammissibile CNR-UNI 10011 per spessori > 40mm
3	muratura	Muratura consolidata	Muratura per la quale si prevedono interventi di rinforzo"
		Incremento resistenza	Incremento conseguito in termini di resistenza
		Incremento rigidezza	Incremento conseguito in termini di rigidezza

Resistenza f	Valore della resistenza a compressione
Resistenza fv0	Valore della resistenza a taglio in assenza di tensioni normali
Resistenza fh	Valore della resistenza a compressione orizzontale
Resistenza fb	Valore della resistenza a compressione dei blocchi
Resistenza fbh	Valore della resistenza a compressione dei blocchi in direzione orizzontale
Resistenza fv0h	Valore della resistenza a taglio in assenza di tensioni normali per le travi
Resistenza ft	Valore della resistenza a trazione per fessurazione diagonale
Resistenza fvlim	Valore della massima resistenza a taglio
Resistenza fbt	Valore della resistenza a trazione dei blocchi
Coefficiente mu	Coefficiente d'attrito utilizzato per la resistenza a taglio (tipicamente 0.4)
Coefficiente fi	Coefficiente d'ingranamento utilizzato per la resistenza a taglio
Coefficiente ksb	Coefficiente di riduzione della resistenza a compressione da utilizzare nello stress block
4 legno	
E0,05	Modulo di elasticità corrispondente ad un frattile del 5%
Resistenza fc0	Valore della resistenza a compressione parallela
Resistenza ft0	Valore della resistenza a trazione parallela
Resistenza fm	Valore della resistenza a flessione
Resistenza fv	Valore della resistenza a taglio
Resist. ft0k	Resistenza caratteristica (tensione amm. per REGLES) per trazione
Resist. fmk	Resistenza caratteristica (tensione amm. per REGLES) per flessione
Resist. fvk	Resistenza caratteristica (tensione amm. per REGLES) per taglio
Modulo E0,05	Modulo elastico parallelo caratteristico
Lamellare	lamellare o massiccio

Vengono inoltre riportate le tabelle contenenti il riassunto delle informazioni assegnate nei criteri di progetto in uso.

Con riferimento al **Documento di Affidabilità** "Test di validazione del software di calcolo PRO\_SAP e dei moduli aggiuntivi PRO\_SAP Modulo Geotecnico, PRO\_CAD nodi acciaio e PRO\_MST" - versione Maggio 2011, disponibile per il download sul sito [www.2si.it](http://www.2si.it), si segnalano i seguenti esempi applicativi:

Modellazione di strutture in c.a.

Test N°	Titolo
41	GERARCHIA DELLE RESISTENZE PER TRAVI IN C.A.



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

42	GERARCHIA DELLE RESISTENZE PER PILASTRI IN C.A.
43	VERIFICA ALLE TA DI STRUTTURE IN C.A.
44	VERIFICA AGLI SLU DI STRUTTURE IN C.A.
45	VERIFICA A PUNZONAMENTO ALLO SLU DI PIASTRE IN C.A.
46	VERIFICA A PUNZONAMENTO ALLO SLU DI TRAVI IN C.A.
47	PROGETTAZIONE A TAGLIO DI STRUTTURE IN C.A. SECONDO IL D.M. 9/1/96
48	PROGETTAZIONE A TAGLIO DI STRUTTURE IN C.A. SECONDO IL D.M. 14/1/2008
49	VERIFICA ALLO SLE (TENSIONI E FESSURAZIONE) DI STRUTTURE IN C.A.
50	VERIFICA ALLO SLE (DEFORMAZIONE) DI STRUTTURE IN C.A.
51	FATTORE DI STRUTTURA
52	SOVRARESISTENZE
53	DETTAGLI COSTRUTTIVI C.A.: LIMITI D'ARMATURA PILASTRI E NODI TRAVE-PILASTRO
54	PARETI IN C.A. SNELLE IN ZONA SISMICA
80	ANALISI PUSHOVER DI UN EDIFICIO IN C.A.
120	PROGETTO E VERIFICA DI TRAVI PREM

Modellazione di strutture in acciaio

Test N°	Titolo
55	VERIFICA DI STABILITA' DI ASTE COMPRESSE IN ACCIAIO – METODO OMEGA
56	LUCE LIBERA DI TRAVI E ASTE IN ACCIAIO
57	LUCE LIBERA DI COLONNE IN ACCIAIO
58	SVERGOLAMENTO DI TRAVI IN ACCIAIO
59	FATTORE DI STRUTTURA
60	ACCIAIO D.M.2008
61	ACCIAIO EC3
62	GERARCHIA RESISTENZE STRUTTURE IN ACCIAIO
63	STABILITA' DI ASTE COMPOSTE IN ACCIAIO
73	COLLEGAMENTI IN ACCIAIO: NODO TRAVE COLONNA FLANGIATO CON PRESENZA IRRIGIDIMENTI TRASVERSALI
74	COLLEGAMENTI IN ACCIAIO: NODO TRAVE COLONNA FLANGIATO CON PRESENZA DI UN PIATTO DI RINFORZO SALDATO ALL'ANIMA DELLA COLONNA
75	COLLEGAMENTI IN ACCIAIO: NODO TRAVE COLONNA FLANGIATO CON PRESENZA DI DUE PIATTI DI RINFORZO SALDATI ALL'ANIMA DELLA COLONNA
76	COLLEGAMENTI IN ACCIAIO: NODO TRAVE COLONNA FLANGIATO A DUE VIE SU ALI COLONNA
77	COLLEGAMENTI IN ACCIAIO: NODO TRAVE COLONNA FLANGIATO A UNA VIA CON DUE COMBINAZIONI DI CARICO
78	COLLEGAMENTI IN ACCIAIO: NODO TRAVE COLONNA FLANGIATO SU ANIMA SENZA RINFORZI A QUATTRO FILE DI BULLONI DI CUI UNA SU PIASTRA INFERIORE E UNA SU PIASTRA SUPERIORE
79	VERIFICA DELLA PIASTRA NODO TRAVE COLONNA
85	TELAIO ACCIAIO: CONTROVENTI CONCENTRICI

Modellazione di strutture in muratura

Test N°	Titolo
81	ANALISI PUSHOVER DI UNA STRUTTURA IN MURATURA
84	ANALISI ELASTO PLASTICA INCREMENTALE, PARETE IN MURATURA
86	VERIFICA NON SISMICA DELLE MURATURE (D.M. 87 TA)
87	VERIFICA NON SISMICA DELLE MURATURE (D.M. 2005 SL)
88	FATTORE DI STRUTTURA

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

Modellazione di strutture in legno

Test N°	Titolo
17	SOLAIO: MISTO LEGNO-CALCESTRUZZO
89	VERIFICA ALLO SLU DI STRUTTURE IN LEGNO SECONDO EC5
90	VERIFICA ALLO SLE DI STRUTTURE IN LEGNO SECONDO EC5
91	FATTORE DI STRUTTURA
92	VERIFICHE EC5
93	SNELLEZZE EC5
94	VERIFICA AL FUOCO DI STRUTTURE IN LEGNO SECONDO EC5
117	PROGETTO E VERIFICA DI GUSCI IN MATERIALE XLAM
118	PROGETTO E VERIFICA DI PARETI IN MATERIALE XLAM E RELATIVI COLLEGAMENTI
119	PROGETTO E VERIFICA DI SOLAI IN MATERIALE XLAM

Id	Tipo / Note	V. caratt.	V. medio	Young	Poisson	G	Gamma	Alfa	Altri
		daN/cm2	daN/cm2	daN/cm2		daN/cm2	daN/cm3		
3	Calcestruzzo Classe C28/35			3.260e+05	0.20	1.358e+05	2.50e-03	1.00e-05	
	Resistenza Rc	350.0							
	Resistenza fctm		28.4						
	Rapporto Rfessurata								1.00
	Coefficiente ksb								0.85
	Rapporto HRDb								1.00e-05
	Rapporto HRDv								1.00e-05
13	Acciaio Fe510 - S355			2.100e+06	0.30	8.077e+05	7.80e-03	1.20e-05	
	Tensione ft	5100.0							
	Resistenza fd	3550.0							
	Resistenza fd (>40)	3150.0							
	Tensione ammissibile	2400.0							
	Tensione ammissibile (>40)	2100.0							
	Rapporto HRDb								1.00e-05
	Rapporto HRDv								1.00e-05

Pilastracci acc.	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
<b>Lunghezze libere</b>						
Metodo di calcolo 2-2	Assegnato	Assegnato				
2-2 Beta assegnato	2.00	2.00				
2-2 Beta * L assegnato [ cm ]	0.0	0.0				
Metodo di calcolo 3-3	Assegnato	Assegnato				
3-3 Beta assegnato	2.00	2.00				
3-3 Beta * L assegnato [ cm ]	0.0	0.0				
1-1 Beta assegnato	1.00	1.00				
1-1 Beta * L assegnato [ cm ]	0.0	0.0				
<b>Generalità</b>						
Coefficiente gamma M0	1.05	1.05				
Coefficiente gamma M1	1.05	1.05				
Coefficiente gamma M2	1.25	1.25				
Effetti del 2 ordine	Si	Si				
Momenti equivalenti	Si	Si				
Usa condizioni I e II	Si	Si				

Gusci c.a.	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
Armatura						

*Parco Eolico "Mondonuovo" – Progetto Definitivo*  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

<b>Gusci c.a.</b>	<b>1/7/..</b>	<b>2/8/..</b>	<b>3/9/..</b>	<b>4/10/..</b>	<b>5/11/..</b>	<b>6/12/..</b>
Inclinazione Ax [ gradi ]	0.0	0.0				
Angolo Ax-Ay [ gradi ]	90.00	90.00				
Minima tesa	0.31	0.31				
Massima tesa	0.78	0.78				
Maglia unica centrale	No	No				
Copriferro [ cm ]	2.00	3.00				
<b>Maglia x</b>						
diametro	10	24				
passo	20	20				
diametro aggiuntivi	12	12				
<b>Maglia y</b>						
diametro	10	24				
passo	20	20				
diametro aggiuntivi	12	12				
<b>Stati limite ultimi</b>						
Tensione fy [daN/cm <sup>2</sup> ]	4500.00	4500.00				
Tipo acciaio	tipo C	tipo C				
Coefficiente gamma s	1.15	1.15				
Coefficiente gamma c	1.50	1.50				
Verifiche con N costante	Si	Si				
Applica SLU da DIN	No	No				
<b>Tensioni ammissibili</b>						
Tensione amm. cls [daN/cm <sup>2</sup> ]	97.50	97.50				
Tensione amm. acciaio [daN/cm <sup>2</sup> ]	2600.00	2600.00				
Rapporto omogeneizzazione N	15.00	15.00				
Massimo rapporto area compressa/tesa	1.00	1.00				
<b>Resistenza al fuoco</b>						
3- intradosso	No	No				
3+ estradosso	No	No				
Tempo di esposizione R	15	15				

## MODELLAZIONE DELLE SEZIONI

### LEGENDA TABELLA DATI SEZIONI

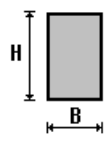
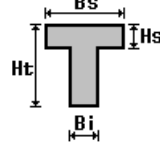
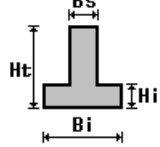
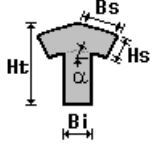
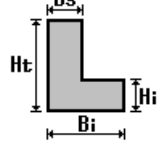
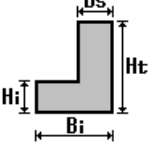
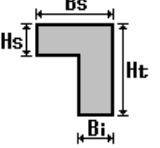
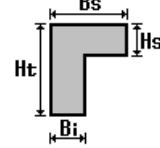
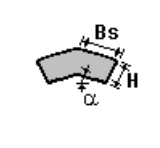
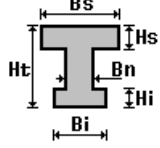
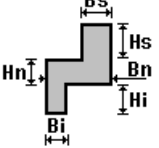
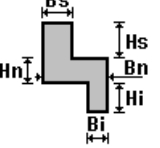
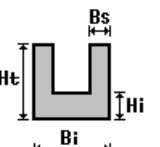
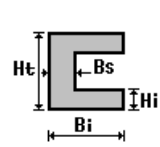
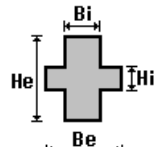
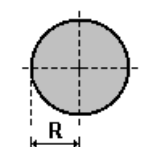
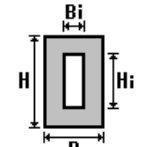
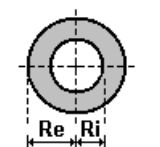
Il programma consente l'uso di sezioni diverse. Sono previsti i seguenti tipi di sezione:

1. sezione di tipo generico
2. profilati semplici
3. profilati accoppiati e speciali

Le sezioni utilizzate nella modellazione sono individuate da una sigla identificativa ed un codice numerico (gli elementi strutturali richiamano quest'ultimo nella propria descrizione). Per ogni sezione vengono riportati in tabella i seguenti dati:

<b>Area</b>	area della sezione
<b>A V2</b>	area della sezione/fattore di taglio (per il taglio in direzione 2)
<b>A V3</b>	area della sezione/fattore di taglio (per il taglio in direzione 3)
<b>Jt</b>	fattore torsionale di rigidezza
<b>J2-2</b>	momento d'inerzia della sezione riferito all'asse 2
<b>J3-3</b>	momento d'inerzia della sezione riferito all'asse 3
<b>W2-2</b>	modulo di resistenza della sezione riferito all'asse 2
<b>W3-3</b>	modulo di resistenza della sezione riferito all'asse 3
<b>Wp2-2</b>	modulo di resistenza plastico della sezione riferito all'asse 2
<b>Wp3-3</b>	modulo di resistenza plastico della sezione riferito all'asse 3

I dati sopra riportati vengono utilizzati per la determinazione dei carichi inerziali e per la definizione delle rigidezze degli elementi strutturali; qualora il valore di Area V2 (e/o Area V3) sia nullo la deformabilità per taglio V2 (e/o V3) è trascurata. La valutazione delle caratteristiche inerziali delle sezioni è condotta nel riferimento 2-3 dell'elemento.

 rettangolare	 a T	 a T rovescia	 a T di colmo	 a L	 a L specchiata
 a L specchiata rovescia	 a L rovescia	 a L di colmo	 a doppio T	 a quattro specchiata	 a quattro
 a U	 a C	 a croce	 circolare	 rettangolare cava	 circolare cava

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Per quanto concerne i profilati semplici ed accoppiati l'asse 2 del riferimento coincide con l'asse x riportato nei più diffusi profilati.

Per quanto concerne le sezioni di tipo generico (tipo 1.):  
i valori dimensionali con prefisso B sono riferiti all'asse 2  
i valori dimensionali con prefisso H sono riferiti all'asse 3

Con riferimento al Documento di Affidabilità "Test di validazione del software di calcolo PRO\_SAP e dei moduli aggiuntivi PRO\_SAP Modulo Geotecnico, PRO\_CAD nodi acciaio e PRO\_MST" - versione Settembre 2014, disponibile per il download sul sito [www.2si.it](http://www.2si.it), si segnalano i seguenti esempi applicativi:

Test N°	Titolo
1	CARATTERISTICHE GEOMETRICHE E INERZIALI
45	VERIFICA AGLI SLU DI STRUTTURE IN C.A.
48	PROGETTAZIONE A TAGLIO DI STRUTTURE IN C.A. SECONDO IL D.M. 9/1/96
49	PROGETTAZIONE A TAGLIO DI STRUTTURE IN C.A. SECONDO IL D.M. 14/1/2008
50	VERIFICA ALLO SLE (TENSIONI E FESSURAZIONE) DI STRUTTURE IN C.A.
51	VERIFICA ALLO SLE (DEFORMAZIONE) DI STRUTTURE IN C.A.
104	ANALISI DI RESISTENZA AL FUOCO

Id	Tipo	Area	A V2	A V3	Jt	J 2-2	J 3-3	W 2-2	W 3-3	Wp 2-2	Wp 3-3
		cm2	cm2	cm2	cm4	cm4	cm4	cm3	cm3	cm3	cm3
133	Circolare cava: re=225 ri=220	6990.04	0.0	0.0	3.461e+08	1.730e+08	1.730e+08	7.691e+05	7.691e+05	9.902e+05	9.902e+05

## MODELLAZIONE STRUTTURA: NODI

### LEGENDA TABELLA DATI NODI

Il programma utilizza per la modellazione nodi strutturali.

Ogni nodo è individuato dalle coordinate cartesiane nel sistema di riferimento globale (X Y Z).

Ad ogni nodo è eventualmente associato un codice di vincolamento rigido, un codice di fondazione speciale, ed un set di sei molle (tre per le traslazioni, tre per le rotazioni). Le tabelle sottoriportate riflettono le succitate possibilità. In particolare per ogni nodo viene indicato in tabella:

<b>Nodo</b>	numero del nodo.
<b>X</b>	valore della coordinata X
<b>Y</b>	valore della coordinata Y
<b>Z</b>	valore della coordinata Z

Per i nodi ai quali sia associato un codice di vincolamento rigido, un codice di fondazione speciale o un set di molle viene indicato in tabella:

<b>Nodo</b>	numero del nodo.
<b>X</b>	valore della coordinata X
<b>Y</b>	valore della coordinata Y
<b>Z</b>	valore della coordinata Z
<b>Note</b>	eventuale codice di vincolo (es. v=110010 sei valori relativi ai sei gradi di libertà previsti per il nodo TxTyTzRxRyRz, il valore 1 indica che lo spostamento o rotazione relativo è impedito, il valore 0 indica che lo spostamento o rotazione relativo è libero).
<b>Note</b>	(FS = 1, 2,...) eventuale codice del tipo di fondazione speciale (1, 2,... fanno riferimento alle tipologie: plinto, palo, plinto su pali,...) che è collegato al nodo. (ISO = "id SIGLA") indice e sigla identificativa dell' eventuale isolatore sismico assegnato al nodo
<b>Rig. TX</b>	valore della rigidezza dei vincoli elastici eventualmente applicati al nodo, nello specifico TX (idem per TY, TZ, RX, RY, RZ).

Per strutture sismicamente isolate viene inoltre inserita la tabella delle caratteristiche per gli isolatori utilizzati; le caratteristiche sono indicate in conformità al cap. 7.10 del D.M. 17/01/18

### TABELLA DATI NODI

Nodo	X	Y	Z	Nodo	X	Y	Z	Nodo	X	Y	Z
	cm	cm	cm		cm	cm	cm		cm	cm	cm
1	-287.5	-287.5	-100.0	2	-215.6	-287.5	-100.0	3	-215.6	-215.6	-100.0
4	-287.5	-215.6	-100.0	5	-215.6	-143.8	-100.0	6	-287.5	-143.8	-100.0
7	-215.6	-71.9	-100.0	8	-287.5	-71.9	-100.0	9	-215.6	0.0	-100.0
10	-287.5	0.0	-100.0	11	-215.6	71.9	-100.0	12	-287.5	71.9	-100.0
13	-215.6	143.8	-100.0	14	-287.5	143.8	-100.0	15	-215.6	215.6	-100.0
16	-287.5	215.6	-100.0	17	-215.6	287.5	-100.0	18	-287.5	287.5	-100.0
19	-143.8	-287.5	-100.0	20	-143.8	-215.6	-100.0	21	-143.8	-143.8	-100.0
22	-143.8	-71.9	-100.0	23	-143.8	0.0	-100.0	24	-143.8	71.9	-100.0
25	-143.8	143.8	-100.0	26	-143.8	215.6	-100.0	27	-143.8	287.5	-100.0
28	-71.9	-287.5	-100.0	29	-71.9	-215.6	-100.0	30	-71.9	-143.8	-100.0
31	-71.9	-71.9	-100.0	32	-71.9	0.0	-100.0	33	-71.9	71.9	-100.0
34	-71.9	143.8	-100.0	35	-71.9	215.6	-100.0	36	-71.9	287.5	-100.0
37	0.0	-287.5	-100.0	38	0.0	-215.6	-100.0	39	0.0	-143.8	-100.0
40	0.0	-71.9	-100.0	41	0.0	0.0	-100.0	42	0.0	71.9	-100.0
43	0.0	143.8	-100.0	44	0.0	215.6	-100.0	45	0.0	287.5	-100.0
46	71.9	-287.5	-100.0	47	71.9	-215.6	-100.0	48	71.9	-143.8	-100.0
49	71.9	-71.9	-100.0	50	71.9	0.0	-100.0	51	71.9	71.9	-100.0
52	71.9	143.8	-100.0	53	71.9	215.6	-100.0	54	71.9	287.5	-100.0
55	143.8	-287.5	-100.0	56	143.8	-215.6	-100.0	57	143.8	-143.8	-100.0
58	143.8	-71.9	-100.0	59	143.8	0.0	-100.0	60	143.8	71.9	-100.0
61	143.8	143.8	-100.0	62	143.8	215.6	-100.0	63	143.8	287.5	-100.0
64	215.6	-287.5	-100.0	65	215.6	-215.6	-100.0	66	215.6	-143.8	-100.0
67	215.6	-71.9	-100.0	68	215.6	0.0	-100.0	69	215.6	71.9	-100.0
70	215.6	143.8	-100.0	71	215.6	215.6	-100.0	72	215.6	287.5	-100.0
73	287.5	-287.5	-100.0	74	287.5	-215.6	-100.0	75	287.5	-143.8	-100.0
76	287.5	-71.9	-100.0	77	287.5	0.0	-100.0	78	287.5	71.9	-100.0
79	287.5	143.8	-100.0	80	287.5	215.6	-100.0	81	287.5	287.5	-100.0
82	395.3	0.0	-100.0	83	392.6	90.9	-100.0	85	497.6	110.0	-100.0
86	610.9	0.0	-100.0	87	602.7	129.1	-100.0	88	718.8	0.0	-100.0
89	707.7	148.1	-100.0	90	826.6	0.0	-100.0	91	812.8	167.2	-100.0
93	917.8	186.2	-100.0	94	1042.2	0.0	-100.0	95	1022.9	205.3	-100.0

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96	1150.0	0.0	-100.0	97	1127.9	224.4	-100.0	98	384.4	180.8	-100.0
99	481.2	217.8	-100.0	100	578.1	254.9	-100.0	101	675.0	291.9	-100.0
102	771.9	329.0	-100.0	104	965.6	403.0	-100.0	105	1062.5	440.1	-100.0
106	371.1	268.5	-100.0	107	454.7	321.4	-100.0	108	538.3	374.4	-100.0
109	621.8	427.3	-100.0	110	705.4	480.2	-100.0	111	789.0	533.1	-100.0
112	872.6	586.0	-100.0	113	956.2	638.9	-100.0	114	353.2	353.2	-100.0
116	484.6	484.6	-100.0	117	550.3	550.3	-100.0	118	616.0	616.0	-100.0
120	747.5	747.5	-100.0	121	813.2	813.2	-100.0	122	268.5	371.1	-100.0
123	321.4	454.7	-100.0	124	374.4	538.3	-100.0	125	427.3	621.8	-100.0
126	480.2	705.4	-100.0	127	533.1	789.0	-100.0	128	586.0	872.6	-100.0
129	638.9	956.2	-100.0	130	180.8	384.4	-100.0	131	217.8	481.2	-100.0
132	254.9	578.1	-100.0	133	291.9	675.0	-100.0	134	329.0	771.9	-100.0
136	403.0	965.6	-100.0	137	440.1	1062.5	-100.0	138	90.9	392.6	-100.0
139	110.0	497.6	-100.0	140	129.1	602.7	-100.0	141	148.1	707.7	-100.0
142	167.2	812.8	-100.0	143	186.2	917.8	-100.0	144	205.3	1022.9	-100.0
145	224.4	1127.9	-100.0	146	0.0	395.3	-100.0	148	0.0	610.9	-100.0
149	0.0	718.8	-100.0	150	0.0	826.6	-100.0	152	0.0	1042.2	-100.0
153	0.0	1150.0	-100.0	154	-90.9	392.6	-100.0	155	-110.0	497.6	-100.0
156	-129.1	602.7	-100.0	157	-148.1	707.7	-100.0	158	-167.2	812.8	-100.0
159	-186.2	917.8	-100.0	160	-205.3	1022.9	-100.0	161	-224.4	1127.9	-100.0
162	-180.8	384.4	-100.0	163	-217.8	481.2	-100.0	164	-254.9	578.1	-100.0
165	-291.9	675.0	-100.0	166	-329.0	771.9	-100.0	168	-403.0	965.6	-100.0
169	-440.1	1062.5	-100.0	170	-268.5	371.1	-100.0	171	-321.4	454.7	-100.0
172	-374.4	538.3	-100.0	173	-427.3	621.8	-100.0	174	-480.2	705.4	-100.0
175	-533.1	789.0	-100.0	176	-586.0	872.6	-100.0	177	-638.9	956.2	-100.0
178	-353.2	353.2	-100.0	180	-484.6	484.6	-100.0	181	-550.3	550.3	-100.0
182	-616.0	616.0	-100.0	184	-747.5	747.5	-100.0	185	-813.2	813.2	-100.0
186	-371.1	268.5	-100.0	187	-454.7	321.4	-100.0	188	-538.3	374.4	-100.0
189	-621.8	427.3	-100.0	190	-705.4	480.2	-100.0	191	-789.0	533.1	-100.0
192	-872.6	586.0	-100.0	193	-956.2	638.9	-100.0	194	-384.4	180.8	-100.0
195	-481.2	217.8	-100.0	196	-578.1	254.9	-100.0	197	-675.0	291.9	-100.0
198	-771.9	329.0	-100.0	200	-965.6	403.0	-100.0	201	-1062.5	440.1	-100.0
202	-392.6	90.9	-100.0	203	-497.6	110.0	-100.0	204	-602.7	129.1	-100.0
205	-707.7	148.1	-100.0	206	-812.8	167.2	-100.0	207	-917.8	186.2	-100.0
208	-1022.9	205.3	-100.0	209	-1127.9	224.4	-100.0	210	-395.3	0.0	-100.0
212	-610.9	0.0	-100.0	213	-718.8	0.0	-100.0	214	-826.6	0.0	-100.0
216	-1042.2	0.0	-100.0	217	-1150.0	0.0	-100.0	218	-392.6	-90.9	-100.0
219	-497.6	-110.0	-100.0	220	-602.7	-129.1	-100.0	221	-707.7	-148.1	-100.0
222	-812.8	-167.2	-100.0	223	-917.8	-186.2	-100.0	224	-1022.9	-205.3	-100.0
225	-1127.9	-224.4	-100.0	226	-384.4	-180.8	-100.0	227	-481.2	-217.8	-100.0
228	-578.1	-254.9	-100.0	229	-675.0	-291.9	-100.0	230	-771.9	-329.0	-100.0
232	-965.6	-403.0	-100.0	233	-1062.5	-440.1	-100.0	234	-371.1	-268.5	-100.0
235	-454.7	-321.4	-100.0	236	-538.3	-374.4	-100.0	237	-621.8	-427.3	-100.0
238	-705.4	-480.2	-100.0	239	-789.0	-533.1	-100.0	240	-872.6	-586.0	-100.0
241	-956.2	-638.9	-100.0	242	-353.2	-353.2	-100.0	244	-484.6	-484.6	-100.0
245	-550.3	-550.3	-100.0	246	-616.0	-616.0	-100.0	248	-747.5	-747.5	-100.0
249	-813.2	-813.2	-100.0	250	-268.5	-371.1	-100.0	251	-321.4	-454.7	-100.0
252	-374.4	-538.3	-100.0	253	-427.3	-621.8	-100.0	254	-480.2	-705.4	-100.0
255	-533.1	-789.0	-100.0	256	-586.0	-872.6	-100.0	257	-638.9	-956.2	-100.0
258	-180.8	-384.4	-100.0	259	-217.8	-481.2	-100.0	260	-254.9	-578.1	-100.0
261	-291.9	-675.0	-100.0	262	-329.0	-771.9	-100.0	264	-403.0	-965.6	-100.0
265	-440.1	-1062.5	-100.0	266	-90.9	-392.6	-100.0	267	-110.0	-497.6	-100.0
268	-129.1	-602.7	-100.0	269	-148.1	-707.7	-100.0	270	-167.2	-812.8	-100.0
271	-186.2	-917.8	-100.0	272	-205.3	-1022.9	-100.0	273	-224.4	-1127.9	-100.0
274	0.0	-395.3	-100.0	276	0.0	-610.9	-100.0	277	0.0	-718.8	-100.0
278	0.0	-826.6	-100.0	280	0.0	-1042.2	-100.0	281	0.0	-1150.0	-100.0
282	90.9	-392.6	-100.0	283	110.0	-497.6	-100.0	284	129.1	-602.7	-100.0
285	148.1	-707.7	-100.0	286	167.2	-812.8	-100.0	287	186.2	-917.8	-100.0
288	205.3	-1022.9	-100.0	289	224.4	-1127.9	-100.0	290	180.8	-384.4	-100.0
291	217.8	-481.2	-100.0	292	254.9	-578.1	-100.0	293	291.9	-675.0	-100.0
294	329.0	-771.9	-100.0	296	403.0	-965.6	-100.0	297	440.1	-1062.5	-100.0
298	268.5	-371.1	-100.0	299	321.4	-454.7	-100.0	300	374.4	-538.3	-100.0
301	427.3	-621.8	-100.0	302	480.2	-705.4	-100.0	303	533.1	-789.0	-100.0
304	586.0	-872.6	-100.0	305	638.9	-956.2	-100.0	306	353.2	-353.2	-100.0
308	484.6	-484.6	-100.0	309	550.3	-550.3	-100.0	310	616.0	-616.0	-100.0
312	747.5	-747.5	-100.0	313	813.2	-813.2	-100.0	314	371.1	-268.5	-100.0
315	454.7	-321.4	-100.0	316	538.3	-374.4	-100.0	317	621.8	-427.3	-100.0
318	705.4	-480.2	-100.0	319	789.0	-533.1	-100.0	320	872.6	-586.0	-100.0
321	956.2	-638.9	-100.0	322	384.4	-180.8	-100.0	323	481.2	-217.8	-100.0
324	578.1	-254.9	-100.0	325	675.0	-291.9	-100.0	326	771.9	-329.0	-100.0
328	965.6	-403.0	-100.0	329	1062.5	-440.1	-100.0	330	392.6	-90.9	-100.0
331	497.6	-110.0	-100.0	332	602.7	-129.1	-100.0	333	707.7	-148.1	-100.0
334	812.8	-167.2	-100.0	335	917.8	-186.2	-100.0	336	1022.9	-205.3	-100.0

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337    1127.9    -224.4    -100.0    338    0.0    0.0    -80.0

<b>Nodo</b>	<b>X</b>	<b>Y</b>	<b>Z</b>	<b>Note</b>	<b>Rig. TX</b>	<b>Rig. TY</b>	<b>Rig. TZ</b>	<b>Rig. RX</b>	<b>Rig. RY</b>	<b>Rig. RZ</b>
	cm	cm	cm		daN/cm	daN/cm	daN/cm	daN cm/rad	daN cm/rad	daN
cm/rad										
84	503.1	0.0	-100.0	FS=4						
92	934.4	0.0	-100.0	FS=4						
103	868.7	366.0	-100.0	FS=4						
115	418.9	418.9	-100.0	FS=4						
119	681.8	681.8	-100.0	FS=4						
135	366.0	868.7	-100.0	FS=4						
147	0.0	503.1	-100.0	FS=4						
151	0.0	934.4	-100.0	FS=4						
167	-366.0	868.7	-100.0	FS=4						
179	-418.9	418.9	-100.0	FS=4						
183	-681.8	681.8	-100.0	FS=4						
199	-868.7	366.0	-100.0	FS=4						
211	-503.1	0.0	-100.0	FS=4						
215	-934.4	0.0	-100.0	FS=4						
231	-868.7	-366.0	-100.0	FS=4						
243	-418.9	-418.9	-100.0	FS=4						
247	-681.8	-681.8	-100.0	FS=4						
263	-366.0	-868.7	-100.0	FS=4						
275	0.0	-503.1	-100.0	FS=4						
279	0.0	-934.4	-100.0	FS=4						
295	366.0	-868.7	-100.0	FS=4						
307	418.9	-418.9	-100.0	FS=4						
311	681.8	-681.8	-100.0	FS=4						
327	868.7	-366.0	-100.0	FS=4						



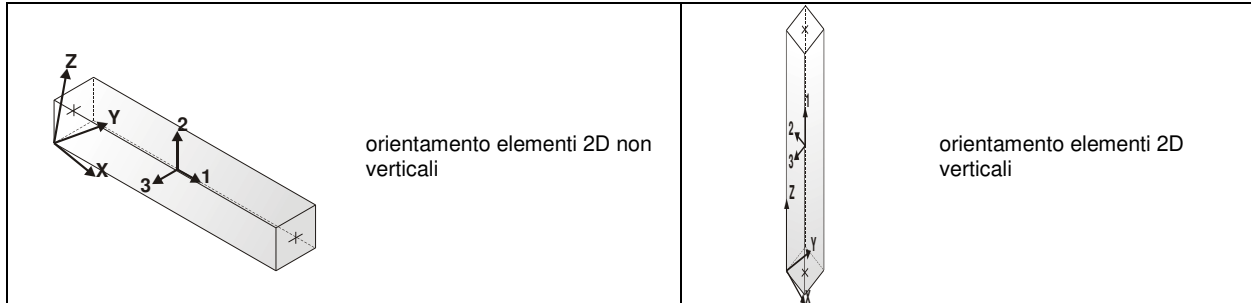
## MODELLAZIONE STRUTTURA: ELEMENTI TRAVE

### TABELLA DATI TRAVI

Il programma utilizza per la modellazione elementi a due nodi denominati in generale travi.

Ogni elemento trave è individuato dal nodo iniziale e dal nodo finale.

Ogni elemento è caratterizzato da un insieme di proprietà riportate in tabella che ne completano la modellazione.



In particolare per ogni elemento viene indicato in tabella:

<b>Elem.</b>	numero dell'elemento
<b>Note</b>	codice di comportamento: trave, trave di fondazione, pilastro, asta, asta tesa, asta compressa,
<b>Nodo I (J)</b>	numero del nodo iniziale (finale)
<b>Mat.</b>	codice del materiale assegnato all'elemento
<b>Sez.</b>	codice della sezione assegnata all'elemento
<b>Rotaz.</b>	valore della rotazione dell'elemento, attorno al proprio asse, nel caso in cui l'orientamento di default non sia adottabile; l'orientamento di default prevede per gli elementi non verticali l'asse 2 contenuto nel piano verticale e l'asse 3 orizzontale, per gli elementi verticali l'asse 2 diretto secondo X negativo e l'asse 3 diretto secondo Y negativo
<b>Svincolo I (J)</b>	codici di svincolo per le azioni interne; i primi sei codici si riferiscono al nodo iniziale, i restanti sei al nodo finale (il valore 1 indica che la relativa azione interna non è attiva)
<b>Wink V</b>	costante di sottofondo (coefficiente di Winkler) per la modellazione della trave su suolo elastico
<b>Wink O</b>	costante di sottofondo (coefficiente di Winkler) per la modellazione del suolo elastico orizzontale

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

Con riferimento al **Documento di Affidabilità "Test di validazione del software di calcolo PRO\_SAP e dei moduli aggiuntivi PRO\_SAP Modulo Geotecnico, PRO\_CAD nodi acciaio e PRO\_MST"** - versione Settembre 2014, disponibile per il download sul sito [www.2si.it](http://www.2si.it), si segnalano i seguenti esempi applicativi:

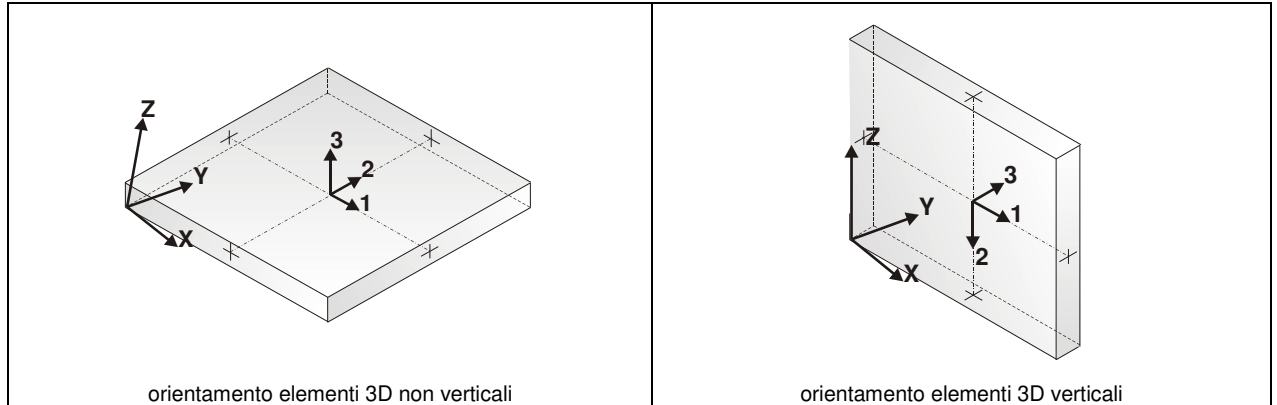
Test N°	Titolo
2	TRAVI A UNA CAMPATA
3	TRAVE A PIU' CAMPATE
4	TRAVE A UNA CAMPATA SU TERRENO ALLA WINKLER
5	TRAVI SU TERRENO ALLA WINKLER CON CARICO TRASVERSALE
6	TELAI PIANI CON CERNIERE ALLA BASE
7	TELAI PIANI CON INCASTRI ALLA BASE
11	STRUTTURE SOGGETTE A VARIAZIONI TERMICHE
12	STRUTTURE SU TERRENO ALLA WINKLER SOTTOPOSTE A CARICHI DISTRIBUITI TRIANGOLARI
21	DRILLING
24	TENSIONI E ROTAZIONI RISPETTO ALLA CORDA DI ELEMENTI TRAVE
27	FRECCIA DI ELEMENTI TRAVE
42	GERARCHIA DELLE RESISTENZE PER TRAVI IN C.A.
43	GERARCHIA DELLE RESISTENZE PER PILASTRI IN C.A.
44	VERIFICA ALLE TA DI STRUTTURE IN C.A.
45	VERIFICA AGLI SLU DI STRUTTURE IN C.A.
47	VERIFICA A PUNZONAMENTO ALLO SLU DI TRAVI IN C.A.
48	PROGETTAZIONE A TAGLIO DI STRUTTURE IN C.A. SECONDO IL D.M. 9/1/96
49	PROGETTAZIONE A TAGLIO DI STRUTTURE IN C.A. SECONDO IL D.M. 14/1/2008
50	VERIFICA ALLO SLE (TENSIONI E FESSURAZIONE) DI STRUTTURE IN C.A.
51	VERIFICA ALLO SLE (DEFORMAZIONE) DI STRUTTURE IN C.A.
52	FATTORE DI STRUTTURA
53	SOVRARESISTENZE
54	DETTAGLI COSTRUTTIVI C.A.: LIMITI D'ARMATURA PILASTRI E NODI TRAVE-PILASTRO
56	VERIFICA DI STABILITA' DI ASTE COMPRESSE IN ACCIAIO – METODO OMEGA
57	LUCE LIBERA DI TRAVI E ASTE IN ACCIAIO
58	LUCE LIBERA DI COLONNE IN ACCIAIO
59	SVERGOLAMENTO DI TRAVI IN ACCIAIO
64	STABILITA' DI ASTE COMPOSTE IN ACCIAIO
73	VALUTAZIONE EFFETTO P-δ SU PILASTRATA
74	VALUTAZIONE EFFETTO P-δ SU TELAIO 3D
85	ANALISI PUSHOVER DI UN EDIFICIO IN C.A.
87	ANALISI ELASTO PLASTICA INCREMENTALE
88	ANALISI ELASTO PLASTICA INCREMENTALE
98	VERIFICA ALLO SLU DI STRUTTURE IN LEGNO SECONDO EC5
99	VERIFICA ALLO SLE DI STRUTTURE IN LEGNO SECONDO EC5
102	SNELLEZZE EC5
130	PROGETTO E VERIFICA DI TRAVI PREM

Elem.	Note	Nodo I	Nodo J	Mat.	Sez.	Rotaz. gradi	Svincolo I	Svincolo J	Wink V daN/cm3	Wink O daN/cm3
1	Pilas.	41	338	13	133					

## MODELLAZIONE STRUTTURA: ELEMENTI SHELL

### LEGENDA TABELLA DATI SHELL

Il programma utilizza per la modellazione elementi a tre o quattro nodi denominati in generale shell.  
 Ogni elemento shell è individuato dai nodi I, J, K, L (L=I per gli elementi a tre nodi).  
 Ogni elemento è caratterizzato da un insieme di proprietà riportate in tabella che ne completano la modellazione.



In particolare per ogni elemento viene indicato in tabella:

<b>Elem.</b>	numero dell'elemento
<b>Note</b>	codice di comportamento: <i>Guscio</i> (elemento guscio in elevazione non verticale) <i>Guscio fond.</i> (elemento guscio su suolo elastico) <i>Setto</i> (elemento guscio in elevazione verticale) <i>Membrana</i> (elemento guscio con comportamento membranale)
<b>Nodo I (J, K, L)</b>	numero del nodo I (J, K, L)
<b>Mat.</b>	codice del materiale assegnato all'elemento
<b>Spessore</b>	spessore dell'elemento (costante)
<b>Wink V</b>	costante di sottofondo (coefficiente di Winkler) per la modellazione del suolo elastico verticale
<b>Wink O</b>	costante di sottofondo (coefficiente di Winkler) per la modellazione del suolo elastico orizzontale

Con riferimento al **Documento di Affidabilità** "Test di validazione del software di calcolo PRO\_SAP e dei moduli aggiuntivi PRO\_SAP Modulo Geotecnico, PRO\_CAD nodi acciaio e PRO\_MST" - versione Maggio 2011, disponibile per il download sul sito [www.2si.it](http://www.2si.it), si segnalano i seguenti esempi applicativi:

Test N°	Titolo
8	MENSOLE CON ELEMENTI PLATE E MATERIALE ORTOTROPO
10	PIASTRA CON ELEMENTI PLATE E MATERIALE ORTOTROPO
21	DRILLING
25	TENSIONI DI ELEMENTI PLATE
31	REALIZZAZIONE DI MESH PIANA SU GEOMETRIA CON PUNTI FISSI IMPORTATA DA FILE .DXF
32	REALIZZAZIONE DI MESH PIANA SU GEOMETRIA CON SEGMENTI E FORI INTERNI IMPORTATA DA FILE .DXF
33	REALIZZAZIONE DI MESH PIANE SU GEOMETRIE COSTRUITE IN PRO_SAP
34	ANALISI DI BUCKLING DI PIASTRA ISOTROPA
35	ANALISI DI BUCKLING DI UN CILINDRO COMPRESSO INCASTRATO ALLA BASE
36	ANALISI DI PARETI FORATE
37	BIMETALLIC STRIP (NAFEMS EXERCISE 6)
38	ANALISI ELASTICA DI PIASTRA CON INTAGLIO CIRCOLARE (FLAT BAR WITH EDGE NOTCHES-NAFEMS EXERCISE 9)
39	PLATEA NERVATA
45	VERIFICA A PUNZONAMENTO ALLO SLU DI PIASTRE IN C.A.
117	PROGETTO E VERIFICA DI GUSCI IN MATERIALE XLAM
118	PROGETTO E VERIFICA DI PARETI IN MATERIALE XLAM E RELATIVI COLLEGAMENTI

Elem.	Note	Nodo I	Nodo J	Nodo K	Nodo L	Mat.	Spessore cm	Svincolo	Wink V daN/cm3	Wink O daN/cm3
1	Guscio fond.	1	2	3	4	3	250.0		0.19	0.10
2	Guscio fond.	4	3	5	6	3	250.0		0.19	0.10
3	Guscio fond.	6	5	7	8	3	250.0		0.19	0.10
4	Guscio fond.	8	7	9	10	3	250.0		0.19	0.10
5	Guscio fond.	10	9	11	12	3	250.0		0.19	0.10
6	Guscio fond.	12	11	13	14	3	250.0		0.19	0.10
7	Guscio fond.	14	13	15	16	3	250.0		0.19	0.10
8	Guscio fond.	16	15	17	18	3	250.0		0.19	0.10
9	Guscio fond.	2	19	20	3	3	250.0		0.19	0.10
10	Guscio fond.	3	20	21	5	3	250.0		0.19	0.10
11	Guscio fond.	5	21	22	7	3	250.0		0.19	0.10

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

12	Guscio fond.	7	22	23	9	3	250.0	0.19	0.10
13	Guscio fond.	9	23	24	11	3	250.0	0.19	0.10
14	Guscio fond.	11	24	25	13	3	250.0	0.19	0.10
15	Guscio fond.	13	25	26	15	3	250.0	0.19	0.10
16	Guscio fond.	15	26	27	17	3	250.0	0.19	0.10
17	Guscio fond.	19	28	29	20	3	250.0	0.19	0.10
18	Guscio fond.	20	29	30	21	3	250.0	0.19	0.10
19	Guscio fond.	21	30	31	22	3	250.0	0.19	0.10
20	Guscio fond.	22	31	32	23	3	250.0	0.19	0.10
21	Guscio fond.	23	32	33	24	3	250.0	0.19	0.10
22	Guscio fond.	24	33	34	25	3	250.0	0.19	0.10
23	Guscio fond.	25	34	35	26	3	250.0	0.19	0.10
24	Guscio fond.	26	35	36	27	3	250.0	0.19	0.10
25	Guscio fond.	28	37	38	29	3	250.0	0.19	0.10
26	Guscio fond.	29	38	39	30	3	250.0	0.19	0.10
27	Guscio fond.	30	39	40	31	3	250.0	0.19	0.10
28	Guscio fond.	31	40	41	32	3	250.0	0.19	0.10
29	Guscio fond.	32	41	42	33	3	250.0	0.19	0.10
30	Guscio fond.	33	42	43	34	3	250.0	0.19	0.10
31	Guscio fond.	34	43	44	35	3	250.0	0.19	0.10
32	Guscio fond.	35	44	45	36	3	250.0	0.19	0.10
33	Guscio fond.	37	46	47	38	3	250.0	0.19	0.10
34	Guscio fond.	38	47	48	39	3	250.0	0.19	0.10
35	Guscio fond.	39	48	49	40	3	250.0	0.19	0.10
36	Guscio fond.	40	49	50	41	3	250.0	0.19	0.10
37	Guscio fond.	41	50	51	42	3	250.0	0.19	0.10
38	Guscio fond.	42	51	52	43	3	250.0	0.19	0.10
39	Guscio fond.	43	52	53	44	3	250.0	0.19	0.10
40	Guscio fond.	44	53	54	45	3	250.0	0.19	0.10
41	Guscio fond.	46	55	56	47	3	250.0	0.19	0.10
42	Guscio fond.	47	56	57	48	3	250.0	0.19	0.10
43	Guscio fond.	48	57	58	49	3	250.0	0.19	0.10
44	Guscio fond.	49	58	59	50	3	250.0	0.19	0.10
45	Guscio fond.	50	59	60	51	3	250.0	0.19	0.10
46	Guscio fond.	51	60	61	52	3	250.0	0.19	0.10
47	Guscio fond.	52	61	62	53	3	250.0	0.19	0.10
48	Guscio fond.	53	62	63	54	3	250.0	0.19	0.10
49	Guscio fond.	55	64	65	56	3	250.0	0.19	0.10
50	Guscio fond.	56	65	66	57	3	250.0	0.19	0.10
51	Guscio fond.	57	66	67	58	3	250.0	0.19	0.10
52	Guscio fond.	58	67	68	59	3	250.0	0.19	0.10
53	Guscio fond.	59	68	69	60	3	250.0	0.19	0.10
54	Guscio fond.	60	69	70	61	3	250.0	0.19	0.10
55	Guscio fond.	61	70	71	62	3	250.0	0.19	0.10
56	Guscio fond.	62	71	72	63	3	250.0	0.19	0.10
57	Guscio fond.	64	73	74	65	3	250.0	0.19	0.10
58	Guscio fond.	65	74	75	66	3	250.0	0.19	0.10
59	Guscio fond.	66	75	76	67	3	250.0	0.19	0.10
60	Guscio fond.	67	76	77	68	3	250.0	0.19	0.10
61	Guscio fond.	68	77	78	69	3	250.0	0.19	0.10
62	Guscio fond.	69	78	79	70	3	250.0	0.19	0.10
63	Guscio fond.	70	79	80	71	3	250.0	0.19	0.10
64	Guscio fond.	71	80	81	72	3	250.0	0.19	0.10
65	Guscio fond.	77	82	83	78	3	250.0	0.19	0.10
66	Guscio fond.	82	84	85	83	3	250.0	0.19	0.10
67	Guscio fond.	84	86	87	85	3	250.0	0.19	0.10
68	Guscio fond.	86	88	89	87	3	250.0	0.19	0.10
69	Guscio fond.	88	90	91	89	3	250.0	0.19	0.10
70	Guscio fond.	90	92	93	91	3	250.0	0.19	0.10
71	Guscio fond.	92	94	95	93	3	250.0	0.19	0.10
72	Guscio fond.	94	96	97	95	3	250.0	0.19	0.10
73	Guscio fond.	78	83	98	79	3	250.0	0.19	0.10
74	Guscio fond.	83	85	99	98	3	250.0	0.19	0.10
75	Guscio fond.	85	87	100	99	3	250.0	0.19	0.10
76	Guscio fond.	87	89	101	100	3	250.0	0.19	0.10
77	Guscio fond.	89	91	102	101	3	250.0	0.19	0.10
78	Guscio fond.	91	93	103	102	3	250.0	0.19	0.10
79	Guscio fond.	93	95	104	103	3	250.0	0.19	0.10
80	Guscio fond.	95	97	105	104	3	250.0	0.19	0.10
81	Guscio fond.	79	98	106	80	3	250.0	0.19	0.10
82	Guscio fond.	98	99	107	106	3	250.0	0.19	0.10
83	Guscio fond.	99	100	108	107	3	250.0	0.19	0.10
84	Guscio fond.	100	101	109	108	3	250.0	0.19	0.10

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

85	Guscio fond.	101	102	110	109	3	250.0	0.19	0.10
86	Guscio fond.	102	103	111	110	3	250.0	0.19	0.10
87	Guscio fond.	103	104	112	111	3	250.0	0.19	0.10
88	Guscio fond.	104	105	113	112	3	250.0	0.19	0.10
89	Guscio fond.	80	106	114	81	3	250.0	0.19	0.10
90	Guscio fond.	106	107	115	114	3	250.0	0.19	0.10
91	Guscio fond.	107	108	116	115	3	250.0	0.19	0.10
92	Guscio fond.	108	109	117	116	3	250.0	0.19	0.10
93	Guscio fond.	109	110	118	117	3	250.0	0.19	0.10
94	Guscio fond.	110	111	119	118	3	250.0	0.19	0.10
95	Guscio fond.	111	112	120	119	3	250.0	0.19	0.10
96	Guscio fond.	112	113	121	120	3	250.0	0.19	0.10
97	Guscio fond.	72	81	114	122	3	250.0	0.19	0.10
98	Guscio fond.	122	114	115	123	3	250.0	0.19	0.10
99	Guscio fond.	123	115	116	124	3	250.0	0.19	0.10
100	Guscio fond.	124	116	117	125	3	250.0	0.19	0.10
101	Guscio fond.	125	117	118	126	3	250.0	0.19	0.10
102	Guscio fond.	126	118	119	127	3	250.0	0.19	0.10
103	Guscio fond.	127	119	120	128	3	250.0	0.19	0.10
104	Guscio fond.	128	120	121	129	3	250.0	0.19	0.10
105	Guscio fond.	63	72	122	130	3	250.0	0.19	0.10
106	Guscio fond.	130	122	123	131	3	250.0	0.19	0.10
107	Guscio fond.	131	123	124	132	3	250.0	0.19	0.10
108	Guscio fond.	132	124	125	133	3	250.0	0.19	0.10
109	Guscio fond.	133	125	126	134	3	250.0	0.19	0.10
110	Guscio fond.	134	126	127	135	3	250.0	0.19	0.10
111	Guscio fond.	135	127	128	136	3	250.0	0.19	0.10
112	Guscio fond.	136	128	129	137	3	250.0	0.19	0.10
113	Guscio fond.	54	63	130	138	3	250.0	0.19	0.10
114	Guscio fond.	138	130	131	139	3	250.0	0.19	0.10
115	Guscio fond.	139	131	132	140	3	250.0	0.19	0.10
116	Guscio fond.	140	132	133	141	3	250.0	0.19	0.10
117	Guscio fond.	141	133	134	142	3	250.0	0.19	0.10
118	Guscio fond.	142	134	135	143	3	250.0	0.19	0.10
119	Guscio fond.	143	135	136	144	3	250.0	0.19	0.10
120	Guscio fond.	144	136	137	145	3	250.0	0.19	0.10
121	Guscio fond.	45	54	138	146	3	250.0	0.19	0.10
122	Guscio fond.	146	138	139	147	3	250.0	0.19	0.10
123	Guscio fond.	147	139	140	148	3	250.0	0.19	0.10
124	Guscio fond.	148	140	141	149	3	250.0	0.19	0.10
125	Guscio fond.	149	141	142	150	3	250.0	0.19	0.10
126	Guscio fond.	150	142	143	151	3	250.0	0.19	0.10
127	Guscio fond.	151	143	144	152	3	250.0	0.19	0.10
128	Guscio fond.	152	144	145	153	3	250.0	0.19	0.10
129	Guscio fond.	36	45	146	154	3	250.0	0.19	0.10
130	Guscio fond.	154	146	147	155	3	250.0	0.19	0.10
131	Guscio fond.	155	147	148	156	3	250.0	0.19	0.10
132	Guscio fond.	156	148	149	157	3	250.0	0.19	0.10
133	Guscio fond.	157	149	150	158	3	250.0	0.19	0.10
134	Guscio fond.	158	150	151	159	3	250.0	0.19	0.10
135	Guscio fond.	159	151	152	160	3	250.0	0.19	0.10
136	Guscio fond.	160	152	153	161	3	250.0	0.19	0.10
137	Guscio fond.	27	36	154	162	3	250.0	0.19	0.10
138	Guscio fond.	162	154	155	163	3	250.0	0.19	0.10
139	Guscio fond.	163	155	156	164	3	250.0	0.19	0.10
140	Guscio fond.	164	156	157	165	3	250.0	0.19	0.10
141	Guscio fond.	165	157	158	166	3	250.0	0.19	0.10
142	Guscio fond.	166	158	159	167	3	250.0	0.19	0.10
143	Guscio fond.	167	159	160	168	3	250.0	0.19	0.10
144	Guscio fond.	168	160	161	169	3	250.0	0.19	0.10
145	Guscio fond.	17	27	162	170	3	250.0	0.19	0.10
146	Guscio fond.	170	162	163	171	3	250.0	0.19	0.10
147	Guscio fond.	171	163	164	172	3	250.0	0.19	0.10
148	Guscio fond.	172	164	165	173	3	250.0	0.19	0.10
149	Guscio fond.	173	165	166	174	3	250.0	0.19	0.10
150	Guscio fond.	174	166	167	175	3	250.0	0.19	0.10
151	Guscio fond.	175	167	168	176	3	250.0	0.19	0.10
152	Guscio fond.	176	168	169	177	3	250.0	0.19	0.10
153	Guscio fond.	18	17	170	178	3	250.0	0.19	0.10
154	Guscio fond.	178	170	171	179	3	250.0	0.19	0.10
155	Guscio fond.	179	171	172	180	3	250.0	0.19	0.10
156	Guscio fond.	180	172	173	181	3	250.0	0.19	0.10
157	Guscio fond.	181	173	174	182	3	250.0	0.19	0.10

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

158	Guscio fond.	182	174	175	183	3	250.0	0.19	0.10
159	Guscio fond.	183	175	176	184	3	250.0	0.19	0.10
160	Guscio fond.	184	176	177	185	3	250.0	0.19	0.10
161	Guscio fond.	186	16	18	178	3	250.0	0.19	0.10
162	Guscio fond.	187	186	178	179	3	250.0	0.19	0.10
163	Guscio fond.	188	187	179	180	3	250.0	0.19	0.10
164	Guscio fond.	189	188	180	181	3	250.0	0.19	0.10
165	Guscio fond.	190	189	181	182	3	250.0	0.19	0.10
166	Guscio fond.	191	190	182	183	3	250.0	0.19	0.10
167	Guscio fond.	192	191	183	184	3	250.0	0.19	0.10
168	Guscio fond.	193	192	184	185	3	250.0	0.19	0.10
169	Guscio fond.	194	14	16	186	3	250.0	0.19	0.10
170	Guscio fond.	195	194	186	187	3	250.0	0.19	0.10
171	Guscio fond.	196	195	187	188	3	250.0	0.19	0.10
172	Guscio fond.	197	196	188	189	3	250.0	0.19	0.10
173	Guscio fond.	198	197	189	190	3	250.0	0.19	0.10
174	Guscio fond.	199	198	190	191	3	250.0	0.19	0.10
175	Guscio fond.	200	199	191	192	3	250.0	0.19	0.10
176	Guscio fond.	201	200	192	193	3	250.0	0.19	0.10
177	Guscio fond.	202	12	14	194	3	250.0	0.19	0.10
178	Guscio fond.	203	202	194	195	3	250.0	0.19	0.10
179	Guscio fond.	204	203	195	196	3	250.0	0.19	0.10
180	Guscio fond.	205	204	196	197	3	250.0	0.19	0.10
181	Guscio fond.	206	205	197	198	3	250.0	0.19	0.10
182	Guscio fond.	207	206	198	199	3	250.0	0.19	0.10
183	Guscio fond.	208	207	199	200	3	250.0	0.19	0.10
184	Guscio fond.	209	208	200	201	3	250.0	0.19	0.10
185	Guscio fond.	210	10	12	202	3	250.0	0.19	0.10
186	Guscio fond.	211	210	202	203	3	250.0	0.19	0.10
187	Guscio fond.	212	211	203	204	3	250.0	0.19	0.10
188	Guscio fond.	213	212	204	205	3	250.0	0.19	0.10
189	Guscio fond.	214	213	205	206	3	250.0	0.19	0.10
190	Guscio fond.	215	214	206	207	3	250.0	0.19	0.10
191	Guscio fond.	216	215	207	208	3	250.0	0.19	0.10
192	Guscio fond.	217	216	208	209	3	250.0	0.19	0.10
193	Guscio fond.	218	8	10	210	3	250.0	0.19	0.10
194	Guscio fond.	219	218	210	211	3	250.0	0.19	0.10
195	Guscio fond.	220	219	211	212	3	250.0	0.19	0.10
196	Guscio fond.	221	220	212	213	3	250.0	0.19	0.10
197	Guscio fond.	222	221	213	214	3	250.0	0.19	0.10
198	Guscio fond.	223	222	214	215	3	250.0	0.19	0.10
199	Guscio fond.	224	223	215	216	3	250.0	0.19	0.10
200	Guscio fond.	225	224	216	217	3	250.0	0.19	0.10
201	Guscio fond.	226	6	8	218	3	250.0	0.19	0.10
202	Guscio fond.	227	226	218	219	3	250.0	0.19	0.10
203	Guscio fond.	228	227	219	220	3	250.0	0.19	0.10
204	Guscio fond.	229	228	220	221	3	250.0	0.19	0.10
205	Guscio fond.	230	229	221	222	3	250.0	0.19	0.10
206	Guscio fond.	231	230	222	223	3	250.0	0.19	0.10
207	Guscio fond.	232	231	223	224	3	250.0	0.19	0.10
208	Guscio fond.	233	232	224	225	3	250.0	0.19	0.10
209	Guscio fond.	234	4	6	226	3	250.0	0.19	0.10
210	Guscio fond.	235	234	226	227	3	250.0	0.19	0.10
211	Guscio fond.	236	235	227	228	3	250.0	0.19	0.10
212	Guscio fond.	237	236	228	229	3	250.0	0.19	0.10
213	Guscio fond.	238	237	229	230	3	250.0	0.19	0.10
214	Guscio fond.	239	238	230	231	3	250.0	0.19	0.10
215	Guscio fond.	240	239	231	232	3	250.0	0.19	0.10
216	Guscio fond.	241	240	232	233	3	250.0	0.19	0.10
217	Guscio fond.	242	1	4	234	3	250.0	0.19	0.10
218	Guscio fond.	243	242	234	235	3	250.0	0.19	0.10
219	Guscio fond.	244	243	235	236	3	250.0	0.19	0.10
220	Guscio fond.	245	244	236	237	3	250.0	0.19	0.10
221	Guscio fond.	246	245	237	238	3	250.0	0.19	0.10
222	Guscio fond.	247	246	238	239	3	250.0	0.19	0.10
223	Guscio fond.	248	247	239	240	3	250.0	0.19	0.10
224	Guscio fond.	249	248	240	241	3	250.0	0.19	0.10
225	Guscio fond.	242	250	2	1	3	250.0	0.19	0.10
226	Guscio fond.	243	251	250	242	3	250.0	0.19	0.10
227	Guscio fond.	244	252	251	243	3	250.0	0.19	0.10
228	Guscio fond.	245	253	252	244	3	250.0	0.19	0.10
229	Guscio fond.	246	254	253	245	3	250.0	0.19	0.10
230	Guscio fond.	247	255	254	246	3	250.0	0.19	0.10



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231	Guscio fond.	248	256	255	247	3	250.0	0.19	0.10
232	Guscio fond.	249	257	256	248	3	250.0	0.19	0.10
233	Guscio fond.	250	258	19	2	3	250.0	0.19	0.10
234	Guscio fond.	251	259	258	250	3	250.0	0.19	0.10
235	Guscio fond.	252	260	259	251	3	250.0	0.19	0.10
236	Guscio fond.	253	261	260	252	3	250.0	0.19	0.10
237	Guscio fond.	254	262	261	253	3	250.0	0.19	0.10
238	Guscio fond.	255	263	262	254	3	250.0	0.19	0.10
239	Guscio fond.	256	264	263	255	3	250.0	0.19	0.10
240	Guscio fond.	257	265	264	256	3	250.0	0.19	0.10
241	Guscio fond.	258	266	28	19	3	250.0	0.19	0.10
242	Guscio fond.	259	267	266	258	3	250.0	0.19	0.10
243	Guscio fond.	260	268	267	259	3	250.0	0.19	0.10
244	Guscio fond.	261	269	268	260	3	250.0	0.19	0.10
245	Guscio fond.	262	270	269	261	3	250.0	0.19	0.10
246	Guscio fond.	263	271	270	262	3	250.0	0.19	0.10
247	Guscio fond.	264	272	271	263	3	250.0	0.19	0.10
248	Guscio fond.	265	273	272	264	3	250.0	0.19	0.10
249	Guscio fond.	266	274	37	28	3	250.0	0.19	0.10
250	Guscio fond.	267	275	274	266	3	250.0	0.19	0.10
251	Guscio fond.	268	276	275	267	3	250.0	0.19	0.10
252	Guscio fond.	269	277	276	268	3	250.0	0.19	0.10
253	Guscio fond.	270	278	277	269	3	250.0	0.19	0.10
254	Guscio fond.	271	279	278	270	3	250.0	0.19	0.10
255	Guscio fond.	272	280	279	271	3	250.0	0.19	0.10
256	Guscio fond.	273	281	280	272	3	250.0	0.19	0.10
257	Guscio fond.	274	282	46	37	3	250.0	0.19	0.10
258	Guscio fond.	275	283	282	274	3	250.0	0.19	0.10
259	Guscio fond.	276	284	283	275	3	250.0	0.19	0.10
260	Guscio fond.	277	285	284	276	3	250.0	0.19	0.10
261	Guscio fond.	278	286	285	277	3	250.0	0.19	0.10
262	Guscio fond.	279	287	286	278	3	250.0	0.19	0.10
263	Guscio fond.	280	288	287	279	3	250.0	0.19	0.10
264	Guscio fond.	281	289	288	280	3	250.0	0.19	0.10
265	Guscio fond.	282	290	55	46	3	250.0	0.19	0.10
266	Guscio fond.	283	291	290	282	3	250.0	0.19	0.10
267	Guscio fond.	284	292	291	283	3	250.0	0.19	0.10
268	Guscio fond.	285	293	292	284	3	250.0	0.19	0.10
269	Guscio fond.	286	294	293	285	3	250.0	0.19	0.10
270	Guscio fond.	287	295	294	286	3	250.0	0.19	0.10
271	Guscio fond.	288	296	295	287	3	250.0	0.19	0.10
272	Guscio fond.	289	297	296	288	3	250.0	0.19	0.10
273	Guscio fond.	290	298	64	55	3	250.0	0.19	0.10
274	Guscio fond.	291	299	298	290	3	250.0	0.19	0.10
275	Guscio fond.	292	300	299	291	3	250.0	0.19	0.10
276	Guscio fond.	293	301	300	292	3	250.0	0.19	0.10
277	Guscio fond.	294	302	301	293	3	250.0	0.19	0.10
278	Guscio fond.	295	303	302	294	3	250.0	0.19	0.10
279	Guscio fond.	296	304	303	295	3	250.0	0.19	0.10
280	Guscio fond.	297	305	304	296	3	250.0	0.19	0.10
281	Guscio fond.	298	306	73	64	3	250.0	0.19	0.10
282	Guscio fond.	299	307	306	298	3	250.0	0.19	0.10
283	Guscio fond.	300	308	307	299	3	250.0	0.19	0.10
284	Guscio fond.	301	309	308	300	3	250.0	0.19	0.10
285	Guscio fond.	302	310	309	301	3	250.0	0.19	0.10
286	Guscio fond.	303	311	310	302	3	250.0	0.19	0.10
287	Guscio fond.	304	312	311	303	3	250.0	0.19	0.10
288	Guscio fond.	305	313	312	304	3	250.0	0.19	0.10
289	Guscio fond.	73	306	314	74	3	250.0	0.19	0.10
290	Guscio fond.	306	307	315	314	3	250.0	0.19	0.10
291	Guscio fond.	307	308	316	315	3	250.0	0.19	0.10
292	Guscio fond.	308	309	317	316	3	250.0	0.19	0.10
293	Guscio fond.	309	310	318	317	3	250.0	0.19	0.10
294	Guscio fond.	310	311	319	318	3	250.0	0.19	0.10
295	Guscio fond.	311	312	320	319	3	250.0	0.19	0.10
296	Guscio fond.	312	313	321	320	3	250.0	0.19	0.10
297	Guscio fond.	74	314	322	75	3	250.0	0.19	0.10
298	Guscio fond.	314	315	323	322	3	250.0	0.19	0.10
299	Guscio fond.	315	316	324	323	3	250.0	0.19	0.10
300	Guscio fond.	316	317	325	324	3	250.0	0.19	0.10
301	Guscio fond.	317	318	326	325	3	250.0	0.19	0.10
302	Guscio fond.	318	319	327	326	3	250.0	0.19	0.10
303	Guscio fond.	319	320	328	327	3	250.0	0.19	0.10



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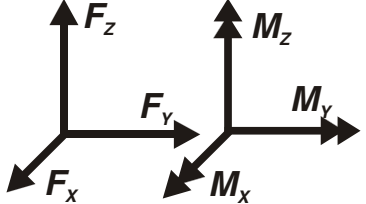
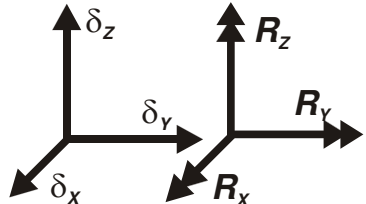
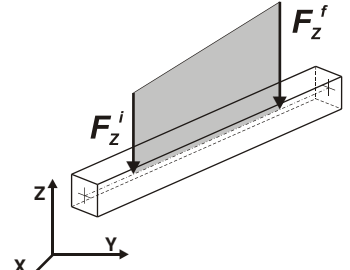
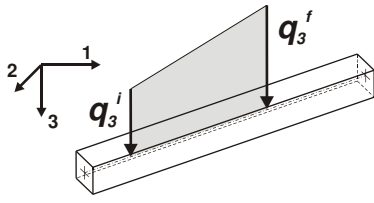
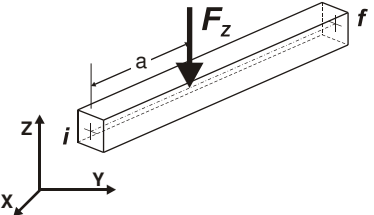
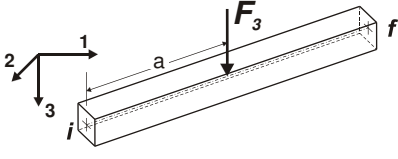
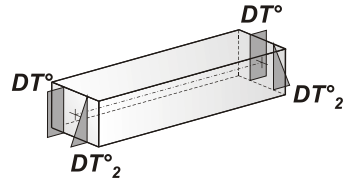
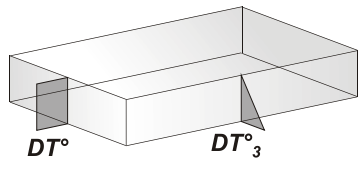
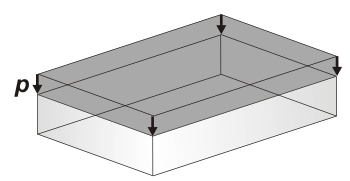
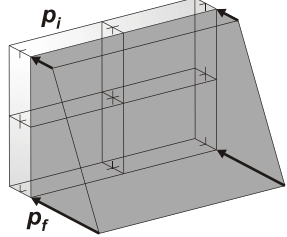
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306	Guscio fond.	322	323	331	330	3	250.0	0.19	0.10
307	Guscio fond.	323	324	332	331	3	250.0	0.19	0.10
308	Guscio fond.	324	325	333	332	3	250.0	0.19	0.10
309	Guscio fond.	325	326	334	333	3	250.0	0.19	0.10
310	Guscio fond.	326	327	335	334	3	250.0	0.19	0.10
311	Guscio fond.	327	328	336	335	3	250.0	0.19	0.10
312	Guscio fond.	328	329	337	336	3	250.0	0.19	0.10
313	Guscio fond.	76	330	82	77	3	250.0	0.19	0.10
314	Guscio fond.	330	331	84	82	3	250.0	0.19	0.10
315	Guscio fond.	331	332	86	84	3	250.0	0.19	0.10
316	Guscio fond.	332	333	88	86	3	250.0	0.19	0.10
317	Guscio fond.	333	334	90	88	3	250.0	0.19	0.10
318	Guscio fond.	334	335	92	90	3	250.0	0.19	0.10
319	Guscio fond.	335	336	94	92	3	250.0	0.19	0.10
320	Guscio fond.	336	337	96	94	3	250.0	0.19	0.10

## MODELLAZIONE DELLE AZIONI

### LEGENDA TABELLA DATI AZIONI

Il programma consente l'uso di diverse tipologie di carico (azioni). Le azioni utilizzate nella modellazione sono individuate da una sigla identificativa ed un codice numerico (gli elementi strutturali richiamano quest'ultimo nella propria descrizione). Per ogni azione applicata alla struttura viene di riportato il codice, il tipo e la sigla identificativa. Le tabelle successive dettagliano i valori caratteristici di ogni azione in relazione al tipo. Le tabelle riportano infatti i seguenti dati in relazione al tipo:

1	<b>carico concentrato nodale</b> 6 dati (forza $F_x$ , $F_y$ , $F_z$ , momento $M_x$ , $M_y$ , $M_z$ )
2	<b>spostamento nodale impresso</b> 6 dati (spostamento $T_x$ , $T_y$ , $T_z$ , rotazione $R_x$ , $R_y$ , $R_z$ )
3	<b>carico distribuito globale su elemento tipo trave</b> 7 dati ( $f_x$ , $f_y$ , $f_z$ , $m_x$ , $m_y$ , $m_z$ , ascissa di inizio carico) 7 dati ( $f_x$ , $f_y$ , $f_z$ , $m_x$ , $m_y$ , $m_z$ , ascissa di fine carico)
4	<b>carico distribuito locale su elemento tipo trave</b> 7 dati ( $f_1$ , $f_2$ , $f_3$ , $m_1$ , $m_2$ , $m_3$ , ascissa di inizio carico) 7 dati ( $f_1$ , $f_2$ , $f_3$ , $m_1$ , $m_2$ , $m_3$ , ascissa di fine carico)
5	<b>carico concentrato globale su elemento tipo trave</b> 7 dati ( $F_x$ , $F_y$ , $F_z$ , $M_x$ , $M_y$ , $M_z$ , ascissa di carico)
6	<b>carico concentrato locale su elemento tipo trave</b> 7 dati ( $F_1$ , $F_2$ , $F_3$ , $M_1$ , $M_2$ , $M_3$ , ascissa di carico)
7	<b>variazione termica applicata ad elemento tipo trave</b> 7 dati (variazioni termiche: uniforme, media e differenza in altezza e larghezza al nodo iniziale e finale)
8	<b>carico di pressione uniforme su elemento tipo piastra</b> 1 dato (pressione)
9	<b>carico di pressione variabile su elemento tipo piastra</b> 4 dati (pressione, quota, pressione, quota)
10	<b>variazione termica applicata ad elemento tipo piastra</b> 2 dati (variazioni termiche: media e differenza nello spessore)
11	<b>carico variabile generale su elementi tipo trave e piastra</b> 1 dato descrizione della tipologia 4 dati per segmento (posizione, valore, posizione, valore) la tipologia precisa l'ascissa di definizione, la direzione del carico, la modalità di carico e la larghezza d'influenza per gli elementi tipo trave
12	<b>gruppo di carichi con impronta su piastra</b> 9 dati (numero di ripetizioni in direzione X e Y, valore di ciascun carico, posizione centrale del primo, dimensioni dell'impronta, interasse tra i carichi)

 <p>Carico concentrato nodale</p>	 <p>Spostamento impresso</p>
 <p>Carico distribuito globale</p>	 <p>Carico distribuito locale</p>
 <p>Carico concentrato globale</p>	 <p>Carico concentrato locale</p>
 <p>Carico termico 2D</p>	 <p>Carico termico 3D</p>
 <p>Carico pressione uniforme</p>	 <p>Carico pressione variabile</p>

**Tipo carico concentrato nodale**

Id	Tipo	Fx	Fy	Fz	Mx	My	Mz
		daN	daN	daN	daN cm	daN cm	daN cm
9	CARICHI IN FONDAZIONE-CN:Fx= 4.740e+04 Fy= 4.740e+04 Fz=-7.633e+05 Mx= 5.809e+08 My= 5.809e+08 Mz=-1.325e+08	4.740e+04	4.740e+04	-7.633e+05	5.809e+08	5.809e+08	-1.325e+08

## SCHEMATIZZAZIONE DEI CASI DI CARICO

### LEGENDA TABELLA CASI DI CARICO

Il programma consente l'applicazione di diverse tipologie di casi di carico.  
 Sono previsti i seguenti 11 tipi di casi di carico:

	<b>Sigla</b>	<b>Tipo</b>	<b>Descrizione</b>
<b>1</b>	<b>Ggk</b>	A	caso di carico comprensivo del peso proprio struttura
<b>2</b>	<b>Gk</b>	NA	caso di carico con azioni permanenti
<b>3</b>	<b>Qk</b>	NA	caso di carico con azioni variabili
<b>4</b>	<b>Gsk</b>	A	caso di carico comprensivo dei carichi permanenti sui solai e sulle coperture
<b>5</b>	<b>Qsk</b>	A	caso di carico comprensivo dei carichi variabili sui solai
<b>6</b>	<b>Qnk</b>	A	caso di carico comprensivo dei carichi di neve sulle coperture
<b>7</b>	<b>Qtk</b>	SA	caso di carico comprensivo di una variazione termica agente sulla struttura
<b>8</b>	<b>Qvk</b>	NA	caso di carico comprensivo di azioni da vento sulla struttura
<b>9</b>	<b>Esk</b>	SA	caso di carico sismico con analisi statica equivalente
<b>10</b>	<b>Edk</b>	SA	caso di carico sismico con analisi dinamica
<b>11</b>	<b>Etk</b>	NA	caso di carico comprensivo di azioni derivanti dall' incremento di spinta delle terre in condizione sismica
<b>12</b>	<b>Pk</b>	NA	caso di carico comprensivo di azioni derivanti da coazioni, cedimenti e precompressioni

Sono di tipo automatico A (ossia non prevedono introduzione dati da parte dell'utente) i seguenti casi di carico: 1-Ggk; 4-Gsk; 5-Qsk; 6-Qnk.

Sono di tipo semi-automatico SA (ossia prevedono una minima introduzione dati da parte dell'utente) i seguenti casi di carico: 7-Qtk, in quanto richiede solo il valore della variazione termica;

9-Esk e 10-Edk, in quanto richiedono il valore dell'angolo di ingresso del sisma e l'individuazione dei casi di carico partecipanti alla definizione delle masse.

Sono di tipo non automatico NA ossia prevedono la diretta applicazione di carichi generici agli elementi strutturali (si veda il precedente punto Modellazione delle Azioni) i restanti casi di carico.

Nella tabella successiva vengono riportati i casi di carico agenti sulla struttura, con l'indicazione dei dati relativi al caso di carico stesso: *Numero Tipo e Sigla identificativa, Valore di riferimento del caso di carico (se previsto).*

In successione, per i casi di carico non automatici, viene riportato l'elenco di nodi ed elementi direttamente caricati con la sigla identificativa del carico.

Per i casi di carico di tipo sismico (9-Esk e 10-Edk), viene riportata la tabella di definizione delle masse: per ogni caso di carico partecipante alla definizione delle masse viene indicata la relativa aliquota (partecipazione) considerata. Si precisa che per i caso di carico 5-Qsk e 6-Qnk la partecipazione è prevista localmente per ogni elemento solaio o copertura presente nel modello (si confronti il valore Sksol nel capitolo relativo agli elementi solaio) e pertanto la loro partecipazione è di norma pari a uno.

<b>CDC</b>	<b>Tipo</b>	<b>Sigla Id</b>	<b>Note</b>
1	Ggk	CDC=Ggk (peso proprio della struttura)	
2	Esk	CDC=Es (statico SLU) alfa=0.0 (ecc. +)	partecipazione:1.00 per 1 CDC=Ggk (peso proprio della struttura)
			partecipazione:1.00 per 10 CDC=G1k (permanente generico) .....
3	Esk	CDC=Es (statico SLU) alfa=0.0 (ecc. -)	come precedente CDC sismico
4	Esk	CDC=Es (statico SLU) alfa=90.00 (ecc. +)	come precedente CDC sismico
5	Esk	CDC=Es (statico SLU) alfa=90.00 (ecc. -)	come precedente CDC sismico
6	Esk	CDC=Es (statico SLD) alfa=0.0 (ecc. +)	come precedente CDC sismico
7	Esk	CDC=Es (statico SLD) alfa=0.0 (ecc. -)	come precedente CDC sismico
8	Esk	CDC=Es (statico SLD) alfa=90.00 (ecc. +)	come precedente CDC sismico
9	Esk	CDC=Es (statico SLD) alfa=90.00 (ecc. -)	come precedente CDC sismico
10	Gk	CDC=G1k (permanente generico) .....	Nodo: 338 Azione : CARICHI IN FONDAZIONE-CN:Fx= 4.740e+04 Fy= 4.740e+04 Fz=-7.633e+05 Mx= 5.809e+08 My= 5.809e+08 Mz=-1.325e+08

## DEFINIZIONE DELLE COMBINAZIONI

### LEGENDA TABELLA COMBINAZIONI DI CARICO

Il programma combina i diversi tipi di casi di carico (CDC) secondo le regole previste dalla normativa vigente.

Le combinazioni previste sono destinate al controllo di sicurezza della struttura ed alla verifica degli spostamenti e delle sollecitazioni.

La prima tabella delle combinazioni riportata di seguito comprende le seguenti informazioni: Numero, Tipo, Sigla identificativa. Una seconda tabella riporta il peso nella combinazione assunto per ogni caso di carico.

Ai fini delle verifiche degli stati limite si definiscono le seguenti combinazioni delle azioni:

**Combinazione fondamentale SLU**

$$\gamma G1 \cdot G1 + \gamma G2 \cdot G2 + \gamma P \cdot P + \gamma Q1 \cdot Qk1 + \gamma Q2 \cdot \psi 02 \cdot Qk2 + \gamma Q3 \cdot \psi 03 \cdot Qk3 + \dots$$

**Combinazione caratteristica (rara) SLE**

$$G1 + G2 + P + Qk1 + \psi 02 \cdot Qk2 + \psi 03 \cdot Qk3 + \dots$$

**Combinazione frequente SLE**

$$G1 + G2 + P + \psi 11 \cdot Qk1 + \psi 22 \cdot Qk2 + \psi 23 \cdot Qk3 + \dots$$

**Combinazione quasi permanente SLE**

$$G1 + G2 + P + \psi 21 \cdot Qk1 + \psi 22 \cdot Qk2 + \psi 23 \cdot Qk3 + \dots$$

**Combinazione sismica, impiegata per gli stati limite ultimi e di esercizio connessi all'azione sismica E**

$$E + G1 + G2 + P + \psi 21 \cdot Qk1 + \psi 22 \cdot Qk2 + \dots$$

**Combinazione eccezionale, impiegata per gli stati limite connessi alle azioni eccezionali**

$$G1 + G2 + Ad + P + \psi 21 \cdot Qk1 + \psi 22 \cdot Qk2 + \dots$$

Dove:

NTC 2018 Tabella 2.5.I

Destinazione d'uso/azione	$\psi 0$	$\psi 1$	$\psi 2$
Categoria A residenziali	0,70	0,50	0,30
Categoria B uffici	0,70	0,50	0,30
Categoria C ambienti suscettibili di affollamento	0,70	0,70	0,60
Categoria D ambienti ad uso commerciale	0,70	0,70	0,60
Categoria E biblioteche, archivi, magazzini, ...	1,00	0,90	0,80
Categoria F Rimesse e parcheggi (autoveicoli $\leq 30kN$ )	0,70	0,70	0,60
Categoria G Rimesse e parcheggi (autoveicoli $> 30kN$ )	0,70	0,50	0,30
Categoria H Coperture	0,00	0,00	0,00
Vento	0,60	0,20	0,00
Neve a quota $\leq 1000 m$	0,50	0,20	0,00
Neve a quota $> 1000 m$	0,70	0,50	0,20
Variazioni Termiche	0,60	0,50	0,00

Nelle verifiche possono essere adottati in alternativa due diversi approcci progettuali:

- per l'approccio 1 si considerano due diverse combinazioni di gruppi di coefficienti di sicurezza parziali per le azioni, per i materiali e per la resistenza globale (combinazione 1 con coefficienti A1 e combinazione 2 con coefficienti A2),
- per l'approccio 2 si definisce un'unica combinazione per le azioni, per la resistenza dei materiali e per la resistenza globale (con coefficienti A1).

NTC 2018 Tabella 2.6.I

		Coefficiente $\gamma f$	EQU	A1	A2
Carichi permanenti	Favorevoli	$\gamma G1$	0,9	1,0	1,0
	Sfavorevoli		1,1	1,3	1,0
Carichi permanenti non strutturali (Non compiutamente definiti)	Favorevoli	$\gamma G2$	0,8	0,8	0,8
	Sfavorevoli		1,5	1,5	1,3
Carichi variabili	Favorevoli	$\gamma Qi$	0,0	0,0	0,0
	Sfavorevoli		1,5	1,5	1,3

Cmb	Tipo	Sigla Id	effetto P-delta
1	SLU	Comb. SLU A1 1	
2	SLU	Comb. SLU A1 2	
3	SLU (Terr. G)	Comb. SLU TIPO EQU 3	

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

<b>Cmb</b>	<b>Tipo</b>	<b>Sigla Id</b>	<b>effetto P-delta</b>
4	SLU (Terr. G)	Comb. SLU TIPO EQU 4	
5	SLU	Comb. SLU A1 (SLV sism.) 5	
6	SLU	Comb. SLU A1 (SLV sism.) 6	
7	SLU	Comb. SLU A1 (SLV sism.) 7	
8	SLU	Comb. SLU A1 (SLV sism.) 8	
9	SLU	Comb. SLU A1 (SLV sism.) 9	
10	SLU	Comb. SLU A1 (SLV sism.) 10	
11	SLU	Comb. SLU A1 (SLV sism.) 11	
12	SLU	Comb. SLU A1 (SLV sism.) 12	
13	SLU	Comb. SLU A1 (SLV sism.) 13	
14	SLU	Comb. SLU A1 (SLV sism.) 14	
15	SLU	Comb. SLU A1 (SLV sism.) 15	
16	SLU	Comb. SLU A1 (SLV sism.) 16	
17	SLU	Comb. SLU A1 (SLV sism.) 17	
18	SLU	Comb. SLU A1 (SLV sism.) 18	
19	SLU	Comb. SLU A1 (SLV sism.) 19	
20	SLU	Comb. SLU A1 (SLV sism.) 20	
21	SLU	Comb. SLU A1 (SLV sism.) 21	
22	SLU	Comb. SLU A1 (SLV sism.) 22	
23	SLU	Comb. SLU A1 (SLV sism.) 23	
24	SLU	Comb. SLU A1 (SLV sism.) 24	
25	SLU	Comb. SLU A1 (SLV sism.) 25	
26	SLU	Comb. SLU A1 (SLV sism.) 26	
27	SLU	Comb. SLU A1 (SLV sism.) 27	
28	SLU	Comb. SLU A1 (SLV sism.) 28	
29	SLU	Comb. SLU A1 (SLV sism.) 29	
30	SLU	Comb. SLU A1 (SLV sism.) 30	
31	SLU	Comb. SLU A1 (SLV sism.) 31	
32	SLU	Comb. SLU A1 (SLV sism.) 32	
33	SLU	Comb. SLU A1 (SLV sism.) 33	
34	SLU	Comb. SLU A1 (SLV sism.) 34	
35	SLU	Comb. SLU A1 (SLV sism.) 35	
36	SLU	Comb. SLU A1 (SLV sism.) 36	
37	SLD(sis)	Comb. SLE (SLD Danno sism.) 37	
38	SLD(sis)	Comb. SLE (SLD Danno sism.) 38	
39	SLD(sis)	Comb. SLE (SLD Danno sism.) 39	
40	SLD(sis)	Comb. SLE (SLD Danno sism.) 40	
41	SLD(sis)	Comb. SLE (SLD Danno sism.) 41	
42	SLD(sis)	Comb. SLE (SLD Danno sism.) 42	
43	SLD(sis)	Comb. SLE (SLD Danno sism.) 43	
44	SLD(sis)	Comb. SLE (SLD Danno sism.) 44	
45	SLD(sis)	Comb. SLE (SLD Danno sism.) 45	
46	SLD(sis)	Comb. SLE (SLD Danno sism.) 46	
47	SLD(sis)	Comb. SLE (SLD Danno sism.) 47	
48	SLD(sis)	Comb. SLE (SLD Danno sism.) 48	
49	SLD(sis)	Comb. SLE (SLD Danno sism.) 49	
50	SLD(sis)	Comb. SLE (SLD Danno sism.) 50	
51	SLD(sis)	Comb. SLE (SLD Danno sism.) 51	
52	SLD(sis)	Comb. SLE (SLD Danno sism.) 52	
53	SLD(sis)	Comb. SLE (SLD Danno sism.) 53	
54	SLD(sis)	Comb. SLE (SLD Danno sism.) 54	
55	SLD(sis)	Comb. SLE (SLD Danno sism.) 55	
56	SLD(sis)	Comb. SLE (SLD Danno sism.) 56	
57	SLD(sis)	Comb. SLE (SLD Danno sism.) 57	
58	SLD(sis)	Comb. SLE (SLD Danno sism.) 58	
59	SLD(sis)	Comb. SLE (SLD Danno sism.) 59	
60	SLD(sis)	Comb. SLE (SLD Danno sism.) 60	
61	SLD(sis)	Comb. SLE (SLD Danno sism.) 61	
62	SLD(sis)	Comb. SLE (SLD Danno sism.) 62	
63	SLD(sis)	Comb. SLE (SLD Danno sism.) 63	
64	SLD(sis)	Comb. SLE (SLD Danno sism.) 64	
65	SLD(sis)	Comb. SLE (SLD Danno sism.) 65	
66	SLD(sis)	Comb. SLE (SLD Danno sism.) 66	
67	SLD(sis)	Comb. SLE (SLD Danno sism.) 67	
68	SLD(sis)	Comb. SLE (SLD Danno sism.) 68	
69	SLE(r)	Comb. SLE(rara) 69	

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

Cmb	CDC 1/15...	CDC 2/16...	CDC 3/17...	CDC 4/18...	CDC 5/19...	CDC 6/20...	CDC 7/21...	CDC 8/22...	CDC 9/23...	CDC 10/24...	CDC 11/25...	CDC 12/26...	CDC 13/27...	CDC 14/28...
1	1.30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.30				
2	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00				
3	1.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.10				
4	0.90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.90				
5	1.00	-1.00	0.0	-0.30	0.0	0.0	0.0	0.0	0.0	1.00				
6	1.00	-1.00	0.0	0.30	0.0	0.0	0.0	0.0	0.0	1.00				
7	1.00	1.00	0.0	-0.30	0.0	0.0	0.0	0.0	0.0	1.00				
8	1.00	1.00	0.0	0.30	0.0	0.0	0.0	0.0	0.0	1.00				
9	1.00	-1.00	0.0	0.0	-0.30	0.0	0.0	0.0	0.0	1.00				
10	1.00	-1.00	0.0	0.0	0.30	0.0	0.0	0.0	0.0	1.00				
11	1.00	1.00	0.0	0.0	-0.30	0.0	0.0	0.0	0.0	1.00				
12	1.00	1.00	0.0	0.0	0.30	0.0	0.0	0.0	0.0	1.00				
13	1.00	0.0	-1.00	-0.30	0.0	0.0	0.0	0.0	0.0	1.00				
14	1.00	0.0	-1.00	0.30	0.0	0.0	0.0	0.0	0.0	1.00				
15	1.00	0.0	1.00	-0.30	0.0	0.0	0.0	0.0	0.0	1.00				
16	1.00	0.0	1.00	0.30	0.0	0.0	0.0	0.0	0.0	1.00				
17	1.00	0.0	-1.00	0.0	-0.30	0.0	0.0	0.0	0.0	1.00				
18	1.00	0.0	-1.00	0.0	0.30	0.0	0.0	0.0	0.0	1.00				
19	1.00	0.0	1.00	0.0	-0.30	0.0	0.0	0.0	0.0	1.00				
20	1.00	0.0	1.00	0.0	0.30	0.0	0.0	0.0	0.0	1.00				
21	1.00	-0.30	0.0	-1.00	0.0	0.0	0.0	0.0	0.0	1.00				
22	1.00	-0.30	0.0	1.00	0.0	0.0	0.0	0.0	0.0	1.00				
23	1.00	0.30	0.0	-1.00	0.0	0.0	0.0	0.0	0.0	1.00				
24	1.00	0.30	0.0	1.00	0.0	0.0	0.0	0.0	0.0	1.00				
25	1.00	0.0	-0.30	-1.00	0.0	0.0	0.0	0.0	0.0	1.00				
26	1.00	0.0	-0.30	1.00	0.0	0.0	0.0	0.0	0.0	1.00				
27	1.00	0.0	0.30	-1.00	0.0	0.0	0.0	0.0	0.0	1.00				
28	1.00	0.0	0.30	1.00	0.0	0.0	0.0	0.0	0.0	1.00				
29	1.00	-0.30	0.0	0.0	-1.00	0.0	0.0	0.0	0.0	1.00				
30	1.00	-0.30	0.0	0.0	1.00	0.0	0.0	0.0	0.0	1.00				
31	1.00	0.30	0.0	0.0	-1.00	0.0	0.0	0.0	0.0	1.00				
32	1.00	0.30	0.0	0.0	1.00	0.0	0.0	0.0	0.0	1.00				
33	1.00	0.0	-0.30	0.0	-1.00	0.0	0.0	0.0	0.0	1.00				
34	1.00	0.0	-0.30	0.0	1.00	0.0	0.0	0.0	0.0	1.00				
35	1.00	0.0	0.30	0.0	-1.00	0.0	0.0	0.0	0.0	1.00				
36	1.00	0.0	0.30	0.0	1.00	0.0	0.0	0.0	0.0	1.00				
37	1.00	0.0	0.0	0.0	0.0	-1.00	0.0	-0.30	0.0	1.00				
38	1.00	0.0	0.0	0.0	0.0	-1.00	0.0	0.30	0.0	1.00				
39	1.00	0.0	0.0	0.0	0.0	1.00	0.0	-0.30	0.0	1.00				
40	1.00	0.0	0.0	0.0	0.0	1.00	0.0	0.30	0.0	1.00				
41	1.00	0.0	0.0	0.0	0.0	-1.00	0.0	0.0	-0.30	1.00				
42	1.00	0.0	0.0	0.0	0.0	-1.00	0.0	0.0	0.30	1.00				
43	1.00	0.0	0.0	0.0	0.0	1.00	0.0	0.0	-0.30	1.00				
44	1.00	0.0	0.0	0.0	0.0	1.00	0.0	0.0	0.30	1.00				
45	1.00	0.0	0.0	0.0	0.0	0.0	-1.00	-0.30	0.0	1.00				
46	1.00	0.0	0.0	0.0	0.0	0.0	-1.00	0.30	0.0	1.00				
47	1.00	0.0	0.0	0.0	0.0	0.0	1.00	-0.30	0.0	1.00				
48	1.00	0.0	0.0	0.0	0.0	0.0	1.00	0.30	0.0	1.00				
49	1.00	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	-0.30	1.00				
50	1.00	0.0	0.0	0.0	0.0	0.0	-1.00	0.0	0.30	1.00				
51	1.00	0.0	0.0	0.0	0.0	0.0	1.00	0.0	-0.30	1.00				
52	1.00	0.0	0.0	0.0	0.0	0.0	1.00	0.0	0.30	1.00				
53	1.00	0.0	0.0	0.0	0.0	-0.30	0.0	-1.00	0.0	1.00				
54	1.00	0.0	0.0	0.0	0.0	-0.30	0.0	1.00	0.0	1.00				
55	1.00	0.0	0.0	0.0	0.0	0.30	0.0	-1.00	0.0	1.00				
56	1.00	0.0	0.0	0.0	0.0	0.30	0.0	1.00	0.0	1.00				
57	1.00	0.0	0.0	0.0	0.0	0.0	-0.30	-1.00	0.0	1.00				
58	1.00	0.0	0.0	0.0	0.0	0.0	-0.30	1.00	0.0	1.00				
59	1.00	0.0	0.0	0.0	0.0	0.0	0.30	-1.00	0.0	1.00				
60	1.00	0.0	0.0	0.0	0.0	0.0	0.30	1.00	0.0	1.00				
61	1.00	0.0	0.0	0.0	0.0	-0.30	0.0	0.0	-1.00	1.00				
62	1.00	0.0	0.0	0.0	0.0	-0.30	0.0	0.0	1.00	1.00				
63	1.00	0.0	0.0	0.0	0.0	0.30	0.0	0.0	-1.00	1.00				
64	1.00	0.0	0.0	0.0	0.0	0.30	0.0	0.0	1.00	1.00				
65	1.00	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	-1.00	1.00				
66	1.00	0.0	0.0	0.0	0.0	0.0	-0.30	0.0	1.00	1.00				
67	1.00	0.0	0.0	0.0	0.0	0.0	0.30	0.0	-1.00	1.00				
68	1.00	0.0	0.0	0.0	0.0	0.0	0.30	0.0	1.00	1.00				
69	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00				





## AZIONE SISMICA

### VALUTAZIONE DELL' AZIONE SISMICA

L'azione sismica sulle costruzioni è valutata a partire dalla "pericolosità sismica di base", in condizioni ideali di sito di riferimento rigido con superficie topografica orizzontale.

Allo stato attuale, la pericolosità sismica su reticolo di riferimento nell'intervallo di riferimento è fornita dai dati pubblicati sul sito <http://esse1.mi.ingv.it/>. Per punti non coincidenti con il reticolo di riferimento e periodi di ritorno non contemplati direttamente si opera come indicato nell' allegato alle NTC (rispettivamente media pesata e interpolazione).

L' azione sismica viene definita in relazione ad un periodo di riferimento  $V_r$  che si ricava, per ciascun tipo di costruzione, moltiplicandone la vita nominale per il coefficiente d'uso (vedi tabella Parametri della struttura). Fissato il periodo di riferimento  $V_r$  e la probabilità di superamento  $P_{ver}$  associata a ciascuno degli stati limite considerati, si ottiene il periodo di ritorno  $T_r$  e i relativi parametri di pericolosità sismica (vedi tabella successiva):

ag: accelerazione orizzontale massima del terreno;

Fo: valore massimo del fattore di amplificazione dello spettro in accelerazione orizzontale;

T\*c: periodo di inizio del tratto a velocità costante dello spettro in accelerazione orizzontale;

Parametri della struttura					
Classe d'uso	Vita $V_n$ [anni]	Coeff. Uso	Periodo $V_r$ [anni]	Tipo di suolo	Categoria topografica
IV	50.0	1.0	50.0	B	T1

Individuati su reticolo di riferimento i parametri di pericolosità sismica si valutano i parametri spettrali riportati in tabella:

S è il coefficiente che tiene conto della categoria di sottosuolo e delle condizioni topografiche mediante la relazione seguente  $S = S_s \cdot S_t$  (3.2.3)

Fo è il fattore che quantifica l'amplificazione spettrale massima, su sito di riferimento rigido orizzontale

Fv è il fattore che quantifica l'amplificazione spettrale massima verticale, in termini di accelerazione orizzontale massima del terreno ag su sito di riferimento rigido orizzontale

Tb è il periodo corrispondente all'inizio del tratto dello spettro ad accelerazione costante.

Tc è il periodo corrispondente all'inizio del tratto dello spettro a velocità costante.

Td è il periodo corrispondente all'inizio del tratto dello spettro a spostamento costante.

Id nodo	Longitudine	Latitudine	Distanza
			Km
Loc.	17.856	40.525	
34365	17.830	40.501	3.425
34366	17.896	40.499	4.460
34144	17.899	40.549	4.521
34143	17.833	40.551	3.454

SL	P <sub>ver</sub>	T <sub>r</sub>	ag	Fo	T*c
		Anni	g		sec
SLO	81.0	30.0	0.015	2.330	0.160
SLD	63.0	50.0	0.020	2.360	0.230
SLV	10.0	475.0	0.048	2.530	0.460
SLC	5.0	975.0	0.058	2.650	0.510

SL	ag	S	Fo	Fv	Tb	Tc	Td
	g				sec	sec	sec
SLO	0.015	1.200	2.330	0.385	0.085	0.254	1.660
SLD	0.020	1.200	2.360	0.448	0.113	0.339	1.679
SLV	0.048	1.200	2.530	0.746	0.197	0.591	1.791
SLC	0.058	1.200	2.650	0.859	0.214	0.642	1.830

## RISULTATI ANALISI SISMICHE

### LEGENDA TABELLA ANALISI SISMICHE

Il programma consente l'analisi di diverse configurazioni sismiche.

Sono previsti, infatti, i seguenti casi di carico:

- |                |  |
|----------------|--|
| <b>9. Esk</b>  | caso di carico sismico con analisi statica equivalente |
| <b>10. Edk</b> | caso di carico sismico con analisi dinamica            |

Ciascun caso di carico è caratterizzato da un angolo di ingresso e da una configurazione di masse determinante la forza sismica complessiva (si rimanda al capitolo relativo ai casi di carico per chiarimenti inerenti questo aspetto).

Nella colonna Note, in funzione della norma in uso sono riportati i parametri fondamentali che caratterizzano l'azione sismica: in particolare possono essere presenti i seguenti valori:

<b>Angolo di ingresso</b>	Angolo di ingresso dell'azione sismica orizzontale
<b>Fattore di importanza</b>	Fattore di importanza dell'edificio, in base alla categoria di appartenenza
<b>Zona sismica</b>	Zona sismica
<b>Accelerazione ag</b>	Accelerazione orizzontale massima sul suolo
<b>Categoria suolo</b>	Categoria di profilo stratigrafico del suolo di fondazione
<b>Fattore q</b>	Fattore di struttura/di comportamento. Dipendente dalla tipologia strutturale
<b>Fattore di sito S</b>	Fattore dipendente dalla stratigrafia e dal profilo topografico
<b>Classe di duttilità CD</b>	Classe di duttilità della struttura – "A" duttilità alta, "B" duttilità bassa
<b>Fattore riduz. SLD</b>	Fattore di riduzione dello spettro elastico per lo stato limite di danno
<b>Periodo proprio T1</b>	Periodo proprio di vibrazione della struttura
<b>Coefficiente Lambda</b>	Coefficiente dipendente dal periodo proprio T1 e dal numero di piani della struttura
<b>Ordinata spettro Sd(T1)</b>	Valore delle ordinate dello spettro di progetto per lo stato limite ultimo, componente orizzontale (verticale Svd)
<b>Ordinata spettro Se(T1)</b>	Valore delle ordinate dello spettro elastico ridotta del fattore SLD per lo stato limite di danno, componente orizzontale (verticale Sve)
<b>Ordinata spettro S (Tb-Tc)</b>	Valore dell' ordinata dello spettro in uso nel tratto costante
<b>numero di modi considerati</b>	Numero di modi di vibrare della struttura considerati nell'analisi dinamica

Per ciascun caso di carico sismico viene riportato l'insieme di dati sotto riportati (le masse sono espresse in unità di forza):

- a) **analisi sismica statica equivalente:**
  - quota, posizione del centro di applicazione e azione orizzontale risultante, posizione del baricentro delle rigidezze, rapporto r/Ls (per strutture a nucleo), indici di regolarità e/r secondo EC8 4.2.3.2
  - azione sismica complessiva
- b) **analisi sismica dinamica con spettro di risposta:**
  - quota, posizione del centro di massa e massa risultante, posizione del baricentro delle rigidezze, rapporto r/Ls (per strutture a nucleo), indici di regolarità e/r secondo EC8 4.2.3.2
  - frequenza, periodo, accelerazione spettrale, massa eccitata nelle tre direzioni globali per tutti i modi
  - massa complessiva ed aliquota di massa complessiva eccitata.

Per ciascuna combinazione sismica definita SLD o SLO viene riportato il livello di deformazione  $\epsilon_T$  (dr) degli elementi strutturali verticali. Per semplicità di consultazione il livello è espresso anche in unità  $1000 \cdot \epsilon_T/h$  da confrontare direttamente con i valori forniti nella norma (es. 5 per edifici con tamponamenti collegati rigidamente alla struttura, 10.0 per edifici con tamponamenti collegati elasticamente, 3 per edifici in muratura ordinaria, 4 per edifici in muratura armata).

Qualora si applichi il D.M. 96 (vedi NOTA sul capitolo "normativa di riferimento") l'analisi sismica dinamica può essere comprensiva di sollecitazione verticale contemporanea a quella orizzontale, nel qual caso è effettuata una sovrapposizione degli effetti in ragione della radice dei quadrati degli effetti stessi. Per ciascuna combinazione sismica - analisi effettuate con il D.M. 96 (vedi NOTA sul capitolo "normativa di riferimento") - viene riportato il livello di deformazione  $\epsilon_T$ ,  $\epsilon_P$  e  $\epsilon_D$  degli elementi strutturali verticali. Per semplicità di consultazione il livello è espresso in unità  $1000 \cdot \epsilon_T/h$  da confrontare direttamente con il valore 2 o 4 per la verifica.

Per gli edifici sismicamente isolati si riportano di seguito le verifiche condotte sui dispositivi di isolamento. Le verifiche sono effettuate secondo la circolare n.7/2019 del C.S.LL.PP nelle combinazioni in SLC come previsto dal DM 17-01-2018. Per ogni combinazione è riportato il codice di verifica ed i valori utilizzati per la verifica: spostamento dE, area ridotta e dimensione A2, azione verticale, deformazioni di taglio dell'elastomero e tensioni nell'acciaio.

Qualora si applichi l'Ordinanza 3274 e s.m.i. le verifiche sono eseguite in accordo con l'allegato 10.A.

In particolare la tabella, per ogni combinazione di calcolo, riporta:

<b>Nodo</b>	Nodo di appoggio dell' isolatore
<b>Cmb</b>	Combinazione oggetto della verifica

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

<b>Verif.</b>	Codice di verifica ok – verifica positiva , NV – verifica negativa, ND – verifica non completata
<b>dE</b>	Spostamento relativo tra le due facce (amplificato del 20% per Ordinanza 3274 e smi) combinato con la regola del 30%
<b>Ang fi</b>	Angolo utilizzato per il calcolo dell' area ridotta Ar (per dispositivi circolari)
<b>V</b>	Azione verticale agente
<b>Ar</b>	Area ridotta efficace
<b>Dim A2</b>	Dimensione utile per il calcolo della deformazione per rotazione
<b>Sig s</b>	Tensione nell' inserto in acciaio
<b>Gam c(a,s,t)</b>	Deformazioni di taglio dell' elastomero
<b>Vcr</b>	Carico critico per instabilità

Affinché la verifica sia positiva deve essere:

- 1)  $V > 0$
- 2)  $Sig s < f_{yk}$
- 3)  $Gam t < 5$
- 4)  $Gam s < Gam * (caratteristica dell' elastomero)$
- 5)  $Gam s < 2$
- 6)  $V < 0.5 Vcr$

Con riferimento al **Documento di Affidabilità** "Test di validazione del software di calcolo PRO\_SAP e dei moduli aggiuntivi PRO\_SAP Modulo Geotecnico, PRO\_CAD nodi acciaio e PRO\_MST" - versione Maggio 2011, disponibile per il download sul sito [www.2si.it](http://www.2si.it), si segnalano i seguenti esempi applicativi:

Test N°	Titolo
23	DM 2008: SPETTRO
29	SISMICA 1000/H, SOMMA V, EFFETTO P-δ
30	ANALISI DI UN EDIFICIO CON ISOLATORI SISMICI
70	MASSE SISMICHE
75	PROGETTO DI ISOLATORI ELASTOMERICI
76	VERIFICA DI ISOLATORI ELASTOMERICI
77	VERIFICA DI ISOLATORI FRICTION PENDULUM

CDC	Tipo	Sigla Id	Note
2	Esk	CDC=Es (statico SLU) alfa=0.0 (ecc. +)	
			categoria suolo: B
			fattore di sito S = 1.200
			ordinata spettro (tratto Tb-Tc) = 0.145 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.300 sec.
			fattore q: 1.000
			fattore per spost. mu d: 1.000
			classe di duttilità CD: ND
			coefficiente Lambda: 1.000
			ordinata spettro Sd(T1): 0.145

Quota	Forza Sismica	Tot. parziale	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
cm	daN	daN	daN	cm	cm	cm	cm	cm	cm			
-80.00	1.111e+05	1.111e+05	7.668e+05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-100.00	30.38	1.111e+05	545.22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Risulta	1.111e+05		7.673e+05									

CDC	Tipo	Sigla Id	Note
3	Esk	CDC=Es (statico SLU) alfa=0.0 (ecc. -)	
			categoria suolo: B

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

CDC	Tipo	Sigla Id	Note
			fattore di sito S = 1.200
			ordinata spettro (tratto Tb-Tc) = 0.145 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.300 sec.
			fattore q: 1.000
			fattore per spost. mu d: 1.000
			classe di duttilità CD: ND
			coefficiente Lambda: 1.000
			ordinata spettro Sd(T1): 0.145

Quota	Forza Sismica	Tot. parziale	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
cm	daN	daN	daN	cm	cm	cm	cm	cm	cm			
-80.00	1.111e+05	1.111e+05	7.668e+05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-100.00	30.38	1.111e+05	545.22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Risulta	1.111e+05		7.673e+05									

CDC	Tipo	Sigla Id	Note
4	Esk	CDC=Es (statico SLU) alfa=90.00 (ecc. +)	
			categoria suolo: B
			fattore di sito S = 1.200
			ordinata spettro (tratto Tb-Tc) = 0.145 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.300 sec.
			fattore q: 1.000
			fattore per spost. mu d: 1.000
			classe di duttilità CD: ND
			coefficiente Lambda: 1.000
			ordinata spettro Sd(T1): 0.145

Quota	Forza Sismica	Tot. parziale	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
cm	daN	daN	daN	cm	cm	cm	cm	cm	cm			
-80.00	1.111e+05	1.111e+05	7.668e+05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-100.00	30.38	1.111e+05	545.22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Risulta	1.111e+05		7.673e+05									

CDC	Tipo	Sigla Id	Note
5	Esk	CDC=Es (statico SLU) alfa=90.00 (ecc. -)	
			categoria suolo: B
			fattore di sito S = 1.200
			ordinata spettro (tratto Tb-Tc) = 0.145 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.300 sec.
			fattore q: 1.000
			fattore per spost. mu d: 1.000
			classe di duttilità CD: ND
			coefficiente Lambda: 1.000
			ordinata spettro Sd(T1): 0.145

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
 Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09

Quota	Forza Sismica	Tot. parziale	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
cm	daN	daN	daN	cm	cm	cm	cm	cm	cm			
-80.00	1.111e+05	1.111e+05	7.668e+05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-100.00	30.38	1.111e+05	545.22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Risulta	1.111e+05		7.673e+05									

CDC	Tipo	Sigla Id	Note
6	Esk	CDC=Es (statico SLD) alfa=0.0 (ecc. +)	
			categoria suolo: B
			fattore di sito S = 1.200
			ordinata spettro (tratto Tb-Tc) = 0.056 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.300 sec.
			coefficiente Lambda: 1.000
			ordinata spettro Se(T1): 0.056

Quota	Forza Sismica	Tot. parziale	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
cm	daN	daN	daN	cm	cm	cm	cm	cm	cm			
-80.00	4.302e+04	4.302e+04	7.668e+05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-100.00	11.76	4.303e+04	545.22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Risulta	4.303e+04		7.673e+05									

CDC	Tipo	Sigla Id	Note
7	Esk	CDC=Es (statico SLD) alfa=0.0 (ecc. -)	
			categoria suolo: B
			fattore di sito S = 1.200
			ordinata spettro (tratto Tb-Tc) = 0.056 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.300 sec.
			coefficiente Lambda: 1.000
			ordinata spettro Se(T1): 0.056

Quota	Forza Sismica	Tot. parziale	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
cm	daN	daN	daN	cm	cm	cm	cm	cm	cm			
-80.00	4.302e+04	4.302e+04	7.668e+05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-100.00	11.76	4.303e+04	545.22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Risulta	4.303e+04		7.673e+05									

CDC	Tipo	Sigla Id	Note
8	Esk	CDC=Es (statico SLD) alfa=90.00 (ecc. +)	
			categoria suolo: B
			fattore di sito S = 1.200
			ordinata spettro (tratto Tb-Tc) = 0.056 g
			angolo di ingresso:90.00

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

CDC	Tipo	Sigla Id	Note
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.300 sec.
			coefficiente Lambda: 1.000
			ordinata spettro Se(T1): 0.056

Quota	Forza Sismica	Tot. parziale	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
cm	daN	daN	daN	cm	cm	cm	cm	cm	cm			
-80.00	4.302e+04	4.302e+04	7.668e+05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-100.00	11.76	4.303e+04	545.22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Risulta	4.303e+04		7.673e+05									

CDC	Tipo	Sigla Id	Note
9	Esk	CDC=Es (statico SLD) alfa=90.00 (ecc. -)	
			categoria suolo: B
			fattore di sito S = 1.200
			ordinata spettro (tratto Tb-Tc) = 0.056 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.300 sec.
			coefficiente Lambda: 1.000
			ordinata spettro Se(T1): 0.056

Quota	Forza Sismica	Tot. parziale	M Sismica x g	Pos. GX	Pos. GY	E agg. X-X	E agg. Y-Y	Pos. KX	Pos. KY	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
cm	daN	daN	daN	cm	cm	cm	cm	cm	cm			
-80.00	4.302e+04	4.302e+04	7.668e+05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-100.00	11.76	4.303e+04	545.22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Risulta	4.303e+04		7.673e+05									

h	Cmb	Pilas. 1000 etaT/h	etaT	inter. h	Pilas. 1000 etaT/h	etaT	inter. h	Pilas. 1000 etaT/h	etaT	inter.
			cm	cm		cm	cm		cm	cm
37	1	3.31	0.07	20.0						
38	1	3.30	0.07	20.0						
39	1	3.34	0.07	20.0						
40	1	3.33	0.07	20.0						
41	1	3.31	0.07	20.0						
42	1	3.30	0.07	20.0						
43	1	3.34	0.07	20.0						
44	1	3.33	0.07	20.0						
45	1	3.31	0.07	20.0						
46	1	3.30	0.07	20.0						
47	1	3.34	0.07	20.0						
48	1	3.33	0.07	20.0						
49	1	3.31	0.07	20.0						
50	1	3.30	0.07	20.0						
51	1	3.34	0.07	20.0						
52	1	3.33	0.07	20.0						
53	1	3.33	0.07	20.0						
54	1	3.30	0.07	20.0						
55	1	3.34	0.07	20.0						
56	1	3.31	0.07	20.0						
57	1	3.33	0.07	20.0						
58	1	3.30	0.07	20.0						

*Parco Eolico "Mondonuovo" – Progetto Definitivo*  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

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59	1	3.34	0.07	20.0
60	1	3.31	0.07	20.0
61	1	3.33	0.07	20.0
62	1	3.30	0.07	20.0
63	1	3.34	0.07	20.0
64	1	3.31	0.07	20.0
65	1	3.33	0.07	20.0
66	1	3.30	0.07	20.0
67	1	3.34	0.07	20.0
68	1	3.31	0.07	20.0
<b>Cmb</b>	<b>1000 etaT/h</b>			
	3.34			

## RISULTATI NODALI

### LEGENDA RISULTATI NODALI

Il controllo dei risultati delle analisi condotte, per quanto concerne i nodi strutturali, è possibile in relazione alle tabelle sottoriportate.

Una prima tabella riporta infatti per ogni nodo e per ogni combinazione (o caso di carico) gli spostamenti nodali.

Una seconda tabella riporta per ogni nodo a cui sia associato un vincolo rigido e/o elastico o una fondazione speciale e per ogni combinazione (o caso di carico) i valori delle azioni esercitate dalla struttura sui vincoli (reazioni vincolari cambiate di segno).

Una terza tabella, infine riassume per ogni nodo le sei combinazioni in cui si attingono i valori minimi e massimi della reazione Fz, della reazione Mx e della reazione My.

Nodo	Cmb	Traslazione X cm	Traslazione Y cm	Traslazione Z cm	Rotazione X	Rotazione Y	Rotazione Z
1	1	0.28	-0.20	-3.34	1.22e-03	1.41e-03	0.0
1	3	0.23	-0.17	-2.83	1.03e-03	1.19e-03	0.0
1	5	0.15	-0.18	-2.59	9.54e-04	1.04e-03	0.0
1	8	0.28	-0.14	-2.55	9.27e-04	1.13e-03	0.0
1	21	0.19	-0.22	-2.59	9.85e-04	1.07e-03	0.0
1	37	0.19	-0.16	-2.58	9.46e-04	1.07e-03	0.0
1	40	0.24	-0.15	-2.56	9.35e-04	1.10e-03	0.0
1	53	0.20	-0.18	-2.58	9.58e-04	1.08e-03	0.0
1	69	0.21	-0.16	-2.57	9.40e-04	1.09e-03	0.0
2	1	0.28	-0.21	-3.45	1.22e-03	1.42e-03	0.0
2	3	0.23	-0.18	-2.92	1.03e-03	1.20e-03	0.0
2	8	0.28	-0.14	-2.64	9.22e-04	1.14e-03	0.0
2	21	0.19	-0.23	-2.67	9.80e-04	1.08e-03	0.0
2	40	0.24	-0.16	-2.65	9.30e-04	1.11e-03	0.0
2	53	0.20	-0.19	-2.66	9.53e-04	1.09e-03	0.0
2	69	0.21	-0.16	-2.65	9.36e-04	1.09e-03	0.0
3	1	0.28	-0.21	-3.36	1.25e-03	1.43e-03	0.0
3	3	0.24	-0.18	-2.84	1.06e-03	1.21e-03	0.0
3	5	0.15	-0.18	-2.59	9.78e-04	1.06e-03	0.0
3	8	0.28	-0.14	-2.57	9.52e-04	1.15e-03	0.0
3	21	0.20	-0.23	-2.59	1.01e-03	1.09e-03	0.0
3	37	0.19	-0.17	-2.59	9.70e-04	1.08e-03	0.0
3	40	0.24	-0.16	-2.58	9.60e-04	1.12e-03	0.0
3	53	0.21	-0.19	-2.59	9.82e-04	1.10e-03	0.0
3	69	0.22	-0.16	-2.58	9.65e-04	1.10e-03	0.0
4	1	0.28	-0.20	-3.25	1.25e-03	1.42e-03	0.0
4	3	0.24	-0.17	-2.75	1.06e-03	1.20e-03	0.0
4	5	0.15	-0.18	-2.52	9.78e-04	1.05e-03	0.0
4	8	0.28	-0.14	-2.49	9.51e-04	1.14e-03	0.0
4	21	0.20	-0.22	-2.51	1.01e-03	1.08e-03	0.0
4	37	0.19	-0.16	-2.51	9.70e-04	1.07e-03	0.0
4	40	0.24	-0.15	-2.50	9.60e-04	1.11e-03	0.0
4	53	0.21	-0.18	-2.51	9.82e-04	1.09e-03	0.0
4	69	0.22	-0.16	-2.50	9.65e-04	1.09e-03	0.0
5	1	0.29	-0.21	-3.26	1.29e-03	1.45e-03	0.0
5	3	0.25	-0.18	-2.76	1.09e-03	1.22e-03	0.0
5	5	0.16	-0.18	-2.52	1.01e-03	1.07e-03	0.0
5	8	0.29	-0.14	-2.50	9.81e-04	1.16e-03	0.0
5	21	0.21	-0.23	-2.52	1.04e-03	1.10e-03	0.0
5	37	0.20	-0.17	-2.51	9.99e-04	1.09e-03	0.0
5	40	0.25	-0.15	-2.51	9.89e-04	1.13e-03	0.0
5	53	0.22	-0.19	-2.51	1.01e-03	1.11e-03	0.0
5	69	0.23	-0.16	-2.51	9.94e-04	1.11e-03	0.0
6	1	0.29	-0.20	-3.16	1.28e-03	1.42e-03	0.0
6	3	0.25	-0.17	-2.67	1.09e-03	1.20e-03	0.0
6	5	0.16	-0.18	-2.44	1.00e-03	1.05e-03	0.0
6	8	0.29	-0.14	-2.41	9.74e-04	1.14e-03	0.0
6	21	0.21	-0.22	-2.44	1.03e-03	1.08e-03	0.0
6	37	0.20	-0.16	-2.44	9.93e-04	1.08e-03	0.0
6	40	0.25	-0.15	-2.42	9.82e-04	1.11e-03	0.0
6	53	0.22	-0.18	-2.43	1.00e-03	1.09e-03	0.0
6	69	0.23	-0.16	-2.43	9.88e-04	1.09e-03	0.0



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

7	1	0.30	-0.21	-3.17	1.33e-03	1.46e-03	0.0
7	3	0.26	-0.18	-2.68	1.12e-03	1.24e-03	0.0
7	5	0.17	-0.18	-2.45	1.03e-03	1.08e-03	0.0
7	8	0.30	-0.14	-2.42	1.01e-03	1.17e-03	0.0
7	21	0.21	-0.23	-2.44	1.06e-03	1.11e-03	0.0
7	37	0.21	-0.17	-2.44	1.03e-03	1.11e-03	0.0
7	40	0.26	-0.15	-2.43	1.01e-03	1.14e-03	0.0
7	53	0.22	-0.19	-2.44	1.04e-03	1.12e-03	0.0
7	69	0.23	-0.16	-2.44	1.02e-03	1.12e-03	0.0
8	1	0.30	-0.20	-3.06	1.31e-03	1.42e-03	0.0
8	3	0.26	-0.17	-2.59	1.11e-03	1.20e-03	0.0
8	5	0.17	-0.18	-2.37	1.02e-03	1.05e-03	0.0
8	8	0.30	-0.14	-2.34	9.93e-04	1.14e-03	0.0
8	21	0.21	-0.22	-2.36	1.05e-03	1.08e-03	0.0
8	37	0.21	-0.16	-2.36	1.01e-03	1.08e-03	0.0
8	40	0.26	-0.15	-2.35	1.00e-03	1.11e-03	0.0
8	53	0.22	-0.18	-2.36	1.02e-03	1.09e-03	0.0
8	69	0.23	-0.16	-2.36	1.01e-03	1.09e-03	0.0
9	1	0.31	-0.21	-3.07	1.35e-03	1.47e-03	0.0
9	3	0.26	-0.18	-2.59	1.15e-03	1.24e-03	0.0
9	6	0.17	-0.14	-2.37	1.03e-03	1.09e-03	0.0
9	7	0.30	-0.18	-2.35	1.05e-03	1.18e-03	0.0
9	21	0.22	-0.23	-2.36	1.09e-03	1.12e-03	0.0
9	38	0.21	-0.15	-2.36	1.04e-03	1.11e-03	0.0
9	39	0.26	-0.17	-2.35	1.05e-03	1.15e-03	0.0
9	53	0.23	-0.19	-2.36	1.06e-03	1.13e-03	0.0
9	69	0.24	-0.16	-2.36	1.04e-03	1.13e-03	0.0
10	1	0.31	-0.20	-2.97	1.32e-03	1.41e-03	0.0
10	3	0.26	-0.17	-2.51	1.12e-03	1.20e-03	0.0
10	6	0.17	-0.14	-2.29	1.00e-03	1.04e-03	0.0
10	7	0.30	-0.18	-2.27	1.03e-03	1.13e-03	0.0
10	21	0.22	-0.22	-2.28	1.06e-03	1.07e-03	0.0
10	38	0.21	-0.15	-2.29	1.01e-03	1.07e-03	0.0
10	39	0.26	-0.16	-2.28	1.02e-03	1.11e-03	0.0
10	53	0.23	-0.18	-2.28	1.04e-03	1.08e-03	0.0
10	69	0.24	-0.16	-2.28	1.02e-03	1.09e-03	0.0
11	1	0.32	-0.21	-2.97	1.37e-03	1.45e-03	0.0
11	3	0.27	-0.18	-2.51	1.16e-03	1.23e-03	0.0
11	6	0.18	-0.14	-2.29	1.04e-03	1.07e-03	0.0
11	7	0.31	-0.18	-2.27	1.06e-03	1.16e-03	0.0
11	23	0.27	-0.23	-2.28	1.09e-03	1.13e-03	0.0
11	38	0.22	-0.15	-2.29	1.05e-03	1.10e-03	0.0
11	39	0.27	-0.17	-2.28	1.06e-03	1.13e-03	0.0
11	55	0.25	-0.19	-2.28	1.07e-03	1.12e-03	0.0
11	69	0.25	-0.16	-2.28	1.05e-03	1.12e-03	0.0
12	1	0.32	-0.20	-2.87	1.33e-03	1.40e-03	0.0
12	3	0.27	-0.17	-2.43	1.12e-03	1.18e-03	0.0
12	6	0.18	-0.14	-2.22	1.01e-03	1.03e-03	0.0
12	7	0.31	-0.18	-2.19	1.03e-03	1.12e-03	0.0
12	23	0.27	-0.22	-2.20	1.07e-03	1.09e-03	0.0
12	38	0.22	-0.15	-2.21	1.02e-03	1.06e-03	0.0
12	39	0.27	-0.16	-2.20	1.03e-03	1.09e-03	0.0
12	55	0.25	-0.18	-2.20	1.04e-03	1.08e-03	0.0
12	69	0.25	-0.16	-2.21	1.02e-03	1.08e-03	0.0
13	1	0.33	-0.21	-2.87	1.35e-03	1.41e-03	0.0
13	3	0.28	-0.18	-2.43	1.15e-03	1.20e-03	0.0
13	6	0.19	-0.14	-2.22	1.03e-03	1.04e-03	0.0
13	7	0.32	-0.18	-2.20	1.06e-03	1.13e-03	0.0
13	23	0.27	-0.23	-2.20	1.09e-03	1.10e-03	0.0
13	38	0.23	-0.15	-2.21	1.04e-03	1.07e-03	0.0
13	39	0.28	-0.17	-2.20	1.05e-03	1.10e-03	0.0
13	55	0.26	-0.19	-2.20	1.06e-03	1.09e-03	0.0
13	69	0.25	-0.16	-2.21	1.04e-03	1.09e-03	0.0
14	1	0.33	-0.20	-2.77	1.32e-03	1.38e-03	0.0
14	3	0.28	-0.17	-2.35	1.12e-03	1.16e-03	0.0
14	6	0.19	-0.14	-2.15	1.00e-03	1.01e-03	0.0
14	7	0.32	-0.18	-2.12	1.03e-03	1.10e-03	0.0
14	23	0.27	-0.22	-2.12	1.06e-03	1.07e-03	0.0
14	38	0.23	-0.15	-2.14	1.01e-03	1.04e-03	0.0
14	39	0.28	-0.16	-2.13	1.02e-03	1.08e-03	0.0
14	55	0.26	-0.18	-2.13	1.03e-03	1.06e-03	0.0
14	69	0.25	-0.16	-2.13	1.02e-03	1.06e-03	0.0
15	1	0.34	-0.21	-2.78	1.33e-03	1.38e-03	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

15	3	0.29	-0.18	-2.35	1.13e-03	1.17e-03	0.0
15	7	0.33	-0.18	-2.12	1.04e-03	1.11e-03	0.0
15	22	0.24	-0.10	-2.15	9.78e-04	1.05e-03	0.0
15	23	0.28	-0.23	-2.12	1.07e-03	1.07e-03	0.0
15	39	0.29	-0.17	-2.13	1.03e-03	1.08e-03	0.0
15	54	0.25	-0.14	-2.14	1.01e-03	1.06e-03	0.0
15	55	0.27	-0.19	-2.13	1.04e-03	1.07e-03	0.0
15	69	0.26	-0.16	-2.13	1.02e-03	1.06e-03	0.0
16	1	0.34	-0.20	-2.68	1.30e-03	1.35e-03	0.0
16	3	0.29	-0.17	-2.27	1.10e-03	1.15e-03	0.0
16	6	0.19	-0.14	-2.08	9.90e-04	9.97e-04	0.0
16	7	0.32	-0.18	-2.05	1.02e-03	1.09e-03	0.0
16	23	0.28	-0.22	-2.05	1.05e-03	1.05e-03	0.0
16	38	0.23	-0.15	-2.07	9.98e-04	1.02e-03	0.0
16	39	0.29	-0.16	-2.05	1.01e-03	1.06e-03	0.0
16	55	0.27	-0.18	-2.06	1.02e-03	1.05e-03	0.0
16	69	0.26	-0.16	-2.06	1.00e-03	1.04e-03	0.0
17	1	0.35	-0.21	-2.68	1.30e-03	1.35e-03	0.0
17	3	0.29	-0.18	-2.27	1.10e-03	1.15e-03	0.0
17	7	0.33	-0.18	-2.05	1.02e-03	1.09e-03	0.0
17	22	0.25	-0.10	-2.08	9.59e-04	1.03e-03	0.0
17	23	0.29	-0.23	-2.05	1.05e-03	1.05e-03	0.0
17	39	0.29	-0.17	-2.06	1.01e-03	1.06e-03	0.0
17	54	0.26	-0.14	-2.07	9.86e-04	1.04e-03	0.0
17	55	0.27	-0.19	-2.06	1.02e-03	1.05e-03	0.0
17	69	0.27	-0.16	-2.06	1.00e-03	1.04e-03	0.0
18	1	0.35	-0.20	-2.59	1.29e-03	1.34e-03	0.0
18	3	0.29	-0.17	-2.19	1.09e-03	1.13e-03	0.0
18	7	0.33	-0.18	-1.97	1.00e-03	1.07e-03	0.0
18	22	0.25	-0.09	-2.01	9.44e-04	1.01e-03	0.0
18	23	0.29	-0.22	-1.97	1.03e-03	1.04e-03	0.0
18	39	0.29	-0.16	-1.98	9.94e-04	1.04e-03	0.0
18	54	0.26	-0.13	-2.00	9.72e-04	1.02e-03	0.0
18	55	0.27	-0.18	-1.98	1.01e-03	1.03e-03	0.0
18	69	0.27	-0.16	-1.99	9.89e-04	1.03e-03	0.0
19	1	0.27	-0.22	-3.55	1.21e-03	1.42e-03	0.0
19	3	0.23	-0.19	-3.01	1.02e-03	1.20e-03	0.0
19	8	0.28	-0.15	-2.72	9.16e-04	1.13e-03	0.0
19	21	0.19	-0.23	-2.75	9.74e-04	1.08e-03	0.0
19	40	0.24	-0.16	-2.73	9.24e-04	1.11e-03	0.0
19	53	0.20	-0.19	-2.74	9.47e-04	1.08e-03	0.0
19	69	0.21	-0.17	-2.73	9.29e-04	1.09e-03	0.0
20	1	0.28	-0.22	-3.46	1.26e-03	1.43e-03	0.0
20	3	0.24	-0.19	-2.93	1.06e-03	1.21e-03	0.0
20	8	0.28	-0.15	-2.66	9.52e-04	1.15e-03	0.0
20	21	0.20	-0.23	-2.68	1.01e-03	1.09e-03	0.0
20	40	0.24	-0.16	-2.66	9.61e-04	1.12e-03	0.0
20	53	0.21	-0.19	-2.67	9.83e-04	1.10e-03	0.0
20	69	0.22	-0.17	-2.66	9.66e-04	1.10e-03	0.0
21	1	0.29	-0.22	-3.37	1.31e-03	1.46e-03	0.0
21	3	0.25	-0.19	-2.85	1.11e-03	1.24e-03	0.0
21	5	0.16	-0.19	-2.60	1.02e-03	1.08e-03	0.0
21	8	0.29	-0.15	-2.58	9.92e-04	1.17e-03	0.0
21	21	0.21	-0.23	-2.60	1.05e-03	1.11e-03	0.0
21	37	0.20	-0.18	-2.60	1.01e-03	1.11e-03	0.0
21	40	0.25	-0.16	-2.59	1.00e-03	1.14e-03	0.0
21	53	0.22	-0.19	-2.60	1.02e-03	1.12e-03	0.0
21	69	0.22	-0.17	-2.59	1.01e-03	1.12e-03	0.0
22	1	0.30	-0.22	-3.27	1.36e-03	1.51e-03	0.0
22	3	0.25	-0.19	-2.77	1.15e-03	1.28e-03	0.0
22	5	0.17	-0.19	-2.52	1.06e-03	1.12e-03	0.0
22	8	0.30	-0.15	-2.51	1.03e-03	1.21e-03	0.0
22	21	0.21	-0.23	-2.52	1.09e-03	1.15e-03	0.0
22	37	0.21	-0.18	-2.52	1.05e-03	1.15e-03	0.0
22	40	0.26	-0.16	-2.51	1.04e-03	1.18e-03	0.0
22	53	0.22	-0.19	-2.52	1.06e-03	1.16e-03	0.0
22	69	0.23	-0.17	-2.52	1.04e-03	1.16e-03	0.0
23	1	0.31	-0.22	-3.17	1.41e-03	1.57e-03	0.0
23	3	0.26	-0.18	-2.68	1.20e-03	1.33e-03	0.0
23	6	0.17	-0.15	-2.44	1.07e-03	1.16e-03	0.0
23	8	0.30	-0.15	-2.43	1.07e-03	1.25e-03	0.0
23	21	0.22	-0.23	-2.44	1.13e-03	1.19e-03	0.0
23	38	0.21	-0.16	-2.44	1.08e-03	1.19e-03	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

23	40	0.26	-0.16	-2.44	1.08e-03	1.22e-03	0.0
23	53	0.23	-0.19	-2.44	1.11e-03	1.20e-03	0.0
23	69	0.24	-0.17	-2.44	1.09e-03	1.21e-03	0.0
24	1	0.32	-0.22	-3.07	1.44e-03	1.54e-03	0.0
24	3	0.27	-0.19	-2.59	1.22e-03	1.30e-03	0.0
24	6	0.18	-0.15	-2.37	1.10e-03	1.14e-03	0.0
24	7	0.31	-0.19	-2.35	1.12e-03	1.23e-03	0.0
24	23	0.27	-0.23	-2.35	1.15e-03	1.20e-03	0.0
24	38	0.22	-0.16	-2.36	1.10e-03	1.17e-03	0.0
24	39	0.27	-0.18	-2.36	1.11e-03	1.20e-03	0.0
24	55	0.25	-0.19	-2.36	1.13e-03	1.19e-03	0.0
24	69	0.25	-0.17	-2.36	1.11e-03	1.18e-03	0.0
25	1	0.33	-0.22	-2.97	1.41e-03	1.46e-03	0.0
25	3	0.28	-0.19	-2.51	1.19e-03	1.24e-03	0.0
25	7	0.32	-0.19	-2.27	1.10e-03	1.17e-03	0.0
25	22	0.23	-0.10	-2.29	1.04e-03	1.11e-03	0.0
25	23	0.27	-0.23	-2.27	1.13e-03	1.14e-03	0.0
25	39	0.28	-0.18	-2.28	1.09e-03	1.14e-03	0.0
25	54	0.25	-0.14	-2.29	1.07e-03	1.12e-03	0.0
25	55	0.26	-0.19	-2.28	1.10e-03	1.13e-03	0.0
25	69	0.25	-0.17	-2.28	1.09e-03	1.12e-03	0.0
26	1	0.34	-0.22	-2.87	1.36e-03	1.40e-03	0.0
26	3	0.29	-0.19	-2.43	1.15e-03	1.19e-03	0.0
26	7	0.33	-0.19	-2.20	1.06e-03	1.12e-03	0.0
26	22	0.24	-0.10	-2.22	1.01e-03	1.07e-03	0.0
26	23	0.28	-0.23	-2.20	1.09e-03	1.09e-03	0.0
26	39	0.29	-0.18	-2.21	1.05e-03	1.10e-03	0.0
26	54	0.25	-0.14	-2.21	1.03e-03	1.07e-03	0.0
26	55	0.27	-0.19	-2.21	1.07e-03	1.08e-03	0.0
26	69	0.26	-0.17	-2.21	1.05e-03	1.08e-03	0.0
27	1	0.35	-0.22	-2.78	1.33e-03	1.37e-03	0.0
27	3	0.29	-0.19	-2.35	1.12e-03	1.16e-03	0.0
27	7	0.33	-0.19	-2.13	1.03e-03	1.10e-03	0.0
27	22	0.25	-0.10	-2.15	9.76e-04	1.04e-03	0.0
27	23	0.29	-0.23	-2.12	1.06e-03	1.07e-03	0.0
27	39	0.29	-0.18	-2.13	1.03e-03	1.07e-03	0.0
27	54	0.26	-0.14	-2.14	1.00e-03	1.05e-03	0.0
27	55	0.27	-0.19	-2.13	1.04e-03	1.06e-03	0.0
27	69	0.27	-0.17	-2.14	1.02e-03	1.05e-03	0.0
28	1	0.27	-0.23	-3.66	1.20e-03	1.40e-03	0.0
28	3	0.23	-0.19	-3.09	1.01e-03	1.18e-03	0.0
28	8	0.28	-0.16	-2.81	9.09e-04	1.12e-03	0.0
28	21	0.19	-0.24	-2.83	9.67e-04	1.06e-03	0.0
28	40	0.24	-0.17	-2.81	9.17e-04	1.09e-03	0.0
28	53	0.20	-0.20	-2.82	9.40e-04	1.07e-03	0.0
28	69	0.21	-0.18	-2.81	9.22e-04	1.08e-03	0.0
29	1	0.28	-0.23	-3.57	1.26e-03	1.43e-03	0.0
29	3	0.24	-0.19	-3.02	1.07e-03	1.21e-03	0.0
29	8	0.28	-0.16	-2.74	9.57e-04	1.14e-03	0.0
29	21	0.20	-0.24	-2.76	1.01e-03	1.08e-03	0.0
29	40	0.24	-0.17	-2.75	9.65e-04	1.11e-03	0.0
29	53	0.21	-0.20	-2.75	9.88e-04	1.09e-03	0.0
29	69	0.22	-0.18	-2.75	9.70e-04	1.10e-03	0.0
30	1	0.29	-0.23	-3.48	1.34e-03	1.47e-03	0.0
30	3	0.25	-0.19	-2.95	1.14e-03	1.24e-03	0.0
30	8	0.29	-0.16	-2.67	1.02e-03	1.17e-03	0.0
30	21	0.20	-0.24	-2.69	1.08e-03	1.11e-03	0.0
30	40	0.25	-0.17	-2.68	1.03e-03	1.14e-03	0.0
30	53	0.22	-0.20	-2.68	1.05e-03	1.12e-03	0.0
30	69	0.22	-0.18	-2.68	1.03e-03	1.13e-03	0.0
31	1	0.30	-0.23	-3.39	1.44e-03	1.56e-03	0.0
31	3	0.25	-0.19	-2.86	1.22e-03	1.32e-03	0.0
31	5	0.16	-0.19	-2.61	1.12e-03	1.16e-03	0.0
31	7	0.30	-0.19	-2.60	1.12e-03	1.25e-03	0.0
31	23	0.25	-0.24	-2.61	1.15e-03	1.22e-03	0.0
31	37	0.20	-0.18	-2.61	1.12e-03	1.19e-03	0.0
31	39	0.25	-0.18	-2.60	1.11e-03	1.22e-03	0.0
31	55	0.24	-0.20	-2.60	1.13e-03	1.21e-03	0.0
31	69	0.23	-0.17	-2.60	1.11e-03	1.20e-03	0.0
32	1	0.31	-0.22	-3.28	1.62e-03	1.81e-03	0.0
32	3	0.26	-0.19	-2.77	1.37e-03	1.53e-03	0.0
32	6	0.17	-0.15	-2.53	1.23e-03	1.35e-03	0.0
32	8	0.30	-0.15	-2.52	1.23e-03	1.44e-03	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

32	23	0.26	-0.24	-2.52	1.29e-03	1.41e-03	0.0
32	38	0.21	-0.17	-2.52	1.24e-03	1.37e-03	0.0
32	40	0.26	-0.17	-2.52	1.24e-03	1.41e-03	0.0
32	55	0.25	-0.20	-2.52	1.27e-03	1.40e-03	0.0
32	69	0.24	-0.17	-2.52	1.25e-03	1.39e-03	0.0
33	1	0.32	-0.23	-3.17	1.63e-03	1.68e-03	0.0
33	3	0.27	-0.19	-2.68	1.38e-03	1.42e-03	0.0
33	8	0.31	-0.15	-2.44	1.24e-03	1.34e-03	0.0
33	21	0.23	-0.24	-2.44	1.30e-03	1.28e-03	0.0
33	22	0.23	-0.11	-2.44	1.21e-03	1.28e-03	0.0
33	40	0.27	-0.17	-2.44	1.25e-03	1.31e-03	0.0
33	53	0.24	-0.20	-2.44	1.27e-03	1.29e-03	0.0
33	54	0.24	-0.15	-2.44	1.24e-03	1.29e-03	0.0
33	69	0.25	-0.17	-2.44	1.25e-03	1.29e-03	0.0
34	1	0.33	-0.23	-3.07	1.49e-03	1.49e-03	0.0
34	3	0.28	-0.19	-2.60	1.26e-03	1.26e-03	0.0
34	7	0.32	-0.20	-2.36	1.16e-03	1.19e-03	0.0
34	22	0.23	-0.11	-2.37	1.10e-03	1.13e-03	0.0
34	23	0.27	-0.24	-2.35	1.19e-03	1.16e-03	0.0
34	39	0.28	-0.18	-2.36	1.15e-03	1.16e-03	0.0
34	54	0.25	-0.15	-2.36	1.13e-03	1.14e-03	0.0
34	55	0.26	-0.20	-2.36	1.16e-03	1.15e-03	0.0
34	69	0.25	-0.18	-2.36	1.15e-03	1.15e-03	0.0
35	1	0.34	-0.23	-2.97	1.40e-03	1.41e-03	0.0
35	3	0.29	-0.19	-2.52	1.19e-03	1.20e-03	0.0
35	7	0.33	-0.20	-2.28	1.09e-03	1.13e-03	0.0
35	22	0.24	-0.11	-2.30	1.03e-03	1.08e-03	0.0
35	23	0.28	-0.24	-2.28	1.12e-03	1.10e-03	0.0
35	39	0.29	-0.18	-2.28	1.08e-03	1.11e-03	0.0
35	54	0.25	-0.15	-2.29	1.06e-03	1.08e-03	0.0
35	55	0.27	-0.20	-2.28	1.10e-03	1.09e-03	0.0
35	69	0.26	-0.18	-2.29	1.08e-03	1.09e-03	0.0
36	1	0.35	-0.23	-2.88	1.35e-03	1.38e-03	0.0
36	3	0.29	-0.19	-2.44	1.14e-03	1.17e-03	0.0
36	7	0.33	-0.20	-2.21	1.05e-03	1.10e-03	0.0
36	22	0.25	-0.11	-2.23	9.93e-04	1.05e-03	0.0
36	23	0.29	-0.24	-2.20	1.08e-03	1.07e-03	0.0
36	39	0.29	-0.18	-2.21	1.04e-03	1.08e-03	0.0
36	54	0.26	-0.15	-2.22	1.02e-03	1.05e-03	0.0
36	55	0.27	-0.20	-2.21	1.06e-03	1.06e-03	0.0
36	69	0.27	-0.18	-2.21	1.04e-03	1.06e-03	0.0
37	1	0.27	-0.24	-3.76	1.19e-03	1.37e-03	0.0
37	3	0.23	-0.20	-3.18	1.01e-03	1.16e-03	0.0
37	7	0.28	-0.20	-2.90	9.28e-04	1.10e-03	0.0
37	21	0.19	-0.25	-2.90	9.59e-04	1.04e-03	0.0
37	39	0.24	-0.19	-2.89	9.20e-04	1.07e-03	0.0
37	53	0.20	-0.21	-2.90	9.32e-04	1.05e-03	0.0
37	69	0.21	-0.18	-2.89	9.15e-04	1.06e-03	0.0
38	1	0.28	-0.24	-3.68	1.27e-03	1.40e-03	0.0
38	3	0.24	-0.20	-3.11	1.07e-03	1.19e-03	0.0
38	7	0.28	-0.20	-2.83	9.87e-04	1.12e-03	0.0
38	21	0.20	-0.25	-2.84	1.02e-03	1.07e-03	0.0
38	39	0.24	-0.19	-2.83	9.78e-04	1.10e-03	0.0
38	53	0.21	-0.21	-2.83	9.91e-04	1.07e-03	0.0
38	69	0.22	-0.18	-2.83	9.73e-04	1.08e-03	0.0
39	1	0.29	-0.24	-3.59	1.39e-03	1.46e-03	0.0
39	3	0.25	-0.20	-3.04	1.18e-03	1.24e-03	0.0
39	7	0.29	-0.20	-2.77	1.09e-03	1.17e-03	0.0
39	21	0.20	-0.25	-2.77	1.12e-03	1.11e-03	0.0
39	23	0.24	-0.25	-2.77	1.12e-03	1.14e-03	0.0
39	39	0.25	-0.19	-2.76	1.08e-03	1.14e-03	0.0
39	53	0.22	-0.21	-2.77	1.09e-03	1.12e-03	0.0
39	55	0.23	-0.21	-2.77	1.09e-03	1.13e-03	0.0
39	69	0.22	-0.18	-2.76	1.07e-03	1.13e-03	0.0
40	1	0.30	-0.24	-3.50	1.68e-03	1.67e-03	0.0
40	3	0.25	-0.20	-2.96	1.42e-03	1.42e-03	0.0
40	8	0.29	-0.16	-2.69	1.28e-03	1.33e-03	0.0
40	21	0.21	-0.25	-2.70	1.34e-03	1.27e-03	0.0
40	23	0.25	-0.25	-2.70	1.34e-03	1.30e-03	0.0
40	40	0.25	-0.18	-2.69	1.29e-03	1.30e-03	0.0
40	53	0.22	-0.21	-2.70	1.31e-03	1.28e-03	0.0
40	55	0.24	-0.21	-2.70	1.31e-03	1.29e-03	0.0
40	69	0.23	-0.18	-2.69	1.29e-03	1.29e-03	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

41	1	0.31	-0.24	-3.41	3.00e-03	3.06e-03	-2.00e-04
41	3	0.26	-0.20	-2.89	2.54e-03	2.59e-03	-1.69e-04
41	7	0.31	-0.20	-2.62	2.32e-03	2.40e-03	-1.54e-04
41	8	0.31	-0.16	-2.62	2.29e-03	2.40e-03	-1.54e-04
41	23	0.26	-0.25	-2.62	2.36e-03	2.37e-03	-1.54e-04
41	39	0.26	-0.19	-2.62	2.31e-03	2.37e-03	-1.54e-04
41	40	0.26	-0.18	-2.62	2.30e-03	2.37e-03	-1.54e-04
41	55	0.25	-0.21	-2.62	2.33e-03	2.36e-03	-1.54e-04
41	69	0.24	-0.18	-2.62	2.31e-03	2.35e-03	-1.54e-04
42	1	0.33	-0.24	-3.28	1.76e-03	1.67e-03	0.0
42	3	0.28	-0.20	-2.78	1.49e-03	1.42e-03	0.0
42	8	0.32	-0.16	-2.53	1.34e-03	1.33e-03	0.0
42	23	0.27	-0.25	-2.52	1.40e-03	1.30e-03	0.0
42	24	0.27	-0.12	-2.53	1.31e-03	1.30e-03	0.0
42	40	0.28	-0.18	-2.52	1.35e-03	1.30e-03	0.0
42	55	0.26	-0.21	-2.52	1.37e-03	1.29e-03	0.0
42	56	0.26	-0.16	-2.53	1.34e-03	1.29e-03	0.0
42	69	0.25	-0.18	-2.52	1.35e-03	1.29e-03	0.0
43	1	0.33	-0.24	-3.18	1.52e-03	1.46e-03	0.0
43	3	0.28	-0.20	-2.69	1.29e-03	1.24e-03	0.0
43	7	0.32	-0.20	-2.44	1.18e-03	1.17e-03	0.0
43	23	0.27	-0.25	-2.44	1.21e-03	1.14e-03	0.0
43	24	0.27	-0.12	-2.45	1.12e-03	1.14e-03	0.0
43	39	0.28	-0.19	-2.44	1.17e-03	1.14e-03	0.0
43	55	0.26	-0.21	-2.44	1.19e-03	1.13e-03	0.0
43	56	0.26	-0.16	-2.45	1.15e-03	1.13e-03	0.0
43	69	0.25	-0.18	-2.44	1.17e-03	1.13e-03	0.0
44	1	0.34	-0.24	-3.08	1.42e-03	1.40e-03	0.0
44	3	0.29	-0.20	-2.60	1.20e-03	1.19e-03	0.0
44	7	0.33	-0.20	-2.36	1.11e-03	1.12e-03	0.0
44	21	0.24	-0.25	-2.36	1.14e-03	1.07e-03	0.0
44	24	0.28	-0.12	-2.38	1.05e-03	1.09e-03	0.0
44	39	0.29	-0.19	-2.37	1.10e-03	1.10e-03	0.0
44	53	0.25	-0.21	-2.36	1.11e-03	1.07e-03	0.0
44	56	0.27	-0.16	-2.37	1.07e-03	1.08e-03	0.0
44	69	0.26	-0.18	-2.37	1.09e-03	1.08e-03	0.0
45	1	0.35	-0.24	-2.98	1.37e-03	1.37e-03	0.0
45	3	0.29	-0.20	-2.52	1.16e-03	1.16e-03	0.0
45	7	0.33	-0.20	-2.29	1.06e-03	1.10e-03	0.0
45	21	0.25	-0.25	-2.28	1.09e-03	1.04e-03	0.0
45	24	0.29	-0.12	-2.30	1.01e-03	1.07e-03	0.0
45	39	0.29	-0.19	-2.29	1.06e-03	1.07e-03	0.0
45	53	0.26	-0.21	-2.29	1.07e-03	1.05e-03	0.0
45	56	0.27	-0.16	-2.30	1.03e-03	1.06e-03	0.0
45	69	0.27	-0.18	-2.29	1.05e-03	1.06e-03	0.0
46	1	0.27	-0.25	-3.86	1.18e-03	1.33e-03	0.0
46	3	0.23	-0.21	-3.26	9.95e-04	1.13e-03	0.0
46	7	0.28	-0.21	-2.97	9.18e-04	1.07e-03	0.0
46	23	0.23	-0.26	-2.98	9.49e-04	1.04e-03	0.0
46	39	0.24	-0.20	-2.97	9.10e-04	1.04e-03	0.0
46	55	0.22	-0.22	-2.97	9.22e-04	1.03e-03	0.0
46	69	0.21	-0.19	-2.97	9.05e-04	1.03e-03	0.0
47	1	0.28	-0.25	-3.78	1.25e-03	1.36e-03	0.0
47	3	0.24	-0.21	-3.20	1.06e-03	1.15e-03	0.0
47	7	0.28	-0.21	-2.91	9.76e-04	1.09e-03	0.0
47	23	0.24	-0.26	-2.92	1.01e-03	1.06e-03	0.0
47	39	0.24	-0.20	-2.91	9.68e-04	1.07e-03	0.0
47	55	0.23	-0.22	-2.91	9.80e-04	1.06e-03	0.0
47	69	0.22	-0.19	-2.91	9.62e-04	1.05e-03	0.0
48	1	0.29	-0.25	-3.70	1.37e-03	1.43e-03	0.0
48	3	0.25	-0.21	-3.13	1.16e-03	1.21e-03	0.0
48	7	0.29	-0.21	-2.85	1.07e-03	1.15e-03	0.0
48	23	0.24	-0.26	-2.85	1.10e-03	1.12e-03	0.0
48	39	0.25	-0.20	-2.84	1.06e-03	1.12e-03	0.0
48	55	0.23	-0.22	-2.85	1.07e-03	1.11e-03	0.0
48	69	0.22	-0.19	-2.84	1.05e-03	1.10e-03	0.0
49	1	0.30	-0.25	-3.61	1.56e-03	1.61e-03	0.0
49	3	0.25	-0.21	-3.05	1.32e-03	1.36e-03	0.0
49	8	0.30	-0.17	-2.78	1.19e-03	1.28e-03	0.0
49	21	0.21	-0.26	-2.78	1.24e-03	1.22e-03	0.0
49	23	0.25	-0.26	-2.78	1.24e-03	1.25e-03	0.0
49	40	0.25	-0.19	-2.78	1.19e-03	1.25e-03	0.0
49	53	0.22	-0.22	-2.78	1.22e-03	1.23e-03	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

49	55	0.24	-0.22	-2.78	1.22e-03	1.24e-03	0.0
49	69	0.23	-0.19	-2.77	1.20e-03	1.24e-03	0.0
50	1	0.31	-0.25	-3.51	1.62e-03	1.73e-03	0.0
50	3	0.26	-0.21	-2.97	1.37e-03	1.46e-03	0.0
50	7	0.30	-0.21	-2.70	1.26e-03	1.38e-03	0.0
50	8	0.30	-0.17	-2.70	1.23e-03	1.38e-03	0.0
50	23	0.26	-0.26	-2.70	1.29e-03	1.35e-03	0.0
50	39	0.26	-0.20	-2.70	1.25e-03	1.35e-03	0.0
50	40	0.26	-0.19	-2.70	1.24e-03	1.35e-03	0.0
50	55	0.25	-0.22	-2.70	1.27e-03	1.34e-03	0.0
50	69	0.24	-0.19	-2.70	1.25e-03	1.33e-03	0.0
51	1	0.32	-0.25	-3.39	1.51e-03	1.49e-03	0.0
51	3	0.27	-0.21	-2.87	1.28e-03	1.26e-03	0.0
51	7	0.31	-0.21	-2.61	1.18e-03	1.19e-03	0.0
51	8	0.31	-0.17	-2.61	1.15e-03	1.19e-03	0.0
51	23	0.27	-0.26	-2.61	1.21e-03	1.16e-03	0.0
51	39	0.27	-0.20	-2.61	1.17e-03	1.17e-03	0.0
51	40	0.27	-0.19	-2.61	1.16e-03	1.17e-03	0.0
51	55	0.26	-0.22	-2.61	1.18e-03	1.15e-03	0.0
51	69	0.25	-0.19	-2.61	1.16e-03	1.15e-03	0.0
52	1	0.33	-0.25	-3.28	1.46e-03	1.41e-03	0.0
52	3	0.28	-0.21	-2.78	1.24e-03	1.19e-03	0.0
52	8	0.32	-0.17	-2.53	1.11e-03	1.13e-03	0.0
52	21	0.23	-0.26	-2.52	1.17e-03	1.07e-03	0.0
52	24	0.27	-0.13	-2.53	1.08e-03	1.10e-03	0.0
52	40	0.28	-0.18	-2.53	1.12e-03	1.10e-03	0.0
52	53	0.25	-0.22	-2.52	1.14e-03	1.08e-03	0.0
52	56	0.26	-0.17	-2.53	1.11e-03	1.09e-03	0.0
52	69	0.25	-0.19	-2.53	1.13e-03	1.08e-03	0.0
53	1	0.34	-0.25	-3.18	1.41e-03	1.38e-03	0.0
53	3	0.29	-0.21	-2.69	1.19e-03	1.16e-03	0.0
53	8	0.33	-0.17	-2.45	1.07e-03	1.10e-03	0.0
53	21	0.24	-0.26	-2.44	1.13e-03	1.04e-03	0.0
53	24	0.28	-0.13	-2.46	1.04e-03	1.07e-03	0.0
53	40	0.29	-0.18	-2.45	1.08e-03	1.08e-03	0.0
53	53	0.25	-0.22	-2.44	1.10e-03	1.05e-03	0.0
53	56	0.27	-0.17	-2.45	1.07e-03	1.06e-03	0.0
53	69	0.26	-0.19	-2.45	1.09e-03	1.06e-03	0.0
54	1	0.35	-0.25	-3.08	1.37e-03	1.36e-03	0.0
54	3	0.29	-0.21	-2.61	1.16e-03	1.15e-03	0.0
54	8	0.33	-0.17	-2.38	1.04e-03	1.09e-03	0.0
54	21	0.25	-0.26	-2.36	1.10e-03	1.03e-03	0.0
54	24	0.29	-0.13	-2.38	1.01e-03	1.06e-03	0.0
54	40	0.29	-0.18	-2.37	1.05e-03	1.06e-03	0.0
54	53	0.26	-0.22	-2.36	1.07e-03	1.04e-03	0.0
54	56	0.27	-0.17	-2.37	1.04e-03	1.05e-03	0.0
54	69	0.27	-0.19	-2.37	1.06e-03	1.04e-03	0.0
55	1	0.27	-0.26	-3.95	1.16e-03	1.29e-03	0.0
55	3	0.23	-0.22	-3.34	9.83e-04	1.09e-03	0.0
55	7	0.28	-0.22	-3.05	9.07e-04	1.03e-03	0.0
55	23	0.23	-0.26	-3.05	9.39e-04	1.00e-03	0.0
55	39	0.24	-0.21	-3.04	8.99e-04	1.01e-03	0.0
55	55	0.22	-0.22	-3.05	9.11e-04	9.95e-04	0.0
55	69	0.21	-0.20	-3.04	8.94e-04	9.90e-04	0.0
56	1	0.28	-0.26	-3.87	1.22e-03	1.31e-03	0.0
56	3	0.24	-0.22	-3.28	1.04e-03	1.11e-03	0.0
56	7	0.28	-0.22	-2.99	9.55e-04	1.05e-03	0.0
56	23	0.24	-0.26	-2.99	9.86e-04	1.02e-03	0.0
56	39	0.24	-0.21	-2.98	9.47e-04	1.03e-03	0.0
56	55	0.23	-0.22	-2.98	9.59e-04	1.01e-03	0.0
56	69	0.22	-0.20	-2.98	9.42e-04	1.01e-03	0.0
57	1	0.29	-0.26	-3.79	1.31e-03	1.35e-03	0.0
57	3	0.25	-0.22	-3.21	1.10e-03	1.15e-03	0.0
57	7	0.29	-0.22	-2.92	1.02e-03	1.09e-03	0.0
57	23	0.24	-0.26	-2.92	1.05e-03	1.06e-03	0.0
57	39	0.25	-0.21	-2.92	1.01e-03	1.06e-03	0.0
57	55	0.23	-0.22	-2.92	1.02e-03	1.05e-03	0.0
57	69	0.22	-0.20	-2.91	1.00e-03	1.04e-03	0.0
58	1	0.30	-0.26	-3.70	1.38e-03	1.42e-03	0.0
58	3	0.25	-0.22	-3.13	1.17e-03	1.20e-03	0.0
58	7	0.30	-0.22	-2.85	1.08e-03	1.14e-03	0.0
58	23	0.25	-0.26	-2.85	1.11e-03	1.11e-03	0.0
58	39	0.26	-0.21	-2.85	1.07e-03	1.11e-03	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

58	55	0.24	-0.22	-2.85	1.08e-03	1.10e-03	0.0
58	69	0.23	-0.20	-2.85	1.06e-03	1.09e-03	0.0
59	1	0.31	-0.26	-3.60	1.41e-03	1.44e-03	0.0
59	3	0.26	-0.22	-3.05	1.20e-03	1.22e-03	0.0
59	7	0.30	-0.22	-2.78	1.10e-03	1.16e-03	0.0
59	8	0.30	-0.18	-2.78	1.07e-03	1.16e-03	0.0
59	21	0.22	-0.26	-2.77	1.13e-03	1.10e-03	0.0
59	39	0.26	-0.21	-2.77	1.09e-03	1.13e-03	0.0
59	40	0.26	-0.19	-2.77	1.08e-03	1.13e-03	0.0
59	53	0.23	-0.22	-2.77	1.11e-03	1.11e-03	0.0
59	69	0.24	-0.20	-2.77	1.09e-03	1.11e-03	0.0
60	1	0.32	-0.26	-3.49	1.42e-03	1.39e-03	0.0
60	3	0.27	-0.22	-2.96	1.20e-03	1.18e-03	0.0
60	8	0.31	-0.18	-2.69	1.08e-03	1.12e-03	0.0
60	21	0.23	-0.26	-2.68	1.13e-03	1.06e-03	0.0
60	40	0.27	-0.19	-2.69	1.08e-03	1.09e-03	0.0
60	53	0.24	-0.22	-2.68	1.11e-03	1.07e-03	0.0
60	69	0.25	-0.20	-2.69	1.09e-03	1.07e-03	0.0
61	1	0.33	-0.26	-3.39	1.41e-03	1.36e-03	0.0
61	3	0.28	-0.22	-2.86	1.20e-03	1.15e-03	0.0
61	8	0.32	-0.18	-2.61	1.07e-03	1.09e-03	0.0
61	21	0.23	-0.26	-2.60	1.13e-03	1.03e-03	0.0
61	40	0.28	-0.19	-2.61	1.08e-03	1.06e-03	0.0
61	53	0.25	-0.22	-2.60	1.10e-03	1.04e-03	0.0
61	69	0.25	-0.20	-2.60	1.09e-03	1.04e-03	0.0
62	1	0.34	-0.26	-3.28	1.40e-03	1.34e-03	0.0
62	3	0.29	-0.22	-2.78	1.18e-03	1.14e-03	0.0
62	8	0.33	-0.18	-2.53	1.06e-03	1.08e-03	0.0
62	21	0.24	-0.26	-2.51	1.12e-03	1.02e-03	0.0
62	24	0.28	-0.13	-2.54	1.03e-03	1.05e-03	0.0
62	40	0.29	-0.19	-2.53	1.07e-03	1.05e-03	0.0
62	53	0.25	-0.22	-2.52	1.09e-03	1.03e-03	0.0
62	56	0.27	-0.17	-2.53	1.06e-03	1.04e-03	0.0
62	69	0.26	-0.20	-2.52	1.07e-03	1.03e-03	0.0
63	1	0.35	-0.26	-3.18	1.37e-03	1.33e-03	0.0
63	3	0.29	-0.22	-2.69	1.16e-03	1.13e-03	0.0
63	8	0.33	-0.18	-2.46	1.04e-03	1.07e-03	0.0
63	21	0.25	-0.26	-2.43	1.10e-03	1.01e-03	0.0
63	24	0.29	-0.13	-2.46	1.01e-03	1.04e-03	0.0
63	40	0.29	-0.19	-2.45	1.05e-03	1.04e-03	0.0
63	53	0.26	-0.22	-2.44	1.07e-03	1.02e-03	0.0
63	56	0.27	-0.17	-2.45	1.04e-03	1.03e-03	0.0
63	69	0.27	-0.20	-2.45	1.06e-03	1.03e-03	0.0
64	1	0.27	-0.27	-4.04	1.15e-03	1.24e-03	0.0
64	3	0.23	-0.22	-3.42	9.74e-04	1.05e-03	0.0
64	7	0.28	-0.22	-3.12	8.99e-04	9.97e-04	0.0
64	23	0.23	-0.27	-3.12	9.30e-04	9.66e-04	0.0
64	39	0.24	-0.21	-3.11	8.91e-04	9.70e-04	0.0
64	55	0.22	-0.23	-3.11	9.03e-04	9.58e-04	0.0
64	69	0.21	-0.20	-3.11	8.86e-04	9.53e-04	0.0
65	1	0.28	-0.27	-3.96	1.20e-03	1.25e-03	0.0
65	3	0.24	-0.23	-3.35	1.02e-03	1.06e-03	0.0
65	7	0.28	-0.22	-3.06	9.38e-04	1.01e-03	0.0
65	23	0.24	-0.27	-3.06	9.69e-04	9.76e-04	0.0
65	39	0.24	-0.21	-3.05	9.30e-04	9.80e-04	0.0
65	55	0.23	-0.23	-3.05	9.42e-04	9.68e-04	0.0
65	69	0.22	-0.20	-3.05	9.25e-04	9.63e-04	0.0
66	1	0.29	-0.27	-3.88	1.26e-03	1.27e-03	0.0
66	3	0.25	-0.23	-3.28	1.07e-03	1.08e-03	0.0
66	7	0.29	-0.22	-2.99	9.83e-04	1.02e-03	0.0
66	23	0.24	-0.27	-2.99	1.01e-03	9.93e-04	0.0
66	39	0.25	-0.21	-2.99	9.75e-04	9.97e-04	0.0
66	55	0.23	-0.23	-2.98	9.87e-04	9.85e-04	0.0
66	69	0.23	-0.20	-2.98	9.70e-04	9.80e-04	0.0
67	1	0.30	-0.27	-3.79	1.32e-03	1.30e-03	0.0
67	3	0.26	-0.23	-3.20	1.11e-03	1.10e-03	0.0
67	7	0.30	-0.22	-2.92	1.03e-03	1.05e-03	0.0
67	23	0.25	-0.27	-2.92	1.06e-03	1.01e-03	0.0
67	39	0.26	-0.21	-2.92	1.02e-03	1.02e-03	0.0
67	55	0.24	-0.23	-2.91	1.03e-03	1.01e-03	0.0
67	69	0.23	-0.21	-2.91	1.01e-03	1.00e-03	0.0
68	1	0.31	-0.27	-3.69	1.35e-03	1.31e-03	0.0
68	3	0.26	-0.23	-3.12	1.15e-03	1.11e-03	0.0



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

68	7	0.30	-0.22	-2.85	1.05e-03	1.06e-03	0.0
68	21	0.22	-0.27	-2.83	1.09e-03	9.98e-04	0.0
68	39	0.26	-0.21	-2.84	1.05e-03	1.03e-03	0.0
68	53	0.23	-0.23	-2.84	1.06e-03	1.01e-03	0.0
68	69	0.24	-0.21	-2.84	1.04e-03	1.01e-03	0.0
69	1	0.32	-0.27	-3.59	1.38e-03	1.31e-03	0.0
69	3	0.27	-0.23	-3.03	1.16e-03	1.11e-03	0.0
69	8	0.31	-0.19	-2.77	1.04e-03	1.05e-03	0.0
69	21	0.23	-0.27	-2.75	1.10e-03	9.95e-04	0.0
69	40	0.27	-0.20	-2.76	1.05e-03	1.03e-03	0.0
69	53	0.24	-0.23	-2.76	1.08e-03	1.00e-03	0.0
69	69	0.25	-0.21	-2.76	1.06e-03	1.01e-03	0.0
70	1	0.33	-0.27	-3.48	1.39e-03	1.31e-03	0.0
70	3	0.28	-0.23	-2.95	1.17e-03	1.10e-03	0.0
70	8	0.32	-0.19	-2.69	1.05e-03	1.05e-03	0.0
70	21	0.23	-0.27	-2.67	1.11e-03	9.91e-04	0.0
70	40	0.28	-0.20	-2.68	1.06e-03	1.02e-03	0.0
70	53	0.25	-0.23	-2.67	1.08e-03	9.99e-04	0.0
70	69	0.25	-0.20	-2.68	1.07e-03	1.00e-03	0.0
71	1	0.34	-0.27	-3.38	1.38e-03	1.30e-03	0.0
71	3	0.29	-0.23	-2.86	1.17e-03	1.10e-03	0.0
71	8	0.33	-0.19	-2.61	1.05e-03	1.05e-03	0.0
71	21	0.24	-0.27	-2.59	1.11e-03	9.90e-04	0.0
71	40	0.29	-0.20	-2.60	1.06e-03	1.02e-03	0.0
71	53	0.25	-0.23	-2.59	1.08e-03	9.98e-04	0.0
71	69	0.26	-0.20	-2.60	1.06e-03	1.00e-03	0.0
72	1	0.35	-0.27	-3.28	1.37e-03	1.30e-03	0.0
72	3	0.29	-0.22	-2.77	1.16e-03	1.10e-03	0.0
72	8	0.33	-0.18	-2.53	1.04e-03	1.05e-03	0.0
72	21	0.25	-0.27	-2.50	1.10e-03	9.89e-04	0.0
72	24	0.29	-0.14	-2.54	1.01e-03	1.02e-03	0.0
72	40	0.29	-0.20	-2.53	1.05e-03	1.02e-03	0.0
72	53	0.26	-0.23	-2.51	1.07e-03	9.98e-04	0.0
72	56	0.27	-0.18	-2.53	1.04e-03	1.01e-03	0.0
72	69	0.27	-0.20	-2.52	1.05e-03	1.00e-03	0.0
73	1	0.28	-0.27	-4.12	1.15e-03	1.20e-03	0.0
73	3	0.23	-0.23	-3.49	9.70e-04	1.01e-03	0.0
73	7	0.28	-0.23	-3.19	8.95e-04	9.64e-04	0.0
73	23	0.23	-0.28	-3.19	9.26e-04	9.33e-04	0.0
73	39	0.24	-0.22	-3.18	8.87e-04	9.37e-04	0.0
73	55	0.22	-0.24	-3.18	8.99e-04	9.25e-04	0.0
73	69	0.21	-0.21	-3.17	8.81e-04	9.19e-04	0.0
74	1	0.28	-0.27	-4.04	1.19e-03	1.20e-03	0.0
74	3	0.24	-0.23	-3.42	1.01e-03	1.02e-03	0.0
74	7	0.28	-0.23	-3.13	9.28e-04	9.68e-04	0.0
74	23	0.24	-0.28	-3.12	9.60e-04	9.37e-04	0.0
74	39	0.24	-0.22	-3.12	9.20e-04	9.41e-04	0.0
74	55	0.23	-0.24	-3.12	9.32e-04	9.29e-04	0.0
74	69	0.22	-0.21	-3.11	9.15e-04	9.24e-04	0.0
75	1	0.29	-0.28	-3.96	1.24e-03	1.21e-03	0.0
75	3	0.25	-0.23	-3.35	1.05e-03	1.03e-03	0.0
75	7	0.29	-0.23	-3.06	9.66e-04	9.77e-04	0.0
75	23	0.24	-0.28	-3.06	9.97e-04	9.45e-04	0.0
75	39	0.25	-0.22	-3.05	9.57e-04	9.49e-04	0.0
75	55	0.23	-0.24	-3.05	9.69e-04	9.37e-04	0.0
75	69	0.23	-0.21	-3.04	9.52e-04	9.32e-04	0.0
76	1	0.30	-0.28	-3.87	1.28e-03	1.23e-03	0.0
76	3	0.26	-0.23	-3.27	1.09e-03	1.04e-03	0.0
76	7	0.30	-0.23	-2.99	1.00e-03	9.87e-04	0.0
76	23	0.25	-0.28	-2.98	1.03e-03	9.56e-04	0.0
76	39	0.26	-0.22	-2.98	9.94e-04	9.60e-04	0.0
76	55	0.24	-0.24	-2.98	1.01e-03	9.48e-04	0.0
76	69	0.23	-0.21	-2.98	9.88e-04	9.43e-04	0.0
77	1	0.31	-0.28	-3.77	1.32e-03	1.24e-03	0.0
77	3	0.26	-0.23	-3.19	1.12e-03	1.05e-03	0.0
77	7	0.30	-0.23	-2.92	1.03e-03	9.97e-04	0.0
77	21	0.22	-0.28	-2.90	1.06e-03	9.39e-04	0.0
77	39	0.26	-0.22	-2.91	1.02e-03	9.70e-04	0.0
77	53	0.23	-0.24	-2.90	1.04e-03	9.48e-04	0.0
77	69	0.24	-0.21	-2.90	1.02e-03	9.53e-04	0.0
78	1	0.32	-0.28	-3.67	1.35e-03	1.25e-03	0.0
78	3	0.27	-0.23	-3.11	1.14e-03	1.06e-03	0.0
78	8	0.31	-0.19	-2.84	1.03e-03	1.01e-03	0.0



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

78	21	0.23	-0.28	-2.82	1.08e-03	9.47e-04	0.0
78	40	0.27	-0.20	-2.83	1.03e-03	9.78e-04	0.0
78	53	0.24	-0.24	-2.82	1.06e-03	9.55e-04	0.0
78	69	0.25	-0.21	-2.83	1.04e-03	9.61e-04	0.0
79	1	0.33	-0.27	-3.57	1.37e-03	1.26e-03	0.0
79	3	0.28	-0.23	-3.02	1.16e-03	1.06e-03	0.0
79	8	0.32	-0.19	-2.76	1.04e-03	1.01e-03	0.0
79	21	0.23	-0.28	-2.74	1.10e-03	9.54e-04	0.0
79	40	0.28	-0.20	-2.75	1.05e-03	9.85e-04	0.0
79	53	0.25	-0.24	-2.74	1.07e-03	9.62e-04	0.0
79	69	0.25	-0.21	-2.75	1.05e-03	9.67e-04	0.0
80	1	0.34	-0.27	-3.47	1.37e-03	1.27e-03	0.0
80	3	0.29	-0.23	-2.94	1.16e-03	1.07e-03	0.0
80	8	0.32	-0.19	-2.69	1.04e-03	1.02e-03	0.0
80	21	0.24	-0.28	-2.66	1.10e-03	9.60e-04	0.0
80	40	0.29	-0.20	-2.68	1.05e-03	9.91e-04	0.0
80	53	0.25	-0.24	-2.66	1.07e-03	9.69e-04	0.0
80	69	0.26	-0.21	-2.67	1.05e-03	9.74e-04	0.0
81	1	0.35	-0.27	-3.37	1.36e-03	1.27e-03	0.0
81	3	0.29	-0.23	-2.85	1.15e-03	1.08e-03	0.0
81	8	0.33	-0.19	-2.61	1.03e-03	1.02e-03	0.0
81	21	0.25	-0.28	-2.58	1.09e-03	9.65e-04	0.0
81	40	0.29	-0.20	-2.60	1.04e-03	9.96e-04	0.0
81	53	0.26	-0.24	-2.59	1.07e-03	9.73e-04	0.0
81	69	0.27	-0.21	-2.59	1.05e-03	9.79e-04	0.0
82	1	0.31	-0.29	-3.90	1.29e-03	1.17e-03	0.0
82	3	0.26	-0.24	-3.30	1.09e-03	9.90e-04	0.0
82	7	0.30	-0.24	-3.01	1.01e-03	9.45e-04	0.0
82	23	0.26	-0.29	-3.00	1.04e-03	9.14e-04	0.0
82	39	0.26	-0.23	-3.00	1.00e-03	9.18e-04	0.0
82	55	0.25	-0.25	-3.00	1.01e-03	9.05e-04	0.0
82	69	0.24	-0.22	-3.00	9.95e-04	9.00e-04	0.0
83	1	0.32	-0.29	-3.77	1.33e-03	1.19e-03	0.0
83	3	0.27	-0.24	-3.19	1.12e-03	1.01e-03	0.0
83	8	0.31	-0.20	-2.92	1.01e-03	9.61e-04	0.0
83	21	0.23	-0.29	-2.89	1.07e-03	9.02e-04	0.0
83	40	0.27	-0.21	-2.91	1.02e-03	9.33e-04	0.0
83	53	0.24	-0.25	-2.90	1.04e-03	9.11e-04	0.0
83	69	0.25	-0.22	-2.90	1.02e-03	9.16e-04	0.0
84	1	0.31	-0.30	-4.02	1.26e-03	1.12e-03	0.0
84	3	0.26	-0.25	-3.40	1.06e-03	9.51e-04	0.0
84	7	0.30	-0.25	-3.11	9.81e-04	9.11e-04	0.0
84	8	0.30	-0.21	-3.11	9.54e-04	9.11e-04	0.0
84	21	0.22	-0.30	-3.08	1.01e-03	8.51e-04	0.0
84	39	0.26	-0.24	-3.10	9.73e-04	8.83e-04	0.0
84	40	0.26	-0.22	-3.10	9.62e-04	8.83e-04	0.0
84	53	0.23	-0.26	-3.09	9.85e-04	8.59e-04	0.0
84	69	0.24	-0.23	-3.09	9.68e-04	8.65e-04	0.0
85	1	0.32	-0.30	-3.87	1.31e-03	1.16e-03	0.0
85	3	0.27	-0.25	-3.27	1.10e-03	9.80e-04	0.0
85	8	0.31	-0.21	-3.00	9.91e-04	9.36e-04	0.0
85	21	0.23	-0.30	-2.96	1.05e-03	8.77e-04	0.0
85	40	0.27	-0.22	-2.98	9.99e-04	9.08e-04	0.0
85	53	0.24	-0.26	-2.97	1.02e-03	8.86e-04	0.0
85	69	0.25	-0.23	-2.97	1.00e-03	8.91e-04	0.0
86	1	0.31	-0.31	-4.14	1.25e-03	1.12e-03	0.0
86	3	0.26	-0.27	-3.50	1.06e-03	9.44e-04	0.0
86	7	0.30	-0.26	-3.21	9.78e-04	9.03e-04	0.0
86	23	0.26	-0.31	-3.19	1.01e-03	8.72e-04	0.0
86	39	0.26	-0.25	-3.19	9.70e-04	8.76e-04	0.0
86	55	0.25	-0.27	-3.18	9.82e-04	8.64e-04	0.0
86	69	0.24	-0.24	-3.18	9.65e-04	8.58e-04	0.0
87	1	0.33	-0.31	-3.96	1.29e-03	1.14e-03	0.0
87	3	0.28	-0.26	-3.35	1.09e-03	9.65e-04	0.0
87	8	0.32	-0.22	-3.08	9.79e-04	9.22e-04	0.0
87	21	0.23	-0.31	-3.03	1.04e-03	8.64e-04	0.0
87	40	0.28	-0.23	-3.06	9.87e-04	8.95e-04	0.0
87	53	0.24	-0.27	-3.04	1.01e-03	8.72e-04	0.0
87	69	0.25	-0.24	-3.05	9.92e-04	8.77e-04	0.0
88	1	0.31	-0.33	-4.25	1.24e-03	1.11e-03	0.0
88	3	0.26	-0.28	-3.60	1.05e-03	9.36e-04	0.0
88	7	0.30	-0.27	-3.30	9.69e-04	8.97e-04	0.0
88	21	0.22	-0.32	-3.26	1.00e-03	8.38e-04	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

88	39	0.26	-0.26	-3.28	9.60e-04	8.69e-04	0.0
88	53	0.23	-0.28	-3.27	9.72e-04	8.46e-04	0.0
88	69	0.24	-0.25	-3.27	9.55e-04	8.51e-04	0.0
89	1	0.33	-0.33	-4.05	1.28e-03	1.13e-03	0.0
89	3	0.28	-0.28	-3.43	1.08e-03	9.56e-04	0.0
89	8	0.32	-0.23	-3.15	9.68e-04	9.14e-04	0.0
89	21	0.23	-0.32	-3.10	1.03e-03	8.55e-04	0.0
89	40	0.28	-0.24	-3.13	9.76e-04	8.86e-04	0.0
89	53	0.25	-0.28	-3.11	9.99e-04	8.64e-04	0.0
89	69	0.25	-0.25	-3.12	9.81e-04	8.69e-04	0.0
90	1	0.31	-0.34	-4.37	1.23e-03	1.10e-03	0.0
90	3	0.26	-0.29	-3.70	1.04e-03	9.32e-04	0.0
90	7	0.30	-0.28	-3.40	9.59e-04	8.93e-04	0.0
90	21	0.22	-0.33	-3.35	9.90e-04	8.34e-04	0.0
90	39	0.26	-0.27	-3.38	9.51e-04	8.65e-04	0.0
90	53	0.23	-0.29	-3.36	9.63e-04	8.42e-04	0.0
90	69	0.24	-0.26	-3.36	9.46e-04	8.48e-04	0.0
91	1	0.33	-0.34	-4.15	1.26e-03	1.12e-03	0.0
91	3	0.28	-0.29	-3.51	1.07e-03	9.52e-04	0.0
91	8	0.32	-0.24	-3.23	9.57e-04	9.11e-04	0.0
91	21	0.24	-0.33	-3.17	1.02e-03	8.52e-04	0.0
91	40	0.28	-0.25	-3.20	9.66e-04	8.83e-04	0.0
91	53	0.25	-0.29	-3.18	9.88e-04	8.60e-04	0.0
91	69	0.25	-0.26	-3.19	9.71e-04	8.65e-04	0.0
92	1	0.31	-0.35	-4.49	1.21e-03	1.10e-03	0.0
92	3	0.26	-0.30	-3.80	1.02e-03	9.28e-04	0.0
92	7	0.30	-0.29	-3.49	9.44e-04	8.90e-04	0.0
92	21	0.22	-0.34	-3.44	9.77e-04	8.30e-04	0.0
92	39	0.26	-0.28	-3.47	9.36e-04	8.62e-04	0.0
92	53	0.23	-0.30	-3.45	9.48e-04	8.38e-04	0.0
92	69	0.24	-0.27	-3.45	9.31e-04	8.44e-04	0.0
93	1	0.33	-0.35	-4.24	1.25e-03	1.12e-03	0.0
93	3	0.28	-0.30	-3.59	1.06e-03	9.52e-04	0.0
93	8	0.32	-0.25	-3.31	9.48e-04	9.11e-04	0.0
93	21	0.24	-0.33	-3.24	1.01e-03	8.51e-04	0.0
93	40	0.28	-0.26	-3.28	9.57e-04	8.83e-04	0.0
93	53	0.25	-0.30	-3.25	9.79e-04	8.60e-04	0.0
93	69	0.26	-0.27	-3.26	9.62e-04	8.65e-04	0.0
94	1	0.31	-0.37	-4.61	1.21e-03	1.11e-03	0.0
94	3	0.26	-0.31	-3.90	1.03e-03	9.39e-04	0.0
94	7	0.30	-0.30	-3.59	9.48e-04	9.00e-04	0.0
94	21	0.22	-0.35	-3.53	9.79e-04	8.40e-04	0.0
94	39	0.26	-0.29	-3.56	9.40e-04	8.72e-04	0.0
94	53	0.23	-0.31	-3.54	9.52e-04	8.49e-04	0.0
94	69	0.24	-0.28	-3.54	9.34e-04	8.54e-04	0.0
95	1	0.34	-0.36	-4.33	1.24e-03	1.13e-03	0.0
95	3	0.28	-0.31	-3.67	1.05e-03	9.55e-04	0.0
95	8	0.32	-0.26	-3.38	9.44e-04	9.14e-04	0.0
95	21	0.24	-0.34	-3.31	1.00e-03	8.54e-04	0.0
95	40	0.28	-0.27	-3.35	9.52e-04	8.86e-04	0.0
95	53	0.25	-0.31	-3.33	9.75e-04	8.63e-04	0.0
95	69	0.26	-0.28	-3.33	9.57e-04	8.68e-04	0.0
96	1	0.31	-0.38	-4.73	1.22e-03	1.11e-03	0.0
96	3	0.26	-0.32	-4.00	1.03e-03	9.43e-04	0.0
96	7	0.30	-0.31	-3.69	9.49e-04	9.03e-04	0.0
96	21	0.22	-0.36	-3.62	9.81e-04	8.43e-04	0.0
96	39	0.26	-0.30	-3.66	9.41e-04	8.75e-04	0.0
96	53	0.23	-0.32	-3.63	9.53e-04	8.52e-04	0.0
96	69	0.24	-0.29	-3.64	9.36e-04	8.57e-04	0.0
97	1	0.34	-0.38	-4.43	1.24e-03	1.13e-03	0.0
97	3	0.29	-0.32	-3.75	1.05e-03	9.58e-04	0.0
97	8	0.32	-0.27	-3.46	9.44e-04	9.16e-04	0.0
97	21	0.24	-0.35	-3.38	1.00e-03	8.57e-04	0.0
97	40	0.29	-0.28	-3.43	9.52e-04	8.88e-04	0.0
97	53	0.25	-0.32	-3.40	9.75e-04	8.65e-04	0.0
97	69	0.26	-0.29	-3.41	9.58e-04	8.71e-04	0.0
98	1	0.33	-0.29	-3.64	1.35e-03	1.21e-03	0.0
98	3	0.28	-0.24	-3.08	1.14e-03	1.03e-03	0.0
98	8	0.32	-0.20	-2.82	1.02e-03	9.79e-04	0.0
98	21	0.24	-0.29	-2.79	1.08e-03	9.20e-04	0.0
98	40	0.28	-0.21	-2.81	1.03e-03	9.51e-04	0.0
98	53	0.25	-0.25	-2.79	1.05e-03	9.29e-04	0.0
98	69	0.26	-0.22	-2.80	1.04e-03	9.34e-04	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

99	1	0.34	-0.30	-3.70	1.33e-03	1.19e-03	0.0
99	3	0.29	-0.25	-3.13	1.12e-03	1.00e-03	0.0
99	8	0.32	-0.21	-2.87	1.01e-03	9.58e-04	0.0
99	21	0.24	-0.29	-2.83	1.07e-03	8.99e-04	0.0
99	40	0.28	-0.22	-2.86	1.02e-03	9.30e-04	0.0
99	53	0.25	-0.25	-2.84	1.04e-03	9.08e-04	0.0
99	69	0.26	-0.23	-2.85	1.02e-03	9.13e-04	0.0
100	1	0.34	-0.31	-3.77	1.31e-03	1.17e-03	0.0
100	3	0.29	-0.26	-3.19	1.11e-03	9.89e-04	0.0
100	8	0.33	-0.22	-2.93	9.96e-04	9.44e-04	0.0
100	21	0.24	-0.30	-2.88	1.05e-03	8.86e-04	0.0
100	40	0.29	-0.23	-2.91	1.00e-03	9.17e-04	0.0
100	53	0.26	-0.26	-2.89	1.03e-03	8.94e-04	0.0
100	69	0.26	-0.24	-2.90	1.01e-03	8.99e-04	0.0
101	1	0.35	-0.32	-3.83	1.30e-03	1.16e-03	0.0
101	3	0.29	-0.27	-3.24	1.10e-03	9.80e-04	0.0
101	8	0.33	-0.23	-2.98	9.85e-04	9.36e-04	0.0
101	21	0.25	-0.31	-2.92	1.04e-03	8.77e-04	0.0
101	40	0.29	-0.24	-2.96	9.93e-04	9.08e-04	0.0
101	53	0.26	-0.27	-2.94	1.02e-03	8.85e-04	0.0
101	69	0.27	-0.25	-2.95	9.99e-04	8.91e-04	0.0
102	1	0.35	-0.33	-3.89	1.28e-03	1.15e-03	0.0
102	3	0.30	-0.28	-3.29	1.09e-03	9.73e-04	0.0
102	8	0.33	-0.24	-3.03	9.74e-04	9.31e-04	0.0
102	21	0.25	-0.32	-2.97	1.03e-03	8.71e-04	0.0
102	40	0.30	-0.25	-3.01	9.82e-04	9.03e-04	0.0
102	53	0.26	-0.28	-2.98	1.01e-03	8.80e-04	0.0
102	69	0.27	-0.26	-2.99	9.88e-04	8.85e-04	0.0
103	1	0.36	-0.35	-3.96	1.26e-03	1.14e-03	0.0
103	3	0.30	-0.29	-3.35	1.07e-03	9.65e-04	0.0
103	8	0.34	-0.25	-3.09	9.56e-04	9.24e-04	0.0
103	21	0.25	-0.33	-3.01	1.02e-03	8.63e-04	0.0
103	40	0.30	-0.26	-3.06	9.64e-04	8.96e-04	0.0
103	53	0.27	-0.29	-3.03	9.88e-04	8.72e-04	0.0
103	69	0.27	-0.27	-3.04	9.70e-04	8.78e-04	0.0
104	1	0.36	-0.36	-4.02	1.26e-03	1.15e-03	0.0
104	3	0.30	-0.30	-3.40	1.07e-03	9.74e-04	0.0
104	8	0.34	-0.26	-3.14	9.59e-04	9.31e-04	0.0
104	21	0.26	-0.34	-3.06	1.02e-03	8.71e-04	0.0
104	40	0.30	-0.27	-3.11	9.67e-04	9.03e-04	0.0
104	53	0.27	-0.30	-3.08	9.90e-04	8.80e-04	0.0
104	69	0.28	-0.27	-3.09	9.73e-04	8.85e-04	0.0
105	1	0.36	-0.37	-4.09	1.27e-03	1.15e-03	0.0
105	3	0.31	-0.31	-3.46	1.07e-03	9.76e-04	0.0
105	8	0.35	-0.26	-3.20	9.60e-04	9.34e-04	0.0
105	21	0.26	-0.35	-3.11	1.02e-03	8.74e-04	0.0
105	40	0.31	-0.28	-3.16	9.68e-04	9.05e-04	0.0
105	53	0.27	-0.31	-3.13	9.91e-04	8.82e-04	0.0
105	69	0.28	-0.28	-3.14	9.73e-04	8.88e-04	0.0
106	1	0.34	-0.28	-3.50	1.35e-03	1.23e-03	0.0
106	3	0.29	-0.24	-2.96	1.14e-03	1.04e-03	0.0
106	8	0.33	-0.20	-2.71	1.03e-03	9.95e-04	0.0
106	21	0.25	-0.28	-2.68	1.08e-03	9.36e-04	0.0
106	40	0.29	-0.21	-2.70	1.03e-03	9.67e-04	0.0
106	53	0.26	-0.24	-2.69	1.06e-03	9.45e-04	0.0
106	69	0.26	-0.22	-2.69	1.04e-03	9.50e-04	0.0
107	1	0.35	-0.29	-3.53	1.33e-03	1.21e-03	0.0
107	3	0.30	-0.25	-2.99	1.13e-03	1.03e-03	0.0
107	8	0.33	-0.21	-2.74	1.01e-03	9.78e-04	0.0
107	21	0.25	-0.29	-2.70	1.07e-03	9.19e-04	0.0
107	40	0.29	-0.22	-2.73	1.02e-03	9.50e-04	0.0
107	53	0.26	-0.25	-2.71	1.04e-03	9.27e-04	0.0
107	69	0.27	-0.23	-2.72	1.03e-03	9.33e-04	0.0
108	1	0.36	-0.31	-3.56	1.32e-03	1.20e-03	0.0
108	3	0.30	-0.26	-3.01	1.12e-03	1.01e-03	0.0
108	8	0.34	-0.22	-2.77	1.00e-03	9.66e-04	0.0
108	21	0.25	-0.30	-2.72	1.06e-03	9.07e-04	0.0
108	40	0.30	-0.23	-2.75	1.01e-03	9.38e-04	0.0
108	53	0.27	-0.26	-2.73	1.03e-03	9.16e-04	0.0
108	69	0.27	-0.23	-2.74	1.02e-03	9.21e-04	0.0
109	1	0.36	-0.32	-3.59	1.31e-03	1.19e-03	0.0
109	3	0.31	-0.27	-3.04	1.11e-03	1.00e-03	0.0
109	8	0.34	-0.22	-2.80	9.92e-04	9.59e-04	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

109	21	0.26	-0.31	-2.73	1.05e-03	9.00e-04	0.0
109	40	0.30	-0.23	-2.77	1.00e-03	9.31e-04	0.0
109	53	0.27	-0.27	-2.75	1.02e-03	9.08e-04	0.0
109	69	0.28	-0.24	-2.76	1.01e-03	9.14e-04	0.0
110	1	0.37	-0.33	-3.62	1.29e-03	1.18e-03	0.0
110	3	0.31	-0.28	-3.06	1.10e-03	9.99e-04	0.0
110	8	0.35	-0.23	-2.82	9.82e-04	9.54e-04	0.0
110	21	0.26	-0.32	-2.75	1.04e-03	8.94e-04	0.0
110	40	0.31	-0.24	-2.80	9.90e-04	9.26e-04	0.0
110	53	0.28	-0.28	-2.77	1.01e-03	9.03e-04	0.0
110	69	0.28	-0.25	-2.78	9.95e-04	9.08e-04	0.0
111	1	0.38	-0.34	-3.65	1.28e-03	1.18e-03	0.0
111	3	0.32	-0.28	-3.09	1.09e-03	9.96e-04	0.0
111	8	0.35	-0.24	-2.85	9.73e-04	9.51e-04	0.0
111	21	0.27	-0.32	-2.77	1.03e-03	8.91e-04	0.0
111	40	0.31	-0.25	-2.82	9.81e-04	9.23e-04	0.0
111	53	0.28	-0.28	-2.79	1.00e-03	9.00e-04	0.0
111	69	0.29	-0.26	-2.81	9.87e-04	9.05e-04	0.0
112	1	0.38	-0.35	-3.68	1.28e-03	1.18e-03	0.0
112	3	0.32	-0.29	-3.11	1.08e-03	9.96e-04	0.0
112	8	0.36	-0.25	-2.88	9.68e-04	9.51e-04	0.0
112	21	0.27	-0.33	-2.79	1.03e-03	8.91e-04	0.0
112	40	0.32	-0.26	-2.85	9.76e-04	9.23e-04	0.0
112	53	0.29	-0.29	-2.82	9.99e-04	9.00e-04	0.0
112	69	0.29	-0.27	-2.83	9.82e-04	9.05e-04	0.0
113	1	0.39	-0.36	-3.71	1.28e-03	1.18e-03	0.0
113	3	0.33	-0.30	-3.14	1.08e-03	9.98e-04	0.0
113	8	0.36	-0.25	-2.91	9.68e-04	9.53e-04	0.0
113	21	0.28	-0.34	-2.81	1.03e-03	8.93e-04	0.0
113	40	0.32	-0.27	-2.87	9.77e-04	9.25e-04	0.0
113	53	0.29	-0.30	-2.84	1.00e-03	9.02e-04	0.0
113	69	0.30	-0.27	-2.85	9.82e-04	9.07e-04	0.0
114	1	0.35	-0.28	-3.36	1.35e-03	1.25e-03	0.0
114	3	0.30	-0.24	-2.85	1.14e-03	1.06e-03	0.0
114	8	0.34	-0.20	-2.61	1.02e-03	1.01e-03	0.0
114	21	0.25	-0.28	-2.57	1.08e-03	9.48e-04	0.0
114	40	0.30	-0.21	-2.59	1.03e-03	9.79e-04	0.0
114	53	0.27	-0.24	-2.58	1.05e-03	9.56e-04	0.0
114	69	0.27	-0.22	-2.59	1.03e-03	9.62e-04	0.0
115	1	0.36	-0.29	-3.35	1.31e-03	1.22e-03	0.0
115	3	0.31	-0.25	-2.84	1.11e-03	1.04e-03	0.0
115	8	0.34	-0.20	-2.60	9.97e-04	9.87e-04	0.0
115	21	0.26	-0.29	-2.56	1.06e-03	9.27e-04	0.0
115	40	0.30	-0.22	-2.59	1.01e-03	9.59e-04	0.0
115	53	0.27	-0.25	-2.57	1.03e-03	9.36e-04	0.0
115	69	0.28	-0.22	-2.58	1.01e-03	9.41e-04	0.0
116	1	0.37	-0.30	-3.35	1.32e-03	1.22e-03	0.0
116	3	0.31	-0.25	-2.83	1.11e-03	1.03e-03	0.0
116	8	0.35	-0.21	-2.60	9.98e-04	9.86e-04	0.0
116	21	0.27	-0.29	-2.55	1.06e-03	9.27e-04	0.0
116	24	0.30	-0.16	-2.60	9.67e-04	9.55e-04	0.0
116	40	0.31	-0.22	-2.59	1.01e-03	9.58e-04	0.0
116	53	0.28	-0.25	-2.57	1.03e-03	9.35e-04	0.0
116	56	0.29	-0.20	-2.59	9.94e-04	9.46e-04	0.0
116	69	0.28	-0.23	-2.58	1.01e-03	9.41e-04	0.0
117	1	0.38	-0.31	-3.34	1.31e-03	1.21e-03	0.0
117	3	0.32	-0.26	-2.83	1.10e-03	1.03e-03	0.0
117	8	0.36	-0.22	-2.60	9.90e-04	9.80e-04	0.0
117	21	0.27	-0.30	-2.54	1.05e-03	9.20e-04	0.0
117	24	0.31	-0.17	-2.60	9.59e-04	9.48e-04	0.0
117	40	0.32	-0.23	-2.58	9.99e-04	9.52e-04	0.0
117	53	0.28	-0.26	-2.56	1.02e-03	9.29e-04	0.0
117	56	0.30	-0.21	-2.58	9.86e-04	9.40e-04	0.0
117	69	0.29	-0.24	-2.57	1.00e-03	9.34e-04	0.0
118	1	0.39	-0.31	-3.34	1.29e-03	1.21e-03	0.0
118	3	0.33	-0.27	-2.82	1.09e-03	1.02e-03	0.0
118	8	0.36	-0.22	-2.60	9.81e-04	9.74e-04	0.0
118	21	0.28	-0.31	-2.53	1.04e-03	9.14e-04	0.0
118	24	0.32	-0.18	-2.60	9.49e-04	9.42e-04	0.0
118	40	0.32	-0.23	-2.58	9.89e-04	9.46e-04	0.0
118	53	0.29	-0.27	-2.55	1.01e-03	9.23e-04	0.0
118	56	0.30	-0.22	-2.58	9.77e-04	9.34e-04	0.0
118	69	0.30	-0.24	-2.57	9.95e-04	9.28e-04	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

119	1	0.39	-0.32	-3.33	1.27e-03	1.19e-03	0.0
119	3	0.33	-0.27	-2.82	1.08e-03	1.01e-03	0.0
119	8	0.37	-0.23	-2.60	9.64e-04	9.65e-04	0.0
119	21	0.28	-0.31	-2.52	1.02e-03	9.04e-04	0.0
119	24	0.32	-0.18	-2.60	9.31e-04	9.32e-04	0.0
119	40	0.33	-0.24	-2.58	9.72e-04	9.36e-04	0.0
119	53	0.30	-0.27	-2.55	9.96e-04	9.13e-04	0.0
119	56	0.31	-0.22	-2.58	9.60e-04	9.24e-04	0.0
119	69	0.30	-0.25	-2.56	9.78e-04	9.18e-04	0.0
120	1	0.40	-0.33	-3.32	1.28e-03	1.20e-03	0.0
120	3	0.34	-0.28	-2.81	1.08e-03	1.02e-03	0.0
120	8	0.37	-0.23	-2.60	9.68e-04	9.70e-04	0.0
120	21	0.29	-0.32	-2.51	1.03e-03	9.10e-04	0.0
120	24	0.33	-0.19	-2.60	9.36e-04	9.38e-04	0.0
120	40	0.33	-0.25	-2.57	9.77e-04	9.42e-04	0.0
120	53	0.30	-0.28	-2.54	1.00e-03	9.19e-04	0.0
120	56	0.32	-0.23	-2.57	9.64e-04	9.30e-04	0.0
120	69	0.31	-0.25	-2.56	9.82e-04	9.24e-04	0.0
121	1	0.41	-0.34	-3.32	1.28e-03	1.20e-03	0.0
121	3	0.35	-0.29	-2.81	1.08e-03	1.02e-03	0.0
121	8	0.38	-0.24	-2.60	9.69e-04	9.72e-04	0.0
121	21	0.30	-0.33	-2.51	1.03e-03	9.13e-04	0.0
121	24	0.34	-0.20	-2.60	9.38e-04	9.41e-04	0.0
121	40	0.34	-0.25	-2.57	9.78e-04	9.44e-04	0.0
121	53	0.31	-0.29	-2.54	1.00e-03	9.21e-04	0.0
121	56	0.32	-0.24	-2.57	9.66e-04	9.32e-04	0.0
121	69	0.32	-0.26	-2.55	9.83e-04	9.27e-04	0.0
122	1	0.36	-0.27	-3.23	1.35e-03	1.28e-03	0.0
122	3	0.30	-0.23	-2.73	1.14e-03	1.08e-03	0.0
122	8	0.34	-0.19	-2.50	1.02e-03	1.03e-03	0.0
122	21	0.25	-0.27	-2.46	1.08e-03	9.73e-04	0.0
122	24	0.29	-0.14	-2.51	9.93e-04	1.00e-03	0.0
122	40	0.30	-0.20	-2.49	1.03e-03	1.00e-03	0.0
122	53	0.27	-0.23	-2.48	1.05e-03	9.81e-04	0.0
122	56	0.28	-0.18	-2.49	1.02e-03	9.91e-04	0.0
122	69	0.27	-0.21	-2.48	1.04e-03	9.86e-04	0.0
123	1	0.37	-0.28	-3.19	1.33e-03	1.26e-03	0.0
123	3	0.31	-0.24	-2.70	1.12e-03	1.07e-03	0.0
123	8	0.35	-0.19	-2.47	1.01e-03	1.02e-03	0.0
123	21	0.26	-0.28	-2.43	1.07e-03	9.59e-04	0.0
123	24	0.30	-0.15	-2.47	9.77e-04	9.86e-04	0.0
123	40	0.31	-0.21	-2.46	1.02e-03	9.90e-04	0.0
123	53	0.27	-0.24	-2.44	1.04e-03	9.67e-04	0.0
123	56	0.29	-0.19	-2.46	1.00e-03	9.77e-04	0.0
123	69	0.28	-0.21	-2.45	1.02e-03	9.72e-04	0.0
124	1	0.38	-0.28	-3.14	1.31e-03	1.25e-03	0.0
124	3	0.32	-0.24	-2.66	1.11e-03	1.06e-03	0.0
124	8	0.35	-0.20	-2.44	9.96e-04	1.01e-03	0.0
124	21	0.27	-0.28	-2.39	1.05e-03	9.49e-04	0.0
124	24	0.31	-0.15	-2.45	9.65e-04	9.77e-04	0.0
124	40	0.32	-0.21	-2.43	1.00e-03	9.80e-04	0.0
124	53	0.28	-0.24	-2.40	1.03e-03	9.58e-04	0.0
124	56	0.30	-0.19	-2.43	9.92e-04	9.68e-04	0.0
124	69	0.29	-0.22	-2.42	1.01e-03	9.63e-04	0.0
125	1	0.39	-0.29	-3.10	1.30e-03	1.24e-03	0.0
125	3	0.33	-0.25	-2.62	1.10e-03	1.05e-03	0.0
125	8	0.36	-0.20	-2.41	9.87e-04	1.00e-03	0.0
125	21	0.28	-0.29	-2.35	1.05e-03	9.42e-04	0.0
125	24	0.32	-0.16	-2.42	9.56e-04	9.69e-04	0.0
125	40	0.32	-0.22	-2.39	9.96e-04	9.73e-04	0.0
125	53	0.29	-0.25	-2.37	1.02e-03	9.50e-04	0.0
125	56	0.31	-0.20	-2.40	9.83e-04	9.61e-04	0.0
125	69	0.30	-0.22	-2.38	1.00e-03	9.56e-04	0.0
126	1	0.40	-0.30	-3.05	1.29e-03	1.23e-03	0.0
126	3	0.34	-0.25	-2.58	1.09e-03	1.04e-03	0.0
126	8	0.37	-0.21	-2.38	9.78e-04	9.94e-04	0.0
126	21	0.29	-0.29	-2.31	1.04e-03	9.35e-04	0.0
126	24	0.33	-0.16	-2.39	9.47e-04	9.62e-04	0.0
126	40	0.33	-0.22	-2.36	9.87e-04	9.66e-04	0.0
126	53	0.30	-0.25	-2.33	1.01e-03	9.43e-04	0.0
126	56	0.31	-0.20	-2.36	9.75e-04	9.54e-04	0.0
126	69	0.31	-0.23	-2.35	9.92e-04	9.49e-04	0.0
127	1	0.41	-0.30	-3.01	1.28e-03	1.23e-03	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

127	3	0.34	-0.26	-2.55	1.08e-03	1.04e-03	0.0
127	8	0.38	-0.21	-2.35	9.70e-04	9.89e-04	0.0
127	21	0.29	-0.30	-2.27	1.03e-03	9.30e-04	0.0
127	24	0.33	-0.17	-2.36	9.38e-04	9.58e-04	0.0
127	40	0.34	-0.23	-2.33	9.79e-04	9.61e-04	0.0
127	53	0.31	-0.26	-2.30	1.00e-03	9.38e-04	0.0
127	56	0.32	-0.21	-2.33	9.66e-04	9.49e-04	0.0
127	69	0.31	-0.23	-2.32	9.84e-04	9.44e-04	0.0
128	1	0.42	-0.31	-2.97	1.27e-03	1.22e-03	0.0
128	3	0.35	-0.26	-2.51	1.08e-03	1.04e-03	0.0
128	8	0.39	-0.22	-2.32	9.66e-04	9.87e-04	0.0
128	21	0.30	-0.30	-2.24	1.03e-03	9.28e-04	0.0
128	24	0.34	-0.17	-2.33	9.34e-04	9.56e-04	0.0
128	40	0.35	-0.23	-2.30	9.75e-04	9.59e-04	0.0
128	53	0.31	-0.26	-2.27	9.98e-04	9.36e-04	0.0
128	56	0.33	-0.21	-2.30	9.62e-04	9.47e-04	0.0
128	69	0.32	-0.24	-2.28	9.80e-04	9.42e-04	0.0
129	1	0.43	-0.32	-2.93	1.27e-03	1.23e-03	0.0
129	3	0.36	-0.27	-2.48	1.08e-03	1.04e-03	0.0
129	8	0.39	-0.22	-2.29	9.65e-04	9.89e-04	0.0
129	21	0.31	-0.31	-2.20	1.03e-03	9.30e-04	0.0
129	24	0.35	-0.18	-2.30	9.34e-04	9.58e-04	0.0
129	40	0.35	-0.24	-2.27	9.74e-04	9.62e-04	0.0
129	53	0.32	-0.27	-2.23	9.97e-04	9.39e-04	0.0
129	56	0.34	-0.22	-2.27	9.62e-04	9.49e-04	0.0
129	69	0.33	-0.24	-2.25	9.79e-04	9.44e-04	0.0
130	1	0.36	-0.26	-3.10	1.34e-03	1.31e-03	0.0
130	3	0.30	-0.22	-2.62	1.14e-03	1.11e-03	0.0
130	8	0.34	-0.18	-2.40	1.02e-03	1.05e-03	0.0
130	21	0.26	-0.27	-2.36	1.08e-03	9.95e-04	0.0
130	24	0.30	-0.14	-2.40	9.89e-04	1.02e-03	0.0
130	40	0.30	-0.19	-2.39	1.03e-03	1.03e-03	0.0
130	53	0.27	-0.23	-2.37	1.05e-03	1.00e-03	0.0
130	56	0.28	-0.18	-2.39	1.02e-03	1.01e-03	0.0
130	69	0.28	-0.20	-2.38	1.03e-03	1.01e-03	0.0
131	1	0.37	-0.27	-3.02	1.32e-03	1.29e-03	0.0
131	3	0.31	-0.22	-2.55	1.12e-03	1.09e-03	0.0
131	8	0.35	-0.18	-2.34	1.00e-03	1.04e-03	0.0
131	21	0.27	-0.27	-2.30	1.06e-03	9.81e-04	0.0
131	24	0.30	-0.14	-2.34	9.72e-04	1.01e-03	0.0
131	40	0.31	-0.20	-2.33	1.01e-03	1.01e-03	0.0
131	53	0.28	-0.23	-2.31	1.03e-03	9.90e-04	0.0
131	56	0.29	-0.18	-2.33	1.00e-03	1.00e-03	0.0
131	69	0.28	-0.20	-2.32	1.02e-03	9.95e-04	0.0
132	1	0.38	-0.27	-2.94	1.30e-03	1.28e-03	0.0
132	3	0.32	-0.23	-2.48	1.10e-03	1.08e-03	0.0
132	8	0.36	-0.19	-2.28	9.90e-04	1.03e-03	0.0
132	21	0.27	-0.27	-2.23	1.05e-03	9.70e-04	0.0
132	24	0.31	-0.14	-2.29	9.59e-04	9.97e-04	0.0
132	40	0.32	-0.20	-2.27	9.99e-04	1.00e-03	0.0
132	53	0.29	-0.23	-2.25	1.02e-03	9.78e-04	0.0
132	56	0.30	-0.18	-2.27	9.86e-04	9.89e-04	0.0
132	69	0.29	-0.21	-2.26	1.00e-03	9.84e-04	0.0
133	1	0.39	-0.27	-2.86	1.29e-03	1.27e-03	0.0
133	3	0.33	-0.23	-2.42	1.09e-03	1.07e-03	0.0
133	8	0.37	-0.19	-2.22	9.80e-04	1.02e-03	0.0
133	21	0.28	-0.28	-2.16	1.04e-03	9.61e-04	0.0
133	24	0.32	-0.15	-2.23	9.48e-04	9.88e-04	0.0
133	40	0.33	-0.20	-2.21	9.88e-04	9.92e-04	0.0
133	53	0.30	-0.24	-2.19	1.01e-03	9.69e-04	0.0
133	56	0.31	-0.19	-2.21	9.76e-04	9.79e-04	0.0
133	69	0.30	-0.21	-2.20	9.93e-04	9.74e-04	0.0
134	1	0.41	-0.28	-2.78	1.28e-03	1.26e-03	0.0
134	3	0.34	-0.24	-2.35	1.08e-03	1.06e-03	0.0
134	8	0.38	-0.20	-2.16	9.70e-04	1.01e-03	0.0
134	21	0.29	-0.28	-2.10	1.03e-03	9.52e-04	0.0
134	24	0.33	-0.15	-2.18	9.38e-04	9.80e-04	0.0
134	40	0.34	-0.21	-2.15	9.78e-04	9.83e-04	0.0
134	53	0.30	-0.24	-2.12	1.00e-03	9.60e-04	0.0
134	56	0.32	-0.19	-2.15	9.66e-04	9.71e-04	0.0
134	69	0.31	-0.21	-2.14	9.83e-04	9.66e-04	0.0
135	1	0.42	-0.28	-2.70	1.26e-03	1.24e-03	0.0
135	3	0.35	-0.24	-2.29	1.06e-03	1.05e-03	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

135	8	0.39	-0.20	-2.11	9.53e-04	9.99e-04	0.0
135	21	0.30	-0.28	-2.03	1.01e-03	9.38e-04	0.0
135	24	0.34	-0.15	-2.12	9.20e-04	9.67e-04	0.0
135	40	0.35	-0.21	-2.09	9.61e-04	9.70e-04	0.0
135	53	0.31	-0.24	-2.06	9.85e-04	9.47e-04	0.0
135	56	0.33	-0.19	-2.10	9.49e-04	9.58e-04	0.0
135	69	0.32	-0.22	-2.08	9.67e-04	9.53e-04	0.0
136	1	0.43	-0.29	-2.63	1.26e-03	1.24e-03	0.0
136	3	0.36	-0.24	-2.22	1.07e-03	1.05e-03	0.0
136	8	0.39	-0.20	-2.05	9.57e-04	1.00e-03	0.0
136	21	0.31	-0.29	-1.97	1.02e-03	9.43e-04	0.0
136	24	0.35	-0.16	-2.07	9.25e-04	9.71e-04	0.0
136	40	0.35	-0.21	-2.03	9.65e-04	9.74e-04	0.0
136	53	0.32	-0.25	-2.00	9.88e-04	9.51e-04	0.0
136	56	0.34	-0.20	-2.04	9.53e-04	9.62e-04	0.0
136	69	0.33	-0.22	-2.02	9.71e-04	9.57e-04	0.0
137	1	0.44	-0.29	-2.55	1.26e-03	1.25e-03	0.0
137	3	0.37	-0.25	-2.16	1.07e-03	1.05e-03	0.0
137	8	0.40	-0.21	-2.00	9.57e-04	1.00e-03	0.0
137	21	0.32	-0.29	-1.91	1.02e-03	9.45e-04	0.0
137	24	0.36	-0.16	-2.02	9.25e-04	9.73e-04	0.0
137	40	0.36	-0.22	-1.97	9.65e-04	9.76e-04	0.0
137	53	0.33	-0.25	-1.94	9.89e-04	9.54e-04	0.0
137	56	0.35	-0.20	-1.98	9.53e-04	9.64e-04	0.0
137	69	0.34	-0.23	-1.96	9.71e-04	9.59e-04	0.0
138	1	0.36	-0.25	-2.96	1.33e-03	1.33e-03	0.0
138	3	0.30	-0.21	-2.51	1.13e-03	1.13e-03	0.0
138	8	0.34	-0.17	-2.29	1.01e-03	1.07e-03	0.0
138	21	0.26	-0.26	-2.26	1.07e-03	1.01e-03	0.0
138	24	0.30	-0.13	-2.30	9.80e-04	1.04e-03	0.0
138	40	0.30	-0.18	-2.28	1.02e-03	1.04e-03	0.0
138	53	0.27	-0.22	-2.27	1.04e-03	1.02e-03	0.0
138	56	0.28	-0.17	-2.29	1.01e-03	1.03e-03	0.0
138	69	0.28	-0.19	-2.28	1.02e-03	1.02e-03	0.0
139	1	0.37	-0.25	-2.85	1.31e-03	1.31e-03	0.0
139	3	0.31	-0.21	-2.41	1.11e-03	1.11e-03	0.0
139	8	0.35	-0.17	-2.21	9.91e-04	1.05e-03	0.0
139	21	0.27	-0.26	-2.17	1.05e-03	9.96e-04	0.0
139	24	0.31	-0.13	-2.22	9.60e-04	1.02e-03	0.0
139	40	0.31	-0.19	-2.20	9.99e-04	1.03e-03	0.0
139	53	0.28	-0.22	-2.18	1.02e-03	1.00e-03	0.0
139	56	0.29	-0.17	-2.20	9.87e-04	1.01e-03	0.0
139	69	0.29	-0.19	-2.19	1.00e-03	1.01e-03	0.0
140	1	0.38	-0.25	-2.74	1.29e-03	1.30e-03	0.0
140	3	0.33	-0.22	-2.32	1.09e-03	1.10e-03	0.0
140	8	0.36	-0.18	-2.12	9.78e-04	1.04e-03	0.0
140	21	0.28	-0.26	-2.08	1.04e-03	9.85e-04	0.0
140	24	0.32	-0.13	-2.14	9.46e-04	1.01e-03	0.0
140	40	0.32	-0.19	-2.11	9.86e-04	1.02e-03	0.0
140	53	0.29	-0.22	-2.10	1.01e-03	9.93e-04	0.0
140	56	0.30	-0.17	-2.12	9.74e-04	1.00e-03	0.0
140	69	0.30	-0.20	-2.11	9.91e-04	9.98e-04	0.0
141	1	0.40	-0.26	-2.63	1.28e-03	1.28e-03	0.0
141	3	0.34	-0.22	-2.23	1.08e-03	1.09e-03	0.0
141	8	0.37	-0.18	-2.04	9.67e-04	1.03e-03	0.0
141	21	0.29	-0.26	-1.99	1.03e-03	9.74e-04	0.0
141	24	0.33	-0.13	-2.06	9.36e-04	1.00e-03	0.0
141	40	0.33	-0.19	-2.03	9.76e-04	1.00e-03	0.0
141	53	0.30	-0.22	-2.01	9.98e-04	9.82e-04	0.0
141	56	0.31	-0.17	-2.04	9.63e-04	9.93e-04	0.0
141	69	0.31	-0.20	-2.02	9.81e-04	9.87e-04	0.0
142	1	0.41	-0.26	-2.52	1.26e-03	1.27e-03	0.0
142	3	0.35	-0.22	-2.13	1.07e-03	1.08e-03	0.0
142	8	0.38	-0.18	-1.96	9.59e-04	1.02e-03	0.0
142	21	0.30	-0.26	-1.90	1.02e-03	9.64e-04	0.0
142	24	0.34	-0.13	-1.98	9.27e-04	9.92e-04	0.0
142	40	0.34	-0.19	-1.95	9.67e-04	9.95e-04	0.0
142	53	0.31	-0.22	-1.93	9.90e-04	9.73e-04	0.0
142	56	0.32	-0.17	-1.96	9.55e-04	9.83e-04	0.0
142	69	0.32	-0.20	-1.94	9.73e-04	9.78e-04	0.0
143	1	0.42	-0.26	-2.41	1.26e-03	1.26e-03	0.0
143	3	0.36	-0.22	-2.04	1.06e-03	1.07e-03	0.0
143	8	0.39	-0.18	-1.88	9.52e-04	1.02e-03	0.0



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

143	21	0.31	-0.27	-1.81	1.01e-03	9.57e-04	0.0
143	24	0.34	-0.14	-1.90	9.20e-04	9.84e-04	0.0
143	40	0.35	-0.19	-1.87	9.60e-04	9.88e-04	0.0
143	53	0.32	-0.23	-1.84	9.83e-04	9.66e-04	0.0
143	56	0.33	-0.18	-1.87	9.48e-04	9.76e-04	0.0
143	69	0.33	-0.20	-1.86	9.65e-04	9.71e-04	0.0
144	1	0.44	-0.26	-2.31	1.25e-03	1.26e-03	0.0
144	3	0.37	-0.22	-1.95	1.06e-03	1.06e-03	0.0
144	8	0.40	-0.18	-1.80	9.49e-04	1.01e-03	0.0
144	21	0.32	-0.27	-1.73	1.01e-03	9.54e-04	0.0
144	24	0.35	-0.14	-1.82	9.17e-04	9.81e-04	0.0
144	40	0.36	-0.20	-1.78	9.57e-04	9.85e-04	0.0
144	53	0.33	-0.23	-1.76	9.80e-04	9.62e-04	0.0
144	56	0.34	-0.18	-1.79	9.45e-04	9.73e-04	0.0
144	69	0.34	-0.20	-1.77	9.63e-04	9.67e-04	0.0
145	1	0.45	-0.27	-2.20	1.25e-03	1.26e-03	0.0
145	3	0.38	-0.23	-1.86	1.06e-03	1.07e-03	0.0
145	8	0.41	-0.19	-1.72	9.48e-04	1.01e-03	0.0
145	21	0.33	-0.27	-1.64	1.01e-03	9.55e-04	0.0
145	24	0.36	-0.14	-1.75	9.16e-04	9.82e-04	0.0
145	40	0.37	-0.20	-1.70	9.56e-04	9.86e-04	0.0
145	53	0.34	-0.23	-1.67	9.79e-04	9.63e-04	0.0
145	56	0.35	-0.18	-1.71	9.44e-04	9.74e-04	0.0
145	69	0.35	-0.20	-1.69	9.62e-04	9.69e-04	0.0
146	1	0.36	-0.24	-2.84	1.32e-03	1.34e-03	0.0
146	3	0.30	-0.20	-2.40	1.11e-03	1.14e-03	0.0
146	8	0.34	-0.16	-2.19	9.99e-04	1.08e-03	0.0
146	21	0.26	-0.25	-2.16	1.06e-03	1.02e-03	0.0
146	24	0.30	-0.12	-2.20	9.67e-04	1.05e-03	0.0
146	40	0.30	-0.18	-2.18	1.01e-03	1.05e-03	0.0
146	53	0.27	-0.21	-2.18	1.03e-03	1.03e-03	0.0
146	56	0.28	-0.16	-2.19	9.95e-04	1.04e-03	0.0
146	69	0.28	-0.18	-2.18	1.01e-03	1.03e-03	0.0
147	1	0.37	-0.24	-2.70	1.27e-03	1.31e-03	0.0
147	3	0.32	-0.20	-2.28	1.08e-03	1.11e-03	0.0
147	7	0.35	-0.20	-2.07	9.92e-04	1.05e-03	0.0
147	23	0.31	-0.25	-2.05	1.02e-03	1.02e-03	0.0
147	24	0.31	-0.12	-2.10	9.32e-04	1.02e-03	0.0
147	39	0.31	-0.19	-2.07	9.83e-04	1.02e-03	0.0
147	55	0.29	-0.21	-2.07	9.96e-04	1.01e-03	0.0
147	56	0.29	-0.16	-2.08	9.60e-04	1.01e-03	0.0
147	69	0.29	-0.18	-2.07	9.78e-04	1.01e-03	0.0
148	1	0.39	-0.24	-2.56	1.27e-03	1.30e-03	0.0
148	3	0.33	-0.20	-2.17	1.07e-03	1.10e-03	0.0
148	8	0.36	-0.16	-1.98	9.61e-04	1.05e-03	0.0
148	21	0.28	-0.25	-1.94	1.02e-03	9.90e-04	0.0
148	24	0.32	-0.12	-2.00	9.29e-04	1.02e-03	0.0
148	40	0.32	-0.18	-1.97	9.69e-04	1.02e-03	0.0
148	53	0.29	-0.21	-1.96	9.92e-04	9.98e-04	0.0
148	56	0.30	-0.16	-1.98	9.57e-04	1.01e-03	0.0
148	69	0.30	-0.18	-1.97	9.75e-04	1.00e-03	0.0
149	1	0.40	-0.24	-2.43	1.26e-03	1.29e-03	0.0
149	3	0.34	-0.20	-2.05	1.06e-03	1.09e-03	0.0
149	7	0.37	-0.20	-1.86	9.80e-04	1.04e-03	0.0
149	21	0.29	-0.25	-1.83	1.01e-03	9.80e-04	0.0
149	24	0.33	-0.12	-1.90	9.21e-04	1.01e-03	0.0
149	39	0.33	-0.19	-1.86	9.72e-04	1.01e-03	0.0
149	53	0.30	-0.21	-1.85	9.84e-04	9.88e-04	0.0
149	56	0.31	-0.16	-1.88	9.49e-04	9.98e-04	0.0
149	69	0.31	-0.18	-1.87	9.66e-04	9.93e-04	0.0
150	1	0.41	-0.24	-2.29	1.25e-03	1.28e-03	0.0
150	3	0.35	-0.20	-1.94	1.05e-03	1.08e-03	0.0
150	7	0.38	-0.20	-1.75	9.72e-04	1.03e-03	0.0
150	21	0.30	-0.25	-1.73	1.00e-03	9.70e-04	0.0
150	24	0.34	-0.12	-1.80	9.13e-04	9.97e-04	0.0
150	39	0.34	-0.19	-1.76	9.64e-04	1.00e-03	0.0
150	53	0.31	-0.21	-1.75	9.76e-04	9.79e-04	0.0
150	56	0.32	-0.16	-1.78	9.41e-04	9.89e-04	0.0
150	69	0.32	-0.18	-1.76	9.58e-04	9.84e-04	0.0
151	1	0.43	-0.24	-2.16	1.23e-03	1.26e-03	0.0
151	3	0.36	-0.20	-1.82	1.04e-03	1.07e-03	0.0
151	7	0.39	-0.20	-1.65	9.58e-04	1.02e-03	0.0
151	21	0.31	-0.25	-1.62	9.91e-04	9.56e-04	0.0



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

151	24	0.35	-0.12	-1.70	8.97e-04	9.84e-04	0.0
151	39	0.35	-0.19	-1.65	9.49e-04	9.88e-04	0.0
151	53	0.32	-0.21	-1.64	9.62e-04	9.65e-04	0.0
151	56	0.33	-0.16	-1.67	9.26e-04	9.75e-04	0.0
151	69	0.33	-0.18	-1.66	9.44e-04	9.70e-04	0.0
152	1	0.44	-0.24	-2.02	1.23e-03	1.26e-03	0.0
152	3	0.37	-0.20	-1.71	1.04e-03	1.07e-03	0.0
152	7	0.40	-0.20	-1.54	9.64e-04	1.02e-03	0.0
152	21	0.32	-0.25	-1.51	9.96e-04	9.59e-04	0.0
152	24	0.36	-0.12	-1.60	9.04e-04	9.86e-04	0.0
152	39	0.36	-0.19	-1.55	9.55e-04	9.90e-04	0.0
152	53	0.33	-0.21	-1.54	9.68e-04	9.68e-04	0.0
152	56	0.34	-0.16	-1.57	9.32e-04	9.78e-04	0.0
152	69	0.34	-0.18	-1.56	9.50e-04	9.73e-04	0.0
153	1	0.45	-0.24	-1.89	1.23e-03	1.27e-03	0.0
153	3	0.38	-0.20	-1.60	1.04e-03	1.07e-03	0.0
153	7	0.41	-0.20	-1.44	9.64e-04	1.02e-03	0.0
153	21	0.33	-0.25	-1.40	9.96e-04	9.61e-04	0.0
153	24	0.37	-0.12	-1.51	9.04e-04	9.88e-04	0.0
153	39	0.37	-0.19	-1.45	9.55e-04	9.91e-04	0.0
153	53	0.34	-0.21	-1.43	9.68e-04	9.69e-04	0.0
153	56	0.35	-0.16	-1.47	9.32e-04	9.79e-04	0.0
153	69	0.35	-0.18	-1.45	9.50e-04	9.74e-04	0.0
154	1	0.36	-0.23	-2.72	1.30e-03	1.34e-03	0.0
154	3	0.30	-0.19	-2.30	1.10e-03	1.14e-03	0.0
154	7	0.34	-0.19	-2.08	1.01e-03	1.08e-03	0.0
154	22	0.26	-0.11	-2.11	9.55e-04	1.02e-03	0.0
154	23	0.30	-0.24	-2.07	1.04e-03	1.05e-03	0.0
154	39	0.30	-0.18	-2.09	1.01e-03	1.05e-03	0.0
154	54	0.27	-0.15	-2.10	9.83e-04	1.03e-03	0.0
154	55	0.28	-0.20	-2.08	1.02e-03	1.04e-03	0.0
154	69	0.28	-0.18	-2.09	1.00e-03	1.03e-03	0.0
155	1	0.37	-0.23	-2.56	1.27e-03	1.32e-03	0.0
155	3	0.31	-0.19	-2.17	1.07e-03	1.12e-03	0.0
155	7	0.35	-0.19	-1.96	9.90e-04	1.06e-03	0.0
155	22	0.27	-0.11	-1.99	9.32e-04	1.00e-03	0.0
155	23	0.31	-0.24	-1.94	1.02e-03	1.03e-03	0.0
155	39	0.31	-0.18	-1.96	9.82e-04	1.03e-03	0.0
155	54	0.28	-0.15	-1.98	9.59e-04	1.01e-03	0.0
155	55	0.29	-0.20	-1.96	9.94e-04	1.02e-03	0.0
155	69	0.29	-0.17	-1.97	9.77e-04	1.01e-03	0.0
156	1	0.38	-0.22	-2.40	1.25e-03	1.30e-03	0.0
156	3	0.33	-0.19	-2.03	1.06e-03	1.10e-03	0.0
156	7	0.36	-0.19	-1.83	9.77e-04	1.05e-03	0.0
156	22	0.28	-0.11	-1.88	9.18e-04	9.89e-04	0.0
156	23	0.32	-0.24	-1.82	1.01e-03	1.02e-03	0.0
156	39	0.32	-0.18	-1.84	9.68e-04	1.02e-03	0.0
156	54	0.29	-0.15	-1.86	9.46e-04	9.97e-04	0.0
156	55	0.30	-0.20	-1.84	9.81e-04	1.01e-03	0.0
156	69	0.30	-0.17	-1.85	9.63e-04	1.00e-03	0.0
157	1	0.40	-0.22	-2.25	1.24e-03	1.29e-03	0.0
157	3	0.34	-0.19	-1.90	1.05e-03	1.09e-03	0.0
157	7	0.37	-0.19	-1.71	9.68e-04	1.04e-03	0.0
157	22	0.29	-0.11	-1.76	9.09e-04	9.79e-04	0.0
157	23	0.33	-0.23	-1.70	1.00e-03	1.01e-03	0.0
157	39	0.33	-0.18	-1.72	9.60e-04	1.01e-03	0.0
157	54	0.30	-0.14	-1.74	9.37e-04	9.88e-04	0.0
157	55	0.31	-0.19	-1.72	9.72e-04	9.98e-04	0.0
157	69	0.31	-0.17	-1.73	9.55e-04	9.93e-04	0.0
158	1	0.41	-0.22	-2.09	1.23e-03	1.28e-03	0.0
158	3	0.35	-0.18	-1.77	1.04e-03	1.08e-03	0.0
158	7	0.38	-0.19	-1.59	9.63e-04	1.03e-03	0.0
158	22	0.30	-0.10	-1.65	9.03e-04	9.71e-04	0.0
158	23	0.34	-0.23	-1.57	9.94e-04	9.98e-04	0.0
158	39	0.34	-0.18	-1.60	9.54e-04	1.00e-03	0.0
158	54	0.31	-0.14	-1.63	9.31e-04	9.79e-04	0.0
158	55	0.32	-0.19	-1.60	9.66e-04	9.90e-04	0.0
158	69	0.32	-0.17	-1.61	9.49e-04	9.85e-04	0.0
159	1	0.42	-0.22	-1.94	1.23e-03	1.27e-03	0.0
159	3	0.36	-0.18	-1.64	1.04e-03	1.08e-03	0.0
159	7	0.39	-0.19	-1.47	9.58e-04	1.02e-03	0.0
159	22	0.31	-0.10	-1.54	8.98e-04	9.64e-04	0.0
159	23	0.34	-0.23	-1.45	9.89e-04	9.92e-04	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

159	39	0.35	-0.17	-1.48	9.49e-04	9.96e-04	0.0
159	54	0.32	-0.14	-1.51	9.26e-04	9.73e-04	0.0
159	55	0.33	-0.19	-1.48	9.61e-04	9.83e-04	0.0
159	69	0.33	-0.17	-1.49	9.44e-04	9.78e-04	0.0
160	1	0.44	-0.21	-1.79	1.23e-03	1.27e-03	0.0
160	3	0.37	-0.18	-1.51	1.04e-03	1.07e-03	0.0
160	7	0.40	-0.18	-1.35	9.57e-04	1.02e-03	0.0
160	22	0.32	-0.10	-1.42	8.97e-04	9.61e-04	0.0
160	23	0.35	-0.23	-1.33	9.89e-04	9.89e-04	0.0
160	39	0.36	-0.17	-1.37	9.48e-04	9.92e-04	0.0
160	54	0.33	-0.14	-1.39	9.25e-04	9.70e-04	0.0
160	55	0.34	-0.19	-1.36	9.61e-04	9.80e-04	0.0
160	69	0.34	-0.16	-1.38	9.43e-04	9.75e-04	0.0
161	1	0.45	-0.21	-1.64	1.22e-03	1.27e-03	0.0
161	3	0.38	-0.18	-1.38	1.04e-03	1.07e-03	0.0
161	7	0.41	-0.18	-1.23	9.56e-04	1.02e-03	0.0
161	22	0.33	-0.10	-1.31	8.96e-04	9.62e-04	0.0
161	23	0.36	-0.23	-1.20	9.88e-04	9.89e-04	0.0
161	39	0.37	-0.17	-1.25	9.47e-04	9.93e-04	0.0
161	54	0.34	-0.14	-1.28	9.24e-04	9.70e-04	0.0
161	55	0.35	-0.19	-1.24	9.60e-04	9.81e-04	0.0
161	69	0.35	-0.16	-1.26	9.42e-04	9.76e-04	0.0
162	1	0.36	-0.22	-2.61	1.28e-03	1.34e-03	0.0
162	3	0.30	-0.18	-2.21	1.09e-03	1.13e-03	0.0
162	7	0.34	-0.19	-1.99	1.00e-03	1.07e-03	0.0
162	22	0.26	-0.10	-2.02	9.43e-04	1.01e-03	0.0
162	23	0.30	-0.23	-1.99	1.03e-03	1.04e-03	0.0
162	39	0.30	-0.17	-2.00	9.93e-04	1.04e-03	0.0
162	54	0.27	-0.14	-2.01	9.70e-04	1.02e-03	0.0
162	55	0.28	-0.19	-2.00	1.00e-03	1.03e-03	0.0
162	69	0.28	-0.17	-2.01	9.87e-04	1.03e-03	0.0
163	1	0.37	-0.21	-2.44	1.26e-03	1.31e-03	0.0
163	3	0.31	-0.18	-2.06	1.06e-03	1.11e-03	0.0
163	7	0.35	-0.18	-1.86	9.81e-04	1.05e-03	0.0
163	22	0.27	-0.10	-1.90	9.22e-04	9.97e-04	0.0
163	23	0.30	-0.23	-1.85	1.01e-03	1.02e-03	0.0
163	39	0.31	-0.17	-1.87	9.72e-04	1.03e-03	0.0
163	54	0.28	-0.14	-1.88	9.50e-04	1.00e-03	0.0
163	55	0.29	-0.19	-1.87	9.84e-04	1.02e-03	0.0
163	69	0.28	-0.16	-1.87	9.67e-04	1.01e-03	0.0
164	1	0.38	-0.21	-2.27	1.24e-03	1.30e-03	0.0
164	3	0.32	-0.18	-1.92	1.05e-03	1.10e-03	0.0
164	7	0.36	-0.18	-1.73	9.68e-04	1.04e-03	0.0
164	22	0.27	-0.09	-1.77	9.09e-04	9.85e-04	0.0
164	23	0.31	-0.22	-1.72	9.99e-04	1.01e-03	0.0
164	39	0.32	-0.17	-1.74	9.59e-04	1.02e-03	0.0
164	54	0.29	-0.13	-1.76	9.37e-04	9.93e-04	0.0
164	55	0.30	-0.18	-1.73	9.72e-04	1.00e-03	0.0
164	69	0.29	-0.16	-1.75	9.54e-04	9.98e-04	0.0
165	1	0.39	-0.20	-2.10	1.23e-03	1.29e-03	0.0
165	3	0.33	-0.17	-1.78	1.04e-03	1.09e-03	0.0
165	7	0.37	-0.18	-1.60	9.60e-04	1.03e-03	0.0
165	22	0.28	-0.09	-1.65	9.01e-04	9.75e-04	0.0
165	23	0.32	-0.22	-1.58	9.91e-04	1.00e-03	0.0
165	39	0.33	-0.16	-1.61	9.51e-04	1.01e-03	0.0
165	54	0.30	-0.13	-1.63	9.28e-04	9.84e-04	0.0
165	55	0.31	-0.18	-1.60	9.63e-04	9.94e-04	0.0
165	69	0.30	-0.16	-1.62	9.46e-04	9.89e-04	0.0
166	1	0.41	-0.20	-1.94	1.22e-03	1.28e-03	0.0
166	3	0.34	-0.17	-1.64	1.03e-03	1.08e-03	0.0
166	7	0.38	-0.17	-1.46	9.53e-04	1.03e-03	0.0
166	22	0.29	-0.09	-1.53	8.93e-04	9.67e-04	0.0
166	23	0.33	-0.22	-1.45	9.85e-04	9.95e-04	0.0
166	39	0.34	-0.16	-1.48	9.44e-04	9.99e-04	0.0
166	54	0.30	-0.13	-1.50	9.21e-04	9.76e-04	0.0
166	55	0.32	-0.18	-1.47	9.57e-04	9.86e-04	0.0
166	69	0.31	-0.15	-1.49	9.39e-04	9.81e-04	0.0
167	1	0.42	-0.19	-1.77	1.20e-03	1.26e-03	0.0
167	3	0.35	-0.16	-1.50	1.02e-03	1.07e-03	0.0
167	7	0.39	-0.17	-1.33	9.40e-04	1.02e-03	0.0
167	22	0.30	-0.08	-1.41	8.79e-04	9.55e-04	0.0
167	23	0.34	-0.21	-1.32	9.73e-04	9.84e-04	0.0
167	39	0.35	-0.16	-1.35	9.31e-04	9.87e-04	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

167	54	0.31	-0.12	-1.38	9.08e-04	9.64e-04	0.0
167	55	0.33	-0.17	-1.35	9.44e-04	9.75e-04	0.0
167	69	0.32	-0.15	-1.36	9.26e-04	9.70e-04	0.0
168	1	0.43	-0.19	-1.61	1.21e-03	1.26e-03	0.0
168	3	0.36	-0.16	-1.36	1.03e-03	1.07e-03	0.0
168	7	0.39	-0.17	-1.21	9.48e-04	1.02e-03	0.0
168	22	0.31	-0.08	-1.29	8.87e-04	9.59e-04	0.0
168	23	0.35	-0.21	-1.19	9.79e-04	9.87e-04	0.0
168	39	0.35	-0.15	-1.22	9.39e-04	9.90e-04	0.0
168	54	0.32	-0.12	-1.26	9.16e-04	9.68e-04	0.0
168	55	0.34	-0.17	-1.22	9.51e-04	9.78e-04	0.0
168	69	0.33	-0.15	-1.24	9.33e-04	9.73e-04	0.0
169	1	0.44	-0.19	-1.44	1.21e-03	1.27e-03	0.0
169	3	0.37	-0.16	-1.22	1.03e-03	1.07e-03	0.0
169	7	0.40	-0.16	-1.08	9.48e-04	1.02e-03	0.0
169	22	0.32	-0.08	-1.16	8.88e-04	9.60e-04	0.0
169	23	0.36	-0.21	-1.06	9.80e-04	9.88e-04	0.0
169	39	0.36	-0.15	-1.10	9.39e-04	9.91e-04	0.0
169	54	0.33	-0.12	-1.13	9.16e-04	9.68e-04	0.0
169	55	0.35	-0.17	-1.09	9.52e-04	9.79e-04	0.0
169	69	0.34	-0.14	-1.11	9.34e-04	9.74e-04	0.0
170	1	0.36	-0.21	-2.51	1.27e-03	1.32e-03	0.0
170	3	0.30	-0.17	-2.12	1.07e-03	1.12e-03	0.0
170	7	0.34	-0.18	-1.91	9.90e-04	1.06e-03	0.0
170	22	0.25	-0.09	-1.95	9.32e-04	1.00e-03	0.0
170	23	0.29	-0.22	-1.91	1.02e-03	1.03e-03	0.0
170	39	0.30	-0.17	-1.92	9.82e-04	1.03e-03	0.0
170	54	0.27	-0.13	-1.94	9.59e-04	1.01e-03	0.0
170	55	0.28	-0.18	-1.92	9.94e-04	1.02e-03	0.0
170	69	0.27	-0.16	-1.93	9.77e-04	1.02e-03	0.0
171	1	0.37	-0.20	-2.33	1.25e-03	1.30e-03	0.0
171	3	0.31	-0.17	-1.98	1.05e-03	1.10e-03	0.0
171	7	0.35	-0.17	-1.78	9.72e-04	1.05e-03	0.0
171	22	0.26	-0.09	-1.82	9.14e-04	9.88e-04	0.0
171	23	0.30	-0.22	-1.77	1.00e-03	1.01e-03	0.0
171	39	0.31	-0.16	-1.79	9.64e-04	1.02e-03	0.0
171	54	0.27	-0.13	-1.81	9.41e-04	9.96e-04	0.0
171	55	0.29	-0.18	-1.79	9.76e-04	1.01e-03	0.0
171	69	0.28	-0.15	-1.80	9.59e-04	1.00e-03	0.0
172	1	0.38	-0.19	-2.16	1.23e-03	1.29e-03	0.0
172	3	0.32	-0.16	-1.83	1.04e-03	1.09e-03	0.0
172	7	0.35	-0.17	-1.64	9.61e-04	1.04e-03	0.0
172	22	0.27	-0.08	-1.69	9.02e-04	9.78e-04	0.0
172	23	0.31	-0.21	-1.64	9.93e-04	1.00e-03	0.0
172	39	0.31	-0.16	-1.65	9.53e-04	1.01e-03	0.0
172	54	0.28	-0.12	-1.68	9.30e-04	9.86e-04	0.0
172	55	0.30	-0.17	-1.65	9.65e-04	9.97e-04	0.0
172	69	0.29	-0.15	-1.66	9.47e-04	9.91e-04	0.0
173	1	0.39	-0.19	-1.99	1.22e-03	1.28e-03	0.0
173	3	0.33	-0.16	-1.69	1.04e-03	1.08e-03	0.0
173	7	0.36	-0.16	-1.51	9.55e-04	1.03e-03	0.0
173	22	0.28	-0.08	-1.57	8.96e-04	9.70e-04	0.0
173	23	0.32	-0.21	-1.50	9.86e-04	9.97e-04	0.0
173	39	0.32	-0.15	-1.52	9.46e-04	1.00e-03	0.0
173	54	0.29	-0.12	-1.55	9.23e-04	9.78e-04	0.0
173	55	0.31	-0.17	-1.52	9.58e-04	9.89e-04	0.0
173	69	0.30	-0.14	-1.53	9.41e-04	9.83e-04	0.0
174	1	0.40	-0.18	-1.82	1.22e-03	1.27e-03	0.0
174	3	0.34	-0.15	-1.54	1.03e-03	1.08e-03	0.0
174	7	0.37	-0.16	-1.37	9.51e-04	1.02e-03	0.0
174	22	0.29	-0.07	-1.44	8.91e-04	9.64e-04	0.0
174	23	0.32	-0.20	-1.37	9.82e-04	9.92e-04	0.0
174	39	0.33	-0.15	-1.39	9.42e-04	9.95e-04	0.0
174	54	0.30	-0.11	-1.42	9.19e-04	9.73e-04	0.0
174	55	0.31	-0.16	-1.39	9.54e-04	9.83e-04	0.0
174	69	0.31	-0.14	-1.40	9.37e-04	9.78e-04	0.0
175	1	0.41	-0.17	-1.66	1.21e-03	1.27e-03	0.0
175	3	0.34	-0.15	-1.40	1.03e-03	1.07e-03	0.0
175	7	0.38	-0.15	-1.24	9.46e-04	1.02e-03	0.0
175	22	0.29	-0.07	-1.32	8.87e-04	9.59e-04	0.0
175	23	0.33	-0.20	-1.23	9.78e-04	9.87e-04	0.0
175	39	0.34	-0.14	-1.26	9.38e-04	9.91e-04	0.0
175	54	0.31	-0.11	-1.29	9.15e-04	9.68e-04	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

175	55	0.32	-0.16	-1.26	9.50e-04	9.79e-04	0.0
175	69	0.31	-0.13	-1.27	9.32e-04	9.73e-04	0.0
176	1	0.42	-0.17	-1.49	1.21e-03	1.26e-03	0.0
176	3	0.35	-0.14	-1.26	1.03e-03	1.07e-03	0.0
176	7	0.39	-0.15	-1.11	9.46e-04	1.02e-03	0.0
176	22	0.30	-0.06	-1.19	8.87e-04	9.58e-04	0.0
176	23	0.34	-0.19	-1.10	9.78e-04	9.86e-04	0.0
176	39	0.35	-0.14	-1.13	9.38e-04	9.90e-04	0.0
176	54	0.31	-0.10	-1.16	9.15e-04	9.67e-04	0.0
176	55	0.33	-0.15	-1.13	9.50e-04	9.77e-04	0.0
176	69	0.32	-0.13	-1.15	9.32e-04	9.72e-04	0.0
177	1	0.43	-0.16	-1.32	1.21e-03	1.26e-03	0.0
177	3	0.36	-0.14	-1.12	1.02e-03	1.07e-03	0.0
177	7	0.39	-0.14	-0.97	9.46e-04	1.02e-03	0.0
177	22	0.31	-0.06	-1.07	8.86e-04	9.58e-04	0.0
177	23	0.35	-0.19	-0.96	9.77e-04	9.86e-04	0.0
177	39	0.35	-0.13	-1.00	9.37e-04	9.90e-04	0.0
177	54	0.32	-0.10	-1.04	9.14e-04	9.67e-04	0.0
177	55	0.34	-0.15	-1.00	9.49e-04	9.77e-04	0.0
177	69	0.33	-0.12	-1.02	9.32e-04	9.72e-04	0.0
178	1	0.35	-0.20	-2.42	1.26e-03	1.31e-03	0.0
178	3	0.30	-0.17	-2.05	1.06e-03	1.11e-03	0.0
178	6	0.21	-0.13	-1.88	9.54e-04	9.61e-04	0.0
178	7	0.34	-0.17	-1.84	9.81e-04	1.05e-03	0.0
178	23	0.29	-0.22	-1.84	1.01e-03	1.02e-03	0.0
178	38	0.25	-0.14	-1.87	9.62e-04	9.89e-04	0.0
178	39	0.30	-0.16	-1.85	9.73e-04	1.02e-03	0.0
178	55	0.28	-0.18	-1.85	9.85e-04	1.01e-03	0.0
178	69	0.27	-0.15	-1.86	9.68e-04	1.01e-03	0.0
179	1	0.36	-0.19	-2.25	1.22e-03	1.28e-03	0.0
179	3	0.31	-0.16	-1.91	1.04e-03	1.08e-03	0.0
179	6	0.21	-0.12	-1.76	9.28e-04	9.38e-04	0.0
179	7	0.34	-0.16	-1.71	9.56e-04	1.03e-03	0.0
179	23	0.30	-0.21	-1.71	9.88e-04	9.98e-04	0.0
179	38	0.25	-0.14	-1.74	9.36e-04	9.66e-04	0.0
179	39	0.30	-0.15	-1.72	9.47e-04	1.00e-03	0.0
179	55	0.29	-0.17	-1.72	9.59e-04	9.89e-04	0.0
179	69	0.28	-0.14	-1.73	9.42e-04	9.84e-04	0.0
180	1	0.37	-0.18	-2.09	1.23e-03	1.28e-03	0.0
180	3	0.31	-0.15	-1.77	1.04e-03	1.08e-03	0.0
180	6	0.22	-0.12	-1.63	9.31e-04	9.38e-04	0.0
180	7	0.35	-0.16	-1.58	9.58e-04	1.03e-03	0.0
180	23	0.30	-0.20	-1.58	9.90e-04	9.97e-04	0.0
180	38	0.26	-0.13	-1.62	9.39e-04	9.66e-04	0.0
180	39	0.31	-0.15	-1.60	9.50e-04	1.00e-03	0.0
180	55	0.29	-0.16	-1.60	9.62e-04	9.89e-04	0.0
180	69	0.28	-0.14	-1.61	9.44e-04	9.83e-04	0.0
181	1	0.38	-0.17	-1.92	1.22e-03	1.27e-03	0.0
181	3	0.32	-0.15	-1.63	1.03e-03	1.08e-03	0.0
181	6	0.23	-0.11	-1.51	9.26e-04	9.33e-04	0.0
181	7	0.36	-0.15	-1.45	9.53e-04	1.02e-03	0.0
181	23	0.31	-0.20	-1.45	9.85e-04	9.92e-04	0.0
181	38	0.27	-0.12	-1.49	9.34e-04	9.61e-04	0.0
181	39	0.32	-0.14	-1.47	9.45e-04	9.96e-04	0.0
181	55	0.30	-0.16	-1.47	9.57e-04	9.84e-04	0.0
181	69	0.29	-0.13	-1.48	9.40e-04	9.78e-04	0.0
182	1	0.39	-0.16	-1.76	1.21e-03	1.26e-03	0.0
182	3	0.33	-0.14	-1.49	1.03e-03	1.07e-03	0.0
182	6	0.23	-0.11	-1.39	9.20e-04	9.27e-04	0.0
182	7	0.36	-0.15	-1.32	9.48e-04	1.02e-03	0.0
182	23	0.32	-0.19	-1.32	9.79e-04	9.87e-04	0.0
182	38	0.27	-0.12	-1.37	9.28e-04	9.55e-04	0.0
182	39	0.32	-0.13	-1.34	9.39e-04	9.91e-04	0.0
182	55	0.30	-0.15	-1.34	9.51e-04	9.78e-04	0.0
182	69	0.30	-0.13	-1.35	9.34e-04	9.73e-04	0.0
183	1	0.39	-0.16	-1.60	1.20e-03	1.25e-03	0.0
183	3	0.33	-0.13	-1.35	1.01e-03	1.06e-03	0.0
183	6	0.24	-0.10	-1.27	9.06e-04	9.18e-04	0.0
183	7	0.37	-0.14	-1.19	9.34e-04	1.01e-03	0.0
183	23	0.32	-0.18	-1.19	9.67e-04	9.79e-04	0.0
183	38	0.28	-0.11	-1.24	9.15e-04	9.46e-04	0.0
183	39	0.33	-0.13	-1.21	9.26e-04	9.82e-04	0.0
183	55	0.31	-0.14	-1.21	9.38e-04	9.70e-04	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

183	69	0.30	-0.12	-1.23	9.20e-04	9.64e-04	0.0
184	1	0.40	-0.15	-1.44	1.21e-03	1.26e-03	0.0
184	3	0.34	-0.12	-1.22	1.02e-03	1.06e-03	0.0
184	6	0.24	-0.09	-1.15	9.15e-04	9.22e-04	0.0
184	7	0.37	-0.13	-1.06	9.43e-04	1.01e-03	0.0
184	23	0.33	-0.18	-1.06	9.74e-04	9.82e-04	0.0
184	38	0.28	-0.11	-1.12	9.23e-04	9.50e-04	0.0
184	39	0.33	-0.12	-1.09	9.34e-04	9.86e-04	0.0
184	55	0.32	-0.14	-1.09	9.46e-04	9.74e-04	0.0
184	69	0.31	-0.11	-1.11	9.29e-04	9.68e-04	0.0
185	1	0.41	-0.14	-1.27	1.21e-03	1.26e-03	0.0
185	3	0.35	-0.12	-1.08	1.02e-03	1.07e-03	0.0
185	6	0.25	-0.09	-1.03	9.16e-04	9.23e-04	0.0
185	7	0.38	-0.13	-0.93	9.44e-04	1.01e-03	0.0
185	23	0.34	-0.17	-0.93	9.75e-04	9.83e-04	0.0
185	38	0.29	-0.10	-1.00	9.24e-04	9.51e-04	0.0
185	39	0.34	-0.11	-0.96	9.35e-04	9.86e-04	0.0
185	55	0.32	-0.13	-0.96	9.47e-04	9.74e-04	0.0
185	69	0.32	-0.11	-0.98	9.30e-04	9.69e-04	0.0
186	1	0.34	-0.19	-2.50	1.27e-03	1.32e-03	0.0
186	3	0.29	-0.16	-2.12	1.08e-03	1.12e-03	0.0
186	6	0.20	-0.13	-1.94	9.65e-04	9.70e-04	0.0
186	7	0.33	-0.17	-1.90	9.92e-04	1.06e-03	0.0
186	23	0.28	-0.21	-1.91	1.02e-03	1.03e-03	0.0
186	38	0.24	-0.14	-1.93	9.74e-04	9.98e-04	0.0
186	39	0.29	-0.16	-1.92	9.84e-04	1.03e-03	0.0
186	55	0.27	-0.17	-1.92	9.96e-04	1.02e-03	0.0
186	69	0.26	-0.15	-1.92	9.79e-04	1.01e-03	0.0
187	1	0.35	-0.18	-2.33	1.25e-03	1.30e-03	0.0
187	3	0.30	-0.15	-1.97	1.06e-03	1.10e-03	0.0
187	6	0.20	-0.12	-1.82	9.49e-04	9.53e-04	0.0
187	7	0.33	-0.16	-1.77	9.76e-04	1.04e-03	0.0
187	23	0.29	-0.21	-1.77	1.01e-03	1.01e-03	0.0
187	38	0.24	-0.13	-1.80	9.57e-04	9.80e-04	0.0
187	39	0.29	-0.15	-1.78	9.68e-04	1.01e-03	0.0
187	55	0.28	-0.17	-1.78	9.80e-04	1.00e-03	0.0
187	69	0.27	-0.14	-1.79	9.62e-04	9.98e-04	0.0
188	1	0.36	-0.17	-2.16	1.24e-03	1.28e-03	0.0
188	3	0.30	-0.15	-1.82	1.05e-03	1.08e-03	0.0
188	6	0.21	-0.11	-1.69	9.39e-04	9.41e-04	0.0
188	7	0.34	-0.15	-1.63	9.66e-04	1.03e-03	0.0
188	23	0.29	-0.20	-1.63	9.98e-04	1.00e-03	0.0
188	38	0.25	-0.13	-1.67	9.48e-04	9.69e-04	0.0
188	39	0.30	-0.14	-1.65	9.58e-04	1.00e-03	0.0
188	55	0.28	-0.16	-1.65	9.70e-04	9.92e-04	0.0
188	69	0.27	-0.13	-1.66	9.53e-04	9.86e-04	0.0
189	1	0.36	-0.16	-1.98	1.23e-03	1.27e-03	0.0
189	3	0.31	-0.14	-1.68	1.04e-03	1.08e-03	0.0
189	6	0.21	-0.11	-1.56	9.31e-04	9.34e-04	0.0
189	7	0.34	-0.14	-1.49	9.59e-04	1.03e-03	0.0
189	23	0.30	-0.19	-1.50	9.90e-04	9.94e-04	0.0
189	38	0.25	-0.12	-1.54	9.40e-04	9.62e-04	0.0
189	39	0.30	-0.13	-1.51	9.50e-04	9.97e-04	0.0
189	55	0.29	-0.15	-1.52	9.62e-04	9.85e-04	0.0
189	69	0.28	-0.13	-1.53	9.45e-04	9.80e-04	0.0
190	1	0.37	-0.15	-1.81	1.22e-03	1.27e-03	0.0
190	3	0.31	-0.13	-1.53	1.03e-03	1.07e-03	0.0
190	6	0.22	-0.10	-1.43	9.25e-04	9.30e-04	0.0
190	7	0.35	-0.14	-1.36	9.53e-04	1.02e-03	0.0
190	23	0.30	-0.18	-1.36	9.84e-04	9.90e-04	0.0
190	38	0.26	-0.11	-1.41	9.34e-04	9.58e-04	0.0
190	39	0.31	-0.13	-1.38	9.44e-04	9.93e-04	0.0
190	55	0.29	-0.14	-1.38	9.57e-04	9.81e-04	0.0
190	69	0.28	-0.12	-1.40	9.39e-04	9.76e-04	0.0
191	1	0.38	-0.14	-1.64	1.21e-03	1.26e-03	0.0
191	3	0.32	-0.12	-1.39	1.03e-03	1.07e-03	0.0
191	6	0.22	-0.09	-1.31	9.20e-04	9.26e-04	0.0
191	7	0.35	-0.13	-1.22	9.48e-04	1.02e-03	0.0
191	23	0.31	-0.17	-1.23	9.79e-04	9.86e-04	0.0
191	38	0.26	-0.10	-1.28	9.28e-04	9.54e-04	0.0
191	39	0.31	-0.12	-1.25	9.39e-04	9.90e-04	0.0
191	55	0.30	-0.13	-1.25	9.51e-04	9.77e-04	0.0
191	69	0.29	-0.11	-1.26	9.34e-04	9.72e-04	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

192	1	0.38	-0.13	-1.47	1.21e-03	1.26e-03	0.0
192	3	0.32	-0.11	-1.25	1.03e-03	1.07e-03	0.0
192	6	0.23	-0.08	-1.18	9.19e-04	9.26e-04	0.0
192	7	0.36	-0.12	-1.09	9.47e-04	1.02e-03	0.0
192	23	0.31	-0.17	-1.10	9.79e-04	9.86e-04	0.0
192	38	0.27	-0.09	-1.15	9.28e-04	9.54e-04	0.0
192	39	0.32	-0.11	-1.12	9.39e-04	9.89e-04	0.0
192	55	0.30	-0.13	-1.12	9.51e-04	9.77e-04	0.0
192	69	0.29	-0.10	-1.13	9.33e-04	9.72e-04	0.0
193	1	0.39	-0.12	-1.30	1.21e-03	1.26e-03	0.0
193	3	0.33	-0.10	-1.10	1.03e-03	1.07e-03	0.0
193	6	0.23	-0.07	-1.06	9.19e-04	9.25e-04	0.0
193	7	0.36	-0.11	-0.95	9.47e-04	1.02e-03	0.0
193	23	0.32	-0.16	-0.96	9.79e-04	9.85e-04	0.0
193	38	0.27	-0.09	-1.02	9.28e-04	9.53e-04	0.0
193	39	0.32	-0.10	-0.98	9.39e-04	9.89e-04	0.0
193	55	0.31	-0.12	-0.99	9.51e-04	9.76e-04	0.0
193	69	0.30	-0.09	-1.00	9.33e-04	9.71e-04	0.0
194	1	0.33	-0.19	-2.60	1.29e-03	1.33e-03	0.0
194	3	0.28	-0.16	-2.20	1.09e-03	1.13e-03	0.0
194	6	0.19	-0.13	-2.02	9.76e-04	9.81e-04	0.0
194	7	0.32	-0.17	-1.98	1.00e-03	1.07e-03	0.0
194	23	0.28	-0.21	-1.98	1.03e-03	1.04e-03	0.0
194	38	0.23	-0.14	-2.01	9.84e-04	1.01e-03	0.0
194	39	0.28	-0.15	-1.99	9.94e-04	1.04e-03	0.0
194	55	0.26	-0.17	-1.99	1.01e-03	1.03e-03	0.0
194	69	0.26	-0.15	-2.00	9.89e-04	1.03e-03	0.0
195	1	0.34	-0.18	-2.42	1.26e-03	1.31e-03	0.0
195	3	0.29	-0.15	-2.05	1.07e-03	1.11e-03	0.0
195	6	0.19	-0.12	-1.89	9.58e-04	9.61e-04	0.0
195	7	0.32	-0.16	-1.84	9.85e-04	1.05e-03	0.0
195	23	0.28	-0.20	-1.85	1.02e-03	1.02e-03	0.0
195	38	0.23	-0.13	-1.87	9.67e-04	9.88e-04	0.0
195	39	0.28	-0.15	-1.86	9.77e-04	1.02e-03	0.0
195	55	0.27	-0.16	-1.86	9.89e-04	1.01e-03	0.0
195	69	0.26	-0.14	-1.86	9.72e-04	1.01e-03	0.0
196	1	0.34	-0.17	-2.25	1.25e-03	1.29e-03	0.0
196	3	0.29	-0.14	-1.91	1.06e-03	1.09e-03	0.0
196	6	0.20	-0.11	-1.76	9.46e-04	9.48e-04	0.0
196	7	0.33	-0.15	-1.70	9.73e-04	1.04e-03	0.0
196	23	0.28	-0.19	-1.71	1.00e-03	1.01e-03	0.0
196	38	0.24	-0.12	-1.74	9.55e-04	9.75e-04	0.0
196	39	0.29	-0.14	-1.72	9.65e-04	1.01e-03	0.0
196	55	0.27	-0.15	-1.73	9.77e-04	9.98e-04	0.0
196	69	0.26	-0.13	-1.73	9.60e-04	9.93e-04	0.0
197	1	0.35	-0.16	-2.08	1.24e-03	1.28e-03	0.0
197	3	0.29	-0.13	-1.76	1.05e-03	1.08e-03	0.0
197	6	0.20	-0.10	-1.64	9.37e-04	9.39e-04	0.0
197	7	0.33	-0.14	-1.57	9.64e-04	1.03e-03	0.0
197	23	0.29	-0.18	-1.58	9.96e-04	9.98e-04	0.0
197	38	0.24	-0.11	-1.62	9.45e-04	9.67e-04	0.0
197	39	0.29	-0.13	-1.59	9.56e-04	1.00e-03	0.0
197	55	0.27	-0.15	-1.59	9.68e-04	9.90e-04	0.0
197	69	0.27	-0.12	-1.60	9.51e-04	9.84e-04	0.0
198	1	0.35	-0.14	-1.91	1.22e-03	1.27e-03	0.0
198	3	0.30	-0.12	-1.62	1.04e-03	1.08e-03	0.0
198	6	0.21	-0.09	-1.51	9.28e-04	9.32e-04	0.0
198	7	0.33	-0.13	-1.43	9.56e-04	1.02e-03	0.0
198	23	0.29	-0.18	-1.45	9.87e-04	9.92e-04	0.0
198	38	0.24	-0.10	-1.49	9.37e-04	9.60e-04	0.0
198	39	0.30	-0.12	-1.46	9.48e-04	9.96e-04	0.0
198	55	0.28	-0.14	-1.46	9.60e-04	9.83e-04	0.0
198	69	0.27	-0.11	-1.47	9.42e-04	9.78e-04	0.0
199	1	0.36	-0.13	-1.75	1.20e-03	1.26e-03	0.0
199	3	0.30	-0.11	-1.48	1.02e-03	1.06e-03	0.0
199	6	0.21	-0.08	-1.39	9.10e-04	9.21e-04	0.0
199	7	0.34	-0.12	-1.30	9.39e-04	1.01e-03	0.0
199	23	0.29	-0.17	-1.31	9.71e-04	9.82e-04	0.0
199	38	0.25	-0.09	-1.36	9.19e-04	9.50e-04	0.0
199	39	0.30	-0.11	-1.33	9.30e-04	9.86e-04	0.0
199	55	0.28	-0.13	-1.33	9.43e-04	9.74e-04	0.0
199	69	0.27	-0.10	-1.34	9.25e-04	9.68e-04	0.0
200	1	0.36	-0.12	-1.58	1.21e-03	1.26e-03	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

200	3	0.30	-0.10	-1.34	1.03e-03	1.07e-03	0.0
200	6	0.21	-0.07	-1.26	9.20e-04	9.27e-04	0.0
200	7	0.34	-0.11	-1.17	9.48e-04	1.02e-03	0.0
200	23	0.30	-0.16	-1.18	9.79e-04	9.87e-04	0.0
200	38	0.25	-0.09	-1.23	9.29e-04	9.55e-04	0.0
200	39	0.30	-0.10	-1.20	9.39e-04	9.91e-04	0.0
200	55	0.28	-0.12	-1.20	9.51e-04	9.78e-04	0.0
200	69	0.28	-0.09	-1.21	9.34e-04	9.73e-04	0.0
201	1	0.36	-0.11	-1.41	1.22e-03	1.26e-03	0.0
201	3	0.31	-0.09	-1.19	1.03e-03	1.07e-03	0.0
201	6	0.22	-0.06	-1.14	9.22e-04	9.27e-04	0.0
201	7	0.35	-0.10	-1.03	9.49e-04	1.02e-03	0.0
201	23	0.30	-0.15	-1.05	9.81e-04	9.87e-04	0.0
201	38	0.26	-0.08	-1.11	9.30e-04	9.55e-04	0.0
201	39	0.31	-0.09	-1.06	9.41e-04	9.91e-04	0.0
201	55	0.29	-0.11	-1.07	9.53e-04	9.78e-04	0.0
201	69	0.28	-0.08	-1.09	9.35e-04	9.73e-04	0.0
202	1	0.32	-0.19	-2.70	1.29e-03	1.35e-03	0.0
202	3	0.27	-0.16	-2.29	1.09e-03	1.14e-03	0.0
202	6	0.18	-0.13	-2.10	9.82e-04	9.94e-04	0.0
202	7	0.31	-0.17	-2.06	1.01e-03	1.08e-03	0.0
202	23	0.27	-0.21	-2.07	1.04e-03	1.05e-03	0.0
202	38	0.22	-0.14	-2.09	9.90e-04	1.02e-03	0.0
202	39	0.27	-0.15	-2.07	1.00e-03	1.06e-03	0.0
202	55	0.26	-0.17	-2.08	1.01e-03	1.04e-03	0.0
202	69	0.25	-0.15	-2.08	9.95e-04	1.04e-03	0.0
203	1	0.32	-0.18	-2.54	1.27e-03	1.32e-03	0.0
203	3	0.27	-0.15	-2.15	1.07e-03	1.12e-03	0.0
203	6	0.18	-0.12	-1.98	9.63e-04	9.70e-04	0.0
203	7	0.31	-0.16	-1.93	9.90e-04	1.06e-03	0.0
203	23	0.27	-0.20	-1.94	1.02e-03	1.03e-03	0.0
203	38	0.22	-0.13	-1.96	9.71e-04	9.98e-04	0.0
203	39	0.27	-0.14	-1.94	9.81e-04	1.03e-03	0.0
203	55	0.26	-0.16	-1.95	9.93e-04	1.02e-03	0.0
203	69	0.25	-0.14	-1.95	9.76e-04	1.02e-03	0.0
204	1	0.33	-0.16	-2.38	1.25e-03	1.30e-03	0.0
204	3	0.28	-0.14	-2.01	1.06e-03	1.10e-03	0.0
204	6	0.19	-0.11	-1.86	9.51e-04	9.56e-04	0.0
204	7	0.32	-0.15	-1.80	9.78e-04	1.05e-03	0.0
204	23	0.27	-0.19	-1.82	1.01e-03	1.02e-03	0.0
204	38	0.23	-0.12	-1.84	9.59e-04	9.84e-04	0.0
204	39	0.28	-0.13	-1.82	9.69e-04	1.02e-03	0.0
204	55	0.26	-0.15	-1.82	9.81e-04	1.01e-03	0.0
204	69	0.25	-0.13	-1.83	9.64e-04	1.00e-03	0.0
205	1	0.33	-0.15	-2.22	1.24e-03	1.29e-03	0.0
205	3	0.28	-0.13	-1.88	1.05e-03	1.09e-03	0.0
205	6	0.19	-0.10	-1.74	9.41e-04	9.48e-04	0.0
205	7	0.32	-0.14	-1.67	9.68e-04	1.04e-03	0.0
205	23	0.27	-0.18	-1.69	1.00e-03	1.01e-03	0.0
205	38	0.23	-0.11	-1.72	9.50e-04	9.76e-04	0.0
205	39	0.28	-0.12	-1.69	9.60e-04	1.01e-03	0.0
205	55	0.26	-0.14	-1.70	9.72e-04	9.99e-04	0.0
205	69	0.25	-0.12	-1.71	9.55e-04	9.93e-04	0.0
206	1	0.33	-0.14	-2.06	1.23e-03	1.28e-03	0.0
206	3	0.28	-0.12	-1.74	1.04e-03	1.09e-03	0.0
206	6	0.19	-0.09	-1.62	9.33e-04	9.42e-04	0.0
206	7	0.32	-0.13	-1.55	9.60e-04	1.03e-03	0.0
206	23	0.27	-0.17	-1.57	9.91e-04	1.00e-03	0.0
206	38	0.23	-0.10	-1.60	9.41e-04	9.70e-04	0.0
206	39	0.28	-0.11	-1.57	9.51e-04	1.01e-03	0.0
206	55	0.26	-0.13	-1.58	9.64e-04	9.93e-04	0.0
206	69	0.25	-0.11	-1.59	9.46e-04	9.88e-04	0.0
207	1	0.33	-0.13	-1.90	1.22e-03	1.28e-03	0.0
207	3	0.28	-0.11	-1.61	1.03e-03	1.08e-03	0.0
207	6	0.19	-0.08	-1.51	9.25e-04	9.37e-04	0.0
207	7	0.32	-0.12	-1.42	9.53e-04	1.03e-03	0.0
207	23	0.28	-0.16	-1.44	9.84e-04	9.97e-04	0.0
207	38	0.23	-0.09	-1.48	9.34e-04	9.65e-04	0.0
207	39	0.28	-0.11	-1.45	9.44e-04	1.00e-03	0.0
207	55	0.26	-0.12	-1.46	9.56e-04	9.88e-04	0.0
207	69	0.26	-0.10	-1.46	9.39e-04	9.83e-04	0.0
208	1	0.34	-0.11	-1.75	1.22e-03	1.28e-03	0.0
208	3	0.28	-0.10	-1.48	1.03e-03	1.08e-03	0.0



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

208	6	0.19	-0.07	-1.39	9.23e-04	9.36e-04	0.0
208	7	0.32	-0.11	-1.30	9.50e-04	1.03e-03	0.0
208	23	0.28	-0.15	-1.32	9.82e-04	9.96e-04	0.0
208	38	0.23	-0.08	-1.36	9.31e-04	9.64e-04	0.0
208	39	0.28	-0.10	-1.32	9.42e-04	1.00e-03	0.0
208	55	0.27	-0.11	-1.33	9.54e-04	9.87e-04	0.0
208	69	0.26	-0.09	-1.34	9.37e-04	9.82e-04	0.0
209	1	0.34	-0.10	-1.59	1.22e-03	1.28e-03	0.0
209	3	0.29	-0.09	-1.35	1.03e-03	1.08e-03	0.0
209	6	0.20	-0.06	-1.28	9.24e-04	9.35e-04	0.0
209	7	0.32	-0.10	-1.17	9.51e-04	1.03e-03	0.0
209	23	0.28	-0.14	-1.20	9.82e-04	9.95e-04	0.0
209	38	0.24	-0.07	-1.24	9.32e-04	9.63e-04	0.0
209	39	0.29	-0.09	-1.20	9.43e-04	9.99e-04	0.0
209	55	0.27	-0.10	-1.21	9.55e-04	9.86e-04	0.0
209	69	0.26	-0.08	-1.22	9.37e-04	9.81e-04	0.0
210	1	0.31	-0.19	-2.82	1.29e-03	1.37e-03	0.0
210	3	0.26	-0.16	-2.38	1.09e-03	1.16e-03	0.0
210	6	0.17	-0.13	-2.18	9.81e-04	1.01e-03	0.0
210	7	0.30	-0.17	-2.15	1.01e-03	1.10e-03	0.0
210	23	0.26	-0.21	-2.16	1.04e-03	1.06e-03	0.0
210	38	0.21	-0.14	-2.17	9.89e-04	1.03e-03	0.0
210	39	0.26	-0.15	-2.16	1.00e-03	1.07e-03	0.0
210	55	0.25	-0.17	-2.17	1.01e-03	1.06e-03	0.0
210	69	0.24	-0.15	-2.17	9.95e-04	1.05e-03	0.0
211	1	0.31	-0.18	-2.67	1.25e-03	1.32e-03	0.0
211	3	0.26	-0.15	-2.26	1.06e-03	1.12e-03	0.0
211	6	0.17	-0.12	-2.08	9.50e-04	9.71e-04	0.0
211	8	0.30	-0.12	-2.03	9.50e-04	1.06e-03	0.0
211	21	0.22	-0.20	-2.06	1.01e-03	1.00e-03	0.0
211	38	0.21	-0.13	-2.06	9.59e-04	9.99e-04	0.0
211	40	0.26	-0.13	-2.05	9.59e-04	1.04e-03	0.0
211	53	0.23	-0.16	-2.06	9.82e-04	1.01e-03	0.0
211	69	0.24	-0.14	-2.06	9.64e-04	1.02e-03	0.0
212	1	0.31	-0.16	-2.53	1.25e-03	1.32e-03	0.0
212	3	0.26	-0.14	-2.14	1.06e-03	1.11e-03	0.0
212	6	0.17	-0.11	-1.97	9.51e-04	9.68e-04	0.0
212	7	0.30	-0.15	-1.92	9.78e-04	1.06e-03	0.0
212	23	0.26	-0.19	-1.94	1.01e-03	1.03e-03	0.0
212	38	0.21	-0.12	-1.96	9.59e-04	9.96e-04	0.0
212	39	0.26	-0.13	-1.94	9.70e-04	1.03e-03	0.0
212	55	0.25	-0.15	-1.94	9.82e-04	1.02e-03	0.0
212	69	0.24	-0.13	-1.95	9.65e-04	1.01e-03	0.0
213	1	0.31	-0.15	-2.39	1.24e-03	1.31e-03	0.0
213	3	0.26	-0.13	-2.02	1.05e-03	1.11e-03	0.0
213	6	0.17	-0.10	-1.87	9.42e-04	9.60e-04	0.0
213	7	0.30	-0.14	-1.81	9.68e-04	1.05e-03	0.0
213	21	0.22	-0.18	-1.85	1.00e-03	9.92e-04	0.0
213	38	0.21	-0.11	-1.85	9.50e-04	9.88e-04	0.0
213	39	0.26	-0.12	-1.83	9.60e-04	1.02e-03	0.0
213	53	0.23	-0.14	-1.84	9.72e-04	1.00e-03	0.0
213	69	0.24	-0.12	-1.84	9.55e-04	1.01e-03	0.0
214	1	0.31	-0.14	-2.25	1.23e-03	1.30e-03	0.0
214	3	0.26	-0.12	-1.90	1.04e-03	1.10e-03	0.0
214	6	0.17	-0.09	-1.77	9.32e-04	9.52e-04	0.0
214	7	0.30	-0.13	-1.69	9.58e-04	1.04e-03	0.0
214	21	0.22	-0.17	-1.74	9.90e-04	9.84e-04	0.0
214	38	0.21	-0.10	-1.75	9.40e-04	9.80e-04	0.0
214	39	0.26	-0.11	-1.72	9.50e-04	1.02e-03	0.0
214	53	0.23	-0.13	-1.73	9.62e-04	9.92e-04	0.0
214	69	0.24	-0.11	-1.73	9.45e-04	9.97e-04	0.0
215	1	0.31	-0.12	-2.11	1.20e-03	1.28e-03	0.0
215	3	0.26	-0.11	-1.79	1.02e-03	1.08e-03	0.0
215	6	0.17	-0.08	-1.66	9.11e-04	9.37e-04	0.0
215	7	0.30	-0.12	-1.58	9.39e-04	1.03e-03	0.0
215	21	0.22	-0.16	-1.64	9.71e-04	9.70e-04	0.0
215	38	0.21	-0.09	-1.64	9.19e-04	9.66e-04	0.0
215	39	0.26	-0.10	-1.61	9.30e-04	1.00e-03	0.0
215	53	0.23	-0.12	-1.63	9.43e-04	9.79e-04	0.0
215	69	0.24	-0.10	-1.62	9.25e-04	9.84e-04	0.0
216	1	0.31	-0.11	-1.97	1.21e-03	1.29e-03	0.0
216	3	0.26	-0.09	-1.67	1.03e-03	1.09e-03	0.0
216	6	0.17	-0.07	-1.56	9.20e-04	9.43e-04	0.0



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
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216	7	0.30	-0.11	-1.47	9.47e-04	1.04e-03	0.0
216	21	0.22	-0.15	-1.53	9.79e-04	9.75e-04	0.0
216	38	0.21	-0.08	-1.53	9.29e-04	9.71e-04	0.0
216	39	0.26	-0.09	-1.50	9.39e-04	1.01e-03	0.0
216	53	0.23	-0.11	-1.52	9.51e-04	9.84e-04	0.0
216	69	0.24	-0.09	-1.52	9.34e-04	9.89e-04	0.0
217	1	0.31	-0.10	-1.83	1.22e-03	1.29e-03	0.0
217	3	0.26	-0.08	-1.55	1.03e-03	1.09e-03	0.0
217	6	0.17	-0.06	-1.46	9.22e-04	9.43e-04	0.0
217	7	0.30	-0.10	-1.36	9.49e-04	1.04e-03	0.0
217	21	0.22	-0.14	-1.43	9.81e-04	9.75e-04	0.0
217	38	0.21	-0.07	-1.43	9.31e-04	9.71e-04	0.0
217	39	0.26	-0.08	-1.39	9.41e-04	1.01e-03	0.0
217	53	0.23	-0.10	-1.42	9.53e-04	9.84e-04	0.0
217	69	0.24	-0.08	-1.41	9.36e-04	9.89e-04	0.0
218	1	0.30	-0.19	-2.94	1.28e-03	1.38e-03	0.0
218	3	0.25	-0.16	-2.49	1.09e-03	1.17e-03	0.0
218	5	0.17	-0.17	-2.28	1.00e-03	1.02e-03	0.0
218	8	0.30	-0.13	-2.24	9.73e-04	1.11e-03	0.0
218	21	0.21	-0.21	-2.27	1.03e-03	1.05e-03	0.0
218	37	0.21	-0.15	-2.27	9.92e-04	1.05e-03	0.0
218	40	0.26	-0.14	-2.26	9.81e-04	1.08e-03	0.0
218	53	0.22	-0.17	-2.27	1.00e-03	1.06e-03	0.0
218	69	0.23	-0.15	-2.26	9.87e-04	1.06e-03	0.0
219	1	0.30	-0.18	-2.82	1.26e-03	1.36e-03	0.0
219	3	0.25	-0.15	-2.39	1.07e-03	1.15e-03	0.0
219	5	0.16	-0.16	-2.19	9.84e-04	9.98e-04	0.0
219	8	0.29	-0.12	-2.15	9.57e-04	1.09e-03	0.0
219	21	0.21	-0.20	-2.18	1.02e-03	1.03e-03	0.0
219	37	0.20	-0.14	-2.18	9.76e-04	1.03e-03	0.0
219	40	0.25	-0.13	-2.16	9.66e-04	1.06e-03	0.0
219	53	0.22	-0.16	-2.18	9.88e-04	1.04e-03	0.0
219	69	0.23	-0.14	-2.17	9.71e-04	1.04e-03	0.0
220	1	0.30	-0.16	-2.70	1.25e-03	1.34e-03	0.0
220	3	0.25	-0.14	-2.29	1.06e-03	1.13e-03	0.0
220	5	0.16	-0.15	-2.11	9.73e-04	9.85e-04	0.0
220	8	0.29	-0.11	-2.05	9.46e-04	1.07e-03	0.0
220	21	0.21	-0.19	-2.09	1.00e-03	1.02e-03	0.0
220	37	0.20	-0.13	-2.09	9.65e-04	1.01e-03	0.0
220	40	0.25	-0.12	-2.07	9.54e-04	1.05e-03	0.0
220	53	0.22	-0.15	-2.09	9.77e-04	1.02e-03	0.0
220	69	0.23	-0.13	-2.08	9.60e-04	1.03e-03	0.0
221	1	0.29	-0.15	-2.59	1.23e-03	1.33e-03	0.0
221	3	0.25	-0.13	-2.19	1.04e-03	1.12e-03	0.0
221	5	0.16	-0.14	-2.03	9.63e-04	9.74e-04	0.0
221	8	0.29	-0.10	-1.96	9.35e-04	1.06e-03	0.0
221	21	0.21	-0.18	-2.01	9.94e-04	1.01e-03	0.0
221	37	0.20	-0.12	-2.00	9.54e-04	1.00e-03	0.0
221	40	0.25	-0.11	-1.98	9.44e-04	1.04e-03	0.0
221	53	0.22	-0.14	-2.00	9.66e-04	1.01e-03	0.0
221	69	0.23	-0.12	-1.99	9.49e-04	1.02e-03	0.0
222	1	0.29	-0.14	-2.47	1.22e-03	1.31e-03	0.0
222	3	0.25	-0.12	-2.09	1.03e-03	1.11e-03	0.0
222	5	0.16	-0.13	-1.94	9.53e-04	9.66e-04	0.0
222	8	0.29	-0.09	-1.86	9.26e-04	1.06e-03	0.0
222	21	0.20	-0.17	-1.92	9.84e-04	9.98e-04	0.0
222	37	0.20	-0.11	-1.92	9.44e-04	9.94e-04	0.0
222	40	0.25	-0.10	-1.89	9.34e-04	1.03e-03	0.0
222	53	0.22	-0.13	-1.91	9.57e-04	1.01e-03	0.0
222	69	0.22	-0.11	-1.90	9.39e-04	1.01e-03	0.0
223	1	0.29	-0.13	-2.36	1.21e-03	1.31e-03	0.0
223	3	0.24	-0.11	-2.00	1.02e-03	1.10e-03	0.0
223	5	0.16	-0.12	-1.86	9.45e-04	9.59e-04	0.0
223	8	0.29	-0.08	-1.77	9.18e-04	1.05e-03	0.0
223	21	0.20	-0.16	-1.84	9.77e-04	9.90e-04	0.0
223	37	0.20	-0.11	-1.83	9.37e-04	9.87e-04	0.0
223	40	0.25	-0.09	-1.80	9.26e-04	1.02e-03	0.0
223	53	0.21	-0.12	-1.82	9.49e-04	9.99e-04	0.0
223	69	0.22	-0.10	-1.81	9.31e-04	1.00e-03	0.0
224	1	0.29	-0.11	-2.25	1.21e-03	1.30e-03	0.0
224	3	0.24	-0.10	-1.90	1.02e-03	1.10e-03	0.0
224	5	0.16	-0.11	-1.78	9.42e-04	9.56e-04	0.0
224	8	0.28	-0.07	-1.68	9.15e-04	1.05e-03	0.0

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224	21	0.20	-0.15	-1.75	9.74e-04	9.88e-04	0.0
224	37	0.19	-0.10	-1.75	9.34e-04	9.84e-04	0.0
224	40	0.24	-0.08	-1.71	9.23e-04	1.02e-03	0.0
224	53	0.21	-0.11	-1.74	9.46e-04	9.96e-04	0.0
224	69	0.22	-0.09	-1.73	9.28e-04	1.00e-03	0.0
225	1	0.28	-0.10	-2.13	1.21e-03	1.30e-03	0.0
225	3	0.24	-0.09	-1.80	1.02e-03	1.10e-03	0.0
225	5	0.15	-0.10	-1.69	9.44e-04	9.55e-04	0.0
225	8	0.28	-0.06	-1.59	9.16e-04	1.05e-03	0.0
225	21	0.20	-0.14	-1.67	9.75e-04	9.87e-04	0.0
225	37	0.19	-0.09	-1.66	9.35e-04	9.83e-04	0.0
225	40	0.24	-0.07	-1.62	9.25e-04	1.02e-03	0.0
225	53	0.21	-0.10	-1.65	9.47e-04	9.95e-04	0.0
225	69	0.22	-0.08	-1.64	9.30e-04	1.00e-03	0.0
226	1	0.29	-0.19	-3.07	1.26e-03	1.39e-03	0.0
226	3	0.24	-0.16	-2.60	1.07e-03	1.18e-03	0.0
226	5	0.16	-0.17	-2.38	9.84e-04	1.03e-03	0.0
226	8	0.29	-0.13	-2.34	9.57e-04	1.12e-03	0.0
226	21	0.20	-0.21	-2.37	1.02e-03	1.06e-03	0.0
226	37	0.20	-0.15	-2.37	9.76e-04	1.05e-03	0.0
226	40	0.25	-0.14	-2.35	9.65e-04	1.09e-03	0.0
226	53	0.21	-0.17	-2.37	9.88e-04	1.07e-03	0.0
226	69	0.22	-0.15	-2.36	9.70e-04	1.07e-03	0.0
227	1	0.28	-0.18	-2.98	1.24e-03	1.37e-03	0.0
227	3	0.24	-0.15	-2.52	1.05e-03	1.16e-03	0.0
227	5	0.15	-0.16	-2.32	9.70e-04	1.01e-03	0.0
227	8	0.28	-0.12	-2.27	9.43e-04	1.10e-03	0.0
227	21	0.20	-0.20	-2.31	1.00e-03	1.04e-03	0.0
227	37	0.19	-0.15	-2.30	9.62e-04	1.04e-03	0.0
227	40	0.24	-0.13	-2.28	9.51e-04	1.07e-03	0.0
227	53	0.21	-0.16	-2.30	9.74e-04	1.05e-03	0.0
227	69	0.22	-0.14	-2.29	9.56e-04	1.06e-03	0.0
228	1	0.28	-0.17	-2.90	1.23e-03	1.35e-03	0.0
228	3	0.24	-0.14	-2.45	1.04e-03	1.15e-03	0.0
228	5	0.15	-0.15	-2.26	9.59e-04	9.97e-04	0.0
228	8	0.28	-0.11	-2.20	9.32e-04	1.09e-03	0.0
228	21	0.20	-0.19	-2.25	9.90e-04	1.03e-03	0.0
228	37	0.19	-0.14	-2.24	9.50e-04	1.02e-03	0.0
228	40	0.24	-0.12	-2.22	9.40e-04	1.06e-03	0.0
228	53	0.21	-0.15	-2.23	9.63e-04	1.04e-03	0.0
228	69	0.22	-0.13	-2.23	9.45e-04	1.04e-03	0.0
229	1	0.28	-0.16	-2.81	1.22e-03	1.34e-03	0.0
229	3	0.23	-0.13	-2.38	1.03e-03	1.13e-03	0.0
229	5	0.15	-0.14	-2.20	9.49e-04	9.87e-04	0.0
229	8	0.28	-0.10	-2.13	9.22e-04	1.08e-03	0.0
229	21	0.19	-0.18	-2.18	9.81e-04	1.02e-03	0.0
229	37	0.19	-0.13	-2.17	9.41e-04	1.01e-03	0.0
229	40	0.24	-0.11	-2.15	9.30e-04	1.05e-03	0.0
229	53	0.20	-0.15	-2.17	9.53e-04	1.03e-03	0.0
229	69	0.21	-0.12	-2.16	9.36e-04	1.03e-03	0.0
230	1	0.27	-0.14	-2.73	1.20e-03	1.33e-03	0.0
230	3	0.23	-0.12	-2.31	1.02e-03	1.12e-03	0.0
230	5	0.14	-0.13	-2.14	9.40e-04	9.76e-04	0.0
230	8	0.27	-0.09	-2.06	9.13e-04	1.07e-03	0.0
230	21	0.19	-0.18	-2.12	9.72e-04	1.01e-03	0.0
230	37	0.18	-0.12	-2.11	9.32e-04	1.00e-03	0.0
230	40	0.23	-0.10	-2.08	9.21e-04	1.04e-03	0.0
230	53	0.20	-0.14	-2.11	9.44e-04	1.02e-03	0.0
230	69	0.21	-0.11	-2.10	9.26e-04	1.02e-03	0.0
231	1	0.27	-0.13	-2.64	1.18e-03	1.31e-03	0.0
231	3	0.23	-0.11	-2.23	9.98e-04	1.10e-03	0.0
231	5	0.14	-0.12	-2.07	9.21e-04	9.57e-04	0.0
231	8	0.27	-0.08	-1.99	8.93e-04	1.05e-03	0.0
231	21	0.19	-0.17	-2.06	9.54e-04	9.90e-04	0.0
231	37	0.18	-0.11	-2.05	9.13e-04	9.86e-04	0.0
231	40	0.23	-0.09	-2.01	9.02e-04	1.02e-03	0.0
231	53	0.20	-0.13	-2.04	9.25e-04	9.99e-04	0.0
231	69	0.20	-0.10	-2.03	9.07e-04	1.00e-03	0.0
232	1	0.26	-0.12	-2.56	1.19e-03	1.31e-03	0.0
232	3	0.22	-0.10	-2.16	1.01e-03	1.11e-03	0.0
232	5	0.14	-0.11	-2.02	9.31e-04	9.64e-04	0.0
232	8	0.27	-0.07	-1.92	9.03e-04	1.06e-03	0.0
232	21	0.18	-0.16	-2.00	9.63e-04	9.95e-04	0.0

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232	37	0.18	-0.10	-1.99	9.23e-04	9.92e-04	0.0
232	40	0.23	-0.09	-1.95	9.12e-04	1.03e-03	0.0
232	53	0.19	-0.12	-1.98	9.35e-04	1.00e-03	0.0
232	69	0.20	-0.09	-1.97	9.17e-04	1.01e-03	0.0
233	1	0.26	-0.11	-2.48	1.20e-03	1.31e-03	0.0
233	3	0.22	-0.09	-2.09	1.01e-03	1.11e-03	0.0
233	5	0.13	-0.10	-1.96	9.34e-04	9.64e-04	0.0
233	8	0.26	-0.06	-1.85	9.06e-04	1.06e-03	0.0
233	21	0.18	-0.15	-1.94	9.65e-04	9.96e-04	0.0
233	37	0.17	-0.09	-1.92	9.25e-04	9.92e-04	0.0
233	40	0.22	-0.08	-1.88	9.15e-04	1.03e-03	0.0
233	53	0.19	-0.11	-1.92	9.37e-04	1.00e-03	0.0
233	69	0.20	-0.08	-1.90	9.20e-04	1.01e-03	0.0
234	1	0.28	-0.19	-3.20	1.23e-03	1.40e-03	0.0
234	3	0.23	-0.16	-2.71	1.04e-03	1.18e-03	0.0
234	5	0.15	-0.17	-2.48	9.61e-04	1.03e-03	0.0
234	8	0.28	-0.13	-2.44	9.34e-04	1.12e-03	0.0
234	21	0.19	-0.21	-2.48	9.92e-04	1.06e-03	0.0
234	37	0.19	-0.16	-2.47	9.53e-04	1.06e-03	0.0
234	40	0.24	-0.14	-2.45	9.42e-04	1.09e-03	0.0
234	53	0.21	-0.17	-2.47	9.65e-04	1.07e-03	0.0
234	69	0.21	-0.15	-2.46	9.48e-04	1.08e-03	0.0
235	1	0.27	-0.18	-3.15	1.21e-03	1.38e-03	0.0
235	3	0.23	-0.15	-2.66	1.03e-03	1.17e-03	0.0
235	5	0.14	-0.16	-2.45	9.47e-04	1.02e-03	0.0
235	8	0.27	-0.12	-2.40	9.20e-04	1.11e-03	0.0
235	21	0.19	-0.21	-2.44	9.78e-04	1.05e-03	0.0
235	37	0.18	-0.15	-2.43	9.38e-04	1.04e-03	0.0
235	40	0.23	-0.13	-2.41	9.28e-04	1.08e-03	0.0
235	53	0.20	-0.17	-2.43	9.51e-04	1.05e-03	0.0
235	69	0.21	-0.14	-2.42	9.33e-04	1.06e-03	0.0
236	1	0.26	-0.17	-3.10	1.20e-03	1.36e-03	0.0
236	3	0.22	-0.15	-2.62	1.02e-03	1.15e-03	0.0
236	5	0.14	-0.15	-2.41	9.38e-04	1.00e-03	0.0
236	8	0.27	-0.11	-2.35	9.10e-04	1.09e-03	0.0
236	21	0.18	-0.20	-2.41	9.69e-04	1.03e-03	0.0
236	37	0.18	-0.14	-2.39	9.29e-04	1.03e-03	0.0
236	40	0.23	-0.13	-2.37	9.19e-04	1.07e-03	0.0
236	53	0.20	-0.16	-2.39	9.42e-04	1.04e-03	0.0
236	69	0.20	-0.13	-2.38	9.24e-04	1.05e-03	0.0
237	1	0.26	-0.16	-3.05	1.19e-03	1.35e-03	0.0
237	3	0.22	-0.14	-2.58	1.01e-03	1.14e-03	0.0
237	5	0.13	-0.14	-2.38	9.30e-04	9.94e-04	0.0
237	8	0.26	-0.11	-2.31	9.03e-04	1.08e-03	0.0
237	21	0.18	-0.19	-2.37	9.62e-04	1.03e-03	0.0
237	37	0.17	-0.13	-2.36	9.22e-04	1.02e-03	0.0
237	40	0.22	-0.12	-2.33	9.11e-04	1.06e-03	0.0
237	53	0.19	-0.15	-2.35	9.34e-04	1.03e-03	0.0
237	69	0.20	-0.13	-2.34	9.17e-04	1.04e-03	0.0
238	1	0.25	-0.15	-3.00	1.18e-03	1.34e-03	0.0
238	3	0.21	-0.13	-2.53	1.00e-03	1.13e-03	0.0
238	5	0.13	-0.14	-2.34	9.23e-04	9.85e-04	0.0
238	8	0.26	-0.10	-2.27	8.96e-04	1.08e-03	0.0
238	21	0.17	-0.18	-2.34	9.55e-04	1.02e-03	0.0
238	37	0.17	-0.12	-2.32	9.15e-04	1.01e-03	0.0
238	40	0.22	-0.11	-2.29	9.04e-04	1.05e-03	0.0
238	53	0.19	-0.14	-2.32	9.27e-04	1.03e-03	0.0
238	69	0.19	-0.12	-2.30	9.09e-04	1.03e-03	0.0
239	1	0.25	-0.14	-2.95	1.17e-03	1.33e-03	0.0
239	3	0.21	-0.12	-2.49	9.94e-04	1.12e-03	0.0
239	5	0.12	-0.13	-2.31	9.18e-04	9.77e-04	0.0
239	8	0.25	-0.09	-2.22	8.90e-04	1.07e-03	0.0
239	21	0.17	-0.17	-2.30	9.49e-04	1.01e-03	0.0
239	37	0.16	-0.12	-2.28	9.09e-04	1.00e-03	0.0
239	40	0.21	-0.10	-2.25	8.98e-04	1.04e-03	0.0
239	53	0.18	-0.13	-2.28	9.21e-04	1.02e-03	0.0
239	69	0.19	-0.11	-2.27	9.04e-04	1.02e-03	0.0
240	1	0.24	-0.13	-2.90	1.17e-03	1.32e-03	0.0
240	3	0.20	-0.11	-2.45	9.93e-04	1.12e-03	0.0
240	5	0.12	-0.12	-2.28	9.16e-04	9.73e-04	0.0
240	8	0.25	-0.08	-2.18	8.88e-04	1.06e-03	0.0
240	21	0.16	-0.17	-2.27	9.48e-04	1.00e-03	0.0
240	37	0.16	-0.11	-2.25	9.08e-04	1.00e-03	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

240	40	0.21	-0.09	-2.21	8.97e-04	1.04e-03	0.0
240	53	0.18	-0.13	-2.24	9.20e-04	1.01e-03	0.0
240	69	0.18	-0.10	-2.23	9.02e-04	1.02e-03	0.0
241	1	0.23	-0.12	-2.85	1.18e-03	1.32e-03	0.0
241	3	0.20	-0.10	-2.41	9.95e-04	1.12e-03	0.0
241	5	0.11	-0.11	-2.24	9.19e-04	9.72e-04	0.0
241	8	0.24	-0.07	-2.14	8.91e-04	1.06e-03	0.0
241	21	0.16	-0.16	-2.23	9.50e-04	1.00e-03	0.0
241	37	0.15	-0.10	-2.21	9.10e-04	1.00e-03	0.0
241	40	0.20	-0.09	-2.17	8.99e-04	1.04e-03	0.0
241	53	0.17	-0.12	-2.21	9.22e-04	1.01e-03	0.0
241	69	0.18	-0.09	-2.19	9.05e-04	1.02e-03	0.0
242	1	0.27	-0.20	-3.33	1.20e-03	1.39e-03	0.0
242	3	0.23	-0.17	-2.82	1.01e-03	1.18e-03	0.0
242	5	0.14	-0.17	-2.58	9.36e-04	1.03e-03	0.0
242	8	0.27	-0.13	-2.54	9.09e-04	1.12e-03	0.0
242	21	0.19	-0.22	-2.58	9.68e-04	1.06e-03	0.0
242	37	0.18	-0.16	-2.57	9.28e-04	1.06e-03	0.0
242	40	0.23	-0.14	-2.55	9.17e-04	1.09e-03	0.0
242	53	0.20	-0.18	-2.57	9.40e-04	1.07e-03	0.0
242	69	0.21	-0.15	-2.56	9.23e-04	1.07e-03	0.0
243	1	0.26	-0.19	-3.31	1.17e-03	1.36e-03	0.0
243	3	0.22	-0.16	-2.80	9.89e-04	1.15e-03	0.0
243	5	0.13	-0.16	-2.57	9.13e-04	1.00e-03	0.0
243	8	0.26	-0.12	-2.52	8.85e-04	1.09e-03	0.0
243	21	0.18	-0.21	-2.57	9.45e-04	1.03e-03	0.0
243	37	0.17	-0.15	-2.56	9.04e-04	1.03e-03	0.0
243	40	0.22	-0.14	-2.54	8.93e-04	1.07e-03	0.0
243	53	0.19	-0.17	-2.56	9.17e-04	1.04e-03	0.0
243	69	0.20	-0.14	-2.55	8.99e-04	1.05e-03	0.0
244	1	0.25	-0.18	-3.30	1.17e-03	1.37e-03	0.0
244	3	0.21	-0.15	-2.79	9.92e-04	1.16e-03	0.0
244	8	0.26	-0.12	-2.51	8.88e-04	1.10e-03	0.0
244	21	0.17	-0.20	-2.57	9.47e-04	1.04e-03	0.0
244	40	0.22	-0.13	-2.53	8.96e-04	1.07e-03	0.0
244	53	0.19	-0.16	-2.55	9.19e-04	1.04e-03	0.0
244	69	0.19	-0.14	-2.54	9.02e-04	1.05e-03	0.0
245	1	0.24	-0.17	-3.29	1.16e-03	1.36e-03	0.0
245	3	0.21	-0.15	-2.78	9.85e-04	1.15e-03	0.0
245	8	0.25	-0.11	-2.50	8.81e-04	1.09e-03	0.0
245	21	0.17	-0.20	-2.56	9.40e-04	1.03e-03	0.0
245	40	0.21	-0.12	-2.52	8.90e-04	1.06e-03	0.0
245	53	0.18	-0.16	-2.54	9.13e-04	1.04e-03	0.0
245	69	0.19	-0.13	-2.53	8.95e-04	1.04e-03	0.0
246	1	0.24	-0.16	-3.27	1.15e-03	1.34e-03	0.0
246	3	0.20	-0.14	-2.77	9.77e-04	1.14e-03	0.0
246	8	0.25	-0.11	-2.48	8.74e-04	1.08e-03	0.0
246	21	0.16	-0.19	-2.55	9.34e-04	1.02e-03	0.0
246	40	0.21	-0.12	-2.51	8.83e-04	1.05e-03	0.0
246	53	0.17	-0.15	-2.53	9.06e-04	1.03e-03	0.0
246	69	0.18	-0.13	-2.52	8.88e-04	1.03e-03	0.0
247	1	0.23	-0.16	-3.26	1.14e-03	1.32e-03	0.0
247	3	0.19	-0.13	-2.76	9.61e-04	1.11e-03	0.0
247	8	0.24	-0.10	-2.47	8.59e-04	1.06e-03	0.0
247	21	0.16	-0.18	-2.55	9.20e-04	9.99e-04	0.0
247	40	0.20	-0.11	-2.49	8.68e-04	1.03e-03	0.0
247	53	0.17	-0.14	-2.52	8.91e-04	1.01e-03	0.0
247	69	0.18	-0.12	-2.51	8.73e-04	1.01e-03	0.0
248	1	0.22	-0.15	-3.25	1.15e-03	1.33e-03	0.0
248	3	0.19	-0.12	-2.75	9.72e-04	1.12e-03	0.0
248	8	0.23	-0.09	-2.46	8.70e-04	1.07e-03	0.0
248	21	0.15	-0.18	-2.54	9.30e-04	1.01e-03	0.0
248	40	0.19	-0.11	-2.48	8.78e-04	1.04e-03	0.0
248	53	0.16	-0.14	-2.52	9.02e-04	1.02e-03	0.0
248	69	0.17	-0.11	-2.50	8.84e-04	1.02e-03	0.0
249	1	0.21	-0.14	-3.24	1.15e-03	1.33e-03	0.0
249	3	0.18	-0.12	-2.74	9.76e-04	1.12e-03	0.0
249	8	0.23	-0.09	-2.44	8.73e-04	1.07e-03	0.0
249	21	0.14	-0.17	-2.54	9.33e-04	1.01e-03	0.0
249	40	0.19	-0.10	-2.47	8.82e-04	1.04e-03	0.0
249	53	0.16	-0.13	-2.51	9.05e-04	1.02e-03	0.0
249	69	0.16	-0.11	-2.49	8.87e-04	1.02e-03	0.0
250	1	0.27	-0.21	-3.47	1.18e-03	1.40e-03	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

250	3	0.22	-0.17	-2.94	1.00e-03	1.19e-03	0.0
250	8	0.27	-0.14	-2.65	8.98e-04	1.12e-03	0.0
250	21	0.18	-0.22	-2.69	9.56e-04	1.06e-03	0.0
250	40	0.23	-0.15	-2.66	9.06e-04	1.09e-03	0.0
250	53	0.20	-0.18	-2.68	9.29e-04	1.07e-03	0.0
250	69	0.20	-0.16	-2.67	9.11e-04	1.08e-03	0.0
251	1	0.25	-0.20	-3.49	1.16e-03	1.38e-03	0.0
251	3	0.22	-0.17	-2.96	9.83e-04	1.17e-03	0.0
251	8	0.26	-0.13	-2.67	8.80e-04	1.11e-03	0.0
251	21	0.18	-0.22	-2.71	9.39e-04	1.05e-03	0.0
251	40	0.22	-0.15	-2.68	8.88e-04	1.08e-03	0.0
251	53	0.19	-0.18	-2.70	9.11e-04	1.06e-03	0.0
251	69	0.20	-0.15	-2.69	8.94e-04	1.06e-03	0.0
252	1	0.24	-0.19	-3.52	1.15e-03	1.37e-03	0.0
252	3	0.21	-0.16	-2.97	9.70e-04	1.16e-03	0.0
252	8	0.25	-0.13	-2.68	8.68e-04	1.10e-03	0.0
252	21	0.17	-0.21	-2.73	9.27e-04	1.04e-03	0.0
252	40	0.21	-0.14	-2.69	8.76e-04	1.07e-03	0.0
252	53	0.18	-0.17	-2.72	8.99e-04	1.05e-03	0.0
252	69	0.19	-0.15	-2.70	8.82e-04	1.05e-03	0.0
253	1	0.23	-0.19	-3.54	1.14e-03	1.36e-03	0.0
253	3	0.20	-0.16	-2.99	9.62e-04	1.15e-03	0.0
253	8	0.25	-0.12	-2.69	8.61e-04	1.09e-03	0.0
253	21	0.16	-0.21	-2.76	9.20e-04	1.03e-03	0.0
253	40	0.21	-0.14	-2.71	8.69e-04	1.06e-03	0.0
253	53	0.17	-0.17	-2.73	8.92e-04	1.04e-03	0.0
253	69	0.18	-0.14	-2.72	8.74e-04	1.04e-03	0.0
254	1	0.22	-0.18	-3.56	1.13e-03	1.34e-03	0.0
254	3	0.19	-0.15	-3.01	9.56e-04	1.14e-03	0.0
254	8	0.24	-0.12	-2.71	8.55e-04	1.08e-03	0.0
254	21	0.15	-0.20	-2.78	9.14e-04	1.02e-03	0.0
254	40	0.20	-0.13	-2.73	8.63e-04	1.05e-03	0.0
254	53	0.17	-0.16	-2.75	8.86e-04	1.03e-03	0.0
254	69	0.17	-0.14	-2.74	8.69e-04	1.03e-03	0.0
255	1	0.21	-0.17	-3.58	1.12e-03	1.33e-03	0.0
255	3	0.18	-0.15	-3.03	9.52e-04	1.13e-03	0.0
255	8	0.23	-0.11	-2.72	8.51e-04	1.07e-03	0.0
255	21	0.15	-0.20	-2.80	9.11e-04	1.01e-03	0.0
255	40	0.19	-0.13	-2.74	8.60e-04	1.04e-03	0.0
255	53	0.16	-0.16	-2.77	8.83e-04	1.02e-03	0.0
255	69	0.16	-0.13	-2.76	8.65e-04	1.02e-03	0.0
256	1	0.20	-0.17	-3.61	1.12e-03	1.33e-03	0.0
256	3	0.17	-0.14	-3.05	9.52e-04	1.12e-03	0.0
256	8	0.22	-0.11	-2.74	8.51e-04	1.07e-03	0.0
256	21	0.14	-0.19	-2.82	9.11e-04	1.01e-03	0.0
256	40	0.18	-0.12	-2.76	8.60e-04	1.04e-03	0.0
256	53	0.15	-0.15	-2.79	8.83e-04	1.01e-03	0.0
256	69	0.16	-0.13	-2.77	8.65e-04	1.02e-03	0.0
257	1	0.19	-0.16	-3.63	1.13e-03	1.33e-03	0.0
257	3	0.16	-0.14	-3.07	9.54e-04	1.12e-03	0.0
257	8	0.21	-0.10	-2.75	8.53e-04	1.07e-03	0.0
257	21	0.13	-0.19	-2.84	9.13e-04	1.01e-03	0.0
257	40	0.17	-0.12	-2.78	8.62e-04	1.04e-03	0.0
257	53	0.14	-0.15	-2.81	8.85e-04	1.02e-03	0.0
257	69	0.15	-0.12	-2.79	8.67e-04	1.02e-03	0.0
258	1	0.26	-0.22	-3.61	1.16e-03	1.40e-03	0.0
258	3	0.22	-0.18	-3.06	9.85e-04	1.18e-03	0.0
258	8	0.27	-0.15	-2.76	8.82e-04	1.12e-03	0.0
258	21	0.18	-0.23	-2.80	9.40e-04	1.06e-03	0.0
258	40	0.23	-0.16	-2.77	8.90e-04	1.09e-03	0.0
258	53	0.19	-0.19	-2.79	9.13e-04	1.07e-03	0.0
258	69	0.20	-0.17	-2.78	8.96e-04	1.07e-03	0.0
259	1	0.25	-0.21	-3.67	1.14e-03	1.38e-03	0.0
259	3	0.21	-0.18	-3.10	9.62e-04	1.17e-03	0.0
259	8	0.26	-0.14	-2.81	8.61e-04	1.10e-03	0.0
259	21	0.17	-0.23	-2.85	9.19e-04	1.05e-03	0.0
259	40	0.22	-0.16	-2.82	8.69e-04	1.08e-03	0.0
259	53	0.19	-0.19	-2.83	8.92e-04	1.05e-03	0.0
259	69	0.19	-0.16	-2.82	8.74e-04	1.06e-03	0.0
260	1	0.24	-0.21	-3.73	1.12e-03	1.36e-03	0.0
260	3	0.20	-0.18	-3.15	9.47e-04	1.15e-03	0.0
260	8	0.25	-0.14	-2.85	8.47e-04	1.09e-03	0.0
260	21	0.16	-0.22	-2.90	9.06e-04	1.03e-03	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

260	40	0.21	-0.15	-2.86	8.55e-04	1.07e-03	0.0
260	53	0.18	-0.18	-2.88	8.78e-04	1.04e-03	0.0
260	69	0.18	-0.16	-2.87	8.61e-04	1.05e-03	0.0
261	1	0.23	-0.20	-3.78	1.11e-03	1.35e-03	0.0
261	3	0.19	-0.17	-3.20	9.37e-04	1.14e-03	0.0
261	8	0.24	-0.14	-2.89	8.38e-04	1.08e-03	0.0
261	21	0.16	-0.22	-2.94	8.97e-04	1.02e-03	0.0
261	40	0.20	-0.15	-2.90	8.46e-04	1.05e-03	0.0
261	53	0.17	-0.18	-2.92	8.69e-04	1.03e-03	0.0
261	69	0.18	-0.16	-2.91	8.52e-04	1.04e-03	0.0
262	1	0.22	-0.20	-3.84	1.10e-03	1.33e-03	0.0
262	3	0.18	-0.17	-3.25	9.30e-04	1.13e-03	0.0
262	8	0.23	-0.13	-2.93	8.31e-04	1.07e-03	0.0
262	21	0.15	-0.22	-2.99	8.91e-04	1.01e-03	0.0
262	40	0.19	-0.15	-2.94	8.40e-04	1.04e-03	0.0
262	53	0.16	-0.18	-2.97	8.63e-04	1.02e-03	0.0
262	69	0.17	-0.15	-2.95	8.45e-04	1.03e-03	0.0
263	1	0.20	-0.19	-3.89	1.09e-03	1.30e-03	0.0
263	3	0.17	-0.16	-3.29	9.18e-04	1.10e-03	0.0
263	8	0.22	-0.13	-2.97	8.21e-04	1.05e-03	0.0
263	21	0.14	-0.21	-3.04	8.82e-04	9.90e-04	0.0
263	40	0.18	-0.14	-2.98	8.29e-04	1.02e-03	0.0
263	53	0.15	-0.17	-3.01	8.53e-04	9.98e-04	0.0
263	69	0.16	-0.15	-3.00	8.35e-04	1.00e-03	0.0
264	1	0.19	-0.19	-3.95	1.10e-03	1.31e-03	0.0
264	3	0.16	-0.16	-3.34	9.30e-04	1.11e-03	0.0
264	8	0.21	-0.13	-3.01	8.31e-04	1.06e-03	0.0
264	21	0.13	-0.21	-3.09	8.91e-04	9.97e-04	0.0
264	40	0.17	-0.14	-3.03	8.40e-04	1.03e-03	0.0
264	53	0.14	-0.17	-3.06	8.63e-04	1.01e-03	0.0
264	69	0.15	-0.15	-3.04	8.45e-04	1.01e-03	0.0
265	1	0.18	-0.19	-4.01	1.10e-03	1.32e-03	0.0
265	3	0.15	-0.16	-3.39	9.33e-04	1.11e-03	0.0
265	8	0.20	-0.12	-3.05	8.34e-04	1.06e-03	0.0
265	21	0.12	-0.21	-3.14	8.94e-04	9.98e-04	0.0
265	40	0.16	-0.13	-3.07	8.43e-04	1.03e-03	0.0
265	53	0.13	-0.17	-3.11	8.66e-04	1.01e-03	0.0
265	69	0.14	-0.14	-3.08	8.48e-04	1.01e-03	0.0
266	1	0.26	-0.23	-3.75	1.14e-03	1.38e-03	0.0
266	3	0.22	-0.19	-3.17	9.65e-04	1.16e-03	0.0
266	8	0.27	-0.16	-2.87	8.64e-04	1.10e-03	0.0
266	21	0.18	-0.24	-2.90	9.22e-04	1.04e-03	0.0
266	40	0.23	-0.17	-2.88	8.72e-04	1.08e-03	0.0
266	53	0.19	-0.20	-2.89	8.95e-04	1.05e-03	0.0
266	69	0.20	-0.17	-2.88	8.78e-04	1.06e-03	0.0
267	1	0.25	-0.23	-3.84	1.11e-03	1.35e-03	0.0
267	3	0.21	-0.19	-3.25	9.38e-04	1.15e-03	0.0
267	8	0.26	-0.15	-2.94	8.39e-04	1.09e-03	0.0
267	21	0.17	-0.24	-2.98	8.97e-04	1.03e-03	0.0
267	40	0.22	-0.17	-2.95	8.47e-04	1.06e-03	0.0
267	53	0.18	-0.20	-2.96	8.70e-04	1.04e-03	0.0
267	69	0.19	-0.17	-2.95	8.52e-04	1.04e-03	0.0
268	1	0.24	-0.22	-3.92	1.09e-03	1.34e-03	0.0
268	3	0.20	-0.19	-3.32	9.23e-04	1.13e-03	0.0
268	8	0.25	-0.15	-3.01	8.25e-04	1.08e-03	0.0
268	21	0.16	-0.24	-3.05	8.84e-04	1.02e-03	0.0
268	40	0.21	-0.16	-3.01	8.33e-04	1.05e-03	0.0
268	53	0.17	-0.20	-3.03	8.56e-04	1.03e-03	0.0
268	69	0.18	-0.17	-3.02	8.39e-04	1.03e-03	0.0
269	1	0.22	-0.22	-4.01	1.08e-03	1.33e-03	0.0
269	3	0.19	-0.19	-3.39	9.13e-04	1.12e-03	0.0
269	8	0.24	-0.15	-3.07	8.16e-04	1.06e-03	0.0
269	21	0.15	-0.23	-3.12	8.75e-04	1.01e-03	0.0
269	40	0.20	-0.16	-3.08	8.25e-04	1.04e-03	0.0
269	53	0.16	-0.19	-3.10	8.48e-04	1.01e-03	0.0
269	69	0.17	-0.17	-3.09	8.30e-04	1.02e-03	0.0
270	1	0.21	-0.22	-4.10	1.07e-03	1.31e-03	0.0
270	3	0.18	-0.18	-3.47	9.09e-04	1.11e-03	0.0
270	8	0.23	-0.15	-3.13	8.13e-04	1.05e-03	0.0
270	21	0.14	-0.23	-3.19	8.72e-04	9.95e-04	0.0
270	40	0.19	-0.16	-3.15	8.21e-04	1.03e-03	0.0
270	53	0.15	-0.19	-3.17	8.44e-04	1.00e-03	0.0
270	69	0.16	-0.17	-3.15	8.26e-04	1.01e-03	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

271	1	0.20	-0.22	-4.19	1.07e-03	1.30e-03	0.0
271	3	0.17	-0.18	-3.54	9.08e-04	1.10e-03	0.0
271	8	0.22	-0.15	-3.20	8.12e-04	1.04e-03	0.0
271	21	0.13	-0.23	-3.26	8.71e-04	9.86e-04	0.0
271	40	0.18	-0.16	-3.21	8.20e-04	1.02e-03	0.0
271	53	0.15	-0.19	-3.24	8.43e-04	9.94e-04	0.0
271	69	0.15	-0.17	-3.22	8.26e-04	1.00e-03	0.0
272	1	0.19	-0.21	-4.27	1.08e-03	1.29e-03	0.0
272	3	0.16	-0.18	-3.62	9.12e-04	1.10e-03	0.0
272	8	0.21	-0.14	-3.26	8.15e-04	1.04e-03	0.0
272	21	0.12	-0.23	-3.34	8.74e-04	9.82e-04	0.0
272	40	0.17	-0.16	-3.28	8.23e-04	1.01e-03	0.0
272	53	0.14	-0.19	-3.31	8.46e-04	9.90e-04	0.0
272	69	0.14	-0.16	-3.29	8.29e-04	9.95e-04	0.0
273	1	0.17	-0.21	-4.36	1.08e-03	1.29e-03	0.0
273	3	0.15	-0.18	-3.69	9.14e-04	1.10e-03	0.0
273	8	0.20	-0.14	-3.33	8.17e-04	1.04e-03	0.0
273	21	0.11	-0.23	-3.41	8.77e-04	9.82e-04	0.0
273	40	0.16	-0.16	-3.35	8.26e-04	1.01e-03	0.0
273	53	0.13	-0.19	-3.38	8.49e-04	9.91e-04	0.0
273	69	0.13	-0.16	-3.36	8.31e-04	9.96e-04	0.0
274	1	0.26	-0.24	-3.88	1.12e-03	1.34e-03	0.0
274	3	0.22	-0.20	-3.28	9.48e-04	1.14e-03	0.0
274	8	0.27	-0.16	-2.98	8.48e-04	1.08e-03	0.0
274	21	0.18	-0.25	-3.00	9.07e-04	1.02e-03	0.0
274	40	0.23	-0.18	-2.98	8.57e-04	1.05e-03	0.0
274	53	0.19	-0.21	-2.99	8.79e-04	1.03e-03	0.0
274	69	0.20	-0.18	-2.98	8.62e-04	1.03e-03	0.0
275	1	0.25	-0.24	-3.99	1.07e-03	1.30e-03	0.0
275	3	0.21	-0.20	-3.38	9.08e-04	1.10e-03	0.0
275	7	0.26	-0.20	-3.08	8.39e-04	1.05e-03	0.0
275	21	0.17	-0.25	-3.09	8.71e-04	9.90e-04	0.0
275	23	0.21	-0.25	-3.09	8.71e-04	1.02e-03	0.0
275	39	0.22	-0.19	-3.07	8.31e-04	1.02e-03	0.0
275	53	0.18	-0.21	-3.08	8.43e-04	9.98e-04	0.0
275	55	0.20	-0.21	-3.08	8.43e-04	1.01e-03	0.0
275	69	0.19	-0.18	-3.07	8.25e-04	1.00e-03	0.0
276	1	0.24	-0.24	-4.11	1.07e-03	1.30e-03	0.0
276	3	0.20	-0.20	-3.47	9.02e-04	1.10e-03	0.0
276	8	0.25	-0.16	-3.15	8.06e-04	1.05e-03	0.0
276	21	0.16	-0.25	-3.19	8.65e-04	9.89e-04	0.0
276	40	0.21	-0.18	-3.15	8.14e-04	1.02e-03	0.0
276	53	0.17	-0.21	-3.17	8.37e-04	9.98e-04	0.0
276	69	0.18	-0.18	-3.16	8.20e-04	1.00e-03	0.0
277	1	0.22	-0.24	-4.22	1.06e-03	1.29e-03	0.0
277	3	0.19	-0.20	-3.57	8.94e-04	1.09e-03	0.0
277	7	0.24	-0.20	-3.25	8.26e-04	1.04e-03	0.0
277	21	0.15	-0.25	-3.28	8.58e-04	9.80e-04	0.0
277	39	0.20	-0.19	-3.25	8.18e-04	1.01e-03	0.0
277	53	0.16	-0.21	-3.26	8.30e-04	9.88e-04	0.0
277	69	0.17	-0.18	-3.24	8.13e-04	9.93e-04	0.0
278	1	0.21	-0.24	-4.33	1.05e-03	1.28e-03	0.0
278	3	0.18	-0.20	-3.66	8.90e-04	1.08e-03	0.0
278	7	0.23	-0.20	-3.34	8.22e-04	1.03e-03	0.0
278	21	0.14	-0.25	-3.37	8.54e-04	9.70e-04	0.0
278	39	0.19	-0.19	-3.34	8.14e-04	1.00e-03	0.0
278	53	0.15	-0.21	-3.35	8.26e-04	9.78e-04	0.0
278	69	0.16	-0.18	-3.33	8.09e-04	9.83e-04	0.0
279	1	0.20	-0.24	-4.44	1.04e-03	1.25e-03	0.0
279	3	0.17	-0.20	-3.76	8.84e-04	1.06e-03	0.0
279	7	0.22	-0.20	-3.43	8.18e-04	1.01e-03	0.0
279	21	0.13	-0.25	-3.46	8.51e-04	9.50e-04	0.0
279	39	0.18	-0.19	-3.42	8.09e-04	9.82e-04	0.0
279	53	0.14	-0.21	-3.43	8.22e-04	9.59e-04	0.0
279	69	0.15	-0.18	-3.42	8.04e-04	9.64e-04	0.0
280	1	0.18	-0.24	-4.56	1.06e-03	1.26e-03	0.0
280	3	0.15	-0.20	-3.86	8.96e-04	1.07e-03	0.0
280	7	0.21	-0.20	-3.52	8.28e-04	1.02e-03	0.0
280	21	0.12	-0.25	-3.55	8.61e-04	9.59e-04	0.0
280	39	0.17	-0.19	-3.51	8.20e-04	9.90e-04	0.0
280	53	0.13	-0.21	-3.52	8.32e-04	9.67e-04	0.0
280	69	0.14	-0.18	-3.50	8.15e-04	9.72e-04	0.0
281	1	0.17	-0.24	-4.67	1.06e-03	1.27e-03	0.0



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

281	3	0.14	-0.20	-3.95	9.00e-04	1.07e-03	0.0
281	7	0.20	-0.20	-3.61	8.32e-04	1.02e-03	0.0
281	21	0.11	-0.25	-3.64	8.64e-04	9.61e-04	0.0
281	39	0.16	-0.19	-3.60	8.23e-04	9.91e-04	0.0
281	53	0.12	-0.21	-3.61	8.36e-04	9.69e-04	0.0
281	69	0.13	-0.18	-3.59	8.18e-04	9.74e-04	0.0
282	1	0.26	-0.25	-4.00	1.11e-03	1.30e-03	0.0
282	3	0.22	-0.21	-3.38	9.38e-04	1.10e-03	0.0
282	7	0.27	-0.21	-3.08	8.66e-04	1.04e-03	0.0
282	23	0.22	-0.26	-3.09	8.98e-04	1.01e-03	0.0
282	39	0.23	-0.20	-3.08	8.58e-04	1.02e-03	0.0
282	55	0.21	-0.22	-3.08	8.70e-04	1.01e-03	0.0
282	69	0.20	-0.19	-3.07	8.53e-04	1.00e-03	0.0
283	1	0.25	-0.25	-4.13	1.07e-03	1.28e-03	0.0
283	3	0.21	-0.21	-3.49	9.07e-04	1.08e-03	0.0
283	7	0.26	-0.21	-3.19	8.38e-04	1.03e-03	0.0
283	23	0.21	-0.26	-3.20	8.70e-04	9.95e-04	0.0
283	39	0.22	-0.20	-3.18	8.30e-04	9.99e-04	0.0
283	55	0.20	-0.22	-3.19	8.42e-04	9.86e-04	0.0
283	69	0.19	-0.19	-3.18	8.25e-04	9.81e-04	0.0
284	1	0.24	-0.25	-4.26	1.05e-03	1.26e-03	0.0
284	3	0.20	-0.22	-3.61	8.92e-04	1.07e-03	0.0
284	7	0.25	-0.22	-3.29	8.24e-04	1.01e-03	0.0
284	23	0.20	-0.26	-3.31	8.56e-04	9.83e-04	0.0
284	39	0.21	-0.20	-3.28	8.16e-04	9.87e-04	0.0
284	55	0.19	-0.22	-3.29	8.28e-04	9.75e-04	0.0
284	69	0.18	-0.20	-3.28	8.10e-04	9.69e-04	0.0
285	1	0.22	-0.26	-4.40	1.05e-03	1.25e-03	0.0
285	3	0.19	-0.22	-3.72	8.84e-04	1.06e-03	0.0
285	7	0.24	-0.22	-3.40	8.18e-04	1.01e-03	0.0
285	23	0.19	-0.26	-3.41	8.49e-04	9.74e-04	0.0
285	39	0.20	-0.21	-3.39	8.09e-04	9.78e-04	0.0
285	55	0.18	-0.22	-3.39	8.21e-04	9.66e-04	0.0
285	69	0.17	-0.20	-3.38	8.04e-04	9.61e-04	0.0
286	1	0.21	-0.26	-4.53	1.04e-03	1.24e-03	0.0
286	3	0.18	-0.22	-3.83	8.83e-04	1.05e-03	0.0
286	7	0.23	-0.22	-3.50	8.16e-04	9.98e-04	0.0
286	23	0.18	-0.26	-3.52	8.48e-04	9.67e-04	0.0
286	39	0.19	-0.21	-3.49	8.08e-04	9.71e-04	0.0
286	55	0.17	-0.22	-3.50	8.20e-04	9.58e-04	0.0
286	69	0.16	-0.20	-3.48	8.03e-04	9.53e-04	0.0
287	1	0.20	-0.26	-4.66	1.05e-03	1.23e-03	0.0
287	3	0.17	-0.22	-3.94	8.85e-04	1.04e-03	0.0
287	7	0.22	-0.22	-3.60	8.18e-04	9.93e-04	0.0
287	23	0.17	-0.27	-3.63	8.50e-04	9.61e-04	0.0
287	39	0.18	-0.21	-3.59	8.10e-04	9.65e-04	0.0
287	55	0.16	-0.23	-3.60	8.22e-04	9.53e-04	0.0
287	69	0.15	-0.20	-3.58	8.04e-04	9.48e-04	0.0
288	1	0.19	-0.26	-4.79	1.05e-03	1.23e-03	0.0
288	3	0.16	-0.22	-4.06	8.90e-04	1.04e-03	0.0
288	7	0.21	-0.22	-3.71	8.23e-04	9.91e-04	0.0
288	23	0.16	-0.27	-3.74	8.55e-04	9.60e-04	0.0
288	39	0.17	-0.21	-3.70	8.15e-04	9.64e-04	0.0
288	55	0.15	-0.23	-3.71	8.27e-04	9.52e-04	0.0
288	69	0.14	-0.20	-3.69	8.09e-04	9.46e-04	0.0
289	1	0.17	-0.27	-4.93	1.06e-03	1.23e-03	0.0
289	3	0.15	-0.23	-4.17	8.93e-04	1.04e-03	0.0
289	7	0.20	-0.22	-3.81	8.26e-04	9.93e-04	0.0
289	23	0.15	-0.27	-3.84	8.58e-04	9.62e-04	0.0
289	39	0.16	-0.21	-3.80	8.17e-04	9.65e-04	0.0
289	55	0.14	-0.23	-3.81	8.30e-04	9.53e-04	0.0
289	69	0.13	-0.20	-3.79	8.12e-04	9.48e-04	0.0
290	1	0.26	-0.26	-4.10	1.10e-03	1.25e-03	0.0
290	3	0.22	-0.22	-3.47	9.34e-04	1.06e-03	0.0
290	7	0.27	-0.22	-3.17	8.63e-04	1.01e-03	0.0
290	23	0.22	-0.27	-3.17	8.94e-04	9.75e-04	0.0
290	39	0.23	-0.21	-3.16	8.54e-04	9.79e-04	0.0
290	55	0.21	-0.23	-3.16	8.67e-04	9.67e-04	0.0
290	69	0.20	-0.20	-3.15	8.49e-04	9.62e-04	0.0
291	1	0.25	-0.27	-4.25	1.07e-03	1.23e-03	0.0
291	3	0.21	-0.22	-3.59	9.07e-04	1.04e-03	0.0
291	7	0.26	-0.22	-3.28	8.38e-04	9.89e-04	0.0
291	23	0.21	-0.27	-3.29	8.69e-04	9.58e-04	0.0



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

291	39	0.22	-0.21	-3.27	8.30e-04	9.62e-04	0.0
291	55	0.20	-0.23	-3.28	8.42e-04	9.50e-04	0.0
291	69	0.19	-0.20	-3.27	8.24e-04	9.44e-04	0.0
292	1	0.24	-0.27	-4.39	1.05e-03	1.21e-03	0.0
292	3	0.20	-0.23	-3.72	8.92e-04	1.03e-03	0.0
292	7	0.25	-0.23	-3.40	8.25e-04	9.78e-04	0.0
292	23	0.20	-0.27	-3.41	8.56e-04	9.47e-04	0.0
292	39	0.21	-0.22	-3.39	8.17e-04	9.51e-04	0.0
292	55	0.19	-0.23	-3.39	8.29e-04	9.39e-04	0.0
292	69	0.18	-0.21	-3.38	8.11e-04	9.33e-04	0.0
293	1	0.23	-0.27	-4.54	1.05e-03	1.20e-03	0.0
293	3	0.19	-0.23	-3.84	8.85e-04	1.02e-03	0.0
293	7	0.24	-0.23	-3.51	8.18e-04	9.71e-04	0.0
293	23	0.19	-0.28	-3.52	8.50e-04	9.40e-04	0.0
293	39	0.20	-0.22	-3.50	8.10e-04	9.43e-04	0.0
293	55	0.18	-0.24	-3.50	8.22e-04	9.31e-04	0.0
293	69	0.18	-0.21	-3.49	8.05e-04	9.26e-04	0.0
294	1	0.22	-0.28	-4.68	1.04e-03	1.20e-03	0.0
294	3	0.18	-0.24	-3.96	8.82e-04	1.01e-03	0.0
294	7	0.23	-0.23	-3.63	8.16e-04	9.65e-04	0.0
294	23	0.19	-0.28	-3.64	8.47e-04	9.34e-04	0.0
294	39	0.19	-0.22	-3.61	8.07e-04	9.37e-04	0.0
294	55	0.17	-0.24	-3.62	8.19e-04	9.25e-04	0.0
294	69	0.17	-0.21	-3.60	8.02e-04	9.20e-04	0.0
295	1	0.20	-0.28	-4.82	1.04e-03	1.18e-03	0.0
295	3	0.17	-0.24	-4.08	8.79e-04	9.98e-04	0.0
295	7	0.22	-0.24	-3.74	8.13e-04	9.53e-04	0.0
295	23	0.18	-0.28	-3.75	8.46e-04	9.21e-04	0.0
295	39	0.18	-0.23	-3.72	8.05e-04	9.25e-04	0.0
295	55	0.16	-0.24	-3.73	8.17e-04	9.13e-04	0.0
295	69	0.16	-0.22	-3.71	7.99e-04	9.07e-04	0.0
296	1	0.19	-0.29	-4.97	1.05e-03	1.19e-03	0.0
296	3	0.16	-0.24	-4.21	8.90e-04	1.01e-03	0.0
296	7	0.21	-0.24	-3.86	8.23e-04	9.63e-04	0.0
296	23	0.17	-0.29	-3.87	8.55e-04	9.31e-04	0.0
296	39	0.17	-0.23	-3.84	8.14e-04	9.35e-04	0.0
296	55	0.16	-0.25	-3.84	8.27e-04	9.23e-04	0.0
296	69	0.15	-0.22	-3.82	8.09e-04	9.17e-04	0.0
297	1	0.18	-0.29	-5.12	1.06e-03	1.20e-03	0.0
297	3	0.15	-0.25	-4.33	8.93e-04	1.01e-03	0.0
297	7	0.20	-0.24	-3.97	8.26e-04	9.65e-04	0.0
297	23	0.16	-0.29	-3.99	8.58e-04	9.34e-04	0.0
297	39	0.16	-0.23	-3.95	8.17e-04	9.38e-04	0.0
297	55	0.15	-0.25	-3.96	8.30e-04	9.26e-04	0.0
297	69	0.14	-0.23	-3.94	8.12e-04	9.20e-04	0.0
298	1	0.26	-0.27	-4.19	1.11e-03	1.20e-03	0.0
298	3	0.22	-0.23	-3.55	9.36e-04	1.02e-03	0.0
298	7	0.27	-0.23	-3.24	8.65e-04	9.70e-04	0.0
298	23	0.22	-0.27	-3.25	8.96e-04	9.39e-04	0.0
298	39	0.23	-0.22	-3.23	8.56e-04	9.43e-04	0.0
298	55	0.21	-0.23	-3.23	8.69e-04	9.30e-04	0.0
298	69	0.20	-0.21	-3.23	8.51e-04	9.25e-04	0.0
299	1	0.25	-0.28	-4.34	1.08e-03	1.18e-03	0.0
299	3	0.22	-0.24	-3.68	9.14e-04	9.99e-04	0.0
299	7	0.26	-0.23	-3.36	8.45e-04	9.53e-04	0.0
299	23	0.22	-0.28	-3.37	8.76e-04	9.22e-04	0.0
299	39	0.22	-0.22	-3.35	8.36e-04	9.25e-04	0.0
299	55	0.20	-0.24	-3.35	8.48e-04	9.13e-04	0.0
299	69	0.20	-0.21	-3.34	8.31e-04	9.08e-04	0.0
300	1	0.24	-0.28	-4.49	1.07e-03	1.17e-03	0.0
300	3	0.21	-0.24	-3.80	9.02e-04	9.90e-04	0.0
300	7	0.25	-0.24	-3.48	8.34e-04	9.45e-04	0.0
300	23	0.21	-0.28	-3.49	8.66e-04	9.13e-04	0.0
300	39	0.21	-0.23	-3.47	8.26e-04	9.17e-04	0.0
300	55	0.20	-0.24	-3.47	8.38e-04	9.05e-04	0.0
300	69	0.19	-0.22	-3.46	8.20e-04	9.00e-04	0.0
301	1	0.23	-0.29	-4.64	1.06e-03	1.16e-03	0.0
301	3	0.20	-0.25	-3.93	8.97e-04	9.84e-04	0.0
301	7	0.25	-0.24	-3.60	8.29e-04	9.40e-04	0.0
301	23	0.20	-0.29	-3.60	8.60e-04	9.08e-04	0.0
301	39	0.21	-0.23	-3.58	8.21e-04	9.12e-04	0.0
301	55	0.19	-0.25	-3.58	8.33e-04	9.00e-04	0.0
301	69	0.18	-0.22	-3.57	8.15e-04	8.95e-04	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

302	1	0.22	-0.30	-4.79	1.06e-03	1.16e-03	0.0
302	3	0.19	-0.25	-4.05	8.96e-04	9.81e-04	0.0
302	7	0.24	-0.25	-3.72	8.28e-04	9.37e-04	0.0
302	23	0.19	-0.29	-3.72	8.60e-04	9.06e-04	0.0
302	39	0.20	-0.24	-3.70	8.20e-04	9.09e-04	0.0
302	55	0.18	-0.25	-3.70	8.32e-04	8.97e-04	0.0
302	69	0.17	-0.23	-3.68	8.14e-04	8.92e-04	0.0
303	1	0.21	-0.30	-4.94	1.06e-03	1.16e-03	0.0
303	3	0.18	-0.26	-4.18	8.97e-04	9.79e-04	0.0
303	7	0.23	-0.25	-3.83	8.29e-04	9.36e-04	0.0
303	23	0.18	-0.30	-3.84	8.61e-04	9.04e-04	0.0
303	39	0.19	-0.24	-3.81	8.20e-04	9.08e-04	0.0
303	55	0.17	-0.26	-3.82	8.33e-04	8.96e-04	0.0
303	69	0.16	-0.23	-3.80	8.15e-04	8.90e-04	0.0
304	1	0.20	-0.31	-5.09	1.06e-03	1.16e-03	0.0
304	3	0.17	-0.26	-4.31	9.01e-04	9.82e-04	0.0
304	7	0.22	-0.26	-3.95	8.33e-04	9.38e-04	0.0
304	23	0.18	-0.30	-3.96	8.65e-04	9.07e-04	0.0
304	39	0.18	-0.25	-3.93	8.24e-04	9.10e-04	0.0
304	55	0.16	-0.26	-3.93	8.37e-04	8.98e-04	0.0
304	69	0.16	-0.24	-3.91	8.19e-04	8.93e-04	0.0
305	1	0.19	-0.32	-5.24	1.07e-03	1.16e-03	0.0
305	3	0.16	-0.27	-4.43	9.03e-04	9.84e-04	0.0
305	7	0.21	-0.26	-4.07	8.35e-04	9.40e-04	0.0
305	23	0.17	-0.31	-4.08	8.66e-04	9.09e-04	0.0
305	39	0.17	-0.25	-4.05	8.26e-04	9.12e-04	0.0
305	55	0.16	-0.27	-4.05	8.38e-04	9.00e-04	0.0
305	69	0.15	-0.24	-4.03	8.21e-04	8.95e-04	0.0
306	1	0.27	-0.28	-4.27	1.11e-03	1.16e-03	0.0
306	3	0.23	-0.24	-3.61	9.42e-04	9.84e-04	0.0
306	7	0.27	-0.24	-3.31	8.70e-04	9.39e-04	0.0
306	23	0.23	-0.28	-3.31	9.01e-04	9.08e-04	0.0
306	39	0.23	-0.22	-3.29	8.62e-04	9.12e-04	0.0
306	55	0.21	-0.24	-3.29	8.74e-04	9.00e-04	0.0
306	69	0.21	-0.22	-3.29	8.57e-04	8.94e-04	0.0
307	1	0.26	-0.29	-4.42	1.09e-03	1.13e-03	0.0
307	3	0.22	-0.25	-3.74	9.18e-04	9.58e-04	0.0
307	7	0.26	-0.24	-3.42	8.49e-04	9.17e-04	0.0
307	23	0.22	-0.29	-3.42	8.81e-04	8.85e-04	0.0
307	39	0.22	-0.23	-3.41	8.40e-04	8.89e-04	0.0
307	55	0.21	-0.25	-3.41	8.53e-04	8.77e-04	0.0
307	69	0.20	-0.22	-3.40	8.35e-04	8.71e-04	0.0
308	1	0.25	-0.30	-4.56	1.09e-03	1.13e-03	0.0
308	3	0.21	-0.25	-3.86	9.18e-04	9.60e-04	0.0
308	7	0.26	-0.25	-3.54	8.49e-04	9.18e-04	0.0
308	23	0.21	-0.29	-3.54	8.80e-04	8.87e-04	0.0
308	39	0.22	-0.24	-3.52	8.40e-04	8.90e-04	0.0
308	55	0.20	-0.25	-3.52	8.53e-04	8.78e-04	0.0
308	69	0.19	-0.23	-3.51	8.35e-04	8.73e-04	0.0
309	1	0.24	-0.31	-4.71	1.08e-03	1.13e-03	0.0
309	3	0.21	-0.26	-3.98	9.15e-04	9.56e-04	0.0
309	7	0.25	-0.26	-3.65	8.45e-04	9.15e-04	0.0
309	23	0.21	-0.30	-3.65	8.77e-04	8.83e-04	0.0
309	39	0.21	-0.24	-3.63	8.37e-04	8.87e-04	0.0
309	55	0.19	-0.26	-3.63	8.49e-04	8.75e-04	0.0
309	69	0.19	-0.24	-3.62	8.32e-04	8.69e-04	0.0
310	1	0.24	-0.31	-4.85	1.08e-03	1.13e-03	0.0
310	3	0.20	-0.27	-4.10	9.12e-04	9.53e-04	0.0
310	7	0.25	-0.26	-3.77	8.43e-04	9.12e-04	0.0
310	23	0.20	-0.31	-3.77	8.74e-04	8.80e-04	0.0
310	39	0.21	-0.25	-3.74	8.34e-04	8.84e-04	0.0
310	55	0.19	-0.27	-3.74	8.47e-04	8.72e-04	0.0
310	69	0.18	-0.24	-3.73	8.29e-04	8.66e-04	0.0
311	1	0.23	-0.32	-4.99	1.07e-03	1.12e-03	0.0
311	3	0.19	-0.27	-4.22	9.07e-04	9.46e-04	0.0
311	7	0.24	-0.27	-3.88	8.39e-04	9.06e-04	0.0
311	23	0.19	-0.31	-3.88	8.72e-04	8.74e-04	0.0
311	39	0.20	-0.26	-3.86	8.30e-04	8.78e-04	0.0
311	55	0.18	-0.27	-3.86	8.43e-04	8.65e-04	0.0
311	69	0.17	-0.25	-3.84	8.25e-04	8.60e-04	0.0
312	1	0.22	-0.33	-5.14	1.08e-03	1.13e-03	0.0
312	3	0.19	-0.28	-4.35	9.16e-04	9.57e-04	0.0
312	7	0.23	-0.27	-4.00	8.47e-04	9.16e-04	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

312	23	0.19	-0.32	-4.00	8.78e-04	8.84e-04	0.0
312	39	0.19	-0.26	-3.97	8.38e-04	8.88e-04	0.0
312	55	0.18	-0.28	-3.97	8.50e-04	8.75e-04	0.0
312	69	0.17	-0.25	-3.95	8.32e-04	8.70e-04	0.0
313	1	0.21	-0.34	-5.28	1.08e-03	1.13e-03	0.0
313	3	0.18	-0.29	-4.47	9.18e-04	9.60e-04	0.0
313	7	0.23	-0.28	-4.11	8.49e-04	9.18e-04	0.0
313	23	0.18	-0.33	-4.11	8.80e-04	8.87e-04	0.0
313	39	0.19	-0.27	-4.08	8.40e-04	8.90e-04	0.0
313	55	0.17	-0.29	-4.08	8.52e-04	8.78e-04	0.0
313	69	0.16	-0.26	-4.07	8.35e-04	8.72e-04	0.0
314	1	0.28	-0.28	-4.20	1.15e-03	1.16e-03	0.0
314	3	0.23	-0.24	-3.55	9.76e-04	9.78e-04	0.0
314	7	0.28	-0.24	-3.25	9.01e-04	9.34e-04	0.0
314	23	0.23	-0.28	-3.25	9.32e-04	9.03e-04	0.0
314	39	0.24	-0.23	-3.24	8.93e-04	9.06e-04	0.0
314	55	0.22	-0.24	-3.24	9.05e-04	8.94e-04	0.0
314	69	0.21	-0.22	-3.23	8.87e-04	8.89e-04	0.0
315	1	0.27	-0.29	-4.35	1.13e-03	1.13e-03	0.0
315	3	0.23	-0.25	-3.68	9.57e-04	9.56e-04	0.0
315	7	0.27	-0.25	-3.37	8.84e-04	9.14e-04	0.0
315	23	0.23	-0.29	-3.37	9.15e-04	8.82e-04	0.0
315	39	0.23	-0.23	-3.36	8.76e-04	8.86e-04	0.0
315	55	0.22	-0.25	-3.35	8.88e-04	8.74e-04	0.0
315	69	0.21	-0.23	-3.35	8.70e-04	8.69e-04	0.0
316	1	0.26	-0.31	-4.50	1.12e-03	1.12e-03	0.0
316	3	0.22	-0.26	-3.81	9.48e-04	9.44e-04	0.0
316	7	0.27	-0.25	-3.49	8.76e-04	9.03e-04	0.0
316	23	0.22	-0.30	-3.49	9.07e-04	8.72e-04	0.0
316	39	0.23	-0.24	-3.47	8.67e-04	8.76e-04	0.0
316	55	0.21	-0.26	-3.47	8.79e-04	8.63e-04	0.0
316	69	0.20	-0.23	-3.46	8.62e-04	8.58e-04	0.0
317	1	0.26	-0.32	-4.65	1.11e-03	1.11e-03	0.0
317	3	0.22	-0.27	-3.94	9.42e-04	9.38e-04	0.0
317	7	0.26	-0.26	-3.61	8.70e-04	8.98e-04	0.0
317	23	0.22	-0.31	-3.61	9.02e-04	8.67e-04	0.0
317	39	0.22	-0.25	-3.59	8.62e-04	8.71e-04	0.0
317	55	0.21	-0.27	-3.59	8.74e-04	8.58e-04	0.0
317	69	0.20	-0.24	-3.58	8.57e-04	8.53e-04	0.0
318	1	0.25	-0.33	-4.80	1.11e-03	1.11e-03	0.0
318	3	0.21	-0.28	-4.06	9.40e-04	9.37e-04	0.0
318	7	0.26	-0.27	-3.73	8.68e-04	8.98e-04	0.0
318	23	0.21	-0.32	-3.72	8.99e-04	8.66e-04	0.0
318	39	0.22	-0.26	-3.71	8.59e-04	8.70e-04	0.0
318	55	0.20	-0.28	-3.71	8.72e-04	8.57e-04	0.0
318	69	0.19	-0.25	-3.69	8.54e-04	8.52e-04	0.0
319	1	0.25	-0.34	-4.95	1.11e-03	1.11e-03	0.0
319	3	0.21	-0.28	-4.19	9.38e-04	9.38e-04	0.0
319	7	0.25	-0.28	-3.85	8.67e-04	8.99e-04	0.0
319	23	0.21	-0.32	-3.84	8.98e-04	8.67e-04	0.0
319	39	0.21	-0.27	-3.83	8.58e-04	8.71e-04	0.0
319	55	0.20	-0.28	-3.82	8.71e-04	8.58e-04	0.0
319	69	0.19	-0.26	-3.81	8.53e-04	8.53e-04	0.0
320	1	0.24	-0.35	-5.10	1.11e-03	1.11e-03	0.0
320	3	0.20	-0.29	-4.32	9.40e-04	9.43e-04	0.0
320	7	0.25	-0.29	-3.97	8.69e-04	9.03e-04	0.0
320	23	0.20	-0.33	-3.96	9.00e-04	8.71e-04	0.0
320	39	0.21	-0.27	-3.94	8.60e-04	8.75e-04	0.0
320	55	0.19	-0.29	-3.94	8.72e-04	8.62e-04	0.0
320	69	0.18	-0.27	-3.93	8.55e-04	8.57e-04	0.0
321	1	0.23	-0.36	-5.25	1.11e-03	1.12e-03	0.0
321	3	0.20	-0.30	-4.45	9.43e-04	9.45e-04	0.0
321	7	0.24	-0.29	-4.09	8.71e-04	9.05e-04	0.0
321	23	0.20	-0.34	-4.08	9.02e-04	8.73e-04	0.0
321	39	0.20	-0.28	-4.06	8.62e-04	8.77e-04	0.0
321	55	0.19	-0.30	-4.06	8.74e-04	8.64e-04	0.0
321	69	0.18	-0.27	-4.04	8.57e-04	8.59e-04	0.0
322	1	0.29	-0.29	-4.11	1.20e-03	1.15e-03	0.0
322	3	0.24	-0.24	-3.48	1.02e-03	9.76e-04	0.0
322	7	0.29	-0.24	-3.18	9.38e-04	9.32e-04	0.0
322	23	0.24	-0.29	-3.18	9.69e-04	9.01e-04	0.0
322	39	0.25	-0.23	-3.17	9.29e-04	9.05e-04	0.0
322	55	0.23	-0.25	-3.17	9.41e-04	8.92e-04	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
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322	69	0.22	-0.22	-3.16	9.24e-04	8.87e-04	0.0
323	1	0.28	-0.30	-4.26	1.18e-03	1.12e-03	0.0
323	3	0.24	-0.25	-3.61	9.97e-04	9.49e-04	0.0
323	7	0.28	-0.25	-3.30	9.20e-04	9.07e-04	0.0
323	23	0.24	-0.29	-3.29	9.51e-04	8.76e-04	0.0
323	39	0.24	-0.24	-3.29	9.12e-04	8.80e-04	0.0
323	55	0.23	-0.25	-3.28	9.24e-04	8.68e-04	0.0
323	69	0.22	-0.23	-3.28	9.07e-04	8.63e-04	0.0
324	1	0.28	-0.31	-4.41	1.16e-03	1.10e-03	0.0
324	3	0.24	-0.26	-3.73	9.85e-04	9.34e-04	0.0
324	7	0.28	-0.26	-3.42	9.09e-04	8.94e-04	0.0
324	23	0.23	-0.30	-3.41	9.40e-04	8.63e-04	0.0
324	39	0.24	-0.25	-3.40	9.01e-04	8.67e-04	0.0
324	55	0.22	-0.26	-3.40	9.13e-04	8.55e-04	0.0
324	69	0.21	-0.24	-3.39	8.95e-04	8.49e-04	0.0
325	1	0.27	-0.32	-4.56	1.15e-03	1.10e-03	0.0
325	3	0.23	-0.27	-3.86	9.77e-04	9.27e-04	0.0
325	7	0.28	-0.27	-3.54	9.02e-04	8.88e-04	0.0
325	23	0.23	-0.31	-3.53	9.33e-04	8.57e-04	0.0
325	39	0.24	-0.26	-3.52	8.93e-04	8.60e-04	0.0
325	55	0.22	-0.27	-3.51	9.05e-04	8.48e-04	0.0
325	69	0.21	-0.25	-3.51	8.88e-04	8.43e-04	0.0
326	1	0.27	-0.33	-4.70	1.15e-03	1.09e-03	0.0
326	3	0.23	-0.28	-3.98	9.71e-04	9.24e-04	0.0
326	7	0.27	-0.28	-3.66	8.96e-04	8.86e-04	0.0
326	23	0.23	-0.32	-3.64	9.27e-04	8.54e-04	0.0
326	39	0.23	-0.26	-3.63	8.88e-04	8.58e-04	0.0
326	55	0.22	-0.28	-3.63	9.00e-04	8.45e-04	0.0
326	69	0.21	-0.26	-3.62	8.82e-04	8.40e-04	0.0
327	1	0.27	-0.35	-4.85	1.14e-03	1.09e-03	0.0
327	3	0.22	-0.29	-4.10	9.61e-04	9.20e-04	0.0
327	7	0.27	-0.29	-3.77	8.88e-04	8.83e-04	0.0
327	23	0.22	-0.33	-3.76	9.20e-04	8.51e-04	0.0
327	39	0.23	-0.27	-3.75	8.79e-04	8.54e-04	0.0
327	55	0.21	-0.29	-3.74	8.91e-04	8.42e-04	0.0
327	69	0.20	-0.27	-3.73	8.73e-04	8.36e-04	0.0
328	1	0.26	-0.36	-5.00	1.14e-03	1.10e-03	0.0
328	3	0.22	-0.30	-4.23	9.68e-04	9.32e-04	0.0
328	7	0.27	-0.29	-3.89	8.94e-04	8.93e-04	0.0
328	23	0.22	-0.34	-3.88	9.25e-04	8.61e-04	0.0
328	39	0.23	-0.28	-3.86	8.85e-04	8.65e-04	0.0
328	55	0.21	-0.30	-3.86	8.97e-04	8.53e-04	0.0
328	69	0.20	-0.27	-3.85	8.80e-04	8.47e-04	0.0
329	1	0.26	-0.37	-5.15	1.15e-03	1.11e-03	0.0
329	3	0.22	-0.31	-4.36	9.71e-04	9.35e-04	0.0
329	7	0.26	-0.30	-4.01	8.96e-04	8.96e-04	0.0
329	23	0.22	-0.35	-3.99	9.27e-04	8.64e-04	0.0
329	39	0.22	-0.29	-3.98	8.88e-04	8.68e-04	0.0
329	55	0.21	-0.31	-3.97	9.00e-04	8.56e-04	0.0
329	69	0.20	-0.28	-3.96	8.82e-04	8.50e-04	0.0
330	1	0.30	-0.29	-4.01	1.25e-03	1.16e-03	0.0
330	3	0.25	-0.24	-3.39	1.06e-03	9.80e-04	0.0
330	7	0.30	-0.24	-3.10	9.75e-04	9.36e-04	0.0
330	23	0.25	-0.29	-3.09	1.01e-03	9.04e-04	0.0
330	39	0.26	-0.23	-3.09	9.67e-04	9.08e-04	0.0
330	55	0.24	-0.25	-3.09	9.79e-04	8.96e-04	0.0
330	69	0.23	-0.22	-3.09	9.62e-04	8.91e-04	0.0
331	1	0.30	-0.30	-4.15	1.23e-03	1.12e-03	0.0
331	3	0.25	-0.25	-3.51	1.04e-03	9.49e-04	0.0
331	7	0.29	-0.25	-3.22	9.57e-04	9.08e-04	0.0
331	23	0.25	-0.30	-3.20	9.88e-04	8.76e-04	0.0
331	39	0.25	-0.24	-3.20	9.49e-04	8.80e-04	0.0
331	55	0.24	-0.26	-3.20	9.61e-04	8.68e-04	0.0
331	69	0.23	-0.23	-3.19	9.44e-04	8.63e-04	0.0
332	1	0.29	-0.31	-4.29	1.21e-03	1.10e-03	0.0
332	3	0.25	-0.26	-3.63	1.02e-03	9.34e-04	0.0
332	7	0.29	-0.26	-3.33	9.45e-04	8.94e-04	0.0
332	23	0.25	-0.31	-3.31	9.76e-04	8.62e-04	0.0
332	39	0.25	-0.25	-3.31	9.37e-04	8.66e-04	0.0
332	55	0.23	-0.27	-3.30	9.49e-04	8.54e-04	0.0
332	69	0.23	-0.24	-3.30	9.32e-04	8.49e-04	0.0
333	1	0.29	-0.33	-4.42	1.20e-03	1.10e-03	0.0
333	3	0.25	-0.28	-3.74	1.01e-03	9.27e-04	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

333	7	0.29	-0.27	-3.44	9.36e-04	8.88e-04	0.0
333	23	0.24	-0.32	-3.42	9.67e-04	8.56e-04	0.0
333	39	0.25	-0.26	-3.42	9.28e-04	8.60e-04	0.0
333	55	0.23	-0.28	-3.41	9.40e-04	8.48e-04	0.0
333	69	0.23	-0.25	-3.40	9.23e-04	8.42e-04	0.0
334	1	0.29	-0.34	-4.56	1.19e-03	1.09e-03	0.0
334	3	0.25	-0.29	-3.86	1.01e-03	9.25e-04	0.0
334	7	0.29	-0.28	-3.55	9.29e-04	8.87e-04	0.0
334	23	0.24	-0.33	-3.53	9.60e-04	8.55e-04	0.0
334	39	0.25	-0.27	-3.52	9.21e-04	8.59e-04	0.0
334	55	0.23	-0.29	-3.51	9.33e-04	8.47e-04	0.0
334	69	0.22	-0.26	-3.51	9.15e-04	8.41e-04	0.0
335	1	0.29	-0.35	-4.70	1.18e-03	1.10e-03	0.0
335	3	0.24	-0.30	-3.97	1.00e-03	9.27e-04	0.0
335	7	0.29	-0.29	-3.66	9.24e-04	8.89e-04	0.0
335	23	0.24	-0.33	-3.63	9.55e-04	8.57e-04	0.0
335	39	0.25	-0.28	-3.63	9.15e-04	8.61e-04	0.0
335	55	0.23	-0.30	-3.62	9.27e-04	8.48e-04	0.0
335	69	0.22	-0.27	-3.61	9.10e-04	8.43e-04	0.0
336	1	0.29	-0.36	-4.83	1.18e-03	1.10e-03	0.0
336	3	0.24	-0.31	-4.09	9.99e-04	9.33e-04	0.0
336	7	0.28	-0.30	-3.77	9.22e-04	8.94e-04	0.0
336	23	0.24	-0.34	-3.74	9.53e-04	8.62e-04	0.0
336	39	0.24	-0.29	-3.74	9.14e-04	8.66e-04	0.0
336	55	0.23	-0.31	-3.73	9.26e-04	8.53e-04	0.0
336	69	0.22	-0.28	-3.72	9.08e-04	8.48e-04	0.0
337	1	0.28	-0.38	-4.97	1.18e-03	1.11e-03	0.0
337	3	0.24	-0.32	-4.21	1.00e-03	9.36e-04	0.0
337	7	0.28	-0.31	-3.88	9.24e-04	8.97e-04	0.0
337	23	0.24	-0.35	-3.85	9.55e-04	8.65e-04	0.0
337	39	0.24	-0.30	-3.85	9.15e-04	8.69e-04	0.0
337	55	0.23	-0.32	-3.83	9.27e-04	8.56e-04	0.0
337	69	0.22	-0.29	-3.82	9.10e-04	8.51e-04	0.0
338	1	0.37	-0.30	-3.41	3.04e-03	3.10e-03	-2.12e-04
338	3	0.32	-0.25	-2.89	2.58e-03	2.62e-03	-1.80e-04
338	7	0.35	-0.25	-2.63	2.36e-03	2.43e-03	-1.63e-04
338	23	0.31	-0.30	-2.63	2.39e-03	2.40e-03	-1.63e-04
338	39	0.31	-0.24	-2.63	2.35e-03	2.40e-03	-1.63e-04
338	55	0.29	-0.26	-2.63	2.36e-03	2.39e-03	-1.63e-04
338	69	0.29	-0.23	-2.63	2.34e-03	2.38e-03	-1.63e-04

Nodo	Traslazione X	Traslazione Y	Traslazione Z	Rotazione X	Rotazione Y	Rotazione Z
	0.11	-0.38	-5.28	7.99e-04	8.30e-04	-2.12e-04
	0.45	-0.06	-0.93	3.04e-03	3.10e-03	0.0

Nodo	Cmb	Azione X daN	Azione Y daN	Azione Z daN	Azione RX daN cm	Azione RY daN cm	Azione RZ daN cm
84	1	-823.82	4085.96	-8.872e+04	8.320e+06	6.623e+06	0.0
84	2	-633.71	3143.04	-6.824e+04	6.400e+06	5.095e+06	0.0
84	3	-697.08	3457.35	-7.507e+04	7.040e+06	5.604e+06	0.0
84	4	-570.34	2828.74	-6.142e+04	5.760e+06	4.585e+06	0.0
84	5	-4131.80	2095.74	-6.775e+04	6.178e+06	5.837e+06	0.0
84	6	-4131.80	4190.35	-6.775e+04	6.623e+06	5.837e+06	0.0
84	7	2864.38	2095.74	-6.874e+04	6.178e+06	4.352e+06	0.0
84	24	415.72	6634.05	-6.839e+04	7.142e+06	4.872e+06	0.0
84	37	-1988.18	2737.52	-6.805e+04	6.314e+06	5.382e+06	0.0
84	38	-1988.18	3548.56	-6.805e+04	6.486e+06	5.382e+06	0.0
84	39	720.76	2737.52	-6.843e+04	6.314e+06	4.807e+06	0.0
84	56	-227.37	4494.77	-6.830e+04	6.688e+06	5.008e+06	0.0
84	69	-633.71	3143.04	-6.824e+04	6.400e+06	5.095e+06	0.0
92	1	-298.15	-403.43	-9.915e+04	6.757e+06	6.317e+06	0.0
92	2	-229.34	-310.33	-7.627e+04	5.198e+06	4.859e+06	0.0
92	3	-252.28	-341.36	-8.390e+04	5.718e+06	5.345e+06	0.0
92	4	-206.41	-279.30	-6.864e+04	4.678e+06	4.373e+06	0.0
92	6	-3705.42	731.66	-7.535e+04	5.419e+06	5.592e+06	0.0
92	7	3246.73	-1352.31	-7.720e+04	4.977e+06	4.126e+06	0.0
92	24	813.48	3162.96	-7.655e+04	5.934e+06	4.639e+06	0.0
92	38	-1575.29	93.13	-7.591e+04	5.283e+06	5.143e+06	0.0
92	39	1116.60	-713.79	-7.663e+04	5.112e+06	4.575e+06	0.0
92	56	174.44	1034.54	-7.638e+04	5.483e+06	4.774e+06	0.0
92	69	-229.34	-310.33	-7.627e+04	5.198e+06	4.859e+06	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

103	1	1885.46	1132.40	-8.739e+04	7.487e+06	5.939e+06	0.0
103	2	1450.35	871.08	-6.722e+04	5.759e+06	4.569e+06	0.0
103	3	1595.39	958.19	-7.394e+04	6.335e+06	5.026e+06	0.0
103	4	1305.32	783.97	-6.050e+04	5.183e+06	4.112e+06	0.0
103	5	-2024.80	-172.00	-6.625e+04	5.540e+06	5.301e+06	0.0
103	6	-2023.87	1911.53	-6.647e+04	5.981e+06	5.302e+06	0.0
103	8	4925.50	1914.15	-6.819e+04	5.979e+06	3.836e+06	0.0
103	22	409.50	4343.23	-6.732e+04	6.495e+06	4.789e+06	0.0
103	37	104.76	467.20	-6.684e+04	5.674e+06	4.852e+06	0.0
103	38	105.12	1273.94	-6.693e+04	5.845e+06	4.853e+06	0.0
103	40	2795.94	1274.96	-6.759e+04	5.844e+06	4.285e+06	0.0
103	54	1047.33	2215.50	-6.726e+04	6.044e+06	4.654e+06	0.0
103	69	1450.35	871.08	-6.722e+04	5.759e+06	4.569e+06	0.0
115	1	732.72	5911.74	-7.411e+04	9.168e+06	6.741e+06	0.0
115	2	563.63	4547.49	-5.701e+04	7.052e+06	5.185e+06	0.0
115	3	619.99	5002.24	-6.271e+04	7.758e+06	5.704e+06	0.0
115	4	507.26	4092.74	-5.131e+04	6.347e+06	4.667e+06	0.0
115	5	-2925.51	3498.37	-5.647e+04	6.831e+06	5.925e+06	0.0
115	6	-2923.95	5591.39	-5.672e+04	7.275e+06	5.925e+06	0.0
115	8	4052.77	5596.60	-5.754e+04	7.274e+06	4.446e+06	0.0
115	22	-480.27	8035.07	-5.730e+04	7.792e+06	5.408e+06	0.0
115	37	-787.38	4141.27	-5.680e+04	6.967e+06	5.472e+06	0.0
115	38	-786.77	4951.69	-5.690e+04	7.139e+06	5.472e+06	0.0
115	40	1914.63	4953.71	-5.722e+04	7.138e+06	4.899e+06	0.0
115	54	159.43	5897.89	-5.712e+04	7.339e+06	5.271e+06	0.0
115	69	563.63	4547.49	-5.701e+04	7.052e+06	5.185e+06	0.0
119	1	3477.85	2898.69	-7.355e+04	8.056e+06	5.781e+06	0.0
119	2	2675.27	2229.76	-5.658e+04	6.197e+06	4.447e+06	0.0
119	3	2942.80	2452.74	-6.224e+04	6.817e+06	4.892e+06	0.0
119	4	2407.74	2006.78	-5.092e+04	5.577e+06	4.003e+06	0.0
119	6	-795.61	3269.14	-5.611e+04	6.418e+06	5.180e+06	0.0
119	21	1631.75	-1242.37	-5.570e+04	5.465e+06	4.666e+06	0.0
119	22	1635.89	5700.65	-5.705e+04	6.930e+06	4.668e+06	0.0
119	24	3718.80	5701.89	-5.746e+04	6.930e+06	4.229e+06	0.0
119	38	1331.33	2632.21	-5.640e+04	6.283e+06	4.731e+06	0.0
119	53	2271.22	885.34	-5.624e+04	5.914e+06	4.532e+06	0.0
119	54	2272.82	3573.70	-5.676e+04	6.481e+06	4.533e+06	0.0
119	56	3079.33	3574.18	-5.692e+04	6.481e+06	4.363e+06	0.0
119	69	2675.27	2229.76	-5.658e+04	6.197e+06	4.447e+06	0.0
135	1	4154.67	5236.27	-5.969e+04	8.645e+06	5.841e+06	0.0
135	2	3195.90	4027.90	-4.591e+04	6.650e+06	4.493e+06	0.0
135	3	3515.49	4430.69	-5.051e+04	7.315e+06	4.943e+06	0.0
135	4	2876.31	3625.11	-4.132e+04	5.985e+06	4.044e+06	0.0
135	6	-276.25	5068.75	-4.581e+04	6.871e+06	5.229e+06	0.0
135	21	2152.82	552.75	-4.495e+04	5.917e+06	4.713e+06	0.0
135	22	2155.45	7502.12	-4.667e+04	7.383e+06	4.715e+06	0.0
135	24	4238.98	7503.06	-4.688e+04	7.382e+06	4.274e+06	0.0
135	38	1851.47	4430.92	-4.587e+04	6.735e+06	4.778e+06	0.0
135	53	2792.02	2682.31	-4.554e+04	6.366e+06	4.578e+06	0.0
135	54	2793.04	5373.13	-4.620e+04	6.934e+06	4.579e+06	0.0
135	56	3599.78	5373.49	-4.629e+04	6.934e+06	4.408e+06	0.0
135	69	3195.90	4027.90	-4.591e+04	6.650e+06	4.493e+06	0.0
147	1	-214.26	8559.80	-5.959e+04	9.682e+06	7.497e+06	0.0
147	2	-164.82	6584.46	-4.584e+04	7.448e+06	5.767e+06	0.0
147	3	-181.30	7242.90	-5.042e+04	8.192e+06	6.344e+06	0.0
147	4	-148.34	5926.01	-4.126e+04	6.703e+06	5.191e+06	0.0
147	6	-3655.83	7633.88	-4.599e+04	7.670e+06	6.509e+06	0.0
147	21	-1212.12	3086.37	-4.534e+04	6.705e+06	5.990e+06	0.0
147	22	-1212.12	1.008e+04	-4.633e+04	8.190e+06	5.990e+06	0.0
147	24	882.48	1.008e+04	-4.633e+04	8.190e+06	5.545e+06	0.0
147	38	-1516.55	6990.80	-4.590e+04	7.534e+06	6.055e+06	0.0
147	53	-570.34	5229.99	-4.565e+04	7.160e+06	5.853e+06	0.0
147	54	-570.34	7938.93	-4.603e+04	7.735e+06	5.853e+06	0.0
147	56	240.70	7938.93	-4.603e+04	7.735e+06	5.681e+06	0.0
147	69	-164.82	6584.46	-4.584e+04	7.448e+06	5.767e+06	0.0
151	1	4255.46	7698.08	-4.764e+04	9.185e+06	5.941e+06	0.0
151	2	3273.43	5921.60	-3.665e+04	7.065e+06	4.570e+06	0.0
151	3	3600.78	6513.76	-4.031e+04	7.772e+06	5.027e+06	0.0
151	4	2946.09	5329.44	-3.298e+04	6.359e+06	4.113e+06	0.0
151	6	-199.85	6964.42	-3.693e+04	7.285e+06	5.306e+06	0.0
151	21	2231.45	2445.53	-3.572e+04	6.332e+06	4.791e+06	0.0
151	24	4315.42	9397.67	-3.757e+04	7.798e+06	4.349e+06	0.0
151	38	1928.57	6325.38	-3.676e+04	7.150e+06	4.855e+06	0.0



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

151	53	2869.97	4575.65	-3.629e+04	6.781e+06	4.655e+06	0.0
151	56	3676.89	7267.54	-3.701e+04	7.349e+06	4.484e+06	0.0
151	69	3273.43	5921.60	-3.665e+04	7.065e+06	4.570e+06	0.0
167	1	3718.51	1.027e+04	-3.913e+04	9.790e+06	6.092e+06	0.0
167	2	2860.39	7900.47	-3.010e+04	7.531e+06	4.686e+06	0.0
167	3	3146.43	8690.51	-3.311e+04	8.284e+06	5.155e+06	0.0
167	4	2574.35	7110.42	-2.709e+04	6.778e+06	4.218e+06	0.0
167	5	-611.76	6859.62	-3.020e+04	7.310e+06	5.421e+06	0.0
167	22	1817.32	1.138e+04	-3.107e+04	8.263e+06	4.906e+06	0.0
167	23	3903.47	4425.31	-2.913e+04	6.798e+06	4.467e+06	0.0
167	24	3900.84	1.137e+04	-3.085e+04	8.264e+06	4.465e+06	0.0
167	37	1515.97	7497.45	-3.014e+04	7.445e+06	4.971e+06	0.0
167	54	2456.51	9246.06	-3.047e+04	7.814e+06	4.771e+06	0.0
167	55	3264.28	6554.88	-2.972e+04	7.247e+06	4.601e+06	0.0
167	56	3263.26	9245.69	-3.039e+04	7.814e+06	4.600e+06	0.0
167	69	2860.39	7900.47	-3.010e+04	7.531e+06	4.686e+06	0.0
179	1	-350.33	1.112e+04	-4.975e+04	1.015e+07	7.367e+06	0.0
179	2	-269.48	8556.61	-3.827e+04	7.808e+06	5.667e+06	0.0
179	3	-296.43	9412.27	-4.210e+04	8.589e+06	6.233e+06	0.0
179	4	-242.53	7700.94	-3.444e+04	7.027e+06	5.100e+06	0.0
179	5	-3757.06	7512.71	-3.856e+04	7.586e+06	6.407e+06	0.0
179	6	-3758.62	9605.72	-3.881e+04	8.030e+06	6.406e+06	0.0
179	7	3219.66	7507.49	-3.774e+04	7.586e+06	4.927e+06	0.0
179	24	774.42	1.204e+04	-3.856e+04	8.548e+06	5.444e+06	0.0
179	37	-1619.88	8152.40	-3.838e+04	7.722e+06	5.953e+06	0.0
179	38	-1620.49	8962.82	-3.848e+04	7.894e+06	5.953e+06	0.0
179	39	1081.52	8150.39	-3.806e+04	7.722e+06	5.380e+06	0.0
179	56	134.72	9907.00	-3.838e+04	8.095e+06	5.581e+06	0.0
179	69	-269.48	8556.61	-3.827e+04	7.808e+06	5.667e+06	0.0
183	1	2299.88	1.274e+04	-3.531e+04	1.046e+07	6.461e+06	0.0
183	2	1769.14	9797.54	-2.716e+04	8.043e+06	4.970e+06	0.0
183	3	1946.05	1.078e+04	-2.988e+04	8.847e+06	5.467e+06	0.0
183	4	1592.22	8817.78	-2.445e+04	7.239e+06	4.473e+06	0.0
183	5	-1701.75	8758.16	-2.763e+04	7.822e+06	5.703e+06	0.0
183	6	-1702.99	1.084e+04	-2.804e+04	8.261e+06	5.703e+06	0.0
183	7	5241.27	8754.01	-2.629e+04	7.824e+06	4.238e+06	0.0
183	24	2808.52	1.327e+04	-2.763e+04	8.776e+06	4.749e+06	0.0
183	37	425.20	9395.09	-2.735e+04	7.957e+06	5.254e+06	0.0
183	38	424.72	1.020e+04	-2.750e+04	8.127e+06	5.254e+06	0.0
183	39	3113.56	9393.48	-2.682e+04	7.958e+06	4.687e+06	0.0
183	56	2171.59	1.114e+04	-2.735e+04	8.327e+06	4.885e+06	0.0
183	69	1769.14	9797.54	-2.716e+04	8.043e+06	4.970e+06	0.0
199	1	-410.87	1.440e+04	-3.858e+04	1.097e+07	7.268e+06	0.0
199	2	-316.06	1.108e+04	-2.967e+04	8.436e+06	5.591e+06	0.0
199	3	-347.66	1.218e+04	-3.264e+04	9.280e+06	6.150e+06	0.0
199	4	-284.45	9969.16	-2.671e+04	7.592e+06	5.032e+06	0.0
199	5	-3790.28	1.004e+04	-3.042e+04	8.215e+06	6.324e+06	0.0
199	6	-3791.21	1.212e+04	-3.064e+04	8.655e+06	6.324e+06	0.0
199	7	3159.10	1.003e+04	-2.870e+04	8.216e+06	4.859e+06	0.0
199	24	724.79	1.455e+04	-2.978e+04	9.171e+06	5.370e+06	0.0
199	37	-1661.28	1.067e+04	-2.996e+04	8.350e+06	5.875e+06	0.0
199	38	-1661.65	1.148e+04	-3.005e+04	8.521e+06	5.875e+06	0.0
199	39	1029.53	1.067e+04	-2.930e+04	8.351e+06	5.307e+06	0.0
199	56	86.96	1.242e+04	-2.971e+04	8.721e+06	5.506e+06	0.0
199	69	-316.06	1.108e+04	-2.967e+04	8.436e+06	5.591e+06	0.0
211	1	-4680.25	1.241e+04	-5.904e+04	1.069e+07	8.858e+06	0.0
211	2	-3600.19	9547.91	-4.542e+04	8.221e+06	6.814e+06	0.0
211	3	-3960.21	1.050e+04	-4.996e+04	9.043e+06	7.496e+06	0.0
211	4	-3240.17	8593.12	-4.088e+04	7.399e+06	6.133e+06	0.0
211	5	-7098.28	8500.61	-4.591e+04	7.998e+06	7.557e+06	0.0
211	6	-7098.28	1.060e+04	-4.591e+04	8.444e+06	7.557e+06	0.0
211	7	-102.10	8500.61	-4.492e+04	7.998e+06	6.072e+06	0.0
211	24	-2550.76	1.304e+04	-4.527e+04	8.963e+06	6.591e+06	0.0
211	37	-4954.66	9142.39	-4.561e+04	8.135e+06	7.102e+06	0.0
211	38	-4954.66	9953.43	-4.561e+04	8.307e+06	7.102e+06	0.0
211	39	-2245.72	9142.39	-4.523e+04	8.135e+06	6.527e+06	0.0
211	56	-3193.85	1.090e+04	-4.536e+04	8.508e+06	6.728e+06	0.0
211	69	-3600.19	9547.91	-4.542e+04	8.221e+06	6.814e+06	0.0
215	1	-3842.95	1.495e+04	-4.662e+04	1.113e+07	8.372e+06	0.0
215	2	-2956.11	1.150e+04	-3.586e+04	8.558e+06	6.440e+06	0.0
215	3	-3251.73	1.265e+04	-3.945e+04	9.414e+06	7.084e+06	0.0
215	4	-2660.50	1.035e+04	-3.227e+04	7.702e+06	5.796e+06	0.0
215	6	-6432.19	1.254e+04	-3.678e+04	8.779e+06	7.173e+06	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

215	7	519.96	1.046e+04	-3.493e+04	8.337e+06	5.707e+06	0.0
215	24	-1913.29	1.497e+04	-3.558e+04	9.294e+06	6.220e+06	0.0
215	38	-4302.06	1.190e+04	-3.622e+04	8.644e+06	6.724e+06	0.0
215	39	-1610.17	1.110e+04	-3.550e+04	8.473e+06	6.156e+06	0.0
215	56	-2552.33	1.284e+04	-3.575e+04	8.843e+06	6.355e+06	0.0
215	69	-2956.11	1.150e+04	-3.586e+04	8.558e+06	6.440e+06	0.0
231	1	-7388.82	1.397e+04	-5.833e+04	1.071e+07	9.541e+06	0.0
231	2	-5683.71	1.074e+04	-4.487e+04	8.242e+06	7.339e+06	0.0
231	3	-6252.08	1.182e+04	-4.936e+04	9.066e+06	8.073e+06	0.0
231	4	-5115.34	9669.22	-4.039e+04	7.417e+06	6.605e+06	0.0
231	5	-9158.86	9700.50	-4.584e+04	8.022e+06	8.072e+06	0.0
231	6	-9157.93	1.178e+04	-4.562e+04	8.463e+06	8.072e+06	0.0
231	8	-2208.55	1.179e+04	-4.390e+04	8.461e+06	6.606e+06	0.0
231	22	-6724.56	1.422e+04	-4.477e+04	8.977e+06	7.560e+06	0.0
231	37	-7029.30	1.034e+04	-4.525e+04	8.157e+06	7.623e+06	0.0
231	38	-7028.94	1.115e+04	-4.516e+04	8.327e+06	7.623e+06	0.0
231	40	-4338.12	1.115e+04	-4.450e+04	8.327e+06	7.055e+06	0.0
231	54	-6086.73	1.209e+04	-4.483e+04	8.526e+06	7.424e+06	0.0
231	69	-5683.71	1.074e+04	-4.487e+04	8.242e+06	7.339e+06	0.0
243	1	-8947.50	1.005e+04	-7.320e+04	9.524e+06	1.031e+07	0.0
243	2	-6882.69	7727.95	-5.631e+04	7.326e+06	7.932e+06	0.0
243	3	-7570.96	8500.75	-6.194e+04	8.059e+06	8.725e+06	0.0
243	4	-6194.42	6955.16	-5.068e+04	6.594e+06	7.138e+06	0.0
243	5	-1.037e+04	6678.84	-5.684e+04	7.105e+06	8.671e+06	0.0
243	6	-1.037e+04	8771.85	-5.659e+04	7.548e+06	8.672e+06	0.0
243	8	-3393.55	8777.06	-5.577e+04	7.548e+06	7.192e+06	0.0
243	22	-7926.59	1.122e+04	-5.602e+04	8.066e+06	8.154e+06	0.0
243	37	-8233.69	7321.73	-5.651e+04	7.240e+06	8.218e+06	0.0
243	38	-8233.09	8132.15	-5.642e+04	7.412e+06	8.218e+06	0.0
243	40	-5531.69	8134.17	-5.610e+04	7.412e+06	7.645e+06	0.0
243	54	-7286.89	9078.35	-5.619e+04	7.613e+06	8.018e+06	0.0
243	69	-6882.69	7727.95	-5.631e+04	7.326e+06	7.932e+06	0.0
247	1	-1.024e+04	1.156e+04	-7.206e+04	9.773e+06	1.043e+07	0.0
247	2	-7873.25	8894.94	-5.543e+04	7.518e+06	8.019e+06	0.0
247	3	-8660.58	9784.43	-6.097e+04	8.270e+06	8.821e+06	0.0
247	4	-7085.93	8005.45	-4.988e+04	6.766e+06	7.217e+06	0.0
247	6	-1.134e+04	9934.32	-5.590e+04	7.739e+06	8.753e+06	0.0
247	21	-8916.78	5422.81	-5.630e+04	6.785e+06	8.238e+06	0.0
247	22	-8912.64	1.237e+04	-5.495e+04	8.251e+06	8.240e+06	0.0
247	24	-6829.73	1.237e+04	-5.455e+04	8.250e+06	7.801e+06	0.0
247	38	-9217.19	9297.39	-5.561e+04	7.603e+06	8.303e+06	0.0
247	53	-8277.31	7550.52	-5.577e+04	7.234e+06	8.104e+06	0.0
247	54	-8275.71	1.024e+04	-5.524e+04	7.802e+06	8.105e+06	0.0
247	56	-7469.20	1.024e+04	-5.509e+04	7.801e+06	7.935e+06	0.0
247	69	-7873.25	8894.94	-5.543e+04	7.518e+06	8.019e+06	0.0
263	1	-1.155e+04	7977.73	-8.603e+04	8.459e+06	1.073e+07	0.0
263	2	-8883.36	6136.72	-6.618e+04	6.507e+06	8.255e+06	0.0
263	3	-9771.70	6750.39	-7.279e+04	7.158e+06	9.081e+06	0.0
263	4	-7995.02	5523.04	-5.956e+04	5.856e+06	7.430e+06	0.0
263	6	-1.236e+04	7177.56	-6.628e+04	6.728e+06	8.990e+06	0.0
263	21	-9926.44	2661.56	-6.714e+04	5.774e+06	8.475e+06	0.0
263	22	-9923.81	9610.94	-6.542e+04	7.240e+06	8.476e+06	0.0
263	24	-7840.28	9611.87	-6.521e+04	7.239e+06	8.036e+06	0.0
263	38	-1.023e+04	6539.73	-6.622e+04	6.592e+06	8.540e+06	0.0
263	53	-9287.24	4791.13	-6.655e+04	6.223e+06	8.340e+06	0.0
263	54	-9286.23	7481.94	-6.588e+04	6.791e+06	8.341e+06	0.0
263	56	-8479.48	7482.30	-6.580e+04	6.791e+06	8.170e+06	0.0
263	69	-8883.36	6136.72	-6.618e+04	6.507e+06	8.255e+06	0.0
275	1	-8540.59	4703.36	-8.817e+04	7.447e+06	9.864e+06	0.0
275	2	-6569.69	3617.97	-6.782e+04	5.728e+06	7.588e+06	0.0
275	3	-7226.65	3979.77	-7.460e+04	6.301e+06	8.347e+06	0.0
275	4	-5912.72	3256.17	-6.104e+04	5.155e+06	6.829e+06	0.0
275	6	-1.006e+04	4667.40	-6.767e+04	5.951e+06	8.330e+06	0.0
275	21	-7616.99	119.88	-6.831e+04	4.986e+06	7.811e+06	0.0
275	22	-7616.99	7116.06	-6.733e+04	6.471e+06	7.811e+06	0.0
275	24	-5522.38	7116.06	-6.733e+04	6.471e+06	7.365e+06	0.0
275	38	-7921.41	4024.31	-6.776e+04	5.814e+06	7.875e+06	0.0
275	53	-6975.20	2263.50	-6.801e+04	5.441e+06	7.674e+06	0.0
275	54	-6975.20	4972.44	-6.763e+04	6.016e+06	7.674e+06	0.0
275	56	-6164.17	4972.44	-6.763e+04	6.016e+06	7.502e+06	0.0
275	69	-6569.69	3617.97	-6.782e+04	5.728e+06	7.588e+06	0.0
279	1	-1.110e+04	4153.27	-9.813e+04	7.130e+06	1.031e+07	0.0
279	2	-8536.32	3194.83	-7.548e+04	5.484e+06	7.930e+06	0.0



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

279	3	-9389.95	3514.31	-8.303e+04	6.033e+06	8.723e+06	0.0
279	4	-7682.69	2875.34	-6.793e+04	4.936e+06	7.137e+06	0.0
279	6	-1.201e+04	4237.65	-7.520e+04	5.704e+06	8.666e+06	0.0
279	21	-9578.31	-281.25	-7.641e+04	4.751e+06	8.151e+06	0.0
279	24	-7494.34	6670.90	-7.456e+04	6.217e+06	7.709e+06	0.0
279	38	-9881.19	3598.61	-7.537e+04	5.569e+06	8.215e+06	0.0
279	53	-8939.78	1848.88	-7.584e+04	5.201e+06	8.016e+06	0.0
279	56	-8132.86	4540.77	-7.512e+04	5.768e+06	7.845e+06	0.0
279	69	-8536.32	3194.83	-7.548e+04	5.484e+06	7.930e+06	0.0
295	1	-9115.73	996.33	-1.066e+05	6.188e+06	9.319e+06	0.0
295	2	-7012.10	766.40	-8.199e+04	4.760e+06	7.168e+06	0.0
295	3	-7713.31	843.05	-9.019e+04	5.236e+06	7.885e+06	0.0
295	4	-6310.89	689.76	-7.379e+04	4.284e+06	6.452e+06	0.0
295	5	-1.048e+04	-274.44	-8.189e+04	4.540e+06	7.904e+06	0.0
295	22	-8055.18	4241.56	-8.102e+04	5.493e+06	7.388e+06	0.0
295	23	-5969.03	-2708.75	-8.296e+04	4.028e+06	6.949e+06	0.0
295	24	-5971.65	4240.62	-8.124e+04	5.493e+06	6.947e+06	0.0
295	37	-8356.53	363.39	-8.195e+04	4.675e+06	7.453e+06	0.0
295	54	-7415.98	2111.99	-8.162e+04	5.044e+06	7.253e+06	0.0
295	55	-6608.22	-579.18	-8.237e+04	4.477e+06	7.083e+06	0.0
295	56	-6609.24	2111.63	-8.170e+04	5.044e+06	7.083e+06	0.0
295	69	-7012.10	766.40	-8.199e+04	4.760e+06	7.168e+06	0.0
307	1	-4484.93	1443.37	-9.756e+04	6.580e+06	7.722e+06	0.0
307	2	-3449.94	1110.29	-7.504e+04	5.062e+06	5.940e+06	0.0
307	3	-3794.94	1221.32	-8.255e+04	5.568e+06	6.534e+06	0.0
307	4	-3104.95	999.26	-6.754e+04	4.556e+06	5.346e+06	0.0
307	5	-6937.52	66.39	-7.476e+04	4.839e+06	6.680e+06	0.0
307	6	-6939.08	2159.40	-7.451e+04	5.283e+06	6.680e+06	0.0
307	7	39.20	61.18	-7.558e+04	4.840e+06	5.201e+06	0.0
307	24	-2406.04	4597.86	-7.476e+04	5.802e+06	5.718e+06	0.0
307	37	-4800.34	706.09	-7.493e+04	4.976e+06	6.227e+06	0.0
307	38	-4800.95	1516.51	-7.484e+04	5.148e+06	6.227e+06	0.0
307	39	-2098.94	704.07	-7.525e+04	4.976e+06	5.654e+06	0.0
307	56	-3045.74	2460.69	-7.493e+04	5.348e+06	5.854e+06	0.0
307	69	-3449.94	1110.29	-7.504e+04	5.062e+06	5.940e+06	0.0
311	1	-6364.86	-976.29	-1.103e+05	5.812e+06	8.178e+06	0.0
311	2	-4896.05	-750.99	-8.484e+04	4.471e+06	6.291e+06	0.0
311	3	-5385.65	-826.09	-9.333e+04	4.918e+06	6.920e+06	0.0
311	4	-4406.44	-675.89	-7.636e+04	4.024e+06	5.662e+06	0.0
311	5	-8366.93	-1790.37	-8.437e+04	4.250e+06	7.024e+06	0.0
311	6	-8368.17	292.53	-8.397e+04	4.689e+06	7.023e+06	0.0
311	7	-1423.92	-1794.52	-8.572e+04	4.252e+06	5.558e+06	0.0
311	24	-3856.66	2719.89	-8.437e+04	5.204e+06	6.070e+06	0.0
311	37	-6239.98	-1153.44	-8.466e+04	4.385e+06	6.575e+06	0.0
311	38	-6240.46	-346.94	-8.450e+04	4.555e+06	6.574e+06	0.0
311	39	-3551.63	-1155.05	-8.518e+04	4.386e+06	6.007e+06	0.0
311	56	-4493.59	592.94	-8.466e+04	4.755e+06	6.205e+06	0.0
311	69	-4896.05	-750.99	-8.484e+04	4.471e+06	6.291e+06	0.0
327	1	-3152.34	-1303.15	-1.071e+05	6.077e+06	7.083e+06	0.0
327	2	-2424.87	-1002.42	-8.242e+04	4.674e+06	5.448e+06	0.0
327	3	-2667.36	-1102.67	-9.066e+04	5.142e+06	5.993e+06	0.0
327	4	-2182.39	-902.18	-7.417e+04	4.207e+06	4.903e+06	0.0
327	5	-5899.09	-2042.87	-8.166e+04	4.453e+06	6.181e+06	0.0
327	6	-5900.03	40.65	-8.145e+04	4.894e+06	6.181e+06	0.0
327	7	1050.28	-2045.50	-8.338e+04	4.455e+06	4.715e+06	0.0
327	24	-1384.02	2469.73	-8.231e+04	5.410e+06	5.227e+06	0.0
327	37	-3770.10	-1405.29	-8.213e+04	4.589e+06	5.732e+06	0.0
327	38	-3770.46	-598.54	-8.204e+04	4.759e+06	5.732e+06	0.0
327	39	-1079.28	-1406.31	-8.279e+04	4.589e+06	5.164e+06	0.0
327	56	-2021.85	342.00	-8.238e+04	4.959e+06	5.363e+06	0.0
327	69	-2424.87	-1002.42	-8.242e+04	4.674e+06	5.448e+06	0.0
<b>Nodo</b>		<b>Azione X</b>	<b>Azione Y</b>	<b>Azione Z</b>	<b>Azione RX</b>	<b>Azione RY</b>	<b>Azione RZ</b>
		-1.236e+04	-2708.75	-1.103e+05	4.024e+06	3.836e+06	0.0
		5241.27	1.497e+04	-2.445e+04	1.113e+07	1.073e+07	0.0
<b>Nodo</b>	<b>Cmb</b>	<b>Azione X</b>	<b>Azione Y</b>	<b>Azione Z</b>	<b>Azione RX</b>	<b>Azione RY</b>	<b>Azione RZ</b>
		daN	daN	daN	daN cm	daN cm	daN cm
84	1	-823.82	4085.96	-8.872e+04	8.320e+06	6.623e+06	0.0
	4	-570.34	2828.74	-6.142e+04	5.760e+06	4.585e+06	0.0
	21	-1683.13	-347.96	-6.809e+04	5.658e+06	5.318e+06	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

	1	-823.82	4085.96	-8.872e+04	8.320e+06	6.623e+06	0.0
	8	2864.38	4190.35	-6.874e+04	6.623e+06	4.352e+06	0.0
92	1	-823.82	4085.96	-8.872e+04	8.320e+06	6.623e+06	0.0
	1	-298.15	-403.43	-9.915e+04	6.757e+06	6.317e+06	0.0
	4	-206.41	-279.30	-6.864e+04	4.678e+06	4.373e+06	0.0
	21	-1272.17	-3783.61	-7.599e+04	4.462e+06	5.079e+06	0.0
	1	-298.15	-403.43	-9.915e+04	6.757e+06	6.317e+06	0.0
	7	3246.73	-1352.31	-7.720e+04	4.977e+06	4.126e+06	0.0
	1	-298.15	-403.43	-9.915e+04	6.757e+06	6.317e+06	0.0
103	1	1885.46	1132.40	-8.739e+04	7.487e+06	5.939e+06	0.0
	4	1305.32	783.97	-6.050e+04	5.183e+06	4.112e+06	0.0
	23	2491.20	-2601.07	-6.712e+04	5.024e+06	4.348e+06	0.0
	1	1885.46	1132.40	-8.739e+04	7.487e+06	5.939e+06	0.0
	7	4924.57	-169.37	-6.797e+04	5.538e+06	3.836e+06	0.0
	1	1885.46	1132.40	-8.739e+04	7.487e+06	5.939e+06	0.0
115	1	732.72	5911.74	-7.411e+04	9.168e+06	6.741e+06	0.0
	4	507.26	4092.74	-5.131e+04	6.347e+06	4.667e+06	0.0
	23	1607.53	1059.91	-5.672e+04	6.313e+06	4.963e+06	0.0
	1	732.72	5911.74	-7.411e+04	9.168e+06	6.741e+06	0.0
	7	4051.20	3503.59	-5.730e+04	6.830e+06	4.445e+06	0.0
	1	732.72	5911.74	-7.411e+04	9.168e+06	6.741e+06	0.0
119	1	3477.85	2898.69	-7.355e+04	8.056e+06	5.781e+06	0.0
	4	2407.74	2006.78	-5.092e+04	5.577e+06	4.003e+06	0.0
	23	3714.65	-1241.13	-5.611e+04	5.464e+06	4.226e+06	0.0
	1	3477.85	2898.69	-7.355e+04	8.056e+06	5.781e+06	0.0
	7	6146.16	1190.38	-5.705e+04	5.976e+06	3.714e+06	0.0
	1	3477.85	2898.69	-7.355e+04	8.056e+06	5.781e+06	0.0
135	1	4154.67	5236.27	-5.969e+04	8.645e+06	5.841e+06	0.0
	4	2876.31	3625.11	-4.132e+04	5.985e+06	4.044e+06	0.0
	23	4236.35	553.68	-4.516e+04	5.917e+06	4.272e+06	0.0
	1	4154.67	5236.27	-5.969e+04	8.645e+06	5.841e+06	0.0
	7	6668.05	2987.05	-4.602e+04	6.429e+06	3.758e+06	0.0
	1	4154.67	5236.27	-5.969e+04	8.645e+06	5.841e+06	0.0
147	1	-214.26	8559.80	-5.959e+04	9.682e+06	7.497e+06	0.0
	4	-148.34	5926.01	-4.126e+04	6.703e+06	5.191e+06	0.0
	4	-148.34	5926.01	-4.126e+04	6.703e+06	5.191e+06	0.0
	1	-214.26	8559.80	-5.959e+04	9.682e+06	7.497e+06	0.0
	7	3326.19	5535.03	-4.569e+04	7.225e+06	5.025e+06	0.0
	1	-214.26	8559.80	-5.959e+04	9.682e+06	7.497e+06	0.0
151	1	4255.46	7698.08	-4.764e+04	9.185e+06	5.941e+06	0.0
	4	2946.09	5329.44	-3.298e+04	6.359e+06	4.113e+06	0.0
	21	2231.45	2445.53	-3.572e+04	6.332e+06	4.791e+06	0.0
	1	4255.46	7698.08	-4.764e+04	9.185e+06	5.941e+06	0.0
	7	6746.72	4878.78	-3.637e+04	6.845e+06	3.834e+06	0.0
	1	4255.46	7698.08	-4.764e+04	9.185e+06	5.941e+06	0.0
167	1	3718.51	1.027e+04	-3.913e+04	9.790e+06	6.092e+06	0.0
	4	2574.35	7110.42	-2.709e+04	6.778e+06	4.218e+06	0.0
	4	2574.35	7110.42	-2.709e+04	6.778e+06	4.218e+06	0.0
	1	3718.51	1.027e+04	-3.913e+04	9.790e+06	6.092e+06	0.0
	8	6332.55	8941.32	-3.000e+04	7.751e+06	3.951e+06	0.0
	1	3718.51	1.027e+04	-3.913e+04	9.790e+06	6.092e+06	0.0
179	1	-350.33	1.112e+04	-4.975e+04	1.015e+07	7.367e+06	0.0
	4	-242.53	7700.94	-3.444e+04	7.027e+06	5.100e+06	0.0
	4	-242.53	7700.94	-3.444e+04	7.027e+06	5.100e+06	0.0
	1	-350.33	1.112e+04	-4.975e+04	1.015e+07	7.367e+06	0.0
	8	3218.10	9600.51	-3.798e+04	8.030e+06	4.927e+06	0.0
	1	-350.33	1.112e+04	-4.975e+04	1.015e+07	7.367e+06	0.0
183	1	2299.88	1.274e+04	-3.531e+04	1.046e+07	6.461e+06	0.0
	4	1592.22	8817.78	-2.445e+04	7.239e+06	4.473e+06	0.0
	4	1592.22	8817.78	-2.445e+04	7.239e+06	4.473e+06	0.0
	1	2299.88	1.274e+04	-3.531e+04	1.046e+07	6.461e+06	0.0
	8	5240.02	1.084e+04	-2.669e+04	8.264e+06	4.237e+06	0.0
	1	2299.88	1.274e+04	-3.531e+04	1.046e+07	6.461e+06	0.0
199	1	-410.87	1.440e+04	-3.858e+04	1.097e+07	7.268e+06	0.0
	4	-284.45	9969.16	-2.671e+04	7.592e+06	5.032e+06	0.0
	4	-284.45	9969.16	-2.671e+04	7.592e+06	5.032e+06	0.0
	1	-410.87	1.440e+04	-3.858e+04	1.097e+07	7.268e+06	0.0
	8	3158.16	1.212e+04	-2.892e+04	8.657e+06	4.858e+06	0.0
	1	-410.87	1.440e+04	-3.858e+04	1.097e+07	7.268e+06	0.0
211	1	-4680.25	1.241e+04	-5.904e+04	1.069e+07	8.858e+06	0.0
	4	-3240.17	8593.12	-4.088e+04	7.399e+06	6.133e+06	0.0
	4	-3240.17	8593.12	-4.088e+04	7.399e+06	6.133e+06	0.0
	1	-4680.25	1.241e+04	-5.904e+04	1.069e+07	8.858e+06	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

	8	-102.10	1.060e+04	-4.492e+04	8.444e+06	6.072e+06	0.0
	1	-4680.25	1.241e+04	-5.904e+04	1.069e+07	8.858e+06	0.0
215	1	-3842.95	1.495e+04	-4.662e+04	1.113e+07	8.372e+06	0.0
	4	-2660.50	1.035e+04	-3.227e+04	7.702e+06	5.796e+06	0.0
	4	-2660.50	1.035e+04	-3.227e+04	7.702e+06	5.796e+06	0.0
	1	-3842.95	1.495e+04	-4.662e+04	1.113e+07	8.372e+06	0.0
	7	519.96	1.046e+04	-3.493e+04	8.337e+06	5.707e+06	0.0
	1	-3842.95	1.495e+04	-4.662e+04	1.113e+07	8.372e+06	0.0
231	1	-7388.82	1.397e+04	-5.833e+04	1.071e+07	9.541e+06	0.0
	4	-5115.34	9669.22	-4.039e+04	7.417e+06	6.605e+06	0.0
	4	-5115.34	9669.22	-4.039e+04	7.417e+06	6.605e+06	0.0
	1	-7388.82	1.397e+04	-5.833e+04	1.071e+07	9.541e+06	0.0
	4	-5115.34	9669.22	-4.039e+04	7.417e+06	6.605e+06	0.0
	1	-7388.82	1.397e+04	-5.833e+04	1.071e+07	9.541e+06	0.0
243	1	-8947.50	1.005e+04	-7.320e+04	9.524e+06	1.031e+07	0.0
	4	-6194.42	6955.16	-5.068e+04	6.594e+06	7.138e+06	0.0
	23	-5838.79	4240.37	-5.659e+04	6.586e+06	7.709e+06	0.0
	1	-8947.50	1.005e+04	-7.320e+04	9.524e+06	1.031e+07	0.0
	4	-6194.42	6955.16	-5.068e+04	6.594e+06	7.138e+06	0.0
	1	-8947.50	1.005e+04	-7.320e+04	9.524e+06	1.031e+07	0.0
247	1	-1.024e+04	1.156e+04	-7.206e+04	9.773e+06	1.043e+07	0.0
	4	-7085.93	8005.45	-4.988e+04	6.766e+06	7.217e+06	0.0
	4	-7085.93	8005.45	-4.988e+04	6.766e+06	7.217e+06	0.0
	1	-1.024e+04	1.156e+04	-7.206e+04	9.773e+06	1.043e+07	0.0
	4	-7085.93	8005.45	-4.988e+04	6.766e+06	7.217e+06	0.0
	1	-1.024e+04	1.156e+04	-7.206e+04	9.773e+06	1.043e+07	0.0
263	1	-1.155e+04	7977.73	-8.603e+04	8.459e+06	1.073e+07	0.0
	4	-7995.02	5523.04	-5.956e+04	5.856e+06	7.430e+06	0.0
	23	-7842.91	2662.50	-6.693e+04	5.774e+06	8.034e+06	0.0
	1	-1.155e+04	7977.73	-8.603e+04	8.459e+06	1.073e+07	0.0
	4	-7995.02	5523.04	-5.956e+04	5.856e+06	7.430e+06	0.0
	1	-1.155e+04	7977.73	-8.603e+04	8.459e+06	1.073e+07	0.0
275	1	-8540.59	4703.36	-8.817e+04	7.447e+06	9.864e+06	0.0
	4	-5912.72	3256.17	-6.104e+04	5.155e+06	6.829e+06	0.0
	23	-5522.38	119.88	-6.831e+04	4.986e+06	7.365e+06	0.0
	1	-8540.59	4703.36	-8.817e+04	7.447e+06	9.864e+06	0.0
	4	-5912.72	3256.17	-6.104e+04	5.155e+06	6.829e+06	0.0
	1	-8540.59	4703.36	-8.817e+04	7.447e+06	9.864e+06	0.0
279	1	-1.110e+04	4153.27	-9.813e+04	7.130e+06	1.031e+07	0.0
	4	-7682.69	2875.34	-6.793e+04	4.936e+06	7.137e+06	0.0
	21	-9578.31	-281.25	-7.641e+04	4.751e+06	8.151e+06	0.0
	1	-1.110e+04	4153.27	-9.813e+04	7.130e+06	1.031e+07	0.0
	4	-7682.69	2875.34	-6.793e+04	4.936e+06	7.137e+06	0.0
	1	-1.110e+04	4153.27	-9.813e+04	7.130e+06	1.031e+07	0.0
295	1	-9115.73	996.33	-1.066e+05	6.188e+06	9.319e+06	0.0
	4	-6310.89	689.76	-7.379e+04	4.284e+06	6.452e+06	0.0
	21	-8052.55	-2707.82	-8.274e+04	4.027e+06	7.390e+06	0.0
	1	-9115.73	996.33	-1.066e+05	6.188e+06	9.319e+06	0.0
	8	-3539.95	1807.25	-8.210e+04	4.981e+06	6.433e+06	0.0
	1	-9115.73	996.33	-1.066e+05	6.188e+06	9.319e+06	0.0
307	1	-4484.93	1443.37	-9.756e+04	6.580e+06	7.722e+06	0.0
	4	-3104.95	999.26	-6.754e+04	4.556e+06	5.346e+06	0.0
	21	-4493.84	-2377.29	-7.533e+04	4.322e+06	6.163e+06	0.0
	1	-4484.93	1443.37	-9.756e+04	6.580e+06	7.722e+06	0.0
	8	37.64	2154.19	-7.533e+04	5.284e+06	5.200e+06	0.0
	1	-4484.93	1443.37	-9.756e+04	6.580e+06	7.722e+06	0.0
311	1	-6364.86	-976.29	-1.103e+05	5.812e+06	8.178e+06	0.0
	4	-4406.44	-675.89	-7.636e+04	4.024e+06	5.662e+06	0.0
	21	-5935.43	-4221.88	-8.532e+04	3.738e+06	6.512e+06	0.0
	1	-6364.86	-976.29	-1.103e+05	5.812e+06	8.178e+06	0.0
	8	-1425.16	288.39	-8.532e+04	4.692e+06	5.558e+06	0.0
	1	-6364.86	-976.29	-1.103e+05	5.812e+06	8.178e+06	0.0
327	1	-3152.34	-1303.15	-1.071e+05	6.077e+06	7.083e+06	0.0
	4	-2182.39	-902.18	-7.417e+04	4.207e+06	4.903e+06	0.0
	21	-3465.72	-4474.58	-8.252e+04	3.939e+06	5.669e+06	0.0
	1	-3152.34	-1303.15	-1.071e+05	6.077e+06	7.083e+06	0.0
	8	1049.35	38.03	-8.317e+04	4.896e+06	4.715e+06	0.0
	1	-3152.34	-1303.15	-1.071e+05	6.077e+06	7.083e+06	0.0

## RISULTATI OPERE DI FONDAZIONE

### LEGENDA RISULTATI OPERE DI FONDAZIONE

Il controllo dei risultati delle analisi condotte, per quanto concerne le opere di fondazione, è possibile in relazione alle tabelle sotto riportate.

La prima tabella è riferita alle fondazioni tipo palo e plinto su pali.

Per questo tipo di fondazione vengono riportate le sei componenti di sollecitazione (espresse nel riferimento globale della struttura) per ogni palo componente l'opera.

In particolare viene riportato:

<b>Nodo</b>	numero del nodo a cui è applicato il plinto
<b>Tipo</b>	codice corrispondente al nome assegnato al tipo di plinto di fondazione: 3) palo singolo ( <i>PALO</i> ) 4) plinto su palo 5) plinto su due pali ( <i>PL.2P</i> ) 6) plinto su tre pali ( <i>PL.3P</i> ) 7) plinto su quattro pali ( <i>PL.4P</i> ) 8) plinto rettangolare su cinque pali ( <i>PL.5P.R</i> ) 9) plinto pentagonale su cinque pali ( <i>PL.5P</i> ) 10) plinto su sei pali ( <i>PL.6P</i> )
<b>Palo</b>	numero del palo
<b>Comb.</b>	combinazione di carico in cui si verificano le sei componenti di sollecitazione.
<b>Quota</b>	quota assoluta della sezione del palo per cui si riportano le sei componenti di sollecitazione.

L'azione  $F_z$  ( corrispondente allo sforzo normale nel palo) è costante poiché il peso del palo stesso non è considerato nella modellazione.

La seconda tabella è riferita alle fondazioni tipo plinto su suolo elastico.

Per questo tipo di fondazione vengono riportate le pressioni nei quattro vertici dell'impronta sul terreno.

In particolare viene riportato:

<b>Nodo</b>	numero del nodo a cui è applicato il plinto
<b>Tipo</b>	Codice identificativo del nome assegnato al plinto
<b>area</b>	area dell'impronta del plinto
<b>Wink O</b> <b>Wink V</b>	coefficienti di Winkler (orizzontale e verticale) adottati
<b>Comb</b>	Combinazione di carico in cui si verificano i valori riportati
<b>Pt (P1 P2 P3 P4)</b>	valori di pressione nei vertici

La terza tabella è riferita alle fondazioni tipo platea su suolo elastico.

Per questo tipo di fondazione vengono riportate le pressioni in ogni vertice (nodo) degli elementi costituenti la platea.

La quarta tabella è riferita alle fondazioni tipo trave su suolo elastico.

Per questo tipo di fondazione vengono riportate le pressioni alle estremità dell'elemento e la massima (in valore assoluto) pressione lungo lo sviluppo dell'elemento.

Vengono inoltre riportati, con funzione statistica, i valori massimo e minimo delle pressioni che compaiono nella tabella.

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

Con riferimento al **Documento di Affidabilità** "Test di validazione del software di calcolo PRO\_SAP e dei moduli aggiuntivi PRO\_SAP Modulo Geotecnico, PRO\_CAD nodi acciaio e PRO\_MST" - versione Settembre 2014, disponibile per il download sul sito [www.2si.it](http://www.2si.it), si segnalano i seguenti esempi applicativi:

Test N°	Titolo
105	PLINTO SUPERFICIALE
106	PLINTO SUPERFICIALE
107	PLINTO SUPERFICIALE
108	PLINTO SUPERFICIALE
109	PLINTO SUPERFICIALE
110	PLINTO SUPERFICIALE
111	PLINTO SUPERFICIALE
112	PLINTO SUPERFICIALE
113	PLINTO SUPERFICIALE
114	PLINTO SUPERFICIALE
115	PLINTO SUPERFICIALE
116	PLINTO SUPERFICIALE
117	PLINTO SUPERFICIALE
118	PLINTO SUPERFICIALE
119	PLINTO SUPERFICIALE
120	PLINTO SUPERFICIALE
121	PLINTO SUPERFICIALE
122	PLINTO SUPERFICIALE
123	PLINTO SUPERFICIALE
124	FONDAZIONE NASTRIFORME
125	CALCOLO DEI K DI WINKLER

Nodo	Tipo	Palo	Cmb	Quota	Fx	Fy	Fz	Mx	My	Mz
				cm	daN	daN	daN	daN cm	daN cm	daN cm
84	PALO D 120.00	1	1	-100.00	-823.82	4085.96	-8.872e+04	-8.320e+06	6.623e+06	0.0
			2	-100.00	-633.71	3143.04	-6.824e+04	-6.400e+06	5.095e+06	0.0
			3	-100.00	-697.08	3457.35	-7.507e+04	-7.040e+06	5.604e+06	0.0
			4	-100.00	-570.34	2828.74	-6.142e+04	-5.760e+06	4.585e+06	0.0
			5	-100.00	-4131.80	2095.74	-6.775e+04	-6.178e+06	5.837e+06	0.0
			6	-100.00	-4131.80	4190.35	-6.775e+04	-6.623e+06	5.837e+06	0.0
			7	-100.00	2864.38	2095.74	-6.874e+04	-6.178e+06	4.352e+06	0.0
			24	-100.00	415.72	6634.05	-6.839e+04	-7.142e+06	4.872e+06	0.0
			37	-100.00	-1988.18	2737.52	-6.805e+04	-6.314e+06	5.382e+06	0.0
			38	-100.00	-1988.18	3548.56	-6.805e+04	-6.486e+06	5.382e+06	0.0
			39	-100.00	720.76	2737.52	-6.843e+04	-6.314e+06	4.807e+06	0.0
			56	-100.00	-227.37	4494.77	-6.830e+04	-6.688e+06	5.008e+06	0.0
			69	-100.00	-633.71	3143.04	-6.824e+04	-6.400e+06	5.095e+06	0.0
92	PALO D 120.00	1	1	-100.00	-298.15	-403.43	-9.915e+04	-6.757e+06	6.317e+06	0.0
			2	-100.00	-229.34	-310.33	-7.627e+04	-5.198e+06	4.859e+06	0.0
			3	-100.00	-252.28	-341.36	-8.390e+04	-5.718e+06	5.345e+06	0.0
			4	-100.00	-206.41	-279.30	-6.864e+04	-4.678e+06	4.373e+06	0.0
			6	-100.00	-3705.42	731.66	-7.535e+04	-5.419e+06	5.592e+06	0.0
			7	-100.00	3246.73	-1352.31	-7.720e+04	-4.977e+06	4.126e+06	0.0
			24	-100.00	813.48	3162.96	-7.655e+04	-5.934e+06	4.639e+06	0.0
			38	-100.00	-1575.29	93.13	-7.591e+04	-5.283e+06	5.143e+06	0.0
			39	-100.00	1116.60	-713.79	-7.663e+04	-5.112e+06	4.575e+06	0.0
			56	-100.00	174.44	1034.54	-7.638e+04	-5.483e+06	4.774e+06	0.0
103	PALO D 120.00	1	1	-100.00	1885.46	1132.40	-8.739e+04	-7.487e+06	5.939e+06	0.0
			2	-100.00	1450.35	871.08	-6.722e+04	-5.759e+06	4.569e+06	0.0
			3	-100.00	1595.39	958.19	-7.394e+04	-6.335e+06	5.026e+06	0.0
			4	-100.00	1305.32	783.97	-6.050e+04	-5.183e+06	4.112e+06	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

Nodo	Tipo	Palo	Cmb	Quota	Fx	Fy	Fz	Mx	My	Mz
		1	5	-100.00	2024.80	-172.00	-6.625e+04	-5.540e+06	5.301e+06	0.0
		1	6	-100.00	2023.87	1911.53	-6.647e+04	-5.981e+06	5.302e+06	0.0
		1	8	-100.00	4925.50	1914.15	-6.819e+04	-5.979e+06	3.836e+06	0.0
		1	22	-100.00	409.50	4343.23	-6.732e+04	-6.495e+06	4.789e+06	0.0
		1	37	-100.00	104.76	467.20	-6.684e+04	-5.674e+06	4.852e+06	0.0
		1	38	-100.00	105.12	1273.94	-6.693e+04	-5.845e+06	4.853e+06	0.0
		1	40	-100.00	2795.94	1274.96	-6.759e+04	-5.844e+06	4.285e+06	0.0
		1	54	-100.00	1047.33	2215.50	-6.726e+04	-6.044e+06	4.654e+06	0.0
		1	69	-100.00	1450.35	871.08	-6.722e+04	-5.759e+06	4.569e+06	0.0
115	PALO D 120.00	1	1	-100.00	732.72	5911.74	-7.411e+04	-9.168e+06	6.741e+06	0.0
		1	2	-100.00	563.63	4547.49	-5.701e+04	-7.052e+06	5.185e+06	0.0
		1	3	-100.00	619.99	5002.24	-6.271e+04	-7.758e+06	5.704e+06	0.0
		1	4	-100.00	507.26	4092.74	-5.131e+04	-6.347e+06	4.667e+06	0.0
		1	5	-100.00	-2925.51	3498.37	-5.647e+04	-6.831e+06	5.925e+06	0.0
		1	6	-100.00	-2923.95	5591.39	-5.672e+04	-7.275e+06	5.925e+06	0.0
		1	8	-100.00	4052.77	5596.60	-5.754e+04	-7.274e+06	4.446e+06	0.0
		1	22	-100.00	-480.27	8035.07	-5.730e+04	-7.792e+06	5.408e+06	0.0
		1	37	-100.00	-787.38	4141.27	-5.680e+04	-6.967e+06	5.472e+06	0.0
		1	38	-100.00	-786.77	4951.69	-5.690e+04	-7.139e+06	5.472e+06	0.0
		1	40	-100.00	1914.63	4953.71	-5.722e+04	-7.138e+06	4.899e+06	0.0
		1	54	-100.00	159.43	5897.89	-5.712e+04	-7.339e+06	5.271e+06	0.0
		1	69	-100.00	563.63	4547.49	-5.701e+04	-7.052e+06	5.185e+06	0.0
119	PALO D 120.00	1	1	-100.00	3477.85	2898.69	-7.355e+04	-8.056e+06	5.781e+06	0.0
		1	2	-100.00	2675.27	2229.76	-5.658e+04	-6.197e+06	4.447e+06	0.0
		1	3	-100.00	2942.80	2452.74	-6.224e+04	-6.817e+06	4.892e+06	0.0
		1	4	-100.00	2407.74	2006.78	-5.092e+04	-5.577e+06	4.003e+06	0.0
		1	6	-100.00	-795.61	3269.14	-5.611e+04	-6.418e+06	5.180e+06	0.0
		1	21	-100.00	1631.75	-1242.37	-5.570e+04	-5.465e+06	4.666e+06	0.0
		1	22	-100.00	1635.89	5700.65	-5.705e+04	-6.930e+06	4.668e+06	0.0
		1	24	-100.00	3718.80	5701.89	-5.746e+04	-6.930e+06	4.229e+06	0.0
		1	38	-100.00	1331.33	2632.21	-5.640e+04	-6.283e+06	4.731e+06	0.0
		1	53	-100.00	2271.22	885.34	-5.624e+04	-5.914e+06	4.532e+06	0.0
		1	54	-100.00	2272.82	3573.70	-5.676e+04	-6.481e+06	4.533e+06	0.0
		1	56	-100.00	3079.33	3574.18	-5.692e+04	-6.481e+06	4.363e+06	0.0
		1	69	-100.00	2675.27	2229.76	-5.658e+04	-6.197e+06	4.447e+06	0.0
135	PALO D 120.00	1	1	-100.00	4154.67	5236.27	-5.969e+04	-8.645e+06	5.841e+06	0.0
		1	2	-100.00	3195.90	4027.90	-4.591e+04	-6.650e+06	4.493e+06	0.0
		1	3	-100.00	3515.49	4430.69	-5.051e+04	-7.315e+06	4.943e+06	0.0
		1	4	-100.00	2876.31	3625.11	-4.132e+04	-5.985e+06	4.044e+06	0.0
		1	6	-100.00	-276.25	5068.75	-4.581e+04	-6.871e+06	5.229e+06	0.0
		1	21	-100.00	2152.82	552.75	-4.495e+04	-5.917e+06	4.713e+06	0.0
		1	22	-100.00	2155.45	7502.12	-4.667e+04	-7.383e+06	4.715e+06	0.0
		1	24	-100.00	4238.98	7503.06	-4.688e+04	-7.382e+06	4.274e+06	0.0
		1	38	-100.00	1851.47	4430.92	-4.587e+04	-6.735e+06	4.778e+06	0.0
		1	53	-100.00	2792.02	2682.31	-4.554e+04	-6.366e+06	4.578e+06	0.0
		1	54	-100.00	2793.04	5373.13	-4.620e+04	-6.934e+06	4.579e+06	0.0
		1	56	-100.00	3599.78	5373.49	-4.629e+04	-6.934e+06	4.408e+06	0.0
		1	69	-100.00	3195.90	4027.90	-4.591e+04	-6.650e+06	4.493e+06	0.0
147	PALO D 120.00	1	1	-100.00	-214.26	8559.80	-5.959e+04	-9.682e+06	7.497e+06	0.0
		1	2	-100.00	-164.82	6584.46	-4.584e+04	-7.448e+06	5.767e+06	0.0
		1	3	-100.00	-181.30	7242.90	-5.042e+04	-8.192e+06	6.344e+06	0.0
		1	4	-100.00	-148.34	5926.01	-4.126e+04	-6.703e+06	5.191e+06	0.0
		1	6	-100.00	-3655.83	7633.88	-4.599e+04	-7.670e+06	6.509e+06	0.0
		1	21	-100.00	-1212.12	3086.37	-4.534e+04	-6.705e+06	5.990e+06	0.0
		1	22	-100.00	-1212.12	1.008e+04	-4.633e+04	-8.190e+06	5.990e+06	0.0
		1	24	-100.00	882.48	1.008e+04	-4.633e+04	-8.190e+06	5.545e+06	0.0
		1	38	-100.00	-1516.55	6990.80	-4.590e+04	-7.534e+06	6.055e+06	0.0
		1	53	-100.00	-570.34	5229.99	-4.565e+04	-7.160e+06	5.853e+06	0.0
		1	54	-100.00	-570.34	7938.93	-4.603e+04	-7.735e+06	5.853e+06	0.0
		1	56	-100.00	240.70	7938.93	-4.603e+04	-7.735e+06	5.681e+06	0.0
		1	69	-100.00	-164.82	6584.46	-4.584e+04	-7.448e+06	5.767e+06	0.0
151	PALO D 120.00	1	1	-100.00	4255.46	7698.08	-4.764e+04	-9.185e+06	5.941e+06	0.0
		1	2	-100.00	3273.43	5921.60	-3.665e+04	-7.065e+06	4.570e+06	0.0
		1	3	-100.00	3600.78	6513.76	-4.031e+04	-7.772e+06	5.027e+06	0.0
		1	4	-100.00	2946.09	5329.44	-3.298e+04	-6.359e+06	4.113e+06	0.0
		1	6	-100.00	-199.85	6964.42	-3.693e+04	-7.285e+06	5.306e+06	0.0
		1	21	-100.00	2231.45	2445.53	-3.572e+04	-6.332e+06	4.791e+06	0.0
		1	24	-100.00	4315.42	9397.67	-3.757e+04	-7.798e+06	4.349e+06	0.0
		1	38	-100.00	1928.57	6325.38	-3.676e+04	-7.150e+06	4.855e+06	0.0
		1	53	-100.00	2869.97	4575.65	-3.629e+04	-6.781e+06	4.655e+06	0.0



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

Nodo	Tipo	Palo	Cmb	Quota	Fx	Fy	Fz	Mx	My	Mz
		1	56	-100.00	3676.89	7267.54	-3.701e+04	-7.349e+06	4.484e+06	0.0
		1	69	-100.00	3273.43	5921.60	-3.665e+04	-7.065e+06	4.570e+06	0.0
167	PALO D 120.00	1	1	-100.00	3718.51	1.027e+04	-3.913e+04	-9.790e+06	6.092e+06	0.0
		1	2	-100.00	2860.39	7900.47	-3.010e+04	-7.531e+06	4.686e+06	0.0
		1	3	-100.00	3146.43	8690.51	-3.311e+04	-8.284e+06	5.155e+06	0.0
		1	4	-100.00	2574.35	7110.42	-2.709e+04	-6.778e+06	4.218e+06	0.0
		1	5	-100.00	-611.76	6859.62	-3.020e+04	-7.310e+06	5.421e+06	0.0
		1	22	-100.00	1817.32	1.138e+04	-3.107e+04	-8.263e+06	4.906e+06	0.0
		1	23	-100.00	3903.47	4425.31	-2.913e+04	-6.798e+06	4.467e+06	0.0
		1	24	-100.00	3900.84	1.137e+04	-3.085e+04	-8.264e+06	4.465e+06	0.0
		1	37	-100.00	1515.97	7497.45	-3.014e+04	-7.445e+06	4.971e+06	0.0
		1	54	-100.00	2456.51	9246.06	-3.047e+04	-7.814e+06	4.771e+06	0.0
		1	55	-100.00	3264.28	6554.88	-2.972e+04	-7.247e+06	4.601e+06	0.0
		1	56	-100.00	3263.26	9245.69	-3.039e+04	-7.814e+06	4.600e+06	0.0
		1	69	-100.00	2860.39	7900.47	-3.010e+04	-7.531e+06	4.686e+06	0.0
179	PALO D 120.00	1	1	-100.00	-350.33	1.112e+04	-4.975e+04	-1.015e+07	7.367e+06	0.0
		1	2	-100.00	-269.48	8556.61	-3.827e+04	-7.808e+06	5.667e+06	0.0
		1	3	-100.00	-296.43	9412.27	-4.210e+04	-8.589e+06	6.233e+06	0.0
		1	4	-100.00	-242.53	7700.94	-3.444e+04	-7.027e+06	5.100e+06	0.0
		1	5	-100.00	-3757.06	7512.71	-3.856e+04	-7.586e+06	6.407e+06	0.0
		1	6	-100.00	-3758.62	9605.72	-3.881e+04	-8.030e+06	6.406e+06	0.0
		1	7	-100.00	3219.66	7507.49	-3.774e+04	-7.586e+06	4.927e+06	0.0
		1	24	-100.00	774.42	1.204e+04	-3.856e+04	-8.548e+06	5.444e+06	0.0
		1	37	-100.00	-1619.88	8152.40	-3.838e+04	-7.722e+06	5.953e+06	0.0
		1	38	-100.00	-1620.49	8962.82	-3.848e+04	-7.894e+06	5.953e+06	0.0
		1	39	-100.00	1081.52	8150.39	-3.806e+04	-7.722e+06	5.380e+06	0.0
		1	56	-100.00	134.72	9907.00	-3.838e+04	-8.095e+06	5.581e+06	0.0
		1	69	-100.00	-269.48	8556.61	-3.827e+04	-7.808e+06	5.667e+06	0.0
183	PALO D 120.00	1	1	-100.00	2299.88	1.274e+04	-3.531e+04	-1.046e+07	6.461e+06	0.0
		1	2	-100.00	1769.14	9797.54	-2.716e+04	-8.043e+06	4.970e+06	0.0
		1	3	-100.00	1946.05	1.078e+04	-2.988e+04	-8.847e+06	5.467e+06	0.0
		1	4	-100.00	1592.22	8817.78	-2.445e+04	-7.239e+06	4.473e+06	0.0
		1	5	-100.00	-1701.75	8758.16	-2.763e+04	-7.822e+06	5.703e+06	0.0
		1	6	-100.00	-1702.99	1.084e+04	-2.804e+04	-8.261e+06	5.703e+06	0.0
		1	7	-100.00	5241.27	8754.01	-2.629e+04	-7.824e+06	4.238e+06	0.0
		1	24	-100.00	2808.52	1.327e+04	-2.763e+04	-8.776e+06	4.749e+06	0.0
		1	37	-100.00	425.20	9395.09	-2.735e+04	-7.957e+06	5.254e+06	0.0
		1	38	-100.00	424.72	1.020e+04	-2.750e+04	-8.127e+06	5.254e+06	0.0
		1	39	-100.00	3113.56	9393.48	-2.682e+04	-7.958e+06	4.687e+06	0.0
		1	56	-100.00	2171.59	1.114e+04	-2.735e+04	-8.327e+06	4.885e+06	0.0
		1	69	-100.00	1769.14	9797.54	-2.716e+04	-8.043e+06	4.970e+06	0.0
199	PALO D 120.00	1	1	-100.00	-410.87	1.440e+04	-3.858e+04	-1.097e+07	7.268e+06	0.0
		1	2	-100.00	-316.06	1.108e+04	-2.967e+04	-8.436e+06	5.591e+06	0.0
		1	3	-100.00	-347.66	1.218e+04	-3.264e+04	-9.280e+06	6.150e+06	0.0
		1	4	-100.00	-284.45	9969.16	-2.671e+04	-7.592e+06	5.032e+06	0.0
		1	5	-100.00	-3790.28	1.004e+04	-3.042e+04	-8.215e+06	6.324e+06	0.0
		1	6	-100.00	-3791.21	1.212e+04	-3.064e+04	-8.655e+06	6.324e+06	0.0
		1	7	-100.00	3159.10	1.003e+04	-2.870e+04	-8.216e+06	4.859e+06	0.0
		1	24	-100.00	724.79	1.455e+04	-2.978e+04	-9.171e+06	5.370e+06	0.0
		1	37	-100.00	-1661.28	1.067e+04	-2.996e+04	-8.350e+06	5.875e+06	0.0
		1	38	-100.00	-1661.65	1.148e+04	-3.005e+04	-8.521e+06	5.875e+06	0.0
		1	39	-100.00	1029.53	1.067e+04	-2.930e+04	-8.351e+06	5.307e+06	0.0
		1	56	-100.00	86.96	1.242e+04	-2.971e+04	-8.721e+06	5.506e+06	0.0
		1	69	-100.00	-316.06	1.108e+04	-2.967e+04	-8.436e+06	5.591e+06	0.0
211	PALO D 120.00	1	1	-100.00	-4680.25	1.241e+04	-5.904e+04	-1.069e+07	8.858e+06	0.0
		1	2	-100.00	-3600.19	9547.91	-4.542e+04	-8.221e+06	6.814e+06	0.0
		1	3	-100.00	-3960.21	1.050e+04	-4.996e+04	-9.043e+06	7.496e+06	0.0
		1	4	-100.00	-3240.17	8593.12	-4.088e+04	-7.399e+06	6.133e+06	0.0
		1	5	-100.00	-7098.28	8500.61	-4.591e+04	-7.998e+06	7.557e+06	0.0
		1	6	-100.00	-7098.28	1.060e+04	-4.591e+04	-8.444e+06	7.557e+06	0.0
		1	7	-100.00	-102.10	8500.61	-4.492e+04	-7.998e+06	6.072e+06	0.0
		1	24	-100.00	-2550.76	1.304e+04	-4.527e+04	-8.963e+06	6.591e+06	0.0
		1	37	-100.00	-4954.66	9142.39	-4.561e+04	-8.135e+06	7.102e+06	0.0
		1	38	-100.00	-4954.66	9953.43	-4.561e+04	-8.307e+06	7.102e+06	0.0
		1	39	-100.00	-2245.72	9142.39	-4.523e+04	-8.135e+06	6.527e+06	0.0
		1	56	-100.00	-3193.85	1.090e+04	-4.536e+04	-8.508e+06	6.728e+06	0.0
		1	69	-100.00	-3600.19	9547.91	-4.542e+04	-8.221e+06	6.814e+06	0.0
215	PALO D 120.00	1	1	-100.00	-3842.95	1.495e+04	-4.662e+04	-1.113e+07	8.372e+06	0.0
		1	2	-100.00	-2956.11	1.150e+04	-3.586e+04	-8.558e+06	6.440e+06	0.0
		1	3	-100.00	-3251.73	1.265e+04	-3.945e+04	-9.414e+06	7.084e+06	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

Nodo	Tipo	Palo	Cmb	Quota	Fx	Fy	Fz	Mx	My	Mz
		1	4	-100.00	-2660.50	1.035e+04	-3.227e+04	-7.702e+06	5.796e+06	0.0
		1	6	-100.00	-6432.19	1.254e+04	-3.678e+04	-8.779e+06	7.173e+06	0.0
		1	7	-100.00	519.96	1.046e+04	-3.493e+04	-8.337e+06	5.707e+06	0.0
		1	24	-100.00	-1913.29	1.497e+04	-3.558e+04	-9.294e+06	6.220e+06	0.0
		1	38	-100.00	-4302.06	1.190e+04	-3.622e+04	-8.644e+06	6.724e+06	0.0
		1	39	-100.00	-1610.17	1.110e+04	-3.550e+04	-8.473e+06	6.156e+06	0.0
		1	56	-100.00	-2552.33	1.284e+04	-3.575e+04	-8.843e+06	6.355e+06	0.0
		1	69	-100.00	-2956.11	1.150e+04	-3.586e+04	-8.558e+06	6.440e+06	0.0
231	PALO D 120.00	1	1	-100.00	-7388.82	1.397e+04	-5.833e+04	-1.071e+07	9.541e+06	0.0
		1	2	-100.00	-5683.71	1.074e+04	-4.487e+04	-8.242e+06	7.339e+06	0.0
		1	3	-100.00	-6252.08	1.182e+04	-4.936e+04	-9.066e+06	8.073e+06	0.0
		1	4	-100.00	-5115.34	9669.22	-4.039e+04	-7.417e+06	6.605e+06	0.0
		1	5	-100.00	-9158.86	9700.50	-4.584e+04	-8.022e+06	8.072e+06	0.0
		1	6	-100.00	-9157.93	1.178e+04	-4.562e+04	-8.463e+06	8.072e+06	0.0
		1	8	-100.00	-2208.55	1.179e+04	-4.390e+04	-8.461e+06	6.606e+06	0.0
		1	22	-100.00	-6724.56	1.422e+04	-4.477e+04	-8.977e+06	7.560e+06	0.0
		1	37	-100.00	-7029.30	1.034e+04	-4.525e+04	-8.157e+06	7.623e+06	0.0
		1	38	-100.00	-7028.94	1.115e+04	-4.516e+04	-8.327e+06	7.623e+06	0.0
		1	40	-100.00	-4338.12	1.115e+04	-4.450e+04	-8.327e+06	7.055e+06	0.0
		1	54	-100.00	-6086.73	1.209e+04	-4.483e+04	-8.526e+06	7.424e+06	0.0
		1	69	-100.00	-5683.71	1.074e+04	-4.487e+04	-8.242e+06	7.339e+06	0.0
243	PALO D 120.00	1	1	-100.00	-8947.50	1.005e+04	-7.320e+04	-9.524e+06	1.031e+07	0.0
		1	2	-100.00	-6882.69	7727.95	-5.631e+04	-7.326e+06	7.932e+06	0.0
		1	3	-100.00	-7570.96	8500.75	-6.194e+04	-8.059e+06	8.725e+06	0.0
		1	4	-100.00	-6194.42	6955.16	-5.068e+04	-6.594e+06	7.138e+06	0.0
		1	5	-100.00	-1.037e+04	6678.84	-5.684e+04	-7.105e+06	8.671e+06	0.0
		1	6	-100.00	-1.037e+04	8771.85	-5.659e+04	-7.548e+06	8.672e+06	0.0
		1	8	-100.00	-3393.55	8777.06	-5.577e+04	-7.548e+06	7.192e+06	0.0
		1	22	-100.00	-7926.59	1.122e+04	-5.602e+04	-8.066e+06	8.154e+06	0.0
		1	37	-100.00	-8233.69	7321.73	-5.651e+04	-7.240e+06	8.218e+06	0.0
		1	38	-100.00	-8233.09	8132.15	-5.642e+04	-7.412e+06	8.218e+06	0.0
		1	40	-100.00	-5531.69	8134.17	-5.610e+04	-7.412e+06	7.645e+06	0.0
		1	54	-100.00	-7286.89	9078.35	-5.619e+04	-7.613e+06	8.018e+06	0.0
		1	69	-100.00	-6882.69	7727.95	-5.631e+04	-7.326e+06	7.932e+06	0.0
247	PALO D 120.00	1	1	-100.00	-1.024e+04	1.156e+04	-7.206e+04	-9.773e+06	1.043e+07	0.0
		1	2	-100.00	-7873.25	8894.94	-5.543e+04	-7.518e+06	8.019e+06	0.0
		1	3	-100.00	-8660.58	9784.43	-6.097e+04	-8.270e+06	8.821e+06	0.0
		1	4	-100.00	-7085.93	8005.45	-4.988e+04	-6.766e+06	7.217e+06	0.0
		1	6	-100.00	-1.134e+04	9934.32	-5.590e+04	-7.739e+06	8.753e+06	0.0
		1	21	-100.00	-8916.78	5422.81	-5.630e+04	-6.785e+06	8.238e+06	0.0
		1	22	-100.00	-8912.64	1.237e+04	-5.495e+04	-8.251e+06	8.240e+06	0.0
		1	24	-100.00	-6829.73	1.237e+04	-5.455e+04	-8.250e+06	7.801e+06	0.0
		1	38	-100.00	-9217.19	9297.39	-5.561e+04	-7.603e+06	8.303e+06	0.0
		1	53	-100.00	-8277.31	7550.52	-5.577e+04	-7.234e+06	8.104e+06	0.0
		1	54	-100.00	-8275.71	1.024e+04	-5.524e+04	-7.802e+06	8.105e+06	0.0
		1	56	-100.00	-7469.20	1.024e+04	-5.509e+04	-7.801e+06	7.935e+06	0.0
		1	69	-100.00	-7873.25	8894.94	-5.543e+04	-7.518e+06	8.019e+06	0.0
263	PALO D 120.00	1	1	-100.00	-1.155e+04	7977.73	-8.603e+04	-8.459e+06	1.073e+07	0.0
		1	2	-100.00	-8883.36	6136.72	-6.618e+04	-6.507e+06	8.255e+06	0.0
		1	3	-100.00	-9771.70	6750.39	-7.279e+04	-7.158e+06	9.081e+06	0.0
		1	4	-100.00	-7995.02	5523.04	-5.956e+04	-5.856e+06	7.430e+06	0.0
		1	6	-100.00	-1.236e+04	7177.56	-6.628e+04	-6.728e+06	8.990e+06	0.0
		1	21	-100.00	-9926.44	2661.56	-6.714e+04	-5.774e+06	8.475e+06	0.0
		1	22	-100.00	-9923.81	9610.94	-6.542e+04	-7.240e+06	8.476e+06	0.0
		1	24	-100.00	-7840.28	9611.87	-6.521e+04	-7.239e+06	8.036e+06	0.0
		1	38	-100.00	-1.023e+04	6539.73	-6.622e+04	-6.592e+06	8.540e+06	0.0
		1	53	-100.00	-9287.24	4791.13	-6.655e+04	-6.223e+06	8.340e+06	0.0
		1	54	-100.00	-9286.23	7481.94	-6.588e+04	-6.791e+06	8.341e+06	0.0
		1	56	-100.00	-8479.48	7482.30	-6.580e+04	-6.791e+06	8.170e+06	0.0
		1	69	-100.00	-8883.36	6136.72	-6.618e+04	-6.507e+06	8.255e+06	0.0
275	PALO D 120.00	1	1	-100.00	-8540.59	4703.36	-8.817e+04	-7.447e+06	9.864e+06	0.0
		1	2	-100.00	-6569.69	3617.97	-6.782e+04	-5.728e+06	7.588e+06	0.0
		1	3	-100.00	-7226.65	3979.77	-7.460e+04	-6.301e+06	8.347e+06	0.0
		1	4	-100.00	-5912.72	3256.17	-6.104e+04	-5.155e+06	6.829e+06	0.0
		1	6	-100.00	-1.006e+04	4667.40	-6.767e+04	-5.951e+06	8.330e+06	0.0
		1	21	-100.00	-7616.99	119.88	-6.831e+04	-4.986e+06	7.811e+06	0.0
		1	22	-100.00	-7616.99	7116.06	-6.733e+04	-6.471e+06	7.811e+06	0.0
		1	24	-100.00	-5522.38	7116.06	-6.733e+04	-6.471e+06	7.365e+06	0.0
		1	38	-100.00	-7921.41	4024.31	-6.776e+04	-5.814e+06	7.875e+06	0.0
		1	53	-100.00	-6975.20	2263.50	-6.801e+04	-5.441e+06	7.674e+06	0.0



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

Nodo	Tipo	Palo	Cmb	Quota	Fx	Fy	Fz	Mx	My	Mz
		1	54	-100.00	-6975.20	4972.44	-6.763e+04	-6.016e+06	7.674e+06	0.0
		1	56	-100.00	-6164.17	4972.44	-6.763e+04	-6.016e+06	7.502e+06	0.0
		1	69	-100.00	-6569.69	3617.97	-6.782e+04	-5.728e+06	7.588e+06	0.0
279	PALO D 120.00	1	1	-100.00	-1.110e+04	4153.27	-9.813e+04	-7.130e+06	1.031e+07	0.0
		1	2	-100.00	-8536.32	3194.83	-7.548e+04	-5.484e+06	7.930e+06	0.0
		1	3	-100.00	-9389.95	3514.31	-8.303e+04	-6.033e+06	8.723e+06	0.0
		1	4	-100.00	-7682.69	2875.34	-6.793e+04	-4.936e+06	7.137e+06	0.0
		1	6	-100.00	-1.201e+04	4237.65	-7.520e+04	-5.704e+06	8.666e+06	0.0
		1	21	-100.00	-9578.31	-281.25	-7.641e+04	-4.751e+06	8.151e+06	0.0
		1	24	-100.00	-7494.34	6670.90	-7.456e+04	-6.217e+06	7.709e+06	0.0
		1	38	-100.00	-9881.19	3598.61	-7.537e+04	-5.569e+06	8.215e+06	0.0
		1	53	-100.00	-8939.78	1848.88	-7.584e+04	-5.201e+06	8.016e+06	0.0
		1	56	-100.00	-8132.86	4540.77	-7.512e+04	-5.768e+06	7.845e+06	0.0
		1	69	-100.00	-8536.32	3194.83	-7.548e+04	-5.484e+06	7.930e+06	0.0
295	PALO D 120.00	1	1	-100.00	-9115.73	996.33	-1.066e+05	-6.188e+06	9.319e+06	0.0
		1	2	-100.00	-7012.10	766.40	-8.199e+04	-4.760e+06	7.168e+06	0.0
		1	3	-100.00	-7713.31	843.05	-9.019e+04	-5.236e+06	7.885e+06	0.0
		1	4	-100.00	-6310.89	689.76	-7.379e+04	-4.284e+06	6.452e+06	0.0
		1	5	-100.00	-1.048e+04	-274.44	-8.189e+04	-4.540e+06	7.904e+06	0.0
		1	22	-100.00	-8055.18	4241.56	-8.102e+04	-5.493e+06	7.388e+06	0.0
		1	23	-100.00	-5969.03	-2708.75	-8.296e+04	-4.028e+06	6.949e+06	0.0
		1	24	-100.00	-5971.65	4240.62	-8.124e+04	-5.493e+06	6.947e+06	0.0
		1	37	-100.00	-8356.53	363.39	-8.195e+04	-4.675e+06	7.453e+06	0.0
		1	54	-100.00	-7415.98	2111.99	-8.162e+04	-5.044e+06	7.253e+06	0.0
		1	55	-100.00	-6608.22	-579.18	-8.237e+04	-4.477e+06	7.083e+06	0.0
		1	56	-100.00	-6609.24	2111.63	-8.170e+04	-5.044e+06	7.083e+06	0.0
		1	69	-100.00	-7012.10	766.40	-8.199e+04	-4.760e+06	7.168e+06	0.0
307	PALO D 120.00	1	1	-100.00	-4484.93	1443.37	-9.756e+04	-6.580e+06	7.722e+06	0.0
		1	2	-100.00	-3449.94	1110.29	-7.504e+04	-5.062e+06	5.940e+06	0.0
		1	3	-100.00	-3794.94	1221.32	-8.255e+04	-5.568e+06	6.534e+06	0.0
		1	4	-100.00	-3104.95	999.26	-6.754e+04	-4.556e+06	5.346e+06	0.0
		1	5	-100.00	-6937.52	66.39	-7.476e+04	-4.839e+06	6.680e+06	0.0
		1	6	-100.00	-6939.08	2159.40	-7.451e+04	-5.283e+06	6.680e+06	0.0
		1	7	-100.00	39.20	61.18	-7.558e+04	-4.840e+06	5.201e+06	0.0
		1	24	-100.00	-2406.04	4597.86	-7.476e+04	-5.802e+06	5.718e+06	0.0
		1	37	-100.00	-4800.34	706.09	-7.493e+04	-4.976e+06	6.227e+06	0.0
		1	38	-100.00	-4800.95	1516.51	-7.484e+04	-5.148e+06	6.227e+06	0.0
		1	39	-100.00	-2098.94	704.07	-7.525e+04	-4.976e+06	5.654e+06	0.0
		1	56	-100.00	-3045.74	2460.69	-7.493e+04	-5.348e+06	5.854e+06	0.0
		1	69	-100.00	-3449.94	1110.29	-7.504e+04	-5.062e+06	5.940e+06	0.0
311	PALO D 120.00	1	1	-100.00	-6364.86	-976.29	-1.103e+05	-5.812e+06	8.178e+06	0.0
		1	2	-100.00	-4896.05	-750.99	-8.484e+04	-4.471e+06	6.291e+06	0.0
		1	3	-100.00	-5385.65	-826.09	-9.333e+04	-4.918e+06	6.920e+06	0.0
		1	4	-100.00	-4406.44	-675.89	-7.636e+04	-4.024e+06	5.662e+06	0.0
		1	5	-100.00	-8366.93	-1790.37	-8.437e+04	-4.250e+06	7.024e+06	0.0
		1	6	-100.00	-8368.17	292.53	-8.397e+04	-4.689e+06	7.023e+06	0.0
		1	7	-100.00	-1423.92	-1794.52	-8.572e+04	-4.252e+06	5.558e+06	0.0
		1	24	-100.00	-3856.66	2719.89	-8.437e+04	-5.204e+06	6.070e+06	0.0
		1	37	-100.00	-6239.98	-1153.44	-8.466e+04	-4.385e+06	6.575e+06	0.0
		1	38	-100.00	-6240.46	-346.94	-8.450e+04	-4.555e+06	6.574e+06	0.0
		1	39	-100.00	-3551.63	-1155.05	-8.518e+04	-4.386e+06	6.007e+06	0.0
		1	56	-100.00	-4493.59	592.94	-8.466e+04	-4.755e+06	6.205e+06	0.0
		1	69	-100.00	-4896.05	-750.99	-8.484e+04	-4.471e+06	6.291e+06	0.0
327	PALO D 120.00	1	1	-100.00	-3152.34	-1303.15	-1.071e+05	-6.077e+06	7.083e+06	0.0
		1	2	-100.00	-2424.87	-1002.42	-8.242e+04	-4.674e+06	5.448e+06	0.0
		1	3	-100.00	-2667.36	-1102.67	-9.066e+04	-5.142e+06	5.993e+06	0.0
		1	4	-100.00	-2182.39	-902.18	-7.417e+04	-4.207e+06	4.903e+06	0.0
		1	5	-100.00	-5899.09	-2042.87	-8.166e+04	-4.453e+06	6.181e+06	0.0
		1	6	-100.00	-5900.03	40.65	-8.145e+04	-4.894e+06	6.181e+06	0.0
		1	7	-100.00	1050.28	-2045.50	-8.338e+04	-4.455e+06	4.715e+06	0.0
		1	24	-100.00	-1384.02	2469.73	-8.231e+04	-5.410e+06	5.227e+06	0.0
		1	37	-100.00	-3770.10	-1405.29	-8.213e+04	-4.589e+06	5.732e+06	0.0
		1	38	-100.00	-3770.46	-598.54	-8.204e+04	-4.759e+06	5.732e+06	0.0
		1	39	-100.00	-1079.28	-1406.31	-8.279e+04	-4.589e+06	5.164e+06	0.0
		1	56	-100.00	-2021.85	342.00	-8.238e+04	-4.959e+06	5.363e+06	0.0
		1	69	-100.00	-2424.87	-1002.42	-8.242e+04	-4.674e+06	5.448e+06	0.0
<b>Nodo</b>					<b>Fx</b>	<b>Fy</b>	<b>Fz</b>	<b>Mx</b>	<b>My</b>	<b>Mz</b>
					-1.236e+04	-2708.75	-1.103e+05	-1.113e+07	3.836e+06	0.0
					5241.27	1.497e+04	-2.445e+04	-4.024e+06	1.073e+07	0.0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
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<b>Nodo (G)</b>	<b>Pt 1/12</b>	<b>Pt 2/13</b>	<b>Pt 3...</b>	<b>Pt 4...</b>						
daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2
1	-0.63	-0.54	-0.49	-0.49	-0.49					
2	-0.65	-0.55	-0.50	-0.50	-0.50					
3	-0.64	-0.54	-0.49	-0.49	-0.49					
4	-0.62	-0.52	-0.48	-0.47	-0.47					
5	-0.62	-0.52	-0.48	-0.48	-0.48					
6	-0.60	-0.51	-0.46	-0.46	-0.46					
7	-0.60	-0.51	-0.46	-0.46	-0.46					
8	-0.58	-0.49	-0.45	-0.45	-0.45					
9	-0.58	-0.49	-0.45	-0.45	-0.45					
10	-0.56	-0.47	-0.43	-0.43	-0.43					
11	-0.56	-0.48	-0.43	-0.43	-0.43					
12	-0.54	-0.46	-0.42	-0.42	-0.42					
13	-0.54	-0.46	-0.42	-0.42	-0.42					
14	-0.52	-0.44	-0.41	-0.40	-0.40					
15	-0.53	-0.44	-0.41	-0.40	-0.40					
16	-0.51	-0.43	-0.39	-0.39	-0.39					
17	-0.51	-0.43	-0.39	-0.39	-0.39					
18	-0.49	-0.41	-0.38	-0.38	-0.38					
19	-0.67	-0.57	-0.52	-0.52	-0.52					
20	-0.66	-0.55	-0.51	-0.51	-0.50					
21	-0.64	-0.54	-0.49	-0.49	-0.49					
22	-0.62	-0.52	-0.48	-0.48	-0.48					
23	-0.60	-0.51	-0.46	-0.46	-0.46					
24	-0.58	-0.49	-0.45	-0.45	-0.45					
25	-0.56	-0.48	-0.43	-0.43	-0.43					
26	-0.54	-0.46	-0.42	-0.42	-0.42					
27	-0.53	-0.45	-0.41	-0.41	-0.40					
28	-0.69	-0.59	-0.53	-0.53	-0.53					
29	-0.68	-0.57	-0.52	-0.52	-0.52					
30	-0.66	-0.56	-0.51	-0.51	-0.51					
31	-0.64	-0.54	-0.49	-0.49	-0.49					
32	-0.62	-0.53	-0.48	-0.48	-0.48					
33	-0.60	-0.51	-0.46	-0.46	-0.46					
34	-0.58	-0.49	-0.45	-0.45	-0.45					
35	-0.56	-0.48	-0.43	-0.43	-0.43					
36	-0.54	-0.46	-0.42	-0.42	-0.42					
37	-0.71	-0.60	-0.55	-0.55	-0.55					
38	-0.70	-0.59	-0.54	-0.54	-0.54					
39	-0.68	-0.58	-0.52	-0.52	-0.52					
40	-0.66	-0.56	-0.51	-0.51	-0.51					
41	-0.65	-0.55	-0.50	-0.50	-0.50					
42	-0.62	-0.53	-0.48	-0.48	-0.48					
43	-0.60	-0.51	-0.46	-0.46	-0.46					
44	-0.58	-0.49	-0.45	-0.45	-0.45					
45	-0.56	-0.48	-0.44	-0.43	-0.43					
46	-0.73	-0.62	-0.56	-0.56	-0.56					
47	-0.72	-0.61	-0.55	-0.55	-0.55					
48	-0.70	-0.59	-0.54	-0.54	-0.54					
49	-0.68	-0.58	-0.53	-0.53	-0.53					
50	-0.66	-0.56	-0.51	-0.51	-0.51					
51	-0.64	-0.54	-0.49	-0.49	-0.49					
52	-0.62	-0.53	-0.48	-0.48	-0.48					
53	-0.60	-0.51	-0.46	-0.46	-0.46					
54	-0.58	-0.49	-0.45	-0.45	-0.45					
55	-0.75	-0.63	-0.58	-0.58	-0.58					
56	-0.73	-0.62	-0.57	-0.56	-0.56					
57	-0.72	-0.61	-0.55	-0.55	-0.55					
58	-0.70	-0.59	-0.54	-0.54	-0.54					
59	-0.68	-0.58	-0.53	-0.52	-0.52					
60	-0.66	-0.56	-0.51	-0.51	-0.51					
61	-0.64	-0.54	-0.49	-0.49	-0.49					
62	-0.62	-0.53	-0.48	-0.48	-0.48					
63	-0.60	-0.51	-0.47	-0.46	-0.46					
64	-0.76	-0.65	-0.59	-0.59	-0.59					
65	-0.75	-0.63	-0.58	-0.58	-0.58					

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66	-0.73	-0.62	-0.57	-0.57	-0.56
67	-0.72	-0.61	-0.55	-0.55	-0.55
68	-0.70	-0.59	-0.54	-0.54	-0.54
69	-0.68	-0.57	-0.52	-0.52	-0.52
70	-0.66	-0.56	-0.51	-0.51	-0.51
71	-0.64	-0.54	-0.49	-0.49	-0.49
72	-0.62	-0.52	-0.48	-0.48	-0.48
73	-0.78	-0.66	-0.60	-0.60	-0.60
74	-0.77	-0.65	-0.59	-0.59	-0.59
75	-0.75	-0.63	-0.58	-0.58	-0.58
76	-0.73	-0.62	-0.57	-0.56	-0.56
77	-0.71	-0.60	-0.55	-0.55	-0.55
78	-0.70	-0.59	-0.54	-0.54	-0.53
79	-0.68	-0.57	-0.52	-0.52	-0.52
80	-0.66	-0.56	-0.51	-0.51	-0.51
81	-0.64	-0.54	-0.49	-0.49	-0.49
82	-0.74	-0.62	-0.57	-0.57	-0.57
83	-0.71	-0.60	-0.55	-0.55	-0.55
84	-0.76	-0.64	-0.59	-0.59	-0.58
85	-0.73	-0.62	-0.57	-0.56	-0.56
86	-0.78	-0.66	-0.61	-0.60	-0.60
87	-0.75	-0.63	-0.58	-0.58	-0.58
88	-0.81	-0.68	-0.63	-0.62	-0.62
89	-0.77	-0.65	-0.60	-0.59	-0.59
90	-0.83	-0.70	-0.64	-0.64	-0.64
91	-0.78	-0.66	-0.61	-0.61	-0.60
92	-0.85	-0.72	-0.66	-0.66	-0.65
93	-0.80	-0.68	-0.63	-0.62	-0.62
94	-0.87	-0.74	-0.68	-0.67	-0.67
95	-0.82	-0.69	-0.64	-0.63	-0.63
96	-0.89	-0.76	-0.70	-0.69	-0.69
97	-0.84	-0.71	-0.66	-0.65	-0.64
98	-0.69	-0.58	-0.53	-0.53	-0.53
99	-0.70	-0.59	-0.54	-0.54	-0.54
100	-0.71	-0.60	-0.55	-0.55	-0.55
101	-0.72	-0.61	-0.56	-0.56	-0.56
102	-0.74	-0.62	-0.57	-0.57	-0.57
103	-0.75	-0.63	-0.58	-0.58	-0.58
104	-0.76	-0.64	-0.59	-0.59	-0.59
105	-0.77	-0.65	-0.60	-0.60	-0.59
106	-0.66	-0.56	-0.51	-0.51	-0.51
107	-0.67	-0.57	-0.52	-0.52	-0.51
108	-0.67	-0.57	-0.52	-0.52	-0.52
109	-0.68	-0.57	-0.53	-0.53	-0.52
110	-0.69	-0.58	-0.53	-0.53	-0.53
111	-0.69	-0.58	-0.54	-0.53	-0.53
112	-0.70	-0.59	-0.54	-0.54	-0.54
113	-0.70	-0.59	-0.55	-0.54	-0.54
114	-0.64	-0.54	-0.49	-0.49	-0.49
115	-0.63	-0.54	-0.49	-0.49	-0.49
116	-0.63	-0.54	-0.49	-0.49	-0.49
117	-0.63	-0.54	-0.49	-0.49	-0.49
118	-0.63	-0.53	-0.49	-0.49	-0.49
119	-0.63	-0.53	-0.49	-0.49	-0.48
120	-0.63	-0.53	-0.49	-0.49	-0.48
121	-0.63	-0.53	-0.49	-0.49	-0.48
122	-0.61	-0.52	-0.47	-0.47	-0.47
123	-0.60	-0.51	-0.47	-0.47	-0.46
124	-0.59	-0.50	-0.46	-0.46	-0.46
125	-0.59	-0.50	-0.46	-0.45	-0.45
126	-0.58	-0.49	-0.45	-0.45	-0.44
127	-0.57	-0.48	-0.45	-0.44	-0.44
128	-0.56	-0.48	-0.44	-0.44	-0.43
129	-0.55	-0.47	-0.44	-0.43	-0.43
130	-0.59	-0.50	-0.45	-0.45	-0.45
131	-0.57	-0.48	-0.44	-0.44	-0.44
132	-0.56	-0.47	-0.43	-0.43	-0.43
133	-0.54	-0.46	-0.42	-0.42	-0.42
134	-0.53	-0.45	-0.41	-0.41	-0.40
135	-0.51	-0.43	-0.40	-0.40	-0.39
136	-0.50	-0.42	-0.39	-0.39	-0.38
137	-0.48	-0.41	-0.38	-0.38	-0.37
138	-0.56	-0.47	-0.44	-0.43	-0.43

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139	-0.54	-0.46	-0.42	-0.42	-0.42
140	-0.52	-0.44	-0.40	-0.40	-0.40
141	-0.50	-0.42	-0.39	-0.39	-0.38
142	-0.48	-0.40	-0.37	-0.37	-0.37
143	-0.46	-0.39	-0.36	-0.35	-0.35
144	-0.44	-0.37	-0.35	-0.34	-0.34
145	-0.42	-0.35	-0.33	-0.32	-0.32
146	-0.54	-0.45	-0.42	-0.41	-0.41
147	-0.51	-0.43	-0.40	-0.39	-0.39
148	-0.48	-0.41	-0.38	-0.37	-0.37
149	-0.46	-0.39	-0.36	-0.36	-0.35
150	-0.43	-0.37	-0.34	-0.34	-0.33
151	-0.41	-0.35	-0.32	-0.32	-0.31
152	-0.38	-0.32	-0.30	-0.30	-0.29
153	-0.36	-0.30	-0.29	-0.28	-0.28
154	-0.51	-0.44	-0.40	-0.40	-0.40
155	-0.48	-0.41	-0.38	-0.37	-0.37
156	-0.45	-0.38	-0.36	-0.35	-0.35
157	-0.43	-0.36	-0.33	-0.33	-0.33
158	-0.40	-0.34	-0.31	-0.31	-0.30
159	-0.37	-0.31	-0.29	-0.29	-0.28
160	-0.34	-0.29	-0.27	-0.26	-0.26
161	-0.31	-0.26	-0.25	-0.24	-0.24
162	-0.49	-0.42	-0.38	-0.38	-0.38
163	-0.46	-0.39	-0.36	-0.36	-0.35
164	-0.43	-0.36	-0.34	-0.33	-0.33
165	-0.40	-0.34	-0.31	-0.31	-0.31
166	-0.37	-0.31	-0.29	-0.28	-0.28
167	-0.34	-0.28	-0.27	-0.26	-0.26
168	-0.30	-0.26	-0.24	-0.24	-0.23
169	-0.27	-0.23	-0.22	-0.21	-0.21
170	-0.47	-0.40	-0.37	-0.37	-0.37
171	-0.44	-0.37	-0.34	-0.34	-0.34
172	-0.41	-0.35	-0.32	-0.32	-0.31
173	-0.38	-0.32	-0.30	-0.29	-0.29
174	-0.35	-0.29	-0.27	-0.27	-0.27
175	-0.31	-0.27	-0.25	-0.24	-0.24
176	-0.28	-0.24	-0.23	-0.22	-0.22
177	-0.25	-0.21	-0.20	-0.20	-0.19
178	-0.46	-0.39	-0.36	-0.35	-0.35
179	-0.43	-0.36	-0.33	-0.33	-0.33
180	-0.40	-0.33	-0.31	-0.31	-0.30
181	-0.36	-0.31	-0.29	-0.28	-0.28
182	-0.33	-0.28	-0.26	-0.26	-0.26
183	-0.30	-0.26	-0.24	-0.24	-0.23
184	-0.27	-0.23	-0.22	-0.21	-0.21
185	-0.24	-0.20	-0.19	-0.19	-0.19
186	-0.47	-0.40	-0.37	-0.37	-0.36
187	-0.44	-0.37	-0.34	-0.34	-0.34
188	-0.41	-0.35	-0.32	-0.32	-0.31
189	-0.38	-0.32	-0.30	-0.29	-0.29
190	-0.34	-0.29	-0.27	-0.27	-0.26
191	-0.31	-0.26	-0.25	-0.24	-0.24
192	-0.28	-0.24	-0.22	-0.22	-0.21
193	-0.25	-0.21	-0.20	-0.19	-0.19
194	-0.49	-0.42	-0.38	-0.38	-0.38
195	-0.46	-0.39	-0.36	-0.35	-0.35
196	-0.43	-0.36	-0.33	-0.33	-0.33
197	-0.39	-0.33	-0.31	-0.31	-0.30
198	-0.36	-0.31	-0.29	-0.28	-0.28
199	-0.33	-0.28	-0.26	-0.26	-0.25
200	-0.30	-0.25	-0.24	-0.23	-0.23
201	-0.27	-0.23	-0.22	-0.21	-0.21
202	-0.51	-0.43	-0.40	-0.39	-0.39
203	-0.48	-0.41	-0.37	-0.37	-0.37
204	-0.45	-0.38	-0.35	-0.35	-0.35
205	-0.42	-0.36	-0.33	-0.33	-0.32
206	-0.39	-0.33	-0.31	-0.30	-0.30
207	-0.36	-0.30	-0.29	-0.28	-0.28
208	-0.33	-0.28	-0.26	-0.26	-0.25
209	-0.30	-0.25	-0.24	-0.24	-0.23
210	-0.53	-0.45	-0.41	-0.41	-0.41
211	-0.51	-0.43	-0.39	-0.39	-0.39

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212	-0.48	-0.41	-0.37	-0.37	-0.37
213	-0.45	-0.38	-0.35	-0.35	-0.35
214	-0.43	-0.36	-0.33	-0.33	-0.33
215	-0.40	-0.34	-0.32	-0.31	-0.31
216	-0.37	-0.32	-0.30	-0.29	-0.29
217	-0.35	-0.29	-0.28	-0.27	-0.27
218	-0.56	-0.47	-0.43	-0.43	-0.43
219	-0.53	-0.45	-0.42	-0.41	-0.41
220	-0.51	-0.43	-0.40	-0.40	-0.39
221	-0.49	-0.41	-0.38	-0.38	-0.38
222	-0.47	-0.40	-0.37	-0.36	-0.36
223	-0.45	-0.38	-0.35	-0.35	-0.34
224	-0.43	-0.36	-0.34	-0.33	-0.33
225	-0.40	-0.34	-0.32	-0.31	-0.31
226	-0.58	-0.49	-0.45	-0.45	-0.45
227	-0.56	-0.48	-0.44	-0.44	-0.43
228	-0.55	-0.46	-0.43	-0.42	-0.42
229	-0.53	-0.45	-0.42	-0.41	-0.41
230	-0.52	-0.44	-0.40	-0.40	-0.40
231	-0.50	-0.42	-0.39	-0.39	-0.38
232	-0.48	-0.41	-0.38	-0.38	-0.37
233	-0.47	-0.40	-0.37	-0.36	-0.36
234	-0.61	-0.51	-0.47	-0.47	-0.47
235	-0.60	-0.50	-0.46	-0.46	-0.46
236	-0.59	-0.50	-0.46	-0.45	-0.45
237	-0.58	-0.49	-0.45	-0.45	-0.44
238	-0.57	-0.48	-0.44	-0.44	-0.44
239	-0.56	-0.47	-0.44	-0.43	-0.43
240	-0.55	-0.46	-0.43	-0.43	-0.42
241	-0.54	-0.46	-0.42	-0.42	-0.41
242	-0.63	-0.53	-0.49	-0.49	-0.48
243	-0.63	-0.53	-0.49	-0.48	-0.48
244	-0.62	-0.53	-0.49	-0.48	-0.48
245	-0.62	-0.53	-0.48	-0.48	-0.48
246	-0.62	-0.52	-0.48	-0.48	-0.48
247	-0.62	-0.52	-0.48	-0.48	-0.47
248	-0.62	-0.52	-0.48	-0.48	-0.47
249	-0.61	-0.52	-0.48	-0.48	-0.47
250	-0.66	-0.56	-0.51	-0.51	-0.51
251	-0.66	-0.56	-0.51	-0.51	-0.51
252	-0.67	-0.56	-0.52	-0.51	-0.51
253	-0.67	-0.57	-0.52	-0.52	-0.52
254	-0.67	-0.57	-0.53	-0.52	-0.52
255	-0.68	-0.57	-0.53	-0.52	-0.52
256	-0.68	-0.58	-0.53	-0.53	-0.53
257	-0.69	-0.58	-0.54	-0.53	-0.53
258	-0.68	-0.58	-0.53	-0.53	-0.53
259	-0.69	-0.59	-0.54	-0.54	-0.53
260	-0.71	-0.60	-0.55	-0.54	-0.54
261	-0.72	-0.61	-0.56	-0.55	-0.55
262	-0.73	-0.61	-0.57	-0.56	-0.56
263	-0.74	-0.62	-0.58	-0.57	-0.57
264	-0.75	-0.63	-0.58	-0.58	-0.58
265	-0.76	-0.64	-0.59	-0.59	-0.58
266	-0.71	-0.60	-0.55	-0.55	-0.55
267	-0.73	-0.61	-0.56	-0.56	-0.56
268	-0.74	-0.63	-0.58	-0.57	-0.57
269	-0.76	-0.64	-0.59	-0.59	-0.58
270	-0.78	-0.66	-0.60	-0.60	-0.60
271	-0.79	-0.67	-0.62	-0.61	-0.61
272	-0.81	-0.68	-0.63	-0.63	-0.62
273	-0.83	-0.70	-0.65	-0.64	-0.64
274	-0.73	-0.62	-0.57	-0.57	-0.56
275	-0.76	-0.64	-0.59	-0.58	-0.58
276	-0.78	-0.66	-0.60	-0.60	-0.60
277	-0.80	-0.68	-0.62	-0.62	-0.61
278	-0.82	-0.69	-0.64	-0.63	-0.63
279	-0.84	-0.71	-0.65	-0.65	-0.65
280	-0.86	-0.73	-0.67	-0.67	-0.66
281	-0.88	-0.75	-0.69	-0.68	-0.68
282	-0.76	-0.64	-0.59	-0.58	-0.58
283	-0.78	-0.66	-0.61	-0.60	-0.60
284	-0.81	-0.68	-0.63	-0.62	-0.62

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

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285	-0.83	-0.70	-0.65	-0.64	-0.64
286	-0.86	-0.72	-0.67	-0.66	-0.66
287	-0.88	-0.75	-0.69	-0.68	-0.68
288	-0.91	-0.77	-0.71	-0.70	-0.70
289	-0.93	-0.79	-0.73	-0.72	-0.72
290	-0.78	-0.66	-0.60	-0.60	-0.60
291	-0.80	-0.68	-0.62	-0.62	-0.62
292	-0.83	-0.70	-0.65	-0.64	-0.64
293	-0.86	-0.73	-0.67	-0.66	-0.66
294	-0.89	-0.75	-0.69	-0.68	-0.68
295	-0.91	-0.77	-0.71	-0.71	-0.70
296	-0.94	-0.80	-0.73	-0.73	-0.72
297	-0.97	-0.82	-0.76	-0.75	-0.75
298	-0.79	-0.67	-0.61	-0.61	-0.61
299	-0.82	-0.70	-0.64	-0.63	-0.63
300	-0.85	-0.72	-0.66	-0.66	-0.65
301	-0.88	-0.74	-0.68	-0.68	-0.68
302	-0.91	-0.77	-0.70	-0.70	-0.70
303	-0.93	-0.79	-0.73	-0.72	-0.72
304	-0.96	-0.81	-0.75	-0.74	-0.74
305	-0.99	-0.84	-0.77	-0.77	-0.76
306	-0.81	-0.68	-0.63	-0.62	-0.62
307	-0.84	-0.71	-0.65	-0.64	-0.64
308	-0.86	-0.73	-0.67	-0.67	-0.66
309	-0.89	-0.75	-0.69	-0.69	-0.69
310	-0.92	-0.78	-0.71	-0.71	-0.71
311	-0.94	-0.80	-0.73	-0.73	-0.73
312	-0.97	-0.82	-0.76	-0.75	-0.75
313	-1.00	-0.85	-0.78	-0.77	-0.77
314	-0.79	-0.67	-0.62	-0.61	-0.61
315	-0.82	-0.70	-0.64	-0.64	-0.63
316	-0.85	-0.72	-0.66	-0.66	-0.66
317	-0.88	-0.74	-0.68	-0.68	-0.68
318	-0.91	-0.77	-0.71	-0.70	-0.70
319	-0.94	-0.79	-0.73	-0.72	-0.72
320	-0.97	-0.82	-0.75	-0.75	-0.74
321	-0.99	-0.84	-0.77	-0.77	-0.77
322	-0.78	-0.66	-0.60	-0.60	-0.60
323	-0.81	-0.68	-0.62	-0.62	-0.62
324	-0.83	-0.71	-0.65	-0.64	-0.64
325	-0.86	-0.73	-0.67	-0.67	-0.66
326	-0.89	-0.75	-0.69	-0.69	-0.68
327	-0.92	-0.78	-0.71	-0.71	-0.71
328	-0.95	-0.80	-0.74	-0.73	-0.73
329	-0.97	-0.82	-0.76	-0.75	-0.75
330	-0.76	-0.64	-0.59	-0.59	-0.58
331	-0.79	-0.66	-0.61	-0.61	-0.60
332	-0.81	-0.69	-0.63	-0.63	-0.62
333	-0.84	-0.71	-0.65	-0.65	-0.64
334	-0.86	-0.73	-0.67	-0.67	-0.66
335	-0.89	-0.75	-0.69	-0.69	-0.68
336	-0.91	-0.77	-0.71	-0.71	-0.70
337	-0.94	-0.80	-0.73	-0.73	-0.72

Nodo (G)	Pt 1/12	Pt 2/13	Pt 3...	Pt 4...
	-1.00			
	-0.19			

## RISULTATI ELEMENTI TIPO TRAVE

### LEGENDA RISULTATI ELEMENTI TIPO TRAVE

Il controllo dei risultati delle analisi condotte, per quanto concerne gli elementi tipo trave, è possibile in relazione alle tabelle sotto riportate.

Gli elementi vengono suddivisi in relazione alle proprietà in elementi:

- tipo **pilastro**
- tipo **trave in elevazione**
- tipo **trave in fondazione**

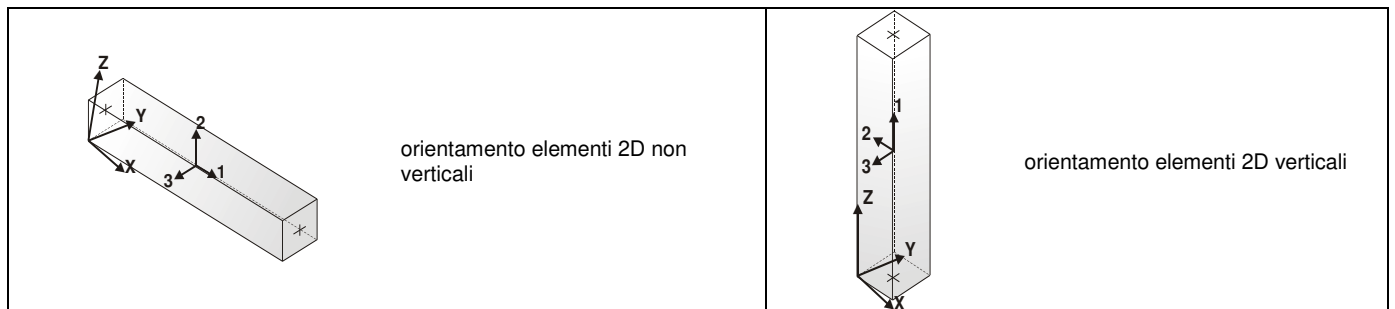
Per ogni elemento e per ogni combinazione (o caso di carico) vengono riportati i risultati più significativi.

Per gli elementi tipo *pilastro* sono riportati in tabella i seguenti valori:

<b>Pilas.</b>	numero dell'elemento pilastro
<b>Cmb</b>	combinazione in cui si verificano i valori riportati
<b>M3 mx/mn</b>	momento flettente in campata M3 max (prima riga) / min (seconda riga)
<b>M2 mx/mn</b>	momento flettente in campata M2 max (prima riga) / min (seconda riga)
<b>D2/D3</b>	freccia massima in direzione 2 (prima riga) / direzione 3 (seconda riga)
<b>Q2/Q3</b>	carico totale in direzione 2 (prima riga) / direzione 3 (seconda riga)
<b>Pos.</b>	ascissa del punto iniziale e finale dell'elemento
<b>N, V2, ecc..</b>	sei componenti di sollecitazione al piede ed in sommità dell'elemento

Per gli elementi tipo *trave in elevazione* sono riportati, oltre al numero dell'elemento, i medesimi risultati visti per i pilastri.

Per gli elementi tipo *trave in fondazione* (trave f.) sono riportati, oltre al numero dell'elemento, i medesimi risultati visti per i pilastri e la massima pressione sul terreno.



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

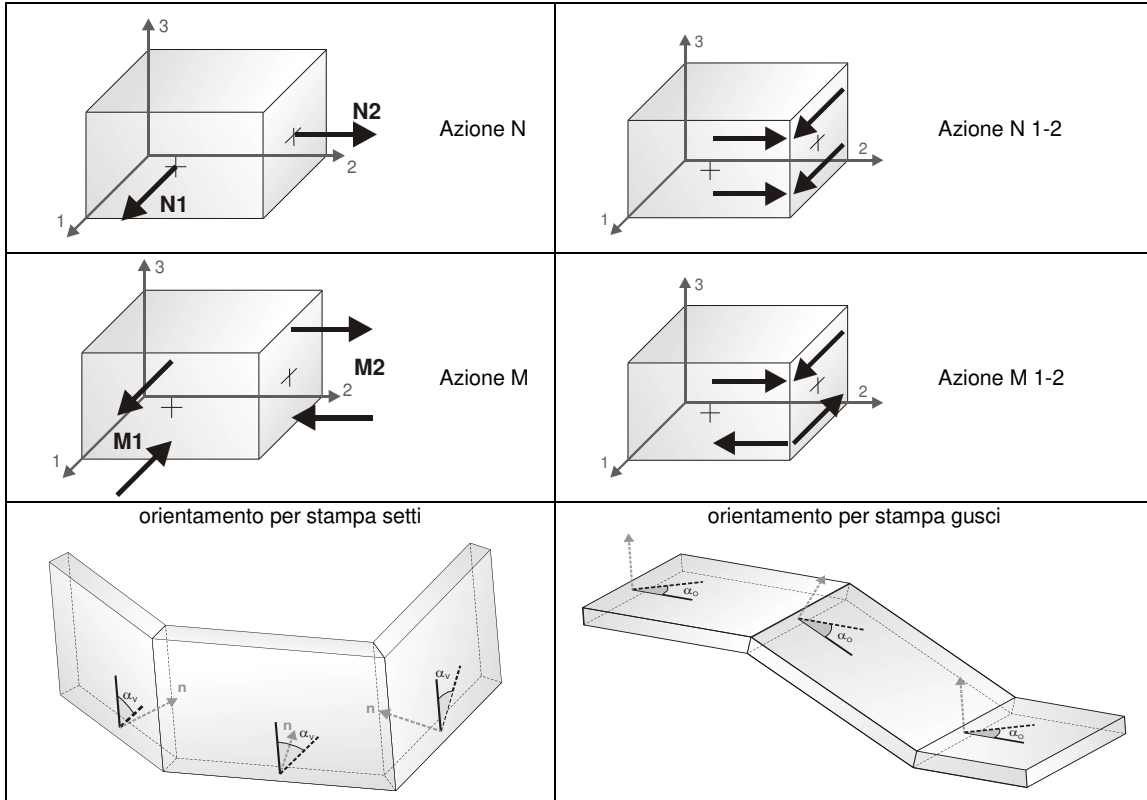
<b>Pilas.</b>	<b>Cmb</b>	<b>M3 mx/mn</b>	<b>M2 mx/mn</b>	<b>D 2 / D 3</b>	<b>Q 2 / Q 3</b>	<b>Pos.</b>	<b>N</b>	<b>V 2</b>	<b>V 3</b>	<b>T</b>	<b>M 2</b>	<b>M 3</b>	
		daN cm	daN cm	cm	daN	cm	daN	daN	daN	daN cm	daN cm	daN cm	
1	1	-7.552e+08	7.552e+08	-0.06	0.0	0.0	-9.937e+05	6.162e+04	6.162e+04	-1.723e+08	7.539e+08	-	
7.564e+08		-7.564e+08	7.539e+08	0.06	0.0	20.0	-9.923e+05	6.162e+04	6.162e+04	-1.723e+08	7.552e+08	-	
7.552e+08	1	2	-5.809e+08	5.809e+08	-0.05	0.0	0.0	-7.644e+05	4.740e+04	4.740e+04	-1.325e+08	5.799e+08	-
5.818e+08		-5.818e+08	5.799e+08	0.05	0.0	20.0	-7.633e+05	4.740e+04	4.740e+04	-1.325e+08	5.809e+08	-	
5.809e+08	1	3	-6.390e+08	6.390e+08	-0.05	0.0	0.0	-8.408e+05	5.214e+04	5.214e+04	-1.458e+08	6.379e+08	-
6.400e+08		-6.400e+08	6.379e+08	0.05	0.0	20.0	-8.396e+05	5.214e+04	5.214e+04	-1.458e+08	6.390e+08	-	
6.390e+08	1	4	-5.228e+08	5.228e+08	-0.04	0.0	0.0	-6.880e+05	4.266e+04	4.266e+04	-1.193e+08	5.219e+08	-
5.237e+08		-5.237e+08	5.219e+08	0.04	0.0	20.0	-6.870e+05	4.266e+04	4.266e+04	-1.193e+08	5.228e+08	-	
5.228e+08	1	5	-5.796e+08	5.809e+08	-0.05	0.0	0.0	-7.644e+05	-6.369e+04	1.407e+04	-1.325e+08	5.806e+08	-
5.796e+08		-5.809e+08	5.806e+08	0.05	0.0	20.0	-7.633e+05	-6.369e+04	1.407e+04	-1.325e+08	5.809e+08	-	
5.809e+08	1	7	-5.809e+08	5.809e+08	-0.05	0.0	0.0	-7.644e+05	1.585e+05	1.407e+04	-1.325e+08	5.806e+08	-
5.841e+08		-5.841e+08	5.806e+08	0.05	0.0	20.0	-7.633e+05	1.585e+05	1.407e+04	-1.325e+08	5.809e+08	-	
5.809e+08	1	21	-5.809e+08	5.822e+08	-0.05	0.0	0.0	-7.644e+05	1.407e+04	-6.369e+04	-1.325e+08	5.822e+08	-
5.812e+08		-5.812e+08	5.809e+08	0.05	0.0	20.0	-7.633e+05	1.407e+04	-6.369e+04	-1.325e+08	5.809e+08	-	
5.809e+08	1	22	-5.809e+08	5.809e+08	-0.05	0.0	0.0	-7.644e+05	1.407e+04	1.585e+05	-1.325e+08	5.777e+08	-
5.812e+08		-5.812e+08	5.777e+08	0.05	0.0	20.0	-7.633e+05	1.407e+04	1.585e+05	-1.325e+08	5.809e+08	-	
5.809e+08	1	37	-5.809e+08	5.809e+08	-0.05	0.0	0.0	-7.644e+05	4384.91	3.450e+04	-1.325e+08	5.802e+08	-
5.810e+08		-5.810e+08	5.802e+08	0.05	0.0	20.0	-7.633e+05	4384.91	3.450e+04	-1.325e+08	5.809e+08	-	
5.809e+08	1	39	-5.809e+08	5.809e+08	-0.05	0.0	0.0	-7.644e+05	9.042e+04	3.450e+04	-1.325e+08	5.802e+08	-
5.827e+08		-5.827e+08	5.802e+08	0.05	0.0	20.0	-7.633e+05	9.042e+04	3.450e+04	-1.325e+08	5.809e+08	-	
5.809e+08	1	54	-5.809e+08	5.809e+08	-0.05	0.0	0.0	-7.644e+05	3.450e+04	9.042e+04	-1.325e+08	5.791e+08	-
5.816e+08		-5.816e+08	5.791e+08	0.05	0.0	20.0	-7.633e+05	3.450e+04	9.042e+04	-1.325e+08	5.809e+08	-	
5.809e+08	1	69	-5.809e+08	5.809e+08	-0.05	0.0	0.0	-7.644e+05	4.740e+04	4.740e+04	-1.325e+08	5.799e+08	-
5.818e+08		-5.818e+08	5.799e+08	0.05	0.0	20.0	-7.633e+05	4.740e+04	4.740e+04	-1.325e+08	5.809e+08	-	
5.809e+08													
<b>Pilas.</b>		<b>M3 mx/mn</b>	<b>M2 mx/mn</b>	<b>D 2 / D 3</b>	<b>Q 2 / Q 3</b>		<b>N</b>	<b>V 2</b>	<b>V 3</b>	<b>T</b>			
		-7.564e+08	5.219e+08	-0.06	0.0		-9.937e+05	-6.369e+04	-6.369e+04	-1.723e+08			
		-5.228e+08	7.552e+08	0.06	0.0		-6.870e+05	1.585e+05	1.585e+05	-1.193e+08			



## RISULTATI ELEMENTI TIPO SHELL

### LEGENDA RISULTATI ELEMENTI TIPO SHELL

Il controllo dei risultati delle analisi condotte, per quanto concerne gli elementi tipo shell, è possibile in relazione alle tabelle sottoriportate. Per ogni elemento, e per ogni combinazione (o caso di carico) vengono riportati i risultati più significativi.



In particolare vengono riportati in ogni nodo di un elemento per ogni combinazione:

<b>tensione di Von Mises</b>	(valore riassuntivo del complessivo stato di sollecitazione)
<b>N max</b>	sforzo membranale principale massimo
<b>N min</b>	sforzo membranale principale minimo
<b>M max</b>	sforzo flessionale principale massimo
<b>M min</b>	sforzo flessionale principale minimo
<b>N1</b>	sforzi membranali e flessionali in direzione locale 1 e 2 dell'elemento (lo sforzo 2-1 è uguale allo sforzo 1-2 per la reciprocità delle tensioni tangenziali)
<b>N1-2</b>	
<b>M2</b>	
<b>M1-2</b>	

I suddetti risultati possono a scelta del progettista essere preceduti o sostituiti da valori di sollecitazione non più riferiti al sistema locale dell'elemento ma al sistema globale.

In questo caso gli elementi vengono raggruppati in gruppi (M\_S: macro gusci o macro setti, raggruppati per materiale, spessore, e posizione fisica) per la valutazione dei valori mediati ai nodi appartenenti agli elementi dei gruppi stessi.

I valori di sollecitazione sono, in questo caso, riferiti ad una terna specifica del gruppo ruotata di  $\alpha_o$  attorno all'asse Z per i gusci e ruotata di  $\alpha_v$  attorno alla normale (che per definizione è orizzontale) al piano del setto.

Per i setti, in particolare, se  $\alpha_v$  è zero, l'asse '1-1 rappresenta la verticale e l'asse '2-2 l'orizzontale contenuta nel setto.

Le azioni sui setti possono essere espresse anche con formato macro, cioè riferite all'intero macroelemento.

In particolare vengono riportati per ogni quota Z dei nodi e per ogni combinazione i seguenti valori:

<b>N memb.</b>	Azione membranale complessiva agente sulla parete in direzione Z
<b>V memb.</b>	Azione complessiva di taglio agente nel piano del macroelemento
<b>V orto</b>	Azione complessiva di taglio agente in direzione perpendicolare al macroelemento
<b>M memb.</b>	Azione flessionale complessiva agente nel piano del macroelemento
<b>M orto</b>	Azione flessionale complessiva agente in direzione perpendicolare al macroelemento
<b>T</b>	Azione torsionale complessiva agente nel piano orizzontale

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

Macro	Tipo	Angolo 1-X (gradi)
1	Guscio	0.0

M_G	Cmb	Nodo	N max daN/cm	N min daN/cm	N 1 daN/cm	N 2 daN/cm	N 1-2 daN/cm	M max daN	M min daN	M 1 daN	M 2 daN	M 1-2 daN
1	1	1	174.63	-155.41	-152.02	171.25	33.26	2.663e+04	-1.872e+05	2.185e+04	-1.824e+05	
3.160e+04	1	2	223.36	-194.65	-193.75	222.47	-19.28	-1.695e+04	-2.373e+05	-3.039e+04	-2.238e+05	
5.274e+04	1	3	303.41	-268.91	-265.68	300.17	42.93	1.305e+04	-2.305e+05	8517.06	-2.259e+05	
3.291e+04	1	4	224.04	-203.06	-182.40	203.37	91.65	5.900e+04	-1.744e+05	5.860e+04	-1.740e+05	
9653.35	1	5	429.93	-402.02	-355.63	383.54	190.90	9.076e+04	-1.927e+05	8.988e+04	-1.918e+05	
1.575e+04	1	6	284.72	-268.39	-194.38	210.70	188.31	1.155e+05	-1.399e+05	1.146e+05	-1.389e+05	-
1.570e+04	1	7	585.74	-544.22	-304.45	345.96	462.00	2.456e+05	-1.351e+05	2.451e+05	-1.346e+05	-
1.323e+04	1	8	342.49	-326.97	-128.59	144.12	305.70	1.934e+05	-8.941e+04	1.856e+05	-8.159e+04	-
4.637e+04	1	9	648.85	-612.15	53.82	-17.13	629.50	4.169e+05	-6.919e+04	3.969e+05	-4.918e+04	-
9.658e+04	1	10	369.00	-348.53	37.01	-16.54	357.76	2.683e+05	-3.622e+04	2.422e+05	-1.008e+04	-
8.531e+04	1	11	588.42	-568.53	395.98	-376.09	430.82	4.961e+05	-1.043e+04	4.070e+05	7.867e+04	-
1.929e+05	1	12	348.42	-328.25	194.45	-174.28	283.69	3.075e+05	7646.75	2.498e+05	6.539e+04	-
1.182e+05	1	13	438.34	-427.07	412.16	-400.89	148.24	4.481e+05	2.780e+04	2.973e+05	1.786e+05	-
2.016e+05	1	14	288.55	-279.68	242.21	-233.34	155.51	2.966e+05	3.626e+04	2.123e+05	1.206e+05	-
1.218e+05	1	15	291.12	-308.07	291.06	-308.01	6.05	3.461e+05	4.744e+04	1.967e+05	1.969e+05	-
1.494e+05	1	16	218.83	-226.85	210.35	-218.38	60.86	2.559e+05	5.015e+04	1.661e+05	1.399e+05	-
1.020e+05	1	17	205.06	-231.27	200.20	-226.41	-45.80	2.559e+05	5.037e+04	1.397e+05	1.666e+05	-
1.019e+05	1	18	164.12	-181.15	163.82	-180.85	10.20	2.093e+05	5.167e+04	1.303e+05	1.307e+05	-
7.882e+04	1	19	286.13	-244.88	-217.14	258.39	-118.15	-8.327e+04	-3.045e+05	-1.075e+05	-2.803e+05	-
6.910e+04	1	20	438.34	-378.47	-366.53	426.40	-98.04	-7.412e+04	-3.218e+05	-8.293e+04	-3.129e+05	-
4.587e+04	1	21	677.07	-613.22	-610.60	674.45	58.02	-1.217e+04	-2.838e+05	-1.655e+04	-2.794e+05	-
3.422e+04	1	22	1254.12	-960.35	-749.93	1043.70	649.37	3.132e+05	-2.544e+05	3.076e+05	-2.489e+05	-
5.596e+04	1	23	1464.67	-1389.84	76.25	-1.42	1426.73	7.499e+05	-1.981e+05	7.390e+05	-1.872e+05	-
1.014e+05	1	24	1043.26	-1247.85	873.19	-1077.78	600.60	9.454e+05	-8.437e+04	7.076e+05	1.535e+05	-
4.340e+05	1	25	668.81	-685.09	668.80	-685.08	3.09	7.246e+05	-2.350e+04	3.506e+05	3.505e+05	-
3.741e+05	1	26	408.83	-453.20	385.47	-429.84	-139.98	4.481e+05	2.790e+04	1.786e+05	2.974e+05	-
2.015e+05	1	27	258.75	-301.16	217.71	-260.12	-145.94	2.968e+05	3.674e+04	1.206e+05	2.129e+05	-
1.216e+05	1	28	335.31	-293.01	-169.41	211.72	-249.76	-1.641e+05	-3.821e+05	-1.971e+05	-3.491e+05	-
7.820e+04	1	29	567.24	-513.41	-356.26	410.10	-380.95	-1.821e+05	-4.758e+05	-1.922e+05	-4.658e+05	-
5.340e+04	1	30	1015.40	-1134.60	-1001.68	882.48	-517.80	-1.345e+05	-6.055e+05	-1.345e+05	-6.055e+05	-
1071.36												

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	1	31	1403.82	-1289.71	-1288.03	1402.13	67.35	9.814e+04	-5.353e+05	9.530e+04	-5.325e+05	
4.235e+04	1	32	688.24	-613.42	63.48	11.34	650.31	1.658e+06	-1.047e+06	1.617e+06	-1.006e+06	
3.299e+05	1	33	1410.60	-1425.88	1410.60	-1425.88	1.11	3.048e+06	-6.229e+05	1.213e+06	1.212e+06	-
1.836e+06	1	34	1231.25	-1058.66	1063.73	-891.14	-596.29	9.446e+05	-8.432e+04	1.537e+05	7.066e+05	-
4.338e+05	1	35	550.49	-603.40	363.61	-416.52	-425.11	4.958e+05	-1.037e+04	7.873e+04	4.067e+05	-
1.928e+05	1	36	309.06	-363.87	163.54	-218.35	-277.03	3.078e+05	8065.03	6.558e+04	2.503e+05	-
1.180e+05	1	37	339.83	-313.76	-23.32	49.40	-324.76	-2.379e+05	-4.481e+05	-2.817e+05	-4.044e+05	-
8.533e+04	1	38	602.58	-562.25	-21.82	62.15	-580.89	-2.726e+05	-6.421e+05	-2.999e+05	-6.148e+05	-
9.669e+04	1	39	1384.29	-1306.99	-4.13	81.44	-1344.96	-2.269e+05	-1.043e+06	-2.397e+05	-1.030e+06	-
1.016e+05	1	40	686.28	-610.56	10.46	65.26	-647.84	4.942e+05	-2.041e+06	4.502e+05	-1.997e+06	-
3.311e+05	1	41	-7.32	-7.32	-7.32	-7.32	4.25e-04	-4.513e+05	-4.513e+05	-4.513e+05	-4.513e+05	0.11
1	1	42	596.86	-701.87	-25.05	-79.96	-648.78	1.653e+06	-1.045e+06	-1.004e+06	1.612e+06	-
3.311e+05	1	43	1370.57	-1477.18	-10.30	-96.31	-1423.22	7.477e+05	-1.980e+05	-1.870e+05	7.367e+05	-
1.016e+05	1	44	591.23	-660.93	7.67	-77.37	-624.63	4.163e+05	-6.926e+04	-4.918e+04	3.962e+05	-
9.667e+04	1	45	325.54	-380.96	9.68	-65.10	-351.26	2.686e+05	-3.618e+04	-1.002e+04	2.424e+05	-
8.537e+04	1	46	301.28	-296.12	128.33	-123.18	-270.94	-2.857e+05	-4.718e+05	-3.441e+05	-4.134e+05	-
8.634e+04	1	47	524.69	-510.33	317.82	-303.45	-413.91	-3.277e+05	-7.059e+05	-4.056e+05	-6.280e+05	-
1.529e+05	1	48	1133.89	-921.41	961.81	-749.32	-569.27	-3.255e+05	-1.219e+06	-5.376e+05	-1.007e+06	-
3.801e+05	1	49	1261.11	-1275.12	1261.11	-1275.12	-1.22	1.025e+05	-3.411e+06	-1.654e+06	-1.654e+06	-
1.757e+06	1	50	594.80	-698.90	-78.17	-25.93	646.32	4.962e+05	-2.046e+06	-2.002e+06	4.527e+05	-
3.299e+05	1	51	1271.27	-1414.65	-1412.97	1269.58	-67.24	9.318e+04	-5.389e+05	-5.367e+05	9.105e+04	-
3.663e+04	1	52	938.83	-1263.25	-1052.85	728.43	-647.34	3.109e+05	-2.548e+05	-2.494e+05	3.055e+05	-
5.484e+04	1	53	519.42	-593.34	-353.88	279.96	-457.30	2.449e+05	-1.352e+05	-1.347e+05	2.444e+05	-
1.351e+04	1	54	295.93	-347.66	-150.82	99.09	-296.54	1.935e+05	-8.936e+04	-8.157e+04	1.857e+05	-
4.629e+04	1	55	241.56	-248.61	187.84	-194.89	-153.11	-3.039e+05	-4.409e+05	-3.668e+05	-3.781e+05	-
6.825e+04	1	56	372.08	-387.16	342.72	-357.80	-146.38	-3.429e+05	-6.311e+05	-4.534e+05	-5.206e+05	-
1.402e+05	1	57	594.57	-607.50	594.57	-607.49	-3.40	-3.408e+05	-9.538e+05	-6.474e+05	-6.472e+05	-
3.065e+05	1	58	906.91	-1145.95	737.72	-976.75	564.54	-3.254e+05	-1.220e+06	-1.008e+06	-5.374e+05	-
3.803e+05	1	59	1289.96	-1394.09	-91.12	-13.01	1341.46	-2.268e+05	-1.045e+06	-1.032e+06	-2.395e+05	-
1.014e+05	1	60	1114.71	-1023.40	-890.52	981.83	516.19	-1.350e+05	-6.076e+05	-6.076e+05	-1.350e+05	-
2202.88	1	61	591.53	-684.58	-681.97	588.92	-57.71	-1.320e+04	-2.843e+05	-2.801e+05	-1.738e+04	-
3.337e+04	1	62	377.93	-436.63	-390.88	332.18	-187.55	9.041e+04	-1.927e+05	-1.918e+05	8.955e+04	-
1.554e+04	1	63	238.54	-288.70	-218.38	168.21	-179.26	1.156e+05	-1.396e+05	-1.386e+05	1.146e+05	-
1.552e+04	1	64	184.61	-193.92	174.71	-184.02	-60.40	-2.975e+05	-3.771e+05	-3.436e+05	-3.310e+05	-
3.931e+04	1	65	252.68	-264.73	252.61	-264.65	-6.09	-3.305e+05	-4.975e+05	-4.140e+05	-4.140e+05	-
8.351e+04	1	66	372.30	-382.41	346.42	-356.53	137.35	-3.429e+05	-6.312e+05	-5.207e+05	-4.534e+05	-
1.402e+05	1	67	494.44	-534.41	294.07	-334.05	407.43	-3.277e+05	-7.062e+05	-6.284e+05	-4.056e+05	-
1.530e+05												

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	1	68	544.12	-610.19	-69.04	2.97	576.03	-2.727e+05	-6.427e+05	-6.155e+05	-2.999e+05
9.657e+04	1	69	492.08	-572.14	-415.53	335.47	377.01	-1.824e+05	-4.763e+05	-4.664e+05	-1.923e+05
5.307e+04	1	70	356.22	-443.58	-432.01	344.66	95.46	-7.434e+04	-3.218e+05	-3.131e+05	-8.305e+04
4.561e+04	1	71	246.83	-310.31	-306.99	243.51	-42.89	1.317e+04	-2.301e+05	-2.256e+05	8624.77
3.293e+04	1	72	180.14	-231.06	-211.51	160.59	-87.51	5.946e+04	-1.737e+05	-1.733e+05	5.903e+04
9990.45	1	73	139.37	-150.62	139.12	-150.37	-8.54	-2.751e+05	-3.053e+05	-2.902e+05	-2.902e+05
1.511e+04	1	74	178.47	-192.66	172.70	-186.89	45.92	-2.974e+05	-3.770e+05	-3.309e+05	-3.435e+05
3.929e+04	1	75	230.89	-248.67	184.40	-202.18	141.90	-3.039e+05	-4.408e+05	-3.780e+05	-3.667e+05
6.824e+04	1	76	278.75	-308.34	116.36	-145.96	262.61	-2.857e+05	-4.716e+05	-4.132e+05	-3.441e+05
8.633e+04	1	77	294.57	-344.38	-52.71	2.90	318.26	-2.378e+05	-4.479e+05	-4.041e+05	-2.816e+05
8.535e+04	1	78	269.43	-334.62	-212.94	147.75	242.27	-1.640e+05	-3.816e+05	-3.486e+05	-1.970e+05
7.807e+04	1	79	220.35	-286.13	-260.63	194.85	110.74	-8.302e+04	-3.039e+05	-2.797e+05	-1.072e+05
6.902e+04	1	80	172.06	-228.56	-228.03	171.53	14.55	-1.638e+04	-2.366e+05	-2.231e+05	-2.993e+04
5.292e+04	1	81	135.56	-183.07	-179.19	131.69	-34.92	2.747e+04	-1.863e+05	-1.813e+05	2.253e+04
3.211e+04	1	82	145.84	-182.46	-37.18	0.56	163.06	-1.646e+05	-3.065e+05	-2.429e+05	-2.281e+05
7.057e+04	1	83	133.92	-174.25	-113.81	73.47	122.37	-9.740e+04	-2.974e+05	-2.274e+05	-1.675e+05
9.543e+04	1	84	83.62	-112.01	-28.61	0.22	96.75	-8.040e+04	-2.171e+05	-1.262e+05	-1.713e+05
6.452e+04	1	85	84.47	-115.12	-78.34	47.70	77.38	-6.272e+04	-2.166e+05	-1.362e+05	-1.432e+05
7.689e+04	1	86	52.23	-74.79	-23.35	0.79	62.35	-4.976e+04	-1.822e+05	-8.019e+04	-1.518e+05
5.572e+04	1	87	56.81	-77.18	-50.51	30.14	53.50	-3.521e+04	-1.671e+05	-9.369e+04	-1.086e+05
6.550e+04	1	88	34.39	-50.96	-16.88	0.32	41.80	-2.928e+04	-1.416e+05	-4.931e+04	-1.216e+05
4.299e+04	1	89	34.51	-51.19	-35.27	18.59	33.32	-1.212e+04	-1.348e+05	-6.036e+04	-8.653e+04
5.991e+04	1	90	22.08	-33.08	-11.45	0.44	26.93	-1.531e+04	-1.079e+05	-3.019e+04	-9.300e+04
3.400e+04	1	91	21.21	-32.84	-23.10	11.47	20.77	9309.98	-1.126e+05	-3.084e+04	-7.241e+04
5.728e+04	1	92	14.06	-19.96	-7.34	1.44	16.43	2.273e+04	-7.493e+04	1.353e+04	-6.572e+04
2.853e+04	1	93	15.85	-20.20	-14.76	10.40	12.91	7568.71	-9.113e+04	-1.775e+04	-6.581e+04
4.311e+04	1	94	7.21	-9.37	-4.62	2.47	7.49	1.399e+04	-6.867e+04	9317.90	-6.399e+04
1.909e+04	1	95	8.36	-7.77	-6.79	7.38	3.86	8747.37	-6.462e+04	-3619.60	-5.225e+04
2.747e+04	1	96	3.90	-3.23	-2.12	2.78	2.59	-675.23	-5.896e+04	-760.06	-5.888e+04
2221.97	1	97	7.69	-2.49	-2.40	7.60	0.96	779.13	-5.445e+04	-1990.52	-5.168e+04
1.205e+04	1	98	117.15	-162.97	-148.81	102.99	61.37	-4.525e+04	-2.391e+05	-1.987e+05	-8.563e+04
7.873e+04	1	99	74.09	-107.74	-97.98	64.32	41.00	-2.162e+04	-1.871e+05	-1.416e+05	-6.712e+04
7.388e+04	1	100	50.36	-74.77	-68.03	43.63	28.23	-5173.92	-1.481e+05	-1.019e+05	-5.139e+04
6.685e+04	1	101	34.37	-51.62	-48.01	30.76	17.26	5309.66	-1.185e+05	-7.331e+04	-3.983e+04
5.957e+04	1	102	23.54	-35.62	-34.42	22.34	8.31	1.085e+04	-9.157e+04	-5.211e+04	-2.861e+04
4.984e+04	1	103	16.30	-19.95	-19.33	15.67	4.71	3.344e+04	-6.331e+04	-1.747e+04	-1.240e+04
4.831e+04	1	104	11.12	-5.87	-5.60	10.85	2.13	1.532e+04	-5.593e+04	-1.779e+04	-2.282e+04



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	1	141	42.41	-54.24	-12.04	0.21	-47.94	6.428e+04	-4.866e+04	-3.346e+04	4.907e+04	-
3.855e+04	1	142	30.18	-37.71	-9.92	2.38	-33.38	5.415e+04	-4.312e+04	-2.835e+04	3.938e+04	-
3.491e+04	1	143	22.22	-22.19	4.25	-4.23	-21.80	3.662e+04	-3.838e+04	-3.169e+04	2.993e+04	-
2.138e+04	1	144	17.25	-4.98	14.59	-2.32	-7.22	1.651e+04	-2.819e+04	-2.558e+04	1.391e+04	-
1.046e+04	1	145	18.00	1.60	15.83	3.78	-5.56	-233.80	-1.652e+04	-1.638e+04	-367.65	-
1470.25	1	146	165.63	-208.17	15.91	-58.45	-183.16	1.767e+05	-2.630e+04	2508.45	1.479e+05	-
7.083e+04	1	147	99.92	-128.74	8.69	-37.51	-111.97	1.408e+05	-1.624e+04	1.710e+04	1.074e+05	-
6.421e+04	1	148	67.55	-79.89	0.82	-13.17	-73.39	8.769e+04	-2.937e+04	9620.43	4.870e+04	-
5.517e+04	1	149	46.24	-56.33	7.61	-17.70	-49.70	6.635e+04	-2.777e+04	-451.73	3.903e+04	-
4.272e+04	1	150	32.41	-44.14	14.28	-26.01	-32.55	5.766e+04	-2.330e+04	-5100.43	3.947e+04	-
3.379e+04	1	151	22.72	-23.01	10.74	-11.03	-20.11	4.706e+04	-1.643e+04	486.36	3.014e+04	-
2.806e+04	1	152	15.59	0.43	8.06	7.95	-7.58	1.472e+04	-2.291e+04	-4470.35	-3721.40	-
1.881e+04	1	153	8.85	-0.58	7.61	0.66	-3.18	1967.86	-6213.95	-5613.37	1367.28	-
2133.81	1	154	164.54	-209.42	80.10	-124.98	-156.36	1.912e+05	1.218e+04	6.090e+04	1.425e+05	-
7.968e+04	1	155	97.68	-121.94	51.82	-76.09	-89.26	1.373e+05	-6596.04	3.815e+04	9.256e+04	-
6.661e+04	1	156	76.02	-84.65	40.82	-49.45	-66.46	7.705e+04	-1754.49	2.539e+04	4.990e+04	-
3.745e+04	1	157	48.27	-57.77	26.05	-35.56	-43.15	6.513e+04	-8574.57	2.393e+04	3.262e+04	-
3.659e+04	1	158	34.17	-40.50	15.60	-21.92	-32.28	5.119e+04	-1.140e+04	2.057e+04	1.922e+04	-
3.129e+04	1	159	21.64	-22.00	17.31	-17.67	-13.05	3.424e+04	-1.606e+04	2954.46	1.522e+04	-
2.439e+04	1	160	16.73	-3.87	16.18	-3.32	3.33	1.452e+04	-1.486e+04	-3872.66	3533.85	-
1.422e+04	1	161	17.46	2.86	17.42	2.91	0.78	-459.51	-6903.09	-6005.52	-1357.09	-
2231.13	1	162	143.14	-173.37	117.23	-147.46	-86.77	1.848e+05	3.365e+04	9.206e+04	1.264e+05	-
7.361e+04	1	163	93.06	-111.86	77.74	-96.55	-53.89	1.253e+05	2.270e+04	6.709e+04	8.087e+04	-
5.081e+04	1	164	64.19	-74.15	55.20	-65.16	-34.11	8.621e+04	1.306e+04	4.948e+04	4.978e+04	-
3.657e+04	1	165	43.70	-51.78	38.90	-46.99	-20.85	6.401e+04	5704.14	3.725e+04	3.247e+04	-
2.906e+04	1	166	31.22	-42.93	30.40	-42.11	-7.77	5.615e+04	1981.75	2.656e+04	3.158e+04	-
2.697e+04	1	167	20.68	-22.23	19.29	-20.83	-7.61	3.931e+04	3402.23	2.376e+04	1.895e+04	-
1.779e+04	1	168	13.76	1.77	9.63	5.91	-5.70	1.116e+04	-1.237e+04	1.065e+04	-1.185e+04	-
3439.16	1	169	5.29	-0.32	5.14	-0.18	-0.89	3775.66	1127.20	3754.50	1148.36	-235.79
6.219e+04	1	170	120.16	-143.16	117.44	-140.44	-26.60	1.725e+05	4.808e+04	1.099e+05	1.107e+05	-
4.008e+04	1	171	88.55	-107.50	87.53	-106.47	-14.15	1.211e+05	3.939e+04	7.231e+04	8.817e+04	-
3.119e+04	1	172	53.63	-41.41	53.52	-41.31	-3.12	8.116e+04	1.375e+04	6.022e+04	3.469e+04	-
1.742e+04	1	173	40.30	-43.27	38.61	-41.58	-11.77	5.366e+04	1.597e+04	4.200e+04	2.764e+04	-
9256.35	1	174	32.70	-36.88	29.43	-33.60	-14.74	3.577e+04	1.341e+04	3.086e+04	1.832e+04	-
1.352e+04	1	175	16.28	-19.39	16.28	-19.39	0.34	2.770e+04	629.37	1.488e+04	1.344e+04	-
8264.68	1	176	14.10	-4.28	4.17	5.64	9.16	1.148e+04	-5577.10	5045.22	853.23	-
1	1	177	12.42	3.59	10.41	5.60	3.71	-750.64	-2417.47	-1380.03	-1788.08	-808.05
1	1	178	103.46	-119.64	102.06	-118.24	17.66	1.548e+05	3.846e+04	9.724e+04	9.600e+04	-





**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	1	216	9.17	-12.67	8.15	-11.65	4.61	1.518e+04	-2.346e+04	-3139.69	-5135.42	-
1.929e+04	1	217	1.69	-11.77	1.69	-11.76	0.28	2076.74	-6955.02	1284.86	-6163.15	-
2554.40	1	218	192.13	-198.49	-63.73	57.36	185.69	1.540e+05	-7.035e+04	1.330e+05	-4.942e+04	-
6.524e+04	1	219	108.74	-109.41	-16.71	16.03	107.84	1.018e+05	-5.383e+04	8.513e+04	-3.713e+04	-
4.817e+04	1	220	62.46	-70.09	-18.00	10.37	64.74	8.228e+04	-5.314e+04	6.596e+04	-3.682e+04	-
4.408e+04	1	221	52.15	-55.97	-12.66	8.84	52.98	6.370e+04	-4.970e+04	4.829e+04	-3.429e+04	-
3.887e+04	1	222	45.29	-51.57	-10.29	4.00	47.90	5.568e+04	-4.689e+04	3.937e+04	-3.058e+04	-
3.751e+04	1	223	14.58	-22.78	-3.88	-4.31	18.68	3.621e+04	-3.971e+04	2.900e+04	-3.249e+04	-
2.226e+04	1	224	9.30	-16.06	5.84	-12.60	-8.71	1.362e+04	-2.615e+04	1.226e+04	-2.480e+04	-
7226.44	1	225	2.68	-8.81	2.68	-8.81	-4.48e-02	-179.19	-1.700e+04	-372.89	-1.681e+04	-
1794.73	1	226	165.02	-156.70	-99.76	108.07	122.79	9.757e+04	-1.150e+05	9.404e+04	-1.115e+05	-
2.714e+04	1	227	101.88	-95.96	-57.97	63.89	77.93	8.034e+04	-9.752e+04	7.692e+04	-9.410e+04	-
2.442e+04	1	228	64.55	-60.69	-35.20	39.06	50.43	6.382e+04	-8.155e+04	6.073e+04	-7.845e+04	-
2.098e+04	1	229	44.29	-45.03	-23.83	23.09	38.00	5.208e+04	-6.647e+04	4.921e+04	-6.360e+04	-
1.822e+04	1	230	29.06	-35.60	-19.58	13.04	27.92	4.751e+04	-5.215e+04	4.589e+04	-5.054e+04	-
1.258e+04	1	231	18.71	-27.72	-12.48	3.48	21.80	4.817e+04	-3.784e+04	4.621e+04	-3.588e+04	-
1.283e+04	1	232	6.46	-14.13	1.06	-8.73	9.06	1.615e+04	-3.532e+04	1.372e+04	-3.289e+04	-
1.091e+04	1	233	1.07	-14.09	-0.98	-12.05	5.18	1392.05	-1.851e+04	365.22	-1.748e+04	-
4402.34	1	234	146.83	-128.72	-110.85	128.95	67.86	6.258e+04	-1.496e+05	6.255e+04	-1.496e+05	-
2584.60	1	235	99.70	-90.96	-82.90	91.64	38.36	7.147e+04	-1.325e+05	7.083e+04	-1.319e+05	-
1.136e+04	1	236	56.81	-29.90	-23.37	50.28	22.89	2.845e+04	-9.611e+04	2.658e+04	-9.424e+04	-
1.515e+04	1	237	47.46	-46.66	-34.30	35.10	31.79	4.004e+04	-7.958e+04	3.997e+04	-7.952e+04	-
2851.06	1	238	40.97	-48.32	-36.05	28.70	30.74	4.467e+04	-7.062e+04	4.466e+04	-7.061e+04	-
1151.41	1	239	13.88	-24.58	-15.29	4.58	16.47	3.072e+04	-5.803e+04	2.991e+04	-5.722e+04	-
8439.84	1	240	9.13	-19.88	9.02	-19.78	1.71	1.250e+04	-3.875e+04	8874.18	-3.512e+04	-
1.314e+04	1	241	1.46	-14.67	-1.15	-12.06	5.94	71.21	-2.838e+04	-7449.30	-2.086e+04	-
1.255e+04	1	242	109.53	-99.07	-95.17	105.63	28.25	2.837e+04	-1.467e+05	2.315e+04	-1.414e+05	-
2.978e+04	1	243	89.53	-84.86	-81.78	86.45	22.98	6.211e+04	-1.205e+05	5.689e+04	-1.153e+05	-
3.046e+04	1	244	48.91	-51.28	-47.90	45.54	18.08	3.428e+04	-1.008e+05	2.971e+04	-9.618e+04	-
2.444e+04	1	245	39.18	-44.85	-41.45	35.78	16.57	3.220e+04	-8.544e+04	2.695e+04	-8.019e+04	-
2.429e+04	1	246	28.04	-36.23	-32.15	23.96	15.68	3.079e+04	-6.798e+04	2.541e+04	-6.261e+04	-
2.240e+04	1	247	19.80	-31.65	-28.27	16.41	12.76	4.349e+04	-5.068e+04	3.718e+04	-4.437e+04	-
2.354e+04	1	248	1.37	-18.07	-8.62	-8.08	9.71	1.496e+04	-4.072e+04	9790.74	-3.555e+04	-
1.616e+04	1	249	0.49	-17.35	-7.99	-8.86	8.91	443.94	-2.852e+04	-1.076e+04	-1.732e+04	-
1.411e+04	1	250	138.73	-128.70	-128.31	138.33	-10.24	7505.68	-1.925e+05	-1.062e+04	-1.744e+05	-
5.742e+04	1	251	102.65	-98.95	-98.65	102.35	7.67	1.958e+04	-1.600e+05	4088.73	-1.445e+05	-
5.043e+04	1	252	35.40	-63.79	-61.29	32.91	15.53	2.019e+04	-1.016e+05	2615.91	-8.406e+04	-





**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	1	289	-2.45	-18.81	-18.63	-2.63	-1.70	1115.77	-6.460e+04	-6.248e+04	-1006.32	-
1.162e+04	1	290	134.15	-141.43	93.83	-101.11	-97.39	-2.237e+05	-2.966e+05	-2.892e+05	-2.311e+05	-
2.202e+04	1	291	80.67	-89.60	50.47	-59.40	-65.04	-1.455e+05	-2.283e+05	-2.283e+05	-1.455e+05	-
1358.70	1	292	50.03	-60.61	27.50	-38.08	-44.55	-8.995e+04	-1.803e+05	-1.793e+05	-9.091e+04	-
9298.05	1	293	34.80	-44.70	14.94	-24.85	-34.42	-5.481e+04	-1.424e+05	-1.407e+05	-5.657e+04	-
1.229e+04	1	294	26.24	-33.15	4.99	-11.89	-28.47	-3.626e+04	-1.072e+05	-1.057e+05	-3.779e+04	-
1.029e+04	1	295	14.11	-25.22	-0.13	-10.98	-18.91	1.346e+04	-7.570e+04	-7.204e+04	9799.27	-
1.768e+04	1	296	-3.30	-14.66	-7.51	-10.45	-5.48	1.341e+04	-7.199e+04	-6.636e+04	7785.26	-
2.118e+04	1	297	-1.70	-10.96	-9.40	-3.27	-3.47	-1177.17	-6.549e+04	-5.712e+04	-9546.19	-
2.164e+04	1	298	114.60	-120.77	105.45	-111.62	-45.51	-2.210e+05	-2.698e+05	-2.697e+05	-2.211e+05	-
1884.42	1	299	71.87	-79.21	65.33	-72.67	-30.75	-1.473e+05	-2.119e+05	-2.020e+05	-1.573e+05	-
2.330e+04	1	300	46.91	-57.39	41.21	-51.70	-23.70	-8.355e+04	-1.639e+05	-1.511e+05	-9.640e+04	-
2.946e+04	1	301	33.04	-44.29	27.65	-38.90	-19.69	-5.107e+04	-1.350e+05	-1.180e+05	-6.802e+04	-
3.368e+04	1	302	24.15	-36.22	19.65	-31.72	-15.85	-1.693e+04	-1.161e+05	-9.524e+04	-3.777e+04	-
4.040e+04	1	303	11.41	-21.35	5.16	-15.11	-12.87	-1.148e+04	-9.689e+04	-7.763e+04	-3.074e+04	-
3.569e+04	1	304	7.03e-03	-14.43	-12.35	-2.07	-5.07	3018.28	-7.237e+04	-5.174e+04	-1.761e+04	-
3.361e+04	1	305	-2.89	-13.61	-10.73	-5.77	-4.75	1216.47	-6.476e+04	-4.467e+04	-1.887e+04	-
3.036e+04	1	306	87.51	-98.24	86.68	-97.42	-12.37	-2.106e+05	-2.165e+05	-2.132e+05	-2.140e+05	-
2914.15	1	307	62.26	-70.34	61.76	-69.84	-8.11	-1.209e+05	-1.673e+05	-1.446e+05	-1.436e+05	-
2.319e+04	1	308	35.54	-53.51	35.52	-53.49	1.26	-6.533e+04	-1.523e+05	-1.086e+05	-1.090e+05	-
4.347e+04	1	309	26.45	-39.11	26.18	-38.83	-4.23	-4.821e+04	-1.221e+05	-8.507e+04	-8.524e+04	-
3.694e+04	1	310	20.86	-27.86	18.84	-25.84	-9.70	-3.928e+04	-9.205e+04	-6.548e+04	-6.585e+04	-
2.638e+04	1	311	12.43	-20.79	11.49	-19.85	-5.50	9592.47	-6.672e+04	-2.918e+04	-2.795e+04	-
3.815e+04	1	312	-3.40	-11.39	-3.41	-11.39	0.15	1.412e+04	-6.520e+04	-2.533e+04	-2.575e+04	-
3.966e+04	1	313	-1.51	-5.30	-2.45	-4.36	-1.63	-1627.45	-6.327e+04	-3.260e+04	-3.230e+04	-
3.082e+04	1	314	103.06	-115.67	99.30	-111.92	28.43	-2.209e+05	-2.690e+05	-2.210e+05	-2.690e+05	-
1717.43	1	315	69.93	-82.21	67.30	-79.58	19.84	-1.485e+05	-2.102e+05	-1.582e+05	-2.004e+05	-
2.251e+04	1	316	33.26	-55.28	31.64	-53.66	11.85	-8.180e+04	-1.623e+05	-9.332e+04	-1.508e+05	-
2.818e+04	1	317	26.34	-40.77	24.34	-38.78	11.39	-5.040e+04	-1.345e+05	-6.728e+04	-1.176e+05	-
3.369e+04	1	318	18.84	-30.85	17.06	-29.07	9.23	-1.683e+04	-1.157e+05	-3.872e+04	-9.380e+04	-
4.105e+04	1	319	10.80	-18.37	10.71	-18.28	1.66	-1.146e+04	-9.670e+04	-3.109e+04	-7.708e+04	-
3.588e+04	1	320	-1.01	-11.05	-3.63	-8.42	-4.41	3227.19	-7.191e+04	-1.481e+04	-5.387e+04	-
3.209e+04	1	321	-2.99	-9.22	-4.26	-7.95	-2.51	1213.56	-6.429e+04	-1.851e+04	-4.457e+04	-
3.005e+04	1	322	122.10	-141.84	91.86	-111.60	84.06	-2.234e+05	-2.965e+05	-2.307e+05	-2.891e+05	-
2.199e+04	1	323	75.08	-94.50	54.10	-73.53	55.84	-1.449e+05	-2.282e+05	-1.449e+05	-2.282e+05	-
1644.33	1	324	47.48	-65.59	32.45	-50.56	38.38	-8.923e+04	-1.799e+05	-9.010e+04	-1.790e+05	-
8814.39	1	325	30.44	-44.86	20.42	-34.84	25.58	-5.393e+04	-1.420e+05	-5.559e+04	-1.403e+05	-



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	3	25	565.91	-579.69	565.91	-579.68	2.62	6.131e+05	-1.989e+04	2.967e+05	2.966e+05	-	
3.165e+05	1	3	26	345.94	-383.48	326.17	-363.71	-118.45	3.792e+05	2.360e+04	1.511e+05	2.516e+05	-
1.705e+05	1	3	27	218.95	-254.83	184.21	-220.10	-123.48	2.511e+05	3.109e+04	1.021e+05	1.802e+05	-
1.029e+05	1	3	28	283.73	-247.93	-143.35	179.15	-211.34	-1.388e+05	-3.233e+05	-1.668e+05	-2.954e+05	-
6.617e+04	1	3	29	479.97	-434.42	-301.45	347.00	-322.35	-1.541e+05	-4.026e+05	-1.626e+05	-3.941e+05	-
4.519e+04	1	3	30	859.18	-960.05	-847.58	746.71	-438.14	-1.138e+05	-5.124e+05	-1.138e+05	-5.124e+05	-906.54
3.583e+04	1	3	31	1187.85	-1091.29	-1089.87	1186.42	56.99	8.305e+04	-4.530e+05	8.064e+04	-4.506e+05	-
2.792e+05	1	3	32	582.35	-519.05	53.71	9.60	550.26	1.403e+06	-8.859e+05	1.368e+06	-8.513e+05	-
1.553e+06	1	3	33	1193.59	-1206.51	1193.59	-1206.51	0.94	2.579e+06	-5.271e+05	1.026e+06	1.026e+06	-
3.671e+05	1	3	34	1041.83	-895.79	900.08	-754.04	-504.55	7.992e+05	-7.135e+04	1.300e+05	5.979e+05	-
1.631e+05	1	3	35	465.80	-510.57	307.67	-352.44	-359.71	4.195e+05	-8771.15	6.662e+04	3.441e+05	-
9.988e+04	1	3	36	261.51	-307.89	138.38	-184.76	-234.41	2.605e+05	6824.26	5.549e+04	2.118e+05	-
7.220e+04	1	3	37	287.55	-265.49	-19.74	41.80	-274.80	-2.013e+05	-3.792e+05	-2.383e+05	-3.421e+05	-
8.181e+04	1	3	38	509.87	-475.75	-18.47	52.59	-491.53	-2.306e+05	-5.433e+05	-2.537e+05	-5.202e+05	-
8.595e+04	1	3	39	1171.32	-1105.91	-3.50	68.91	-1138.04	-1.920e+05	-8.825e+05	-2.029e+05	-8.716e+05	-
2.802e+05	1	3	40	580.70	-516.62	8.85	55.22	-548.17	4.181e+05	-1.727e+06	3.809e+05	-1.690e+06	-
02	1	3	41	-6.19	-6.19	-6.19	-6.19	3.60e-04	-3.819e+05	-3.819e+05	-3.819e+05	-3.819e+05	8.89e-
2.802e+05	1	3	42	505.04	-593.89	-21.20	-67.66	-548.97	1.399e+06	-8.841e+05	-8.492e+05	1.364e+06	-
8.594e+04	1	3	43	1159.71	-1249.92	-8.72	-81.49	-1204.27	6.327e+05	-1.676e+05	-1.582e+05	6.233e+05	-
8.180e+04	1	3	44	500.27	-559.25	6.49	-65.47	-528.54	3.523e+05	-5.861e+04	-4.162e+04	3.353e+05	-
7.223e+04	1	3	45	275.46	-322.35	8.19	-55.08	-297.22	2.273e+05	-3.061e+04	-8479.17	2.051e+05	-
7.305e+04	1	3	46	254.93	-250.57	108.59	-104.23	-229.25	-2.418e+05	-3.992e+05	-2.912e+05	-3.498e+05	-
1.294e+05	1	3	47	443.97	-431.81	268.92	-256.77	-350.23	-2.773e+05	-5.973e+05	-3.432e+05	-5.314e+05	-
3.216e+05	1	3	48	959.45	-779.65	813.84	-634.04	-481.69	-2.754e+05	-1.031e+06	-4.549e+05	-8.517e+05	-
1.486e+06	1	3	49	1067.10	-1078.95	1067.09	-1078.95	-1.04	8.670e+04	-2.886e+06	-1.400e+06	-1.399e+06	-
2.792e+05	1	3	50	503.29	-591.37	-66.15	-21.94	546.88	4.199e+05	-1.731e+06	-1.694e+06	3.830e+05	-
3.099e+04	1	3	51	1075.69	-1197.01	-1195.59	1074.26	-56.90	7.884e+04	-4.560e+05	-4.542e+05	7.704e+04	-
4.641e+04	1	3	52	794.40	-1068.90	-890.87	616.37	-547.75	2.630e+05	-2.156e+05	-2.111e+05	2.585e+05	-
1.143e+04	1	3	53	439.51	-502.06	-299.44	236.89	-386.94	2.072e+05	-1.144e+05	-1.140e+05	2.068e+05	-
3.917e+04	1	3	54	250.40	-294.17	-127.62	83.85	-250.92	1.637e+05	-7.561e+04	-6.902e+04	1.571e+05	-
5.775e+04	1	3	55	204.39	-210.36	158.94	-164.91	-129.56	-2.572e+05	-3.731e+05	-3.104e+05	-3.199e+05	-
1.186e+05	1	3	56	314.84	-327.60	290.00	-302.76	-123.86	-2.901e+05	-5.340e+05	-3.837e+05	-4.405e+05	-
2.593e+05	1	3	57	503.10	-514.04	503.09	-514.03	-2.88	-2.884e+05	-8.070e+05	-5.478e+05	-5.476e+05	-
3.218e+05	1	3	58	767.39	-969.65	624.22	-826.48	477.69	-2.754e+05	-1.032e+06	-8.526e+05	-4.547e+05	-
8.578e+04	1	3	59	1091.50	-1179.61	-77.10	-11.01	1135.08	-1.919e+05	-8.843e+05	-8.736e+05	-2.027e+05	-
1863.97	1	3	60	943.22	-865.95	-753.52	830.78	436.78	-1.143e+05	-5.141e+05	-5.141e+05	-1.143e+05	-
2.824e+04	1	3	61	500.53	-579.26	-577.05	498.31	-48.83	-1.117e+04	-2.406e+05	-2.370e+05	-1.470e+04	-

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	3	62	319.79	-369.46	-330.75	281.07	-158.70	7.650e+04	-1.630e+05	-1.623e+05	7.577e+04
1.315e+04											
1	3	63	201.84	-244.29	-184.78	142.34	-151.68	9.780e+04	-1.181e+05	-1.173e+05	9.700e+04
1.313e+04											
1	3	64	156.21	-164.09	147.83	-155.71	-51.11	-2.517e+05	-3.191e+05	-2.907e+05	-2.801e+05
3.327e+04											
1	3	65	213.81	-224.00	213.75	-223.94	-5.15	-2.796e+05	-4.210e+05	-3.503e+05	-3.503e+05
7.066e+04											
1	3	66	315.02	-323.58	293.12	-301.68	116.22	-2.901e+05	-5.341e+05	-4.406e+05	-3.836e+05
1.186e+05											
1	3	67	418.37	-452.20	248.83	-282.66	344.75	-2.773e+05	-5.976e+05	-5.317e+05	-3.432e+05
1.294e+05											
1	3	68	460.41	-516.32	-58.42	2.51	487.41	-2.307e+05	-5.438e+05	-5.208e+05	-2.537e+05
8.171e+04											
1	3	69	416.37	-484.11	-351.60	283.86	319.01	-1.543e+05	-4.030e+05	-3.946e+05	-1.627e+05
4.491e+04											
1	3	70	301.41	-375.33	-365.55	291.63	80.77	-6.290e+04	-2.723e+05	-2.649e+05	-7.027e+04
3.859e+04											
1	3	71	208.86	-262.57	-259.76	206.04	-36.29	1.114e+04	-1.947e+05	-1.909e+05	7297.88
2.787e+04											
1	3	72	152.43	-195.52	-178.97	135.89	-74.04	5.032e+04	-1.470e+05	-1.466e+05	4.995e+04
8453.45											
1	3	73	117.93	-127.44	117.72	-127.23	-7.22	-2.328e+05	-2.583e+05	-2.455e+05	-2.456e+05
1.279e+04											
1	3	74	151.02	-163.02	146.13	-158.14	38.86	-2.517e+05	-3.190e+05	-2.800e+05	-2.907e+05
3.325e+04											
1	3	75	195.37	-210.42	156.03	-171.08	120.07	-2.571e+05	-3.730e+05	-3.198e+05	-3.103e+05
5.775e+04											
1	3	76	235.86	-260.90	98.46	-123.50	222.21	-2.417e+05	-3.991e+05	-3.496e+05	-2.912e+05
7.305e+04											
1	3	77	249.25	-291.40	-44.60	2.45	269.30	-2.012e+05	-3.790e+05	-3.419e+05	-2.383e+05
7.222e+04											
1	3	78	227.98	-283.14	-180.18	125.02	205.00	-1.387e+05	-3.229e+05	-2.950e+05	-1.667e+05
6.606e+04											
1	3	79	186.45	-242.11	-220.54	164.87	93.70	-7.025e+04	-2.571e+05	-2.366e+05	-9.075e+04
5.840e+04											
1	3	80	145.59	-193.40	-192.95	145.14	12.31	-1.386e+04	-2.002e+05	-1.887e+05	-2.532e+04
4.478e+04											
1	3	81	114.71	-154.90	-151.62	111.43	-29.55	2.324e+04	-1.576e+05	-1.534e+05	1.906e+04
2.717e+04											
1	3	82	123.40	-154.39	-31.46	0.48	137.97	-1.392e+05	-2.593e+05	-2.056e+05	-1.930e+05
5.971e+04											
1	3	83	113.31	-147.44	-96.30	62.17	103.54	-8.241e+04	-2.517e+05	-1.924e+05	-1.417e+05
8.075e+04											
1	3	84	70.76	-94.77	-24.20	0.19	81.86	-6.803e+04	-1.837e+05	-1.068e+05	-1.450e+05
5.460e+04											
1	3	85	71.48	-97.41	-66.29	40.36	65.47	-5.307e+04	-1.833e+05	-1.152e+05	-1.211e+05
6.506e+04											
1	3	86	44.20	-63.28	-19.75	0.67	52.76	-4.210e+04	-1.542e+05	-6.785e+04	-1.284e+05
4.715e+04											
1	3	87	48.07	-65.31	-42.74	25.50	45.27	-2.979e+04	-1.414e+05	-7.927e+04	-9.187e+04
5.543e+04											
1	3	88	29.10	-43.12	-14.29	0.27	35.37	-2.478e+04	-1.198e+05	-4.172e+04	-1.029e+05
3.637e+04											
1	3	89	29.20	-43.31	-29.85	15.73	28.20	-1.025e+04	-1.140e+05	-5.107e+04	-7.322e+04
5.070e+04											
1	3	90	18.68	-27.99	-9.68	0.37	22.79	-1.296e+04	-9.128e+04	-2.555e+04	-7.869e+04
2.877e+04											
1	3	91	17.95	-27.79	-19.55	9.71	17.57	7877.67	-9.524e+04	-2.610e+04	-6.127e+04
4.847e+04											
1	3	92	11.90	-16.89	-6.21	1.22	13.90	1.923e+04	-6.340e+04	1.145e+04	-5.561e+04
2.414e+04											
1	3	93	13.41	-17.10	-12.49	8.80	10.93	6404.29	-7.711e+04	-1.502e+04	-5.568e+04
3.647e+04											
1	3	94	6.10	-7.93	-3.91	2.09	6.34	1.184e+04	-5.810e+04	7884.38	-5.415e+04
1.615e+04											
1	3	95	7.08	-6.58	-5.74	6.24	3.27	7401.62	-5.468e+04	-3062.74	-4.421e+04
2.324e+04											
1	3	96	3.30	-2.73	-1.79	2.35	2.19	-571.35	-4.989e+04	-643.13	-4.982e+04
1880.13											
1	3	97	6.51	-2.11	-2.03	6.43	0.81	659.26	-4.607e+04	-1684.29	-4.373e+04
1.020e+04											
1	3	98	99.13	-137.90	-125.92	87.14	51.93	-3.828e+04	-2.023e+05	-1.682e+05	-7.245e+04



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	3	135	18.31	-19.05	-4.28	3.54	-18.27	4.096e+04	-2.992e+04	-2.854e+04	3.959e+04	-	
9768.84	1	3	136	13.16	-1.13	2.19	9.83	-6.04	1.334e+04	-2.897e+04	-2.671e+04	1.108e+04	-
9515.96	1	3	137	7.83	-1.25	3.68	2.90	-4.52	1161.77	-1.453e+04	-1.364e+04	267.65	-
3637.69	1	3	138	118.93	-159.21	-62.35	22.07	-132.51	1.293e+05	-5.936e+04	-4.243e+04	1.124e+05	-
5.392e+04	1	3	139	81.66	-105.68	-33.54	9.52	-91.16	8.746e+04	-4.681e+04	-3.362e+04	7.428e+04	-
3.995e+04	1	3	140	50.79	-61.42	-14.77	4.14	-55.30	7.049e+04	-4.730e+04	-3.253e+04	5.573e+04	-
3.900e+04	1	3	141	35.89	-45.90	-10.19	0.18	-40.56	5.439e+04	-4.118e+04	-2.831e+04	4.152e+04	-
3.262e+04	1	3	142	25.53	-31.91	-8.39	2.01	-28.25	4.582e+04	-3.649e+04	-2.399e+04	3.332e+04	-
2.954e+04	1	3	143	18.80	-18.78	3.60	-3.58	-18.44	3.099e+04	-3.247e+04	-2.681e+04	2.532e+04	-
1.809e+04	1	3	144	14.60	-4.21	12.34	-1.96	-6.11	1.397e+04	-2.385e+04	-2.165e+04	1.177e+04	-
8853.01	1	3	145	15.23	1.36	13.40	3.20	-4.71	-197.83	-1.398e+04	-1.386e+04	-311.09	-
1244.06	1	3	146	140.15	-176.14	13.47	-49.46	-154.98	1.495e+05	-2.225e+04	2122.53	1.251e+05	-
5.994e+04	1	3	147	84.55	-108.93	7.36	-31.74	-94.74	1.191e+05	-1.374e+04	1.447e+04	9.090e+04	-
5.433e+04	1	3	148	57.15	-67.60	0.69	-11.14	-62.10	7.420e+04	-2.485e+04	8140.36	4.121e+04	-
4.668e+04	1	3	149	39.12	-47.66	6.44	-14.98	-42.05	5.614e+04	-2.350e+04	-382.23	3.303e+04	-
3.615e+04	1	3	150	27.43	-37.35	12.09	-22.01	-27.54	4.879e+04	-1.971e+04	-4315.75	3.339e+04	-
2.859e+04	1	3	151	19.22	-19.47	9.09	-9.33	-17.01	3.982e+04	-1.390e+04	411.54	2.551e+04	-
2.375e+04	1	3	152	13.19	0.36	6.82	6.73	-6.41	1.245e+04	-1.938e+04	-3782.60	-3148.87	-
1.592e+04	1	3	153	7.49	-0.49	6.44	0.56	-2.69	1665.11	-5257.96	-4749.78	1156.93	-
1805.53	1	3	154	139.23	-177.20	67.77	-105.75	-132.30	1.618e+05	1.031e+04	5.153e+04	1.206e+05	-
6.742e+04	1	3	155	82.65	-103.18	43.85	-64.38	-75.53	1.162e+05	-5581.27	3.228e+04	7.832e+04	-
5.636e+04	1	3	156	64.33	-71.63	34.54	-41.84	-56.23	6.519e+04	-1484.57	2.148e+04	4.223e+04	-
3.168e+04	1	3	157	40.84	-48.89	22.05	-30.09	-36.52	5.511e+04	-7255.41	2.025e+04	2.760e+04	-
3.096e+04	1	3	158	28.91	-34.27	13.20	-18.55	-27.31	4.331e+04	-9650.37	1.740e+04	1.626e+04	-
2.648e+04	1	3	159	18.31	-18.62	14.65	-14.95	-11.04	2.897e+04	-1.359e+04	2499.93	1.288e+04	-
2.064e+04	1	3	160	14.16	-3.28	13.69	-2.81	2.82	1.229e+04	-1.258e+04	-3276.86	2990.18	-
1.203e+04	1	3	161	14.77	2.42	14.74	2.46	0.66	-388.82	-5841.08	-5081.59	-1148.30	-
1887.88	1	3	162	121.12	-146.70	99.19	-124.77	-73.42	1.564e+05	2.847e+04	7.790e+04	1.070e+05	-
6.229e+04	1	3	163	78.74	-94.65	65.78	-81.69	-45.60	1.060e+05	1.921e+04	5.676e+04	6.843e+04	-
4.299e+04	1	3	164	54.31	-62.74	46.70	-55.13	-28.86	7.294e+04	1.105e+04	4.187e+04	4.212e+04	-
3.095e+04	1	3	165	36.97	-43.82	32.92	-39.76	-17.64	5.417e+04	4826.58	3.152e+04	2.747e+04	-
2.459e+04	1	3	166	26.42	-36.33	25.72	-35.63	-6.57	4.751e+04	1676.86	2.247e+04	2.672e+04	-
2.282e+04	1	3	167	17.50	-18.81	16.32	-17.63	-6.44	3.326e+04	2878.81	2.011e+04	1.603e+04	-
1.505e+04	1	3	168	11.65	1.50	8.15	5.00	-4.82	9445.64	-1.046e+04	9010.77	-1.003e+04	-
2910.06	1	3	169	4.47	-0.27	4.35	-0.15	-0.75	3194.79	953.79	3176.88	971.69	-199.51
5.262e+04	1	3	170	101.67	-121.13	99.38	-118.84	-22.51	1.459e+05	4.068e+04	9.297e+04	9.364e+04	-
3.391e+04	1	3	171	74.93	-90.96	74.06	-90.09	-11.97	1.025e+05	3.333e+04	6.119e+04	7.461e+04	-



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	3	172	45.38	-35.04	45.29	-34.96	-2.64	6.867e+04	1.164e+04	5.096e+04	2.935e+04	-	
2.639e+04	1	3	173	34.10	-36.61	32.67	-35.18	-9.96	4.541e+04	1.351e+04	3.554e+04	2.339e+04	-
1.474e+04	1	3	174	27.67	-31.20	24.90	-28.43	-12.47	3.027e+04	1.135e+04	2.612e+04	1.550e+04	-
7832.30	1	3	175	13.77	-16.41	13.77	-16.41	0.29	2.344e+04	532.54	1.259e+04	1.138e+04	-
1.144e+04	1	3	176	11.93	-3.62	3.53	4.77	7.75	9710.08	-4719.08	4269.03	721.96	-
6993.19	1	3	177	10.51	3.04	8.81	4.74	3.14	-635.16	-2045.55	-1167.72	-1512.99	-683.74
1	3	178	87.54	-101.24	86.36	-100.05	14.94	1.310e+05	3.254e+04	8.228e+04	8.123e+04	-	
4.921e+04	1	3	179	64.96	-80.67	64.46	-80.18	8.49	1.073e+05	4.146e+04	7.289e+04	7.584e+04	-
3.288e+04	1	3	180	47.36	-44.59	46.83	-44.06	-6.97	4.009e+04	3.256e+04	3.618e+04	3.646e+04	-
3762.69	1	3	181	33.35	-36.91	33.32	-36.88	1.56	3.809e+04	1.790e+04	2.769e+04	2.830e+04	-
1.009e+04	1	3	182	21.69	-31.97	19.63	-29.91	10.32	4.248e+04	8888.51	2.544e+04	2.592e+04	-
1.679e+04	1	3	183	16.21	-20.76	15.93	-20.47	3.23	2.750e+04	1.128e+04	1.810e+04	2.067e+04	-
8005.15	1	3	184	10.35	-2.50	6.46	1.38	-5.90	6800.63	-7245.46	-256.65	-188.18	-
7022.96	1	3	185	1.43	-5.69	-0.64	-3.62	-3.23	6729.53	1599.70	3919.34	4409.90	-
2553.16	1	3	186	116.52	-131.21	110.02	-124.71	39.58	1.469e+05	4.072e+04	9.284e+04	9.478e+04	-
5.308e+04	1	3	187	75.41	-87.78	72.82	-85.19	20.36	1.007e+05	3.544e+04	7.134e+04	6.479e+04	-
3.246e+04	1	3	188	45.63	-58.10	43.89	-56.36	13.31	6.860e+04	1.747e+04	3.417e+04	5.190e+04	-
2.397e+04	1	3	189	39.18	-45.12	36.77	-42.70	14.06	4.630e+04	1.350e+04	2.322e+04	3.659e+04	-
1.498e+04	1	3	190	33.46	-38.09	31.95	-36.58	10.28	3.280e+04	8471.45	1.267e+04	2.860e+04	-
9195.48	1	3	191	12.85	-17.20	11.22	-15.58	6.80	2.347e+04	-72.43	9855.89	1.354e+04	-
1.163e+04	1	3	192	6.21	-6.26	-5.65	5.60	-2.69	8017.32	-2376.47	3565.01	2075.84	-
5143.28	1	3	193	2.94	1.59	2.13	2.40	-0.66	-675.20	-1399.43	-1094.81	-979.81	-357.52
1	3	194	139.90	-138.66	112.27	-111.03	83.26	1.562e+05	2.773e+04	1.062e+05	7.770e+04	-	
6.264e+04	1	3	195	85.62	-87.32	68.22	-69.92	52.03	1.055e+05	1.940e+04	6.791e+04	5.698e+04	-
4.269e+04	1	3	196	54.10	-57.14	43.43	-46.47	32.76	7.251e+04	1.162e+04	4.177e+04	4.237e+04	-
3.044e+04	1	3	197	36.84	-42.26	27.71	-33.12	25.28	5.389e+04	4984.68	2.695e+04	3.193e+04	-
2.432e+04	1	3	198	22.76	-32.63	12.86	-22.73	21.22	4.639e+04	1913.60	2.566e+04	2.264e+04	-
2.219e+04	1	3	199	15.82	-21.27	11.37	-16.82	12.06	3.396e+04	1290.71	1.433e+04	2.092e+04	-
1.600e+04	1	3	200	9.03	-8.34	8.68	-7.98	-2.45	1.006e+04	-1.051e+04	-9932.01	9480.07	-
3391.31	1	3	201	1.65	-7.83	0.85	-7.03	-2.64	3664.79	595.37	649.39	3610.77	-403.62
1	3	202	164.82	-152.75	86.54	-74.47	136.86	1.615e+05	6625.03	1.182e+05	4.995e+04	-	
6.952e+04	1	3	203	95.72	-89.02	41.62	-34.91	84.07	1.158e+05	-7507.60	7.893e+04	2.934e+04	-
5.643e+04	1	3	204	58.25	-44.94	37.07	-23.76	41.68	6.267e+04	-1939.99	4.081e+04	1.991e+04	-
3.057e+04	1	3	205	44.38	-45.32	25.22	-26.15	36.77	5.467e+04	-8178.64	2.647e+04	2.002e+04	-
3.126e+04	1	3	206	37.63	-42.49	20.77	-25.64	32.66	4.515e+04	-1.275e+04	1.464e+04	1.777e+04	-
2.891e+04	1	3	207	12.77	-17.98	6.58	-11.78	12.34	2.885e+04	-1.452e+04	1.168e+04	2644.64	-
2.121e+04	1	3	208	7.57	-10.53	-1.66	-1.31	-9.05	9746.85	-1.008e+04	3758.09	-4093.71	-
9104.27	1	3	209	2.79	-4.31	1.87	-3.39	-2.38	-377.86	-5625.47	-1001.75	-5001.58	-
1698.44													



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	3	210	160.45	-153.67	16.09	-9.31	156.55	1.475e+05	-2.155e+04	1.237e+05	2257.86	-	
5.881e+04	1	3	211	101.52	-98.58	14.11	-11.16	99.25	1.185e+05	-1.474e+04	8.968e+04	1.408e+04	-
5.486e+04	1	3	212	68.93	-65.68	17.15	-13.90	65.49	7.496e+04	-2.648e+04	4.110e+04	7382.17	-
4.784e+04	1	3	213	44.67	-46.10	8.87	-10.31	44.36	5.554e+04	-2.422e+04	3.217e+04	-844.82	-
3.631e+04	1	3	214	26.65	-33.52	0.33	-7.21	29.85	4.700e+04	-2.001e+04	3.160e+04	-4613.39	-
2.819e+04	1	3	215	17.03	-23.16	2.50	-8.63	19.31	3.990e+04	-1.568e+04	2.439e+04	-174.19	-
2.493e+04	1	3	216	7.76	-10.72	6.89	-9.86	3.90	1.285e+04	-1.985e+04	-2656.66	-4345.36	-
1.632e+04	1	3	217	1.43	-9.96	1.43	-9.95	0.24	1757.24	-5885.02	1087.19	-5214.98	-
2161.41	1	3	218	162.57	-167.96	-53.93	48.54	157.12	1.303e+05	-5.953e+04	1.126e+05	-4.182e+04	-
5.521e+04	1	3	219	92.01	-92.58	-14.14	13.57	91.25	8.616e+04	-4.555e+04	7.203e+04	-3.142e+04	-
4.076e+04	1	3	220	52.85	-59.31	-15.23	8.77	54.78	6.962e+04	-4.496e+04	5.581e+04	-3.115e+04	-
3.730e+04	1	3	221	44.12	-47.36	-10.71	7.48	44.83	5.390e+04	-4.206e+04	4.086e+04	-2.901e+04	-
3.289e+04	1	3	222	38.32	-43.64	-8.70	3.39	40.53	4.711e+04	-3.968e+04	3.331e+04	-2.588e+04	-
3.174e+04	1	3	223	12.34	-19.27	-3.28	-3.65	15.81	3.064e+04	-3.360e+04	2.454e+04	-2.749e+04	-
1.884e+04	1	3	224	7.87	-13.59	4.94	-10.66	-7.37	1.152e+04	-2.213e+04	1.037e+04	-2.098e+04	-
6114.68	1	3	225	2.26	-7.46	2.26	-7.46	-3.79e-02	-151.63	-1.439e+04	-315.53	-1.422e+04	-
1518.62	1	3	226	139.63	-132.59	-84.41	91.44	103.90	8.256e+04	-9.730e+04	7.957e+04	-9.432e+04	-
2.296e+04	1	3	227	86.21	-81.20	-49.05	54.06	65.94	6.798e+04	-8.252e+04	6.508e+04	-7.963e+04	-
2.067e+04	1	3	228	54.62	-51.36	-29.79	33.05	42.67	5.400e+04	-6.900e+04	5.139e+04	-6.638e+04	-
1.775e+04	1	3	229	37.47	-38.10	-20.17	19.54	32.15	4.407e+04	-5.624e+04	4.164e+04	-5.381e+04	-
1.542e+04	1	3	230	24.59	-30.12	-16.57	11.04	23.62	4.020e+04	-4.413e+04	3.883e+04	-4.276e+04	-
1.064e+04	1	3	231	15.84	-23.45	-10.56	2.94	18.45	4.076e+04	-3.202e+04	3.910e+04	-3.036e+04	-
1.086e+04	1	3	232	5.46	-11.96	0.90	-7.39	7.66	1.366e+04	-2.988e+04	1.161e+04	-2.783e+04	-
9232.18	1	3	233	0.90	-11.92	-0.83	-10.19	4.38	1177.89	-1.566e+04	309.03	-1.479e+04	-
3725.06	1	3	234	124.24	-108.92	-93.79	109.12	57.42	5.295e+04	-1.266e+05	5.293e+04	-1.266e+05	-
2186.97	1	3	235	84.36	-76.97	-70.15	77.54	32.46	6.047e+04	-1.121e+05	5.994e+04	-1.116e+05	-
9610.47	1	3	236	48.07	-25.30	-19.77	42.54	19.36	2.407e+04	-8.132e+04	2.249e+04	-7.974e+04	-
1.282e+04	1	3	237	40.16	-39.48	-29.02	29.70	26.90	3.388e+04	-6.734e+04	3.382e+04	-6.728e+04	-
2412.44	1	3	238	34.67	-40.88	-30.50	24.28	26.01	3.780e+04	-5.975e+04	3.779e+04	-5.974e+04	974.27
7141.41	1	3	239	11.74	-20.80	-12.93	3.87	13.93	2.599e+04	-4.910e+04	2.531e+04	-4.842e+04	-
1.112e+04	1	3	240	7.72	-16.82	7.64	-16.74	1.45	1.058e+04	-3.279e+04	7508.92	-2.972e+04	-
1.062e+04	1	3	241	1.23	-12.41	-0.97	-10.20	5.03	60.25	-2.401e+04	-6303.26	-1.765e+04	-
2.520e+04	1	3	242	92.68	-83.82	-80.53	89.38	23.90	2.401e+04	-1.241e+05	1.959e+04	-1.197e+05	-
2.577e+04	1	3	243	75.76	-71.81	-69.20	73.15	19.45	5.256e+04	-1.020e+05	4.814e+04	-9.757e+04	-
2.068e+04	1	3	244	41.39	-43.39	-40.53	38.53	15.30	2.901e+04	-8.525e+04	2.514e+04	-8.138e+04	-
2.055e+04	1	3	245	33.16	-37.95	-35.07	30.27	14.02	2.725e+04	-7.230e+04	2.281e+04	-6.785e+04	-
1.896e+04	1	3	246	23.73	-30.66	-27.20	20.27	13.27	2.605e+04	-5.752e+04	2.150e+04	-5.298e+04	-

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	3	247	16.75	-26.78	-23.92	13.89	10.80	3.680e+04	-4.288e+04	3.146e+04	-3.754e+04
1.992e+04											
1	3	248	1.16	-15.29	-7.30	-6.83	8.22	1.266e+04	-3.445e+04	8284.47	-3.008e+04
1.368e+04											
1	3	249	0.41	-14.68	-6.76	-7.50	7.54	375.64	-2.413e+04	-9101.76	-1.466e+04
1.194e+04											
1	3	250	117.38	-108.90	-108.57	117.05	-8.66	6350.96	-1.629e+05	-8984.11	-1.476e+05
4.858e+04											
1	3	251	86.85	-83.72	-83.48	86.61	6.49	1.657e+04	-1.354e+05	3459.69	-1.223e+05
4.267e+04											
1	3	252	29.96	-53.98	-51.86	27.84	13.14	1.708e+04	-8.600e+04	2213.46	-7.113e+04
3.621e+04											
1	3	253	32.78	-41.66	-41.66	32.78	0.22	2.097e+04	-8.705e+04	2484.76	-6.856e+04
4.069e+04											
1	3	254	29.75	-38.78	-38.67	29.63	-2.80	2.685e+04	-7.793e+04	5792.32	-5.687e+04
4.199e+04											
1	3	255	12.28	-22.51	-21.22	10.99	6.57	1.555e+04	-6.223e+04	-4734.99	-4.194e+04
3.415e+04											
1	3	256	7.25	-25.49	-4.77	-13.48	15.78	7110.22	-3.863e+04	-1.198e+04	-1.954e+04
2.255e+04											
1	3	257	-0.16	-19.65	-11.35	-8.45	9.64	425.04	-3.247e+04	-2.126e+04	-1.079e+04
1.559e+04											
1	3	258	137.38	-119.20	-104.91	123.09	-58.86	-3.902e+04	-2.032e+05	-7.306e+04	-1.691e+05
6.655e+04											
1	3	259	84.08	-78.36	-72.01	77.74	-31.47	-1.933e+04	-1.586e+05	-5.720e+04	-1.208e+05
6.197e+04											
1	3	260	52.19	-55.13	-52.85	49.91	-15.48	-5508.77	-1.253e+05	-4.380e+04	-8.700e+04
5.586e+04											
1	3	261	34.89	-41.40	-40.26	33.75	-9.27	3120.32	-1.004e+05	-3.420e+04	-6.311e+04
4.972e+04											
1	3	262	26.39	-33.44	-33.21	26.16	-3.72	6759.19	-7.778e+04	-2.489e+04	-4.613e+04
4.091e+04											
1	3	263	14.62	-25.86	-25.71	14.47	-2.47	2.746e+04	-5.501e+04	-1.079e+04	-1.675e+04
4.113e+04											
1	3	264	-1.73	-17.78	-16.84	-2.67	3.78	1.364e+04	-4.764e+04	-1.960e+04	-1.441e+04
3.053e+04											
1	3	265	-0.12	-16.49	-13.74	-2.87	6.12	-258.04	-3.796e+04	-3.047e+04	-7747.96
1.504e+04											
1	3	266	163.63	-136.28	-74.55	101.90	-121.26	-8.278e+04	-2.543e+05	-1.428e+05	-1.942e+05
8.182e+04											
1	3	267	86.62	-77.27	-43.52	52.87	-66.27	-5.449e+04	-1.840e+05	-1.229e+05	-1.155e+05
6.463e+04											
1	3	268	56.12	-52.82	-36.77	40.07	-38.61	-3.164e+04	-1.417e+05	-9.291e+04	-8.046e+04
5.469e+04											
1	3	269	40.01	-44.60	-32.55	27.97	-29.56	-1.143e+04	-1.147e+05	-7.384e+04	-5.227e+04
5.049e+04											
1	3	270	31.15	-39.94	-28.30	19.51	-26.31	7922.09	-9.720e+04	-6.173e+04	-2.755e+04
4.971e+04											
1	3	271	13.05	-23.83	-22.49	11.71	-6.90	5415.13	-7.769e+04	-5.587e+04	-1.640e+04
3.656e+04											
1	3	272	5.05	-23.64	-17.55	-1.04	11.73	5872.34	-5.344e+04	-4.501e+04	-2564.35
2.072e+04											
1	3	273	-1.26	-20.31	-18.65	-2.92	5.37	751.31	-4.605e+04	-4.378e+04	-1515.37
1.005e+04											
1	3	274	148.25	-136.46	-22.30	34.08	-139.54	-1.405e+05	-2.593e+05	-1.929e+05	-2.069e+05
5.903e+04											
1	3	275	90.31	-86.99	-18.33	21.64	-86.37	-6.897e+04	-1.844e+05	-1.454e+05	-1.080e+05
5.460e+04											
1	3	276	54.57	-59.96	-13.92	8.53	-56.16	-4.216e+04	-1.550e+05	-1.292e+05	-6.796e+04
4.738e+04											
1	3	277	36.41	-43.32	-16.48	9.57	-37.68	-2.580e+04	-1.201e+05	-1.033e+05	-4.258e+04
3.608e+04											
1	3	278	26.52	-32.78	-18.92	12.66	-25.10	-1.506e+04	-9.127e+04	-7.899e+04	-2.734e+04
2.802e+04											
1	3	279	14.18	-25.05	-16.50	5.63	-16.20	1.840e+04	-6.427e+04	-5.620e+04	1.033e+04
2.453e+04											
1	3	280	-2.53	-15.81	-14.59	-3.75	-3.83	1.224e+04	-5.858e+04	-5.471e+04	8376.59
1.609e+04											
1	3	281	-0.91	-14.04	-14.04	-0.92	0.27	-625.17	-5.037e+04	-5.028e+04	-712.86
2086.81											
1	3	282	134.82	-136.37	42.93	-44.47	-128.36	-1.724e+05	-2.630e+05	-2.351e+05	-2.004e+05
4.187e+04											
1	3	283	79.25	-85.22	10.08	-16.05	-81.19	-1.081e+05	-1.982e+05	-1.848e+05	-1.215e+05



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	3	320	-0.85	-9.35	-3.08	-7.13	-3.73	2730.70	-6.085e+04	-1.253e+04	-4.559e+04	-	
2.716e+04	1	3	321	-2.53	-7.80	-3.60	-6.72	-2.12	1026.86	-5.440e+04	-1.566e+04	-3.771e+04	-
2.542e+04	1	3	322	103.31	-120.02	77.73	-94.43	71.13	-1.890e+05	-2.509e+05	-1.952e+05	-2.446e+05	-
1.861e+04	1	3	323	63.53	-79.97	45.78	-62.21	47.25	-1.226e+05	-1.931e+05	-1.226e+05	-1.931e+05	-
1391.35	1	3	324	40.17	-55.50	27.46	-42.78	32.48	-7.550e+04	-1.522e+05	-7.624e+04	-1.515e+05	-
7458.33	1	3	325	25.76	-37.96	17.28	-29.48	21.64	-4.564e+04	-1.201e+05	-4.704e+04	-1.187e+05	-
1.013e+04	1	3	326	17.39	-25.16	13.10	-20.87	12.82	-2.961e+04	-9.052e+04	-3.078e+04	-8.934e+04	-
8377.66	1	3	327	9.90	-16.44	6.64	-13.18	8.68	1.178e+04	-6.353e+04	8505.02	-6.026e+04	-
1.536e+04	1	3	328	1.28	-9.45	-1.52	-6.66	4.71	1.124e+04	-6.042e+04	6605.01	-5.578e+04	-
1.762e+04	1	3	329	-0.41	-3.45	-0.82	-3.03	1.04	-982.28	-5.487e+04	-8129.69	-4.772e+04	-
1.828e+04	1	3	330	114.62	-139.63	37.43	-62.43	116.91	-1.724e+05	-2.628e+05	-2.000e+05	-2.352e+05	-
4.162e+04	1	3	331	69.14	-90.51	20.77	-42.15	73.36	-1.073e+05	-1.987e+05	-1.202e+05	-1.859e+05	-
3.175e+04	1	3	332	44.76	-65.39	7.14	-27.78	52.24	-6.287e+04	-1.480e+05	-6.555e+04	-1.454e+05	-
1.487e+04	1	3	333	27.92	-41.58	2.93	-16.59	33.36	-3.517e+04	-1.242e+05	-3.723e+04	-1.222e+05	-
1.338e+04	1	3	334	17.53	-27.83	0.75	-11.05	21.90	-8066.19	-1.043e+05	-8866.37	-1.035e+05	-
8738.11	1	3	335	10.93	-16.49	1.56	-7.11	13.00	-2668.33	-8.542e+04	-2758.51	-8.533e+04	-
2730.23	1	3	336	1.03	-6.28	-1.34	-3.90	3.42	5559.49	-6.268e+04	5447.55	-6.256e+04	-
2761.44	1	3	337	-5.83e-03	-3.45	-1.59	-1.86	1.72	894.06	-5.436e+04	-824.72	-5.264e+04	-
9592.53	1	7	1	135.92	-100.05	-90.23	126.10	47.12	2.003e+04	-1.441e+05	1.639e+04	-1.405e+05	-
2.415e+04	1	7	2	164.85	-124.75	-124.52	164.62	8.20	-1.330e+04	-1.825e+05	-2.360e+04	-1.722e+05	-
4.046e+04	1	7	3	231.50	-174.05	-164.94	222.39	60.10	9920.65	-1.773e+05	6433.81	-1.738e+05	-
2.531e+04	1	7	4	178.83	-131.14	-99.89	147.58	93.33	4.503e+04	-1.343e+05	4.473e+04	-1.340e+05	-
7380.71	1	7	5	335.80	-262.58	-206.26	279.48	174.72	6.991e+04	-1.482e+05	6.923e+04	-1.475e+05	-
1.222e+04	1	7	6	231.69	-173.58	-88.78	146.90	164.85	8.853e+04	-1.077e+05	8.779e+04	-1.070e+05	-
1.202e+04	1	7	7	469.65	-361.11	-133.13	241.67	370.71	1.893e+05	-1.039e+05	1.890e+05	-1.035e+05	-
1.005e+04	1	7	8	286.07	-214.40	-17.06	88.73	244.58	1.485e+05	-6.886e+04	1.425e+05	-6.286e+04	-
3.560e+04	1	7	9	543.17	-419.00	159.70	-35.53	471.08	3.214e+05	-5.321e+04	3.060e+05	-3.783e+04	-
7.432e+04	1	7	10	319.68	-235.51	120.54	-36.37	266.28	2.062e+05	-2.793e+04	1.861e+05	-7803.03	-
6.563e+04	1	7	11	512.34	-403.91	409.21	-300.78	289.58	3.822e+05	-8039.54	3.136e+05	6.057e+04	-
1.485e+05	1	7	12	312.73	-228.69	234.64	-150.60	190.22	2.364e+05	5718.31	1.919e+05	5.021e+04	-
9.101e+04	1	7	13	394.04	-308.84	388.78	-303.59	60.54	3.450e+05	2.131e+04	2.288e+05	1.374e+05	-
1.552e+05	1	7	14	265.79	-198.33	251.57	-184.11	80.00	2.279e+05	2.765e+04	1.630e+05	9.256e+04	-
9.373e+04	1	7	15	269.75	-225.38	265.51	-221.13	-45.64	2.661e+05	3.638e+04	1.511e+05	1.514e+05	-
1.149e+05	1	7	16	205.99	-162.48	205.94	-162.43	4.29	1.963e+05	3.833e+04	1.273e+05	1.073e+05	-
7.835e+04	1	7	17	194.85	-172.62	177.53	-155.30	-77.87	1.964e+05	3.859e+04	1.071e+05	1.279e+05	-
7.820e+04	1	7	18	157.89	-131.85	154.28	-128.24	-32.12	1.602e+05	3.953e+04	9.963e+04	1.001e+05	-
6.034e+04	1	7	19	200.37	-159.44	-146.46	187.39	-67.12	-6.415e+04	-2.341e+05	-8.275e+04	-2.155e+05	-





**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	7	93	25.69	-23.08	-22.55	25.17	5.03	6666.37	-6.968e+04	-1.263e+04	-5.039e+04	
3.318e+04	1	7	94	21.02	-5.09	-3.73	19.67	5.79	1.027e+04	-5.225e+04	6643.10	-4.863e+04
1.461e+04	1	7	95	24.82	-9.25	-8.94	24.52	-3.22	7109.41	-4.971e+04	-2492.72	-4.011e+04
2.129e+04	1	7	96	19.82	-2.76	-2.55	19.61	2.15	-446.30	-4.486e+04	-510.35	-4.479e+04
1685.36	1	7	97	25.87	-1.45	-1.09	25.51	-3.13	520.01	-4.175e+04	-1603.32	-3.963e+04
9232.65	1	7	98	95.81	-162.21	-158.23	91.84	31.77	-3.447e+04	-1.834e+05	-1.522e+05	-6.560e+04
6.055e+04	1	7	99	64.17	-109.81	-108.07	62.43	17.33	-1.619e+04	-1.434e+05	-1.082e+05	-5.145e+04
5.695e+04	1	7	100	47.38	-77.01	-76.37	46.74	8.86	-3513.12	-1.135e+05	-7.763e+04	-3.936e+04
5.155e+04	1	7	101	36.54	-55.09	-55.04	36.49	2.00	4744.64	-9.057e+04	-5.547e+04	-3.036e+04
4.597e+04	1	7	102	31.31	-42.82	-42.51	31.00	-4.81	9508.99	-6.976e+04	-3.852e+04	-2.173e+04
3.873e+04	1	7	103	25.29	-22.88	-22.51	24.93	-4.16	2.641e+04	-4.791e+04	-1.231e+04	-9180.60
3.713e+04	1	7	104	21.06	-2.36	-1.76	20.46	-3.70	1.135e+04	-4.261e+04	-1.393e+04	-1.733e+04
2.692e+04	1	7	105	19.56	-2.28	-0.73	18.01	-5.59	-98.15	-3.380e+04	-6592.82	-2.730e+04
1.329e+04	1	7	106	81.31	-139.40	-138.29	80.21	-15.56	6523.85	-1.467e+05	-1.324e+05	-7728.85
4.450e+04	1	7	107	58.77	-100.75	-99.68	57.70	-12.97	1.474e+04	-1.196e+05	-1.061e+05	1239.03
4.039e+04	1	7	108	42.94	-62.90	-60.98	41.02	-14.11	1.757e+04	-8.338e+04	-6.863e+04	2817.15
3.566e+04	1	7	109	32.87	-46.74	-45.30	31.43	-10.61	1.987e+04	-7.824e+04	-6.123e+04	2863.21
3.714e+04	1	7	110	25.22	-31.30	-30.47	24.39	-6.79	2.386e+04	-6.732e+04	-4.831e+04	4853.06
3.704e+04	1	7	111	23.92	-21.31	-17.72	20.33	-12.23	1.542e+04	-5.503e+04	-3.548e+04	-4133.20
3.154e+04	1	7	112	24.12	-8.25	6.82e-02	15.81	-14.15	8835.94	-3.725e+04	-1.971e+04	-8697.99
2.237e+04	1	7	113	24.89	-0.34	5.32	19.24	-10.52	218.65	-2.981e+04	-1.021e+04	-1.938e+04
1.430e+04	1	7	114	77.84	-121.74	-110.88	66.97	-45.28	2.468e+04	-1.128e+05	-1.083e+05	2.015e+04
2.454e+04	1	7	115	54.17	-89.57	-80.85	45.45	-34.31	4.832e+04	-8.843e+04	-8.383e+04	4.372e+04
2.466e+04	1	7	116	42.08	-54.69	-51.33	38.71	-17.72	2.646e+04	-7.630e+04	-7.314e+04	2.330e+04
1.776e+04	1	7	117	33.29	-43.64	-37.64	27.29	-20.63	2.573e+04	-6.416e+04	-5.995e+04	2.152e+04
1.900e+04	1	7	118	28.53	-37.82	-26.83	17.54	-24.66	2.615e+04	-5.067e+04	-4.577e+04	2.124e+04
1.878e+04	1	7	119	22.71	-21.00	-13.99	15.69	-16.04	3.357e+04	-3.575e+04	-3.029e+04	2.810e+04
1.868e+04	1	7	120	16.42	0.97	4.10	13.28	-6.21	1.086e+04	-3.077e+04	-2.738e+04	7466.61
1.138e+04	1	7	121	12.54	-1.79	2.48	8.27	-6.56	417.11	-2.082e+04	-1.230e+04	-8093.84
1.041e+04	1	7	122	96.83	-142.20	-120.61	75.23	-68.52	4.865e+04	-1.116e+05	-1.116e+05	4.859e+04
3086.53	1	7	123	62.48	-95.71	-77.61	44.38	-50.36	5.456e+04	-9.770e+04	-9.729e+04	5.415e+04
7872.46	1	7	124	52.80	-68.80	-53.30	37.30	-40.55	2.586e+04	-7.122e+04	-7.012e+04	2.475e+04
1.029e+04	1	7	125	37.84	-49.10	-36.59	25.33	-30.52	3.179e+04	-5.888e+04	-5.880e+04	3.171e+04
2721.19	1	7	126	29.05	-34.31	-25.78	20.52	-21.63	3.308e+04	-5.054e+04	-5.049e+04	3.303e+04
2048.41	1	7	127	21.29	-19.95	-8.16	9.51	-18.63	2.397e+04	-4.304e+04	-4.223e+04	2.316e+04
7329.94	1	7	128	16.70	-5.47	8.96	2.28	-10.57	1.182e+04	-3.061e+04	-2.873e+04	9938.58
8736.54	1	7	129	18.49	0.25	10.54	8.20	-9.05	-31.44	-2.115e+04	-1.578e+04	-5398.58







**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	7	166	24.75	-31.28	17.11	-23.64	-19.23	4.188e+04	1215.96	1.985e+04	2.325e+04	-
2.026e+04												
1	7	167	15.70	-20.79	7.58	-12.67	-15.18	2.921e+04	2400.75	1.753e+04	1.408e+04	-
1.329e+04												
1	7	168	9.29	-8.41	-1.97	2.85	-8.51	8137.64	-9174.54	7686.55	-8723.45	-
2757.88												
1	7	169	2.11	-8.49	-4.85	-1.52	-5.03	2522.59	793.38	2483.26	832.71	-257.82
1	7	170	122.81	-108.66	108.85	-94.70	-55.09	1.314e+05	3.657e+04	8.325e+04	8.470e+04	-
4.739e+04												
1	7	171	86.16	-79.22	78.12	-71.18	-35.56	9.219e+04	2.940e+04	5.459e+04	6.701e+04	-
3.077e+04												
1	7	172	52.70	-31.50	46.16	-24.96	-22.54	6.148e+04	1.004e+04	4.534e+04	2.618e+04	-
2.387e+04												
1	7	173	41.59	-38.96	31.73	-29.10	-26.40	4.030e+04	1.192e+04	3.137e+04	2.085e+04	-
1.318e+04												
1	7	174	33.58	-37.26	23.26	-26.94	-25.00	2.645e+04	1.005e+04	2.258e+04	1.391e+04	-
6961.72												
1	7	175	12.22	-19.72	6.75	-14.25	-12.03	2.037e+04	278.29	1.083e+04	9812.28	-
1.003e+04												
1	7	176	4.22	-8.78	-8.52	3.97	-1.81	8613.59	-4535.34	3822.60	255.66	-
6327.94												
1	7	177	2.85	-7.48	-3.70	-0.93	-4.97	-523.22	-1989.29	-1136.01	-1376.50	-723.10
1	7	178	101.07	-85.44	98.28	-82.66	-22.63	1.174e+05	2.970e+04	7.409e+04	7.301e+04	-
4.385e+04												
1	7	179	78.12	-71.37	75.29	-68.53	-20.39	9.557e+04	3.703e+04	6.457e+04	6.803e+04	-
2.922e+04												
1	7	180	54.23	-45.88	48.42	-40.07	-23.41	3.666e+04	2.868e+04	3.244e+04	3.290e+04	-
3984.53												
1	7	181	38.51	-38.51	34.74	-34.74	-16.61	3.378e+04	1.575e+04	2.434e+04	2.519e+04	-
9003.40												
1	7	182	22.96	-30.69	20.84	-28.57	-10.46	3.668e+04	7807.43	2.188e+04	2.261e+04	-
1.443e+04												
1	7	183	16.46	-26.44	13.40	-23.38	-11.04	2.384e+04	9605.28	1.527e+04	1.818e+04	-
6966.52												
1	7	184	8.31	-17.51	-2.60	-6.60	-12.75	5642.70	-5994.83	-286.32	-65.81	-
5817.72												
1	7	185	1.96	-18.65	-6.74	-9.95	-10.18	5558.85	1364.22	3194.00	3729.07	-
2080.19												
1	7	186	132.15	-109.80	132.15	-109.80	1.23	1.324e+05	3.654e+04	8.364e+04	8.532e+04	-
4.793e+04												
1	7	187	94.08	-81.00	93.49	-80.41	-10.14	9.016e+04	3.167e+04	6.312e+04	5.872e+04	-
2.917e+04												
1	7	188	51.52	-55.83	49.85	-54.16	-13.27	6.139e+04	1.644e+04	3.138e+04	4.646e+04	-
2.117e+04												
1	7	189	43.51	-44.27	43.18	-43.94	-5.42	4.128e+04	1.171e+04	2.040e+04	3.259e+04	-
1.347e+04												
1	7	190	35.27	-40.37	35.09	-40.19	-3.75	2.920e+04	6697.35	1.058e+04	2.531e+04	-
8505.42												
1	7	191	14.81	-25.26	13.02	-23.48	-8.27	2.032e+04	-474.59	7972.60	1.187e+04	-
1.021e+04												
1	7	192	7.42	-23.44	-8.90	-7.12	-15.40	6835.36	-2134.41	3016.20	1684.75	-
4435.20												
1	7	193	2.51	-20.06	-4.76	-12.79	-10.55	-537.83	-1346.11	-954.86	-929.08	-403.94
1	7	194	157.48	-115.57	149.65	-107.74	45.58	1.413e+05	2.480e+04	9.586e+04	7.024e+04	-
5.683e+04												
1	7	195	101.18	-76.59	98.15	-73.55	23.03	9.505e+04	1.724e+04	6.087e+04	5.142e+04	-
3.862e+04												
1	7	196	67.16	-55.13	66.37	-54.33	9.81	6.508e+04	1.010e+04	3.710e+04	3.809e+04	-
2.749e+04												
1	7	197	45.86	-43.38	45.51	-43.02	5.62	4.790e+04	3952.41	2.339e+04	2.846e+04	-
2.183e+04												
1	7	198	30.00	-35.75	29.89	-35.65	2.64	4.033e+04	1152.07	2.145e+04	2.003e+04	-
1.958e+04												
1	7	199	18.57	-30.04	18.56	-30.03	-0.67	2.978e+04	344.82	1.182e+04	1.830e+04	-
1.435e+04												
1	7	200	7.50	-25.21	4.83	-22.54	-8.95	8847.54	-9303.75	-8606.86	8150.65	-
3487.66												
1	7	201	2.41	-24.65	-0.96	-21.27	-8.94	2925.13	325.45	438.95	2811.63	-531.20
1	7	202	183.93	-125.87	141.58	-83.52	106.43	1.462e+05	5149.62	1.063e+05	4.496e+04	-
6.347e+04												
1	7	203	106.73	-72.34	83.81	-49.42	59.82	1.040e+05	-6844.04	7.073e+04	2.646e+04	-
5.083e+04												
1	7	204	73.49	-48.20	66.05	-40.75	29.16	5.687e+04	-2354.32	3.643e+04	1.809e+04	-

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

2.816e+04														
1	7	205	53.41	-46.48	46.99	-40.06	24.49	4.885e+04	-8113.25	2.310e+04	1.764e+04	-		
2.835e+04														
1	7	206	40.52	-44.03	34.08	-37.59	22.42	4.009e+04	-1.242e+04	1.246e+04	1.521e+04	-		
2.622e+04														
1	7	207	18.46	-29.86	18.03	-29.43	4.54	2.527e+04	-1.366e+04	9536.60	2064.89	-		
1.910e+04														
1	7	208	8.94	-28.43	3.34	-22.84	-13.33	8541.92	-9300.64	3038.69	-3797.42	-		
8240.52														
1	7	209	2.40	-26.52	0.85	-24.97	-6.51	-260.33	-5288.05	-831.39	-4716.99	-		
1595.31														
1	7	210	174.77	-123.02	84.47	-32.73	136.88	1.329e+05	-1.972e+04	1.110e+05	2196.77	-		
5.353e+04														
1	7	211	113.42	-81.62	61.68	-29.88	86.11	1.066e+05	-1.394e+04	8.023e+04	1.239e+04	-		
4.979e+04														
1	7	212	76.33	-58.79	45.73	-28.19	56.55	6.767e+04	-2.451e+04	3.725e+04	5903.09	-		
4.334e+04														
1	7	213	51.92	-45.65	33.49	-27.22	38.19	4.963e+04	-2.257e+04	2.832e+04	-1260.98	-		
3.293e+04														
1	7	214	34.72	-37.73	24.11	-27.12	25.61	4.114e+04	-1.883e+04	2.682e+04	-4511.17	-		
2.557e+04														
1	7	215	20.67	-32.52	14.89	-26.73	16.56	3.513e+04	-1.492e+04	2.099e+04	-782.49	-		
2.253e+04														
1	7	216	6.81	-27.11	6.44	-26.74	3.52	1.160e+04	-1.804e+04	-1890.63	-4550.01	-		
1.476e+04														
1	7	217	2.22	-26.52	2.22	-26.52	5.48e-02	1475.39	-5797.96	914.05	-5236.62	-		
1941.07														
1	7	218	166.10	-127.57	11.99	26.53	146.65	1.169e+05	-5.442e+04	1.011e+05	-3.861e+04	-		
4.958e+04														
1	7	219	104.71	-79.51	28.91	-3.72	90.66	7.781e+04	-4.220e+04	6.475e+04	-2.914e+04	-		
3.737e+04														
1	7	220	59.40	-52.05	17.26	-9.91	54.04	6.245e+04	-4.097e+04	4.999e+04	-2.851e+04	-		
3.366e+04														
1	7	221	48.21	-44.14	13.52	-9.46	44.72	4.807e+04	-3.867e+04	3.620e+04	-2.681e+04	-		
2.980e+04														
1	7	222	38.04	-42.14	7.37	-11.47	38.97	4.173e+04	-3.655e+04	2.938e+04	-2.420e+04	-		
2.854e+04														
1	7	223	17.89	-30.16	8.21	-20.49	19.27	2.692e+04	-3.087e+04	2.128e+04	-2.523e+04	-		
1.715e+04														
1	7	224	8.22	-28.54	8.21	-28.53	-0.50	1.025e+04	-2.027e+04	9139.29	-1.916e+04	-		
5724.76														
1	7	225	1.82	-26.96	1.30	-26.44	3.83	-59.56	-1.321e+04	-214.69	-1.306e+04	-		
1419.99														
1	7	226	140.24	-102.70	-32.97	70.51	109.90	7.441e+04	-8.873e+04	7.170e+04	-8.602e+04	-		
2.086e+04														
1	7	227	90.11	-65.80	-11.89	36.19	74.16	6.112e+04	-7.525e+04	5.845e+04	-7.257e+04	-		
1.891e+04														
1	7	228	59.51	-45.68	-3.04	16.87	51.64	4.841e+04	-6.294e+04	4.599e+04	-6.052e+04	-		
1.626e+04														
1	7	229	42.95	-38.24	-0.22	4.93	40.51	3.920e+04	-5.147e+04	3.693e+04	-4.920e+04	-		
1.417e+04														
1	7	230	31.37	-34.18	0.97	-3.78	32.69	3.510e+04	-4.052e+04	3.374e+04	-3.915e+04	-		
1.007e+04														
1	7	231	18.82	-30.97	-1.96	-10.20	24.55	3.594e+04	-2.947e+04	3.443e+04	-2.796e+04	-		
9839.75														
1	7	232	4.70	-25.27	-1.73	-18.83	12.30	1.248e+04	-2.720e+04	1.080e+04	-2.553e+04	-		
7982.28														
1	7	233	1.58	-24.79	-1.92	-21.29	8.95	980.53	-1.459e+04	132.98	-1.374e+04	-		
3532.78														
1	7	234	119.98	-84.33	-55.60	91.25	71.03	4.751e+04	-1.153e+05	4.749e+04	-1.152e+05	-		
1890.12														
1	7	235	79.13	-57.37	-38.12	59.88	47.51	5.340e+04	-1.015e+05	5.295e+04	-1.010e+05	-		
8358.21														
1	7	236	51.35	-30.06	-10.56	31.86	34.74	2.243e+04	-7.398e+04	2.116e+04	-7.271e+04	-		
1.099e+04														
1	7	237	40.69	-37.76	-16.60	19.54	34.81	3.022e+04	-6.141e+04	3.017e+04	-6.136e+04	-		
2171.96														
1	7	238	31.35	-37.76	-19.78	13.36	30.32	3.337e+04	-5.439e+04	3.335e+04	-5.437e+04	-		
1164.99														
1	7	239	15.68	-28.34	-8.82	-3.84	21.87	2.277e+04	-4.473e+04	2.217e+04	-4.414e+04	-		
6305.92														
1	7	240	6.85	-26.27	2.68	-22.10	11.00	9460.25	-2.986e+04	6821.31	-2.722e+04	-		
9838.52														

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	7	241	0.86	-25.79	-5.45	-19.49	11.32	116.08	-2.184e+04	-5681.12	-1.604e+04
9678.80											
1	7	242	89.92	-66.73	-55.01	78.20	41.21	2.136e+04	-1.132e+05	1.751e+04	-1.093e+05
2.243e+04											
1	7	243	69.97	-55.07	-45.76	60.65	32.83	4.628e+04	-9.262e+04	4.233e+04	-8.868e+04
2.307e+04											
1	7	244	38.93	-37.62	-29.87	31.18	23.09	2.611e+04	-7.762e+04	2.247e+04	-7.398e+04
1.910e+04											
1	7	245	31.88	-34.50	-25.75	23.13	22.46	2.413e+04	-6.581e+04	2.010e+04	-6.179e+04
1.859e+04											
1	7	246	25.99	-31.42	-20.23	14.80	22.74	2.264e+04	-5.244e+04	1.868e+04	-4.848e+04
1.679e+04											
1	7	247	16.01	-28.27	-19.90	7.63	17.34	3.242e+04	-3.893e+04	2.758e+04	-3.409e+04
1.794e+04											
1	7	248	0.66	-22.30	-11.61	-10.03	11.45	1.158e+04	-3.137e+04	7398.45	-2.718e+04
1.274e+04											
1	7	249	0.85	-20.71	-9.13	-10.74	10.75	274.88	-2.222e+04	-8531.79	-1.342e+04
1.098e+04											
1	7	250	101.80	-79.49	-78.86	101.17	10.67	4706.17	-1.480e+05	-9138.84	-1.342e+05
4.385e+04											
1	7	251	75.60	-63.07	-61.05	73.59	16.59	1.416e+04	-1.231e+05	2031.99	-1.110e+05
3.895e+04											
1	7	252	32.17	-44.45	-39.21	26.94	19.33	1.499e+04	-7.916e+04	1310.23	-6.547e+04
3.318e+04											
1	7	253	28.16	-33.40	-32.06	26.82	8.98	1.837e+04	-7.914e+04	1584.55	-6.236e+04
3.681e+04											
1	7	254	22.17	-30.35	-29.84	21.65	5.19	2.352e+04	-7.049e+04	4332.24	-5.130e+04
3.789e+04											
1	7	255	12.74	-23.87	-20.06	8.93	11.17	1.363e+04	-5.650e+04	-4754.60	-3.811e+04
3.084e+04											
1	7	256	6.13	-26.69	-10.34	-10.21	16.41	6484.64	-3.540e+04	-1.083e+04	-1.809e+04
2.063e+04											
1	7	257	-0.17	-23.84	-14.47	-9.55	11.58	412.17	-2.964e+04	-1.939e+04	-9833.07
1.424e+04											
1	7	258	111.21	-89.40	-82.77	104.58	-35.88	-3.572e+04	-1.845e+05	-6.654e+04	-1.537e+05
6.029e+04											
1	7	259	68.54	-59.56	-57.09	66.07	-17.62	-1.782e+04	-1.442e+05	-5.224e+04	-1.098e+05
5.626e+04											
1	7	260	43.06	-43.03	-42.43	42.47	-7.15	-5297.32	-1.140e+05	-4.016e+04	-7.910e+04
5.072e+04											
1	7	261	28.70	-32.97	-32.87	28.59	-2.58	2457.50	-9.127e+04	-3.145e+04	-5.737e+04
4.504e+04											
1	7	262	22.31	-27.87	-27.82	22.26	1.51	5757.55	-7.066e+04	-2.295e+04	-4.195e+04
3.701e+04											
1	7	263	11.79	-22.39	-22.34	11.75	1.26	2.448e+04	-4.975e+04	-1.024e+04	-1.503e+04
3.704e+04											
1	7	264	-1.41	-17.49	-16.46	-2.45	3.94	1.224e+04	-4.325e+04	-1.811e+04	-1.290e+04
2.762e+04											
1	7	265	2.63e-02	-16.38	-13.22	-3.13	6.46	-250.94	-3.463e+04	-2.788e+04	-7004.44
1.366e+04											
1	7	266	121.69	-104.31	-59.82	77.19	-89.87	-7.543e+04	-2.300e+05	-1.295e+05	-1.759e+05
7.370e+04											
1	7	267	65.37	-60.68	-37.23	41.92	-49.05	-4.945e+04	-1.668e+05	-1.110e+05	-1.052e+05
5.861e+04											
1	7	268	41.27	-42.25	-29.98	28.99	-29.57	-2.833e+04	-1.286e+05	-8.415e+04	-7.281e+04
4.983e+04											
1	7	269	27.70	-32.80	-24.76	19.66	-20.54	-1.052e+04	-1.039e+05	-6.719e+04	-4.727e+04
4.563e+04											
1	7	270	19.89	-27.83	-20.96	13.02	-16.75	6732.93	-8.774e+04	-5.632e+04	-2.470e+04
4.451e+04											
1	7	271	9.51	-18.59	-17.65	8.57	-5.05	4865.40	-7.044e+04	-5.088e+04	-1.469e+04
3.302e+04											
1	7	272	2.64	-17.55	-14.57	-0.34	7.16	5479.59	-4.874e+04	-4.088e+04	-2374.45
1.908e+04											
1	7	273	-1.08	-15.91	-14.42	-2.57	4.46	674.13	-4.189e+04	-3.983e+04	-1388.42
9139.67											
1	7	274	107.85	-110.81	-12.99	10.03	-108.72	-1.273e+05	-2.358e+05	-1.754e+05	-1.877e+05
5.390e+04											
1	7	275	62.41	-68.13	-10.74	5.02	-64.79	-6.266e+04	-1.671e+05	-1.320e+05	-9.777e+04
4.935e+04											
1	7	276	36.60	-45.87	-7.99	-1.28	-41.10	-3.866e+04	-1.403e+05	-1.172e+05	-6.175e+04
4.258e+04											
1	7	277	23.38	-31.93	-9.63	1.07	-27.13	-2.338e+04	-1.088e+05	-9.379e+04	-3.844e+04



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	7	315	43.44	-77.22	24.48	-58.26	43.91	-1.125e+05	-1.615e+05	-1.200e+05	-1.540e+05	-	
1.766e+04	1	7	316	31.44	-55.40	14.39	-38.35	34.49	-6.265e+04	-1.247e+05	-7.210e+04	-1.153e+05	-
2.230e+04	1	7	317	23.92	-39.65	8.97	-24.71	26.96	-3.795e+04	-1.029e+05	-5.105e+04	-8.981e+04	-
2.606e+04	1	7	318	18.94	-27.29	7.08	-15.43	20.19	-1.219e+04	-8.813e+04	-2.885e+04	-7.147e+04	-
3.143e+04	1	7	319	16.86	-16.19	5.42	-4.74	15.73	-7656.75	-7.412e+04	-2.292e+04	-5.885e+04	-
2.796e+04	1	7	320	13.20	-6.51	0.97	5.73	9.56	2907.48	-5.532e+04	-1.117e+04	-4.124e+04	-
2.493e+04	1	7	321	14.61	-2.33	3.42	8.86	8.02	844.40	-4.936e+04	-1.428e+04	-3.424e+04	-
2.303e+04	1	7	322	79.67	-135.64	23.07	-79.04	94.78	-1.712e+05	-2.276e+05	-1.768e+05	-2.220e+05	-
1.680e+04	1	7	323	51.54	-92.62	5.49	-46.57	67.22	-1.106e+05	-1.751e+05	-1.106e+05	-1.751e+05	-
1068.20	1	7	324	36.67	-65.40	-1.93	-26.80	49.49	-6.773e+04	-1.380e+05	-6.843e+04	-1.373e+05	-
6968.94	1	7	325	28.08	-46.58	-4.61	-13.88	37.04	-4.032e+04	-1.087e+05	-4.166e+04	-1.074e+05	-
9492.04	1	7	326	23.20	-33.48	-6.30	-3.98	28.31	-2.490e+04	-8.188e+04	-2.611e+04	-8.067e+04	-
8210.64	1	7	327	19.96	-19.39	-2.20	2.76	19.52	1.197e+04	-5.710e+04	8941.28	-5.406e+04	-
1.415e+04	1	7	328	17.09	-6.18	1.68	9.23	11.01	9653.73	-5.432e+04	5582.31	-5.025e+04	-
1.562e+04	1	7	329	15.89	-2.77	0.99	12.13	7.48	-810.64	-4.934e+04	-7239.23	-4.291e+04	-
1.645e+04	1	7	330	89.52	-159.33	-28.88	-40.93	124.28	-1.556e+05	-2.385e+05	-1.807e+05	-2.134e+05	-
3.811e+04	1	7	331	59.50	-107.22	-27.09	-20.63	83.30	-9.701e+04	-1.800e+05	-1.082e+05	-1.688e+05	-
2.839e+04	1	7	332	41.10	-73.05	-25.85	-6.10	56.22	-5.637e+04	-1.347e+05	-5.892e+04	-1.321e+05	-
1.389e+04	1	7	333	30.75	-50.95	-21.41	1.21	39.26	-3.103e+04	-1.123e+05	-3.288e+04	-1.105e+05	-
1.210e+04	1	7	334	23.60	-33.89	-14.52	4.24	27.17	-6499.09	-9.385e+04	-7215.14	-9.314e+04	-
7876.36	1	7	335	22.56	-20.95	-10.64	12.25	18.50	-1352.29	-7.730e+04	-1422.51	-7.723e+04	-
2308.17	1	7	336	20.64	-8.60	-6.07	18.11	8.22	5434.27	-5.690e+04	5330.08	-5.680e+04	-
2546.49	1	7	337	21.75	-2.16	-0.59	20.19	5.91	723.44	-4.924e+04	-829.04	-4.769e+04	-
8669.21	1	39	1	134.32	-111.37	-106.60	129.55	33.92	2.031e+04	-1.440e+05	1.665e+04	-1.404e+05	-
2.425e+04	1	39	2	168.72	-139.66	-139.55	168.61	-5.91	-1.314e+04	-1.825e+05	-2.347e+04	-1.722e+05	-
4.053e+04	1	39	3	232.10	-193.59	-189.10	227.60	43.51	9992.76	-1.773e+05	6505.98	-1.738e+05	-
2.531e+04	1	39	4	174.08	-145.73	-124.66	153.01	79.34	4.525e+04	-1.342e+05	4.494e+04	-1.339e+05	-
7408.25	1	39	5	331.90	-290.39	-247.50	289.01	157.64	6.985e+04	-1.482e+05	6.918e+04	-1.475e+05	-
1.215e+04	1	39	6	222.93	-192.73	-126.00	156.20	152.59	8.873e+04	-1.077e+05	8.799e+04	-1.069e+05	-
1.206e+04	1	39	7	456.90	-395.30	-195.06	256.65	361.32	1.891e+05	-1.039e+05	1.887e+05	-1.035e+05	-
1.013e+04	1	39	8	270.93	-235.86	-67.22	102.29	238.80	1.487e+05	-6.881e+04	1.426e+05	-6.280e+04	-
3.564e+04	1	39	9	514.92	-449.54	87.21	-21.83	479.14	3.210e+05	-5.322e+04	3.056e+05	-3.783e+04	-
7.431e+04	1	39	10	296.25	-254.01	64.12	-21.88	271.75	2.063e+05	-2.789e+04	1.862e+05	-7771.51	-
6.563e+04	1	39	11	474.45	-423.09	345.11	-293.75	315.21	3.818e+05	-8027.97	3.133e+05	6.054e+04	-
1.484e+05	1	39	12	283.86	-241.82	182.51	-140.47	207.38	2.365e+05	5818.70	1.920e+05	5.027e+04	-
9.098e+04	1	39	13	357.93	-319.63	344.82	-306.52	93.32	3.448e+05	2.136e+04	2.287e+05	1.374e+05	-
1.551e+05	1	39	14	237.54	-207.24	211.58	-181.28	104.28	2.281e+05	2.780e+04	1.632e+05	9.267e+04	-







**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	39	88	28.39	-44.07	-22.83	7.16	32.98	-2.222e+04	-1.087e+05	-3.757e+04	-9.333e+04	
3.304e+04	1	39	89	29.45	-44.99	-36.14	20.60	24.10	-9070.30	-1.034e+05	-4.607e+04	-6.639e+04
4.605e+04	1	39	90	20.18	-29.90	-18.02	8.30	21.31	-1.115e+04	-8.275e+04	-2.248e+04	-7.142e+04
2.613e+04	1	39	91	19.75	-28.98	-23.69	14.46	15.15	7366.88	-8.618e+04	-2.337e+04	-5.544e+04
4.394e+04	1	39	92	15.05	-17.16	-10.53	8.42	13.02	1.789e+04	-5.734e+04	1.086e+04	-5.032e+04
2.190e+04	1	39	93	16.64	-17.68	-15.69	14.65	8.03	6148.64	-6.994e+04	-1.326e+04	-5.053e+04
3.317e+04	1	39	94	11.05	-5.90	-3.63	8.78	5.77	1.057e+04	-5.260e+04	6964.53	-4.899e+04
1.466e+04	1	39	95	12.99	-6.68	-6.66	12.97	0.57	6876.13	-4.971e+04	-2671.40	-4.016e+04
2.119e+04	1	39	96	9.28	-2.36	-1.99	8.90	2.05	-491.10	-4.516e+04	-555.89	-4.510e+04
1699.98	1	39	97	13.50	-1.59	-1.55	13.46	-0.76	568.62	-4.183e+04	-1559.11	-3.970e+04
9256.81	1	39	98	91.72	-139.03	-131.41	84.11	41.23	-3.467e+04	-1.837e+05	-1.526e+05	-6.576e+04
6.056e+04	1	39	99	59.10	-92.64	-88.03	54.50	26.03	-1.646e+04	-1.437e+05	-1.086e+05	-5.156e+04
5.687e+04	1	39	100	41.39	-64.36	-61.64	38.67	16.74	-3799.39	-1.137e+05	-7.807e+04	-3.947e+04
5.147e+04	1	39	101	29.71	-45.02	-43.94	28.63	8.91	4339.70	-9.090e+04	-5.604e+04	-3.053e+04
4.588e+04	1	39	102	22.61	-32.76	-32.69	22.54	2.06	8793.16	-7.017e+04	-3.948e+04	-2.190e+04
3.849e+04	1	39	103	17.05	-17.84	-17.83	17.04	0.61	2.599e+04	-4.839e+04	-1.300e+04	-9400.35
3.715e+04	1	39	104	13.05	-3.33	-3.32	13.04	-0.43	1.161e+04	-4.286e+04	-1.378e+04	-1.747e+04
2.718e+04	1	39	105	11.16	-1.97	-1.45	10.65	-2.55	-135.67	-3.403e+04	-6683.49	-2.749e+04
1.338e+04	1	39	106	75.42	-120.20	-120.11	75.34	-4.02	6359.83	-1.470e+05	-1.328e+05	-7831.75
4.444e+04	1	39	107	51.23	-83.99	-83.96	51.20	-1.94	1.476e+04	-1.203e+05	-1.070e+05	1518.16
4.016e+04	1	39	108	36.98	-56.58	-56.44	36.84	-3.61	1.723e+04	-8.274e+04	-6.819e+04	2681.08
3.526e+04	1	39	109	27.13	-39.58	-39.31	26.86	-4.27	1.971e+04	-7.854e+04	-6.158e+04	2747.38
3.713e+04	1	39	110	19.21	-25.76	-25.60	19.05	-2.70	2.384e+04	-6.795e+04	-4.893e+04	4816.39
3.721e+04	1	39	111	17.13	-17.23	-15.92	15.82	-6.59	1.512e+04	-5.532e+04	-3.599e+04	-4206.19
3.143e+04	1	39	112	15.36	-6.31	-2.55	11.59	-8.21	8597.52	-3.714e+04	-1.972e+04	-8822.96
2.221e+04	1	39	113	16.00	-0.50	2.52	12.98	-6.38	255.06	-2.981e+04	-1.018e+04	-1.938e+04
1.431e+04	1	39	114	71.59	-106.22	-99.73	65.10	-33.34	2.426e+04	-1.129e+05	-1.085e+05	1.983e+04
2.425e+04	1	39	115	47.20	-75.67	-70.34	41.87	-25.03	4.823e+04	-8.920e+04	-8.470e+04	4.373e+04
2.444e+04	1	39	116	38.08	-48.77	-47.05	36.36	-12.10	2.652e+04	-7.659e+04	-7.337e+04	2.330e+04
1.794e+04	1	39	117	28.08	-37.36	-33.89	24.61	-14.68	2.563e+04	-6.451e+04	-6.033e+04	2.146e+04
1.894e+04	1	39	118	22.38	-31.14	-24.08	15.32	-18.12	2.580e+04	-5.105e+04	-4.630e+04	2.105e+04
1.850e+04	1	39	119	17.01	-17.23	-12.85	12.63	-11.43	3.349e+04	-3.627e+04	-3.091e+04	2.813e+04
1.858e+04	1	39	120	12.22	-0.22	1.05	10.95	-3.77	1.104e+04	-3.093e+04	-2.746e+04	7565.29
1.157e+04	1	39	121	8.18	-1.65	0.65	5.87	-4.17	398.05	-2.101e+04	-1.246e+04	-8150.21
1.048e+04	1	39	122	88.60	-125.03	-108.45	72.02	-57.16	4.863e+04	-1.122e+05	-1.122e+05	4.858e+04
2891.51	1	39	123	56.57	-83.86	-68.52	41.23	-43.81	5.467e+04	-9.839e+04	-9.797e+04	5.425e+04
7973.32	1	39	124	51.31	-61.45	-48.44	38.30	-36.03	2.539e+04	-7.169e+04	-7.055e+04	2.426e+04





**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	39	161	9.56	2.07	9.55	2.08	-0.19	-339.17	-5355.49	-4664.15	-1030.50	-
1729.17												
1	39	162	120.32	-133.18	92.80	-105.65	-78.86	1.420e+05	2.585e+04	7.069e+04	9.712e+04	-
5.653e+04												
1	39	163	77.66	-85.33	60.38	-68.05	-50.18	9.611e+04	1.736e+04	5.145e+04	6.202e+04	-
3.902e+04												
1	39	164	52.63	-56.27	41.70	-45.33	-32.73	6.606e+04	9912.27	3.786e+04	3.811e+04	-
2.807e+04												
1	39	165	35.28	-39.39	28.38	-32.49	-21.63	4.889e+04	4266.91	2.842e+04	2.474e+04	-
2.224e+04												
1	39	166	23.31	-31.36	20.95	-29.00	-11.11	4.269e+04	1405.19	2.021e+04	2.389e+04	-
2.056e+04												
1	39	167	15.04	-17.73	12.03	-14.73	-9.46	2.984e+04	2533.38	1.799e+04	1.438e+04	-
1.353e+04												
1	39	168	9.82	-2.15	3.78	3.89	-5.98	8412.18	-9380.39	7996.05	-8964.26	-
2689.02												
1	39	169	2.38	-2.51	0.55	-0.67	-2.37	2754.87	840.21	2731.33	863.75	-210.98
1	39	170	103.08	-108.44	97.51	-102.87	-33.87	1.322e+05	3.683e+04	8.403e+04	8.496e+04	-
4.767e+04												
1	39	171	74.26	-80.50	71.51	-77.75	-20.44	9.278e+04	2.995e+04	5.522e+04	6.751e+04	-
3.081e+04												
1	39	172	44.51	-30.55	43.10	-29.14	-10.20	6.206e+04	1.037e+04	4.594e+04	2.649e+04	-
2.395e+04												
1	39	173	34.30	-34.68	30.49	-30.87	-15.77	4.090e+04	1.215e+04	3.194e+04	2.110e+04	-
1.332e+04												
1	39	174	27.97	-31.37	22.88	-26.27	-16.63	2.710e+04	1.022e+04	2.329e+04	1.402e+04	-
7058.88												
1	39	175	11.07	-15.44	10.29	-14.66	-4.50	2.094e+04	404.43	1.121e+04	1.014e+04	-
1.026e+04												
1	39	176	5.98	-3.12	-1.33	4.19	3.62	8744.04	-4384.50	3858.35	501.19	-
6346.02												
1	39	177	3.50	2.25	3.47	2.28	-0.18	-556.99	-1909.25	-1090.39	-1375.85	-660.89
1	39	178	86.16	-87.74	86.16	-87.74	-0.44	1.184e+05	2.963e+04	7.452e+04	7.352e+04	-
4.439e+04												
1	39	179	65.14	-71.28	65.06	-71.20	-3.17	9.677e+04	3.743e+04	6.561e+04	6.859e+04	-
2.963e+04												
1	39	180	46.76	-41.99	44.83	-40.06	-12.94	3.653e+04	2.924e+04	3.271e+04	3.305e+04	-
3638.97												
1	39	181	32.48	-34.46	32.01	-33.99	-5.56	3.430e+04	1.607e+04	2.485e+04	2.552e+04	-
9106.74												
1	39	182	19.07	-27.78	19.01	-27.72	1.70	3.787e+04	7974.95	2.265e+04	2.319e+04	-
1.494e+04												
1	39	183	14.24	-20.63	14.06	-20.46	-2.48	2.455e+04	1.001e+04	1.600e+04	1.855e+04	-
7157.03												
1	39	184	8.91	-8.11	2.59	-1.79	-8.23	5973.28	-6357.44	-253.84	-130.31	-
6165.05												
1	39	185	1.50	-10.34	-2.97	-5.87	-5.74	5901.08	1419.67	3420.14	3900.61	-
2227.79												
1	39	186	114.70	-114.23	112.46	-111.99	22.53	1.331e+05	3.684e+04	8.410e+04	8.584e+04	-
4.813e+04												
1	39	187	77.12	-78.95	76.77	-78.59	7.42	9.100e+04	3.201e+04	6.418e+04	5.883e+04	-
2.938e+04												
1	39	188	43.81	-52.43	43.75	-52.37	2.28	6.199e+04	1.610e+04	3.118e+04	4.690e+04	-
2.155e+04												
1	39	189	37.62	-41.22	37.20	-40.80	5.74	4.178e+04	1.206e+04	2.084e+04	3.300e+04	-
1.356e+04												
1	39	190	31.66	-36.21	31.39	-35.94	4.28	2.958e+04	7312.58	1.116e+04	2.573e+04	-
8416.02												
1	39	191	11.31	-17.78	11.29	-17.77	0.59	2.094e+04	-222.88	8577.61	1.214e+04	-
1.043e+04												
1	39	192	5.12	-11.35	-6.60	0.36	-7.46	7113.01	-2150.34	3153.91	1808.77	-
4582.58												
1	39	193	2.55	-6.83	-0.66	-3.61	-4.45	-585.11	-1300.11	-979.63	-905.59	-355.57
1	39	194	137.50	-120.58	120.49	-103.57	64.03	1.417e+05	2.505e+04	9.630e+04	7.048e+04	-
5.690e+04												
1	39	195	85.41	-76.83	76.01	-67.43	37.90	9.557e+04	1.748e+04	6.140e+04	5.165e+04	-
3.874e+04												
1	39	196	54.68	-51.71	49.89	-46.93	22.05	6.560e+04	1.039e+04	3.763e+04	3.835e+04	-
2.760e+04												
1	39	197	36.73	-38.79	33.06	-35.11	16.26	4.857e+04	4307.77	2.407e+04	2.880e+04	-
2.200e+04												
1	39	198	22.14	-29.86	18.74	-26.46	12.85	4.146e+04	1514.51	2.260e+04	2.037e+04	-
1.994e+04												

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	39	199	14.69	-22.16	13.52	-21.00	6.46	3.045e+04	853.19	1.256e+04	1.874e+04	-	
1.447e+04	1	39	200	7.81	-14.29	6.70	-13.17	-4.83	9023.88	-9452.30	-8865.61	8437.19	-
3239.69	1	39	201	1.84	-13.89	0.10	-12.15	-4.93	3170.43	461.48	531.73	3100.19	-430.54
1	1	39	202	161.62	-132.42	103.03	-73.83	117.45	1.466e+05	5684.96	1.070e+05	4.524e+04	-
6.331e+04	1	39	203	92.90	-75.85	55.64	-38.59	70.00	1.048e+05	-6832.36	7.136e+04	2.659e+04	-
5.112e+04	1	39	204	59.66	-42.45	46.22	-29.02	34.51	5.693e+04	-1991.61	3.684e+04	1.810e+04	-
2.793e+04	1	39	205	44.31	-42.15	32.24	-30.08	29.97	4.937e+04	-7697.54	2.369e+04	1.798e+04	-
2.839e+04	1	39	206	35.92	-39.99	24.77	-28.84	26.87	4.068e+04	-1.191e+04	1.298e+04	1.579e+04	-
2.626e+04	1	39	207	13.05	-20.36	10.64	-17.96	8.63	2.585e+04	-1.338e+04	1.020e+04	2272.83	-
1.921e+04	1	39	208	6.75	-15.95	0.37	-9.57	-10.20	8737.10	-9217.85	3270.18	-3750.93	-
8262.63	1	39	209	2.43	-12.62	1.37	-11.56	-3.85	-311.38	-5181.35	-879.98	-4612.75	-
1563.89	1	39	210	155.24	-131.43	41.67	-17.86	140.21	1.337e+05	-1.964e+04	1.119e+05	2108.42	-
5.349e+04	1	39	211	99.00	-85.05	31.74	-17.79	88.63	1.073e+05	-1.361e+04	8.102e+04	1.264e+04	-
4.984e+04	1	39	212	67.04	-58.43	27.26	-18.66	58.38	6.796e+04	-2.424e+04	3.732e+04	6398.21	-
4.343e+04	1	39	213	43.85	-42.23	17.91	-16.28	39.50	5.016e+04	-2.223e+04	2.889e+04	-958.90	-
3.298e+04	1	39	214	26.64	-31.64	9.52	-14.52	26.55	4.211e+04	-1.844e+04	2.799e+04	-4316.80	-
2.560e+04	1	39	215	16.48	-24.48	7.16	-15.16	17.17	3.583e+04	-1.451e+04	2.172e+04	-400.02	-
2.261e+04	1	39	216	6.88	-16.39	6.34	-15.84	3.53	1.165e+04	-1.804e+04	-2212.05	-4182.52	-
1.481e+04	1	39	217	1.66	-15.81	1.66	-15.81	0.15	1549.60	-5522.85	959.58	-4932.84	-
1955.68	1	39	218	153.64	-141.72	-25.40	37.31	144.31	1.178e+05	-5.423e+04	1.019e+05	-3.825e+04	-
4.995e+04	1	39	219	90.66	-81.23	3.32	6.12	85.94	7.813e+04	-4.171e+04	6.520e+04	-2.879e+04	-
3.718e+04	1	39	220	51.09	-51.84	-1.80	1.05	51.44	6.297e+04	-4.091e+04	5.045e+04	-2.839e+04	-
3.382e+04	1	39	221	42.18	-42.41	-0.73	0.50	42.29	4.864e+04	-3.840e+04	3.678e+04	-2.654e+04	-
2.986e+04	1	39	222	35.39	-39.94	-1.99	-2.56	37.67	4.240e+04	-3.626e+04	2.993e+04	-2.379e+04	-
2.873e+04	1	39	223	12.92	-21.53	1.35	-9.97	16.27	2.749e+04	-3.067e+04	2.191e+04	-2.508e+04	-
1.713e+04	1	39	224	6.71	-17.77	5.93	-16.99	-4.30	1.039e+04	-2.018e+04	9317.98	-1.911e+04	-
5623.06	1	39	225	1.90	-14.52	1.76	-14.39	1.46	-107.54	-1.313e+04	-258.90	-1.298e+04	-
1395.83	1	39	226	131.09	-112.64	-59.79	78.25	100.43	7.480e+04	-8.856e+04	7.209e+04	-8.585e+04	-
2.087e+04	1	39	227	81.79	-69.59	-31.93	44.13	65.45	6.153e+04	-7.511e+04	5.889e+04	-7.246e+04	-
1.883e+04	1	39	228	52.29	-45.11	-17.77	24.95	43.77	4.883e+04	-6.281e+04	4.643e+04	-6.041e+04	-
1.619e+04	1	39	229	36.43	-34.96	-11.32	12.79	33.60	3.973e+04	-5.126e+04	3.750e+04	-4.903e+04	-
1.407e+04	1	39	230	24.60	-28.77	-8.85	4.68	25.82	3.599e+04	-4.027e+04	3.470e+04	-3.898e+04	-
9828.86	1	39	231	15.43	-24.38	-6.64	-2.31	19.78	3.662e+04	-2.925e+04	3.511e+04	-2.774e+04	-
9859.86	1	39	232	4.85	-16.43	-0.17	-11.41	9.03	1.244e+04	-2.718e+04	1.065e+04	-2.539e+04	-
8233.90	1	39	233	1.11	-16.24	-1.20	-13.92	5.90	1035.70	-1.437e+04	223.64	-1.356e+04	-
3443.09	1	39	234	114.88	-92.54	-73.78	96.12	59.49	4.789e+04	-1.152e+05	4.787e+04	-1.151e+05	-
1950.19	1	39	235	76.59	-64.04	-53.84	66.38	36.48	5.437e+04	-1.018e+05	5.389e+04	-1.013e+05	-
8590.20													

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	39	236	45.70	-24.77	-15.11	36.04	24.24	2.209e+04	-7.395e+04	2.072e+04	-7.258e+04	
1.140e+04	1	39	237	37.58	-36.06	-22.60	24.11	28.47	3.057e+04	-6.129e+04	3.052e+04	-6.124e+04
2184.93	1	39	238	31.05	-37.00	-24.65	18.70	26.23	3.398e+04	-5.435e+04	3.397e+04	-5.434e+04
1	1	39	239	12.21	-22.16	-10.62	0.67	16.23	2.330e+04	-4.467e+04	2.269e+04	-4.406e+04
6420.06	1	39	240	6.35	-18.94	5.29	-17.88	5.06	9554.62	-2.983e+04	6824.36	-2.709e+04
1.000e+04	1	39	241	0.98	-16.86	-2.65	-13.23	7.18	78.51	-2.183e+04	-5711.22	-1.605e+04
9661.89	1	39	242	85.72	-71.80	-66.16	80.08	29.27	2.164e+04	-1.130e+05	1.769e+04	-1.090e+05
2.272e+04	1	39	243	68.67	-60.71	-56.27	64.23	23.55	4.720e+04	-9.268e+04	4.321e+04	-8.869e+04
2.329e+04	1	39	244	37.78	-38.38	-34.15	33.54	17.46	2.627e+04	-7.755e+04	2.270e+04	-7.398e+04
1.892e+04	1	39	245	30.37	-34.06	-29.51	25.82	16.51	2.452e+04	-6.576e+04	2.049e+04	-6.172e+04
1.865e+04	1	39	246	22.76	-28.72	-22.99	17.02	16.20	2.328e+04	-5.235e+04	1.921e+04	-4.828e+04
1.706e+04	1	39	247	15.17	-25.51	-21.03	10.69	12.73	3.305e+04	-3.896e+04	2.820e+04	-3.411e+04
1.804e+04	1	39	248	0.90	-17.15	-8.56	-7.69	9.01	1.154e+04	-3.134e+04	7479.89	-2.728e+04
1.255e+04	1	39	249	0.56	-16.20	-7.30	-8.34	8.36	315.57	-2.205e+04	-8374.02	-1.336e+04
1.090e+04	1	39	250	104.38	-91.02	-91.02	104.38	-0.69	5360.29	-1.481e+05	-8543.53	-1.342e+05
4.404e+04	1	39	251	77.42	-70.83	-70.14	76.74	10.04	1.471e+04	-1.231e+05	2714.15	-1.111e+05
3.885e+04	1	39	252	28.94	-47.08	-44.08	25.94	14.80	1.532e+04	-7.856e+04	1740.42	-6.498e+04
3.302e+04	1	39	253	28.85	-35.82	-35.62	28.65	3.60	1.880e+04	-7.914e+04	1997.77	-6.234e+04
3.692e+04	1	39	254	24.89	-33.10	-33.09	24.89	0.45	2.407e+04	-7.071e+04	4904.29	-5.155e+04
3.806e+04	1	39	255	11.63	-21.63	-19.59	9.58	7.99	1.394e+04	-5.654e+04	-4478.80	-3.812e+04
3.096e+04	1	39	256	6.27	-24.39	-6.66	-11.46	15.14	6471.72	-3.523e+04	-1.087e+04	-1.789e+04
2.055e+04	1	39	257	-0.16	-20.17	-11.93	-8.40	9.85	396.38	-2.956e+04	-1.935e+04	-9815.97
1.420e+04	1	39	258	119.44	-100.87	-90.49	109.06	-46.68	-3.557e+04	-1.846e+05	-6.646e+04	-1.537e+05
6.042e+04	1	39	259	73.27	-66.60	-62.22	68.89	-24.36	-1.767e+04	-1.442e+05	-5.209e+04	-1.098e+05
5.631e+04	1	39	260	45.67	-47.29	-45.87	44.25	-11.39	-5120.05	-1.139e+05	-3.995e+04	-7.909e+04
5.076e+04	1	39	261	30.45	-35.73	-35.15	29.87	-6.17	2689.80	-9.129e+04	-3.123e+04	-5.737e+04
4.514e+04	1	39	262	23.23	-29.31	-29.27	23.19	-1.49	5994.77	-7.069e+04	-2.275e+04	-4.194e+04
3.712e+04	1	39	263	12.63	-23.00	-22.98	12.61	-0.89	2.478e+04	-4.991e+04	-9978.92	-1.515e+04
3.725e+04	1	39	264	-1.51	-16.68	-15.75	-2.44	3.63	1.234e+04	-4.329e+04	-1.793e+04	-1.302e+04
2.770e+04	1	39	265	-6.14e-02	-15.52	-12.77	-2.81	5.91	-240.98	-3.456e+04	-2.777e+04	-7028.44
1.367e+04	1	39	266	138.27	-116.31	-64.69	86.66	-102.35	-7.533e+04	-2.307e+05	-1.297e+05	-1.763e+05
7.412e+04	1	39	267	73.55	-66.52	-38.66	45.69	-55.91	-4.951e+04	-1.671e+05	-1.115e+05	-1.051e+05
5.870e+04	1	39	268	47.24	-45.78	-32.09	33.55	-32.96	-2.860e+04	-1.288e+05	-8.434e+04	-7.302e+04
4.976e+04	1	39	269	33.01	-37.54	-27.72	23.19	-24.42	-1.044e+04	-1.041e+05	-6.715e+04	-4.743e+04
4.580e+04	1	39	270	25.04	-33.02	-23.88	15.91	-21.14	7019.73	-8.813e+04	-5.619e+04	-2.491e+04
4.493e+04	1	39	271	10.95	-20.47	-19.36	9.84	-5.80	4900.42	-7.055e+04	-5.083e+04	-1.482e+04
3.315e+04	1	39	272	3.80	-19.93	-15.42	-0.71	9.31	5392.94	-4.864e+04	-4.090e+04	-2347.96
1.893e+04												

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	39	273	-1.12	-17.47	-15.97	-2.62	4.72	679.57	-4.187e+04	-3.981e+04	-1381.80		
9135.91	1	39	274	124.23	-118.80	-17.45	22.87	-119.83	-1.275e+05	-2.358e+05	-1.754e+05	-1.879e+05	
5.376e+04	1	39	275	74.38	-74.75	-14.37	14.00	-73.20	-6.268e+04	-1.674e+05	-1.321e+05	-9.801e+04	
4.953e+04	1	39	276	44.50	-51.09	-10.85	4.26	-47.20	-3.846e+04	-1.407e+05	-1.173e+05	-6.177e+04	
4.288e+04	1	39	277	29.27	-36.43	-12.91	5.74	-31.50	-2.343e+04	-1.091e+05	-9.388e+04	-3.861e+04	
3.270e+04	1	39	278	20.92	-26.99	-14.81	8.74	-20.86	-1.355e+04	-8.285e+04	-7.177e+04	-2.463e+04	
2.540e+04	1	39	279	11.19	-20.34	-12.81	3.65	-13.45	1.677e+04	-5.825e+04	-5.102e+04	9532.85	
2.214e+04	1	39	280	-2.12	-12.51	-11.20	-3.43	-3.45	1.103e+04	-5.314e+04	-4.967e+04	7554.16	
1.452e+04	1	39	281	-0.92	-10.75	-10.73	-0.94	0.45	-562.18	-4.573e+04	-4.565e+04	-639.42	
1866.31	1	39	282	110.64	-119.66	39.83	-48.84	-106.27	-1.569e+05	-2.390e+05	-2.137e+05	-1.821e+05	
3.791e+04	1	39	283	63.74	-73.97	12.17	-22.40	-66.65	-9.819e+04	-1.802e+05	-1.682e+05	-1.102e+05	
2.900e+04	1	39	284	29.59	-46.02	2.72	-19.15	-36.19	-5.758e+04	-1.336e+05	-1.315e+05	-5.968e+04	
1.244e+04	1	39	285	25.37	-35.19	2.97	-12.79	-29.24	-3.247e+04	-1.130e+05	-1.112e+05	-3.425e+04	
1.186e+04	1	39	286	20.29	-29.42	1.41	-10.54	-24.13	-7306.34	-9.563e+04	-9.478e+04	-8157.21	
8627.16	1	39	287	8.43	-16.63	-5.55	-2.64	-12.44	-2806.67	-7.788e+04	-7.779e+04	-2898.35	
2621.78	1	39	288	0.69	-12.39	-12.30	0.59	1.12	4365.33	-5.663e+04	-5.628e+04	4022.74	
4558.26	1	39	289	-1.84	-10.52	-10.49	-1.87	-0.51	842.19	-4.965e+04	-4.802e+04	-787.50	
8923.45	1	39	290	91.79	-107.79	69.55	-85.55	-62.80	-1.720e+05	-2.279e+05	-2.223e+05	-1.777e+05	
1.684e+04	1	39	291	54.31	-67.97	38.25	-51.91	-41.30	-1.117e+05	-1.755e+05	-1.755e+05	-1.118e+05	977.08
7211.84	1	39	292	33.36	-45.52	21.92	-34.08	-27.78	-6.899e+04	-1.385e+05	-1.377e+05	-6.975e+04	
9570.83	1	39	293	22.64	-32.37	13.04	-22.77	-20.88	-4.190e+04	-1.094e+05	-1.080e+05	-4.328e+04	
8103.95	1	39	294	16.08	-22.36	6.26	-12.54	-16.76	-2.744e+04	-8.231e+04	-8.109e+04	-2.867e+04	
1.375e+04	1	39	295	9.06	-16.10	2.70	-9.74	-10.93	1.061e+04	-5.801e+04	-5.513e+04	7729.73	
1.625e+04	1	39	296	-1.06	-8.47	-2.15	-7.38	-2.62	1.017e+04	-5.518e+04	-5.085e+04	5836.51	
1.661e+04	1	39	297	-1.55	-4.25	-3.82	-1.98	-0.99	-887.97	-5.022e+04	-4.378e+04	-7323.61	
1276.93	1	39	298	76.73	-93.80	73.94	-91.02	-21.60	-1.698e+05	-2.070e+05	-2.070e+05	-1.699e+05	
1.794e+04	1	39	299	47.92	-61.89	46.07	-60.05	-14.10	-1.130e+05	-1.627e+05	-1.550e+05	-1.207e+05	
2.271e+04	1	39	300	31.25	-43.88	29.77	-42.41	-10.43	-6.401e+04	-1.258e+05	-1.158e+05	-7.396e+04	
2.600e+04	1	39	301	21.83	-32.38	20.48	-31.04	-8.43	-3.902e+04	-1.036e+05	-9.044e+04	-5.216e+04	
3.114e+04	1	39	302	16.07	-25.17	14.88	-23.98	-6.90	-1.282e+04	-8.898e+04	-7.281e+04	-2.899e+04	
2.759e+04	1	39	303	7.57	-13.24	6.21	-11.88	-5.14	-8502.85	-7.442e+04	-5.948e+04	-2.344e+04	
2.587e+04	1	39	304	-1.39	-5.02	-4.96	-1.45	-0.47	2450.86	-5.562e+04	-3.978e+04	-1.339e+04	
2.331e+04	1	39	305	-2.16	-3.97	-3.72	-2.41	-0.62	908.63	-4.976e+04	-3.434e+04	-1.451e+04	
2583.78	1	39	306	59.17	-78.29	59.02	-78.15	4.51	-1.614e+05	-1.666e+05	-1.637e+05	-1.643e+05	
1.810e+04	1	39	307	41.27	-55.63	41.05	-55.41	4.65	-9.223e+04	-1.284e+05	-1.106e+05	-1.101e+05	
3.322e+04	1	39	308	25.92	-42.00	25.06	-41.14	7.58	-5.034e+04	-1.168e+05	-8.339e+04	-8.372e+04	
2.848e+04	1	39	309	18.70	-29.69	18.42	-29.40	3.73	-3.676e+04	-9.372e+04	-6.512e+04	-6.536e+04	

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	39	310	13.34	-19.34	13.34	-19.34	0.22	-2.946e+04	-7.070e+04	-4.988e+04	-5.028e+04	-	
2.062e+04	1	39	311	9.32	-13.49	9.26	-13.43	1.18	7847.75	-5.109e+04	-2.198e+04	-2.126e+04	-
2.947e+04	1	39	312	1.84	-6.89	0.66	-5.72	2.98	1.063e+04	-4.994e+04	-1.946e+04	-1.985e+04	-
3.029e+04	1	39	313	1.54	-1.81	0.50	-0.78	1.55	-1219.59	-4.845e+04	-2.493e+04	-2.474e+04	-
2.361e+04	1	39	314	71.78	-95.31	63.94	-87.47	35.33	-1.696e+05	-2.066e+05	-1.697e+05	-2.066e+05	-
1194.38	1	39	315	47.65	-66.52	41.20	-60.07	26.35	-1.135e+05	-1.616e+05	-1.210e+05	-1.541e+05	-
1.745e+04	1	39	316	25.92	-45.58	20.49	-40.15	18.94	-6.282e+04	-1.248e+05	-7.190e+04	-1.157e+05	-
2.192e+04	1	39	317	20.15	-33.05	14.95	-27.85	15.80	-3.845e+04	-1.033e+05	-5.148e+04	-9.022e+04	-
2.597e+04	1	39	318	15.05	-23.94	10.78	-19.68	12.17	-1.265e+04	-8.866e+04	-2.943e+04	-7.189e+04	-
3.152e+04	1	39	319	9.51	-12.82	7.14	-10.45	6.87	-8368.68	-7.429e+04	-2.353e+04	-5.912e+04	-
2.774e+04	1	39	320	9.14e-02	-3.18	-1.34	-1.75	1.62	2646.97	-5.532e+04	-1.131e+04	-4.136e+04	-
2.478e+04	1	39	321	1.43	-2.43	-0.68	-0.31	1.92	899.00	-4.942e+04	-1.425e+04	-3.427e+04	-
2.308e+04	1	39	322	86.55	-117.53	52.24	-83.21	76.32	-1.716e+05	-2.279e+05	-1.772e+05	-2.222e+05	-
1.687e+04	1	39	323	53.45	-78.51	27.63	-52.69	52.35	-1.111e+05	-1.754e+05	-1.111e+05	-1.754e+05	-
1188.72	1	39	324	34.69	-54.36	14.55	-34.21	37.26	-6.829e+04	-1.382e+05	-6.897e+04	-1.376e+05	-
6853.34	1	39	325	23.30	-37.25	7.84	-21.80	26.40	-4.103e+04	-1.090e+05	-4.234e+04	-1.077e+05	-
9316.21	1	39	326	16.07	-24.38	4.86	-13.17	18.11	-2.614e+04	-8.213e+04	-2.726e+04	-8.101e+04	-
7846.28	1	39	327	11.49	-14.92	2.85	-6.27	12.39	1.120e+04	-5.750e+04	8200.13	-5.450e+04	-
1.404e+04	1	39	328	6.72	-7.05	-0.19	-0.14	6.88	9998.96	-5.469e+04	5841.06	-5.053e+04	-
1.586e+04	1	39	329	5.27	-2.34	-7.66e-02	3.01	3.48	-861.10	-4.967e+04	-7332.01	-4.320e+04	-
1.655e+04	1	39	330	96.71	-137.67	9.67	-50.63	113.25	-1.563e+05	-2.388e+05	-1.814e+05	-2.137e+05	-
3.795e+04	1	39	331	59.72	-90.11	1.08	-31.47	73.12	-9.736e+04	-1.804e+05	-1.089e+05	-1.689e+05	-
2.868e+04	1	39	332	39.28	-63.14	-6.03	-17.83	50.87	-5.685e+04	-1.346e+05	-5.933e+04	-1.321e+05	-
1.366e+04	1	39	333	26.08	-41.52	-6.66	-8.77	33.78	-3.161e+04	-1.127e+05	-3.347e+04	-1.108e+05	-
1.214e+04	1	39	334	17.86	-27.59	-5.21	-4.52	22.72	-7010.06	-9.444e+04	-7733.08	-9.371e+04	-
7917.65	1	39	335	13.31	-15.78	-3.25	0.78	14.41	-2010.23	-7.752e+04	-2087.53	-7.744e+04	-
2414.71	1	39	336	7.32	-5.59	-3.10	4.84	5.09	5201.29	-5.695e+04	5098.59	-5.685e+04	-
2524.37	1	39	337	7.94	-2.28	-1.12	6.78	3.25	778.19	-4.935e+04	-780.45	-4.779e+04	-
8700.63	1	69	1	134.33	-119.54	-116.94	131.73	25.58	2.048e+04	-1.440e+05	1.681e+04	-1.403e+05	-
2.431e+04	1	69	2	171.81	-149.73	-149.04	171.13	-14.83	-1.303e+04	-1.825e+05	-2.338e+04	-1.722e+05	-
4.057e+04	1	69	3	233.39	-206.86	-204.37	230.90	33.02	1.004e+04	-1.773e+05	6551.58	-1.738e+05	-
2.532e+04	1	69	4	172.34	-156.20	-140.31	156.44	70.50	4.539e+04	-1.341e+05	4.508e+04	-1.338e+05	-
7425.66	1	69	5	330.72	-309.25	-273.56	295.03	146.85	6.982e+04	-1.482e+05	6.914e+04	-1.475e+05	-
1.211e+04	1	69	6	219.01	-206.45	-149.52	162.08	144.85	8.886e+04	-1.076e+05	8.812e+04	-1.069e+05	-
1.208e+04	1	69	7	450.57	-418.63	-234.19	266.12	355.39	1.889e+05	-1.039e+05	1.886e+05	-1.035e+05	-
1.018e+04	1	69	8	263.46	-251.51	-98.92	110.86	235.15	1.488e+05	-6.878e+04	1.428e+05	-6.276e+04	-
3.567e+04	1	69	9	499.11	-470.88	41.40	-13.17	484.23	3.207e+05	-5.323e+04	3.053e+05	-3.783e+04	-

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

7.429e+04													
1	69	10	283.84	-268.10	28.47	-12.73	275.20	2.064e+05	-2.786e+04	1.863e+05	-7751.59	-	
6.562e+04													
1	69	11	452.63	-437.33	304.60	-289.30	331.40	3.816e+05	-8020.66	3.131e+05	6.052e+04	-	
1.483e+05													
1	69	12	268.01	-252.50	149.57	-134.06	218.22	2.366e+05	5882.12	1.921e+05	5.030e+04	-	
9.096e+04													
1	69	13	337.19	-328.52	317.05	-308.37	114.03	3.447e+05	2.139e+04	2.287e+05	1.374e+05	-	
1.551e+05													
1	69	14	221.96	-215.14	186.32	-179.49	119.62	2.282e+05	2.789e+04	1.633e+05	9.274e+04	-	
9.371e+04													
1	69	15	223.94	-236.98	223.89	-236.93	4.65	2.663e+05	3.649e+04	1.513e+05	1.515e+05	-	
1.149e+05													
1	69	16	168.33	-174.50	161.81	-167.98	46.82	1.968e+05	3.857e+04	1.278e+05	1.076e+05	-	
7.848e+04													
1	69	17	157.74	-177.90	154.00	-174.16	-35.23	1.968e+05	3.875e+04	1.075e+05	1.281e+05	-	
7.837e+04													
1	69	18	126.24	-139.35	126.01	-139.12	7.85	1.610e+05	3.974e+04	1.002e+05	1.005e+05	-	
6.063e+04													
1	69	19	220.10	-188.37	-167.03	198.76	-90.88	-6.405e+04	-2.343e+05	-8.270e+04	-2.156e+05	-	
5.315e+04													
1	69	20	337.19	-291.13	-281.95	328.00	-75.42	-5.702e+04	-2.475e+05	-6.380e+04	-2.407e+05	-	
3.529e+04													
1	69	21	520.82	-471.71	-469.69	518.81	44.63	-9358.30	-2.183e+05	-1.273e+04	-2.149e+05	-	
2.632e+04													
1	69	22	964.70	-738.73	-576.87	802.85	499.52	2.409e+05	-1.957e+05	2.366e+05	-1.914e+05	-	
4.305e+04													
1	69	23	1126.67	-1069.11	58.65	-1.09	1097.48	5.769e+05	-1.524e+05	5.684e+05	-1.440e+05	-	
7.799e+04													
1	69	24	802.51	-959.88	671.69	-829.06	462.00	7.273e+05	-6.490e+04	5.443e+05	1.181e+05	-	
3.339e+05													
1	69	25	514.47	-526.99	514.46	-526.98	2.38	5.574e+05	-1.808e+04	2.697e+05	2.696e+05	-	
2.877e+05													
1	69	26	314.49	-348.62	296.51	-330.65	-107.68	3.447e+05	2.146e+04	1.374e+05	2.288e+05	-	
1.550e+05													
1	69	27	199.04	-231.66	167.47	-200.09	-112.26	2.283e+05	2.826e+04	9.278e+04	1.638e+05	-	
9.351e+04													
1	69	28	257.93	-225.39	-130.32	162.86	-192.12	-1.262e+05	-2.939e+05	-1.517e+05	-2.685e+05	-	
6.016e+04													
1	69	29	436.34	-394.93	-274.05	315.46	-293.04	-1.401e+05	-3.660e+05	-1.478e+05	-3.583e+05	-	
4.108e+04													
1	69	30	781.08	-872.77	-770.52	678.83	-398.31	-1.034e+05	-4.658e+05	-1.034e+05	-4.658e+05	-824.12	
1	69	31	1079.86	-992.09	-990.79	1078.57	51.81	7.550e+04	-4.118e+05	7.331e+04	-4.096e+05	-	
3.258e+04													
1	69	32	529.41	-471.86	48.83	8.72	500.23	1.275e+06	-8.053e+05	1.244e+06	-7.739e+05	-	
2.538e+05													
1	69	33	1085.08	-1096.83	1085.08	-1096.83	0.86	2.345e+06	-4.791e+05	9.331e+05	9.325e+05	-	
1.412e+06													
1	69	34	947.12	-814.36	818.25	-685.49	-458.68	7.266e+05	-6.486e+04	1.182e+05	5.435e+05	-	
3.337e+05													
1	69	35	423.46	-464.16	279.70	-320.40	-327.01	3.814e+05	-7973.77	6.056e+04	3.129e+05	-	
1.483e+05													
1	69	36	237.74	-279.90	125.80	-167.97	-213.10	2.368e+05	6203.87	5.045e+04	1.926e+05	-	
9.080e+04													
1	69	37	261.41	-241.35	-17.94	38.00	-249.82	-1.830e+05	-3.447e+05	-2.167e+05	-3.110e+05	-	
6.564e+04													
1	69	38	463.52	-432.50	-16.79	47.81	-446.84	-2.097e+05	-4.939e+05	-2.307e+05	-4.729e+05	-	
7.437e+04													
1	69	39	1064.84	-1005.37	-3.18	62.64	-1034.58	-1.745e+05	-8.023e+05	-1.844e+05	-7.924e+05	-	
7.813e+04													
1	69	40	527.91	-469.66	8.05	50.20	-498.34	3.801e+05	-1.570e+06	3.463e+05	-1.536e+06	-	
2.547e+05													
1	69	41	-5.63	-5.63	-5.63	-5.63	3.27e-04	-3.471e+05	-3.471e+05	-3.471e+05	-3.471e+05	8.08e-02	
2.547e+05													
1	69	42	459.12	-539.90	-19.27	-61.51	-499.07	1.271e+06	-8.037e+05	-7.720e+05	1.240e+06	-	
7.813e+04													
1	69	43	1054.28	-1136.29	-7.92	-74.08	-1094.79	5.752e+05	-1.523e+05	-1.438e+05	5.667e+05	-	
7.436e+04													
1	69	44	454.79	-508.41	5.90	-59.52	-480.49	3.202e+05	-5.328e+04	-3.783e+04	3.048e+05	-	
6.567e+04													
1	69	45	250.42	-293.04	7.45	-50.07	-270.20	2.066e+05	-2.783e+04	-7708.34	1.865e+05	-	
1	69	46	231.75	-227.79	98.72	-94.75	-208.41	-2.198e+05	-3.629e+05	-2.647e+05	-3.180e+05	-	







**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	69	83	103.01	-134.04	-87.54	56.52	94.13	-7.492e+04	-2.288e+05	-1.749e+05	-1.288e+05	
7.341e+04	1	69	84	64.33	-86.16	-22.00	0.17	74.42	-6.184e+04	-1.670e+05	-9.705e+04	-1.318e+05
4.963e+04	1	69	85	64.98	-88.55	-60.26	36.69	59.52	-4.824e+04	-1.667e+05	-1.048e+05	-1.101e+05
5.914e+04	1	69	86	40.18	-57.53	-17.96	0.61	47.96	-3.827e+04	-1.402e+05	-6.168e+04	-1.168e+05
4.286e+04	1	69	87	43.70	-59.37	-38.86	23.18	41.16	-2.708e+04	-1.285e+05	-7.207e+04	-8.352e+04
5.039e+04	1	69	88	26.46	-39.20	-12.99	0.25	32.15	-2.253e+04	-1.089e+05	-3.793e+04	-9.352e+04
3.307e+04	1	69	89	26.54	-39.38	-27.13	14.30	25.63	-9322.67	-1.037e+05	-4.643e+04	-6.656e+04
4.609e+04	1	69	90	16.98	-25.45	-8.80	0.34	20.72	-1.178e+04	-8.299e+04	-2.322e+04	-7.154e+04
2.615e+04	1	69	91	16.31	-25.26	-17.77	8.83	15.98	7161.52	-8.659e+04	-2.372e+04	-5.570e+04
4.406e+04	1	69	92	10.82	-15.35	-5.64	1.11	12.64	1.748e+04	-5.763e+04	1.040e+04	-5.056e+04
2.194e+04	1	69	93	12.19	-15.54	-11.35	8.00	9.93	5822.08	-7.010e+04	-1.366e+04	-5.062e+04
3.316e+04	1	69	94	5.55	-7.21	-3.56	1.90	5.76	1.076e+04	-5.282e+04	7167.62	-4.923e+04
1.469e+04	1	69	95	6.43	-5.98	-5.22	5.68	2.97	6728.75	-4.971e+04	-2784.31	-4.019e+04
2.113e+04	1	69	96	3.00	-2.48	-1.63	2.14	1.99	-519.41	-4.535e+04	-584.66	-4.529e+04
1709.21	1	69	97	5.92	-1.92	-1.85	5.85	0.74	599.33	-4.188e+04	-1531.17	-3.975e+04
9272.08	1	69	98	90.12	-125.36	-114.47	79.22	47.21	-3.480e+04	-1.839e+05	-1.529e+05	-6.587e+04
6.056e+04	1	69	99	56.99	-82.88	-75.37	49.48	31.54	-1.663e+04	-1.439e+05	-1.089e+05	-5.163e+04
5.683e+04	1	69	100	38.74	-57.51	-52.33	33.56	21.72	-3979.94	-1.139e+05	-7.835e+04	-3.953e+04
5.142e+04	1	69	101	26.44	-39.71	-36.93	23.66	13.28	4084.35	-9.112e+04	-5.640e+04	-3.064e+04
4.582e+04	1	69	102	18.10	-27.40	-26.48	17.19	6.40	8343.36	-7.044e+04	-4.008e+04	-2.201e+04
3.834e+04	1	69	103	12.54	-15.35	-14.87	12.06	3.62	2.572e+04	-4.870e+04	-1.344e+04	-9539.21
3.716e+04	1	69	104	8.55	-4.52	-4.31	8.34	1.64	1.178e+04	-4.302e+04	-1.368e+04	-1.756e+04
2.733e+04	1	69	105	6.04	-1.95	-1.90	5.99	-0.63	-159.37	-3.418e+04	-6740.78	-2.760e+04
1.344e+04	1	69	106	72.32	-108.68	-108.62	72.26	3.27	6256.31	-1.472e+05	-1.330e+05	-7896.76
4.440e+04	1	69	107	47.30	-74.24	-74.03	47.09	5.03	1.477e+04	-1.207e+05	-1.076e+05	1694.54
4.001e+04	1	69	108	34.30	-53.67	-53.57	34.20	3.03	1.702e+04	-8.234e+04	-6.791e+04	2595.09
3.500e+04	1	69	109	23.97	-35.52	-35.52	23.97	-0.25	1.960e+04	-7.873e+04	-6.180e+04	2674.20
3.712e+04	1	69	110	15.68	-22.52	-22.52	15.68	-0.12	2.383e+04	-6.835e+04	-4.932e+04	4793.22
3.731e+04	1	69	111	13.30	-15.10	-14.78	12.97	-3.03	1.494e+04	-5.550e+04	-3.631e+04	-4252.31
3.136e+04	1	69	112	10.30	-5.57	-4.20	8.92	-4.47	8446.89	-3.707e+04	-1.972e+04	-8901.93
2.211e+04	1	69	113	10.48	-0.70	0.76	9.02	-3.77	278.08	-2.982e+04	-1.016e+04	-1.938e+04
1.432e+04	1	69	114	68.06	-96.83	-92.68	63.92	-25.80	2.399e+04	-1.130e+05	-1.086e+05	1.962e+04
2.407e+04	1	69	115	43.05	-67.14	-63.70	39.61	-19.16	4.817e+04	-8.968e+04	-8.526e+04	4.374e+04
2.430e+04	1	69	116	35.78	-45.26	-44.35	34.87	-8.55	2.656e+04	-7.678e+04	-7.352e+04	2.330e+04
1.806e+04	1	69	117	25.01	-33.62	-31.51	22.91	-10.92	2.557e+04	-6.473e+04	-6.058e+04	2.142e+04
1.891e+04	1	69	118	18.68	-27.10	-22.34	13.91	-13.98	2.558e+04	-5.129e+04	-4.664e+04	2.092e+04
1.833e+04	1	69	119	13.53	-14.97	-12.14	10.70	-8.52	3.344e+04	-3.660e+04	-3.130e+04	2.814e+04

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

1.852e+04												
1	69	120	9.93	-1.33	-0.87	9.47	-2.23	1.116e+04	-3.104e+04	-2.751e+04	7627.63	
1.169e+04												
1	69	121	5.52	-1.67	-0.50	4.35	-2.66	386.06	-2.113e+04	-1.256e+04	-8185.82	
1.053e+04												
1	69	122	83.55	-114.32	-100.76	69.99	-49.98	4.862e+04	-1.126e+05	-1.126e+05	4.858e+04	
2768.29												
1	69	123	52.84	-76.38	-62.78	39.24	-39.67	5.473e+04	-9.883e+04	-9.840e+04	5.431e+04	
8037.04												
1	69	124	50.41	-56.85	-45.37	38.93	-33.17	2.510e+04	-7.198e+04	-7.082e+04	2.394e+04	
1.055e+04												
1	69	125	30.11	-38.54	-30.78	22.35	-21.74	3.175e+04	-5.955e+04	-5.948e+04	3.168e+04	
2544.48												
1	69	126	20.01	-25.24	-20.47	15.23	-13.90	3.347e+04	-5.146e+04	-5.142e+04	3.343e+04	
1762.29												
1	69	127	15.75	-16.24	-8.93	8.44	-13.43	2.394e+04	-4.344e+04	-4.268e+04	2.318e+04	
7126.88												
1	69	128	12.16	-4.90	2.95	4.32	-8.50	1.156e+04	-3.061e+04	-2.866e+04	9606.82	
8859.77												
1	69	129	12.60	0.14	6.39	6.34	-6.23	-7.90	-2.126e+04	-1.585e+04	-5426.49	
9263.82												
1	69	130	100.19	-130.78	-91.42	60.83	-86.85	7.545e+04	-8.795e+04	-8.535e+04	7.284e+04	-
2.047e+04												
1	69	131	64.78	-86.46	-54.66	32.97	-61.63	6.267e+04	-7.434e+04	-7.171e+04	6.005e+04	-
1.879e+04												
1	69	132	45.20	-59.23	-33.10	19.07	-45.23	5.019e+04	-6.182e+04	-5.939e+04	4.776e+04	-
1.633e+04												
1	69	133	32.43	-42.52	-20.31	10.22	-34.23	4.127e+04	-5.000e+04	-4.783e+04	3.911e+04	-
1.388e+04												
1	69	134	23.14	-32.76	-9.44	-0.18	-27.57	3.844e+04	-3.917e+04	-3.801e+04	3.728e+04	-
9407.91												
1	69	135	16.65	-17.32	-3.89	3.22	-16.61	3.724e+04	-2.720e+04	-2.595e+04	3.599e+04	-
8880.77												
1	69	136	11.96	-1.03	1.99	8.94	-5.49	1.213e+04	-2.634e+04	-2.428e+04	1.007e+04	-
8650.87												
1	69	137	7.12	-1.14	3.34	2.64	-4.11	1056.15	-1.321e+04	-1.240e+04	243.32	
3306.99												
1	69	138	108.12	-144.74	-56.68	20.06	-120.47	1.176e+05	-5.396e+04	-3.857e+04	1.022e+05	-
4.902e+04												
1	69	139	74.24	-96.08	-30.49	8.65	-82.88	7.951e+04	-4.255e+04	-3.057e+04	6.753e+04	-
3.632e+04												
1	69	140	46.17	-55.84	-13.43	3.76	-50.28	6.408e+04	-4.300e+04	-2.958e+04	5.066e+04	-
3.545e+04												
1	69	141	32.62	-41.73	-9.26	0.16	-36.88	4.944e+04	-3.743e+04	-2.574e+04	3.775e+04	-
2.965e+04												
1	69	142	23.21	-29.01	-7.63	1.83	-25.68	4.165e+04	-3.317e+04	-2.181e+04	3.029e+04	-
2.685e+04												
1	69	143	17.09	-17.07	3.27	-3.25	-16.77	2.817e+04	-2.952e+04	-2.437e+04	2.302e+04	-
1.644e+04												
1	69	144	13.27	-3.83	11.22	-1.78	-5.55	1.270e+04	-2.168e+04	-1.968e+04	1.070e+04	-
8048.19												
1	69	145	13.85	1.23	12.18	2.91	-4.28	-179.85	-1.271e+04	-1.260e+04	-282.81	
1130.96												
1	69	146	127.41	-160.13	12.24	-44.96	-140.89	1.359e+05	-2.023e+04	1929.58	1.137e+05	-
5.449e+04												
1	69	147	76.86	-99.03	6.69	-28.86	-86.13	1.083e+05	-1.249e+04	1.315e+04	8.264e+04	-
4.939e+04												
1	69	148	51.96	-61.46	0.63	-10.13	-56.45	6.745e+04	-2.259e+04	7400.33	3.746e+04	-
4.244e+04												
1	69	149	35.57	-43.33	5.85	-13.62	-38.23	5.104e+04	-2.136e+04	-347.49	3.003e+04	-
3.286e+04												
1	69	150	24.93	-33.96	10.99	-20.01	-25.04	4.436e+04	-1.792e+04	-3923.41	3.036e+04	-
2.600e+04												
1	69	151	17.48	-17.70	8.26	-8.48	-15.47	3.620e+04	-1.264e+04	374.12	2.319e+04	-
2.159e+04												
1	69	152	11.99	0.33	6.20	6.12	-5.83	1.132e+04	-1.762e+04	-3438.73	-2862.61	-
1.447e+04												
1	69	153	6.81	-0.45	5.85	0.51	-2.45	1513.74	-4779.96	-4317.98	1051.75	-
1641.39												
1	69	154	126.57	-161.09	61.61	-96.14	-120.28	1.471e+05	9371.78	4.685e+04	1.096e+05	-
6.129e+04												
1	69	155	75.14	-93.80	39.86	-58.53	-68.66	1.056e+05	-5073.88	2.934e+04	7.120e+04	-
5.124e+04												

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	69	156	58.48	-65.12	31.40	-38.04	-51.12	5.927e+04	-1349.61	1.953e+04	3.839e+04	-	
2.880e+04	1	69	157	37.13	-44.44	20.04	-27.35	-33.20	5.010e+04	-6595.83	1.841e+04	2.509e+04	-
2.815e+04	1	69	158	26.29	-31.15	12.00	-16.86	-24.83	3.938e+04	-8773.06	1.582e+04	1.478e+04	-
2.407e+04	1	69	159	16.65	-16.93	13.32	-13.59	-10.04	2.634e+04	-1.236e+04	2272.66	1.171e+04	-
1.876e+04	1	69	160	12.87	-2.98	12.45	-2.55	2.56	1.117e+04	-1.143e+04	-2978.97	2718.34	-
1.094e+04	1	69	161	13.43	2.20	13.40	2.23	0.60	-353.47	-5310.07	-4619.63	-1043.91	-
1716.25	1	69	162	110.11	-133.36	90.17	-113.43	-66.75	1.422e+05	2.588e+04	7.082e+04	9.724e+04	-
5.663e+04	1	69	163	71.58	-86.05	59.80	-74.27	-41.45	9.635e+04	1.746e+04	5.160e+04	6.221e+04	-
3.908e+04	1	69	164	49.38	-57.04	42.46	-50.12	-26.24	6.631e+04	1.005e+04	3.806e+04	3.829e+04	-
2.813e+04	1	69	165	33.61	-39.83	29.92	-36.15	-16.04	4.924e+04	4387.80	2.866e+04	2.497e+04	-
2.235e+04	1	69	166	24.02	-33.02	23.38	-32.39	-5.97	4.319e+04	1524.42	2.043e+04	2.429e+04	-
2.075e+04	1	69	167	15.91	-17.10	14.84	-16.03	-5.85	3.024e+04	2617.10	1.828e+04	1.457e+04	-
1.369e+04	1	69	168	10.59	1.36	7.41	4.54	-4.39	8586.94	-9511.75	8191.61	-9116.41	-
2645.51	1	69	169	4.07	-0.25	3.95	-0.14	-0.68	2904.35	867.08	2888.07	883.36	-181.38
4.784e+04	1	69	170	92.43	-110.12	90.34	-108.03	-20.46	1.327e+05	3.699e+04	8.452e+04	8.513e+04	-
3.083e+04	1	69	171	68.12	-82.69	67.33	-81.90	-10.89	9.315e+04	3.030e+04	5.562e+04	6.783e+04	-
2.399e+04	1	69	172	41.25	-31.86	41.17	-31.78	-2.40	6.243e+04	1.058e+04	4.633e+04	2.669e+04	-
1.340e+04	1	69	173	31.00	-33.28	29.70	-31.98	-9.05	4.128e+04	1.229e+04	3.231e+04	2.126e+04	-
7120.27	1	69	174	25.16	-28.37	22.64	-25.85	-11.33	2.752e+04	1.032e+04	2.374e+04	1.409e+04	-
1.040e+04	1	69	175	12.52	-14.92	12.52	-14.92	0.26	2.131e+04	484.13	1.145e+04	1.034e+04	-
6357.45	1	69	176	10.84	-3.30	3.21	4.34	7.05	8827.35	-4290.08	3880.94	656.33	-
4.473e+04	1	69	177	9.55	2.76	8.01	4.31	2.85	-577.41	-1859.59	-1061.56	-1375.44	-621.58
2.989e+04	1	69	178	79.59	-92.03	78.50	-90.95	13.58	1.191e+05	2.958e+04	7.480e+04	7.384e+04	-
3420.63	1	69	179	59.05	-73.34	58.60	-72.89	7.72	9.752e+04	3.769e+04	6.627e+04	6.895e+04	-
9172.04	1	69	180	43.05	-40.54	42.57	-40.05	-6.33	3.644e+04	2.960e+04	3.289e+04	3.315e+04	-
1.527e+04	1	69	181	30.32	-33.55	30.29	-33.52	1.42	3.462e+04	1.627e+04	2.517e+04	2.573e+04	-
7277.41	1	69	182	19.72	-29.06	17.85	-27.19	9.38	3.861e+04	8080.46	2.313e+04	2.356e+04	-
6384.51	1	69	183	14.74	-18.87	14.48	-18.61	2.93	2.500e+04	1.026e+04	1.646e+04	1.879e+04	-
2321.06	1	69	184	9.41	-2.28	5.87	1.26	-5.36	6182.40	-6586.78	-233.32	-171.07	-
4.826e+04	1	69	185	1.30	-5.17	-0.58	-3.29	-2.94	6117.76	1454.28	3563.03	4009.00	-
2.951e+04	1	69	186	105.92	-119.28	100.02	-113.38	35.98	1.335e+05	3.702e+04	8.440e+04	8.617e+04	-
2.179e+04	1	69	187	68.55	-79.80	66.20	-77.45	18.51	9.154e+04	3.222e+04	6.485e+04	5.890e+04	-
1.362e+04	1	69	188	41.48	-52.82	39.90	-51.24	12.10	6.236e+04	1.588e+04	3.106e+04	4.719e+04	-
8359.53	1	69	189	35.62	-41.02	33.42	-38.82	12.78	4.209e+04	1.227e+04	2.111e+04	3.326e+04	-
1.057e+04	1	69	190	30.42	-34.63	29.05	-33.25	9.35	2.982e+04	7701.32	1.152e+04	2.600e+04	-
4675.71	1	69	191	11.68	-15.64	10.20	-14.16	6.18	2.133e+04	-65.84	8959.90	1.231e+04	-
	1	69	192	5.64	-5.69	-5.14	5.09	-2.45	7288.47	-2160.43	3240.91	1887.13	-
	1	69	193	2.67	1.45	1.93	2.18	-0.60	-613.82	-1272.21	-995.28	-890.74	-325.02

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	69	194	127.18	-126.06	102.06	-100.94	75.70	1.420e+05	2.521e+04	9.658e+04	7.064e+04	-	
5.695e+04	1	69	195	77.84	-79.38	62.02	-63.56	47.30	9.590e+04	1.764e+04	6.174e+04	5.180e+04	-
3.881e+04	1	69	196	49.18	-51.95	39.48	-42.25	29.78	6.592e+04	1.057e+04	3.797e+04	3.852e+04	-
2.767e+04	1	69	197	33.49	-38.42	25.19	-30.11	22.98	4.899e+04	4531.52	2.450e+04	2.902e+04	-
2.211e+04	1	69	198	20.69	-29.66	11.69	-20.66	19.29	4.217e+04	1739.63	2.333e+04	2.059e+04	-
2.017e+04	1	69	199	14.38	-19.34	10.33	-15.29	10.96	3.087e+04	1173.37	1.303e+04	1.902e+04	-
1.454e+04	1	69	200	8.21	-7.58	7.89	-7.26	-2.22	9141.35	-9552.20	-9029.10	8618.25	-
3083.01	1	69	201	1.50	-7.12	0.77	-6.39	-2.40	3331.63	541.24	590.36	3282.51	-366.93
6.320e+04	1	69	202	149.84	-138.86	78.68	-67.70	124.42	1.468e+05	6022.76	1.074e+05	4.541e+04	-
5.130e+04	1	69	203	87.02	-80.93	37.83	-31.74	76.43	1.052e+05	-6825.10	7.175e+04	2.667e+04	-
2.779e+04	1	69	204	52.96	-40.86	33.70	-21.60	37.89	5.697e+04	-1763.63	3.710e+04	1.810e+04	-
2.842e+04	1	69	205	40.35	-41.20	22.92	-23.78	33.43	4.970e+04	-7435.13	2.407e+04	1.820e+04	-
2.628e+04	1	69	206	34.21	-38.63	18.88	-23.31	29.69	4.105e+04	-1.159e+04	1.331e+04	1.615e+04	-
1.928e+04	1	69	207	11.61	-16.34	5.98	-10.71	11.22	2.622e+04	-1.320e+04	1.062e+04	2404.22	-
8276.61	1	69	208	6.88	-9.58	-1.51	-1.19	-8.23	8860.77	-9165.88	3416.45	-3721.55	-
1544.04	1	69	209	2.54	-3.92	1.70	-3.08	-2.16	-343.51	-5114.06	-910.68	-4546.89	-
5.346e+04	1	69	210	145.86	-139.70	14.62	-8.46	142.31	1.341e+05	-1.959e+04	1.125e+05	2052.60	-
4.987e+04	1	69	211	92.29	-89.62	12.82	-10.15	90.23	1.077e+05	-1.340e+04	8.153e+04	1.280e+04	-
4.349e+04	1	69	212	62.66	-59.71	15.59	-12.64	59.54	6.815e+04	-2.408e+04	3.736e+04	6711.06	-
3.300e+04	1	69	213	40.61	-41.91	8.07	-9.37	40.33	5.049e+04	-2.202e+04	2.924e+04	-768.02	-
2.563e+04	1	69	214	24.22	-30.48	0.30	-6.56	27.13	4.273e+04	-1.819e+04	2.873e+04	-4193.99	-
2.266e+04	1	69	215	15.48	-21.06	2.28	-7.85	17.56	3.627e+04	-1.425e+04	2.218e+04	-158.35	-
1.484e+04	1	69	216	7.05	-9.75	6.27	-8.96	3.54	1.168e+04	-1.804e+04	-2415.15	-3950.32	-
1964.92	1	69	217	1.30	-9.05	1.30	-9.05	0.22	1597.49	-5350.02	988.36	-4740.89	-
5.019e+04	1	69	218	147.79	-152.69	-49.02	44.12	142.84	1.184e+05	-5.412e+04	1.023e+05	-3.802e+04	-
3.706e+04	1	69	219	83.64	-84.16	-12.86	12.33	82.95	7.833e+04	-4.141e+04	6.548e+04	-2.856e+04	-
3.391e+04	1	69	220	48.05	-53.92	-13.84	7.97	49.80	6.329e+04	-4.087e+04	5.074e+04	-2.832e+04	-
2.990e+04	1	69	221	40.11	-43.06	-9.74	6.80	40.75	4.900e+04	-3.823e+04	3.715e+04	-2.637e+04	-
2.885e+04	1	69	222	34.84	-39.67	-7.91	3.08	36.85	4.283e+04	-3.607e+04	3.028e+04	-2.352e+04	-
1.713e+04	1	69	223	11.22	-17.52	-2.98	-3.32	14.37	2.786e+04	-3.054e+04	2.231e+04	-2.499e+04	-
5558.80	1	69	224	7.15	-12.36	4.49	-9.69	-6.70	1.048e+04	-2.012e+04	9430.88	-1.907e+04	-
1380.56	1	69	225	2.06	-6.78	2.06	-6.78	-3.44e-02	-137.84	-1.308e+04	-286.84	-1.293e+04	-
2.087e+04	1	69	226	126.93	-120.54	-76.74	83.13	94.46	7.505e+04	-8.845e+04	7.234e+04	-8.574e+04	-
1.879e+04	1	69	227	78.37	-73.82	-44.59	49.15	59.94	6.180e+04	-7.502e+04	5.917e+04	-7.239e+04	-
1.614e+04	1	69	228	49.66	-46.69	-27.08	30.05	38.79	4.909e+04	-6.273e+04	4.671e+04	-6.035e+04	-
1.402e+04	1	69	229	34.07	-34.64	-18.33	17.76	29.23	4.006e+04	-5.113e+04	3.785e+04	-4.892e+04	-
9676.18	1	69	230	22.36	-27.39	-15.06	10.03	21.48	3.654e+04	-4.011e+04	3.530e+04	-3.887e+04	-

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	69	231	14.40	-21.32	-9.60	2.68	16.77	3.706e+04	-2.911e+04	3.555e+04	-2.760e+04	-	
9872.57	1	69	232	4.97	-10.87	0.81	-6.71	6.97	1.242e+04	-2.717e+04	1.055e+04	-2.530e+04	-
8392.89	1	69	233	0.82	-10.84	-0.75	-9.27	3.98	1070.81	-1.424e+04	280.93	-1.345e+04	-
3386.42	1	69	234	112.94	-99.01	-85.27	99.20	52.20	4.814e+04	-1.151e+05	4.812e+04	-1.151e+05	-
1988.15	1	69	235	76.69	-69.97	-63.77	70.49	29.51	5.498e+04	-1.019e+05	5.449e+04	-1.015e+05	-
8736.79	1	69	236	43.70	-23.00	-17.98	38.68	17.60	2.189e+04	-7.393e+04	2.045e+04	-7.249e+04	-
1.166e+04	1	69	237	36.51	-35.89	-26.39	27.00	24.45	3.080e+04	-6.122e+04	3.074e+04	-6.117e+04	-
2193.12	1	69	238	31.51	-37.17	-27.73	22.08	23.65	3.436e+04	-5.432e+04	3.435e+04	-5.431e+04	885.70
6492.19	1	69	239	10.67	-18.91	-11.76	3.52	12.67	2.363e+04	-4.464e+04	2.301e+04	-4.402e+04	-
1	69	240	7.02	-15.29	6.94	-15.21	1.32	9615.03	-2.980e+04	6826.29	-2.702e+04	-	
1.011e+04	1	69	241	1.12	-11.28	-0.89	-9.28	4.57	54.78	-2.183e+04	-5730.23	-1.605e+04	-
9651.21	1	69	242	84.26	-76.20	-73.21	81.26	21.73	2.183e+04	-1.128e+05	1.781e+04	-1.088e+05	-
2.291e+04	1	69	243	68.87	-65.28	-62.91	66.50	17.68	4.778e+04	-9.272e+04	4.376e+04	-8.870e+04	-
2.343e+04	1	69	244	37.63	-39.44	-36.85	35.03	13.91	2.637e+04	-7.750e+04	2.285e+04	-7.398e+04	-
1.880e+04	1	69	245	30.14	-34.50	-31.88	27.52	12.75	2.477e+04	-6.572e+04	2.073e+04	-6.169e+04	-
1.868e+04	1	69	246	21.57	-27.87	-24.73	18.43	12.06	2.368e+04	-5.229e+04	1.955e+04	-4.816e+04	-
1.723e+04	1	69	247	15.23	-24.35	-21.74	12.63	9.82	3.345e+04	-3.898e+04	2.860e+04	-3.413e+04	-
1.811e+04	1	69	248	1.05	-13.90	-6.63	-6.21	7.47	1.151e+04	-3.132e+04	7531.34	-2.734e+04	-
1.243e+04	1	69	249	0.38	-13.34	-6.15	-6.82	6.85	341.49	-2.194e+04	-8274.33	-1.332e+04	-
1.085e+04	1	69	250	106.71	-99.00	-98.70	106.41	-7.87	5773.60	-1.481e+05	-8167.37	-1.341e+05	-
4.417e+04	1	69	251	78.96	-76.11	-75.89	78.73	5.90	1.507e+04	-1.231e+05	3145.17	-1.112e+05	-
3.879e+04	1	69	252	27.23	-49.07	-47.15	25.31	11.95	1.553e+04	-7.818e+04	2012.23	-6.466e+04	-
3.292e+04	1	69	253	29.80	-37.87	-37.87	29.80	0.20	1.907e+04	-7.914e+04	2258.87	-6.233e+04	-
3.699e+04	1	69	254	27.04	-35.25	-35.15	26.94	-2.54	2.441e+04	-7.085e+04	5265.74	-5.170e+04	-
3.817e+04	1	69	255	11.17	-20.46	-19.29	9.99	5.97	1.413e+04	-5.657e+04	-4304.53	-3.813e+04	-
3.104e+04	1	69	256	6.59	-23.17	-4.34	-12.25	14.34	6463.83	-3.511e+04	-1.089e+04	-1.776e+04	-
2.050e+04	1	69	257	-0.14	-17.86	-10.32	-7.68	8.76	386.40	-2.952e+04	-1.933e+04	-9805.16	-
1.417e+04	1	69	258	124.89	-108.37	-95.37	111.90	-53.51	-3.548e+04	-1.847e+05	-6.642e+04	-1.538e+05	-
6.050e+04	1	69	259	76.44	-71.23	-65.47	70.67	-28.61	-1.757e+04	-1.442e+05	-5.200e+04	-1.098e+05	-
5.634e+04	1	69	260	47.45	-50.12	-48.04	45.37	-14.07	-5007.97	-1.139e+05	-3.982e+04	-7.909e+04	-
5.078e+04	1	69	261	31.72	-37.64	-36.60	30.68	-8.43	2836.66	-9.130e+04	-3.109e+04	-5.738e+04	-
4.520e+04	1	69	262	23.99	-30.40	-30.19	23.78	-3.39	6144.71	-7.071e+04	-2.262e+04	-4.194e+04	-
3.719e+04	1	69	263	13.29	-23.51	-23.38	13.15	-2.24	2.496e+04	-5.001e+04	-9812.31	-1.523e+04	-
3.739e+04	1	69	264	-1.57	-16.16	-15.30	-2.43	3.43	1.240e+04	-4.331e+04	-1.781e+04	-1.310e+04	-
2.775e+04	1	69	265	-0.11	-14.99	-12.49	-2.61	5.56	-234.58	-3.451e+04	-2.770e+04	-7043.60	-
1.368e+04	1	69	266	148.76	-123.89	-67.77	92.64	-110.24	-7.526e+04	-2.312e+05	-1.299e+05	-1.766e+05	-
7.438e+04	1	69	267	78.75	-70.24	-39.56	48.07	-60.25	-4.954e+04	-1.672e+05	-1.118e+05	-1.050e+05	-
5.876e+04													

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	69	268	51.02	-48.01	-33.42	36.43	-35.10	-2.877e+04	-1.288e+05	-8.447e+04	-7.315e+04	
4.972e+04	1	69	269	36.37	-40.54	-29.59	25.42	-26.88	-1.039e+04	-1.043e+05	-6.713e+04	-4.752e+04
4.590e+04	1	69	270	28.32	-36.31	-25.72	17.73	-23.92	7201.90	-8.837e+04	-5.612e+04	-2.505e+04
4.519e+04	1	69	271	11.86	-21.66	-20.44	10.64	-6.27	4922.85	-7.062e+04	-5.079e+04	-1.491e+04
3.324e+04	1	69	272	4.59	-21.49	-15.96	-0.95	10.67	5338.49	-4.859e+04	-4.092e+04	-2331.23
1.884e+04	1	69	273	-1.15	-18.46	-16.95	-2.65	4.88	683.01	-4.186e+04	-3.980e+04	-1377.61
9133.53	1	69	274	134.77	-124.06	-20.27	30.99	-126.85	-1.277e+05	-2.358e+05	-1.753e+05	-1.881e+05
5.366e+04	1	69	275	82.10	-79.09	-16.66	19.68	-78.52	-6.270e+04	-1.676e+05	-1.322e+05	-9.816e+04
4.963e+04	1	69	276	49.61	-54.51	-12.65	7.76	-51.05	-3.833e+04	-1.409e+05	-1.174e+05	-6.178e+04
4.307e+04	1	69	277	33.10	-39.38	-14.98	8.70	-34.25	-2.345e+04	-1.092e+05	-9.394e+04	-3.871e+04
3.280e+04	1	69	278	24.11	-29.80	-17.20	11.51	-22.82	-1.369e+04	-8.297e+04	-7.181e+04	-2.485e+04
2.547e+04	1	69	279	12.89	-22.78	-15.00	5.12	-14.73	1.673e+04	-5.843e+04	-5.109e+04	9395.40
2.230e+04	1	69	280	-2.30	-14.37	-13.27	-3.41	-3.48	1.113e+04	-5.325e+04	-4.974e+04	7615.08
1.462e+04	1	69	281	-0.83	-12.77	-12.76	-0.84	0.24	-568.33	-4.579e+04	-4.571e+04	-648.06
1897.10	1	69	282	122.57	-123.97	39.03	-40.43	-116.69	-1.567e+05	-2.391e+05	-2.137e+05	-1.822e+05
3.807e+04	1	69	283	72.05	-77.48	9.16	-14.59	-73.81	-9.830e+04	-1.802e+05	-1.680e+05	-1.105e+05
2.915e+04	1	69	284	33.03	-47.93	-0.24	-14.66	-39.84	-5.765e+04	-1.334e+05	-1.314e+05	-5.972e+04
1.233e+04	1	69	285	29.38	-37.84	1.06	-9.52	-33.19	-3.256e+04	-1.132e+05	-1.113e+05	-3.438e+04
1.196e+04	1	69	286	23.87	-32.78	-9.22e-02	-8.82	-27.99	-7329.02	-9.594e+04	-9.504e+04	-8223.86
8859.47	1	69	287	10.11	-19.49	-8.64	-0.74	-14.26	-2958.74	-7.799e+04	-7.789e+04	-3058.29
2731.22	1	69	288	1.90	-16.54	-16.46	1.82	1.17	4282.23	-5.664e+04	-5.629e+04	3928.26
4630.34	1	69	289	-1.89	-14.47	-14.33	-2.02	-1.30	858.29	-4.970e+04	-4.806e+04	-774.09
8936.37	1	69	290	103.19	-108.79	72.18	-77.78	-74.92	-1.721e+05	-2.281e+05	-2.224e+05	-1.778e+05
1.694e+04	1	69	291	62.05	-68.92	38.82	-45.69	-50.03	-1.119e+05	-1.756e+05	-1.756e+05	-1.119e+05
1045.15	1	69	292	38.48	-46.62	21.15	-29.29	-34.27	-6.919e+04	-1.387e+05	-1.379e+05	-6.993e+04
7152.35	1	69	293	26.77	-34.39	11.49	-19.11	-26.47	-4.216e+04	-1.096e+05	-1.082e+05	-4.351e+04
9457.48	1	69	294	20.18	-25.50	3.84	-9.15	-21.90	-2.790e+04	-8.249e+04	-8.131e+04	-2.907e+04
7917.26	1	69	295	10.86	-19.40	-0.10	-8.45	-14.54	1.035e+04	-5.823e+04	-5.542e+04	7537.90
1.360e+04	1	69	296	-2.54	-11.27	-5.78	-8.04	-4.22	1.032e+04	-5.538e+04	-5.105e+04	5988.66
1.630e+04	1	69	297	-1.31	-8.43	-7.23	-2.52	-2.67	-905.52	-5.037e+04	-4.394e+04	-7343.22
1.664e+04	1	69	298	88.16	-92.90	81.11	-85.86	-35.01	-1.700e+05	-2.075e+05	-2.075e+05	-1.701e+05
1449.55	1	69	299	55.29	-60.93	50.25	-55.90	-23.66	-1.133e+05	-1.630e+05	-1.554e+05	-1.210e+05
1.792e+04	1	69	300	36.08	-44.15	31.70	-39.77	-18.23	-6.427e+04	-1.261e+05	-1.162e+05	-7.415e+04
2.266e+04	1	69	301	25.42	-34.07	21.27	-29.92	-15.15	-3.929e+04	-1.038e+05	-9.080e+04	-5.232e+04
2.591e+04	1	69	302	18.58	-27.86	15.12	-24.40	-12.19	-1.302e+04	-8.930e+04	-7.326e+04	-2.906e+04
3.108e+04	1	69	303	8.78	-16.42	3.97	-11.62	-9.90	-8834.22	-7.453e+04	-5.972e+04	-2.365e+04
2.745e+04	1	69	304	5.41e-03	-11.10	-9.50	-1.59	-3.90	2321.76	-5.567e+04	-3.980e+04	-1.355e+04

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

2.585e+04	1	69	305	-2.22	-10.47	-8.26	-4.44	-3.65	935.74	-4.981e+04	-3.436e+04	-1.452e+04	-
2.335e+04	1	69	306	67.31	-75.57	66.68	-74.93	-9.51	-1.620e+05	-1.666e+05	-1.640e+05	-1.646e+05	-
2241.65	1	69	307	47.89	-54.10	47.51	-53.72	-6.24	-9.299e+04	-1.287e+05	-1.112e+05	-1.104e+05	-
1.784e+04	1	69	308	27.34	-41.16	27.33	-41.14	0.97	-5.025e+04	-1.171e+05	-8.357e+04	-8.382e+04	-
3.344e+04	1	69	309	20.35	-30.08	20.14	-29.87	-3.25	-3.709e+04	-9.392e+04	-6.543e+04	-6.557e+04	-
2.842e+04	1	69	310	16.05	-21.43	14.50	-19.88	-7.46	-3.021e+04	-7.081e+04	-5.037e+04	-5.065e+04	-
2.030e+04	1	69	311	9.56	-15.99	8.84	-15.27	-4.23	7378.82	-5.132e+04	-2.244e+04	-2.150e+04	-
2.935e+04	1	69	312	-2.62	-8.76	-2.62	-8.76	0.12	1.086e+04	-5.015e+04	-1.948e+04	-1.981e+04	-
3.051e+04	1	69	313	-1.16	-4.08	-1.88	-3.36	-1.26	-1251.89	-4.867e+04	-2.507e+04	-2.484e+04	-
2.371e+04	1	69	314	79.27	-88.98	76.38	-86.09	21.87	-1.699e+05	-2.069e+05	-1.700e+05	-2.069e+05	-
1321.10	1	69	315	53.79	-63.24	51.77	-61.21	15.26	-1.142e+05	-1.617e+05	-1.217e+05	-1.542e+05	-
1.732e+04	1	69	316	25.58	-42.52	24.34	-41.28	9.12	-6.292e+04	-1.249e+05	-7.178e+04	-1.160e+05	-
2.168e+04	1	69	317	20.26	-31.36	18.73	-29.83	8.76	-3.877e+04	-1.035e+05	-5.176e+04	-9.048e+04	-
2.592e+04	1	69	318	14.49	-23.73	13.12	-22.36	7.10	-1.295e+04	-8.899e+04	-2.979e+04	-7.215e+04	-
3.158e+04	1	69	319	8.31	-14.13	8.24	-14.06	1.27	-8818.51	-7.439e+04	-2.391e+04	-5.929e+04	-
2.760e+04	1	69	320	-0.78	-8.50	-2.80	-6.48	-3.39	2482.46	-5.532e+04	-1.139e+04	-4.144e+04	-
2.469e+04	1	69	321	-2.30	-7.09	-3.28	-6.11	-1.93	933.51	-4.945e+04	-1.424e+04	-3.428e+04	-
2.311e+04	1	69	322	93.92	-109.11	70.66	-85.85	64.66	-1.718e+05	-2.281e+05	-1.775e+05	-2.224e+05	-
1.691e+04	1	69	323	57.76	-72.70	41.62	-56.56	42.95	-1.114e+05	-1.755e+05	-1.115e+05	-1.755e+05	-
1264.87	1	69	324	36.52	-50.45	24.96	-38.89	29.53	-6.864e+04	-1.384e+05	-6.931e+04	-1.377e+05	-
6780.30	1	69	325	23.42	-34.51	15.71	-26.80	19.68	-4.149e+04	-1.092e+05	-4.276e+04	-1.079e+05	-
9205.12	1	69	326	15.81	-22.88	11.91	-18.97	11.66	-2.692e+04	-8.229e+04	-2.799e+04	-8.122e+04	-
7616.05	1	69	327	9.00	-14.94	6.03	-11.98	7.89	1.071e+04	-5.775e+04	7731.83	-5.478e+04	-
1.396e+04	1	69	328	1.16	-8.59	-1.38	-6.05	4.28	1.022e+04	-5.493e+04	6004.55	-5.071e+04	-
1.602e+04	1	69	329	-0.37	-3.13	-0.75	-2.76	0.95	-892.98	-4.988e+04	-7390.63	-4.338e+04	-
1.662e+04	1	69	330	104.20	-126.93	34.02	-56.76	106.28	-1.568e+05	-2.389e+05	-1.818e+05	-2.138e+05	-
3.784e+04	1	69	331	62.85	-82.28	18.89	-38.32	66.69	-9.759e+04	-1.807e+05	-1.093e+05	-1.690e+05	-
2.887e+04	1	69	332	40.69	-59.45	6.49	-25.25	47.49	-5.715e+04	-1.346e+05	-5.959e+04	-1.321e+05	-
1.352e+04	1	69	333	25.39	-37.80	2.66	-15.08	30.32	-3.197e+04	-1.129e+05	-3.384e+04	-1.111e+05	-
1.217e+04	1	69	334	15.93	-25.30	0.68	-10.05	19.91	-7332.90	-9.481e+04	-8060.34	-9.408e+04	-
7943.74	1	69	335	9.94	-14.99	1.41	-6.47	11.82	-2425.75	-7.765e+04	-2507.73	-7.757e+04	-
2482.03	1	69	336	0.94	-5.71	-1.22	-3.55	3.11	5054.08	-5.698e+04	4952.32	-5.688e+04	-
2510.40	1	69	337	-5.30e-03	-3.14	-1.45	-1.69	1.56	812.78	-4.942e+04	-749.74	-4.786e+04	-
8720.48													
<b>M_G</b>				<b>N max</b>	<b>N min</b>	<b>N 1</b>	<b>N 2</b>	<b>N 1-2</b>	<b>M max</b>	<b>M min</b>	<b>M 1</b>	<b>M 2</b>	<b>M 1-2</b>
					-1477.18	-1412.97	-1425.88	-1423.22		-3.411e+06	-2.002e+06	-1.997e+06	-
1.836e+06				1464.67		1410.60	1402.13	1426.73	3.048e+06		1.617e+06	1.612e+06	
1.757e+06													



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

Elem.	Cmb	Nodo	Von Mises daN/cm <sup>2</sup>	N max daN/cm	N min daN/cm	N 1 daN/cm	N 2 daN/cm	N 1-2 daN/cm	M max daN	M min daN	M 1 daN	M 2 daN	M 1-2 daN
3.164e+04	1	1	20.43	177.07	-156.93	-153.50	173.64	33.65	2.740e+04	-1.877e+05	2.264e+04	-1.830e+05	
5.250e+04		2	23.31	224.29	-195.75	-194.93	223.47	-18.50	-1.794e+04	-2.392e+05	-3.119e+04	-2.259e+05	
3.264e+04		3	24.59	301.46	-267.39	-264.23	298.30	42.28	1.434e+04	-2.314e+05	9925.97	-2.269e+05	
9893.80		4	21.53	224.38	-203.47	-183.00	203.91	91.31	6.077e+04	-1.741e+05	6.035e+04	-1.737e+05	
2.677e+04	1	3	17.29	149.83	-132.79	-129.89	146.93	28.47	2.319e+04	-1.589e+05	1.916e+04	-1.548e+05	
4.442e+04		2	19.72	189.78	-165.63	-164.94	189.09	-15.66	-1.518e+04	-2.024e+05	-2.639e+04	-1.912e+05	
2.762e+04		3	20.81	255.08	-226.25	-223.58	252.41	35.78	1.214e+04	-1.958e+05	8398.90	-1.920e+05	
8371.68		4	18.22	189.86	-172.17	-154.85	172.54	77.26	5.142e+04	-1.473e+05	5.107e+04	-1.470e+05	
2.450e+04	1	6	15.86	139.00	-145.36	-145.30	138.94	4.07	2.160e+04	-1.443e+05	1.789e+04	-1.406e+05	
4.050e+04		2	18.07	182.81	-177.95	-173.98	178.84	-37.63	-1.352e+04	-1.840e+05	-2.375e+04	-1.738e+05	
2.512e+04		3	19.08	238.29	-242.76	-242.69	238.22	5.80	1.116e+04	-1.779e+05	7757.35	-1.745e+05	
7653.73		4	16.74	172.13	-188.25	-181.85	165.73	47.60	4.708e+04	-1.338e+05	4.676e+04	-1.335e+05	
2.440e+04	1	38	15.77	136.80	-129.77	-128.62	135.65	17.44	2.128e+04	-1.444e+05	1.760e+04	-1.407e+05	
4.043e+04		2	17.98	176.20	-160.87	-159.25	174.59	-23.29	-1.369e+04	-1.840e+05	-2.390e+04	-1.738e+05	
2.512e+04		3	18.98	233.94	-219.61	-218.52	232.85	22.18	1.108e+04	-1.780e+05	7682.59	-1.746e+05	
7627.31		4	16.63	171.80	-168.18	-156.68	160.29	61.47	4.687e+04	-1.339e+05	4.655e+04	-1.336e+05	
2.434e+04	1	69	15.72	136.20	-120.71	-118.08	133.57	25.88	2.108e+04	-1.444e+05	1.742e+04	-1.408e+05	
4.038e+04		2	17.93	172.53	-150.57	-149.95	171.90	-14.23	-1.380e+04	-1.840e+05	-2.399e+04	-1.738e+05	
2.511e+04		3	18.92	231.89	-205.68	-203.25	229.46	32.52	1.103e+04	-1.780e+05	7635.36	-1.746e+05	
7610.62		4	16.56	172.60	-156.51	-140.77	156.86	70.24	4.674e+04	-1.339e+05	4.642e+04	-1.336e+05	
9848.95	2	1	21.49	229.41	-204.36	-182.00	207.05	95.93	6.016e+04	-1.741e+05	5.974e+04	-1.737e+05	
3.254e+04		3	24.54	302.55	-276.91	-274.45	300.09	37.68	1.226e+04	-2.317e+05	7839.74	-2.273e+05	
1.339e+04		5	26.54	417.47	-383.30	-337.84	372.01	185.30	8.915e+04	-1.954e+05	8.852e+04	-1.948e+05	
1.519e+04		6	22.88	273.82	-267.60	-195.84	202.07	183.58	1.171e+05	-1.392e+05	1.162e+05	-1.383e+05	-
8333.72	2	3	18.19	194.12	-172.92	-154.00	175.19	81.17	5.090e+04	-1.473e+05	5.055e+04	-1.469e+05	
2.753e+04		3	20.77	256.01	-234.31	-232.23	253.93	31.88	1.037e+04	-1.960e+05	6633.63	-1.923e+05	
1.133e+04		5	22.46	353.24	-324.33	-285.87	314.77	156.79	7.543e+04	-1.654e+05	7.490e+04	-1.648e+05	
1.285e+04		6	19.36	231.69	-226.43	-165.71	170.98	155.33	9.908e+04	-1.178e+05	9.832e+04	-1.170e+05	-
7625.64	2	6	16.70	175.32	-188.13	-180.92	168.12	50.68	4.661e+04	-1.338e+05	4.629e+04	-1.335e+05	
2.503e+04		3	19.05	239.88	-250.45	-250.44	239.88	1.26	9556.27	-1.782e+05	6157.38	-1.748e+05	
1.021e+04		5	20.67	321.65	-346.07	-325.61	301.18	115.09	6.849e+04	-1.503e+05	6.801e+04	-1.499e+05	
1.174e+04		6	17.85	205.50	-247.25	-211.95	170.19	121.40	9.038e+04	-1.070e+05	8.968e+04	-1.063e+05	-
7595.29	2	38	16.60	175.39	-168.54	-155.84	162.69	64.84	4.641e+04	-1.339e+05	4.608e+04	-1.335e+05	
2.503e+04		3	18.94	235.06	-227.07	-226.34	234.34	18.25	9478.84	-1.782e+05	6079.67	-1.748e+05	

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

1.027e+04	5	20.51	320.69	-314.04	-285.33	291.98	131.91	6.854e+04-1.503e+05	6.806e+04-1.499e+05	
1.171e+04	6	17.69	207.81	-221.04	-174.39	161.15	133.54	9.019e+04-1.070e+05	8.950e+04-1.063e+05	-
7576.11	4	16.53	176.47	-157.20	-140.00	159.27	73.79	4.627e+04-1.339e+05	4.595e+04-1.336e+05	
2.503e+04	3	18.88	232.73	-213.01	-211.12	230.84	28.98	9429.92-1.782e+05	6030.57-1.748e+05	
1.030e+04	5	20.42	321.13	-294.85	-259.88	286.16	142.54	6.858e+04-1.503e+05	6.809e+04-1.499e+05	
1.169e+04	6	17.60	210.63	-205.84	-150.65	155.44	141.21	9.007e+04-1.071e+05	8.938e+04-1.064e+05	-
1.500e+04	6	23.05	305.94	-271.02	-189.82	224.74	200.64	1.174e+05-1.400e+05	1.165e+05-1.392e+05	-
1.644e+04	5	26.38	393.69	-412.24	-376.17	357.61	166.65	8.989e+04-1.927e+05	8.893e+04-1.918e+05	
1.415e+04	7	34.04	600.37	-555.90	-320.09	364.56	465.89	2.359e+05-1.366e+05	2.353e+05-1.360e+05	-
4.635e+04	8	25.47	311.40	-328.26	-129.60	112.74	295.99	1.943e+05-8.739e+04	1.864e+05-7.954e+04	-
1.270e+04	6	19.51	258.87	-229.32	-160.61	190.16	169.77	9.933e+04-1.185e+05	9.859e+04-1.178e+05	-
1.391e+04	5	22.33	333.12	-348.82	-318.30	302.59	141.01	7.606e+04-1.631e+05	7.525e+04-1.623e+05	
1.198e+04	7	28.80	508.00	-470.37	-270.84	308.47	394.21	1.996e+05-1.156e+05	1.991e+05-1.151e+05	-
3.922e+04	8	21.55	263.49	-277.76	-109.66	95.39	250.45	1.644e+05-7.395e+04	1.577e+05-6.731e+04	-
1.157e+04	6	17.98	229.83	-248.61	-207.54	188.76	134.02	9.058e+04-1.076e+05	8.991e+04-1.070e+05	-
1.254e+04	5	20.56	305.00	-371.65	-356.83	290.19	99.03	6.906e+04-1.482e+05	6.833e+04-1.475e+05	
1.102e+04	7	26.58	453.12	-494.98	-347.08	305.22	344.02	1.811e+05-1.051e+05	1.806e+05-1.047e+05	-
3.575e+04	8	19.93	225.00	-299.29	-181.68	107.39	218.70	1.497e+05-6.713e+04	1.437e+05-6.106e+04	-
1.155e+04	6	17.83	232.37	-223.18	-169.84	179.03	146.47	9.041e+04-1.077e+05	8.973e+04-1.070e+05	-
1.261e+04	5	20.40	303.03	-337.58	-315.49	280.93	116.90	6.911e+04-1.482e+05	6.838e+04-1.475e+05	
1.094e+04	7	26.34	457.59	-452.84	-285.27	290.03	352.82	1.813e+05-1.051e+05	1.809e+05-1.047e+05	-
3.569e+04	8	19.72	232.75	-269.47	-131.44	94.73	224.21	1.496e+05-6.719e+04	1.435e+05-6.114e+04	-
1.154e+04	6	17.73	235.34	-208.48	-146.01	172.87	154.34	9.030e+04-1.077e+05	8.962e+04-1.070e+05	-
1.265e+04	5	20.30	302.84	-317.11	-289.36	275.09	128.19	6.914e+04-1.482e+05	6.841e+04-1.475e+05	
1.089e+04	7	26.18	461.82	-427.61	-246.22	280.43	358.38	1.814e+05-1.051e+05	1.810e+05-1.046e+05	-
3.565e+04	8	19.59	239.54	-252.51	-99.69	86.72	227.68	1.494e+05-6.722e+04	1.434e+05-6.119e+04	-
4.733e+04	8	26.20	382.54	-319.86	-117.30	179.98	318.19	1.965e+05-9.199e+04	1.885e+05-8.400e+04	-
9684.05	7	34.50	504.70	-594.90	-335.72	245.51	466.72	2.496e+05-1.314e+05	2.494e+05-1.311e+05	-
9.842e+04	9	46.57	720.83	-597.78	35.10	87.95	658.78	4.219e+05-7.675e+04	4.016e+05-5.650e+04	-
8.480e+04	10	28.51	339.94	-373.46	30.61	-64.13	353.54	2.681e+05-3.155e+04	2.418e+05 -5238.56	-
4.005e+04	8	22.17	323.69	-270.65	-99.25	152.29	269.24	1.663e+05-7.784e+04	1.595e+05-7.108e+04	-
8194.20	7	29.19	427.05	-503.38	-284.07	207.74	394.92	2.112e+05-1.112e+05	2.110e+05-1.110e+05	-
8.328e+04	9	39.41	609.93	-505.82	29.70	74.42	557.43	3.570e+05-6.494e+04	3.398e+05-4.781e+04	-
7.175e+04	10	24.12	287.64	-316.01	25.90	-54.26	299.15	2.268e+05-2.669e+04	2.046e+05 -4432.62	-
3.647e+04	8	20.51	283.40	-294.08	-172.94	162.27	235.12	1.514e+05-7.073e+04	1.453e+05-6.458e+04	-
7595.67	7	26.93	373.08	-523.18	-360.55	210.45	345.41	1.916e+05-1.011e+05	1.914e+05-1.009e+05	-
	9	36.28	528.40	-526.69	-90.78	92.49	519.52	3.239e+05-5.907e+04	3.083e+05-4.348e+04	-



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

1.039e+05	14	23.44	247.12	-251.17	204.09	-208.13	139.97	2.543e+05	3.114e+04	1.835e+05	1.020e+05	-
6 6	12	23.21	241.02	-266.17	67.89	-93.04	240.49	2.347e+05	4429.97	1.915e+05	4.757e+04	-
8.984e+04	11	38.50	412.90	-495.08	210.49	-292.67	377.91	3.863e+05	-7033.77	3.098e+05	6.948e+04	-
1.557e+05	13	32.45	296.44	-329.80	259.91	-293.26	146.78	3.425e+05	1.995e+04	2.263e+05	1.362e+05	-
1.549e+05	14	21.67	193.33	-258.91	119.00	-184.58	167.60	2.315e+05	2.850e+04	1.671e+05	9.288e+04	-
9.445e+04	12	22.98	258.24	-241.67	119.96	-103.39	223.62	2.346e+05	4316.85	1.914e+05	4.750e+04	-
6 38	11	38.23	442.03	-466.75	274.47	-299.19	352.42	3.866e+05	-7039.92	3.101e+05	6.952e+04	-
8.988e+04	13	32.20	324.68	-311.91	303.56	-290.79	114.02	3.427e+05	1.990e+04	2.264e+05	1.362e+05	-
1.558e+05	14	21.45	211.00	-238.65	159.77	-187.42	142.87	2.313e+05	2.838e+04	1.669e+05	9.278e+04	-
1.550e+05	12	22.83	271.70	-228.77	152.86	-109.94	212.96	2.345e+05	4245.37	1.913e+05	4.745e+04	-
9.445e+04	11	38.06	462.58	-450.99	314.90	-303.31	336.31	3.868e+05	-7043.80	3.102e+05	6.955e+04	-
6 69	13	32.10	344.88	-302.96	331.14	-289.22	93.33	3.428e+05	1.987e+04	2.264e+05	1.362e+05	-
8.990e+04	14	21.31	224.66	-228.33	185.54	-189.21	127.24	2.312e+05	2.831e+04	1.668e+05	9.272e+04	-
1.559e+05	14	27.15	292.79	-270.17	247.17	-224.54	153.63	2.950e+05	3.518e+04	2.131e+05	1.171e+05	-
7 1	13	41.52	416.83	-415.02	390.62	-388.81	145.30	4.433e+05	2.983e+04	2.903e+05	1.828e+05	-
1.207e+05	15	31.01	297.74	-309.15	297.74	-309.15	-1.86	3.430e+05	4.728e+04	1.931e+05	1.972e+05	-
1.996e+05	16	23.15	221.47	-229.67	212.58	-220.79	62.68	2.597e+05	5.001e+04	1.692e+05	1.405e+05	-
1.479e+05	14	22.97	247.75	-228.60	209.14	-190.00	130.00	2.496e+05	2.977e+04	1.803e+05	9.912e+04	-
1.039e+05	13	35.13	352.70	-351.17	330.53	-329.00	122.95	3.751e+05	2.524e+04	2.457e+05	1.547e+05	-
7 3	15	26.24	251.94	-261.59	251.93	-261.59	-1.58	2.903e+05	4.001e+04	1.634e+05	1.669e+05	-
1.022e+05	16	19.59	187.39	-194.33	179.88	-186.82	53.03	2.198e+05	4.232e+04	1.432e+05	1.189e+05	-
1.689e+05	14	21.24	193.32	-236.54	124.52	-167.74	157.61	2.272e+05	2.728e+04	1.642e+05	9.028e+04	-
8.790e+04	13	32.33	276.79	-351.10	230.17	-304.49	164.60	3.408e+05	2.301e+04	2.232e+05	1.405e+05	-
7 6	15	24.20	193.23	-258.50	187.84	-253.11	49.03	2.640e+05	3.649e+04	1.487e+05	1.518e+05	-
9.287e+04	16	18.15	144.64	-201.63	118.58	-175.57	91.34	2.003e+05	3.870e+04	1.306e+05	1.084e+05	-
1.534e+05	14	21.02	211.33	-217.40	164.73	-170.79	133.45	2.270e+05	2.715e+04	1.640e+05	9.018e+04	-
1.138e+05	13	32.09	302.23	-330.15	273.26	-301.18	132.23	3.409e+05	2.297e+04	2.233e+05	1.406e+05	-
8.004e+04	15	23.99	213.80	-244.45	213.08	-243.73	18.11	2.639e+05	3.642e+04	1.486e+05	1.518e+05	-
7 38	16	17.94	158.86	-184.79	146.12	-172.06	64.91	2.000e+05	3.856e+04	1.303e+05	1.082e+05	-
9.288e+04	14	20.88	225.22	-207.82	190.13	-172.72	118.18	2.269e+05	2.706e+04	1.639e+05	9.011e+04	-
1.535e+05	13	31.94	320.64	-319.25	300.48	-299.09	111.77	3.410e+05	2.294e+04	2.233e+05	1.406e+05	-
1.138e+05	15	23.86	229.03	-237.81	229.03	-237.80	-1.43	2.639e+05	3.637e+04	1.485e+05	1.517e+05	-
7.996e+04	16	17.81	170.36	-176.67	163.53	-169.83	48.21	1.998e+05	3.847e+04	1.302e+05	1.081e+05	-
7 69	16	22.80	223.93	-227.58	215.12	-218.76	62.48	2.561e+05	4.980e+04	1.677e+05	1.382e+05	-
9.288e+04	15	30.96	287.18	-307.03	287.07	-306.92	8.30	3.425e+05	4.838e+04	1.953e+05	1.955e+05	-
1.535e+05	17	22.67	204.43	-233.08	199.13	-227.77	-47.88	2.561e+05	4.997e+04	1.380e+05	1.682e+05	-
1.137e+05	18	18.55	165.33	-183.04	165.08	-182.79	9.23	2.130e+05	5.300e+04	1.327e+05	1.333e+05	-
7.991e+04												
8 1												
1.021e+05												
1.470e+05												
1.020e+05												

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

7.999e+04 8 3	16	19.29	189.48	-192.56	182.02	-185.10	52.87	2.167e+05	4.214e+04	1.419e+05	1.170e+05	-
8.640e+04	15	26.20	243.00	-259.80	242.90	-259.70	7.03	2.898e+05	4.093e+04	1.653e+05	1.654e+05	-
1.244e+05	17	19.19	172.98	-197.22	168.49	-192.73	-40.52	2.167e+05	4.228e+04	1.167e+05	1.423e+05	-
8.628e+04	18	15.69	139.89	-154.88	139.68	-154.67	7.81	1.802e+05	4.484e+04	1.123e+05	1.128e+05	-
6.768e+04 8 22	16	17.86	169.65	-214.18	146.70	-191.22	91.01	1.975e+05	3.846e+04	1.293e+05	1.067e+05	-
7.871e+04	15	24.17	211.72	-283.96	205.31	-277.55	56.02	2.636e+05	3.733e+04	1.504e+05	1.506e+05	-
1.131e+05	17	17.72	148.04	-219.93	147.95	-219.84	5.70	1.975e+05	3.866e+04	1.064e+05	1.298e+05	-
7.857e+04	18	14.61	123.21	-177.40	115.47	-169.66	47.62	1.647e+05	4.105e+04	1.026e+05	1.032e+05	-
6.183e+04 8 54	16	17.66	170.25	-189.21	158.20	-177.16	64.69	1.972e+05	3.837e+04	1.291e+05	1.065e+05	-
7.861e+04	15	23.95	216.22	-253.54	214.82	-252.14	25.60	2.635e+05	3.726e+04	1.503e+05	1.505e+05	-
1.131e+05	17	17.50	152.35	-193.69	151.15	-192.49	-20.37	1.972e+05	3.853e+04	1.062e+05	1.295e+05	-
7.849e+04	18	14.40	124.41	-153.74	122.53	-151.86	22.79	1.642e+05	4.087e+04	1.023e+05	1.028e+05	-
6.165e+04 8 69	16	17.54	172.26	-175.06	165.47	-168.28	48.06	1.970e+05	3.831e+04	1.290e+05	1.063e+05	-
7.855e+04	15	23.81	220.91	-236.18	220.82	-236.09	6.39	2.634e+05	3.721e+04	1.503e+05	1.504e+05	-
1.131e+05	17	17.44	157.25	-179.29	153.17	-175.21	-36.83	1.970e+05	3.844e+04	1.061e+05	1.293e+05	-
7.844e+04	18	14.27	127.17	-140.80	126.99	-140.61	7.10	1.638e+05	4.077e+04	1.021e+05	1.025e+05	-
6.153e+04 9 1	2	23.26	224.64	-198.19	-196.97	223.42	-22.67	-1.821e+04	-2.387e+05	-3.162e+04	-2.252e+05	-
5.271e+04	19	27.62	286.06	-235.81	-209.82	260.06	-113.53	-8.485e+04	-3.062e+05	-1.086e+05	-2.824e+05	-
6.854e+04	20	30.23	418.56	-365.54	-354.21	407.23	-93.60	-6.944e+04	-3.212e+05	-7.883e+04	-3.118e+05	-
4.771e+04	3	24.48	311.99	-270.02	-266.05	308.03	47.85	1.445e+04	2.298e+05	9819.92	2.252e+05	-
3.331e+04 9 3	2	19.68	190.08	-167.70	-166.67	189.05	-19.18	-1.540e+04	-2.019e+05	-2.676e+04	-1.906e+05	-
4.460e+04	19	23.37	242.05	-199.53	-177.54	220.05	-96.06	-7.180e+04	-2.591e+05	-9.192e+04	-2.390e+05	-
5.800e+04	20	25.58	354.17	-309.31	-299.71	344.58	-79.20	-5.875e+04	-2.718e+05	-6.670e+04	-2.638e+05	-
4.037e+04	3	20.71	263.99	-228.47	-225.12	260.64	40.49	1.223e+04	1.945e+05	8309.17	1.906e+05	-
2.818e+04 9 22	2	18.02	212.87	-160.46	-160.37	212.79	5.68	-1.417e+04	-1.839e+05	-2.445e+04	-1.736e+05	-
4.049e+04	19	21.43	271.53	-186.34	-176.16	261.35	-67.51	-6.537e+04	-2.359e+05	-8.368e+04	-2.176e+05	-
5.278e+04	20	23.46	381.95	-290.46	-287.50	378.98	-44.55	-5.336e+04	-2.470e+05	-6.062e+04	-2.398e+05	-
3.679e+04	3	18.97	284.62	-222.05	-213.69	276.27	64.52	1.109e+04	1.769e+05	7528.16	1.734e+05	-
2.562e+04 9 54	2	17.94	187.92	-155.16	-154.95	187.71	-8.49	-1.407e+04	-1.837e+05	-2.437e+04	-1.734e+05	-
4.052e+04	19	21.32	239.40	-182.72	-167.11	223.79	-79.66	-6.531e+04	-2.357e+05	-8.361e+04	-2.174e+05	-
5.275e+04	20	23.33	344.75	-284.33	-278.29	338.70	-61.37	-5.339e+04	-2.471e+05	-6.063e+04	-2.398e+05	-
3.673e+04	3	18.89	257.03	-213.01	-208.16	252.17	47.54	1.110e+04	1.768e+05	7543.86	1.733e+05	-
2.562e+04 9 69	2	17.89	172.80	-152.46	-151.52	171.86	-17.44	-1.400e+04	-1.836e+05	-2.432e+04	-1.733e+05	-
4.054e+04	19	21.25	220.04	-181.39	-161.40	200.05	-87.33	-6.527e+04	-2.356e+05	-8.356e+04	-2.173e+05	-
5.273e+04	20	23.25	321.97	-281.19	-272.47	313.25	-72.00	-5.341e+04	-2.471e+05	-6.064e+04	-2.399e+05	-
3.670e+04	3	18.83	239.99	-207.70	-204.66	236.94	36.81	1.111e+04	1.768e+05	7553.79	1.732e+05	-
2.562e+04												

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

10	1	3	24.15	297.72	-261.44	-257.97	294.25	43.91	1.115e+04-2.290e+05	6482.60-2.243e+05
3.316e+04										
4.487e+04		20	30.39	444.09	-362.94	-353.97	435.12	-84.60	-7.584e+04-3.243e+05-8.423e+04-3.159e+05	
3.336e+04		21	32.23	615.51	-551.45	-548.56	612.62	58.01	3154.29-2.979e+05	-589.04-2.942e+05
1.680e+04		5	26.54	408.15	-406.81	-366.95	368.29	175.79	9.390e+04-1.911e+05	9.291e+04-1.901e+05
10	3	3	20.43	251.92	-221.21	-218.28	248.98	37.15	9437.43-1.937e+05	5485.28-1.898e+05
2.806e+04										
3.797e+04		20	25.72	375.77	-307.10	-299.51	368.18	-71.58	-6.417e+04-2.744e+05-7.127e+04-2.673e+05	
2.823e+04		21	27.27	520.82	-466.62	-464.17	518.37	49.09	2669.01-2.521e+05	-498.42-2.489e+05
1.421e+04		5	22.46	345.36	-344.23	-310.49	311.63	148.74	7.946e+04-1.617e+05	7.862e+04-1.609e+05
10	6	3	18.74	233.71	-237.83	-237.76	233.63	6.07	8693.09-1.761e+05	5102.00-1.725e+05
2.551e+04										
3.448e+04		20	23.53	363.30	-318.93	-305.53	349.89	-94.69	-5.838e+04-2.495e+05-6.481e+04-2.431e+05	
2.542e+04		21	25.03	488.27	-488.65	-488.58	488.21	8.10	2042.14-2.293e+05	-786.51-2.264e+05
1.282e+04		5	20.68	315.67	-367.02	-349.64	298.28	107.54	7.213e+04-1.470e+05	7.138e+04-1.462e+05
10	38	3	18.64	230.36	-214.86	-213.66	229.17	23.05	8623.47-1.761e+05	5031.29-1.725e+05
2.551e+04										
3.450e+04		20	23.44	349.81	-294.38	-285.16	340.59	-76.54	-5.835e+04-2.495e+05-6.480e+04-2.430e+05	
2.557e+04		21	24.89	478.82	-448.77	-447.76	477.82	30.48	2277.55-2.292e+05	-582.20-2.264e+05
1.288e+04		5	20.52	314.01	-333.26	-308.35	289.10	124.50	7.220e+04-1.470e+05	7.144e+04-1.462e+05
10	69	3	18.58	229.02	-201.10	-198.43	226.35	33.78	8579.48-1.761e+05	4986.62-1.725e+05
2.551e+04										
3.451e+04		20	23.38	341.61	-279.18	-272.29	334.71	-65.08	-5.834e+04-2.495e+05-6.479e+04-2.430e+05	
2.566e+04		21	24.79	473.47	-424.20	-421.97	471.25	44.62	2426.37-2.292e+05	-453.11-2.263e+05
1.292e+04		5	20.41	313.96	-312.93	-282.27	283.30	135.22	7.223e+04-1.470e+05	7.147e+04-1.462e+05
11	1	5	26.45	502.20	-407.49	-341.54	436.25	235.88	9.013e+04-1.914e+05	8.918e+04-1.905e+05
1.636e+04										
4.180e+04		21	31.75	591.05	-648.81	-646.61	588.86	-52.15	-3015.36-2.941e+05	-9147.42-2.880e+05
4.187e+04		22	48.22	1240.51	-1104.22	-878.97	1015.26	690.96	2.655e+05-2.419e+05	2.620e+05-2.384e+05
8161.65		7	33.26	391.93	-546.99	-319.63	164.57	402.22	2.456e+05-1.246e+05	2.455e+05-1.244e+05
11	3	5	22.38	424.94	-344.80	-289.00	369.14	199.59	7.627e+04-1.620e+05	7.546e+04-1.612e+05
1.384e+04										
3.537e+04		21	26.86	500.12	-548.99	-547.13	498.26	-44.12	-2551.46-2.489e+05	-7740.12-2.437e+05
3.543e+04		22	40.80	1049.66	-934.34	-743.74	859.06	584.65	2.246e+05-2.047e+05	2.217e+05-2.017e+05
6906.01		7	28.14	331.64	-462.84	-270.46	139.25	340.34	2.079e+05-1.054e+05	2.077e+05-1.052e+05
11	6	5	20.62	385.83	-364.52	-331.34	352.65	154.26	6.922e+04-1.473e+05	6.850e+04-1.465e+05
1.247e+04										
3.191e+04		21	24.69	476.92	-571.35	-564.79	470.36	-82.67	-2686.01-2.263e+05	-7335.63-2.217e+05
3.175e+04		22	37.63	969.89	-961.08	-813.03	821.83	513.78	2.030e+05-1.862e+05	2.004e+05-1.835e+05
6408.02		7	25.95	280.62	-482.73	-344.94	142.83	293.58	1.886e+05-9.581e+04	1.884e+05-9.567e+04
11	38	5	20.46	385.48	-332.59	-289.29	342.19	170.92	6.929e+04-1.473e+05	6.856e+04-1.465e+05
1.254e+04										
3.206e+04		21	24.52	462.95	-526.74	-523.49	459.70	-56.59	-2461.47-2.263e+05	-7152.31-2.216e+05
3.203e+04		22	37.30	959.76	-892.11	-729.14	796.79	524.64	2.038e+05-1.861e+05	2.011e+05-1.835e+05
6328.46		7	25.73	292.39	-443.74	-284.23	132.88	303.28	1.888e+05-9.581e+04	1.887e+05-9.567e+04
11	69	5	20.35	386.31	-313.45	-262.73	335.58	181.45	6.933e+04-1.472e+05	6.860e+04-1.465e+05







**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1.404e+05	23	68.41	861.75	-1310.85	83.66	-532.76	1041.66	6.461e+05	-9.286e+04	6.184e+05	-6.514e+04	-	
3.307e+05	24	75.13	1152.07	-422.92	951.11	-221.96	525.48	7.152e+05	-1.145e+05	5.509e+05	4.983e+04	-	
1.466e+05	11	37.19	431.79	-629.99	301.55	-499.74	348.32	3.875e+05	1.106e+04	3.174e+05	8.121e+04	-	
7.335e+04	13 69	9	36.04	647.54	-295.56	92.07	259.91	464.03	3.140e+05	-7.786e+04	2.998e+05	-6.362e+04	-
1.403e+05	23	68.57	836.87	-1346.00	25.14	-534.27	1054.99	6.453e+05	-9.287e+04	6.176e+05	-6.514e+04	-	
3.304e+05	24	74.98	1119.80	-442.06	900.55	-222.81	542.56	7.145e+05	-1.145e+05	5.503e+05	4.977e+04	-	
1.465e+05	11	37.37	408.34	-644.00	259.93	-495.60	366.26	3.873e+05	1.105e+04	3.172e+05	8.118e+04	-	
1.798e+05	14 1	11	47.11	589.72	-369.43	410.45	-190.16	373.91	4.735e+05	-2.753e+04	3.975e+05	4.851e+04	-
4.608e+05	24	96.56	1196.28	-1236.79	1008.35	-1048.85	649.57	9.535e+05	-7.605e+04	6.683e+05	2.092e+05	-	
3.412e+05	25	65.42	709.11	-609.60	699.35	-599.84	-113.02	6.593e+05	-2.322e+04	3.218e+05	3.142e+05	-	
2.112e+05	13	44.29	442.97	-493.87	402.42	-453.32	190.64	4.700e+05	3.017e+04	3.112e+05	1.890e+05	-	
1.521e+05	14 3	11	39.87	498.99	-312.59	347.30	-160.91	316.38	4.006e+05	-2.329e+04	3.363e+05	4.104e+04	-
3.899e+05	24	81.71	1012.24	-1046.51	853.22	-887.49	549.64	8.068e+05	-6.435e+04	5.655e+05	1.770e+05	-	
2.887e+05	25	55.35	600.02	-515.82	591.76	-507.56	-95.63	5.579e+05	-1.965e+04	2.723e+05	2.659e+05	-	
1.787e+05	13	37.47	374.82	-417.89	340.51	-383.57	161.31	3.977e+05	2.553e+04	2.633e+05	1.599e+05	-	
1.381e+05	14 6	11	36.68	410.86	-330.94	214.30	-134.38	327.38	3.637e+05	-2.112e+04	3.053e+05	3.731e+04	-
3.537e+05	24	74.74	832.49	-1001.22	639.90	-808.63	562.19	7.317e+05	-5.851e+04	5.126e+05	1.605e+05	-	
2.620e+05	25	49.73	472.67	-481.64	472.33	-481.30	-18.03	5.063e+05	-1.782e+04	2.471e+05	2.414e+05	-	
1.623e+05	13	34.48	297.23	-416.84	234.83	-354.43	201.66	3.612e+05	2.327e+04	2.392e+05	1.453e+05	-	
1.382e+05	14 38	11	36.41	435.53	-300.75	276.46	-141.67	303.02	3.640e+05	-2.115e+04	3.056e+05	3.731e+04	-
3.541e+05	24	74.46	885.22	-969.65	723.09	-807.51	523.88	7.328e+05	-5.850e+04	5.135e+05	1.608e+05	-	
2.623e+05	25	50.09	516.23	-472.80	512.55	-469.12	-60.26	5.068e+05	-1.785e+04	2.474e+05	2.416e+05	-	
1.624e+05	13	34.22	322.51	-392.81	280.62	-350.92	167.95	3.614e+05	2.324e+04	2.393e+05	1.453e+05	-	
1.383e+05	14 69	11	36.24	453.63	-284.18	315.73	-146.28	287.62	3.642e+05	-2.117e+04	3.057e+05	3.731e+04	-
3.544e+05	24	74.28	920.22	-951.38	775.65	-806.81	499.67	7.335e+05	-5.850e+04	5.141e+05	1.609e+05	-	
2.625e+05	25	50.32	545.47	-468.93	537.97	-461.42	-86.94	5.072e+05	-1.786e+04	2.476e+05	2.417e+05	-	
1.625e+05	13	34.07	340.75	-379.90	309.55	-348.70	146.65	3.615e+05	2.321e+04	2.394e+05	1.453e+05	-	
1.940e+05	15 1	13	40.62	447.23	-407.55	425.11	-385.43	135.70	4.338e+05	2.522e+04	2.933e+05	1.657e+05	-
3.481e+05	25	66.65	602.53	-621.28	602.50	-621.26	5.16	6.885e+05	-7669.24	3.405e+05	3.404e+05	-	
1.940e+05	26	40.69	387.95	-460.62	368.36	-441.02	-127.46	4.337e+05	2.531e+04	1.656e+05	2.934e+05	-	
1.546e+05	15	32.27	285.75	-300.13	285.72	-300.10	3.87	3.560e+05	4.678e+04	2.013e+05	2.015e+05	-	
1.642e+05	15 3	13	34.37	378.42	-344.85	359.71	-326.13	114.82	3.670e+05	2.134e+04	2.482e+05	1.402e+05	-
2.945e+05	25	56.40	509.83	-525.70	509.81	-525.68	4.37	5.826e+05	-6489.36	2.881e+05	2.880e+05	-	
1.641e+05	26	34.43	328.27	-389.75	311.69	-373.17	-107.85	3.670e+05	2.142e+04	1.401e+05	2.483e+05	-	
1.308e+05	15	27.31	241.79	-253.95	241.77	-253.93	3.28	3.013e+05	3.958e+04	1.703e+05	1.705e+05	-	
1.494e+05	15 7	13	31.71	401.55	-296.37	397.69	-292.51	51.71	3.339e+05	1.933e+04	2.258e+05	1.274e+05	-
	25	51.79	536.18	-458.41	532.06	-454.29	-63.86	5.305e+05	-5905.52	2.624e+05	2.622e+05	-	



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

4.626e+04	29	35.23	491.17	-446.15	-315.06	360.08	-325.10-1.514e+05-3.959e+05-1.605e+05-3.868e+05
3.825e+04	20	25.46	382.99	-296.27	-290.21	376.94	-63.86-6.307e+04-2.713e+05-7.036e+04-2.640e+05
17 22 5.260e+04	19	21.47	271.92	-206.40	-192.88	258.40	-79.27-6.545e+04-2.358e+05-8.363e+04-2.177e+05
6.034e+04	28	25.86	315.13	-198.75	-129.08	245.46	-175.93-1.278e+05-2.953e+05-1.535e+05-2.697e+05
4.219e+04	29	32.35	522.99	-405.99	-311.21	428.20	-281.19-1.376e+05-3.595e+05-1.459e+05-3.512e+05
3.489e+04	20	23.37	411.35	-280.14	-278.93	410.14	-28.89-5.730e+04-2.466e+05-6.396e+04-2.399e+05
17 54 5.259e+04	19	21.36	240.55	-203.00	-183.14	220.69	-91.72-6.539e+04-2.357e+05-8.357e+04-2.175e+05
6.029e+04	28	25.71	278.56	-199.75	-116.41	195.22	-181.43-1.278e+05-2.951e+05-1.534e+05-2.695e+05
4.211e+04	29	32.15	475.41	-405.02	-296.01	366.40	-289.99-1.376e+05-3.597e+05-1.459e+05-3.515e+05
3.482e+04	20	23.23	372.20	-273.08	-269.68	368.80	-46.76-5.732e+04-2.466e+05-6.396e+04-2.400e+05
17 69 5.257e+04	19	21.29	221.75	-201.86	-176.98	196.87	-99.59-6.536e+04-2.356e+05-8.354e+04-2.174e+05
6.025e+04	28	25.61	257.03	-201.97	-108.41	163.47	-184.91-1.278e+05-2.950e+05-1.534e+05-2.694e+05
4.206e+04	29	32.03	446.52	-405.59	-286.41	327.34	-295.54-1.377e+05-3.599e+05-1.459e+05-3.516e+05
3.478e+04	20	23.15	348.18	-269.34	-263.83	342.67	-58.05-5.734e+04-2.466e+05-6.396e+04-2.400e+05
18 1 4.571e+04	20	30.15	440.20	-437.39	-414.96	417.77	-138.50-7.666e+04-3.209e+05-8.554e+04-3.120e+05
4.866e+04	29	41.75	562.72	-329.02	-186.53	420.23	-326.74-1.927e+05-4.745e+05-2.014e+05-4.658e+05
1.273e+04	30	54.22	1162.01	-1121.24	-972.51	1013.27	-563.45-1.400e+05-5.627e+05-1.404e+05-5.623e+05
2.661e+04	21	31.14	723.65	-554.30	-533.16	702.51	162.99 -5487.85-2.885e+05 -8012.81-2.860e+05
18 3 3.868e+04	20	25.52	372.48	-370.10	-351.12	353.50	-117.19-6.487e+04-2.716e+05-7.238e+04-2.640e+05
4.117e+04	29	35.33	476.15	-278.40	-157.83	355.58	-276.47-1.631e+05-4.015e+05-1.704e+05-3.942e+05
1.077e+04	30	45.88	983.24	-948.74	-822.89	857.38	-476.77-1.185e+05-4.761e+05-1.188e+05-4.758e+05
2.252e+04	21	26.35	612.32	-469.02	-451.14	594.44	137.91 -4643.56-2.441e+05 -6780.07-2.420e+05
18 22 3.527e+04	20	23.42	398.55	-344.84	-336.27	389.98	-79.35-5.889e+04-2.468e+05-6.576e+04-2.399e+05
3.756e+04	29	32.42	505.69	-243.09	-159.72	422.33	-235.52-1.482e+05-3.646e+05-1.549e+05-3.579e+05
1.025e+04	30	42.20	1012.27	-884.88	-788.95	916.34	-415.70-1.075e+05-4.317e+05-1.079e+05-4.314e+05
2.072e+04	21	24.21	634.35	-454.08	-427.52	607.79	167.93 -4045.69-2.217e+05 -6036.41-2.197e+05
18 54 3.520e+04	20	23.28	361.35	-339.22	-325.81	347.93	-96.01-5.894e+04-2.468e+05-6.578e+04-2.400e+05
3.748e+04	29	32.23	460.20	-248.35	-149.77	361.62	-245.21-1.482e+05-3.649e+05-1.549e+05-3.582e+05
9967.85	30	41.90	939.28	-870.74	-763.90	832.45	-426.56-1.076e+05-4.324e+05-1.079e+05-4.321e+05
2.057e+04	21	24.06	586.55	-436.92	-416.86	566.49	141.85 -4153.45-2.218e+05 -6114.42-2.199e+05
18 69 3.516e+04	20	23.20	338.62	-336.45	-319.20	321.36	-106.54-5.897e+04-2.469e+05-6.580e+04-2.400e+05
3.743e+04	29	32.12	432.86	-253.09	-143.48	323.25	-251.34-1.483e+05-3.650e+05-1.549e+05-3.583e+05
9791.64	30	41.71	893.85	-862.49	-748.08	779.44	-433.42-1.077e+05-4.328e+05-1.080e+05-4.325e+05
2.047e+04	21	23.96	556.66	-426.39	-410.13	540.40	125.38 -4221.42-2.219e+05 -6163.70-2.200e+05
19 1 3.509e+04	21	26.81	796.46	-716.72	-714.07	793.81	63.24-4.249e+04-2.553e+05-4.844e+04-2.494e+05
3.280e+04	30	56.36	1124.95	-158.79	79.73	886.43	-499.30-1.724e+05-6.207e+05-1.748e+05-6.182e+05
	31	72.43	3598.24	-3437.36	-3436.49	3597.38	78.19 5.988e+04-4.841e+05 5.751e+04-4.817e+05



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

4.690e+04	23	48.86	62.48	-2453.55	-615.24	-1775.83	1116.18	5.286e+05	1.122e+05	5.233e+05	1.176e+05	-
21 1	23	114.40	3297.88	-9.63	961.07	2327.19	1506.10	7.069e+05	-6.024e+05	7.066e+05	-6.021e+05	-
2.120e+04	32	251.63	-487.96	-5151.46	-2057.73	-3581.68	2203.74	2.483e+06	-1.716e+04	2.098e+06	3.678e+05	-
9.023e+05	33	199.81	6406.47	34.20	4743.25	1697.41	2798.60	1.572e+06	-6.331e+05	9.361e+05	2436.67	-
9.987e+05	24	112.01	482.62	-3118.59	418.90	-3054.86	474.79	1.165e+06	5.434e+04	8.057e+05	4.141e+05	-
5.199e+05	23	96.80	2790.51	-8.15	813.21	1969.16	1274.39	5.982e+05	-5.097e+05	5.979e+05	-5.094e+05	-
21 3	32	212.92	-412.89	-4358.93	-1741.16	-3030.65	1864.70	2.101e+06	-1.452e+04	1.775e+06	3.112e+05	-
1.793e+04	33	169.07	5420.86	28.94	4013.52	1436.27	2368.05	1.330e+06	-5.357e+05	7.921e+05	2061.80	-
7.635e+05	24	94.78	408.37	-2638.80	354.45	-2584.88	401.75	9.861e+05	4.598e+04	6.817e+05	3.504e+05	-
8.450e+05	23	88.50	2785.52	49.54	823.42	2011.63	1232.25	5.443e+05	-4.624e+05	5.441e+05	-4.621e+05	-
4.399e+05	32	194.45	-363.96	-4417.51	-1675.19	-3106.28	1896.27	1.910e+06	-1.384e+04	1.615e+06	2.806e+05	-
21 24	33	154.52	5296.86	2.04	3898.61	1400.30	2334.18	1.208e+06	-4.871e+05	7.195e+05	1691.86	-
1.629e+04	24	86.57	386.57	-2636.42	323.58	-2573.43	431.81	8.957e+05	4.169e+04	6.196e+05	3.178e+05	-
6.926e+05	23	88.19	2633.04	14.73	771.86	1875.90	1187.08	5.440e+05	-4.630e+05	5.437e+05	-4.627e+05	-
7.679e+05	32	193.91	-371.12	-4138.60	-1618.62	-2891.10	1773.04	1.910e+06	-1.345e+04	1.614e+06	2.820e+05	-
3.995e+05	33	154.02	5070.84	16.93	3745.44	1342.33	2223.01	1.209e+06	-4.870e+05	7.199e+05	1803.70	-
21 56	24	86.32	377.09	-2490.79	322.75	-2436.45	391.01	8.962e+05	4.176e+04	6.197e+05	3.182e+05	-
1.630e+04	23	88.00	2536.83	-7.41	739.28	1790.14	1158.54	5.438e+05	-4.634e+05	5.435e+05	-4.631e+05	-
6.935e+05	32	193.56	-375.35	-3962.66	-1582.87	-2755.14	1695.18	1.910e+06	-1.320e+04	1.614e+06	2.829e+05	-
7.681e+05	33	153.70	4928.05	26.31	3648.66	1305.70	2152.77	1.209e+06	-4.870e+05	7.201e+05	1874.36	-
3.997e+05	24	86.16	371.25	-2398.91	322.23	-2349.89	365.23	8.964e+05	4.180e+04	6.197e+05	3.185e+05	-
21 69	24	85.14	1190.71	-213.65	894.82	82.25	572.71	7.673e+05	-2.002e+05	6.410e+05	-7.392e+04	-
1.630e+04	33	237.91	3703.73	-3721.52	3703.73	-3721.52	3.24	2.278e+06	-3.367e+05	9.709e+05	9.702e+05	-
6.941e+05	34	85.07	194.18	-1203.35	-98.07	-911.10	-568.35	7.662e+05	-2.001e+05	-7.389e+04	6.400e+05	-
7.682e+05	25	87.75	788.14	-801.93	788.14	-801.93	0.99	8.914e+05	-3.997e+04	4.257e+05	4.258e+05	-
3.999e+05	24	72.04	1007.53	-180.78	757.15	69.59	484.60	6.492e+05	-1.694e+05	5.424e+05	-6.255e+04	-
3.259e+05	33	201.31	3133.92	-3148.98	3133.92	-3148.98	2.74	1.927e+06	-2.849e+05	8.215e+05	8.209e+05	-
1.307e+06	34	71.98	164.30	-1018.22	-82.99	-770.93	-480.91	6.483e+05	-1.693e+05	-6.252e+04	5.415e+05	-
3.256e+05	25	74.25	666.89	-678.56	666.89	-678.56	0.83	7.543e+05	-3.382e+04	3.602e+05	3.603e+05	-
4.657e+05	24	66.19	967.19	-80.02	797.51	89.66	385.88	5.918e+05	-1.543e+05	4.945e+05	-5.698e+04	-
22 3	33	184.24	3078.99	-2886.94	3077.66	-2885.60	-89.10	1.756e+06	-2.593e+05	7.491e+05	7.481e+05	-
2.758e+05	34	65.78	222.89	-967.43	-67.26	-677.28	-511.06	5.903e+05	-1.542e+05	-5.693e+04	4.930e+05	-
1.106e+06	25	68.17	693.44	-593.46	689.27	-589.29	-73.18	6.870e+05	-3.081e+04	3.281e+05	3.281e+05	-
2.755e+05	24	65.76	934.80	-130.71	730.60	73.49	419.38	5.908e+05	-1.541e+05	4.936e+05	-5.691e+04	-
3.941e+05	33	183.46	2937.74	-2871.76	2937.55	-2871.57	-32.97	1.754e+06	-2.591e+05	7.477e+05	7.470e+05	-
22 7	34	65.47	177.37	-941.36	-72.27	-691.72	-465.79	5.897e+05	-1.540e+05	-5.687e+04	4.926e+05	-
2.512e+05	25	67.74	639.03	-606.81	638.40	-606.19	-27.87	6.862e+05	-3.077e+04	3.277e+05	3.277e+05	-
2.508e+05												-
3.589e+05												-
22 39												-
2.509e+05												-
1.006e+06												-
2.506e+05												-

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

3.585e+05	22	69	24	65.49	915.93	-164.35	688.32	63.27	440.54	5.902e+05	-1.540e+05	4.931e+05	-5.687e+04	-
2.507e+05			33	183.01	2849.02	-2862.71	2849.02	-2862.71	2.49	1.752e+06	-2.590e+05	7.468e+05	7.463e+05	-
1.006e+06			34	65.44	149.37	-925.65	-75.44	-700.85	-437.19	5.894e+05	-1.539e+05	-5.684e+04	4.923e+05	-
2.505e+05			25	67.50	606.27	-616.87	606.26	-616.87	0.76	6.857e+05	-3.074e+04	3.275e+05	3.275e+05	-
3.582e+05	23	1	25	65.48	596.03	-728.11	585.20	-717.29	119.23	6.593e+05	-2.319e+04	3.144e+05	3.217e+05	-
3.412e+05			34	96.42	1215.56	-1211.95	1032.37	-1028.75	-641.21	9.528e+05	-7.608e+04	2.093e+05	6.674e+05	-
4.606e+05			35	47.02	349.85	-603.15	175.88	-429.18	-368.14	4.732e+05	-2.746e+04	4.854e+04	3.972e+05	-
1.796e+05			26	44.22	479.35	-456.57	440.51	-417.73	-186.66	4.699e+05	3.025e+04	1.889e+05	3.113e+05	-
2.112e+05	23	3	25	55.41	504.33	-616.10	495.17	-606.94	100.89	5.578e+05	-1.962e+04	2.660e+05	2.722e+05	-
2.887e+05			34	81.58	1028.55	-1025.49	873.54	-870.48	-542.56	8.062e+05	-6.438e+04	1.771e+05	5.647e+05	-
3.898e+05			35	39.78	296.03	-510.36	148.82	-363.15	-311.50	4.004e+05	-2.323e+04	4.107e+04	3.361e+05	-
1.520e+05			26	37.42	405.61	-386.33	372.74	-353.46	-157.94	3.976e+05	2.559e+04	1.598e+05	2.634e+05	-
1.787e+05	23	23	25	49.94	470.58	-486.67	470.04	-486.12	22.81	5.080e+05	-1.788e+04	2.422e+05	2.479e+05	-
2.629e+05			34	74.97	984.30	-843.94	795.95	-655.60	-555.76	7.347e+05	-5.852e+04	1.614e+05	5.148e+05	-
3.551e+05			35	36.71	315.15	-420.47	123.39	-228.71	-322.94	3.645e+05	-2.117e+04	3.734e+04	3.060e+05	-
1.384e+05			26	34.49	405.10	-307.12	344.59	-246.60	-198.60	3.618e+05	2.320e+04	1.454e+05	2.396e+05	-
1.626e+05	23	55	25	50.21	462.13	-530.62	457.85	-526.35	65.04	5.075e+05	-1.785e+04	2.419e+05	2.477e+05	-
2.626e+05			34	74.48	953.09	-897.04	794.83	-738.78	-517.45	7.336e+05	-5.852e+04	1.612e+05	5.139e+05	-
3.546e+05			35	36.38	285.39	-445.57	130.69	-290.87	-298.58	3.642e+05	-2.114e+04	3.734e+04	3.057e+05	-
1.383e+05			26	34.20	381.42	-332.74	341.07	-292.40	-164.89	3.616e+05	2.324e+04	1.453e+05	2.395e+05	-
1.625e+05	23	69	25	50.37	458.48	-560.09	450.15	-551.76	91.72	5.071e+05	-1.784e+04	2.418e+05	2.475e+05	-
2.625e+05			34	74.17	935.05	-932.27	794.13	-791.35	-493.24	7.329e+05	-5.853e+04	1.610e+05	5.134e+05	-
3.543e+05			35	36.17	269.12	-463.96	135.29	-330.14	-283.18	3.640e+05	-2.112e+04	3.734e+04	3.055e+05	-
1.382e+05			26	34.02	368.73	-351.21	338.86	-321.33	-143.59	3.615e+05	2.327e+04	1.453e+05	2.394e+05	-
1.624e+05	24	1	26	41.82	377.16	-465.04	361.80	-449.68	-112.71	4.456e+05	2.600e+04	1.771e+05	2.945e+05	-
2.014e+05			35	49.37	563.49	-616.23	379.60	-432.34	-427.92	5.026e+05	-9218.62	9.038e+04	4.030e+05	-
2.026e+05			36	29.59	276.26	-366.19	129.67	-219.60	-269.60	3.051e+05	6101.87	6.198e+04	2.493e+05	-
1.166e+05			27	27.65	282.52	-305.18	234.27	-256.93	-161.34	3.008e+05	3.703e+04	1.205e+05	2.173e+05	-
1.227e+05	24	3	26	35.38	319.14	-393.50	306.14	-380.50	-95.37	3.771e+05	2.200e+04	1.499e+05	2.492e+05	-
1.704e+05			35	41.77	476.80	-521.42	321.20	-365.83	-362.09	4.253e+05	-7800.37	7.647e+04	3.410e+05	-
1.715e+05			36	25.04	233.76	-309.85	109.72	-185.82	-228.13	2.582e+05	5163.12	5.244e+04	2.109e+05	-
9.863e+04			27	23.40	239.06	-258.23	198.23	-217.40	-136.52	2.545e+05	3.133e+04	1.019e+05	1.839e+05	-
1.038e+05	24	23	26	32.43	315.62	-307.95	282.35	-274.68	-140.15	3.430e+05	1.991e+04	1.363e+05	2.266e+05	-
1.551e+05			35	38.52	476.46	-423.26	281.36	-228.16	-370.77	3.872e+05	-7101.28	6.960e+04	3.105e+05	-
1.561e+05			36	23.13	248.73	-249.83	82.85	-83.96	-234.91	2.345e+05	4509.26	4.756e+04	1.915e+05	-
8.972e+04			27	21.60	247.09	-202.61	175.57	-131.10	-164.46	2.311e+05	2.829e+04	9.252e+04	1.669e+05	-
9.435e+04														-



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

24	55	26	32.15	298.57	-337.02	279.87	-318.33	-107.39	3.429e+05	1.996e+04	1.363e+05	2.266e+05	-
1.550e+05		35	38.19	448.79	-453.05	287.88	-292.14	-345.28	3.869e+05	-7095.13	6.955e+04	3.102e+05	-
1.560e+05		36	22.91	224.92	-267.75	93.20	-136.03	-218.05	2.347e+05	4622.32	4.763e+04	1.916e+05	-
8.968e+04		27	21.40	227.32	-220.78	178.41	-171.87	-139.73	2.313e+05	2.841e+04	9.262e+04	1.671e+05	-
9.435e+04		26	32.17	290.12	-357.72	278.31	-345.90	-86.70	3.428e+05	2.000e+04	1.363e+05	2.265e+05	-
1.550e+05	24	69	37.97	433.45	-474.02	292.00	-332.57	-329.17	3.866e+05	-7091.25	6.952e+04	3.100e+05	-
1.559e+05		36	22.76	212.50	-281.69	99.75	-168.93	-207.39	2.347e+05	4693.75	4.767e+04	1.917e+05	-
8.966e+04		27	21.27	217.32	-234.75	180.21	-197.63	-124.11	2.314e+05	2.848e+04	9.268e+04	1.672e+05	-
9.436e+04		28	33.49	330.02	-330.29	-202.12	201.86	-261.16	1.630e+05	-3.850e+05	-1.959e+05	-3.521e+05	-
7.891e+04		37	38.39	358.79	-283.24	19.26	56.30	-320.48	-2.414e+05	-4.485e+05	-2.861e+05	-4.039e+05	-
8.514e+04		38	55.87	595.12	-634.23	-119.95	80.83	-606.42	-2.657e+05	-6.480e+05	-2.935e+05	-6.203e+05	-
9.924e+04		29	42.45	613.49	-435.01	-262.49	440.97	-388.75	-1.877e+05	-4.789e+05	-1.965e+05	-4.702e+05	-
4.973e+04		28	28.34	279.25	-279.47	-171.03	170.80	-220.98	-1.379e+05	-3.258e+05	-1.658e+05	-2.979e+05	-
6.677e+04	25	1	32.48	303.59	-239.66	16.29	47.64	-271.17	-2.043e+05	-3.795e+05	-2.421e+05	-3.417e+05	-
7.204e+04		38	47.28	503.56	-536.66	-101.50	68.40	-513.13	-2.248e+05	-5.483e+05	-2.483e+05	-5.248e+05	-
8.397e+04		29	35.92	519.11	-368.09	-222.10	373.13	-328.94	-1.588e+05	-4.052e+05	-1.663e+05	-3.978e+05	-
4.208e+04		28	26.01	312.37	-253.68	-179.30	237.99	-191.24	-1.254e+05	-2.965e+05	-1.507e+05	-2.711e+05	-
6.076e+04	25	22	29.80	330.39	-201.50	-7.28	136.17	-256.09	-1.859e+05	-3.453e+05	-2.202e+05	-3.109e+05	-
6.551e+04		38	43.35	533.16	-470.32	-117.11	179.96	-479.25	-2.043e+05	-4.979e+05	-2.257e+05	-4.765e+05	-
7.632e+04		29	32.97	547.22	-329.22	-223.51	441.51	-285.44	-1.444e+05	-3.680e+05	-1.512e+05	-3.612e+05	-
3.840e+04		28	25.86	275.58	-252.98	-164.70	187.30	-197.15	-1.254e+05	-2.963e+05	-1.507e+05	-2.710e+05	-
6.072e+04	25	54	29.63	295.64	-210.12	6.26	79.27	-250.23	-1.858e+05	-3.451e+05	-2.201e+05	-3.108e+05	-
6.550e+04		38	43.12	485.89	-479.99	-101.89	107.78	-471.42	-2.043e+05	-4.982e+05	-2.257e+05	-4.769e+05	-
7.633e+04		29	32.78	500.28	-331.73	-210.27	378.82	-293.77	-1.444e+05	-3.683e+05	-1.511e+05	-3.615e+05	-
3.831e+04		28	25.76	253.86	-254.07	-155.48	155.28	-200.89	-1.254e+05	-2.962e+05	-1.507e+05	-2.709e+05	-
6.070e+04	25	69	29.53	275.99	-217.87	14.81	43.31	-246.52	-1.857e+05	-3.450e+05	-2.201e+05	-3.107e+05	-
6.549e+04		38	42.98	457.78	-487.87	-92.27	62.18	-466.48	-2.044e+05	-4.985e+05	-2.257e+05	-4.771e+05	-
7.634e+04		29	32.65	471.92	-334.62	-201.91	339.21	-299.04	-1.444e+05	-3.684e+05	-1.511e+05	-3.617e+05	-
3.825e+04		29	43.16	514.50	-764.56	-603.69	353.63	-424.12	-1.689e+05	-4.823e+05	-1.810e+05	-4.701e+05	-
6.054e+04		38	54.02	774.93	-349.51	301.67	123.75	-555.13	-3.055e+05	-6.295e+05	-3.319e+05	-6.032e+05	-
8.859e+04		39	99.80	1019.60	-1615.03	-641.44	46.01	-1271.68	-1.919e+05	-1.085e+06	-2.154e+05	-1.061e+06	-
1.430e+05		30	57.08	1404.54	-513.70	-274.70	1165.54	-633.51	-1.674e+05	-6.118e+05	-1.701e+05	-6.091e+05	-
3.439e+04		29	36.52	435.35	-646.93	-510.82	299.23	-358.87	-1.429e+05	-4.081e+05	-1.532e+05	-3.978e+05	-
5.123e+04	26	3	45.71	655.71	-295.74	255.26	104.71	-469.73	-2.585e+05	-5.327e+05	-2.808e+05	-5.104e+05	-
7.496e+04		39	84.45	862.74	-1366.56	-542.76	38.93	-1076.04	-1.624e+05	-9.180e+05	-1.823e+05	-8.981e+05	-
1.210e+05		30	48.30	1188.46	-434.67	-232.44	986.23	-536.05	-1.416e+05	-5.176e+05	-1.439e+05	-5.154e+05	-
2.910e+04		29	33.53	472.12	-597.68	-499.59	374.02	-308.74	-1.298e+05	-3.706e+05	-1.392e+05	-3.612e+05	-
26	22												





**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

2.646e+04	40	266.59	1513.58	-2778.41	-2708.22	1443.39	544.36-1.157e+06-3.045e+06-3.045e+06-1.157e+06	-
3.852e+04	41	1249.32	1915.64	-1709.92	1899.93	-1694.20	238.19 7.068e+06-7.803e+06 7.068e+06-7.803e+06	-
3.974e+04	32	229.40	3018.48	-1478.60	-1315.82	2855.70	-839.97 2.574e+06 8.765e+05 8.775e+05 2.573e+06	-
3.576e+04	28 23 31	82.91	772.46	-758.70	772.14	-758.38	22.20 2.699e+05-6.405e+05 2.684e+05-6.391e+05	-
2.158e+04	40	242.10	1206.09	-2521.30	-2444.24	1129.03	530.37-1.055e+06-2.769e+06-2.768e+06-1.056e+06	-
2.281e+04	41	1139.23	1743.03	-1718.70	1742.59	-1718.27	38.86 6.432e+06-7.121e+06 6.432e+06-7.121e+06	-
3.884e+04	32	209.10	2550.37	-1208.77	-1117.50	2459.10	-578.60 2.353e+06 7.973e+05 7.983e+05 2.352e+06	-
3.825e+04	28 55 31	82.98	837.82	-753.97	833.35	-749.49	84.28 2.713e+05-6.381e+05 2.697e+05-6.365e+05	-
2.310e+04	40	242.26	1309.97	-2523.84	-2455.13	1241.26	508.62-1.053e+06-2.769e+06-2.768e+06-1.053e+06	-
3.029e+04	41	1137.09	1739.68	-1615.66	1733.16	-1609.14	147.74 6.428e+06-7.104e+06 6.428e+06-7.104e+06	-
3.717e+04	32	208.76	2667.95	-1290.63	-1165.72	2543.05	-691.98 2.345e+06 7.970e+05 7.979e+05 2.344e+06	-
3.983e+04	28 69 31	83.03	881.41	-753.26	872.02	-743.88	123.50 2.723e+05-6.366e+05 2.706e+05-6.349e+05	-
2.406e+04	40	242.36	1375.98	-2525.82	-2462.02	1312.17	494.87-1.052e+06-2.769e+06-2.768e+06-1.052e+06	-
3.502e+04	41	1135.74	1741.49	-1554.47	1727.21	-1540.18	216.53 6.425e+06-7.094e+06 6.425e+06-7.094e+06	-
3.613e+04	32	208.54	2744.08	-1344.18	-1196.20	2596.09	-763.61 2.340e+06 7.968e+05 7.977e+05 2.339e+06	-
2.485e+06	29 1 32	810.92	1881.97	-3507.47	1734.48	-3359.98	-879.29 2.133e+06-7.047e+06 1.402e+06-6.316e+06	-
1.187e+07	41	2188.30	2033.70	-2047.52	-2047.52	2033.70	-5.37e-03 2.170e+07-2.046e+06 9.842e+06 9.813e+06	-
2.485e+06	42	811.58	3491.29	-1897.74	3342.93	-1749.37	881.78 2.129e+06-7.057e+06-6.327e+06 1.398e+06	-
4.039e+06	33	728.53	1080.79	-1093.04	-1093.04	1080.79	-1.36 6.980e+06-1.097e+06 2.943e+06 2.941e+06	-
2.103e+06	29 3 32	686.16	1592.44	-2967.86	1467.64	-2843.06	-744.01 1.805e+06-5.963e+06 1.186e+06-5.344e+06	-
1.005e+07	41	1851.64	1720.82	-1732.52	-1732.52	1720.82	-4.54e-03 1.836e+07-1.732e+06 8.328e+06 8.304e+06	-
2.103e+06	42	686.72	2954.17	-1605.78	2828.63	-1480.24	746.13 1.801e+06-5.971e+06-5.353e+06 1.183e+06	-
3.417e+06	33	616.45	914.52	-924.88	-924.88	914.51	-1.15 5.906e+06-9.281e+05 2.490e+06 2.488e+06	-
1.916e+06	29 23 32	625.90	1409.14	-2480.66	1360.70	-2432.22	-431.36 1.644e+06-5.437e+06 1.080e+06-4.874e+06	-
9.157e+06	41	1689.81	1800.77	-1509.26	-1476.03	1767.55	-329.97 1.674e+07-1.577e+06 7.581e+06 7.577e+06	-
1.916e+06	42	624.87	2818.25	-1355.93	2640.52	-1178.20	842.80 1.643e+06-5.438e+06-4.875e+06 1.080e+06	-
3.114e+06	33	563.14	936.32	-733.32	-711.60	914.61	-189.18 5.383e+06-8.454e+05 2.269e+06 2.269e+06	-
1.913e+06	29 55 32	624.60	1429.96	-2611.08	1344.47	-2525.60	-581.50 1.642e+06-5.427e+06 1.079e+06-4.864e+06	-
9.143e+06	41	1685.80	1648.17	-1541.82	-1536.69	1643.05	-127.77 1.671e+07-1.575e+06 7.575e+06 7.560e+06	-
1.913e+06	42	624.51	2735.30	-1417.91	2598.21	-1280.82	741.99 1.640e+06-5.432e+06-4.870e+06 1.077e+06	-
3.110e+06	33	561.46	866.90	-794.07	-790.77	863.60	-73.89 5.375e+06-8.444e+05 2.266e+06 2.265e+06	-
1.911e+06	29 69 32	623.78	1447.67	-2698.05	1334.21	-2584.60	-676.37 1.641e+06-5.421e+06 1.078e+06-4.859e+06	-
9.134e+06	41	1683.31	1564.38	-1575.02	-1575.02	1564.38	-4.13e-03 1.669e+07-1.574e+06 7.571e+06 7.549e+06	-
1.912e+06	42	624.29	2685.61	-1459.80	2571.48	-1345.67	678.30 1.637e+06-5.429e+06-4.867e+06 1.076e+06	-
3.107e+06	33	560.41	831.38	-840.80	-840.80	831.38	-1.05 5.369e+06-8.437e+05 2.264e+06 2.262e+06	-
9.976e+05	30 1 33	199.58	-51.31	-6420.40	-1711.52	-4760.19	-2796.02 1.570e+06-6.323e+05 2585.86 9.353e+05	-
	42	251.14	5129.78	475.07	3566.12	2038.73	-2198.48 2.478e+06-1.646e+04 3.707e+05 2.091e+06	-



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

7.338e+04	44	35.95	278.35	-655.77	-268.49	-108.93	-460.19	3.135e+05	-7.794e+04	-6.367e+04	2.993e+05	-
1.465e+05	35	37.31	634.65	-420.66	487.91	-273.91	-365.14	3.871e+05	1.107e+04	8.122e+04	3.170e+05	-
32 1	35	50.02	466.47	-650.26	264.67	-448.46	-429.69	5.051e+05	-2.011e+04	7.041e+04	4.146e+05	-
1.984e+05	44	46.34	666.31	-651.53	110.59	-95.81	-650.79	4.328e+05	-6.452e+04	-4.126e+04	4.095e+05	-
1.050e+05	45	29.10	293.43	-405.59	-38.96	-73.20	-349.09	2.696e+05	-3.918e+04	-1.268e+04	2.431e+05	-
8.649e+04	36	29.77	353.74	-359.78	201.25	-207.29	-292.49	3.082e+05	1.114e+04	6.746e+04	2.519e+05	-
1.165e+05	35	42.32	394.71	-550.22	223.95	-379.47	-363.59	4.274e+05	-1.702e+04	5.958e+04	3.508e+05	-
32 3	44	39.21	563.80	-551.30	93.57	-81.07	-550.67	3.662e+05	-5.460e+04	-3.492e+04	3.465e+05	-
1.679e+05	45	24.62	248.28	-343.19	-32.97	-61.94	-295.38	2.281e+05	-3.315e+04	-1.073e+04	2.057e+05	-
8.885e+04	36	25.19	299.32	-304.43	170.29	-175.40	-247.49	2.608e+05	9422.57	5.708e+04	2.132e+05	-
9.854e+04	35	39.03	403.76	-452.70	190.91	-239.86	-370.12	3.891e+05	-1.551e+04	5.420e+04	3.194e+05	-
32 23	44	36.21	569.90	-461.35	64.25	44.30	-515.53	3.336e+05	-4.962e+04	-3.174e+04	3.157e+05	-
1.528e+05	45	22.75	271.69	-289.93	-54.76	36.52	-277.07	2.071e+05	-3.022e+04	-9816.54	1.867e+05	-
8.082e+04	36	23.27	307.48	-242.26	138.57	-73.35	-253.62	2.369e+05	8411.77	5.182e+04	1.935e+05	-
8.964e+04	35	38.69	374.83	-480.42	198.68	-304.27	-345.86	3.888e+05	-1.549e+04	5.418e+04	3.191e+05	-
32 55	44	35.87	533.60	-484.60	77.01	-28.01	-506.38	3.332e+05	-4.963e+04	-3.174e+04	3.153e+05	-
1.527e+05	45	22.52	242.04	-301.98	-39.57	-20.37	-271.84	2.073e+05	-3.017e+04	-9776.47	1.869e+05	-
8.079e+04	36	23.04	284.31	-261.91	148.52	-126.12	-236.08	2.370e+05	8506.28	5.186e+04	1.937e+05	-
6.653e+04	35	38.47	358.82	-500.20	203.59	-344.97	-330.53	3.885e+05	-1.547e+04	5.417e+04	3.189e+05	-
8.960e+04	44	35.65	512.55	-501.18	85.07	-73.70	-500.61	3.329e+05	-4.963e+04	-3.174e+04	3.150e+05	-
32 69	45	22.38	225.71	-311.99	-29.97	-56.31	-268.53	2.074e+05	-3.014e+04	-9751.15	1.870e+05	-
1.526e+05	36	22.90	272.10	-276.75	154.81	-159.46	-224.99	2.371e+05	8565.97	5.189e+04	1.938e+05	-
8.958e+04	37	38.29	315.18	-339.71	-65.73	41.20	-323.05	-2.347e+05	-4.486e+05	-2.784e+05	-4.049e+05	-
33 1	46	40.32	333.55	-289.22	159.11	-114.79	-279.65	-2.898e+05	-4.727e+05	-3.474e+05	-4.151e+05	-
8.625e+04	47	60.16	449.42	-555.04	225.72	-331.33	-417.92	-3.187e+05	-7.154e+05	-3.980e+05	-6.360e+05	-
8.495e+04	38	56.71	669.87	-548.75	76.08	45.05	-609.11	-2.778e+05	-6.599e+05	-3.088e+05	-6.289e+05	-
1.587e+05	37	32.40	266.69	-287.45	-55.62	34.86	-273.35	-1.986e+05	-3.796e+05	-2.355e+05	-3.426e+05	-
1.043e+05	46	34.12	282.23	-244.73	134.64	-97.13	-236.63	-2.452e+05	-4.000e+05	-2.939e+05	-3.512e+05	-
33 3	47	50.90	380.28	-469.65	190.99	-280.36	-353.63	-2.696e+05	-6.053e+05	-3.368e+05	-5.381e+05	-
7.298e+04	38	47.98	566.82	-464.32	64.38	38.12	-515.40	-2.351e+05	-5.584e+05	-2.613e+05	-5.322e+05	-
8.827e+04	37	29.73	300.37	-251.20	-75.35	124.52	-257.05	-1.806e+05	-3.453e+05	-2.142e+05	-3.117e+05	-
33 22	46	31.28	301.68	-197.71	106.16	-2.19	-243.75	-2.231e+05	-3.637e+05	-2.673e+05	-3.195e+05	-
6.635e+04	47	46.63	398.67	-387.48	160.94	-149.76	-361.07	-2.452e+05	-5.497e+05	-3.061e+05	-4.887e+05	-
6.529e+04	38	43.99	582.04	-391.69	37.71	152.65	-483.46	-2.137e+05	-5.070e+05	-2.375e+05	-4.831e+05	-
1.219e+05	37	29.56	263.53	-256.05	-60.16	67.63	-251.81	-1.805e+05	-3.452e+05	-2.141e+05	-3.116e+05	-
8.020e+04	46	31.12	272.41	-211.26	116.11	-54.96	-226.20	-2.230e+05	-3.637e+05	-2.672e+05	-3.194e+05	-
33 54	47	46.41	364.69	-410.14	168.72	-214.17	-336.81	-2.451e+05	-5.500e+05	-3.062e+05	-4.890e+05	-
6.635e+04												
6.533e+04												

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1.220e+05																					
8.023e+04	38	43.76	539.96	-409.16	50.46	80.34	-474.32-2.137e+05-5.074e+05-2.375e+05-4.835e+05														
6.634e+04	37	29.45	242.45	-261.32	-50.56	31.69	-248.50-1.805e+05-3.451e+05-2.141e+05-3.115e+05	69													
6.535e+04	46	31.02	256.58	-222.48	122.40	-88.30	-215.12-2.229e+05-3.636e+05-2.672e+05-3.193e+05														
1.221e+05	47	46.27	345.71	-426.95	173.63	-254.87	-321.48-2.451e+05-5.503e+05-3.062e+05-4.892e+05														
8.025e+04	38	43.62	515.29	-422.11	58.52	34.65	-468.55-2.137e+05-5.076e+05-2.375e+05-4.838e+05														
9.459e+04	38	54.33	406.01	-752.11	-345.09	-1.01	-552.91-2.409e+05-6.312e+05-2.654e+05-6.068e+05	1													
1.511e+05	47	60.60	766.74	-454.40	559.21	-246.87	-458.65-3.522e+05-7.139e+05-4.337e+05-6.324e+05														
3.753e+05	48	105.52	534.58	-1304.26	255.16	-1024.84	-660.10-2.622e+05-1.201e+06-4.495e+05-1.014e+06														
1.812e+05	39	101.12	1668.78	-944.57	612.18	112.03	-1282.52-3.046e+05-1.139e+06-3.459e+05-1.098e+06														
8.004e+04	38	45.97	343.54	-636.40	-292.00	-0.86	-467.85-2.039e+05-5.341e+05-2.246e+05-5.134e+05	3													
1.279e+05	47	51.28	648.78	-384.50	473.18	-208.89	-388.09-2.980e+05-6.041e+05-3.670e+05-5.351e+05														
3.176e+05	48	89.29	452.33	-1103.61	215.90	-867.18	-558.54-2.218e+05-1.016e+06-3.804e+05-8.579e+05														
1.533e+05	39	85.57	1412.04	-799.25	518.00	94.80	-1085.21-2.577e+05-9.642e+05-2.927e+05-9.292e+05														
7.280e+04	38	41.41	243.80	-597.80	-235.13	-118.88	-416.76-1.853e+05-4.861e+05-2.041e+05-4.673e+05	23													
1.164e+05	47	46.26	551.51	-408.02	440.86	-297.37	-306.47-2.709e+05-5.498e+05-3.337e+05-4.870e+05														
2.894e+05	48	81.92	361.92	-1086.76	194.08	-918.91	-463.66-2.015e+05-9.259e+05-3.459e+05-7.815e+05														
1.395e+05	39	77.37	1189.62	-787.58	467.01	-64.96	-952.15-2.343e+05-8.787e+05-2.661e+05-8.469e+05														
7.278e+04	38	41.65	284.43	-584.65	-253.71	-46.51	-422.00-1.853e+05-4.858e+05-2.041e+05-4.670e+05	55													
1.163e+05	47	46.48	573.59	-370.79	434.31	-231.51	-334.87-2.709e+05-5.494e+05-3.336e+05-4.867e+05														
2.890e+05	48	81.46	391.17	-1034.64	195.42	-838.90	-490.69-2.016e+05-9.248e+05-3.459e+05-7.805e+05														
1.394e+05	39	77.63	1246.51	-749.45	469.40	27.66	-973.23-2.343e+05-8.774e+05-2.661e+05-8.456e+05														
7.276e+04	38	41.80	312.31	-578.55	-265.46	-0.78	-425.32-1.853e+05-4.855e+05-2.041e+05-4.667e+05	69													
1.163e+05	47	46.62	589.80	-349.54	430.16	-189.90	-352.81-2.709e+05-5.492e+05-3.336e+05-4.865e+05														
2.887e+05	48	81.17	411.21	-1003.28	196.27	-788.34	-507.77-2.017e+05-9.241e+05-3.458e+05-7.799e+05														
1.394e+05	39	77.79	1283.68	-726.59	470.91	86.18	-986.55-2.343e+05-8.765e+05-2.661e+05-8.447e+05														
1.775e+04	39	108.19	119.58	-2951.57	-2074.90	-757.08	-1387.02 1.801e+05-9.939e+05 1.799e+05-9.937e+05	1													
4.678e+05	48	126.76	2794.81	-397.35	2726.17	-328.71	-463.04-4.635e+05-1.446e+06-8.049e+05-1.105e+06														
9.188e+05	49	197.15	-35.24	-5761.62	-1512.92	-4283.94	-2505.63 1.295e+05-1.922e+06-4.402e+05-1.352e+06														
8.986e+05	40	272.55	4722.68	491.40	3208.72	2005.36	-2028.28-5.342e+05-2.931e+06-9.396e+05-2.526e+06														
1.502e+04	39	91.54	101.18	-2497.48	-1755.69	-640.61	-1173.63 1.524e+05-8.410e+05 1.522e+05-8.408e+05	3													
3.959e+05	48	107.26	2364.84	-336.22	2306.76	-278.14	-391.80-3.922e+05-1.224e+06-6.811e+05-9.346e+05														
7.774e+05	49	166.82	-29.82	-4875.22	-1280.16	-3624.88	-2120.15 1.096e+05-1.626e+06-3.725e+05-1.144e+06														
7.604e+05	40	230.62	3996.11	415.80	2715.07	1696.84	-1716.24-4.520e+05-2.480e+06-7.951e+05-2.137e+06														
1.364e+04	39	83.53	35.58	-2519.66	-1817.57	-666.51	-1140.65 1.376e+05-7.651e+05 1.373e+05-7.649e+05	5													
3.594e+05	48	97.99	2388.23	-321.85	2320.59	-254.21	-422.77-3.564e+05-1.112e+06-6.184e+05-8.496e+05														
7.065e+05	49	152.24	-2.96	-4800.71	-1258.38	-3545.29	-2108.82 9.964e+04-1.478e+06-3.385e+05-1.040e+06														

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

6.898e+05	40	210.64	4085.35	368.94	2819.38	1634.90	-1761.30	-4.104e+05	-2.255e+06	-7.205e+05	-1.945e+06	
35 37	39	83.34	70.06	-2366.85	-1681.84	-614.95	-1095.48	1.382e+05	-7.648e+05	1.380e+05	-7.646e+05	
1.365e+04	48	97.69	2242.07	-311.84	2183.61	-253.38	-381.96	-3.565e+05	-1.112e+06	-6.189e+05	-8.496e+05	
3.597e+05	49	151.88	-17.78	-4574.76	-1200.41	-3392.12	-1997.65	9.962e+04	-1.478e+06	-3.386e+05	-1.040e+06	
7.066e+05	40	210.03	3807.78	374.76	2604.21	1578.33	-1638.08	-4.107e+05	-2.255e+06	-7.219e+05	-1.944e+06	
6.907e+05	39	83.22	91.99	-2270.44	-1596.08	-582.37	-1066.94	1.386e+05	-7.646e+05	1.384e+05	-7.644e+05	
35 69	48	97.51	2149.86	-305.65	2097.05	-252.85	-356.18	-3.565e+05	-1.112e+06	-6.191e+05	-8.497e+05	
1.365e+04	49	151.66	-27.11	-4432.01	-1163.78	-3295.34	-1927.41	9.961e+04	-1.478e+06	-3.386e+05	-1.040e+06	
3.599e+05	40	209.65	3632.83	378.00	2468.25	1542.58	-1560.22	-4.109e+05	-2.255e+06	-7.228e+05	-1.943e+06	
7.067e+05	40	787.96	3329.73	-1642.18	3213.35	-1525.80	751.73	6.549e+06	-2.494e+06	5.789e+06	-1.734e+06	-
6.912e+05	49	734.26	1005.56	-1022.59	-1022.59	1005.56	1.25	5.225e+05	-7.373e+06	-3.426e+06	-3.424e+06	
36 1	50	787.29	1628.49	-3342.67	1511.29	-3225.47	-754.23	6.539e+06	-2.498e+06	-1.737e+06	5.778e+06	-
2.509e+06	41	2219.32	2197.93	-2213.39	-2213.39	2197.93	6.29e-03	1.091e+06	-2.255e+07	-1.074e+07	-1.072e+07	
3.948e+06	40	666.74	2817.47	-1389.54	2718.99	-1291.06	636.08	5.541e+06	-2.110e+06	4.898e+06	-1.467e+06	-
2.509e+06	49	621.30	850.86	-865.27	-865.27	850.86	1.06	4.421e+05	-6.239e+06	-2.899e+06	-2.898e+06	
1.182e+07	50	666.17	1377.95	-2828.41	1278.79	-2729.25	-638.20	5.533e+06	-2.114e+06	-1.470e+06	4.889e+06	-
36 3	41	1877.89	1859.79	-1872.87	-1872.87	1859.79	5.32e-03	9.235e+05	-1.908e+07	-9.092e+06	-9.067e+06	
2.123e+06	40	608.29	2350.71	-1231.45	2319.44	-1200.17	333.25	5.054e+06	-1.921e+06	4.468e+06	-1.335e+06	-
3.341e+06	49	567.54	667.56	-893.10	-869.84	644.30	189.09	4.037e+05	-5.685e+06	-2.642e+06	-2.639e+06	
2.123e+06	50	606.15	1145.13	-2700.24	995.06	-2550.17	-744.68	5.040e+06	-1.927e+06	-1.340e+06	4.453e+06	-
1.000e+07	41	1713.71	1622.59	-1936.63	-1905.77	1591.73	329.97	8.426e+05	-1.739e+07	-8.294e+06	-8.254e+06	
36 7	40	606.96	2476.64	-1247.78	2412.81	-1183.95	483.39	5.044e+06	-1.919e+06	4.459e+06	-1.334e+06	-
1.935e+06	49	565.87	727.01	-822.36	-818.83	723.48	73.81	4.026e+05	-5.677e+06	-2.638e+06	-2.636e+06	
3.044e+06	50	605.82	1209.22	-2619.40	1097.69	-2507.86	-643.88	5.034e+06	-1.924e+06	-1.338e+06	4.448e+06	-
1.935e+06	41	1709.70	1657.14	-1786.02	-1781.27	1652.39	127.77	8.407e+05	-1.736e+07	-8.276e+06	-8.247e+06	
9.116e+06	40	606.13	2561.33	-1263.22	2471.81	-1173.69	578.26	5.038e+06	-1.918e+06	4.453e+06	-1.334e+06	-
36 39	49	564.81	773.51	-786.61	-786.61	773.51	0.96	4.019e+05	-5.672e+06	-2.636e+06	-2.634e+06	
1.932e+06	50	605.61	1252.68	-2571.29	1162.53	-2481.13	-580.18	5.030e+06	-1.921e+06	-1.336e+06	4.445e+06	-
3.040e+06	41	1707.17	1690.72	-1702.61	-1702.61	1690.72	4.84e-03	8.395e+05	-1.735e+07	-8.265e+06	-8.243e+06	
1.932e+06	41	1476.52	2004.85	-2277.26	1986.26	-2258.67	-281.49	8.319e+06	-9.255e+06	-9.255e+06	8.319e+06	
9.102e+06	50	313.13	3263.76	-1802.51	-1720.11	3181.36	-640.82	-1.372e+06	-3.579e+06	-1.372e+06	-3.579e+06	-
36 69	51	107.96	964.90	-1160.77	952.72	-1148.59	-160.44	3.430e+05	-8.366e+05	-8.353e+05	3.418e+05	
1.930e+06	42	273.06	1731.58	-3576.46	-3384.83	1539.95	990.18	3.062e+06	1.031e+06	3.061e+06	1.032e+06	
9.094e+06	41	1249.36	1696.41	-1926.91	1680.68	-1911.19	-238.19	7.039e+06	-7.832e+06	-7.832e+06	7.039e+06	
37 1	50	264.96	2761.64	-1525.20	-1455.48	2691.92	-542.24	-1.161e+06	-3.028e+06	-1.161e+06	-3.028e+06	-
6848.84	51	91.35	816.46	-982.19	806.15	-971.89	-135.76	2.903e+05	-7.079e+05	-7.068e+05	2.892e+05	
2.305e+04	42	231.05	1465.18	-3026.24	-2864.09	1303.03	837.85	2.591e+06	8.721e+05	2.590e+06	8.734e+05	
3.888e+04												
5.519e+04												
37 3												
5795.18												
1.951e+04												
3.290e+04												



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

4.670e+04 37 21	41	1136.90	1630.95	-1538.34	1626.88	-1534.28	113.43	6.428e+06	-7.109e+06	-7.109e+06	6.428e+06	
2.793e+04	50	242.81	2734.66	-1431.77	-1296.68	2599.57	-737.95	-1.054e+06	-2.768e+06	-1.054e+06	-2.768e+06	-
2.261e+04	51	83.26	864.58	-802.82	862.07	-800.30	64.72	2.708e+05	-6.388e+05	-6.373e+05	2.693e+05	
3.747e+04	42	209.09	1441.73	-2624.37	-2534.68	1352.05	597.18	2.347e+06	7.970e+05	2.346e+06	7.979e+05	
3.770e+04 37 53	41	1136.22	1568.66	-1661.22	1566.22	-1658.78	-88.77	6.411e+06	-7.116e+06	-7.115e+06	6.411e+06	
1.404e+04	50	241.62	2594.62	-1401.33	-1312.91	2506.20	-587.81	-1.055e+06	-2.759e+06	-1.055e+06	-2.759e+06	-
1.962e+04	51	83.13	784.45	-852.87	782.89	-851.31	-50.57	2.665e+05	-6.417e+05	-6.405e+05	2.654e+05	
3.284e+04	42	209.68	1372.77	-2700.33	-2576.99	1249.42	697.98	2.352e+06	7.945e+05	2.351e+06	7.955e+05	
4.061e+04 37 69	41	1135.79	1542.19	-1751.74	1527.89	-1737.44	-216.53	6.400e+06	-7.120e+06	-7.120e+06	6.400e+06	
5268.34	50	240.87	2510.58	-1386.55	-1323.16	2447.20	-492.94	-1.056e+06	-2.753e+06	-1.056e+06	-2.753e+06	-
1.773e+04	51	83.04	742.23	-892.90	732.86	-883.53	-123.42	2.639e+05	-6.435e+05	-6.426e+05	2.629e+05	
2.991e+04	42	210.05	1331.99	-2751.12	-2603.72	1184.58	761.68	2.356e+06	7.928e+05	2.355e+06	7.940e+05	
4.245e+04 38 1	42	268.29	-501.24	-5272.31	-3624.42	-2149.13	-2268.62	1.957e+06	-1.151e+06	-1.119e+06	1.925e+06	-
3.126e+05	51	87.62	6042.05	-20.47	1562.33	4459.25	-2662.80	3.179e+05	-5.397e+05	-3.140e+05	9.226e+04	
3.776e+05	52	67.24	364.07	-3054.46	-2959.32	268.92	-562.32	3.325e+05	-3.378e+05	-3.378e+05	3.325e+05	
1848.99	43	63.24	3177.97	-97.03	2299.18	781.76	-1451.12	6.851e+05	1.474e+05	1.544e+05	6.781e+05	-
6.088e+04 38 3	42	227.01	-424.13	-4461.19	-3066.82	-1818.50	-1919.61	1.656e+06	-9.737e+05	-9.469e+05	1.629e+06	-
2.645e+05	51	74.14	5112.50	-17.32	1321.97	3773.21	-2253.14	2.690e+05	-4.567e+05	-2.657e+05	7.806e+04	
3.195e+05	52	56.90	308.06	-2584.55	-2504.04	227.55	-475.81	2.814e+05	-2.858e+05	-2.858e+05	2.814e+05	
1564.53	43	53.51	2689.05	-82.10	1945.46	661.49	-1227.87	5.797e+05	1.247e+05	1.306e+05	5.738e+05	-
5.151e+04 38 23	42	207.36	-372.71	-4089.28	-2856.96	-1605.02	-1749.68	1.511e+06	-8.861e+05	-8.618e+05	1.487e+06	-
2.401e+05	51	68.79	5052.21	24.20	1340.62	3735.79	-2210.43	2.471e+05	-4.161e+05	-2.416e+05	7.250e+04	
2.921e+05	52	52.72	380.10	-2472.71	-2421.16	328.55	-380.00	2.572e+05	-2.597e+05	-2.596e+05	2.572e+05	
1867.28	43	49.52	2617.62	15.88	1859.75	773.76	-1182.12	5.289e+05	1.134e+05	1.188e+05	5.235e+05	-
4.689e+04 38 55	42	206.76	-380.78	-4068.47	-2814.71	-1634.53	-1746.87	1.508e+06	-8.856e+05	-8.612e+05	1.483e+06	-
2.403e+05	51	67.94	4804.34	-0.28	1255.55	3548.52	-2111.08	2.455e+05	-4.155e+05	-2.416e+05	7.156e+04	
2.911e+05	52	52.11	318.09	-2396.56	-2332.45	253.98	-412.20	2.563e+05	-2.598e+05	-2.598e+05	2.563e+05	
1594.60	43	48.98	2511.19	-39.19	1803.89	668.11	-1141.76	5.277e+05	1.134e+05	1.188e+05	5.223e+05	-
4.685e+04 38 69	42	206.37	-385.57	-4055.62	-2788.02	-1653.18	-1745.10	1.505e+06	-8.852e+05	-8.608e+05	1.481e+06	-
2.404e+05	51	67.40	4647.73	-15.74	1201.80	3430.19	-2048.31	2.445e+05	-4.151e+05	-2.416e+05	7.097e+04	
2.905e+05	52	51.73	280.05	-2349.59	-2276.40	206.86	-432.55	2.558e+05	-2.598e+05	-2.598e+05	2.558e+05	
1422.30	43	48.65	2444.59	-74.64	1768.60	601.35	-1116.25	5.270e+05	1.134e+05	1.188e+05	5.216e+05	-
4.683e+04 39 1	43	92.92	995.54	-1808.27	-680.02	-132.70	-1374.94	7.837e+05	-2.349e+05	-2.149e+05	7.637e+05	-
1.414e+05	52	49.43	1344.18	-610.84	-286.66	1020.00	-727.11	3.240e+05	-2.292e+05	-2.147e+05	3.095e+05	
8.836e+04	53	36.79	459.22	-858.32	-618.43	219.34	-508.44	2.507e+05	-1.482e+05	-1.470e+05	2.496e+05	-
2.121e+04	44	41.48	801.13	-448.63	364.08	-11.58	-595.98	4.038e+05	-3.466e+04	-1.634e+04	3.855e+05	-
8.773e+04												



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

39	3	43	78.62	842.38	-1530.07	-575.40	-112.29	-1163.41	6.631e+05	-1.988e+05	-1.818e+05	6.462e+05	-
1.196e+05		52	41.83	1137.39	-516.87	-242.56	863.08	-615.25	2.741e+05	-1.939e+05	-1.817e+05	2.619e+05	-
7.477e+04		53	31.13	388.57	-726.27	-523.29	185.59	-430.22	2.121e+05	-1.254e+05	-1.244e+05	2.112e+05	-
1.795e+04		44	35.10	677.88	-379.61	308.07	-9.80	-504.29	3.417e+05	-2.933e+04	-1.383e+04	3.262e+05	-
7.423e+04		43	72.12	826.88	-1297.02	-519.19	49.06	-1023.24	6.050e+05	-1.806e+05	-1.653e+05	5.897e+05	-
1.086e+05	39	52	38.70	1114.37	-417.49	-218.31	915.19	-515.21	2.510e+05	-1.764e+05	-1.650e+05	2.396e+05	-
6.871e+04		53	28.70	408.95	-619.18	-486.42	276.19	-344.78	1.933e+05	-1.138e+05	-1.130e+05	1.925e+05	-
1.613e+04		44	32.41	634.81	-275.89	249.73	109.19	-449.89	3.112e+05	-2.666e+04	-1.260e+04	2.971e+05	-
6.745e+04		43	71.72	788.75	-1353.89	-521.58	-43.56	-1044.32	6.037e+05	-1.807e+05	-1.653e+05	5.883e+05	-
1.087e+05	39	52	38.29	1064.19	-448.67	-219.66	835.17	-542.24	2.499e+05	-1.763e+05	-1.651e+05	2.387e+05	-
6.826e+04		53	28.45	373.52	-643.04	-479.86	210.33	-373.17	1.930e+05	-1.139e+05	-1.131e+05	1.922e+05	-
1.624e+04		44	32.10	622.19	-317.06	268.32	36.82	-455.14	3.108e+05	-2.666e+04	-1.258e+04	2.967e+05	-
6.747e+04		43	71.47	765.80	-1390.98	-523.09	-102.08	-1057.64	6.029e+05	-1.807e+05	-1.653e+05	5.875e+05	-
1.088e+05	39	52	38.02	1033.99	-469.88	-220.51	784.62	-559.32	2.492e+05	-1.763e+05	-1.652e+05	2.380e+05	-
6.797e+04		53	28.30	353.25	-660.24	-475.72	168.72	-391.11	1.929e+05	-1.140e+05	-1.131e+05	1.920e+05	-
1.632e+04		44	31.91	616.25	-345.10	280.06	-8.91	-458.45	3.106e+05	-2.666e+04	-1.257e+04	2.965e+05	-
6.749e+04		44	46.42	576.01	-731.47	-94.96	-60.49	-653.51	4.212e+05	-7.670e+04	-5.636e+04	4.009e+05	-
9.856e+04	40	53	34.37	564.37	-512.24	-256.78	308.91	-458.01	2.489e+05	-1.316e+05	-1.313e+05	2.486e+05	-
9939.66		54	26.09	290.57	-387.13	-186.13	89.56	-309.54	1.966e+05	-9.174e+04	-8.373e+04	1.886e+05	-
4.738e+04		45	28.44	356.63	-355.26	57.64	-56.27	-351.36	2.683e+05	-3.165e+04	-5489.01	2.421e+05	-
8.463e+04		44	39.28	487.39	-618.93	-80.35	-51.19	-552.97	3.564e+05	-6.490e+04	-4.769e+04	3.392e+05	-
8.340e+04	40	53	29.09	477.54	-433.43	-217.27	261.38	-387.54	2.106e+05	-1.113e+05	-1.111e+05	2.104e+05	-
8410.49		54	22.07	245.86	-327.57	-157.50	75.79	-261.92	1.663e+05	-7.763e+04	-7.085e+04	1.596e+05	-
4.009e+04		45	24.07	301.77	-300.61	48.78	-47.62	-297.30	2.270e+05	-2.678e+04	-4644.55	2.049e+05	-
7.161e+04		44	36.28	509.04	-535.69	-97.89	71.24	-515.47	3.246e+05	-5.897e+04	-4.334e+04	3.090e+05	-
7.584e+04	40	53	26.91	499.56	-378.75	-219.12	339.93	-338.71	1.919e+05	-1.012e+05	-1.010e+05	1.917e+05	-
7499.49		54	20.37	270.82	-286.21	-167.00	151.61	-228.46	1.509e+05	-7.060e+04	-6.445e+04	1.448e+05	-
3.638e+04		45	22.24	316.09	-244.27	22.25	49.58	-279.85	2.061e+05	-2.446e+04	-4332.82	1.860e+05	-
6.508e+04		44	35.93	467.49	-551.09	-82.67	-0.93	-507.65	3.243e+05	-5.899e+04	-4.335e+04	3.086e+05	-
7.582e+04	40	53	26.62	458.51	-387.16	-205.88	277.23	-347.05	1.916e+05	-1.012e+05	-1.010e+05	1.914e+05	-
7589.21		54	20.19	240.67	-292.15	-152.40	100.92	-234.37	1.511e+05	-7.058e+04	-6.443e+04	1.449e+05	-
3.642e+04		45	22.02	289.06	-260.60	35.79	-7.33	-273.98	2.062e+05	-2.439e+04	-4265.10	1.861e+05	-
6.509e+04		44	35.71	443.08	-562.67	-73.05	-46.53	-502.70	3.240e+05	-5.900e+04	-4.335e+04	3.084e+05	-
7.581e+04	40	53	26.44	434.13	-394.03	-197.52	237.62	-352.31	1.914e+05	-1.012e+05	-1.010e+05	1.912e+05	-
7645.90		54	20.07	223.51	-297.80	-143.18	68.90	-238.11	1.512e+05	-7.057e+04	-6.441e+04	1.451e+05	-
3.644e+04		45	21.88	274.33	-273.28	44.34	-43.29	-270.28	2.064e+05	-2.435e+04	-4222.32	1.862e+05	-
6.510e+04		46	39.80	274.38	-300.43	100.78	-126.83	-263.92	2.845e+05	-4.687e+05	-3.407e+05	4.126e+05	-
41	1												

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

8.477e+04									
6.932e+04	55	38.21	257.53	-252.14	198.99	-193.60	-162.51-3.057e+05-4.452e+05-3.681e+05-3.829e+05		
1.401e+05	56	52.43	340.91	-396.10	319.87	-375.06	-122.73-3.410e+05-6.287e+05-4.521e+05-5.176e+05		
1.624e+05	47	60.22	538.55	-521.42	334.19	-317.06	-418.15-3.277e+05-7.140e+05-4.163e+05-6.254e+05		
7.173e+04	46	33.68	232.17	-254.21	85.27	-107.31	-223.32-2.408e+05-3.966e+05-2.883e+05-3.491e+05	3	
5.866e+04	55	32.33	217.91	-213.35	168.38	-163.82	-137.51-2.587e+05-3.767e+05-3.114e+05-3.240e+05		
1.185e+05	56	44.36	288.46	-335.16	270.66	-317.36	-103.85-2.886e+05-5.320e+05-3.826e+05-4.380e+05		
1.375e+05	47	50.96	455.69	-441.20	282.78	-268.28	-353.82-2.773e+05-6.042e+05-3.523e+05-5.292e+05		
6.515e+04	46	30.88	257.45	-209.41	60.63	-12.59	-230.54-2.191e+05-3.607e+05-2.622e+05-3.176e+05	41 22	
5.333e+04	55	29.62	234.68	-168.63	148.43	-82.39	-165.36-2.354e+05-3.427e+05-2.833e+05-2.948e+05		
1.076e+05	56	40.63	292.95	-260.13	250.10	-217.28	-147.86-2.624e+05-4.834e+05-3.478e+05-3.980e+05		
1.247e+05	47	46.68	464.79	-357.84	246.43	-139.48	-363.25-2.521e+05-5.487e+05-3.202e+05-4.806e+05		
6.519e+04	46	30.72	227.34	-221.02	70.98	-64.66	-213.67-2.190e+05-3.606e+05-2.621e+05-3.175e+05	41 54	
5.333e+04	55	29.48	210.54	-182.43	151.27	-123.16	-140.63-2.353e+05-3.425e+05-2.832e+05-2.946e+05		
1.077e+05	56	40.44	272.46	-285.77	247.62	-260.93	-115.10-2.624e+05-4.835e+05-3.478e+05-3.981e+05		
1.249e+05	47	46.46	432.37	-382.89	252.95	-203.47	-337.76-2.521e+05-5.490e+05-3.202e+05-4.809e+05		
6.521e+04	46	30.62	211.06	-231.10	77.52	-97.56	-203.02-2.189e+05-3.605e+05-2.621e+05-3.174e+05	41 69	
5.333e+04	55	29.39	198.10	-193.95	153.07	-148.92	-125.01-2.352e+05-3.424e+05-2.831e+05-2.945e+05		
1.077e+05	56	40.33	262.24	-304.69	246.05	-288.51	-94.41-2.623e+05-4.836e+05-3.478e+05-3.982e+05		
1.250e+05	47	46.33	414.27	-401.09	257.07	-243.89	-321.65-2.521e+05-5.492e+05-3.202e+05-4.811e+05		
1.394e+05	47	56.96	347.67	-514.06	152.15	-318.55	-360.91-3.110e+05-6.814e+05-3.743e+05-6.181e+05	42 1	
1.494e+05	56	54.79	434.09	-392.57	390.29	-348.77	-185.17-3.463e+05-6.530e+05-4.651e+05-5.343e+05		
2.735e+05	57	75.22	526.26	-645.48	517.73	-636.96	99.59-3.407e+05-8.879e+05-6.111e+05-6.175e+05		
4.073e+05	48	106.95	1121.56	-1057.56	933.80	-869.80	-611.46-3.297e+05-1.229e+06-5.889e+05-9.696e+05		
1.180e+05	47	48.20	294.18	-434.98	128.75	-269.54	-305.38-2.632e+05-5.766e+05-3.167e+05-5.230e+05	42 3	
1.264e+05	56	46.36	367.31	-332.18	330.25	-295.12	-156.68-2.931e+05-5.526e+05-3.935e+05-4.521e+05		
2.315e+05	57	63.65	445.30	-546.18	438.08	-538.96	84.27-2.883e+05-7.513e+05-5.171e+05-5.225e+05		
3.446e+05	48	90.50	949.01	-894.86	790.14	-735.99	-517.39-2.790e+05-1.040e+06-4.983e+05-8.205e+05		
1.071e+05	47	44.17	321.64	-360.11	105.14	-143.61	-317.38-2.393e+05-5.236e+05-2.879e+05-4.750e+05	42 22	
1.147e+05	56	42.46	374.58	-262.18	305.96	-193.56	-197.45-2.665e+05-5.020e+05-3.577e+05-4.108e+05		
2.100e+05	57	57.35	418.21	-424.40	418.14	-424.33	7.70-2.622e+05-6.821e+05-4.697e+05-4.746e+05		
3.125e+05	48	82.70	916.05	-729.25	720.13	-533.33	-532.88-2.536e+05-9.434e+05-4.526e+05-7.445e+05		
1.072e+05	47	43.96	286.76	-380.09	112.43	-205.77	-293.01-2.393e+05-5.240e+05-2.879e+05-4.753e+05	42 54	
1.148e+05	56	42.27	348.08	-284.99	302.44	-239.35	-163.74-2.664e+05-5.022e+05-3.577e+05-4.109e+05		
2.102e+05	57	57.67	408.81	-467.41	405.95	-464.55	49.93-2.621e+05-6.826e+05-4.699e+05-4.748e+05		
3.130e+05	48	82.44	882.22	-779.72	719.02	-616.52	-494.57-2.536e+05-9.445e+05-4.528e+05-7.453e+05		
1.073e+05	47	43.82	267.44	-395.43	117.04	-245.04	-277.62-2.392e+05-5.242e+05-2.879e+05-4.755e+05	42 69	

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1.149e+05	56	42.15	333.92	-301.98	300.23	-268.29	-142.44-2.664e+05-5.023e+05-3.578e+05-4.110e+05	
2.104e+05	57	57.86	404.82	-496.53	398.26	-489.97	76.61-2.621e+05-6.830e+05-4.701e+05-4.750e+05	
3.133e+05	48	82.27	862.74	-813.51	718.31	-669.08	-470.36-2.536e+05-9.452e+05-4.530e+05-7.459e+05	
2.699e+05	43 1	48	92.11	226.32	-1068.15	-67.91	-773.92	-542.50-2.073e+05-1.038e+06-3.070e+05-9.382e+05
3.967e+05	57	96.00	699.52	-714.94	699.52	-714.94	-1.31-3.279e+05-1.121e+06-7.246e+05-7.245e+05	
2.702e+05	58	92.20	1050.90	-235.51	760.68	54.72	537.70-2.072e+05-1.039e+06-9.393e+05-3.070e+05	
1.240e+06	49	247.05	3308.36	-3319.84	3308.36	-3319.84	-3.34-1.586e+05-2.638e+06-1.399e+06-1.398e+06	
2.284e+05	43 3	48	77.94	191.50	-903.82	-57.46	-654.86	-459.04-1.754e+05-8.782e+05-2.598e+05-7.939e+05
3.356e+05	57	81.23	591.90	-604.95	591.90	-604.95	-1.10-2.775e+05-9.487e+05-6.131e+05-6.131e+05	
2.286e+05	58	78.02	889.23	-199.28	643.65	46.30	454.98-1.753e+05-8.792e+05-7.948e+05-2.597e+05	
1.049e+06	49	209.04	2799.38	-2809.10	2799.38	-2809.10	-2.83-1.342e+05-2.232e+06-1.183e+06-1.183e+06	
2.082e+05	43 23	48	71.53	87.43	-870.57	-78.63	-704.51	-362.64-1.592e+05-8.000e+05-2.360e+05-7.231e+05
3.058e+05	57	74.49	515.14	-637.59	510.51	-632.95	72.93-2.522e+05-8.638e+05-5.580e+05-5.580e+05	
2.082e+05	58	70.71	852.04	-256.56	561.57	33.90	487.48-1.592e+05-8.001e+05-7.233e+05-2.360e+05	
9.559e+05	49	191.29	2569.27	-2783.84	2567.79	-2782.36	89.02-1.216e+05-2.033e+06-1.078e+06-1.077e+06	
2.079e+05	43 55	48	71.12	139.48	-839.54	-62.46	-637.60	-396.14-1.594e+05-7.990e+05-2.361e+05-7.223e+05
3.054e+05	57	74.09	528.10	-582.78	527.41	-582.09	27.62-2.522e+05-8.630e+05-5.576e+05-5.576e+05	
2.080e+05	58	70.84	824.84	-209.91	576.01	38.92	442.22-1.593e+05-7.996e+05-7.228e+05-2.361e+05	
9.544e+05	49	190.51	2553.96	-2642.46	2553.76	-2642.25	32.89-1.219e+05-2.031e+06-1.076e+06-1.076e+06	
2.076e+05	43 69	48	70.85	174.09	-821.66	-52.24	-595.33	-417.30-1.595e+05-7.984e+05-2.362e+05-7.217e+05
3.051e+05	57	73.85	538.09	-549.95	538.09	-549.95	-1.00-2.522e+05-8.625e+05-5.574e+05-5.573e+05	
2.079e+05	58	70.92	808.39	-181.16	585.14	42.09	413.62-1.594e+05-7.993e+05-7.225e+05-2.361e+05	
9.535e+05	49	190.04	2544.89	-2553.72	2544.89	-2553.72	-2.57-1.220e+05-2.029e+06-1.076e+06-1.075e+06	
9.199e+05	44 1	49	197.35	5746.10	23.26	4271.60	1497.75	2502.83 1.304e+05-1.923e+06-1.353e+06-4.401e+05
4.678e+05	58	126.85	383.08	-2812.11	314.68	-2743.70	462.47-4.636e+05-1.447e+06-1.106e+06-8.044e+05	
1.768e+04	59	108.32	2934.29	-129.18	745.48	2059.64	1383.64 1.792e+05-9.960e+05-9.957e+05 1.790e+05	
8.977e+05	50	272.95	-507.97	-4730.10	-2015.75	-3222.33	2023.03-5.336e+05-2.936e+06-2.533e+06-9.367e+05	
7.784e+05	44 3	49	166.99	4862.08	19.68	3614.43	1267.33	2117.78 1.103e+05-1.628e+06-1.145e+06-3.724e+05
3.959e+05	58	107.33	324.15	-2379.47	266.27	-2321.60	391.32-3.922e+05-1.224e+06-9.356e+05-6.807e+05	
1.496e+04	59	91.66	2482.86	-109.30	630.79	1742.77	1170.77 1.517e+05-8.428e+05-8.426e+05 1.514e+05	
7.596e+05	50	230.96	-429.82	-4002.40	-1705.63	-2726.59	1711.79-4.515e+05-2.484e+06-2.143e+06-7.926e+05	
7.090e+05	44 23	49	152.57	4595.01	-37.37	3383.74	1173.90	2035.65 1.009e+05-1.482e+06-1.042e+06-3.387e+05
3.607e+05	58	98.59	250.69	-2370.09	163.45	-2282.85	470.15-3.568e+05-1.115e+06-8.516e+05-6.198e+05	
1.357e+04	59	84.09	2443.08	-92.99	560.55	1789.54	1109.19 1.391e+05-7.668e+05-7.666e+05 1.389e+05	
6.925e+05	50	211.58	-387.80	-4158.96	-1692.91	-2853.85	1794.01-4.111e+05-2.262e+06-1.950e+06-7.226e+05	
7.081e+05	44 55	49	152.10	4487.79	-3.49	3323.75	1160.55	1968.00 1.005e+05-1.481e+06-1.041e+06-3.386e+05
	58	97.97	276.83	-2242.47	211.62	-2177.26	400.04-3.567e+05-1.113e+06-8.509e+05-6.192e+05	



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

2.544e+04	61	20.83	518.43	-712.81	-700.53	506.15	-122.34-3.461e+04-1.973e+05-1.932e+05-3.870e+04	
6.772e+04	52	36.59	907.48	-303.61	35.84	568.02	-543.95 2.564e+05-1.695e+05-1.584e+052.454e+05	
46 40 2.355e+04	51	56.11	2637.22	-2863.16	-2861.50	2635.56	-95.53 4.224e+04-3.754e+05-3.741e+054.090e+04	
2.604e+04	60	43.72	76.39	-896.83	-732.33	-88.10	364.74-1.323e+05-4.795e+05-4.775e+05-1.343e+05	-
2.585e+04	61	20.71	528.09	-654.71	-649.67	523.05	-77.03-3.411e+04-1.970e+05-1.928e+05-3.833e+04	
6.794e+04	52	36.75	879.13	-255.81	40.86	582.46	-498.68 2.569e+05-1.696e+05-1.585e+052.458e+05	
46 69 2.446e+04	51	55.73	2627.37	-2773.64	-2772.97	2626.70	-60.07 4.303e+04-3.746e+05-3.732e+054.160e+04	
2.583e+04	60	43.51	108.59	-876.52	-690.06	-77.88	385.90-1.324e+05-4.789e+05-4.770e+05-1.343e+05	-
2.611e+04	61	20.63	535.76	-619.56	-617.53	533.73	-48.40-3.380e+04-1.969e+05-1.926e+05-3.809e+04	
6.808e+04	52	36.85	861.80	-226.19	44.03	591.58	-470.08 2.573e+05-1.697e+05-1.585e+052.461e+05	
47 1 4.066e+04	52	48.05	1081.27	-1248.18	-1022.66	855.75	-688.82 2.633e+05-2.424e+05-2.391e+052.600e+05	
4.107e+04	61	31.74	625.10	-601.56	-598.95	622.49	56.49 -3956.94-2.946e+05-2.886e+05 -9880.52	
1.611e+04	62	26.40	384.82	-510.17	-444.99	319.63	-232.58 8.973e+04-1.915e+05-1.905e+058.880e+04	
8387.38	53	33.13	528.33	-400.97	-170.27	297.63	-401.46 2.449e+05-1.246e+05-1.244e+052.447e+05	-
47 3 3.441e+04	52	40.66	914.92	-1056.15	-865.33	724.10	-582.85 2.228e+05-2.051e+05-2.024e+052.200e+05	
3.475e+04	61	26.85	528.93	-509.01	-506.80	526.73	47.80 -3348.18-2.493e+05-2.442e+05 -8360.44	
1.363e+04	62	22.34	325.62	-431.69	-376.53	270.46	-196.80 7.592e+04-1.620e+05-1.612e+057.514e+04	
7097.02	53	28.04	447.05	-339.28	-144.07	251.84	-339.70 2.073e+05-1.054e+05-1.053e+052.071e+05	-
47 23 3.173e+04	52	37.67	943.28	-975.64	-827.52	795.17	-512.14 2.038e+05-1.864e+05-1.838e+052.012e+05	
3.184e+04	61	24.70	553.41	-485.30	-478.13	546.24	86.01 -2677.91-2.265e+05-2.219e+05 -7301.24	
1.250e+04	62	20.59	347.07	-391.96	-359.37	314.49	-151.72 6.913e+04-1.473e+05-1.465e+056.841e+04	
6322.01	53	25.93	467.64	-286.84	-147.22	328.02	-293.00 1.888e+05-9.584e+04-9.570e+041.887e+05	-
47 55 3.146e+04	52	37.24	874.39	-965.60	-802.48	711.28	-523.00 2.030e+05-1.865e+05-1.839e+052.005e+05	
3.168e+04	61	24.53	508.62	-471.15	-467.47	504.94	59.93 -2902.17-2.266e+05-2.220e+05 -7484.57	
1.243e+04	62	20.42	315.14	-391.60	-348.91	272.44	-168.38 6.907e+04-1.473e+05-1.466e+056.835e+04	
6401.57	53	25.66	429.08	-299.04	-137.26	267.31	-302.69 1.886e+05-9.584e+04-9.570e+041.884e+05	-
47 69 3.128e+04	52	36.96	831.75	-960.14	-786.66	658.27	-529.86 2.026e+05-1.865e+05-1.840e+052.000e+05	
3.159e+04	61	24.41	480.85	-462.74	-460.73	478.84	43.45 -3043.80-2.266e+05-2.220e+05 -7600.40	
1.239e+04	62	20.31	296.01	-392.44	-342.30	245.87	-178.91 6.902e+04-1.473e+05-1.466e+056.831e+04	
6451.83	53	25.49	406.41	-308.44	-130.97	228.95	-308.81 1.884e+05-9.584e+04-9.570e+041.883e+05	-
48 1 1.450e+04	53	33.91	530.31	-606.37	-370.04	293.98	-461.28 2.352e+05-1.367e+05-1.361e+052.346e+05	-
1.626e+04	62	26.33	383.79	-401.57	-367.93	350.15	-159.02 8.952e+04-1.928e+05-1.918e+058.858e+04	
1.491e+04	63	22.98	244.64	-311.06	-232.72	166.30	-193.38 1.175e+05-1.397e+05-1.388e+051.167e+05	-
4.621e+04	54	25.37	304.05	-318.71	-118.21	103.54	-290.97 1.942e+05-8.737e+04-7.957e+041.864e+05	-
48 3 1.227e+04	53	28.69	448.72	-513.08	-313.11	248.75	-390.31 1.990e+05-1.157e+05-1.152e+051.985e+05	-
1.376e+04	62	22.28	324.75	-339.79	-311.32	296.28	-134.55 7.575e+04-1.631e+05-1.623e+057.495e+04	
	63	19.44	207.00	-263.20	-196.92	140.72	-163.63 9.946e+04-1.182e+05-1.175e+059.872e+04	-





**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

2.821e+05	57	77.09	535.39	-545.84	535.36	-545.81	-5.44-3.538e+05-9.181e+05-6.361e+05-6.358e+05
50 3	56	43.51	300.10	-333.54	278.97	-312.40	-113.78-2.880e+05-5.214e+05-3.723e+05-4.370e+05
1.121e+05	65	36.28	208.05	-220.40	208.03	-220.37	-3.29-2.798e+05-4.293e+05-3.546e+05-3.545e+05
7.471e+04	66	43.53	319.79	-307.73	301.31	-289.24	106.10-2.880e+05-5.215e+05-4.372e+05-3.723e+05
1.122e+05	57	65.23	453.02	-461.86	453.00	-461.84	-4.60-2.994e+05-7.768e+05-5.382e+05-5.380e+05
2.387e+05	56	39.85	253.87	-358.92	249.63	-354.69	-50.76-2.617e+05-4.742e+05-3.385e+05-3.975e+05
50 23	65	33.21	177.50	-248.23	171.91	-242.64	48.46-2.543e+05-3.901e+05-3.222e+05-3.222e+05
1.021e+05	66	39.85	286.60	-331.81	247.68	-292.89	150.18-2.617e+05-4.743e+05-3.975e+05-3.385e+05
6.792e+04	57	59.81	392.81	-493.05	388.21	-488.45	63.65-2.722e+05-7.071e+05-4.897e+05-4.896e+05
1.021e+05	56	39.64	264.05	-323.35	252.07	-311.37	-83.04-2.618e+05-4.741e+05-3.385e+05-3.974e+05
2.175e+05	65	33.07	183.17	-217.43	182.45	-216.72	16.93-2.544e+05-3.902e+05-3.223e+05-3.222e+05
50 55	66	39.68	288.19	-298.97	263.76	-274.54	117.25-2.618e+05-4.741e+05-3.975e+05-3.385e+05
1.020e+05	57	59.49	403.25	-446.99	402.68	-446.42	22.08-2.722e+05-7.066e+05-4.894e+05-4.893e+05
6.792e+04	56	39.55	272.82	-303.21	253.61	-284.00	-103.43-2.618e+05-4.740e+05-3.385e+05-3.973e+05
1.020e+05	65	32.98	189.14	-200.36	189.12	-200.34	-2.99-2.544e+05-3.902e+05-3.223e+05-3.223e+05
2.172e+05	66	39.57	290.72	-279.75	273.92	-262.95	96.45-2.618e+05-4.741e+05-3.974e+05-3.385e+05
50 69	57	59.30	411.84	-419.88	411.81	-419.85	-4.18-2.722e+05-7.062e+05-4.893e+05-4.891e+05
1.019e+05	56	75.22	635.36	-541.98	625.65	-532.27	-106.46-3.407e+05-8.879e+05-6.177e+05-6.109e+05
6.792e+04	66	54.83	376.55	-448.20	334.98	-406.63	180.44-3.463e+05-6.531e+05-5.344e+05-4.650e+05
1.020e+05	67	57.01	496.65	-355.88	307.41	-166.63	354.29-3.110e+05-6.818e+05-6.185e+05-3.743e+05
2.172e+05	58	107.00	1043.25	-1128.89	860.67	-946.32	602.70-3.297e+05-1.230e+06-9.705e+05-5.887e+05
51 3	57	63.64	537.61	-458.60	529.40	-450.38	-90.08-2.883e+05-7.513e+05-5.227e+05-5.169e+05
2.736e+05	66	46.40	318.62	-379.25	283.45	-344.07	152.68-2.931e+05-5.526e+05-4.522e+05-3.935e+05
1.494e+05	67	48.24	420.25	-301.13	260.12	-141.00	299.79-2.632e+05-5.769e+05-5.234e+05-3.167e+05
1.395e+05	58	90.54	882.75	-955.22	728.26	-800.73	509.98-2.790e+05-1.040e+06-8.212e+05-4.981e+05
4.074e+05	57	57.50	415.83	-429.52	415.63	-429.32	-12.98-2.621e+05-6.838e+05-4.756e+05-4.703e+05
51 7	66	42.54	249.12	-384.69	182.95	-318.52	193.81-2.663e+05-5.027e+05-4.113e+05-3.578e+05
3.447e+05	67	44.30	346.00	-327.24	135.04	-116.28	312.29-2.392e+05-5.250e+05-4.763e+05-2.879e+05
51 39	58	83.07	717.57	-921.02	526.31	-729.76	526.14-2.537e+05-9.476e+05-7.480e+05-4.533e+05
2.109e+05	57	57.72	459.33	-420.61	455.86	-417.14	-55.21-2.621e+05-6.833e+05-4.753e+05-4.701e+05
1.151e+05	66	42.32	272.38	-358.64	228.75	-315.01	160.10-2.664e+05-5.025e+05-4.112e+05-3.577e+05
1.075e+05	67	44.03	366.39	-292.77	197.20	-123.57	287.93-2.392e+05-5.247e+05-4.760e+05-2.879e+05
3.141e+05	58	82.60	768.45	-887.60	609.49	-728.64	487.82-2.537e+05-9.465e+05-7.471e+05-4.530e+05
51 69	57	57.86	488.74	-416.91	481.27	-409.44	-81.89-2.621e+05-6.830e+05-4.752e+05-4.699e+05
2.104e+05	66	42.18	289.66	-344.77	257.68	-312.79	138.80-2.664e+05-5.024e+05-4.111e+05-3.577e+05
1.149e+05	67	43.86	382.04	-273.75	236.47	-128.18	272.53-2.393e+05-5.245e+05-4.758e+05-2.879e+05
1.073e+05	58	82.31	802.50	-868.38	662.06	-727.94	463.62-2.536e+05-9.458e+05-7.466e+05-4.529e+05



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

3.134e+05	52	1	58	105.62	1289.83	-546.71	1014.83	-271.71	655.30-2.621e+05-1.202e+06-1.015e+06-4.495e+05
3.756e+05			67	60.67	439.77	-782.56	235.06	-577.85	456.42-3.522e+05-7.143e+05-6.329e+05-4.336e+05
1.512e+05			68	54.39	733.14	-412.80	-7.53	327.87	547.88-2.411e+05-6.318e+05-6.074e+05-2.655e+05
9.449e+04			59	101.30	927.01	-1673.29	-119.37	-626.91	1275.14-3.046e+05-1.142e+06-1.100e+06-3.456e+05
1.809e+05	52	3	58	89.37	1091.39	-462.60	858.70	-229.91	554.49-2.218e+05-1.017e+06-8.588e+05-3.803e+05
3.178e+05			67	51.34	372.11	-662.17	198.90	-488.95	386.20-2.980e+05-6.044e+05-5.355e+05-3.669e+05
1.279e+05			68	46.02	620.35	-349.29	-6.37	277.43	463.59-2.040e+05-5.346e+05-5.140e+05-2.247e+05
7.996e+04			59	85.72	784.39	-1415.86	-101.00	-530.46	1078.96-2.577e+05-9.660e+05-9.312e+05-2.925e+05
1.530e+05	52	7	58	81.53	916.54	-477.68	650.07	-211.20	548.19-2.015e+05-9.267e+05-7.823e+05-3.459e+05
2.896e+05			67	47.13	291.20	-651.66	73.34	-433.80	397.43-2.710e+05-5.500e+05-4.873e+05-3.336e+05
1.165e+05			68	42.33	554.93	-396.28	-123.89	282.54	430.00-1.855e+05-4.866e+05-4.679e+05-2.042e+05
7.272e+04			59	78.74	657.99	-1387.09	-242.96	-486.14	1015.28-2.343e+05-8.803e+05-8.487e+05-2.659e+05
1.393e+05	52	39	58	81.10	961.88	-441.65	730.08	-209.86	521.16-2.016e+05-9.256e+05-7.814e+05-3.458e+05
2.892e+05			67	46.85	318.63	-619.79	139.20	-440.36	369.03-2.709e+05-5.497e+05-4.870e+05-3.336e+05
1.163e+05			68	42.03	559.32	-346.88	-51.52	263.95	424.76-1.855e+05-4.862e+05-4.675e+05-2.042e+05
7.270e+04			59	78.24	691.03	-1325.12	-150.34	-483.75	994.20-2.343e+05-8.790e+05-8.474e+05-2.659e+05
1.392e+05	52	69	58	81.25	992.18	-420.54	780.64	-209.01	504.08-2.016e+05-9.249e+05-7.807e+05-3.457e+05
2.889e+05			67	46.67	338.29	-601.97	180.81	-444.50	351.09-2.709e+05-5.494e+05-4.868e+05-3.335e+05
1.163e+05			68	41.84	563.96	-317.54	-5.79	252.21	421.45-1.855e+05-4.860e+05-4.673e+05-2.042e+05
7.269e+04			59	77.93	713.08	-1287.14	-91.82	-482.24	980.88-2.343e+05-8.781e+05-8.465e+05-2.659e+05
1.391e+05	53	1	59	99.99	1596.78	-1028.54	-54.11	622.35	1268.33-1.923e+05-1.087e+06-1.064e+06-2.156e+05
1.425e+05			68	54.09	334.46	-790.26	-133.04	-322.76	554.30-3.055e+05-6.301e+05-6.038e+05-3.317e+05
8.847e+04			69	43.20	744.08	-520.40	-360.61	584.28	420.15-1.692e+05-4.827e+05-4.707e+05-1.813e+05
6.022e+04			60	57.27	494.17	-1407.59	-1171.06	257.64	627.60-1.675e+05-6.140e+05-6.111e+05-1.703e+05
3.551e+04	53	3	59	84.61	1351.12	-870.30	-45.79	526.61	1073.20-1.627e+05-9.199e+05-9.002e+05-1.824e+05
1.206e+05			68	45.77	283.00	-668.68	-112.57	-273.11	469.02-2.585e+05-5.331e+05-5.109e+05-2.807e+05
7.486e+04			69	36.55	629.60	-440.34	-305.13	494.39	355.51-1.432e+05-4.085e+05-3.983e+05-1.534e+05
5.096e+04			60	48.46	418.15	-1191.04	-990.90	218.01	531.04-1.417e+05-5.195e+05-5.171e+05-1.441e+05
3.005e+04	53	7	59	77.75	1210.75	-895.26	-189.42	504.91	994.14-1.478e+05-8.384e+05-8.205e+05-1.657e+05
1.097e+05			68	42.06	214.53	-671.03	-221.65	-234.85	442.73-2.351e+05-4.852e+05-4.651e+05-2.552e+05
6.806e+04			69	33.62	581.86	-476.59	-379.39	484.65	305.68-1.303e+05-3.717e+05-3.625e+05-1.395e+05
4.621e+04			60	44.72	367.81	-1200.46	-1037.98	205.33	477.92-1.288e+05-4.736e+05-4.714e+05-1.311e+05
2.783e+04	53	39	59	77.24	1220.80	-830.79	-98.85	488.87	982.80-1.479e+05-8.371e+05-8.192e+05-1.658e+05
1.096e+05			68	41.78	239.48	-631.10	-148.54	-243.08	432.71-2.350e+05-4.849e+05-4.647e+05-2.552e+05
6.806e+04			69	33.38	575.29	-429.10	-316.88	463.08	316.41-1.302e+05-3.715e+05-3.623e+05-1.394e+05
4.628e+04			60	44.31	374.97	-1127.95	-953.93	200.95	480.89-1.288e+05-4.728e+05-4.706e+05-1.310e+05
2.751e+04									

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

53	69	59	76.92	1228.29	-791.18	-41.63	478.73	975.64-1.479e+05-8.363e+05-8.184e+05-1.658e+05
1.096e+05		68	41.61	257.27	-607.89	-102.34	-248.28	426.38-2.350e+05-4.847e+05-4.645e+05-2.552e+05
6.805e+04		69	33.23	572.37	-400.31	-277.39	449.45	323.19-1.302e+05-3.713e+05-3.621e+05-1.394e+05
4.632e+04		60	44.06	380.13	-1082.76	-900.82	198.19	482.77-1.288e+05-4.723e+05-4.701e+05-1.310e+05
2.731e+04		60	54.35	1099.79	-1168.46	-1019.59	950.91	561.72-1.408e+05-5.645e+05-5.642e+05-1.412e+05
54	1	69	41.80	308.48	-573.11	-428.10	163.47	326.82-1.929e+05-4.749e+05-4.664e+05-2.014e+05
1.151e+04		70	30.15	416.52	-446.92	-424.96	394.56	135.95-7.693e+04-3.210e+05-3.122e+05-8.570e+04
4.836e+04		61	31.14	536.41	-729.96	-707.63	514.08	-166.68 -6331.37-2.890e+05-2.866e+05 -8719.50
4.542e+04		60	45.98	930.59	-988.70	-862.73	804.62	475.30-1.192e+05-4.777e+05-4.774e+05-1.194e+05
2.587e+04		69	35.37	261.02	-484.94	-362.24	138.32	276.54-1.632e+05-4.019e+05-3.946e+05-1.704e+05
54	3	70	25.51	352.44	-378.17	-359.58	333.86	115.03-6.510e+04-2.716e+05-2.642e+05-7.251e+04
9740.78		61	26.35	453.89	-617.66	-598.76	434.99	-141.04 -5357.31-2.446e+05-2.425e+05 -7378.04
4.092e+04		60	42.48	868.28	-1017.14	-921.19	772.33	414.37-1.085e+05-4.354e+05-4.352e+05-1.087e+05
3.843e+04		69	32.52	226.71	-513.10	-428.38	141.99	235.58-1.484e+05-3.657e+05-3.592e+05-1.549e+05
2.189e+04		70	23.42	328.85	-403.78	-395.51	320.58	77.39-5.925e+04-2.470e+05-2.403e+05-6.595e+04
54	7	61	24.25	440.56	-639.44	-611.73	412.84	-170.77 -5044.07-2.226e+05-2.208e+05 -6834.60
8400.17		60	42.07	854.19	-944.20	-837.30	747.29	425.23-1.084e+05-4.347e+05-4.345e+05-1.086e+05
3.707e+04		69	32.30	232.31	-467.94	-367.67	132.04	245.28-1.484e+05-3.655e+05-3.589e+05-1.549e+05
3.482e+04		70	23.28	323.19	-366.53	-353.46	310.12	94.05-5.921e+04-2.469e+05-2.402e+05-6.593e+04
1.965e+04		61	24.06	423.25	-591.50	-570.43	402.18	-144.69 -4937.65-2.224e+05-2.206e+05 -6756.60
54	39	60	41.80	845.99	-898.82	-784.30	731.47	432.09-1.083e+05-4.343e+05-4.340e+05-1.086e+05
8679.05		69	32.16	237.29	-440.86	-329.31	125.75	251.40-1.484e+05-3.653e+05-3.588e+05-1.549e+05
3.715e+04		70	23.19	320.40	-343.79	-326.89	303.51	104.57-5.918e+04-2.469e+05-2.402e+05-6.592e+04
3.489e+04		61	23.95	412.63	-561.51	-544.33	395.45	-128.22 -4870.28-2.223e+05-2.205e+05 -6707.31
1.981e+04		61	32.21	528.15	-621.41	-618.50	525.24	-57.73 2195.63-2.985e+05-2.949e+05 -1381.16
54	1	70	30.39	339.24	-452.75	-443.27	329.76	86.14-7.601e+04-3.243e+05-3.160e+05-8.430e+04
8855.26		71	24.11	240.87	-306.12	-302.58	237.33	-43.89 1.125e+04-2.286e+05-2.240e+05 6570.01
3.720e+04		62	26.47	387.05	-414.26	-373.29	346.08	-176.49 9.356e+04-1.911e+05-1.901e+05 9.259e+04
3.494e+04		61	27.25	446.89	-525.81	-523.35	444.43	-48.85 1857.84-2.526e+05-2.495e+05 -1168.68
1.990e+04		70	25.72	287.05	-383.10	-375.07	279.03	72.88-6.431e+04-2.744e+05-2.674e+05-7.133e+04
55	1	71	20.40	203.81	-259.02	-256.03	200.81	-37.14 9515.83-1.935e+05-1.895e+05 5559.24
3.260e+04		62	22.40	327.50	-350.53	-315.86	292.84	-149.34 7.917e+04-1.617e+05-1.609e+05 7.834e+04
4.463e+04		61	25.06	427.74	-549.13	-542.38	420.99	-80.93 1492.55-2.299e+05-2.272e+05 -1204.57
3.316e+04		70	23.61	270.84	-410.54	-408.35	268.64	38.58-5.851e+04-2.495e+05-2.432e+05-6.485e+04
1.661e+04		71	18.67	197.88	-280.11	-272.07	189.84	-61.47 8665.40-1.758e+05-1.722e+05 5066.26
55	3	62	20.52	323.85	-362.84	-320.39	281.39	-165.38 7.191e+04-1.470e+05-1.463e+05 7.117e+04
2.758e+04		61	24.88	414.34	-505.30	-501.56	410.60	-58.55 1612.83-2.297e+05-2.270e+05 -1117.47
3.776e+04								
2.806e+04								
1.406e+04								
55	7							
2.483e+04								
3.423e+04								
2.551e+04								
1.274e+04								
55	39							

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

2.498e+04											
3.429e+04	70	23.47	264.35	-371.95	-367.06	259.46	55.54-5.848e+04-2.495e+05-2.431e+05-6.485e+04				
2.551e+04	71	18.59	189.90	-252.50	-247.98	185.38	-44.49 8656.43-1.758e+05-1.722e+05 5058.66				
1.277e+04	62	20.42	307.76	-335.68	-300.02	272.09	-147.23 7.195e+04-1.470e+05-1.462e+05 7.120e+04				
2.508e+04	61	24.78	406.27	-478.01	-475.77	404.03	-44.41 1688.94-2.296e+05-2.269e+05 -1062.43				
3.433e+04	70	23.38	260.95	-348.27	-340.98	253.66	66.26-5.847e+04-2.495e+05-2.431e+05-6.485e+04				
2.551e+04	71	18.55	185.28	-235.48	-232.75	182.56	-33.76 8650.76-1.759e+05-1.723e+05 5053.85				
1.278e+04	62	20.36	297.73	-318.66	-287.15	266.22	-135.76 7.197e+04-1.470e+05-1.462e+05 7.122e+04				
1.318e+04	62	26.47	357.96	-422.43	-377.32	312.85	-182.12 8.884e+04-1.955e+05-1.948e+05 8.823e+04				
3.256e+04	71	24.51	251.85	-311.72	-309.75	249.88	-33.32 1.237e+04-2.314e+05-2.270e+05 7944.88				
1.017e+04	72	21.43	183.16	-237.24	-215.84	161.77	-92.39 6.060e+04-1.733e+05-1.729e+05 6.016e+04				
1.503e+04	63	22.80	244.65	-279.04	-207.68	173.30	-179.66 1.172e+05-1.389e+05-1.380e+05 1.163e+05				-
1.115e+04	62	22.40	302.89	-357.44	-319.27	264.72	-154.10 7.517e+04-1.654e+05-1.649e+05 7.465e+04				
2.755e+04	71	20.74	213.11	-263.76	-262.09	211.43	-28.19 1.047e+04-1.958e+05-1.920e+05 6722.59				
8607.42	72	18.13	154.98	-200.74	-182.64	136.88	-78.18 5.128e+04-1.467e+05-1.463e+05 5.090e+04				
1.271e+04	63	19.29	207.01	-236.11	-175.73	146.64	-152.02 9.915e+04-1.175e+05-1.168e+05 9.840e+04				-
1.023e+04	62	20.63	326.47	-325.36	-305.27	306.38	-112.64 6.843e+04-1.503e+05-1.499e+05 6.795e+04				
2.504e+04	71	19.01	231.55	-247.31	-247.30	231.54	2.09 9392.19-1.780e+05-1.746e+05 5984.64				
7775.40	72	16.63	171.99	-181.52	-174.89	165.36	-47.96 4.627e+04-1.335e+05-1.331e+05 4.594e+04				
1.150e+04	63	17.76	229.31	-209.21	-174.51	194.61	-118.38 8.983e+04-1.070e+05-1.063e+05 8.916e+04				-
1.017e+04	62	20.46	294.48	-324.45	-296.06	266.10	-129.46 6.837e+04-1.503e+05-1.499e+05 6.790e+04				
2.504e+04	71	18.92	207.93	-242.26	-241.76	207.44	-14.89 9469.62-1.780e+05-1.746e+05 6062.35				
7805.75	72	16.54	152.28	-181.46	-169.46	140.28	-62.12 4.648e+04-1.334e+05-1.330e+05 4.614e+04				
1.154e+04	63	17.62	203.25	-211.67	-165.47	157.04	-130.52 9.002e+04-1.069e+05-1.062e+05 8.934e+04				-
1.014e+04	62	20.36	275.35	-324.94	-290.24	240.65	-140.09 6.834e+04-1.504e+05-1.499e+05 6.787e+04				
2.505e+04	71	18.85	193.73	-239.79	-238.27	192.21	-25.63 9518.54-1.780e+05-1.746e+05 6111.45				
7824.93	72	16.49	140.89	-182.49	-166.03	124.44	-71.07 4.662e+04-1.333e+05-1.330e+05 4.627e+04				
1.156e+04	63	17.54	188.19	-214.65	-159.76	133.31	-138.20 9.014e+04-1.068e+05-1.062e+05 8.946e+04				-
3.941e+04	64	33.20	186.00	-197.92	175.81	-187.73	-61.70-2.980e+05-3.774e+05-3.424e+05-3.330e+05				
1.618e+04	73	28.23	140.51	-151.97	140.32	-151.79	-7.43-2.761e+05-3.085e+05-2.923e+05-2.923e+05				
3.939e+04	74	33.22	179.44	-192.27	173.29	-186.12	47.42-2.980e+05-3.773e+05-3.329e+05-3.424e+05				
8.172e+04	65	41.88	251.30	-260.62	251.17	-260.49	-8.20-3.305e+05-4.939e+05-4.122e+05-4.122e+05				
3.335e+04	64	28.10	157.38	-167.47	148.76	-158.85	-52.21-2.522e+05-3.193e+05-2.898e+05-2.818e+05				
1.369e+04	73	23.89	118.90	-128.59	118.74	-128.43	-6.29-2.337e+05-2.610e+05-2.474e+05-2.474e+05				
3.333e+04	74	28.11	151.84	-162.69	146.63	-157.49	40.12-2.521e+05-3.193e+05-2.817e+05-2.897e+05				
6.915e+04	65	35.43	212.64	-220.52	212.53	-220.41	-6.94-2.796e+05-4.179e+05-3.488e+05-3.488e+05				
3.048e+04	64	25.72	184.53	-151.98	158.18	-125.63	-90.39-2.294e+05-2.908e+05-2.638e+05-2.564e+05				

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

1.275e+04	73	21.86	145.54	-113.80	137.01	-105.27	-46.26-2.127e+05-2.382e+05-2.255e+05-2.254e+05
3.043e+04	74	25.57	178.04	-138.05	177.92	-137.93	-6.06-2.294e+05-2.907e+05-2.565e+05-2.637e+05
6.288e+04	65	32.45	242.00	-192.20	234.67	-184.87	-55.94-2.543e+05-3.801e+05-3.173e+05-3.172e+05
3.038e+04	57 38 64	25.61	158.04	-151.05	144.12	-137.14	-64.08-2.293e+05-2.905e+05-2.636e+05-2.562e+05
1.257e+04	73	21.75	121.16	-114.27	119.20	-112.31	-21.41-2.125e+05-2.377e+05-2.251e+05-2.251e+05
3.035e+04	74	25.51	151.95	-142.51	150.58	-141.14	20.01-2.293e+05-2.904e+05-2.562e+05-2.635e+05
6.287e+04	65	32.31	210.87	-195.98	209.26	-194.37	-25.53-2.543e+05-3.800e+05-3.172e+05-3.171e+05
3.032e+04	57 69 64	25.54	143.07	-152.24	135.24	-144.41	-47.46-2.293e+05-2.903e+05-2.634e+05-2.561e+05
1.245e+04	73	21.71	108.09	-116.90	107.94	-116.76	-5.71-2.124e+05-2.373e+05-2.249e+05-2.249e+05
3.030e+04	74	25.56	138.03	-147.90	133.30	-143.17	36.48-2.292e+05-2.902e+05-2.561e+05-2.634e+05
6.286e+04	65	32.21	193.31	-200.48	193.21	-200.37	-6.31-2.542e+05-3.799e+05-3.171e+05-3.171e+05
8.200e+04	58 1 65	41.91	260.47	-266.96	260.16	-266.66	-12.67-3.303e+05-4.944e+05-4.104e+05-4.144e+05
4.100e+04	74	33.50	179.98	-199.41	172.60	-192.04	52.39-2.983e+05-3.810e+05-3.343e+05-3.450e+05
6.723e+04	75	37.69	232.02	-238.79	186.19	-192.97	139.55-3.038e+05-4.392e+05-3.792e+05-3.638e+05
1.387e+05	66	52.46	353.87	-367.13	329.45	-342.71	130.42-3.435e+05-6.269e+05-5.139e+05-4.564e+05
6.939e+04	58 3 65	35.46	220.39	-225.89	220.14	-225.63	-10.72-2.795e+05-4.183e+05-3.472e+05-3.506e+05
3.469e+04	74	28.34	152.29	-168.73	146.05	-162.49	44.33-2.524e+05-3.224e+05-2.829e+05-2.920e+05
5.689e+04	75	31.89	196.32	-202.05	157.55	-163.28	118.08-2.571e+05-3.716e+05-3.209e+05-3.078e+05
1.174e+05	66	44.39	299.43	-310.65	278.76	-289.99	110.36-2.907e+05-5.304e+05-4.349e+05-3.862e+05
6.307e+04	58 7 65	32.44	163.26	-224.75	158.94	-220.43	40.72-2.540e+05-3.802e+05-3.155e+05-3.186e+05
3.141e+04	74	25.88	113.87	-179.50	87.83	-153.46	83.43-2.292e+05-2.926e+05-2.567e+05-2.651e+05
5.172e+04	75	29.17	150.83	-216.66	77.62	-143.45	146.78-2.335e+05-3.376e+05-2.914e+05-2.797e+05
1.069e+05	66	40.69	230.11	-316.02	183.12	-269.02	153.16-2.642e+05-4.824e+05-3.955e+05-3.512e+05
6.307e+04	58 39 65	32.32	184.42	-211.29	184.18	-211.05	9.79-2.541e+05-3.802e+05-3.156e+05-3.187e+05
3.149e+04	74	25.81	127.10	-161.67	115.37	-149.94	57.00-2.294e+05-2.929e+05-2.570e+05-2.653e+05
5.172e+04	75	29.06	165.94	-194.63	117.82	-146.51	122.62-2.336e+05-3.377e+05-2.916e+05-2.798e+05
1.068e+05	66	40.49	254.25	-293.77	226.20	-265.72	120.78-2.642e+05-4.823e+05-3.954e+05-3.511e+05
6.308e+04	58 69 65	32.24	200.36	-205.35	200.12	-205.12	-9.75-2.541e+05-3.803e+05-3.157e+05-3.187e+05
3.154e+04	74	25.77	138.45	-153.40	132.77	-147.72	40.30-2.295e+05-2.931e+05-2.572e+05-2.654e+05
5.171e+04	75	28.99	178.48	-183.69	143.23	-148.44	107.35-2.337e+05-3.378e+05-2.917e+05-2.798e+05
1.067e+05	66	40.36	272.21	-282.41	253.42	-263.63	100.32-2.642e+05-4.822e+05-3.953e+05-3.511e+05
1.401e+05	59 1 66	52.44	382.98	-352.76	365.14	-334.93	113.16-3.410e+05-6.288e+05-5.178e+05-4.521e+05
6.935e+04	75	38.25	235.79	-271.58	181.04	-216.83	157.43-3.056e+05-4.451e+05-3.828e+05-3.680e+05
8.475e+04	76	39.81	280.57	-279.47	117.33	-116.23	254.50-2.845e+05-4.686e+05-4.125e+05-3.407e+05
1.625e+05	67	60.24	505.46	-543.38	310.16	-348.08	408.28-3.277e+05-7.143e+05-6.258e+05-4.162e+05
1.185e+05	59 3 66	44.38	324.06	-298.49	308.97	-283.40	95.75-2.886e+05-5.321e+05-4.381e+05-3.825e+05
	75	32.37	199.52	-229.80	153.18	-183.47	133.21-2.586e+05-3.766e+05-3.239e+05-3.114e+05

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

5.868e+04									
7.171e+04	76	33.68	237.40	-236.47	99.28	-98.35	215.35-2.407e+05-3.965e+05-3.490e+05-2.882e+05		
1.375e+05									
59 7	66	40.68	248.35	-300.38	209.65	-261.68	140.49-2.623e+05-4.839e+05-3.984e+05-3.478e+05		
1.079e+05									
5.334e+04	75	29.61	154.93	-244.36	72.72	-162.15	161.45-2.349e+05-3.422e+05-2.941e+05-2.829e+05		
6.526e+04	76	30.86	193.05	-260.28	5.29	-72.51	223.30-2.186e+05-3.603e+05-3.170e+05-2.619e+05		
1.252e+05									
59 39	66	40.47	275.03	-280.93	253.30	-259.20	107.74-2.623e+05-4.838e+05-3.983e+05-3.478e+05		
1.078e+05									
5.334e+04	75	29.50	169.40	-220.90	113.50	-164.99	136.73-2.350e+05-3.423e+05-2.943e+05-2.830e+05		
6.522e+04	76	30.71	205.26	-230.77	57.35	-82.87	206.43-2.188e+05-3.604e+05-3.172e+05-2.620e+05		
1.251e+05									
59 69	66	40.34	294.60	-271.36	280.88	-257.64	87.04-2.623e+05-4.837e+05-3.983e+05-3.478e+05		
1.078e+05									
5.334e+04	75	29.42	181.38	-208.91	139.26	-166.79	121.10-2.351e+05-3.424e+05-2.944e+05-2.831e+05		
6.520e+04	76	30.62	215.82	-214.97	90.25	-89.41	195.77-2.189e+05-3.605e+05-3.173e+05-2.620e+05		
1.250e+05									
60 1	67	46.34	388.81	-417.98	238.58	-267.75	314.06-2.521e+05-5.495e+05-4.814e+05-3.202e+05		
1.587e+05									
8.501e+04	76	40.36	274.82	-349.14	104.64	-178.96	277.89-2.896e+05-4.726e+05-4.149e+05-3.472e+05		
8.615e+04	77	38.26	318.35	-318.11	-45.84	46.09	314.89-2.347e+05-4.483e+05-4.046e+05-2.784e+05		
1.042e+05									
60 3	67	50.93	456.22	-388.50	273.87	-206.15	347.54-2.697e+05-6.056e+05-5.385e+05-3.368e+05		
1.343e+05									
7.193e+04	76	34.15	232.54	-295.43	88.54	-151.43	235.14-2.450e+05-3.999e+05-3.511e+05-2.938e+05		
7.290e+04	77	32.38	269.37	-269.17	-38.79	39.00	266.45-1.986e+05-3.793e+05-3.423e+05-2.356e+05		
8.818e+04	68	48.02	448.75	-568.64	-42.09	-77.80	508.38-2.351e+05-5.589e+05-5.328e+05-2.612e+05		
60 7	67	46.76	374.15	-405.02	143.86	-174.73	355.53-2.452e+05-5.512e+05-4.901e+05-3.062e+05		
1.223e+05									
6.545e+04	76	31.28	185.69	-312.74	-5.62	-121.43	242.40-2.226e+05-3.634e+05-3.189e+05-2.670e+05		
6.627e+04	77	29.67	233.94	-301.79	-128.09	60.24	250.77-1.805e+05-3.446e+05-3.109e+05-2.141e+05		
8.021e+04	68	44.13	376.95	-583.12	-156.26	-49.91	477.08-2.138e+05-5.087e+05-4.850e+05-2.375e+05		
60 39	67	46.48	397.49	-371.71	208.27	-182.50	331.27-2.452e+05-5.508e+05-4.898e+05-3.062e+05		
1.222e+05									
6.542e+04	76	31.14	199.81	-284.04	47.15	-131.38	224.85-2.227e+05-3.635e+05-3.191e+05-2.671e+05		
6.627e+04	77	29.53	239.24	-265.40	-71.21	45.05	245.53-1.805e+05-3.447e+05-3.111e+05-2.142e+05		
8.018e+04	68	43.84	394.75	-541.37	-83.95	-62.67	467.94-2.137e+05-5.083e+05-4.846e+05-2.375e+05		
60 69	67	46.30	414.74	-353.18	248.98	-187.41	315.94-2.452e+05-5.506e+05-4.896e+05-3.062e+05		
1.221e+05									
6.539e+04	76	31.05	211.40	-268.57	80.49	-137.66	213.76-2.228e+05-3.635e+05-3.192e+05-2.671e+05		
6.627e+04	77	29.43	244.88	-244.70	-35.26	35.45	242.22-1.806e+05-3.448e+05-3.112e+05-2.142e+05		
8.016e+04	68	43.65	407.95	-516.95	-38.26	-70.73	462.16-2.137e+05-5.081e+05-4.844e+05-2.375e+05		
61 1	68	55.92	614.60	-601.74	-85.86	98.72	601.13-2.659e+05-6.487e+05-6.210e+05-2.936e+05		
9.910e+04									
8.504e+04	77	38.38	267.20	-370.37	-62.61	-40.57	318.59-2.412e+05-4.481e+05-4.036e+05-2.858e+05		

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

7.883e+04	78	33.44	306.51	-330.91	-204.78	180.38	253.95-1.630e+05-3.846e+05-3.517e+05-1.959e+05
4.936e+04	69	42.47	413.96	-613.16	-444.08	244.88	380.90-1.879e+05-4.794e+05-4.708e+05-1.965e+05
61 3	68	47.32	520.05	-509.17	-72.65	83.53	508.65-2.250e+05-5.489e+05-5.255e+05-2.484e+05
8.386e+04	77	32.48	226.09	-313.39	-52.98	-34.32	269.58-2.041e+05-3.792e+05-3.415e+05-2.418e+05
7.196e+04	78	28.30	259.35	-280.00	-173.28	152.63	214.88-1.379e+05-3.254e+05-2.976e+05-1.658e+05
6.670e+04	69	35.94	350.28	-518.83	-375.76	207.20	322.30-1.590e+05-4.056e+05-3.984e+05-1.663e+05
4.177e+04	68	43.50	454.51	-537.55	-183.82	100.78	475.18-2.046e+05-4.996e+05-4.784e+05-2.258e+05
61 7	77	29.76	187.98	-338.12	-141.03	-9.11	254.64-1.854e+05-3.445e+05-3.102e+05-2.197e+05
7.626e+04	78	25.92	235.11	-312.78	-240.24	162.57	185.70-1.253e+05-2.956e+05-2.702e+05-1.507e+05
6.540e+04	69	33.06	313.08	-547.03	-443.90	209.96	279.40-1.446e+05-3.691e+05-3.626e+05-1.511e+05
6.058e+04	68	43.20	464.59	-490.69	-111.65	85.56	467.35-2.046e+05-4.992e+05-4.780e+05-2.258e+05
3.782e+04	77	29.62	197.28	-304.05	-84.12	-22.65	248.78-1.855e+05-3.446e+05-3.103e+05-2.198e+05
61 39	78	25.80	234.55	-276.12	-189.55	147.98	191.61-1.254e+05-2.957e+05-2.704e+05-1.507e+05
7.624e+04	69	32.82	315.55	-500.03	-381.21	196.73	287.73-1.445e+05-3.689e+05-3.623e+05-1.511e+05
6.541e+04	68	43.02	472.77	-462.88	-66.04	75.94	462.41-2.045e+05-4.990e+05-4.777e+05-2.258e+05
6.062e+04	77	29.53	205.54	-284.90	-48.16	-31.20	245.07-1.856e+05-3.447e+05-3.104e+05-2.198e+05
3.791e+04	78	25.73	235.78	-254.55	-157.53	138.75	195.34-1.254e+05-2.958e+05-2.705e+05-1.507e+05
61 69	69	32.67	318.43	-471.66	-341.60	188.37	293.00-1.445e+05-3.688e+05-3.621e+05-1.511e+05
7.623e+04	68	41.66	504.09	-584.17	-429.32	349.24	380.18-1.793e+05-4.683e+05-4.577e+05-1.899e+05
6.542e+04	78	33.26	240.96	-340.08	-216.83	117.71	237.53-1.659e+05-3.830e+05-3.497e+05-1.992e+05
6.064e+04	79	27.61	238.91	-291.09	-260.71	208.52	123.21-8.474e+04-3.057e+05-2.821e+05-1.084e+05
3.797e+04	70	30.06	330.14	-454.65	-448.57	324.06	68.79-7.473e+04-3.206e+05-3.121e+05-8.323e+04
62 1	69	35.25	426.54	-494.30	-363.27	295.51	321.69-1.517e+05-3.962e+05-3.873e+05-1.607e+05
5.434e+04	78	28.14	203.89	-287.76	-183.47	99.60	200.99-1.404e+05-3.240e+05-2.959e+05-1.685e+05
7.813e+04	79	23.37	202.15	-246.31	-220.60	176.44	104.25-7.170e+04-2.587e+05-2.387e+05-9.173e+04
6.834e+04	70	25.44	279.35	-384.70	-379.56	274.20	58.21-6.323e+04-2.713e+05-2.641e+05-7.043e+04
4.493e+04	69	32.42	387.87	-525.54	-431.10	293.44	278.10-1.380e+05-3.606e+05-3.525e+05-1.461e+05
62 3	78	25.77	181.39	-318.94	-248.78	111.22	173.73-1.276e+05-2.943e+05-2.688e+05-1.531e+05
4.598e+04	79	21.38	188.59	-274.38	-262.07	176.29	74.45-6.509e+04-2.349e+05-2.167e+05-8.330e+04
6.611e+04	70	23.35	265.21	-413.36	-412.52	264.37	23.76-5.753e+04-2.466e+05-2.401e+05-6.402e+04
5.783e+04	69	32.19	387.06	-478.12	-369.30	278.24	286.89-1.380e+05-3.604e+05-3.522e+05-1.461e+05
3.801e+04	78	25.66	182.80	-282.78	-198.54	98.55	179.24-1.276e+05-2.945e+05-2.689e+05-1.531e+05
62 7	79	21.29	185.00	-242.82	-224.37	166.55	86.91-6.515e+04-2.351e+05-2.169e+05-8.336e+04
4.167e+04	70	23.21	257.88	-373.93	-371.18	255.12	41.63-5.750e+04-2.466e+05-2.401e+05-6.402e+04
6.001e+04	69	32.04	387.76	-449.36	-330.25	268.65	292.45-1.379e+05-3.602e+05-3.521e+05-1.461e+05
5.254e+04	78	25.58	185.35	-261.60	-166.79	90.55	182.72-1.276e+05-2.946e+05-2.690e+05-1.532e+05
3.445e+04	79	21.24	183.77	-223.92	-200.54	160.40	94.77-6.518e+04-2.352e+05-2.170e+05-8.339e+04
62 39							
4.175e+04							
6.007e+04							
5.256e+04							
3.452e+04							
62 69							
4.180e+04							
6.010e+04							



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

5.257e+04									
3.456e+04	70	23.13	253.95	-349.73	-345.05	249.28	52.92-5.748e+04-2.466e+05-2.401e+05-6.403e+04		
63	1								
4.746e+04	70	30.20	341.24	-422.25	-411.26	330.25	90.95-6.966e+04-3.212e+05-3.119e+05-7.896e+04		
6.847e+04	79	27.57	211.78	-291.75	-265.74	185.77	111.45-8.461e+04-3.056e+05-2.819e+05-1.084e+05		
5.289e+04	80	23.20	176.14	-231.26	-230.45	175.32	18.23-1.769e+04-2.380e+05-2.245e+05-3.121e+04		
3.333e+04	71	24.42	251.67	-317.23	-312.45	246.89	-51.96 1.457e+04-2.295e+05-2.248e+05 9928.30		
63	3								
4.016e+04	70	25.55	288.75	-357.29	-347.99	279.44	76.96-5.895e+04-2.718e+05-2.640e+05-6.681e+04		
5.794e+04	79	23.33	179.20	-246.87	-224.86	157.19	94.30-7.159e+04-2.586e+05-2.385e+05-9.170e+04		
4.475e+04	80	19.63	149.04	-195.68	-194.99	148.35	15.43-1.497e+04-2.014e+05-1.899e+05-2.641e+04		
2.820e+04	71	20.66	212.95	-268.43	-264.38	208.90	-43.97 1.233e+04-1.942e+05-1.903e+05 8400.87		
63	7								
3.642e+04	70	23.45	271.83	-384.85	-382.08	269.06	42.51-5.364e+04-2.472e+05-2.400e+05-6.076e+04		
5.262e+04	79	21.34	167.68	-275.74	-265.72	157.66	65.91-6.498e+04-2.348e+05-2.165e+05-8.325e+04		
4.073e+04	80	17.93	143.94	-218.42	-218.19	143.71	-9.09-1.344e+04-1.828e+05-1.723e+05-2.388e+04		
2.564e+04	71	18.91	208.34	-289.06	-279.67	198.95	-67.69 1.123e+04-1.764e+05-1.728e+05 7662.78		
63	39								
3.648e+04	70	23.32	265.65	-347.60	-341.81	259.86	59.34-5.361e+04-2.471e+05-2.400e+05-6.075e+04		
5.265e+04	79	21.26	164.14	-243.69	-228.15	148.61	78.06-6.504e+04-2.350e+05-2.167e+05-8.332e+04		
4.070e+04	80	17.88	138.37	-193.19	-193.11	138.29	5.07-1.354e+04-1.830e+05-1.725e+05-2.396e+04		
2.564e+04	71	18.83	199.07	-261.22	-255.57	193.41	-50.70 1.122e+04-1.765e+05-1.729e+05 7647.07		
63	69								
3.651e+04	70	23.23	262.50	-324.81	-316.35	254.04	69.96-5.359e+04-2.471e+05-2.400e+05-6.074e+04		
5.267e+04	79	21.21	162.91	-224.43	-204.42	142.90	85.73-6.508e+04-2.351e+05-2.168e+05-8.337e+04		
4.068e+04	80	17.85	135.49	-177.90	-177.27	134.86	14.02-1.361e+04-1.831e+05-1.727e+05-2.401e+04		
2.564e+04	71	18.79	193.59	-244.03	-240.34	189.91	-39.97 1.121e+04-1.765e+05-1.730e+05 7637.15		
64	1								
3.268e+04	71	24.53	243.23	-306.46	-303.17	239.94	-42.38 1.449e+04-2.310e+05-2.266e+05 1.006e+04		
5.267e+04	80	23.26	171.85	-233.32	-232.50	171.03	18.27-1.744e+04-2.385e+05-2.252e+05-3.080e+04		
3.216e+04	81	20.35	135.73	-185.04	-181.07	131.77	-35.44 2.828e+04-1.866e+05-1.817e+05 2.335e+04		
1.022e+04	72	21.47	186.03	-231.04	-209.94	164.94	-91.40 6.119e+04-1.734e+05-1.730e+05 6.075e+04		
64	3								
2.765e+04	71	20.76	205.81	-259.31	-256.53	203.03	-35.86 1.226e+04-1.955e+05-1.917e+05 8508.82		
4.457e+04	80	19.69	145.42	-197.43	-196.73	144.72	15.46-1.476e+04-2.018e+05-1.905e+05-2.606e+04		
2.721e+04	81	17.22	114.85	-156.57	-153.21	111.50	-29.99 2.393e+04-1.579e+05-1.537e+05 1.976e+04		
8650.56	72	18.16	157.41	-195.50	-177.65	139.56	-77.34 5.178e+04-1.467e+05-1.463e+05 5.140e+04		
64	23								
2.513e+04	71	19.03	224.08	-242.05	-241.97	224.01	-5.87 1.102e+04-1.777e+05-1.743e+05 7613.30		
4.040e+04	80	18.01	159.66	-189.84	-185.78	155.60	37.43-1.370e+04-1.835e+05-1.732e+05-2.393e+04		
2.458e+04	81	15.76	128.70	-144.79	-144.68	128.59	-5.42 2.124e+04-1.437e+05-1.399e+05 1.749e+04		
7821.03	72	16.66	174.54	-176.94	-170.35	167.95	-47.68 4.673e+04-1.335e+05-1.332e+05 4.639e+04		
64	55								
2.513e+04	71	18.93	200.97	-237.73	-236.60	199.84	-22.25 1.110e+04-1.777e+05-1.743e+05 7688.06		
4.047e+04	80	17.94	142.52	-183.18	-181.53	140.87	23.11-1.353e+04-1.835e+05-1.732e+05-2.378e+04		
2.468e+04	81	15.69	113.29	-142.76	-141.37	111.90	-18.80 2.155e+04-1.436e+05-1.398e+05 1.778e+04		



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

7847.45	72	16.57	154.63	-176.78	-164.93	142.78	-61.54	4.694e+04	-1.334e+05	-1.331e+05	4.660e+04
64 69 2.514e+04	71	18.87	187.10	-235.74	-233.21	184.57	-32.60	1.114e+04	-1.777e+05	-1.743e+05	7735.29
4.051e+04	80	17.90	132.20	-179.48	-178.84	131.56	14.05	-1.342e+04	-1.835e+05	-1.732e+05	-2.369e+04
2.474e+04	81	15.65	104.41	-142.34	-139.29	101.36	-27.26	2.175e+04	-1.436e+05	-1.398e+05	1.796e+04
7864.14	72	16.51	143.10	-177.72	-161.50	126.87	-70.31	4.707e+04	-1.334e+05	-1.330e+05	4.673e+04
65 1 9.426e+04	77	38.09	300.25	-344.35	-1.10e-03	-44.10	321.54	-2.346e+05	-4.454e+05	-3.872e+05	-2.928e+05
7.885e+04	82	27.18	139.49	-180.65	-11.66	-29.51	159.82	-1.596e+05	-3.192e+05	-2.269e+05	-2.519e+05
9.296e+04	83	24.96	136.35	-176.53	-89.25	49.06	140.33	-9.799e+04	-2.866e+05	-2.080e+05	-1.765e+05
9.044e+04	78	33.19	262.02	-334.47	-168.01	95.56	267.55	-1.655e+05	-3.822e+05	-3.336e+05	-2.141e+05
65 3 7.976e+04	77	32.23	254.06	-291.37	-9.31e-04	-37.31	272.07	-1.985e+05	-3.769e+05	-3.277e+05	-2.477e+05
6.672e+04	82	23.00	118.03	-152.86	-9.86	-24.97	135.23	-1.350e+05	-2.701e+05	-1.920e+05	-2.132e+05
7.865e+04	83	21.12	115.37	-149.38	-75.52	41.52	118.74	-8.292e+04	-2.425e+05	-1.760e+05	-1.494e+05
7.653e+04	78	28.08	221.71	-283.01	-142.16	80.86	226.39	-1.400e+05	-3.234e+05	-2.822e+05	-1.812e+05
65 7 7.254e+04	77	29.55	218.14	-318.85	-88.92	-11.79	265.71	-1.804e+05	-3.426e+05	-2.977e+05	-2.253e+05
6.024e+04	82	20.91	102.63	-185.33	-78.68	-4.03	139.06	-1.220e+05	-2.442e+05	-1.728e+05	-1.933e+05
7.121e+04	83	19.22	108.70	-179.15	-129.29	58.83	108.94	-7.518e+04	-2.195e+05	-1.591e+05	-1.356e+05
6.945e+04	78	25.72	199.00	-315.42	-212.08	95.66	206.11	-1.271e+05	-2.936e+05	-2.563e+05	-1.645e+05
65 39 7.252e+04	77	29.40	224.60	-284.38	-34.43	-25.35	254.45	-1.804e+05	-3.426e+05	-2.978e+05	-2.253e+05
6.049e+04	82	20.91	103.87	-155.30	-35.96	-15.47	129.18	-1.224e+05	-2.450e+05	-1.739e+05	-1.936e+05
7.139e+04	83	19.21	105.34	-151.56	-92.13	45.91	108.33	-7.530e+04	-2.201e+05	-1.597e+05	-1.357e+05
6.952e+04	78	25.60	199.58	-278.81	-161.32	82.09	205.92	-1.272e+05	-2.939e+05	-2.565e+05	-1.646e+05
65 69 7.251e+04	77	29.30	230.96	-264.88	-8.46e-04	-33.92	247.34	-1.804e+05	-3.426e+05	-2.979e+05	-2.252e+05
6.065e+04	82	20.91	107.30	-138.96	-8.97	-22.70	122.94	-1.227e+05	-2.456e+05	-1.745e+05	-1.938e+05
7.150e+04	83	19.20	104.88	-135.80	-68.65	37.74	107.94	-7.538e+04	-2.204e+05	-1.600e+05	-1.358e+05
6.957e+04	78	25.53	201.56	-257.29	-129.24	73.51	205.81	-1.273e+05	-2.940e+05	-2.566e+05	-1.647e+05
66 1 6.025e+04	82	24.03	145.27	-197.14	-6.52	-45.34	170.10	-1.560e+05	-2.813e+05	-2.358e+05	-2.015e+05
1.351e+05	84	32.03	81.96	-74.02	-9.16	17.09	76.88	-6.890e+04	-3.591e+05	-1.611e+05	-2.669e+05
6.054e+04	85	16.82	87.89	-123.49	-68.17	32.56	92.91	-5.774e+04	-1.930e+05	-9.526e+04	-1.554e+05
1.138e+05	83	28.35	135.37	-165.15	-86.35	56.57	132.18	-9.439e+04	-3.233e+05	-2.206e+05	-1.970e+05
66 3 5.098e+04	82	20.34	122.92	-166.81	-5.52	-38.36	143.93	-1.320e+05	-2.380e+05	-1.995e+05	-1.705e+05
1.143e+05	84	27.11	69.35	-62.63	-7.75	14.46	65.05	-5.830e+04	-3.039e+05	-1.363e+05	-2.258e+05
5.123e+04	85	14.23	74.37	-104.49	-57.68	27.55	78.62	-4.886e+04	-1.633e+05	-8.060e+04	-1.315e+05
9.631e+04	83	23.99	114.55	-139.74	-73.06	47.87	111.84	-7.987e+04	-2.735e+05	-1.867e+05	-1.667e+05
66 22 4.552e+04	82	18.28	98.27	-139.34	13.48	-54.55	113.83	-1.189e+05	-2.148e+05	-1.820e+05	-1.517e+05
1.087e+05	84	25.34	53.78	0.50	11.44	42.84	21.52	-5.210e+04	-2.861e+05	-1.258e+05	-2.124e+05
4.562e+04	85	12.82	59.24	-90.43	-53.77	22.58	64.36	-4.447e+04	-1.475e+05	-7.205e+04	-1.199e+05
	83	21.93	85.22	-92.93	-51.76	44.06	75.10	-7.232e+04	-2.516e+05	-1.709e+05	-1.530e+05

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

8.918e+04 66 54	82	18.41	106.07	-146.42	2.14	-42.50	124.26-1.196e+05-2.158e+05-1.816e+05-1.537e+05
4.602e+04	84	24.91	58.61	-33.85	0.11	24.65	44.57-5.265e+04-2.801e+05-1.247e+05-2.080e+05
1.058e+05	85	12.89	64.35	-93.21	-52.95	24.09	68.72-4.444e+04-1.481e+05-7.280e+04-1.197e+05
4.620e+04	83	21.86	96.75	-113.77	-60.74	43.73	91.38-7.250e+04-2.498e+05-1.702e+05-1.521e+05
8.818e+04 66 69	82	18.49	111.75	-151.64	-5.02	-34.88	130.85-1.200e+05-2.164e+05-1.814e+05-1.550e+05
4.634e+04	84	24.64	63.04	-56.94	-7.04	13.15	59.14-5.300e+04-2.762e+05-1.239e+05-2.053e+05
1.039e+05	85	12.94	67.60	-94.99	-52.44	25.05	71.47-4.441e+04-1.484e+05-7.328e+04-1.196e+05
4.657e+04	83	21.81	104.13	-127.04	-66.42	43.52	101.68-7.261e+04-2.487e+05-1.697e+05-1.515e+05
8.755e+04 67 1	84	22.30	123.29	-117.23	-11.57	17.63	119.37-6.189e+04-2.550e+05-7.001e+04-2.469e+05
3.877e+04	86	14.13	41.17	-86.32	-13.14	-32.01	63.04-4.601e+04-1.608e+05-7.651e+04-1.303e+05
5.070e+04	87	14.69	65.55	-77.65	-38.41	26.31	63.87-3.842e+04-1.657e+05-8.132e+04-1.228e+05
6.015e+04	85	20.03	78.33	-108.09	-61.80	32.04	80.54-6.963e+04-2.301e+05-1.436e+05-1.561e+05
7.997e+04 67 3	84	18.87	104.33	-99.20	-9.79	14.92	101.01-5.237e+04-2.158e+05-5.924e+04-2.089e+05
3.280e+04	86	11.95	34.84	-73.04	-11.12	-27.08	53.35-3.893e+04-1.361e+05-6.474e+04-1.103e+05
4.290e+04	87	12.43	55.47	-65.70	-32.50	22.27	54.04-3.251e+04-1.402e+05-6.881e+04-1.039e+05
5.089e+04	85	16.95	66.28	-91.46	-52.29	27.11	68.15-5.892e+04-1.947e+05-1.215e+05-1.321e+05
6.767e+04 67 6	84	17.58	77.76	-65.56	6.94	5.27	71.66-4.197e+04-1.990e+05-4.876e+04-1.922e+05
3.194e+04	86	10.86	43.13	-64.04	21.45	-42.36	43.06-3.614e+04-1.236e+05-5.938e+04-1.004e+05
3.865e+04	87	11.41	47.04	-46.59	-0.58	1.03	46.81-2.913e+04-1.283e+05-6.290e+04-9.448e+04
4.698e+04	85	15.45	73.41	-58.19	9.36	5.86	65.77-5.615e+04-1.784e+05-1.141e+05-1.204e+05
6.102e+04 67 38	84	17.32	88.06	-80.48	-2.77	10.35	84.02-4.543e+04-1.972e+05-5.189e+04-1.908e+05
3.064e+04	86	10.86	34.65	-64.03	2.11	-31.49	46.39-3.568e+04-1.237e+05-5.906e+04-1.003e+05
3.886e+04	87	11.34	47.92	-53.44	-18.33	12.80	48.23-2.939e+04-1.277e+05-6.269e+04-9.445e+04
4.654e+04	85	15.42	62.89	-71.02	-25.51	17.37	63.43-5.457e+04-1.775e+05-1.119e+05-1.202e+05
6.132e+04 67 69	84	17.15	94.84	-90.18	-8.90	13.56	91.83-4.761e+04-1.962e+05-5.386e+04-1.899e+05
2.982e+04	86	10.87	31.67	-66.40	-10.11	-24.62	48.50-3.539e+04-1.237e+05-5.885e+04-1.002e+05
3.900e+04	87	11.30	50.42	-59.73	-29.55	20.24	49.13-2.956e+04-1.274e+05-6.255e+04-9.443e+04
4.627e+04	85	15.41	60.25	-83.14	-47.54	24.64	61.95-5.356e+04-1.770e+05-1.104e+05-1.201e+05
6.151e+04 68 1	86	15.50	56.52	-76.71	-10.79	-9.41	66.61-5.102e+04-1.781e+05-6.813e+04-1.610e+05
4.338e+04	88	12.56	34.63	-57.48	-10.46	-12.39	46.05-2.878e+04-1.408e+05-4.283e+04-1.267e+05
3.709e+04	89	12.58	37.01	-51.24	-29.71	15.48	37.90-1.240e+04-1.350e+05-4.980e+04-9.763e+04
5.646e+04	87	15.09	52.01	-70.61	-37.57	18.97	54.41-3.269e+04-1.681e+05-8.296e+04-1.179e+05
6.543e+04 68 3	86	13.11	47.82	-64.91	-9.13	-7.96	56.36-4.317e+04-1.507e+05-5.765e+04-1.362e+05
3.670e+04	88	10.63	29.31	-48.64	-8.85	-10.48	38.96-2.436e+04-1.191e+05-3.624e+04-1.072e+05
3.138e+04	89	10.64	31.32	-43.35	-25.14	13.10	32.07-1.049e+04-1.143e+05-4.214e+04-8.261e+04
4.778e+04	87	12.77	44.01	-59.75	-31.79	16.05	46.04-2.766e+04-1.423e+05-7.019e+04-9.973e+04
5.536e+04							

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

68	5	86	12.02	49.62	-55.39	19.59	-25.36	47.45-3.895e+04-1.374e+05-5.214e+04-1.242e+05
3.353e+04		88	9.75	35.46	-44.43	17.84	-26.82	33.12-2.309e+04-1.089e+05-3.392e+04-9.804e+04
2.850e+04		89	9.77	32.79	-36.37	2.29	-5.87	34.33-1.031e+04-1.045e+05-3.922e+04-7.558e+04
4.344e+04		87	11.71	48.27	-46.67	5.03	-3.43	47.28-2.553e+04-1.301e+05-6.452e+04-9.108e+04
5.056e+04		86	11.96	44.60	-56.35	2.50	-14.25	49.77-3.913e+04-1.371e+05-5.231e+04-1.240e+05
68 37		88	9.70	28.59	-42.83	1.98	-16.22	34.53-2.251e+04-1.085e+05-3.332e+04-9.771e+04
3.343e+04		89	9.71	28.41	-36.50	-13.11	5.02	31.16 -9835.36-1.041e+05-3.866e+04-7.529e+04
2.852e+04		87	11.65	41.41	-49.55	-15.76	7.62	43.95-2.529e+04-1.296e+05-6.409e+04-9.083e+04
4.344e+04		86	11.92	43.47	-59.01	-8.30	-7.24	51.24-3.925e+04-1.370e+05-5.241e+04-1.238e+05
5.042e+04		88	9.66	26.64	-44.22	-8.05	-9.53	35.42-2.214e+04-1.083e+05-3.295e+04-9.749e+04
68 69		89	9.68	28.47	-39.41	-22.85	11.91	29.15 -9538.16-1.039e+05-3.831e+04-7.510e+04
3.337e+04		87	11.61	40.01	-54.32	-28.90	14.59	41.85-2.515e+04-1.293e+05-6.381e+04-9.067e+04
2.853e+04		88	12.50	34.46	-52.20	-8.78	-8.96	43.33-2.905e+04-1.404e+05-4.217e+04-1.273e+05
4.343e+04		90	10.78	24.04	-39.72	-7.21	-8.47	31.88-1.124e+04-1.160e+05-2.351e+04-1.038e+05
5.033e+04		91	11.09	23.46	-33.32	-21.03	11.17	23.39 7482.63-1.107e+05-2.224e+04-8.101e+04
69 1		89	12.63	33.43	-44.25	-25.21	14.39	33.41-1.244e+04-1.358e+05-5.048e+04-9.781e+04
3.591e+04		88	10.58	29.16	-44.17	-7.43	-7.58	36.67-2.458e+04-1.188e+05-3.568e+04-1.077e+05
3.369e+04		90	9.12	20.34	-33.61	-6.10	-7.17	26.97 -9512.97-9.818e+04-1.989e+04-8.780e+04
5.129e+04		91	9.39	19.85	-28.19	-17.79	9.45	19.79 6331.46-9.370e+04-1.882e+04-6.855e+04
5.698e+04		89	10.69	28.29	-37.44	-21.33	12.18	28.27-1.053e+04-1.149e+05-4.271e+04-8.276e+04
69 3		88	9.70	33.84	-40.73	17.78	-24.67	30.65-2.318e+04-1.086e+05-3.330e+04-9.843e+04
3.038e+04		90	8.37	26.13	-34.30	18.24	-26.41	20.36-1.021e+04-8.999e+04-1.999e+04-8.022e+04
2.851e+04		91	8.64	19.34	-25.88	0.50	-7.03	22.29 4912.18-8.598e+04-1.794e+04-6.312e+04
4.340e+04		89	9.81	31.23	-32.00	5.60	-6.38	31.04-1.042e+04-1.052e+05-3.983e+04-7.579e+04
4.821e+04		88	9.65	27.82	-38.85	2.75	-13.78	32.29-2.267e+04-1.082e+05-3.277e+04-9.813e+04
69 5		90	8.32	19.32	-29.87	3.66	-14.22	22.91 -9255.73-8.954e+04-1.882e+04-7.997e+04
2.760e+04		91	8.57	17.00	-24.18	-9.72	2.54	19.66 5429.19-8.549e+04-1.743e+04-6.263e+04
2.615e+04		89	9.76	25.94	-31.34	-9.72	4.31	27.77 -9901.43-1.048e+05-3.922e+04-7.545e+04
3.943e+04		88	9.61	26.51	-40.16	-6.75	-6.89	33.33-2.235e+04-1.080e+05-3.244e+04-9.793e+04
4.384e+04		90	8.29	18.50	-30.56	-5.55	-6.51	24.52 -8648.15-8.925e+04-1.809e+04-7.982e+04
69 37		91	8.53	18.05	-25.63	-16.18	8.59	17.99 5755.87-8.518e+04-1.711e+04-6.232e+04
2.761e+04		89	9.72	25.71	-34.04	-19.39	11.07	25.70 -9572.38-1.045e+05-3.883e+04-7.524e+04
2.601e+04		90	8.55	21.33	-34.64	-7.14	-6.17	27.98-1.427e+04-9.400e+04-2.641e+04-8.186e+04
3.944e+04		92	16.19	16.54	-27.43	-2.25	-8.64	21.75 2.212e+04-1.552e+05 -9641.49-1.234e+05
4.384e+04		93	7.50	15.41	-20.87	-15.96	10.50	12.41 1.668e+04-6.811e+04 1.138e+04-6.281e+04
69 69		91	12.74	22.24	-25.58	-14.64	11.29	20.09 8144.40-1.278e+05-2.479e+04-9.484e+04
2.762e+04		90	7.23	18.05	-29.31	-6.04	-5.22	23.67-1.208e+04-7.954e+04-2.235e+04-6.927e+04
2.592e+04								
3.945e+04								
4.383e+04								
70 1								
2.864e+04								
6.798e+04								
2.052e+04								
5.824e+04								
70 3								



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

2585.54	96	5.54	4.65	-6.68	0.20	-2.23	5.53	-619.15-5.791e+04	-736.09-5.779e+04	-
7355.30	97	5.37	12.43	-3.19	-3.08	12.32	-1.26	900.97-5.492e+04	-85.64-5.393e+04	-
2.506e+04	95	6.86	10.45	0.02	0.02	10.45	-4.94e-03	7536.51-6.702e+04	-2144.69-5.734e+04	-
1.040e+04	72 3 94	6.32	4.67	-10.84	-3.70	-2.47	7.73	1.161e+04-5.908e+04	1.005e+04-5.751e+04	-
2187.77	96	4.68	3.93	-5.65	0.17	-1.89	4.68	-523.90-4.900e+04	-622.84-4.890e+04	-
6223.71	97	4.55	10.51	-2.70	-2.61	10.43	-1.06	762.36-4.647e+04	-72.47-4.564e+04	-
2.121e+04	95	5.80	8.84	0.02	0.02	8.84	-4.18e-03	6377.05-5.671e+04	-1814.74-4.852e+04	-
9152.79	72 7 94	5.67	20.93	-9.27	-3.21	14.87	12.10	9949.34-5.303e+04	8589.83-5.167e+04	-
1981.33	96	4.28	18.14	-2.82	-0.29	15.60	6.84	-412.20-4.408e+04	-502.30-4.399e+04	-
5576.53	97	4.20	30.42	-2.69	-2.37	30.10	-3.24	617.34-4.208e+04	-123.89-4.134e+04	-
1.915e+04	95	5.35	28.12	-5.00	-4.72	27.83	-3.07	6113.02-5.129e+04	-1207.48-4.397e+04	-
9339.53	72 39 94	5.70	10.32	-9.24	-3.30	4.38	8.99	1.032e+04-5.345e+04	8923.04-5.205e+04	-
1985.96	96	4.26	8.31	-3.33	-0.02	4.99	5.26	-451.47-4.436e+04	-541.47-4.427e+04	-
5626.41	97	4.16	17.64	-2.54	-2.37	17.47	-1.85	663.72-4.218e+04	-88.34-4.143e+04	-
1.923e+04	95	5.30	15.78	-1.90	-1.81	15.70	-1.19	5919.39-5.145e+04	-1478.51-4.406e+04	-
9457.53	72 69 94	5.74	4.25	-9.86	-3.36	-2.25	7.03	1.056e+04-5.371e+04	9133.59-5.228e+04	-
1988.88	96	4.26	3.58	-5.14	0.15	-1.72	4.26	-476.27-4.454e+04	-566.22-4.445e+04	-
5657.92	97	4.13	9.56	-2.45	-2.37	9.48	-0.97	693.06-4.225e+04	-65.88-4.149e+04	-
1.928e+04	95	5.28	8.04	0.02	0.02	8.04	-3.80e-03	5797.31-5.155e+04	-1649.76-4.411e+04	-
1.047e+05	73 1 78	32.76	268.41	-333.19	-67.65	2.87	298.73	-1.615e+05-3.768e+05	-2.939e+05-2.443e+05	-
9.438e+04	83	25.51	128.01	-176.86	-39.13	-9.72	151.72	-9.884e+04-2.928e+05	-1.735e+05-2.182e+05	-
9.636e+04	98	21.77	119.35	-163.12	-97.97	54.19	118.99	-4.508e+04-2.383e+05	-1.487e+05-1.347e+05	-
1.039e+05	79	27.37	215.53	-282.64	-174.35	107.24	205.48	-8.215e+04-3.032e+05	-2.302e+05-1.552e+05	-
8.863e+04	73 3 78	27.72	227.12	-281.93	-57.24	2.43	252.77	-1.366e+05-3.188e+05	-2.487e+05-2.067e+05	-
7.986e+04	83	21.58	108.31	-149.65	-33.11	-8.22	128.38	-8.363e+04-2.478e+05	-1.468e+05-1.846e+05	-
8.154e+04	98	18.42	100.99	-138.03	-82.89	45.85	100.69	-3.814e+04-2.016e+05	-1.258e+05-1.139e+05	-
8.796e+04	79	23.16	182.37	-239.16	-147.53	90.74	173.87	-6.951e+04-2.565e+05	-1.947e+05-1.313e+05	-
8.050e+04	73 7 78	25.39	205.46	-313.31	-130.48	22.63	247.83	-1.242e+05-2.896e+05	-2.259e+05-1.879e+05	-
7.208e+04	83	19.61	100.95	-182.12	-87.79	6.62	133.43	-7.571e+04-2.240e+05	-1.326e+05-1.671e+05	-
7.408e+04	98	16.78	97.31	-161.10	-122.41	58.62	92.19	-3.434e+04-1.829e+05	-1.139e+05-1.033e+05	-
7.980e+04	79	21.17	171.87	-269.14	-199.70	102.42	160.63	-6.307e+04-2.328e+05	-1.767e+05-1.191e+05	-
8.054e+04	73 39 78	25.27	205.11	-277.40	-82.41	10.12	236.78	-1.242e+05-2.897e+05	-2.260e+05-1.879e+05	-
7.240e+04	83	19.62	98.51	-152.97	-52.44	-2.02	123.18	-7.591e+04-2.248e+05	-1.331e+05-1.676e+05	-
7.411e+04	98	16.76	93.32	-138.66	-93.58	48.24	91.79	-3.454e+04-1.831e+05	-1.142e+05-1.035e+05	-
7.990e+04	79	21.10	167.56	-236.86	-159.51	90.21	159.06	-6.315e+04-2.330e+05	-1.769e+05-1.193e+05	-
8.057e+04	73 69 78	25.20	206.47	-256.30	-52.04	2.21	229.79	-1.242e+05-2.898e+05	-2.261e+05-1.879e+05	-
	83	19.62	98.47	-136.04	-30.10	-7.47	116.71	-7.603e+04-2.253e+05	-1.334e+05-1.679e+05	-

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

7.260e+04									
7.412e+04	98	16.75	91.81	-125.48	-75.36	41.69	91.53-3.467e+04-1.833e+05-1.144e+05-1.036e+05		
7.996e+04	79	21.05	165.79	-217.42	-134.12	82.49	158.06-6.319e+04-2.332e+05-1.770e+05-1.194e+05		
74 1	83	25.01	136.02	-178.54	-40.36	-2.16	156.11-9.823e+04-2.872e+05-1.685e+05-2.169e+05		
9.135e+04	85	19.97	84.16	-115.25	-28.90	-2.20	98.81-6.063e+04-2.269e+05-1.009e+05-1.867e+05		
7.122e+04	99	17.36	75.53	-108.38	-65.61	32.76	77.69-2.041e+04-1.854e+05-9.555e+04-1.103e+05		
8.218e+04	98	21.95	119.19	-161.09	-98.59	56.69	116.67-4.645e+04-2.408e+05-1.522e+05-1.350e+05		
9.678e+04	83	21.16	115.09	-151.07	-34.15	-1.83	132.10-8.312e+04-2.430e+05-1.426e+05-1.836e+05		
74 3	85	16.90	71.21	-97.52	-24.45	-1.86	83.61-5.131e+04-1.920e+05-8.537e+04-1.579e+05		
7.730e+04	99	14.69	63.91	-91.71	-55.52	27.72	65.74-1.727e+04-1.569e+05-8.085e+04-9.332e+04		
6.027e+04	98	18.57	100.85	-136.31	-83.42	47.97	98.72-3.930e+04-2.037e+05-1.288e+05-1.143e+05		
6.954e+04	83	19.27	130.95	-142.95	3.38	-15.38	136.63-7.600e+04-2.207e+05-1.300e+05-1.667e+05		
8.189e+04	85	15.40	78.33	-93.03	4.59	-19.29	84.85-4.679e+04-1.741e+05-7.819e+04-1.427e+05		
74 21	99	13.43	75.13	-82.20	-23.95	16.89	75.97-1.633e+04-1.429e+05-7.398e+04-8.524e+04		
6.998e+04	98	16.96	116.21	-122.02	-41.03	35.23	112.85-3.617e+04-1.853e+05-1.175e+05-1.040e+05		
5.489e+04	83	19.25	114.26	-138.95	-17.72	-6.97	126.49-7.573e+04-2.208e+05-1.298e+05-1.668e+05		
6.303e+04	85	15.37	69.27	-89.62	-11.84	-8.51	79.43-4.670e+04-1.744e+05-7.783e+04-1.432e+05		
7.428e+04	99	13.38	63.88	-82.10	-40.20	21.98	66.04-1.594e+04-1.427e+05-7.369e+04-8.499e+04		
74 53	98	16.92	100.26	-122.25	-62.36	40.36	98.69-3.590e+04-1.853e+05-1.172e+05-1.039e+05		
7.016e+04	83	19.24	104.63	-137.34	-31.05	-1.66	120.09-7.556e+04-2.209e+05-1.296e+05-1.669e+05		
5.483e+04	85	15.36	64.74	-88.65	-22.23	-1.69	76.01-4.664e+04-1.745e+05-7.761e+04-1.436e+05		
6.314e+04	99	13.35	58.10	-83.37	-50.47	25.20	59.76-1.570e+04-1.426e+05-7.350e+04-8.484e+04		
7.438e+04	98	16.89	91.69	-123.91	-75.84	43.61	89.75-3.573e+04-1.852e+05-1.171e+05-1.039e+05		
74 69	85	19.28	87.55	-113.67	-26.73	0.60	99.68-6.003e+04-2.195e+05-9.602e+04-1.835e+05		
7.027e+04	87	14.91	54.56	-83.24	-20.74	-7.94	68.60-3.494e+04-1.666e+05-6.037e+04-1.412e+05		
5.479e+04	100	14.27	53.28	-75.03	-45.57	23.83	53.96 -5374.57-1.481e+05-6.343e+04-9.009e+04		
6.321e+04	99	17.44	73.70	-104.14	-63.72	33.28	74.53-2.206e+04-1.871e+05-9.925e+04-1.099e+05		
7.445e+04	85	16.31	74.08	-96.18	-22.62	0.51	84.34-5.080e+04-1.857e+05-8.125e+04-1.553e+05		
75 1	87	12.62	46.17	-70.43	-17.55	-6.72	58.05-2.957e+04-1.410e+05-5.108e+04-1.195e+05		
6.666e+04	100	12.08	45.09	-63.49	-38.56	20.16	45.66 -4547.71-1.254e+05-5.367e+04-7.623e+04		
5.197e+04	99	14.76	62.36	-88.12	-53.92	28.16	63.06-1.866e+04-1.583e+05-8.398e+04-9.301e+04		
7.013e+04	85	14.88	76.78	-90.08	2.65	-15.95	82.91-4.578e+04-1.686e+05-7.393e+04-1.404e+05		
8.236e+04	87	11.53	51.37	-65.80	2.79	-17.22	57.72-2.721e+04-1.283e+05-4.690e+04-1.086e+05		
75 3	100	11.05	50.42	-57.00	-15.44	8.86	52.32 -4694.89-1.143e+05-4.929e+04-6.969e+04		
5.641e+04	99	13.49	73.17	-77.82	-21.78	17.14	72.94-1.768e+04-1.443e+05-7.701e+04-8.495e+04		
4.398e+04	85	14.85	70.41	-87.87	-11.57	-5.89	79.09-4.603e+04-1.687e+05-7.389e+04-1.409e+05		
5.934e+04	87	11.50	45.14	-64.25	-8.70	-10.41	54.69-2.701e+04-1.282e+05-4.662e+04-1.086e+05		
6.969e+04									
75 21									
5.161e+04									
4.004e+04									
5.384e+04									
6.318e+04									
75 53									
5.141e+04									
4.000e+04									



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

5.391e+04	100	11.01	43.92	-56.71	-27.46	14.66	45.70	-4351.35-1.141e+05-4.899e+04-6.945e+04
6.328e+04	99	13.45	62.21	-78.36	-38.47	22.33	63.37-1.724e+04-1.441e+05-7.660e+04-8.471e+04	
5.128e+04	75 69 85	14.83	67.34	-87.44	-20.56	0.46	76.67-4.618e+04-1.688e+05-7.386e+04-1.412e+05	
3.998e+04	87	11.47	41.97	-64.03	-15.95	-6.11	52.77-2.688e+04-1.282e+05-4.644e+04-1.086e+05	
5.395e+04	100	10.98	40.99	-57.71	-35.05	18.33	41.51 -4134.28-1.140e+05-4.879e+04-6.930e+04	
6.335e+04	99	13.42	56.69	-80.11	-49.02	25.60	57.33-1.697e+04-1.439e+05-7.635e+04-8.455e+04	
5.331e+04	76 1 87	15.03	55.11	-77.25	-17.82	-4.32	65.83-3.468e+04-1.679e+05-6.136e+04-1.412e+05	
4.458e+04	89	12.59	34.66	-57.17	-15.44	-7.08	45.73-1.157e+04-1.344e+05-3.074e+04-1.152e+05	
5.977e+04	101	11.84	37.07	-51.85	-33.88	19.11	35.70 5212.96-1.188e+05-4.034e+04-7.321e+04	
6.976e+04	100	14.21	49.91	-69.87	-43.76	23.80	49.45 -5675.06-1.479e+05-6.298e+04-9.060e+04	
4.511e+04	76 3 87	12.71	46.63	-65.36	-15.08	-3.65	55.71-2.935e+04-1.421e+05-5.192e+04-1.195e+05	
3.772e+04	89	10.65	29.33	-48.38	-13.06	-5.99	38.69 -9790.04-1.137e+05-2.601e+04-9.751e+04	
5.057e+04	101	10.02	31.37	-43.87	-28.67	16.17	30.21 4410.96-1.005e+05-3.413e+04-6.195e+04	
5.903e+04	100	12.02	42.23	-59.12	-37.03	20.14	41.84 -4801.98-1.251e+05-5.329e+04-7.666e+04	
4.131e+04	76 5 87	11.64	48.69	-51.92	20.32	-23.55	45.27-2.701e+04-1.297e+05-4.784e+04-1.089e+05	
3.428e+04	89	9.77	33.19	-41.96	14.34	-23.11	32.58 -9820.03-1.040e+05-2.462e+04-8.925e+04	
4.589e+04	101	9.19	32.34	-35.72	1.25	-4.63	33.90 2982.06-9.202e+04-3.226e+04-5.678e+04	
5.353e+04	100	10.99	45.86	-46.33	0.74	-1.21	46.09 -5239.67-1.143e+05-4.944e+04-7.007e+04	
4.112e+04	76 37 87	11.59	43.01	-54.69	-0.53	-11.16	48.56-2.681e+04-1.294e+05-4.745e+04-1.087e+05	
3.429e+04	89	9.72	27.57	-41.58	-1.72	-12.29	34.17 -9256.30-1.036e+05-2.402e+04-8.888e+04	
4.594e+04	101	9.14	27.90	-36.17	-15.49	7.21	29.96 3611.65-9.161e+04-3.151e+04-5.650e+04	
5.361e+04	100	10.95	39.20	-48.79	-20.34	10.75	41.16 -4704.10-1.140e+05-4.883e+04-6.984e+04	
4.101e+04	76 69 87	11.56	42.39	-59.42	-13.71	-3.32	50.64-2.668e+04-1.292e+05-4.720e+04-1.086e+05	
3.429e+04	89	9.68	26.66	-43.98	-11.87	-5.44	35.17 -8900.04-1.034e+05-2.365e+04-8.865e+04	
4.597e+04	101	9.11	28.52	-39.88	-26.06	14.70	27.46 4009.97-9.135e+04-3.103e+04-5.632e+04	
5.366e+04	100	10.93	38.39	-53.74	-33.66	18.31	38.04 -4365.43-1.138e+05-4.844e+04-6.969e+04	
4.460e+04	77 1 89	12.49	33.04	-52.20	-14.66	-4.50	42.32-1.206e+04-1.338e+05-3.151e+04-1.143e+05	
3.522e+04	91	11.07	22.76	-38.58	-10.30	-5.52	30.58 6170.09-1.109e+05 -5615.02-9.907e+04	
5.010e+04	102	9.51	24.63	-35.62	-27.13	16.15	20.96 1.501e+04-8.971e+04-2.212e+04-5.258e+04	
5.949e+04	101	11.87	34.25	-45.19	-30.08	19.14	31.18 4290.90-1.198e+05-4.008e+04-7.547e+04	
3.774e+04	77 3 89	10.57	27.96	-44.17	-12.40	-3.81	35.81-1.020e+04-1.132e+05-2.666e+04-9.675e+04	
2.980e+04	91	9.37	19.26	-32.64	-8.71	-4.67	25.87 5220.84-9.380e+04 -4751.17-8.383e+04	
4.239e+04	102	8.05	20.84	-30.14	-22.96	13.66	17.73 1.270e+04-7.591e+04-1.872e+04-4.449e+04	
5.034e+04	101	10.04	28.98	-38.24	-25.46	16.20	26.38 3630.76-1.014e+05-3.392e+04-6.386e+04	
3.434e+04	77 5 89	9.69	31.04	-38.12	14.54	-21.62	29.47-1.022e+04-1.036e+05-2.528e+04-8.851e+04	
2.699e+04	91	8.61	21.22	-32.69	9.45	-20.92	22.27 3834.36-8.599e+04 -5178.11-7.698e+04	
	102	7.36	22.69	-26.55	3.55	-7.41	24.00 9641.10-6.969e+04-1.908e+04-4.097e+04	





**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

4308.87	103	2.77	10.48	2.39	3.40	9.48	2.67	3.293e+04	1.975e+04	3.133e+04	2.135e+04	-
79 22	93	9.08	8.22	-6.76	-3.66	5.12	6.07	3366.09-9.281e+04	-1.297e+04	-7.648e+04		
3.611e+04	95	4.37	4.49	-21.09	-6.02	-10.59	12.58	1.246e+04-3.763e+04	1.224e+04-3.741e+04			
3260.92	104	6.84	23.47	-3.19	-3.09	23.37	1.63	1.131e+04-6.427e+04	-1920.94-5.104e+04			
2.873e+04	103	2.93	6.58	-29.20	-2.54	-20.07	15.60	3.416e+04 2.007e+04	2.931e+04 2.492e+04			-
6697.27	93	8.97	8.32	-15.47	-8.47	1.33	10.84	3310.10-9.141e+04	-1.236e+04-7.574e+04			
79 54	95	4.40	6.10	-13.99	-3.66	-4.22	10.04	1.211e+04-3.839e+04	1.186e+04-3.813e+04			
3.520e+04	104	6.70	15.86	-4.55	-4.08	15.40	3.05	1.129e+04-6.308e+04	-1803.36-4.999e+04			
3586.46	103	2.64	6.92	-8.51	0.91	-2.49	7.53	3.135e+04 1.900e+04	2.880e+04 2.155e+04			-
2.832e+04	93	8.90	8.51	-21.09	-11.51	-1.07	13.85	3278.18-9.052e+04	-1.198e+04-7.527e+04			
4993.62	95	4.42	7.31	-9.68	-2.17	-0.20	8.44	1.190e+04-3.887e+04	1.161e+04-3.858e+04			
79 69	104	6.61	11.33	-5.68	-4.71	10.36	3.94	1.127e+04-6.233e+04	-1729.07-4.933e+04			
3.461e+04	103	2.52	9.53	2.17	3.09	8.61	2.43	2.994e+04 1.796e+04	2.848e+04 1.941e+04			-
3792.15	95	6.97	5.13	-10.83	-6.06	0.36	7.31	9565.79-6.734e+04	6873.29-6.465e+04			
2.807e+04	97	5.22	5.82	-4.66	0.64	0.51	5.24	658.45-5.398e+04	562.73-5.388e+04			-
3917.15	105	4.47	12.89	-3.25	-3.19	12.83	-0.97	-255.25-4.612e+04	-1758.70-4.462e+04			
80 1	104	5.81	12.82	2.41	2.45	12.78	-0.63	1.682e+04-4.999e+04	4026.84-3.720e+04			
1.414e+04	95	5.90	4.34	-9.17	-5.13	0.30	6.18	8094.13-5.698e+04	5815.86-5.470e+04			
2284.92	97	4.41	4.92	-3.95	0.55	0.43	4.43	557.15-4.567e+04	476.16-4.559e+04			-
8166.71	105	3.78	10.90	-2.75	-2.70	10.85	-0.82	-215.98-3.902e+04	-1488.13-3.775e+04			
2.628e+04	104	4.92	10.85	2.04	2.07	10.82	-0.54	1.423e+04-4.230e+04	3407.33-3.148e+04			
80 3	95	5.45	19.90	-11.39	-10.24	18.76	5.87	7789.27-5.168e+04	5666.30-4.955e+04			
1.196e+04	97	4.08	21.74	-0.64	0.87	20.23	5.62	424.51-4.142e+04	356.72-4.135e+04			-
1933.40	105	3.46	23.62	-3.60	-3.29	23.30	-2.91	-116.26-3.504e+04	-1256.17-3.390e+04			
6910.29	104	4.55	27.86	2.29	4.15	26.00	-6.64	1.269e+04-3.869e+04	2468.21-2.846e+04			
2.224e+04	95	5.40	9.44	-8.83	-6.82	7.43	5.72	7525.12-5.175e+04	5433.95-4.966e+04			
80 7	97	4.04	10.31	-1.59	0.64	8.07	4.65	474.73-4.148e+04	403.38-4.141e+04			-
1.103e+04	105	3.45	15.21	-2.92	-2.78	15.07	-1.58	-165.34-3.531e+04	-1315.41-3.416e+04			
1682.85	104	4.50	16.68	2.17	2.76	16.09	-2.87	1.284e+04-3.854e+04	2853.88-2.856e+04			
6205.34	95	5.36	3.94	-8.33	-4.67	0.28	5.62	7358.30-5.180e+04	5287.14-4.973e+04			
2.051e+04	97	4.01	4.47	-3.59	0.50	0.39	4.03	506.50-4.152e+04	432.87-4.145e+04			-
80 39	105	3.44	9.91	-2.50	-2.46	9.87	-0.75	-196.35-3.548e+04	-1352.84-3.432e+04			
1.094e+04	104	4.47	9.86	1.85	1.88	9.83	-0.49	1.294e+04-3.845e+04	3097.57-2.861e+04			
1728.68	79	27.20	215.40	-279.26	-82.98	19.12	242.00	-8.058e+04-3.010e+05	-1.868e+05-1.949e+05			
6252.37	98	21.90	113.10	-164.89	-50.34	-1.45	136.83	-4.513e+04-2.396e+05	-1.136e+05-1.711e+05			
2.033e+04	106	19.26	97.23	-141.23	-89.73	45.73	98.13	5617.40-1.909e+05	-9.527e+04-9.001e+04			
80 69	80	22.95	172.29	-226.12	-138.97	85.15	164.70	-1.573e+04-2.349e+05	-1.406e+05-1.100e+05			
1.087e+04												
1757.63												
6282.08												
2.022e+04												
81 1												
1.102e+05												
9.286e+04												
9.822e+04												



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

83	1	99	17.55	73.14	-107.40	-34.13	-0.13	88.65-2.200e+04-1.881e+05-6.870e+04-1.414e+05
7.466e+04		100	14.24	49.79	-79.76	-23.72	-6.25	64.18 -3792.89-1.468e+05-3.683e+04-1.138e+05
6.028e+04		108	12.70	49.13	-70.93	-44.27	22.48	49.89 2.004e+04-1.178e+05-4.314e+04-5.461e+04
6.867e+04		107	15.38	59.27	-91.86	-55.65	23.06	64.50 2.322e+04-1.427e+05-6.124e+04-5.820e+04
8.293e+04		99	14.85	61.89	-90.88	-28.88	-0.11	75.01-1.862e+04-1.591e+05-5.813e+04-1.196e+05
6.317e+04	3	100	12.05	42.13	-67.49	-20.07	-5.29	54.31 -3209.37-1.242e+05-3.116e+04-9.629e+04
5.101e+04		108	10.75	41.57	-60.01	-37.46	19.02	42.22 1.695e+04-9.967e+04-3.650e+04-4.621e+04
5.811e+04		107	13.01	50.15	-77.72	-47.09	19.51	54.58 1.965e+04-1.207e+05-5.182e+04-4.924e+04
7.017e+04		99	13.55	68.48	-91.92	-19.96	-3.48	79.77-1.718e+04-1.446e+05-5.299e+04-1.088e+05
5.728e+04	23	100	11.00	47.17	-67.16	-13.31	-6.68	57.07 -3260.75-1.130e+05-2.850e+04-8.780e+04
4.620e+04		108	9.86	46.89	-57.14	-27.77	17.52	46.82 1.498e+04-9.124e+04-3.342e+04-4.284e+04
5.290e+04		107	11.89	63.49	-74.52	-34.49	23.46	62.63 1.678e+04-1.103e+05-4.717e+04-4.633e+04
6.353e+04		99	13.52	60.92	-86.15	-23.82	-1.41	72.68-1.702e+04-1.446e+05-5.290e+04-1.088e+05
5.737e+04	55	100	10.97	41.69	-63.56	-16.33	-5.54	52.35 -3050.51-1.130e+05-2.840e+04-8.764e+04
4.630e+04		108	9.80	41.20	-55.44	-31.62	17.38	41.65 1.525e+04-9.085e+04-3.328e+04-4.233e+04
5.286e+04		107	11.85	52.42	-72.05	-39.59	19.95	54.65 1.744e+04-1.099e+05-4.713e+04-4.537e+04
6.369e+04		99	13.50	56.26	-82.61	-26.25	-0.10	68.19-1.692e+04-1.447e+05-5.285e+04-1.087e+05
5.743e+04	69	100	10.96	38.30	-61.35	-18.25	-4.81	49.37 -2917.61-1.129e+05-2.833e+04-8.753e+04
4.637e+04		108	9.77	37.79	-54.56	-34.06	17.29	38.38 1.541e+04-9.061e+04-3.319e+04-4.201e+04
5.283e+04		107	11.83	45.59	-70.66	-42.81	17.74	49.62 1.786e+04-1.097e+05-4.711e+04-4.477e+04
6.379e+04		100	14.38	48.58	-74.52	-23.60	-2.34	60.63 -5820.85-1.495e+05-4.079e+04-1.145e+05
6.165e+04	1	101	11.82	34.59	-57.50	-19.46	-3.45	45.35 6015.21-1.178e+05-1.858e+04-9.320e+04
4.940e+04		109	11.62	35.37	-47.06	-31.83	20.14	31.99 2.512e+04-1.047e+05-2.563e+04-5.394e+04
6.334e+04		108	12.25	45.81	-65.64	-42.52	22.70	45.19 2.158e+04-1.125e+05-3.639e+04-5.449e+04
6.641e+04		100	12.17	41.11	-63.05	-19.97	-1.98	51.30 -4925.33-1.265e+05-3.452e+04-9.688e+04
5.216e+04	3	101	10.01	29.27	-48.66	-16.47	-2.92	38.37 5089.80-9.968e+04-1.572e+04-7.887e+04
4.180e+04		109	9.84	29.93	-39.82	-26.93	17.04	27.07 2.125e+04-8.858e+04-2.169e+04-4.564e+04
5.359e+04		108	10.36	38.77	-55.54	-35.98	19.21	38.23 1.826e+04-9.516e+04-3.080e+04-4.611e+04
5.619e+04		100	11.10	45.28	-63.66	-14.80	-3.59	54.18 -4735.91-1.150e+05-3.141e+04-8.832e+04
4.721e+04	23	101	9.11	32.83	-49.02	-10.84	-5.35	40.84 4229.20-9.060e+04-1.452e+04-7.186e+04
3.777e+04		109	8.96	33.94	-40.37	-18.92	12.49	33.68 1.867e+04-8.045e+04-1.999e+04-4.180e+04
4.834e+04		108	9.50	43.84	-49.94	-24.01	17.91	41.94 1.606e+04-8.727e+04-2.851e+04-4.269e+04
5.117e+04		100	11.08	40.40	-59.75	-16.85	-2.49	49.56 -4577.69-1.150e+05-3.139e+04-8.817e+04
4.734e+04	55	101	9.10	28.97	-46.03	-13.37	-3.70	37.19 4472.99-9.061e+04-1.438e+04-7.176e+04
3.791e+04		109	8.95	29.57	-37.57	-22.33	14.33	28.12 1.907e+04-8.050e+04-1.982e+04-4.161e+04
4.858e+04		108	9.45	38.43	-50.14	-29.34	17.64	37.54 1.639e+04-8.680e+04-2.820e+04-4.222e+04
5.112e+04		100	11.06	37.37	-57.32	-18.15	-1.80	46.64 -4477.58-1.150e+05-3.138e+04-8.807e+04
84	69	100	11.06	37.37	-57.32	-18.15	-1.80	46.64 -4477.58-1.150e+05-3.138e+04-8.807e+04



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

5.799e+04	103	13.46	11.88	-14.45	-4.90	2.33	12.66	3.347e+04-1.199e+05	6962.38-9.335e+04	
1.883e+04	111	4.14	10.26	-14.11	-9.10	5.25	9.85	1.481e+04-3.348e+04	5778.36-2.445e+04	
4.793e+04	110	9.07	16.32	-14.42	-8.28	10.18	12.30	2.116e+04-8.152e+04-1.177e+04-4.859e+04		
3.114e+04	102	6.36	15.29	-28.84	-13.88	0.33	20.89	1.142e+04-5.865e+04	-7559.00-3.966e+04	
5.642e+04	103	13.24	15.81	-29.03	-13.16	-0.07	21.44	3.375e+04-1.170e+05	8350.62-9.157e+04	
1.938e+04	111	4.19	13.98	-10.40	-8.54	12.12	6.48	1.481e+04-3.423e+04	5307.54-2.473e+04	
4.753e+04	110	8.99	18.30	-18.88	-12.59	12.00	13.94	2.124e+04-8.064e+04-1.138e+04-4.803e+04		
2542.75	103	12.15	27.95	-22.72	1.42	3.80	25.31	2.427e+04-1.125e+05 2.422e+04-1.124e+05		-
2.146e+04	104	4.82	11.97	-12.38	1.31	-1.72	12.08	1.888e+04-3.731e+04	8919.73-2.735e+04	
2.017e+04	112	5.73	21.16	-11.94	-9.72	18.94	8.28	-179.00-5.936e+04	-8118.98-5.142e+04	
5.261e+04	111	9.33	15.69	-13.13	-12.79	15.35	3.14	3.911e+04-7.139e+04	720.43-3.300e+04	
2151.56	103	10.28	23.65	-19.23	1.21	3.21	21.41	2.053e+04-9.517e+04 2.049e+04-9.513e+04		-
1.816e+04	104	4.08	10.13	-10.47	1.11	-1.46	10.22	1.598e+04-3.157e+04	7547.46-2.314e+04	
1.707e+04	112	4.85	17.91	-10.10	-8.23	16.03	7.01	-151.46-5.023e+04	-6869.91-4.351e+04	
4.452e+04	111	7.89	13.28	-11.11	-10.82	12.99	2.66	3.309e+04-6.040e+04	609.59-2.792e+04	
5758.00	103	9.72	67.10	-17.56	11.35	38.19	40.15	1.616e+04-9.054e+04 1.584e+04-9.023e+04		-
1.712e+04	104	3.66	8.73	-9.42	-0.34	-0.36	9.08	1.521e+04-2.759e+04	6642.28-1.902e+04	
1.466e+04	112	4.46	39.50	-10.58	-8.74	37.66	9.41	-914.85-4.587e+04	-6350.10-4.043e+04	
4.238e+04	111	7.59	21.81	-31.08	-28.91	19.64	-10.50	3.404e+04-5.497e+04	3117.49-2.405e+04	
3428.12	103	9.48	38.89	-17.25	5.07	16.58	27.47	1.766e+04-8.804e+04 1.755e+04-8.793e+04		-
1.674e+04	104	3.69	9.00	-9.47	0.49	-0.95	9.21	1.478e+04-2.826e+04	6776.51-2.025e+04	
1.518e+04	112	4.43	25.23	-9.68	-7.97	23.51	7.55	-442.84-4.574e+04	-6285.92-3.990e+04	
4.121e+04	111	7.33	15.04	-17.43	-17.22	14.84	-2.58	3.162e+04-5.494e+04	1546.70-2.486e+04	
1955.96	103	9.35	21.50	-17.48	1.10	2.92	19.47	1.867e+04-8.652e+04 1.863e+04-8.648e+04		-
1.651e+04	104	3.71	9.21	-9.52	1.01	-1.32	9.29	1.452e+04-2.870e+04	6861.33-2.103e+04	
1.552e+04	112	4.41	16.28	-9.19	-7.48	14.57	6.37	-137.69-4.566e+04	-6245.37-3.955e+04	
4.047e+04	111	7.17	12.07	-10.10	-9.83	11.80	2.42	3.009e+04-5.491e+04	554.18-2.538e+04	
1.709e+04	104	6.17	9.26	-10.43	-2.90	1.72	9.57	1.243e+04-5.691e+04	7926.28-5.240e+04	
192.53	105	4.10	5.63	-4.63	0.81	0.19	5.12	-158.59-4.276e+04	-159.46-4.275e+04	-
6453.51	113	3.85	19.79	-2.54	-2.54	19.78	-0.35	501.30-3.904e+04	-581.67-3.796e+04	
2.516e+04	112	5.47	16.70	-1.26	-1.22	16.65	0.90	1.036e+04-5.071e+04	-2862.50-3.749e+04	
1.446e+04	104	5.22	7.83	-8.83	-2.45	1.46	8.10	1.052e+04-4.815e+04	6706.85-4.434e+04	
162.91	105	3.47	4.76	-3.91	0.69	0.16	4.33	-134.19-3.618e+04	-134.93-3.618e+04	-
5460.67	113	3.26	16.74	-2.15	-2.15	16.74	-0.30	424.18-3.303e+04	-492.18-3.212e+04	
2.129e+04	112	4.63	14.13	-1.07	-1.03	14.09	0.76	8768.49-4.291e+04	-2422.12-3.172e+04	
1.282e+04	104	4.66	25.22	-7.10	-1.45	19.57	12.28	8835.73-4.312e+04	5453.99-3.974e+04	
	105	3.17	19.26	-1.99	-0.07	17.33	6.10	-41.57-3.234e+04	-42.13-3.234e+04	-



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

134.91										
4870.34	113	3.04	37.01	-1.94	-1.71	36.78	-3.00	295.29-2.991e+04	-511.65-2.910e+04	
1.920e+04										
88 40	104	4.27	33.34	-6.15	-5.99	33.17	-2.56	8273.48-3.867e+04	-1693.55-2.870e+04	
1.302e+04										
142.99	105	4.69	13.84	-7.37	-1.93	8.39	9.26	9279.88-4.352e+04	5848.11-4.009e+04	
4927.88	105	3.16	9.34	-2.18	0.36	6.80	4.77	-90.86-3.268e+04	-91.48-3.268e+04	-
1.929e+04										
88 69	113	2.99	23.63	-1.93	-1.86	23.56	-1.33	350.61-2.998e+04	-472.30-2.916e+04	
1.314e+04										
148.10	112	4.23	20.71	-2.91	-2.89	20.69	-0.57	8088.05-3.888e+04	-2005.08-2.879e+04	
4964.24	112	4.23	20.71	-2.91	-2.89	20.69	-0.57	8088.05-3.888e+04	-2005.08-2.879e+04	
1.935e+04										
89 1	104	4.74	7.12	-8.03	-2.23	1.32	7.36	9560.52-4.377e+04	6097.14-4.031e+04	
1.060e+05										
8.981e+04	105	3.15	4.33	-3.56	0.62	0.15	3.94	-121.99-3.289e+04	-122.66-3.289e+04	-
9.780e+04										
1.062e+05	113	2.96	15.22	-1.95	-1.95	15.22	-0.27	385.62-3.003e+04	-447.44-2.920e+04	
89 3	112	4.21	12.84	-0.97	-0.94	12.81	0.69	7971.36-3.901e+04	-2201.93-2.884e+04	
8.972e+04										
7.599e+04	80	22.99	168.09	-223.68	-60.24	4.65	193.18-1.465e+04-2.349e+05-9.499e+04-1.546e+05			
8.276e+04										
8.982e+04	106	19.17	95.44	-144.90	-44.44	-5.02	118.54 3951.88-1.906e+05-5.592e+04-1.308e+05			
8.144e+04										
6.876e+04	114	17.66	81.22	-123.32	-77.52	35.42	85.26 4.503e+04-1.513e+05-4.468e+04-6.161e+04			
7.459e+04										
8.153e+04	81	20.15	137.02	-182.25	-94.40	49.18	142.58 2.818e+04-1.848e+05-6.991e+04-8.671e+04			
8.152e+04										
6.896e+04	80	19.45	142.23	-189.27	-50.98	3.94	163.46-1.240e+04-1.988e+05-8.037e+04-1.308e+05			
7.498e+04										
8.161e+04	106	16.22	80.76	-122.61	-37.60	-4.25	100.31 3343.90-1.613e+05-4.732e+04-1.106e+05			
8.157e+04										
6.908e+04	114	14.95	68.72	-104.34	-65.59	29.97	72.14 3.810e+04-1.280e+05-3.780e+04-5.213e+04			
7.523e+04										
8.166e+04	81	17.05	115.94	-154.21	-79.88	41.61	120.64 2.385e+04-1.564e+05-5.915e+04-7.337e+04			
9.784e+04										
6.693e+04	80	17.79	156.96	-181.26	-18.47	-5.83	169.00-1.157e+04-1.807e+05-7.331e+04-1.190e+05			
1.431e+05										
7.928e+04	106	14.81	93.29	-119.30	-12.50	-13.52	106.29 2343.88-1.466e+05-4.352e+04-1.008e+05			
8.279e+04										
5.664e+04	114	13.62	82.21	-95.45	-34.67	21.42	84.28 3.324e+04-1.165e+05-3.537e+04-4.785e+04			
	81	15.61	128.65	-142.54	-44.94	31.06	130.16 2.130e+04-1.422e+05-5.416e+04-6.678e+04			
	80	17.73	139.69	-175.31	-35.55	-0.06	156.50-1.139e+04-1.807e+05-7.316e+04-1.190e+05			
	106	14.77	80.77	-114.16	-25.79	-7.60	97.04 2770.40-1.466e+05-4.321e+04-1.006e+05			
	114	13.60	69.42	-94.39	-49.96	24.99	72.83 3.409e+04-1.164e+05-3.476e+04-4.757e+04			
	81	15.54	113.89	-140.58	-61.90	35.21	117.61 2.153e+04-1.422e+05-5.392e+04-6.673e+04			
	80	17.68	129.30	-172.06	-46.34	3.58	148.60-1.127e+04-1.807e+05-7.307e+04-1.189e+05			
	106	14.74	73.41	-111.46	-34.18	-3.87	91.19 3039.91-1.466e+05-4.302e+04-1.006e+05			
	114	13.59	62.47	-94.86	-59.63	27.25	65.58 3.464e+04-1.164e+05-3.437e+04-4.739e+04			
	81	15.50	105.40	-140.19	-72.62	37.83	109.68 2.168e+04-1.421e+05-5.377e+04-6.670e+04			
	106	20.05	84.10	-139.85	-52.42	-3.33	109.25 1.860e+04-1.924e+05-4.746e+04-1.263e+05			
	107	14.82	75.61	-96.53	-10.31	-10.61	86.07 4135.87-1.472e+05-3.623e+04-1.068e+05			
	115	24.15	2.10	-96.24	-92.24	-1.90	19.41 1.530e+05-1.353e+05 -8199.21 2.584e+04			
	114	15.91	105.70	-126.96	-73.83	52.56	97.67 1.294e+04-1.538e+05-4.464e+04-9.621e+04			
	106	16.97	71.17	-118.34	-44.35	-2.82	92.45 1.574e+04-1.628e+05-4.016e+04-1.069e+05			
	107	12.54	63.98	-81.68	-8.73	-8.98	72.83 3499.58-1.246e+05-3.066e+04-9.041e+04			



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

1.211e+05	115	20.43	1.78	-81.43	-78.05	-1.60	16.43	1.294e+05-1.145e+05	-6937.79	2.187e+04	
6.709e+04	114	13.46	89.44	-107.43	-62.47	44.47	82.64	1.095e+04-1.301e+05-3.778e+04-8.141e+04			
7.634e+04	106	15.43	42.14	-104.57	-65.44	3.01	64.89	1.636e+04-1.482e+05-3.522e+04-9.663e+04			
5.112e+04	107	11.25	49.30	-68.23	-15.53	-3.39	58.45	2321.18-1.127e+05-2.882e+04-8.159e+04			
1.156e+05	115	19.53	-10.44	-107.01	-101.06	-16.39	-23.24	1.274e+05-1.055e+05	-2857.92	2.475e+04	
6.018e+04	114	12.11	82.59	-106.01	-80.95	57.54	64.01	9156.88-1.185e+05-3.338e+04-7.599e+04			
7.568e+04	106	15.43	55.32	-105.77	-50.05	-0.40	76.62	1.510e+04-1.481e+05-3.601e+04-9.696e+04			
5.134e+04	107	11.34	54.65	-71.84	-10.88	-6.32	63.20	2847.80-1.130e+05-2.824e+04-8.196e+04			
1.122e+05	115	18.84	-7.24	-82.61	-82.61	-7.24	0.15	1.214e+05-1.046e+05	-4971.56	2.177e+04	
6.068e+04	114	12.19	81.12	-100.21	-66.15	47.05	70.83	9641.77-1.184e+05-3.397e+04-7.477e+04			
7.526e+04	106	15.42	64.70	-107.58	-40.32	-2.56	84.04	1.431e+04-1.480e+05-3.651e+04-9.716e+04			
5.149e+04	107	11.40	58.16	-74.25	-7.93	-8.16	66.21	3181.44-1.132e+05-2.787e+04-8.219e+04			
1.101e+05	115	18.58	1.61	-74.03	-70.96	-1.46	14.93	1.177e+05-1.041e+05	-6307.08	1.988e+04	
6.099e+04	114	12.24	81.30	-97.67	-56.79	40.43	75.13	9956.39-1.183e+05-3.434e+04-7.401e+04			
1.012e+05	107	19.97	55.44	-103.05	-46.55	-1.06	75.91	2.447e+04-1.900e+05-4.722e+04-1.183e+05			
4.315e+04	108	9.28	41.51	-75.87	-19.67	-14.69	58.64	2.397e+04-7.877e+04	470.79-5.527e+04		
7.612e+04	116	15.71	67.06	-57.42	-31.26	40.89	50.72	1.897e+04-1.514e+05-2.795e+04-1.045e+05			
3.265e+04	115	10.95	35.42	-71.31	-12.07	-23.83	53.04	1.040e+05-1.577e+04	-6085.48	9.436e+04	
8.562e+04	107	16.90	46.91	-87.20	-39.39	-0.90	64.23	2.071e+04-1.608e+05-3.996e+04-1.001e+05			
3.651e+04	108	7.85	35.13	-64.20	-16.65	-12.43	49.62	2.028e+04-6.665e+04	398.36-4.677e+04		
6.441e+04	116	13.29	56.74	-48.59	-26.45	34.60	42.92	1.605e+04-1.281e+05-2.365e+04-8.843e+04			
2.763e+04	115	9.27	29.97	-60.34	-10.21	-20.16	44.88	8.803e+04-1.334e+04	-5149.25	7.984e+04	
8.018e+04	107	15.66	52.78	-43.04	27.86	-18.13	42.03	1.709e+04-1.509e+05-4.190e+04-9.189e+04			
3.135e+04	108	6.95	41.37	-72.38	9.45	-40.46	51.11	1.720e+04-5.804e+04	375.44-4.121e+04		
5.996e+04	116	12.43	52.26	-26.04	-2.15	28.37	36.05	1.479e+04-1.200e+05-2.181e+04-8.343e+04			
1.925e+04	115	7.93	42.39	-108.18	-9.74	-56.05	71.64	8.044e+04	-3450.77	1225.15	7.577e+04
7.874e+04	107	15.48	42.75	-61.43	-11.16	-7.52	52.06	1.814e+04-1.480e+05-3.848e+04-9.136e+04			
3.248e+04	108	7.06	34.08	-62.29	-5.62	-22.59	47.43	1.796e+04-5.960e+04	367.29-4.201e+04		
5.910e+04	116	12.22	51.61	-36.91	-15.57	30.26	37.87	1.467e+04-1.179e+05-2.162e+04-8.157e+04			
2.284e+04	115	8.22	32.83	-75.23	-9.46	-32.93	52.74	8.014e+04	-8716.76	-2394.21	7.382e+04
7.783e+04	107	15.36	42.65	-79.27	-35.81	-0.82	58.39	1.883e+04-1.462e+05-3.632e+04-9.102e+04			
3.319e+04	108	7.14	31.93	-58.36	-15.13	-11.30	45.11	1.844e+04-6.059e+04	362.14-4.252e+04		
5.855e+04	116	12.08	51.59	-44.17	-24.04	31.46	39.02	1.459e+04-1.165e+05-2.150e+04-8.039e+04			
2.512e+04	115	8.43	27.24	-54.85	-9.28	-18.33	40.80	8.003e+04-1.213e+04	-4681.14	7.258e+04	
5.911e+04	108	12.97	42.49	-67.23	-24.41	-0.33	53.52	2.306e+04-1.193e+05	-8469.06-8.775e+04		
5.149e+04	109	11.31	30.37	-50.02	-15.46	-4.19	39.80	2.592e+04-1.006e+05	-601.77-7.404e+04		
	117	10.44	36.13	-44.34	-28.85	20.65	31.72	3.344e+04-8.614e+04-1.342e+04-3.929e+04			



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

4.406e+04	117	7.86	25.65	-28.79	-18.63	15.48	21.22	2.538e+04	-6.496e+04	-9855.11	-2.973e+04	
94	1	110	10.02	12.38	-29.05	-13.07	-3.60	20.17	3.992e+04	-7.737e+04	1.545e+04	-5.290e+04
4.766e+04		111	7.63	28.29	-20.57	6.35	1.38	24.31	3412.87	-7.709e+04	638.43	-7.431e+04
1.468e+04		119	13.95	14.07	-38.88	-38.71	13.91	-2.99	1.150e+05	-4.819e+04	1.708e+04	4.975e+04
7.996e+04		118	8.87	26.12	-27.86	-23.81	22.07	14.22	2.440e+04	-7.755e+04	-2198.47	-5.096e+04
4.477e+04		110	8.47	10.47	-24.58	-11.06	-3.05	17.06	3.378e+04	-6.547e+04	1.307e+04	-4.476e+04
94	3	111	6.46	23.94	-17.41	5.37	1.17	20.57	2887.81	-6.523e+04	540.21	-6.288e+04
4.032e+04		119	11.80	11.91	-32.90	-32.76	11.77	-2.53	9.733e+04	-4.078e+04	1.445e+04	4.210e+04
6.765e+04		118	7.50	22.10	-23.58	-20.15	18.67	12.03	2.065e+04	-6.562e+04	-1860.24	-4.312e+04
3.788e+04		110	7.75	-0.58	-20.58	-17.25	-3.91	7.45	3.243e+04	-5.920e+04	1.265e+04	-3.943e+04
94	22	111	5.82	34.30	-14.04	6.65	13.61	23.92	1274.28	-5.986e+04	-456.26	-5.813e+04
3.769e+04		119	11.69	6.09	-53.88	-39.77	-8.02	-25.44	9.657e+04	-3.779e+04	1.506e+04	4.372e+04
1.014e+04		118	7.02	34.83	-29.55	-29.24	34.52	4.47	1.947e+04	-6.054e+04	-611.70	-4.046e+04
6.563e+04		110	7.72	5.27	-21.32	-12.84	-3.21	12.39	3.137e+04	-5.939e+04	1.218e+04	-4.020e+04
3.470e+04		111	5.85	26.46	-14.98	5.57	5.92	20.72	2097.62	-5.951e+04	124.28	-5.754e+04
94	54	119	11.10	6.60	-36.80	-33.65	3.45	-11.26	9.161e+04	-3.735e+04	1.388e+04	4.038e+04
3.706e+04		118	6.89	25.26	-24.04	-22.55	23.77	8.44	1.904e+04	-6.000e+04	-1273.17	-3.968e+04
1.085e+04		110	7.70	9.52	-22.35	-10.05	-2.77	15.51	3.070e+04	-5.952e+04	1.188e+04	-4.070e+04
6.310e+04		111	5.87	21.76	-15.82	4.88	1.06	18.70	2625.28	-5.930e+04	491.10	-5.716e+04
3.454e+04		119	10.73	10.83	-29.91	-29.78	10.70	-2.30	8.848e+04	-3.707e+04	1.314e+04	3.827e+04
94	69	118	6.82	20.09	-21.43	-18.32	16.97	10.94	1.877e+04	-5.966e+04	-1691.13	-3.920e+04
3.666e+04		111	10.79	12.64	-36.98	-25.88	1.54	20.68	2.040e+04	-1.001e+05	-2175.30	-7.756e+04
1.130e+04		112	4.44	10.27	-5.88	-3.17	7.57	6.03	2.014e+04	-3.258e+04	1.796e+04	-3.040e+04
6.150e+04		120	6.98	13.84	-3.17	-1.35	12.02	5.26	1.255e+04	-6.561e+04	-6070.45	-4.698e+04
3.444e+04		119	4.91	29.33	11.00	19.73	20.61	-9.16	5.742e+04	1.975e+04	1.988e+04	5.728e+04
95	1	111	9.13	10.69	-31.29	-21.90	1.30	17.50	1.726e+04	-8.473e+04	-1840.64	-6.563e+04
4.702e+04		112	3.76	8.69	-4.97	-2.68	6.40	5.10	1.704e+04	-2.756e+04	1.520e+04	-2.572e+04
1.050e+04		120	5.91	11.71	-2.68	-1.14	10.17	4.45	1.062e+04	-5.552e+04	-5136.53	-3.976e+04
3.330e+04		119	4.15	24.82	9.31	16.69	17.44	-7.75	4.858e+04	1.671e+04	1.682e+04	4.847e+04
2253.63		111	8.56	1.99	-6.22	-1.25	-2.99	4.01	1.504e+04	-8.039e+04	-4198.65	-6.115e+04
95	3	112	3.33	2.51	-21.45	-1.79	-17.15	9.20	1.533e+04	-2.355e+04	1.393e+04	-2.215e+04
3.979e+04		120	5.57	14.18	-1.77	-0.12	12.53	4.85	9751.19	-5.244e+04	-4477.09	-3.821e+04
8880.69		119	4.23	9.85	-28.74	3.27	-22.16	14.51	4.908e+04	1.777e+04	1.792e+04	4.893e+04
2.818e+04		111	8.40	6.30	-19.41	-12.68	-0.43	11.30	1.543e+04	-7.832e+04	-2651.12	-6.024e+04
1906.92		112	3.37	3.79	-9.05	-2.19	-3.07	6.41	1.542e+04	-2.447e+04	1.386e+04	-2.290e+04
95	6	120	5.45	12.01	-2.18	-0.68	10.52	4.36	9691.91	-5.123e+04	-4595.05	-3.694e+04
3.829e+04		119	3.88	10.74	0.96	10.57	1.14	1.30	4.595e+04	1.631e+04	1.631e+04	4.595e+04
7236.94												223.41
2.612e+04												
2166.60												
95	38											
3.699e+04												
7749.49												
2.581e+04												

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

95	69	111	8.30	9.72	-28.45	-19.91	1.18	15.91	1.569e+04	-7.702e+04	-1673.30	-5.966e+04	
3.617e+04		112	3.42	7.90	-4.52	-2.44	5.82	4.64	1.549e+04	-2.506e+04	1.381e+04	-2.338e+04	
8073.35		120	5.37	10.64	-2.44	-1.04	9.24	4.05	9657.45	-5.047e+04	-4669.58	-3.614e+04	
2.562e+04		119	3.78	22.57	8.46	15.17	15.86	-7.04	4.417e+04	1.519e+04	1.530e+04	4.406e+04	
1733.56		112	5.69	6.26	-10.73	-9.66	5.19	4.12	1.417e+04	-5.067e+04	9181.35	-4.568e+04	
96	1	113	3.73	8.45	-0.27	2.47	5.72	4.05	221.79	-3.849e+04	158.12	-3.842e+04	-
1.727e+04		121	2.87	12.39	-3.57	-3.56	12.38	0.14	543.98	-2.913e+04	-1066.60	-2.752e+04	
1568.61		120	4.75	15.99	6.85	7.52	15.32	-2.39	1.864e+04	-3.709e+04	123.66	-1.858e+04	
6722.61		112	4.82	5.30	-9.08	-8.17	4.39	3.49	1.199e+04	-4.287e+04	7768.84	-3.865e+04	
2.625e+04		113	3.15	7.15	-0.23	2.09	4.84	3.43	187.67	-3.257e+04	133.79	-3.251e+04	-
96	3	121	2.43	10.48	-3.02	-3.02	10.48	0.12	460.29	-2.465e+04	-902.51	-2.328e+04	
1.461e+04		120	4.02	13.53	5.80	6.37	12.96	-2.02	1.577e+04	-3.138e+04	104.64	-1.572e+04	
1327.28		112	4.50	24.31	-13.83	-13.48	23.96	3.60	1.150e+04	-3.895e+04	7577.77	-3.503e+04	
5688.36		113	2.94	26.53	1.29	2.26	25.56	4.86	85.20	-2.956e+04	43.39	-2.952e+04	-
2.221e+04		121	2.21	22.70	-3.77	-3.57	22.50	-2.27	524.22	-2.180e+04	-716.61	-2.056e+04	
96	8	120	3.76	31.62	5.51	8.68	28.45	-8.52	1.431e+04	-2.895e+04	-677.23	-1.397e+04	
1.351e+04		112	4.42	12.23	-10.28	-9.77	11.73	3.34	1.113e+04	-3.897e+04	7262.06	-3.510e+04	
1112.47		113	2.90	13.81	0.82	2.04	12.59	3.79	137.47	-2.959e+04	91.33	-2.954e+04	-
5114.59		121	2.21	14.59	-3.10	-3.06	14.55	-0.81	459.36	-2.217e+04	-780.25	-2.093e+04	
2.059e+04		120	3.69	19.76	5.38	6.91	18.24	-4.42	1.432e+04	-2.869e+04	-203.93	-1.417e+04	
96	40	112	4.38	4.81	-8.25	-7.43	3.99	3.17	1.090e+04	-3.897e+04	7062.58	-3.514e+04	
1.337e+04		113	2.87	6.50	-0.21	1.90	4.40	3.12	170.61	-2.961e+04	121.63	-2.956e+04	-
1170.16		121	2.21	9.53	-2.74	-2.74	9.53	0.11	418.45	-2.241e+04	-820.46	-2.117e+04	
5149.30		120	3.65	12.30	5.27	5.79	11.79	-1.84	1.434e+04	-2.853e+04	95.13	-1.429e+04	
2.034e+04		72	21.28	175.13	-227.57	-185.34	132.90	-123.38	5.807e+04	-1.739e+05	-1.727e+05	5.688e+04	-
96	69	81	20.28	134.00	-181.97	-167.66	119.69	-65.70	2.594e+04	-1.874e+05	-1.871e+05	2.562e+04	
1.329e+04		114	17.81	81.87	-128.69	-114.05	67.24	-53.55	4.061e+04	-1.556e+05	-1.550e+05	4.001e+04	
1206.62		122	18.39	113.16	-144.53	-107.82	76.46	-90.07	6.162e+04	-1.450e+05	-1.432e+05	5.979e+04	-
5171.24		72	18.01	148.18	-192.56	-156.83	112.45	-104.40	4.914e+04	-1.472e+05	-1.462e+05	4.813e+04	-
2.019e+04		81	17.16	113.38	-153.98	-141.87	101.27	-55.59	2.195e+04	-1.586e+05	-1.583e+05	2.168e+04	
97	1	114	15.07	69.28	-108.89	-96.51	56.89	-45.31	3.436e+04	-1.317e+05	-1.312e+05	3.386e+04	
1.653e+04		122	15.56	95.75	-122.30	-91.24	64.69	-76.21	5.214e+04	-1.227e+05	-1.212e+05	5.059e+04	-
8220.07		72	16.52	165.49	-174.88	-155.82	146.43	-78.25	4.431e+04	-1.340e+05	-1.330e+05	4.339e+04	-
1.079e+04		81	15.70	127.01	-143.43	-139.23	122.81	-33.43	1.949e+04	-1.443e+05	-1.440e+05	1.925e+04	
1.935e+04		114	13.75	80.32	-99.92	-96.52	76.92	-24.53	3.013e+04	-1.198e+05	-1.194e+05	2.971e+04	
97	3	122	14.23	107.68	-109.81	-94.37	92.24	-55.84	4.687e+04	-1.117e+05	-1.102e+05	4.545e+04	-
1.399e+04		72	16.43	145.99	-174.34	-147.70	119.34	-88.46	4.453e+04	-1.339e+05	-1.329e+05	4.362e+04	-
6955.44													
9130.63													
1.637e+04													
97	23												
1.274e+04													
6224.14													
7914.88													
1.493e+04													
97	55												



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

4.292e+04	115	15.71	137.13	-41.44	15.05	80.63	-83.05-1.372e+04-1.677e+05-1.546e+05-2.680e+04	
4.253e+04	116	8.71	16.20	-62.82	-61.44	14.82	-10.35 5.320e+04-4.904e+04-2.628e+043.044e+04	-
1.229e+04	124	7.64	76.99	-46.05	5.95	24.99	-60.78 5199.16-7.523e+04-7.330e+04 3273.54	-
6.254e+04	99 38 123	16.41	28.63	-75.97	-15.56	-31.78	-51.67 9.074e+04-1.041e+05-8.142e+046.803e+04	-
4.073e+04	115	15.08	125.69	-56.75	-7.64	76.58	-80.92-1.461e+04-1.623e+05-1.501e+05-2.686e+04	
4.190e+04	116	8.73	18.78	-55.93	-50.01	12.87	-20.18 5.206e+04-5.001e+04-2.811e+043.015e+04	-
1.281e+04	124	7.61	73.66	-53.46	2.10	18.10	-63.05 6063.32-7.439e+04-7.229e+04 3968.76	-
6.199e+04	99 69 123	16.36	34.70	-84.84	-16.43	-33.71	-59.15 9.040e+04-1.035e+05-8.112e+046.800e+04	-
3.934e+04	115	14.68	118.96	-66.90	-21.97	74.03	-79.57-1.518e+04-1.589e+05-1.472e+05-2.690e+04	
4.151e+04	116	8.74	22.32	-53.49	-42.79	11.63	-26.39 5.134e+04-5.063e+04-2.926e+042.997e+04	-
1.314e+04	124	7.60	71.58	-58.16	-0.33	13.75	-64.49 6613.08-7.386e+04-7.165e+04 4408.05	-
4.961e+04	100 1 124	11.13	57.94	-71.00	-4.14	-8.92	-64.43 3.826e+04-8.824e+04-6.422e+041.425e+04	-
3.499e+04	116	11.57	48.68	-59.31	-25.74	15.11	-49.99 2.744e+04-1.013e+05-9.090e+041.709e+04	-
3.173e+04	117	10.23	32.41	-48.44	-19.61	3.58	-38.73 3.422e+04-8.292e+04-7.358e+042.488e+04	-
4.746e+04	125	10.28	46.18	-50.71	3.96	-8.49	-48.05 3.986e+04-7.880e+04-5.507e+041.613e+04	-
4.198e+04	100 3 124	9.42	49.03	-60.08	-3.50	-7.55	-54.52 3.238e+04-7.466e+04-5.434e+041.206e+04	-
2.961e+04	116	9.79	41.19	-50.19	-21.78	12.79	-42.30 2.322e+04-8.567e+04-7.692e+041.446e+04	-
2.685e+04	117	8.66	27.42	-40.99	-16.59	3.03	-32.77 2.895e+04-7.016e+04-6.226e+042.105e+04	-
4.016e+04	125	8.70	39.08	-42.91	3.35	-7.18	-40.65 3.373e+04-6.668e+04-4.660e+041.365e+04	-
3.872e+04	100 21 124	8.69	48.09	-47.05	-20.54	21.58	-42.65 2.942e+04-6.879e+04-4.988e+041.051e+04	-
2.688e+04	116	9.02	38.70	-45.48	-33.96	27.17	-28.94 2.157e+04-7.832e+04-7.047e+041.372e+04	-
2.438e+04	117	7.92	29.18	-37.07	-28.98	21.09	-21.69 2.538e+04-6.436e+04-5.716e+041.818e+04	-
3.659e+04	125	7.98	36.28	-35.96	-14.05	14.37	-33.21 3.008e+04-6.122e+04-4.286e+041.173e+04	-
3.838e+04	100 53 124	8.61	44.53	-50.29	-9.91	4.15	-46.89 2.943e+04-6.823e+04-4.959e+041.079e+04	-
2.690e+04	116	8.95	37.04	-44.68	-25.28	17.65	-34.77 2.129e+04-7.805e+04-7.014e+041.337e+04	-
2.440e+04	117	7.89	25.36	-35.97	-20.47	9.85	-26.66 2.596e+04-6.401e+04-5.682e+041.877e+04	-
3.654e+04	125	7.93	34.59	-36.60	-3.58	1.56	-35.51 3.044e+04-6.085e+04-4.256e+041.215e+04	-
3.816e+04	100 69 124	8.56	44.57	-54.62	-3.19	-6.86	-49.56 2.943e+04-6.787e+04-4.940e+041.096e+04	-
2.692e+04	116	8.90	37.45	-45.63	-19.80	11.62	-38.45 2.111e+04-7.788e+04-6.993e+041.315e+04	-
2.441e+04	117	7.87	24.93	-37.26	-15.09	2.75	-29.79 2.632e+04-6.378e+04-5.660e+041.914e+04	-
3.651e+04	125	7.91	35.52	-39.01	3.04	-6.53	-36.96 3.066e+04-6.062e+04-4.236e+041.241e+04	-
5.155e+04	101 1 125	10.25	39.53	-45.94	6.43	-12.83	-41.63 4.075e+04-7.793e+04-4.799e+041.081e+04	-
3.683e+04	117	10.09	28.49	-44.92	-12.09	-4.34	-36.50 3.234e+04-8.311e+04-6.983e+041.906e+04	-
3.177e+04	118	9.38	25.74	-41.05	-7.08	-8.24	-33.39 3.542e+04-7.357e+04-6.335e+042.521e+04	-
4.656e+04	126	9.11	32.91	-34.82	8.26	-10.17	-32.59 4.039e+04-6.618e+04-3.881e+041.302e+04	-
4.362e+04	101 3 125	8.67	33.45	-38.87	5.44	-10.86	-35.23 3.448e+04-6.594e+04-4.061e+04 9150.26	-
	117	8.54	24.11	-38.01	-10.23	-3.67	-30.88 2.737e+04-7.032e+04-5.909e+041.613e+04	-







**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

2.049e+04	120	3.73	16.94	-7.09	0.64	9.21	-11.22	2.220e+04	-2.164e+04	-7508.75	8068.11	-		
1.277e+04	128	4.89	24.92	-15.87	19.88	-10.82	-13.43	1732.10	-4.954e+04	-4.613e+04	-1674.65	-		
103	3	127	9.01	16.15	-14.54	15.14	-13.54	-5.46	5.820e+04	-5.001e+04	-1.489e+04	2.307e+04	-	
5.067e+04	119	9.35	29.60	-20.67	-3.83	12.76	-23.73	5901.02	-9.413e+04	-8.988e+04	1647.62	-		
2.018e+04	120	3.16	14.33	-6.00	0.55	7.79	-9.50	1.879e+04	-1.831e+04	-6353.56	6826.86	-		
1.734e+04	128	4.14	21.09	-13.43	16.82	-9.15	-11.37	1465.62	-4.192e+04	-3.903e+04	-1417.01	-		
1.080e+04	103	22	127	8.66	19.36	-32.39	18.59	-31.62	6.26	5.709e+04	-4.564e+04	-1.217e+04	2.362e+04	-
4.815e+04	119	9.23	73.05	-15.02	33.29	24.74	-43.82	4151.42	-9.184e+04	-8.635e+04	-1346.66	-		
2.231e+04	120	2.91	12.10	-8.72	-2.83	6.21	-9.37	1.820e+04	-1.590e+04	-3738.61	6044.25	-		
1.633e+04	128	3.88	42.68	-13.40	37.97	-8.69	-15.55	696.04	-3.882e+04	-3.667e+04	-1450.41	-		
8955.76	103	54	127	8.37	15.65	-19.80	15.64	-19.78	-0.62	5.453e+04	-4.553e+04	-1.300e+04	2.200e+04	-
4.687e+04	119	8.78	44.06	-16.61	10.76	16.69	-30.19	4869.10	-8.798e+04	-8.350e+04	396.44	-		
1.988e+04	120	2.88	12.66	-6.71	-0.79	6.75	-8.92	1.750e+04	-1.635e+04	-4987.09	6143.51	-		
1.599e+04	128	3.80	28.23	-12.62	24.07	-8.47	-12.36	1079.90	-3.837e+04	-3.594e+04	-1351.00	-		
9486.92	103	69	127	8.19	14.68	-13.22	13.77	-12.31	-4.97	5.291e+04	-4.547e+04	-1.353e+04	2.097e+04	-
4.606e+04	119	8.50	26.91	-18.79	-3.48	11.60	-21.57	5364.56	-8.557e+04	-8.171e+04	1497.83	-		
1.835e+04	120	2.87	13.03	-5.45	0.50	7.08	-8.63	1.708e+04	-1.665e+04	-5775.96	6206.24	-		
1.576e+04	128	3.76	19.17	-12.20	15.29	-8.32	-10.33	1332.38	-3.811e+04	-3.548e+04	-1288.19	-		
9822.53	104	1	128	4.71	20.21	-2.79	19.55	-2.14	-3.81	1.397e+04	-4.022e+04	-2.843e+04	2181.66	-
2.236e+04	120	4.42	10.80	-9.48	1.33	-1.12e-03	-10.12	8416.68	-4.085e+04	-3.640e+04	3972.12	-		
1.411e+04	121	2.51	5.05	-3.85	-1.18	2.38	-4.08	481.98	-2.584e+04	-2.582e+04	457.97	794.51	-	
3908.75	129	2.78	23.71	-2.16	23.55	-2.00	-2.01	120.04	-2.790e+04	-2.734e+04	-436.35	-		
104	3	128	3.98	17.10	-2.36	16.55	-1.81	-3.23	1.182e+04	-3.403e+04	-2.405e+04	1846.02	-	
1.892e+04	120	3.74	9.14	-8.02	1.12	-9.50e-04	-8.56	7121.80	-3.456e+04	-3.080e+04	3361.03	-		
1.194e+04	121	2.13	4.27	-3.26	-1.00	2.01	-3.45	407.83	-2.187e+04	-2.185e+04	387.52	672.28	-	
3307.40	129	2.35	20.06	-1.83	19.93	-1.69	-1.70	101.57	-2.360e+04	-2.313e+04	-369.22	-		
104	5	128	3.65	6.24	-5.33	-1.58	2.49	-5.42	1.044e+04	-3.133e+04	-2.207e+04	1176.03	-	
1.735e+04	120	3.54	-0.15	-13.25	-12.76	-0.64	-2.49	7134.81	-3.221e+04	-2.869e+04	3619.99	-		
1.122e+04	121	2.04	1.86	-14.42	-14.42	1.85	-0.31	313.03	-2.041e+04	-2.039e+04	297.24	571.71	-	
3076.67	129	2.08	2.76	-3.64	0.40	-1.29	-3.09	158.04	-2.160e+04	-2.116e+04	-286.00	-		
104	37	128	3.61	10.10	-1.54	8.61	-0.04	-3.90	1.063e+04	-3.109e+04	-2.195e+04	1483.76	-	
1.726e+04	120	3.45	3.80	-8.36	-4.32	-0.25	-5.73	6730.07	-3.173e+04	-2.827e+04	3274.06	-		
1.100e+04	121	1.97	2.33	-6.63	-6.14	1.84	-2.04	348.37	-2.008e+04	-2.007e+04	330.97	595.88	-	
3033.81	129	2.11	11.61	-1.79	11.26	-1.44	-2.14	117.76	-2.151e+04	-2.108e+04	-316.43	-		
104	69	128	3.62	15.54	-2.15	15.04	-1.64	-2.93	1.075e+04	-3.094e+04	-2.187e+04	1678.20	-	
1.720e+04	120	3.40	8.31	-7.29	1.02	-8.64e-04	-7.78	6474.37	-3.142e+04	-2.800e+04	3055.48	-		
1.086e+04	121	1.93	3.88	-2.96	-0.91	1.83	-3.14	370.75	-1.988e+04	-1.986e+04	352.29	611.16	-	
3006.73	129	2.14	18.24	-1.66	18.12	-1.54	-1.54	92.34	-2.146e+04	-2.103e+04	-335.65	-		
105	1	63	22.55	232.08	-283.42	-185.30	133.96	-202.37	1.125e+05	-1.404e+05	-1.350e+05	1.071e+05	-	
3.637e+04														

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

9458.27	72	21.30	176.35	-228.51	-195.12	142.96	-111.37	5.799e+04	-1.741e+05	-1.737e+05	5.761e+04	-	
1.288e+04	122	18.46	108.69	-150.16	-119.61	78.14	-83.51	6.213e+04	-1.454e+05	-1.446e+05	6.133e+04	-	
4.369e+04	130	18.53	132.42	-165.32	-92.57	59.67	-127.94	9.805e+04	-1.143e+05	-1.049e+05	8.864e+04	-	
3.077e+04	105 <sup>3</sup>	63	19.08	196.37	-239.81	-156.79	113.35	-171.23	9.517e+04	-1.188e+05	-1.143e+05	9.065e+04	-
8003.15	72	18.03	149.22	-193.36	-165.10	120.97	-94.24	4.907e+04	-1.473e+05	-1.470e+05	4.874e+04	-	
1.090e+04	122	15.62	91.97	-127.06	-101.21	66.12	-70.67	5.258e+04	-1.230e+05	-1.223e+05	5.190e+04	-	
3.697e+04	130	15.68	112.05	-139.89	-78.33	50.49	-108.25	8.296e+04	-9.675e+04	-8.879e+04	7.501e+04	-	
2.792e+04	105 <sup>23</sup>	63	17.56	218.48	-213.59	-160.29	165.18	-142.08	8.621e+04	-1.081e+05	-1.040e+05	8.212e+04	-
7298.78	72	16.53	167.10	-176.21	-162.52	153.41	-67.18	4.424e+04	-1.340e+05	-1.337e+05	4.394e+04	-	
1.001e+04	122	14.30	103.66	-113.99	-102.60	92.27	-48.47	4.722e+04	-1.120e+05	-1.113e+05	4.659e+04	-	
3.354e+04	130	14.38	128.92	-122.21	-85.74	92.45	-88.48	7.476e+04	-8.821e+04	-8.098e+04	6.754e+04	-	
2.795e+04	105 <sup>55</sup>	63	17.43	193.14	-215.45	-149.41	127.10	-150.41	8.640e+04	-1.080e+05	-1.039e+05	8.230e+04	-
7284.57	72	16.44	147.19	-175.31	-154.90	126.79	-78.51	4.447e+04	-1.340e+05	-1.337e+05	4.417e+04	-	
9948.32	122	14.24	90.66	-114.21	-96.11	72.56	-58.14	4.757e+04	-1.119e+05	-1.113e+05	4.695e+04	-	
3.358e+04	130	14.30	111.43	-124.34	-76.83	63.92	-94.57	7.517e+04	-8.805e+04	-8.082e+04	6.794e+04	-	
2.798e+04	105 <sup>69</sup>	63	17.35	178.52	-218.01	-142.54	103.04	-155.67	8.652e+04	-1.080e+05	-1.039e+05	8.241e+04	-
7275.59	72	16.39	135.66	-175.78	-150.09	109.97	-85.67	4.461e+04	-1.339e+05	-1.336e+05	4.431e+04	-	
9908.71	122	14.20	83.61	-115.51	-92.01	60.11	-64.24	4.780e+04	-1.118e+05	-1.112e+05	4.718e+04	-	
3.361e+04	130	14.26	101.86	-127.17	-71.21	45.90	-98.41	7.542e+04	-8.796e+04	-8.072e+04	6.819e+04	-	
6.482e+04	106 <sup>1</sup>	130	18.48	130.11	-170.33	-67.33	27.11	-142.61	9.689e+04	-1.146e+05	-9.243e+04	7.469e+04	-
3.811e+04	122	18.62	106.37	-147.77	-97.70	56.29	-101.08	6.311e+04	-1.463e+05	-1.392e+05	5.593e+04	-	
2.842e+04	123	16.49	73.95	-105.79	-61.03	29.20	-77.72	6.123e+04	-1.276e+05	-1.233e+05	5.685e+04	-	
5.737e+04	131	15.41	88.42	-110.21	-30.57	8.78	-97.35	8.187e+04	-9.673e+04	-7.586e+04	6.100e+04	-	
5.485e+04	106 <sup>3</sup>	130	15.64	110.10	-144.13	-56.97	22.94	-120.67	8.198e+04	-9.699e+04	-7.821e+04	6.320e+04	-
3.225e+04	122	15.76	90.00	-125.04	-82.67	47.63	-85.53	5.340e+04	-1.238e+05	-1.177e+05	4.732e+04	-	
2.405e+04	123	13.95	62.57	-89.51	-51.64	24.70	-65.77	5.181e+04	-1.080e+05	-1.043e+05	4.811e+04	-	
4.854e+04	131	13.04	74.82	-93.25	-25.87	7.43	-82.37	6.927e+04	-8.185e+04	-6.419e+04	5.162e+04	-	
4.997e+04	106 <sup>21</sup>	130	14.33	122.85	-113.25	-68.12	77.72	-92.83	7.388e+04	-8.869e+04	-7.152e+04	5.671e+04	-
2.946e+04	122	14.41	101.89	-99.79	-85.20	87.29	-52.26	4.782e+04	-1.131e+05	-1.075e+05	4.223e+04	-	
2.237e+04	123	12.78	68.55	-68.74	-57.81	57.63	-37.15	4.614e+04	-9.898e+04	-9.545e+04	4.261e+04	-	
4.408e+04	131	11.92	82.09	-73.31	-41.36	50.14	-62.80	6.222e+04	-7.471e+04	-5.863e+04	4.614e+04	-	
4.990e+04	106 <sup>53</sup>	130	14.26	107.24	-122.48	-58.12	42.87	-103.17	7.428e+04	-8.837e+04	-7.126e+04	5.717e+04	-
2.937e+04	122	14.36	87.93	-106.64	-79.04	60.33	-67.89	4.826e+04	-1.128e+05	-1.072e+05	4.271e+04	-	
2.206e+04	123	12.72	59.59	-74.66	-51.15	36.08	-51.02	4.673e+04	-9.849e+04	-9.506e+04	4.330e+04	-	
4.411e+04	131	11.88	71.78	-78.65	-30.43	23.56	-70.20	6.268e+04	-7.452e+04	-5.846e+04	4.662e+04	-	
4.986e+04	106 <sup>69</sup>	130	14.22	100.09	-131.03	-51.79	20.86	-109.70	7.453e+04	-8.817e+04	-7.110e+04	5.746e+04	-
	122	14.33	81.82	-113.67	-75.15	43.30	-77.76	4.854e+04	-1.126e+05	-1.070e+05	4.302e+04	-	



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

2.784e+04	125	7.89	29.09	-39.14	-19.94	9.89	-30.68	3.225e+04	-5.883e+04	-4.934e+04	2.275e+04	-
3.809e+04	133	7.75	36.73	-39.62	1.17	-4.06	-38.09	4.035e+04	-5.009e+04	-2.925e+04	1.951e+04	-
4.764e+04	108 69 132	9.78	43.28	-57.35	3.13	-17.20	-49.27	5.226e+04	-6.227e+04	-3.678e+04	2.677e+04	-
2.567e+04	124	9.00	44.30	-55.98	-15.51	3.83	-49.20	2.888e+04	-7.335e+04	-6.644e+04	2.197e+04	-
2.782e+04	125	7.87	29.02	-41.30	-14.26	1.98	-34.21	3.255e+04	-5.856e+04	-4.909e+04	2.307e+04	-
3.806e+04	133	7.73	37.91	-43.78	9.06	-14.93	-39.04	4.074e+04	-4.983e+04	-2.909e+04	2.000e+04	-
5.245e+04	109 1 133	10.11	42.09	-51.95	12.70	-22.57	-43.59	5.280e+04	-6.595e+04	-3.441e+04	2.126e+04	-
3.956e+04	125	10.24	33.22	-50.17	-11.65	-5.30	-41.57	4.220e+04	-7.679e+04	-6.174e+04	2.714e+04	-
3.488e+04	126	9.15	25.20	-35.08	-10.42	0.54	-29.64	4.055e+04	-6.643e+04	-5.349e+04	2.761e+04	-
4.825e+04	134	9.09	34.12	-42.57	18.88	-27.33	-30.60	5.717e+04	-5.060e+04	-2.071e+04	2.728e+04	-
4.438e+04	109 3 133	8.55	35.61	-43.96	10.75	-19.10	-36.88	4.467e+04	-5.581e+04	-2.912e+04	1.799e+04	-
3.347e+04	125	8.67	28.11	-42.45	-9.85	-4.49	-35.18	3.570e+04	-6.498e+04	-5.224e+04	2.296e+04	-
2.952e+04	126	7.74	21.32	-29.69	-8.82	0.46	-25.08	3.431e+04	-5.621e+04	-4.526e+04	2.336e+04	-
4.082e+04	134	7.69	28.87	-36.02	15.97	-23.13	-25.89	4.837e+04	-4.281e+04	-1.753e+04	2.309e+04	-
4.037e+04	109 21 133	7.83	34.90	-35.49	-10.55	9.95	-33.67	3.963e+04	-5.140e+04	-2.691e+04	1.514e+04	-
3.051e+04	125	7.93	27.69	-36.06	-25.17	16.80	-24.00	3.163e+04	-5.972e+04	-4.804e+04	1.995e+04	-
2.668e+04	126	7.08	21.81	-30.55	-23.33	14.59	-18.06	3.029e+04	-5.171e+04	-4.184e+04	2.042e+04	-
3.678e+04	134	6.96	25.86	-27.12	-5.75	4.49	-25.99	4.198e+04	-3.961e+04	-1.647e+04	1.884e+04	-
4.035e+04	109 53 133	7.79	31.42	-36.30	1.90	-6.79	-33.58	4.023e+04	-5.099e+04	-2.664e+04	1.588e+04	-
3.046e+04	125	7.90	24.83	-36.06	-15.23	4.00	-28.89	3.214e+04	-5.932e+04	-4.770e+04	2.052e+04	-
2.677e+04	126	7.05	19.17	-27.22	-13.95	5.90	-20.96	3.084e+04	-5.134e+04	-4.142e+04	2.092e+04	-
3.698e+04	134	6.98	23.82	-28.30	6.67	-11.15	-24.49	4.320e+04	-3.919e+04	-1.614e+04	2.016e+04	-
4.034e+04	109 69 133	7.77	32.37	-39.96	9.77	-17.36	-33.53	4.061e+04	-5.073e+04	-2.647e+04	1.635e+04	-
3.043e+04	125	7.88	25.55	-38.59	-8.96	-4.08	-31.98	3.246e+04	-5.907e+04	-4.749e+04	2.088e+04	-
2.683e+04	126	7.03	19.39	-26.99	-8.02	0.41	-22.80	3.119e+04	-5.110e+04	-4.115e+04	2.124e+04	-
3.711e+04	134	6.99	26.24	-32.75	14.52	-21.03	-23.54	4.398e+04	-3.892e+04	-1.593e+04	2.099e+04	-
4.123e+04	110 1 134	8.95	27.63	-37.52	16.22	-26.11	-24.76	4.229e+04	-6.409e+04	-4.450e+04	2.270e+04	-
4.652e+04	126	9.64	16.57	-30.14	-7.14	-6.43	-23.35	5.676e+04	-5.753e+04	-3.358e+04	3.281e+04	-
5961.27	127	5.84	33.47	-21.76	-2.69	14.40	-26.26	-323.70	-6.022e+04	-5.962e+04	-923.01	-
8.787e+04	135	15.49	26.55	-46.20	26.32	-45.97	-4.09	1.409e+05	-3.484e+04	5.281e+04	5.324e+04	-
3.489e+04	110 3 134	7.57	23.38	-31.75	13.72	-22.09	-20.95	3.578e+04	-5.423e+04	-3.765e+04	1.921e+04	-
3.936e+04	126	8.15	14.02	-25.50	-6.04	-5.44	-19.76	4.803e+04	-4.868e+04	-2.842e+04	2.776e+04	-
5044.15	127	4.94	28.32	-18.41	-2.27	12.18	-22.22	-273.90	-5.095e+04	-5.045e+04	-781.01	-
7.435e+04	135	13.10	22.46	-39.09	22.27	-38.89	-3.46	1.192e+05	-2.948e+04	4.469e+04	4.505e+04	-
3.178e+04	110 22 134	7.10	39.43	-42.16	36.69	-39.43	-14.69	3.379e+04	-4.987e+04	-3.523e+04	1.915e+04	-
3.682e+04	126	7.49	7.85	-24.70	-0.51	-16.34	-14.22	4.565e+04	-4.379e+04	-2.445e+04	2.631e+04	-
	127	4.42	43.52	-15.32	15.09	13.11	-29.41	-1792.01	-4.671e+04	-4.649e+04	-2017.17	-

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

3172.38																				
7.167e+04	135	12.83	20.09	-62.74	15.47	-58.12	19.01	1.166e+05	-2.679e+04	4.497e+04	4.480e+04									
110 54	134	6.93	27.34	-33.06	21.85	-27.57	-17.36	3.301e+04	-4.951e+04	-3.462e+04	1.812e+04									
3.174e+04	126	7.44	10.31	-23.23	-3.56	-9.36	-16.51	4.443e+04	-4.408e+04	-2.530e+04	2.565e+04									
3.619e+04	127	4.45	32.26	-15.82	4.58	11.86	-23.76	-855.72	-4.646e+04	-4.610e+04	-1216.14									
4038.39	135	12.25	18.86	-44.64	18.40	-44.17	5.43	1.115e+05	-2.680e+04	4.231e+04	4.244e+04									
6.917e+04	134	6.89	21.25	-28.86	12.48	-20.08	-19.05	3.253e+04	-4.930e+04	-3.423e+04	1.746e+04									
110 69	126	7.41	12.75	-23.18	-5.49	-4.95	-17.96	4.366e+04	-4.426e+04	-2.583e+04	2.524e+04									
3.172e+04	127	4.49	25.74	-16.74	-2.07	11.08	-20.20	-249.00	-4.632e+04	-4.586e+04	-710.00									
3.578e+04	135	11.91	20.42	-35.54	20.24	-35.36	-3.15	1.084e+05	-2.680e+04	4.062e+04	4.095e+04									
4585.59	135	5.69	48.17	15.63	33.41	30.39	16.20	5.542e+04	-6941.97	4.834e+04	136.47									
6.759e+04	127	9.01	14.13	-46.84	-1.94	-30.77	-26.86	3.415e+04	-7.128e+04	-5.800e+04	2.086e+04									
111 1	128	4.68	14.50	-0.03	14.33	0.13	-1.54	2.676e+04	-2.909e+04	-2.470e+04	2.237e+04									
1.978e+04	136	5.97	15.07	-6.57	6.62	1.88	-10.56	1.357e+04	-5.369e+04	-3.360e+04	-6514.42									
3.499e+04	135	4.82	40.76	13.23	28.27	25.72	13.71	4.689e+04	-5873.97	4.090e+04	115.47									
1.503e+04	127	7.62	11.96	-39.63	-1.64	-26.03	-22.73	2.890e+04	-6.032e+04	-4.907e+04	1.765e+04									
3.078e+04	128	3.96	12.27	-0.03	12.13	0.11	-1.31	2.264e+04	-2.461e+04	-2.090e+04	1.893e+04									
111 3	136	5.05	12.75	-5.56	5.60	1.59	-8.93	1.148e+04	-4.543e+04	-2.843e+04	-5512.20									
1.674e+04	135	4.51	17.01	-5.98	-5.57	16.60	-3.04	4.565e+04	-1884.92	4.235e+04	1411.07									
2.961e+04	127	7.11	8.31	-18.56	2.10	-12.35	-11.33	2.597e+04	-5.739e+04	-4.605e+04	1.463e+04									
1.272e+04	128	3.50	1.88	-7.86	-2.96	-3.02	-4.87	2.087e+04	-2.102e+04	-1.794e+04	1.779e+04									
2.604e+04	136	4.75	18.40	0.71	15.65	3.46	-6.41	1.040e+04	-4.337e+04	-2.784e+04	-5128.58									
111 6	135	4.41	24.56	9.79	13.60	20.75	6.46	4.373e+04	-3934.82	3.919e+04	610.70									
1.208e+04	127	7.00	9.87	-29.25	-0.10	-19.28	-17.05	2.615e+04	-5.582e+04	-4.517e+04	1.550e+04									
2.858e+04	128	3.55	6.51	-2.00	5.61	-1.11	-2.61	2.070e+04	-2.185e+04	-1.859e+04	1.744e+04									
1.093e+04	136	4.65	13.93	-2.53	9.18	2.23	-7.46	1.042e+04	-4.210e+04	-2.662e+04	-5056.59									
2.437e+04	135	4.38	37.06	12.02	25.70	23.38	12.46	4.263e+04	-5339.98	3.719e+04	104.98									
111 38	127	6.93	10.87	-36.03	-1.49	-23.67	-20.66	2.627e+04	-5.483e+04	-4.461e+04	1.605e+04									
1.400e+04	128	3.60	11.15	-0.03	11.02	0.10	-1.19	2.059e+04	-2.237e+04	-1.900e+04	1.721e+04									
2.756e+04	136	4.59	11.59	-5.05	5.09	1.45	-8.12	1.044e+04	-4.130e+04	-2.585e+04	-5011.09									
1.132e+04	136	4.60	17.00	9.35	17.00	9.35	0.04	2.032e+04	-3.428e+04	-1.060e+04	-3353.27									
2.394e+04	128	5.28	6.79	-9.96	6.61	-9.78	-1.75	1.949e+04	-4.221e+04	-3.549e+04	1.278e+04									
111 69	129	2.65	9.17	2.39	8.03	3.53	-2.54	-139.96	-2.739e+04	-2.734e+04	-194.66									
1.522e+04	137	1.93	13.96	-3.18	13.58	-2.80	-2.51	1693.05	-1.869e+04	-1.709e+04	90.96									
2.692e+04	136	3.89	14.39	7.92	14.39	7.92	0.03	1.719e+04	-2.900e+04	-8971.10	-2837.38									
1.156e+04	128	4.47	5.75	-8.43	5.59	-8.28	-1.48	1.649e+04	-3.572e+04	-3.003e+04	1.081e+04									
2.368e+04	129	2.24	7.76	2.02	6.79	2.99	-2.15	-118.42	-2.318e+04	-2.313e+04	-164.72									
112 1																				
2.706e+04																				
1.922e+04																				
1219.79																				
5485.91																				
112 3																				
2.289e+04																				
1.626e+04																				
1032.13																				

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

4641.92	137	1.63	11.81	-2.69	11.49	-2.37	-2.12	1432.58-1.582e+04-1.446e+04	76.97	-
112 24	136	3.62	32.29	7.01	31.14	8.16	5.27	1.582e+04-2.663e+04 -7576.44	-3234.27	-
2.112e+04	128	4.16	26.00	-13.12	25.56	-12.69	-4.12	1.556e+04-3.239e+04-2.717e+04	1.033e+04	-
1.494e+04	129	2.11	28.55	2.15	27.83	2.86	-4.29	-182.78-2.096e+04-2.093e+04	-217.40	847.46
4198.13	137	1.51	27.56	-2.77	27.55	-2.76	0.56	1408.84-1.386e+04-1.260e+04	151.15	-
112 56	136	3.57	20.40	7.24	20.07	7.57	2.06	1.570e+04-2.647e+04 -7931.32	-2832.99	-
2.093e+04	128	4.10	13.27	-9.78	13.01	-9.52	-2.42	1.521e+04-3.244e+04-2.725e+04	1.002e+04	-
1.484e+04	129	2.07	15.22	2.12	14.56	2.77	-2.86	-136.82-2.103e+04-2.099e+04	-175.94	903.13
4211.49	137	1.49	17.12	-2.44	17.07	-2.39	-0.96	1343.40-1.418e+04-1.294e+04	101.40	-
112 69	136	3.54	13.08	7.20	13.08	7.20	0.03	1.563e+04-2.637e+04 -8155.55	-2579.44	-
2.081e+04	128	4.06	5.23	-7.67	5.08	-7.52	-1.35	1.499e+04-3.247e+04-2.730e+04	9827.67	-
1.478e+04	129	2.04	7.05	1.84	6.18	2.71	-1.95	-107.66-2.107e+04-2.103e+04	-149.74	938.30
4219.93	137	1.48	10.74	-2.44	10.45	-2.16	-1.93	1302.34-1.438e+04-1.315e+04	69.97	-
113 1	54	25.25	293.98	-345.38	-125.22	73.82	-303.80	1.886e+05-9.146e+04-7.901e+04	1.761e+05	-
5.773e+04	63	22.68	232.95	-281.46	-198.34	149.83	-189.33	1.151e+05-1.393e+05-1.360e+05	1.118e+05	-
2.893e+04	130	18.39	132.35	-173.56	-108.86	67.65	-124.92	9.609e+04-1.142e+05-1.075e+05	8.947e+04	-
3.670e+04	138	19.40	144.70	-182.88	-49.80	11.62	-160.89	1.479e+05-7.062e+04-4.545e+04	1.227e+05	-
6.976e+04	113 3	21.36	248.75	-292.25	-105.96	62.46	-257.06	1.596e+05-7.739e+04-6.685e+04	1.490e+05	-
4.885e+04	63	19.19	197.11	-238.15	-167.83	126.78	-160.20	9.742e+04-1.179e+05-1.151e+05	9.460e+04	-
2.448e+04	130	15.56	111.99	-146.85	-92.11	57.24	-105.70	8.130e+04-9.659e+04-9.099e+04	7.571e+04	-
3.105e+04	138	16.41	122.44	-154.74	-42.14	9.83	-136.13	1.251e+05-5.976e+04-3.846e+04	1.038e+05	-
5.903e+04	113 23	19.72	271.97	-253.50	-119.73	138.19	-228.91	1.448e+05-7.036e+04-6.077e+04	1.352e+05	-
4.439e+04	63	17.66	220.96	-212.59	-169.50	177.86	-129.72	8.815e+04-1.073e+05-1.048e+05	8.561e+04	-
2.213e+04	130	14.28	126.96	-128.56	-97.90	96.30	-83.04	7.341e+04-8.808e+04-8.298e+04	6.831e+04	-
2.824e+04	138	15.04	145.92	-131.67	-56.10	70.34	-123.56	1.124e+05-5.464e+04-3.549e+04	9.329e+04	-
5.322e+04	113 55	19.54	242.71	-259.79	-105.39	88.30	-231.84	1.450e+05-7.036e+04-6.077e+04	1.354e+05	-
4.440e+04	63	17.53	194.51	-214.13	-159.12	139.50	-139.47	8.840e+04-1.072e+05-1.047e+05	8.585e+04	-
2.220e+04	130	14.20	110.64	-130.69	-89.22	69.18	-91.04	7.372e+04-8.792e+04-8.282e+04	6.863e+04	-
2.823e+04	138	14.97	123.43	-135.91	-45.19	32.72	-123.68	1.132e+05-5.445e+04-3.517e+04	9.396e+04	-
5.349e+04	113 69	19.42	226.14	-265.68	-96.33	56.78	-233.69	1.451e+05-7.035e+04-6.078e+04	1.355e+05	-
4.441e+04	63	17.45	179.19	-216.50	-152.57	115.25	-145.64	8.856e+04-1.072e+05-1.046e+05	8.600e+04	-
2.225e+04	130	14.14	101.80	-133.50	-83.74	52.04	-96.09	7.391e+04-8.781e+04-8.272e+04	6.883e+04	-
2.823e+04	138	14.92	111.31	-140.68	-38.31	8.94	-123.76	1.137e+05-5.433e+04-3.496e+04	9.438e+04	-
5.366e+04	114 1	18.63	150.77	-190.44	-35.38	-4.29	-169.90	1.391e+05-7.014e+04-3.647e+04	1.055e+05	-
7.689e+04	130	18.80	126.16	-170.90	-91.26	46.52	-131.59	1.013e+05-1.142e+05-1.012e+05	8.825e+04	-
5.141e+04	131	15.17	87.59	-114.75	-52.72	25.56	-93.30	7.841e+04-9.689e+04-8.476e+04	6.628e+04	-
4.450e+04	139	15.34	90.48	-121.14	-10.63	-20.03	-105.70	1.183e+05-5.580e+04-2.012e+04	8.264e+04	-
7.028e+04	114 3	15.77	127.58	-161.14	-29.94	-3.63	-143.76	1.177e+05-5.935e+04-3.086e+04	8.924e+04	-
6.506e+04										



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

4.350e+04	130	15.90	106.75	-144.61	-77.22	39.36	-111.34	8.572e+04	-9.667e+04	-8.562e+04	7.467e+04	-
3.765e+04	131	12.84	74.12	-97.10	-44.61	21.62	-78.94	6.635e+04	-8.199e+04	-7.172e+04	5.608e+04	-
5.947e+04	139	12.98	76.56	-102.50	-9.00	-16.95	-89.44	1.001e+05	-4.722e+04	-1.702e+04	6.992e+04	-
5.892e+04	114 23 138	14.50	147.19	-138.79	-45.02	53.42	-134.25	1.064e+05	-5.436e+04	-2.863e+04	8.063e+04	-
3.943e+04	130	14.57	124.60	-127.06	-85.88	83.42	-93.10	7.710e+04	-8.814e+04	-7.813e+04	6.708e+04	-
3.432e+04	131	11.77	82.30	-85.18	-56.33	53.45	-63.24	5.992e+04	-7.477e+04	-6.536e+04	5.051e+04	-
5.371e+04	139	11.86	92.26	-85.26	-23.63	30.63	-84.51	8.956e+04	-4.348e+04	-1.621e+04	6.229e+04	-
5.906e+04	114 55 138	14.40	126.96	-142.40	-34.11	18.66	-132.07	1.068e+05	-5.411e+04	-2.828e+04	8.093e+04	-
3.950e+04	130	14.50	106.78	-128.82	-76.27	54.23	-98.08	7.760e+04	-8.798e+04	-7.795e+04	6.757e+04	-
3.427e+04	131	11.71	72.18	-86.10	-46.66	32.74	-68.46	6.016e+04	-7.462e+04	-6.526e+04	5.080e+04	-
5.393e+04	139	11.82	77.09	-88.84	-14.16	2.42	-82.55	9.045e+04	-4.314e+04	-1.576e+04	6.307e+04	-
5.915e+04	114 69 138	14.33	115.98	-146.49	-27.21	-3.30	-130.69	1.070e+05	-5.395e+04	-2.806e+04	8.112e+04	-
3.955e+04	130	14.46	97.05	-131.46	-70.20	35.79	-101.22	7.792e+04	-8.788e+04	-7.784e+04	6.788e+04	-
3.423e+04	131	11.67	67.38	-88.27	-40.55	19.66	-71.77	6.032e+04	-7.453e+04	-6.520e+04	5.098e+04	-
5.407e+04	139	11.80	69.60	-93.18	-8.18	-15.41	-81.31	9.102e+04	-4.292e+04	-1.548e+04	6.357e+04	-
7.122e+04	115 1 139	14.38	92.20	-113.61	-2.76	-18.64	-102.60	1.066e+05	-5.685e+04	-1.523e+04	6.503e+04	-
5.178e+04	131	15.48	79.27	-113.49	-42.28	8.06	-93.03	8.264e+04	-9.702e+04	-8.059e+04	6.622e+04	-
4.376e+04	132	12.47	58.90	-78.71	-23.71	3.89	-67.41	6.536e+04	-8.003e+04	-6.538e+04	5.072e+04	-
5.893e+04	140	11.83	67.86	-81.72	8.71	-22.57	-73.13	8.184e+04	-5.495e+04	-2.128e+04	4.816e+04	-
6.026e+04	115 3 139	12.17	78.02	-96.13	-2.34	-15.77	-86.81	9.024e+04	-4.810e+04	-1.289e+04	5.503e+04	-
4.381e+04	131	13.09	67.07	-96.03	-35.78	6.82	-78.72	6.993e+04	-8.209e+04	-6.819e+04	5.603e+04	-
3.703e+04	132	10.55	49.84	-66.60	-20.06	3.29	-57.04	5.531e+04	-6.771e+04	-5.532e+04	4.291e+04	-
4.986e+04	140	10.01	57.42	-69.15	7.37	-19.10	-61.88	6.925e+04	-4.650e+04	-1.801e+04	4.075e+04	-
5.453e+04	115 23 139	11.16	90.55	-82.89	-18.00	25.67	-83.93	8.142e+04	-4.408e+04	-1.237e+04	4.971e+04	-
3.989e+04	131	11.98	76.60	-83.20	-49.40	42.80	-65.26	6.279e+04	-7.486e+04	-6.212e+04	5.006e+04	-
3.368e+04	132	9.65	54.17	-58.74	-34.95	30.38	-46.04	4.963e+04	-6.176e+04	-5.042e+04	3.829e+04	-
4.528e+04	140	9.17	63.42	-58.50	-10.88	15.79	-59.49	6.214e+04	-4.269e+04	-1.669e+04	3.613e+04	-
5.469e+04	115 55 139	11.10	77.44	-84.56	-8.27	1.15	-80.86	8.180e+04	-4.386e+04	-1.197e+04	4.990e+04	-
3.985e+04	131	11.93	65.89	-84.58	-39.06	20.37	-69.12	6.327e+04	-7.472e+04	-6.204e+04	5.060e+04	-
3.367e+04	132	9.62	47.61	-58.73	-24.71	13.60	-49.60	5.003e+04	-6.164e+04	-5.034e+04	3.873e+04	-
4.531e+04	140	9.12	55.24	-59.86	-0.10	-4.52	-57.51	6.264e+04	-4.243e+04	-1.649e+04	3.670e+04	-
5.478e+04	115 69 139	11.06	70.93	-87.39	-2.12	-14.34	-78.92	8.204e+04	-4.373e+04	-1.171e+04	5.002e+04	-
3.983e+04	131	11.90	60.97	-87.30	-32.52	6.20	-71.57	6.357e+04	-7.463e+04	-6.199e+04	5.094e+04	-
3.366e+04	132	9.59	45.30	-60.55	-18.24	2.99	-51.85	5.028e+04	-6.156e+04	-5.029e+04	3.901e+04	-
4.533e+04	140	9.10	52.20	-62.86	6.70	-17.36	-56.26	6.295e+04	-4.227e+04	-1.637e+04	3.705e+04	-
6.243e+04	116 1 140	11.93	61.27	-73.82	11.81	-24.36	-65.08	8.240e+04	-5.600e+04	-1.665e+04	4.306e+04	-
	132	12.29	53.99	-77.88	-18.93	-4.97	-65.57	6.420e+04	-7.929e+04	-6.157e+04	4.647e+04	-





**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

2.671e+04	134	6.83	23.60	-38.37	-2.72	-12.05	-30.63	3.886e+04	-4.180e+04	-3.170e+04	2.875e+04	-
3.427e+04	142	6.16	29.99	-30.47	10.35	-10.82	-28.31	3.946e+04	-3.246e+04	-7400.84	1.440e+04	-
118 1	142	8.27	33.12	-43.66	4.73	-15.28	-37.06	4.726e+04	-4.963e+04	-1.782e+04	1.545e+04	-
4.550e+04	134	7.50	28.76	-41.24	10.24	-22.72	-30.88	5.191e+04	-3.664e+04	-1.903e+04	3.430e+04	-
3.535e+04	135	12.99	27.05	-81.58	-22.73	-31.81	-54.12	7.227e+04	-8.203e+04	-7.283e+04	6.307e+04	-
3.653e+04	143	5.69	25.77	1.91	23.53	4.15	-6.96	3.220e+04	-3.575e+04	-6275.92	2717.98	-
3.368e+04	142	7.00	28.02	-36.94	4.00	-12.93	-31.36	3.999e+04	-4.200e+04	-1.508e+04	1.307e+04	-
118 3	134	6.35	24.34	-34.90	8.67	-19.22	-26.13	4.393e+04	-3.101e+04	-1.610e+04	2.902e+04	-
3.850e+04	135	11.00	22.88	-69.03	-19.23	-26.92	-45.80	6.115e+04	-6.941e+04	-6.162e+04	5.337e+04	-
2.991e+04	143	4.81	21.81	1.62	19.91	3.52	-5.89	2.724e+04	-3.025e+04	-5310.39	2299.83	-
3.091e+04	142	6.46	22.77	-21.87	11.56	-10.67	-19.36	3.661e+04	-3.987e+04	-1.470e+04	1.145e+04	-
2.850e+04	134	5.70	11.41	-29.54	-2.67	-15.47	-19.45	4.016e+04	-2.706e+04	-1.307e+04	2.617e+04	-
118 6	135	10.55	22.67	-37.47	10.14	-24.93	-24.43	5.662e+04	-6.984e+04	-6.159e+04	4.837e+04	-
3.593e+04	143	4.26	16.45	-3.98	12.96	-0.49	-7.69	2.487e+04	-2.583e+04	-3660.35	2700.36	-
2.729e+04	142	6.40	24.23	-28.86	6.71	-11.33	-24.97	3.645e+04	-3.883e+04	-1.410e+04	1.172e+04	-
2.515e+04	134	5.74	17.90	-30.80	3.79	-16.70	-22.09	4.002e+04	-2.775e+04	-1.403e+04	2.630e+04	-
118 38	135	10.20	20.37	-51.81	-6.79	-24.65	-34.97	5.598e+04	-6.570e+04	-5.818e+04	4.846e+04	-
3.536e+04	143	4.33	18.46	-0.58	16.11	1.77	-6.26	2.481e+04	-2.686e+04	-4375.65	2326.80	-
2.723e+04	142	6.37	25.47	-33.59	3.64	-11.75	-28.51	3.635e+04	-3.818e+04	-1.371e+04	1.189e+04	-
2.931e+04	134	5.77	22.13	-31.72	7.88	-17.48	-23.75	3.993e+04	-2.819e+04	-1.464e+04	2.638e+04	-
2.561e+04	135	10.00	20.80	-62.76	-17.48	-24.47	-41.63	5.559e+04	-6.310e+04	-5.602e+04	4.851e+04	-
118 69	143	4.38	19.82	1.47	18.10	3.20	-5.35	2.477e+04	-2.750e+04	-4827.63	2090.76	-
3.500e+04	143	10.21	24.39	-21.10	22.62	-19.33	-8.79	7.752e+04	-4.353e+04	-2627.79	3.662e+04	-
2.719e+04	135	8.52	37.25	-30.37	-14.00	20.87	-28.97	-2771.57	-8.978e+04	-8.111e+04	-1.144e+04	-
2.810e+04	136	4.02	21.39	-2.64	7.08	11.67	-11.79	2.593e+04	-2.128e+04	1045.81	3608.10	-
2.590e+04	144	3.38	24.57	-17.04	19.41	-11.88	-13.72	3261.07	-3.296e+04	-3.059e+04	898.45	-
119 1	143	8.64	20.63	-17.86	19.14	-16.36	-7.44	6.560e+04	-3.683e+04	-2223.52	3.099e+04	-
5.726e+04	135	7.21	31.52	-25.70	-11.84	17.66	-24.51	-2345.17	-7.596e+04	-6.863e+04	-9677.82	-
2.606e+04	136	3.40	18.10	-2.23	5.99	9.87	-9.98	2.194e+04	-1.800e+04	884.91	3053.01	-
2.357e+04	144	2.86	20.79	-14.42	16.42	-10.05	-11.61	2759.36	-2.789e+04	-2.589e+04	760.22	-
8943.44	143	8.13	11.19	-22.70	11.16	-22.67	1.03	6.212e+04	-3.377e+04	-802.61	2.915e+04	-
119 3	135	7.36	55.22	-15.61	18.01	21.60	-35.37	-1744.18	-7.578e+04	-6.792e+04	-9603.24	-
4.845e+04	136	3.18	10.01	-10.21	-7.58	7.38	-6.80	2.152e+04	-1.604e+04	2521.04	2962.67	-
2.205e+04	144	2.66	31.24	-11.21	25.34	-5.32	-14.68	1599.42	-2.624e+04	-2.471e+04	66.47	-
1.994e+04	143	7.95	15.40	-18.31	14.98	-17.89	-3.75	6.059e+04	-3.359e+04	-1549.47	2.855e+04	-
7567.52	135	6.86	38.05	-19.48	0.38	18.20	-27.35	-1983.78	-7.166e+04	-6.453e+04	-9109.80	-
119 6	136	3.12	13.49	-4.73	0.40	8.36	-8.19	2.055e+04	-1.624e+04	1469.13	2847.95	-
4.554e+04												
2.281e+04												
1.878e+04												
6350.28												
119 38												
4.462e+04												
2.111e+04												





**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

4.239e+04	140	9.40	50.43	-47.45	7.37	-4.40	-48.58	6.556e+04	-4.399e+04	-2.390e+04	4.548e+04	-
4.203e+04	148	8.34	62.48	-94.36	-2.76	-29.12	-77.30	6.199e+04	-3.147e+04	-5156.80	3.568e+04	-
123 40	147	11.46	72.72	-21.89	29.97	20.86	-47.09	1.029e+05	-2.276e+04	6.203e+04	1.807e+04	-
5.883e+04	139	12.89	66.90	-127.38	-17.11	-43.37	-96.25	1.033e+05	-4.425e+04	-3.038e+04	8.944e+04	-
4.307e+04	140	9.31	46.61	-46.16	-0.63	1.09	-46.38	6.539e+04	-4.283e+04	-2.327e+04	4.583e+04	-
4.165e+04	148	8.47	60.64	-79.83	3.57	-22.76	-68.99	6.215e+04	-3.373e+04	-7142.93	3.556e+04	-
4.292e+04	147	11.28	70.63	-34.04	15.03	21.56	-52.23	1.030e+05	-1.961e+04	6.433e+04	1.904e+04	-
123 69	139	12.88	62.12	-113.94	-20.14	-31.69	-87.84	1.028e+05	-4.457e+04	-3.028e+04	8.853e+04	-
5.696e+04	140	9.26	44.71	-45.84	-5.69	4.55	-44.98	6.529e+04	-4.211e+04	-2.286e+04	4.605e+04	-
4.362e+04	148	8.55	59.50	-70.67	7.58	-18.75	-63.74	6.225e+04	-3.516e+04	-8397.89	3.548e+04	-
4.119e+04	148	10.06	68.92	-71.84	16.36	-19.28	-68.09	8.373e+04	-2.760e+04	1.668e+04	3.945e+04	-
4.349e+04	140	12.24	53.02	-75.39	-13.59	-8.77	-64.16	8.420e+04	-5.798e+04	-3.237e+04	5.859e+04	-
124 1	141	9.59	41.76	-54.67	-8.14	-4.77	-48.19	6.376e+04	-4.800e+04	-2.696e+04	4.272e+04	-
5.449e+04	149	8.56	51.71	-57.44	18.13	-23.86	-50.37	6.742e+04	-2.968e+04	4065.48	3.367e+04	-
4.624e+04	148	8.51	58.32	-60.79	13.84	-16.31	-57.61	7.085e+04	-2.336e+04	1.411e+04	3.338e+04	-
124 3	140	10.35	44.86	-63.79	-11.50	-7.42	-54.29	7.125e+04	-4.906e+04	-2.739e+04	4.958e+04	-
4.611e+04	141	8.11	35.34	-46.26	-6.88	-4.03	-40.77	5.395e+04	-4.062e+04	-2.281e+04	3.614e+04	-
4.623e+04	149	7.24	43.76	-48.60	15.34	-20.19	-42.62	5.705e+04	-2.512e+04	3440.02	2.849e+04	-
3.697e+04	148	7.81	64.84	-55.24	-3.36	12.96	-59.49	6.418e+04	-2.140e+04	1.222e+04	3.055e+04	-
3.913e+04	140	9.45	53.23	-56.54	-28.20	24.89	-48.04	6.388e+04	-4.479e+04	-2.522e+04	4.431e+04	-
124 23	141	7.41	40.30	-43.54	-23.24	20.01	-35.91	4.814e+04	-3.733e+04	-2.117e+04	3.197e+04	-
4.180e+04	149	6.62	47.11	-43.15	-3.16	7.12	-44.84	5.093e+04	-2.335e+04	2646.17	2.493e+04	-
4.175e+04	148	7.77	56.55	-54.21	6.41	-4.07	-55.13	6.432e+04	-2.130e+04	1.259e+04	3.043e+04	-
3.347e+04	140	9.43	44.25	-56.07	-17.33	5.50	-48.84	6.442e+04	-4.467e+04	-2.503e+04	4.478e+04	-
3.542e+04	141	7.39	34.08	-41.42	-12.84	5.50	-36.62	4.869e+04	-3.708e+04	-2.090e+04	3.252e+04	-
124 55	149	6.60	41.28	-42.44	7.32	-8.49	-41.11	5.150e+04	-2.303e+04	2941.00	2.553e+04	-
4.187e+04	148	7.74	53.02	-55.27	12.58	-14.83	-52.38	6.441e+04	-2.123e+04	1.283e+04	3.035e+04	-
4.192e+04	140	9.41	40.78	-57.99	-10.46	-6.75	-49.35	6.477e+04	-4.460e+04	-2.490e+04	4.507e+04	-
4.203e+04	141	7.38	32.13	-42.05	-6.26	-3.67	-37.07	4.904e+04	-3.693e+04	-2.074e+04	3.286e+04	-
3.361e+04	149	6.58	39.78	-44.18	13.95	-18.35	-38.75	5.186e+04	-2.283e+04	3127.29	2.590e+04	-
3.557e+04	149	8.30	46.40	-54.21	16.28	-24.09	-46.08	6.566e+04	-2.869e+04	5123.62	3.185e+04	-
125 1	141	9.69	35.16	-52.46	-6.52	-10.78	-43.76	6.538e+04	-4.792e+04	-2.560e+04	4.305e+04	-
4.524e+04	142	8.02	27.88	-37.71	-8.12	-1.71	-32.64	5.099e+04	-4.304e+04	-2.430e+04	3.225e+04	-
4.507e+04	150	7.80	37.68	-43.73	23.74	-29.79	-30.67	6.507e+04	-2.402e+04	5793.68	3.525e+04	-
3.756e+04	149	7.02	39.26	-45.87	13.78	-20.39	-38.99	5.556e+04	-2.427e+04	4335.37	2.695e+04	-
4.204e+04	141	8.20	29.75	-44.39	-5.51	-9.12	-37.03	5.532e+04	-4.055e+04	-2.166e+04	3.643e+04	-
125 3	142	6.79	23.59	-31.91	-6.87	-1.45	-27.62	4.314e+04	-3.641e+04	-2.056e+04	2.729e+04	-
3.828e+04												
3.813e+04												





**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

2.263e+04	152	4.02	13.67	-11.51	-1.99	4.16	-12.21	1.167e+04	-3.396e+04	-1.405e+04	-8247.31	-
127 3	151	6.60	62.40	14.18	42.42	34.16	23.76	4.970e+04	-2.777e+04	3.796e+04	-1.603e+04	-
2.778e+04	143	6.08	12.41	-48.73	-3.24	-33.08	-26.68	3.738e+04	-3.549e+04	-2.894e+04	3.083e+04	-
2.085e+04	144	3.77	19.87	1.68	19.16	2.40	3.53	2.373e+04	-2.096e+04	-1.373e+04	1.650e+04	-
1.645e+04	152	3.40	11.57	-9.74	-1.68	3.52	-10.33	9870.73	-2.873e+04	-1.188e+04	-6978.49	-
1.915e+04	151	6.11	36.07	7.81	16.00	27.88	12.82	4.823e+04	-2.300e+04	3.970e+04	-1.446e+04	-
127 6	143	5.69	15.66	-35.29	7.27	-26.90	-18.90	3.422e+04	-3.399e+04	-2.743e+04	2.766e+04	-
2.313e+04	144	3.36	12.75	-3.01	12.74	-3.00	-0.45	2.208e+04	-1.781e+04	-1.149e+04	1.575e+04	-
2.011e+04	152	3.20	17.85	1.53	14.58	4.80	-6.53	8741.66	-2.775e+04	-1.237e+04	-6638.55	-
1.457e+04	151	5.92	41.42	12.04	25.58	27.88	14.64	4.595e+04	-2.340e+04	3.639e+04	-1.384e+04	-
1.802e+04	143	5.59	8.85	-36.75	-3.41	-24.49	-20.22	3.368e+04	-3.320e+04	-2.683e+04	2.731e+04	-
127 37	144	3.36	10.87	1.40	10.57	1.70	1.66	2.156e+04	-1.848e+04	-1.209e+04	1.516e+04	-
2.391e+04	152	3.15	11.38	-6.69	0.89	3.79	-8.92	8904.74	-2.683e+04	-1.158e+04	-6341.08	-
1.964e+04	151	6.00	56.73	12.89	38.57	31.05	21.60	4.518e+04	-2.524e+04	3.451e+04	-1.457e+04	-
1.467e+04	143	5.53	11.28	-44.30	-2.95	-30.07	-24.26	3.399e+04	-3.227e+04	-2.631e+04	2.803e+04	-
1.767e+04	144	3.43	18.07	1.53	17.42	2.18	3.21	2.157e+04	-1.905e+04	-1.248e+04	1.500e+04	-
127 69	152	3.09	10.52	-8.85	-1.53	3.20	-9.39	8973.39	-2.612e+04	-1.080e+04	-6344.09	-
2.525e+04	152	3.84	17.37	11.13	17.37	11.14	-0.22	1.990e+04	-2.609e+04	34.71	-6221.49	-
1.896e+04	144	4.41	8.28	-10.25	8.18	-10.15	1.31	2.143e+04	-3.069e+04	-2.233e+04	1.307e+04	-
1.496e+04	145	1.55	10.82	4.04	10.70	4.16	-0.90	-404.08	-1.599e+04	-1.599e+04	-404.65	94.27
1.741e+04	153	0.93	12.77	-3.04	11.85	-2.12	-3.70	2687.22	-7897.25	-5838.28	628.25	-
128 1	152	3.25	14.70	9.42	14.69	9.42	-0.18	1.684e+04	-2.207e+04	29.37	-5264.33	-
2.278e+04	144	3.73	7.00	-8.67	6.93	-8.59	1.11	1.813e+04	-2.597e+04	-1.890e+04	1.106e+04	-
1.913e+04	145	1.31	9.16	3.42	9.06	3.52	-0.76	-341.91	-1.353e+04	-1.353e+04	-342.40	79.77
4189.72	153	0.79	10.81	-2.57	10.03	-1.79	-3.13	2273.80	-6682.29	-4940.08	531.59	-
128 3	152	3.05	33.43	8.55	32.07	9.92	5.67	1.556e+04	-2.056e+04	442.92	-5436.42	-
1.927e+04	144	3.47	27.39	-13.56	27.37	-13.55	-0.85	1.700e+04	-2.347e+04	-1.696e+04	1.048e+04	-
1.618e+04	145	1.26	30.89	3.14	30.56	3.48	-3.03	-386.59	-1.213e+04	-1.213e+04	-386.62	-19.45
3545.15	153	0.74	26.14	-2.44	26.13	-2.44	-0.46	2194.66	-5592.67	-3971.90	573.89	-
128 24	152	2.99	20.97	8.72	20.60	9.09	2.09	1.540e+04	-2.025e+04	187.86	-5037.70	-
1.782e+04	144	3.42	14.46	-10.03	14.46	-10.03	0.29	1.668e+04	-2.355e+04	-1.709e+04	1.022e+04	-
1.487e+04	145	1.22	17.06	3.12	16.88	3.31	-1.60	-340.33	-1.223e+04	-1.223e+04	-340.45	36.91
3161.42	153	0.72	15.91	-2.15	15.70	-1.94	-1.93	2115.95	-5887.58	-4289.99	518.36	-
128 56	152	2.95	13.36	8.56	13.36	8.57	-0.17	1.531e+04	-2.007e+04	26.70	-4785.76	-
1.764e+04	144	3.39	6.37	-7.88	6.30	-7.81	1.01	1.648e+04	-2.361e+04	-1.718e+04	1.005e+04	-
1.477e+04	145	1.19	8.33	3.11	8.23	3.20	-0.69	-310.83	-1.230e+04	-1.230e+04	-311.27	72.52
3199.07	153	0.72	9.82	-2.34	9.12	-1.63	-2.85	2067.09	-6074.80	-4490.98	483.27	-
128 69	36	30.02	299.82	-369.28	144.24	-213.71	-282.65	3.096e+05	6771.39	6.102e+04	2.554e+05	-
1.752e+04	45	28.78	329.40	-378.34	10.91	-59.85	-352.09	2.702e+05	-3.395e+04	-9803.18	2.461e+05	-
1.471e+04												
8.223e+04												



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

7.295e+04	146	19.70	157.41	-215.91	-1.60	-56.90	-184.60	1.825e+05	-2.835e+04	963.31	1.532e+05	-	
7.682e+04	154	17.98	172.85	-202.44	84.37	-113.95	-159.31	1.878e+05	1.294e+04	5.865e+04	1.421e+05	-	
129 3	36	25.41	253.69	-312.47	122.05	-180.83	-239.17	2.620e+05	5729.64	5.164e+04	2.161e+05	-	
9.827e+04	45	24.35	278.72	-320.13	9.23	-50.64	-297.93	2.286e+05	-2.873e+04	-8295.00	2.082e+05	-	
6.958e+04	146	16.67	133.20	-182.69	-1.35	-48.14	-156.20	1.544e+05	-2.399e+04	815.11	1.296e+05	-	
6.173e+04	154	15.21	146.26	-171.29	71.39	-96.42	-134.80	1.589e+05	1.095e+04	4.963e+04	1.202e+05	-	
6.501e+04	129 23	36	23.46	265.61	-250.45	93.50	-78.35	-243.30	2.380e+05	4998.05	4.680e+04	1.962e+05	-
8.939e+04	45	22.50	295.15	-264.69	-15.07	45.52	-278.28	2.077e+05	-2.622e+04	-7642.86	1.891e+05	-	
6.325e+04	146	15.31	149.62	-145.87	-24.50	28.25	-145.37	1.390e+05	-2.218e+04	646.07	1.161e+05	-	
5.618e+04	154	14.04	156.32	-133.45	47.44	-24.58	-140.34	1.438e+05	9396.72	4.488e+04	1.083e+05	-	
5.925e+04	129 55	36	23.24	242.63	-269.50	104.20	-131.07	-227.44	2.381e+05	5127.18	4.689e+04	1.963e+05	-
8.936e+04	45	22.28	268.12	-279.41	-0.69	-10.59	-273.72	2.078e+05	-2.616e+04	-7580.39	1.892e+05	-	
6.325e+04	146	15.22	130.27	-156.39	-10.24	-15.88	-143.31	1.398e+05	-2.195e+04	704.25	1.172e+05	-	
5.614e+04	154	13.91	140.41	-145.50	58.14	-63.23	-129.43	1.442e+05	9738.06	4.502e+04	1.089e+05	-	
5.915e+04	129 69	36	23.10	230.63	-284.06	110.95	-164.39	-217.43	2.382e+05	5208.76	4.694e+04	1.965e+05	-
8.934e+04	45	22.14	253.38	-291.03	8.39	-46.04	-270.84	2.079e+05	-2.612e+04	-7540.91	1.893e+05	-	
6.326e+04	146	15.16	121.09	-166.08	-1.23	-43.77	-142.00	1.404e+05	-2.181e+04	741.01	1.179e+05	-	
5.612e+04	154	13.83	132.96	-155.72	64.90	-87.65	-122.54	1.444e+05	9953.30	4.511e+04	1.093e+05	-	
5.910e+04	130 1	154	18.73	168.09	-230.83	62.09	-124.82	-176.21	1.974e+05	1.602e+04	5.479e+04	1.586e+05	-
7.435e+04	146	18.64	159.86	-195.44	7.63	-43.20	-175.82	1.812e+05	-1.109e+04	2.024e+04	1.499e+05	-	
7.101e+04	147	21.47	111.07	-218.52	-9.68	-97.77	-158.80	1.945e+05	-4.848e+04	-3.927e+04	1.853e+05	-	
4.641e+04	155	12.48	106.51	-89.14	45.19	-27.81	-90.76	1.142e+05	-1.811e+04	3.627e+04	5.982e+04	-	
6.510e+04	130 3	154	15.85	142.23	-195.31	52.53	-105.62	-149.10	1.670e+05	1.356e+04	4.636e+04	1.342e+05	-
6.292e+04	146	15.78	135.27	-165.37	6.46	-36.56	-148.77	1.533e+05	-9382.17	1.713e+04	1.268e+05	-	
6.009e+04	147	18.17	93.98	-184.90	-8.19	-82.73	-134.37	1.646e+05	-4.102e+04	-3.323e+04	1.568e+05	-	
3.927e+04	155	10.56	90.13	-75.42	38.24	-23.53	-76.80	9.664e+04	-1.532e+04	3.069e+04	5.062e+04	-	
5.509e+04	130 6	154	14.31	106.16	-170.26	54.89	-118.99	-107.44	1.524e+05	1.105e+04	4.149e+04	1.219e+05	-
5.810e+04	146	14.09	96.42	-149.73	0.69	-53.99	-120.00	1.396e+05	-5734.42	1.841e+04	1.155e+05	-	
5.409e+04	147	17.31	80.87	-152.22	28.26	-99.60	-97.44	1.522e+05	-4.386e+04	-3.606e+04	1.444e+05	-	
3.832e+04	155	9.44	69.66	-67.46	41.75	-39.56	-55.21	8.755e+04	-1.374e+04	2.773e+04	4.607e+04	-	
4.981e+04	130 38	154	14.37	119.71	-174.10	50.52	-104.91	-124.67	1.520e+05	1.183e+04	4.189e+04	1.220e+05	-
5.754e+04	146	14.24	112.59	-150.00	3.86	-41.27	-129.34	1.395e+05	-7446.45	1.667e+04	1.154e+05	-	
5.442e+04	147	16.77	82.30	-160.58	6.38	-84.66	-112.59	1.506e+05	-3.984e+04	-3.247e+04	1.433e+05	-	
3.671e+04	155	9.54	76.65	-67.60	37.47	-28.43	-64.16	8.773e+04	-1.386e+04	2.784e+04	4.604e+04	-	
4.997e+04	130 69	154	14.41	129.30	-177.56	47.76	-96.01	-135.55	1.518e+05	1.233e+04	4.215e+04	1.220e+05	-
5.720e+04	146	14.34	122.97	-150.34	5.87	-33.23	-135.25	1.394e+05	-8529.25	1.557e+04	1.153e+05	-	
5.462e+04	147	16.52	85.44	-168.09	-7.44	-75.21	-122.15	1.496e+05	-3.729e+04	-3.021e+04	1.425e+05	-	



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

2.711e+04	157	5.30	44.00	-43.38	12.29	-11.67	-42.01	4.850e+04	-7608.25	1.323e+04	2.767e+04	-
132 69	156	6.51	56.02	-66.18	22.19	-32.35	-54.68	6.491e+04	-584.94	2.087e+04	4.345e+04	-
3.074e+04	148	7.10	53.49	-60.06	-4.99	-1.58	-56.75	5.726e+04-2.164e+04	-3759.89	3.938e+04	-	
3.303e+04	149	6.36	35.05	-45.44	-2.51	-7.88	-40.16	5.163e+04-2.002e+04	-3033.03	3.464e+04	-	
3.047e+04	157	5.29	43.42	-45.65	19.09	-21.32	-39.68	4.879e+04	-7361.57	1.341e+04	2.802e+04	-
2.711e+04	157	6.94	49.64	-59.45	19.36	-29.17	-48.85	6.507e+04	-8463.70	1.805e+04	3.856e+04	-
133 1	149	8.11	41.35	-54.68	-0.64	-12.68	-47.63	6.523e+04-2.670e+04	-5925.75	4.445e+04	-	
3.531e+04	150	7.04	32.38	-52.28	-0.45	-19.45	-41.25	5.726e+04-2.322e+04-1.052e+04	4.456e+04	-		
3.845e+04	158	5.58	43.41	-41.88	18.57	-17.05	-38.75	4.901e+04-1.150e+04	1.414e+04	2.336e+04	-	
2.934e+04	157	5.87	42.00	-50.30	16.38	-24.68	-41.33	5.506e+04	-7161.59	1.527e+04	3.263e+04	-
2.990e+04	149	6.86	34.99	-46.26	-0.55	-10.73	-40.31	5.519e+04-2.260e+04	-5014.10	3.761e+04	-	
133 3	150	5.96	27.40	-44.24	-0.38	-16.46	-34.91	4.845e+04-1.964e+04	-8898.32	3.770e+04	-	
2.988e+04	158	4.72	36.73	-35.44	15.71	-14.42	-32.79	4.147e+04	-9731.90	1.197e+04	1.977e+04	-
3.254e+04	157	5.38	43.44	-43.43	-2.43	2.44	-43.36	4.923e+04	-7228.31	1.333e+04	2.867e+04	-
2.482e+04	149	6.27	36.45	-39.94	-18.32	14.83	-34.41	4.938e+04-2.111e+04	-5059.05	3.333e+04	-	
2.530e+04	150	5.42	25.91	-37.33	-20.32	8.91	-28.04	4.255e+04-1.866e+04	-8486.71	3.237e+04	-	
133 23	158	4.31	35.64	-33.42	-1.24	3.46	-34.45	3.686e+04	-9645.79	1.007e+04	1.714e+04	-
2.717e+04	157	5.36	38.87	-43.49	8.19	-12.81	-39.82	4.973e+04	-6788.27	1.367e+04	2.928e+04	-
2.956e+04	149	6.25	32.14	-39.77	-7.40	-0.24	-35.78	4.987e+04-2.076e+04	-4752.17	3.386e+04	-	
2.279e+04	150	5.42	23.43	-37.23	-8.08	-5.72	-30.30	4.346e+04-1.817e+04	-8243.23	3.354e+04	-	
2.298e+04	158	4.30	33.27	-31.69	8.28	-6.69	-31.60	3.737e+04	-9156.40	1.057e+04	1.765e+04	-
133 55	157	5.34	38.18	-45.73	14.89	-22.44	-37.57	5.006e+04	-6510.54	1.388e+04	2.966e+04	-
2.716e+04	149	6.24	31.81	-42.06	-0.50	-9.75	-36.64	5.018e+04-2.054e+04	-4558.27	3.419e+04	-	
2.957e+04	150	5.42	24.91	-40.22	-0.35	-14.96	-31.73	4.405e+04-1.786e+04	-8089.38	3.428e+04	-	
2.265e+04	158	4.29	33.39	-32.22	14.29	-13.11	-29.80	3.770e+04	-8847.18	1.088e+04	1.797e+04	-
2.299e+04	157	5.18	35.17	-53.41	1.23	-19.47	-43.07	4.487e+04-1.117e+04	9199.20	2.450e+04	-	
134 1	150	6.59	35.93	-40.62	20.09	-24.78	-31.00	5.913e+04-1.486e+04	980.07	4.329e+04	-	
2.695e+04	151	9.52	28.59	-103.17	-36.82	-37.76	-65.88	7.726e+04-3.343e+04-3.196e+04	7.579e+04	-		
3.035e+04	159	5.24	27.19	9.38	26.93	9.64	-2.14	3.246e+04-3.028e+04	6035.40	-3859.58	-	
1.267e+04	158	4.38	29.76	-45.19	1.04	-16.47	-36.44	3.797e+04	-9450.30	7783.94	2.073e+04	-
3.098e+04	150	5.58	30.40	-34.37	17.00	-20.97	-26.23	5.003e+04-1.257e+04	829.29	3.663e+04	-	
134 3	151	8.05	24.19	-87.29	-31.15	-31.95	-55.74	6.537e+04-2.829e+04-2.705e+04	6.413e+04	-		
2.281e+04	159	4.44	23.01	7.94	22.79	8.16	-1.81	2.746e+04-2.562e+04	5106.88	-3265.80	-	
2.568e+04	158	4.02	25.65	-32.26	12.88	-19.48	-24.01	3.497e+04	-9566.49	6616.28	1.878e+04	-
1.072e+04	150	5.03	22.36	-35.29	12.92	-25.85	-21.33	4.625e+04-1.000e+04	2453.38	3.380e+04	-	
2.621e+04	151	7.87	26.78	-63.82	2.55	-39.59	-40.10	6.126e+04-3.064e+04-2.910e+04	5.972e+04	-		
134 6	159	4.00	22.87	2.89	22.87	2.90	-0.37	2.551e+04-2.238e+04	5880.21	-2747.33	-	
2.142e+04												
2.336e+04												
1.179e+04												

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

2.355e+04	134	38	158	4.00	26.05	-37.20	5.57	-16.72	-29.60	3.469e+04	-8968.82	6898.18	1.882e+04	-
2.100e+04			150	5.05	25.55	-32.77	14.47	-21.69	-22.88	4.578e+04-1.088e+04		1411.94	3.349e+04	-
2.335e+04			151	7.47	22.58	-72.08	-16.37	-33.13	-46.58	6.013e+04-2.762e+04-2.633e+04	5.885e+04			-
1.054e+04			159	4.02	21.63	5.58	21.55	5.67	-1.15	2.518e+04-2.294e+04		5121.82	-2883.11	-
2.372e+04	134	69	158	3.98	27.06	-41.08	0.95	-14.98	-33.13	3.451e+04	-8591.18	7076.31	1.885e+04	-
2.073e+04			150	5.07	27.64	-31.24	15.46	-19.06	-23.85	4.548e+04-1.143e+04		753.90	3.330e+04	-
2.334e+04			151	7.32	21.99	-79.36	-28.32	-29.04	-50.68	5.943e+04-2.572e+04-2.459e+04	5.830e+04			-
9747.13			159	4.03	20.92	7.21	20.72	7.41	-1.65	2.497e+04-2.329e+04		4642.62	-2968.91	-
2.383e+04	135	1	159	8.54	29.30	-20.83	26.44	-17.97	-11.63	7.524e+04-2.251e+04		8364.70	4.436e+04	-
4.544e+04			151	6.19	32.48	-38.48	-30.14	24.14	-22.85	-4175.14-6.564e+04-4.440e+04-2.542e+04				-
2.923e+04			152	3.59	25.47	4.65	15.13	14.98	-10.41	2.541e+04-1.649e+04		9469.71	-556.36	-
2.034e+04			160	1.86	17.89	-17.98	13.43	-13.51	-11.84	3914.89-1.630e+04-1.619e+04		3803.59		-
1495.98	135	3	159	7.22	24.79	-17.63	22.37	-15.21	-9.84	6.366e+04-1.905e+04		7077.83	3.753e+04	-
3.845e+04			151	5.23	27.48	-32.56	-25.51	20.42	-19.34	-3532.81-5.554e+04-3.757e+04-2.151e+04				-
2.473e+04			152	3.04	21.55	3.94	12.81	12.68	-8.81	2.150e+04-1.396e+04		8012.83	-470.77	-
1.721e+04			160	1.57	15.14	-15.21	11.36	-11.43	-10.02	3312.60-1.379e+04-1.370e+04		3218.42		-
1265.83	135	6	159	6.94	21.58	-28.28	21.53	-28.23	1.48	6.121e+04-1.744e+04		7783.37	3.598e+04	-
3.671e+04			151	5.62	55.01	-17.93	10.34	26.75	-35.54	-2815.11-5.762e+04-3.900e+04-2.144e+04				-
2.596e+04			152	2.91	14.85	0.53	5.38	10.00	-6.78	2.148e+04-1.262e+04		9295.68	-435.74	-
1.634e+04			160	1.56	32.18	-13.33	28.02	-9.17	-13.12	2519.38-1.349e+04-1.348e+04		2509.12		-
405.14	135	38	159	6.69	21.39	-19.99	20.80	-19.40	-4.91	5.917e+04-1.737e+04		6956.72	3.484e+04	-
3.564e+04			151	5.09	35.04	-23.51	-10.21	21.74	-24.53	-3058.56-5.325e+04-3.603e+04-2.028e+04				-
2.383e+04			152	2.82	17.66	2.50	9.22	10.93	-7.53	2.029e+04-1.266e+04		8063.17	-430.98	-
1.592e+04			160	1.48	20.87	-13.61	17.18	-9.92	-10.66	2811.92-1.290e+04-1.285e+04		2764.48		-
862.05	135	69	159	6.57	22.54	-16.03	20.34	-13.82	-8.95	5.787e+04-1.732e+04		6434.39	3.412e+04	-
3.496e+04			151	4.76	24.98	-29.60	-23.19	18.57	-17.58	-3211.64-5.049e+04-3.415e+04-1.955e+04				-
2.248e+04			152	2.76	19.59	3.58	11.64	11.53	-8.01	1.954e+04-1.269e+04		7284.39	-427.97	-
1.565e+04			160	1.43	13.76	-13.83	10.33	-10.39	-9.11	3011.46-1.254e+04-1.246e+04		2925.84		-
1150.76	136	1	160	2.17	21.91	-4.93	20.75	-3.77	-5.46	1.381e+04-1.224e+04		-4424.24	5997.17	-
1.194e+04			152	2.08	9.49	-6.23	0.60	2.66	-7.79	5021.72-1.822e+04-1.064e+04		-2564.71		-
1.090e+04			153	0.55	5.01	1.79	3.93	2.88	-1.52	1463.06	-4745.22	-4739.75	1457.59	-
184.21			161	0.74	23.77	-0.39	23.15	0.23	-3.81	-183.32	-7123.94	-6385.44	-921.81	-
2140.15	136	3	160	1.84	18.54	-4.18	17.56	-3.19	-4.62	1.169e+04-1.036e+04		-3743.59	5074.53	-
1.010e+04			152	1.76	8.03	-5.27	0.51	2.25	-6.59	4249.14-1.542e+04		-8999.59	-2170.14	-
9222.11			153	0.46	4.24	1.52	3.32	2.44	-1.29	1237.97	-4015.19	-4010.56	1233.34	-
155.87			161	0.63	20.11	-0.33	19.59	0.19	-3.22	-155.11	-6027.95	-5403.07	-780.00	-
1810.90														-

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

136	21	160	1.73	6.66	-8.66	-3.88	1.87	-7.10	1.040e+04	-9762.36	-3536.84	4172.70	-
9314.13		152	1.68	1.86	-16.62	-16.58	1.82	-0.81	4319.25-1.454e+04	-8798.59	-1424.98	-	-
8680.54		153	0.52	2.76	-14.40	-14.26	2.62	1.53	1060.51	-4115.63	-4112.29	1057.17	-
131.41		161	0.57	3.97	-6.61	-2.85	0.20	-5.06	-54.94	-5657.88	-5062.84	-649.98	-
1726.24		160	1.69	10.69	-3.47	8.28	-1.05	-5.32	1.054e+04	-9548.68	-3454.98	4442.64	-
9233.58	53	152	1.63	3.59	-7.77	-6.14	1.96	-3.99	4037.15-1.422e+04	-8420.40	-1760.72	-	-
8498.66		153	0.45	2.37	-3.67	-3.67	2.37	-0.12	1100.27	-3830.37	-3826.53	1096.42	-
137.71		161	0.55	11.10	-1.11	9.81	0.19	-3.76	-107.69	-5548.85	-4970.33	-686.20	-
1677.24		160	1.67	16.85	-3.80	15.96	-2.90	-4.20	1.062e+04	-9414.38	-3403.26	4613.20	-
9182.67	69	152	1.60	7.30	-4.79	0.46	2.04	-5.99	3862.86-1.402e+04	-8181.45	-1972.86	-	-
8383.74		153	0.42	3.85	1.38	3.02	2.21	-1.17	1125.43	-3650.17	-3645.96	1121.22	-
141.70		161	0.57	18.28	-0.30	17.81	0.18	-2.93	-141.01	-5479.96	-4911.88	-709.09	-
1646.27		27	27.14	252.88	-302.52	199.63	-249.27	-163.52	2.965e+05	3.712e+04	1.099e+05	2.238e+05	-
1.165e+05	1	36	29.82	306.69	-360.49	141.32	-195.12	-288.07	3.084e+05	8213.46	5.625e+04	2.603e+05	-
1.100e+05		154	17.98	156.08	-204.82	57.43	-106.17	-160.84	1.877e+05	1.222e+04	5.313e+04	1.467e+05	-
7.418e+04		162	16.63	148.47	-170.99	111.12	-133.65	-102.64	1.839e+05	3.287e+04	8.489e+04	1.319e+05	-
7.176e+04		27	22.97	213.98	-255.98	168.92	-210.92	-138.36	2.509e+05	3.141e+04	9.297e+04	1.894e+05	-
9.861e+04	3	36	25.23	259.50	-305.03	119.58	-165.11	-243.75	2.609e+05	6949.85	4.760e+04	2.203e+05	-
9.312e+04		154	15.21	132.06	-173.31	48.59	-89.84	-136.10	1.588e+05	1.034e+04	4.495e+04	1.242e+05	-
6.277e+04		162	14.07	125.63	-144.69	94.03	-113.09	-86.85	1.556e+05	2.782e+04	7.183e+04	1.116e+05	-
6.072e+04		27	21.20	220.83	-198.64	145.16	-122.96	-161.30	2.278e+05	2.825e+04	8.431e+04	1.718e+05	-
8.970e+04	23	36	23.30	269.41	-243.24	89.63	-63.46	-244.63	2.370e+05	6212.72	4.323e+04	2.000e+05	-
8.469e+04		154	14.04	144.20	-134.72	26.52	-17.04	-137.75	1.437e+05	8665.24	4.044e+04	1.119e+05	-
5.728e+04		162	12.98	136.27	-113.22	75.92	-52.87	-106.84	1.408e+05	2.496e+04	6.492e+04	1.008e+05	-
5.505e+04		27	21.00	203.17	-217.98	150.31	-165.11	-139.53	2.280e+05	2.844e+04	8.444e+04	1.720e+05	-
8.967e+04	55	36	23.08	247.34	-262.57	101.32	-116.55	-230.51	2.371e+05	6277.27	4.325e+04	2.002e+05	-
8.467e+04		154	13.91	127.79	-147.09	37.34	-56.65	-129.16	1.441e+05	9116.06	4.070e+04	1.125e+05	-
5.714e+04		162	12.86	121.15	-122.84	81.78	-83.47	-89.75	1.412e+05	2.516e+04	6.515e+04	1.012e+05	-
5.514e+04		27	20.88	194.52	-232.71	153.57	-191.75	-125.78	2.281e+05	2.855e+04	8.452e+04	1.721e+05	-
8.965e+04	69	36	22.94	235.91	-277.30	108.71	-150.10	-221.59	2.372e+05	6318.04	4.327e+04	2.003e+05	-
8.465e+04		154	13.83	120.06	-157.55	44.17	-81.67	-123.72	1.443e+05	9400.58	4.087e+04	1.129e+05	-
5.706e+04		162	12.79	114.20	-131.53	85.48	-102.81	-78.95	1.415e+05	2.529e+04	6.530e+04	1.014e+05	-
5.520e+04		162	16.79	145.98	-179.58	94.95	-128.55	-118.35	1.867e+05	3.425e+04	7.424e+04	1.467e+05	-
6.706e+04	1	154	18.65	161.18	-199.63	41.47	-79.92	-169.89	1.922e+05	7358.85	4.115e+04	1.584e+05	-
7.144e+04		155	13.06	99.01	-132.21	23.60	-56.80	-108.39	1.323e+05	-679.83	2.255e+04	1.090e+05	-
5.049e+04		163	11.27	97.89	-108.54	64.35	-75.00	-76.15	1.238e+05	2.148e+04	5.621e+04	8.906e+04	-
4.844e+04		162	14.21	123.52	-151.95	80.35	-108.78	-100.15	1.580e+05	2.898e+04	6.281e+04	1.241e+05	-
138	3												-





**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

3.281e+04	156	8.37	67.57	-82.98	9.06	-24.47	-73.39	8.242e+04	-3718.12	1.145e+04	6.725e+04	-
3.226e+04	157	7.01	45.51	-56.72	2.39	-13.60	-50.49	6.587e+04	-8299.57	1.049e+04	4.708e+04	-
2.734e+04	165	6.04	50.43	-54.76	30.61	-34.95	-41.13	6.397e+04	5989.03	2.533e+04	4.462e+04	-
2.963e+04	140 3 164	6.92	54.40	-63.10	31.41	-40.11	-46.62	7.502e+04	1.023e+04	2.954e+04	5.571e+04	-
2.776e+04	156	7.08	57.17	-70.22	7.66	-20.70	-62.10	6.974e+04	-3146.10	9686.76	5.690e+04	-
2.729e+04	157	5.93	38.51	-47.99	2.03	-11.51	-42.72	5.574e+04	-7022.71	8873.88	3.984e+04	-
2.313e+04	165	5.11	42.67	-46.34	25.90	-29.57	-34.80	5.413e+04	5067.64	2.144e+04	3.776e+04	-
2.677e+04	140 23 164	6.35	57.59	-50.62	10.24	-3.26	-53.68	6.724e+04	8884.84	2.646e+04	4.967e+04	-
2.551e+04	156	6.54	57.38	-55.44	-13.72	15.66	-54.46	6.301e+04	-3363.52	8593.22	5.105e+04	-
2.478e+04	157	5.42	42.06	-42.13	-15.98	15.91	-38.96	4.977e+04	-7055.13	7461.94	3.525e+04	-
2.090e+04	165	4.66	43.33	-38.68	5.18	-0.53	-40.90	4.812e+04	4002.38	1.901e+04	3.310e+04	-
2.687e+04	140 55 164	6.31	50.83	-52.98	21.46	-23.61	-46.76	6.783e+04	9139.47	2.670e+04	5.027e+04	-
2.534e+04	156	6.48	52.47	-58.98	-1.04	-5.47	-55.68	6.325e+04	-3054.57	8723.70	5.147e+04	-
2.480e+04	157	5.40	36.30	-41.61	-5.06	-0.25	-38.88	5.032e+04	-6643.95	7832.82	3.584e+04	-
2.098e+04	165	4.65	38.80	-39.05	16.44	-16.68	-35.23	4.878e+04	4373.38	1.930e+04	3.385e+04	-
2.694e+04	140 69 164	6.29	49.46	-57.37	28.56	-36.46	-42.38	6.820e+04	9300.11	2.685e+04	5.064e+04	-
2.524e+04	156	6.44	51.98	-63.83	6.97	-18.82	-56.45	6.340e+04	-2860.09	8806.14	5.173e+04	-
2.481e+04	157	5.39	35.01	-43.63	1.84	-10.46	-38.83	5.067e+04	-6384.28	8067.16	3.622e+04	-
2.103e+04	165	4.64	38.79	-42.13	23.55	-26.88	-31.64	4.921e+04	4606.95	1.949e+04	3.433e+04	-
2.681e+04	141 1 165	6.00	44.10	-53.25	23.83	-32.99	-39.53	6.350e+04	5479.62	2.340e+04	4.558e+04	-
3.061e+04	157	6.97	41.63	-55.73	2.96	-17.06	-47.64	6.615e+04	-7975.60	8197.96	4.997e+04	-
2.714e+04	158	5.58	29.85	-38.08	-4.97	-3.26	-33.95	4.899e+04	-1.222e+04	4236.80	3.253e+04	-
2.743e+04	166	5.90	38.16	-42.51	28.67	-33.02	-26.00	6.136e+04	1358.44	1.921e+04	4.351e+04	-
2.269e+04	141 3 165	5.07	37.32	-45.06	20.17	-27.91	-33.45	5.373e+04	4636.61	1.980e+04	3.857e+04	-
2.590e+04	157	5.90	35.23	-47.16	2.50	-14.43	-40.31	5.597e+04	-6748.58	6936.73	4.229e+04	-
2.296e+04	158	4.72	25.26	-32.22	-4.20	-2.76	-28.73	4.145e+04	-1.034e+04	3584.99	2.753e+04	-
2.321e+04	166	4.99	32.29	-35.97	24.26	-27.94	-22.00	5.192e+04	1149.45	1.626e+04	3.682e+04	-
2.052e+04	141 23 165	4.64	38.75	-38.81	-0.45	0.39	-38.78	4.779e+04	3614.77	1.752e+04	3.389e+04	-
2.356e+04	157	5.39	36.36	-39.55	-16.04	12.86	-35.09	4.996e+04	-6808.27	5748.87	3.740e+04	-
2.077e+04	158	4.30	28.70	-34.33	-20.54	14.91	-26.05	3.676e+04	-1.010e+04	2481.07	2.417e+04	-
2.064e+04	166	4.48	30.10	-28.85	2.82	-1.57	-29.39	4.519e+04	468.16	1.422e+04	3.143e+04	-
2.058e+04	141 55 165	4.62	33.99	-38.32	11.06	-15.40	-33.65	4.844e+04	3983.06	1.782e+04	3.461e+04	-
2.355e+04	157	5.37	32.12	-40.00	-4.82	-3.06	-36.05	5.052e+04	-6395.56	6090.35	3.804e+04	-
2.083e+04	158	4.30	24.06	-30.11	-10.30	4.24	-26.09	3.732e+04	-9672.20	2957.83	2.469e+04	-
2.092e+04	166	4.51	27.42	-28.99	14.60	-16.17	-23.63	4.642e+04	822.91	1.456e+04	3.268e+04	-
2.062e+04	141 69 165	4.61	33.92	-40.96	18.33	-25.37	-30.40	4.885e+04	4215.10	1.800e+04	3.506e+04	-
	157	5.36	32.02	-42.87	2.28	-13.12	-36.65	5.088e+04	-6135.07	6306.12	3.844e+04	-





**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1.496e+04	160	3.10	35.89	-0.72	33.34	1.83	9.33	2.054e+04	-1.531e+04	-7258.55	1.249e+04	-
8594.08	168	1.72	8.42	-10.20	-6.33	4.55	-7.55	8270.30	-1.196e+04	3488.71	-7176.06	-
143 69 3.221e+04	167	6.82	81.36	11.86	55.47	37.75	33.60	3.835e+04	-4.178e+04	2.212e+04	-2.554e+04	-
5092.44	159	4.10	10.25	-53.32	-6.86	-36.22	-28.19	3.700e+04	-8361.51	-7782.48	3.643e+04	-
1.470e+04	160	3.03	27.51	1.22	24.20	4.52	8.71	2.016e+04	-1.510e+04	-7212.86	1.227e+04	-
8644.23	168	1.70	8.26	-16.36	-12.46	4.36	-8.99	8100.67	-1.192e+04	3138.61	-6958.11	-
144 1 1.606e+04	168	2.94	15.94	13.04	15.51	13.48	1.03	1.676e+04	-1.853e+04	6409.54	-8180.58	-
1.419e+04	160	3.07	9.33	-12.12	8.25	-11.04	4.70	1.949e+04	-1.660e+04	-9693.08	1.258e+04	-
245.76	161	0.66	12.65	4.62	12.46	4.81	1.22	-704.17	-6713.78	-6703.71	-714.24	-
2651.61	169	0.55	7.40	-3.86	5.39	-1.84	-4.31	4986.18	-674.51	3145.69	1165.97	-
144 3 1.359e+04	168	2.49	13.49	11.04	13.12	11.40	0.88	1.418e+04	-1.568e+04	5423.46	-6922.03	-
1.201e+04	160	2.60	7.90	-10.26	6.98	-9.34	3.97	1.649e+04	-1.404e+04	-8201.84	1.065e+04	-
207.95	161	0.55	10.70	3.91	10.54	4.07	1.03	-595.84	-5680.89	-5672.37	-604.36	-
2243.67	169	0.47	6.26	-3.26	4.56	-1.56	-3.65	4219.07	-570.74	2661.74	986.59	-
144 22 1.274e+04	168	2.38	32.98	8.96	30.45	11.49	7.37	1.341e+04	-1.492e+04	5436.43	-6944.64	-
1.108e+04	160	2.45	27.94	-14.30	27.90	-14.25	1.43	1.555e+04	-1.265e+04	-7260.08	1.016e+04	-
278.46	161	0.58	32.35	3.81	32.29	3.87	-1.27	-605.00	-5013.52	-4995.86	-622.66	-
2005.20	169	0.48	21.54	-2.07	21.53	-2.06	-0.55	4202.94	-266.15	2954.49	982.30	-
144 54 1.251e+04	168	2.31	20.28	9.63	19.10	10.80	3.34	1.309e+04	-1.451e+04	5126.35	-6545.17	-
1.098e+04	160	2.39	14.99	-11.02	14.69	-10.72	2.77	1.521e+04	-1.272e+04	-7380.27	9866.94	-
223.67	161	0.53	18.38	3.77	18.38	3.77	0.09	-566.73	-5105.47	-5094.42	-577.78	-
2026.34	169	0.44	11.27	-2.06	10.88	-1.67	-2.25	3975.18	-418.40	2626.81	929.97	-
144 69 1.236e+04	168	2.26	12.27	10.03	11.93	10.37	0.80	1.289e+04	-1.425e+04	4930.42	-6292.76	-
1.092e+04	160	2.36	7.18	-9.32	6.35	-8.49	3.61	1.499e+04	-1.277e+04	-7456.22	9679.26	-
189.05	161	0.50	9.73	3.56	9.58	3.70	0.94	-541.67	-5164.45	-5156.70	-549.42	-
2039.70	169	0.42	5.69	-2.97	4.14	-1.42	-3.32	3835.52	-518.85	2419.76	896.90	-
145 1 9.784e+04	17	22.47	204.11	-232.13	190.39	-218.41	-76.15	2.541e+05	4.998e+04	1.230e+05	1.810e+05	-
1.126e+05	27	27.00	252.24	-293.92	188.36	-230.04	-175.52	2.948e+05	3.714e+04	1.034e+05	2.285e+05	-
6.798e+04	162	16.32	137.95	-170.83	95.28	-128.16	-106.56	1.815e+05	3.400e+04	7.919e+04	1.363e+05	-
6.034e+04	170	14.70	124.18	-142.70	114.58	-133.11	-49.68	1.697e+05	4.668e+04	9.630e+04	1.201e+05	-
145 3 8.279e+04	17	19.02	172.71	-196.42	161.10	-184.81	-64.43	2.150e+05	4.229e+04	1.041e+05	1.532e+05	-
9.527e+04	27	22.84	213.43	-248.70	159.38	-194.65	-148.52	2.494e+05	3.143e+04	8.748e+04	1.934e+05	-
5.752e+04	162	13.81	116.73	-144.55	80.62	-108.44	-90.17	1.536e+05	2.877e+04	6.700e+04	1.153e+05	-
5.106e+04	170	12.44	105.07	-120.75	96.95	-112.63	-42.04	1.436e+05	3.950e+04	8.149e+04	1.016e+05	-
145 23 7.515e+04	17	17.54	177.02	-149.65	145.03	-117.67	-97.08	1.949e+05	3.822e+04	9.438e+04	1.388e+05	-
8.661e+04	27	21.08	221.00	-193.40	134.61	-107.02	-168.33	2.265e+05	2.834e+04	7.932e+04	1.755e+05	-
	162	12.74	127.26	-111.56	61.69	-45.99	-106.59	1.389e+05	2.574e+04	6.055e+04	1.041e+05	-



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

2.268e+04	172	6.19	53.07	-58.44	41.62	-46.99	-33.85	7.134e+04	1.874e+04	3.172e+04	5.836e+04	-
147 23	171	7.37	78.41	-58.35	35.17	-15.11	-63.59	8.399e+04	2.804e+04	4.529e+04	6.674e+04	-
2.584e+04	163	8.99	79.49	-73.03	6.07	0.39	-76.20	9.784e+04	1.737e+04	3.045e+04	8.476e+04	-
2.968e+04	164	6.03	57.32	-47.65	-0.77	10.45	-52.19	6.409e+04	9398.35	2.262e+04	5.087e+04	-
2.342e+04	172	5.65	53.56	-44.69	21.36	-12.49	-46.12	6.357e+04	1.694e+04	2.870e+04	5.181e+04	-
2.025e+04	171	7.32	70.87	-61.37	44.58	-35.08	-52.77	8.431e+04	2.812e+04	4.551e+04	6.692e+04	-
147 55	163	8.93	70.32	-80.55	18.12	-28.35	-71.77	9.848e+04	1.764e+04	3.064e+04	8.548e+04	-
2.598e+04	164	5.99	50.27	-49.11	11.33	-10.17	-48.51	6.453e+04	9655.67	2.285e+04	5.134e+04	-
2.969e+04	172	5.63	48.42	-47.98	31.45	-31.01	-36.71	6.436e+04	1.700e+04	2.879e+04	5.257e+04	-
2.345e+04	171	7.28	68.67	-65.83	50.53	-47.70	-45.94	8.451e+04	2.817e+04	4.566e+04	6.703e+04	-
2.047e+04	163	8.89	67.46	-88.23	25.73	-46.50	-68.96	9.888e+04	1.781e+04	3.076e+04	8.593e+04	-
147 69	164	5.97	48.67	-52.89	18.98	-23.20	-46.19	6.481e+04	9818.12	2.299e+04	5.164e+04	-
2.607e+04	172	5.62	48.24	-53.13	37.83	-42.72	-30.77	6.485e+04	1.704e+04	2.884e+04	5.305e+04	-
2.970e+04	172	7.15	58.14	-50.32	43.01	-35.19	-37.57	8.023e+04	1.665e+04	3.526e+04	6.162e+04	-
2.347e+04	164	7.88	58.87	-77.98	17.36	-36.46	-62.91	8.698e+04	1.482e+04	2.631e+04	7.550e+04	-
2.061e+04	165	6.11	41.76	-49.31	14.01	-21.56	-41.92	6.465e+04	5215.92	1.758e+04	5.229e+04	-
148 1	173	4.73	44.90	-47.48	23.63	-26.20	-38.89	5.386e+04	1.669e+04	2.967e+04	4.088e+04	-
2.892e+04	172	6.05	49.19	-42.58	36.39	-29.78	-31.79	6.788e+04	1.409e+04	2.983e+04	5.214e+04	-
2.639e+04	164	6.66	49.81	-65.98	14.69	-30.85	-53.23	7.360e+04	1.254e+04	2.226e+04	6.388e+04	-
2.412e+04	165	5.17	35.34	-41.72	11.86	-18.24	-35.47	5.471e+04	4413.47	1.487e+04	4.425e+04	-
1.772e+04	173	4.00	37.99	-40.17	19.99	-22.17	-32.91	4.557e+04	1.412e+04	2.510e+04	3.459e+04	-
148 3	172	5.53	51.17	-37.42	14.78	-1.03	-43.58	6.080e+04	1.307e+04	2.697e+04	4.690e+04	-
2.447e+04	164	6.12	51.20	-50.02	-6.85	8.03	-50.06	6.598e+04	1.084e+04	1.986e+04	5.696e+04	-
2.233e+04	165	4.71	37.22	-35.36	-9.61	11.47	-34.73	4.859e+04	3490.11	1.311e+04	3.897e+04	-
2.041e+04	173	3.65	40.95	-37.17	3.52	0.26	-39.03	4.061e+04	1.217e+04	2.217e+04	3.061e+04	-
1.499e+04	172	5.51	45.23	-36.21	26.00	-16.99	-34.59	6.136e+04	1.291e+04	2.706e+04	4.721e+04	-
148 23	164	6.08	45.73	-54.28	5.53	-14.08	-49.04	6.655e+04	1.118e+04	2.009e+04	5.764e+04	-
2.168e+04	165	4.70	32.07	-34.90	2.89	-5.72	-33.21	4.929e+04	3810.54	1.336e+04	3.974e+04	-
2.040e+04	173	3.64	35.79	-35.54	12.50	-12.25	-33.45	4.111e+04	1.258e+04	2.257e+04	3.112e+04	-
1.848e+04	172	5.50	44.72	-38.71	33.08	-27.07	-28.90	6.171e+04	1.281e+04	2.712e+04	4.740e+04	-
1.358e+04	164	6.06	45.28	-59.98	13.35	-28.05	-48.39	6.691e+04	1.140e+04	2.024e+04	5.808e+04	-
148 55	165	4.70	32.13	-37.93	10.78	-16.58	-32.25	4.973e+04	4012.25	1.352e+04	4.022e+04	-
2.203e+04	173	3.64	34.54	-36.52	18.17	-20.16	-29.92	4.143e+04	1.284e+04	2.282e+04	3.145e+04	-
2.034e+04	173	4.82	41.82	-47.40	19.80	-25.38	-38.47	5.503e+04	1.603e+04	2.688e+04	4.417e+04	-
1.853e+04	165	5.97	38.66	-49.98	11.78	-23.10	-40.74	6.393e+04	6129.67	1.646e+04	5.360e+04	-
1.361e+04	166	5.09	29.60	-50.63	3.58	-24.62	-37.56	5.507e+04	5272.85	9763.64	5.058e+04	-
148 69	174	3.14	40.43	-37.77	18.25	-15.59	-35.25	3.538e+04	1.209e+04	2.067e+04	2.680e+04	-
2.225e+04												-
2.030e+04												-
1.856e+04												-
1.748e+04												-
2.215e+04												-
1.426e+04												-

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1.124e+04	149	3	173	4.08	35.39	-40.11	16.75	-21.47	-32.55	4.656e+04	1.356e+04	2.274e+04	3.738e+04	-
1.479e+04			165	5.05	32.71	-42.29	9.97	-19.55	-34.48	5.409e+04	5186.64	1.393e+04	4.535e+04	-
1.874e+04			166	4.31	25.05	-42.84	3.03	-20.83	-31.78	4.659e+04	4461.64	8261.54	4.279e+04	-
1.207e+04			174	2.65	34.21	-31.96	15.44	-13.19	-29.83	2.994e+04	1.023e+04	1.749e+04	2.267e+04	-
9508.91	149	22	173	3.70	37.44	-46.39	31.44	-40.40	-21.61	4.322e+04	1.291e+04	2.123e+04	3.491e+04	-
1.352e+04			165	4.63	40.91	-56.61	29.38	-45.09	-31.48	5.027e+04	5277.24	1.311e+04	4.244e+04	-
1.706e+04			166	4.13	35.34	-56.76	23.03	-44.45	-31.35	4.418e+04	4912.74	8044.35	4.105e+04	-
1.064e+04			174	2.42	37.24	-34.06	29.35	-26.17	-22.38	2.784e+04	1.018e+04	1.660e+04	2.143e+04	-
8491.57	149	55	173	3.71	32.99	-35.48	8.95	-11.44	-32.68	4.198e+04	1.210e+04	2.046e+04	3.362e+04	-
1.341e+04			165	4.60	28.56	-34.57	1.19	-7.19	-31.29	4.875e+04	4496.53	1.249e+04	4.076e+04	-
1.703e+04			166	3.91	20.94	-35.09	-5.09	-9.06	-27.94	4.166e+04	3716.85	7303.78	3.807e+04	-
1.110e+04			174	2.41	30.66	-29.05	8.11	-6.50	-28.95	2.698e+04	8955.93	1.564e+04	2.030e+04	-
8703.67	149	69	173	3.71	32.17	-36.46	15.23	-19.52	-29.59	4.233e+04	1.233e+04	2.068e+04	3.398e+04	-
1.344e+04			165	4.59	29.74	-38.45	9.06	-17.77	-31.34	4.918e+04	4715.13	1.266e+04	4.123e+04	-
1.704e+04			166	3.92	22.77	-38.95	2.76	-18.94	-28.89	4.236e+04	4056.04	7510.49	3.890e+04	-
1.097e+04			174	2.41	31.10	-29.05	14.04	-11.99	-27.12	2.722e+04	9298.55	1.590e+04	2.061e+04	-
8644.46	150	1	174	2.86	29.91	-57.32	-9.28	-18.14	-43.39	3.365e+04	1.934e+04	2.185e+04	3.114e+04	-
5440.94			166	5.26	43.72	-39.36	33.21	-28.85	-27.62	5.616e+04	3744.79	9741.71	5.017e+04	-
1.668e+04			167	8.78	27.34	-125.63	-57.45	-40.83	-76.03	9.019e+04	3108.44	7297.88	8.600e+04	-
1.863e+04			175	4.44	29.82	13.92	27.32	16.43	5.79	2.504e+04-2.800e+04	7263.24-1.022e+04			-
2.504e+04	150	3	174	2.42	25.31	-48.50	-7.85	-15.35	-36.72	2.848e+04	1.637e+04	1.849e+04	2.635e+04	-
4603.87			166	4.45	37.00	-33.30	28.10	-24.41	-23.37	4.752e+04	3168.67	8242.99	4.245e+04	-
1.412e+04			167	7.43	23.14	-106.30	-48.61	-34.55	-64.33	7.631e+04	2630.22	6175.13	7.277e+04	-
1.577e+04			175	3.76	25.23	11.78	23.12	13.90	4.90	2.119e+04-2.370e+04	6145.82	-8650.78		-
2.119e+04	150	22	174	2.26	24.10	-47.15	5.40	-28.45	-31.34	2.652e+04	1.652e+04	1.799e+04	2.505e+04	-
3546.97			166	4.32	54.86	-52.32	49.11	-46.57	-24.16	4.503e+04	3169.23	7539.54	4.066e+04	-
1.280e+04			167	7.49	30.27	-122.41	-30.61	-61.53	-74.75	7.541e+04	3097.27	7496.20	7.101e+04	-
1.728e+04			175	3.71	46.53	5.78	39.92	12.39	15.02	2.016e+04-2.354e+04	5728.18	-9115.03		-
2.055e+04	150	54	174	2.21	22.79	-44.64	-2.28	-19.56	-32.59	2.613e+04	1.552e+04	1.727e+04	2.438e+04	-
3938.16			166	4.15	41.51	-38.47	34.67	-31.63	-22.37	4.391e+04	2994.88	7511.40	3.939e+04	-
1.282e+04			167	7.04	23.81	-105.82	-38.93	-43.07	-64.78	7.170e+04	2677.66	6342.64	6.803e+04	-
1.548e+04			175	3.53	32.08	8.80	28.34	12.54	8.55	1.961e+04-2.232e+04	5641.73	-8348.61		-
1.976e+04	150	69	174	2.20	23.01	-44.09	-7.14	-13.95	-33.38	2.589e+04	1.488e+04	1.681e+04	2.396e+04	-
4185.34			166	4.05	33.63	-30.27	25.55	-22.19	-21.24	4.320e+04	2880.61	7493.63	3.859e+04	-
1.283e+04			167	6.75	21.03	-96.64	-44.19	-31.41	-58.49	6.938e+04	2391.11	5613.76	6.615e+04	-
1.433e+04			175	3.42	22.94	10.71	21.02	12.64	4.45	1.926e+04-2.154e+04	5587.11	-7864.34		-
1.926e+04														

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

151	1	175	6.38	33.01	-13.79	28.21	-8.99	-14.20	6.269e+04	-6543.55	9010.34	4.713e+04	-
2.889e+04		167	6.23	22.56	-55.10	-53.92	21.37	-9.52	1.424e+04	-5.515e+04	-6980.08	-3.393e+04	-
3.197e+04		168	2.38	30.27	13.26	24.28	19.24	-8.12	1.698e+04	-1.054e+04	1.189e+04	-5458.12	-
1.068e+04		176	1.83	2.24	-20.42	-0.72	-17.46	-7.64	1.209e+04	-8885.12	-7019.36	1.022e+04	-
5970.44		175	5.40	27.93	-11.67	23.87	-7.61	-12.02	5.304e+04	-5536.85	7624.14	3.988e+04	-
2.445e+04	3	167	5.27	19.09	-46.62	-45.62	18.08	-8.06	1.205e+04	-4.667e+04	-5906.23	-2.871e+04	-
2.705e+04		168	2.01	25.61	11.22	20.55	16.28	-6.87	1.437e+04	-8921.82	1.006e+04	-4618.41	-
9038.97		176	1.55	1.90	-17.28	-0.61	-14.78	-6.46	1.023e+04	-7518.18	-5939.46	8647.91	-
5051.91		175	5.36	29.51	-25.96	29.43	-25.88	2.11	5.210e+04	-5016.68	8281.40	3.880e+04	-
2.414e+04	6	167	5.54	42.55	-22.06	-6.03	26.52	-27.90	1.105e+04	-4.905e+04	-9146.86	-2.886e+04	-
2.839e+04		168	2.04	23.32	9.78	19.64	13.46	-6.03	1.515e+04	-8401.65	1.117e+04	-4422.63	-
8824.40		176	1.62	24.55	-16.70	22.57	-14.72	-8.82	9629.85	-8152.10	-6286.32	7764.06	-
5449.41		175	5.06	25.56	-15.13	24.69	-14.26	-5.88	4.972e+04	-5025.75	7453.90	3.724e+04	-
2.297e+04	38	167	5.08	24.79	-32.20	-27.75	20.34	-15.29	1.098e+04	-4.498e+04	-6831.98	-2.717e+04	-
2.606e+04		168	1.91	23.27	10.06	19.05	14.28	-6.16	1.387e+04	-8221.08	9930.93	-4285.32	-
8452.34		176	1.49	10.42	-15.95	8.40	-13.93	-7.01	9422.89	-7341.85	-5742.88	7823.92	-
4924.39		175	4.91	25.40	-10.61	21.70	-6.92	-10.92	4.822e+04	-5033.50	6931.03	3.625e+04	-
2.223e+04	69	167	4.79	17.35	-42.39	-41.47	16.44	-7.33	1.095e+04	-4.242e+04	-5369.30	-2.610e+04	-
2.459e+04		168	1.83	23.28	10.20	18.68	14.80	-6.25	1.306e+04	-8110.74	9148.93	-4198.55	-
8217.25		176	1.41	1.72	-15.71	-0.55	-13.43	-5.87	9296.94	-6834.71	-5399.51	7861.74	-
4592.65		176	1.02	16.86	-4.66	15.77	-3.57	-4.71	9717.95	-1123.02	-354.80	8949.73	-
2781.74	1	168	0.89	6.18	-6.03	-3.15	3.30	-5.18	2875.70	-7383.78	1782.91	-6290.99	-
3165.01		169	0.35	3.33	3.05	3.05	3.33	-0.02	4002.09	1491.97	3929.17	1564.89	421.57
729.45		177	0.22	17.86	-0.36	17.03	0.47	-3.80	-508.77	-2109.47	-1638.45	-979.79	-
2353.78		176	0.86	14.26	-3.94	13.34	-3.02	-3.98	8222.88	-950.25	-300.22	7572.84	-
2678.08	3	168	0.75	5.23	-5.10	-2.67	2.80	-4.38	2433.29	-6247.81	1508.62	-5323.14	-
		169	0.29	2.82	2.58	2.58	2.82	-0.02	3386.38	1262.44	3324.68	1324.14	356.71
617.23		177	0.18	15.11	-0.30	14.41	0.40	-3.22	-430.50	-1784.94	-1386.38	-829.05	-
1980.04		176	0.88	32.62	-7.93	32.61	-7.91	-0.85	7876.31	-624.81	-135.45	7386.96	-
2132.20	22	168	0.79	20.61	-1.46	15.63	3.51	-9.22	2518.01	-6061.48	1950.57	-5494.05	-
470.28		169	0.37	19.80	1.61	19.44	1.96	-2.51	3605.15	1245.51	3565.71	1284.94	302.48
2077.94		177	0.23	34.76	0.50	34.75	0.51	-0.59	-490.80	-1490.43	-1159.89	-821.34	-
2317.53		176	0.82	20.32	-5.00	20.06	-4.75	-2.55	7629.12	-769.82	-219.69	7078.99	-
		168	0.72	9.81	-2.33	4.57	2.92	-6.01	2320.23	-5817.30	1595.70	-5092.77	-
525.94		169	0.31	9.11	2.19	8.97	2.33	-0.98	3281.54	1186.45	3232.79	1235.19	315.84
2139.80		177	0.19	21.68	0.23	21.48	0.42	-2.02	-430.26	-1571.07	-1221.45	-779.88	-
2434.62		176	0.79	12.97	-3.58	12.13	-2.75	-3.62	7475.34	-863.86	-272.92	6884.40	-
	69	168	0.68	4.75	-4.63	-2.43	2.54	-3.98	2212.08	-5679.83	1371.47	-4839.22	-
		169	0.27	2.57	2.34	2.35	2.56	-0.02	3078.53	1147.67	3022.44	1203.76	324.28

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

561.12		177	0.17	13.74	-0.27	13.10	0.36	-2.92	-391.36	-1622.67	-1260.35	-753.68	-
153	1	18	18.10	164.77	-182.33	162.66	-180.22	-27.01	2.075e+05	5.111e+04	1.116e+05	1.469e+05	-
7.617e+04		17	22.41	200.04	-227.42	181.11	-208.48	-87.96	2.537e+05	5.135e+04	1.187e+05	1.864e+05	-
9.534e+04		170	14.35	119.09	-140.01	105.97	-126.89	-56.82	1.658e+05	4.519e+04	8.855e+04	1.224e+05	-
5.786e+04		178	14.00	105.64	-127.19	105.48	-127.03	-6.17	1.625e+05	4.830e+04	9.525e+04	1.156e+05	-
5.619e+04		18	15.32	139.42	-154.28	137.63	-152.49	-22.85	1.756e+05	4.325e+04	9.447e+04	1.243e+05	-
153	3	17	18.96	169.27	-192.43	153.24	-176.40	-74.43	2.147e+05	4.345e+04	1.004e+05	1.577e+05	-
6.445e+04		170	12.15	100.77	-118.47	89.67	-107.37	-48.08	1.403e+05	3.824e+04	7.492e+04	1.036e+05	-
8.067e+04		178	11.85	89.39	-107.63	89.25	-107.49	-5.22	1.375e+05	4.087e+04	8.060e+04	9.777e+04	-
4.896e+04		18	14.25	124.25	-176.06	123.41	-175.22	15.90	1.604e+05	3.951e+04	8.617e+04	1.137e+05	-
4.755e+04	22	17	17.49	145.06	-215.35	142.42	-212.70	-30.76	1.957e+05	3.978e+04	9.164e+04	1.439e+05	-
153		170	11.22	87.72	-138.13	86.86	-137.27	-13.93	1.284e+05	3.509e+04	6.858e+04	9.491e+04	-
5.884e+04		178	11.17	82.91	-131.78	78.73	-127.60	29.66	1.270e+05	3.752e+04	7.422e+04	9.034e+04	-
7.346e+04		18	13.86	130.58	-129.26	125.78	-124.46	-34.98	1.593e+05	3.924e+04	8.577e+04	1.128e+05	-
4.476e+04		17	17.33	160.45	-162.45	138.11	-140.10	-81.95	1.949e+05	3.939e+04	9.115e+04	1.432e+05	-
4.403e+04	55	170	11.10	96.51	-99.32	79.45	-82.25	-55.24	1.272e+05	3.464e+04	6.793e+04	9.388e+04	-
153		178	10.63	83.99	-88.06	82.07	-86.15	-18.06	1.242e+05	3.701e+04	7.290e+04	8.832e+04	-
5.850e+04		18	13.92	126.75	-140.25	125.12	-138.63	-20.78	1.596e+05	3.932e+04	8.588e+04	1.130e+05	-
7.329e+04		17	17.24	153.88	-174.94	139.31	-160.37	-67.66	1.951e+05	3.950e+04	9.128e+04	1.434e+05	-
4.441e+04		170	11.04	91.61	-107.70	81.51	-97.61	-43.71	1.275e+05	3.476e+04	6.811e+04	9.417e+04	-
4.291e+04		178	10.77	81.26	-97.84	81.14	-97.72	-4.74	1.250e+05	3.715e+04	7.327e+04	8.889e+04	-
153	69	18	13.20	103.63	-123.94	91.10	-111.41	-51.91	1.480e+05	3.117e+04	4.875e+04	1.304e+05	-
5.859e+04		170	16.22	112.33	-143.45	78.86	-109.98	-86.26	1.877e+05	5.336e+04	9.003e+04	1.510e+05	-
7.334e+04		171	5.68	101.51	-80.94	61.82	-41.26	-75.27	6.770e+04	3.670e+04	3.860e+04	6.581e+04	-
4.451e+04		179	22.04	79.93	-138.25	79.84	-138.17	4.38	2.450e+05	4.066e+04	1.265e+05	1.592e+05	-
4.322e+04		178	11.17	87.68	-104.87	77.08	-94.27	-43.92	1.252e+05	2.638e+04	4.125e+04	1.103e+05	-
154	3	170	13.73	95.05	-121.38	66.73	-93.06	-72.99	1.588e+05	4.515e+04	7.618e+04	1.278e+05	-
4.177e+04		171	4.80	85.89	-68.49	52.31	-34.91	-63.69	5.729e+04	3.105e+04	3.266e+04	5.568e+04	-
5.984e+04		179	18.65	67.63	-116.98	67.56	-116.91	3.70	2.073e+05	3.440e+04	1.070e+05	1.347e+05	-
7433.44		178	10.57	79.38	-115.27	79.09	-114.99	-7.42	1.153e+05	2.237e+04	3.574e+04	1.020e+05	-
1.009e+05		170	12.72	62.60	-124.39	56.48	-118.27	-33.28	1.467e+05	4.162e+04	7.112e+04	1.172e+05	-
154	6	171	4.32	71.34	-63.20	55.10	-46.95	-43.84	5.069e+04	2.870e+04	2.962e+04	4.977e+04	-
3.534e+04		179	18.20	41.94	-148.96	26.60	-133.62	51.90	1.986e+05	3.215e+04	1.055e+05	1.252e+05	-
5.063e+04		178	10.31	77.84	-101.32	73.57	-97.04	-27.34	1.144e+05	2.336e+04	3.682e+04	1.010e+05	-
6289.83		170	12.47	75.59	-114.19	59.04	-97.64	-53.55	1.453e+05	4.127e+04	6.998e+04	1.166e+05	-
8.534e+04		171	4.34	74.92	-62.07	50.48	-37.63	-52.46	5.153e+04	2.842e+04	2.966e+04	5.029e+04	-
154	38	179	17.43	50.86	-119.79	47.93	-116.87	22.16	1.924e+05	3.163e+04	1.005e+05	1.235e+05	-
3.263e+04													-
4.724e+04													-
4403.26													-
8.265e+04													-
154													-
3.232e+04													-
4.650e+04													-
5208.95													-



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

7.955e+04	154	69	178	10.15	79.71	-95.34	70.07	-85.70	-39.93	1.138e+05	2.398e+04	3.750e+04	1.003e+05	-
3.213e+04			170	12.48	86.41	-110.35	60.66	-84.60	-66.35	1.444e+05	4.105e+04	6.925e+04	1.162e+05	-
4.603e+04			171	4.37	78.08	-62.26	47.56	-31.74	-57.90	5.208e+04	2.823e+04	2.969e+04	5.062e+04	-
5718.03			179	16.95	61.48	-106.35	61.41	-106.28	3.37	1.885e+05	3.127e+04	9.728e+04	1.225e+05	-
7.758e+04	155	1	179	15.67	115.33	62.74	101.61	76.46	23.10	1.081e+05	-7.924e+04	7.921e+04	-5.032e+04	-
6.770e+04			171	17.18	82.23	-170.93	47.87	-136.57	-86.70	1.896e+05	3.759e+04	4.028e+04	1.869e+05	-
2.004e+04			172	8.48	52.10	2.45	47.66	6.90	-14.17	8.358e+04	-6596.56	3.239e+04	4.459e+04	-
4.467e+04			180	5.96	48.43	-94.90	-2.93	-43.53	-68.73	6.788e+04	3.718e+04	4.381e+04	6.125e+04	-
1.263e+04	155	3	179	13.26	97.59	53.08	85.98	64.70	19.54	9.150e+04	-6.705e+04	6.703e+04	-4.258e+04	-
5.728e+04			171	14.53	69.58	-144.63	40.51	-115.56	-73.36	1.605e+05	3.181e+04	3.408e+04	1.582e+05	-
1.696e+04			172	7.17	44.08	2.08	40.32	5.83	-11.99	7.072e+04	-5581.71	2.741e+04	3.773e+04	-
3.780e+04			180	5.04	40.98	-80.30	-2.48	-36.84	-58.15	5.743e+04	3.146e+04	3.707e+04	5.182e+04	-
1.069e+04	155	22	179	13.21	142.32	32.83	97.73	77.42	53.80	8.466e+04	-7.153e+04	6.053e+04	-4.740e+04	-
5.645e+04			171	14.08	71.81	-186.41	56.85	-171.44	-60.34	1.520e+05	2.923e+04	3.099e+04	1.502e+05	-
1.458e+04			172	6.72	59.95	-13.40	59.09	-12.55	7.86	6.549e+04	-7586.49	2.464e+04	3.326e+04	-
3.628e+04			180	4.89	29.20	-83.75	0.62	-55.17	-49.11	5.527e+04	2.889e+04	3.584e+04	4.832e+04	-
1.162e+04	155	54	179	12.50	109.09	42.66	85.74	66.02	31.72	8.375e+04	-6.505e+04	6.078e+04	-4.207e+04	-
5.377e+04			171	13.55	65.59	-151.77	44.58	-130.76	-64.23	1.482e+05	2.904e+04	3.099e+04	1.463e+05	-
1.509e+04			172	6.57	45.63	-1.89	45.35	-1.61	-3.64	6.475e+04	-6045.74	2.481e+04	3.390e+04	-
3.511e+04			180	4.70	33.79	-76.81	-1.14	-41.88	-51.41	5.338e+04	2.873e+04	3.453e+04	4.758e+04	-
1.045e+04	155	69	179	12.05	88.72	48.26	78.16	58.81	17.77	8.318e+04	-6.096e+04	6.093e+04	-3.871e+04	-
5.207e+04			171	13.21	63.25	-131.49	36.82	-105.06	-66.69	1.459e+05	2.892e+04	3.098e+04	1.438e+05	-
1.541e+04			172	6.52	40.08	1.89	36.66	5.30	-10.90	6.429e+04	-5074.28	2.492e+04	3.430e+04	-
3.436e+04			180	4.59	37.26	-73.00	-2.25	-33.49	-52.87	5.221e+04	2.860e+04	3.370e+04	4.711e+04	-
9717.23	156	1	180	4.11	58.98	-43.88	31.46	-16.36	-45.53	4.708e+04	2.991e+04	3.712e+04	3.987e+04	-
8470.48			172	7.13	42.86	-50.03	14.01	-21.18	-42.99	8.042e+04	1.892e+04	3.346e+04	6.589e+04	-
2.613e+04			173	4.56	40.30	-38.53	10.10	-8.33	-38.33	5.168e+04	1.518e+04	2.376e+04	4.311e+04	-
1.548e+04			181	3.85	41.50	-46.16	22.60	-27.26	-36.05	4.604e+04	2.179e+04	2.401e+04	4.383e+04	-
6981.60	156	3	180	3.47	49.91	-37.13	26.62	-13.84	-38.53	3.983e+04	2.531e+04	3.141e+04	3.374e+04	-
7167.33			172	6.03	36.27	-42.34	11.85	-17.92	-36.37	6.805e+04	1.601e+04	2.831e+04	5.575e+04	-
2.211e+04			173	3.86	34.10	-32.60	8.55	-7.05	-32.43	4.373e+04	1.284e+04	2.010e+04	3.647e+04	-
1.309e+04			181	3.26	35.12	-39.06	19.13	-23.07	-30.50	3.896e+04	1.844e+04	2.031e+04	3.708e+04	-
5907.51	156	23	180	3.20	51.19	-38.13	10.08	2.97	-44.52	3.637e+04	2.288e+04	2.801e+04	3.125e+04	-
6548.88			172	5.50	43.85	-38.30	-6.60	12.14	-39.99	6.094e+04	1.455e+04	2.525e+04	5.024e+04	-
1.954e+04			173	3.52	37.88	-32.70	-9.32	14.49	-33.22	3.905e+04	1.121e+04	1.778e+04	3.248e+04	-
1.182e+04			181	2.95	36.39	-35.54	3.48	-2.63	-35.83	3.451e+04	1.616e+04	1.791e+04	3.276e+04	-
5394.71														

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

156	39	180	3.17	49.66	-35.82	21.00	-7.16	-40.36	3.617e+04	2.285e+04	2.821e+04	3.082e+04	-
6531.79		172	5.49	37.09	-38.62	5.81	-7.34	-37.28	6.146e+04	1.446e+04	2.551e+04	5.041e+04	-
1.993e+04		173	3.51	34.78	-31.58	2.99	0.20	-33.15	3.939e+04	1.154e+04	1.802e+04	3.291e+04	-
1.177e+04		181	2.95	34.76	-36.94	13.02	-15.19	-32.96	3.506e+04	1.659e+04	1.824e+04	3.341e+04	-
5258.92		180	3.16	45.37	-33.75	24.20	-12.58	-35.03	3.621e+04	2.301e+04	2.855e+04	3.067e+04	-
156	69	172	5.48	32.97	-38.49	10.77	-16.29	-33.07	6.186e+04	1.455e+04	2.574e+04	5.068e+04	-
6515.75		173	3.51	31.00	-29.64	7.77	-6.41	-29.48	3.976e+04	1.168e+04	1.827e+04	3.316e+04	-
2.010e+04		181	2.96	31.93	-35.51	17.39	-20.97	-27.73	3.541e+04	1.676e+04	1.847e+04	3.371e+04	-
5370.46		181	3.66	39.27	-45.10	15.80	-21.64	-37.80	4.382e+04	2.132e+04	2.281e+04	4.234e+04	-
157	1	173	4.73	34.32	-39.83	5.28	-10.78	-36.19	5.414e+04	1.594e+04	2.279e+04	4.728e+04	-
5593.24		174	3.01	28.91	-33.32	-5.97	1.56	-30.89	3.406e+04	1.169e+04	1.752e+04	2.823e+04	-
1.466e+04		182	4.50	34.71	-37.86	26.08	-29.24	-23.49	5.100e+04	1.166e+04	1.560e+04	4.706e+04	-
9821.68		181	3.09	33.23	-38.16	13.37	-18.31	-31.99	3.708e+04	1.804e+04	1.930e+04	3.582e+04	-
1.182e+04		173	4.00	29.04	-33.70	4.47	-9.12	-30.63	4.581e+04	1.349e+04	1.929e+04	4.001e+04	-
157	3	174	2.54	24.46	-28.20	-5.05	1.32	-26.14	2.882e+04	9891.69	1.483e+04	2.389e+04	-
4732.74		182	3.80	29.37	-32.04	22.07	-24.74	-19.88	4.316e+04	9865.81	1.320e+04	3.982e+04	-
1.241e+04		181	2.95	30.58	-37.56	25.66	-32.63	-17.64	3.454e+04	1.684e+04	1.808e+04	3.329e+04	-
8310.65		173	3.65	25.30	-34.47	16.91	-26.08	-20.77	4.269e+04	1.264e+04	1.819e+04	3.715e+04	-
9997.36		174	2.34	18.63	-20.44	8.96	-10.76	-16.86	2.716e+04	9248.40	1.413e+04	2.228e+04	-
157	6	182	3.75	32.39	-39.55	32.09	-39.25	-4.60	4.137e+04	9457.07	1.293e+04	3.790e+04	-
4528.19		181	2.84	28.10	-33.14	14.54	-19.58	-25.43	3.390e+04	1.646e+04	1.766e+04	3.270e+04	-
1.166e+04		173	3.64	23.53	-28.95	5.65	-11.07	-24.88	4.192e+04	1.230e+04	1.770e+04	3.653e+04	-
7974.74		174	2.32	19.21	-22.05	-2.07	-0.76	-20.62	2.649e+04	8897.58	1.357e+04	2.182e+04	-
9933.23		182	3.52	25.00	-29.25	21.15	-25.40	-13.93	3.974e+04	9127.08	1.235e+04	3.652e+04	-
157	37	181	2.81	30.21	-34.69	12.16	-16.64	-29.08	3.371e+04	1.640e+04	1.755e+04	3.257e+04	-
4415.91		173	3.64	26.40	-30.63	4.06	-8.29	-27.84	4.165e+04	1.226e+04	1.753e+04	3.637e+04	-
1.143e+04		174	2.31	22.24	-25.63	-4.59	1.20	-23.76	2.620e+04	8992.45	1.348e+04	2.172e+04	-
7772.79		182	3.46	26.70	-29.13	20.06	-22.49	-18.07	3.923e+04	8968.92	1.200e+04	3.620e+04	-
9389.02		181	4.24	7.62	-41.52	-9.62	-24.28	-23.45	4.881e+04	1.334e+04	1.466e+04	4.749e+04	-
157	69	174	3.72	33.84	-21.38	11.97	0.49	-27.01	4.115e+04	9382.05	1.938e+04	3.115e+04	-
4302.49		175	2.25	19.35	-17.97	-14.01	15.39	-11.49	1.039e+04	-1.524e+04	1540.30	-6394.20	-
1.128e+04		183	9.89	83.45	-61.17	79.89	-57.61	-22.40	1.009e+05	-1302.68	1.758e+04	8.200e+04	-
7555.13		182	3.58	6.45	-35.13	-8.14	-20.54	-19.84	4.130e+04	1.129e+04	1.241e+04	4.018e+04	-
9088.51		174	3.15	28.63	-18.09	10.13	0.42	-22.85	3.482e+04	7938.66	1.640e+04	2.636e+04	-
158	1	175	1.91	16.37	-15.21	-11.86	13.02	-9.72	8790.57	-1.290e+04	1303.33	-5410.48	-
6714.32		183	8.37	70.61	-51.76	67.60	-48.75	-18.96	8.536e+04	-1102.27	1.488e+04	6.939e+04	-
1.475e+04		182	3.56	15.50	-38.11	14.47	-37.07	-7.38	3.949e+04	9655.72	1.075e+04	3.840e+04	-
1.219e+04													-
3.966e+04													-
5681.34													-
1.248e+04													-
1.031e+04													-
3.356e+04													-
158	6												-



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

172.02		177	0.23	9.64	2.64	7.88	4.40	3.04	-787.06	-2358.91	-2339.86	-806.12	-
		185	0.69	0.40	-9.62	-7.36	-1.86	-4.19	7571.92	1210.29	7381.87	1400.34	-
1082.99		184	1.69	27.77	10.70	23.39	15.09	7.45	7962.66-1.196e+04	5055.55	-9048.22	-	-
7032.25	22	176	1.60	25.31	-15.75	23.98	-14.43	7.27	1.252e+04	-4634.93	-2084.57	9968.34	-
6102.76		177	0.28	28.36	4.34	28.32	4.38	0.97	-763.04	-2133.88	-2086.34	-810.59	-
250.84		185	0.69	6.53	-2.77	6.30	-2.53	-1.47	7461.80	1234.72	7319.92	1376.60	-
929.18		184	1.62	16.63	9.86	13.15	13.34	3.38	7692.66-1.141e+04	4859.83	-8576.17	-	-
6788.72	54	176	1.53	14.06	-13.03	11.75	-10.72	7.57	1.214e+04	-4640.79	-2150.82	9651.93	-
5965.61		177	0.24	15.72	3.78	15.35	4.15	2.07	-735.88	-2138.41	-2111.34	-762.94	-
192.95		185	0.64	1.07	-4.75	-1.66	-2.01	-2.90	7106.75	1153.03	6946.65	1313.13	-
963.10		184	1.58	12.34	6.57	6.69	12.23	0.81	7522.28-1.106e+04	4736.16	-8277.90	-	-
6634.85	69	176	1.49	7.76	-12.11	4.02	-8.37	7.77	1.190e+04	-4644.50	-2192.68	9452.00	-
5878.95		177	0.21	8.76	2.40	7.16	4.00	2.76	-715.51	-2144.46	-2127.14	-732.84	-
156.38		185	0.63	0.37	-8.74	-6.69	-1.69	-3.81	6883.56	1100.27	6710.79	1273.03	-
984.53		186	14.54	139.80	-145.39	-16.67	11.08	141.92	1.664e+05	4.535e+04	1.654e+05	4.639e+04	-
1.117e+04	1	16	22.57	213.82	-226.93	-17.56	4.45	220.10	2.537e+05	5.109e+04	2.530e+05	5.179e+04	-
1.186e+04		18	18.09	162.28	-178.11	21.69	-37.52	167.60	2.075e+05	5.089e+04	2.054e+05	5.300e+04	-
1.803e+04		178	14.08	103.62	-134.34	-2.11	-28.61	118.24	1.628e+05	4.875e+04	1.600e+05	5.154e+04	-
1.763e+04		186	12.30	118.29	-123.02	-14.10	9.38	120.08	1.408e+05	3.838e+04	1.399e+05	3.926e+04	-
9453.22	3	16	19.10	180.93	-192.01	-14.85	3.77	186.24	2.147e+05	4.323e+04	2.141e+05	4.382e+04	-
1.004e+04		18	15.31	137.31	-150.71	18.35	-31.75	141.81	1.756e+05	4.306e+04	1.738e+05	4.484e+04	-
1.525e+04		178	11.91	87.68	-113.67	-1.79	-24.21	100.05	1.378e+05	4.125e+04	1.354e+05	4.361e+04	-
1.491e+04		186	11.47	93.19	-131.83	-66.62	27.98	102.09	1.289e+05	3.521e+04	1.281e+05	3.601e+04	-
8583.44	6	16	17.69	139.75	-199.04	-83.44	24.15	160.63	1.957e+05	3.958e+04	1.952e+05	4.012e+04	-
9116.66		18	14.23	105.37	-155.89	-43.08	-7.45	129.41	1.604e+05	3.935e+04	1.588e+05	4.094e+04	-
1.380e+04		178	11.22	69.55	-125.43	-54.74	-1.15	93.73	1.273e+05	3.786e+04	1.251e+05	4.001e+04	-
1.369e+04		186	11.29	100.49	-118.09	-33.65	16.06	106.43	1.283e+05	3.501e+04	1.275e+05	3.581e+04	-
8589.81	38	16	17.49	153.40	-182.54	-40.58	11.45	165.95	1.954e+05	3.941e+04	1.948e+05	3.995e+04	-
9121.78		18	14.04	115.79	-142.82	-6.46	-20.57	129.11	1.599e+05	3.923e+04	1.583e+05	4.084e+04	-
1.384e+04		178	10.98	74.06	-110.18	-22.19	-13.93	92.03	1.260e+05	3.764e+04	1.239e+05	3.979e+04	-
1.361e+04		186	11.18	107.54	-111.84	-12.82	8.52	109.17	1.280e+05	3.489e+04	1.272e+05	3.569e+04	-
8593.83	69	16	17.36	164.48	-174.56	-13.50	3.42	169.31	1.951e+05	3.930e+04	1.946e+05	3.984e+04	-
9125.02		18	13.92	124.83	-137.01	16.68	-28.86	128.92	1.596e+05	3.915e+04	1.580e+05	4.077e+04	-
1.387e+04		178	10.83	79.71	-103.34	-1.63	-22.01	90.95	1.252e+05	3.750e+04	1.231e+05	3.965e+04	-
1.356e+04		187	5.85	96.97	-75.42	23.14	-1.59	85.30	6.793e+04	3.850e+04	6.709e+04	3.934e+04	-
4907.11	1	186	16.81	139.30	-178.00	-36.30	-2.40	157.74	1.908e+05	5.293e+04	1.861e+05	5.760e+04	-
2.493e+04		178	13.43	101.81	-93.95	0.60	7.26	97.82	1.493e+05	2.205e+04	1.493e+05	2.208e+04	-



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

8882.81		180	3.83	53.86	-17.27	15.85	20.73	35.48	4.402e+04	1.866e+04	4.039e+04	2.229e+04	
164	1	189	4.73	50.62	-55.36	-7.79	3.05	52.71	5.312e+04	1.565e+04	4.891e+04	1.986e+04	-
1.184e+04		188	7.24	62.65	-72.43	-13.53	3.75	66.99	8.108e+04	2.112e+04	7.561e+04	2.658e+04	-
1.726e+04		180	4.15	54.70	-57.81	19.44	-22.55	52.19	4.783e+04	3.203e+04	4.396e+04	3.591e+04	-
6798.68		181	3.88	40.85	-42.62	6.48	-8.25	41.08	4.618e+04	2.094e+04	4.549e+04	2.163e+04	-
4108.52		189	4.01	42.83	-46.85	-6.59	2.58	44.60	4.495e+04	1.324e+04	4.138e+04	1.680e+04	-
164	3	188	6.13	53.01	-61.29	-11.45	3.17	56.68	6.860e+04	1.787e+04	6.398e+04	2.249e+04	-
1.002e+04		180	3.51	46.28	-48.91	16.45	-19.08	44.16	4.048e+04	2.711e+04	3.720e+04	3.039e+04	-
1.460e+04		181	3.29	34.56	-36.06	5.48	-6.98	34.76	3.908e+04	1.772e+04	3.849e+04	1.830e+04	-
5752.73		189	3.80	44.93	-53.31	-25.45	17.07	44.28	4.181e+04	1.239e+04	3.839e+04	1.582e+04	-
3476.44	22	188	5.77	52.84	-70.68	-36.22	18.38	55.40	6.340e+04	1.648e+04	5.901e+04	2.087e+04	-
164		180	3.26	45.11	-53.21	-3.18	-4.92	49.15	3.693e+04	2.502e+04	3.345e+04	2.849e+04	-
9433.33		181	3.15	38.73	-43.73	-13.84	8.84	39.64	3.646e+04	1.654e+04	3.586e+04	1.714e+04	-
1.366e+04		189	3.70	40.62	-46.10	-13.53	8.05	41.99	4.123e+04	1.217e+04	3.792e+04	1.549e+04	-
5416.21	54	188	5.65	49.25	-60.77	-20.40	8.88	53.03	6.277e+04	1.634e+04	5.849e+04	2.061e+04	-
3398.94		180	3.22	42.52	-47.12	7.93	-12.53	43.63	3.684e+04	2.479e+04	3.367e+04	2.796e+04	-
164		181	3.05	33.34	-36.11	-2.31	-0.47	34.71	3.589e+04	1.628e+04	3.533e+04	1.683e+04	-
9232.55		189	3.64	38.94	-42.59	-5.99	2.34	40.55	4.086e+04	1.204e+04	3.762e+04	1.528e+04	-
1.343e+04		188	5.57	48.19	-55.72	-10.41	2.88	51.53	6.237e+04	1.624e+04	5.816e+04	2.045e+04	-
5301.95		180	3.19	42.08	-44.47	14.96	-17.35	40.14	3.680e+04	2.464e+04	3.381e+04	2.762e+04	-
3252.76		181	2.99	31.42	-32.78	4.98	-6.35	31.60	3.552e+04	1.611e+04	3.499e+04	1.664e+04	-
164	69	190	3.33	44.95	-43.49	-5.34	6.80	43.80	3.631e+04	9414.56	3.136e+04	1.437e+04	-
9105.68		189	4.95	48.04	-60.60	-11.93	-0.62	54.03	5.547e+04	1.634e+04	5.113e+04	2.068e+04	-
1.327e+04		181	3.72	36.20	-40.75	2.07	-6.62	38.23	4.413e+04	2.043e+04	4.351e+04	2.105e+04	-
5229.76		182	4.69	27.26	-49.50	-9.47	-12.78	38.34	5.271e+04	1.331e+04	4.959e+04	1.643e+04	-
3160.40		190	2.82	38.04	-36.80	-4.52	5.76	37.06	3.073e+04	7966.17	2.653e+04	1.216e+04	-
165	1	189	4.19	40.65	-51.28	-10.10	-0.53	45.72	4.693e+04	1.383e+04	4.326e+04	1.750e+04	-
1.043e+04		181	3.15	30.63	-34.48	1.75	-5.60	32.35	3.734e+04	1.728e+04	3.681e+04	1.781e+04	-
1.228e+04		182	3.97	23.06	-41.88	-8.01	-10.81	32.44	4.460e+04	1.126e+04	4.196e+04	1.390e+04	-
3808.47		190	2.70	43.23	-40.53	-17.31	20.02	37.49	2.890e+04	7488.15	2.479e+04	1.161e+04	-
1.064e+04	3	189	3.98	42.26	-56.86	-28.18	13.58	44.95	4.372e+04	1.295e+04	4.019e+04	1.647e+04	-
165		181	3.01	36.59	-42.59	-16.63	10.63	37.17	3.478e+04	1.614e+04	3.424e+04	1.668e+04	-
8823.33		182	3.91	31.46	-53.30	-26.75	4.91	39.31	4.274e+04	1.067e+04	4.003e+04	1.338e+04	-
1.039e+04		190	2.61	37.45	-35.71	-9.22	10.96	35.16	2.831e+04	7337.83	2.438e+04	1.127e+04	-
3222.55	22	189	3.87	38.41	-49.98	-16.54	4.96	42.87	4.307e+04	1.272e+04	3.966e+04	1.613e+04	-
9004.52		181	2.92	30.34	-34.81	-5.46	1.00	32.41	3.427e+04	1.588e+04	3.377e+04	1.638e+04	-
165	54	182	3.72	24.25	-43.19	-14.82	-4.12	33.29	4.140e+04	1.040e+04	3.888e+04	1.292e+04	-
8439.11													
9804.31													
3127.98													
8919.50													
165													
8183.02													
9587.03													
3006.41													





**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

167	54	192	1.96	-14.55	-17.28	-17.05	-14.78	0.75	1.808e+04	-3601.76	1.419e+04	293.87	-
8324.35		191	3.64	40.11	-12.47	-1.04	28.69	21.68	3.646e+04	-2211.22	3.573e+04	-1487.27	-
5241.30		183	6.23	13.95	-77.37	13.56	-76.98	-6.01	3.687e+04	-3.528e+04	-2.778e+04	2.938e+04	-
2.201e+04		184	1.04	34.75	15.69	17.99	32.46	6.20	3201.91	-8726.02	-8358.30	2834.18	-
2061.80		192	1.92	-13.67	-19.78	-13.84	-19.61	1.01	1.765e+04	-3779.64	1.382e+04	49.89	-
167	69	191	3.55	36.53	-11.90	3.60	21.02	22.59	3.580e+04	-2091.38	3.507e+04	-1363.76	-
8209.58		183	6.03	12.22	-77.87	11.30	-76.94	-9.08	3.559e+04	-3.446e+04	-2.690e+04	2.803e+04	-
5199.83		184	1.01	26.91	14.83	17.01	24.73	4.64	3262.58	-8425.23	-8084.19	2921.54	-
2.173e+04		193	0.17	7.41	-1.43	0.64	5.34	3.74	-766.18	-1816.25	-769.74	-1812.70	60.99
1967.16	1	192	1.59	5.49	-4.41	-2.60	3.68	3.83	1.416e+04	-3583.09	1.211e+04	-1531.80	-
5673.49		184	1.97	4.13	-12.74	3.64	-12.25	2.82	1.149e+04	-1.149e+04	-8913.92	8912.98	-
7252.60		185	0.80	3.83	-3.02	3.56	-2.75	-1.34	8533.36	774.95	1268.13	8040.19	-
1892.89		193	0.14	6.27	-1.21	0.54	4.52	3.16	-648.31	-1536.83	-651.32	-1533.82	51.60
168	3	192	1.35	4.64	-3.74	-2.20	3.11	3.24	1.198e+04	-3031.85	1.025e+04	-1296.14	-
4800.65		184	1.66	3.49	-10.78	3.08	-10.37	2.39	9723.00	-9723.80	-7542.55	7541.75	-
6136.81		185	0.67	3.24	-2.56	3.01	-2.33	-1.13	7220.54	655.73	1073.03	6803.23	-
1601.68		193	0.19	21.92	0.14	0.23	21.83	1.38	-641.30	-1265.67	-642.11	-1264.86	-22.57
168	22	192	1.30	19.47	-6.16	-6.15	19.46	0.52	1.146e+04	-2612.65	9815.81	-972.79	-
4514.54		184	1.62	11.41	-3.61	3.47	4.33	7.50	9616.92	-9493.99	-7423.24	7546.16	-
5940.20		185	0.68	11.75	2.36	2.73	11.38	1.83	7084.01	661.47	1030.33	6715.15	-
1494.31		193	0.15	11.45	-0.09	0.39	10.97	2.30	-610.92	-1344.78	-611.47	-1344.23	20.01
168	54	192	1.25	9.57	-3.91	-3.61	9.27	2.00	1.111e+04	-2700.63	9508.55	-1098.73	-
4422.42		184	1.55	5.03	-6.06	3.06	-4.10	4.23	9140.10	-9092.95	-7076.16	7123.32	-
5718.81		185	0.63	3.13	2.72	2.74	3.11	0.08	6765.18	621.67	996.72	6390.13	-
1470.88		193	0.13	5.70	-1.10	0.49	4.11	2.88	-589.37	-1397.12	-592.11	-1394.38	46.91
168	69	192	1.22	4.22	-3.40	-2.00	2.83	2.95	1.089e+04	-2756.22	9314.41	-1178.31	-
4364.22		184	1.51	3.18	-9.80	2.80	-9.42	2.17	8839.09	-8839.82	-6856.86	6856.14	-
5578.92		185	0.61	2.95	-2.32	2.74	-2.12	-1.03	6564.12	596.12	975.48	6184.76	-
1456.07		194	16.41	166.17	-158.97	5.45	1.74	162.56	1.812e+05	3.312e+04	1.748e+05	3.957e+04	-
169	1	14	27.13	282.01	-278.10	21.75	-17.84	279.35	2.947e+05	3.667e+04	2.886e+05	4.271e+04	-
3.024e+04		16	22.61	216.10	-223.24	77.82	-84.96	204.04	2.540e+05	4.964e+04	2.401e+05	6.348e+04	-
3.901e+04		186	14.89	134.51	-148.13	37.99	-51.61	134.03	1.703e+05	4.693e+04	1.583e+05	5.896e+04	-
5.133e+04		194	13.89	140.61	-134.52	4.62	1.48	137.55	1.533e+05	2.802e+04	1.479e+05	3.348e+04	-
3.659e+04		14	22.96	238.62	-235.31	18.40	-15.09	236.37	2.493e+05	3.103e+04	2.442e+05	3.614e+04	-
169	3	16	19.13	182.86	-188.90	65.85	-71.89	172.65	2.149e+05	4.201e+04	2.032e+05	5.371e+04	-
2.558e+04		186	12.60	113.82	-125.34	32.15	-43.67	113.41	1.441e+05	3.971e+04	1.339e+05	4.989e+04	-
3.301e+04		194	12.91	109.17	-144.65	-56.55	21.07	120.83	1.401e+05	2.589e+04	1.351e+05	3.081e+04	-
4.344e+04		14	21.22	186.33	-242.95	-65.10	8.48	211.47	2.269e+05	2.844e+04	2.223e+05	3.307e+04	-
3.096e+04		16	17.72	140.75	-195.21	-9.89	-44.57	167.08	1.959e+05	3.842e+04	1.852e+05	4.904e+04	-
169	6												-
2.317e+04													-
2.997e+04													-
3.949e+04													-

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

2.832e+04	186	11.75	89.96	-135.68	-25.05	-20.67	112.80	1.320e+05	3.649e+04	1.227e+05	4.579e+04	-
169 38	194	12.73	119.05	-129.39	-19.32	8.98	123.41	1.397e+05	2.564e+04	1.347e+05	3.058e+04	-
2.322e+04	14	21.00	203.58	-223.66	-14.96	-5.12	213.56	2.268e+05	2.830e+04	2.221e+05	3.294e+04	-
2.999e+04	16	17.52	154.84	-179.30	32.85	-57.31	160.87	1.956e+05	3.828e+04	1.849e+05	4.891e+04	-
3.949e+04	186	11.57	96.70	-120.82	8.21	-32.33	106.86	1.314e+05	3.625e+04	1.221e+05	4.552e+04	-
2.821e+04	194	12.63	127.82	-122.29	4.20	1.34	125.05	1.394e+05	2.547e+04	1.344e+05	3.044e+04	-
169 69	14	20.87	216.93	-213.92	16.73	-13.72	214.89	2.267e+05	2.821e+04	2.220e+05	3.285e+04	-
2.326e+04	16	17.39	166.23	-171.72	59.86	-65.36	156.95	1.954e+05	3.819e+04	1.847e+05	4.883e+04	-
3.001e+04	186	11.45	103.47	-113.95	29.23	-39.70	103.10	1.310e+05	3.610e+04	1.217e+05	4.535e+04	-
3.949e+04	195	10.81	104.19	-99.62	3.76	0.80	101.89	1.196e+05	2.314e+04	1.136e+05	2.913e+04	-
2.815e+04	194	17.05	166.35	-170.53	-2.03	-2.14	168.44	1.873e+05	3.260e+04	1.803e+05	3.962e+04	-
170 1	186	14.64	137.21	-148.74	40.54	-52.07	135.27	1.677e+05	4.654e+04	1.566e+05	5.760e+04	-
2.327e+04	187	11.01	88.18	-113.52	24.63	-49.97	93.70	1.269e+05	4.152e+04	1.133e+05	5.513e+04	-
3.218e+04	195	9.15	88.16	-84.29	3.18	0.68	86.22	1.012e+05	1.958e+04	9.610e+04	2.465e+04	-
3.491e+04	194	14.43	140.76	-144.29	-1.72	-1.81	142.52	1.585e+05	2.759e+04	1.525e+05	3.352e+04	-
3.125e+04	186	12.39	116.10	-125.86	34.30	-44.06	114.46	1.419e+05	3.938e+04	1.325e+05	4.874e+04	-
170 3	187	9.32	74.61	-96.06	20.84	-42.29	79.28	1.074e+05	3.513e+04	9.586e+04	4.665e+04	-
1.969e+04	195	8.53	69.24	-91.28	-42.48	20.44	73.84	9.259e+04	1.824e+04	8.809e+04	2.274e+04	-
2.723e+04	194	13.41	110.60	-154.35	-61.99	18.24	126.25	1.448e+05	2.548e+04	1.395e+05	3.086e+04	-
2.954e+04	186	11.54	91.55	-134.37	-21.85	-20.97	112.96	1.298e+05	3.621e+04	1.213e+05	4.471e+04	-
2.644e+04	187	8.75	58.60	-102.40	-24.38	-19.42	80.46	9.904e+04	3.227e+04	8.849e+04	4.282e+04	-
170 6	195	8.40	74.29	-80.67	-14.67	8.29	76.62	9.221e+04	1.797e+04	8.765e+04	2.254e+04	-
1.773e+04	194	13.23	119.76	-138.67	-24.96	6.05	128.28	1.444e+05	2.523e+04	1.390e+05	3.062e+04	-
2.477e+04	186	11.37	98.65	-120.67	10.65	-32.67	107.50	1.293e+05	3.596e+04	1.208e+05	4.447e+04	-
2.690e+04	187	8.58	62.68	-91.59	2.17	-31.08	75.32	9.816e+04	3.207e+04	8.766e+04	4.257e+04	-
2.436e+04	195	8.32	80.14	-76.63	2.89	0.62	78.38	9.197e+04	1.780e+04	8.737e+04	2.241e+04	-
170 38	194	13.12	127.96	-131.17	-1.56	-1.65	129.57	1.441e+05	2.508e+04	1.387e+05	3.047e+04	-
1.784e+04	186	11.26	105.54	-114.42	31.18	-40.06	104.05	1.290e+05	3.580e+04	1.205e+05	4.431e+04	-
2.476e+04	187	8.47	67.83	-87.32	18.95	-38.44	72.08	9.761e+04	3.194e+04	8.714e+04	4.241e+04	-
2.687e+04	195	7.77	66.09	-68.92	0.29	-3.12	67.48	8.438e+04	1.372e+04	7.642e+04	2.168e+04	-
2.416e+04	196	11.58	102.13	-106.63	-3.46	-1.05	104.37	1.274e+05	2.302e+04	1.213e+05	2.906e+04	-
170 69	187	9.57	85.60	-107.84	31.12	-53.37	87.01	1.111e+05	4.194e+04	9.795e+04	5.512e+04	-
1.790e+04	188	7.12	54.37	-63.11	18.63	-27.37	54.05	8.260e+04	2.627e+04	7.573e+04	3.313e+04	-
2.476e+04	196	6.57	55.92	-58.32	0.24	-2.64	57.10	7.140e+04	1.161e+04	6.466e+04	1.834e+04	-
2.685e+04	195	9.80	86.42	-90.23	-2.93	-0.88	88.32	1.078e+05	1.948e+04	1.027e+05	2.459e+04	-
2.404e+04	187	8.10	72.43	-91.25	26.33	-45.16	73.62	9.404e+04	3.548e+04	8.288e+04	4.664e+04	-
171 1	188	6.03	46.00	-53.40	15.76	-23.16	45.73	6.989e+04	2.223e+04	6.408e+04	2.804e+04	-
2.234e+04												
2.437e+04												
2.718e+04												
1.843e+04												
171 3												
1.890e+04												
2.062e+04												
2.300e+04												



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

173	3	198	4.51	33.08	-32.66	-9.33	9.75	31.45	4.605e+04	1289.16	4.273e+04	4604.30	-
1.172e+04		197	5.10	36.61	-48.31	-6.39	-5.31	42.46	5.390e+04	6027.80	4.714e+04	1.278e+04	-
1.666e+04		189	4.18	35.27	-41.11	6.99	-12.83	36.88	4.712e+04	1.330e+04	3.931e+04	2.111e+04	-
1.425e+04		190	2.82	28.57	-35.24	11.29	-17.96	28.35	3.135e+04	8940.59	2.295e+04	1.734e+04	-
1.085e+04		198	4.32	36.25	-41.11	-33.46	28.60	23.10	4.363e+04	2085.08	4.095e+04	4771.54	-
173	6	197	4.80	33.89	-51.51	-32.89	15.26	35.27	5.009e+04	6050.72	4.407e+04	1.206e+04	-
1.022e+04		189	3.94	35.34	-45.31	-15.42	5.45	38.95	4.372e+04	1.268e+04	3.667e+04	1.973e+04	-
1.512e+04		190	2.62	26.10	-31.03	-4.41	-0.51	28.50	2.911e+04	9025.28	2.166e+04	1.647e+04	-
1.301e+04		198	4.18	30.81	-32.46	-18.15	16.51	26.47	4.254e+04	1528.88	3.966e+04	4412.56	-
9700.82		197	4.70	31.86	-45.20	-16.29	2.95	37.31	4.942e+04	5701.32	4.333e+04	1.179e+04	-
173	38	189	3.85	32.10	-39.22	-2.07	-5.04	35.63	4.318e+04	1.232e+04	3.610e+04	1.940e+04	-
1.049e+04		190	2.58	25.02	-30.64	4.58	-10.20	26.83	2.874e+04	8475.39	2.117e+04	1.604e+04	-
1.514e+04		198	4.10	30.07	-29.69	-8.48	8.86	28.59	4.186e+04	1171.97	3.885e+04	4185.73	-
1.298e+04		197	4.63	33.28	-43.92	-5.81	-4.83	38.60	4.900e+04	5479.82	4.286e+04	1.162e+04	-
9798.72		189	3.80	32.06	-37.37	6.36	-11.66	33.53	4.283e+04	1.209e+04	3.573e+04	1.919e+04	-
173	69	190	2.56	25.97	-32.03	10.27	-16.33	25.77	2.850e+04	8127.81	2.087e+04	1.576e+04	-
1.066e+04		199	10.19	109.95	-52.52	-36.76	94.19	48.08	8.290e+04	3.067e+04	8.289e+04	3.066e+04	-
1.515e+04		198	4.87	10.84	-60.37	-12.16	-37.37	33.30	5.496e+04	1.541e+04	4.854e+04	2.182e+04	-
1.295e+04		190	3.08	47.79	-25.77	12.46	9.56	36.75	3.382e+04	7629.93	2.796e+04	1.349e+04	-
9860.58		191	3.46	13.15	-29.81	12.92	-29.58	3.14	2.449e+04	1.565e+04	-5454.33	1.430e+04	-
174	1	199	8.62	93.04	-44.44	-31.11	79.70	40.69	7.015e+04	2.595e+04	7.014e+04	2.594e+04	-
856.48		198	4.12	9.17	-51.09	-10.29	-31.62	28.18	4.650e+04	1.304e+04	4.107e+04	1.846e+04	-
1.458e+04		190	2.61	40.44	-21.80	10.55	8.09	31.10	2.861e+04	6456.09	2.366e+04	1.141e+04	-
1.091e+04		191	2.93	11.13	-25.23	10.93	-25.03	2.65	2.072e+04	1.324e+04	-4615.21	1.210e+04	-
1.747e+04		199	8.27	87.54	-59.91	-57.32	84.96	19.35	6.849e+04	2.157e+04	6.843e+04	2.151e+04	-
724.72		198	3.95	5.94	-44.86	-33.50	-5.43	21.17	4.396e+04	1.228e+04	3.941e+04	1.683e+04	-
1.233e+04		190	2.41	39.47	-24.49	-5.02	20.00	29.43	2.658e+04	7578.07	2.256e+04	1.160e+04	-
9232.86		191	2.92	16.71	-10.86	9.05	-3.19	12.35	1.974e+04	1.405e+04	-5362.39	1.106e+04	-
1.478e+04		199	8.00	84.62	-46.85	-39.52	77.30	30.16	6.557e+04	2.278e+04	6.557e+04	2.278e+04	517.66
2379.60		198	3.82	4.69	-43.11	-18.70	-19.72	23.90	4.292e+04	1.202e+04	3.814e+04	1.680e+04	-
1.117e+04		190	2.38	37.11	-20.93	3.93	12.25	28.72	2.623e+04	6531.86	2.191e+04	1.085e+04	-
8147.96		191	2.76	11.09	-16.67	9.59	-15.18	6.26	1.919e+04	1.282e+04	-4647.41	1.102e+04	-
1.395e+04		199	7.84	84.58	-40.40	-28.28	72.46	36.99	6.377e+04	2.359e+04	6.376e+04	2.359e+04	-
174	69	198	3.74	8.34	-46.44	-9.35	-28.75	25.62	4.227e+04	1.185e+04	3.734e+04	1.678e+04	-
658.83		190	2.37	36.76	-19.82	9.59	7.36	28.27	2.601e+04	5869.18	2.151e+04	1.037e+04	-
1.121e+04		191	2.66	10.12	-22.93	9.94	-22.76	2.41	1.884e+04	1.204e+04	-4195.64	1.100e+04	-
8393.51		200	3.73	6.43	-57.41	3.15	-54.12	14.11	3.095e+04	-9281.83	-3425.30	2.509e+04	-
1.344e+04													
175	1												
1.419e+04													

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

5.273e+04	199	10.16	138.33	14.99	51.98	101.34	-56.52	1.046e+04	-9.506e+04	-4.070e+04	-4.390e+04	
3.709e+04	191	8.06	1.46	-79.66	-44.70	-33.50	40.17	7.789e+04	-5410.48	5.518e+04	1.730e+04	-
1.069e+04	192	2.64	50.15	2.69	18.00	34.84	-22.19	9124.87	-1.987e+04	4421.93	-1.517e+04	-
1.201e+04	200	3.16	5.44	-48.58	2.66	-45.79	11.94	2.619e+04	-7853.86	-2898.33	2.123e+04	-
4.462e+04	199	8.59	117.05	12.68	43.98	85.75	-47.82	8848.50	-8.043e+04	-3.444e+04	-3.715e+04	-
3.139e+04	191	6.82	1.23	-67.40	-37.82	-28.35	33.99	6.590e+04	-4578.10	4.669e+04	1.464e+04	-
9044.63	192	2.23	42.44	2.27	15.23	29.48	-18.77	7721.04	-1.682e+04	3741.63	-1.284e+04	-
1.153e+04	200	3.09	3.82	-43.42	1.07	-40.66	11.06	2.593e+04	-7472.19	-2853.90	2.132e+04	-
4.437e+04	199	8.69	153.20	10.26	50.24	113.23	-64.16	8594.28	-8.020e+04	-3.409e+04	-3.752e+04	-
3.044e+04	191	6.70	11.58	-82.98	-53.46	-17.94	43.82	6.384e+04	-4193.44	4.501e+04	1.464e+04	-
9082.37	192	2.27	58.67	3.81	12.58	49.89	-20.11	7426.33	-1.668e+04	3296.75	-1.255e+04	-
1.115e+04	200	2.96	4.51	-43.87	1.90	-41.26	10.93	2.463e+04	-7267.70	-2719.66	2.008e+04	-
4.204e+04	199	8.15	124.51	11.05	43.96	91.61	-51.48	8256.79	-7.586e+04	-3.239e+04	-3.522e+04	-
2.927e+04	191	6.39	4.89	-69.40	-41.77	-22.74	35.90	6.143e+04	-4173.77	4.344e+04	1.382e+04	-
8555.38	192	2.12	45.95	3.14	13.35	35.74	-18.25	7175.96	-1.582e+04	3360.93	-1.201e+04	-
1.091e+04	200	2.87	4.95	-44.16	2.42	-41.63	10.85	2.381e+04	-7139.87	-2634.84	1.930e+04	-
4.056e+04	199	7.81	106.41	11.53	39.99	77.95	-43.48	8044.09	-7.312e+04	-3.131e+04	-3.377e+04	-
2.853e+04	191	6.20	1.12	-61.28	-34.38	-25.77	30.90	5.991e+04	-4161.91	4.244e+04	1.331e+04	-
8222.39	192	2.03	38.58	2.07	13.84	26.80	-17.07	7019.13	-1.529e+04	3401.48	-1.167e+04	-
135.51	201	0.47	0.88	-16.85	-0.91	-15.06	5.34	4889.35	1801.19	1807.15	4883.39	-
2177.36	200	0.84	13.61	1.39	12.73	2.27	3.16	368.25	-8017.05	-7407.34	-241.47	-
1174.23	192	0.82	5.81	-16.50	-5.42	-5.27	-11.16	8533.05	273.44	8362.60	443.89	-
461.28	193	0.16	8.18	-3.45	4.04	0.68	-5.57	-690.31	-1630.91	-1068.98	-1252.24	-
114.66	201	0.40	0.75	-14.25	-0.77	-12.74	4.52	4137.14	1524.09	1529.13	4132.10	-
1842.38	200	0.71	11.51	1.17	10.77	1.92	2.68	311.59	-6783.66	-6267.75	-204.32	-
993.58	192	0.69	4.92	-13.96	-4.58	-4.46	-9.44	7220.28	231.37	7076.05	375.60	-
390.32	193	0.13	6.92	-2.92	3.42	0.58	-4.71	-584.11	-1380.00	-904.52	-1059.59	-
117.42	201	0.39	6.11	-1.89	-1.39	5.60	1.95	4305.25	1465.78	1470.64	4300.38	-
1349.72	200	0.68	20.61	9.95	10.57	20.00	-2.48	642.53	-6601.96	-6341.10	381.67	-
750.40	192	0.72	17.38	-10.29	-9.22	16.31	-5.33	7027.06	387.19	6941.14	473.11	-
260.93	193	0.15	22.21	3.23	3.35	22.09	-1.55	-615.25	-1137.50	-886.51	-866.25	-
109.34	201	0.35	0.88	-6.77	-0.97	-4.93	3.27	3971.75	1416.61	1421.30	3967.06	-
1548.99	200	0.65	10.28	8.62	10.09	8.81	0.53	411.32	-6324.34	-5946.98	33.96	-
844.07	192	0.66	7.71	-10.00	-6.12	3.83	-7.32	6741.82	280.22	6629.61	392.43	-
318.47	193	0.12	10.33	1.74	3.21	8.87	-3.23	-565.54	-1207.31	-847.16	-925.70	-
104.24	201	0.36	0.68	-12.96	-0.70	-11.58	4.11	3761.04	1385.53	1390.12	3756.45	-
	200	0.65	10.47	1.07	9.79	1.75	2.43	283.27	-6166.96	-5697.95	-185.75	-

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1674.89													
903.26	192	0.63	4.47	-12.70	-4.17	-4.06	-8.58	6563.89	210.34	6432.77	341.46	-	
354.83	193	0.12	6.29	-2.66	3.11	0.53	-4.28	-531.01	-1254.55	-822.29	-963.26	-	
177	1	202	18.13	191.96	-173.08	9.37	9.51	182.52	1.869e+05	9090.97	1.723e+05	2.367e+04	-
4.879e+04		12	29.89	345.29	-331.08	25.30	-11.09	337.69	3.080e+05	8461.83	2.972e+05	1.933e+04	-
5.601e+04		14	27.26	287.40	-273.68	131.92	-118.20	251.13	2.963e+05	3.632e+04	2.674e+05	6.517e+04	-
8.166e+04		194	16.72	163.06	-161.82	61.89	-60.64	150.44	1.838e+05	3.220e+04	1.600e+05	5.607e+04	-
5.523e+04	177	3	202	15.34	162.42	-146.45	7.93	8.05	154.44	1.582e+05	7692.36	1.458e+05	2.003e+04
4.128e+04		12	25.29	292.17	-280.14	21.41	-9.38	285.74	2.607e+05	7160.01	2.515e+05	1.635e+04	-
4.739e+04		14	23.06	243.18	-231.58	111.62	-100.01	212.49	2.507e+05	3.073e+04	2.263e+05	5.515e+04	-
6.909e+04		194	14.15	137.97	-136.92	52.36	-51.31	127.30	1.556e+05	2.724e+04	1.354e+05	4.744e+04	-
4.673e+04	177	6	202	14.21	126.03	-158.49	-59.48	27.02	135.52	1.445e+05	7731.41	1.334e+05	1.875e+04
3.722e+04		12	23.38	233.40	-290.01	-71.95	15.34	258.04	2.372e+05	6614.43	2.289e+05	1.494e+04	-
4.300e+04		14	21.32	188.93	-238.77	21.21	-71.06	208.81	2.282e+05	2.824e+04	2.060e+05	5.038e+04	-
6.273e+04		194	13.15	108.81	-148.22	-11.38	-28.03	128.25	1.421e+05	2.509e+04	1.237e+05	4.345e+04	-
4.256e+04	177	38	202	14.04	137.69	-141.36	-18.61	14.94	138.51	1.440e+05	7279.16	1.329e+05	1.842e+04
3.741e+04		12	23.14	251.62	-266.84	-15.93	0.71	259.10	2.370e+05	6549.90	2.287e+05	1.489e+04	-
4.305e+04		14	21.10	207.11	-219.94	70.40	-83.23	199.23	2.280e+05	2.806e+04	2.058e+05	5.023e+04	-
6.278e+04		194	12.97	117.44	-132.11	24.76	-39.44	120.57	1.417e+05	2.489e+04	1.233e+05	4.325e+04	-
4.251e+04	177	69	202	13.94	147.66	-133.14	7.21	7.31	140.40	1.438e+05	6993.06	1.326e+05	1.821e+04
3.753e+04		12	22.99	265.61	-254.67	19.46	-8.53	259.76	2.370e+05	6509.10	2.286e+05	1.487e+04	-
4.308e+04		14	20.97	221.08	-210.52	101.47	-90.92	193.17	2.279e+05	2.794e+04	2.057e+05	5.013e+04	-
6.281e+04		194	12.86	125.43	-124.47	47.60	-46.65	115.72	1.414e+05	2.477e+04	1.231e+05	4.313e+04	-
4.248e+04	178	1	203	13.25	118.22	-99.28	-3.38	22.32	107.99	1.309e+05	-5504.39	1.208e+05	4623.35
3.577e+04		202	18.94	195.84	-188.40	2.48	4.96	192.11	1.926e+05	4629.67	1.766e+05	2.064e+04	-
5.247e+04		194	16.89	165.75	-164.19	63.20	-61.63	152.71	1.861e+05	3.314e+04	1.636e+05	5.568e+04	-
5.423e+04		195	11.25	101.68	-101.12	39.91	-39.36	93.33	1.234e+05	2.202e+04	1.020e+05	4.346e+04	-
4.140e+04	178	3	203	11.21	100.03	-84.01	-2.86	18.89	91.37	1.108e+05	-4657.56	1.022e+05	3912.07
3.026e+04		202	16.03	165.71	-159.41	2.10	4.20	162.56	1.630e+05	3917.41	1.494e+05	1.746e+04	-
4.440e+04		194	14.29	140.25	-138.93	53.48	-52.15	129.21	1.575e+05	2.804e+04	1.384e+05	4.711e+04	-
4.589e+04		195	9.52	86.03	-85.57	33.77	-33.30	78.97	1.044e+05	1.863e+04	8.629e+04	3.677e+04	-
3.503e+04	178	6	203	10.46	82.41	-98.45	-53.91	37.87	77.92	1.017e+05	-3715.16	9.422e+04	3786.79
2.711e+04		202	14.84	132.19	-170.36	-62.19	24.03	145.00	1.487e+05	4001.16	1.364e+05	1.630e+04	-
4.035e+04		194	13.28	109.28	-149.29	-11.14	-28.87	128.98	1.439e+05	2.598e+04	1.267e+05	4.321e+04	-
4.165e+04		195	8.88	69.20	-93.84	-13.29	-11.35	81.51	9.566e+04	1.724e+04	7.913e+04	3.377e+04	-
3.199e+04	178	38	203	10.30	85.86	-83.14	-22.47	25.19	81.07	1.011e+05	-4032.31	9.343e+04	3645.62
2.736e+04		202	14.67	142.08	-153.35	-22.91	11.64	146.70	1.484e+05	3731.61	1.361e+05	1.604e+04	-
4.036e+04													

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

4.169e+04	194	13.10	118.90	-133.65	25.48	-40.23	121.92	1.435e+05	2.568e+04	1.262e+05	4.297e+04	-
3.190e+04	195	8.74	73.10	-82.38	13.67	-22.95	75.56	9.522e+04	1.705e+04	7.871e+04	3.356e+04	-
2.751e+04	178 69 203	10.19	90.94	-76.37	-2.60	17.17	83.07	1.007e+05	-4234.14	9.293e+04	3556.43	-
4.036e+04	202	14.57	150.64	-144.92	1.90	3.82	147.78	1.482e+05	3561.28	1.358e+05	1.588e+04	-
4.172e+04	194	12.99	127.50	-126.30	48.62	-47.41	117.47	1.432e+05	2.549e+04	1.259e+05	4.283e+04	-
3.185e+04	195	8.65	78.21	-77.79	30.70	-30.28	71.79	9.494e+04	1.694e+04	7.845e+04	3.343e+04	-
3.076e+04	179 1 204	8.92	69.57	-67.38	1.57	0.62	68.48	8.774e+04	-4220.23	7.593e+04	7587.21	-
3.319e+04	203	11.83	116.00	-92.20	5.78	18.03	103.92	1.170e+05	-4492.91	1.071e+05	5373.02	-
4.097e+04	195	11.67	96.83	-105.47	31.59	-40.23	94.56	1.284e+05	2.342e+04	1.087e+05	4.309e+04	-
3.063e+04	196	7.72	64.03	-61.44	27.75	-25.16	56.88	8.407e+04	1.319e+04	6.646e+04	3.080e+04	-
2.603e+04	179 3 204	7.55	58.87	-57.02	1.33	0.53	57.94	7.424e+04	-3570.96	6.425e+04	6419.95	-
2.808e+04	203	10.01	98.16	-78.01	4.89	15.25	87.93	9.901e+04	-3801.69	9.066e+04	4546.40	-
3.467e+04	195	9.88	81.93	-89.24	26.73	-34.04	80.01	1.087e+05	1.982e+04	9.202e+04	3.646e+04	-
2.592e+04	196	6.53	54.18	-51.99	23.48	-21.29	48.13	7.113e+04	1.116e+04	5.623e+04	2.606e+04	-
2.354e+04	179 6 204	7.04	48.42	-63.94	-35.86	20.34	48.64	6.833e+04	-2785.17	5.942e+04	6123.34	-
2.517e+04	203	9.25	80.92	-86.49	-40.47	34.90	74.74	9.007e+04	-3085.28	8.268e+04	4302.06	-
3.160e+04	195	9.24	65.60	-99.05	-21.85	-11.60	82.16	9.981e+04	1.842e+04	8.476e+04	3.347e+04	-
2.358e+04	196	6.11	45.08	-57.57	-12.91	0.41	50.89	6.543e+04	1.059e+04	5.200e+04	2.402e+04	-
2.362e+04	179 38 204	6.93	49.73	-54.70	-13.15	8.17	51.11	6.782e+04	-3067.40	5.880e+04	5947.45	-
2.539e+04	203	9.16	84.39	-75.33	-12.95	22.01	77.93	9.003e+04	-3312.24	8.252e+04	4198.51	-
3.155e+04	195	9.08	69.32	-86.35	6.43	-23.46	76.39	9.918e+04	1.817e+04	8.408e+04	3.327e+04	-
2.357e+04	196	6.01	45.75	-49.37	8.08	-11.70	46.52	6.496e+04	1.032e+04	5.146e+04	2.382e+04	-
2.366e+04	179 69 204	6.86	53.52	-51.83	1.21	0.48	52.67	6.749e+04	-3246.33	5.841e+04	5836.32	-
2.553e+04	203	9.10	89.23	-70.92	4.45	13.87	79.94	9.001e+04	-3456.08	8.242e+04	4133.09	-
3.151e+04	195	8.98	74.48	-81.13	24.30	-30.95	72.74	9.878e+04	1.802e+04	8.365e+04	3.315e+04	-
2.356e+04	196	5.94	49.25	-47.26	21.35	-19.35	43.76	6.467e+04	1.015e+04	5.112e+04	2.369e+04	-
3.042e+04	180 1 205	7.08	54.89	-56.73	2.87	-4.71	55.68	6.571e+04	-9281.46	5.015e+04	6284.88	-
2.841e+04	204	8.17	71.49	-63.03	7.12	1.34	67.20	8.011e+04	-4342.57	6.913e+04	6643.00	-
3.253e+04	196	8.19	60.06	-67.98	18.25	-26.17	60.04	8.843e+04	1.280e+04	6.989e+04	3.133e+04	-
2.616e+04	197	6.03	42.70	-46.43	14.30	-18.03	41.53	6.372e+04	5996.64	4.704e+04	2.267e+04	-
2.574e+04	180 3 205	5.99	46.44	-48.00	2.43	-3.98	47.11	5.560e+04	-7853.54	4.243e+04	5317.97	-
2.404e+04	204	6.92	60.49	-53.34	6.02	1.14	56.86	6.779e+04	-3674.48	5.849e+04	5621.00	-
2.753e+04	196	6.93	50.82	-57.52	15.45	-22.15	50.81	7.483e+04	1.083e+04	5.914e+04	2.651e+04	-
2.214e+04	197	5.11	36.13	-39.29	12.10	-15.26	35.14	5.391e+04	5074.08	3.981e+04	1.918e+04	-
2.340e+04	180 6 205	5.56	39.52	-49.49	-24.01	14.04	40.23	5.145e+04	-6467.33	3.955e+04	5437.31	-
2.156e+04	204	6.41	48.95	-56.23	-28.55	21.27	46.32	6.202e+04	-2842.45	5.382e+04	5358.09	-
	196	6.50	44.63	-65.61	-20.36	-0.62	54.23	6.898e+04	1.026e+04	5.476e+04	2.448e+04	-





**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

6.933e+04	199	13.69	30.13	-139.15	-10.65	-98.36	72.39	1.347e+05	-4080.24	6.256e+04	6.804e+04	-
182 22	207	2.05	36.75	11.72	19.04	29.43	-11.39	-2541.74	-2.123e+04	-7168.36	-1.661e+04	-
8066.41	206	6.17	31.46	-75.73	-17.86	-26.41	53.42	5.620e+04	-7980.56	3.316e+04	1.507e+04	-
3.079e+04	198	4.68	54.90	-29.85	-19.26	44.32	28.02	3.964e+04	-1.085e+04	3.531e+04	-6518.89	-
1.413e+04	199	13.41	33.63	-162.66	-25.85	-103.17	90.21	1.306e+05	-3847.40	5.963e+04	6.714e+04	-
6.713e+04	182 54	207	1.90	26.83	11.41	18.10	20.13	-7.64	-2585.32	-2.003e+04	-6503.68	-1.611e+04
7280.29	206	6.01	29.67	-68.71	-11.49	-27.55	48.53	5.488e+04	-8105.15	3.257e+04	1.421e+04	-
3.013e+04	198	4.50	42.20	-20.77	-10.17	31.60	23.56	3.892e+04	-1.023e+04	3.450e+04	-5808.75	-
1.407e+04	199	12.82	29.60	-140.29	-15.95	-94.75	75.26	1.256e+05	-3760.69	5.794e+04	6.390e+04	-
6.461e+04	182 69	207	1.80	21.40	10.36	17.51	14.26	-5.27	-2598.15	-1.929e+04	-6083.70	-1.580e+04
6783.57	206	5.91	28.75	-64.48	-7.46	-28.27	45.44	5.405e+04	-8185.57	3.220e+04	1.367e+04	-
2.971e+04	198	4.39	34.59	-15.45	-4.43	23.57	20.74	3.848e+04	-9845.73	3.399e+04	-5360.04	-
1.402e+04	199	12.44	27.39	-126.50	-9.68	-89.42	65.81	1.224e+05	-3709.31	5.687e+04	6.186e+04	-
6.302e+04	183 1	208	3.00	-14.99	-36.88	-16.30	-35.57	-5.18	2.685e+04	-6857.02	2.016e+04	-172.56
1.344e+04	207	5.51	53.02	-17.82	14.44	20.77	35.28	4.070e+04	-2.310e+04	3.594e+04	-1.834e+04	-
1.677e+04	199	8.62	14.84	-122.52	8.78	-116.46	-28.21	7.014e+04	-2.549e+04	-2.229e+04	6.694e+04	-
1.720e+04	200	2.69	38.30	16.84	19.20	35.94	6.71	5002.74	-2.428e+04	-9882.29	-9398.10	-
1.464e+04	183 3	208	2.54	-12.69	-31.20	-13.79	-30.10	-4.38	2.272e+04	-5802.10	1.706e+04	-146.01
1.137e+04	207	4.66	44.87	-15.08	12.22	17.57	29.85	3.444e+04	-1.955e+04	3.041e+04	-1.552e+04	-
1.419e+04	199	7.29	12.56	-103.67	7.43	-98.54	-23.87	5.935e+04	-2.157e+04	-1.886e+04	5.664e+04	-
1.456e+04	200	2.27	32.41	14.25	16.24	30.41	5.68	4233.09	-2.055e+04	-8361.94	-7952.24	-
1.239e+04	183 22	208	2.31	-14.58	-28.05	-19.57	-23.06	-6.51	2.145e+04	-4320.09	1.635e+04	781.46
1.027e+04	207	4.45	50.87	-12.66	6.27	31.94	29.05	3.219e+04	-1.873e+04	2.830e+04	-1.484e+04	-
1.352e+04	199	7.13	11.97	-106.52	7.49	-102.05	-22.59	5.821e+04	-2.019e+04	-1.820e+04	5.622e+04	-
1.234e+04	200	2.21	49.72	13.88	16.40	47.20	9.17	3619.26	-1.985e+04	-8071.27	-8161.32	-
1.174e+04	183 54	208	2.31	-13.28	-27.68	-15.26	-25.70	-4.96	2.096e+04	-4905.03	1.584e+04	221.24
1.031e+04	207	4.32	44.31	-12.92	9.23	22.16	27.88	3.165e+04	-1.814e+04	2.790e+04	-1.439e+04	-
1.314e+04	199	6.82	11.62	-98.99	7.04	-94.41	-22.05	5.559e+04	-1.982e+04	-1.755e+04	5.332e+04	-
1.289e+04	200	2.12	37.28	13.34	15.40	35.22	6.71	3759.02	-1.913e+04	-7783.56	-7590.18	-
1.145e+04	183 69	208	2.30	-11.53	-28.37	-12.54	-27.36	-3.98	2.065e+04	-5274.63	1.551e+04	-132.74
1.034e+04	207	4.24	40.79	-13.71	11.11	15.98	27.14	3.131e+04	-1.777e+04	2.764e+04	-1.411e+04	-
1.290e+04	199	6.63	11.42	-94.25	6.75	-89.58	-21.70	5.396e+04	-1.961e+04	-1.714e+04	5.149e+04	-
1.323e+04	200	2.07	29.46	12.95	14.77	27.65	5.16	3848.26	-1.868e+04	-7601.76	-7229.30	-
1.126e+04	184 1	209	0.58	2.16	-5.87	0.90	2.92	-508.50	-6086.18	-509.94	-6084.74	-89.65
1.258e+04	208	2.72	1.07	-3.60	-0.71	-1.82	2.27	1.763e+04	-1.498e+04	1.169e+04	-9038.18	-
1.425e+04	200	2.77	2.27	-18.16	2.26	-18.15	0.32	1.797e+04	-1.484e+04	-6568.12	9693.90	-
3071.56	201	0.58	4.56	-3.20	3.32	-1.96	-2.85	4928.69	-1549.77	660.80	2718.12	-

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

184	3	209	0.49	1.83	-4.97	0.76	-3.90	2.47	-430.27	-5149.85	-431.49	-5148.63	-75.86
		208	2.30	0.91	-3.05	-0.60	-1.54	1.92	1.492e+04	-1.267e+04	9890.76	-7647.69	-
1.065e+04													
		200	2.34	1.92	-15.36	1.92	-15.36	0.27	1.520e+04	-1.256e+04	-5557.64	8202.53	-
1.205e+04													
		201	0.49	3.86	-2.71	2.81	-1.66	-2.41	4170.43	-1311.34	559.14	2299.95	-
2599.01													
184	6	209	0.49	19.24	0.78	0.79	19.23	0.43	-462.69	-4522.54	-468.56	-4516.68	-
154.24													
		208	2.18	20.22	-6.37	-6.37	20.22	0.05	1.412e+04	-1.140e+04	9470.45	-6750.47	-
9848.86													
		200	2.24	10.86	-3.44	3.10	4.32	7.12	1.436e+04	-1.210e+04	-5717.38	7975.95	-
1.132e+04													
		201	0.48	15.84	1.96	2.02	15.78	0.89	4142.18	-922.88	595.05	2624.25	-
2320.41													
184	38	209	0.45	5.75	0.25	0.73	5.27	1.54	-419.33	-4619.59	-421.80	-4617.11	-
101.98													
		208	2.13	7.09	-2.92	-2.80	6.97	1.09	1.378e+04	-1.147e+04	9177.01	-6874.24	-
9744.99													
		200	2.17	3.11	-7.73	2.27	-6.89	2.91	1.403e+04	-1.168e+04	-5309.88	7657.84	-
1.110e+04													
		201	0.45	5.50	2.03	2.35	5.19	-1.00	3924.80	-1085.51	541.90	2297.39	-
2346.35													
184	69	209	0.45	1.66	-4.52	0.69	-3.55	2.25	-391.15	-4681.68	-392.26	-4680.57	-68.96
154.24		208	2.10	0.83	-2.77	-0.54	-1.40	1.75	1.356e+04	-1.152e+04	8991.60	-6952.44	-
9679.36													
		200	2.13	1.75	-13.97	1.74	-13.96	0.24	1.382e+04	-1.142e+04	-5052.40	7456.84	-
1.096e+04													
		201	0.44	3.51	-2.46	2.55	-1.51	-2.19	3791.30	-1192.13	508.31	2090.86	-
2362.74													
185	1	210	20.03	202.00	-182.89	-15.13	34.24	190.86	1.816e+05	-3.223e+04	1.612e+05	-1.181e+04	-
6.284e+04													
		10	28.79	366.29	-360.52	-22.37	28.15	362.53	2.699e+05	-3.265e+04	2.563e+05	-1.903e+04	-
6.274e+04													
		12	30.17	353.20	-320.04	141.87	-108.72	312.43	3.093e+05	5489.15	2.705e+05	4.432e+04	-
1.014e+05													
		202	17.95	183.69	-178.81	71.29	-66.42	167.66	1.869e+05	1.251e+04	1.509e+05	4.846e+04	-
7.055e+04													
185	3	210	16.95	170.93	-154.76	-12.80	28.97	161.50	1.537e+05	-2.727e+04	1.364e+05	-9994.61	-
5.317e+04													
		10	24.36	309.94	-305.06	-18.93	23.82	306.75	2.284e+05	-2.763e+04	2.169e+05	-1.610e+04	-
5.308e+04													
		12	25.53	298.86	-270.81	120.05	-91.99	264.37	2.618e+05	4644.66	2.289e+05	3.750e+04	-
8.584e+04													
		202	15.19	155.43	-151.30	60.32	-56.20	141.87	1.581e+05	1.058e+04	1.277e+05	4.101e+04	-
5.969e+04													
185	6	210	15.78	140.99	-175.04	-83.65	49.60	143.28	1.411e+05	-2.442e+04	1.257e+05	-8972.93	-
4.815e+04													
		10	22.53	256.68	-320.34	-109.25	45.59	277.93	2.078e+05	-2.501e+04	1.973e+05	-1.454e+04	-
4.826e+04													
		12	23.60	240.23	-283.32	19.90	-62.99	258.48	2.382e+05	4433.22	2.084e+05	3.425e+04	-
7.798e+04													
		202	14.08	120.24	-162.11	-10.39	-31.48	140.78	1.444e+05	1.018e+04	1.170e+05	3.754e+04	-
5.406e+04													
185	38	210	15.55	148.10	-152.27	-39.52	35.35	145.45	1.402e+05	-2.465e+04	1.246e+05	-9042.23	-
4.826e+04													
		10	22.30	270.67	-292.60	-52.85	30.92	278.50	2.077e+05	-2.508e+04	1.972e+05	-1.460e+04	-
4.826e+04													
		12	23.36	257.98	-259.04	74.58	-75.64	247.36	2.380e+05	4304.05	2.082e+05	3.415e+04	-
7.801e+04													
		202	13.91	131.49	-145.41	29.58	-43.50	133.54	1.440e+05	9836.80	1.165e+05	3.738e+04	-
5.419e+04													
185	69	210	15.41	155.39	-140.69	-11.64	26.34	146.81	1.397e+05	-2.479e+04	1.240e+05	-9086.01	-
4.833e+04													
		10	22.15	281.76	-277.32	-17.21	21.65	278.87	2.076e+05	-2.512e+04	1.971e+05	-1.464e+04	-
4.826e+04													
		12	23.21	271.69	-246.19	109.13	-83.63	240.33	2.380e+05	4222.42	2.081e+05	3.409e+04	-
7.804e+04													
		202	13.81	141.30	-137.55	54.84	-51.09	128.97	1.438e+05	9619.80	1.161e+05	3.728e+04	-
5.427e+04													
186	1	211	24.53	199.19	-133.28	-43.69	109.60	147.51	1.934e+05	-8.438e+04	1.823e+05	-7.322e+04	-
5.453e+04													
		210	17.76	170.41	-209.21	-8.51	-30.29	189.50	1.783e+05	3327.97	1.538e+05	2.784e+04	-



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

6.103e+04	203	15.03	83.44	-108.22	-4.13	-20.65	95.47	1.459e+05	-1.119e+04	1.168e+05	1.790e+04	-		
1.202e+04	204	3.58	51.84	-12.53	39.38	-0.07	25.43	3.638e+04	-1031.82	3.200e+04	3340.16	-		
188	1	213	8.31	53.87	-58.33	2.93	-7.38	55.86	6.672e+04	-2.679e+04	4.546e+04	-5520.77	-	
3.920e+04	212	9.11	79.90	-64.59	9.93	5.38	72.21	7.292e+04	-2.905e+04	5.255e+04	-8676.05	-		
4.077e+04	204	8.32	68.11	-66.96	30.05	-28.90	60.76	8.311e+04	-1286.98	5.645e+04	2.538e+04	-		
3.923e+04	205	6.81	51.64	-46.44	24.80	-19.61	43.72	6.258e+04	-1.071e+04	3.640e+04	1.547e+04	-		
3.512e+04	188	3	213	7.03	45.59	-49.36	2.48	-6.25	47.27	5.646e+04	-2.267e+04	3.846e+04	-4671.42	-
3.317e+04	212	7.71	67.60	-54.65	8.40	4.55	61.10	6.170e+04	-2.458e+04	4.447e+04	-7341.27	-		
3.450e+04	204	7.04	57.63	-56.66	25.43	-24.45	51.41	7.033e+04	-1088.98	4.776e+04	2.147e+04	-		
3.320e+04	205	5.76	43.69	-39.30	20.99	-16.59	37.00	5.295e+04	-9064.10	3.080e+04	1.309e+04	-		
2.972e+04	188	22	213	6.50	46.22	-52.58	-6.54	0.18	49.29	5.187e+04	-2.057e+04	3.529e+04	-3984.17	-
3.043e+04	212	7.05	67.19	-55.17	-1.31	13.32	60.74	5.579e+04	-2.247e+04	4.025e+04	-6934.86	-		
3.122e+04	204	6.49	54.08	-61.04	9.49	-16.45	56.08	6.413e+04	-782.53	4.357e+04	1.977e+04	-		
3.020e+04	205	5.35	43.83	-43.06	9.36	-8.58	42.51	4.862e+04	-8188.51	2.832e+04	1.211e+04	-		
2.722e+04	188	54	213	6.43	43.15	-47.71	-1.15	-3.41	45.42	5.154e+04	-2.059e+04	3.509e+04	-4145.08	-
3.026e+04	212	7.03	63.52	-51.65	4.17	7.69	57.56	5.598e+04	-2.240e+04	4.036e+04	-6774.93	-		
3.131e+04	204	6.44	52.72	-54.87	17.84	-19.99	50.36	6.401e+04	-909.65	4.348e+04	1.962e+04	-		
3.019e+04	205	5.28	40.98	-38.23	15.31	-12.57	37.07	4.832e+04	-8220.12	2.812e+04	1.198e+04	-		
2.710e+04	188	69	213	6.39	41.44	-44.87	2.25	-5.68	42.97	5.133e+04	-2.061e+04	3.497e+04	-4246.75	-
3.015e+04	212	7.01	61.46	-49.68	7.64	4.14	55.54	5.610e+04	-2.235e+04	4.042e+04	-6673.88	-		
3.136e+04	204	6.40	52.39	-51.51	23.11	-22.23	46.74	6.393e+04	-989.99	4.342e+04	1.952e+04	-		
3.018e+04	205	5.24	39.72	-35.72	19.08	-15.08	33.63	4.814e+04	-8240.09	2.800e+04	1.190e+04	-		
2.702e+04	189	1	214	7.33	43.63	-39.38	-2.85	7.09	41.21	5.604e+04	-2.778e+04	4.259e+04	-1.433e+04	-
3.077e+04	213	8.11	51.92	-61.26	0.16	-9.50	56.38	6.454e+04	-2.675e+04	4.424e+04	-6456.09	-		
3.796e+04	205	6.96	51.31	-49.49	20.42	-18.60	46.47	6.433e+04	-1.010e+04	3.784e+04	1.638e+04	-		
3.564e+04	206	5.77	38.60	-46.04	19.24	-26.68	35.55	4.997e+04	-1.335e+04	2.239e+04	1.424e+04	-		
3.140e+04	189	3	214	6.20	36.91	-33.32	-2.41	6.00	34.87	4.742e+04	-2.351e+04	3.604e+04	-1.212e+04	-
2.603e+04	213	6.86	43.93	-51.83	0.14	-8.04	47.71	5.461e+04	-2.264e+04	3.744e+04	-5462.84	-		
3.212e+04	205	5.89	43.41	-41.87	17.28	-15.74	39.32	5.443e+04	-8549.86	3.202e+04	1.386e+04	-		
3.015e+04	206	4.88	32.66	-38.96	16.28	-22.58	30.08	4.229e+04	-1.130e+04	1.894e+04	1.205e+04	-		
2.657e+04	189	6	214	5.79	37.32	-37.96	-25.98	25.35	27.54	4.460e+04	-2.056e+04	3.466e+04	-1.062e+04	-
2.343e+04	213	6.34	37.30	-51.24	-24.41	10.47	40.69	5.044e+04	-2.001e+04	3.489e+04	-4465.85	-		
2.922e+04	205	5.47	38.47	-44.63	-9.29	3.13	41.08	5.031e+04	-7053.95	3.010e+04	1.316e+04	-		
2.740e+04	206	4.51	28.30	-35.07	-1.87	-4.91	31.65	3.928e+04	-9470.45	1.806e+04	1.175e+04	-		
2.417e+04	189	38	214	5.70	33.37	-31.62	-11.40	13.16	30.09	4.369e+04	-2.106e+04	3.350e+04	-1.087e+04	-
2.358e+04	213	6.28	37.67	-47.47	-9.38	-0.42	42.33	4.995e+04	-2.036e+04	3.437e+04	-4772.48	-		
2.921e+04	205	5.40	37.65	-39.18	6.03	-7.56	37.81	4.980e+04	-7494.15	2.949e+04	1.282e+04	-		





**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

2957.37	208	2.05	56.15	3.81	17.31	42.65	-22.90	-1089.95	-2.002e+04	-1563.93	-1.954e+04	
191 54	216	3.62	3.20	-53.66	0.71	-51.17	11.64	2.917e+04	-1.091e+04	849.33	1.741e+04	-
1.825e+04	215	8.77	124.01	9.98	38.06	95.94	-49.12	-696.88	-8.674e+04	-2.386e+04	-6.358e+04	
3.817e+04	207	7.86	2.98	-66.97	-34.25	-29.74	34.90	6.917e+04	-1.718e+04	3.923e+04	1.276e+04	-
4.109e+04	208	1.94	46.02	2.35	16.57	31.80	-20.46	-961.97	-1.926e+04	-1310.53	-1.891e+04	
2501.27	216	3.53	3.68	-51.12	1.30	-48.74	11.17	2.838e+04	-1.090e+04	853.49	1.663e+04	-
191 69	215	8.43	107.47	10.38	34.92	82.93	-42.19	-851.30	-8.398e+04	-2.314e+04	-6.170e+04	
1.799e+04	207	7.70	1.42	-60.30	-28.69	-30.19	30.85	6.787e+04	-1.712e+04	3.851e+04	1.224e+04	-
3.682e+04	208	1.86	39.95	1.09	16.10	24.94	-18.92	-872.77	-1.879e+04	-1150.42	-1.851e+04	
4.041e+04	217	0.62	0.21	-21.14	-0.90	-20.03	4.73	1737.68	-4645.85	1669.98	-4578.15	-
2213.08	216	2.04	12.54	-2.61	11.08	-1.15	4.47	2761.89	-1.960e+04	-3535.89	-1.330e+04	-
192 1	208	1.97	5.50	-18.49	-2.46	-10.52	-11.30	1.199e+04	-1.066e+04	5349.01	-4017.30	-
653.88	209	0.72	7.17	-7.05	3.57	-3.45	-6.18	-342.19	-7252.82	-1005.92	-6589.09	-
1.006e+04	217	0.52	0.18	-17.89	-0.76	-16.95	4.01	1470.34	-3931.10	1413.06	-3873.82	-
1.031e+04	216	1.73	10.61	-2.20	9.38	-0.97	3.78	2336.98	-1.658e+04	-2991.91	-1.126e+04	-
2036.23	208	1.66	4.66	-15.64	-2.09	-8.90	-9.56	1.015e+04	-9019.63	4526.08	-3399.26	-
192 3	209	0.61	6.07	-5.97	3.02	-2.92	-5.23	-289.55	-6137.00	-851.16	-5575.39	-
553.28	217	0.58	0.90	-33.88	-0.25	-32.72	6.22	1267.38	-4034.81	1220.68	-3988.11	-
8510.77	216	1.65	10.88	-20.50	8.38	-18.00	8.51	2624.85	-1.565e+04	-2176.16	-1.085e+04	-
8725.37	208	1.58	6.82	-31.87	2.84	-27.89	-11.75	8992.76	-8542.45	3672.33	-3222.02	-
1722.96	209	0.65	4.52	-25.06	2.74	-23.28	-7.03	-177.21	-5756.95	-715.78	-5218.39	-
192 8	217	0.52	0.44	-23.07	-0.52	-22.11	4.64	1309.74	-3752.16	1259.85	-3702.27	-
495.44	216	1.60	10.12	-9.16	8.47	-7.51	5.40	2316.35	-1.530e+04	-2509.37	-1.047e+04	-
8041.80	208	1.54	4.70	-20.53	-0.06	-15.76	-9.88	9133.98	-8331.88	3943.37	-3141.26	-
8061.50	209	0.59	4.80	-12.70	2.74	-10.64	-5.64	-229.92	-5647.96	-751.32	-5126.56	-
1647.73	217	0.48	0.16	-16.26	-0.69	-15.41	3.64	1336.67	-3573.73	1284.60	-3521.66	-
192 40	216	1.57	9.65	-2.00	8.53	-0.88	3.44	2124.53	-1.508e+04	-2719.92	-1.023e+04	-
500.06	208	1.51	4.23	-14.22	-1.90	-8.09	-8.69	9224.05	-8199.67	4114.62	-3090.23	-
7855.06	209	0.55	5.51	-5.42	2.74	-2.66	-4.76	-263.23	-5579.09	-773.78	-5068.53	-
7982.24	218	19.46	193.64	-179.79	-24.88	38.73	183.98	1.428e+05	-7.572e+04	1.154e+05	-4.832e+04	-
1597.85	8	25.55	334.14	-337.63	-76.86	73.37	327.38	1.946e+05	-8.656e+04	1.759e+05	-6.781e+04	-
192 69	10	28.95	376.01	-343.07	92.77	-59.83	351.35	2.659e+05	-4.101e+04	2.243e+05	639.53	-
502.98	210	20.03	189.04	-198.96	51.32	-61.23	185.66	1.878e+05	-2.153e+04	1.339e+05	3.239e+04	-
7737.06	218	16.47	163.85	-152.13	-21.05	32.77	155.68	1.208e+05	-6.407e+04	9.765e+04	-4.088e+04	-
7932.15	8	21.62	282.73	-285.69	-65.03	62.08	277.01	1.647e+05	-7.325e+04	1.488e+05	-5.738e+04	-
1566.33	10	24.49	318.16	-290.29	78.50	-50.63	297.29	2.250e+05	-3.470e+04	1.898e+05	541.14	-
193 1	210	16.95	159.96	-168.35	43.42	-51.81	157.10	1.589e+05	-1.822e+04	1.133e+05	2.741e+04	-
7.238e+04												
7.015e+04												
1.051e+05												
9.154e+04												
193 3												
6.124e+04												
5.936e+04												
8.894e+04												



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

7.746e+04	193	6	218	15.28	142.33	-171.22	-79.77	50.88	142.52	1.109e+05	-5.820e+04	8.975e+04	-3.703e+04	-
5.596e+04			8	20.00	243.50	-306.88	-141.96	78.58	252.13	1.501e+05	-6.640e+04	1.356e+05	-5.192e+04	-
5.409e+04			10	22.66	267.93	-309.38	-17.56	-23.89	288.64	2.047e+05	-3.156e+04	1.727e+05	411.37	-
8.082e+04			210	15.80	129.60	-188.27	-30.24	-28.43	158.93	1.462e+05	-1.612e+04	1.046e+05	2.542e+04	-
7.082e+04	193	38	218	15.09	145.19	-149.85	-42.62	37.96	141.91	1.103e+05	-5.823e+04	8.915e+04	-3.712e+04	-
5.579e+04			8	19.79	250.68	-276.87	-91.20	65.01	251.95	1.499e+05	-6.651e+04	1.354e+05	-5.207e+04	-
5.401e+04			10	22.42	279.60	-280.12	36.93	-37.46	277.38	2.046e+05	-3.155e+04	1.726e+05	460.74	-
8.084e+04			210	15.56	137.64	-165.03	12.48	-39.87	149.05	1.451e+05	-1.639e+04	1.036e+05	2.511e+04	-
7.057e+04	193	69	218	14.97	148.95	-138.30	-19.14	29.79	141.52	1.099e+05	-5.825e+04	8.877e+04	-3.717e+04	-
5.567e+04			8	19.66	257.03	-259.72	-59.12	56.43	251.83	1.497e+05	-6.659e+04	1.353e+05	-5.216e+04	-
5.396e+04			10	22.27	289.24	-263.90	71.37	-46.03	270.27	2.046e+05	-3.154e+04	1.725e+05	491.94	-
8.086e+04			210	15.41	145.42	-153.04	39.47	-47.10	142.81	1.445e+05	-1.656e+04	1.030e+05	2.492e+04	-
7.041e+04	194	1	219	9.05	106.37	-77.05	27.98	1.34	90.74	5.452e+04	-4.939e+04	3.846e+04	-3.333e+04	-
3.756e+04			218	22.98	198.24	-238.51	-43.59	3.31	217.11	1.861e+05	-6.549e+04	1.377e+05	-1.708e+04	-
9.918e+04			210	19.11	202.19	-140.53	45.02	16.64	170.78	1.568e+05	-5.832e+04	1.349e+05	-3.643e+04	-
6.504e+04			211	32.36	137.93	-278.22	8.11	-148.40	192.80	3.135e+05	-1.939e+04	1.569e+05	1.372e+05	-
1.662e+05	194	3	219	7.65	90.00	-65.20	23.67	1.13	76.78	4.614e+04	-4.180e+04	3.255e+04	-2.821e+04	-
3.178e+04			218	19.45	167.74	-201.82	-36.88	2.80	183.71	1.575e+05	-5.541e+04	1.165e+05	-1.445e+04	-
8.392e+04			210	16.17	171.09	-118.91	38.09	14.08	144.50	1.326e+05	-4.935e+04	1.141e+05	-3.082e+04	-
5.503e+04			211	27.38	116.71	-235.41	6.87	-125.57	163.14	2.653e+05	-1.640e+04	1.328e+05	1.161e+05	-
1.406e+05	194	6	219	6.71	69.87	-57.36	-5.65	18.17	62.49	3.923e+04	-3.702e+04	2.741e+04	-2.520e+04	-
2.760e+04			218	18.18	143.01	-225.64	-99.00	16.37	175.07	1.464e+05	-5.003e+04	1.080e+05	-1.160e+04	-
7.792e+04			210	15.10	150.50	-140.27	-32.62	42.85	140.40	1.212e+05	-4.565e+04	1.051e+05	-2.964e+04	-
4.914e+04			211	26.20	95.81	-274.09	-67.73	-110.56	183.71	2.516e+05	-1.510e+04	1.274e+05	1.092e+05	-
1.331e+05	194	38	219	6.86	76.32	-57.66	11.00	7.66	66.97	4.089e+04	-3.762e+04	2.875e+04	-2.547e+04	-
2.839e+04			218	17.87	147.89	-198.86	-58.88	7.90	170.13	1.444e+05	-5.024e+04	1.067e+05	-1.254e+04	-
7.692e+04			210	14.85	151.61	-118.58	8.59	24.44	134.86	1.208e+05	-4.517e+04	1.043e+05	-2.865e+04	-
4.968e+04			211	25.40	100.62	-235.78	-22.40	-112.76	162.01	2.452e+05	-1.498e+04	1.233e+05	1.069e+05	-
1.298e+05	194	69	219	6.96	81.82	-59.27	21.52	1.03	69.80	4.194e+04	-3.800e+04	2.959e+04	-2.564e+04	-
2.889e+04			218	17.68	152.49	-183.47	-33.53	2.55	167.01	1.432e+05	-5.037e+04	1.059e+05	-1.314e+04	-
7.629e+04			210	14.70	155.53	-108.10	34.63	12.80	131.37	1.206e+05	-4.486e+04	1.037e+05	-2.802e+04	-
5.003e+04			211	24.89	106.10	-214.01	6.24	-114.15	148.31	2.412e+05	-1.491e+04	1.207e+05	1.055e+05	-
1.278e+05	195	1	220	11.24	44.76	-69.55	-10.71	-14.08	57.13	8.380e+04	-4.587e+04	5.970e+04	-2.178e+04	-
5.044e+04			219	16.77	123.27	-127.27	-6.75	2.75	125.18	1.292e+05	-6.088e+04	1.021e+05	-3.375e+04	-
6.650e+04			211	13.56	75.34	-156.17	58.34	-139.17	60.39	1.370e+05	6892.36	3.134e+04	1.125e+05	-
5.082e+04			212	12.35	108.58	-50.05	31.47	27.06	79.28	8.150e+04	-6.081e+04	4.145e+04	-2.076e+04	-
6.400e+04														-

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

195	3	220	9.51	37.87	-58.85	-9.06	-11.91	48.34	7.091e+04	-3.882e+04	5.052e+04	-1.843e+04	-
4.268e+04		219	14.19	104.30	-107.69	-5.71	2.32	105.92	1.094e+05	-5.151e+04	8.641e+04	-2.856e+04	-
5.627e+04		211	11.47	63.75	-132.14	49.36	-117.76	51.10	1.159e+05	5831.99	2.652e+04	9.520e+04	-
4.300e+04		212	10.45	91.87	-42.35	26.63	22.89	67.08	6.897e+04	-5.145e+04	3.508e+04	-1.756e+04	-
5.415e+04		220	8.87	37.16	-65.99	-37.21	8.38	46.27	6.531e+04	-3.574e+04	4.627e+04	-1.670e+04	-
195	6	220	8.87	37.16	-65.99	-37.21	8.38	46.27	6.531e+04	-3.574e+04	4.627e+04	-1.670e+04	-
3.951e+04		219	13.25	80.76	-121.95	-62.08	20.90	92.47	1.023e+05	-4.571e+04	8.222e+04	-2.564e+04	-
5.066e+04		211	10.99	57.45	-127.18	29.04	-98.76	66.63	1.079e+05	-87.46	1.902e+04	8.881e+04	-
4.121e+04		212	9.57	85.88	-54.68	-7.35	38.55	66.43	6.281e+04	-4.618e+04	3.242e+04	-1.579e+04	-
4.887e+04		220	8.73	34.13	-56.98	-19.45	-3.39	44.84	6.479e+04	-3.546e+04	4.606e+04	-1.673e+04	-
195	38	220	8.73	34.13	-56.98	-19.45	-3.39	44.84	6.479e+04	-3.546e+04	4.606e+04	-1.673e+04	-
3.908e+04		219	13.04	87.65	-105.48	-27.22	9.39	94.81	1.005e+05	-4.639e+04	7.997e+04	-2.584e+04	-
5.096e+04		211	10.64	57.04	-122.15	38.74	-103.84	54.27	1.063e+05	3220.20	2.214e+04	8.742e+04	-
3.991e+04		212	9.53	83.41	-43.74	11.99	27.68	63.09	6.274e+04	-4.654e+04	3.209e+04	-1.590e+04	-
4.909e+04		220	8.65	34.43	-53.50	-8.24	-10.83	43.94	6.446e+04	-3.529e+04	4.593e+04	-1.675e+04	-
195	69	220	8.65	34.43	-53.50	-8.24	-10.83	43.94	6.446e+04	-3.529e+04	4.593e+04	-1.675e+04	-
3.880e+04		219	12.90	94.82	-97.90	-5.19	2.11	96.29	9.942e+04	-4.683e+04	7.855e+04	-2.596e+04	-
5.115e+04		211	10.43	57.95	-120.13	44.87	-107.05	46.46	1.054e+05	5301.81	2.411e+04	8.655e+04	-
3.909e+04		212	9.50	83.52	-38.50	24.21	20.81	60.99	6.270e+04	-4.677e+04	3.189e+04	-1.597e+04	-
4.923e+04		221	9.63	51.52	-56.93	-2.95	-2.46	54.23	6.330e+04	-4.854e+04	4.039e+04	-2.564e+04	-
196	1	220	12.26	73.78	-77.45	-7.83	4.16	75.38	8.352e+04	-5.795e+04	5.639e+04	-3.082e+04	-
4.513e+04		212	9.85	71.38	-74.18	30.39	-33.19	65.47	8.334e+04	-2.533e+04	3.813e+04	1.987e+04	-
5.570e+04		213	8.61	53.58	-49.55	19.74	-15.71	48.42	6.678e+04	-3.119e+04	3.081e+04	4782.83	-
5.356e+04		221	8.15	43.59	-48.17	-2.50	-2.08	45.88	5.356e+04	-4.107e+04	3.418e+04	-2.169e+04	-
4.722e+04		220	10.38	62.43	-65.53	-6.62	3.52	63.78	7.067e+04	-4.904e+04	4.771e+04	-2.608e+04	-
196	3	212	8.34	60.40	-62.77	25.71	-28.08	55.40	7.052e+04	-2.144e+04	3.227e+04	1.681e+04	-
3.819e+04		213	7.28	45.34	-41.93	16.70	-13.29	40.97	5.650e+04	-2.639e+04	2.607e+04	4047.01	-
4.532e+04		221	7.54	40.76	-51.61	-25.98	15.12	41.36	4.959e+04	-3.694e+04	3.195e+04	-1.929e+04	-
3.996e+04		220	9.60	56.31	-73.03	-37.69	20.97	57.64	6.514e+04	-4.439e+04	4.413e+04	-2.338e+04	-
196	6	212	7.67	51.39	-65.40	-4.12	-9.88	58.33	6.434e+04	-1.932e+04	2.912e+04	1.589e+04	-
3.486e+04		213	6.75	42.15	-47.42	-10.03	4.77	44.17	5.230e+04	-2.348e+04	2.466e+04	4166.08	-
4.313e+04		221	7.46	38.97	-45.73	-11.45	4.70	41.58	4.904e+04	-3.718e+04	3.141e+04	-1.955e+04	-
4.131e+04		220	9.50	55.46	-63.66	-18.28	10.08	57.85	6.459e+04	-4.451e+04	4.367e+04	-2.358e+04	-
3.648e+04		212	7.61	52.45	-59.19	12.73	-19.47	53.45	6.420e+04	-1.942e+04	2.925e+04	1.552e+04	-
196	38	213	6.67	40.24	-40.37	5.42	-5.56	39.93	5.173e+04	-2.379e+04	2.407e+04	3867.66	-
3.477e+04		221	7.41	39.63	-43.80	-2.27	-1.89	41.71	4.869e+04	-3.734e+04	3.107e+04	-1.972e+04	-
4.296e+04		220	9.43	56.75	-59.57	-6.02	3.20	57.98	6.425e+04	-4.458e+04	4.338e+04	-2.371e+04	-
4.124e+04		212	7.58	54.91	-57.06	23.38	-25.53	50.36	6.411e+04	-1.949e+04	2.933e+04	1.529e+04	-
3.638e+04		213	6.62	41.22	-38.11	15.18	-12.08	37.25	5.137e+04	-2.399e+04	2.370e+04	3679.10	-
196	69	221	7.41	39.63	-43.80	-2.27	-1.89	41.71	4.869e+04	-3.734e+04	3.107e+04	-1.972e+04	-
3.472e+04		220	9.43	56.75	-59.57	-6.02	3.20	57.98	6.425e+04	-4.458e+04	4.338e+04	-2.371e+04	-
4.285e+04		212	7.58	54.91	-57.06	23.38	-25.53	50.36	6.411e+04	-1.949e+04	2.933e+04	1.529e+04	-
4.120e+04		213	6.62	41.22	-38.11	15.18	-12.08	37.25	5.137e+04	-2.399e+04	2.370e+04	3679.10	-
3.632e+04		222	8.37	46.29	-46.25	-1.73	1.77	46.24	5.142e+04	-4.595e+04	3.122e+04	-2.575e+04	-
197	1	222	8.37	46.29	-46.25	-1.73	1.77	46.24	5.142e+04	-4.595e+04	3.122e+04	-2.575e+04	-



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

7.465e+04	215	14.25	31.12	-129.75	-1.34	-97.29	64.56	1.331e+05	-1.796e+04	4.613e+04	6.898e+04	-		
199	1	224	3.66	-13.93	-47.58	-17.09	-44.42	-9.82	2.867e+04	-1.332e+04	2.366e+04	-8317.54	-	
1.361e+04		223	8.18	59.71	-18.25	21.77	19.69	38.97	3.909e+04	-5.643e+04	2.513e+04	-4.247e+04	-	
3.374e+04		215	8.59	10.75	-138.50	0.51	-128.26	-37.73	8.013e+04	-8436.66	-7452.15	7.914e+04	-	
9285.65		216	5.03	41.92	15.37	17.22	40.06	6.77	9335.08	-4.596e+04	-8784.83	-2.784e+04	-	
2.595e+04		224	3.10	-11.79	-40.26	-14.46	-37.58	-8.31	2.426e+04	-1.127e+04	2.002e+04	-7037.91	-	
199	3	223	6.92	50.52	-15.44	18.42	16.66	32.97	3.307e+04	-4.775e+04	2.126e+04	-3.594e+04	-	
1.151e+04		215	7.27	9.10	-117.19	0.43	-108.53	-31.92	6.780e+04	-7138.72	-6305.67	6.697e+04	-	
2.855e+04		216	4.26	35.47	13.00	14.57	33.90	5.72	7898.92	-3.889e+04	-7433.32	-2.356e+04	-	
7857.09		224	2.78	-13.36	-43.80	-18.30	-38.86	-11.22	2.258e+04	-9034.24	1.895e+04	-5399.03	-	
2.196e+04	199	22	223	6.53	58.06	-12.78	19.90	25.38	35.32	3.041e+04	-4.525e+04	1.896e+04	-3.381e+04	-
1.009e+04		215	7.13	8.26	-132.27	-2.74	-121.26	-37.75	6.643e+04	-5985.72	-5634.91	6.608e+04	-	
2.711e+04		216	4.07	48.84	12.94	14.84	46.94	8.03	7048.39	-3.709e+04	-7049.38	-2.299e+04	-	
5028.02		224	2.80	-11.81	-39.31	-15.14	-35.98	-8.97	2.226e+04	-9778.01	1.849e+04	-6011.26	-	
2.058e+04	199	54	223	6.38	50.59	-13.51	17.97	19.11	32.04	3.020e+04	-4.412e+04	1.919e+04	-3.311e+04	-
1.032e+04		215	6.81	8.26	-116.49	-0.82	-107.41	-32.40	6.347e+04	-6272.88	-5694.67	6.289e+04	-	
2.640e+04		216	3.95	38.66	12.26	13.86	37.06	6.30	7128.75	-3.602e+04	-6870.55	-2.203e+04	-	
6323.95		224	2.81	-10.71	-36.60	-13.15	-34.17	-7.55	2.205e+04	-1.025e+04	1.820e+04	-6398.10	-	
2.020e+04	199	69	223	6.29	45.93	-14.04	16.75	15.15	29.97	3.007e+04	-4.341e+04	1.933e+04	-3.267e+04	-
1.047e+04		215	6.61	8.27	-106.54	0.39	-98.66	-29.02	6.164e+04	-6489.74	-5732.42	6.088e+04	-	
2.596e+04		216	3.87	32.24	11.82	13.25	30.82	5.20	7180.83	-3.536e+04	-6757.56	-2.142e+04	-	
7142.81		225	1.58	0.73	-10.55	0.43	-10.25	1.81	-187.53	-1.613e+04	-205.57	-1.611e+04	535.89	
1.997e+04	200	1	224	4.15	0.15	-5.88	0.03	-5.76	0.84	1.950e+04	-2.989e+04	1.284e+04	-2.323e+04	-
1.687e+04		216	3.57	1.03	-20.60	1.03	-20.60	0.06	2.022e+04	-2.259e+04	-3767.96	1401.70	-	
2.125e+04		217	1.07	4.38	-3.61	3.10	-2.33	-2.93	2529.70	-9378.10	299.50	-7147.90	-	
4645.75		225	1.34	0.62	-8.93	0.36	-8.68	1.53	-158.68	-1.364e+04	-173.94	-1.363e+04	453.45	
200	3	224	3.51	0.13	-4.97	0.03	-4.87	0.71	1.650e+04	-2.529e+04	1.086e+04	-1.965e+04	-	
1.427e+04		216	3.02	0.87	-17.43	0.87	-17.43	0.05	1.711e+04	-1.911e+04	-3188.27	1186.06	-	
1.798e+04		217	0.90	3.71	-3.05	2.63	-1.97	-2.48	2140.51	-7935.31	253.42	-6048.22	-	
3931.02		225	1.22	14.49	0.56	0.64	14.40	-1.10	-223.75	-1.223e+04	-232.21	-1.222e+04	318.60	
200	5	224	3.26	16.71	-5.77	-5.68	16.62	-1.39	1.551e+04	-2.285e+04	1.031e+04	-1.765e+04	-	
1.313e+04		216	2.84	8.28	-3.28	2.06	2.94	5.76	1.581e+04	-1.787e+04	-3544.99	1490.35	-	
1.665e+04		217	0.80	15.25	1.55	1.55	15.25	0.01	2072.58	-6730.88	320.19	-4978.49	-	
3515.14		225	1.18	1.05	0.14	0.45	0.74	0.43	-175.18	-1.234e+04	-186.82	-1.233e+04	375.97	
200	37	224	3.21	3.72	-2.19	-2.19	3.72	-0.14	1.520e+04	-2.293e+04	1.004e+04	-1.778e+04	-	
1.304e+04		216	2.78	1.78	-9.06	1.28	-8.57	2.26	1.565e+04	-1.756e+04	-3148.78	1237.81	-	
1.646e+04		217	0.79	5.38	1.49	2.06	4.81	-1.37	1994.49	-7026.42	265.16	-5297.08	-	
3551.00		225	1.22	0.56	-8.12	0.33	-7.89	1.39	-144.25	-1.240e+04	-158.13	-1.239e+04	412.23	
200	69	224	3.19	0.12	-4.52	0.03	-4.43	0.65	1.500e+04	-2.299e+04	9875.73	-1.787e+04	-	
1.298e+04													-	

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

1.635e+04	216	2.75	0.79	-15.85	0.79	-15.85	0.05	1.556e+04	-1.738e+04	-2898.43	1078.23	-		
3573.65	217	0.82	3.37	-2.78	2.39	-1.79	-2.25	1945.92	-7213.92	230.38	-5498.39	-		
201	1	226	18.41	166.27	-153.15	-16.60	29.72	158.02	9.546e+04	-1.148e+05	6.336e+04	-8.267e+04	-	
7.563e+04	6	22.81	278.17	-272.35	-75.74	81.56	263.79	1.152e+05	-1.396e+05	8.753e+04	-1.119e+05	-		
7.934e+04	8	25.35	342.26	-322.49	41.57	-21.80	330.86	1.882e+05	-9.171e+04	1.391e+05	-4.255e+04	-		
1.065e+05	218	19.63	182.42	-187.69	38.95	-44.22	180.33	1.486e+05	-7.081e+04	8.454e+04	-6792.34	-		
9.973e+04	201	3	226	15.58	140.69	-129.59	-14.05	25.15	133.71	8.078e+04	-9.712e+04	5.361e+04	-6.995e+04	-
6.399e+04	6	19.30	235.37	-230.45	-64.08	69.01	223.20	9.752e+04	-1.181e+05	7.407e+04	-9.469e+04	-		
6.714e+04	8	21.45	289.61	-272.88	35.18	-18.45	279.96	1.593e+05	-7.760e+04	1.177e+05	-3.600e+04	-		
9.013e+04	218	16.61	154.36	-158.82	32.95	-37.41	152.58	1.257e+05	-5.992e+04	7.154e+04	-5747.36	-		
8.439e+04	201	6	226	14.33	121.96	-141.99	-59.82	39.79	122.22	7.393e+04	-8.801e+04	4.924e+04	-6.332e+04	-
5.821e+04	6	17.80	209.38	-250.55	-123.84	82.67	205.48	8.906e+04	-1.073e+05	6.766e+04	-8.584e+04	-		
6.119e+04	8	19.85	252.30	-295.11	-46.47	3.65	272.55	1.451e+05	-7.054e+04	1.072e+05	-3.271e+04	-		
8.201e+04	218	15.41	131.66	-179.31	-27.73	-19.92	155.44	1.156e+05	-5.416e+04	6.591e+04	-4477.13	-		
7.724e+04	201	38	226	14.23	124.71	-126.28	-30.99	29.42	121.81	7.363e+04	-8.818e+04	4.893e+04	-6.349e+04	-
5.819e+04	6	17.64	211.38	-224.58	-83.65	70.45	203.91	8.881e+04	-1.073e+05	6.746e+04	-8.599e+04	-		
6.109e+04	8	19.63	257.92	-265.18	1.60	-8.86	261.50	1.449e+05	-7.054e+04	1.071e+05	-3.272e+04	-		
8.196e+04	218	15.22	135.84	-156.78	7.62	-28.56	145.19	1.148e+05	-5.435e+04	6.537e+04	-4935.35	-		
7.692e+04	201	69	226	14.16	127.90	-117.81	-12.77	22.86	121.55	7.343e+04	-8.829e+04	4.874e+04	-6.359e+04	-
5.817e+04	6	17.55	213.98	-209.50	-58.26	62.74	202.91	8.865e+04	-1.074e+05	6.733e+04	-8.608e+04	-		
6.103e+04	8	19.50	263.28	-248.07	31.98	-16.77	254.51	1.448e+05	-7.054e+04	1.070e+05	-3.273e+04	-		
8.193e+04	218	15.10	140.32	-144.38	29.96	-34.01	138.71	1.143e+05	-5.447e+04	6.503e+04	-5224.88	-		
7.671e+04	202	1	227	15.18	102.82	-93.45	-5.23	14.59	97.63	7.754e+04	-9.803e+04	4.923e+04	-6.972e+04	-
6.457e+04	226	18.89	166.66	-165.34	-26.98	28.29	163.68	1.009e+05	-1.147e+05	6.846e+04	-8.231e+04	-		
7.705e+04	218	18.81	194.42	-188.19	46.29	-40.06	186.37	1.395e+05	-7.051e+04	7.897e+04	-9959.78	-		
9.513e+04	219	15.13	105.33	-120.24	34.75	-49.66	104.59	1.177e+05	-5.295e+04	5.831e+04	6457.96	-		
8.130e+04	202	3	227	12.84	87.00	-79.08	-4.43	12.35	82.61	6.561e+04	-8.295e+04	4.166e+04	-5.899e+04	-
5.463e+04	226	15.99	141.02	-139.91	-22.83	23.94	138.50	8.535e+04	-9.708e+04	5.793e+04	-6.965e+04	-		
6.520e+04	218	15.92	164.51	-159.24	39.17	-33.90	157.70	1.181e+05	-5.966e+04	6.682e+04	-8427.50	-		
8.050e+04	219	12.80	89.13	-101.74	29.41	-42.02	88.50	9.961e+04	-4.481e+04	4.934e+04	5464.43	-		
6.879e+04	202	6	227	11.80	76.09	-86.91	-39.24	28.41	74.15	6.005e+04	-7.517e+04	3.836e+04	-5.349e+04	-
4.962e+04	226	14.74	122.82	-153.75	-69.38	38.44	127.35	7.842e+04	-8.798e+04	5.342e+04	-6.298e+04	-		
5.946e+04	218	14.70	140.54	-174.66	-18.47	-15.65	157.59	1.080e+05	-5.383e+04	6.118e+04	-7019.77	-		
7.338e+04	219	11.88	71.52	-113.56	-17.04	-25.01	92.45	9.201e+04	-4.018e+04	4.601e+04	5815.87	-		
6.296e+04	202	38	227	11.72	76.93	-76.71	-17.66	17.88	74.73	5.980e+04	-7.532e+04	3.806e+04	-5.358e+04	-
4.965e+04	226	14.61	125.25	-136.61	-39.58	28.22	126.47	7.791e+04	-8.815e+04	5.295e+04	-6.319e+04	-		
5.935e+04	218	14.56	145.04	-155.32	14.67	-24.95	148.87	1.076e+05	-5.408e+04	6.092e+04	-7412.94	-		





**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

4.239e+04	221	7.64	40.67	-47.24	-8.18	1.61	43.68	4.943e+04	-3.865e+04	1.731e+04	-6529.44	-
204 38	229	7.94	33.56	-37.52	-9.76	5.80	34.67	4.144e+04	-5.133e+04	2.534e+04	-3.523e+04	-
3.513e+04	228	9.48	49.52	-52.15	-12.91	10.28	49.50	4.824e+04	-6.182e+04	2.987e+04	-4.345e+04	-
4.104e+04	220	9.11	48.09	-57.99	1.12	-11.02	52.69	6.306e+04	-4.173e+04	2.766e+04	-6333.95	-
4.956e+04	221	7.57	39.08	-40.93	5.66	-7.51	39.46	4.888e+04	-3.894e+04	1.680e+04	-6857.50	-
4.229e+04	229	7.90	34.36	-36.17	-1.15	-0.66	35.27	4.108e+04	-5.145e+04	2.495e+04	-3.532e+04	-
204 69	228	9.44	51.21	-49.79	-2.23	3.64	50.42	4.800e+04	-6.194e+04	2.958e+04	-4.353e+04	-
3.510e+04	220	9.04	49.29	-53.91	12.87	-17.48	49.32	6.275e+04	-4.182e+04	2.739e+04	-6460.36	-
4.947e+04	221	7.52	39.88	-38.75	14.41	-13.28	36.80	4.854e+04	-3.912e+04	1.648e+04	-7064.79	-
4.222e+04	230	9.24	40.87	-35.43	-0.49	5.93	38.02	4.889e+04	-5.957e+04	3.182e+04	-4.250e+04	-
205 1	229	10.03	43.42	-53.83	-2.35	-8.06	48.54	5.272e+04	-6.474e+04	3.136e+04	-4.338e+04	-
3.950e+04	221	9.82	52.98	-51.61	15.46	-14.08	50.17	6.340e+04	-5.089e+04	2.284e+04	-1.033e+04	-
4.531e+04	222	8.22	38.73	-46.81	17.10	-25.17	37.19	5.169e+04	-4.436e+04	1.387e+04	-6543.44	-
5.468e+04	230	7.82	34.59	-29.98	-0.42	5.02	32.17	4.137e+04	-5.040e+04	2.692e+04	-3.596e+04	-
4.693e+04	229	8.49	36.74	-45.55	-1.99	-6.82	41.07	4.461e+04	-5.478e+04	2.653e+04	-3.670e+04	-
205 3	221	8.31	44.83	-43.67	13.08	-11.92	42.45	5.364e+04	-4.306e+04	1.933e+04	-8741.23	-
3.342e+04	222	6.95	32.78	-39.61	14.47	-21.30	31.46	4.374e+04	-3.754e+04	1.174e+04	-5536.76	-
3.834e+04	230	7.26	35.52	-32.62	-19.92	22.82	26.54	3.895e+04	-4.547e+04	2.609e+04	-3.260e+04	-
4.627e+04	229	7.82	32.03	-45.33	-22.88	9.58	35.11	4.143e+04	-4.940e+04	2.506e+04	-3.302e+04	-
3.971e+04	221	7.69	43.37	-48.90	-10.60	5.07	45.47	4.970e+04	-3.871e+04	1.848e+04	-7477.62	-
205 6	222	6.41	30.19	-38.03	-1.43	-6.41	34.02	4.067e+04	-3.356e+04	1.136e+04	-4251.95	-
3.034e+04	230	7.17	31.69	-28.00	-7.94	11.63	28.20	3.813e+04	-4.568e+04	2.510e+04	-3.266e+04	-
3.491e+04	229	7.76	31.78	-41.84	-9.97	-0.09	36.48	4.089e+04	-4.964e+04	2.448e+04	-3.323e+04	-
4.226e+04	221	7.61	40.69	-42.19	3.18	-4.68	41.25	4.913e+04	-3.897e+04	1.792e+04	-7764.99	-
3.629e+04	222	6.35	29.17	-36.01	7.50	-14.35	30.70	4.011e+04	-3.391e+04	1.094e+04	-4730.83	-
205 38	230	7.11	31.44	-27.26	-0.38	4.56	29.24	3.761e+04	-4.582e+04	2.447e+04	-3.269e+04	-
3.037e+04	229	7.72	33.40	-41.41	-1.81	-6.20	37.34	4.055e+04	-4.980e+04	2.412e+04	-3.337e+04	-
3.488e+04	221	7.56	40.76	-39.70	11.89	-10.83	38.59	4.877e+04	-3.914e+04	1.757e+04	-7946.57	-
4.214e+04	222	6.32	29.80	-36.01	13.15	-19.36	28.60	3.976e+04	-3.412e+04	1.067e+04	-5033.42	-
3.617e+04	231	17.71	137.01	-49.04	-16.63	104.61	70.56	7.670e+04	-1.265e+05	5.762e+04	-1.074e+05	-
205 69	230	6.79	13.84	-67.33	-1.90	-51.59	32.09	5.054e+04	-2.850e+04	2.986e+04	-7821.91	-
3.038e+04	222	9.26	63.83	-30.03	21.91	11.89	46.66	4.658e+04	-6.083e+04	1.001e+04	-2.426e+04	-
3.474e+04	223	4.37	5.62	-38.84	4.50	-37.72	-6.97	2.883e+04	-2.294e+04	4931.20	950.16	-
5.090e+04	231	14.98	115.93	-41.49	-14.07	88.51	59.70	6.490e+04	-1.070e+05	4.876e+04	-9.089e+04	-
2.581e+04	230	5.75	11.71	-56.97	-1.61	-43.65	27.15	4.276e+04	-2.412e+04	2.527e+04	-6618.54	-
206 3	222	7.83	54.01	-25.41	18.54	10.06	39.48	3.941e+04	-5.147e+04	8472.23	-2.053e+04	-
5.015e+04	223	3.70	4.76	-32.86	3.81	-31.91	-5.90	2.439e+04	-1.941e+04	4172.55	803.98	-
2.940e+04												-
4.307e+04												-



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

2.184e+04	206	22	231	14.48	141.16	-46.33	-12.79	107.62	71.86	6.015e+04	-1.042e+05	4.410e+04	-8.811e+04	-
4.879e+04			230	5.19	13.64	-63.32	0.66	-50.34	28.82	3.920e+04	-2.090e+04	2.275e+04	-4449.85	-
2.679e+04			222	7.36	62.65	-27.64	18.19	16.82	45.14	3.609e+04	-4.848e+04	7236.67	-1.963e+04	-
4.009e+04			223	3.25	1.39	-35.77	-0.29	-34.09	-7.71	2.229e+04	-1.599e+04	4423.06	1877.94	-
1.909e+04	206	54	231	13.95	119.24	-41.05	-12.79	90.98	61.08	5.944e+04	-9.996e+04	4.424e+04	-8.475e+04	-
4.683e+04			230	5.21	11.79	-56.24	-0.64	-43.81	26.28	3.900e+04	-2.152e+04	2.289e+04	-5410.11	-
2.675e+04			222	7.21	54.30	-24.82	17.37	12.12	39.47	3.593e+04	-4.744e+04	7521.84	-1.904e+04	-
3.951e+04			223	3.32	3.16	-32.13	2.01	-30.98	-6.27	2.222e+04	-1.701e+04	4037.10	1175.03	-
1.956e+04	206	69	231	13.62	105.39	-37.72	-12.79	80.47	54.28	5.900e+04	-9.730e+04	4.432e+04	-8.263e+04	-
4.559e+04			230	5.22	10.65	-51.79	-1.46	-39.69	24.68	3.888e+04	-2.192e+04	2.297e+04	-6016.85	-
2.672e+04			222	7.12	49.10	-23.10	16.86	9.14	35.89	3.583e+04	-4.679e+04	7702.03	-1.866e+04	-
3.915e+04			223	3.36	4.33	-29.87	3.47	-29.01	-5.36	2.217e+04	-1.765e+04	3793.23	730.89	-
1.985e+04	207	1	232	4.63	0.48	-71.66	-1.93	-69.25	12.97	3.506e+04	-1.795e+04	5559.40	1.155e+04	-
2.634e+04			231	13.28	143.27	8.93	38.12	114.08	-55.40	569.93	-1.324e+05	-1.588e+04	-1.159e+05	-
4.378e+04			223	11.59	2.80	-79.97	-34.16	-43.01	41.14	8.957e+04	-4.380e+04	4.229e+04	3483.40	-
6.380e+04			224	3.68	52.02	2.20	22.26	31.96	-24.43	-3525.89	-3.943e+04	-4175.36	-3.878e+04	-
4785.02	207	3	232	3.92	0.41	-60.64	-1.63	-58.60	10.97	2.967e+04	-1.519e+04	4704.11	9775.48	-
2.228e+04			231	11.24	121.23	7.56	32.26	96.53	-46.88	482.25	-1.120e+05	-1.344e+04	-9.809e+04	-
3.704e+04			223	9.81	2.37	-67.67	-28.91	-36.39	34.81	7.579e+04	-3.706e+04	3.579e+04	2947.49	-
5.398e+04			224	3.12	44.02	1.86	18.84	27.05	-20.68	-2983.45	-3.336e+04	-3533.00	-3.281e+04	-
4048.87	207	22	232	3.74	-0.79	-68.59	-3.10	-66.28	12.28	2.867e+04	-1.360e+04	4468.33	1.060e+04	-
2.091e+04			231	11.02	144.78	6.62	34.96	116.44	-55.79	867.27	-1.086e+05	-1.304e+04	-9.468e+04	-
3.646e+04			223	9.23	2.82	-76.22	-34.13	-39.27	39.44	7.141e+04	-3.399e+04	3.353e+04	3887.61	-
5.057e+04			224	2.94	51.96	3.98	20.97	34.97	-22.94	-3479.80	-3.136e+04	-3840.25	-3.100e+04	-
3149.56	207	54	232	3.63	-0.08	-60.34	-2.11	-58.31	10.87	2.763e+04	-1.373e+04	4350.76	9549.66	-
2.051e+04			231	10.53	123.59	6.78	31.51	98.86	-47.72	603.83	-1.044e+05	-1.254e+04	-9.130e+04	-
3.475e+04			223	9.04	2.40	-67.20	-29.32	-35.48	34.66	6.987e+04	-3.381e+04	3.292e+04	3147.31	-
4.966e+04			224	2.87	44.61	2.61	18.61	28.61	-20.40	-3012.33	-3.073e+04	-3455.15	-3.028e+04	-
3475.09	207	69	232	3.56	0.37	-55.13	-1.48	-53.27	9.97	2.697e+04	-1.381e+04	4276.46	8886.80	-
2.026e+04			231	10.21	110.21	6.87	29.33	87.75	-42.62	438.41	-1.018e+05	-1.222e+04	-8.917e+04	-
3.368e+04			223	8.92	2.15	-61.51	-26.28	-33.09	31.65	6.890e+04	-3.369e+04	3.253e+04	2679.54	-
4.908e+04			224	2.83	40.02	1.69	17.12	24.59	-18.80	-2712.22	-3.033e+04	-3211.82	-2.983e+04	-
3680.79	208	1	233	1.73	-0.55	-25.05	-1.25	-24.35	4.09	1341.33	-1.628e+04	1341.06	-1.628e+04	69.29
1.331e+04			232	3.62	10.20	-4.32	9.05	-3.17	3.92	5731.47	-3.440e+04	678.93	-2.935e+04	-
1.763e+04			224	3.53	4.86	-18.91	-0.84	-13.20	-10.15	1.435e+04	-2.649e+04	4233.87	-1.638e+04	-
3078.11			225	1.75	5.91	-8.36	2.93	-5.39	-5.80	-163.64	-1.789e+04	-715.44	-1.733e+04	-
208	3	233	1.46	-0.46	-21.20	-1.06	-20.60	3.46	1134.97	-1.377e+04	1134.74	-1.377e+04	58.63	-

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1.127e+04	232	3.06	8.63	-3.65	7.66	-2.68	3.32	4849.71-2.911e+04	574.48-2.483e+04	-	
1.492e+04	224	2.99	4.12	-16.00	-0.71	-11.17	-8.59	1.214e+04-2.242e+04	3582.51-1.386e+04	-	
2604.55	225	1.48	5.00	-7.08	2.48	-4.56	-4.91	-138.47-1.513e+04	-605.37-1.467e+04	-	
208	8	233	1.44	0.63	-37.07	-0.43	-36.02	6.23	945.50-1.305e+04	944.84-1.305e+04	95.63
1.061e+04	232	2.91	8.91	-24.02	5.60	-20.72	9.90	5167.03-2.708e+04	1187.24-2.310e+04	-	
1.373e+04	224	2.80	7.48	-34.08	5.18	-31.78	-9.51	1.077e+04-2.080e+04	2777.97-1.280e+04	-	
2453.04	225	1.46	3.46	-28.22	2.16	-26.92	-6.28	-27.34-1.394e+04	-474.05-1.350e+04	-	
208	40	233	1.37	-0.01	-26.17	-0.76	-25.42	4.34	998.35-1.273e+04	998.00-1.273e+04	69.69
1.038e+04	232	2.83	8.25	-11.33	6.43	-9.51	5.68	4702.30-2.670e+04	779.74-2.278e+04	-	
1.363e+04	224	2.75	4.70	-21.62	1.61	-18.53	-8.47	1.094e+04-2.054e+04	3071.41-1.268e+04	-	
2400.79	225	1.39	3.81	-14.55	2.22	-12.96	-5.16	-87.75-1.383e+04	-520.80-1.340e+04	-	
208	69	233	1.33	-0.42	-19.27	-0.96	-18.73	3.15	1031.79-1.252e+04	1031.58-1.252e+04	53.30
1.024e+04	232	2.78	7.85	-3.32	6.96	-2.43	3.02	4408.82-2.646e+04	522.26-2.258e+04	-	
1.356e+04	224	2.72	3.74	-14.55	-0.65	-10.16	-7.81	1.104e+04-2.038e+04	3256.82-1.260e+04	-	
2367.77	225	1.34	4.55	-6.43	2.26	-4.14	-4.46	-125.88-1.376e+04	-550.34-1.333e+04	-	
209	1	234	18.65	143.06	-126.53	-8.06	24.59	133.80	6.130e+04-1.478e+05	2.253e+04-1.090e+05	-
8.125e+04	4	21.35	220.20	-204.48	-36.58	52.31	207.63	5.753e+04-1.745e+05	1.866e+04-1.357e+05	-	
8.666e+04	6	22.65	281.02	-262.68	35.11	-16.77	270.61	1.124e+05-1.407e+05	4.852e+04-7.689e+04	-	
1.099e+05	226	18.59	159.47	-151.34	38.47	-30.34	151.55	9.761e+04-1.150e+05	3.111e+04-4.846e+04	-	
9.855e+04	234	15.78	121.05	-107.06	-6.82	20.81	113.21	5.187e+04-1.250e+05	1.906e+04-9.223e+04	-	
6.875e+04	4	18.06	186.32	-173.02	-30.95	44.26	175.69	4.868e+04-1.477e+05	1.579e+04-1.148e+05	-	
7.332e+04	6	19.16	237.78	-222.26	29.71	-14.19	228.97	9.507e+04-1.191e+05	4.106e+04-6.506e+04	-	
9.300e+04	226	15.73	134.94	-128.06	32.55	-25.67	128.24	8.259e+04-9.727e+04	2.633e+04-4.101e+04	-	
8.339e+04	234	14.49	108.66	-117.54	-43.36	34.48	106.19	4.773e+04-1.135e+05	1.793e+04-8.371e+04	-	
6.258e+04	4	16.59	169.19	-188.07	-76.62	57.74	165.51	4.462e+04-1.341e+05	1.471e+04-1.042e+05	-	
6.672e+04	6	17.66	211.39	-241.67	-33.52	3.24	225.78	8.673e+04-1.081e+05	3.756e+04-5.894e+04	-	
8.464e+04	226	14.49	117.54	-143.29	-15.41	-10.35	130.39	7.574e+04-8.818e+04	2.448e+04-3.692e+04	-	
7.599e+04	234	14.40	108.83	-104.47	-20.59	24.94	104.19	4.737e+04-1.136e+05	1.756e+04-8.379e+04	-	
6.253e+04	4	16.48	168.68	-168.58	-46.91	47.01	161.96	4.440e+04-1.342e+05	1.449e+04-1.043e+05	-	
6.668e+04	6	17.51	213.50	-216.58	3.57	-6.65	214.98	8.654e+04-1.082e+05	3.741e+04-5.907e+04	-	
8.458e+04	226	14.37	119.81	-125.94	12.17	-18.31	121.93	7.534e+04-8.833e+04	2.414e+04-3.714e+04	-	
7.588e+04	234	14.35	110.04	-97.33	-6.20	18.92	102.92	4.715e+04-1.137e+05	1.733e+04-8.385e+04	-	
6.250e+04	4	16.42	169.38	-157.29	-28.14	40.24	159.72	4.425e+04-1.343e+05	1.435e+04-1.044e+05	-	
6.666e+04	6	17.42	216.17	-202.06	27.01	-12.90	208.16	8.642e+04-1.082e+05	3.732e+04-5.915e+04	-	
8.454e+04	226	14.30	122.67	-116.42	29.59	-23.33	116.58	7.508e+04-8.843e+04	2.393e+04-3.728e+04	-	
7.581e+04	235	17.03	105.30	-82.80	-7.52	30.03	92.15	6.004e+04-1.335e+05	2.947e+04-1.029e+05	-	
7.058e+04	234	18.84	144.44	-134.12	-12.85	23.18	138.11	6.262e+04-1.485e+05	2.330e+04-1.091e+05	-	
8.217e+04	226	18.57	167.69	-157.01	39.89	-29.21	158.63	9.632e+04-1.155e+05	3.074e+04-4.992e+04	-	
9.793e+04											

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

8.329e+04	227	15.36	99.21	-91.81	29.12	-21.72	92.06	8.079e+04	-9.716e+04	2.313e+04	-3.950e+04	-
210 3	235	14.41	89.10	-70.06	-6.37	25.41	77.98	5.080e+04	-1.130e+05	2.494e+04	-8.711e+04	-
5.972e+04	234	15.94	122.22	-113.48	-10.88	19.61	116.86	5.298e+04	-1.256e+05	1.972e+04	-9.235e+04	-
6.953e+04	226	15.71	141.89	-132.85	33.76	-24.71	134.22	8.150e+04	-9.773e+04	2.601e+04	-4.224e+04	-
8.287e+04	227	12.99	83.95	-77.68	24.64	-18.38	77.90	6.836e+04	-8.222e+04	1.957e+04	-3.342e+04	-
7.047e+04	235	13.29	84.99	-80.04	-36.49	41.44	72.74	4.691e+04	-1.030e+05	2.356e+04	-7.960e+04	-
210 6	234	14.65	110.24	-123.66	-46.84	33.42	109.85	4.879e+04	-1.141e+05	1.848e+04	-8.382e+04	-
5.435e+04	226	14.46	123.85	-146.15	-13.61	-8.69	134.98	7.468e+04	-8.854e+04	2.417e+04	-3.804e+04	-
6.339e+04	227	11.97	74.08	-88.54	-12.01	-2.45	81.17	6.282e+04	-7.457e+04	1.839e+04	-3.014e+04	-
7.545e+04	235	13.17	81.76	-69.24	-17.68	30.20	71.60	4.646e+04	-1.028e+05	2.301e+04	-7.935e+04	-
6.427e+04	234	14.55	110.12	-110.45	-24.20	23.87	107.64	4.841e+04	-1.142e+05	1.814e+04	-8.390e+04	-
210 38	226	14.35	126.16	-129.76	13.54	-17.13	127.04	7.432e+04	-8.873e+04	2.385e+04	-3.826e+04	-
5.431e+04	227	11.87	74.46	-76.57	9.08	-11.19	74.83	6.241e+04	-7.468e+04	1.802e+04	-3.029e+04	-
6.328e+04	235	13.10	81.00	-63.69	-5.79	23.10	70.89	4.618e+04	-1.027e+05	2.267e+04	-7.919e+04	-
7.538e+04	234	14.49	111.11	-103.17	-9.89	17.83	106.24	4.817e+04	-1.142e+05	1.792e+04	-8.395e+04	-
6.414e+04	226	14.29	128.99	-120.77	30.69	-22.47	122.02	7.409e+04	-8.885e+04	2.365e+04	-3.840e+04	-
210 69	227	11.81	76.32	-70.62	22.40	-16.71	70.82	6.215e+04	-7.474e+04	1.779e+04	-3.038e+04	-
5.429e+04	236	12.69	55.48	-51.95	-8.50	12.03	52.73	4.641e+04	-9.955e+04	2.877e+04	-8.191e+04	-
6.321e+04	235	16.60	104.16	-74.14	-4.64	34.66	86.96	5.336e+04	-1.343e+05	2.627e+04	-1.072e+05	-
7.533e+04	227	15.44	100.30	-98.97	23.54	-22.21	96.97	8.203e+04	-9.657e+04	2.537e+04	-3.990e+04	-
6.407e+04	228	12.37	65.19	-52.24	24.54	-11.59	55.87	6.179e+04	-8.262e+04	1.405e+04	-3.488e+04	-
211 1	236	10.74	46.94	-43.96	-7.19	10.18	44.61	3.927e+04	-8.423e+04	2.434e+04	-6.930e+04	-
4.758e+04	235	14.05	88.13	-62.73	-3.93	29.33	73.58	4.515e+04	-1.136e+05	2.223e+04	-9.072e+04	-
6.595e+04	227	13.06	84.87	-83.74	19.92	-18.79	82.05	6.941e+04	-8.171e+04	2.146e+04	-3.376e+04	-
8.312e+04	228	10.47	55.16	-44.21	20.76	-9.81	47.27	5.228e+04	-6.991e+04	1.189e+04	-2.951e+04	-
6.794e+04	236	9.83	53.86	-44.62	-0.25	9.48	49.00	3.535e+04	-7.729e+04	2.190e+04	-6.384e+04	-
211 3	235	12.97	99.65	-62.51	4.75	32.38	79.90	4.096e+04	-1.048e+05	2.015e+04	-8.403e+04	-
4.026e+04	227	11.96	91.02	-87.07	24.41	-20.47	86.17	6.312e+04	-7.451e+04	1.937e+04	-3.075e+04	-
5.581e+04	228	9.59	60.06	-47.04	23.81	-10.79	50.68	4.750e+04	-6.396e+04	1.063e+04	-2.710e+04	-
7.033e+04	236	9.79	46.96	-41.72	-4.10	9.34	43.83	3.556e+04	-7.685e+04	2.204e+04	-6.333e+04	-
5.748e+04	235	12.85	87.66	-59.13	-0.35	28.88	71.93	4.101e+04	-1.039e+05	2.018e+04	-8.308e+04	-
211 54	227	11.91	82.52	-80.36	20.55	-18.39	79.08	6.311e+04	-7.437e+04	1.946e+04	-3.071e+04	-
3.657e+04	228	9.55	53.98	-42.84	20.79	-9.65	45.96	4.752e+04	-6.371e+04	1.074e+04	-2.693e+04	-
5.244e+04	236	9.76	42.68	-39.96	-6.54	9.25	40.56	3.570e+04	-7.658e+04	2.213e+04	-6.300e+04	-
211 69	235	12.77	80.12	-57.03	-3.57	26.66	66.89	4.104e+04	-1.033e+05	2.020e+04	-8.247e+04	-
3.660e+04	227	11.87	77.15	-76.13	18.11	-17.08	74.59	6.310e+04	-7.428e+04	1.951e+04	-3.069e+04	-
5.073e+04	228	9.52	50.15	-40.19	18.88	-8.92	42.98	4.753e+04	-6.356e+04	1.081e+04	-2.683e+04	-
6.394e+04												-

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

5.226e+04	212	1	237	10.30	44.83	-49.34	3.75	-8.26	46.70	4.132e+04	-7.800e+04	1.914e+04	-5.582e+04	-
4.641e+04			236	11.61	58.93	-40.20	5.78	12.95	49.43	3.398e+04	-9.760e+04	1.702e+04	-8.063e+04	-
4.410e+04			228	12.79	64.29	-64.16	14.65	-14.52	62.55	6.695e+04	-8.219e+04	1.926e+04	-3.450e+04	-
6.956e+04			229	10.01	42.96	-38.72	17.28	-13.04	37.92	5.126e+04	-6.630e+04	1.226e+04	-2.730e+04	-
5.535e+04	212	3	237	8.71	37.94	-41.75	3.17	-6.99	39.52	3.496e+04	-6.600e+04	1.620e+04	-4.723e+04	-
3.927e+04			236	9.82	49.86	-34.01	4.89	10.96	41.83	2.876e+04	-8.258e+04	1.440e+04	-6.823e+04	-
3.731e+04			228	10.82	54.40	-54.29	12.40	-12.29	52.93	5.665e+04	-6.954e+04	1.629e+04	-2.919e+04	-
5.885e+04			229	8.47	36.35	-32.77	14.62	-11.04	32.09	4.337e+04	-5.610e+04	1.037e+04	-2.310e+04	-
4.683e+04	212	6	237	8.01	34.42	-41.30	-12.43	5.56	36.77	3.245e+04	-5.974e+04	1.528e+04	-4.258e+04	-
3.589e+04			236	8.99	46.73	-33.75	-14.78	27.76	34.16	2.598e+04	-7.508e+04	1.333e+04	-6.243e+04	-
3.344e+04			228	10.00	51.00	-63.29	-16.73	4.43	56.16	5.241e+04	-6.304e+04	1.571e+04	-2.633e+04	-
5.376e+04			229	7.82	34.39	-36.74	-7.81	5.45	34.94	4.026e+04	-5.066e+04	1.036e+04	-2.075e+04	-
4.272e+04	212	38	237	7.96	33.87	-38.65	-3.05	-1.74	36.25	3.204e+04	-5.990e+04	1.494e+04	-4.280e+04	-
3.577e+04			236	8.95	44.78	-30.93	-3.00	16.85	36.53	2.608e+04	-7.508e+04	1.318e+04	-6.218e+04	-
3.374e+04			228	9.90	48.96	-53.65	0.43	-5.13	51.23	5.185e+04	-6.315e+04	1.516e+04	-2.646e+04	-
5.360e+04			229	7.75	32.28	-31.20	5.12	-4.04	31.41	3.975e+04	-5.087e+04	9787.49	-2.090e+04	-
4.263e+04	212	69	237	7.92	34.49	-37.96	2.88	-6.35	35.93	3.178e+04	-6.000e+04	1.472e+04	-4.294e+04	-
3.570e+04			236	8.93	45.33	-30.92	4.45	9.96	38.02	2.614e+04	-7.508e+04	1.309e+04	-6.203e+04	-
3.392e+04			228	9.84	49.46	-49.36	11.27	-11.17	48.12	5.150e+04	-6.322e+04	1.481e+04	-2.654e+04	-
5.350e+04			229	7.70	33.04	-29.79	13.29	-10.03	29.17	3.943e+04	-5.100e+04	9427.19	-2.100e+04	-
4.258e+04	213	1	238	9.49	39.64	-42.45	0.53	-3.34	41.00	4.088e+04	-6.961e+04	2.216e+04	-5.089e+04	-
4.145e+04			237	10.33	45.52	-53.19	1.61	-9.28	49.06	4.099e+04	-7.855e+04	1.970e+04	-5.726e+04	-
4.573e+04			229	10.17	46.40	-40.84	14.89	-9.33	41.91	5.098e+04	-6.799e+04	1.230e+04	-2.930e+04	-
5.573e+04			230	9.27	29.84	-47.45	9.23	-26.84	34.18	5.725e+04	-5.181e+04	1.825e+04	-1.281e+04	-
5.227e+04	213	3	238	8.03	33.54	-35.92	0.45	-2.83	34.69	3.459e+04	-5.890e+04	1.875e+04	-4.306e+04	-
3.507e+04			237	8.74	38.52	-45.01	1.36	-7.85	41.51	3.468e+04	-6.647e+04	1.667e+04	-4.845e+04	-
3.870e+04			229	8.60	39.26	-34.56	12.60	-7.89	35.46	4.314e+04	-5.753e+04	1.041e+04	-2.480e+04	-
4.716e+04			230	7.84	25.25	-40.15	7.81	-22.71	28.92	4.844e+04	-4.384e+04	1.544e+04	-1.084e+04	-
4.423e+04	213	6	238	7.43	35.29	-35.47	-10.22	10.04	33.90	3.232e+04	-5.349e+04	1.766e+04	-3.883e+04	-
3.230e+04			237	8.04	34.79	-43.19	-13.77	5.36	37.80	3.220e+04	-6.020e+04	1.577e+04	-4.378e+04	-
3.532e+04			229	7.94	38.95	-39.33	-9.32	8.94	38.06	4.005e+04	-5.201e+04	1.037e+04	-2.233e+04	-
4.303e+04			230	7.34	24.55	-44.01	-12.00	-7.45	34.20	4.595e+04	-3.947e+04	1.569e+04	-9202.81	-
4.086e+04	213	38	238	7.35	31.90	-33.29	-3.71	2.31	32.45	3.179e+04	-5.353e+04	1.728e+04	-3.902e+04	-
3.205e+04			237	7.98	34.34	-41.21	-4.57	-2.30	37.76	3.179e+04	-6.034e+04	1.539e+04	-4.394e+04	-
3.524e+04			229	7.87	35.80	-33.32	3.41	-0.94	34.49	3.954e+04	-5.219e+04	9815.49	-2.246e+04	-
4.293e+04			230	7.21	22.41	-38.24	-0.29	-15.54	29.35	4.478e+04	-3.970e+04	1.468e+04	-9602.13	-
4.046e+04														

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

213	69	238	7.30	30.50	-32.66	0.41	-2.57	31.54	3.145e+04	-5.355e+04	1.704e+04	-3.914e+04	-
3.189e+04		237	7.95	35.02	-40.92	1.24	-7.14	37.74	3.153e+04	-6.042e+04	1.515e+04	-4.405e+04	-
3.518e+04		229	7.82	35.70	-31.42	11.46	-7.18	32.24	3.922e+04	-5.230e+04	9462.96	-2.254e+04	-
4.287e+04		230	7.13	22.95	-36.50	7.10	-20.65	26.29	4.404e+04	-3.986e+04	1.404e+04	-9854.44	-
4.021e+04		239	6.40	23.43	6.69	15.21	14.91	-8.37	-1748.78	-6.722e+04	-1869.87	-6.710e+04	-
2813.12	1	238	10.18	30.23	-83.93	-7.19	-46.51	53.59	6.236e+04	-5.683e+04	3.100e+04	-2.547e+04	-
5.248e+04		230	9.63	51.41	-11.90	5.36	34.15	28.19	3.793e+04	-7.329e+04	1.849e+04	-5.385e+04	-
4.224e+04		231	19.21	43.33	-169.81	10.49	-136.97	76.95	1.701e+05	-3.955e+04	4.029e+04	9.026e+04	-
1.018e+05		239	5.41	19.83	5.66	12.87	12.61	-7.08	-1479.74	-5.688e+04	-1582.20	-5.678e+04	-
2380.33	3	238	8.62	25.58	-71.02	-6.08	-39.36	45.34	5.277e+04	-4.809e+04	2.623e+04	-2.155e+04	-
4.441e+04		230	8.14	43.50	-10.07	4.53	28.90	23.86	3.209e+04	-6.201e+04	1.564e+04	-4.557e+04	-
3.574e+04		231	16.26	36.66	-143.69	8.88	-115.90	65.11	1.439e+05	-3.346e+04	3.409e+04	7.637e+04	-
8.614e+04		239	4.99	38.32	4.04	13.15	29.20	-15.15	-2643.53	-5.235e+04	-2654.31	-5.234e+04	-
731.87	6	238	8.03	22.19	-69.90	-16.66	-31.06	45.48	5.001e+04	-4.330e+04	2.486e+04	-1.815e+04	-
4.140e+04		230	7.69	60.18	-24.92	-14.90	50.16	27.43	3.051e+04	-5.703e+04	1.590e+04	-4.241e+04	-
3.264e+04		231	15.70	33.09	-157.91	-13.25	-111.57	81.87	1.390e+05	-3.039e+04	3.458e+04	7.404e+04	-
8.237e+04		239	4.95	25.57	5.03	12.26	18.33	-9.81	-1857.41	-5.195e+04	-1909.18	-5.190e+04	-
214	38	238	7.91	22.64	-66.43	-9.84	-33.95	42.87	4.876e+04	-4.355e+04	2.424e+04	-1.903e+04	-
1609.44		230	7.51	46.92	-14.64	-3.24	35.52	23.91	2.969e+04	-5.663e+04	1.487e+04	-4.181e+04	-
4.077e+04		231	15.13	32.71	-140.66	-0.18	-107.77	67.97	1.340e+05	-3.041e+04	3.238e+04	7.121e+04	-
3.255e+04		239	4.92	18.03	5.14	11.70	11.47	-6.44	-1345.22	-5.171e+04	-1438.36	-5.162e+04	-
7.988e+04		238	7.83	23.25	-64.56	-5.53	-35.78	41.22	4.797e+04	-4.372e+04	2.385e+04	-1.959e+04	-
214	69	230	7.40	39.55	-9.16	4.12	26.27	21.69	2.917e+04	-5.638e+04	1.422e+04	-4.142e+04	-
2163.94		231	14.78	33.33	-130.63	8.07	-105.37	59.19	1.308e+05	-3.042e+04	3.099e+04	6.943e+04	-
4.037e+04		240	4.10	-14.51	-59.52	-18.96	-55.07	-13.43	2.829e+04	-1.910e+04	2.620e+04	-1.700e+04	-
3.249e+04		239	10.25	67.43	-16.28	33.22	17.93	41.15	2.943e+04	-8.676e+04	8583.55	-6.592e+04	-
7.831e+04		231	7.81	5.09	-154.79	-12.36	-137.33	-49.86	8.073e+04	1.166e+04	1.185e+04	8.053e+04	-
215	1	232	7.15	43.79	14.17	15.45	42.50	6.04	1.220e+04	-6.639e+04	-7447.30	-4.674e+04	-
9732.70		240	3.47	-12.28	-50.36	-16.04	-46.60	-11.37	2.394e+04	-1.616e+04	2.217e+04	-1.439e+04	-
4.458e+04		239	8.68	57.06	-13.78	28.11	15.17	34.82	2.490e+04	-7.342e+04	7263.00	-5.578e+04	-
3674.97		231	6.61	4.31	-130.97	-10.46	-116.20	-42.19	6.831e+04	9864.09	1.003e+04	6.814e+04	-
3.403e+04		232	6.05	37.05	11.99	13.08	35.96	5.11	1.032e+04	-5.617e+04	-6301.57	-3.955e+04	-
8235.36	3	240	3.13	-13.15	-60.89	-17.73	-56.31	-14.06	2.212e+04	-1.341e+04	2.074e+04	-1.203e+04	-
3.772e+04		239	8.18	69.25	-14.99	36.95	17.31	40.96	2.250e+04	-6.945e+04	5170.91	-5.213e+04	-
3109.59		231	6.66	4.22	-157.43	-16.42	-136.78	-53.96	6.771e+04	9824.74	1.045e+04	6.709e+04	-
2.879e+04		232	5.74	44.57	12.58	13.91	43.23	6.39	9402.89	-5.319e+04	-5851.87	-3.794e+04	-
215	22	240	3.14	-11.93	-51.63	-15.80	-47.76	-11.78	2.190e+04	-1.419e+04	2.038e+04	-1.267e+04	-
6854.86		240	3.14	-11.93	-51.63	-15.80	-47.76	-11.78	2.190e+04	-1.419e+04	2.038e+04	-1.267e+04	-
3.596e+04		240	3.14	-11.93	-51.63	-15.80	-47.76	-11.78	2.190e+04	-1.419e+04	2.038e+04	-1.267e+04	-
5984.37		240	3.14	-11.93	-51.63	-15.80	-47.76	-11.78	2.190e+04	-1.419e+04	2.038e+04	-1.267e+04	-
2.687e+04		240	3.14	-11.93	-51.63	-15.80	-47.76	-11.78	2.190e+04	-1.419e+04	2.038e+04	-1.267e+04	-
215	54	240	3.14	-11.93	-51.63	-15.80	-47.76	-11.78	2.190e+04	-1.419e+04	2.038e+04	-1.267e+04	-





**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

7.096e+04	1	15.76	135.52	-144.19	-32.24	23.57	137.05	1.975e+04-1.446e+05-2.100e+04-1.038e+05	-
8.517e+04	4	16.59	170.41	-184.26	-0.38	-13.46	177.21	4.464e+04-1.342e+05-1.753e+04-7.202e+04	-
7.739e+04	234	14.40	106.03	-115.97	2.47	-12.42	110.75	4.726e+04-1.130e+05-1.215e+04-5.355e+04	-
6.527e+04	217 38 242	14.02	95.02	-88.70	-6.33	12.65	91.37	3.072e+04-1.224e+05 -5827.75-8.584e+04	-
7.088e+04	1	15.67	132.95	-129.08	-11.00	14.87	130.38	1.946e+04-1.446e+05-2.127e+04-1.039e+05	-
8.512e+04	4	16.49	170.10	-164.99	26.00	-20.89	165.90	4.442e+04-1.343e+05-1.774e+04-7.215e+04	-
7.728e+04	234	14.31	105.91	-102.36	22.68	-19.13	102.02	4.694e+04-1.130e+05-1.244e+04-5.365e+04	-
6.518e+04	217 69 242	13.95	94.63	-81.95	5.52	7.17	88.29	3.030e+04-1.224e+05 -6273.67-8.586e+04	-
7.083e+04	1	15.62	132.11	-120.31	2.42	9.38	126.16	1.928e+04-1.446e+05-2.144e+04-1.039e+05	-
8.509e+04	4	16.43	170.92	-153.83	42.67	-25.58	158.75	4.428e+04-1.344e+05-1.787e+04-7.223e+04	-
7.721e+04	234	14.25	106.92	-94.84	35.45	-23.36	96.50	4.673e+04-1.131e+05-1.262e+04-5.372e+04	-
1.354e+05	218 1 243	28.94	192.77	-113.80	2.25	76.72	148.69	1.016e+05-2.265e+05 3.020e+04-1.551e+05	-
6.611e+04	242	13.45	89.40	-108.31	11.67	-30.58	96.57	2.472e+04-1.208e+05-1.767e+04-7.838e+04	-
1.076e+05	234	19.76	160.84	-130.97	53.74	-23.87	140.65	6.571e+04-1.553e+05-1.984e+04-6.976e+04	-
8.165e+04	235	15.17	84.40	-70.57	27.46	-13.64	74.71	5.027e+04-1.220e+05 -8473.89-6.322e+04	-
1.146e+05	218 3 243	24.49	163.11	-96.29	1.90	64.92	125.82	8.599e+04-1.916e+05 2.555e+04-1.312e+05	-
5.594e+04	242	11.38	75.64	-91.65	9.87	-25.88	81.72	2.092e+04-1.022e+05-1.495e+04-6.632e+04	-
9.109e+04	234	16.72	136.10	-110.82	45.47	-20.20	119.01	5.560e+04-1.314e+05-1.678e+04-5.903e+04	-
6.909e+04	235	12.84	71.41	-59.72	23.24	-11.54	63.22	4.254e+04-1.032e+05 -7170.22-5.349e+04	-
1.097e+05	218 22 243	23.37	206.88	-101.11	31.83	73.95	152.55	7.900e+04-1.834e+05 1.978e+04-1.241e+05	-
5.005e+04	242	10.15	89.28	-96.78	33.14	-40.63	85.41	1.819e+04-9.105e+04-1.456e+04-5.831e+04	-
8.388e+04	234	15.49	156.39	-113.87	66.45	-23.93	127.35	5.060e+04-1.213e+05-1.655e+04-5.420e+04	-
6.244e+04	235	11.68	75.57	-62.10	28.73	-15.26	65.23	3.874e+04-9.355e+04 -5570.33-4.923e+04	-
1.063e+05	218 54 243	22.69	170.78	-92.60	13.38	64.80	129.16	7.849e+04-1.778e+05 2.189e+04-1.212e+05	-
5.054e+04	242	10.27	76.34	-88.16	18.33	-30.15	78.59	1.869e+04-9.218e+04-1.397e+04-5.952e+04	-
8.322e+04	234	15.31	136.30	-105.75	51.06	-20.52	115.61	5.057e+04-1.202e+05-1.576e+04-5.387e+04	-
6.267e+04	235	11.68	69.02	-57.29	24.07	-12.34	60.47	3.870e+04-9.371e+04 -6151.29-4.886e+04	-
1.042e+05	218 69 243	22.26	148.28	-87.54	1.73	59.01	114.38	7.817e+04-1.742e+05 2.323e+04-1.193e+05	-
5.085e+04	242	10.35	68.77	-83.32	8.97	-23.53	74.29	1.902e+04-9.290e+04-1.359e+04-6.029e+04	-
8.281e+04	234	15.20	123.73	-100.75	41.34	-18.36	108.19	5.054e+04-1.195e+05-1.526e+04-5.366e+04	-
6.281e+04	235	11.67	64.92	-54.29	21.12	-10.49	57.47	3.867e+04-9.382e+04 -6518.38-4.863e+04	-
6.676e+04	219 1 244	11.55	31.65	-118.31	5.04	-91.69	57.29	7.455e+04-5.899e+04 6827.39 8734.30	-
1.215e+04	243	23.10	170.66	27.97	28.49	170.14	8.63	-1.618e+04-2.418e+05-1.683e+04-2.412e+05	-
1.243e+05	235	22.62	105.66	-137.06	-3.25	-28.14	120.72	1.223e+05-1.404e+05 3.338e+04-5.151e+04	-
3.593e+04	236	9.94	56.15	20.25	39.77	36.64	17.88	1548.67-1.013e+05-1.309e+04-8.663e+04	-
5.649e+04	219 3 244	9.77	26.78	-100.11	4.27	-77.59	48.48	6.308e+04-4.991e+04 5777.02 7390.56	-
	243	19.55	144.41	23.67	24.11	143.97	7.30	-1.369e+04-2.046e+05-1.424e+04-2.041e+05	-





**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

5.762e+04	237	10.41	51.41	-43.88	25.32	-17.79	42.49	3.937e+04-8.057e+04	-3965.50-3.723e+04	-	
5.287e+04	238	9.37	37.02	-45.30	20.26	-28.55	33.14	4.045e+04-6.884e+04	-373.86-2.802e+04	-	
221 3	246	8.30	33.43	-30.19	5.12	-1.88	31.62	2.876e+04-6.673e+04	1.123e+04-4.920e+04	-	
3.697e+04	245	8.53	32.25	-43.87	3.95	-15.57	36.79	2.652e+04-7.092e+04	6738.52-5.114e+04	-	
3.920e+04	237	8.81	43.50	-37.13	21.43	-15.05	35.95	3.332e+04-6.817e+04	-3355.42-3.150e+04	-	
4.875e+04	238	7.92	31.32	-38.33	17.15	-24.16	28.04	3.423e+04-5.825e+04	-316.34-2.371e+04	-	
4.473e+04	221 22	246	7.67	43.26	-35.61	14.49	-6.84	37.96	2.579e+04-6.202e+04	9207.39-4.543e+04	-
3.437e+04	245	7.80	40.14	-49.28	13.15	-22.29	41.05	2.396e+04-6.497e+04	5716.90-4.672e+04	-	
3.591e+04	237	8.10	50.01	-41.14	28.26	-19.39	38.85	3.023e+04-6.272e+04	-3535.23-2.896e+04	-	
4.470e+04	238	7.32	37.54	-45.36	22.36	-30.18	32.06	3.136e+04-5.370e+04	-671.29-2.167e+04	-	
4.121e+04	221 54	246	7.59	35.26	-30.49	8.46	-3.69	32.31	2.601e+04-6.118e+04	9823.62-4.500e+04	-
3.390e+04	245	7.78	33.41	-43.42	7.30	-17.31	36.39	2.405e+04-6.467e+04	5967.55-4.658e+04	-	
3.574e+04	237	8.04	43.57	-36.58	22.88	-15.89	35.07	3.026e+04-6.226e+04	-3238.12-2.876e+04	-	
4.447e+04	238	7.25	31.97	-38.90	18.21	-25.14	28.04	3.121e+04-5.324e+04	-436.16-2.160e+04	-	
4.088e+04	221 69	246	7.54	30.39	-27.44	4.65	-1.71	28.74	2.615e+04-6.066e+04	1.021e+04-4.472e+04	-
3.361e+04	245	7.76	29.32	-39.88	3.59	-14.16	33.44	2.411e+04-6.448e+04	6125.93-4.649e+04	-	
3.563e+04	237	8.01	39.55	-33.75	19.48	-13.68	32.68	3.029e+04-6.197e+04	-3050.38-2.864e+04	-	
4.432e+04	238	7.20	28.47	-34.85	15.59	-21.96	25.49	3.111e+04-5.295e+04	-287.58-2.155e+04	-	
4.067e+04	222 1	247	20.55	143.05	-50.47	-7.58	100.16	80.38	6.959e+04-1.632e+05	3.604e+04-1.296e+05	-
8.175e+04	246	6.84	20.17	-69.72	8.04	-57.59	30.72	3.436e+04-4.636e+04	9581.03-2.157e+04	-	
3.723e+04	238	10.95	61.54	-26.14	25.67	9.74	43.11	3.633e+04-8.853e+04	-4379.93-4.782e+04	-	
5.853e+04	239	4.22	5.35	-47.26	1.81	-43.71	-13.18	2.202e+04-2.678e+04	7229.02-1.200e+04	-	
2.243e+04	222 3	247	17.39	121.04	-42.70	-6.41	84.75	68.01	5.888e+04-1.381e+05	3.050e+04-1.097e+05	-
6.917e+04	246	5.79	17.07	-59.00	6.80	-48.73	26.00	2.908e+04-3.922e+04	8107.03-1.825e+04	-	
3.150e+04	238	9.27	52.08	-22.12	21.72	8.24	36.48	3.074e+04-7.491e+04	-3706.09-4.046e+04	-	
4.952e+04	239	3.57	4.53	-39.99	1.53	-36.99	-11.16	1.863e+04-2.266e+04	6116.86-1.015e+04	-	
1.898e+04	222 22	247	16.71	146.48	-46.56	4.16	95.76	84.97	5.401e+04-1.334e+05	2.580e+04-1.052e+05	-
6.701e+04	246	5.25	27.27	-72.01	17.10	-61.84	30.10	2.633e+04-3.538e+04	6290.60-1.534e+04	-	
2.890e+04	238	8.67	60.01	-24.44	26.94	8.63	41.22	2.798e+04-7.017e+04	-4139.55-3.805e+04	-	
4.606e+04	239	3.11	4.30	-50.86	-0.37	-46.18	-15.37	1.683e+04-1.859e+04	6508.15 -8264.88	-	
1.609e+04	222 54	247	16.16	124.05	-41.72	-1.96	84.29	70.79	5.371e+04-1.286e+05	2.698e+04-1.018e+05	-
6.448e+04	246	5.26	20.02	-60.70	10.41	-51.09	26.14	2.639e+04-3.554e+04	6952.07-1.611e+04	-	
2.874e+04	238	8.52	52.24	-21.78	22.53	7.93	36.28	2.796e+04-6.890e+04	-3667.47-3.727e+04	-	
4.542e+04	239	3.19	4.18	-41.96	0.71	-38.49	-12.16	1.689e+04-1.982e+04	5927.60 -8855.86	-	
1.680e+04	222 69	247	15.81	110.04	-38.82	-5.83	77.04	61.83	5.353e+04-1.255e+05	2.773e+04-9.972e+04	-
6.288e+04	246	5.26	15.52	-53.63	6.18	-44.30	23.63	2.643e+04-3.566e+04	7370.02-1.660e+04	-	
2.864e+04	238	8.42	47.34	-20.11	19.74	7.49	33.16	2.795e+04-6.810e+04	-3369.17-3.678e+04	-	



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

1.029e+04											
1.593e+04	240	3.56	4.32	-15.17	1.06	-11.91	-7.28	9092.73-3.093e+04	1189.67-2.303e+04	-	
2884.23											
225	1	242	17.88	118.86	-111.39	-111.21	118.68	6.42 4.368e+04-1.537e+05	3.046e+04-1.404e+05	-	
4.933e+04	250	19.22	133.74	-122.50	-117.06	128.29	-36.95	3393.92-1.914e+05-2.935e+04-1.587e+05			
7.284e+04	2	23.07	219.66	-193.12	-182.94	209.48	-63.99-1.533e+04-2.357e+05-4.323e+04-2.078e+05				
7.327e+04	1	20.23	175.09	-152.89	-152.85	175.05	-3.60 2.741e+04-1.858e+05	1.279e+04-1.712e+05			
5.388e+04											
225	3	242	15.13	100.57	-94.25	-94.10	100.42	5.43 3.696e+04-1.300e+05	2.578e+04-1.188e+05		
4.174e+04	250	16.26	113.16	-103.66	-99.05	108.56	-31.27	2871.78-1.619e+05-2.483e+04-1.342e+05			
6.163e+04	2	19.52	185.86	-163.41	-154.80	177.25	-54.15-1.297e+04-1.994e+05-3.658e+04-1.758e+05				
6.200e+04	1	17.11	148.15	-129.37	-129.33	148.12	-3.05 2.320e+04-1.572e+05	1.082e+04-1.448e+05			
4.559e+04											
225	6	242	13.96	93.18	-106.55	-105.09	91.72	-17.01 3.499e+04-1.181e+05	2.463e+04-1.078e+05		
3.847e+04	250	14.93	110.63	-114.11	-102.78	99.30	-49.17	3306.58-1.472e+05-2.202e+04-1.219e+05			
5.632e+04	2	17.88	178.64	-176.63	-160.06	162.06	-74.92-1.149e+04-1.813e+05-3.303e+04-1.597e+05				
5.651e+04	1	15.69	137.72	-141.57	-138.88	135.03	-27.30 2.147e+04-1.428e+05	1.013e+04-1.315e+05			
4.164e+04											
225	38	242	13.83	91.53	-93.18	-93.11	91.46	-3.56 3.414e+04-1.182e+05	2.390e+04-1.079e+05		
3.815e+04	250	14.84	105.55	-101.61	-94.98	98.93	-36.46	2880.15-1.472e+05-2.236e+04-1.220e+05			
5.614e+04	2	17.80	172.42	-159.13	-148.21	161.50	-59.18-1.168e+04-1.813e+05-3.317e+04-1.598e+05				
5.642e+04	1	15.61	135.37	-126.40	-125.82	134.80	-12.27 2.123e+04-1.429e+05	9952.01-1.316e+05			
4.152e+04											
225	69	242	13.75	91.43	-85.68	-85.55	91.29	4.94 3.360e+04-1.182e+05	2.343e+04-1.080e+05		
3.795e+04	250	14.78	102.88	-94.23	-90.05	98.69	-28.42	2610.71-1.472e+05-2.258e+04-1.220e+05			
5.603e+04	2	17.74	168.97	-148.55	-140.73	161.14	-49.23-1.179e+04-1.813e+05-3.325e+04-1.598e+05				
5.636e+04	1	15.56	134.68	-117.61	-117.57	134.65	-2.77 2.109e+04-1.429e+05	9840.19-1.317e+05			
4.145e+04											
226	1	243	26.61	129.69	-182.86	-179.50	126.32	-32.26 1.617e+05-1.462e+05	1.347e+05-1.192e+05		
8.710e+04	251	14.73	77.31	-85.94	-75.94	67.31	-39.15	6715.01-1.464e+05-4.911e+04-9.055e+04			
7.369e+04	250	20.34	141.97	-141.18	-111.73	112.51	-86.44	1.785e+04-1.943e+05-4.763e+04-1.288e+05			
9.799e+04	242	15.87	109.15	-72.32	-64.32	101.15	-37.25	8673.31-1.560e+05-3.951e+04-1.078e+05			
7.493e+04											
226	3	243	22.52	109.73	-154.73	-151.88	106.89	-27.29 1.368e+05-1.237e+05	1.140e+05-1.008e+05		
7.370e+04	251	12.47	65.42	-72.72	-64.25	56.95	-33.13	5681.93-1.239e+05-4.155e+04-7.662e+04			
6.235e+04	250	17.21	120.13	-119.46	-94.54	95.20	-73.14	1.511e+04-1.644e+05-4.030e+04-1.090e+05			
8.291e+04	242	13.43	92.36	-61.19	-54.43	85.59	-31.52	7338.96-1.320e+05-3.344e+04-9.125e+04			
6.340e+04											
226	6	243	21.66	107.36	-193.15	-181.72	95.93	-57.47 1.341e+05-1.138e+05	1.121e+05-9.186e+04		
7.048e+04	251	11.30	63.99	-73.59	-60.81	51.20	-39.94	4299.68-1.121e+05-3.765e+04-7.012e+04			
5.587e+04	250	15.91	117.61	-136.43	-98.07	79.25	-90.97	1.578e+04-1.497e+05-3.525e+04-9.862e+04			
7.641e+04	242	12.29	86.74	-65.50	-45.85	67.08	-51.05	5918.72-1.203e+05-3.252e+04-8.185e+04			
5.808e+04											
226	38	243	20.93	102.15	-160.43	-154.98	96.69	-37.46 1.282e+05-1.130e+05	1.069e+05-9.174e+04		
6.835e+04	251	11.32	61.11	-68.89	-59.34	51.56	-33.92	4829.66-1.124e+05-3.773e+04-6.983e+04			
5.637e+04											

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

7.577e+04	250	15.75	112.18	-119.09	-90.64	83.72	-75.97	1.453e+04-1.495e+05-3.610e+04-9.888e+04	
5.781e+04	242	12.24	84.19	-58.61	-48.07	73.66	-37.33	6375.03-1.201e+05-3.122e+04-8.253e+04	
6.700e+04	226 69 243	20.47	99.76	-140.66	-138.08	97.17	-24.81	1.244e+05-1.124e+05 1.036e+05-9.166e+04	
5.668e+04	251	11.33	59.47	-66.11	-58.41	51.78	-30.12	5165.39-1.126e+05-3.778e+04-6.965e+04	
7.537e+04	250	15.64	109.20	-108.60	-85.94	86.55	-66.49	1.373e+04-1.494e+05-3.664e+04-9.905e+04	
5.764e+04	242	12.21	83.97	-55.63	-49.48	77.81	-28.66	6671.78-1.200e+05-3.040e+04-8.296e+04	
9.273e+04	227 1 244	17.42	93.12	-9.59	27.78	55.75	-49.41	1.720e+04-1.683e+05-7.507e+04-7.598e+04	
4.277e+04	252	7.52	1.79	-82.09	-81.91	1.61	3.92	2.139e+04-6.438e+04-2.463e+04-1.835e+04	
1.107e+05	251	21.77	157.28	-106.07	-71.67	122.88	-88.75	2.364e+04-2.062e+05-6.034e+04-1.222e+05	
1.976e+04	243	12.59	3.78	-209.53	-188.56	-17.19	63.52	1.262e+05 7448.07 1.228e+05 1.083e+04	-
7.846e+04	227 3 244	14.74	78.79	-8.11	23.51	47.17	-41.81	1.455e+04-1.424e+05-6.352e+04-6.429e+04	
3.619e+04	252	6.36	1.52	-69.46	-69.30	1.36	3.31	1.810e+04-5.448e+04-2.084e+04-1.553e+04	
9.364e+04	251	18.42	133.09	-89.75	-60.64	103.98	-75.10	2.000e+04-1.744e+05-5.105e+04-1.034e+05	
1.672e+04	243	10.65	3.20	-177.30	-159.55	-14.55	53.75	1.068e+05 6302.21 1.039e+05 9165.04	-
7.348e+04	227 22 244	13.88	90.34	-2.03	29.10	59.21	-43.67	1.304e+04-1.339e+05-6.118e+04-5.972e+04	
3.084e+04	252	5.54	12.81	-87.88	-85.06	9.99	16.60	1.573e+04-4.616e+04-1.781e+04-1.263e+04	
8.660e+04	251	17.32	169.43	-95.54	-73.25	147.14	-73.56	1.792e+04-1.633e+05-4.598e+04-9.941e+04	
2.082e+04	243	10.33	3.03	-216.96	-181.57	-32.36	80.83	1.038e+05 1.062e+04 9.886e+04 1.553e+04	-
7.216e+04	227 54 244	13.58	78.86	-5.29	24.36	49.20	-40.20	1.315e+04-1.312e+05-5.908e+04-5.894e+04	
3.210e+04	252	5.69	5.52	-72.43	-71.54	4.63	8.27	1.617e+04-4.822e+04-1.851e+04-1.354e+04	
8.569e+04	251	16.97	139.43	-86.68	-62.15	114.90	-70.32	1.807e+04-1.604e+05-4.625e+04-9.609e+04	
1.737e+04	243	9.92	2.55	-182.37	-159.18	-20.63	61.24	9.958e+04 7706.07 9.617e+04 1.112e+04	-
7.133e+04	227 69 244	13.40	71.63	-7.38	21.37	42.88	-38.01	1.323e+04-1.294e+05-5.775e+04-5.845e+04	
3.290e+04	252	5.79	1.38	-63.15	-63.00	1.24	3.01	1.646e+04-4.952e+04-1.895e+04-1.412e+04	
8.512e+04	251	16.75	120.99	-81.59	-55.13	94.52	-68.27	1.818e+04-1.586e+05-4.641e+04-9.400e+04	
1.520e+04	243	9.69	2.91	-161.18	-145.04	-13.22	48.86	9.707e+04 5729.28 9.446e+04 8331.85	-
5.953e+04	228 1 245	10.54	40.21	-39.84	-31.88	32.26	-23.95	3.233e+04-8.797e+04-1.921e+04-3.643e+04	
6.101e+04	253	11.26	33.57	-51.07	-34.08	16.58	-33.90	2.560e+04-1.007e+05-5.372e+04-2.134e+04	
6.722e+04	252	12.62	46.08	-56.29	-35.13	24.92	-41.45	2.142e+04-1.172e+05-6.483e+04-3.097e+04	
6.337e+04	244	11.34	44.57	-57.83	-49.09	35.83	-28.61	3.777e+04-9.192e+04-1.329e+04-4.086e+04	
5.037e+04	228 3 245	8.92	34.02	-33.71	-26.98	27.29	-20.26	2.736e+04-7.444e+04-1.626e+04-3.082e+04	
5.163e+04	253	9.53	28.41	-43.21	-28.84	14.03	-28.69	2.166e+04-8.517e+04-4.545e+04-1.806e+04	
5.688e+04	252	10.68	38.99	-47.63	-29.73	21.09	-35.07	1.813e+04-9.918e+04-5.486e+04-2.620e+04	
5.362e+04	244	9.59	37.71	-48.93	-41.54	30.32	-24.21	3.196e+04-7.778e+04-1.125e+04-3.457e+04	
4.577e+04	228 21 245	8.12	25.78	-29.94	-10.63	6.47	-26.52	2.557e+04-6.686e+04-1.422e+04-2.706e+04	
4.702e+04	253	8.71	21.20	-38.46	-9.12	-8.15	-29.83	2.038e+04-7.694e+04-4.082e+04-1.573e+04	
	252	9.84	29.33	-48.26	-9.67	-9.27	-38.79	1.748e+04-9.024e+04-4.939e+04-2.338e+04	





**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

3.982e+04	246	7.89	31.73	-4.96	13.04	13.74	-18.34	1.660e+04	-7.127e+04	-4.590e+04	-8772.62	
230	5	247	14.41	38.79	-144.34	-114.31	8.76	-67.81	1.165e+05	-4.349e+04	7.323e+04	-178.13
7.110e+04	255	6.15	29.83	-1.86	24.77	3.20	11.60	425.03	-6.316e+04	-6.127e+04	-1459.15	
1.078e+04	254	8.09	18.30	-63.13	-31.92	-12.91	-39.59	3.559e+04	-5.827e+04	-3.099e+04	8308.55	
4.262e+04	246	7.41	47.67	-19.85	33.72	-5.91	-27.33	1.667e+04	-6.504e+04	-4.226e+04	-6106.71	
3.664e+04	247	13.89	39.25	-129.42	-111.14	20.96	-52.44	1.117e+05	-4.365e+04	7.040e+04	-2314.00	
230	37	247	13.89	39.25	-129.42	-111.14	20.96	-52.44	1.117e+05	-4.365e+04	7.040e+04	-2314.00
6.866e+04	255	6.15	17.18	-0.90	12.43	3.84	7.95	1353.45	-6.309e+04	-6.090e+04	-833.70	
1.167e+04	254	7.98	17.73	-59.54	-36.47	-5.34	-35.36	3.443e+04	-5.858e+04	-3.192e+04	7774.17	
4.206e+04	246	7.26	34.95	-9.26	20.32	5.36	-20.80	1.570e+04	-6.488e+04	-4.193e+04	-7251.66	
3.637e+04	247	13.57	40.85	-121.31	-109.13	28.68	-42.73	1.087e+05	-4.375e+04	6.861e+04	-3663.57	
230	69	247	13.57	40.85	-121.31	-109.13	28.68	-42.73	1.087e+05	-4.375e+04	6.861e+04	-3663.57
6.712e+04	255	6.15	10.10	-1.21	4.64	4.25	5.65	1949.89	-6.305e+04	-6.066e+04	-438.50	
1.223e+04	254	7.92	18.06	-57.96	-39.34	-0.57	-32.69	3.370e+04	-5.878e+04	-3.252e+04	7436.52	
4.170e+04	246	7.17	28.85	-4.51	11.85	12.49	-16.67	1.509e+04	-6.479e+04	-4.173e+04	-7975.11	
3.620e+04	248	8.15	40.50	9.25	40.05	9.71	-3.73	1.144e+04	-7.738e+04	-5.772e+04	-8215.34	
231	1	248	8.15	40.50	9.25	40.05	9.71	-3.73	1.144e+04	-7.738e+04	-5.772e+04	-8215.34
3.687e+04	256	3.83	-8.37	-76.49	-68.90	-15.96	21.45	2.128e+04	-2.208e+04	-2.119e+04	2.039e+04	
6157.46	255	12.45	80.23	-20.47	11.86	47.90	-47.02	1.658e+04	-1.179e+05	-8.257e+04	-1.874e+04	
5.918e+04	247	9.07	-3.10	-181.88	-152.21	-32.77	66.51	9.737e+04	2.635e+04	8.926e+04	3.446e+04	
2.259e+04	248	6.89	34.27	7.83	33.89	8.21	-3.16	9681.21	-6.547e+04	-4.884e+04	-6951.44	
231	3	248	6.89	34.27	7.83	33.89	8.21	-3.16	9681.21	-6.547e+04	-4.884e+04	-6951.44
3.120e+04	256	3.24	-7.08	-64.73	-58.30	-13.51	18.15	1.801e+04	-1.868e+04	-1.793e+04	1.725e+04	
5210.16	255	10.54	67.89	-17.32	10.04	40.53	-39.78	1.403e+04	-9.976e+04	-6.987e+04	-1.586e+04	
5.008e+04	247	7.67	-2.62	-153.90	-128.79	-27.73	56.28	8.239e+04	2.229e+04	7.552e+04	2.915e+04	
1.911e+04	248	6.47	34.31	8.17	34.13	8.34	-2.13	8954.76	-6.155e+04	-4.644e+04	-6157.51	
231	22	248	6.47	34.31	8.17	34.13	8.34	-2.13	8954.76	-6.155e+04	-4.644e+04	-6157.51
2.893e+04	256	2.91	-5.21	-82.38	-75.68	-11.91	21.72	1.632e+04	-1.559e+04	-1.511e+04	1.585e+04	
3869.74	255	9.94	84.25	-23.80	4.30	56.16	-47.39	1.230e+04	-9.425e+04	-6.488e+04	-1.706e+04	
4.761e+04	247	7.82	-2.69	-189.51	-153.86	-38.34	73.42	8.195e+04	2.070e+04	7.330e+04	2.935e+04	
2.133e+04	248	6.35	32.37	7.53	32.10	7.81	-2.59	8859.42	-6.031e+04	-4.519e+04	-6256.77	
231	54	248	6.35	32.37	7.53	32.10	7.81	-2.59	8859.42	-6.031e+04	-4.519e+04	-6256.77
2.858e+04	256	2.93	-5.99	-67.93	-61.78	-12.14	18.52	1.635e+04	-1.644e+04	-1.584e+04	1.575e+04	
4400.90	255	9.72	70.34	-18.76	7.25	44.33	-40.51	1.257e+04	-9.206e+04	-6.405e+04	-1.544e+04	
4.633e+04	247	7.30	-2.54	-159.07	-131.32	-30.29	59.78	7.760e+04	2.046e+04	7.046e+04	2.761e+04	
1.891e+04	248	6.27	31.15	7.12	30.81	7.47	-2.87	8801.10	-5.952e+04	-4.440e+04	-6319.49	
231	69	248	6.27	31.15	7.12	30.81	7.47	-2.87	8801.10	-5.952e+04	-4.440e+04	-6319.49
2.836e+04	256	2.95	-6.43	-58.84	-53.00	-12.28	16.50	1.637e+04	-1.698e+04	-1.630e+04	1.568e+04	
4736.51	255	9.58	61.72	-15.75	9.12	36.85	-36.17	1.276e+04	-9.069e+04	-6.352e+04	-1.442e+04	
4.553e+04	247	6.98	-2.38	-139.91	-117.08	-25.21	51.17	7.490e+04	2.027e+04	6.866e+04	2.650e+04	
1.738e+04	249	3.00	2.06	-5.53	-5.11	1.64	1.73	272.43	-3.083e+04	-2.909e+04	-1467.80	
232	1	249	3.00	2.06	-5.53	-5.11	1.64	1.73	272.43	-3.083e+04	-2.909e+04	-1467.80
7148.40	257	3.76	-1.12	-26.06	-25.97	-1.21	1.47	504.96	-3.786e+04	-3.775e+04	396.61	
2035.83	256	5.47	5.11	-23.10	-22.27	4.28	4.76	1.218e+04	-4.880e+04	-4.490e+04	8273.19	
1.493e+04	248	4.50	-3.60	-27.61	-26.97	-4.24	3.86	1.909e+04	-3.357e+04	-1.744e+04	2955.44	



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

2.428e+04	3	249	2.54	1.74	-4.68	-4.32	1.39	1.46	230.52-2.609e+04-2.462e+04	-1241.99	
6048.64		257	3.18	-0.95	-22.05	-21.97	-1.03	1.24	427.28-3.203e+04-3.194e+04	335.60	-
1722.63		256	4.63	4.32	-19.54	-18.84	3.62	4.03	1.030e+04-4.129e+04-3.799e+04	7000.39	
1.263e+04		248	3.81	-3.05	-23.36	-22.82	-3.59	3.26	1.615e+04-2.841e+04-1.475e+04	2500.76	
2.054e+04	24	249	2.42	2.79	-17.60	-16.92	2.11	3.67	103.34-2.432e+04-2.299e+04	-1232.65	
5554.13		257	2.99	-1.29	-41.14	-41.13	-1.30	-0.66	476.14-2.917e+04-2.908e+04	382.84	-
1660.49		256	4.25	9.56	-37.31	-37.09	9.34	3.16	8767.00-3.757e+04-3.465e+04	5847.65	
1.126e+04		248	3.50	-3.40	-40.16	-37.45	-6.12	9.62	1.476e+04-2.545e+04-1.373e+04	3043.74	
1.828e+04	56	249	2.35	2.04	-9.41	-8.96	1.59	2.23	168.39-2.395e+04-2.261e+04	-1169.18	
5520.20		257	2.93	-1.07	-28.18	-28.17	-1.08	0.44	422.33-2.914e+04-2.905e+04	335.19	-
1602.60		256	4.22	6.03	-25.25	-24.86	5.64	3.47	9134.37-3.755e+04-3.458e+04	6164.06	
1.139e+04		248	3.48	-3.09	-28.49	-27.21	-4.37	5.54	1.471e+04-2.568e+04-1.354e+04	2571.69	
1.852e+04	69	249	2.31	1.58	-4.25	-3.93	1.26	1.33	209.56-2.372e+04-2.238e+04	-1129.08	
5498.77		257	2.89	-0.86	-20.04	-19.98	-0.93	1.13	388.43-2.912e+04-2.904e+04	305.09	-
1566.03		256	4.21	3.93	-17.77	-17.13	3.29	3.66	9366.57-3.754e+04-3.454e+04	6363.99	
1.148e+04		248	3.46	-2.77	-21.24	-20.75	-3.26	2.97	1.468e+04-2.582e+04-1.341e+04	2273.42	
1.867e+04	1	250	19.35	135.99	-124.46	-120.83	132.36	-30.52	4832.23-1.918e+05-2.351e+04-1.635e+05		
6.906e+04		258	21.97	157.68	-136.19	-108.04	129.52	-86.50	-4.591e+04-2.406e+05-9.997e+04-1.865e+05		
8.719e+04		19	27.29	280.16	-241.89	-193.66	231.93	-151.18	-8.086e+04-3.016e+05-1.183e+05-2.642e+05		
8.282e+04		2	23.03	224.88	-191.56	-184.99	218.31	-51.88	-1.631e+04-2.356e+05-4.000e+04-2.120e+05		
6.808e+04	3	250	16.37	115.07	-105.31	-102.24	112.00	-25.82	4088.81-1.623e+05-1.989e+04-1.383e+05		
5.844e+04		258	18.59	133.42	-115.24	-91.41	109.60	-73.19	-3.885e+04-2.036e+05-8.459e+04-1.578e+05		
7.377e+04		19	23.09	237.06	-204.68	-163.86	196.25	-127.92	-6.842e+04-2.552e+05-1.001e+05-2.236e+05		
7.008e+04		2	19.49	190.28	-162.09	-156.53	184.72	-43.90	-1.380e+04-1.994e+05-3.384e+04-1.793e+05		
5.761e+04	22	250	14.96	134.22	-103.79	-103.54	133.97	-7.71	3438.99-1.480e+05-1.823e+04-1.263e+05		
5.302e+04		258	17.02	158.68	-110.13	-97.63	146.18	-56.61	-3.562e+04-1.857e+05-7.716e+04-1.441e+05		
6.714e+04		19	21.17	264.97	-191.16	-166.72	240.54	-102.71	-6.232e+04-2.324e+05-9.111e+04-2.036e+05		
6.377e+04		2	17.84	212.61	-155.98	-154.73	211.37	-21.41	-1.272e+04-1.816e+05-3.090e+04-1.634e+05		
5.235e+04	54	250	14.91	115.69	-98.47	-97.05	114.27	-17.37	3609.33-1.477e+05-1.814e+04-1.260e+05		
5.309e+04		258	16.94	135.21	-106.28	-88.73	117.66	-62.69	-3.544e+04-1.853e+05-7.700e+04-1.437e+05		
6.709e+04		19	21.06	234.08	-187.46	-155.84	202.46	-111.03	-6.225e+04-2.322e+05-9.103e+04-2.034e+05		
6.373e+04		2	17.77	187.95	-150.31	-147.11	184.75	-32.75	-1.261e+04-1.814e+05-3.082e+04-1.632e+05		
5.236e+04	69	250	14.88	104.61	-95.74	-92.95	101.82	-23.47	3717.10-1.475e+05-1.809e+04-1.257e+05		
5.313e+04		258	16.90	121.29	-104.76	-83.10	99.63	-66.54	-3.532e+04-1.851e+05-7.690e+04-1.435e+05		
6.707e+04		19	20.99	215.51	-186.07	-148.97	178.40	-116.29	-6.220e+04-2.320e+05-9.097e+04-2.033e+05		
6.371e+04		2	17.72	172.98	-147.35	-142.30	167.93	-39.91	-1.254e+04-1.813e+05-3.077e+04-1.630e+05		
5.237e+04											

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

234	1	251	16.07	92.31	-101.11	-95.43	86.64	-32.64	2.529e+04	-1.483e+05	-1.683e+04	-1.061e+05
7.440e+04		259	17.47	95.31	-90.77	-62.73	67.26	-66.58	-2.290e+04	-1.881e+05	-1.007e+05	-1.104e+05
8.248e+04		258	21.85	163.10	-144.15	-87.79	106.73	-118.91	-4.525e+04	-2.388e+05	-1.215e+05	-1.625e+05
9.458e+04		250	19.42	143.23	-126.69	-110.41	126.95	-64.26	3947.82	-1.926e+05	-4.301e+04	-1.457e+05
8.382e+04	3	251	13.60	78.11	-85.55	-80.75	73.31	-27.62	2.140e+04	-1.255e+05	-1.424e+04	-8.981e+04
6.296e+04		259	14.79	80.64	-76.81	-53.08	56.91	-56.33	-1.937e+04	-1.592e+05	-8.517e+04	-9.339e+04
6.979e+04		258	18.49	138.00	-121.97	-74.28	90.31	-100.62	-3.829e+04	-2.021e+05	-1.028e+05	-1.375e+05
8.003e+04		250	16.43	121.19	-107.20	-93.42	107.42	-54.37	3340.46	-1.630e+05	-3.639e+04	-1.233e+05
7.093e+04	6	251	12.52	74.98	-96.33	-86.17	64.82	-40.47	2.096e+04	-1.137e+05	-1.133e+04	-8.145e+04
5.751e+04		259	13.52	82.88	-81.44	-50.63	52.07	-64.14	-1.749e+04	-1.448e+05	-7.732e+04	-8.495e+04
6.353e+04		258	16.94	139.74	-131.24	-72.54	81.05	-111.63	-3.447e+04	-1.839e+05	-9.343e+04	-1.249e+05
7.302e+04		250	15.09	118.37	-118.24	-95.07	95.20	-70.32	3739.32	-1.483e+05	-3.254e+04	-1.120e+05
6.479e+04	38	251	12.42	72.34	-84.75	-78.35	65.94	-31.05	2.004e+04	-1.139e+05	-1.232e+04	-8.157e+04
5.734e+04		259	13.47	76.93	-74.23	-49.17	51.87	-56.22	-1.757e+04	-1.447e+05	-7.739e+04	-8.492e+04
6.348e+04		258	16.86	130.88	-118.66	-69.47	81.69	-99.28	-3.468e+04	-1.838e+05	-9.347e+04	-1.250e+05
7.286e+04		250	15.00	113.09	-105.24	-88.86	96.70	-57.52	3308.80	-1.482e+05	-3.287e+04	-1.120e+05
6.460e+04	69	251	12.36	71.01	-77.77	-73.41	66.65	-25.10	1.946e+04	-1.140e+05	-1.294e+04	-8.165e+04
5.723e+04		259	13.44	73.31	-69.83	-48.25	51.74	-51.21	-1.761e+04	-1.447e+05	-7.743e+04	-8.490e+04
6.344e+04		258	16.81	125.46	-110.88	-67.53	82.10	-91.47	-3.481e+04	-1.837e+05	-9.349e+04	-1.250e+05
7.275e+04		250	14.94	110.18	-97.45	-84.93	97.65	-49.43	3036.78	-1.482e+05	-3.309e+04	-1.121e+05
6.448e+04	1	252	12.39	59.98	-62.87	-59.62	56.73	-19.71	1.820e+04	-1.166e+05	-2.950e+04	-6.885e+04
6.444e+04		260	14.04	53.54	-65.96	-45.69	33.27	-44.85	-4663.16	-1.465e+05	-9.096e+04	-6.017e+04
6.921e+04		259	17.55	103.87	-93.29	-51.39	61.97	-80.65	-2.378e+04	-1.889e+05	-1.142e+05	-9.848e+04
8.220e+04		251	15.24	83.69	-102.68	-91.94	72.95	-43.44	2.405e+04	-1.406e+05	-2.738e+04	-8.916e+04
7.631e+04	3	252	10.48	50.75	-53.20	-50.45	48.00	-16.67	1.540e+04	-9.862e+04	-2.496e+04	-5.825e+04
5.453e+04		260	11.88	45.31	-55.81	-38.66	28.16	-37.95	-3945.75	-1.239e+05	-7.697e+04	-5.091e+04
5.856e+04		259	14.85	87.89	-78.94	-43.48	52.44	-68.25	-2.012e+04	-1.599e+05	-9.665e+04	-8.333e+04
6.955e+04		251	12.89	70.82	-86.89	-77.80	61.72	-36.75	2.035e+04	-1.190e+05	-2.317e+04	-7.544e+04
6.457e+04	6	252	9.55	46.44	-55.21	-49.12	40.35	-24.12	1.445e+04	-8.903e+04	-2.191e+04	-5.268e+04
4.940e+04		260	10.86	45.94	-58.53	-36.09	23.50	-42.90	-3243.14	-1.126e+05	-6.965e+04	-4.617e+04
5.339e+04		259	13.58	88.65	-83.46	-40.36	45.54	-74.57	-1.804e+04	-1.454e+05	-8.775e+04	-7.566e+04
6.338e+04		251	11.82	66.74	-95.34	-80.96	52.36	-46.09	1.961e+04	-1.076e+05	-1.946e+04	-6.857e+04
5.869e+04	38	252	9.54	46.09	-50.85	-47.12	42.37	-18.63	1.417e+04	-8.942e+04	-2.239e+04	-5.285e+04
4.950e+04		260	10.82	42.95	-53.68	-35.51	24.79	-37.75	-3453.93	-1.126e+05	-6.985e+04	-4.624e+04
5.330e+04		259	13.53	83.21	-76.21	-39.85	46.85	-66.89	-1.819e+04	-1.453e+05	-8.782e+04	-7.572e+04
6.329e+04		251	11.76	65.16	-85.19	-74.69	54.66	-38.32	1.893e+04	-1.080e+05	-2.044e+04	-6.858e+04
5.870e+04	69	252	9.53	46.14	-48.36	-45.86	43.64	-15.16	1.400e+04	-8.966e+04	-2.269e+04	-5.296e+04

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

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4.957e+04									
5.324e+04	260	10.80	41.19	-50.74	-35.14	25.60	-34.50	-3587.05-1.127e+05-6.997e+04-4.629e+04	
6.323e+04	259	13.50	79.90	-71.76	-39.53	47.67	-62.04-1.829e+04-1.453e+05-8.786e+04-7.575e+04		
5.870e+04	251	11.72	64.38	-78.99	-70.72	56.11	-33.41 1.850e+04-1.082e+05-2.107e+04-6.858e+04		
6.496e+04	1 253	11.67	40.47	-44.70	-34.29	30.05	-27.90 2.424e+04-1.057e+05-4.029e+04-4.116e+04		
5.600e+04	261	11.64	36.30	-48.72	-33.26	20.84	-32.79 4376.06-1.179e+05-8.129e+04-3.223e+04		
6.819e+04	260	14.32	67.57	-67.79	-38.41	38.19	-55.80 -7359.41-1.500e+05-9.969e+04-5.772e+04		
6.413e+04	252	11.71	43.14	-63.30	-57.33	37.17	-24.48 2.012e+04-1.088e+05-3.804e+04-5.061e+04		
5.497e+04	3 253	9.87	34.24	-37.82	-29.01	25.43	-23.61 2.051e+04-8.943e+04-3.409e+04-3.483e+04		
4.738e+04	261	9.85	30.71	-41.22	-28.15	17.64	-27.74 3702.82-9.976e+04-6.879e+04-2.727e+04		
5.770e+04	260	12.11	57.17	-57.36	-32.50	32.32	-47.21 -6227.20-1.270e+05-8.435e+04-4.884e+04		
5.427e+04	252	9.90	36.50	-53.56	-48.51	31.45	-20.71 1.702e+04-9.203e+04-3.219e+04-4.282e+04		
5.034e+04	6 253	9.09	35.66	-41.48	-25.50	19.68	-31.26 1.930e+04-8.138e+04-3.060e+04-3.148e+04		
4.331e+04	261	9.02	31.44	-42.43	-24.30	13.31	-31.79 3765.35-9.070e+04-6.232e+04-2.462e+04		
5.263e+04	260	11.07	57.49	-59.23	-29.51	27.77	-50.85 -5398.99-1.154e+05-7.639e+04-4.441e+04		
4.922e+04	252	9.01	30.88	-55.53	-46.26	21.61	-26.75 1.601e+04-8.291e+04-2.851e+04-3.839e+04		
5.011e+04	38 253	9.02	32.65	-36.90	-26.03	21.78	-25.26 1.890e+04-8.133e+04-3.084e+04-3.159e+04		
4.317e+04	261	8.98	29.18	-39.29	-25.09	14.98	-27.76 3520.72-9.070e+04-6.245e+04-2.472e+04		
5.252e+04	260	11.03	54.06	-54.83	-29.53	28.76	-45.99 -5559.69-1.154e+05-7.657e+04-4.440e+04		
4.929e+04	252	9.01	32.11	-51.16	-44.94	25.89	-21.90 1.568e+04-8.338e+04-2.897e+04-3.872e+04		
4.997e+04	69 253	8.98	31.13	-34.39	-26.37	23.12	-21.46 1.865e+04-8.130e+04-3.099e+04-3.166e+04		
4.308e+04	261	8.96	27.92	-37.48	-25.59	16.03	-25.22 3366.20-9.069e+04-6.253e+04-2.479e+04		
5.245e+04	260	11.01	51.98	-52.14	-29.55	29.38	-42.92 -5661.09-1.154e+05-7.668e+04-4.440e+04		
4.933e+04	252	9.00	33.18	-48.69	-44.10	28.59	-18.83 1.547e+04-8.367e+04-2.926e+04-3.893e+04		
5.845e+04	1 254	10.37	32.38	-45.97	-34.97	21.38	-27.22 2.898e+04-8.900e+04-3.802e+04-2.200e+04		
5.081e+04	262	10.79	38.28	-36.40	-16.44	18.33	-33.04 1.300e+04-1.040e+05-7.443e+04-1.653e+04		
5.368e+04	261	11.58	40.53	-54.78	-33.61	19.36	-39.62 4236.83-1.171e+05-8.477e+04-2.814e+04		
6.368e+04	253	11.49	43.47	-46.07	-31.77	29.17	-32.79 2.388e+04-1.039e+05-4.491e+04-3.507e+04		
4.946e+04	3 254	8.78	27.40	-38.90	-29.59	18.09	-23.03 2.453e+04-7.531e+04-3.217e+04-1.862e+04		
4.299e+04	262	9.13	32.39	-30.80	-13.91	15.51	-27.96 1.100e+04-8.796e+04-6.298e+04-1.399e+04		
4.542e+04	261	9.80	34.30	-46.35	-28.44	16.38	-33.52 3585.01-9.912e+04-7.173e+04-2.381e+04		
5.388e+04	253	9.72	36.78	-38.98	-26.88	24.69	-27.75 2.020e+04-8.788e+04-3.800e+04-2.968e+04		
4.528e+04	5 254	8.08	27.61	-39.01	-18.54	7.14	-30.73 2.325e+04-6.809e+04-2.838e+04-1.646e+04		
3.935e+04	262	8.42	30.11	-29.21	2.77	-1.88	-29.57 1.121e+04-7.979e+04-5.714e+04-1.144e+04		
4.150e+04	261	8.98	27.43	-44.02	-14.30	-2.29	-35.22 4165.94-8.970e+04-6.469e+04-2.084e+04		
4.931e+04	253	8.95	35.14	-41.82	-13.78	7.10	-37.03 1.936e+04-7.955e+04-3.392e+04-2.626e+04		
4.508e+04	37 254	8.02	25.33	-36.15	-23.66	12.85	-24.73 2.266e+04-6.832e+04-2.891e+04-1.674e+04		

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

3.919e+04	262	8.35	28.61	-27.38	-6.68	7.91	-27.03	1.047e+04-7.990e+04-5.721e+04-1.222e+04
4.137e+04	261	8.94	28.98	-42.12	-21.38	8.24	-32.31	3610.23-8.995e+04-6.501e+04-2.133e+04
4.911e+04	253	8.88	33.12	-36.93	-20.31	16.50	-29.80	1.875e+04-7.976e+04-3.430e+04-2.670e+04
4.496e+04	237 69 254	7.98	24.91	-35.36	-26.90	16.45	-20.94	2.230e+04-6.846e+04-2.924e+04-1.692e+04
3.908e+04	262	8.30	29.45	-28.00	-12.65	14.10	-25.42	9997.40-7.997e+04-5.725e+04-1.272e+04
4.129e+04	261	8.91	31.18	-42.14	-25.85	14.89	-30.48	3259.10-9.011e+04-6.520e+04-2.164e+04
4.898e+04	253	8.84	33.44	-35.44	-24.44	22.44	-25.23	1.837e+04-7.989e+04-3.455e+04-2.698e+04
1.862e+04	238 1 255	4.46	-0.67	-53.15	-47.23	-6.59	16.60	1.693e+04-3.342e+04-2.520e+04 8707.58
9.629e+04	263	21.66	134.85	-36.94	82.24	15.66	-79.18	4.768e+04-1.915e+05-1.429e+05 -982.32
4.032e+04	262	7.55	26.09	-76.56	-68.11	17.65	-28.21	1.384e+04-7.008e+04-3.974e+04-1.650e+04
6.761e+04	254	12.78	59.07	-26.84	5.27	26.95	-41.56	2.683e+04-1.149e+05-6.535e+04-2.276e+04
1.575e+04	238 3 255	3.77	-0.56	-44.97	-39.96	-5.57	14.05	1.433e+04-2.828e+04-2.132e+04 7367.95
8.148e+04	263	18.33	114.10	-31.26	69.59	13.25	-67.00	4.034e+04-1.621e+05-1.209e+05 -831.20
3.412e+04	262	6.39	22.08	-64.78	-57.63	14.93	-23.87	1.171e+04-5.930e+04-3.363e+04-1.396e+04
5.721e+04	254	10.82	49.98	-22.71	4.46	22.81	-35.17	2.270e+04-9.726e+04-5.530e+04-1.926e+04
1.371e+04	238 6 255	3.29	-3.92	-44.03	-38.84	-9.12	13.47	1.319e+04-2.405e+04-1.803e+04 7175.95
7.701e+04	263	17.53	137.57	-37.34	92.53	7.70	-76.48	3.832e+04-1.536e+05-1.150e+05 -379.21
3.109e+04	262	5.77	19.64	-68.56	-60.65	11.74	-25.19	1.147e+04-5.276e+04-2.869e+04-1.260e+04
5.293e+04	254	10.07	58.67	-25.20	14.03	19.44	-41.85	2.108e+04-8.986e+04-5.098e+04-1.780e+04
1.408e+04	238 38 255	3.38	-1.84	-42.10	-37.30	-6.63	13.04	1.309e+04-2.507e+04-1.886e+04 6883.15
7.521e+04	263	17.00	116.72	-31.76	74.60	10.36	-66.94	3.731e+04-1.498e+05-1.119e+05 -609.88
3.105e+04	262	5.79	19.90	-62.63	-55.59	12.86	-23.05	1.096e+04-5.346e+04-2.984e+04-1.265e+04
5.236e+04	254	9.93	50.39	-22.25	7.92	20.23	-35.80	2.081e+04-8.898e+04-5.055e+04-1.762e+04
1.432e+04	238 69 255	3.43	-0.51	-40.89	-36.33	-5.07	12.77	1.303e+04-2.571e+04-1.938e+04 6698.14
7.407e+04	263	16.66	103.73	-28.42	63.26	12.05	-60.91	3.667e+04-1.473e+05-1.099e+05 -755.63
3.102e+04	262	5.81	20.07	-58.89	-52.39	13.58	-21.70	1.065e+04-5.391e+04-3.057e+04-1.269e+04
5.201e+04	254	9.83	45.44	-20.65	4.06	20.73	-31.97	2.064e+04-8.841e+04-5.027e+04-1.751e+04
1.736e+04	239 1 256	5.80	34.60	2.45	13.60	23.46	15.30	-7225.15-6.335e+04-5.734e+04-1.324e+04
2.356e+04	264	4.70	-10.03	-70.52	-69.50	-11.04	-7.77	2.392e+04-3.145e+04-1.830e+04-1.078e+04
1.503e+04	263	15.18	97.81	0.57	85.73	12.65	32.07	2.379e+04-1.413e+05-1.399e+05 2.241e+04 -
5.714e+04	255	10.03	-0.62	-65.22	-51.25	-14.59	-26.59	4.745e+04-7.088e+04-2.706e+04 3629.72
1.469e+04	239 3 256	4.91	29.28	2.08	11.51	19.85	12.94	-6113.59-5.360e+04-4.852e+04-1.120e+04
1.993e+04	264	3.97	-8.49	-59.67	-58.81	-9.34	-6.57	2.024e+04-2.661e+04-1.549e+04 9119.73
1.272e+04	263	12.84	82.76	0.48	72.54	10.71	27.14	2.013e+04-1.195e+05-1.184e+05 1.896e+04 -
4.835e+04	255	8.49	-0.53	-55.18	-43.37	-12.34	-22.50	4.015e+04-5.997e+04-2.289e+04 3071.30
1.272e+04	239 6 256	4.47	38.34	7.26	24.44	21.16	15.45	-6574.08-4.936e+04-4.516e+04-1.077e+04
	264	3.62	-9.43	-65.10	-64.02	-10.51	-7.68	1.958e+04-2.326e+04-1.209e+04 8408.16

**Parco Eolico “Mondonuovo” – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

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1.881e+04																							-
1.471e+04	263	12.32	113.81	-0.08	97.22	16.52	40.18	1.759e+04	-1.144e+05	-1.128e+05	1.593e+04												-
4.562e+04																							
239 38	256	4.46	30.87	4.26	15.87	19.25	13.19	-5953.59	-4.897e+04	-4.451e+04	-1.041e+04												
1.311e+04																							
1.839e+04	264	3.62	-8.38	-58.45	-57.55	-9.27	-6.64	1.885e+04	-2.382e+04	-1.331e+04	8336.16												
1.278e+04																							-
1.278e+04	263	11.92	90.15	0.26	78.06	12.36	30.68	1.801e+04	-1.109e+05	-1.096e+05	1.673e+04												
4.460e+04																							
239 69	256	7.84	-1.04	-55.38	-40.82	-15.60	-24.07	3.767e+04	-5.459e+04	-2.026e+04	3341.21												
1.335e+04																							
1.335e+04	264	3.61	-7.72	-54.24	-53.46	-8.50	-5.97	1.840e+04	-2.419e+04	-1.408e+04	8290.66												
1.812e+04																							
1.812e+04	263	11.68	75.24	0.44	65.95	9.73	24.67	1.830e+04	-1.087e+05	-1.076e+05	1.724e+04											-	
1.156e+04																							
1.156e+04	255	7.72	-0.48	-50.17	-39.43	-11.22	-20.45	3.650e+04	-5.452e+04	-2.081e+04	2792.09												
4.395e+04																							
240 1	257	3.84	0.78	-20.41	-19.55	-0.08	4.19	500.19	-3.889e+04	-3.807e+04	-320.84												
5627.34																							
605.81	265	4.20	-1.41	-29.99	-29.93	-1.47	-1.26	-76.52	-4.258e+04	-4.258e+04	-85.16											-	
1.529e+04																							
1.529e+04	264	6.31	3.79	-14.61	-12.86	2.04	-5.40	1.188e+04	-5.856e+04	-5.507e+04	8384.65												
2.298e+04																							
240 3	257	5.31	6.08	-26.54	-25.27	4.81	6.31	8509.02	-4.949e+04	-3.817e+04	-2808.12												
4761.59																							
512.60	265	3.25	0.66	-17.27	-16.54	-0.07	3.55	423.23	-3.291e+04	-3.221e+04	-271.48												
1.294e+04																							
1.294e+04	264	3.56	-1.20	-25.37	-25.33	-1.24	-1.06	-64.75	-3.603e+04	-3.603e+04	-72.06											-	
1.945e+04																							
240 24	257	5.34	3.20	-12.37	-10.88	1.72	-4.57	1.005e+04	-4.955e+04	-4.660e+04	7094.70												
4419.56																							
487.80	265	4.50	5.14	-22.46	-21.38	4.07	5.34	7199.94	-4.188e+04	-3.230e+04	-2376.10												
1.207e+04																							
1.207e+04	256	4.50	5.14	-22.46	-21.38	4.07	5.34	7199.94	-4.188e+04	-3.230e+04	-2376.10												
1.784e+04																							
240 56	257	3.06	0.62	-37.52	-36.69	-0.21	5.56	474.99	-3.004e+04	-2.938e+04	-179.14												
4363.90																							
474.44	265	3.35	-0.23	-40.42	-40.12	-0.53	-3.46	-139.51	-3.330e+04	-3.329e+04	-146.69											-	
1.188e+04																							
1.188e+04	264	5.01	3.41	-30.77	-27.95	0.60	-9.39	9862.49	-4.570e+04	-4.294e+04	7104.56												
1.774e+04																							
240 69	257	4.18	10.03	-41.08	-39.91	8.86	7.63	6242.02	-3.841e+04	-2.950e+04	-2662.65												
4328.72																							
466.00	265	2.99	0.59	-24.13	-23.42	-0.12	4.13	419.67	-2.996e+04	-2.932e+04	-220.60												
1.177e+04																							
1.177e+04	264	3.28	-0.77	-29.77	-29.65	-0.90	-1.93	-90.09	-3.297e+04	-3.296e+04	-96.94											-	
1.768e+04																							
241 1	258	4.91	3.10	-18.80	-16.89	1.19	-6.18	9418.24	-4.530e+04	-4.258e+04	6703.28												
8.400e+04																							
8.400e+04	256	4.12	6.73	-28.40	-27.36	5.70	5.93	6427.62	-3.820e+04	-2.942e+04	-2354.68												
9.572e+04																							
9.572e+04	257	2.95	0.60	-15.70	-15.04	-0.06	3.22	384.76	-2.992e+04	-2.928e+04	-246.80												
8.409e+04																							
8.409e+04	265	3.23	-1.09	-23.07	-23.03	-1.13	-0.97	-58.86	-3.276e+04	-3.275e+04	-65.51											-	
7.822e+04																							
241 3	258	4.85	2.91	-11.24	-9.89	1.57	-4.15	9137.54	-4.505e+04	-4.236e+04	6449.73												
7.108e+04																							
7.108e+04	264	4.09	4.68	-20.41	-19.44	3.70	4.85	6545.40	-3.807e+04	-2.936e+04	-2160.09												
8.099e+04																							
8.099e+04	258	21.83	158.28	-140.33	-115.42	133.38	-82.56	-4.595e+04	-2.390e+05	-9.491e+04	-1.901e+05												
	266	25.76	183.89	-152.67	-71.67	102.89	-143.88	-9.948e+04	-2.952e+05	-1.769e+05	-2.178e+05												
	28	32.79	333.08	-294.55	-151.82	190.35	-263.07	-1.615e+05	-3.770e+05	-2.019e+05	-3.366e+05												
	19	27.51	290.17	-239.54	-200.07	250.70	-139.11	-8.240e+04	-3.040e+05	-1.147e+05	-2.717e+05												
	258	18.47	133.93	-118.74	-97.67	112.86	-69.86	-3.888e+04	-2.023e+05	-8.031e+04	-1.608e+05												
	266	21.79	155.60	-129.18	-60.64	87.06	-121.74	-8.418e+04	-2.498e+05	-1.497e+05	-1.843e+05												

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

7.116e+04	28	27.75	281.84	-249.23	-128.46	161.07	-222.60-1.367e+05-3.190e+05-1.708e+05-2.848e+05	
6.618e+04	19	23.27	245.53	-202.69	-169.29	212.13	-117.71-6.972e+04-2.573e+05-9.706e+04-2.299e+05	
6.460e+04	241 22	258	16.88	156.66	-112.75	-102.95	146.86	-50.45-3.568e+04-1.843e+05-7.327e+04-1.467e+05
7.407e+04	266	20.03	187.43	-119.80	-72.92	140.55	-110.48-7.684e+04-2.284e+05-1.366e+05-1.686e+05	
6.470e+04	28	25.46	313.82	-226.17	-140.19	227.84	-197.58-1.243e+05-2.902e+05-1.553e+05-2.592e+05	
6.029e+04	19	21.35	274.10	-189.48	-170.83	255.45	-91.09-6.350e+04-2.343e+05-8.841e+04-2.094e+05	
6.461e+04	241 54	258	16.83	134.66	-109.19	-94.27	119.74	-58.45-3.548e+04-1.840e+05-7.311e+04-1.464e+05
7.380e+04	266	19.90	158.41	-117.51	-62.02	102.92	-110.60-7.665e+04-2.276e+05-1.363e+05-1.679e+05	
6.469e+04	28	25.32	277.60	-225.50	-125.85	177.95	-200.51-1.242e+05-2.901e+05-1.553e+05-2.590e+05	
6.021e+04	19	21.23	242.33	-185.70	-160.45	217.09	-100.84-6.343e+04-2.340e+05-8.831e+04-2.092e+05	
6.462e+04	241 69	258	16.79	121.75	-107.94	-88.79	102.60	-63.51-3.535e+04-1.839e+05-7.301e+04-1.462e+05
7.363e+04	266	19.81	141.45	-117.44	-55.13	79.15	-110.67-7.652e+04-2.271e+05-1.361e+05-1.675e+05	
6.469e+04	28	25.23	256.21	-226.57	-116.79	146.43	-202.36-1.242e+05-2.900e+05-1.553e+05-2.589e+05	
6.017e+04	19	21.16	223.21	-184.26	-153.90	192.85	-107.01-6.338e+04-2.339e+05-8.824e+04-2.090e+05	
8.013e+04	242 1	259	17.28	95.95	-91.58	-72.09	76.46	-57.23-2.159e+04-1.855e+05-8.635e+04-1.207e+05
8.078e+04	267	20.15	110.21	-89.06	-26.47	47.62	-92.49-6.250e+04-2.294e+05-1.669e+05-1.250e+05	
9.501e+04	266	25.19	185.46	-163.71	-55.16	76.91	-161.62-9.869e+04-2.888e+05-1.906e+05-1.969e+05	
9.015e+04	258	22.12	170.42	-142.86	-102.93	130.48	-104.47-4.735e+04-2.420e+05-1.080e+05-1.814e+05	
6.780e+04	242 3	259	14.62	81.19	-77.49	-61.00	64.70	-48.42-1.827e+04-1.570e+05-7.307e+04-1.022e+05
6.836e+04	267	17.05	93.25	-75.36	-22.40	40.29	-78.26-5.288e+04-1.941e+05-1.412e+05-1.058e+05	
8.039e+04	266	21.32	156.93	-138.53	-46.67	65.08	-136.75-8.350e+04-2.444e+05-1.613e+05-1.666e+05	
7.628e+04	258	18.71	144.20	-120.88	-87.10	110.41	-88.40-4.007e+04-2.048e+05-9.138e+04-1.535e+05	
6.174e+04	242 6	259	13.37	82.04	-83.96	-61.76	59.84	-56.51-1.629e+04-1.426e+05-6.613e+04-9.277e+04
6.244e+04	267	15.67	103.12	-77.72	-17.12	42.53	-85.36-4.835e+04-1.775e+05-1.295e+05-9.637e+04	
7.350e+04	266	19.55	166.22	-145.36	-45.66	66.52	-145.34-7.572e+04-2.228e+05-1.470e+05-1.515e+05	
6.958e+04	258	17.15	146.38	-129.66	-87.20	103.92	-99.59-3.624e+04-1.865e+05-8.304e+04-1.397e+05	
6.168e+04	242 38	259	13.32	76.92	-75.60	-57.89	59.21	-48.86-1.648e+04-1.427e+05-6.631e+04-9.283e+04
6.226e+04	267	15.57	91.86	-72.05	-19.11	38.91	-76.65-4.818e+04-1.769e+05-1.288e+05-9.624e+04	
7.325e+04	266	19.44	151.78	-133.45	-43.68	62.01	-132.46-7.584e+04-2.224e+05-1.468e+05-1.514e+05	
6.944e+04	258	17.07	136.92	-117.46	-82.28	101.75	-87.81-3.635e+04-1.863e+05-8.306e+04-1.396e+05	
6.164e+04	242 69	259	13.29	73.81	-70.44	-55.45	58.81	-44.02-1.661e+04-1.427e+05-6.643e+04-9.287e+04
6.214e+04	267	15.50	84.77	-68.51	-20.36	36.63	-71.15-4.808e+04-1.765e+05-1.284e+05-9.616e+04	
7.308e+04	266	19.38	142.67	-125.93	-42.43	59.16	-124.32-7.591e+04-2.222e+05-1.466e+05-1.514e+05	
6.935e+04	258	17.01	131.09	-109.89	-79.18	100.37	-80.37-3.642e+04-1.862e+05-8.307e+04-1.395e+05	
7.058e+04	243 1	260	14.12	62.31	-62.41	-50.25	50.15	-36.99 -6944.60-1.481e+05-7.635e+04-7.872e+04
5.814e+04	268	14.78	60.18	-64.26	-29.32	25.24	-55.92-3.669e+04-1.669e+05-1.311e+05-7.250e+04	
	267	19.35	106.99	-89.07	-19.06	36.98	-93.94-6.203e+04-2.210e+05-1.723e+05-1.107e+05	







**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

5.399e+04	260	10.84	48.79	-49.67	-36.09	35.21	-33.95	-5401.57-1.136e+05-6.315e+04-5.587e+04
245	1	262	9.49	31.09	-47.97	-40.34	23.47	-23.34 1.412e+04-9.001e+04-4.756e+04-2.832e+04
5.117e+04		270	11.20	30.33	-39.56	-13.37	4.13	-33.83 5769.02-1.127e+05-9.813e+04 -8802.14
3.891e+04		269	12.43	45.70	-56.39	-24.25	13.55	-47.42-1.337e+04-1.342e+05-1.114e+05-3.619e+04
4.730e+04		261	11.86	45.89	-44.82	-30.39	31.46	-33.17 2483.83-1.206e+05-7.231e+04-4.580e+04
6.009e+04		262	8.03	26.31	-40.59	-34.13	19.86	-19.75 1.195e+04-7.616e+04-4.025e+04-2.397e+04
245	3	270	9.47	25.66	-33.47	-11.31	3.50	-28.62 4881.48-9.537e+04-8.304e+04 -7447.96
4.330e+04		269	10.52	38.67	-47.72	-20.52	11.47	-40.12-1.131e+04-1.136e+05-9.426e+04-3.063e+04
3.292e+04		261	10.03	38.83	-37.93	-25.72	26.62	-28.07 2101.70-1.020e+05-6.119e+04-3.875e+04
4.002e+04		262	7.45	22.35	-41.73	-23.42	4.05	-28.94 1.264e+04-6.890e+04-3.572e+04-2.053e+04
5.085e+04		270	8.73	29.83	-35.73	-0.07	-5.83	-32.65 5210.08-8.674e+04-7.524e+04 -6290.54
245	5	269	9.63	36.16	-48.31	-10.14	-2.02	-42.04 -9624.26-1.031e+05-8.537e+04-2.734e+04
4.006e+04		261	9.21	35.17	-39.01	-12.89	9.05	-35.43 2738.54-9.252e+04-5.526e+04-3.452e+04
3.042e+04		262	7.36	22.40	-37.86	-28.09	12.63	-22.21 1.155e+04-6.911e+04-3.625e+04-2.130e+04
3.664e+04		270	8.66	25.43	-32.06	-6.33	-0.31	-28.59 4736.55-8.671e+04-7.539e+04 -6584.89
4.648e+04		269	9.59	35.15	-44.90	-15.36	5.61	-38.63-1.003e+04-1.032e+05-8.557e+04-2.765e+04
245	37	261	9.16	34.38	-35.37	-19.32	18.33	-29.36 2231.17-9.267e+04-5.548e+04-3.495e+04
3.963e+04		262	7.30	23.92	-36.90	-31.03	18.05	-17.95 1.086e+04-6.924e+04-3.659e+04-2.179e+04
3.012e+04		270	8.61	23.33	-30.43	-10.28	3.18	-26.02 4437.71-8.670e+04-7.549e+04 -6770.88
3.648e+04		269	9.56	35.15	-43.38	-18.65	10.42	-36.47-1.029e+04-1.032e+05-8.569e+04-2.784e+04
4.633e+04		261	9.12	35.30	-34.48	-23.38	24.20	-25.52 1910.64-9.276e+04-5.562e+04-3.523e+04
245	69	263	13.17	48.68	-135.54	-122.48	35.62	-47.28 9.085e+04-6.002e+04 4.564e+04-1.481e+04
3.936e+04		271	10.29	2.71	-1.30	-0.90	2.31	1.19 7295.11-1.033e+05-1.010e+05 4995.07
2.993e+04		270	10.60	25.74	-69.84	-42.57	-1.54	-43.16 1.822e+04-9.938e+04-8.171e+04 551.45
3.638e+04		262	10.34	37.88	-5.76	9.13	22.98	-20.69 -4167.35-1.085e+05-8.482e+04-2.784e+04
4.623e+04		263	11.15	41.19	-114.69	-103.64	30.14	-40.01 7.687e+04-5.078e+04 3.862e+04-1.253e+04
246	1	271	8.71	2.29	-1.10	-0.76	1.96	1.01 6172.79-8.738e+04-8.543e+04 4226.60
6.911e+04		270	8.97	21.78	-59.10	-36.02	-1.30	-36.52 1.542e+04-8.409e+04-6.914e+04 466.61
1.578e+04		262	8.75	32.05	-4.88	7.73	19.45	-17.51 -3526.22-9.180e+04-7.177e+04-2.356e+04
4.202e+04		263	11.05	37.23	-133.96	-108.62	11.89	-60.79 7.818e+04-4.642e+04 4.050e+04 -8746.11
4.369e+04		271	7.92	17.83	-0.04	14.64	3.15	6.85 4215.87-7.993e+04-7.850e+04 2792.16
246	3	270	8.27	21.27	-63.74	-31.11	-11.36	-41.35 1.579e+04-7.587e+04-6.143e+04 1351.16
5.848e+04		262	8.16	41.97	-11.36	27.57	3.04	-23.68 -2321.89-8.418e+04-6.640e+04-2.010e+04
1.335e+04		263	10.49	36.77	-115.17	-99.80	21.39	-45.83 7.310e+04-4.627e+04 3.720e+04-1.037e+04
3.555e+04		271	7.91	7.31	0.24	5.24	2.31	3.21 5067.09-7.962e+04-7.799e+04 3435.72
3.697e+04		270	8.20	20.16	-57.39	-32.11	-5.12	-36.35 1.470e+04-7.622e+04-6.230e+04 783.12
246	5	262	8.03	32.48	-5.48	14.98	12.01	-18.92 -2866.09-8.373e+04-6.569e+04-2.091e+04
5.723e+04								
1.085e+04								
3.340e+04								
3.375e+04								
246	37							
5.474e+04								
1.164e+04								
3.274e+04								

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

3.367e+04	246	69	263	10.13	37.45	-104.26	-94.22	27.40	-36.37	6.989e+04	-4.617e+04	3.511e+04	-1.139e+04	
5.316e+04			271	7.92	2.08	-1.00	-0.70	1.78	0.92	5611.63	-7.943e+04	-7.766e+04	3842.37	
1.214e+04			270	8.16	19.80	-53.72	-32.75	-1.18	-33.20	1.401e+04	-7.645e+04	-6.286e+04	424.19	
3.232e+04			262	7.95	29.14	-4.43	7.02	17.68	-15.92	-3205.66	-8.345e+04	-6.524e+04	-2.141e+04	
3.361e+04	247	1	264	9.67	30.90	2.40	29.45	3.85	-6.26	1.450e+04	-9.152e+04	-7.503e+04	-1995.68	
3.843e+04			272	5.43	-5.60	-67.89	-60.62	-12.87	19.99	1.783e+04	-4.340e+04	-4.340e+04	1.782e+04	-
377.36			271	12.72	70.91	-23.97	3.78	43.16	-43.16	32.49	-1.306e+05	-1.043e+05	-2.619e+04	
5.232e+04			263	6.95	-3.46	-159.13	-131.85	-30.74	59.18	7.565e+04	2.462e+04	5.195e+04	4.832e+04	-
2.545e+04	247	3	264	8.18	26.14	2.03	24.92	3.26	-5.30	1.227e+04	-7.744e+04	-6.348e+04	-1688.66	
3.252e+04			272	4.60	-4.74	-57.44	-51.30	-10.89	16.92	1.508e+04	-3.673e+04	-3.672e+04	1.508e+04	-
319.31			271	10.77	60.00	-20.29	3.20	36.52	-36.52	27.50	-1.105e+05	-8.828e+04	-2.216e+04	
4.427e+04			263	5.88	-2.93	-134.65	-111.57	-26.01	50.08	6.401e+04	2.084e+04	4.396e+04	4.089e+04	-
2.153e+04	247	6	264	7.67	37.21	3.02	35.68	4.55	-7.08	1.120e+04	-7.235e+04	-5.943e+04	-1722.35	
3.021e+04			272	4.14	-6.23	-64.53	-57.05	-13.72	19.50	1.435e+04	-3.223e+04	-3.221e+04	1.434e+04	-
819.56			271	10.08	69.05	-18.91	9.15	41.00	-40.99	202.30	-1.028e+05	-8.148e+04	-2.113e+04	
4.174e+04			263	6.05	-2.32	-157.07	-130.21	-29.19	58.61	6.439e+04	1.908e+04	4.549e+04	3.797e+04	-
2.234e+04	247	38	264	7.53	28.97	2.30	27.70	3.58	-5.69	1.117e+04	-7.116e+04	-5.838e+04	-1607.63	
2.981e+04			272	4.16	-5.06	-56.98	-50.67	-11.38	16.97	1.396e+04	-3.294e+04	-3.293e+04	1.395e+04	-
495.22			271	9.90	60.15	-18.61	5.32	36.22	-36.22	92.19	-1.014e+05	-8.073e+04	-2.053e+04	
4.082e+04			263	5.62	-2.53	-135.83	-112.57	-25.79	50.59	6.057e+04	1.902e+04	4.210e+04	3.748e+04	-
2.064e+04	247	69	264	7.44	23.77	1.85	22.65	2.96	-4.82	1.115e+04	-7.040e+04	-5.771e+04	-1535.14	
2.956e+04			272	4.18	-4.31	-52.22	-46.63	-9.90	15.38	1.371e+04	-3.339e+04	-3.339e+04	1.371e+04	-
290.28			271	9.79	54.55	-18.44	2.91	33.20	-33.20	25.00	-1.004e+05	-8.026e+04	-2.015e+04	
4.024e+04			263	5.35	-2.66	-122.41	-101.42	-23.65	45.52	5.819e+04	1.894e+04	3.996e+04	3.717e+04	-
1.957e+04	248	1	265	4.54	1.15	-9.01	-8.92	1.06	0.94	-531.49	-4.714e+04	-4.582e+04	-1851.54	
7732.23			273	5.30	-1.95	-27.70	-27.47	-2.18	2.40	900.67	-5.365e+04	-5.342e+04	671.10	-
3531.32			272	6.92	5.84	-21.95	-21.28	5.17	4.26	8129.41	-6.661e+04	-6.500e+04	6514.94	
1.087e+04			264	5.64	-5.13	-29.00	-28.76	-5.38	2.40	1.755e+04	-4.705e+04	-3.667e+04	7169.84	
2.372e+04	248	3	265	3.84	0.97	-7.63	-7.55	0.90	0.79	-449.73	-3.989e+04	-3.877e+04	-1566.69	
6542.66			273	4.48	-1.65	-23.44	-23.25	-1.84	2.03	762.11	-4.540e+04	-4.520e+04	567.86	-
2988.04			272	5.85	4.94	-18.58	-18.01	4.37	3.61	6878.73	-5.636e+04	-5.500e+04	5512.64	
9193.83			264	4.77	-4.34	-24.54	-24.33	-4.55	2.03	1.485e+04	-3.981e+04	-3.103e+04	6066.79	
2.007e+04	248	24	265	3.61	1.92	-24.72	-24.25	1.46	3.49	-495.47	-3.680e+04	-3.578e+04	-1509.66	
5982.37			273	4.19	-1.84	-43.85	-43.84	-1.84	-0.36	776.78	-4.144e+04	-4.125e+04	589.47	-
2805.81			272	5.40	9.76	-37.95	-37.92	9.73	1.10	5727.32	-5.139e+04	-5.019e+04	4526.80	
8193.47			264	4.44	-3.36	-42.54	-40.64	-5.26	8.42	1.369e+04	-3.624e+04	-2.872e+04	6167.15	
1.786e+04														

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

248	56	265	3.54	1.28	-13.81	-13.60	1.06	1.79	-442.40-3.647e+04-3.546e+04	-1457.33	
5961.23		273	4.12	-1.70	-29.96	-29.93	-1.74	0.99	725.30-4.134e+04-4.115e+04	544.59	-
2751.02		272	5.35	6.39	-24.91	-24.72	6.20	2.44	6049.64-5.130e+04-5.007e+04	4823.82	
8294.31		264	4.37	-3.81	-30.05	-29.29	-4.57	4.39	1.357e+04-3.621e+04-2.841e+04	5767.67	
1.810e+04		265	3.49	0.88	-6.93	-6.87	0.82	0.72	-408.84-3.626e+04-3.525e+04	-1424.26	
248	69	273	4.07	-1.50	-21.31	-21.13	-1.68	1.85	692.82-4.127e+04-4.109e+04	516.23	-
5947.87		272	5.32	4.49	-16.89	-16.37	3.97	3.28	6253.39-5.124e+04-5.000e+04	5011.49	
2716.40		264	4.34	-3.95	-22.31	-22.12	-4.14	1.84	1.350e+04-3.619e+04-2.821e+04	5515.26	
8358.03		266	25.09	180.38	-163.63	-93.28	110.03	-138.75-9.845e+04-2.877e+05-1.633e+05-2.229e+05			
1.825e+04		274	27.40	185.17	-157.21	-8.44	36.40	-169.72-1.605e+05-3.217e+05-2.420e+05-2.403e+05			
249	1	37	38.08	337.94	-322.46	-30.07	45.55	-328.03-2.343e+05-4.454e+05-2.791e+05-4.005e+05			
8.981e+04		28	33.30	344.20	-284.84	-148.42	207.79	-259.23-1.658e+05-3.830e+05-2.023e+05-3.465e+05			
8.060e+04		266	21.23	152.63	-138.46	-78.93	93.10	-117.40-8.330e+04-2.435e+05-1.381e+05-1.886e+05			
8.632e+04		274	23.19	156.68	-133.03	-7.14	30.80	-143.61-1.358e+05-2.722e+05-2.047e+05-2.033e+05			
8.120e+04		37	32.22	285.95	-272.85	-25.44	38.54	-277.56-1.982e+05-3.768e+05-2.361e+05-3.389e+05			
249	3	28	28.18	291.25	-241.02	-125.59	175.82	-219.35-1.403e+05-3.241e+05-1.711e+05-2.932e+05			
7.600e+04		266	19.48	182.66	-130.24	-92.57	144.99	-101.82-7.592e+04-2.222e+05-1.257e+05-1.725e+05			
6.820e+04		274	21.32	190.04	-117.49	-27.02	99.57	-140.13-1.243e+05-2.489e+05-1.866e+05-1.866e+05			
7.304e+04		37	29.55	315.79	-237.10	-47.33	126.03	-262.50-1.802e+05-3.427e+05-2.146e+05-3.083e+05			
6.871e+04		28	25.87	322.69	-216.33	-135.81	242.17	-192.14-1.277e+05-2.950e+05-1.558e+05-2.669e+05			
249	22	266	19.37	154.84	-126.65	-79.81	108.01	-104.83-7.581e+04-2.217e+05-1.256e+05-1.719e+05			
6.931e+04		274	21.17	159.40	-118.13	-14.44	55.71	-134.26-1.238e+05-2.480e+05-1.863e+05-1.855e+05			
6.232e+04		37	29.39	280.25	-242.49	-32.50	70.27	-256.27-1.802e+05-3.426e+05-2.147e+05-3.082e+05			
6.635e+04		28	25.72	286.26	-217.09	-122.55	191.72	-196.60-1.276e+05-2.948e+05-1.557e+05-2.667e+05			
6.258e+04		266	19.30	138.75	-125.87	-71.76	84.64	-106.73-7.573e+04-2.213e+05-1.256e+05-1.715e+05			
249	54	274	21.08	142.44	-120.93	-6.49	28.00	-130.55-1.235e+05-2.475e+05-1.861e+05-1.849e+05			
6.917e+04		37	29.29	259.96	-248.05	-23.13	35.04	-252.33-1.802e+05-3.426e+05-2.147e+05-3.081e+05			
6.212e+04		28	25.62	264.77	-219.11	-114.17	159.83	-199.41-1.275e+05-2.946e+05-1.556e+05-2.665e+05			
6.638e+04		267	16.42	71.37	-86.58	-45.57	30.36	-69.25-5.862e+04-1.903e+05-1.510e+05-9.789e+04			
6.251e+04		275	34.95	225.90	-110.58	60.67	54.65	-168.21-6.817e+04-3.825e+05-2.680e+05-1.827e+05			
249	69	274	23.62	151.83	-176.84	-55.70	30.69	-158.55-1.542e+05-2.779e+05-1.888e+05-2.433e+05			
6.909e+04		266	29.31	224.23	-164.66	-62.29	121.85	-171.27-9.454e+04-3.306e+05-1.896e+05-2.355e+05			
6.200e+04		267	13.89	60.39	-73.26	-38.56	25.69	-58.59-4.960e+04-1.610e+05-1.278e+05-8.283e+04			
6.640e+04		275	29.57	191.14	-93.56	51.34	46.24	-142.33-5.768e+04-3.237e+05-2.267e+05-1.546e+05			
6.246e+04		274	19.99	128.47	-149.63	-47.13	25.97	-134.16-1.305e+05-2.351e+05-1.597e+05-2.059e+05			
250	1	266	24.80	189.73	-139.33	-52.70	103.11	-144.92-7.999e+04-2.798e+05-1.605e+05-1.993e+05			
6.024e+04		267	12.57	59.79	-75.30	-38.20	22.70	-60.29-4.509e+04-1.455e+05-1.166e+05-7.399e+04			

*Parco Eolico "Mondonuovo" – Progetto Definitivo*  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

4.547e+04													
1.214e+05	275	28.11	235.87	-98.98	72.73	64.16	-167.37-5.154e+04-3.041e+05-2.127e+05-1.429e+05						
4.169e+04	274	18.13	137.06	-157.48	-64.07	43.65	-137.07-1.173e+05-2.124e+05-1.420e+05-1.877e+05						
9.070e+04	266	22.98	207.37	-146.35	-49.90	110.92	-157.52-7.243e+04-2.572e+05-1.472e+05-1.825e+05						
4.600e+04	267	12.60	56.78	-69.96	-36.27	23.10	-55.99-4.509e+04-1.460e+05-1.163e+05-7.479e+04						
1.183e+05	275	27.36	197.81	-90.45	56.76	50.60	-144.10-5.209e+04-2.981e+05-2.087e+05-1.415e+05						
4.231e+04	274	18.15	124.45	-144.14	-51.06	31.37	-127.81-1.181e+05-2.132e+05-1.440e+05-1.874e+05						
8.970e+04	266	22.71	185.98	-134.28	-48.68	100.39	-141.73-7.261e+04-2.554e+05-1.464e+05-1.817e+05						
4.634e+04	267	12.63	54.90	-66.60	-35.05	23.35	-53.27-4.509e+04-1.464e+05-1.162e+05-7.530e+04						
1.164e+05	275	26.88	173.77	-85.06	46.67	42.04	-129.39-5.244e+04-2.943e+05-2.061e+05-1.406e+05						
4.270e+04	274	18.17	116.79	-136.03	-42.85	23.61	-121.97-1.186e+05-2.137e+05-1.452e+05-1.871e+05						
8.907e+04	266	22.54	172.48	-126.66	-47.91	93.73	-131.74-7.272e+04-2.543e+05-1.459e+05-1.812e+05						
5.973e+04	268	14.56	65.03	-50.80	-28.71	42.94	-45.50-4.200e+04-1.662e+05-1.210e+05-8.715e+04						
5.330e+04	276	13.81	51.44	-95.16	-48.56	4.84	-68.26-4.396e+04-1.585e+05-1.221e+05-8.033e+04						
3.966e+04	275	23.51	112.53	-64.67	64.16	-16.30	-78.94-6.084e+04-2.651e+05-2.571e+05-6.885e+04						
8.094e+04	267	20.32	121.03	-100.67	-46.74	67.11	-95.11-7.079e+04-2.327e+05-1.524e+05-1.511e+05						
5.054e+04	268	12.32	55.03	-42.98	-24.30	36.34	-38.50-3.554e+04-1.406e+05-1.024e+05-7.375e+04						
4.510e+04	276	11.68	43.52	-80.52	-41.09	4.10	-57.76-3.720e+04-1.341e+05-1.033e+05-6.797e+04						
3.356e+04	275	19.89	95.22	-54.72	54.29	-13.79	-66.79-5.148e+04-2.243e+05-2.175e+05-5.826e+04						
6.849e+04	267	17.19	102.41	-85.18	-39.55	56.78	-80.48-5.990e+04-1.969e+05-1.290e+05-1.278e+05						
4.533e+04	268	11.21	59.69	-39.95	-21.81	41.56	-38.45-3.366e+04-1.280e+05-9.397e+04-6.773e+04						
4.201e+04	276	10.63	52.67	-95.98	-55.91	12.60	-65.96-3.209e+04-1.211e+05-9.132e+04-6.190e+04						
2.776e+04	275	18.60	108.45	-36.77	76.32	-4.64	-60.29-4.740e+04-2.088e+05-2.039e+05-5.233e+04						
6.313e+04	267	15.82	109.40	-91.44	-39.60	57.57	-87.88-5.382e+04-1.801e+05-1.176e+05-1.162e+05						
4.571e+04	268	11.20	53.76	-39.41	-21.98	36.33	-36.34-3.283e+04-1.279e+05-9.344e+04-6.731e+04						
4.139e+04	276	10.62	44.55	-81.93	-44.54	7.16	-57.71-3.316e+04-1.216e+05-9.291e+04-6.183e+04						
2.944e+04	275	18.28	94.92	-44.60	59.79	-9.48	-60.55-4.705e+04-2.058e+05-2.001e+05-5.272e+04						
6.260e+04	267	15.70	99.40	-82.84	-37.37	53.93	-78.86-5.420e+04-1.794e+05-1.174e+05-1.162e+05						
4.595e+04	268	11.20	50.02	-39.08	-22.09	33.03	-35.00-3.231e+04-1.278e+05-9.310e+04-6.704e+04						
4.100e+04	276	10.62	39.57	-73.20	-37.36	3.73	-52.51-3.382e+04-1.219e+05-9.391e+04-6.179e+04						
3.051e+04	275	18.08	86.56	-49.74	49.36	-12.54	-60.72-4.680e+04-2.039e+05-1.978e+05-5.296e+04						
6.226e+04	267	15.63	93.10	-77.44	-35.96	51.62	-73.16-5.445e+04-1.790e+05-1.172e+05-1.162e+05						
5.711e+04	269	12.57	47.40	-51.06	-31.30	27.65	-39.43-1.389e+04-1.358e+05-9.617e+04-5.353e+04						
3.860e+04	277	12.47	39.60	-52.52	-17.84	4.92	-44.63-2.992e+04-1.411e+05-1.255e+05-4.550e+04						
4.438e+04	276	15.48	61.78	-65.85	-6.30	2.22	-63.67-5.180e+04-1.786e+05-1.605e+05-6.992e+04						
6.573e+04	268	15.09	72.87	-69.65	-39.21	42.42	-58.41-3.410e+04-1.687e+05-1.158e+05-8.697e+04						
4.832e+04	269	10.64	40.11	-43.20	-26.49	23.39	-33.36-1.175e+04-1.149e+05-8.138e+04-4.530e+04						

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

3.266e+04	277	10.55	33.50	-44.44	-15.10	4.16	-37.76-2.531e+04-1.194e+05-1.062e+05-3.850e+04
3.755e+04	276	13.10	52.27	-55.72	-5.33	1.88	-53.87-4.383e+04-1.511e+05-1.358e+05-5.917e+04
5.562e+04	268	12.77	61.66	-58.93	-33.17	35.90	-49.43-2.885e+04-1.427e+05-9.799e+04-7.359e+04
4.418e+04	269	9.74	45.42	-47.24	-28.30	26.48	-37.37-1.062e+04-1.048e+05-7.402e+04-4.141e+04
3.001e+04	277	9.63	41.69	-49.48	-18.47	10.68	-43.19-2.303e+04-1.088e+05-9.660e+04-3.527e+04
3.409e+04	276	11.97	59.86	-56.27	-6.12	9.72	-57.52-3.998e+04-1.378e+05-1.240e+05-5.381e+04
5.072e+04	268	11.67	65.99	-62.40	-35.41	38.99	-52.32-2.623e+04-1.300e+05-8.905e+04-6.719e+04
4.403e+04	269	9.70	39.93	-42.36	-25.71	23.29	-33.06-1.066e+04-1.046e+05-7.400e+04-4.127e+04
2.982e+04	277	9.61	34.78	-43.89	-15.56	6.45	-37.76-2.302e+04-1.087e+05-9.658e+04-3.511e+04
3.412e+04	276	11.93	52.27	-52.80	-5.34	4.81	-52.29-3.990e+04-1.376e+05-1.237e+05-5.380e+04
5.062e+04	268	11.63	59.90	-56.99	-32.19	35.10	-47.79-2.623e+04-1.299e+05-8.907e+04-6.701e+04
4.393e+04	269	9.67	36.46	-39.27	-24.08	21.27	-30.33-1.069e+04-1.045e+05-7.398e+04-4.118e+04
2.969e+04	277	9.59	30.46	-40.40	-13.73	3.79	-34.33-2.301e+04-1.085e+05-9.656e+04-3.500e+04
3.414e+04	276	11.90	47.52	-50.65	-4.84	1.71	-48.98-3.985e+04-1.374e+05-1.234e+05-5.379e+04
5.056e+04	268	11.61	56.05	-53.58	-30.16	32.63	-44.93-2.623e+04-1.298e+05-8.908e+04-6.690e+04
5.246e+04	270	11.17	34.48	-48.55	-32.00	17.93	-33.17 6721.43-1.118e+05-8.003e+04-2.500e+04
3.553e+04	278	10.94	37.50	-37.00	-10.08	10.58	-35.79-1.309e+04-1.190e+05-1.053e+05-2.678e+04
3.639e+04	277	12.37	41.20	-54.22	-18.68	5.66	-46.13-3.023e+04-1.402e+05-1.264e+05-4.400e+04
5.739e+04	269	12.72	54.18	-51.52	-27.44	30.10	-44.33-1.396e+04-1.370e+05-9.770e+04-5.329e+04
4.439e+04	270	9.45	29.17	-41.08	-27.08	15.17	-28.06 5687.37-9.456e+04-6.772e+04-2.116e+04
3.006e+04	278	9.26	31.73	-31.30	-8.53	8.95	-30.28-1.107e+04-1.007e+05-8.906e+04-2.266e+04
3.080e+04	277	10.46	34.86	-45.88	-15.80	4.79	-39.03-2.558e+04-1.186e+05-1.070e+05-3.723e+04
4.856e+04	269	10.76	45.84	-43.59	-23.22	25.47	-37.51-1.181e+04-1.159e+05-8.267e+04-4.509e+04
4.078e+04	270	8.67	30.48	-43.57	-20.92	7.83	-34.12 5897.17-8.583e+04-6.096e+04-1.897e+04
2.769e+04	278	8.54	33.78	-31.29	1.91	0.57	-32.53 -9392.79-9.190e+04-8.123e+04-2.006e+04
2.819e+04	277	9.56	34.65	-46.99	-8.78	-3.56	-40.74-2.286e+04-1.077e+05-9.703e+04-3.357e+04
4.440e+04	269	9.86	44.76	-45.74	-14.44	13.46	-43.04-1.018e+04-1.054e+05-7.490e+04-4.065e+04
4.052e+04	270	8.62	27.80	-39.51	-23.19	11.49	-28.85 5451.45-8.591e+04-6.133e+04-1.913e+04
2.747e+04	278	8.46	30.42	-29.22	-4.01	5.21	-29.46 -9805.84-9.166e+04-8.107e+04-2.039e+04
2.807e+04	277	9.53	32.67	-43.58	-12.20	1.29	-37.52-2.310e+04-1.078e+05-9.717e+04-3.374e+04
4.424e+04	269	9.82	42.52	-41.64	-18.53	19.40	-37.56-1.052e+04-1.054e+05-7.506e+04-4.086e+04
4.035e+04	270	8.59	26.52	-37.34	-24.62	13.79	-25.51 5170.33-8.596e+04-6.156e+04-1.923e+04
2.733e+04	278	8.42	28.85	-28.46	-7.75	8.14	-27.53-1.007e+04-9.150e+04-8.097e+04-2.060e+04
2.800e+04	277	9.51	31.70	-41.70	-14.37	4.36	-35.49-2.325e+04-1.078e+05-9.725e+04-3.384e+04
4.414e+04	269	9.79	41.68	-39.63	-21.11	23.16	-34.10-1.074e+04-1.054e+05-7.515e+04-4.099e+04
1.415e+04	271	6.91	-4.91	-45.32	-42.99	-7.25	9.43 1.607e+04-6.086e+04-5.816e+04 1.337e+04
	279	19.96	117.93	-34.92	67.52	15.48	-71.86 2.576e+04-1.883e+05-1.483e+05-1.429e+04





**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

2866.60	279	12.29	55.36	-2.94	52.09	0.33	13.41	3.173e+04	-1.070e+05	-1.069e+05	3.167e+04	-
3.401e+04	271	7.00	5.68	-43.44	-34.72	-3.03	-18.77	1.185e+04	-6.598e+04	-4.597e+04	-8153.29	-
6888.81	256 1	273	5.42	-0.62	-20.70	-20.51	-0.81	1.93	875.46	-5.519e+04	-5.433e+04	15.85
2737.23	281	5.63	-2.08	-25.21	-25.21	-2.08	0.29	-520.49	-5.792e+04	-5.779e+04	-651.31	-
1.084e+04	280	7.61	2.32	-13.26	-10.89	-0.05	-5.60	1.300e+04	-7.161e+04	-7.019e+04	1.158e+04	-
2.309e+04	272	6.76	5.17	-25.69	-25.56	5.04	2.00	6074.27	-6.610e+04	-5.774e+04	-2280.65	-
5829.00	256 3	273	4.59	-0.52	-17.52	-17.36	-0.68	1.64	740.77	-4.670e+04	-4.597e+04	13.41
2316.12	281	4.77	-1.76	-21.33	-21.33	-1.76	0.25	-440.41	-4.901e+04	-4.890e+04	-551.11	-
9171.04	280	6.44	1.96	-11.22	-9.21	-0.05	-4.74	1.100e+04	-6.059e+04	-5.939e+04	9801.63	-
1.954e+04	272	5.72	4.38	-21.74	-21.62	4.27	1.70	5139.77	-5.593e+04	-4.886e+04	-1929.78	-
5379.06	256 22	273	4.27	-0.23	-36.80	-36.44	-0.60	3.62	749.03	-4.262e+04	-4.194e+04	71.30
2115.86	281	4.45	-1.03	-36.84	-36.67	-1.20	-2.48	-464.35	-4.502e+04	-4.492e+04	-565.05	-
8634.12	280	6.01	2.92	-28.60	-25.42	-0.26	-9.49	1.060e+04	-5.576e+04	-5.461e+04	9458.45	-
1.789e+04	272	5.29	9.06	-39.90	-39.50	8.65	4.44	4352.38	-5.110e+04	-4.455e+04	-2194.85	-
5330.05	256 54	273	4.21	-0.38	-24.01	-23.78	-0.61	2.31	702.69	-4.252e+04	-4.185e+04	35.08
2109.55	281	4.38	-1.42	-26.11	-26.08	-1.45	-0.82	-425.15	-4.474e+04	-4.464e+04	-525.80	-
8452.24	280	5.91	2.20	-17.30	-14.97	-0.13	-6.31	1.023e+04	-5.534e+04	-5.423e+04	9122.71	-
1.781e+04	272	5.23	5.94	-27.55	-27.34	5.73	2.66	4548.39	-5.094e+04	-4.447e+04	-1924.91	-
5299.09	256 69	273	4.17	-0.48	-15.93	-15.78	-0.62	1.49	673.43	-4.245e+04	-4.179e+04	12.19
2105.56	281	4.33	-1.60	-19.39	-19.39	-1.60	0.23	-400.37	-4.456e+04	-4.446e+04	-501.01	-
8337.31	280	5.85	1.78	-10.20	-8.37	-0.04	-4.31	9996.82	-5.508e+04	-5.400e+04	8910.58	-
1.776e+04	272	5.20	3.98	-19.76	-19.66	3.88	1.54	4672.52	-5.084e+04	-4.442e+04	-1754.35	-
7.639e+04	257 1	274	26.45	175.67	-168.26	-38.66	46.06	-166.67	-1.561e+05	-3.106e+05	-2.217e+05	-2.450e+05
4.693e+04	282	26.67	156.16	-152.91	49.13	-45.88	-147.06	-2.078e+05	-3.104e+05	-2.798e+05	-2.383e+05	-
8.710e+04	46	40.21	294.67	-301.14	108.30	-114.77	-276.23	-2.827e+05	-4.733e+05	-3.394e+05	-4.166e+05	-
8.366e+04	37	38.48	348.77	-310.99	-16.80	54.58	-327.94	-2.413e+05	-4.501e+05	-2.832e+05	-4.081e+05	-
6.464e+04	257 3	274	22.38	148.64	-142.38	-32.71	38.98	-141.03	-1.321e+05	-2.628e+05	-1.876e+05	-2.073e+05
3.971e+04	282	22.56	132.14	-129.39	41.57	-38.82	-124.43	-1.758e+05	-2.626e+05	-2.368e+05	-2.017e+05	-
7.370e+04	46	34.02	249.33	-254.81	91.64	-97.12	-233.74	-2.392e+05	-4.005e+05	-2.872e+05	-3.525e+05	-
7.079e+04	37	32.56	295.12	-263.14	-14.21	46.19	-277.49	-2.042e+05	-3.808e+05	-2.397e+05	-3.453e+05	-
5.869e+04	257 22	274	20.55	181.33	-126.89	-53.01	107.45	-131.58	-1.209e+05	-2.399e+05	-1.706e+05	-1.902e+05
3.595e+04	282	20.64	155.03	-106.91	20.33	27.79	-130.92	-1.607e+05	-2.391e+05	-2.155e+05	-1.843e+05	-
6.695e+04	46	31.20	272.59	-208.97	65.86	-2.24	-238.36	-2.177e+05	-3.643e+05	-2.612e+05	-3.208e+05	-
6.436e+04	37	29.87	321.83	-224.66	-36.38	133.55	-259.70	-1.857e+05	-3.464e+05	-2.180e+05	-3.141e+05	-
5.873e+04	257 54	274	20.42	151.49	-126.92	-38.75	63.32	-129.51	-1.204e+05	-2.393e+05	-1.706e+05	-1.892e+05
3.604e+04	282	20.56	131.91	-111.74	31.03	-10.87	-120.01	-1.602e+05	-2.389e+05	-2.153e+05	-1.837e+05	-
	46	31.03	242.81	-221.23	76.56	-54.97	-222.51	-2.176e+05	-3.642e+05	-2.611e+05	-3.206e+05	-





**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

2.000e+04	275	6.51	2.79	-111.07	-111.07	2.79	0.37-2.757e+04-7.393e+04-6.247e+04-3.903e+04	-
259 54 6.032e+04	276	16.05	79.71	-42.53	11.08	26.09	-60.66-3.793e+04-1.798e+05-1.461e+05-7.155e+04	
4761.26	284	9.93	11.95	-46.09	-26.15	-7.99	-27.57-5.069e+04-1.181e+05-1.178e+05-5.102e+04	
4.806e+04	283	17.59	114.69	-77.37	-5.20	42.52	-93.02-1.087e+05-2.072e+05-1.688e+05-1.471e+05	
1.716e+04	275	6.38	-4.34	-95.38	-93.17	-6.56	-14.02-3.279e+04-7.302e+04-6.340e+04-4.241e+04	-
259 69 5.989e+04	276	15.96	73.17	-44.88	14.71	13.59	-59.02-3.795e+04-1.788e+05-1.454e+05-7.134e+04	
5243.52	284	9.92	8.87	-45.29	-17.12	-19.30	-27.06-5.061e+04-1.184e+05-1.180e+05-5.102e+04	
4.756e+04	283	17.45	96.84	-76.60	2.44	17.80	-86.38-1.081e+05-2.061e+05-1.688e+05-1.454e+05	
1.537e+04	275	6.32	-5.47	-88.85	-81.86	-12.46	-23.11-3.608e+04-7.245e+04-6.398e+04-4.454e+04	-
260 1 4.758e+04	277	12.76	44.07	-49.38	-21.10	15.80	-42.93-3.084e+04-1.442e+05-1.184e+05-5.670e+04	
2.168e+04	285	12.47	31.20	-47.94	-8.19	-8.55	-39.57-4.156e+04-1.450e+05-1.402e+05-4.633e+04	
2.784e+04	284	15.43	52.86	-61.92	-0.64	-8.42	-57.26-7.571e+04-1.832e+05-1.754e+05-8.348e+04	
5.094e+04	276	14.39	56.74	-71.19	-30.90	16.45	-59.43-5.063e+04-1.668e+05-1.366e+05-8.083e+04	
260 3 4.026e+04	277	10.80	37.29	-41.78	-17.86	13.37	-36.32-2.610e+04-1.220e+05-1.002e+05-4.798e+04	
1.835e+04	285	10.55	26.40	-40.56	-6.93	-7.23	-33.48-3.517e+04-1.227e+05-1.186e+05-3.920e+04	
2.355e+04	284	13.05	44.73	-52.39	-0.54	-7.12	-48.45-6.406e+04-1.550e+05-1.484e+05-7.064e+04	
4.310e+04	276	12.18	48.01	-60.24	-26.14	13.92	-50.29-4.284e+04-1.411e+05-1.156e+05-6.839e+04	
260 21 3.674e+04	277	9.88	33.53	-45.97	0.87	-13.32	-39.11-2.275e+04-1.105e+05-9.057e+04-4.265e+04	
1.682e+04	285	9.66	25.94	-45.51	10.68	-30.25	-29.28-3.105e+04-1.111e+05-1.074e+05-3.475e+04	
2.169e+04	284	11.92	40.48	-61.34	17.25	-38.11	-42.73-5.737e+04-1.407e+05-1.346e+05-6.346e+04	
3.930e+04	276	11.11	41.46	-64.44	-7.82	-15.15	-52.82-3.884e+04-1.280e+05-1.044e+05-6.238e+04	
260 53 3.665e+04	277	9.84	32.22	-39.54	-9.61	2.29	-35.38-2.335e+04-1.108e+05-9.087e+04-4.324e+04	
1.673e+04	285	9.62	23.31	-38.78	0.28	-15.74	-29.99-3.161e+04-1.114e+05-1.077e+05-3.529e+04	
2.152e+04	284	11.89	39.13	-51.48	6.38	-18.72	-43.53-5.790e+04-1.408e+05-1.348e+05-6.392e+04	
3.923e+04	276	11.09	41.58	-57.29	-17.59	1.89	-48.47-3.891e+04-1.282e+05-1.048e+05-6.226e+04	
260 69 3.660e+04	277	9.82	33.90	-37.98	-16.23	12.15	-33.02-2.373e+04-1.109e+05-9.105e+04-4.362e+04	
1.668e+04	285	9.59	24.00	-36.88	-6.30	-6.58	-30.44-3.197e+04-1.115e+05-1.079e+05-3.564e+04	
2.141e+04	284	11.87	40.66	-47.63	-0.49	-6.47	-44.04-5.824e+04-1.409e+05-1.349e+05-6.422e+04	
3.918e+04	276	11.07	43.65	-54.77	-23.77	12.65	-45.71-3.895e+04-1.283e+05-1.050e+05-6.218e+04	
261 1 3.806e+04	278	9.55	31.10	-46.04	-31.89	16.94	-29.86-1.453e+04-1.054e+05-8.473e+04-3.516e+04	
1.688e+04	286	11.35	24.85	-36.19	-4.16	-7.18	-30.48-1.203e+04-1.233e+05-1.206e+05-1.465e+04	
2.325e+04	285	12.56	36.03	-49.77	-9.19	-4.56	-42.83-4.239e+04-1.460e+05-1.405e+05-4.790e+04	
4.684e+04	277	12.59	47.70	-49.14	-20.43	18.99	-44.23-3.089e+04-1.424e+05-1.168e+05-5.643e+04	
261 3 3.221e+04	278	8.08	26.31	-38.96	-26.98	14.34	-25.27-1.229e+04-8.916e+04-7.170e+04-2.975e+04	
1.428e+04	286	9.60	21.03	-30.62	-3.52	-6.08	-25.79-1.018e+04-1.043e+05-1.021e+05-1.240e+04	
1.968e+04	285	10.62	30.48	-42.11	-7.77	-3.86	-36.24-3.587e+04-1.235e+05-1.189e+05-4.053e+04	
	277	10.65	40.36	-41.58	-17.29	16.07	-37.42-2.614e+04-1.205e+05-9.886e+04-4.774e+04	

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

3.964e+04	261	5	278	7.42	26.35	-42.93	-22.93	6.36	-31.39	-1.009e+04	-8.095e+04	-6.460e+04	-2.644e+04
2.986e+04			286	8.82	27.92	-34.63	2.61	-9.31	-30.70	-8871.45	-9.515e+04	-9.299e+04	-1.103e+04
1.348e+04			285	9.71	33.95	-45.88	-3.63	-8.29	-39.85	-3.223e+04	-1.124e+05	-1.080e+05	-3.660e+04
1.820e+04			277	9.75	41.42	-44.19	-10.66	7.88	-41.79	-2.338e+04	-1.096e+05	-8.980e+04	-4.316e+04
3.625e+04	261	37	278	7.37	24.63	-38.09	-23.91	10.45	-26.23	-1.075e+04	-8.102e+04	-6.496e+04	-2.681e+04
2.950e+04			286	8.77	22.46	-30.40	-0.95	-6.99	-26.26	-9105.62	-9.494e+04	-9.287e+04	-1.118e+04
1.317e+04			285	9.68	30.07	-41.17	-5.74	-5.36	-35.62	-3.246e+04	-1.123e+05	-1.081e+05	-3.675e+04
1.801e+04			277	9.71	38.33	-40.08	-13.76	12.00	-37.03	-2.362e+04	-1.095e+05	-8.985e+04	-4.331e+04
3.612e+04	261	69	278	7.34	23.92	-35.42	-24.53	13.03	-22.97	-1.117e+04	-8.106e+04	-6.518e+04	-2.705e+04
2.928e+04			286	8.73	19.11	-27.84	-3.20	-5.53	-23.45	-9252.84	-9.482e+04	-9.280e+04	-1.127e+04
1.298e+04			285	9.66	27.71	-38.28	-7.07	-3.50	-32.95	-3.260e+04	-1.123e+05	-1.081e+05	-3.684e+04
1.789e+04			277	9.69	36.69	-37.80	-15.72	14.61	-34.02	-2.376e+04	-1.095e+05	-8.987e+04	-4.340e+04
3.603e+04	262	1	279	7.65	44.43	-108.98	-97.56	33.01	-40.27	2.943e+04	-5.664e+04	-1954.33	-2.525e+04
4.143e+04			287	11.46	1.89	-7.78	0.31	-6.20	-3.57	1.126e+04	-1.131e+05	-1.124e+05	1.051e+04
9651.82			286	10.50	20.03	-56.06	-27.86	-8.16	-36.75	-5104.56	-1.116e+05	-1.079e+05	-8843.84
1.961e+04			278	10.95	40.17	-14.71	6.32	19.14	-26.68	-2.438e+04	-1.231e+05	-1.099e+05	-3.760e+04
3.363e+04	262	3	279	6.47	37.60	-92.21	-82.55	27.93	-34.07	2.491e+04	-4.793e+04	-1653.66	-2.137e+04
3.506e+04			287	9.70	1.60	-6.58	0.26	-5.25	-3.02	9530.33	-9.574e+04	-9.510e+04	8892.86
8166.93			286	8.88	16.95	-47.43	-23.58	-6.91	-31.09	-4319.24	-9.446e+04	-9.130e+04	-7483.25
1.659e+04			278	9.26	33.99	-12.45	5.35	16.19	-22.58	-2.063e+04	-1.042e+05	-9.301e+04	-3.181e+04
2.846e+04	262	22	279	5.77	56.76	-99.69	-97.31	54.38	-19.14	1.936e+04	-4.482e+04	-1549.33	-2.392e+04
3.008e+04			287	8.98	4.10	-23.12	-17.67	-1.35	-10.89	9685.52	-8.773e+04	-8.700e+04	8953.46
8412.94			286	8.18	25.23	-52.89	-37.34	9.69	-31.19	-4980.86	-8.660e+04	-8.383e+04	-7741.31
1.475e+04			278	8.37	42.53	-18.76	-13.69	37.46	-16.88	-2.044e+04	-9.552e+04	-8.520e+04	-3.076e+04
2.585e+04	262	54	279	5.83	42.15	-89.20	-83.67	36.62	-26.39	2.135e+04	-4.403e+04	-1521.14	-2.116e+04
3.118e+04			287	8.86	1.05	-11.19	-6.70	-3.44	-5.90	9057.68	-8.730e+04	-8.666e+04	8420.91
7807.21			286	8.12	18.61	-46.30	-27.59	-0.09	-29.40	-4335.04	-8.615e+04	-8.332e+04	-7166.29
1.495e+04			278	8.40	33.67	-12.47	-2.32	23.52	-19.11	-1.941e+04	-9.503e+04	-8.480e+04	-2.963e+04
2.586e+04	262	69	279	5.88	34.18	-83.83	-75.04	25.39	-30.98	2.264e+04	-4.357e+04	-1503.33	-1.942e+04
3.187e+04			287	8.81	1.45	-5.98	0.24	-4.77	-2.75	8663.94	-8.703e+04	-8.645e+04	8084.42
7424.48			286	8.07	15.41	-43.12	-21.43	-6.28	-28.27	-3926.58	-8.587e+04	-8.300e+04	-6802.95
1.508e+04			278	8.42	30.90	-11.32	4.86	14.72	-20.53	-1.875e+04	-9.472e+04	-8.455e+04	-2.892e+04
2.587e+04	263	1	280	10.34	25.69	-3.17	22.40	0.11	-9.16	1.383e+04	-9.894e+04	-8.750e+04	2382.80
3.406e+04			288	6.70	-5.75	-54.98	-48.25	-12.49	16.92	1.575e+04	-5.918e+04	-5.824e+04	1.481e+04
8341.47			287	11.90	60.27	-20.85	3.46	35.96	-37.16	-1.786e+04	-1.306e+05	-1.150e+05	-3.344e+04
3.891e+04			279	7.54	-10.21	-127.80	-105.74	-32.26	45.90	7.454e+04	-3741.76	9049.79	6.175e+04
2.894e+04													

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

263	3	280	8.75	21.73	-2.68	18.96	0.10	-7.75	1.170e+04	-8.372e+04	-7.404e+04	2016.21	
2.882e+04		288	5.67	-4.87	-46.52	-40.82	-10.57	14.32	1.333e+04	-5.008e+04	-4.928e+04	1.253e+04	-
7058.16		287	10.07	50.99	-17.64	2.93	30.43	-31.44	-1.511e+04	-1.105e+05	-9.733e+04	-2.830e+04	-
3.292e+04		279	6.38	-8.64	-108.14	-89.48	-27.30	38.84	6.307e+04	-3166.10	7657.51	5.225e+04	-
2.449e+04		280	8.20	26.27	-1.16	23.49	1.62	-8.27	1.086e+04	-7.834e+04	-6.932e+04	1840.69	-
2.689e+04	6	288	5.17	-5.01	-60.63	-54.81	-10.84	17.02	1.272e+04	-4.468e+04	-4.378e+04	1.181e+04	-
7162.13		287	9.42	65.75	-22.21	1.47	42.07	-39.02	-1.429e+04	-1.031e+05	-8.983e+04	-2.759e+04	-
3.169e+04		279	6.34	-6.75	-141.11	-114.87	-33.00	53.27	6.246e+04	-1271.47	1.180e+04	4.939e+04	-
2.574e+04		280	8.05	22.28	-1.94	19.66	0.68	-7.52	1.072e+04	-7.697e+04	-6.809e+04	1835.93	-
2.646e+04	38	288	5.16	-4.68	-49.37	-43.96	-10.08	14.57	1.235e+04	-4.520e+04	-4.441e+04	1.156e+04	-
6705.22		287	9.26	53.85	-18.41	2.20	33.24	-32.62	-1.396e+04	-1.015e+05	-8.900e+04	-2.644e+04	-
3.061e+04		279	6.00	-7.43	-114.88	-94.32	-27.99	42.26	5.928e+04	-2213.11	8836.63	4.823e+04	-
2.361e+04		280	7.95	19.76	-2.44	17.23	0.09	-7.05	1.064e+04	-7.611e+04	-6.731e+04	1832.92	-
2.620e+04	69	288	5.15	-4.43	-42.29	-37.11	-9.61	13.01	1.212e+04	-4.553e+04	-4.480e+04	1.139e+04	-
6416.51		287	9.16	46.36	-16.04	2.66	27.66	-28.58	-1.374e+04	-1.005e+05	-8.848e+04	-2.572e+04	-
2.993e+04		279	5.80	-7.85	-98.31	-81.34	-24.82	35.31	5.734e+04	-2878.28	6961.37	4.750e+04	-
2.226e+04		281	5.86	0.58	-8.64	-8.52	0.46	-1.03	-952.62	-6.114e+04	-6.010e+04	-1996.00	-
7855.49	1	289	6.29	-2.32	-21.64	-21.09	-2.88	3.22	1163.57	-6.419e+04	-6.376e+04	735.17	-
5273.77		288	7.67	4.85	-17.08	-16.07	3.84	4.59	5039.13	-7.648e+04	-7.625e+04	4804.29	-
4369.11		280	6.89	-5.78	-24.34	-24.25	-5.87	-1.27	1.630e+04	-6.156e+04	-5.581e+04	1.054e+04	-
2.036e+04		281	4.96	0.49	-7.31	-7.21	0.39	-0.87	-806.06	-5.173e+04	-5.085e+04	-1688.92	-
6646.95	3	289	5.33	-1.97	-18.31	-17.84	-2.43	2.72	984.56	-5.431e+04	-5.395e+04	622.07	-
4462.42		288	6.49	4.10	-14.45	-13.60	3.25	3.89	4263.88	-6.472e+04	-6.452e+04	4065.17	-
3696.94		280	5.83	-4.89	-20.59	-20.52	-4.97	-1.07	1.379e+04	-5.209e+04	-4.722e+04	8922.34	-
1.723e+04		281	4.62	1.26	-23.67	-23.57	1.16	1.59	-814.80	-4.756e+04	-4.675e+04	-1626.01	-
6104.13	22	289	4.95	-2.49	-38.54	-38.54	-2.49	0.14	983.74	-4.956e+04	-4.922e+04	640.87	-
4148.71		288	5.99	8.76	-33.51	-33.44	8.69	1.68	3428.34	-5.904e+04	-5.887e+04	3263.73	-
3202.52		280	5.43	-5.13	-38.10	-37.36	-5.86	4.86	1.296e+04	-4.754e+04	-4.334e+04	8761.88	-
1.537e+04		281	4.55	0.67	-13.14	-13.14	0.66	0.13	-764.54	-4.723e+04	-4.643e+04	-1570.48	-
6066.48	54	289	4.88	-2.21	-24.97	-24.86	-2.32	1.57	929.37	-4.945e+04	-4.911e+04	594.69	-
4092.36		288	5.94	5.48	-20.83	-20.53	5.18	2.81	3702.74	-5.891e+04	-5.874e+04	3528.38	-
3299.55		280	5.35	-4.96	-25.98	-25.90	-5.04	1.28	1.270e+04	-4.742e+04	-4.309e+04	8363.15	-
1.555e+04		281	4.51	0.44	-6.65	-6.56	0.35	-0.79	-732.78	-4.703e+04	-4.623e+04	-1535.38	-
6042.69	69	289	4.84	-1.79	-16.64	-16.22	-2.21	2.48	895.05	-4.938e+04	-4.905e+04	565.52	-
4056.75		288	5.90	3.73	-13.14	-12.36	2.96	3.53	3876.25	-5.883e+04	-5.865e+04	3695.61	-
3360.86		280	5.30	-4.45	-18.72	-18.65	-4.51	-0.98	1.253e+04	-4.735e+04	-4.293e+04	8111.22	-
1.566e+04		282	26.55	152.37	-157.75	32.92	-38.30	-150.91	-2.041e+05	-3.097e+05	-2.739e+05	-2.399e+05	-
265	1												



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

9349.54	291	14.94	59.28	-69.16	24.17	-34.05	-57.24-1.090e+05-1.769e+05-1.755e+05-1.103e+05
2.212e+04	290	20.00	103.89	-109.26	51.53	-56.91	-91.75-1.729e+05-2.286e+05-2.177e+05-1.839e+05
4.238e+04	282	20.67	128.18	-126.52	13.02	-11.36	-126.77-1.556e+05-2.413e+05-2.047e+05-1.922e+05
267 1	284	15.29	55.00	-63.37	-15.15	6.78	-58.16-7.904e+04-1.820e+05-1.665e+05-9.452e+04
3.679e+04	292	14.98	43.71	-59.95	7.29	-23.53	-49.48-8.813e+04-1.796e+05-1.792e+05-8.852e+04
5983.53	291	19.54	82.98	-87.41	25.00	-29.42	-80.73-1.479e+05-2.302e+05-2.266e+05-1.515e+05
1.676e+04	283	18.47	83.45	-101.53	-22.14	4.06	-91.56-1.246e+05-2.193e+05-1.986e+05-1.452e+05
3.911e+04	284	12.94	46.54	-53.62	-12.82	5.73	-49.21-6.688e+04-1.540e+05-1.409e+05-7.998e+04
267 3	292	12.68	36.98	-50.72	6.17	-19.91	-41.87-7.457e+04-1.520e+05-1.516e+05-7.490e+04
3.113e+04	291	16.53	70.22	-73.96	21.15	-24.89	-68.31-1.252e+05-1.948e+05-1.917e+05-1.282e+05
5062.99	283	15.63	70.61	-85.91	-18.74	3.44	-77.47-1.054e+05-1.855e+05-1.680e+05-1.229e+05
1.418e+04	284	11.77	57.56	-56.37	-21.53	22.71	-52.50-6.122e+04-1.400e+05-1.281e+05-7.318e+04
3.310e+04	292	11.55	50.32	-52.67	-1.48	-0.86	-51.49-6.825e+04-1.386e+05-1.383e+05-6.857e+04
267 6	291	15.10	88.82	-73.46	14.13	1.23	-80.88-1.143e+05-1.776e+05-1.748e+05-1.171e+05
2.829e+04	283	14.15	81.68	-88.79	-31.86	24.75	-80.39-9.593e+04-1.679e+05-1.520e+05-1.118e+05
4716.60	284	11.77	47.93	-51.42	-15.48	11.99	-47.74-6.096e+04-1.400e+05-1.281e+05-7.289e+04
1.309e+04	292	11.53	39.57	-48.13	2.86	-11.43	-43.26-6.797e+04-1.383e+05-1.380e+05-6.828e+04
2.984e+04	291	15.06	72.98	-69.11	17.26	-13.39	-69.37-1.140e+05-1.773e+05-1.745e+05-1.168e+05
267 38	283	14.18	70.60	-81.88	-22.77	11.50	-74.29-9.586e+04-1.683e+05-1.524e+05-1.118e+05
2.829e+04	284	11.77	42.31	-48.75	-11.66	5.21	-44.74-6.080e+04-1.400e+05-1.281e+05-7.271e+04
4646.81	292	11.53	33.62	-46.11	5.61	-18.10	-38.06-6.779e+04-1.381e+05-1.378e+05-6.809e+04
1.297e+04	291	15.03	63.83	-67.24	19.23	-22.63	-62.10-1.138e+05-1.771e+05-1.743e+05-1.165e+05
2.999e+04	283	14.20	64.19	-78.10	-17.03	3.13	-70.43-9.581e+04-1.687e+05-1.528e+05-1.117e+05
267 69	285	12.88	40.30	-50.15	-15.10	5.26	-44.06-4.218e+04-1.491e+05-1.357e+05-5.557e+04
2.830e+04	293	12.01	30.30	-43.09	-2.52	-10.27	-36.49-5.421e+04-1.428e+05-1.423e+05-5.469e+04
4602.72	292	15.12	51.25	-59.09	5.29	-13.13	-54.39-9.142e+04-1.810e+05-1.796e+05-9.284e+04
1.289e+04	284	14.89	52.41	-65.14	-19.99	7.27	-57.17-7.682e+04-1.773e+05-1.620e+05-9.211e+04
3.009e+04	285	10.89	34.10	-42.43	-12.78	4.45	-37.29-3.569e+04-1.262e+05-1.149e+05-4.702e+04
268 1	293	10.16	25.64	-36.46	-2.14	-8.69	-30.88-4.587e+04-1.208e+05-1.204e+05-4.627e+04
3.539e+04	292	12.79	43.36	-50.00	4.48	-11.11	-46.03-7.735e+04-1.532e+05-1.520e+05-7.856e+04
6464.37	284	12.60	44.35	-55.12	-16.92	6.15	-48.38-6.500e+04-1.500e+05-1.370e+05-7.794e+04
1.120e+04	285	9.96	38.44	-47.02	-10.31	1.73	-42.31-3.216e+04-1.149e+05-1.044e+05-4.267e+04
3.609e+04	293	9.28	31.31	-39.11	-0.07	-7.74	-35.00-4.171e+04-1.102e+05-1.098e+05-4.210e+04
268 3	292	11.67	49.10	-51.53	6.60	-9.02	-49.71-7.042e+04-1.395e+05-1.384e+05-7.155e+04
2.995e+04	284	11.46	45.19	-58.85	-14.80	1.15	-51.40-5.881e+04-1.361e+05-1.244e+05-7.057e+04
5469.85	285	9.93	33.85	-41.81	-11.11	3.15	-37.15-3.233e+04-1.148e+05-1.044e+05-4.272e+04
9479.52	293	9.25	26.41	-35.46	-1.22	-7.83	-30.75-4.170e+04-1.100e+05-1.096e+05-4.208e+04
3.054e+04							
268 5							
2.756e+04							
5214.43							
8754.45							
2.776e+04							
268 37							
2.735e+04							



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

5066.23									
8670.68	292	11.65	43.17	-47.80	5.05	-9.68	-44.89-7.036e+04-1.394e+05-1.383e+05-7.147e+04		
2.776e+04	284	11.46	42.17	-53.45	-15.16	3.87	-46.85-5.898e+04-1.363e+05-1.245e+05-7.075e+04		
268 69	285	9.90	31.00	-38.57	-11.62	4.05	-33.90-3.245e+04-1.147e+05-1.044e+05-4.274e+04		
2.723e+04	293	9.23	23.31	-33.15	-1.94	-7.90	-28.07-4.170e+04-1.098e+05-1.095e+05-4.207e+04		
4972.59	292	11.63	39.42	-45.45	4.07	-10.10	-41.84-7.032e+04-1.393e+05-1.382e+05-7.142e+04		
8617.75	284	11.45	40.32	-50.11	-15.38	5.59	-43.98-5.909e+04-1.364e+05-1.246e+05-7.086e+04		
2.776e+04	286	11.33	29.51	-45.17	-21.00	5.33	-34.94-1.133e+04-1.228e+05-1.105e+05-2.360e+04		
269 1	294	9.95	30.58	-31.78	-2.57	1.38	-31.12-3.251e+04-1.156e+05-1.134e+05-3.467e+04		
3.488e+04	293	11.93	32.41	-44.62	-7.30	-4.91	-38.50-5.451e+04-1.420e+05-1.411e+05-5.542e+04		
1.323e+04	285	12.79	45.36	-49.04	-15.12	11.44	-45.30-4.319e+04-1.483e+05-1.334e+05-5.809e+04		
8854.81	286	9.59	24.97	-38.22	-17.77	4.51	-29.57 -9589.61-1.039e+05-9.352e+04-1.997e+04		
3.666e+04	294	8.42	25.88	-26.89	-2.18	1.16	-26.33-2.751e+04-9.781e+04-9.598e+04-2.934e+04		
269 3	293	10.09	27.43	-37.75	-6.17	-4.15	-32.57-4.613e+04-1.202e+05-1.194e+05-4.689e+04		
2.952e+04	285	10.82	38.38	-41.50	-12.80	9.68	-38.33-3.655e+04-1.255e+05-1.129e+05-4.915e+04		
1.120e+04	286	8.77	24.74	-38.42	-2.86	-10.83	-31.33 -7885.35-9.382e+04-8.425e+04-1.745e+04		
7492.53	294	7.76	25.19	-27.39	16.05	-18.25	-19.93-2.347e+04-8.875e+04-8.716e+04-2.506e+04		
3.102e+04	293	9.22	23.99	-38.67	9.97	-24.65	-26.12-4.099e+04-1.089e+05-1.082e+05-4.169e+04		
269 21	285	9.90	36.74	-46.17	4.69	-14.12	-40.37-3.225e+04-1.137e+05-1.022e+05-4.376e+04		
2.703e+04	286	8.74	22.64	-35.32	-11.01	-1.68	-28.60 -8395.57-9.421e+04-8.472e+04-1.788e+04		
1.008e+04	294	7.69	22.39	-23.81	5.00	-6.42	-22.39-2.441e+04-8.885e+04-8.721e+04-2.605e+04		
6853.14	293	9.19	23.20	-34.64	0.42	-11.86	-28.26-4.157e+04-1.091e+05-1.084e+05-4.227e+04		
2.838e+04	285	9.86	34.38	-39.77	-5.31	-0.07	-36.98-3.285e+04-1.139e+05-1.025e+05-4.433e+04		
269 53	286	8.72	22.70	-34.75	-16.15	4.10	-26.88 -8717.83-9.445e+04-8.502e+04-1.815e+04		
2.691e+04	294	7.65	23.53	-24.45	-1.98	1.06	-23.94-2.501e+04-8.892e+04-8.725e+04-2.667e+04		
1.014e+04	293	9.17	24.93	-34.32	-5.61	-3.78	-29.61-4.193e+04-1.093e+05-1.086e+05-4.263e+04		
6827.56	285	9.84	34.89	-37.73	-11.63	8.80	-34.84-3.323e+04-1.141e+05-1.026e+05-4.468e+04		
2.827e+04	287	8.92	-9.63	-35.15	-34.81	-9.98	2.95 1.658e+04-8.229e+04-8.216e+04 1.645e+04		
269 69	295	16.11	97.05	-30.40	55.90	10.75	-59.59 3506.86-1.616e+05-1.338e+05-2.427e+04		
2.683e+04	294	7.77	18.96	-49.19	-37.01	6.78	-26.10-3.745e+04-9.171e+04-9.011e+04-3.905e+04		
1.018e+04	286	13.30	51.94	-35.25	1.93	14.75	-43.12 -9527.33-1.413e+05-1.235e+05-2.738e+04		
6811.39	287	7.55	-8.15	-29.74	-29.45	-8.44	2.50 1.403e+04-6.963e+04-6.952e+04 1.392e+04		
2.820e+04	295	13.63	82.12	-25.72	47.30	9.09	-50.42 2967.34-1.367e+05-1.132e+05-2.054e+04		
270 1	294	6.57	16.04	-41.62	-31.32	5.74	-22.09-3.169e+04-7.760e+04-7.625e+04-3.304e+04		
3578.18	286	11.25	43.95	-29.83	1.63	12.48	-36.49 -8061.59-1.196e+05-1.045e+05-2.317e+04		
6.176e+04	287	6.89	-7.12	-44.03	-42.11	-9.04	8.20 1.373e+04-6.239e+04-6.236e+04 1.371e+04		
9175.85	295	13.30	112.84	-31.65	57.41	23.78	-70.26 2652.55-1.323e+05-1.083e+05-2.132e+04		
4.510e+04									
270 3									
3027.69									
5.226e+04									
7764.18									
3.816e+04									
270 6									
1466.33									
5.157e+04									



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

7201.24	294	5.94	29.70	-58.86	-49.02	19.85	-27.84	-2.999e+04	-6.952e+04	-6.816e+04	-3.135e+04
3.577e+04	286	10.44	53.40	-32.03	-0.16	21.53	-41.32	-7583.26	-1.108e+05	-9.639e+04	-2.199e+04
2254.46	270 38 287	6.87	-7.38	-33.54	-32.71	-8.20	4.57	1.313e+04	-6.294e+04	-6.287e+04	1.306e+04
4.908e+04	295	12.74	89.32	-26.47	48.58	14.27	-55.29	2675.35	-1.274e+05	-1.050e+05	-1.970e+04
7113.67	294	5.96	20.28	-45.82	-36.43	10.88	-23.08	-2.927e+04	-7.015e+04	-6.887e+04	-3.055e+04
3.511e+04	286	10.31	45.10	-28.96	0.85	15.29	-36.32	-7428.14	-1.095e+05	-9.552e+04	-2.142e+04
2752.45	270 69 287	6.86	-7.41	-27.04	-26.77	-7.67	2.27	1.275e+04	-6.330e+04	-6.320e+04	1.265e+04
4.751e+04	295	12.39	74.65	-23.38	43.00	8.27	-45.84	2697.58	-1.243e+05	-1.029e+05	-1.867e+04
7058.35	294	5.97	14.58	-37.83	-28.47	5.22	-20.08	-2.881e+04	-7.055e+04	-6.932e+04	-3.004e+04
3.469e+04	286	10.23	39.95	-27.12	1.48	11.35	-33.17	-7328.72	-1.087e+05	-9.497e+04	-2.106e+04
1.932e+04	271 1 288	8.10	13.79	-1.23e-04	0.33	13.46	2.10	-315.06	-8.427e+04	-7.956e+04	-5023.19
1280.37	296	6.25	-12.18	-41.13	-39.72	-13.59	-6.23	1.245e+04	-5.675e+04	-5.672e+04	1.243e+04
3581.90	295	15.06	54.64	-8.41	53.53	-7.31	8.27	5.470e+04	-1.198e+05	-1.197e+05	5.463e+04
2.585e+04	287	8.50	9.54	-47.07	-35.91	-1.62	-22.52	-1.155e+04	-9.332e+04	-8.411e+04	-2.076e+04
1.634e+04	271 3 288	6.86	11.67	-1.04e-04	0.28	11.39	1.78	-266.59	-7.131e+04	-6.732e+04	-4250.39
1083.39	296	5.29	-10.31	-34.80	-33.61	-11.50	-5.27	1.054e+04	-4.802e+04	-4.800e+04	1.052e+04
3030.84	295	12.75	46.23	-7.12	45.30	-6.18	7.00	4.628e+04	-1.014e+05	-1.013e+05	4.622e+04
2.187e+04	287	7.19	8.07	-39.83	-30.38	-1.37	-19.06	-9777.15	-7.896e+04	-7.117e+04	-1.757e+04
1.479e+04	271 6 288	6.31	18.16	-4.82	-4.04	17.37	4.18	-1117.69	-6.570e+04	-6.212e+04	-4703.56
1456.44	296	4.83	-10.15	-52.04	-50.13	-12.06	-8.73	1.007e+04	-4.274e+04	-4.270e+04	1.003e+04
1880.85	295	12.14	54.50	-7.22	53.65	-6.37	7.20	4.311e+04	-9.685e+04	-9.682e+04	4.308e+04
2.050e+04	287	6.57	10.40	-50.40	-43.60	3.60	-19.16	-8993.41	-7.160e+04	-6.396e+04	-1.664e+04
1.483e+04	271 38 288	6.26	13.53	-1.86	-1.41	13.07	2.61	-581.31	-6.516e+04	-6.156e+04	-4189.08
1167.48	296	4.82	-9.67	-39.54	-38.13	-11.08	-6.32	9766.92	-4.330e+04	-4.327e+04	9741.22
2416.72	295	11.80	46.85	-6.76	46.01	-5.91	6.69	4.248e+04	-9.396e+04	-9.392e+04	4.243e+04
2.012e+04	287	6.55	8.35	-41.52	-33.81	0.63	-18.04	-8932.21	-7.171e+04	-6.441e+04	-1.623e+04
1.486e+04	271 69 288	6.23	10.61	-9.43e-05	0.25	10.36	1.61	-242.36	-6.482e+04	-6.120e+04	-3863.99
2755.31	296	4.81	-9.37	-31.64	-30.55	-10.45	-4.79	9578.96	-4.365e+04	-4.363e+04	9560.73
1.988e+04	295	11.59	42.03	-6.47	41.18	-5.62	6.36	4.208e+04	-9.214e+04	-9.209e+04	4.202e+04
6846.94	287	6.54	7.34	-36.21	-27.62	-1.25	-17.32	-8888.31	-7.179e+04	-6.470e+04	-1.597e+04
4522.95	272 1 289	6.36	-1.24	-17.33	-17.31	-1.26	-0.52	1069.56	-6.502e+04	-6.431e+04	352.46
4346.43	297	6.22	-2.38	-17.14	-17.02	-2.50	1.32	-991.22	-6.463e+04	-6.431e+04	-1314.32
1.930e+04	296	7.81	0.83	-8.70	-6.01	-1.87	-4.29	1.354e+04	-7.361e+04	-7.339e+04	1.332e+04
5793.56	288	7.56	4.15	-21.11	-20.99	4.03	-1.75	3368.14	-7.618e+04	-7.118e+04	-1626.08
3827.11	272 3 289	5.38	-1.05	-14.66	-14.65	-1.06	-0.44	905.01	-5.502e+04	-5.441e+04	298.23
3677.75	297	5.26	-2.01	-14.50	-14.40	-2.11	1.12	-838.73	-5.469e+04	-5.441e+04	-1112.11
	296	6.61	0.70	-7.36	-5.08	-1.58	-3.63	1.145e+04	-6.228e+04	-6.210e+04	1.127e+04

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1.633e+04	288	6.40	3.51	-17.87	-17.76	3.41	-1.48	2849.96-6.446e+04-6.023e+04	-1375.91
272 22	289	5.00	-1.04	-36.12	-36.03	-1.13	1.81	912.05-5.019e+04-4.963e+04	344.36
5356.29	297	4.90	-1.18	-30.58	-30.48	-1.28	-1.75	-845.25-5.025e+04-5.000e+04	-1096.41
3513.69	296	6.17	1.41	-27.11	-23.14	-2.56	-9.88	1.110e+04-5.716e+04-5.696e+04	1.090e+04
3728.40	288	5.92	8.87	-37.71	-37.70	8.86	0.83	2204.88-5.889e+04-5.495e+04	-1735.52
1.501e+04	289	4.94	-1.02	-22.12	-22.11	-1.03	0.46	857.30-5.009e+04-4.953e+04	299.48
272 54	297	4.83	-1.67	-19.82	-19.82	-1.67	-0.06	-794.53-4.992e+04-4.967e+04	-1044.08
5301.49	296	6.07	0.84	-14.50	-11.79	-1.87	-5.85	1.068e+04-5.683e+04-5.665e+04	1.050e+04
3492.55	288	5.85	5.34	-24.50	-24.49	5.33	-0.50	2441.24-5.871e+04-5.483e+04	-1438.50
3492.48	289	4.89	-0.95	-13.33	-13.32	-0.97	-0.40	822.74-5.002e+04-4.947e+04	271.12
1.491e+04	297	4.78	-1.83	-13.18	-13.09	-1.92	1.02	-762.48-4.972e+04-4.947e+04	-1011.01
272 69	296	6.01	0.64	-6.69	-4.62	-1.43	-3.30	1.041e+04-5.662e+04-5.645e+04	1.024e+04
5266.87	288	5.81	3.20	-16.24	-16.15	3.10	-1.34	2590.88-5.860e+04-5.476e+04	-1250.83
3479.19	290	25.74	129.96	-140.74	74.09	-84.87	-109.56	-2.234e+05-2.942e+05-2.839e+05	-2.336e+05
3343.41	298	23.85	109.77	-118.71	92.25	-101.20	-60.79	-2.213e+05-2.668e+05-2.663e+05	-2.218e+05
1.484e+04	64	33.03	181.51	-191.59	160.32	-170.39	-86.36	-2.964e+05-3.753e+05-3.367e+05	-3.350e+05
273 1	55	37.69	239.46	-243.30	159.80	-163.64	-179.19	-3.030e+05-4.390e+05-3.566e+05	-3.853e+05
2.494e+04	290	21.78	109.97	-119.09	62.69	-71.81	-92.71	-1.890e+05-2.489e+05-2.402e+05	-1.977e+05
4591.17	298	20.18	92.88	-100.45	78.06	-85.63	-51.44	-1.873e+05-2.257e+05-2.253e+05	-1.877e+05
3.942e+04	64	27.95	153.59	-162.11	135.65	-144.18	-73.08	-2.508e+05-3.176e+05-2.849e+05	-2.835e+05
6.648e+04	55	31.89	202.62	-205.87	135.22	-138.47	-151.62	-2.563e+05-3.714e+05-3.018e+05	-3.260e+05
273 3	290	19.92	129.05	-96.35	45.39	-12.69	-108.89	-1.725e+05-2.267e+05-2.187e+05	-1.805e+05
2.110e+04	298	18.47	110.16	-81.77	68.66	-40.27	-79.01	-1.710e+05-2.059e+05-2.055e+05	-1.714e+05
3884.84	64	25.60	166.45	-125.28	121.90	-80.73	-104.93	-2.283e+05-2.892e+05-2.593e+05	-2.582e+05
3.335e+04	55	29.21	219.14	-162.43	112.65	-55.95	-171.15	-2.333e+05-3.379e+05-2.745e+05	-2.967e+05
5.625e+04	290	19.84	109.49	-101.91	52.50	-44.92	-93.81	-1.721e+05-2.265e+05-2.185e+05	-1.800e+05
273 22	298	18.39	92.59	-85.81	70.07	-63.29	-59.25	-1.705e+05-2.055e+05-2.051e+05	-1.709e+05
1.924e+04	64	25.48	148.24	-137.04	122.77	-111.58	-81.34	-2.281e+05-2.889e+05-2.591e+05	-2.579e+05
3844.38	55	29.08	196.02	-175.87	118.95	-98.80	-150.74	-2.331e+05-3.378e+05-2.744e+05	-2.965e+05
3.043e+04	290	19.80	99.97	-108.26	56.99	-65.28	-84.28	-1.718e+05-2.263e+05-2.184e+05	-1.797e+05
5.114e+04	298	18.34	84.44	-91.32	70.96	-77.85	-46.76	-1.703e+05-2.052e+05-2.049e+05	-1.706e+05
273 54	64	25.41	139.62	-147.37	123.32	-131.07	-66.43	-2.280e+05-2.887e+05-2.590e+05	-2.577e+05
1.920e+04	55	28.99	184.20	-187.15	122.93	-125.88	-137.84	-2.330e+05-3.377e+05-2.743e+05	-2.964e+05
3652.75	291	19.12	78.05	-90.58	19.27	-31.80	-80.36	-1.436e+05-2.258e+05-2.227e+05	-1.466e+05
3.036e+04	299	18.44	74.31	-79.44	49.48	-54.62	-56.57	-1.433e+05-2.168e+05-2.165e+05	-1.436e+05
5.114e+04	298	23.77	112.28	-120.41	76.38	-84.51	-84.05	-2.210e+05-2.658e+05-2.638e+05	-2.230e+05
273 69	290	26.06	139.78	-143.01	50.27	-53.50	-131.53	-2.238e+05-2.983e+05-2.786e+05	-2.435e+05
1.918e+04									
3531.67									
3.032e+04									
4867.52									
9178.29									



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

276	1	293	11.89	35.74	-46.88	-11.74	0.61	-40.85-5.516e+04-1.415e+05-1.380e+05-5.873e+04	
1.719e+04		301	11.40	28.68	-42.30	5.32	-18.94	-33.36-5.118e+04-1.356e+05-1.343e+05-5.245e+04	-
1.030e+04		300	13.70	45.23	-54.14	12.84	-21.75	-46.58-8.701e+04-1.644e+05-1.639e+05-8.744e+04	-
5740.62		292	15.05	54.79	-61.49	-6.62	-0.07	-58.04-9.214e+04-1.802e+05-1.755e+05-9.688e+04	
1.988e+04		276	10.06	30.24	-39.67	-9.94	0.51	-34.56-4.667e+04-1.198e+05-1.167e+05-4.969e+04	
1.454e+04	3	293	10.06	30.24	-39.67	-9.94	0.51	-34.56-4.667e+04-1.198e+05-1.167e+05-4.969e+04	
8718.38		301	9.64	24.27	-35.79	4.50	-16.03	-28.22-4.330e+04-1.148e+05-1.137e+05-4.438e+04	-
4857.45		300	11.59	38.27	-45.81	10.87	-18.41	-39.41-7.362e+04-1.391e+05-1.387e+05-7.399e+04	-
		292	12.74	46.36	-52.03	-5.61	-0.06	-49.11-7.796e+04-1.525e+05-1.485e+05-8.198e+04	
1.682e+04		276	9.21	28.87	-43.05	7.28	-21.46	-32.96-4.148e+04-1.086e+05-1.059e+05-4.422e+04	
1.328e+04	21	293	9.21	28.87	-43.05	7.28	-21.46	-32.96-4.148e+04-1.086e+05-1.059e+05-4.422e+04	
7768.06		301	8.79	25.75	-39.64	15.84	-29.73	-23.45-3.881e+04-1.040e+05-1.030e+05-3.975e+04	-
4953.56		300	10.62	37.21	-45.49	26.35	-34.63	-27.93-6.673e+04-1.268e+05-1.264e+05-6.714e+04	-
		292	11.63	43.08	-60.63	11.75	-29.30	-47.62-6.989e+04-1.385e+05-1.348e+05-7.358e+04	
1.547e+04		276	9.16	30.40	-38.41	-9.53	1.52	-33.96-4.246e+04-1.090e+05-1.062e+05-4.524e+04	
1.331e+04	37	293	9.16	30.40	-38.41	-9.53	1.52	-33.96-4.246e+04-1.090e+05-1.062e+05-4.524e+04	
7784.90		301	8.78	25.91	-35.40	3.75	-13.24	-29.45-3.947e+04-1.044e+05-1.035e+05-4.042e+04	-
4461.53		300	10.56	39.16	-42.47	10.71	-14.03	-38.90-6.713e+04-1.267e+05-1.264e+05-6.747e+04	-
		292	11.60	45.53	-50.08	-5.11	0.56	-47.72-7.084e+04-1.388e+05-1.351e+05-7.452e+04	
1.536e+04		276	9.15	27.49	-36.06	-9.03	0.47	-31.42-4.243e+04-1.089e+05-1.061e+05-4.517e+04	
1.322e+04	69	293	9.15	27.49	-36.06	-9.03	0.47	-31.42-4.243e+04-1.089e+05-1.061e+05-4.517e+04	
7925.80		301	8.77	22.06	-32.54	4.09	-14.57	-25.66-3.937e+04-1.043e+05-1.033e+05-4.035e+04	-
4415.86		300	10.54	34.79	-41.65	9.88	-16.73	-35.83-6.693e+04-1.264e+05-1.261e+05-6.726e+04	-
		292	11.58	42.14	-47.30	-5.10	-0.06	-44.65-7.087e+04-1.386e+05-1.350e+05-7.452e+04	
1.529e+04		277	8.92	26.54	-40.27	-22.22	8.49	-29.67-3.506e+04-1.050e+05-1.017e+05-3.833e+04	
1.477e+04	1	294	8.92	26.54	-40.27	-22.22	8.49	-29.67-3.506e+04-1.050e+05-1.017e+05-3.833e+04	
1.000e+04		302	10.35	19.54	-31.21	1.93	-13.60	-24.16-1.843e+04-1.158e+05-1.148e+05-1.946e+04	-
6112.78		301	11.30	30.11	-41.45	0.61	-11.96	-35.22-5.217e+04-1.346e+05-1.341e+05-5.263e+04	-
		293	12.07	40.94	-44.43	-10.93	7.44	-41.68-5.533e+04-1.434e+05-1.383e+05-6.040e+04	
2.051e+04		277	7.55	22.46	-34.07	-18.80	7.18	-25.10-2.966e+04-8.885e+04-8.608e+04-3.243e+04	
1.250e+04	3	294	7.55	22.46	-34.07	-18.80	7.18	-25.10-2.966e+04-8.885e+04-8.608e+04-3.243e+04	
8464.29		302	8.76	16.54	-26.41	1.63	-11.50	-20.44-1.559e+04-9.799e+04-9.711e+04-1.647e+04	-
5172.35		301	9.56	25.48	-35.08	0.52	-10.12	-29.81-4.414e+04-1.139e+05-1.135e+05-4.453e+04	-
		293	10.21	34.64	-37.59	-9.25	6.30	-35.27-4.682e+04-1.213e+05-1.171e+05-5.110e+04	
1.735e+04		277	6.90	20.74	-37.22	-2.98	-13.49	-28.50-2.505e+04-8.039e+04-7.768e+04-2.775e+04	
1.194e+04	21	294	6.90	20.74	-37.22	-2.98	-13.49	-28.50-2.505e+04-8.039e+04-7.768e+04-2.775e+04	
7301.55		302	8.02	22.81	-29.80	14.31	-21.31	-19.36-1.359e+04-8.874e+04-8.802e+04-1.430e+04	-
4583.10		301	8.71	25.72	-36.95	12.86	-24.09	-25.32-3.951e+04-1.033e+05-1.029e+05-3.984e+04	-
		293	9.35	33.67	-41.01	8.32	-15.67	-35.36-4.162e+04-1.101e+05-1.062e+05-4.553e+04	
1.588e+04		277	6.85	19.13	-31.98	-11.63	-1.22	-25.02-2.622e+04-8.062e+04-7.803e+04-2.881e+04	
1.159e+04	53	294	6.85	19.13	-31.98	-11.63	-1.22	-25.02-2.622e+04-8.062e+04-7.803e+04-2.881e+04	
7542.53		302	7.98	17.53	-25.74	6.45	-14.66	-18.89-1.395e+04-8.895e+04-8.818e+04-1.471e+04	-
4656.05		301	8.69	23.43	-33.13	5.27	-14.96	-26.41-3.989e+04-1.034e+05-1.031e+05-4.023e+04	-
		293	9.31	31.10	-35.59	-1.93	-2.56	-33.34-4.220e+04-1.102e+05-1.063e+05-4.610e+04	
1.582e+04		277	6.86	20.41	-30.98	-17.09	6.53	-22.82-2.697e+04-8.077e+04-7.825e+04-2.948e+04	
	69	294	6.86	20.41	-30.98	-17.09	6.53	-22.82-2.697e+04-8.077e+04-7.825e+04-2.948e+04	



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1.313e+04	304	5.38	-2.94	-38.24	-35.32	-5.86	9.72	8783.07-5.024e+04-4.716e+04	5702.76	-
1.608e+04	303	7.53	44.15	-18.47	-3.37	29.04	-26.79-2.561e+04-8.757e+04-8.307e+04-3.011e+04			
2.650e+04	295	7.85	-10.79	-84.98	-67.97	-27.81	31.19	6.348e+04-2.800e+04-1.953e+045.501e+04		-
1.765e+04	279 69 296	7.32	16.02	-5.23	12.81	-2.02	-7.61	9522.66-7.033e+04-6.621e+04	5409.64	
1.289e+04	304	5.35	-4.39	-31.48	-27.27	-8.60	9.81	8941.56-5.013e+04-4.717e+04	5978.08	-
1.571e+04	303	7.53	38.10	-11.57	4.18	22.35	-23.11-2.490e+04-8.721e+04-8.297e+04-2.915e+04			
2.568e+04	295	7.65	-11.37	-74.73	-61.40	-24.70	25.82	6.197e+04-2.728e+04-1.916e+045.384e+04		-
6641.55	280 1 297	6.33	1.24	-7.06	-5.88	0.06	-2.90	-1352.29-6.636e+04-6.567e+04	-2038.12	
6673.51	305	6.35	-2.14	-14.92	-13.86	-3.20	3.53	1299.08-6.507e+04-6.440e+04	621.17	-
4532.19	304	7.30	4.97	-12.08	-10.38	3.27	5.11	1686.43-7.473e+04-7.446e+04	1416.67	-
1.280e+04	296	7.32	-5.61	-19.07	-18.15	-6.52	-3.38	1.574e+04-6.664e+04-6.460e+041.370e+04		
5619.77	280 3 297	5.35	1.05	-5.97	-4.97	0.05	-2.45	-1144.25-5.615e+04-5.557e+04	-1724.56	
5646.81	305	5.38	-1.81	-12.63	-11.72	-2.71	2.99	1099.22-5.506e+04-5.449e+04	525.61	-
3834.93	304	6.18	4.21	-10.22	-8.78	2.77	4.32	1426.98-6.323e+04-6.300e+04	1198.72	-
1.083e+04	296	6.19	-4.75	-16.13	-15.36	-5.52	-2.86	1.332e+04-5.639e+04-5.466e+041.159e+04		
5130.68	280 22 297	4.99	0.65	-21.62	-21.62	0.65	0.26	-1121.81-5.159e+04-5.106e+04	-1648.96	
5224.31	305	4.99	-2.61	-32.32	-32.31	-2.61	0.38	1083.60-5.017e+04-4.964e+04	545.48	-
3646.06	304	5.70	7.71	-28.50	-28.46	7.68	1.16	815.49-5.764e+04-5.741e+04	587.19	-
9547.41	296	5.78	-5.72	-32.29	-32.02	-5.98	2.64	1.264e+04-5.172e+04-5.027e+041.119e+04		
5117.32	280 54 297	4.91	0.42	-11.28	-11.14	0.28	-1.26	-1071.82-5.125e+04-5.073e+04	-1599.21	
5168.64	305	4.93	-2.32	-19.24	-19.04	-2.52	1.81	1031.91-5.010e+04-4.957e+04	504.02	-
3548.16	304	5.65	4.91	-16.31	-15.91	4.51	2.86	1110.58-5.754e+04-5.733e+04	895.15	-
9732.73	296	5.69	-5.37	-20.98	-20.96	-5.39	-0.57	1.232e+04-5.144e+04-4.991e+041.079e+04		
5108.88	280 69 297	4.87	0.95	-5.43	-4.52	0.04	-2.23	-1040.23-5.104e+04-5.052e+04	-1567.78	
5133.47	305	4.89	-1.64	-11.48	-10.66	-2.46	2.72	999.29-5.006e+04-4.954e+04	477.82	-
3486.30	304	5.62	3.82	-9.29	-7.98	2.52	3.93	1297.25-5.748e+04-5.728e+04	1089.74	-
9849.82	296	5.63	-4.31	-14.67	-13.96	-5.02	-2.60	1.211e+04-5.126e+04-4.969e+041.054e+04		
4914.72	281 1 298	23.60	109.54	-122.38	88.14	-100.97	-67.13-2.206e+05-2.633e+05-2.627e+05-2.212e+05			
3620.30	306	21.01	91.65	-95.71	86.67	-90.73	-30.14-2.126e+05-2.243e+05-2.230e+05-2.138e+05			-
1.429e+04	73	27.89	136.82	-149.15	131.31	-143.64	-39.30-2.745e+05-3.037e+05-2.861e+05-2.921e+05			
3.884e+04	64	33.03	183.87	-189.86	155.81	-161.81	-98.48-2.970e+05-3.747e+05-3.348e+05-3.370e+05			
4158.61	281 3 298	19.97	92.69	-103.55	74.58	-85.44	-56.80-1.867e+05-2.228e+05-2.223e+05-1.872e+05			
3063.33	306	17.78	77.55	-80.98	73.34	-76.77	-25.50-1.799e+05-1.898e+05-1.887e+05-1.809e+05			-
1.209e+04	73	23.60	115.77	-126.20	111.11	-121.54	-33.26-2.323e+05-2.570e+05-2.421e+05-2.472e+05			
3.287e+04	64	27.95	155.58	-160.65	131.84	-136.91	-83.33-2.513e+05-3.171e+05-2.833e+05-2.851e+05			
4030.01	281 22 298	18.26	107.89	-83.44	62.45	-38.01	-81.41-1.704e+05-2.030e+05-2.025e+05-1.709e+05			
	306	16.33	93.87	-64.70	69.08	-39.91	-57.59-1.654e+05-1.731e+05-1.725e+05-1.660e+05			-

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

1976.11												
1.124e+04	73	21.58	125.21	-96.39	102.72	-73.90	-66.91-2.113e+05-2.344e+05-2.204e+05-2.254e+05					
3.000e+04	64	25.60	169.31	-124.70	116.75	-72.13	-112.65-2.288e+05-2.888e+05-2.579e+05-2.597e+05					
3877.15	281 54	298	18.19	91.64	-88.23	65.73	-62.32	-63.17-1.700e+05-2.027e+05-2.023e+05-1.704e+05				
2471.70	306	16.23	77.43	-68.04	67.61	-58.22	-36.50-1.643e+05-1.727e+05-1.719e+05-1.651e+05	-				
1.109e+04	73	21.49	111.19	-105.84	101.67	-96.33	-44.44-2.112e+05-2.339e+05-2.202e+05-2.250e+05					
2.993e+04	64	25.48	150.48	-136.04	118.65	-104.20	-90.04-2.286e+05-2.885e+05-2.577e+05-2.594e+05					
3780.56	281 69	298	18.15	84.26	-94.14	67.80	-77.67	-51.64-1.697e+05-2.025e+05-2.021e+05-1.701e+05				
2784.85	306	16.16	70.50	-73.62	66.67	-69.79	-23.18-1.635e+05-1.725e+05-1.716e+05-1.645e+05	-				
1.099e+04	73	21.46	105.24	-114.73	101.01	-110.49	-30.23-2.111e+05-2.336e+05-2.201e+05-2.247e+05					
2.988e+04	64	25.41	141.44	-146.05	119.85	-124.47	-75.75-2.285e+05-2.883e+05-2.575e+05-2.592e+05					
2.564e+04	282 1	299	17.37	57.23	-84.90	31.71	-59.37	-54.55-1.107e+05-2.085e+05-2.012e+05-1.179e+05	-			
4.267e+04	307	21.23	116.95	-73.79	88.77	-45.61	-67.68-1.428e+05-2.501e+05-2.290e+05-1.639e+05					
6766.28	306	20.17	76.73	-96.60	54.24	-74.11	-58.24-1.962e+05-2.199e+05-1.983e+05-2.177e+05	-				
2.205e+04	298	24.98	126.83	-121.59	71.95	-66.71	-103.06-2.207e+05-2.838e+05-2.748e+05-2.297e+05					
2.169e+04	282 3	299	14.70	48.43	-71.83	26.83	-50.24	-46.16-9.366e+04-1.764e+05-1.703e+05-9.980e+04	-			
3.611e+04	307	17.96	98.95	-62.44	75.11	-38.59	-57.27-1.208e+05-2.116e+05-1.938e+05-1.387e+05					
5725.31	306	17.07	64.93	-81.74	45.90	-62.71	-49.28-1.660e+05-1.860e+05-1.678e+05-1.842e+05	-				
1.866e+04	298	21.13	107.32	-102.88	60.88	-56.45	-87.21-1.867e+05-2.401e+05-2.325e+05-1.943e+05					
2.104e+04	282 6	299	13.45	54.01	-67.62	16.85	-30.46	-56.03-8.366e+04-1.609e+05-1.547e+05-8.988e+04	-			
3.789e+04	307	17.49	162.52	-67.17	103.10	-7.75	-100.59-1.097e+05-2.036e+05-1.844e+05-1.289e+05					
4705.21	306	15.50	85.49	-80.51	32.71	-27.72	-77.31-1.497e+05-1.703e+05-1.508e+05-1.691e+05	-				
1.817e+04	298	19.50	139.74	-97.85	59.53	-17.65	-112.36-1.701e+05-2.209e+05-2.132e+05-1.777e+05					
2.023e+04	282 38	299	13.39	47.29	-65.60	21.47	-39.78	-47.41-8.457e+04-1.606e+05-1.548e+05-9.040e+04	-			
3.479e+04	307	16.77	117.19	-59.93	81.76	-24.50	-70.85-1.098e+05-1.967e+05-1.793e+05-1.272e+05					
5011.38	306	15.51	67.37	-74.80	38.23	-45.67	-57.39-1.505e+05-1.695e+05-1.519e+05-1.681e+05	-				
1.743e+04	298	19.32	113.02	-94.33	56.97	-38.28	-92.09-1.699e+05-2.193e+05-2.121e+05-1.771e+05					
1.972e+04	282 69	299	13.36	44.02	-65.30	24.39	-45.67	-41.96-8.514e+04-1.604e+05-1.548e+05-9.073e+04	-			
3.282e+04	307	16.33	89.96	-56.76	68.28	-35.09	-52.06-1.098e+05-1.924e+05-1.761e+05-1.261e+05					
5204.83	306	15.52	59.02	-74.31	41.73	-57.01	-44.80-1.509e+05-1.691e+05-1.526e+05-1.675e+05	-				
1.696e+04	298	19.21	97.56	-93.53	55.35	-51.31	-79.28-1.697e+05-2.183e+05-2.114e+05-1.767e+05					
5758.19	283 1	300	13.61	48.56	-61.08	12.86	-25.37	-51.38-6.938e+04-1.621e+05-1.618e+05-6.973e+04				
3.957e+04	308	13.03	23.50	-54.05	8.44	-38.99	-30.68-6.718e+04-1.548e+05-1.297e+05-9.222e+04	-				
2277.52	307	18.96	78.70	-94.03	66.97	-82.30	-43.46 -3727.51-1.949e+05-1.949e+05 -3754.64	-				
535.26	299	19.78	84.23	-74.53	20.94	-11.24	-77.73-1.998e+05-2.111e+05-2.111e+05-1.998e+05					
4872.32	283 3	300	11.52	41.09	-51.68	10.88	-21.47	-43.48-5.870e+04-1.372e+05-1.369e+05-5.901e+04				
3.349e+04	308	11.02	19.88	-45.73	7.14	-32.99	-25.96-5.685e+04-1.310e+05-1.098e+05-7.804e+04	-				



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1927.13		307	16.04	66.59	-79.56	56.67	-69.64	-36.77	-3154.04-1.649e+05-1.649e+05	-3177.01	-
452.91		299	16.74	71.27	-63.07	17.72	-9.51	-65.78-1.690e+05-1.786e+05-1.786e+05-1.691e+05			
6347.68	283	22 300	10.43	51.44	-65.64	-12.54	-1.66	-58.29-5.205e+04-1.247e+05-1.242e+05-5.261e+04			
3.235e+04		308	10.34	25.65	-30.35	3.62	-8.31	-27.36-5.143e+04-1.227e+05-1.019e+05-7.215e+04			-
2624.19		307	14.97	64.82	-114.79	31.94	-81.91	-69.46 5843.86-1.495e+05-1.495e+05	5799.53		
423.16		299	15.59	99.89	-46.07	-3.92	57.73	-66.15-1.601e+05-1.625e+05-1.624e+05-1.601e+05			-
5172.15	283	54 300	10.45	41.60	-52.99	1.20	-12.60	-46.79-5.287e+04-1.247e+05-1.243e+05-5.324e+04			
3.118e+04		308	10.14	20.34	-36.56	5.38	-21.60	-25.05-5.158e+04-1.204e+05-1.006e+05-7.141e+04			-
4429.38		307	14.72	61.01	-87.58	43.94	-70.51	-47.38 475.74-1.497e+05-1.497e+05	475.72 -57.49		
		299	15.36	75.11	-49.70	8.35	17.05	-62.26-1.562e+05-1.624e+05-1.624e+05-1.562e+05	88.46		
	283	69 300	10.47	37.36	-46.98	9.89	-19.52	-39.52-5.337e+04-1.247e+05-1.244e+05-5.364e+04			
3.044e+04		308	10.02	18.07	-41.57	6.49	-29.99	-23.60-5.168e+04-1.191e+05-9.979e+04-7.094e+04			-
1751.94		307	14.58	60.54	-72.33	51.52	-63.31	-33.43 -2867.31-1.499e+05-1.499e+05	-2888.19		-
411.74		299	15.22	64.79	-57.33	16.11	-8.65	-59.80-1.537e+05-1.624e+05-1.624e+05-1.537e+05			
2490.76	284	1 301	11.31	34.05	-47.62	-3.48	-10.09	-40.70-4.980e+04-1.345e+05-1.344e+05-4.987e+04			
1.971e+04		309	10.25	24.32	-38.68	7.11	-21.47	-28.07-4.911e+04-1.221e+05-1.163e+05-5.489e+04			-
2.126e+04		308	12.43	36.28	-52.26	17.29	-33.27	-36.34-6.046e+04-1.485e+05-1.431e+05-6.594e+04			-
6139.83		300	13.69	52.10	-60.69	0.86	-9.45	-56.16-8.557e+04-1.642e+05-1.637e+05-8.605e+04			
2107.56	284	3 301	9.57	28.81	-40.29	-2.94	-8.54	-34.44-4.214e+04-1.138e+05-1.137e+05-4.220e+04			
1.668e+04		309	8.68	20.58	-32.73	6.01	-18.17	-23.75-4.156e+04-1.033e+05-9.843e+04-4.645e+04			-
1.799e+04		308	10.52	30.70	-44.22	14.63	-28.15	-30.75-5.116e+04-1.257e+05-1.211e+05-5.579e+04			-
5195.24		300	11.58	44.09	-51.35	0.73	-8.00	-47.52-7.240e+04-1.389e+05-1.385e+05-7.281e+04			
1998.93	284	22 301	8.81	35.40	-42.03	-19.76	13.14	-35.05-3.898e+04-1.039e+05-1.039e+05-3.904e+04			
1.519e+04		309	8.00	26.83	-33.44	-8.44	1.82	-29.70-3.869e+04-9.453e+04-9.004e+04-4.318e+04			-
1.639e+04		308	9.68	32.31	-43.16	-0.82	-10.04	-37.45-4.599e+04-1.148e+05-1.106e+05-5.014e+04			-
5277.86		300	10.58	55.81	-51.35	-16.71	21.16	-50.13-6.617e+04-1.268e+05-1.264e+05-6.664e+04			
2055.77	284	37 301	8.72	30.14	-39.36	-4.03	-5.19	-34.75-3.843e+04-1.036e+05-1.036e+05-3.849e+04			
1.502e+04		309	7.91	22.07	-32.57	3.78	-14.28	-25.79-3.797e+04-9.399e+04-8.962e+04-4.234e+04			-
1.637e+04		308	9.59	31.68	-41.68	13.07	-23.07	-31.92-4.649e+04-1.145e+05-1.103e+05-5.069e+04			-
4785.24		300	10.54	44.18	-48.83	-0.85	-3.80	-46.48-6.602e+04-1.264e+05-1.260e+05-6.640e+04			
1915.97	284	69 301	8.70	26.19	-36.63	-2.68	-7.76	-31.31-3.831e+04-1.034e+05-1.034e+05-3.836e+04			
1.516e+04		309	7.89	18.71	-29.75	5.47	-16.52	-21.59-3.778e+04-9.393e+04-8.948e+04-4.222e+04			-
1.636e+04		308	9.56	27.91	-40.20	13.30	-25.59	-27.96-4.651e+04-1.143e+05-1.100e+05-5.072e+04			-
4722.95		300	10.53	40.08	-46.69	0.66	-7.27	-43.20-6.582e+04-1.263e+05-1.259e+05-6.619e+04			
8190.69	285	1 302	10.31	24.44	-40.27	-11.53	-4.30	-32.15-1.785e+04-1.151e+05-1.144e+05-1.855e+04			
6746.93		310	8.03	24.32	-27.43	3.41	-6.51	-25.40-3.767e+04-9.571e+04-9.492e+04-3.847e+04			-
1.586e+04		309	10.24	24.00	-35.98	1.90	-13.88	-28.94-4.739e+04-1.217e+05-1.181e+05-5.094e+04			-
		301	11.37	39.44	-45.90	-5.58	-0.87	-42.60-5.114e+04-1.353e+05-1.345e+05-5.193e+04			



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

287 1.403e+04	1	304	7.45	10.82	-1.85	-0.47	9.44	-3.95	683.82-7.718e+04-7.456e+04	-1933.94	
1.278e+04		312	6.84	-13.17	-25.73	-24.11	-14.80	-4.22	1.369e+04-6.273e+04-6.052e+04	1.149e+04	-
9533.40		311	12.35	40.41	-9.28	40.31	-9.18	2.23	6.607e+04-8.015e+04-7.952e+04	6.545e+04	
1127.74		303	7.98	8.24	-37.97	-27.03	-2.70	-19.64	2.998e+04-9.292e+04-9.290e+04	-3.000e+04	
1.188e+04	3	304	6.31	9.15	-1.57	-0.40	7.98	-3.34	578.62-6.530e+04-6.309e+04	-1636.41	
1.082e+04		312	5.79	-11.15	-21.77	-20.40	-12.52	-3.57	1.159e+04-5.308e+04-5.121e+04	9725.15	-
8066.72		311	10.45	34.20	-7.85	34.11	-7.76	1.89	5.591e+04-6.782e+04-6.729e+04	5.538e+04	
954.24		303	6.76	6.97	-32.13	-22.87	-2.28	-16.62	2.537e+04-7.862e+04-7.860e+04	-2.538e+04	
1.057e+04	5	304	5.80	14.00	1.69	1.69	14.00	-0.09	-429.14-6.047e+04-5.855e+04	-2352.72	
9326.40		312	5.22	-12.39	-38.62	-36.84	-14.17	-6.60	1.090e+04-4.681e+04-4.526e+04	9354.11	-
5617.76		311	10.03	52.67	-6.04	51.69	-5.06	7.50	5.097e+04-6.692e+04-6.665e+04	5.070e+04	
1972.53		303	6.10	7.05	-44.39	-34.75	-2.60	-20.08	2.298e+04-7.052e+04-7.044e+04	-2.306e+04	
1.071e+04	37	304	5.76	10.23	0.07	0.43	9.87	-1.90	155.90-5.979e+04-5.781e+04	-1822.61	
9636.59		312	5.24	-11.05	-27.04	-25.63	-12.46	-4.54	1.068e+04-4.769e+04-4.605e+04	9039.71	-
6669.09		311	9.70	39.36	-6.63	39.02	-6.29	3.96	5.087e+04-6.368e+04-6.329e+04	5.048e+04	
1295.36		303	6.13	6.58	-35.05	-26.19	-2.28	-17.03	2.304e+04-7.110e+04-7.106e+04	-2.307e+04	
1.080e+04	69	304	5.73	8.32	-1.43	-0.36	7.26	-3.04	526.02-5.937e+04-5.735e+04	-1487.65	
9832.58		312	5.26	-10.13	-19.79	-18.54	-11.38	-3.24	1.053e+04-4.825e+04-4.656e+04	8841.05	-
7333.39		311	9.50	31.09	-7.13	31.01	-7.06	1.72	5.082e+04-6.165e+04-6.117e+04	5.034e+04	
867.49		303	6.14	6.34	-29.21	-20.79	-2.08	-15.11	2.306e+04-7.147e+04-7.146e+04	-2.308e+04	
5691.67	1	305	6.30	-0.76	-15.19	-14.73	-1.22	-2.53	1134.51-6.445e+04-6.395e+04	636.75	
5702.78		313	6.00	-2.27	-8.27	-7.82	-2.72	1.58	-1530.95-6.303e+04-6.250e+04	-2064.39	-
4086.21		312	7.01	0.58	-4.92	-1.74	-2.61	-2.72	1.478e+04-6.448e+04-6.427e+04	1.457e+04	-
1.130e+04		304	7.22	3.75	-16.66	-15.48	2.57	-4.76	174.58-7.450e+04-7.275e+04	-1577.88	
4816.03	3	305	5.33	-0.64	-12.85	-12.46	-1.03	-2.14	959.97-5.453e+04-5.411e+04	538.79	
4825.43		313	5.08	-1.92	-6.99	-6.61	-2.30	1.34	-1295.42-5.333e+04-5.288e+04	-1746.80	-
3457.56		312	5.93	0.49	-4.17	-1.47	-2.21	-2.30	1.251e+04-5.456e+04-5.438e+04	1.233e+04	-
9565.54		304	6.11	3.17	-14.10	-13.10	2.18	-4.02	147.72-6.304e+04-6.156e+04	-1335.13	
4472.67	22	305	4.94	-1.31	-32.49	-32.49	-1.31	-0.16	966.09-4.963e+04-4.923e+04	567.56	
4442.11		313	4.73	-1.18	-19.07	-19.00	-1.25	-1.12	-1275.34-4.910e+04-4.868e+04	-1691.56	-
2745.84		312	5.53	-0.51	-22.40	-18.04	-4.86	-8.74	1.210e+04-4.988e+04-4.975e+04	1.198e+04	-
8919.75		304	5.64	8.28	-32.12	-31.88	8.03	-3.16	-303.38-5.750e+04-5.607e+04	-1730.09	
4414.79	54	305	4.88	-1.00	-19.61	-19.52	-1.08	-1.26	908.83-4.959e+04-4.921e+04	519.91	
4408.19		313	4.66	-1.76	-11.05	-11.04	-1.77	0.31	-1215.48-4.872e+04-4.831e+04	-1628.10	-
2989.36		312	5.44	-0.24	-10.68	-7.81	-3.11	-4.66	1.165e+04-4.971e+04-4.956e+04	1.151e+04	-
8782.60		304	5.58	4.81	-20.13	-19.64	4.32	-3.46	-35.49-5.738e+04-5.600e+04	-1413.68	
288	69	305	4.84	-0.58	-11.68	-11.33	-0.94	-1.95	872.70-4.957e+04-4.919e+04	489.81	

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

4378.21												
4386.75	313	4.62	-1.75	-6.36	-6.01	-2.09	1.22	-1177.65-4.848e+04-4.807e+04	-1588.00	-		
3143.24	312	5.39	0.44	-3.79	-1.34	-2.01	-2.09	1.137e+04-4.960e+04-4.944e+04	1.121e+04	-		
8695.94	304	5.55	2.88	-12.81	-11.91	1.98	-3.66	134.29-5.731e+04-5.596e+04	-1213.76			
289	1	73	27.90	140.81	-150.75	38.49	-48.43	139.15-2.746e+05-3.037e+05-3.032e+05	-2.750e+05			
3641.62	306	21.02	89.53	-98.14	30.55	-39.16	87.12-2.128e+05-2.237e+05	-2.132e+05-2.233e+05				
2026.78	314	23.61	99.75	-114.30	-12.99	-1.56	106.87-2.203e+05-2.628e+05	-2.368e+05-2.463e+05				
2.073e+04	74	33.03	175.03	-187.83	-7.39	-5.41	181.43-2.970e+05-3.746e+05	-3.711e+05-3.005e+05				
1.614e+04	289	3	73	23.60	119.15	-127.56	32.57	-40.98	117.74-2.323e+05-2.570e+05-2.566e+05	-2.327e+05		
3081.37	306	17.79	75.76	-83.05	25.85	-33.14	73.72-1.801e+05-1.893e+05	-1.804e+05-1.890e+05				
1714.96	314	19.98	84.40	-96.71	-10.99	-1.32	90.43-1.864e+05-2.224e+05	-2.004e+05-2.084e+05				
1.754e+04	74	27.95	148.10	-158.93	-6.25	-4.58	153.52-2.513e+05-3.170e+05	-3.140e+05-2.543e+05				
1.365e+04	289	23	73	21.51	101.37	-147.60	-26.45	-19.78	124.44-2.111e+05-2.328e+05-2.325e+05	-2.114e+05		
2724.72	306	16.11	64.17	-104.50	-26.51	-13.83	84.10-1.620e+05-1.713e+05	-1.621e+05-1.712e+05				
949.93	314	18.16	78.32	-118.53	-57.77	17.55	90.93-1.690e+05-2.014e+05	-1.813e+05-1.892e+05				
1.568e+04	74	25.51	131.16	-183.47	-67.42	15.11	151.81-2.283e+05-2.876e+05	-2.850e+05-2.309e+05				
1.231e+04	289	55	73	21.48	104.09	-126.68	7.90	-30.49	113.78-2.111e+05-2.333e+05-2.330e+05	-2.115e+05		
2771.61	306	16.15	65.10	-84.78	4.13	-23.81	73.63-1.630e+05-1.718e+05	-1.633e+05-1.716e+05				
1323.20	314	18.16	76.10	-98.53	-28.49	6.06	85.59-1.693e+05-2.019e+05	-1.818e+05-1.894e+05				
1.584e+04	74	25.45	132.09	-158.38	-29.59	3.30	144.30-2.284e+05-2.880e+05	-2.853e+05-2.311e+05				
1.237e+04	289	69	73	21.46	108.31	-115.96	29.60	-37.25	107.04-2.112e+05-2.336e+05-2.332e+05	-2.116e+05		
2801.24	306	16.17	68.87	-75.50	23.50	-30.13	67.02-1.637e+05-1.721e+05	-1.640e+05-1.718e+05				
1559.06	314	18.16	76.73	-87.92	-9.99	-1.20	82.21-1.695e+05-2.022e+05	-1.822e+05-1.895e+05				
1.594e+04	74	25.41	134.64	-144.49	-5.69	-4.16	139.56-2.284e+05-2.882e+05	-2.855e+05-2.311e+05				
1.241e+04	290	1	306	20.23	92.23	-102.64	28.03	-38.44	91.59-1.998e+05-2.195e+05-2.097e+05	-2.096e+05		
9839.07	307	20.12	77.53	-57.15	54.46	-34.08	50.75-1.456e+05-2.393e+05	-2.039e+05-1.811e+05				
4.546e+04	315	17.34	57.78	-90.64	-30.72	-2.15	72.82-1.103e+05-2.076e+05	-1.116e+05-2.062e+05				
1.131e+04	314	24.84	102.65	-108.93	-3.92	-2.36	105.78-2.209e+05-2.820e+05	-2.504e+05-2.526e+05				
3.051e+04	290	3	306	17.12	78.04	-86.85	23.72	-32.52	77.50-1.690e+05-1.857e+05-1.774e+05	-1.773e+05		
8325.37	307	17.03	65.60	-48.36	46.08	-28.84	42.94-1.232e+05-2.025e+05	-1.725e+05-1.532e+05				
3.847e+04	315	14.68	48.89	-76.70	-25.99	-1.82	61.62-9.332e+04-1.756e+05	-9.445e+04-1.745e+05				
9572.42	314	21.02	86.85	-92.17	-3.32	-2.00	89.51-1.870e+05-2.386e+05	-2.118e+05-2.137e+05				
2.582e+04	290	22	306	15.62	92.78	-80.55	68.20	-55.96	60.48-1.526e+05-1.697e+05-1.628e+05	-1.596e+05		
8393.59	307	16.49	103.93	-26.20	103.91	-26.18	1.60-1.118e+05-1.954e+05	-1.639e+05-1.432e+05				
4.051e+04	315	13.42	45.56	-63.11	-1.75	-15.80	53.88-8.336e+04-1.602e+05	-8.421e+04-1.594e+05				
8029.35	314	19.20	91.91	-58.90	49.43	-16.42	67.84-1.703e+05-2.195e+05	-1.946e+05-1.952e+05				
2.462e+04	290	54	306	15.58	77.44	-77.61	39.62	-39.79	66.59-1.533e+05-1.691e+05-1.619e+05	-1.606e+05		
7887.99												

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

3.712e+04	307	15.80	72.04	-32.33	65.91	-26.20	24.54-1.119e+05-1.885e+05-1.596e+05-1.408e+05	
8441.67	315	13.37	44.19	-66.48	-15.15	-7.13	55.19-8.427e+04-1.599e+05-8.522e+04-1.589e+05	
2.392e+04	314	19.14	82.04	-72.22	17.29	-7.47	76.13-1.701e+05-2.179e+05-1.934e+05-1.947e+05	
7568.52	290 69 306	15.56	70.95	-78.95	21.56	-29.57	70.46-1.537e+05-1.688e+05-1.613e+05-1.612e+05	-
3.497e+04	307	15.48	59.64	-43.96	41.89	-26.22	39.04-1.120e+05-1.841e+05-1.568e+05-1.393e+05	
8702.20	315	13.34	44.45	-69.73	-23.63	-1.65	56.02-8.483e+04-1.597e+05-8.586e+04-1.586e+05	
2.347e+04	314	19.11	78.96	-83.79	-3.02	-1.81	81.37-1.700e+05-2.169e+05-1.926e+05-1.943e+05	
5.506e+04	291 1 307	17.95	-12.14	-68.38	-29.49	-51.04	25.97 5609.74-1.818e+05-1.227e+04-1.639e+05	
2.576e+04	308	13.79	48.89	-53.44	1.15	-5.70	51.05-6.768e+04-1.639e+05-7.515e+04-1.565e+05	-
3.195e+04	316	13.48	14.23	-52.55	-21.37	-16.95	33.32-6.467e+04-1.594e+05-7.707e+04-1.470e+05	
956.10	315	19.98	93.59	-75.12	20.77	-2.30	83.56-2.046e+05-2.107e+05-2.047e+05-2.105e+05	-
4.659e+04	291 3 307	15.19	-10.28	-57.86	-24.95	-43.18	21.98 4746.70-1.538e+05-1.038e+04-1.387e+05	
2.179e+04	308	11.67	41.37	-45.22	0.97	-4.82	43.20-5.727e+04-1.387e+05-6.359e+04-1.324e+05	-
2.704e+04	316	11.41	12.04	-44.47	-18.08	-14.34	28.19-5.472e+04-1.349e+05-6.521e+04-1.244e+05	
809.01	315	16.91	79.19	-63.56	17.58	-1.94	70.71-1.731e+05-1.782e+05-1.732e+05-1.781e+05	-
4.822e+04	291 6 307	14.30	-20.98	-78.87	-23.10	-76.74	-10.89 1.351e+04-1.400e+05 -3534.17-1.229e+05	
2.122e+04	308	10.93	52.46	-37.33	22.78	-7.65	42.24-5.183e+04-1.297e+05-5.812e+04-1.234e+05	-
2.643e+04	316	10.47	14.93	-48.79	8.16	-42.02	19.63-4.827e+04-1.228e+05-5.927e+04-1.118e+05	
3081.81	315	15.80	124.73	-64.43	79.58	-19.28	80.64-1.598e+05-1.660e+05-1.630e+05-1.628e+05	-
4.463e+04	291 38 307	14.00	-20.89	-55.73	-22.85	-53.77	8.03 7852.87-1.399e+05 -7153.53-1.249e+05	
2.036e+04	308	10.73	42.97	-39.25	9.36	-5.65	40.42-5.197e+04-1.275e+05-5.793e+04-1.215e+05	-
2.529e+04	316	10.41	9.28	-40.46	-6.91	-24.26	23.31-4.918e+04-1.227e+05-5.928e+04-1.126e+05	
1643.98	315	15.53	90.80	-58.74	40.61	-8.55	70.61-1.588e+05-1.631e+05-1.596e+05-1.623e+05	-
4.235e+04	291 69 307	13.81	-9.34	-52.60	-22.69	-39.26	19.98 4315.18-1.399e+05 -9440.47-1.261e+05	
1.981e+04	308	10.61	37.61	-41.11	0.89	-4.38	39.27-5.206e+04-1.261e+05-5.781e+04-1.204e+05	-
2.458e+04	316	10.37	10.95	-40.43	-16.44	-13.04	25.63-4.974e+04-1.226e+05-5.928e+04-1.131e+05	
735.47	315	15.37	72.00	-57.78	15.98	-1.77	64.28-1.573e+05-1.620e+05-1.575e+05-1.619e+05	-
5673.20	292 1 308	12.42	34.29	-55.07	-0.05	-20.73	43.47-5.996e+04-1.479e+05-6.033e+04-1.475e+05	-
7685.96	309	10.29	27.95	-41.84	4.61	-18.49	32.93-4.906e+04-1.224e+05-4.987e+04-1.216e+05	-
1.731e+04	317	11.32	22.56	-39.85	-14.06	-3.22	30.73-4.896e+04-1.338e+05-5.265e+04-1.301e+05	
2.046e+04	316	13.72	35.20	-48.68	-9.34	-4.14	41.86-8.408e+04-1.639e+05-8.972e+04-1.582e+05	
4800.40	292 3 308	10.51	29.02	-46.60	-0.04	-17.54	36.78-5.074e+04-1.251e+05-5.105e+04-1.248e+05	-
6503.50	309	8.70	23.65	-35.40	3.90	-15.65	27.86-4.151e+04-1.036e+05-4.220e+04-1.029e+05	-
1.464e+04	317	9.58	19.09	-33.72	-11.90	-2.73	26.00-4.143e+04-1.132e+05-4.455e+04-1.101e+05	
1.731e+04	316	11.61	29.78	-41.19	-7.91	-3.50	35.42-7.114e+04-1.387e+05-7.592e+04-1.339e+05	
4198.19	292 6 308	9.68	31.69	-46.27	17.90	-32.49	29.74-4.560e+04-1.142e+05-4.585e+04-1.140e+05	-
	309	8.02	32.47	-38.71	23.70	-29.94	23.40-3.865e+04-9.476e+04-3.930e+04-9.411e+04	-

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

6004.90										
1.336e+04	317	8.82	25.93	-35.42	10.20	-19.68	26.79-3.833e+04-1.034e+05-4.120e+04-1.006e+05			
1.626e+04	316	10.66	40.58	-39.87	22.22	-21.51	33.76-6.502e+04-1.267e+05-6.966e+04-1.220e+05			
4299.80	292 38 308	9.60	27.47	-42.91	6.91	-22.35	32.01-4.592e+04-1.139e+05-4.619e+04-1.137e+05	-		
5948.14	309	7.96	24.76	-33.72	11.35	-20.31	24.58-3.809e+04-9.439e+04-3.872e+04-9.376e+04	-		
1.333e+04	317	8.75	19.16	-30.98	-2.68	-9.14	24.86-3.792e+04-1.031e+05-4.077e+04-1.003e+05			
1.594e+04	316	10.59	30.55	-36.63	4.20	-10.28	32.80-6.481e+04-1.263e+05-6.927e+04-1.218e+05			
4364.00	292 69 308	9.56	26.38	-42.36	-0.04	-15.95	33.44-4.612e+04-1.137e+05-4.641e+04-1.135e+05	-		
5912.27	309	7.91	21.50	-32.18	3.54	-14.23	25.33-3.774e+04-9.416e+04-3.836e+04-9.353e+04	-		
1.331e+04	317	8.71	17.36	-30.65	-10.81	-2.48	23.64-3.766e+04-1.029e+05-4.050e+04-1.001e+05			
1.574e+04	316	10.55	27.08	-37.45	-7.19	-3.18	32.20-6.468e+04-1.261e+05-6.902e+04-1.217e+05			
7515.47	293 1 309	10.29	29.62	-40.00	6.28	-16.65	32.87-4.726e+04-1.222e+05-4.802e+04-1.215e+05	-		
1084.05	310	7.96	21.89	-33.65	10.03	-21.79	22.76-3.737e+04-9.410e+04-3.739e+04-9.408e+04	-		
1.839e+04	318	10.35	15.24	-28.08	-12.54	-0.30	20.78-1.721e+04-1.150e+05-2.080e+04-1.115e+05			
1.748e+04	317	11.36	23.63	-35.10	-7.78	-3.69	29.29-5.038e+04-1.345e+05-5.418e+04-1.307e+05			
6359.24	293 3 309	8.70	25.06	-33.85	5.31	-14.09	27.81-3.999e+04-1.034e+05-4.063e+04-1.028e+05	-		
917.27	310	6.74	18.52	-28.47	8.49	-18.44	19.26-3.162e+04-7.962e+04-3.163e+04-7.961e+04	-		
1.556e+04	318	8.75	12.90	-23.76	-10.61	-0.25	17.58-1.456e+04-9.735e+04-1.760e+04-9.431e+04			
1.479e+04	317	9.61	19.99	-29.70	-6.59	-3.12	24.79-4.263e+04-1.138e+05-4.584e+04-1.106e+05			
5845.06	293 6 309	8.02	31.90	-37.51	23.43	-29.04	22.72-3.712e+04-9.456e+04-3.772e+04-9.396e+04	-		
657.25	310	6.21	30.95	-38.54	28.15	-35.74	13.66-3.064e+04-7.265e+04-3.065e+04-7.264e+04	-		
1.408e+04	318	8.09	15.94	-26.50	4.07	-14.63	19.05-1.389e+04-8.928e+04-1.662e+04-8.656e+04			
1.351e+04	317	8.85	28.85	-33.36	15.21	-19.72	25.74-3.954e+04-1.040e+05-4.250e+04-1.011e+05			
5805.88	293 38 309	7.95	25.32	-32.38	12.03	-19.09	24.29-3.665e+04-9.422e+04-3.724e+04-9.363e+04	-		
765.49	310	6.16	21.28	-29.76	15.63	-24.11	16.02-2.948e+04-7.249e+04-2.949e+04-7.248e+04	-		
1.412e+04	318	8.01	12.12	-22.26	-4.34	-5.80	17.17-1.349e+04-8.880e+04-1.624e+04-8.605e+04			
1.347e+04	317	8.78	20.89	-28.05	2.22	-9.37	23.77-3.906e+04-1.037e+05-4.200e+04-1.007e+05			
5781.13	293 69 309	7.91	22.79	-30.77	4.83	-12.81	25.28-3.636e+04-9.401e+04-3.694e+04-9.342e+04	-		
833.88	310	6.12	16.84	-25.88	7.71	-16.76	17.51-2.874e+04-7.239e+04-2.876e+04-7.237e+04	-		
1.415e+04	318	7.96	11.72	-21.60	-9.65	-0.23	15.98-1.324e+04-8.850e+04-1.600e+04-8.574e+04			
1.344e+04	317	8.74	18.18	-27.00	-5.99	-2.84	22.53-3.875e+04-1.035e+05-4.168e+04-1.005e+05			
2074.84	294 1 310	7.81	24.01	-19.72	10.25	-5.97	20.31-3.979e+04-9.337e+04-3.987e+04-9.329e+04	-		
2.443e+04	311	7.32	32.08	-53.06	26.75	-47.73	20.63-2.322e+04-8.285e+04-3.594e+04-7.012e+04			
1244.98	319	9.87	4.38	-18.53	-15.64	1.49	7.61 1.544e+04-9.375e+04 1.543e+04-9.373e+04			
2.240e+04	318	10.86	12.37	-28.63	-7.15	-9.11	20.48-1.490e+04-1.191e+05-1.996e+04-1.140e+05			
1755.63	294 3 310	6.61	20.31	-16.69	8.68	-5.05	17.18-3.367e+04-7.900e+04-3.374e+04-7.894e+04	-		
2.067e+04	311	6.20	27.14	-44.90	22.63	-40.39	17.45-1.964e+04-7.010e+04-3.041e+04-5.933e+04			

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1053.44	319	8.35	3.71	-15.68	-13.23	1.26	6.44	1.307e+04	-7.932e+04	1.305e+04	-7.931e+04	
1.895e+04	318	9.19	10.47	-24.23	-6.05	-7.71	17.33	-1.261e+04	-1.008e+05	-1.689e+04	-9.649e+04	
294 22	310	6.03	28.59	-28.76	27.53	-27.70	7.73	-3.254e+04	-7.122e+04	-3.259e+04	-7.118e+04	-
1324.46	311	6.20	44.57	-35.61	43.77	-34.80	-8.00	-1.849e+04	-7.119e+04	-3.167e+04	-5.802e+04	
2.282e+04	319	7.63	-1.45	-28.51	-11.86	-18.10	13.17	1.308e+04	-7.169e+04	1.308e+04	-7.168e+04	-
449.10	318	8.54	11.57	-19.16	7.67	-15.26	10.23	-1.206e+04	-9.341e+04	-1.635e+04	-8.912e+04	
1.818e+04	310	6.02	20.18	-18.22	15.49	-13.54	12.57	-3.136e+04	-7.159e+04	-3.141e+04	-7.153e+04	-
294 54	311	5.85	30.22	-36.64	29.56	-35.98	6.62	-1.813e+04	-6.660e+04	-2.920e+04	-5.552e+04	
1490.87	319	7.57	-1.28e-03	-18.27	-11.96	-6.31	8.69	1.234e+04	-7.194e+04	1.234e+04	-7.194e+04	412.97
2.035e+04	318	8.43	9.17	-19.77	-0.40	-10.20	13.62	-1.170e+04	-9.230e+04	-1.574e+04	-8.826e+04	
1.760e+04	310	6.01	18.47	-15.17	7.89	-4.59	15.62	-3.061e+04	-7.182e+04	-3.067e+04	-7.176e+04	-
294 69	311	5.63	24.68	-40.82	20.58	-36.72	15.87	-1.786e+04	-6.373e+04	-2.765e+04	-5.394e+04	
1596.03	319	7.59	3.37	-14.26	-12.03	1.15	5.85	1.188e+04	-7.211e+04	1.187e+04	-7.210e+04	957.67
1.879e+04	318	8.36	9.52	-22.03	-5.50	-7.01	15.75	-1.146e+04	-9.161e+04	-1.536e+04	-8.771e+04	
1.723e+04	311	11.46	-17.77	-71.31	-30.31	-58.77	-22.67	7.761e+04	-5.963e+04	7.141e+04	-5.344e+04	
295 1	312	7.64	13.33	-7.98	-4.02	9.37	8.28	1.296e+04	-7.163e+04	1.124e+04	-6.990e+04	-
2.850e+04	320	7.27	-4.48	-27.84	-8.35	-23.97	-8.69	5654.92	-7.229e+04	304.80	-6.694e+04	
1.195e+04	319	8.28	40.66	-11.01	24.19	5.45	24.07	-3.705e+04	-9.841e+04	-3.719e+04	-9.826e+04	-
1.971e+04	311	9.69	-15.04	-60.34	-25.65	-49.73	-19.18	6.567e+04	-5.046e+04	6.042e+04	-4.522e+04	
2986.39	312	6.46	11.28	-6.75	-3.40	7.93	7.01	1.097e+04	-6.061e+04	9508.07	-5.915e+04	-
295 3	320	6.15	-3.79	-23.55	-7.07	-20.28	-7.35	4784.93	-6.117e+04	257.90	-5.664e+04	
2.411e+04	319	7.01	34.40	-9.32	20.47	4.61	20.37	-3.135e+04	-8.327e+04	-3.147e+04	-8.315e+04	-
1.011e+04	311	8.53	-14.96	-76.25	-25.00	-66.21	-22.68	6.023e+04	-4.129e+04	5.448e+04	-3.553e+04	
1.668e+04	312	6.06	28.65	-3.44	-0.48	25.68	9.29	9606.17	-5.654e+04	8158.65	-5.510e+04	-
2526.95	320	5.53	-6.34	-27.31	-12.99	-20.66	-9.76	5335.82	-5.454e+04	1087.20	-5.029e+04	
295 21	319	6.54	41.74	-4.45	18.86	18.43	23.09	-2.833e+04	-7.691e+04	-2.857e+04	-7.667e+04	-
2.347e+04	311	8.70	-14.26	-63.04	-23.97	-53.34	-19.47	5.989e+04	-4.408e+04	5.475e+04	-3.895e+04	
9677.81	312	5.95	17.27	-4.99	-2.08	14.36	7.50	9828.73	-5.566e+04	8455.89	-5.428e+04	-
1.537e+04	320	5.57	-4.72	-23.55	-8.97	-19.30	-7.87	4731.38	-5.519e+04	564.64	-5.103e+04	
3372.02	319	6.44	34.99	-6.58	18.71	9.71	20.29	-2.844e+04	-7.616e+04	-2.859e+04	-7.601e+04	-
295 53	311	8.81	-13.67	-54.85	-23.32	-45.21	-17.44	5.970e+04	-4.587e+04	5.493e+04	-4.110e+04	
2.252e+04	312	5.87	10.25	-6.14	-3.09	7.21	6.37	9970.04	-5.510e+04	8643.70	-5.377e+04	-
9381.74	320	5.59	-3.45	-21.41	-6.43	-18.44	-6.68	4349.94	-5.561e+04	234.46	-5.149e+04	
1.524e+04	319	6.37	31.27	-8.47	18.61	4.20	18.52	-2.850e+04	-7.570e+04	-2.861e+04	-7.559e+04	-
2713.39	312	6.95	-6.26	-15.02	-7.85	-13.42	3.38	1.591e+04	-6.282e+04	1.579e+04	-6.270e+04	-
295 69	313	6.03	2.64	-5.72	0.47	-3.55	3.66	-1693.50	-6.353e+04	-2319.04	-6.291e+04	-
2.192e+04	321	6.21	-2.05	-9.55	-3.85	-7.76	-3.20	1266.19	-6.381e+04	760.06	-6.330e+04	
9194.67	320	7.17	6.52	-8.16	4.74	-6.38	-4.79	676.49	-7.413e+04	-1616.31	-7.183e+04	
1.516e+04												
2297.22												
296 1												
3064.64												
6188.09												
5716.77												



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1.289e+04	296	3	312	5.88	-5.29	-12.71	-6.64	-11.36	2.86	1.346e+04	-5.316e+04	1.336e+04	-5.305e+04	-
2593.16			313	5.10	2.23	-4.84	0.40	-3.01	3.10	-1432.96	-5.376e+04	-1962.27	-5.323e+04	-
5236.07			321	5.25	-1.74	-8.08	-3.26	-6.57	-2.71	1071.39	-5.399e+04	643.13	-5.357e+04	-
4837.27			320	6.07	5.51	-6.91	4.01	-5.40	-4.05	572.41	-6.272e+04	-1367.64	-6.078e+04	-
1.091e+04	296	6	312	5.48	-8.05	-27.87	-8.93	-26.99	-4.08	1.298e+04	-4.862e+04	1.292e+04	-4.855e+04	-
1962.82			313	4.75	1.20	-15.72	1.19	-15.71	0.44	-1400.32	-4.949e+04	-1887.73	-4.900e+04	-
4816.72			321	4.87	-3.30	-27.16	-3.32	-27.14	-0.72	1067.98	-4.914e+04	662.90	-4.874e+04	-
4491.67			320	5.60	10.00	-25.18	9.70	-24.88	-3.25	96.53	-5.722e+04	-1758.50	-5.537e+04	-
1.014e+04	296	38	312	5.40	-7.16	-16.78	-7.16	-16.78	0.01	1.252e+04	-4.844e+04	1.244e+04	-4.836e+04	-
2204.63			313	4.68	1.09	-8.16	0.68	-7.76	1.90	-1340.49	-4.911e+04	-1824.09	-4.863e+04	-
4782.00			321	4.81	-2.82	-14.45	-3.10	-14.17	-1.79	1010.36	-4.911e+04	614.95	-4.871e+04	-
4433.97			320	5.55	6.63	-13.28	5.99	-12.64	-3.52	355.93	-5.710e+04	-1442.79	-5.530e+04	-
1.001e+04	296	69	312	5.35	-4.81	-11.55	-6.04	-10.33	2.60	1.224e+04	-4.832e+04	1.215e+04	-4.823e+04	-
2357.42			313	4.64	2.03	-4.40	0.36	-2.73	2.82	-1302.69	-4.887e+04	-1783.88	-4.839e+04	-
4760.07			321	4.77	-1.58	-7.35	-2.96	-5.97	-2.46	974.00	-4.908e+04	584.66	-4.870e+04	-
4397.52			320	5.52	5.01	-6.28	3.65	-4.91	-3.68	520.38	-5.702e+04	-1243.31	-5.526e+04	-
9918.28	297	1	74	33.05	179.60	-191.30	69.43	-81.13	169.48	-2.964e+05	-3.752e+05	-3.623e+05	-3.094e+05	-
2.921e+04			314	23.86	103.26	-119.58	32.20	-48.52	103.85	-2.211e+05	-2.663e+05	-2.308e+05	-2.566e+05	-
1.851e+04			322	25.77	118.09	-136.70	-17.27	-1.34	127.15	-2.230e+05	-2.941e+05	-2.574e+05	-2.597e+05	-
3.549e+04			75	37.68	225.07	-242.04	-1.28	-15.70	233.44	-3.029e+05	-4.388e+05	-4.270e+05	-3.148e+05	-
3.839e+04	297	3	74	27.97	151.97	-161.87	58.75	-68.65	143.41	-2.508e+05	-3.175e+05	-3.066e+05	-2.618e+05	-
2.471e+04			314	20.19	87.37	-101.18	27.25	-41.06	87.87	-1.871e+05	-2.253e+05	-1.953e+05	-2.172e+05	-
1.566e+04			322	21.80	99.92	-115.67	-14.61	-1.14	107.59	-1.887e+05	-2.488e+05	-2.178e+05	-2.198e+05	-
3.003e+04			75	31.89	190.44	-204.81	-1.09	-13.28	197.53	-2.563e+05	-3.713e+05	-3.613e+05	-2.663e+05	-
3.248e+04	297	7	74	25.53	112.08	-170.05	-16.35	-41.62	140.50	-2.277e+05	-2.882e+05	-2.782e+05	-2.378e+05	-
2.246e+04			314	18.34	65.86	-113.65	-29.51	-18.29	89.58	-1.694e+05	-2.041e+05	-1.765e+05	-1.970e+05	-
1.406e+04			322	19.85	76.77	-132.11	-74.03	18.69	93.59	-1.709e+05	-2.258e+05	-1.973e+05	-1.994e+05	-
2.739e+04			75	29.16	145.83	-218.53	-82.82	10.13	176.15	-2.327e+05	-3.373e+05	-3.281e+05	-2.419e+05	-
2.957e+04	297	39	74	25.46	126.25	-154.21	26.40	-54.36	134.29	-2.279e+05	-2.885e+05	-2.785e+05	-2.379e+05	-
2.246e+04			314	18.35	72.22	-98.42	3.75	-29.95	83.64	-1.698e+05	-2.046e+05	-1.771e+05	-1.972e+05	-
1.417e+04			322	19.83	83.49	-113.69	-36.80	6.60	96.17	-1.713e+05	-2.260e+05	-1.977e+05	-1.996e+05	-
2.734e+04			75	29.05	160.77	-196.92	-32.67	-3.48	178.25	-2.329e+05	-3.375e+05	-3.283e+05	-2.420e+05	-
2.955e+04	297	69	74	25.42	138.15	-147.15	53.41	-62.41	130.37	-2.280e+05	-2.886e+05	-2.787e+05	-2.380e+05	-
2.247e+04			314	18.35	79.43	-91.98	24.77	-37.32	79.89	-1.701e+05	-2.048e+05	-1.775e+05	-1.974e+05	-
1.424e+04			322	19.82	90.84	-105.16	-13.28	-1.03	97.81	-1.716e+05	-2.262e+05	-1.980e+05	-1.998e+05	-
2.730e+04			75	28.99	173.13	-186.19	-0.99	-12.07	179.57	-2.330e+05	-3.376e+05	-3.284e+05	-2.421e+05	-
2.953e+04														

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

298	1	314	23.78	106.64	-119.96	36.08	-49.41	104.93-2.209e+05-2.653e+05-2.299e+05-2.563e+05
1.784e+04		315	18.32	66.77	-82.05	19.32	-34.61	69.36-1.432e+05-2.146e+05-1.458e+05-2.120e+05
1.354e+04		323	19.19	71.99	-93.81	-19.29	-2.53	82.48-1.429e+05-2.257e+05-1.588e+05-2.098e+05
3.268e+04		322	26.06	121.81	-138.91	-11.43	-5.67	130.33-2.235e+05-2.981e+05-2.616e+05-2.601e+05
3.730e+04		314	20.12	90.23	-101.51	30.53	-41.81	88.79-1.869e+05-2.245e+05-1.945e+05-2.169e+05
298	3	315	15.51	56.50	-69.43	16.35	-29.28	58.69-1.211e+05-1.816e+05-1.234e+05-1.794e+05
1.509e+04		323	16.23	60.91	-79.38	-16.33	-2.14	69.79-1.209e+05-1.910e+05-1.344e+05-1.775e+05
1.146e+04		322	22.05	103.07	-117.54	-9.67	-4.80	110.28-1.891e+05-2.523e+05-2.214e+05-2.201e+05
2.765e+04		314	18.29	82.91	-122.37	-12.48	-26.98	102.38-1.696e+05-2.032e+05-1.762e+05-1.966e+05
3.156e+04		315	13.99	52.73	-90.05	-17.41	-19.90	71.38-1.093e+05-1.635e+05-1.111e+05-1.617e+05
298	23	323	14.75	60.21	-92.77	-44.99	12.44	70.89-1.095e+05-1.734e+05-1.218e+05-1.611e+05
1.337e+04		322	20.08	97.81	-138.35	-51.43	10.89	113.89-1.718e+05-2.288e+05-2.006e+05-1.999e+05
9753.99		314	18.29	81.23	-102.79	12.18	-33.73	89.11-1.698e+05-2.037e+05-1.766e+05-1.969e+05
2.514e+04		315	14.05	50.93	-72.58	2.37	-24.02	60.33-1.098e+05-1.645e+05-1.118e+05-1.625e+05
2.850e+04		323	14.75	56.57	-79.46	-26.52	3.62	66.33-1.097e+05-1.735e+05-1.220e+05-1.613e+05
298	55	322	20.06	94.51	-118.26	-25.30	1.55	105.53-1.719e+05-2.291e+05-2.010e+05-2.000e+05
1.359e+04		314	18.30	82.03	-92.28	27.75	-38.01	80.71-1.699e+05-2.041e+05-1.768e+05-1.971e+05
1.016e+04		315	14.10	51.36	-63.12	14.86	-26.62	53.35-1.101e+05-1.651e+05-1.122e+05-1.630e+05
2.514e+04		323	14.76	55.38	-72.16	-14.84	-1.95	63.44-1.099e+05-1.736e+05-1.222e+05-1.614e+05
2.861e+04		322	20.05	93.70	-106.85	-8.79	-4.36	100.25-1.719e+05-2.293e+05-2.012e+05-2.001e+05
298	69	314	18.00	63.78	-83.23	15.81	-35.26	68.93-1.309e+05-2.128e+05-1.323e+05-2.114e+05
1.372e+04		316	13.78	44.66	-61.48	11.68	-28.50	49.12-9.161e+04-1.642e+05-9.161e+04-1.642e+05
1.042e+04		324	15.11	44.09	-64.62	-18.07	-2.46	53.79-8.698e+04-1.799e+05-9.846e+04-1.685e+05
2.514e+04		323	19.41	75.06	-89.58	-10.34	-4.18	82.26-1.484e+05-2.276e+05-1.661e+05-2.099e+05
2.869e+04		315	15.23	53.97	-70.43	13.38	-29.84	58.32-1.108e+05-1.800e+05-1.119e+05-1.789e+05
299	1	316	11.66	37.79	-52.02	9.88	-24.11	41.57-7.752e+04-1.389e+05-7.752e+04-1.389e+05
1.055e+04		324	12.78	37.30	-54.68	-15.29	-2.08	45.51-7.360e+04-1.523e+05-8.331e+04-1.426e+05
203.88		323	16.42	63.51	-75.80	-8.75	-3.53	69.61-1.256e+05-1.926e+05-1.406e+05-1.776e+05
3.058e+04		315	13.91	66.88	-64.46	49.42	-47.00	44.60-1.010e+05-1.640e+05-1.021e+05-1.629e+05
3.298e+04		316	10.67	53.18	-52.49	42.96	-42.27	31.23-7.180e+04-1.263e+05-7.180e+04-1.263e+05
299	3	324	11.71	48.66	-50.48	20.25	-22.07	44.82-6.764e+04-1.388e+05-7.651e+04-1.300e+05
8929.23		323	14.98	82.64	-66.65	39.36	-23.37	67.74-1.153e+05-1.755e+05-1.289e+05-1.618e+05
172.52		315	13.87	54.35	-62.59	26.59	-34.82	49.76-1.008e+05-1.638e+05-1.019e+05-1.627e+05
2.587e+04		316	10.62	39.95	-47.61	22.14	-29.80	35.25-7.098e+04-1.263e+05-7.098e+04-1.263e+05
2.791e+04		324	11.66	37.76	-48.14	-0.68	-9.71	42.71-6.719e+04-1.386e+05-7.604e+04-1.297e+05
299	6	323	14.95	65.55	-66.20	10.36	-11.02	65.00-1.146e+05-1.752e+05-1.282e+05-1.616e+05
8347.79		315	13.85	49.06	-64.02	12.16	-27.12	53.02-1.007e+05-1.637e+05-1.018e+05-1.626e+05
2.351e+04		316	10.60	34.36	-47.29	8.98	-21.92	37.79-7.047e+04-1.263e+05-7.047e+04-1.263e+05
2.524e+04								
299	38							
8206.66								
2.352e+04								
2.532e+04								
299	69							
8117.48								

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

156.83										
2.352e+04	324	11.62	33.91	-49.71	-13.90	-1.89	41.38-6.691e+04-1.384e+05-7.574e+04-1.296e+05			
2.537e+04	323	14.93	57.74	-68.91	-7.96	-3.21	63.28-1.142e+05-1.751e+05-1.278e+05-1.615e+05			
300	1	316	13.67	38.97	-58.42	8.90	-28.36	44.99-8.567e+04-1.629e+05-8.591e+04-1.627e+05		
4331.04										
816.26	317	11.44	29.04	-45.37	2.26	-18.58	35.72-5.064e+04-1.354e+05-5.065e+04-1.354e+05	-		
2.605e+04	325	11.93	27.83	-43.22	-12.57	-2.82	35.19-5.422e+04-1.411e+05-6.290e+04-1.324e+05			
2.849e+04	324	15.08	47.61	-59.90	-9.52	-2.78	53.65-9.185e+04-1.797e+05-1.023e+05-1.692e+05			
300	3	316	11.57	32.97	-49.43	7.53	-23.99	38.07-7.249e+04-1.379e+05-7.269e+04-1.377e+05		
3664.73										
690.68	317	9.68	24.57	-38.39	1.91	-15.72	30.22-4.285e+04-1.145e+05-4.286e+04-1.145e+05	-		
2.204e+04	325	10.10	23.55	-36.57	-10.63	-2.39	29.78-4.588e+04-1.194e+05-5.322e+04-1.120e+05			
2.411e+04	324	12.76	40.28	-50.69	-8.05	-2.35	45.40-7.772e+04-1.521e+05-8.660e+04-1.432e+05			
300	6	316	10.59	43.04	-50.23	35.61	-42.80	25.25-6.646e+04-1.254e+05-6.671e+04-1.252e+05		
3844.57										
599.45	317	8.92	31.87	-38.67	23.75	-30.55	22.51-3.980e+04-1.048e+05-3.981e+04-1.048e+05	-		
2.002e+04	325	9.28	34.25	-38.41	18.33	-22.48	30.06-4.289e+04-1.090e+05-4.965e+04-1.022e+05			
2.174e+04	324	11.68	55.58	-49.19	28.42	-22.03	45.91-7.177e+04-1.386e+05-7.981e+04-1.306e+05			
300	38	316	10.54	33.19	-45.15	17.99	-29.94	30.99-6.612e+04-1.254e+05-6.633e+04-1.252e+05		
3530.20										
616.88	317	8.85	24.68	-35.01	10.26	-20.59	25.55-3.928e+04-1.044e+05-3.929e+04-1.044e+05	-		
2.003e+04	325	9.22	24.35	-33.21	1.17	-10.03	28.23-4.216e+04-1.087e+05-4.887e+04-1.020e+05			
2.185e+04	324	11.63	42.17	-45.50	6.52	-9.84	43.07-7.109e+04-1.384e+05-7.915e+04-1.303e+05			
300	69	316	10.51	29.98	-44.94	6.85	-21.81	34.61-6.590e+04-1.253e+05-6.609e+04-1.252e+05		
3331.57										
627.89	317	8.80	22.34	-34.90	1.74	-14.30	27.47-3.896e+04-1.041e+05-3.896e+04-1.041e+05	-		
2.004e+04	325	9.18	21.41	-33.25	-9.67	-2.17	27.07-4.171e+04-1.085e+05-4.838e+04-1.018e+05			
2.192e+04	324	11.60	36.62	-46.08	-7.32	-2.14	41.27-7.066e+04-1.382e+05-7.873e+04-1.302e+05			
301	1	317	11.34	30.21	-42.86	5.34	-17.99	34.62-5.160e+04-1.344e+05-5.160e+04-1.344e+05	-	
451.56										
4031.61	318	10.31	20.83	-36.42	0.66	-16.24	27.35-1.863e+04-1.149e+05-1.880e+04-1.147e+05	-		
1.840e+04	326	9.01	21.77	-28.84	-6.45	-0.62	25.13-3.473e+04-1.056e+05-3.989e+04-1.004e+05			
2.600e+04	325	12.05	28.36	-38.65	-6.88	-3.41	33.46-5.444e+04-1.424e+05-6.294e+04-1.339e+05			
301	3	317	9.60	25.56	-36.26	4.52	-15.22	29.29-4.366e+04-1.137e+05-4.366e+04-1.137e+05	-	
382.09										
3411.36	318	8.72	17.63	-30.82	0.56	-13.74	23.14-1.576e+04-9.721e+04-1.591e+04-9.707e+04	-		
1.557e+04	326	7.62	18.42	-24.40	-5.46	-0.52	21.27-2.939e+04-8.935e+04-3.375e+04-8.499e+04			
2.200e+04	325	10.19	24.00	-32.70	-5.82	-2.88	28.31-4.606e+04-1.205e+05-5.325e+04-1.133e+05			
301	6	317	8.84	32.93	-37.99	25.89	-30.95	21.20-4.063e+04-1.039e+05-4.063e+04-1.039e+05	-	
294.21										
3261.00	318	8.05	21.87	-35.00	15.18	-28.31	18.31-1.511e+04-8.910e+04-1.525e+04-8.896e+04	-		
1.372e+04	326	7.02	31.86	-32.05	20.02	-20.21	24.83-2.893e+04-8.170e+04-3.278e+04-7.785e+04			
1.997e+04	325	9.37	36.15	-37.07	21.79	-22.71	29.07-4.303e+04-1.101e+05-4.963e+04-1.035e+05			
301	38	317	8.77	25.60	-33.53	12.54	-20.46	24.53-4.005e+04-1.036e+05-4.006e+04-1.036e+05	-	
326.78										
3163.10	318	7.98	17.31	-29.74	6.19	-18.62	19.98-1.463e+04-8.866e+04-1.477e+04-8.852e+04	-		

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1.399e+04	326	6.97	20.70	-24.10	4.71	-8.12	21.46-2.758e+04-8.141e+04-3.149e+04-7.749e+04	
1.999e+04	325	9.31	25.53	-30.73	5.19	-10.40	27.03-4.232e+04-1.098e+05-4.888e+04-1.032e+05	
301 69 347.36	317	8.72	23.24	-32.97	4.11	-13.84	26.63-3.969e+04-1.034e+05-3.969e+04-1.034e+05	-
3101.24	318	7.93	16.02	-28.01	0.51	-12.50	21.04-1.433e+04-8.838e+04-1.446e+04-8.825e+04	-
1.416e+04	326	6.93	16.74	-22.18	-4.96	-0.47	19.33-2.672e+04-8.123e+04-3.068e+04-7.727e+04	
2.000e+04	325	9.27	21.82	-29.73	-5.29	-2.62	25.74-4.187e+04-1.096e+05-4.841e+04-1.030e+05	
302 1 6647.33	318	10.28	27.59	-30.96	3.88	-7.25	28.75-1.622e+04-1.141e+05-1.667e+04-1.137e+05	-
7805.76	319	10.47	-1.87	-23.57	-5.79	-19.66	8.35 1.449e+04-1.004e+05 1.395e+04-9.983e+04	
2993.10	327	5.09	42.32	-21.50	1.27	19.56	30.57-2.994e+04-6.010e+04-3.024e+04-5.980e+04	-
1.838e+04	326	9.46	16.29	-27.11	0.26	-11.08	20.95-3.754e+04-1.109e+05-4.249e+04-1.059e+05	
302 3 5624.67	318	8.70	23.35	-26.20	3.28	-6.13	24.32-1.372e+04-9.656e+04-1.411e+04-9.617e+04	-
6604.87	319	8.86	-1.59	-19.95	-4.90	-16.63	7.06 1.226e+04-8.492e+04 1.181e+04-8.447e+04	
2532.62	327	4.31	35.81	-18.19	1.07	16.55	25.87-2.534e+04-5.086e+04-2.559e+04-5.060e+04	-
1.555e+04	326	8.01	13.79	-22.94	0.22	-9.38	17.73-3.177e+04-9.380e+04-3.595e+04-8.961e+04	
302 22 4704.42	318	7.97	17.36	-26.11	12.62	-21.37	13.55-1.291e+04-8.776e+04-1.320e+04-8.746e+04	-
6248.60	319	8.23	-0.51	-23.87	-0.62	-23.76	1.57 1.145e+04-7.842e+04 1.101e+04-7.799e+04	
1669.40	327	3.64	30.75	-26.43	21.39	-17.08	21.15-2.613e+04-4.295e+04-2.630e+04-4.278e+04	-
1.420e+04	326	7.43	21.79	-21.23	15.21	-14.65	15.48-3.010e+04-8.686e+04-3.390e+04-8.306e+04	
302 54 4955.00	318	7.93	18.44	-23.42	6.71	-11.69	18.80-1.264e+04-8.777e+04-1.297e+04-8.744e+04	-
6098.97	319	8.12	-1.74	-19.70	-2.97	-18.47	4.54 1.126e+04-7.767e+04 1.084e+04-7.725e+04	
2057.29	327	3.77	28.56	-17.07	8.88	2.60	22.60-2.423e+04-4.496e+04-2.444e+04-4.475e+04	-
1.416e+04	326	7.34	15.54	-20.42	6.01	-10.90	15.87-2.935e+04-8.589e+04-3.315e+04-8.208e+04	
302 69 5113.33	318	7.91	21.23	-23.82	2.98	-5.57	22.11-1.247e+04-8.778e+04-1.282e+04-8.743e+04	-
6004.43	319	8.05	-1.44	-18.13	-4.45	-15.12	6.42 1.114e+04-7.720e+04 1.073e+04-7.679e+04	
2302.38	327	3.91	32.55	-16.54	0.97	15.04	23.51-2.303e+04-4.623e+04-2.326e+04-4.600e+04	-
1.414e+04	326	7.28	12.53	-20.86	0.20	-8.52	16.11-2.888e+04-8.527e+04-3.268e+04-8.147e+04	
303 1 1.539e+04	319	9.22	5.94	-26.28	-1.09	-19.25	13.31-2.735e+04-1.057e+05-3.050e+04-1.025e+05	
1.264e+04	320	7.00	9.89	-11.21	5.70	-7.03	8.41 6894.65-6.905e+04 4728.31-6.688e+04	-
2.164e+04	328	8.59	-5.70	-15.37	-12.46	-8.61	4.43 1.284e+04-8.215e+04 7628.47-7.694e+04	
1.745e+04	327	9.75	19.64	-10.77	-8.54	17.41	7.93 6.565e+04-5.004e+04 6.296e+04-4.735e+04	-
303 3 1.302e+04	319	7.80	5.03	-22.24	-0.93	-16.29	11.26-2.314e+04-8.942e+04-2.581e+04-8.676e+04	
1.070e+04	320	5.93	8.37	-9.49	4.83	-5.94	7.12 5833.93-5.842e+04 4000.88-5.659e+04	-
1.831e+04	328	7.27	-4.82	-13.00	-10.54	-7.29	3.75 1.087e+04-6.951e+04 6454.86-6.510e+04	
1.477e+04	327	8.25	16.62	-9.12	-7.23	14.73	6.71 5.555e+04-4.234e+04 5.327e+04-4.006e+04	-
303 5 1.172e+04	319	7.08	8.74	-34.43	7.38	-33.07	7.54-2.230e+04-8.077e+04-2.475e+04-7.832e+04	
9881.18	320	5.46	12.70	-15.75	12.03	-15.08	4.31 4451.26-5.375e+04 2722.33-5.202e+04	-
	328	6.64	-9.06	-29.39	-11.22	-27.24	6.26 1.029e+04-6.249e+04 6424.06-5.863e+04	



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

4.895e+04	76	33.99	234.65	-257.57	-24.49	1.57	245.76-2.417e+05-3.996e+05-3.826e+05-2.587e+05
305 7	75	29.23	148.98	-218.30	-10.85	-58.46	182.09-2.327e+05-3.384e+05-3.156e+05-2.556e+05
4.350e+04	322	19.99	81.51	-140.72	-35.72	-23.49	110.95-1.707e+05-2.276e+05-1.880e+05-2.103e+05
2.621e+04	330	20.48	88.48	-155.33	-94.54	27.69	105.48-1.559e+05-2.377e+05-2.010e+05-1.926e+05
4.068e+04	76	31.13	188.14	-276.52	-113.68	25.29	221.70-2.196e+05-3.631e+05-3.476e+05-2.351e+05
4.458e+04	75	29.12	164.75	-197.06	38.33	-70.64	172.51-2.329e+05-3.386e+05-3.158e+05-2.557e+05
305 39	322	19.97	87.54	-122.01	0.43	-34.91	103.27-1.710e+05-2.279e+05-1.884e+05-2.105e+05
4.345e+04	330	20.45	94.83	-132.90	-53.68	15.61	108.46-1.565e+05-2.379e+05-2.015e+05-1.929e+05
2.626e+04	76	30.99	201.86	-248.85	-57.66	10.67	222.75-2.196e+05-3.632e+05-3.477e+05-2.351e+05
4.049e+04	75	29.06	177.65	-186.56	69.41	-78.33	166.45-2.331e+05-3.386e+05-3.159e+05-2.558e+05
4.453e+04	322	19.96	94.29	-113.13	23.27	-42.12	98.42-1.712e+05-2.281e+05-1.887e+05-2.106e+05
305 69	330	20.43	101.86	-121.73	-27.86	7.98	110.35-1.569e+05-2.381e+05-2.019e+05-1.931e+05
4.342e+04	76	30.90	213.32	-234.15	-22.27	1.43	223.42-2.197e+05-3.633e+05-3.478e+05-2.352e+05
2.629e+04	322	26.03	125.99	-144.75	37.15	-55.91	127.12-2.244e+05-2.972e+05-2.480e+05-2.736e+05
4.037e+04	323	19.49	75.68	-99.02	13.44	-36.78	83.66-1.413e+05-2.297e+05-1.486e+05-2.224e+05
4.450e+04	331	19.18	77.86	-106.32	-28.05	-0.40	91.05-1.286e+05-2.263e+05-1.632e+05-1.916e+05
306 1	330	26.84	137.10	-162.46	-29.77	4.41	148.80-2.025e+05-3.133e+05-2.657e+05-2.501e+05
3.403e+04	322	22.02	106.61	-122.48	31.44	-47.31	107.56-1.899e+05-2.514e+05-2.098e+05-2.315e+05
2.427e+04	323	16.49	64.04	-83.79	11.37	-31.12	70.79-1.196e+05-1.943e+05-1.257e+05-1.882e+05
4.675e+04	331	16.23	65.89	-89.97	-23.74	-0.34	77.04-1.088e+05-1.914e+05-1.381e+05-1.621e+05
5.486e+04	330	22.71	116.01	-137.47	-25.19	3.73	125.91-1.713e+05-2.651e+05-2.248e+05-2.116e+05
306 3	322	20.07	101.29	-142.14	-6.23	-34.62	120.88-1.725e+05-2.282e+05-1.904e+05-2.103e+05
2.879e+04	323	14.97	62.51	-98.67	-16.18	-19.98	80.57-1.083e+05-1.762e+05-1.138e+05-1.707e+05
2.053e+04	331	14.81	69.89	-101.00	-48.40	17.29	78.88-9.872e+04-1.745e+05-1.250e+05-1.482e+05
3.956e+04	330	20.71	116.08	-156.30	-57.33	17.11	131.01-1.560e+05-2.406e+05-2.040e+05-1.926e+05
4.642e+04	322	20.04	97.87	-122.53	15.10	-39.76	106.73-1.726e+05-2.284e+05-1.906e+05-2.104e+05
306 23	323	14.98	59.24	-84.25	0.07	-25.07	70.63-1.086e+05-1.765e+05-1.141e+05-1.709e+05
2.601e+04	331	14.77	63.21	-88.67	-31.96	6.50	73.46-9.883e+04-1.742e+05-1.253e+05-1.477e+05
1.848e+04	330	20.67	109.18	-136.70	-36.23	8.70	120.87-1.558e+05-2.408e+05-2.042e+05-1.924e+05
3.606e+04	322	20.02	96.92	-111.34	28.58	-43.01	97.79-1.726e+05-2.286e+05-1.908e+05-2.105e+05
4.192e+04	323	14.99	58.22	-76.17	10.34	-28.29	64.36-1.087e+05-1.767e+05-1.143e+05-1.711e+05
306 55	331	14.75	59.90	-81.79	-21.58	-0.31	70.04-9.889e+04-1.740e+05-1.256e+05-1.474e+05
2.611e+04	330	20.65	105.46	-124.97	-22.90	3.39	114.46-1.557e+05-2.410e+05-2.044e+05-1.924e+05
1.860e+04	323	19.57	77.71	-95.71	18.44	-36.45	82.25-1.468e+05-2.298e+05-1.545e+05-2.222e+05
3.600e+04	324	15.07	48.88	-71.39	4.80	-27.31	57.95-8.768e+04-1.793e+05-9.033e+04-1.767e+05
4.209e+04	332	15.43	51.95	-72.08	-24.19	4.05	60.38-7.773e+04-1.825e+05-1.016e+05-1.586e+05
306 69	331	18.78	79.95	-107.24	-25.99	-1.30	92.78-1.241e+05-2.217e+05-1.538e+05-1.919e+05
2.618e+04							
1.867e+04							
3.596e+04							
4.220e+04							
307 1							
2.404e+04							
1.536e+04							
4.396e+04							

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

4.493e+04	307	3	323	16.56	65.75	-80.99	15.60	-30.84	69.60-1.242e+05-1.945e+05-1.307e+05-1.880e+05
2.034e+04			324	12.76	41.36	-60.41	4.06	-23.11	49.04-7.419e+04-1.517e+05-7.643e+04-1.495e+05
1.300e+04			332	13.06	43.96	-60.99	-20.46	3.43	51.09-6.577e+04-1.544e+05-8.600e+04-1.342e+05
3.720e+04			331	15.89	67.65	-90.74	-21.99	-1.10	78.51-1.050e+05-1.876e+05-1.301e+05-1.624e+05
3.802e+04	307	21	323	15.06	69.37	-88.04	11.99	-30.66	75.76-1.129e+05-1.765e+05-1.188e+05-1.706e+05
1.834e+04			324	11.59	44.38	-64.29	2.78	-22.69	52.83-6.746e+04-1.376e+05-6.946e+04-1.356e+05
1.171e+04			332	11.91	49.29	-62.58	-16.61	3.33	55.04-5.992e+04-1.405e+05-7.829e+04-1.221e+05
3.381e+04			331	14.53	76.37	-89.76	-18.18	4.80	82.27-9.566e+04-1.714e+05-1.184e+05-1.487e+05
3.472e+04	307	53	323	15.05	63.47	-79.19	13.34	-29.05	68.11-1.129e+05-1.767e+05-1.188e+05-1.708e+05
1.844e+04			324	11.59	40.22	-58.54	3.34	-21.66	47.77-6.745e+04-1.378e+05-6.948e+04-1.358e+05
1.177e+04			332	11.89	43.56	-58.19	-17.83	3.20	49.78-5.984e+04-1.404e+05-7.823e+04-1.220e+05
3.381e+04			331	14.48	67.26	-85.31	-19.29	1.24	75.59-9.552e+04-1.709e+05-1.183e+05-1.480e+05
3.462e+04	307	69	323	15.05	59.77	-73.63	14.18	-28.04	63.27-1.129e+05-1.768e+05-1.188e+05-1.709e+05
1.849e+04			324	11.60	37.60	-54.91	3.69	-21.01	44.58-6.744e+04-1.379e+05-6.949e+04-1.359e+05
1.182e+04			332	11.87	39.96	-55.45	-18.60	3.12	46.45-5.979e+04-1.404e+05-7.819e+04-1.220e+05
3.382e+04			331	14.44	61.50	-82.50	-19.99	-1.00	71.37-9.543e+04-1.705e+05-1.183e+05-1.476e+05
3.456e+04	308	1	324	15.18	49.44	-66.56	8.64	-25.76	55.39-9.036e+04-1.807e+05-9.367e+04-1.774e+05
1.697e+04			325	12.07	32.80	-50.97	1.98	-20.16	40.40-5.342e+04-1.423e+05-5.511e+04-1.406e+05
1.215e+04			333	12.88	32.17	-47.51	-19.90	4.56	37.92-4.133e+04-1.486e+05-5.953e+04-1.304e+05
4.028e+04			332	15.07	50.86	-69.60	-21.14	2.39	59.07-7.613e+04-1.783e+05-9.711e+04-1.573e+05
4.127e+04	308	3	324	12.85	41.83	-56.32	7.31	-21.80	46.87-7.646e+04-1.529e+05-7.926e+04-1.501e+05
1.436e+04			325	10.22	27.75	-43.13	1.68	-17.06	34.18-4.520e+04-1.204e+05-4.663e+04-1.190e+05
1.028e+04			333	10.90	27.22	-40.20	-16.84	3.86	32.09-3.497e+04-1.258e+05-5.038e+04-1.104e+05
3.408e+04			332	12.75	43.03	-58.90	-17.89	2.03	49.98-6.442e+04-1.509e+05-8.217e+04-1.331e+05
3.492e+04	308	5	324	11.75	52.37	-55.08	34.24	-36.96	40.24-7.022e+04-1.392e+05-7.280e+04-1.366e+05
1.309e+04			325	9.36	36.47	-44.91	23.76	-32.21	29.54-4.209e+04-1.097e+05-4.339e+04-1.084e+05
9275.54			333	10.00	35.20	-39.29	7.28	-11.38	36.06-3.270e+04-1.148e+05-4.662e+04-1.009e+05
3.080e+04			332	11.66	55.66	-56.44	14.07	-14.86	54.15-5.938e+04-1.373e+05-7.539e+04-1.213e+05
3.149e+04	308	37	324	11.71	42.53	-51.65	17.33	-26.45	41.69-6.979e+04-1.391e+05-7.235e+04-1.365e+05
1.307e+04			325	9.32	28.53	-40.37	10.14	-21.97	30.48-4.148e+04-1.095e+05-4.278e+04-1.082e+05
9320.40			333	9.94	27.50	-36.32	-6.56	-2.25	31.84-3.214e+04-1.145e+05-4.612e+04-1.005e+05
3.091e+04			332	11.62	44.24	-53.38	-4.52	-4.62	48.81-5.888e+04-1.372e+05-7.497e+04-1.211e+05
3.165e+04	308	69	324	11.68	38.03	-51.20	6.64	-19.81	42.61-6.951e+04-1.390e+05-7.206e+04-1.364e+05
1.305e+04			325	9.29	25.23	-39.21	1.53	-15.51	31.07-4.109e+04-1.094e+05-4.239e+04-1.081e+05
9348.74			333	9.91	24.75	-36.55	-15.31	3.51	29.17-3.179e+04-1.143e+05-4.580e+04-1.003e+05
3.098e+04			332	11.59	39.12	-53.54	-16.26	1.84	45.44-5.856e+04-1.371e+05-7.470e+04-1.210e+05
3.175e+04									



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

309	1	325	12.06	32.85	-46.66	4.40	-18.21	38.11-5.365e+04-1.422e+05-5.538e+04-1.405e+05
1.223e+04		326	9.83	22.43	-36.02	3.67	-17.27	27.28-3.138e+04-1.131e+05-3.429e+04-1.102e+05
1.514e+04		334	11.33	19.72	-31.39	-15.66	3.99	23.59-1.063e+04-1.223e+05-2.500e+04-1.079e+05
3.739e+04		333	12.76	31.14	-42.16	-14.15	3.13	35.62-4.230e+04-1.477e+05-6.006e+04-1.299e+05
3.944e+04		325	10.20	27.79	-39.48	3.72	-15.41	32.25-4.540e+04-1.203e+05-4.686e+04-1.189e+05
309	3	326	8.32	18.98	-30.48	3.11	-14.61	23.09-2.655e+04-9.574e+04-2.901e+04-9.328e+04
1.035e+04		334	9.59	16.69	-26.56	-13.25	3.38	19.96 -8997.61-1.035e+05-2.116e+04-9.133e+04
1.281e+04		333	10.80	26.35	-35.68	-11.97	2.64	30.14-3.579e+04-1.249e+05-5.082e+04-1.099e+05
3.164e+04		325	9.38	36.89	-40.53	29.68	-33.32	22.50-4.242e+04-1.099e+05-4.378e+04-1.085e+05
3.337e+04		326	7.66	29.97	-35.84	27.25	-33.12	13.10-2.599e+04-8.777e+04-2.844e+04-8.532e+04
309	6	334	8.84	17.44	-25.72	5.33	-13.60	19.39 -8958.17-9.493e+04-2.009e+04-8.380e+04
9491.76		333	9.92	33.71	-34.54	14.93	-15.76	30.48-3.352e+04-1.142e+05-4.724e+04-1.005e+05
1.206e+04		325	9.31	27.96	-35.88	13.56	-21.48	26.68-4.171e+04-1.096e+05-4.305e+04-1.082e+05
2.886e+04		326	7.60	20.11	-28.79	12.28	-20.96	17.94-2.486e+04-8.732e+04-2.718e+04-8.500e+04
3.031e+04		334	8.76	14.30	-23.01	-5.32	-3.39	18.63 -8481.12-9.441e+04-1.956e+04-8.332e+04
309	38	333	9.86	25.90	-31.41	-0.89	-4.63	28.59-3.292e+04-1.138e+05-4.660e+04-1.001e+05
9440.52		325	9.27	25.27	-35.89	3.38	-14.01	29.32-4.127e+04-1.094e+05-4.260e+04-1.081e+05
1.180e+04		326	7.56	17.25	-27.71	2.83	-13.28	20.99-2.414e+04-8.703e+04-2.638e+04-8.480e+04
2.880e+04		334	8.71	15.17	-24.15	-12.05	3.07	18.15 -8179.65-9.408e+04-1.923e+04-8.303e+04
3.033e+04		333	9.82	23.95	-32.43	-10.88	2.40	27.40-3.254e+04-1.136e+05-4.620e+04-9.993e+04
309	69	325	9.27	25.27	-35.89	3.38	-14.01	29.32-4.127e+04-1.094e+05-4.260e+04-1.081e+05
9408.14		326	7.56	17.25	-27.71	2.83	-13.28	20.99-2.414e+04-8.703e+04-2.638e+04-8.480e+04
1.164e+04		334	8.71	15.17	-24.15	-12.05	3.07	18.15 -8179.65-9.408e+04-1.923e+04-8.303e+04
2.876e+04		333	9.82	23.95	-32.43	-10.88	2.40	27.40-3.254e+04-1.136e+05-4.620e+04-9.993e+04
3.034e+04		326	8.43	22.78	-28.02	4.64	-9.89	24.34-3.543e+04-9.918e+04-3.753e+04-9.708e+04
310	1	327	12.80	20.46	-33.02	13.66	-26.22	17.81 -1167.34-1.321e+05-2.481e+04-1.085e+05
1.137e+04		335	9.30	10.05	-22.25	-16.45	4.25	12.40 1.622e+04-8.730e+04 1.512e+04-8.620e+04
5.037e+04		334	12.62	17.92	-26.12	-9.26	1.06	21.41 -8451.92-1.347e+05-2.597e+04-1.172e+05
1.061e+04		326	7.14	19.27	-23.71	3.92	-8.36	20.60-2.998e+04-8.392e+04-3.175e+04-8.215e+04
4.365e+04		327	10.83	17.31	-27.94	11.56	-22.19	15.07 -987.75-1.118e+05-2.100e+04-9.177e+04
310	3	335	7.87	8.51	-18.83	-13.92	3.59	10.49 1.373e+04-7.387e+04 1.279e+04-7.294e+04
9618.72		334	10.68	15.16	-22.10	-7.84	0.90	18.11 -7151.62-1.140e+05-2.198e+04-9.916e+04
4.262e+04		326	6.45	21.05	-31.00	18.41	-28.36	11.44-2.844e+04-7.526e+04-3.018e+04-7.352e+04
8979.69		327	10.49	29.83	-9.57	26.67	-6.41	-10.70 -929.34-1.096e+05-2.184e+04-8.871e+04
3.693e+04		335	7.10	2.65	-28.74	-14.18	-11.91	15.65 1.332e+04-6.610e+04 1.272e+04-6.550e+04
310	22	334	9.88	9.87	-7.63	3.27	-1.04	8.48 -6766.40-1.057e+05-2.093e+04-9.155e+04
8854.04		326	6.47	17.05	-23.38	9.31	-15.64	15.90-2.772e+04-7.589e+04-2.938e+04-7.423e+04
4.285e+04		327	10.09	17.33	-15.41	16.77	-14.84	4.26 -915.86-1.047e+05-2.016e+04-8.548e+04
6880.53		335	7.11	5.11	-20.97	-13.25	-2.61	11.91 1.280e+04-6.674e+04 1.205e+04-6.600e+04
3.466e+04		334	9.77	11.97	-14.97	-3.10	0.10	13.37 -6605.00-1.044e+05-2.035e+04-9.069e+04
310	54	326	6.49	17.52	-21.56	3.57	-7.60	18.72-2.725e+04-7.629e+04-2.887e+04-7.468e+04
8786.79		327	10.09	17.33	-15.41	16.77	-14.84	4.26 -915.86-1.047e+05-2.016e+04-8.548e+04
4.033e+04		335	7.11	5.11	-20.97	-13.25	-2.61	11.91 1.280e+04-6.674e+04 1.205e+04-6.600e+04
7666.64		334	9.77	11.97	-14.97	-3.10	0.10	13.37 -6605.00-1.044e+05-2.035e+04-9.069e+04
3.399e+04		326	6.49	17.52	-21.56	3.57	-7.60	18.72-2.725e+04-7.629e+04-2.887e+04-7.468e+04
310	69	326	6.49	17.52	-21.56	3.57	-7.60	18.72-2.725e+04-7.629e+04-2.887e+04-7.468e+04



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

4458.60	329	4.72	6.65	-3.59	-0.02	3.08	4.88	-834.29-4.943e+04	-1246.87-4.902e+04	-
4455.52	337	4.84	10.84	-3.21	-2.79	10.43	-2.38	843.62-4.947e+04	445.94-4.907e+04	-
1.511e+04	336	5.86	10.34	-0.79	-0.41	9.96	-2.01	3500.60-5.873e+04	-415.65-5.482e+04	-
3006.56	312 69 328	5.91	-0.51	-11.03	-4.55	-7.00	5.11	1.114e+04-5.506e+04	1.101e+04-5.493e+04	-
4474.99	329	4.73	2.44	-5.86	0.19	-3.62	3.69	-866.34-4.964e+04	-1280.45-4.922e+04	-
4488.54	337	4.81	2.17	-3.39	-2.83	1.61	-1.67	878.29-4.954e+04	475.48-4.914e+04	-
1.518e+04	336	5.82	3.08	0.35	1.84	1.59	-1.36	3353.92-5.885e+04	-601.06-5.490e+04	-
8.052e+04	313 1 76	40.20	282.55	-300.62	71.93	-89.99	280.12-2.829e+05-4.731e+05-4.286e+05-3.274e+05			
4.976e+04	330	26.70	138.02	-172.28	14.47	-48.72	151.90-2.070e+05-3.103e+05-2.448e+05-2.724e+05			
7.377e+04	82	26.36	140.51	-174.66	-64.18	30.03	150.38-1.561e+05-3.096e+05-2.540e+05-2.117e+05			
7.383e+04	77	38.45	293.67	-345.90	-101.33	49.11	310.81-2.407e+05-4.498e+05-4.193e+05-2.712e+05			
6.813e+04	313 3 76	34.02	239.08	-254.37	60.86	-76.15	237.02-2.394e+05-4.003e+05-3.627e+05-2.770e+05			
4.210e+04	330	22.60	116.79	-145.77	12.24	-41.22	128.53-1.751e+05-2.625e+05-2.071e+05-2.305e+05			
6.242e+04	82	22.30	118.89	-147.79	-54.31	25.41	127.24-1.321e+05-2.620e+05-2.149e+05-1.792e+05			
6.247e+04	77	32.54	248.49	-292.68	-85.74	41.55	262.99-2.036e+05-3.806e+05-3.548e+05-2.295e+05			
6.200e+04	313 7 76	31.15	192.49	-274.98	-33.90	-48.59	233.62-2.174e+05-3.637e+05-3.294e+05-2.517e+05			
3.848e+04	330	20.59	93.94	-165.90	-54.10	-17.87	128.65-1.583e+05-2.383e+05-1.874e+05-2.093e+05			
5.693e+04	82	20.32	102.53	-177.55	-121.38	46.36	112.14-1.192e+05-2.372e+05-1.937e+05-1.628e+05			
5.679e+04	77	29.82	210.70	-318.97	-169.99	61.71	238.15-1.850e+05-3.459e+05-3.224e+05-2.085e+05			
6.196e+04	313 39 76	31.01	206.02	-246.48	20.78	-61.23	222.50-2.175e+05-3.639e+05-3.296e+05-2.518e+05			
3.835e+04	330	20.56	99.67	-143.68	-14.13	-29.88	121.42-1.589e+05-2.385e+05-1.880e+05-2.095e+05			
5.682e+04	82	20.29	104.14	-149.29	-77.25	32.11	114.31-1.198e+05-2.378e+05-1.947e+05-1.628e+05			
5.679e+04	77	29.67	218.60	-285.14	-113.59	47.04	238.72-1.851e+05-3.460e+05-3.225e+05-2.086e+05			
6.194e+04	313 69 76	30.92	217.35	-231.24	55.33	-69.22	215.48-2.176e+05-3.639e+05-3.297e+05-2.518e+05			
3.828e+04	330	20.54	106.17	-132.52	11.13	-37.47	116.85-1.592e+05-2.387e+05-1.883e+05-2.096e+05			
5.674e+04	82	20.27	108.08	-134.36	-49.37	23.10	115.68-1.201e+05-2.382e+05-1.954e+05-1.629e+05			
5.679e+04	77	29.58	225.90	-266.07	-77.95	37.78	239.09-1.851e+05-3.460e+05-3.226e+05-2.086e+05			
5.354e+04	314 1 330	26.57	134.45	-167.20	19.98	-52.74	146.38-2.015e+05-3.096e+05-2.480e+05-2.632e+05			
4.135e+04	331	19.89	85.17	-115.66	3.25	-33.75	98.69-1.087e+05-2.348e+05-1.242e+05-2.193e+05			
6.439e+04	84	19.22	51.70	-105.54	-37.85	-15.98	77.86-6.416e+04-2.199e+05-1.858e+05-9.823e+04			
7.005e+04	82	27.34	158.41	-177.71	-63.90	44.60	159.07-1.809e+05-3.214e+05-2.564e+05-2.459e+05			
4.530e+04	314 3 330	22.48	113.76	-141.48	16.91	-44.63	123.86-1.705e+05-2.620e+05-2.098e+05-2.227e+05			
3.499e+04	331	16.83	72.06	-97.86	2.75	-28.55	83.51-9.200e+04-1.986e+05-1.051e+05-1.856e+05			
5.448e+04	84	16.26	43.75	-89.30	-32.03	-13.52	65.88-5.429e+04-1.861e+05-1.572e+05-8.312e+04			
5.928e+04	82	23.13	134.04	-150.37	-54.07	37.74	134.59-1.531e+05-2.720e+05-2.170e+05-2.081e+05			
3.955e+04	314 5 330	20.43	151.53	-125.09	80.84	-54.40	120.65-1.584e+05-2.383e+05-1.928e+05-2.040e+05			
	331	15.43	70.95	-84.37	29.67	-43.09	68.61-8.093e+04-1.816e+05-9.336e+04-1.691e+05			

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

3.311e+04										
4.428e+04	84	14.68	114.49	-85.53	44.85	-15.89	95.29-5.783e+04-1.710e+05-1.496e+05-7.919e+04			
5.478e+04	82	21.05	142.75	-120.40	18.10	4.25	131.39-1.380e+05-2.482e+05-1.986e+05-1.876e+05			
314 37	330	20.43	120.96	-126.16	40.72	-45.93	115.72-1.563e+05-2.382e+05-1.915e+05-2.030e+05			
4.055e+04	331	15.35	66.78	-86.35	13.02	-32.59	73.09-8.259e+04-1.810e+05-9.469e+04-1.689e+05			
3.231e+04	84	14.74	66.81	-80.97	-0.48	-13.68	73.60-5.267e+04-1.698e+05-1.455e+05-7.696e+04			
4.750e+04	82	21.04	127.70	-128.14	-23.11	22.67	125.86-1.387e+05-2.476e+05-1.978e+05-1.885e+05			
5.423e+04	314 69	330	20.44	103.42	-128.62	15.37	-40.57	112.60-1.550e+05-2.382e+05-1.907e+05-2.024e+05		
4.118e+04	331	15.30	65.51	-88.97	2.50	-25.96	75.92-8.363e+04-1.806e+05-9.553e+04-1.687e+05			
3.181e+04	84	14.79	39.77	-81.18	-29.12	-12.29	59.89-4.935e+04-1.692e+05-1.429e+05-7.556e+04			
4.953e+04	82	21.03	121.86	-136.70	-49.15	34.31	122.36-1.392e+05-2.472e+05-1.972e+05-1.892e+05			
5.389e+04	315 1	331	22.24	84.08	-98.87	17.97	-32.76	87.89-1.395e+05-2.633e+05-1.865e+05-2.164e+05		
6.008e+04	332	13.33	54.93	-93.28	-8.99	-29.37	73.40-6.663e+04-1.574e+05-6.863e+04-1.554e+05			
1.334e+04	86	19.78	61.87	-64.43	-34.95	32.39	53.42-4.938e+04-2.244e+05-9.700e+04-1.768e+05			
7.790e+04	84	8.27	83.38	-157.08	-56.81	-16.89	118.56-6.387e+04-9.721e+04-6.527e+04-9.581e+04			-
6687.80	315 3	331	18.82	71.15	-83.66	15.20	-27.72	74.37-1.181e+05-2.228e+05-1.578e+05-1.831e+05		
5.084e+04	332	11.28	46.48	-78.93	-7.61	-24.85	62.11-5.638e+04-1.332e+05-5.807e+04-1.315e+05			
1.129e+04	86	16.74	52.35	-54.51	-29.57	27.41	45.20-4.178e+04-1.899e+05-8.207e+04-1.496e+05			
6.591e+04	84	7.00	70.55	-132.91	-48.07	-14.29	100.32-5.405e+04-8.226e+04-5.523e+04-8.107e+04			-
5658.91	315 22	331	17.18	67.21	-56.21	45.33	-34.34	47.13-1.074e+05-2.046e+05-1.458e+05-1.661e+05		
4.756e+04	332	10.18	40.04	-73.66	2.25	-35.86	53.56-5.094e+04-1.198e+05-5.215e+04-1.185e+05			
9050.17	86	15.49	46.60	-27.86	-15.66	34.40	27.56-3.768e+04-1.764e+05-7.491e+04-1.392e+05			
6.147e+04	84	6.11	59.08	-152.56	-42.78	-50.70	105.74-4.329e+04-7.216e+04-4.740e+04-6.805e+04			-
1.009e+04	315 54	331	17.14	64.30	-67.02	26.02	-28.74	59.68-1.073e+05-2.034e+05-1.444e+05-1.663e+05		
4.674e+04	332	10.23	41.12	-72.21	-3.37	-27.73	55.34-5.113e+04-1.205e+05-5.254e+04-1.191e+05			
9793.15	86	15.32	47.06	-41.01	-22.54	28.59	35.85-3.787e+04-1.741e+05-7.473e+04-1.372e+05			
6.052e+04	84	6.24	61.68	-132.62	-43.34	-27.59	96.83-4.708e+04-7.355e+04-4.912e+04-7.151e+04			-
7058.04	315 69	331	17.11	64.68	-76.06	13.82	-25.20	67.61-1.073e+05-2.026e+05-1.434e+05-1.665e+05		
4.621e+04	332	10.25	42.25	-71.76	-6.91	-22.59	56.46-5.125e+04-1.211e+05-5.279e+04-1.195e+05			
1.026e+04	86	15.22	47.59	-49.56	-26.89	24.92	41.09-3.799e+04-1.726e+05-7.461e+04-1.360e+05			
5.992e+04	84	6.36	64.14	-120.83	-43.70	-12.99	91.20-4.913e+04-7.478e+04-5.021e+04-7.370e+04			-
5144.46	316 1	332	15.54	53.89	-74.18	-1.25	-19.05	63.41-7.503e+04-1.834e+05-8.444e+04-1.739e+05		
3.051e+04	333	12.58	34.51	-56.26	-5.39	-16.36	45.05-4.091e+04-1.449e+05-4.674e+04-1.391e+05			
2.392e+04	88	12.74	35.78	-49.98	-25.59	11.40	38.69-2.970e+04-1.435e+05-5.763e+04-1.156e+05			
4.898e+04	86	14.59	51.40	-73.70	-32.16	9.85	58.92-5.012e+04-1.680e+05-8.347e+04-1.347e+05			
5.310e+04	316 3	332	13.15	45.60	-62.77	-1.06	-16.12	53.66-6.348e+04-1.551e+05-7.145e+04-1.472e+05		
2.581e+04	333	10.64	29.20	-47.61	-4.56	-13.85	38.12-3.461e+04-1.226e+05-3.955e+04-1.177e+05			
2.024e+04										

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

4.145e+04	88	10.78	30.28	-42.29	-21.65	9.64	32.74-2.513e+04-1.215e+05-4.876e+04-9.782e+04
4.493e+04	86	12.34	43.49	-62.36	-27.21	8.34	49.85-4.241e+04-1.422e+05-7.063e+04-1.140e+05
316 5 2.318e+04	332	12.02	56.96	-58.67	30.71	-32.43	48.44-5.859e+04-1.412e+05-6.570e+04-1.341e+05
1.825e+04	333	9.77	37.18	-47.22	19.56	-29.60	34.30-3.239e+04-1.119e+05-3.683e+04-1.074e+05
3.753e+04	88	9.89	36.03	-38.58	5.53	-8.08	36.68-2.382e+04-1.109e+05-4.529e+04-8.941e+04
4.074e+04	86	11.31	50.91	-56.21	2.76	-8.07	53.28-3.867e+04-1.295e+05-6.400e+04-1.042e+05
316 37 2.336e+04	332	11.98	46.23	-56.46	11.30	-21.53	48.65-5.805e+04-1.411e+05-6.524e+04-1.339e+05
1.834e+04	333	9.71	29.51	-43.65	5.03	-19.18	34.52-3.182e+04-1.116e+05-3.629e+04-1.072e+05
3.762e+04	88	9.84	29.17	-36.84	-9.92	2.24	32.44-2.322e+04-1.106e+05-4.470e+04-8.911e+04
4.081e+04	86	11.25	42.75	-55.31	-14.09	1.52	48.40-3.860e+04-1.294e+05-6.412e+04-1.038e+05
316 69 2.347e+04	332	11.95	41.45	-57.06	-0.96	-14.65	48.78-5.771e+04-1.410e+05-6.495e+04-1.338e+05
1.840e+04	333	9.68	26.54	-43.28	-4.15	-12.59	34.65-3.147e+04-1.115e+05-3.595e+04-1.070e+05
3.768e+04	88	9.80	27.53	-38.44	-19.69	8.77	29.76-2.284e+04-1.104e+05-4.433e+04-8.892e+04
4.085e+04	86	11.22	39.54	-56.69	-24.74	7.58	45.32-3.856e+04-1.293e+05-6.421e+04-1.036e+05
317 1 2.452e+04	333	12.65	34.27	-50.72	-2.98	-13.48	42.17-4.171e+04-1.461e+05-4.783e+04-1.399e+05
1.769e+04	334	11.26	22.84	-39.30	-4.43	-12.03	30.84-1.191e+04-1.218e+05-1.484e+04-1.189e+05
3.842e+04	90	9.65	23.12	-32.91	-17.77	7.98	24.88-1.359e+04-1.057e+05-3.427e+04-8.499e+04
4.796e+04	88	12.56	32.85	-44.33	-20.54	9.06	35.64-2.955e+04-1.417e+05-5.659e+04-1.146e+05
317 3 2.075e+04	333	10.71	28.99	-42.92	-2.52	-11.40	35.68-3.529e+04-1.236e+05-4.047e+04-1.184e+05
1.497e+04	334	9.53	19.33	-33.25	-3.75	-10.18	26.09-1.008e+04-1.031e+05-1.255e+04-1.006e+05
3.251e+04	90	8.16	19.57	-27.85	-15.03	6.75	21.05-1.150e+04-8.941e+04-2.900e+04-7.191e+04
4.059e+04	88	10.63	27.80	-37.51	-17.38	7.67	30.15-2.501e+04-1.199e+05-4.788e+04-9.701e+04
317 5 1.868e+04	333	9.82	37.02	-42.62	21.13	-26.74	31.82-3.310e+04-1.128e+05-3.775e+04-1.081e+05
1.335e+04	334	8.76	24.27	-37.17	12.51	-25.40	24.17-1.006e+04-9.418e+04-1.224e+04-9.201e+04
2.904e+04	90	7.48	28.51	-29.99	9.77	-11.25	27.30-1.252e+04-8.179e+04-2.828e+04-6.603e+04
3.679e+04	88	9.76	34.14	-36.42	8.29	-10.56	34.00-2.358e+04-1.095e+05-4.438e+04-8.865e+04
317 37 1.879e+04	333	9.77	29.31	-39.24	6.78	-16.71	32.20-3.248e+04-1.125e+05-3.716e+04-1.078e+05
1.351e+04	334	8.70	19.21	-31.96	2.76	-15.51	23.90 -9510.26-9.388e+04-1.173e+04-9.166e+04
2.936e+04	90	7.45	19.80	-24.98	-4.59	-0.59	22.30-1.125e+04-8.148e+04-2.710e+04-6.563e+04
3.686e+04	88	9.70	27.00	-33.29	-6.48	0.18	29.96-2.306e+04-1.092e+05-4.386e+04-8.837e+04
317 69 1.886e+04	333	9.73	26.36	-39.02	-2.29	-10.37	32.44-3.208e+04-1.123e+05-3.679e+04-1.076e+05
1.361e+04	334	8.66	17.57	-30.23	-3.41	-9.25	23.72 -9161.55-9.369e+04-1.141e+04-9.144e+04
2.956e+04	90	7.42	17.79	-25.31	-13.67	6.14	19.14-1.046e+04-8.128e+04-2.636e+04-6.537e+04
3.690e+04	88	9.66	25.27	-34.10	-15.80	6.97	27.41-2.273e+04-1.090e+05-4.353e+04-8.819e+04
318 1 1.790e+04	334	10.74	22.60	-34.99	-2.93	-9.46	28.61 -7043.43-1.143e+05-1.012e+04-1.112e+05
1.409e+04	335	11.15	11.93	-25.55	-2.57	-11.05	18.25 1.193e+04-1.090e+05 1.027e+04-1.074e+05
	92	5.86	19.18	-21.05	-12.15	10.29	16.70 1.054e+04-5.396e+04-1.974e+04-2.369e+04



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

8898.32		92	4.77	11.42	-7.23	-3.69	7.88	7.31	4.186e+04	-1.234e+04	4.035e+04	-1.084e+04	-
320	1	336	7.65	3.41	-12.91	-2.69	-6.81	7.90	5778.97	-7.640e+04	5378.00	-7.600e+04	-
5726.27		337	6.22	2.62	-9.20	-0.23	-6.35	5.06	973.79	-6.409e+04	518.43	-6.363e+04	-
5423.98		96	5.76	6.82	-3.45	-3.26	6.63	-1.39	-727.31	-6.002e+04	-1601.36	-5.915e+04	-
7145.61		94	6.97	7.77	-0.15	0.08	7.55	1.31	1.543e+04	-6.339e+04	9057.77	-5.702e+04	-
2.148e+04		336	6.48	2.89	-10.92	-2.28	-5.76	6.68	4889.90	-6.465e+04	4550.62	-6.431e+04	-
320	3	337	5.26	2.22	-7.78	-0.20	-5.37	4.28	823.98	-5.423e+04	438.67	-5.384e+04	-
4845.31		96	4.87	5.77	-2.92	-2.76	5.61	-1.17	-615.42	-5.079e+04	-1354.99	-5.005e+04	-
4589.52		94	5.89	6.57	-0.12	0.06	6.39	1.11	1.305e+04	-5.363e+04	7664.27	-4.824e+04	-
6046.29		336	5.96	2.99	-25.36	2.66	-25.03	3.01	3986.74	-5.888e+04	3694.64	-5.859e+04	-
1.818e+04		337	4.89	-0.08	-25.61	-0.18	-25.51	1.61	819.27	-4.946e+04	456.80	-4.910e+04	-
320	5	96	4.49	-1.85	-12.44	-2.07	-12.22	1.51	-627.48	-4.663e+04	-1295.74	-4.596e+04	-
4275.47		94	5.45	2.57	-13.97	-0.09	-11.31	6.08	1.216e+04	-4.912e+04	7511.28	-4.447e+04	-
4253.69		336	5.92	1.43	-14.57	-0.24	-12.90	4.89	4267.74	-5.881e+04	3965.67	-5.851e+04	-
5504.17		337	4.82	0.50	-13.54	-0.18	-12.87	3.01	776.24	-4.936e+04	421.25	-4.901e+04	-
1.622e+04		96	4.42	-1.60	-2.34	-2.34	-1.61	-0.07	-585.81	-4.635e+04	-1256.56	-4.568e+04	-
320	37	94	5.38	2.59	-3.41	1.28e-03	-0.82	2.97	1.198e+04	-4.890e+04	7178.06	-4.410e+04	-
4354.74		336	5.89	2.63	-9.93	-2.07	-5.24	6.08	4445.36	-5.877e+04	4136.92	-5.846e+04	-
4203.81		337	4.78	2.02	-7.08	-0.18	-4.88	3.89	749.07	-4.930e+04	398.79	-4.895e+04	-
5499.55		96	4.43	5.24	-2.65	-2.51	5.10	-1.07	-559.47	-4.617e+04	-1231.81	-4.550e+04	-
1.641e+04		94	5.36	5.98	-0.11	0.06	5.80	1.01	1.187e+04	-4.876e+04	6967.52	-4.386e+04	-
320	69												
4404.82													
4172.29													
5496.62													
1.652e+04													
<b>Elem.</b>		<b>Von Mises</b>	<b>N max</b>	<b>N min</b>	<b>N 1</b>	<b>N 2</b>	<b>N 1-2</b>	<b>M max</b>	<b>M min</b>	<b>M 1</b>	<b>M 2</b>	<b>M 1-2</b>	<b>-</b>
1.187e+07				-6420.40	-4562.06	-4760.19	-2796.02		-2.255e+07	-1.074e+07	-1.072e+07		-
1.182e+07		2219.32	6406.47		4743.25	4555.61	2798.60	2.170e+07		9.842e+06	9.813e+06		



## VERIFICHE ELEMENTI ESISTENTI

### LEGENDA TABELLA VERIFICHE ELEMENTI ESISTENTI

Le verifiche degli elementi esistenti sono state condotte con riferimento al Capitolo 8 del D.M. 17 gennaio 2018. Il metodo adottato è quello previsto nella circolare n.7 del 21 gennaio 2019 al punto C8.7.2.2.1 / C8.7.2.2.2 (Analisi statica lineare/dinamica modale con spettro elastico).

Le modalità di analisi e le verifiche, consistono nel confronto tra domanda e capacità.

Il programma consente di effettuare analisi lineare statica e dinamica e analisi non lineare statica. Qualora l'analisi effettuata sia lineare le verifiche sono precedute da un controllo di accettazione del modello lineare, atto a valutare la dispersione dei rapporti domanda/capacità.

Per gli elementi in c.a. sono previste le seguenti verifiche:

- flessione con e senza sforzo normale
- taglio
- nodi trave-pilastro

Con riferimento ai punti succitati le verifiche vengono così tabellate:

Tabella relativa alle verifiche di accettazione del modello lineare

<b>Pilas. / Trave</b>	numero dell'elemento considerato
<b>ro I (J) acc.</b>	massimo rapporto domanda/capacità in termini di momento flettente di cui al p.to C8.7.2.2.1 per la verifica di accettazione
<b>ver. f. acc.</b>	massimo rapporto domanda/capacità in termini di taglio di cui al p.to C8.7.2.2.1 per la verifica di accettazione
<b>Rif. cmb</b>	combinazioni per le quali si sono attinti i valori riportati

Tabella relativa alle verifiche degli elementi duttili e fragili

<b>Pilas. / Trave</b>	numero dell'elemento considerato
<b>SL cod</b>	Stato limite considerato e relativo esito delle verifica ( <b>NV</b> non verifica, <b>ok</b> verifica)
<b>ver. (d)</b>	massimo rapporto domanda capacità in termini di deformazione per gli elementi duttili; nello specifico: <b>rot. c / ThetaU</b> per SLC <b>rot. c / 0.75 ThetaU</b> per SLV <b>rot. c / ThetaY</b> per SLD
<b>ver. (f)</b>	massimo rapporto domanda capacità in termini di verifica a taglio
<b>rot. c</b>	valore di rotazione rispetto alla corda (rappresenta la domanda in termini di deformazione) per cui si attinge il massimo valore della verifica <b>ver. (d)</b>
<b>Theta Y</b>	capacità di rotazione rispetto alla corda allo snervamento, calcolata con la formula C8.7.2.7
<b>Theta U</b>	capacità di rotazione rispetto alla corda in condizioni di collasso
<b>curv. Y</b>	curvatura della sezione allo snervamento dell'acciaio
<b>curv. U</b>	curvatura ultima della sezione valutata considerando le deformazioni ultime di conglomerato (tenuto conto del confinamento) e acciaio
<b>Lv</b>	luce di taglio; rapporto momento/taglio utilizzato nelle succitate formule per il calcolo di <b>Theta Y (U)</b>
<b>V2(V3)</b>	valore del taglio 2 (3) per cui si attinge il massimo valore della verifica <b>ver. (f)</b>
<b>ro VI (V J)</b>	indicatori del rapporto domanda/capacità per gli elementi duttili; se inferiori a 1 le sollecitazioni degli elementi fragili sono assunte dall'analisi, in caso contrario sono assunte per equilibrio considerando le capacità degli elementi duttili
<b>Rif. cmb</b>	Combinazioni in cui si attingono i massimi valori dei rapporti domanda/capacità; per i pilastri, il numero tra parentesi indica l'asse( locale ) di riferimento per le rotazioni riportate

Tabella relativa alle verifiche dei nodi trave pilastro

<b>Pilas. S</b>	numero del pilastro considerato (superiore al nodo)
<b>Pilas. I</b>	numero del relativo pilastro inferiore
<b>Nodo</b>	numero del nodo tra i pilastri
<b>SL cod</b>	Stato limite considerato e relativo esito delle verifica ( <b>NV</b> non verifica, <b>ok</b> verifica, <b>nrC</b> non richiesta in quanto confinato)
<b>ver. (+)</b>	massimo rapporto domanda capacità con riferimento alla formula C8.7.2.121(resistenza per trazione)
<b>ver. (-)</b>	massimo rapporto domanda capacità con riferimento alla formula C8.7.2.12 (resistenza per compressione)
<b>V +</b>	valore del taglio, nel pilastro superiore, in direzione 2 o 3 per cui si attinge il massimo valore della verifica <b>ver. (+)</b>
<b>V + af s</b>	sollecitazione di trazione presente nell'armatura longitudinale superiore della trave da sommare (con segno) a <b>V +</b>
<b>N +</b>	azione assiale presente nel pilastro superiore contemporanea a <b>V +</b>
<b>V -</b>	valore del taglio, nel pilastro superiore, in direzione 2 o 3 per cui si attinge il massimo valore della verifica <b>ver. (-)</b>
<b>V - af s</b>	sollecitazione di trazione presente nell'armatura longitudinale superiore della trave da sommare (con segno) a <b>V -</b>
<b>N -</b>	azione assiale presente nel pilastro superiore contemporanea a <b>V -</b>
<b>Area g</b>	area del nodo ( <b>da Pilas. I</b> )
<b>Rif. cmb</b>	combinazioni in cui si attingono i massimi valori dei rapporti domanda/capacità; per i nodi, il numero tra parentesi indica l'asse( locale ) di riferimento per le sollecitazioni di taglio



## VERIFICHE ELEMENTI TRAVE E/O PILASTRO IN C.A.

### LEGENDA TABELLA VERIFICHE ELEMENTI TRAVE E/O PILASTRO IN C.A.

In tabella vengono riportati per ogni elemento il numero identificativo ed il codice di verifica con le sigle **Ok** o **NV**.

Nel caso in cui si sia proceduto alla progettazione con le tensioni ammissibili (**T.A.**) vengono riportate le massime tensioni nell'elemento (massima compressione nel calcestruzzo, massima compressione media nel calcestruzzo, massima tensione nell'acciaio, massima tensione tangenziale) con l'indicazione delle combinazioni in cui si sono attinti i rispettivi valori.

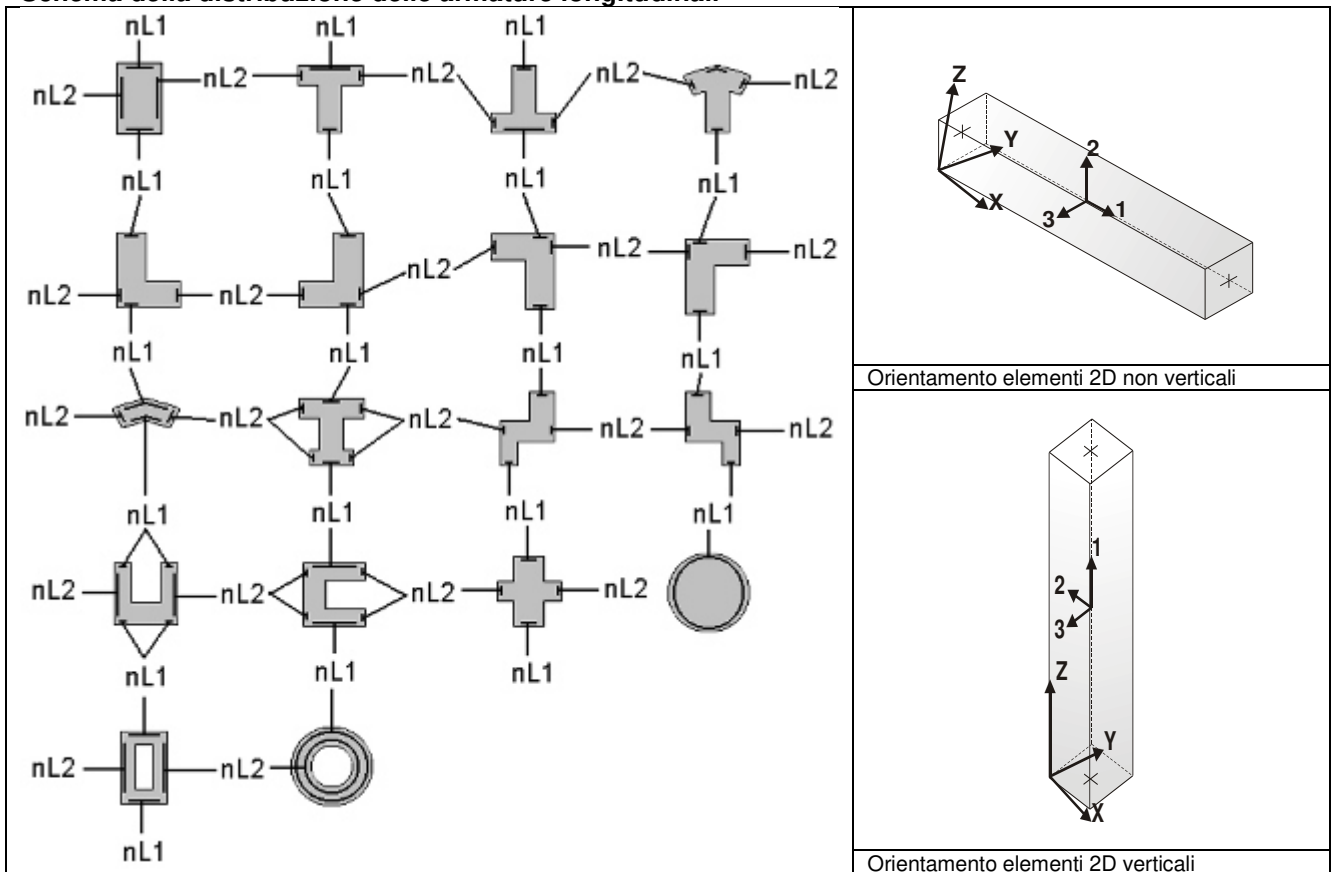
Nel caso in cui si sia proceduto alla progettazione con il metodo degli stati limite (**S.L.**) vengono riportati: il rapporto  $x/d$ , le verifiche per sollecitazioni proporzionali e la verifica per compressione media con l'indicazione delle combinazioni in cui si sono attinti i rispettivi valori.

Nel caso in cui la struttura abbia comportamento dissipativo e sia prevista la progettazione con il criterio della gerarchia delle resistenze (**G.R.**) vengono riportate le verifiche di sovrarresistenza e del nodo.

Per gli elementi tipo pilastro sono riportati numero e diametro dei ferri di vertice, numero e diametro di ferri disposti lungo i lati L1 (paralleli alla base della sezione) e lungo i lati L2 (paralleli all'altezza della sezione).

Per gli elementi tipo trave sono riportati infine le quantità di armatura inferiore e superiore.

#### Schema della distribuzione delle armature longitudinali



## PROGETTAZIONE DELLE FONDAZIONI

Il D.M.17/01/2018 - par: 7.2.5 prevede:

"Sia per CD"A" sia per CD"B" il dimensionamento delle strutture di fondazione e la verifica di sicurezza del complesso fondazione-terreno devono essere eseguiti assumendo come azione in fondazione, trasmessa dagli elementi soprastanti, una tra le seguenti:

- quella derivante dall'analisi strutturale eseguita ipotizzando comportamento strutturale non dissipativo;
- [...];
- quella trasferita dagli elementi soprastanti nell'ipotesi di comportamento strutturale dissipativo, amplificata di un coefficiente pari a 1,30 in CD"A" e 1,10 in CD"B";

Nel contesto visualizzazione risultati e nella stampa della relazione sulle fondazioni PRO\_SAP mostra le sollecitazioni che derivano dall'analisi non incrementate sia in termini di pressioni sul terreno che in termini di sollecitazioni.

La progettazione degli elementi strutturali con proprietà fondazione è effettuata da PRO\_SAP (per travi e platee) o da PRO\_CAD Plinti (per plinti e pali di fondazione) incrementando le sollecitazioni delle combinazioni con sisma di un coefficiente pari 1.1 in CDB e 1.3 in CDA per pali, plinti, travi e platee.

Per i bicchieri dei plinti di fondazione prefabbricati l'incremento delle sollecitazioni ha un fattore pari a 1.2 in CDB e 1.35 in CDA.

N.B.: nel caso di comportamento strutturale non dissipativo la progettazione viene effettuata senza nessun incremento.

Le verifiche geotecniche vengono effettuate dal modulo geotecnico incrementando automaticamente le sollecitazioni del fattore 1.1 in CDB e 1.3 in CDA per pali, plinti, travi e platee.

N.B.: nel caso di comportamento strutturale non dissipativo le verifiche geotecniche vengono effettuate senza nessun incremento.

### Simbologia adottata nelle tabelle di verifica

**Per le verifiche alle T.A. di pilastri e travi è presente una tabella con i simboli di seguito descritti:**

M P X Y	Numero della pilastrata (P) e posizione in pianta (X,Y)
M T Z P P	Numero della travata, quota media pilastrata iniziale e finale (nodo in assenza di pilastrata)
Pilas. o Trave	numero identificativo dell'elemento D2
Note	Viene riportato il codice relativo alla sezione(s) e relativo al materiale(m); nella terza riga viene riportato il valore delle snellezze in direzione 2-2 e 3-3
Stato	Codici di verifica relativi alle tensioni normali e alle tensioni tangenziali
Quota	Ascissa del punto di verifica
%Af	Percentuale di area di armatura rispetto a quella di calcestruzzo
Armat. long.	Numero e diametro dei ferri di armatura longitudinale: ferri di vertice + ferri di lato (come da fig. precedente)
Af inf.	Area di armatura longitudinale posta all'intradosso della trave
Af sup	Area di armatura longitudinale posta all'estradosso della trave
Sc max	Massima tensione di compressione del calcestruzzo
Sc med	Massima tensione media di compressione del calcestruzzo
Sf max	Tensione massima nell'acciaio
staffe	Vengono riportati i dati del tratto di staffatura in cui cade la sezione di verifica; in particolare: numero dei bracci, diametro, passo, lunghezza tratto
Tau max	Tensione massima tangenziale nel cls
Rif. comb	Combinazioni in cui si generano i seguenti valori di tensione: Sc max, Sc med, Sf max, Tau max
AfV	area dell'armatura atta ad assorbire le azioni di taglio
AfT	area dell'armatura atta ad assorbire le azioni di torsione
Scorr. P	Scorrimento dei piegati
Af long.	Area del ferro longitudinale aggiuntivo per assorbire la torsione

**Per le verifiche agli S.L. dei pilastri è presente una tabella con i simboli di seguito descritti:**

M P X Y	Numero della pilastrata (P) e posizione in pianta (X,Y)
Pilas.	numero identificativo dell'elemento D2
Note	Codici identificativi delle sezione (s) e materiale (m) pilastro
Stato	Codici relativi all'esito delle verifiche effettuate appresso descritte
Quota	Quota sezione di verifica
%Af	Percentuale di area di armatura rispetto a quella di calcestruzzo
r. snell.	Rapporto di snellezza $\lambda$ su $\lambda^*$ : valore superiore a 1 per elementi snelli nel caso in cui viene effettuata la verifica con il metodo diretto dello stato di equilibrio
Armat. long.	Numero e diametro (d) dei ferri di armatura longitudinale distinti in ferri di vertice + ferri di lato nelle posizioni nL1 e nL2, come da schemi in figura precedente
V N/M	Verifica a pressoflessione con rapporto Ed/Rd: valore minore o uguale a 1 per verifica positiva
V N sis	Verifica a compressione solo calcestruzzo con rapporto Nsd/Nrd ed Nrd calcolato come al punto 7.4.4.2.1: valore minore o uguale a 1 per verifica positiva
Staffe	Dati tratto di staffatura oggetto di verifica, nello specifico: numero delle braccia, diametro, passo, lunghezza L tratto
V V/T cls	Verifica a taglio/torsione con rapporto Ved/Vrd: valore minore o uguale a 1 per verifica positiva
Rif. cmb.	Riferimento combinazioni da cui si generano le verifiche più gravose per il pilastro

**Per le verifiche alla G.R. dei pilastri è presente una tabella con i simboli di seguito descritti:**

Pilas.	numero identificativo dell'elemento D2 pilastro
sovr. Xi (Xf)	Verifica sovrarresistenza come da formula 7.4.4 in direzione X, alla base (i) ed alla sommità (f): rapporto tra i momenti resistenti dei pilastri e delle travi. La verifica è positiva se maggiore del $\gamma_{Rd}$ adottato
sovr. Yi (Yf)	Verifica sovrarresistenza come da formula 7.4.4 in direzione Y, alla base (i) ed alla sommità (f): rapporto tra i momenti resistenti dei pilastri e delle travi. La verifica è positiva se maggiore del $\gamma_{Rd}$ adottato
M 2-2 i (f)	Valore del momento resistente 2-2 alla base (i) ed alla sommità (f) con massimo momento in presenza dello sforzo normale di calcolo
M 3-3 i (f)	Valore del momento resistente 3-3 alla base (i) ed alla sommità (f) con massimo momento in presenza dello sforzo normale di calcolo
Luce per V	Luce di calcolo per la definizione del taglio (generato dai momenti resistenti)
V M2-2 (M3-3)	Valore del taglio generato dai momenti resistenti 2-2 (3-3)

**Per le verifiche dei dettagli costruttivi per la duttilità è presente una tabella con i simboli di seguito descritti: (Non presente nel caso di comportamento strutturale non dissipativo)**

Pilas	Numero identificativo D2 pilastro
ni	Sforzo assiale adimensionalizzato di progetto relativo alla combinazione sismica SLV
alfaomega	Prodotto tra il coefficiente di efficacia del confinamento e il rapporto meccanico dell'armatura trasversale di confinamento all'interno del nodo
V.7.4.29 2-2 (3-3)	Rapporto tra la domanda di staffe minima nel nodo e il rapporto meccanico dell'armatura trasversale di confinamento inserito all'interno del nodo in direzione 2 (3)
V. 7.4.29 Stato	Codici relativi all'esito della verifica 7.4.29
d <sub>mu</sub> fi 2-2 (3-3)	Domanda in duttilità di curvatura in direzione 2 (3)
c <sub>mu</sub> fi 2-2 (3-3)	Capacità in duttilità di curvatura in direzione 2 (3)
V. dutt. 2-2 (3-3)	Rapporto tra la domanda in duttilità di curvatura e la capacità in duttilità di curvatura in direzione 2 (3)

**Per le verifiche nodi trave-pilastro di elementi nuovi è presente una tabella con i simboli di seguito descritti:**

Nodo	Numero identificativo del nodo trave-pilastro
Stato	Esito delle verifiche
Pilastro	Numero identificativo D2 pilastro
Diam st	Diametro staffe nodo
Passo	Passo staffe nodo
n. br. 2 (3)	Numero braccia staffe per il taglio in direzione 2 (3)
Bj2 (3)	Larghezza effettiva del nodo per il taglio in direzione 2 (3)
Hjc2 (3)	Distanza tra le giaciture più esterne delle armature del pilastro per il taglio in direzione 2 (3)
V. 7.4.8	Rapporto tra il taglio $V_{jbd}$ e il taglio resistente come da formula 7.4.8
V. Ash	Rapporto tra il passo staffe calcolato secondo il capitolo 7.4.4.3.1. e il passo staffe effettivamente inserita nel nodo. Nel caso di valore indica passo staffe utilizzato deriva dalle formule presenti nel paragrafo 7.4.4.3.1. Nel caso di valore minore di 1 il passo staffe utilizzato deriva del pilastro superiore o inferiore al nodo
7.4.10	Check passo staffe valutato in funzione della formula 7.4.10: <ul style="list-style-type: none"> <li>• SI il passo staffe è calcolato utilizzando la formula 7.4.10;</li> <li>• NO il passo staffe è calcolato utilizzando le formule 7.4.11 e/o 7.4.12;</li> <li>• NR calcolo passo staffe non richiesto;</li> </ul>
Rif. comb.	Riferimento combinazioni da cui si generano le verifiche più gravose per il nodo

**Per le verifiche nodi trave-pilastro di elementi esistenti è presente una tabella con i simboli di seguito descritti:**

Pilastro I	Numero identificativo D2 del pilastro inferiore.
Pilastro S	Numero identificativo D2 del pilastro superiore.
Nodo	Numero identificativo del nodo trave-pilastro.
SL cod	Stato limite di riferimento e relativo esito delle verifiche.
ver. (+)	Fattore di sicurezza nei riguardi della verifica di resistenza a compressione (verificato se < 1.00).
V +	Azione di Taglio presente al di sopra del nodo nella verifica di resistenza a compressione.
V + af s	Sollecitazione di trazione presente nell' armatura longitudinale superiore della trave nella verifica di resistenza a compressione.
N +	Azione Assiale presente al di sopra del nodo nella verifica di resistenza a compressione.
ver. (-)	Fattore di sicurezza nei riguardi della verifica di resistenza a trazione (verificato se < 1.00).
V -	Azione di Taglio presente al di sopra del nodo nella verifica di resistenza a trazione.
V - af s	Sollecitazione di trazione presente nell' armatura longitudinale superiore della trave nella verifica di resistenza a trazione.
N -	Azione Assiale presente al di sopra del nodo nella verifica di resistenza a trazione.
Area G	Area resistente del nodo.
Rif. comb.	Combinazione (direzione) di riferimento nella verifica di trazione.

**Per le verifiche agli S.L. delle travi è presente una tabella con i simboli di seguito descritti:**

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

M T Z P P	Numero della travata (T), quota media (Z), n° pilastrata iniziale (P) e finale (P) (nodo in assenza di pilastrata)
Trave	numero identificativo dell'elemento D2
Note	Codici identificativi sezione (s) e materiale (m) trave; sono inoltre presenti le sigle relative all'esito delle verifiche effettuate appresso descritte
%Af	Percentuale di area di armatura rispetto a quella di calcestruzzo
Af inf.	Area di armatura longitudinale posta all'intradosso
Af sup	Area di armatura longitudinale posta all'estradosso
Af long.	Area complessiva armatura longitudinale
x/d	rapporto tra posizione dell'asse neutro e altezza utile
V N/M	Verifica a pressoflessione rapporto Ed/Rd: valore minore o uguale a 1 per verifica positiva
Staffe	Dati tratto di staffatura oggetto di verifica, nello specifico: numero delle braccia, diametro, passo, lunghezza L tratto
V V/T cls	Verifica a taglio/torsione con rapporto Ved/Vrd: valore minore o uguale a 1 per verifica positiva
Rif. cmb.	Riferimento combinazioni da cui si generano le verifiche più gravose per la trave

**Per le verifiche alla G.R. delle travi è presente una tabella con i simboli di seguito descritti:**

Trave	numero identificativo dell'elemento D2 trave
M negativo i (f)	Valore del momento resistente negativo all' estremità iniziale i (finale f) della trave
M positivo i (f)	Valore del momento resistente positivo all' estremità iniziale i (finale f) della trave
Luce per V	Luce di calcolo per la definizione del taglio (generato dai momenti resistenti)
V M-i M+f	Taglio generato dai momenti resistenti negativo i e positivo f
V M+i M-f	Taglio generato dai momenti resistenti positivo i e negativo f
VEd, min	Valore di taglio minimo per verifica condizioni p.to 7.4.4.1.1 armatura diagonale (solo per CD "A")
VEd, max	Valore di taglio massimo per verifica condizioni p.to 7.4.4.1.1 armatura diagonale (solo per CD "A")
Vr1	Valore di taglio come da formula 7.4.1 per armatura diagonale (solo per CD "A")
As	Area singolo ordine armature diagonali come da formula 7.4.2 (solo per CD "A")

Con riferimento al **Documento di Affidabilità "Test di validazione del software di calcolo PRO\_SAP e dei moduli aggiuntivi PRO\_SAP Modulo Geotecnico, PRO\_CAD nodi acciaio e PRO\_MST"** - versione Maggio 2011, disponibile per il download sul sito [www.2si.it](http://www.2si.it), si segnalano i seguenti esempi applicativi:

Test N°	Titolo
24	TENSIONI E ROTAZIONI RISPETTO ALLA CORDA DI ELEMENTI TRAVE
27	FRECCIA DI ELEMENTI TRAVE
41	GERARCHIA DELLE RESISTENZE PER TRAVI IN C.A.
42	GERARCHIA DELLE RESISTENZE PER PILASTRI IN C.A.
43	VERIFICA ALLE TA DI STRUTTURE IN C.A.
44	VERIFICA AGLI SLU DI STRUTTURE IN C.A.
46	VERIFICA A PUNZONAMENTO ALLO SLU DI TRAVI IN C.A.
47	PROGETTAZIONE A TAGLIO DI STRUTTURE IN C.A. SECONDO IL D.M. 9/1/96
48	PROGETTAZIONE A TAGLIO DI STRUTTURE IN C.A. SECONDO IL D.M. 14/1/2008
49	VERIFICA ALLO SLE (TENSIONI E FESSURAZIONE) DI STRUTTURE IN C.A.
50	VERIFICA ALLO SLE (DEFORMAZIONE) DI STRUTTURE IN C.A.
52	SOVRARESISTENZE
53	DETTAGLI COSTRUTTIVI C.A.: LIMITI D'ARMATURA PILASTRI E NODI TRAVE-PILASTRO
68	VALUTAZIONE EFFETTO P-δ SU PILASTRATA
69	VALUTAZIONE EFFETTO P-δ SU TELAIO 3D
120	PROGETTO E VERIFICA DI TRAVI PREM

## **VERIFICHE ELEMENTI PARETE E/O GUSCIO IN C.A.**

### LEGENDA TABELLA VERIFICHE ELEMENTI PARETE E GUSCIO IN C.A.

Per le pareti in c.a., in ottemperanza al cap. 7 del DM 17-01-18, viene effettuata una doppia progettazione: sia come *Singolo Elemento* sia come *Parete Sismica* o *Parete Debolmente Armata*.

Per la progettazione come *Singolo Elemento* di ogni elemento vengono riportati il codice dello stato di verifica con le sigle **Ok** e **NV**, il rapporto  $x/d$ , la verifica per sollecitazioni ultime (verifica a compressione media gli sforzi membranali, verifica a presso-flessionale e verifica a sollecitazioni taglianti), gli sforzi membranali e flessionali, il quantitativo di armatura nella direzione principale e secondaria sia inferiore che superiore e il quantitativo di armatura a taglio.

Per la progettazione come *Parete Sismica* o *Parete Debolmente Armata* vengono riportate invece le caratteristiche geometriche della parete e delle zone dissipative (quest'ultime solo nel caso di parete sismica), i coefficienti di verifica a compressione assiale, pressoflessione e sollecitazioni taglianti.

Inoltre vengono riportate per ogni quota significativa l'armatura principale e secondaria, l'armatura in zona confinata (solo per parete sismica) e non confinata, l'armatura concentrata all'estremità (per pareti debolmente armate), lo sforzo assiale aggiuntivo per  $q$  superiore a 2 e i valori di inviluppo di taglio e momento. Per le pareti debolmente armate viene riportato anche lo stato di verifica relativo alla snellezza.

Le azioni derivate dall'analisi, in ogni combinazione di calcolo, sono elaborate come previsto al punto 7.4.4.5.1: traslazione del momento, incremento e variazione diagramma taglio, incremento e decremento sforzo assiale

La progettazione nel caso dei gusci viene effettuata una progettazione come *Singolo Elemento*, riportando in tabella il rapporto  $x/d$ , la verifica per sollecitazioni ultime, (verifica a compressione media gli sforzi membranali, verifica a presso-flessionale e verifica a sollecitazioni taglianti) di ogni elemento.

Per ogni elemento, viene riportata inoltre la maglia di armatura necessaria in relazione alle risultanze della progettazione dei nodi dell'elemento stesso. Le quantità di armature necessarie sono armature (disposte rispettivamente in direzione principale e secondaria, inferiore e superiore) distribuite nell'elemento ed espresse in centimetri quadri per sviluppo lineare pari ad un metro.

Nel caso dei gusci viene effettuata, inoltre, la verifica a punzonamento, riportando in tabella il codice dello stato di verifica, il coefficiente di verifica per piastre prive di armature a taglio lungo il perimetro resistente e lungo il perimetro del pilastro, coefficiente di incremento dovuto ai momenti flettenti, fattore di amplificazione per le fondazioni, il fattore di amplificazione dell'altezza utile per individuare il perimetro di verifica lungo il quale l'armatura a taglio non è richiesta, il quantitativo di armatura a punzonamento, il numero di serie di armature, il numero di braccia di armatura ed il riferimento alla combinazione più gravosa.

### **Simbologia adottata nelle tabelle di verifica**

**Per gli elementi con progettazione "Singolo Elemento ..." è presente una tabella con i simboli di seguito descritti:**

Macro Guscio	Numero del macroelemento di tipo guscio (elementi non verticali contigui ed analoghi per proprietà)
Macro Setto	Numero del macroelemento di tipo setto (elementi verticali contigui ed analoghi per proprietà)
Spessore	Spessore della parete
Id Materiale	Codice del materiale assegnato all'elemento
Id Criterio	Codice del criterio di progetto assegnato all'elemento
Progettazione	Sigla tipo di Elemento: - Singolo Elemento; - Singolo Elemento FONDAZIONE; - Singolo Elemento NON DISSIPATIVO

**Per gli elementi con progettazione "Parete Sismica o Parete Debolmente Armata" è presente una tabella con i simboli di seguito descritti:**

Parete	Numero della PARETE SISMICA
Parete PDA	Numero della PARETE DEBOLMENTE ARMATA
H totale	Altezza complessiva della parete
Spessore	Spessore della parete
H critica	Altezza come da punto 7.4.4.5.1 per traslazione momento (solo in Parete Sismica)
H critica V	Altezza della zona dissipativa (solo in Parete Sismica)
L totale	Larghezza di base della parete
L confinata	Lunghezza della zona dissipativa (solo in Parete Sismica)
Verif. N	Verifica di cui al punto 7.4.4.5.1 compressione semplice
Verif. N-M	Verifica di cui al punto 7.4.4.5.1 pressoflessione
Fattore V	Fattore di amplificazione del taglio di cui al punto 7.4.4.5.1
Diagramma V	Diagramma elaborato per effetto modi superiori come da fig. 7.4.4
Verif. V	Verifica di cui al punto 7.4.4.5.1 taglio (compressione cls, trazione acciaio, scorrimento in zona critica) (solo in Parete Sismica)
Verifica Snellezza	Verifica di cui al punto 7.4.4.5.1 limitazione compressione per prevenire l'instabilità (solo in Parete Debolmente Armata)
Prog. composta	Sigla per la progettazione composta



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

**Per le verifiche degli elementi con progettazione "Singolo Elemento ..." e Progettazione Composta è presente una tabella con i simboli di seguito descritti:**

Nodo	numero del nodo
Stato	codice di verifica dell'elemento <b>ok</b> o <b>NV</b>
x/d	rapporto tra posizione dell'asse neutro e altezza utile alla rottura della sezione (per sola flessione)
V N/M	Verifica delle sollecitazioni Normali (momento e sforzo normale)
Ver. rid	Rapporto Nd/Nu (Nu ottenuto con riduzione del 25% di fcd)
Af pr+	quantità di armatura richiesta in direzione principale relativa alla faccia positiva (estradosso piastre) (valore derivante da calcolo o minimo normativo)
Af pr-	quantità di armatura richiesta in direzione principale relativa alla faccia negativa (intradosso piastre) (valore derivante da calcolo o minimo normativo)
Af sec+	quantità di armatura richiesta in direzione secondaria relativa alla faccia positiva (estradosso piastre) (valore derivante da calcolo o minimo normativo)
Af sec-	quantità di armatura richiesta in direzione secondaria relativa alla faccia negativa (intradosso piastre) (valore derivante da calcolo o minimo normativo)
Nz No Nzo	Sforzi membranali per pareti e/o setti verticali
Mz Mo Mzo	Sforzi flessionali per pareti e/o setti verticali
Nx Ny Nxy	Sforzi membranali per gusci orizzontali
Mx Mx Mxy	Sforzi flessionali per gusci orizzontali

Nodo	numero del nodo
Stato	codice di verifica dell'elemento <b>ok</b> o <b>NV</b>
Max tau	Tensione tangenziale Massima
Ver V pr	Verifica a taglio nella direzione principale lato calcestruzzo
Ver V sec	Verifica a taglio nella direzione secondaria lato calcestruzzo
Af V pr	Armatura nella direzione principale
V pr-	Verifica dell'armatura nella direzione principale
Af V sec	Armatura nella direzione secondaria
V sec-	Verifica dell'armatura nella direzione secondaria

**Per le verifiche degli elementi con progettazione "Parete Sismica o Parete Debolmente Armata", oltre alla tabella con le verifiche per gli elementi con progettazione "Singolo Elemento ...", è presente una tabella con i simboli di seguito descritti:**

Quota	Ascissa verticale di riferimento
Af conf.	Numero e diametro armatura presente in una zona confinata
Af std	Diametro e passo armatura in zona non confinata (doppia maglia)
Af estremi	Diametro dei ferri di estremità del pannello; se posto uguale 0, viene utilizzato il diametro standard
Af V (ori)	Diametro e passo armatura orizzontale (doppia maglia)
Ver. N	Rapporto tra azione di calcolo e resistenza a compressione (normalizzato a 1 in quanto da confrontare con 40% in CDB e 35 % in CDA)
Ver. N/M	Rapporto tra azione di calcolo e resistenza a pressoflessione
Ver. V acc(7)	Rapporto tra azione di calcolo e resistenza a taglio-trazione per alfaS minore di 2 secondo paragrafo 7.4.4.5.1
Ver. V cls	Rapporto tra azione di calcolo e resistenza a taglio-compressione
Ver. V acc	Rapporto tra azione di calcolo e resistenza a taglio-trazione
Ver. V scorr.	Rapporto tra azione di calcolo e resistenza a taglio scorrimento
N add	Sforzo assiale di cui al punto 7.4.4.5.1 da sommare e sottrarre nelle verifiche quando q supera 2
N invil M invil	Inviluppo del Momento e Sforzo Normale come al punto 7.4.4.5.1 (informativo) (solo in Parete Sismica)

Quota	Ascissa verticale di riferimento
N v.N	Valore dello sforzo assiale per cui Ver. N attinge il massimo valore
N v.M/N, M v.M/N	Valore dello sforzo assiale e momento per cui Ver. N/M attinge il massimo valore
N v.M/N, M v.M/N Mo v.M/N	Valore dello sforzo assiale e dei momenti per cui Ver. N/M attinge il massimo valore (per le pareti estese debolmente armate)
N v.Vcls, V v.Vcls,	Valore dello sforzo assiale e taglio per cui Ver. V. cls attinge il massimo valore
N v.Vacc, M v.Vacc, V v.Vacc,	Valore dello sforzo assiale, momento e taglio per cui Ver. V. acc attinge il massimo valore
N v.Vscorr, M v.Vscorr, V v.Vscorr,	Valore dello sforzo assiale, momento e taglio per cui Ver. V. scorr.e
N v.N	Valore dello sforzo assiale per cui Ver. N attinge il massimo valore
N v.M/N, M v.M/N	Valore dello sforzo assiale e momento per cui Ver. N/M attinge il massimo valore
N v.M/N, M v.M/N Mo v.M/N	Valore dello sforzo assiale e dei momenti per cui Ver. N/M attinge il massimo valore (per le pareti estese debolmente armate)
N v.Vcls, V v.Vcls,	Valore dello sforzo assiale e taglio per cui Ver. V. cls attinge il massimo valore

Quota	Ascissa verticale di riferimento
CtgT Vcls	Valore di ctg(teta) adottato nella verifica V compressione cls
Vrsd Vcls	Valore della resistenza a taglio trazione (armatura di calcolo)
Vrcd Vcls	Valore della resistenza a taglio compressione
CtgT Vacc	Valore di ctg(teta) adottato nella verifica V trazione armatura
Vrsd Vacc	Valore della resistenza a taglio trazione (armatura presente)
Vrcd Vacc	Valore della resistenza a taglio compressione

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

Vdd	Valore del contributo alla resistenza allo scorrimento come da [7.4.20]
Vid	Valore del contributo alla resistenza allo scorrimento come da [7.4.21]
A s.i.	Somma delle aree di armature
Incli.	Angolo di inclinazione delle armature
Dist.	Distanza alla base tra le armature inclinate

Quota	Ascissa verticale di riferimento
V[7.4.16]	Verifica a taglio-trazione dell'armatura dell'anima (7.4.16)
N M V	Sollecitazioni di calcolo della condizione più gravosa
Alfas	Rapporto di Taglio
Vrd,c	Resistenza a taglio degli elementi non armati
VRd,s	Resistenza a taglio nei confronti dello scorrimento
V[7.4.17]	Verifica a taglio-trazione dell'armatura dell'anima (7.4.17)
roH	Rapporto tra l'armatura orizzontale e l'area della sezione relativa di calcestruzzo
roV	Rapporto tra l'armatura verticale e l'area della sezione relativa di calcestruzzo
roN	Sforzo normale adimensionalizzato Ned/(bw fyd)

**Per la verifica a Punzonamento è presente una tabella con i simboli di seguito descritti:**

Nodo	numero del nodo
Stato	codice di verifica dell'elemento <b>ok</b> o <b>NV</b>
V. 6.47	Fattore di sicurezza per la verifica per piastre prive di armature a taglio lungo il perimetro resistente U1
V. 6.53	Fattore di sicurezza per la verifica per piastre prive di armature a taglio lungo il perimetro del pilastro U0
Beta	Fattore di incremento dovuto ai momenti flettenti
f. a fon	fattore di amplificazione per le fondazioni (solo per gusci di fondazione)
f. Uout	fattore di amplificazione dell'altezza utile per individuare il perimetro di verifica lungo il quale l'armatura a taglio non è richiesta
Aw tot	Quantitativo di armatura per la verifica di piastre munite di armatura (formula 6.52 dell'EC2)
Asw,min	Quantitativo minimo di armatura previsto dai dettagli costruttivi (formula 9.11 dell'EC2)
n. x serie	Numero di serie di armature
n.ser 0(R)	Numero di braccia delle armature in direzione 0 (o numero di braccia radiale)
n.ser 90	Numero di braccia delle armature in direzione 90 (solo se armatura cruciforme)
Rif. cmb	Riferimento combinazioni da cui si generano le verifiche più gravose

## PROGETTAZIONE DELLE FONDAZIONI

Il D.M.17/01/2018 - par: 7.2.5 prevede:

"Sia per CD"A" sia per CD"B" il dimensionamento delle strutture di fondazione e la verifica di sicurezza del complesso fondazione-terreno devono essere eseguiti assumendo come azione in fondazione, trasmessa dagli elementi soprastanti, una tra le seguenti:

- quella derivante dall'analisi strutturale eseguita ipotizzando comportamento strutturale non dissipativo;
- [...];
- quella trasferita dagli elementi soprastanti nell'ipotesi di comportamento strutturale dissipativo, amplificata di un coefficiente pari a 1,30 in CD"A" e 1,10 in CD"B";

Nel contesto visualizzazione risultati e nella stampa della relazione sulle fondazioni PRO\_SAP mostra le sollecitazioni che derivano dall'analisi non incrementate sia in termini di pressioni sul terreno che in termini di sollecitazioni.

La progettazione degli elementi strutturali con proprietà fondazione è effettuata da PRO\_SAP (per travi e platee) o da PRO\_CAD Plinti (per plinti e pali di fondazione) incrementando le sollecitazioni delle combinazioni con sisma di un coefficiente pari 1.1 in CDB e 1.3 in CDA per pali, plinti, travi e platee.

Per i bicchieri dei plinti di fondazione prefabbricati l'incremento delle sollecitazioni ha un fattore pari a 1.2 in CDB e 1.35 in CDA.

N.B.: nel caso di comportamento strutturale non dissipativo la progettazione viene effettuata senza nessun incremento.

Le verifiche geotecniche vengono effettuate dal modulo geotecnico incrementando automaticamente le sollecitazioni del fattore 1.1 in CDB e 1.3 in CDA per pali, plinti, travi e platee.

N.B.: nel caso di comportamento strutturale non dissipativo le verifiche geotecniche vengono effettuate senza nessun incremento.

Macro Guscio	Spessore	Id Materiale	Id Criterio	Progettazione
	cm			
1	250.00	3	2	Singolo elemento

**Nodo Stato x/d V N/M ver. rid Af pr- Af pr+Af sec-Af sec+ N x N y N xy M x M y M xy**

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

									daN/cm	daN/cm	daN/cm	daN	daN	daN
1	ok	0.03	0.3	4.25e-03	77.8	77.8	77.8	77.8	-153.5	173.6	33.6	2.264e+04	-1.830e+05	
3.164e+04														
2	ok	0.03	0.3	5.36e-03	77.8	77.8	77.8	77.8	-194.9	223.5	-18.5	-3.119e+04	-2.259e+05	
5.250e+04														
3	ok	0.03	0.3	7.49e-03	77.8	77.8	77.8	77.8	-264.2	298.3	42.3	9926.0	-2.269e+05	
3.264e+04														
4	ok	0.03	0.2	5.53e-03	77.8	77.8	77.8	77.8	-183.0	203.9	91.3	6.035e+04	-1.737e+05	9893.8
5	ok	0.03	0.3	1.12e-02	77.8	77.8	77.8	77.8	-366.9	368.3	175.8	9.291e+04	-1.901e+05	
1.680e+04														
6	ok	0.03	0.2	7.37e-03	77.8	77.8	77.8	77.8	-189.8	224.7	200.6	1.165e+05	-1.392e+05	-
1.500e+04														
7	ok	0.03	0.3	1.61e-02	77.8	77.8	77.8	77.8	-242.3	609.2	513.2	2.503e+05	-1.468e+05	-
2.093e+04														
8	ok	0.03	0.3	9.14e-03	77.8	77.8	77.8	77.8	-117.3	180.0	318.2	1.885e+05	-8.400e+04	-
4.733e+04														
9	ok	0.03	0.6	2.20e-02	77.8	77.8	77.8	77.8	119.7	337.9	603.2	3.897e+05	-8.270e+04	-
9.535e+04														
10	ok	0.03	0.4	1.01e-02	77.8	77.8	77.8	77.8	45.9	30.8	356.9	2.428e+05	-1.312e+04	-
8.667e+04														
11	ok	0.03	0.7	2.27e-02	77.8	77.8	77.8	77.8	337.9	-644.3	476.1	4.123e+05	1.055e+05	-
1.905e+05														
12	ok	0.03	0.4	9.87e-03	77.8	77.8	77.8	77.8	196.9	-182.7	279.9	2.484e+05	6.813e+04	-
1.196e+05														
13	ok	0.03	0.6	1.34e-02	77.8	77.8	77.8	77.8	402.4	-453.3	190.6	3.112e+05	1.890e+05	-
2.112e+05														
14	ok	0.03	0.4	8.03e-03	77.8	77.8	77.8	77.8	241.2	-246.0	165.4	2.168e+05	1.205e+05	-
1.228e+05														
15	ok	0.03	0.5	8.56e-03	77.8	77.8	77.8	77.8	285.7	-300.1	3.9	2.013e+05	2.015e+05	-
1.546e+05														
16	ok	0.03	0.4	6.22e-03	77.8	77.8	77.8	77.8	212.6	-220.8	62.7	1.692e+05	1.405e+05	-
1.039e+05														
17	ok	0.03	0.4	6.31e-03	77.8	77.8	77.8	77.8	205.6	-226.4	-52.2	1.403e+05	1.697e+05	-
1.038e+05														
18	ok	0.03	0.3	4.95e-03	77.8	77.8	77.8	77.8	165.1	-182.8	9.2	1.327e+05	1.333e+05	-
7.999e+04														
19	ok	0.03	0.4	7.10e-03	77.8	77.8	77.8	77.8	-209.8	260.1	-113.5	-1.086e+05	-2.824e+05	-
6.854e+04														
20	ok	0.03	0.5	1.18e-02	77.8	77.8	77.8	77.8	-354.0	435.1	-84.6	-8.423e+04	-3.159e+05	-
4.487e+04														
21	ok	0.03	0.4	1.94e-02	77.8	77.8	77.8	77.8	-646.6	588.9	-52.1	-9147.4	-2.880e+05	-
4.180e+04														
22	ok	0.04	0.7	3.71e-02	77.8	77.8	114.5	77.8	-288.8	2949.6	563.9	3.349e+05	-3.364e+05	3250.4
23	ok	0.05	0.9	8.63e-02	99.2	89.6	116.1	78.1	961.1	2327.2	1506.1	7.066e+05	-6.021e+05	-
2.120e+04														
24	ok	0.06	0.9	8.16e-02	77.8	125.9	77.8	109.7	418.9	-3054.9	474.8	8.057e+05	4.141e+05	-
5.199e+05														
25	ok	0.03	0.8	2.12e-02	77.8	98.8	77.8	98.8	788.1	-801.9	1.0	4.257e+05	4.258e+05	-
4.657e+05														
26	ok	0.03	0.6	1.26e-02	77.8	77.8	77.8	77.8	440.5	-417.7	-186.7	1.889e+05	3.113e+05	-
2.112e+05														
27	ok	0.03	0.4	8.26e-03	77.8	77.8	77.8	77.8	234.3	-256.9	-161.3	1.205e+05	2.173e+05	-
1.227e+05														
28	ok	0.03	0.6	8.94e-03	77.8	77.8	77.8	77.8	-140.9	212.5	-240.4	-1.994e+05	-3.502e+05	-
7.833e+04														
29	ok	0.03	0.7	2.07e-02	77.8	77.8	77.8	77.8	-262.5	441.0	-388.8	-1.965e+05	-4.702e+05	-
4.973e+04														
30	ok	0.03	0.7	7.80e-02	77.8	77.8	80.9	77.8	79.7	886.4	-499.3	-1.748e+05	-6.182e+05	-
3.280e+04														
31	ok	0.12	0.8	0.2	77.9	77.8	174.8	77.8	1133.6	-967.0	160.6	3.517e+05	-8.254e+05	-
5.178e+04														
32	ok	0.58	0.9	0.1	298.9	320.6	952.8	464.0	1734.5	-3360.0	-879.3	1.402e+06	-6.316e+06	-
2.485e+06														
33	ok	0.52	0.9	0.2	415.3	838.3	415.3	848.3	-1093.0	1080.8	-1.4	2.943e+06	2.941e+06	-
4.039e+06														
34	ok	0.08	0.8	3.89e-02	77.8	147.6	77.8	147.8	3043.4	-434.4	-474.7	4.145e+05	8.046e+05	-
5.199e+05														
35	ok	0.03	0.7	1.76e-02	77.8	77.8	77.8	77.8	634.3	-356.1	-474.7	1.056e+05	4.120e+05	-
1.904e+05														
36	ok	0.03	0.4	9.99e-03	77.8	77.8	77.8	77.8	169.5	-223.3	-269.6	6.787e+04	2.487e+05	-
1.198e+05														
37	ok	0.03	0.6	9.19e-03	77.8	77.8	77.8	77.8	-5.7	43.4	-329.0	-2.861e+05	-4.052e+05	-
8.573e+04														

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

38	ok	0.03	1.0	2.04e-02	77.8	77.8	77.8	77.8	76.1	45.0	-609.1	-3.088e+05	-6.289e+05	
1.043e+05														
39	ok	0.08	0.9	7.92e-02	113.5	77.8	147.1	77.8	612.2	112.0	-1282.5	-3.459e+05	-1.098e+06	
1.812e+05														
40	ok	0.65	0.9	0.1	469.7	934.8	464.7	255.2	3213.4	-1525.8	751.7	5.789e+06	-1.734e+06	-
2.509e+06														
41	ok	0.60	0.8	2.51e-02	2485.2	2396.2	2537.4	2444.3	-2213.4	2197.9	6.29e-03	-1.074e+07	-1.072e+07	
1.182e+07														
42	ok	0.65	0.8	0.1	998.7	404.6	259.7	376.7	3342.9	-1749.4	881.8	-6.327e+06	1.398e+06	
2.485e+06														
43	ok	0.06	0.7	8.96e-02	77.8	119.1	77.8	125.2	-2340.8	-979.2	-1502.7	-6.030e+05	7.045e+05	-
2.125e+04														
44	ok	0.03	0.6	2.31e-02	77.8	77.8	77.8	77.8	-349.0	-141.6	-598.2	-8.277e+04	3.891e+05	-
9.539e+04														
45	ok	0.03	0.4	1.10e-02	77.8	77.8	77.8	77.8	-39.0	-73.2	-349.1	-1.268e+04	2.431e+05	-
8.649e+04														
46	ok	0.03	0.7	8.15e-03	77.8	77.8	77.8	77.8	159.1	-114.8	-279.7	-3.474e+05	-4.151e+05	
8.495e+04														
47	ok	0.03	1.0	1.50e-02	82.6	77.8	82.6	77.8	559.2	-246.9	-458.6	-4.337e+05	-6.324e+05	
1.511e+05														
48	ok	0.12	0.9	3.32e-02	182.2	77.8	180.9	77.8	2726.2	-328.7	-463.0	-8.049e+05	-1.105e+06	
4.678e+05														
49	ok	0.53	0.9	0.1	872.7	455.5	897.9	455.5	-1022.6	1005.6	1.2	-3.426e+06	-3.424e+06	
3.948e+06														
50	ok	0.56	0.8	0.1	427.0	280.9	512.8	878.7	1511.3	-3225.5	-754.2	-1.737e+06	5.778e+06	-
2.509e+06														
51	ok	0.12	0.8	0.2	189.6	91.9	189.6	98.7	952.7	-1148.6	-160.4	-8.353e+05	3.418e+05	
3.888e+04														
52	ok	0.03	0.5	8.27e-02	77.8	77.8	77.8	77.8	-2959.3	268.9	-562.3	-3.378e+05	3.325e+05	1849.0
53	ok	0.03	0.4	2.32e-02	77.8	77.8	77.8	77.8	-618.4	219.3	-508.4	-1.470e+05	2.496e+05	-
2.121e+04														
54	ok	0.03	0.3	1.05e-02	77.8	77.8	77.8	77.8	-186.1	89.6	-309.5	-8.373e+04	1.886e+05	-
4.738e+04														
55	ok	0.03	0.6	6.82e-03	77.8	77.8	77.8	77.8	199.0	-193.6	-162.5	-3.681e+05	-3.829e+05	
6.932e+04														
56	ok	0.03	0.9	1.07e-02	77.8	77.8	77.8	77.8	390.3	-348.8	-185.2	-4.651e+05	-5.343e+05	
1.494e+05														
57	ok	0.06	0.8	1.85e-02	131.3	77.8	121.0	77.8	699.5	-714.9	-1.3	-7.246e+05	-7.245e+05	
3.967e+05														
58	ok	0.11	0.9	7.26e-02	172.5	77.8	122.3	77.8	314.7	-2743.7	462.5	-1.106e+06	-8.044e+05	
4.678e+05														
59	ok	0.06	0.8	8.26e-02	123.7	77.8	79.7	77.8	-119.4	-626.9	1275.1	-1.100e+06	-3.456e+05	
1.809e+05														
60	ok	0.03	0.8	3.81e-02	77.8	77.8	77.8	77.8	-897.1	-101.2	501.7	-6.201e+05	-1.746e+05	-
3.358e+04														
61	ok	0.03	0.4	2.18e-02	77.8	77.8	77.8	77.8	-598.9	622.5	56.5	-2.886e+05	-9880.5	
4.107e+04														
62	ok	0.03	0.3	1.38e-02	77.8	77.8	77.8	77.8	-373.3	346.1	-176.5	-1.901e+05	9.259e+04	
1.661e+04														
63	ok	0.03	0.2	8.42e-03	77.8	77.8	77.8	77.8	-232.7	166.3	-193.4	-1.388e+05	1.167e+05	-
1.491e+04														
64	ok	0.03	0.5	5.36e-03	77.8	77.8	77.8	77.8	176.8	-186.0	-61.9	-3.451e+05	-3.344e+05	
4.102e+04														
65	ok	0.03	0.7	7.33e-03	77.8	77.8	77.8	77.8	245.8	-260.4	-3.9	-4.190e+05	-4.190e+05	
8.830e+04														
66	ok	0.03	0.9	1.21e-02	77.8	77.8	77.8	77.8	335.0	-406.6	180.4	-5.344e+05	-4.650e+05	
1.494e+05														
67	ok	0.03	1.0	2.12e-02	77.8	77.8	77.8	77.8	235.1	-577.8	456.4	-6.329e+05	-4.336e+05	
1.512e+05														
68	ok	0.03	0.8	2.14e-02	77.8	77.8	77.8	77.8	-49.7	-92.0	600.8	-6.297e+05	-3.087e+05	
1.042e+05														
69	ok	0.03	0.6	1.66e-02	77.8	77.8	77.8	77.8	-444.1	244.9	380.9	-4.708e+05	-1.965e+05	
4.936e+04														
70	ok	0.03	0.4	1.23e-02	77.8	77.8	77.8	77.8	-443.3	329.8	86.1	-3.160e+05	-8.430e+04	
4.463e+04														
71	ok	0.03	0.3	8.58e-03	77.8	77.8	77.8	77.8	-303.2	239.9	-42.4	-2.266e+05	1.006e+04	
3.268e+04														
72	ok	0.03	0.2	6.42e-03	77.8	77.8	77.8	77.8	-209.9	164.9	-91.4	-1.730e+05	6.075e+04	
1.022e+04														
73	ok	0.03	0.4	4.11e-03	77.8	77.8	77.8	77.8	140.3	-151.8	-7.4	-2.923e+05	-2.923e+05	
1.618e+04														
74	ok	0.03	0.5	5.40e-03	77.8	77.8	77.8	77.8	172.6	-192.0	52.4	-3.343e+05	-3.450e+05	
4.100e+04														

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

75	ok	0.03	0.6	7.35e-03	77.8	77.8	77.8	77.8	181.0	-216.8	157.4-3.828e+05-3.680e+05
6.935e+04											
76	ok	0.03	0.6	9.45e-03	77.8	77.8	77.8	77.8	104.6	-179.0	277.9-4.149e+05-3.472e+05
8.501e+04											
77	ok	0.03	0.6	1.00e-02	77.8	77.8	77.8	77.8	-44.9	-7.3	319.2-4.050e+05-2.855e+05
8.582e+04											
78	ok	0.03	0.5	9.20e-03	77.8	77.8	77.8	77.8	-216.8	117.7	237.5-3.497e+05-1.992e+05
7.813e+04											
79	ok	0.03	0.4	7.90e-03	77.8	77.8	77.8	77.8	-260.7	208.5	123.2-2.821e+05-1.084e+05
6.834e+04											
80	ok	0.03	0.3	6.31e-03	77.8	77.8	77.8	77.8	-232.5	171.0	18.3-2.252e+05-3.080e+04
5.267e+04											
81	ok	0.03	0.2	5.01e-03	77.8	77.8	77.8	77.8	-181.1	131.8	-35.4-1.817e+05 2.335e+04
3.216e+04											
82	ok	0.03	0.4	5.33e-03	77.8	77.8	77.8	77.8	-34.8	15.5	166.2-2.439e+05-2.585e+05
6.987e+04											
83	ok	0.03	0.4	4.83e-03	77.8	77.8	77.8	77.8	-108.7	78.9	117.4-2.407e+05-1.770e+05
1.099e+05											
84	ok	0.03	0.5	4.25e-03	77.8	77.8	77.8	77.8	-22.6	30.5	73.3-1.860e+05-2.420e+05
1.424e+05											
85	ok	0.03	0.3	3.34e-03	77.8	77.8	77.8	77.8	-75.4	45.6	70.9-1.579e+05-1.418e+05
7.981e+04											
86	ok	0.03	0.3	2.34e-03	77.8	77.8	77.8	77.8	-24.9	22.4	58.6-8.379e+04-1.900e+05
6.957e+04											
87	ok	0.03	0.2	2.25e-03	77.8	77.8	77.8	77.8	-50.8	28.7	52.9-9.458e+04-1.080e+05
6.627e+04											
88	ok	0.03	0.2	1.56e-03	77.8	77.8	77.8	77.8	-18.4	4.2	41.4-4.939e+04-1.238e+05
4.306e+04											
89	ok	0.03	0.2	1.55e-03	77.8	77.8	77.8	77.8	-30.8	20.0	29.4-6.098e+04-8.731e+04
6.028e+04											
90	ok	0.03	0.2	1.07e-03	77.8	77.8	77.8	77.8	-12.9	-2.8	31.5-3.014e+04-9.714e+04
4.028e+04											
91	ok	0.03	0.2	1.04e-03	77.8	77.8	77.8	77.8	-18.0	14.7	17.5-3.570e+04-8.394e+04
6.354e+04											
92	ok	0.03	0.2	1.23e-03	77.8	77.8	77.8	77.8	-6.2	-4.7	22.0-2.262e+04-1.104e+05
7.701e+04											
93	ok	0.03	0.2	9.51e-04	77.8	77.8	77.8	77.8	-23.3	6.9	11.9-4.468e+04-6.874e+04
5.977e+04											
94	ok	0.03	0.1	5.08e-04	77.8	77.8	77.8	77.8	-8.4	4.1	6.6 7888.5-8.296e+04
2.428e+04											
95	ok	0.03	0.1	6.49e-04	77.8	77.8	77.8	77.8	-9.6	10.3	3.0 -9777.5-6.139e+04
2.869e+04											
96	ok	0.03	8.14e-02	4.11e-04	77.8	77.8	77.8	77.8	-3.4	6.8	-0.5 -789.6-5.996e+04 1920.4
97	ok	0.03	7.46e-02	4.85e-04	77.8	77.8	77.8	77.8	-2.7	12.0	-2.6 -1820.7-5.220e+04
1.202e+04											
98	ok	0.03	0.3	4.46e-03	77.8	77.8	77.8	77.8	-147.6	105.7	59.9-2.009e+05-8.633e+04
7.848e+04											
99	ok	0.03	0.3	3.01e-03	77.8	77.8	77.8	77.8	-98.2	63.9	39.8-1.428e+05-6.728e+04
7.395e+04											
100	ok	0.03	0.2	2.16e-03	77.8	77.8	77.8	77.8	-67.8	41.8	28.0-1.047e+05-5.060e+04
6.654e+04											
101	ok	0.03	0.2	1.56e-03	77.8	77.8	77.8	77.8	-42.6	31.7	14.0-7.331e+04-4.224e+04
6.009e+04											
102	ok	0.03	0.1	1.13e-03	77.8	77.8	77.8	77.8	-27.8	25.2	4.3-5.117e+04-5.046e+04
5.181e+04											
103	ok	0.03	0.2	1.43e-03	77.8	77.8	77.8	77.8	-36.0	18.8	10.0-7.356e+04-3.462e+04
9.601e+04											
104	ok	0.03	0.1	5.09e-04	77.8	77.8	77.8	77.8	-7.4	14.7	-0.7-2.551e+04-4.087e+04
4.722e+04											
105	ok	0.03	6.26e-02	3.69e-04	77.8	77.8	77.8	77.8	-1.5	11.2	-5.0 -9042.9-3.733e+04
1.805e+04											
106	ok	0.03	0.3	3.92e-03	77.8	77.8	77.8	77.8	-139.2	99.3	3.6-1.735e+05-1.364e+04
5.659e+04											
107	ok	0.03	0.3	2.92e-03	77.8	77.8	77.8	77.8	-102.9	55.3	-5.0-1.733e+05 7753.9
5.751e+04											
108	ok	0.03	0.2	2.05e-03	77.8	77.8	77.8	77.8	-67.2	42.5	0.4-9.673e+04 510.0
5.198e+04											
109	ok	0.03	0.1	1.35e-03	77.8	77.8	77.8	77.8	-47.0	35.3	-1.5-8.184e+04 2274.7
4.943e+04											
110	ok	0.03	0.1	8.84e-04	77.8	77.8	77.8	77.8	-24.5	23.7	-1.9-7.361e+04 -3615.5
5.622e+04											
111	ok	0.03	0.1	1.13e-03	77.8	77.8	77.8	77.8	-35.4	11.1	-8.7-7.715e+04 -2584.1
4.735e+04											

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

112	ok	0.03	8.05e-02	4.89e-04	77.8	77.8	77.8	77.8	-10.6	19.8	-6.5-3.284e+04	-2.670e+04
2.943e+04												
113	ok	0.03	5.31e-02	3.62e-04	77.8	77.8	77.8	77.8	2.2	15.1	-9.1-1.317e+04	-2.536e+04
1.881e+04												
114	ok	0.03	0.2	3.48e-03	77.8	77.8	77.8	77.8	-123.8	77.0	-31.7-1.501e+05	3.507e+04
3.250e+04												
115	ok	0.03	0.3	3.66e-03	77.8	77.8	77.8	77.8	-102.6	39.7	-51.9-1.801e+05	8.460e+04
6.019e+04												
116	ok	0.03	0.2	1.88e-03	77.8	77.8	77.8	77.8	-52.7	62.4	-23.7-1.317e+05	-736.3
5.449e+04												
117	ok	0.03	0.1	1.31e-03	77.8	77.8	77.8	77.8	-40.6	32.4	-16.9-8.029e+04	2.759e+04
2.579e+04												
118	ok	0.03	0.1	1.11e-03	77.8	77.8	77.8	77.8	-37.3	22.0	-15.3-6.716e+04	2.902e+04
2.563e+04												
119	ok	0.03	0.2	1.75e-03	77.8	77.8	77.8	77.8	-52.3	18.7	-17.0-1.023e+05	4.619e+04
5.323e+04												
120	ok	0.03	8.89e-02	4.28e-04	77.8	77.8	77.8	77.8	-1.3	12.0	-5.3-5.434e+04	1287.0
2.745e+04												
121	ok	0.03	3.95e-02	3.10e-04	77.8	77.8	77.8	77.8	2.5	6.3	-7.7-1.785e+04	-1.073e+04
1.440e+04												
122	ok	0.03	0.2	4.11e-03	77.8	77.8	77.8	77.8	-134.5	88.7	-64.9-1.488e+05	6.598e+04 2053.3
123	ok	0.03	0.2	2.98e-03	77.8	77.8	77.8	77.8	-80.7	15.5	-61.0-1.337e+05	1.166e+05
1.497e+04												
124	ok	0.03	0.1	2.07e-03	77.8	77.8	77.8	77.8	-60.2	37.5	-43.0-9.579e+04	4.721e+04
1.401e+04												
125	ok	0.03	0.1	1.45e-03	77.8	77.8	77.8	77.8	-40.3	23.3	-27.0-7.667e+04	4.208e+04 3753.3
126	ok	0.03	0.1	9.49e-04	77.8	77.8	77.8	77.8	-25.7	23.9	-17.7-7.771e+04	3.663e+04 7419.1
127	ok	0.03	9.65e-02	1.28e-03	77.8	77.8	77.8	77.8	-0.5	2.4	-18.1-5.893e+04	6.861e+04 4711.4
128	ok	0.03	6.72e-02	4.29e-04	77.8	77.8	77.8	77.8	1.7	-4.8	-7.7-4.092e+04	1.821e+04 8811.2
129	ok	0.03	3.79e-02	3.32e-04	77.8	77.8	77.8	77.8	11.6	9.9	-12.9-2.067e+04	-7102.6
1.225e+04												
130	ok	0.03	0.2	4.70e-03	77.8	77.8	77.8	77.8	-121.3	76.6	-110.8-1.109e+05	9.794e+04 -
2.669e+04												
131	ok	0.03	0.1	3.11e-03	77.8	77.8	77.8	77.8	-72.4	38.2	-79.0-9.382e+04	7.944e+04 -
2.377e+04												
132	ok	0.03	0.1	2.13e-03	77.8	77.8	77.8	77.8	-40.3	22.0	-57.5-7.799e+04	6.498e+04 -
2.077e+04												
133	ok	0.03	8.92e-02	1.57e-03	77.8	77.8	77.8	77.8	-30.3	13.6	-44.5-6.231e+04	5.183e+04 -
1.864e+04												
134	ok	0.03	8.68e-02	1.35e-03	77.8	77.8	77.8	77.8	-9.7	1.3	-37.9-4.788e+04	5.446e+04 -
1.688e+04												
135	ok	0.03	0.2	2.21e-03	77.8	77.8	77.8	77.8	10.6	-30.3	-30.1-1.375e+04	1.198e+05 -
5.711e+04												
136	ok	0.03	7.28e-02	4.55e-04	77.8	77.8	77.8	77.8	-2.7	11.2	-8.3-5.272e+04	1.261e+04-7982.1
137	ok	0.03	2.54e-02	3.35e-04	77.8	77.8	77.8	77.8	8.0	2.8	-8.2-1.791e+04	912.8 3911.3
138	ok	0.03	0.3	5.19e-03	77.8	77.8	77.8	77.8	-80.0	13.6	-147.1-3.642e+04	1.526e+05 -
8.005e+04												
139	ok	0.03	0.2	4.01e-03	77.8	77.8	77.8	77.8	-39.4	-28.0	-114.3-4.538e+04	1.211e+05 -
4.744e+04												
140	ok	0.03	0.1	2.21e-03	77.8	77.8	77.8	77.8	-22.5	0.1	-63.2-3.952e+04	6.574e+04 -
4.780e+04												
141	ok	0.03	8.89e-02	1.53e-03	77.8	77.8	77.8	77.8	-9.9	-3.93e-02	-48.1-3.476e+04	4.965e+04 -
3.801e+04												
142	ok	0.03	9.20e-02	1.18e-03	77.8	77.8	77.8	77.8	-6.8	-2.3	-25.6-1.714e+04	4.657e+04 -
4.235e+04												
143	ok	0.03	0.1	1.56e-03	77.8	77.8	77.8	77.8	14.9	-11.7	-18.4-2.963e+04	6.362e+04 -
3.859e+04												
144	ok	0.03	4.47e-02	4.61e-04	77.8	77.8	77.8	77.8	23.2	2.2	2.3-1.947e+04	2.274e+04 -
1.587e+04												
145	ok	0.03	2.44e-02	3.06e-04	77.8	77.8	77.8	77.8	21.2	3.2	-9.6-1.694e+04	-169.0 1358.9
146	ok	0.03	0.3	5.85e-03	77.8	77.8	77.8	77.8	22.0	-57.6	-173.1 2.631e+04	1.438e+05 -
7.611e+04												
147	ok	0.03	0.4	5.91e-03	77.8	77.8	77.8	77.8	5.4	-108.6	-69.5 8.351e+04	1.922e+05 -
1.491e+05												
148	ok	0.03	0.2	2.49e-03	77.8	77.8	77.8	77.8	-7.4	-16.0	-66.0 4.515e+04	5.048e+04 -
6.902e+04												
149	ok	0.03	9.19e-02	1.60e-03	77.8	77.8	77.8	77.8	10.9	-16.7	-52.8 -2211.1	3.995e+04 -
4.374e+04												
150	ok	0.03	8.84e-02	1.41e-03	77.8	77.8	77.8	77.8	7.6	-23.9	-29.7-2.068e+04	3.878e+04 -
2.916e+04												
151	ok	0.03	0.2	2.79e-03	77.8	77.8	77.8	77.8	38.9	-50.0	-14.9 4.215e+04	8.044e+04 -
7.951e+04												
152	ok	0.03	4.61e-02	5.75e-04	77.8	77.8	77.8	77.8	-4.2	6.3	-11.4-1.811e+04	-4180.0 -







**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

194	ok	0.03	0.3	4.61e-03	77.8	77.8	77.8	77.8	132.4	-136.6	101.3	1.266e+05	9.331e+04	-
7.554e+04														
195	ok	0.03	0.2	2.89e-03	77.8	77.8	77.8	77.8	75.2	-83.9	62.5	8.291e+04	6.893e+04	-
5.203e+04														
196	ok	0.03	0.1	1.95e-03	77.8	77.8	77.8	77.8	46.0	-54.0	40.0	5.035e+04	5.088e+04	-
3.782e+04														
197	ok	0.03	8.71e-02	1.55e-03	77.8	77.8	77.8	77.8	35.1	-39.7	31.5	3.222e+04	3.771e+04	-
2.928e+04														
198	ok	0.03	8.52e-02	1.63e-03	77.8	77.8	77.8	77.8	17.5	-40.0	26.5	2.812e+04	3.669e+04	-
3.030e+04														
199	ok	0.03	0.2	4.45e-03	77.8	77.8	77.8	77.8	24.1	-153.0	46.6	3.213e+04	1.222e+05	-
6.852e+04														
200	ok	0.03	4.22e-02	1.55e-03	77.8	77.8	77.8	77.8	3.0	-54.0	-14.4	-9079.6	3.075e+04	2845.2
201	ok	0.03	7.60e-03	6.45e-04	77.8	77.8	77.8	77.8	0.5	-16.5	-2.4	2311.2	4379.4	1146.7
202	ok	0.03	0.3	5.10e-03	77.8	77.8	77.8	77.8	103.8	-77.9	172.6	1.462e+05	5.594e+04	-
8.480e+04														
203	ok	0.03	0.3	3.81e-03	77.8	77.8	77.8	77.8	16.5	-48.7	120.2	1.367e+05	3.840e+04	-
8.950e+04														
204	ok	0.03	0.1	1.82e-03	77.8	77.8	77.8	77.8	36.8	-34.6	58.4	5.517e+04	2.835e+04	-
4.398e+04														
205	ok	0.03	8.90e-02	1.67e-03	77.8	77.8	77.8	77.8	27.6	-37.2	46.7	3.250e+04	2.475e+04	-
3.700e+04														
206	ok	0.03	9.49e-02	2.27e-03	77.8	77.8	77.8	77.8	18.8	-65.3	43.6	2.021e+04	3.942e+04	-
3.930e+04														
207	ok	0.03	0.1	2.12e-03	77.8	77.8	77.8	77.8	-30.2	-46.4	39.3	4.046e+04	2.551e+04	-
5.474e+04														
208	ok	0.03	3.65e-02	1.16e-03	77.8	77.8	77.8	77.8	-20.4	-31.5	-9.4	1.177e+04	8217.9	-
1.676e+04														
209	ok	0.03	1.02e-02	5.78e-04	77.8	77.8	77.8	77.8	2.4	-2.3	-6.7	-1412.1	-6182.9	-2499.8
210	ok	0.03	0.3	5.66e-03	77.8	77.8	77.8	77.8	25.0	-63.8	184.5	1.420e+05	3.963e+04	-
7.094e+04														
211	ok	0.03	0.4	7.53e-03	77.8	77.8	77.8	77.8	-27.4	-112.9	203.6	1.863e+05	1.078e+05	-
1.618e+05														
212	ok	0.03	0.2	3.56e-03	77.8	77.8	77.8	77.8	22.7	-78.4	90.5	4.963e+04	5.697e+04	-
7.205e+04														
213	ok	0.03	9.03e-02	1.66e-03	77.8	77.8	77.8	77.8	10.9	-6.8	50.8	3.899e+04	-3399.3	-
4.416e+04														
214	ok	0.03	8.91e-02	1.83e-03	77.8	77.8	77.8	77.8	-3.2	37.2	26.7	3.735e+04	-3.232e+04	-
2.656e+04														
215	ok	0.03	0.2	4.56e-03	77.8	77.8	77.8	77.8	-17.6	-110.6	93.7	7.745e+04	7.220e+04	-
9.814e+04														
216	ok	0.03	6.27e-02	1.80e-03	77.8	77.8	77.8	77.8	16.2	41.1	4.6	-4325.4	-3.230e+04	-
2.385e+04														
217	ok	0.03	1.27e-02	7.27e-04	77.8	77.8	77.8	77.8	3.6	-2.8	-2.4	1065.6	-7914.0	-3910.3
218	ok	0.03	0.2	6.45e-03	77.8	77.8	77.8	77.8	-81.8	41.5	209.5	1.541e+05	-3.347e+04	-
8.385e+04														
219	ok	0.03	0.2	3.44e-03	77.8	77.8	77.8	77.8	-28.9	24.9	122.3	1.129e+05	-4.448e+04	-
5.337e+04														
220	ok	0.03	0.1	2.10e-03	77.8	77.8	77.8	77.8	-21.1	17.5	73.1	6.559e+04	-4.002e+04	-
4.707e+04														
221	ok	0.03	8.79e-02	1.76e-03	77.8	77.8	77.8	77.8	-12.5	13.9	50.6	4.867e+04	-3.616e+04	-
3.829e+04														
222	ok	0.03	0.1	2.34e-03	77.8	77.8	77.8	77.8	-2.9	36.7	42.6	3.381e+04	-4.806e+04	-
3.476e+04														
223	ok	0.03	0.1	2.16e-03	77.8	77.8	77.8	77.8	-56.0	-21.2	37.5	7.242e+04	-2.665e+04	-
4.464e+04														
224	ok	0.03	5.36e-02	1.31e-03	77.8	77.8	77.8	77.8	-0.2	-5.6	1.3	1.555e+04	-2.594e+04	-
1.340e+04														
225	ok	0.03	2.43e-02	6.58e-04	77.8	77.8	77.8	77.8	5.3	-7.8	-2.8	-318.5	-1.773e+04	1649.6
226	ok	0.03	0.2	4.47e-03	77.8	77.8	77.8	77.8	-107.5	108.8	126.0	9.740e+04	-1.113e+05	-
2.712e+04														
227	ok	0.03	0.1	2.70e-03	77.8	77.8	77.8	77.8	-60.2	65.8	80.8	7.773e+04	-9.508e+04	-
2.396e+04														
228	ok	0.03	0.1	1.75e-03	77.8	77.8	77.8	77.8	-41.1	41.2	49.3	6.410e+04	-7.934e+04	-
2.041e+04														
229	ok	0.03	9.27e-02	1.46e-03	77.8	77.8	77.8	77.8	-25.1	22.7	39.1	5.036e+04	-6.384e+04	-
1.888e+04														
230	ok	0.03	0.1	1.82e-03	77.8	77.8	77.8	77.8	-25.2	7.6	35.0	5.381e+04	-4.837e+04	-
1.906e+04														
231	ok	0.03	0.2	4.60e-03	77.8	77.8	77.8	77.8	-80.3	-46.2	105.2	1.315e+05	-978.7	-
8.123e+04														
232	ok	0.03	9.05e-02	1.94e-03	77.8	77.8	77.8	77.8	16.0	41.9	-7.2	1.191e+04	-6.609e+04	-4798.1
233	ok	0.03	2.82e-02	7.96e-04	77.8	77.8	77.8	77.8	3.1	-3.5	0.9	687.6	-1.999e+04	4201.5

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

234	ok	0.03	0.2	3.63e-03	77.8	77.8	77.8	77.8	-113.3	143.2	69.6	6.571e+04	-1.553e+05	-16.8
235	ok	0.03	0.2	3.71e-03	77.8	77.8	77.8	77.8	-130.5	99.1	39.4	1.216e+05	-1.397e+05	
1.325e+04														
236	ok	0.03	0.1	1.41e-03	77.8	77.8	77.8	77.8	-46.5	50.0	23.5	4.474e+04	-9.787e+04	
1.555e+04														
237	ok	0.03	0.1	1.44e-03	77.8	77.8	77.8	77.8	-32.7	40.3	30.6	3.929e+04	-8.048e+04	3176.6
238	ok	0.03	0.1	2.27e-03	77.8	77.8	77.8	77.8	-22.5	57.9	17.5	3.583e+04	-8.802e+04	7925.8
239	ok	0.03	0.1	2.24e-03	77.8	77.8	77.8	77.8	-77.3	-4.9	20.7	8.125e+04	-5.942e+04	2204.3
240	ok	0.03	7.67e-02	1.61e-03	77.8	77.8	77.8	77.8	47.8	7.6	-9.6	-1.539e+04	-4.631e+04	
2.036e+04														
241	ok	0.03	3.91e-02	7.43e-04	77.8	77.8	77.8	77.8	1.6	-11.2	5.0	-7579.2	-2.118e+04	
1.273e+04														
242	ok	0.03	0.2	3.01e-03	77.8	77.8	77.8	77.8	-103.8	120.3	24.9	3.434e+04	-1.541e+05	
3.124e+04														
243	ok	0.03	0.3	5.67e-03	77.8	77.8	77.8	77.8	74.9	123.7	-67.0	-1.155e+05	-1.425e+05	
1.120e+05														
244	ok	0.03	0.2	3.20e-03	77.8	77.8	77.8	77.8	-3.7	87.3	-23.8	-7886.2	-1.432e+05	
6.343e+04														
245	ok	0.03	0.1	1.40e-03	77.8	77.8	77.8	77.8	-37.5	37.9	13.5	2.653e+04	-8.217e+04	
2.577e+04														
246	ok	0.03	0.1	1.89e-03	77.8	77.8	77.8	77.8	-33.5	37.4	12.5	2.820e+04	-7.306e+04	
2.491e+04														
247	ok	0.03	0.2	4.92e-03	77.8	77.8	77.8	77.8	-44.2	136.8	-34.3	5.156e+04	-1.451e+05	
6.222e+04														
248	ok	0.03	0.1	2.06e-03	77.8	77.8	77.8	77.8	25.6	24.2	-15.6	-4530.3	-6.141e+04	
3.411e+04														
249	ok	0.03	4.18e-02	7.92e-04	77.8	77.8	77.8	77.8	-0.8	-2.7	3.7	-1.136e+04	-1.920e+04	
1.505e+04														
250	ok	0.03	0.3	3.82e-03	77.8	77.8	77.8	77.8	-126.2	142.7	-11.5	-1.382e+04	-1.749e+05	
5.636e+04														
251	ok	0.03	0.3	2.87e-03	77.8	77.8	77.8	77.8	-105.7	156.9	9.6	1.035e+04	-1.929e+05	
5.363e+04														
252	ok	0.03	0.2	2.22e-03	77.8	77.8	77.8	77.8	-56.2	46.0	2.1	-1270.6	-9.453e+04	
5.129e+04														
253	ok	0.03	0.1	1.49e-03	77.8	77.8	77.8	77.8	-44.7	40.5	-0.6	1449.0	-8.290e+04	
4.941e+04														
254	ok	0.03	0.2	2.04e-03	77.8	77.8	77.8	77.8	-22.5	54.7	-18.9	-6666.4	-8.144e+04	
6.022e+04														
255	ok	0.03	0.2	1.76e-03	77.8	77.8	77.8	77.8	-20.3	80.1	4.1	-2817.1	-9.850e+04	
4.725e+04														
256	ok	0.03	8.59e-02	2.07e-03	77.8	77.8	77.8	77.8	27.7	9.4	13.2	-3.493e+04	-3.565e+04	
2.806e+04														
257	ok	0.03	5.27e-02	8.83e-04	77.8	77.8	77.8	77.8	-11.9	-7.7	10.4	-2.537e+04	-1.302e+04	
1.870e+04														
258	ok	0.03	0.3	3.90e-03	77.8	77.8	77.8	77.8	-124.9	152.5	-72.8	-8.706e+04	-2.023e+05	
7.844e+04														
259	ok	0.03	0.3	2.57e-03	77.8	77.8	77.8	77.8	-86.3	96.9	-36.5	-6.798e+04	-1.447e+05	
7.312e+04														
260	ok	0.03	0.2	1.83e-03	77.8	77.8	77.8	77.8	-65.3	65.1	-18.0	-5.084e+04	-1.066e+05	
6.568e+04														
261	ok	0.03	0.2	1.48e-03	77.8	77.8	77.8	77.8	-42.1	43.2	-15.5	-4.349e+04	-7.462e+04	
5.954e+04														
262	ok	0.03	0.1	2.07e-03	77.8	77.8	77.8	77.8	-0.2	32.3	-14.6	-5.959e+04	-5.307e+04	
5.206e+04														
263	ok	0.03	0.3	4.31e-03	77.8	77.8	77.8	77.8	10.6	87.3	-76.9	-4.516e+04	-9.870e+04	
1.166e+05														
264	ok	0.03	0.1	1.91e-03	77.8	77.8	77.8	77.8	24.3	9.0	-12.0	-4.960e+04	-2.742e+04	
5.184e+04														
265	ok	0.03	6.39e-02	8.67e-04	77.8	77.8	77.8	77.8	-7.6	-0.3	3.5	-3.805e+04	-9628.2	
1.847e+04														
266	ok	0.03	0.5	4.46e-03	77.8	77.8	77.8	77.8	-76.1	135.6	-163.1	-1.802e+05	-2.450e+05	
1.135e+05														
267	ok	0.03	0.3	2.72e-03	77.8	77.8	77.8	77.8	-57.3	77.7	-87.9	-1.431e+05	-1.604e+05	
8.048e+04														
268	ok	0.03	0.2	1.88e-03	77.8	77.8	77.8	77.8	-46.5	48.7	-45.9	-1.091e+05	-9.599e+04	
6.553e+04														
269	ok	0.03	0.2	1.53e-03	77.8	77.8	77.8	77.8	-34.0	36.7	-39.3	-8.843e+04	-6.256e+04	
6.016e+04														
270	ok	0.03	0.2	1.89e-03	77.8	77.8	77.8	77.8	-7.9	33.7	-41.9	-8.916e+04	-3.977e+04	
6.705e+04														
271	ok	0.03	0.2	1.53e-03	77.8	77.8	77.8	77.8	-15.9	62.8	-26.5	-7.128e+04	-5.925e+04	
6.502e+04														
272	ok	0.03	0.1	1.84e-03	77.8	77.8	77.8	77.8	5.4	16.8	10.3	-6.757e+04	-1.324e+04	



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

312	ok	0.03	9.72e-02	8.70e-04	77.8	77.8	77.8	77.8	9.2	-3.9	8.4-3.181e+04	-2.686e+04	-
4.222e+04													
313	ok	0.03	8.61e-02	4.22e-04	77.8	77.8	77.8	77.8	2.5	-5.6	-1.1-3.179e+04	-3.343e+04	-
3.091e+04													
314	ok	0.03	0.4	3.25e-03	77.8	77.8	77.8	77.8	99.7	-106.0	24.7-2.215e+05	-2.815e+05	5799.0
315	ok	0.03	0.3	2.45e-03	77.8	77.8	77.8	77.8	93.2	-74.8	7.7-2.079e+05	-2.073e+05	-3039.7
316	ok	0.03	0.2	1.66e-03	77.8	77.8	77.8	77.8	42.9	-59.7	13.5-1.062e+05	-1.496e+05	-
2.910e+04													
317	ok	0.03	0.2	1.23e-03	77.8	77.8	77.8	77.8	26.6	-43.0	13.2-6.816e+04	-1.179e+05	-
3.431e+04													
318	ok	0.03	0.2	9.86e-04	77.8	77.8	77.8	77.8	12.0	-28.3	3.7-3.454e+04	-9.945e+04	-
4.075e+04													
319	ok	0.03	0.1	8.05e-04	77.8	77.8	77.8	77.8	40.4	-10.7	-3.7-6.374e+04	-7.172e+04	-
3.042e+04													
320	ok	0.03	0.1	1.00e-03	77.8	77.8	77.8	77.8	2.7	-15.6	-1.6-1.688e+04	-5.563e+04	-
3.259e+04													
321	ok	0.03	8.77e-02	6.63e-04	77.8	77.8	77.8	77.8	-3.92e-02	-12.8	-2.4-1.855e+04	-4.505e+04	-
3.018e+04													
322	ok	0.03	0.4	3.98e-03	77.8	77.8	77.8	77.8	93.8	-110.9	80.8-2.315e+05	-2.902e+05	-
2.307e+04													
323	ok	0.03	0.3	2.68e-03	77.8	77.8	77.8	77.8	56.9	-74.9	56.3-1.469e+05	-2.297e+05	3133.7
324	ok	0.03	0.2	1.93e-03	77.8	77.8	77.8	77.8	34.7	-47.0	35.0-9.290e+04	-1.787e+05	-9551.5
325	ok	0.03	0.2	1.38e-03	77.8	77.8	77.8	77.8	20.5	-30.8	21.5-5.631e+04	-1.406e+05	-
1.270e+04													
326	ok	0.03	0.2	9.75e-04	77.8	77.8	77.8	77.8	14.7	-25.6	8.1-4.043e+04	-1.080e+05	-
1.426e+04													
327	ok	0.03	0.2	1.49e-03	77.8	77.8	77.8	77.8	-20.9	-27.2	-4.8 5.648e+04	-9.340e+04	-
2.603e+04													
328	ok	0.03	0.1	6.31e-04	77.8	77.8	77.8	77.8	-8.2	-12.9	4.2 8079.2-7.739e+04	-	-
2.074e+04													
329	ok	0.03	8.83e-02	4.49e-04	77.8	77.8	77.8	77.8	-4.3	-0.3	-0.4-1.008e+04	-5.627e+04	-
2.214e+04													
330	ok	0.03	0.4	4.66e-03	77.8	77.8	77.8	77.8	49.4	-74.8	136.3-2.362e+05	-2.795e+05	-
5.102e+04													
331	ok	0.03	0.4	3.13e-03	77.8	77.8	77.8	77.8	33.2	-48.0	82.0-1.760e+05	-2.268e+05	-
5.646e+04													
332	ok	0.03	0.2	2.52e-03	77.8	77.8	77.8	77.8	9.0	-29.1	59.0-8.304e+04	-1.772e+05	-
2.298e+04													
333	ok	0.03	0.2	1.52e-03	77.8	77.8	77.8	77.8	1.4	-16.8	38.8-4.384e+04	-1.461e+05	-
1.622e+04													
334	ok	0.03	0.2	1.06e-03	77.8	77.8	77.8	77.8	2.5	-10.7	21.0 -9993.0-1.332e+05	-	-
1.386e+04													
335	ok	0.03	0.2	7.92e-04	77.8	77.8	77.8	77.8	-2.7	-12.7	15.2-1.919e+04	-1.149e+05	-
2.460e+04													
336	ok	0.03	0.1	6.99e-04	77.8	77.8	77.8	77.8	-8.9	-5.2	-0.2 4996.5-8.026e+04	512.2	-
337	ok	0.03	8.73e-02	5.85e-04	77.8	77.8	77.8	77.8	-4.4	2.8	-0.4 -993.9-6.227e+04	-	-
1.164e+04													

Nodo	x/d	V N/M	ver. rid	Af pr-	Af pr+Af	sec-Af	sec+	N x	N y	N xy	M x	M y	M xy
4.039e+06								-2959.32	-3359.98	-1502.73-1.074e+07	-1.072e+07	-	-
1.182e+07	0.65	1.09	0.172485.222396.232537.402444.273342.93	2949.56	1506.10	5.789e+06	5.778e+06						

Nodo	Stato	Max tau daN/cm2	Ver V pr	Ver V sec	Af V pr	Af V sec	V pr daN/cm	V sec daN/cm
1	ok Av	3.65	0.14	0.04	4.0	1.2	853.2	268.4
2	ok Av	4.86	0.19	9.01e-03	5.5	0.3	1189.5	56.4
3	ok Av	5.69	0.21	0.09	6.0	2.5	1285.3	540.1
4	ok Av	4.15	0.13	0.10	3.7	3.0	796.0	656.7
5	ok Av	6.32	0.15	0.20	4.4	5.7	947.7	1239.6
6	ok Av	4.66	0.08	0.17	2.3	4.9	494.3	1051.5
7	ok Av	6.89	0.03	0.27	1.0	7.8	207.3	1680.0
8	ok Av	5.01	0.03	0.19	0.9	5.6	188.3	1214.1
9	ok Av	8.17	0.25	0.21	7.4	6.1	1596.6	1324.4
10	ok Av	5.27	0.14	0.15	4.1	4.4	879.3	946.4
11	ok Av	8.77	0.34	0.03	10.0	0.9	2149.3	197.1
12	ok Av	5.36	0.20	0.06	5.8	1.7	1258.8	376.7
13	ok Av	7.69	0.28	0.12	8.0	3.6	1734.7	769.0
14	ok Av	4.96	0.19	0.03	5.6	0.9	1203.9	196.3
15	ok Av	5.72	0.16	0.16	4.6	4.6	993.8	989.3

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

16	ok Av	4.03	0.14	0.07	4.1	2.1	876.5	460.9
17	ok Av	4.03	0.07	0.14	2.2	4.0	467.9	871.5
18	ok	2.97						
19	ok Av	6.28	0.23	0.07	6.8	2.1	1469.6	459.0
20	ok Av	7.82	0.31	0.02	8.9	0.5	1914.9	112.4
21	ok Av	9.02	0.33	0.14	9.4	4.0	2039.6	853.1
22	ok Av	9.00	0.05	0.35	1.5	10.2	318.9	2201.5
23	ok Av	14.61	0.49	0.35	14.3	10.3	3086.5	2220.7
24	ok Av	16.22	0.61	0.19	17.6	5.5	3809.0	1177.7
25	ok Av	12.64	0.35	0.35	10.2	10.1	2192.0	2190.4
26	ok Av	7.68	0.12	0.28	3.6	8.0	771.3	1728.9
27	ok Av	4.93	0.03	0.19	0.9	5.5	202.4	1195.6
28	ok Av	7.82	0.23	0.20	6.7	5.8	1449.0	1262.1
29	ok Av	10.67	0.34	0.25	9.7	7.2	2103.1	1555.2
30	ok Av	14.31	0.47	0.30	13.7	8.7	2962.4	1879.8
31	ok Av	17.89	0.60	0.36	17.5	10.3	3775.9	2230.9
32	ok	53.37	1.00	1.25	76.6	131.4	6724.5	1.135e+04
33	ok	41.00	1.00	1.00	39.7	39.7	7110.7	7107.8
34	ok Av	16.18	0.19	0.61	5.4	17.6	1176.1	3800.4
35	ok Av	8.73	0.03	0.34	0.9	9.9	197.3	2139.7
36	ok Av	5.31	0.06	0.20	1.7	5.8	373.1	1247.4
37	ok Av	9.10	0.15	0.32	4.5	9.4	961.7	2025.0
38	ok Av	13.56	0.21	0.50	6.0	14.4	1305.5	3112.0
39	ok Av	22.20	0.27	0.85	7.9	24.7	1712.1	5331.6
40	ok	47.75	1.00	1.23	35.4	129.4	6795.4	1.117e+04
41	ok	203.77	3.89	3.89	409.5	408.7	3.537e+04	3.529e+04
42	ok	53.31	1.25	1.00	131.5	75.5	1.135e+04	6730.5
43	ok Av	14.55	0.35	0.49	10.3	14.2	2220.0	3068.8
44	ok Av	8.12	0.21	0.25	6.1	7.3	1323.4	1583.7
45	ok Av	5.23	0.15	0.14	4.4	4.0	944.1	868.1
46	ok Av	9.55	0.02	0.37	0.7	10.8	140.4	2339.4
47	ok Av	14.44	0.07	0.56	1.9	16.3	417.0	3524.4
48	ok Av	24.52	0.34	0.92	9.8	26.6	2111.7	5741.9
49	ok	75.87	1.45	1.45	152.3	152.3	1.316e+04	1.315e+04
50	ok	47.80	1.23	1.00	129.7	35.1	1.120e+04	6776.7
51	ok Av	18.10	0.36	0.61	10.5	17.7	2269.2	3813.8
52	ok Av	8.97	0.35	0.05	10.2	1.6	2191.8	337.8
53	ok Av	6.86	0.27	0.03	7.8	0.9	1674.7	194.0
54	ok Av	4.99	0.19	0.03	5.6	0.8	1209.4	179.7
55	ok Av	8.96	0.10	0.34	3.0	9.8	644.0	2113.1
56	ok Av	12.76	0.23	0.44	6.7	12.9	1454.4	2785.9
57	ok Av	19.56	0.54	0.54	15.7	15.7	3391.6	3391.6
58	ok Av	24.55	0.92	0.34	26.6	9.8	5749.8	2114.1
59	ok Av	22.28	0.85	0.27	24.8	7.9	5349.6	1712.5
60	ok Av	14.38	0.30	0.47	8.8	13.8	1900.8	2970.8
61	ok Av	9.04	0.13	0.33	3.9	9.5	838.4	2052.6
62	ok Av	6.32	0.20	0.15	5.7	4.4	1230.0	957.8
63	ok Av	4.64	0.17	0.08	4.8	2.3	1042.2	500.2
64	ok Av	7.71	0.16	0.26	4.7	7.4	1012.3	1602.8
65	ok Av	10.07	0.28	0.28	8.1	8.1	1746.3	1745.4
66	ok Av	12.78	0.45	0.23	12.9	6.7	2788.9	1454.9
67	ok Av	14.48	0.56	0.07	16.4	1.9	3532.1	418.2
68	ok Av	13.61	0.50	0.21	14.5	6.0	3124.9	1305.8
69	ok Av	10.72	0.25	0.34	7.3	9.8	1570.4	2107.0
70	ok Av	7.85	0.02	0.31	0.6	8.9	125.7	1921.6
71	ok Av	5.70	0.08	0.21	2.5	6.0	529.1	1292.7
72	ok Av	4.14	0.10	0.13	3.0	3.7	644.7	802.2
73	ok Av	6.39	0.18	0.18	5.1	5.1	1108.8	1107.8
74	ok Av	7.72	0.26	0.16	7.4	4.7	1604.9	1012.2
75	ok Av	8.97	0.34	0.10	9.8	3.0	2116.7	644.2
76	ok Av	9.58	0.37	0.02	10.9	0.7	2346.6	140.5
77	ok Av	9.14	0.33	0.15	9.4	4.5	2036.0	963.4
78	ok Av	7.86	0.20	0.23	5.9	6.7	1275.0	1450.3
79	ok Av	6.30	0.08	0.24	2.2	6.8	470.6	1472.3
80	ok Av	4.87	7.47e-03	0.19	0.2	5.5	46.8	1193.7
81	ok Av	3.66	0.04	0.14	1.2	4.0	257.5	859.7
82	ok Av	5.92	0.21	0.12	6.1	3.6	1309.8	782.8
83	ok Av	5.09	0.15	0.14	4.4	4.2	952.7	907.2
84	ok Av	7.25	0.22	0.19	6.3	5.6	1367.4	1218.8
85	ok Av	4.63	0.15	0.10	4.3	3.0	938.3	637.7
86	ok	2.76						
87	ok	2.30						
88	ok	1.77						

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

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89	ok	1.68							
90	ok	1.59							
91	ok	1.76							
92	ok Av	3.70	0.09	0.13	2.7	3.7	593.0	791.6	
93	ok	2.05							
94	ok	0.55							
95	ok	0.63							
96	ok	0.96							
97	ok	0.89							
98	ok Av	4.23	0.06	0.15	1.9	4.5	404.2	964.2	
99	ok	3.03							
100	ok	2.06							
101	ok	1.44							
102	ok	1.32							
103	ok Av	3.63	0.09	0.14	2.6	4.0	563.7	855.9	
104	ok	0.65							
105	ok	1.07							
106	ok Av	3.90	0.02	0.15	0.5	4.4	105.2	950.9	
107	ok Av	3.40	0.05	0.12	1.5	3.6	315.4	772.9	
108	ok	2.31							
109	ok	1.14							
110	ok	1.40							
111	ok	1.55							
112	ok	0.63							
113	ok	1.07							
114	ok	2.75							
115	ok Av	5.64	0.17	0.22	5.1	6.2	1094.8	1348.5	
116	ok	1.94							
117	ok	0.83							
118	ok	0.95							
119	ok Av	3.27	0.02	0.13	0.5	3.7	106.4	795.4	
120	ok	0.82							
121	ok	1.36							
122	ok	2.61							
123	ok	2.76							
124	ok	1.30							
125	ok	0.89							
126	ok	1.23							
127	ok	1.08							
128	ok	0.53							
129	ok	1.23							
130	ok	2.98							
131	ok	1.87							
132	ok	1.20							
133	ok	0.78							
134	ok	0.67							
135	ok	2.80							
136	ok	0.85							
137	ok	1.37							
138	ok Av	3.74	0.14	0.03	4.2	0.7	904.6	157.2	
139	ok	2.38							
140	ok	1.66							
141	ok	0.81							
142	ok	1.04							
143	ok	1.19							
144	ok	0.59							
145	ok	1.09							
146	ok	3.14							
147	ok Av	4.25	0.15	0.07	4.4	2.0	954.2	433.5	
148	ok	1.58							
149	ok	0.76							
150	ok	0.40							
151	ok	2.12							
152	ok	0.83							
153	ok	1.15							
154	ok	2.87							
155	ok	2.94							
156	ok	1.34							
157	ok	0.91							
158	ok	0.89							
159	ok	1.33							
160	ok	0.61							
161	ok	0.83							

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

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162	ok	2.86							
163	ok	2.04							
164	ok	1.43							
165	ok	0.86							
166	ok	0.24							
167	ok	1.52							
168	ok	0.76							
169	ok	0.84							
170	ok	2.37							
171	ok	2.50							
172	ok	1.51							
173	ok	0.85							
174	ok	0.84							
175	ok	1.34							
176	ok	0.64							
177	ok	0.50							
178	ok	1.72							
179	ok	2.46							
180	ok	1.38							
181	ok	0.63							
182	ok	0.18							
183	ok	1.53							
184	ok	0.67							
185	ok	0.46							
186	ok	2.35							
187	ok	2.43							
188	ok	1.69							
189	ok	0.91							
190	ok	0.89							
191	ok	1.38							
192	ok	0.76							
193	ok	0.41							
194	ok	2.89							
195	ok	2.06							
196	ok	1.47							
197	ok	0.92							
198	ok	0.34							
199	ok	1.95							
200	ok	0.82							
201	ok	0.86							
202	ok	2.97							
203	ok	3.01							
204	ok	1.37							
205	ok	0.94							
206	ok	1.07							
207	ok	1.37							
208	ok	0.79							
209	ok	0.75							
210	ok	3.11							
211	ok Av	4.55	0.07	0.17	2.1	4.8	461.9	1036.0	
212	ok	1.51							
213	ok	0.79							
214	ok	0.41							
215	ok	2.53							
216	ok	0.89							
217	ok	1.16							
218	ok Av	3.82	0.03	0.15	0.8	4.3	164.9	922.0	
219	ok	2.47							
220	ok	1.80							
221	ok	0.88							
222	ok	1.25							
223	ok	1.25							
224	ok	0.78							
225	ok	1.00							
226	ok	3.05							
227	ok	1.97							
228	ok	1.28							
229	ok	0.81							
230	ok	0.70							
231	ok	3.18							
232	ok	0.90							
233	ok	1.39							
234	ok	2.64							



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

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235	ok	2.85							
236	ok	1.40							
237	ok	0.94							
238	ok	1.43							
239	ok	1.16							
240	ok	0.72							
241	ok	1.15							
242	ok	2.73							
243	ok Av	5.95	0.22	0.19	6.3	5.4	1369.7	1170.2	
244	ok	1.86							
245	ok	0.80							
246	ok	0.94							
247	ok Av	3.58	0.14	0.12	4.0	3.5	857.0	766.0	
248	ok	0.87							
249	ok	1.39							
250	ok Av	3.91	0.15	0.02	4.4	0.5	952.5	100.2	
251	ok Av	3.48	0.13	0.05	3.7	1.4	795.8	306.5	
252	ok	2.44							
253	ok	1.14							
254	ok	1.56							
255	ok	1.64							
256	ok	0.82							
257	ok	0.99							
258	ok Av	4.23	0.15	0.06	4.5	1.8	969.4	398.0	
259	ok	3.06							
260	ok	2.08							
261	ok	1.43							
262	ok	1.31							
263	ok Av	3.89	0.15	0.10	4.3	2.8	933.5	614.5	
264	ok	0.69							
265	ok	1.07							
266	ok Av	5.06	0.15	0.15	4.2	4.3	915.4	932.3	
267	ok Av	4.67	0.10	0.15	3.0	4.4	650.2	942.4	
268	ok	2.31							
269	ok	1.69							
270	ok	1.88							
271	ok	2.12							
272	ok	0.80							
273	ok	0.80							
274	ok Av	5.88	0.12	0.21	3.6	6.0	771.2	1297.7	
275	ok Av	7.27	0.20	0.21	5.8	6.2	1257.0	1344.4	
276	ok	2.70							
277	ok	1.75							
278	ok	1.58							
279	ok Av	3.94	0.14	0.09	4.1	2.7	878.4	581.9	
280	ok	0.59							
281	ok	0.95							
282	ok Av	6.84	0.04	0.26	1.2	7.7	257.8	1656.9	
283	ok Av	5.24	0.04	0.20	1.1	5.9	228.6	1281.1	
284	ok	2.62							
285	ok	1.97							
286	ok	1.98							
287	ok	2.40							
288	ok	0.71							
289	ok	0.63							
290	ok Av	5.85	0.06	0.22	1.6	6.5	355.3	1394.4	
291	ok Av	4.08	0.04	0.16	1.1	4.5	233.7	973.2	
292	ok	2.85							
293	ok	2.07							
294	ok	1.75							
295	ok Av	3.85	0.14	0.13	4.2	3.9	907.5	838.7	
296	ok	0.51							
297	ok	0.78							
298	ok Av	5.53	0.12	0.18	3.5	5.2	756.1	1126.3	
299	ok Av	5.79	0.11	0.20	3.2	5.8	680.1	1244.8	
300	ok	2.73							
301	ok	1.94							
302	ok	1.84							
303	ok	2.51							
304	ok	0.69							
305	ok	0.36							
306	ok Av	4.74	0.14	0.14	4.0	3.9	853.4	849.5	
307	ok Av	5.96	0.20	0.21	5.9	6.1	1278.4	1310.4	

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
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308	ok	2.12							
309	ok	1.66							
310	ok	1.56							
311	ok Av	3.65	0.14	0.14	4.0	4.0	866.6	857.1	
312	ok	0.72							
313	ok	0.27							
314	ok Av	5.56	0.18	0.12	5.2	3.5	1129.5	762.7	
315	ok Av	5.80	0.20	0.11	5.7	3.2	1240.3	693.7	
316	ok	2.71							
317	ok	1.92							
318	ok	1.77							
319	ok	2.48							
320	ok	0.79							
321	ok	0.46							
322	ok Av	5.86	0.22	0.06	6.5	1.7	1396.3	359.7	
323	ok Av	4.09	0.16	0.04	4.5	1.1	973.0	241.9	
324	ok	2.85							
325	ok	2.07							
326	ok	1.74							
327	ok Av	3.61	0.13	0.13	3.8	3.8	809.8	826.5	
328	ok	0.54							
329	ok	0.79							
330	ok Av	6.84	0.26	0.04	7.7	1.2	1658.0	255.4	
331	ok Av	5.24	0.20	0.03	5.9	1.0	1282.0	215.8	
332	ok	2.65							
333	ok	1.99							
334	ok	1.89							
335	ok	2.36							
336	ok	0.59							
337	ok	0.72							
<b>Nodo</b>		<b>Max tau</b>	<b>Ver V pr</b>	<b>Ver V sec</b>	<b>Af V pr</b>	<b>Af V sec</b>	<b>V pr</b>	<b>V sec</b>	
		203.77	3.89	3.89	409.54	408.73	3.537e+04	3.529e+04	

## STATI LIMITE D' ESERCIZIO

### LEGENDA TABELLA STATI LIMITE D' ESERCIZIO

In tabella vengono riportati i valori di interesse per il controllo degli stati limite d'esercizio.

In particolare vengono riportati, in relazione al tipo di elemento strutturale, i risultati relativi alle tre categorie di combinazione considerate:

- Combinazioni rare
- Combinazioni frequenti
- Combinazioni quasi permanenti.

I valori di interesse sono i seguenti:

<b>rRfck</b>	rapporto tra la massima compressione nel calcestruzzo e la tensione fck in combinazioni rare [normalizzato a 1]
<b>rRfyk</b>	rapporto tra la massima tensione nell'acciaio e la tensione fyk in combinazioni rare [normalizzato a 1]
<b>rPfck</b>	rapporto tra la massima compressione nel calcestruzzo e la tensione fck in combinazioni quasi permanenti [normalizzato a 1]
<b>wR</b>	apertura caratteristica delle fessure in combinazioni rare [mm]
<b>wF</b>	apertura caratteristica delle fessure in combinazioni frequenti [mm]
<b>wP</b>	apertura caratteristica delle fessure in combinazioni quasi permanenti [mm]
<b>dR</b>	massima deformazione in combinazioni rare
<b>dF</b>	massima deformazione in combinazioni frequenti
<b>dP</b>	massima deformazione in combinazioni quasi permanenti

Per ognuno dei nove valori soprariportati viene indicata (Rif.cmb) la combinazione in cui si è verificato.

In relazione al tipo di elemento strutturale i valori sono selezionati nel modo seguente:

pilastrini	<b>rRfck</b>	<b>rRfyk</b>	<b>rPfck</b>	per sezioni significative
travi	<b>rRfck</b> <b>wR</b> <b>dR</b>	<b>rRfyk</b> <b>wF</b> <b>dF</b>	<b>rPfck</b> <b>wP</b> <b>dP</b>	per sezioni significative per sezioni significative massimi in campata
setti e gusci	<b>rRfck</b> <b>wR</b>	<b>rRfyk</b> <b>wF</b>	<b>rPfck</b> <b>wP</b>	massimi nei nodi dell'elemento massimi nei nodi dell'elemento

Si precisa che i valori di massima deformazione per travi sono riferiti al piano verticale (piano locale 1-2 con momenti flettenti 3-3).

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Guscio	rRfck	rRfyk	rPfck	Rif. cmb	wR	wF	wP	Rif. cmb
					mm	mm	mm	
1	0.11	0.31	0.0	69,69,0	0.0	0.0	0.0	0,0,0
2	0.11	0.31	0.0	69,69,0	0.0	0.0	0.0	0,0,0
3	0.12	0.27	0.0	69,69,0	0.0	0.0	0.0	0,0,0
4	0.21	0.48	0.0	69,69,0	0.10	0.0	0.0	69,0,0
5	0.25	0.60	0.0	69,69,0	0.13	0.0	0.0	69,0,0
6	0.25	0.59	0.0	69,69,0	0.13	0.0	0.0	69,0,0
7	0.22	0.53	0.0	69,69,0	0.11	0.0	0.0	69,0,0
8	0.17	0.40	0.0	69,69,0	0.0	0.0	0.0	0,0,0
9	0.15	0.43	0.0	69,69,0	0.0	0.0	0.0	0,0,0
10	0.15	0.44	0.0	69,69,0	0.0	0.0	0.0	0,0,0
11	0.14	0.42	0.0	69,69,0	0.0	0.0	0.0	0,0,0
12	0.38	0.84	0.0	69,69,0	0.19	0.0	0.0	69,0,0
13	0.40	0.84	0.0	69,69,0	0.19	0.0	0.0	69,0,0
14	0.42	0.84	0.0	69,69,0	0.18	0.0	0.0	69,0,0
15	0.34	0.82	0.0	69,69,0	0.19	0.0	0.0	69,0,0
16	0.22	0.53	0.0	69,69,0	0.11	0.0	0.0	69,0,0
17	0.21	0.62	0.0	69,69,0	0.14	0.0	0.0	69,0,0
18	0.25	0.80	0.0	69,69,0	0.18	0.0	0.0	69,0,0
19	0.28	0.84	0.0	69,69,0	0.19	0.0	0.0	69,0,0
20	0.56	0.81	0.0	69,69,0	0.16	0.0	0.0	69,0,0
21	0.89	0.83	0.0	69,69,0	0.19	0.0	0.0	69,0,0
22	0.75	0.84	0.0	69,69,0	0.19	0.0	0.0	69,0,0
23	0.42	0.84	0.0	69,69,0	0.18	0.0	0.0	69,0,0
24	0.24	0.61	0.0	69,69,0	0.13	0.0	0.0	69,0,0
25	0.31	0.82	0.0	69,69,0	0.19	0.0	0.0	69,0,0
26	0.44	0.84	0.0	69,69,0	0.19	0.0	0.0	69,0,0
27	0.81	0.83	0.0	69,69,0	0.20	0.0	0.0	69,0,0
28	1.15	0.83	0.0	69,69,0	0.19	0.0	0.0	69,0,0
29	1.16	0.82	0.0	69,69,0	0.16	0.0	0.0	69,0,0
30	0.69	0.83	0.0	69,69,0	0.18	0.0	0.0	69,0,0
31	0.42	0.84	0.0	69,69,0	0.18	0.0	0.0	69,0,0
32	0.25	0.61	0.0	69,69,0	0.13	0.0	0.0	69,0,0
33	0.34	0.84	0.0	69,69,0	0.19	0.0	0.0	69,0,0
34	0.50	0.84	0.0	69,69,0	0.19	0.0	0.0	69,0,0
35	0.79	0.83	0.0	69,69,0	0.18	0.0	0.0	69,0,0
36	1.16	0.82	0.0	69,69,0	0.16	0.0	0.0	69,0,0
37	1.15	0.84	0.0	69,69,0	0.18	0.0	0.0	69,0,0
38	0.72	0.80	0.0	69,69,0	0.18	0.0	0.0	69,0,0
39	0.36	0.84	0.0	69,69,0	0.19	0.0	0.0	69,0,0
40	0.20	0.53	0.0	69,69,0	0.11	0.0	0.0	69,0,0
41	0.34	0.84	0.0	69,69,0	0.19	0.0	0.0	69,0,0
42	0.49	0.84	0.0	69,69,0	0.19	0.0	0.0	69,0,0
43	0.83	0.84	0.0	69,69,0	0.18	0.0	0.0	69,0,0
44	0.96	0.84	0.0	69,69,0	0.18	0.0	0.0	69,0,0
45	0.73	0.84	0.0	69,69,0	0.18	0.0	0.0	69,0,0
46	0.32	0.65	0.0	69,69,0	0.14	0.0	0.0	69,0,0
47	0.15	0.42	0.0	69,69,0	0.0	0.0	0.0	0,0,0
48	0.11	0.32	0.0	69,69,0	0.0	0.0	0.0	0,0,0
49	0.30	0.76	0.0	69,69,0	0.17	0.0	0.0	69,0,0
50	0.41	0.84	0.0	69,69,0	0.18	0.0	0.0	69,0,0
51	0.51	0.84	0.0	69,69,0	0.18	0.0	0.0	69,0,0
52	0.50	0.83	0.0	69,69,0	0.19	0.0	0.0	69,0,0
53	0.47	0.84	0.0	69,69,0	0.18	0.0	0.0	69,0,0
54	0.29	0.56	0.0	69,69,0	0.12	0.0	0.0	69,0,0
55	0.17	0.33	0.0	69,69,0	0.0	0.0	0.0	0,0,0
56	0.12	0.24	0.0	69,69,0	0.0	0.0	0.0	0,0,0
57	0.24	0.59	0.0	69,69,0	0.13	0.0	0.0	69,0,0
58	0.31	0.74	0.0	69,69,0	0.17	0.0	0.0	69,0,0
59	0.35	0.83	0.0	69,69,0	0.19	0.0	0.0	69,0,0
60	0.35	0.84	0.0	69,69,0	0.19	0.0	0.0	69,0,0
61	0.32	0.73	0.0	69,69,0	0.16	0.0	0.0	69,0,0
62	0.24	0.49	0.0	69,69,0	0.10	0.0	0.0	69,0,0
63	0.16	0.33	0.0	69,69,0	0.0	0.0	0.0	0,0,0
64	0.12	0.26	0.0	69,69,0	0.0	0.0	0.0	0,0,0
65	0.22	0.49	0.0	69,69,0	0.10	0.0	0.0	69,0,0
66	0.18	0.42	0.0	69,69,0	0.0	0.0	0.0	0,0,0
67	0.12	0.30	0.0	69,69,0	0.0	0.0	0.0	0,0,0
68	0.09	0.20	0.0	69,69,0	0.0	0.0	0.0	0,0,0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
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69	0.07	0.16	0.0	69,69,0	0.0	0.0	0.0	0,0,0
70	0.08	0.18	0.0	69,69,0	0.0	0.0	0.0	0,0,0
71	0.06	0.14	0.0	69,69,0	0.0	0.0	0.0	0,0,0
72	0.03	0.08	0.0	69,69,0	0.0	0.0	0.0	0,0,0
73	0.19	0.41	0.0	69,69,0	0.08	0.0	0.0	69,0,0
74	0.14	0.32	0.0	69,69,0	0.0	0.0	0.0	0,0,0
75	0.11	0.25	0.0	69,69,0	0.0	0.0	0.0	0,0,0
76	0.08	0.19	0.0	69,69,0	0.0	0.0	0.0	0,0,0
77	0.07	0.15	0.0	69,69,0	0.0	0.0	0.0	0,0,0
78	0.05	0.12	0.0	69,69,0	0.0	0.0	0.0	0,0,0
79	0.06	0.14	0.0	69,69,0	0.0	0.0	0.0	0,0,0
80	0.03	0.08	0.0	69,69,0	0.0	0.0	0.0	0,0,0
81	0.15	0.32	0.0	69,69,0	0.0	0.0	0.0	0,0,0
82	0.12	0.26	0.0	69,69,0	0.0	0.0	0.0	0,0,0
83	0.09	0.21	0.0	69,69,0	0.0	0.0	0.0	0,0,0
84	0.07	0.17	0.0	69,69,0	0.0	0.0	0.0	0,0,0
85	0.06	0.13	0.0	69,69,0	0.0	0.0	0.0	0,0,0
86	0.07	0.18	0.0	69,69,0	0.0	0.0	0.0	0,0,0
87	0.05	0.13	0.0	69,69,0	0.0	0.0	0.0	0,0,0
88	0.03	0.07	0.0	69,69,0	0.0	0.0	0.0	0,0,0
89	0.12	0.25	0.0	69,69,0	0.0	0.0	0.0	0,0,0
90	0.10	0.21	0.0	69,69,0	0.0	0.0	0.0	0,0,0
91	0.09	0.21	0.0	69,69,0	0.0	0.0	0.0	0,0,0
92	0.06	0.14	0.0	69,69,0	0.0	0.0	0.0	0,0,0
93	0.05	0.12	0.0	69,69,0	0.0	0.0	0.0	0,0,0
94	0.06	0.14	0.0	69,69,0	0.0	0.0	0.0	0,0,0
95	0.05	0.12	0.0	69,69,0	0.0	0.0	0.0	0,0,0
96	0.02	0.06	0.0	69,69,0	0.0	0.0	0.0	0,0,0
97	0.09	0.20	0.0	69,69,0	0.0	0.0	0.0	0,0,0
98	0.10	0.22	0.0	69,69,0	0.0	0.0	0.0	0,0,0
99	0.10	0.25	0.0	69,69,0	0.0	0.0	0.0	0,0,0
100	0.05	0.11	0.0	69,69,0	0.0	0.0	0.0	0,0,0
101	0.04	0.09	0.0	69,69,0	0.0	0.0	0.0	0,0,0
102	0.06	0.14	0.0	69,69,0	0.0	0.0	0.0	0,0,0
103	0.05	0.13	0.0	69,69,0	0.0	0.0	0.0	0,0,0
104	0.02	0.05	0.0	69,69,0	0.0	0.0	0.0	0,0,0
105	0.09	0.18	0.0	69,69,0	0.0	0.0	0.0	0,0,0
106	0.07	0.16	0.0	69,69,0	0.0	0.0	0.0	0,0,0
107	0.06	0.14	0.0	69,69,0	0.0	0.0	0.0	0,0,0
108	0.05	0.11	0.0	69,69,0	0.0	0.0	0.0	0,0,0
109	0.04	0.09	0.0	69,69,0	0.0	0.0	0.0	0,0,0
110	0.07	0.17	0.0	69,69,0	0.0	0.0	0.0	0,0,0
111	0.04	0.08	0.0	69,69,0	0.0	0.0	0.0	0,0,0
112	0.02	0.05	0.0	69,69,0	0.0	0.0	0.0	0,0,0
113	0.09	0.25	0.0	69,69,0	0.0	0.0	0.0	0,0,0
114	0.07	0.18	0.0	69,69,0	0.0	0.0	0.0	0,0,0
115	0.05	0.14	0.0	69,69,0	0.0	0.0	0.0	0,0,0
116	0.04	0.10	0.0	69,69,0	0.0	0.0	0.0	0,0,0
117	0.03	0.08	0.0	69,69,0	0.0	0.0	0.0	0,0,0
118	0.04	0.09	0.0	69,69,0	0.0	0.0	0.0	0,0,0
119	0.04	0.11	0.0	69,69,0	0.0	0.0	0.0	0,0,0
120	0.02	0.04	0.0	69,69,0	0.0	0.0	0.0	0,0,0
121	0.13	0.33	0.0	69,69,0	0.0	0.0	0.0	0,0,0
122	0.14	0.35	0.0	69,69,0	0.0	0.0	0.0	0,0,0
123	0.06	0.17	0.0	69,69,0	0.0	0.0	0.0	0,0,0
124	0.04	0.11	0.0	69,69,0	0.0	0.0	0.0	0,0,0
125	0.03	0.08	0.0	69,69,0	0.0	0.0	0.0	0,0,0
126	0.07	0.17	0.0	69,69,0	0.0	0.0	0.0	0,0,0
127	0.03	0.07	0.0	69,69,0	0.0	0.0	0.0	0,0,0
128	0.01	0.04	0.0	69,69,0	0.0	0.0	0.0	0,0,0
129	0.15	0.38	0.0	69,69,0	0.0	0.0	0.0	0,0,0
130	0.10	0.24	0.0	69,69,0	0.0	0.0	0.0	0,0,0
131	0.09	0.22	0.0	69,69,0	0.0	0.0	0.0	0,0,0
132	0.04	0.11	0.0	69,69,0	0.0	0.0	0.0	0,0,0
133	0.03	0.08	0.0	69,69,0	0.0	0.0	0.0	0,0,0
134	0.04	0.09	0.0	69,69,0	0.0	0.0	0.0	0,0,0
135	0.04	0.09	0.0	69,69,0	0.0	0.0	0.0	0,0,0
136	9.01e-03	0.02	0.0	69,69,0	0.0	0.0	0.0	0,0,0
137	0.15	0.38	0.0	69,69,0	0.0	0.0	0.0	0,0,0
138	0.09	0.24	0.0	69,69,0	0.0	0.0	0.0	0,0,0
139	0.06	0.16	0.0	69,69,0	0.0	0.0	0.0	0,0,0
140	0.04	0.11	0.0	69,69,0	0.0	0.0	0.0	0,0,0
141	0.03	0.08	0.0	69,69,0	0.0	0.0	0.0	0,0,0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
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142	0.06	0.15	0.0	69,69,0	0.0	0.0	0.0	0,0,0
143	0.02	0.08	0.0	69,69,0	0.0	0.0	0.0	0,0,0
144	9.73e-03	0.02	0.0	69,69,0	0.0	0.0	0.0	0,0,0
145	0.14	0.35	0.0	69,69,0	0.0	0.0	0.0	0,0,0
146	0.09	0.23	0.0	69,69,0	0.0	0.0	0.0	0,0,0
147	0.06	0.16	0.0	69,69,0	0.0	0.0	0.0	0,0,0
148	0.04	0.11	0.0	69,69,0	0.0	0.0	0.0	0,0,0
149	0.03	0.08	0.0	69,69,0	0.0	0.0	0.0	0,0,0
150	0.05	0.10	0.0	69,69,0	0.0	0.0	0.0	0,0,0
151	0.03	0.08	0.0	69,69,0	0.0	0.0	0.0	0,0,0
152	4.73e-03	0.01	0.0	69,69,0	0.0	0.0	0.0	0,0,0
153	0.12	0.30	0.0	69,69,0	0.0	0.0	0.0	0,0,0
154	0.12	0.29	0.0	69,69,0	0.0	0.0	0.0	0,0,0
155	0.09	0.21	0.0	69,69,0	0.0	0.0	0.0	0,0,0
156	0.04	0.10	0.0	69,69,0	0.0	0.0	0.0	0,0,0
157	0.03	0.07	0.0	69,69,0	0.0	0.0	0.0	0,0,0
158	0.05	0.12	0.0	69,69,0	0.0	0.0	0.0	0,0,0
159	0.04	0.11	0.0	69,69,0	0.0	0.0	0.0	0,0,0
160	7.85e-03	0.02	0.0	69,69,0	0.0	0.0	0.0	0,0,0
161	0.12	0.30	0.0	69,69,0	0.0	0.0	0.0	0,0,0
162	0.13	0.29	0.0	69,69,0	0.0	0.0	0.0	0,0,0
163	0.09	0.21	0.0	69,69,0	0.0	0.0	0.0	0,0,0
164	0.04	0.09	0.0	69,69,0	0.0	0.0	0.0	0,0,0
165	0.03	0.06	0.0	69,69,0	0.0	0.0	0.0	0,0,0
166	0.06	0.13	0.0	69,69,0	0.0	0.0	0.0	0,0,0
167	0.02	0.06	0.0	69,69,0	0.0	0.0	0.0	0,0,0
168	6.99e-03	0.02	0.0	69,69,0	0.0	0.0	0.0	0,0,0
169	0.14	0.35	0.0	69,69,0	0.0	0.0	0.0	0,0,0
170	0.09	0.21	0.0	69,69,0	0.0	0.0	0.0	0,0,0
171	0.06	0.14	0.0	69,69,0	0.0	0.0	0.0	0,0,0
172	0.04	0.10	0.0	69,69,0	0.0	0.0	0.0	0,0,0
173	0.03	0.07	0.0	69,69,0	0.0	0.0	0.0	0,0,0
174	0.04	0.09	0.0	69,69,0	0.0	0.0	0.0	0,0,0
175	0.04	0.13	0.0	69,69,0	0.0	0.0	0.0	0,0,0
176	4.21e-03	0.01	0.0	69,69,0	0.0	0.0	0.0	0,0,0
177	0.15	0.36	0.0	69,69,0	0.0	0.0	0.0	0,0,0
178	0.10	0.22	0.0	69,69,0	0.0	0.0	0.0	0,0,0
179	0.06	0.15	0.0	69,69,0	0.0	0.0	0.0	0,0,0
180	0.04	0.10	0.0	69,69,0	0.0	0.0	0.0	0,0,0
181	0.03	0.07	0.0	69,69,0	0.0	0.0	0.0	0,0,0
182	0.08	0.17	0.0	69,69,0	0.0	0.0	0.0	0,0,0
183	0.04	0.07	0.0	69,69,0	0.0	0.0	0.0	0,0,0
184	9.03e-03	0.02	0.0	69,69,0	0.0	0.0	0.0	0,0,0
185	0.15	0.36	0.0	69,69,0	0.0	0.0	0.0	0,0,0
186	0.10	0.22	0.0	69,69,0	0.0	0.0	0.0	0,0,0
187	0.09	0.21	0.0	69,69,0	0.0	0.0	0.0	0,0,0
188	0.04	0.09	0.0	69,69,0	0.0	0.0	0.0	0,0,0
189	0.03	0.07	0.0	69,69,0	0.0	0.0	0.0	0,0,0
190	0.04	0.11	0.0	69,69,0	0.0	0.0	0.0	0,0,0
191	0.05	0.15	0.0	69,69,0	0.0	0.0	0.0	0,0,0
192	9.41e-03	0.02	0.0	69,69,0	0.0	0.0	0.0	0,0,0
193	0.13	0.30	0.0	69,69,0	0.0	0.0	0.0	0,0,0
194	0.16	0.34	0.0	69,69,0	0.0	0.0	0.0	0,0,0
195	0.07	0.14	0.0	69,69,0	0.0	0.0	0.0	0,0,0
196	0.04	0.09	0.0	69,69,0	0.0	0.0	0.0	0,0,0
197	0.03	0.07	0.0	69,69,0	0.0	0.0	0.0	0,0,0
198	0.09	0.19	0.0	69,69,0	0.0	0.0	0.0	0,0,0
199	0.04	0.08	0.0	69,69,0	0.0	0.0	0.0	0,0,0
200	0.01	0.03	0.0	69,69,0	0.0	0.0	0.0	0,0,0
201	0.10	0.20	0.0	69,69,0	0.0	0.0	0.0	0,0,0
202	0.07	0.15	0.0	69,69,0	0.0	0.0	0.0	0,0,0
203	0.05	0.13	0.0	69,69,0	0.0	0.0	0.0	0,0,0
204	0.04	0.10	0.0	69,69,0	0.0	0.0	0.0	0,0,0
205	0.03	0.08	0.0	69,69,0	0.0	0.0	0.0	0,0,0
206	0.06	0.17	0.0	69,69,0	0.0	0.0	0.0	0,0,0
207	0.06	0.17	0.0	69,69,0	0.0	0.0	0.0	0,0,0
208	0.02	0.04	0.0	69,69,0	0.0	0.0	0.0	0,0,0
209	0.08	0.23	0.0	69,69,0	0.0	0.0	0.0	0,0,0
210	0.07	0.19	0.0	69,69,0	0.0	0.0	0.0	0,0,0
211	0.06	0.17	0.0	69,69,0	0.0	0.0	0.0	0,0,0
212	0.05	0.12	0.0	69,69,0	0.0	0.0	0.0	0,0,0
213	0.04	0.10	0.0	69,69,0	0.0	0.0	0.0	0,0,0
214	0.09	0.18	0.0	69,69,0	0.0	0.0	0.0	0,0,0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

215	0.04	0.11	0.0	69,69,0	0.0	0.0	0.0	0,0,0
216	0.02	0.05	0.0	69,69,0	0.0	0.0	0.0	0,0,0
217	0.09	0.24	0.0	69,69,0	0.0	0.0	0.0	0,0,0
218	0.11	0.29	0.0	69,69,0	0.0	0.0	0.0	0,0,0
219	0.11	0.31	0.0	69,69,0	0.0	0.0	0.0	0,0,0
220	0.05	0.13	0.0	69,69,0	0.0	0.0	0.0	0,0,0
221	0.04	0.10	0.0	69,69,0	0.0	0.0	0.0	0,0,0
222	0.08	0.21	0.0	69,69,0	0.0	0.0	0.0	0,0,0
223	0.07	0.20	0.0	69,69,0	0.0	0.0	0.0	0,0,0
224	0.02	0.05	0.0	69,69,0	0.0	0.0	0.0	0,0,0
225	0.11	0.30	0.0	69,69,0	0.0	0.0	0.0	0,0,0
226	0.09	0.25	0.0	69,69,0	0.0	0.0	0.0	0,0,0
227	0.10	0.26	0.0	69,69,0	0.0	0.0	0.0	0,0,0
228	0.06	0.14	0.0	69,69,0	0.0	0.0	0.0	0,0,0
229	0.05	0.12	0.0	69,69,0	0.0	0.0	0.0	0,0,0
230	0.07	0.15	0.0	69,69,0	0.0	0.0	0.0	0,0,0
231	0.06	0.15	0.0	69,69,0	0.0	0.0	0.0	0,0,0
232	0.02	0.06	0.0	69,69,0	0.0	0.0	0.0	0,0,0
233	0.14	0.39	0.0	69,69,0	0.0	0.0	0.0	0,0,0
234	0.11	0.30	0.0	69,69,0	0.0	0.0	0.0	0,0,0
235	0.09	0.23	0.0	69,69,0	0.0	0.0	0.0	0,0,0
236	0.07	0.18	0.0	69,69,0	0.0	0.0	0.0	0,0,0
237	0.06	0.14	0.0	69,69,0	0.0	0.0	0.0	0,0,0
238	0.09	0.24	0.0	69,69,0	0.0	0.0	0.0	0,0,0
239	0.07	0.18	0.0	69,69,0	0.0	0.0	0.0	0,0,0
240	0.03	0.07	0.0	69,69,0	0.0	0.0	0.0	0,0,0
241	0.18	0.49	0.0	69,69,0	0.10	0.0	0.0	69,0,0
242	0.14	0.36	0.0	69,69,0	0.0	0.0	0.0	0,0,0
243	0.11	0.27	0.0	69,69,0	0.0	0.0	0.0	0,0,0
244	0.08	0.21	0.0	69,69,0	0.0	0.0	0.0	0,0,0
245	0.06	0.16	0.0	69,69,0	0.0	0.0	0.0	0,0,0
246	0.05	0.13	0.0	69,69,0	0.0	0.0	0.0	0,0,0
247	0.06	0.16	0.0	69,69,0	0.0	0.0	0.0	0,0,0
248	0.03	0.08	0.0	69,69,0	0.0	0.0	0.0	0,0,0
249	0.21	0.57	0.0	69,69,0	0.12	0.0	0.0	69,0,0
250	0.18	0.48	0.0	69,69,0	0.10	0.0	0.0	69,0,0
251	0.13	0.33	0.0	69,69,0	0.0	0.0	0.0	0,0,0
252	0.09	0.22	0.0	69,69,0	0.0	0.0	0.0	0,0,0
253	0.07	0.17	0.0	69,69,0	0.0	0.0	0.0	0,0,0
254	0.09	0.24	0.0	69,69,0	0.0	0.0	0.0	0,0,0
255	0.07	0.17	0.0	69,69,0	0.0	0.0	0.0	0,0,0
256	0.04	0.08	0.0	69,69,0	0.0	0.0	0.0	0,0,0
257	0.23	0.59	0.0	69,69,0	0.13	0.0	0.0	69,0,0
258	0.15	0.41	0.0	69,69,0	0.0	0.0	0.0	0,0,0
259	0.13	0.33	0.0	69,69,0	0.0	0.0	0.0	0,0,0
260	0.09	0.22	0.0	69,69,0	0.0	0.0	0.0	0,0,0
261	0.07	0.17	0.0	69,69,0	0.0	0.0	0.0	0,0,0
262	0.06	0.15	0.0	69,69,0	0.0	0.0	0.0	0,0,0
263	0.06	0.16	0.0	69,69,0	0.0	0.0	0.0	0,0,0
264	0.04	0.09	0.0	69,69,0	0.0	0.0	0.0	0,0,0
265	0.23	0.59	0.0	69,69,0	0.13	0.0	0.0	69,0,0
266	0.15	0.39	0.0	69,69,0	0.0	0.0	0.0	0,0,0
267	0.11	0.28	0.0	69,69,0	0.0	0.0	0.0	0,0,0
268	0.09	0.22	0.0	69,69,0	0.0	0.0	0.0	0,0,0
269	0.07	0.18	0.0	69,69,0	0.0	0.0	0.0	0,0,0
270	0.08	0.20	0.0	69,69,0	0.0	0.0	0.0	0,0,0
271	0.06	0.15	0.0	69,69,0	0.0	0.0	0.0	0,0,0
272	0.04	0.09	0.0	69,69,0	0.0	0.0	0.0	0,0,0
273	0.21	0.54	0.0	69,69,0	0.12	0.0	0.0	69,0,0
274	0.14	0.37	0.0	69,69,0	0.0	0.0	0.0	0,0,0
275	0.11	0.28	0.0	69,69,0	0.0	0.0	0.0	0,0,0
276	0.09	0.22	0.0	69,69,0	0.0	0.0	0.0	0,0,0
277	0.07	0.17	0.0	69,69,0	0.0	0.0	0.0	0,0,0
278	0.06	0.14	0.0	69,69,0	0.0	0.0	0.0	0,0,0
279	0.05	0.14	0.0	69,69,0	0.0	0.0	0.0	0,0,0
280	0.04	0.09	0.0	69,69,0	0.0	0.0	0.0	0,0,0
281	0.18	0.46	0.0	69,69,0	0.10	0.0	0.0	69,0,0
282	0.14	0.35	0.0	69,69,0	0.0	0.0	0.0	0,0,0
283	0.10	0.26	0.0	69,69,0	0.0	0.0	0.0	0,0,0
284	0.08	0.20	0.0	69,69,0	0.0	0.0	0.0	0,0,0
285	0.07	0.16	0.0	69,69,0	0.0	0.0	0.0	0,0,0
286	0.06	0.15	0.0	69,69,0	0.0	0.0	0.0	0,0,0
287	0.05	0.11	0.0	69,69,0	0.0	0.0	0.0	0,0,0



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

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288	0.04	0.09	0.0	69,69,0	0.0	0.0	0.0	0,0,0
289	0.18	0.44	0.0	69,69,0	0.09	0.0	0.0	69,0,0
290	0.14	0.32	0.0	69,69,0	0.0	0.0	0.0	0,0,0
291	0.10	0.26	0.0	69,69,0	0.0	0.0	0.0	0,0,0
292	0.08	0.19	0.0	69,69,0	0.0	0.0	0.0	0,0,0
293	0.07	0.16	0.0	69,69,0	0.0	0.0	0.0	0,0,0
294	0.06	0.14	0.0	69,69,0	0.0	0.0	0.0	0,0,0
295	0.05	0.12	0.0	69,69,0	0.0	0.0	0.0	0,0,0
296	0.04	0.09	0.0	69,69,0	0.0	0.0	0.0	0,0,0
297	0.22	0.51	0.0	69,69,0	0.11	0.0	0.0	69,0,0
298	0.15	0.34	0.0	69,69,0	0.0	0.0	0.0	0,0,0
299	0.11	0.26	0.0	69,69,0	0.0	0.0	0.0	0,0,0
300	0.09	0.21	0.0	69,69,0	0.0	0.0	0.0	0,0,0
301	0.07	0.17	0.0	69,69,0	0.0	0.0	0.0	0,0,0
302	0.06	0.14	0.0	69,69,0	0.0	0.0	0.0	0,0,0
303	0.05	0.12	0.0	69,69,0	0.0	0.0	0.0	0,0,0
304	0.04	0.09	0.0	69,69,0	0.0	0.0	0.0	0,0,0
305	0.23	0.54	0.0	69,69,0	0.12	0.0	0.0	69,0,0
306	0.16	0.35	0.0	69,69,0	0.0	0.0	0.0	0,0,0
307	0.11	0.26	0.0	69,69,0	0.0	0.0	0.0	0,0,0
308	0.09	0.21	0.0	69,69,0	0.0	0.0	0.0	0,0,0
309	0.07	0.17	0.0	69,69,0	0.0	0.0	0.0	0,0,0
310	0.07	0.16	0.0	69,69,0	0.0	0.0	0.0	0,0,0
311	0.05	0.11	0.0	69,69,0	0.0	0.0	0.0	0,0,0
312	0.04	0.09	0.0	69,69,0	0.0	0.0	0.0	0,0,0
313	0.23	0.54	0.0	69,69,0	0.12	0.0	0.0	69,0,0
314	0.16	0.36	0.0	69,69,0	0.0	0.0	0.0	0,0,0
315	0.13	0.30	0.0	69,69,0	0.0	0.0	0.0	0,0,0
316	0.09	0.21	0.0	69,69,0	0.0	0.0	0.0	0,0,0
317	0.07	0.17	0.0	69,69,0	0.0	0.0	0.0	0,0,0
318	0.06	0.14	0.0	69,69,0	0.0	0.0	0.0	0,0,0
319	0.06	0.14	0.0	69,69,0	0.0	0.0	0.0	0,0,0
320	0.04	0.09	0.0	69,69,0	0.0	0.0	0.0	0,0,0
<b>Guscio</b>	<b>rRfck</b>	<b>rRfyk</b>	<b>rPfck</b>		<b>wR</b>	<b>wF</b>	<b>wP</b>	
	1.16	0.84	0.0		0.20	0.0	0.0	

## **RELAZIONE GEOTECNICA E DELLE FONDAZIONI INDIRETTE**

### **NORMATIVE DI RIFERIMENTO**

In quanto di seguito riportato viene fatto esplicito riferimento alle seguenti Normative:

- **LEGGE n° 64 del 02/02/1974.** "Provvedimenti per le costruzioni, con particolari prescrizioni per le zone sismiche.";
- **D.M. LL.PP. del 11/03/1988.** "Norme tecniche riguardanti le indagini sui terreni e sulle rocce, la stabilità dei pendii naturali e delle scarpate, i criteri generali e le prescrizioni per la progettazione, l'esecuzione e il collaudo delle opere di sostegno delle terre e delle opere di fondazione.";
- **D.M. LL.PP. del 16/01/1996.** "Norme tecniche per le costruzioni in zone sismiche.";
- **Circolare Ministeriale LL.PP. n° 65/AA.GG. del 10/04/1997.** "Istruzioni per l'applicazione delle "Norme Tecniche per le costruzioni in zone sismiche" di cui al D.M. 16/01/1996.";
- **Eurocodice 1 - Parte 1** - "Basi di calcolo ed azioni sulle strutture - Basi di calcolo -.";
- **Eurocodice 7 - Parte 1** - "Progettazione geotecnica - Regole generali -.";
- **Eurocodice 8 - Parte 5** - "Indicazioni progettuali per la resistenza sismica delle strutture - Fondazioni, strutture di contenimento ed aspetti geotecnici -.";
- **D.M. 17/01/2018 - NUOVE NORME TECNICHE PER LE COSTRUZIONI**
- **Circolare n. 7 del 21/01/2019**

### **INDAGINI IN SITO E CARATTERIZZAZIONE GEOTECNICA DEI TERRENI DI FONDAZIONE**

La finalità della presente relazione è quella di definire il comportamento meccanico del volume di terreno (volume significativo) influenzato direttamente o indirettamente dalla costruzione di un manufatto e che a sua volta influenza il comportamento strutturale del manufatto stesso. Di seguito si illustrano i risultati delle indagini geologiche eseguite, nonché l'interpretazione dei risultati ottenuti. Dal quadro generale in tal modo scaturito si definiscono le caratteristiche della fondazione da adottare ed il modello da utilizzare per le elaborazioni relative alla interazione sovrastruttura-fondazione e fondazione-terreno.

Il sondaggio profondo effettuato il giorno 11.06.2011 nell'area interessata dalla CPR S.DONACI, ha permesso di individuare la seguente stratigrafia fino a 45 m di profondità::

0,00 – 0,50 m	terreno vegetale con sabbie giallastre e presenza di ciottolate.
0,50 – 3,00m	sabbie argillose alternate a strati più consolidati di sabbie giallastre, con falda idrica superficiale.
3,00 - 33,5 m	argille sabbiose di colore giallastro, passante ad argilla grigio azzurra (man mano che si procede verso il basso, aumenta la percentuale di argilla).
33,5 – 39,0 m	Calcarenite giallastra a grana fine, non uniformemente distribuita e poco cementata.
39,0 – 45,0 m	Calccare grigio giallastro

Di seguito si riportano alcuni cenni teorici relativi alle modalità di calcolo implementate e la descrizione della simbologia adottata nei tabulati.

### **DETERMINAZIONE DELLA PORTANZA VERTICALE DI FONDAZIONI PROFONDE**

Per la determinazione della portanza verticale di fondazioni profonde si fa riferimento a due contributi: la "portanza di punta" e la "portanza per attrito laterale". Queste due componenti in genere sono calcolate in maniera autonoma dato che risulta molto difficoltoso, tranne che in poche situazioni, stabilire quanta parte del carico è assorbita dall'attrito laterale e quanta dalla resistenza alla punta. Nel seguito, ai fini del calcolo della portanza verticale, si assumeranno le seguenti espressioni generali valide per il caso di palo soggetto a compressione e per il caso di palo soggetto a trazione (nel calcolo della portanza verticale è possibile tenere in conto tutti o solo

uno dei contributi su definiti):

$$Q_C = \frac{Q_P}{\eta_P} + \frac{Q_L}{\eta_L} - W_{ATT.NEG.} - W_P \quad (\text{caso di palo in compressione}) \quad Q_T$$

$$= \frac{Q_L}{\eta_L} + W_P \quad (\text{caso di palo in trazione})$$

dove i simboli su riportati hanno il seguente significato:

- $Q_C$  resistenza a compressione del palo
- $Q_T$  resistenza a trazione del palo
- $Q_P$  carico limite verticale alla punta del palo
- $Q_L$  carico limite verticale lungo la superficie laterale del palo
- $W_{ATT.NEG.}$  attrito negativo agente sul palo
- $W_P$  peso totale del palo
- $\eta_{II}$  coefficiente di sicurezza per carico limite verticale alla punta del palo
- $\eta_{I}$  coefficiente di sicurezza per carico limite verticale lungo la superficie laterale del palo

I valori del carico limite verticale alla punta del palo " $Q_P$ " e del carico limite verticale lungo la superficie laterale del palo " $Q_L$ " sono determinati con le note "formule statiche". Queste esprimono i valori di cui sopra in funzione della geometria del palo, delle caratteristiche geotecniche del terreno in cui è immerso, della modalità esecutiva e dell'interfaccia palo-terreno.

Di seguito si illustrano le metodologie con le quali saranno determinati i valori prima citati; è necessario tenere presente che tali metodi sono riferiti al calcolo del "singolo palo" e per estendere tale modalità computazione al caso di "pali in gruppo" si farà ricorso ai "coefficienti d'efficienza", in questo modo si potrà tenere in debito conto l'interferenza reciproca che i pali esercitano.

### CARICO LIMITE VERTICALE ALLA PUNTA DEL PALO

Il valore del carico limite verticale alla punta del palo, indipendentemente dal metodo utilizzato per la sua determinazione, è condizionato dalla modalità esecutiva. Esso varia notevolmente a seconda che il palo sia del tipo "infisso" o "trivellato" poiché le caratteristiche fisico-meccaniche del terreno circostante il palo variano in seguito alle operazioni d'installazione. Di conseguenza, per tenere conto della modalità esecutiva nel calcolo dei coefficienti di portanza, si propone di modificare il valore dell'angolo di resistenza a taglio secondo quanto suggerito da Kishida (1967):

$$\phi_{cor} = \frac{\phi + 40}{2} \quad (\text{per pali infissi}) \quad \phi_{cor} = \phi - 3^\circ \quad (\text{per pali trivellati})$$

Con la correzione di cui sopra si determineranno i fattori adimensionali di portanza che sono presenti nella relazione per la determinazione del carico limite verticale alla punta che assume la seguente espressione:

$$Q_P = A_P \cdot (q_P \cdot N_q^* + c \cdot N_c^*)$$

dove i simboli su riportati hanno il seguente significato:

- $A_P$  superficie portante efficace della punta del palo
- $q_P$  pressione del terreno presente alla punta del palo
- $c$  coesione del terreno alla punta del palo (nel caso di condizione non drenata  $c = c_u$ )
- $N_q^*, N_c^*$  fattori adimensionali di portanza funzione dell'angolo d'attrito interno  $\phi_{zop}$  del terreno già corretti

In letteratura esistono diverse formulazioni per il calcolo dei fattori adimensionali di portanza, di seguito si riportano quelle che sono state implementate:

#### **Formulazione di Meyerhof per base poggiate su terreni sciolti (1951)**

- se  $\phi \neq 0$  (condizione drenata) si ha:

$$N_q = \text{tg}^2 \left( \frac{\pi}{4} + \frac{\phi}{2} \right) \cdot e^{\pi \cdot \text{tg}(\phi)} \quad N_c = (N_q - 1) \cdot \text{ctg}(\phi)$$

$$s_q = 1 + 0.1 \cdot \text{tg}^2 \left( \frac{\pi}{4} + \frac{\phi}{2} \right) \quad s_c = 1 + 0.2 \cdot \text{tg}^2 \left( \frac{\pi}{4} + \frac{\phi}{2} \right) \quad (\text{fattori di forma})$$

$$d_q = 1 + 0.1 \cdot \frac{L}{D} \cdot \sqrt{\text{tg}^2 \left( \frac{\pi}{4} + \frac{\phi}{2} \right)} \quad d_c = 1 + 0.2 \cdot \frac{L}{D} \cdot \sqrt{\text{tg}^2 \left( \frac{\pi}{4} + \frac{\phi}{2} \right)} \quad (\text{fattori d'approfondimento})$$

$$N_q^* = N_q \cdot s_q \cdot d_q \quad N_c^* = N_c \cdot s_c \cdot d_c$$

se  $\varphi = 0$  (condizione non drenata) si ha:

$$\begin{aligned} N_q &= 1.00 & N_c &= \pi + 2 \\ s_q &= 1.00 & s_c &= 1.20 && \text{(fattori di forma)} \\ d_q &= 1.00 & d_c &= 1 + 0.2 \cdot \frac{L}{D} && \text{(fattori d'approfondimento)} \\ N_q^* &= N_q \cdot s_q \cdot d_q & N_c^* &= N_c \cdot s_c \cdot d_c \end{aligned}$$

**Formulazione di Hansen per base poggiate su terreni sciolti (1970)**

se  $\varphi \neq 0$  (condizione drenata) si ha:

$$\begin{aligned} N_q &= \text{tg}^2\left(\frac{\pi}{4} + \frac{\phi}{2}\right) \cdot e^{\pi \cdot \text{tg}(\phi)} & N_c &= (N_q - 1) \cdot \text{ctg}(\phi) \\ s_q &= 1 + \text{tg}(\phi) & s_c &= 1 + \frac{N_q}{N_c} && \text{(fattori di forma)} \\ d_q &= 1 + 2 \cdot \text{tg}(\phi) \cdot (1 - \text{sen}(\phi))^2 \cdot \theta & d_c &= 1 + 0.4 \cdot \theta && \text{(fattori d'approfondimento)} \end{aligned}$$

dove: se  $\frac{L}{D} \leq 1 \Rightarrow \theta = \frac{L}{D}$ , se  $\frac{L}{D} > 1 \Rightarrow \theta = \arctg\left(\frac{L}{D}\right)$

$$N_q^* = N_q \cdot s_q \cdot d_q \quad N_c^* = N_c \cdot s_c \cdot d_c$$

se  $\varphi = 0$  (condizione non drenata) si ha:

$$\begin{aligned} N_q &= 1.00 & N_c &= \pi + 2 \\ s_q &= 1.00 & s_c &= 1.20 && \text{(fattori di forma)} \\ d_q &= 1.00 & d_c &= 1 + 0.4 \cdot \theta && \text{(fattori d'approfondimento)} \\ N_q^* &= N_q \cdot s_q \cdot d_q & N_c^* &= N_c \cdot s_c \cdot d_c \end{aligned}$$

**Formulazione di Zeevaert per base poggiate su terreni sciolti (1972)**

se  $\varphi \neq 0$  (condizione drenata) si ha:

$$N_q^* = \frac{\cos^2(\phi)}{2 \cdot \cos^2\left(\frac{\pi}{4} + \frac{\phi}{2}\right)} \cdot e^{\left(\frac{3 \cdot \pi}{2} + \phi\right) \cdot \text{tg}(\phi)} \quad N_c^* = (N_q - 1) \cdot \text{ctg}(\phi)$$

se  $\varphi = 0$  (condizione non drenata) si ha:

$$N_q^* = 1.00 \quad N_c^* = 9.00$$

**Formulazione di Berezantzev per base poggiate su terreni sciolti (1970)**

Berezantzev fa riferimento ad una superficie di scorrimento "alla Terzaghi" che si arresta sul piano della punta del palo. Inoltre considera il cilindro di terreno coassiale al palo (avente diametro pari all'estensione in sezione della superficie di scorrimento) in parte sostenuto da tensioni tangenziali dal rimanente terreno presente lungo la superficie laterale del cilindro. Conseguentemente il valore della pressione presente alla punta del palo è inferiore alla corrispondente pressione litostatica ed è influenzata dal rapporto tra la profondità alla quale è posta la punta "L" del palo e il diametro "D" dello stesso. Quindi il valore di  $N_q^*$  è influenzato da questo effetto "Silo". I valori che l'autore propone sono:

se  $\varphi \neq 0$  (condizione drenata) si ha:

Valori di  $N_q^*$  per pali di diametro fino a 80.0 cm.

L/D	8°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°	40°	42°	44°	46°	48°	50°
4	1.07	2.18	3.15	4.72	7.15	10.73	15.85	22.95	32.62	45.56	62.69	85.18	114.53	152.71	202.32	266.82	350.86	460.79	605.36
12	1.04	1.77	2.46	3.64	5.52	8.42	12.71	18.85	27.44	39.21	55.07	76.20	104.13	140.81	188.86	251.72	334.05	442.17	584.82
20	1.03	1.63	2.20	3.20	4.82	7.38	11.22	16.82	24.76	35.79	50.83	71.06	98.01	133.65	180.59	242.29	323.39	430.21	571.48
28	1.03	1.54	2.05	2.93	4.40	6.72	10.26	15.48	22.96	33.43	47.84	67.37	93.54	128.35	174.39	235.13	315.21	420.95	561.08
36	1.02	1.49	1.94	2.75	4.10	6.26	9.57	14.49	21.60	31.64	45.53	64.48	90.00	124.10	169.36	229.27	308.46	413.26	552.38
50	1.02	1.42	1.82	2.53	3.74	5.68	8.70	13.23	19.84	29.27	42.45	60.56	85.14	118.18	162.30	220.95	298.80	402.16	539.74
75	1.02	1.35	1.69	2.30	3.33	5.02	7.69	11.74	17.73	26.37	38.58	55.55	78.82	110.38	152.84	209.67	285.53	386.74	522.01
100	1.01	1.31	1.61	2.14	3.07	4.60	7.02	10.74	16.28	24.34	35.84	51.95	74.19	104.56	145.68	201.02	275.23	374.64	507.95
200	1.01	1.22	1.44	1.84	2.54	3.71	5.60	8.56	13.05	19.73	29.43	43.30	62.82	89.95	127.29	178.30	247.63	341.59	468.90
500	1.01	1.14	1.29	1.55	2.02	2.82	4.14	6.24	9.50	14.45	21.83	32.64	48.25	70.49	101.85	145.69	206.57	290.75	406.87

Valori di  $N_q^*$  per pali di diametro maggiore a 80.0 cm.

L/D	8°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°	40°	42°	44°	46°	48°	50°
-----	----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

4	1.16	3.09	3.95	5.04	6.44	8.22	10.50	13.41	17.12	21.87	27.92	35.65	45.53	58.14	74.24	94.80	121.05	154.57	197.38
12	1.21	3.14	3.98	5.05	6.42	8.14	10.34	13.13	16.68	21.18	26.90	34.17	43.41	55.15	70.07	89.03	113.13	143.77	182.72
20	1.26	3.18	4.01	5.06	6.39	8.06	10.18	12.85	16.23	20.49	25.88	32.69	41.29	52.16	65.89	83.26	105.21	132.97	168.06
28	1.30	3.22	4.04	5.07	6.36	7.99	10.02	12.57	15.78	19.81	24.86	31.20	39.17	49.16	61.72	77.49	97.29	122.16	153.40
36	1.35	3.27	4.07	5.08	6.34	7.91	9.86	12.30	15.33	19.12	23.84	29.72	37.04	46.17	57.55	71.72	89.38	111.36	138.75
44	1.39	3.31	4.10	5.09	6.31	7.83	9.70	12.02	14.88	18.43	22.81	28.23	34.92	43.18	53.38	65.95	81.46	100.56	124.09
52	1.44	3.35	4.14	5.10	6.29	7.75	9.54	11.74	14.44	17.74	21.79	26.75	32.80	40.19	49.21	60.18	73.54	89.76	109.43
56	1.46	3.37	4.15	5.10	6.27	7.71	9.46	11.60	14.21	17.40	21.28	26.00	31.74	38.70	47.12	57.30	69.58	84.36	102.10
60	1.49	3.39	4.17	5.11	6.26	7.67	9.38	11.46	13.99	17.06	20.77	25.26	30.68	37.20	45.03	54.42	65.62	78.96	94.77
65	1.51	3.42	4.19	5.12	6.25	7.62	9.28	11.29	13.71	16.63	20.13	24.33	29.35	35.33	42.43	50.81	60.67	72.21	85.61

$$N_c^* = (N_q - 1) \cdot \text{ctg}(\phi)$$

se  $\phi = 0$  (condizione non drenata) si ha:

$$N_q^* = 1.00 \qquad N_c^* = 9.00$$

**Formulazione di Vesic per base poggiate su terreni sciolti (1975)**

se  $\phi \neq 0$  (condizione drenata) si ha:

$$N_q^* = \frac{3}{3 - \text{sen}(\phi)} \cdot \text{tg}^2\left(\frac{\pi}{4} + \frac{\phi}{2}\right) \cdot I_{rr}^{\frac{4 \cdot \text{sen}(\phi)}{3 \cdot (1 + \text{sen}(\phi))}} \cdot e^{\left(\frac{\pi}{2} - \phi\right) \cdot \text{tg}(\phi)} \qquad N_c^* = (N_q - 1) \cdot \text{ctg}(\phi)$$

$$I_{rr} = \frac{I_r}{1 + \varepsilon_v \cdot I_r} \qquad \varepsilon_v = \frac{q_p \cdot \alpha \cdot (1 + \nu) \cdot (1 - 2 \cdot \nu)}{E_t \cdot (1 - \nu)} \qquad I_r = \frac{E_t}{2 \cdot (1 + \nu) \cdot (c + q_p \cdot \alpha \cdot \text{tg}(\phi))}$$

se  $\phi = 0$  (condizione non drenata) si ha:

$$N_q^* = 1.00 \qquad N_c^* = \frac{4}{3} \cdot (\log_n(I_{rr}) + 1) + \frac{\pi}{2} + 1$$

dove i simboli su riportati hanno il seguente significato:

- $E_t$       modulo elastico del terreno alla profondità della punta del palo
- $\nu$       coefficiente di Poisson del terreno alla profondità della punta del palo
- $\alpha$       coefficiente di riduzione della pressione del terreno presente alla profondità della punta del palo

Nel caso in cui si scelga di effettuare la riduzione della pressione del terreno presente alla profondità della punta del palo (cioè  $\alpha < 1$ ) il coefficiente di riduzione " $\alpha$ " assume la seguente espressione:

$$\alpha = \frac{1 + 2 \cdot K_0}{3} \qquad \text{dove: se } \phi \neq 0 \Rightarrow K_0 = 1 - \text{sen}(\phi); \qquad \text{se } \phi = 0 \Rightarrow K_0 = \frac{\nu}{1 - \nu}$$

**Formulazione di Janbu per base poggiate su terreni sciolti (1976)**

se  $\phi \neq 0$  (condizione drenata) si ha:

$$N_q^* = \left(\text{tg}(\phi) + \sqrt{1 + \text{tg}^2(\phi)}\right)^2 \cdot e^{2 \cdot \vartheta \cdot \text{tg}(\phi)} \qquad N_c^* = (N_q - 1) \cdot \text{ctg}(\phi)$$

$$\vartheta = 60 + 0.45 \cdot Dr \qquad \text{dove "Dr" è la densità relativa del terreno.}$$

se  $\phi = 0$  (condizione non drenata) si ha:

$$N_q^* = 1.00 \qquad N_c^* = 5.74$$

**Formulazione di Terzaghi per base poggiate su roccia (1943)**

Per la determinazione del carico limite nel caso di presenza di ammasso roccioso bisogna valutare molto attentamente il grado di solidità della roccia stessa. Tale valutazione viene in genere eseguita stimando l'indice *RQD* (Rock Quality Designation) che rappresenta una misura della qualità di un ammasso roccioso. Tale indice può variare da un minimo di 0 (caso in cui la lunghezza dei pezzi di roccia estratti dal carotiere è inferiore a 100 mm) ad un massimo di 1 (caso in cui la carota risulta integra) ed è calcolato nel seguente modo:

$$RQD = \frac{\sum \text{lunghezze dei pezzi di roccia intatta} > 100\text{mm}}{\text{lunghezza del carotiere}}$$

Se il valore di *RQD* è molto basso la roccia è molto fratturata ed il calcolo della capacità portante dell'ammasso roccioso va condotto alla stregua di un terreno sciolto utilizzando tutte le formulazioni sopra descritte.

$$N_q = \frac{e^{2 \cdot \left(\frac{3 \cdot \pi}{4} - \frac{\phi}{2}\right) \cdot \text{tg}(\phi)}}{2 \cdot \cos^2\left(\frac{\pi}{4} + \frac{\phi}{2}\right)} \qquad N_c = (N_q - 1) \cdot \text{ctg}(\phi) \qquad \text{se } \phi = 0 \Rightarrow N_c = \frac{3}{2} \cdot \pi + 1$$

$$s_q = 1.00 \qquad s_c = 1.30 \qquad \text{(fattori di forma)}$$

$$N_q^* = RQD^2 \cdot N_q \cdot s_q$$

$$N_c^* = RQD^2 \cdot N_c \cdot s_c$$

**Formulazione di Stagg-Zienkiewicz per base poggiate su roccia (1968)**

$$N_q = \text{tg}^6 \left( \frac{90^\circ + \phi}{2} \right)$$

$$N_c = 5 \cdot \text{tg}^4 \left( \frac{90^\circ + \phi}{2} \right)$$

$$s_q = 1.00$$

$$s_c = 1.30$$

(fattori di forma)

$$N_q^* = RQD^2 \cdot N_q \cdot s_q$$

$$N_c^* = RQD^2 \cdot N_c \cdot s_c$$

**CARICO LIMITE VERTICALE LUNGO LA SUPERFICIE LATERALE DEL PALO**

Il valore del carico limite verticale lungo la superficie laterale del palo è dato dall'integrale esteso a tutta la superficie laterale del palo delle tensioni tangenziali che si sviluppano all'interfaccia palo-terreno in condizioni limite:

$$Q_L = \int_{\Gamma} \tau_{\text{lim}} \cdot d\Gamma = \int_0^L (c_a + \sigma_h \cdot \text{tg}(\delta)) \cdot P_{\text{lat}} \cdot dz$$

dove i simboli sopra riportati hanno il seguente significato:

- $\chi_\alpha$  adesione all'interfaccia terreno-palo alla generica profondità "z"
- $\sigma_\eta$  tensione orizzontale alla generica profondità "z"
- $\delta$  angolo di resistenza a taglio all'interfaccia terreno-palo alla generica profondità "z"
- $\Pi_{\text{lat}}$  perimetro della sezione trasversale del palo alla generica profondità "z"
- $L$  sviluppo longitudinale del palo

Analogamente al carico limite alla punta, anche il valore del carico limite verticale lungo la superficie laterale del palo varia notevolmente a seconda che esso sia del tipo "infisso" o "trivellato" a causa del diverso comportamento del terreno circostante in palo. Conseguentemente i parametri sopra riportati possono essere correlati da leggi diverse in funzione delle modalità di esecuzione del palo. Di seguito si descrivono quelle che sono state implementate.

L'adesione " $c_a$ " è correlata alla coesione " $c$ " nel caso di condizioni drenate; oppure alla coesione non drenata " $c_u$ " nel caso di condizioni non drenate, per mezzo del coefficiente d'adesione " $\psi$ " secondo la seguente relazione:

$$c_a = c_* \cdot \psi \quad \text{dove: } c_* = c \text{ (in condizione drenata);}$$

$$c_* = c_u \text{ (in condizione non drenata).}$$

Esprimendo il valore di " $c$ " in N/cm<sup>2</sup>, il coefficiente d'adesione " $\psi$ " può assumere i seguenti valori:

**Caquot-Kerisel (consigliato per pali trivellati)**

$$\psi = \frac{100 + c_*^2}{100 + 7 \cdot c_*^2}$$

**Meyerhof-Murdock (consigliato per pali trivellati)**

$$\text{se } c_* \leq 5.00 \text{ N/cm}^2 \quad \Rightarrow \quad \psi = 1.000 - 0.100 \cdot c_*$$

$$\text{se } c_* > 5.00 \text{ N/cm}^2 \quad \Rightarrow \quad \psi = 0.525 - 0.005 \cdot c_*$$

**Whitaker-Cooke (consigliato per pali trivellati)**

$$\text{se } c_* \leq 2.50 \text{ N/cm}^2 \quad \Rightarrow \quad \psi = 0.90$$

$$\text{se } 2.50 < c_* \leq 5.00 \text{ N/cm}^2 \quad \Rightarrow \quad \psi = 0.80$$

$$\text{se } 5.00 < c_* \leq 7.50 \text{ N/cm}^2 \quad \Rightarrow \quad \psi = 0.60$$

$$\text{se } c_* > 7.50 \text{ N/cm}^2 \quad \Rightarrow \quad \psi = 0.40$$

**Woodward (consigliato per pali trivellati)**

se $c_* \leq 4.00 \text{ N/cm}^2$	$\Rightarrow$	$\psi = 0.90$
se $4.00 < c_* \leq 8.00 \text{ N/cm}^2$	$\Rightarrow$	$\psi = 0.60$
se $8.00 < c_* \leq 12.00 \text{ N/cm}^2$	$\Rightarrow$	$\psi = 0.50$
se $12.00 < c_* \leq 20.00 \text{ N/cm}^2$	$\Rightarrow$	$\psi = 0.40$
se $c_* > 20.00 \text{ N/cm}^2$	$\Rightarrow$	$\psi = 0.30$
<b>Viggiani e altri (consigliato per pali infissi)</b>		
se $c_* \leq 5.00 \text{ N/cm}^2$	$\Rightarrow$	$\psi = 1.00$
se $5.00 < c_* \leq 10.00 \text{ N/cm}^2$	$\Rightarrow$	$\psi = 0.70$
se $10.00 < c_* \leq 15.00 \text{ N/cm}^2$	$\Rightarrow$	$\psi = 0.50$
se $15.00 < c_* \leq 20.00 \text{ N/cm}^2$	$\Rightarrow$	$\psi = 0.40$
se $c_* > 20.00 \text{ N/cm}^2$	$\Rightarrow$	$\psi = 0.30$

Il valore della tensione orizzontale " $\sigma_h$ " è correlato al valore della pressione verticale " $\sigma_v$ " per mezzo del coefficiente di spinta orizzontale " $K_s$ " secondo la seguente relazione:

$$\sigma_h = \sigma_v \cdot K_s$$

Il valore di " $K_s$ " dipende essenzialmente dal tipo di terreno e dal suo stato d'addensamento nonché dalla tecnologia utilizzata per l'installazione.

Il programma permette di scegliere tra differenti teorie per il calcolo di  $K_s$ .

Opzione 1:

Metodo "Tomlinson (1971)"

$K_s$  può variare da un limite inferiore pari al coefficiente di spinta a riposo " $K_0$ " fino a valori prossimi al coefficiente di spinta passiva " $K_p$ "; i valori proposti sono:

pali trivellati:  $K_s = K_0 = 1 - \text{sen}(\phi)$

pali infissi:  $K_s =$  variabile da:  $K_0 = 1 + \text{tg}^2(\phi)$  in sommità fino a  $K_0 = 1 - \text{sen}(\phi)$  alla punta

Opzione 2:

Metodo di "Kulhavy (1983)"

pali trivellati:  $K_s = \alpha K_0$  con  $\alpha$  variabile tra 2/3 e 1

pali infissi:  $K_s = \alpha K_0$  con  $\alpha$  variabile da 3/4, per compattazione del terreno trascurabile, fino a 2, nel caso di compattazione significativa.

Il valore dell'angolo di resistenza al taglio all'interfaccia terreno-palo " $\delta$ " è funzione della scabrezza della superficie del palo e quindi della modalità esecutiva; i valori proposti sono:

$$\delta = \arctg(\text{tg}(\phi)) \quad (\text{per pali trivellati}) \quad \delta = \arctg\left(\frac{3}{4} \cdot \text{tg}(\phi)\right) \quad (\text{per pali infissi})$$

## **SIMBOLOGIA ADOTTATA NEI TABULATI DI CALCOLO**

Per maggior chiarezza nella lettura dei tabulati di calcolo viene riportata la descrizione dei simboli principali utilizzati nella stesura degli stessi. Per comodità di lettura la legenda è suddivisa in paragrafi con la stessa modalità in cui sono stampati i tabulati di calcolo.

### **Dati geometrici degli elementi costituenti le fondazioni profonde**

- X elem.            ascissa nel riferimento globale dell'elemento
- Y elem.            ordinata nel riferimento globale dell'elemento
- Profon.            profondità del piano di posa dell'elemento a partire dal piano campagna
- Base                larghezza della sezione trasversale dell'elemento
- Lungh.             dimensione dello sviluppo longitudinale dell'elemento
- Altezz.             altezza della sezione trasversale dell'elemento



- Rotaz. rotazione dell'elemento rispetto al suo baricentro
- Grup. ap. nel caso cui l'elemento faccia parte di una palificata, rappresenta il numero identificativo della stessa
- Ind. Strat. indice della stratigrafia associata all'elemento
- Tip. iniez. tipologia d'iniezione dei micropali ai fini del calcolo della portanza secondo le raccomandazioni di Bustamante e Doix (No iniez. = assenza d'iniezione, Iniez.uni. = iniezione unica, Iniez.rip. = iniezione ripetuta)
- Tip. ter. tipologia di terreno ai fini del calcolo della portanza secondo le raccomandazioni di Bustamante e Doix (Coes. = coesivo, Inc. = incoerente)
- Dia. P. diametro fusto del palo
- Lun. P. lunghezza totale del palo
- Lun. L. lunghezza tratto del palo senza contributo di terreno
- Dis. P. distanza del baricentro del palo dal bordo del plinto
- In. Px interasse principale del palo
- In. Py interasse secondario del palo
- Dia. B. diametro bulbo del palo
- Lun. B. lunghezza della sbulbatura del palo
- E.C.V. coefficiente d'efficienza per carico limite verticale del singolo palo
- E.C.C. coefficiente d'efficienza per carico critico verticale del singolo palo
- E.C.T. coefficiente d'efficienza per carico limite trasversale del singolo palo
- Svin. testa codice di svincolo alla rotazione in testa al palo (0 = non attivo, 1 = attivo)
- Vin. piede codici di vincolo rispettivamente alla rotazione orizzontale, traslazione orizzontale e traslazione verticale applicabili al piede del palo (0 = non attivo, 1 = attivo)
- Asc. X' ascissa del baricentro del singolo palo dell'elemento nel riferimento locale con origine nel baricentro del plinto
- Asc. Y' ordinata del baricentro del singolo palo dell'elemento nel riferimento locale con origine nel baricentro del plinto
- Peso spec. peso specifico del palo
- Mod. El. Pa. modulo elastico normale del palo

#### ***Dati di carico degli elementi costituenti le fondazioni profonde***

- Cmb numero della combinazione di carico
- Tipologia tipologia della combinazione di carico
- Sismica flag per l'applicazione della riduzione sismica alle caratteristiche meccaniche del terreno di fondazione per la combinazione di carico in esame
- S. Normale sollecitazione normale agente alla quota del piano di fondazione dell'elemento (riferimento locale con origine nel baricentro del plinto)
- S. Tagliante X' sollecitazione tagliante lungo l'asse X' agente alla quota del piano di fondazione dell'elemento (riferimento locale con origine nel baricentro del plinto)
- S. Tagliante Y' sollecitazione tagliante lungo l'asse Y' agente alla quota del piano di fondazione dell'elemento (riferimento locale con origine nel baricentro del plinto)
- S. Flessionale X' sollecitazione flessionale lungo l'asse X' agente alla quota del piano di fondazione dell'elemento (riferimento locale con origine nel baricentro del plinto)
- S. Flessionale Y' sollecitazione flessionale lungo l'asse Y' agente alla quota del piano di fondazione dell'elemento (riferimento locale con origine nel baricentro del plinto)
- S. Torsionale sollecitazione torsionale agente alla quota del piano di fondazione dell'elemento (riferimento locale con origine nel baricentro del plinto)

#### ***Valori di calcolo per le fondazioni profonde***

- Port. punta carico limite verticale alla punta del palo (valore su singolo palo corretto dal relativo coefficiente d'efficienza)
- Port. lat. carico limite verticale lungo la superficie laterale del fusto del palo (valore su singolo palo corretto dal relativo coefficiente d'efficienza)
- Port. bulbo carico limite verticale lungo la superficie laterale del bulbo del palo (valore su singolo palo corretto dal relativo coefficiente d'efficienza)
- C. Critico carico critico per l'instabilità del palo (valore su singolo palo corretto dal relativo coefficiente

	d'efficienza)
- Attr. Neg.	attrito negativo agente sul palo (valore su singolo palo)
- Peso Palo	peso totale del singolo palo
- Cmb	numero e tipologia della combinazione di carico
- S. Norm.	sollecitazione normale agente alla testa del palo in esame
- V. V. Com.	resistenza a compressione del palo in esame (corretto dal relativo coefficiente di sicurezza)
- V. V. Tra.	resistenza a trazione del palo in esame (corretto dal relativo coefficiente di sicurezza)
- Ver. Com.	rapporto tra la sollecitazione normale agente alla testa del palo e la sua resistenza a compressione (verifica positiva se il rapporto è < 1.0)
- Ver. Tra.	rapporto tra la sollecitazione normale agente alla testa del palo e la sua resistenza a trazione (verifica positiva se il rapporto è < 1.0)
- S. Tagl.	sollecitazione tagliente agente alla testa del palo
- S. Fles.	sollecitazione flessionale agente alla testa del palo
- V. V. Trs.	resistenza trasversale del palo in esame (corretto dal relativo coefficiente di sicurezza)
- Ver. Tra.	rapporto tra la sollecitazione tagliente agente alla testa del palo e la sua resistenza trasversale (verifica positiva se il rapporto è < 1.0)
- Ced. V.	cedimento verticale in corrispondenza della testa del palo
- Ced. H.	cedimento orizzontale in corrispondenza della testa del palo

## PARAMETRI DI CALCOLO

### Modalità di calcolo della portanza verticale per fondazioni profonde:

Per elementi con pali: Portanza di punta e laterale

Per elementi con micropali: Portanza di punta e laterale

### Metodi di calcolo della portanza di punta per fondazioni profonde:

Per terreni sciolti: Vesic

Riduzione della tensione litostatica: No

Per terreni lapidei: Terzaghi

Riduzione di Kishida per pali battuti o trivellati: Si

Metodo di calcolo del coefficiente di spinta orizzontale Ks: Tomlinson

### Coefficienti parziali e totali di sicurezza per Tensioni Ammissibili e S.L.E. nel calcolo della portanza per fondazioni profonde:

Coeff. di sicurezza alla punta: 2,50

Coeff. di sicurezza lungo il fusto: 2,50

Coeff. di sicurezza lungo il bulbo: 2,50

Coeff. di sicurezza per palo in trazione: 2,50

### Combinazioni di carico:

#### APPROCCIO PROGETTUALE TIPO 2 - Comb. (A1+M1+R3)

Coefficienti parziali e totali di sicurezza per S.L.U. nel calcolo della portanza per pali trivellati:

I coeff. A1 risultano combinati secondo lo schema presente nella relazione di calcolo della struttura.

- Coeff. M1 per  $\tan \phi$  (statico): 1

- Coeff. M1 per  $c'$  (statico): 1

- Coeff. M1 per  $C_u$  (statico): 1

- Coeff. M1 per  $\tan \phi$  (sismico): 1

- Coeff. M1 per  $c'$  (sismico): 1

- Coeff. M1 per  $C_u$  (sismico): 1

- Coeff. R3 base: 1,35

- Coeff. R3 laterale in compressione: 1,15

- Coeff. R3 laterale in trazione: 1,25

Fattore di correlazione: 1,70

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**ARCHIVIO STRATIGRAFIE**

Indice / Descrizione: 001 / Nuova stratigrafia n. 1  
 Numero strati: 2  
 Profondità falda: 400,00 cm

Strato n.	Quota di riferimento	Spessore	Indice / Descrizione terreno	Attrito Neg.
1	da 0,0 a -300,0 cm	300,0 cm	001 / Sabbia limosa	Assente
2	da -300,0 a -6300,0 cm	6000,0 cm	002 / Limo argilloso	Assente

**ARCHIVIO TERRENI**

Indice / Descrizione terreno: **001 / Sabbia limosa**

Comportamento del terreno: condizione drenata

Peso Spec.	P. Spec.	Sat.	Angolo Res.	Coesione	Mod.Elast.	Mod.Edom.	Dens.Rel.	Poisson	C. Ades.
daN/cm <sup>2</sup>	daN/cm <sup>2</sup>	Gradi°	daN/cm <sup>2</sup>	daN/cm <sup>2</sup>	daN/cm <sup>2</sup>	daN/cm <sup>2</sup>	%	%	
1,800 E-3	2,770 E-3	27,000	0,170	92,221	150,000	60,0	0,353	0,83	

Indice / Descrizione terreno: **002 / Limo argilloso**

Comportamento del terreno: condizione non drenata

Peso Spec.	P. Spec.	Sat.	Coes.non dren.	Mod.Elast.	Mod.Edom.	Dens.Rel.	Poisson	C. Ades.
daN/cm <sup>2</sup>	daN/cm <sup>2</sup>	daN/cm <sup>2</sup>	daN/cm <sup>2</sup>	daN/cm <sup>2</sup>	daN/cm <sup>2</sup>	%	%	
1,760 E-3	2,700 E-3	0,300	100,000	100,000	60,0	0,500	0,70	

**DATI GEOMETRICI DEGLI ELEMENTI COSTITUENTI LE FONDAZIONI PROFONDE**

**Elemento: 84 - Palo singolo - Tipologia pali: trivellati**

X elem.	Y elem.	Prof.	Base	Lungh.	Altez.	Rot.	Grup.ap.	Ind.strat.	Dia. P.	Lun. P.	Lun. L.	Dist.P.	In. Px	In. Py	Dia. B.	Lun. B.	E.C.V.	E.C.C.	E.C.T.	Svin.testa	Vin.piede
cm	cm	cm	cm	cm	cm	Gradi°	n.	n.	cm	cm	cm	cm	cm	cm	cm	cm				codice	codice
503,1	0,0	225,0	0,0	0,0	250,0	0,00	84	001	120,0	3700,0	0,0	0,0	0,0	0,0	0,0	0,0	1,00	1,00	1,00	0	0; 0; 0
<b>Palo</b>	<b>Asc. X'</b>	<b>Ord. Y'</b>																			
n.	cm	cm																			
1	0,0	0,0																			

**Elemento: 92 - Palo singolo - Tipologia pali: trivellati**

X elem.	Y elem.	Prof.	Base	Lungh.	Altez.	Rot.	Grup.ap.	Ind.strat.	Dia. P.	Lun. P.	Lun. L.	Dist.P.	In. Px	In. Py	Dia. B.	Lun. B.	E.C.V.	E.C.C.	E.C.T.	Svin.testa	Vin.piede
cm	cm	cm	cm	cm	cm	Gradi°	n.	n.	cm	cm	cm	cm	cm	cm	cm	cm				codice	codice
934,4	0,0	225,0	0,0	0,0	250,0	0,00	92	001	120,0	3700,0	0,0	0,0	0,0	0,0	0,0	0,0	1,00	1,00	1,00	0	0; 0; 0
<b>Palo</b>	<b>Asc. X'</b>	<b>Ord. Y'</b>																			
n.	cm	cm																			
1	0,0	0,0																			

**Elemento: 103 - Palo singolo - Tipologia pali: trivellati**

X elem.	Y elem.	Prof.	Base	Lungh.	Altez.	Rot.	Grup.ap.	Ind.strat.	Dia. P.	Lun. P.	Lun. L.	Dist.P.	In. Px	In. Py	Dia. B.	Lun. B.	E.C.V.	E.C.C.	E.C.T.	Svin.testa	Vin.piede
cm	cm	cm	cm	cm	cm	Gradi°	n.	n.	cm	cm	cm	cm	cm	cm	cm	cm				codice	codice
868,7	366,0	225,0	0,0	0,0	250,0	0,00	103	001	120,0	3700,0	0,0	0,0	0,0	0,0	0,0	0,0	1,00	1,00	1,00	0	0; 0; 0
<b>Palo</b>	<b>Asc. X'</b>	<b>Ord. Y'</b>																			
n.	cm	cm																			
1	0,0	0,0																			

**Elemento: 115 - Palo singolo - Tipologia pali: trivellati**

X elem.	Y elem.	Prof.	Base	Lungh.	Altez.	Rot.	Grup.ap.	Ind.strat.	Dia. P.	Lun. P.	Lun. L.	Dist.P.	In. Px	In. Py	Dia. B.	Lun. B.	E.C.V.	E.C.C.	E.C.T.	Svin.testa	Vin.piede
cm	cm	cm	cm	cm	cm	Gradi°	n.	n.	cm	cm	cm	cm	cm	cm	cm	cm				codice	codice
418,9	418,9	225,0	0,0	0,0	250,0	0,00	115	001	120,0	3700,0	0,0	0,0	0,0	0,0	0,0	0,0	1,00	1,00	1,00	0	0; 0; 0
<b>Palo</b>	<b>Asc. X'</b>	<b>Ord. Y'</b>																			
n.	cm	cm																			



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1 0,0 0,0

**Elemento: 119 - Palo singolo - Tipologia pali: trivellati**

X elem.	Y elem.	Prof.	Base	Lungh.	Altez.	Rot.	Grup.ap.	Ind.strat.
cm	cm	cm	cm	cm	cm	Gradi°	n.	n.
681,8	681,8	225,0	0,0	0,0	250,0	0,00	119	001

Dia. P.	Lun. P.	Lun. L.	Dist.P.	In. Px	In. Py	Dia. B.	Lun. B.	E.C.V.	E.C.C.	E.C.T.	Svin.testa	Vin.piede
cm	cm	cm	cm	cm	cm	cm	cm				codice	codice
120,0	3700,0	0,0	0,0	0,0	0,0	0,0	0,0	1,00	1,00	1,00	0	0; 0; 0

Palo	Asc. X'	Ord. Y'
n.	cm	cm
1	0,0	0,0

**Elemento: 135 - Palo singolo - Tipologia pali: trivellati**

X elem.	Y elem.	Prof.	Base	Lungh.	Altez.	Rot.	Grup.ap.	Ind.strat.
cm	cm	cm	cm	cm	cm	Gradi°	n.	n.
366,0	868,7	225,0	0,0	0,0	250,0	0,00	135	001

Dia. P.	Lun. P.	Lun. L.	Dist.P.	In. Px	In. Py	Dia. B.	Lun. B.	E.C.V.	E.C.C.	E.C.T.	Svin.testa	Vin.piede
cm	cm	cm	cm	cm	cm	cm	cm				codice	codice
120,0	3700,0	0,0	0,0	0,0	0,0	0,0	0,0	1,00	1,00	1,00	0	0; 0; 0

Palo	Asc. X'	Ord. Y'
n.	cm	cm
1	0,0	0,0

**Elemento: 147 - Palo singolo - Tipologia pali: trivellati**

X elem.	Y elem.	Prof.	Base	Lungh.	Altez.	Rot.	Grup.ap.	Ind.strat.
cm	cm	cm	cm	cm	cm	Gradi°	n.	n.
0,0	503,1	225,0	0,0	0,0	250,0	0,00	147	001

Dia. P.	Lun. P.	Lun. L.	Dist.P.	In. Px	In. Py	Dia. B.	Lun. B.	E.C.V.	E.C.C.	E.C.T.	Svin.testa	Vin.piede
cm	cm	cm	cm	cm	cm	cm	cm				codice	codice
120,0	3700,0	0,0	0,0	0,0	0,0	0,0	0,0	1,00	1,00	1,00	0	0; 0; 0

Palo	Asc. X'	Ord. Y'
n.	cm	cm
1	0,0	0,0

**Elemento: 151 - Palo singolo - Tipologia pali: trivellati**

X elem.	Y elem.	Prof.	Base	Lungh.	Altez.	Rot.	Grup.ap.	Ind.strat.
cm	cm	cm	cm	cm	cm	Gradi°	n.	n.
0,0	934,4	225,0	0,0	0,0	250,0	0,00	151	001

Dia. P.	Lun. P.	Lun. L.	Dist.P.	In. Px	In. Py	Dia. B.	Lun. B.	E.C.V.	E.C.C.	E.C.T.	Svin.testa	Vin.piede
cm	cm	cm	cm	cm	cm	cm	cm				codice	codice
120,0	3700,0	0,0	0,0	0,0	0,0	0,0	0,0	1,00	1,00	1,00	0	0; 0; 0

Palo	Asc. X'	Ord. Y'
n.	cm	cm
1	0,0	0,0

**Elemento: 167 - Palo singolo - Tipologia pali: trivellati**

X elem.	Y elem.	Prof.	Base	Lungh.	Altez.	Rot.	Grup.ap.	Ind.strat.
cm	cm	cm	cm	cm	cm	Gradi°	n.	n.
-366,0	868,7	225,0	0,0	0,0	250,0	0,00	167	001

Dia. P.	Lun. P.	Lun. L.	Dist.P.	In. Px	In. Py	Dia. B.	Lun. B.	E.C.V.	E.C.C.	E.C.T.	Svin.testa	Vin.piede
cm	cm	cm	cm	cm	cm	cm	cm				codice	codice
120,0	3700,0	0,0	0,0	0,0	0,0	0,0	0,0	1,00	1,00	1,00	0	0; 0; 0

Palo	Asc. X'	Ord. Y'
n.	cm	cm
1	0,0	0,0

**Elemento: 179 - Palo singolo - Tipologia pali: trivellati**

X elem.	Y elem.	Prof.	Base	Lungh.	Altez.	Rot.	Grup.ap.	Ind.strat.
cm	cm	cm	cm	cm	cm	Gradi°	n.	n.
-418,9	418,9	225,0	0,0	0,0	250,0	0,00	179	001

Dia. P.	Lun. P.	Lun. L.	Dist.P.	In. Px	In. Py	Dia. B.	Lun. B.	E.C.V.	E.C.C.	E.C.T.	Svin.testa	Vin.piede
cm	cm	cm	cm	cm	cm	cm	cm				codice	codice
120,0	3700,0	0,0	0,0	0,0	0,0	0,0	0,0	1,00	1,00	1,00	0	0; 0; 0

Palo	Asc. X'	Ord. Y'
n.	cm	cm
1	0,0	0,0

**Elemento: 183 - Palo singolo - Tipologia pali: trivellati**



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X elem.	Y elem.	Prof.	Base	Lungh.	Altez.	Rot.	Grup.ap.	Ind.strat.					
cm	cm	cm	cm	cm	cm	Gradi°	n.	n.					
-681,8	681,8	225,0	0,0	0,0	250,0	0,00	183	001					
Dia. P.	Lun. P.	Lun. L.	Dist.P.	In. Px	In. Py	Dia. B.	Lun. B.	E.C.V.	E.C.C.	E.C.T.	Svin.testa	Vin.piede	
cm	cm	cm	cm	cm	cm	cm	cm				codice	codice	
120,0	3700,0	0,0	0,0	0,0	0,0	0,0	0,0	1,00	1,00	1,00	0	0; 0; 0	
Palo	Asc. X'	Ord. Y'											
n.	cm	cm											
1	0,0	0,0											

**Elemento: 199 - Palo singolo - Tipologia pali: trivellati**

X elem.	Y elem.	Prof.	Base	Lungh.	Altez.	Rot.	Grup.ap.	Ind.strat.					
cm	cm	cm	cm	cm	cm	Gradi°	n.	n.					
-868,7	366,0	225,0	0,0	0,0	250,0	0,00	199	001					
Dia. P.	Lun. P.	Lun. L.	Dist.P.	In. Px	In. Py	Dia. B.	Lun. B.	E.C.V.	E.C.C.	E.C.T.	Svin.testa	Vin.piede	
cm	cm	cm	cm	cm	cm	cm	cm				codice	codice	
120,0	3700,0	0,0	0,0	0,0	0,0	0,0	0,0	1,00	1,00	1,00	0	0; 0; 0	
Palo	Asc. X'	Ord. Y'											
n.	cm	cm											
1	0,0	0,0											

**Elemento: 211 - Palo singolo - Tipologia pali: trivellati**

X elem.	Y elem.	Prof.	Base	Lungh.	Altez.	Rot.	Grup.ap.	Ind.strat.					
cm	cm	cm	cm	cm	cm	Gradi°	n.	n.					
-503,1	0,0	225,0	0,0	0,0	250,0	0,00	211	001					
Dia. P.	Lun. P.	Lun. L.	Dist.P.	In. Px	In. Py	Dia. B.	Lun. B.	E.C.V.	E.C.C.	E.C.T.	Svin.testa	Vin.piede	
cm	cm	cm	cm	cm	cm	cm	cm				codice	codice	
120,0	3700,0	0,0	0,0	0,0	0,0	0,0	0,0	1,00	1,00	1,00	0	0; 0; 0	
Palo	Asc. X'	Ord. Y'											
n.	cm	cm											
1	0,0	0,0											

**Elemento: 215 - Palo singolo - Tipologia pali: trivellati**

X elem.	Y elem.	Prof.	Base	Lungh.	Altez.	Rot.	Grup.ap.	Ind.strat.					
cm	cm	cm	cm	cm	cm	Gradi°	n.	n.					
-934,4	0,0	225,0	0,0	0,0	250,0	0,00	215	001					
Dia. P.	Lun. P.	Lun. L.	Dist.P.	In. Px	In. Py	Dia. B.	Lun. B.	E.C.V.	E.C.C.	E.C.T.	Svin.testa	Vin.piede	
cm	cm	cm	cm	cm	cm	cm	cm				codice	codice	
120,0	3700,0	0,0	0,0	0,0	0,0	0,0	0,0	1,00	1,00	1,00	0	0; 0; 0	
Palo	Asc. X'	Ord. Y'											
n.	cm	cm											
1	0,0	0,0											

**Elemento: 231 - Palo singolo - Tipologia pali: trivellati**

X elem.	Y elem.	Prof.	Base	Lungh.	Altez.	Rot.	Grup.ap.	Ind.strat.					
cm	cm	cm	cm	cm	cm	Gradi°	n.	n.					
-868,7	-366,0	225,0	0,0	0,0	250,0	0,00	231	001					
Dia. P.	Lun. P.	Lun. L.	Dist.P.	In. Px	In. Py	Dia. B.	Lun. B.	E.C.V.	E.C.C.	E.C.T.	Svin.testa	Vin.piede	
cm	cm	cm	cm	cm	cm	cm	cm				codice	codice	
120,0	3700,0	0,0	0,0	0,0	0,0	0,0	0,0	1,00	1,00	1,00	0	0; 0; 0	
Palo	Asc. X'	Ord. Y'											
n.	cm	cm											
1	0,0	0,0											

**Elemento: 243 - Palo singolo - Tipologia pali: trivellati**

X elem.	Y elem.	Prof.	Base	Lungh.	Altez.	Rot.	Grup.ap.	Ind.strat.					
cm	cm	cm	cm	cm	cm	Gradi°	n.	n.					
-418,9	-418,9	225,0	0,0	0,0	250,0	0,00	243	001					
Dia. P.	Lun. P.	Lun. L.	Dist.P.	In. Px	In. Py	Dia. B.	Lun. B.	E.C.V.	E.C.C.	E.C.T.	Svin.testa	Vin.piede	
cm	cm	cm	cm	cm	cm	cm	cm				codice	codice	
120,0	3700,0	0,0	0,0	0,0	0,0	0,0	0,0	1,00	1,00	1,00	0	0; 0; 0	
Palo	Asc. X'	Ord. Y'											
n.	cm	cm											
1	0,0	0,0											

**Elemento: 247 - Palo singolo - Tipologia pali: trivellati**

X elem.	Y elem.	Prof.	Base	Lungh.	Altez.	Rot.	Grup.ap.	Ind.strat.					
cm	cm	cm	cm	cm	cm	Gradi°	n.	n.					
-681,8	-681,8	225,0	0,0	0,0	250,0	0,00	247	001					

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Dia. P.	Lun. P.	Lun. L.	Dist.P.	In. Px	In. Py	Dia. B.	Lun. B.	E.C.V.	E.C.C.	E.C.T.	Svin.testa	Vin.piede
cm	cm	cm	cm	cm	cm	cm	cm				codice	codice
120,0	3700,0	0,0	0,0	0,0	0,0	0,0	0,0	1,00	1,00	1,00	0	0; 0; 0

Palo	Asc. X'	Ord. Y'
n.	cm	cm
1	0,0	0,0

**Elemento: 263 - Palo singolo - Tipologia pali: trivellati**

X elem.	Y elem.	Prof.	Base	Lungh.	Altez.	Rot.	Grup.ap.	Ind.strat.
cm	cm	cm	cm	cm	cm	Gradi°	n.	n.
-366,0	-868,7	225,0	0,0	0,0	250,0	0,00	263	001

Dia. P.	Lun. P.	Lun. L.	Dist.P.	In. Px	In. Py	Dia. B.	Lun. B.	E.C.V.	E.C.C.	E.C.T.	Svin.testa	Vin.piede
cm	cm	cm	cm	cm	cm	cm	cm				codice	codice
120,0	3700,0	0,0	0,0	0,0	0,0	0,0	0,0	1,00	1,00	1,00	0	0; 0; 0

Palo	Asc. X'	Ord. Y'
n.	cm	cm
1	0,0	0,0

**Elemento: 275 - Palo singolo - Tipologia pali: trivellati**

X elem.	Y elem.	Prof.	Base	Lungh.	Altez.	Rot.	Grup.ap.	Ind.strat.
cm	cm	cm	cm	cm	cm	Gradi°	n.	n.
0,0	-503,1	225,0	0,0	0,0	250,0	0,00	275	001

Dia. P.	Lun. P.	Lun. L.	Dist.P.	In. Px	In. Py	Dia. B.	Lun. B.	E.C.V.	E.C.C.	E.C.T.	Svin.testa	Vin.piede
cm	cm	cm	cm	cm	cm	cm	cm				codice	codice
120,0	3700,0	0,0	0,0	0,0	0,0	0,0	0,0	1,00	1,00	1,00	0	0; 0; 0

Palo	Asc. X'	Ord. Y'
n.	cm	cm
1	0,0	0,0

**Elemento: 279 - Palo singolo - Tipologia pali: trivellati**

X elem.	Y elem.	Prof.	Base	Lungh.	Altez.	Rot.	Grup.ap.	Ind.strat.
cm	cm	cm	cm	cm	cm	Gradi°	n.	n.
0,0	-934,4	225,0	0,0	0,0	250,0	0,00	279	001

Dia. P.	Lun. P.	Lun. L.	Dist.P.	In. Px	In. Py	Dia. B.	Lun. B.	E.C.V.	E.C.C.	E.C.T.	Svin.testa	Vin.piede
cm	cm	cm	cm	cm	cm	cm	cm				codice	codice
120,0	3700,0	0,0	0,0	0,0	0,0	0,0	0,0	1,00	1,00	1,00	0	0; 0; 0

Palo	Asc. X'	Ord. Y'
n.	cm	cm
1	0,0	0,0

**Elemento: 295 - Palo singolo - Tipologia pali: trivellati**

X elem.	Y elem.	Prof.	Base	Lungh.	Altez.	Rot.	Grup.ap.	Ind.strat.
cm	cm	cm	cm	cm	cm	Gradi°	n.	n.
366,0	-868,7	225,0	0,0	0,0	250,0	0,00	295	001

Dia. P.	Lun. P.	Lun. L.	Dist.P.	In. Px	In. Py	Dia. B.	Lun. B.	E.C.V.	E.C.C.	E.C.T.	Svin.testa	Vin.piede
cm	cm	cm	cm	cm	cm	cm	cm				codice	codice
120,0	3700,0	0,0	0,0	0,0	0,0	0,0	0,0	1,00	1,00	1,00	0	0; 0; 0

Palo	Asc. X'	Ord. Y'
n.	cm	cm
1	0,0	0,0

**Elemento: 307 - Palo singolo - Tipologia pali: trivellati**

X elem.	Y elem.	Prof.	Base	Lungh.	Altez.	Rot.	Grup.ap.	Ind.strat.
cm	cm	cm	cm	cm	cm	Gradi°	n.	n.
418,9	-418,9	225,0	0,0	0,0	250,0	0,00	307	001

Dia. P.	Lun. P.	Lun. L.	Dist.P.	In. Px	In. Py	Dia. B.	Lun. B.	E.C.V.	E.C.C.	E.C.T.	Svin.testa	Vin.piede
cm	cm	cm	cm	cm	cm	cm	cm				codice	codice
120,0	3700,0	0,0	0,0	0,0	0,0	0,0	0,0	1,00	1,00	1,00	0	0; 0; 0

Palo	Asc. X'	Ord. Y'
n.	cm	cm
1	0,0	0,0

**Elemento: 311 - Palo singolo - Tipologia pali: trivellati**

X elem.	Y elem.	Prof.	Base	Lungh.	Altez.	Rot.	Grup.ap.	Ind.strat.
cm	cm	cm	cm	cm	cm	Gradi°	n.	n.
681,8	-681,8	225,0	0,0	0,0	250,0	0,00	311	001

Dia. P.	Lun. P.	Lun. L.	Dist.P.	In. Px	In. Py	Dia. B.	Lun. B.	E.C.V.	E.C.C.	E.C.T.	Svin.testa	Vin.piede
cm	cm	cm	cm	cm	cm	cm	cm				codice	codice

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120,0	3700,0	0,0	0,0	0,0	0,0	0,0	0,0	1,00	1,00	1,00	0	0; 0; 0
<b>Palo</b>	<b>Asc. X'</b>	<b>Ord. Y'</b>										
n.	cm	cm										
1	0,0	0,0										

**Elemento: 327 - Palo singolo - Tipologia pali: trivellati**

<b>X elem.</b>	<b>Y elem.</b>	<b>Prof.</b>	<b>Base</b>	<b>Lungh.</b>	<b>Altez.</b>	<b>Rot.</b>	<b>Grup.ap.</b>	<b>Ind.strat.</b>					
cm	cm	cm	cm	cm	cm	Gradi°	n.	n.					
868,7	-366,0	225,0	0,0	0,0	250,0	0,00	327	001					
<b>Dia. P.</b>	<b>Lun. P.</b>	<b>Lun. L.</b>	<b>Dist.P.</b>	<b>In. Px</b>	<b>In. Py</b>	<b>Dia. B.</b>	<b>Lun. B.</b>	<b>E.C.V.</b>	<b>E.C.C.</b>	<b>E.C.T.</b>	<b>Svin.testa</b>	<b>Vin.piede</b>	
cm	cm	cm	cm	cm	cm	cm	cm	cm	cm	cm	codice	codice	
120,0	3700,0	0,0	0,0	0,0	0,0	0,0	0,0	1,00	1,00	1,00	0	0; 0; 0	
<b>Palo</b>	<b>Asc. X'</b>	<b>Ord. Y'</b>											
n.	cm	cm											
1	0,0	0,0											

**VALORI DI CALCOLO DELLA PORTANZA PER FONDAZIONI PROFONDE**

**Elemento: 84 - Palo singolo**

$N_q = 1.000$ ,  $\sigma_{punta} = 10.234$ ,  $\phi = 0.0$ ,  $N_c = 10.185$ ,  $c_{punta} = 0.300$

Port. lat. = 294690.7 daN, Port. punta = 150294.5 daN, P.P.Palo = 104615.0 daN

<b>Cmb.</b>	<b>Tipo</b>	<b>Palo</b>	<b>coord.X</b>	<b>coord.Y</b>	<b>N</b>	<b>N lim</b>	<b>Ver.N</b>	<b>Stato</b>
n.		n.	cm	cm	daN	daN	daN cm	
001	SLU STR	1	0.000	0.000	-88760.0	-111609.7	0,795	Ok

Sollecitazioni:

<b>Cmb</b>	<b>Tipo</b>	<b>Sism.</b>	<b>N</b>	<b>Tx</b>	<b>Ty</b>	<b>Mx</b>	<b>My</b>
n.			daN	daN	daN	daN cm	daN cm
001	SLU STR	No	-88760.0	-745.8	4130.9	8342000.0	6573000.0

**Elemento: 92 - Palo singolo**

$N_q = 1.000$ ,  $\sigma_{punta} = 10.234$ ,  $\phi = 0.0$ ,  $N_c = 10.185$ ,  $c_{punta} = 0.300$

Port. lat. = 294690.7 daN, Port. punta = 150294.5 daN, P.P.Palo = 104615.0 daN

<b>Cmb.</b>	<b>Tipo</b>	<b>Palo</b>	<b>coord.X</b>	<b>coord.Y</b>	<b>N</b>	<b>N lim</b>	<b>Ver.N</b>	<b>Stato</b>
n.		n.	cm	cm	daN	daN	daN cm	
001	SLU STR	1	0.000	0.000	-99140.0	-111609.7	0,888	Ok

Sollecitazioni:

<b>Cmb</b>	<b>Tipo</b>	<b>Sism.</b>	<b>N</b>	<b>Tx</b>	<b>Ty</b>	<b>Mx</b>	<b>My</b>
n.			daN	daN	daN	daN cm	daN cm
001	SLU STR	No	-99140.0	-203.1	-391.6	6759000.0	6256000.0

**Elemento: 103 - Palo singolo**

$N_q = 1.000$ ,  $\sigma_{punta} = 10.234$ ,  $\phi = 0.0$ ,  $N_c = 10.185$ ,  $c_{punta} = 0.300$

Port. lat. = 294690.7 daN, Port. punta = 150294.5 daN, P.P.Palo = 104615.0 daN

<b>Cmb.</b>	<b>Tipo</b>	<b>Palo</b>	<b>coord.X</b>	<b>coord.Y</b>	<b>N</b>	<b>N lim</b>	<b>Ver.N</b>	<b>Stato</b>
n.		n.	cm	cm	daN	daN	daN cm	
001	SLU STR	1	0.000	0.000	-87370.0	-111609.7	0,783	Ok

Sollecitazioni:

<b>Cmb</b>	<b>Tipo</b>	<b>Sism.</b>	<b>N</b>	<b>Tx</b>	<b>Ty</b>	<b>Mx</b>	<b>My</b>
n.			daN	daN	daN	daN cm	daN cm
001	SLU STR	No	-87370.0	1951.5	1177.9	7509000.0	5896000.0

**Elemento: 115 - Palo singolo**

$N_q = 1.000$ ,  $\sigma_{punta} = 10.234$ ,  $\phi = 0.0$ ,  $N_c = 10.185$ ,  $c_{punta} = 0.300$

Port. lat. = 294690.7 daN, Port. punta = 150294.5 daN, P.P.Palo = 104615.0 daN

<b>Cmb.</b>	<b>Tipo</b>	<b>Palo</b>	<b>coord.X</b>	<b>coord.Y</b>	<b>N</b>	<b>N lim</b>	<b>Ver.N</b>	<b>Stato</b>
n.		n.	cm	cm	daN	daN	daN cm	
001	SLU STR	1	0.000	0.000	-74130.0	-111609.7	0,664	Ok

Sollecitazioni:

<b>Cmb</b>	<b>Tipo</b>	<b>Sism.</b>	<b>N</b>	<b>Tx</b>	<b>Ty</b>	<b>Mx</b>	<b>My</b>
n.			daN	daN	daN	daN cm	daN cm
001	SLU STR	No	-74130.0	744.0	5994.6	9211000.0	6730000.0

**Elemento: 119 - Palo singolo**





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$N_q = 1.000$ ,  $\sigma_{punta} = 10.234$ ,  $\phi = 0.0$ ,  $N_c = 10.185$ ,  $c_{punta} = 0.300$   
 Port. lat. = 294690.7 daN, Port. punta = 150294.5 daN, P.P.Palo = 104615.0 daN

Cmb.	Tipo	Palo	coord.X	coord.Y	N	N lim	Ver.N	Stato
n.		n.	cm	cm	daN	daN		
001	SLU STR	1	0.000	0.000	-73540.0	-111609.7	0,659	Ok

Sollecitazioni:

Cmb	Tipo	Sism.	N	Tx	Ty	Mx	My
n.			daN	daN	daN	daN cm	daN cm
001	SLU STR	No	-73540.0	3509.1	2951.0	8082000.0	5758000.0

**Elemento: 135 - Palo singolo**

$N_q = 1.000$ ,  $\sigma_{punta} = 10.234$ ,  $\phi = 0.0$ ,  $N_c = 10.185$ ,  $c_{punta} = 0.300$   
 Port. lat. = 294690.7 daN, Port. punta = 150294.5 daN, P.P.Palo = 104615.0 daN

Cmb.	Tipo	Palo	coord.X	coord.Y	N	N lim	Ver.N	Stato
n.		n.	cm	cm	daN	daN		
001	SLU STR	1	0.000	0.000	-59670.0	-111609.7	0,535	Ok

Sollecitazioni:

Cmb	Tipo	Sism.	N	Tx	Ty	Mx	My
n.			daN	daN	daN	daN cm	daN cm
001	SLU STR	No	-59670.0	4156.6	5278.7	8664000.0	5836000.0

**Elemento: 147 - Palo singolo**

$N_q = 1.000$ ,  $\sigma_{punta} = 10.234$ ,  $\phi = 0.0$ ,  $N_c = 10.185$ ,  $c_{punta} = 0.300$   
 Port. lat. = 294690.7 daN, Port. punta = 150294.5 daN, P.P.Palo = 104615.0 daN

Cmb.	Tipo	Palo	coord.X	coord.Y	N	N lim	Ver.N	Stato
n.		n.	cm	cm	daN	daN		
001	SLU STR	1	0.000	0.000	-59580.0	-111609.7	0,534	Ok

Sollecitazioni:

Cmb	Tipo	Sism.	N	Tx	Ty	Mx	My
n.			daN	daN	daN	daN cm	daN cm
001	SLU STR	No	-59580.0	-259.0	8613.7	9707000.0	7519000.0

**Elemento: 151 - Palo singolo**

$N_q = 1.000$ ,  $\sigma_{punta} = 10.234$ ,  $\phi = 0.0$ ,  $N_c = 10.185$ ,  $c_{punta} = 0.300$   
 Port. lat. = 294690.7 daN, Port. punta = 150294.5 daN, P.P.Palo = 104615.0 daN

Cmb.	Tipo	Palo	coord.X	coord.Y	N	N lim	Ver.N	Stato
n.		n.	cm	cm	daN	daN		
001	SLU STR	1	0.000	0.000	-47630.0	-111609.7	0,427	Ok

Sollecitazioni:

Cmb	Tipo	Sism.	N	Tx	Ty	Mx	My
n.			daN	daN	daN	daN cm	daN cm
001	SLU STR	No	-47630.0	4243.2	7720.9	9192000.0	5943000.0

**Elemento: 167 - Palo singolo**

$N_q = 1.000$ ,  $\sigma_{punta} = 10.234$ ,  $\phi = 0.0$ ,  $N_c = 10.185$ ,  $c_{punta} = 0.300$   
 Port. lat. = 294690.7 daN, Port. punta = 150294.5 daN, P.P.Palo = 104615.0 daN

Cmb.	Tipo	Palo	coord.X	coord.Y	N	N lim	Ver.N	Stato
n.		n.	cm	cm	daN	daN		
001	SLU STR	1	0.000	0.000	-39110.0	-111609.7	0,350	Ok

Sollecitazioni:

Cmb	Tipo	Sism.	N	Tx	Ty	Mx	My
n.			daN	daN	daN	daN cm	daN cm
001	SLU STR	No	-39110.0	3707.6	10280.0	9788000.0	6094000.0

**Elemento: 179 - Palo singolo**

$N_q = 1.000$ ,  $\sigma_{punta} = 10.234$ ,  $\phi = 0.0$ ,  $N_c = 10.185$ ,  $c_{punta} = 0.300$   
 Port. lat. = 294690.7 daN, Port. punta = 150294.5 daN, P.P.Palo = 104615.0 daN

Cmb.	Tipo	Palo	coord.X	coord.Y	N	N lim	Ver.N	Stato
n.		n.	cm	cm	daN	daN		
001	SLU STR	1	0.000	0.000	-49730.0	-111609.7	0,446	Ok

Sollecitazioni:

Cmb	Tipo	Sism.	N	Tx	Ty	Mx	My
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n.			daN	daN	daN	daN cm	daN cm
001	SLU STR	No	-49730.0	-373.2	11150.0	10160000.0	7375000.0

**Elemento: 183 - Palo singolo**

$N_q = 1.000$ ,  $\sigma_{punta} = 10.234$ ,  $\phi = 0.0$ ,  $N_c = 10.185$ ,  $c_{punta} = 0.300$

Port. lat. = 294690.7 daN, Port. punta = 150294.5 daN, P.P.Palo = 104615.0 daN

Cmb.	Tipo	Palo	coord.X	coord.Y	N	N lim	Ver.N	Stato
n.		n.	cm	cm	daN	daN		
001	SLU STR	1	0.000	0.000	-35290.0	-111609.7	0,316	Ok

Sollecitazioni:

Cmb	Tipo	Sism.	N	Tx	Ty	Mx	My
n.			daN	daN	daN	daN cm	daN cm
001	SLU STR	No	-35290.0	2294.3	12740.0	10450000.0	6460000.0

**Elemento: 199 - Palo singolo**

$N_q = 1.000$ ,  $\sigma_{punta} = 10.234$ ,  $\phi = 0.0$ ,  $N_c = 10.185$ ,  $c_{punta} = 0.300$

Port. lat. = 294690.7 daN, Port. punta = 150294.5 daN, P.P.Palo = 104615.0 daN

Cmb.	Tipo	Palo	coord.X	coord.Y	N	N lim	Ver.N	Stato
n.		n.	cm	cm	daN	daN		
001	SLU STR	1	0.000	0.000	-38560.0	-111609.7	0,345	Ok

Sollecitazioni:

Cmb	Tipo	Sism.	N	Tx	Ty	Mx	My
n.			daN	daN	daN	daN cm	daN cm
001	SLU STR	No	-38560.0	-419.6	14410.0	10970000.0	7268000.0

**Elemento: 211 - Palo singolo**

$N_q = 1.000$ ,  $\sigma_{punta} = 10.234$ ,  $\phi = 0.0$ ,  $N_c = 10.185$ ,  $c_{punta} = 0.300$

Port. lat. = 294690.7 daN, Port. punta = 150294.5 daN, P.P.Palo = 104615.0 daN

Cmb.	Tipo	Palo	coord.X	coord.Y	N	N lim	Ver.N	Stato
n.		n.	cm	cm	daN	daN		
001	SLU STR	1	0.000	0.000	-59040.0	-111609.7	0,529	Ok

Sollecitazioni:

Cmb	Tipo	Sism.	N	Tx	Ty	Mx	My
n.			daN	daN	daN	daN cm	daN cm
001	SLU STR	No	-59040.0	-4733.6	12460.0	10710000.0	8884000.0

**Elemento: 215 - Palo singolo**

$N_q = 1.000$ ,  $\sigma_{punta} = 10.234$ ,  $\phi = 0.0$ ,  $N_c = 10.185$ ,  $c_{punta} = 0.300$

Port. lat. = 294690.7 daN, Port. punta = 150294.5 daN, P.P.Palo = 104615.0 daN

Cmb.	Tipo	Palo	coord.X	coord.Y	N	N lim	Ver.N	Stato
n.		n.	cm	cm	daN	daN		
001	SLU STR	1	0.000	0.000	-46600.0	-111609.7	0,418	Ok

Sollecitazioni:

Cmb	Tipo	Sism.	N	Tx	Ty	Mx	My
n.			daN	daN	daN	daN cm	daN cm
001	SLU STR	No	-46600.0	-3866.1	14960.0	11130000.0	8380000.0

**Elemento: 231 - Palo singolo**

$N_q = 1.000$ ,  $\sigma_{punta} = 10.234$ ,  $\phi = 0.0$ ,  $N_c = 10.185$ ,  $c_{punta} = 0.300$

Port. lat. = 294690.7 daN, Port. punta = 150294.5 daN, P.P.Palo = 104615.0 daN

Cmb.	Tipo	Palo	coord.X	coord.Y	N	N lim	Ver.N	Stato
n.		n.	cm	cm	daN	daN		
001	SLU STR	1	0.000	0.000	-58320.0	-111609.7	0,523	Ok

Sollecitazioni:

Cmb	Tipo	Sism.	N	Tx	Ty	Mx	My
n.			daN	daN	daN	daN cm	daN cm
001	SLU STR	No	-58320.0	-7430.9	13960.0	10710000.0	9560000.0

**Elemento: 243 - Palo singolo**

$N_q = 1.000$ ,  $\sigma_{punta} = 10.234$ ,  $\phi = 0.0$ ,  $N_c = 10.185$ ,  $c_{punta} = 0.300$

Port. lat. = 294690.7 daN, Port. punta = 150294.5 daN, P.P.Palo = 104615.0 daN

Cmb.	Tipo	Palo	coord.X	coord.Y	N	N lim	Ver.N	Stato
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n.	SLU STR	n.	cm	cm	daN	daN		
001	SLU STR	1	0.000	0.000	-73210.0	-111609.7	0,656	Ok

Sollecitazioni:

Cmb	Tipo	Sism.	N	Tx	Ty	Mx	My
n.			daN	daN	daN	daN cm	daN cm
001	SLU STR	No	-73210.0	-9030.3	10040.0	9512000.0	10350000.0

**Elemento: 247 - Palo singolo**

$N_q = 1.000$ ,  $\sigma_{punta} = 10.234$ ,  $\phi = 0.0$ ,  $N_c = 10.185$ ,  $c_{punta} = 0.300$

Port. lat. = 294690.7 daN, Port. punta = 150294.5 daN, P.P.Palo = 104615.0 daN

Cmb.	Tipo	Palo	coord.X	coord.Y	N	N lim	Ver.N	Stato
n.		n.	cm	cm	daN	daN		
001	SLU STR	1	0.000	0.000	-72040.0	-111609.7	0,645	Ok

Sollecitazioni:

Cmb	Tipo	Sism.	N	Tx	Ty	Mx	My
n.			daN	daN	daN	daN cm	daN cm
001	SLU STR	No	-72040.0	-10290.0	11530.0	9748000.0	10450000.0

**Elemento: 263 - Palo singolo**

$N_q = 1.000$ ,  $\sigma_{punta} = 10.234$ ,  $\phi = 0.0$ ,  $N_c = 10.185$ ,  $c_{punta} = 0.300$

Port. lat. = 294690.7 daN, Port. punta = 150294.5 daN, P.P.Palo = 104615.0 daN

Cmb.	Tipo	Palo	coord.X	coord.Y	N	N lim	Ver.N	Stato
n.		n.	cm	cm	daN	daN		
001	SLU STR	1	0.000	0.000	-86020.0	-111609.7	0,771	Ok

Sollecitazioni:

Cmb	Tipo	Sism.	N	Tx	Ty	Mx	My
n.			daN	daN	daN	daN cm	daN cm
001	SLU STR	No	-86020.0	-11590.0	7910.6	8414000.0	10750000.0

**Elemento: 275 - Palo singolo**

$N_q = 1.000$ ,  $\sigma_{punta} = 10.234$ ,  $\phi = 0.0$ ,  $N_c = 10.185$ ,  $c_{punta} = 0.300$

Port. lat. = 294690.7 daN, Port. punta = 150294.5 daN, P.P.Palo = 104615.0 daN

Cmb.	Tipo	Palo	coord.X	coord.Y	N	N lim	Ver.N	Stato
n.		n.	cm	cm	daN	daN		
001	SLU STR	1	0.000	0.000	-88220.0	-111609.7	0,790	Ok

Sollecitazioni:

Cmb	Tipo	Sism.	N	Tx	Ty	Mx	My
n.			daN	daN	daN	daN cm	daN cm
001	SLU STR	No	-88220.0	-8586.7	4625.9	7396000.0	9885000.0

**Elemento: 279 - Palo singolo**

$N_q = 1.000$ ,  $\sigma_{punta} = 10.234$ ,  $\phi = 0.0$ ,  $N_c = 10.185$ ,  $c_{punta} = 0.300$

Port. lat. = 294690.7 daN, Port. punta = 150294.5 daN, P.P.Palo = 104615.0 daN

Cmb.	Tipo	Palo	coord.X	coord.Y	N	N lim	Ver.N	Stato
n.		n.	cm	cm	daN	daN		
001	SLU STR	1	0.000	0.000	-98120.0	-111609.7	0,879	Ok

Sollecitazioni:

Cmb	Tipo	Sism.	N	Tx	Ty	Mx	My
n.			daN	daN	daN	daN cm	daN cm
001	SLU STR	No	-98120.0	-11110.0	4057.9	7069000.0	10310000.0

**Elemento: 295 - Palo singolo**

$N_q = 1.000$ ,  $\sigma_{punta} = 10.234$ ,  $\phi = 0.0$ ,  $N_c = 10.185$ ,  $c_{punta} = 0.300$

Port. lat. = 294690.7 daN, Port. punta = 150294.5 daN, P.P.Palo = 104615.0 daN

Cmb.	Tipo	Palo	coord.X	coord.Y	N	N lim	Ver.N	Stato
n.		n.	cm	cm	daN	daN		
001	SLU STR	1	0.000	0.000	-106600.0	-111609.7	0,955	Ok

Sollecitazioni:

Cmb	Tipo	Sism.	N	Tx	Ty	Mx	My
n.			daN	daN	daN	daN cm	daN cm
001	SLU STR	No	-106600.0	-9077.3	895.8	6125000.0	9291000.0

**Elemento: 307 - Palo singolo**

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$N_q = 1.000$ ,  $\sigma_{punta} = 10.234$ ,  $\phi = 0.0$ ,  $N_c = 10.185$ ,  $c_{punta} = 0.300$   
 Port. lat. = 294690.7 daN, Port. punta = 150294.5 daN, P.P.Palo = 104615.0 daN

Cmb.	Tipo	Palo	coord.X	coord.Y	N	N lim	Ver.N	Stato
n.		n.	cm	cm	daN	daN		
001	SLU STR	1	0.000	0.000	-97600.0	-111609.7	0,874	Ok

Sollecitazioni:

Cmb	Tipo	Sism.	N	Tx	Ty	Mx	My
n.			daN	daN	daN	daN cm	daN cm
001	SLU STR	No	-97600.0	-4414.2	1372.4	6534000.0	7676000.0

**Elemento: 311 - Palo singolo**

$N_q = 1.000$ ,  $\sigma_{punta} = 10.234$ ,  $\phi = 0.0$ ,  $N_c = 10.185$ ,  $c_{punta} = 0.300$   
 Port. lat. = 294690.7 daN, Port. punta = 150294.5 daN, P.P.Palo = 104615.0 daN

Cmb.	Tipo	Palo	coord.X	coord.Y	N	N lim	Ver.N	Stato
n.		n.	cm	cm	daN	daN		
001	SLU STR	1	0.000	0.000	-110300.0	-111609.7	0,988	Ok

Sollecitazioni:

Cmb	Tipo	Sism.	N	Tx	Ty	Mx	My
n.			daN	daN	daN	daN cm	daN cm
001	SLU STR	No	-110300.0	-6285.0	-1055.3	5761000.0	8126000.0

**Elemento: 327 - Palo singolo**

$N_q = 1.000$ ,  $\sigma_{punta} = 10.234$ ,  $\phi = 0.0$ ,  $N_c = 10.185$ ,  $c_{punta} = 0.300$   
 Port. lat. = 294690.7 daN, Port. punta = 150294.5 daN, P.P.Palo = 104615.0 daN

Cmb.	Tipo	Palo	coord.X	coord.Y	N	N lim	Ver.N	Stato
n.		n.	cm	cm	daN	daN		
001	SLU STR	1	0.000	0.000	-107100.0	-111609.7	0,960	Ok

Sollecitazioni:

Cmb	Tipo	Sism.	N	Tx	Ty	Mx	My
n.			daN	daN	daN	daN cm	daN cm
001	SLU STR	No	-107100.0	-3051.5	-1340.6	6050000.0	7018000.0

**VALORI DI CALCOLO DEI CEDIMENTI PER FONDAZIONI PROFONDE**

**Elemento: 84 - Palo singolo**

Cmb. (Tipo)	Palo	coord.X	coord.Y	N	Ced.Vert
n.	n.	cm	cm	daN	cm
069 (SLE rare)	1	0.000	0.000	-68280.0	0.115

Sollecitazioni:

Cmb	Tipo	Sism.	N	Tx	Ty	Mx	My
n.			daN	daN	daN	daN cm	daN cm
069	SLE rare	No	-68280.0	-573.7	3177.6	6417000.0	5056000.0

**Elemento: 92 - Palo singolo**

Cmb. (Tipo)	Palo	coord.X	coord.Y	N	Ced.Vert
n.	n.	cm	cm	daN	cm
069 (SLE rare)	1	0.000	0.000	-76260.0	0.129

Sollecitazioni:

Cmb	Tipo	Sism.	N	Tx	Ty	Mx	My
n.			daN	daN	daN	daN cm	daN cm
069	SLE rare	No	-76260.0	-156.2	-301.2	5199000.0	4813000.0

**Elemento: 103 - Palo singolo**

Cmb. (Tipo)	Palo	coord.X	coord.Y	N	Ced.Vert
n.	n.	cm	cm	daN	cm
069 (SLE rare)	1	0.000	0.000	-67210.0	0.114

Sollecitazioni:

Cmb	Tipo	Sism.	N	Tx	Ty	Mx	My
n.			daN	daN	daN	daN cm	daN cm
069	SLE rare	No	-67210.0	1501.2	906.0	5776000.0	4535000.0

**Elemento: 115 - Palo singolo**

Cmb. (Tipo)	Palo	coord.X	coord.Y	N	Ced.Vert
n.	n.	cm	cm	daN	cm

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069 (SLE rare)	1	0.000	0.000	-57020.0	0.096		
Sollecitazioni:							
<b>Cmb</b>	<b>Tipo</b>	<b>Sism.</b>	<b>N</b>	<b>Tx</b>	<b>Ty</b>	<b>Mx</b>	<b>My</b>
n.			daN	daN	daN	daN cm	daN cm
069	SLE rare	No	-57020.0	572.3	4611.2	7085000.0	5177000.0

**Elemento: 119 - Palo singolo**

<b>Cmb. (Tipo)</b>	<b>Palo</b>	<b>coord.X</b>	<b>coord.Y</b>	<b>N</b>	<b>Ced.Vert</b>		
n.	n.	cm	cm	daN	cm		
069 (SLE rare)	1	0.000	0.000	-56570.0	0.096		
Sollecitazioni:							
<b>Cmb</b>	<b>Tipo</b>	<b>Sism.</b>	<b>N</b>	<b>Tx</b>	<b>Ty</b>	<b>Mx</b>	<b>My</b>
n.			daN	daN	daN	daN cm	daN cm
069	SLE rare	No	-56570.0	2699.3	2270.0	6217000.0	4430000.0

**Elemento: 135 - Palo singolo**

<b>Cmb. (Tipo)</b>	<b>Palo</b>	<b>coord.X</b>	<b>coord.Y</b>	<b>N</b>	<b>Ced.Vert</b>		
n.	n.	cm	cm	daN	cm		
069 (SLE rare)	1	0.000	0.000	-45900.0	0.078		
Sollecitazioni:							
<b>Cmb</b>	<b>Tipo</b>	<b>Sism.</b>	<b>N</b>	<b>Tx</b>	<b>Ty</b>	<b>Mx</b>	<b>My</b>
n.			daN	daN	daN	daN cm	daN cm
069	SLE rare	No	-45900.0	3197.4	4060.6	6665000.0	4489000.0

**Elemento: 147 - Palo singolo**

<b>Cmb. (Tipo)</b>	<b>Palo</b>	<b>coord.X</b>	<b>coord.Y</b>	<b>N</b>	<b>Ced.Vert</b>		
n.	n.	cm	cm	daN	cm		
069 (SLE rare)	1	0.000	0.000	-45830.0	0.078		
Sollecitazioni:							
<b>Cmb</b>	<b>Tipo</b>	<b>Sism.</b>	<b>N</b>	<b>Tx</b>	<b>Ty</b>	<b>Mx</b>	<b>My</b>
n.			daN	daN	daN	daN cm	daN cm
069	SLE rare	No	-45830.0	-199.2	6625.9	7467000.0	5784000.0

**Elemento: 151 - Palo singolo**

<b>Cmb. (Tipo)</b>	<b>Palo</b>	<b>coord.X</b>	<b>coord.Y</b>	<b>N</b>	<b>Ced.Vert</b>		
n.	n.	cm	cm	daN	cm		
069 (SLE rare)	1	0.000	0.000	-36640.0	0.062		
Sollecitazioni:							
<b>Cmb</b>	<b>Tipo</b>	<b>Sism.</b>	<b>N</b>	<b>Tx</b>	<b>Ty</b>	<b>Mx</b>	<b>My</b>
n.			daN	daN	daN	daN cm	daN cm
069	SLE rare	No	-36640.0	3264.0	5939.1	7071000.0	4572000.0

**Elemento: 167 - Palo singolo**

<b>Cmb. (Tipo)</b>	<b>Palo</b>	<b>coord.X</b>	<b>coord.Y</b>	<b>N</b>	<b>Ced.Vert</b>		
n.	n.	cm	cm	daN	cm		
069 (SLE rare)	1	0.000	0.000	-30090.0	0.051		
Sollecitazioni:							
<b>Cmb</b>	<b>Tipo</b>	<b>Sism.</b>	<b>N</b>	<b>Tx</b>	<b>Ty</b>	<b>Mx</b>	<b>My</b>
n.			daN	daN	daN	daN cm	daN cm
069	SLE rare	No	-30090.0	2852.0	7906.3	7530000.0	4687000.0

**Elemento: 179 - Palo singolo**

<b>Cmb. (Tipo)</b>	<b>Palo</b>	<b>coord.X</b>	<b>coord.Y</b>	<b>N</b>	<b>Ced.Vert</b>		
n.	n.	cm	cm	daN	cm		
069 (SLE rare)	1	0.000	0.000	-38260.0	0.065		
Sollecitazioni:							
<b>Cmb</b>	<b>Tipo</b>	<b>Sism.</b>	<b>N</b>	<b>Tx</b>	<b>Ty</b>	<b>Mx</b>	<b>My</b>
n.			daN	daN	daN	daN cm	daN cm
069	SLE rare	No	-38260.0	-287.1	8574.4	7814000.0	5673000.0

**Elemento: 183 - Palo singolo**

<b>Cmb. (Tipo)</b>	<b>Palo</b>	<b>coord.X</b>	<b>coord.Y</b>	<b>N</b>	<b>Ced.Vert</b>		
n.	n.	cm	cm	daN	cm		
069 (SLE rare)	1	0.000	0.000	-27150.0	0.046		
Sollecitazioni:							
<b>Cmb</b>	<b>Tipo</b>	<b>Sism.</b>	<b>N</b>	<b>Tx</b>	<b>Ty</b>	<b>Mx</b>	<b>My</b>
n.			daN	daN	daN	daN cm	daN cm
069	SLE rare	No	-27150.0	1764.8	9800.2	8040000.0	4969000.0

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**Elemento: 199 - Palo singolo**

<b>Cmb. (Tipo)</b>	<b>Palo</b>	<b>coord.X</b>	<b>coord.Y</b>	<b>N</b>	<b>Ced.Vert</b>		
n.	n.	cm	cm	daN	cm		
069 (SLE rare)	1	0.000	0.000	-29660.0	0.050		
Sollecitazioni:							
<b>Cmb</b>	<b>Tipo</b>	<b>Sism.</b>	<b>N</b>	<b>Tx</b>	<b>Ty</b>	<b>Mx</b>	<b>My</b>
n.			daN	daN	daN	daN cm	daN cm
069	SLE rare	No	-29660.0	-322.8	11080.0	8435000.0	5591000.0

**Elemento: 211 - Palo singolo**

<b>Cmb. (Tipo)</b>	<b>Palo</b>	<b>coord.X</b>	<b>coord.Y</b>	<b>N</b>	<b>Ced.Vert</b>		
n.	n.	cm	cm	daN	cm		
069 (SLE rare)	1	0.000	0.000	-45410.0	0.077		
Sollecitazioni:							
<b>Cmb</b>	<b>Tipo</b>	<b>Sism.</b>	<b>N</b>	<b>Tx</b>	<b>Ty</b>	<b>Mx</b>	<b>My</b>
n.			daN	daN	daN	daN cm	daN cm
069	SLE rare	No	-45410.0	-3641.3	9583.5	8237000.0	6834000.0

**Elemento: 215 - Palo singolo**

<b>Cmb. (Tipo)</b>	<b>Palo</b>	<b>coord.X</b>	<b>coord.Y</b>	<b>N</b>	<b>Ced.Vert</b>		
n.	n.	cm	cm	daN	cm		
069 (SLE rare)	1	0.000	0.000	-35850.0	0.061		
Sollecitazioni:							
<b>Cmb</b>	<b>Tipo</b>	<b>Sism.</b>	<b>N</b>	<b>Tx</b>	<b>Ty</b>	<b>Mx</b>	<b>My</b>
n.			daN	daN	daN	daN cm	daN cm
069	SLE rare	No	-35850.0	-2973.9	11510.0	8558000.0	6446000.0

**Elemento: 231 - Palo singolo**

<b>Cmb. (Tipo)</b>	<b>Palo</b>	<b>coord.X</b>	<b>coord.Y</b>	<b>N</b>	<b>Ced.Vert</b>		
n.	n.	cm	cm	daN	cm		
069 (SLE rare)	1	0.000	0.000	-44860.0	0.076		
Sollecitazioni:							
<b>Cmb</b>	<b>Tipo</b>	<b>Sism.</b>	<b>N</b>	<b>Tx</b>	<b>Ty</b>	<b>Mx</b>	<b>My</b>
n.			daN	daN	daN	daN cm	daN cm
069	SLE rare	No	-44860.0	-5716.1	10740.0	8235000.0	7354000.0

**Elemento: 243 - Palo singolo**

<b>Cmb. (Tipo)</b>	<b>Palo</b>	<b>coord.X</b>	<b>coord.Y</b>	<b>N</b>	<b>Ced.Vert</b>		
n.	n.	cm	cm	daN	cm		
069 (SLE rare)	1	0.000	0.000	-56320.0	0.095		
Sollecitazioni:							
<b>Cmb</b>	<b>Tipo</b>	<b>Sism.</b>	<b>N</b>	<b>Tx</b>	<b>Ty</b>	<b>Mx</b>	<b>My</b>
n.			daN	daN	daN	daN cm	daN cm
069	SLE rare	No	-56320.0	-6946.4	7719.7	7317000.0	7964000.0

**Elemento: 247 - Palo singolo**

<b>Cmb. (Tipo)</b>	<b>Palo</b>	<b>coord.X</b>	<b>coord.Y</b>	<b>N</b>	<b>Ced.Vert</b>		
n.	n.	cm	cm	daN	cm		
069 (SLE rare)	1	0.000	0.000	-55420.0	0.094		
Sollecitazioni:							
<b>Cmb</b>	<b>Tipo</b>	<b>Sism.</b>	<b>N</b>	<b>Tx</b>	<b>Ty</b>	<b>Mx</b>	<b>My</b>
n.			daN	daN	daN	daN cm	daN cm
069	SLE rare	No	-55420.0	-7912.7	8869.4	7498000.0	8038000.0

**Elemento: 263 - Palo singolo**

<b>Cmb. (Tipo)</b>	<b>Palo</b>	<b>coord.X</b>	<b>coord.Y</b>	<b>N</b>	<b>Ced.Vert</b>		
n.	n.	cm	cm	daN	cm		
069 (SLE rare)	1	0.000	0.000	-66170.0	0.112		
Sollecitazioni:							
<b>Cmb</b>	<b>Tipo</b>	<b>Sism.</b>	<b>N</b>	<b>Tx</b>	<b>Ty</b>	<b>Mx</b>	<b>My</b>
n.			daN	daN	daN	daN cm	daN cm
069	SLE rare	No	-66170.0	-8917.5	6085.1	6472000.0	8270000.0

**Elemento: 275 - Palo singolo**

<b>Cmb. (Tipo)</b>	<b>Palo</b>	<b>coord.X</b>	<b>coord.Y</b>	<b>N</b>	<b>Ced.Vert</b>		
n.	n.	cm	cm	daN	cm		
069 (SLE rare)	1	0.000	0.000	-67860.0	0.115		
Sollecitazioni:							
<b>Cmb</b>	<b>Tipo</b>	<b>Sism.</b>	<b>N</b>	<b>Tx</b>	<b>Ty</b>	<b>Mx</b>	<b>My</b>

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n.			daN	daN	daN	daN cm	daN cm
069	SLE rare	No	-67860.0	-6605.1	3558.4	5689000.0	7604000.0

**Elemento: 279 - Palo singolo**

<b>Cmb. (Tipo)</b>	<b>Palo</b>	<b>coord.X</b>	<b>coord.Y</b>	<b>N</b>	<b>Ced.Vert</b>		
n.	n.	cm	cm	daN	cm		
069 (SLE rare)	1	0.000	0.000	-75480.0	0.128		
Sollecitazioni:							
<b>Cmb</b>	<b>Tipo</b>	<b>Sism.</b>	<b>N</b>	<b>Tx</b>	<b>Ty</b>	<b>Mx</b>	<b>My</b>
n.			daN	daN	daN	daN cm	daN cm
069	SLE rare	No	-75480.0	-8544.7	3121.4	5437000.0	7930000.0

**Elemento: 295 - Palo singolo**

<b>Cmb. (Tipo)</b>	<b>Palo</b>	<b>coord.X</b>	<b>coord.Y</b>	<b>N</b>	<b>Ced.Vert</b>		
n.	n.	cm	cm	daN	cm		
069 (SLE rare)	1	0.000	0.000	-81990.0	0.139		
Sollecitazioni:							
<b>Cmb</b>	<b>Tipo</b>	<b>Sism.</b>	<b>N</b>	<b>Tx</b>	<b>Ty</b>	<b>Mx</b>	<b>My</b>
n.			daN	daN	daN	daN cm	daN cm
069	SLE rare	No	-81990.0	-6982.6	689.0	4711000.0	7147000.0

**Elemento: 307 - Palo singolo**

<b>Cmb. (Tipo)</b>	<b>Palo</b>	<b>coord.X</b>	<b>coord.Y</b>	<b>N</b>	<b>Ced.Vert</b>		
n.	n.	cm	cm	daN	cm		
069 (SLE rare)	1	0.000	0.000	-75080.0	0.127		
Sollecitazioni:							
<b>Cmb</b>	<b>Tipo</b>	<b>Sism.</b>	<b>N</b>	<b>Tx</b>	<b>Ty</b>	<b>Mx</b>	<b>My</b>
n.			daN	daN	daN	daN cm	daN cm
069	SLE rare	No	-75080.0	-3395.5	1055.7	5026000.0	5904000.0

**Elemento: 311 - Palo singolo**

<b>Cmb. (Tipo)</b>	<b>Palo</b>	<b>coord.X</b>	<b>coord.Y</b>	<b>N</b>	<b>Ced.Vert</b>		
n.	n.	cm	cm	daN	cm		
069 (SLE rare)	1	0.000	0.000	-84840.0	0.143		
Sollecitazioni:							
<b>Cmb</b>	<b>Tipo</b>	<b>Sism.</b>	<b>N</b>	<b>Tx</b>	<b>Ty</b>	<b>Mx</b>	<b>My</b>
n.			daN	daN	daN	daN cm	daN cm
069	SLE rare	No	-84840.0	-4834.6	-811.8	4432000.0	6251000.0

**Elemento: 327 - Palo singolo**

<b>Cmb. (Tipo)</b>	<b>Palo</b>	<b>coord.X</b>	<b>coord.Y</b>	<b>N</b>	<b>Ced.Vert</b>		
n.	n.	cm	cm	daN	cm		
069 (SLE rare)	1	0.000	0.000	-82410.0	0.139		
Sollecitazioni:							
<b>Cmb</b>	<b>Tipo</b>	<b>Sism.</b>	<b>N</b>	<b>Tx</b>	<b>Ty</b>	<b>Mx</b>	<b>My</b>
n.			daN	daN	daN	daN cm	daN cm
069	SLE rare	No	-82410.0	-2347.3	-1031.3	4654000.0	5399000.0



## **RELAZIONE GEOTECNICA E DELLE FONDAZIONI SUPERFICIALI**

### **NORMATIVE DI RIFERIMENTO**

In quanto di seguito riportato viene fatto esplicito riferimento alle seguenti Normative:

- **LEGGE n° 64 del 02/02/1974.** "Provvedimenti per le costruzioni, con particolari prescrizioni per le zone sismiche.";
- **D.M. LL.PP. del 11/03/1988.** "Norme tecniche riguardanti le indagini sui terreni e sulle rocce, la stabilità dei pendii naturali e delle scarpate, i criteri generali e le prescrizioni per la progettazione, l'esecuzione e il collaudo delle opere di sostegno delle terre e delle opere di fondazione.";
- **D.M. LL.PP. del 16/01/1996.** "Norme tecniche per le costruzioni in zone sismiche.";
- **Circolare Ministeriale LL.PP. n° 65/AA.GG. del 10/04/1997.** "Istruzioni per l'applicazione delle "Norme Tecniche per le costruzioni in zone sismiche" di cui al D.M. 16/01/1996.";
- **Eurocodice 1 - Parte 1** - "Basi di calcolo ed azioni sulle strutture - Basi di calcolo -.";
- **Eurocodice 7 - Parte 1** - "Progettazione geotecnica - Regole generali -.";
- **Eurocodice 8 - Parte 5** - "Indicazioni progettuali per la resistenza sismica delle strutture - Fondazioni, strutture di contenimento ed aspetti geotecnici -.";
- **D.M. 17/01/2018 - NUOVE NORME TECNICHE PER LE COSTRUZIONI**
- **Circolare n. 7 del 21/01/2019**

### **INDAGINI IN SITO E CARATTERIZZAZIONE GEOTECNICA DEI TERRENI DI FONDAZIONE**

La finalità della presente relazione è quella di definire il comportamento meccanico del volume di terreno (volume significativo) influenzato direttamente o indirettamente dalla costruzione di un manufatto e che a sua volta influenza il comportamento strutturale del manufatto stesso. Di seguito si illustrano i risultati delle indagini geologiche eseguite, nonché l'interpretazione dei risultati ottenuti. Dal quadro generale in tal modo scaturito si definiscono le caratteristiche della fondazione da adottare ed il modello da utilizzare per le elaborazioni relative alla interazione sovrastruttura-fondazione e fondazione-terreno.

Il sondaggio profondo effettuato il giorno 11.06.2011 nell'area interessata dalla CPR S.DONACI, ha permesso di individuare la seguente stratigrafia fino a 45 m di profondità:

0,00 – 0,50 m	terreno vegetale con sabbie giallastre e presenza di ciottolate.
0,50 – 3,00m	sabbie argillose alternate a strati più consolidati di sabbie giallastre, con falda idrica superficiale.
3,00 - 33,5 m	argille sabbiose di colore giallastro, passante ad argilla grigio azzurra (man mano che si procede verso il basso, aumenta la percentuale di argilla).
33,5 – 39,0 m	Calcarenite giallastra a grana fine, non uniformemente distribuita e poco cementata.
39,0 – 45,0 m	Calcere grigio giallastro.

Di seguito si riportano alcuni cenni teorici relativi alle modalità di calcolo implementate e la descrizione della simbologia adottata nei tabulati.

### **CARICO LIMITE DI FONDAZIONI SUPERFICIALI SU TERRENI**

Per la determinazione del carico limite del complesso terreno-fondazione (inteso come valore asintotico del diagramma carico-cedimento) si fa riferimento a due principali meccanismi di rottura: il "meccanismo generale" e quello di "punzonamento". Il primo è caratterizzato dalla formazione di una superficie di scorrimento: il terreno sottostante la fondazione rifluisce lateralmente e verso l'alto, conseguentemente il terreno circostante la fondazione è interessato da un meccanismo di sollevamento ed emersione della superficie di scorrimento. Il secondo meccanismo è caratterizzato dall'assenza di una superficie di scorrimento ben definita: il terreno sotto la fondazione si comprime ed in corrispondenza della superficie del terreno circostante la fondazione si osserva un abbassamento generalizzato. Quest'ultimo meccanismo non consente una precisa individuazione del carico

limite in quanto la curva cedimenti-carico applicato non raggiunge mai un valore asintotico ma cresce indefinitamente. Vesic ha studiato il fenomeno della rottura per punzonamento assimilando il terreno ad un mezzo elasto-plastico e la rottura per carico limite all'espansione di una cavità cilindrica. In questo caso il fenomeno risulta retto da un indice di rigidezza "I<sub>r</sub>" così definito:

$$I_r = \frac{G}{c' + \sigma' \cdot \operatorname{tg}(\varphi)}$$

Per la determinazione del modulo di rigidezza a taglio si utilizzeranno le seguenti relazioni:

$$G = \frac{E}{2 \cdot (1 + \nu)}; \quad E = E_{ed} \frac{1 - \nu - 2 \cdot \nu^2}{1 - \nu}; \quad \nu = \frac{k_0}{1 + k_0}; \quad k_0 = 1 - \operatorname{sen}(\varphi)$$

L'indice di rigidezza viene confrontato con l'indice di rigidezza critico "I<sub>r,crit</sub>":

$$I_{r,crit} = \frac{e^{\left[ \left( 3.3 - 0.45 \frac{B}{L} \right) \operatorname{ctg} \left( 45^\circ - \frac{\varphi}{2} \right) \right]}}{2}$$

La rottura per punzonamento del terreno di fondazione avviene quando l'indice di rigidezza è minore di quello critico. Tale teoria comporta l'introduzione di coefficienti correttivi all'interno della formula trinomia del carico limite detti "coefficienti di punzonamento" i quali sono funzione dell'indice di rigidezza, dell'angolo d'attrito e della geometria dell'elemento di fondazione. La loro espressione è la seguente:

- se  $I_r < I_{r,crit}$  si ha :

$$\Psi_\gamma = \Psi_q = e^{\left[ \left( 0.6 \frac{B}{L} - 4.4 \right) \operatorname{tg}(\varphi) + \frac{3.07 \cdot \operatorname{sen}(\varphi) \log_{10}(2I_r)}{1 + \operatorname{sen}(\varphi)} \right]} \quad \text{se } \varphi = 0 \Rightarrow \Psi_\gamma = \Psi_q = 1$$

$$\Psi_c = \Psi_q - \frac{1 - \Psi_q}{N_c \cdot \operatorname{tg}(\varphi)} \quad \text{se } \varphi = 0 \Rightarrow \Psi_c = 0.32 + 0.12 \cdot \frac{B}{L} + 0.6 \cdot \log_{10}(I_r)$$

- se  $I_r > I_{r,crit}$  si ha che  $\Psi_\gamma = \Psi_q = \Psi_c = 1$ .

Il significato dei simboli adottati nelle equazioni sopra riportate è il seguente:

- E<sub>ed</sub> modulo edometrico del terreno sottostante la fondazione
- ν coefficiente di Poisson del terreno sottostante la fondazione
- k<sub>0</sub> coefficiente di spinta a riposo del terreno sottostante la fondazione
- φ angolo d'attrito efficace del terreno sottostante il piano di posa
- c' coesione (espressa in termini di tensioni efficaci)
- σ' tensione litostatica effettiva a profondità D+B/2
- L luce delle singole travi di fondazione
- D profondità del piano di posa della fondazione a partire dal piano campagna
- B larghezza della trave di fondazione

Definito il meccanismo di rottura, il calcolo del carico limite viene eseguito modellando il terreno come un mezzo rigido perfettamente plastico con la seguente espressione:

$$q_{ult} = \gamma_1 \cdot D \cdot N_q \cdot s_q \cdot d_q \cdot i_q \cdot \Psi_q + c \cdot N_c \cdot s_c \cdot d_c \cdot i_c \cdot \Psi_c + \gamma_2 \cdot \frac{B}{2} \cdot N_\gamma \cdot s_\gamma \cdot d_\gamma \cdot i_\gamma \cdot \Psi_\gamma \cdot r_\gamma$$

Il significato dei termini presenti nella relazione trinomia sopra riportata è il seguente:

- N<sub>q</sub>, N<sub>c</sub>, N<sub>γ</sub>, fattori adimensionali di portanza funzione dell'angolo d'attrito interno φ del terreno
- s<sub>q</sub>, s<sub>c</sub>, s<sub>γ</sub>, coefficienti che rappresentano il fattore di forma
- d<sub>q</sub>, d<sub>c</sub>, d<sub>γ</sub>, coefficienti che rappresentano il fattore dell'approfondimento
- i<sub>q</sub>, i<sub>c</sub>, i<sub>γ</sub>, coefficienti che rappresentano il fattore di inclinazione del carico
- γ<sub>1</sub> peso per unità di volume del terreno sovrastante il piano di posa
- γ<sub>2</sub> peso per unità di volume del terreno sottostante il piano di posa

Per fondazioni aventi larghezza modesta si dimostra che il terzo termine non aumenta indefinitamente e per valori elevati di "B", sia secondo Vesic che secondo de Beer, il valore limite è prossimo a quello di una fondazione profonda. Bowles per fondazioni di larghezza maggiore di 2.00 metri propone il seguente fattore riduttivo:

$$r_\gamma = 1 - 0.25 \cdot \log_{10} \left( \frac{B}{2} \right) \quad \text{dove "B" va espresso in metri.}$$

Questa relazione risulta particolarmente utile per fondazioni larghe con rapporto D/B basso (platee e simili), caso nel quale il terzo termine dell'equazione trinomia è predominante.

Nel caso di carico eccentrico Meyerhof consiglia di ridurre le dimensioni della superficie di contatto ( $A_f$ ) tra fondazione e terreno (B, L) in tutte le formule del calcolo del carico limite. Tale riduzione è espressa dalle seguenti relazioni:

$$B_{rid} = B - 2 \cdot e_B \quad L_{rid} = L - 2 \cdot e_L \quad \text{dove } e_B, e_L \text{ sono le eccentricità relative alle dimensioni in esame.}$$

L'equazione trinomia del carico limite può essere risolta secondo varie formulazioni, di seguito si riportano quelle che sono state implementate:

**Formulazione di Hansen (1970)**

$$N_q = tg^2 \left( \frac{90^\circ + \varphi}{2} \right) \cdot e^{\pi \cdot tg(\varphi)} \quad N_\gamma = 1.5 \cdot (N_q - 1) \cdot tg(\varphi) \quad N_c = (N_q - 1) \cdot ctg(\varphi)$$

- se  $\varphi \neq 0$  si ha:

$$s_q = 1 + \frac{B}{L} \cdot tg(\varphi) \quad s_\gamma = 1 - 0.4 \cdot \frac{B}{L} \quad s_c = 1 + \frac{N_q \cdot B}{N_c \cdot L}$$

$$d_q = 1 + 2 \cdot tg(\varphi) \cdot (1 - \sin(\varphi))^2 \cdot \Theta \quad d_\gamma = 1.0 \quad d_c = 1 + 0.4 \cdot \Theta$$

$$\text{dove: se } \frac{D}{B} \leq 1 \Rightarrow \Theta = \frac{D}{B}, \text{ se } \frac{D}{B} > 1 \Rightarrow \Theta = \arctg \left( \frac{D}{B} \right)$$

$$i_q = \left[ 1 - \frac{0.5 \cdot H}{V + A_f \cdot c_a \cdot ctg(\varphi)} \right]^{\alpha_1} \quad i_\gamma = \left[ 1 - \frac{0.7 \cdot H}{V + A_f \cdot c_a \cdot ctg(\varphi)} \right]^{\alpha_2} \quad i_c = i_q - \frac{1 - i_q}{N_q - 1}$$

- se  $\varphi = 0$  si ha:

$$s_q = 1.0 \quad s_\gamma = 1.0 \quad s_c = 1 + 0.2 \cdot \frac{B}{L}$$

$$d_q = 1.0 \quad d_\gamma = 1.0 \quad d_c = 1 + 0.4 \cdot \Theta$$

$$i_q = 1.0 \quad i_\gamma = 1.0 \quad i_c = 0.5 \cdot \left( 1 + \sqrt{1 - \frac{H}{A_f \cdot c_a}} \right)$$

**Formulazione di Vesic (1975)**

$$N_q = tg^2 \left( \frac{90^\circ + \varphi}{2} \right) \cdot e^{\pi \cdot tg(\varphi)} \quad N_\gamma = 2 \cdot (N_q + 1) \cdot tg(\varphi) \quad N_c = (N_q - 1) \cdot ctg(\varphi)$$

- se  $\varphi \neq 0$  si ha:

$$s_q = 1 + \frac{B}{L} \cdot tg(\varphi) \quad s_\gamma = 1 - 0.4 \cdot \frac{B}{L} \quad s_c = 1 + \frac{N_q \cdot B}{N_c \cdot L}$$

$$d_q = 1 + 2 \cdot tg(\varphi) \cdot (1 - \sin(\varphi))^2 \cdot \Theta \quad d_\gamma = 1.0 \quad d_c = 1 + 0.4 \cdot \Theta$$

$$\text{dove: se } \frac{D}{B} \leq 1 \Rightarrow \Theta = \frac{D}{B}, \text{ se } \frac{D}{B} > 1 \Rightarrow \Theta = \arctg \left( \frac{D}{B} \right)$$

$$i_q = \left[ 1 - \frac{H}{V + A_f \cdot c_a \cdot ctg(\varphi)} \right]^m \quad i_\gamma = \left[ 1 - \frac{H}{V + A_f \cdot c_a \cdot ctg(\varphi)} \right]^{m+1} \quad i_c = i_q - \frac{1 - i_q}{N_q - 1}$$

$$\text{dove: } m = m_B = \frac{2 + \frac{B}{L}}{1 + \frac{B}{L}} \quad m = m_L = \frac{2 + \frac{L}{B}}{1 + \frac{L}{B}}$$

- se  $\varphi = 0$  si ha:

$$s_q = 1.0 \quad s_\gamma = 1.0 \quad s_c = 1 + 0.2 \cdot \frac{B}{L}$$

$$d_q = 1.0 \quad d_\gamma = 1.0 \quad d_c = 1 + 0.4 \cdot \Theta$$

$$i_q = 1.0 \quad i_\gamma = 1.0 \quad i_c = 1 - \frac{m \cdot H}{A_f \cdot c_a \cdot N_c}$$

**Formulazione di Brinch-Hansen**

$$N_q = tg^2 \left( \frac{90^\circ + \varphi}{2} \right) \cdot e^{\pi \cdot tg(\varphi)} \quad N_\gamma = 2 \cdot (N_q + 1) \cdot tg(\varphi) \quad N_c = (N_q - 1) \cdot ctg(\varphi)$$

- se  $\varphi \neq 0$  si ha:

$$s_q = 1 + 0.1 \cdot \frac{B \cdot (1 + \sin(\varphi))}{L \cdot (1 - \sin(\varphi))} \quad s_\gamma = 1 + 0.1 \cdot \frac{B \cdot (1 + \sin(\varphi))}{L \cdot (1 - \sin(\varphi))} \quad s_c = 1 + 0.2 \cdot \frac{B \cdot (1 + \sin(\varphi))}{L \cdot (1 - \sin(\varphi))}$$

$$d_q = 1 + 2 \cdot tg(\varphi) \cdot (1 - \sin(\varphi))^2 \cdot \Theta \quad d_\gamma = 1.0 \quad d_c = d_q - \frac{1 - d_q}{N_c \cdot tg(\varphi)}$$

dove: se  $\frac{D}{B} \leq 1 \Rightarrow \Theta = \frac{D}{B}$ , se  $\frac{D}{B} > 1 \Rightarrow \Theta = \arctg\left(\frac{D}{B}\right)$

$$i_q = \left[ 1 - \frac{H}{V + A_f \cdot c_a \cdot ctg(\varphi)} \right]^m \quad i_\gamma = \left[ 1 - \frac{H}{V + A_f \cdot c_a \cdot ctg(\varphi)} \right]^{m+1} \quad i_c = i_q - \frac{1 - i_q}{N_q - 1}$$

dove:  $m = m_B = \frac{2 + \frac{B}{L}}{1 + \frac{B}{L}} \quad m = m_L = \frac{2 + \frac{L}{B}}{1 + \frac{L}{B}}$

- se  $\varphi = 0$  si ha:

$$s_q = 1.0 \quad s_\gamma = 1.0 \quad s_c = 1 + 0.2 \cdot \frac{B}{L}$$

$$d_q = 1.0 \quad d_\gamma = 1.0 \quad d_c = 1 + 0.4 \cdot \Theta$$

$$i_q = 1.0 \quad i_\gamma = 1.0 \quad i_c = 1 - \frac{m \cdot H}{A_f \cdot c_a \cdot N_c}$$

**Formulazione Eurocodice 7**

$$N_q = tg^2 \left( \frac{90^\circ + \varphi}{2} \right) \cdot e^{\pi \cdot tg(\varphi)} \quad N_\gamma = 2 \cdot (N_q - 1) \cdot tg(\varphi) \quad N_c = (N_q - 1) \cdot ctg(\varphi)$$

- se  $\varphi \neq 0$  si ha:

$$s_q = 1 + \frac{B}{L} \cdot \sin(\varphi) \quad s_\gamma = 1 - 0.3 \cdot \frac{B}{L} \quad s_c = \frac{s_q \cdot (N_q - 1)}{N_q - 1}$$

$$d_q = 1 + 2 \cdot tg(\varphi) \cdot (1 - \sin(\varphi))^2 \cdot \Theta \quad d_\gamma = 1.0 \quad d_c = 1 + 0.4 \cdot \Theta$$

dove: se  $\frac{D}{B} \leq 1 \Rightarrow \Theta = \frac{D}{B}$ , se  $\frac{D}{B} > 1 \Rightarrow \Theta = \arctg\left(\frac{D}{B}\right)$

- se H è parallela al lato B si ha:

$$i_q = \left[ 1 - \frac{0.7 \cdot H}{V + A_f \cdot c_a \cdot ctg(\varphi)} \right]^3 \quad i_\gamma = \left[ 1 - \frac{H}{V + A_f \cdot c_a \cdot ctg(\varphi)} \right]^3 \quad i_c = \frac{i_q \cdot N_q - 1}{N_q - 1}$$

- se H è parallela al lato L si ha:

$$i_q = 1 - \frac{H}{V + A_f \cdot c_a \cdot ctg(\varphi)} \quad i_\gamma = 1 - \frac{H}{V + A_f \cdot c_a \cdot ctg(\varphi)} \quad i_c = \frac{i_q \cdot N_q - 1}{N_q - 1}$$

- se  $\varphi = 0$  si ha:

$$s_q = 1.0 \quad s_\gamma = 1.0 \quad s_c = 1 + 0.2 \cdot \frac{B}{L}$$

$$d_q = 1.0 \quad d_\gamma = 1.0 \quad d_c = 1 + 0.4 \cdot \Theta$$

$$i_q = 1.0 \quad i_\gamma = 1.0 \quad i_c = 0.5 \cdot \left( 1 + \sqrt{1 - \frac{H}{A_f \cdot c_a}} \right)$$

Si ricorda che per le relazioni sopra riportate nel caso in cui  $\varphi = 0 \Rightarrow N_q = 1.0, N_\gamma = 1.0$  e  $N_c = 2 + \pi$ .

Il significato dei termini presenti nelle relazioni su descritte è il seguente:

- $V$  componente verticale del carico agente sulla fondazione
- $H$  componente orizzontale del carico agente sulla fondazione (sia lungo B che lungo L)
- $c_a$  adesione fondazione-terreno (valore variabile tra il 60% e 100% della coesione)
- $\alpha_1, \alpha_2$  esponenti di potenza che variano tra 2 e 5

Nel caso in cui il cuneo di fondazione sia interessato da falda idrica il valore di  $\gamma_2$  nella formula trinomia assume la seguente espressione:

$$\gamma_2 = \frac{\gamma \cdot z + \gamma_{sat} \cdot (h_c - z)}{h_c} \quad h_c = \frac{B}{2} \cdot \operatorname{tg} \left( \frac{90 + \varphi}{2} \right)$$

dove i termini dell'espressione hanno il seguente significato:

- $\gamma$  peso per unità di volume del terreno sottostante il piano di posa
- $\gamma_{sat}$  peso per unità di volume saturo del terreno sottostante il piano di posa
- $z$  profondità della falda dal piano di posa
- $h_c$  altezza del cuneo di rottura della fondazione

Tutto ciò che è stato detto sopra è valido nell'ipotesi di terreno con caratteristiche geotecniche omogenee. Nella realtà i terreni costituenti il piano di posa delle fondazioni sono quasi sempre composti, o comunque riconducibili, a formazioni di terreno omogenee di spessore variabile che si sovrappongono (caso di terreni stratificati). In queste condizioni i parametri vengono determinati con la seguente procedura:

- viene determinata l'altezza del cuneo di rottura in funzione delle caratteristiche geotecniche degli strati attraversati; quindi si determinano il numero degli strati interessati da esso
- in corrispondenza di ogni superficie di separazione, partendo da quella immediatamente sottostante il piano di posa della fondazione, fino a raggiungere l'altezza del cuneo di rottura, viene determinata la capacità portante di ogni singolo strato come somma di due valori: il primo dato dall'applicazione della formula trinomia alla quota  $i$ -esima dello strato; il secondo dato dalla resistenza al punzonamento del terreno sovrastante lo strato in esame
- il minimo di questi due valori sarà assunto come valore massimo della capacità portante della fondazione stratificata

Si può formulare il procedimento anche in forma analitica:

$$q'_{ult} = \left[ q''_{ult} + q_{resT} \right]_{\min} = \left[ q''_{ult} + \frac{p}{A_f} (P_V \cdot K_S \cdot \operatorname{tg}(\varphi) + d \cdot c) \right]_{\min}$$

dove i termini dell'espressione hanno il seguente significato:

- $q''_{ult}$  carico limite per un'ipotetica fondazione posta alla quota dello strato interessato
- $p$  perimetro della fondazione
- $P_V$  spinta verticale del terreno dal piano di posa allo strato interessato
- $K_S$  coefficiente di spinta laterale del terreno
- $d$  distanza dal piano di posa allo strato interessato

## CARICO LIMITE DI FONDAZIONI SUPERFICIALI SU ROCCIA

Per la determinazione del carico limite nel caso di presenza di ammasso roccioso bisogna valutare molto attentamente il grado di solidità della roccia stessa. Tale valutazione viene in genere eseguita stimando l'indice *RQD* (Rock Quality Designation) che rappresenta una misura della qualità di un ammasso roccioso. Tale indice può variare da un minimo di 0 (caso in cui la lunghezza dei pezzi di roccia estratti dal carotiere è inferiore a 100 mm) ad un massimo di 1 (caso in cui la carota risulta integra) ed è calcolato nel seguente modo:

$$RQD = \frac{\sum \text{lunghezze dei pezzi di roccia intatta} > 100\text{mm}}{\text{lunghezza del carotiere}}$$

Se il valore di *RQD* è molto basso la roccia è molto fratturata ed il calcolo della capacità portante dell'ammasso

roccioso va condotto alla stregua di un terreno sciolto utilizzando tutte le formulazioni sopra descritte. Per ricavare la capacità portante di rocce non assimilabili ad ammassi di terreno sciolto sono state implementate due formulazioni: quella di Terzaghi (1943) e quella di Stagg-Zienkiewicz (1968), entrambe correlate all'indice RQD. In definitiva il valore della capacità portante sarà espresso dalla seguente relazione:

$$q'_{ult} = q''_{ult} \cdot RQD^2$$

dove i termini dell'espressione hanno il seguente significato:

- $q'_{ult}$  carico limite dell'ammasso roccioso
- $q''_{ult}$  carico limite calcolato alla Terzaghi o alla Stagg-Zienkiewicz

In questo caso l'equazione trinomia del carico limite assume la seguente forma:

$$q''_{ult} = \gamma_1 \cdot D \cdot N_q + c \cdot N_c \cdot s_c + \gamma_2 \cdot \frac{B}{2} \cdot N_\gamma \cdot s_\gamma$$

I termini presenti nell'equazione hanno lo stesso significato già visto in precedenza; i coefficienti di forma assumeranno i seguenti valori:

- $s_c = 1.0$  per fondazioni di tiponastriforme                       $s_c = 1.3$  per fondazioni di tipoquadrato;
- $s_\gamma = 1.0$  per fondazioni di tiponastriforme                       $s_\gamma = 0.8$  per fondazioni di tipoquadrato.

I fattori adimensionali di portanza a seconda della formulazione adottata saranno:

**Formulazione di Terzaghi (1943)**

$$N_q = \frac{e^{2 \left( 0.75 \cdot \pi - \frac{\varphi}{2} \right) \cdot \text{tg}(\varphi)}}{2 \cdot \cos^2 \left( \frac{90^\circ + \varphi}{2} \right)} \quad N_\gamma = \frac{\text{tg}(\varphi)}{2} \left( \frac{K_{p\gamma}}{\cos^2(\varphi)} - 1 \right) \quad N_c = (N_q - 1) \cdot \text{ctg}(\varphi)$$

se  $\varphi = 0 \Rightarrow N_c = 1.5 \cdot \pi + 1$

$\varphi$	0	5	10	15	20	25	30	35	40	45	50
$K_{p\gamma}$	10.8	12.2	14.7	18.6	25.0	35.0	52.0	82.0	141.0	298.0	800.0

**Formulazione di Stagg-Zienkiewicz (1968)**

$$N_q = \text{tg}^6 \left( \frac{90^\circ + \varphi}{2} \right) \quad N_\gamma = N_q + 1 \quad N_c = 5 \cdot \text{tg}^4 \left( \frac{90^\circ + \varphi}{2} \right)$$

**VERIFICA A ROTTURA PER SCORRIMENTO DI FONDAZIONI SUPERFICIALI**

Se il carico applicato alla base della fondazione non è normale alla stessa bisogna effettuare anche una verifica per rottura a scorrimento. Rispetto al collasso per scorrimento la resistenza offerta dal sistema fondale viene valutata come somma di due componenti: la prima derivante dall'attrito fondazione-terreno, la seconda derivante dall'adesione. In generale, oltre a queste due componenti, può essere tenuto in conto anche l'effetto della spinta passiva del terreno di ricoprimento esercita sulla fondazione fino ad un massimo del 30%. La formulazione analitica della verifica può essere esposta nel seguente modo:

$$T_{Sd} \leq T_{Rd} = N_{Sd} \cdot \text{tg}(\delta) + A_f \cdot c_a + S_p \cdot f_{Sp}$$

dove i termini dell'espressione hanno il seguente significato:

- $T_{Sd}$  componente orizzontale del carico agente sulla fondazione (sia lungo B che lungo L)
- $N_{Sd}$  componente verticale del carico agente sulla fondazione
- $c_a$  adesione fondazione-terreno (valore variabile tra il 60% e 100% della coesione)
- $\delta$  angolo d'attrito fondazione-terreno (valore variabile tra il 60% e 100% della coesione)
- $S_p$  spinta passiva del terreno di ricoprimento della fondazione
- $f_{Sp}$  percentuale di partecipazione della spinta passiva
- $A_f$  superficie di contatto del piano di posa della fondazione

La verifica deve essere effettuata sia per componenti taglianti parallele alla base della fondazione che per quelle ortogonali.

## DETERMINAZIONE DELLE TENSIONI INDOTTE NEL TERRENO

Ai fini del calcolo dei cedimenti è essenziale conoscere lo stato tensionale indotto nel terreno a varie profondità da un carico applicato in superficie. Tale determinazione viene eseguita ipotizzando che il terreno si comporti come un mezzo continuo, elastico-lineare, omogeneo e isotopo. Tale assunzione, utilizzata per la determinazione della variazione delle tensioni verticali dovuta all'applicazione di un carico in superficie, è confortata dalla letteratura (Morgenstern e Phukan) perché la non linearità del materiale poco influenza la distribuzione delle tensioni verticali. Per ottenere un profilo verticale di pressioni si possono utilizzare tre metodi di calcolo: quello di Boussinesq, quello di Westergaard oppure quello di Mindlin; tutti basati sulla teoria del continuo elastico. Il metodo di Westergaard differisce da quello di Boussinesq per la presenza del coefficiente di Poisson "ν", quindi si adatta meglio ai terreni stratificati. Il metodo di Mindlin differisce dai primi due per la possibilità di posizionare il carico all'interno del continuo elastico mentre i primi due lo pongono esclusivamente sulla frontiera quindi si presta meglio al caso di fondazioni molto profonde. Nel caso di fondazioni poste sulla frontiera del continuo elastico il metodo di Mindlin risulta equivalente a quello di Boussinesq. Le espressioni analitiche dei tre metodi di calcolo sono:

$$\text{Boussinesq} \Rightarrow \Delta\sigma_v = \frac{3 \cdot Q \cdot z^3}{2 \cdot \pi \cdot (r^2 + z^2)^{\frac{5}{2}}} \quad \text{Westergaard} \Rightarrow \Delta\sigma_v = \frac{Q}{2 \cdot \pi \cdot z^2} \cdot \frac{\sqrt{\frac{1-2 \cdot \nu}{2-2 \cdot \nu}}}{\left(\frac{1-2 \cdot \nu}{2-2 \cdot \nu} + \frac{r^2}{z^2}\right)^{\frac{3}{2}}}$$

dove i termini dell'espressioni hanno il seguente significato:

- $Q$  carico puntiforme applicato sulla frontiera del mezzo
- $r$  proiezione orizzontale della distanza del punto di applicazione del carico dal punto in esame
- $z$  proiezione verticale della distanza del punto di applicazione del carico dal punto in esame

$$\text{Mindlin} \Rightarrow \Delta\sigma_v = \frac{Q}{8 \cdot \pi \cdot (1-\nu) \cdot D^2} \left( \frac{-\frac{(1-2 \cdot \nu) \cdot (m-1)}{A^3} + \frac{(1-2 \cdot \nu) \cdot (m-1)}{B^3} - \frac{3 \cdot (m-1)^3}{A^5} - \frac{30 \cdot m \cdot (m+1)^3}{B^7}}{-\frac{3 \cdot (3-4 \cdot \nu) \cdot m \cdot (m+1)^2 - 3 \cdot (m+1) \cdot (5 \cdot m-1)}{B^5}} \right)$$

$$n = \frac{r}{D}; \quad m = \frac{z}{D}; \quad A^2 = n^2 + (m-1)^2; \quad B^2 = n^2 + (m+1)^2$$

dove i termini dell'espressioni hanno il seguente significato:

- $Q$  carico puntiforme applicato sulla frontiera o all'interno del mezzo
- $D$  proiezione verticale della distanza del punto di applicazione del carico dalla frontiera del mezzo
- $r$  proiezione orizzontale della distanza del punto di applicazione del carico dal punto in esame
- $z$  proiezione verticale della distanza del punto di applicazione del carico dal punto in esame

Basandosi sulle ben note equazioni ricavate per un carico puntiforme, l'algoritmo implementato esegue un'integrazione delle equazioni di cui sopra lungo la verticale di ogni punto notevole degli elementi fondali estesa a tutte le aree di carico presenti sulla superficie del terreno; questo consente di determinare la variazione dello stato tensionale verticale " $\Delta\sigma_v$ ". Bisogna sottolineare che, nel caso di pressione, " $Q$ " va definito come "pressione netta", ossia la pressione in eccesso rispetto a quella geostatica esistente che può essere sopportata con sicurezza alla profondità " $D$ " del piano di posa delle fondazioni. Questo perché i cedimenti sono causati solo da incrementi netti di pressione che si aggiungono all'esistente pressione geostatica.

## CALCOLO DEI CEDIMENTI DELLA FONDAZIONE

La determinazione dei cedimenti delle fondazioni assume una rilevanza notevole per il manufatto da realizzarsi, in special modo nella fase di esercizio. Nell'evolversi della fase di cedimento il terreno passa da uno stato di sforzo corrente dovuto al peso proprio ad uno nuovo dovuto all'effetto del carico addizionale applicato. Questa variazione dello stato tensionale produce una serie di movimenti di rotolamento e scorrimento relativo tra i granuli del terreno, nonché deformazioni elastiche e rotture delle particelle costituenti il mezzo localizzate in una limitata zona d'influenza a ridosso dell'area di carico. L'insieme di questi fenomeni costituisce il cedimento che



nel caso in esame è verticale. Nonostante la frazione elastica sia modesta, l'esperienza ha dimostrato che ai fini del calcolo dei cedimenti modellare il terreno come materiale pseudoelastico permette di ottenere risultati soddisfacenti. In letteratura sono descritti diversi metodi per il calcolo dei cedimenti ma si ricorda che, qualunque sia il metodo di calcolo, la determinazione del valore del cedimento deve intendersi come la miglior stima delle deformazioni subite dal terreno da attendersi all'applicazione dei carichi. Nel seguito vengono descritte le teorie implementate:

**Metodo edometrico**, che si basa sulla nota relazione:

$$w_{ed} = \sum_{i=1}^n \frac{\Delta\sigma_{v,i}}{E_{ed,i}} \cdot \Delta z_i$$

dove i termini dell'espressioni hanno il seguente significato:

- $\Delta\sigma_{v,i}$  variazione dello stato tensionale verticale alla profondità "z<sub>i</sub>" dello strato i-esimo per l'applicazione del carico
- $E_{ed,i}$  modulo edometrico del terreno relativo allo strato i-esimo
- $\Delta z_i$  spessore dello strato i-esimo

Si ricorda che questo metodo si basa sull'ipotesi edometrica quindi l'accuratezza del risultato è maggiore quando il rapporto tra lo spessore dello strato deformabile e la dimensione in pianta delle fondazioni è ridotto, tuttavia il metodo edometrico consente una buona approssimazione anche nel caso di strati deformabili di spessore notevole.

**Metodo dell'elasticità**, che si basa sulle note relazioni:

$$w_{imp.} = \sum_{i=1}^n \frac{\Delta\sigma_{v,i}}{E_i} \cdot \Delta z_i \quad w_{Lib.} = \sum_{i=1}^n \frac{\Delta\sigma_{v,i}}{E_i} \cdot \frac{1-2 \cdot \nu^2}{1-\nu} \cdot \Delta z_i$$

dove i termini dell'espressioni hanno il seguente significato:

- $w_{imp.}$  cedimento in condizioni di deformazione laterale impedita
- $w_{Lib.}$  cedimento in condizioni di deformazione laterale libera
- $\Delta\sigma_{v,i}$  variazione stato tensionale verticale alla profondità "z<sub>i</sub>" dello strato i-esimo per l'applicazione del carico
- $E_i$  modulo elastico del terreno relativo allo strato i-esimo
- $\Delta z_i$  spessore dello strato i-esimo

La doppia formulazione adottata consente di ottenere un intervallo di valori del cedimento elastico per la fondazione in esame (valore minimo per  $w_{imp.}$  e valore massimo per  $w_{Lib.}$ ).

## **SIMBOLOGIA ADOTTATA NEI TABULATI DI CALCOLO**

Per maggior chiarezza nella lettura dei tabulati di calcolo viene riportata la descrizione dei simboli principali utilizzati nella stesura degli stessi. Per comodità di lettura la legenda è suddivisa in paragrafi con la stessa modalità in cui sono stampati i tabulati di calcolo.

### ***Dati geometrici degli elementi costituenti le fondazioni superficiali***

*per tipologie travi e plinti superficiali:*

- Indice Strat. indice della stratigrafia associata all'elemento
- Prof. Fon. profondità del piano di posa dell'elemento a partire dal piano campagna
- Base larghezza della sezione trasversale dell'elemento
- Altezza altezza della sezione trasversale dell'elemento
- Lung. Elem. dimensione dello sviluppo longitudinale dell'elemento
- Lung. Travata nel caso l'elemento appartenga ad un macroelemento, rappresenta la dimensione dello sviluppo longitudinale del macroelemento

*per tipologia platea:*

- Indice Strat. indice della stratigrafia associata all'elemento
- Prof. Fon. profondità del piano di posa dell'elemento dal piano campagna
- Dia. Eq. diametro del cerchio equivalente alla superficie dell'elemento
- Spessore spessore dell'elemento

- Superficie superficie dell'elemento
- Vert. Elem. Numero dei vertici che costituiscono l'elemento
- Macro nel caso l'elemento appartenga ad un macroelemento, rappresenta il numero del macroelemento

Nel caso si avesse scelto di determinare la portanza anche per gli elementi platea è presente un'ulteriore riga nella quale sono riportate le caratteristiche geometriche del plinto equivalente alla macro/platea in esame.

#### ***Dati di carico degli elementi costituenti le fondazioni superficiali***

*per tipologie travi e plinti superficiali:*

- Cmb numero della combinazione di carico
- Tipologia tipologia della combinazione di carico
- Sismica flag per l'applicazione della riduzione sismica alle caratteristiche meccaniche del terreno di fondazione per la combinazione di carico in esame
- Ecc. B eccentricità del carico normale agente sul piano di fondazione in direzione parallela alla sezione trasversale dell'elemento
- Ecc. L eccentricità del carico normale agente sul piano di fondazione in direzione parallela allo sviluppo longitudinale dell'elemento
- S.Taglio B sforzo di taglio agente sul piano di fondazione in direzione parallela alla sezione trasversale dell'elemento
- S.Taglio L sforzo di taglio agente sul piano di fondazione in direzione parallela allo sviluppo longitudinale dell'elemento
- S.Normale carico normale agente sul piano di fondazione
- T.T.min minimo valore della distribuzione tensionale di contatto tra terreno ed elemento fondale
- T.T.max massimo valore della distribuzione tensionale di contatto tra terreno ed elemento fondale

*per tipologia platea:*

- Cmb numero della combinazione di carico
- Tipologia tipologia della combinazione di carico
- Sismica flag per l'applicazione della riduzione sismica alle caratteristiche meccaniche del terreno di fondazione per la combinazione di carico in esame
- Press. N1 tensione di contatto tra terreno e fondazione nel vertice n° 1 dell'elemento
- Press. N2 tensione di contatto tra terreno e fondazione nel vertice n° 2 dell'elemento
- Press. N3 tensione di contatto tra terreno e fondazione nel vertice n° 3 dell'elemento
- Press. N4 tensione di contatto tra terreno e fondazione nel vertice n° 4 dell'elemento
- S.Taglio X sforzo di taglio agente sul piano di fondazione in direzione parallela all'asse X del riferimento globale
- S.Taglio Y sforzo di taglio agente sul piano di fondazione in direzione parallela all'asse Y del riferimento globale

Nel caso si avesse scelto di determinare la portanza anche per gli elementi platea è presente un'ulteriore riga nella quale sono riportate le macroazioni (integrale delle azioni applicate sui singoli elementi che compongono la platea) agenti sul plinto equivalente alla macro/platea in esame.

#### ***Valori di calcolo della portanza per fondazioni superficiali***

- Cmb numero della combinazione di carico
- Qlim capacità portante totale data dalla somma di Qlim q, Qlim g, Qlim c e di Qres P (nel caso in cui si operi alle tensioni ammissibili corrisponde alla portanza ammissibile)
- Qlim q termine relativo al sovraccarico della formula trinomia per il calcolo della capacità portante (nel caso in cui si operi alle tensioni ammissibili corrisponde alla relativa parte della portanza ammissibile)
- Qlim g termine relativo alla larghezza della base di fondazione della formula trinomia per il calcolo della capacità portante (nel caso in cui si operi alle tensioni ammissibili corrisponde alla relativa parte della portanza ammissibile)
- Qlim c termine relativo alla coesione della formula trinomia per il calcolo della capacità portante (nel caso in cui si operi alle tensioni ammissibili corrisponde alla relativa parte della portanza ammissibile)

- Qres P termine relativo alla resistenza al punzonamento del terreno sovrastante lo strato di rottura. Diverso da zero solo nel caso di terreni stratificati dove lo strato di rottura è diverso dal primo (nel caso in cui si operi alle tensioni ammissibili corrisponde alla relativa parte della portanza ammissibile)
- Qmax / Qlim rapporto tra il massimo valore della distribuzione tensionale di contatto tra terreno ed elemento fondale ed il valore della capacità portante (verifica positiva se il rapporto è < 1.0).
- TBlim valore limite della resistenza a scorrimento in direzione parallela alla sezione trasversale dell'elemento
- TB / TBlim rapporto tra lo sforzo di taglio agente ed il valore limite della resistenza a scorrimento in direzione parallela alla sezione trasversale dell'elemento (verifica positiva se il rapporto è < 1.0)
- TLlim valore limite della resistenza a scorrimento in direzione parallela allo sviluppo longitudinale dell'elemento
- TL / TLlim rapporto tra lo sforzo di taglio agente ed il valore limite della resistenza a scorrimento in direzione parallela allo sviluppo longitudinale dell'elemento (verifica positiva se il rapporto è < 1.0)
- Sgm. Lt. tensione litostatica agente alla quota del piano di posa dell'elemento fondale

Nel caso si avesse scelto di determinare la portanza anche per gli elementi platea è presente un'ulteriore riga nella quale sono riportate le verifiche di portanza del plinto equivalente alla macro/platea in esame.

#### **Valori di calcolo dei cedimenti per fondazioni superficiali**

- Cmb numero della combinazione di carico e tipologia
- Nodo vertice dell'elemento in cui viene calcolato il cedimento
- Car. Netto valore del carico netto applicato sulla superficie del terreno
- Cedimento/i valore del cedimento (nel caso di calcolo di cedimenti elastici i valori riportati sono due, il primo corrisponde al cedimento  $w_{Imp.}$ , mentre il secondo al cedimento  $w_{Lib.}$ )

#### **PARAMETRI DI CALCOLO**

##### **Metodi di calcolo della portanza per fondazioni superficiali:**

- Per terreni sciolti: Vesic
- Per terreni lapidei: Terzaghi

##### **Fattori utilizzati per il calcolo della portanza per fondazioni superficiali :**

- Riduzione dimensioni per eccentricità: si
- Fattori di forma della fondazione: si
- Fattori di profondità del piano di posa: si
- Fattori di inclinazione del carico: si
- Fattori di punzonamento (Vesic): si
- Fattore riduzione effetto piastra (Bowles): si
- Fattore di riduzione dimensione Base equivalente platea: 20,0 %
- Fattore di riduzione dimensione Lunghezza equivalente platea: 20,0 %

##### **Coefficienti parziali di sicurezza per Tensioni Ammissibili, SLE nel calcolo della portanza per fondazioni superficiali:**

- Coeff. parziale di sicurezza Fc (statico): 2,50
- Coeff. parziale di sicurezza Fq (statico): 2,50
- Coeff. parziale di sicurezza Fg (statico): 2,50
- Coeff. parziale di sicurezza Fc (sismico): 3,00
- Coeff. parziale di sicurezza Fq (sismico): 3,00
- Coeff. parziale di sicurezza Fg (sismico): 3,00

##### **Combinazioni di carico:**

##### **APPROCCIO PROGETTUALE TIPO 2 - Comb. (A1+M1+R3)**

Coefficienti parziali di sicurezza per SLU nel calcolo della portanza per fondazioni superficiali :

I coeff. A1 risultano combinati secondo lo schema presente nella relazione di calcolo della struttura.

- Coeff. M1 per Tan  $\phi$  (statico): 1

- Coeff. M1 per c' (statico): 1
- Coeff. M1 per Cu (statico): 1
- Coeff. M1 per Tan  $\phi$  (sismico): 1
- Coeff. M1 per c' (sismico): 1
- Coeff. M1 per Cu sismico): 1
  
- Coeff. R3 capacità portante (statico e sismico): 2,30
- Coeff. R3 scorrimento (statico e sismico): 1,10

**Parametri per la verifica a scorrimento delle fondazioni superficiali:**

- Fattore per l'adesione ( $6 < Ca < 10$ ): 8
- Fattore per attrito terreno-fondazione ( $5 < \Delta < 10$ ): 7
- Frazione di spinta passiva fSp: 50,00 %
- Coeff. resistenza sulle sup. laterali: 1,30

**Metodi e parametri per il calcolo dei cedimenti delle fondazioni superficiali:**

- Metodo di calcolo tensioni superficiali: Boussinesq
- Modalità d'interferenza dei bulbi tensionali: sovrapposizione dei bulbi
- Metodo di calcolo dei cedimenti del terreno: cedimenti edometrici

**ARCHIVIO STRATIGRAFIE**

Indice / Descrizione: 001 / Nuova stratigrafia n. 1  
 Numero strati: 2  
 Profondità falda: 400,00 cm

Strato n.	Quota di riferimento	Spessore	Indice / Descrizione terreno	Attrito Neg.
1	da 0,0 a -300,0 cm	300,0 cm	001 / Sabbia limosa	Assente
2	da -300,0 a -6300,0 cm	6000,0 cm	002 / Limo argilloso	Assente

**ARCHIVIO TERRENI**

Indice / Descrizione terreno: **001 / Sabbia limosa**

Comportamento del terreno: condizione drenata

Peso Spec.	P. Spec. Sat.	Angolo Res.	Coesione	Mod.Elast.	Mod.Edom.	Dens.Rel.	Poisson	C. Ades.
daN/cm <sup>2</sup>	daN/cm <sup>2</sup>	Gradi°	daN/cm <sup>2</sup>	daN/cm <sup>2</sup>	daN/cm <sup>2</sup>	%	%	
1,800 E-3	2,770 E-3	27,000	0,170	92,221	150,000	60,0	0,353	0,83

Indice / Descrizione terreno: **002 / Limo argilloso**

Comportamento del terreno: condizione non drenata

Peso Spec.	P. Spec. Sat.	Coes.non dren.	Mod.Elast.	Mod.Edom.	Dens.Rel.	Poisson	C. Ades.
daN/cm <sup>2</sup>	daN/cm <sup>2</sup>	daN/cm <sup>2</sup>	daN/cm <sup>2</sup>	daN/cm <sup>2</sup>	%	%	
1,760 E-3	2,700 E-3	0,300	100,000	100,000	60,0	0,500	0,70

**DATI GEOMETRICI DEGLI ELEMENTI COSTITUENTI LE FONDAZIONI SUPERFICIALI**

Elemento n.	Tipologia	Id.Strat.	Prof. Fon. cm	Dia. Eq. cm	Spessore cm	Superficie cm <sup>2</sup>	Vertici n. per elem.	Macro n.
Platea n. 1	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 2	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 3	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 4	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 5	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 6	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 7	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 8	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 9	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 10	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 11	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 12	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 13	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 14	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 15	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 16	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 17	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 18	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 19	Platea	001	225.000	81.102	250.000	5166.016	4	1

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

Platea n. 20	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 21	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 22	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 23	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 24	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 25	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 26	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 27	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 28	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 29	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 30	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 31	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 32	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 33	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 34	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 35	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 36	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 37	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 38	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 39	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 40	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 41	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 42	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 43	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 44	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 45	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 46	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 47	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 48	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 49	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 50	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 51	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 52	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 53	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 54	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 55	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 56	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 57	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 58	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 59	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 60	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 61	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 62	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 63	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 64	Platea	001	225.000	81.102	250.000	5166.016	4	1
Platea n. 65	Platea	001	225.000	105.110	250.000	8677.205	4	1
Platea n. 66	Platea	001	225.000	116.895	250.000	10732.100	4	1
Platea n. 67	Platea	001	225.000	127.597	250.000	12786.990	4	1
Platea n. 68	Platea	001	225.000	137.467	250.000	14841.880	4	1
Platea n. 69	Platea	001	225.000	146.675	250.000	16896.770	4	1
Platea n. 70	Platea	001	225.000	155.338	250.000	18951.660	4	1
Platea n. 71	Platea	001	225.000	163.543	250.000	21006.550	4	1
Platea n. 72	Platea	001	225.000	171.356	250.000	23061.450	4	1
Platea n. 73	Platea	001	225.000	102.670	250.000	8278.992	4	1
Platea n. 74	Platea	001	225.000	114.651	250.000	10323.940	4	1
Platea n. 75	Platea	001	225.000	125.493	250.000	12368.880	4	1
Platea n. 76	Platea	001	225.000	135.471	250.000	14413.820	4	1
Platea n. 77	Platea	001	225.000	144.762	250.000	16458.760	4	1
Platea n. 78	Platea	001	225.000	153.492	250.000	18503.710	4	1
Platea n. 79	Platea	001	225.000	161.751	250.000	20548.660	4	1
Platea n. 80	Platea	001	225.000	169.609	250.000	22593.590	4	1
Platea n. 81	Platea	001	225.000	97.719	250.000	7499.757	4	1
Platea n. 82	Platea	001	225.000	110.148	250.000	9528.968	4	1
Platea n. 83	Platea	001	225.000	121.311	250.000	11558.180	4	1
Platea n. 84	Platea	001	225.000	131.529	250.000	13587.380	4	1
Platea n. 85	Platea	001	225.000	141.009	250.000	15616.590	4	1
Platea n. 86	Platea	001	225.000	149.891	250.000	17645.800	4	1
Platea n. 87	Platea	001	225.000	158.275	250.000	19675.020	4	1
Platea n. 88	Platea	001	225.000	166.237	250.000	21704.210	4	1
Platea n. 89	Platea	001	225.000	90.081	250.000	6373.153	4	1
Platea n. 90	Platea	001	225.000	103.349	250.000	8388.857	4	1
Platea n. 91	Platea	001	225.000	115.098	250.000	10404.560	4	1
Platea n. 92	Platea	001	225.000	125.754	250.000	12420.270	4	1

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

Platea n. 93	Platea	001	225.000	135.574	250.000	14435.960	4	1
Platea n. 94	Platea	001	225.000	144.731	250.000	16451.670	4	1
Platea n. 95	Platea	001	225.000	153.341	250.000	18467.380	4	1
Platea n. 96	Platea	001	225.000	161.493	250.000	20483.070	4	1
Platea n. 97	Platea	001	225.000	90.081	250.000	6373.153	4	1
Platea n. 98	Platea	001	225.000	103.349	250.000	8388.857	4	1
Platea n. 99	Platea	001	225.000	115.098	250.000	10404.560	4	1
Platea n. 100	Platea	001	225.000	125.754	250.000	12420.270	4	1
Platea n. 101	Platea	001	225.000	135.574	250.000	14435.960	4	1
Platea n. 102	Platea	001	225.000	144.731	250.000	16451.670	4	1
Platea n. 103	Platea	001	225.000	153.341	250.000	18467.380	4	1
Platea n. 104	Platea	001	225.000	161.493	250.000	20483.070	4	1
Platea n. 105	Platea	001	225.000	97.719	250.000	7499.757	4	1
Platea n. 106	Platea	001	225.000	110.148	250.000	9528.968	4	1
Platea n. 107	Platea	001	225.000	121.311	250.000	11558.180	4	1
Platea n. 108	Platea	001	225.000	131.529	250.000	13587.380	4	1
Platea n. 109	Platea	001	225.000	141.009	250.000	15616.590	4	1
Platea n. 110	Platea	001	225.000	149.891	250.000	17645.800	4	1
Platea n. 111	Platea	001	225.000	158.275	250.000	19675.020	4	1
Platea n. 112	Platea	001	225.000	166.237	250.000	21704.210	4	1
Platea n. 113	Platea	001	225.000	102.670	250.000	8278.992	4	1
Platea n. 114	Platea	001	225.000	114.651	250.000	10323.940	4	1
Platea n. 115	Platea	001	225.000	125.493	250.000	12368.880	4	1
Platea n. 116	Platea	001	225.000	135.471	250.000	14413.820	4	1
Platea n. 117	Platea	001	225.000	144.762	250.000	16458.760	4	1
Platea n. 118	Platea	001	225.000	153.492	250.000	18503.710	4	1
Platea n. 119	Platea	001	225.000	161.751	250.000	20548.660	4	1
Platea n. 120	Platea	001	225.000	169.609	250.000	22593.590	4	1
Platea n. 121	Platea	001	225.000	105.110	250.000	8677.205	4	1
Platea n. 122	Platea	001	225.000	116.895	250.000	10732.100	4	1
Platea n. 123	Platea	001	225.000	127.597	250.000	12786.990	4	1
Platea n. 124	Platea	001	225.000	137.467	250.000	14841.880	4	1
Platea n. 125	Platea	001	225.000	146.675	250.000	16896.770	4	1
Platea n. 126	Platea	001	225.000	155.338	250.000	18951.660	4	1
Platea n. 127	Platea	001	225.000	163.543	250.000	21006.550	4	1
Platea n. 128	Platea	001	225.000	171.356	250.000	23061.450	4	1
Platea n. 129	Platea	001	225.000	105.110	250.000	8677.205	4	1
Platea n. 130	Platea	001	225.000	116.895	250.000	10732.100	4	1
Platea n. 131	Platea	001	225.000	127.597	250.000	12786.990	4	1
Platea n. 132	Platea	001	225.000	137.467	250.000	14841.880	4	1
Platea n. 133	Platea	001	225.000	146.675	250.000	16896.770	4	1
Platea n. 134	Platea	001	225.000	155.338	250.000	18951.660	4	1
Platea n. 135	Platea	001	225.000	163.543	250.000	21006.550	4	1
Platea n. 136	Platea	001	225.000	171.356	250.000	23061.450	4	1
Platea n. 137	Platea	001	225.000	102.670	250.000	8278.992	4	1
Platea n. 138	Platea	001	225.000	114.651	250.000	10323.940	4	1
Platea n. 139	Platea	001	225.000	125.493	250.000	12368.880	4	1
Platea n. 140	Platea	001	225.000	135.471	250.000	14413.820	4	1
Platea n. 141	Platea	001	225.000	144.762	250.000	16458.760	4	1
Platea n. 142	Platea	001	225.000	153.492	250.000	18503.710	4	1
Platea n. 143	Platea	001	225.000	161.751	250.000	20548.660	4	1
Platea n. 144	Platea	001	225.000	169.609	250.000	22593.590	4	1
Platea n. 145	Platea	001	225.000	97.719	250.000	7499.757	4	1
Platea n. 146	Platea	001	225.000	110.148	250.000	9528.968	4	1
Platea n. 147	Platea	001	225.000	121.311	250.000	11558.180	4	1
Platea n. 148	Platea	001	225.000	131.529	250.000	13587.380	4	1
Platea n. 149	Platea	001	225.000	141.009	250.000	15616.590	4	1
Platea n. 150	Platea	001	225.000	149.891	250.000	17645.800	4	1
Platea n. 151	Platea	001	225.000	158.275	250.000	19675.020	4	1
Platea n. 152	Platea	001	225.000	166.237	250.000	21704.210	4	1
Platea n. 153	Platea	001	225.000	90.081	250.000	6373.153	4	1
Platea n. 154	Platea	001	225.000	103.349	250.000	8388.857	4	1
Platea n. 155	Platea	001	225.000	115.098	250.000	10404.560	4	1
Platea n. 156	Platea	001	225.000	125.754	250.000	12420.270	4	1
Platea n. 157	Platea	001	225.000	135.574	250.000	14435.960	4	1
Platea n. 158	Platea	001	225.000	144.731	250.000	16451.670	4	1
Platea n. 159	Platea	001	225.000	153.341	250.000	18467.380	4	1
Platea n. 160	Platea	001	225.000	161.493	250.000	20483.070	4	1
Platea n. 161	Platea	001	225.000	90.081	250.000	6373.153	4	1
Platea n. 162	Platea	001	225.000	103.349	250.000	8388.857	4	1
Platea n. 163	Platea	001	225.000	115.098	250.000	10404.560	4	1
Platea n. 164	Platea	001	225.000	125.754	250.000	12420.270	4	1
Platea n. 165	Platea	001	225.000	135.574	250.000	14435.960	4	1



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

Platea n. 166	Platea	001	225.000	144.731	250.000	16451.670	4	1
Platea n. 167	Platea	001	225.000	153.341	250.000	18467.380	4	1
Platea n. 168	Platea	001	225.000	161.493	250.000	20483.070	4	1
Platea n. 169	Platea	001	225.000	97.719	250.000	7499.757	4	1
Platea n. 170	Platea	001	225.000	110.148	250.000	9528.968	4	1
Platea n. 171	Platea	001	225.000	121.311	250.000	11558.180	4	1
Platea n. 172	Platea	001	225.000	131.529	250.000	13587.380	4	1
Platea n. 173	Platea	001	225.000	141.009	250.000	15616.590	4	1
Platea n. 174	Platea	001	225.000	149.891	250.000	17645.800	4	1
Platea n. 175	Platea	001	225.000	158.275	250.000	19675.020	4	1
Platea n. 176	Platea	001	225.000	166.237	250.000	21704.210	4	1
Platea n. 177	Platea	001	225.000	102.670	250.000	8278.992	4	1
Platea n. 178	Platea	001	225.000	114.651	250.000	10323.940	4	1
Platea n. 179	Platea	001	225.000	125.493	250.000	12368.880	4	1
Platea n. 180	Platea	001	225.000	135.471	250.000	14413.820	4	1
Platea n. 181	Platea	001	225.000	144.762	250.000	16458.760	4	1
Platea n. 182	Platea	001	225.000	153.492	250.000	18503.710	4	1
Platea n. 183	Platea	001	225.000	161.751	250.000	20548.660	4	1
Platea n. 184	Platea	001	225.000	169.609	250.000	22593.590	4	1
Platea n. 185	Platea	001	225.000	105.110	250.000	8677.205	4	1
Platea n. 186	Platea	001	225.000	116.895	250.000	10732.100	4	1
Platea n. 187	Platea	001	225.000	127.597	250.000	12786.990	4	1
Platea n. 188	Platea	001	225.000	137.467	250.000	14841.880	4	1
Platea n. 189	Platea	001	225.000	146.675	250.000	16896.770	4	1
Platea n. 190	Platea	001	225.000	155.338	250.000	18951.660	4	1
Platea n. 191	Platea	001	225.000	163.543	250.000	21006.550	4	1
Platea n. 192	Platea	001	225.000	171.356	250.000	23061.450	4	1
Platea n. 193	Platea	001	225.000	105.110	250.000	8677.205	4	1
Platea n. 194	Platea	001	225.000	116.895	250.000	10732.100	4	1
Platea n. 195	Platea	001	225.000	127.597	250.000	12786.990	4	1
Platea n. 196	Platea	001	225.000	137.467	250.000	14841.880	4	1
Platea n. 197	Platea	001	225.000	146.675	250.000	16896.770	4	1
Platea n. 198	Platea	001	225.000	155.338	250.000	18951.660	4	1
Platea n. 199	Platea	001	225.000	163.543	250.000	21006.550	4	1
Platea n. 200	Platea	001	225.000	171.356	250.000	23061.450	4	1
Platea n. 201	Platea	001	225.000	102.670	250.000	8278.992	4	1
Platea n. 202	Platea	001	225.000	114.651	250.000	10323.940	4	1
Platea n. 203	Platea	001	225.000	125.493	250.000	12368.880	4	1
Platea n. 204	Platea	001	225.000	135.471	250.000	14413.820	4	1
Platea n. 205	Platea	001	225.000	144.762	250.000	16458.760	4	1
Platea n. 206	Platea	001	225.000	153.492	250.000	18503.710	4	1
Platea n. 207	Platea	001	225.000	161.751	250.000	20548.660	4	1
Platea n. 208	Platea	001	225.000	169.609	250.000	22593.590	4	1
Platea n. 209	Platea	001	225.000	97.719	250.000	7499.757	4	1
Platea n. 210	Platea	001	225.000	110.148	250.000	9528.968	4	1
Platea n. 211	Platea	001	225.000	121.311	250.000	11558.180	4	1
Platea n. 212	Platea	001	225.000	131.529	250.000	13587.380	4	1
Platea n. 213	Platea	001	225.000	141.009	250.000	15616.590	4	1
Platea n. 214	Platea	001	225.000	149.891	250.000	17645.800	4	1
Platea n. 215	Platea	001	225.000	158.275	250.000	19675.020	4	1
Platea n. 216	Platea	001	225.000	166.237	250.000	21704.210	4	1
Platea n. 217	Platea	001	225.000	90.081	250.000	6373.153	4	1
Platea n. 218	Platea	001	225.000	103.349	250.000	8388.857	4	1
Platea n. 219	Platea	001	225.000	115.098	250.000	10404.560	4	1
Platea n. 220	Platea	001	225.000	125.754	250.000	12420.270	4	1
Platea n. 221	Platea	001	225.000	135.574	250.000	14435.960	4	1
Platea n. 222	Platea	001	225.000	144.731	250.000	16451.670	4	1
Platea n. 223	Platea	001	225.000	153.341	250.000	18467.380	4	1
Platea n. 224	Platea	001	225.000	161.493	250.000	20483.070	4	1
Platea n. 225	Platea	001	225.000	90.081	250.000	6373.153	4	1
Platea n. 226	Platea	001	225.000	103.349	250.000	8388.857	4	1
Platea n. 227	Platea	001	225.000	115.098	250.000	10404.560	4	1
Platea n. 228	Platea	001	225.000	125.754	250.000	12420.270	4	1
Platea n. 229	Platea	001	225.000	135.574	250.000	14435.960	4	1
Platea n. 230	Platea	001	225.000	144.731	250.000	16451.670	4	1
Platea n. 231	Platea	001	225.000	153.341	250.000	18467.380	4	1
Platea n. 232	Platea	001	225.000	161.493	250.000	20483.070	4	1
Platea n. 233	Platea	001	225.000	97.719	250.000	7499.757	4	1
Platea n. 234	Platea	001	225.000	110.148	250.000	9528.968	4	1
Platea n. 235	Platea	001	225.000	121.311	250.000	11558.180	4	1
Platea n. 236	Platea	001	225.000	131.529	250.000	13587.380	4	1
Platea n. 237	Platea	001	225.000	141.009	250.000	15616.590	4	1
Platea n. 238	Platea	001	225.000	149.891	250.000	17645.800	4	1



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

Platea n. 239	Platea	001	225.000	158.275	250.000	19675.020	4	1
Platea n. 240	Platea	001	225.000	166.237	250.000	21704.210	4	1
Platea n. 241	Platea	001	225.000	102.670	250.000	8278.992	4	1
Platea n. 242	Platea	001	225.000	114.651	250.000	10323.940	4	1
Platea n. 243	Platea	001	225.000	125.493	250.000	12368.880	4	1
Platea n. 244	Platea	001	225.000	135.471	250.000	14413.820	4	1
Platea n. 245	Platea	001	225.000	144.762	250.000	16458.760	4	1
Platea n. 246	Platea	001	225.000	153.492	250.000	18503.710	4	1
Platea n. 247	Platea	001	225.000	161.751	250.000	20548.660	4	1
Platea n. 248	Platea	001	225.000	169.609	250.000	22593.590	4	1
Platea n. 249	Platea	001	225.000	105.110	250.000	8677.205	4	1
Platea n. 250	Platea	001	225.000	116.895	250.000	10732.100	4	1
Platea n. 251	Platea	001	225.000	127.597	250.000	12786.990	4	1
Platea n. 252	Platea	001	225.000	137.467	250.000	14841.880	4	1
Platea n. 253	Platea	001	225.000	146.675	250.000	16896.770	4	1
Platea n. 254	Platea	001	225.000	155.338	250.000	18951.660	4	1
Platea n. 255	Platea	001	225.000	163.543	250.000	21006.550	4	1
Platea n. 256	Platea	001	225.000	171.356	250.000	23061.450	4	1
Platea n. 257	Platea	001	225.000	105.110	250.000	8677.205	4	1
Platea n. 258	Platea	001	225.000	116.895	250.000	10732.100	4	1
Platea n. 259	Platea	001	225.000	127.597	250.000	12786.990	4	1
Platea n. 260	Platea	001	225.000	137.467	250.000	14841.880	4	1
Platea n. 261	Platea	001	225.000	146.675	250.000	16896.770	4	1
Platea n. 262	Platea	001	225.000	155.338	250.000	18951.660	4	1
Platea n. 263	Platea	001	225.000	163.543	250.000	21006.550	4	1
Platea n. 264	Platea	001	225.000	171.356	250.000	23061.450	4	1
Platea n. 265	Platea	001	225.000	102.670	250.000	8278.992	4	1
Platea n. 266	Platea	001	225.000	114.651	250.000	10323.940	4	1
Platea n. 267	Platea	001	225.000	125.493	250.000	12368.880	4	1
Platea n. 268	Platea	001	225.000	135.471	250.000	14413.820	4	1
Platea n. 269	Platea	001	225.000	144.762	250.000	16458.760	4	1
Platea n. 270	Platea	001	225.000	153.492	250.000	18503.710	4	1
Platea n. 271	Platea	001	225.000	161.751	250.000	20548.660	4	1
Platea n. 272	Platea	001	225.000	169.609	250.000	22593.590	4	1
Platea n. 273	Platea	001	225.000	97.719	250.000	7499.757	4	1
Platea n. 274	Platea	001	225.000	110.148	250.000	9528.968	4	1
Platea n. 275	Platea	001	225.000	121.311	250.000	11558.180	4	1
Platea n. 276	Platea	001	225.000	131.529	250.000	13587.380	4	1
Platea n. 277	Platea	001	225.000	141.009	250.000	15616.590	4	1
Platea n. 278	Platea	001	225.000	149.891	250.000	17645.800	4	1
Platea n. 279	Platea	001	225.000	158.275	250.000	19675.020	4	1
Platea n. 280	Platea	001	225.000	166.237	250.000	21704.210	4	1
Platea n. 281	Platea	001	225.000	90.081	250.000	6373.153	4	1
Platea n. 282	Platea	001	225.000	103.349	250.000	8388.857	4	1
Platea n. 283	Platea	001	225.000	115.098	250.000	10404.560	4	1
Platea n. 284	Platea	001	225.000	125.754	250.000	12420.270	4	1
Platea n. 285	Platea	001	225.000	135.574	250.000	14435.960	4	1
Platea n. 286	Platea	001	225.000	144.731	250.000	16451.670	4	1
Platea n. 287	Platea	001	225.000	153.341	250.000	18467.380	4	1
Platea n. 288	Platea	001	225.000	161.493	250.000	20483.070	4	1
Platea n. 289	Platea	001	225.000	90.081	250.000	6373.153	4	1
Platea n. 290	Platea	001	225.000	103.349	250.000	8388.857	4	1
Platea n. 291	Platea	001	225.000	115.098	250.000	10404.560	4	1
Platea n. 292	Platea	001	225.000	125.754	250.000	12420.270	4	1
Platea n. 293	Platea	001	225.000	135.574	250.000	14435.960	4	1
Platea n. 294	Platea	001	225.000	144.731	250.000	16451.670	4	1
Platea n. 295	Platea	001	225.000	153.341	250.000	18467.380	4	1
Platea n. 296	Platea	001	225.000	161.493	250.000	20483.070	4	1
Platea n. 297	Platea	001	225.000	97.719	250.000	7499.757	4	1
Platea n. 298	Platea	001	225.000	110.148	250.000	9528.968	4	1
Platea n. 299	Platea	001	225.000	121.311	250.000	11558.180	4	1
Platea n. 300	Platea	001	225.000	131.529	250.000	13587.380	4	1
Platea n. 301	Platea	001	225.000	141.009	250.000	15616.590	4	1
Platea n. 302	Platea	001	225.000	149.891	250.000	17645.800	4	1
Platea n. 303	Platea	001	225.000	158.275	250.000	19675.020	4	1
Platea n. 304	Platea	001	225.000	166.237	250.000	21704.210	4	1
Platea n. 305	Platea	001	225.000	102.670	250.000	8278.992	4	1
Platea n. 306	Platea	001	225.000	114.651	250.000	10323.940	4	1
Platea n. 307	Platea	001	225.000	125.493	250.000	12368.880	4	1
Platea n. 308	Platea	001	225.000	135.471	250.000	14413.820	4	1
Platea n. 309	Platea	001	225.000	144.762	250.000	16458.760	4	1
Platea n. 310	Platea	001	225.000	153.492	250.000	18503.710	4	1
Platea n. 311	Platea	001	225.000	161.751	250.000	20548.660	4	1

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Platea n. 312	Platea	001	225.000	169.609	250.000	22593.590	4	1
Platea n. 313	Platea	001	225.000	105.110	250.000	8677.205	4	1
Platea n. 314	Platea	001	225.000	116.895	250.000	10732.100	4	1
Platea n. 315	Platea	001	225.000	127.597	250.000	12786.990	4	1
Platea n. 316	Platea	001	225.000	137.467	250.000	14841.880	4	1
Platea n. 317	Platea	001	225.000	146.675	250.000	16896.770	4	1
Platea n. 318	Platea	001	225.000	155.338	250.000	18951.660	4	1
Platea n. 319	Platea	001	225.000	163.543	250.000	21006.550	4	1
Platea n. 320	Platea	001	225.000	171.356	250.000	23061.450	4	1
<b>Elemento n.</b>	<b>Tipologia</b>	<b>Id.Strat.</b>	<b>Prof. Fon.</b>	<b>Base Eq.</b>	<b>Spessore</b>	<b>Lung. Eq.</b>	<b>Lung. Travata Eq.</b>	
Macro n. 1	Macro-Platea	001	cm 225.000	cm 1625.420	cm 250.000	cm 1625.420	cm 1625.420	

**VALORI DI CALCOLO DELLA PORTANZA PER FONDAZIONI SUPERFICIALI**

I coeff. A1 risultano combinati secondo lo schema presente nella relazione di calcolo della struttura. Le azioni trasmesse in fondazione, relative alle combinazioni di tipo sismico, non saranno amplificate in quanto determinate ipotizzando un comportamento non dissipativo.

La verifica nei confronti dello Stato Limite di Danno viene eseguita determinando il carico limite della fondazione per le corrispondenti azioni di SLD, impiegando i coefficienti parziali gammaR di cui alla tabella 7.11.II.

N.B. La relazione è redatta in forma sintetica. Verranno riportati solo i casi maggiormente gravosi per ogni tipo di combinazione e le relative verifiche.

**Macro platea: 1**

Risultati più gravosi per cmb. di tipo **SLU STR**:

Sgm. Lt (tens. litostatica) = -0.4050 daN/cm<sup>2</sup>

Qlim = Qlim c + Qlim q + Qlim g + Qres P = 0.7862 + 0.2348 + 0.0000 + 0.0242

Qmax / Qlim = 0.9998 / 1.0452 = 0,957 Ok (Cmb. n. 001)

TB / TBlim = 140655.4 / 1222982.0 = 0,115 Ok (Cmb. n. 001)

TL / TLLim = 90213.1 / 1222982.0 = 0,074 Ok (Cmb. n. 001)

Sollecitazioni:

Cmb n.	Tipo	Sism.	Ecc. B cm	Ecc. L cm	S. Taglio B daN	S. Taglio L daN	S. Normale daN	T.T. min daN/cm <sup>2</sup>	T.T. max daN/cm <sup>2</sup>
001	SLU STR	No	137.410	-111.229	140655.4	-90213.1	-2592231.0	-0.2411	-0.9998

Risultati più gravosi per cmb. di tipo **SLV A1 sism.:**

Sgm. Lt (tens. litostatica) = -0.4050 daN/cm<sup>2</sup>

Qlim = Qlim c + Qlim q + Qlim g + Qres P = 0.7877 + 0.2348 + 0.0000 + 0.0242

Qmax / Qlim = 0.7781 / 1.0467 = 0,743 Ok (Cmb. n. 007)

TB / TBlim = 136423.2 / 992349.5 = 0,137 Ok (Cmb. n. 007)

TL / TLLim = 97621.6 / 993263.9 = 0,098 Ok (Cmb. n. 021)

Sollecitazioni:

Cmb n.	Tipo	Sism.	Ecc. B cm	Ecc. L cm	S. Taglio B daN	S. Taglio L daN	S. Normale daN	T.T. min daN/cm <sup>2</sup>	T.T. max daN/cm <sup>2</sup>
007	SLV A1	Si	143.341	-112.470	136423.2	-75303.4	-1994024.0	-0.1764	-0.7781
021	SLV A1	Si	136.169	-117.159	102287.8	-97621.6	-1994023.0	-0.1806	-0.7740

Risultati più gravosi per cmb. di tipo **SLD sism.:**

Sgm. Lt (tens. litostatica) = -0.4050 daN/cm<sup>2</sup>

Qlim = Qlim c + Qlim q + Qlim g + Qres P = 0.7979 + 0.2348 + 0.0000 + 0.0242

Qmax / Qlim = 0.7726 / 1.0568 = 0,731 Ok (Cmb. n. 039)

TB / TBlim = 119125.9 / 993860.8 = 0,120 Ok (Cmb. n. 039)

TL / TLLim = 80324.2 / 994216.7 = 0,081 Ok (Cmb. n. 053)

Sollecitazioni:

Cmb n.	Tipo	Sism.	Ecc. B cm	Ecc. L cm	S. Taglio B daN	S. Taglio L daN	S. Normale daN	T.T. min daN/cm <sup>2</sup>	T.T. max daN/cm <sup>2</sup>
039	SLD	Si	139.707	-111.709	119125.9	-71682.6	-1994023.0	-0.1819	-0.7726
053	SLD	Si	136.930	-113.525	105908.5	-80324.2	-1994023.0	-0.1836	-0.7710

**VALORI DI CALCOLO DEI CEDIMENTI PER FONDAZIONI SUPERFICIALI**

**Elemento: Platea n. 1**

Sollecitazioni:

Cmb n.	Tipo	Sism.	Ecc. B	Ecc. L	S. Taglio B	S. Taglio L	S. Normale	T.T. min	T.T. max
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n.			cm	cm	daN	daN	daN	daN/cm <sup>2</sup>	daN/cm <sup>2</sup>
069	SLE rare	No	137.410	-111.229	108196.4	-69394.7	-1994024.0	-0.1854	-0.7691

Cedimento massimo = -0.885 cm in Cmb n. 069  
Cedimento minimo = -0.010 cm in Cmb n. 069

**VERIFICHE PALI DI FONDAZIONE**

**MATERIALI**

**Acciaio: B450C**

E = 2060000 daN/cmq, Fyk = 4500 daN/cmq, fsd = 3913 daN/cmq

**Calcestruzzo pali: C25/30**

Rck = 300 daN/cmq, E = 314470 daN/cmq, fcd = 141,1 daN/cmq, fctm = 25,6 daN/cmq, fctd = 11,9 daN/cmq

**Sollecitazioni alla base del pilastro**

Cmb.	Plin.	Tipo	Vx (daN)	Vy (daN)	N (daN)	Mx (daN cm)	My (daN cm)	T (daN cm)
1	215	SLU STR.	-3843,0	14950,0	-46620,0	11130000,0	8372000,0	0,0
2	215	SLU STR.	-2956,1	11500,0	-35860,0	8558000,0	6440000,0	0,0
5	215	SLU A1 sism.	-6432,2	10460,0	-36780,0	8337000,0	7173000,0	0,0
6	215	SLU A1 sism.	-6432,2	12540,0	-36780,0	8779000,0	7173000,0	0,0
7	215	SLU A1 sism.	520,0	10460,0	-34930,0	8337000,0	5707000,0	0,0
8	215	SLU A1 sism.	520,0	12540,0	-34930,0	8779000,0	5707000,0	0,0
9	215	SLU A1 sism.	-6432,2	10460,0	-36780,0	8337000,0	7173000,0	0,0
10	215	SLU A1 sism.	-6432,2	12540,0	-36780,0	8779000,0	7173000,0	0,0
11	215	SLU A1 sism.	520,0	10460,0	-34930,0	8337000,0	5707000,0	0,0
12	215	SLU A1 sism.	520,0	12540,0	-34930,0	8779000,0	5707000,0	0,0
13	215	SLU A1 sism.	-6432,2	10460,0	-36780,0	8337000,0	7173000,0	0,0
14	215	SLU A1 sism.	-6432,2	12540,0	-36780,0	8779000,0	7173000,0	0,0
15	215	SLU A1 sism.	520,0	10460,0	-34930,0	8337000,0	5707000,0	0,0
16	215	SLU A1 sism.	520,0	12540,0	-34930,0	8779000,0	5707000,0	0,0
17	215	SLU A1 sism.	-6432,2	10460,0	-36780,0	8337000,0	7173000,0	0,0
18	215	SLU A1 sism.	-6432,2	12540,0	-36780,0	8779000,0	7173000,0	0,0
19	215	SLU A1 sism.	520,0	10460,0	-34930,0	8337000,0	5707000,0	0,0
20	215	SLU A1 sism.	520,0	12540,0	-34930,0	8779000,0	5707000,0	0,0
21	215	SLU A1 sism.	-3998,9	8026,1	-36140,0	7822000,0	6660000,0	0,0
22	215	SLU A1 sism.	-3998,9	14970,0	-36140,0	9294000,0	6660000,0	0,0
23	215	SLU A1 sism.	-1913,3	8026,1	-35580,0	7822000,0	6220000,0	0,0
24	215	SLU A1 sism.	-1913,3	14970,0	-35580,0	9294000,0	6220000,0	0,0
25	215	SLU A1 sism.	-3998,9	8026,1	-36140,0	7822000,0	6660000,0	0,0
26	215	SLU A1 sism.	-3998,9	14970,0	-36140,0	9294000,0	6660000,0	0,0
27	215	SLU A1 sism.	-1913,3	8026,1	-35580,0	7822000,0	6220000,0	0,0
28	215	SLU A1 sism.	-1913,3	14970,0	-35580,0	9294000,0	6220000,0	0,0
29	215	SLU A1 sism.	-3998,9	8026,1	-36140,0	7822000,0	6660000,0	0,0
30	215	SLU A1 sism.	-3998,9	14970,0	-36140,0	9294000,0	6660000,0	0,0
31	215	SLU A1 sism.	-1913,3	8026,1	-35580,0	7822000,0	6220000,0	0,0
32	215	SLU A1 sism.	-1913,3	14970,0	-35580,0	9294000,0	6220000,0	0,0
33	215	SLU A1 sism.	-3998,9	8026,1	-36140,0	7822000,0	6660000,0	0,0
34	215	SLU A1 sism.	-3998,9	14970,0	-36140,0	9294000,0	6660000,0	0,0
35	215	SLU A1 sism.	-1913,3	8026,1	-35580,0	7822000,0	6220000,0	0,0
36	215	SLU A1 sism.	-1913,3	14970,0	-35580,0	9294000,0	6220000,0	0,0
69	215	SLE Rare	-2956,1	11500,0	-35860,0	8558000,0	6440000,0	0,0
1	103	SLU STR.	1885,5	1132,4	-87390,0	7487000,0	5939000,0	0,0
2	103	SLU STR.	1450,4	871,1	-67220,0	5759000,0	4569000,0	0,0
5	103	SLU A1 sism.	-2024,8	-172,0	-66250,0	5540000,0	5301000,0	0,0
6	103	SLU A1 sism.	-2023,9	1911,5	-66470,0	5981000,0	5302000,0	0,0
7	103	SLU A1 sism.	4924,6	-169,4	-67970,0	5538000,0	3836000,0	0,0
8	103	SLU A1 sism.	4925,5	1914,2	-68190,0	5979000,0	3836000,0	0,0
9	103	SLU A1 sism.	-2024,8	-172,0	-66250,0	5540000,0	5301000,0	0,0
10	103	SLU A1 sism.	-2023,9	1911,5	-66470,0	5981000,0	5302000,0	0,0
11	103	SLU A1 sism.	4924,6	-169,4	-67970,0	5538000,0	3836000,0	0,0
12	103	SLU A1 sism.	4925,5	1914,2	-68190,0	5979000,0	3836000,0	0,0
13	103	SLU A1 sism.	-2024,8	-172,0	-66250,0	5540000,0	5301000,0	0,0
14	103	SLU A1 sism.	-2023,9	1911,5	-66470,0	5981000,0	5302000,0	0,0
15	103	SLU A1 sism.	4924,6	-169,4	-67970,0	5538000,0	3836000,0	0,0
16	103	SLU A1 sism.	4925,5	1914,2	-68190,0	5979000,0	3836000,0	0,0
17	103	SLU A1 sism.	-2024,8	-172,0	-66250,0	5540000,0	5301000,0	0,0
18	103	SLU A1 sism.	-2023,9	1911,5	-66470,0	5981000,0	5302000,0	0,0
19	103	SLU A1 sism.	4924,6	-169,4	-67970,0	5538000,0	3836000,0	0,0

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20	103	SLU A1 sism.	4925,5	1914,2	-68190,0	5979000,0	3836000,0	0,0
21	103	SLU A1 sism.	406,4	-2601,9	-66600,0	5025000,0	4788000,0	0,0
22	103	SLU A1 sism.	409,5	4343,2	-67320,0	6495000,0	4789000,0	0,0
23	103	SLU A1 sism.	2491,2	-2601,1	-67120,0	5024000,0	4348000,0	0,0
24	103	SLU A1 sism.	2494,3	4344,0	-67840,0	6494000,0	4350000,0	0,0
25	103	SLU A1 sism.	406,4	-2601,9	-66600,0	5025000,0	4788000,0	0,0
26	103	SLU A1 sism.	409,5	4343,2	-67320,0	6495000,0	4789000,0	0,0
27	103	SLU A1 sism.	2491,2	-2601,1	-67120,0	5024000,0	4348000,0	0,0
28	103	SLU A1 sism.	2494,3	4344,0	-67840,0	6494000,0	4350000,0	0,0
29	103	SLU A1 sism.	406,4	-2601,9	-66600,0	5025000,0	4788000,0	0,0
30	103	SLU A1 sism.	409,5	4343,2	-67320,0	6495000,0	4789000,0	0,0
31	103	SLU A1 sism.	2491,2	-2601,1	-67120,0	5024000,0	4348000,0	0,0
32	103	SLU A1 sism.	2494,3	4344,0	-67840,0	6494000,0	4350000,0	0,0
33	103	SLU A1 sism.	406,4	-2601,9	-66600,0	5025000,0	4788000,0	0,0
34	103	SLU A1 sism.	409,5	4343,2	-67320,0	6495000,0	4789000,0	0,0
35	103	SLU A1 sism.	2491,2	-2601,1	-67120,0	5024000,0	4348000,0	0,0
36	103	SLU A1 sism.	2494,3	4344,0	-67840,0	6494000,0	4350000,0	0,0
69	103	SLE Rare	1450,4	871,1	-67220,0	5759000,0	4569000,0	0,0
1	115	SLU STR.	732,7	5911,7	-74110,0	9168000,0	6741000,0	0,0
2	115	SLU STR.	563,6	4547,5	-57010,0	7052000,0	5185000,0	0,0
5	115	SLU A1 sism.	-2925,5	3498,4	-56470,0	6831000,0	5925000,0	0,0
6	115	SLU A1 sism.	-2924,0	5591,4	-56720,0	7275000,0	5925000,0	0,0
7	115	SLU A1 sism.	4051,2	3503,6	-57300,0	6830000,0	4445000,0	0,0
8	115	SLU A1 sism.	4052,8	5596,6	-57540,0	7274000,0	4446000,0	0,0
9	115	SLU A1 sism.	-2925,5	3498,4	-56470,0	6831000,0	5925000,0	0,0
10	115	SLU A1 sism.	-2924,0	5591,4	-56720,0	7275000,0	5925000,0	0,0
11	115	SLU A1 sism.	4051,2	3503,6	-57300,0	6830000,0	4445000,0	0,0
12	115	SLU A1 sism.	4052,8	5596,6	-57540,0	7274000,0	4446000,0	0,0
13	115	SLU A1 sism.	-2925,5	3498,4	-56470,0	6831000,0	5925000,0	0,0
14	115	SLU A1 sism.	-2924,0	5591,4	-56720,0	7275000,0	5925000,0	0,0
15	115	SLU A1 sism.	4051,2	3503,6	-57300,0	6830000,0	4445000,0	0,0
16	115	SLU A1 sism.	4052,8	5596,6	-57540,0	7274000,0	4446000,0	0,0
17	115	SLU A1 sism.	-2925,5	3498,4	-56470,0	6831000,0	5925000,0	0,0
18	115	SLU A1 sism.	-2924,0	5591,4	-56720,0	7275000,0	5925000,0	0,0
19	115	SLU A1 sism.	4051,2	3503,6	-57300,0	6830000,0	4445000,0	0,0
20	115	SLU A1 sism.	4052,8	5596,6	-57540,0	7274000,0	4446000,0	0,0
21	115	SLU A1 sism.	-485,5	1058,4	-56470,0	6313000,0	5407000,0	0,0
22	115	SLU A1 sism.	-480,3	8035,1	-57300,0	7792000,0	5408000,0	0,0
23	115	SLU A1 sism.	1607,5	1059,9	-56720,0	6313000,0	4963000,0	0,0
24	115	SLU A1 sism.	1612,7	8036,6	-57540,0	7792000,0	4964000,0	0,0
25	115	SLU A1 sism.	-485,5	1058,4	-56470,0	6313000,0	5407000,0	0,0
26	115	SLU A1 sism.	-480,3	8035,1	-57300,0	7792000,0	5408000,0	0,0
27	115	SLU A1 sism.	1607,5	1059,9	-56720,0	6313000,0	4963000,0	0,0
28	115	SLU A1 sism.	1612,7	8036,6	-57540,0	7792000,0	4964000,0	0,0
29	115	SLU A1 sism.	-485,5	1058,4	-56470,0	6313000,0	5407000,0	0,0
30	115	SLU A1 sism.	-480,3	8035,1	-57300,0	7792000,0	5408000,0	0,0
31	115	SLU A1 sism.	1607,5	1059,9	-56720,0	6313000,0	4963000,0	0,0
32	115	SLU A1 sism.	1612,7	8036,6	-57540,0	7792000,0	4964000,0	0,0
33	115	SLU A1 sism.	-485,5	1058,4	-56470,0	6313000,0	5407000,0	0,0
34	115	SLU A1 sism.	-480,3	8035,1	-57300,0	7792000,0	5408000,0	0,0
35	115	SLU A1 sism.	1607,5	1059,9	-56720,0	6313000,0	4963000,0	0,0
36	115	SLU A1 sism.	1612,7	8036,6	-57540,0	7792000,0	4964000,0	0,0
69	115	SLE Rare	563,6	4547,5	-57010,0	7052000,0	5185000,0	0,0
1	119	SLU STR.	3477,9	2898,7	-73550,0	8056000,0	5781000,0	0,0
2	119	SLU STR.	2675,3	2229,8	-56580,0	6197000,0	4447000,0	0,0
5	119	SLU A1 sism.	-796,9	1186,2	-55700,0	5978000,0	5180000,0	0,0
6	119	SLU A1 sism.	-795,6	3269,1	-56110,0	6418000,0	5180000,0	0,0
7	119	SLU A1 sism.	6146,2	1190,4	-57050,0	5976000,0	3714000,0	0,0
8	119	SLU A1 sism.	6147,4	3273,3	-57460,0	6416000,0	3715000,0	0,0
9	119	SLU A1 sism.	-796,9	1186,2	-55700,0	5978000,0	5180000,0	0,0
10	119	SLU A1 sism.	-795,6	3269,1	-56110,0	6418000,0	5180000,0	0,0
11	119	SLU A1 sism.	6146,2	1190,4	-57050,0	5976000,0	3714000,0	0,0
12	119	SLU A1 sism.	6147,4	3273,3	-57460,0	6416000,0	3715000,0	0,0
13	119	SLU A1 sism.	-796,9	1186,2	-55700,0	5978000,0	5180000,0	0,0

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14	119	SLU A1 sism.	-795,6	3269,1	-56110,0	6418000,0	5180000,0	0,0
15	119	SLU A1 sism.	6146,2	1190,4	-57050,0	5976000,0	3714000,0	0,0
16	119	SLU A1 sism.	6147,4	3273,3	-57460,0	6416000,0	3715000,0	0,0
17	119	SLU A1 sism.	-796,9	1186,2	-55700,0	5978000,0	5180000,0	0,0
18	119	SLU A1 sism.	-795,6	3269,1	-56110,0	6418000,0	5180000,0	0,0
19	119	SLU A1 sism.	6146,2	1190,4	-57050,0	5976000,0	3714000,0	0,0
20	119	SLU A1 sism.	6147,4	3273,3	-57460,0	6416000,0	3715000,0	0,0
21	119	SLU A1 sism.	1631,8	-1242,4	-55700,0	5465000,0	4666000,0	0,0
22	119	SLU A1 sism.	1635,9	5700,7	-57050,0	6930000,0	4668000,0	0,0
23	119	SLU A1 sism.	3714,7	-1241,1	-56110,0	5464000,0	4226000,0	0,0
24	119	SLU A1 sism.	3718,8	5701,9	-57460,0	6930000,0	4229000,0	0,0
25	119	SLU A1 sism.	1631,8	-1242,4	-55700,0	5465000,0	4666000,0	0,0
26	119	SLU A1 sism.	1635,9	5700,7	-57050,0	6930000,0	4668000,0	0,0
27	119	SLU A1 sism.	3714,7	-1241,1	-56110,0	5464000,0	4226000,0	0,0
28	119	SLU A1 sism.	3718,8	5701,9	-57460,0	6930000,0	4229000,0	0,0
29	119	SLU A1 sism.	1631,8	-1242,4	-55700,0	5465000,0	4666000,0	0,0
30	119	SLU A1 sism.	1635,9	5700,7	-57050,0	6930000,0	4668000,0	0,0
31	119	SLU A1 sism.	3714,7	-1241,1	-56110,0	5464000,0	4226000,0	0,0
32	119	SLU A1 sism.	3718,8	5701,9	-57460,0	6930000,0	4229000,0	0,0
33	119	SLU A1 sism.	1631,8	-1242,4	-55700,0	5465000,0	4666000,0	0,0
34	119	SLU A1 sism.	1635,9	5700,7	-57050,0	6930000,0	4668000,0	0,0
35	119	SLU A1 sism.	3714,7	-1241,1	-56110,0	5464000,0	4226000,0	0,0
36	119	SLU A1 sism.	3718,8	5701,9	-57460,0	6930000,0	4229000,0	0,0
69	119	SLE Rare	2675,3	2229,8	-56580,0	6197000,0	4447000,0	0,0
1	135	SLU STR.	4154,7	5236,3	-59690,0	8645000,0	5841000,0	0,0
2	135	SLU STR.	3195,9	4027,9	-45910,0	6650000,0	4493000,0	0,0
5	135	SLU A1 sism.	-277,0	2983,9	-45290,0	6431000,0	5228000,0	0,0
6	135	SLU A1 sism.	-276,3	5068,8	-45810,0	6871000,0	5229000,0	0,0
7	135	SLU A1 sism.	6668,1	2987,1	-46020,0	6429000,0	3758000,0	0,0
8	135	SLU A1 sism.	6668,8	5071,9	-46530,0	6869000,0	3759000,0	0,0
9	135	SLU A1 sism.	-277,0	2983,9	-45290,0	6431000,0	5228000,0	0,0
10	135	SLU A1 sism.	-276,3	5068,8	-45810,0	6871000,0	5229000,0	0,0
11	135	SLU A1 sism.	6668,1	2987,1	-46020,0	6429000,0	3758000,0	0,0
12	135	SLU A1 sism.	6668,8	5071,9	-46530,0	6869000,0	3759000,0	0,0
13	135	SLU A1 sism.	-277,0	2983,9	-45290,0	6431000,0	5228000,0	0,0
14	135	SLU A1 sism.	-276,3	5068,8	-45810,0	6871000,0	5229000,0	0,0
15	135	SLU A1 sism.	6668,1	2987,1	-46020,0	6429000,0	3758000,0	0,0
16	135	SLU A1 sism.	6668,8	5071,9	-46530,0	6869000,0	3759000,0	0,0
17	135	SLU A1 sism.	-277,0	2983,9	-45290,0	6431000,0	5228000,0	0,0
18	135	SLU A1 sism.	-276,3	5068,8	-45810,0	6871000,0	5229000,0	0,0
19	135	SLU A1 sism.	6668,1	2987,1	-46020,0	6429000,0	3758000,0	0,0
20	135	SLU A1 sism.	6668,8	5071,9	-46530,0	6869000,0	3759000,0	0,0
21	135	SLU A1 sism.	2152,8	552,8	-44950,0	5917000,0	4713000,0	0,0
22	135	SLU A1 sism.	2155,5	7502,1	-46670,0	7383000,0	4715000,0	0,0
23	135	SLU A1 sism.	4236,4	553,7	-45160,0	5917000,0	4272000,0	0,0
24	135	SLU A1 sism.	4239,0	7503,1	-46880,0	7382000,0	4274000,0	0,0
25	135	SLU A1 sism.	2152,8	552,8	-44950,0	5917000,0	4713000,0	0,0
26	135	SLU A1 sism.	2155,5	7502,1	-46670,0	7383000,0	4715000,0	0,0
27	135	SLU A1 sism.	4236,4	553,7	-45160,0	5917000,0	4272000,0	0,0
28	135	SLU A1 sism.	4239,0	7503,1	-46880,0	7382000,0	4274000,0	0,0
29	135	SLU A1 sism.	2152,8	552,8	-44950,0	5917000,0	4713000,0	0,0
30	135	SLU A1 sism.	2155,5	7502,1	-46670,0	7383000,0	4715000,0	0,0
31	135	SLU A1 sism.	4236,4	553,7	-45160,0	5917000,0	4272000,0	0,0
32	135	SLU A1 sism.	4239,0	7503,1	-46880,0	7382000,0	4274000,0	0,0
33	135	SLU A1 sism.	2152,8	552,8	-44950,0	5917000,0	4713000,0	0,0
34	135	SLU A1 sism.	2155,5	7502,1	-46670,0	7383000,0	4715000,0	0,0
35	135	SLU A1 sism.	4236,4	553,7	-45160,0	5917000,0	4272000,0	0,0
36	135	SLU A1 sism.	4239,0	7503,1	-46880,0	7382000,0	4274000,0	0,0
69	135	SLE Rare	3195,9	4027,9	-45910,0	6650000,0	4493000,0	0,0
1	147	SLU STR.	-214,3	8559,8	-59590,0	9682000,0	7497000,0	0,0
2	147	SLU STR.	-164,8	6584,5	-45840,0	7448000,0	5767000,0	0,0
5	147	SLU A1 sism.	-3655,8	5535,0	-45690,0	7225000,0	6509000,0	0,0
6	147	SLU A1 sism.	-3655,8	7633,9	-45990,0	7670000,0	6509000,0	0,0
7	147	SLU A1 sism.	3326,2	5535,0	-45690,0	7225000,0	5025000,0	0,0



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8	147	SLU A1 sism.	3326,2	7633,9	-45990,0	7670000,0	5025000,0	0,0
9	147	SLU A1 sism.	-3655,8	5535,0	-45690,0	7225000,0	6509000,0	0,0
10	147	SLU A1 sism.	-3655,8	7633,9	-45990,0	7670000,0	6509000,0	0,0
11	147	SLU A1 sism.	3326,2	5535,0	-45690,0	7225000,0	5025000,0	0,0
12	147	SLU A1 sism.	3326,2	7633,9	-45990,0	7670000,0	5025000,0	0,0
13	147	SLU A1 sism.	-3655,8	5535,0	-45690,0	7225000,0	6509000,0	0,0
14	147	SLU A1 sism.	-3655,8	7633,9	-45990,0	7670000,0	6509000,0	0,0
15	147	SLU A1 sism.	3326,2	5535,0	-45690,0	7225000,0	5025000,0	0,0
16	147	SLU A1 sism.	3326,2	7633,9	-45990,0	7670000,0	5025000,0	0,0
17	147	SLU A1 sism.	-3655,8	5535,0	-45690,0	7225000,0	6509000,0	0,0
18	147	SLU A1 sism.	-3655,8	7633,9	-45990,0	7670000,0	6509000,0	0,0
19	147	SLU A1 sism.	3326,2	5535,0	-45690,0	7225000,0	5025000,0	0,0
20	147	SLU A1 sism.	3326,2	7633,9	-45990,0	7670000,0	5025000,0	0,0
21	147	SLU A1 sism.	-1212,1	3086,4	-45340,0	6705000,0	5990000,0	0,0
22	147	SLU A1 sism.	-1212,1	10080,0	-46330,0	8190000,0	5990000,0	0,0
23	147	SLU A1 sism.	882,5	3086,4	-45340,0	6705000,0	5545000,0	0,0
24	147	SLU A1 sism.	882,5	10080,0	-46330,0	8190000,0	5545000,0	0,0
25	147	SLU A1 sism.	-1212,1	3086,4	-45340,0	6705000,0	5990000,0	0,0
26	147	SLU A1 sism.	-1212,1	10080,0	-46330,0	8190000,0	5990000,0	0,0
27	147	SLU A1 sism.	882,5	3086,4	-45340,0	6705000,0	5545000,0	0,0
28	147	SLU A1 sism.	882,5	10080,0	-46330,0	8190000,0	5545000,0	0,0
29	147	SLU A1 sism.	-1212,1	3086,4	-45340,0	6705000,0	5990000,0	0,0
30	147	SLU A1 sism.	-1212,1	10080,0	-46330,0	8190000,0	5990000,0	0,0
31	147	SLU A1 sism.	882,5	3086,4	-45340,0	6705000,0	5545000,0	0,0
32	147	SLU A1 sism.	882,5	10080,0	-46330,0	8190000,0	5545000,0	0,0
33	147	SLU A1 sism.	-1212,1	3086,4	-45340,0	6705000,0	5990000,0	0,0
34	147	SLU A1 sism.	-1212,1	10080,0	-46330,0	8190000,0	5990000,0	0,0
35	147	SLU A1 sism.	882,5	3086,4	-45340,0	6705000,0	5545000,0	0,0
36	147	SLU A1 sism.	882,5	10080,0	-46330,0	8190000,0	5545000,0	0,0
69	147	SLE Rare	-164,8	6584,5	-45840,0	7448000,0	5767000,0	0,0
1	151	SLU STR.	4255,5	7698,1	-47640,0	9185000,0	5941000,0	0,0
2	151	SLU STR.	3273,4	5921,6	-36650,0	7065000,0	4570000,0	0,0
5	151	SLU A1 sism.	-199,9	4878,8	-36370,0	6845000,0	5306000,0	0,0
6	151	SLU A1 sism.	-199,9	6964,4	-36930,0	7285000,0	5306000,0	0,0
7	151	SLU A1 sism.	6746,7	4878,8	-36370,0	6845000,0	3834000,0	0,0
8	151	SLU A1 sism.	6746,7	6964,4	-36930,0	7285000,0	3834000,0	0,0
9	151	SLU A1 sism.	-199,9	4878,8	-36370,0	6845000,0	5306000,0	0,0
10	151	SLU A1 sism.	-199,9	6964,4	-36930,0	7285000,0	5306000,0	0,0
11	151	SLU A1 sism.	6746,7	4878,8	-36370,0	6845000,0	3834000,0	0,0
12	151	SLU A1 sism.	6746,7	6964,4	-36930,0	7285000,0	3834000,0	0,0
13	151	SLU A1 sism.	-199,9	4878,8	-36370,0	6845000,0	5306000,0	0,0
14	151	SLU A1 sism.	-199,9	6964,4	-36930,0	7285000,0	5306000,0	0,0
15	151	SLU A1 sism.	6746,7	4878,8	-36370,0	6845000,0	3834000,0	0,0
16	151	SLU A1 sism.	6746,7	6964,4	-36930,0	7285000,0	3834000,0	0,0
17	151	SLU A1 sism.	-199,9	4878,8	-36370,0	6845000,0	5306000,0	0,0
18	151	SLU A1 sism.	-199,9	6964,4	-36930,0	7285000,0	5306000,0	0,0
19	151	SLU A1 sism.	6746,7	4878,8	-36370,0	6845000,0	3834000,0	0,0
20	151	SLU A1 sism.	6746,7	6964,4	-36930,0	7285000,0	3834000,0	0,0
21	151	SLU A1 sism.	2231,5	2445,5	-35720,0	6332000,0	4791000,0	0,0
22	151	SLU A1 sism.	2231,5	9397,7	-37570,0	7798000,0	4791000,0	0,0
23	151	SLU A1 sism.	4315,4	2445,5	-35720,0	6332000,0	4349000,0	0,0
24	151	SLU A1 sism.	4315,4	9397,7	-37570,0	7798000,0	4349000,0	0,0
25	151	SLU A1 sism.	2231,5	2445,5	-35720,0	6332000,0	4791000,0	0,0
26	151	SLU A1 sism.	2231,5	9397,7	-37570,0	7798000,0	4791000,0	0,0
27	151	SLU A1 sism.	4315,4	2445,5	-35720,0	6332000,0	4349000,0	0,0
28	151	SLU A1 sism.	4315,4	9397,7	-37570,0	7798000,0	4349000,0	0,0
29	151	SLU A1 sism.	2231,5	2445,5	-35720,0	6332000,0	4791000,0	0,0
30	151	SLU A1 sism.	2231,5	9397,7	-37570,0	7798000,0	4791000,0	0,0
31	151	SLU A1 sism.	4315,4	2445,5	-35720,0	6332000,0	4349000,0	0,0
32	151	SLU A1 sism.	4315,4	9397,7	-37570,0	7798000,0	4349000,0	0,0
33	151	SLU A1 sism.	2231,5	2445,5	-35720,0	6332000,0	4791000,0	0,0
34	151	SLU A1 sism.	2231,5	9397,7	-37570,0	7798000,0	4791000,0	0,0
35	151	SLU A1 sism.	4315,4	2445,5	-35720,0	6332000,0	4349000,0	0,0
36	151	SLU A1 sism.	4315,4	9397,7	-37570,0	7798000,0	4349000,0	0,0



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69	151	SLE Rare	3273,4	5921,6	-36650,0	7065000,0	4570000,0	0,0
1	167	SLU STR.	3718,5	10270,0	-39130,0	9790000,0	6092000,0	0,0
2	167	SLU STR.	2860,4	7900,5	-30100,0	7531000,0	4686000,0	0,0
5	167	SLU A1 sism.	-611,8	6859,6	-30200,0	7310000,0	5421000,0	0,0
6	167	SLU A1 sism.	-612,6	8944,4	-30720,0	7750000,0	5421000,0	0,0
7	167	SLU A1 sism.	6333,3	6856,5	-29480,0	7312000,0	3952000,0	0,0
8	167	SLU A1 sism.	6332,6	8941,3	-30000,0	7751000,0	3951000,0	0,0
9	167	SLU A1 sism.	-611,8	6859,6	-30200,0	7310000,0	5421000,0	0,0
10	167	SLU A1 sism.	-612,6	8944,4	-30720,0	7750000,0	5421000,0	0,0
11	167	SLU A1 sism.	6333,3	6856,5	-29480,0	7312000,0	3952000,0	0,0
12	167	SLU A1 sism.	6332,6	8941,3	-30000,0	7751000,0	3951000,0	0,0
13	167	SLU A1 sism.	-611,8	6859,6	-30200,0	7310000,0	5421000,0	0,0
14	167	SLU A1 sism.	-612,6	8944,4	-30720,0	7750000,0	5421000,0	0,0
15	167	SLU A1 sism.	6333,3	6856,5	-29480,0	7312000,0	3952000,0	0,0
16	167	SLU A1 sism.	6332,6	8941,3	-30000,0	7751000,0	3951000,0	0,0
17	167	SLU A1 sism.	-611,8	6859,6	-30200,0	7310000,0	5421000,0	0,0
18	167	SLU A1 sism.	-612,6	8944,4	-30720,0	7750000,0	5421000,0	0,0
19	167	SLU A1 sism.	6333,3	6856,5	-29480,0	7312000,0	3952000,0	0,0
20	167	SLU A1 sism.	6332,6	8941,3	-30000,0	7751000,0	3951000,0	0,0
21	167	SLU A1 sism.	1819,9	4426,3	-29350,0	6798000,0	4908000,0	0,0
22	167	SLU A1 sism.	1817,3	11380,0	-31070,0	8263000,0	4906000,0	0,0
23	167	SLU A1 sism.	3903,5	4425,3	-29130,0	6798000,0	4467000,0	0,0
24	167	SLU A1 sism.	3900,8	11370,0	-30850,0	8264000,0	4465000,0	0,0
25	167	SLU A1 sism.	1819,9	4426,3	-29350,0	6798000,0	4908000,0	0,0
26	167	SLU A1 sism.	1817,3	11380,0	-31070,0	8263000,0	4906000,0	0,0
27	167	SLU A1 sism.	3903,5	4425,3	-29130,0	6798000,0	4467000,0	0,0
28	167	SLU A1 sism.	3900,8	11370,0	-30850,0	8264000,0	4465000,0	0,0
29	167	SLU A1 sism.	1819,9	4426,3	-29350,0	6798000,0	4908000,0	0,0
30	167	SLU A1 sism.	1817,3	11380,0	-31070,0	8263000,0	4906000,0	0,0
31	167	SLU A1 sism.	3903,5	4425,3	-29130,0	6798000,0	4467000,0	0,0
32	167	SLU A1 sism.	3900,8	11370,0	-30850,0	8264000,0	4465000,0	0,0
33	167	SLU A1 sism.	1819,9	4426,3	-29350,0	6798000,0	4908000,0	0,0
34	167	SLU A1 sism.	1817,3	11380,0	-31070,0	8263000,0	4906000,0	0,0
35	167	SLU A1 sism.	3903,5	4425,3	-29130,0	6798000,0	4467000,0	0,0
36	167	SLU A1 sism.	3900,8	11370,0	-30850,0	8264000,0	4465000,0	0,0
69	167	SLE Rare	2860,4	7900,5	-30100,0	7531000,0	4686000,0	0,0
1	179	SLU STR.	-350,3	11120,0	-49750,0	10150000,0	7367000,0	0,0
2	179	SLU STR.	-269,5	8556,6	-38270,0	7808000,0	5667000,0	0,0
5	179	SLU A1 sism.	-3757,1	7512,7	-38560,0	7586000,0	6407000,0	0,0
6	179	SLU A1 sism.	-3758,6	9605,7	-38810,0	8030000,0	6406000,0	0,0
7	179	SLU A1 sism.	3219,7	7507,5	-37740,0	7586000,0	4927000,0	0,0
8	179	SLU A1 sism.	3218,1	9600,5	-37980,0	8030000,0	4927000,0	0,0
9	179	SLU A1 sism.	-3757,1	7512,7	-38560,0	7586000,0	6407000,0	0,0
10	179	SLU A1 sism.	-3758,6	9605,7	-38810,0	8030000,0	6406000,0	0,0
11	179	SLU A1 sism.	3219,7	7507,5	-37740,0	7586000,0	4927000,0	0,0
12	179	SLU A1 sism.	3218,1	9600,5	-37980,0	8030000,0	4927000,0	0,0
13	179	SLU A1 sism.	-3757,1	7512,7	-38560,0	7586000,0	6407000,0	0,0
14	179	SLU A1 sism.	-3758,6	9605,7	-38810,0	8030000,0	6406000,0	0,0
15	179	SLU A1 sism.	3219,7	7507,5	-37740,0	7586000,0	4927000,0	0,0
16	179	SLU A1 sism.	3218,1	9600,5	-37980,0	8030000,0	4927000,0	0,0
17	179	SLU A1 sism.	-3757,1	7512,7	-38560,0	7586000,0	6407000,0	0,0
18	179	SLU A1 sism.	-3758,6	9605,7	-38810,0	8030000,0	6406000,0	0,0
19	179	SLU A1 sism.	3219,7	7507,5	-37740,0	7586000,0	4927000,0	0,0
20	179	SLU A1 sism.	3218,1	9600,5	-37980,0	8030000,0	4927000,0	0,0
21	179	SLU A1 sism.	-1313,4	5069,0	-37980,0	7068000,0	5889000,0	0,0
22	179	SLU A1 sism.	-1318,6	12050,0	-38810,0	8548000,0	5888000,0	0,0
23	179	SLU A1 sism.	779,6	5067,5	-37740,0	7068000,0	5445000,0	0,0
24	179	SLU A1 sism.	774,4	12040,0	-38560,0	8548000,0	5444000,0	0,0
25	179	SLU A1 sism.	-1313,4	5069,0	-37980,0	7068000,0	5889000,0	0,0
26	179	SLU A1 sism.	-1318,6	12050,0	-38810,0	8548000,0	5888000,0	0,0
27	179	SLU A1 sism.	779,6	5067,5	-37740,0	7068000,0	5445000,0	0,0
28	179	SLU A1 sism.	774,4	12040,0	-38560,0	8548000,0	5444000,0	0,0
29	179	SLU A1 sism.	-1313,4	5069,0	-37980,0	7068000,0	5889000,0	0,0
30	179	SLU A1 sism.	-1318,6	12050,0	-38810,0	8548000,0	5888000,0	0,0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

31	179	SLU A1 sism.	779,6	5067,5	-37740,0	7068000,0	5445000,0	0,0
32	179	SLU A1 sism.	774,4	12040,0	-38560,0	8548000,0	5444000,0	0,0
33	179	SLU A1 sism.	-1313,4	5069,0	-37980,0	7068000,0	5889000,0	0,0
34	179	SLU A1 sism.	-1318,6	12050,0	-38810,0	8548000,0	5888000,0	0,0
35	179	SLU A1 sism.	779,6	5067,5	-37740,0	7068000,0	5445000,0	0,0
36	179	SLU A1 sism.	774,4	12040,0	-38560,0	8548000,0	5444000,0	0,0
69	179	SLE Rare	-269,5	8556,6	-38270,0	7808000,0	5667000,0	0,0
1	183	SLU STR.	2299,9	12740,0	-35310,0	10460000,0	6461000,0	0,0
2	183	SLU STR.	1769,1	9797,5	-27160,0	8043000,0	4970000,0	0,0
5	183	SLU A1 sism.	-1701,8	8758,2	-27630,0	7822000,0	5703000,0	0,0
6	183	SLU A1 sism.	-1703,0	10840,0	-28040,0	8261000,0	5703000,0	0,0
7	183	SLU A1 sism.	5241,3	8754,0	-26290,0	7824000,0	4238000,0	0,0
8	183	SLU A1 sism.	5240,0	10840,0	-26690,0	8264000,0	4237000,0	0,0
9	183	SLU A1 sism.	-1701,8	8758,2	-27630,0	7822000,0	5703000,0	0,0
10	183	SLU A1 sism.	-1703,0	10840,0	-28040,0	8261000,0	5703000,0	0,0
11	183	SLU A1 sism.	5241,3	8754,0	-26290,0	7824000,0	4238000,0	0,0
12	183	SLU A1 sism.	5240,0	10840,0	-26690,0	8264000,0	4237000,0	0,0
13	183	SLU A1 sism.	-1701,8	8758,2	-27630,0	7822000,0	5703000,0	0,0
14	183	SLU A1 sism.	-1703,0	10840,0	-28040,0	8261000,0	5703000,0	0,0
15	183	SLU A1 sism.	5241,3	8754,0	-26290,0	7824000,0	4238000,0	0,0
16	183	SLU A1 sism.	5240,0	10840,0	-26690,0	8264000,0	4237000,0	0,0
17	183	SLU A1 sism.	-1701,8	8758,2	-27630,0	7822000,0	5703000,0	0,0
18	183	SLU A1 sism.	-1703,0	10840,0	-28040,0	8261000,0	5703000,0	0,0
19	183	SLU A1 sism.	5241,3	8754,0	-26290,0	7824000,0	4238000,0	0,0
20	183	SLU A1 sism.	5240,0	10840,0	-26690,0	8264000,0	4237000,0	0,0
21	183	SLU A1 sism.	729,8	6326,7	-26690,0	7310000,0	5191000,0	0,0
22	183	SLU A1 sism.	725,6	13270,0	-28040,0	8775000,0	5189000,0	0,0
23	183	SLU A1 sism.	2812,7	6325,4	-26290,0	7310000,0	4752000,0	0,0
24	183	SLU A1 sism.	2808,5	13270,0	-27630,0	8776000,0	4749000,0	0,0
25	183	SLU A1 sism.	729,8	6326,7	-26690,0	7310000,0	5191000,0	0,0
26	183	SLU A1 sism.	725,6	13270,0	-28040,0	8775000,0	5189000,0	0,0
27	183	SLU A1 sism.	2812,7	6325,4	-26290,0	7310000,0	4752000,0	0,0
28	183	SLU A1 sism.	2808,5	13270,0	-27630,0	8776000,0	4749000,0	0,0
29	183	SLU A1 sism.	729,8	6326,7	-26690,0	7310000,0	5191000,0	0,0
30	183	SLU A1 sism.	725,6	13270,0	-28040,0	8775000,0	5189000,0	0,0
31	183	SLU A1 sism.	2812,7	6325,4	-26290,0	7310000,0	4752000,0	0,0
32	183	SLU A1 sism.	2808,5	13270,0	-27630,0	8776000,0	4749000,0	0,0
33	183	SLU A1 sism.	729,8	6326,7	-26690,0	7310000,0	5191000,0	0,0
34	183	SLU A1 sism.	725,6	13270,0	-28040,0	8775000,0	5189000,0	0,0
35	183	SLU A1 sism.	2812,7	6325,4	-26290,0	7310000,0	4752000,0	0,0
36	183	SLU A1 sism.	2808,5	13270,0	-27630,0	8776000,0	4749000,0	0,0
69	183	SLE Rare	1769,1	9797,5	-27160,0	8043000,0	4970000,0	0,0
1	199	SLU STR.	-410,9	14400,0	-38580,0	10970000,0	7268000,0	0,0
2	199	SLU STR.	-316,1	11080,0	-29670,0	8436000,0	5591000,0	0,0
5	199	SLU A1 sism.	-3790,3	10040,0	-30420,0	8215000,0	6324000,0	0,0
6	199	SLU A1 sism.	-3791,2	12120,0	-30640,0	8655000,0	6324000,0	0,0
7	199	SLU A1 sism.	3159,1	10030,0	-28700,0	8216000,0	4859000,0	0,0
8	199	SLU A1 sism.	3158,2	12120,0	-28920,0	8657000,0	4858000,0	0,0
9	199	SLU A1 sism.	-3790,3	10040,0	-30420,0	8215000,0	6324000,0	0,0
10	199	SLU A1 sism.	-3791,2	12120,0	-30640,0	8655000,0	6324000,0	0,0
11	199	SLU A1 sism.	3159,1	10030,0	-28700,0	8216000,0	4859000,0	0,0
12	199	SLU A1 sism.	3158,2	12120,0	-28920,0	8657000,0	4858000,0	0,0
13	199	SLU A1 sism.	-3790,3	10040,0	-30420,0	8215000,0	6324000,0	0,0
14	199	SLU A1 sism.	-3791,2	12120,0	-30640,0	8655000,0	6324000,0	0,0
15	199	SLU A1 sism.	3159,1	10030,0	-28700,0	8216000,0	4859000,0	0,0
16	199	SLU A1 sism.	3158,2	12120,0	-28920,0	8657000,0	4858000,0	0,0
17	199	SLU A1 sism.	-3790,3	10040,0	-30420,0	8215000,0	6324000,0	0,0
18	199	SLU A1 sism.	-3791,2	12120,0	-30640,0	8655000,0	6324000,0	0,0
19	199	SLU A1 sism.	3159,1	10030,0	-28700,0	8216000,0	4859000,0	0,0
20	199	SLU A1 sism.	3158,2	12120,0	-28920,0	8657000,0	4858000,0	0,0
21	199	SLU A1 sism.	-1356,9	7604,7	-29570,0	7701000,0	5812000,0	0,0
22	199	SLU A1 sism.	-1360,0	14550,0	-30290,0	9171000,0	5810000,0	0,0
23	199	SLU A1 sism.	727,9	7603,9	-29050,0	7701000,0	5372000,0	0,0
24	199	SLU A1 sism.	724,8	14550,0	-29780,0	9171000,0	5370000,0	0,0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

25	199	SLU A1 sism.	-1356,9	7604,7	-29570,0	7701000,0	5812000,0	0,0
26	199	SLU A1 sism.	-1360,0	14550,0	-30290,0	9171000,0	5810000,0	0,0
27	199	SLU A1 sism.	727,9	7603,9	-29050,0	7701000,0	5372000,0	0,0
28	199	SLU A1 sism.	724,8	14550,0	-29780,0	9171000,0	5370000,0	0,0
29	199	SLU A1 sism.	-1356,9	7604,7	-29570,0	7701000,0	5812000,0	0,0
30	199	SLU A1 sism.	-1360,0	14550,0	-30290,0	9171000,0	5810000,0	0,0
31	199	SLU A1 sism.	727,9	7603,9	-29050,0	7701000,0	5372000,0	0,0
32	199	SLU A1 sism.	724,8	14550,0	-29780,0	9171000,0	5370000,0	0,0
33	199	SLU A1 sism.	-1356,9	7604,7	-29570,0	7701000,0	5812000,0	0,0
34	199	SLU A1 sism.	-1360,0	14550,0	-30290,0	9171000,0	5810000,0	0,0
35	199	SLU A1 sism.	727,9	7603,9	-29050,0	7701000,0	5372000,0	0,0
36	199	SLU A1 sism.	724,8	14550,0	-29780,0	9171000,0	5370000,0	0,0
69	199	SLE Rare	-316,1	11080,0	-29670,0	8436000,0	5591000,0	0,0
1	211	SLU STR.	-4680,3	12410,0	-59040,0	10690000,0	8858000,0	0,0
2	211	SLU STR.	-3600,2	9547,9	-45420,0	8221000,0	6814000,0	0,0
5	211	SLU A1 sism.	-7098,3	8500,6	-45910,0	7998000,0	7557000,0	0,0
6	211	SLU A1 sism.	-7098,3	10600,0	-45910,0	8444000,0	7557000,0	0,0
7	211	SLU A1 sism.	-102,1	8500,6	-44920,0	7998000,0	6072000,0	0,0
8	211	SLU A1 sism.	-102,1	10600,0	-44920,0	8444000,0	6072000,0	0,0
9	211	SLU A1 sism.	-7098,3	8500,6	-45910,0	7998000,0	7557000,0	0,0
10	211	SLU A1 sism.	-7098,3	10600,0	-45910,0	8444000,0	7557000,0	0,0
11	211	SLU A1 sism.	-102,1	8500,6	-44920,0	7998000,0	6072000,0	0,0
12	211	SLU A1 sism.	-102,1	10600,0	-44920,0	8444000,0	6072000,0	0,0
13	211	SLU A1 sism.	-7098,3	8500,6	-45910,0	7998000,0	7557000,0	0,0
14	211	SLU A1 sism.	-7098,3	10600,0	-45910,0	8444000,0	7557000,0	0,0
15	211	SLU A1 sism.	-102,1	8500,6	-44920,0	7998000,0	6072000,0	0,0
16	211	SLU A1 sism.	-102,1	10600,0	-44920,0	8444000,0	6072000,0	0,0
17	211	SLU A1 sism.	-7098,3	8500,6	-45910,0	7998000,0	7557000,0	0,0
18	211	SLU A1 sism.	-7098,3	10600,0	-45910,0	8444000,0	7557000,0	0,0
19	211	SLU A1 sism.	-102,1	8500,6	-44920,0	7998000,0	6072000,0	0,0
20	211	SLU A1 sism.	-102,1	10600,0	-44920,0	8444000,0	6072000,0	0,0
21	211	SLU A1 sism.	-4649,6	6056,9	-45570,0	7479000,0	7037000,0	0,0
22	211	SLU A1 sism.	-4649,6	13040,0	-45570,0	8963000,0	7037000,0	0,0
23	211	SLU A1 sism.	-2550,8	6056,9	-45270,0	7479000,0	6591000,0	0,0
24	211	SLU A1 sism.	-2550,8	13040,0	-45270,0	8963000,0	6591000,0	0,0
25	211	SLU A1 sism.	-4649,6	6056,9	-45570,0	7479000,0	7037000,0	0,0
26	211	SLU A1 sism.	-4649,6	13040,0	-45570,0	8963000,0	7037000,0	0,0
27	211	SLU A1 sism.	-2550,8	6056,9	-45270,0	7479000,0	6591000,0	0,0
28	211	SLU A1 sism.	-2550,8	13040,0	-45270,0	8963000,0	6591000,0	0,0
29	211	SLU A1 sism.	-4649,6	6056,9	-45570,0	7479000,0	7037000,0	0,0
30	211	SLU A1 sism.	-4649,6	13040,0	-45570,0	8963000,0	7037000,0	0,0
31	211	SLU A1 sism.	-2550,8	6056,9	-45270,0	7479000,0	6591000,0	0,0
32	211	SLU A1 sism.	-2550,8	13040,0	-45270,0	8963000,0	6591000,0	0,0
33	211	SLU A1 sism.	-4649,6	6056,9	-45570,0	7479000,0	7037000,0	0,0
34	211	SLU A1 sism.	-4649,6	13040,0	-45570,0	8963000,0	7037000,0	0,0
35	211	SLU A1 sism.	-2550,8	6056,9	-45270,0	7479000,0	6591000,0	0,0
36	211	SLU A1 sism.	-2550,8	13040,0	-45270,0	8963000,0	6591000,0	0,0
69	211	SLE Rare	-3600,2	9547,9	-45420,0	8221000,0	6814000,0	0,0
1	231	SLU STR.	-7388,8	13970,0	-58330,0	10710000,0	9541000,0	0,0
2	231	SLU STR.	-5683,7	10740,0	-44870,0	8242000,0	7339000,0	0,0
5	231	SLU A1 sism.	-9158,9	9700,5	-45840,0	8022000,0	8072000,0	0,0
6	231	SLU A1 sism.	-9157,9	11780,0	-45620,0	8463000,0	8072000,0	0,0
7	231	SLU A1 sism.	-2209,5	9703,1	-44120,0	8020000,0	6606000,0	0,0
8	231	SLU A1 sism.	-2208,6	11790,0	-43900,0	8461000,0	6606000,0	0,0
9	231	SLU A1 sism.	-9158,9	9700,5	-45840,0	8022000,0	8072000,0	0,0
10	231	SLU A1 sism.	-9157,9	11780,0	-45620,0	8463000,0	8072000,0	0,0
11	231	SLU A1 sism.	-2209,5	9703,1	-44120,0	8020000,0	6606000,0	0,0
12	231	SLU A1 sism.	-2208,6	11790,0	-43900,0	8461000,0	6606000,0	0,0
13	231	SLU A1 sism.	-9158,9	9700,5	-45840,0	8022000,0	8072000,0	0,0
14	231	SLU A1 sism.	-9157,9	11780,0	-45620,0	8463000,0	8072000,0	0,0
15	231	SLU A1 sism.	-2209,5	9703,1	-44120,0	8020000,0	6606000,0	0,0
16	231	SLU A1 sism.	-2208,6	11790,0	-43900,0	8461000,0	6606000,0	0,0
17	231	SLU A1 sism.	-9158,9	9700,5	-45840,0	8022000,0	8072000,0	0,0
18	231	SLU A1 sism.	-9157,9	11780,0	-45620,0	8463000,0	8072000,0	0,0

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*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

19	231	SLU A1 sism.	-2209,5	9703,1	-44120,0	8020000,0	6606000,0	0,0
20	231	SLU A1 sism.	-2208,6	11790,0	-43900,0	8461000,0	6606000,0	0,0
21	231	SLU A1 sism.	-6727,7	7270,6	-45490,0	7507000,0	7558000,0	0,0
22	231	SLU A1 sism.	-6724,6	14220,0	-44770,0	8977000,0	7560000,0	0,0
23	231	SLU A1 sism.	-4642,9	7271,4	-44980,0	7506000,0	7118000,0	0,0
24	231	SLU A1 sism.	-4639,8	14220,0	-44250,0	8976000,0	7120000,0	0,0
25	231	SLU A1 sism.	-6727,7	7270,6	-45490,0	7507000,0	7558000,0	0,0
26	231	SLU A1 sism.	-6724,6	14220,0	-44770,0	8977000,0	7560000,0	0,0
27	231	SLU A1 sism.	-4642,9	7271,4	-44980,0	7506000,0	7118000,0	0,0
28	231	SLU A1 sism.	-4639,8	14220,0	-44250,0	8976000,0	7120000,0	0,0
29	231	SLU A1 sism.	-6727,7	7270,6	-45490,0	7507000,0	7558000,0	0,0
30	231	SLU A1 sism.	-6724,6	14220,0	-44770,0	8977000,0	7560000,0	0,0
31	231	SLU A1 sism.	-4642,9	7271,4	-44980,0	7506000,0	7118000,0	0,0
32	231	SLU A1 sism.	-4639,8	14220,0	-44250,0	8976000,0	7120000,0	0,0
33	231	SLU A1 sism.	-6727,7	7270,6	-45490,0	7507000,0	7558000,0	0,0
34	231	SLU A1 sism.	-6724,6	14220,0	-44770,0	8977000,0	7560000,0	0,0
35	231	SLU A1 sism.	-4642,9	7271,4	-44980,0	7506000,0	7118000,0	0,0
36	231	SLU A1 sism.	-4639,8	14220,0	-44250,0	8976000,0	7120000,0	0,0
69	231	SLE Rare	-5683,7	10740,0	-44870,0	8242000,0	7339000,0	0,0
1	243	SLU STR.	-8947,5	10050,0	-73200,0	9524000,0	10310000,0	0,0
2	243	SLU STR.	-6882,7	7728,0	-56310,0	7326000,0	7932000,0	0,0
5	243	SLU A1 sism.	-10370,0	6678,8	-56840,0	7105000,0	8671000,0	0,0
6	243	SLU A1 sism.	-10370,0	8771,9	-56590,0	7548000,0	8672000,0	0,0
7	243	SLU A1 sism.	-3395,1	6684,1	-56020,0	7104000,0	7192000,0	0,0
8	243	SLU A1 sism.	-3393,6	8777,1	-55770,0	7548000,0	7192000,0	0,0
9	243	SLU A1 sism.	-10370,0	6678,8	-56840,0	7105000,0	8671000,0	0,0
10	243	SLU A1 sism.	-10370,0	8771,9	-56590,0	7548000,0	8672000,0	0,0
11	243	SLU A1 sism.	-3395,1	6684,1	-56020,0	7104000,0	7192000,0	0,0
12	243	SLU A1 sism.	-3393,6	8777,1	-55770,0	7548000,0	7192000,0	0,0
13	243	SLU A1 sism.	-10370,0	6678,8	-56840,0	7105000,0	8671000,0	0,0
14	243	SLU A1 sism.	-10370,0	8771,9	-56590,0	7548000,0	8672000,0	0,0
15	243	SLU A1 sism.	-3395,1	6684,1	-56020,0	7104000,0	7192000,0	0,0
16	243	SLU A1 sism.	-3393,6	8777,1	-55770,0	7548000,0	7192000,0	0,0
17	243	SLU A1 sism.	-10370,0	6678,8	-56840,0	7105000,0	8671000,0	0,0
18	243	SLU A1 sism.	-10370,0	8771,9	-56590,0	7548000,0	8672000,0	0,0
19	243	SLU A1 sism.	-3395,1	6684,1	-56020,0	7104000,0	7192000,0	0,0
20	243	SLU A1 sism.	-3393,6	8777,1	-55770,0	7548000,0	7192000,0	0,0
21	243	SLU A1 sism.	-7931,8	4238,8	-56840,0	6586000,0	8153000,0	0,0
22	243	SLU A1 sism.	-7926,6	11220,0	-56020,0	8066000,0	8154000,0	0,0
23	243	SLU A1 sism.	-5838,8	4240,4	-56590,0	6586000,0	7709000,0	0,0
24	243	SLU A1 sism.	-5833,6	11220,0	-55770,0	8066000,0	7710000,0	0,0
25	243	SLU A1 sism.	-7931,8	4238,8	-56840,0	6586000,0	8153000,0	0,0
26	243	SLU A1 sism.	-7926,6	11220,0	-56020,0	8066000,0	8154000,0	0,0
27	243	SLU A1 sism.	-5838,8	4240,4	-56590,0	6586000,0	7709000,0	0,0
28	243	SLU A1 sism.	-5833,6	11220,0	-55770,0	8066000,0	7710000,0	0,0
29	243	SLU A1 sism.	-7931,8	4238,8	-56840,0	6586000,0	8153000,0	0,0
30	243	SLU A1 sism.	-7926,6	11220,0	-56020,0	8066000,0	8154000,0	0,0
31	243	SLU A1 sism.	-5838,8	4240,4	-56590,0	6586000,0	7709000,0	0,0
32	243	SLU A1 sism.	-5833,6	11220,0	-55770,0	8066000,0	7710000,0	0,0
33	243	SLU A1 sism.	-7931,8	4238,8	-56840,0	6586000,0	8153000,0	0,0
34	243	SLU A1 sism.	-7926,6	11220,0	-56020,0	8066000,0	8154000,0	0,0
35	243	SLU A1 sism.	-5838,8	4240,4	-56590,0	6586000,0	7709000,0	0,0
36	243	SLU A1 sism.	-5833,6	11220,0	-55770,0	8066000,0	7710000,0	0,0
69	243	SLE Rare	-6882,7	7728,0	-56310,0	7326000,0	7932000,0	0,0
1	247	SLU STR.	-10240,0	11560,0	-72060,0	9773000,0	10430000,0	0,0
2	247	SLU STR.	-7873,3	8894,9	-55430,0	7518000,0	8019000,0	0,0
5	247	SLU A1 sism.	-11350,0	7851,4	-56300,0	7299000,0	8752000,0	0,0
6	247	SLU A1 sism.	-11340,0	9934,3	-55900,0	7739000,0	8753000,0	0,0
7	247	SLU A1 sism.	-4402,4	7855,6	-54950,0	7297000,0	7286000,0	0,0
8	247	SLU A1 sism.	-4401,1	9938,5	-54550,0	7736000,0	7287000,0	0,0
9	247	SLU A1 sism.	-11350,0	7851,4	-56300,0	7299000,0	8752000,0	0,0
10	247	SLU A1 sism.	-11340,0	9934,3	-55900,0	7739000,0	8753000,0	0,0
11	247	SLU A1 sism.	-4402,4	7855,6	-54950,0	7297000,0	7286000,0	0,0
12	247	SLU A1 sism.	-4401,1	9938,5	-54550,0	7736000,0	7287000,0	0,0



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

13	247	SLU A1 sism.	-11350,0	7851,4	-56300,0	7299000,0	8752000,0	0,0
14	247	SLU A1 sism.	-11340,0	9934,3	-55900,0	7739000,0	8753000,0	0,0
15	247	SLU A1 sism.	-4402,4	7855,6	-54950,0	7297000,0	7286000,0	0,0
16	247	SLU A1 sism.	-4401,1	9938,5	-54550,0	7736000,0	7287000,0	0,0
17	247	SLU A1 sism.	-11350,0	7851,4	-56300,0	7299000,0	8752000,0	0,0
18	247	SLU A1 sism.	-11340,0	9934,3	-55900,0	7739000,0	8753000,0	0,0
19	247	SLU A1 sism.	-4402,4	7855,6	-54950,0	7297000,0	7286000,0	0,0
20	247	SLU A1 sism.	-4401,1	9938,5	-54550,0	7736000,0	7287000,0	0,0
21	247	SLU A1 sism.	-8916,8	5422,8	-56300,0	6785000,0	8238000,0	0,0
22	247	SLU A1 sism.	-8912,6	12370,0	-54950,0	8251000,0	8240000,0	0,0
23	247	SLU A1 sism.	-6833,9	5424,1	-55900,0	6785000,0	7798000,0	0,0
24	247	SLU A1 sism.	-6829,7	12370,0	-54550,0	8250000,0	7801000,0	0,0
25	247	SLU A1 sism.	-8916,8	5422,8	-56300,0	6785000,0	8238000,0	0,0
26	247	SLU A1 sism.	-8912,6	12370,0	-54950,0	8251000,0	8240000,0	0,0
27	247	SLU A1 sism.	-6833,9	5424,1	-55900,0	6785000,0	7798000,0	0,0
28	247	SLU A1 sism.	-6829,7	12370,0	-54550,0	8250000,0	7801000,0	0,0
29	247	SLU A1 sism.	-8916,8	5422,8	-56300,0	6785000,0	8238000,0	0,0
30	247	SLU A1 sism.	-8912,6	12370,0	-54950,0	8251000,0	8240000,0	0,0
31	247	SLU A1 sism.	-6833,9	5424,1	-55900,0	6785000,0	7798000,0	0,0
32	247	SLU A1 sism.	-6829,7	12370,0	-54550,0	8250000,0	7801000,0	0,0
33	247	SLU A1 sism.	-8916,8	5422,8	-56300,0	6785000,0	8238000,0	0,0
34	247	SLU A1 sism.	-8912,6	12370,0	-54950,0	8251000,0	8240000,0	0,0
35	247	SLU A1 sism.	-6833,9	5424,1	-55900,0	6785000,0	7798000,0	0,0
36	247	SLU A1 sism.	-6829,7	12370,0	-54550,0	8250000,0	7801000,0	0,0
69	247	SLE Rare	-7873,3	8894,9	-55430,0	7518000,0	8019000,0	0,0
1	263	SLU STR.	-11550,0	7977,7	-86030,0	8459000,0	10730000,0	0,0
2	263	SLU STR.	-8883,4	6136,7	-66180,0	6507000,0	8255000,0	0,0
5	263	SLU A1 sism.	-12360,0	5092,8	-66800,0	6288000,0	8990000,0	0,0
6	263	SLU A1 sism.	-12360,0	7177,6	-66280,0	6728000,0	8990000,0	0,0
7	263	SLU A1 sism.	-5411,2	5095,9	-66070,0	6286000,0	7520000,0	0,0
8	263	SLU A1 sism.	-5410,4	7180,7	-65560,0	6726000,0	7520000,0	0,0
9	263	SLU A1 sism.	-12360,0	5092,8	-66800,0	6288000,0	8990000,0	0,0
10	263	SLU A1 sism.	-12360,0	7177,6	-66280,0	6728000,0	8990000,0	0,0
11	263	SLU A1 sism.	-5411,2	5095,9	-66070,0	6286000,0	7520000,0	0,0
12	263	SLU A1 sism.	-5410,4	7180,7	-65560,0	6726000,0	7520000,0	0,0
13	263	SLU A1 sism.	-12360,0	5092,8	-66800,0	6288000,0	8990000,0	0,0
14	263	SLU A1 sism.	-12360,0	7177,6	-66280,0	6728000,0	8990000,0	0,0
15	263	SLU A1 sism.	-5411,2	5095,9	-66070,0	6286000,0	7520000,0	0,0
16	263	SLU A1 sism.	-5410,4	7180,7	-65560,0	6726000,0	7520000,0	0,0
17	263	SLU A1 sism.	-12360,0	5092,8	-66800,0	6288000,0	8990000,0	0,0
18	263	SLU A1 sism.	-12360,0	7177,6	-66280,0	6728000,0	8990000,0	0,0
19	263	SLU A1 sism.	-5411,2	5095,9	-66070,0	6286000,0	7520000,0	0,0
20	263	SLU A1 sism.	-5410,4	7180,7	-65560,0	6726000,0	7520000,0	0,0
21	263	SLU A1 sism.	-9926,4	2661,6	-67140,0	5774000,0	8475000,0	0,0
22	263	SLU A1 sism.	-9923,8	9610,9	-65420,0	7240000,0	8476000,0	0,0
23	263	SLU A1 sism.	-7842,9	2662,5	-66930,0	5774000,0	8034000,0	0,0
24	263	SLU A1 sism.	-7840,3	9611,9	-65210,0	7239000,0	8036000,0	0,0
25	263	SLU A1 sism.	-9926,4	2661,6	-67140,0	5774000,0	8475000,0	0,0
26	263	SLU A1 sism.	-9923,8	9610,9	-65420,0	7240000,0	8476000,0	0,0
27	263	SLU A1 sism.	-7842,9	2662,5	-66930,0	5774000,0	8034000,0	0,0
28	263	SLU A1 sism.	-7840,3	9611,9	-65210,0	7239000,0	8036000,0	0,0
29	263	SLU A1 sism.	-9926,4	2661,6	-67140,0	5774000,0	8475000,0	0,0
30	263	SLU A1 sism.	-9923,8	9610,9	-65420,0	7240000,0	8476000,0	0,0
31	263	SLU A1 sism.	-7842,9	2662,5	-66930,0	5774000,0	8034000,0	0,0
32	263	SLU A1 sism.	-7840,3	9611,9	-65210,0	7239000,0	8036000,0	0,0
33	263	SLU A1 sism.	-9926,4	2661,6	-67140,0	5774000,0	8475000,0	0,0
34	263	SLU A1 sism.	-9923,8	9610,9	-65420,0	7240000,0	8476000,0	0,0
35	263	SLU A1 sism.	-7842,9	2662,5	-66930,0	5774000,0	8034000,0	0,0
36	263	SLU A1 sism.	-7840,3	9611,9	-65210,0	7239000,0	8036000,0	0,0
69	263	SLE Rare	-8883,4	6136,7	-66180,0	6507000,0	8255000,0	0,0
1	275	SLU STR.	-8540,6	4703,4	-88170,0	7447000,0	9864000,0	0,0
2	275	SLU STR.	-6569,7	3618,0	-67820,0	5728000,0	7588000,0	0,0
5	275	SLU A1 sism.	-10060,0	2568,5	-67970,0	5505000,0	8330000,0	0,0
6	275	SLU A1 sism.	-10060,0	4667,4	-67670,0	5951000,0	8330000,0	0,0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

7	275	SLU A1 sism.	-3078,7	2568,5	-67970,0	5505000,0	6846000,0	0,0
8	275	SLU A1 sism.	-3078,7	4667,4	-67670,0	5951000,0	6846000,0	0,0
9	275	SLU A1 sism.	-10060,0	2568,5	-67970,0	5505000,0	8330000,0	0,0
10	275	SLU A1 sism.	-10060,0	4667,4	-67670,0	5951000,0	8330000,0	0,0
11	275	SLU A1 sism.	-3078,7	2568,5	-67970,0	5505000,0	6846000,0	0,0
12	275	SLU A1 sism.	-3078,7	4667,4	-67670,0	5951000,0	6846000,0	0,0
13	275	SLU A1 sism.	-10060,0	2568,5	-67970,0	5505000,0	8330000,0	0,0
14	275	SLU A1 sism.	-10060,0	4667,4	-67670,0	5951000,0	8330000,0	0,0
15	275	SLU A1 sism.	-3078,7	2568,5	-67970,0	5505000,0	6846000,0	0,0
16	275	SLU A1 sism.	-3078,7	4667,4	-67670,0	5951000,0	6846000,0	0,0
17	275	SLU A1 sism.	-10060,0	2568,5	-67970,0	5505000,0	8330000,0	0,0
18	275	SLU A1 sism.	-10060,0	4667,4	-67670,0	5951000,0	8330000,0	0,0
19	275	SLU A1 sism.	-3078,7	2568,5	-67970,0	5505000,0	6846000,0	0,0
20	275	SLU A1 sism.	-3078,7	4667,4	-67670,0	5951000,0	6846000,0	0,0
21	275	SLU A1 sism.	-7617,0	119,9	-68310,0	4986000,0	7811000,0	0,0
22	275	SLU A1 sism.	-7617,0	7116,1	-67330,0	6471000,0	7811000,0	0,0
23	275	SLU A1 sism.	-5522,4	119,9	-68310,0	4986000,0	7365000,0	0,0
24	275	SLU A1 sism.	-5522,4	7116,1	-67330,0	6471000,0	7365000,0	0,0
25	275	SLU A1 sism.	-7617,0	119,9	-68310,0	4986000,0	7811000,0	0,0
26	275	SLU A1 sism.	-7617,0	7116,1	-67330,0	6471000,0	7811000,0	0,0
27	275	SLU A1 sism.	-5522,4	119,9	-68310,0	4986000,0	7365000,0	0,0
28	275	SLU A1 sism.	-5522,4	7116,1	-67330,0	6471000,0	7365000,0	0,0
29	275	SLU A1 sism.	-7617,0	119,9	-68310,0	4986000,0	7811000,0	0,0
30	275	SLU A1 sism.	-7617,0	7116,1	-67330,0	6471000,0	7811000,0	0,0
31	275	SLU A1 sism.	-5522,4	119,9	-68310,0	4986000,0	7365000,0	0,0
32	275	SLU A1 sism.	-5522,4	7116,1	-67330,0	6471000,0	7365000,0	0,0
33	275	SLU A1 sism.	-7617,0	119,9	-68310,0	4986000,0	7811000,0	0,0
34	275	SLU A1 sism.	-7617,0	7116,1	-67330,0	6471000,0	7811000,0	0,0
35	275	SLU A1 sism.	-5522,4	119,9	-68310,0	4986000,0	7365000,0	0,0
36	275	SLU A1 sism.	-5522,4	7116,1	-67330,0	6471000,0	7365000,0	0,0
69	275	SLE Rare	-6569,7	3618,0	-67820,0	5728000,0	7588000,0	0,0
1	279	SLU STR.	-11100,0	4153,3	-98130,0	7130000,0	10310000,0	0,0
2	279	SLU STR.	-8536,3	3194,8	-75480,0	5484000,0	7930000,0	0,0
5	279	SLU A1 sism.	-12010,0	2152,0	-75760,0	5264000,0	8666000,0	0,0
6	279	SLU A1 sism.	-12010,0	4237,7	-75200,0	5704000,0	8666000,0	0,0
7	279	SLU A1 sism.	-5063,0	2152,0	-75760,0	5264000,0	7194000,0	0,0
8	279	SLU A1 sism.	-5063,0	4237,7	-75200,0	5704000,0	7194000,0	0,0
9	279	SLU A1 sism.	-12010,0	2152,0	-75760,0	5264000,0	8666000,0	0,0
10	279	SLU A1 sism.	-12010,0	4237,7	-75200,0	5704000,0	8666000,0	0,0
11	279	SLU A1 sism.	-5063,0	2152,0	-75760,0	5264000,0	7194000,0	0,0
12	279	SLU A1 sism.	-5063,0	4237,7	-75200,0	5704000,0	7194000,0	0,0
13	279	SLU A1 sism.	-12010,0	2152,0	-75760,0	5264000,0	8666000,0	0,0
14	279	SLU A1 sism.	-12010,0	4237,7	-75200,0	5704000,0	8666000,0	0,0
15	279	SLU A1 sism.	-5063,0	2152,0	-75760,0	5264000,0	7194000,0	0,0
16	279	SLU A1 sism.	-5063,0	4237,7	-75200,0	5704000,0	7194000,0	0,0
17	279	SLU A1 sism.	-12010,0	2152,0	-75760,0	5264000,0	8666000,0	0,0
18	279	SLU A1 sism.	-12010,0	4237,7	-75200,0	5704000,0	8666000,0	0,0
19	279	SLU A1 sism.	-5063,0	2152,0	-75760,0	5264000,0	7194000,0	0,0
20	279	SLU A1 sism.	-5063,0	4237,7	-75200,0	5704000,0	7194000,0	0,0
21	279	SLU A1 sism.	-9578,3	-281,3	-76410,0	4751000,0	8151000,0	0,0
22	279	SLU A1 sism.	-9578,3	6670,9	-74560,0	6217000,0	8151000,0	0,0
23	279	SLU A1 sism.	-7494,3	-281,3	-76410,0	4751000,0	7709000,0	0,0
24	279	SLU A1 sism.	-7494,3	6670,9	-74560,0	6217000,0	7709000,0	0,0
25	279	SLU A1 sism.	-9578,3	-281,3	-76410,0	4751000,0	8151000,0	0,0
26	279	SLU A1 sism.	-9578,3	6670,9	-74560,0	6217000,0	8151000,0	0,0
27	279	SLU A1 sism.	-7494,3	-281,3	-76410,0	4751000,0	7709000,0	0,0
28	279	SLU A1 sism.	-7494,3	6670,9	-74560,0	6217000,0	7709000,0	0,0
29	279	SLU A1 sism.	-9578,3	-281,3	-76410,0	4751000,0	8151000,0	0,0
30	279	SLU A1 sism.	-9578,3	6670,9	-74560,0	6217000,0	8151000,0	0,0
31	279	SLU A1 sism.	-7494,3	-281,3	-76410,0	4751000,0	7709000,0	0,0
32	279	SLU A1 sism.	-7494,3	6670,9	-74560,0	6217000,0	7709000,0	0,0
33	279	SLU A1 sism.	-9578,3	-281,3	-76410,0	4751000,0	8151000,0	0,0
34	279	SLU A1 sism.	-9578,3	6670,9	-74560,0	6217000,0	8151000,0	0,0
35	279	SLU A1 sism.	-7494,3	-281,3	-76410,0	4751000,0	7709000,0	0,0

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*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

36	279	SLU A1 sism.	-7494,3	6670,9	-74560,0	6217000,0	7709000,0	0,0
69	279	SLE Rare	-8536,3	3194,8	-75480,0	5484000,0	7930000,0	0,0
1	295	SLU STR.	-9115,7	996,3	-106600,0	6188000,0	9319000,0	0,0
2	295	SLU STR.	-7012,1	766,4	-81990,0	4760000,0	7168000,0	0,0
5	295	SLU A1 sism.	-10480,0	-274,4	-81890,0	4540000,0	7904000,0	0,0
6	295	SLU A1 sism.	-10490,0	1810,4	-81370,0	4979000,0	7903000,0	0,0
7	295	SLU A1 sism.	-3539,2	-277,6	-82610,0	4541000,0	6434000,0	0,0
8	295	SLU A1 sism.	-3540,0	1807,3	-82100,0	4981000,0	6433000,0	0,0
9	295	SLU A1 sism.	-10480,0	-274,4	-81890,0	4540000,0	7904000,0	0,0
10	295	SLU A1 sism.	-10490,0	1810,4	-81370,0	4979000,0	7903000,0	0,0
11	295	SLU A1 sism.	-3539,2	-277,6	-82610,0	4541000,0	6434000,0	0,0
12	295	SLU A1 sism.	-3540,0	1807,3	-82100,0	4981000,0	6433000,0	0,0
13	295	SLU A1 sism.	-10480,0	-274,4	-81890,0	4540000,0	7904000,0	0,0
14	295	SLU A1 sism.	-10490,0	1810,4	-81370,0	4979000,0	7903000,0	0,0
15	295	SLU A1 sism.	-3539,2	-277,6	-82610,0	4541000,0	6434000,0	0,0
16	295	SLU A1 sism.	-3540,0	1807,3	-82100,0	4981000,0	6433000,0	0,0
17	295	SLU A1 sism.	-10480,0	-274,4	-81890,0	4540000,0	7904000,0	0,0
18	295	SLU A1 sism.	-10490,0	1810,4	-81370,0	4979000,0	7903000,0	0,0
19	295	SLU A1 sism.	-3539,2	-277,6	-82610,0	4541000,0	6434000,0	0,0
20	295	SLU A1 sism.	-3540,0	1807,3	-82100,0	4981000,0	6433000,0	0,0
21	295	SLU A1 sism.	-8052,6	-2707,8	-82740,0	4027000,0	7390000,0	0,0
22	295	SLU A1 sism.	-8055,2	4241,6	-81020,0	5493000,0	7388000,0	0,0
23	295	SLU A1 sism.	-5969,0	-2708,8	-82960,0	4028000,0	6949000,0	0,0
24	295	SLU A1 sism.	-5971,7	4240,6	-81240,0	5493000,0	6947000,0	0,0
25	295	SLU A1 sism.	-8052,6	-2707,8	-82740,0	4027000,0	7390000,0	0,0
26	295	SLU A1 sism.	-8055,2	4241,6	-81020,0	5493000,0	7388000,0	0,0
27	295	SLU A1 sism.	-5969,0	-2708,8	-82960,0	4028000,0	6949000,0	0,0
28	295	SLU A1 sism.	-5971,7	4240,6	-81240,0	5493000,0	6947000,0	0,0
29	295	SLU A1 sism.	-8052,6	-2707,8	-82740,0	4027000,0	7390000,0	0,0
30	295	SLU A1 sism.	-8055,2	4241,6	-81020,0	5493000,0	7388000,0	0,0
31	295	SLU A1 sism.	-5969,0	-2708,8	-82960,0	4028000,0	6949000,0	0,0
32	295	SLU A1 sism.	-5971,7	4240,6	-81240,0	5493000,0	6947000,0	0,0
33	295	SLU A1 sism.	-8052,6	-2707,8	-82740,0	4027000,0	7390000,0	0,0
34	295	SLU A1 sism.	-8055,2	4241,6	-81020,0	5493000,0	7388000,0	0,0
35	295	SLU A1 sism.	-5969,0	-2708,8	-82960,0	4028000,0	6949000,0	0,0
36	295	SLU A1 sism.	-5971,7	4240,6	-81240,0	5493000,0	6947000,0	0,0
69	295	SLE Rare	-7012,1	766,4	-81990,0	4760000,0	7168000,0	0,0
1	307	SLU STR.	-4484,9	1443,4	-97560,0	6580000,0	7722000,0	0,0
2	307	SLU STR.	-3449,9	1110,3	-75040,0	5062000,0	5940000,0	0,0
5	307	SLU A1 sism.	-6937,5	66,4	-74760,0	4839000,0	6680000,0	0,0
6	307	SLU A1 sism.	-6939,1	2159,4	-74510,0	5283000,0	6680000,0	0,0
7	307	SLU A1 sism.	39,2	61,2	-75580,0	4840000,0	5201000,0	0,0
8	307	SLU A1 sism.	37,6	2154,2	-75330,0	5284000,0	5200000,0	0,0
9	307	SLU A1 sism.	-6937,5	66,4	-74760,0	4839000,0	6680000,0	0,0
10	307	SLU A1 sism.	-6939,1	2159,4	-74510,0	5283000,0	6680000,0	0,0
11	307	SLU A1 sism.	39,2	61,2	-75580,0	4840000,0	5201000,0	0,0
12	307	SLU A1 sism.	37,6	2154,2	-75330,0	5284000,0	5200000,0	0,0
13	307	SLU A1 sism.	-6937,5	66,4	-74760,0	4839000,0	6680000,0	0,0
14	307	SLU A1 sism.	-6939,1	2159,4	-74510,0	5283000,0	6680000,0	0,0
15	307	SLU A1 sism.	39,2	61,2	-75580,0	4840000,0	5201000,0	0,0
16	307	SLU A1 sism.	37,6	2154,2	-75330,0	5284000,0	5200000,0	0,0
17	307	SLU A1 sism.	-6937,5	66,4	-74760,0	4839000,0	6680000,0	0,0
18	307	SLU A1 sism.	-6939,1	2159,4	-74510,0	5283000,0	6680000,0	0,0
19	307	SLU A1 sism.	39,2	61,2	-75580,0	4840000,0	5201000,0	0,0
20	307	SLU A1 sism.	37,6	2154,2	-75330,0	5284000,0	5200000,0	0,0
21	307	SLU A1 sism.	-4493,8	-2377,3	-75330,0	4322000,0	6163000,0	0,0
22	307	SLU A1 sism.	-4499,1	4599,4	-74510,0	5801000,0	6162000,0	0,0
23	307	SLU A1 sism.	-2400,8	-2378,9	-75580,0	4322000,0	5719000,0	0,0
24	307	SLU A1 sism.	-2406,0	4597,9	-74760,0	5802000,0	5718000,0	0,0
25	307	SLU A1 sism.	-4493,8	-2377,3	-75330,0	4322000,0	6163000,0	0,0
26	307	SLU A1 sism.	-4499,1	4599,4	-74510,0	5801000,0	6162000,0	0,0
27	307	SLU A1 sism.	-2400,8	-2378,9	-75580,0	4322000,0	5719000,0	0,0
28	307	SLU A1 sism.	-2406,0	4597,9	-74760,0	5802000,0	5718000,0	0,0
29	307	SLU A1 sism.	-4493,8	-2377,3	-75330,0	4322000,0	6163000,0	0,0



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

30	307	SLU A1 sism.	-4499,1	4599,4	-74510,0	5801000,0	6162000,0	0,0
31	307	SLU A1 sism.	-2400,8	-2378,9	-75580,0	4322000,0	5719000,0	0,0
32	307	SLU A1 sism.	-2406,0	4597,9	-74760,0	5802000,0	5718000,0	0,0
33	307	SLU A1 sism.	-4493,8	-2377,3	-75330,0	4322000,0	6163000,0	0,0
34	307	SLU A1 sism.	-4499,1	4599,4	-74510,0	5801000,0	6162000,0	0,0
35	307	SLU A1 sism.	-2400,8	-2378,9	-75580,0	4322000,0	5719000,0	0,0
36	307	SLU A1 sism.	-2406,0	4597,9	-74760,0	5802000,0	5718000,0	0,0
69	307	SLE Rare	-3449,9	1110,3	-75040,0	5062000,0	5940000,0	0,0
1	311	SLU STR.	-6364,9	-976,3	-110300,0	5812000,0	8178000,0	0,0
2	311	SLU STR.	-4896,1	-751,0	-84840,0	4471000,0	6291000,0	0,0
5	311	SLU A1 sism.	-8366,9	-1790,4	-84370,0	4250000,0	7024000,0	0,0
6	311	SLU A1 sism.	-8368,2	292,5	-83970,0	4689000,0	7023000,0	0,0
7	311	SLU A1 sism.	-1423,9	-1794,5	-85720,0	4252000,0	5558000,0	0,0
8	311	SLU A1 sism.	-1425,2	288,4	-85320,0	4692000,0	5558000,0	0,0
9	311	SLU A1 sism.	-8366,9	-1790,4	-84370,0	4250000,0	7024000,0	0,0
10	311	SLU A1 sism.	-8368,2	292,5	-83970,0	4689000,0	7023000,0	0,0
11	311	SLU A1 sism.	-1423,9	-1794,5	-85720,0	4252000,0	5558000,0	0,0
12	311	SLU A1 sism.	-1425,2	288,4	-85320,0	4692000,0	5558000,0	0,0
13	311	SLU A1 sism.	-8366,9	-1790,4	-84370,0	4250000,0	7024000,0	0,0
14	311	SLU A1 sism.	-8368,2	292,5	-83970,0	4689000,0	7023000,0	0,0
15	311	SLU A1 sism.	-1423,9	-1794,5	-85720,0	4252000,0	5558000,0	0,0
16	311	SLU A1 sism.	-1425,2	288,4	-85320,0	4692000,0	5558000,0	0,0
17	311	SLU A1 sism.	-8366,9	-1790,4	-84370,0	4250000,0	7024000,0	0,0
18	311	SLU A1 sism.	-8368,2	292,5	-83970,0	4689000,0	7023000,0	0,0
19	311	SLU A1 sism.	-1423,9	-1794,5	-85720,0	4252000,0	5558000,0	0,0
20	311	SLU A1 sism.	-1425,2	288,4	-85320,0	4692000,0	5558000,0	0,0
21	311	SLU A1 sism.	-5935,4	-4221,9	-85320,0	3738000,0	6512000,0	0,0
22	311	SLU A1 sism.	-5939,6	2721,1	-83970,0	5203000,0	6510000,0	0,0
23	311	SLU A1 sism.	-3852,5	-4223,1	-85720,0	3738000,0	6072000,0	0,0
24	311	SLU A1 sism.	-3856,7	2719,9	-84370,0	5204000,0	6070000,0	0,0
25	311	SLU A1 sism.	-5935,4	-4221,9	-85320,0	3738000,0	6512000,0	0,0
26	311	SLU A1 sism.	-5939,6	2721,1	-83970,0	5203000,0	6510000,0	0,0
27	311	SLU A1 sism.	-3852,5	-4223,1	-85720,0	3738000,0	6072000,0	0,0
28	311	SLU A1 sism.	-3856,7	2719,9	-84370,0	5204000,0	6070000,0	0,0
29	311	SLU A1 sism.	-5935,4	-4221,9	-85320,0	3738000,0	6512000,0	0,0
30	311	SLU A1 sism.	-5939,6	2721,1	-83970,0	5203000,0	6510000,0	0,0
31	311	SLU A1 sism.	-3852,5	-4223,1	-85720,0	3738000,0	6072000,0	0,0
32	311	SLU A1 sism.	-3856,7	2719,9	-84370,0	5204000,0	6070000,0	0,0
33	311	SLU A1 sism.	-5935,4	-4221,9	-85320,0	3738000,0	6512000,0	0,0
34	311	SLU A1 sism.	-5939,6	2721,1	-83970,0	5203000,0	6510000,0	0,0
35	311	SLU A1 sism.	-3852,5	-4223,1	-85720,0	3738000,0	6072000,0	0,0
36	311	SLU A1 sism.	-3856,7	2719,9	-84370,0	5204000,0	6070000,0	0,0
69	311	SLE Rare	-4896,1	-751,0	-84840,0	4471000,0	6291000,0	0,0
1	327	SLU STR.	-3152,3	-1303,2	-107100,0	6077000,0	7083000,0	0,0
2	327	SLU STR.	-2424,9	-1002,4	-82420,0	4674000,0	5448000,0	0,0
5	327	SLU A1 sism.	-5899,1	-2042,9	-81660,0	4453000,0	6181000,0	0,0
6	327	SLU A1 sism.	-5900,0	40,7	-81450,0	4894000,0	6181000,0	0,0
7	327	SLU A1 sism.	1050,3	-2045,5	-83380,0	4455000,0	4715000,0	0,0
8	327	SLU A1 sism.	1049,4	38,0	-83170,0	4896000,0	4715000,0	0,0
9	327	SLU A1 sism.	-5899,1	-2042,9	-81660,0	4453000,0	6181000,0	0,0
10	327	SLU A1 sism.	-5900,0	40,7	-81450,0	4894000,0	6181000,0	0,0
11	327	SLU A1 sism.	1050,3	-2045,5	-83380,0	4455000,0	4715000,0	0,0
12	327	SLU A1 sism.	1049,4	38,0	-83170,0	4896000,0	4715000,0	0,0
13	327	SLU A1 sism.	-5899,1	-2042,9	-81660,0	4453000,0	6181000,0	0,0
14	327	SLU A1 sism.	-5900,0	40,7	-81450,0	4894000,0	6181000,0	0,0
15	327	SLU A1 sism.	1050,3	-2045,5	-83380,0	4455000,0	4715000,0	0,0
16	327	SLU A1 sism.	1049,4	38,0	-83170,0	4896000,0	4715000,0	0,0
17	327	SLU A1 sism.	-5899,1	-2042,9	-81660,0	4453000,0	6181000,0	0,0
18	327	SLU A1 sism.	-5900,0	40,7	-81450,0	4894000,0	6181000,0	0,0
19	327	SLU A1 sism.	1050,3	-2045,5	-83380,0	4455000,0	4715000,0	0,0
20	327	SLU A1 sism.	1049,4	38,0	-83170,0	4896000,0	4715000,0	0,0
21	327	SLU A1 sism.	-3465,7	-4474,6	-82520,0	3939000,0	5669000,0	0,0
22	327	SLU A1 sism.	-3468,8	2470,5	-81800,0	5409000,0	5667000,0	0,0
23	327	SLU A1 sism.	-1380,9	-4475,4	-83040,0	3940000,0	5229000,0	0,0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

24	327	SLU A1 sism.	-1384,0	2469,7	-82310,0	5410000,0	5227000,0	0,0
25	327	SLU A1 sism.	-3465,7	-4474,6	-82520,0	3939000,0	5669000,0	0,0
26	327	SLU A1 sism.	-3468,8	2470,5	-81800,0	5409000,0	5667000,0	0,0
27	327	SLU A1 sism.	-1380,9	-4475,4	-83040,0	3940000,0	5229000,0	0,0
28	327	SLU A1 sism.	-1384,0	2469,7	-82310,0	5410000,0	5227000,0	0,0
29	327	SLU A1 sism.	-3465,7	-4474,6	-82520,0	3939000,0	5669000,0	0,0
30	327	SLU A1 sism.	-3468,8	2470,5	-81800,0	5409000,0	5667000,0	0,0
31	327	SLU A1 sism.	-1380,9	-4475,4	-83040,0	3940000,0	5229000,0	0,0
32	327	SLU A1 sism.	-1384,0	2469,7	-82310,0	5410000,0	5227000,0	0,0
33	327	SLU A1 sism.	-3465,7	-4474,6	-82520,0	3939000,0	5669000,0	0,0
34	327	SLU A1 sism.	-3468,8	2470,5	-81800,0	5409000,0	5667000,0	0,0
35	327	SLU A1 sism.	-1380,9	-4475,4	-83040,0	3940000,0	5229000,0	0,0
36	327	SLU A1 sism.	-1384,0	2469,7	-82310,0	5410000,0	5227000,0	0,0
69	327	SLE Rare	-2424,9	-1002,4	-82420,0	4674000,0	5448000,0	0,0
1	84	SLU STR.	-823,8	4086,0	-88720,0	8320000,0	6623000,0	0,0
2	84	SLU STR.	-633,7	3143,0	-68240,0	6400000,0	5095000,0	0,0
5	84	SLU A1 sism.	-4131,8	2095,7	-67750,0	6178000,0	5837000,0	0,0
6	84	SLU A1 sism.	-4131,8	4190,4	-67750,0	6623000,0	5837000,0	0,0
7	84	SLU A1 sism.	2864,4	2095,7	-68740,0	6178000,0	4352000,0	0,0
8	84	SLU A1 sism.	2864,4	4190,4	-68740,0	6623000,0	4352000,0	0,0
9	84	SLU A1 sism.	-4131,8	2095,7	-67750,0	6178000,0	5837000,0	0,0
10	84	SLU A1 sism.	-4131,8	4190,4	-67750,0	6623000,0	5837000,0	0,0
11	84	SLU A1 sism.	2864,4	2095,7	-68740,0	6178000,0	4352000,0	0,0
12	84	SLU A1 sism.	2864,4	4190,4	-68740,0	6623000,0	4352000,0	0,0
13	84	SLU A1 sism.	-4131,8	2095,7	-67750,0	6178000,0	5837000,0	0,0
14	84	SLU A1 sism.	-4131,8	4190,4	-67750,0	6623000,0	5837000,0	0,0
15	84	SLU A1 sism.	2864,4	2095,7	-68740,0	6178000,0	4352000,0	0,0
16	84	SLU A1 sism.	2864,4	4190,4	-68740,0	6623000,0	4352000,0	0,0
17	84	SLU A1 sism.	-4131,8	2095,7	-67750,0	6178000,0	5837000,0	0,0
18	84	SLU A1 sism.	-4131,8	4190,4	-67750,0	6623000,0	5837000,0	0,0
19	84	SLU A1 sism.	2864,4	2095,7	-68740,0	6178000,0	4352000,0	0,0
20	84	SLU A1 sism.	2864,4	4190,4	-68740,0	6623000,0	4352000,0	0,0
21	84	SLU A1 sism.	-1683,1	-348,0	-68090,0	5658000,0	5318000,0	0,0
22	84	SLU A1 sism.	-1683,1	6634,1	-68090,0	7142000,0	5318000,0	0,0
23	84	SLU A1 sism.	415,7	-348,0	-68390,0	5658000,0	4872000,0	0,0
24	84	SLU A1 sism.	415,7	6634,1	-68390,0	7142000,0	4872000,0	0,0
25	84	SLU A1 sism.	-1683,1	-348,0	-68090,0	5658000,0	5318000,0	0,0
26	84	SLU A1 sism.	-1683,1	6634,1	-68090,0	7142000,0	5318000,0	0,0
27	84	SLU A1 sism.	415,7	-348,0	-68390,0	5658000,0	4872000,0	0,0
28	84	SLU A1 sism.	415,7	6634,1	-68390,0	7142000,0	4872000,0	0,0
29	84	SLU A1 sism.	-1683,1	-348,0	-68090,0	5658000,0	5318000,0	0,0
30	84	SLU A1 sism.	-1683,1	6634,1	-68090,0	7142000,0	5318000,0	0,0
31	84	SLU A1 sism.	415,7	-348,0	-68390,0	5658000,0	4872000,0	0,0
32	84	SLU A1 sism.	415,7	6634,1	-68390,0	7142000,0	4872000,0	0,0
33	84	SLU A1 sism.	-1683,1	-348,0	-68090,0	5658000,0	5318000,0	0,0
34	84	SLU A1 sism.	-1683,1	6634,1	-68090,0	7142000,0	5318000,0	0,0
35	84	SLU A1 sism.	415,7	-348,0	-68390,0	5658000,0	4872000,0	0,0
36	84	SLU A1 sism.	415,7	6634,1	-68390,0	7142000,0	4872000,0	0,0
69	84	SLE Rare	-633,7	3143,0	-68240,0	6400000,0	5095000,0	0,0
1	92	SLU STR.	-298,2	-403,4	-99150,0	6757000,0	6317000,0	0,0
2	92	SLU STR.	-229,3	-310,3	-76270,0	5198000,0	4859000,0	0,0
5	92	SLU A1 sism.	-3705,4	-1352,3	-75350,0	4977000,0	5592000,0	0,0
6	92	SLU A1 sism.	-3705,4	731,7	-75350,0	5419000,0	5592000,0	0,0
7	92	SLU A1 sism.	3246,7	-1352,3	-77200,0	4977000,0	4126000,0	0,0
8	92	SLU A1 sism.	3246,7	731,7	-77200,0	5419000,0	4126000,0	0,0
9	92	SLU A1 sism.	-3705,4	-1352,3	-75350,0	4977000,0	5592000,0	0,0
10	92	SLU A1 sism.	-3705,4	731,7	-75350,0	5419000,0	5592000,0	0,0
11	92	SLU A1 sism.	3246,7	-1352,3	-77200,0	4977000,0	4126000,0	0,0
12	92	SLU A1 sism.	3246,7	731,7	-77200,0	5419000,0	4126000,0	0,0
13	92	SLU A1 sism.	-3705,4	-1352,3	-75350,0	4977000,0	5592000,0	0,0
14	92	SLU A1 sism.	-3705,4	731,7	-75350,0	5419000,0	5592000,0	0,0
15	92	SLU A1 sism.	3246,7	-1352,3	-77200,0	4977000,0	4126000,0	0,0
16	92	SLU A1 sism.	3246,7	731,7	-77200,0	5419000,0	4126000,0	0,0
17	92	SLU A1 sism.	-3705,4	-1352,3	-75350,0	4977000,0	5592000,0	0,0

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
**Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09**

18	92	SLU A1 sism.	-3705,4	731,7	-75350,0	5419000,0	5592000,0	0,0
19	92	SLU A1 sism.	3246,7	-1352,3	-77200,0	4977000,0	4126000,0	0,0
20	92	SLU A1 sism.	3246,7	731,7	-77200,0	5419000,0	4126000,0	0,0
21	92	SLU A1 sism.	-1272,2	-3783,6	-75990,0	4462000,0	5079000,0	0,0
22	92	SLU A1 sism.	-1272,2	3163,0	-75990,0	5934000,0	5079000,0	0,0
23	92	SLU A1 sism.	813,5	-3783,6	-76550,0	4462000,0	4639000,0	0,0
24	92	SLU A1 sism.	813,5	3163,0	-76550,0	5934000,0	4639000,0	0,0
25	92	SLU A1 sism.	-1272,2	-3783,6	-75990,0	4462000,0	5079000,0	0,0
26	92	SLU A1 sism.	-1272,2	3163,0	-75990,0	5934000,0	5079000,0	0,0
27	92	SLU A1 sism.	813,5	-3783,6	-76550,0	4462000,0	4639000,0	0,0
28	92	SLU A1 sism.	813,5	3163,0	-76550,0	5934000,0	4639000,0	0,0
29	92	SLU A1 sism.	-1272,2	-3783,6	-75990,0	4462000,0	5079000,0	0,0
30	92	SLU A1 sism.	-1272,2	3163,0	-75990,0	5934000,0	5079000,0	0,0
31	92	SLU A1 sism.	813,5	-3783,6	-76550,0	4462000,0	4639000,0	0,0
32	92	SLU A1 sism.	813,5	3163,0	-76550,0	5934000,0	4639000,0	0,0
33	92	SLU A1 sism.	-1272,2	-3783,6	-75990,0	4462000,0	5079000,0	0,0
34	92	SLU A1 sism.	-1272,2	3163,0	-75990,0	5934000,0	5079000,0	0,0
35	92	SLU A1 sism.	813,5	-3783,6	-76550,0	4462000,0	4639000,0	0,0
36	92	SLU A1 sism.	813,5	3163,0	-76550,0	5934000,0	4639000,0	0,0
69	92	SLE Rare	-229,3	-310,3	-76270,0	5198000,0	4859000,0	0,0

#### VERIFICHE PALI

Diametro palo = 120,0 cm

Armatura corrente: 31 Ø 18 = 78,9 cmq

Armatura a taglio - st. spirale Ø8 / 14

#### VERIFICHE VERIFICHE STATO LIMITE ULTIMO:

Ver. N/M = rapporto Sd/Su con sollecitazioni ultime proporzionali

Ver. (25) = rapporto Nd/Nu, dove Nu viene ottenuto con riduzione del 25% di fcd

Ver.V = verifica a taglio, rapporto Vd/Vrd

(Verifica positiva per valori inferiori a 1)

#### Plinto n. 215

Cmb.	Palo	Quota (cm)	N (daN)	V (daN)	M (daN cm)	Ver. N/M	Ver.(25)	Ver.V	Stato
34	215	0,0	-36136,9	15497,5	11433790,0	0,987	0,025	0,275	Ok
1	215	0,0	-46617,4	15435,3	13923500,0	0,842	0,032	0,274	Ok
34	215	-123,3	-34849,0	16135,2	9519826,0	0,825	0,024	0,286	Ok
1	215	-123,3	-44955,9	18042,9	11917160,0	0,723	0,031	0,320	Ok
34	215	-246,7	-34047,1	15049,4	7586365,0	0,659	0,024	0,267	Ok
1	215	-246,7	-43921,5	17585,7	9746312,0	0,593	0,031	0,312	Ok
19	215	-370,0	-32139,9	11589,3	5944053,0	0,520	0,022	0,206	Ok
1	215	-370,0	-42887,8	16058,6	7615544,0	0,464	0,030	0,285	Ok
19	215	-493,3	-31365,8	10270,2	4556135,0	0,399	0,022	0,182	Ok
1	215	-493,3	-41854,8	13887,4	5665851,0	0,346	0,029	0,246	Ok
19	215	-616,7	-30592,2	8667,4	3325022,0	0,292	0,021	0,154	Ok
1	215	-616,7	-40822,6	11438,0	3982147,0	0,244	0,028	0,203	Ok
19	215	-740,0	-29819,2	6988,0	2291544,0	0,202	0,021	0,124	Ok
1	215	-740,0	-39791,1	8986,4	2604030,0	0,160	0,028	0,159	Ok
19	215	-863,3	-29046,7	5381,9	1471955,0	0,130	0,020	0,095	Ok
1	215	-863,3	-38760,2	6719,4	1541320,0	0,095	0,027	0,119	Ok
19	215	-986,7	-28274,7	3945,9	870725,5	0,077	0,020	0,070	Ok
1	215	-986,7	-37730,0	4748,1	800466,8	0,049	0,026	0,084	Ok
20	215	-1110,0	-27503,1	2636,7	557747,6	0,049	0,019	0,047	Ok
1	215	-1110,0	-36700,5	3125,6	455337,3	0,028	0,026	0,055	Ok
36	215	-1233,3	-27227,4	1427,3	570137,8	0,051	0,019	0,025	Ok
1	215	-1233,3	-35671,5	1866,9	515130,6	0,032	0,025	0,033	Ok
34	215	-1356,7	-26854,8	688,6	629704,6	0,056	0,019	0,012	Ok
1	215	-1356,7	-34643,2	978,1	640551,7	0,040	0,024	0,017	Ok
34	215	-1480,0	-26058,1	554,5	636347,0	0,057	0,018	0,010	Ok

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	215	-1480,0	-33615,5	535,0	698853,2	0,044	0,023	0,009	Ok
34	215	-1603,3	-25261,9	645,0	596979,6	0,053	0,018	0,011	Ok
1	215	-1603,3	-32588,3	580,2	689976,3	0,043	0,023	0,010	Ok
34	215	-1726,7	-24466,1	721,7	527920,4	0,047	0,017	0,013	Ok
1	215	-1726,7	-31561,7	728,7	633676,2	0,040	0,022	0,013	Ok
34	215	-1850,0	-23670,7	733,9	443927,1	0,040	0,016	0,013	Ok
1	215	-1850,0	-30535,6	802,3	549623,5	0,035	0,021	0,014	Ok
34	215	-1973,3	-22875,7	691,1	356392,0	0,032	0,016	0,012	Ok
1	215	-1973,3	-29510,1	796,3	453666,9	0,029	0,021	0,014	Ok
19	215	-2096,7	-21346,5	525,0	276554,2	0,025	0,015	0,009	Ok
1	215	-2096,7	-28485,0	733,0	357357,4	0,023	0,020	0,013	Ok
19	215	-2220,0	-20578,7	466,9	213772,9	0,019	0,014	0,008	Ok
1	215	-2220,0	-27460,5	635,4	268378,0	0,017	0,019	0,011	Ok
19	215	-2343,3	-19811,2	393,7	157749,8	0,014	0,014	0,007	Ok
1	215	-2343,3	-26436,3	522,3	191251,9	0,012	0,018	0,009	Ok
19	215	-2466,7	-19044,1	315,5	110624,7	0,010	0,013	0,006	Ok
1	215	-2466,7	-25412,7	407,2	128103,2	0,008	0,018	0,007	Ok
19	215	-2590,0	-18277,3	239,8	73203,0	0,007	0,013	0,004	Ok
1	215	-2590,0	-24389,5	299,7	79389,1	0,005	0,017	0,005	Ok
19	215	-2713,3	-17510,8	171,5	45397,5	0,004	0,012	0,003	Ok
1	215	-2713,3	-23366,7	205,4	44628,4	0,003	0,016	0,004	Ok
20	215	-2836,7	-16744,7	109,6	27171,6	0,002	0,012	0,002	Ok
1	215	-2836,7	-22344,3	127,6	23324,5	0,001	0,016	0,002	Ok
36	215	-2960,0	-16274,8	54,8	18642,6	0,002	0,011	0,001	Ok
1	215	-2960,0	-21322,2	68,6	15208,8	0,001	0,015	0,001	Ok
36	215	-3083,3	-15495,0	35,6	16399,7	0,002	0,011	0,001	Ok
1	215	-3083,3	-20300,6	32,9	14468,0	0,001	0,014	0,001	Ok
34	215	-3206,7	-14944,9	33,6	13780,8	0,001	0,010	0,001	Ok
1	215	-3206,7	-19279,2	29,5	13314,1	0,001	0,013	0,001	Ok
34	215	-3330,0	-14153,5	36,3	9848,7	0,001	0,010	0,001	Ok
1	215	-3330,0	-18258,2	35,5	10107,8	0,001	0,013	0,001	Ok
34	215	-3453,3	-13362,2	30,2	5402,4	0,001	0,009	0,001	Ok
1	215	-3453,3	-17237,5	31,8	5790,7	0,000	0,012	0,001	Ok
34	215	-3576,7	-12571,2	13,7	1684,9	0,000	0,009	0,000	Ok
1	215	-3576,7	-16217,2	15,2	1872,7	0,000	0,011	0,000	Ok
1	215	-3700,0	-16217,2	15,2	0,0	0,009	0,011	0,000	Ok

**Plinto n. 103**

<b>Cmb.</b>	<b>Palo</b>	<b>Quota (cm)</b>	<b>N (daN)</b>	<b>V (daN)</b>	<b>M (daN cm)</b>	<b>Ver. N/M</b>	<b>Ver.(25)</b>	<b>Ver.V</b>	<b>Stato</b>
34	103	0,0	-67323,5	4362,5	8069518,0	0,636	0,047	0,077	Ok
1	103	0,0	-87385,4	2199,4	9556798,0	0,528	0,061	0,039	Ok
34	103	-123,3	-64923,9	8133,4	7387980,0	0,587	0,045	0,144	Ok
1	103	-123,3	-84270,9	7655,6	9145295,0	0,509	0,059	0,136	Ok
18	103	-246,7	-62624,3	8906,0	6401168,0	0,511	0,044	0,158	Ok
1	103	-246,7	-82331,8	9886,7	8213718,0	0,459	0,057	0,175	Ok
35	103	-370,0	-61746,1	7328,9	5471173,0	0,438	0,043	0,130	Ok
1	103	-370,0	-80394,2	10698,5	6999918,0	0,393	0,056	0,190	Ok
35	103	-493,3	-60259,0	7575,7	4567306,0	0,367	0,042	0,134	Ok
1	103	-493,3	-78457,9	10450,0	5683624,0	0,320	0,055	0,185	Ok
35	103	-616,7	-58772,8	7167,2	3632981,0	0,293	0,041	0,127	Ok
1	103	-616,7	-76523,0	9502,8	4397000,0	0,249	0,053	0,169	Ok
35	103	-740,0	-57287,7	6355,0	2749041,0	0,223	0,040	0,113	Ok
1	103	-740,0	-74589,4	8163,0	3226799,0	0,183	0,052	0,145	Ok
35	103	-863,3	-55803,6	5339,6	1965266,0	0,160	0,039	0,095	Ok
1	103	-863,3	-72657,0	6667,0	2221787,0	0,127	0,051	0,118	Ok
19	103	-986,7	-55012,6	4261,7	1315802,0	0,107	0,038	0,076	Ok
1	103	-986,7	-70725,9	5183,7	1401597,0	0,080	0,049	0,092	Ok
19	103	-1110,0	-53511,4	3242,8	796784,3	0,065	0,037	0,058	Ok
1	103	-1110,0	-68795,9	3823,1	765509,2	0,044	0,048	0,068	Ok
19	103	-1233,3	-52011,2	2335,3	408619,5	0,034	0,036	0,041	Ok
1	103	-1233,3	-66867,2	2647,6	302573,2	0,017	0,047	0,047	Ok
36	103	-1356,7	-50414,1	1194,8	207619,0	0,017	0,035	0,021	Ok
1	103	-1356,7	-64939,6	1683,8	92054,7	0,005	0,045	0,030	Ok

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

34	103	-1480,0	-48546,5	524,8	295473,1	0,025	0,034	0,009	Ok
1	103	-1480,0	-63013,0	933,0	255830,8	0,015	0,044	0,017	Ok
34	103	-1603,3	-47063,1	202,7	345983,2	0,029	0,033	0,004	Ok
1	103	-1603,3	-61087,6	383,1	364567,7	0,021	0,043	0,007	Ok
34	103	-1726,7	-45580,5	217,7	353750,8	0,030	0,032	0,004	Ok
1	103	-1726,7	-59163,2	99,5	407764,0	0,024	0,041	0,002	Ok
34	103	-1850,0	-44098,7	333,5	331897,2	0,028	0,031	0,006	Ok
1	103	-1850,0	-57239,8	281,8	404065,8	0,024	0,040	0,005	Ok
34	103	-1973,3	-42617,6	395,6	292267,8	0,025	0,030	0,007	Ok
1	103	-1973,3	-55317,3	413,2	370216,6	0,022	0,039	0,007	Ok
35	103	-2096,7	-41010,2	312,4	247480,4	0,021	0,029	0,006	Ok
1	103	-2096,7	-53395,9	466,9	319579,2	0,019	0,037	0,008	Ok
35	103	-2220,0	-39535,2	332,4	208956,7	0,018	0,028	0,006	Ok
1	103	-2220,0	-51475,3	464,4	262160,0	0,016	0,036	0,008	Ok
35	103	-2343,3	-38060,7	318,4	167959,2	0,014	0,027	0,006	Ok
1	103	-2343,3	-49555,6	425,3	204987,0	0,012	0,035	0,008	Ok
35	103	-2466,7	-36587,0	283,2	128696,5	0,011	0,025	0,005	Ok
1	103	-2466,7	-47636,7	365,3	152609,1	0,009	0,033	0,006	Ok
35	103	-2590,0	-35113,8	237,1	93765,8	0,008	0,024	0,004	Ok
1	103	-2590,0	-45718,7	296,4	107616,0	0,007	0,032	0,005	Ok
19	103	-2713,3	-34070,0	187,1	64766,0	0,006	0,024	0,003	Ok
1	103	-2713,3	-43801,4	226,9	71127,3	0,004	0,031	0,004	Ok
19	103	-2836,7	-32579,2	139,3	41844,8	0,004	0,023	0,002	Ok
1	103	-2836,7	-41884,8	162,5	43218,1	0,003	0,029	0,003	Ok
19	103	-2960,0	-31089,0	96,5	24833,7	0,002	0,022	0,002	Ok
1	103	-2960,0	-39969,0	106,7	23271,1	0,001	0,028	0,002	Ok
19	103	-3083,3	-29599,4	60,7	13132,3	0,001	0,021	0,001	Ok
1	103	-3083,3	-38053,9	61,4	10263,3	0,001	0,027	0,001	Ok
19	103	-3206,7	-28110,2	33,0	5916,2	0,001	0,020	0,001	Ok
1	103	-3206,7	-36139,4	27,7	3099,9	0,000	0,025	0,000	Ok
36	103	-3330,0	-26570,1	12,0	3309,4	0,000	0,019	0,000	Ok
1	103	-3330,0	-34225,5	6,9	1615,5	0,000	0,024	0,000	Ok
34	103	-3453,3	-24894,0	11,5	2230,4	0,000	0,017	0,000	Ok
1	103	-3453,3	-32312,2	7,5	1662,5	0,000	0,023	0,000	Ok
34	103	-3576,7	-23420,3	6,7	826,6	0,000	0,016	0,000	Ok
1	103	-3576,7	-30399,5	6,1	758,1	0,000	0,021	0,000	Ok
1	103	-3700,0	-30399,5	6,1	0,0	0,016	0,021	0,000	Ok

**Plinto n. 115**

<b>Cmb.</b>	<b>Palo</b>	<b>Quota (cm)</b>	<b>N (daN)</b>	<b>V (daN)</b>	<b>M (daN cm)</b>	<b>Ver. N/M</b>	<b>Ver.(25)</b>	<b>Ver.V</b>	<b>Stato</b>
34	115	0,0	-57297,3	8049,4	9484858,0	0,769	0,040	0,143	Ok
1	115	0,0	-74111,7	5957,0	11379630,0	0,647	0,052	0,106	Ok
34	115	-123,3	-55255,1	11010,0	8392452,0	0,685	0,039	0,195	Ok
1	115	-123,3	-71470,3	11351,7	10443370,0	0,597	0,050	0,201	Ok
18	115	-246,7	-53440,5	11086,8	7067528,0	0,580	0,037	0,197	Ok
1	115	-246,7	-69825,8	12792,3	9077186,0	0,521	0,049	0,227	Ok
35	115	-370,0	-52182,9	8991,9	5868324,0	0,483	0,036	0,159	Ok
1	115	-370,0	-68182,4	12889,4	7517620,0	0,433	0,048	0,229	Ok
35	115	-493,3	-50926,0	8773,4	4762282,0	0,393	0,035	0,156	Ok
1	115	-493,3	-66540,3	12018,8	5939748,0	0,343	0,046	0,213	Ok
35	115	-616,7	-49670,1	7972,1	3682277,0	0,305	0,035	0,141	Ok
1	115	-616,7	-64899,3	10553,0	4466501,0	0,259	0,045	0,187	Ok
19	115	-740,0	-48907,1	6839,4	2712536,0	0,225	0,034	0,121	Ok
1	115	-740,0	-63259,4	8800,1	3173134,0	0,185	0,044	0,156	Ok
19	115	-863,3	-47640,1	5580,6	1881758,0	0,157	0,033	0,099	Ok
1	115	-863,3	-61620,5	6990,7	2096572,0	0,122	0,043	0,124	Ok
19	115	-986,7	-46373,8	4342,4	1208231,0	0,101	0,032	0,077	Ok
1	115	-986,7	-59982,7	5282,9	1246213,0	0,073	0,042	0,094	Ok
19	115	-1110,0	-45108,4	3212,2	694421,4	0,058	0,031	0,057	Ok
1	115	-1110,0	-58345,9	3773,0	617259,6	0,036	0,041	0,067	Ok
20	115	-1233,3	-44032,8	2132,8	360710,5	0,030	0,031	0,038	Ok
1	115	-1233,3	-56710,2	2509,5	236650,0	0,014	0,040	0,045	Ok
34	115	-1356,7	-42579,9	942,3	343137,1	0,029	0,030	0,017	Ok



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	115	-1356,7	-55075,3	1506,7	270463,8	0,016	0,038	0,027	Ok
34	115	-1480,0	-41316,7	458,0	416052,7	0,035	0,029	0,008	Ok
1	115	-1480,0	-53441,5	760,0	411139,7	0,024	0,037	0,013	Ok
34	115	-1603,3	-40054,2	294,0	439970,7	0,038	0,028	0,005	Ok
1	115	-1603,3	-51808,5	291,9	485150,2	0,029	0,036	0,005	Ok
34	115	-1726,7	-38792,4	386,6	424053,4	0,036	0,027	0,007	Ok
1	115	-1726,7	-50176,4	297,8	498165,4	0,030	0,035	0,005	Ok
34	115	-1850,0	-37531,2	474,7	382004,0	0,033	0,026	0,008	Ok
1	115	-1850,0	-48545,1	463,7	468729,8	0,028	0,034	0,008	Ok
34	115	-1973,3	-36270,7	505,7	325831,8	0,028	0,025	0,009	Ok
1	115	-1973,3	-46914,7	554,5	413674,5	0,025	0,033	0,010	Ok
35	115	-2096,7	-34658,6	392,6	267964,5	0,023	0,024	0,007	Ok
1	115	-2096,7	-45285,1	572,8	346272,9	0,021	0,032	0,010	Ok
35	115	-2220,0	-33412,0	390,0	219697,0	0,019	0,023	0,007	Ok
1	115	-2220,0	-43656,3	539,9	276212,3	0,017	0,030	0,010	Ok
35	115	-2343,3	-32165,9	356,9	171694,0	0,015	0,022	0,006	Ok
1	115	-2343,3	-42028,2	475,6	210035,2	0,013	0,029	0,008	Ok
19	115	-2466,7	-31234,6	306,2	128112,9	0,011	0,022	0,005	Ok
1	115	-2466,7	-40400,8	395,4	151718,6	0,009	0,028	0,007	Ok
19	115	-2590,0	-29977,0	248,1	90828,0	0,008	0,021	0,004	Ok
1	115	-2590,0	-38774,1	311,1	103264,7	0,006	0,027	0,006	Ok
19	115	-2713,3	-28719,9	190,1	60687,4	0,005	0,020	0,003	Ok
1	115	-2713,3	-37148,0	230,4	65242,5	0,004	0,026	0,004	Ok
19	115	-2836,7	-27463,2	136,7	37729,9	0,003	0,019	0,002	Ok
1	115	-2836,7	-35522,6	158,6	37259,7	0,002	0,025	0,003	Ok
19	115	-2960,0	-26207,1	90,8	21450,0	0,002	0,018	0,002	Ok
1	115	-2960,0	-33897,8	98,5	18389,8	0,001	0,024	0,002	Ok
20	115	-3083,3	-25058,9	51,1	11280,6	0,001	0,017	0,001	Ok
1	115	-3083,3	-32273,6	51,9	7740,5	0,000	0,022	0,001	Ok
36	115	-3206,7	-23798,2	22,1	7190,1	0,001	0,017	0,000	Ok
1	115	-3206,7	-30649,9	20,7	4730,2	0,000	0,021	0,000	Ok
34	115	-3330,0	-22441,1	18,1	5479,3	0,000	0,016	0,000	Ok
1	115	-3330,0	-29026,7	12,8	4443,7	0,000	0,020	0,000	Ok
34	115	-3453,3	-21186,6	17,9	3333,3	0,000	0,015	0,000	Ok
1	115	-3453,3	-27404,0	15,8	3089,0	0,000	0,019	0,000	Ok
34	115	-3576,7	-19932,4	9,2	1133,4	0,000	0,014	0,000	Ok
1	115	-3576,7	-25781,8	9,3	1152,5	0,000	0,018	0,000	Ok
1	115	-3700,0	-25781,8	9,3	0,0	0,014	0,018	0,000	Ok

**Plinto n. 119**

<b>Cmb.</b>	<b>Palo</b>	<b>Quota (cm)</b>	<b>N (daN)</b>	<b>V (daN)</b>	<b>M (daN cm)</b>	<b>Ver. N/M</b>	<b>Ver.(25)</b>	<b>Ver.V</b>	<b>Stato</b>
34	119	0,0	-57051,4	5930,7	8355974,0	0,678	0,040	0,105	Ok
1	119	0,0	-73552,7	4527,5	9916061,0	0,564	0,051	0,080	Ok
34	119	-123,3	-55018,0	8767,4	7614266,0	0,622	0,038	0,155	Ok
1	119	-123,3	-70931,2	8424,4	9436516,0	0,540	0,049	0,149	Ok
18	119	-246,7	-52861,9	9235,0	6581536,0	0,541	0,037	0,164	Ok
1	119	-246,7	-69299,1	10425,9	8448293,0	0,485	0,048	0,185	Ok
35	119	-370,0	-51617,8	7635,2	5614250,0	0,463	0,036	0,135	Ok
1	119	-370,0	-67668,1	11121,4	7185659,0	0,414	0,047	0,197	Ok
35	119	-493,3	-50374,6	7834,0	4676115,0	0,387	0,035	0,139	Ok
1	119	-493,3	-66038,4	10791,7	5827534,0	0,337	0,046	0,191	Ok
35	119	-616,7	-49132,2	7379,4	3712139,0	0,308	0,034	0,131	Ok
1	119	-616,7	-64409,7	9778,2	4505991,0	0,262	0,045	0,173	Ok
19	119	-740,0	-48697,2	6519,1	2815574,0	0,234	0,034	0,116	Ok
1	119	-740,0	-62782,2	8381,4	3307763,0	0,193	0,044	0,149	Ok
19	119	-863,3	-47435,7	5463,2	2022394,0	0,169	0,033	0,097	Ok
1	119	-863,3	-61155,7	6836,5	2281567,0	0,133	0,043	0,121	Ok
19	119	-986,7	-46174,9	4365,5	1359839,0	0,114	0,032	0,077	Ok
1	119	-986,7	-59530,3	5312,3	1447224,0	0,085	0,041	0,094	Ok
19	119	-1110,0	-44914,9	3323,8	835737,4	0,070	0,031	0,059	Ok
1	119	-1110,0	-57905,8	3918,7	805579,5	0,047	0,040	0,069	Ok
19	119	-1233,3	-43655,7	2398,8	450080,5	0,038	0,030	0,043	Ok
1	119	-1233,3	-56282,4	2718,1	354949,3	0,021	0,039	0,048	Ok

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

36	119	-1356,7	-42698,1	1267,7	272742,9	0,023	0,030	0,022	Ok
1	119	-1356,7	-54659,9	1737,2	179394,0	0,011	0,038	0,031	Ok
34	119	-1480,0	-41139,4	594,5	324123,1	0,028	0,029	0,011	Ok
1	119	-1480,0	-53038,4	979,1	291610,5	0,017	0,037	0,017	Ok
34	119	-1603,3	-39882,3	298,8	364840,5	0,031	0,028	0,005	Ok
1	119	-1603,3	-51417,7	440,7	387188,2	0,023	0,036	0,008	Ok
34	119	-1726,7	-38625,9	283,2	367621,9	0,032	0,027	0,005	Ok
1	119	-1726,7	-49797,9	204,8	424897,3	0,025	0,035	0,004	Ok
34	119	-1850,0	-37370,2	367,8	342606,8	0,029	0,026	0,007	Ok
1	119	-1850,0	-48179,0	325,0	417721,3	0,025	0,034	0,006	Ok
34	119	-1973,3	-36115,1	417,8	300682,5	0,026	0,025	0,007	Ok
1	119	-1973,3	-46560,9	439,8	381155,9	0,023	0,032	0,008	Ok
35	119	-2096,7	-34283,3	326,6	254161,8	0,022	0,024	0,006	Ok
1	119	-2096,7	-44943,5	486,9	328233,3	0,020	0,031	0,009	Ok
35	119	-2220,0	-33050,1	344,3	214071,2	0,019	0,023	0,006	Ok
1	119	-2220,0	-43327,0	480,2	268873,9	0,016	0,030	0,009	Ok
35	119	-2343,3	-31817,6	328,0	171716,5	0,015	0,022	0,006	Ok
1	119	-2343,3	-41711,1	437,9	210085,3	0,013	0,029	0,008	Ok
19	119	-2466,7	-31100,6	290,7	131709,4	0,012	0,022	0,005	Ok
1	119	-2466,7	-40096,0	375,2	156406,0	0,010	0,028	0,007	Ok
19	119	-2590,0	-29848,4	242,6	96274,4	0,008	0,021	0,004	Ok
1	119	-2590,0	-38481,6	303,9	110411,1	0,007	0,027	0,005	Ok
19	119	-2713,3	-28596,7	191,7	66712,0	0,006	0,020	0,003	Ok
1	119	-2713,3	-36867,8	232,5	73198,9	0,005	0,026	0,004	Ok
19	119	-2836,7	-27345,4	142,8	43415,0	0,004	0,019	0,003	Ok
1	119	-2836,7	-35254,7	166,6	44821,6	0,003	0,025	0,003	Ok
19	119	-2960,0	-26094,6	99,3	26156,9	0,002	0,018	0,002	Ok
1	119	-2960,0	-33642,1	109,7	24648,8	0,002	0,023	0,002	Ok
19	119	-3083,3	-24844,3	63,1	14310,4	0,001	0,017	0,001	Ok
1	119	-3083,3	-32030,1	63,9	11681,5	0,001	0,022	0,001	Ok
20	119	-3206,7	-23761,8	33,9	7315,3	0,001	0,017	0,001	Ok
1	119	-3206,7	-30418,7	30,5	4885,2	0,000	0,021	0,001	Ok
36	119	-3330,0	-22503,4	16,5	4271,3	0,000	0,016	0,000	Ok
1	119	-3330,0	-28807,8	11,9	2866,7	0,000	0,020	0,000	Ok
34	119	-3453,3	-21095,7	13,4	2526,3	0,000	0,015	0,000	Ok
1	119	-3453,3	-27197,3	10,2	2059,6	0,000	0,019	0,000	Ok
34	119	-3576,7	-19846,9	7,3	895,8	0,000	0,014	0,000	Ok
1	119	-3576,7	-25587,4	6,8	842,7	0,000	0,018	0,000	Ok
1	119	-3700,0	-25587,4	6,8	0,0	0,013	0,018	0,000	Ok

Plinto n. 135		Quota (cm)	N (daN)	V (daN)	M (daN cm)	Ver. N/M	Ver.(25)	Ver.V	Stato
Cmb.	Palo								
34	135	0,0	-46665,2	7805,6	8760042,0	0,733	0,033	0,138	Ok
1	135	0,0	-59688,0	6684,3	10433440,0	0,612	0,042	0,119	Ok
34	135	-123,3	-45001,9	9841,1	7877091,0	0,662	0,031	0,175	Ok
1	135	-123,3	-57560,6	9811,0	9776549,0	0,576	0,040	0,174	Ok
18	135	-246,7	-43160,7	9898,6	6743916,0	0,570	0,030	0,176	Ok
1	135	-246,7	-56236,2	11363,4	8658433,0	0,512	0,039	0,202	Ok
35	135	-370,0	-41549,3	8112,3	5703813,0	0,484	0,029	0,144	Ok
1	135	-370,0	-54912,7	11756,0	7302410,0	0,433	0,038	0,208	Ok
35	135	-493,3	-40548,6	8152,1	4714136,0	0,402	0,028	0,145	Ok
1	135	-493,3	-53590,1	11208,7	5880142,0	0,350	0,037	0,199	Ok
19	135	-616,7	-40297,5	7590,2	3728664,0	0,318	0,028	0,135	Ok
1	135	-616,7	-52268,5	10036,8	4517624,0	0,270	0,036	0,178	Ok
19	135	-740,0	-39279,3	6630,9	2813421,0	0,241	0,027	0,118	Ok
1	135	-740,0	-50947,7	8526,7	3296487,0	0,197	0,036	0,151	Ok
19	135	-863,3	-38261,7	5517,7	2014212,0	0,173	0,027	0,098	Ok
1	135	-863,3	-49627,8	6903,9	2261428,0	0,136	0,035	0,122	Ok
19	135	-986,7	-37244,7	4384,1	1353244,0	0,116	0,026	0,078	Ok
1	135	-986,7	-48308,8	5329,6	1429794,0	0,086	0,034	0,095	Ok
19	135	-1110,0	-36228,4	3322,6	837536,7	0,072	0,025	0,059	Ok
1	135	-1110,0	-46990,6	3907,6	803240,6	0,049	0,033	0,069	Ok
20	135	-1233,3	-35607,5	2292,0	477528,4	0,041	0,025	0,041	Ok



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	135	-1233,3	-45673,2	2695,4	391462,1	0,024	0,032	0,048	Ok
36	135	-1356,7	-34840,1	1286,4	343070,6	0,030	0,024	0,023	Ok
1	135	-1356,7	-44356,5	1716,4	269207,0	0,016	0,031	0,030	Ok
34	135	-1480,0	-33649,9	632,1	371629,7	0,032	0,023	0,011	Ok
1	135	-1480,0	-43040,6	974,2	353754,5	0,022	0,030	0,017	Ok
34	135	-1603,3	-32621,7	381,2	396514,1	0,035	0,023	0,007	Ok
1	135	-1603,3	-41725,4	477,5	427534,6	0,026	0,029	0,008	Ok
34	135	-1726,7	-31594,1	366,3	388636,3	0,034	0,022	0,006	Ok
1	135	-1726,7	-40411,0	307,8	451696,3	0,028	0,028	0,005	Ok
34	135	-1850,0	-30566,9	424,1	356179,4	0,031	0,021	0,008	Ok
1	135	-1850,0	-39097,2	399,0	435205,4	0,027	0,027	0,007	Ok
34	135	-1973,3	-29540,3	455,3	309025,2	0,027	0,021	0,008	Ok
1	135	-1973,3	-37784,1	487,6	392011,5	0,024	0,026	0,009	Ok
35	135	-2096,7	-27596,0	350,2	258919,1	0,023	0,019	0,006	Ok
1	135	-2096,7	-36471,7	518,5	334406,9	0,021	0,025	0,009	Ok
35	135	-2220,0	-26603,4	359,9	216289,5	0,019	0,019	0,006	Ok
1	135	-2220,0	-35159,8	500,7	271852,4	0,017	0,024	0,009	Ok
19	135	-2343,3	-26096,3	338,5	172630,0	0,015	0,018	0,006	Ok
1	135	-2343,3	-33848,6	450,5	211015,2	0,013	0,024	0,008	Ok
19	135	-2466,7	-25085,8	296,0	131780,7	0,012	0,017	0,005	Ok
1	135	-2466,7	-32537,9	382,2	156161,9	0,010	0,023	0,007	Ok
19	135	-2590,0	-24075,7	245,1	95984,4	0,009	0,017	0,004	Ok
1	135	-2590,0	-31227,8	307,0	109645,9	0,007	0,022	0,005	Ok
19	135	-2713,3	-23066,1	192,4	66381,5	0,006	0,016	0,003	Ok
1	135	-2713,3	-29918,2	233,1	72389,0	0,005	0,021	0,004	Ok
19	135	-2836,7	-22056,8	142,6	43253,7	0,004	0,015	0,003	Ok
1	135	-2836,7	-28609,1	165,8	44312,4	0,003	0,020	0,003	Ok
19	135	-2960,0	-21048,0	98,8	26287,5	0,002	0,015	0,002	Ok
1	135	-2960,0	-27300,6	108,5	24704,9	0,002	0,019	0,002	Ok
20	135	-3083,3	-20264,1	60,3	14863,0	0,001	0,014	0,001	Ok
1	135	-3083,3	-25992,4	63,3	12530,7	0,001	0,018	0,001	Ok
20	135	-3206,7	-19244,6	35,8	8473,5	0,001	0,013	0,001	Ok
1	135	-3206,7	-24684,7	31,6	6516,4	0,000	0,017	0,001	Ok
36	135	-3330,0	-18362,0	20,9	5343,6	0,000	0,013	0,000	Ok
1	135	-3330,0	-23377,5	16,5	4253,3	0,000	0,016	0,000	Ok
34	135	-3453,3	-17255,2	16,2	2992,3	0,000	0,012	0,000	Ok
1	135	-3453,3	-22070,6	14,0	2680,5	0,000	0,015	0,000	Ok
34	135	-3576,7	-16233,8	8,2	1012,4	0,000	0,011	0,000	Ok
1	135	-3576,7	-20764,1	8,1	993,9	0,000	0,014	0,000	Ok
1	135	-3700,0	-20764,1	8,1	0,0	0,011	0,014	0,000	Ok

**Plinto n. 147**

<b>Cmb.</b>	<b>Palo</b>	<b>Quota (cm)</b>	<b>N (daN)</b>	<b>V (daN)</b>	<b>M (daN cm)</b>	<b>Ver. N/M</b>	<b>Ver.(25)</b>	<b>Ver.V</b>	<b>Stato</b>
34	147	0,0	-46333,3	10155,2	10146730,0	0,850	0,032	0,180	Ok
1	147	0,0	-59590,8	8562,5	12245400,0	0,719	0,042	0,152	Ok
34	147	-123,3	-44681,9	12500,7	8835955,0	0,743	0,031	0,222	Ok
1	147	-123,3	-57466,9	13288,2	11024320,0	0,650	0,040	0,236	Ok
18	147	-246,7	-43327,9	12227,4	7343358,0	0,620	0,030	0,217	Ok
1	147	-246,7	-56144,6	14256,1	9432447,0	0,558	0,039	0,253	Ok
35	147	-370,0	-41717,0	9806,9	6008045,0	0,510	0,029	0,174	Ok
1	147	-370,0	-54823,3	13942,1	7701464,0	0,457	0,038	0,247	Ok
19	147	-493,3	-41022,9	9370,5	4809727,0	0,409	0,029	0,166	Ok
1	147	-493,3	-53502,9	12729,9	6000737,0	0,357	0,037	0,226	Ok
19	147	-616,7	-40011,2	8319,1	3675816,0	0,314	0,028	0,148	Ok
1	147	-616,7	-52183,4	10992,1	4445889,0	0,265	0,036	0,195	Ok
19	147	-740,0	-39000,2	7019,8	2668465,0	0,228	0,027	0,124	Ok
1	147	-740,0	-50864,8	9032,6	3104553,0	0,186	0,035	0,160	Ok
19	147	-863,3	-37989,8	5650,9	1821508,0	0,156	0,026	0,100	Ok
1	147	-863,3	-49547,0	7074,7	2006846,0	0,120	0,035	0,125	Ok
19	147	-986,7	-36980,1	4339,0	1147504,0	0,099	0,026	0,077	Ok
1	147	-986,7	-48230,1	5267,6	1157889,0	0,070	0,034	0,093	Ok
19	147	-1110,0	-35971,0	3164,8	648335,5	0,056	0,025	0,056	Ok
1	147	-1110,0	-46914,1	3698,5	558001,1	0,034	0,033	0,066	Ok

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

36	147	-1233,3	-35454,2	1781,5	384778,3	0,033	0,025	0,032	Ok
1	147	-1233,3	-45598,8	2407,8	281439,6	0,017	0,032	0,043	Ok
34	147	-1356,7	-34432,1	899,4	424222,3	0,037	0,024	0,016	Ok
1	147	-1356,7	-44284,3	1404,1	373550,8	0,023	0,031	0,025	Ok
34	147	-1480,0	-33410,6	471,1	479430,5	0,042	0,023	0,008	Ok
1	147	-1480,0	-42970,5	687,1	493401,0	0,030	0,030	0,012	Ok
34	147	-1603,3	-32389,7	389,2	487184,8	0,043	0,023	0,007	Ok
1	147	-1603,3	-41657,5	329,9	546612,1	0,033	0,029	0,006	Ok
34	147	-1726,7	-31369,4	481,4	457712,0	0,040	0,022	0,009	Ok
1	147	-1726,7	-40345,2	417,4	542134,0	0,033	0,028	0,007	Ok
34	147	-1850,0	-30349,6	549,1	404695,3	0,036	0,021	0,010	Ok
1	147	-1850,0	-39033,6	560,3	498445,7	0,031	0,027	0,010	Ok
34	147	-1973,3	-29330,3	561,2	339973,9	0,030	0,020	0,010	Ok
1	147	-1973,3	-37722,6	626,7	432179,1	0,027	0,026	0,011	Ok
35	147	-2096,7	-27707,4	432,5	275667,1	0,024	0,019	0,008	Ok
1	147	-2096,7	-36412,3	624,5	356326,2	0,022	0,025	0,011	Ok
35	147	-2220,0	-26710,8	417,0	222613,8	0,020	0,019	0,007	Ok
1	147	-2220,0	-35102,6	574,7	280221,8	0,017	0,024	0,010	Ok
19	147	-2343,3	-25910,9	374,0	171958,4	0,015	0,018	0,007	Ok
1	147	-2343,3	-33793,5	497,0	210018,9	0,013	0,024	0,009	Ok
19	147	-2466,7	-24907,6	314,9	126615,8	0,011	0,017	0,006	Ok
1	147	-2466,7	-32484,9	406,7	149305,0	0,009	0,023	0,007	Ok
19	147	-2590,0	-23904,7	251,3	88475,0	0,008	0,017	0,004	Ok
1	147	-2590,0	-31177,0	315,0	99723,3	0,006	0,022	0,006	Ok
19	147	-2713,3	-22902,2	189,6	58173,9	0,005	0,016	0,003	Ok
1	147	-2713,3	-29869,5	229,4	61542,3	0,004	0,021	0,004	Ok
19	147	-2836,7	-21900,1	134,1	35565,0	0,003	0,015	0,002	Ok
1	147	-2836,7	-28562,6	154,6	34167,4	0,002	0,020	0,003	Ok
19	147	-2960,0	-20898,4	87,3	20014,3	0,002	0,015	0,002	Ok
1	147	-2960,0	-27256,1	93,3	16680,1	0,001	0,019	0,002	Ok
20	147	-3083,3	-20026,2	49,0	11701,6	0,001	0,014	0,001	Ok
1	147	-3083,3	-25950,1	47,3	8481,7	0,001	0,018	0,001	Ok
36	147	-3206,7	-19161,8	25,1	8934,1	0,001	0,013	0,000	Ok
1	147	-3206,7	-24644,6	20,4	6975,3	0,000	0,017	0,000	Ok
34	147	-3330,0	-18147,0	23,2	6716,3	0,001	0,013	0,000	Ok
1	147	-3330,0	-23339,4	18,9	6026,6	0,000	0,016	0,000	Ok
34	147	-3453,3	-17132,5	21,4	3923,1	0,000	0,012	0,000	Ok
1	147	-3453,3	-22034,7	20,3	3853,3	0,000	0,015	0,000	Ok
34	147	-3576,7	-16118,3	10,5	1293,1	0,000	0,011	0,000	Ok
1	147	-3576,7	-20730,3	11,0	1360,0	0,000	0,014	0,000	Ok
1	147	-3700,0	-20730,3	11,0	0,0	0,011	0,014	0,000	Ok

**Plinto n. 151**

<b>Cmb.</b>	<b>Palo</b>	<b>Quota (cm)</b>	<b>N (daN)</b>	<b>V (daN)</b>	<b>M (daN cm)</b>	<b>Ver. N/M</b>	<b>Ver.(25)</b>	<b>Ver.V</b>	<b>Stato</b>
34	151	0,0	-37573,2	9659,0	9152003,0	0,787	0,026	0,171	Ok
1	151	0,0	-47643,0	8796,0	10938570,0	0,660	0,033	0,156	Ok
34	151	-123,3	-36234,0	11013,8	8095545,0	0,699	0,025	0,195	Ok
1	151	-123,3	-45944,9	11336,3	10060160,0	0,609	0,032	0,201	Ok
18	151	-246,7	-34790,4	10639,1	6842384,0	0,593	0,024	0,189	Ok
1	151	-246,7	-44887,7	12378,2	8786813,0	0,533	0,031	0,219	Ok
35	151	-370,0	-32865,7	8594,6	5723187,0	0,499	0,023	0,152	Ok
1	151	-370,0	-43831,3	12391,4	7327258,0	0,446	0,031	0,220	Ok
35	151	-493,3	-32074,1	8428,8	4682912,0	0,410	0,022	0,149	Ok
1	151	-493,3	-42775,7	11570,0	5841987,0	0,356	0,030	0,205	Ok
19	151	-616,7	-31849,9	7720,8	3679019,0	0,322	0,022	0,137	Ok
1	151	-616,7	-41720,7	10206,0	4447217,0	0,272	0,029	0,181	Ok
19	151	-740,0	-31045,1	6663,8	2757495,0	0,242	0,022	0,118	Ok
1	151	-740,0	-40666,5	8568,1	3216476,0	0,197	0,028	0,152	Ok
19	151	-863,3	-30240,9	5492,3	1963685,0	0,173	0,021	0,097	Ok
1	151	-863,3	-39613,0	6867,1	2188326,0	0,135	0,028	0,122	Ok
19	151	-986,7	-29437,1	4329,2	1316374,0	0,116	0,021	0,077	Ok
1	151	-986,7	-38560,1	5251,8	1376631,0	0,085	0,027	0,093	Ok
19	151	-1110,0	-28633,8	3258,6	821284,6	0,073	0,020	0,058	Ok

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	151	-1110,0	-37507,9	3816,2	784435,7	0,048	0,026	0,068	Ok
20	151	-1233,3	-28255,6	2244,6	509056,6	0,045	0,020	0,040	Ok
1	151	-1233,3	-36456,3	2610,1	431517,0	0,027	0,025	0,046	Ok
36	151	-1356,7	-27922,1	1272,7	411055,1	0,036	0,019	0,023	Ok
1	151	-1356,7	-35405,4	1652,8	356373,2	0,022	0,025	0,029	Ok
34	151	-1480,0	-27093,8	658,2	423227,7	0,038	0,019	0,012	Ok
1	151	-1480,0	-34355,0	948,5	421147,1	0,026	0,024	0,017	Ok
34	151	-1603,3	-26265,9	459,4	430751,6	0,038	0,018	0,008	Ok
1	151	-1603,3	-33305,3	517,1	471707,9	0,029	0,023	0,009	Ok
34	151	-1726,7	-25438,4	449,7	409990,6	0,037	0,018	0,008	Ok
1	151	-1726,7	-32256,1	407,7	479171,4	0,030	0,022	0,007	Ok
34	151	-1850,0	-24611,4	485,2	368342,7	0,033	0,017	0,009	Ok
1	151	-1850,0	-31207,4	478,8	450939,8	0,028	0,022	0,008	Ok
34	151	-1973,3	-23784,8	495,9	314867,7	0,028	0,017	0,009	Ok
1	151	-1973,3	-30159,3	540,0	399649,2	0,025	0,021	0,010	Ok
35	151	-2096,7	-21828,6	374,9	260707,3	0,024	0,015	0,007	Ok
1	151	-2096,7	-29111,7	551,1	336693,7	0,021	0,020	0,010	Ok
35	151	-2220,0	-21043,4	374,1	215477,8	0,020	0,015	0,007	Ok
1	151	-2220,0	-28064,6	519,4	270860,3	0,017	0,020	0,009	Ok
19	151	-2343,3	-20625,7	345,4	170701,4	0,015	0,014	0,006	Ok
1	151	-2343,3	-27018,0	459,4	208281,6	0,013	0,019	0,008	Ok
19	151	-2466,7	-19827,1	298,0	129418,5	0,012	0,014	0,005	Ok
1	151	-2466,7	-25971,8	384,6	152794,2	0,010	0,018	0,007	Ok
19	151	-2590,0	-19028,7	244,0	93741,1	0,009	0,013	0,004	Ok
1	151	-2590,0	-24926,0	305,5	106412,9	0,007	0,017	0,005	Ok
19	151	-2713,3	-18230,7	189,8	64599,8	0,006	0,013	0,003	Ok
1	151	-2713,3	-23880,7	229,4	69804,3	0,004	0,017	0,004	Ok
19	151	-2836,7	-17433,1	139,6	42119,6	0,004	0,012	0,002	Ok
1	151	-2836,7	-22835,8	161,5	42712,0	0,003	0,016	0,003	Ok
19	151	-2960,0	-16635,7	96,2	25867,5	0,002	0,012	0,002	Ok
1	151	-2960,0	-21791,3	104,7	24312,8	0,002	0,015	0,002	Ok
20	151	-3083,3	-16080,2	59,7	15660,0	0,001	0,011	0,001	Ok
1	151	-3083,3	-20747,2	61,1	13428,2	0,001	0,014	0,001	Ok
36	151	-3206,7	-15538,9	32,4	9647,3	0,001	0,011	0,001	Ok
1	151	-3206,7	-19703,4	32,7	8204,0	0,001	0,014	0,001	Ok
36	151	-3330,0	-14716,0	25,0	6388,1	0,001	0,010	0,000	Ok
1	151	-3330,0	-18659,9	21,2	5606,9	0,000	0,013	0,000	Ok
34	151	-3453,3	-13893,3	19,2	3490,1	0,000	0,010	0,000	Ok
1	151	-3453,3	-17616,8	17,9	3330,7	0,000	0,012	0,000	Ok
34	151	-3576,7	-13070,9	9,2	1139,7	0,000	0,009	0,000	Ok
1	151	-3576,7	-16573,9	9,4	1159,7	0,000	0,012	0,000	Ok
1	151	-3700,0	-16573,9	9,4	0,0	0,009	0,012	0,000	Ok

**Plinto n. 167**

Cmb.	Palo	Quota (cm)	N (daN)	V (daN)	M (daN cm)	Ver. N/M	Ver.(25)	Ver.V	Stato
34	167	0,0	-31068,2	11519,9	9609717,0	0,843	0,022	0,204	Ok
1	167	0,0	-39129,7	10923,0	11530540,0	0,710	0,027	0,194	Ok
34	167	-123,3	-29960,9	12333,3	8341097,0	0,734	0,021	0,219	Ok
1	167	-123,3	-37735,1	13053,1	10378620,0	0,641	0,026	0,231	Ok
18	167	-246,7	-28943,1	11526,4	6935294,0	0,613	0,020	0,204	Ok
1	167	-246,7	-36866,8	13566,2	8909715,0	0,551	0,026	0,241	Ok
35	167	-370,0	-26800,7	9165,2	5717525,0	0,508	0,019	0,163	Ok
1	167	-370,0	-35999,1	13138,5	7319090,0	0,454	0,025	0,233	Ok
19	167	-493,3	-26468,2	8823,7	4624007,0	0,412	0,018	0,156	Ok
1	167	-493,3	-35132,1	11980,8	5754990,0	0,358	0,024	0,212	Ok
19	167	-616,7	-25815,4	7853,2	3585912,0	0,320	0,018	0,139	Ok
1	167	-616,7	-34265,7	10375,4	4321756,0	0,269	0,024	0,184	Ok
19	167	-740,0	-25163,1	6671,0	2658706,0	0,238	0,018	0,118	Ok
1	167	-740,0	-33399,8	8575,5	3082615,0	0,192	0,023	0,152	Ok
19	167	-863,3	-24511,2	5424,7	1875220,0	0,168	0,017	0,096	Ok
1	167	-863,3	-32534,6	6776,1	2068266,0	0,129	0,023	0,120	Ok
19	167	-986,7	-23859,7	4225,0	1249698,0	0,112	0,017	0,075	Ok
1	167	-986,7	-31669,8	5111,4	1288448,0	0,081	0,022	0,091	Ok

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

20	167	-1110,0	-23614,9	3046,0	791484,2	0,071	0,016	0,054	Ok
1	167	-1110,0	-30805,6	3662,6	748792,6	0,047	0,021	0,065	Ok
20	167	-1233,3	-22952,8	2152,0	533821,6	0,048	0,016	0,038	Ok
1	167	-1233,3	-29942,0	2470,0	474004,5	0,030	0,021	0,044	Ok
36	167	-1356,7	-22926,7	1226,6	478565,9	0,043	0,016	0,022	Ok
1	167	-1356,7	-29078,8	1547,5	444339,2	0,028	0,020	0,027	Ok
34	167	-1480,0	-22403,1	672,4	480284,1	0,043	0,016	0,012	Ok
1	167	-1480,0	-28216,2	901,3	495281,4	0,031	0,020	0,016	Ok
34	167	-1603,3	-21718,5	533,8	470315,4	0,043	0,015	0,009	Ok
1	167	-1603,3	-27354,0	558,6	523061,9	0,033	0,019	0,010	Ok
34	167	-1726,7	-21034,3	534,5	435014,9	0,039	0,015	0,009	Ok
1	167	-1726,7	-26492,3	508,3	511541,8	0,032	0,018	0,009	Ok
34	167	-1850,0	-20350,5	552,4	382324,7	0,035	0,014	0,010	Ok
1	167	-1850,0	-25631,0	566,1	469042,3	0,030	0,018	0,010	Ok
34	167	-1973,3	-19667,0	542,7	320974,4	0,029	0,014	0,010	Ok
1	167	-1973,3	-24770,2	600,8	407607,6	0,026	0,017	0,011	Ok
35	167	-2096,7	-17800,4	404,3	261651,8	0,024	0,012	0,007	Ok
1	167	-2096,7	-23909,8	589,5	337876,8	0,022	0,017	0,010	Ok
19	167	-2220,0	-17365,5	395,4	213381,5	0,020	0,012	0,007	Ok
1	167	-2220,0	-23049,8	540,8	267917,4	0,017	0,016	0,010	Ok
19	167	-2343,3	-16717,8	352,7	166941,7	0,015	0,012	0,006	Ok
1	167	-2343,3	-22190,1	468,7	203222,3	0,013	0,015	0,008	Ok
19	167	-2466,7	-16070,5	298,9	125198,5	0,012	0,011	0,005	Ok
1	167	-2466,7	-21330,9	385,8	147085,7	0,009	0,015	0,007	Ok
19	167	-2590,0	-15423,4	241,2	89817,2	0,008	0,011	0,004	Ok
1	167	-2590,0	-20472,0	301,6	101084,4	0,007	0,014	0,005	Ok
19	167	-2713,3	-14776,6	185,0	61447,4	0,006	0,010	0,003	Ok
1	167	-2713,3	-19613,5	223,0	65554,4	0,004	0,014	0,004	Ok
19	167	-2836,7	-14130,1	134,3	39999,7	0,004	0,010	0,002	Ok
1	167	-2836,7	-18755,3	154,3	40012,3	0,003	0,013	0,003	Ok
20	167	-2960,0	-13719,7	88,6	25271,5	0,002	0,010	0,002	Ok
1	167	-2960,0	-17897,4	98,5	23464,8	0,002	0,012	0,002	Ok
20	167	-3083,3	-13062,4	57,7	16225,5	0,002	0,009	0,001	Ok
1	167	-3083,3	-17039,9	57,4	14356,2	0,001	0,012	0,001	Ok
36	167	-3206,7	-12758,9	34,9	11133,7	0,001	0,009	0,001	Ok
1	167	-3206,7	-16182,6	33,5	9935,1	0,001	0,011	0,001	Ok
36	167	-3330,0	-12083,2	28,9	7433,2	0,001	0,008	0,001	Ok
1	167	-3330,0	-15325,6	25,9	6979,6	0,000	0,011	0,000	Ok
34	167	-3453,3	-11488,0	22,4	4027,1	0,000	0,008	0,000	Ok
1	167	-3453,3	-14468,9	21,9	4022,6	0,000	0,010	0,000	Ok
34	167	-3576,7	-10807,9	10,4	1282,0	0,000	0,008	0,000	Ok
1	167	-3576,7	-13612,4	10,9	1344,8	0,000	0,009	0,000	Ok
1	167	-3700,0	-13612,4	10,9	0,0	0,007	0,009	0,000	Ok

**Plinto n. 179**

<b>Cmb.</b>	<b>Palo</b>	<b>Quota</b> (cm)	<b>N</b> (daN)	<b>V</b> (daN)	<b>M</b> (daN cm)	<b>Ver. N/M</b>	<b>Ver.(25)</b>	<b>Ver.V</b>	<b>Stato</b>
34	179	0,0	-38807,3	12117,7	10379640,0	0,889	0,027	0,215	Ok
1	179	0,0	-49753,6	11129,1	12541980,0	0,753	0,035	0,197	Ok
34	179	-123,3	-37424,1	13576,2	8887176,0	0,764	0,026	0,241	Ok
1	179	-123,3	-47980,3	14673,5	11089700,0	0,668	0,033	0,260	Ok
34	179	-246,7	-36563,0	13142,3	7281456,0	0,628	0,025	0,233	Ok
1	179	-246,7	-46876,3	15078,8	9348318,0	0,565	0,033	0,267	Ok
35	179	-370,0	-34717,6	10111,0	5878067,0	0,510	0,024	0,179	Ok
1	179	-370,0	-45773,1	14349,0	7531147,0	0,456	0,032	0,254	Ok
19	179	-493,3	-33881,4	9468,9	4651790,0	0,404	0,024	0,168	Ok
1	179	-493,3	-44670,6	12845,8	5792386,0	0,352	0,031	0,228	Ok
19	179	-616,7	-33045,8	8265,7	3516816,0	0,307	0,023	0,147	Ok
1	179	-616,7	-43569,0	10918,5	4234221,0	0,258	0,030	0,194	Ok
19	179	-740,0	-32210,8	6880,0	2526670,0	0,221	0,022	0,122	Ok
1	179	-740,0	-42468,0	8848,7	2913493,0	0,178	0,030	0,157	Ok
19	179	-863,3	-31376,3	5472,8	1708724,0	0,150	0,022	0,097	Ok
1	179	-863,3	-41367,8	6839,9	1853025,0	0,113	0,029	0,121	Ok
19	179	-986,7	-30542,4	4156,2	1072254,0	0,094	0,021	0,074	Ok

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	179	-986,7	-40268,3	5024,5	1056515,0	0,065	0,028	0,089	Ok
20	179	-1110,0	-29903,5	2896,1	633492,4	0,056	0,021	0,051	Ok
1	179	-1110,0	-39169,5	3476,4	538538,4	0,033	0,027	0,062	Ok
36	179	-1233,3	-29506,2	1671,3	467367,8	0,041	0,021	0,030	Ok
1	179	-1233,3	-38071,4	2226,7	378780,8	0,023	0,027	0,039	Ok
34	179	-1356,7	-28839,2	847,8	497448,1	0,044	0,020	0,015	Ok
1	179	-1356,7	-36973,9	1281,5	469682,2	0,029	0,026	0,023	Ok
34	179	-1480,0	-27983,7	519,6	528023,0	0,047	0,019	0,009	Ok
1	179	-1480,0	-35877,0	654,6	556279,3	0,035	0,025	0,012	Ok
34	179	-1603,3	-27128,6	496,0	516301,3	0,046	0,019	0,009	Ok
1	179	-1603,3	-34780,7	434,8	583855,5	0,036	0,024	0,008	Ok
34	179	-1726,7	-26274,0	568,0	472603,9	0,042	0,018	0,010	Ok
1	179	-1726,7	-33685,0	531,0	561102,2	0,035	0,023	0,009	Ok
34	179	-1850,0	-25419,8	606,9	409741,5	0,037	0,018	0,011	Ok
1	179	-1850,0	-32589,9	635,2	504876,0	0,032	0,023	0,011	Ok
34	179	-1973,3	-24566,1	596,1	338660,0	0,030	0,017	0,011	Ok
1	179	-1973,3	-31495,4	671,3	430502,8	0,027	0,022	0,012	Ok
35	179	-2096,7	-23058,6	449,7	270784,1	0,024	0,016	0,008	Ok
1	179	-2096,7	-30401,4	647,4	349908,7	0,022	0,021	0,011	Ok
19	179	-2220,0	-22229,2	426,4	216136,5	0,020	0,015	0,008	Ok
1	179	-2220,0	-29307,9	582,7	271543,4	0,017	0,020	0,010	Ok
19	179	-2343,3	-21400,2	372,8	165038,2	0,015	0,015	0,007	Ok
1	179	-2343,3	-28214,9	495,3	200834,6	0,013	0,020	0,009	Ok
19	179	-2466,7	-20571,5	309,2	120275,0	0,011	0,014	0,005	Ok
1	179	-2466,7	-27122,3	399,2	140795,7	0,009	0,019	0,007	Ok
19	179	-2590,0	-19743,2	243,5	83262,7	0,008	0,014	0,004	Ok
1	179	-2590,0	-26030,3	304,7	92642,9	0,006	0,018	0,005	Ok
19	179	-2713,3	-18915,3	181,4	54386,7	0,005	0,013	0,003	Ok
1	179	-2713,3	-24938,7	218,4	56370,6	0,004	0,017	0,004	Ok
19	179	-2836,7	-18087,6	126,7	33337,9	0,003	0,013	0,002	Ok
1	179	-2836,7	-23847,5	144,6	31299,0	0,002	0,017	0,003	Ok
20	179	-2960,0	-17373,3	78,5	20106,1	0,002	0,012	0,001	Ok
1	179	-2960,0	-22756,7	85,6	16633,3	0,001	0,016	0,002	Ok
36	179	-3083,3	-16791,9	39,1	13628,8	0,001	0,012	0,001	Ok
1	179	-3083,3	-21666,3	43,7	11000,3	0,001	0,015	0,001	Ok
36	179	-3206,7	-15947,1	29,7	10806,9	0,001	0,011	0,001	Ok
1	179	-3206,7	-20576,2	24,4	9455,0	0,001	0,014	0,000	Ok
34	179	-3330,0	-15199,3	28,2	7817,5	0,001	0,011	0,000	Ok
1	179	-3330,0	-19486,6	25,3	7472,2	0,000	0,014	0,000	Ok
34	179	-3453,3	-14349,6	24,3	4405,4	0,000	0,010	0,000	Ok
1	179	-3453,3	-18397,2	24,2	4481,5	0,000	0,013	0,000	Ok
34	179	-3576,7	-13500,2	11,4	1410,9	0,000	0,009	0,000	Ok
1	179	-3576,7	-17308,2	12,3	1512,0	0,000	0,012	0,000	Ok
1	179	-3700,0	-17308,2	12,3	0,0	0,009	0,012	0,000	Ok

**Plinto n. 183**

Cmb.	Palo	Quota (cm)	N (daN)	V (daN)	M (daN cm)	Ver. N/M	Ver.(25)	Ver.V	Stato
34	183	0,0	-28039,9	13289,5	10194610,0	0,903	0,020	0,236	Ok
1	183	0,0	-35311,3	12942,8	12291010,0	0,763	0,025	0,230	Ok
34	183	-123,3	-27040,5	13771,0	8685440,0	0,772	0,019	0,244	Ok
1	183	-123,3	-34052,7	14922,1	10825850,0	0,674	0,024	0,265	Ok
34	183	-246,7	-26418,3	13070,9	7101573,0	0,632	0,018	0,232	Ok
1	183	-246,7	-33269,2	14963,5	9117762,0	0,569	0,023	0,265	Ok
35	183	-370,0	-24182,2	9891,4	5746251,0	0,515	0,017	0,175	Ok
1	183	-370,0	-32486,2	14082,6	7356093,0	0,460	0,023	0,250	Ok
19	183	-493,3	-23599,8	9261,7	4567876,0	0,410	0,016	0,164	Ok
1	183	-493,3	-31703,8	12546,2	5680419,0	0,356	0,022	0,222	Ok
19	183	-616,7	-23017,8	8065,7	3482127,0	0,313	0,016	0,143	Ok
1	183	-616,7	-30921,9	10649,0	4184382,0	0,263	0,022	0,189	Ok
19	183	-740,0	-22436,1	6721,9	2536778,0	0,229	0,016	0,119	Ok
1	183	-740,0	-30140,6	8640,1	2920844,0	0,184	0,021	0,153	Ok
19	183	-863,3	-21854,9	5370,1	1757470,0	0,159	0,015	0,095	Ok
1	183	-863,3	-29359,7	6703,4	1912332,0	0,121	0,020	0,119	Ok



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

19	183	-986,7	-21274,0	4110,5	1153587,0	0,104	0,015	0,073	Ok
1	183	-986,7	-28579,4	4959,9	1165259,0	0,074	0,020	0,088	Ok
20	183	-1110,0	-21012,3	2911,6	751590,8	0,068	0,015	0,052	Ok
1	183	-1110,0	-27799,5	3478,5	691438,8	0,044	0,019	0,062	Ok
36	183	-1233,3	-21146,2	1749,0	564019,7	0,051	0,015	0,031	Ok
1	183	-1233,3	-27020,1	2289,3	511554,8	0,032	0,019	0,041	Ok
36	183	-1356,7	-20536,6	1146,8	541617,2	0,049	0,014	0,020	Ok
1	183	-1356,7	-26241,2	1401,4	528983,7	0,034	0,018	0,025	Ok
34	183	-1480,0	-20219,4	669,3	540886,3	0,049	0,014	0,012	Ok
1	183	-1480,0	-25462,7	827,3	573663,1	0,037	0,018	0,015	Ok
34	183	-1603,3	-19601,5	598,3	515723,0	0,047	0,014	0,011	Ok
1	183	-1603,3	-24684,7	593,8	582254,9	0,037	0,017	0,011	Ok
34	183	-1726,7	-18984,1	616,1	465900,6	0,043	0,013	0,011	Ok
1	183	-1726,7	-23907,0	604,5	551736,8	0,035	0,017	0,011	Ok
34	183	-1850,0	-18366,9	623,3	401101,5	0,037	0,013	0,011	Ok
1	183	-1850,0	-23129,8	657,6	493435,5	0,032	0,016	0,012	Ok
34	183	-1973,3	-17750,0	596,2	330436,1	0,030	0,012	0,011	Ok
1	183	-1973,3	-22353,0	670,5	419901,1	0,027	0,016	0,012	Ok
35	183	-2096,7	-16061,2	440,8	264473,2	0,024	0,011	0,008	Ok
1	183	-2096,7	-21576,5	637,0	341530,6	0,022	0,015	0,011	Ok
19	183	-2220,0	-15483,5	417,7	211873,2	0,020	0,011	0,007	Ok
1	183	-2220,0	-20800,5	569,6	265894,5	0,017	0,014	0,010	Ok
19	183	-2343,3	-14906,1	363,9	162936,0	0,015	0,010	0,006	Ok
1	183	-2343,3	-20024,7	483,1	197921,5	0,013	0,014	0,009	Ok
19	183	-2466,7	-14328,9	302,0	120129,7	0,011	0,010	0,005	Ok
1	183	-2466,7	-19249,4	389,7	140365,5	0,009	0,013	0,007	Ok
19	183	-2590,0	-13752,0	238,9	84734,0	0,008	0,010	0,004	Ok
1	183	-2590,0	-18474,3	298,5	94339,4	0,006	0,013	0,005	Ok
19	183	-2713,3	-13175,3	179,6	57080,1	0,005	0,009	0,003	Ok
1	183	-2713,3	-17699,5	215,9	59825,1	0,004	0,012	0,004	Ok
19	183	-2836,7	-12598,8	127,7	36823,7	0,003	0,009	0,002	Ok
1	183	-2836,7	-16925,1	145,6	36112,1	0,002	0,012	0,003	Ok
20	183	-2960,0	-12207,7	82,8	24184,2	0,002	0,009	0,001	Ok
1	183	-2960,0	-16150,9	90,1	21987,1	0,001	0,011	0,002	Ok
36	183	-3083,3	-12034,2	46,8	16612,6	0,002	0,008	0,001	Ok
1	183	-3083,3	-15377,1	52,0	15113,3	0,001	0,011	0,001	Ok
36	183	-3206,7	-11428,8	36,7	12447,2	0,001	0,008	0,001	Ok
1	183	-3206,7	-14603,4	33,9	11561,4	0,001	0,010	0,001	Ok
36	183	-3330,0	-10823,5	32,4	8418,9	0,001	0,008	0,001	Ok
1	183	-3330,0	-13830,1	30,4	8310,3	0,001	0,010	0,001	Ok
34	183	-3453,3	-10368,2	25,6	4579,6	0,000	0,007	0,000	Ok
1	183	-3453,3	-13056,9	26,0	4728,1	0,000	0,009	0,000	Ok
34	183	-3576,7	-9754,5	11,6	1435,7	0,000	0,007	0,000	Ok
1	183	-3576,7	-12284,0	12,5	1544,4	0,000	0,009	0,000	Ok
1	183	-3700,0	-12284,0	12,5	0,0	0,006	0,009	0,000	Ok

**Plinto n. 199**

<b>Cmb.</b>	<b>Palo</b>	<b>Quota (cm)</b>	<b>N (daN)</b>	<b>V (daN)</b>	<b>M (daN cm)</b>	<b>Ver. N/M</b>	<b>Ver.(25)</b>	<b>Ver.V</b>	<b>Stato</b>
34	199	0,0	-30293,3	14613,2	10856260,0	0,955	0,021	0,259	Ok
1	199	0,0	-38575,4	14405,8	13156730,0	0,811	0,027	0,255	Ok
34	199	-123,3	-29213,6	15099,8	9119943,0	0,805	0,020	0,268	Ok
1	199	-123,3	-37200,6	16654,8	11391520,0	0,704	0,026	0,295	Ok
34	199	-246,7	-28541,4	14156,7	7344971,0	0,650	0,020	0,251	Ok
1	199	-246,7	-36344,6	16389,0	9432724,0	0,584	0,025	0,291	Ok
19	199	-370,0	-26408,4	10923,2	5836414,0	0,520	0,018	0,194	Ok
1	199	-370,0	-35489,2	15135,3	7475527,0	0,464	0,025	0,268	Ok
19	199	-493,3	-25772,4	9791,4	4550801,0	0,406	0,018	0,174	Ok
1	199	-493,3	-34634,5	13244,8	5658488,0	0,352	0,024	0,235	Ok
19	199	-616,7	-25136,8	8370,4	3393378,0	0,303	0,018	0,148	Ok
1	199	-616,7	-33780,3	11047,1	4069344,0	0,254	0,024	0,196	Ok
19	199	-740,0	-24501,6	6846,9	2408022,0	0,216	0,017	0,121	Ok
1	199	-740,0	-32926,7	8802,8	2753273,0	0,172	0,023	0,156	Ok
19	199	-863,3	-23866,9	5363,4	1614835,0	0,145	0,017	0,095	Ok

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	199	-863,3	-32073,7	6694,9	1726106,0	0,108	0,022	0,119	Ok
19	199	-986,7	-23232,5	4016,2	1019898,0	0,092	0,016	0,071	Ok
1	199	-986,7	-31221,2	4837,7	993820,2	0,062	0,022	0,086	Ok
20	199	-1110,0	-22769,5	2767,8	668798,3	0,060	0,016	0,049	Ok
1	199	-1110,0	-30369,3	3290,8	586943,0	0,037	0,021	0,058	Ok
36	199	-1233,3	-22785,6	1592,5	577622,0	0,052	0,016	0,028	Ok
1	199	-1233,3	-29517,9	2076,2	520029,6	0,033	0,021	0,037	Ok
34	199	-1356,7	-22512,1	845,6	591604,5	0,053	0,016	0,015	Ok
1	199	-1356,7	-28666,9	1201,2	593601,9	0,037	0,020	0,021	Ok
34	199	-1480,0	-21844,3	623,8	595032,2	0,054	0,015	0,011	Ok
1	199	-1480,0	-27816,5	697,7	643717,3	0,041	0,019	0,012	Ok
34	199	-1603,3	-21176,8	632,3	560597,1	0,051	0,015	0,011	Ok
1	199	-1603,3	-26966,5	594,5	641146,1	0,041	0,019	0,011	Ok
34	199	-1726,7	-20509,7	678,8	499364,6	0,045	0,014	0,012	Ok
1	199	-1726,7	-26117,0	676,8	595605,9	0,038	0,018	0,012	Ok
34	199	-1850,0	-19842,9	686,2	423650,1	0,039	0,014	0,012	Ok
1	199	-1850,0	-25267,9	738,8	522855,2	0,033	0,018	0,013	Ok
34	199	-1973,3	-19176,5	648,7	343670,1	0,031	0,013	0,012	Ok
1	199	-1973,3	-24419,3	739,4	437065,6	0,028	0,017	0,013	Ok
19	199	-2096,7	-17539,8	493,3	270233,2	0,025	0,012	0,009	Ok
1	199	-2096,7	-23571,1	688,5	349116,7	0,022	0,016	0,012	Ok
19	199	-2220,0	-16909,0	443,8	212359,8	0,020	0,012	0,008	Ok
1	199	-2220,0	-22723,3	604,1	266534,9	0,017	0,016	0,011	Ok
19	199	-2343,3	-16278,4	379,1	159876,0	0,015	0,011	0,007	Ok
1	199	-2343,3	-21875,8	503,0	193959,4	0,012	0,015	0,009	Ok
19	199	-2466,7	-15648,0	308,4	115049,3	0,011	0,011	0,005	Ok
1	199	-2466,7	-21028,8	398,1	133762,7	0,009	0,015	0,007	Ok
19	199	-2590,0	-15018,0	238,8	78867,6	0,007	0,010	0,004	Ok
1	199	-2590,0	-20182,1	298,4	86685,0	0,006	0,014	0,005	Ok
19	199	-2713,3	-14388,2	175,1	51403,9	0,005	0,010	0,003	Ok
1	199	-2713,3	-19335,7	209,9	52439,1	0,003	0,013	0,004	Ok
20	199	-2836,7	-13862,7	116,4	32414,4	0,003	0,010	0,002	Ok
1	199	-2836,7	-18489,7	136,2	30271,9	0,002	0,013	0,002	Ok
20	199	-2960,0	-13228,6	75,0	21669,4	0,002	0,009	0,001	Ok
1	199	-2960,0	-17643,9	79,6	18998,3	0,001	0,012	0,001	Ok
36	199	-3083,3	-12967,2	42,1	16817,7	0,002	0,009	0,001	Ok
1	199	-3083,3	-16798,5	43,4	14981,1	0,001	0,012	0,001	Ok
36	199	-3206,7	-12314,8	36,4	13207,7	0,001	0,009	0,001	Ok
1	199	-3206,7	-15953,4	32,1	12623,1	0,001	0,011	0,001	Ok
34	199	-3330,0	-11864,7	34,4	9241,5	0,001	0,008	0,001	Ok
1	199	-3330,0	-15108,5	33,4	9346,5	0,001	0,011	0,001	Ok
34	199	-3453,3	-11201,4	28,2	5052,1	0,000	0,008	0,001	Ok
1	199	-3453,3	-14263,9	29,3	5328,9	0,000	0,010	0,001	Ok
34	199	-3576,7	-10538,4	12,8	1576,2	0,000	0,007	0,000	Ok
1	199	-3576,7	-13419,5	14,0	1727,2	0,000	0,009	0,000	Ok
1	199	-3700,0	-13419,5	14,0	0,0	0,007	0,009	0,000	Ok

Plinto n. 211		Quota (cm)	N (daN)	V (daN)	M (daN cm)	Ver. N/M	Ver.(25)	Ver.V	Stato
Cmb.	Palo								
34	211	0,0	-45565,7	13843,1	11395240,0	0,956	0,032	0,245	Ok
1	211	0,0	-59042,6	13265,4	13881160,0	0,816	0,041	0,235	Ok
34	211	-123,3	-43941,7	15405,0	9610360,0	0,810	0,031	0,273	Ok
1	211	-123,3	-56938,3	17125,7	12035720,0	0,711	0,040	0,304	Ok
34	211	-246,7	-42930,6	14698,8	7747059,0	0,655	0,030	0,261	Ok
1	211	-246,7	-55628,1	17152,8	9952814,0	0,589	0,039	0,304	Ok
19	211	-370,0	-41329,1	11471,3	6127486,0	0,521	0,029	0,203	Ok
1	211	-370,0	-54319,0	15955,7	7856845,0	0,467	0,038	0,283	Ok
19	211	-493,3	-40333,7	10334,8	4737122,0	0,404	0,028	0,183	Ok
1	211	-493,3	-53010,7	13993,3	5904201,0	0,352	0,037	0,248	Ok
19	211	-616,7	-39339,0	8832,2	3482784,0	0,298	0,027	0,157	Ok
1	211	-616,7	-51703,4	11660,7	4192209,0	0,250	0,036	0,207	Ok
19	211	-740,0	-38345,0	7194,5	2413189,0	0,207	0,027	0,128	Ok
1	211	-740,0	-50396,9	9258,4	2769046,0	0,166	0,035	0,164	Ok



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

19	211	-863,3	-37351,6	5590,2	1548857,0	0,133	0,026	0,099	Ok
1	211	-863,3	-49091,3	6993,4	1647473,0	0,099	0,034	0,124	Ok
19	211	-986,7	-36358,8	4130,0	893455,1	0,077	0,025	0,073	Ok
1	211	-986,7	-47786,5	4992,8	823653,6	0,050	0,033	0,089	Ok
20	211	-1110,0	-35366,7	2770,4	484395,7	0,042	0,025	0,049	Ok
1	211	-1110,0	-46482,5	3320,5	343499,7	0,021	0,032	0,059	Ok
34	211	-1233,3	-34866,8	1305,7	473401,6	0,041	0,024	0,023	Ok
1	211	-1233,3	-45179,3	1995,8	387867,4	0,024	0,031	0,035	Ok
34	211	-1356,7	-33861,7	647,6	569877,4	0,050	0,024	0,011	Ok
1	211	-1356,7	-43876,9	1015,2	562738,9	0,034	0,031	0,018	Ok
34	211	-1480,0	-32857,1	418,1	601691,3	0,052	0,023	0,007	Ok
1	211	-1480,0	-42575,3	419,3	655046,8	0,040	0,030	0,007	Ok
34	211	-1603,3	-31853,1	533,3	579839,6	0,051	0,022	0,009	Ok
1	211	-1603,3	-41274,3	429,1	668706,9	0,041	0,029	0,008	Ok
34	211	-1726,7	-30849,7	650,2	522508,6	0,046	0,021	0,012	Ok
1	211	-1726,7	-39974,1	635,4	627167,9	0,039	0,028	0,011	Ok
34	211	-1850,0	-29846,7	692,2	445885,7	0,039	0,021	0,012	Ok
1	211	-1850,0	-38674,5	749,5	552310,4	0,034	0,027	0,013	Ok
34	211	-1973,3	-28844,3	670,2	362484,6	0,032	0,020	0,012	Ok
1	211	-1973,3	-37375,6	770,3	461516,3	0,029	0,026	0,014	Ok
19	211	-2096,7	-27449,8	516,4	284239,7	0,025	0,019	0,009	Ok
1	211	-2096,7	-36077,3	724,7	367496,5	0,023	0,025	0,013	Ok
19	211	-2220,0	-26462,5	468,1	221723,6	0,020	0,018	0,008	Ok
1	211	-2220,0	-34779,7	638,1	278832,2	0,017	0,024	0,011	Ok
19	211	-2343,3	-25475,6	400,2	164897,8	0,015	0,018	0,007	Ok
1	211	-2343,3	-33482,6	531,2	200730,5	0,013	0,023	0,009	Ok
19	211	-2466,7	-24489,1	324,3	116341,1	0,010	0,017	0,006	Ok
1	211	-2466,7	-32186,1	418,9	135806,8	0,008	0,022	0,007	Ok
19	211	-2590,0	-23503,1	249,0	77150,9	0,007	0,016	0,004	Ok
1	211	-2590,0	-30890,2	311,8	84816,0	0,005	0,022	0,006	Ok
19	211	-2713,3	-22517,5	179,7	47400,8	0,004	0,016	0,003	Ok
1	211	-2713,3	-29594,7	216,2	47325,6	0,003	0,021	0,004	Ok
19	211	-2836,7	-21532,2	120,0	26568,0	0,002	0,015	0,002	Ok
1	211	-2836,7	-28299,8	136,0	22499,0	0,001	0,020	0,002	Ok
20	211	-2960,0	-20547,3	68,5	15390,7	0,001	0,014	0,001	Ok
1	211	-2960,0	-27005,4	73,0	10786,4	0,001	0,019	0,001	Ok
36	211	-3083,3	-19713,4	30,3	13405,8	0,001	0,014	0,001	Ok
1	211	-3083,3	-25711,4	29,9	10577,8	0,001	0,018	0,001	Ok
34	211	-3206,7	-18844,3	26,9	12066,5	0,001	0,013	0,000	Ok
1	211	-3206,7	-24417,9	20,6	11038,3	0,001	0,017	0,000	Ok
34	211	-3330,0	-17846,3	32,0	8960,8	0,001	0,012	0,001	Ok
1	211	-3330,0	-23124,7	29,8	8956,9	0,001	0,016	0,001	Ok
34	211	-3453,3	-16848,7	27,9	5040,3	0,000	0,012	0,000	Ok
1	211	-3453,3	-21832,0	28,9	5329,0	0,000	0,015	0,001	Ok
34	211	-3576,7	-15851,3	13,0	1603,4	0,000	0,011	0,000	Ok
1	211	-3576,7	-20539,6	14,4	1770,2	0,000	0,014	0,000	Ok
1	211	-3700,0	-20539,6	14,4	0,0	0,011	0,014	0,000	Ok

**Plinto n. 231**

Cmb.	Palo	Quota (cm)	N (daN)	V (daN)	M (daN cm)	Ver. N/M	Ver.(25)	Ver.V	Stato
34	231	0,0	-44769,1	15726,0	11735910,0	0,987	0,031	0,279	Ok
1	231	0,0	-58334,9	15800,7	14346290,0	0,844	0,041	0,280	Ok
34	231	-123,3	-43173,4	16609,8	9732910,0	0,823	0,030	0,295	Ok
1	231	-123,3	-56255,7	18760,1	12207000,0	0,722	0,039	0,333	Ok
34	231	-246,7	-42180,0	15493,1	7714111,0	0,654	0,029	0,275	Ok
1	231	-246,7	-54961,3	18231,1	9914736,0	0,588	0,038	0,323	Ok
19	231	-370,0	-40591,7	11927,8	5995361,0	0,511	0,028	0,212	Ok
1	231	-370,0	-53667,8	16566,5	7681587,0	0,457	0,037	0,294	Ok
19	231	-493,3	-39614,1	10523,5	4545095,0	0,388	0,028	0,187	Ok
1	231	-493,3	-52375,3	14242,2	5651129,0	0,337	0,036	0,253	Ok
19	231	-616,7	-38637,1	8825,2	3265646,0	0,280	0,027	0,156	Ok
1	231	-616,7	-51083,6	11649,6	3907003,0	0,234	0,036	0,207	Ok
19	231	-740,0	-37660,8	7057,3	2196468,0	0,189	0,026	0,125	Ok

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	231	-740,0	-49792,8	9076,1	2484834,0	0,149	0,035	0,161	Ok
19	231	-863,3	-36685,2	5377,2	1350731,0	0,116	0,026	0,095	Ok
1	231	-863,3	-48502,8	6712,5	1387796,0	0,084	0,034	0,119	Ok
19	231	-986,7	-35710,1	3883,4	729524,7	0,063	0,025	0,069	Ok
1	231	-986,7	-47213,7	4668,8	613514,7	0,037	0,033	0,083	Ok
36	231	-1110,0	-34839,2	2217,8	448794,1	0,039	0,024	0,039	Ok
1	231	-1110,0	-45925,3	2993,6	302272,5	0,018	0,032	0,053	Ok
34	231	-1233,3	-34257,2	1091,1	557400,1	0,048	0,024	0,019	Ok
1	231	-1233,3	-44637,8	1694,4	493491,4	0,030	0,031	0,030	Ok
34	231	-1356,7	-33269,7	514,9	641682,7	0,056	0,023	0,009	Ok
1	231	-1356,7	-43351,0	766,8	659773,6	0,040	0,030	0,014	Ok
34	231	-1480,0	-32282,7	462,3	654475,9	0,057	0,022	0,008	Ok
1	231	-1480,0	-42064,9	345,6	726652,0	0,044	0,029	0,006	Ok
34	231	-1603,3	-31296,3	629,9	614750,4	0,054	0,022	0,011	Ok
1	231	-1603,3	-40779,6	548,1	716081,4	0,044	0,028	0,010	Ok
34	231	-1726,7	-30310,3	734,4	542633,1	0,048	0,021	0,013	Ok
1	231	-1726,7	-39494,9	749,1	654554,3	0,040	0,028	0,013	Ok
34	231	-1850,0	-29324,9	754,6	454674,6	0,040	0,020	0,013	Ok
1	231	-1850,0	-38210,9	834,1	564414,8	0,035	0,027	0,015	Ok
34	231	-1973,3	-28340,1	711,7	363170,7	0,032	0,020	0,013	Ok
1	231	-1973,3	-36927,6	826,6	462711,3	0,029	0,026	0,015	Ok
19	231	-2096,7	-26960,0	540,8	279749,9	0,025	0,019	0,010	Ok
1	231	-2096,7	-35644,9	757,4	361517,9	0,022	0,025	0,013	Ok
19	231	-2220,0	-25990,3	479,1	214035,2	0,019	0,018	0,008	Ok
1	231	-2220,0	-34362,8	652,8	268684,9	0,017	0,024	0,012	Ok
19	231	-2343,3	-25021,0	401,4	155748,9	0,014	0,017	0,007	Ok
1	231	-2343,3	-33081,3	532,8	188704,3	0,012	0,023	0,009	Ok
19	231	-2466,7	-24052,2	319,0	107001,3	0,010	0,017	0,006	Ok
1	231	-2466,7	-31800,3	411,8	123554,6	0,008	0,022	0,007	Ok
19	231	-2590,0	-23083,8	239,6	68501,1	0,006	0,016	0,004	Ok
1	231	-2590,0	-30519,9	299,5	73475,4	0,005	0,021	0,005	Ok
19	231	-2713,3	-22115,7	168,5	40051,8	0,004	0,015	0,003	Ok
1	231	-2713,3	-29240,0	201,5	37726,5	0,002	0,020	0,004	Ok
20	231	-2836,7	-21044,0	103,9	21462,2	0,002	0,015	0,002	Ok
1	231	-2836,7	-27960,6	120,8	15924,8	0,001	0,019	0,002	Ok
36	231	-2960,0	-20240,9	46,4	15628,0	0,001	0,014	0,001	Ok
1	231	-2960,0	-26681,7	59,0	10840,9	0,001	0,019	0,001	Ok
34	231	-3083,3	-19495,7	22,6	15732,4	0,001	0,014	0,000	Ok
1	231	-3083,3	-25403,2	21,2	13529,9	0,001	0,018	0,000	Ok
34	231	-3206,7	-18514,8	32,0	13877,5	0,001	0,013	0,001	Ok
1	231	-3206,7	-24125,2	26,1	13454,4	0,001	0,017	0,000	Ok
34	231	-3330,0	-17534,3	36,7	10051,5	0,001	0,012	0,001	Ok
1	231	-3330,0	-22847,5	36,0	10432,5	0,001	0,016	0,001	Ok
34	231	-3453,3	-16554,1	30,9	5545,4	0,001	0,012	0,001	Ok
1	231	-3453,3	-21570,3	33,0	6014,0	0,000	0,015	0,001	Ok
34	231	-3576,7	-15574,2	14,1	1734,0	0,000	0,011	0,000	Ok
1	231	-3576,7	-20293,4	15,8	1947,3	0,000	0,014	0,000	Ok
1	231	-3700,0	-20293,4	15,8	0,0	0,011	0,014	0,000	Ok

**Plinto n. 243**

<b>Cmb.</b>	<b>Palo</b>	<b>Quota (cm)</b>	<b>N (daN)</b>	<b>V (daN)</b>	<b>M (daN cm)</b>	<b>Ver. N/M</b>	<b>Ver.(25)</b>	<b>Ver.V</b>	<b>Stato</b>
18	243	0,0	-56594,7	13582,6	11496720,0	0,934	0,039	0,241	Ok
1	243	0,0	-73198,3	13453,1	14036650,0	0,800	0,051	0,239	Ok
18	243	-123,3	-54577,5	15562,7	9653923,0	0,789	0,038	0,276	Ok
1	243	-123,3	-70589,4	17536,1	12095720,0	0,693	0,049	0,311	Ok
34	243	-246,7	-52778,6	14839,5	7728995,0	0,635	0,037	0,263	Ok
1	243	-246,7	-68965,2	17473,5	9935589,0	0,571	0,048	0,310	Ok
19	243	-370,0	-51536,5	11554,4	6072617,0	0,501	0,036	0,205	Ok
1	243	-370,0	-67342,1	16156,5	7782345,0	0,449	0,047	0,286	Ok
19	243	-493,3	-50295,2	10374,0	4653069,0	0,385	0,035	0,184	Ok
1	243	-493,3	-65720,2	14080,1	5791162,0	0,335	0,046	0,250	Ok
19	243	-616,7	-49054,8	8820,6	3378293,0	0,281	0,034	0,156	Ok
1	243	-616,7	-64099,4	11653,6	4055971,0	0,236	0,045	0,207	Ok

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

19	243	-740,0	-47815,3	7137,5	2295144,0	0,191	0,033	0,127	Ok
1	243	-740,0	-62479,7	9181,3	2620224,0	0,153	0,044	0,163	Ok
19	243	-863,3	-46576,6	5497,8	1420692,0	0,119	0,032	0,097	Ok
1	243	-863,3	-60861,1	6868,8	1490093,0	0,087	0,042	0,122	Ok
19	243	-986,7	-45338,6	4012,7	752366,6	0,063	0,032	0,071	Ok
1	243	-986,7	-59243,5	4839,3	647988,1	0,038	0,041	0,086	Ok
20	243	-1110,0	-43906,9	2633,5	302617,9	0,026	0,031	0,047	Ok
1	243	-1110,0	-57626,9	3151,2	107440,1	0,006	0,040	0,056	Ok
34	243	-1233,3	-42865,0	1148,4	446897,1	0,038	0,030	0,020	Ok
1	243	-1233,3	-56011,2	1816,3	356603,7	0,021	0,039	0,032	Ok
34	243	-1356,7	-41629,3	450,0	568492,6	0,048	0,029	0,008	Ok
1	243	-1356,7	-54396,6	816,7	574016,6	0,034	0,038	0,014	Ok
34	243	-1480,0	-40394,3	268,9	606892,7	0,052	0,028	0,005	Ok
1	243	-1480,0	-52782,8	149,3	671509,1	0,040	0,037	0,003	Ok
18	243	-1603,3	-39563,0	476,5	586689,7	0,050	0,028	0,008	Ok
1	243	-1603,3	-51170,0	383,7	682277,9	0,041	0,036	0,007	Ok
18	243	-1726,7	-38316,7	641,7	527934,6	0,045	0,027	0,011	Ok
1	243	-1726,7	-49558,0	647,1	635992,1	0,038	0,035	0,011	Ok
18	243	-1850,0	-37071,0	697,5	448798,5	0,039	0,026	0,012	Ok
1	243	-1850,0	-47946,9	768,5	556498,3	0,034	0,033	0,014	Ok
18	243	-1973,3	-35826,0	678,1	362779,6	0,031	0,025	0,012	Ok
1	243	-1973,3	-46336,5	786,3	461863,7	0,028	0,032	0,014	Ok
19	243	-2096,7	-34229,3	520,4	282356,5	0,025	0,024	0,009	Ok
1	243	-2096,7	-44727,0	735,2	364978,3	0,022	0,031	0,013	Ok
19	243	-2220,0	-32998,1	470,4	218432,3	0,019	0,023	0,008	Ok
1	243	-2220,0	-43118,2	643,2	274375,1	0,017	0,030	0,011	Ok
19	243	-2343,3	-31767,5	400,1	160628,5	0,014	0,022	0,007	Ok
1	243	-2343,3	-41510,2	531,7	195109,3	0,012	0,029	0,009	Ok
19	243	-2466,7	-30537,4	322,1	111467,5	0,010	0,021	0,006	Ok
1	243	-2466,7	-39902,9	415,9	129598,2	0,008	0,028	0,007	Ok
19	243	-2590,0	-29307,8	244,9	71942,8	0,006	0,020	0,004	Ok
1	243	-2590,0	-38296,2	306,4	78370,3	0,005	0,027	0,005	Ok
19	243	-2713,3	-28078,7	174,3	41992,1	0,004	0,020	0,003	Ok
1	243	-2713,3	-36690,2	209,2	40700,2	0,003	0,026	0,004	Ok
19	243	-2836,7	-26850,2	113,5	20923,3	0,002	0,019	0,002	Ok
1	243	-2836,7	-35084,8	127,8	15193,0	0,001	0,024	0,002	Ok
36	243	-2960,0	-25509,0	46,6	9993,0	0,001	0,018	0,001	Ok
1	243	-2960,0	-33480,0	63,7	3486,4	0,000	0,023	0,001	Ok
34	243	-3083,3	-24394,3	12,7	12340,1	0,001	0,017	0,000	Ok
1	243	-3083,3	-31875,8	17,3	9260,0	0,001	0,022	0,000	Ok
34	243	-3206,7	-23167,0	24,0	11845,7	0,001	0,016	0,000	Ok
1	243	-3206,7	-30272,1	15,7	11033,7	0,001	0,021	0,000	Ok
34	243	-3330,0	-21940,2	31,6	8956,4	0,001	0,015	0,001	Ok
1	243	-3330,0	-28669,0	29,9	9151,9	0,001	0,020	0,001	Ok
34	243	-3453,3	-20713,6	28,0	5072,7	0,000	0,014	0,000	Ok
1	243	-3453,3	-27066,3	29,6	5465,1	0,000	0,019	0,001	Ok
34	243	-3576,7	-19487,5	13,1	1618,4	0,000	0,014	0,000	Ok
1	243	-3576,7	-25464,1	14,7	1813,4	0,000	0,018	0,000	Ok
1	243	-3700,0	-25464,1	14,7	0,0	0,013	0,018	0,000	Ok

<b>Plinto n. 247</b>									
<b>Cmb.</b>	<b>Palo</b>	<b>Quota</b>	<b>N</b>	<b>V</b>	<b>M</b>	<b>Ver. N/M</b>	<b>Ver.(25)</b>	<b>Ver.V</b>	<b>Stato</b>
		(cm)	(daN)	(daN)	(daN cm)				
34	247	0,0	-54955,0	15243,0	11661140,0	0,952	0,038	0,270	Ok
1	247	0,0	-72055,7	15442,6	14289740,0	0,816	0,050	0,274	Ok
34	247	-123,3	-52996,3	16411,3	9671936,0	0,794	0,037	0,291	Ok
1	247	-123,3	-69487,5	18659,7	12145390,0	0,697	0,048	0,331	Ok
34	247	-246,7	-51776,9	15366,4	7658882,0	0,631	0,036	0,272	Ok
1	247	-246,7	-67888,6	18163,7	9847168,0	0,567	0,047	0,322	Ok
19	247	-370,0	-50558,3	11831,7	5940749,0	0,491	0,035	0,210	Ok
1	247	-370,0	-66290,9	16503,8	7609226,0	0,440	0,046	0,293	Ok
19	247	-493,3	-49340,7	10452,6	4487767,0	0,372	0,034	0,185	Ok
1	247	-493,3	-64694,3	14174,1	5575636,0	0,324	0,045	0,251	Ok
19	247	-616,7	-48123,8	8762,8	3204205,0	0,267	0,034	0,155	Ok

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	247	-616,7	-63098,8	11574,0	3829350,0	0,223	0,044	0,205	Ok
19	247	-740,0	-46907,8	6995,5	2129395,0	0,178	0,033	0,124	Ok
1	247	-740,0	-61504,4	8994,5	2404109,0	0,140	0,043	0,159	Ok
19	247	-863,3	-45692,6	5312,2	1274504,0	0,107	0,032	0,094	Ok
1	247	-863,3	-59911,0	6626,8	1298338,0	0,076	0,042	0,118	Ok
19	247	-986,7	-44478,1	3813,7	634088,7	0,053	0,031	0,068	Ok
1	247	-986,7	-58318,6	4580,3	491004,7	0,029	0,041	0,081	Ok
36	247	-1110,0	-42945,6	2131,8	329515,3	0,028	0,030	0,038	Ok
1	247	-1110,0	-56727,3	2901,7	145330,7	0,009	0,040	0,051	Ok
34	247	-1233,3	-42051,5	985,4	522793,5	0,044	0,029	0,017	Ok
1	247	-1233,3	-55136,9	1593,3	458149,9	0,027	0,038	0,028	Ok
34	247	-1356,7	-40839,2	351,3	624870,3	0,053	0,028	0,006	Ok
1	247	-1356,7	-53547,4	632,2	648183,3	0,039	0,037	0,011	Ok
34	247	-1480,0	-39627,7	355,3	645308,0	0,055	0,028	0,006	Ok
1	247	-1480,0	-51958,8	145,2	721809,9	0,043	0,036	0,003	Ok
34	247	-1603,3	-38416,8	587,5	609248,2	0,052	0,027	0,010	Ok
1	247	-1603,3	-50371,2	503,0	713274,0	0,043	0,035	0,009	Ok
34	247	-1726,7	-37206,6	714,0	538945,8	0,046	0,026	0,013	Ok
1	247	-1726,7	-48784,4	734,7	652154,4	0,039	0,034	0,013	Ok
34	247	-1850,0	-35997,0	743,6	451860,8	0,039	0,025	0,013	Ok
1	247	-1850,0	-47198,4	828,3	561867,8	0,034	0,033	0,015	Ok
34	247	-1973,3	-34788,0	705,2	360731,1	0,031	0,024	0,013	Ok
1	247	-1973,3	-45613,2	823,3	459887,8	0,028	0,032	0,015	Ok
19	247	-2096,7	-33579,6	535,9	277410,7	0,024	0,023	0,010	Ok
1	247	-2096,7	-44028,8	754,7	358453,6	0,022	0,031	0,013	Ok
19	247	-2220,0	-32371,8	475,8	211605,1	0,018	0,023	0,008	Ok
1	247	-2220,0	-42445,1	649,9	265462,4	0,016	0,030	0,012	Ok
19	247	-2343,3	-31164,5	398,7	153164,7	0,013	0,022	0,007	Ok
1	247	-2343,3	-40862,2	529,5	185392,1	0,011	0,028	0,009	Ok
19	247	-2466,7	-29957,8	316,3	104228,1	0,009	0,021	0,006	Ok
1	247	-2466,7	-39279,9	408,3	120167,3	0,007	0,027	0,007	Ok
19	247	-2590,0	-28751,6	236,8	65482,3	0,006	0,020	0,004	Ok
1	247	-2590,0	-37698,4	295,7	69920,7	0,004	0,026	0,005	Ok
19	247	-2713,3	-27545,8	165,3	36647,5	0,003	0,019	0,003	Ok
1	247	-2713,3	-36117,4	197,5	33646,5	0,002	0,025	0,004	Ok
19	247	-2836,7	-26340,6	104,7	16967,4	0,002	0,018	0,002	Ok
1	247	-2836,7	-34537,1	116,4	10022,8	0,001	0,024	0,002	Ok
34	247	-2960,0	-25135,7	30,8	12392,8	0,001	0,018	0,001	Ok
1	247	-2960,0	-32957,4	53,4	6644,5	0,000	0,023	0,001	Ok
34	247	-3083,3	-23931,3	14,9	14614,4	0,001	0,017	0,000	Ok
1	247	-3083,3	-31378,2	10,3	12314,0	0,001	0,022	0,000	Ok
34	247	-3206,7	-22727,4	29,1	13344,4	0,001	0,016	0,001	Ok
1	247	-3206,7	-29799,6	22,6	13016,6	0,001	0,021	0,000	Ok
34	247	-3330,0	-21523,8	35,4	9805,6	0,001	0,015	0,001	Ok
1	247	-3330,0	-28221,4	35,0	10268,1	0,001	0,020	0,001	Ok
34	247	-3453,3	-20320,5	30,3	5449,8	0,000	0,014	0,001	Ok
1	247	-3453,3	-26643,8	32,6	5959,3	0,000	0,019	0,001	Ok
34	247	-3576,7	-19117,6	13,9	1712,1	0,000	0,013	0,000	Ok
1	247	-3576,7	-25066,6	15,7	1936,1	0,000	0,017	0,000	Ok
1	247	-3700,0	-25066,6	15,7	0,0	0,013	0,017	0,000	Ok

**Plinto n. 263**

Cmb.	Palo	Quota (cm)	N (daN)	V (daN)	M (daN cm)	Ver. N/M	Ver.(25)	Ver.V	Stato
18	263	0,0	-66279,7	14289,0	11228740,0	0,888	0,046	0,253	Ok
1	263	0,0	-86028,5	14036,0	13664550,0	0,758	0,060	0,249	Ok
18	263	-123,3	-63917,3	15647,2	9340611,0	0,744	0,045	0,277	Ok
1	263	-123,3	-82962,3	17515,8	11680680,0	0,652	0,058	0,311	Ok
34	263	-246,7	-61640,9	14554,0	7405711,0	0,593	0,043	0,258	Ok
1	263	-246,7	-81053,4	17218,3	9521650,0	0,533	0,056	0,305	Ok
19	263	-370,0	-60785,8	11219,5	5779541,0	0,464	0,042	0,199	Ok
1	263	-370,0	-79145,8	15759,4	7398933,0	0,416	0,055	0,279	Ok
19	263	-493,3	-59321,8	10008,2	4396008,0	0,354	0,041	0,177	Ok
1	263	-493,3	-77239,6	13617,3	5455987,0	0,308	0,054	0,241	Ok

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

19	263	-616,7	-57858,8	8456,9	3161838,0	0,256	0,040	0,150	Ok
1	263	-616,7	-75334,7	11181,8	3777209,0	0,214	0,052	0,198	Ok
19	263	-740,0	-56396,8	6799,3	2119004,0	0,172	0,039	0,121	Ok
1	263	-740,0	-73431,1	8738,9	2398933,0	0,137	0,051	0,155	Ok
19	263	-863,3	-54935,7	5199,2	1280663,0	0,105	0,038	0,092	Ok
1	263	-863,3	-71528,8	6479,1	1322377,0	0,076	0,050	0,115	Ok
35	263	-986,7	-54167,8	3739,1	648373,9	0,053	0,038	0,066	Ok
1	263	-986,7	-69627,6	4513,4	526488,5	0,030	0,049	0,080	Ok
17	263	-1110,0	-52586,2	2064,8	279211,4	0,023	0,037	0,037	Ok
1	263	-1110,0	-67727,7	2891,2	77396,7	0,004	0,047	0,051	Ok
18	263	-1233,3	-50717,1	958,9	479134,3	0,040	0,035	0,017	Ok
1	263	-1233,3	-65828,8	1618,5	396437,1	0,023	0,046	0,029	Ok
18	263	-1356,7	-49255,0	300,7	587864,1	0,049	0,034	0,005	Ok
1	263	-1356,7	-63931,2	672,9	593298,2	0,034	0,045	0,012	Ok
18	263	-1480,0	-47793,8	284,5	613846,5	0,051	0,033	0,005	Ok
1	263	-1480,0	-62034,6	79,9	674670,7	0,039	0,043	0,001	Ok
18	263	-1603,3	-46333,4	536,5	583212,5	0,049	0,032	0,010	Ok
1	263	-1603,3	-60139,0	431,4	674539,5	0,040	0,042	0,008	Ok
18	263	-1726,7	-44873,8	670,9	518143,9	0,044	0,031	0,012	Ok
1	263	-1726,7	-58244,5	670,9	621746,9	0,037	0,041	0,012	Ok
18	263	-1850,0	-43414,9	706,9	435877,6	0,037	0,030	0,013	Ok
1	263	-1850,0	-56350,9	773,3	539136,3	0,032	0,039	0,014	Ok
18	263	-1973,3	-41956,8	674,8	348972,4	0,030	0,029	0,012	Ok
1	263	-1973,3	-54458,4	778,1	443830,7	0,026	0,038	0,014	Ok
19	263	-2096,7	-40372,4	506,4	269297,6	0,023	0,028	0,009	Ok
1	263	-2096,7	-52566,7	719,2	347908,0	0,021	0,037	0,013	Ok
19	263	-2220,0	-38920,3	454,5	206849,8	0,018	0,027	0,008	Ok
1	263	-2220,0	-50676,0	623,4	259244,5	0,016	0,035	0,011	Ok
19	263	-2343,3	-37468,8	384,1	150799,5	0,013	0,026	0,007	Ok
1	263	-2343,3	-48786,1	511,0	182391,5	0,011	0,034	0,009	Ok
19	263	-2466,7	-36018,0	307,1	103428,5	0,009	0,025	0,005	Ok
1	263	-2466,7	-46897,0	396,4	119401,4	0,007	0,033	0,007	Ok
19	263	-2590,0	-34567,7	231,7	65556,8	0,006	0,024	0,004	Ok
1	263	-2590,0	-45008,7	289,1	70554,5	0,004	0,031	0,005	Ok
19	263	-2713,3	-33118,1	163,1	36992,2	0,003	0,023	0,003	Ok
1	263	-2713,3	-43121,2	194,8	34968,6	0,002	0,030	0,003	Ok
35	263	-2836,7	-32078,9	103,7	17611,1	0,002	0,022	0,002	Ok
1	263	-2836,7	-41234,4	116,5	11157,4	0,001	0,029	0,002	Ok
18	263	-2960,0	-30315,5	29,4	10509,8	0,001	0,021	0,001	Ok
1	263	-2960,0	-39348,4	55,2	4236,1	0,000	0,027	0,001	Ok
18	263	-3083,3	-28862,9	10,4	13311,1	0,001	0,020	0,000	Ok
1	263	-3083,3	-37463,0	11,3	10492,0	0,001	0,026	0,000	Ok
18	263	-3206,7	-27410,8	26,2	12436,7	0,001	0,019	0,000	Ok
1	263	-3206,7	-35578,2	18,5	11692,4	0,001	0,025	0,000	Ok
18	263	-3330,0	-25959,2	33,0	9238,0	0,001	0,018	0,001	Ok
1	263	-3330,0	-33694,0	31,5	9424,5	0,001	0,023	0,001	Ok
18	263	-3453,3	-24508,0	28,7	5167,2	0,000	0,017	0,001	Ok
1	263	-3453,3	-31810,5	30,2	5536,5	0,000	0,022	0,001	Ok
18	263	-3576,7	-23057,2	13,2	1631,2	0,000	0,016	0,000	Ok
1	263	-3576,7	-29927,4	14,7	1814,8	0,000	0,021	0,000	Ok
1	263	-3700,0	-29927,4	14,7	0,0	0,016	0,021	0,000	Ok

Plinto n.	275								
Cmb.	Palo	Quota	N	V	M	Ver. N/M	Ver.(25)	Ver.V	Stato
		(cm)	(daN)	(daN)	(daN cm)				
18	275	0,0	-67672,5	11090,6	10237270,0	0,807	0,047	0,197	Ok
1	275	0,0	-88167,0	9750,0	12359520,0	0,682	0,061	0,173	Ok
18	275	-123,3	-65260,5	13339,6	8713913,0	0,691	0,045	0,237	Ok
1	275	-123,3	-85024,6	14457,6	10857380,0	0,603	0,059	0,256	Ok
18	275	-246,7	-63758,9	12993,3	7077602,0	0,564	0,044	0,230	Ok
1	275	-246,7	-83068,2	14927,1	9077732,0	0,506	0,058	0,265	Ok
19	275	-370,0	-62531,2	9971,4	5655565,0	0,452	0,044	0,177	Ok
1	275	-370,0	-81113,2	14157,4	7238916,0	0,406	0,057	0,251	Ok
19	275	-493,3	-61025,2	9212,8	4425760,0	0,355	0,043	0,163	Ok



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	275	-493,3	-79159,6	12594,2	5494476,0	0,309	0,055	0,223	Ok
19	275	-616,7	-59520,1	8019,1	3289521,0	0,265	0,041	0,142	Ok
1	275	-616,7	-77207,4	10617,6	3942637,0	0,223	0,054	0,188	Ok
19	275	-740,0	-58016,2	6628,5	2300509,0	0,186	0,040	0,118	Ok
1	275	-740,0	-75256,5	8518,5	2634637,0	0,149	0,052	0,151	Ok
19	275	-863,3	-56513,1	5215,4	1482996,0	0,121	0,039	0,092	Ok
1	275	-863,3	-73306,8	6500,1	1585981,0	0,090	0,051	0,115	Ok
35	275	-986,7	-55291,1	3875,0	847447,8	0,069	0,039	0,069	Ok
1	275	-986,7	-71358,4	4689,9	787913,8	0,045	0,050	0,083	Ok
35	275	-1110,0	-53782,4	2723,7	393172,2	0,032	0,037	0,048	Ok
1	275	-1110,0	-69411,2	3155,5	224755,3	0,013	0,048	0,056	Ok
18	275	-1233,3	-51782,9	1188,2	336350,0	0,028	0,036	0,021	Ok
1	275	-1233,3	-67465,2	1919,5	204953,9	0,012	0,047	0,034	Ok
18	275	-1356,7	-50290,1	511,7	464685,3	0,038	0,035	0,009	Ok
1	275	-1356,7	-65520,4	974,5	428576,9	0,025	0,046	0,017	Ok
18	275	-1480,0	-48798,2	188,9	516039,5	0,043	0,034	0,003	Ok
1	275	-1480,0	-63576,6	301,2	544839,3	0,032	0,044	0,005	Ok
18	275	-1603,3	-47307,1	371,3	510108,9	0,043	0,033	0,007	Ok
1	275	-1603,3	-61633,9	210,9	577927,6	0,034	0,043	0,004	Ok
18	275	-1726,7	-45816,8	527,0	466921,0	0,039	0,032	0,009	Ok
1	275	-1726,7	-59692,3	478,3	554252,6	0,033	0,042	0,008	Ok
18	275	-1850,0	-44327,3	592,2	402863,7	0,034	0,031	0,011	Ok
1	275	-1850,0	-57751,7	620,9	495732,7	0,029	0,040	0,011	Ok
18	275	-1973,3	-42838,5	588,8	330317,8	0,028	0,030	0,010	Ok
1	275	-1973,3	-55812,1	664,4	419351,1	0,025	0,039	0,012	Ok
19	275	-2096,7	-41531,7	444,4	261243,4	0,022	0,029	0,008	Ok
1	275	-2096,7	-53873,4	639,7	337517,2	0,020	0,038	0,011	Ok
19	275	-2220,0	-40037,9	414,8	206430,4	0,018	0,028	0,007	Ok
1	275	-2220,0	-51935,7	572,3	258703,3	0,015	0,036	0,010	Ok
19	275	-2343,3	-38544,7	362,1	155267,3	0,013	0,027	0,006	Ok
1	275	-2343,3	-49998,8	482,5	188176,6	0,011	0,035	0,009	Ok
19	275	-2466,7	-37052,2	298,2	110614,3	0,010	0,026	0,005	Ok
1	275	-2466,7	-48062,8	384,9	128725,2	0,008	0,033	0,007	Ok
19	275	-2590,0	-35560,3	232,2	73830,8	0,006	0,025	0,004	Ok
1	275	-2590,0	-46127,5	289,7	81319,6	0,005	0,032	0,005	Ok
35	275	-2713,3	-34242,4	168,7	45223,8	0,004	0,024	0,003	Ok
1	275	-2713,3	-44193,1	203,4	45682,3	0,003	0,031	0,004	Ok
35	275	-2836,7	-32744,2	113,8	24835,7	0,002	0,023	0,002	Ok
1	275	-2836,7	-42259,4	129,7	20771,9	0,001	0,029	0,002	Ok
35	275	-2960,0	-31246,4	68,6	11560,5	0,001	0,022	0,001	Ok
1	275	-2960,0	-40326,5	70,4	5499,5	0,000	0,028	0,001	Ok
18	275	-3083,3	-29469,4	12,2	9127,4	0,001	0,021	0,000	Ok
1	275	-3083,3	-38394,2	26,3	4929,3	0,000	0,027	0,000	Ok
18	275	-3206,7	-27986,8	17,2	9384,5	0,001	0,020	0,000	Ok
1	275	-3206,7	-36462,6	7,2	7591,1	0,000	0,025	0,000	Ok
18	275	-3330,0	-26504,7	25,2	7356,9	0,001	0,018	0,000	Ok
1	275	-3330,0	-34531,6	21,0	6911,3	0,000	0,024	0,000	Ok
18	275	-3453,3	-25023,0	23,3	4262,1	0,000	0,017	0,000	Ok
1	275	-3453,3	-32601,2	23,1	4332,3	0,000	0,023	0,000	Ok
18	275	-3576,7	-23541,8	11,2	1384,1	0,000	0,016	0,000	Ok
1	275	-3576,7	-30671,3	12,1	1487,2	0,000	0,021	0,000	Ok
1	275	-3700,0	-30671,3	12,1	0,0	0,016	0,021	0,000	Ok

**Plinto n. 279**

<b>Cmb.</b>	<b>Palo</b>	<b>Quota</b> (cm)	<b>N</b> (daN)	<b>V</b> (daN)	<b>M</b> (daN cm)	<b>Ver. N/M</b>	<b>Ver.(25)</b>	<b>Ver.V</b>	<b>Stato</b>
18	279	0,0	-75204,3	12735,3	10374940,0	0,801	0,052	0,226	Ok
1	279	0,0	-98126,3	11849,0	12534360,0	0,678	0,068	0,210	Ok
18	279	-123,3	-72523,9	14163,5	8706791,0	0,677	0,051	0,251	Ok
1	279	-123,3	-94628,9	15492,2	10849260,0	0,591	0,066	0,275	Ok
18	279	-246,7	-70855,2	13459,2	6979541,0	0,545	0,049	0,239	Ok
1	279	-246,7	-92451,5	15513,5	8953137,0	0,490	0,064	0,275	Ok
19	279	-370,0	-69698,1	10159,9	5511489,0	0,432	0,049	0,180	Ok
1	279	-370,0	-90275,7	14412,6	7049603,0	0,388	0,063	0,256	Ok

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

19	279	-493,3	-68019,5	9231,1	4260068,0	0,335	0,047	0,164	Ok
1	279	-493,3	-88101,5	12618,3	5279742,0	0,292	0,061	0,224	Ok
19	279	-616,7	-66342,0	7925,7	3122912,0	0,247	0,046	0,141	Ok
1	279	-616,7	-85928,7	10493,2	3730547,0	0,207	0,060	0,186	Ok
19	279	-740,0	-64665,6	6470,4	2146723,0	0,171	0,045	0,115	Ok
1	279	-740,0	-83757,4	8310,4	2444144,0	0,136	0,058	0,147	Ok
35	279	-863,3	-63528,5	5011,8	1368620,0	0,109	0,044	0,089	Ok
1	279	-863,3	-81587,5	6256,7	1429974,0	0,080	0,057	0,111	Ok
35	279	-986,7	-61840,0	3692,6	777728,3	0,062	0,043	0,065	Ok
1	279	-986,7	-79419,0	4445,9	680190,4	0,038	0,055	0,079	Ok
33	279	-1110,0	-60152,6	2436,7	399356,4	0,032	0,042	0,043	Ok
1	279	-1110,0	-77251,9	2934,1	232879,1	0,013	0,054	0,052	Ok
18	279	-1233,3	-57546,2	1070,0	427799,0	0,035	0,040	0,019	Ok
1	279	-1233,3	-75086,1	1736,3	327442,7	0,019	0,052	0,031	Ok
18	279	-1356,7	-55887,3	471,5	524875,4	0,043	0,039	0,008	Ok
1	279	-1356,7	-72921,5	844,8	504957,7	0,029	0,051	0,015	Ok
18	279	-1480,0	-54229,3	317,6	553809,4	0,045	0,038	0,006	Ok
1	279	-1480,0	-70758,2	289,5	592287,6	0,034	0,049	0,005	Ok
18	279	-1603,3	-52572,3	479,9	531580,2	0,044	0,037	0,009	Ok
1	279	-1603,3	-68596,1	357,4	604927,4	0,035	0,048	0,006	Ok
18	279	-1726,7	-50916,1	598,6	476776,3	0,039	0,035	0,011	Ok
1	279	-1726,7	-66435,2	569,4	566713,8	0,033	0,046	0,010	Ok
18	279	-1850,0	-49260,9	637,3	404808,5	0,034	0,034	0,011	Ok
1	279	-1850,0	-64275,3	677,6	498237,1	0,029	0,045	0,012	Ok
18	279	-1973,3	-47606,4	614,6	327258,9	0,027	0,033	0,011	Ok
1	279	-1973,3	-62116,6	696,9	415486,8	0,024	0,043	0,012	Ok
19	279	-2096,7	-46291,8	455,6	255568,7	0,021	0,032	0,008	Ok
1	279	-2096,7	-59958,9	654,9	330030,9	0,019	0,042	0,012	Ok
19	279	-2220,0	-44626,7	417,3	199453,3	0,017	0,031	0,007	Ok
1	279	-2220,0	-57802,3	575,7	249621,2	0,015	0,040	0,010	Ok
19	279	-2343,3	-42962,4	358,8	148041,4	0,013	0,030	0,006	Ok
1	279	-2343,3	-55646,6	478,2	178923,6	0,011	0,039	0,008	Ok
19	279	-2466,7	-41298,9	291,6	103838,6	0,009	0,029	0,005	Ok
1	279	-2466,7	-53491,9	376,2	120246,2	0,007	0,037	0,007	Ok
35	279	-2590,0	-39974,7	223,2	68391,9	0,006	0,028	0,004	Ok
1	279	-2590,0	-51338,1	279,0	74205,6	0,004	0,036	0,005	Ok
35	279	-2713,3	-38298,3	160,6	41617,1	0,004	0,027	0,003	Ok
1	279	-2713,3	-49185,2	192,4	40324,1	0,002	0,034	0,003	Ok
35	279	-2836,7	-36622,5	106,6	22893,9	0,002	0,026	0,002	Ok
1	279	-2836,7	-47033,1	119,7	17707,4	0,001	0,033	0,002	Ok
33	279	-2960,0	-34947,4	58,9	12713,5	0,001	0,024	0,001	Ok
1	279	-2960,0	-44881,8	62,5	7227,0	0,000	0,031	0,001	Ok
18	279	-3083,3	-32749,4	16,2	11928,1	0,001	0,023	0,000	Ok
1	279	-3083,3	-42731,2	22,6	8722,2	0,001	0,030	0,000	Ok
18	279	-3206,7	-31101,7	23,7	11067,4	0,001	0,022	0,000	Ok
1	279	-3206,7	-40581,4	16,0	9762,7	0,001	0,028	0,000	Ok
18	279	-3330,0	-29454,6	29,4	8255,6	0,001	0,021	0,001	Ok
1	279	-3330,0	-38432,3	26,4	8049,4	0,000	0,027	0,000	Ok
18	279	-3453,3	-27808,0	25,7	4643,5	0,000	0,019	0,000	Ok
1	279	-3453,3	-36283,8	26,1	4812,3	0,000	0,025	0,000	Ok
18	279	-3576,7	-26161,9	12,0	1474,8	0,000	0,018	0,000	Ok
1	279	-3576,7	-34136,0	13,0	1601,1	0,000	0,024	0,000	Ok
1	279	-3700,0	-34136,0	13,0	0,0	0,018	0,024	0,000	Ok

Plinto n.	295	Quota	N	V	M	Ver. N/M	Ver.(25)	Ver.V	Stato
Cmb.	Palo	(cm)	(daN)	(daN)	(daN cm)				
18	295	0,0	-81372,9	10640,2	9340964,0	0,710	0,057	0,189	Ok
1	295	0,0	-106590,6	9170,0	11186610,0	0,596	0,074	0,163	Ok
18	295	-123,3	-78472,7	12235,1	7969095,0	0,610	0,055	0,217	Ok
1	295	-123,3	-102791,5	12947,5	9891563,0	0,530	0,072	0,230	Ok
18	295	-246,7	-76667,1	11857,6	6498220,0	0,500	0,053	0,210	Ok
1	295	-246,7	-100426,4	13411,8	8329647,0	0,449	0,070	0,238	Ok
19	295	-370,0	-76003,2	8911,2	5240913,0	0,404	0,053	0,158	Ok



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	295	-370,0	-98062,9	12795,6	6697237,0	0,362	0,068	0,227	Ok
19	295	-493,3	-74172,7	8340,1	4147021,0	0,321	0,052	0,148	Ok
1	295	-493,3	-95701,1	11459,0	5134958,0	0,279	0,067	0,203	Ok
19	295	-616,7	-72343,5	7341,4	3122335,0	0,243	0,050	0,130	Ok
1	295	-616,7	-93340,9	9731,0	3735184,0	0,204	0,065	0,173	Ok
35	295	-740,0	-70813,0	6127,6	2234677,0	0,175	0,049	0,109	Ok
1	295	-740,0	-90982,3	7871,5	2548577,0	0,140	0,063	0,140	Ok
35	295	-863,3	-68978,5	4869,8	1500386,0	0,118	0,048	0,086	Ok
1	295	-863,3	-88625,2	6066,4	1594311,0	0,088	0,062	0,108	Ok
35	295	-986,7	-67145,1	3691,1	927341,8	0,073	0,047	0,065	Ok
1	295	-986,7	-86269,7	4435,3	872764,9	0,048	0,060	0,079	Ok
35	295	-1110,0	-65312,9	2654,4	518051,9	0,041	0,046	0,047	Ok
1	295	-1110,0	-83915,6	3044,3	393259,8	0,022	0,058	0,054	Ok
17	295	-1233,3	-62661,2	1394,7	384508,1	0,031	0,044	0,025	Ok
1	295	-1233,3	-81563,0	1920,0	270118,9	0,015	0,057	0,034	Ok
18	295	-1356,7	-60471,4	641,9	440168,4	0,035	0,042	0,011	Ok
1	295	-1356,7	-79211,7	1064,5	394849,1	0,022	0,055	0,019	Ok
18	295	-1480,0	-58677,5	367,6	475046,5	0,038	0,041	0,007	Ok
1	295	-1480,0	-76861,8	485,4	488244,2	0,028	0,054	0,009	Ok
18	295	-1603,3	-56884,5	406,3	465878,0	0,038	0,040	0,007	Ok
1	295	-1603,3	-74513,2	304,8	518565,1	0,029	0,052	0,005	Ok
18	295	-1726,7	-55092,5	501,3	425857,4	0,035	0,038	0,009	Ok
1	295	-1726,7	-72165,8	443,5	500185,9	0,029	0,050	0,008	Ok
18	295	-1850,0	-53301,4	545,7	368009,0	0,030	0,037	0,010	Ok
1	295	-1850,0	-69819,7	556,7	450392,2	0,026	0,049	0,010	Ok
18	295	-1973,3	-51511,3	537,9	302790,4	0,025	0,036	0,010	Ok
1	295	-1973,3	-67474,8	596,0	383775,0	0,022	0,047	0,011	Ok
19	295	-2096,7	-50479,5	395,4	241276,1	0,020	0,035	0,007	Ok
1	295	-2096,7	-65131,0	577,0	311393,9	0,018	0,045	0,010	Ok
19	295	-2220,0	-48663,8	374,3	192766,3	0,016	0,034	0,007	Ok
1	295	-2220,0	-62788,3	519,8	240983,1	0,014	0,044	0,009	Ok
19	295	-2343,3	-46849,0	330,7	146775,4	0,012	0,033	0,006	Ok
1	295	-2343,3	-60446,7	441,5	177468,1	0,010	0,042	0,008	Ok
35	295	-2466,7	-45224,9	275,4	106531,2	0,009	0,032	0,005	Ok
1	295	-2466,7	-58106,1	355,2	123557,8	0,007	0,040	0,006	Ok
35	295	-2590,0	-43404,0	216,7	73349,3	0,006	0,030	0,004	Ok
1	295	-2590,0	-55766,5	270,3	80320,6	0,005	0,039	0,005	Ok
35	295	-2713,3	-41583,8	161,1	47444,2	0,004	0,029	0,003	Ok
1	295	-2713,3	-53427,9	192,7	47707,8	0,003	0,037	0,003	Ok
35	295	-2836,7	-39764,3	111,9	28547,0	0,002	0,028	0,002	Ok
1	295	-2836,7	-51090,1	126,2	25057,1	0,001	0,036	0,002	Ok
33	295	-2960,0	-37846,1	67,2	16298,3	0,001	0,026	0,001	Ok
1	295	-2960,0	-48753,2	72,8	11785,7	0,001	0,034	0,001	Ok
17	295	-3083,3	-35660,3	30,1	11079,9	0,001	0,025	0,001	Ok
1	295	-3083,3	-46417,2	34,1	7636,2	0,000	0,032	0,001	Ok
17	295	-3206,7	-33866,2	23,7	9251,4	0,001	0,024	0,000	Ok
1	295	-3206,7	-44081,9	16,5	7505,1	0,000	0,031	0,000	Ok
18	295	-3330,0	-31870,6	24,5	6936,7	0,001	0,022	0,000	Ok
1	295	-3330,0	-41747,4	20,3	6327,0	0,000	0,029	0,000	Ok
18	295	-3453,3	-30089,0	21,8	3949,4	0,000	0,021	0,000	Ok
1	295	-3453,3	-39413,6	20,8	3895,9	0,000	0,027	0,000	Ok
18	295	-3576,7	-28307,8	10,3	1270,9	0,000	0,020	0,000	Ok
1	295	-3576,7	-37080,5	10,8	1332,0	0,000	0,026	0,000	Ok
1	295	-3700,0	-37080,5	10,8	0,0	0,020	0,026	0,000	Ok

**Plinto n. 307**

<b>Cmb.</b>	<b>Palo</b>	<b>Quota (cm)</b>	<b>N (daN)</b>	<b>V (daN)</b>	<b>M (daN cm)</b>	<b>Ver. N/M</b>	<b>Ver.(25)</b>	<b>Ver.V</b>	<b>Stato</b>
18	307	0,0	-74508,1	7267,3	8516882,0	0,659	0,052	0,129	Ok
1	307	0,0	-97556,5	4711,5	10145760,0	0,550	0,068	0,084	Ok
18	307	-123,3	-71852,5	10086,3	7472677,0	0,582	0,050	0,179	Ok
1	307	-123,3	-94079,4	10240,2	9258644,0	0,505	0,066	0,182	Ok
18	307	-246,7	-70199,2	10327,8	6246258,0	0,489	0,049	0,183	Ok
1	307	-246,7	-91914,7	11490,2	8003078,0	0,438	0,064	0,204	Ok

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

19	307	-370,0	-69532,1	7960,3	5155090,0	0,404	0,048	0,141	Ok
1	307	-370,0	-89751,5	11507,1	6589999,0	0,363	0,063	0,204	Ok
19	307	-493,3	-67857,4	7746,5	4173327,0	0,329	0,047	0,137	Ok
1	307	-493,3	-87589,9	10666,7	5173481,0	0,286	0,061	0,189	Ok
35	307	-616,7	-66183,9	7029,1	3218269,0	0,255	0,046	0,125	Ok
1	307	-616,7	-85429,7	9312,5	3860028,0	0,214	0,060	0,165	Ok
35	307	-740,0	-64511,6	6011,5	2357418,0	0,187	0,045	0,107	Ok
1	307	-740,0	-83271,0	7720,5	2713428,0	0,151	0,058	0,137	Ok
35	307	-863,3	-62840,3	4893,6	1621927,0	0,130	0,044	0,087	Ok
1	307	-863,3	-81113,8	6094,0	1763386,0	0,099	0,057	0,108	Ok
35	307	-986,7	-61170,1	3795,0	1025414,0	0,082	0,043	0,067	Ok
1	307	-986,7	-78957,9	4570,0	1014857,0	0,057	0,055	0,081	Ok
35	307	-1110,0	-59500,9	2793,5	568260,9	0,046	0,041	0,050	Ok
1	307	-1110,0	-76803,3	3230,5	457840,9	0,026	0,054	0,057	Ok
33	307	-1233,3	-57643,7	1821,1	260788,3	0,021	0,040	0,032	Ok
1	307	-1233,3	-74650,0	2114,9	106995,4	0,006	0,052	0,038	Ok
18	307	-1356,7	-55369,9	716,7	312952,2	0,026	0,039	0,013	Ok
1	307	-1356,7	-72498,1	1232,0	228656,5	0,013	0,051	0,022	Ok
18	307	-1480,0	-53727,3	294,8	382034,3	0,031	0,037	0,005	Ok
1	307	-1480,0	-70347,3	571,5	370617,3	0,021	0,049	0,010	Ok
18	307	-1603,3	-52085,6	219,9	400505,7	0,033	0,036	0,004	Ok
1	307	-1603,3	-68197,8	139,8	436458,5	0,025	0,048	0,002	Ok
18	307	-1726,7	-50444,8	351,6	382344,0	0,032	0,035	0,006	Ok
1	307	-1726,7	-66049,4	247,0	445387,6	0,026	0,046	0,004	Ok
18	307	-1850,0	-48804,8	436,0	341314,9	0,028	0,034	0,008	Ok
1	307	-1850,0	-63902,1	417,8	416509,4	0,024	0,045	0,007	Ok
18	307	-1973,3	-47165,7	460,7	288548,4	0,024	0,033	0,008	Ok
1	307	-1973,3	-61755,9	499,0	365447,3	0,021	0,043	0,009	Ok
19	307	-2096,7	-46181,5	347,8	235570,5	0,020	0,032	0,006	Ok
1	307	-2096,7	-59610,8	512,3	304118,5	0,018	0,042	0,009	Ok
19	307	-2220,0	-44520,4	344,6	192671,1	0,016	0,031	0,006	Ok
1	307	-2220,0	-57466,6	479,9	241065,6	0,014	0,040	0,009	Ok
19	307	-2343,3	-42860,1	314,5	150174,1	0,013	0,030	0,006	Ok
1	307	-2343,3	-55323,5	420,2	181972,2	0,011	0,039	0,007	Ok
35	307	-2466,7	-41200,5	269,2	111548,2	0,009	0,029	0,005	Ok
1	307	-2466,7	-53181,3	347,2	130229,1	0,008	0,037	0,006	Ok
35	307	-2590,0	-39541,6	217,6	78568,5	0,007	0,028	0,004	Ok
1	307	-2590,0	-51040,0	271,2	87481,1	0,005	0,036	0,005	Ok
35	307	-2713,3	-37883,4	166,0	51951,2	0,004	0,026	0,003	Ok
1	307	-2713,3	-48899,5	199,1	54115,2	0,003	0,034	0,004	Ok
35	307	-2836,7	-36225,8	118,7	31709,1	0,003	0,025	0,002	Ok
1	307	-2836,7	-46759,9	135,3	29673,6	0,002	0,033	0,002	Ok
35	307	-2960,0	-34568,8	77,9	17374,5	0,002	0,024	0,001	Ok
1	307	-2960,0	-44621,1	82,0	13208,9	0,001	0,031	0,001	Ok
33	307	-3083,3	-32804,8	41,6	8261,9	0,001	0,023	0,001	Ok
1	307	-3083,3	-42483,1	40,7	3866,6	0,000	0,030	0,001	Ok
18	307	-3206,7	-30813,8	10,8	5910,5	0,001	0,021	0,000	Ok
1	307	-3206,7	-40345,7	12,2	3085,9	0,000	0,028	0,000	Ok
18	307	-3330,0	-29182,0	16,1	5011,5	0,000	0,020	0,000	Ok
1	307	-3330,0	-38209,1	9,1	3824,3	0,000	0,027	0,000	Ok
18	307	-3453,3	-27550,6	16,5	3064,9	0,000	0,019	0,000	Ok
1	307	-3453,3	-36073,1	14,0	2768,8	0,000	0,025	0,000	Ok
18	307	-3576,7	-25919,7	8,4	1039,2	0,000	0,018	0,000	Ok
1	307	-3576,7	-33937,7	8,4	1039,7	0,000	0,024	0,000	Ok
1	307	-3700,0	-33937,7	8,4	0,0	0,018	0,024	0,000	Ok

**Plinto n. 311**

<b>Cmb.</b>	<b>Palo</b>	<b>Quota (cm)</b>	<b>N (daN)</b>	<b>V (daN)</b>	<b>M (daN cm)</b>	<b>Ver. N/M</b>	<b>Ver.(25)</b>	<b>Ver.V</b>	<b>Stato</b>
18	311	0,0	-83966,5	8373,3	8444973,0	0,637	0,059	0,148	Ok
1	311	0,0	-110297,1	6439,3	10032960,0	0,531	0,077	0,114	Ok
18	311	-123,3	-80973,8	10315,4	7379279,0	0,561	0,056	0,183	Ok
1	311	-123,3	-106365,9	10448,3	9133319,0	0,486	0,074	0,185	Ok
18	311	-246,7	-79110,7	10354,1	6157019,0	0,470	0,055	0,184	Ok

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	311	-246,7	-103918,5	11465,5	7890094,0	0,422	0,072	0,203	Ok
19	311	-370,0	-78863,2	7842,5	5089723,0	0,389	0,055	0,139	Ok
1	311	-370,0	-101472,8	11390,2	6501234,0	0,350	0,071	0,202	Ok
19	311	-493,3	-76963,8	7631,0	4127366,0	0,317	0,054	0,135	Ok
1	311	-493,3	-99028,9	10525,4	5113233,0	0,276	0,069	0,187	Ok
35	311	-616,7	-75065,7	6935,7	3198395,0	0,247	0,052	0,123	Ok
1	311	-616,7	-96586,6	9181,1	3828218,0	0,208	0,067	0,163	Ok
35	311	-740,0	-73168,9	5932,8	2360379,0	0,183	0,051	0,105	Ok
1	311	-740,0	-94146,0	7615,3	2707887,0	0,148	0,066	0,135	Ok
35	311	-863,3	-71273,3	4840,0	1645304,0	0,128	0,050	0,086	Ok
1	311	-863,3	-91707,0	6021,2	1781757,0	0,098	0,064	0,107	Ok
35	311	-986,7	-69379,0	3769,2	1067367,0	0,084	0,048	0,067	Ok
1	311	-986,7	-89269,5	4530,1	1057033,0	0,058	0,062	0,080	Ok
35	311	-1110,0	-67485,8	2794,3	629627,0	0,050	0,047	0,050	Ok
1	311	-1110,0	-86833,6	3221,2	532621,7	0,029	0,061	0,057	Ok
33	311	-1233,3	-65283,9	1859,8	365057,0	0,029	0,045	0,033	Ok
1	311	-1233,3	-84399,1	2133,5	246895,5	0,014	0,059	0,038	Ok
18	311	-1356,7	-62398,8	791,4	349276,3	0,028	0,043	0,014	Ok
1	311	-1356,7	-81966,1	1277,9	280835,0	0,016	0,057	0,023	Ok
18	311	-1480,0	-60547,7	421,7	395133,1	0,032	0,042	0,007	Ok
1	311	-1480,0	-79534,5	653,3	384121,8	0,022	0,055	0,012	Ok
18	311	-1603,3	-58697,6	330,0	403169,7	0,033	0,041	0,006	Ok
1	311	-1603,3	-77104,2	296,2	437257,1	0,025	0,054	0,005	Ok
18	311	-1726,7	-56848,5	396,5	380304,3	0,031	0,040	0,007	Ok
1	311	-1726,7	-74675,2	313,5	441437,6	0,025	0,052	0,006	Ok
18	311	-1850,0	-55000,3	452,4	337506,0	0,028	0,038	0,008	Ok
1	311	-1850,0	-72247,5	435,1	411166,6	0,023	0,050	0,008	Ok
18	311	-1973,3	-53153,1	464,3	284548,4	0,023	0,037	0,008	Ok
1	311	-1973,3	-69821,1	500,6	360306,5	0,021	0,049	0,009	Ok
19	311	-2096,7	-52379,0	342,8	232478,3	0,019	0,036	0,006	Ok
1	311	-2096,7	-67395,8	508,0	299922,0	0,017	0,047	0,009	Ok
19	311	-2220,0	-50495,0	339,4	190444,4	0,016	0,035	0,006	Ok
1	311	-2220,0	-64971,6	473,8	238094,2	0,014	0,045	0,008	Ok
35	311	-2343,3	-48611,9	310,9	148976,5	0,012	0,034	0,006	Ok
1	311	-2343,3	-62548,6	414,3	180251,1	0,011	0,044	0,007	Ok
35	311	-2466,7	-46729,5	265,6	111377,4	0,009	0,033	0,005	Ok
1	311	-2466,7	-60126,6	342,5	129651,3	0,008	0,042	0,006	Ok
35	311	-2590,0	-44848,0	215,2	79241,9	0,007	0,031	0,004	Ok
1	311	-2590,0	-57705,7	268,0	87887,7	0,005	0,040	0,005	Ok
35	311	-2713,3	-42967,2	165,0	53296,9	0,005	0,030	0,003	Ok
1	311	-2713,3	-55285,7	197,5	55354,4	0,003	0,039	0,004	Ok
35	311	-2836,7	-41087,2	119,0	33562,1	0,003	0,029	0,002	Ok
1	311	-2836,7	-52866,7	135,2	31660,6	0,002	0,037	0,002	Ok
35	311	-2960,0	-39207,9	79,7	19590,4	0,002	0,027	0,001	Ok
1	311	-2960,0	-50448,5	83,6	16023,6	0,001	0,035	0,001	Ok
33	311	-3083,3	-37152,9	46,1	11255,3	0,001	0,026	0,001	Ok
1	311	-3083,3	-48031,3	44,2	7719,1	0,000	0,033	0,001	Ok
17	311	-3206,7	-34892,9	22,9	7660,7	0,001	0,024	0,000	Ok
1	311	-3206,7	-45614,8	19,4	5355,1	0,000	0,032	0,000	Ok
18	311	-3330,0	-32886,5	19,2	5527,8	0,000	0,023	0,000	Ok
1	311	-3330,0	-43199,1	14,3	4540,2	0,000	0,030	0,000	Ok
18	311	-3453,3	-31048,0	17,6	3229,5	0,000	0,022	0,000	Ok
1	311	-3453,3	-40784,2	15,5	2960,0	0,000	0,028	0,000	Ok
18	311	-3576,7	-29210,1	8,6	1066,6	0,000	0,020	0,000	Ok
1	311	-3576,7	-38369,9	8,6	1065,8	0,000	0,027	0,000	Ok
1	311	-3700,0	-38369,9	8,6	0,0	0,020	0,027	0,000	Ok

**Plinto n. 327**

Cmb.	Palo	Quota (cm)	N (daN)	V (daN)	M (daN cm)	Ver. N/M	Ver.(25)	Ver.V	Stato
18	327	0,0	-81447,7	5900,2	7883577,0	0,599	0,057	0,105	Ok
1	327	0,0	-107141,0	3411,1	9332077,0	0,496	0,075	0,060	Ok
18	327	-123,3	-78544,8	8681,2	7078918,0	0,542	0,055	0,154	Ok
1	327	-123,3	-103322,3	8371,1	8756845,0	0,469	0,072	0,148	Ok

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

18	327	-246,7	-76737,5	9229,2	6045494,0	0,465	0,053	0,164	Ok
1	327	-246,7	-100944,9	10056,0	7748226,0	0,417	0,070	0,178	Ok
35	327	-370,0	-76392,8	7285,6	5101136,0	0,393	0,053	0,129	Ok
1	327	-370,0	-98569,3	10505,7	6519556,0	0,352	0,069	0,186	Ok
35	327	-493,3	-74552,9	7296,8	4219303,0	0,326	0,052	0,129	Ok
1	327	-493,3	-96195,3	10039,2	5230900,0	0,284	0,067	0,178	Ok
35	327	-616,7	-72714,2	6777,0	3330216,0	0,259	0,051	0,120	Ok
1	327	-616,7	-93822,9	8983,9	3997838,0	0,218	0,065	0,159	Ok
35	327	-740,0	-70876,8	5933,7	2502701,0	0,195	0,049	0,105	Ok
1	327	-740,0	-91452,1	7615,6	2894179,0	0,159	0,064	0,135	Ok
35	327	-863,3	-69040,7	4937,9	1778348,0	0,140	0,048	0,088	Ok
1	327	-863,3	-89082,9	6144,8	1959340,0	0,108	0,062	0,109	Ok
35	327	-986,7	-67205,6	3916,8	1177350,0	0,093	0,047	0,069	Ok
1	327	-986,7	-86715,2	4719,7	1206982,0	0,067	0,060	0,084	Ok
35	327	-1110,0	-65371,8	2957,2	704977,3	0,056	0,046	0,052	Ok
1	327	-1110,0	-84348,9	3434,1	634192,5	0,035	0,059	0,061	Ok
35	327	-1233,3	-63539,0	2111,8	360085,5	0,029	0,044	0,037	Ok
1	327	-1233,3	-81984,1	2339,1	239236,9	0,013	0,057	0,041	Ok
17	327	-1356,7	-60688,4	1062,6	256582,0	0,021	0,042	0,019	Ok
1	327	-1356,7	-79620,7	1453,6	157462,7	0,009	0,055	0,026	Ok
18	327	-1480,0	-58731,4	451,9	323972,4	0,026	0,041	0,008	Ok
1	327	-1480,0	-77258,7	776,1	292894,7	0,017	0,054	0,014	Ok
18	327	-1603,3	-56936,8	237,1	354544,4	0,029	0,040	0,004	Ok
1	327	-1603,3	-74897,9	302,7	376173,6	0,021	0,052	0,005	Ok
18	327	-1726,7	-55143,1	285,0	349614,1	0,029	0,038	0,005	Ok
1	327	-1726,7	-72538,5	171,1	403117,6	0,023	0,051	0,003	Ok
18	327	-1850,0	-53350,4	368,4	320367,5	0,026	0,037	0,007	Ok
1	327	-1850,0	-70180,2	327,2	389736,0	0,022	0,049	0,006	Ok
18	327	-1973,3	-51558,6	406,7	277161,3	0,023	0,036	0,007	Ok
1	327	-1973,3	-67823,2	428,2	350982,2	0,020	0,047	0,008	Ok
35	327	-2096,7	-50738,2	315,2	231531,2	0,019	0,035	0,006	Ok
1	327	-2096,7	-65467,3	462,5	298819,1	0,017	0,046	0,008	Ok
35	327	-2220,0	-48913,2	322,3	193530,2	0,016	0,034	0,006	Ok
1	327	-2220,0	-63112,5	448,4	242131,2	0,014	0,044	0,008	Ok
35	327	-2343,3	-47089,1	302,0	154297,7	0,013	0,033	0,005	Ok
1	327	-2343,3	-60758,8	403,3	187065,0	0,011	0,042	0,007	Ok
35	327	-2466,7	-45265,7	264,9	117409,0	0,010	0,032	0,005	Ok
1	327	-2466,7	-58406,1	341,5	137502,3	0,008	0,041	0,006	Ok
35	327	-2590,0	-43443,1	219,4	85028,4	0,007	0,030	0,004	Ok
1	327	-2590,0	-56054,5	273,3	95552,9	0,006	0,039	0,005	Ok
35	327	-2713,3	-41621,3	171,8	58229,3	0,005	0,029	0,003	Ok
1	327	-2713,3	-53703,7	206,3	62013,8	0,004	0,037	0,004	Ok
35	327	-2836,7	-39800,1	126,7	37287,9	0,003	0,028	0,002	Ok
1	327	-2836,7	-51353,9	145,3	36767,6	0,002	0,036	0,003	Ok
35	327	-2960,0	-37979,7	86,8	21934,5	0,002	0,026	0,002	Ok
1	327	-2960,0	-49005,0	93,3	19119,1	0,001	0,034	0,002	Ok
35	327	-3083,3	-36159,8	53,9	11557,2	0,001	0,025	0,001	Ok
1	327	-3083,3	-46656,9	51,8	8113,7	0,000	0,033	0,001	Ok
33	327	-3206,7	-34127,3	27,8	5872,3	0,001	0,024	0,000	Ok
1	327	-3206,7	-44309,6	22,1	3118,9	0,000	0,031	0,000	Ok
18	327	-3330,0	-31899,9	13,2	4074,2	0,000	0,022	0,000	Ok
1	327	-3330,0	-41963,0	7,9	2644,0	0,000	0,029	0,000	Ok
18	327	-3453,3	-30116,6	13,5	2551,4	0,000	0,021	0,000	Ok
1	327	-3453,3	-39617,2	10,2	2079,8	0,000	0,028	0,000	Ok
18	327	-3576,7	-28333,9	7,2	889,9	0,000	0,020	0,000	Ok
1	327	-3576,7	-37272,0	6,8	840,6	0,000	0,026	0,000	Ok
1	327	-3700,0	-37272,0	6,8	0,0	0,020	0,026	0,000	Ok

**Plinto n. 84**

Cmb.	Palo	Quota (cm)	N (daN)	V (daN)	M (daN cm)	Ver. N/M	Ver.(25)	Ver.V	Stato
34	84	0,0	-68094,1	6844,2	8904390,0	0,701	0,047	0,121	Ok
1	84	0,0	-88715,1	4168,2	10634630,0	0,586	0,062	0,074	Ok
34	84	-123,3	-65667,1	10188,1	7886086,0	0,625	0,046	0,181	Ok

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

1	84	-123,3	-85553,2	10342,6	9786814,0	0,543	0,060	0,183	Ok
34	84	-246,7	-64156,2	10632,3	6646479,0	0,529	0,045	0,189	Ok
1	84	-246,7	-83584,6	11861,5	8519107,0	0,475	0,058	0,210	Ok
35	84	-370,0	-62919,1	8348,6	5516766,0	0,440	0,044	0,148	Ok
1	84	-370,0	-81617,5	12034,3	7060355,0	0,395	0,057	0,213	Ok
35	84	-493,3	-61403,7	8191,8	4487110,0	0,360	0,043	0,145	Ok
1	84	-493,3	-79651,8	11258,6	5578821,0	0,313	0,056	0,200	Ok
35	84	-616,7	-59889,4	7471,2	3476789,0	0,280	0,042	0,132	Ok
1	84	-616,7	-77687,4	9902,4	4192327,0	0,237	0,054	0,176	Ok
35	84	-740,0	-58376,1	6431,7	2555350,0	0,207	0,041	0,114	Ok
1	84	-740,0	-75724,4	8264,3	2972888,0	0,168	0,053	0,147	Ok
19	84	-863,3	-57151,4	5251,9	1765084,0	0,143	0,040	0,093	Ok
1	84	-863,3	-73762,6	6566,1	1955630,0	0,111	0,051	0,116	Ok
19	84	-986,7	-55632,4	4088,6	1124210,0	0,092	0,039	0,073	Ok
1	84	-986,7	-71802,1	4959,2	1148550,0	0,066	0,050	0,088	Ok
19	84	-1110,0	-54114,3	3022,5	630328,2	0,052	0,038	0,054	Ok
1	84	-1110,0	-69842,8	3535,9	542406,0	0,031	0,049	0,063	Ok
19	84	-1233,3	-52597,2	2102,2	281929,0	0,023	0,037	0,037	Ok
1	84	-1233,3	-67884,7	2342,3	136650,1	0,008	0,047	0,042	Ok
34	84	-1356,7	-50603,4	826,8	299325,1	0,025	0,035	0,015	Ok
1	84	-1356,7	-65927,7	1391,0	210198,8	0,012	0,046	0,025	Ok
34	84	-1480,0	-49102,2	346,6	382516,0	0,032	0,034	0,006	Ok
1	84	-1480,0	-63971,9	673,0	370028,1	0,022	0,045	0,012	Ok
34	84	-1603,3	-47601,8	195,2	410480,5	0,034	0,033	0,003	Ok
1	84	-1603,3	-62017,1	182,6	448406,9	0,026	0,043	0,003	Ok
34	84	-1726,7	-46102,3	334,5	397679,0	0,033	0,032	0,006	Ok
1	84	-1726,7	-60063,4	224,3	464563,4	0,027	0,042	0,004	Ok
34	84	-1850,0	-44603,5	435,6	358881,8	0,030	0,031	0,008	Ok
1	84	-1850,0	-58110,8	415,8	438850,7	0,026	0,040	0,007	Ok
34	84	-1973,3	-43105,4	471,6	306153,5	0,026	0,030	0,008	Ok
1	84	-1973,3	-56159,1	512,0	388077,2	0,023	0,039	0,009	Ok
35	84	-2096,7	-41789,3	363,6	251712,8	0,021	0,029	0,006	Ok
1	84	-2096,7	-54208,4	533,9	325161,1	0,019	0,038	0,009	Ok
35	84	-2220,0	-40286,2	363,7	206868,4	0,018	0,028	0,006	Ok
1	84	-2220,0	-52258,6	505,4	259440,7	0,015	0,036	0,009	Ok
35	84	-2343,3	-38783,8	334,2	162013,7	0,014	0,027	0,006	Ok
1	84	-2343,3	-50309,6	446,1	197198,9	0,012	0,035	0,008	Ok
35	84	-2466,7	-37282,0	287,8	120795,9	0,010	0,026	0,005	Ok
1	84	-2466,7	-48361,6	371,3	142252,3	0,009	0,034	0,007	Ok
35	84	-2590,0	-35780,9	233,9	85303,6	0,007	0,025	0,004	Ok
1	84	-2590,0	-46414,3	292,2	96525,6	0,006	0,032	0,005	Ok
19	84	-2713,3	-34453,8	179,0	56738,6	0,005	0,024	0,003	Ok
1	84	-2713,3	-44467,9	216,3	60569,1	0,004	0,031	0,004	Ok
19	84	-2836,7	-32946,3	128,6	34893,8	0,003	0,023	0,002	Ok
1	84	-2836,7	-42522,2	148,5	33997,2	0,002	0,030	0,003	Ok
19	84	-2960,0	-31439,3	85,0	19319,4	0,002	0,022	0,002	Ok
1	84	-2960,0	-40577,2	91,6	15856,1	0,001	0,028	0,002	Ok
19	84	-3083,3	-29932,9	49,8	9255,7	0,001	0,021	0,001	Ok
1	84	-3083,3	-38632,9	47,0	5063,4	0,000	0,027	0,001	Ok
36	84	-3206,7	-28283,9	16,0	5562,5	0,000	0,020	0,000	Ok
1	84	-3206,7	-36689,3	15,6	2594,5	0,000	0,026	0,000	Ok
34	84	-3330,0	-26669,8	14,9	4822,7	0,000	0,019	0,000	Ok
1	84	-3330,0	-34746,3	7,7	3564,2	0,000	0,024	0,000	Ok
34	84	-3453,3	-25178,9	16,1	3029,4	0,000	0,018	0,000	Ok
1	84	-3453,3	-32803,9	13,5	2712,3	0,000	0,023	0,000	Ok
34	84	-3576,7	-23688,4	8,5	1046,7	0,000	0,017	0,000	Ok
1	84	-3576,7	-30862,0	8,5	1046,2	0,000	0,022	0,000	Ok
1	84	-3700,0	-30862,0	8,5	0,0	0,016	0,022	0,000	Ok

**Plinto n. 92**

<b>Cmb.</b>	<b>Palo</b>	<b>Quota (cm)</b>	<b>N (daN)</b>	<b>V (daN)</b>	<b>M (daN cm)</b>	<b>Ver. N/M</b>	<b>Ver.(25)</b>	<b>Ver.V</b>	<b>Stato</b>
34	92	0,0	-75993,3	3409,2	7810693,0	0,602	0,053	0,060	Ok
1	92	0,0	-99151,9	501,6	9250022,0	0,500	0,069	0,009	Ok





**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

34	92	-123,3	-73284,7	7818,6	7138704,0	0,554	0,051	0,139	Ok
1	92	-123,3	-95617,9	7434,1	8831699,0	0,480	0,067	0,132	Ok
18	92	-246,7	-70988,6	8788,4	6172377,0	0,482	0,049	0,156	Ok
1	92	-246,7	-93417,8	9598,8	7915490,0	0,432	0,065	0,170	Ok
35	92	-370,0	-70423,9	7109,0	5264917,0	0,412	0,049	0,126	Ok
1	92	-370,0	-91219,3	10360,8	6731933,0	0,369	0,064	0,184	Ok
35	92	-493,3	-68727,8	7316,4	4391830,0	0,345	0,048	0,130	Ok
1	92	-493,3	-89022,3	10095,9	5454270,0	0,301	0,062	0,179	Ok
35	92	-616,7	-67032,8	6906,7	3491773,0	0,276	0,047	0,122	Ok
1	92	-616,7	-86826,8	9160,8	4209227,0	0,233	0,061	0,162	Ok
35	92	-740,0	-65339,0	6116,2	2641657,0	0,209	0,046	0,108	Ok
1	92	-740,0	-84632,8	7852,7	3079498,0	0,171	0,059	0,139	Ok
35	92	-863,3	-63646,3	5134,9	1888820,0	0,150	0,044	0,091	Ok
1	92	-863,3	-82440,3	6399,7	2111097,0	0,118	0,057	0,113	Ok
35	92	-986,7	-61954,6	4103,7	1257091,0	0,101	0,043	0,073	Ok
1	92	-986,7	-80249,1	4963,8	1321917,0	0,074	0,056	0,088	Ok
35	92	-1110,0	-60264,0	3119,4	753033,4	0,061	0,042	0,055	Ok
1	92	-1110,0	-78059,3	3649,8	709903,6	0,040	0,054	0,065	Ok
35	92	-1233,3	-58574,5	2241,8	372145,7	0,030	0,041	0,040	Ok
1	92	-1233,3	-75870,9	2517,0	260286,8	0,015	0,053	0,045	Ok
18	92	-1356,7	-55992,6	981,8	178374,9	0,015	0,039	0,017	Ok
1	92	-1356,7	-73683,7	1589,4	54481,3	0,003	0,051	0,028	Ok
18	92	-1480,0	-54331,5	473,3	282722,6	0,023	0,038	0,008	Ok
1	92	-1480,0	-71497,8	867,1	247548,2	0,014	0,050	0,015	Ok
34	92	-1603,3	-53123,8	96,8	334610,2	0,027	0,037	0,002	Ok
1	92	-1603,3	-69313,0	334,1	354153,7	0,020	0,048	0,006	Ok
34	92	-1726,7	-51450,3	181,4	342553,9	0,028	0,036	0,003	Ok
1	92	-1726,7	-67129,5	42,8	395131,9	0,023	0,047	0,001	Ok
34	92	-1850,0	-49777,6	317,7	320957,5	0,027	0,035	0,006	Ok
1	92	-1850,0	-64947,1	272,2	390563,5	0,023	0,045	0,005	Ok
34	92	-1973,3	-48105,8	382,5	281992,7	0,023	0,034	0,007	Ok
1	92	-1973,3	-62765,8	401,4	357037,0	0,021	0,044	0,007	Ok
35	92	-2096,7	-46773,8	303,7	238226,1	0,020	0,033	0,005	Ok
1	92	-2096,7	-60585,6	452,5	307547,0	0,018	0,042	0,008	Ok
35	92	-2220,0	-45091,4	321,3	200966,8	0,017	0,031	0,006	Ok
1	92	-2220,0	-58406,4	448,9	251747,8	0,015	0,041	0,008	Ok
35	92	-2343,3	-43409,8	306,9	161448,9	0,014	0,030	0,005	Ok
1	92	-2343,3	-56228,2	410,2	196384,3	0,012	0,039	0,007	Ok
35	92	-2466,7	-41728,9	272,6	123673,2	0,010	0,029	0,005	Ok
1	92	-2466,7	-54051,0	351,6	145798,6	0,009	0,038	0,006	Ok
35	92	-2590,0	-40048,7	228,0	90107,5	0,008	0,028	0,004	Ok
1	92	-2590,0	-51874,7	284,5	102443,3	0,006	0,036	0,005	Ok
35	92	-2713,3	-38369,2	180,2	62033,3	0,005	0,027	0,003	Ok
1	92	-2713,3	-49699,2	217,2	67357,4	0,004	0,035	0,004	Ok
35	92	-2836,7	-36690,4	133,9	39861,6	0,003	0,026	0,002	Ok
1	92	-2836,7	-47524,6	154,9	40577,5	0,002	0,033	0,003	Ok
35	92	-2960,0	-35012,2	92,4	23398,9	0,002	0,024	0,002	Ok
1	92	-2960,0	-45350,9	101,1	21474,8	0,001	0,032	0,002	Ok
35	92	-3083,3	-33334,5	57,7	12062,2	0,001	0,023	0,001	Ok
1	92	-3083,3	-43177,8	57,5	9015,1	0,001	0,030	0,001	Ok
35	92	-3206,7	-31657,5	30,6	5045,7	0,000	0,022	0,001	Ok
1	92	-3206,7	-41005,6	24,9	1962,0	0,000	0,029	0,000	Ok
18	92	-3330,0	-29510,1	7,6	2963,2	0,000	0,021	0,000	Ok
1	92	-3330,0	-38834,0	3,6	1191,7	0,000	0,027	0,000	Ok
18	92	-3453,3	-27860,4	10,8	2115,2	0,000	0,019	0,000	Ok
1	92	-3453,3	-36663,0	6,9	1582,2	0,000	0,026	0,000	Ok
18	92	-3576,7	-26211,2	6,4	793,1	0,000	0,018	0,000	Ok
1	92	-3576,7	-34492,7	6,0	735,6	0,000	0,024	0,000	Ok
20	92	-3700,0	-26854,6	4,0	0,0	0,014	0,019	0,000	Ok
1	92	-3700,0	-34492,7	6,0	0,0	0,000	0,024	0,000	Ok

Sezioni maggiormente sollecitate:

Pl.	Cmb.	Palo	Quota (cm)	N (daN)	V (daN)	M (daN cm)	Ver. N/M	Ver.(25)	Ver.V
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**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

215	34	215	0,0	-36136,9	15497,5	11433790,0	0,987	0,025	0,275
311	1	311	0,0	-110297,1	6439,3	10032960,0	0,531	0,077	0,114
231	1	231	-123,3	-56255,7	18760,1	12207000,0	0,722	0,039	0,333

S/Su massime:

Ver. N/M = 0,987 < 1 Ok

Ver. (25) = 0,077 < 1 Ok

Ver. V = 0,333 < 1 Ok

**VERIFICHE STATO LIMITE DI ESERCIZIO:**

Combinazioni di tipo: **SLE condizioni rare.**

Tensione lim. CLS = 149,4 daN/cm<sup>2</sup>

Tensione lim. acciaio = 3600,0 daN/cm<sup>2</sup>

Plinto n. 215

Cmb.	Palo	Quota (cm)	N (daN)	M (daN cm)	Ten.SLE C (daN/cm <sup>2</sup> )	Ten.SLE A (daN/cm <sup>2</sup> )	Stato
69	215	0,0	-35859,5	10710380,0	-106,6	3528,6	Ok
69	215	-123,3	-34581,4	9167045,0	-91,2	2965,4	Ok
69	215	-246,7	-33785,7	7497163,0	-74,4	2348,2	Ok
69	215	-370,0	-32990,6	5858111,0	-57,9	1743,7	Ok
69	215	-493,3	-32196,0	4358347,0	-42,7	1193,5	Ok
69	215	-616,7	-31402,0	3063190,0	-29,5	724,2	Ok
69	215	-740,0	-30608,5	2003100,0	-18,6	353,4	Ok
69	215	-863,3	-29815,6	1185631,0	-10,2	-139,3	Ok
69	215	-986,7	-29023,1	615743,7	-5,5	-77,9	Ok
69	215	-1110,0	-28231,1	350259,5	-4,0	-57,9	Ok
69	215	-1233,3	-27439,7	396254,3	-4,2	-60,1	Ok
69	215	-1356,7	-26648,6	492732,1	-4,6	-65,9	Ok
69	215	-1480,0	-25858,1	537579,4	-4,8	-68,5	Ok
69	215	-1603,3	-25067,9	530751,0	-4,8	-67,2	Ok
69	215	-1726,7	-24278,2	487443,2	-4,4	-63,0	Ok
69	215	-1850,0	-23488,9	422787,3	-4,0	-57,3	Ok
69	215	-1973,3	-22700,1	348974,5	-3,6	-51,2	Ok
69	215	-2096,7	-21911,6	274890,3	-3,2	-45,2	Ok
69	215	-2220,0	-21123,4	206444,6	-2,7	-39,5	Ok
69	215	-2343,3	-20335,7	147116,8	-2,4	-34,5	Ok
69	215	-2466,7	-19548,2	98540,9	-2,1	-30,3	Ok
69	215	-2590,0	-18761,1	61068,5	-1,8	-26,8	Ok
69	215	-2713,3	-17974,4	34329,6	-1,6	-24,0	Ok
69	215	-2836,7	-17187,9	17941,9	-1,5	-21,9	Ok
69	215	-2960,0	-16401,7	11699,0	-1,4	-20,5	Ok
69	215	-3083,3	-15615,8	11129,2	-1,3	-19,6	Ok
69	215	-3206,7	-14830,2	10241,6	-1,2	-18,6	Ok
69	215	-3330,0	-14044,8	7775,2	-1,2	-17,4	Ok
69	215	-3453,3	-13259,7	4454,4	-1,1	-16,3	Ok
69	215	-3576,7	-12474,7	1440,5	-1,0	-15,0	Ok
69	215	-3700,0	-12474,7	0,0	-1,0	-15,0	Ok

Plinto n. 103

Cmb.	Palo	Quota (cm)	N (daN)	M (daN cm)	Ten.SLE C (daN/cm <sup>2</sup> )	Ten.SLE A (daN/cm <sup>2</sup> )	Stato
69	103	0,0	-67219,6	7351383,0	-71,4	1842,6	Ok
69	103	-123,3	-64823,7	7034843,0	-68,3	1756,8	Ok
69	103	-246,7	-63332,2	6318245,0	-61,0	1512,1	Ok
69	103	-370,0	-61841,7	5384552,0	-51,5	1189,8	Ok
69	103	-493,3	-60352,3	4372018,0	-41,1	844,5	Ok
69	103	-616,7	-58863,8	3382308,0	-30,8	520,6	Ok
69	103	-740,0	-57376,4	2482153,0	-21,6	-293,6	Ok
69	103	-863,3	-55890,0	1709067,0	-14,4	-200,0	Ok
69	103	-986,7	-54404,5	1078152,0	-9,9	-140,0	Ok
69	103	-1110,0	-52920,0	588853,2	-7,2	-104,0	Ok
69	103	-1233,3	-51436,3	232748,6	-5,3	-77,8	Ok
69	103	-1356,7	-49953,5	70811,3	-4,4	-65,0	Ok



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

69	103	-1480,0	-48471,6	196792,9	-4,9	-71,8	Ok
69	103	-1603,3	-46990,5	280436,7	-5,2	-75,7	Ok
69	103	-1726,7	-45510,1	313664,6	-5,2	-76,2	Ok
69	103	-1850,0	-44030,6	310819,8	-5,1	-74,3	Ok
69	103	-1973,3	-42551,8	284782,0	-4,9	-70,7	Ok
69	103	-2096,7	-41073,7	245830,2	-4,5	-66,3	Ok
69	103	-2220,0	-39596,4	201661,5	-4,2	-61,5	Ok
69	103	-2343,3	-38119,7	157682,3	-3,9	-56,7	Ok
69	103	-2466,7	-36643,6	117391,6	-3,5	-52,1	Ok
69	103	-2590,0	-35168,2	82781,6	-3,2	-48,0	Ok
69	103	-2713,3	-33693,4	54713,3	-3,0	-44,3	Ok
69	103	-2836,7	-32219,1	33244,7	-2,8	-41,1	Ok
69	103	-2960,0	-30745,4	17900,8	-2,6	-38,2	Ok
69	103	-3083,3	-29272,2	7894,9	-2,4	-35,8	Ok
69	103	-3206,7	-27799,5	2384,5	-2,2	-33,5	Ok
69	103	-3330,0	-26327,3	1242,7	-2,1	-31,7	Ok
69	103	-3453,3	-24855,5	1278,8	-2,0	-29,9	Ok
69	103	-3576,7	-23384,2	583,2	-1,9	-28,1	Ok
69	103	-3700,0	-23384,2	0,0	-1,9	-28,1	Ok

Plinto n. 115

<b>Cmb.</b>	<b>Palo</b>	<b>Quota</b> (cm)	<b>N</b> (daN)	<b>M</b> (daN cm)	<b>Ten.SLE C</b> (daN/cm <sup>2</sup> )	<b>Ten.SLE A</b> (daN/cm <sup>2</sup> )	<b>Stato</b>
69	115	0,0	-57009,0	8753559,0	-86,2	2500,2	Ok
69	115	-123,3	-54977,1	8033365,0	-79,0	2258,5	Ok
69	115	-246,7	-53712,1	6982451,0	-68,4	1883,5	Ok
69	115	-370,0	-52448,0	5782785,0	-56,2	1455,0	Ok
69	115	-493,3	-51184,8	4569037,0	-43,8	1025,6	Ok
69	115	-616,7	-49922,5	3435770,0	-32,1	635,1	Ok
69	115	-740,0	-48661,0	2440872,0	-21,8	316,3	Ok
69	115	-863,3	-47400,4	1612748,0	-13,6	-188,1	Ok
69	115	-986,7	-46140,6	958625,3	-8,6	-122,2	Ok
69	115	-1110,0	-44881,5	474815,1	-6,0	-86,5	Ok
69	115	-1233,3	-43623,2	182038,5	-4,4	-65,0	Ok
69	115	-1356,7	-42365,6	208049,1	-4,5	-65,2	Ok
69	115	-1480,0	-41108,8	316261,3	-4,9	-71,1	Ok
69	115	-1603,3	-39852,7	373192,5	-5,1	-73,5	Ok
69	115	-1726,7	-38597,2	383204,1	-5,0	-72,7	Ok
69	115	-1850,0	-37342,4	360561,4	-4,8	-69,6	Ok
69	115	-1973,3	-36088,3	318211,1	-4,5	-65,2	Ok
69	115	-2096,7	-34834,7	266363,7	-4,1	-60,1	Ok
69	115	-2220,0	-33581,7	212471,0	-3,8	-55,0	Ok
69	115	-2343,3	-32329,4	161565,5	-3,4	-50,0	Ok
69	115	-2466,7	-31077,5	116706,6	-3,1	-45,4	Ok
69	115	-2590,0	-29826,2	79434,4	-2,8	-41,3	Ok
69	115	-2713,3	-28575,4	50186,5	-2,5	-37,8	Ok
69	115	-2836,7	-27325,1	28661,3	-2,3	-34,9	Ok
69	115	-2960,0	-26075,2	14146,0	-2,2	-32,4	Ok
69	115	-3083,3	-24825,8	5954,3	-2,0	-30,3	Ok
69	115	-3206,7	-23576,8	3638,6	-1,9	-28,6	Ok
69	115	-3330,0	-22328,2	3418,2	-1,8	-27,1	Ok
69	115	-3453,3	-21080,0	2376,2	-1,7	-25,4	Ok
69	115	-3576,7	-19832,2	886,6	-1,6	-23,9	Ok
69	115	-3700,0	-19832,2	0,0	-1,6	-23,9	Ok

Plinto n. 119

<b>Cmb.</b>	<b>Palo</b>	<b>Quota</b> (cm)	<b>N</b> (daN)	<b>M</b> (daN cm)	<b>Ten.SLE C</b> (daN/cm <sup>2</sup> )	<b>Ten.SLE A</b> (daN/cm <sup>2</sup> )	<b>Stato</b>
69	119	0,0	-56579,0	7627739,0	-74,8	2085,6	Ok
69	119	-123,3	-54562,4	7258859,0	-71,1	1975,1	Ok
69	119	-246,7	-53307,0	6498687,0	-63,5	1709,0	Ok
69	119	-370,0	-52052,4	5527430,0	-53,6	1365,9	Ok
69	119	-493,3	-50798,8	4482719,0	-42,9	999,0	Ok
69	119	-616,7	-49546,0	3466147,0	-32,4	650,0	Ok

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

69	119	-740,0	-48294,0	2544433,0	-22,9	352,2	Ok
69	119	-863,3	-47042,9	1755051,0	-15,0	-205,3	Ok
69	119	-986,7	-45792,5	1113249,0	-9,6	-135,1	Ok
69	119	-1110,0	-44543,0	619676,5	-6,7	-96,0	Ok
69	119	-1233,3	-43294,2	273037,9	-4,9	-70,8	Ok
69	119	-1356,7	-42046,1	137995,4	-4,1	-60,1	Ok
69	119	-1480,0	-40798,7	224315,8	-4,4	-64,5	Ok
69	119	-1603,3	-39552,1	297837,1	-4,7	-68,0	Ok
69	119	-1726,7	-38306,1	326844,1	-4,7	-68,5	Ok
69	119	-1850,0	-37060,8	321324,1	-4,6	-66,6	Ok
69	119	-1973,3	-35816,0	293196,8	-4,4	-63,2	Ok
69	119	-2096,7	-34571,9	252487,1	-4,1	-58,9	Ok
69	119	-2220,0	-33328,4	206826,1	-3,7	-54,3	Ok
69	119	-2343,3	-32085,5	161604,0	-3,4	-49,7	Ok
69	119	-2466,7	-30843,1	120312,3	-3,1	-45,4	Ok
69	119	-2590,0	-29601,2	84931,6	-2,8	-41,4	Ok
69	119	-2713,3	-28359,9	56306,9	-2,6	-38,0	Ok
69	119	-2836,7	-27119,0	34478,1	-2,4	-35,0	Ok
69	119	-2960,0	-25878,5	18960,6	-2,2	-32,4	Ok
69	119	-3083,3	-24638,6	8985,8	-2,0	-30,3	Ok
69	119	-3206,7	-23399,0	3757,8	-1,9	-28,4	Ok
69	119	-3330,0	-22159,8	2205,2	-1,8	-26,7	Ok
69	119	-3453,3	-20921,0	1584,3	-1,7	-25,2	Ok
69	119	-3576,7	-19682,6	648,2	-1,6	-23,7	Ok
69	119	-3700,0	-19682,6	0,0	-1,6	-23,7	Ok

Plinto n. 135

<b>Cmb.</b>	<b>Palo</b>	<b>Quota</b> (cm)	<b>N</b> (daN)	<b>M</b> (daN cm)	<b>Ten.SLE C</b> (daN/cm <sup>2</sup> )	<b>Ten.SLE A</b> (daN/cm <sup>2</sup> )	<b>Stato</b>
69	135	0,0	-45913,8	8025725,0	-79,3	2379,0	Ok
69	135	-123,3	-44277,4	7520422,0	-74,3	2212,1	Ok
69	135	-246,7	-43258,6	6660333,0	-65,6	1903,9	Ok
69	135	-370,0	-42240,5	5617238,0	-55,1	1528,2	Ok
69	135	-493,3	-41223,2	4523186,0	-43,9	1135,5	Ok
69	135	-616,7	-40206,5	3475095,0	-33,2	764,2	Ok
69	135	-740,0	-39190,6	2535759,0	-23,5	442,6	Ok
69	135	-863,3	-38175,3	1739560,0	-15,3	-206,8	Ok
69	135	-986,7	-37160,6	1099841,0	-9,3	-129,0	Ok
69	135	-1110,0	-36146,6	617877,4	-6,0	-85,8	Ok
69	135	-1233,3	-35133,2	301124,7	-4,3	-62,9	Ok
69	135	-1356,7	-34120,4	207082,3	-3,8	-55,2	Ok
69	135	-1480,0	-33108,2	272118,9	-4,0	-58,5	Ok
69	135	-1603,3	-32096,5	328872,8	-4,2	-61,1	Ok
69	135	-1726,7	-31085,4	347458,7	-4,3	-61,2	Ok
69	135	-1850,0	-30074,8	334773,4	-4,1	-59,1	Ok
69	135	-1973,3	-29064,7	301547,3	-3,9	-55,6	Ok
69	135	-2096,7	-28055,1	257236,1	-3,6	-51,4	Ok
69	135	-2220,0	-27046,0	209117,2	-3,2	-46,9	Ok
69	135	-2343,3	-26037,4	162319,4	-2,9	-42,4	Ok
69	135	-2466,7	-25029,2	120124,6	-2,6	-38,3	Ok
69	135	-2590,0	-24021,4	84343,0	-2,4	-34,7	Ok
69	135	-2713,3	-23014,0	55683,8	-2,1	-31,5	Ok
69	135	-2836,7	-22007,0	34086,5	-1,9	-28,8	Ok
69	135	-2960,0	-21000,4	19003,8	-1,8	-26,6	Ok
69	135	-3083,3	-19994,2	9639,0	-1,7	-24,7	Ok
69	135	-3206,7	-18988,3	5012,6	-1,5	-23,2	Ok
69	135	-3330,0	-17982,7	3271,7	-1,5	-21,9	Ok
69	135	-3453,3	-16977,4	2061,9	-1,4	-20,6	Ok
69	135	-3576,7	-15972,4	764,5	-1,3	-19,2	Ok
69	135	-3700,0	-15972,4	0,0	-1,3	-19,2	Ok

Plinto n. 147

<b>Cmb.</b>	<b>Palo</b>	<b>Quota</b> (cm)	<b>N</b> (daN)	<b>M</b> (daN cm)	<b>Ten.SLE C</b> (daN/cm <sup>2</sup> )	<b>Ten.SLE A</b> (daN/cm <sup>2</sup> )	<b>Stato</b>
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**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

69	147	0,0	-45839,1	9419540,0	-93,4	2903,2	Ok
69	147	-123,3	-44205,3	8480249,0	-84,0	2573,1	Ok
69	147	-246,7	-43188,2	7255729,0	-71,6	2127,8	Ok
69	147	-370,0	-42171,7	5924203,0	-58,2	1643,6	Ok
69	147	-493,3	-41156,1	4615951,0	-44,9	1170,7	Ok
69	147	-616,7	-40141,1	3419914,0	-32,6	745,0	Ok
69	147	-740,0	-39126,8	2388118,0	-22,0	392,9	Ok
69	147	-863,3	-38113,1	1543728,0	-13,3	-181,6	Ok
69	147	-986,7	-37100,1	890684,2	-7,7	-108,4	Ok
69	147	-1110,0	-36087,7	429231,6	-5,1	-72,8	Ok
69	147	-1233,3	-35076,0	216492,0	-3,9	-57,0	Ok
69	147	-1356,7	-34064,8	287346,8	-4,2	-60,7	Ok
69	147	-1480,0	-33054,3	379539,3	-4,6	-65,7	Ok
69	147	-1603,3	-32044,2	420470,8	-4,7	-67,3	Ok
69	147	-1726,7	-31034,8	417026,1	-4,6	-65,9	Ok
69	147	-1850,0	-30025,8	383419,7	-4,4	-62,4	Ok
69	147	-1973,3	-29017,4	332445,4	-4,0	-57,7	Ok
69	147	-2096,7	-28009,4	274097,1	-3,6	-52,5	Ok
69	147	-2220,0	-27002,0	215555,2	-3,3	-47,2	Ok
69	147	-2343,3	-25995,0	161553,0	-2,9	-42,3	Ok
69	147	-2466,7	-24988,4	114850,0	-2,6	-37,9	Ok
69	147	-2590,0	-23982,3	76710,3	-2,3	-34,1	Ok
69	147	-2713,3	-22976,5	47340,2	-2,1	-30,9	Ok
69	147	-2836,7	-21971,2	26282,6	-1,9	-28,2	Ok
69	147	-2960,0	-20966,2	12830,8	-1,7	-26,1	Ok
69	147	-3083,3	-19961,6	6524,4	-1,6	-24,5	Ok
69	147	-3206,7	-18957,4	5365,6	-1,5	-23,2	Ok
69	147	-3330,0	-17953,4	4635,8	-1,5	-21,9	Ok
69	147	-3453,3	-16949,8	2964,1	-1,4	-20,6	Ok
69	147	-3576,7	-15946,4	1046,2	-1,3	-19,2	Ok
69	147	-3700,0	-15946,4	0,0	-1,3	-19,2	Ok

Plinto n. 151

<b>Cmb.</b>	<b>Palo</b>	<b>Quota</b> (cm)	<b>N</b> (daN)	<b>M</b> (daN cm)	<b>Ten.SLE C</b> (daN/cm <sup>2</sup> )	<b>Ten.SLE A</b> (daN/cm <sup>2</sup> )	<b>Stato</b>
69	151	0,0	-36648,4	8414285,0	-83,5	2653,2	Ok
69	151	-123,3	-35342,2	7738584,0	-76,8	2417,3	Ok
69	151	-246,7	-34529,0	6759087,0	-66,9	2060,6	Ok
69	151	-370,0	-33716,4	5636352,0	-55,6	1650,6	Ok
69	151	-493,3	-32904,4	4493836,0	-44,1	1234,5	Ok
69	151	-616,7	-32092,9	3420936,0	-33,2	846,9	Ok
69	151	-740,0	-31281,9	2474212,0	-23,5	511,8	Ok
69	151	-863,3	-30471,5	1683328,0	-15,2	247,3	Ok
69	151	-986,7	-29661,6	1058947,0	-9,0	-123,6	Ok
69	151	-1110,0	-28852,2	603412,1	-5,4	-76,7	Ok
69	151	-1233,3	-28043,3	331936,2	-3,9	-56,5	Ok
69	151	-1356,7	-27234,9	274133,2	-3,6	-51,5	Ok
69	151	-1480,0	-26426,9	323959,3	-3,8	-54,0	Ok
69	151	-1603,3	-25619,4	362852,2	-3,9	-55,7	Ok
69	151	-1726,7	-24812,4	368593,4	-3,9	-55,1	Ok
69	151	-1850,0	-24005,7	346876,8	-3,7	-52,6	Ok
69	151	-1973,3	-23199,5	307422,5	-3,4	-48,9	Ok
69	151	-2096,7	-22393,6	258995,2	-3,1	-44,7	Ok
69	151	-2220,0	-21588,1	208354,1	-2,8	-40,2	Ok
69	151	-2343,3	-20783,0	160216,6	-2,5	-36,0	Ok
69	151	-2466,7	-19978,3	117534,0	-2,2	-32,1	Ok
69	151	-2590,0	-19173,9	81856,1	-2,0	-28,7	Ok
69	151	-2713,3	-18369,8	53695,6	-1,7	-25,8	Ok
69	151	-2836,7	-17566,0	32855,4	-1,6	-23,4	Ok
69	151	-2960,0	-16762,5	18702,1	-1,4	-21,5	Ok
69	151	-3083,3	-15959,4	10329,4	-1,3	-19,9	Ok
69	151	-3206,7	-15156,4	6310,7	-1,2	-18,7	Ok
69	151	-3330,0	-14353,8	4313,0	-1,2	-17,6	Ok
69	151	-3453,3	-13551,4	2562,1	-1,1	-16,5	Ok

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

69	151	-3576,7	-12749,2	892,0	-1,0	-15,3	Ok
69	151	-3700,0	-12749,2	0,0	-1,0	-15,3	Ok

Plinto n. 167

<b>Cmb.</b>	<b>Palo</b>	<b>Quota</b> (cm)	<b>N</b> (daN)	<b>M</b> (daN cm)	<b>Ten.SLE C</b> (daN/cm <sup>2</sup> )	<b>Ten.SLE A</b> (daN/cm <sup>2</sup> )	<b>Stato</b>
69	167	0,0	-30099,8	8869643,0	-88,3	2916,5	Ok
69	167	-123,3	-29027,0	7983555,0	-79,4	2597,9	Ok
69	167	-246,7	-28359,1	6853627,0	-68,1	2181,9	Ok
69	167	-370,0	-27691,7	5630069,0	-55,8	1731,2	Ok
69	167	-493,3	-27024,7	4426915,0	-43,7	1289,0	Ok
69	167	-616,7	-26358,2	3324428,0	-32,5	886,3	Ok
69	167	-740,0	-25692,2	2371242,0	-22,8	543,1	Ok
69	167	-863,3	-25026,6	1590974,0	-14,7	272,9	Ok
69	167	-986,7	-24361,4	991114,1	-8,5	-116,6	Ok
69	167	-1110,0	-23696,7	575994,3	-5,0	-69,9	Ok
69	167	-1233,3	-23032,3	364618,8	-3,7	-52,7	Ok
69	167	-1356,7	-22368,3	341799,4	-3,5	-50,3	Ok
69	167	-1480,0	-21704,7	380985,7	-3,7	-52,2	Ok
69	167	-1603,3	-21041,5	402355,3	-3,7	-53,0	Ok
69	167	-1726,7	-20378,7	393493,7	-3,6	-51,7	Ok
69	167	-1850,0	-19716,2	360801,8	-3,4	-48,5	Ok
69	167	-1973,3	-19054,0	313544,3	-3,1	-44,4	Ok
69	167	-2096,7	-18392,1	259905,2	-2,8	-39,9	Ok
69	167	-2220,0	-17730,6	206090,3	-2,5	-35,4	Ok
69	167	-2343,3	-17069,3	156324,8	-2,2	-31,2	Ok
69	167	-2466,7	-16408,4	113142,8	-1,9	-27,5	Ok
69	167	-2590,0	-15747,7	77757,3	-1,7	-24,3	Ok
69	167	-2713,3	-15087,3	50426,5	-1,5	-21,6	Ok
69	167	-2836,7	-14427,2	30778,7	-1,3	-19,5	Ok
69	167	-2960,0	-13767,3	18049,9	-1,2	-17,8	Ok
69	167	-3083,3	-13107,6	11043,2	-1,1	-16,5	Ok
69	167	-3206,7	-12448,2	7642,4	-1,0	-15,5	Ok
69	167	-3330,0	-11788,9	5368,9	-1,0	-14,6	Ok
69	167	-3453,3	-11129,9	3094,3	-0,9	-13,6	Ok
69	167	-3576,7	-10471,0	1034,5	-0,8	-12,6	Ok
69	167	-3700,0	-10471,0	0,0	-0,8	-12,6	Ok

Plinto n. 179

<b>Cmb.</b>	<b>Palo</b>	<b>Quota</b> (cm)	<b>N</b> (daN)	<b>M</b> (daN cm)	<b>Ten.SLE C</b> (daN/cm <sup>2</sup> )	<b>Ten.SLE A</b> (daN/cm <sup>2</sup> )	<b>Stato</b>
69	179	0,0	-38272,0	9647675,0	-95,9	3094,5	Ok
69	179	-123,3	-36907,9	8530535,0	-84,7	2693,3	Ok
69	179	-246,7	-36058,7	7191013,0	-71,2	2201,6	Ok
69	179	-370,0	-35210,1	5793190,0	-57,2	1688,9	Ok
69	179	-493,3	-34362,0	4455681,0	-43,6	1200,8	Ok
69	179	-616,7	-33514,6	3257093,0	-31,4	768,5	Ok
69	179	-740,0	-32667,7	2241149,0	-20,9	413,1	Ok
69	179	-863,3	-31821,4	1425404,0	-12,5	-169,2	Ok
69	179	-986,7	-30975,6	812703,9	-6,9	-97,0	Ok
69	179	-1110,0	-30130,4	414260,3	-4,5	-64,6	Ok
69	179	-1233,3	-29285,7	291369,8	-3,8	-55,2	Ok
69	179	-1356,7	-28441,4	361294,0	-4,1	-58,9	Ok
69	179	-1480,0	-27597,7	427907,1	-4,4	-62,5	Ok
69	179	-1603,3	-26754,4	449119,6	-4,4	-62,9	Ok
69	179	-1726,7	-25911,6	431617,0	-4,3	-60,7	Ok
69	179	-1850,0	-25069,2	388366,1	-4,0	-56,7	Ok
69	179	-1973,3	-24227,2	331156,0	-3,6	-51,8	Ok
69	179	-2096,7	-23385,7	269160,5	-3,2	-46,6	Ok
69	179	-2220,0	-22544,5	208879,5	-2,9	-41,4	Ok
69	179	-2343,3	-21703,7	154488,2	-2,5	-36,7	Ok
69	179	-2466,7	-20863,3	108304,4	-2,2	-32,5	Ok
69	179	-2590,0	-20023,3	71263,8	-2,0	-29,0	Ok
69	179	-2713,3	-19183,6	43362,0	-1,8	-26,1	Ok

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

69	179	-2836,7	-18344,2	24076,1	-1,6	-23,7	Ok
69	179	-2960,0	-17505,1	12794,9	-1,5	-21,9	Ok
69	179	-3083,3	-16666,4	8461,8	-1,4	-20,6	Ok
69	179	-3206,7	-15827,9	7273,1	-1,3	-19,6	Ok
69	179	-3330,0	-14989,7	5747,9	-1,2	-18,4	Ok
69	179	-3453,3	-14151,7	3447,3	-1,2	-17,3	Ok
69	179	-3576,7	-13314,0	1163,1	-1,1	-16,0	Ok
69	179	-3700,0	-13314,0	0,0	-1,1	-16,0	Ok

Plinto n. 183

<b>Cmb.</b>	<b>Palo</b>	<b>Quota</b> (cm)	<b>N</b> (daN)	<b>M</b> (daN cm)	<b>Ten.SLE C</b> (daN/cmq)	<b>Ten.SLE A</b> (daN/cmq)	<b>Stato</b>
69	183	0,0	-27162,5	9454620,0	-94,2	3178,4	Ok
69	183	-123,3	-26194,4	8327579,0	-82,9	2767,4	Ok
69	183	-246,7	-25591,7	7013663,0	-69,8	2281,0	Ok
69	183	-370,0	-24989,4	5658533,0	-56,2	1779,4	Ok
69	183	-493,3	-24387,5	4369553,0	-43,2	1303,6	Ok
69	183	-616,7	-23786,1	3218755,0	-31,6	881,3	Ok
69	183	-740,0	-23185,0	2246803,0	-21,7	529,3	Ok
69	183	-863,3	-22584,4	1471024,0	-13,6	258,4	Ok
69	183	-986,7	-21984,1	896353,4	-7,7	-105,5	Ok
69	183	-1110,0	-21384,2	531876,0	-4,6	-64,2	Ok
69	183	-1233,3	-20784,7	393503,7	-3,7	-52,1	Ok
69	183	-1356,7	-20185,5	406910,5	-3,7	-52,5	Ok
69	183	-1480,0	-19586,7	441279,3	-3,9	-54,7	Ok
69	183	-1603,3	-18988,2	447888,4	-3,9	-54,8	Ok
69	183	-1726,7	-18390,0	424412,9	-3,7	-52,2	Ok
69	183	-1850,0	-17792,2	379565,7	-3,4	-47,9	Ok
69	183	-1973,3	-17194,6	323000,8	-3,0	-42,9	Ok
69	183	-2096,7	-16597,3	262715,9	-2,7	-37,9	Ok
69	183	-2220,0	-16000,4	204534,3	-2,3	-33,2	Ok
69	183	-2343,3	-15403,6	152247,3	-2,0	-29,0	Ok
69	183	-2466,7	-14807,2	107973,5	-1,7	-25,2	Ok
69	183	-2590,0	-14211,0	72568,8	-1,5	-22,1	Ok
69	183	-2713,3	-13615,0	46019,3	-1,3	-19,5	Ok
69	183	-2836,7	-13019,3	27778,5	-1,2	-17,6	Ok
69	183	-2960,0	-12423,8	16913,2	-1,1	-16,1	Ok
69	183	-3083,3	-11828,5	11625,6	-1,0	-15,0	Ok
69	183	-3206,7	-11233,4	8893,4	-0,9	-14,1	Ok
69	183	-3330,0	-10638,5	6392,5	-0,9	-13,2	Ok
69	183	-3453,3	-10043,8	3637,0	-0,8	-12,3	Ok
69	183	-3576,7	-9449,2	1188,0	-0,8	-11,5	Ok
69	183	-3700,0	-9449,2	0,0	-0,8	-11,4	Ok

Plinto n. 199

<b>Cmb.</b>	<b>Palo</b>	<b>Quota</b> (cm)	<b>N</b> (daN)	<b>M</b> (daN cm)	<b>Ten.SLE C</b> (daN/cmq)	<b>Ten.SLE A</b> (daN/cmq)	<b>Stato</b>
69	199	0,0	-29673,4	10120560,0	-100,9	3393,8	Ok
69	199	-123,3	-28615,8	8762706,0	-87,3	2897,1	Ok
69	199	-246,7	-27957,4	7255941,0	-72,1	2338,9	Ok
69	199	-370,0	-27299,4	5750406,0	-57,0	1781,8	Ok
69	199	-493,3	-26641,9	4352683,0	-42,9	1266,4	Ok
69	199	-616,7	-25984,9	3130265,0	-30,6	819,1	Ok
69	199	-740,0	-25328,3	2117902,0	-20,2	455,6	Ok
69	199	-863,3	-24672,1	1327774,0	-12,0	188,9	Ok
69	199	-986,7	-24016,3	764477,1	-6,4	-89,3	Ok
69	199	-1110,0	-23361,0	451494,6	-4,2	-59,2	Ok
69	199	-1233,3	-22706,1	400022,8	-3,9	-54,7	Ok
69	199	-1356,7	-22051,5	456616,8	-4,1	-58,3	Ok
69	199	-1480,0	-21397,3	495167,2	-4,3	-60,9	Ok
69	199	-1603,3	-20743,5	493189,3	-4,3	-60,2	Ok
69	199	-1726,7	-20090,0	458158,4	-4,0	-56,6	Ok
69	199	-1850,0	-19436,9	402196,3	-3,6	-51,4	Ok
69	199	-1973,3	-18784,1	336204,3	-3,2	-45,7	Ok

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

69	199	-2096,7	-18131,6	268551,3	-2,8	-40,2	Ok
69	199	-2220,0	-17479,4	205026,8	-2,4	-35,1	Ok
69	199	-2343,3	-16827,6	149199,5	-2,1	-30,5	Ok
69	199	-2466,7	-16176,0	102894,4	-1,8	-26,5	Ok
69	199	-2590,0	-15524,7	66680,7	-1,6	-23,2	Ok
69	199	-2713,3	-14873,6	40337,8	-1,4	-20,7	Ok
69	199	-2836,7	-14222,8	23286,0	-1,3	-18,7	Ok
69	199	-2960,0	-13572,3	14614,1	-1,2	-17,3	Ok
69	199	-3083,3	-12921,9	11523,9	-1,1	-16,3	Ok
69	199	-3206,7	-12271,8	9710,1	-1,0	-15,4	Ok
69	199	-3330,0	-11621,9	7189,6	-1,0	-14,5	Ok
69	199	-3453,3	-10972,2	4099,1	-0,9	-13,5	Ok
69	199	-3576,7	-10322,7	1328,6	-0,8	-12,5	Ok
69	199	-3700,0	-10322,7	0,0	-0,8	-12,4	Ok

Plinto n. 211

<b>Cmb.</b>	<b>Palo</b>	<b>Quota</b> (cm)	<b>N</b> (daN)	<b>M</b> (daN cm)	<b>Ten.SLE C</b> (daN/cm <sup>2</sup> )	<b>Ten.SLE A</b> (daN/cm <sup>2</sup> )	<b>Stato</b>
69	211	0,0	-45417,4	10677820,0	-106,0	3382,1	Ok
69	211	-123,3	-43798,7	9258244,0	-91,8	2870,9	Ok
69	211	-246,7	-42790,9	7656011,0	-75,7	2283,3	Ok
69	211	-370,0	-41783,8	6043727,0	-59,4	1693,4	Ok
69	211	-493,3	-40777,5	4541693,0	-44,2	1148,2	Ok
69	211	-616,7	-39771,8	3224776,0	-30,6	679,1	Ok
69	211	-740,0	-38766,8	2130035,0	-19,3	310,9	Ok
69	211	-863,3	-37762,5	1267287,0	-10,7	-147,8	Ok
69	211	-986,7	-36758,8	633579,7	-6,2	-87,6	Ok
69	211	-1110,0	-35755,8	264230,6	-4,2	-61,1	Ok
69	211	-1233,3	-34753,3	298359,6	-4,3	-62,2	Ok
69	211	-1356,7	-33751,5	432876,0	-4,9	-70,2	Ok
69	211	-1480,0	-32750,2	503882,2	-5,2	-73,9	Ok
69	211	-1603,3	-31749,5	514390,0	-5,2	-73,4	Ok
69	211	-1726,7	-30749,3	482436,8	-4,9	-70,0	Ok
69	211	-1850,0	-29749,6	424854,1	-4,5	-64,9	Ok
69	211	-1973,3	-28750,5	355012,5	-4,1	-58,9	Ok
69	211	-2096,7	-27751,8	282689,6	-3,7	-52,7	Ok
69	211	-2220,0	-26753,6	214486,3	-3,2	-46,9	Ok
69	211	-2343,3	-25755,9	154408,1	-2,8	-41,6	Ok
69	211	-2466,7	-24758,6	104466,8	-2,5	-36,9	Ok
69	211	-2590,0	-23761,7	65243,1	-2,2	-33,1	Ok
69	211	-2713,3	-22765,2	36404,3	-2,0	-29,9	Ok
69	211	-2836,7	-21769,1	17306,9	-1,8	-27,4	Ok
69	211	-2960,0	-20773,4	8297,3	-1,7	-25,6	Ok
69	211	-3083,3	-19778,0	8136,8	-1,6	-24,4	Ok
69	211	-3206,7	-18783,0	8491,0	-1,6	-23,2	Ok
69	211	-3330,0	-17788,3	6890,0	-1,5	-21,9	Ok
69	211	-3453,3	-16793,8	4099,3	-1,4	-20,5	Ok
69	211	-3576,7	-15799,7	1361,7	-1,3	-19,0	Ok
69	211	-3700,0	-15799,7	0,0	-1,3	-19,0	Ok

Plinto n. 231

<b>Cmb.</b>	<b>Palo</b>	<b>Quota</b> (cm)	<b>N</b> (daN)	<b>M</b> (daN cm)	<b>Ten.SLE C</b> (daN/cm <sup>2</sup> )	<b>Ten.SLE A</b> (daN/cm <sup>2</sup> )	<b>Stato</b>
69	231	0,0	-44873,0	11035610,0	-109,7	3524,4	Ok
69	231	-123,3	-43273,7	9390000,0	-93,2	2927,7	Ok
69	231	-246,7	-42277,9	7626720,0	-75,4	2279,3	Ok
69	231	-370,0	-41283,0	5908913,0	-58,1	1649,8	Ok
69	231	-493,3	-40288,7	4347023,0	-42,2	1082,6	Ok
69	231	-616,7	-39295,1	3005387,0	-28,4	606,2	Ok
69	231	-740,0	-38302,1	1911411,0	-17,0	245,9	Ok
69	231	-863,3	-37309,9	1067535,0	-9,0	-125,7	Ok
69	231	-986,7	-36318,2	471934,4	-5,3	-76,0	Ok
69	231	-1110,0	-35327,2	232517,3	-4,0	-58,4	Ok
69	231	-1233,3	-34336,7	379608,8	-4,7	-67,3	Ok



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

69	231	-1356,7	-33346,9	507518,1	-5,2	-74,8	Ok
69	231	-1480,0	-32357,6	558963,1	-5,4	-77,2	Ok
69	231	-1603,3	-31368,9	550831,8	-5,3	-75,5	Ok
69	231	-1726,7	-30380,7	503503,3	-5,0	-71,0	Ok
69	231	-1850,0	-29393,0	434165,2	-4,6	-65,1	Ok
69	231	-1973,3	-28405,8	355931,8	-4,1	-58,5	Ok
69	231	-2096,7	-27419,1	278090,7	-3,6	-52,0	Ok
69	231	-2220,0	-26432,9	206680,7	-3,2	-46,0	Ok
69	231	-2343,3	-25447,1	145157,2	-2,8	-40,6	Ok
69	231	-2466,7	-24461,8	95042,0	-2,4	-35,9	Ok
69	231	-2590,0	-23476,8	56519,5	-2,2	-32,1	Ok
69	231	-2713,3	-22492,3	29020,4	-2,0	-29,1	Ok
69	231	-2836,7	-21508,1	12249,9	-1,8	-26,7	Ok
69	231	-2960,0	-20524,4	8339,2	-1,7	-25,3	Ok
69	231	-3083,3	-19540,9	10407,6	-1,6	-24,2	Ok
69	231	-3206,7	-18557,8	10349,5	-1,5	-23,0	Ok
69	231	-3330,0	-17575,0	8025,0	-1,5	-21,7	Ok
69	231	-3453,3	-16592,5	4626,2	-1,4	-20,3	Ok
69	231	-3576,7	-15610,3	1497,9	-1,3	-18,8	Ok
69	231	-3700,0	-15610,3	0,0	-1,3	-18,8	Ok

Plinto n. 243

<b>Cmb.</b>	<b>Palo</b>	<b>Quota</b> (cm)	<b>N</b> (daN)	<b>M</b> (daN cm)	<b>Ten.SLE C</b> (daN/cm <sup>2</sup> )	<b>Ten.SLE A</b> (daN/cm <sup>2</sup> )	<b>Stato</b>
69	243	0,0	-56306,4	10797420,0	-106,9	3275,8	Ok
69	243	-123,3	-54299,6	9304397,0	-91,9	2743,4	Ok
69	243	-246,7	-53050,2	7642761,0	-75,1	2138,6	Ok
69	243	-370,0	-51801,6	5986419,0	-58,3	1538,8	Ok
69	243	-493,3	-50554,0	4454740,0	-42,6	991,9	Ok
69	243	-616,7	-49307,3	3119978,0	-28,8	532,7	Ok
69	243	-740,0	-48061,3	2015557,0	-17,5	-237,8	Ok
69	243	-863,3	-46816,2	1146225,0	-9,9	-138,8	Ok
69	243	-986,7	-45571,9	498452,4	-6,2	-88,9	Ok
69	243	-1110,0	-44328,4	82646,2	-4,0	-59,0	Ok
69	243	-1233,3	-43085,6	274310,6	-4,8	-70,6	Ok
69	243	-1356,7	-41843,5	441551,2	-5,6	-80,6	Ok
69	243	-1480,0	-40602,2	516545,4	-5,9	-84,2	Ok
69	243	-1603,3	-39361,5	524829,2	-5,8	-83,3	Ok
69	243	-1726,7	-38121,5	489224,7	-5,5	-79,3	Ok
69	243	-1850,0	-36882,2	428075,6	-5,1	-73,7	Ok
69	243	-1973,3	-35643,5	355279,8	-4,7	-67,2	Ok
69	243	-2096,7	-34405,4	280752,5	-4,2	-60,6	Ok
69	243	-2220,0	-33167,9	211057,8	-3,7	-54,4	Ok
69	243	-2343,3	-31930,9	150084,1	-3,3	-48,7	Ok
69	243	-2466,7	-30694,5	99691,0	-3,0	-43,8	Ok
69	243	-2590,0	-29458,6	60284,8	-2,7	-39,6	Ok
69	243	-2713,3	-28223,2	31307,8	-2,4	-36,1	Ok
69	243	-2836,7	-26988,3	11686,9	-2,2	-33,3	Ok
69	243	-2960,0	-25753,9	2681,8	-2,1	-31,0	Ok
69	243	-3083,3	-24519,8	7123,1	-2,0	-30,0	Ok
69	243	-3206,7	-23286,3	8487,4	-1,9	-28,6	Ok
69	243	-3330,0	-22053,1	7039,9	-1,8	-27,0	Ok
69	243	-3453,3	-20820,2	4203,9	-1,7	-25,4	Ok
69	243	-3576,7	-19587,8	1394,9	-1,6	-23,6	Ok
69	243	-3700,0	-19587,8	0,0	-1,6	-23,6	Ok

Plinto n. 247

<b>Cmb.</b>	<b>Palo</b>	<b>Quota</b> (cm)	<b>N</b> (daN)	<b>M</b> (daN cm)	<b>Ten.SLE C</b> (daN/cm <sup>2</sup> )	<b>Ten.SLE A</b> (daN/cm <sup>2</sup> )	<b>Stato</b>
69	247	0,0	-55427,4	10992110,0	-108,9	3361,1	Ok
69	247	-123,3	-53451,9	9342610,0	-92,3	2769,3	Ok
69	247	-246,7	-52222,0	7574745,0	-74,5	2124,4	Ok
69	247	-370,0	-50993,0	5853251,0	-57,0	1500,1	Ok
69	247	-493,3	-49764,8	4288950,0	-41,0	941,5	Ok



**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

69	247	-616,7	-48537,5	2945654,0	-27,1	481,6	Ok
69	247	-740,0	-47311,1	1849315,0	-15,8	-216,9	Ok
69	247	-863,3	-46085,4	998721,5	-8,9	-125,4	Ok
69	247	-986,7	-44860,5	377695,9	-5,5	-79,8	Ok
69	247	-1110,0	-43636,4	111792,8	-4,1	-60,2	Ok
69	247	-1233,3	-42413,0	352423,0	-5,2	-75,2	Ok
69	247	-1356,7	-41190,3	498602,5	-5,8	-83,7	Ok
69	247	-1480,0	-39968,3	555238,3	-6,0	-86,1	Ok
69	247	-1603,3	-38747,1	548672,3	-5,9	-84,2	Ok
69	247	-1726,7	-37526,4	501657,3	-5,6	-79,5	Ok
69	247	-1850,0	-36306,4	432206,0	-5,1	-73,3	Ok
69	247	-1973,3	-35087,1	353759,8	-4,6	-66,4	Ok
69	247	-2096,7	-33868,3	275733,6	-4,1	-59,6	Ok
69	247	-2220,0	-32650,1	204201,9	-3,7	-53,3	Ok
69	247	-2343,3	-31432,5	142609,3	-3,2	-47,6	Ok
69	247	-2466,7	-30215,3	92436,4	-2,9	-42,7	Ok
69	247	-2590,0	-28998,7	53785,2	-2,6	-38,6	Ok
69	247	-2713,3	-27782,6	25881,9	-2,4	-35,2	Ok
69	247	-2836,7	-26567,0	7709,9	-2,2	-32,5	Ok
69	247	-2960,0	-25351,8	5111,2	-2,1	-30,9	Ok
69	247	-3083,3	-24137,1	9472,3	-2,0	-29,7	Ok
69	247	-3206,7	-22922,7	10012,8	-1,9	-28,3	Ok
69	247	-3330,0	-21708,8	7898,5	-1,8	-26,7	Ok
69	247	-3453,3	-20495,2	4584,1	-1,7	-25,0	Ok
69	247	-3576,7	-19282,0	1489,3	-1,5	-23,2	Ok
69	247	-3700,0	-19282,0	0,0	-1,5	-23,2	Ok

Plinto n. 263

<b>Cmb.</b>	<b>Palo</b>	<b>Quota</b> (cm)	<b>N</b> (daN)	<b>M</b> (daN cm)	<b>Ten.SLE C</b> (daN/cmq)	<b>Ten.SLE A</b> (daN/cmq)	<b>Stato</b>
69	263	0,0	-66175,8	10511190,0	-103,6	3033,2	Ok
69	263	-123,3	-63817,1	8985141,0	-88,2	2494,7	Ok
69	263	-246,7	-62348,7	7324346,0	-71,4	1896,3	Ok
69	263	-370,0	-60881,4	5691487,0	-54,7	1313,5	Ok
69	263	-493,3	-59415,1	4196913,0	-39,3	793,6	Ok
69	263	-616,7	-57949,8	2905546,0	-25,9	376,3	Ok
69	263	-740,0	-56485,5	1845333,0	-15,6	-215,3	Ok
69	263	-863,3	-55022,1	1017213,0	-9,6	-136,1	Ok
69	263	-986,7	-53559,7	404991,1	-6,3	-92,2	Ok
69	263	-1110,0	-52098,2	59535,9	-4,5	-66,8	Ok
69	263	-1233,3	-50637,6	304951,6	-5,6	-81,8	Ok
69	263	-1356,7	-49177,8	456383,2	-6,3	-90,4	Ok
69	263	-1480,0	-47718,9	518977,5	-6,5	-92,9	Ok
69	263	-1603,3	-46260,8	518876,6	-6,3	-91,2	Ok
69	263	-1726,7	-44803,5	478266,8	-6,0	-86,6	Ok
69	263	-1850,0	-43346,9	414720,2	-5,6	-80,5	Ok
69	263	-1973,3	-41891,1	341408,2	-5,1	-73,8	Ok
69	263	-2096,7	-40435,9	267621,5	-4,6	-67,0	Ok
69	263	-2220,0	-38981,5	199418,8	-4,1	-60,6	Ok
69	263	-2343,3	-37527,7	140301,1	-3,7	-54,8	Ok
69	263	-2466,7	-36074,6	91847,2	-3,4	-49,7	Ok
69	263	-2590,0	-34622,1	54272,7	-3,1	-45,4	Ok
69	263	-2713,3	-33170,2	26899,0	-2,8	-41,8	Ok
69	263	-2836,7	-31718,8	8582,6	-2,6	-38,8	Ok
69	263	-2960,0	-30268,0	3258,5	-2,4	-36,4	Ok
69	263	-3083,3	-28817,7	8070,7	-2,4	-35,2	Ok
69	263	-3206,7	-27367,8	8994,1	-2,2	-33,6	Ok
69	263	-3330,0	-25918,5	7249,6	-2,1	-31,7	Ok
69	263	-3453,3	-24469,6	4258,8	-2,0	-29,7	Ok
69	263	-3576,7	-23021,1	1396,0	-1,8	-27,7	Ok
69	263	-3700,0	-23021,1	0,0	-1,8	-27,7	Ok

Plinto n. 275

<b>Cmb.</b>	<b>Palo</b>	<b>Quota</b>	<b>N</b>	<b>M</b>	<b>Ten.SLE C</b>	<b>Ten.SLE A</b>	<b>Stato</b>
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**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

		(cm)	(daN)	(daN cm)	(daN/cmq)	(daN/cmq)	
69	275	0,0	-67820,8	9507325,0	-93,4	2635,8	Ok
69	275	-123,3	-65403,5	8351833,0	-81,7	2237,5	Ok
69	275	-246,7	-63898,6	6982871,0	-67,8	1749,6	Ok
69	275	-370,0	-62394,8	5568397,0	-53,4	1249,7	Ok
69	275	-493,3	-60892,0	4226520,0	-39,5	787,2	Ok
69	275	-616,7	-59390,3	3032797,0	-27,1	402,8	Ok
69	275	-740,0	-57889,6	2026644,0	-17,2	-236,5	Ok
69	275	-863,3	-56389,9	1219985,0	-10,9	-153,3	Ok
69	275	-986,7	-54891,1	606087,6	-7,5	-107,5	Ok
69	275	-1110,0	-53393,3	172888,7	-5,2	-76,1	Ok
69	275	-1233,3	-51896,3	157656,8	-5,0	-73,3	Ok
69	275	-1356,7	-50400,3	329674,6	-5,7	-83,2	Ok
69	275	-1480,0	-48905,1	419107,1	-6,0	-87,5	Ok
69	275	-1603,3	-47410,7	444559,7	-6,1	-87,5	Ok
69	275	-1726,7	-45917,2	426348,1	-5,8	-84,4	Ok
69	275	-1850,0	-44424,4	381332,8	-5,5	-79,6	Ok
69	275	-1973,3	-42932,4	322577,8	-5,1	-73,7	Ok
69	275	-2096,7	-41441,1	259628,6	-4,6	-67,6	Ok
69	275	-2220,0	-39950,5	199002,5	-4,2	-61,7	Ok
69	275	-2343,3	-38460,6	144751,3	-3,8	-56,2	Ok
69	275	-2466,7	-36971,4	99019,4	-3,5	-51,3	Ok
69	275	-2590,0	-35482,7	62553,5	-3,2	-47,0	Ok
69	275	-2713,3	-33994,7	35140,2	-2,9	-43,3	Ok
69	275	-2836,7	-32507,3	15978,4	-2,7	-40,2	Ok
69	275	-2960,0	-31020,4	4230,4	-2,5	-37,6	Ok
69	275	-3083,3	-29534,0	3791,8	-2,4	-35,8	Ok
69	275	-3206,7	-28048,2	5839,3	-2,3	-34,2	Ok
69	275	-3330,0	-26562,8	5316,4	-2,2	-32,3	Ok
69	275	-3453,3	-25077,8	3332,5	-2,0	-30,4	Ok
69	275	-3576,7	-23593,3	1144,0	-1,9	-28,4	Ok
69	275	-3700,0	-23593,3	0,0	-1,9	-28,4	Ok

Plinto n. 279

<b>Cmb.</b>	<b>Palo</b>	<b>Quota</b>	<b>N</b>	<b>M</b>	<b>Ten.SLE C</b>	<b>Ten.SLE A</b>	<b>Stato</b>
		(cm)	(daN)	(daN cm)	(daN/cmq)	(daN/cmq)	
69	279	0,0	-75481,8	9641816,0	-94,3	2583,4	Ok
69	279	-123,3	-72791,5	8345582,0	-81,3	2137,7	Ok
69	279	-246,7	-71116,6	6887029,0	-66,4	1621,7	Ok
69	279	-370,0	-69442,9	5422772,0	-51,4	1111,2	Ok
69	279	-493,3	-67770,4	4061340,0	-37,2	655,1	Ok
69	279	-616,7	-66099,0	2869652,0	-25,0	-339,6	Ok
69	279	-740,0	-64428,8	1880111,0	-15,9	-220,9	Ok
69	279	-863,3	-62759,6	1099980,0	-10,6	-150,9	Ok
69	279	-986,7	-61091,6	523223,4	-7,6	-109,3	Ok
69	279	-1110,0	-59424,5	179137,8	-5,7	-83,8	Ok
69	279	-1233,3	-57758,5	251879,0	-5,9	-86,8	Ok
69	279	-1356,7	-56093,5	388429,0	-6,5	-94,1	Ok
69	279	-1480,0	-54429,4	455605,9	-6,7	-96,7	Ok
69	279	-1603,3	-52766,2	465328,8	-6,6	-95,3	Ok
69	279	-1726,7	-51104,0	435933,7	-6,3	-91,3	Ok
69	279	-1850,0	-49442,6	383259,3	-5,9	-85,7	Ok
69	279	-1973,3	-47782,0	319605,2	-5,5	-79,4	Ok
69	279	-2096,7	-46122,3	253869,9	-5,0	-72,9	Ok
69	279	-2220,0	-44463,3	192016,3	-4,5	-66,7	Ok
69	279	-2343,3	-42805,1	137633,6	-4,1	-60,9	Ok
69	279	-2466,7	-41147,6	92497,1	-3,8	-55,9	Ok
69	279	-2590,0	-39490,9	57081,2	-3,5	-51,4	Ok
69	279	-2713,3	-37834,7	31018,5	-3,2	-47,7	Ok
69	279	-2836,7	-36179,3	13621,0	-3,0	-44,5	Ok
69	279	-2960,0	-34524,4	5559,2	-2,8	-41,9	Ok
69	279	-3083,3	-32870,2	6709,4	-2,7	-40,0	Ok
69	279	-3206,7	-31216,5	7509,8	-2,5	-38,1	Ok
69	279	-3330,0	-29563,3	6191,9	-2,4	-36,0	Ok

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

69	279	-3453,3	-27910,6	3701,7	-2,3	-33,9	Ok
69	279	-3576,7	-26258,4	1231,7	-2,1	-31,6	Ok
69	279	-3700,0	-26258,4	0,0	-2,1	-31,6	Ok

Plinto n. 295

<b>Cmb.</b>	<b>Palo</b>	<b>Quota</b> (cm)	<b>N</b> (daN)	<b>M</b> (daN cm)	<b>Ten.SLE C</b> (daN/cm <sup>2</sup> )	<b>Ten.SLE A</b> (daN/cm <sup>2</sup> )	<b>Stato</b>
69	295	0,0	-81992,8	8605082,0	-83,4	2114,1	Ok
69	295	-123,3	-79070,4	7608895,0	-73,3	1785,4	Ok
69	295	-246,7	-77251,0	6407420,0	-61,0	1370,9	Ok
69	295	-370,0	-75433,0	5151721,0	-48,1	945,7	Ok
69	295	-493,3	-73616,2	3949968,0	-35,6	559,7	Ok
69	295	-616,7	-71800,7	2873218,0	-24,7	-337,6	Ok
69	295	-740,0	-69986,4	1960444,0	-16,6	-231,4	Ok
69	295	-863,3	-68173,3	1226393,0	-11,7	-166,2	Ok
69	295	-986,7	-66361,3	671357,6	-8,7	-125,8	Ok
69	295	-1110,0	-64550,5	302507,6	-6,7	-98,4	Ok
69	295	-1233,3	-62740,7	207783,8	-6,1	-89,7	Ok
69	295	-1356,7	-60932,1	303730,1	-6,4	-94,1	Ok
69	295	-1480,0	-59124,4	375572,4	-6,6	-96,9	Ok
69	295	-1603,3	-57317,8	398896,2	-6,6	-96,3	Ok
69	295	-1726,7	-55512,2	384758,4	-6,4	-93,1	Ok
69	295	-1850,0	-53707,5	346455,5	-6,1	-88,3	Ok
69	295	-1973,3	-51903,7	295211,6	-5,7	-82,7	Ok
69	295	-2096,7	-50100,8	239533,7	-5,2	-76,7	Ok
69	295	-2220,0	-48298,7	185371,6	-4,8	-70,8	Ok
69	295	-2343,3	-46497,4	136513,9	-4,4	-65,3	Ok
69	295	-2466,7	-44697,0	95044,5	-4,1	-60,3	Ok
69	295	-2590,0	-42897,3	61785,1	-3,8	-55,9	Ok
69	295	-2713,3	-41098,3	36698,3	-3,5	-52,0	Ok
69	295	-2836,7	-39300,1	19274,7	-3,3	-48,6	Ok
69	295	-2960,0	-37502,5	9065,9	-3,1	-45,8	Ok
69	295	-3083,3	-35705,5	5874,0	-2,9	-43,4	Ok
69	295	-3206,7	-33909,2	5773,2	-2,8	-41,2	Ok
69	295	-3330,0	-32113,4	4866,9	-2,6	-39,0	Ok
69	295	-3453,3	-30318,2	2996,8	-2,4	-36,5	Ok
69	295	-3576,7	-28523,5	1024,6	-2,3	-34,3	Ok
69	295	-3700,0	-28523,5	0,0	-2,3	-34,3	Ok

Plinto n. 307

<b>Cmb.</b>	<b>Palo</b>	<b>Quota</b> (cm)	<b>N</b> (daN)	<b>M</b> (daN cm)	<b>Ten.SLE C</b> (daN/cm <sup>2</sup> )	<b>Ten.SLE A</b> (daN/cm <sup>2</sup> )	<b>Stato</b>
69	307	0,0	-75043,4	7804433,0	-75,6	1908,6	Ok
69	307	-123,3	-72368,8	7122034,0	-68,7	1692,0	Ok
69	307	-246,7	-70703,6	6156214,0	-58,9	1360,3	Ok
69	307	-370,0	-69039,6	5069230,0	-47,7	990,1	Ok
69	307	-493,3	-67376,8	3979601,0	-36,4	631,8	Ok
69	307	-616,7	-65715,2	2969252,0	-26,0	-352,7	Ok
69	307	-740,0	-64054,6	2087252,0	-17,6	-243,6	Ok
69	307	-863,3	-62395,2	1356451,0	-12,1	-170,2	Ok
69	307	-986,7	-60736,8	780658,9	-8,8	-126,5	Ok
69	307	-1110,0	-59079,5	352185,3	-6,5	-95,2	Ok
69	307	-1233,3	-57423,1	82304,1	-5,0	-74,8	Ok
69	307	-1356,7	-55767,7	175889,6	-5,4	-79,2	Ok
69	307	-1480,0	-54113,3	285090,3	-5,8	-84,6	Ok
69	307	-1603,3	-52459,8	335737,3	-5,9	-86,1	Ok
69	307	-1726,7	-50807,2	342605,9	-5,8	-84,6	Ok
69	307	-1850,0	-49155,4	320391,9	-5,6	-81,1	Ok
69	307	-1973,3	-47504,5	281113,3	-5,2	-76,4	Ok
69	307	-2096,7	-45854,4	233937,3	-4,9	-71,2	Ok
69	307	-2220,0	-44205,1	185435,1	-4,5	-65,9	Ok
69	307	-2343,3	-42556,5	139978,6	-4,1	-60,8	Ok
69	307	-2466,7	-40908,7	100176,2	-3,8	-56,1	Ok
69	307	-2590,0	-39261,5	67293,1	-3,5	-51,9	Ok

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

69	307	-2713,3	-37615,0	41627,1	-3,2	-48,1	Ok
69	307	-2836,7	-35969,2	22825,9	-3,0	-44,9	Ok
69	307	-2960,0	-34323,9	10160,7	-2,8	-42,0	Ok
69	307	-3083,3	-32679,3	2974,3	-2,6	-39,3	Ok
69	307	-3206,7	-31035,2	2373,7	-2,5	-37,4	Ok
69	307	-3330,0	-29391,6	2941,8	-2,4	-35,4	Ok
69	307	-3453,3	-27748,5	2129,9	-2,2	-33,4	Ok
69	307	-3576,7	-26105,9	799,8	-2,1	-31,4	Ok
69	307	-3700,0	-26105,9	0,0	-2,1	-31,4	Ok

Plinto n. 311

<b>Cmb.</b>	<b>Palo</b>	<b>Quota</b> (cm)	<b>N</b> (daN)	<b>M</b> (daN cm)	<b>Ten.SLE C</b> (daN/cm <sup>2</sup> )	<b>Ten.SLE A</b> (daN/cm <sup>2</sup> )	<b>Stato</b>
69	311	0,0	-84843,9	7717658,0	-74,1	1752,5	Ok
69	311	-123,3	-81819,9	7025630,0	-67,1	1538,5	Ok
69	311	-246,7	-79937,3	6069303,0	-57,3	1217,4	Ok
69	311	-370,0	-78056,0	5000949,0	-46,3	864,4	Ok
69	311	-493,3	-76176,1	3933256,0	-35,2	530,2	Ok
69	311	-616,7	-74297,4	2944783,0	-25,3	-345,8	Ok
69	311	-740,0	-72420,0	2082990,0	-17,6	-245,1	Ok
69	311	-863,3	-70543,8	1370583,0	-12,7	-179,5	Ok
69	311	-986,7	-68668,9	813102,2	-9,6	-138,3	Ok
69	311	-1110,0	-66795,1	409709,0	-7,4	-108,4	Ok
69	311	-1233,3	-64922,4	189919,6	-6,2	-91,1	Ok
69	311	-1356,7	-63050,9	216026,9	-6,2	-90,7	Ok
69	311	-1480,0	-61180,4	295478,3	-6,4	-93,9	Ok
69	311	-1603,3	-59310,9	336351,6	-6,5	-94,4	Ok
69	311	-1726,7	-57442,5	339567,4	-6,3	-92,4	Ok
69	311	-1850,0	-55575,0	316282,0	-6,1	-88,5	Ok
69	311	-1973,3	-53708,5	277158,8	-5,7	-83,6	Ok
69	311	-2096,7	-51842,9	230709,2	-5,3	-78,2	Ok
69	311	-2220,0	-49978,2	183149,4	-4,9	-72,7	Ok
69	311	-2343,3	-48114,3	138654,7	-4,6	-67,4	Ok
69	311	-2466,7	-46251,2	99731,8	-4,2	-62,5	Ok
69	311	-2590,0	-44389,0	67605,9	-3,9	-58,1	Ok
69	311	-2713,3	-42527,5	42580,3	-3,6	-54,1	Ok
69	311	-2836,7	-40666,7	24354,3	-3,4	-50,6	Ok
69	311	-2960,0	-38806,6	12325,8	-3,2	-47,6	Ok
69	311	-3083,3	-36947,1	5937,8	-3,0	-44,9	Ok
69	311	-3206,7	-35088,3	4119,3	-2,8	-42,2	Ok
69	311	-3330,0	-33230,1	3492,4	-2,7	-40,0	Ok
69	311	-3453,3	-31372,4	2276,9	-2,5	-37,8	Ok
69	311	-3576,7	-29515,3	819,9	-2,4	-35,5	Ok
69	311	-3700,0	-29515,3	0,0	-2,4	-35,5	Ok

Plinto n. 327

<b>Cmb.</b>	<b>Palo</b>	<b>Quota</b> (cm)	<b>N</b> (daN)	<b>M</b> (daN cm)	<b>Ten.SLE C</b> (daN/cm <sup>2</sup> )	<b>Ten.SLE A</b> (daN/cm <sup>2</sup> )	<b>Stato</b>
69	327	0,0	-82416,2	7178521,0	-68,7	1586,6	Ok
69	327	-123,3	-79478,7	6736035,0	-64,3	1462,4	Ok
69	327	-246,7	-77650,0	5960174,0	-56,3	1205,6	Ok
69	327	-370,0	-75822,5	5015043,0	-46,6	893,9	Ok
69	327	-493,3	-73996,4	4023770,0	-36,4	579,8	Ok
69	327	-616,7	-72171,4	3075260,0	-26,7	-363,3	Ok
69	327	-740,0	-70347,8	2226291,0	-18,7	-260,0	Ok
69	327	-863,3	-68525,3	1507185,0	-13,3	-188,3	Ok
69	327	-986,7	-66704,0	928447,3	-10,1	-143,8	Ok
69	327	-1110,0	-64883,8	487840,4	-7,7	-111,5	Ok
69	327	-1233,3	-63064,7	184028,4	-6,0	-88,5	Ok
69	327	-1356,7	-61246,7	121125,2	-5,5	-82,0	Ok
69	327	-1480,0	-59429,7	225303,6	-5,9	-86,9	Ok
69	327	-1603,3	-57613,8	289364,3	-6,1	-89,1	Ok
69	327	-1726,7	-55798,8	310090,4	-6,0	-88,4	Ok
69	327	-1850,0	-53984,8	299796,9	-5,9	-85,5	Ok

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

69	327	-1973,3	-52171,7	269986,3	-5,6	-81,3	Ok
69	327	-2096,7	-50359,5	229860,8	-5,2	-76,3	Ok
69	327	-2220,0	-48548,1	186254,7	-4,8	-71,2	Ok
69	327	-2343,3	-46737,6	143896,2	-4,5	-66,1	Ok
69	327	-2466,7	-44927,8	105771,0	-4,1	-61,3	Ok
69	327	-2590,0	-43118,8	73502,3	-3,8	-56,9	Ok
69	327	-2713,3	-41310,6	47702,9	-3,6	-53,0	Ok
69	327	-2836,7	-39503,0	28282,8	-3,3	-49,5	Ok
69	327	-2960,0	-37696,1	14707,0	-3,1	-46,4	Ok
69	327	-3083,3	-35889,9	6241,3	-2,9	-43,6	Ok
69	327	-3206,7	-34084,3	2399,1	-2,7	-41,0	Ok
69	327	-3330,0	-32279,2	2033,8	-2,6	-38,9	Ok
69	327	-3453,3	-30474,7	1599,9	-2,4	-36,7	Ok
69	327	-3576,7	-28670,8	646,6	-2,3	-34,5	Ok
69	327	-3700,0	-28670,8	0,0	-2,3	-34,5	Ok

Plinto n. 84

<b>Cmb.</b>	<b>Palo</b>	<b>Quota</b> (cm)	<b>N</b> (daN)	<b>M</b> (daN cm)	<b>Ten.SLE C</b> (daN/cm <sup>2</sup> )	<b>Ten.SLE A</b> (daN/cm <sup>2</sup> )	<b>Stato</b>
69	84	0,0	-68242,4	8180483,0	-79,8	2136,3	Ok
69	84	-123,3	-65810,1	7528319,0	-73,3	1926,5	Ok
69	84	-246,7	-64295,9	6553159,0	-63,4	1586,1	Ok
69	84	-370,0	-62782,7	5431042,0	-51,9	1195,0	Ok
69	84	-493,3	-61270,6	4291401,0	-40,2	805,6	Ok
69	84	-616,7	-59759,5	3224867,0	-29,1	460,3	Ok
69	84	-740,0	-58249,5	2286837,0	-19,6	-268,3	Ok
69	84	-863,3	-56740,5	1504331,0	-12,8	-179,1	Ok
69	84	-986,7	-55232,4	883500,0	-8,9	-126,9	Ok
69	84	-1110,0	-53725,2	417235,4	-6,4	-93,2	Ok
69	84	-1233,3	-52219,0	105115,5	-4,7	-70,0	Ok
69	84	-1356,7	-50713,6	161691,4	-4,9	-72,1	Ok
69	84	-1480,0	-49209,1	284637,0	-5,4	-78,7	Ok
69	84	-1603,3	-47705,5	344928,4	-5,6	-81,0	Ok
69	84	-1726,7	-46202,7	357356,5	-5,5	-80,1	Ok
69	84	-1850,0	-44700,6	337577,4	-5,3	-76,9	Ok
69	84	-1973,3	-43199,3	298520,9	-5,0	-72,4	Ok
69	84	-2096,7	-41698,7	250123,9	-4,6	-67,3	Ok
69	84	-2220,0	-40198,9	199569,7	-4,2	-62,0	Ok
69	84	-2343,3	-38699,7	151691,4	-3,9	-57,0	Ok
69	84	-2466,7	-37201,2	109424,8	-3,5	-52,3	Ok
69	84	-2590,0	-35703,3	74250,5	-3,2	-48,1	Ok
69	84	-2713,3	-34206,1	46591,6	-3,0	-44,4	Ok
69	84	-2836,7	-32709,4	26151,7	-2,8	-41,2	Ok
69	84	-2960,0	-31213,2	12197,0	-2,6	-38,4	Ok
69	84	-3083,3	-29717,6	3895,0	-2,4	-36,0	Ok
69	84	-3206,7	-28222,5	1995,8	-2,3	-34,0	Ok
69	84	-3330,0	-26727,9	2741,7	-2,1	-32,2	Ok
69	84	-3453,3	-25233,8	2086,4	-2,0	-30,4	Ok
69	84	-3576,7	-23740,0	804,8	-1,9	-28,6	Ok
69	84	-3700,0	-23740,0	0,0	-1,9	-28,6	Ok

Plinto n. 92

<b>Cmb.</b>	<b>Palo</b>	<b>Quota</b> (cm)	<b>N</b> (daN)	<b>M</b> (daN cm)	<b>Ten.SLE C</b> (daN/cm <sup>2</sup> )	<b>Ten.SLE A</b> (daN/cm <sup>2</sup> )	<b>Stato</b>
69	92	0,0	-76270,7	7115401,0	-68,4	1640,2	Ok
69	92	-123,3	-73552,3	6793615,0	-65,3	1556,8	Ok
69	92	-246,7	-71859,9	6088839,0	-58,1	1321,7	Ok
69	92	-370,0	-70168,7	5178410,0	-48,8	1015,6	Ok
69	92	-493,3	-68478,7	4195592,0	-38,6	693,0	Ok
69	92	-616,7	-66789,9	3237867,0	-28,7	399,8	Ok
69	92	-740,0	-65102,2	2368844,0	-20,1	-276,8	Ok
69	92	-863,3	-63415,6	1623921,0	-13,9	-194,7	Ok
69	92	-986,7	-61730,1	1016859,0	-10,1	-143,9	Ok
69	92	-1110,0	-60045,6	546079,7	-7,6	-109,6	Ok

**Parco Eolico "Mondonuovo" – Progetto Definitivo**  
*Relazione di calcolo preliminare delle fondazioni degli aerogeneratori M01, M05, M07, M09*

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69	92	-1233,3	-58362,2	200220,6	-5,7	-83,9	Ok
69	92	-1356,7	-56679,8	41908,7	-4,8	-71,1	Ok
69	92	-1480,0	-54998,3	190421,7	-5,4	-79,2	Ok
69	92	-1603,3	-53317,7	272426,0	-5,7	-82,8	Ok
69	92	-1726,7	-51638,1	303947,6	-5,7	-82,9	Ok
69	92	-1850,0	-49959,3	300433,4	-5,5	-80,7	Ok
69	92	-1973,3	-48281,4	274643,8	-5,3	-76,9	Ok
69	92	-2096,7	-46604,3	236574,6	-4,9	-72,3	Ok
69	92	-2220,0	-44928,0	193652,1	-4,6	-67,3	Ok
69	92	-2343,3	-43252,5	151064,8	-4,2	-62,4	Ok
69	92	-2466,7	-41577,7	112152,7	-3,9	-57,7	Ok
69	92	-2590,0	-39903,6	78802,6	-3,6	-53,4	Ok
69	92	-2713,3	-38230,2	51813,3	-3,3	-49,6	Ok
69	92	-2836,7	-36557,4	31213,4	-3,1	-46,1	Ok
69	92	-2960,0	-34885,3	16519,1	-2,9	-43,1	Ok
69	92	-3083,3	-33213,7	6934,7	-2,7	-40,5	Ok
69	92	-3206,7	-31542,7	1509,2	-2,5	-38,0	Ok
69	92	-3330,0	-29872,3	916,7	-2,4	-36,0	Ok
69	92	-3453,3	-28202,3	1217,1	-2,3	-33,9	Ok
69	92	-3576,7	-26532,9	565,9	-2,1	-31,9	Ok
69	92	-3700,0	-26532,9	0,0	-2,1	-31,9	Ok

Sezioni maggiormente sollecitate:

PI.	Cmb.	Palo	Quota (cm)	N (daN)	M (daN cm)	Ten.SLE C (daN/cmq)	Ten.SLE A (daN/cmq)
231	69	231	0,0	-44873,0	11035610,0	-109,7	3524,4
215	69	215	0,0	-35859,5	10710380,0	-106,6	3528,6

Valori massimi:

Ten.massima CLS = 109,7 daN/cmq < Ten. lim. CLS Ok  
 Ten.massima acciaio = 3528,6 daN/cmq < Ten. lim. acciaio Ok