

20_25_FV_PWT_CN_EL_15_REL_00	Gennaio 2021	Relazione di calcolo	Ing. Mahmoud Elsherbiny	Ing. Fabio Borrello	Ing. Leonardo Filotico
N. ELABORATO	DATA EMISSIONE	DESCRIZIONE	ESEGUITO	CONTROLLATO	APPROVATO

OGGETTO:

Progetto degli impianti per la connessione degli impianti fotovoltaici:
- Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514
- Sparpagliata da 30 MWac sito nei Comuni di Mesagne (BR), Torre Santa Susanna (BR) e Erchie (BR), codice pratica 202000548

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TITOLO:

Relazione di calcolo

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direttore tecnico

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RELAZIONE DI CALCOLO STRUTTURALE

Premessa

La presente relazione di calcolo strutturale, 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.

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

Oggetto del presente documento è la descrizione delle opere di connessione alla RTN degli impianti fotovoltaici come di seguito indicati:

- **Stazione di elevazione ,Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.**

Si riferisce ad una struttura prefabbricata realizzata con pilastri in c.a. aventi sezione 30x40 atti a sostenere una copertura realizzata con orditura di travi principali in c.a.p. a doppia pendenza e sovrastanti solai pieni sp. 16cm in c.a. avranno pianta rettangolare con dimensioni esterne di 2,40 x 4,80 m ed altezza da terra di 3,00 m. Ogni chiosco avrà una superficie coperta di 11,52 m² e volume di 36,86 m³. Gli infissi saranno realizzati in alluminio anodizzato naturale.

Fondazione di trasformatore messa su un plinto per trasferire il carico del trasformatore .

Descrizione generale dell'opera

Descrizione generale dell'opera	
Ubicazione	Comune di ERCHIE (BR) (Regione PUGLIA)
	Località ERCHIE (BR)
	Longitudine 17.74410, Latitudine 40.435
Numero di piani	Fuori terra
	Interrati
	le dimensioni dell'opera in pianta sono racchiuse in un rettangolo di

Parametri della struttura			
Classe d'uso	Vita Vn [anni]	Coeff. Uso	Periodo Vr [anni]
I	50.0	0.7	35.0

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.

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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
Azione sismica	
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.

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:

$K * u = F$ dove K = matrice di rigidezza
 u = vettore spostamenti nodali
 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 **TRUSS** (biella-D2)
Elemento tipo **BEAM** (trave-D2)
Elemento tipo **MEMBRANE** (membrana-D3)

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Elemento tipo PLATE	(piastra-guscio-D3)
Elemento tipo BOUNDARY	(molla)
Elemento tipo STIFFNESS	(matrice di rigidezza)
Elemento tipo BRICK	(elemento solido)
Elemento tipo SOLAIO	(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
Sismica statica lineare	NO
Sismica dinamica lineare	SI
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:	PROFESSIONAL (build 2020-05-189)
Produttore-Distributore:	2S.I. Software e Servizi per l'Ingegneria s.r.l., Ferrara
Dati utente finale:	***** COMPLETARE *****
Codice Utente:	***** COMPLETARE *****
Codice Licenza:	Licenza dsi5770

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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:
<https://www.2si.it/it/prodotti/affidabilita/>

Modellazione della geometria e proprietà meccaniche:

nodi	1182
elementi D2 (per aste, travi, pilastri...)	260
elementi D3 (per pareti, platee, gusci...)	1032
elementi solaio	1
elementi solidi	0

Dimensione del modello strutturale [cm]:

X min =	0.00
Xmax =	4000.00
Ymin =	0.00
Ymax =	2133.00
Zmin =	0.00
Zmax =	300.00

Strutture verticali:

Elementi di tipo asta	NO
Pilastri	SI
Pareti	SI
Setti (a comportamento membranale)	NO

Strutture non verticali:

Elementi di tipo asta	NO
Travi	SI

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Gusci	NO
Membrane	NO
Orizzontamenti:	
Solai con la proprietà piano rigido	SI
Solai senza la proprietà piano rigido	NO
Tipo di vincoli:	
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.

Combinazioni dei casi di carico	
APPROCCIO PROGETTUALE	Approccio 2
Tensioni ammissibili	NO
SLU	SI
SLV (SLU con sisma)	SI
SLC	NO
SLD	SI
SLO	SI

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SLU GEO A2 (per approccio 1)	NO
SLU EQU	NO
Combinazione caratteristica (rara)	SI
Combinazione frequente	SI
Combinazione quasi permanente (SLE)	SI
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 comprensione 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

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- 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 involuipi 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 abnormi. 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 SLE 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 riportata informazioni esaustive relative all'elenco dei materiali impiegati e loro modalità di posa in opera e ai valori di calcolo.

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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 - Pesì per unità di volume, pesì 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 il 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

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"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 17.01.18 è dovuto o a progettazione simulata di edificio esistente.

ISTITUTO NAZIONALE DI GEOFISICA E VULCANOLOGIA

Nota: per il calcolo dei parametri sismici
1) inserire le coordinate geografiche 2) introdurre Vn e Cu
Per le isole è possibile utilizzare come località: gruppo isole N
[con N = 1,2,3,4,5]

Vertici della maglia elementare INGV [riferimento WGS84]			
Id nodo	Longitudine	Latitudine	Distanza [km]
34807	17.692	40.406	4.847
34808	17.758	40.404	3.946
34586	17.761	40.454	3.040
34585	17.696	40.456	4.029

Coordinate geografiche [riferimento WGS84]

Località:

Longitudine: Latitudine:

Parametri per le forme spettrali					
	Pver	Tr	ag [g]	Fo	T*c
SLO	81	30	0.0172	2.334	0.173
SLD	63	35	0.0187	2.335	0.192
SLV	10	332	0.0451	2.596	0.424
SLC	5	682	0.0546	2.732	0.472

Periodo di riferimento per l'azione sismica

Vita Vn [anni]	Coefficiente uso Cu	Periodo Vr [anni]	Livello di sicurezza
<input type="text" value="50"/>	<input type="text" value="0.7"/>	<input type="text" value="35"/>	<input type="text" value="100"/>

01_INT_PERICOLOSITA

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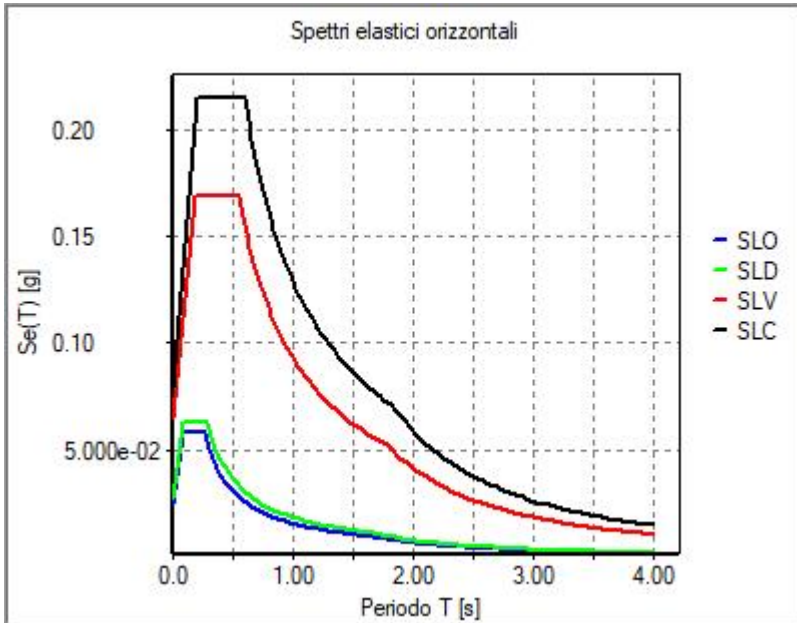
RELAZIONE DI CALCOLO



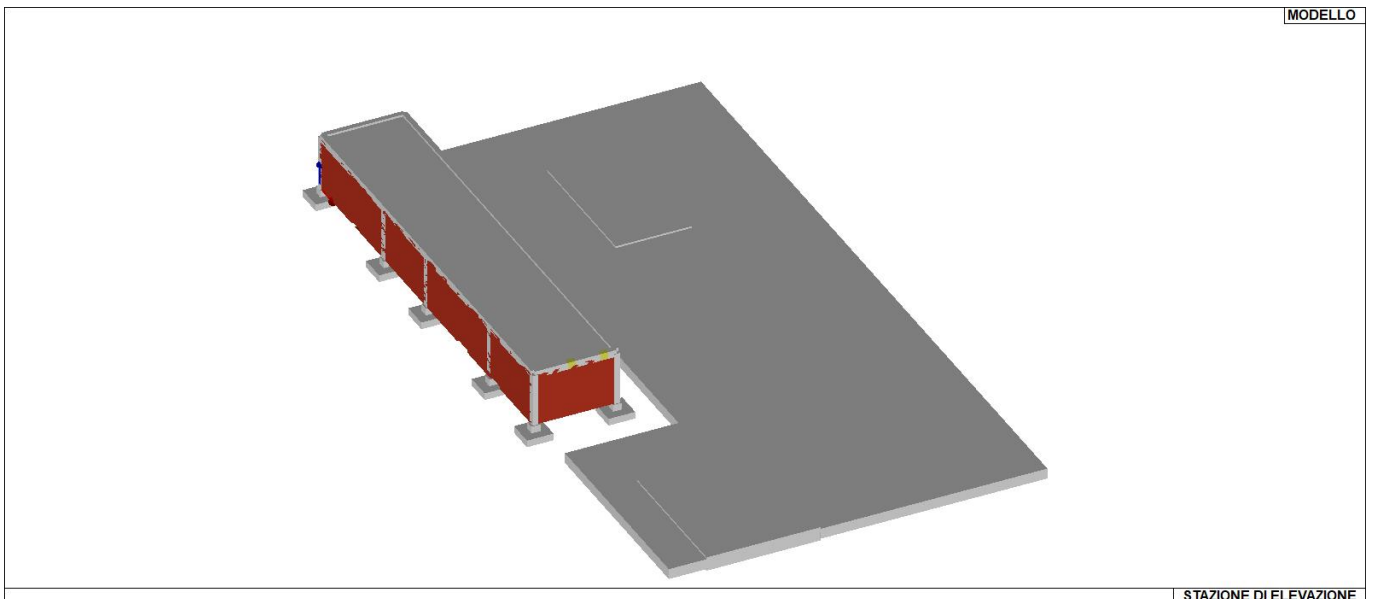
SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO /IEC 27001:2017
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01_INT_SPETTRI_ELASTICI_O



MODELLO

STAZIONE DI ELEVAZIONE

01_INT_VISTA_SOLIDATA_001

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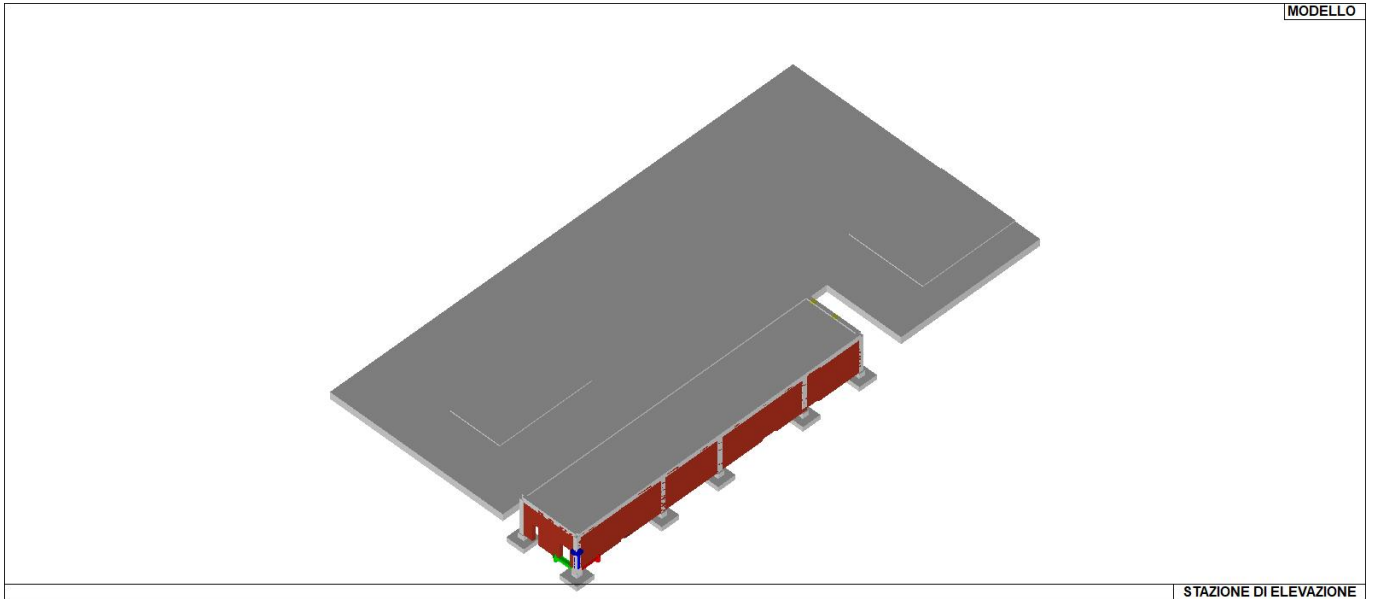
RELAZIONE DI CALCOLO



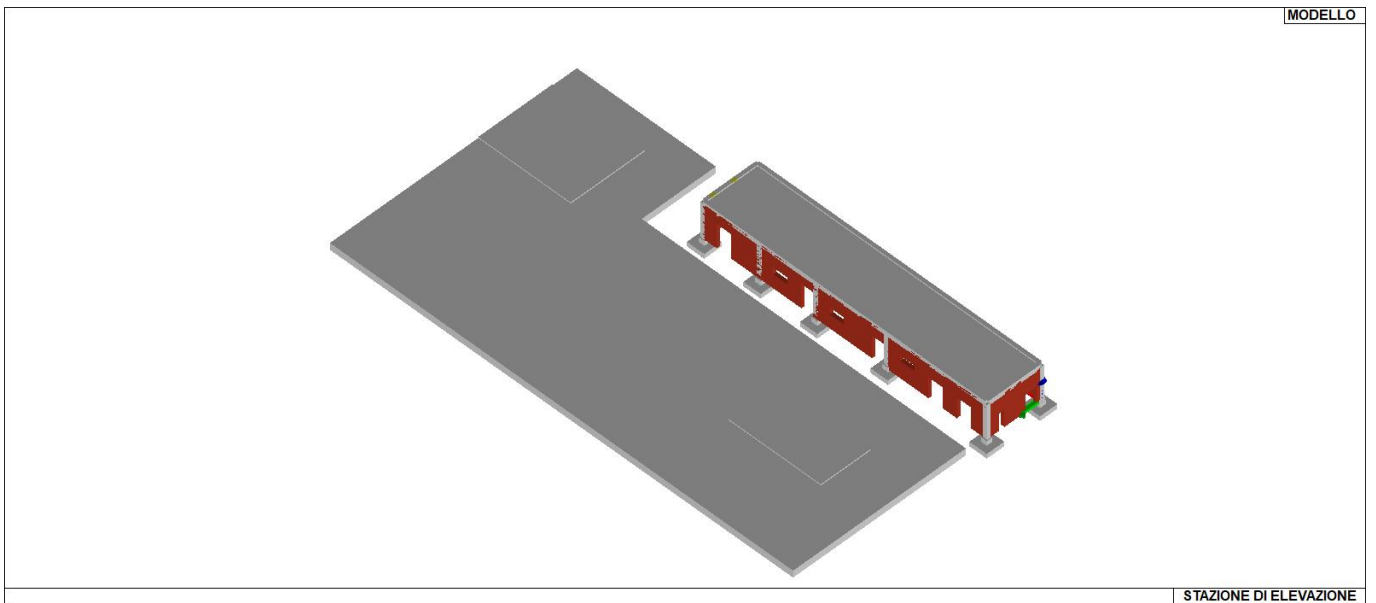
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01_INT_VISTA_SOLIDATA_002



01_INT_VISTA_SOLIDATA_003

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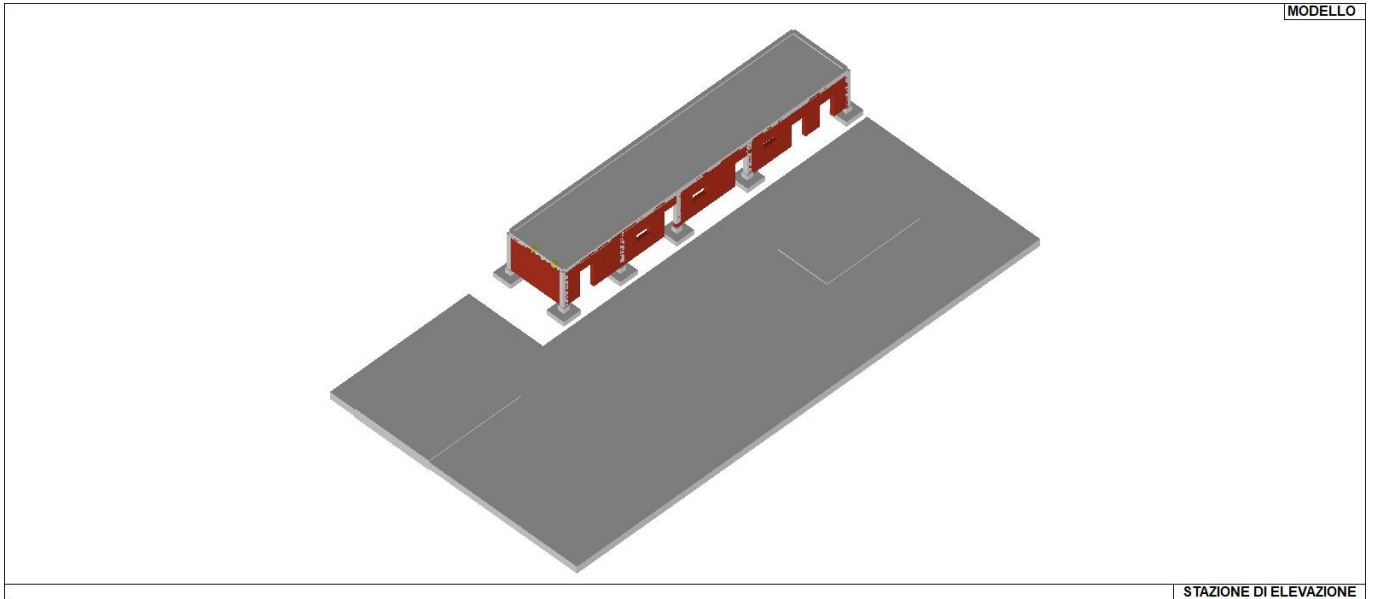
RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO /IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

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01_INT_VISTA_SOLIDA_004

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RELAZIONE DI CALCOLO



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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 ν
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	c.a.	Resistenza Rc Resistenza fctm Coefficiente ksb	resistenza a compressione cubica resistenza media a trazione semplice Coefficiente di riduzione della resistenza a compressione da utilizzare nello stress block
2	acciaio	Tensione ft Tensione fy Resistenza fd Resistenza fd (>40) Tensione ammissibile Tensione ammissibile(>40)	Valore della tensione di rottura Valore della tensione di snervamento Resistenza di calcolo per SL CNR-UNI 10011 Resistenza di calcolo per SL CNR-UNI 10011 per spessori > 40mm Tensione ammissibile CNR-UNI 10011 Tensione ammissibile CNR-UNI 10011 per spessori > 40mm
3	muratura	Muratura consolidata Incremento resistenza Incremento rigidezza Resistenza f Resistenza fv0 Resistenza fh Resistenza fb Resistenza fbh Resistenza fv0h Resistenza ft Resistenza fvlm Resistenza fbt Coefficiente mu Coefficiente fi Coefficiente ksb	Muratura per la quale si prevedono interventi di rinforzo" Incremento conseguito in termini di resistenza Incremento conseguito in termini di rigidezza Valore della resistenza a compressione Valore della resistenza a taglio in assenza di tensioni normali Valore della resistenza a compressione orizzontale Valore della resistenza a compressione dei blocchi Valore della resistenza a compressione dei blocchi in direzione orizzontale Valore della resistenza a taglio in assenza di tensioni normali per le travi Valore della resistenza a trazione per fessurazione diagonale Valore della massima resistenza a taglio Valore della resistenza a trazione dei blocchi Coefficiente d'attrito utilizzato per la resistenza a taglio (tipicamente 0.4) Coefficiente d'ingranamento utilizzato per la resistenza a taglio 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%

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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

Nel tabulato si riportano sia i valori caratteristici che medi utilizzando gli uni e/o gli altri in relazione alle richieste di normativa ed alla tipologia di verifica. (Cap.7 NTC18 per materiali nuovi, Cap.8 NTC18 e relativa circolare 21/01/2019 per materiali esistenti, Linee Guida Reluis per incamicatura CAM, CNR-DT 200 per interventi con FRP)

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, si segnalano i seguenti esempi applicativi:

Modellazione di strutture in c.a.

Test N°	Titolo
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.
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

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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

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
1	Calcestruzzo Classe C25/30	daN/cm ²	daN/cm ²	daN/cm ²					
	Resistenza Rc	300.0		3.145e+05	0.20	1.310e+05	2.50e-03	1.00e-05	
	Resistenza fctm		25.6						
	Rapporto Rfessurata								1.00
	Coefficiente ksb								0.85

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Partita Iva : 02658050733

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RELAZIONE DI CALCOLO

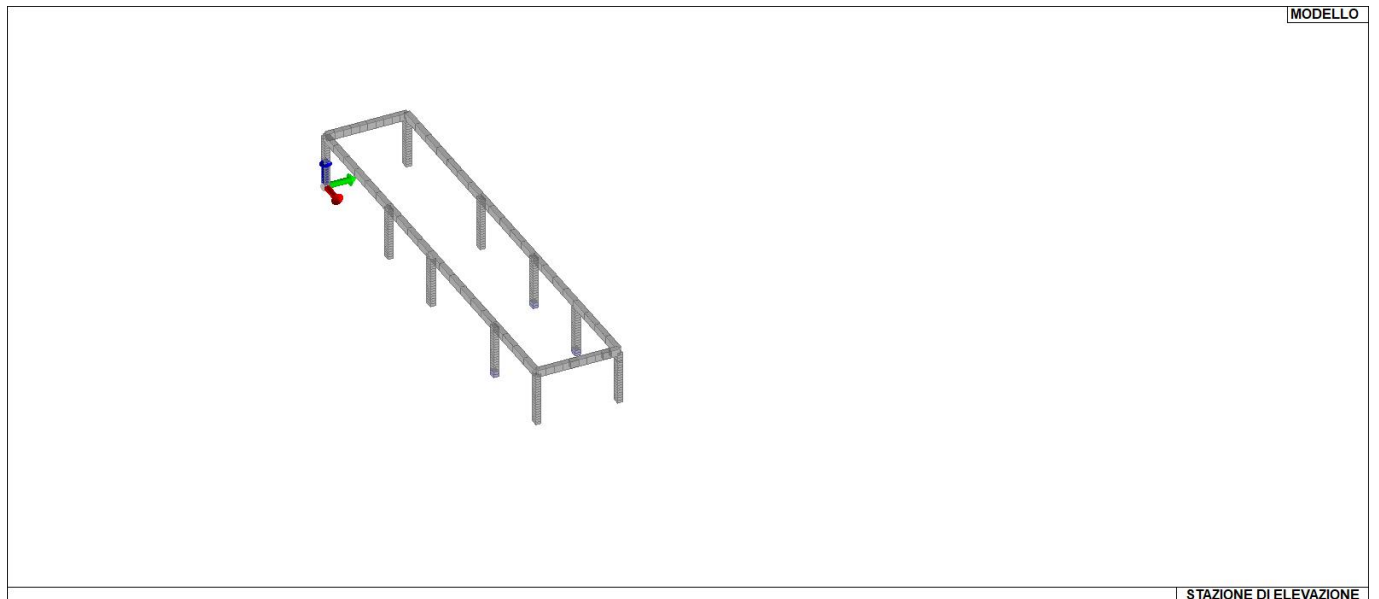


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Progetto degli impianti per la connessione degli impianti fotovoltaici:

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Id	Tipo / Note	V. caratt.	V. medio	Young	Poisson	G	Gamma	Alfa	Altri
	Rapporto HRDb								1.00e-05
	Rapporto HRDv								1.00e-05
110	Tamponatura 1100 daN/mc per elemento pannello-muratura E = 6.000e+04			6.000e+04	0.25	2.400e+04	1.10e-03	1.00e-05	
	Resistenza f	50.0							
	Resistenza fh	10.1							
	Resistenza fv0	2.0							
	Resistenza fv0h	2.0							
	Resistenza tau0	1.0							
	Resistenza fvlm	9.8							
	Resistenza fb	150.0							
	Resistenza fbh	30.0							
	Resistenza fbt	15.0							
	Rapporto Rfessurata								1.00
	Coefficiente ksb								0.85
	Coefficiente mu tilda								0.50
	Coefficiente fi								0.50
	Rapporto HRDb								1.00e-05
	Rapporto HRDv								1.00e-05
158	materiale E = 2.100e+11 [w= 0.0]			2.100e+11	0.0	1.050e+11	0.0	0.0	
	Rapporto HRDb								1.00e-05
	Rapporto HRDv								1.00e-05



STAZIONE DI ELEVAZIONE

11_MOD_MATERIALI_D2

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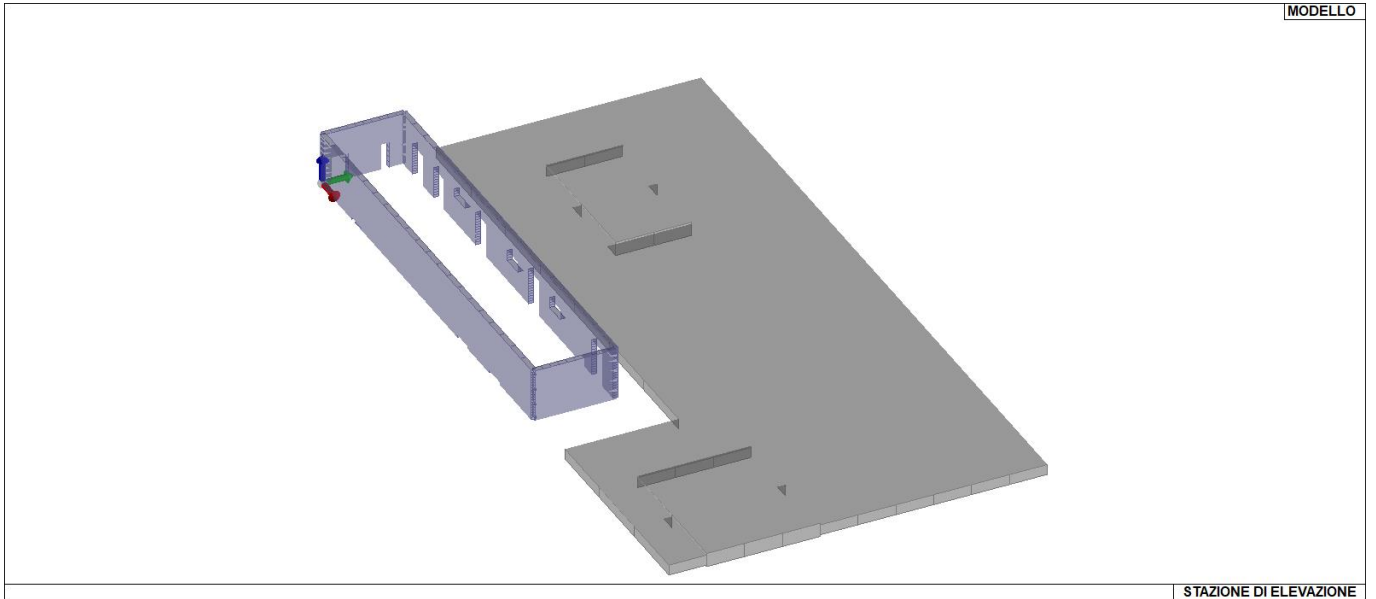
RELAZIONE DI CALCOLO



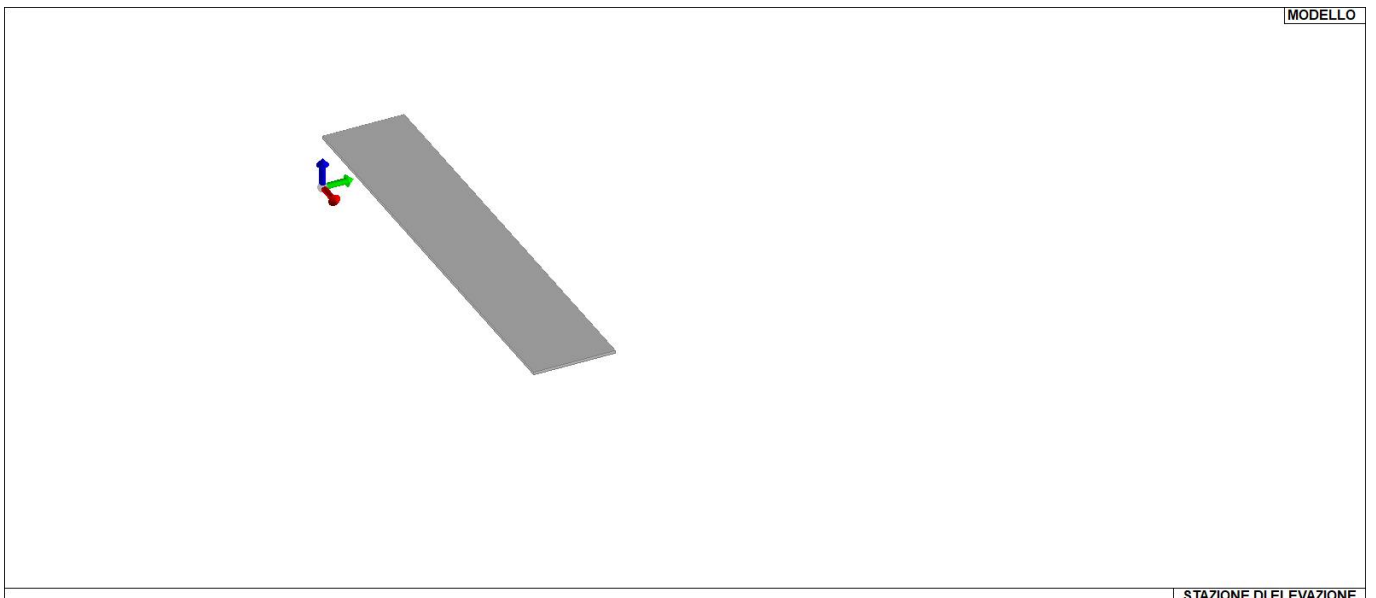
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11_MOD_MATERIALI_D3



11_MOD_MATERIALI_SOLAI

Gusci c.a.	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
Armatura						
Inclinazione Ax [gradi]	0.0					
Angolo Ax-Ay [gradi]	90.00					
Minima tesa	0.31					

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

Travi c.a.	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
Generalità						
Progetta a filo	NO					
Af inf: da q*L*L /	0.0					
Armatura						
Minima tesa	0.31					
Minima compressa	0.31					
Massima tesa	0.78					
Da sezione	SI					
Usa armatura teorica	NO					
Stati limite ultimi						
Tensione fy [daN/cm ²]	4500.00					
Tensione fy staffe [daN/cm ²]	4500.00					
Tipo acciaio	tipo C					
Coefficiente gamma s	1.15					
Coefficiente gamma c	1.50					
Verifiche con N costante	SI					
Fattore di redistribuzione	0.0					
Modello per il confinamento						
Relazione tensio-deformativa	Mander					
Incrudimento acciaio	5.000e-03					
Fattore lambda	1.00					
epsilon max,s	4.000e-02					
epsilon cu2	4.500e-03					
epsilon c2	0.0					
epsilon cy	0.0					
Tensioni ammissibili						
Tensione amm. cls [daN/cm ²]	97.50					
Tensione amm. acciaio [daN/cm ²]	2600.00					
Rapporto omogeneizzazione N	15.00					
Massimo rapporto area compressa/tesa	1.00					
Staffe						

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Travi c.a.	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
Diametro staffe	0.0					
Passo minimo [cm]	4.00					
Passo massimo [cm]	30.00					
Passo raffittito [cm]	15.00					
Lunghezza zona raffittita [cm]	50.00					
Ctg(Teta) Max	2.50					
Percentuale sagomati	0.0					
Luce di taglio per GR [cm]	1.00					
Adotta scorrimento medio	NO					
Torsione non essenziale inclusa	SI					

Pilastri c.a.	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
Generalità						
Progetto armatura	Privilegia lati					
Progetta a filo	NO					
Effetti del 2 ordine	SI					
Beta per 2-2	1.00					
Beta per 3-3	1.00					
Armatura						
Massima tesa	4.00					
Minima tesa	1.00					
Stati limite ultimi						
Tensione fy [daN/cm ²]	4500.00					
Tensione fy staffe [daN/cm ²]	4500.00					
Tipo acciaio	tipo C					
Coefficiente gamma s	1.15					
Coefficiente gamma c	1.50					
Verifiche con N costante	SI					
Modello per il confinamento						
Relazione tensio-deformativa	Mander					
Incrudimento acciaio	5.000e-03					
Fattore lambda	1.00					
epsilon max,s	4.000e-02					
epsilon cu2	4.500e-03					
epsilon c2	0.0					
epsilon cy	0.0					
Tensioni ammissibili						
Tensione amm. cls [daN/cm ²]	97.50					
Tensione amm. acciaio [daN/cm ²]	2600.00					
Rapporto omogeneizzazione N	15.00					
Staffe						
Diametro staffe	0.0					
Passo minimo [cm]	5.00					
Passo massimo [cm]	25.00					
Passo raffittito [cm]	15.00					
Lunghezza zona raffittita [cm]	45.00					
Ctg(Teta) Max	2.50					
Luce di taglio per GR [cm]	1.00					
Massimizza gerarchia	SI					

Muratura	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
Lunghezze libere						
Altezza interpiano [cm]	0.0					
Rho	0.85					
Snellezza limite	20.00					
Generalità						

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Muratura	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
Gamma non sismico	3.00					
Gamma sismico	2.40					
Tolleranza azioni [daN/cm2]	0.0					
Media valori per quota	SI					
Media valori per elemento	SI					
Verifica come fascia	NO					
Usa formula [7.8.3]	SI					

Solai e pannelli	1/7/..	2/8/..	3/9/..	4/10/..	5/11/..	6/12/..
Generalità						
Usa tensioni ammissibili	NO					
Af inf: da traliccio	SI					
Consenti armatura a taglio	NO					
Incrementa armatura longitudinale per taglio	SI					
Af inf: da $q \cdot L \cdot L /$	20.00					
Incremento fascia piena [cm]	5.00					
Armatura						
Minima tesa	0.15					
Massima tesa	3.00					
Minima compressa	0.0					
Af/h [cm]	7.000e-02					
Stati limite ultimi						
Tensione fy [daN/cm2]	4500.00					
Tipo acciaio	tipo C					
Coefficiente gamma s	1.15					
Coefficiente gamma c	1.50					
Fattore di redistribuzione	0.0					
Tensioni ammissibili						
Tensione amm. cls [daN/cm2]	85.00					
Tensione amm. acciaio [daN/cm2]	2600.00					
Rapporto omogeneizzazione N	15.00					
Massimo rapporto area compressa/tesa	1.00					
Verifica freccia						
Infinita	250.00					
Istantanea	500.00					
Fattore viscosità	3.00					
Usa J non fessurato	NO					
Elementi non strutturali						
Tamponatura antiespulsione	NO					
Tamponatura con armatura	NO					
Fattore di struttura/comportamento	2.00					
Coefficiente gamma m	0.0					
Periodo Ta	0.0					
Altezza pannello	0.0					

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MODELLAZIONE DELLE SEZIONI

LEGENDA TABELLA DATI SEZIONI

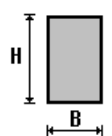
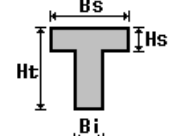
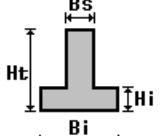
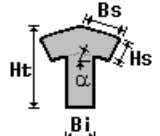
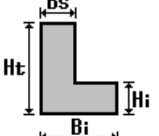
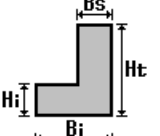
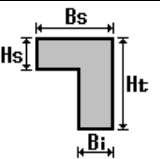
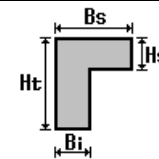
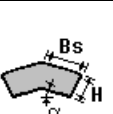
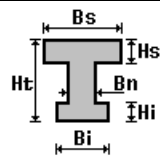
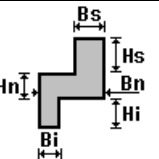
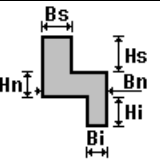
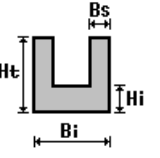
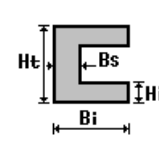
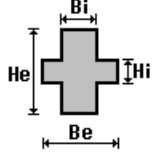
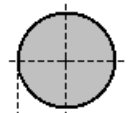
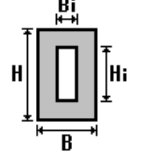
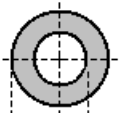
Il programma consente l'uso di sezioni diverse. Sono previsti i seguenti tipi di sezione:

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:

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

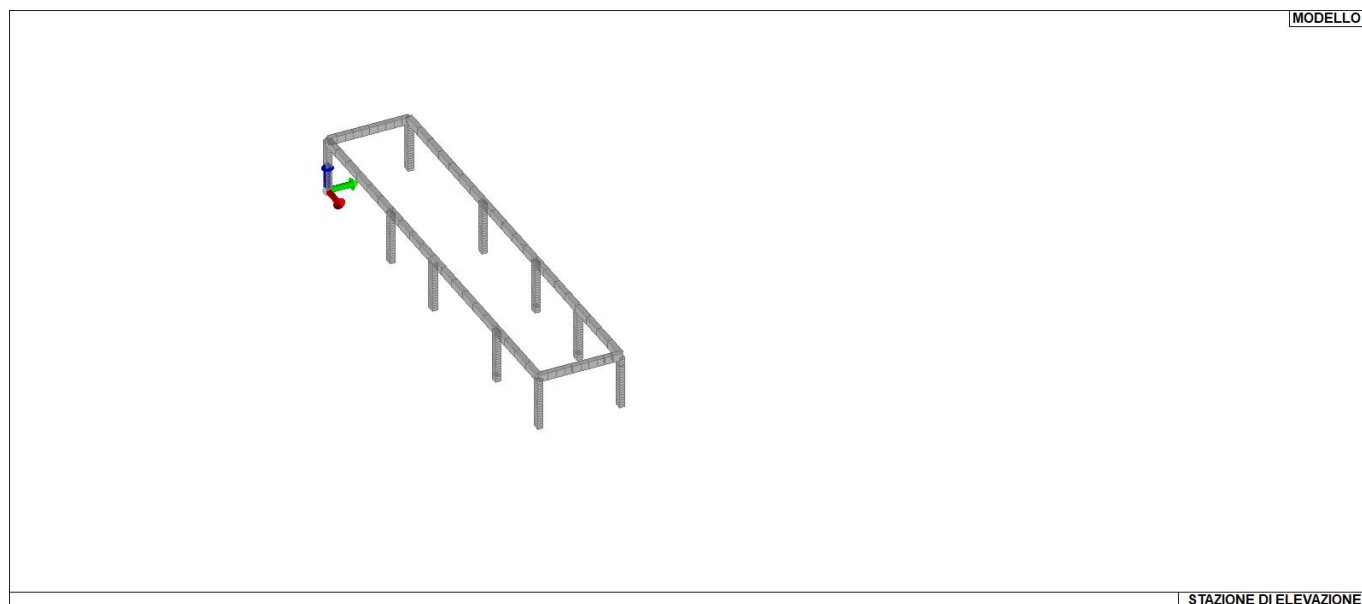
i valori dimensionali con prefisso B sono riferiti all'asse 2

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, 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
1	Rettangolare: b=30 h=40	1200.00	1000.00	1000.00	1.946e+05	9.000e+04	1.600e+05	6000.00	8000.00	9000.00	1.200e+04



13_MOD_SEZIONI

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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:

Nodo	numero del nodo.
X	valore della coordinata X
Y	valore della coordinata Y
Z	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:

Nodo	numero del nodo.
X	valore della coordinata X
Y	valore della coordinata Y
Z	valore della coordinata Z
Note	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).
Note	(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
Rig. TX	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
2	0.0	213.3	0.0	3	2440.0	92.0	300.0	4	400.0	0.0	0.0
5	0.0	426.6	0.0	6	2440.0	92.0	270.0	7	0.0	639.9	0.0
8	400.0	639.9	0.0	9	0.0	853.2	0.0	10	400.0	853.2	0.0
11	0.0	1066.5	0.0	12	400.0	1066.5	0.0	13	0.0	1279.8	0.0
14	400.0	1279.8	0.0	15	0.0	1493.1	0.0	16	400.0	1493.1	0.0
17	0.0	1706.4	0.0	18	400.0	1706.4	0.0	19	0.0	1919.7	0.0
20	400.0	1919.7	0.0	21	0.0	2133.0	0.0	22	400.0	2133.0	0.0
23	2440.0	46.0	30.0	24	800.0	0.0	0.0	25	2440.0	92.0	240.0
26	800.0	639.9	0.0	27	800.0	853.2	0.0	28	800.0	1066.5	0.0
30	800.0	1493.1	0.0	31	800.0	1706.4	0.0	32	800.0	1919.7	0.0
33	800.0	2133.0	0.0	34	2440.0	46.0	60.0	35	1200.0	0.0	0.0
36	2440.0	92.0	210.0	37	1200.0	639.9	0.0	38	1200.0	853.2	0.0
39	1200.0	1066.5	0.0	40	1200.0	1279.8	0.0	41	1200.0	1493.1	0.0
42	1200.0	1706.4	0.0	43	1200.0	1919.7	0.0	44	1200.0	2133.0	0.0
45	2440.0	46.0	0.0	46	2440.0	46.0	90.0	47	2440.0	92.0	180.0
48	1600.0	639.9	0.0	49	1600.0	853.2	0.0	50	1600.0	1066.5	0.0
51	1600.0	1279.8	0.0	52	1600.0	1493.1	0.0	53	1600.0	1706.4	0.0
54	1600.0	1919.7	0.0	55	1600.0	2133.0	0.0	56	2440.0	46.0	120.0
57	2440.0	46.0	150.0	58	2440.0	92.0	150.0	59	2000.0	639.9	0.0
60	2000.0	853.2	0.0	61	2000.0	1066.5	0.0	62	2000.0	1279.8	0.0
63	2000.0	1493.1	0.0	64	2000.0	1706.4	0.0	65	2000.0	1919.7	0.0
66	2000.0	2133.0	0.0	67	2440.0	92.0	120.0	68	2400.0	0.0	0.0
69	2440.0	92.0	90.0	70	2400.0	639.9	0.0	71	2400.0	853.2	0.0
72	2400.0	1066.5	0.0	73	2400.0	1279.8	0.0	74	2400.0	1493.1	0.0

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO /IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

75	2400.0	1706.4	0.0	76	2400.0	1919.7	0.0	77	2400.0	2133.0	0.0
78	2800.0	213.3	0.0	79	2800.0	0.0	0.0	80	2800.0	426.6	0.0
81	2800.0	639.9	0.0	82	2800.0	853.2	0.0	83	2800.0	1066.5	0.0
84	2800.0	1279.8	0.0	85	2800.0	1493.1	0.0	86	2800.0	1706.4	0.0
87	2800.0	1919.7	0.0	88	2800.0	2133.0	0.0	89	3200.0	213.3	0.0
90	3200.0	0.0	0.0	91	3200.0	426.6	0.0	92	3200.0	639.9	0.0
93	3200.0	853.2	0.0	94	3200.0	1066.5	0.0	95	3200.0	1279.8	0.0
96	3200.0	1493.1	0.0	97	3200.0	1706.4	0.0	98	3200.0	1919.7	0.0
99	3200.0	2133.0	0.0	101	3600.0	0.0	0.0	104	3600.0	853.2	0.0
105	3600.0	1066.5	0.0	106	3600.0	1279.8	0.0	107	3600.0	1493.1	0.0
108	3600.0	1706.4	0.0	109	3600.0	1919.7	0.0	110	3600.0	2133.0	0.0
111	4000.0	213.3	0.0	112	4000.0	0.0	0.0	113	4000.0	426.6	0.0
114	4000.0	639.9	0.0	115	4000.0	853.2	0.0	116	4000.0	1066.5	0.0
117	4000.0	1279.8	0.0	118	4000.0	1493.1	0.0	119	4000.0	1706.4	0.0
120	4000.0	1919.7	0.0	121	4000.0	2133.0	0.0	122	0.0	0.0	300.0
124	0.0	460.0	300.0	126	2440.0	0.0	300.0	128	2440.0	460.0	300.0
129	2440.0	230.0	300.0	130	1220.0	0.0	300.0	131	0.0	0.0	150.0
132	2440.0	0.0	150.0	133	0.0	0.0	30.0	134	0.0	46.0	30.0
135	0.0	46.0	0.0	136	0.0	0.0	60.0	137	0.0	46.0	60.0
138	0.0	0.0	90.0	139	0.0	46.0	90.0	140	0.0	0.0	120.0
141	0.0	46.0	120.0	142	0.0	46.0	150.0	143	0.0	0.0	180.0
144	0.0	46.0	180.0	145	0.0	0.0	210.0	146	0.0	46.0	210.0
147	0.0	0.0	240.0	148	0.0	46.0	240.0	149	0.0	0.0	270.0
150	0.0	46.0	270.0	151	0.0	46.0	300.0	152	2440.0	46.0	180.0
153	2440.0	46.0	210.0	154	2440.0	46.0	240.0	155	2440.0	46.0	270.0
156	2440.0	46.0	300.0	157	0.0	92.0	150.0	158	0.0	92.0	180.0
159	0.0	92.0	210.0	160	0.0	92.0	240.0	161	0.0	92.0	270.0
162	0.0	92.0	300.0	163	0.0	138.0	30.0	164	0.0	138.0	0.0
165	0.0	138.0	60.0	166	0.0	138.0	90.0	167	0.0	138.0	120.0
168	0.0	138.0	150.0	169	0.0	138.0	180.0	170	0.0	138.0	210.0
171	0.0	138.0	240.0	172	0.0	138.0	270.0	173	0.0	138.0	300.0
174	0.0	184.0	30.0	175	0.0	184.0	0.0	176	0.0	184.0	60.0
177	0.0	184.0	90.0	178	0.0	184.0	120.0	179	0.0	184.0	150.0
180	0.0	184.0	180.0	181	0.0	184.0	210.0	182	0.0	184.0	240.0
183	0.0	184.0	270.0	184	0.0	184.0	300.0	185	0.0	230.0	30.0
186	0.0	230.0	0.0	187	0.0	230.0	60.0	188	0.0	230.0	90.0
189	0.0	230.0	120.0	190	0.0	230.0	150.0	191	0.0	230.0	180.0
192	0.0	230.0	210.0	193	0.0	230.0	240.0	194	0.0	230.0	270.0
195	0.0	230.0	300.0	196	0.0	276.0	30.0	197	0.0	276.0	0.0
198	0.0	276.0	60.0	199	0.0	276.0	90.0	200	0.0	276.0	120.0
201	0.0	276.0	150.0	202	0.0	276.0	180.0	203	0.0	276.0	210.0
204	0.0	276.0	240.0	205	0.0	276.0	270.0	206	0.0	276.0	300.0
207	0.0	322.0	30.0	208	0.0	322.0	0.0	209	0.0	322.0	60.0
210	0.0	322.0	90.0	211	0.0	322.0	120.0	212	0.0	322.0	150.0
213	0.0	322.0	180.0	214	0.0	322.0	210.0	215	0.0	322.0	240.0
216	0.0	322.0	270.0	217	0.0	322.0	300.0	218	0.0	368.0	30.0
219	0.0	368.0	0.0	220	0.0	368.0	60.0	221	0.0	368.0	90.0
222	0.0	368.0	120.0	223	0.0	368.0	150.0	224	0.0	368.0	180.0
225	0.0	368.0	210.0	226	0.0	368.0	240.0	227	0.0	368.0	270.0
228	0.0	368.0	300.0	229	0.0	414.0	30.0	230	0.0	414.0	0.0
231	0.0	414.0	60.0	232	0.0	414.0	90.0	233	0.0	414.0	120.0
234	0.0	414.0	150.0	235	0.0	414.0	180.0	236	0.0	414.0	210.0
237	0.0	414.0	240.0	238	0.0	414.0	270.0	239	0.0	414.0	300.0
240	0.0	460.0	30.0	241	0.0	460.0	60.0	242	0.0	460.0	90.0
243	0.0	460.0	120.0	244	0.0	460.0	150.0	245	0.0	460.0	180.0
246	0.0	460.0	210.0	247	0.0	460.0	240.0	248	0.0	460.0	270.0
249	0.0	460.0	15.0	250	122.0	460.0	15.0	251	122.0	460.0	0.0
252	122.0	460.0	30.0	253	0.0	460.0	45.0	254	122.0	460.0	45.0
255	122.0	460.0	60.0	256	0.0	460.0	75.0	257	122.0	460.0	75.0
258	122.0	460.0	90.0	259	0.0	460.0	105.0	260	122.0	460.0	105.0
261	122.0	460.0	120.0	262	0.0	460.0	135.0	263	122.0	460.0	135.0
264	122.0	460.0	150.0	265	0.0	460.0	165.0	266	122.0	460.0	165.0
267	122.0	460.0	180.0	268	0.0	460.0	195.0	269	122.0	460.0	195.0
270	122.0	460.0	210.0	271	0.0	460.0	225.0	272	122.0	460.0	225.0
273	122.0	460.0	240.0	274	0.0	460.0	255.0	275	122.0	460.0	255.0
276	122.0	460.0	270.0	277	0.0	460.0	285.0	278	122.0	460.0	285.0

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RELAZIONE DI CALCOLO



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279	122.0	460.0	300.0	280	244.0	460.0	15.0	281	244.0	460.0	0.0
282	244.0	460.0	30.0	283	244.0	460.0	45.0	284	244.0	460.0	60.0
285	244.0	460.0	75.0	286	244.0	460.0	90.0	287	244.0	460.0	105.0
288	244.0	460.0	120.0	289	244.0	460.0	135.0	290	244.0	460.0	150.0
291	244.0	460.0	165.0	292	244.0	460.0	180.0	293	244.0	460.0	195.0
294	244.0	460.0	210.0	295	244.0	460.0	225.0	296	244.0	460.0	240.0
297	244.0	460.0	255.0	298	244.0	460.0	270.0	299	244.0	460.0	285.0
300	244.0	460.0	300.0	301	366.0	460.0	15.0	302	366.0	460.0	0.0
303	366.0	460.0	30.0	304	366.0	460.0	45.0	305	366.0	460.0	60.0
306	366.0	460.0	75.0	307	366.0	460.0	90.0	308	366.0	460.0	105.0
309	366.0	460.0	120.0	310	366.0	460.0	135.0	311	366.0	460.0	150.0
312	366.0	460.0	165.0	313	366.0	460.0	180.0	314	366.0	460.0	195.0
315	366.0	460.0	210.0	316	366.0	460.0	225.0	317	366.0	460.0	240.0
318	366.0	460.0	255.0	319	366.0	460.0	270.0	320	366.0	460.0	285.0
321	366.0	460.0	300.0	322	488.0	460.0	15.0	323	488.0	460.0	0.0
324	488.0	460.0	30.0	325	488.0	460.0	45.0	326	488.0	460.0	60.0
327	488.0	460.0	75.0	328	488.0	460.0	90.0	329	488.0	460.0	105.0
330	488.0	460.0	120.0	331	488.0	460.0	135.0	332	488.0	460.0	150.0
333	488.0	460.0	165.0	334	488.0	460.0	180.0	335	488.0	460.0	195.0
336	488.0	460.0	210.0	337	488.0	460.0	225.0	338	488.0	460.0	240.0
339	488.0	460.0	255.0	340	488.0	460.0	270.0	341	488.0	460.0	285.0
342	488.0	460.0	300.0	343	610.0	460.0	15.0	344	610.0	460.0	0.0
345	610.0	460.0	30.0	346	610.0	460.0	45.0	347	610.0	460.0	60.0
348	610.0	460.0	75.0	349	610.0	460.0	90.0	350	610.0	460.0	105.0
351	610.0	460.0	120.0	352	610.0	460.0	135.0	353	610.0	460.0	150.0
354	610.0	460.0	165.0	355	610.0	460.0	180.0	356	610.0	460.0	195.0
357	610.0	460.0	210.0	358	610.0	460.0	225.0	359	610.0	460.0	240.0
360	610.0	460.0	255.0	361	610.0	460.0	270.0	362	610.0	460.0	285.0
363	610.0	460.0	300.0	364	732.0	460.0	15.0	365	732.0	460.0	0.0
366	732.0	460.0	30.0	367	732.0	460.0	45.0	368	732.0	460.0	60.0
369	732.0	460.0	75.0	370	732.0	460.0	90.0	371	732.0	460.0	105.0
372	732.0	460.0	120.0	373	732.0	460.0	135.0	374	732.0	460.0	150.0
375	732.0	460.0	165.0	376	732.0	460.0	180.0	377	732.0	460.0	195.0
378	732.0	460.0	210.0	379	732.0	460.0	225.0	380	732.0	460.0	240.0
381	732.0	460.0	255.0	382	732.0	460.0	270.0	383	732.0	460.0	285.0
384	732.0	460.0	300.0	385	854.0	460.0	15.0	386	854.0	460.0	0.0
388	854.0	460.0	45.0	389	854.0	460.0	60.0	390	854.0	460.0	75.0
391	854.0	460.0	90.0	392	854.0	460.0	105.0	393	854.0	460.0	120.0
394	854.0	460.0	135.0	395	854.0	460.0	150.0	396	854.0	460.0	165.0
397	854.0	460.0	180.0	398	854.0	460.0	195.0	399	854.0	460.0	210.0
400	854.0	460.0	225.0	401	854.0	460.0	240.0	402	854.0	460.0	255.0
403	854.0	460.0	270.0	404	854.0	460.0	285.0	405	854.0	460.0	300.0
406	976.0	460.0	15.0	407	976.0	460.0	0.0	408	976.0	460.0	30.0
409	976.0	460.0	45.0	410	976.0	460.0	60.0	411	976.0	460.0	75.0
412	976.0	460.0	90.0	413	976.0	460.0	105.0	414	976.0	460.0	120.0
415	976.0	460.0	135.0	416	976.0	460.0	150.0	417	976.0	460.0	165.0
418	976.0	460.0	180.0	419	976.0	460.0	195.0	420	976.0	460.0	210.0
421	976.0	460.0	225.0	422	976.0	460.0	240.0	423	976.0	460.0	255.0
424	976.0	460.0	270.0	425	976.0	460.0	285.0	426	976.0	460.0	300.0
427	1098.0	460.0	15.0	428	1098.0	460.0	0.0	429	1098.0	460.0	30.0
430	1098.0	460.0	45.0	431	1098.0	460.0	60.0	432	1098.0	460.0	75.0
433	1098.0	460.0	90.0	434	1098.0	460.0	105.0	435	1098.0	460.0	120.0
436	1098.0	460.0	135.0	437	1098.0	460.0	150.0	438	1098.0	460.0	165.0
439	1098.0	460.0	180.0	440	1098.0	460.0	195.0	441	1098.0	460.0	210.0
442	1098.0	460.0	225.0	443	1098.0	460.0	240.0	444	1098.0	460.0	255.0
445	1098.0	460.0	270.0	446	1098.0	460.0	285.0	447	1098.0	460.0	300.0
448	1220.0	460.0	15.0	449	1220.0	460.0	0.0	450	1220.0	460.0	30.0
451	1220.0	460.0	45.0	452	1220.0	460.0	60.0	453	1220.0	460.0	75.0
454	1220.0	460.0	90.0	455	1220.0	460.0	105.0	456	1220.0	460.0	120.0
457	1220.0	460.0	135.0	458	1220.0	460.0	150.0	459	1220.0	460.0	165.0
460	1220.0	460.0	180.0	461	1220.0	460.0	195.0	462	1220.0	460.0	210.0
463	1220.0	460.0	225.0	464	1220.0	460.0	240.0	465	1220.0	460.0	255.0
466	1220.0	460.0	270.0	467	1220.0	460.0	285.0	468	1220.0	460.0	300.0
469	1342.0	460.0	15.0	470	1342.0	460.0	0.0	471	1342.0	460.0	30.0
472	1342.0	460.0	45.0	473	1342.0	460.0	60.0	474	1342.0	460.0	75.0
475	1342.0	460.0	90.0	476	1342.0	460.0	105.0	477	1342.0	460.0	120.0

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Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

478	1342.0	460.0	135.0	479	1342.0	460.0	150.0	480	1342.0	460.0	165.0
481	1342.0	460.0	180.0	482	1342.0	460.0	195.0	483	1342.0	460.0	210.0
484	1342.0	460.0	225.0	485	1342.0	460.0	240.0	486	1342.0	460.0	255.0
487	1342.0	460.0	270.0	488	1342.0	460.0	285.0	489	1342.0	460.0	300.0
490	1464.0	460.0	15.0	492	1464.0	460.0	30.0	493	1464.0	460.0	45.0
494	1464.0	460.0	60.0	495	1464.0	460.0	75.0	496	1464.0	460.0	90.0
497	1464.0	460.0	105.0	498	1464.0	460.0	120.0	499	1464.0	460.0	135.0
500	1464.0	460.0	150.0	501	1464.0	460.0	165.0	502	1464.0	460.0	180.0
503	1464.0	460.0	195.0	504	1464.0	460.0	210.0	505	1464.0	460.0	225.0
506	1464.0	460.0	240.0	507	1464.0	460.0	255.0	508	1464.0	460.0	270.0
509	1464.0	460.0	285.0	510	1464.0	460.0	300.0	511	1586.0	460.0	15.0
512	1586.0	460.0	0.0	513	1586.0	460.0	30.0	514	1586.0	460.0	45.0
515	1586.0	460.0	60.0	516	1586.0	460.0	75.0	517	1586.0	460.0	90.0
518	1586.0	460.0	105.0	519	1586.0	460.0	120.0	520	1586.0	460.0	135.0
521	1586.0	460.0	150.0	522	1586.0	460.0	165.0	523	1586.0	460.0	180.0
524	1586.0	460.0	195.0	525	1586.0	460.0	210.0	526	1586.0	460.0	225.0
527	1586.0	460.0	240.0	528	1586.0	460.0	255.0	529	1586.0	460.0	270.0
530	1586.0	460.0	285.0	531	1586.0	460.0	300.0	532	1708.0	460.0	15.0
533	1708.0	460.0	0.0	534	1708.0	460.0	30.0	535	1708.0	460.0	45.0
536	1708.0	460.0	60.0	537	1708.0	460.0	75.0	538	1708.0	460.0	90.0
539	1708.0	460.0	105.0	540	1708.0	460.0	120.0	541	1708.0	460.0	135.0
542	1708.0	460.0	150.0	543	1708.0	460.0	165.0	544	1708.0	460.0	180.0
545	1708.0	460.0	195.0	546	1708.0	460.0	210.0	547	1708.0	460.0	225.0
548	1708.0	460.0	240.0	549	1708.0	460.0	255.0	550	1708.0	460.0	270.0
551	1708.0	460.0	285.0	552	1708.0	460.0	300.0	553	1830.0	460.0	15.0
554	1830.0	460.0	0.0	555	1830.0	460.0	30.0	556	1830.0	460.0	45.0
557	1830.0	460.0	60.0	558	1830.0	460.0	75.0	559	1830.0	460.0	90.0
560	1830.0	460.0	105.0	561	1830.0	460.0	120.0	562	1830.0	460.0	135.0
563	1830.0	460.0	150.0	564	1830.0	460.0	165.0	565	1830.0	460.0	180.0
566	1830.0	460.0	195.0	567	1830.0	460.0	210.0	568	1830.0	460.0	225.0
569	1830.0	460.0	240.0	570	1830.0	460.0	255.0	571	1830.0	460.0	270.0
572	1830.0	460.0	285.0	573	1830.0	460.0	300.0	574	1952.0	460.0	15.0
576	1952.0	460.0	30.0	577	1952.0	460.0	45.0	578	1952.0	460.0	60.0
579	1952.0	460.0	75.0	580	1952.0	460.0	90.0	581	1952.0	460.0	105.0
582	1952.0	460.0	120.0	583	1952.0	460.0	135.0	584	1952.0	460.0	150.0
585	1952.0	460.0	165.0	586	1952.0	460.0	180.0	587	1952.0	460.0	195.0
588	1952.0	460.0	210.0	589	1952.0	460.0	225.0	590	1952.0	460.0	240.0
591	1952.0	460.0	255.0	592	1952.0	460.0	270.0	593	1952.0	460.0	285.0
594	1952.0	460.0	300.0	595	2074.0	460.0	15.0	596	2074.0	460.0	0.0
597	2074.0	460.0	30.0	598	2074.0	460.0	45.0	599	2074.0	460.0	60.0
600	2074.0	460.0	75.0	601	2074.0	460.0	90.0	602	2074.0	460.0	105.0
603	2074.0	460.0	120.0	604	2074.0	460.0	135.0	605	2074.0	460.0	150.0
606	2074.0	460.0	165.0	607	2074.0	460.0	180.0	608	2074.0	460.0	195.0
609	2074.0	460.0	210.0	610	2074.0	460.0	225.0	611	2074.0	460.0	240.0
612	2074.0	460.0	255.0	613	2074.0	460.0	270.0	614	2074.0	460.0	285.0
615	2074.0	460.0	300.0	616	2196.0	460.0	15.0	617	2196.0	460.0	0.0
618	2196.0	460.0	30.0	619	2196.0	460.0	45.0	620	2196.0	460.0	60.0
621	2196.0	460.0	75.0	622	2196.0	460.0	90.0	623	2196.0	460.0	105.0
624	2196.0	460.0	120.0	625	2196.0	460.0	135.0	626	2196.0	460.0	150.0
627	2196.0	460.0	165.0	628	2196.0	460.0	180.0	629	2196.0	460.0	195.0
630	2196.0	460.0	210.0	631	2196.0	460.0	225.0	632	2196.0	460.0	240.0
633	2196.0	460.0	255.0	634	2196.0	460.0	270.0	635	2196.0	460.0	285.0
636	2196.0	460.0	300.0	637	2318.0	460.0	15.0	638	2318.0	460.0	0.0
639	2318.0	460.0	30.0	640	2318.0	460.0	45.0	641	2318.0	460.0	60.0
642	2318.0	460.0	75.0	643	2318.0	460.0	90.0	644	2318.0	460.0	105.0
645	2318.0	460.0	120.0	646	2318.0	460.0	135.0	647	2318.0	460.0	150.0
648	2318.0	460.0	165.0	649	2318.0	460.0	180.0	650	2318.0	460.0	195.0
651	2318.0	460.0	210.0	652	2318.0	460.0	225.0	653	2318.0	460.0	240.0
654	2318.0	460.0	255.0	655	2318.0	460.0	270.0	656	2318.0	460.0	285.0
657	2318.0	460.0	300.0	658	2440.0	460.0	15.0	659	2440.0	460.0	30.0
660	2440.0	460.0	45.0	661	2440.0	460.0	60.0	662	2440.0	460.0	75.0
663	2440.0	460.0	90.0	664	2440.0	460.0	105.0	665	2440.0	460.0	120.0
666	2440.0	460.0	135.0	667	2440.0	460.0	150.0	668	2440.0	460.0	165.0
669	2440.0	460.0	180.0	670	2440.0	460.0	195.0	671	2440.0	460.0	210.0
672	2440.0	460.0	225.0	673	2440.0	460.0	240.0	674	2440.0	460.0	255.0
675	2440.0	460.0	270.0	676	2440.0	460.0	285.0	677	2440.0	0.0	15.0

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

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678	2318.0	0.0	15.0	679	2318.0	0.0	0.0	680	2440.0	0.0	30.0
681	2318.0	0.0	30.0	682	2440.0	0.0	45.0	683	2318.0	0.0	45.0
684	2440.0	0.0	60.0	685	2318.0	0.0	60.0	686	2440.0	0.0	75.0
687	2318.0	0.0	75.0	688	2440.0	0.0	90.0	689	2318.0	0.0	90.0
690	2440.0	0.0	105.0	691	2318.0	0.0	105.0	692	2440.0	0.0	120.0
693	2318.0	0.0	120.0	694	2440.0	0.0	135.0	695	2318.0	0.0	135.0
696	2318.0	0.0	150.0	697	2440.0	0.0	165.0	698	2318.0	0.0	165.0
699	2440.0	0.0	180.0	700	2318.0	0.0	180.0	701	2440.0	0.0	195.0
702	2318.0	0.0	195.0	703	2440.0	0.0	210.0	704	2318.0	0.0	210.0
705	2440.0	0.0	225.0	706	2318.0	0.0	225.0	707	2440.0	0.0	240.0
708	2318.0	0.0	240.0	709	2440.0	0.0	255.0	710	2318.0	0.0	255.0
711	2440.0	0.0	270.0	712	2318.0	0.0	270.0	713	2440.0	0.0	285.0
714	2318.0	0.0	285.0	715	2318.0	0.0	300.0	716	2196.0	0.0	15.0
717	2196.0	0.0	0.0	718	2196.0	0.0	30.0	719	2196.0	0.0	45.0
720	2196.0	0.0	60.0	721	2196.0	0.0	75.0	722	2196.0	0.0	90.0
723	2196.0	0.0	105.0	724	2196.0	0.0	120.0	725	2196.0	0.0	135.0
726	2196.0	0.0	150.0	727	2196.0	0.0	165.0	728	2196.0	0.0	180.0
729	2196.0	0.0	195.0	730	2196.0	0.0	210.0	731	2196.0	0.0	225.0
732	2196.0	0.0	240.0	733	2196.0	0.0	255.0	734	2196.0	0.0	270.0
735	2196.0	0.0	285.0	736	2196.0	0.0	300.0	737	2074.0	0.0	15.0
738	2074.0	0.0	0.0	739	2074.0	0.0	30.0	740	2074.0	0.0	45.0
741	2074.0	0.0	60.0	742	2074.0	0.0	75.0	743	2074.0	0.0	90.0
744	2074.0	0.0	105.0	745	2074.0	0.0	120.0	746	2074.0	0.0	135.0
747	2074.0	0.0	150.0	748	2074.0	0.0	165.0	749	2074.0	0.0	180.0
750	2074.0	0.0	195.0	751	2074.0	0.0	210.0	752	2074.0	0.0	225.0
753	2074.0	0.0	240.0	754	2074.0	0.0	255.0	755	2074.0	0.0	270.0
756	2074.0	0.0	285.0	757	2074.0	0.0	300.0	758	1952.0	0.0	15.0
760	1952.0	0.0	30.0	761	1952.0	0.0	45.0	762	1952.0	0.0	60.0
763	1952.0	0.0	75.0	764	1952.0	0.0	90.0	765	1952.0	0.0	105.0
766	1952.0	0.0	120.0	767	1952.0	0.0	135.0	768	1952.0	0.0	150.0
769	1952.0	0.0	165.0	770	1952.0	0.0	180.0	771	1952.0	0.0	195.0
772	1952.0	0.0	210.0	773	1952.0	0.0	225.0	774	1952.0	0.0	240.0
775	1952.0	0.0	255.0	776	1952.0	0.0	270.0	777	1952.0	0.0	285.0
778	1952.0	0.0	300.0	779	1830.0	0.0	15.0	780	1830.0	0.0	0.0
781	1830.0	0.0	30.0	782	1830.0	0.0	45.0	783	1830.0	0.0	60.0
784	1830.0	0.0	75.0	785	1830.0	0.0	90.0	786	1830.0	0.0	105.0
787	1830.0	0.0	120.0	788	1830.0	0.0	135.0	789	1830.0	0.0	150.0
790	1830.0	0.0	165.0	791	1830.0	0.0	180.0	792	1830.0	0.0	195.0
793	1830.0	0.0	210.0	794	1830.0	0.0	225.0	795	1830.0	0.0	240.0
796	1830.0	0.0	255.0	797	1830.0	0.0	270.0	798	1830.0	0.0	285.0
799	1830.0	0.0	300.0	800	1708.0	0.0	15.0	801	1708.0	0.0	0.0
802	1708.0	0.0	30.0	803	1708.0	0.0	45.0	804	1708.0	0.0	60.0
805	1708.0	0.0	75.0	806	1708.0	0.0	90.0	807	1708.0	0.0	105.0
808	1708.0	0.0	120.0	809	1708.0	0.0	135.0	810	1708.0	0.0	150.0
811	1708.0	0.0	165.0	812	1708.0	0.0	180.0	813	1708.0	0.0	195.0
814	1708.0	0.0	210.0	815	1708.0	0.0	225.0	816	1708.0	0.0	240.0
817	1708.0	0.0	255.0	818	1708.0	0.0	270.0	819	1708.0	0.0	285.0
820	1708.0	0.0	300.0	821	1586.0	0.0	15.0	822	1586.0	0.0	0.0
823	1586.0	0.0	30.0	824	1586.0	0.0	45.0	825	1586.0	0.0	60.0
826	1586.0	0.0	75.0	827	1586.0	0.0	90.0	828	1586.0	0.0	105.0
829	1586.0	0.0	120.0	830	1586.0	0.0	135.0	831	1586.0	0.0	150.0
832	1586.0	0.0	165.0	833	1586.0	0.0	180.0	834	1586.0	0.0	195.0
835	1586.0	0.0	210.0	836	1586.0	0.0	225.0	837	1586.0	0.0	240.0
838	1586.0	0.0	255.0	839	1586.0	0.0	270.0	840	1586.0	0.0	285.0
841	1586.0	0.0	300.0	842	1464.0	0.0	15.0	843	1464.0	0.0	0.0
844	1464.0	0.0	30.0	845	1464.0	0.0	45.0	846	1464.0	0.0	60.0
847	1464.0	0.0	75.0	848	1464.0	0.0	90.0	849	1464.0	0.0	105.0
850	1464.0	0.0	120.0	851	1464.0	0.0	135.0	852	1464.0	0.0	150.0
853	1464.0	0.0	165.0	854	1464.0	0.0	180.0	855	1464.0	0.0	195.0
856	1464.0	0.0	210.0	857	1464.0	0.0	225.0	858	1464.0	0.0	240.0
859	1464.0	0.0	255.0	860	1464.0	0.0	270.0	861	1464.0	0.0	285.0
862	1464.0	0.0	300.0	863	1342.0	0.0	15.0	864	1342.0	0.0	0.0
865	1342.0	0.0	30.0	866	1342.0	0.0	45.0	867	1342.0	0.0	60.0
868	1342.0	0.0	75.0	869	1342.0	0.0	90.0	870	1342.0	0.0	105.0
871	1342.0	0.0	120.0	872	1342.0	0.0	135.0	873	1342.0	0.0	150.0
874	1342.0	0.0	165.0	875	1342.0	0.0	180.0	876	1342.0	0.0	195.0

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

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- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

877	1342.0	0.0	210.0	878	1342.0	0.0	225.0	879	1342.0	0.0	240.0
880	1342.0	0.0	255.0	881	1342.0	0.0	270.0	882	1342.0	0.0	285.0
883	1342.0	0.0	300.0	884	1220.0	0.0	15.0	886	1220.0	0.0	30.0
887	1220.0	0.0	45.0	888	1220.0	0.0	60.0	889	1220.0	0.0	75.0
890	1220.0	0.0	90.0	891	1220.0	0.0	105.0	892	1220.0	0.0	120.0
893	1220.0	0.0	135.0	894	1220.0	0.0	150.0	895	1220.0	0.0	165.0
896	1220.0	0.0	180.0	897	1220.0	0.0	195.0	898	1220.0	0.0	210.0
899	1220.0	0.0	225.0	900	1220.0	0.0	240.0	901	1220.0	0.0	255.0
902	1220.0	0.0	270.0	903	1220.0	0.0	285.0	904	1098.0	0.0	15.0
905	1098.0	0.0	0.0	906	1098.0	0.0	30.0	907	1098.0	0.0	45.0
908	1098.0	0.0	60.0	909	1098.0	0.0	75.0	910	1098.0	0.0	90.0
911	1098.0	0.0	105.0	912	1098.0	0.0	120.0	913	1098.0	0.0	135.0
914	1098.0	0.0	150.0	915	1098.0	0.0	165.0	916	1098.0	0.0	180.0
917	1098.0	0.0	195.0	918	1098.0	0.0	210.0	919	1098.0	0.0	225.0
920	1098.0	0.0	240.0	921	1098.0	0.0	255.0	922	1098.0	0.0	270.0
923	1098.0	0.0	285.0	924	1098.0	0.0	300.0	925	976.0	0.0	15.0
926	976.0	0.0	0.0	927	976.0	0.0	30.0	928	976.0	0.0	45.0
929	976.0	0.0	60.0	930	976.0	0.0	75.0	931	976.0	0.0	90.0
932	976.0	0.0	105.0	933	976.0	0.0	120.0	934	976.0	0.0	135.0
935	976.0	0.0	150.0	936	976.0	0.0	165.0	937	976.0	0.0	180.0
938	976.0	0.0	195.0	939	976.0	0.0	210.0	940	976.0	0.0	225.0
941	976.0	0.0	240.0	942	976.0	0.0	255.0	943	976.0	0.0	270.0
944	976.0	0.0	285.0	945	976.0	0.0	300.0	946	854.0	0.0	15.0
947	854.0	0.0	0.0	948	854.0	0.0	30.0	949	854.0	0.0	45.0
950	854.0	0.0	60.0	951	854.0	0.0	75.0	952	854.0	0.0	90.0
953	854.0	0.0	105.0	954	854.0	0.0	120.0	955	854.0	0.0	135.0
956	854.0	0.0	150.0	957	854.0	0.0	165.0	958	854.0	0.0	180.0
959	854.0	0.0	195.0	960	854.0	0.0	210.0	961	854.0	0.0	225.0
962	854.0	0.0	240.0	963	854.0	0.0	255.0	964	854.0	0.0	270.0
965	854.0	0.0	285.0	966	854.0	0.0	300.0	967	732.0	0.0	15.0
969	732.0	0.0	30.0	970	732.0	0.0	45.0	971	732.0	0.0	60.0
972	732.0	0.0	75.0	973	732.0	0.0	90.0	974	732.0	0.0	105.0
975	732.0	0.0	120.0	976	732.0	0.0	135.0	977	732.0	0.0	150.0
978	732.0	0.0	165.0	979	732.0	0.0	180.0	980	732.0	0.0	195.0
981	732.0	0.0	210.0	982	732.0	0.0	225.0	983	732.0	0.0	240.0
984	732.0	0.0	255.0	985	732.0	0.0	270.0	986	732.0	0.0	285.0
987	732.0	0.0	300.0	988	610.0	0.0	15.0	989	610.0	0.0	0.0
990	610.0	0.0	30.0	991	610.0	0.0	45.0	992	610.0	0.0	60.0
993	610.0	0.0	75.0	994	610.0	0.0	90.0	995	610.0	0.0	105.0
996	610.0	0.0	120.0	997	610.0	0.0	135.0	998	610.0	0.0	150.0
999	610.0	0.0	165.0	1000	610.0	0.0	180.0	1001	610.0	0.0	195.0
1002	610.0	0.0	210.0	1003	610.0	0.0	225.0	1004	610.0	0.0	240.0
1005	610.0	0.0	255.0	1006	610.0	0.0	270.0	1007	610.0	0.0	285.0
1008	610.0	0.0	300.0	1009	488.0	0.0	15.0	1010	488.0	0.0	0.0
1011	488.0	0.0	30.0	1012	488.0	0.0	45.0	1013	488.0	0.0	60.0
1014	488.0	0.0	75.0	1015	488.0	0.0	90.0	1016	488.0	0.0	105.0
1017	488.0	0.0	120.0	1018	488.0	0.0	135.0	1019	488.0	0.0	150.0
1020	488.0	0.0	165.0	1021	488.0	0.0	180.0	1022	488.0	0.0	195.0
1023	488.0	0.0	210.0	1024	488.0	0.0	225.0	1025	488.0	0.0	240.0
1026	488.0	0.0	255.0	1027	488.0	0.0	270.0	1028	488.0	0.0	285.0
1029	488.0	0.0	300.0	1030	366.0	0.0	15.0	1031	366.0	0.0	0.0
1032	366.0	0.0	30.0	1033	366.0	0.0	45.0	1034	366.0	0.0	60.0
1035	366.0	0.0	75.0	1036	366.0	0.0	90.0	1037	366.0	0.0	105.0
1038	366.0	0.0	120.0	1039	366.0	0.0	135.0	1040	366.0	0.0	150.0
1041	366.0	0.0	165.0	1042	366.0	0.0	180.0	1043	366.0	0.0	195.0
1044	366.0	0.0	210.0	1045	366.0	0.0	225.0	1046	366.0	0.0	240.0
1047	366.0	0.0	255.0	1048	366.0	0.0	270.0	1049	366.0	0.0	285.0
1050	366.0	0.0	300.0	1051	244.0	0.0	15.0	1052	244.0	0.0	0.0
1053	244.0	0.0	30.0	1054	244.0	0.0	45.0	1055	244.0	0.0	60.0
1056	244.0	0.0	75.0	1057	244.0	0.0	90.0	1058	244.0	0.0	105.0
1059	244.0	0.0	120.0	1060	244.0	0.0	135.0	1061	244.0	0.0	150.0
1062	244.0	0.0	165.0	1063	244.0	0.0	180.0	1064	244.0	0.0	195.0
1065	244.0	0.0	210.0	1066	244.0	0.0	225.0	1067	244.0	0.0	240.0
1068	244.0	0.0	255.0	1069	244.0	0.0	270.0	1070	244.0	0.0	285.0
1071	244.0	0.0	300.0	1072	122.0	0.0	15.0	1073	122.0	0.0	0.0
1074	122.0	0.0	30.0	1075	122.0	0.0	45.0	1076	122.0	0.0	60.0

PROJETTO engineering s.r.l.

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Partita Iva : 02658050733

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Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO /IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

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1077	122.0	0.0	75.0	1078	122.0	0.0	90.0	1079	122.0	0.0	105.0
1080	122.0	0.0	120.0	1081	122.0	0.0	135.0	1082	122.0	0.0	150.0
1083	122.0	0.0	165.0	1084	122.0	0.0	180.0	1085	122.0	0.0	195.0
1086	122.0	0.0	210.0	1087	122.0	0.0	225.0	1088	122.0	0.0	240.0
1089	122.0	0.0	255.0	1090	122.0	0.0	270.0	1091	122.0	0.0	285.0
1092	122.0	0.0	300.0	1093	0.0	0.0	15.0	1094	0.0	0.0	45.0
1095	0.0	0.0	75.0	1096	0.0	0.0	105.0	1097	0.0	0.0	135.0
1098	0.0	0.0	165.0	1099	0.0	0.0	195.0	1100	0.0	0.0	225.0
1101	0.0	0.0	255.0	1102	0.0	0.0	285.0	1103	2440.0	414.0	30.0
1104	2440.0	414.0	0.0	1105	2440.0	414.0	60.0	1106	2440.0	414.0	90.0
1107	2440.0	414.0	120.0	1108	2440.0	414.0	150.0	1109	2440.0	414.0	180.0
1110	2440.0	414.0	210.0	1111	2440.0	414.0	240.0	1112	2440.0	414.0	270.0
1113	2440.0	414.0	300.0	1114	2440.0	368.0	30.0	1115	2440.0	368.0	0.0
1116	2440.0	368.0	60.0	1117	2440.0	368.0	90.0	1118	2440.0	368.0	120.0
1119	2440.0	368.0	150.0	1120	2440.0	368.0	180.0	1121	2440.0	368.0	210.0
1122	2440.0	368.0	240.0	1123	2440.0	368.0	270.0	1124	2440.0	368.0	300.0
1125	2440.0	322.0	30.0	1126	2440.0	322.0	0.0	1127	2440.0	322.0	60.0
1128	2440.0	322.0	90.0	1129	2440.0	322.0	120.0	1130	2440.0	322.0	150.0
1131	2440.0	322.0	180.0	1132	2440.0	322.0	210.0	1133	2440.0	322.0	240.0
1134	2440.0	322.0	270.0	1135	2440.0	322.0	300.0	1136	2440.0	276.0	30.0
1137	2440.0	276.0	0.0	1138	2440.0	276.0	60.0	1139	2440.0	276.0	90.0
1140	2440.0	276.0	120.0	1141	2440.0	276.0	150.0	1142	2440.0	276.0	180.0
1143	2440.0	276.0	210.0	1144	2440.0	276.0	240.0	1145	2440.0	276.0	270.0
1146	2440.0	276.0	300.0	1147	2440.0	230.0	30.0	1148	2440.0	230.0	0.0
1149	2440.0	230.0	60.0	1150	2440.0	230.0	90.0	1151	2440.0	230.0	120.0
1152	2440.0	230.0	150.0	1153	2440.0	230.0	180.0	1154	2440.0	230.0	210.0
1155	2440.0	230.0	240.0	1156	2440.0	230.0	270.0	1157	2440.0	184.0	30.0
1158	2440.0	184.0	0.0	1159	2440.0	184.0	60.0	1160	2440.0	184.0	90.0
1161	2440.0	184.0	120.0	1162	2440.0	184.0	150.0	1163	2440.0	184.0	180.0
1164	2440.0	184.0	210.0	1165	2440.0	184.0	240.0	1166	2440.0	184.0	270.0
1167	2440.0	184.0	300.0	1168	2440.0	138.0	30.0	1169	2440.0	138.0	0.0
1170	2440.0	138.0	60.0	1171	2440.0	138.0	90.0	1172	2440.0	138.0	120.0
1173	2440.0	138.0	150.0	1174	2440.0	138.0	180.0	1175	2440.0	138.0	210.0
1176	2440.0	138.0	240.0	1177	2440.0	138.0	270.0	1178	2440.0	138.0	300.0
1179	2440.0	92.0	30.0	1180	2440.0	92.0	0.0	1181	2440.0	92.0	60.0
1182	2440.0	460.0	247.5								

Nodo	X	Y	Z	Note	Rig. TX	Rig. TY	Rig. TZ	Rig. RX	Rig. RY	Rig. RZ
	cm	cm	cm		daN/cm	daN/cm	daN/cm	daN cm/rad	daN cm/rad	daN cm/rad
1	0.0	0.0	0.0	FS=1						
29	800.0	1279.8	0.0	FS=4						
100	3600.0	213.3	0.0	FS=5						
102	3600.0	426.6	0.0	FS=5						
103	3600.0	639.9	0.0	FS=5						
123	0.0	460.0	0.0	FS=1						
125	2440.0	0.0	0.0	FS=1						
127	2440.0	460.0	0.0	FS=1						
387	854.0	460.0	30.0	FS=1						
491	1464.0	460.0	0.0	FS=1						
575	1952.0	460.0	0.0	FS=1						
759	1952.0	0.0	0.0	FS=1						
885	1220.0	0.0	0.0	FS=1						
968	732.0	0.0	0.0	FS=1						

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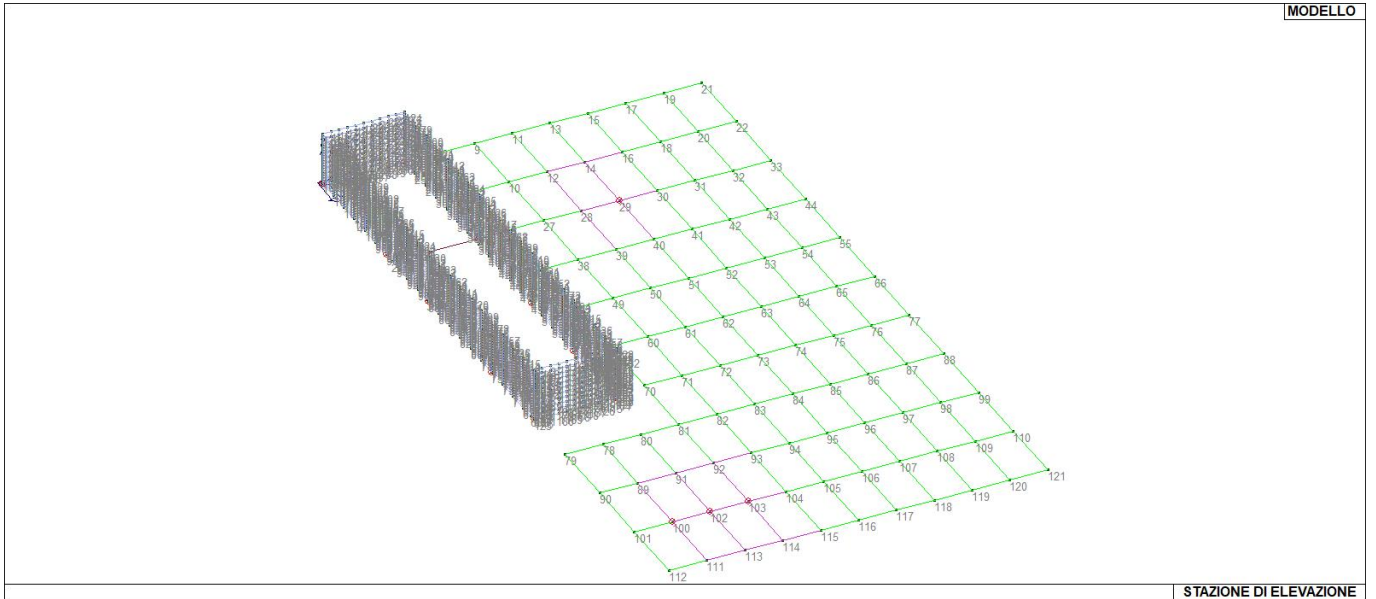
RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

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14_MOD_NUMERAZIONE_NODI

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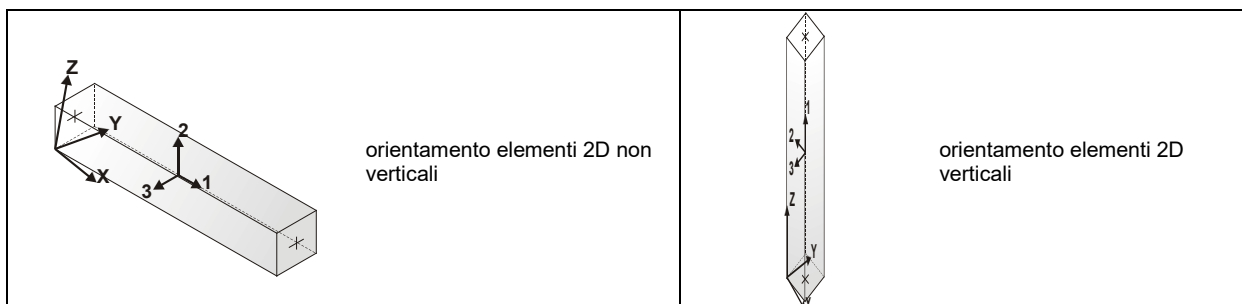
MODELLAZIONE STRUTTURA: ELEMENTI TRAVE

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:

Elem.	numero dell'elemento
Note	codice di comportamento: trave, trave di fondazione, pilastro, asta, asta tesa, asta compressa,
Nodo I (J)	numero del nodo iniziale (finale)
Mat.	codice del materiale assegnato all'elemento
Sez.	codice della sezione assegnata all'elemento
Rotaz.	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
Svincolo I (J)	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)
Wink V	costante di sottofondo (coefficiente di Winkler) per la modellazione della trave su suolo elastico
Wink O	costante di sottofondo (coefficiente di Winkler) per la modellazione del suolo elastico orizzontale

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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, 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. Svincolo I Svincolo J Wink V Wink O

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						gradi	daN/cm3	daN/cm3
1	Pilas.	758	760	110	1			
2	Pilas.	899	900	1	1			
3	Trave	615	636	1	1			
4	Pilas.	900	901	1	1			
5	Pilas.	574	576	110	1			
6	Trave	124	279	1	1			
7	Trave	122	151	1	1			
8	Trave	126	156	1	1			
9	Trave	1167	129	158	1			
10	Trave	594	615	1	1			
11	Pilas.	506	507	1	1			
12	Pilas.	505	506	1	1			
13	Pilas.	401	402	1	1			
14	Pilas.	589	590	1	1			
15	Pilas.	590	591	1	1			
16	Pilas.	775	776	1	1			
17	Pilas.	491	490	110	1			
18	Pilas.	759	758	110	1			
19	Pilas.	575	574	110	1			
20	Pilas.	773	774	1	1			
21	Trave	715	126	1	1			
22	Pilas.	984	985	1	1			
23	Pilas.	983	984	1	1			
24	Trave	924	130	1	1			
25	Trave	279	300	1	1			
26	Trave	151	162	1	1			
27	Trave	1113	128	1	1			
28	Pilas.	901	902	1	1			
29	Trave	1124	1113	158	1			
30	Pilas.	774	775	1	1			
31	Pilas.	400	401	1	1			
32	Pilas.	490	492	110	1			
33	Trave	122	1092	1	1			
34	Pilas.	507	508	1	1			
35	Pilas.	402	403	1	1			
36	Pilas.	591	592	1	1			
37	Pilas.	968	967	1	1			
38	Pilas.	885	884	1	1			
39	Trave	636	657	1	1			
40	Pilas.	985	986	1	1			
41	Pilas.	386	385	1	1			
42	Pilas.	902	903	1	1			
43	Trave	130	883	1	1			
44	Pilas.	776	777	1	1			
45	Trave	3	1178	1	1			
46	Pilas.	508	509	1	1			
47	Pilas.	967	969	1	1			
48	Pilas.	884	886	1	1			
49	Pilas.	403	404	1	1			
50	Pilas.	592	593	1	1			
51	Pilas.	385	387	1	1			
52	Trave	657	128	1	1			
53	Pilas.	986	987	1	1			
54	Trave	156	3	1	1			
55	Pilas.	903	130	1	1			
56	Trave	300	321	1	1			
57	Trave	129	1146	1	1			
58	Trave	162	173	1	1			
59	Pilas.	969	970	1	1			
60	Pilas.	886	887	1	1			
61	Pilas.	760	761	1	1			
62	Pilas.	492	493	1	1			
63	Pilas.	387	388	1	1			
64	Pilas.	576	577	1	1			
65	Trave	945	924	1	1			

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66	Trave	736	715	1	1
67	Pilas.	777	778	1	1
68	Trave	321	342	1	1
69	Pilas.	509	510	1	1
70	Trave	173	184	1	1
71	Pilas.	970	971	1	1
72	Pilas.	887	888	1	1
73	Pilas.	761	762	1	1
74	Pilas.	493	494	1	1
75	Pilas.	388	389	1	1
76	Pilas.	577	578	1	1
77	Trave	966	945	1	1
78	Trave	757	736	1	1
79	Trave	1178	1167	1	1
80	Pilas.	404	405	1	1
81	Trave	342	363	1	1
82	Trave	184	195	1	1
83	Pilas.	971	972	1	1
84	Pilas.	888	889	1	1
85	Pilas.	762	763	1	1
86	Pilas.	494	495	1	1
87	Pilas.	389	390	1	1
88	Pilas.	578	579	1	1
89	Trave	987	966	1	1
90	Trave	778	757	1	1
91	Trave	1135	1124	1	1
92	Trave	363	384	1	1
93	Trave	195	206	1	1
94	Pilas.	972	973	1	1
95	Pilas.	889	890	1	1
96	Pilas.	763	764	1	1
97	Pilas.	495	496	1	1
98	Pilas.	390	391	1	1
99	Pilas.	579	580	1	1
100	Trave	1008	987	1	1
101	Trave	799	778	1	1
102	Trave	1146	1135	1	1
103	Trave	384	405	1	1
104	Trave	206	217	1	1
105	Pilas.	973	974	1	1
106	Pilas.	890	891	1	1
107	Pilas.	764	765	1	1
108	Pilas.	496	497	1	1
109	Pilas.	391	392	1	1
110	Pilas.	580	581	1	1
111	Trave	1029	1008	1	1
112	Trave	820	799	1	1
113	Trave	405	426	1	1
114	Trave	217	228	1	1
115	Pilas.	974	975	1	1
116	Pilas.	891	892	1	1
117	Pilas.	765	766	1	1
118	Pilas.	497	498	1	1
119	Pilas.	392	393	1	1
120	Pilas.	581	582	1	1
121	Trave	1050	1029	1	1
122	Trave	841	820	1	1
123	Trave	426	447	1	1
124	Trave	228	239	1	1
125	Pilas.	975	976	1	1
126	Pilas.	892	893	1	1
127	Pilas.	766	767	1	1
128	Pilas.	498	499	1	1
129	Pilas.	393	394	1	1
130	Pilas.	582	583	1	1
131	Trave	1071	1050	1	1

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Partita Iva : 02658050733

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RELAZIONE DI CALCOLO



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132	Trave	862	841	1	1
133	Trave	447	468	1	1
134	Trave	239	124	1	1
135	Pilas.	976	977	1	1
136	Pilas.	893	894	1	1
137	Pilas.	767	768	1	1
138	Pilas.	499	500	1	1
139	Pilas.	394	395	1	1
140	Pilas.	583	584	1	1
141	Trave	1092	1071	1	1
142	Trave	883	862	1	1
143	Trave	468	489	1	1
144	Pilas.	977	978	1	1
145	Pilas.	894	895	1	1
146	Pilas.	768	769	1	1
147	Pilas.	500	501	1	1
148	Pilas.	395	396	1	1
149	Pilas.	584	585	1	1
150	Trave	489	510	1	1
151	Pilas.	978	979	1	1
152	Pilas.	895	896	1	1
153	Pilas.	769	770	1	1
154	Pilas.	501	502	1	1
155	Pilas.	396	397	1	1
156	Pilas.	585	586	1	1
157	Trave	510	531	1	1
158	Pilas.	979	980	1	1
159	Pilas.	896	897	1	1
160	Pilas.	770	771	1	1
161	Pilas.	502	503	1	1
162	Pilas.	397	398	1	1
163	Pilas.	586	587	1	1
164	Trave	531	552	1	1
165	Pilas.	980	981	1	1
166	Pilas.	897	898	1	1
167	Pilas.	771	772	1	1
168	Pilas.	503	504	1	1
169	Pilas.	398	399	1	1
170	Pilas.	587	588	1	1
171	Trave	552	573	1	1
172	Pilas.	981	982	1	1
173	Pilas.	898	899	1	1
174	Pilas.	772	773	1	1
175	Pilas.	504	505	1	1
176	Pilas.	399	400	1	1
177	Pilas.	588	589	1	1
178	Trave	573	594	1	1
179	Pilas.	982	983	1	1
180	Pilas.	1	1093	1	1
181	Pilas.	123	249	1	1
182	Pilas.	125	677	1	1
183	Pilas.	127	658	1	1
184	Pilas.	131	1098	1	1
185	Pilas.	240	253	1	1
186	Pilas.	132	697	1	1
187	Pilas.	658	659	1	1
188	Pilas.	133	1094	1	1
189	Pilas.	249	240	1	1
190	Pilas.	677	680	1	1
191	Pilas.	143	1099	1	1
192	Pilas.	241	256	1	1
193	Pilas.	697	699	1	1
194	Pilas.	659	660	1	1
195	Pilas.	1093	133	1	1
196	Pilas.	1098	143	1	1
197	Pilas.	253	241	1	1

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198	Pilas.	136	1095	1	1
199	Pilas.	680	682	1	1
200	Pilas.	145	1100	1	1
201	Pilas.	242	259	1	1
202	Pilas.	699	701	1	1
203	Pilas.	660	661	1	1
204	Pilas.	1094	136	1	1
205	Pilas.	1099	145	1	1
206	Pilas.	256	242	1	1
207	Pilas.	138	1096	1	1
208	Pilas.	682	684	1	1
209	Pilas.	147	1101	1	1
210	Pilas.	243	262	1	1
211	Pilas.	701	703	1	1
212	Pilas.	661	662	1	1
213	Pilas.	1095	138	1	1
214	Pilas.	1100	147	1	1
215	Pilas.	259	243	1	1
216	Pilas.	140	1097	1	1
217	Pilas.	684	686	1	1
218	Pilas.	149	1102	1	1
219	Pilas.	244	265	1	1
220	Pilas.	703	705	1	1
221	Pilas.	662	663	1	1
222	Pilas.	1096	140	1	1
223	Pilas.	1101	149	1	1
224	Pilas.	262	244	1	1
225	Pilas.	1097	131	1	1
226	Pilas.	686	688	1	1
227	Pilas.	1102	122	1	1
228	Pilas.	245	268	1	1
229	Pilas.	705	707	1	1
230	Pilas.	663	664	1	1
231	Pilas.	265	245	1	1
232	Pilas.	688	690	1	1
233	Pilas.	246	271	1	1
234	Pilas.	707	709	1	1
235	Pilas.	664	665	1	1
236	Pilas.	268	246	1	1
237	Pilas.	690	692	1	1
238	Pilas.	247	274	1	1
239	Pilas.	709	711	1	1
240	Pilas.	665	666	1	1
241	Pilas.	271	247	1	1
242	Pilas.	692	694	1	1
243	Pilas.	248	277	1	1
244	Pilas.	711	713	1	1
245	Pilas.	666	667	1	1
246	Pilas.	274	248	1	1
247	Pilas.	694	132	1	1
248	Pilas.	277	124	1	1
249	Pilas.	713	126	1	1
250	Pilas.	667	668	1	1
251	Pilas.	668	669	1	1
252	Pilas.	669	670	1	1
253	Pilas.	670	671	1	1
254	Pilas.	1182	674	1	1
255	Pilas.	671	672	1	1
256	Pilas.	674	675	1	1
257	Pilas.	672	673	1	1
258	Pilas.	675	676	1	1
259	Pilas.	673	1182	1	1
260	Pilas.	676	128	1	1

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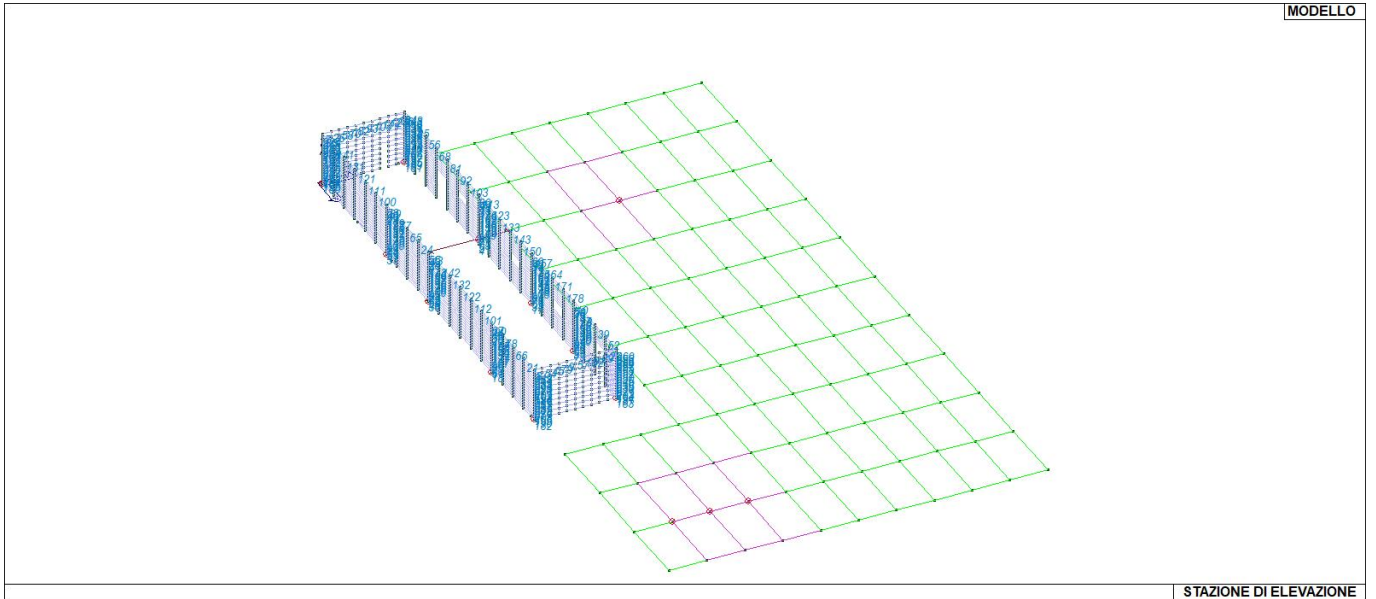
RELAZIONE DI CALCOLO



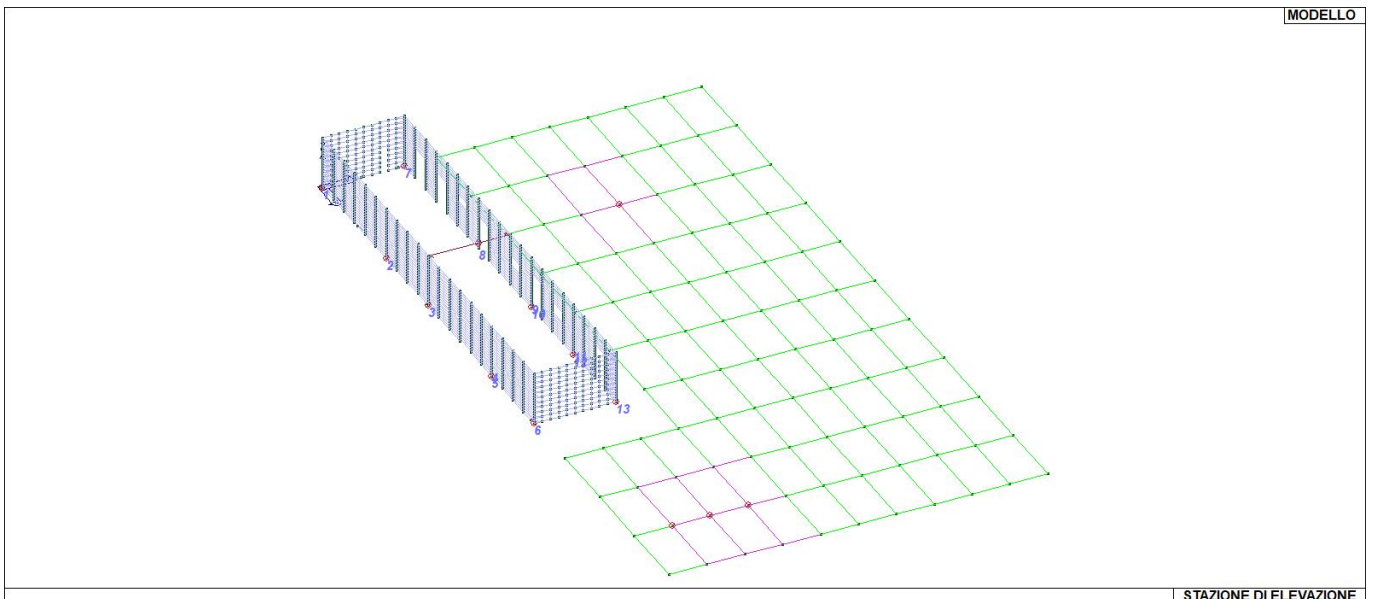
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15_MOD_NUMERAZIONE_D2



15_MOD_NUMERAZIONE_D2_PILASTRATE

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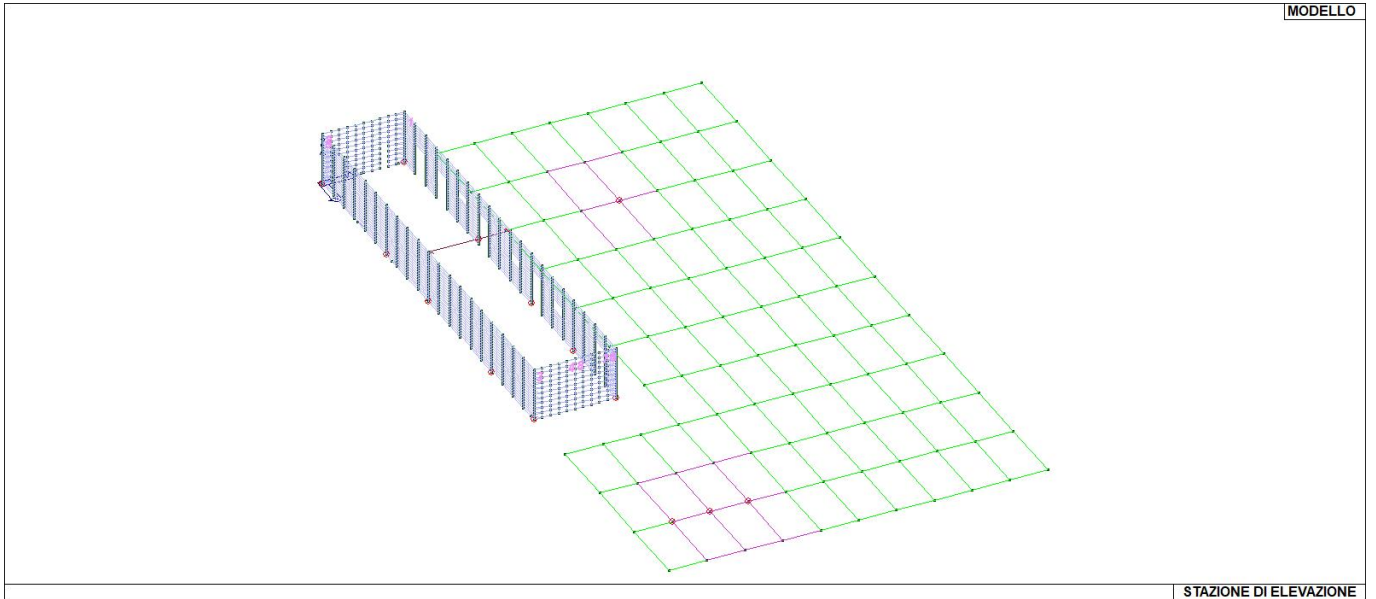
RELAZIONE DI CALCOLO



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15_MOD_NUMERAZIONE_D2_TRAVATE

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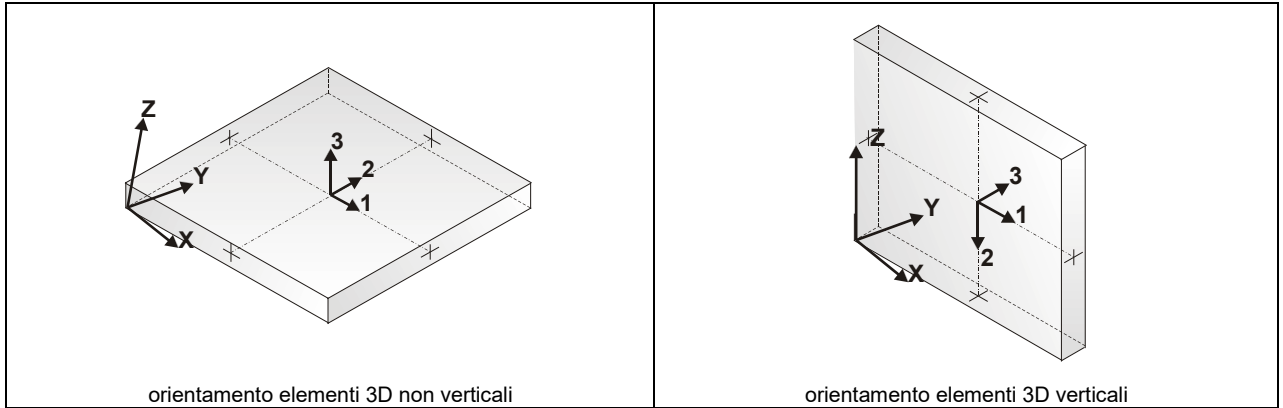
MODELLAZIONE STRUTTURA: ELEMENTI SHELL

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:

Elem.	numero dell'elemento
Note	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)
Nodo I (J, K, L)	numero del nodo I (J, K, L)
Mat.	codice del materiale assegnato all'elemento
Spessore	spessore dell'elemento (costante)
Wink V	costante di sottofondo (coefficiente di Winkler) per la modellazione del suolo elastico verticale
Wink O	costante di sottofondo (coefficiente di Winkler) per la modellazione del suolo elastico orizzontale

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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**, 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	Setto	68	677	125		110	30.0			
2	Setto	1107	664	665		110	30.0			
3	Setto	24	946	947		110	30.0			
4	Guscio fond.	7	8	10	9	1	60.0		1.00	1.00

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5	Guscio fond.	9	10	12	11	1	60.0	1.00	1.00
6	Guscio fond.	11	12	14	13	1	60.0	1.00	1.00
7	Guscio fond.	13	14	16	15	1	60.0	1.00	1.00
8	Guscio fond.	15	16	18	17	1	60.0	1.00	1.00
9	Guscio fond.	17	18	20	19	1	60.0	1.00	1.00
10	Guscio fond.	19	20	22	21	1	60.0	1.00	1.00
11	Setto	703	153	705		110	30.0		
12	Setto	125	45	677		110	30.0		
13	Setto	234	262	244		110	30.0		
14	Guscio fond.	8	26	27	10	1	60.0	1.00	1.00
15	Guscio fond.	10	27	28	12	1	60.0	1.00	1.00
16	Guscio fond.	12	28	29	14	1	80.0	1.00	1.00
17	Guscio fond.	14	29	30	16	1	80.0	1.00	1.00
18	Guscio fond.	16	30	31	18	1	60.0	1.00	1.00
19	Guscio fond.	18	31	32	20	1	60.0	1.00	1.00
20	Guscio fond.	20	32	33	22	1	60.0	1.00	1.00
21	Setto	1112	674	675		110	30.0		
22	Setto	1109	668	669		110	30.0		
23	Setto	232	256	242		110	30.0		
24	Guscio fond.	26	37	38	27	1	60.0	1.00	1.00
25	Guscio fond.	27	38	39	28	1	60.0	1.00	1.00
26	Guscio fond.	28	39	40	29	1	80.0	1.00	1.00
27	Guscio fond.	29	40	41	30	1	80.0	1.00	1.00
28	Guscio fond.	30	41	42	31	1	60.0	1.00	1.00
29	Guscio fond.	31	42	43	32	1	60.0	1.00	1.00
30	Guscio fond.	32	43	44	33	1	60.0	1.00	1.00
31	Setto	1111	672	673		110	30.0		
32	Setto	692	56	694		110	30.0		
33	Setto	5	123	249		110	30.0		
34	Guscio fond.	37	48	49	38	1	60.0	1.00	1.00
35	Guscio fond.	38	49	50	39	1	60.0	1.00	1.00
36	Guscio fond.	39	50	51	40	1	60.0	1.00	1.00
37	Guscio fond.	40	51	52	41	1	60.0	1.00	1.00
38	Guscio fond.	41	52	53	42	1	60.0	1.00	1.00
39	Guscio fond.	42	53	54	43	1	60.0	1.00	1.00
40	Guscio fond.	43	54	55	44	1	60.0	1.00	1.00
41	Setto	5	249	240		110	30.0		
42	Setto	707	154	709		110	30.0		
43	Setto	2	186	185		110	30.0		
44	Guscio fond.	48	59	60	49	1	60.0	1.00	1.00
45	Guscio fond.	49	60	61	50	1	60.0	1.00	1.00
46	Guscio fond.	50	61	62	51	1	60.0	1.00	1.00
47	Guscio fond.	51	62	63	52	1	60.0	1.00	1.00
48	Guscio fond.	52	63	64	53	1	60.0	1.00	1.00
49	Guscio fond.	53	64	65	54	1	60.0	1.00	1.00
50	Guscio fond.	54	65	66	55	1	60.0	1.00	1.00
51	Setto	1105	660	661		110	30.0		
52	Setto	684	34	686		110	30.0		
53	Setto	680	23	682		110	30.0		
54	Guscio fond.	59	70	71	60	1	60.0	1.00	1.00
55	Guscio fond.	60	71	72	61	1	60.0	1.00	1.00
56	Guscio fond.	61	72	73	62	1	60.0	1.00	1.00
57	Guscio fond.	62	73	74	63	1	60.0	1.00	1.00
58	Guscio fond.	63	74	75	64	1	60.0	1.00	1.00
59	Guscio fond.	64	75	76	65	1	60.0	1.00	1.00
60	Guscio fond.	65	76	77	66	1	60.0	1.00	1.00
61	Setto	132	57	697		110	30.0		
62	Setto	238	274	248		110	30.0		
63	Setto	235	265	245		110	30.0		
64	Guscio fond.	70	81	82	71	1	60.0	1.00	1.00
65	Guscio fond.	71	82	83	72	1	60.0	1.00	1.00
66	Guscio fond.	72	83	84	73	1	60.0	1.00	1.00
67	Guscio fond.	73	84	85	74	1	60.0	1.00	1.00
68	Guscio fond.	74	85	86	75	1	60.0	1.00	1.00
69	Guscio fond.	75	86	87	76	1	60.0	1.00	1.00
70	Guscio fond.	76	87	88	77	1	60.0	1.00	1.00

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

71	Guscio fond.	79	90	89	78	1	60.0	1.00	1.00
72	Guscio fond.	78	89	91	80	1	60.0	1.00	1.00
73	Guscio fond.	80	91	92	81	1	60.0	1.00	1.00
74	Guscio fond.	81	92	93	82	1	60.0	1.00	1.00
75	Guscio fond.	82	93	94	83	1	60.0	1.00	1.00
76	Guscio fond.	83	94	95	84	1	60.0	1.00	1.00
77	Guscio fond.	84	95	96	85	1	60.0	1.00	1.00
78	Guscio fond.	85	96	97	86	1	60.0	1.00	1.00
79	Guscio fond.	86	97	98	87	1	60.0	1.00	1.00
80	Guscio fond.	87	98	99	88	1	60.0	1.00	1.00
81	Guscio fond.	90	101	100	89	1	60.0	1.00	1.00
82	Guscio fond.	89	100	102	91	1	80.0	1.00	1.00
83	Guscio fond.	91	102	103	92	1	80.0	1.00	1.00
84	Guscio fond.	92	103	104	93	1	80.0	1.00	1.00
85	Guscio fond.	93	104	105	94	1	60.0	1.00	1.00
86	Guscio fond.	94	105	106	95	1	60.0	1.00	1.00
87	Guscio fond.	95	106	107	96	1	60.0	1.00	1.00
88	Guscio fond.	96	107	108	97	1	60.0	1.00	1.00
89	Guscio fond.	97	108	109	98	1	60.0	1.00	1.00
90	Guscio fond.	98	109	110	99	1	60.0	1.00	1.00
91	Guscio fond.	101	112	111	100	1	60.0	1.00	1.00
92	Guscio fond.	100	111	113	102	1	80.0	1.00	1.00
93	Guscio fond.	102	113	114	103	1	80.0	1.00	1.00
94	Guscio fond.	103	114	115	104	1	80.0	1.00	1.00
95	Guscio fond.	104	115	116	105	1	60.0	1.00	1.00
96	Guscio fond.	105	116	117	106	1	60.0	1.00	1.00
97	Guscio fond.	106	117	118	107	1	60.0	1.00	1.00
98	Guscio fond.	107	118	119	108	1	60.0	1.00	1.00
99	Guscio fond.	108	119	120	109	1	60.0	1.00	1.00
100	Guscio fond.	109	120	121	110	1	60.0	1.00	1.00
101	Setto	122	1092	1091	1102	110	30.0		
102	Setto	636	657	656	635	110	30.0		
103	Setto	1093	135	134	133	110	30.0		
104	Setto	1094	134	137	136	110	30.0		
105	Setto	1095	137	139	138	110	30.0		
106	Setto	1096	139	141	140	110	30.0		
107	Setto	1097	141	142	131	110	30.0		
108	Setto	1098	142	144	143	110	30.0		
109	Setto	1099	144	146	145	110	30.0		
110	Setto	1100	146	148	147	110	30.0		
111	Setto	1101	148	150	149	110	30.0		
112	Setto	1102	150	151	122	110	30.0		
113	Setto	238	248	277	239	110	30.0		
114	Setto	235	245	268	236	110	30.0		
115	Setto	234	244	265	235	110	30.0		
116	Setto	232	242	259	233	110	30.0		
117	Setto	229	240	253	231	110	30.0		
118	Setto	142	157	158	144	110	30.0		
119	Setto	144	158	159	146	110	30.0		
120	Setto	146	159	160	148	110	30.0		
121	Setto	148	160	161	150	110	30.0		
122	Setto	150	161	162	151	110	30.0		
123	Setto	237	247	274	238	110	30.0		
124	Setto	236	246	271	237	110	30.0		
125	Setto	233	243	262	234	110	30.0		
126	Setto	231	241	256	232	110	30.0		
127	Setto	230	5	240	229	110	30.0		
128	Setto	157	168	169	158	110	30.0		
129	Setto	158	169	170	159	110	30.0		
130	Setto	159	170	171	160	110	30.0		
131	Setto	160	171	172	161	110	30.0		
132	Setto	161	172	173	162	110	30.0		
133	Setto	164	175	174	163	110	30.0		
134	Setto	163	174	176	165	110	30.0		
135	Setto	165	176	177	166	110	30.0		
136	Setto	166	177	178	167	110	30.0		

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

137	Setto	167	178	179	168	110	30.0
138	Setto	168	179	180	169	110	30.0
139	Setto	169	180	181	170	110	30.0
140	Setto	170	181	182	171	110	30.0
141	Setto	171	182	183	172	110	30.0
142	Setto	172	183	184	173	110	30.0
143	Setto	175	2	185	174	110	30.0
144	Setto	174	185	187	176	110	30.0
145	Setto	176	187	188	177	110	30.0
146	Setto	177	188	189	178	110	30.0
147	Setto	178	189	190	179	110	30.0
148	Setto	179	190	191	180	110	30.0
149	Setto	180	191	192	181	110	30.0
150	Setto	181	192	193	182	110	30.0
151	Setto	182	193	194	183	110	30.0
152	Setto	183	194	195	184	110	30.0
153	Setto	186	197	196	185	110	30.0
154	Setto	185	196	198	187	110	30.0
155	Setto	187	198	199	188	110	30.0
156	Setto	188	199	200	189	110	30.0
157	Setto	189	200	201	190	110	30.0
158	Setto	190	201	202	191	110	30.0
159	Setto	191	202	203	192	110	30.0
160	Setto	192	203	204	193	110	30.0
161	Setto	193	204	205	194	110	30.0
162	Setto	194	205	206	195	110	30.0
163	Setto	197	208	207	196	110	30.0
164	Setto	196	207	209	198	110	30.0
165	Setto	198	209	210	199	110	30.0
166	Setto	199	210	211	200	110	30.0
167	Setto	200	211	212	201	110	30.0
168	Setto	201	212	213	202	110	30.0
169	Setto	202	213	214	203	110	30.0
170	Setto	203	214	215	204	110	30.0
171	Setto	204	215	216	205	110	30.0
172	Setto	205	216	217	206	110	30.0
173	Setto	227	238	239	228	110	30.0
174	Setto	226	237	238	227	110	30.0
175	Setto	225	236	237	226	110	30.0
176	Setto	224	235	236	225	110	30.0
177	Setto	223	234	235	224	110	30.0
178	Setto	212	223	224	213	110	30.0
179	Setto	213	224	225	214	110	30.0
180	Setto	214	225	226	215	110	30.0
181	Setto	215	226	227	216	110	30.0
182	Setto	216	227	228	217	110	30.0
183	Setto	219	230	229	218	110	30.0
184	Setto	218	229	231	220	110	30.0
185	Setto	220	231	232	221	110	30.0
186	Setto	221	232	233	222	110	30.0
187	Setto	222	233	234	223	110	30.0
188	Setto	249	250	251	123	110	30.0
189	Setto	240	252	250	249	110	30.0
190	Setto	253	254	252	240	110	30.0
191	Setto	241	255	254	253	110	30.0
192	Setto	256	257	255	241	110	30.0
193	Setto	242	258	257	256	110	30.0
194	Setto	259	260	258	242	110	30.0
195	Setto	243	261	260	259	110	30.0
196	Setto	262	263	261	243	110	30.0
197	Setto	244	264	263	262	110	30.0
198	Setto	265	266	264	244	110	30.0
199	Setto	245	267	266	265	110	30.0
200	Setto	268	269	267	245	110	30.0
201	Setto	246	270	269	268	110	30.0
202	Setto	271	272	270	246	110	30.0

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

203	Setto	247	273	272	271	110	30.0
204	Setto	274	275	273	247	110	30.0
205	Setto	248	276	275	274	110	30.0
206	Setto	277	278	276	248	110	30.0
207	Setto	124	279	278	277	110	30.0
208	Setto	657	128	676	656	110	30.0
209	Setto	656	676	675	655	110	30.0
210	Setto	655	675	674	654	110	30.0
211	Setto	654	674	1182	653	110	30.0
212	Setto	653	673	672	652	110	30.0
213	Setto	652	672	671	651	110	30.0
214	Setto	651	671	670	650	110	30.0
215	Setto	650	670	669	649	110	30.0
216	Setto	649	669	668	648	110	30.0
217	Setto	648	668	667	647	110	30.0
218	Setto	1163	1153	1154	1164	110	30.0
219	Setto	1162	1152	1153	1163	110	30.0
220	Setto	269	293	292	267	110	30.0
221	Setto	270	294	293	269	110	30.0
222	Setto	272	295	294	270	110	30.0
223	Setto	273	296	295	272	110	30.0
224	Setto	275	297	296	273	110	30.0
225	Setto	276	298	297	275	110	30.0
226	Setto	278	299	298	276	110	30.0
227	Setto	279	300	299	278	110	30.0
228	Setto	280	301	302	281	110	30.0
229	Setto	282	303	301	280	110	30.0
230	Setto	283	304	303	282	110	30.0
231	Setto	284	305	304	283	110	30.0
232	Setto	285	306	305	284	110	30.0
233	Setto	286	307	306	285	110	30.0
234	Setto	287	308	307	286	110	30.0
235	Setto	288	309	308	287	110	30.0
236	Setto	289	310	309	288	110	30.0
237	Setto	290	311	310	289	110	30.0
238	Setto	291	312	311	290	110	30.0
239	Setto	292	313	312	291	110	30.0
240	Setto	293	314	313	292	110	30.0
241	Setto	294	315	314	293	110	30.0
242	Setto	295	316	315	294	110	30.0
243	Setto	296	317	316	295	110	30.0
244	Setto	297	318	317	296	110	30.0
245	Setto	298	319	318	297	110	30.0
246	Setto	299	320	319	298	110	30.0
247	Setto	300	321	320	299	110	30.0
248	Setto	647	667	666	646	110	30.0
249	Setto	646	666	665	645	110	30.0
250	Setto	645	665	664	644	110	30.0
251	Setto	644	664	663	643	110	30.0
252	Setto	643	663	662	642	110	30.0
253	Setto	640	660	659	639	110	30.0
254	Setto	642	662	661	641	110	30.0
255	Setto	641	661	660	640	110	30.0
256	Setto	639	659	658	637	110	30.0
257	Setto	637	658	127	638	110	30.0
258	Setto	1165	1155	1156	1166	110	30.0
259	Setto	1164	1154	1155	1165	110	30.0
260	Setto	314	335	334	313	110	30.0
261	Setto	315	336	335	314	110	30.0
262	Setto	316	337	336	315	110	30.0
263	Setto	317	338	337	316	110	30.0
264	Setto	318	339	338	317	110	30.0
265	Setto	319	340	339	318	110	30.0
266	Setto	320	341	340	319	110	30.0
267	Setto	321	342	341	320	110	30.0
268	Setto	322	343	344	323	110	30.0

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

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Partita Iva : 02658050733

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

269	Setto	324	345	343	322	110	30.0
270	Setto	325	346	345	324	110	30.0
271	Setto	326	347	346	325	110	30.0
272	Setto	327	348	347	326	110	30.0
273	Setto	328	349	348	327	110	30.0
274	Setto	329	350	349	328	110	30.0
275	Setto	330	351	350	329	110	30.0
276	Setto	331	352	351	330	110	30.0
277	Setto	332	353	352	331	110	30.0
278	Setto	333	354	353	332	110	30.0
279	Setto	334	355	354	333	110	30.0
280	Setto	335	356	355	334	110	30.0
281	Setto	336	357	356	335	110	30.0
282	Setto	337	358	357	336	110	30.0
283	Setto	338	359	358	337	110	30.0
284	Setto	339	360	359	338	110	30.0
285	Setto	340	361	360	339	110	30.0
286	Setto	341	362	361	340	110	30.0
287	Setto	342	363	362	341	110	30.0
288	Setto	343	364	365	344	110	30.0
289	Setto	345	366	364	343	110	30.0
290	Setto	346	367	366	345	110	30.0
291	Setto	347	368	367	346	110	30.0
292	Setto	348	369	368	347	110	30.0
293	Setto	349	370	369	348	110	30.0
294	Setto	350	371	370	349	110	30.0
295	Setto	351	372	371	350	110	30.0
296	Setto	352	373	372	351	110	30.0
297	Setto	353	374	373	352	110	30.0
298	Setto	1153	1142	1143	1154	110	30.0
299	Setto	1152	1141	1142	1153	110	30.0
300	Setto	1151	1140	1141	1152	110	30.0
301	Setto	357	378	377	356	110	30.0
302	Setto	358	379	378	357	110	30.0
303	Setto	359	380	379	358	110	30.0
304	Setto	360	381	380	359	110	30.0
305	Setto	361	382	381	360	110	30.0
306	Setto	362	383	382	361	110	30.0
307	Setto	363	384	383	362	110	30.0
308	Setto	364	385	386	365	110	30.0
309	Setto	366	387	385	364	110	30.0
310	Setto	367	388	387	366	110	30.0
311	Setto	368	389	388	367	110	30.0
312	Setto	369	390	389	368	110	30.0
313	Setto	370	391	390	369	110	30.0
314	Setto	371	392	391	370	110	30.0
315	Setto	372	393	392	371	110	30.0
316	Setto	373	394	393	372	110	30.0
317	Setto	374	395	394	373	110	30.0
318	Setto	375	396	395	374	110	30.0
319	Setto	376	397	396	375	110	30.0
320	Setto	377	398	397	376	110	30.0
321	Setto	378	399	398	377	110	30.0
322	Setto	379	400	399	378	110	30.0
323	Setto	380	401	400	379	110	30.0
324	Setto	381	402	401	380	110	30.0
325	Setto	382	403	402	381	110	30.0
326	Setto	383	404	403	382	110	30.0
327	Setto	384	405	404	383	110	30.0
328	Setto	1179	1168	1170	1181	110	30.0
329	Setto	1180	1169	1168	1179	110	30.0
330	Setto	1177	1166	1167	1178	110	30.0
331	Setto	1176	1165	1166	1177	110	30.0
332	Setto	1175	1164	1165	1176	110	30.0
333	Setto	1174	1163	1164	1175	110	30.0
334	Setto	1173	1162	1163	1174	110	30.0

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

335	Setto	1172	1161	1162	1173	110	30.0
336	Setto	1171	1160	1161	1172	110	30.0
337	Setto	1170	1159	1160	1171	110	30.0
338	Setto	1168	1157	1159	1170	110	30.0
339	Setto	1169	1158	1157	1168	110	30.0
340	Setto	1166	1156	129	1167	110	30.0
341	Setto	399	420	419	398	110	30.0
342	Setto	400	421	420	399	110	30.0
343	Setto	401	422	421	400	110	30.0
344	Setto	402	423	422	401	110	30.0
345	Setto	403	424	423	402	110	30.0
346	Setto	404	425	424	403	110	30.0
347	Setto	405	426	425	404	110	30.0
348	Setto	406	427	428	407	110	30.0
349	Setto	408	429	427	406	110	30.0
350	Setto	409	430	429	408	110	30.0
351	Setto	410	431	430	409	110	30.0
352	Setto	411	432	431	410	110	30.0
353	Setto	412	433	432	411	110	30.0
354	Setto	413	434	433	412	110	30.0
355	Setto	414	435	434	413	110	30.0
356	Setto	415	436	435	414	110	30.0
357	Setto	416	437	436	415	110	30.0
358	Setto	417	438	437	416	110	30.0
359	Setto	418	439	438	417	110	30.0
360	Setto	419	440	439	418	110	30.0
361	Setto	420	441	440	419	110	30.0
362	Setto	421	442	441	420	110	30.0
363	Setto	422	443	442	421	110	30.0
364	Setto	423	444	443	422	110	30.0
365	Setto	424	445	444	423	110	30.0
366	Setto	425	446	445	424	110	30.0
367	Setto	426	447	446	425	110	30.0
368	Setto	427	448	449	428	110	30.0
369	Setto	429	450	448	427	110	30.0
370	Setto	430	451	450	429	110	30.0
371	Setto	431	452	451	430	110	30.0
372	Setto	432	453	452	431	110	30.0
373	Setto	433	454	453	432	110	30.0
374	Setto	434	455	454	433	110	30.0
375	Setto	435	456	455	434	110	30.0
376	Setto	436	457	456	435	110	30.0
377	Setto	437	458	457	436	110	30.0
378	Setto	438	459	458	437	110	30.0
379	Setto	439	460	459	438	110	30.0
380	Setto	440	461	460	439	110	30.0
381	Setto	441	462	461	440	110	30.0
382	Setto	442	463	462	441	110	30.0
383	Setto	443	464	463	442	110	30.0
384	Setto	444	465	464	443	110	30.0
385	Setto	445	466	465	444	110	30.0
386	Setto	446	467	466	445	110	30.0
387	Setto	447	468	467	446	110	30.0
388	Setto	448	469	470	449	110	30.0
389	Setto	450	471	469	448	110	30.0
390	Setto	451	472	471	450	110	30.0
391	Setto	452	473	472	451	110	30.0
392	Setto	453	474	473	452	110	30.0
393	Setto	454	475	474	453	110	30.0
394	Setto	455	476	475	454	110	30.0
395	Setto	456	477	476	455	110	30.0
396	Setto	1155	1144	1145	1156	110	30.0
397	Setto	1158	1148	1147	1157	110	30.0
398	Setto	1156	1145	1146	129	110	30.0
399	Setto	1154	1143	1144	1155	110	30.0
400	Setto	461	482	481	460	110	30.0

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

401	Setto	462	483	482	461	110	30.0
402	Setto	463	484	483	462	110	30.0
403	Setto	464	485	484	463	110	30.0
404	Setto	465	486	485	464	110	30.0
405	Setto	466	487	486	465	110	30.0
406	Setto	467	488	487	466	110	30.0
407	Setto	468	489	488	467	110	30.0
408	Setto	469	490	491	470	110	30.0
409	Setto	471	492	490	469	110	30.0
410	Setto	472	493	492	471	110	30.0
411	Setto	473	494	493	472	110	30.0
412	Setto	474	495	494	473	110	30.0
413	Setto	475	496	495	474	110	30.0
414	Setto	476	497	496	475	110	30.0
415	Setto	477	498	497	476	110	30.0
416	Setto	478	499	498	477	110	30.0
417	Setto	479	500	499	478	110	30.0
418	Setto	480	501	500	479	110	30.0
419	Setto	481	502	501	480	110	30.0
420	Setto	482	503	502	481	110	30.0
421	Setto	483	504	503	482	110	30.0
422	Setto	484	505	504	483	110	30.0
423	Setto	485	506	505	484	110	30.0
424	Setto	486	507	506	485	110	30.0
425	Setto	487	508	507	486	110	30.0
426	Setto	488	509	508	487	110	30.0
427	Setto	489	510	509	488	110	30.0
428	Setto	57	58	47	152	110	30.0
429	Setto	56	67	58	57	110	30.0
430	Setto	46	69	67	56	110	30.0
431	Setto	58	1173	1174	47	110	30.0
432	Setto	67	1172	1173	58	110	30.0
433	Setto	69	1171	1172	67	110	30.0
434	Setto	1181	1170	1171	69	110	30.0
435	Setto	47	1174	1175	36	110	30.0
436	Setto	36	1175	1176	25	110	30.0
437	Setto	25	1176	1177	6	110	30.0
438	Setto	6	1177	1178	3	110	30.0
439	Setto	45	1180	1179	23	110	30.0
440	Setto	23	1179	1181	34	110	30.0
441	Setto	34	1181	69	46	110	30.0
442	Setto	505	526	525	504	110	30.0
443	Setto	506	527	526	505	110	30.0
444	Setto	507	528	527	506	110	30.0
445	Setto	508	529	528	507	110	30.0
446	Setto	509	530	529	508	110	30.0
447	Setto	510	531	530	509	110	30.0
448	Setto	511	532	533	512	110	30.0
449	Setto	513	534	532	511	110	30.0
450	Setto	514	535	534	513	110	30.0
451	Setto	515	536	535	514	110	30.0
452	Setto	516	537	536	515	110	30.0
453	Setto	517	538	537	516	110	30.0
454	Setto	518	539	538	517	110	30.0
455	Setto	519	540	539	518	110	30.0
456	Setto	520	541	540	519	110	30.0
457	Setto	521	542	541	520	110	30.0
458	Setto	522	543	542	521	110	30.0
459	Setto	523	544	543	522	110	30.0
460	Setto	524	545	544	523	110	30.0
461	Setto	525	546	545	524	110	30.0
462	Setto	526	547	546	525	110	30.0
463	Setto	527	548	547	526	110	30.0
464	Setto	528	549	548	527	110	30.0
465	Setto	529	550	549	528	110	30.0
466	Setto	530	551	550	529	110	30.0

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

467	Setto	531	552	551	530	110	30.0
468	Setto	532	553	554	533	110	30.0
469	Setto	534	555	553	532	110	30.0
470	Setto	535	556	555	534	110	30.0
471	Setto	536	557	556	535	110	30.0
472	Setto	537	558	557	536	110	30.0
473	Setto	538	559	558	537	110	30.0
474	Setto	539	560	559	538	110	30.0
475	Setto	540	561	560	539	110	30.0
476	Setto	1161	1151	1152	1162	110	30.0
477	Setto	1160	1150	1151	1161	110	30.0
478	Setto	1159	1149	1150	1160	110	30.0
479	Setto	1157	1147	1149	1159	110	30.0
480	Setto	545	566	565	544	110	30.0
481	Setto	546	567	566	545	110	30.0
482	Setto	547	568	567	546	110	30.0
483	Setto	548	569	568	547	110	30.0
484	Setto	549	570	569	548	110	30.0
485	Setto	550	571	570	549	110	30.0
486	Setto	551	572	571	550	110	30.0
487	Setto	552	573	572	551	110	30.0
488	Setto	553	574	575	554	110	30.0
489	Setto	555	576	574	553	110	30.0
490	Setto	556	577	576	555	110	30.0
491	Setto	557	578	577	556	110	30.0
492	Setto	558	579	578	557	110	30.0
493	Setto	559	580	579	558	110	30.0
494	Setto	560	581	580	559	110	30.0
495	Setto	561	582	581	560	110	30.0
496	Setto	562	583	582	561	110	30.0
497	Setto	563	584	583	562	110	30.0
498	Setto	564	585	584	563	110	30.0
499	Setto	565	586	585	564	110	30.0
500	Setto	566	587	586	565	110	30.0
501	Setto	567	588	587	566	110	30.0
502	Setto	568	589	588	567	110	30.0
503	Setto	569	590	589	568	110	30.0
504	Setto	570	591	590	569	110	30.0
505	Setto	571	592	591	570	110	30.0
506	Setto	572	593	592	571	110	30.0
507	Setto	573	594	593	572	110	30.0
508	Setto	574	595	596	575	110	30.0
509	Setto	576	597	595	574	110	30.0
510	Setto	577	598	597	576	110	30.0
511	Setto	578	599	598	577	110	30.0
512	Setto	579	600	599	578	110	30.0
513	Setto	580	601	600	579	110	30.0
514	Setto	581	602	601	580	110	30.0
515	Setto	582	603	602	581	110	30.0
516	Setto	583	604	603	582	110	30.0
517	Setto	584	605	604	583	110	30.0
518	Setto	585	606	605	584	110	30.0
519	Setto	586	607	606	585	110	30.0
520	Setto	587	608	607	586	110	30.0
521	Setto	588	609	608	587	110	30.0
522	Setto	589	610	609	588	110	30.0
523	Setto	590	611	610	589	110	30.0
524	Setto	591	612	611	590	110	30.0
525	Setto	592	613	612	591	110	30.0
526	Setto	593	614	613	592	110	30.0
527	Setto	594	615	614	593	110	30.0
528	Setto	595	616	617	596	110	30.0
529	Setto	597	618	616	595	110	30.0
530	Setto	598	619	618	597	110	30.0
531	Setto	599	620	619	598	110	30.0
532	Setto	600	621	620	599	110	30.0

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

533	Setto	601	622	621	600	110	30.0
534	Setto	602	623	622	601	110	30.0
535	Setto	603	624	623	602	110	30.0
536	Setto	604	625	624	603	110	30.0
537	Setto	605	626	625	604	110	30.0
538	Setto	606	627	626	605	110	30.0
539	Setto	607	628	627	606	110	30.0
540	Setto	608	629	628	607	110	30.0
541	Setto	609	630	629	608	110	30.0
542	Setto	610	631	630	609	110	30.0
543	Setto	611	632	631	610	110	30.0
544	Setto	612	633	632	611	110	30.0
545	Setto	613	634	633	612	110	30.0
546	Setto	614	635	634	613	110	30.0
547	Setto	615	636	635	614	110	30.0
548	Setto	682	23	34	684	110	30.0
549	Setto	677	45	23	680	110	30.0
550	Setto	155	6	3	156	110	30.0
551	Setto	154	25	6	155	110	30.0
552	Setto	153	36	25	154	110	30.0
553	Setto	152	47	36	153	110	30.0
554	Setto	686	34	46	688	110	30.0
555	Setto	690	46	56	692	110	30.0
556	Setto	694	56	57	132	110	30.0
557	Setto	697	57	152	699	110	30.0
558	Setto	701	152	153	703	110	30.0
559	Setto	709	154	155	711	110	30.0
560	Setto	705	153	154	707	110	30.0
561	Setto	713	155	156	126	110	30.0
562	Setto	631	652	651	630	110	30.0
563	Setto	632	653	652	631	110	30.0
564	Setto	633	654	653	632	110	30.0
565	Setto	634	655	654	633	110	30.0
566	Setto	635	656	655	634	110	30.0
567	Setto	678	677	68	679	110	30.0
568	Setto	681	680	677	678	110	30.0
569	Setto	683	682	680	681	110	30.0
570	Setto	685	684	682	683	110	30.0
571	Setto	687	686	684	685	110	30.0
572	Setto	689	688	686	687	110	30.0
573	Setto	691	690	688	689	110	30.0
574	Setto	693	692	690	691	110	30.0
575	Setto	695	694	692	693	110	30.0
576	Setto	696	132	694	695	110	30.0
577	Setto	698	697	132	696	110	30.0
578	Setto	700	699	697	698	110	30.0
579	Setto	702	701	699	700	110	30.0
580	Setto	704	703	701	702	110	30.0
581	Setto	706	705	703	704	110	30.0
582	Setto	708	707	705	706	110	30.0
583	Setto	710	709	707	708	110	30.0
584	Setto	712	711	709	710	110	30.0
585	Setto	714	713	711	712	110	30.0
586	Setto	715	126	713	714	110	30.0
587	Setto	716	678	679	717	110	30.0
588	Setto	718	681	678	716	110	30.0
589	Setto	719	683	681	718	110	30.0
590	Setto	720	685	683	719	110	30.0
591	Setto	721	687	685	720	110	30.0
592	Setto	722	689	687	721	110	30.0
593	Setto	723	691	689	722	110	30.0
594	Setto	724	693	691	723	110	30.0
595	Setto	725	695	693	724	110	30.0
596	Setto	726	696	695	725	110	30.0
597	Setto	727	698	696	726	110	30.0
598	Setto	728	700	698	727	110	30.0

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

599	Setto	729	702	700	728	110	30.0
600	Setto	730	704	702	729	110	30.0
601	Setto	731	706	704	730	110	30.0
602	Setto	732	708	706	731	110	30.0
603	Setto	733	710	708	732	110	30.0
604	Setto	734	712	710	733	110	30.0
605	Setto	735	714	712	734	110	30.0
606	Setto	736	715	714	735	110	30.0
607	Setto	737	716	717	738	110	30.0
608	Setto	739	718	716	737	110	30.0
609	Setto	740	719	718	739	110	30.0
610	Setto	741	720	719	740	110	30.0
611	Setto	742	721	720	741	110	30.0
612	Setto	743	722	721	742	110	30.0
613	Setto	744	723	722	743	110	30.0
614	Setto	745	724	723	744	110	30.0
615	Setto	746	725	724	745	110	30.0
616	Setto	747	726	725	746	110	30.0
617	Setto	748	727	726	747	110	30.0
618	Setto	749	728	727	748	110	30.0
619	Setto	750	729	728	749	110	30.0
620	Setto	751	730	729	750	110	30.0
621	Setto	752	731	730	751	110	30.0
622	Setto	753	732	731	752	110	30.0
623	Setto	754	733	732	753	110	30.0
624	Setto	755	734	733	754	110	30.0
625	Setto	756	735	734	755	110	30.0
626	Setto	757	736	735	756	110	30.0
627	Setto	688	46	690		110	30.0
628	Setto	760	739	737	758	110	30.0
629	Setto	761	740	739	760	110	30.0
630	Setto	762	741	740	761	110	30.0
631	Setto	763	742	741	762	110	30.0
632	Setto	764	743	742	763	110	30.0
633	Setto	765	744	743	764	110	30.0
634	Setto	766	745	744	765	110	30.0
635	Setto	767	746	745	766	110	30.0
636	Setto	768	747	746	767	110	30.0
637	Setto	769	748	747	768	110	30.0
638	Setto	770	749	748	769	110	30.0
639	Setto	771	750	749	770	110	30.0
640	Setto	772	751	750	771	110	30.0
641	Setto	773	752	751	772	110	30.0
642	Setto	774	753	752	773	110	30.0
643	Setto	775	754	753	774	110	30.0
644	Setto	776	755	754	775	110	30.0
645	Setto	777	756	755	776	110	30.0
646	Setto	778	757	756	777	110	30.0
647	Setto	779	758	759	780	110	30.0
648	Setto	781	760	758	779	110	30.0
649	Setto	782	761	760	781	110	30.0
650	Setto	783	762	761	782	110	30.0
651	Setto	784	763	762	783	110	30.0
652	Setto	785	764	763	784	110	30.0
653	Setto	786	765	764	785	110	30.0
654	Setto	787	766	765	786	110	30.0
655	Setto	788	767	766	787	110	30.0
656	Setto	789	768	767	788	110	30.0
657	Setto	790	769	768	789	110	30.0
658	Setto	791	770	769	790	110	30.0
659	Setto	792	771	770	791	110	30.0
660	Setto	793	772	771	792	110	30.0
661	Setto	794	773	772	793	110	30.0
662	Setto	795	774	773	794	110	30.0
663	Setto	796	775	774	795	110	30.0
664	Setto	797	776	775	796	110	30.0

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

665	Setto	798	777	776	797	110	30.0
666	Setto	799	778	777	798	110	30.0
667	Setto	800	779	780	801	110	30.0
668	Setto	802	781	779	800	110	30.0
669	Setto	803	782	781	802	110	30.0
670	Setto	804	783	782	803	110	30.0
671	Setto	805	784	783	804	110	30.0
672	Setto	806	785	784	805	110	30.0
673	Setto	807	786	785	806	110	30.0
674	Setto	808	787	786	807	110	30.0
675	Setto	809	788	787	808	110	30.0
676	Setto	810	789	788	809	110	30.0
677	Setto	811	790	789	810	110	30.0
678	Setto	812	791	790	811	110	30.0
679	Setto	813	792	791	812	110	30.0
680	Setto	814	793	792	813	110	30.0
681	Setto	815	794	793	814	110	30.0
682	Setto	816	795	794	815	110	30.0
683	Setto	817	796	795	816	110	30.0
684	Setto	818	797	796	817	110	30.0
685	Setto	819	798	797	818	110	30.0
686	Setto	820	799	798	819	110	30.0
687	Setto	233	259	243		110	30.0
688	Setto	823	802	800	821	110	30.0
689	Setto	824	803	802	823	110	30.0
690	Setto	825	804	803	824	110	30.0
691	Setto	826	805	804	825	110	30.0
692	Setto	827	806	805	826	110	30.0
693	Setto	828	807	806	827	110	30.0
694	Setto	829	808	807	828	110	30.0
695	Setto	830	809	808	829	110	30.0
696	Setto	831	810	809	830	110	30.0
697	Setto	832	811	810	831	110	30.0
698	Setto	833	812	811	832	110	30.0
699	Setto	834	813	812	833	110	30.0
700	Setto	835	814	813	834	110	30.0
701	Setto	836	815	814	835	110	30.0
702	Setto	837	816	815	836	110	30.0
703	Setto	838	817	816	837	110	30.0
704	Setto	839	818	817	838	110	30.0
705	Setto	840	819	818	839	110	30.0
706	Setto	841	820	819	840	110	30.0
707	Setto	842	821	822	843	110	30.0
708	Setto	844	823	821	842	110	30.0
709	Setto	845	824	823	844	110	30.0
710	Setto	846	825	824	845	110	30.0
711	Setto	847	826	825	846	110	30.0
712	Setto	848	827	826	847	110	30.0
713	Setto	849	828	827	848	110	30.0
714	Setto	850	829	828	849	110	30.0
715	Setto	851	830	829	850	110	30.0
716	Setto	852	831	830	851	110	30.0
717	Setto	853	832	831	852	110	30.0
718	Setto	854	833	832	853	110	30.0
719	Setto	855	834	833	854	110	30.0
720	Setto	856	835	834	855	110	30.0
721	Setto	857	836	835	856	110	30.0
722	Setto	858	837	836	857	110	30.0
723	Setto	859	838	837	858	110	30.0
724	Setto	860	839	838	859	110	30.0
725	Setto	861	840	839	860	110	30.0
726	Setto	862	841	840	861	110	30.0
727	Setto	863	842	843	864	110	30.0
728	Setto	865	844	842	863	110	30.0
729	Setto	866	845	844	865	110	30.0
730	Setto	867	846	845	866	110	30.0

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

731	Setto	868	847	846	867	110	30.0
732	Setto	869	848	847	868	110	30.0
733	Setto	870	849	848	869	110	30.0
734	Setto	871	850	849	870	110	30.0
735	Setto	872	851	850	871	110	30.0
736	Setto	873	852	851	872	110	30.0
737	Setto	874	853	852	873	110	30.0
738	Setto	875	854	853	874	110	30.0
739	Setto	876	855	854	875	110	30.0
740	Setto	877	856	855	876	110	30.0
741	Setto	878	857	856	877	110	30.0
742	Setto	879	858	857	878	110	30.0
743	Setto	880	859	858	879	110	30.0
744	Setto	881	860	859	880	110	30.0
745	Setto	882	861	860	881	110	30.0
746	Setto	883	862	861	882	110	30.0
747	Setto	884	863	864	885	110	30.0
748	Setto	886	865	863	884	110	30.0
749	Setto	887	866	865	886	110	30.0
750	Setto	888	867	866	887	110	30.0
751	Setto	889	868	867	888	110	30.0
752	Setto	890	869	868	889	110	30.0
753	Setto	891	870	869	890	110	30.0
754	Setto	892	871	870	891	110	30.0
755	Setto	893	872	871	892	110	30.0
756	Setto	894	873	872	893	110	30.0
757	Setto	895	874	873	894	110	30.0
758	Setto	896	875	874	895	110	30.0
759	Setto	897	876	875	896	110	30.0
760	Setto	898	877	876	897	110	30.0
761	Setto	899	878	877	898	110	30.0
762	Setto	900	879	878	899	110	30.0
763	Setto	901	880	879	900	110	30.0
764	Setto	902	881	880	901	110	30.0
765	Setto	903	882	881	902	110	30.0
766	Setto	130	883	882	903	110	30.0
767	Setto	904	884	35	905	110	30.0
768	Setto	906	886	884	904	110	30.0
769	Setto	907	887	886	906	110	30.0
770	Setto	908	888	887	907	110	30.0
771	Setto	909	889	888	908	110	30.0
772	Setto	910	890	889	909	110	30.0
773	Setto	911	891	890	910	110	30.0
774	Setto	912	892	891	911	110	30.0
775	Setto	913	893	892	912	110	30.0
776	Setto	914	894	893	913	110	30.0
777	Setto	915	895	894	914	110	30.0
778	Setto	916	896	895	915	110	30.0
779	Setto	917	897	896	916	110	30.0
780	Setto	918	898	897	917	110	30.0
781	Setto	919	899	898	918	110	30.0
782	Setto	920	900	899	919	110	30.0
783	Setto	921	901	900	920	110	30.0
784	Setto	922	902	901	921	110	30.0
785	Setto	923	903	902	922	110	30.0
786	Setto	924	130	903	923	110	30.0
787	Setto	925	904	905	926	110	30.0
788	Setto	927	906	904	925	110	30.0
789	Setto	928	907	906	927	110	30.0
790	Setto	929	908	907	928	110	30.0
791	Setto	930	909	908	929	110	30.0
792	Setto	931	910	909	930	110	30.0
793	Setto	932	911	910	931	110	30.0
794	Setto	933	912	911	932	110	30.0
795	Setto	934	913	912	933	110	30.0
796	Setto	935	914	913	934	110	30.0

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

797	Setto	936	915	914	935	110	30.0
798	Setto	937	916	915	936	110	30.0
799	Setto	938	917	916	937	110	30.0
800	Setto	939	918	917	938	110	30.0
801	Setto	940	919	918	939	110	30.0
802	Setto	941	920	919	940	110	30.0
803	Setto	942	921	920	941	110	30.0
804	Setto	943	922	921	942	110	30.0
805	Setto	944	923	922	943	110	30.0
806	Setto	945	924	923	944	110	30.0
807	Setto	946	925	926	947	110	30.0
808	Setto	948	927	925	946	110	30.0
809	Setto	949	928	927	948	110	30.0
810	Setto	950	929	928	949	110	30.0
811	Setto	951	930	929	950	110	30.0
812	Setto	952	931	930	951	110	30.0
813	Setto	953	932	931	952	110	30.0
814	Setto	954	933	932	953	110	30.0
815	Setto	955	934	933	954	110	30.0
816	Setto	956	935	934	955	110	30.0
817	Setto	957	936	935	956	110	30.0
818	Setto	958	937	936	957	110	30.0
819	Setto	959	938	937	958	110	30.0
820	Setto	960	939	938	959	110	30.0
821	Setto	961	940	939	960	110	30.0
822	Setto	962	941	940	961	110	30.0
823	Setto	963	942	941	962	110	30.0
824	Setto	964	943	942	963	110	30.0
825	Setto	965	944	943	964	110	30.0
826	Setto	966	945	944	965	110	30.0
827	Setto	967	946	24	968	110	30.0
828	Setto	969	948	946	967	110	30.0
829	Setto	970	949	948	969	110	30.0
830	Setto	971	950	949	970	110	30.0
831	Setto	972	951	950	971	110	30.0
832	Setto	973	952	951	972	110	30.0
833	Setto	974	953	952	973	110	30.0
834	Setto	975	954	953	974	110	30.0
835	Setto	976	955	954	975	110	30.0
836	Setto	977	956	955	976	110	30.0
837	Setto	978	957	956	977	110	30.0
838	Setto	979	958	957	978	110	30.0
839	Setto	980	959	958	979	110	30.0
840	Setto	981	960	959	980	110	30.0
841	Setto	982	961	960	981	110	30.0
842	Setto	983	962	961	982	110	30.0
843	Setto	984	963	962	983	110	30.0
844	Setto	985	964	963	984	110	30.0
845	Setto	986	965	964	985	110	30.0
846	Setto	987	966	965	986	110	30.0
847	Setto	988	967	968	989	110	30.0
848	Setto	990	969	967	988	110	30.0
849	Setto	991	970	969	990	110	30.0
850	Setto	992	971	970	991	110	30.0
851	Setto	993	972	971	992	110	30.0
852	Setto	994	973	972	993	110	30.0
853	Setto	995	974	973	994	110	30.0
854	Setto	996	975	974	995	110	30.0
855	Setto	997	976	975	996	110	30.0
856	Setto	998	977	976	997	110	30.0
857	Setto	999	978	977	998	110	30.0
858	Setto	1000	979	978	999	110	30.0
859	Setto	1001	980	979	1000	110	30.0
860	Setto	1002	981	980	1001	110	30.0
861	Setto	1003	982	981	1002	110	30.0
862	Setto	1004	983	982	1003	110	30.0

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

863	Setto	1005	984	983	1004	110	30.0
864	Setto	1006	985	984	1005	110	30.0
865	Setto	1007	986	985	1006	110	30.0
866	Setto	1008	987	986	1007	110	30.0
867	Setto	1009	988	989	1010	110	30.0
868	Setto	1011	990	988	1009	110	30.0
869	Setto	1012	991	990	1011	110	30.0
870	Setto	1013	992	991	1012	110	30.0
871	Setto	1014	993	992	1013	110	30.0
872	Setto	1015	994	993	1014	110	30.0
873	Setto	1016	995	994	1015	110	30.0
874	Setto	1017	996	995	1016	110	30.0
875	Setto	1018	997	996	1017	110	30.0
876	Setto	1019	998	997	1018	110	30.0
877	Setto	1020	999	998	1019	110	30.0
878	Setto	1021	1000	999	1020	110	30.0
879	Setto	1022	1001	1000	1021	110	30.0
880	Setto	1023	1002	1001	1022	110	30.0
881	Setto	1024	1003	1002	1023	110	30.0
882	Setto	1025	1004	1003	1024	110	30.0
883	Setto	1026	1005	1004	1025	110	30.0
884	Setto	1027	1006	1005	1026	110	30.0
885	Setto	1028	1007	1006	1027	110	30.0
886	Setto	1029	1008	1007	1028	110	30.0
887	Setto	699	152	701		110	30.0
888	Setto	1032	1011	1009	1030	110	30.0
889	Setto	1033	1012	1011	1032	110	30.0
890	Setto	1034	1013	1012	1033	110	30.0
891	Setto	1035	1014	1013	1034	110	30.0
892	Setto	1036	1015	1014	1035	110	30.0
893	Setto	1037	1016	1015	1036	110	30.0
894	Setto	1038	1017	1016	1037	110	30.0
895	Setto	1039	1018	1017	1038	110	30.0
896	Setto	1040	1019	1018	1039	110	30.0
897	Setto	1041	1020	1019	1040	110	30.0
898	Setto	1042	1021	1020	1041	110	30.0
899	Setto	1043	1022	1021	1042	110	30.0
900	Setto	1044	1023	1022	1043	110	30.0
901	Setto	1045	1024	1023	1044	110	30.0
902	Setto	1046	1025	1024	1045	110	30.0
903	Setto	1047	1026	1025	1046	110	30.0
904	Setto	1048	1027	1026	1047	110	30.0
905	Setto	1049	1028	1027	1048	110	30.0
906	Setto	1050	1029	1028	1049	110	30.0
907	Setto	1051	1030	1031	1052	110	30.0
908	Setto	1053	1032	1030	1051	110	30.0
909	Setto	1054	1033	1032	1053	110	30.0
910	Setto	1055	1034	1033	1054	110	30.0
911	Setto	1056	1035	1034	1055	110	30.0
912	Setto	1057	1036	1035	1056	110	30.0
913	Setto	1058	1037	1036	1057	110	30.0
914	Setto	1059	1038	1037	1058	110	30.0
915	Setto	1060	1039	1038	1059	110	30.0
916	Setto	1061	1040	1039	1060	110	30.0
917	Setto	1062	1041	1040	1061	110	30.0
918	Setto	1063	1042	1041	1062	110	30.0
919	Setto	1064	1043	1042	1063	110	30.0
920	Setto	1065	1044	1043	1064	110	30.0
921	Setto	1066	1045	1044	1065	110	30.0
922	Setto	1067	1046	1045	1066	110	30.0
923	Setto	1068	1047	1046	1067	110	30.0
924	Setto	1069	1048	1047	1068	110	30.0
925	Setto	1070	1049	1048	1069	110	30.0
926	Setto	1071	1050	1049	1070	110	30.0
927	Setto	1072	1051	1052	1073	110	30.0
928	Setto	1074	1053	1051	1072	110	30.0

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

929	Setto	1075	1054	1053	1074	110	30.0
930	Setto	1076	1055	1054	1075	110	30.0
931	Setto	1077	1056	1055	1076	110	30.0
932	Setto	1078	1057	1056	1077	110	30.0
933	Setto	1079	1058	1057	1078	110	30.0
934	Setto	1080	1059	1058	1079	110	30.0
935	Setto	1081	1060	1059	1080	110	30.0
936	Setto	1082	1061	1060	1081	110	30.0
937	Setto	1083	1062	1061	1082	110	30.0
938	Setto	1084	1063	1062	1083	110	30.0
939	Setto	1085	1064	1063	1084	110	30.0
940	Setto	1086	1065	1064	1085	110	30.0
941	Setto	1087	1066	1065	1086	110	30.0
942	Setto	1088	1067	1066	1087	110	30.0
943	Setto	1089	1068	1067	1088	110	30.0
944	Setto	1090	1069	1068	1089	110	30.0
945	Setto	1091	1070	1069	1090	110	30.0
946	Setto	1092	1071	1070	1091	110	30.0
947	Setto	1093	1072	1073	1	110	30.0
948	Setto	133	1074	1072	1093	110	30.0
949	Setto	1094	1075	1074	133	110	30.0
950	Setto	136	1076	1075	1094	110	30.0
951	Setto	1095	1077	1076	136	110	30.0
952	Setto	138	1078	1077	1095	110	30.0
953	Setto	1096	1079	1078	138	110	30.0
954	Setto	140	1080	1079	1096	110	30.0
955	Setto	1097	1081	1080	140	110	30.0
956	Setto	131	1082	1081	1097	110	30.0
957	Setto	1098	1083	1082	131	110	30.0
958	Setto	143	1084	1083	1098	110	30.0
959	Setto	1099	1085	1084	143	110	30.0
960	Setto	145	1086	1085	1099	110	30.0
961	Setto	1100	1087	1086	145	110	30.0
962	Setto	147	1088	1087	1100	110	30.0
963	Setto	1101	1089	1088	147	110	30.0
964	Setto	149	1090	1089	1101	110	30.0
965	Setto	1102	1091	1090	149	110	30.0
966	Setto	1104	127	658	1103	110	30.0
967	Setto	1103	659	660	1105	110	30.0
968	Setto	1105	661	662	1106	110	30.0
969	Setto	1106	663	664	1107	110	30.0
970	Setto	1107	665	666	1108	110	30.0
971	Setto	1108	667	668	1109	110	30.0
972	Setto	1109	669	670	1110	110	30.0
973	Setto	1110	671	672	1111	110	30.0
974	Setto	1111	673	1182	1112	110	30.0
975	Setto	1112	675	676	1113	110	30.0
976	Setto	1115	1104	1103	1114	110	30.0
977	Setto	1114	1103	1105	1116	110	30.0
978	Setto	1116	1105	1106	1117	110	30.0
979	Setto	1117	1106	1107	1118	110	30.0
980	Setto	1118	1107	1108	1119	110	30.0
981	Setto	1119	1108	1109	1120	110	30.0
982	Setto	1120	1109	1110	1121	110	30.0
983	Setto	1121	1110	1111	1122	110	30.0
984	Setto	1122	1111	1112	1123	110	30.0
985	Setto	1123	1112	1113	1124	110	30.0
986	Setto	1126	1115	1114	1125	110	30.0
987	Setto	1125	1114	1116	1127	110	30.0
988	Setto	1127	1116	1117	1128	110	30.0
989	Setto	1128	1117	1118	1129	110	30.0
990	Setto	1129	1118	1119	1130	110	30.0
991	Setto	1130	1119	1120	1131	110	30.0
992	Setto	1131	1120	1121	1132	110	30.0
993	Setto	1132	1121	1122	1133	110	30.0
994	Setto	1133	1122	1123	1134	110	30.0

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

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Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

995	Setto	1134	1123	1124	1135	110	30.0
996	Setto	1137	1126	1125	1136	110	30.0
997	Setto	1136	1125	1127	1138	110	30.0
998	Setto	1138	1127	1128	1139	110	30.0
999	Setto	1139	1128	1129	1140	110	30.0
1000	Setto	1140	1129	1130	1141	110	30.0
1001	Setto	1141	1130	1131	1142	110	30.0
1002	Setto	1142	1131	1132	1143	110	30.0
1003	Setto	1143	1132	1133	1144	110	30.0
1004	Setto	1144	1133	1134	1145	110	30.0
1005	Setto	1145	1134	1135	1146	110	30.0
1006	Setto	1148	1137	1136	1147	110	30.0
1007	Setto	1147	1136	1138	1149	110	30.0
1008	Setto	1149	1138	1139	1150	110	30.0
1009	Setto	1150	1139	1140	1151	110	30.0
1010	Setto	237	271	247		110	30.0
1011	Setto	1103	658	659		110	30.0
1012	Setto	711	155	713		110	30.0
1013	Setto	4	1009	1010		110	30.0
1014	Setto	1110	670	671		110	30.0
1015	Setto	1106	662	663		110	30.0
1016	Setto	231	253	241		110	30.0
1017	Setto	1108	666	667		110	30.0
1018	Setto	1113	676	128		110	30.0
1019	Setto	1	135	1093		110	30.0
1020	Setto	133	134	1094		110	30.0
1021	Setto	136	137	1095		110	30.0
1022	Setto	138	139	1096		110	30.0
1023	Setto	140	141	1097		110	30.0
1024	Setto	131	142	1098		110	30.0
1025	Setto	143	144	1099		110	30.0
1026	Setto	145	146	1100		110	30.0
1027	Setto	147	148	1101		110	30.0
1028	Setto	149	150	1102		110	30.0
1029	Setto	239	277	124		110	30.0
1030	Setto	236	268	246		110	30.0
1031	Setto	653	1182	673		110	30.0
1032	Setto	1112	1182	674		110	30.0

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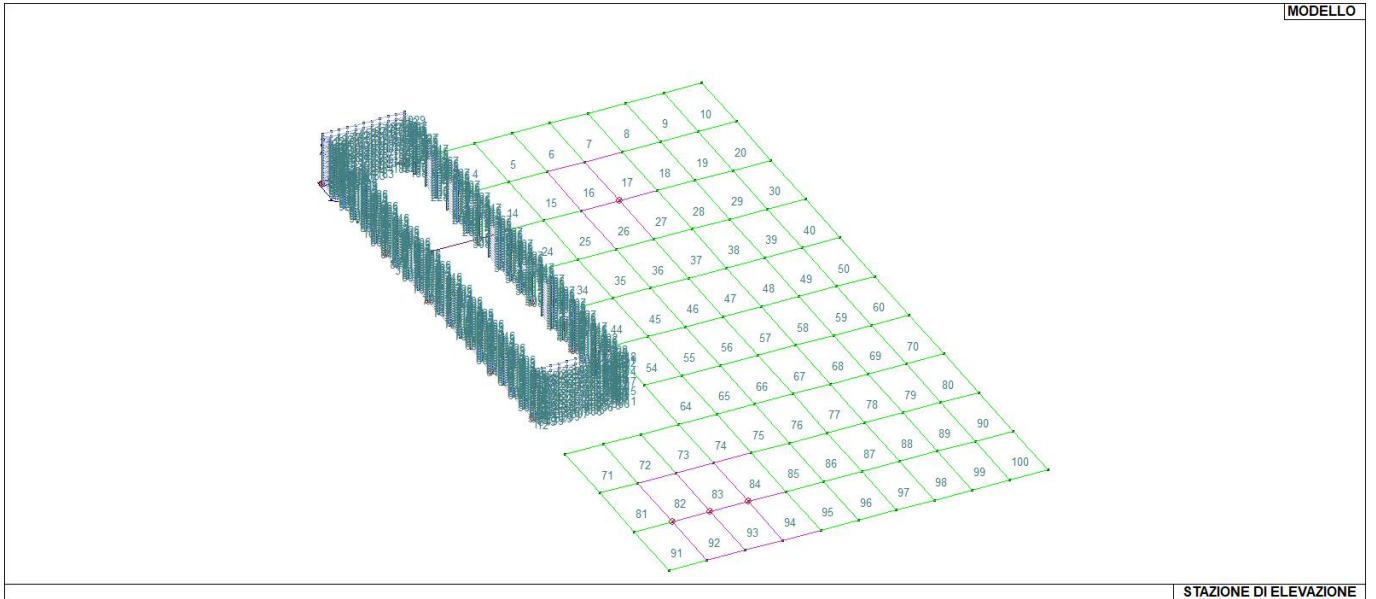
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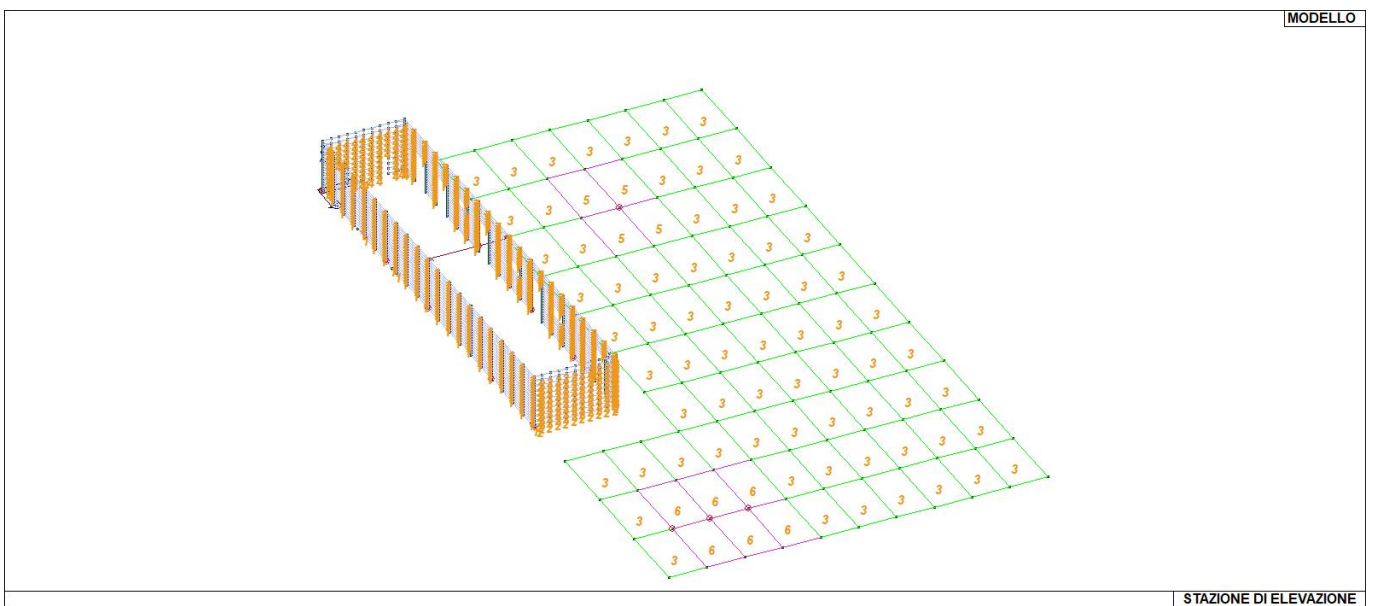
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16_MOD_NUMERAZIONE_D3



16_MOD_NUMERAZIONE_D3_PARETI

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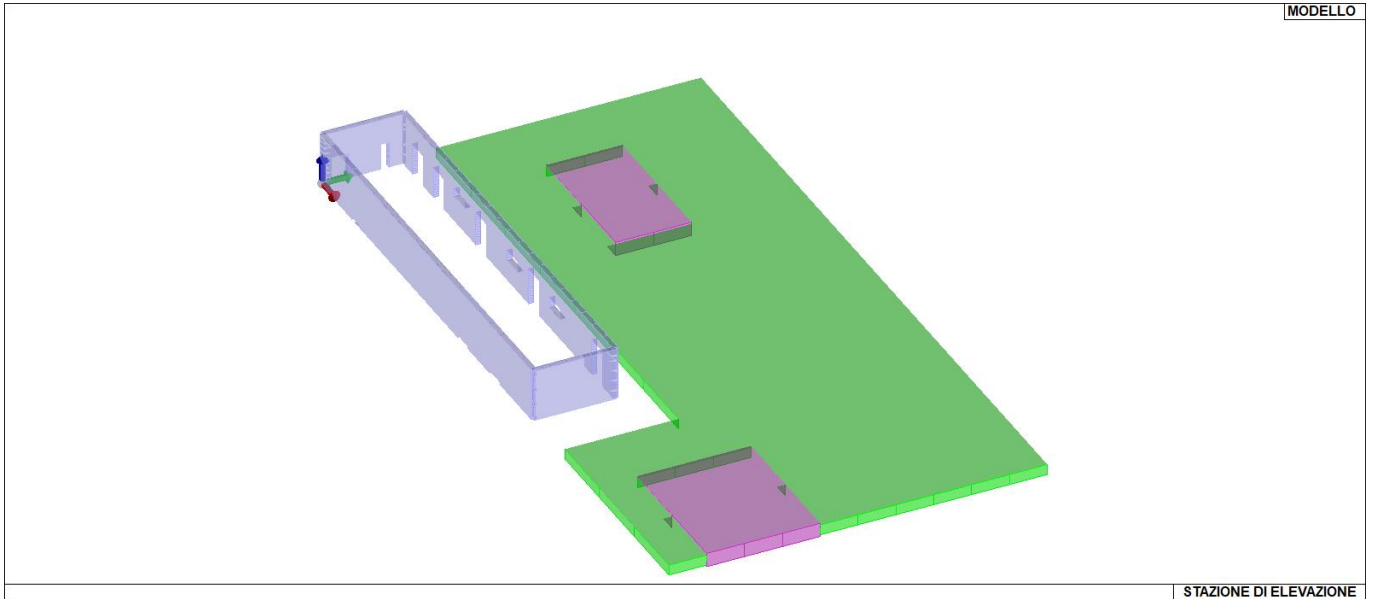
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16_MOD_SPESSORI_D3

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MODELLAZIONE DELLA STRUTTURA: ELEMENTI SOLAIO-PANNELLO

LEGENDA TABELLA DATI SOLAI-PANNELLI

Il programma utilizza per la modellazione elementi a tre o più nodi denominati in generale solaio o pannello.

Ogni elemento solaio-pannello è individuato da una poligonale di nodi 1,2, ..., N.

L'elemento solaio è utilizzato in primo luogo per la modellazione dei carichi agenti sugli elementi strutturali. In secondo luogo può essere utilizzato per la corretta ripartizione delle forze orizzontali agenti nel proprio piano. L'elemento balcone è derivato dall'elemento solaio.

I carichi agenti sugli elementi solaio, raccolti in un archivio, sono direttamente assegnati agli elementi utilizzando le informazioni raccolte nell'archivio (es. i coefficienti combinatori). La tabella seguente riporta i dati utilizzati per la definizione dei carichi e delle masse.

L'elemento pannello è utilizzato solo per l'applicazione dei carichi, quali pesi delle tamponature o spinte dovute al vento o terre. In questo caso i carichi sono applicati in analogia agli altri elementi strutturali (si veda il cap. SCHEMATIZZAZIONE DEI CASI DI CARICO).

Id.Arch.	Identificativo dell' archivio
Tipo	Tipo di carico Variab. Carico variabile generico Var. rid. Carico variabile generico con riduzione in funzione dell' area (c.5.5. ...) Neve Carico di neve
G1k	carico permanente (comprensivo del peso proprio)
G2k	carico permanente non strutturale e non compiutamente definito
Qk	carico variabile
Fatt. A	fattore di riduzione del carico variabile (0.5 o 0.75) per tipo "Var.rid."
S sis.	fattore di riduzione del carico variabile per la definizione delle masse sismiche per D.M. 96 (vedi NOTA sul capitolo "normativa di riferimento")
Psi 0	Coefficiente combinatorio dei valori caratteristici delle azioni variabili: per valore raro
Psi 1	Coefficiente combinatorio dei valori caratteristici delle azioni variabili: per valore frequente
Psi 2	Coefficiente combinatorio dei valori caratteristici delle azioni variabili: per valore quasi permanente
Psi S 2	Coefficiente di combinazione che fornisce il valore quasi-permanente dell'azione variabile: per la definizione delle masse sismiche
Fatt. Fi	Coefficiente di correlazione dei carichi per edifici

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:

Elem	numero dell'elemento
Tipo	codice di comportamento S elemento utilizzato solo per scarico C elemento utilizzato per scarico e per modellazione piano rigido P elemento utilizzato come pannello M scarico monodirezionale B scarico bidirezionale
Id.Arch.	Identificativo dell' archivio
Mat	codice del materiale assegnato all'elemento
Spessore	spessore dell'elemento (costante)
Orditura	angolo (rispetto all'asse X) della direzione dei travetti principali
Gk	carico permanente solaio (comprensivo del peso proprio)
Qk	carico variabile solaio
Nodi	numero dei nodi che definiscono l'elemento (5 per riga)

Nel caso in cui si sia proceduto alla progettazione dei solai con le tensioni ammissibili vengono riportate le massime tensioni nell'elemento (massima compressione nel calcestruzzo, massima tensione nell'acciaio, massima tensione tangenziale); nel caso in cui si sia proceduto alla progettazione con il metodo degli stati limite vengono riportati il rapporto x/d e le verifiche per sollecitazioni proporzionali nonché le verifiche in esercizio.

In particolare i simboli utilizzati in tabella assumono il seguente significato:

Elem.	numero identificativo dell'elemento
Stato	Codici di verifica relativi alle tensioni normali e alle tensioni tangenziali
Note	Viene riportato il codice relativo alla sezione(s) e relativo al materiale(m);
Pos.	Ascissa del punto di verifica
F ist, F infi	Frecce istantanee e a tempo infinito

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Momento	Momento flettente
Taglio	Sollecitazione di taglio
Af inf.	Area di armatura longitudinale posta all'intradosso della trave
Af sup.	Area di armatura longitudinale posta all'estradosso della trave
AfV	Area dell'armatura atta ad assorbire le azioni di taglio
Beff	Base della sezione di cls per l'assorbimento del taglio
	simboli utilizzati con il metodo delle tensioni ammissibili:
sc max	Massima tensione di compressione del calcestruzzo
sf max	Massima tensione nell'acciaio
tau max	Massima tensione tangenziale nel cls
	simboli utilizzati con il metodo degli stati limite:
x/d	rapporto tra posizione dell'asse neutro e altezza utile alla rottura della sezione (per sola flessione)
verif.	rapporto Sd/Su con sollecitazioni ultime proporzionali: valore minore o uguale a 1 per verifica positiva
Verif.V	rapporto Sd/Su con sollecitazioni taglianti proporzionali valore minore o uguale a 1 per verifica positiva
rRfck	rapporto tra la massima compressione nel calcestruzzo e la tensione fck in combinazioni rare [normalizzato a 1]
rFfck	rapporto tra la massima compressione nel calcestruzzo e la tensione fck in combinazioni frequenti [normalizzato a 1]
rPfck	rapporto tra la massima compressione nel calcestruzzo e la tensione fck in combinazioni quasi permanenti [normalizzato a 1]
rRfyk	rapporto tra la massima tensione nell'acciaio e la tensione fyk in combinazioni frequenti [normalizzato a 1]
rFyk	rapporto tra la massima tensione nell'acciaio e la tensione fyk in combinazioni rare [normalizzato a 1]
rPfyk	rapporto tra la massima tensione nell'acciaio e la tensione fyk in combinazioni quasi permanenti [normalizzato a 1]
wR	apertura caratteristica delle fessure in combinazioni rare [mm]
wF	apertura caratteristica delle fessure in combinazioni frequenti [mm]
wP	apertura caratteristica delle fessure in combinazioni quasi permanenti [mm]

Nel caso in cui si sia proceduto alla verifica delle tamponature secondo il D.M. 17.01.2018 - §7.2.3 viene riportata una tabella riassuntiva delle verifiche degli elementi pannello. La verifica confronta i momenti sollecitanti indotti dal sisma con i momenti resistenti, secondo tre ipotesi, due basate sulla resistenza a pressoflessione della tamponatura ed una basata sul cinematismo a seguito della formazione di tre cerniere plastiche sulla tamponatura (rif. Ufficio di Vigilanza sulle Costruzioni, Provincia di Terni).

Qualora la tamponatura sia di tipo antiespulsione (nelle due possibili varianti ordinaria o armata) viene condotta una verifica con meccanismo ad arco con degrado di resistenza. La verifica confronta le pressioni sollecitanti indotte dal sisma con le pressioni resistenti che la tamponatura sviluppa attraverso il meccanismo ad arco. La verifica considera anche il degrado di resistenza dovuto al danneggiamento nel piano della tamponatura.

Per quest'ultima tamponatura sono disponibili, in funzione del materiale impiegato (materiale [52] o materiale [53]):

- **Tamponatura Antiespulsione ordinaria Poroton® Cis Edil** sp.30 cm; con metodo di verifica per meccanismo ad arco con degrado di resistenza, sviluppato attraverso i risultati di un progetto di ricerca sperimentale condotto dall'Università degli Studi di Padova. Utilizzabile per il materiale [52].
- **Tamponatura Antiespulsione armata Poroton® Cis Edil** sp.30 cm; con metodo di verifica per meccanismo ad arco con degrado di resistenza, sviluppato attraverso i risultati di un progetto di ricerca sperimentale condotto dall'Università degli Studi di Padova. Utilizzabile per il materiale [53].

La verifica è stata calibrata sulla base di prove sperimentali sul sistema di Tamponatura Antiespulsione anche in presenza di aperture. (rif. Rapporti di Prova redatti dal Dipartimento ICEA - Università degli Studi di Padova di test sperimentali condotti sul sistema Tamponatura Antiespulsione di Cis Edil)

In particolare i simboli utilizzati in tabella assumono il seguente significato:

Elem.	Numero identificativo dell'elemento
Stato	Codice di verifica
Ver. c.c.	Verifica nell'ipotesi di trave appoggiata con carico concentrato in mezzeria
Ver. c.d.	Verifica nell'ipotesi di trave appoggiata con carico distribuito
Ver. c.cin.	Verifica nell'ipotesi di cinematismo con formazione di cerniere plastiche in appoggio e mezzeria
Ver. CIS	Rapporto pa/pr (valore minore o uguale a 1 per verifica positiva)
Z	Quota del baricentro dell'elemento
T1	Periodo proprio dell'edificio nella direzione di interesse (ortogonale al pannello)
Ta	Periodo proprio della parete
Sa	Accelerazione massima, adimensionalizzata allo SLV
pa	Pressione sulla parete causata dall'azione sismica
pr	Pressione resistente del meccanismo ad arco

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Drift	Spostamento relativo interpiano allo SLV valutato secondo il D.M. 14.01.2018 - § 7.3.3.3
Beta a	Coef. riduttivo per tener conto del danneggiamento del piano dipendente dallo spostamento, ottenuto sperimentalmente

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, si segnalano i seguenti esempi applicativi:

Test N°	Titolo
14	ANALISI DEI CARICHI PER UN SOLAIO DI COPERTURA
15	EFFETTI DELLO SPESSORE SULLA RIGIDEZZA DEI SOLAI
16	SOLAIO: CONFRONTO FRA RIGIDO E DEFORMABILE
17	SOLAIO: MISTO LEGNO-CALCESTRUZZO
28	FRECCIA DI SOLAI IN C.A.
119	PROGETTO E VERIFICA DI SOLAI IN MATERIALE XLAM

ID Arch.	Tipo	G1k daN/cm2	G2k daN/cm2	Qk daN/cm2	Fatt. A	s sis.	Psi 0	Psi 1	Psi 2	Psi S 2	Fatt. Fi
4	Variab.	5.00e-02	1.00e-02	3.00e-02		1.00	0.70	0.70	0.60	0.60	1.00

Elem.	Tipo	ID Arch.	Mat.	Spessore	Orditura	G1k daN/cm2	G2k daN/cm2	Qk daN/cm2	Nodo 1/6..	Nodo 2/7..	Nodo 3/8..	Nodo..	Nodo..
1	CM	4	m=1	16.0	90.0	5.00e-02	1.00e-02	3.00e-02	122	126	128	124	

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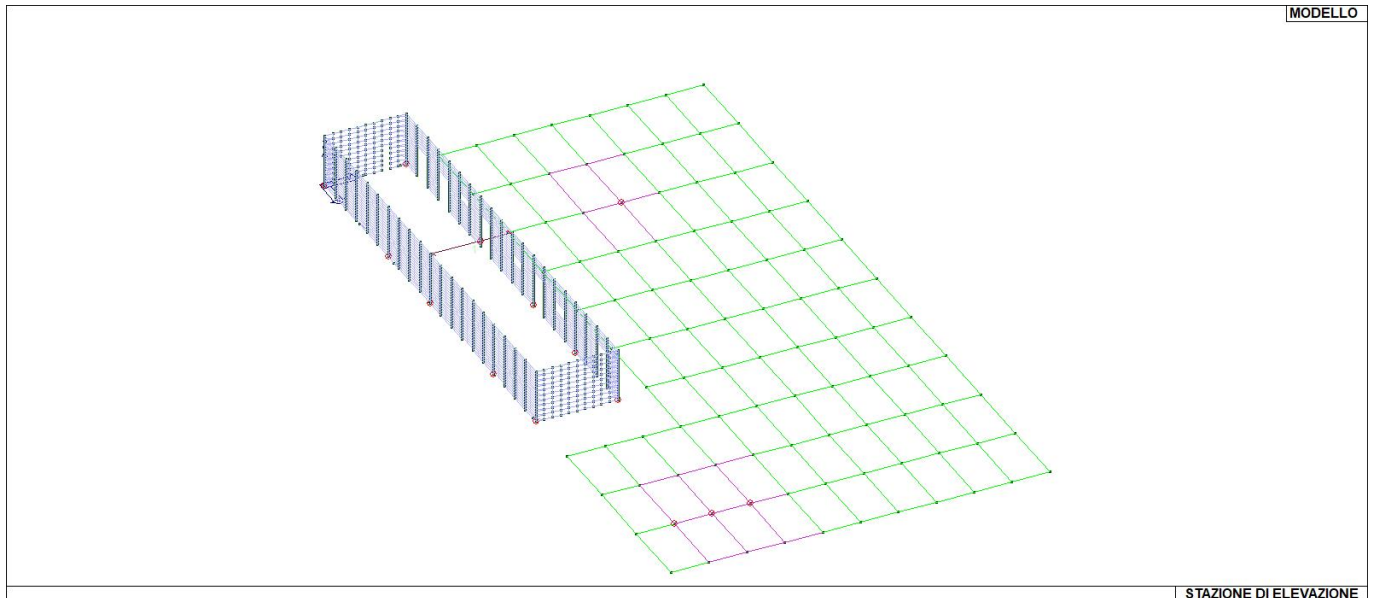
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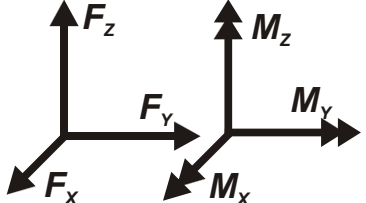
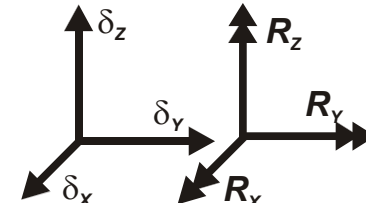
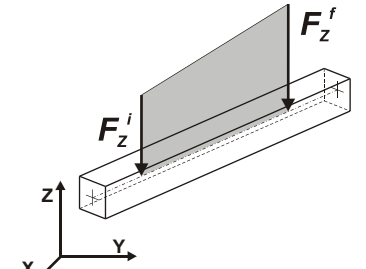
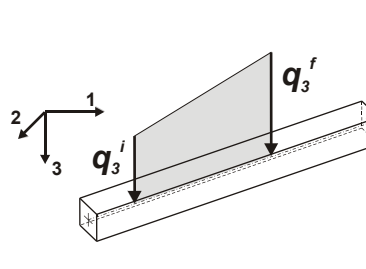
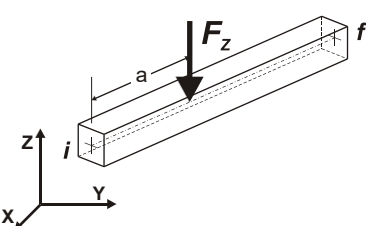
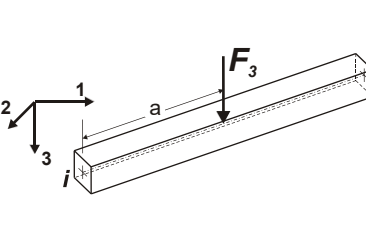
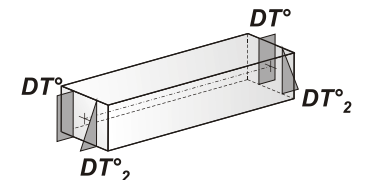
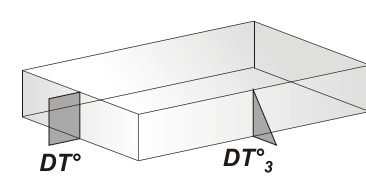
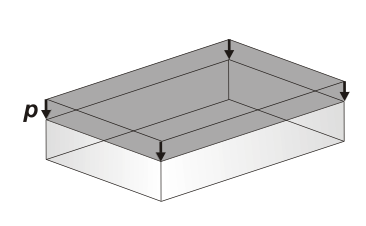
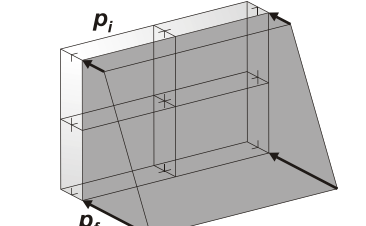
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MODELLAZIONE DELLE AZIONI

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	carico concentrato nodale 6 dati (forza F_x, F_y, F_z , momento M_x, M_y, M_z)
2	spostamento nodale impresso 6 dati (spostamento T_x, T_y, T_z , rotazione R_x, R_y, R_z)
3	carico distribuito globale su elemento tipo trave 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	carico distribuito locale su elemento tipo trave 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	carico concentrato globale su elemento tipo trave 7 dati ($F_x, F_y, F_z, M_x, M_y, M_z$, ascissa di carico)
6	carico concentrato locale su elemento tipo trave 7 dati ($F_1, F_2, F_3, M_1, M_2, M_3$, ascissa di carico)
7	variazione termica applicata ad elemento tipo trave 7 dati (variazioni termiche: uniforme, media e differenza in altezza e larghezza al nodo iniziale e finale)
8	carico di pressione uniforme su elemento tipo piastra 1 dato (pressione)
9	carico di pressione variabile su elemento tipo piastra 4 dati (pressione, quota, pressione, quota)
10	variazione termica applicata ad elemento tipo piastra 2 dati (variazioni termiche: media e differenza nello spessore)
11	carico variabile generale su elementi tipo trave e piastra 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	gruppo di carichi con impronta su piastra 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

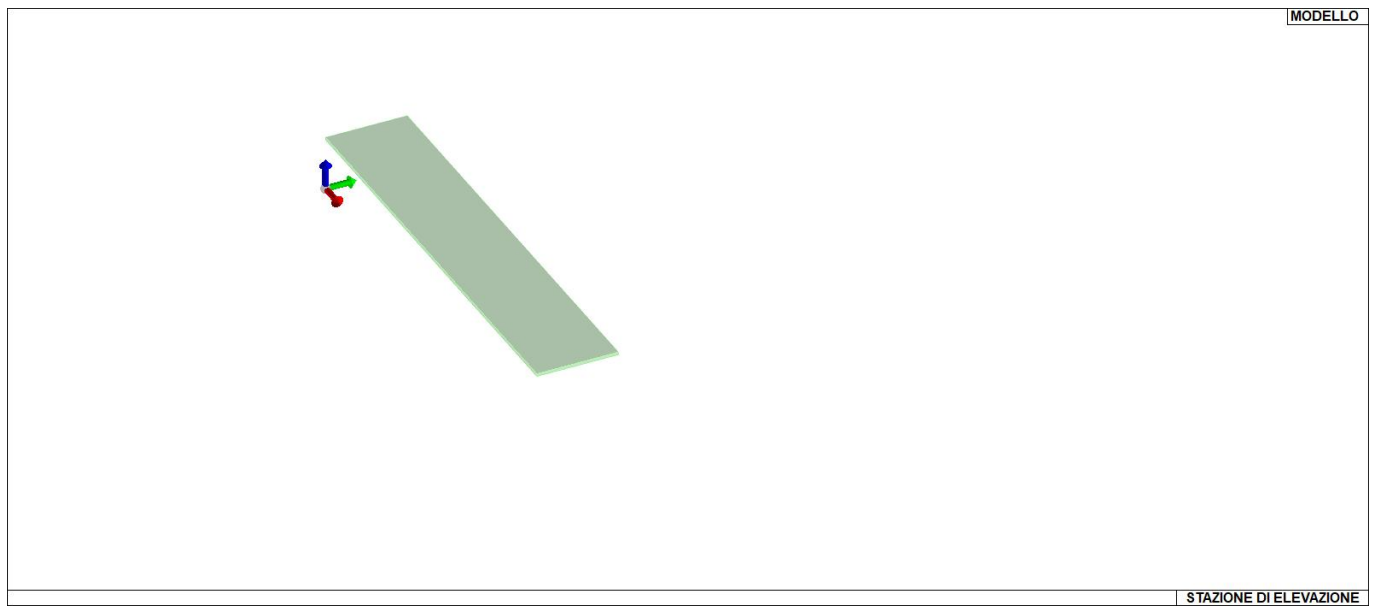
Id	Tipo	Fx	Fy	Fz	Mx	My	Mz
		daN	daN	daN	daN cm	daN cm	daN cm
9	CN:Fz=-300.00	0.0	0.0	-300.00	0.0	0.0	0.0

Progetto degli impianti per la connessione degli impianti fotovoltaici:

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Tipo carico di pressione uniforme su piastra

Id	Tipo	pressione
		daN/cm2
10	P3:p=-0.30	-0.30



21_CAR_CARICHI_SOLAI

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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:

	Sigla	Tipo	Descrizione
1	Ggk	A	caso di carico comprensivo del peso proprio struttura
2	Gk	NA	caso di carico con azioni permanenti
3	Qk	NA	caso di carico con azioni variabili
4	Gsk	A	caso di carico comprensivo dei carichi permanenti sui solai e sulle coperture
5	Qsk	A	caso di carico comprensivo dei carichi variabili sui solai
6	Qnk	A	caso di carico comprensivo dei carichi di neve sulle coperture
7	Qtk	SA	caso di carico comprensivo di una variazione termica agente sulla struttura
8	Qvk	NA	caso di carico comprensivo di azioni da vento sulla struttura
9	Esk	SA	caso di carico sismico con analisi statica equivalente
10	Edk	SA	caso di carico sismico con analisi dinamica
11	Etk	NA	caso di carico comprensivo di azioni derivanti dall' incremento di spinta delle terre in condizione sismica
12	Pk	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 solai) e pertanto la loro partecipazione è di norma pari a uno.

CDC	Tipo	Sigla Id	Note
1	Ggk	CDC=Ggk (peso proprio della struttura)	
2	Gsk	CDC=G1sk (permanente solai-coperture)	
3	Gsk	CDC=G2sk (permanente solai-coperture n.c.d.)	
4	Qsk	CDC=Qsk (variabile solai)	
5	Edk	CDC=Ed (dinamico SLU) alfa=0.0 (ecc. +)	partecipazione:1.00 per 1 CDC=Ggk (peso proprio della struttura) partecipazione:1.00 per 2 CDC=G1sk (permanente solai-coperture) partecipazione:1.00 per 3 CDC=G2sk (permanente solai-coperture n.c.d.) partecipazione:1.00 per 4 CDC=Qsk (variabile solai) partecipazione:1.00 per 13 CDC=G1k (permanente generico)
6	Edk	CDC=Ed (dinamico SLU) alfa=0.0 (ecc. -)	come precedente CDC sismico
7	Edk	CDC=Ed (dinamico SLU) alfa=90.00 (ecc. +)	come precedente CDC sismico
8	Edk	CDC=Ed (dinamico SLU) alfa=90.00 (ecc. -)	come precedente CDC sismico
9	Edk	CDC=Ed (dinamico SLD) alfa=0.0 (ecc. +)	come precedente CDC sismico
10	Edk	CDC=Ed (dinamico SLD) alfa=0.0 (ecc. -)	come precedente CDC sismico
11	Edk	CDC=Ed (dinamico SLD) alfa=90.00 (ecc. +)	come precedente CDC sismico
12	Edk	CDC=Ed (dinamico SLD) alfa=90.00 (ecc. -)	come precedente CDC sismico
13	Gk	CDC=G1k (permanente generico)	Azioni applicate: Nodo: 29 Azione : CN:Fz=-300.00 Nodo: 100 Azione : CN:Fz=-300.00 Nodo:da 102 a 103 Azione : CN:Fz=-300.00

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RELAZIONE DI CALCOLO

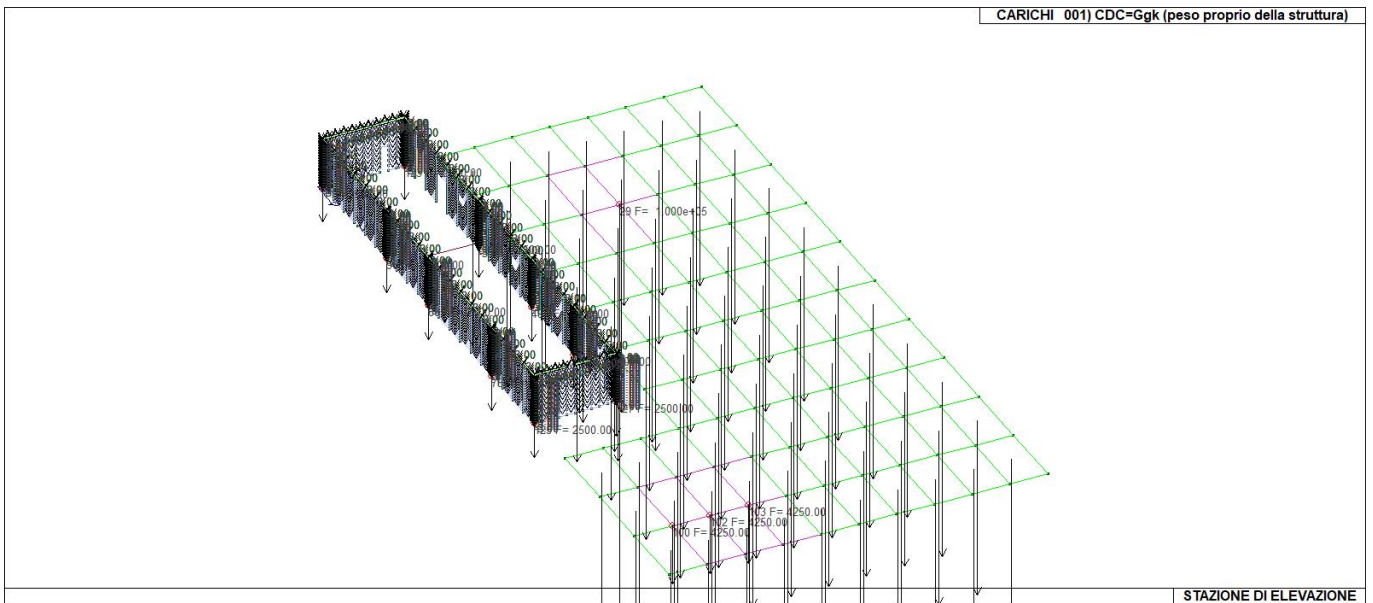


SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

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CDC	Tipo	Sigla Id	Note
			D3 : 35 Azione : P3:p=-0.30
			D3 : 37 Azione : P3:p=-0.30
			D3 : 39 Azione : P3:p=-0.30
			D3 : 55 Azione : P3:p=-0.30
			D3 : 57 Azione : P3:p=-0.30
			D3 : 59 Azione : P3:p=-0.30
			D3 : 75 Azione : P3:p=-0.30
			D3 : 77 Azione : P3:p=-0.30
			D3 : 79 Azione : P3:p=-0.30



22_CDC_001_CDC=Ggk (peso proprio della struttura)

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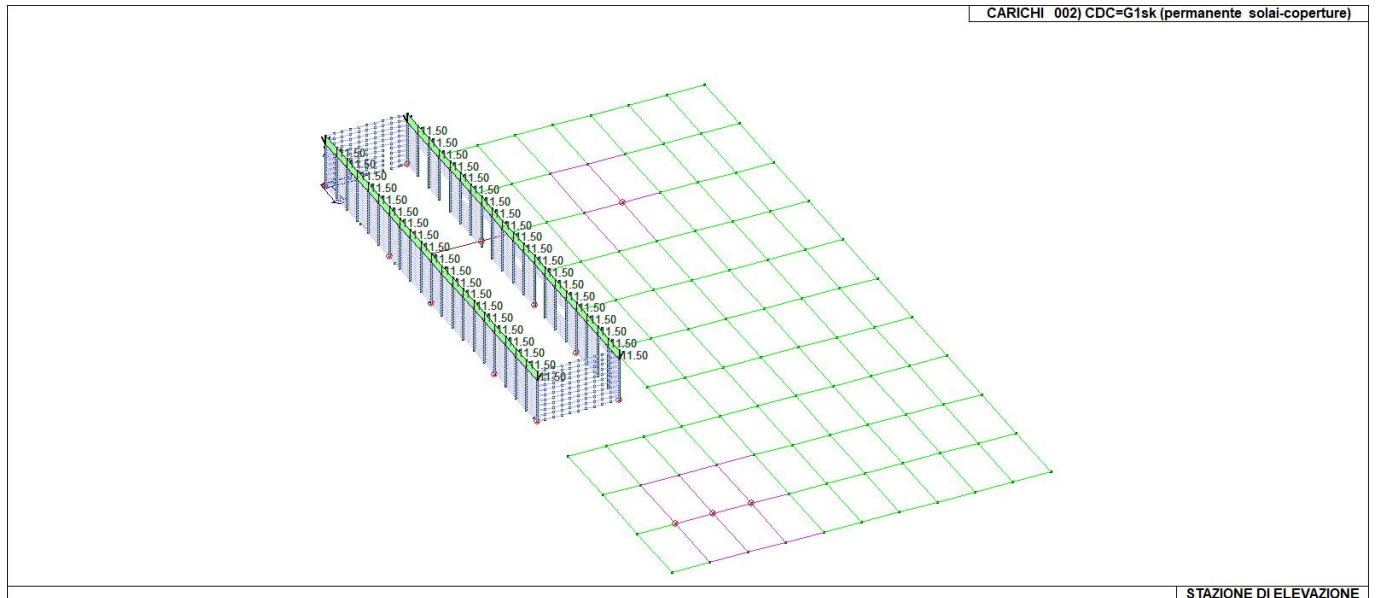
RELAZIONE DI CALCOLO



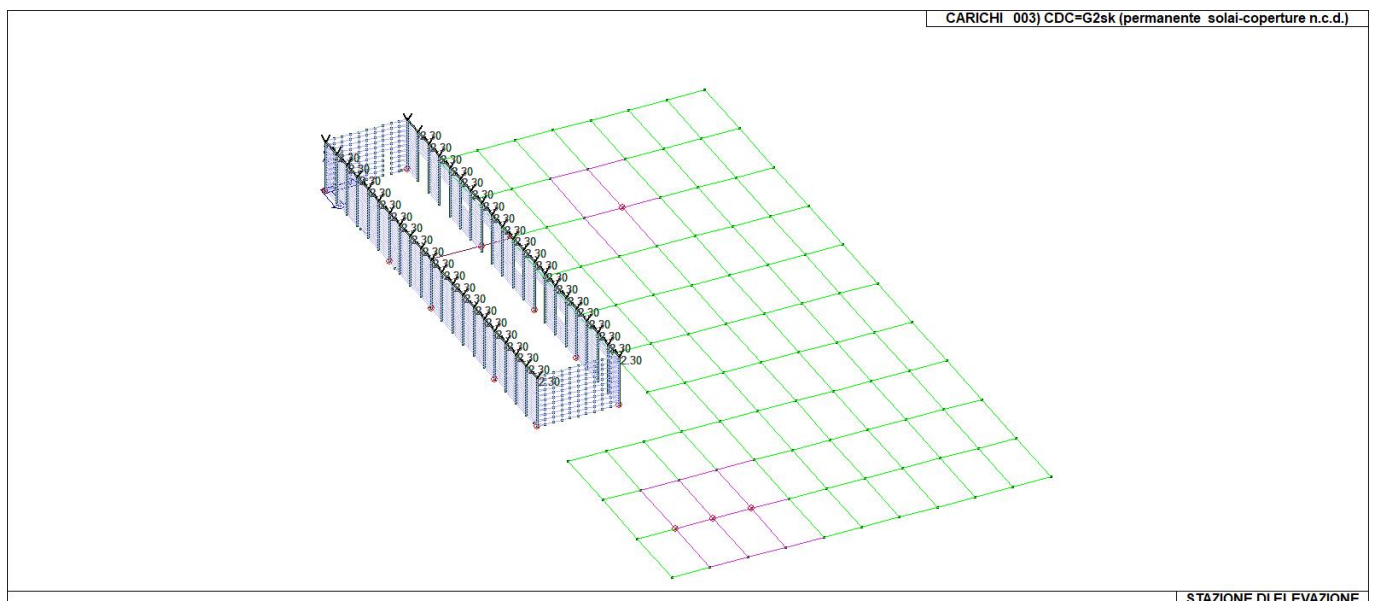
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22_CDC_002_CDC=G1sk (permanente solai-coperture)



22_CDC_003_CDC=G2sk (permanente solai-coperture n.c.d.)

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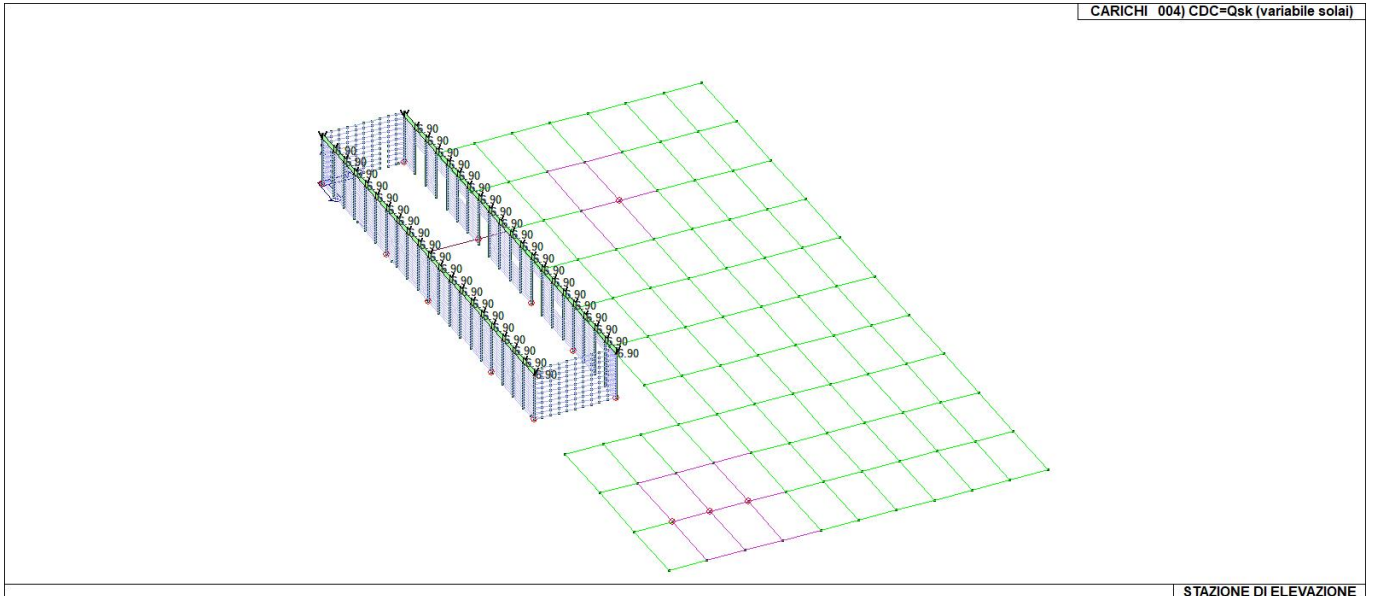
RELAZIONE DI CALCOLO



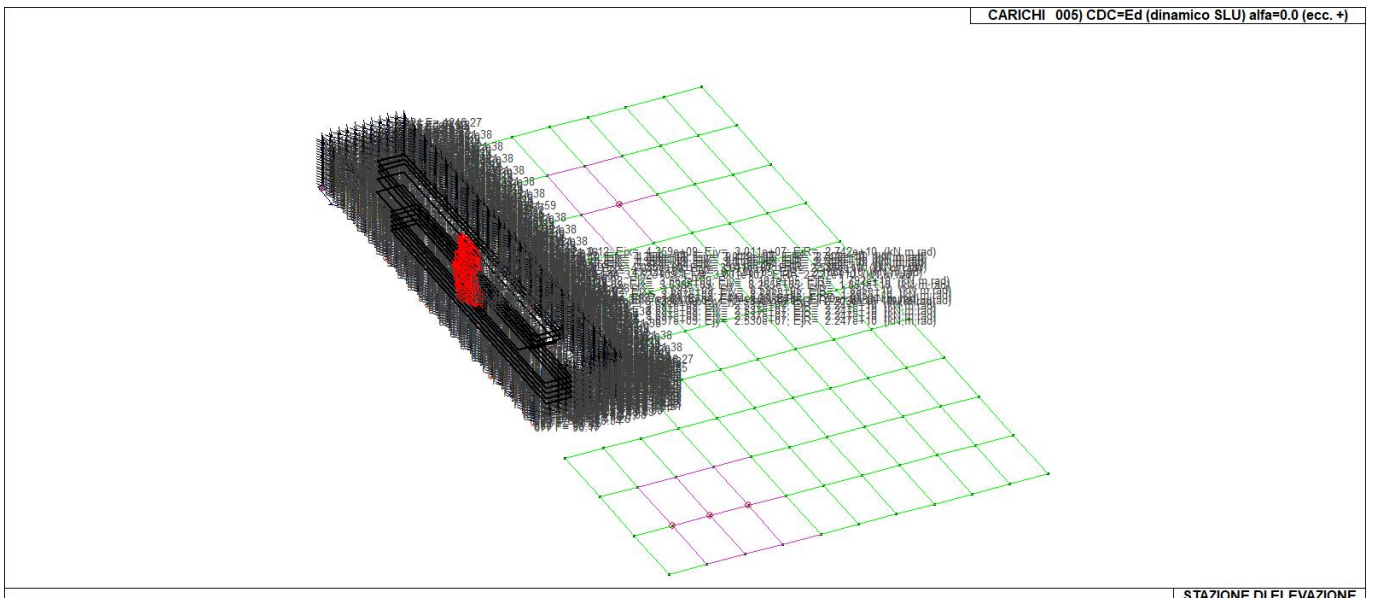
SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO /IEC 17001:2017
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22_CDC_004_CDC=Qsk (variabile solai)



22_CDC_005_CDC=Ed (dinamico SLU) alfa=0.0 (ecc. +)

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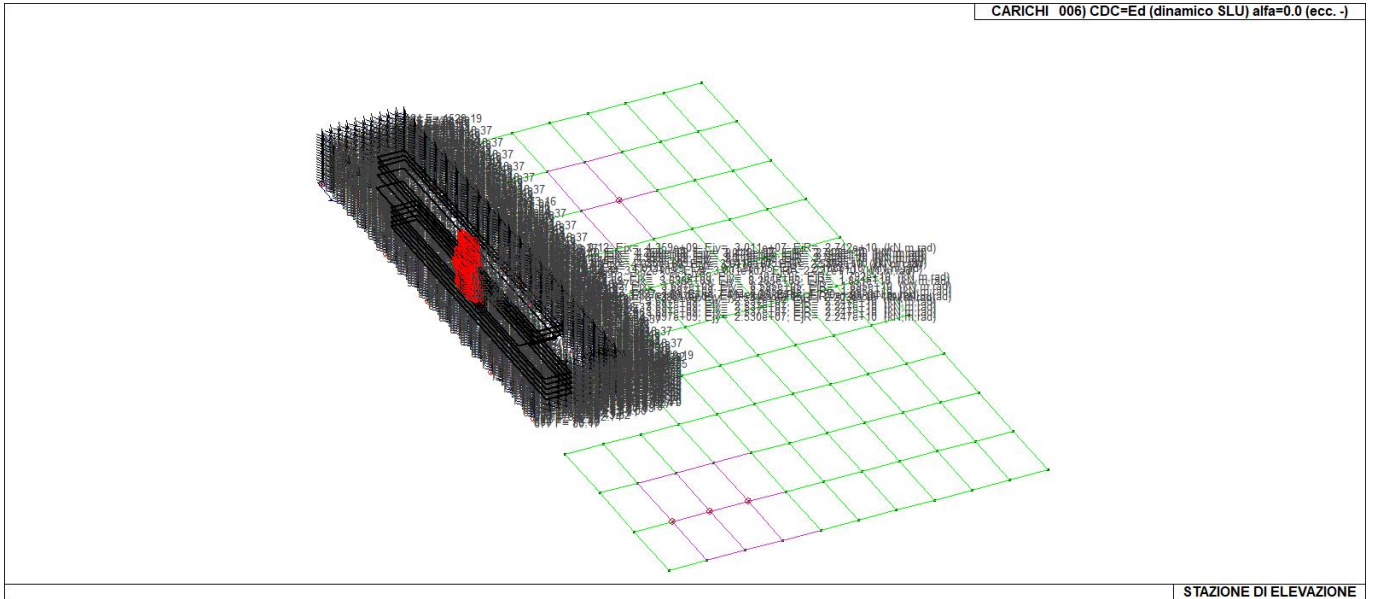
RELAZIONE DI CALCOLO



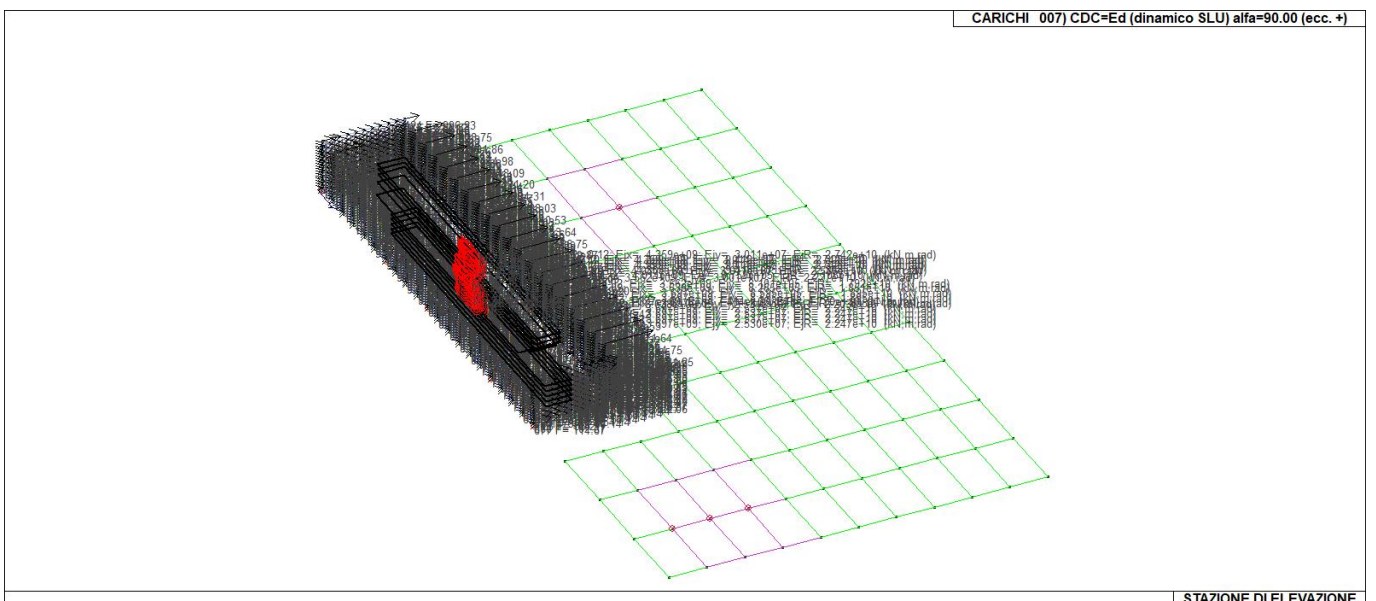
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22_CDC_006_CDC=Ed (dinamico SLU) alfa=0.0 (ecc. -)



22_CDC_007_CDC=Ed (dinamico SLU) alfa=90.00 (ecc. +)

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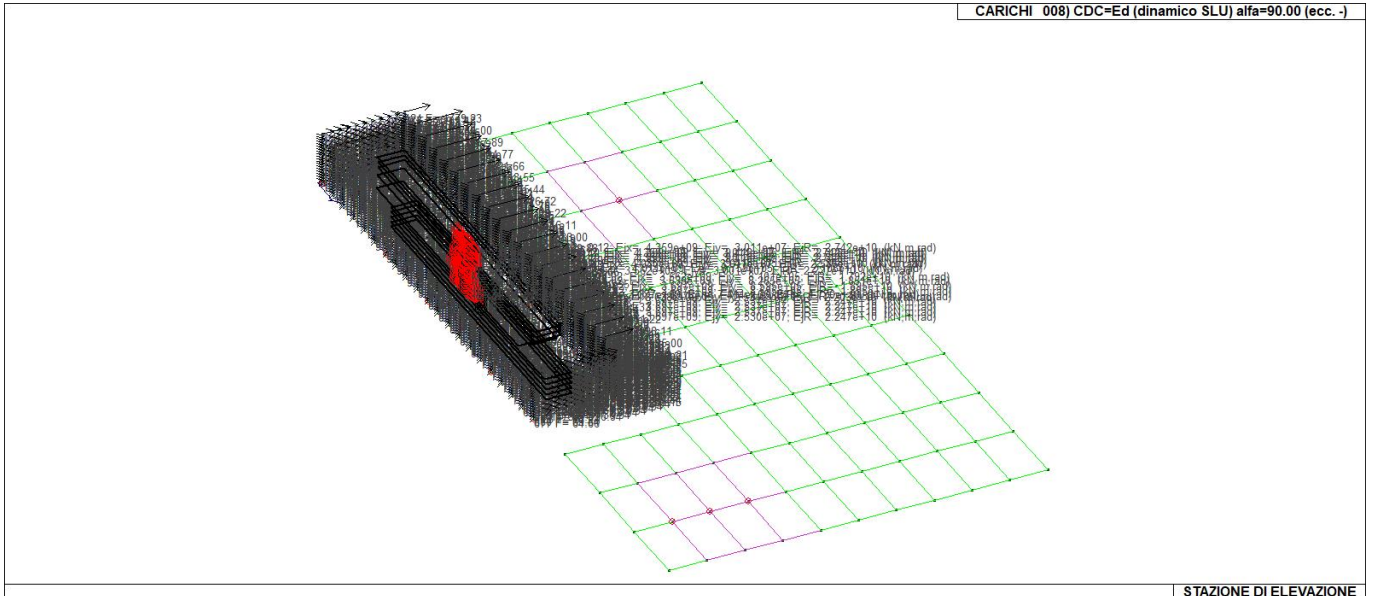
RELAZIONE DI CALCOLO



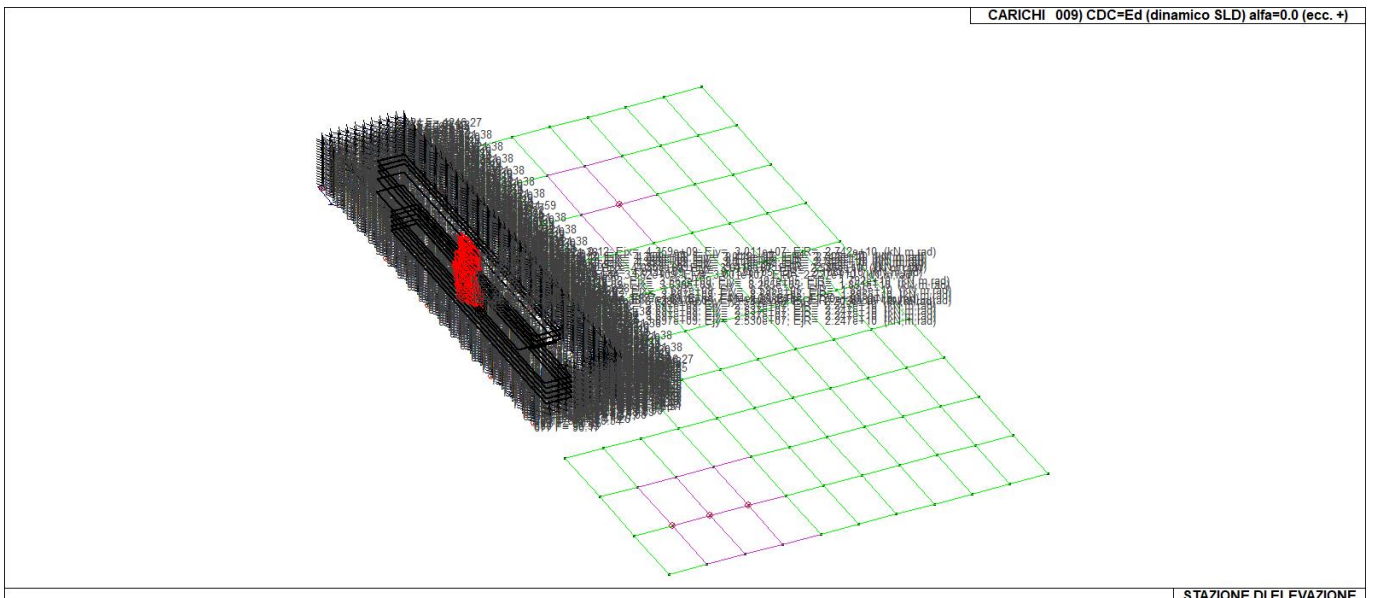
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22_CDC_008_CDC=Ed (dinamico SLU) alfa=90.00 (ecc. -)



22_CDC_009_CDC=Ed (dinamico SLD) alfa=0.0 (ecc. +)

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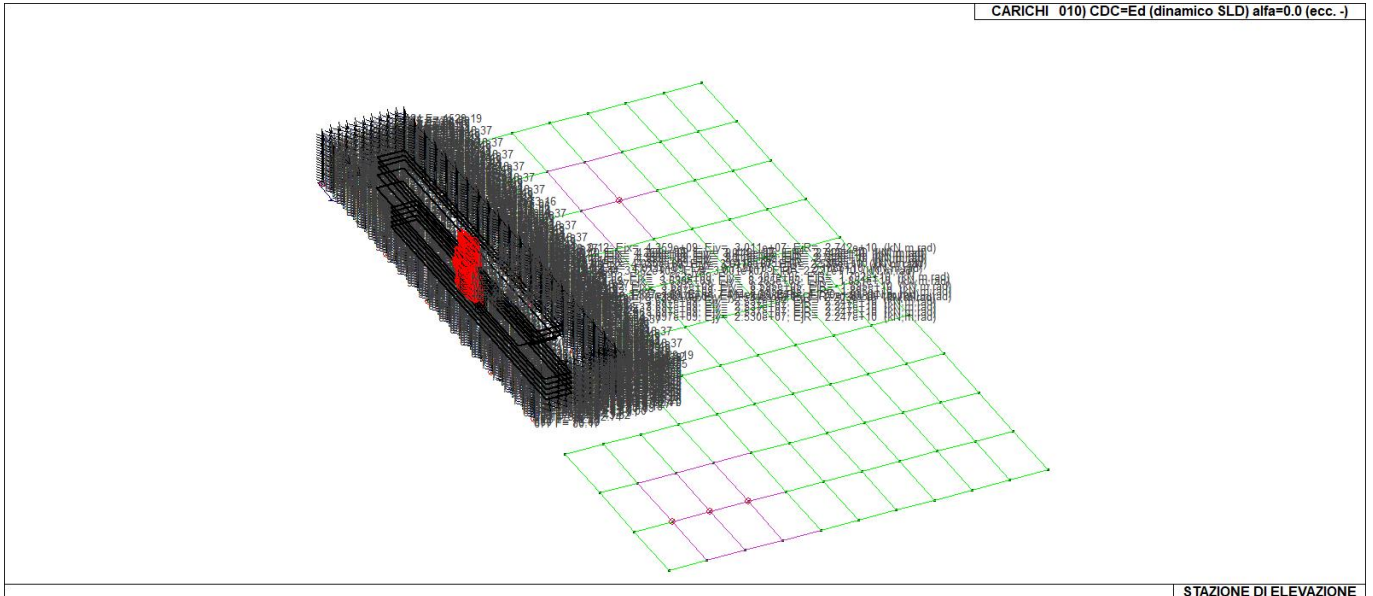
RELAZIONE DI CALCOLO



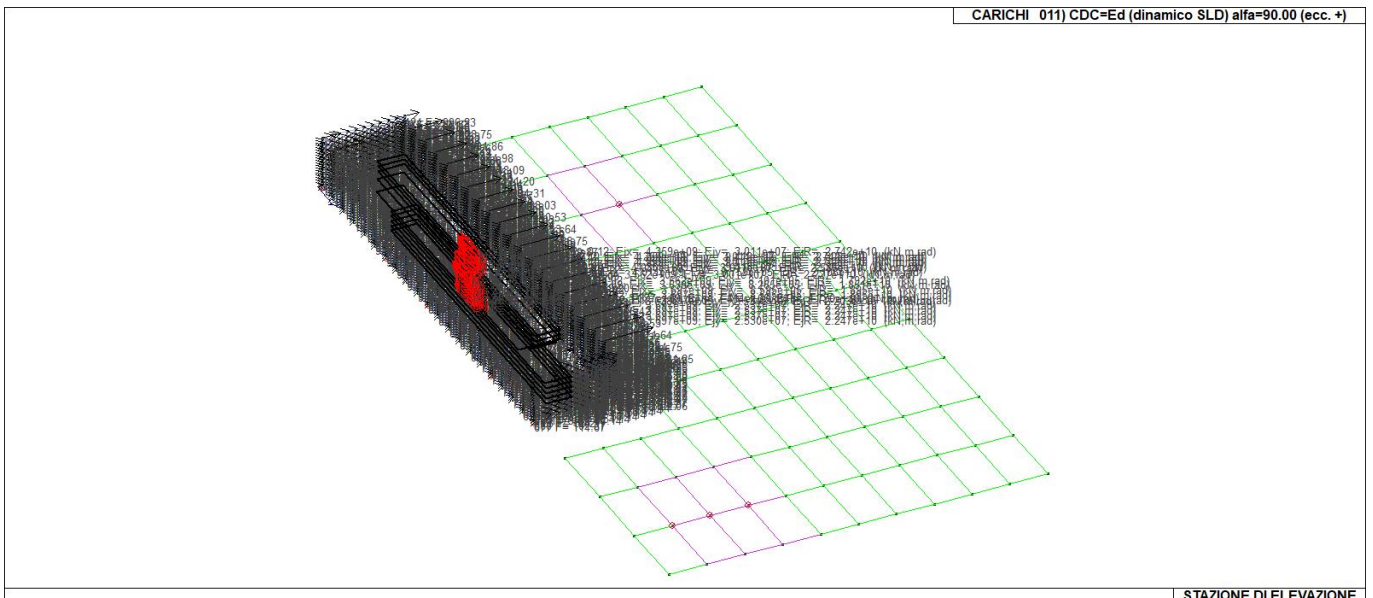
SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO /IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

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22_CDC_010_CDC=Ed (dinamico SLD) alfa=0.0 (ecc. -)



22_CDC_011_CDC=Ed (dinamico SLD) alfa=90.00 (ecc. +)

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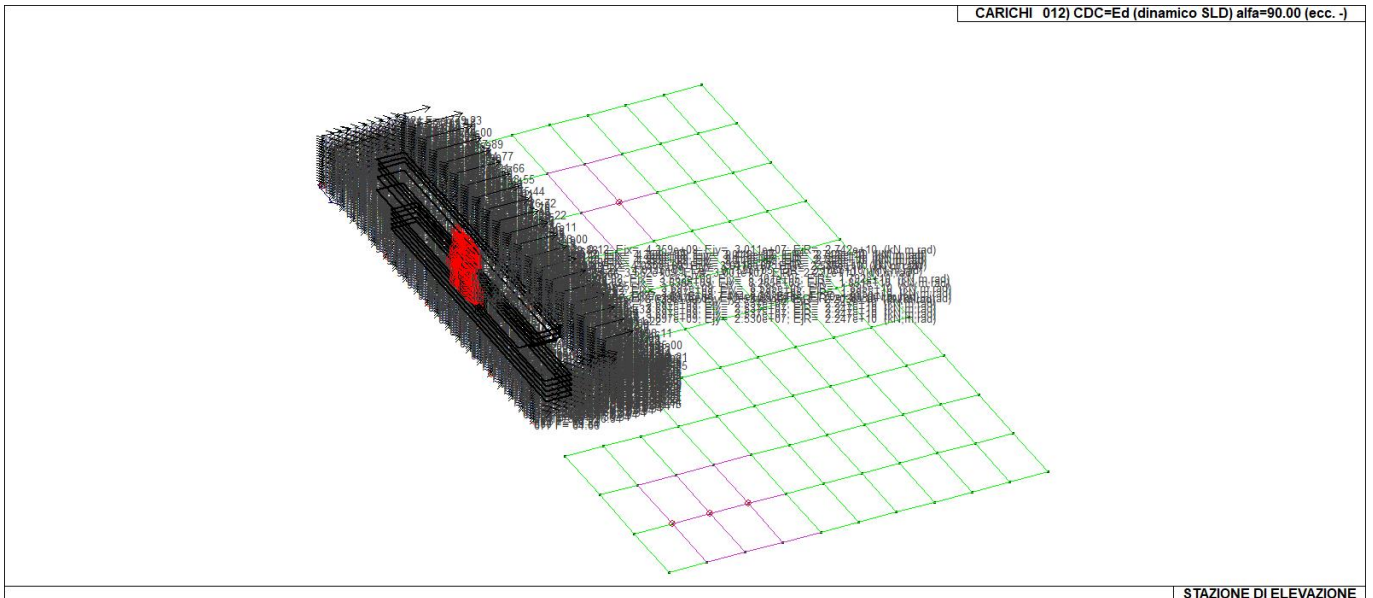
RELAZIONE DI CALCOLO



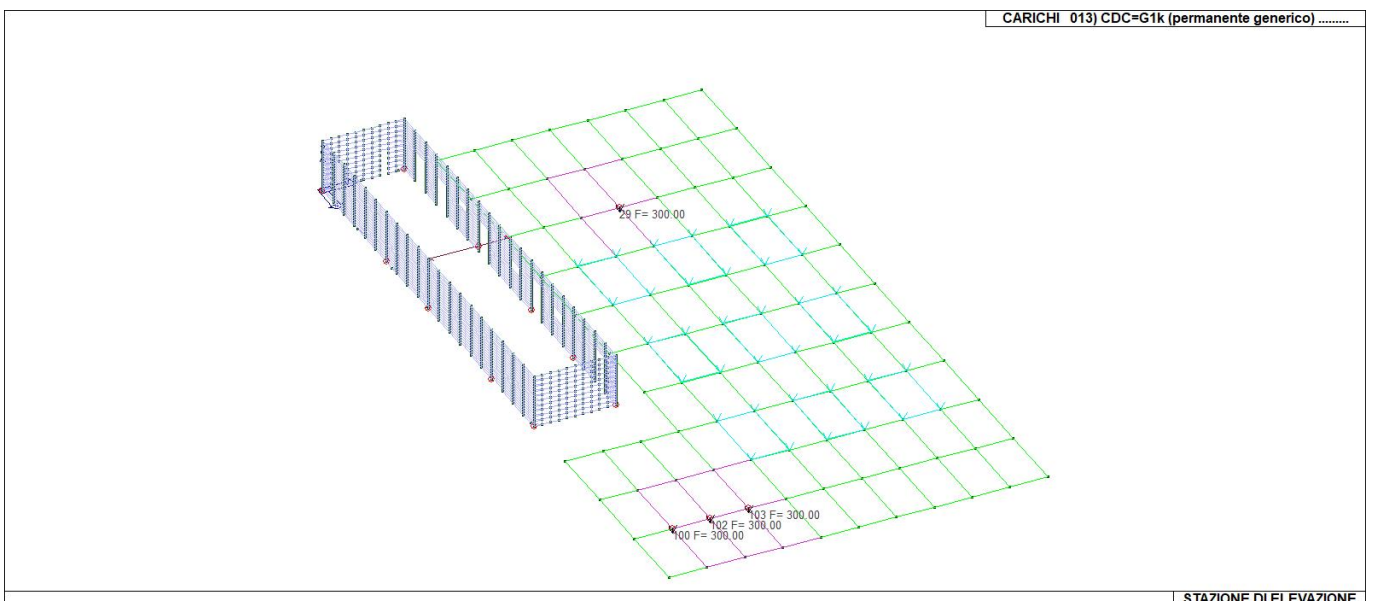
SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO 17001:2017
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22_CDC_012_CDC=Ed (dinamico SLD) alfa=90.00 (ecc. -)



22_CDC_013_CDC=G1k (permanente generico)

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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

$$\gamma G_1 \cdot G_1 + \gamma G_2 \cdot G_2 + \gamma P \cdot P + \gamma Q_1 \cdot Q_{k1} + \gamma Q_2 \cdot \psi_{02} \cdot Q_{k2} + \gamma Q_3 \cdot \psi_{03} \cdot Q_{k3} + \dots$$

Combinazione caratteristica (rara) SLE

$$G_1 + G_2 + P + Q_{k1} + \psi_{02} \cdot Q_{k2} + \psi_{03} \cdot Q_{k3} + \dots$$

Combinazione frequente SLE

$$G_1 + G_2 + P + \psi_{11} \cdot Q_{k1} + \psi_{22} \cdot Q_{k2} + \psi_{23} \cdot Q_{k3} + \dots$$

Combinazione quasi permanente SLE

$$G_1 + G_2 + P + \psi_{21} \cdot Q_{k1} + \psi_{22} \cdot Q_{k2} + \psi_{23} \cdot Q_{k3} + \dots$$

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

$$E + G_1 + G_2 + P + \psi_{21} \cdot Q_{k1} + \psi_{22} \cdot Q_{k2} + \dots$$

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

$$G_1 + G_2 + A_d + P + \psi_{21} \cdot Q_{k1} + \psi_{22} \cdot Q_{k2} + \dots$$

Dove:

NTC 2018 Tabella 2.5.I

Destinazione d'uso/azione	ψ_0	ψ_1	ψ_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 γ_f	EQU	A1	A2
Carichi permanenti	Favorevoli	γ_{G1}	0,9	1,0	1,0
	Sfavorevoli		1,1	1,3	1,0
Carichi permanenti non strutturali (Non compiutamente definiti)	Favorevoli	γ_{G2}	0,8	0,8	0,8
	Sfavorevoli		1,5	1,5	1,3
Carichi variabili	Favorevoli	γ_{Qi}	0,0	0,0	0,0
	Sfavorevoli		1,5	1,5	1,3

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Cmb	Tipo	Sigla Id	effetto P-delta
1	SLU	Comb. SLU A1 1	
2	SLU	Comb. SLU A1 2	
3	SLU	Comb. SLU A1 3	
4	SLU	Comb. SLU A1 4	
5	SLE(r)	Comb. SLE(rara) 5	
6	SLE(r)	Comb. SLE(rara) 6	
7	SLE(f)	Comb. SLE(freq.) 7	
8	SLE(f)	Comb. SLE(freq.) 8	
9	SLE(p)	Comb. SLE(perm.) 9	
10	SLE(p)	Comb. SLE(perm.) 10	

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	1.30	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.30	
2	1.30	1.30	1.50	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.30	
3	1.00	1.00	0.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	
4	1.00	1.00	0.80	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	
5	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	
6	1.00	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	
7	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	
8	1.00	1.00	1.00	0.70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	
9	1.00	1.00	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	
10	1.00	1.00	1.00	0.60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	

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RELAZIONE DI CALCOLO



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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):

a_g : accelerazione orizzontale massima del terreno;

F_o : 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
I	50.0	0.7	35.0	B	T2

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)

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

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

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

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

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

Lo spettro di risposta elastico in accelerazione della componente orizzontale del moto sismico, S_e , è definito dalle seguenti espressioni:

$$0 \leq T < T_B \quad S_e(T) = a_g \cdot S \cdot \eta \cdot F_o \cdot \left[\frac{T}{T_B} + \frac{1}{\eta \cdot F_o} \left(1 - \frac{T}{T_B} \right) \right]$$

$$T_B \leq T < T_C \quad S_e(T) = a_g \cdot S \cdot \eta \cdot F_o$$

$$T_C \leq T < T_D \quad S_e(T) = a_g \cdot S \cdot \eta \cdot F_o \cdot \left(\frac{T_C}{T} \right)$$

$$T_D \leq T \quad S_e(T) = a_g \cdot S \cdot \eta \cdot F_o \cdot \left(\frac{T_C \cdot T_D}{T^2} \right)$$

Dove per sottosuolo di categoria **A** i coefficienti S_s e C_c valgono 1; mentre per le categorie di sottosuolo B, C, D, E i coefficienti S_s e C_c vengono calcolati mediante le espressioni riportate nella seguente Tabella

Categoria sottosuolo	S_s	C_c
A	1,00	1,00
B	$1,00 \leq 1,40 - 0,40 \cdot F_o \cdot \frac{a_g}{g} \leq 1,20$	$1,10 \cdot (T_c^*)^{-0,20}$
C	$1,00 \leq 1,70 - 0,60 \cdot F_o \cdot \frac{a_g}{g} \leq 1,50$	$1,05 \cdot (T_c^*)^{-0,33}$
D	$0,90 \leq 2,40 - 1,50 \cdot F_o \cdot \frac{a_g}{g} \leq 1,80$	$1,25 \cdot (T_c^*)^{-0,50}$
E	$1,00 \leq 2,00 - 1,10 \cdot F_o \cdot \frac{a_g}{g} \leq 1,60$	$1,15 \cdot (T_c^*)^{-0,40}$

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Per tenere conto delle condizioni topografiche e in assenza di specifiche analisi di risposta sismica locale, si utilizzano i valori del coefficiente topografico S_T riportati nella seguente Tabella

Categoria topografica	Ubicazione dell'opera o dell'intervento	S_T
T1	-	1,0
T2	In corrispondenza della sommità del pendio	1,2
T3	In corrispondenza della cresta di un rilievo con pendenza media minore o uguale a 30°	1,2
T4	In corrispondenza della cresta di un rilievo con pendenza media maggiore di 30°	1,4

Lo spettro di risposta elastico in accelerazione della componente verticale del moto sismico, S_{ve} , è definito dalle espressioni:

$$0 \leq T < T_B \quad S_{ve}(T) = a_g \cdot S \cdot \eta \cdot F_v \cdot \left[\frac{T}{T_B} + \frac{1}{\eta \cdot F_o} \left(1 - \frac{T}{T_B} \right) \right]$$

$$T_B \leq T < T_C \quad S_{ve}(T) = a_g \cdot S \cdot \eta \cdot F_v$$

$$T_C \leq T < T_D \quad S_{ve}(T) = a_g \cdot S \cdot \eta \cdot F_v \cdot \left(\frac{T_C}{T} \right)$$

$$T_D \leq T \quad S_{ve}(T) = a_g \cdot S \cdot \eta \cdot F_v \cdot \left(\frac{T_C \cdot T_D}{T^2} \right)$$

I valori di S_s , T_B , T_C e T_D , sono riportati nella seguente Tabella

Categoria di sottosuolo	S_s	T_B	T_C	T_D
A, B, C, D, E	1,0	0,05 s	0,15 s	1,0 s

Id nodo	Longitudine	Latitudine	Distanza Km
Loc.	17.735	40.435	
34807	17.692	40.406	4.847
34808	17.758	40.404	3.946
34586	17.761	40.454	3.040
34585	17.696	40.456	4.029

SL	Pver	Tr Anni	ag g	Fo	T*c sec
SLO	81.0	30.0	0.017	2.334	0.173
SLD	63.0	35.0	0.019	2.335	0.192
SLV	10.0	332.0	0.045	2.596	0.424
SLC	5.0	682.0	0.055	2.732	0.472

SL	ag g	S	Fo	Fv	Tb sec	Tc sec	Td sec
SLO	0.017	1.440	2.334	0.413	0.090	0.270	1.669
SLD	0.019	1.440	2.335	0.431	0.098	0.294	1.675
SLV	0.045	1.440	2.596	0.744	0.185	0.554	1.780

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SL	ag	S	Fo	Fv	Tb	Tc	Td
SLC	0.055	1.440	2.732	0.862	0.201	0.603	1.818

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RISULTATI ANALISI SISMICHE

LEGENDA TABELLA ANALISI SISMICHE

Il programma consente l'analisi di diverse configurazioni sismiche.

Sono previsti, infatti, i seguenti casi di carico:

- 9. Esk** caso di carico sismico con analisi statica equivalente
10. Edk 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:

Angolo di ingresso	Angolo di ingresso dell'azione sismica orizzontale
Fattore di importanza	Fattore di importanza dell'edificio, in base alla categoria di appartenenza
Zona sismica	Zona sismica
Accelerazione ag	Accelerazione orizzontale massima sul suolo
Categoria suolo	Categoria di profilo stratigrafico del suolo di fondazione
Fattore q	Fattore di struttura/di comportamento. Dipendente dalla tipologia strutturale
Fattore di sito S	Fattore dipendente dalla stratigrafia e dal profilo topografico
Classe di duttilità CD	Classe di duttilità della struttura – "A" duttilità alta, "B" duttilità bassa
Fattore riduz. SLD	Fattore di riduzione dello spettro elastico per lo stato limite di danno
Periodo proprio T1	Periodo proprio di vibrazione della struttura
Coefficiente Lambda	Coefficiente dipendente dal periodo proprio T1 e dal numero di piani della struttura
Ordinata spettro Sd(T1)	Valore delle ordinate dello spettro di progetto per lo stato limite ultimo, componente orizzontale (verticale Svd)
Ordinata spettro Se(T1)	Valore delle ordinate dello spettro elastico ridotta del fattore SLD per lo stato limite di danno, componente orizzontale (verticale Sve)
Ordinata spettro S (Tb-Tc)	Valore dell' ordinata dello spettro in uso nel tratto costante
numero di modi considerati	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 ϵ_{dT} (dr) degli elementi strutturali verticali. Per semplicità di consultazione il livello è espresso anche in unità $1000 \cdot \epsilon_{dT}/h$ 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 ϵ_{dT} , ϵ_{tP} e ϵ_{tD} degli elementi strutturali verticali. Per semplicità di consultazione il livello è espresso in unità $1000 \cdot \epsilon_{dT}/h$ 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

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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:

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

Affinché la verifica sia positiva deve essere:

- 1) $V > 0$
- 2) $Sig s < fyk$
- 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, 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
5	Edk	CDC=Ed (dinamico SLU) alfa=0.0 (ecc. +)	
			categoria suolo: B
			fattore di sito S = 1.440
			ordinata spettro (tratto Tb-Tc) = 0.169 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.218 sec.
			fattore q: 1.000
			fattore per spost. mu d: 1.000
			classe di duttilità CD: B
			numero di modi considerati: 18
			combinaz. modale: CQC

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Quota cm	M Sismica x g daN	Pos. GX cm	Pos. GY cm	E agg. X-X cm	E agg. Y-Y cm	Pos. KX cm	Pos. KY cm	(r/Ls)^2	rapp. ex/rx	rapp. ey/ry
300.00	1.065e+05	1216.86	229.77	0.0	-23.00	1220.11	230.00	0.122	0.001	9.0082e-04
285.00	2886.74	1227.61	228.21	0.0	-23.00	1245.66	230.00	0.103	0.001	0.008
270.00	3733.94	1230.68	230.06	0.0	-23.00	1220.80	230.00	0.122	0.003	2.3298e-04
255.00	2885.23	1223.24	228.09	0.0	-23.00	1245.66	230.00	0.103	0.001	0.008
247.50	43.85	2440.00	460.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
240.00	3711.74	1223.34	228.71	0.0	-23.00	1220.80	230.00	0.122	8.4233e-04	0.005
225.00	2909.24	1233.21	230.00	0.0	-23.00	1245.66	230.00	0.103	7.9558e-04	0.0
210.00	3672.37	1219.43	226.22	0.0	-23.00	1220.07	214.26	0.123	2.1784e-04	0.047
195.00	2728.07	1213.83	214.73	0.0	-23.00	1238.42	210.07	0.102	0.002	0.020
180.00	3370.42	1233.59	205.27	0.0	-23.00	1221.21	178.58	0.122	0.005	0.107
165.00	2426.12	1254.06	184.20	0.0	-23.00	1264.72	178.58	0.098	7.1663e-04	0.025
150.00	3211.52	1266.52	198.70	0.0	-23.00	1446.71	184.43	0.118	0.061	0.058
135.00	2486.51	1239.90	190.90	0.0	-23.00	1252.89	184.43	0.099	8.6801e-04	0.029
120.00	3233.80	1292.54	206.50	0.0	-23.00	1446.81	188.82	0.118	0.052	0.072
105.00	2607.29	1253.11	203.36	0.0	-23.00	1263.32	188.82	0.100	6.8770e-04	0.064
90.00	3294.19	1296.80	211.14	0.0	-23.00	1446.81	188.82	0.118	0.050	0.091
75.00	2607.29	1253.11	203.36	0.0	-23.00	1263.32	188.82	0.100	6.8770e-04	0.064
60.00	3294.19	1296.80	211.14	0.0	-23.00	1446.81	188.82	0.118	0.050	0.091
45.00	2607.29	1253.11	203.36	0.0	-23.00	1263.32	188.82	0.100	6.8770e-04	0.064
30.00	3260.92	1289.29	210.41	0.0	-23.00	1445.88	188.82	0.118	0.053	0.088
15.00	2443.67	1233.38	206.48	0.0	-23.00	1207.97	206.68	0.102	0.002	8.7497e-04
Risulta	1.639e+05									

Modo	Frequenza Hz	Periodo sec	Acc. Spettrale g	M efficace X x g daN	%	M efficace Y x g daN	%	M efficace Z x g daN	Z %	Energia	Energia x v
1	1.271	0.787	0.119	0.03	2.04e-05	7.216e+04	44.0	0.28	1.74e-04	0.0	0.0
2	1.348	0.742	0.126	0.20	1.20e-04	4.759e+04	29.0	0.28	1.70e-04	0.0	0.0
3	2.457	0.407	0.169	4.47	2.73e-03	281.15	0.2	1.97	1.20e-03	0.0	0.0
4	2.594	0.386	0.169	27.25	1.66e-02	110.88	6.76e-02	1.65	1.01e-03	0.0	0.0
5	3.412	0.293	0.169	25.62	1.56e-02	2.619e+04	16.0	28.37	1.73e-02	0.0	0.0
6	4.315	0.232	0.169	232.63	0.1	404.12	0.2	0.01	6.95e-06	0.0	0.0
7	4.589	0.218	0.169	1.387e+05	84.6	39.70	2.42e-02	2220.33	1.4	0.0	0.0
8	4.742	0.211	0.169	961.57	0.6	359.54	0.2	631.53	0.4	0.0	0.0
9	5.611	0.178	0.165	5789.28	3.5	0.74	4.51e-04	1.412e+05	86.1	0.0	0.0
10	5.766	0.173	0.162	148.91	9.08e-02	3.14	1.91e-03	7757.10	4.7	0.0	0.0
11	6.805	0.147	0.147	5099.78	3.1	3913.18	2.4	7598.69	4.6	0.0	0.0
12	6.990	0.143	0.145	1.091e+04	6.7	1788.84	1.1	2424.71	1.5	0.0	0.0
13	8.002	0.125	0.135	612.98	0.4	0.13	7.83e-05	108.85	6.64e-02	0.0	0.0
14	9.711	0.103	0.123	551.26	0.3	534.08	0.3	185.49	0.1	0.0	0.0
15	10.104	0.099	0.120	327.89	0.2	2009.74	1.2	1437.87	0.9	0.0	0.0
16	13.293	0.075	0.107	2.82	1.72e-03	7833.69	4.8	96.17	5.87e-02	0.0	0.0
17	17.219	0.058	0.097	273.05	0.2	38.90	2.37e-02	78.11	4.76e-02	0.0	0.0
18	18.525	0.054	0.095	209.50	0.1	195.30	0.1	114.15	6.96e-02	0.0	0.0
Risulta				1.638e+05		1.635e+05		1.639e+05			
In percentuale				99.95		99.71		99.99			

CDC	Tipo	Sigla Id	Note
6	Edk	CDC=Ed (dinamico SLU) alfa=0.0 (ecc. -)	
			categoria suolo: B
			fattore di sito S = 1.440
			ordinata spettro (tratto Tb-Tc) = 0.169 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: negativa

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

CDC	Tipo	Sigla Id	Note
			periodo proprio T1: 0.221 sec.
			fattore q: 1.000
			fattore per spost. mu d: 1.000
			classe di duttilità CD: B
			numero di modi considerati: 18
			combinaz. modale: CQC

Quota	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	cm	cm	cm	cm	cm	cm			
300.00	1.065e+05	1216.86	229.77	0.0	23.00	1220.11	230.00	0.122	0.001	9.0082e-04
285.00	2886.74	1227.61	228.21	0.0	23.00	1245.66	230.00	0.103	0.001	0.008
270.00	3733.94	1230.68	230.06	0.0	23.00	1220.80	230.00	0.122	0.003	2.3298e-04
255.00	2885.23	1223.24	228.09	0.0	23.00	1245.66	230.00	0.103	0.001	0.008
247.50	43.85	2440.00	460.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
240.00	3711.74	1223.34	228.71	0.0	23.00	1220.80	230.00	0.122	8.4233e-04	0.005
225.00	2909.24	1233.21	230.00	0.0	23.00	1245.66	230.00	0.103	7.9558e-04	0.0
210.00	3672.37	1219.43	226.22	0.0	23.00	1220.07	214.26	0.123	2.1784e-04	0.047
195.00	2728.07	1213.83	214.73	0.0	23.00	1238.42	210.07	0.102	0.002	0.020
180.00	3370.42	1233.59	205.27	0.0	23.00	1221.21	178.58	0.122	0.005	0.107
165.00	2426.12	1254.06	184.20	0.0	23.00	1264.72	178.58	0.098	7.1663e-04	0.025
150.00	3211.52	1266.52	198.70	0.0	23.00	1446.71	184.43	0.118	0.061	0.058
135.00	2486.51	1239.90	190.90	0.0	23.00	1252.89	184.43	0.099	8.6801e-04	0.029
120.00	3233.80	1292.54	206.50	0.0	23.00	1446.81	188.82	0.118	0.052	0.072
105.00	2607.29	1253.11	203.36	0.0	23.00	1263.32	188.82	0.100	6.8770e-04	0.064
90.00	3294.19	1296.80	211.14	0.0	23.00	1446.81	188.82	0.118	0.050	0.091
75.00	2607.29	1253.11	203.36	0.0	23.00	1263.32	188.82	0.100	6.8770e-04	0.064
60.00	3294.19	1296.80	211.14	0.0	23.00	1446.81	188.82	0.118	0.050	0.091
45.00	2607.29	1253.11	203.36	0.0	23.00	1263.32	188.82	0.100	6.8770e-04	0.064
30.00	3260.92	1289.29	210.41	0.0	23.00	1445.88	188.82	0.118	0.053	0.088
15.00	2443.67	1233.38	206.48	0.0	23.00	1207.97	206.68	0.102	0.002	8.7497e-04
Risulta	1.639e+05									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.271	0.787	0.119	6.25e-03	3.81e-06	7.216e+04	44.0	0.29	1.74e-04	0.0	0.0
2	1.348	0.742	0.126	0.03	1.92e-05	4.759e+04	29.0	0.28	1.70e-04	0.0	0.0
3	2.457	0.407	0.169	90.87	5.54e-02	281.06	0.2	1.82	1.11e-03	0.0	0.0
4	2.594	0.386	0.169	0.62	3.80e-04	110.18	6.72e-02	1.52	9.25e-04	0.0	0.0
5	3.412	0.293	0.169	4.17	2.55e-03	2.620e+04	16.0	29.34	1.79e-02	0.0	0.0
6	4.315	0.232	0.169	153.51	9.36e-02	415.41	0.3	0.06	3.85e-05	0.0	0.0
7	4.528	0.221	0.169	1.110e+05	67.7	43.75	2.67e-02	642.25	0.4	0.0	0.0
8	4.798	0.208	0.169	2.756e+04	16.8	340.72	0.2	3537.20	2.2	0.0	0.0
9	5.618	0.178	0.165	6465.86	3.9	0.07	4.04e-05	1.394e+05	85.0	0.0	0.0
10	5.758	0.174	0.162	123.38	7.53e-02	2.24	1.37e-03	8430.91	5.1	0.0	0.0
11	6.805	0.147	0.147	4919.85	3.0	3994.56	2.4	7338.65	4.5	0.0	0.0
12	6.989	0.143	0.145	1.118e+04	6.8	1663.26	1.0	2524.91	1.5	0.0	0.0
13	7.955	0.126	0.135	1224.73	0.7	1.06	6.47e-04	84.79	5.17e-02	0.0	0.0
14	9.767	0.102	0.122	297.61	0.2	737.18	0.4	276.19	0.2	0.0	0.0
15	10.092	0.099	0.120	276.05	0.2	1886.59	1.2	1350.95	0.8	0.0	0.0
16	13.305	0.075	0.107	2.79	1.70e-03	7791.41	4.8	97.98	5.98e-02	0.0	0.0
17	17.245	0.058	0.097	227.42	0.1	61.63	3.76e-02	99.96	6.10e-02	0.0	0.0
18	18.498	0.054	0.095	271.34	0.2	177.90	0.1	101.89	6.22e-02	0.0	0.0
Risulta				1.638e+05		1.635e+05		1.639e+05			
In percentuale				99.95		99.71		99.99			

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

CDC	Tipo	Sigla Id	Note
7	Edk	CDC=Ed (dinamico SLU) alfa=90.00 (ecc. +)	
			categoria suolo: B
			fattore di sito S = 1.440
			ordinata spettro (tratto Tb-Tc) = 0.169 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.788 sec.
			fattore q: 1.000
			fattore per spost. mu d: 1.000
			classe di duttilità CD: B
			numero di modi considerati: 18
			combinaz. modale: CQC

Quota	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	cm	cm	cm	cm	cm	cm			
300.00	1.065e+05	1216.86	229.77	122.00	0.0	1220.11	230.00	0.122	0.001	9.0082e-04
285.00	2886.74	1227.61	228.21	122.00	0.0	1245.66	230.00	0.103	0.001	0.008
270.00	3733.94	1230.68	230.06	122.00	0.0	1220.80	230.00	0.122	0.003	2.3298e-04
255.00	2885.23	1223.24	228.09	122.00	0.0	1245.66	230.00	0.103	0.001	0.008
247.50	43.85	2440.00	460.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
240.00	3711.74	1223.34	228.71	122.00	0.0	1220.80	230.00	0.122	8.4233e-04	0.005
225.00	2909.24	1233.21	230.00	122.00	0.0	1245.66	230.00	0.103	7.9558e-04	0.0
210.00	3672.37	1219.43	226.22	122.00	0.0	1220.07	214.26	0.123	2.1784e-04	0.047
195.00	2728.07	1213.83	214.73	122.00	0.0	1238.42	210.07	0.102	0.002	0.020
180.00	3370.42	1233.59	205.27	122.00	0.0	1221.21	178.58	0.122	0.005	0.107
165.00	2426.12	1254.06	184.20	122.00	0.0	1264.72	178.58	0.098	7.1663e-04	0.025
150.00	3211.52	1266.52	198.70	122.00	0.0	1446.71	184.43	0.118	0.061	0.058
135.00	2486.51	1239.90	190.90	122.00	0.0	1252.89	184.43	0.099	8.6801e-04	0.029
120.00	3233.80	1292.54	206.50	122.00	0.0	1446.81	188.82	0.118	0.052	0.072
105.00	2607.29	1253.11	203.36	122.00	0.0	1263.32	188.82	0.100	6.8770e-04	0.064
90.00	3294.19	1296.80	211.14	122.00	0.0	1446.81	188.82	0.118	0.050	0.091
75.00	2607.29	1253.11	203.36	122.00	0.0	1263.32	188.82	0.100	6.8770e-04	0.064
60.00	3294.19	1296.80	211.14	122.00	0.0	1446.81	188.82	0.118	0.050	0.091
45.00	2607.29	1253.11	203.36	122.00	0.0	1263.32	188.82	0.100	6.8770e-04	0.064
30.00	3260.92	1289.29	210.41	122.00	0.0	1445.88	188.82	0.118	0.053	0.088
15.00	2443.67	1233.38	206.48	122.00	0.0	1207.97	206.68	0.102	0.002	8.7497e-04
Risulta	1.639e+05									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.269	0.788	0.119	0.04	2.54e-05	7.150e+04	43.6	0.33	1.98e-04	0.0	0.0
2	1.345	0.743	0.126	0.07	4.38e-05	4.793e+04	29.2	0.32	1.97e-04	0.0	0.0
3	2.489	0.402	0.169	36.89	2.25e-02	15.29	9.33e-03	2.88	1.76e-03	0.0	0.0
4	2.617	0.382	0.169	3.75	2.29e-03	22.28	1.36e-02	2.50	1.53e-03	0.0	0.0
5	3.427	0.292	0.169	25.24	1.54e-02	2.725e+04	16.6	36.44	2.22e-02	0.0	0.0
6	4.342	0.230	0.169	375.95	0.2	380.36	0.2	0.65	3.95e-04	0.0	0.0
7	4.578	0.218	0.169	1.303e+05	79.5	2.96	1.81e-03	1355.46	0.8	0.0	0.0
8	4.760	0.210	0.169	8758.83	5.3	182.84	0.1	2026.90	1.2	0.0	0.0
9	5.613	0.178	0.165	6086.18	3.7	5.87e-03	3.58e-06	1.381e+05	84.2	0.0	0.0
10	5.790	0.173	0.162	70.08	4.28e-02	29.18	1.78e-02	1.114e+04	6.8	0.0	0.0

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	Z %	Energia	Energia x v
11	6.867	0.146	0.147	8565.80	5.2	2626.59	1.6	8020.71	4.9	0.0	0.0
12	7.004	0.143	0.145	7527.83	4.6	2778.77	1.7	1188.21	0.7	0.0	0.0
13	7.999	0.125	0.135	907.01	0.6	12.48	7.61e-03	73.35	4.47e-02	0.0	0.0
14	9.850	0.102	0.122	455.88	0.3	611.27	0.4	106.94	6.52e-02	0.0	0.0
15	10.012	0.100	0.121	239.63	0.1	2105.51	1.3	1546.16	0.9	0.0	0.0
16	13.274	0.075	0.107	2.34	1.43e-03	7779.34	4.7	105.13	6.41e-02	0.0	0.0
17	17.064	0.059	0.098	260.32	0.2	56.99	3.48e-02	89.83	5.48e-02	0.0	0.0
18	18.636	0.054	0.095	231.27	0.1	194.09	0.1	108.13	6.60e-02	0.0	0.0
Risulta				1.638e+05		1.635e+05		1.639e+05			
In percentuale				99.95		99.72		99.99			

CDC	Tipo	Sigla Id	Note
8	Edk	CDC=Ed (dinamico SLU) alfa=90.00 (ecc. -)	
			categoria suolo: B
			fattore di sito S = 1.440
			ordinata spettro (tratto Tb-Tc) = 0.169 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.788 sec.
			fattore q: 1.000
			fattore per spost. mu d: 1.000
			classe di duttilità CD: B
			numero di modi considerati: 18
			combinaz. modale: CQC

Quota	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	cm	cm	cm	cm	cm	cm			
300.00	1.065e+05	1216.86	229.77	-122.00	0.0	1220.11	230.00	0.122	0.001	9.0082e-04
285.00	2886.74	1227.61	228.21	-122.00	0.0	1245.66	230.00	0.103	0.001	0.008
270.00	3733.94	1230.68	230.06	-122.00	0.0	1220.80	230.00	0.122	0.003	2.3298e-04
255.00	2885.23	1223.24	228.09	-122.00	0.0	1245.66	230.00	0.103	0.001	0.008
247.50	43.85	2440.00	460.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
240.00	3711.74	1223.34	228.71	-122.00	0.0	1220.80	230.00	0.122	8.4233e-04	0.005
225.00	2909.24	1233.21	230.00	-122.00	0.0	1245.66	230.00	0.103	7.9558e-04	0.0
210.00	3672.37	1219.43	226.22	-122.00	0.0	1220.07	214.26	0.123	2.1784e-04	0.047
195.00	2728.07	1213.83	214.73	-122.00	0.0	1238.42	210.07	0.102	0.002	0.020
180.00	3370.42	1233.59	205.27	-122.00	0.0	1221.21	178.58	0.122	0.005	0.107
165.00	2426.12	1254.06	184.20	-122.00	0.0	1264.72	178.58	0.098	7.1663e-04	0.025
150.00	3211.52	1266.52	198.70	-122.00	0.0	1446.71	184.43	0.118	0.061	0.058
135.00	2486.51	1239.90	190.90	-122.00	0.0	1252.89	184.43	0.099	8.6801e-04	0.029
120.00	3233.80	1292.54	206.50	-122.00	0.0	1446.81	188.82	0.118	0.052	0.072
105.00	2607.29	1253.11	203.36	-122.00	0.0	1263.32	188.82	0.100	6.8770e-04	0.064
90.00	3294.19	1296.80	211.14	-122.00	0.0	1446.81	188.82	0.118	0.050	0.091
75.00	2607.29	1253.11	203.36	-122.00	0.0	1263.32	188.82	0.100	6.8770e-04	0.064
60.00	3294.19	1296.80	211.14	-122.00	0.0	1446.81	188.82	0.118	0.050	0.091
45.00	2607.29	1253.11	203.36	-122.00	0.0	1263.32	188.82	0.100	6.8770e-04	0.064
30.00	3260.92	1289.29	210.41	-122.00	0.0	1445.88	188.82	0.118	0.053	0.088
15.00	2443.67	1233.38	206.48	-122.00	0.0	1207.97	206.68	0.102	0.002	8.7497e-04
Risulta	1.639e+05									

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO 17001:2015
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.269	0.788	0.119	0.01	6.18e-06	7.369e+04	45.0	0.25	1.51e-04	0.0	0.0
2	1.346	0.743	0.126	0.13	7.65e-05	4.709e+04	28.7	0.23	1.42e-04	0.0	0.0
3	2.430	0.412	0.169	30.21	1.84e-02	1314.76	0.8	1.28	7.78e-04	0.0	0.0
4	2.582	0.387	0.169	7.05	4.30e-03	483.00	0.3	0.91	5.54e-04	0.0	0.0
5	3.414	0.293	0.169	4.56	2.78e-03	2.375e+04	14.5	21.50	1.31e-02	0.0	0.0
6	4.317	0.232	0.169	86.44	5.27e-02	342.48	0.2	0.63	3.86e-04	0.0	0.0
7	4.579	0.218	0.169	1.341e+05	81.8	6.08	3.71e-03	1453.88	0.9	0.0	0.0
8	4.828	0.207	0.169	5216.14	3.2	521.44	0.3	2268.07	1.4	0.0	0.0
9	5.616	0.178	0.165	5961.92	3.6	2.93	1.79e-03	1.439e+05	87.8	0.0	0.0
10	5.766	0.173	0.162	363.87	0.2	3.30	2.01e-03	3728.95	2.3	0.0	0.0
11	6.798	0.147	0.147	5489.91	3.3	3712.34	2.3	8673.96	5.3	0.0	0.0
12	7.010	0.143	0.145	1.064e+04	6.5	2058.38	1.3	1822.07	1.1	0.0	0.0
13	8.049	0.124	0.135	846.67	0.5	1.54	9.39e-04	123.88	7.56e-02	0.0	0.0
14	9.746	0.103	0.122	257.77	0.2	884.80	0.5	537.14	0.3	0.0	0.0
15	10.278	0.097	0.119	415.54	0.3	1633.84	1.0	1048.28	0.6	0.0	0.0
16	13.331	0.075	0.107	1.43	8.73e-04	7665.15	4.7	97.10	5.92e-02	0.0	0.0
17	17.674	0.057	0.097	199.26	0.1	90.48	5.52e-02	92.91	5.67e-02	0.0	0.0
18	18.421	0.054	0.095	273.74	0.2	157.49	9.61e-02	97.19	5.93e-02	0.0	0.0
Risulta				1.638e+05		1.634e+05		1.639e+05			
In percentuale				99.95		99.68		99.99			

CDC	Tipo	Sigla Id	Note
9	Edk	CDC=Ed (dinamico SLD) alfa=0.0 (ecc. +)	
			categoria suolo: B
			fattore di sito S = 1.440
			ordinata spettro (tratto Tb-Tc) = 0.063 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.218 sec.
			numero di modi considerati: 18
			combinaz. modale: CQC

Quota	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	cm	cm	cm	cm	cm	cm			
300.00	1.065e+05	1216.86	229.77	0.0	-23.00	1220.11	230.00	0.122	0.001	9.0082e-04
285.00	2886.74	1227.61	228.21	0.0	-23.00	1245.66	230.00	0.103	0.001	0.008
270.00	3733.94	1230.68	230.06	0.0	-23.00	1220.80	230.00	0.122	0.003	2.3298e-04
255.00	2885.23	1223.24	228.09	0.0	-23.00	1245.66	230.00	0.103	0.001	0.008
247.50	43.85	2440.00	460.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
240.00	3711.74	1223.34	228.71	0.0	-23.00	1220.80	230.00	0.122	8.4233e-04	0.005
225.00	2909.24	1233.21	230.00	0.0	-23.00	1245.66	230.00	0.103	7.9558e-04	0.0
210.00	3672.37	1219.43	226.22	0.0	-23.00	1220.07	214.26	0.123	2.1784e-04	0.047
195.00	2728.07	1213.83	214.73	0.0	-23.00	1238.42	210.07	0.102	0.002	0.020
180.00	3370.42	1233.59	205.27	0.0	-23.00	1221.21	178.58	0.122	0.005	0.107
165.00	2426.12	1254.06	184.20	0.0	-23.00	1264.72	178.58	0.098	7.1663e-04	0.025
150.00	3211.52	1266.52	198.70	0.0	-23.00	1446.71	184.43	0.118	0.061	0.058
135.00	2486.51	1239.90	190.90	0.0	-23.00	1252.89	184.43	0.099	8.6801e-04	0.029
120.00	3233.80	1292.54	206.50	0.0	-23.00	1446.81	188.82	0.118	0.052	0.072
105.00	2607.29	1253.11	203.36	0.0	-23.00	1263.32	188.82	0.100	6.8770e-04	0.064
90.00	3294.19	1296.80	211.14	0.0	-23.00	1446.81	188.82	0.118	0.050	0.091
75.00	2607.29	1253.11	203.36	0.0	-23.00	1263.32	188.82	0.100	6.8770e-04	0.064
60.00	3294.19	1296.80	211.14	0.0	-23.00	1446.81	188.82	0.118	0.050	0.091
45.00	2607.29	1253.11	203.36	0.0	-23.00	1263.32	188.82	0.100	6.8770e-04	0.064

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO 17001:2015
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

Quota	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
30.00	3260.92	1289.29	210.41	0.0	-23.00	1445.88	188.82	0.118	0.053	0.088
15.00	2443.67	1233.38	206.48	0.0	-23.00	1207.97	206.68	0.102	0.002	8.7497e-04
Risulta	1.639e+05									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.271	0.787	0.023	0.03	2.04e-05	7.216e+04	44.0	0.28	1.74e-04	0.0	0.0
2	1.348	0.742	0.025	0.20	1.20e-04	4.759e+04	29.0	0.28	1.70e-04	0.0	0.0
3	2.457	0.407	0.045	4.47	2.73e-03	281.15	0.2	1.97	1.20e-03	0.0	0.0
4	2.594	0.386	0.048	27.25	1.66e-02	110.88	6.76e-02	1.65	1.01e-03	0.0	0.0
5	3.412	0.293	0.063	25.62	1.56e-02	2.619e+04	16.0	28.37	1.73e-02	0.0	0.0
6	4.315	0.232	0.063	232.63	0.1	404.12	0.2	0.01	6.95e-06	0.0	0.0
7	4.589	0.218	0.063	1.387e+05	84.6	39.70	2.42e-02	2220.33	1.4	0.0	0.0
8	4.742	0.211	0.063	961.57	0.6	359.54	0.2	631.53	0.4	0.0	0.0
9	5.611	0.178	0.063	5789.28	3.5	0.74	4.51e-04	1.412e+05	86.1	0.0	0.0
10	5.766	0.173	0.063	148.91	9.08e-02	3.14	1.91e-03	7757.10	4.7	0.0	0.0
11	6.805	0.147	0.063	5099.78	3.1	3913.18	2.4	7598.69	4.6	0.0	0.0
12	6.990	0.143	0.063	1.091e+04	6.7	1788.84	1.1	2424.71	1.5	0.0	0.0
13	8.002	0.125	0.063	612.98	0.4	0.13	7.83e-05	108.85	6.64e-02	0.0	0.0
14	9.711	0.103	0.063	551.26	0.3	534.08	0.3	185.49	0.1	0.0	0.0
15	10.104	0.099	0.063	327.89	0.2	2009.74	1.2	1437.87	0.9	0.0	0.0
16	13.293	0.075	0.055	2.82	1.72e-03	7833.69	4.8	96.17	5.87e-02	0.0	0.0
17	17.219	0.058	0.048	273.05	0.2	38.90	2.37e-02	78.11	4.76e-02	0.0	0.0
18	18.525	0.054	0.047	209.50	0.1	195.30	0.1	114.15	6.96e-02	0.0	0.0
Risulta				1.638e+05		1.635e+05		1.639e+05			
In percentuale				99.95		99.71		99.99			

CDC	Tipo	Sigla Id	Note
10	Edk	CDC=Ed (dinamico SLD) alfa=0.0 (ecc. -)	
			categoria suolo: B
			fattore di sito S = 1.440
			ordinata spettro (tratto Tb-Tc) = 0.063 g
			angolo di ingresso:0.0
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.221 sec.
			numero di modi considerati: 18
			combinaz. modale: CQC

Quota	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	cm	cm	cm	cm	cm	cm			
300.00	1.065e+05	1216.86	229.77	0.0	23.00	1220.11	230.00	0.122	0.001	9.0082e-04
285.00	2886.74	1227.61	228.21	0.0	23.00	1245.66	230.00	0.103	0.001	0.008
270.00	3733.94	1230.68	230.06	0.0	23.00	1220.80	230.00	0.122	0.003	2.3298e-04
255.00	2885.23	1223.24	228.09	0.0	23.00	1245.66	230.00	0.103	0.001	0.008
247.50	43.85	2440.00	460.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
240.00	3711.74	1223.34	228.71	0.0	23.00	1220.80	230.00	0.122	8.4233e-04	0.005
225.00	2909.24	1233.21	230.00	0.0	23.00	1245.66	230.00	0.103	7.9558e-04	0.0
210.00	3672.37	1219.43	226.22	0.0	23.00	1220.07	214.26	0.123	2.1784e-04	0.047
195.00	2728.07	1213.83	214.73	0.0	23.00	1238.42	210.07	0.102	0.002	0.020
180.00	3370.42	1233.59	205.27	0.0	23.00	1221.21	178.58	0.122	0.005	0.107

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO /IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

Quota	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
165.00	2426.12	1254.06	184.20	0.0	23.00	1264.72	178.58	0.098	7.1663e-04	0.025
150.00	3211.52	1266.52	198.70	0.0	23.00	1446.71	184.43	0.118	0.061	0.058
135.00	2486.51	1239.90	190.90	0.0	23.00	1252.89	184.43	0.099	8.6801e-04	0.029
120.00	3233.80	1292.54	206.50	0.0	23.00	1446.81	188.82	0.118	0.052	0.072
105.00	2607.29	1253.11	203.36	0.0	23.00	1263.32	188.82	0.100	6.8770e-04	0.064
90.00	3294.19	1296.80	211.14	0.0	23.00	1446.81	188.82	0.118	0.050	0.091
75.00	2607.29	1253.11	203.36	0.0	23.00	1263.32	188.82	0.100	6.8770e-04	0.064
60.00	3294.19	1296.80	211.14	0.0	23.00	1446.81	188.82	0.118	0.050	0.091
45.00	2607.29	1253.11	203.36	0.0	23.00	1263.32	188.82	0.100	6.8770e-04	0.064
30.00	3260.92	1289.29	210.41	0.0	23.00	1445.88	188.82	0.118	0.053	0.088
15.00	2443.67	1233.38	206.48	0.0	23.00	1207.97	206.68	0.102	0.002	8.7497e-04
Risulta	1.639e+05									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.271	0.787	0.023	6.25e-03	3.81e-06	7.216e+04	44.0	0.29	1.74e-04	0.0	0.0
2	1.348	0.742	0.025	0.03	1.92e-05	4.759e+04	29.0	0.28	1.70e-04	0.0	0.0
3	2.457	0.407	0.045	90.87	5.54e-02	281.06	0.2	1.82	1.11e-03	0.0	0.0
4	2.594	0.386	0.048	0.62	3.80e-04	110.18	6.72e-02	1.52	9.25e-04	0.0	0.0
5	3.412	0.293	0.063	4.17	2.55e-03	2.620e+04	16.0	29.34	1.79e-02	0.0	0.0
6	4.315	0.232	0.063	153.51	9.36e-02	415.41	0.3	0.06	3.85e-05	0.0	0.0
7	4.528	0.221	0.063	1.110e+05	67.7	43.75	2.67e-02	642.25	0.4	0.0	0.0
8	4.798	0.208	0.063	2.756e+04	16.8	340.72	0.2	3537.20	2.2	0.0	0.0
9	5.618	0.178	0.063	6465.86	3.9	0.07	4.04e-05	1.394e+05	85.0	0.0	0.0
10	5.758	0.174	0.063	123.38	7.53e-02	2.24	1.37e-03	8430.91	5.1	0.0	0.0
11	6.805	0.147	0.063	4919.85	3.0	3994.56	2.4	7338.65	4.5	0.0	0.0
12	6.989	0.143	0.063	1.118e+04	6.8	1663.26	1.0	2524.91	1.5	0.0	0.0
13	7.955	0.126	0.063	1224.73	0.7	1.06	6.47e-04	84.79	5.17e-02	0.0	0.0
14	9.767	0.102	0.063	297.61	0.2	737.18	0.4	276.19	0.2	0.0	0.0
15	10.092	0.099	0.063	276.05	0.2	1886.59	1.2	1350.95	0.8	0.0	0.0
16	13.305	0.075	0.054	2.79	1.70e-03	7791.41	4.8	97.98	5.98e-02	0.0	0.0
17	17.245	0.058	0.048	227.42	0.1	61.63	3.76e-02	99.96	6.10e-02	0.0	0.0
18	18.498	0.054	0.047	271.34	0.2	177.90	0.1	101.89	6.22e-02	0.0	0.0
Risulta				1.638e+05		1.635e+05		1.639e+05			
In percentuale				99.95		99.71		99.99			

CDC	Tipo	Sigla Id	Note
11	Edk	CDC=Ed (dinamico SLD) alfa=90.00 (ecc. +)	
			categoria suolo: B
			fattore di sito S = 1.440
			ordinata spettro (tratto Tb-Tc) = 0.063 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: positiva
			periodo proprio T1: 0.788 sec.
			numero di modi considerati: 18
			combinaz. modale: CQC

Quota	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	cm	cm	cm	cm	cm	cm			
300.00	1.065e+05	1216.86	229.77	122.00	0.0	1220.11	230.00	0.122	0.001	9.0082e-04

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

Quota	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
285.00	2886.74	1227.61	228.21	122.00	0.0	1245.66	230.00	0.103	0.001	0.008
270.00	3733.94	1230.68	230.06	122.00	0.0	1220.80	230.00	0.122	0.003	2.3298e-04
255.00	2885.23	1223.24	228.09	122.00	0.0	1245.66	230.00	0.103	0.001	0.008
247.50	43.85	2440.00	460.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
240.00	3711.74	1223.34	228.71	122.00	0.0	1220.80	230.00	0.122	8.4233e-04	0.005
225.00	2909.24	1233.21	230.00	122.00	0.0	1245.66	230.00	0.103	7.9558e-04	0.0
210.00	3672.37	1219.43	226.22	122.00	0.0	1220.07	214.26	0.123	2.1784e-04	0.047
195.00	2728.07	1213.83	214.73	122.00	0.0	1238.42	210.07	0.102	0.002	0.020
180.00	3370.42	1233.59	205.27	122.00	0.0	1221.21	178.58	0.122	0.005	0.107
165.00	2426.12	1254.06	184.20	122.00	0.0	1264.72	178.58	0.098	7.1663e-04	0.025
150.00	3211.52	1266.52	198.70	122.00	0.0	1446.71	184.43	0.118	0.061	0.058
135.00	2486.51	1239.90	190.90	122.00	0.0	1252.89	184.43	0.099	8.6801e-04	0.029
120.00	3233.80	1292.54	206.50	122.00	0.0	1446.81	188.82	0.118	0.052	0.072
105.00	2607.29	1253.11	203.36	122.00	0.0	1263.32	188.82	0.100	6.8770e-04	0.064
90.00	3294.19	1296.80	211.14	122.00	0.0	1446.81	188.82	0.118	0.050	0.091
75.00	2607.29	1253.11	203.36	122.00	0.0	1263.32	188.82	0.100	6.8770e-04	0.064
60.00	3294.19	1296.80	211.14	122.00	0.0	1446.81	188.82	0.118	0.050	0.091
45.00	2607.29	1253.11	203.36	122.00	0.0	1263.32	188.82	0.100	6.8770e-04	0.064
30.00	3260.92	1289.29	210.41	122.00	0.0	1445.88	188.82	0.118	0.053	0.088
15.00	2443.67	1233.38	206.48	122.00	0.0	1207.97	206.68	0.102	0.002	8.7497e-04
Risulta	1.639e+05									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	Z %	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.269	0.788	0.023	0.04	2.54e-05	7.150e+04	43.6	0.33	1.98e-04	0.0	0.0
2	1.345	0.743	0.025	0.07	4.38e-05	4.793e+04	29.2	0.32	1.97e-04	0.0	0.0
3	2.489	0.402	0.046	36.89	2.25e-02	15.29	9.33e-03	2.88	1.76e-03	0.0	0.0
4	2.617	0.382	0.048	3.75	2.29e-03	22.28	1.36e-02	2.50	1.53e-03	0.0	0.0
5	3.427	0.292	0.063	25.24	1.54e-02	2.725e+04	16.6	36.44	2.22e-02	0.0	0.0
6	4.342	0.230	0.063	375.95	0.2	380.36	0.2	0.65	3.95e-04	0.0	0.0
7	4.578	0.218	0.063	1.303e+05	79.5	2.96	1.81e-03	1355.46	0.8	0.0	0.0
8	4.760	0.210	0.063	8758.83	5.3	182.84	0.1	2026.90	1.2	0.0	0.0
9	5.613	0.178	0.063	6086.18	3.7	5.87e-03	3.58e-06	1.381e+05	84.2	0.0	0.0
10	5.790	0.173	0.063	70.08	4.28e-02	29.18	1.78e-02	1.114e+04	6.8	0.0	0.0
11	6.867	0.146	0.063	8565.80	5.2	2626.59	1.6	8020.71	4.9	0.0	0.0
12	7.004	0.143	0.063	7527.83	4.6	2778.77	1.7	1188.21	0.7	0.0	0.0
13	7.999	0.125	0.063	907.01	0.6	12.48	7.61e-03	73.35	4.47e-02	0.0	0.0
14	9.850	0.102	0.063	455.88	0.3	611.27	0.4	106.94	6.52e-02	0.0	0.0
15	10.012	0.100	0.063	239.63	0.1	2105.51	1.3	1546.16	0.9	0.0	0.0
16	13.274	0.075	0.055	2.34	1.43e-03	7779.34	4.7	105.13	6.41e-02	0.0	0.0
17	17.064	0.059	0.048	260.32	0.2	56.99	3.48e-02	89.83	5.48e-02	0.0	0.0
18	18.636	0.054	0.047	231.27	0.1	194.09	0.1	108.13	6.60e-02	0.0	0.0
Risulta				1.638e+05		1.635e+05		1.639e+05			
In percentuale				99.95		99.72		99.99			

CDC	Tipo	Sigla Id	Note
12	Edk	CDC=Ed (dinamico SLD) alfa=90.00 (ecc. -)	
			categoria suolo: B
			fattore di sito S = 1.440
			ordinata spettro (tratto Tb-Tc) = 0.063 g
			angolo di ingresso:90.00
			eccentricità aggiuntiva: negativa
			periodo proprio T1: 0.788 sec.
			numero di modi considerati: 18

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

CDC	Tipo	Sigla Id	Note
			combinaz. modale: CQC

Quota	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	cm	cm	cm	cm	cm	cm			
300.00	1.065e+05	1216.86	229.77	-122.00	0.0	1220.11	230.00	0.122	0.001	9.0082e-04
285.00	2886.74	1227.61	228.21	-122.00	0.0	1245.66	230.00	0.103	0.001	0.008
270.00	3733.94	1230.68	230.06	-122.00	0.0	1220.80	230.00	0.122	0.003	2.3298e-04
255.00	2885.23	1223.24	228.09	-122.00	0.0	1245.66	230.00	0.103	0.001	0.008
247.50	43.85	2440.00	460.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
240.00	3711.74	1223.34	228.71	-122.00	0.0	1220.80	230.00	0.122	8.4233e-04	0.005
225.00	2909.24	1233.21	230.00	-122.00	0.0	1245.66	230.00	0.103	7.9558e-04	0.0
210.00	3672.37	1219.43	226.22	-122.00	0.0	1220.07	214.26	0.123	2.1784e-04	0.047
195.00	2728.07	1213.83	214.73	-122.00	0.0	1238.42	210.07	0.102	0.002	0.020
180.00	3370.42	1233.59	205.27	-122.00	0.0	1221.21	178.58	0.122	0.005	0.107
165.00	2426.12	1254.06	184.20	-122.00	0.0	1264.72	178.58	0.098	7.1663e-04	0.025
150.00	3211.52	1266.52	198.70	-122.00	0.0	1446.71	184.43	0.118	0.061	0.058
135.00	2486.51	1239.90	190.90	-122.00	0.0	1252.89	184.43	0.099	8.6801e-04	0.029
120.00	3233.80	1292.54	206.50	-122.00	0.0	1446.81	188.82	0.118	0.052	0.072
105.00	2607.29	1253.11	203.36	-122.00	0.0	1263.32	188.82	0.100	6.8770e-04	0.064
90.00	3294.19	1296.80	211.14	-122.00	0.0	1446.81	188.82	0.118	0.050	0.091
75.00	2607.29	1253.11	203.36	-122.00	0.0	1263.32	188.82	0.100	6.8770e-04	0.064
60.00	3294.19	1296.80	211.14	-122.00	0.0	1446.81	188.82	0.118	0.050	0.091
45.00	2607.29	1253.11	203.36	-122.00	0.0	1263.32	188.82	0.100	6.8770e-04	0.064
30.00	3260.92	1289.29	210.41	-122.00	0.0	1445.88	188.82	0.118	0.053	0.088
15.00	2443.67	1233.38	206.48	-122.00	0.0	1207.97	206.68	0.102	0.002	8.7497e-04
Risulta	1.639e+05									

Modo	Frequenza	Periodo	Acc. Spettrale	M efficace X x g	%	M efficace Y x g	%	M efficace Z x g	%	Energia	Energia x v
	Hz	sec	g	daN		daN		daN			
1	1.269	0.788	0.023	0.01	6.18e-06	7.369e+04	45.0	0.25	1.51e-04	0.0	0.0
2	1.346	0.743	0.025	0.13	7.65e-05	4.709e+04	28.7	0.23	1.42e-04	0.0	0.0
3	2.430	0.412	0.045	30.21	1.84e-02	1314.76	0.8	1.28	7.78e-04	0.0	0.0
4	2.582	0.387	0.048	7.05	4.30e-03	483.00	0.3	0.91	5.54e-04	0.0	0.0
5	3.414	0.293	0.063	4.56	2.78e-03	2.375e+04	14.5	21.50	1.31e-02	0.0	0.0
6	4.317	0.232	0.063	86.44	5.27e-02	342.48	0.2	0.63	3.86e-04	0.0	0.0
7	4.579	0.218	0.063	1.341e+05	81.8	6.08	3.71e-03	1453.88	0.9	0.0	0.0
8	4.828	0.207	0.063	5216.14	3.2	521.44	0.3	2268.07	1.4	0.0	0.0
9	5.616	0.178	0.063	5961.92	3.6	2.93	1.79e-03	1.439e+05	87.8	0.0	0.0
10	5.766	0.173	0.063	363.87	0.2	3.30	2.01e-03	3728.95	2.3	0.0	0.0
11	6.798	0.147	0.063	5489.91	3.3	3712.34	2.3	8673.96	5.3	0.0	0.0
12	7.010	0.143	0.063	1.064e+04	6.5	2058.38	1.3	1822.07	1.1	0.0	0.0
13	8.049	0.124	0.063	846.67	0.5	1.54	9.39e-04	123.88	7.56e-02	0.0	0.0
14	9.746	0.103	0.063	257.77	0.2	884.80	0.5	537.14	0.3	0.0	0.0
15	10.278	0.097	0.063	415.54	0.3	1633.84	1.0	1048.28	0.6	0.0	0.0
16	13.331	0.075	0.054	1.43	8.73e-04	7665.15	4.7	97.10	5.92e-02	0.0	0.0
17	17.674	0.057	0.048	199.26	0.1	90.48	5.52e-02	92.91	5.67e-02	0.0	0.0
18	18.421	0.054	0.047	273.74	0.2	157.49	9.61e-02	97.19	5.93e-02	0.0	0.0
Risulta				1.638e+05		1.634e+05		1.639e+05			
In percentuale				99.95		99.68		99.99			

PROJETTO engineering s.r.l.

società d'ingegneria

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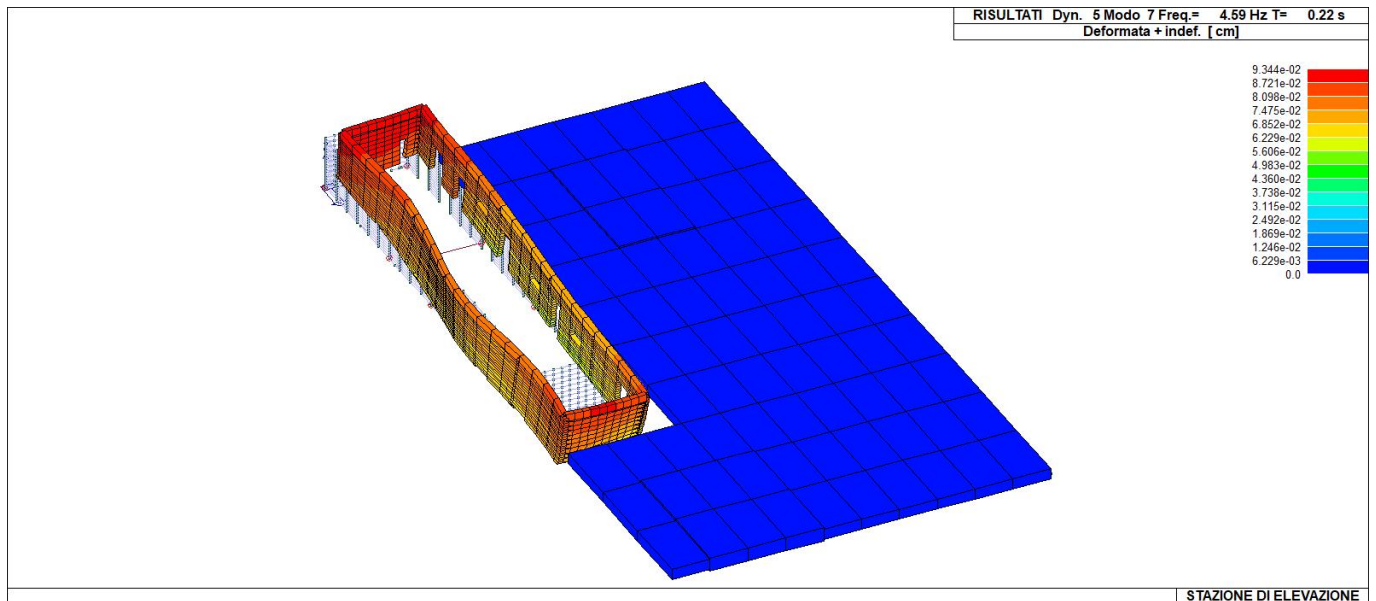
RELAZIONE DI CALCOLO



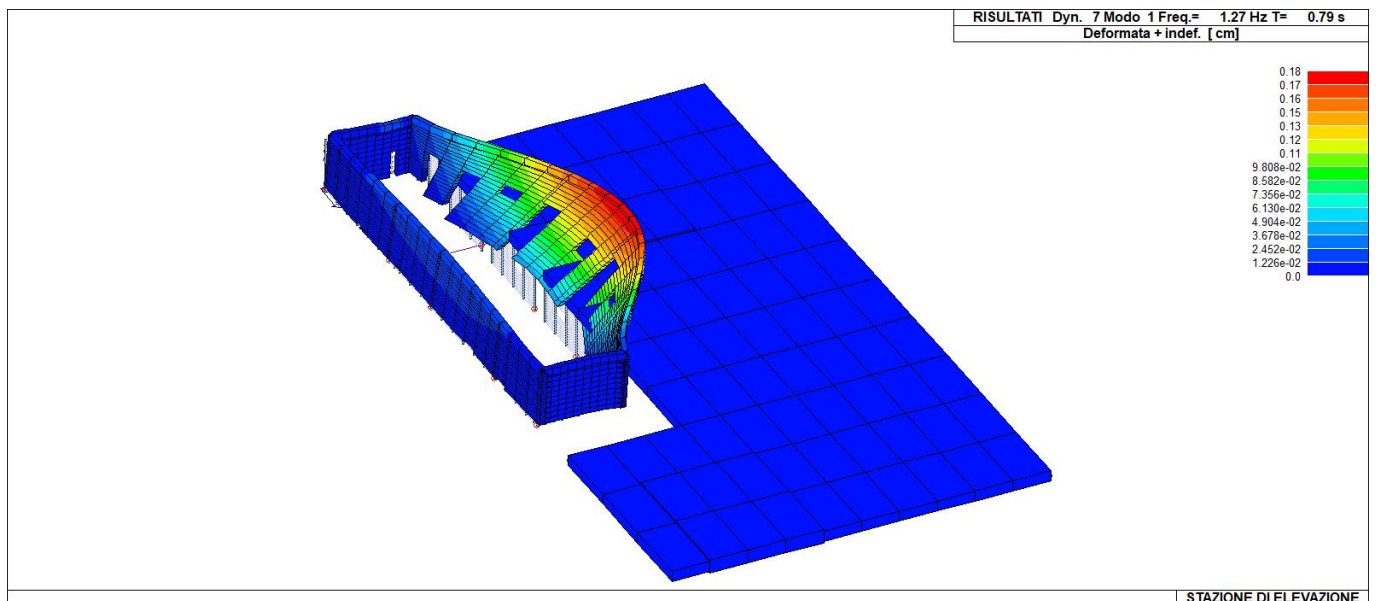
SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.



31_RIS_MODALX_007_CDC=Ed (dinamico SLU) alfa=0.0 (ecc. +)



31_RIS_MODALY_001_CDC=Ed (dinamico SLU) alfa=90.00 (ecc. +)

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RELAZIONE DI CALCOLO



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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	2	-0.09	-0.02	-1.24	3.44e-05	5.50e-05	3.72e-05
1	6	-0.07	-0.01	-0.92	2.67e-05	4.01e-05	2.74e-05
1	8	-0.06	-0.01	-0.88	2.71e-05	3.69e-05	2.57e-05
1	10	-0.06	-0.01	-0.86	2.73e-05	3.58e-05	2.51e-05
2	2	-0.17	-0.02	-1.24	0.0	4.93e-04	1.95e-04
2	6	-0.12	-0.01	-0.93	0.0	3.60e-04	1.42e-04
2	8	-0.12	-0.01	-0.88	0.0	3.33e-04	1.32e-04
2	10	-0.11	-0.01	-0.87	0.0	3.23e-04	1.28e-04
3	2	-0.05	-0.12	-1.03	3.33e-04	-3.83e-04	-3.48e-05
3	6	-0.04	-0.09	-0.77	2.46e-04	-2.80e-04	-2.56e-05
3	8	-0.03	-0.08	-0.74	2.32e-04	-2.59e-04	-2.40e-05
3	10	-0.03	-0.08	-0.72	2.27e-04	-2.52e-04	-2.34e-05
4	2	-0.06	-7.39e-03	-1.36	6.46e-05	0.0	7.39e-06
4	6	-0.05	-5.68e-03	-1.01	4.85e-05	0.0	5.95e-06
4	8	-0.04	-5.67e-03	-0.96	4.66e-05	0.0	6.32e-06
4	10	-0.04	-5.67e-03	-0.94	4.60e-05	0.0	6.45e-06
5	2	-0.22	-1.94e-03	-1.23	0.0	4.77e-04	5.13e-05
5	6	-0.16	-1.33e-03	-0.92	0.0	3.50e-04	3.76e-05
5	8	-0.15	-1.09e-03	-0.87	0.0	3.24e-04	3.48e-05
5	10	-0.15	-1.01e-03	-0.86	0.0	3.16e-04	3.38e-05
6	2	-0.04	-0.11	-1.03	0.0	-3.71e-04	-4.64e-05
6	6	-0.03	-0.08	-0.77	0.0	-2.72e-04	-3.40e-05
6	8	-0.03	-0.08	-0.74	0.0	-2.51e-04	-3.16e-05
6	10	-0.03	-0.07	-0.72	0.0	-2.44e-04	-3.08e-05
7	1	0.0	0.0	-0.16	-1.28e-04	1.62e-04	0.0
7	5	0.0	0.0	-0.12	-9.88e-05	1.25e-04	0.0
7	7	0.0	0.0	-0.12	-9.88e-05	1.25e-04	0.0
7	9	0.0	0.0	-0.12	-9.88e-05	1.25e-04	0.0
8	1	0.0	0.0	-0.22	-2.04e-04	1.59e-04	0.0
8	5	0.0	0.0	-0.17	-1.57e-04	1.23e-04	0.0
8	7	0.0	0.0	-0.17	-1.57e-04	1.23e-04	0.0
8	9	0.0	0.0	-0.17	-1.57e-04	1.23e-04	0.0
9	1	0.0	0.0	-0.18	-1.12e-04	1.87e-04	0.0
9	5	0.0	0.0	-0.14	-8.62e-05	1.44e-04	0.0
9	7	0.0	0.0	-0.14	-8.62e-05	1.44e-04	0.0
9	9	0.0	0.0	-0.14	-8.62e-05	1.44e-04	0.0
10	1	0.0	0.0	-0.26	-1.93e-04	2.16e-04	0.0
10	5	0.0	0.0	-0.20	-1.48e-04	1.66e-04	0.0
10	7	0.0	0.0	-0.20	-1.48e-04	1.66e-04	0.0
10	9	0.0	0.0	-0.20	-1.48e-04	1.66e-04	0.0
11	1	0.0	0.0	-0.20	-6.48e-05	2.18e-04	0.0
11	5	0.0	0.0	-0.15	-4.99e-05	1.68e-04	0.0
11	7	0.0	0.0	-0.15	-4.99e-05	1.68e-04	0.0
11	9	0.0	0.0	-0.15	-4.99e-05	1.68e-04	0.0
12	1	0.0	0.0	-0.30	-1.13e-04	2.80e-04	0.0
12	5	0.0	0.0	-0.23	-8.68e-05	2.15e-04	0.0

PROJETTO engineering s.r.l.

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RELAZIONE DI CALCOLO



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12	7	0.0	0.0	-0.23	-8.68e-05	2.15e-04	0.0
12	9	0.0	0.0	-0.23	-8.68e-05	2.15e-04	0.0
13	1	0.0	0.0	-0.21	-8.35e-06	2.12e-04	0.0
13	5	0.0	0.0	-0.16	-6.43e-06	1.63e-04	0.0
13	7	0.0	0.0	-0.16	-6.43e-06	1.63e-04	0.0
13	9	0.0	0.0	-0.16	-6.43e-06	1.63e-04	0.0
14	1	0.0	0.0	-0.31	0.0	2.71e-04	0.0
14	5	0.0	0.0	-0.24	0.0	2.08e-04	0.0
14	7	0.0	0.0	-0.24	0.0	2.08e-04	0.0
14	9	0.0	0.0	-0.24	0.0	2.08e-04	0.0
15	1	0.0	0.0	-0.21	4.42e-05	2.08e-04	0.0
15	5	0.0	0.0	-0.16	3.40e-05	1.60e-04	0.0
15	7	0.0	0.0	-0.16	3.40e-05	1.60e-04	0.0
15	9	0.0	0.0	-0.16	3.40e-05	1.60e-04	0.0
16	1	0.0	0.0	-0.29	1.14e-04	2.72e-04	0.0
16	5	0.0	0.0	-0.23	8.78e-05	2.10e-04	0.0
16	7	0.0	0.0	-0.23	8.78e-05	2.10e-04	0.0
16	9	0.0	0.0	-0.23	8.78e-05	2.10e-04	0.0
17	1	0.0	0.0	-0.19	8.38e-05	1.62e-04	0.0
17	5	0.0	0.0	-0.15	6.45e-05	1.25e-04	0.0
17	7	0.0	0.0	-0.15	6.45e-05	1.25e-04	0.0
17	9	0.0	0.0	-0.15	6.45e-05	1.25e-04	0.0
18	1	0.0	0.0	-0.26	1.90e-04	1.96e-04	0.0
18	5	0.0	0.0	-0.20	1.46e-04	1.51e-04	0.0
18	7	0.0	0.0	-0.20	1.46e-04	1.51e-04	0.0
18	9	0.0	0.0	-0.20	1.46e-04	1.51e-04	0.0
19	1	0.0	0.0	-0.17	1.11e-04	1.16e-04	0.0
19	5	0.0	0.0	-0.13	8.56e-05	8.89e-05	0.0
19	7	0.0	0.0	-0.13	8.56e-05	8.89e-05	0.0
19	9	0.0	0.0	-0.13	8.56e-05	8.89e-05	0.0
20	1	0.0	0.0	-0.22	1.93e-04	1.26e-04	0.0
20	5	0.0	0.0	-0.17	1.48e-04	9.69e-05	0.0
20	7	0.0	0.0	-0.17	1.48e-04	9.69e-05	0.0
20	9	0.0	0.0	-0.17	1.48e-04	9.69e-05	0.0
21	1	0.0	0.0	-0.15	1.21e-04	8.59e-05	0.0
21	5	0.0	0.0	-0.11	9.34e-05	6.61e-05	0.0
21	7	0.0	0.0	-0.11	9.34e-05	6.61e-05	0.0
21	9	0.0	0.0	-0.11	9.34e-05	6.61e-05	0.0
22	1	0.0	0.0	-0.18	1.84e-04	8.14e-05	0.0
22	5	0.0	0.0	-0.14	1.42e-04	6.26e-05	0.0
22	7	0.0	0.0	-0.14	1.42e-04	6.26e-05	0.0
22	9	0.0	0.0	-0.14	1.42e-04	6.26e-05	0.0
23	2	0.04	-0.03	-1.04	0.0	-3.39e-04	-9.14e-05
23	6	0.03	-0.02	-0.78	0.0	-2.48e-04	-6.66e-05
23	8	0.03	-0.02	-0.74	0.0	-2.30e-04	-6.10e-05
23	10	0.03	-0.02	-0.73	0.0	-2.24e-04	-5.92e-05
24	2	-0.05	-6.15e-03	-1.36	8.37e-05	0.0	-1.88e-06
24	6	-0.04	-4.60e-03	-1.01	6.26e-05	0.0	-1.19e-06
24	8	-0.04	-4.42e-03	-0.96	6.00e-05	0.0	0.0
24	10	-0.03	-4.36e-03	-0.94	5.91e-05	0.0	0.0
25	2	-0.03	-0.10	-1.03	0.0	-3.63e-04	-5.87e-05
25	6	-0.02	-0.07	-0.77	0.0	-2.66e-04	-4.30e-05
25	8	-0.02	-0.07	-0.74	0.0	-2.46e-04	-3.98e-05
25	10	-0.02	-0.07	-0.72	0.0	-2.39e-04	-3.88e-05
26	1	0.0	0.0	-0.26	-2.86e-04	6.74e-05	0.0
26	5	0.0	0.0	-0.20	-2.20e-04	5.18e-05	0.0
26	7	0.0	0.0	-0.20	-2.20e-04	5.18e-05	0.0
26	9	0.0	0.0	-0.20	-2.20e-04	5.18e-05	0.0
27	1	0.0	0.0	-0.32	-2.95e-04	7.51e-05	0.0
27	5	0.0	0.0	-0.25	-2.27e-04	5.78e-05	0.0
27	7	0.0	0.0	-0.25	-2.27e-04	5.78e-05	0.0
27	9	0.0	0.0	-0.25	-2.27e-04	5.78e-05	0.0
28	1	0.0	0.0	-0.38	-2.04e-04	8.40e-05	0.0
28	5	0.0	0.0	-0.29	-1.57e-04	6.46e-05	0.0
28	7	0.0	0.0	-0.29	-1.57e-04	6.46e-05	0.0
28	9	0.0	0.0	-0.29	-1.57e-04	6.46e-05	0.0

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel 099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204 SR EN ISO 14001:2015 Certificate No. E81 SR EN ISO 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

29	1	0.0	0.0	-0.42	1.91e-06	8.72e-05	0.0
29	5	0.0	0.0	-0.32	1.47e-06	6.71e-05	0.0
29	7	0.0	0.0	-0.32	1.47e-06	6.71e-05	0.0
29	9	0.0	0.0	-0.32	1.47e-06	6.71e-05	0.0
30	1	0.0	0.0	-0.38	2.09e-04	8.93e-05	0.0
30	5	0.0	0.0	-0.29	1.61e-04	6.87e-05	0.0
30	7	0.0	0.0	-0.29	1.61e-04	6.87e-05	0.0
30	9	0.0	0.0	-0.29	1.61e-04	6.87e-05	0.0
31	1	0.0	0.0	-0.32	3.00e-04	8.76e-05	0.0
31	5	0.0	0.0	-0.25	2.31e-04	6.74e-05	0.0
31	7	0.0	0.0	-0.25	2.31e-04	6.74e-05	0.0
31	9	0.0	0.0	-0.25	2.31e-04	6.74e-05	0.0
32	1	0.0	0.0	-0.26	2.68e-04	7.89e-05	0.0
32	5	0.0	0.0	-0.20	2.06e-04	6.07e-05	0.0
32	7	0.0	0.0	-0.20	2.06e-04	6.07e-05	0.0
32	9	0.0	0.0	-0.20	2.06e-04	6.07e-05	0.0
33	1	0.0	0.0	-0.21	2.48e-04	7.13e-05	0.0
33	5	0.0	0.0	-0.16	1.91e-04	5.49e-05	0.0
33	7	0.0	0.0	-0.16	1.91e-04	5.49e-05	0.0
33	9	0.0	0.0	-0.16	1.91e-04	5.49e-05	0.0
34	2	0.03	-0.04	-1.04	0.0	-3.50e-04	-8.54e-05
34	6	0.02	-0.03	-0.78	0.0	-2.57e-04	-6.22e-05
34	8	0.02	-0.03	-0.75	0.0	-2.38e-04	-5.72e-05
34	10	0.02	-0.03	-0.73	0.0	-2.32e-04	-5.55e-05
35	2	-0.03	-8.63e-03	-1.36	1.16e-04	0.0	-1.36e-05
35	6	-0.02	-6.41e-03	-1.01	8.59e-05	0.0	-1.00e-05
35	8	-0.02	-6.08e-03	-0.96	8.15e-05	0.0	-9.37e-06
35	10	-0.02	-5.97e-03	-0.94	8.00e-05	0.0	-9.17e-06
36	2	-0.02	-0.09	-1.03	0.0	-3.60e-04	-7.04e-05
36	6	-0.01	-0.06	-0.77	0.0	-2.63e-04	-5.15e-05
36	8	-0.01	-0.06	-0.74	0.0	-2.44e-04	-4.76e-05
36	10	-0.01	-0.06	-0.72	0.0	-2.37e-04	-4.63e-05
37	1	0.0	0.0	-0.26	-2.57e-04	-4.88e-05	0.0
37	5	0.0	0.0	-0.20	-1.97e-04	-3.76e-05	0.0
37	7	0.0	0.0	-0.20	-1.97e-04	-3.76e-05	0.0
37	9	0.0	0.0	-0.20	-1.97e-04	-3.76e-05	0.0
38	1	0.0	0.0	-0.32	-2.31e-04	-9.53e-05	0.0
38	5	0.0	0.0	-0.24	-1.78e-04	-7.33e-05	0.0
38	7	0.0	0.0	-0.24	-1.78e-04	-7.33e-05	0.0
38	9	0.0	0.0	-0.24	-1.78e-04	-7.33e-05	0.0
39	1	0.0	0.0	-0.36	-1.30e-04	-1.43e-04	0.0
39	5	0.0	0.0	-0.28	-9.99e-05	-1.10e-04	0.0
39	7	0.0	0.0	-0.28	-9.99e-05	-1.10e-04	0.0
39	9	0.0	0.0	-0.28	-9.99e-05	-1.10e-04	0.0
40	1	0.0	0.0	-0.37	-7.06e-06	-1.27e-04	0.0
40	5	0.0	0.0	-0.29	-5.43e-06	-9.76e-05	0.0
40	7	0.0	0.0	-0.29	-5.43e-06	-9.76e-05	0.0
40	9	0.0	0.0	-0.29	-5.43e-06	-9.76e-05	0.0
41	1	0.0	0.0	-0.36	1.12e-04	-1.29e-04	0.0
41	5	0.0	0.0	-0.28	8.65e-05	-9.95e-05	0.0
41	7	0.0	0.0	-0.28	8.65e-05	-9.95e-05	0.0
41	9	0.0	0.0	-0.28	8.65e-05	-9.95e-05	0.0
42	1	0.0	0.0	-0.33	2.06e-04	-6.25e-05	0.0
42	5	0.0	0.0	-0.25	1.59e-04	-4.80e-05	0.0
42	7	0.0	0.0	-0.25	1.59e-04	-4.80e-05	0.0
42	9	0.0	0.0	-0.25	1.59e-04	-4.80e-05	0.0
43	1	0.0	0.0	-0.28	2.30e-04	-2.89e-06	0.0
43	5	0.0	0.0	-0.21	1.77e-04	-2.23e-06	0.0
43	7	0.0	0.0	-0.21	1.77e-04	-2.23e-06	0.0
43	9	0.0	0.0	-0.21	1.77e-04	-2.23e-06	0.0
44	1	0.0	0.0	-0.23	2.35e-04	3.30e-05	0.0
44	5	0.0	0.0	-0.18	1.81e-04	2.54e-05	0.0
44	7	0.0	0.0	-0.18	1.81e-04	2.54e-05	0.0
44	9	0.0	0.0	-0.18	1.81e-04	2.54e-05	0.0
45	2	0.05	-0.02	-1.04	0.0	-3.32e-04	-9.51e-05
45	6	0.04	-0.02	-0.78	0.0	-2.43e-04	-6.92e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel 099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

45	8	0.04	-0.01	-0.74	0.0	-2.26e-04	-6.34e-05
45	10	0.03	-0.01	-0.73	0.0	-2.20e-04	-6.15e-05
46	2	0.02	-0.05	-1.04	0.0	-3.57e-04	-8.40e-05
46	6	0.02	-0.04	-0.78	0.0	-2.61e-04	-6.13e-05
46	8	0.01	-0.03	-0.75	0.0	-2.42e-04	-5.65e-05
46	10	0.01	-0.03	-0.73	0.0	-2.36e-04	-5.48e-05
47	2	-6.80e-03	-0.08	-1.03	0.0	-3.60e-04	-8.05e-05
47	6	-5.19e-03	-0.06	-0.77	0.0	-2.63e-04	-5.88e-05
47	8	-5.14e-03	-0.05	-0.74	0.0	-2.44e-04	-5.43e-05
47	10	-5.12e-03	-0.05	-0.72	0.0	-2.37e-04	-5.28e-05
48	1	0.0	0.0	-0.24	-1.89e-04	-4.37e-05	0.0
48	5	0.0	0.0	-0.19	-1.45e-04	-3.36e-05	0.0
48	7	0.0	0.0	-0.19	-1.45e-04	-3.36e-05	0.0
48	9	0.0	0.0	-0.19	-1.45e-04	-3.36e-05	0.0
49	1	0.0	0.0	-0.28	-1.54e-04	-6.94e-05	0.0
49	5	0.0	0.0	-0.22	-1.19e-04	-5.34e-05	0.0
49	7	0.0	0.0	-0.22	-1.19e-04	-5.34e-05	0.0
49	9	0.0	0.0	-0.22	-1.19e-04	-5.34e-05	0.0
50	1	0.0	0.0	-0.31	-9.04e-05	-9.34e-05	0.0
50	5	0.0	0.0	-0.24	-6.95e-05	-7.18e-05	0.0
50	7	0.0	0.0	-0.24	-6.95e-05	-7.18e-05	0.0
50	9	0.0	0.0	-0.24	-6.95e-05	-7.18e-05	0.0
51	1	0.0	0.0	-0.32	-1.85e-05	-9.26e-05	0.0
51	5	0.0	0.0	-0.25	-1.42e-05	-7.12e-05	0.0
51	7	0.0	0.0	-0.25	-1.42e-05	-7.12e-05	0.0
51	9	0.0	0.0	-0.25	-1.42e-05	-7.12e-05	0.0
52	1	0.0	0.0	-0.32	4.91e-05	-4.53e-05	0.0
52	5	0.0	0.0	-0.24	3.78e-05	-6.56e-05	0.0
52	7	0.0	0.0	-0.24	3.78e-05	-6.56e-05	0.0
52	9	0.0	0.0	-0.24	3.78e-05	-6.56e-05	0.0
53	1	0.0	0.0	-0.30	1.08e-04	-5.33e-05	0.0
53	5	0.0	0.0	-0.23	8.32e-05	-4.10e-05	0.0
53	7	0.0	0.0	-0.23	8.32e-05	-4.10e-05	0.0
53	9	0.0	0.0	-0.23	8.32e-05	-4.10e-05	0.0
54	1	0.0	0.0	-0.27	1.56e-04	-2.13e-05	0.0
54	5	0.0	0.0	-0.21	1.20e-04	-1.63e-05	0.0
54	7	0.0	0.0	-0.21	1.20e-04	-1.63e-05	0.0
54	9	0.0	0.0	-0.21	1.20e-04	-1.63e-05	0.0
55	1	0.0	0.0	-0.24	1.80e-04	5.46e-06	0.0
55	5	0.0	0.0	-0.18	1.39e-04	4.20e-06	0.0
55	7	0.0	0.0	-0.18	1.39e-04	4.20e-06	0.0
55	9	0.0	0.0	-0.18	1.39e-04	4.20e-06	0.0
56	2	0.01	-0.06	-1.04	0.0	-3.57e-04	-8.31e-05
56	6	7.61e-03	-0.04	-0.78	0.0	-2.61e-04	-6.07e-05
56	8	6.72e-03	-0.04	-0.75	0.0	-2.42e-04	-5.60e-05
56	10	6.42e-03	-0.04	-0.73	0.0	-2.36e-04	-5.44e-05
57	1	-1.53e-03	-0.05	-0.87	0.0	-2.57e-04	-5.79e-05
57	2	2.83e-05	-0.07	-1.05	0.0	-3.53e-04	-8.05e-05
57	5	-1.23e-03	-0.04	-0.67	0.0	-1.95e-04	-4.38e-05
57	6	-1.92e-04	-0.05	-0.78	0.0	-2.58e-04	-5.89e-05
57	7	-1.23e-03	-0.04	-0.67	0.0	-1.95e-04	-4.38e-05
57	8	-5.04e-04	-0.05	-0.75	0.0	-2.39e-04	-5.43e-05
57	9	-1.23e-03	-0.04	-0.67	0.0	-1.95e-04	-4.38e-05
57	10	-6.08e-04	-0.05	-0.73	0.0	-2.33e-04	-5.28e-05
58	2	4.00e-03	-0.07	-1.03	0.0	-3.61e-04	-8.85e-05
58	6	2.71e-03	-0.05	-0.77	0.0	-2.64e-04	-6.46e-05
58	8	2.17e-03	-0.05	-0.74	0.0	-2.45e-04	-5.96e-05
58	10	1.99e-03	-0.05	-0.72	0.0	-2.38e-04	-5.79e-05
59	1	0.0	0.0	-0.24	-1.50e-04	-2.73e-06	0.0
59	5	0.0	0.0	-0.18	-1.15e-04	-2.10e-06	0.0
59	7	0.0	0.0	-0.18	-1.15e-04	-2.10e-06	0.0
59	9	0.0	0.0	-0.18	-1.15e-04	-2.10e-06	0.0
60	1	0.0	0.0	-0.27	-1.22e-04	-1.39e-05	0.0
60	5	0.0	0.0	-0.21	-9.41e-05	-1.07e-05	0.0
60	7	0.0	0.0	-0.21	-9.41e-05	-1.07e-05	0.0
60	9	0.0	0.0	-0.21	-9.41e-05	-1.07e-05	0.0

PROJETTO engineering s.r.l.

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Direttore Tecnico: ING. LEONARDO FILOTICO

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

61	1	0.0	0.0	-0.29	-7.30e-05	-2.17e-05	0.0
61	5	0.0	0.0	-0.22	-5.62e-05	-1.67e-05	0.0
61	7	0.0	0.0	-0.22	-5.62e-05	-1.67e-05	0.0
61	9	0.0	0.0	-0.22	-5.62e-05	-1.67e-05	0.0
62	1	0.0	0.0	-0.30	-2.28e-05	-2.22e-05	0.0
62	5	0.0	0.0	-0.23	-1.76e-05	-1.71e-05	0.0
62	7	0.0	0.0	-0.23	-1.76e-05	-1.71e-05	0.0
62	9	0.0	0.0	-0.23	-1.76e-05	-1.71e-05	0.0
63	1	0.0	0.0	-0.30	2.39e-05	-1.99e-05	0.0
63	5	0.0	0.0	-0.23	1.84e-05	-1.53e-05	0.0
63	7	0.0	0.0	-0.23	1.84e-05	-1.53e-05	0.0
63	9	0.0	0.0	-0.23	1.84e-05	-1.53e-05	0.0
64	1	0.0	0.0	-0.29	7.15e-05	-1.09e-05	0.0
64	5	0.0	0.0	-0.22	5.50e-05	-8.38e-06	0.0
64	7	0.0	0.0	-0.22	5.50e-05	-8.38e-06	0.0
64	9	0.0	0.0	-0.22	5.50e-05	-8.38e-06	0.0
65	1	0.0	0.0	-0.27	1.18e-04	0.0	0.0
65	5	0.0	0.0	-0.21	9.07e-05	0.0	0.0
65	7	0.0	0.0	-0.21	9.07e-05	0.0	0.0
65	9	0.0	0.0	-0.21	9.07e-05	0.0	0.0
66	1	0.0	0.0	-0.24	1.44e-04	1.32e-05	0.0
66	5	0.0	0.0	-0.18	1.11e-04	1.02e-05	0.0
66	7	0.0	0.0	-0.18	1.11e-04	1.02e-05	0.0
66	9	0.0	0.0	-0.18	1.11e-04	1.02e-05	0.0
67	2	0.01	-0.06	-1.03	0.0	-3.62e-04	-9.47e-05
67	6	0.01	-0.04	-0.77	0.0	-2.65e-04	-6.91e-05
67	8	9.52e-03	-0.04	-0.74	0.0	-2.46e-04	-6.36e-05
67	10	9.15e-03	-0.04	-0.72	0.0	-2.39e-04	-6.18e-05
68	2	0.05	-0.02	-1.07	2.95e-04	0.0	-4.75e-05
68	6	0.04	-0.01	-0.80	2.18e-04	0.0	-3.47e-05
68	8	0.03	-0.01	-0.77	2.05e-04	0.0	-3.22e-05
68	10	0.03	-0.01	-0.75	2.01e-04	0.0	-3.13e-05
69	2	0.03	-0.05	-1.03	0.0	-3.61e-04	-9.99e-05
69	6	0.02	-0.04	-0.77	0.0	-2.65e-04	-7.28e-05
69	8	0.02	-0.03	-0.74	0.0	-2.45e-04	-6.70e-05
69	10	0.02	-0.03	-0.72	0.0	-2.39e-04	-6.50e-05
70	1	0.0	0.0	-0.24	-1.33e-04	9.13e-06	0.0
70	5	0.0	0.0	-0.18	-1.02e-04	7.02e-06	0.0
70	7	0.0	0.0	-0.18	-1.02e-04	7.02e-06	0.0
70	9	0.0	0.0	-0.18	-1.02e-04	7.02e-06	0.0
71	1	0.0	0.0	-0.27	-1.10e-04	2.45e-06	0.0
71	5	0.0	0.0	-0.21	-8.49e-05	1.88e-06	0.0
71	7	0.0	0.0	-0.21	-8.49e-05	1.88e-06	0.0
71	9	0.0	0.0	-0.21	-8.49e-05	1.88e-06	0.0
72	1	0.0	0.0	-0.29	-6.75e-05	0.0	0.0
72	5	0.0	0.0	-0.22	-5.19e-05	0.0	0.0
72	7	0.0	0.0	-0.22	-5.19e-05	0.0	0.0
72	9	0.0	0.0	-0.22	-5.19e-05	0.0	0.0
73	1	0.0	0.0	-0.30	-2.38e-05	-1.58e-06	0.0
73	5	0.0	0.0	-0.23	-1.83e-05	-1.22e-06	0.0
73	7	0.0	0.0	-0.23	-1.83e-05	-1.22e-06	0.0
73	9	0.0	0.0	-0.23	-1.83e-05	-1.22e-06	0.0
74	1	0.0	0.0	-0.30	1.70e-05	-1.03e-06	0.0
74	5	0.0	0.0	-0.23	1.31e-05	0.0	0.0
74	7	0.0	0.0	-0.23	1.31e-05	0.0	0.0
74	9	0.0	0.0	-0.23	1.31e-05	0.0	0.0
75	1	0.0	0.0	-0.29	5.97e-05	2.01e-06	0.0
75	5	0.0	0.0	-0.22	4.59e-05	1.55e-06	0.0
75	7	0.0	0.0	-0.22	4.59e-05	1.55e-06	0.0
75	9	0.0	0.0	-0.22	4.59e-05	1.55e-06	0.0
76	1	0.0	0.0	-0.27	1.02e-04	7.44e-06	0.0
76	5	0.0	0.0	-0.21	7.82e-05	5.72e-06	0.0
76	7	0.0	0.0	-0.21	7.82e-05	5.72e-06	0.0
76	9	0.0	0.0	-0.21	7.82e-05	5.72e-06	0.0
77	1	0.0	0.0	-0.25	1.26e-04	1.45e-05	0.0
77	5	0.0	0.0	-0.19	9.65e-05	1.12e-05	0.0

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

77	7	0.0	0.0	-0.19	9.65e-05	1.12e-05	0.0
77	9	0.0	0.0	-0.19	9.65e-05	1.12e-05	0.0
78	1	0.0	0.0	-0.20	-7.25e-05	7.17e-05	0.0
78	5	0.0	0.0	-0.16	-5.57e-05	5.51e-05	0.0
78	7	0.0	0.0	-0.16	-5.57e-05	5.51e-05	0.0
78	9	0.0	0.0	-0.16	-5.57e-05	5.51e-05	0.0
79	1	0.0	0.0	-0.19	-6.72e-05	7.27e-05	0.0
79	5	0.0	0.0	-0.15	-5.17e-05	5.59e-05	0.0
79	7	0.0	0.0	-0.15	-5.17e-05	5.59e-05	0.0
79	9	0.0	0.0	-0.15	-5.17e-05	5.59e-05	0.0
80	1	0.0	0.0	-0.22	-9.02e-05	6.39e-05	0.0
80	5	0.0	0.0	-0.17	-6.94e-05	4.91e-05	0.0
80	7	0.0	0.0	-0.17	-6.94e-05	4.91e-05	0.0
80	9	0.0	0.0	-0.17	-6.94e-05	4.91e-05	0.0
81	1	0.0	0.0	-0.24	-1.16e-04	2.78e-05	0.0
81	5	0.0	0.0	-0.19	-8.89e-05	2.14e-05	0.0
81	7	0.0	0.0	-0.19	-8.89e-05	2.14e-05	0.0
81	9	0.0	0.0	-0.19	-8.89e-05	2.14e-05	0.0
82	1	0.0	0.0	-0.27	-9.62e-05	5.02e-06	0.0
82	5	0.0	0.0	-0.21	-7.40e-05	3.86e-06	0.0
82	7	0.0	0.0	-0.21	-7.40e-05	3.86e-06	0.0
82	9	0.0	0.0	-0.21	-7.40e-05	3.86e-06	0.0
83	1	0.0	0.0	-0.28	-5.71e-05	-1.10e-05	0.0
83	5	0.0	0.0	-0.22	-4.40e-05	-8.48e-06	0.0
83	7	0.0	0.0	-0.22	-4.40e-05	-8.48e-06	0.0
83	9	0.0	0.0	-0.22	-4.40e-05	-8.48e-06	0.0
84	1	0.0	0.0	-0.29	-1.91e-05	-2.03e-05	0.0
84	5	0.0	0.0	-0.22	-1.47e-05	-1.56e-05	0.0
84	7	0.0	0.0	-0.22	-1.47e-05	-1.56e-05	0.0
84	9	0.0	0.0	-0.22	-1.47e-05	-1.56e-05	0.0
85	1	0.0	0.0	-0.29	1.60e-05	-2.41e-05	0.0
85	5	0.0	0.0	-0.23	1.23e-05	-1.85e-05	0.0
85	7	0.0	0.0	-0.23	1.23e-05	-1.85e-05	0.0
85	9	0.0	0.0	-0.23	1.23e-05	-1.85e-05	0.0
86	1	0.0	0.0	-0.29	5.31e-05	-2.28e-05	0.0
86	5	0.0	0.0	-0.22	4.09e-05	-1.75e-05	0.0
86	7	0.0	0.0	-0.22	4.09e-05	-1.75e-05	0.0
86	9	0.0	0.0	-0.22	4.09e-05	-1.75e-05	0.0
87	1	0.0	0.0	-0.27	8.94e-05	-1.70e-05	0.0
87	5	0.0	0.0	-0.21	6.88e-05	-1.31e-05	0.0
87	7	0.0	0.0	-0.21	6.88e-05	-1.31e-05	0.0
87	9	0.0	0.0	-0.21	6.88e-05	-1.31e-05	0.0
88	1	0.0	0.0	-0.25	1.09e-04	-9.54e-06	0.0
88	5	0.0	0.0	-0.19	8.39e-05	-7.34e-06	0.0
88	7	0.0	0.0	-0.19	8.39e-05	-7.34e-06	0.0
88	9	0.0	0.0	-0.19	8.39e-05	-7.34e-06	0.0
89	1	0.0	0.0	-0.23	-6.08e-05	6.49e-05	0.0
89	5	0.0	0.0	-0.18	-4.68e-05	4.99e-05	0.0
89	7	0.0	0.0	-0.18	-4.68e-05	4.99e-05	0.0
89	9	0.0	0.0	-0.18	-4.68e-05	4.99e-05	0.0
90	1	0.0	0.0	-0.22	-6.75e-05	7.60e-05	0.0
90	5	0.0	0.0	-0.17	-5.19e-05	5.84e-05	0.0
90	7	0.0	0.0	-0.17	-5.19e-05	5.84e-05	0.0
90	9	0.0	0.0	-0.17	-5.19e-05	5.84e-05	0.0
91	1	0.0	0.0	-0.24	-5.47e-05	4.83e-05	0.0
91	5	0.0	0.0	-0.19	-4.21e-05	3.71e-05	0.0
91	7	0.0	0.0	-0.19	-4.21e-05	3.71e-05	0.0
91	9	0.0	0.0	-0.19	-4.21e-05	3.71e-05	0.0
92	1	0.0	0.0	-0.26	-4.93e-05	1.69e-05	0.0
92	5	0.0	0.0	-0.20	-3.79e-05	1.30e-05	0.0
92	7	0.0	0.0	-0.20	-3.79e-05	1.30e-05	0.0
92	9	0.0	0.0	-0.20	-3.79e-05	1.30e-05	0.0
93	1	0.0	0.0	-0.27	-4.01e-05	-1.78e-05	0.0
93	5	0.0	0.0	-0.20	-3.08e-05	-1.37e-05	0.0
93	7	0.0	0.0	-0.20	-3.08e-05	-1.37e-05	0.0
93	9	0.0	0.0	-0.20	-3.08e-05	-1.37e-05	0.0

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

94	1	0.0	0.0	-0.27	-1.60e-05	-5.52e-05	0.0
94	5	0.0	0.0	-0.21	-1.23e-05	-4.25e-05	0.0
94	7	0.0	0.0	-0.21	-1.23e-05	-4.25e-05	0.0
94	9	0.0	0.0	-0.21	-1.23e-05	-4.25e-05	0.0
95	1	0.0	0.0	-0.27	3.94e-06	-8.22e-05	0.0
95	5	0.0	0.0	-0.21	3.03e-06	-6.32e-05	0.0
95	7	0.0	0.0	-0.21	3.03e-06	-6.32e-05	0.0
95	9	0.0	0.0	-0.21	3.03e-06	-6.32e-05	0.0
96	1	0.0	0.0	-0.27	2.17e-05	-9.40e-05	0.0
96	5	0.0	0.0	-0.21	1.67e-05	-7.23e-05	0.0
96	7	0.0	0.0	-0.21	1.67e-05	-7.23e-05	0.0
96	9	0.0	0.0	-0.21	1.67e-05	-7.23e-05	0.0
97	1	0.0	0.0	-0.26	4.45e-05	-9.30e-05	0.0
97	5	0.0	0.0	-0.20	3.42e-05	-7.15e-05	0.0
97	7	0.0	0.0	-0.20	3.42e-05	-7.15e-05	0.0
97	9	0.0	0.0	-0.20	3.42e-05	-7.15e-05	0.0
98	1	0.0	0.0	-0.25	7.08e-05	-8.16e-05	0.0
98	5	0.0	0.0	-0.19	5.45e-05	-6.27e-05	0.0
98	7	0.0	0.0	-0.19	5.45e-05	-6.27e-05	0.0
98	9	0.0	0.0	-0.19	5.45e-05	-6.27e-05	0.0
99	1	0.0	0.0	-0.23	8.35e-05	-7.12e-05	0.0
99	5	0.0	0.0	-0.18	6.42e-05	-5.48e-05	0.0
99	7	0.0	0.0	-0.18	6.42e-05	-5.48e-05	0.0
99	9	0.0	0.0	-0.18	6.42e-05	-5.48e-05	0.0
100	1	0.0	0.0	-0.25	-3.76e-05	2.35e-05	0.0
100	5	0.0	0.0	-0.19	-2.89e-05	1.81e-05	0.0
100	7	0.0	0.0	-0.19	-2.89e-05	1.81e-05	0.0
100	9	0.0	0.0	-0.19	-2.89e-05	1.81e-05	0.0
101	1	0.0	0.0	-0.24	-5.91e-05	3.08e-05	0.0
101	5	0.0	0.0	-0.19	-4.54e-05	2.37e-05	0.0
101	7	0.0	0.0	-0.19	-4.54e-05	2.37e-05	0.0
101	9	0.0	0.0	-0.19	-4.54e-05	2.37e-05	0.0
102	1	0.0	0.0	-0.26	-1.67e-05	1.10e-05	0.0
102	5	0.0	0.0	-0.20	-1.29e-05	8.50e-06	0.0
102	7	0.0	0.0	-0.20	-1.29e-05	8.50e-06	0.0
102	9	0.0	0.0	-0.20	-1.29e-05	8.50e-06	0.0
103	1	0.0	0.0	-0.26	1.51e-05	-9.95e-06	0.0
103	5	0.0	0.0	-0.20	1.16e-05	-7.65e-06	0.0
103	7	0.0	0.0	-0.20	1.16e-05	-7.65e-06	0.0
103	9	0.0	0.0	-0.20	1.16e-05	-7.65e-06	0.0
104	1	0.0	0.0	-0.25	3.94e-05	-3.64e-05	0.0
104	5	0.0	0.0	-0.19	3.03e-05	-2.80e-05	0.0
104	7	0.0	0.0	-0.19	3.03e-05	-2.80e-05	0.0
104	9	0.0	0.0	-0.19	3.03e-05	-2.80e-05	0.0
105	1	0.0	0.0	-0.24	5.19e-05	-6.98e-05	0.0
105	5	0.0	0.0	-0.19	3.99e-05	-5.37e-05	0.0
105	7	0.0	0.0	-0.19	3.99e-05	-5.37e-05	0.0
105	9	0.0	0.0	-0.19	3.99e-05	-5.37e-05	0.0
106	1	0.0	0.0	-0.23	4.13e-05	-9.44e-05	0.0
106	5	0.0	0.0	-0.18	3.17e-05	-7.26e-05	0.0
106	7	0.0	0.0	-0.18	3.17e-05	-7.26e-05	0.0
106	9	0.0	0.0	-0.18	3.17e-05	-7.26e-05	0.0
107	1	0.0	0.0	-0.22	3.19e-05	-1.06e-04	0.0
107	5	0.0	0.0	-0.17	2.45e-05	-8.15e-05	0.0
107	7	0.0	0.0	-0.17	2.45e-05	-8.15e-05	0.0
107	9	0.0	0.0	-0.17	2.45e-05	-8.15e-05	0.0
108	1	0.0	0.0	-0.22	3.19e-05	-1.06e-04	0.0
108	5	0.0	0.0	-0.17	2.45e-05	-8.13e-05	0.0
108	7	0.0	0.0	-0.17	2.45e-05	-8.13e-05	0.0
108	9	0.0	0.0	-0.17	2.45e-05	-8.13e-05	0.0
109	1	0.0	0.0	-0.21	3.87e-05	-9.54e-05	0.0
109	5	0.0	0.0	-0.16	2.98e-05	-7.34e-05	0.0
109	7	0.0	0.0	-0.16	2.98e-05	-7.34e-05	0.0
109	9	0.0	0.0	-0.16	2.98e-05	-7.34e-05	0.0
110	1	0.0	0.0	-0.20	4.57e-05	-8.63e-05	0.0
110	5	0.0	0.0	-0.16	3.51e-05	-6.64e-05	0.0

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

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SR EN ISO 9001:2015 Certificate No. Q204
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- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

110	7	0.0	0.0	-0.16	3.51e-05	-6.64e-05	0.0
110	9	0.0	0.0	-0.16	3.51e-05	-6.64e-05	0.0
111	1	0.0	0.0	-0.25	-2.98e-05	-1.19e-05	0.0
111	5	0.0	0.0	-0.19	-2.29e-05	-9.12e-06	0.0
111	7	0.0	0.0	-0.19	-2.29e-05	-9.12e-06	0.0
111	9	0.0	0.0	-0.19	-2.29e-05	-9.12e-06	0.0
112	1	0.0	0.0	-0.24	-5.23e-05	-2.51e-05	0.0
112	5	0.0	0.0	-0.19	-4.02e-05	-1.93e-05	0.0
112	7	0.0	0.0	-0.19	-4.02e-05	-1.93e-05	0.0
112	9	0.0	0.0	-0.19	-4.02e-05	-1.93e-05	0.0
113	1	0.0	0.0	-0.26	0.0	-1.11e-05	0.0
113	5	0.0	0.0	-0.20	0.0	-8.51e-06	0.0
113	7	0.0	0.0	-0.20	0.0	-8.51e-06	0.0
113	9	0.0	0.0	-0.20	0.0	-8.51e-06	0.0
114	1	0.0	0.0	-0.25	4.21e-05	-1.86e-05	0.0
114	5	0.0	0.0	-0.19	3.24e-05	-1.43e-05	0.0
114	7	0.0	0.0	-0.19	3.24e-05	-1.43e-05	0.0
114	9	0.0	0.0	-0.19	3.24e-05	-1.43e-05	0.0
115	1	0.0	0.0	-0.24	7.44e-05	-3.53e-05	0.0
115	5	0.0	0.0	-0.18	5.72e-05	-2.72e-05	0.0
115	7	0.0	0.0	-0.18	5.72e-05	-2.72e-05	0.0
115	9	0.0	0.0	-0.18	5.72e-05	-2.72e-05	0.0
116	1	0.0	0.0	-0.22	9.03e-05	-6.24e-05	0.0
116	5	0.0	0.0	-0.17	6.95e-05	-4.80e-05	0.0
116	7	0.0	0.0	-0.17	6.95e-05	-4.80e-05	0.0
116	9	0.0	0.0	-0.17	6.95e-05	-4.80e-05	0.0
117	1	0.0	0.0	-0.20	6.39e-05	-7.38e-05	0.0
117	5	0.0	0.0	-0.16	4.92e-05	-5.68e-05	0.0
117	7	0.0	0.0	-0.16	4.92e-05	-5.68e-05	0.0
117	9	0.0	0.0	-0.16	4.92e-05	-5.68e-05	0.0
118	1	0.0	0.0	-0.19	3.74e-05	-7.60e-05	0.0
118	5	0.0	0.0	-0.15	2.88e-05	-5.85e-05	0.0
118	7	0.0	0.0	-0.15	2.88e-05	-5.85e-05	0.0
118	9	0.0	0.0	-0.15	2.88e-05	-5.85e-05	0.0
119	1	0.0	0.0	-0.18	2.43e-05	-7.20e-05	0.0
119	5	0.0	0.0	-0.14	1.87e-05	-5.54e-05	0.0
119	7	0.0	0.0	-0.14	1.87e-05	-5.54e-05	0.0
119	9	0.0	0.0	-0.14	1.87e-05	-5.54e-05	0.0
120	1	0.0	0.0	-0.18	2.42e-05	-6.49e-05	0.0
120	5	0.0	0.0	-0.14	1.86e-05	-4.99e-05	0.0
120	7	0.0	0.0	-0.14	1.86e-05	-4.99e-05	0.0
120	9	0.0	0.0	-0.14	1.86e-05	-4.99e-05	0.0
121	1	0.0	0.0	-0.17	2.51e-05	-6.00e-05	0.0
121	5	0.0	0.0	-0.13	1.93e-05	-4.62e-05	0.0
121	7	0.0	0.0	-0.13	1.93e-05	-4.62e-05	0.0
121	9	0.0	0.0	-0.13	1.93e-05	-4.62e-05	0.0
122	2	-0.03	-0.02	-1.24	1.19e-05	2.36e-04	-1.58e-05
122	6	-0.03	-0.02	-0.93	9.22e-06	1.72e-04	-1.15e-05
122	8	-0.02	-0.02	-0.88	9.30e-06	1.58e-04	-1.05e-05
122	10	-0.02	-0.02	-0.87	9.32e-06	1.54e-04	-1.01e-05
123	2	-0.22	-2.25e-03	-1.23	9.84e-05	1.90e-04	6.85e-05
123	6	-0.16	-1.57e-03	-0.91	7.46e-05	1.39e-04	5.01e-05
123	8	-0.15	-1.34e-03	-0.87	7.29e-05	1.29e-04	4.63e-05
123	10	-0.14	-1.26e-03	-0.85	7.24e-05	1.25e-04	4.50e-05
124	2	-0.02	-0.02	-1.23	4.49e-05	8.05e-04	-5.27e-06
124	6	-0.01	-0.02	-0.92	3.54e-05	5.89e-04	-3.99e-06
124	8	-0.01	-0.02	-0.87	3.65e-05	5.44e-04	-3.89e-06
124	10	-0.01	-0.02	-0.86	3.69e-05	5.29e-04	-3.86e-06
125	2	0.05	-0.02	-1.05	2.69e-04	-2.46e-04	-5.44e-05
125	6	0.03	-0.02	-0.79	1.99e-04	-1.81e-04	-3.97e-05
125	8	0.03	-0.01	-0.75	1.87e-04	-1.69e-04	-3.65e-05
125	10	0.03	-0.01	-0.74	1.83e-04	-1.64e-04	-3.55e-05
126	2	-0.05	-0.12	-1.06	3.41e-04	-3.72e-04	-5.10e-05
126	6	-0.04	-0.09	-0.79	2.52e-04	-2.72e-04	-3.76e-05
126	8	-0.04	-0.08	-0.76	2.37e-04	-2.52e-04	-3.52e-05
126	10	-0.04	-0.08	-0.75	2.32e-04	-2.45e-04	-3.44e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

127	2	0.10	-0.02	-0.90	3.23e-04	-2.14e-04	-8.40e-05
127	6	0.07	-0.01	-0.67	2.40e-04	-1.57e-04	-6.13e-05
127	8	0.07	-0.01	-0.64	2.26e-04	-1.46e-04	-5.64e-05
127	10	0.07	-0.01	-0.64	2.22e-04	-1.43e-04	-5.47e-05
128	2	-0.04	-0.12	-0.91	3.36e-04	-5.28e-04	-6.36e-05
128	6	-0.03	-0.09	-0.68	2.49e-04	-3.85e-04	-4.66e-05
128	8	-0.02	-0.08	-0.65	2.36e-04	-3.54e-04	-4.32e-05
128	10	-0.02	-0.08	-0.64	2.31e-04	-3.44e-04	-4.21e-05
129	2	-0.05	-0.12	-0.98	3.36e-04	-4.22e-04	-3.64e-05
129	6	-0.03	-0.09	-0.74	2.49e-04	-3.08e-04	-2.67e-05
129	8	-0.03	-0.08	-0.70	2.34e-04	-2.84e-04	-2.49e-05
129	10	-0.03	-0.08	-0.69	2.30e-04	-2.76e-04	-2.42e-05
130	2	-0.04	-0.05	-1.36	1.28e-04	-3.48e-05	-3.93e-05
130	6	-0.03	-0.03	-1.01	9.53e-05	-2.57e-05	-2.90e-05
130	8	-0.03	-0.03	-0.96	9.04e-05	-2.41e-05	-2.71e-05
130	10	-0.03	-0.03	-0.94	8.88e-05	-2.36e-05	-2.65e-05
131	2	-0.06	-0.02	-1.24	8.74e-06	2.00e-04	4.67e-05
131	6	-0.05	-0.02	-0.93	7.12e-06	1.46e-04	3.44e-05
131	8	-0.04	-0.02	-0.88	7.69e-06	1.34e-04	3.21e-05
131	10	-0.04	-0.02	-0.87	7.89e-06	1.30e-04	3.13e-05
132	1	-4.02e-03	-0.05	-0.88	2.62e-04	-2.55e-04	-4.48e-05
132	2	-3.42e-03	-0.07	-1.06	3.32e-04	-3.49e-04	-6.17e-05
132	5	-3.11e-03	-0.04	-0.67	1.99e-04	-1.93e-04	-3.39e-05
132	6	-2.71e-03	-0.05	-0.79	2.46e-04	-2.56e-04	-4.52e-05
132	7	-3.11e-03	-0.04	-0.67	1.99e-04	-1.93e-04	-3.39e-05
132	8	-2.83e-03	-0.05	-0.76	2.32e-04	-2.37e-04	-4.18e-05
132	9	-3.11e-03	-0.04	-0.67	1.99e-04	-1.93e-04	-3.39e-05
132	10	-2.87e-03	-0.05	-0.74	2.27e-04	-2.31e-04	-4.07e-05
133	2	-0.09	-0.02	-1.24	1.64e-05	1.43e-04	3.97e-05
133	6	-0.06	-0.02	-0.92	1.32e-05	1.05e-04	2.93e-05
133	8	-0.06	-0.01	-0.88	1.40e-05	9.68e-05	2.75e-05
133	10	-0.06	-0.01	-0.86	1.43e-05	9.41e-05	2.68e-05
134	2	-0.09	-0.02	-1.24	0.0	1.63e-04	4.92e-05
134	6	-0.07	-0.01	-0.92	0.0	1.19e-04	3.62e-05
134	8	-0.06	-0.01	-0.88	0.0	1.10e-04	3.38e-05
134	10	-0.06	-0.01	-0.86	0.0	1.07e-04	3.30e-05
135	2	-0.09	-0.02	-1.24	0.0	1.54e-04	4.76e-05
135	6	-0.07	-0.02	-0.92	0.0	1.13e-04	3.51e-05
135	8	-0.06	-0.01	-0.88	0.0	1.04e-04	3.28e-05
135	10	-0.06	-0.01	-0.86	0.0	1.01e-04	3.20e-05
136	2	-0.08	-0.02	-1.24	1.37e-05	1.90e-04	4.23e-05
136	6	-0.06	-0.02	-0.92	1.10e-05	1.39e-04	3.12e-05
136	8	-0.06	-0.01	-0.88	1.18e-05	1.28e-04	2.92e-05
136	10	-0.05	-0.01	-0.86	1.21e-05	1.25e-04	2.86e-05
137	2	-0.08	-0.02	-1.24	0.0	1.87e-04	5.08e-05
137	6	-0.06	-0.01	-0.92	0.0	1.37e-04	3.74e-05
137	8	-0.06	-0.01	-0.88	0.0	1.26e-04	3.49e-05
137	10	-0.06	-0.01	-0.86	0.0	1.23e-04	3.41e-05
138	2	-0.08	-0.02	-1.24	1.45e-05	2.06e-04	4.55e-05
138	6	-0.06	-0.02	-0.92	1.16e-05	1.51e-04	3.36e-05
138	8	-0.05	-0.02	-0.88	1.22e-05	1.39e-04	3.14e-05
138	10	-0.05	-0.02	-0.87	1.24e-05	1.35e-04	3.07e-05
139	2	-0.08	-0.02	-1.24	0.0	1.99e-04	5.64e-05
139	6	-0.06	-0.02	-0.92	0.0	1.45e-04	4.14e-05
139	8	-0.05	-0.02	-0.88	0.0	1.34e-04	3.87e-05
139	10	-0.05	-0.01	-0.87	0.0	1.30e-04	3.77e-05
140	2	-0.07	-0.02	-1.24	1.28e-05	2.06e-04	4.77e-05
140	6	-0.05	-0.02	-0.92	1.02e-05	1.51e-04	3.52e-05
140	8	-0.05	-0.02	-0.88	1.07e-05	1.39e-04	3.29e-05
140	10	-0.05	-0.02	-0.87	1.09e-05	1.35e-04	3.21e-05
141	2	-0.07	-0.02	-1.24	0.0	1.96e-04	6.87e-05
141	6	-0.05	-0.02	-0.92	0.0	1.43e-04	5.05e-05
141	8	-0.05	-0.02	-0.88	0.0	1.32e-04	4.70e-05
141	10	-0.05	-0.02	-0.87	0.0	1.28e-04	4.58e-05
142	2	-0.07	-0.02	-1.24	0.0	2.02e-04	1.06e-04
142	6	-0.05	-0.02	-0.93	0.0	1.47e-04	7.79e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 27001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

142	8	-0.05	-0.02	-0.88	0.0	1.36e-04	7.22e-05
142	10	-0.04	-0.02	-0.87	0.0	1.32e-04	7.04e-05
143	2	-0.06	-0.02	-1.24	6.40e-06	1.93e-04	4.05e-05
143	6	-0.04	-0.02	-0.93	5.38e-06	1.41e-04	2.98e-05
143	8	-0.04	-0.02	-0.88	6.05e-06	1.29e-04	2.78e-05
143	10	-0.04	-0.02	-0.87	6.27e-06	1.25e-04	2.72e-05
144	2	-0.06	-0.02	-1.24	0.0	2.22e-04	1.01e-04
144	6	-0.04	-0.02	-0.93	0.0	1.62e-04	7.39e-05
144	8	-0.04	-0.02	-0.88	0.0	1.49e-04	6.86e-05
144	10	-0.04	-0.02	-0.87	0.0	1.45e-04	6.68e-05
145	2	-0.05	-0.02	-1.24	8.15e-06	1.87e-04	2.94e-05
145	6	-0.04	-0.02	-0.93	6.74e-06	1.36e-04	2.17e-05
145	8	-0.04	-0.02	-0.88	7.42e-06	1.25e-04	2.02e-05
145	10	-0.03	-0.02	-0.87	7.65e-06	1.22e-04	1.98e-05
146	2	-0.05	-0.02	-1.24	0.0	2.26e-04	6.93e-05
146	6	-0.04	-0.02	-0.93	0.0	1.65e-04	5.08e-05
146	8	-0.04	-0.02	-0.88	0.0	1.51e-04	4.71e-05
146	10	-0.04	-0.02	-0.87	0.0	1.47e-04	4.59e-05
147	2	-0.05	-0.02	-1.24	1.20e-05	1.87e-04	1.51e-05
147	6	-0.03	-0.02	-0.93	9.61e-06	1.36e-04	1.12e-05
147	8	-0.03	-0.02	-0.88	1.02e-05	1.25e-04	1.05e-05
147	10	-0.03	-0.02	-0.87	1.04e-05	1.21e-04	1.03e-05
148	2	-0.05	-0.02	-1.24	0.0	2.29e-04	3.46e-05
148	6	-0.03	-0.02	-0.93	0.0	1.67e-04	2.53e-05
148	8	-0.03	-0.02	-0.88	0.0	1.53e-04	2.35e-05
148	10	-0.03	-0.02	-0.87	0.0	1.49e-04	2.29e-05
149	2	-0.04	-0.02	-1.24	1.45e-05	1.98e-04	0.0
149	6	-0.03	-0.02	-0.93	1.15e-05	1.44e-04	0.0
149	8	-0.03	-0.02	-0.88	1.19e-05	1.33e-04	0.0
149	10	-0.03	-0.02	-0.87	1.21e-05	1.29e-04	0.0
150	2	-0.04	-0.02	-1.24	0.0	2.41e-04	-1.22e-06
150	6	-0.03	-0.02	-0.93	0.0	1.75e-04	0.0
150	8	-0.03	-0.02	-0.88	0.0	1.61e-04	0.0
150	10	-0.03	-0.02	-0.87	0.0	1.57e-04	0.0
151	2	-0.03	-0.02	-1.24	1.74e-06	2.69e-04	-3.59e-05
151	6	-0.02	-0.02	-0.93	1.46e-06	1.96e-04	-2.63e-05
151	8	-0.02	-0.02	-0.88	1.64e-06	1.80e-04	-2.43e-05
151	10	-0.02	-0.02	-0.87	1.70e-06	1.75e-04	-2.37e-05
152	2	-0.01	-0.08	-1.05	0.0	-3.48e-04	-7.59e-05
152	6	-7.88e-03	-0.06	-0.78	0.0	-2.55e-04	-5.55e-05
152	8	-7.62e-03	-0.05	-0.75	0.0	-2.36e-04	-5.13e-05
152	10	-7.53e-03	-0.05	-0.73	0.0	-2.30e-04	-4.99e-05
153	2	-0.02	-0.09	-1.05	0.0	-3.45e-04	-6.89e-05
153	6	-0.02	-0.06	-0.78	0.0	-2.52e-04	-5.05e-05
153	8	-0.01	-0.06	-0.75	0.0	-2.34e-04	-4.67e-05
153	10	-0.01	-0.06	-0.73	0.0	-2.27e-04	-4.55e-05
154	2	-0.03	-0.10	-1.05	0.0	-3.46e-04	-5.98e-05
154	6	-0.02	-0.07	-0.78	0.0	-2.53e-04	-4.39e-05
154	8	-0.02	-0.07	-0.75	0.0	-2.34e-04	-4.07e-05
154	10	-0.02	-0.07	-0.73	0.0	-2.28e-04	-3.97e-05
155	2	-0.04	-0.11	-1.05	0.0	-3.54e-04	-4.92e-05
155	6	-0.03	-0.08	-0.78	0.0	-2.59e-04	-3.61e-05
155	8	-0.03	-0.08	-0.75	0.0	-2.39e-04	-3.37e-05
155	10	-0.03	-0.07	-0.73	0.0	-2.33e-04	-3.28e-05
156	2	-0.05	-0.12	-1.05	3.37e-04	-3.73e-04	-3.87e-05
156	6	-0.04	-0.09	-0.78	2.49e-04	-2.72e-04	-2.85e-05
156	8	-0.04	-0.08	-0.75	2.34e-04	-2.52e-04	-2.67e-05
156	10	-0.04	-0.08	-0.74	2.29e-04	-2.45e-04	-2.61e-05
157	2	-0.08	-0.02	-1.24	0.0	2.90e-04	1.57e-04
157	6	-0.06	-0.02	-0.93	0.0	2.12e-04	1.15e-04
157	8	-0.05	-0.02	-0.88	0.0	1.95e-04	1.06e-04
157	10	-0.05	-0.02	-0.87	0.0	1.90e-04	1.03e-04
158	2	-0.07	-0.02	-1.24	0.0	2.91e-04	1.35e-04
158	6	-0.05	-0.02	-0.93	0.0	2.12e-04	9.89e-05
158	8	-0.05	-0.02	-0.88	0.0	1.96e-04	9.15e-05
158	10	-0.04	-0.02	-0.87	0.0	1.90e-04	8.91e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

159	2	-0.06	-0.02	-1.24	0.0	2.90e-04	8.75e-05
159	6	-0.04	-0.02	-0.93	0.0	2.11e-04	6.41e-05
159	8	-0.04	-0.02	-0.88	0.0	1.95e-04	5.93e-05
159	10	-0.04	-0.02	-0.87	0.0	1.89e-04	5.77e-05
160	2	-0.05	-0.02	-1.24	0.0	2.91e-04	4.22e-05
160	6	-0.04	-0.02	-0.93	0.0	2.13e-04	3.09e-05
160	8	-0.03	-0.02	-0.88	0.0	1.96e-04	2.86e-05
160	10	-0.03	-0.02	-0.87	0.0	1.90e-04	2.78e-05
161	2	-0.04	-0.02	-1.24	0.0	3.00e-04	0.0
161	6	-0.03	-0.02	-0.93	0.0	2.19e-04	0.0
161	8	-0.03	-0.02	-0.88	0.0	2.02e-04	0.0
161	10	-0.03	-0.02	-0.87	0.0	1.96e-04	0.0
162	2	-0.03	-0.02	-1.24	-1.47e-06	3.17e-04	-4.06e-05
162	6	-0.02	-0.02	-0.93	0.0	2.32e-04	-2.97e-05
162	8	-0.02	-0.02	-0.88	0.0	2.13e-04	-2.76e-05
162	10	-0.02	-0.02	-0.87	0.0	2.07e-04	-2.69e-05
163	2	-0.14	-0.02	-1.24	0.0	4.88e-04	1.94e-04
163	6	-0.10	-0.01	-0.93	0.0	3.57e-04	1.42e-04
163	8	-0.10	-0.01	-0.88	0.0	3.30e-04	1.31e-04
163	10	-0.09	-0.01	-0.87	0.0	3.20e-04	1.28e-04
164	2	-0.16	-0.02	-1.24	0.0	4.89e-04	1.94e-04
164	6	-0.11	-0.01	-0.93	0.0	3.57e-04	1.42e-04
164	8	-0.11	-0.01	-0.88	0.0	3.30e-04	1.31e-04
164	10	-0.10	-0.01	-0.87	0.0	3.21e-04	1.28e-04
165	2	-0.13	-0.02	-1.24	0.0	4.85e-04	1.92e-04
165	6	-0.09	-0.01	-0.93	0.0	3.55e-04	1.41e-04
165	8	-0.09	-0.01	-0.88	0.0	3.27e-04	1.30e-04
165	10	-0.08	-0.01	-0.87	0.0	3.18e-04	1.27e-04
166	2	-0.11	-0.02	-1.24	0.0	4.77e-04	1.90e-04
166	6	-0.08	-0.01	-0.93	0.0	3.49e-04	1.39e-04
166	8	-0.08	-0.01	-0.88	0.0	3.22e-04	1.28e-04
166	10	-0.07	-0.01	-0.87	0.0	3.13e-04	1.25e-04
167	2	-0.10	-0.02	-1.24	0.0	4.61e-04	1.85e-04
167	6	-0.07	-0.01	-0.93	0.0	3.37e-04	1.36e-04
167	8	-0.07	-0.01	-0.88	0.0	3.11e-04	1.25e-04
167	10	-0.07	-0.01	-0.87	0.0	3.03e-04	1.22e-04
168	2	-0.08	-0.02	-1.24	0.0	4.12e-04	1.70e-04
168	6	-0.06	-0.02	-0.93	0.0	3.01e-04	1.25e-04
168	8	-0.06	-0.01	-0.88	0.0	2.78e-04	1.15e-04
168	10	-0.06	-0.01	-0.87	0.0	2.70e-04	1.12e-04
169	2	-0.07	-0.02	-1.24	0.0	3.75e-04	1.39e-04
169	6	-0.05	-0.02	-0.93	0.0	2.74e-04	1.02e-04
169	8	-0.05	-0.02	-0.88	0.0	2.53e-04	9.43e-05
169	10	-0.05	-0.02	-0.87	0.0	2.46e-04	9.18e-05
170	2	-0.06	-0.02	-1.24	0.0	3.63e-04	9.19e-05
170	6	-0.05	-0.02	-0.93	0.0	2.65e-04	6.72e-05
170	8	-0.04	-0.02	-0.88	0.0	2.45e-04	6.21e-05
170	10	-0.04	-0.02	-0.87	0.0	2.38e-04	6.04e-05
171	2	-0.05	-0.02	-1.24	0.0	3.61e-04	4.56e-05
171	6	-0.04	-0.02	-0.93	0.0	2.64e-04	3.33e-05
171	8	-0.04	-0.02	-0.88	0.0	2.43e-04	3.07e-05
171	10	-0.03	-0.02	-0.87	0.0	2.36e-04	2.99e-05
172	2	-0.04	-0.02	-1.24	0.0	3.65e-04	1.22e-06
172	6	-0.03	-0.02	-0.93	0.0	2.67e-04	0.0
172	8	-0.03	-0.02	-0.88	0.0	2.46e-04	0.0
172	10	-0.03	-0.02	-0.87	0.0	2.39e-04	0.0
173	2	-0.03	-0.02	-1.24	2.46e-06	3.74e-04	-4.02e-05
173	6	-0.02	-0.02	-0.93	2.44e-06	2.73e-04	-2.95e-05
173	8	-0.02	-0.02	-0.88	3.24e-06	2.52e-04	-2.75e-05
173	10	-0.02	-0.02	-0.87	3.51e-06	2.45e-04	-2.68e-05
174	2	-0.15	-0.02	-1.24	0.0	4.90e-04	1.94e-04
174	6	-0.11	-0.01	-0.93	0.0	3.58e-04	1.42e-04
174	8	-0.10	-0.01	-0.88	0.0	3.31e-04	1.31e-04
174	10	-0.10	-0.01	-0.87	0.0	3.22e-04	1.28e-04
175	2	-0.16	-0.02	-1.24	0.0	4.90e-04	1.95e-04
175	6	-0.12	-0.01	-0.93	0.0	3.58e-04	1.42e-04

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

175	8	-0.11	-0.01	-0.88	0.0	3.31e-04	1.32e-04
175	10	-0.11	-0.01	-0.87	0.0	3.22e-04	1.28e-04
176	2	-0.14	-0.02	-1.24	0.0	4.88e-04	1.91e-04
176	6	-0.10	-0.01	-0.93	0.0	3.57e-04	1.40e-04
176	8	-0.09	-0.01	-0.88	0.0	3.29e-04	1.29e-04
176	10	-0.09	-0.01	-0.87	0.0	3.20e-04	1.26e-04
177	2	-0.12	-0.02	-1.24	0.0	4.83e-04	1.87e-04
177	6	-0.09	-0.01	-0.93	0.0	3.53e-04	1.37e-04
177	8	-0.08	-0.01	-0.88	0.0	3.26e-04	1.26e-04
177	10	-0.08	-0.01	-0.87	0.0	3.17e-04	1.23e-04
178	2	-0.11	-0.02	-1.24	0.0	4.73e-04	1.78e-04
178	6	-0.08	-0.01	-0.93	0.0	3.45e-04	1.30e-04
178	8	-0.07	-0.01	-0.88	0.0	3.19e-04	1.20e-04
178	10	-0.07	-0.01	-0.87	0.0	3.10e-04	1.17e-04
179	2	-0.09	-0.02	-1.24	0.0	4.56e-04	1.60e-04
179	6	-0.07	-0.01	-0.93	0.0	3.33e-04	1.17e-04
179	8	-0.06	-0.01	-0.88	0.0	3.07e-04	1.08e-04
179	10	-0.06	-0.01	-0.87	0.0	2.99e-04	1.06e-04
180	2	-0.08	-0.02	-1.24	0.0	4.40e-04	1.30e-04
180	6	-0.06	-0.02	-0.93	0.0	3.22e-04	9.51e-05
180	8	-0.05	-0.02	-0.88	0.0	2.97e-04	8.79e-05
180	10	-0.05	-0.01	-0.87	0.0	2.89e-04	8.55e-05
181	2	-0.07	-0.02	-1.24	0.0	4.32e-04	9.02e-05
181	6	-0.05	-0.02	-0.93	0.0	3.15e-04	6.59e-05
181	8	-0.05	-0.02	-0.88	0.0	2.91e-04	6.09e-05
181	10	-0.04	-0.02	-0.87	0.0	2.83e-04	5.92e-05
182	2	-0.05	-0.02	-1.24	0.0	4.30e-04	4.68e-05
182	6	-0.04	-0.02	-0.93	0.0	3.14e-04	3.41e-05
182	8	-0.04	-0.02	-0.88	0.0	2.90e-04	3.14e-05
182	10	-0.04	-0.02	-0.87	0.0	2.82e-04	3.05e-05
183	2	-0.04	-0.02	-1.24	0.0	4.32e-04	3.02e-06
183	6	-0.03	-0.02	-0.93	0.0	3.15e-04	2.08e-06
183	8	-0.03	-0.02	-0.88	0.0	2.91e-04	1.72e-06
183	10	-0.03	-0.02	-0.87	0.0	2.83e-04	1.60e-06
184	2	-0.03	-0.02	-1.24	1.07e-05	4.36e-04	-3.88e-05
184	6	-0.02	-0.02	-0.93	8.90e-06	3.18e-04	-2.86e-05
184	8	-0.02	-0.02	-0.88	9.84e-06	2.94e-04	-2.67e-05
184	10	-0.02	-0.02	-0.87	1.02e-05	2.86e-04	-2.60e-05
185	2	-0.16	-0.02	-1.24	0.0	4.94e-04	1.93e-04
185	6	-0.12	-0.01	-0.93	0.0	3.61e-04	1.42e-04
185	8	-0.11	-0.01	-0.88	0.0	3.33e-04	1.31e-04
185	10	-0.11	-0.01	-0.87	0.0	3.24e-04	1.27e-04
186	2	-0.17	-0.02	-1.24	0.0	4.94e-04	1.95e-04
186	6	-0.13	-0.01	-0.93	0.0	3.61e-04	1.42e-04
186	8	-0.12	-0.01	-0.88	0.0	3.34e-04	1.32e-04
186	10	-0.11	-0.01	-0.87	0.0	3.24e-04	1.28e-04
187	2	-0.14	-0.02	-1.24	0.0	4.94e-04	1.90e-04
187	6	-0.11	-0.01	-0.93	0.0	3.61e-04	1.39e-04
187	8	-0.10	-0.01	-0.88	0.0	3.33e-04	1.29e-04
187	10	-0.10	-0.01	-0.87	0.0	3.24e-04	1.25e-04
188	2	-0.13	-0.02	-1.24	0.0	4.93e-04	1.85e-04
188	6	-0.09	-0.01	-0.93	0.0	3.61e-04	1.35e-04
188	8	-0.09	-0.01	-0.88	0.0	3.33e-04	1.25e-04
188	10	-0.09	-0.01	-0.87	0.0	3.24e-04	1.22e-04
189	2	-0.11	-0.02	-1.24	0.0	4.93e-04	1.74e-04
189	6	-0.08	-0.01	-0.93	0.0	3.61e-04	1.27e-04
189	8	-0.08	-0.01	-0.88	0.0	3.33e-04	1.18e-04
189	10	-0.08	-0.01	-0.87	0.0	3.24e-04	1.14e-04
190	2	-0.10	-0.02	-1.24	0.0	4.93e-04	1.55e-04
190	6	-0.07	-0.01	-0.93	0.0	3.61e-04	1.13e-04
190	8	-0.07	-0.01	-0.88	0.0	3.33e-04	1.05e-04
190	10	-0.07	-0.01	-0.87	0.0	3.24e-04	1.02e-04
191	2	-0.09	-0.02	-1.24	0.0	4.94e-04	1.26e-04
191	6	-0.06	-0.02	-0.93	0.0	3.61e-04	9.19e-05
191	8	-0.06	-0.01	-0.88	0.0	3.33e-04	8.49e-05
191	10	-0.06	-0.01	-0.87	0.0	3.24e-04	8.26e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO /IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

192	2	-0.07	-0.02	-1.24	0.0	4.95e-04	8.84e-05
192	6	-0.05	-0.02	-0.93	0.0	3.62e-04	6.46e-05
192	8	-0.05	-0.02	-0.88	0.0	3.34e-04	5.96e-05
192	10	-0.05	-0.02	-0.87	0.0	3.25e-04	5.80e-05
193	2	-0.06	-0.02	-1.24	0.0	4.96e-04	4.68e-05
193	6	-0.04	-0.02	-0.93	0.0	3.63e-04	3.41e-05
193	8	-0.04	-0.02	-0.88	0.0	3.35e-04	3.13e-05
193	10	-0.04	-0.02	-0.87	0.0	3.25e-04	3.04e-05
194	2	-0.04	-0.02	-1.24	0.0	4.98e-04	3.71e-06
194	6	-0.03	-0.02	-0.93	0.0	3.64e-04	2.55e-06
194	8	-0.03	-0.02	-0.88	0.0	3.36e-04	2.11e-06
194	10	-0.03	-0.02	-0.87	0.0	3.27e-04	1.97e-06
195	2	-0.03	-0.02	-1.24	2.07e-05	4.99e-04	-3.81e-05
195	6	-0.02	-0.02	-0.93	1.66e-05	3.65e-04	-2.81e-05
195	8	-0.02	-0.02	-0.88	1.77e-05	3.37e-04	-2.63e-05
195	10	-0.02	-0.02	-0.87	1.80e-05	3.27e-04	-2.57e-05
196	2	-0.17	-0.02	-1.24	0.0	4.98e-04	1.92e-04
196	6	-0.12	-0.01	-0.93	0.0	3.64e-04	1.41e-04
196	8	-0.11	-0.01	-0.88	0.0	3.36e-04	1.30e-04
196	10	-0.11	-0.01	-0.87	0.0	3.27e-04	1.27e-04
197	2	-0.18	-0.02	-1.24	0.0	4.98e-04	1.93e-04
197	6	-0.13	-0.01	-0.93	0.0	3.64e-04	1.41e-04
197	8	-0.12	-0.01	-0.88	0.0	3.36e-04	1.31e-04
197	10	-0.12	-0.01	-0.87	0.0	3.27e-04	1.27e-04
198	2	-0.15	-0.02	-1.24	0.0	5.00e-04	1.89e-04
198	6	-0.11	-0.01	-0.93	0.0	3.65e-04	1.39e-04
198	8	-0.10	-0.01	-0.88	0.0	3.38e-04	1.28e-04
198	10	-0.10	-0.01	-0.87	0.0	3.28e-04	1.25e-04
199	2	-0.14	-0.02	-1.24	0.0	5.05e-04	1.84e-04
199	6	-0.10	-0.01	-0.93	0.0	3.69e-04	1.35e-04
199	8	-0.09	-0.01	-0.88	0.0	3.41e-04	1.25e-04
199	10	-0.09	-0.01	-0.87	0.0	3.31e-04	1.21e-04
200	2	-0.12	-0.02	-1.24	0.0	5.15e-04	1.75e-04
200	6	-0.09	-0.01	-0.92	0.0	3.76e-04	1.28e-04
200	8	-0.08	-0.01	-0.88	0.0	3.47e-04	1.18e-04
200	10	-0.08	-0.01	-0.87	0.0	3.38e-04	1.15e-04
201	2	-0.11	-0.02	-1.24	0.0	5.31e-04	1.56e-04
201	6	-0.08	-0.01	-0.92	0.0	3.88e-04	1.14e-04
201	8	-0.07	-0.01	-0.88	0.0	3.59e-04	1.06e-04
201	10	-0.07	-0.01	-0.87	0.0	3.49e-04	1.03e-04
202	2	-0.09	-0.02	-1.24	0.0	5.46e-04	1.26e-04
202	6	-0.07	-0.01	-0.93	0.0	3.99e-04	9.23e-05
202	8	-0.06	-0.01	-0.88	0.0	3.69e-04	8.53e-05
202	10	-0.06	-0.01	-0.87	0.0	3.59e-04	8.30e-05
203	2	-0.07	-0.02	-1.24	0.0	5.56e-04	8.77e-05
203	6	-0.05	-0.02	-0.93	0.0	4.07e-04	6.41e-05
203	8	-0.05	-0.02	-0.88	0.0	3.76e-04	5.91e-05
203	10	-0.05	-0.01	-0.87	0.0	3.65e-04	5.75e-05
204	2	-0.06	-0.02	-1.24	0.0	5.61e-04	4.58e-05
204	6	-0.04	-0.02	-0.93	0.0	4.10e-04	3.34e-05
204	8	-0.04	-0.02	-0.88	0.0	3.79e-04	3.07e-05
204	10	-0.04	-0.02	-0.87	0.0	3.69e-04	2.97e-05
205	2	-0.04	-0.02	-1.24	0.0	5.63e-04	3.11e-06
205	6	-0.03	-0.02	-0.93	0.0	4.12e-04	2.10e-06
205	8	-0.03	-0.02	-0.88	0.0	3.80e-04	1.67e-06
205	10	-0.03	-0.02	-0.87	0.0	3.70e-04	1.53e-06
206	2	-0.02	-0.02	-1.24	3.14e-05	5.63e-04	-3.84e-05
206	6	-0.02	-0.02	-0.93	2.49e-05	4.11e-04	-2.83e-05
206	8	-0.02	-0.02	-0.88	2.59e-05	3.80e-04	-2.65e-05
206	10	-0.02	-0.02	-0.87	2.63e-05	3.69e-04	-2.59e-05
207	2	-0.18	-0.02	-1.24	0.0	5.00e-04	1.92e-04
207	6	-0.13	-0.01	-0.92	0.0	3.66e-04	1.40e-04
207	8	-0.12	-0.01	-0.88	0.0	3.38e-04	1.30e-04
207	10	-0.12	-0.01	-0.87	0.0	3.28e-04	1.26e-04
208	2	-0.19	-0.02	-1.24	0.0	5.00e-04	1.93e-04
208	6	-0.14	-0.01	-0.92	0.0	3.65e-04	1.41e-04

PROJETTO engineering s.r.l.

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Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
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 SR EN ISO/IEC 27001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

208	8	-0.13	-0.01	-0.88	0.0	3.37e-04	1.30e-04
208	10	-0.13	-0.01	-0.87	0.0	3.28e-04	1.27e-04
209	2	-0.16	-0.02	-1.24	0.0	5.03e-04	1.90e-04
209	6	-0.12	-0.01	-0.92	0.0	3.68e-04	1.39e-04
209	8	-0.11	-0.01	-0.88	0.0	3.40e-04	1.29e-04
209	10	-0.11	-0.01	-0.87	0.0	3.31e-04	1.25e-04
210	2	-0.15	-0.02	-1.24	0.0	5.11e-04	1.87e-04
210	6	-0.11	-0.01	-0.92	0.0	3.74e-04	1.36e-04
210	8	-0.10	-0.01	-0.88	0.0	3.45e-04	1.26e-04
210	10	-0.10	-0.01	-0.87	0.0	3.36e-04	1.23e-04
211	2	-0.13	-0.02	-1.24	0.0	5.27e-04	1.80e-04
211	6	-0.10	-0.01	-0.92	0.0	3.86e-04	1.32e-04
211	8	-0.09	-0.01	-0.88	0.0	3.56e-04	1.22e-04
211	10	-0.09	-0.01	-0.87	0.0	3.46e-04	1.18e-04
212	2	-0.11	-0.02	-1.24	0.0	5.74e-04	1.58e-04
212	6	-0.08	-0.01	-0.92	0.0	4.20e-04	1.16e-04
212	8	-0.08	-0.01	-0.88	0.0	3.88e-04	1.07e-04
212	10	-0.08	-0.01	-0.87	0.0	3.77e-04	1.04e-04
213	2	-0.10	-0.02	-1.24	0.0	6.08e-04	1.28e-04
213	6	-0.07	-0.01	-0.92	0.0	4.45e-04	9.35e-05
213	8	-0.07	-0.01	-0.88	0.0	4.11e-04	8.64e-05
213	10	-0.06	-0.01	-0.87	0.0	4.00e-04	8.40e-05
214	2	-0.08	-0.02	-1.24	0.0	6.20e-04	8.46e-05
214	6	-0.06	-0.02	-0.92	0.0	4.54e-04	6.18e-05
214	8	-0.05	-0.01	-0.88	0.0	4.19e-04	5.70e-05
214	10	-0.05	-0.01	-0.87	0.0	4.08e-04	5.54e-05
215	2	-0.06	-0.02	-1.24	0.0	6.26e-04	4.30e-05
215	6	-0.04	-0.02	-0.92	0.0	4.58e-04	3.13e-05
215	8	-0.04	-0.02	-0.88	0.0	4.23e-04	2.87e-05
215	10	-0.04	-0.02	-0.87	0.0	4.12e-04	2.78e-05
216	2	-0.04	-0.02	-1.24	0.0	6.28e-04	1.66e-06
216	6	-0.03	-0.02	-0.92	0.0	4.59e-04	1.04e-06
216	8	-0.03	-0.02	-0.88	0.0	4.24e-04	0.0
216	10	-0.03	-0.02	-0.87	0.0	4.13e-04	0.0
217	2	-0.02	-0.02	-1.24	4.19e-05	6.26e-04	-3.87e-05
217	6	-0.02	-0.02	-0.92	3.29e-05	4.57e-04	-2.85e-05
217	8	-0.02	-0.02	-0.88	3.40e-05	4.23e-04	-2.67e-05
217	10	-0.02	-0.02	-0.87	3.44e-05	4.11e-04	-2.61e-05
218	2	-0.20	-5.55e-03	-1.24	0.0	5.56e-04	5.36e-05
218	6	-0.15	-4.07e-03	-0.92	0.0	4.07e-04	3.93e-05
218	8	-0.14	-3.79e-03	-0.88	0.0	3.78e-04	3.64e-05
218	10	-0.13	-3.69e-03	-0.86	0.0	3.68e-04	3.54e-05
219	2	-0.22	-2.19e-03	-1.24	0.0	5.45e-04	4.90e-05
219	6	-0.16	-1.51e-03	-0.92	0.0	3.99e-04	3.59e-05
219	8	-0.15	-1.26e-03	-0.88	0.0	3.70e-04	3.33e-05
219	10	-0.14	-1.18e-03	-0.86	0.0	3.60e-04	3.24e-05
220	2	-0.18	-8.75e-03	-1.24	0.0	5.98e-04	6.60e-05
220	6	-0.14	-6.51e-03	-0.92	0.0	4.38e-04	4.83e-05
220	8	-0.13	-6.20e-03	-0.88	0.0	4.06e-04	4.47e-05
220	10	-0.12	-6.09e-03	-0.86	0.0	3.95e-04	4.36e-05
221	2	-0.17	-0.01	-1.24	0.0	6.49e-04	7.74e-05
221	6	-0.12	-8.69e-03	-0.92	0.0	4.76e-04	5.67e-05
221	8	-0.11	-8.36e-03	-0.88	0.0	4.40e-04	5.25e-05
221	10	-0.11	-8.25e-03	-0.86	0.0	4.29e-04	5.11e-05
222	2	-0.14	-0.01	-1.24	0.0	6.89e-04	9.16e-05
222	6	-0.11	-0.01	-0.92	0.0	5.05e-04	6.71e-05
222	8	-0.10	-0.01	-0.88	0.0	4.67e-04	6.21e-05
222	10	-0.10	-0.01	-0.86	0.0	4.55e-04	6.04e-05
223	2	-0.12	-0.02	-1.24	0.0	6.95e-04	1.21e-04
223	6	-0.09	-0.01	-0.92	0.0	5.09e-04	8.84e-05
223	8	-0.08	-0.01	-0.88	0.0	4.71e-04	8.18e-05
223	10	-0.08	-0.01	-0.86	0.0	4.58e-04	7.96e-05
224	2	-0.10	-0.02	-1.24	0.0	6.80e-04	1.08e-04
224	6	-0.08	-0.01	-0.92	0.0	4.98e-04	7.92e-05
224	8	-0.07	-0.01	-0.88	0.0	4.60e-04	7.32e-05
224	10	-0.07	-0.01	-0.86	0.0	4.48e-04	7.12e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 27001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

225	2	-0.08	-0.02	-1.24	0.0	6.82e-04	7.38e-05
225	6	-0.06	-0.01	-0.92	0.0	4.99e-04	5.38e-05
225	8	-0.06	-0.01	-0.88	0.0	4.61e-04	4.96e-05
225	10	-0.05	-0.01	-0.86	0.0	4.48e-04	4.82e-05
226	2	-0.06	-0.02	-1.24	0.0	6.86e-04	3.81e-05
226	6	-0.05	-0.02	-0.92	0.0	5.02e-04	2.77e-05
226	8	-0.04	-0.02	-0.88	0.0	4.64e-04	2.54e-05
226	10	-0.04	-0.02	-0.86	0.0	4.51e-04	2.46e-05
227	2	-0.04	-0.02	-1.24	0.0	6.89e-04	1.04e-06
227	6	-0.03	-0.02	-0.92	0.0	5.04e-04	0.0
227	8	-0.03	-0.02	-0.88	0.0	4.66e-04	0.0
227	10	-0.03	-0.02	-0.86	0.0	4.53e-04	0.0
228	2	-0.02	-0.02	-1.24	4.98e-05	6.87e-04	-3.65e-05
228	6	-0.01	-0.02	-0.92	3.91e-05	5.02e-04	-2.69e-05
228	8	-0.01	-0.02	-0.88	4.02e-05	4.64e-04	-2.52e-05
228	10	-0.01	-0.02	-0.86	4.06e-05	4.51e-04	-2.46e-05
229	2	-0.20	-5.60e-03	-1.23	0.0	5.25e-04	6.04e-05
229	6	-0.15	-4.11e-03	-0.92	0.0	3.85e-04	4.42e-05
229	8	-0.14	-3.83e-03	-0.87	0.0	3.56e-04	4.09e-05
229	10	-0.14	-3.73e-03	-0.86	0.0	3.47e-04	3.98e-05
230	2	-0.22	-2.03e-03	-1.23	0.0	5.07e-04	4.78e-05
230	6	-0.16	-1.39e-03	-0.92	0.0	3.72e-04	3.50e-05
230	8	-0.15	-1.15e-03	-0.87	0.0	3.45e-04	3.24e-05
230	10	-0.15	-1.07e-03	-0.86	0.0	3.36e-04	3.15e-05
231	2	-0.19	-8.79e-03	-1.23	0.0	5.84e-04	8.31e-05
231	6	-0.14	-6.54e-03	-0.92	0.0	4.28e-04	6.08e-05
231	8	-0.13	-6.22e-03	-0.88	0.0	3.96e-04	5.63e-05
231	10	-0.12	-6.12e-03	-0.86	0.0	3.86e-04	5.48e-05
232	2	-0.17	-0.01	-1.23	0.0	6.43e-04	8.91e-05
232	6	-0.12	-8.69e-03	-0.92	0.0	4.71e-04	6.52e-05
232	8	-0.12	-8.36e-03	-0.88	0.0	4.37e-04	6.03e-05
232	10	-0.11	-8.25e-03	-0.86	0.0	4.25e-04	5.87e-05
233	2	-0.15	-0.01	-1.23	0.0	6.85e-04	9.08e-05
233	6	-0.11	-0.01	-0.92	0.0	5.01e-04	6.64e-05
233	8	-0.10	-0.01	-0.88	0.0	4.64e-04	6.14e-05
233	10	-0.10	-0.01	-0.86	0.0	4.52e-04	5.98e-05
234	2	-0.13	-0.02	-1.23	0.0	7.06e-04	8.91e-05
234	6	-0.09	-0.01	-0.92	0.0	5.17e-04	6.51e-05
234	8	-0.09	-0.01	-0.88	0.0	4.78e-04	6.02e-05
234	10	-0.08	-0.01	-0.86	0.0	4.65e-04	5.85e-05
235	2	-0.11	-0.02	-1.23	0.0	7.18e-04	7.85e-05
235	6	-0.08	-0.01	-0.92	0.0	5.25e-04	5.73e-05
235	8	-0.07	-0.01	-0.88	0.0	4.86e-04	5.29e-05
235	10	-0.07	-0.01	-0.86	0.0	4.73e-04	5.14e-05
236	2	-0.09	-0.02	-1.24	0.0	7.27e-04	5.82e-05
236	6	-0.06	-0.01	-0.92	0.0	5.32e-04	4.25e-05
236	8	-0.06	-0.01	-0.88	0.0	4.92e-04	3.91e-05
236	10	-0.06	-0.01	-0.86	0.0	4.78e-04	3.80e-05
237	2	-0.06	-0.02	-1.24	0.0	7.36e-04	3.27e-05
237	6	-0.05	-0.02	-0.92	0.0	5.38e-04	2.38e-05
237	8	-0.04	-0.02	-0.88	0.0	4.97e-04	2.18e-05
237	10	-0.04	-0.02	-0.86	0.0	4.84e-04	2.11e-05
238	2	-0.04	-0.02	-1.24	0.0	7.43e-04	3.65e-06
238	6	-0.03	-0.02	-0.92	0.0	5.43e-04	2.52e-06
238	8	-0.03	-0.02	-0.88	0.0	5.02e-04	2.11e-06
238	10	-0.03	-0.02	-0.86	0.0	4.88e-04	1.97e-06
239	2	-0.02	-0.02	-1.24	5.17e-05	7.46e-04	-2.76e-05
239	6	-0.01	-0.02	-0.92	4.06e-05	5.46e-04	-2.04e-05
239	8	-0.01	-0.02	-0.88	4.19e-05	5.04e-04	-1.91e-05
239	10	-0.01	-0.02	-0.86	4.23e-05	4.90e-04	-1.86e-05
240	2	-0.21	-5.44e-03	-1.23	1.04e-04	4.19e-04	7.34e-05
240	6	-0.15	-3.99e-03	-0.91	7.94e-05	3.07e-04	5.36e-05
240	8	-0.14	-3.71e-03	-0.87	7.80e-05	2.85e-04	4.95e-05
240	10	-0.14	-3.62e-03	-0.86	7.76e-05	2.77e-04	4.82e-05
241	2	-0.19	-8.56e-03	-1.23	9.85e-05	5.63e-04	7.68e-05
241	6	-0.14	-6.37e-03	-0.92	7.53e-05	4.13e-04	5.62e-05

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241	8	-0.13	-6.06e-03	-0.87	7.44e-05	3.82e-04	5.19e-05
241	10	-0.13	-5.95e-03	-0.86	7.42e-05	3.72e-04	5.05e-05
242	2	-0.17	-0.01	-1.23	8.83e-05	6.43e-04	7.51e-05
242	6	-0.13	-8.53e-03	-0.92	6.77e-05	4.71e-04	5.49e-05
242	8	-0.12	-8.20e-03	-0.87	6.74e-05	4.36e-04	5.08e-05
242	10	-0.11	-8.09e-03	-0.86	6.72e-05	4.24e-04	4.94e-05
243	2	-0.15	-0.01	-1.23	7.67e-05	6.87e-04	7.02e-05
243	6	-0.11	-0.01	-0.92	5.90e-05	5.03e-04	5.14e-05
243	8	-0.10	-0.01	-0.87	5.91e-05	4.66e-04	4.75e-05
243	10	-0.10	-9.99e-03	-0.86	5.92e-05	4.54e-04	4.62e-05
244	2	-0.13	-0.02	-1.23	6.48e-05	7.16e-04	6.29e-05
244	6	-0.10	-0.01	-0.92	5.02e-05	5.24e-04	4.60e-05
244	8	-0.09	-0.01	-0.87	5.06e-05	4.85e-04	4.25e-05
244	10	-0.09	-0.01	-0.86	5.08e-05	4.72e-04	4.14e-05
245	2	-0.11	-0.02	-1.23	5.35e-05	7.38e-04	5.30e-05
245	6	-0.08	-0.01	-0.92	4.16e-05	5.40e-04	3.87e-05
245	8	-0.07	-0.01	-0.87	4.24e-05	4.99e-04	3.58e-05
245	10	-0.07	-0.01	-0.86	4.26e-05	4.86e-04	3.48e-05
246	2	-0.09	-0.02	-1.23	4.39e-05	7.56e-04	4.04e-05
246	6	-0.06	-0.01	-0.92	3.44e-05	5.53e-04	2.95e-05
246	8	-0.06	-0.01	-0.87	3.53e-05	5.12e-04	2.73e-05
246	10	-0.06	-0.01	-0.86	3.56e-05	4.98e-04	2.65e-05
247	2	-0.06	-0.02	-1.23	3.73e-05	7.71e-04	2.58e-05
247	6	-0.05	-0.02	-0.92	2.94e-05	5.64e-04	1.88e-05
247	8	-0.04	-0.02	-0.87	3.05e-05	5.21e-04	1.73e-05
247	10	-0.04	-0.02	-0.86	3.08e-05	5.07e-04	1.68e-05
248	2	-0.04	-0.02	-1.23	3.60e-05	7.85e-04	1.01e-05
248	6	-0.03	-0.02	-0.92	2.85e-05	5.74e-04	7.29e-06
248	8	-0.03	-0.02	-0.87	2.96e-05	5.31e-04	6.58e-06
248	10	-0.03	-0.02	-0.86	3.00e-05	5.16e-04	6.34e-06
249	2	-0.21	-3.82e-03	-1.23	1.03e-04	3.13e-04	6.98e-05
249	6	-0.16	-2.76e-03	-0.91	7.85e-05	2.29e-04	5.10e-05
249	8	-0.15	-2.51e-03	-0.87	7.69e-05	2.13e-04	4.71e-05
249	10	-0.14	-2.42e-03	-0.86	7.64e-05	2.07e-04	4.58e-05
250	2	-0.22	3.32e-03	-1.32	1.03e-04	0.0	5.32e-05
250	6	-0.16	2.45e-03	-0.98	7.83e-05	0.0	3.88e-05
250	8	-0.15	2.29e-03	-0.93	7.70e-05	0.0	3.57e-05
250	10	-0.15	2.24e-03	-0.92	7.66e-05	0.0	3.47e-05
251	2	-0.23	4.87e-03	-1.32	1.01e-04	0.0	5.44e-05
251	6	-0.17	3.63e-03	-0.98	7.69e-05	0.0	3.97e-05
251	8	-0.16	3.46e-03	-0.93	7.57e-05	0.0	3.67e-05
251	10	-0.15	3.40e-03	-0.91	7.52e-05	0.0	3.56e-05
252	2	-0.21	1.75e-03	-1.32	1.03e-04	0.0	5.31e-05
252	6	-0.15	1.25e-03	-0.98	7.87e-05	0.0	3.88e-05
252	8	-0.14	1.12e-03	-0.93	7.74e-05	0.0	3.57e-05
252	10	-0.14	1.07e-03	-0.92	7.70e-05	0.0	3.47e-05
253	2	-0.20	-7.03e-03	-1.23	1.02e-04	5.01e-04	7.58e-05
253	6	-0.15	-5.20e-03	-0.91	7.80e-05	3.67e-04	5.55e-05
253	8	-0.14	-4.90e-03	-0.87	7.69e-05	3.41e-04	5.12e-05
253	10	-0.13	-4.80e-03	-0.86	7.66e-05	3.32e-04	4.98e-05
254	1	-0.15	-4.05e-04	-1.07	9.72e-05	0.0	3.73e-05
254	2	-0.20	1.77e-04	-1.32	1.03e-04	0.0	5.25e-05
254	5	-0.11	-3.32e-04	-0.82	7.45e-05	0.0	2.82e-05
254	6	-0.15	5.64e-05	-0.98	7.86e-05	0.0	3.83e-05
254	7	-0.11	-3.32e-04	-0.82	7.45e-05	0.0	2.82e-05
254	8	-0.14	-6.00e-05	-0.93	7.74e-05	0.0	3.53e-05
254	9	-0.11	-3.32e-04	-0.82	7.45e-05	0.0	2.82e-05
254	10	-0.13	-9.89e-05	-0.92	7.70e-05	0.0	3.42e-05
255	1	-0.14	-1.87e-03	-1.07	9.67e-05	0.0	3.64e-05
255	2	-0.19	-1.39e-03	-1.32	1.03e-04	0.0	5.12e-05
255	5	-0.11	-1.46e-03	-0.82	7.42e-05	0.0	2.75e-05
255	6	-0.14	-1.13e-03	-0.98	7.82e-05	0.0	3.74e-05
255	7	-0.11	-1.46e-03	-0.82	7.42e-05	0.0	2.75e-05
255	8	-0.13	-1.23e-03	-0.93	7.70e-05	0.0	3.44e-05
255	9	-0.11	-1.46e-03	-0.82	7.42e-05	0.0	2.75e-05
255	10	-0.13	-1.26e-03	-0.92	7.66e-05	0.0	3.34e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

256	2	-0.18	-0.01	-1.23	9.37e-05	6.09e-04	7.65e-05
256	6	-0.13	-7.48e-03	-0.92	7.17e-05	4.46e-04	5.59e-05
256	8	-0.12	-7.16e-03	-0.87	7.11e-05	4.13e-04	5.17e-05
256	10	-0.12	-7.05e-03	-0.86	7.09e-05	4.02e-04	5.03e-05
257	1	-0.13	-3.33e-03	-1.07	9.58e-05	0.0	3.51e-05
257	2	-0.18	-2.94e-03	-1.32	1.02e-04	0.0	4.94e-05
257	5	-0.10	-2.58e-03	-0.82	7.35e-05	0.0	2.65e-05
257	6	-0.13	-2.32e-03	-0.98	7.76e-05	0.0	3.61e-05
257	7	-0.10	-2.58e-03	-0.82	7.35e-05	0.0	2.65e-05
257	8	-0.12	-2.39e-03	-0.93	7.63e-05	0.0	3.32e-05
257	9	-0.10	-2.58e-03	-0.82	7.35e-05	0.0	2.65e-05
257	10	-0.12	-2.42e-03	-0.92	7.59e-05	0.0	3.23e-05
258	1	-0.13	-4.78e-03	-1.07	9.46e-05	0.0	3.36e-05
258	2	-0.17	-4.48e-03	-1.32	1.01e-04	0.0	4.73e-05
258	5	-0.09	-3.68e-03	-0.82	7.26e-05	0.0	2.54e-05
258	6	-0.13	-3.49e-03	-0.98	7.66e-05	0.0	3.45e-05
258	7	-0.09	-3.68e-03	-0.82	7.26e-05	0.0	2.54e-05
258	8	-0.12	-3.55e-03	-0.93	7.54e-05	0.0	3.18e-05
258	9	-0.09	-3.68e-03	-0.82	7.26e-05	0.0	2.54e-05
258	10	-0.11	-3.57e-03	-0.92	7.50e-05	0.0	3.08e-05
259	2	-0.16	-0.01	-1.23	8.25e-05	6.68e-04	7.30e-05
259	6	-0.12	-9.52e-03	-0.92	6.34e-05	4.89e-04	5.34e-05
259	8	-0.11	-9.18e-03	-0.87	6.33e-05	4.53e-04	4.93e-05
259	10	-0.11	-9.07e-03	-0.86	6.33e-05	4.41e-04	4.80e-05
260	1	-0.12	-6.21e-03	-1.08	9.31e-05	0.0	3.18e-05
260	2	-0.16	-6.01e-03	-1.32	9.92e-05	0.0	4.47e-05
260	5	-0.09	-4.78e-03	-0.82	7.14e-05	0.0	2.40e-05
260	6	-0.12	-4.65e-03	-0.98	7.55e-05	0.0	3.26e-05
260	7	-0.09	-4.78e-03	-0.82	7.14e-05	0.0	2.40e-05
260	8	-0.11	-4.69e-03	-0.93	7.43e-05	0.0	3.00e-05
260	9	-0.09	-4.78e-03	-0.82	7.14e-05	0.0	2.40e-05
260	10	-0.11	-4.70e-03	-0.92	7.39e-05	0.0	2.92e-05
261	1	-0.11	-7.61e-03	-1.08	9.13e-05	0.0	2.96e-05
261	2	-0.15	-7.52e-03	-1.32	9.74e-05	0.0	4.17e-05
261	5	-0.08	-5.86e-03	-0.82	7.00e-05	0.0	2.24e-05
261	6	-0.11	-5.80e-03	-0.98	7.41e-05	0.0	3.04e-05
261	7	-0.08	-5.86e-03	-0.82	7.00e-05	0.0	2.24e-05
261	8	-0.10	-5.81e-03	-0.93	7.29e-05	0.0	2.80e-05
261	9	-0.08	-5.86e-03	-0.82	7.00e-05	0.0	2.24e-05
261	10	-0.10	-5.82e-03	-0.92	7.25e-05	0.0	2.72e-05
262	2	-0.14	-0.01	-1.23	7.07e-05	7.03e-04	6.69e-05
262	6	-0.10	-0.01	-0.92	5.46e-05	5.15e-04	4.89e-05
262	8	-0.10	-0.01	-0.87	5.49e-05	4.77e-04	4.52e-05
262	10	-0.09	-0.01	-0.86	5.50e-05	4.64e-04	4.40e-05
263	2	-0.14	-9.00e-03	-1.32	9.52e-05	0.0	3.81e-05
263	6	-0.10	-6.92e-03	-0.98	7.24e-05	0.0	2.78e-05
263	8	-0.10	-6.92e-03	-0.94	7.12e-05	0.0	2.56e-05
263	10	-0.09	-6.92e-03	-0.92	7.08e-05	0.0	2.49e-05
264	2	-0.13	-0.01	-1.33	9.25e-05	0.0	3.39e-05
264	6	-0.10	-8.03e-03	-0.99	7.03e-05	0.0	2.48e-05
264	8	-0.09	-8.00e-03	-0.94	6.91e-05	0.0	2.28e-05
264	10	-0.09	-8.00e-03	-0.92	6.87e-05	0.0	2.21e-05
265	2	-0.12	-0.02	-1.23	5.91e-05	7.27e-04	5.83e-05
265	6	-0.09	-0.01	-0.92	4.58e-05	5.32e-04	4.26e-05
265	8	-0.08	-0.01	-0.87	4.64e-05	4.93e-04	3.94e-05
265	10	-0.08	-0.01	-0.86	4.66e-05	4.79e-04	3.83e-05
266	2	-0.12	-0.01	-1.33	8.91e-05	0.0	2.90e-05
266	6	-0.09	-9.10e-03	-0.99	6.77e-05	0.0	2.11e-05
266	8	-0.08	-9.06e-03	-0.94	6.66e-05	0.0	1.94e-05
266	10	-0.08	-9.05e-03	-0.92	6.62e-05	0.0	1.89e-05
267	2	-0.11	-0.01	-1.33	8.45e-05	0.0	2.16e-05
267	6	-0.08	-0.01	-0.99	6.43e-05	0.0	1.58e-05
267	8	-0.07	-0.01	-0.94	6.32e-05	0.0	1.45e-05
267	10	-0.07	-0.01	-0.92	6.28e-05	0.0	1.41e-05
268	2	-0.10	-0.02	-1.23	4.84e-05	7.48e-04	4.70e-05
268	6	-0.07	-0.01	-0.92	3.78e-05	5.47e-04	3.44e-05

PROJETTO engineering s.r.l.

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Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

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Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

268	8	-0.07	-0.01	-0.87	3.86e-05	5.06e-04	3.17e-05
268	10	-0.07	-0.01	-0.86	3.89e-05	4.92e-04	3.09e-05
269	2	-0.10	-0.01	-1.33	8.09e-05	0.0	1.82e-05
269	6	-0.07	-0.01	-0.99	6.16e-05	0.0	1.33e-05
269	8	-0.07	-0.01	-0.94	6.06e-05	0.0	1.22e-05
269	10	-0.07	-0.01	-0.92	6.03e-05	0.0	1.18e-05
270	2	-0.09	-0.02	-1.33	7.76e-05	0.0	1.65e-05
270	6	-0.06	-0.01	-0.99	5.91e-05	0.0	1.20e-05
270	8	-0.06	-0.01	-0.94	5.83e-05	0.0	1.11e-05
270	10	-0.06	-0.01	-0.93	5.80e-05	0.0	1.08e-05
271	2	-0.08	-0.02	-1.23	4.01e-05	7.64e-04	3.33e-05
271	6	-0.06	-0.02	-0.92	3.15e-05	5.59e-04	2.43e-05
271	8	-0.05	-0.01	-0.87	3.25e-05	5.17e-04	2.24e-05
271	10	-0.05	-0.01	-0.86	3.29e-05	5.03e-04	2.18e-05
272	2	-0.07	-0.02	-1.33	7.48e-05	0.0	1.48e-05
272	6	-0.05	-0.01	-0.99	5.70e-05	0.0	1.08e-05
272	8	-0.05	-0.01	-0.94	5.63e-05	0.0	1.00e-05
272	10	-0.05	-0.01	-0.93	5.60e-05	0.0	9.72e-06
273	2	-0.06	-0.02	-1.34	7.24e-05	0.0	1.31e-05
273	6	-0.05	-0.01	-0.99	5.53e-05	0.0	9.59e-06
273	8	-0.04	-0.01	-0.94	5.46e-05	0.0	8.85e-06
273	10	-0.04	-0.01	-0.93	5.44e-05	0.0	8.60e-06
274	2	-0.05	-0.02	-1.23	3.58e-05	7.78e-04	1.80e-05
274	6	-0.04	-0.02	-0.92	2.83e-05	5.69e-04	1.31e-05
274	8	-0.04	-0.02	-0.87	2.94e-05	5.26e-04	1.20e-05
274	10	-0.04	-0.02	-0.86	2.97e-05	5.11e-04	1.16e-05
275	2	-0.05	-0.02	-1.34	7.02e-05	0.0	1.13e-05
275	6	-0.04	-0.01	-0.99	5.36e-05	0.0	8.28e-06
275	8	-0.03	-0.01	-0.94	5.31e-05	0.0	7.63e-06
275	10	-0.03	-0.01	-0.93	5.29e-05	0.0	7.42e-06
276	2	-0.04	-0.02	-1.34	6.81e-05	0.0	9.50e-06
276	6	-0.03	-0.02	-0.99	5.21e-05	0.0	6.93e-06
276	8	-0.03	-0.02	-0.94	5.17e-05	0.0	6.39e-06
276	10	-0.03	-0.02	-0.93	5.15e-05	0.0	6.20e-06
277	2	-0.03	-0.02	-1.23	3.87e-05	7.93e-04	2.28e-06
277	6	-0.02	-0.02	-0.92	3.06e-05	5.80e-04	1.55e-06
277	8	-0.02	-0.02	-0.87	3.18e-05	5.36e-04	1.25e-06
277	10	-0.02	-0.02	-0.86	3.22e-05	5.22e-04	1.15e-06
278	2	-0.03	-0.02	-1.34	6.59e-05	0.0	7.63e-06
278	6	-0.02	-0.02	-1.00	5.05e-05	0.0	5.57e-06
278	8	-0.02	-0.02	-0.95	5.02e-05	0.0	5.13e-06
278	10	-0.02	-0.02	-0.93	5.01e-05	0.0	4.98e-06
279	2	-0.02	-0.02	-1.34	6.37e-05	8.88e-04	6.00e-06
279	6	-0.01	-0.02	-1.00	4.89e-05	6.50e-04	4.38e-06
279	8	-0.01	-0.02	-0.95	4.87e-05	6.01e-04	4.04e-06
279	10	-0.01	-0.02	-0.93	4.87e-05	5.85e-04	3.92e-06
280	1	-0.14	-4.55e-04	-1.16	7.26e-05	0.0	0.0
280	2	-0.19	4.08e-04	-1.44	7.82e-05	0.0	0.0
280	5	-0.11	-3.79e-04	-0.89	5.56e-05	0.0	0.0
280	6	-0.14	1.96e-04	-1.07	5.94e-05	0.0	0.0
280	7	-0.11	-3.79e-04	-0.89	5.56e-05	0.0	0.0
280	8	-0.13	2.32e-05	-1.02	5.82e-05	0.0	0.0
280	9	-0.11	-3.79e-04	-0.89	5.56e-05	0.0	0.0
280	10	-0.13	-3.43e-05	-1.00	5.79e-05	0.0	0.0
281	2	-0.20	1.58e-03	-1.44	7.82e-05	0.0	0.0
281	6	-0.15	1.09e-03	-1.07	5.94e-05	0.0	0.0
281	8	-0.14	8.97e-04	-1.02	5.82e-05	0.0	0.0
281	10	-0.13	8.34e-04	-1.00	5.79e-05	0.0	0.0
282	1	-0.13	-1.54e-03	-1.16	7.26e-05	0.0	0.0
282	2	-0.18	-7.65e-04	-1.44	7.82e-05	0.0	0.0
282	5	-0.10	-1.21e-03	-0.89	5.56e-05	0.0	0.0
282	6	-0.13	-6.95e-04	-1.07	5.94e-05	0.0	0.0
282	7	-0.10	-1.21e-03	-0.89	5.56e-05	0.0	0.0
282	8	-0.12	-8.51e-04	-1.02	5.82e-05	0.0	0.0
282	9	-0.10	-1.21e-03	-0.89	5.56e-05	0.0	0.0
282	10	-0.12	-9.02e-04	-1.00	5.79e-05	0.0	0.0

PROJETTO engineering s.r.l.

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Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
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Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

283	1	-0.13	-2.63e-03	-1.16	7.26e-05	0.0	0.0
283	2	-0.18	-1.94e-03	-1.44	7.82e-05	0.0	0.0
283	5	-0.10	-2.05e-03	-0.89	5.56e-05	0.0	0.0
283	6	-0.13	-1.59e-03	-1.07	5.94e-05	0.0	0.0
283	7	-0.10	-2.05e-03	-0.89	5.56e-05	0.0	0.0
283	8	-0.12	-1.72e-03	-1.02	5.82e-05	0.0	0.0
283	9	-0.10	-2.05e-03	-0.89	5.56e-05	0.0	0.0
283	10	-0.11	-1.77e-03	-1.00	5.79e-05	0.0	0.0
284	1	-0.12	-3.72e-03	-1.16	7.26e-05	0.0	0.0
284	2	-0.17	-3.11e-03	-1.44	7.82e-05	0.0	0.0
284	5	-0.09	-2.88e-03	-0.89	5.56e-05	0.0	0.0
284	6	-0.12	-2.48e-03	-1.07	5.94e-05	0.0	0.0
284	7	-0.09	-2.88e-03	-0.89	5.56e-05	0.0	0.0
284	8	-0.11	-2.60e-03	-1.02	5.82e-05	0.0	0.0
284	9	-0.09	-2.88e-03	-0.89	5.56e-05	0.0	0.0
284	10	-0.11	-2.64e-03	-1.00	5.79e-05	0.0	0.0
285	1	-0.11	-4.81e-03	-1.16	7.26e-05	0.0	0.0
285	2	-0.16	-4.28e-03	-1.44	7.82e-05	0.0	0.0
285	5	-0.08	-3.72e-03	-0.89	5.56e-05	0.0	0.0
285	6	-0.11	-3.37e-03	-1.07	5.94e-05	0.0	0.0
285	7	-0.08	-3.72e-03	-0.89	5.56e-05	0.0	0.0
285	8	-0.11	-3.47e-03	-1.02	5.83e-05	0.0	0.0
285	9	-0.08	-3.72e-03	-0.89	5.56e-05	0.0	0.0
285	10	-0.10	-3.51e-03	-1.00	5.79e-05	0.0	0.0
286	1	-0.11	-5.90e-03	-1.16	7.26e-05	0.0	0.0
286	2	-0.15	-5.46e-03	-1.44	7.82e-05	0.0	0.0
286	5	-0.08	-4.55e-03	-0.89	5.56e-05	0.0	0.0
286	6	-0.11	-4.26e-03	-1.07	5.94e-05	0.0	0.0
286	7	-0.08	-4.55e-03	-0.89	5.56e-05	0.0	0.0
286	8	-0.10	-4.35e-03	-1.02	5.83e-05	0.0	0.0
286	9	-0.08	-4.55e-03	-0.89	5.56e-05	0.0	0.0
286	10	-0.10	-4.38e-03	-1.00	5.79e-05	0.0	0.0
287	1	-0.10	-6.99e-03	-1.16	7.26e-05	0.0	0.0
287	2	-0.14	-6.63e-03	-1.44	7.82e-05	0.0	0.0
287	5	-0.07	-5.39e-03	-0.89	5.56e-05	0.0	0.0
287	6	-0.10	-5.15e-03	-1.07	5.94e-05	0.0	0.0
287	7	-0.07	-5.39e-03	-0.89	5.56e-05	0.0	0.0
287	8	-0.09	-5.22e-03	-1.02	5.83e-05	0.0	0.0
287	9	-0.07	-5.39e-03	-0.89	5.56e-05	0.0	0.0
287	10	-0.09	-5.24e-03	-1.00	5.79e-05	0.0	0.0
288	1	-0.09	-8.08e-03	-1.16	7.26e-05	0.0	0.0
288	2	-0.13	-7.81e-03	-1.44	7.82e-05	0.0	0.0
288	5	-0.07	-6.22e-03	-0.89	5.56e-05	0.0	0.0
288	6	-0.09	-6.04e-03	-1.07	5.94e-05	0.0	0.0
288	7	-0.07	-6.22e-03	-0.89	5.56e-05	0.0	0.0
288	8	-0.09	-6.10e-03	-1.02	5.83e-05	0.0	0.0
288	9	-0.07	-6.22e-03	-0.89	5.56e-05	0.0	0.0
288	10	-0.08	-6.11e-03	-1.00	5.79e-05	0.0	0.0
289	1	-0.09	-9.17e-03	-1.16	7.26e-05	0.0	0.0
289	2	-0.12	-8.98e-03	-1.44	7.82e-05	0.0	0.0
289	5	-0.06	-7.06e-03	-0.89	5.57e-05	0.0	0.0
289	6	-0.09	-6.93e-03	-1.07	5.94e-05	0.0	0.0
289	7	-0.06	-7.06e-03	-0.89	5.57e-05	0.0	0.0
289	8	-0.08	-6.97e-03	-1.02	5.83e-05	0.0	0.0
289	9	-0.06	-7.06e-03	-0.89	5.57e-05	0.0	0.0
289	10	-0.08	-6.98e-03	-1.00	5.79e-05	0.0	0.0
290	1	-0.08	-0.01	-1.16	7.26e-05	0.0	0.0
290	2	-0.11	-0.01	-1.44	7.82e-05	0.0	0.0
290	5	-0.06	-7.89e-03	-0.89	5.57e-05	0.0	0.0
290	6	-0.08	-7.83e-03	-1.07	5.94e-05	0.0	0.0
290	7	-0.06	-7.89e-03	-0.89	5.57e-05	0.0	0.0
290	8	-0.07	-7.85e-03	-1.02	5.83e-05	0.0	0.0
290	9	-0.06	-7.89e-03	-0.89	5.57e-05	0.0	0.0
290	10	-0.07	-7.85e-03	-1.00	5.79e-05	0.0	0.0
291	1	-0.07	-0.01	-1.16	7.26e-05	0.0	0.0
291	2	-0.10	-0.01	-1.44	7.81e-05	0.0	0.0

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

291	5	-0.06	-8.73e-03	-0.89	5.57e-05	0.0	0.0
291	6	-0.08	-8.72e-03	-1.07	5.93e-05	0.0	0.0
291	7	-0.06	-8.73e-03	-0.89	5.57e-05	0.0	0.0
291	8	-0.07	-8.72e-03	-1.02	5.82e-05	0.0	0.0
291	9	-0.06	-8.73e-03	-0.89	5.57e-05	0.0	0.0
291	10	-0.07	-8.72e-03	-1.00	5.79e-05	0.0	0.0
292	2	-0.10	-0.01	-1.44	7.80e-05	0.0	1.97e-06
292	6	-0.07	-9.61e-03	-1.07	5.92e-05	0.0	1.46e-06
292	8	-0.06	-9.60e-03	-1.02	5.82e-05	0.0	1.39e-06
292	10	-0.06	-9.60e-03	-1.00	5.78e-05	0.0	1.37e-06
293	2	-0.09	-0.01	-1.44	7.75e-05	0.0	1.97e-06
293	6	-0.06	-0.01	-1.07	5.89e-05	0.0	1.47e-06
293	8	-0.06	-0.01	-1.02	5.79e-05	0.0	1.40e-06
293	10	-0.06	-0.01	-1.00	5.75e-05	0.0	1.38e-06
294	2	-0.08	-0.01	-1.44	7.70e-05	0.0	1.79e-06
294	6	-0.06	-0.01	-1.07	5.85e-05	0.0	1.34e-06
294	8	-0.05	-0.01	-1.02	5.75e-05	0.0	1.29e-06
294	10	-0.05	-0.01	-1.00	5.72e-05	0.0	1.28e-06
295	2	-0.07	-0.02	-1.44	7.65e-05	0.0	1.68e-06
295	6	-0.05	-0.01	-1.07	5.82e-05	0.0	1.27e-06
295	8	-0.05	-0.01	-1.02	5.72e-05	0.0	1.24e-06
295	10	-0.05	-0.01	-1.00	5.69e-05	0.0	1.23e-06
296	2	-0.06	-0.02	-1.44	7.59e-05	0.0	1.60e-06
296	6	-0.04	-0.01	-1.07	5.78e-05	0.0	1.22e-06
296	8	-0.04	-0.01	-1.02	5.68e-05	0.0	1.21e-06
296	10	-0.04	-0.01	-1.00	5.65e-05	0.0	1.21e-06
297	2	-0.05	-0.02	-1.44	7.52e-05	0.0	1.46e-06
297	6	-0.04	-0.01	-1.07	5.73e-05	0.0	1.13e-06
297	8	-0.03	-0.01	-1.02	5.64e-05	0.0	1.14e-06
297	10	-0.03	-0.01	-1.00	5.61e-05	0.0	1.14e-06
298	2	-0.04	-0.02	-1.44	7.45e-05	0.0	1.22e-06
298	6	-0.03	-0.01	-1.07	5.67e-05	0.0	0.0
298	8	-0.03	-0.01	-1.02	5.58e-05	0.0	0.0
298	10	-0.03	-0.01	-1.00	5.56e-05	0.0	1.01e-06
299	2	-0.03	-0.02	-1.44	7.36e-05	0.0	0.0
299	6	-0.02	-0.02	-1.07	5.61e-05	0.0	0.0
299	8	-0.02	-0.02	-1.02	5.53e-05	0.0	0.0
299	10	-0.02	-0.02	-1.00	5.50e-05	0.0	0.0
300	2	-0.02	-0.02	-1.44	7.27e-05	7.73e-04	0.0
300	6	-0.01	-0.02	-1.07	5.54e-05	5.65e-04	0.0
300	8	-0.01	-0.02	-1.02	5.46e-05	5.21e-04	0.0
300	10	-0.01	-0.02	-1.00	5.44e-05	5.06e-04	0.0
301	1	-0.14	-4.53e-04	-1.22	7.26e-05	0.0	0.0
301	2	-0.19	3.64e-04	-1.52	7.82e-05	0.0	0.0
301	5	-0.11	-3.77e-04	-0.93	5.56e-05	0.0	0.0
301	6	-0.14	1.68e-04	-1.13	5.94e-05	0.0	0.0
301	7	-0.11	-3.77e-04	-0.93	5.56e-05	0.0	0.0
301	8	-0.13	4.86e-06	-1.07	5.82e-05	0.0	0.0
301	9	-0.11	-3.77e-04	-0.93	5.56e-05	0.0	0.0
301	10	-0.13	-4.96e-05	-1.05	5.79e-05	0.0	0.0
302	2	-0.20	1.54e-03	-1.52	7.82e-05	0.0	0.0
302	6	-0.15	1.06e-03	-1.13	5.94e-05	0.0	0.0
302	8	-0.14	8.79e-04	-1.07	5.82e-05	0.0	0.0
302	10	-0.13	8.18e-04	-1.05	5.79e-05	0.0	0.0
303	1	-0.13	-1.54e-03	-1.22	7.26e-05	0.0	0.0
303	2	-0.18	-8.09e-04	-1.52	7.82e-05	0.0	0.0
303	5	-0.10	-1.21e-03	-0.93	5.56e-05	0.0	0.0
303	6	-0.14	-7.22e-04	-1.13	5.94e-05	0.0	0.0
303	7	-0.10	-1.21e-03	-0.93	5.56e-05	0.0	0.0
303	8	-0.12	-8.69e-04	-1.07	5.82e-05	0.0	0.0
303	9	-0.10	-1.21e-03	-0.93	5.56e-05	0.0	0.0
303	10	-0.12	-9.18e-04	-1.05	5.79e-05	0.0	0.0
304	1	-0.13	-2.63e-03	-1.22	7.26e-05	0.0	0.0
304	2	-0.18	-1.98e-03	-1.52	7.82e-05	0.0	0.0
304	5	-0.10	-2.05e-03	-0.93	5.56e-05	0.0	0.0
304	6	-0.13	-1.61e-03	-1.13	5.94e-05	0.0	0.0

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

304	7	-0.10	-2.05e-03	-0.93	5.56e-05	0.0	0.0
304	8	-0.12	-1.74e-03	-1.07	5.82e-05	0.0	0.0
304	9	-0.10	-2.05e-03	-0.93	5.56e-05	0.0	0.0
304	10	-0.11	-1.79e-03	-1.05	5.79e-05	0.0	0.0
305	1	-0.12	-3.72e-03	-1.22	7.26e-05	0.0	0.0
305	2	-0.17	-3.15e-03	-1.52	7.82e-05	0.0	0.0
305	5	-0.09	-2.88e-03	-0.93	5.56e-05	0.0	0.0
305	6	-0.12	-2.50e-03	-1.13	5.94e-05	0.0	0.0
305	7	-0.09	-2.88e-03	-0.93	5.56e-05	0.0	0.0
305	8	-0.11	-2.62e-03	-1.07	5.83e-05	0.0	0.0
305	9	-0.09	-2.88e-03	-0.93	5.56e-05	0.0	0.0
305	10	-0.11	-2.65e-03	-1.05	5.79e-05	0.0	0.0
306	1	-0.11	-4.81e-03	-1.22	7.26e-05	0.0	0.0
306	2	-0.16	-4.33e-03	-1.52	7.82e-05	0.0	0.0
306	5	-0.08	-3.71e-03	-0.93	5.56e-05	0.0	0.0
306	6	-0.11	-3.39e-03	-1.13	5.94e-05	0.0	0.0
306	7	-0.08	-3.71e-03	-0.93	5.56e-05	0.0	0.0
306	8	-0.11	-3.49e-03	-1.07	5.83e-05	0.0	0.0
306	9	-0.08	-3.71e-03	-0.93	5.56e-05	0.0	0.0
306	10	-0.10	-3.52e-03	-1.05	5.79e-05	0.0	0.0
307	1	-0.11	-5.90e-03	-1.22	7.26e-05	0.0	0.0
307	2	-0.15	-5.50e-03	-1.52	7.82e-05	0.0	0.0
307	5	-0.08	-4.55e-03	-0.93	5.56e-05	0.0	0.0
307	6	-0.11	-4.29e-03	-1.13	5.94e-05	0.0	0.0
307	7	-0.08	-4.55e-03	-0.93	5.56e-05	0.0	0.0
307	8	-0.10	-4.36e-03	-1.07	5.83e-05	0.0	0.0
307	9	-0.08	-4.55e-03	-0.93	5.56e-05	0.0	0.0
307	10	-0.10	-4.39e-03	-1.05	5.79e-05	0.0	0.0
308	1	-0.10	-6.99e-03	-1.22	7.26e-05	0.0	0.0
308	2	-0.14	-6.68e-03	-1.52	7.82e-05	0.0	0.0
308	5	-0.07	-5.38e-03	-0.93	5.56e-05	0.0	0.0
308	6	-0.10	-5.18e-03	-1.13	5.94e-05	0.0	0.0
308	7	-0.07	-5.38e-03	-0.93	5.56e-05	0.0	0.0
308	8	-0.09	-5.24e-03	-1.07	5.83e-05	0.0	0.0
308	9	-0.07	-5.38e-03	-0.93	5.56e-05	0.0	0.0
308	10	-0.09	-5.26e-03	-1.05	5.79e-05	0.0	0.0
309	1	-0.09	-8.08e-03	-1.22	7.26e-05	0.0	0.0
309	2	-0.13	-7.85e-03	-1.52	7.83e-05	0.0	0.0
309	5	-0.07	-6.22e-03	-0.93	5.56e-05	0.0	0.0
309	6	-0.09	-6.07e-03	-1.13	5.94e-05	0.0	0.0
309	7	-0.07	-6.22e-03	-0.93	5.56e-05	0.0	0.0
309	8	-0.09	-6.11e-03	-1.07	5.83e-05	0.0	0.0
309	9	-0.07	-6.22e-03	-0.93	5.56e-05	0.0	0.0
309	10	-0.08	-6.13e-03	-1.05	5.79e-05	0.0	0.0
310	1	-0.08	-9.17e-03	-1.22	7.26e-05	0.0	0.0
310	2	-0.12	-9.03e-03	-1.52	7.83e-05	0.0	0.0
310	5	-0.06	-7.06e-03	-0.93	5.57e-05	0.0	0.0
310	6	-0.09	-6.96e-03	-1.13	5.95e-05	0.0	0.0
310	7	-0.06	-7.06e-03	-0.93	5.57e-05	0.0	0.0
310	8	-0.08	-6.99e-03	-1.07	5.83e-05	0.0	0.0
310	9	-0.06	-7.06e-03	-0.93	5.57e-05	0.0	0.0
310	10	-0.08	-7.00e-03	-1.05	5.79e-05	0.0	0.0
311	1	-0.08	-0.01	-1.22	7.26e-05	0.0	0.0
311	2	-0.11	-0.01	-1.52	7.84e-05	0.0	-1.24e-06
311	5	-0.06	-7.89e-03	-0.93	5.57e-05	0.0	0.0
311	6	-0.08	-7.86e-03	-1.13	5.95e-05	0.0	0.0
311	7	-0.06	-7.89e-03	-0.93	5.57e-05	0.0	0.0
311	8	-0.07	-7.87e-03	-1.07	5.84e-05	0.0	0.0
311	9	-0.06	-7.89e-03	-0.93	5.57e-05	0.0	0.0
311	10	-0.07	-7.87e-03	-1.05	5.80e-05	0.0	0.0
312	2	-0.09	-0.01	-1.52	7.85e-05	0.0	-1.65e-06
312	6	-0.07	-8.75e-03	-1.13	5.96e-05	0.0	-1.16e-06
312	8	-0.06	-8.75e-03	-1.07	5.84e-05	0.0	0.0
312	10	-0.06	-8.74e-03	-1.05	5.80e-05	0.0	0.0
313	2	-0.08	-0.01	-1.52	7.86e-05	0.0	-2.36e-06
313	6	-0.06	-9.65e-03	-1.13	5.97e-05	0.0	-1.66e-06

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

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RELAZIONE DI CALCOLO



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Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

313	8	-0.05	-9.63e-03	-1.07	5.85e-05	0.0	-1.44e-06
313	10	-0.05	-9.62e-03	-1.05	5.81e-05	0.0	-1.37e-06
314	2	-0.07	-0.01	-1.52	7.86e-05	0.0	-2.82e-06
314	6	-0.05	-0.01	-1.13	5.96e-05	0.0	-1.99e-06
314	8	-0.05	-0.01	-1.07	5.84e-05	0.0	-1.73e-06
314	10	-0.05	-0.01	-1.05	5.80e-05	0.0	-1.64e-06
315	2	-0.06	-0.01	-1.52	7.84e-05	0.0	-3.24e-06
315	6	-0.05	-0.01	-1.13	5.95e-05	0.0	-2.29e-06
315	8	-0.04	-0.01	-1.07	5.83e-05	0.0	-1.99e-06
315	10	-0.04	-0.01	-1.05	5.79e-05	0.0	-1.89e-06
316	2	-0.06	-0.02	-1.52	7.83e-05	0.0	-3.64e-06
316	6	-0.04	-0.01	-1.13	5.94e-05	0.0	-2.57e-06
316	8	-0.04	-0.01	-1.07	5.82e-05	0.0	-2.23e-06
316	10	-0.04	-0.01	-1.05	5.78e-05	0.0	-2.12e-06
317	2	-0.05	-0.02	-1.52	7.80e-05	0.0	-4.03e-06
317	6	-0.04	-0.01	-1.13	5.92e-05	0.0	-2.84e-06
317	8	-0.03	-0.01	-1.07	5.81e-05	0.0	-2.47e-06
317	10	-0.03	-0.01	-1.05	5.77e-05	0.0	-2.34e-06
318	2	-0.04	-0.02	-1.52	7.78e-05	0.0	-4.43e-06
318	6	-0.03	-0.01	-1.13	5.90e-05	0.0	-3.13e-06
318	8	-0.03	-0.01	-1.07	5.79e-05	0.0	-2.71e-06
318	10	-0.03	-0.01	-1.05	5.75e-05	0.0	-2.58e-06
319	2	-0.04	-0.02	-1.52	7.75e-05	0.0	-4.85e-06
319	6	-0.03	-0.01	-1.13	5.88e-05	0.0	-3.42e-06
319	8	-0.02	-0.01	-1.07	5.77e-05	0.0	-2.97e-06
319	10	-0.02	-0.01	-1.05	5.73e-05	0.0	-2.82e-06
320	2	-0.03	-0.02	-1.52	7.72e-05	0.0	-5.29e-06
320	6	-0.02	-0.02	-1.13	5.86e-05	0.0	-3.73e-06
320	8	-0.02	-0.02	-1.07	5.75e-05	0.0	-3.24e-06
320	10	-0.02	-0.02	-1.05	5.71e-05	0.0	-3.08e-06
321	2	-0.02	-0.02	-1.52	7.69e-05	4.94e-04	-5.71e-06
321	6	-0.02	-0.02	-1.13	5.84e-05	3.59e-04	-4.03e-06
321	8	-0.02	-0.02	-1.07	5.73e-05	3.29e-04	-3.50e-06
321	10	-0.02	-0.02	-1.05	5.69e-05	3.19e-04	-3.32e-06
322	1	0.02	-6.93e-04	-1.25	7.32e-05	0.0	-8.31e-06
322	2	0.02	3.30e-04	-1.57	8.17e-05	0.0	-1.21e-05
322	5	0.01	-5.68e-04	-0.95	5.60e-05	0.0	-6.27e-06
322	6	0.01	1.14e-04	-1.16	6.17e-05	0.0	-8.79e-06
322	7	0.01	-5.68e-04	-0.95	5.60e-05	0.0	-6.27e-06
322	8	0.01	-9.04e-05	-1.10	6.00e-05	0.0	-8.03e-06
322	9	0.01	-5.68e-04	-0.95	5.60e-05	0.0	-6.27e-06
322	10	0.01	-1.59e-04	-1.08	5.94e-05	0.0	-7.78e-06
323	1	0.02	4.04e-04	-1.25	7.32e-05	0.0	-8.32e-06
323	2	0.02	1.56e-03	-1.57	8.17e-05	0.0	-1.21e-05
323	5	0.02	2.72e-04	-0.95	5.60e-05	0.0	-6.27e-06
323	6	0.02	1.04e-03	-1.16	6.17e-05	0.0	-8.80e-06
323	7	0.02	2.72e-04	-0.95	5.60e-05	0.0	-6.27e-06
323	8	0.02	8.09e-04	-1.10	6.00e-05	0.0	-8.04e-06
323	9	0.02	2.72e-04	-0.95	5.60e-05	0.0	-6.27e-06
323	10	0.02	7.32e-04	-1.08	5.94e-05	0.0	-7.79e-06
324	1	0.02	-1.79e-03	-1.25	7.32e-05	0.0	-8.27e-06
324	2	0.01	-8.95e-04	-1.57	8.17e-05	0.0	-1.21e-05
324	5	0.01	-1.41e-03	-0.95	5.60e-05	0.0	-6.23e-06
324	6	0.01	-8.11e-04	-1.16	6.17e-05	0.0	-8.76e-06
324	7	0.01	-1.41e-03	-0.95	5.60e-05	0.0	-6.23e-06
324	8	0.01	-9.90e-04	-1.10	6.00e-05	0.0	-8.00e-06
324	9	0.01	-1.41e-03	-0.95	5.60e-05	0.0	-6.23e-06
324	10	0.01	-1.05e-03	-1.08	5.94e-05	0.0	-7.75e-06
325	1	0.01	-2.89e-03	-1.25	7.32e-05	0.0	-8.21e-06
325	2	9.84e-03	-2.12e-03	-1.57	8.18e-05	0.0	-1.20e-05
325	5	9.43e-03	-2.25e-03	-0.95	5.61e-05	0.0	-6.18e-06
325	6	7.89e-03	-1.74e-03	-1.16	6.17e-05	0.0	-8.70e-06
325	7	9.43e-03	-2.25e-03	-0.95	5.61e-05	0.0	-6.18e-06
325	8	8.35e-03	-1.89e-03	-1.10	6.00e-05	0.0	-7.95e-06
325	9	9.43e-03	-2.25e-03	-0.95	5.61e-05	0.0	-6.18e-06
325	10	8.51e-03	-1.94e-03	-1.08	5.95e-05	0.0	-7.69e-06

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

326	1	8.57e-03	-3.99e-03	-1.25	7.33e-05	0.0	-8.13e-06
326	2	5.52e-03	-3.35e-03	-1.57	8.19e-05	0.0	-1.19e-05
326	5	6.69e-03	-3.09e-03	-0.95	5.61e-05	0.0	-6.12e-06
326	6	4.66e-03	-2.66e-03	-1.16	6.18e-05	0.0	-8.63e-06
326	7	6.69e-03	-3.09e-03	-0.95	5.61e-05	0.0	-6.12e-06
326	8	5.27e-03	-2.79e-03	-1.10	6.01e-05	0.0	-7.88e-06
326	9	6.69e-03	-3.09e-03	-0.95	5.61e-05	0.0	-6.12e-06
326	10	5.47e-03	-2.83e-03	-1.08	5.95e-05	0.0	-7.63e-06
327	1	4.93e-03	-5.09e-03	-1.25	7.34e-05	0.0	-8.02e-06
327	2	1.13e-03	-4.58e-03	-1.56	8.19e-05	0.0	-1.18e-05
327	5	3.92e-03	-3.93e-03	-0.95	5.62e-05	0.0	-6.04e-06
327	6	1.39e-03	-3.59e-03	-1.16	6.19e-05	0.0	-8.54e-06
327	7	3.92e-03	-3.93e-03	-0.95	5.62e-05	0.0	-6.04e-06
327	8	2.15e-03	-3.70e-03	-1.10	6.02e-05	0.0	-7.79e-06
327	9	3.92e-03	-3.93e-03	-0.95	5.62e-05	0.0	-6.04e-06
327	10	2.40e-03	-3.73e-03	-1.08	5.96e-05	0.0	-7.54e-06
328	1	1.25e-03	-6.19e-03	-1.25	7.36e-05	0.0	-7.90e-06
328	2	-3.33e-03	-5.81e-03	-1.56	8.20e-05	0.0	-1.16e-05
328	5	1.12e-03	-4.78e-03	-0.95	5.63e-05	0.0	-5.95e-06
328	6	-1.93e-03	-4.52e-03	-1.16	6.19e-05	0.0	-8.44e-06
328	7	1.12e-03	-4.78e-03	-0.95	5.63e-05	0.0	-5.95e-06
328	8	-1.02e-03	-4.60e-03	-1.10	6.03e-05	0.0	-7.69e-06
328	9	1.12e-03	-4.78e-03	-0.95	5.63e-05	0.0	-5.95e-06
328	10	-7.12e-04	-4.62e-03	-1.08	5.97e-05	0.0	-7.44e-06
329	1	-2.47e-03	-7.30e-03	-1.25	7.37e-05	0.0	-7.76e-06
329	2	-7.85e-03	-7.04e-03	-1.56	8.21e-05	0.0	-1.15e-05
329	5	-1.72e-03	-5.62e-03	-0.95	5.64e-05	0.0	-5.84e-06
329	6	-5.30e-03	-5.45e-03	-1.16	6.20e-05	0.0	-8.31e-06
329	7	-1.72e-03	-5.62e-03	-0.95	5.64e-05	0.0	-5.84e-06
329	8	-4.23e-03	-5.50e-03	-1.10	6.03e-05	0.0	-7.57e-06
329	9	-1.72e-03	-5.62e-03	-0.95	5.64e-05	0.0	-5.84e-06
329	10	-3.87e-03	-5.52e-03	-1.08	5.98e-05	0.0	-7.33e-06
330	1	-6.25e-03	-8.41e-03	-1.25	7.38e-05	0.0	-7.59e-06
330	2	-0.01	-8.28e-03	-1.56	8.23e-05	0.0	-1.13e-05
330	5	-4.60e-03	-6.47e-03	-0.95	5.65e-05	0.0	-5.72e-06
330	6	-8.73e-03	-6.39e-03	-1.16	6.21e-05	0.0	-8.16e-06
330	7	-4.60e-03	-6.47e-03	-0.95	5.65e-05	0.0	-5.72e-06
330	8	-7.49e-03	-6.41e-03	-1.10	6.04e-05	0.0	-7.43e-06
330	9	-4.60e-03	-6.47e-03	-0.95	5.65e-05	0.0	-5.72e-06
330	10	-7.08e-03	-6.42e-03	-1.08	5.99e-05	0.0	-7.18e-06
331	1	-0.01	-9.52e-03	-1.25	7.40e-05	0.0	-7.39e-06
331	2	-0.02	-9.52e-03	-1.56	8.23e-05	0.0	-1.10e-05
331	5	-7.57e-03	-7.32e-03	-0.95	5.66e-05	0.0	-5.56e-06
331	6	-0.01	-7.32e-03	-1.16	6.22e-05	0.0	-7.98e-06
331	7	-7.57e-03	-7.32e-03	-0.95	5.66e-05	0.0	-5.56e-06
331	8	-0.01	-7.32e-03	-1.10	6.05e-05	0.0	-7.25e-06
331	9	-7.57e-03	-7.32e-03	-0.95	5.66e-05	0.0	-5.56e-06
331	10	-0.01	-7.32e-03	-1.08	6.00e-05	0.0	-7.01e-06
332	2	-0.02	-0.01	-1.56	8.24e-05	0.0	-1.07e-05
332	6	-0.02	-8.26e-03	-1.16	6.22e-05	0.0	-7.76e-06
332	8	-0.01	-8.23e-03	-1.10	6.06e-05	0.0	-7.05e-06
332	10	-0.01	-8.22e-03	-1.07	6.00e-05	0.0	-6.81e-06
333	2	-0.03	-0.01	-1.56	8.23e-05	0.0	-1.02e-05
333	6	-0.02	-9.19e-03	-1.16	6.22e-05	0.0	-7.39e-06
333	8	-0.02	-9.14e-03	-1.09	6.06e-05	0.0	-6.70e-06
333	10	-0.02	-9.13e-03	-1.07	6.00e-05	0.0	-6.47e-06
334	2	-0.04	-0.01	-1.56	8.20e-05	0.0	-9.41e-06
334	6	-0.03	-0.01	-1.16	6.20e-05	0.0	-6.79e-06
334	8	-0.03	-0.01	-1.09	6.05e-05	0.0	-6.13e-06
334	10	-0.02	-0.01	-1.07	5.99e-05	0.0	-5.91e-06
335	2	-0.04	-0.01	-1.56	8.17e-05	0.0	-9.25e-06
335	6	-0.03	-0.01	-1.16	6.18e-05	0.0	-6.67e-06
335	8	-0.03	-0.01	-1.09	6.03e-05	0.0	-6.01e-06
335	10	-0.03	-0.01	-1.07	5.98e-05	0.0	-5.79e-06
336	2	-0.04	-0.02	-1.56	8.14e-05	0.0	-9.37e-06
336	6	-0.03	-0.01	-1.16	6.16e-05	0.0	-6.74e-06

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015
Certificate No. Q204

SR EN ISO 14001:2015
Certificate No. E81

SR EN ISO/IEC 17001:2017
Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

336	8	-0.03	-0.01	-1.09	6.01e-05	0.0	-6.06e-06
336	10	-0.03	-0.01	-1.07	5.96e-05	0.0	-5.83e-06
337	2	-0.04	-0.02	-1.56	8.12e-05	0.0	-9.58e-06
337	6	-0.03	-0.01	-1.15	6.14e-05	0.0	-6.89e-06
337	8	-0.03	-0.01	-1.09	5.99e-05	0.0	-6.18e-06
337	10	-0.03	-0.01	-1.07	5.94e-05	0.0	-5.94e-06
338	2	-0.04	-0.02	-1.56	8.10e-05	0.0	-9.84e-06
338	6	-0.03	-0.01	-1.15	6.13e-05	0.0	-7.06e-06
338	8	-0.03	-0.01	-1.09	5.98e-05	0.0	-6.32e-06
338	10	-0.03	-0.01	-1.07	5.93e-05	0.0	-6.07e-06
339	2	-0.04	-0.02	-1.56	8.08e-05	0.0	-1.01e-05
339	6	-0.03	-0.01	-1.15	6.12e-05	0.0	-7.26e-06
339	8	-0.02	-0.01	-1.09	5.97e-05	0.0	-6.49e-06
339	10	-0.02	-0.01	-1.07	5.92e-05	0.0	-6.23e-06
340	2	-0.03	-0.02	-1.56	8.07e-05	0.0	-1.04e-05
340	6	-0.03	-0.02	-1.15	6.11e-05	0.0	-7.49e-06
340	8	-0.02	-0.02	-1.09	5.96e-05	0.0	-6.68e-06
340	10	-0.02	-0.02	-1.07	5.91e-05	0.0	-6.41e-06
341	2	-0.03	-0.02	-1.56	8.05e-05	0.0	-1.08e-05
341	6	-0.02	-0.02	-1.15	6.10e-05	0.0	-7.73e-06
341	8	-0.02	-0.02	-1.09	5.95e-05	0.0	-6.89e-06
341	10	-0.02	-0.02	-1.07	5.91e-05	0.0	-6.62e-06
342	2	-0.03	-0.02	-1.56	8.04e-05	5.52e-05	-1.11e-05
342	6	-0.02	-0.02	-1.15	6.08e-05	3.71e-05	-7.97e-06
342	8	-0.02	-0.02	-1.09	5.94e-05	2.92e-05	-7.11e-06
342	10	-0.02	-0.02	-1.07	5.90e-05	2.65e-05	-6.82e-06
343	1	0.02	-1.74e-03	-1.22	7.25e-05	0.0	-9.13e-06
343	2	0.02	-1.19e-03	-1.53	8.11e-05	0.0	-1.31e-05
343	5	0.02	-1.36e-03	-0.93	5.55e-05	0.0	-6.89e-06
343	6	0.01	-9.89e-04	-1.14	6.12e-05	0.0	-9.52e-06
343	7	0.02	-1.36e-03	-0.93	5.55e-05	0.0	-6.89e-06
343	8	0.01	-1.10e-03	-1.07	5.95e-05	0.0	-8.73e-06
343	9	0.02	-1.36e-03	-0.93	5.55e-05	0.0	-6.89e-06
343	10	0.01	-1.14e-03	-1.05	5.89e-05	0.0	-8.47e-06
344	1	0.02	-6.54e-04	-1.22	7.26e-05	0.0	-9.13e-06
344	2	0.02	3.06e-05	-1.53	8.12e-05	0.0	-1.31e-05
344	5	0.02	-5.26e-04	-0.93	5.55e-05	0.0	-6.89e-06
344	6	0.02	-7.01e-05	-1.14	6.13e-05	0.0	-9.52e-06
344	7	0.02	-5.26e-04	-0.93	5.55e-05	0.0	-6.89e-06
344	8	0.02	-2.07e-04	-1.07	5.95e-05	0.0	-8.73e-06
344	9	0.02	-5.26e-04	-0.93	5.55e-05	0.0	-6.89e-06
344	10	0.02	-2.53e-04	-1.05	5.90e-05	0.0	-8.47e-06
345	1	0.02	-2.83e-03	-1.22	7.25e-05	0.0	-9.03e-06
345	2	0.01	-2.40e-03	-1.53	8.10e-05	0.0	-1.30e-05
345	5	0.01	-2.19e-03	-0.93	5.55e-05	0.0	-6.81e-06
345	6	0.01	-1.91e-03	-1.14	6.12e-05	0.0	-9.44e-06
345	7	0.01	-2.19e-03	-0.93	5.55e-05	0.0	-6.81e-06
345	8	0.01	-1.99e-03	-1.07	5.95e-05	0.0	-8.65e-06
345	9	0.01	-2.19e-03	-0.93	5.55e-05	0.0	-6.81e-06
345	10	0.01	-2.02e-03	-1.05	5.89e-05	0.0	-8.39e-06
346	1	0.01	-3.92e-03	-1.22	7.25e-05	0.0	-8.91e-06
346	2	0.01	-3.62e-03	-1.53	8.10e-05	0.0	-1.29e-05
346	5	9.95e-03	-3.02e-03	-0.93	5.55e-05	0.0	-6.72e-06
346	6	8.58e-03	-2.82e-03	-1.14	6.12e-05	0.0	-9.36e-06
346	7	9.95e-03	-3.02e-03	-0.93	5.55e-05	0.0	-6.72e-06
346	8	8.99e-03	-2.88e-03	-1.07	5.94e-05	0.0	-8.57e-06
346	9	9.95e-03	-3.02e-03	-0.93	5.55e-05	0.0	-6.72e-06
346	10	9.13e-03	-2.90e-03	-1.05	5.89e-05	0.0	-8.30e-06
347	1	9.38e-03	-5.00e-03	-1.22	7.25e-05	0.0	-8.79e-06
347	2	6.64e-03	-4.83e-03	-1.53	8.10e-05	0.0	-1.28e-05
347	5	7.31e-03	-3.86e-03	-0.93	5.55e-05	0.0	-6.63e-06
347	6	5.48e-03	-3.74e-03	-1.14	6.12e-05	0.0	-9.28e-06
347	7	7.31e-03	-3.86e-03	-0.93	5.55e-05	0.0	-6.63e-06
347	8	6.03e-03	-3.78e-03	-1.07	5.95e-05	0.0	-8.48e-06
347	9	7.31e-03	-3.86e-03	-0.93	5.55e-05	0.0	-6.63e-06
347	10	6.21e-03	-3.79e-03	-1.05	5.89e-05	0.0	-8.22e-06

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

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RELAZIONE DI CALCOLO



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348	1	5.90e-03	-6.09e-03	-1.22	7.25e-05	0.0	-8.67e-06
348	2	2.47e-03	-6.05e-03	-1.53	8.10e-05	0.0	-1.27e-05
348	5	4.65e-03	-4.69e-03	-0.93	5.55e-05	0.0	-6.53e-06
348	6	2.37e-03	-4.66e-03	-1.14	6.12e-05	0.0	-9.19e-06
348	7	4.65e-03	-4.69e-03	-0.93	5.55e-05	0.0	-6.53e-06
348	8	3.05e-03	-4.67e-03	-1.07	5.95e-05	0.0	-8.39e-06
348	9	4.65e-03	-4.69e-03	-0.93	5.55e-05	0.0	-6.53e-06
348	10	3.28e-03	-4.67e-03	-1.05	5.89e-05	0.0	-8.13e-06
349	1	2.40e-03	-7.18e-03	-1.22	7.26e-05	0.0	-8.55e-06
349	2	-1.72e-03	-7.26e-03	-1.53	8.11e-05	0.0	-1.26e-05
349	5	1.98e-03	-5.52e-03	-0.93	5.55e-05	0.0	-6.44e-06
349	6	-7.63e-04	-5.58e-03	-1.14	6.12e-05	0.0	-9.11e-06
349	7	1.98e-03	-5.52e-03	-0.93	5.55e-05	0.0	-6.44e-06
349	8	6.12e-05	-5.56e-03	-1.07	5.95e-05	0.0	-8.31e-06
349	9	1.98e-03	-5.52e-03	-0.93	5.55e-05	0.0	-6.44e-06
349	10	3.36e-04	-5.55e-03	-1.05	5.89e-05	0.0	-8.04e-06
350	2	-5.94e-03	-8.48e-03	-1.53	8.11e-05	0.0	-1.24e-05
350	6	-3.91e-03	-6.49e-03	-1.14	6.12e-05	0.0	-9.02e-06
350	8	-2.95e-03	-6.45e-03	-1.07	5.95e-05	0.0	-8.22e-06
350	10	-2.63e-03	-6.44e-03	-1.05	5.90e-05	0.0	-7.95e-06
351	2	-0.01	-9.70e-03	-1.53	8.12e-05	0.0	-1.23e-05
351	6	-7.08e-03	-7.41e-03	-1.14	6.13e-05	0.0	-8.93e-06
351	8	-5.97e-03	-7.35e-03	-1.08	5.96e-05	0.0	-8.12e-06
351	10	-5.60e-03	-7.32e-03	-1.05	5.90e-05	0.0	-7.85e-06
352	2	-0.01	-0.01	-1.53	8.13e-05	0.0	-1.22e-05
352	6	-0.01	-8.33e-03	-1.14	6.14e-05	0.0	-8.84e-06
352	8	-8.99e-03	-8.24e-03	-1.08	5.97e-05	0.0	-8.02e-06
352	10	-8.57e-03	-8.21e-03	-1.06	5.91e-05	0.0	-7.75e-06
353	2	-0.02	-0.01	-1.54	8.15e-05	0.0	-1.22e-05
353	6	-0.01	-9.25e-03	-1.14	6.15e-05	0.0	-8.83e-06
353	8	-0.01	-9.14e-03	-1.08	5.98e-05	0.0	-8.00e-06
353	10	-0.01	-9.10e-03	-1.06	5.93e-05	0.0	-7.73e-06
354	2	-0.02	-0.01	-1.54	8.18e-05	0.0	-1.20e-05
354	6	-0.02	-0.01	-1.14	6.18e-05	0.0	-8.64e-06
354	8	-0.01	-0.01	-1.08	6.01e-05	0.0	-7.82e-06
354	10	-0.01	-9.99e-03	-1.06	5.96e-05	0.0	-7.54e-06
355	2	-0.03	-0.01	-1.54	8.22e-05	0.0	-1.19e-05
355	6	-0.02	-0.01	-1.14	6.21e-05	0.0	-8.61e-06
355	8	-0.02	-0.01	-1.08	6.04e-05	0.0	-7.77e-06
355	10	-0.02	-0.01	-1.06	5.99e-05	0.0	-7.49e-06
356	2	-0.02	-0.02	-1.54	8.28e-05	0.0	-1.25e-05
356	6	-0.02	-0.01	-1.14	6.26e-05	0.0	-8.99e-06
356	8	-0.02	-0.01	-1.08	6.09e-05	0.0	-8.11e-06
356	10	-0.02	-0.01	-1.06	6.03e-05	0.0	-7.82e-06
357	2	-0.03	-0.02	-1.54	8.32e-05	0.0	-1.27e-05
357	6	-0.02	-0.01	-1.14	6.28e-05	0.0	-9.19e-06
357	8	-0.02	-0.01	-1.08	6.11e-05	0.0	-8.29e-06
357	10	-0.02	-0.01	-1.06	6.06e-05	0.0	-7.99e-06
358	2	-0.03	-0.02	-1.54	8.34e-05	0.0	-1.32e-05
358	6	-0.02	-0.01	-1.14	6.30e-05	0.0	-9.53e-06
358	8	-0.02	-0.01	-1.08	6.13e-05	0.0	-8.60e-06
358	10	-0.02	-0.01	-1.06	6.07e-05	0.0	-8.28e-06
359	2	-0.03	-0.02	-1.54	8.36e-05	0.0	-1.37e-05
359	6	-0.02	-0.01	-1.14	6.31e-05	0.0	-9.86e-06
359	8	-0.02	-0.01	-1.08	6.14e-05	0.0	-8.89e-06
359	10	-0.02	-0.01	-1.06	6.08e-05	0.0	-8.57e-06
360	2	-0.03	-0.02	-1.54	8.37e-05	0.0	-1.41e-05
360	6	-0.02	-0.02	-1.14	6.32e-05	0.0	-1.02e-05
360	8	-0.02	-0.02	-1.08	6.15e-05	0.0	-9.18e-06
360	10	-0.02	-0.02	-1.06	6.09e-05	0.0	-8.85e-06
361	2	-0.03	-0.02	-1.54	8.37e-05	0.0	-1.46e-05
361	6	-0.02	-0.02	-1.14	6.32e-05	0.0	-1.05e-05
361	8	-0.02	-0.02	-1.08	6.15e-05	0.0	-9.46e-06
361	10	-0.02	-0.02	-1.06	6.10e-05	0.0	-9.11e-06
362	2	-0.03	-0.02	-1.54	8.38e-05	0.0	-1.50e-05
362	6	-0.03	-0.02	-1.14	6.33e-05	0.0	-1.08e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

362	8	-0.02	-0.02	-1.08	6.16e-05	0.0	-9.74e-06
362	10	-0.02	-0.02	-1.06	6.10e-05	0.0	-9.38e-06
363	2	-0.04	-0.02	-1.54	8.38e-05	-2.23e-04	-1.54e-05
363	6	-0.03	-0.02	-1.14	6.33e-05	-1.67e-04	-1.11e-05
363	8	-0.03	-0.02	-1.08	6.16e-05	-1.61e-04	-1.00e-05
363	10	-0.02	-0.02	-1.06	6.10e-05	-1.59e-04	-9.64e-06
364	1	0.02	-2.96e-03	-1.19	7.10e-05	0.0	-1.06e-05
364	2	0.02	-2.90e-03	-1.50	7.96e-05	0.0	-1.49e-05
364	5	0.02	-2.28e-03	-0.91	5.43e-05	0.0	-8.02e-06
364	6	0.02	-2.24e-03	-1.11	6.01e-05	0.0	-1.09e-05
364	7	0.02	-2.28e-03	-0.91	5.43e-05	0.0	-8.02e-06
364	8	0.02	-2.25e-03	-1.05	5.84e-05	0.0	-1.00e-05
364	9	0.02	-2.28e-03	-0.91	5.43e-05	0.0	-8.02e-06
364	10	0.02	-2.25e-03	-1.03	5.78e-05	0.0	-9.74e-06
365	1	0.02	-1.89e-03	-1.19	7.11e-05	0.0	-1.06e-05
365	2	0.02	-1.71e-03	-1.50	7.98e-05	0.0	-1.49e-05
365	5	0.02	-1.46e-03	-0.91	5.44e-05	0.0	-8.02e-06
365	6	0.02	-1.34e-03	-1.11	6.02e-05	0.0	-1.09e-05
365	7	0.02	-1.46e-03	-0.91	5.44e-05	0.0	-8.02e-06
365	8	0.02	-1.37e-03	-1.05	5.84e-05	0.0	-1.00e-05
365	9	0.02	-1.46e-03	-0.91	5.44e-05	0.0	-8.02e-06
365	10	0.02	-1.39e-03	-1.03	5.79e-05	0.0	-9.74e-06
366	1	0.02	-4.02e-03	-1.19	7.09e-05	0.0	-1.04e-05
366	2	0.02	-4.10e-03	-1.50	7.95e-05	0.0	-1.47e-05
366	5	0.01	-3.09e-03	-0.91	5.43e-05	0.0	-7.87e-06
366	6	0.01	-3.14e-03	-1.11	6.00e-05	0.0	-1.07e-05
366	7	0.01	-3.09e-03	-0.91	5.43e-05	0.0	-7.87e-06
366	8	0.01	-3.13e-03	-1.05	5.83e-05	0.0	-9.87e-06
366	9	0.01	-3.09e-03	-0.91	5.43e-05	0.0	-7.87e-06
366	10	0.01	-3.12e-03	-1.03	5.77e-05	0.0	-9.58e-06
367	1	0.01	-5.09e-03	-1.19	7.11e-05	0.0	-1.02e-05
367	2	0.01	-5.29e-03	-1.50	7.97e-05	0.0	-1.45e-05
367	5	0.01	-3.91e-03	-0.91	5.44e-05	0.0	-7.73e-06
367	6	0.01	-4.04e-03	-1.11	6.01e-05	0.0	-1.06e-05
367	7	0.01	-3.91e-03	-0.91	5.44e-05	0.0	-7.73e-06
367	8	0.01	-4.00e-03	-1.05	5.84e-05	0.0	-9.74e-06
367	9	0.01	-3.91e-03	-0.91	5.44e-05	0.0	-7.73e-06
367	10	0.01	-3.99e-03	-1.03	5.78e-05	0.0	-9.45e-06
368	1	0.01	-6.16e-03	-1.19	7.13e-05	0.0	-1.01e-05
368	2	8.85e-03	-6.49e-03	-1.50	7.99e-05	0.0	-1.44e-05
368	5	8.51e-03	-4.72e-03	-0.91	5.45e-05	0.0	-7.59e-06
368	6	7.10e-03	-4.95e-03	-1.11	6.03e-05	0.0	-1.05e-05
368	7	8.51e-03	-4.72e-03	-0.91	5.45e-05	0.0	-7.59e-06
368	8	7.52e-03	-4.88e-03	-1.05	5.86e-05	0.0	-9.61e-06
368	9	8.51e-03	-4.72e-03	-0.91	5.45e-05	0.0	-7.59e-06
368	10	7.67e-03	-4.86e-03	-1.03	5.80e-05	0.0	-9.32e-06
369	1	7.65e-03	-7.23e-03	-1.19	7.15e-05	0.0	-9.90e-06
369	2	4.92e-03	-7.69e-03	-1.50	8.02e-05	0.0	-1.42e-05
369	5	5.98e-03	-5.54e-03	-0.91	5.47e-05	0.0	-7.47e-06
369	6	4.16e-03	-5.85e-03	-1.11	6.05e-05	0.0	-1.04e-05
369	7	5.98e-03	-5.54e-03	-0.91	5.47e-05	0.0	-7.47e-06
369	8	4.70e-03	-5.76e-03	-1.05	5.88e-05	0.0	-9.49e-06
369	9	5.98e-03	-5.54e-03	-0.91	5.47e-05	0.0	-7.47e-06
369	10	4.89e-03	-5.73e-03	-1.03	5.82e-05	0.0	-9.20e-06
370	1	4.41e-03	-8.30e-03	-1.19	7.18e-05	0.0	-9.78e-06
370	2	1.08e-03	-8.90e-03	-1.50	8.05e-05	0.0	-1.42e-05
370	5	3.51e-03	-6.36e-03	-0.91	5.49e-05	0.0	-7.37e-06
370	6	1.29e-03	-6.76e-03	-1.11	6.07e-05	0.0	-1.03e-05
370	7	3.51e-03	-6.36e-03	-0.91	5.49e-05	0.0	-7.37e-06
370	8	1.95e-03	-6.64e-03	-1.05	5.90e-05	0.0	-9.41e-06
370	9	3.51e-03	-6.36e-03	-0.91	5.49e-05	0.0	-7.37e-06
370	10	2.17e-03	-6.60e-03	-1.03	5.84e-05	0.0	-9.12e-06
371	2	-2.64e-03	-0.01	-1.50	8.09e-05	0.0	-1.42e-05
371	6	-1.50e-03	-7.67e-03	-1.11	6.10e-05	0.0	-1.03e-05
371	7	1.10e-03	-7.19e-03	-0.91	5.51e-05	0.0	-7.33e-06
371	8	-7.19e-04	-7.53e-03	-1.05	5.93e-05	0.0	-9.40e-06

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204 SR EN ISO 14001:2015 Certificate No. E81 SR EN ISO/IEC 27001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

371	9	1.10e-03	-7.19e-03	-0.91	5.51e-05	0.0	-7.33e-06
371	10	-4.60e-04	-7.48e-03	-1.03	5.87e-05	0.0	-9.10e-06
372	2	-6.21e-03	-0.01	-1.50	8.13e-05	0.0	-1.43e-05
372	6	-4.17e-03	-8.59e-03	-1.11	6.13e-05	0.0	-1.04e-05
372	8	-3.29e-03	-8.42e-03	-1.05	5.96e-05	0.0	-9.46e-06
372	10	-2.99e-03	-8.36e-03	-1.03	5.90e-05	0.0	-9.16e-06
373	2	-9.51e-03	-0.01	-1.50	8.18e-05	0.0	-1.45e-05
373	6	-6.65e-03	-9.51e-03	-1.11	6.17e-05	0.0	-1.05e-05
373	8	-5.67e-03	-9.31e-03	-1.05	5.99e-05	0.0	-9.61e-06
373	10	-5.35e-03	-9.25e-03	-1.03	5.93e-05	0.0	-9.31e-06
374	2	-0.01	-0.01	-1.50	8.24e-05	0.0	-1.47e-05
374	6	-8.61e-03	-0.01	-1.11	6.22e-05	0.0	-1.07e-05
374	8	-7.58e-03	-0.01	-1.05	6.03e-05	0.0	-9.76e-06
374	10	-7.23e-03	-0.01	-1.03	5.97e-05	0.0	-9.45e-06
375	2	-0.01	-0.02	-1.50	8.36e-05	0.0	-1.54e-05
375	6	-9.87e-03	-0.01	-1.11	6.31e-05	0.0	-1.12e-05
375	8	-8.83e-03	-0.01	-1.05	6.12e-05	0.0	-1.02e-05
375	10	-8.48e-03	-0.01	-1.03	6.06e-05	0.0	-9.89e-06
376	2	-0.02	-0.02	-1.50	8.47e-05	0.0	-1.58e-05
376	6	-0.01	-0.01	-1.11	6.39e-05	0.0	-1.14e-05
376	8	-0.01	-0.01	-1.05	6.20e-05	0.0	-1.04e-05
376	10	-9.90e-03	-0.01	-1.03	6.13e-05	0.0	-1.01e-05
377	2	-0.02	-0.02	-1.50	8.58e-05	0.0	-1.59e-05
377	6	-0.01	-0.01	-1.11	6.46e-05	0.0	-1.15e-05
377	8	-0.01	-0.01	-1.05	6.27e-05	0.0	-1.05e-05
377	10	-0.01	-0.01	-1.03	6.21e-05	0.0	-1.02e-05
378	2	-0.02	-0.02	-1.50	8.62e-05	0.0	-1.61e-05
378	6	-0.01	-0.01	-1.12	6.50e-05	0.0	-1.17e-05
378	8	-0.01	-0.01	-1.05	6.31e-05	0.0	-1.06e-05
378	10	-0.01	-0.01	-1.03	6.24e-05	0.0	-1.03e-05
379	2	-0.02	-0.02	-1.51	8.67e-05	0.0	-1.63e-05
379	6	-0.02	-0.02	-1.12	6.53e-05	0.0	-1.18e-05
379	8	-0.02	-0.01	-1.05	6.34e-05	0.0	-1.08e-05
379	10	-0.02	-0.01	-1.03	6.27e-05	0.0	-1.04e-05
380	2	-0.03	-0.02	-1.51	8.70e-05	0.0	-1.67e-05
380	6	-0.02	-0.02	-1.12	6.56e-05	0.0	-1.21e-05
380	8	-0.02	-0.02	-1.06	6.36e-05	0.0	-1.10e-05
380	10	-0.02	-0.02	-1.03	6.30e-05	0.0	-1.06e-05
381	2	-0.03	-0.02	-1.51	8.73e-05	0.0	-1.71e-05
381	6	-0.02	-0.02	-1.12	6.58e-05	0.0	-1.24e-05
381	8	-0.02	-0.02	-1.06	6.38e-05	0.0	-1.13e-05
381	10	-0.02	-0.02	-1.03	6.32e-05	0.0	-1.09e-05
382	2	-0.03	-0.02	-1.51	8.76e-05	0.0	-1.77e-05
382	6	-0.02	-0.02	-1.12	6.60e-05	0.0	-1.28e-05
382	8	-0.02	-0.02	-1.06	6.41e-05	0.0	-1.16e-05
382	10	-0.02	-0.02	-1.04	6.34e-05	0.0	-1.12e-05
383	2	-0.04	-0.03	-1.51	8.79e-05	0.0	-1.82e-05
383	6	-0.03	-0.02	-1.12	6.62e-05	0.0	-1.32e-05
383	8	-0.02	-0.02	-1.06	6.42e-05	0.0	-1.20e-05
383	10	-0.02	-0.02	-1.04	6.36e-05	0.0	-1.16e-05
384	2	-0.04	-0.03	-1.51	8.82e-05	-3.08e-04	-1.88e-05
384	6	-0.03	-0.02	-1.12	6.64e-05	-2.30e-04	-1.36e-05
384	8	-0.03	-0.02	-1.06	6.44e-05	-2.19e-04	-1.23e-05
384	10	-0.03	-0.02	-1.04	6.37e-05	-2.15e-04	-1.19e-05
385	2	0.02	-4.78e-03	-1.46	7.53e-05	-2.43e-04	-1.33e-05
385	6	0.02	-3.62e-03	-1.08	5.68e-05	-1.81e-04	-9.66e-06
385	8	0.02	-3.52e-03	-1.02	5.51e-05	-1.73e-04	-8.86e-06
385	10	0.02	-3.49e-03	-1.00	5.46e-05	-1.70e-04	-8.59e-06
386	2	0.03	-3.65e-03	-1.46	7.53e-05	-2.45e-04	-1.33e-05
386	6	0.02	-2.76e-03	-1.08	5.68e-05	-1.83e-04	-9.70e-06
386	8	0.02	-2.69e-03	-1.02	5.51e-05	-1.74e-04	-8.90e-06
386	10	0.02	-2.67e-03	-1.00	5.46e-05	-1.72e-04	-8.63e-06
387	1	0.02	-5.31e-03	-1.16	6.69e-05	-1.93e-04	-9.12e-06
387	2	0.02	-5.91e-03	-1.46	7.52e-05	-2.33e-04	-1.31e-05
387	5	0.01	-4.06e-03	-0.88	5.12e-05	-1.47e-04	-6.88e-06
387	6	0.01	-4.47e-03	-1.08	5.67e-05	-1.74e-04	-9.53e-06

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 27001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

387	7	0.01	-4.06e-03	-0.88	5.12e-05	-1.47e-04	-6.88e-06
387	8	0.01	-4.35e-03	-1.02	5.51e-05	-1.66e-04	-8.73e-06
387	9	0.01	-4.06e-03	-0.88	5.12e-05	-1.47e-04	-6.88e-06
387	10	0.01	-4.31e-03	-1.00	5.45e-05	-1.63e-04	-8.47e-06
388	1	0.02	-6.33e-03	-1.16	6.82e-05	-2.00e-04	-9.23e-06
388	2	0.01	-7.06e-03	-1.46	7.67e-05	-2.39e-04	-1.33e-05
388	5	0.01	-4.84e-03	-0.89	5.21e-05	-1.52e-04	-6.96e-06
388	6	0.01	-5.33e-03	-1.08	5.78e-05	-1.79e-04	-9.66e-06
388	7	0.01	-4.84e-03	-0.89	5.21e-05	-1.52e-04	-6.96e-06
388	8	0.01	-5.18e-03	-1.02	5.61e-05	-1.71e-04	-8.85e-06
388	9	0.01	-4.84e-03	-0.89	5.21e-05	-1.52e-04	-6.96e-06
388	10	0.01	-5.13e-03	-1.00	5.55e-05	-1.68e-04	-8.58e-06
389	1	0.01	-7.36e-03	-1.16	6.93e-05	-2.02e-04	-9.31e-06
389	2	0.01	-8.22e-03	-1.46	7.80e-05	-2.41e-04	-1.35e-05
389	5	9.44e-03	-5.63e-03	-0.89	5.30e-05	-1.54e-04	-7.02e-06
389	6	8.34e-03	-6.20e-03	-1.09	5.88e-05	-1.80e-04	-9.78e-06
389	7	9.44e-03	-5.63e-03	-0.89	5.30e-05	-1.54e-04	-7.02e-06
389	8	8.67e-03	-6.03e-03	-1.03	5.71e-05	-1.72e-04	-8.95e-06
389	9	9.44e-03	-5.63e-03	-0.89	5.30e-05	-1.54e-04	-7.02e-06
389	10	8.78e-03	-5.97e-03	-1.01	5.65e-05	-1.70e-04	-8.68e-06
390	1	9.10e-03	-8.41e-03	-1.17	7.04e-05	-2.02e-04	-9.41e-06
390	2	6.89e-03	-9.40e-03	-1.46	7.93e-05	-2.38e-04	-1.36e-05
390	5	7.07e-03	-6.43e-03	-0.89	5.38e-05	-1.54e-04	-7.09e-06
390	6	5.60e-03	-7.09e-03	-1.09	5.98e-05	-1.78e-04	-9.91e-06
390	7	7.07e-03	-6.43e-03	-0.89	5.38e-05	-1.54e-04	-7.09e-06
390	8	6.04e-03	-6.90e-03	-1.03	5.80e-05	-1.71e-04	-9.06e-06
390	9	7.07e-03	-6.43e-03	-0.89	5.38e-05	-1.54e-04	-7.09e-06
390	10	6.19e-03	-6.83e-03	-1.01	5.74e-05	-1.69e-04	-8.78e-06
391	1	6.05e-03	-9.47e-03	-1.17	7.14e-05	-1.99e-04	-9.52e-06
391	2	3.30e-03	-0.01	-1.47	8.05e-05	-2.34e-04	-1.38e-05
391	5	4.75e-03	-7.25e-03	-0.89	5.46e-05	-1.52e-04	-7.18e-06
391	6	2.92e-03	-8.00e-03	-1.09	6.07e-05	-1.75e-04	-1.01e-05
391	7	4.75e-03	-7.25e-03	-0.89	5.46e-05	-1.52e-04	-7.18e-06
391	8	3.47e-03	-7.77e-03	-1.03	5.89e-05	-1.68e-04	-9.19e-06
391	9	4.75e-03	-7.25e-03	-0.89	5.46e-05	-1.52e-04	-7.18e-06
391	10	3.65e-03	-7.70e-03	-1.01	5.83e-05	-1.66e-04	-8.90e-06
392	1	3.07e-03	-0.01	-1.17	7.24e-05	-1.96e-04	-9.67e-06
392	2	-1.77e-04	-0.01	-1.47	8.17e-05	-2.28e-04	-1.41e-05
392	5	2.47e-03	-8.07e-03	-0.89	5.54e-05	-1.49e-04	-7.29e-06
392	6	3.08e-04	-8.92e-03	-1.09	6.16e-05	-1.71e-04	-1.02e-05
392	7	2.47e-03	-8.07e-03	-0.89	5.54e-05	-1.49e-04	-7.29e-06
392	8	9.57e-04	-8.66e-03	-1.03	5.97e-05	-1.65e-04	-9.34e-06
392	9	2.47e-03	-8.07e-03	-0.89	5.54e-05	-1.49e-04	-7.29e-06
392	10	1.17e-03	-8.58e-03	-1.01	5.91e-05	-1.63e-04	-9.05e-06
393	2	-3.56e-03	-0.01	-1.47	8.29e-05	-2.23e-04	-1.43e-05
393	6	-2.23e-03	-9.85e-03	-1.09	6.25e-05	-1.67e-04	-1.04e-05
393	8	-1.49e-03	-9.56e-03	-1.03	6.06e-05	-1.61e-04	-9.51e-06
393	10	-1.24e-03	-9.47e-03	-1.01	5.99e-05	-1.59e-04	-9.21e-06
394	2	-6.86e-03	-0.01	-1.47	8.41e-05	-2.17e-04	-1.46e-05
394	6	-4.70e-03	-0.01	-1.09	6.33e-05	-1.63e-04	-1.06e-05
394	8	-3.87e-03	-0.01	-1.03	6.14e-05	-1.57e-04	-9.72e-06
394	10	-3.59e-03	-0.01	-1.01	6.07e-05	-1.55e-04	-9.41e-06
395	2	-0.01	-0.02	-1.47	8.53e-05	-2.12e-04	-1.50e-05
395	6	-7.12e-03	-0.01	-1.09	6.42e-05	-1.59e-04	-1.09e-05
395	8	-6.20e-03	-0.01	-1.03	6.22e-05	-1.54e-04	-9.95e-06
395	10	-5.89e-03	-0.01	-1.01	6.16e-05	-1.52e-04	-9.64e-06
396	2	-0.01	-0.02	-1.47	8.65e-05	-2.07e-04	-1.54e-05
396	6	-9.47e-03	-0.01	-1.09	6.51e-05	-1.56e-04	-1.12e-05
396	8	-8.47e-03	-0.01	-1.03	6.31e-05	-1.50e-04	-1.02e-05
396	10	-8.14e-03	-0.01	-1.01	6.24e-05	-1.49e-04	-9.89e-06
397	2	-0.02	-0.02	-1.47	8.77e-05	-2.02e-04	-1.58e-05
397	6	-0.01	-0.01	-1.09	6.60e-05	-1.52e-04	-1.15e-05
397	8	-0.01	-0.01	-1.03	6.39e-05	-1.47e-04	-1.05e-05
397	10	-0.01	-0.01	-1.01	6.32e-05	-1.45e-04	-1.02e-05
398	2	-0.02	-0.02	-1.47	8.90e-05	-1.96e-04	-1.63e-05
398	6	-0.01	-0.01	-1.09	6.70e-05	-1.47e-04	-1.18e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015
Certificate No. Q204



SR EN ISO 14001:2015
Certificate No. E81



SR EN ISO/IEC 17001:2017
Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

398	8	-0.01	-0.01	-1.03	6.48e-05	-1.42e-04	-1.08e-05
398	10	-0.01	-0.01	-1.01	6.41e-05	-1.40e-04	-1.05e-05
399	2	-0.02	-0.02	-1.47	9.01e-05	-1.89e-04	-1.68e-05
399	6	-0.02	-0.02	-1.09	6.78e-05	-1.42e-04	-1.22e-05
399	8	-0.02	-0.02	-1.03	6.56e-05	-1.36e-04	-1.12e-05
399	10	-0.01	-0.02	-1.01	6.49e-05	-1.35e-04	-1.08e-05
400	2	-0.02	-0.02	-1.47	9.12e-05	-1.83e-04	-1.75e-05
400	6	-0.02	-0.02	-1.09	6.86e-05	-1.38e-04	-1.28e-05
400	8	-0.02	-0.02	-1.03	6.64e-05	-1.32e-04	-1.17e-05
400	10	-0.02	-0.02	-1.01	6.56e-05	-1.31e-04	-1.13e-05
401	2	-0.03	-0.02	-1.47	9.21e-05	-1.81e-04	-1.84e-05
401	6	-0.02	-0.02	-1.09	6.93e-05	-1.36e-04	-1.34e-05
401	8	-0.02	-0.02	-1.03	6.70e-05	-1.31e-04	-1.22e-05
401	10	-0.02	-0.02	-1.01	6.62e-05	-1.29e-04	-1.19e-05
402	2	-0.03	-0.02	-1.47	9.28e-05	-1.81e-04	-1.92e-05
402	6	-0.02	-0.02	-1.09	6.98e-05	-1.36e-04	-1.40e-05
402	8	-0.02	-0.02	-1.03	6.75e-05	-1.30e-04	-1.28e-05
402	10	-0.02	-0.02	-1.01	6.67e-05	-1.29e-04	-1.24e-05
403	2	-0.03	-0.03	-1.47	9.34e-05	-1.81e-04	-2.01e-05
403	6	-0.02	-0.02	-1.09	7.03e-05	-1.35e-04	-1.46e-05
403	8	-0.02	-0.02	-1.03	6.79e-05	-1.30e-04	-1.34e-05
403	10	-0.02	-0.02	-1.01	6.71e-05	-1.28e-04	-1.30e-05
404	2	-0.04	-0.03	-1.47	9.39e-05	-1.77e-04	-2.10e-05
404	6	-0.03	-0.02	-1.09	7.06e-05	-1.33e-04	-1.53e-05
404	8	-0.02	-0.02	-1.03	6.82e-05	-1.28e-04	-1.40e-05
404	10	-0.02	-0.02	-1.01	6.74e-05	-1.26e-04	-1.36e-05
405	2	-0.04	-0.03	-1.47	9.42e-05	-1.70e-04	-2.18e-05
405	6	-0.03	-0.02	-1.09	7.08e-05	-1.27e-04	-1.59e-05
405	8	-0.03	-0.02	-1.03	6.84e-05	-1.23e-04	-1.45e-05
405	10	-0.03	-0.02	-1.01	6.76e-05	-1.21e-04	-1.41e-05
406	2	0.06	4.38e-04	-1.47	1.21e-04	0.0	-1.96e-05
406	4	0.05	4.50e-04	-1.18	9.61e-05	0.0	-1.58e-05
406	5	0.03	-2.62e-04	-0.89	7.76e-05	0.0	-1.11e-05
406	6	0.04	2.35e-04	-1.09	9.05e-05	0.0	-1.44e-05
406	7	0.03	-2.62e-04	-0.89	7.76e-05	0.0	-1.11e-05
406	8	0.04	8.59e-05	-1.03	8.66e-05	0.0	-1.34e-05
406	9	0.03	-2.62e-04	-0.89	7.76e-05	0.0	-1.11e-05
406	10	0.04	3.62e-05	-1.01	8.54e-05	0.0	-1.31e-05
407	2	0.06	2.26e-03	-1.47	1.21e-04	0.0	-1.96e-05
407	6	0.05	1.59e-03	-1.09	9.05e-05	0.0	-1.44e-05
407	8	0.04	1.39e-03	-1.03	8.66e-05	0.0	-1.34e-05
407	10	0.04	1.32e-03	-1.01	8.54e-05	0.0	-1.31e-05
408	1	0.04	-1.83e-03	-1.17	1.02e-04	0.0	-1.47e-05
408	2	0.05	-1.38e-03	-1.47	1.21e-04	0.0	-1.96e-05
408	5	0.03	-1.43e-03	-0.89	7.76e-05	0.0	-1.11e-05
408	6	0.04	-1.12e-03	-1.09	9.05e-05	0.0	-1.44e-05
408	7	0.03	-1.43e-03	-0.89	7.76e-05	0.0	-1.11e-05
408	8	0.04	-1.21e-03	-1.03	8.66e-05	0.0	-1.34e-05
408	9	0.03	-1.43e-03	-0.89	7.76e-05	0.0	-1.11e-05
408	10	0.04	-1.24e-03	-1.01	8.53e-05	0.0	-1.31e-05
409	1	0.04	-3.36e-03	-1.17	1.02e-04	0.0	-1.47e-05
409	2	0.05	-3.19e-03	-1.47	1.21e-04	0.0	-1.96e-05
409	5	0.03	-2.59e-03	-0.89	7.75e-05	0.0	-1.11e-05
409	6	0.03	-2.48e-03	-1.09	9.04e-05	0.0	-1.44e-05
409	7	0.03	-2.59e-03	-0.89	7.75e-05	0.0	-1.11e-05
409	8	0.03	-2.51e-03	-1.03	8.65e-05	0.0	-1.34e-05
409	9	0.03	-2.59e-03	-0.89	7.75e-05	0.0	-1.11e-05
409	10	0.03	-2.52e-03	-1.01	8.53e-05	0.0	-1.31e-05
410	2	0.04	-5.01e-03	-1.47	1.21e-04	0.0	-1.96e-05
410	6	0.03	-3.84e-03	-1.09	9.03e-05	0.0	-1.44e-05
410	8	0.03	-3.81e-03	-1.03	8.64e-05	0.0	-1.34e-05
410	10	0.03	-3.80e-03	-1.01	8.52e-05	0.0	-1.31e-05
411	2	0.04	-6.82e-03	-1.47	1.21e-04	0.0	-1.96e-05
411	6	0.03	-5.19e-03	-1.09	9.01e-05	0.0	-1.44e-05
411	8	0.02	-5.11e-03	-1.03	8.63e-05	0.0	-1.34e-05
411	10	0.02	-5.08e-03	-1.01	8.50e-05	0.0	-1.31e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

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Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015
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Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

412	2	0.03	-8.63e-03	-1.47	1.20e-04	0.0	-1.96e-05
412	6	0.02	-6.54e-03	-1.09	8.99e-05	0.0	-1.44e-05
412	8	0.02	-6.40e-03	-1.03	8.61e-05	0.0	-1.34e-05
412	10	0.02	-6.35e-03	-1.01	8.48e-05	0.0	-1.31e-05
413	2	0.02	-0.01	-1.47	1.20e-04	0.0	-1.95e-05
413	6	0.02	-7.89e-03	-1.09	8.96e-05	0.0	-1.43e-05
413	8	0.02	-7.69e-03	-1.03	8.58e-05	0.0	-1.33e-05
413	10	0.02	-7.63e-03	-1.01	8.45e-05	0.0	-1.30e-05
414	2	0.02	-0.01	-1.47	1.19e-04	0.0	-1.94e-05
414	6	0.01	-9.23e-03	-1.09	8.92e-05	0.0	-1.43e-05
414	8	0.01	-8.98e-03	-1.03	8.54e-05	0.0	-1.33e-05
414	10	0.01	-8.89e-03	-1.01	8.42e-05	0.0	-1.30e-05
415	2	0.01	-0.01	-1.47	1.19e-04	0.0	-1.93e-05
415	6	9.29e-03	-0.01	-1.09	8.87e-05	0.0	-1.42e-05
415	8	8.75e-03	-0.01	-1.03	8.50e-05	0.0	-1.32e-05
415	10	8.57e-03	-0.01	-1.01	8.37e-05	0.0	-1.29e-05
416	2	6.61e-03	-0.02	-1.47	1.18e-04	0.0	-1.92e-05
416	6	4.91e-03	-0.01	-1.09	8.80e-05	0.0	-1.41e-05
416	8	4.64e-03	-0.01	-1.03	8.44e-05	0.0	-1.31e-05
416	10	4.55e-03	-0.01	-1.01	8.31e-05	0.0	-1.28e-05
417	1	6.50e-04	-0.02	-1.17	9.85e-05	0.0	-1.41e-05
417	2	5.22e-04	-0.02	-1.47	1.16e-04	0.0	-1.90e-05
417	5	5.04e-04	-0.01	-0.89	7.51e-05	0.0	-1.06e-05
417	6	4.19e-04	-0.01	-1.09	8.71e-05	0.0	-1.40e-05
417	7	5.04e-04	-0.01	-0.89	7.51e-05	0.0	-1.06e-05
417	8	4.44e-04	-0.01	-1.03	8.35e-05	0.0	-1.30e-05
417	9	5.04e-04	-0.01	-0.89	7.51e-05	0.0	-1.06e-05
417	10	4.53e-04	-0.01	-1.01	8.23e-05	0.0	-1.26e-05
418	2	-5.82e-03	-0.02	-1.47	1.15e-04	0.0	-1.89e-05
418	6	-4.25e-03	-0.01	-1.09	8.58e-05	0.0	-1.39e-05
418	8	-3.93e-03	-0.01	-1.03	8.23e-05	0.0	-1.29e-05
418	10	-3.82e-03	-0.01	-1.01	8.11e-05	0.0	-1.25e-05
419	2	-0.01	-0.02	-1.46	1.12e-04	0.0	-1.88e-05
419	6	-9.91e-03	-0.02	-1.09	8.37e-05	0.0	-1.38e-05
419	8	-9.21e-03	-0.02	-1.03	8.03e-05	0.0	-1.28e-05
419	10	-8.97e-03	-0.02	-1.01	7.92e-05	0.0	-1.24e-05
420	2	-0.02	-0.02	-1.46	1.10e-04	0.0	-1.90e-05
420	6	-0.01	-0.02	-1.08	8.22e-05	0.0	-1.39e-05
420	8	-0.01	-0.02	-1.02	7.90e-05	0.0	-1.29e-05
420	10	-0.01	-0.02	-1.00	7.79e-05	0.0	-1.25e-05
421	2	-0.02	-0.02	-1.46	1.08e-04	0.0	-2.04e-05
421	6	-0.02	-0.02	-1.08	8.11e-05	0.0	-1.49e-05
421	8	-0.01	-0.02	-1.02	7.79e-05	0.0	-1.38e-05
421	10	-0.01	-0.02	-1.00	7.69e-05	0.0	-1.34e-05
422	2	-0.03	-0.03	-1.46	1.07e-04	0.0	-2.20e-05
422	6	-0.02	-0.02	-1.08	8.02e-05	0.0	-1.61e-05
422	8	-0.02	-0.02	-1.02	7.71e-05	0.0	-1.49e-05
422	10	-0.02	-0.02	-1.00	7.61e-05	0.0	-1.45e-05
423	2	-0.03	-0.03	-1.46	1.06e-04	0.0	-2.36e-05
423	6	-0.02	-0.02	-1.08	7.97e-05	0.0	-1.73e-05
423	8	-0.02	-0.02	-1.02	7.66e-05	0.0	-1.60e-05
423	10	-0.02	-0.02	-1.00	7.56e-05	0.0	-1.55e-05
424	2	-0.03	-0.03	-1.46	1.06e-04	0.0	-2.51e-05
424	6	-0.02	-0.02	-1.08	7.93e-05	0.0	-1.84e-05
424	8	-0.02	-0.02	-1.02	7.62e-05	0.0	-1.70e-05
424	10	-0.02	-0.02	-1.00	7.52e-05	0.0	-1.66e-05
425	2	-0.04	-0.03	-1.46	1.05e-04	0.0	-2.66e-05
425	6	-0.03	-0.02	-1.08	7.90e-05	0.0	-1.95e-05
425	8	-0.02	-0.02	-1.02	7.60e-05	0.0	-1.80e-05
425	10	-0.02	-0.02	-1.00	7.50e-05	0.0	-1.75e-05
426	2	-0.04	-0.03	-1.46	1.05e-04	-1.71e-04	-2.81e-05
426	6	-0.03	-0.02	-1.08	7.88e-05	-1.27e-04	-2.06e-05
426	8	-0.03	-0.02	-1.02	7.58e-05	-1.20e-04	-1.90e-05
426	10	-0.03	-0.02	-1.00	7.48e-05	-1.18e-04	-1.85e-05
427	1	0.04	-2.12e-03	-1.13	1.02e-04	0.0	-1.52e-05
427	2	0.06	-1.97e-03	-1.43	1.22e-04	0.0	-2.01e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

427	5	0.03	-1.63e-03	-0.86	7.81e-05	0.0	-1.16e-05
427	6	0.04	-1.53e-03	-1.06	9.12e-05	0.0	-1.48e-05
427	7	0.03	-1.63e-03	-0.86	7.81e-05	0.0	-1.16e-05
427	8	0.04	-1.56e-03	-1.00	8.73e-05	0.0	-1.38e-05
427	9	0.03	-1.63e-03	-0.86	7.81e-05	0.0	-1.16e-05
427	10	0.04	-1.57e-03	-0.98	8.60e-05	0.0	-1.35e-05
428	1	0.05	-5.81e-04	-1.13	1.02e-04	0.0	-1.53e-05
428	2	0.06	-1.35e-04	-1.43	1.22e-04	0.0	-2.02e-05
428	5	0.04	-4.62e-04	-0.86	7.81e-05	0.0	-1.16e-05
428	6	0.05	-1.65e-04	-1.06	9.12e-05	0.0	-1.48e-05
428	7	0.04	-4.62e-04	-0.86	7.81e-05	0.0	-1.16e-05
428	8	0.04	-2.54e-04	-1.00	8.73e-05	0.0	-1.39e-05
428	9	0.04	-4.62e-04	-0.86	7.81e-05	0.0	-1.16e-05
428	10	0.04	-2.84e-04	-0.98	8.60e-05	0.0	-1.35e-05
429	2	0.05	-3.80e-03	-1.43	1.22e-04	0.0	-2.03e-05
429	6	0.04	-2.90e-03	-1.06	9.12e-05	0.0	-1.50e-05
429	8	0.04	-2.87e-03	-1.00	8.72e-05	0.0	-1.40e-05
429	10	0.04	-2.86e-03	-0.98	8.59e-05	0.0	-1.36e-05
430	2	0.05	-5.63e-03	-1.43	1.22e-04	0.0	-2.06e-05
430	6	0.03	-4.27e-03	-1.06	9.11e-05	0.0	-1.51e-05
430	8	0.03	-4.18e-03	-1.00	8.71e-05	0.0	-1.41e-05
430	10	0.03	-4.15e-03	-0.98	8.58e-05	0.0	-1.38e-05
431	2	0.04	-7.45e-03	-1.43	1.22e-04	0.0	-2.08e-05
431	6	0.03	-5.63e-03	-1.06	9.09e-05	0.0	-1.53e-05
431	8	0.03	-5.49e-03	-1.00	8.70e-05	0.0	-1.43e-05
431	10	0.03	-5.44e-03	-0.98	8.57e-05	0.0	-1.39e-05
432	2	0.04	-9.28e-03	-1.43	1.22e-04	0.0	-2.11e-05
432	6	0.03	-7.00e-03	-1.06	9.08e-05	0.0	-1.55e-05
432	8	0.02	-6.79e-03	-1.00	8.69e-05	0.0	-1.45e-05
432	10	0.02	-6.72e-03	-0.98	8.56e-05	0.0	-1.41e-05
433	2	0.03	-0.01	-1.43	1.21e-04	0.0	-2.14e-05
433	6	0.02	-8.36e-03	-1.06	9.06e-05	0.0	-1.57e-05
433	8	0.02	-8.09e-03	-1.00	8.67e-05	0.0	-1.46e-05
433	10	0.02	-8.01e-03	-0.98	8.54e-05	0.0	-1.43e-05
434	2	0.02	-0.01	-1.43	1.21e-04	0.0	-2.17e-05
434	6	0.02	-9.71e-03	-1.06	9.04e-05	0.0	-1.59e-05
434	8	0.02	-9.39e-03	-1.00	8.65e-05	0.0	-1.49e-05
434	10	0.02	-9.28e-03	-0.98	8.52e-05	0.0	-1.45e-05
435	2	0.02	-0.01	-1.43	1.21e-04	0.0	-2.20e-05
435	6	0.01	-0.01	-1.06	9.01e-05	0.0	-1.62e-05
435	8	0.01	-0.01	-1.00	8.63e-05	0.0	-1.51e-05
435	10	0.01	-0.01	-0.98	8.50e-05	0.0	-1.47e-05
436	2	0.01	-0.02	-1.43	1.20e-04	0.0	-2.25e-05
436	6	0.01	-0.01	-1.06	8.98e-05	0.0	-1.65e-05
436	8	9.55e-03	-0.01	-1.00	8.60e-05	0.0	-1.54e-05
436	10	9.35e-03	-0.01	-0.98	8.47e-05	0.0	-1.50e-05
437	2	8.29e-03	-0.02	-1.43	1.20e-04	0.0	-2.30e-05
437	6	6.14e-03	-0.01	-1.06	8.95e-05	0.0	-1.69e-05
437	8	5.78e-03	-0.01	-1.00	8.57e-05	0.0	-1.57e-05
437	10	5.66e-03	-0.01	-0.98	8.44e-05	0.0	-1.53e-05
438	2	2.95e-03	-0.02	-1.43	1.19e-04	0.0	-2.36e-05
438	6	2.20e-03	-0.02	-1.06	8.92e-05	0.0	-1.73e-05
438	8	2.09e-03	-0.01	-1.00	8.54e-05	0.0	-1.61e-05
438	10	2.05e-03	-0.01	-0.98	8.42e-05	0.0	-1.57e-05
439	2	-2.13e-03	-0.02	-1.43	1.19e-04	0.0	-2.44e-05
439	6	-1.55e-03	-0.02	-1.06	8.89e-05	0.0	-1.79e-05
439	8	-1.43e-03	-0.02	-1.00	8.52e-05	0.0	-1.66e-05
439	10	-1.39e-03	-0.02	-0.98	8.39e-05	0.0	-1.62e-05
440	2	-7.70e-03	-0.02	-1.43	1.18e-04	0.0	-2.51e-05
440	6	-5.66e-03	-0.02	-1.06	8.85e-05	0.0	-1.84e-05
440	8	-5.28e-03	-0.02	-1.00	8.48e-05	0.0	-1.71e-05
440	10	-5.15e-03	-0.02	-0.98	8.36e-05	0.0	-1.67e-05
441	2	-0.01	-0.03	-1.43	1.18e-04	0.0	-2.59e-05
441	6	-9.26e-03	-0.02	-1.06	8.83e-05	0.0	-1.90e-05
441	8	-8.65e-03	-0.02	-1.00	8.45e-05	0.0	-1.77e-05
441	10	-8.45e-03	-0.02	-0.98	8.33e-05	0.0	-1.72e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

442	2	-0.02	-0.03	-1.43	1.18e-04	0.0	-2.69e-05
442	6	-0.01	-0.02	-1.06	8.80e-05	0.0	-1.97e-05
442	8	-0.01	-0.02	-1.00	8.43e-05	0.0	-1.83e-05
442	10	-0.01	-0.02	-0.98	8.31e-05	0.0	-1.79e-05
443	2	-0.02	-0.03	-1.43	1.17e-04	0.0	-2.80e-05
443	6	-0.02	-0.02	-1.06	8.77e-05	0.0	-2.05e-05
443	8	-0.02	-0.02	-1.00	8.40e-05	0.0	-1.91e-05
443	10	-0.01	-0.02	-0.98	8.28e-05	0.0	-1.86e-05
444	2	-0.03	-0.03	-1.43	1.17e-04	0.0	-2.91e-05
444	6	-0.02	-0.02	-1.06	8.75e-05	0.0	-2.14e-05
444	8	-0.02	-0.02	-1.00	8.38e-05	0.0	-1.99e-05
444	10	-0.02	-0.02	-0.98	8.26e-05	0.0	-1.94e-05
445	2	-0.03	-0.03	-1.43	1.17e-04	0.0	-3.03e-05
445	6	-0.02	-0.02	-1.06	8.73e-05	0.0	-2.23e-05
445	8	-0.02	-0.02	-1.00	8.36e-05	0.0	-2.07e-05
445	10	-0.02	-0.02	-0.98	8.24e-05	0.0	-2.02e-05
446	2	-0.04	-0.03	-1.43	1.16e-04	0.0	-3.16e-05
446	6	-0.03	-0.03	-1.06	8.71e-05	0.0	-2.32e-05
446	8	-0.03	-0.02	-1.00	8.34e-05	0.0	-2.15e-05
446	10	-0.02	-0.02	-0.98	8.22e-05	0.0	-2.10e-05
447	2	-0.04	-0.04	-1.43	1.16e-04	-3.29e-04	-3.28e-05
447	6	-0.03	-0.03	-1.06	8.69e-05	-2.43e-04	-2.41e-05
447	8	-0.03	-0.03	-1.00	8.33e-05	-2.28e-04	-2.24e-05
447	10	-0.03	-0.03	-0.98	8.21e-05	-2.23e-04	-2.18e-05
448	2	0.06	-4.52e-03	-1.38	1.25e-04	0.0	-2.21e-05
448	6	0.05	-3.42e-03	-1.02	9.30e-05	0.0	-1.63e-05
448	8	0.04	-3.32e-03	-0.97	8.89e-05	0.0	-1.52e-05
448	10	0.04	-3.29e-03	-0.95	8.75e-05	0.0	-1.49e-05
449	2	0.07	-2.65e-03	-1.38	1.25e-04	0.0	-2.21e-05
449	6	0.05	-2.02e-03	-1.02	9.30e-05	0.0	-1.63e-05
449	8	0.05	-1.99e-03	-0.97	8.89e-05	0.0	-1.53e-05
449	10	0.05	-1.98e-03	-0.95	8.75e-05	0.0	-1.50e-05
450	2	0.06	-6.39e-03	-1.38	1.25e-04	0.0	-2.24e-05
450	6	0.04	-4.81e-03	-1.02	9.30e-05	0.0	-1.65e-05
450	8	0.04	-4.66e-03	-0.97	8.89e-05	0.0	-1.55e-05
450	10	0.04	-4.61e-03	-0.95	8.75e-05	0.0	-1.51e-05
451	2	0.05	-8.26e-03	-1.38	1.24e-04	0.0	-2.28e-05
451	6	0.04	-6.21e-03	-1.02	9.30e-05	0.0	-1.68e-05
451	8	0.03	-5.99e-03	-0.97	8.88e-05	0.0	-1.57e-05
451	10	0.03	-5.92e-03	-0.95	8.75e-05	0.0	-1.54e-05
452	2	0.04	-0.01	-1.38	1.24e-04	0.0	-2.31e-05
452	6	0.03	-7.60e-03	-1.02	9.29e-05	0.0	-1.70e-05
452	8	0.03	-7.32e-03	-0.97	8.88e-05	0.0	-1.59e-05
452	10	0.03	-7.23e-03	-0.95	8.74e-05	0.0	-1.55e-05
453	2	0.04	-0.01	-1.38	1.24e-04	0.0	-2.34e-05
453	6	0.03	-8.99e-03	-1.02	9.29e-05	0.0	-1.72e-05
453	8	0.03	-8.66e-03	-0.97	8.88e-05	0.0	-1.61e-05
453	10	0.03	-8.54e-03	-0.95	8.74e-05	0.0	-1.57e-05
454	2	0.03	-0.01	-1.38	1.24e-04	0.0	-2.37e-05
454	6	0.02	-0.01	-1.02	9.28e-05	0.0	-1.75e-05
454	8	0.02	-9.99e-03	-0.97	8.87e-05	0.0	-1.63e-05
454	10	0.02	-9.85e-03	-0.95	8.73e-05	0.0	-1.60e-05
455	2	0.03	-0.02	-1.38	1.24e-04	0.0	-2.41e-05
455	6	0.02	-0.01	-1.02	9.28e-05	0.0	-1.77e-05
455	8	0.02	-0.01	-0.97	8.87e-05	0.0	-1.65e-05
455	10	0.02	-0.01	-0.95	8.73e-05	0.0	-1.62e-05
456	2	0.02	-0.02	-1.38	1.24e-04	0.0	-2.44e-05
456	6	0.01	-0.01	-1.02	9.28e-05	0.0	-1.80e-05
456	8	0.01	-0.01	-0.97	8.87e-05	0.0	-1.68e-05
456	10	0.01	-0.01	-0.95	8.73e-05	0.0	-1.64e-05
457	2	0.01	-0.02	-1.38	1.24e-04	0.0	-2.48e-05
457	6	0.01	-0.01	-1.03	9.27e-05	0.0	-1.83e-05
457	8	0.01	-0.01	-0.97	8.87e-05	0.0	-1.70e-05
457	10	0.01	-0.01	-0.95	8.73e-05	0.0	-1.66e-05
458	2	9.94e-03	-0.02	-1.38	1.24e-04	0.0	-2.54e-05
458	6	7.34e-03	-0.02	-1.03	9.29e-05	0.0	-1.87e-05

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458	8	6.89e-03	-0.02	-0.97	8.88e-05	0.0	-1.74e-05
458	10	6.74e-03	-0.02	-0.95	8.75e-05	0.0	-1.70e-05
459	2	5.11e-03	-0.02	-1.38	1.25e-04	0.0	-2.62e-05
459	6	3.78e-03	-0.02	-1.03	9.32e-05	0.0	-1.93e-05
459	8	3.55e-03	-0.02	-0.97	8.92e-05	0.0	-1.80e-05
459	10	3.48e-03	-0.02	-0.95	8.78e-05	0.0	-1.75e-05
460	2	8.09e-04	-0.03	-1.38	1.26e-04	0.0	-2.77e-05
460	6	6.02e-04	-0.02	-1.03	9.39e-05	0.0	-2.04e-05
460	8	5.71e-04	-0.02	-0.97	8.98e-05	0.0	-1.90e-05
460	10	5.61e-04	-0.02	-0.95	8.84e-05	0.0	-1.86e-05
461	2	-4.14e-03	-0.03	-1.38	1.26e-04	0.0	-2.86e-05
461	6	-3.05e-03	-0.02	-1.03	9.43e-05	0.0	-2.10e-05
461	8	-2.86e-03	-0.02	-0.97	9.01e-05	0.0	-1.96e-05
461	10	-2.80e-03	-0.02	-0.95	8.87e-05	0.0	-1.91e-05
462	2	-9.50e-03	-0.03	-1.38	1.27e-04	0.0	-2.98e-05
462	6	-7.01e-03	-0.02	-1.03	9.45e-05	0.0	-2.19e-05
462	8	-6.58e-03	-0.02	-0.97	9.04e-05	0.0	-2.04e-05
462	10	-6.43e-03	-0.02	-0.95	8.90e-05	0.0	-1.99e-05
463	2	-0.02	-0.03	-1.38	1.27e-04	0.0	-3.10e-05
463	6	-0.01	-0.02	-1.03	9.47e-05	0.0	-2.28e-05
463	8	-0.01	-0.02	-0.97	9.05e-05	0.0	-2.12e-05
463	10	-0.01	-0.02	-0.95	8.91e-05	0.0	-2.07e-05
464	2	-0.02	-0.03	-1.38	1.27e-04	0.0	-3.22e-05
464	6	-0.02	-0.02	-1.03	9.47e-05	0.0	-2.37e-05
464	8	-0.01	-0.02	-0.97	9.05e-05	0.0	-2.21e-05
464	10	-0.01	-0.02	-0.95	8.92e-05	0.0	-2.15e-05
465	2	-0.03	-0.03	-1.38	1.27e-04	0.0	-3.34e-05
465	6	-0.02	-0.03	-1.03	9.47e-05	0.0	-2.46e-05
465	8	-0.02	-0.02	-0.97	9.06e-05	0.0	-2.29e-05
465	10	-0.02	-0.02	-0.95	8.92e-05	0.0	-2.24e-05
466	2	-0.03	-0.04	-1.38	1.27e-04	0.0	-3.47e-05
466	6	-0.02	-0.03	-1.03	9.47e-05	0.0	-2.55e-05
466	8	-0.02	-0.03	-0.97	9.06e-05	0.0	-2.38e-05
466	10	-0.02	-0.03	-0.95	8.92e-05	0.0	-2.32e-05
467	2	-0.04	-0.04	-1.38	1.27e-04	0.0	-3.59e-05
467	6	-0.03	-0.03	-1.03	9.47e-05	0.0	-2.64e-05
467	8	-0.03	-0.03	-0.97	9.05e-05	0.0	-2.46e-05
467	10	-0.02	-0.03	-0.95	8.91e-05	0.0	-2.40e-05
468	2	-0.04	-0.04	-1.39	1.27e-04	-4.02e-04	-3.71e-05
468	6	-0.03	-0.03	-1.03	9.46e-05	-2.97e-04	-2.73e-05
468	8	-0.03	-0.03	-0.97	9.05e-05	-2.78e-04	-2.54e-05
468	10	-0.03	-0.03	-0.95	8.91e-05	-2.72e-04	-2.48e-05
469	2	0.06	-7.41e-03	-1.33	1.26e-04	0.0	-2.52e-05
469	6	0.05	-5.55e-03	-0.99	9.43e-05	0.0	-1.86e-05
469	8	0.04	-5.32e-03	-0.93	9.00e-05	0.0	-1.75e-05
469	10	0.04	-5.25e-03	-0.91	8.86e-05	0.0	-1.71e-05
470	2	0.07	-5.51e-03	-1.33	1.25e-04	0.0	-2.52e-05
470	6	0.05	-4.13e-03	-0.98	9.36e-05	0.0	-1.86e-05
470	8	0.05	-3.98e-03	-0.93	8.94e-05	0.0	-1.75e-05
470	10	0.05	-3.92e-03	-0.91	8.79e-05	0.0	-1.71e-05
471	2	0.06	-9.31e-03	-1.33	1.27e-04	0.0	-2.60e-05
471	6	0.04	-6.97e-03	-0.99	9.48e-05	0.0	-1.92e-05
471	8	0.04	-6.68e-03	-0.93	9.05e-05	0.0	-1.80e-05
471	10	0.04	-6.59e-03	-0.91	8.90e-05	0.0	-1.76e-05
472	2	0.05	-0.01	-1.33	1.27e-04	0.0	-2.63e-05
472	6	0.04	-8.39e-03	-0.99	9.47e-05	0.0	-1.94e-05
472	8	0.04	-8.04e-03	-0.93	9.04e-05	0.0	-1.82e-05
472	10	0.03	-7.92e-03	-0.91	8.90e-05	0.0	-1.78e-05
473	2	0.05	-0.01	-1.33	1.27e-04	0.0	-2.65e-05
473	6	0.03	-9.81e-03	-0.99	9.48e-05	0.0	-1.96e-05
473	8	0.03	-9.39e-03	-0.93	9.05e-05	0.0	-1.84e-05
473	10	0.03	-9.26e-03	-0.91	8.91e-05	0.0	-1.80e-05
474	2	0.04	-0.02	-1.33	1.27e-04	0.0	-2.68e-05
474	6	0.03	-0.01	-0.99	9.50e-05	0.0	-1.98e-05
474	8	0.03	-0.01	-0.93	9.07e-05	0.0	-1.86e-05
474	10	0.03	-0.01	-0.91	8.93e-05	0.0	-1.81e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

475	2	0.03	-0.02	-1.33	1.28e-04	0.0	-2.73e-05
475	6	0.02	-0.01	-0.99	9.54e-05	0.0	-2.01e-05
475	8	0.02	-0.01	-0.93	9.11e-05	0.0	-1.89e-05
475	10	0.02	-0.01	-0.91	8.96e-05	0.0	-1.85e-05
476	2	0.03	-0.02	-1.33	1.28e-04	0.0	-2.80e-05
476	6	0.02	-0.01	-0.98	9.59e-05	0.0	-2.06e-05
476	8	0.02	-0.01	-0.93	9.15e-05	0.0	-1.93e-05
476	10	0.02	-0.01	-0.91	9.00e-05	0.0	-1.89e-05
477	2	0.02	-0.02	-1.33	1.29e-04	0.0	-2.86e-05
477	6	0.02	-0.02	-0.98	9.64e-05	0.0	-2.11e-05
477	8	0.01	-0.01	-0.93	9.20e-05	0.0	-1.98e-05
477	10	0.01	-0.01	-0.91	9.06e-05	0.0	-1.93e-05
478	2	0.02	-0.02	-1.33	1.31e-04	0.0	-3.02e-05
478	6	0.01	-0.02	-0.98	9.77e-05	0.0	-2.22e-05
478	8	0.01	-0.02	-0.93	9.32e-05	0.0	-2.08e-05
478	10	0.01	-0.02	-0.91	9.18e-05	0.0	-2.03e-05
479	2	0.01	-0.02	-1.33	1.32e-04	0.0	-3.11e-05
479	6	8.23e-03	-0.02	-0.98	9.88e-05	0.0	-2.29e-05
479	8	7.66e-03	-0.02	-0.93	9.43e-05	0.0	-2.14e-05
479	10	7.47e-03	-0.02	-0.91	9.28e-05	0.0	-2.10e-05
480	2	6.35e-03	-0.03	-1.33	1.34e-04	0.0	-3.18e-05
480	6	4.65e-03	-0.02	-0.99	9.98e-05	0.0	-2.34e-05
480	8	4.31e-03	-0.02	-0.93	9.52e-05	0.0	-2.19e-05
480	10	4.19e-03	-0.02	-0.91	9.37e-05	0.0	-2.14e-05
481	2	2.01e-03	-0.03	-1.33	1.35e-04	0.0	-3.24e-05
481	6	1.45e-03	-0.02	-0.99	1.00e-04	0.0	-2.39e-05
481	8	1.31e-03	-0.02	-0.93	9.59e-05	0.0	-2.23e-05
481	10	1.26e-03	-0.02	-0.91	9.44e-05	0.0	-2.18e-05
482	2	-3.50e-03	-0.03	-1.33	1.35e-04	0.0	-3.30e-05
482	6	-2.61e-03	-0.02	-0.99	1.01e-04	0.0	-2.43e-05
482	8	-2.48e-03	-0.02	-0.93	9.62e-05	0.0	-2.27e-05
482	10	-2.44e-03	-0.02	-0.91	9.47e-05	0.0	-2.22e-05
483	2	-9.24e-03	-0.03	-1.33	1.36e-04	0.0	-3.38e-05
483	6	-6.84e-03	-0.02	-0.99	1.01e-04	0.0	-2.49e-05
483	8	-6.44e-03	-0.02	-0.93	9.65e-05	0.0	-2.33e-05
483	10	-6.31e-03	-0.02	-0.91	9.49e-05	0.0	-2.27e-05
484	2	-0.01	-0.03	-1.33	1.36e-04	0.0	-3.48e-05
484	6	-0.01	-0.03	-0.99	1.01e-04	0.0	-2.56e-05
484	8	-0.01	-0.02	-0.93	9.68e-05	0.0	-2.39e-05
484	10	-0.01	-0.02	-0.91	9.52e-05	0.0	-2.34e-05
485	2	-0.02	-0.04	-1.33	1.36e-04	0.0	-3.59e-05
485	6	-0.02	-0.03	-0.99	1.02e-04	0.0	-2.65e-05
485	8	-0.01	-0.03	-0.93	9.71e-05	0.0	-2.47e-05
485	10	-0.01	-0.03	-0.92	9.55e-05	0.0	-2.41e-05
486	2	-0.03	-0.04	-1.33	1.37e-04	0.0	-3.72e-05
486	6	-0.02	-0.03	-0.99	1.02e-04	0.0	-2.74e-05
486	8	-0.02	-0.03	-0.93	9.74e-05	0.0	-2.56e-05
486	10	-0.02	-0.03	-0.92	9.58e-05	0.0	-2.50e-05
487	2	-0.03	-0.04	-1.33	1.37e-04	0.0	-3.85e-05
487	6	-0.02	-0.03	-0.99	1.02e-04	0.0	-2.83e-05
487	8	-0.02	-0.03	-0.93	9.76e-05	0.0	-2.65e-05
487	10	-0.02	-0.03	-0.92	9.61e-05	0.0	-2.59e-05
488	2	-0.04	-0.04	-1.33	1.38e-04	0.0	-3.98e-05
488	6	-0.03	-0.03	-0.99	1.03e-04	0.0	-2.93e-05
488	8	-0.03	-0.03	-0.93	9.79e-05	0.0	-2.74e-05
488	10	-0.02	-0.03	-0.92	9.63e-05	0.0	-2.68e-05
489	2	-0.04	-0.05	-1.33	1.38e-04	-4.37e-04	-4.12e-05
489	6	-0.03	-0.03	-0.99	1.03e-04	-3.22e-04	-3.03e-05
489	8	-0.03	-0.03	-0.93	9.81e-05	-3.02e-04	-2.83e-05
489	10	-0.03	-0.03	-0.92	9.65e-05	-2.95e-04	-2.77e-05
490	2	0.06	-0.01	-1.27	1.19e-04	-2.35e-04	-2.42e-05
490	6	0.05	-8.01e-03	-0.94	8.85e-05	-1.74e-04	-1.78e-05
490	8	0.04	-7.63e-03	-0.89	8.44e-05	-1.63e-04	-1.67e-05
490	10	0.04	-7.51e-03	-0.87	8.30e-05	-1.60e-04	-1.64e-05
491	2	0.07	-9.01e-03	-1.27	1.10e-04	-5.49e-05	-2.10e-05
491	6	0.05	-6.72e-03	-0.94	8.22e-05	-4.06e-05	-1.55e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015
Certificate No. Q204

SR EN ISO 14001:2015
Certificate No. E81

SR EN ISO/IEC 27001:2017
Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

491	8	0.05	-6.41e-03	-0.89	7.84e-05	-3.83e-05	-1.45e-05
491	10	0.05	-6.30e-03	-0.87	7.71e-05	-3.76e-05	-1.42e-05
492	2	0.06	-0.01	-1.27	1.26e-04	-3.61e-04	-2.64e-05
492	6	0.04	-9.38e-03	-0.94	9.41e-05	-2.66e-04	-1.94e-05
492	8	0.04	-8.95e-03	-0.89	8.97e-05	-2.50e-04	-1.82e-05
492	10	0.04	-8.80e-03	-0.88	8.83e-05	-2.45e-04	-1.78e-05
493	2	0.05	-0.01	-1.27	1.28e-04	-3.77e-04	-2.68e-05
493	6	0.04	-0.01	-0.94	9.53e-05	-2.78e-04	-1.98e-05
493	8	0.04	-0.01	-0.89	9.09e-05	-2.61e-04	-1.85e-05
493	10	0.04	-0.01	-0.88	8.94e-05	-2.55e-04	-1.81e-05
494	2	0.05	-0.02	-1.27	1.29e-04	-3.86e-04	-2.74e-05
494	6	0.03	-0.01	-0.94	9.65e-05	-2.85e-04	-2.02e-05
494	8	0.03	-0.01	-0.89	9.20e-05	-2.67e-04	-1.89e-05
494	10	0.03	-0.01	-0.88	9.05e-05	-2.62e-04	-1.85e-05
495	2	0.04	-0.02	-1.27	1.31e-04	-3.91e-04	-2.80e-05
495	6	0.03	-0.01	-0.95	9.76e-05	-2.88e-04	-2.06e-05
495	8	0.03	-0.01	-0.89	9.31e-05	-2.71e-04	-1.93e-05
495	10	0.03	-0.01	-0.88	9.16e-05	-2.65e-04	-1.89e-05
496	2	0.03	-0.02	-1.28	1.32e-04	-3.92e-04	-2.86e-05
496	6	0.03	-0.02	-0.95	9.87e-05	-2.89e-04	-2.11e-05
496	8	0.02	-0.01	-0.89	9.42e-05	-2.71e-04	-1.97e-05
496	10	0.02	-0.01	-0.88	9.26e-05	-2.65e-04	-1.93e-05
497	2	0.03	-0.02	-1.28	1.34e-04	-3.91e-04	-2.93e-05
497	6	0.02	-0.02	-0.95	9.98e-05	-2.89e-04	-2.16e-05
497	8	0.02	-0.02	-0.90	9.52e-05	-2.71e-04	-2.02e-05
497	10	0.02	-0.02	-0.88	9.37e-05	-2.65e-04	-1.98e-05
498	2	0.02	-0.02	-1.28	1.35e-04	-3.89e-04	-3.00e-05
498	6	0.02	-0.02	-0.95	1.01e-04	-2.87e-04	-2.21e-05
498	8	0.02	-0.02	-0.90	9.62e-05	-2.70e-04	-2.07e-05
498	10	0.02	-0.02	-0.88	9.47e-05	-2.64e-04	-2.03e-05
499	2	0.02	-0.03	-1.28	1.37e-04	-3.88e-04	-3.09e-05
499	6	0.01	-0.02	-0.95	1.02e-04	-2.86e-04	-2.28e-05
499	8	0.01	-0.02	-0.90	9.73e-05	-2.68e-04	-2.13e-05
499	10	0.01	-0.02	-0.88	9.57e-05	-2.63e-04	-2.08e-05
500	2	0.01	-0.03	-1.28	1.38e-04	-3.85e-04	-3.17e-05
500	6	8.31e-03	-0.02	-0.95	1.03e-04	-2.85e-04	-2.34e-05
500	8	7.72e-03	-0.02	-0.90	9.83e-05	-2.67e-04	-2.19e-05
500	10	7.53e-03	-0.02	-0.88	9.67e-05	-2.61e-04	-2.14e-05
501	2	5.54e-03	-0.03	-1.28	1.40e-04	-3.83e-04	-3.26e-05
501	6	4.04e-03	-0.02	-0.95	1.04e-04	-2.82e-04	-2.41e-05
501	8	3.71e-03	-0.02	-0.90	9.94e-05	-2.65e-04	-2.25e-05
501	10	3.61e-03	-0.02	-0.88	9.78e-05	-2.59e-04	-2.20e-05
502	1	-5.17e-04	-0.03	-1.02	1.17e-04	-2.92e-04	-2.57e-05
502	2	-1.96e-04	-0.03	-1.28	1.41e-04	-3.79e-04	-3.36e-05
502	5	-4.08e-04	-0.02	-0.78	8.89e-05	-2.22e-04	-1.95e-05
502	6	-1.95e-04	-0.02	-0.95	1.05e-04	-2.79e-04	-2.48e-05
502	7	-4.08e-04	-0.02	-0.78	8.89e-05	-2.22e-04	-1.95e-05
502	8	-2.59e-04	-0.02	-0.90	1.00e-04	-2.62e-04	-2.32e-05
502	9	-4.08e-04	-0.02	-0.78	8.89e-05	-2.22e-04	-1.95e-05
502	10	-2.80e-04	-0.02	-0.88	9.88e-05	-2.56e-04	-2.27e-05
503	2	-5.93e-03	-0.03	-1.28	1.43e-04	-3.73e-04	-3.47e-05
503	6	-4.43e-03	-0.03	-0.95	1.07e-04	-2.75e-04	-2.56e-05
503	8	-4.23e-03	-0.02	-0.90	1.02e-04	-2.58e-04	-2.39e-05
503	10	-4.16e-03	-0.02	-0.88	9.99e-05	-2.52e-04	-2.34e-05
504	2	-0.01	-0.04	-1.28	1.45e-04	-3.61e-04	-3.58e-05
504	6	-8.61e-03	-0.03	-0.95	1.08e-04	-2.66e-04	-2.64e-05
504	8	-8.15e-03	-0.03	-0.90	1.03e-04	-2.50e-04	-2.47e-05
504	10	-8.00e-03	-0.03	-0.88	1.01e-04	-2.44e-04	-2.42e-05
505	2	-0.02	-0.04	-1.28	1.46e-04	-3.46e-04	-3.70e-05
505	6	-0.01	-0.03	-0.95	1.09e-04	-2.55e-04	-2.73e-05
505	8	-0.01	-0.03	-0.90	1.04e-04	-2.38e-04	-2.56e-05
505	10	-0.01	-0.03	-0.88	1.02e-04	-2.33e-04	-2.50e-05
506	2	-0.02	-0.04	-1.28	1.48e-04	-3.32e-04	-3.85e-05
506	6	-0.02	-0.03	-0.95	1.10e-04	-2.44e-04	-2.84e-05
506	8	-0.02	-0.03	-0.90	1.05e-04	-2.28e-04	-2.66e-05
506	10	-0.01	-0.03	-0.88	1.03e-04	-2.23e-04	-2.60e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015
Certificate No. Q204

SR EN ISO 14001:2015
Certificate No. E81

SR EN ISO/IEC 17001:2017
Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

507	2	-0.03	-0.04	-1.28	1.49e-04	-3.22e-04	-4.01e-05
507	6	-0.02	-0.03	-0.95	1.11e-04	-2.37e-04	-2.95e-05
507	8	-0.02	-0.03	-0.90	1.06e-04	-2.21e-04	-2.77e-05
507	10	-0.02	-0.03	-0.88	1.04e-04	-2.15e-04	-2.70e-05
508	2	-0.03	-0.05	-1.28	1.50e-04	-3.14e-04	-4.17e-05
508	6	-0.02	-0.03	-0.95	1.12e-04	-2.31e-04	-3.07e-05
508	8	-0.02	-0.03	-0.90	1.06e-04	-2.15e-04	-2.88e-05
508	10	-0.02	-0.03	-0.88	1.04e-04	-2.10e-04	-2.81e-05
509	2	-0.04	-0.05	-1.28	1.50e-04	-3.08e-04	-4.33e-05
509	6	-0.03	-0.04	-0.95	1.12e-04	-2.26e-04	-3.19e-05
509	8	-0.02	-0.03	-0.90	1.07e-04	-2.10e-04	-2.99e-05
509	10	-0.02	-0.03	-0.88	1.05e-04	-2.05e-04	-2.92e-05
510	2	-0.04	-0.05	-1.28	1.51e-04	-3.01e-04	-4.49e-05
510	6	-0.03	-0.04	-0.95	1.12e-04	-2.21e-04	-3.31e-05
510	8	-0.03	-0.04	-0.90	1.07e-04	-2.06e-04	-3.10e-05
510	10	-0.03	-0.04	-0.88	1.05e-04	-2.01e-04	-3.03e-05
511	2	0.06	-2.97e-03	-1.26	1.98e-04	0.0	-4.02e-05
511	6	0.05	-2.27e-03	-0.94	1.47e-04	0.0	-2.97e-05
511	8	0.04	-2.25e-03	-0.89	1.40e-04	0.0	-2.79e-05
511	10	0.04	-2.24e-03	-0.87	1.37e-04	0.0	-2.73e-05
512	1	0.04	-4.61e-04	-1.01	1.60e-04	0.0	-3.13e-05
512	2	0.07	-2.50e-06	-1.26	1.98e-04	0.0	-4.02e-05
512	5	0.03	-3.71e-04	-0.77	1.22e-04	0.0	-2.38e-05
512	6	0.05	-6.47e-05	-0.94	1.47e-04	0.0	-2.97e-05
512	7	0.03	-3.71e-04	-0.77	1.22e-04	0.0	-2.38e-05
512	8	0.04	-1.56e-04	-0.89	1.40e-04	0.0	-2.79e-05
512	9	0.03	-3.71e-04	-0.77	1.22e-04	0.0	-2.38e-05
512	10	0.04	-1.87e-04	-0.87	1.37e-04	0.0	-2.73e-05
513	2	0.06	-5.95e-03	-1.26	1.98e-04	0.0	-4.03e-05
513	6	0.04	-4.48e-03	-0.94	1.47e-04	0.0	-2.97e-05
513	8	0.04	-4.35e-03	-0.89	1.40e-04	0.0	-2.80e-05
513	10	0.04	-4.30e-03	-0.87	1.37e-04	0.0	-2.74e-05
514	2	0.05	-8.92e-03	-1.26	1.98e-04	0.0	-4.04e-05
514	6	0.04	-6.69e-03	-0.94	1.47e-04	0.0	-2.98e-05
514	8	0.03	-6.44e-03	-0.89	1.39e-04	0.0	-2.80e-05
514	10	0.03	-6.36e-03	-0.87	1.37e-04	0.0	-2.74e-05
515	2	0.05	-0.01	-1.26	1.97e-04	0.0	-4.04e-05
515	6	0.03	-8.89e-03	-0.94	1.47e-04	0.0	-2.99e-05
515	8	0.03	-8.53e-03	-0.89	1.39e-04	0.0	-2.81e-05
515	10	0.03	-8.41e-03	-0.87	1.37e-04	0.0	-2.75e-05
516	2	0.04	-0.01	-1.26	1.97e-04	0.0	-4.06e-05
516	6	0.03	-0.01	-0.94	1.46e-04	0.0	-3.00e-05
516	8	0.03	-0.01	-0.89	1.39e-04	0.0	-2.82e-05
516	10	0.02	-0.01	-0.87	1.36e-04	0.0	-2.76e-05
517	2	0.03	-0.02	-1.26	1.96e-04	0.0	-4.07e-05
517	6	0.02	-0.01	-0.94	1.46e-04	0.0	-3.00e-05
517	8	0.02	-0.01	-0.89	1.38e-04	0.0	-2.82e-05
517	10	0.02	-0.01	-0.87	1.36e-04	0.0	-2.76e-05
518	2	0.03	-0.02	-1.26	1.96e-04	0.0	-4.07e-05
518	6	0.02	-0.02	-0.94	1.45e-04	0.0	-3.01e-05
518	8	0.02	-0.01	-0.89	1.38e-04	0.0	-2.83e-05
518	10	0.02	-0.01	-0.87	1.36e-04	0.0	-2.77e-05
519	2	0.02	-0.02	-1.26	1.95e-04	0.0	-4.08e-05
519	6	0.02	-0.02	-0.94	1.45e-04	0.0	-3.01e-05
519	8	0.01	-0.02	-0.89	1.37e-04	0.0	-2.83e-05
519	10	0.01	-0.02	-0.87	1.35e-04	0.0	-2.77e-05
520	2	0.02	-0.03	-1.26	1.94e-04	0.0	-4.09e-05
520	6	0.01	-0.02	-0.94	1.44e-04	0.0	-3.02e-05
520	8	9.96e-03	-0.02	-0.89	1.37e-04	0.0	-2.84e-05
520	10	9.44e-03	-0.02	-0.87	1.34e-04	0.0	-2.78e-05
521	2	0.01	-0.03	-1.26	1.92e-04	0.0	-4.09e-05
521	6	7.37e-03	-0.02	-0.94	1.43e-04	0.0	-3.02e-05
521	8	6.18e-03	-0.02	-0.89	1.36e-04	0.0	-2.84e-05
521	10	5.78e-03	-0.02	-0.87	1.33e-04	0.0	-2.78e-05
522	2	4.94e-03	-0.03	-1.26	1.91e-04	0.0	-4.09e-05
522	6	3.22e-03	-0.02	-0.94	1.42e-04	0.0	-3.02e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

522	8	2.38e-03	-0.02	-0.89	1.35e-04	0.0	-2.84e-05
522	10	2.10e-03	-0.02	-0.87	1.32e-04	0.0	-2.77e-05
523	1	-3.18e-03	-0.03	-1.01	1.53e-04	0.0	-3.19e-05
523	2	-7.46e-04	-0.04	-1.26	1.89e-04	0.0	-4.11e-05
523	5	-2.53e-03	-0.02	-0.77	1.17e-04	0.0	-2.42e-05
523	6	-9.07e-04	-0.03	-0.94	1.40e-04	0.0	-3.04e-05
523	7	-2.53e-03	-0.02	-0.77	1.17e-04	0.0	-2.42e-05
523	8	-1.39e-03	-0.02	-0.88	1.33e-04	0.0	-2.85e-05
523	9	-2.53e-03	-0.02	-0.77	1.17e-04	0.0	-2.42e-05
523	10	-1.56e-03	-0.02	-0.87	1.31e-04	0.0	-2.79e-05
524	1	-7.14e-03	-0.03	-1.01	1.51e-04	0.0	-3.19e-05
524	2	-6.50e-03	-0.04	-1.26	1.86e-04	0.0	-4.12e-05
524	5	-5.52e-03	-0.02	-0.77	1.15e-04	0.0	-2.42e-05
524	6	-5.09e-03	-0.03	-0.93	1.38e-04	0.0	-3.04e-05
524	7	-5.52e-03	-0.02	-0.77	1.15e-04	0.0	-2.42e-05
524	8	-5.22e-03	-0.03	-0.88	1.31e-04	0.0	-2.86e-05
524	9	-5.52e-03	-0.02	-0.77	1.15e-04	0.0	-2.42e-05
524	10	-5.26e-03	-0.03	-0.87	1.29e-04	0.0	-2.79e-05
525	2	-0.01	-0.04	-1.26	1.81e-04	0.0	-4.14e-05
525	6	-9.78e-03	-0.03	-0.93	1.35e-04	0.0	-3.06e-05
525	8	-9.50e-03	-0.03	-0.88	1.28e-04	0.0	-2.87e-05
525	10	-9.40e-03	-0.03	-0.87	1.26e-04	0.0	-2.81e-05
526	2	-0.02	-0.04	-1.26	1.78e-04	0.0	-4.20e-05
526	6	-0.01	-0.03	-0.93	1.32e-04	0.0	-3.10e-05
526	8	-0.01	-0.03	-0.88	1.26e-04	0.0	-2.91e-05
526	10	-0.01	-0.03	-0.87	1.24e-04	0.0	-2.85e-05
527	2	-0.02	-0.05	-1.26	1.76e-04	0.0	-4.45e-05
527	6	-0.02	-0.03	-0.93	1.31e-04	0.0	-3.28e-05
527	8	-0.02	-0.03	-0.88	1.24e-04	0.0	-3.08e-05
527	10	-0.02	-0.03	-0.87	1.22e-04	0.0	-3.01e-05
528	2	-0.03	-0.05	-1.26	1.74e-04	0.0	-4.72e-05
528	6	-0.02	-0.04	-0.93	1.29e-04	0.0	-3.48e-05
528	8	-0.02	-0.03	-0.88	1.23e-04	0.0	-3.27e-05
528	10	-0.02	-0.03	-0.87	1.21e-04	0.0	-3.19e-05
529	2	-0.03	-0.05	-1.26	1.72e-04	0.0	-4.99e-05
529	6	-0.02	-0.04	-0.93	1.28e-04	0.0	-3.68e-05
529	8	-0.02	-0.04	-0.88	1.22e-04	0.0	-3.45e-05
529	10	-0.02	-0.04	-0.87	1.20e-04	0.0	-3.38e-05
530	2	-0.04	-0.05	-1.26	1.72e-04	0.0	-5.25e-05
530	6	-0.03	-0.04	-0.93	1.28e-04	0.0	-3.87e-05
530	8	-0.02	-0.04	-0.88	1.21e-04	0.0	-3.63e-05
530	10	-0.02	-0.04	-0.87	1.19e-04	0.0	-3.55e-05
531	2	-0.04	-0.06	-1.26	1.71e-04	-2.38e-04	-5.50e-05
531	6	-0.03	-0.04	-0.93	1.27e-04	-1.73e-04	-4.06e-05
531	8	-0.03	-0.04	-0.88	1.21e-04	-1.58e-04	-3.81e-05
531	10	-0.03	-0.04	-0.87	1.19e-04	-1.53e-04	-3.73e-05
532	2	0.06	-7.84e-03	-1.22	2.00e-04	0.0	-3.97e-05
532	6	0.05	-5.87e-03	-0.90	1.49e-04	0.0	-2.93e-05
532	8	0.04	-5.63e-03	-0.86	1.41e-04	0.0	-2.76e-05
532	10	0.04	-5.55e-03	-0.84	1.38e-04	0.0	-2.70e-05
533	2	0.07	-4.84e-03	-1.22	2.00e-04	0.0	-3.98e-05
533	6	0.05	-3.64e-03	-0.90	1.49e-04	0.0	-2.94e-05
533	8	0.04	-3.52e-03	-0.86	1.41e-04	0.0	-2.77e-05
533	10	0.04	-3.48e-03	-0.84	1.38e-04	0.0	-2.71e-05
534	2	0.06	-0.01	-1.22	2.00e-04	0.0	-4.02e-05
534	6	0.04	-8.10e-03	-0.90	1.49e-04	0.0	-2.97e-05
534	8	0.04	-7.75e-03	-0.86	1.41e-04	0.0	-2.79e-05
534	10	0.04	-7.63e-03	-0.84	1.39e-04	0.0	-2.73e-05
535	2	0.05	-0.01	-1.22	2.00e-04	0.0	-4.06e-05
535	6	0.04	-0.01	-0.90	1.49e-04	0.0	-3.00e-05
535	8	0.03	-9.87e-03	-0.86	1.41e-04	0.0	-2.82e-05
535	10	0.03	-9.71e-03	-0.84	1.38e-04	0.0	-2.76e-05
536	2	0.05	-0.02	-1.22	2.00e-04	0.0	-4.10e-05
536	6	0.03	-0.01	-0.90	1.48e-04	0.0	-3.03e-05
536	8	0.03	-0.01	-0.86	1.41e-04	0.0	-2.85e-05
536	10	0.03	-0.01	-0.84	1.38e-04	0.0	-2.79e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

537	2	0.04	-0.02	-1.22	2.00e-04	0.0	-4.15e-05
537	6	0.03	-0.01	-0.90	1.48e-04	0.0	-3.07e-05
537	8	0.03	-0.01	-0.86	1.41e-04	0.0	-2.88e-05
537	10	0.02	-0.01	-0.84	1.38e-04	0.0	-2.82e-05
538	2	0.03	-0.02	-1.22	1.99e-04	0.0	-4.21e-05
538	6	0.02	-0.02	-0.90	1.48e-04	0.0	-3.11e-05
538	8	0.02	-0.02	-0.86	1.40e-04	0.0	-2.92e-05
538	10	0.02	-0.02	-0.84	1.38e-04	0.0	-2.86e-05
539	2	0.03	-0.03	-1.22	1.99e-04	0.0	-4.27e-05
539	6	0.02	-0.02	-0.90	1.48e-04	0.0	-3.15e-05
539	8	0.02	-0.02	-0.86	1.40e-04	0.0	-2.96e-05
539	10	0.02	-0.02	-0.84	1.38e-04	0.0	-2.90e-05
540	2	0.02	-0.03	-1.22	1.98e-04	0.0	-4.33e-05
540	6	0.02	-0.02	-0.90	1.47e-04	0.0	-3.20e-05
540	8	0.01	-0.02	-0.86	1.40e-04	0.0	-3.00e-05
540	10	0.01	-0.02	-0.84	1.37e-04	0.0	-2.94e-05
541	2	0.02	-0.03	-1.22	1.97e-04	0.0	-4.41e-05
541	6	0.01	-0.02	-0.90	1.46e-04	0.0	-3.26e-05
541	8	9.95e-03	-0.02	-0.86	1.39e-04	0.0	-3.06e-05
541	10	9.43e-03	-0.02	-0.84	1.36e-04	0.0	-3.00e-05
542	2	0.01	-0.03	-1.22	1.96e-04	0.0	-4.49e-05
542	6	7.52e-03	-0.03	-0.90	1.46e-04	0.0	-3.32e-05
542	8	6.31e-03	-0.02	-0.86	1.38e-04	0.0	-3.12e-05
542	10	5.90e-03	-0.02	-0.84	1.36e-04	0.0	-3.05e-05
543	2	5.63e-03	-0.04	-1.22	1.95e-04	0.0	-4.60e-05
543	6	3.72e-03	-0.03	-0.90	1.45e-04	0.0	-3.40e-05
543	8	2.83e-03	-0.03	-0.86	1.38e-04	0.0	-3.19e-05
543	10	2.54e-03	-0.03	-0.84	1.35e-04	0.0	-3.12e-05
544	1	-2.07e-03	-0.03	-0.98	1.58e-04	0.0	-3.72e-05
544	2	8.66e-04	-0.04	-1.22	1.95e-04	0.0	-4.79e-05
544	5	-1.70e-03	-0.03	-0.75	1.20e-04	0.0	-2.82e-05
544	6	2.64e-04	-0.03	-0.90	1.45e-04	0.0	-3.54e-05
544	7	-1.70e-03	-0.03	-0.75	1.20e-04	0.0	-2.82e-05
544	8	-3.24e-04	-0.03	-0.86	1.37e-04	0.0	-3.33e-05
544	9	-1.70e-03	-0.03	-0.75	1.20e-04	0.0	-2.82e-05
544	10	-5.20e-04	-0.03	-0.84	1.35e-04	0.0	-3.25e-05
545	1	-5.29e-03	-0.04	-0.98	1.57e-04	0.0	-3.81e-05
545	2	-3.78e-03	-0.04	-1.22	1.94e-04	0.0	-4.91e-05
545	5	-4.12e-03	-0.03	-0.75	1.20e-04	0.0	-2.89e-05
545	6	-3.12e-03	-0.03	-0.90	1.44e-04	0.0	-3.63e-05
545	7	-4.12e-03	-0.03	-0.75	1.20e-04	0.0	-2.89e-05
545	8	-3.42e-03	-0.03	-0.86	1.37e-04	0.0	-3.41e-05
545	9	-4.12e-03	-0.03	-0.75	1.20e-04	0.0	-2.89e-05
545	10	-3.52e-03	-0.03	-0.84	1.35e-04	0.0	-3.33e-05
546	2	-9.13e-03	-0.05	-1.22	1.94e-04	0.0	-5.06e-05
546	6	-7.00e-03	-0.03	-0.91	1.44e-04	0.0	-3.73e-05
546	8	-6.97e-03	-0.03	-0.86	1.37e-04	0.0	-3.51e-05
546	10	-6.96e-03	-0.03	-0.84	1.34e-04	0.0	-3.43e-05
547	2	-0.01	-0.05	-1.22	1.93e-04	0.0	-5.21e-05
547	6	-0.01	-0.04	-0.91	1.44e-04	0.0	-3.85e-05
547	8	-0.01	-0.03	-0.86	1.36e-04	0.0	-3.61e-05
547	10	-0.01	-0.03	-0.84	1.34e-04	0.0	-3.54e-05
548	2	-0.02	-0.05	-1.22	1.93e-04	0.0	-5.39e-05
548	6	-0.01	-0.04	-0.91	1.43e-04	0.0	-3.98e-05
548	8	-0.01	-0.04	-0.86	1.36e-04	0.0	-3.74e-05
548	10	-0.01	-0.04	-0.84	1.33e-04	0.0	-3.66e-05
549	2	-0.02	-0.06	-1.22	1.92e-04	0.0	-5.59e-05
549	6	-0.02	-0.04	-0.91	1.43e-04	0.0	-4.13e-05
549	8	-0.02	-0.04	-0.86	1.35e-04	0.0	-3.88e-05
549	10	-0.02	-0.04	-0.84	1.33e-04	0.0	-3.79e-05
550	2	-0.03	-0.06	-1.22	1.91e-04	0.0	-5.79e-05
550	6	-0.02	-0.04	-0.91	1.42e-04	0.0	-4.27e-05
550	8	-0.02	-0.04	-0.86	1.35e-04	0.0	-4.01e-05
550	10	-0.02	-0.04	-0.84	1.33e-04	0.0	-3.93e-05
551	2	-0.03	-0.06	-1.22	1.91e-04	0.0	-5.99e-05
551	6	-0.03	-0.05	-0.91	1.42e-04	0.0	-4.42e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

551	8	-0.02	-0.04	-0.86	1.35e-04	0.0	-4.15e-05
551	10	-0.02	-0.04	-0.84	1.32e-04	0.0	-4.06e-05
552	2	-0.04	-0.06	-1.22	1.90e-04	-3.53e-04	-6.20e-05
552	6	-0.03	-0.05	-0.91	1.41e-04	-2.57e-04	-4.58e-05
552	8	-0.03	-0.05	-0.86	1.34e-04	-2.35e-04	-4.30e-05
552	10	-0.03	-0.04	-0.84	1.32e-04	-2.27e-04	-4.21e-05
553	2	0.06	-0.01	-1.17	2.03e-04	0.0	-4.13e-05
553	6	0.05	-9.51e-03	-0.87	1.51e-04	0.0	-3.05e-05
553	8	0.04	-9.06e-03	-0.82	1.43e-04	0.0	-2.87e-05
553	10	0.04	-8.90e-03	-0.81	1.41e-04	0.0	-2.81e-05
554	2	0.07	-9.72e-03	-1.17	2.02e-04	0.0	-4.12e-05
554	6	0.05	-7.25e-03	-0.87	1.50e-04	0.0	-3.05e-05
554	8	0.04	-6.91e-03	-0.82	1.42e-04	0.0	-2.87e-05
554	10	0.04	-6.80e-03	-0.81	1.40e-04	0.0	-2.81e-05
555	2	0.06	-0.02	-1.17	2.04e-04	0.0	-4.25e-05
555	6	0.04	-0.01	-0.87	1.52e-04	0.0	-3.14e-05
555	8	0.04	-0.01	-0.82	1.44e-04	0.0	-2.95e-05
555	10	0.04	-0.01	-0.81	1.41e-04	0.0	-2.89e-05
556	2	0.05	-0.02	-1.17	2.04e-04	0.0	-4.31e-05
556	6	0.04	-0.01	-0.87	1.52e-04	0.0	-3.18e-05
556	8	0.03	-0.01	-0.82	1.44e-04	0.0	-2.99e-05
556	10	0.03	-0.01	-0.81	1.41e-04	0.0	-2.93e-05
557	2	0.05	-0.02	-1.17	2.04e-04	0.0	-4.35e-05
557	6	0.03	-0.02	-0.87	1.52e-04	0.0	-3.22e-05
557	8	0.03	-0.02	-0.82	1.44e-04	0.0	-3.02e-05
557	10	0.03	-0.02	-0.81	1.41e-04	0.0	-2.96e-05
558	2	0.04	-0.03	-1.17	2.04e-04	0.0	-4.41e-05
558	6	0.03	-0.02	-0.87	1.52e-04	0.0	-3.26e-05
558	8	0.03	-0.02	-0.82	1.44e-04	0.0	-3.06e-05
558	10	0.02	-0.02	-0.81	1.41e-04	0.0	-3.00e-05
559	2	0.03	-0.03	-1.17	2.05e-04	0.0	-4.48e-05
559	6	0.02	-0.02	-0.87	1.52e-04	0.0	-3.31e-05
559	8	0.02	-0.02	-0.82	1.44e-04	0.0	-3.11e-05
559	10	0.02	-0.02	-0.81	1.42e-04	0.0	-3.05e-05
560	2	0.03	-0.03	-1.17	2.05e-04	0.0	-4.57e-05
560	6	0.02	-0.02	-0.87	1.53e-04	0.0	-3.38e-05
560	8	0.02	-0.02	-0.82	1.45e-04	0.0	-3.18e-05
560	10	0.02	-0.02	-0.81	1.42e-04	0.0	-3.11e-05
561	2	0.02	-0.03	-1.17	2.06e-04	0.0	-4.67e-05
561	6	0.02	-0.03	-0.87	1.53e-04	0.0	-3.45e-05
561	8	0.02	-0.02	-0.82	1.45e-04	0.0	-3.25e-05
561	10	0.01	-0.02	-0.81	1.42e-04	0.0	-3.18e-05
562	2	0.02	-0.04	-1.17	2.07e-04	0.0	-4.87e-05
562	6	0.01	-0.03	-0.87	1.54e-04	0.0	-3.60e-05
562	8	0.01	-0.03	-0.82	1.46e-04	0.0	-3.38e-05
562	10	0.01	-0.03	-0.81	1.43e-04	0.0	-3.31e-05
563	2	0.01	-0.04	-1.17	2.08e-04	0.0	-5.01e-05
563	6	0.01	-0.03	-0.87	1.55e-04	0.0	-3.70e-05
563	8	8.65e-03	-0.03	-0.82	1.47e-04	0.0	-3.48e-05
563	10	8.17e-03	-0.03	-0.81	1.44e-04	0.0	-3.40e-05
564	2	9.42e-03	-0.04	-1.17	2.09e-04	0.0	-5.13e-05
564	6	6.48e-03	-0.03	-0.87	1.55e-04	0.0	-3.79e-05
564	8	5.35e-03	-0.03	-0.82	1.47e-04	0.0	-3.56e-05
564	10	4.98e-03	-0.03	-0.81	1.44e-04	0.0	-3.49e-05
565	2	4.48e-03	-0.05	-1.17	2.08e-04	0.0	-5.28e-05
565	6	2.89e-03	-0.03	-0.87	1.55e-04	0.0	-3.90e-05
565	8	2.08e-03	-0.03	-0.82	1.47e-04	0.0	-3.67e-05
565	10	1.81e-03	-0.03	-0.81	1.44e-04	0.0	-3.59e-05
566	1	-3.50e-03	-0.04	-0.95	1.68e-04	0.0	-4.18e-05
566	2	-1.22e-03	-0.05	-1.17	2.08e-04	0.0	-5.38e-05
566	5	-2.77e-03	-0.03	-0.72	1.28e-04	0.0	-3.17e-05
566	6	-1.25e-03	-0.04	-0.87	1.54e-04	0.0	-3.98e-05
566	7	-2.77e-03	-0.03	-0.72	1.28e-04	0.0	-3.17e-05
566	8	-1.71e-03	-0.04	-0.83	1.46e-04	0.0	-3.74e-05
566	9	-2.77e-03	-0.03	-0.72	1.28e-04	0.0	-3.17e-05
566	10	-1.86e-03	-0.03	-0.81	1.44e-04	0.0	-3.66e-05

PROJETTO engineering s.r.l.

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Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

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Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

567	1	-7.43e-03	-0.04	-0.95	1.68e-04	0.0	-4.30e-05
567	2	-6.91e-03	-0.05	-1.17	2.08e-04	0.0	-5.55e-05
567	5	-5.73e-03	-0.03	-0.72	1.28e-04	0.0	-3.27e-05
567	6	-5.38e-03	-0.04	-0.87	1.54e-04	0.0	-4.10e-05
567	7	-5.73e-03	-0.03	-0.72	1.28e-04	0.0	-3.27e-05
567	8	-5.49e-03	-0.04	-0.83	1.46e-04	0.0	-3.85e-05
567	9	-5.73e-03	-0.03	-0.72	1.28e-04	0.0	-3.27e-05
567	10	-5.52e-03	-0.04	-0.81	1.44e-04	0.0	-3.76e-05
568	2	-0.01	-0.06	-1.17	2.07e-04	0.0	-5.72e-05
568	6	-9.39e-03	-0.04	-0.87	1.54e-04	0.0	-4.22e-05
568	8	-9.15e-03	-0.04	-0.83	1.46e-04	0.0	-3.97e-05
568	10	-9.08e-03	-0.04	-0.81	1.43e-04	0.0	-3.88e-05
569	2	-0.02	-0.06	-1.17	2.07e-04	0.0	-5.90e-05
569	6	-0.01	-0.04	-0.87	1.54e-04	0.0	-4.36e-05
569	8	-0.01	-0.04	-0.83	1.46e-04	0.0	-4.09e-05
569	10	-0.01	-0.04	-0.81	1.43e-04	0.0	-4.00e-05
570	2	-0.02	-0.06	-1.17	2.07e-04	0.0	-6.08e-05
570	6	-0.02	-0.05	-0.87	1.54e-04	0.0	-4.49e-05
570	8	-0.02	-0.04	-0.83	1.46e-04	0.0	-4.22e-05
570	10	-0.02	-0.04	-0.81	1.43e-04	0.0	-4.12e-05
571	2	-0.03	-0.07	-1.17	2.07e-04	0.0	-6.25e-05
571	6	-0.02	-0.05	-0.87	1.54e-04	0.0	-4.62e-05
571	8	-0.02	-0.05	-0.83	1.46e-04	0.0	-4.34e-05
571	10	-0.02	-0.05	-0.81	1.43e-04	0.0	-4.24e-05
572	2	-0.03	-0.07	-1.17	2.07e-04	0.0	-6.42e-05
572	6	-0.03	-0.05	-0.87	1.54e-04	0.0	-4.74e-05
572	8	-0.02	-0.05	-0.83	1.46e-04	0.0	-4.45e-05
572	10	-0.02	-0.05	-0.81	1.43e-04	0.0	-4.36e-05
573	2	-0.04	-0.07	-1.17	2.08e-04	-4.03e-04	-6.69e-05
573	6	-0.03	-0.05	-0.87	1.54e-04	-2.93e-04	-4.94e-05
573	8	-0.03	-0.05	-0.83	1.46e-04	-2.68e-04	-4.64e-05
573	10	-0.03	-0.05	-0.81	1.44e-04	-2.60e-04	-4.54e-05
574	2	0.06	-0.02	-1.12	1.97e-04	-1.79e-04	-3.86e-05
574	6	0.04	-0.01	-0.83	1.46e-04	-1.30e-04	-2.85e-05
574	8	0.04	-0.01	-0.79	1.38e-04	-1.20e-04	-2.68e-05
574	10	0.04	-0.01	-0.77	1.36e-04	-1.17e-04	-2.62e-05
575	2	0.06	-0.02	-1.11	1.86e-04	-1.68e-05	-3.47e-05
575	6	0.05	-0.01	-0.83	1.38e-04	-1.34e-05	-2.56e-05
575	8	0.04	-0.01	-0.79	1.31e-04	-1.40e-05	-2.41e-05
575	10	0.04	-0.01	-0.77	1.28e-04	-1.42e-05	-2.36e-05
576	2	0.06	-0.02	-1.12	2.06e-04	-2.99e-04	-4.20e-05
576	6	0.04	-0.02	-0.83	1.53e-04	-2.17e-04	-3.10e-05
576	8	0.04	-0.01	-0.79	1.45e-04	-1.99e-04	-2.92e-05
576	10	0.04	-0.01	-0.78	1.42e-04	-1.93e-04	-2.86e-05
577	2	0.05	-0.02	-1.12	2.08e-04	-3.16e-04	-4.29e-05
577	6	0.04	-0.02	-0.83	1.54e-04	-2.29e-04	-3.17e-05
577	8	0.03	-0.02	-0.79	1.46e-04	-2.10e-04	-2.98e-05
577	10	0.03	-0.02	-0.78	1.44e-04	-2.03e-04	-2.92e-05
578	2	0.05	-0.03	-1.12	2.10e-04	-3.27e-04	-4.39e-05
578	6	0.03	-0.02	-0.83	1.56e-04	-2.38e-04	-3.25e-05
578	8	0.03	-0.02	-0.79	1.48e-04	-2.18e-04	-3.05e-05
578	10	0.03	-0.02	-0.78	1.45e-04	-2.11e-04	-2.99e-05
579	2	0.04	-0.03	-1.12	2.11e-04	-3.35e-04	-4.50e-05
579	6	0.03	-0.02	-0.83	1.57e-04	-2.44e-04	-3.33e-05
579	8	0.03	-0.02	-0.79	1.49e-04	-2.23e-04	-3.13e-05
579	10	0.03	-0.02	-0.78	1.46e-04	-2.16e-04	-3.06e-05
580	2	0.04	-0.03	-1.12	2.13e-04	-3.40e-04	-4.62e-05
580	6	0.03	-0.02	-0.83	1.58e-04	-2.47e-04	-3.42e-05
580	8	0.02	-0.02	-0.79	1.50e-04	-2.26e-04	-3.21e-05
580	10	0.02	-0.02	-0.78	1.47e-04	-2.19e-04	-3.14e-05
581	2	0.03	-0.04	-1.12	2.15e-04	-3.44e-04	-4.74e-05
581	6	0.02	-0.03	-0.83	1.59e-04	-2.50e-04	-3.51e-05
581	8	0.02	-0.03	-0.79	1.51e-04	-2.28e-04	-3.29e-05
581	10	0.02	-0.03	-0.78	1.48e-04	-2.21e-04	-3.22e-05
582	2	0.03	-0.04	-1.12	2.16e-04	-3.46e-04	-4.87e-05
582	6	0.02	-0.03	-0.83	1.60e-04	-2.51e-04	-3.60e-05

PROJETTO engineering s.r.l.

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Direttore Tecnico: ING. LEONARDO FILOTICO

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582	8	0.02	-0.03	-0.79	1.52e-04	-2.30e-04	-3.38e-05
582	10	0.02	-0.03	-0.78	1.49e-04	-2.23e-04	-3.31e-05
583	2	0.02	-0.04	-1.12	2.17e-04	-3.48e-04	-5.01e-05
583	6	0.01	-0.03	-0.83	1.61e-04	-2.53e-04	-3.70e-05
583	8	0.01	-0.03	-0.79	1.53e-04	-2.31e-04	-3.48e-05
583	10	0.01	-0.03	-0.78	1.50e-04	-2.24e-04	-3.40e-05
584	2	0.02	-0.05	-1.12	2.18e-04	-3.50e-04	-5.14e-05
584	6	0.01	-0.03	-0.83	1.62e-04	-2.54e-04	-3.80e-05
584	8	9.34e-03	-0.03	-0.79	1.54e-04	-2.32e-04	-3.57e-05
584	10	8.84e-03	-0.03	-0.78	1.51e-04	-2.25e-04	-3.49e-05
585	2	0.01	-0.05	-1.12	2.19e-04	-3.52e-04	-5.28e-05
585	6	7.00e-03	-0.04	-0.83	1.63e-04	-2.55e-04	-3.90e-05
585	8	5.84e-03	-0.04	-0.79	1.54e-04	-2.33e-04	-3.67e-05
585	10	5.45e-03	-0.03	-0.78	1.51e-04	-2.26e-04	-3.59e-05
586	2	4.86e-03	-0.05	-1.12	2.20e-04	-3.53e-04	-5.43e-05
586	6	3.17e-03	-0.04	-0.84	1.64e-04	-2.57e-04	-4.01e-05
586	8	2.34e-03	-0.04	-0.79	1.55e-04	-2.35e-04	-3.77e-05
586	10	2.06e-03	-0.04	-0.78	1.52e-04	-2.27e-04	-3.69e-05
587	1	-2.96e-03	-0.05	-0.91	1.78e-04	-2.44e-04	-4.33e-05
587	2	-4.62e-04	-0.06	-1.12	2.21e-04	-3.55e-04	-5.58e-05
587	5	-2.36e-03	-0.03	-0.70	1.35e-04	-1.84e-04	-3.29e-05
587	6	-6.98e-04	-0.04	-0.84	1.64e-04	-2.58e-04	-4.12e-05
587	7	-2.36e-03	-0.03	-0.70	1.35e-04	-1.84e-04	-3.29e-05
587	8	-1.20e-03	-0.04	-0.79	1.56e-04	-2.36e-04	-3.87e-05
587	9	-2.36e-03	-0.03	-0.70	1.35e-04	-1.84e-04	-3.29e-05
587	10	-1.36e-03	-0.04	-0.78	1.53e-04	-2.29e-04	-3.79e-05
588	1	-6.64e-03	-0.05	-0.91	1.79e-04	-2.46e-04	-4.45e-05
588	2	-5.81e-03	-0.06	-1.12	2.22e-04	-3.57e-04	-5.73e-05
588	5	-5.13e-03	-0.04	-0.70	1.36e-04	-1.85e-04	-3.38e-05
588	6	-4.58e-03	-0.04	-0.84	1.65e-04	-2.60e-04	-4.23e-05
588	7	-5.13e-03	-0.04	-0.70	1.36e-04	-1.85e-04	-3.38e-05
588	8	-4.75e-03	-0.04	-0.79	1.56e-04	-2.37e-04	-3.98e-05
588	9	-5.13e-03	-0.04	-0.70	1.36e-04	-1.85e-04	-3.38e-05
588	10	-4.80e-03	-0.04	-0.78	1.53e-04	-2.30e-04	-3.89e-05
589	2	-0.01	-0.06	-1.12	2.23e-04	-3.59e-04	-5.88e-05
589	6	-8.49e-03	-0.05	-0.84	1.65e-04	-2.61e-04	-4.34e-05
589	8	-8.32e-03	-0.04	-0.79	1.57e-04	-2.38e-04	-4.08e-05
589	10	-8.26e-03	-0.04	-0.78	1.54e-04	-2.31e-04	-3.99e-05
590	2	-0.02	-0.07	-1.12	2.23e-04	-3.60e-04	-6.03e-05
590	6	-0.01	-0.05	-0.84	1.66e-04	-2.62e-04	-4.45e-05
590	8	-0.01	-0.05	-0.79	1.57e-04	-2.39e-04	-4.18e-05
590	10	-0.01	-0.05	-0.78	1.54e-04	-2.32e-04	-4.09e-05
591	2	-0.02	-0.07	-1.12	2.24e-04	-3.61e-04	-6.17e-05
591	6	-0.02	-0.05	-0.84	1.66e-04	-2.63e-04	-4.55e-05
591	8	-0.02	-0.05	-0.79	1.57e-04	-2.40e-04	-4.28e-05
591	10	-0.02	-0.05	-0.78	1.55e-04	-2.32e-04	-4.18e-05
592	2	-0.03	-0.07	-1.12	2.24e-04	-3.62e-04	-6.28e-05
592	6	-0.02	-0.05	-0.84	1.67e-04	-2.63e-04	-4.64e-05
592	8	-0.02	-0.05	-0.79	1.58e-04	-2.40e-04	-4.36e-05
592	10	-0.02	-0.05	-0.78	1.55e-04	-2.33e-04	-4.26e-05
593	2	-0.03	-0.08	-1.12	2.25e-04	-3.62e-04	-6.36e-05
593	6	-0.02	-0.06	-0.84	1.67e-04	-2.63e-04	-4.70e-05
593	8	-0.02	-0.05	-0.79	1.58e-04	-2.41e-04	-4.41e-05
593	10	-0.02	-0.05	-0.78	1.55e-04	-2.33e-04	-4.32e-05
594	2	-0.04	-0.08	-1.13	2.26e-04	-3.58e-04	-7.02e-05
594	6	-0.03	-0.06	-0.84	1.68e-04	-2.60e-04	-5.18e-05
594	8	-0.03	-0.06	-0.79	1.59e-04	-2.37e-04	-4.86e-05
594	10	-0.03	-0.06	-0.78	1.56e-04	-2.30e-04	-4.76e-05
595	2	0.06	-0.02	-1.08	2.21e-04	0.0	-3.90e-05
595	6	0.04	-0.02	-0.81	1.64e-04	0.0	-2.88e-05
595	8	0.04	-0.02	-0.77	1.55e-04	0.0	-2.71e-05
595	10	0.04	-0.02	-0.75	1.53e-04	0.0	-2.65e-05
596	2	0.07	-0.02	-1.08	2.20e-04	0.0	-3.75e-05
596	6	0.05	-0.01	-0.81	1.63e-04	0.0	-2.77e-05
596	8	0.04	-0.01	-0.77	1.54e-04	0.0	-2.61e-05
596	10	0.04	-0.01	-0.75	1.52e-04	0.0	-2.55e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 27001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

597	2	0.06	-0.03	-1.08	2.22e-04	0.0	-4.00e-05
597	6	0.04	-0.02	-0.81	1.65e-04	0.0	-2.96e-05
597	8	0.04	-0.02	-0.77	1.56e-04	0.0	-2.78e-05
597	10	0.03	-0.02	-0.75	1.53e-04	0.0	-2.72e-05
598	2	0.05	-0.03	-1.08	2.22e-04	0.0	-4.09e-05
598	6	0.04	-0.02	-0.81	1.65e-04	0.0	-3.02e-05
598	8	0.03	-0.02	-0.77	1.56e-04	0.0	-2.84e-05
598	10	0.03	-0.02	-0.75	1.53e-04	0.0	-2.78e-05
599	2	0.05	-0.03	-1.08	2.23e-04	0.0	-4.22e-05
599	6	0.03	-0.02	-0.81	1.65e-04	0.0	-3.12e-05
599	8	0.03	-0.02	-0.77	1.57e-04	0.0	-2.93e-05
599	10	0.03	-0.02	-0.75	1.54e-04	0.0	-2.87e-05
600	2	0.04	-0.04	-1.08	2.23e-04	0.0	-4.35e-05
600	6	0.03	-0.03	-0.81	1.66e-04	0.0	-3.21e-05
600	8	0.03	-0.03	-0.77	1.57e-04	0.0	-3.02e-05
600	10	0.03	-0.02	-0.75	1.54e-04	0.0	-2.95e-05
601	2	0.04	-0.04	-1.08	2.25e-04	0.0	-4.48e-05
601	6	0.03	-0.03	-0.81	1.67e-04	0.0	-3.31e-05
601	8	0.02	-0.03	-0.77	1.58e-04	0.0	-3.11e-05
601	10	0.02	-0.03	-0.75	1.55e-04	0.0	-3.04e-05
602	2	0.03	-0.04	-1.08	2.26e-04	0.0	-4.61e-05
602	6	0.02	-0.03	-0.81	1.68e-04	0.0	-3.41e-05
602	8	0.02	-0.03	-0.77	1.59e-04	0.0	-3.20e-05
602	10	0.02	-0.03	-0.75	1.56e-04	0.0	-3.14e-05
603	2	0.03	-0.05	-1.08	2.27e-04	0.0	-4.76e-05
603	6	0.02	-0.03	-0.81	1.69e-04	0.0	-3.51e-05
603	8	0.02	-0.03	-0.77	1.60e-04	0.0	-3.30e-05
603	10	0.02	-0.03	-0.75	1.57e-04	0.0	-3.23e-05
604	2	0.02	-0.05	-1.08	2.29e-04	0.0	-4.91e-05
604	6	0.02	-0.04	-0.81	1.70e-04	0.0	-3.62e-05
604	8	0.01	-0.03	-0.77	1.61e-04	0.0	-3.40e-05
604	10	0.01	-0.03	-0.75	1.58e-04	0.0	-3.33e-05
605	2	0.02	-0.05	-1.08	2.31e-04	0.0	-5.07e-05
605	6	0.01	-0.04	-0.81	1.71e-04	0.0	-3.74e-05
605	8	0.01	-0.04	-0.77	1.62e-04	0.0	-3.52e-05
605	10	9.72e-03	-0.04	-0.75	1.59e-04	0.0	-3.44e-05
606	2	0.01	-0.06	-1.08	2.33e-04	0.0	-5.24e-05
606	6	8.08e-03	-0.04	-0.81	1.73e-04	0.0	-3.87e-05
606	8	6.85e-03	-0.04	-0.77	1.64e-04	0.0	-3.64e-05
606	10	6.44e-03	-0.04	-0.75	1.61e-04	0.0	-3.56e-05
607	2	6.41e-03	-0.06	-1.08	2.35e-04	0.0	-5.44e-05
607	6	4.31e-03	-0.04	-0.81	1.74e-04	0.0	-4.02e-05
607	8	3.40e-03	-0.04	-0.77	1.65e-04	0.0	-3.77e-05
607	10	3.09e-03	-0.04	-0.75	1.62e-04	0.0	-3.69e-05
608	1	-1.79e-03	-0.05	-0.89	1.90e-04	0.0	-4.38e-05
608	2	1.10e-03	-0.06	-1.08	2.37e-04	0.0	-5.65e-05
608	5	-1.48e-03	-0.04	-0.68	1.45e-04	0.0	-3.33e-05
608	6	4.52e-04	-0.05	-0.81	1.76e-04	0.0	-4.17e-05
608	7	-1.48e-03	-0.04	-0.68	1.45e-04	0.0	-3.33e-05
608	8	-1.26e-04	-0.04	-0.77	1.67e-04	0.0	-3.92e-05
608	9	-1.48e-03	-0.04	-0.68	1.45e-04	0.0	-3.33e-05
608	10	-3.19e-04	-0.04	-0.75	1.63e-04	0.0	-3.84e-05
609	1	-5.27e-03	-0.05	-0.89	1.92e-04	0.0	-4.58e-05
609	2	-3.98e-03	-0.07	-1.08	2.40e-04	0.0	-5.91e-05
609	5	-4.10e-03	-0.04	-0.68	1.46e-04	0.0	-3.47e-05
609	6	-3.24e-03	-0.05	-0.81	1.78e-04	0.0	-4.37e-05
609	7	-4.10e-03	-0.04	-0.68	1.46e-04	0.0	-3.47e-05
609	8	-3.50e-03	-0.05	-0.77	1.68e-04	0.0	-4.10e-05
609	9	-4.10e-03	-0.04	-0.68	1.46e-04	0.0	-3.47e-05
609	10	-3.58e-03	-0.05	-0.75	1.65e-04	0.0	-4.01e-05
610	2	-9.46e-03	-0.07	-1.08	2.41e-04	0.0	-6.15e-05
610	6	-7.22e-03	-0.05	-0.81	1.79e-04	0.0	-4.54e-05
610	8	-7.14e-03	-0.05	-0.77	1.70e-04	0.0	-4.26e-05
610	10	-7.11e-03	-0.05	-0.75	1.66e-04	0.0	-4.17e-05
611	2	-0.02	-0.07	-1.08	2.43e-04	0.0	-6.41e-05
611	6	-0.01	-0.06	-0.81	1.80e-04	0.0	-4.73e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

611	8	-0.01	-0.05	-0.77	1.71e-04	0.0	-4.44e-05
611	10	-0.01	-0.05	-0.75	1.68e-04	0.0	-4.35e-05
612	2	-0.02	-0.08	-1.08	2.45e-04	0.0	-6.69e-05
612	6	-0.02	-0.06	-0.81	1.82e-04	0.0	-4.94e-05
612	8	-0.01	-0.05	-0.77	1.72e-04	0.0	-4.63e-05
612	10	-0.01	-0.05	-0.75	1.69e-04	0.0	-4.53e-05
613	2	-0.03	-0.08	-1.09	2.46e-04	0.0	-6.97e-05
613	6	-0.02	-0.06	-0.81	1.83e-04	0.0	-5.15e-05
613	8	-0.02	-0.06	-0.77	1.73e-04	0.0	-4.83e-05
613	10	-0.02	-0.06	-0.76	1.70e-04	0.0	-4.72e-05
614	2	-0.03	-0.09	-1.09	2.48e-04	0.0	-7.25e-05
614	6	-0.02	-0.06	-0.81	1.84e-04	0.0	-5.35e-05
614	8	-0.02	-0.06	-0.77	1.74e-04	0.0	-5.02e-05
614	10	-0.02	-0.06	-0.76	1.71e-04	0.0	-4.91e-05
615	2	-0.04	-0.09	-1.09	2.49e-04	-3.32e-04	-7.63e-05
615	6	-0.03	-0.07	-0.81	1.85e-04	-2.41e-04	-5.63e-05
615	8	-0.03	-0.06	-0.77	1.75e-04	-2.20e-04	-5.28e-05
615	10	-0.03	-0.06	-0.76	1.72e-04	-2.12e-04	-5.17e-05
616	2	0.06	-0.03	-1.04	2.28e-04	0.0	-4.15e-05
616	6	0.04	-0.02	-0.78	1.69e-04	0.0	-3.06e-05
616	8	0.04	-0.02	-0.74	1.60e-04	0.0	-2.88e-05
616	10	0.04	-0.02	-0.73	1.57e-04	0.0	-2.82e-05
617	2	0.07	-0.02	-1.04	2.27e-04	0.0	-4.07e-05
617	6	0.05	-0.02	-0.78	1.69e-04	0.0	-3.01e-05
617	8	0.04	-0.02	-0.74	1.60e-04	0.0	-2.83e-05
617	10	0.04	-0.02	-0.73	1.57e-04	0.0	-2.77e-05
618	2	0.06	-0.03	-1.04	2.28e-04	0.0	-4.16e-05
618	6	0.04	-0.02	-0.78	1.69e-04	0.0	-3.08e-05
618	8	0.04	-0.02	-0.74	1.60e-04	0.0	-2.89e-05
618	10	0.03	-0.02	-0.73	1.57e-04	0.0	-2.83e-05
619	2	0.05	-0.03	-1.04	2.28e-04	0.0	-4.18e-05
619	6	0.04	-0.03	-0.78	1.70e-04	0.0	-3.09e-05
619	8	0.03	-0.02	-0.74	1.61e-04	0.0	-2.91e-05
619	10	0.03	-0.02	-0.73	1.58e-04	0.0	-2.84e-05
620	2	0.05	-0.04	-1.04	2.29e-04	0.0	-4.23e-05
620	6	0.03	-0.03	-0.78	1.70e-04	0.0	-3.12e-05
620	8	0.03	-0.03	-0.74	1.61e-04	0.0	-2.93e-05
620	10	0.03	-0.03	-0.73	1.58e-04	0.0	-2.87e-05
621	2	0.04	-0.04	-1.04	2.30e-04	0.0	-4.28e-05
621	6	0.03	-0.03	-0.78	1.71e-04	0.0	-3.16e-05
621	8	0.03	-0.03	-0.74	1.62e-04	0.0	-2.97e-05
621	10	0.03	-0.03	-0.73	1.59e-04	0.0	-2.90e-05
622	2	0.04	-0.04	-1.04	2.32e-04	0.0	-4.33e-05
622	6	0.03	-0.03	-0.78	1.72e-04	0.0	-3.20e-05
622	8	0.02	-0.03	-0.74	1.63e-04	0.0	-3.01e-05
622	10	0.02	-0.03	-0.73	1.60e-04	0.0	-2.94e-05
623	2	0.03	-0.05	-1.04	2.34e-04	0.0	-4.39e-05
623	6	0.02	-0.04	-0.78	1.73e-04	0.0	-3.24e-05
623	8	0.02	-0.03	-0.74	1.64e-04	0.0	-3.05e-05
623	10	0.02	-0.03	-0.73	1.61e-04	0.0	-2.98e-05
624	2	0.03	-0.05	-1.04	2.36e-04	0.0	-4.46e-05
624	6	0.02	-0.04	-0.78	1.75e-04	0.0	-3.29e-05
624	8	0.02	-0.04	-0.74	1.66e-04	0.0	-3.09e-05
624	10	0.02	-0.04	-0.73	1.63e-04	0.0	-3.02e-05
625	2	0.02	-0.06	-1.04	2.38e-04	0.0	-4.53e-05
625	6	0.02	-0.04	-0.78	1.77e-04	0.0	-3.34e-05
625	8	0.01	-0.04	-0.74	1.67e-04	0.0	-3.14e-05
625	10	0.01	-0.04	-0.73	1.64e-04	0.0	-3.07e-05
626	2	0.02	-0.06	-1.04	2.41e-04	0.0	-4.60e-05
626	6	0.01	-0.04	-0.78	1.79e-04	0.0	-3.40e-05
626	8	0.01	-0.04	-0.74	1.69e-04	0.0	-3.19e-05
626	10	0.01	-0.04	-0.73	1.66e-04	0.0	-3.12e-05
627	2	0.01	-0.06	-1.04	2.45e-04	0.0	-4.69e-05
627	6	8.95e-03	-0.05	-0.78	1.82e-04	0.0	-3.47e-05
627	8	7.64e-03	-0.04	-0.74	1.72e-04	0.0	-3.25e-05
627	10	7.21e-03	-0.04	-0.73	1.69e-04	0.0	-3.18e-05

PROJETTO engineering s.r.l.

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Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

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628	2	8.20e-03	-0.07	-1.04	2.50e-04	0.0	-4.81e-05
628	6	5.62e-03	-0.05	-0.78	1.85e-04	0.0	-3.55e-05
628	8	4.61e-03	-0.05	-0.74	1.75e-04	0.0	-3.33e-05
628	10	4.27e-03	-0.05	-0.73	1.72e-04	0.0	-3.26e-05
629	2	3.85e-03	-0.07	-1.04	2.56e-04	0.0	-5.00e-05
629	6	2.46e-03	-0.05	-0.78	1.90e-04	0.0	-3.69e-05
629	8	1.73e-03	-0.05	-0.74	1.79e-04	0.0	-3.46e-05
629	10	1.49e-03	-0.05	-0.73	1.76e-04	0.0	-3.38e-05
630	1	-2.03e-03	-0.06	-0.86	2.11e-04	0.0	-4.12e-05
630	2	4.60e-04	-0.07	-1.04	2.64e-04	0.0	-5.37e-05
630	5	-1.64e-03	-0.04	-0.65	1.60e-04	0.0	-3.13e-05
630	6	1.40e-05	-0.05	-0.78	1.96e-04	0.0	-3.96e-05
630	7	-1.64e-03	-0.04	-0.65	1.60e-04	0.0	-3.13e-05
630	8	-4.83e-04	-0.05	-0.74	1.85e-04	0.0	-3.71e-05
630	9	-1.64e-03	-0.04	-0.65	1.60e-04	0.0	-3.13e-05
630	10	-6.49e-04	-0.05	-0.73	1.82e-04	0.0	-3.63e-05
631	1	-5.67e-03	-0.06	-0.86	2.15e-04	0.0	-4.29e-05
631	2	-4.82e-03	-0.08	-1.04	2.69e-04	0.0	-5.60e-05
631	5	-4.39e-03	-0.05	-0.65	1.63e-04	0.0	-3.25e-05
631	6	-3.82e-03	-0.06	-0.78	2.00e-04	0.0	-4.13e-05
631	7	-4.39e-03	-0.05	-0.65	1.63e-04	0.0	-3.25e-05
631	8	-3.99e-03	-0.05	-0.74	1.89e-04	0.0	-3.86e-05
631	9	-4.39e-03	-0.05	-0.65	1.63e-04	0.0	-3.25e-05
631	10	-4.05e-03	-0.05	-0.73	1.85e-04	0.0	-3.78e-05
632	2	-0.01	-0.08	-1.04	2.73e-04	0.0	-6.07e-05
632	6	-8.37e-03	-0.06	-0.78	2.03e-04	0.0	-4.47e-05
632	8	-8.15e-03	-0.06	-0.74	1.91e-04	0.0	-4.19e-05
632	10	-8.08e-03	-0.06	-0.73	1.88e-04	0.0	-4.09e-05
633	2	-0.02	-0.09	-1.04	2.76e-04	0.0	-6.57e-05
633	6	-0.01	-0.06	-0.77	2.05e-04	0.0	-4.84e-05
633	8	-0.01	-0.06	-0.74	1.93e-04	0.0	-4.53e-05
633	10	-0.01	-0.06	-0.73	1.90e-04	0.0	-4.43e-05
634	2	-0.02	-0.09	-1.04	2.78e-04	0.0	-7.05e-05
634	6	-0.02	-0.07	-0.77	2.06e-04	0.0	-5.20e-05
634	8	-0.02	-0.06	-0.74	1.95e-04	0.0	-4.86e-05
634	10	-0.02	-0.06	-0.73	1.91e-04	0.0	-4.75e-05
635	2	-0.03	-0.09	-1.04	2.79e-04	0.0	-7.51e-05
635	6	-0.02	-0.07	-0.77	2.07e-04	0.0	-5.53e-05
635	8	-0.02	-0.07	-0.74	1.96e-04	0.0	-5.18e-05
635	10	-0.02	-0.06	-0.73	1.92e-04	0.0	-5.06e-05
636	2	-0.04	-0.10	-1.04	2.80e-04	-4.52e-04	-7.96e-05
636	6	-0.03	-0.07	-0.77	2.08e-04	-3.29e-04	-5.87e-05
636	8	-0.03	-0.07	-0.74	1.96e-04	-3.01e-04	-5.49e-05
636	10	-0.03	-0.07	-0.73	1.92e-04	-2.92e-04	-5.36e-05
637	2	0.10	-0.01	-0.96	3.53e-04	0.0	-7.86e-05
637	6	0.07	-7.55e-03	-0.72	2.62e-04	0.0	-5.73e-05
637	8	0.07	-7.26e-03	-0.69	2.47e-04	0.0	-5.27e-05
637	10	0.06	-7.16e-03	-0.68	2.42e-04	0.0	-5.12e-05
638	2	0.11	-4.78e-03	-0.96	3.49e-04	0.0	-8.12e-05
638	6	0.08	-3.63e-03	-0.72	2.59e-04	0.0	-5.93e-05
638	8	0.07	-3.55e-03	-0.69	2.44e-04	0.0	-5.46e-05
638	10	0.07	-3.52e-03	-0.68	2.39e-04	0.0	-5.31e-05
639	2	0.09	-0.02	-0.96	3.55e-04	0.0	-7.91e-05
639	6	0.07	-0.01	-0.72	2.63e-04	0.0	-5.77e-05
639	8	0.06	-0.01	-0.69	2.48e-04	0.0	-5.31e-05
639	10	0.06	-0.01	-0.68	2.43e-04	0.0	-5.16e-05
640	2	0.09	-0.02	-0.96	3.56e-04	0.0	-7.87e-05
640	6	0.06	-0.02	-0.72	2.64e-04	0.0	-5.74e-05
640	8	0.06	-0.01	-0.69	2.49e-04	0.0	-5.29e-05
640	10	0.06	-0.01	-0.68	2.44e-04	0.0	-5.13e-05
641	2	0.08	-0.03	-0.96	3.56e-04	0.0	-7.77e-05
641	6	0.06	-0.02	-0.72	2.64e-04	0.0	-5.67e-05
641	8	0.05	-0.02	-0.69	2.49e-04	0.0	-5.21e-05
641	10	0.05	-0.02	-0.68	2.44e-04	0.0	-5.06e-05
642	2	0.07	-0.03	-0.96	3.57e-04	0.0	-7.63e-05
642	6	0.05	-0.02	-0.72	2.64e-04	0.0	-5.57e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

642	8	0.05	-0.02	-0.69	2.49e-04	0.0	-5.13e-05
642	10	0.05	-0.02	-0.68	2.44e-04	0.0	-4.98e-05
643	2	0.07	-0.04	-0.96	3.57e-04	0.0	-7.49e-05
643	6	0.05	-0.03	-0.72	2.64e-04	0.0	-5.46e-05
643	8	0.04	-0.03	-0.69	2.49e-04	0.0	-5.03e-05
643	10	0.04	-0.03	-0.68	2.44e-04	0.0	-4.89e-05
644	2	0.06	-0.04	-0.96	3.57e-04	0.0	-7.33e-05
644	6	0.04	-0.03	-0.72	2.64e-04	0.0	-5.35e-05
644	8	0.04	-0.03	-0.69	2.49e-04	0.0	-4.93e-05
644	10	0.04	-0.03	-0.68	2.44e-04	0.0	-4.79e-05
645	2	0.05	-0.05	-0.96	3.56e-04	0.0	-7.17e-05
645	6	0.04	-0.04	-0.72	2.64e-04	0.0	-5.24e-05
645	8	0.03	-0.03	-0.69	2.49e-04	0.0	-4.83e-05
645	10	0.03	-0.03	-0.68	2.44e-04	0.0	-4.69e-05
646	2	0.05	-0.05	-0.96	3.55e-04	0.0	-6.99e-05
646	6	0.03	-0.04	-0.72	2.63e-04	0.0	-5.11e-05
646	8	0.03	-0.04	-0.69	2.48e-04	0.0	-4.71e-05
646	10	0.03	-0.04	-0.68	2.43e-04	0.0	-4.58e-05
647	2	0.04	-0.06	-0.97	3.54e-04	0.0	-6.79e-05
647	6	0.03	-0.04	-0.72	2.62e-04	0.0	-4.96e-05
647	8	0.03	-0.04	-0.69	2.47e-04	0.0	-4.58e-05
647	10	0.02	-0.04	-0.68	2.42e-04	0.0	-4.46e-05
648	2	0.03	-0.06	-0.97	3.52e-04	0.0	-6.58e-05
648	6	0.02	-0.05	-0.72	2.60e-04	0.0	-4.81e-05
648	8	0.02	-0.04	-0.69	2.45e-04	0.0	-4.45e-05
648	10	0.02	-0.04	-0.68	2.40e-04	0.0	-4.32e-05
649	2	0.02	-0.07	-0.97	3.49e-04	0.0	-6.36e-05
649	6	0.02	-0.05	-0.72	2.58e-04	0.0	-4.66e-05
649	8	0.02	-0.05	-0.69	2.43e-04	0.0	-4.31e-05
649	10	0.02	-0.05	-0.68	2.38e-04	0.0	-4.19e-05
650	2	0.02	-0.07	-0.97	3.43e-04	0.0	-6.17e-05
650	6	0.01	-0.06	-0.72	2.54e-04	0.0	-4.52e-05
650	8	0.01	-0.05	-0.69	2.39e-04	0.0	-4.18e-05
650	10	0.01	-0.05	-0.68	2.34e-04	0.0	-4.07e-05
651	2	9.60e-03	-0.08	-0.97	3.35e-04	0.0	-6.01e-05
651	6	6.73e-03	-0.06	-0.72	2.48e-04	0.0	-4.41e-05
651	8	5.78e-03	-0.06	-0.69	2.33e-04	0.0	-4.09e-05
651	10	5.46e-03	-0.05	-0.68	2.29e-04	0.0	-3.99e-05
652	2	1.62e-03	-0.08	-0.97	3.29e-04	0.0	-6.05e-05
652	6	9.13e-04	-0.06	-0.73	2.44e-04	0.0	-4.44e-05
652	7	-7.17e-04	-0.05	-0.62	1.97e-04	0.0	-3.39e-05
652	8	4.24e-04	-0.06	-0.69	2.30e-04	0.0	-4.13e-05
652	9	-7.17e-04	-0.05	-0.62	1.97e-04	0.0	-3.39e-05
652	10	2.61e-04	-0.06	-0.68	2.25e-04	0.0	-4.02e-05
653	1	-6.52e-03	-0.07	-0.81	2.56e-04	0.0	-4.75e-05
653	2	-6.45e-03	-0.09	-0.97	3.25e-04	0.0	-6.41e-05
653	5	-5.02e-03	-0.05	-0.62	1.95e-04	0.0	-3.60e-05
653	6	-4.97e-03	-0.07	-0.73	2.40e-04	0.0	-4.70e-05
653	7	-5.02e-03	-0.05	-0.62	1.95e-04	0.0	-3.60e-05
653	8	-4.99e-03	-0.06	-0.69	2.27e-04	0.0	-4.37e-05
653	9	-5.02e-03	-0.05	-0.62	1.95e-04	0.0	-3.60e-05
653	10	-4.99e-03	-0.06	-0.68	2.22e-04	0.0	-4.26e-05
654	2	-0.01	-0.09	-0.97	3.21e-04	0.0	-6.81e-05
654	6	-0.01	-0.07	-0.73	2.38e-04	0.0	-5.00e-05
654	8	-0.01	-0.07	-0.69	2.24e-04	0.0	-4.65e-05
654	10	-0.01	-0.06	-0.68	2.20e-04	0.0	-4.53e-05
655	2	-0.02	-0.10	-0.97	3.18e-04	0.0	-7.21e-05
655	6	-0.02	-0.07	-0.73	2.36e-04	0.0	-5.29e-05
655	8	-0.02	-0.07	-0.69	2.22e-04	0.0	-4.93e-05
655	10	-0.02	-0.07	-0.68	2.18e-04	0.0	-4.80e-05
656	2	-0.03	-0.10	-0.97	3.16e-04	0.0	-7.59e-05
656	6	-0.02	-0.08	-0.73	2.34e-04	0.0	-5.57e-05
656	8	-0.02	-0.07	-0.69	2.21e-04	0.0	-5.19e-05
656	10	-0.02	-0.07	-0.68	2.16e-04	0.0	-5.06e-05
657	2	-0.04	-0.11	-0.98	3.14e-04	-5.75e-04	-7.97e-05
657	6	-0.03	-0.08	-0.73	2.32e-04	-4.19e-04	-5.85e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
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 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

657	8	-0.03	-0.08	-0.69	2.19e-04	-3.85e-04	-5.45e-05
657	10	-0.03	-0.07	-0.68	2.15e-04	-3.74e-04	-5.32e-05
658	2	0.10	-0.02	-0.90	3.38e-04	-2.78e-04	-8.64e-05
658	6	0.07	-0.01	-0.67	2.50e-04	-2.03e-04	-6.30e-05
658	8	0.06	-0.01	-0.65	2.37e-04	-1.89e-04	-5.79e-05
658	10	0.06	-0.01	-0.64	2.32e-04	-1.84e-04	-5.63e-05
659	2	0.09	-0.03	-0.90	3.47e-04	-3.31e-04	-8.89e-05
659	6	0.07	-0.02	-0.67	2.57e-04	-2.43e-04	-6.48e-05
659	8	0.06	-0.02	-0.65	2.43e-04	-2.25e-04	-5.96e-05
659	10	0.06	-0.02	-0.64	2.38e-04	-2.19e-04	-5.79e-05
660	2	0.09	-0.03	-0.90	3.51e-04	-3.73e-04	-9.06e-05
660	6	0.06	-0.02	-0.67	2.60e-04	-2.73e-04	-6.61e-05
660	8	0.06	-0.02	-0.65	2.46e-04	-2.53e-04	-6.08e-05
660	10	0.06	-0.02	-0.64	2.41e-04	-2.46e-04	-5.90e-05
661	2	0.08	-0.04	-0.90	3.52e-04	-4.03e-04	-9.13e-05
661	6	0.06	-0.03	-0.67	2.61e-04	-2.95e-04	-6.66e-05
661	8	0.05	-0.03	-0.65	2.47e-04	-2.73e-04	-6.13e-05
661	10	0.05	-0.02	-0.64	2.42e-04	-2.66e-04	-5.95e-05
662	2	0.07	-0.04	-0.90	3.51e-04	-4.25e-04	-9.12e-05
662	6	0.05	-0.03	-0.68	2.60e-04	-3.11e-04	-6.65e-05
662	8	0.05	-0.03	-0.65	2.46e-04	-2.88e-04	-6.12e-05
662	10	0.05	-0.03	-0.64	2.41e-04	-2.80e-04	-5.94e-05
663	2	0.07	-0.05	-0.90	3.50e-04	-4.41e-04	-9.03e-05
663	6	0.05	-0.03	-0.68	2.59e-04	-3.23e-04	-6.59e-05
663	8	0.04	-0.03	-0.65	2.45e-04	-2.98e-04	-6.06e-05
663	10	0.04	-0.03	-0.64	2.40e-04	-2.90e-04	-5.89e-05
664	2	0.06	-0.05	-0.90	3.47e-04	-4.53e-04	-8.90e-05
664	6	0.04	-0.04	-0.68	2.57e-04	-3.31e-04	-6.49e-05
664	8	0.04	-0.04	-0.65	2.43e-04	-3.06e-04	-5.97e-05
664	10	0.04	-0.04	-0.64	2.38e-04	-2.97e-04	-5.80e-05
665	2	0.05	-0.06	-0.90	3.45e-04	-4.62e-04	-8.73e-05
665	6	0.04	-0.04	-0.68	2.56e-04	-3.37e-04	-6.37e-05
665	8	0.04	-0.04	-0.65	2.41e-04	-3.11e-04	-5.87e-05
665	10	0.03	-0.04	-0.64	2.37e-04	-3.03e-04	-5.70e-05
666	2	0.05	-0.06	-0.90	3.43e-04	-4.69e-04	-8.55e-05
666	6	0.03	-0.05	-0.68	2.54e-04	-3.42e-04	-6.24e-05
666	8	0.03	-0.04	-0.65	2.40e-04	-3.16e-04	-5.74e-05
666	10	0.03	-0.04	-0.64	2.35e-04	-3.07e-04	-5.58e-05
667	2	0.04	-0.07	-0.90	3.41e-04	-4.75e-04	-8.35e-05
667	6	0.03	-0.05	-0.68	2.53e-04	-3.47e-04	-6.09e-05
667	8	0.03	-0.05	-0.65	2.38e-04	-3.20e-04	-5.61e-05
667	10	0.02	-0.05	-0.64	2.34e-04	-3.11e-04	-5.45e-05
668	2	0.03	-0.07	-0.90	3.39e-04	-4.80e-04	-8.14e-05
668	6	0.02	-0.05	-0.68	2.51e-04	-3.51e-04	-5.94e-05
668	8	0.02	-0.05	-0.65	2.37e-04	-3.24e-04	-5.47e-05
668	10	0.02	-0.05	-0.64	2.32e-04	-3.14e-04	-5.32e-05
669	2	0.02	-0.08	-0.91	3.38e-04	-4.86e-04	-7.92e-05
669	6	0.02	-0.06	-0.68	2.50e-04	-3.54e-04	-5.79e-05
669	8	0.02	-0.05	-0.65	2.36e-04	-3.27e-04	-5.33e-05
669	10	0.02	-0.05	-0.64	2.31e-04	-3.17e-04	-5.18e-05
670	2	0.02	-0.08	-0.91	3.36e-04	-4.90e-04	-7.71e-05
670	6	0.01	-0.06	-0.68	2.49e-04	-3.58e-04	-5.63e-05
670	8	0.01	-0.06	-0.65	2.35e-04	-3.30e-04	-5.19e-05
670	10	0.01	-0.06	-0.64	2.30e-04	-3.20e-04	-5.05e-05
671	2	0.01	-0.09	-0.91	3.35e-04	-4.95e-04	-7.50e-05
671	6	7.14e-03	-0.06	-0.68	2.48e-04	-3.61e-04	-5.48e-05
671	8	6.19e-03	-0.06	-0.65	2.34e-04	-3.32e-04	-5.05e-05
671	10	5.87e-03	-0.06	-0.64	2.29e-04	-3.23e-04	-4.91e-05
672	2	2.68e-03	-0.09	-0.91	3.34e-04	-4.99e-04	-7.29e-05
672	6	1.70e-03	-0.07	-0.68	2.47e-04	-3.64e-04	-5.32e-05
672	8	1.18e-03	-0.06	-0.65	2.33e-04	-3.35e-04	-4.92e-05
672	10	1.00e-03	-0.06	-0.64	2.29e-04	-3.26e-04	-4.78e-05
673	1	-5.28e-03	-0.08	-0.76	2.63e-04	-3.57e-04	-5.12e-05
673	2	-4.85e-03	-0.10	-0.91	3.33e-04	-5.03e-04	-7.08e-05
673	5	-4.08e-03	-0.06	-0.58	2.00e-04	-2.70e-04	-3.87e-05
673	6	-3.79e-03	-0.07	-0.68	2.47e-04	-3.67e-04	-5.18e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

673	7	-4.08e-03	-0.06	-0.58	2.00e-04	-2.70e-04	-3.87e-05
673	8	-3.88e-03	-0.07	-0.65	2.33e-04	-3.38e-04	-4.79e-05
673	9	-4.08e-03	-0.06	-0.58	2.00e-04	-2.70e-04	-3.87e-05
673	10	-3.91e-03	-0.07	-0.64	2.28e-04	-3.28e-04	-4.66e-05
674	2	-0.01	-0.10	-0.91	3.33e-04	-5.07e-04	-6.89e-05
674	6	-9.31e-03	-0.08	-0.68	2.46e-04	-3.74e-04	-5.04e-05
674	8	-8.96e-03	-0.07	-0.65	2.33e-04	-3.40e-04	-4.66e-05
674	10	-8.84e-03	-0.07	-0.64	2.28e-04	-3.31e-04	-4.54e-05
675	2	-0.02	-0.11	-0.91	3.33e-04	-5.12e-04	-6.71e-05
675	6	-0.01	-0.08	-0.68	2.47e-04	-3.74e-04	-4.91e-05
675	8	-0.01	-0.08	-0.65	2.33e-04	-3.44e-04	-4.54e-05
675	10	-0.01	-0.07	-0.64	2.28e-04	-3.34e-04	-4.42e-05
676	2	-0.03	-0.11	-0.91	3.34e-04	-5.19e-04	-6.53e-05
676	6	-0.02	-0.08	-0.68	2.47e-04	-3.78e-04	-4.78e-05
676	8	-0.02	-0.08	-0.65	2.34e-04	-3.48e-04	-4.43e-05
676	10	-0.02	-0.08	-0.64	2.29e-04	-3.38e-04	-4.31e-05
677	2	0.04	-0.03	-1.06	2.77e-04	-2.83e-04	-5.63e-05
677	6	0.03	-0.02	-0.79	2.05e-04	-2.08e-04	-4.11e-05
677	8	0.03	-0.02	-0.75	1.93e-04	-1.93e-04	-3.78e-05
677	10	0.03	-0.02	-0.74	1.89e-04	-1.88e-04	-3.67e-05
678	2	0.04	-0.02	-1.11	3.02e-04	0.0	-2.28e-05
678	6	0.03	-0.01	-0.83	2.23e-04	0.0	-1.68e-05
678	8	0.03	-0.01	-0.79	2.10e-04	0.0	-1.57e-05
678	10	0.03	-0.01	-0.78	2.06e-04	0.0	-1.53e-05
679	2	0.05	-0.02	-1.11	3.03e-04	0.0	-2.35e-05
679	6	0.04	-0.01	-0.83	2.24e-04	0.0	-1.73e-05
679	8	0.03	-0.01	-0.79	2.11e-04	0.0	-1.62e-05
679	10	0.03	-0.01	-0.78	2.07e-04	0.0	-1.58e-05
680	2	0.04	-0.03	-1.06	2.86e-04	-3.12e-04	-5.68e-05
680	6	0.03	-0.02	-0.79	2.11e-04	-2.29e-04	-4.15e-05
680	8	0.03	-0.02	-0.75	1.99e-04	-2.13e-04	-3.82e-05
680	10	0.03	-0.02	-0.74	1.95e-04	-2.08e-04	-3.71e-05
681	2	0.04	-0.02	-1.11	3.02e-04	0.0	-2.44e-05
681	6	0.03	-0.02	-0.83	2.24e-04	0.0	-1.80e-05
681	8	0.03	-0.02	-0.79	2.11e-04	0.0	-1.68e-05
681	10	0.03	-0.02	-0.78	2.06e-04	0.0	-1.64e-05
682	2	0.03	-0.03	-1.06	2.95e-04	-3.33e-04	-5.72e-05
682	6	0.02	-0.02	-0.79	2.18e-04	-2.44e-04	-4.17e-05
682	8	0.02	-0.02	-0.75	2.05e-04	-2.27e-04	-3.84e-05
682	10	0.02	-0.02	-0.74	2.01e-04	-2.21e-04	-3.73e-05
683	2	0.03	-0.03	-1.11	3.03e-04	0.0	-2.58e-05
683	6	0.02	-0.02	-0.83	2.24e-04	0.0	-1.90e-05
683	8	0.02	-0.02	-0.79	2.11e-04	0.0	-1.77e-05
683	10	0.02	-0.02	-0.78	2.07e-04	0.0	-1.73e-05
684	2	0.03	-0.04	-1.06	3.04e-04	-3.46e-04	-5.78e-05
684	6	0.02	-0.03	-0.79	2.25e-04	-2.54e-04	-4.22e-05
684	8	0.02	-0.03	-0.75	2.11e-04	-2.36e-04	-3.89e-05
684	10	0.02	-0.03	-0.74	2.07e-04	-2.30e-04	-3.78e-05
685	2	0.03	-0.03	-1.11	3.04e-04	0.0	-2.69e-05
685	6	0.02	-0.02	-0.83	2.25e-04	0.0	-1.98e-05
685	8	0.02	-0.02	-0.79	2.12e-04	0.0	-1.85e-05
685	10	0.02	-0.02	-0.78	2.08e-04	0.0	-1.80e-05
686	2	0.02	-0.04	-1.06	3.11e-04	-3.54e-04	-5.86e-05
686	6	0.02	-0.03	-0.79	2.30e-04	-2.59e-04	-4.28e-05
686	8	0.02	-0.03	-0.75	2.17e-04	-2.40e-04	-3.95e-05
686	10	0.01	-0.03	-0.74	2.12e-04	-2.34e-04	-3.83e-05
687	2	0.02	-0.04	-1.11	3.06e-04	0.0	-2.81e-05
687	6	0.02	-0.03	-0.83	2.26e-04	0.0	-2.07e-05
687	8	0.01	-0.03	-0.79	2.13e-04	0.0	-1.93e-05
687	10	0.01	-0.03	-0.78	2.09e-04	0.0	-1.88e-05
688	2	0.02	-0.05	-1.06	3.17e-04	-3.57e-04	-5.95e-05
688	6	0.01	-0.04	-0.79	2.35e-04	-2.61e-04	-4.35e-05
688	8	0.01	-0.03	-0.75	2.21e-04	-2.42e-04	-4.01e-05
688	10	0.01	-0.03	-0.74	2.16e-04	-2.36e-04	-3.90e-05
689	2	0.02	-0.04	-1.11	3.08e-04	0.0	-2.95e-05
689	6	0.01	-0.03	-0.83	2.28e-04	0.0	-2.17e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

689	8	0.01	-0.03	-0.79	2.15e-04	0.0	-2.02e-05
689	10	0.01	-0.03	-0.78	2.10e-04	0.0	-1.97e-05
690	2	0.01	-0.05	-1.06	3.22e-04	-3.57e-04	-6.04e-05
690	6	9.00e-03	-0.04	-0.79	2.38e-04	-2.62e-04	-4.41e-05
690	8	8.02e-03	-0.04	-0.76	2.25e-04	-2.43e-04	-4.07e-05
690	10	7.70e-03	-0.04	-0.74	2.20e-04	-2.36e-04	-3.96e-05
691	2	0.01	-0.05	-1.11	3.10e-04	0.0	-3.12e-05
691	6	7.91e-03	-0.04	-0.83	2.30e-04	0.0	-2.29e-05
691	8	7.01e-03	-0.03	-0.79	2.16e-04	0.0	-2.14e-05
691	10	6.71e-03	-0.03	-0.78	2.12e-04	0.0	-2.09e-05
692	2	7.19e-03	-0.06	-1.06	3.26e-04	-3.55e-04	-6.11e-05
692	6	5.06e-03	-0.04	-0.79	2.41e-04	-2.60e-04	-4.46e-05
692	8	4.37e-03	-0.04	-0.76	2.27e-04	-2.41e-04	-4.12e-05
692	10	4.14e-03	-0.04	-0.74	2.23e-04	-2.35e-04	-4.01e-05
693	2	5.81e-03	-0.05	-1.11	3.13e-04	0.0	-3.32e-05
693	6	4.05e-03	-0.04	-0.83	2.31e-04	0.0	-2.44e-05
693	8	3.43e-03	-0.04	-0.79	2.18e-04	0.0	-2.28e-05
693	10	3.23e-03	-0.04	-0.78	2.13e-04	0.0	-2.23e-05
694	2	1.86e-03	-0.06	-1.06	3.30e-04	-3.53e-04	-6.15e-05
694	6	1.15e-03	-0.05	-0.79	2.44e-04	-2.58e-04	-4.50e-05
694	8	7.49e-04	-0.04	-0.76	2.30e-04	-2.39e-04	-4.16e-05
694	10	6.14e-04	-0.04	-0.74	2.25e-04	-2.33e-04	-4.05e-05
695	1	-1.07e-03	-0.05	-0.92	2.48e-04	0.0	-2.69e-05
695	2	5.87e-04	-0.06	-1.11	3.15e-04	0.0	-3.56e-05
695	5	-8.84e-04	-0.03	-0.70	1.88e-04	0.0	-2.04e-05
695	6	2.24e-04	-0.04	-0.83	2.33e-04	0.0	-2.62e-05
695	7	-8.84e-04	-0.03	-0.70	1.88e-04	0.0	-2.04e-05
695	8	-1.08e-04	-0.04	-0.79	2.20e-04	0.0	-2.44e-05
695	9	-8.84e-04	-0.03	-0.70	1.88e-04	0.0	-2.04e-05
695	10	-2.19e-04	-0.04	-0.78	2.15e-04	0.0	-2.39e-05
696	1	-4.86e-03	-0.05	-0.92	2.49e-04	0.0	-2.90e-05
696	2	-4.59e-03	-0.06	-1.11	3.17e-04	0.0	-3.82e-05
696	5	-3.74e-03	-0.04	-0.70	1.90e-04	0.0	-2.20e-05
696	6	-3.57e-03	-0.05	-0.83	2.35e-04	0.0	-2.81e-05
696	7	-3.74e-03	-0.04	-0.70	1.90e-04	0.0	-2.20e-05
696	8	-3.62e-03	-0.04	-0.79	2.21e-04	0.0	-2.63e-05
696	9	-3.74e-03	-0.04	-0.70	1.90e-04	0.0	-2.20e-05
696	10	-3.64e-03	-0.04	-0.78	2.17e-04	0.0	-2.57e-05
697	2	-8.63e-03	-0.07	-1.06	3.35e-04	-3.46e-04	-6.17e-05
697	6	-6.53e-03	-0.05	-0.79	2.48e-04	-2.53e-04	-4.51e-05
697	8	-6.37e-03	-0.05	-0.76	2.33e-04	-2.35e-04	-4.18e-05
697	10	-6.31e-03	-0.05	-0.74	2.29e-04	-2.28e-04	-4.07e-05
698	2	-9.73e-03	-0.07	-1.11	3.20e-04	0.0	-4.11e-05
698	6	-7.33e-03	-0.05	-0.83	2.36e-04	0.0	-3.03e-05
698	8	-7.11e-03	-0.05	-0.79	2.23e-04	0.0	-2.83e-05
698	10	-7.03e-03	-0.05	-0.78	2.18e-04	0.0	-2.76e-05
699	2	-0.01	-0.08	-1.06	3.36e-04	-3.42e-04	-6.13e-05
699	6	-0.01	-0.06	-0.79	2.49e-04	-2.51e-04	-4.49e-05
699	8	-9.86e-03	-0.05	-0.76	2.35e-04	-2.32e-04	-4.16e-05
699	10	-9.72e-03	-0.05	-0.74	2.30e-04	-2.26e-04	-4.05e-05
700	2	-0.01	-0.07	-1.11	3.21e-04	0.0	-4.42e-05
700	6	-0.01	-0.05	-0.83	2.38e-04	0.0	-3.26e-05
700	8	-0.01	-0.05	-0.79	2.24e-04	0.0	-3.05e-05
700	10	-0.01	-0.05	-0.78	2.20e-04	0.0	-2.98e-05
701	2	-0.02	-0.08	-1.06	3.38e-04	-3.39e-04	-6.07e-05
701	6	-0.01	-0.06	-0.79	2.50e-04	-2.48e-04	-4.45e-05
701	8	-0.01	-0.06	-0.76	2.36e-04	-2.30e-04	-4.13e-05
701	10	-0.01	-0.06	-0.74	2.31e-04	-2.24e-04	-4.02e-05
702	2	-0.02	-0.08	-1.11	3.23e-04	0.0	-4.74e-05
702	6	-0.01	-0.06	-0.83	2.39e-04	0.0	-3.50e-05
702	8	-0.01	-0.05	-0.79	2.25e-04	0.0	-3.27e-05
702	10	-0.01	-0.05	-0.78	2.21e-04	0.0	-3.20e-05
703	2	-0.02	-0.09	-1.06	3.39e-04	-3.37e-04	-5.98e-05
703	6	-0.02	-0.06	-0.79	2.51e-04	-2.47e-04	-4.39e-05
703	8	-0.02	-0.06	-0.76	2.37e-04	-2.28e-04	-4.07e-05
703	10	-0.02	-0.06	-0.74	2.32e-04	-2.22e-04	-3.97e-05

PROJETTO engineering s.r.l.

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Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

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RELAZIONE DI CALCOLO



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 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

704	2	-0.03	-0.08	-1.11	3.24e-04	0.0	-5.08e-05
704	6	-0.02	-0.06	-0.83	2.40e-04	0.0	-3.75e-05
704	8	-0.02	-0.06	-0.79	2.26e-04	0.0	-3.51e-05
704	10	-0.02	-0.06	-0.78	2.21e-04	0.0	-3.43e-05
705	2	-0.03	-0.09	-1.06	3.41e-04	-3.35e-04	-5.87e-05
705	6	-0.02	-0.07	-0.79	2.52e-04	-2.45e-04	-4.31e-05
705	8	-0.02	-0.06	-0.76	2.38e-04	-2.27e-04	-4.00e-05
705	10	-0.02	-0.06	-0.75	2.33e-04	-2.21e-04	-3.90e-05
706	2	-0.03	-0.09	-1.11	3.25e-04	0.0	-5.43e-05
706	6	-0.02	-0.06	-0.83	2.41e-04	0.0	-4.01e-05
706	8	-0.02	-0.06	-0.79	2.27e-04	0.0	-3.75e-05
706	10	-0.02	-0.06	-0.78	2.22e-04	0.0	-3.67e-05
707	2	-0.03	-0.10	-1.06	3.41e-04	-3.35e-04	-5.73e-05
707	6	-0.03	-0.07	-0.79	2.53e-04	-2.46e-04	-4.21e-05
707	8	-0.02	-0.07	-0.76	2.38e-04	-2.27e-04	-3.92e-05
707	10	-0.02	-0.07	-0.75	2.34e-04	-2.21e-04	-3.82e-05
708	2	-0.04	-0.09	-1.11	3.26e-04	0.0	-5.79e-05
708	6	-0.03	-0.07	-0.83	2.41e-04	0.0	-4.27e-05
708	8	-0.02	-0.06	-0.79	2.27e-04	0.0	-4.00e-05
708	10	-0.02	-0.06	-0.78	2.22e-04	0.0	-3.91e-05
709	2	-0.04	-0.10	-1.06	3.42e-04	-3.38e-04	-5.58e-05
709	6	-0.03	-0.08	-0.79	2.53e-04	-2.47e-04	-4.10e-05
709	8	-0.03	-0.07	-0.76	2.39e-04	-2.29e-04	-3.82e-05
709	10	-0.03	-0.07	-0.75	2.34e-04	-2.23e-04	-3.73e-05
710	2	-0.04	-0.10	-1.11	3.26e-04	0.0	-6.14e-05
710	6	-0.03	-0.07	-0.83	2.41e-04	0.0	-4.53e-05
710	8	-0.03	-0.07	-0.79	2.27e-04	0.0	-4.24e-05
710	10	-0.03	-0.07	-0.78	2.22e-04	0.0	-4.15e-05
711	2	-0.04	-0.11	-1.06	3.42e-04	-3.43e-04	-5.42e-05
711	6	-0.03	-0.08	-0.79	2.53e-04	-2.51e-04	-3.99e-05
711	8	-0.03	-0.08	-0.76	2.39e-04	-2.33e-04	-3.72e-05
711	10	-0.03	-0.07	-0.75	2.34e-04	-2.26e-04	-3.63e-05
712	2	-0.05	-0.10	-1.11	3.25e-04	0.0	-6.48e-05
712	6	-0.03	-0.07	-0.83	2.41e-04	0.0	-4.78e-05
712	8	-0.03	-0.07	-0.79	2.27e-04	0.0	-4.48e-05
712	10	-0.03	-0.07	-0.78	2.22e-04	0.0	-4.38e-05
713	2	-0.05	-0.11	-1.06	3.42e-04	-3.54e-04	-5.25e-05
713	6	-0.04	-0.08	-0.79	2.53e-04	-2.59e-04	-3.87e-05
713	8	-0.03	-0.08	-0.76	2.38e-04	-2.40e-04	-3.62e-05
713	10	-0.03	-0.08	-0.75	2.33e-04	-2.33e-04	-3.53e-05
714	2	-0.05	-0.11	-1.11	3.24e-04	0.0	-6.80e-05
714	6	-0.04	-0.08	-0.83	2.40e-04	0.0	-5.02e-05
714	8	-0.03	-0.07	-0.79	2.26e-04	0.0	-4.71e-05
714	10	-0.03	-0.07	-0.78	2.21e-04	0.0	-4.60e-05
715	2	-0.06	-0.11	-1.11	3.23e-04	-3.98e-04	-7.11e-05
715	6	-0.04	-0.08	-0.83	2.39e-04	-2.92e-04	-5.25e-05
715	8	-0.04	-0.08	-0.79	2.25e-04	-2.70e-04	-4.92e-05
715	10	-0.04	-0.08	-0.78	2.20e-04	-2.63e-04	-4.81e-05
716	2	0.04	-0.02	-1.15	2.86e-04	0.0	-6.53e-06
716	6	0.03	-0.01	-0.86	2.12e-04	0.0	-4.98e-06
716	8	0.03	-0.01	-0.82	1.99e-04	0.0	-4.92e-06
716	10	0.03	-0.01	-0.81	1.95e-04	0.0	-4.90e-06
717	2	0.05	-0.01	-1.15	2.86e-04	0.0	-6.67e-06
717	6	0.03	-0.01	-0.86	2.12e-04	0.0	-5.09e-06
717	8	0.03	-0.01	-0.82	2.00e-04	0.0	-5.02e-06
717	10	0.03	-9.92e-03	-0.81	1.96e-04	0.0	-5.00e-06
718	2	0.04	-0.02	-1.16	2.86e-04	0.0	-8.96e-06
718	6	0.03	-0.02	-0.86	2.12e-04	0.0	-6.77e-06
718	8	0.02	-0.02	-0.82	1.99e-04	0.0	-6.59e-06
718	10	0.02	-0.02	-0.81	1.95e-04	0.0	-6.53e-06
719	2	0.03	-0.03	-1.16	2.86e-04	0.0	-1.18e-05
719	6	0.02	-0.02	-0.86	2.12e-04	0.0	-8.85e-06
719	8	0.02	-0.02	-0.82	1.99e-04	0.0	-8.53e-06
719	10	0.02	-0.02	-0.81	1.95e-04	0.0	-8.42e-06
720	2	0.02	-0.03	-1.16	2.86e-04	0.0	-1.48e-05
720	6	0.02	-0.02	-0.86	2.12e-04	0.0	-1.10e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

720	8	0.02	-0.02	-0.82	2.00e-04	0.0	-1.06e-05
720	10	0.02	-0.02	-0.81	1.96e-04	0.0	-1.04e-05
721	2	0.02	-0.04	-1.16	2.87e-04	0.0	-1.78e-05
721	6	0.01	-0.03	-0.86	2.12e-04	0.0	-1.33e-05
721	8	0.01	-0.03	-0.82	2.00e-04	0.0	-1.26e-05
721	10	0.01	-0.02	-0.81	1.96e-04	0.0	-1.24e-05
722	2	0.01	-0.04	-1.16	2.87e-04	0.0	-2.09e-05
722	6	0.01	-0.03	-0.86	2.13e-04	0.0	-1.56e-05
722	8	9.12e-03	-0.03	-0.82	2.00e-04	0.0	-1.48e-05
722	10	8.77e-03	-0.03	-0.81	1.96e-04	0.0	-1.45e-05
723	2	9.03e-03	-0.04	-1.16	2.88e-04	0.0	-2.42e-05
723	6	6.41e-03	-0.03	-0.86	2.13e-04	0.0	-1.80e-05
723	8	5.63e-03	-0.03	-0.82	2.01e-04	0.0	-1.70e-05
723	10	5.37e-03	-0.03	-0.81	1.97e-04	0.0	-1.67e-05
724	2	3.92e-03	-0.05	-1.16	2.89e-04	0.0	-2.75e-05
724	6	2.67e-03	-0.04	-0.86	2.14e-04	0.0	-2.04e-05
724	8	2.16e-03	-0.03	-0.82	2.02e-04	0.0	-1.93e-05
724	10	2.00e-03	-0.03	-0.81	1.97e-04	0.0	-1.90e-05
725	1	-2.31e-03	-0.04	-0.95	2.28e-04	0.0	-2.47e-05
725	2	-1.16e-03	-0.05	-1.16	2.90e-04	0.0	-3.10e-05
725	5	-1.81e-03	-0.03	-0.73	1.73e-04	0.0	-1.88e-05
725	6	-1.05e-03	-0.04	-0.86	2.15e-04	0.0	-2.30e-05
725	7	-1.81e-03	-0.03	-0.73	1.73e-04	0.0	-1.88e-05
725	8	-1.28e-03	-0.04	-0.82	2.02e-04	0.0	-2.17e-05
725	9	-1.81e-03	-0.03	-0.73	1.73e-04	0.0	-1.88e-05
725	10	-1.36e-03	-0.04	-0.81	1.98e-04	0.0	-2.13e-05
726	2	-6.22e-03	-0.06	-1.16	2.91e-04	0.0	-3.45e-05
726	6	-4.75e-03	-0.04	-0.86	2.15e-04	0.0	-2.56e-05
726	8	-4.71e-03	-0.04	-0.82	2.03e-04	0.0	-2.42e-05
726	10	-4.69e-03	-0.04	-0.81	1.99e-04	0.0	-2.37e-05
727	2	-0.01	-0.06	-1.16	2.92e-04	0.0	-3.82e-05
727	6	-8.44e-03	-0.05	-0.86	2.16e-04	0.0	-2.83e-05
727	8	-8.12e-03	-0.04	-0.82	2.03e-04	0.0	-2.67e-05
727	10	-8.01e-03	-0.04	-0.81	1.99e-04	0.0	-2.61e-05
728	2	-0.02	-0.07	-1.16	2.92e-04	0.0	-4.19e-05
728	6	-0.01	-0.05	-0.86	2.16e-04	0.0	-3.10e-05
728	8	-0.01	-0.05	-0.82	2.04e-04	0.0	-2.92e-05
728	10	-0.01	-0.05	-0.81	2.00e-04	0.0	-2.86e-05
729	2	-0.02	-0.07	-1.16	2.93e-04	0.0	-4.56e-05
729	6	-0.02	-0.05	-0.86	2.17e-04	0.0	-3.38e-05
729	8	-0.01	-0.05	-0.82	2.05e-04	0.0	-3.18e-05
729	10	-0.01	-0.05	-0.81	2.00e-04	0.0	-3.12e-05
730	2	-0.03	-0.07	-1.16	2.94e-04	0.0	-4.94e-05
730	6	-0.02	-0.06	-0.86	2.18e-04	0.0	-3.66e-05
730	8	-0.02	-0.05	-0.82	2.05e-04	0.0	-3.44e-05
730	10	-0.02	-0.05	-0.81	2.01e-04	0.0	-3.37e-05
731	2	-0.03	-0.08	-1.16	2.94e-04	0.0	-5.33e-05
731	6	-0.02	-0.06	-0.86	2.18e-04	0.0	-3.94e-05
731	8	-0.02	-0.06	-0.82	2.05e-04	0.0	-3.71e-05
731	10	-0.02	-0.05	-0.81	2.01e-04	0.0	-3.63e-05
732	2	-0.04	-0.08	-1.16	2.95e-04	0.0	-5.71e-05
732	6	-0.03	-0.06	-0.86	2.18e-04	0.0	-4.22e-05
732	8	-0.03	-0.06	-0.82	2.06e-04	0.0	-3.97e-05
732	10	-0.02	-0.06	-0.81	2.01e-04	0.0	-3.89e-05
733	2	-0.04	-0.09	-1.16	2.95e-04	0.0	-6.09e-05
733	6	-0.03	-0.07	-0.86	2.18e-04	0.0	-4.50e-05
733	8	-0.03	-0.06	-0.82	2.06e-04	0.0	-4.24e-05
733	10	-0.03	-0.06	-0.81	2.02e-04	0.0	-4.15e-05
734	2	-0.05	-0.09	-1.16	2.95e-04	0.0	-6.47e-05
734	6	-0.03	-0.07	-0.86	2.19e-04	0.0	-4.78e-05
734	8	-0.03	-0.06	-0.82	2.06e-04	0.0	-4.49e-05
734	10	-0.03	-0.06	-0.81	2.02e-04	0.0	-4.40e-05
735	2	-0.05	-0.10	-1.16	2.95e-04	0.0	-6.83e-05
735	6	-0.04	-0.07	-0.86	2.19e-04	0.0	-5.05e-05
735	8	-0.04	-0.07	-0.82	2.06e-04	0.0	-4.75e-05
735	10	-0.03	-0.07	-0.81	2.02e-04	0.0	-4.65e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO /IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

736	2	-0.06	-0.10	-1.16	2.95e-04	-3.63e-04	-7.19e-05
736	6	-0.04	-0.08	-0.86	2.19e-04	-2.66e-04	-5.31e-05
736	8	-0.04	-0.07	-0.82	2.06e-04	-2.46e-04	-4.99e-05
736	10	-0.04	-0.07	-0.81	2.02e-04	-2.39e-04	-4.89e-05
737	2	0.04	-0.02	-1.20	2.60e-04	0.0	-2.26e-06
737	6	0.03	-0.01	-0.89	1.93e-04	0.0	-1.90e-06
737	8	0.02	-0.01	-0.85	1.82e-04	0.0	-2.13e-06
737	10	0.02	-0.01	-0.83	1.78e-04	0.0	-2.21e-06
738	2	0.04	-0.01	-1.20	2.61e-04	0.0	-2.24e-06
738	6	0.03	-0.01	-0.89	1.93e-04	0.0	-1.88e-06
738	8	0.03	-0.01	-0.85	1.82e-04	0.0	-2.12e-06
738	10	0.03	-9.88e-03	-0.83	1.79e-04	0.0	-2.20e-06
739	2	0.03	-0.02	-1.20	2.60e-04	0.0	-4.33e-06
739	6	0.02	-0.02	-0.89	1.93e-04	0.0	-3.42e-06
739	8	0.02	-0.02	-0.85	1.82e-04	0.0	-3.57e-06
739	10	0.02	-0.02	-0.83	1.78e-04	0.0	-3.61e-06
740	2	0.03	-0.03	-1.20	2.59e-04	0.0	-7.26e-06
740	6	0.02	-0.02	-0.89	1.92e-04	0.0	-5.58e-06
740	8	0.02	-0.02	-0.85	1.81e-04	0.0	-5.58e-06
740	10	0.02	-0.02	-0.83	1.77e-04	0.0	-5.58e-06
741	2	0.02	-0.03	-1.20	2.58e-04	0.0	-1.09e-05
741	6	0.01	-0.02	-0.89	1.91e-04	0.0	-8.22e-06
741	8	0.01	-0.02	-0.85	1.81e-04	0.0	-8.04e-06
741	10	0.01	-0.02	-0.83	1.77e-04	0.0	-7.98e-06
742	2	0.02	-0.03	-1.20	2.58e-04	0.0	-1.46e-05
742	6	0.01	-0.02	-0.89	1.91e-04	0.0	-1.10e-05
742	8	0.01	-0.02	-0.85	1.80e-04	0.0	-1.06e-05
742	10	9.66e-03	-0.02	-0.83	1.77e-04	0.0	-1.05e-05
743	2	0.01	-0.04	-1.20	2.59e-04	0.0	-1.85e-05
743	6	7.67e-03	-0.03	-0.89	1.91e-04	0.0	-1.38e-05
743	8	6.80e-03	-0.03	-0.85	1.81e-04	0.0	-1.33e-05
743	10	6.51e-03	-0.03	-0.83	1.77e-04	0.0	-1.31e-05
744	2	5.96e-03	-0.04	-1.20	2.59e-04	0.0	-2.23e-05
744	6	4.17e-03	-0.03	-0.89	1.92e-04	0.0	-1.66e-05
744	8	3.56e-03	-0.03	-0.85	1.81e-04	0.0	-1.59e-05
744	10	3.36e-03	-0.03	-0.83	1.77e-04	0.0	-1.56e-05
745	2	1.18e-03	-0.05	-1.20	2.60e-04	0.0	-2.60e-05
745	6	6.71e-04	-0.03	-0.89	1.92e-04	0.0	-1.94e-05
745	7	-4.80e-04	-0.03	-0.75	1.56e-04	0.0	-1.63e-05
745	8	3.26e-04	-0.03	-0.85	1.81e-04	0.0	-1.85e-05
745	9	-4.80e-04	-0.03	-0.75	1.56e-04	0.0	-1.63e-05
745	10	2.11e-04	-0.03	-0.83	1.78e-04	0.0	-1.82e-05
746	1	-4.03e-03	-0.04	-0.98	2.06e-04	0.0	-2.42e-05
746	2	-3.60e-03	-0.05	-1.20	2.60e-04	0.0	-2.97e-05
746	5	-3.11e-03	-0.03	-0.75	1.56e-04	0.0	-1.84e-05
746	6	-2.83e-03	-0.04	-0.89	1.93e-04	0.0	-2.21e-05
746	7	-3.11e-03	-0.03	-0.75	1.56e-04	0.0	-1.84e-05
746	8	-2.92e-03	-0.03	-0.85	1.82e-04	0.0	-2.10e-05
746	9	-3.11e-03	-0.03	-0.75	1.56e-04	0.0	-1.84e-05
746	10	-2.94e-03	-0.03	-0.84	1.78e-04	0.0	-2.06e-05
747	2	-8.38e-03	-0.05	-1.20	2.61e-04	0.0	-3.34e-05
747	6	-6.33e-03	-0.04	-0.89	1.93e-04	0.0	-2.48e-05
747	8	-6.16e-03	-0.04	-0.85	1.82e-04	0.0	-2.35e-05
747	10	-6.10e-03	-0.04	-0.84	1.79e-04	0.0	-2.31e-05
748	2	-0.01	-0.06	-1.20	2.62e-04	0.0	-3.70e-05
748	6	-9.83e-03	-0.04	-0.89	1.94e-04	0.0	-2.74e-05
748	8	-9.40e-03	-0.04	-0.85	1.83e-04	0.0	-2.60e-05
748	10	-9.25e-03	-0.04	-0.84	1.79e-04	0.0	-2.55e-05
749	2	-0.02	-0.06	-1.20	2.62e-04	0.0	-4.05e-05
749	6	-0.01	-0.05	-0.89	1.94e-04	0.0	-3.01e-05
749	8	-0.01	-0.04	-0.85	1.83e-04	0.0	-2.84e-05
749	10	-0.01	-0.04	-0.84	1.80e-04	0.0	-2.79e-05
750	2	-0.02	-0.06	-1.20	2.63e-04	0.0	-4.40e-05
750	6	-0.02	-0.05	-0.89	1.95e-04	0.0	-3.26e-05
750	8	-0.02	-0.05	-0.85	1.84e-04	0.0	-3.09e-05
750	10	-0.02	-0.04	-0.84	1.80e-04	0.0	-3.03e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

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RELAZIONE DI CALCOLO



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 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

751	2	-0.03	-0.07	-1.20	2.64e-04	0.0	-4.75e-05
751	6	-0.02	-0.05	-0.89	1.95e-04	0.0	-3.52e-05
751	8	-0.02	-0.05	-0.85	1.84e-04	0.0	-3.33e-05
751	10	-0.02	-0.05	-0.84	1.81e-04	0.0	-3.26e-05
752	2	-0.03	-0.07	-1.20	2.64e-04	0.0	-5.10e-05
752	6	-0.02	-0.05	-0.89	1.96e-04	0.0	-3.78e-05
752	8	-0.02	-0.05	-0.85	1.85e-04	0.0	-3.57e-05
752	10	-0.02	-0.05	-0.84	1.81e-04	0.0	-3.49e-05
753	2	-0.04	-0.08	-1.20	2.65e-04	0.0	-5.45e-05
753	6	-0.03	-0.06	-0.89	1.96e-04	0.0	-4.03e-05
753	8	-0.03	-0.05	-0.85	1.85e-04	0.0	-3.80e-05
753	10	-0.03	-0.05	-0.84	1.81e-04	0.0	-3.73e-05
754	2	-0.04	-0.08	-1.20	2.65e-04	0.0	-5.79e-05
754	6	-0.03	-0.06	-0.89	1.97e-04	0.0	-4.29e-05
754	8	-0.03	-0.06	-0.85	1.85e-04	0.0	-4.04e-05
754	10	-0.03	-0.06	-0.84	1.82e-04	0.0	-3.96e-05
755	2	-0.05	-0.08	-1.20	2.66e-04	0.0	-6.13e-05
755	6	-0.03	-0.06	-0.89	1.97e-04	0.0	-4.54e-05
755	8	-0.03	-0.06	-0.85	1.86e-04	0.0	-4.27e-05
755	10	-0.03	-0.06	-0.84	1.82e-04	0.0	-4.19e-05
756	2	-0.05	-0.09	-1.20	2.66e-04	0.0	-6.46e-05
756	6	-0.04	-0.07	-0.89	1.97e-04	0.0	-4.78e-05
756	8	-0.04	-0.06	-0.85	1.86e-04	0.0	-4.51e-05
756	10	-0.03	-0.06	-0.84	1.82e-04	0.0	-4.41e-05
757	2	-0.06	-0.09	-1.20	2.67e-04	-3.18e-04	-6.79e-05
757	6	-0.04	-0.07	-0.89	1.98e-04	-2.33e-04	-5.02e-05
757	8	-0.04	-0.06	-0.85	1.86e-04	-2.15e-04	-4.73e-05
757	10	-0.04	-0.06	-0.84	1.83e-04	-2.09e-04	-4.63e-05
758	2	0.03	-0.02	-1.23	2.08e-04	-2.05e-04	-1.70e-05
758	6	0.02	-0.01	-0.91	1.54e-04	-1.51e-04	-1.27e-05
758	8	0.02	-0.01	-0.87	1.46e-04	-1.41e-04	-1.21e-05
758	10	0.02	-0.01	-0.85	1.43e-04	-1.38e-04	-1.19e-05
759	2	0.03	-0.02	-1.22	1.91e-04	-1.05e-04	-1.43e-05
759	6	0.02	-0.01	-0.91	1.42e-04	-7.80e-05	-1.07e-05
759	8	0.02	-0.01	-0.87	1.34e-04	-7.38e-05	-1.02e-05
759	10	0.02	-0.01	-0.85	1.32e-04	-7.24e-05	-1.00e-05
760	2	0.02	-0.02	-1.23	2.20e-04	-2.72e-04	-1.92e-05
760	6	0.02	-0.02	-0.92	1.63e-04	-1.99e-04	-1.43e-05
760	8	0.02	-0.02	-0.87	1.54e-04	-1.85e-04	-1.36e-05
760	10	0.02	-0.01	-0.86	1.51e-04	-1.80e-04	-1.34e-05
761	2	0.02	-0.02	-1.23	2.23e-04	-2.81e-04	-2.03e-05
761	6	0.01	-0.02	-0.92	1.65e-04	-2.06e-04	-1.51e-05
761	8	0.01	-0.02	-0.87	1.56e-04	-1.91e-04	-1.44e-05
761	10	0.01	-0.02	-0.86	1.53e-04	-1.86e-04	-1.42e-05
762	2	0.02	-0.03	-1.23	2.26e-04	-2.88e-04	-2.19e-05
762	6	0.01	-0.02	-0.92	1.67e-04	-2.11e-04	-1.63e-05
762	8	0.01	-0.02	-0.87	1.58e-04	-1.96e-04	-1.55e-05
762	10	9.68e-03	-0.02	-0.86	1.55e-04	-1.91e-04	-1.53e-05
763	2	0.01	-0.03	-1.23	2.28e-04	-2.93e-04	-2.38e-05
763	6	7.93e-03	-0.02	-0.92	1.69e-04	-2.14e-04	-1.77e-05
763	8	7.06e-03	-0.02	-0.87	1.60e-04	-1.99e-04	-1.68e-05
763	10	6.77e-03	-0.02	-0.86	1.56e-04	-1.93e-04	-1.66e-05
764	2	6.64e-03	-0.03	-1.23	2.30e-04	-2.95e-04	-2.58e-05
764	6	4.67e-03	-0.03	-0.92	1.70e-04	-2.16e-04	-1.92e-05
764	8	4.04e-03	-0.02	-0.87	1.61e-04	-2.00e-04	-1.83e-05
764	10	3.83e-03	-0.02	-0.86	1.58e-04	-1.95e-04	-1.80e-05
765	2	2.17e-03	-0.04	-1.23	2.32e-04	-2.96e-04	-2.80e-05
765	6	1.40e-03	-0.03	-0.92	1.72e-04	-2.17e-04	-2.08e-05
765	8	1.01e-03	-0.03	-0.87	1.62e-04	-2.01e-04	-1.98e-05
765	10	8.75e-04	-0.03	-0.86	1.59e-04	-1.96e-04	-1.94e-05
766	1	-3.06e-03	-0.03	-1.01	1.85e-04	-2.17e-04	-2.45e-05
766	2	-2.30e-03	-0.04	-1.23	2.33e-04	-2.97e-04	-3.03e-05
766	5	-2.38e-03	-0.03	-0.77	1.41e-04	-1.64e-04	-1.87e-05
766	6	-1.87e-03	-0.03	-0.92	1.73e-04	-2.17e-04	-2.25e-05
766	7	-2.38e-03	-0.03	-0.77	1.41e-04	-1.64e-04	-1.87e-05
766	8	-2.03e-03	-0.03	-0.87	1.63e-04	-2.01e-04	-2.14e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 27001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

766	9	-2.38e-03	-0.03	-0.77	1.41e-04	-1.64e-04	-1.87e-05
766	10	-2.08e-03	-0.03	-0.86	1.60e-04	-1.96e-04	-2.10e-05
767	2	-6.76e-03	-0.05	-1.23	2.35e-04	-2.97e-04	-3.26e-05
767	6	-5.14e-03	-0.03	-0.92	1.74e-04	-2.17e-04	-2.42e-05
767	8	-5.05e-03	-0.03	-0.87	1.64e-04	-2.01e-04	-2.30e-05
767	10	-5.02e-03	-0.03	-0.86	1.61e-04	-1.96e-04	-2.25e-05
768	2	-0.01	-0.05	-1.23	2.36e-04	-2.96e-04	-3.50e-05
768	6	-8.40e-03	-0.04	-0.92	1.75e-04	-2.17e-04	-2.60e-05
768	8	-8.07e-03	-0.03	-0.87	1.65e-04	-2.01e-04	-2.46e-05
768	10	-7.97e-03	-0.03	-0.86	1.62e-04	-1.96e-04	-2.42e-05
769	2	-0.02	-0.05	-1.23	2.37e-04	-2.96e-04	-3.74e-05
769	6	-0.01	-0.04	-0.92	1.76e-04	-2.17e-04	-2.78e-05
769	8	-0.01	-0.04	-0.87	1.66e-04	-2.01e-04	-2.63e-05
769	10	-0.01	-0.04	-0.86	1.62e-04	-1.95e-04	-2.58e-05
770	2	-0.02	-0.06	-1.23	2.38e-04	-2.95e-04	-3.99e-05
770	6	-0.01	-0.04	-0.92	1.76e-04	-2.16e-04	-2.96e-05
770	8	-0.01	-0.04	-0.87	1.66e-04	-2.00e-04	-2.80e-05
770	10	-0.01	-0.04	-0.86	1.63e-04	-1.95e-04	-2.74e-05
771	2	-0.02	-0.06	-1.23	2.39e-04	-2.95e-04	-4.23e-05
771	6	-0.02	-0.04	-0.92	1.77e-04	-2.16e-04	-3.14e-05
771	8	-0.02	-0.04	-0.87	1.67e-04	-2.00e-04	-2.97e-05
771	10	-0.02	-0.04	-0.86	1.64e-04	-1.95e-04	-2.91e-05
772	2	-0.03	-0.06	-1.24	2.39e-04	-2.95e-04	-4.48e-05
772	6	-0.02	-0.05	-0.92	1.77e-04	-2.16e-04	-3.32e-05
772	8	-0.02	-0.04	-0.87	1.67e-04	-2.00e-04	-3.13e-05
772	10	-0.02	-0.04	-0.86	1.64e-04	-1.95e-04	-3.07e-05
773	2	-0.03	-0.07	-1.24	2.40e-04	-2.95e-04	-4.72e-05
773	6	-0.02	-0.05	-0.92	1.78e-04	-2.16e-04	-3.50e-05
773	8	-0.02	-0.05	-0.87	1.68e-04	-2.00e-04	-3.30e-05
773	10	-0.02	-0.05	-0.86	1.65e-04	-1.95e-04	-3.24e-05
774	2	-0.04	-0.07	-1.24	2.41e-04	-2.96e-04	-4.97e-05
774	6	-0.03	-0.05	-0.92	1.78e-04	-2.17e-04	-3.68e-05
774	8	-0.03	-0.05	-0.88	1.68e-04	-2.01e-04	-3.47e-05
774	10	-0.03	-0.05	-0.86	1.65e-04	-1.96e-04	-3.40e-05
775	2	-0.04	-0.07	-1.24	2.41e-04	-2.98e-04	-5.21e-05
775	6	-0.03	-0.05	-0.92	1.79e-04	-2.18e-04	-3.86e-05
775	8	-0.03	-0.05	-0.88	1.69e-04	-2.02e-04	-3.64e-05
775	10	-0.03	-0.05	-0.86	1.65e-04	-1.97e-04	-3.57e-05
776	2	-0.05	-0.08	-1.24	2.41e-04	-3.01e-04	-5.44e-05
776	6	-0.03	-0.06	-0.92	1.79e-04	-2.21e-04	-4.03e-05
776	8	-0.03	-0.05	-0.88	1.69e-04	-2.04e-04	-3.80e-05
776	10	-0.03	-0.05	-0.86	1.65e-04	-1.99e-04	-3.73e-05
777	2	-0.05	-0.08	-1.24	2.42e-04	-3.06e-04	-5.67e-05
777	6	-0.04	-0.06	-0.92	1.79e-04	-2.24e-04	-4.20e-05
777	8	-0.04	-0.06	-0.88	1.69e-04	-2.08e-04	-3.96e-05
777	10	-0.03	-0.06	-0.86	1.66e-04	-2.02e-04	-3.88e-05
778	2	-0.06	-0.08	-1.24	2.42e-04	-3.14e-04	-5.89e-05
778	6	-0.04	-0.06	-0.92	1.79e-04	-2.30e-04	-4.36e-05
778	8	-0.04	-0.06	-0.88	1.69e-04	-2.13e-04	-4.11e-05
778	10	-0.04	-0.06	-0.86	1.66e-04	-2.07e-04	-4.03e-05
779	2	0.02	-0.02	-1.27	2.12e-04	0.0	-1.62e-05
779	6	0.02	-0.01	-0.95	1.57e-04	0.0	-1.21e-05
779	8	0.02	-0.01	-0.90	1.48e-04	0.0	-1.15e-05
779	10	0.02	-0.01	-0.89	1.45e-04	0.0	-1.13e-05
780	2	0.03	-0.01	-1.27	2.09e-04	0.0	-1.68e-05
780	6	0.02	-9.45e-03	-0.95	1.55e-04	0.0	-1.25e-05
780	8	0.02	-8.95e-03	-0.90	1.47e-04	0.0	-1.19e-05
780	10	0.02	-8.78e-03	-0.88	1.44e-04	0.0	-1.17e-05
781	2	0.02	-0.02	-1.27	2.13e-04	0.0	-1.82e-05
781	6	0.01	-0.01	-0.95	1.58e-04	0.0	-1.36e-05
781	8	0.01	-0.01	-0.90	1.49e-04	0.0	-1.29e-05
781	10	0.01	-0.01	-0.89	1.46e-04	0.0	-1.26e-05
782	2	0.01	-0.02	-1.27	2.13e-04	0.0	-2.00e-05
782	6	0.01	-0.02	-0.95	1.58e-04	0.0	-1.48e-05
782	8	9.40e-03	-0.02	-0.90	1.49e-04	0.0	-1.41e-05
782	10	9.06e-03	-0.02	-0.89	1.46e-04	0.0	-1.38e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

783	2	9.95e-03	-0.03	-1.27	2.13e-04	0.0	-2.15e-05
783	6	7.11e-03	-0.02	-0.95	1.58e-04	0.0	-1.60e-05
783	8	6.33e-03	-0.02	-0.90	1.49e-04	0.0	-1.52e-05
783	10	6.06e-03	-0.02	-0.89	1.46e-04	0.0	-1.49e-05
784	2	5.58e-03	-0.03	-1.27	2.13e-04	0.0	-2.32e-05
784	6	3.91e-03	-0.02	-0.95	1.58e-04	0.0	-1.72e-05
784	8	3.35e-03	-0.02	-0.90	1.49e-04	0.0	-1.63e-05
784	10	3.17e-03	-0.02	-0.89	1.46e-04	0.0	-1.60e-05
785	2	1.33e-03	-0.03	-1.27	2.14e-04	0.0	-2.50e-05
785	6	7.93e-04	-0.02	-0.95	1.59e-04	0.0	-1.85e-05
785	8	4.58e-04	-0.02	-0.90	1.50e-04	0.0	-1.76e-05
785	10	3.46e-04	-0.02	-0.89	1.47e-04	0.0	-1.72e-05
786	1	-3.41e-03	-0.03	-1.04	1.71e-04	0.0	-2.16e-05
786	2	-2.83e-03	-0.04	-1.28	2.15e-04	0.0	-2.69e-05
786	5	-2.64e-03	-0.02	-0.79	1.30e-04	0.0	-1.64e-05
786	6	-2.26e-03	-0.03	-0.95	1.59e-04	0.0	-2.00e-05
786	7	-2.64e-03	-0.02	-0.79	1.30e-04	0.0	-1.64e-05
786	8	-2.37e-03	-0.02	-0.90	1.50e-04	0.0	-1.89e-05
786	9	-2.64e-03	-0.02	-0.79	1.30e-04	0.0	-1.64e-05
786	10	-2.41e-03	-0.02	-0.89	1.47e-04	0.0	-1.86e-05
787	2	-6.92e-03	-0.04	-1.28	2.15e-04	0.0	-2.90e-05
787	6	-5.26e-03	-0.03	-0.95	1.60e-04	0.0	-2.15e-05
787	8	-5.15e-03	-0.03	-0.90	1.51e-04	0.0	-2.04e-05
787	10	-5.12e-03	-0.03	-0.89	1.48e-04	0.0	-2.00e-05
788	2	-0.01	-0.04	-1.28	2.16e-04	0.0	-3.12e-05
788	6	-8.21e-03	-0.03	-0.95	1.60e-04	0.0	-2.31e-05
788	8	-7.89e-03	-0.03	-0.90	1.51e-04	0.0	-2.19e-05
788	10	-7.79e-03	-0.03	-0.89	1.48e-04	0.0	-2.15e-05
789	2	-0.01	-0.04	-1.28	2.17e-04	0.0	-3.35e-05
789	6	-0.01	-0.03	-0.95	1.61e-04	0.0	-2.48e-05
789	8	-0.01	-0.03	-0.90	1.52e-04	0.0	-2.35e-05
789	10	-0.01	-0.03	-0.89	1.49e-04	0.0	-2.30e-05
790	2	-0.02	-0.05	-1.28	2.17e-04	0.0	-3.58e-05
790	6	-0.01	-0.04	-0.95	1.61e-04	0.0	-2.66e-05
790	8	-0.01	-0.03	-0.90	1.52e-04	0.0	-2.51e-05
790	10	-0.01	-0.03	-0.89	1.49e-04	0.0	-2.46e-05
791	2	-0.02	-0.05	-1.28	2.18e-04	0.0	-3.82e-05
791	6	-0.02	-0.04	-0.95	1.62e-04	0.0	-2.83e-05
791	8	-0.02	-0.04	-0.90	1.53e-04	0.0	-2.68e-05
791	10	-0.02	-0.04	-0.89	1.50e-04	0.0	-2.62e-05
792	2	-0.03	-0.05	-1.28	2.18e-04	0.0	-4.07e-05
792	6	-0.02	-0.04	-0.95	1.62e-04	0.0	-3.02e-05
792	8	-0.02	-0.04	-0.90	1.53e-04	0.0	-2.85e-05
792	10	-0.02	-0.04	-0.89	1.50e-04	0.0	-2.79e-05
793	2	-0.03	-0.06	-1.28	2.19e-04	0.0	-4.32e-05
793	6	-0.02	-0.04	-0.95	1.62e-04	0.0	-3.20e-05
793	8	-0.02	-0.04	-0.90	1.53e-04	0.0	-3.02e-05
793	10	-0.02	-0.04	-0.89	1.50e-04	0.0	-2.96e-05
794	2	-0.03	-0.06	-1.28	2.19e-04	0.0	-4.58e-05
794	6	-0.03	-0.05	-0.95	1.63e-04	0.0	-3.39e-05
794	8	-0.02	-0.04	-0.90	1.54e-04	0.0	-3.20e-05
794	10	-0.02	-0.04	-0.89	1.51e-04	0.0	-3.13e-05
795	2	-0.04	-0.06	-1.28	2.20e-04	0.0	-4.84e-05
795	6	-0.03	-0.05	-0.95	1.63e-04	0.0	-3.58e-05
795	8	-0.03	-0.05	-0.90	1.54e-04	0.0	-3.38e-05
795	10	-0.03	-0.04	-0.89	1.51e-04	0.0	-3.31e-05
796	2	-0.04	-0.07	-1.28	2.20e-04	0.0	-5.10e-05
796	6	-0.03	-0.05	-0.95	1.63e-04	0.0	-3.77e-05
796	8	-0.03	-0.05	-0.90	1.54e-04	0.0	-3.56e-05
796	10	-0.03	-0.05	-0.89	1.51e-04	0.0	-3.49e-05
797	2	-0.05	-0.07	-1.28	2.20e-04	0.0	-5.36e-05
797	6	-0.03	-0.05	-0.95	1.63e-04	0.0	-3.97e-05
797	8	-0.03	-0.05	-0.90	1.54e-04	0.0	-3.74e-05
797	10	-0.03	-0.05	-0.89	1.51e-04	0.0	-3.66e-05
798	2	-0.05	-0.07	-1.28	2.20e-04	0.0	-5.62e-05
798	6	-0.04	-0.06	-0.95	1.63e-04	0.0	-4.16e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

798	8	-0.03	-0.05	-0.90	1.54e-04	0.0	-3.92e-05
798	10	-0.03	-0.05	-0.89	1.51e-04	0.0	-3.84e-05
799	2	-0.05	-0.08	-1.28	2.21e-04	-3.25e-04	-5.86e-05
799	6	-0.04	-0.06	-0.95	1.63e-04	-2.38e-04	-4.34e-05
799	8	-0.04	-0.05	-0.90	1.54e-04	-2.21e-04	-4.09e-05
799	10	-0.04	-0.05	-0.89	1.51e-04	-2.15e-04	-4.01e-05
800	2	0.02	-0.01	-1.31	1.99e-04	0.0	-1.36e-05
800	6	0.01	-0.01	-0.97	1.47e-04	0.0	-1.01e-05
800	8	9.82e-03	-9.90e-03	-0.93	1.39e-04	0.0	-9.62e-06
800	10	9.47e-03	-9.71e-03	-0.91	1.37e-04	0.0	-9.45e-06
801	2	0.02	-0.01	-1.31	1.99e-04	0.0	-1.42e-05
801	6	0.01	-8.24e-03	-0.97	1.47e-04	0.0	-1.06e-05
801	8	0.01	-7.80e-03	-0.93	1.39e-04	0.0	-1.00e-05
801	10	0.01	-7.65e-03	-0.91	1.37e-04	0.0	-9.84e-06
802	2	0.01	-0.02	-1.31	1.98e-04	0.0	-1.46e-05
802	6	7.40e-03	-0.01	-0.97	1.47e-04	0.0	-1.08e-05
802	8	6.61e-03	-0.01	-0.93	1.39e-04	0.0	-1.03e-05
802	10	6.34e-03	-0.01	-0.91	1.36e-04	0.0	-1.01e-05
803	2	6.11e-03	-0.02	-1.31	1.98e-04	0.0	-1.65e-05
803	6	4.31e-03	-0.01	-0.98	1.46e-04	0.0	-1.22e-05
803	8	3.73e-03	-0.01	-0.93	1.39e-04	0.0	-1.16e-05
803	10	3.54e-03	-0.01	-0.91	1.36e-04	0.0	-1.14e-05
804	2	2.21e-03	-0.02	-1.31	1.97e-04	0.0	-1.86e-05
804	6	1.45e-03	-0.02	-0.98	1.46e-04	0.0	-1.38e-05
804	8	1.08e-03	-0.02	-0.93	1.38e-04	0.0	-1.30e-05
804	10	9.60e-04	-0.02	-0.91	1.36e-04	0.0	-1.28e-05
805	1	-2.36e-03	-0.02	-1.07	1.57e-04	0.0	-1.66e-05
805	2	-1.51e-03	-0.03	-1.31	1.97e-04	0.0	-2.08e-05
805	5	-1.84e-03	-0.02	-0.81	1.20e-04	0.0	-1.26e-05
805	6	-1.28e-03	-0.02	-0.98	1.46e-04	0.0	-1.54e-05
805	7	-1.84e-03	-0.02	-0.81	1.20e-04	0.0	-1.26e-05
805	8	-1.45e-03	-0.02	-0.93	1.38e-04	0.0	-1.46e-05
805	9	-1.84e-03	-0.02	-0.81	1.20e-04	0.0	-1.26e-05
805	10	-1.51e-03	-0.02	-0.91	1.35e-04	0.0	-1.43e-05
806	2	-5.11e-03	-0.03	-1.31	1.97e-04	0.0	-2.30e-05
806	6	-3.92e-03	-0.02	-0.98	1.46e-04	0.0	-1.70e-05
806	8	-3.90e-03	-0.02	-0.93	1.38e-04	0.0	-1.61e-05
806	10	-3.89e-03	-0.02	-0.91	1.35e-04	0.0	-1.58e-05
807	2	-8.63e-03	-0.03	-1.31	1.97e-04	0.0	-2.53e-05
807	6	-6.50e-03	-0.02	-0.98	1.46e-04	0.0	-1.87e-05
807	8	-6.29e-03	-0.02	-0.93	1.38e-04	0.0	-1.77e-05
807	10	-6.22e-03	-0.02	-0.91	1.36e-04	0.0	-1.73e-05
808	2	-0.01	-0.03	-1.31	1.97e-04	0.0	-2.76e-05
808	6	-9.03e-03	-0.03	-0.98	1.46e-04	0.0	-2.04e-05
808	8	-8.64e-03	-0.02	-0.93	1.38e-04	0.0	-1.93e-05
808	10	-8.51e-03	-0.02	-0.91	1.36e-04	0.0	-1.89e-05
809	2	-0.02	-0.04	-1.31	1.97e-04	0.0	-2.99e-05
809	6	-0.01	-0.03	-0.98	1.46e-04	0.0	-2.21e-05
809	8	-0.01	-0.03	-0.93	1.38e-04	0.0	-2.09e-05
809	10	-0.01	-0.03	-0.91	1.36e-04	0.0	-2.05e-05
810	2	-0.02	-0.04	-1.31	1.98e-04	0.0	-3.22e-05
810	6	-0.01	-0.03	-0.98	1.47e-04	0.0	-2.39e-05
810	8	-0.01	-0.03	-0.93	1.39e-04	0.0	-2.25e-05
810	10	-0.01	-0.03	-0.91	1.36e-04	0.0	-2.21e-05
811	2	-0.02	-0.04	-1.31	1.98e-04	0.0	-3.46e-05
811	6	-0.02	-0.03	-0.98	1.47e-04	0.0	-2.56e-05
811	8	-0.02	-0.03	-0.93	1.39e-04	0.0	-2.42e-05
811	10	-0.02	-0.03	-0.91	1.36e-04	0.0	-2.37e-05
812	2	-0.03	-0.05	-1.31	1.98e-04	0.0	-3.70e-05
812	6	-0.02	-0.03	-0.98	1.47e-04	0.0	-2.74e-05
812	8	-0.02	-0.03	-0.93	1.39e-04	0.0	-2.58e-05
812	10	-0.02	-0.03	-0.91	1.36e-04	0.0	-2.53e-05
813	2	-0.03	-0.05	-1.31	1.98e-04	0.0	-3.94e-05
813	6	-0.02	-0.04	-0.98	1.47e-04	0.0	-2.92e-05
813	8	-0.02	-0.03	-0.93	1.39e-04	0.0	-2.75e-05
813	10	-0.02	-0.03	-0.91	1.36e-04	0.0	-2.69e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

814	2	-0.03	-0.05	-1.31	1.99e-04	0.0	-4.19e-05
814	6	-0.02	-0.04	-0.98	1.47e-04	0.0	-3.10e-05
814	8	-0.02	-0.04	-0.93	1.39e-04	0.0	-2.92e-05
814	10	-0.02	-0.04	-0.91	1.37e-04	0.0	-2.86e-05
815	2	-0.04	-0.06	-1.31	1.99e-04	0.0	-4.43e-05
815	6	-0.03	-0.04	-0.98	1.47e-04	0.0	-3.28e-05
815	8	-0.02	-0.04	-0.93	1.39e-04	0.0	-3.09e-05
815	10	-0.02	-0.04	-0.91	1.37e-04	0.0	-3.03e-05
816	2	-0.04	-0.06	-1.31	1.99e-04	0.0	-4.68e-05
816	6	-0.03	-0.04	-0.98	1.48e-04	0.0	-3.46e-05
816	8	-0.03	-0.04	-0.93	1.40e-04	0.0	-3.26e-05
816	10	-0.03	-0.04	-0.91	1.37e-04	0.0	-3.20e-05
817	2	-0.04	-0.06	-1.31	1.99e-04	0.0	-4.93e-05
817	6	-0.03	-0.05	-0.98	1.48e-04	0.0	-3.65e-05
817	8	-0.03	-0.04	-0.93	1.40e-04	0.0	-3.43e-05
817	10	-0.03	-0.04	-0.91	1.37e-04	0.0	-3.36e-05
818	2	-0.05	-0.06	-1.31	1.99e-04	0.0	-5.18e-05
818	6	-0.03	-0.05	-0.98	1.48e-04	0.0	-3.83e-05
818	8	-0.03	-0.05	-0.93	1.40e-04	0.0	-3.61e-05
818	10	-0.03	-0.04	-0.91	1.37e-04	0.0	-3.53e-05
819	2	-0.05	-0.07	-1.31	2.00e-04	0.0	-5.43e-05
819	6	-0.04	-0.05	-0.98	1.48e-04	0.0	-4.01e-05
819	8	-0.03	-0.05	-0.93	1.40e-04	0.0	-3.78e-05
819	10	-0.03	-0.05	-0.91	1.37e-04	0.0	-3.70e-05
820	2	-0.05	-0.07	-1.31	2.00e-04	-2.56e-04	-5.67e-05
820	6	-0.04	-0.05	-0.98	1.48e-04	-1.88e-04	-4.19e-05
820	8	-0.04	-0.05	-0.93	1.40e-04	-1.74e-04	-3.95e-05
820	10	-0.03	-0.05	-0.91	1.37e-04	-1.70e-04	-3.86e-05
821	1	-2.84e-03	-0.01	-1.09	1.40e-04	0.0	-7.91e-06
821	2	-2.19e-03	-0.01	-1.34	1.75e-04	0.0	-9.93e-06
821	5	-2.21e-03	-7.92e-03	-0.83	1.07e-04	0.0	-6.01e-06
821	6	-1.77e-03	-9.65e-03	-0.99	1.30e-04	0.0	-7.36e-06
821	7	-2.21e-03	-7.92e-03	-0.83	1.07e-04	0.0	-6.01e-06
821	8	-1.90e-03	-9.13e-03	-0.94	1.23e-04	0.0	-6.96e-06
821	9	-2.21e-03	-7.92e-03	-0.83	1.07e-04	0.0	-6.01e-06
821	10	-1.95e-03	-8.96e-03	-0.93	1.21e-04	0.0	-6.82e-06
822	1	-2.63e-03	-8.31e-03	-1.09	1.40e-04	0.0	-7.57e-06
822	2	-1.86e-03	-0.01	-1.34	1.75e-04	0.0	-9.52e-06
822	5	-2.05e-03	-6.32e-03	-0.83	1.06e-04	0.0	-5.76e-06
822	6	-1.53e-03	-7.72e-03	-0.99	1.30e-04	0.0	-7.06e-06
822	7	-2.05e-03	-6.32e-03	-0.83	1.06e-04	0.0	-5.76e-06
822	8	-1.69e-03	-7.30e-03	-0.94	1.23e-04	0.0	-6.67e-06
822	9	-2.05e-03	-6.32e-03	-0.83	1.06e-04	0.0	-5.76e-06
822	10	-1.74e-03	-7.16e-03	-0.93	1.20e-04	0.0	-6.54e-06
823	1	-3.98e-03	-0.01	-1.09	1.41e-04	0.0	-8.76e-06
823	2	-3.75e-03	-0.02	-1.34	1.76e-04	0.0	-1.10e-05
823	5	-3.07e-03	-9.52e-03	-0.83	1.07e-04	0.0	-6.66e-06
823	6	-2.92e-03	-0.01	-0.99	1.31e-04	0.0	-8.17e-06
823	7	-3.07e-03	-9.52e-03	-0.83	1.07e-04	0.0	-6.66e-06
823	8	-2.96e-03	-0.01	-0.94	1.24e-04	0.0	-7.72e-06
823	9	-3.07e-03	-9.52e-03	-0.83	1.07e-04	0.0	-6.66e-06
823	10	-2.98e-03	-0.01	-0.93	1.21e-04	0.0	-7.57e-06
824	2	-5.77e-03	-0.02	-1.34	1.77e-04	0.0	-1.32e-05
824	6	-4.40e-03	-0.01	-0.99	1.31e-04	0.0	-9.77e-06
824	8	-4.34e-03	-0.01	-0.94	1.24e-04	0.0	-9.22e-06
824	10	-4.32e-03	-0.01	-0.93	1.22e-04	0.0	-9.04e-06
825	2	-8.02e-03	-0.02	-1.34	1.77e-04	0.0	-1.56e-05
825	6	-6.05e-03	-0.02	-0.99	1.31e-04	0.0	-1.15e-05
825	8	-5.87e-03	-0.01	-0.94	1.24e-04	0.0	-1.09e-05
825	10	-5.81e-03	-0.01	-0.93	1.22e-04	0.0	-1.07e-05
826	2	-0.01	-0.02	-1.34	1.77e-04	0.0	-1.80e-05
826	6	-7.79e-03	-0.02	-0.99	1.32e-04	0.0	-1.33e-05
826	8	-7.48e-03	-0.02	-0.94	1.24e-04	0.0	-1.26e-05
826	10	-7.38e-03	-0.02	-0.93	1.22e-04	0.0	-1.23e-05
827	2	-0.01	-0.03	-1.34	1.78e-04	0.0	-2.04e-05
827	6	-9.59e-03	-0.02	-0.99	1.32e-04	0.0	-1.51e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

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Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

827	8	-9.15e-03	-0.02	-0.94	1.25e-04	0.0	-1.43e-05
827	10	-9.01e-03	-0.02	-0.93	1.22e-04	0.0	-1.40e-05
828	2	-0.02	-0.03	-1.34	1.78e-04	0.0	-2.29e-05
828	6	-0.01	-0.02	-0.99	1.32e-04	0.0	-1.69e-05
828	8	-0.01	-0.02	-0.94	1.25e-04	0.0	-1.59e-05
828	10	-0.01	-0.02	-0.93	1.22e-04	0.0	-1.56e-05
829	2	-0.02	-0.03	-1.34	1.78e-04	0.0	-2.53e-05
829	6	-0.01	-0.02	-1.00	1.32e-04	0.0	-1.87e-05
829	8	-0.01	-0.02	-0.94	1.25e-04	0.0	-1.76e-05
829	10	-0.01	-0.02	-0.93	1.22e-04	0.0	-1.73e-05
830	2	-0.02	-0.03	-1.34	1.78e-04	0.0	-2.77e-05
830	6	-0.02	-0.03	-1.00	1.32e-04	0.0	-2.05e-05
830	8	-0.01	-0.02	-0.94	1.25e-04	0.0	-1.93e-05
830	10	-0.01	-0.02	-0.93	1.23e-04	0.0	-1.89e-05
831	2	-0.02	-0.04	-1.34	1.78e-04	0.0	-3.01e-05
831	6	-0.02	-0.03	-1.00	1.32e-04	0.0	-2.23e-05
831	8	-0.02	-0.03	-0.95	1.25e-04	0.0	-2.10e-05
831	10	-0.02	-0.03	-0.93	1.23e-04	0.0	-2.05e-05
832	2	-0.03	-0.04	-1.34	1.78e-04	0.0	-3.25e-05
832	6	-0.02	-0.03	-1.00	1.32e-04	0.0	-2.41e-05
832	8	-0.02	-0.03	-0.95	1.25e-04	0.0	-2.26e-05
832	10	-0.02	-0.03	-0.93	1.23e-04	0.0	-2.22e-05
833	2	-0.03	-0.04	-1.34	1.79e-04	0.0	-3.49e-05
833	6	-0.02	-0.03	-1.00	1.32e-04	0.0	-2.58e-05
833	8	-0.02	-0.03	-0.95	1.25e-04	0.0	-2.43e-05
833	10	-0.02	-0.03	-0.93	1.23e-04	0.0	-2.38e-05
834	2	-0.03	-0.04	-1.34	1.79e-04	0.0	-3.73e-05
834	6	-0.02	-0.03	-1.00	1.33e-04	0.0	-2.76e-05
834	8	-0.02	-0.03	-0.95	1.25e-04	0.0	-2.60e-05
834	10	-0.02	-0.03	-0.93	1.23e-04	0.0	-2.54e-05
835	2	-0.03	-0.05	-1.34	1.79e-04	0.0	-3.97e-05
835	6	-0.02	-0.04	-1.00	1.33e-04	0.0	-2.94e-05
835	8	-0.02	-0.03	-0.95	1.26e-04	0.0	-2.77e-05
835	10	-0.02	-0.03	-0.93	1.23e-04	0.0	-2.71e-05
836	2	-0.04	-0.05	-1.34	1.79e-04	0.0	-4.22e-05
836	6	-0.03	-0.04	-1.00	1.33e-04	0.0	-3.12e-05
836	8	-0.02	-0.04	-0.95	1.26e-04	0.0	-2.93e-05
836	10	-0.02	-0.03	-0.93	1.23e-04	0.0	-2.87e-05
837	2	-0.04	-0.05	-1.34	1.79e-04	0.0	-4.46e-05
837	6	-0.03	-0.04	-1.00	1.33e-04	0.0	-3.29e-05
837	8	-0.03	-0.04	-0.95	1.26e-04	0.0	-3.10e-05
837	10	-0.03	-0.04	-0.93	1.23e-04	0.0	-3.04e-05
838	2	-0.04	-0.06	-1.34	1.79e-04	0.0	-4.70e-05
838	6	-0.03	-0.04	-1.00	1.33e-04	0.0	-3.47e-05
838	8	-0.03	-0.04	-0.95	1.26e-04	0.0	-3.27e-05
838	10	-0.03	-0.04	-0.93	1.23e-04	0.0	-3.20e-05
839	2	-0.04	-0.06	-1.34	1.79e-04	0.0	-4.94e-05
839	6	-0.03	-0.04	-1.00	1.33e-04	0.0	-3.65e-05
839	8	-0.03	-0.04	-0.95	1.26e-04	0.0	-3.43e-05
839	10	-0.03	-0.04	-0.93	1.24e-04	0.0	-3.36e-05
840	2	-0.05	-0.06	-1.34	1.80e-04	0.0	-5.18e-05
840	6	-0.03	-0.05	-1.00	1.33e-04	0.0	-3.83e-05
840	8	-0.03	-0.04	-0.95	1.26e-04	0.0	-3.60e-05
840	10	-0.03	-0.04	-0.93	1.24e-04	0.0	-3.52e-05
841	2	-0.05	-0.06	-1.34	1.80e-04	-1.71e-04	-5.41e-05
841	6	-0.04	-0.05	-1.00	1.33e-04	-1.25e-04	-4.00e-05
841	8	-0.03	-0.04	-0.95	1.26e-04	-1.16e-04	-3.76e-05
841	10	-0.03	-0.04	-0.93	1.24e-04	-1.13e-04	-3.68e-05
842	2	-0.01	-0.01	-1.35	1.58e-04	0.0	-7.05e-06
842	6	-9.69e-03	-8.95e-03	-1.00	1.17e-04	0.0	-5.21e-06
842	8	-9.24e-03	-8.47e-03	-0.95	1.11e-04	0.0	-4.89e-06
842	10	-9.09e-03	-8.31e-03	-0.94	1.09e-04	0.0	-4.79e-06
843	2	-0.01	-9.70e-03	-1.35	1.58e-04	0.0	-6.95e-06
843	6	-8.80e-03	-7.20e-03	-1.00	1.17e-04	0.0	-5.14e-06
843	8	-8.42e-03	-6.81e-03	-0.95	1.11e-04	0.0	-4.82e-06
843	10	-8.30e-03	-6.68e-03	-0.94	1.09e-04	0.0	-4.72e-06

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

844	2	-0.01	-0.01	-1.35	1.58e-04	0.0	-8.86e-06
844	6	-0.01	-0.01	-1.01	1.17e-04	0.0	-6.54e-06
844	8	-0.01	-0.01	-0.95	1.11e-04	0.0	-6.15e-06
844	10	-0.01	-9.94e-03	-0.94	1.09e-04	0.0	-6.02e-06
845	2	-0.02	-0.02	-1.35	1.58e-04	0.0	-1.11e-05
845	6	-0.01	-0.01	-1.01	1.17e-04	0.0	-8.24e-06
845	8	-0.01	-0.01	-0.95	1.11e-04	0.0	-7.74e-06
845	10	-0.01	-0.01	-0.94	1.09e-04	0.0	-7.57e-06
846	2	-0.02	-0.02	-1.35	1.58e-04	0.0	-1.35e-05
846	6	-0.01	-0.01	-1.01	1.17e-04	0.0	-9.99e-06
846	8	-0.01	-0.01	-0.95	1.11e-04	0.0	-9.39e-06
846	10	-0.01	-0.01	-0.94	1.09e-04	0.0	-9.19e-06
847	2	-0.02	-0.02	-1.35	1.58e-04	0.0	-1.59e-05
847	6	-0.01	-0.02	-1.01	1.17e-04	0.0	-1.18e-05
847	8	-0.01	-0.02	-0.95	1.11e-04	0.0	-1.10e-05
847	10	-0.01	-0.01	-0.94	1.09e-04	0.0	-1.08e-05
848	2	-0.02	-0.02	-1.35	1.58e-04	0.0	-1.83e-05
848	6	-0.02	-0.02	-1.01	1.17e-04	0.0	-1.35e-05
848	8	-0.01	-0.02	-0.95	1.11e-04	0.0	-1.27e-05
848	10	-0.01	-0.02	-0.94	1.09e-04	0.0	-1.24e-05
849	2	-0.02	-0.03	-1.35	1.58e-04	0.0	-2.07e-05
849	6	-0.02	-0.02	-1.01	1.17e-04	0.0	-1.53e-05
849	8	-0.02	-0.02	-0.95	1.11e-04	0.0	-1.44e-05
849	10	-0.02	-0.02	-0.94	1.09e-04	0.0	-1.40e-05
850	2	-0.02	-0.03	-1.35	1.58e-04	0.0	-2.31e-05
850	6	-0.02	-0.02	-1.01	1.18e-04	0.0	-1.70e-05
850	8	-0.02	-0.02	-0.96	1.11e-04	0.0	-1.60e-05
850	10	-0.02	-0.02	-0.94	1.09e-04	0.0	-1.57e-05
851	2	-0.03	-0.03	-1.35	1.59e-04	0.0	-2.54e-05
851	6	-0.02	-0.02	-1.01	1.18e-04	0.0	-1.88e-05
851	8	-0.02	-0.02	-0.96	1.11e-04	0.0	-1.77e-05
851	10	-0.02	-0.02	-0.94	1.09e-04	0.0	-1.73e-05
852	2	-0.03	-0.03	-1.35	1.59e-04	0.0	-2.78e-05
852	6	-0.02	-0.02	-1.01	1.18e-04	0.0	-2.05e-05
852	8	-0.02	-0.02	-0.96	1.12e-04	0.0	-1.93e-05
852	10	-0.02	-0.02	-0.94	1.09e-04	0.0	-1.89e-05
853	2	-0.03	-0.04	-1.35	1.59e-04	0.0	-3.02e-05
853	6	-0.02	-0.03	-1.01	1.18e-04	0.0	-2.23e-05
853	8	-0.02	-0.03	-0.96	1.12e-04	0.0	-2.09e-05
853	10	-0.02	-0.02	-0.94	1.10e-04	0.0	-2.05e-05
854	2	-0.03	-0.04	-1.35	1.59e-04	0.0	-3.25e-05
854	6	-0.02	-0.03	-1.01	1.18e-04	0.0	-2.40e-05
854	8	-0.02	-0.03	-0.96	1.12e-04	0.0	-2.26e-05
854	10	-0.02	-0.03	-0.94	1.10e-04	0.0	-2.21e-05
855	2	-0.03	-0.04	-1.35	1.59e-04	0.0	-3.49e-05
855	6	-0.02	-0.03	-1.01	1.18e-04	0.0	-2.57e-05
855	8	-0.02	-0.03	-0.96	1.12e-04	0.0	-2.42e-05
855	10	-0.02	-0.03	-0.94	1.10e-04	0.0	-2.37e-05
856	2	-0.03	-0.04	-1.35	1.60e-04	0.0	-3.72e-05
856	6	-0.03	-0.03	-1.01	1.18e-04	0.0	-2.75e-05
856	8	-0.02	-0.03	-0.96	1.12e-04	0.0	-2.58e-05
856	10	-0.02	-0.03	-0.94	1.10e-04	0.0	-2.53e-05
857	2	-0.04	-0.05	-1.35	1.60e-04	0.0	-3.95e-05
857	6	-0.03	-0.03	-1.01	1.19e-04	0.0	-2.92e-05
857	8	-0.03	-0.03	-0.96	1.12e-04	0.0	-2.74e-05
857	10	-0.02	-0.03	-0.94	1.10e-04	0.0	-2.68e-05
858	2	-0.04	-0.05	-1.36	1.60e-04	0.0	-4.18e-05
858	6	-0.03	-0.04	-1.01	1.19e-04	0.0	-3.09e-05
858	8	-0.03	-0.03	-0.96	1.12e-04	0.0	-2.90e-05
858	10	-0.03	-0.03	-0.94	1.10e-04	0.0	-2.84e-05
859	2	-0.04	-0.05	-1.36	1.60e-04	0.0	-4.41e-05
859	6	-0.03	-0.04	-1.01	1.19e-04	0.0	-3.26e-05
859	8	-0.03	-0.04	-0.96	1.13e-04	0.0	-3.06e-05
859	10	-0.03	-0.03	-0.94	1.10e-04	0.0	-3.00e-05
860	2	-0.04	-0.05	-1.36	1.60e-04	0.0	-4.64e-05
860	6	-0.03	-0.04	-1.01	1.19e-04	0.0	-3.43e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

860	8	-0.03	-0.04	-0.96	1.13e-04	0.0	-3.22e-05
860	10	-0.03	-0.04	-0.94	1.11e-04	0.0	-3.15e-05
861	2	-0.04	-0.05	-1.36	1.61e-04	0.0	-4.87e-05
861	6	-0.03	-0.04	-1.01	1.19e-04	0.0	-3.59e-05
861	8	-0.03	-0.04	-0.96	1.13e-04	0.0	-3.38e-05
861	10	-0.03	-0.04	-0.94	1.11e-04	0.0	-3.30e-05
862	2	-0.05	-0.06	-1.36	1.61e-04	-8.84e-05	-5.08e-05
862	6	-0.03	-0.04	-1.01	1.19e-04	-6.46e-05	-3.75e-05
862	8	-0.03	-0.04	-0.96	1.13e-04	-5.96e-05	-3.53e-05
862	10	-0.03	-0.04	-0.94	1.11e-04	-5.80e-05	-3.45e-05
863	2	-0.02	-0.01	-1.36	1.38e-04	0.0	-5.72e-06
863	6	-0.02	-8.47e-03	-1.01	1.02e-04	0.0	-4.20e-06
863	8	-0.02	-8.02e-03	-0.96	9.70e-05	0.0	-3.90e-06
863	10	-0.02	-7.87e-03	-0.94	9.52e-05	0.0	-3.80e-06
864	2	-0.02	-9.35e-03	-1.36	1.38e-04	0.0	-5.51e-06
864	6	-0.02	-6.94e-03	-1.01	1.02e-04	0.0	-4.04e-06
864	8	-0.02	-6.57e-03	-0.96	9.69e-05	0.0	-3.75e-06
864	10	-0.02	-6.45e-03	-0.94	9.51e-05	0.0	-3.66e-06
865	2	-0.02	-0.01	-1.36	1.38e-04	0.0	-7.53e-06
865	6	-0.02	-0.01	-1.01	1.02e-04	0.0	-5.53e-06
865	8	-0.02	-9.48e-03	-0.96	9.70e-05	0.0	-5.16e-06
865	10	-0.02	-9.30e-03	-0.94	9.52e-05	0.0	-5.03e-06
866	2	-0.02	-0.02	-1.36	1.38e-04	0.0	-9.78e-06
866	6	-0.02	-0.01	-1.01	1.02e-04	0.0	-7.20e-06
866	8	-0.02	-0.01	-0.96	9.71e-05	0.0	-6.73e-06
866	10	-0.02	-0.01	-0.94	9.53e-05	0.0	-6.57e-06
867	2	-0.02	-0.02	-1.36	1.38e-04	0.0	-1.22e-05
867	6	-0.02	-0.01	-1.01	1.03e-04	0.0	-8.96e-06
867	8	-0.02	-0.01	-0.96	9.73e-05	0.0	-8.38e-06
867	10	-0.02	-0.01	-0.94	9.55e-05	0.0	-8.19e-06
868	2	-0.03	-0.02	-1.36	1.38e-04	0.0	-1.46e-05
868	6	-0.02	-0.01	-1.01	1.03e-04	0.0	-1.07e-05
868	8	-0.02	-0.01	-0.96	9.74e-05	0.0	-1.01e-05
868	10	-0.02	-0.01	-0.94	9.56e-05	0.0	-9.82e-06
869	2	-0.03	-0.02	-1.36	1.39e-04	0.0	-1.70e-05
869	6	-0.02	-0.02	-1.01	1.03e-04	0.0	-1.25e-05
869	8	-0.02	-0.02	-0.96	9.76e-05	0.0	-1.17e-05
869	10	-0.02	-0.02	-0.94	9.58e-05	0.0	-1.14e-05
870	2	-0.03	-0.02	-1.36	1.39e-04	0.0	-1.93e-05
870	6	-0.02	-0.02	-1.01	1.03e-04	0.0	-1.42e-05
870	8	-0.02	-0.02	-0.96	9.79e-05	0.0	-1.33e-05
870	10	-0.02	-0.02	-0.94	9.61e-05	0.0	-1.30e-05
871	2	-0.03	-0.03	-1.36	1.39e-04	0.0	-2.16e-05
871	6	-0.02	-0.02	-1.01	1.04e-04	0.0	-1.59e-05
871	8	-0.02	-0.02	-0.96	9.81e-05	0.0	-1.49e-05
871	10	-0.02	-0.02	-0.94	9.63e-05	0.0	-1.46e-05
872	2	-0.03	-0.03	-1.36	1.40e-04	0.0	-2.38e-05
872	6	-0.02	-0.02	-1.01	1.04e-04	0.0	-1.76e-05
872	8	-0.02	-0.02	-0.96	9.84e-05	0.0	-1.65e-05
872	10	-0.02	-0.02	-0.94	9.66e-05	0.0	-1.61e-05
873	2	-0.03	-0.03	-1.36	1.40e-04	0.0	-2.60e-05
873	6	-0.02	-0.02	-1.01	1.04e-04	0.0	-1.92e-05
873	8	-0.02	-0.02	-0.96	9.86e-05	0.0	-1.80e-05
873	10	-0.02	-0.02	-0.94	9.68e-05	0.0	-1.76e-05
874	2	-0.03	-0.03	-1.36	1.41e-04	0.0	-2.81e-05
874	6	-0.02	-0.02	-1.01	1.04e-04	0.0	-2.07e-05
874	8	-0.02	-0.02	-0.96	9.89e-05	0.0	-1.95e-05
874	10	-0.02	-0.02	-0.94	9.71e-05	0.0	-1.90e-05
875	2	-0.03	-0.03	-1.36	1.41e-04	0.0	-3.02e-05
875	6	-0.02	-0.03	-1.01	1.05e-04	0.0	-2.23e-05
875	8	-0.02	-0.02	-0.96	9.92e-05	0.0	-2.09e-05
875	10	-0.02	-0.02	-0.94	9.73e-05	0.0	-2.05e-05
876	2	-0.03	-0.04	-1.36	1.41e-04	0.0	-3.23e-05
876	6	-0.03	-0.03	-1.01	1.05e-04	0.0	-2.38e-05
876	8	-0.02	-0.03	-0.96	9.94e-05	0.0	-2.24e-05
876	10	-0.02	-0.03	-0.94	9.76e-05	0.0	-2.19e-05

PROJETTO engineering s.r.l.

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- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

877	2	-0.04	-0.04	-1.36	1.42e-04	0.0	-3.44e-05
877	6	-0.03	-0.03	-1.01	1.05e-04	0.0	-2.54e-05
877	8	-0.02	-0.03	-0.96	9.96e-05	0.0	-2.38e-05
877	10	-0.02	-0.03	-0.94	9.78e-05	0.0	-2.33e-05
878	2	-0.04	-0.04	-1.36	1.42e-04	0.0	-3.64e-05
878	6	-0.03	-0.03	-1.01	1.05e-04	0.0	-2.69e-05
878	8	-0.03	-0.03	-0.96	9.98e-05	0.0	-2.52e-05
878	10	-0.02	-0.03	-0.94	9.80e-05	0.0	-2.47e-05
879	2	-0.04	-0.04	-1.36	1.42e-04	0.0	-3.85e-05
879	6	-0.03	-0.03	-1.01	1.06e-04	0.0	-2.84e-05
879	8	-0.03	-0.03	-0.96	1.00e-04	0.0	-2.66e-05
879	10	-0.03	-0.03	-0.94	9.82e-05	0.0	-2.61e-05
880	2	-0.04	-0.04	-1.36	1.42e-04	0.0	-4.05e-05
880	6	-0.03	-0.03	-1.01	1.06e-04	0.0	-2.99e-05
880	8	-0.03	-0.03	-0.96	1.00e-04	0.0	-2.81e-05
880	10	-0.03	-0.03	-0.94	9.84e-05	0.0	-2.74e-05
881	2	-0.04	-0.05	-1.36	1.43e-04	0.0	-4.26e-05
881	6	-0.03	-0.03	-1.01	1.06e-04	0.0	-3.14e-05
881	8	-0.03	-0.03	-0.96	1.00e-04	0.0	-2.95e-05
881	10	-0.03	-0.03	-0.94	9.86e-05	0.0	-2.88e-05
882	2	-0.04	-0.05	-1.36	1.43e-04	0.0	-4.46e-05
882	6	-0.03	-0.04	-1.01	1.06e-04	0.0	-3.29e-05
882	8	-0.03	-0.03	-0.96	1.01e-04	0.0	-3.08e-05
882	10	-0.03	-0.03	-0.94	9.88e-05	0.0	-3.02e-05
883	2	-0.04	-0.05	-1.36	1.43e-04	-2.18e-05	-4.65e-05
883	6	-0.03	-0.04	-1.01	1.06e-04	-1.58e-05	-3.43e-05
883	8	-0.03	-0.04	-0.96	1.01e-04	-1.44e-05	-3.22e-05
883	10	-0.03	-0.04	-0.94	9.90e-05	-1.39e-05	-3.15e-05
884	2	-0.03	-0.01	-1.35	1.15e-04	-5.80e-05	-1.35e-05
884	6	-0.02	-7.91e-03	-1.01	8.55e-05	-4.26e-05	-9.95e-06
884	8	-0.02	-7.50e-03	-0.96	8.11e-05	-3.97e-05	-9.31e-06
884	10	-0.02	-7.36e-03	-0.94	7.96e-05	-3.87e-05	-9.09e-06
885	2	-0.03	-8.93e-03	-1.35	1.13e-04	-6.74e-05	-1.30e-05
885	6	-0.02	-6.64e-03	-1.01	8.37e-05	-4.96e-05	-9.55e-06
885	8	-0.02	-6.29e-03	-0.95	7.94e-05	-4.62e-05	-8.93e-06
885	10	-0.02	-6.18e-03	-0.94	7.80e-05	-4.51e-05	-8.73e-06
886	2	-0.03	-0.01	-1.35	1.17e-04	-5.17e-05	-1.43e-05
886	6	-0.02	-9.20e-03	-1.01	8.69e-05	-3.80e-05	-1.06e-05
886	8	-0.02	-8.73e-03	-0.96	8.25e-05	-3.55e-05	-9.87e-06
886	10	-0.02	-8.57e-03	-0.94	8.10e-05	-3.47e-05	-9.64e-06
887	2	-0.03	-0.01	-1.36	1.19e-04	-4.76e-05	-1.53e-05
887	6	-0.02	-0.01	-1.01	8.82e-05	-3.50e-05	-1.13e-05
887	8	-0.02	-9.98e-03	-0.96	8.37e-05	-3.28e-05	-1.06e-05
887	10	-0.02	-9.80e-03	-0.94	8.22e-05	-3.20e-05	-1.03e-05
888	2	-0.03	-0.02	-1.36	1.20e-04	-4.51e-05	-1.65e-05
888	6	-0.02	-0.01	-1.01	8.92e-05	-3.33e-05	-1.21e-05
888	8	-0.02	-0.01	-0.96	8.47e-05	-3.12e-05	-1.14e-05
888	10	-0.02	-0.01	-0.94	8.32e-05	-3.05e-05	-1.11e-05
889	2	-0.03	-0.02	-1.36	1.21e-04	-4.40e-05	-1.77e-05
889	6	-0.02	-0.01	-1.01	9.01e-05	-3.25e-05	-1.31e-05
889	8	-0.02	-0.01	-0.96	8.55e-05	-3.04e-05	-1.22e-05
889	10	-0.02	-0.01	-0.94	8.40e-05	-2.98e-05	-1.19e-05
890	2	-0.03	-0.02	-1.36	1.22e-04	-4.37e-05	-1.90e-05
890	6	-0.02	-0.01	-1.01	9.09e-05	-3.22e-05	-1.40e-05
890	8	-0.02	-0.01	-0.96	8.63e-05	-3.03e-05	-1.31e-05
890	10	-0.02	-0.01	-0.94	8.47e-05	-2.96e-05	-1.28e-05
891	2	-0.03	-0.02	-1.36	1.23e-04	-4.39e-05	-2.04e-05
891	6	-0.02	-0.02	-1.01	9.16e-05	-3.24e-05	-1.50e-05
891	8	-0.02	-0.02	-0.96	8.69e-05	-3.04e-05	-1.41e-05
891	10	-0.02	-0.01	-0.94	8.53e-05	-2.98e-05	-1.37e-05
892	2	-0.03	-0.02	-1.36	1.24e-04	-4.44e-05	-2.18e-05
892	6	-0.02	-0.02	-1.01	9.21e-05	-3.28e-05	-1.61e-05
892	8	-0.02	-0.02	-0.96	8.74e-05	-3.08e-05	-1.50e-05
892	10	-0.02	-0.02	-0.94	8.59e-05	-3.01e-05	-1.47e-05
893	2	-0.03	-0.03	-1.36	1.25e-04	-4.50e-05	-2.33e-05
893	6	-0.02	-0.02	-1.01	9.26e-05	-3.33e-05	-1.71e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

893	8	-0.02	-0.02	-0.96	8.79e-05	-3.13e-05	-1.60e-05
893	10	-0.02	-0.02	-0.94	8.63e-05	-3.06e-05	-1.57e-05
894	2	-0.03	-0.03	-1.36	1.25e-04	-4.57e-05	-2.47e-05
894	6	-0.03	-0.02	-1.01	9.31e-05	-3.37e-05	-1.82e-05
894	8	-0.02	-0.02	-0.96	8.83e-05	-3.17e-05	-1.70e-05
894	10	-0.02	-0.02	-0.94	8.67e-05	-3.14e-05	-1.67e-05
895	2	-0.04	-0.03	-1.36	1.26e-04	-4.62e-05	-2.62e-05
895	6	-0.03	-0.02	-1.01	9.35e-05	-3.42e-05	-1.93e-05
895	8	-0.02	-0.02	-0.96	8.87e-05	-3.21e-05	-1.81e-05
895	10	-0.02	-0.02	-0.94	8.71e-05	-3.14e-05	-1.77e-05
896	2	-0.04	-0.03	-1.36	1.26e-04	-4.67e-05	-2.77e-05
896	6	-0.03	-0.02	-1.01	9.38e-05	-3.45e-05	-2.04e-05
896	8	-0.02	-0.02	-0.96	8.90e-05	-3.24e-05	-1.91e-05
896	10	-0.02	-0.02	-0.94	8.74e-05	-3.17e-05	-1.87e-05
897	2	-0.04	-0.03	-1.36	1.27e-04	-4.70e-05	-2.92e-05
897	6	-0.03	-0.02	-1.01	9.41e-05	-3.47e-05	-2.15e-05
897	8	-0.03	-0.02	-0.96	8.93e-05	-3.26e-05	-2.01e-05
897	10	-0.02	-0.02	-0.94	8.77e-05	-3.19e-05	-1.97e-05
898	2	-0.04	-0.03	-1.36	1.27e-04	-4.71e-05	-3.07e-05
898	6	-0.03	-0.03	-1.01	9.44e-05	-3.48e-05	-2.26e-05
898	8	-0.03	-0.02	-0.96	8.96e-05	-3.27e-05	-2.12e-05
898	10	-0.03	-0.02	-0.94	8.80e-05	-3.20e-05	-2.07e-05
899	2	-0.04	-0.04	-1.36	1.27e-04	-4.68e-05	-3.22e-05
899	6	-0.03	-0.03	-1.01	9.46e-05	-3.46e-05	-2.37e-05
899	8	-0.03	-0.03	-0.96	8.98e-05	-3.25e-05	-2.22e-05
899	10	-0.03	-0.03	-0.94	8.82e-05	-3.18e-05	-2.17e-05
900	2	-0.04	-0.04	-1.36	1.28e-04	-4.62e-05	-3.37e-05
900	6	-0.03	-0.03	-1.01	9.48e-05	-3.41e-05	-2.48e-05
900	8	-0.03	-0.03	-0.96	9.00e-05	-3.21e-05	-2.32e-05
900	10	-0.03	-0.03	-0.94	8.84e-05	-3.14e-05	-2.27e-05
901	2	-0.04	-0.04	-1.36	1.28e-04	-4.49e-05	-3.51e-05
901	6	-0.03	-0.03	-1.01	9.50e-05	-3.32e-05	-2.59e-05
901	8	-0.03	-0.03	-0.96	9.01e-05	-3.12e-05	-2.42e-05
901	10	-0.03	-0.03	-0.94	8.85e-05	-3.05e-05	-2.37e-05
902	2	-0.04	-0.04	-1.36	1.28e-04	-4.29e-05	-3.66e-05
902	6	-0.03	-0.03	-1.01	9.51e-05	-3.17e-05	-2.70e-05
902	8	-0.03	-0.03	-0.96	9.03e-05	-2.98e-05	-2.52e-05
902	10	-0.03	-0.03	-0.94	8.87e-05	-2.91e-05	-2.46e-05
903	2	-0.04	-0.04	-1.36	1.28e-04	-3.96e-05	-3.80e-05
903	6	-0.03	-0.03	-1.01	9.52e-05	-2.93e-05	-2.80e-05
903	8	-0.03	-0.03	-0.96	9.04e-05	-2.75e-05	-2.62e-05
903	10	-0.03	-0.03	-0.94	8.87e-05	-2.69e-05	-2.56e-05
904	2	-0.03	-9.09e-03	-1.37	1.11e-04	0.0	-1.08e-05
904	6	-0.02	-6.76e-03	-1.02	8.27e-05	0.0	-7.97e-06
904	8	-0.02	-6.42e-03	-0.96	7.86e-05	0.0	-7.46e-06
904	10	-0.02	-6.31e-03	-0.95	7.73e-05	0.0	-7.28e-06
905	2	-0.03	-7.42e-03	-1.37	1.11e-04	0.0	-1.09e-05
905	6	-0.02	-5.52e-03	-1.01	8.29e-05	0.0	-8.05e-06
905	8	-0.02	-5.24e-03	-0.96	7.88e-05	0.0	-7.53e-06
905	10	-0.02	-5.15e-03	-0.95	7.74e-05	0.0	-7.36e-06
906	2	-0.03	-0.01	-1.37	1.11e-04	0.0	-1.18e-05
906	6	-0.03	-8.00e-03	-1.02	8.28e-05	0.0	-8.65e-06
906	8	-0.02	-7.60e-03	-0.96	7.87e-05	0.0	-8.09e-06
906	10	-0.02	-7.47e-03	-0.95	7.73e-05	0.0	-7.90e-06
907	2	-0.03	-0.01	-1.37	1.11e-04	0.0	-1.29e-05
907	6	-0.03	-9.25e-03	-1.02	8.29e-05	0.0	-9.49e-06
907	8	-0.02	-8.78e-03	-0.96	7.88e-05	0.0	-8.87e-06
907	10	-0.02	-8.63e-03	-0.95	7.74e-05	0.0	-8.66e-06
908	2	-0.04	-0.01	-1.37	1.12e-04	0.0	-1.41e-05
908	6	-0.03	-0.01	-1.02	8.30e-05	0.0	-1.03e-05
908	8	-0.02	-9.97e-03	-0.96	7.89e-05	0.0	-9.66e-06
908	10	-0.02	-9.79e-03	-0.95	7.75e-05	0.0	-9.43e-06
909	2	-0.04	-0.02	-1.37	1.12e-04	0.0	-1.52e-05
909	6	-0.03	-0.01	-1.02	8.31e-05	0.0	-1.12e-05
909	8	-0.02	-0.01	-0.96	7.90e-05	0.0	-1.05e-05
909	10	-0.02	-0.01	-0.95	7.77e-05	0.0	-1.02e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

910	2	-0.04	-0.02	-1.37	1.12e-04	0.0	-1.65e-05
910	6	-0.03	-0.01	-1.02	8.33e-05	0.0	-1.21e-05
910	8	-0.02	-0.01	-0.96	7.92e-05	0.0	-1.13e-05
910	10	-0.02	-0.01	-0.95	7.78e-05	0.0	-1.10e-05
911	2	-0.04	-0.02	-1.37	1.12e-04	0.0	-1.77e-05
911	6	-0.03	-0.01	-1.02	8.36e-05	0.0	-1.30e-05
911	8	-0.03	-0.01	-0.96	7.94e-05	0.0	-1.21e-05
911	10	-0.02	-0.01	-0.95	7.81e-05	0.0	-1.19e-05
912	2	-0.04	-0.02	-1.37	1.13e-04	0.0	-1.91e-05
912	6	-0.03	-0.02	-1.02	8.38e-05	0.0	-1.40e-05
912	8	-0.03	-0.01	-0.96	7.97e-05	0.0	-1.31e-05
912	10	-0.02	-0.01	-0.95	7.83e-05	0.0	-1.27e-05
913	2	-0.04	-0.02	-1.37	1.13e-04	0.0	-2.04e-05
913	6	-0.03	-0.02	-1.02	8.41e-05	0.0	-1.50e-05
913	8	-0.03	-0.02	-0.96	7.99e-05	0.0	-1.40e-05
913	10	-0.03	-0.02	-0.95	7.85e-05	0.0	-1.36e-05
914	2	-0.04	-0.02	-1.37	1.13e-04	0.0	-2.18e-05
914	6	-0.03	-0.02	-1.02	8.43e-05	0.0	-1.61e-05
914	8	-0.03	-0.02	-0.96	8.01e-05	0.0	-1.50e-05
914	10	-0.03	-0.02	-0.95	7.88e-05	0.0	-1.46e-05
915	2	-0.04	-0.03	-1.37	1.14e-04	0.0	-2.33e-05
915	6	-0.03	-0.02	-1.02	8.46e-05	0.0	-1.71e-05
915	8	-0.03	-0.02	-0.96	8.04e-05	0.0	-1.60e-05
915	10	-0.03	-0.02	-0.95	7.90e-05	0.0	-1.56e-05
916	2	-0.04	-0.03	-1.37	1.14e-04	0.0	-2.48e-05
916	6	-0.03	-0.02	-1.02	8.48e-05	0.0	-1.82e-05
916	8	-0.03	-0.02	-0.96	8.06e-05	0.0	-1.70e-05
916	10	-0.03	-0.02	-0.95	7.92e-05	0.0	-1.66e-05
917	2	-0.04	-0.03	-1.37	1.14e-04	0.0	-2.63e-05
917	6	-0.03	-0.02	-1.02	8.50e-05	0.0	-1.93e-05
917	8	-0.03	-0.02	-0.97	8.08e-05	0.0	-1.80e-05
917	10	-0.03	-0.02	-0.95	7.94e-05	0.0	-1.76e-05
918	2	-0.04	-0.03	-1.37	1.14e-04	0.0	-2.79e-05
918	6	-0.03	-0.02	-1.02	8.52e-05	0.0	-2.05e-05
918	8	-0.03	-0.02	-0.97	8.10e-05	0.0	-1.91e-05
918	10	-0.03	-0.02	-0.95	7.96e-05	0.0	-1.86e-05
919	2	-0.04	-0.03	-1.37	1.15e-04	0.0	-2.94e-05
919	6	-0.03	-0.02	-1.02	8.54e-05	0.0	-2.16e-05
919	8	-0.03	-0.02	-0.97	8.11e-05	0.0	-2.01e-05
919	10	-0.03	-0.02	-0.95	7.97e-05	0.0	-1.96e-05
920	2	-0.04	-0.03	-1.37	1.15e-04	0.0	-3.10e-05
920	6	-0.03	-0.03	-1.02	8.55e-05	0.0	-2.28e-05
920	8	-0.03	-0.02	-0.97	8.13e-05	0.0	-2.12e-05
920	10	-0.03	-0.02	-0.95	7.99e-05	0.0	-2.07e-05
921	2	-0.04	-0.04	-1.37	1.15e-04	0.0	-3.26e-05
921	6	-0.03	-0.03	-1.02	8.56e-05	0.0	-2.39e-05
921	8	-0.03	-0.03	-0.97	8.14e-05	0.0	-2.23e-05
921	10	-0.03	-0.03	-0.95	8.00e-05	0.0	-2.18e-05
922	2	-0.04	-0.04	-1.37	1.15e-04	0.0	-3.41e-05
922	6	-0.03	-0.03	-1.02	8.57e-05	0.0	-2.51e-05
922	8	-0.03	-0.03	-0.97	8.14e-05	0.0	-2.34e-05
922	10	-0.03	-0.03	-0.95	8.00e-05	0.0	-2.28e-05
923	2	-0.04	-0.04	-1.37	1.15e-04	0.0	-3.57e-05
923	6	-0.03	-0.03	-1.02	8.57e-05	0.0	-2.62e-05
923	8	-0.03	-0.03	-0.97	8.15e-05	0.0	-2.45e-05
923	10	-0.03	-0.03	-0.95	8.01e-05	0.0	-2.39e-05
924	2	-0.04	-0.04	-1.37	1.15e-04	-3.94e-05	-3.72e-05
924	6	-0.03	-0.03	-1.02	8.58e-05	-2.94e-05	-2.74e-05
924	8	-0.03	-0.03	-0.97	8.15e-05	-2.81e-05	-2.55e-05
924	10	-0.03	-0.03	-0.95	8.01e-05	-2.77e-05	-2.49e-05
925	2	-0.04	-8.05e-03	-1.37	1.01e-04	0.0	-6.77e-06
925	6	-0.03	-6.00e-03	-1.02	7.54e-05	0.0	-4.93e-06
925	8	-0.03	-5.71e-03	-0.97	7.19e-05	0.0	-4.52e-06
925	10	-0.03	-5.62e-03	-0.95	7.07e-05	0.0	-4.39e-06
926	2	-0.04	-6.53e-03	-1.37	1.01e-04	0.0	-6.77e-06
926	6	-0.03	-4.87e-03	-1.02	7.55e-05	0.0	-4.93e-06

PROJETTO engineering s.r.l.

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Direttore Tecnico: ING. LEONARDO FILOTICO

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
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 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

926	8	-0.03	-4.64e-03	-0.96	7.20e-05	0.0	-4.53e-06
926	10	-0.03	-4.56e-03	-0.95	7.08e-05	0.0	-4.39e-06
927	2	-0.04	-9.57e-03	-1.37	1.01e-04	0.0	-7.84e-06
927	6	-0.03	-7.13e-03	-1.02	7.54e-05	0.0	-5.72e-06
927	8	-0.03	-6.79e-03	-0.97	7.18e-05	0.0	-5.25e-06
927	10	-0.03	-6.68e-03	-0.95	7.06e-05	0.0	-5.10e-06
928	2	-0.04	-0.01	-1.37	1.01e-04	0.0	-9.16e-06
928	6	-0.03	-8.26e-03	-1.02	7.53e-05	0.0	-6.68e-06
928	8	-0.03	-7.87e-03	-0.97	7.18e-05	0.0	-6.15e-06
928	10	-0.03	-7.74e-03	-0.95	7.06e-05	0.0	-5.97e-06
929	2	-0.04	-0.01	-1.37	1.01e-04	0.0	-1.05e-05
929	6	-0.03	-9.39e-03	-1.02	7.53e-05	0.0	-7.68e-06
929	8	-0.03	-8.95e-03	-0.97	7.18e-05	0.0	-7.08e-06
929	10	-0.03	-8.80e-03	-0.95	7.06e-05	0.0	-6.88e-06
930	2	-0.04	-0.01	-1.37	1.01e-04	0.0	-1.19e-05
930	6	-0.03	-0.01	-1.02	7.53e-05	0.0	-8.70e-06
930	8	-0.03	-0.01	-0.97	7.18e-05	0.0	-8.02e-06
930	10	-0.03	-9.86e-03	-0.95	7.06e-05	0.0	-7.79e-06
931	2	-0.04	-0.02	-1.37	1.01e-04	0.0	-1.33e-05
931	6	-0.03	-0.01	-1.02	7.54e-05	0.0	-9.72e-06
931	8	-0.03	-0.01	-0.97	7.18e-05	0.0	-8.97e-06
931	10	-0.03	-0.01	-0.95	7.07e-05	0.0	-8.72e-06
932	2	-0.04	-0.02	-1.37	1.01e-04	0.0	-1.47e-05
932	6	-0.03	-0.01	-1.02	7.54e-05	0.0	-1.07e-05
932	8	-0.03	-0.01	-0.97	7.19e-05	0.0	-9.92e-06
932	10	-0.03	-0.01	-0.95	7.07e-05	0.0	-9.65e-06
933	2	-0.04	-0.02	-1.37	1.01e-04	0.0	-1.61e-05
933	6	-0.03	-0.01	-1.02	7.55e-05	0.0	-1.18e-05
933	8	-0.03	-0.01	-0.97	7.20e-05	0.0	-1.09e-05
933	10	-0.03	-0.01	-0.95	7.08e-05	0.0	-1.06e-05
934	2	-0.04	-0.02	-1.37	1.01e-04	0.0	-1.75e-05
934	6	-0.03	-0.02	-1.02	7.56e-05	0.0	-1.28e-05
934	8	-0.03	-0.01	-0.97	7.21e-05	0.0	-1.19e-05
934	10	-0.03	-0.01	-0.95	7.09e-05	0.0	-1.15e-05
935	2	-0.04	-0.02	-1.37	1.02e-04	0.0	-1.90e-05
935	6	-0.03	-0.02	-1.02	7.57e-05	0.0	-1.39e-05
935	8	-0.03	-0.02	-0.97	7.22e-05	0.0	-1.28e-05
935	10	-0.03	-0.02	-0.95	7.10e-05	0.0	-1.25e-05
936	2	-0.04	-0.02	-1.37	1.02e-04	0.0	-2.04e-05
936	6	-0.03	-0.02	-1.02	7.58e-05	0.0	-1.49e-05
936	8	-0.03	-0.02	-0.97	7.23e-05	0.0	-1.38e-05
936	10	-0.03	-0.02	-0.95	7.11e-05	0.0	-1.34e-05
937	2	-0.04	-0.02	-1.37	1.02e-04	0.0	-2.18e-05
937	6	-0.03	-0.02	-1.02	7.59e-05	0.0	-1.60e-05
937	8	-0.03	-0.02	-0.97	7.24e-05	0.0	-1.48e-05
937	10	-0.03	-0.02	-0.95	7.12e-05	0.0	-1.44e-05
938	2	-0.04	-0.03	-1.37	1.02e-04	0.0	-2.33e-05
938	6	-0.03	-0.02	-1.02	7.61e-05	0.0	-1.71e-05
938	8	-0.03	-0.02	-0.97	7.25e-05	0.0	-1.58e-05
938	10	-0.03	-0.02	-0.95	7.13e-05	0.0	-1.54e-05
939	2	-0.04	-0.03	-1.37	1.02e-04	0.0	-2.48e-05
939	6	-0.03	-0.02	-1.02	7.62e-05	0.0	-1.81e-05
939	8	-0.03	-0.02	-0.97	7.26e-05	0.0	-1.68e-05
939	10	-0.03	-0.02	-0.95	7.14e-05	0.0	-1.63e-05
940	2	-0.04	-0.03	-1.37	1.02e-04	0.0	-2.62e-05
940	6	-0.03	-0.02	-1.02	7.63e-05	0.0	-1.92e-05
940	8	-0.03	-0.02	-0.97	7.27e-05	0.0	-1.78e-05
940	10	-0.03	-0.02	-0.95	7.15e-05	0.0	-1.73e-05
941	2	-0.04	-0.03	-1.37	1.02e-04	0.0	-2.77e-05
941	6	-0.03	-0.02	-1.02	7.64e-05	0.0	-2.03e-05
941	8	-0.03	-0.02	-0.97	7.27e-05	0.0	-1.88e-05
941	10	-0.03	-0.02	-0.95	7.15e-05	0.0	-1.83e-05
942	2	-0.04	-0.03	-1.37	1.03e-04	0.0	-2.92e-05
942	6	-0.03	-0.02	-1.02	7.64e-05	0.0	-2.14e-05
942	8	-0.03	-0.02	-0.97	7.28e-05	0.0	-1.98e-05
942	10	-0.03	-0.02	-0.95	7.16e-05	0.0	-1.93e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

943	2	-0.04	-0.03	-1.37	1.03e-04	0.0	-3.07e-05
943	6	-0.03	-0.03	-1.02	7.65e-05	0.0	-2.25e-05
943	8	-0.03	-0.02	-0.97	7.29e-05	0.0	-2.08e-05
943	10	-0.03	-0.02	-0.95	7.17e-05	0.0	-2.03e-05
944	2	-0.04	-0.04	-1.37	1.03e-04	0.0	-3.21e-05
944	6	-0.03	-0.03	-1.02	7.66e-05	0.0	-2.35e-05
944	8	-0.03	-0.03	-0.97	7.29e-05	0.0	-2.18e-05
944	10	-0.03	-0.02	-0.95	7.17e-05	0.0	-2.13e-05
945	2	-0.04	-0.04	-1.37	1.03e-04	1.26e-05	-3.35e-05
945	6	-0.03	-0.03	-1.02	7.66e-05	8.63e-06	-2.46e-05
945	8	-0.03	-0.03	-0.97	7.30e-05	7.02e-06	-2.28e-05
945	10	-0.03	-0.03	-0.95	7.18e-05	6.49e-06	-2.22e-05
946	2	-0.05	-7.51e-03	-1.36	8.94e-05	0.0	-3.30e-06
946	6	-0.04	-5.61e-03	-1.01	6.68e-05	0.0	-2.29e-06
946	8	-0.03	-5.37e-03	-0.96	6.38e-05	0.0	-1.92e-06
946	10	-0.03	-5.29e-03	-0.94	6.29e-05	0.0	-1.80e-06
947	2	-0.05	-6.17e-03	-1.36	8.95e-05	0.0	-3.20e-06
947	6	-0.04	-4.61e-03	-1.01	6.68e-05	0.0	-2.21e-06
947	8	-0.03	-4.41e-03	-0.96	6.39e-05	0.0	-1.85e-06
947	10	-0.03	-4.34e-03	-0.94	6.30e-05	0.0	-1.73e-06
948	2	-0.05	-8.85e-03	-1.36	8.93e-05	0.0	-4.38e-06
948	6	-0.03	-6.61e-03	-1.01	6.67e-05	0.0	-3.08e-06
948	8	-0.03	-6.33e-03	-0.96	6.38e-05	0.0	-2.65e-06
948	10	-0.03	-6.23e-03	-0.94	6.28e-05	0.0	-2.51e-06
949	2	-0.05	-0.01	-1.36	8.94e-05	0.0	-5.72e-06
949	6	-0.03	-7.61e-03	-1.01	6.67e-05	0.0	-4.06e-06
949	8	-0.03	-7.28e-03	-0.96	6.38e-05	0.0	-3.57e-06
949	10	-0.03	-7.17e-03	-0.94	6.28e-05	0.0	-3.41e-06
950	2	-0.05	-0.01	-1.36	8.94e-05	0.0	-7.15e-06
950	6	-0.03	-8.61e-03	-1.01	6.68e-05	0.0	-5.11e-06
950	8	-0.03	-8.24e-03	-0.96	6.38e-05	0.0	-4.54e-06
950	10	-0.03	-8.12e-03	-0.94	6.29e-05	0.0	-4.36e-06
951	2	-0.05	-0.01	-1.36	8.95e-05	0.0	-8.59e-06
951	6	-0.03	-9.62e-03	-1.01	6.68e-05	0.0	-6.17e-06
951	8	-0.03	-9.20e-03	-0.96	6.39e-05	0.0	-5.53e-06
951	10	-0.03	-9.06e-03	-0.95	6.29e-05	0.0	-5.32e-06
952	2	-0.04	-0.01	-1.36	8.96e-05	0.0	-1.00e-05
952	6	-0.03	-0.01	-1.01	6.69e-05	0.0	-7.23e-06
952	8	-0.03	-0.01	-0.96	6.40e-05	0.0	-6.51e-06
952	10	-0.03	-0.01	-0.95	6.30e-05	0.0	-6.27e-06
953	2	-0.04	-0.02	-1.36	8.97e-05	0.0	-1.14e-05
953	6	-0.03	-0.01	-1.01	6.70e-05	0.0	-8.26e-06
953	8	-0.03	-0.01	-0.96	6.40e-05	0.0	-7.48e-06
953	10	-0.03	-0.01	-0.95	6.31e-05	0.0	-7.21e-06
954	2	-0.04	-0.02	-1.36	8.99e-05	0.0	-1.28e-05
954	6	-0.03	-0.01	-1.01	6.71e-05	0.0	-9.28e-06
954	8	-0.03	-0.01	-0.96	6.42e-05	0.0	-8.43e-06
954	10	-0.03	-0.01	-0.95	6.32e-05	0.0	-8.14e-06
955	2	-0.04	-0.02	-1.36	9.00e-05	0.0	-1.42e-05
955	6	-0.03	-0.01	-1.01	6.72e-05	0.0	-1.03e-05
955	8	-0.03	-0.01	-0.96	6.43e-05	0.0	-9.36e-06
955	10	-0.03	-0.01	-0.95	6.33e-05	0.0	-9.05e-06
956	2	-0.04	-0.02	-1.36	9.02e-05	0.0	-1.55e-05
956	6	-0.03	-0.01	-1.01	6.74e-05	0.0	-1.13e-05
956	8	-0.03	-0.01	-0.96	6.44e-05	0.0	-1.03e-05
956	10	-0.03	-0.01	-0.95	6.34e-05	0.0	-9.94e-06
957	2	-0.04	-0.02	-1.36	9.04e-05	0.0	-1.69e-05
957	6	-0.03	-0.02	-1.01	6.75e-05	0.0	-1.22e-05
957	8	-0.03	-0.01	-0.96	6.45e-05	0.0	-1.12e-05
957	10	-0.03	-0.01	-0.95	6.35e-05	0.0	-1.08e-05
958	2	-0.04	-0.02	-1.36	9.05e-05	0.0	-1.82e-05
958	6	-0.03	-0.02	-1.01	6.76e-05	0.0	-1.32e-05
958	8	-0.03	-0.02	-0.96	6.46e-05	0.0	-1.21e-05
958	10	-0.03	-0.02	-0.95	6.36e-05	0.0	-1.17e-05
959	2	-0.04	-0.02	-1.36	9.07e-05	0.0	-1.95e-05
959	6	-0.03	-0.02	-1.01	6.77e-05	0.0	-1.42e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
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 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

959	8	-0.03	-0.02	-0.96	6.47e-05	0.0	-1.30e-05
959	10	-0.03	-0.02	-0.95	6.37e-05	0.0	-1.26e-05
960	2	-0.04	-0.03	-1.37	9.08e-05	0.0	-2.08e-05
960	6	-0.03	-0.02	-1.01	6.78e-05	0.0	-1.51e-05
960	8	-0.03	-0.02	-0.96	6.48e-05	0.0	-1.39e-05
960	10	-0.03	-0.02	-0.95	6.38e-05	0.0	-1.35e-05
961	2	-0.04	-0.03	-1.37	9.10e-05	0.0	-2.21e-05
961	6	-0.03	-0.02	-1.02	6.79e-05	0.0	-1.61e-05
961	8	-0.03	-0.02	-0.96	6.49e-05	0.0	-1.48e-05
961	10	-0.03	-0.02	-0.95	6.38e-05	0.0	-1.43e-05
962	2	-0.04	-0.03	-1.37	9.11e-05	0.0	-2.34e-05
962	6	-0.03	-0.02	-1.02	6.80e-05	0.0	-1.71e-05
962	8	-0.03	-0.02	-0.96	6.49e-05	0.0	-1.57e-05
962	10	-0.03	-0.02	-0.95	6.39e-05	0.0	-1.52e-05
963	2	-0.04	-0.03	-1.37	9.12e-05	0.0	-2.47e-05
963	6	-0.03	-0.02	-1.02	6.81e-05	0.0	-1.80e-05
963	8	-0.03	-0.02	-0.96	6.50e-05	0.0	-1.66e-05
963	10	-0.03	-0.02	-0.95	6.40e-05	0.0	-1.61e-05
964	2	-0.04	-0.03	-1.37	9.13e-05	0.0	-2.61e-05
964	6	-0.03	-0.02	-1.02	6.81e-05	0.0	-1.90e-05
964	8	-0.03	-0.02	-0.96	6.51e-05	0.0	-1.75e-05
964	10	-0.03	-0.02	-0.95	6.41e-05	0.0	-1.70e-05
965	2	-0.04	-0.03	-1.37	9.14e-05	0.0	-2.73e-05
965	6	-0.03	-0.02	-1.02	6.82e-05	0.0	-1.99e-05
965	8	-0.03	-0.02	-0.96	6.51e-05	0.0	-1.83e-05
965	10	-0.03	-0.02	-0.95	6.41e-05	0.0	-1.78e-05
966	2	-0.04	-0.03	-1.37	9.15e-05	6.21e-05	-2.86e-05
966	6	-0.03	-0.02	-1.02	6.83e-05	4.48e-05	-2.09e-05
966	8	-0.03	-0.02	-0.96	6.52e-05	4.04e-05	-1.92e-05
966	10	-0.03	-0.02	-0.95	6.42e-05	3.90e-05	-1.87e-05
967	2	-0.05	-7.25e-03	-1.35	7.58e-05	-2.51e-05	-4.77e-06
967	6	-0.04	-5.44e-03	-1.00	5.67e-05	-1.07e-05	-3.26e-06
967	8	-0.03	-5.25e-03	-0.95	5.45e-05	-1.12e-05	-2.65e-06
967	10	-0.03	-5.18e-03	-0.94	5.38e-05	-1.14e-05	-2.45e-06
968	2	-0.05	-6.12e-03	-1.35	7.45e-05	-3.78e-05	-4.53e-06
968	6	-0.04	-4.60e-03	-1.00	5.58e-05	-2.85e-05	-3.09e-06
968	8	-0.03	-4.44e-03	-0.95	5.36e-05	-2.76e-05	-2.51e-06
968	10	-0.03	-4.38e-03	-0.93	5.29e-05	-2.73e-05	-2.31e-06
969	2	-0.05	-8.40e-03	-1.35	7.68e-05	6.71e-06	-5.21e-06
969	6	-0.04	-6.30e-03	-1.00	5.75e-05	4.02e-06	-3.57e-06
969	8	-0.03	-6.07e-03	-0.95	5.53e-05	2.35e-06	-2.94e-06
969	10	-0.03	-6.00e-03	-0.94	5.45e-05	1.80e-06	-2.73e-06
970	2	-0.05	-9.56e-03	-1.35	7.77e-05	2.19e-05	-5.80e-06
970	6	-0.04	-7.17e-03	-1.00	5.82e-05	1.51e-05	-4.00e-06
970	8	-0.03	-6.91e-03	-0.95	5.59e-05	1.26e-05	-3.34e-06
970	10	-0.03	-6.82e-03	-0.94	5.51e-05	1.17e-05	-3.11e-06
971	2	-0.05	-0.01	-1.35	7.85e-05	3.26e-05	-6.50e-06
971	6	-0.04	-8.05e-03	-1.00	5.87e-05	2.29e-05	-4.52e-06
971	8	-0.03	-7.75e-03	-0.95	5.64e-05	1.98e-05	-3.81e-06
971	10	-0.03	-7.65e-03	-0.94	5.56e-05	1.88e-05	-3.57e-06
972	2	-0.05	-0.01	-1.35	7.91e-05	3.99e-05	-7.27e-06
972	6	-0.04	-8.94e-03	-1.01	5.92e-05	2.83e-05	-5.08e-06
972	8	-0.03	-8.60e-03	-0.95	5.68e-05	2.47e-05	-4.34e-06
972	10	-0.03	-8.49e-03	-0.94	5.60e-05	2.36e-05	-4.09e-06
973	2	-0.05	-0.01	-1.35	7.95e-05	4.47e-05	-8.11e-06
973	6	-0.04	-9.83e-03	-1.01	5.95e-05	3.18e-05	-5.70e-06
973	8	-0.03	-9.46e-03	-0.95	5.71e-05	2.80e-05	-4.91e-06
973	10	-0.03	-9.33e-03	-0.94	5.63e-05	2.68e-05	-4.64e-06
974	2	-0.05	-0.01	-1.35	8.00e-05	4.78e-05	-8.98e-06
974	6	-0.04	-0.01	-1.01	5.98e-05	3.41e-05	-6.34e-06
974	8	-0.03	-0.01	-0.96	5.74e-05	3.01e-05	-5.50e-06
974	10	-0.03	-0.01	-0.94	5.66e-05	2.88e-05	-5.23e-06
975	2	-0.05	-0.02	-1.35	8.03e-05	4.98e-05	-9.89e-06
975	6	-0.03	-0.01	-1.01	6.01e-05	3.55e-05	-7.01e-06
975	8	-0.03	-0.01	-0.96	5.76e-05	3.15e-05	-6.13e-06
975	10	-0.03	-0.01	-0.94	5.68e-05	3.02e-05	-5.83e-06

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 27001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

976	2	-0.05	-0.02	-1.35	8.06e-05	5.10e-05	-1.08e-05
976	6	-0.03	-0.01	-1.01	6.03e-05	3.65e-05	-7.69e-06
976	8	-0.03	-0.01	-0.96	5.78e-05	3.24e-05	-6.77e-06
976	10	-0.03	-0.01	-0.94	5.70e-05	3.10e-05	-6.46e-06
977	2	-0.05	-0.02	-1.35	8.08e-05	5.18e-05	-1.18e-05
977	6	-0.03	-0.01	-1.01	6.05e-05	3.71e-05	-8.39e-06
977	8	-0.03	-0.01	-0.96	5.80e-05	3.29e-05	-7.42e-06
977	10	-0.03	-0.01	-0.94	5.71e-05	3.16e-05	-7.10e-06
978	2	-0.05	-0.02	-1.35	8.10e-05	5.24e-05	-1.27e-05
978	6	-0.03	-0.01	-1.01	6.06e-05	3.75e-05	-9.11e-06
978	8	-0.03	-0.01	-0.96	5.81e-05	3.33e-05	-8.09e-06
978	10	-0.03	-0.01	-0.94	5.73e-05	3.19e-05	-7.75e-06
979	2	-0.04	-0.02	-1.36	8.12e-05	5.27e-05	-1.37e-05
979	6	-0.03	-0.02	-1.01	6.07e-05	3.77e-05	-9.83e-06
979	8	-0.03	-0.01	-0.96	5.82e-05	3.36e-05	-8.76e-06
979	10	-0.03	-0.01	-0.94	5.74e-05	3.22e-05	-8.41e-06
980	2	-0.04	-0.02	-1.36	8.13e-05	5.29e-05	-1.47e-05
980	6	-0.03	-0.02	-1.01	6.08e-05	3.79e-05	-1.06e-05
980	8	-0.03	-0.02	-0.96	5.83e-05	3.37e-05	-9.44e-06
980	10	-0.03	-0.02	-0.94	5.74e-05	3.23e-05	-9.07e-06
981	2	-0.04	-0.02	-1.36	8.14e-05	5.30e-05	-1.57e-05
981	6	-0.03	-0.02	-1.01	6.09e-05	3.80e-05	-1.13e-05
981	8	-0.03	-0.02	-0.96	5.84e-05	3.38e-05	-1.01e-05
981	10	-0.03	-0.02	-0.94	5.75e-05	3.24e-05	-9.74e-06
982	2	-0.04	-0.02	-1.36	8.15e-05	5.30e-05	-1.67e-05
982	6	-0.03	-0.02	-1.01	6.10e-05	3.79e-05	-1.20e-05
982	8	-0.03	-0.02	-0.96	5.84e-05	3.38e-05	-1.08e-05
982	10	-0.03	-0.02	-0.94	5.75e-05	3.24e-05	-1.04e-05
983	2	-0.04	-0.03	-1.36	8.16e-05	5.28e-05	-1.77e-05
983	6	-0.03	-0.02	-1.01	6.10e-05	3.78e-05	-1.27e-05
983	8	-0.03	-0.02	-0.96	5.84e-05	3.36e-05	-1.15e-05
983	10	-0.03	-0.02	-0.94	5.76e-05	3.22e-05	-1.11e-05
984	2	-0.04	-0.03	-1.36	8.16e-05	5.24e-05	-1.87e-05
984	6	-0.03	-0.02	-1.01	6.10e-05	3.74e-05	-1.35e-05
984	8	-0.03	-0.02	-0.96	5.84e-05	3.33e-05	-1.22e-05
984	10	-0.03	-0.02	-0.94	5.76e-05	3.19e-05	-1.17e-05
985	2	-0.04	-0.03	-1.36	8.16e-05	5.16e-05	-1.96e-05
985	6	-0.03	-0.02	-1.01	6.10e-05	3.69e-05	-1.42e-05
985	8	-0.03	-0.02	-0.96	5.85e-05	3.27e-05	-1.28e-05
985	10	-0.03	-0.02	-0.94	5.76e-05	3.13e-05	-1.24e-05
986	2	-0.04	-0.03	-1.36	8.16e-05	5.04e-05	-2.06e-05
986	6	-0.03	-0.02	-1.01	6.10e-05	3.59e-05	-1.49e-05
986	8	-0.03	-0.02	-0.96	5.84e-05	3.18e-05	-1.35e-05
986	10	-0.03	-0.02	-0.94	5.76e-05	3.04e-05	-1.30e-05
987	2	-0.04	-0.03	-1.36	8.16e-05	4.85e-05	-2.15e-05
987	6	-0.03	-0.02	-1.01	6.10e-05	3.45e-05	-1.55e-05
987	8	-0.03	-0.02	-0.96	5.84e-05	3.04e-05	-1.41e-05
987	10	-0.03	-0.02	-0.94	5.76e-05	2.91e-05	-1.36e-05
988	2	-0.06	-7.08e-03	-1.35	7.23e-05	0.0	1.97e-06
988	6	-0.04	-5.37e-03	-1.00	5.42e-05	0.0	1.90e-06
988	8	-0.04	-5.25e-03	-0.95	5.21e-05	0.0	2.45e-06
988	10	-0.04	-5.21e-03	-0.94	5.14e-05	0.0	2.63e-06
989	2	-0.06	-6.00e-03	-1.35	7.24e-05	0.0	1.87e-06
989	6	-0.04	-4.55e-03	-1.00	5.42e-05	0.0	1.82e-06
989	8	-0.04	-4.46e-03	-0.95	5.21e-05	0.0	2.37e-06
989	10	-0.04	-4.43e-03	-0.94	5.14e-05	0.0	2.55e-06
990	2	-0.06	-8.17e-03	-1.35	7.23e-05	0.0	1.29e-06
990	6	-0.04	-6.18e-03	-1.01	5.41e-05	0.0	1.39e-06
990	8	-0.04	-6.03e-03	-0.95	5.21e-05	0.0	1.97e-06
990	10	-0.04	-5.98e-03	-0.94	5.14e-05	0.0	2.16e-06
991	2	-0.06	-9.25e-03	-1.35	7.22e-05	0.0	0.0
991	6	-0.04	-6.99e-03	-1.01	5.41e-05	0.0	0.0
991	8	-0.04	-6.81e-03	-0.95	5.20e-05	0.0	1.35e-06
991	10	-0.04	-6.75e-03	-0.94	5.13e-05	0.0	1.56e-06
992	2	-0.05	-0.01	-1.35	7.21e-05	0.0	0.0
992	6	-0.04	-7.80e-03	-1.01	5.41e-05	0.0	0.0

PROJETTO engineering s.r.l.

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Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015
Certificate No. Q204

SR EN ISO 14001:2015
Certificate No. E81

SR EN ISO/IEC 27001:2017
Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

992	8	-0.04	-7.59e-03	-0.95	5.20e-05	0.0	0.0
992	10	-0.04	-7.52e-03	-0.94	5.13e-05	0.0	0.0
993	2	-0.05	-0.01	-1.35	7.21e-05	0.0	-1.36e-06
993	6	-0.04	-8.61e-03	-1.01	5.41e-05	0.0	0.0
993	8	-0.04	-8.37e-03	-0.96	5.20e-05	0.0	0.0
993	10	-0.04	-8.28e-03	-0.94	5.13e-05	0.0	0.0
994	2	-0.05	-0.01	-1.35	7.22e-05	0.0	-2.29e-06
994	6	-0.04	-9.42e-03	-1.01	5.41e-05	0.0	-1.27e-06
994	8	-0.04	-9.15e-03	-0.96	5.20e-05	0.0	0.0
994	10	-0.04	-9.05e-03	-0.94	5.13e-05	0.0	0.0
995	2	-0.05	-0.01	-1.35	7.22e-05	0.0	-3.25e-06
995	6	-0.04	-0.01	-1.01	5.41e-05	0.0	-1.99e-06
995	8	-0.04	-9.93e-03	-0.96	5.20e-05	0.0	-1.23e-06
995	10	-0.03	-9.82e-03	-0.94	5.13e-05	0.0	0.0
996	2	-0.05	-0.01	-1.35	7.23e-05	0.0	-4.25e-06
996	6	-0.04	-0.01	-1.01	5.42e-05	0.0	-2.72e-06
996	8	-0.04	-0.01	-0.96	5.21e-05	0.0	-1.93e-06
996	10	-0.03	-0.01	-0.94	5.14e-05	0.0	-1.66e-06
997	2	-0.05	-0.02	-1.35	7.24e-05	0.0	-5.28e-06
997	6	-0.04	-0.01	-1.01	5.42e-05	0.0	-3.49e-06
997	8	-0.03	-0.01	-0.96	5.21e-05	0.0	-2.65e-06
997	10	-0.03	-0.01	-0.94	5.14e-05	0.0	-2.37e-06
998	2	-0.05	-0.02	-1.35	7.25e-05	0.0	-6.33e-06
998	6	-0.04	-0.01	-1.01	5.43e-05	0.0	-4.27e-06
998	8	-0.03	-0.01	-0.96	5.22e-05	0.0	-3.38e-06
998	10	-0.03	-0.01	-0.94	5.15e-05	0.0	-3.09e-06
999	2	-0.05	-0.02	-1.35	7.26e-05	0.0	-7.41e-06
999	6	-0.04	-0.01	-1.01	5.43e-05	0.0	-5.06e-06
999	8	-0.03	-0.01	-0.96	5.22e-05	0.0	-4.14e-06
999	10	-0.03	-0.01	-0.94	5.15e-05	0.0	-3.83e-06
1000	2	-0.05	-0.02	-1.35	7.26e-05	0.0	-8.50e-06
1000	6	-0.03	-0.01	-1.01	5.44e-05	0.0	-5.88e-06
1000	8	-0.03	-0.01	-0.96	5.22e-05	0.0	-4.91e-06
1000	10	-0.03	-0.01	-0.94	5.15e-05	0.0	-4.58e-06
1001	2	-0.05	-0.02	-1.35	7.27e-05	0.0	-9.62e-06
1001	6	-0.03	-0.02	-1.01	5.44e-05	0.0	-6.70e-06
1001	8	-0.03	-0.01	-0.96	5.23e-05	0.0	-5.68e-06
1001	10	-0.03	-0.01	-0.94	5.15e-05	0.0	-5.34e-06
1002	2	-0.04	-0.02	-1.35	7.27e-05	0.0	-1.07e-05
1002	6	-0.03	-0.02	-1.01	5.44e-05	0.0	-7.54e-06
1002	8	-0.03	-0.02	-0.96	5.23e-05	0.0	-6.47e-06
1002	10	-0.03	-0.02	-0.94	5.15e-05	0.0	-6.12e-06
1003	2	-0.04	-0.02	-1.35	7.27e-05	0.0	-1.19e-05
1003	6	-0.03	-0.02	-1.01	5.44e-05	0.0	-8.38e-06
1003	8	-0.03	-0.02	-0.96	5.23e-05	0.0	-7.27e-06
1003	10	-0.03	-0.02	-0.94	5.15e-05	0.0	-6.90e-06
1004	2	-0.04	-0.02	-1.35	7.27e-05	0.0	-1.30e-05
1004	6	-0.03	-0.02	-1.01	5.44e-05	0.0	-9.23e-06
1004	8	-0.03	-0.02	-0.96	5.22e-05	0.0	-8.07e-06
1004	10	-0.03	-0.02	-0.94	5.15e-05	0.0	-7.68e-06
1005	2	-0.04	-0.02	-1.35	7.26e-05	0.0	-1.42e-05
1005	6	-0.03	-0.02	-1.01	5.44e-05	0.0	-1.01e-05
1005	8	-0.03	-0.02	-0.96	5.22e-05	0.0	-8.88e-06
1005	10	-0.03	-0.02	-0.94	5.15e-05	0.0	-8.47e-06
1006	2	-0.04	-0.03	-1.35	7.25e-05	0.0	-1.54e-05
1006	6	-0.03	-0.02	-1.01	5.43e-05	0.0	-1.09e-05
1006	8	-0.03	-0.02	-0.96	5.21e-05	0.0	-9.68e-06
1006	10	-0.03	-0.02	-0.94	5.14e-05	0.0	-9.26e-06
1007	2	-0.04	-0.03	-1.36	7.24e-05	0.0	-1.65e-05
1007	6	-0.03	-0.02	-1.01	5.42e-05	0.0	-1.18e-05
1007	8	-0.03	-0.02	-0.96	5.20e-05	0.0	-1.05e-05
1007	10	-0.03	-0.02	-0.94	5.13e-05	0.0	-1.00e-05
1008	2	-0.04	-0.03	-1.36	7.23e-05	3.37e-05	-1.76e-05
1008	6	-0.03	-0.02	-1.01	5.41e-05	2.33e-05	-1.26e-05
1008	8	-0.03	-0.02	-0.96	5.19e-05	1.94e-05	-1.13e-05
1008	10	-0.03	-0.02	-0.94	5.12e-05	1.81e-05	-1.08e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
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 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

1009	2	-0.06	-7.71e-03	-1.34	6.55e-05	0.0	7.52e-06
1009	6	-0.05	-5.89e-03	-1.00	4.91e-05	0.0	6.04e-06
1009	8	-0.04	-5.82e-03	-0.95	4.73e-05	0.0	6.41e-06
1009	10	-0.04	-5.80e-03	-0.93	4.67e-05	0.0	6.54e-06
1010	2	-0.06	-6.73e-03	-1.34	6.57e-05	0.0	7.33e-06
1010	6	-0.05	-5.15e-03	-1.00	4.93e-05	0.0	5.90e-06
1010	8	-0.04	-5.11e-03	-0.95	4.74e-05	0.0	6.28e-06
1010	10	-0.04	-5.10e-03	-0.93	4.68e-05	0.0	6.40e-06
1011	2	-0.06	-8.69e-03	-1.34	6.50e-05	0.0	7.25e-06
1011	6	-0.05	-6.62e-03	-1.00	4.88e-05	0.0	5.84e-06
1011	8	-0.04	-6.53e-03	-0.95	4.69e-05	0.0	6.22e-06
1011	10	-0.04	-6.50e-03	-0.93	4.63e-05	0.0	6.35e-06
1012	2	-0.06	-9.66e-03	-1.34	6.45e-05	0.0	6.34e-06
1012	6	-0.05	-7.35e-03	-1.00	4.84e-05	0.0	5.16e-06
1012	8	-0.04	-7.23e-03	-0.95	4.66e-05	0.0	5.58e-06
1012	10	-0.04	-7.19e-03	-0.93	4.60e-05	0.0	5.72e-06
1013	2	-0.06	-0.01	-1.34	6.42e-05	0.0	5.28e-06
1013	6	-0.05	-8.08e-03	-1.00	4.81e-05	0.0	4.38e-06
1013	8	-0.04	-7.93e-03	-0.95	4.64e-05	0.0	4.83e-06
1013	10	-0.04	-7.88e-03	-0.93	4.58e-05	0.0	4.99e-06
1014	2	-0.06	-0.01	-1.35	6.39e-05	0.0	4.18e-06
1014	6	-0.04	-8.80e-03	-1.00	4.80e-05	0.0	3.56e-06
1014	8	-0.04	-8.62e-03	-0.95	4.62e-05	0.0	4.06e-06
1014	10	-0.04	-8.57e-03	-0.93	4.56e-05	0.0	4.23e-06
1015	2	-0.06	-0.01	-1.35	6.38e-05	0.0	3.06e-06
1015	6	-0.04	-9.51e-03	-1.00	4.79e-05	0.0	2.73e-06
1015	8	-0.04	-9.31e-03	-0.95	4.61e-05	0.0	3.27e-06
1015	10	-0.04	-9.25e-03	-0.93	4.55e-05	0.0	3.46e-06
1016	2	-0.06	-0.01	-1.35	6.37e-05	0.0	1.94e-06
1016	6	-0.04	-0.01	-1.00	4.78e-05	0.0	1.89e-06
1016	8	-0.04	-0.01	-0.95	4.60e-05	0.0	2.48e-06
1016	10	-0.04	-9.93e-03	-0.93	4.54e-05	0.0	2.68e-06
1017	2	-0.06	-0.01	-1.35	6.36e-05	0.0	0.0
1017	6	-0.04	-0.01	-1.00	4.77e-05	0.0	1.06e-06
1017	8	-0.04	-0.01	-0.95	4.60e-05	0.0	1.69e-06
1017	10	-0.04	-0.01	-0.93	4.54e-05	0.0	1.90e-06
1018	2	-0.05	-0.02	-1.35	6.36e-05	0.0	0.0
1018	6	-0.04	-0.01	-1.00	4.77e-05	0.0	0.0
1018	8	-0.04	-0.01	-0.95	4.59e-05	0.0	0.0
1018	10	-0.04	-0.01	-0.93	4.53e-05	0.0	1.12e-06
1019	2	-0.05	-0.02	-1.35	6.35e-05	0.0	-1.46e-06
1019	6	-0.04	-0.01	-1.00	4.77e-05	0.0	0.0
1019	8	-0.04	-0.01	-0.95	4.59e-05	0.0	0.0
1019	10	-0.03	-0.01	-0.93	4.53e-05	0.0	0.0
1020	2	-0.05	-0.02	-1.35	6.35e-05	0.0	-2.59e-06
1020	6	-0.04	-0.01	-1.00	4.76e-05	0.0	-1.47e-06
1020	8	-0.03	-0.01	-0.95	4.59e-05	0.0	0.0
1020	10	-0.03	-0.01	-0.93	4.53e-05	0.0	0.0
1021	2	-0.05	-0.02	-1.35	6.35e-05	0.0	-3.73e-06
1021	6	-0.04	-0.01	-1.00	4.76e-05	0.0	-2.31e-06
1021	8	-0.03	-0.01	-0.95	4.58e-05	0.0	-1.50e-06
1021	10	-0.03	-0.01	-0.94	4.52e-05	0.0	-1.23e-06
1022	2	-0.05	-0.02	-1.35	6.34e-05	0.0	-4.87e-06
1022	6	-0.03	-0.01	-1.00	4.76e-05	0.0	-3.16e-06
1022	8	-0.03	-0.01	-0.95	4.58e-05	0.0	-2.30e-06
1022	10	-0.03	-0.01	-0.94	4.52e-05	0.0	-2.01e-06
1023	2	-0.05	-0.02	-1.35	6.34e-05	0.0	-6.02e-06
1023	6	-0.03	-0.02	-1.00	4.75e-05	0.0	-4.01e-06
1023	8	-0.03	-0.01	-0.95	4.58e-05	0.0	-3.10e-06
1023	10	-0.03	-0.01	-0.94	4.52e-05	0.0	-2.80e-06
1024	2	-0.04	-0.02	-1.35	6.33e-05	0.0	-7.16e-06
1024	6	-0.03	-0.02	-1.00	4.75e-05	0.0	-4.86e-06
1024	8	-0.03	-0.02	-0.95	4.57e-05	0.0	-3.90e-06
1024	10	-0.03	-0.02	-0.94	4.51e-05	0.0	-3.59e-06
1025	2	-0.04	-0.02	-1.35	6.33e-05	0.0	-8.31e-06
1025	6	-0.03	-0.02	-1.00	4.75e-05	0.0	-5.71e-06

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

1025	8	-0.03	-0.02	-0.95	4.57e-05	0.0	-4.71e-06
1025	10	-0.03	-0.02	-0.94	4.51e-05	0.0	-4.38e-06
1026	2	-0.04	-0.02	-1.35	6.32e-05	0.0	-9.46e-06
1026	6	-0.03	-0.02	-1.00	4.74e-05	0.0	-6.56e-06
1026	8	-0.03	-0.02	-0.95	4.56e-05	0.0	-5.51e-06
1026	10	-0.03	-0.02	-0.94	4.50e-05	0.0	-5.17e-06
1027	2	-0.04	-0.02	-1.35	6.31e-05	0.0	-1.06e-05
1027	6	-0.03	-0.02	-1.00	4.73e-05	0.0	-7.41e-06
1027	8	-0.03	-0.02	-0.95	4.55e-05	0.0	-6.32e-06
1027	10	-0.03	-0.02	-0.94	4.49e-05	0.0	-5.95e-06
1028	2	-0.04	-0.02	-1.35	6.30e-05	0.0	-1.18e-05
1028	6	-0.03	-0.02	-1.00	4.72e-05	0.0	-8.26e-06
1028	8	-0.03	-0.02	-0.95	4.55e-05	0.0	-7.12e-06
1028	10	-0.03	-0.02	-0.94	4.49e-05	0.0	-6.74e-06
1029	2	-0.04	-0.03	-1.35	6.29e-05	9.41e-05	-1.29e-05
1029	6	-0.03	-0.02	-1.00	4.71e-05	6.76e-05	-9.08e-06
1029	8	-0.03	-0.02	-0.95	4.54e-05	6.07e-05	-7.89e-06
1029	10	-0.02	-0.02	-0.94	4.48e-05	5.83e-05	-7.50e-06
1030	2	-0.08	-9.25e-03	-1.33	5.29e-05	0.0	1.46e-05
1030	6	-0.06	-7.08e-03	-0.99	3.98e-05	0.0	1.12e-05
1030	8	-0.05	-7.03e-03	-0.94	3.85e-05	0.0	1.13e-05
1030	10	-0.05	-7.02e-03	-0.92	3.80e-05	0.0	1.13e-05
1031	2	-0.08	-8.46e-03	-1.33	5.29e-05	0.0	1.50e-05
1031	6	-0.06	-6.49e-03	-0.99	3.97e-05	0.0	1.15e-05
1031	8	-0.06	-6.46e-03	-0.94	3.84e-05	0.0	1.15e-05
1031	10	-0.05	-6.45e-03	-0.92	3.80e-05	0.0	1.15e-05
1032	2	-0.07	-0.01	-1.33	5.32e-05	0.0	1.39e-05
1032	6	-0.05	-7.68e-03	-0.99	4.00e-05	0.0	1.07e-05
1032	8	-0.05	-7.61e-03	-0.94	3.86e-05	0.0	1.07e-05
1032	10	-0.05	-7.59e-03	-0.92	3.82e-05	0.0	1.07e-05
1033	2	-0.07	-0.01	-1.33	5.34e-05	0.0	1.26e-05
1033	6	-0.05	-8.28e-03	-0.99	4.02e-05	0.0	9.77e-06
1033	8	-0.05	-8.19e-03	-0.94	3.88e-05	0.0	9.86e-06
1033	10	-0.05	-8.16e-03	-0.92	3.84e-05	0.0	9.89e-06
1034	2	-0.07	-0.01	-1.33	5.36e-05	0.0	1.13e-05
1034	6	-0.05	-8.88e-03	-0.99	4.03e-05	0.0	8.78e-06
1034	8	-0.05	-8.78e-03	-0.94	3.89e-05	0.0	8.93e-06
1034	10	-0.05	-8.74e-03	-0.92	3.85e-05	0.0	8.98e-06
1035	2	-0.07	-0.01	-1.33	5.37e-05	0.0	9.92e-06
1035	6	-0.05	-9.49e-03	-0.99	4.03e-05	0.0	7.78e-06
1035	8	-0.05	-9.36e-03	-0.94	3.90e-05	0.0	7.99e-06
1035	10	-0.04	-9.32e-03	-0.92	3.85e-05	0.0	8.05e-06
1036	2	-0.06	-0.01	-1.33	5.37e-05	0.0	8.59e-06
1036	6	-0.05	-0.01	-0.99	4.04e-05	0.0	6.79e-06
1036	8	-0.04	-9.95e-03	-0.94	3.90e-05	0.0	7.05e-06
1036	10	-0.04	-9.90e-03	-0.92	3.86e-05	0.0	7.14e-06
1037	2	-0.06	-0.01	-1.33	5.38e-05	0.0	7.28e-06
1037	6	-0.05	-0.01	-0.99	4.04e-05	0.0	5.82e-06
1037	8	-0.04	-0.01	-0.94	3.91e-05	0.0	6.14e-06
1037	10	-0.04	-0.01	-0.92	3.86e-05	0.0	6.24e-06
1038	2	-0.06	-0.01	-1.33	5.38e-05	0.0	5.99e-06
1038	6	-0.04	-0.01	-0.99	4.05e-05	0.0	4.86e-06
1038	8	-0.04	-0.01	-0.94	3.91e-05	0.0	5.24e-06
1038	10	-0.04	-0.01	-0.92	3.86e-05	0.0	5.36e-06
1039	2	-0.06	-0.02	-1.33	5.39e-05	0.0	4.73e-06
1039	6	-0.04	-0.01	-0.99	4.05e-05	0.0	3.93e-06
1039	8	-0.04	-0.01	-0.94	3.91e-05	0.0	4.36e-06
1039	10	-0.04	-0.01	-0.92	3.87e-05	0.0	4.50e-06
1040	2	-0.06	-0.02	-1.33	5.39e-05	0.0	3.49e-06
1040	6	-0.04	-0.01	-0.99	4.05e-05	0.0	3.01e-06
1040	8	-0.04	-0.01	-0.94	3.92e-05	0.0	3.49e-06
1040	10	-0.04	-0.01	-0.92	3.87e-05	0.0	3.65e-06
1041	2	-0.05	-0.02	-1.33	5.40e-05	0.0	2.28e-06
1041	6	-0.04	-0.01	-0.99	4.06e-05	0.0	2.11e-06
1041	8	-0.04	-0.01	-0.94	3.92e-05	0.0	2.64e-06
1041	10	-0.04	-0.01	-0.93	3.87e-05	0.0	2.82e-06

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

1042	2	-0.05	-0.02	-1.33	5.40e-05	0.0	1.08e-06
1042	6	-0.04	-0.01	-0.99	4.06e-05	0.0	1.23e-06
1042	8	-0.04	-0.01	-0.94	3.92e-05	0.0	1.80e-06
1042	10	-0.03	-0.01	-0.93	3.87e-05	0.0	2.00e-06
1043	2	-0.05	-0.02	-1.33	5.40e-05	0.0	0.0
1043	6	-0.04	-0.01	-0.99	4.06e-05	0.0	0.0
1043	8	-0.03	-0.01	-0.94	3.92e-05	0.0	0.0
1043	10	-0.03	-0.01	-0.93	3.87e-05	0.0	1.19e-06
1044	2	-0.05	-0.02	-1.33	5.40e-05	0.0	-1.26e-06
1044	6	-0.03	-0.01	-0.99	4.06e-05	0.0	0.0
1044	8	-0.03	-0.01	-0.94	3.92e-05	0.0	0.0
1044	10	-0.03	-0.01	-0.93	3.87e-05	0.0	0.0
1045	2	-0.05	-0.02	-1.33	5.40e-05	0.0	-2.42e-06
1045	6	-0.03	-0.02	-0.99	4.06e-05	0.0	-1.37e-06
1045	8	-0.03	-0.02	-0.94	3.92e-05	0.0	0.0
1045	10	-0.03	-0.02	-0.93	3.87e-05	0.0	0.0
1046	2	-0.04	-0.02	-1.33	5.40e-05	0.0	-3.56e-06
1046	6	-0.03	-0.02	-0.99	4.06e-05	0.0	-2.22e-06
1046	8	-0.03	-0.02	-0.94	3.91e-05	0.0	-1.45e-06
1046	10	-0.03	-0.02	-0.93	3.87e-05	0.0	-1.20e-06
1047	2	-0.04	-0.02	-1.33	5.39e-05	0.0	-4.70e-06
1047	6	-0.03	-0.02	-0.99	4.05e-05	0.0	-3.06e-06
1047	8	-0.03	-0.02	-0.94	3.91e-05	0.0	-2.25e-06
1047	10	-0.03	-0.02	-0.93	3.86e-05	0.0	-1.99e-06
1048	2	-0.04	-0.02	-1.33	5.38e-05	0.0	-5.84e-06
1048	6	-0.03	-0.02	-0.99	4.04e-05	0.0	-3.91e-06
1048	8	-0.03	-0.02	-0.94	3.90e-05	0.0	-3.05e-06
1048	10	-0.03	-0.02	-0.93	3.85e-05	0.0	-2.77e-06
1049	2	-0.04	-0.02	-1.33	5.37e-05	0.0	-6.96e-06
1049	6	-0.03	-0.02	-0.99	4.03e-05	0.0	-4.74e-06
1049	8	-0.03	-0.02	-0.94	3.89e-05	0.0	-3.84e-06
1049	10	-0.02	-0.02	-0.93	3.85e-05	0.0	-3.54e-06
1050	2	-0.03	-0.02	-1.33	5.35e-05	1.65e-04	-8.05e-06
1050	6	-0.03	-0.02	-0.99	4.02e-05	1.20e-04	-5.55e-06
1050	8	-0.02	-0.02	-0.94	3.88e-05	1.09e-04	-4.61e-06
1050	10	-0.02	-0.02	-0.93	3.83e-05	1.06e-04	-4.30e-06
1051	2	-0.09	-0.01	-1.30	4.23e-05	0.0	2.16e-05
1051	6	-0.06	-8.77e-03	-0.97	3.20e-05	0.0	1.63e-05
1051	8	-0.06	-8.69e-03	-0.92	3.11e-05	0.0	1.58e-05
1051	10	-0.06	-8.67e-03	-0.91	3.08e-05	0.0	1.57e-05
1052	2	-0.09	-0.01	-1.30	4.28e-05	0.0	2.14e-05
1052	6	-0.06	-8.29e-03	-0.97	3.23e-05	0.0	1.61e-05
1052	8	-0.06	-8.23e-03	-0.92	3.14e-05	0.0	1.57e-05
1052	10	-0.06	-8.21e-03	-0.91	3.12e-05	0.0	1.55e-05
1053	2	-0.08	-0.01	-1.30	4.21e-05	0.0	2.04e-05
1053	6	-0.06	-9.25e-03	-0.97	3.18e-05	0.0	1.54e-05
1053	8	-0.06	-9.16e-03	-0.92	3.10e-05	0.0	1.50e-05
1053	10	-0.05	-9.13e-03	-0.91	3.07e-05	0.0	1.48e-05
1054	2	-0.08	-0.01	-1.30	4.20e-05	0.0	1.88e-05
1054	6	-0.06	-9.72e-03	-0.97	3.18e-05	0.0	1.43e-05
1054	8	-0.05	-9.62e-03	-0.92	3.09e-05	0.0	1.39e-05
1054	10	-0.05	-9.59e-03	-0.91	3.07e-05	0.0	1.38e-05
1055	2	-0.08	-0.01	-1.30	4.20e-05	0.0	1.73e-05
1055	6	-0.06	-0.01	-0.97	3.18e-05	0.0	1.31e-05
1055	8	-0.05	-0.01	-0.92	3.09e-05	0.0	1.28e-05
1055	10	-0.05	-0.01	-0.91	3.07e-05	0.0	1.28e-05
1056	2	-0.07	-0.01	-1.30	4.21e-05	0.0	1.57e-05
1056	6	-0.05	-0.01	-0.97	3.18e-05	0.0	1.19e-05
1056	8	-0.05	-0.01	-0.92	3.10e-05	0.0	1.18e-05
1056	10	-0.05	-0.01	-0.91	3.07e-05	0.0	1.17e-05
1057	2	-0.07	-0.01	-1.30	4.23e-05	0.0	1.41e-05
1057	6	-0.05	-0.01	-0.97	3.19e-05	0.0	1.08e-05
1057	8	-0.05	-0.01	-0.92	3.11e-05	0.0	1.07e-05
1057	10	-0.05	-0.01	-0.91	3.08e-05	0.0	1.06e-05
1058	2	-0.07	-0.02	-1.31	4.25e-05	0.0	1.26e-05
1058	6	-0.05	-0.01	-0.97	3.21e-05	0.0	9.64e-06

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

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Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO 17001:2015
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

1058	8	-0.05	-0.01	-0.92	3.12e-05	0.0	9.60e-06
1058	10	-0.04	-0.01	-0.91	3.09e-05	0.0	9.59e-06
1059	2	-0.06	-0.02	-1.31	4.28e-05	0.0	1.10e-05
1059	6	-0.05	-0.01	-0.97	3.23e-05	0.0	8.52e-06
1059	8	-0.04	-0.01	-0.92	3.14e-05	0.0	8.56e-06
1059	10	-0.04	-0.01	-0.91	3.11e-05	0.0	8.57e-06
1060	2	-0.06	-0.02	-1.31	4.31e-05	0.0	9.57e-06
1060	6	-0.05	-0.01	-0.97	3.25e-05	0.0	7.43e-06
1060	8	-0.04	-0.01	-0.92	3.16e-05	0.0	7.54e-06
1060	10	-0.04	-0.01	-0.91	3.13e-05	0.0	7.57e-06
1061	2	-0.06	-0.02	-1.31	4.34e-05	0.0	8.16e-06
1061	6	-0.04	-0.01	-0.97	3.28e-05	0.0	6.39e-06
1061	8	-0.04	-0.01	-0.92	3.18e-05	0.0	6.56e-06
1061	10	-0.04	-0.01	-0.91	3.15e-05	0.0	6.61e-06
1062	2	-0.06	-0.02	-1.31	4.38e-05	0.0	6.80e-06
1062	6	-0.04	-0.01	-0.97	3.30e-05	0.0	5.39e-06
1062	8	-0.04	-0.01	-0.92	3.20e-05	0.0	5.62e-06
1062	10	-0.04	-0.01	-0.91	3.17e-05	0.0	5.69e-06
1063	2	-0.05	-0.02	-1.31	4.41e-05	0.0	5.50e-06
1063	6	-0.04	-0.01	-0.97	3.32e-05	0.0	4.43e-06
1063	8	-0.04	-0.01	-0.93	3.22e-05	0.0	4.71e-06
1063	10	-0.04	-0.01	-0.91	3.19e-05	0.0	4.80e-06
1064	2	-0.05	-0.02	-1.31	4.44e-05	0.0	4.25e-06
1064	6	-0.04	-0.01	-0.97	3.34e-05	0.0	3.50e-06
1064	8	-0.04	-0.01	-0.93	3.24e-05	0.0	3.83e-06
1064	10	-0.03	-0.01	-0.91	3.21e-05	0.0	3.94e-06
1065	2	-0.05	-0.02	-1.31	4.46e-05	0.0	3.03e-06
1065	6	-0.04	-0.02	-0.97	3.36e-05	0.0	2.60e-06
1065	8	-0.03	-0.01	-0.93	3.26e-05	0.0	2.98e-06
1065	10	-0.03	-0.01	-0.91	3.22e-05	0.0	3.11e-06
1066	2	-0.05	-0.02	-1.31	4.47e-05	0.0	1.86e-06
1066	6	-0.03	-0.02	-0.97	3.37e-05	0.0	1.73e-06
1066	8	-0.03	-0.02	-0.93	3.26e-05	0.0	2.16e-06
1066	10	-0.03	-0.02	-0.91	3.23e-05	0.0	2.30e-06
1067	2	-0.04	-0.02	-1.31	4.48e-05	0.0	0.0
1067	6	-0.03	-0.02	-0.97	3.37e-05	0.0	0.0
1067	8	-0.03	-0.02	-0.93	3.27e-05	0.0	1.36e-06
1067	10	-0.03	-0.02	-0.91	3.23e-05	0.0	1.51e-06
1068	2	-0.04	-0.02	-1.31	4.48e-05	0.0	0.0
1068	6	-0.03	-0.02	-0.97	3.37e-05	0.0	0.0
1068	8	-0.03	-0.02	-0.93	3.26e-05	0.0	0.0
1068	10	-0.03	-0.02	-0.91	3.23e-05	0.0	0.0
1069	2	-0.04	-0.02	-1.31	4.46e-05	0.0	-1.54e-06
1069	6	-0.03	-0.02	-0.97	3.36e-05	0.0	0.0
1069	8	-0.03	-0.02	-0.93	3.26e-05	0.0	0.0
1069	10	-0.03	-0.02	-0.91	3.22e-05	0.0	0.0
1070	2	-0.04	-0.02	-1.31	4.44e-05	0.0	-2.67e-06
1070	6	-0.03	-0.02	-0.97	3.34e-05	0.0	-1.64e-06
1070	8	-0.02	-0.02	-0.93	3.24e-05	0.0	-1.03e-06
1070	10	-0.02	-0.02	-0.91	3.20e-05	0.0	0.0
1071	2	-0.03	-0.02	-1.31	4.41e-05	2.26e-04	-3.77e-06
1071	6	-0.02	-0.02	-0.97	3.32e-05	1.65e-04	-2.45e-06
1071	8	-0.02	-0.02	-0.93	3.22e-05	1.52e-04	-1.81e-06
1071	10	-0.02	-0.02	-0.91	3.18e-05	1.47e-04	-1.59e-06
1072	2	-0.09	-0.01	-1.27	2.80e-05	0.0	3.29e-05
1072	6	-0.07	-0.01	-0.95	2.15e-05	0.0	2.44e-05
1072	8	-0.06	-0.01	-0.90	2.14e-05	0.0	2.32e-05
1072	10	-0.06	-0.01	-0.89	2.14e-05	0.0	2.27e-05
1073	2	-0.09	-0.01	-1.27	3.03e-05	0.0	3.17e-05
1073	6	-0.07	-0.01	-0.95	2.32e-05	0.0	2.35e-05
1073	8	-0.06	-0.01	-0.90	2.30e-05	0.0	2.23e-05
1073	10	-0.06	-0.01	-0.89	2.29e-05	0.0	2.19e-05
1074	2	-0.09	-0.02	-1.27	2.71e-05	0.0	3.12e-05
1074	6	-0.06	-0.01	-0.95	2.08e-05	0.0	2.32e-05
1074	8	-0.06	-0.01	-0.90	2.08e-05	0.0	2.20e-05
1074	10	-0.06	-0.01	-0.89	2.07e-05	0.0	2.16e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

1075	2	-0.08	-0.02	-1.27	2.67e-05	0.0	2.92e-05
1075	6	-0.06	-0.01	-0.95	2.05e-05	0.0	2.18e-05
1075	8	-0.06	-0.01	-0.90	2.05e-05	0.0	2.07e-05
1075	10	-0.06	-0.01	-0.89	2.05e-05	0.0	2.03e-05
1076	2	-0.08	-0.02	-1.27	2.66e-05	0.0	2.72e-05
1076	6	-0.06	-0.01	-0.95	2.04e-05	0.0	2.03e-05
1076	8	-0.05	-0.01	-0.90	2.04e-05	0.0	1.93e-05
1076	10	-0.05	-0.01	-0.89	2.04e-05	0.0	1.90e-05
1077	2	-0.08	-0.02	-1.27	2.67e-05	0.0	2.51e-05
1077	6	-0.06	-0.01	-0.95	2.05e-05	0.0	1.87e-05
1077	8	-0.05	-0.01	-0.90	2.04e-05	0.0	1.79e-05
1077	10	-0.05	-0.01	-0.89	2.04e-05	0.0	1.76e-05
1078	2	-0.07	-0.02	-1.27	2.69e-05	0.0	2.29e-05
1078	6	-0.05	-0.01	-0.95	2.06e-05	0.0	1.71e-05
1078	8	-0.05	-0.01	-0.90	2.06e-05	0.0	1.64e-05
1078	10	-0.05	-0.01	-0.89	2.05e-05	0.0	1.61e-05
1079	2	-0.07	-0.02	-1.27	2.74e-05	0.0	2.06e-05
1079	6	-0.05	-0.01	-0.95	2.10e-05	0.0	1.54e-05
1079	8	-0.05	-0.01	-0.90	2.08e-05	0.0	1.48e-05
1079	10	-0.05	-0.01	-0.89	2.08e-05	0.0	1.46e-05
1080	2	-0.07	-0.02	-1.27	2.80e-05	0.0	1.83e-05
1080	6	-0.05	-0.01	-0.95	2.14e-05	0.0	1.37e-05
1080	8	-0.05	-0.01	-0.90	2.12e-05	0.0	1.32e-05
1080	10	-0.04	-0.01	-0.89	2.12e-05	0.0	1.31e-05
1081	2	-0.06	-0.02	-1.27	2.88e-05	0.0	1.61e-05
1081	6	-0.05	-0.01	-0.95	2.20e-05	0.0	1.21e-05
1081	8	-0.04	-0.01	-0.90	2.18e-05	0.0	1.17e-05
1081	10	-0.04	-0.01	-0.89	2.17e-05	0.0	1.16e-05
1082	2	-0.06	-0.02	-1.27	2.98e-05	0.0	1.40e-05
1082	6	-0.04	-0.01	-0.95	2.27e-05	0.0	1.06e-05
1082	8	-0.04	-0.01	-0.90	2.24e-05	0.0	1.03e-05
1082	10	-0.04	-0.01	-0.89	2.23e-05	0.0	1.02e-05
1083	2	-0.06	-0.02	-1.28	3.09e-05	0.0	1.20e-05
1083	6	-0.04	-0.01	-0.95	2.35e-05	0.0	9.11e-06
1083	8	-0.04	-0.01	-0.90	2.31e-05	0.0	8.91e-06
1083	10	-0.04	-0.01	-0.89	2.30e-05	0.0	8.84e-06
1084	2	-0.06	-0.02	-1.28	3.20e-05	0.0	1.02e-05
1084	6	-0.04	-0.01	-0.95	2.43e-05	0.0	7.75e-06
1084	8	-0.04	-0.01	-0.90	2.39e-05	0.0	7.64e-06
1084	10	-0.04	-0.01	-0.89	2.37e-05	0.0	7.60e-06
1085	2	-0.05	-0.02	-1.28	3.32e-05	0.0	8.44e-06
1085	6	-0.04	-0.02	-0.95	2.52e-05	0.0	6.48e-06
1085	8	-0.04	-0.01	-0.90	2.46e-05	0.0	6.45e-06
1085	10	-0.04	-0.01	-0.89	2.45e-05	0.0	6.44e-06
1086	2	-0.05	-0.02	-1.28	3.42e-05	0.0	6.82e-06
1086	6	-0.04	-0.02	-0.95	2.59e-05	0.0	5.28e-06
1086	8	-0.03	-0.02	-0.90	2.53e-05	0.0	5.33e-06
1086	10	-0.03	-0.02	-0.89	2.51e-05	0.0	5.35e-06
1087	2	-0.05	-0.02	-1.28	3.50e-05	0.0	5.31e-06
1087	6	-0.03	-0.02	-0.95	2.65e-05	0.0	4.17e-06
1087	8	-0.03	-0.02	-0.90	2.58e-05	0.0	4.29e-06
1087	10	-0.03	-0.02	-0.89	2.56e-05	0.0	4.33e-06
1088	2	-0.04	-0.02	-1.28	3.55e-05	0.0	3.89e-06
1088	6	-0.03	-0.02	-0.95	2.68e-05	0.0	3.12e-06
1088	8	-0.03	-0.02	-0.91	2.61e-05	0.0	3.31e-06
1088	10	-0.03	-0.02	-0.89	2.59e-05	0.0	3.37e-06
1089	2	-0.04	-0.02	-1.28	3.55e-05	0.0	2.51e-06
1089	6	-0.03	-0.02	-0.95	2.69e-05	0.0	2.10e-06
1089	8	-0.03	-0.02	-0.91	2.62e-05	0.0	2.35e-06
1089	10	-0.03	-0.02	-0.89	2.59e-05	0.0	2.43e-06
1090	2	-0.04	-0.02	-1.28	3.52e-05	0.0	1.10e-06
1090	6	-0.03	-0.02	-0.95	2.66e-05	0.0	1.05e-06
1090	8	-0.03	-0.02	-0.91	2.59e-05	0.0	1.36e-06
1090	10	-0.03	-0.02	-0.89	2.57e-05	0.0	1.46e-06
1091	2	-0.04	-0.02	-1.28	3.44e-05	0.0	0.0
1091	6	-0.03	-0.02	-0.95	2.60e-05	0.0	0.0

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

1091	8	-0.02	-0.02	-0.91	2.53e-05	0.0	0.0
1091	10	-0.02	-0.02	-0.89	2.51e-05	0.0	0.0
1092	2	-0.03	-0.02	-1.28	3.31e-05	2.67e-04	-1.92e-06
1092	6	-0.02	-0.02	-0.95	2.51e-05	1.95e-04	-1.19e-06
1092	8	-0.02	-0.02	-0.91	2.44e-05	1.80e-04	0.0
1092	10	-0.02	-0.02	-0.89	2.42e-05	1.74e-04	0.0
1093	2	-0.09	-0.02	-1.24	2.28e-05	1.04e-04	3.88e-05
1093	6	-0.07	-0.01	-0.92	1.81e-05	7.58e-05	2.86e-05
1093	8	-0.06	-0.01	-0.88	1.88e-05	6.99e-05	2.68e-05
1093	10	-0.06	-0.01	-0.86	1.90e-05	6.80e-05	2.62e-05
1094	2	-0.08	-0.02	-1.24	1.39e-05	1.72e-04	4.09e-05
1094	6	-0.06	-0.02	-0.92	1.13e-05	1.25e-04	3.01e-05
1094	8	-0.06	-0.01	-0.88	1.21e-05	1.16e-04	2.82e-05
1094	10	-0.06	-0.01	-0.86	1.24e-05	1.13e-04	2.76e-05
1095	2	-0.08	-0.02	-1.24	1.42e-05	2.01e-04	4.39e-05
1095	6	-0.06	-0.02	-0.92	1.14e-05	1.47e-04	3.24e-05
1095	8	-0.05	-0.02	-0.88	1.20e-05	1.36e-04	3.04e-05
1095	10	-0.05	-0.02	-0.87	1.23e-05	1.32e-04	2.97e-05
1096	2	-0.07	-0.02	-1.24	1.41e-05	2.07e-04	4.69e-05
1096	6	-0.05	-0.02	-0.92	1.12e-05	1.51e-04	3.46e-05
1096	8	-0.05	-0.02	-0.88	1.18e-05	1.40e-04	3.23e-05
1096	10	-0.05	-0.02	-0.87	1.19e-05	1.36e-04	3.16e-05
1097	2	-0.07	-0.02	-1.24	1.08e-05	2.04e-04	4.78e-05
1097	6	-0.05	-0.02	-0.92	8.68e-06	1.48e-04	3.52e-05
1097	8	-0.04	-0.02	-0.88	9.22e-06	1.37e-04	3.29e-05
1097	10	-0.04	-0.02	-0.87	9.39e-06	1.33e-04	3.21e-05
1098	2	-0.06	-0.02	-1.24	7.08e-06	1.96e-04	4.43e-05
1098	6	-0.04	-0.02	-0.93	5.88e-06	1.43e-04	3.26e-05
1098	8	-0.04	-0.02	-0.88	6.51e-06	1.32e-04	3.04e-05
1098	10	-0.04	-0.02	-0.87	6.72e-06	1.28e-04	2.97e-05
1099	2	-0.05	-0.02	-1.24	6.84e-06	1.90e-04	3.55e-05
1099	6	-0.04	-0.02	-0.93	5.73e-06	1.38e-04	2.61e-05
1099	8	-0.04	-0.02	-0.88	6.42e-06	1.27e-04	2.44e-05
1099	10	-0.04	-0.02	-0.87	6.65e-06	1.23e-04	2.38e-05
1100	2	-0.05	-0.02	-1.24	1.00e-05	1.86e-04	2.25e-05
1100	6	-0.04	-0.02	-0.93	8.14e-06	1.36e-04	1.66e-05
1100	8	-0.03	-0.02	-0.88	8.80e-06	1.24e-04	1.56e-05
1100	10	-0.03	-0.02	-0.87	9.02e-06	1.21e-04	1.52e-05
1101	2	-0.04	-0.02	-1.24	1.36e-05	1.90e-04	7.29e-06
1101	6	-0.03	-0.02	-0.93	1.08e-05	1.39e-04	5.44e-06
1101	8	-0.03	-0.02	-0.88	1.14e-05	1.27e-04	5.20e-06
1101	10	-0.03	-0.02	-0.87	1.16e-05	1.23e-04	5.12e-06
1102	2	-0.04	-0.02	-1.24	1.42e-05	2.13e-04	-8.49e-06
1102	6	-0.03	-0.02	-0.93	1.11e-05	1.55e-04	-6.11e-06
1102	8	-0.03	-0.02	-0.88	1.14e-05	1.42e-04	-5.50e-06
1102	10	-0.03	-0.02	-0.87	1.15e-05	1.38e-04	-5.29e-06
1103	2	0.09	-0.03	-0.92	0.0	-3.85e-04	-9.96e-05
1103	6	0.06	-0.02	-0.69	0.0	-2.82e-04	-7.27e-05
1103	8	0.06	-0.02	-0.66	0.0	-2.61e-04	-6.69e-05
1103	10	0.06	-0.02	-0.65	0.0	-2.54e-04	-6.49e-05
1104	2	0.10	-0.01	-0.92	0.0	-3.77e-04	-8.71e-05
1104	6	0.07	-0.01	-0.69	0.0	-2.76e-04	-6.36e-05
1104	8	0.07	-0.01	-0.66	0.0	-2.56e-04	-5.85e-05
1104	10	0.06	-9.82e-03	-0.65	0.0	-2.49e-04	-5.68e-05
1105	2	0.08	-0.04	-0.92	0.0	-4.10e-04	-1.08e-04
1105	6	0.05	-0.03	-0.69	0.0	-3.00e-04	-7.90e-05
1105	8	0.05	-0.03	-0.66	0.0	-2.78e-04	-7.26e-05
1105	10	0.05	-0.02	-0.65	0.0	-2.70e-04	-7.05e-05
1106	2	0.06	-0.05	-0.92	0.0	-4.35e-04	-1.06e-04
1106	6	0.05	-0.03	-0.69	0.0	-3.18e-04	-7.75e-05
1106	8	0.04	-0.03	-0.66	0.0	-2.94e-04	-7.12e-05
1106	10	0.04	-0.03	-0.65	0.0	-2.86e-04	-6.91e-05
1107	2	0.05	-0.06	-0.92	0.0	-4.53e-04	-9.98e-05
1107	6	0.04	-0.04	-0.69	0.0	-3.31e-04	-7.27e-05
1107	8	0.03	-0.04	-0.66	0.0	-3.06e-04	-6.68e-05
1107	10	0.03	-0.04	-0.65	0.0	-2.97e-04	-6.48e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

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Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 27001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

1108	2	0.04	-0.07	-0.92	0.0	-4.66e-04	-9.23e-05
1108	6	0.03	-0.05	-0.69	0.0	-3.40e-04	-6.73e-05
1108	8	0.02	-0.05	-0.66	0.0	-3.14e-04	-6.18e-05
1108	10	0.02	-0.05	-0.65	0.0	-3.05e-04	-5.99e-05
1109	2	0.02	-0.08	-0.92	0.0	-4.76e-04	-8.47e-05
1109	6	0.02	-0.06	-0.69	0.0	-3.48e-04	-6.17e-05
1109	8	0.01	-0.05	-0.66	0.0	-3.21e-04	-5.67e-05
1109	10	0.01	-0.05	-0.65	0.0	-3.11e-04	-5.50e-05
1110	2	6.64e-03	-0.09	-0.92	0.0	-4.85e-04	-7.68e-05
1110	6	4.59e-03	-0.06	-0.69	0.0	-3.54e-04	-5.60e-05
1110	8	3.84e-03	-0.06	-0.66	0.0	-3.26e-04	-5.15e-05
1110	10	3.59e-03	-0.06	-0.65	0.0	-3.17e-04	-5.00e-05
1111	2	-8.04e-03	-0.10	-0.92	0.0	-4.92e-04	-6.85e-05
1111	6	-6.12e-03	-0.07	-0.69	0.0	-3.59e-04	-5.01e-05
1111	8	-6.03e-03	-0.07	-0.66	0.0	-3.31e-04	-4.62e-05
1111	10	-5.99e-03	-0.07	-0.65	0.0	-3.21e-04	-4.49e-05
1112	2	-0.02	-0.11	-0.92	0.0	-4.99e-04	-5.98e-05
1112	6	-0.02	-0.08	-0.69	0.0	-3.64e-04	-4.38e-05
1112	8	-0.02	-0.08	-0.66	0.0	-3.35e-04	-4.05e-05
1112	10	-0.02	-0.07	-0.65	0.0	-3.25e-04	-3.94e-05
1113	2	-0.04	-0.12	-0.92	3.45e-04	-4.97e-04	-4.88e-05
1113	6	-0.03	-0.09	-0.69	2.56e-04	-3.63e-04	-3.58e-05
1113	8	-0.03	-0.08	-0.66	2.42e-04	-3.34e-04	-3.33e-05
1113	10	-0.03	-0.08	-0.65	2.37e-04	-3.24e-04	-3.25e-05
1114	2	0.08	-0.03	-0.94	0.0	-4.04e-04	-1.12e-04
1114	6	0.06	-0.02	-0.70	0.0	-2.96e-04	-8.17e-05
1114	8	0.05	-0.02	-0.67	0.0	-2.73e-04	-7.51e-05
1114	10	0.05	-0.02	-0.66	0.0	-2.66e-04	-7.29e-05
1115	2	0.09	-0.01	-0.94	0.0	-4.04e-04	-1.10e-04
1115	6	0.07	-0.01	-0.70	0.0	-2.95e-04	-7.98e-05
1115	8	0.06	-0.01	-0.67	0.0	-2.73e-04	-7.34e-05
1115	10	0.06	-0.01	-0.66	0.0	-2.66e-04	-7.12e-05
1116	2	0.07	-0.04	-0.94	0.0	-4.14e-04	-1.15e-04
1116	6	0.05	-0.03	-0.70	0.0	-3.03e-04	-8.41e-05
1116	8	0.05	-0.03	-0.67	0.0	-2.80e-04	-7.72e-05
1116	10	0.05	-0.02	-0.66	0.0	-2.72e-04	-7.49e-05
1117	2	0.06	-0.05	-0.94	0.0	-4.28e-04	-1.13e-04
1117	6	0.04	-0.03	-0.70	0.0	-3.13e-04	-8.24e-05
1117	8	0.04	-0.03	-0.67	0.0	-2.89e-04	-7.57e-05
1117	10	0.04	-0.03	-0.66	0.0	-2.81e-04	-7.34e-05
1118	2	0.04	-0.06	-0.94	0.0	-4.41e-04	-1.07e-04
1118	6	0.03	-0.04	-0.70	0.0	-3.23e-04	-7.78e-05
1118	8	0.03	-0.04	-0.67	0.0	-2.98e-04	-7.14e-05
1118	10	0.03	-0.04	-0.66	0.0	-2.90e-04	-6.92e-05
1119	2	0.03	-0.07	-0.94	0.0	-4.53e-04	-9.82e-05
1119	6	0.02	-0.05	-0.70	0.0	-3.31e-04	-7.15e-05
1119	8	0.02	-0.05	-0.67	0.0	-3.05e-04	-6.56e-05
1119	10	0.02	-0.05	-0.66	0.0	-2.97e-04	-6.37e-05
1120	2	0.02	-0.08	-0.94	0.0	-4.62e-04	-8.86e-05
1120	6	0.01	-0.06	-0.70	0.0	-3.38e-04	-6.45e-05
1120	8	0.01	-0.05	-0.67	0.0	-3.11e-04	-5.93e-05
1120	10	0.01	-0.05	-0.66	0.0	-3.03e-04	-5.75e-05
1121	2	3.06e-03	-0.09	-0.94	0.0	-4.70e-04	-7.85e-05
1121	6	1.98e-03	-0.06	-0.70	0.0	-3.43e-04	-5.72e-05
1121	8	1.44e-03	-0.06	-0.67	0.0	-3.17e-04	-5.26e-05
1121	10	1.26e-03	-0.06	-0.66	0.0	-3.08e-04	-5.11e-05
1122	2	-0.01	-0.10	-0.94	0.0	-4.77e-04	-6.80e-05
1122	6	-8.41e-03	-0.07	-0.70	0.0	-3.48e-04	-4.97e-05
1122	8	-8.13e-03	-0.07	-0.67	0.0	-3.21e-04	-4.58e-05
1122	10	-8.04e-03	-0.07	-0.66	0.0	-3.12e-04	-4.45e-05
1123	2	-0.03	-0.11	-0.94	0.0	-4.84e-04	-5.75e-05
1123	6	-0.02	-0.08	-0.70	0.0	-3.54e-04	-4.21e-05
1123	8	-0.02	-0.08	-0.67	0.0	-3.26e-04	-3.89e-05
1123	10	-0.02	-0.07	-0.66	0.0	-3.16e-04	-3.79e-05
1124	2	-0.04	-0.12	-0.94	3.45e-04	-4.97e-04	-4.88e-05
1124	6	-0.03	-0.09	-0.70	2.56e-04	-3.63e-04	-3.58e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 27001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

1124	8	-0.03	-0.08	-0.67	2.42e-04	-3.34e-04	-3.33e-05
1124	10	-0.03	-0.08	-0.66	2.37e-04	-3.24e-04	-3.25e-05
1125	2	0.08	-0.03	-0.95	0.0	-4.07e-04	-1.23e-04
1125	6	0.06	-0.02	-0.71	0.0	-2.98e-04	-8.95e-05
1125	8	0.05	-0.02	-0.68	0.0	-2.76e-04	-8.22e-05
1125	10	0.05	-0.02	-0.67	0.0	-2.68e-04	-7.97e-05
1126	2	0.09	-0.02	-0.95	0.0	-4.08e-04	-1.23e-04
1126	6	0.06	-0.01	-0.71	0.0	-2.98e-04	-8.99e-05
1126	8	0.06	-0.01	-0.68	0.0	-2.76e-04	-8.25e-05
1126	10	0.06	-0.01	-0.67	0.0	-2.68e-04	-8.00e-05
1127	2	0.06	-0.04	-0.95	0.0	-4.12e-04	-1.21e-04
1127	6	0.05	-0.03	-0.71	0.0	-3.01e-04	-8.80e-05
1127	8	0.04	-0.03	-0.68	0.0	-2.79e-04	-8.08e-05
1127	10	0.04	-0.03	-0.67	0.0	-2.71e-04	-7.84e-05
1128	2	0.05	-0.05	-0.95	0.0	-4.20e-04	-1.16e-04
1128	6	0.04	-0.03	-0.71	0.0	-3.07e-04	-8.47e-05
1128	8	0.03	-0.03	-0.68	0.0	-2.84e-04	-7.78e-05
1128	10	0.03	-0.03	-0.67	0.0	-2.76e-04	-7.54e-05
1129	2	0.04	-0.06	-0.95	0.0	-4.29e-04	-1.09e-04
1129	6	0.03	-0.04	-0.71	0.0	-3.14e-04	-7.96e-05
1129	8	0.03	-0.04	-0.68	0.0	-2.90e-04	-7.30e-05
1129	10	0.02	-0.04	-0.67	0.0	-2.82e-04	-7.08e-05
1130	2	0.03	-0.07	-0.95	0.0	-4.38e-04	-1.00e-04
1130	6	0.02	-0.05	-0.71	0.0	-3.20e-04	-7.30e-05
1130	8	0.02	-0.05	-0.68	0.0	-2.96e-04	-6.70e-05
1130	10	0.02	-0.05	-0.67	0.0	-2.87e-04	-6.50e-05
1131	2	0.01	-0.08	-0.95	0.0	-4.46e-04	-8.98e-05
1131	6	9.20e-03	-0.06	-0.71	0.0	-3.26e-04	-6.55e-05
1131	8	8.10e-03	-0.05	-0.68	0.0	-3.01e-04	-6.01e-05
1131	10	7.74e-03	-0.05	-0.67	0.0	-2.92e-04	-5.84e-05
1132	1	-2.23e-03	-0.07	-0.80	0.0	-3.25e-04	-5.57e-05
1132	2	-5.78e-04	-0.09	-0.95	0.0	-4.54e-04	-7.87e-05
1132	5	-1.77e-03	-0.05	-0.61	0.0	-2.45e-04	-4.21e-05
1132	6	-6.71e-04	-0.06	-0.71	0.0	-3.31e-04	-5.74e-05
1132	7	-1.77e-03	-0.05	-0.61	0.0	-2.45e-04	-4.21e-05
1132	8	-1.00e-03	-0.06	-0.68	0.0	-3.06e-04	-5.28e-05
1132	9	-1.77e-03	-0.05	-0.61	0.0	-2.45e-04	-4.21e-05
1132	10	-1.11e-03	-0.06	-0.67	0.0	-2.97e-04	-5.13e-05
1133	2	-0.01	-0.10	-0.95	0.0	-4.60e-04	-6.72e-05
1133	6	-0.01	-0.07	-0.71	0.0	-3.36e-04	-4.90e-05
1133	8	-0.01	-0.07	-0.68	0.0	-3.10e-04	-4.52e-05
1133	10	-0.01	-0.07	-0.67	0.0	-3.01e-04	-4.39e-05
1134	2	-0.03	-0.11	-0.95	0.0	-4.66e-04	-5.49e-05
1134	6	-0.02	-0.08	-0.71	0.0	-3.40e-04	-4.02e-05
1134	8	-0.02	-0.08	-0.68	0.0	-3.13e-04	-3.71e-05
1134	10	-0.02	-0.07	-0.67	0.0	-3.05e-04	-3.61e-05
1135	2	-0.04	-0.12	-0.95	3.45e-04	-4.71e-04	-4.19e-05
1135	6	-0.03	-0.09	-0.71	2.55e-04	-3.44e-04	-3.08e-05
1135	8	-0.03	-0.08	-0.68	2.41e-04	-3.17e-04	-2.86e-05
1135	10	-0.03	-0.08	-0.67	2.37e-04	-3.08e-04	-2.79e-05
1136	2	0.07	-0.03	-0.97	0.0	-4.02e-04	-1.30e-04
1136	6	0.05	-0.02	-0.72	0.0	-2.94e-04	-9.43e-05
1136	8	0.05	-0.02	-0.69	0.0	-2.72e-04	-8.65e-05
1136	10	0.05	-0.02	-0.68	0.0	-2.65e-04	-8.39e-05
1137	2	0.08	-0.02	-0.97	0.0	-4.02e-04	-1.32e-04
1137	6	0.06	-0.01	-0.72	0.0	-2.94e-04	-9.59e-05
1137	8	0.06	-0.01	-0.69	0.0	-2.72e-04	-8.79e-05
1137	10	0.05	-0.01	-0.68	0.0	-2.65e-04	-8.53e-05
1138	2	0.06	-0.04	-0.97	0.0	-4.05e-04	-1.24e-04
1138	6	0.04	-0.03	-0.72	0.0	-2.96e-04	-9.05e-05
1138	8	0.04	-0.03	-0.69	0.0	-2.74e-04	-8.30e-05
1138	10	0.04	-0.03	-0.68	0.0	-2.66e-04	-8.05e-05
1139	2	0.05	-0.05	-0.97	0.0	-4.10e-04	-1.18e-04
1139	6	0.03	-0.03	-0.72	0.0	-3.00e-04	-8.57e-05
1139	8	0.03	-0.03	-0.69	0.0	-2.77e-04	-7.86e-05
1139	10	0.03	-0.03	-0.68	0.0	-2.69e-04	-7.62e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO /IEC 27001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

1140	2	0.03	-0.06	-0.97	0.0	-4.16e-04	-1.09e-04
1140	6	0.02	-0.04	-0.72	0.0	-3.04e-04	-7.97e-05
1140	8	0.02	-0.04	-0.69	0.0	-2.81e-04	-7.31e-05
1140	10	0.02	-0.04	-0.68	0.0	-2.73e-04	-7.09e-05
1141	2	0.02	-0.07	-0.97	0.0	-4.23e-04	-9.97e-05
1141	6	0.02	-0.05	-0.72	0.0	-3.09e-04	-7.26e-05
1141	8	0.01	-0.05	-0.69	0.0	-2.85e-04	-6.67e-05
1141	10	0.01	-0.05	-0.68	0.0	-2.77e-04	-6.47e-05
1142	2	8.80e-03	-0.08	-0.97	0.0	-4.29e-04	-8.87e-05
1142	6	6.19e-03	-0.06	-0.72	0.0	-3.14e-04	-6.47e-05
1142	8	5.34e-03	-0.05	-0.69	0.0	-2.90e-04	-5.94e-05
1142	10	5.05e-03	-0.05	-0.68	0.0	-2.82e-04	-5.77e-05
1143	1	-4.78e-03	-0.07	-0.81	0.0	-3.13e-04	-5.45e-05
1143	2	-4.18e-03	-0.09	-0.97	0.0	-4.36e-04	-7.69e-05
1143	5	-3.70e-03	-0.05	-0.62	0.0	-2.36e-04	-4.12e-05
1143	6	-3.30e-03	-0.06	-0.72	0.0	-3.18e-04	-5.61e-05
1143	7	-3.70e-03	-0.05	-0.62	0.0	-2.36e-04	-4.12e-05
1143	8	-3.42e-03	-0.06	-0.69	0.0	-2.94e-04	-5.16e-05
1143	9	-3.70e-03	-0.05	-0.62	0.0	-2.36e-04	-4.12e-05
1143	10	-3.46e-03	-0.06	-0.68	0.0	-2.85e-04	-5.01e-05
1144	2	-0.02	-0.10	-0.97	0.0	-4.41e-04	-6.45e-05
1144	6	-0.01	-0.07	-0.72	0.0	-3.22e-04	-4.71e-05
1144	8	-0.01	-0.07	-0.69	0.0	-2.97e-04	-4.34e-05
1144	10	-0.01	-0.07	-0.68	0.0	-2.89e-04	-4.22e-05
1145	2	-0.03	-0.11	-0.97	0.0	-4.45e-04	-5.15e-05
1145	6	-0.02	-0.08	-0.72	0.0	-3.25e-04	-3.77e-05
1145	8	-0.02	-0.08	-0.69	0.0	-3.00e-04	-3.49e-05
1145	10	-0.02	-0.07	-0.68	0.0	-2.91e-04	-3.39e-05
1146	2	-0.04	-0.12	-0.97	3.41e-04	-4.47e-04	-3.82e-05
1146	6	-0.03	-0.09	-0.72	2.53e-04	-3.26e-04	-2.81e-05
1146	8	-0.03	-0.08	-0.69	2.38e-04	-3.01e-04	-2.61e-05
1146	10	-0.03	-0.08	-0.68	2.34e-04	-2.92e-04	-2.55e-05
1147	2	0.06	-0.03	-0.99	0.0	-3.93e-04	-1.32e-04
1147	6	0.05	-0.02	-0.74	0.0	-2.87e-04	-9.63e-05
1147	8	0.04	-0.02	-0.70	0.0	-2.66e-04	-8.83e-05
1147	10	0.04	-0.02	-0.69	0.0	-2.58e-04	-8.56e-05
1148	2	0.08	-0.02	-0.99	0.0	-3.92e-04	-1.35e-04
1148	6	0.06	-0.01	-0.74	0.0	-2.87e-04	-9.85e-05
1148	8	0.05	-0.01	-0.70	0.0	-2.66e-04	-9.03e-05
1148	10	0.05	-0.01	-0.69	0.0	-2.58e-04	-8.76e-05
1149	2	0.05	-0.04	-0.99	0.0	-3.94e-04	-1.25e-04
1149	6	0.04	-0.03	-0.74	0.0	-2.89e-04	-9.11e-05
1149	8	0.04	-0.03	-0.70	0.0	-2.67e-04	-8.36e-05
1149	10	0.03	-0.03	-0.69	0.0	-2.60e-04	-8.11e-05
1150	2	0.04	-0.05	-0.99	0.0	-3.98e-04	-1.17e-04
1150	6	0.03	-0.03	-0.74	0.0	-2.91e-04	-8.53e-05
1150	8	0.03	-0.03	-0.70	0.0	-2.69e-04	-7.83e-05
1150	10	0.03	-0.03	-0.69	0.0	-2.62e-04	-7.59e-05
1151	2	0.03	-0.06	-0.99	0.0	-4.02e-04	-1.08e-04
1151	6	0.02	-0.04	-0.74	0.0	-2.94e-04	-7.87e-05
1151	8	0.02	-0.04	-0.70	0.0	-2.71e-04	-7.23e-05
1151	10	0.02	-0.04	-0.69	0.0	-2.64e-04	-7.01e-05
1152	2	0.02	-0.07	-0.99	0.0	-4.06e-04	-9.78e-05
1152	6	0.01	-0.05	-0.74	0.0	-2.97e-04	-7.13e-05
1152	8	0.01	-0.05	-0.70	0.0	-2.74e-04	-6.55e-05
1152	10	0.01	-0.05	-0.69	0.0	-2.67e-04	-6.36e-05
1153	2	4.76e-03	-0.08	-0.98	0.0	-4.11e-04	-8.64e-05
1153	6	3.24e-03	-0.06	-0.74	0.0	-3.01e-04	-6.30e-05
1153	8	2.63e-03	-0.05	-0.70	0.0	-2.78e-04	-5.79e-05
1153	10	2.42e-03	-0.05	-0.69	0.0	-2.70e-04	-5.62e-05
1154	2	-7.66e-03	-0.09	-0.98	0.0	-4.17e-04	-7.40e-05
1154	6	-5.83e-03	-0.06	-0.74	0.0	-3.04e-04	-5.40e-05
1154	8	-5.75e-03	-0.06	-0.70	0.0	-2.81e-04	-4.97e-05
1154	10	-5.73e-03	-0.06	-0.69	0.0	-2.73e-04	-4.83e-05
1155	2	-0.02	-0.10	-0.98	0.0	-4.22e-04	-6.10e-05
1155	6	-0.02	-0.07	-0.74	0.0	-3.08e-04	-4.46e-05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015
Certificate No. Q204

SR EN ISO 14001:2015
Certificate No. E81

SR EN ISO/IEC 17001:2017
Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

1155	8	-0.01	-0.07	-0.70	0.0	-2.84e-04	-4.11e-05
1155	10	-0.01	-0.07	-0.69	0.0	-2.76e-04	-4.00e-05
1156	2	-0.03	-0.11	-0.98	0.0	-4.25e-04	-4.83e-05
1156	6	-0.02	-0.08	-0.74	0.0	-3.11e-04	-3.53e-05
1156	8	-0.02	-0.08	-0.70	0.0	-2.87e-04	-3.27e-05
1156	10	-0.02	-0.07	-0.69	0.0	-2.79e-04	-3.19e-05
1157	2	0.06	-0.03	-1.00	0.0	-3.81e-04	-1.31e-04
1157	6	0.04	-0.02	-0.75	0.0	-2.79e-04	-9.54e-05
1157	8	0.04	-0.02	-0.71	0.0	-2.58e-04	-8.74e-05
1157	10	0.04	-0.02	-0.70	0.0	-2.51e-04	-8.48e-05
1158	2	0.07	-0.02	-1.00	0.0	-3.80e-04	-1.35e-04
1158	6	0.05	-0.01	-0.75	0.0	-2.78e-04	-9.79e-05
1158	8	0.05	-0.01	-0.71	0.0	-2.57e-04	-8.97e-05
1158	10	0.05	-0.01	-0.70	0.0	-2.50e-04	-8.70e-05
1159	2	0.05	-0.04	-1.00	0.0	-3.82e-04	-1.23e-04
1159	6	0.03	-0.03	-0.75	0.0	-2.80e-04	-8.96e-05
1159	8	0.03	-0.03	-0.71	0.0	-2.59e-04	-8.22e-05
1159	10	0.03	-0.03	-0.70	0.0	-2.52e-04	-7.97e-05
1160	2	0.04	-0.05	-1.00	0.0	-3.84e-04	-1.15e-04
1160	6	0.03	-0.04	-0.75	0.0	-2.81e-04	-8.35e-05
1160	8	0.02	-0.03	-0.71	0.0	-2.60e-04	-7.67e-05
1160	10	0.02	-0.03	-0.70	0.0	-2.53e-04	-7.44e-05
1161	2	0.02	-0.06	-1.00	0.0	-3.87e-04	-1.06e-04
1161	6	0.02	-0.04	-0.75	0.0	-2.83e-04	-7.70e-05
1161	8	0.02	-0.04	-0.71	0.0	-2.62e-04	-7.07e-05
1161	10	0.02	-0.04	-0.70	0.0	-2.55e-04	-6.86e-05
1162	2	0.01	-0.07	-1.00	0.0	-3.90e-04	-9.55e-05
1162	6	8.95e-03	-0.05	-0.75	0.0	-2.85e-04	-6.96e-05
1162	8	7.92e-03	-0.05	-0.71	0.0	-2.63e-04	-6.40e-05
1162	10	7.57e-03	-0.05	-0.70	0.0	-2.56e-04	-6.21e-05
1163	1	-1.09e-03	-0.06	-0.84	0.0	-2.84e-04	-5.98e-05
1163	2	8.30e-04	-0.08	-1.00	0.0	-3.93e-04	-8.42e-05
1163	5	-9.08e-04	-0.05	-0.64	0.0	-2.15e-04	-4.51e-05
1163	6	3.75e-04	-0.06	-0.75	0.0	-2.87e-04	-6.14e-05
1163	7	-9.08e-04	-0.05	-0.64	0.0	-2.15e-04	-4.51e-05
1163	8	-9.73e-06	-0.05	-0.71	0.0	-2.66e-04	-5.65e-05
1163	9	-9.08e-04	-0.05	-0.64	0.0	-2.15e-04	-4.51e-05
1163	10	-1.38e-04	-0.05	-0.70	0.0	-2.58e-04	-5.49e-05
1164	2	-0.01	-0.09	-1.00	0.0	-3.97e-04	-7.19e-05
1164	6	-8.28e-03	-0.06	-0.75	0.0	-2.90e-04	-5.25e-05
1164	8	-8.01e-03	-0.06	-0.71	0.0	-2.68e-04	-4.84e-05
1164	10	-7.91e-03	-0.06	-0.70	0.0	-2.61e-04	-4.70e-05
1165	2	-0.02	-0.10	-1.00	0.0	-4.02e-04	-5.90e-05
1165	6	-0.02	-0.07	-0.75	0.0	-2.94e-04	-4.32e-05
1165	8	-0.02	-0.07	-0.71	0.0	-2.71e-04	-3.99e-05
1165	10	-0.02	-0.07	-0.70	0.0	-2.64e-04	-3.88e-05
1166	2	-0.04	-0.11	-1.00	0.0	-4.08e-04	-4.68e-05
1166	6	-0.03	-0.08	-0.75	0.0	-2.98e-04	-3.43e-05
1166	8	-0.02	-0.08	-0.71	0.0	-2.75e-04	-3.18e-05
1166	10	-0.02	-0.07	-0.70	0.0	-2.68e-04	-3.09e-05
1167	2	-0.05	-0.12	-1.00	3.36e-04	-4.22e-04	-3.64e-05
1167	6	-0.03	-0.09	-0.75	2.49e-04	-3.08e-04	-2.67e-05
1167	8	-0.03	-0.08	-0.71	2.34e-04	-2.84e-04	-2.49e-05
1167	10	-0.03	-0.08	-0.70	2.30e-04	-2.76e-04	-2.42e-05
1168	2	0.05	-0.03	-1.02	0.0	-3.67e-04	-1.25e-04
1168	6	0.04	-0.02	-0.76	0.0	-2.69e-04	-9.11e-05
1168	8	0.04	-0.02	-0.73	0.0	-2.49e-04	-8.34e-05
1168	10	0.03	-0.02	-0.71	0.0	-2.43e-04	-8.09e-05
1169	2	0.06	-0.02	-1.02	0.0	-3.66e-04	-1.29e-04
1169	6	0.05	-0.01	-0.76	0.0	-2.68e-04	-9.37e-05
1169	8	0.04	-0.01	-0.73	0.0	-2.48e-04	-8.58e-05
1169	10	0.04	-0.01	-0.71	0.0	-2.42e-04	-8.32e-05
1170	2	0.04	-0.04	-1.02	0.0	-3.70e-04	-1.17e-04
1170	6	0.03	-0.03	-0.76	0.0	-2.71e-04	-8.53e-05
1170	8	0.03	-0.03	-0.73	0.0	-2.51e-04	-7.83e-05
1170	10	0.03	-0.03	-0.71	0.0	-2.44e-04	-7.59e-05

PROJETTO engineering s.r.l.

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Direttore Tecnico: ING. LEONARDO FILOTICO

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Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015
Certificate No. Q204

SR EN ISO 14001:2015
Certificate No. E81

SR EN ISO/IEC 27001:2017
Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

1171	2	0.03	-0.05	-1.02	0.0	-3.72e-04	-1.09e-04
1171	6	0.02	-0.04	-0.76	0.0	-2.72e-04	-7.98e-05
1171	8	0.02	-0.03	-0.73	0.0	-2.52e-04	-7.32e-05
1171	10	0.02	-0.03	-0.71	0.0	-2.45e-04	-7.11e-05
1172	2	0.02	-0.06	-1.02	0.0	-3.73e-04	-1.02e-04
1172	6	0.01	-0.04	-0.76	0.0	-2.74e-04	-7.40e-05
1172	8	0.01	-0.04	-0.73	0.0	-2.53e-04	-6.81e-05
1172	10	0.01	-0.04	-0.71	0.0	-2.46e-04	-6.61e-05
1173	2	8.21e-03	-0.07	-1.02	0.0	-3.74e-04	-9.27e-05
1173	6	5.78e-03	-0.05	-0.76	0.0	-2.74e-04	-6.76e-05
1173	8	5.00e-03	-0.05	-0.73	0.0	-2.53e-04	-6.22e-05
1173	10	4.74e-03	-0.05	-0.71	0.0	-2.46e-04	-6.04e-05
1174	1	-3.83e-03	-0.06	-0.85	0.0	-2.72e-04	-5.88e-05
1174	2	-3.02e-03	-0.08	-1.02	0.0	-3.75e-04	-8.25e-05
1174	5	-2.97e-03	-0.05	-0.65	0.0	-2.06e-04	-4.45e-05
1174	6	-2.43e-03	-0.06	-0.76	0.0	-2.75e-04	-6.02e-05
1174	7	-2.97e-03	-0.05	-0.65	0.0	-2.06e-04	-4.45e-05
1174	8	-2.60e-03	-0.05	-0.73	0.0	-2.54e-04	-5.55e-05
1174	9	-2.97e-03	-0.05	-0.65	0.0	-2.06e-04	-4.45e-05
1174	10	-2.65e-03	-0.05	-0.71	0.0	-2.47e-04	-5.39e-05
1175	2	-0.01	-0.09	-1.02	0.0	-3.78e-04	-7.10e-05
1175	6	-0.01	-0.06	-0.76	0.0	-2.76e-04	-5.19e-05
1175	8	-0.01	-0.06	-0.73	0.0	-2.55e-04	-4.78e-05
1175	10	-0.01	-0.06	-0.71	0.0	-2.48e-04	-4.65e-05
1176	2	-0.03	-0.10	-1.02	0.0	-3.82e-04	-5.86e-05
1176	6	-0.02	-0.07	-0.76	0.0	-2.80e-04	-4.29e-05
1176	8	-0.02	-0.07	-0.73	0.0	-2.58e-04	-3.97e-05
1176	10	-0.02	-0.07	-0.71	0.0	-2.51e-04	-3.86e-05
1177	2	-0.04	-0.11	-1.02	0.0	-3.90e-04	-4.62e-05
1177	6	-0.03	-0.08	-0.76	0.0	-2.85e-04	-3.39e-05
1177	8	-0.03	-0.08	-0.73	0.0	-2.63e-04	-3.15e-05
1177	10	-0.03	-0.07	-0.71	0.0	-2.56e-04	-3.06e-05
1178	2	-0.05	-0.12	-1.02	3.33e-04	-4.00e-04	-3.45e-05
1178	6	-0.04	-0.09	-0.76	2.46e-04	-2.92e-04	-2.54e-05
1178	8	-0.03	-0.08	-0.73	2.32e-04	-2.70e-04	-2.37e-05
1178	10	-0.03	-0.08	-0.71	2.27e-04	-2.63e-04	-2.32e-05
1179	2	0.05	-0.03	-1.03	0.0	-3.54e-04	-1.13e-04
1179	6	0.03	-0.02	-0.77	0.0	-2.59e-04	-8.21e-05
1179	8	0.03	-0.02	-0.74	0.0	-2.40e-04	-7.53e-05
1179	10	0.03	-0.02	-0.72	0.0	-2.34e-04	-7.30e-05
1180	2	0.06	-0.02	-1.03	0.0	-3.51e-04	-1.17e-04
1180	6	0.04	-0.01	-0.77	0.0	-2.57e-04	-8.49e-05
1180	8	0.04	-0.01	-0.74	0.0	-2.38e-04	-7.77e-05
1180	10	0.04	-0.01	-0.72	0.0	-2.32e-04	-7.54e-05
1181	2	0.04	-0.04	-1.03	0.0	-3.58e-04	-1.06e-04
1181	6	0.03	-0.03	-0.77	0.0	-2.62e-04	-7.69e-05
1181	8	0.02	-0.03	-0.74	0.0	-2.43e-04	-7.06e-05
1181	10	0.02	-0.03	-0.72	0.0	-2.37e-04	-6.85e-05
1182	2	-8.63e-03	-0.10	-0.91	3.33e-04	-5.05e-04	-6.99e-05
1182	6	-6.55e-03	-0.07	-0.68	2.47e-04	-3.69e-04	-5.11e-05
1182	8	-6.41e-03	-0.07	-0.65	2.33e-04	-3.39e-04	-4.72e-05
1182	10	-6.37e-03	-0.07	-0.64	2.28e-04	-3.29e-04	-4.59e-05
Nodo		Traslazione X	Traslazione Y	Traslazione Z	Rotazione X	Rotazione Y	Rotazione Z
		-0.23	-0.12	-1.57	-2.95e-04	-5.75e-04	-1.35e-04
		0.11	4.87e-03	-0.11	3.57e-04	8.88e-04	1.95e-04

PROJETTO engineering s.r.l.

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Direttore Tecnico: ING. LEONARDO FILOTICO

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Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel 099 9574694 fax 099 2222834 mob. 3491735914

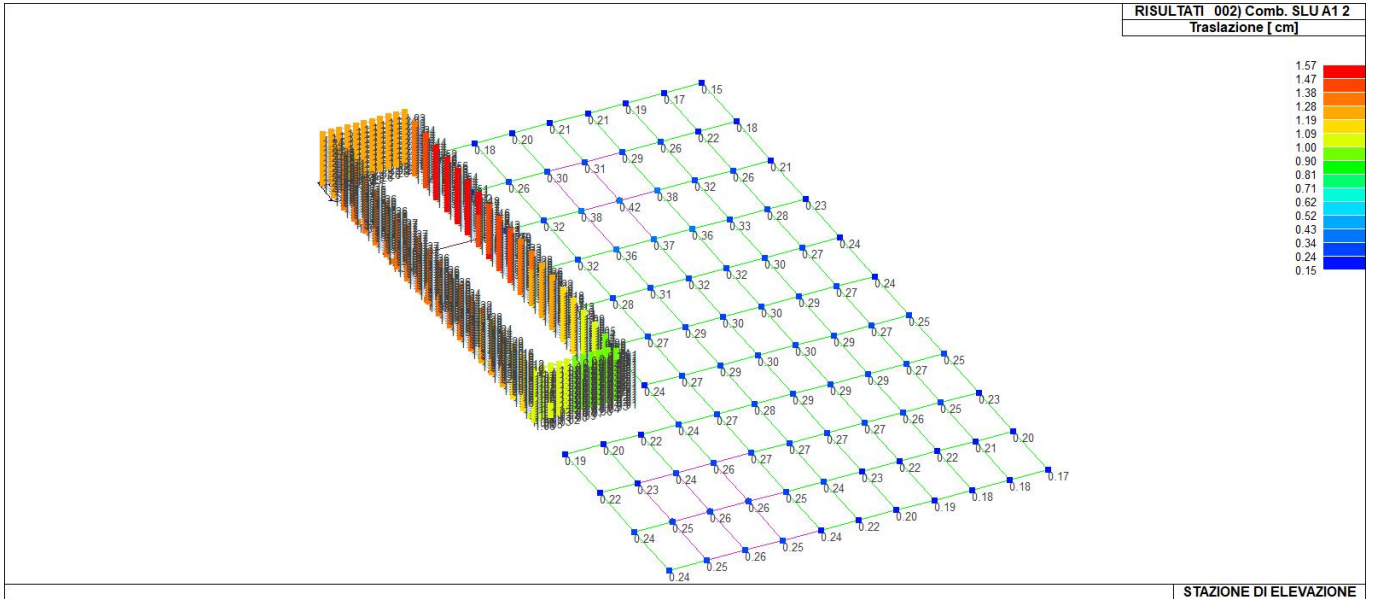
RELAZIONE DI CALCOLO



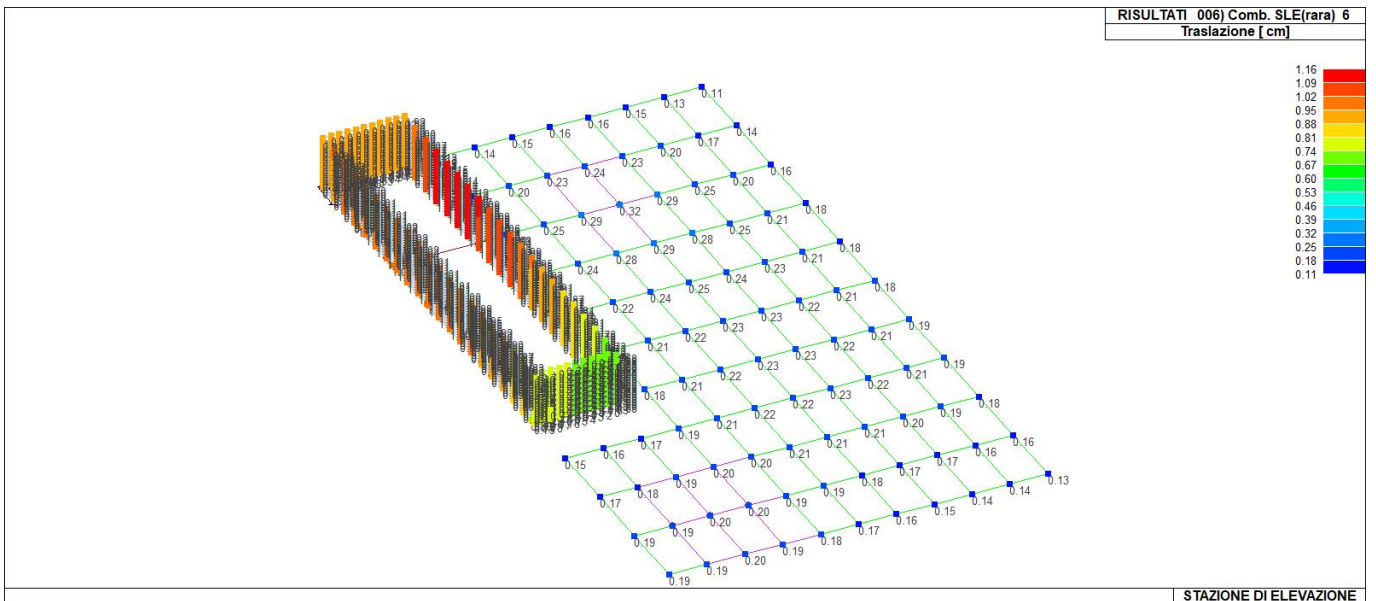
SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.



41_RIS_SPOSTAMENTI_002_Comb. SLU A1 2



41_RIS_SPOSTAMENTI_006_Comb. SLE(rara) 6

PROJETTO engineering s.r.l.

società d'ingegneria

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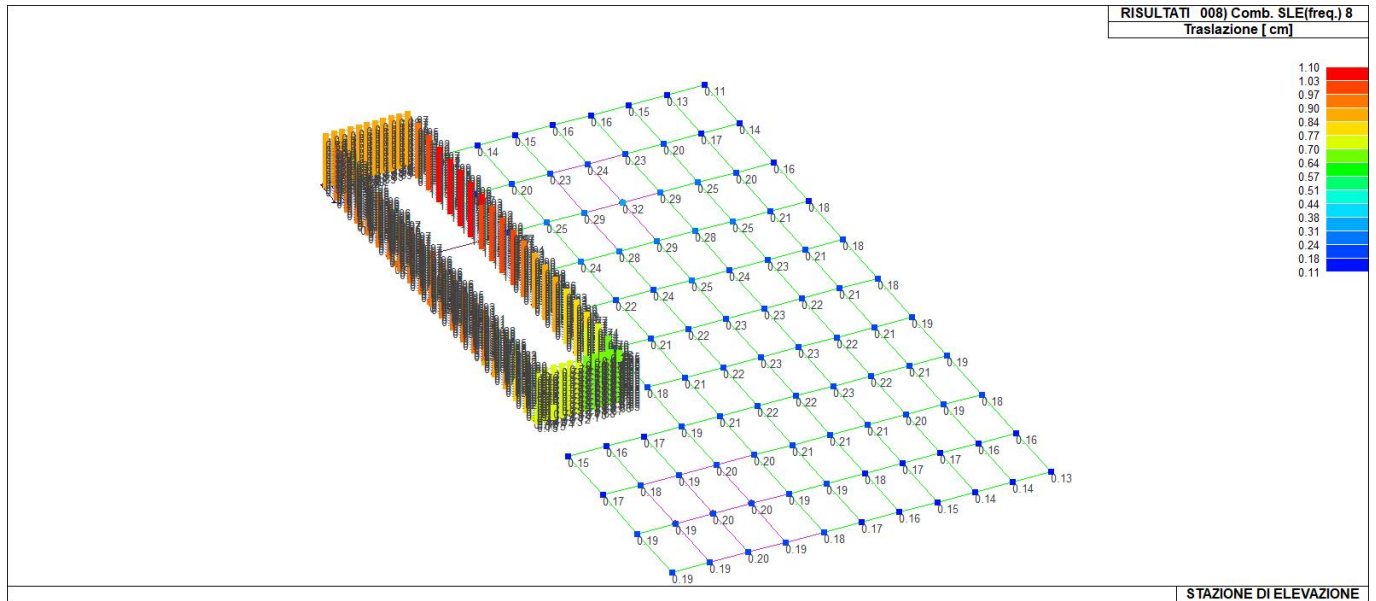
RELAZIONE DI CALCOLO



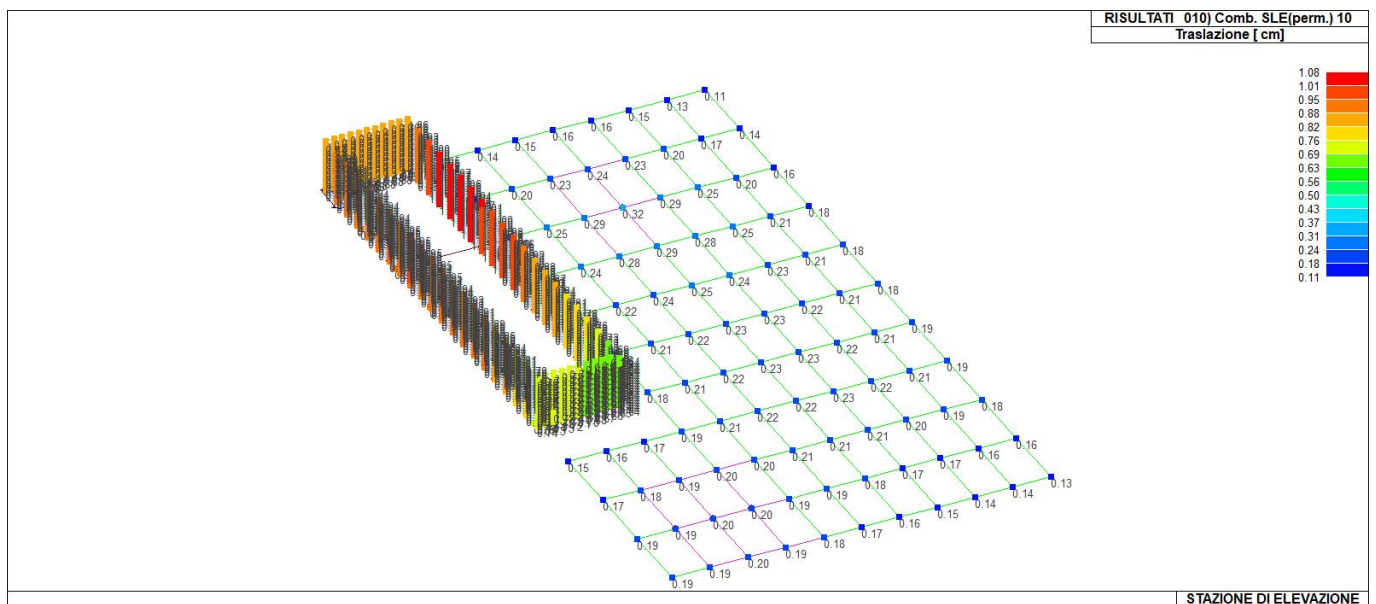
SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO /IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

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41_RIS_SPOSTAMENTI_008_Comb. SLE(freq.) 8



41_RIS_SPOSTAMENTI_010_Comb. SLE(perm.) 10

Nodo	Cmb	Azione X daN	Azione Y daN	Azione Z daN	Azione RX daN cm	Azione RY daN cm	Azione RZ daN cm
1	2	-2141.01	-371.85	-2.780e+04	-2.830e+04	1.736e+05	2217.27
1	3	-1163.92	-243.87	-1.725e+04	-1.832e+04	9.432e+04	1271.14
1	5	-1189.24	-246.08	-1.746e+04	-1.850e+04	9.638e+04	1293.91

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RELAZIONE DI CALCOLO



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Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

1	6	-1569.03	-279.24	-2.071e+04	-2.121e+04	1.272e+05	1635.52
1	7	-1189.24	-246.08	-1.746e+04	-1.850e+04	9.638e+04	1293.91
1	8	-1455.09	-269.29	-1.974e+04	-2.040e+04	1.180e+05	1533.04
1	9	-1189.24	-246.08	-1.746e+04	-1.850e+04	9.638e+04	1293.91
1	10	-1417.11	-265.98	-1.941e+04	-2.013e+04	1.149e+05	1498.88
29	1	0.0	0.0	0.0	0.0	0.0	0.0
29	5	0.0	0.0	0.0	0.0	0.0	0.0
29	7	0.0	0.0	0.0	0.0	0.0	0.0
29	9	0.0	0.0	0.0	0.0	0.0	0.0
100	1	0.0	0.0	0.0	0.0	0.0	0.0
100	5	0.0	0.0	0.0	0.0	0.0	0.0
100	7	0.0	0.0	0.0	0.0	0.0	0.0
100	9	0.0	0.0	0.0	0.0	0.0	0.0
102	1	0.0	0.0	0.0	0.0	0.0	0.0
102	5	0.0	0.0	0.0	0.0	0.0	0.0
102	7	0.0	0.0	0.0	0.0	0.0	0.0
102	9	0.0	0.0	0.0	0.0	0.0	0.0
103	1	0.0	0.0	0.0	0.0	0.0	0.0
103	5	0.0	0.0	0.0	0.0	0.0	0.0
103	7	0.0	0.0	0.0	0.0	0.0	0.0
103	9	0.0	0.0	0.0	0.0	0.0	0.0
123	1	-3849.94	137.77	-2.266e+04	1.482e+04	3.139e+05	2946.70
123	2	-5250.36	126.60	-2.759e+04	1.428e+04	4.280e+05	4086.18
123	3	-2851.38	106.86	-1.704e+04	1.145e+04	2.325e+05	2177.09
123	5	-2913.62	106.36	-1.726e+04	1.142e+04	2.375e+05	2227.74
123	6	-3847.23	98.91	-2.055e+04	1.106e+04	3.136e+05	2987.39
123	7	-2913.62	106.36	-1.726e+04	1.142e+04	2.375e+05	2227.74
123	8	-3567.14	101.14	-1.956e+04	1.117e+04	2.908e+05	2759.49
123	9	-2913.62	106.36	-1.726e+04	1.142e+04	2.375e+05	2227.74
123	10	-3473.78	101.89	-1.923e+04	1.120e+04	2.832e+05	2683.53
125	2	1520.47	10.59	-2.373e+04	1.219e+04	-1.320e+05	-3246.17
125	3	805.95	-4.41	-1.491e+04	6300.30	-7.026e+04	-1698.42
125	5	825.01	-3.75	-1.509e+04	6461.60	-7.190e+04	-1740.28
125	6	1110.94	6.12	-1.771e+04	8881.12	-9.651e+04	-2368.24
125	7	825.01	-3.75	-1.509e+04	6461.60	-7.190e+04	-1740.28
125	8	1025.16	3.16	-1.693e+04	8155.27	-8.912e+04	-2179.85
125	9	825.01	-3.75	-1.509e+04	6461.60	-7.190e+04	-1740.28
125	10	996.57	2.17	-1.666e+04	7913.32	-8.666e+04	-2117.06
127	2	2645.91	241.58	-2.027e+04	3.296e+04	-2.207e+05	-5014.41
127	3	1379.72	150.74	-1.287e+04	2.020e+04	-1.154e+05	-2613.46
127	5	1414.09	152.58	-1.301e+04	2.047e+04	-1.182e+05	-2678.66
127	6	1929.57	180.17	-1.516e+04	2.452e+04	-1.610e+05	-3656.63
127	7	1414.09	152.58	-1.301e+04	2.047e+04	-1.182e+05	-2678.66
127	8	1774.93	171.89	-1.451e+04	2.331e+04	-1.482e+05	-3363.24
127	9	1414.09	152.58	-1.301e+04	2.047e+04	-1.182e+05	-2678.66
127	10	1723.38	169.14	-1.430e+04	2.290e+04	-1.439e+05	-3265.44
387	2	823.75	2.28	-3.289e+04	3355.38	-7.574e+04	-780.95
387	3	580.58	0.60	-1.960e+04	2191.80	-5.258e+04	-399.99
387	5	583.37	0.66	-1.990e+04	2212.21	-5.288e+04	-410.51
387	6	625.09	1.57	-2.438e+04	2518.28	-5.735e+04	-568.36
387	7	583.37	0.66	-1.990e+04	2212.21	-5.288e+04	-410.51
387	8	612.58	1.30	-2.304e+04	2426.46	-5.601e+04	-521.00
387	9	583.37	0.66	-1.990e+04	2212.21	-5.288e+04	-410.51
387	10	608.40	1.21	-2.259e+04	2395.85	-5.556e+04	-505.22
491	2	1622.74	-4.37	-2.847e+04	4299.24	-1.321e+05	-1254.47
491	3	930.33	-2.70	-1.704e+04	2679.43	-7.580e+04	-718.97
491	5	946.99	-2.74	-1.730e+04	2712.34	-7.715e+04	-731.86
491	6	1196.98	-3.26	-2.112e+04	3205.87	-9.747e+04	-925.30
491	7	946.99	-2.74	-1.730e+04	2712.34	-7.715e+04	-731.86
491	8	1121.99	-3.10	-1.997e+04	3057.81	-9.138e+04	-867.27
491	9	946.99	-2.74	-1.730e+04	2712.34	-7.715e+04	-731.86
491	10	1096.99	-3.05	-1.959e+04	3008.46	-8.934e+04	-847.92
575	2	1455.00	-6.30	-2.506e+04	7326.18	-1.171e+05	-2069.40
575	3	698.47	-4.56	-1.531e+04	4380.13	-5.654e+04	-1204.23
575	5	720.52	-4.58	-1.552e+04	4445.94	-5.830e+04	-1224.55
575	6	1051.37	-4.80	-1.864e+04	5433.04	-8.467e+04	-1529.33

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015
Certificate No. Q204

SR EN ISO 14001:2015
Certificate No. E81

SR EN ISO/IEC 17001:2017
Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

575	7	720.52	-4.58	-1.552e+04	4445.94	-5.830e+04	-1224.55
575	8	952.11	-4.73	-1.770e+04	5136.91	-7.676e+04	-1437.89
575	9	720.52	-4.58	-1.552e+04	4445.94	-5.830e+04	-1224.55
575	10	919.03	-4.71	-1.739e+04	5038.20	-7.412e+04	-1407.42
759	2	902.36	3.39	-2.752e+04	8342.84	-7.663e+04	-851.64
759	3	477.64	0.14	-1.694e+04	4844.27	-4.087e+04	-535.75
759	5	488.99	0.27	-1.716e+04	4926.74	-4.182e+04	-542.00
759	6	659.21	2.21	-2.049e+04	6163.81	-5.603e+04	-635.85
759	7	488.99	0.27	-1.716e+04	4926.74	-4.182e+04	-542.00
759	8	608.14	1.63	-1.949e+04	5792.69	-5.177e+04	-607.70
759	9	488.99	0.27	-1.716e+04	4926.74	-4.182e+04	-542.00
759	10	591.12	1.43	-1.916e+04	5668.98	-5.034e+04	-598.31
885	2	-500.24	1.73	-3.044e+04	4889.68	3.718e+04	-773.81
885	3	-285.99	1.34	-1.853e+04	2995.14	2.129e+04	-438.36
885	5	-291.17	1.34	-1.879e+04	3035.30	2.168e+04	-446.58
885	6	-368.87	1.33	-2.263e+04	3637.72	2.742e+04	-569.93
885	7	-291.17	1.34	-1.879e+04	3035.30	2.168e+04	-446.58
885	8	-345.56	1.33	-2.147e+04	3457.00	2.570e+04	-532.93
885	9	-291.17	1.34	-1.879e+04	3035.30	2.168e+04	-446.58
885	10	-337.79	1.33	-2.109e+04	3396.76	2.512e+04	-520.59
968	2	-1078.62	-3.64	-3.032e+04	2851.13	8.469e+04	-270.44
968	3	-571.40	-4.13	-1.851e+04	1696.62	4.464e+04	-60.73
968	5	-584.94	-4.06	-1.876e+04	1722.65	4.572e+04	-68.45
968	6	-788.05	-3.01	-2.255e+04	2113.09	6.184e+04	-184.27
968	7	-584.94	-4.06	-1.876e+04	1722.65	4.572e+04	-68.45
968	8	-727.11	-3.33	-2.141e+04	1995.96	5.700e+04	-149.52
968	9	-584.94	-4.06	-1.876e+04	1722.65	4.572e+04	-68.45
968	10	-706.80	-3.43	-2.103e+04	1956.91	5.539e+04	-137.94
Nodo		Azione X	Azione Y	Azione Z	Azione RX	Azione RY	Azione RZ
		-5250.36	-371.85	-3.289e+04	-2.830e+04	-2.207e+05	-5014.41
		2645.91	241.58	0.0	3.296e+04	4.280e+05	4086.18
Nodo	Cmb	Azione X	Azione Y	Azione Z	Azione RX	Azione RY	Azione RZ
		daN	daN	daN	daN cm	daN cm	daN cm
1	2	-2141.01	-371.85	-2.780e+04	-2.830e+04	1.736e+05	2217.27
	3	-1163.92	-243.87	-1.725e+04	-1.832e+04	9.432e+04	1271.14
	2	-2141.01	-371.85	-2.780e+04	-2.830e+04	1.736e+05	2217.27
	3	-1163.92	-243.87	-1.725e+04	-1.832e+04	9.432e+04	1271.14
	3	-1163.92	-243.87	-1.725e+04	-1.832e+04	9.432e+04	1271.14
	2	-2141.01	-371.85	-2.780e+04	-2.830e+04	1.736e+05	2217.27
29	1	0.0	0.0	0.0	0.0	0.0	0.0
	1	0.0	0.0	0.0	0.0	0.0	0.0
	1	0.0	0.0	0.0	0.0	0.0	0.0
	1	0.0	0.0	0.0	0.0	0.0	0.0
	1	0.0	0.0	0.0	0.0	0.0	0.0
	1	0.0	0.0	0.0	0.0	0.0	0.0
100	1	0.0	0.0	0.0	0.0	0.0	0.0
	1	0.0	0.0	0.0	0.0	0.0	0.0
	1	0.0	0.0	0.0	0.0	0.0	0.0
	1	0.0	0.0	0.0	0.0	0.0	0.0
	1	0.0	0.0	0.0	0.0	0.0	0.0
102	1	0.0	0.0	0.0	0.0	0.0	0.0
	1	0.0	0.0	0.0	0.0	0.0	0.0
	1	0.0	0.0	0.0	0.0	0.0	0.0
	1	0.0	0.0	0.0	0.0	0.0	0.0
	1	0.0	0.0	0.0	0.0	0.0	0.0
103	1	0.0	0.0	0.0	0.0	0.0	0.0
	1	0.0	0.0	0.0	0.0	0.0	0.0
	1	0.0	0.0	0.0	0.0	0.0	0.0
	1	0.0	0.0	0.0	0.0	0.0	0.0
	1	0.0	0.0	0.0	0.0	0.0	0.0
	1	0.0	0.0	0.0	0.0	0.0	0.0

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

123	2	-5250.36	126.60	-2.759e+04	1.428e+04	4.280e+05	4086.18
	3	-2851.38	106.86	-1.704e+04	1.145e+04	2.325e+05	2177.09
	4	-4251.79	95.68	-2.197e+04	1.090e+04	3.466e+05	3316.57
	1	-3849.94	137.77	-2.266e+04	1.482e+04	3.139e+05	2946.70
	3	-2851.38	106.86	-1.704e+04	1.145e+04	2.325e+05	2177.09
	2	-5250.36	126.60	-2.759e+04	1.428e+04	4.280e+05	4086.18
125	2	1520.47	10.59	-2.373e+04	1.219e+04	-1.320e+05	-3246.17
	3	805.95	-4.41	-1.491e+04	6300.30	-7.026e+04	-1698.42
	3	805.95	-4.41	-1.491e+04	6300.30	-7.026e+04	-1698.42
	2	1520.47	10.59	-2.373e+04	1.219e+04	-1.320e+05	-3246.17
	2	1520.47	10.59	-2.373e+04	1.219e+04	-1.320e+05	-3246.17
	3	805.95	-4.41	-1.491e+04	6300.30	-7.026e+04	-1698.42
127	2	2645.91	241.58	-2.027e+04	3.296e+04	-2.207e+05	-5014.41
	3	1379.72	150.74	-1.287e+04	2.020e+04	-1.154e+05	-2613.46
	3	1379.72	150.74	-1.287e+04	2.020e+04	-1.154e+05	-2613.46
	2	2645.91	241.58	-2.027e+04	3.296e+04	-2.207e+05	-5014.41
	2	2645.91	241.58	-2.027e+04	3.296e+04	-2.207e+05	-5014.41
	3	1379.72	150.74	-1.287e+04	2.020e+04	-1.154e+05	-2613.46
387	2	823.75	2.28	-3.289e+04	3355.38	-7.574e+04	-780.95
	3	580.58	0.60	-1.960e+04	2191.80	-5.258e+04	-399.99
	3	580.58	0.60	-1.960e+04	2191.80	-5.258e+04	-399.99
	2	823.75	2.28	-3.289e+04	3355.38	-7.574e+04	-780.95
	2	823.75	2.28	-3.289e+04	3355.38	-7.574e+04	-780.95
	3	580.58	0.60	-1.960e+04	2191.80	-5.258e+04	-399.99
491	2	1622.74	-4.37	-2.847e+04	4299.24	-1.321e+05	-1254.47
	3	930.33	-2.70	-1.704e+04	2679.43	-7.580e+04	-718.97
	3	930.33	-2.70	-1.704e+04	2679.43	-7.580e+04	-718.97
	2	1622.74	-4.37	-2.847e+04	4299.24	-1.321e+05	-1254.47
	2	1622.74	-4.37	-2.847e+04	4299.24	-1.321e+05	-1254.47
	3	930.33	-2.70	-1.704e+04	2679.43	-7.580e+04	-718.97
575	2	1455.00	-6.30	-2.506e+04	7326.18	-1.171e+05	-2069.40
	3	698.47	-4.56	-1.531e+04	4380.13	-5.654e+04	-1204.23
	3	698.47	-4.56	-1.531e+04	4380.13	-5.654e+04	-1204.23
	2	1455.00	-6.30	-2.506e+04	7326.18	-1.171e+05	-2069.40
	2	1455.00	-6.30	-2.506e+04	7326.18	-1.171e+05	-2069.40
	3	698.47	-4.56	-1.531e+04	4380.13	-5.654e+04	-1204.23
759	2	902.36	3.39	-2.752e+04	8342.84	-7.663e+04	-851.64
	3	477.64	0.14	-1.694e+04	4844.27	-4.087e+04	-535.75
	3	477.64	0.14	-1.694e+04	4844.27	-4.087e+04	-535.75
	2	902.36	3.39	-2.752e+04	8342.84	-7.663e+04	-851.64
	2	902.36	3.39	-2.752e+04	8342.84	-7.663e+04	-851.64
	3	477.64	0.14	-1.694e+04	4844.27	-4.087e+04	-535.75
885	2	-500.24	1.73	-3.044e+04	4889.68	3.718e+04	-773.81
	3	-285.99	1.34	-1.853e+04	2995.14	2.129e+04	-438.36
	3	-285.99	1.34	-1.853e+04	2995.14	2.129e+04	-438.36
	2	-500.24	1.73	-3.044e+04	4889.68	3.718e+04	-773.81
	3	-285.99	1.34	-1.853e+04	2995.14	2.129e+04	-438.36
	2	-500.24	1.73	-3.044e+04	4889.68	3.718e+04	-773.81
968	2	-1078.62	-3.64	-3.032e+04	2851.13	8.469e+04	-270.44
	3	-571.40	-4.13	-1.851e+04	1696.62	4.464e+04	-60.73
	3	-571.40	-4.13	-1.851e+04	1696.62	4.464e+04	-60.73
	2	-1078.62	-3.64	-3.032e+04	2851.13	8.469e+04	-270.44
	3	-571.40	-4.13	-1.851e+04	1696.62	4.464e+04	-60.73
	2	-1078.62	-3.64	-3.032e+04	2851.13	8.469e+04	-270.44

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

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Partita Iva : 02658050733

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Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

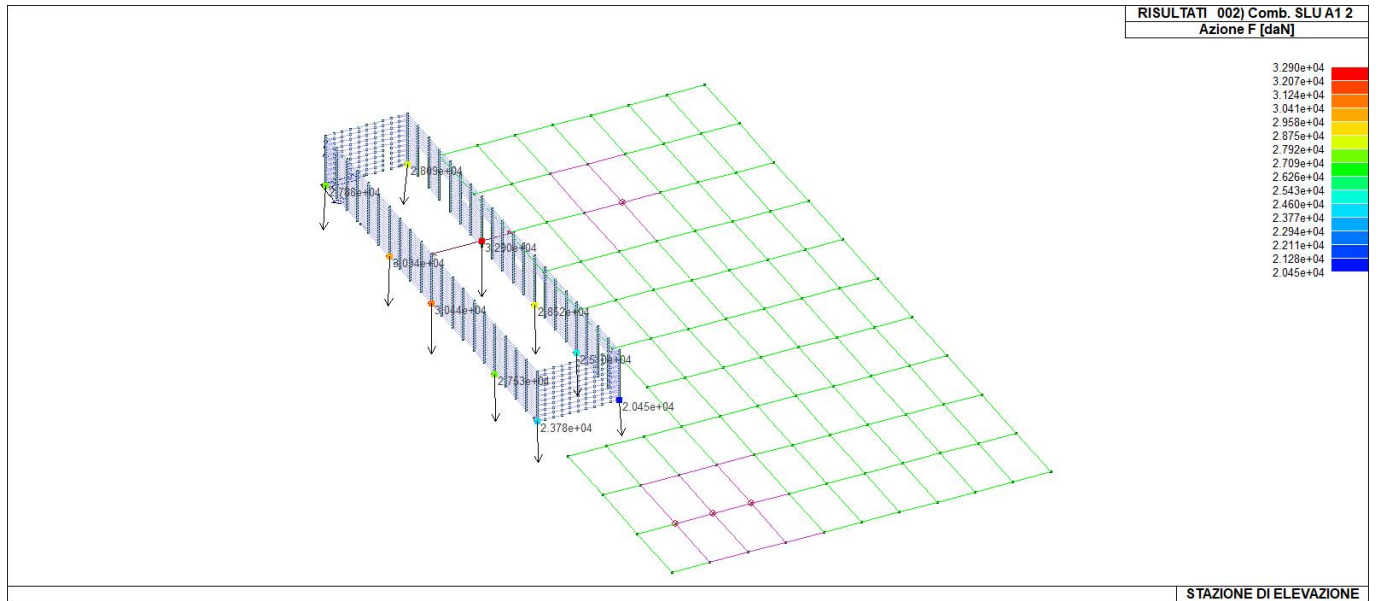
RELAZIONE DI CALCOLO



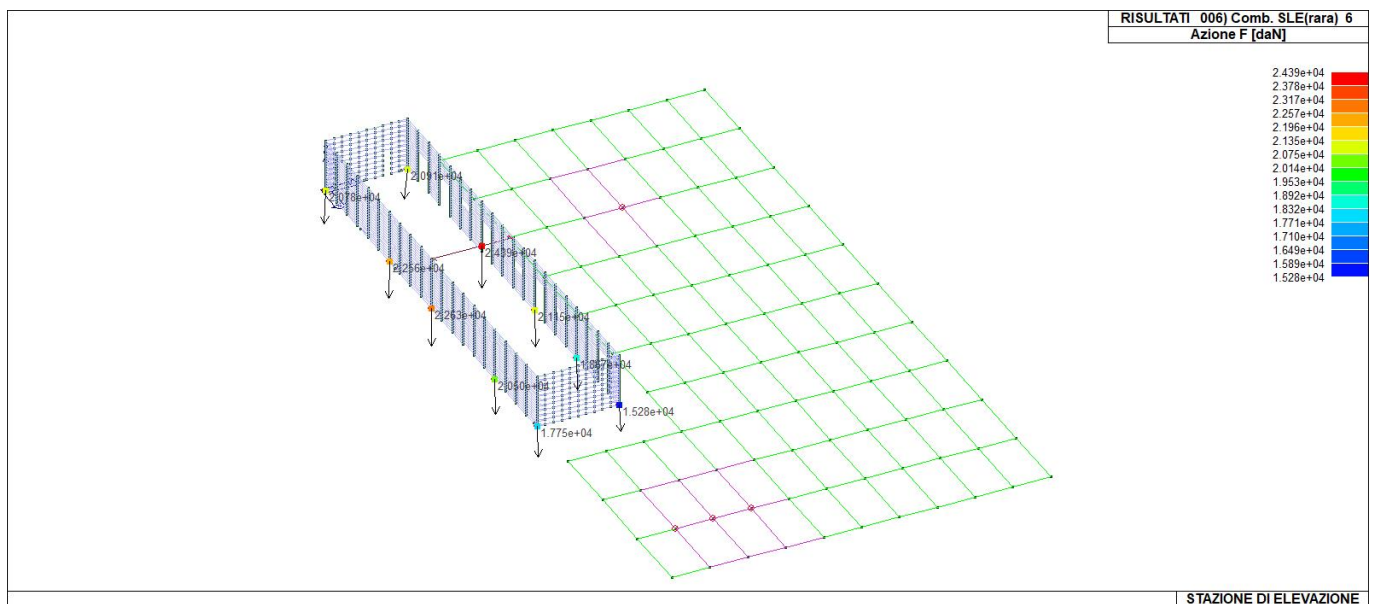
SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO /IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.



42_RIS_REAZIONI_002_Comb. SLU A1 2



42_RIS_REAZIONI_006_Comb. SLE(rara) 6

PROJETTO engineering s.r.l.

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Direttore Tecnico: ING. LEONARDO FILOTICO
 Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733
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 Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto
 Tel 099 9574694 fax 099 2222834 mob. 3491735914

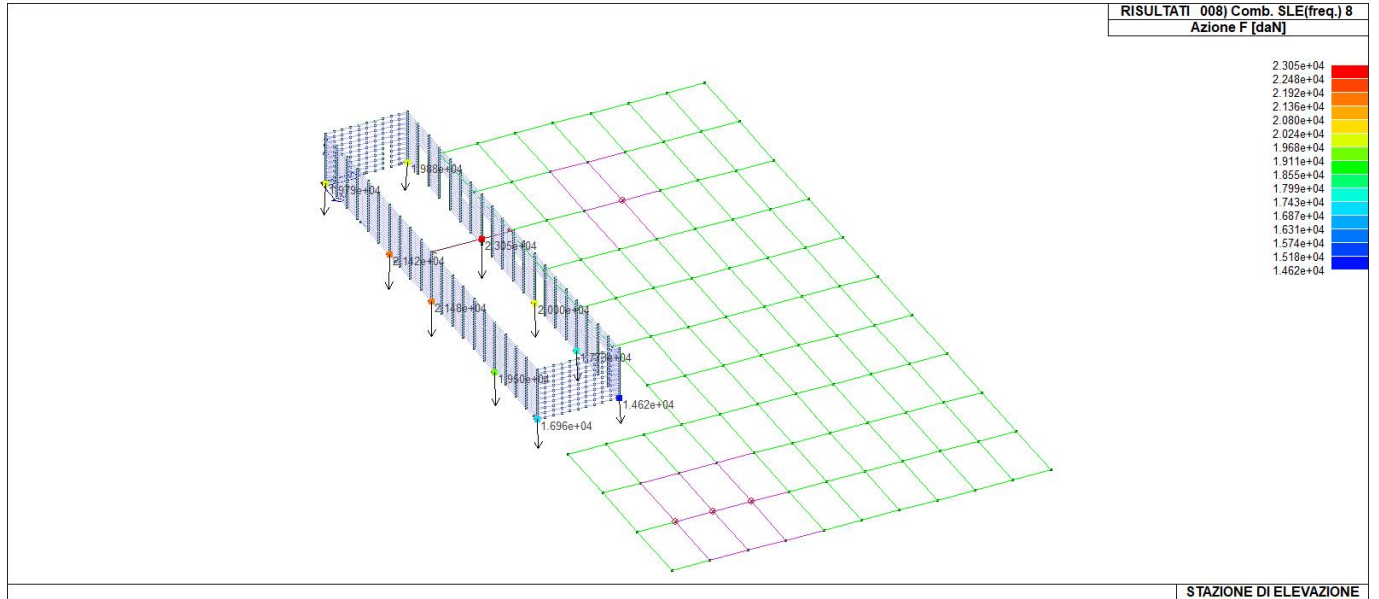
RELAZIONE DI CALCOLO



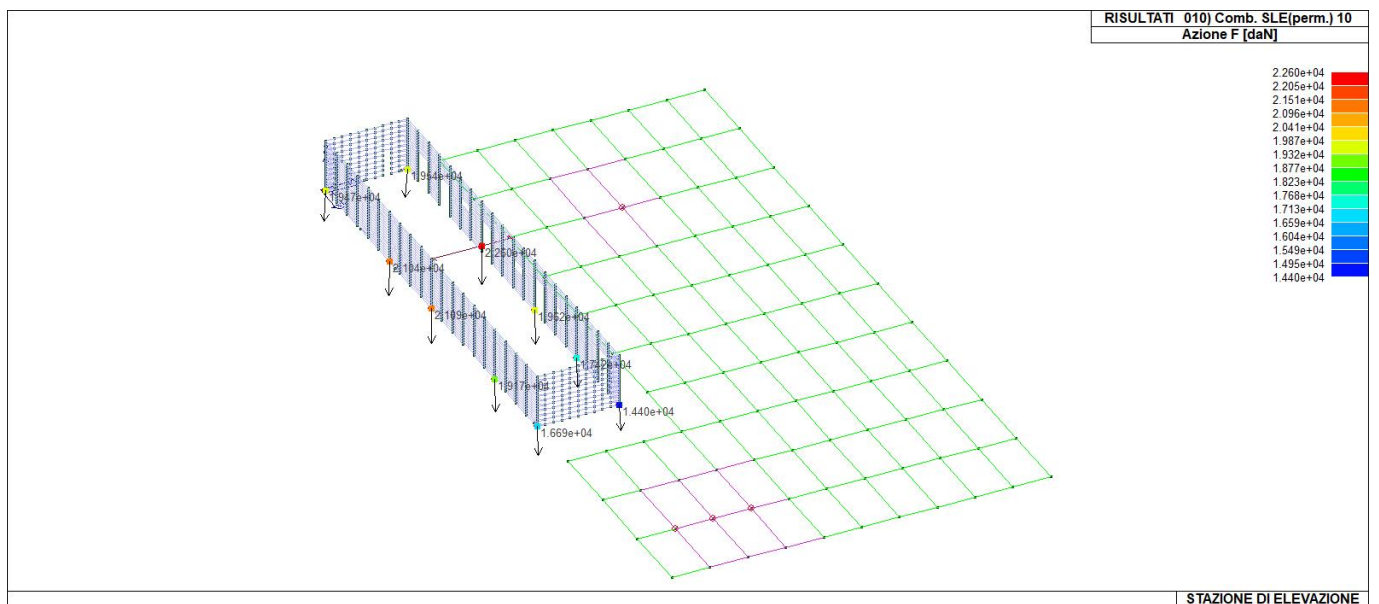
SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO /IEC 17001:2017
 Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.



42_RIS_REAZIONI_008_Comb. SLE(freq.) 8



42_RIS_REAZIONI_010_Comb. SLE(perm.) 10

PROJETTO engineering s.r.l.

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO /IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

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 (esprese nel riferimento globale della struttura) per ogni palo componente l'opera.

In particolare viene riportato:

Nodo	numero del nodo a cui è applicato il plinto
Tipo	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>)
Palo	numero del palo
Comb.	combinazione di carico in cui si verificano le sei componenti di sollecitazione.
Quota	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:

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

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Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

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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, 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	Area	Wink V	Wink O	Cmb	Pt	Pt	Pt	Pt
		m2	daN/cm3	daN/cm3		daN/cm2	daN/cm2	daN/cm2	daN/cm2
1	PL.DADO 150.00 x150.00	2.25	1.00	1.00	2	-1.23	-1.24	-1.24	-1.23
					6	-0.92	-0.93	-0.92	-0.92
					8	-0.88	-0.88	-0.88	-0.87
					10	-0.86	-0.87	-0.86	-0.86
29	PL.DADO 600.00 x600.00	36.00	0.0	0.0	1	0.0	0.0	0.0	0.0
					5	0.0	0.0	0.0	0.0
					7	0.0	0.0	0.0	0.0
					9	0.0	0.0	0.0	0.0
100	PL.DADO 200.00 x200.00	4.00	0.0	0.0	1	0.0	0.0	0.0	0.0
					5	0.0	0.0	0.0	0.0
					7	0.0	0.0	0.0	0.0
					9	0.0	0.0	0.0	0.0
102	PL.DADO 200.00 x200.00	4.00	0.0	0.0	1	0.0	0.0	0.0	0.0
					5	0.0	0.0	0.0	0.0
					7	0.0	0.0	0.0	0.0
					9	0.0	0.0	0.0	0.0
103	PL.DADO 200.00 x200.00	4.00	0.0	0.0	1	0.0	0.0	0.0	0.0
					5	0.0	0.0	0.0	0.0
					7	0.0	0.0	0.0	0.0
					9	0.0	0.0	0.0	0.0
123	PL.DADO 150.00 x150.00	2.25	1.00	1.00	2	-1.22	-1.25	-1.23	-1.20

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RELAZIONE DI CALCOLO



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Nodo	Tipo	Area	Wink V	Wink O	Cmb	Pt	Pt	Pt	Pt	
						6	-0.91	-0.93	-0.92	-0.90
						8	-0.87	-0.88	-0.87	-0.85
						10	-0.85	-0.87	-0.86	-0.84
125	PL.DADO 150.00 x150.00	2.25	1.00	1.00		2	-1.09	-1.06	-1.02	-1.05
						6	-0.82	-0.79	-0.76	-0.79
						8	-0.78	-0.75	-0.73	-0.75
						10	-0.77	-0.74	-0.71	-0.74
127	PL.DADO 150.00 x150.00	2.25	1.00	1.00		2	-0.94	-0.91	-0.86	-0.89
						6	-0.70	-0.68	-0.64	-0.67
						8	-0.67	-0.65	-0.62	-0.64
						10	-0.66	-0.64	-0.61	-0.63
387	PL.DADO 150.00 x150.00	2.25	1.00	1.00		2	-1.48	-1.45	-1.44	-1.47
						6	-1.10	-1.07	-1.07	-1.09
						8	-1.04	-1.02	-1.01	-1.03
						10	-1.02	-1.00	-0.99	-1.01
491	PL.DADO 150.00 x150.00	2.25	1.00	1.00		2	-1.28	-1.27	-1.25	-1.26
						6	-0.95	-0.94	-0.93	-0.94
						8	-0.90	-0.89	-0.88	-0.88
						10	-0.88	-0.87	-0.86	-0.87
575	PL.DADO 150.00 x150.00	2.25	1.00	1.00		2	-1.13	-1.13	-1.10	-1.10
						6	-0.84	-0.84	-0.82	-0.82
						8	-0.80	-0.80	-0.78	-0.78
						10	-0.78	-0.78	-0.76	-0.76
759	PL.DADO 150.00 x150.00	2.25	1.00	1.00		2	-1.25	-1.23	-1.20	-1.22
						6	-0.93	-0.92	-0.89	-0.91
						8	-0.88	-0.87	-0.85	-0.86
						10	-0.87	-0.86	-0.84	-0.85
885	PL.DADO 150.00 x150.00	2.25	1.00	1.00		2	-1.37	-1.36	-1.34	-1.35
						6	-1.02	-1.01	-1.00	-1.00
						8	-0.96	-0.96	-0.94	-0.95
						10	-0.95	-0.94	-0.93	-0.93
968	PL.DADO 150.00 x150.00	2.25	1.00	1.00		2	-1.36	-1.35	-1.34	-1.34
						6	-1.01	-1.00	-1.00	-1.00
						8	-0.96	-0.95	-0.95	-0.95
						10	-0.94	-0.94	-0.93	-0.93
Nodo							Pt	Pt	Pt	Pt
							-1.48			
							0.0			

Nodo (G)	Pt 1/12	Pt 2/13	Pt 3...	Pt 4...	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2	daN/cm2
7	-0.16	-0.12	-0.12	-0.12						
8	-0.22	-0.17	-0.17	-0.17						
9	-0.18	-0.14	-0.14	-0.14						
10	-0.26	-0.20	-0.20	-0.20						
11	-0.20	-0.15	-0.15	-0.15						
12	-0.30	-0.23	-0.23	-0.23						
13	-0.21	-0.16	-0.16	-0.16						
14	-0.31	-0.24	-0.24	-0.24						
15	-0.21	-0.16	-0.16	-0.16						
16	-0.29	-0.23	-0.23	-0.23						
17	-0.19	-0.15	-0.15	-0.15						
18	-0.26	-0.20	-0.20	-0.20						
19	-0.17	-0.13	-0.13	-0.13						
20	-0.22	-0.17	-0.17	-0.17						
21	-0.15	-0.11	-0.11	-0.11						
22	-0.18	-0.14	-0.14	-0.14						
26	-0.26	-0.20	-0.20	-0.20						
27	-0.32	-0.25	-0.25	-0.25						

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RELAZIONE DI CALCOLO



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Certificate No. Q204 Certificate No. E81 Certificate No. E01

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28	-0.38	-0.29	-0.29	-0.29
29	-0.42	-0.32	-0.32	-0.32
30	-0.38	-0.29	-0.29	-0.29
31	-0.32	-0.25	-0.25	-0.25
32	-0.26	-0.20	-0.20	-0.20
33	-0.21	-0.16	-0.16	-0.16
37	-0.26	-0.20	-0.20	-0.20
38	-0.32	-0.24	-0.24	-0.24
39	-0.36	-0.28	-0.28	-0.28
40	-0.37	-0.29	-0.29	-0.29
41	-0.36	-0.28	-0.28	-0.28
42	-0.33	-0.25	-0.25	-0.25
43	-0.28	-0.21	-0.21	-0.21
44	-0.23	-0.18	-0.18	-0.18
48	-0.24	-0.19	-0.19	-0.19
49	-0.28	-0.22	-0.22	-0.22
50	-0.31	-0.24	-0.24	-0.24
51	-0.32	-0.25	-0.25	-0.25
52	-0.32	-0.24	-0.24	-0.24
53	-0.30	-0.23	-0.23	-0.23
54	-0.27	-0.21	-0.21	-0.21
55	-0.24	-0.18	-0.18	-0.18
59	-0.24	-0.18	-0.18	-0.18
60	-0.27	-0.21	-0.21	-0.21
61	-0.29	-0.22	-0.22	-0.22
62	-0.30	-0.23	-0.23	-0.23
63	-0.30	-0.23	-0.23	-0.23
64	-0.29	-0.22	-0.22	-0.22
65	-0.27	-0.21	-0.21	-0.21
66	-0.24	-0.18	-0.18	-0.18
70	-0.24	-0.18	-0.18	-0.18
71	-0.27	-0.21	-0.21	-0.21
72	-0.29	-0.22	-0.22	-0.22
73	-0.30	-0.23	-0.23	-0.23
74	-0.30	-0.23	-0.23	-0.23
75	-0.29	-0.22	-0.22	-0.22
76	-0.27	-0.21	-0.21	-0.21
77	-0.25	-0.19	-0.19	-0.19
78	-0.20	-0.16	-0.16	-0.16
79	-0.19	-0.15	-0.15	-0.15
80	-0.22	-0.17	-0.17	-0.17
81	-0.24	-0.19	-0.19	-0.19
82	-0.27	-0.21	-0.21	-0.21
83	-0.28	-0.22	-0.22	-0.22
84	-0.29	-0.22	-0.22	-0.22
85	-0.29	-0.23	-0.23	-0.23
86	-0.29	-0.22	-0.22	-0.22
87	-0.27	-0.21	-0.21	-0.21
88	-0.25	-0.19	-0.19	-0.19
89	-0.23	-0.18	-0.18	-0.18
90	-0.22	-0.17	-0.17	-0.17
91	-0.24	-0.19	-0.19	-0.19
92	-0.26	-0.20	-0.20	-0.20
93	-0.27	-0.20	-0.20	-0.20
94	-0.27	-0.21	-0.21	-0.21
95	-0.27	-0.21	-0.21	-0.21
96	-0.27	-0.21	-0.21	-0.21
97	-0.26	-0.20	-0.20	-0.20
98	-0.25	-0.19	-0.19	-0.19
99	-0.23	-0.18	-0.18	-0.18
100	-0.25	-0.19	-0.19	-0.19
101	-0.24	-0.19	-0.19	-0.19
102	-0.26	-0.20	-0.20	-0.20
103	-0.26	-0.20	-0.20	-0.20
104	-0.25	-0.19	-0.19	-0.19
105	-0.24	-0.19	-0.19	-0.19

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RELAZIONE DI CALCOLO



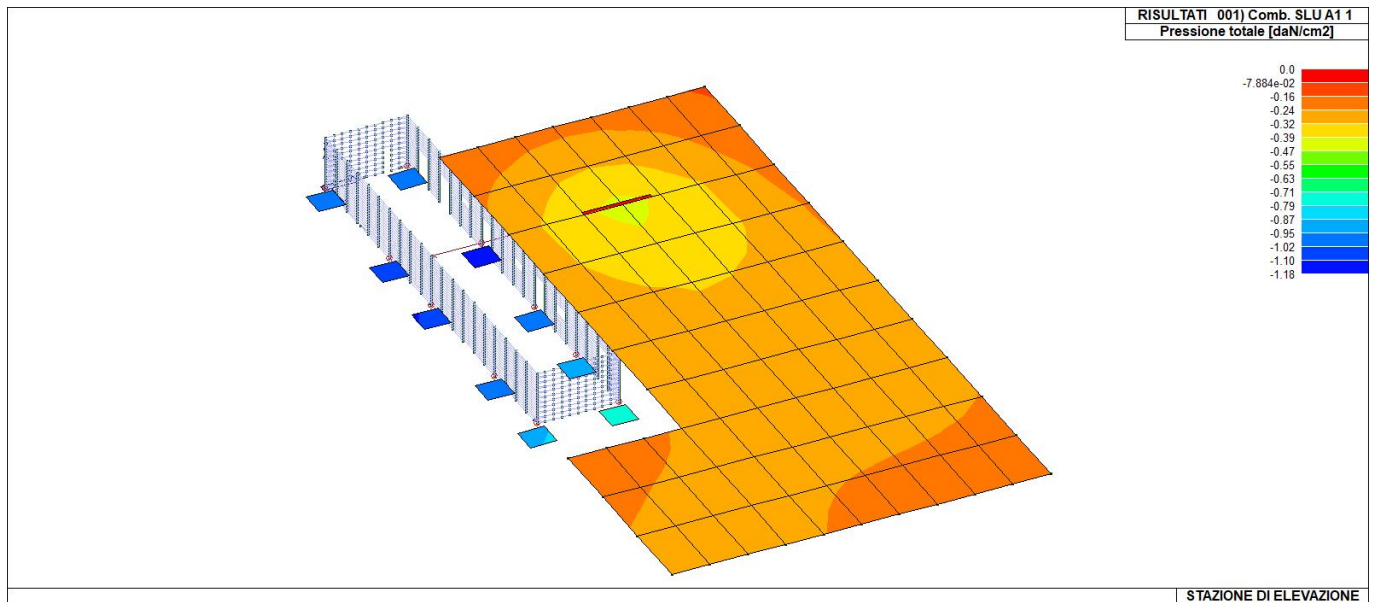
SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

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106	-0.23	-0.18	-0.18	-0.18
107	-0.22	-0.17	-0.17	-0.17
108	-0.22	-0.17	-0.17	-0.17
109	-0.21	-0.16	-0.16	-0.16
110	-0.20	-0.16	-0.16	-0.16
111	-0.25	-0.19	-0.19	-0.19
112	-0.24	-0.19	-0.19	-0.19
113	-0.26	-0.20	-0.20	-0.20
114	-0.25	-0.19	-0.19	-0.19
115	-0.24	-0.18	-0.18	-0.18
116	-0.22	-0.17	-0.17	-0.17
117	-0.20	-0.16	-0.16	-0.16
118	-0.19	-0.15	-0.15	-0.15
119	-0.18	-0.14	-0.14	-0.14
120	-0.18	-0.14	-0.14	-0.14
121	-0.17	-0.13	-0.13	-0.13

Nodo (G)	Pt 1/12	Pt 2/13	Pt 3...	Pt 4...
	-0.42			
	-0.11			



46_RIS_PRESSIONI_001_Comb. SLU A1 1

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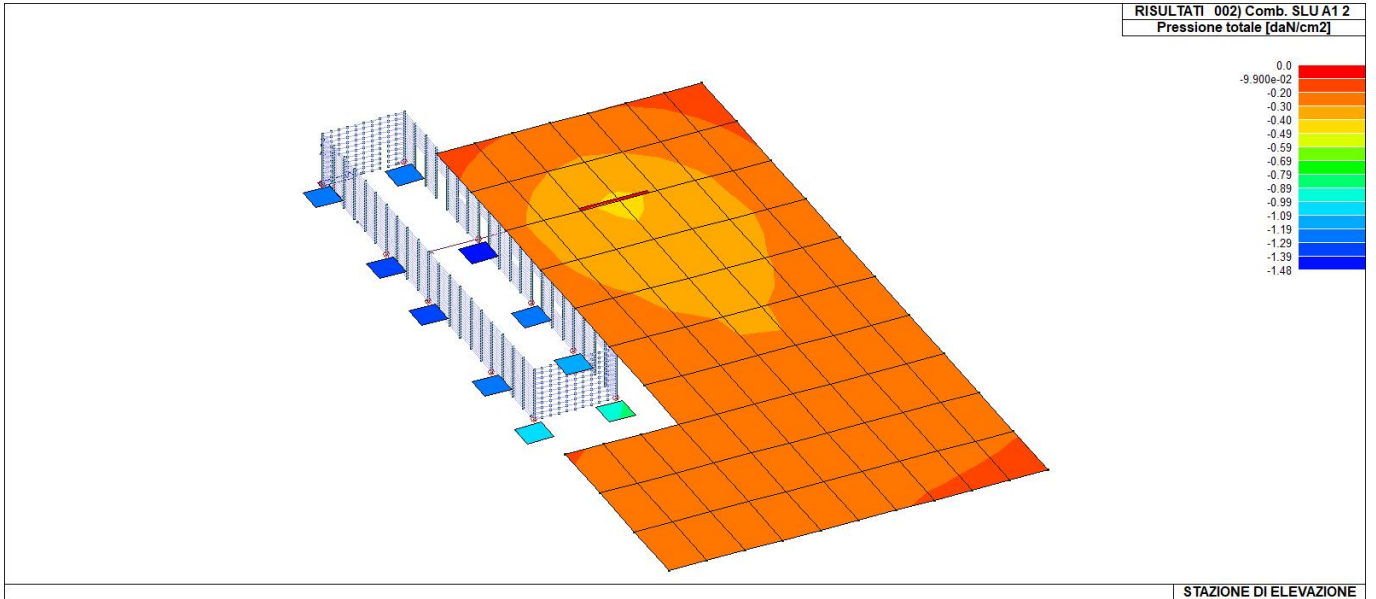
RELAZIONE DI CALCOLO



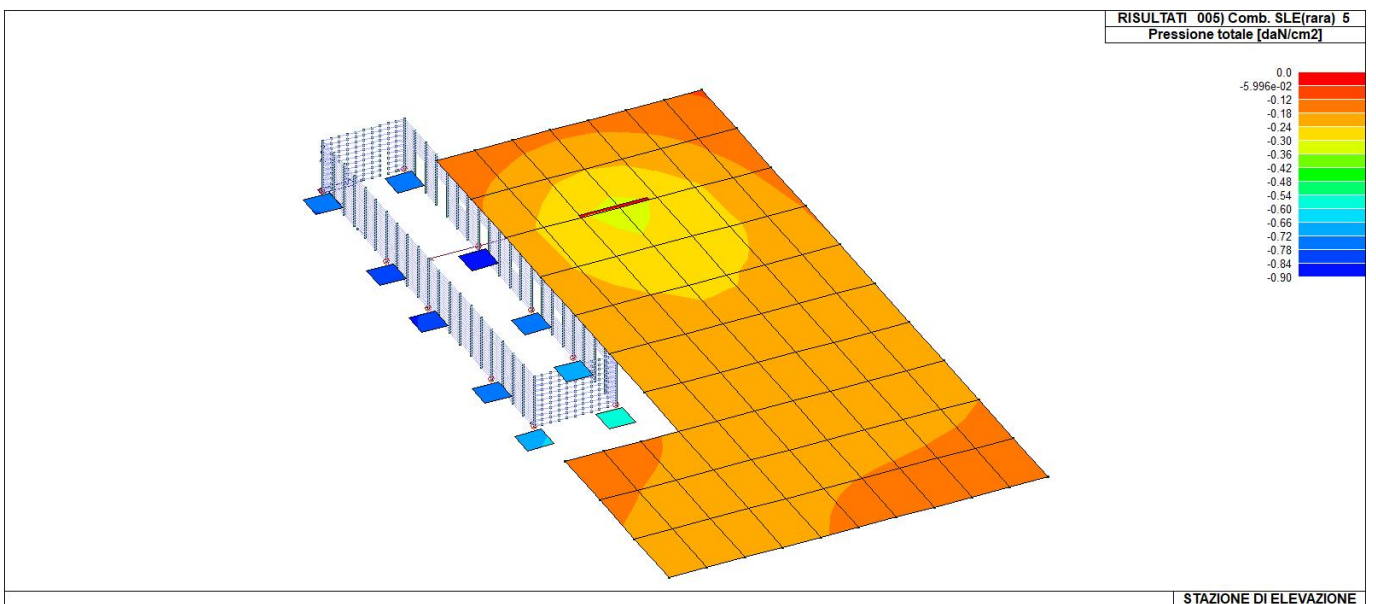
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46_RIS_PRESSIONI_002_Comb. SLU A1 2



46_RIS_PRESSIONI_005_Comb. SLE(rara) 5

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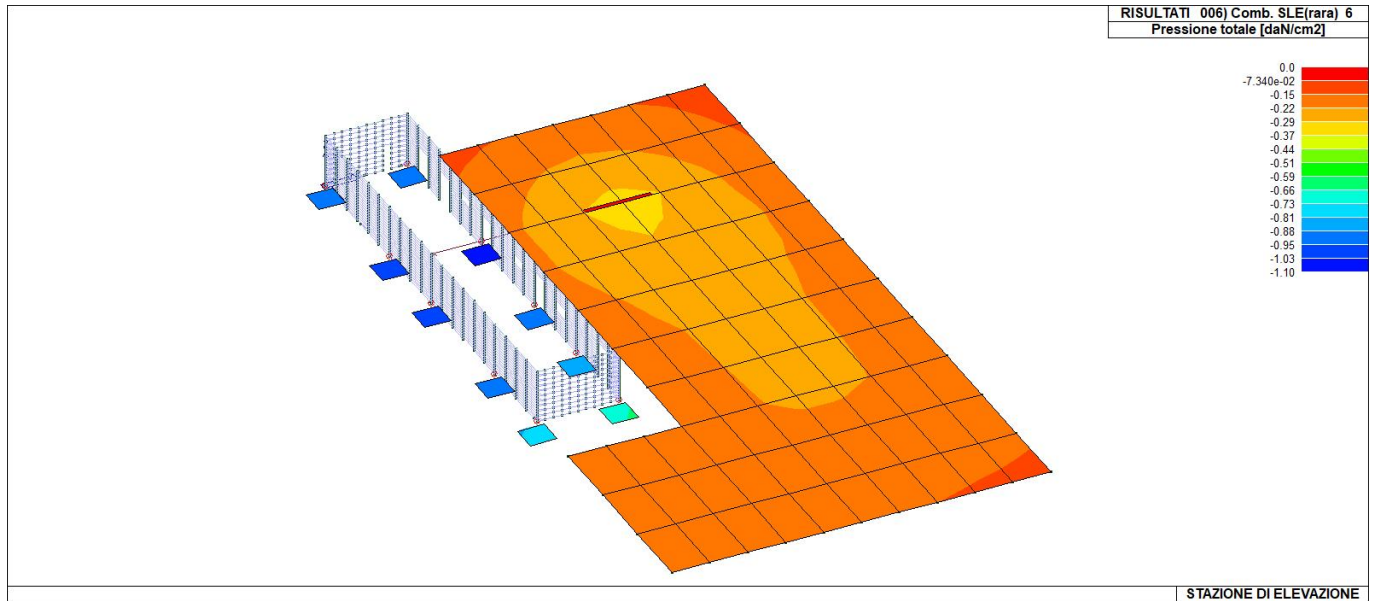
RELAZIONE DI CALCOLO



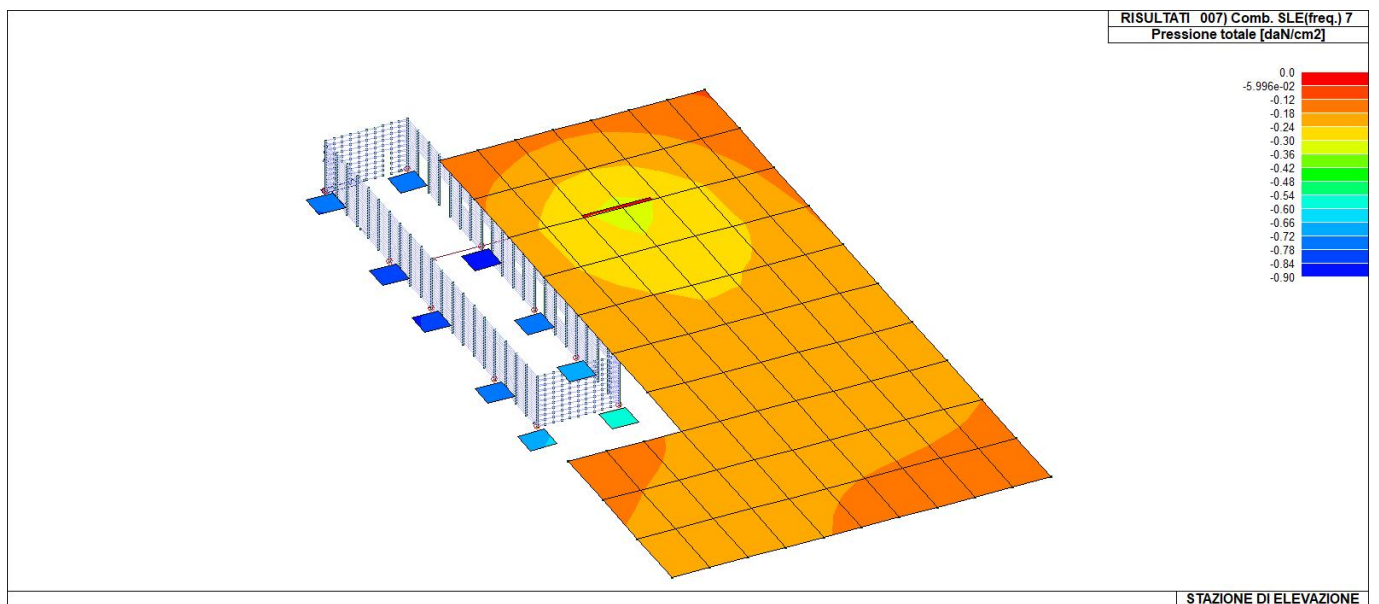
SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO /IEC 17001:2017
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46_RIS_PRESSIONI_006_Comb. SLE(rara) 6



46_RIS_PRESSIONI_007_Comb. SLE(freq.) 7

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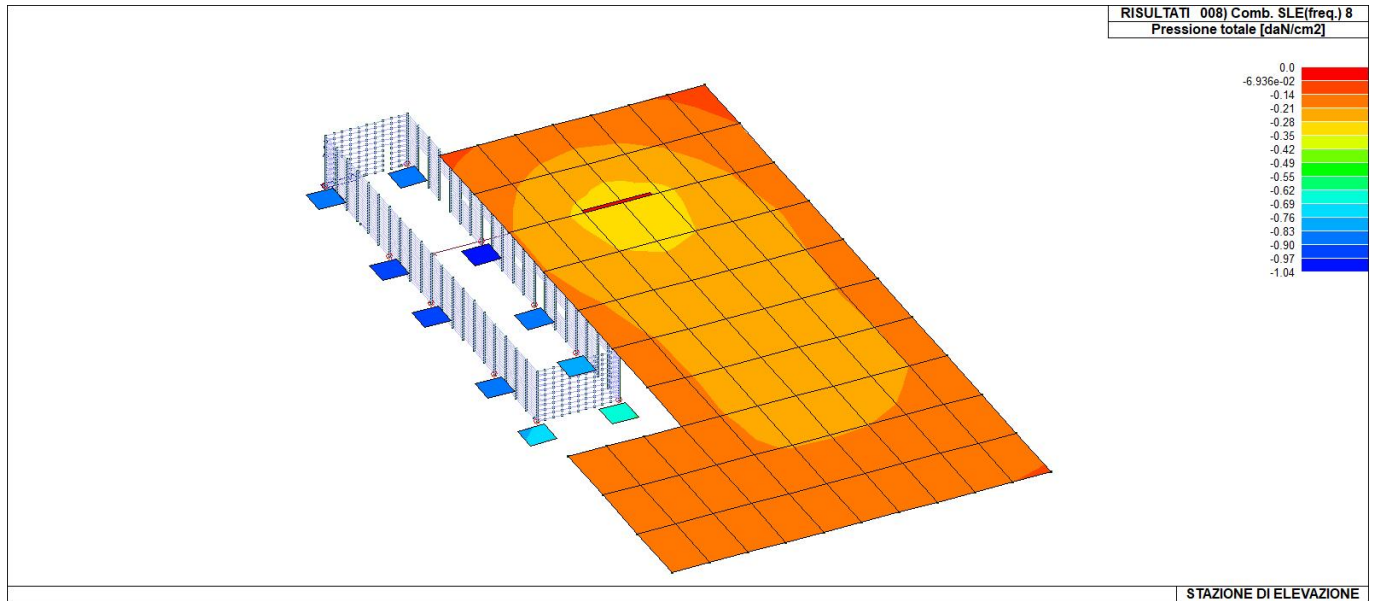
RELAZIONE DI CALCOLO



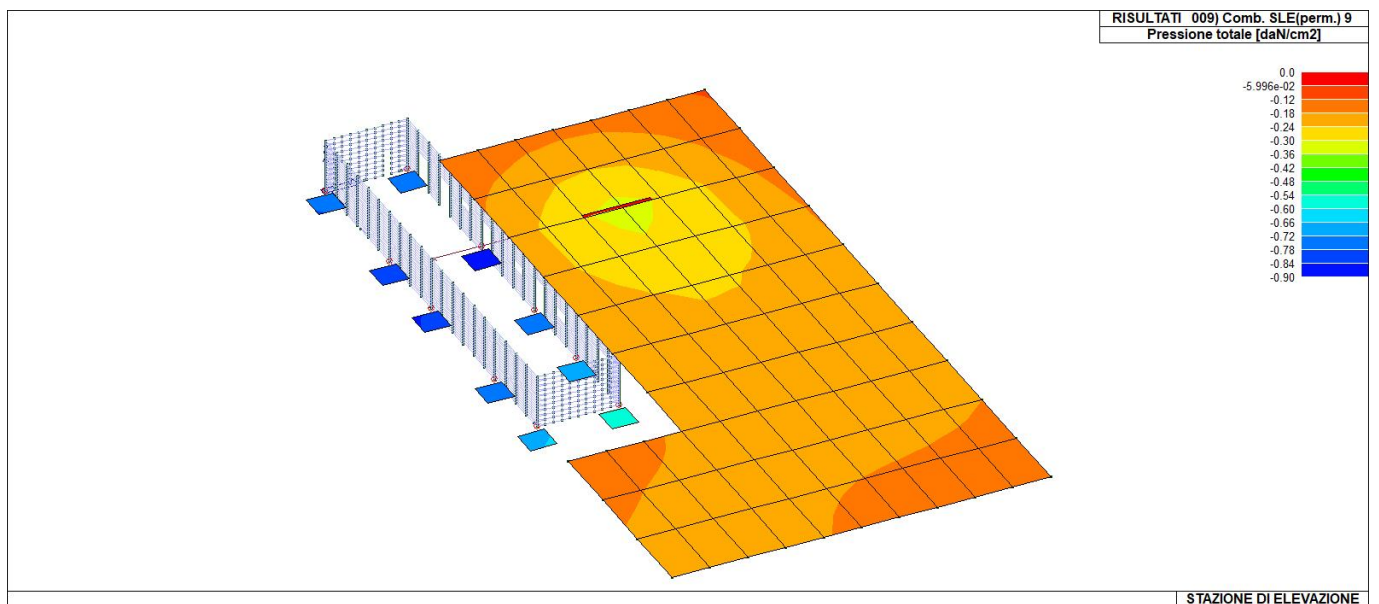
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SR EN ISO 14001:2015 Certificate No. E81
SR EN ISO /IEC 27001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.



46_RIS_PRESSIONI_008_Comb. SLE(freq.) 8



46_RIS_PRESSIONI_009_Comb. SLE(perm.) 9

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO
Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733
Partita Iva : 02658050733
Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto
Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto
Tel099 9574694 fax 099 2222834 mob. 3491735914

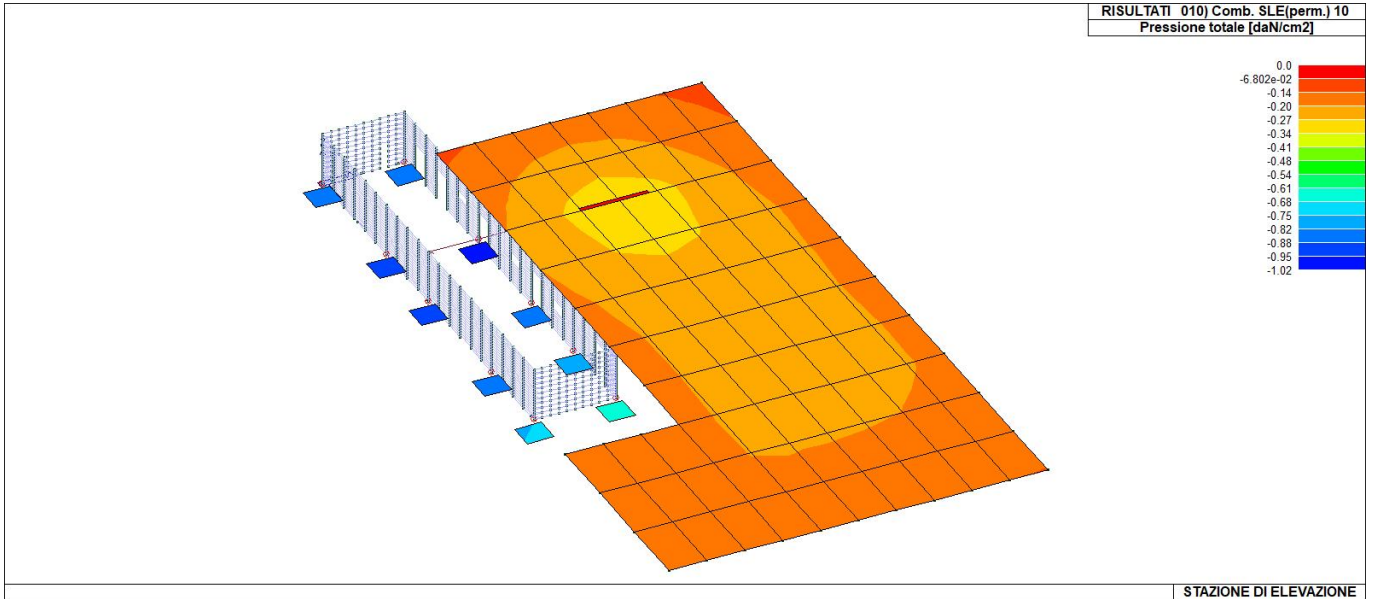
RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.



46_RIS_PRESSIONI_010_Comb. SLE(perm.) 10

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO /IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

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**

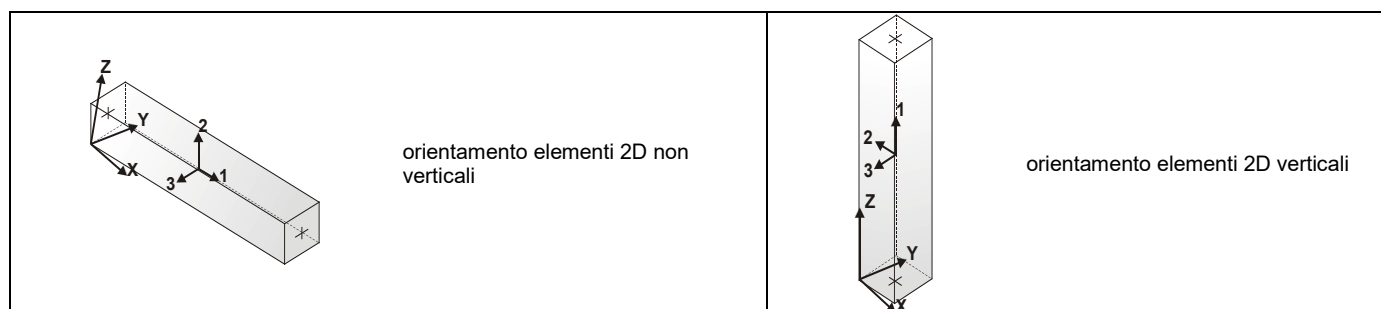
Per ogni elemento e per ogni combinazione (o caso di carico) vengono riportati i risultati più significativi.

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

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



Pilas.	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
	daN	cm	daN	cm	daN	cm	daN	daN	daN	daN cm	daN cm	daN cm
1	2	4.984e+04	4528.40	4.12e-03	0.0	0.0	-1.282e+04	-836.22	-20.72	-685.96	4528.40	4.984e+04
		3.730e+04	4081.94	3.22e-03	0.0	15.0	-1.280e+04	-836.22	-20.72	-685.96	4081.94	3.730e+04
1	3	2.519e+04	2612.02	2.28e-03	0.0	0.0	-7611.80	-454.73	-12.81	-417.72	2612.02	2.519e+04
		1.837e+04	2342.51	1.92e-03	0.0	15.0	-7592.00	-454.73	-12.81	-417.72	2342.51	1.837e+04
1	5	2.588e+04	2657.69	2.32e-03	0.0	0.0	-7729.92	-464.61	-12.98	-423.48	2657.69	2.588e+04
		1.891e+04	2384.31	1.95e-03	0.0	15.0	-7710.12	-464.61	-12.98	-423.48	2384.31	1.891e+04
1	6	3.622e+04	3342.84	3.03e-03	0.0	0.0	-9501.65	-612.84	-15.43	-509.93	3342.84	3.622e+04
		2.703e+04	3011.33	2.39e-03	0.0	15.0	-9481.85	-612.84	-15.43	-509.93	3011.33	2.703e+04
1	7	2.588e+04	2657.69	2.32e-03	0.0	0.0	-7729.92	-464.61	-12.98	-423.48	2657.69	2.588e+04
		1.891e+04	2384.31	1.95e-03	0.0	15.0	-7710.12	-464.61	-12.98	-423.48	2384.31	1.891e+04
1	8	3.312e+04	3137.30	2.82e-03	0.0	0.0	-8970.13	-568.37	-14.70	-484.00	3137.30	3.312e+04
		2.459e+04	2823.22	2.26e-03	0.0	15.0	-8950.33	-568.37	-14.70	-484.00	2823.22	2.459e+04
1	9	2.588e+04	2657.69	2.32e-03	0.0	0.0	-7729.92	-464.61	-12.98	-423.48	2657.69	2.588e+04
		1.891e+04	2384.31	1.95e-03	0.0	15.0	-7710.12	-464.61	-12.98	-423.48	2384.31	1.891e+04
1	10	3.208e+04	3068.78	2.75e-03	0.0	0.0	-8792.96	-553.55	-14.45	-475.35	3068.78	3.208e+04
		2.378e+04	2760.52	2.21e-03	0.0	15.0	-8773.16	-553.55	-14.45	-475.35	2760.52	2.378e+04
2	2	-1394.50	545.03	7.11e-04	0.0	0.0	-7075.31	-108.84	-5.24	-2521.07	545.03	-1394.50
		-3026.96	462.64	1.91e-03	0.0	15.0	-7016.81	-108.84	-5.24	-2521.07	462.64	-3026.96
2	3	-806.96	329.79	4.12e-04	0.0	0.0	-3962.82	-62.67	-3.20	-1434.66	329.79	-806.96
		-1747.00	279.36	1.16e-03	0.0	15.0	-3917.82	-62.67	-3.20	-1434.66	279.36	-1747.00
2	5	-820.89	334.48	4.19e-04	0.0	0.0	-4040.38	-63.78	-3.25	-1461.11	334.48	-820.89
		-1777.48	283.37	1.18e-03	0.0	15.0	-3995.38	-63.78	-3.25	-1461.11	283.37	-1777.48
2	6	-1029.83	404.82	5.25e-04	0.0	0.0	-5203.88	-80.33	-3.90	-1857.90	404.82	-1029.83
		-2234.65	343.54	1.42e-03	0.0	15.0	-5158.88	-80.33	-3.90	-1857.90	343.54	-2234.65
2	7	-820.89	334.48	4.19e-04	0.0	0.0	-4040.38	-63.78	-3.25	-1461.11	334.48	-820.89
		-1777.48	283.37	1.18e-03	0.0	15.0	-3995.38	-63.78	-3.25	-1461.11	283.37	-1777.48
2	8	-967.15	383.72	4.93e-04	0.0	0.0	-4854.83	-75.36	-3.70	-1738.86	383.72	-967.15
		-2097.50	325.49	1.35e-03	0.0	15.0	-4809.83	-75.36	-3.70	-1738.86	325.49	-2097.50
2	9	-820.89	334.48	4.19e-04	0.0	0.0	-4040.38	-63.78	-3.25	-1461.11	334.48	-820.89
		-1777.48	283.37	1.18e-03	0.0	15.0	-3995.38	-63.78	-3.25	-1461.11	283.37	-1777.48
2	10	-946.25	376.69	4.83e-04	0.0	0.0	-4738.48	-73.71	-3.64	-1699.18	376.69	-946.25
		-2051.78	319.47	1.32e-03	0.0	15.0	-4693.48	-73.71	-3.64	-1699.18	319.47	-2051.78
4	2	-3026.72	460.69	7.02e-04	0.0	0.0	-6285.45	-155.70	-5.05	-2491.57	460.69	-3026.72
		-5362.16	380.90	1.92e-03	0.0	15.0	-6226.95	-155.70	-5.05	-2491.57	380.90	-5362.16
4	3	-1746.86	278.13	4.07e-04	0.0	0.0	-3493.57	-89.67	-3.08	-1418.14	278.13	-1746.86
		-3091.83	229.40	1.17e-03	0.0	15.0	-3448.57	-89.67	-3.08	-1418.14	229.40	-3091.83
4	5	-1777.33	282.13	4.14e-04	0.0	0.0	-3563.89	-91.25	-3.12	-1444.27	282.13	-1777.33
		-3145.97	232.73	1.18e-03	0.0	15.0	-3518.89	-91.25	-3.12	-1444.27	232.73	-3145.97
4	6	-2234.47	342.08	5.19e-04	0.0	0.0	-4618.61	-114.92	-3.75	-1836.20	342.08	-2234.47
		-3958.14	282.74	1.42e-03	0.0	15.0	-4573.61	-114.92	-3.75	-1836.20	282.74	-3958.14
4	7	-1777.33	282.13	4.14e-04	0.0	0.0	-3563.89	-91.25	-3.12	-1444.27	282.13	-1777.33
		-3145.97	232.73	1.18e-03	0.0	15.0	-3518.89	-91.25	-3.12	-1444.27	232.73	-3145.97
4	8	-2097.33	324.10	4.87e-04	0.0	0.0	-4302.19	-107.82	-3.56	-1718.62	324.10	-2097.33
		-3714.49	267.74	1.35e-03	0.0	15.0	-4257.19	-107.82	-3.56	-1718.62	267.74	-3714.49
4	9	-1777.33	282.13	4.14e-04	0.0	0.0	-3563.89	-91.25	-3.12	-1444.27	282.13	-1777.33
		-3145.97	232.73	1.18e-03	0.0	15.0	-3518.89	-91.25	-3.12	-1444.27	232.73	-3145.97
4	10	-2051.62	318.10	4.77e-04	0.0	0.0	-4196.72	-105.45	-3.50	-1679.43	318.10	-2051.62
		-3633.27	262.74	1.33e-03	0.0	15.0	-4151.72	-105.45	-3.50	-1679.43	262.74	-3633.27
5	2	8.878e+04	3522.01	4.52e-03	0.0	0.0	-1.095e+04	-1445.13	-26.99	-1059.96	3522.01	8.878e+04
		6.711e+04	2978.35	3.03e-03	0.0	15.0	-1.093e+04	-1445.13	-26.99	-1059.96	2978.35	6.711e+04
5	3	4.284e+04	2100.51	2.30e-03	0.0	0.0	-6415.92	-698.62	-16.38	-613.23	2100.51	4.284e+04
		3.236e+04	1772.40	1.84e-03	0.0	15.0	-6396.12	-698.62	-16.38	-613.23	1772.40	3.236e+04
5	5	4.417e+04	2132.42	2.36e-03	0.0	0.0	-6521.29	-720.27	-16.61	-623.82	2132.42	4.417e+04
		3.337e+04	1799.59	1.86e-03	0.0	15.0	-6501.49	-720.27	-16.61	-623.82	1799.59	3.337e+04
5	6	6.419e+04	2611.05	3.29e-03	0.0	0.0	-8101.84	-1045.03	-20.05	-782.76	2611.05	6.419e+04
		4.851e+04	2207.39	2.25e-03	0.0	15.0	-8082.04	-1045.03	-20.05	-782.76	2207.39	4.851e+04
5	7	4.417e+04	2132.42	2.36e-03	0.0	0.0	-6521.29	-720.27	-16.61	-623.82	2132.42	4.417e+04
		3.337e+04	1799.59	1.86e-03	0.0	15.0	-6501.49	-720.27	-16.61	-623.82	1799.59	3.337e+04
5	8	5.818e+04	2467.46	3.01e-03	0.0	0.0	-7627.67	-947.60	-19.02	-735.08	2467.46	5.818e+04
		4.397e+04	2085.05	2.14e-03	0.0	15.0	-7607.87	-947.60	-19.02	-735.08	2085.05	4.397e+04
5	9	4.417e+04	2132.42	2.36e-03	0.0	0.0	-6521.29	-720.27	-16.61	-623.82	2132.42	4.417e+04
		3.337e+04	1799.59	1.86e-03	0.0	15.0	-6501.49	-720.27	-16.61	-623.82	1799.59	3.337e+04

5	10	5.618e+04	2419.60	2.92e-03	0.0	0.0	-7469.62	-915.13	-18.68	-719.18	2419.60	5.618e+04
		4.245e+04	2044.27	2.10e-03	0.0	15.0	-7449.82	-915.13	-18.68	-719.18	2044.27	4.245e+04
11	2	-2.906e+04	2369.66	4.82e-03	0.0	0.0	-1.045e+04	720.23	-21.86	-2685.58	2369.66	-3.986e+04
		-3.986e+04	1964.11	2.23e-03	0.0	15.0	-1.039e+04	720.23	-21.86	-2685.58	1964.11	-2.906e+04
11	3	-1.972e+04	1383.99	2.69e-03	0.0	0.0	-5890.34	483.96	-12.92	-1536.02	1383.99	-2.698e+04
		-2.698e+04	1145.18	1.38e-03	0.0	15.0	-5845.34	483.96	-12.92	-1536.02	1145.18	-1.972e+04
11	5	-1.986e+04	1406.99	2.74e-03	0.0	0.0	-6003.03	487.63	-13.12	-1563.80	1406.99	-2.717e+04
		-2.717e+04	1164.35	1.40e-03	0.0	15.0	-5958.03	487.63	-13.12	-1563.80	1164.35	-1.986e+04
11	6	-2.193e+04	1752.04	3.54e-03	0.0	0.0	-7693.43	542.72	-16.19	-1980.38	1752.04	-3.007e+04
		-3.007e+04	1451.87	1.66e-03	0.0	15.0	-7648.43	542.72	-16.19	-1980.38	1451.87	-2.193e+04
11	7	-1.986e+04	1406.99	2.74e-03	0.0	0.0	-6003.03	487.63	-13.12	-1563.80	1406.99	-2.717e+04
		-2.717e+04	1164.35	1.40e-03	0.0	15.0	-5958.03	487.63	-13.12	-1563.80	1164.35	-1.986e+04
11	8	-2.131e+04	1648.52	3.30e-03	0.0	0.0	-7186.31	526.19	-15.27	-1855.40	1648.52	-2.920e+04
		-2.920e+04	1365.62	1.58e-03	0.0	15.0	-7141.31	526.19	-15.27	-1855.40	1365.62	-2.131e+04
11	9	-1.986e+04	1406.99	2.74e-03	0.0	0.0	-6003.03	487.63	-13.12	-1563.80	1406.99	-2.717e+04
		-2.717e+04	1164.35	1.40e-03	0.0	15.0	-5958.03	487.63	-13.12	-1563.80	1164.35	-1.986e+04
11	10	-2.110e+04	1614.02	3.22e-03	0.0	0.0	-7017.27	520.69	-14.96	-1813.75	1614.02	-2.891e+04
		-2.891e+04	1336.87	1.55e-03	0.0	15.0	-6972.27	520.69	-14.96	-1813.75	1336.87	-2.110e+04
12	2	-3.986e+04	2778.53	4.99e-03	0.0	0.0	-1.143e+04	765.81	-18.88	-2463.97	2778.53	-5.135e+04
		-5.135e+04	2413.17	2.21e-03	0.0	15.0	-1.138e+04	765.81	-18.88	-2463.97	2413.17	-3.986e+04
12	3	-2.698e+04	1625.76	2.81e-03	0.0	0.0	-6477.23	476.92	-11.25	-1410.65	1625.76	-3.414e+04
		-3.414e+04	1409.23	1.37e-03	0.0	15.0	-6432.23	476.92	-11.25	-1410.65	1409.23	-2.698e+04
12	5	-2.717e+04	1652.57	2.87e-03	0.0	0.0	-6598.74	482.80	-11.42	-1436.06	1652.57	-3.442e+04
		-3.442e+04	1432.66	1.38e-03	0.0	15.0	-6553.74	482.80	-11.42	-1436.06	1432.66	-2.717e+04
12	6	-3.007e+04	2054.82	3.68e-03	0.0	0.0	-8421.36	571.00	-13.99	-1817.18	2054.82	-3.863e+04
		-3.863e+04	1784.18	1.64e-03	0.0	15.0	-8376.36	571.00	-13.99	-1817.18	1784.18	-3.007e+04
12	7	-2.717e+04	1652.57	2.87e-03	0.0	0.0	-6598.74	482.80	-11.42	-1436.06	1652.57	-3.442e+04
		-3.442e+04	1432.66	1.38e-03	0.0	15.0	-6553.74	482.80	-11.42	-1436.06	1432.66	-2.717e+04
12	8	-2.920e+04	1934.14	3.43e-03	0.0	0.0	-7874.57	544.54	-13.22	-1702.84	1934.14	-3.737e+04
		-3.737e+04	1678.72	1.57e-03	0.0	15.0	-7829.57	544.54	-13.22	-1702.84	1678.72	-2.920e+04
12	9	-2.717e+04	1652.57	2.87e-03	0.0	0.0	-6598.74	482.80	-11.42	-1436.06	1652.57	-3.442e+04
		-3.442e+04	1432.66	1.38e-03	0.0	15.0	-6553.74	482.80	-11.42	-1436.06	1432.66	-2.717e+04
12	10	-2.891e+04	1893.92	3.35e-03	0.0	0.0	-7692.31	535.72	-12.96	-1664.73	1893.92	-3.695e+04
		-3.695e+04	1643.57	1.54e-03	0.0	15.0	-7647.31	535.72	-12.96	-1664.73	1643.57	-2.891e+04
13	1	-2340.65	1174.71	2.31e-03	0.0	0.0	-8754.01	161.47	-11.75	-1068.00	1174.71	-4763.11
		-4763.11	964.73	1.22e-03	0.0	15.0	-8695.51	161.47	-11.75	-1068.00	964.73	-2340.65
13	2	-390.45	1525.74	2.71e-03	0.0	0.0	-1.162e+04	126.24	-14.93	-1469.15	1525.74	-2284.59
		-2284.59	1257.16	1.39e-03	0.0	15.0	-1.156e+04	126.24	-14.93	-1469.15	1257.16	-390.45
13	3	-1953.85	876.02	1.74e-03	0.0	0.0	-6508.46	126.98	-8.79	-789.99	876.02	-3858.83
		-3858.83	719.10	9.21e-04	0.0	15.0	-6463.46	126.98	-8.79	-789.99	719.10	-1953.85
13	4	-3.65	1227.05	2.14e-03	0.0	0.0	-9374.89	91.75	-11.97	-1191.14	1227.05	-1380.30
		-1380.30	1011.54	1.09e-03	0.0	15.0	-9329.89	91.75	-11.97	-1191.14	1011.54	-3.65
13	5	-1867.17	891.63	1.76e-03	0.0	0.0	-6635.85	125.41	-8.93	-807.82	891.63	-3748.67
		-3748.67	732.10	9.29e-04	0.0	15.0	-6590.85	125.41	-8.93	-807.82	732.10	-1867.17
13	6	-567.04	1125.64	2.03e-03	0.0	0.0	-8546.81	101.93	-11.05	-1075.25	1125.64	-2096.32
		-2096.32	927.06	1.04e-03	0.0	15.0	-8501.81	101.93	-11.05	-1075.25	927.06	-567.04
13	7	-1867.17	891.63	1.76e-03	0.0	0.0	-6635.85	125.41	-8.93	-807.82	891.63	-3748.67
		-3748.67	732.10	9.29e-04	0.0	15.0	-6590.85	125.41	-8.93	-807.82	732.10	-1867.17
13	8	-957.08	1055.44	1.95e-03	0.0	0.0	-7973.52	108.97	-10.42	-995.02	1055.44	-2592.02
		-2592.02	868.57	1.01e-03	0.0	15.0	-7928.52	108.97	-10.42	-995.02	868.57	-957.08
13	9	-1867.17	891.63	1.76e-03	0.0	0.0	-6635.85	125.41	-8.93	-807.82	891.63	-3748.67
		-3748.67	732.10	9.29e-04	0.0	15.0	-6590.85	125.41	-8.93	-807.82	732.10	-1867.17
13	10	-1087.09	1032.03	1.92e-03	0.0	0.0	-7782.43	111.32	-10.20	-968.28	1032.03	-2757.26
		-2757.26	849.07	9.98e-04	0.0	15.0	-7737.43	111.32	-10.20	-968.28	849.07	-1087.09
14	2	5202.74	1274.77	5.40e-03	0.0	0.0	-5809.05	-78.19	-10.95	-2508.08	1274.77	5202.74
		4030.78	1102.18	3.35e-03	0.0	15.0	-5750.55	-78.19	-10.95	-2508.08	1102.18	4030.78
14	3	2778.01	732.88	2.73e-03	0.0	0.0	-3210.87	-40.98	-6.46	-1434.57	732.88	2778.01
		2163.85	631.48	2.02e-03	0.0	15.0	-3165.87	-40.98	-6.46	-1434.57	631.48	2163.85
14	5	2842.17	745.86	2.80e-03	0.0	0.0	-3276.79	-41.98	-6.57	-1460.50	745.86	2842.17
		2212.96	642.82	2.05e-03	0.0	15.0	-3231.79	-41.98	-6.57	-1460.50	642.82	2212.96
14	6	3804.67	940.64	3.93e-03	0.0	0.0	-4265.65	-57.06	-8.11	-1849.50	940.64	3804.67
		2949.51	812.94	2.48e-03	0.0	15.0	-4220.65	-57.06	-8.11	-1849.50	812.94	2949.51
14	7	2842.17	745.86	2.80e-03	0.0	0.0	-3276.79	-41.98	-6.57	-1460.50	745.86	2842.17
		2212.96	642.82	2.05e-03	0.0	15.0	-3231.79	-41.98	-6.57	-1460.50	642.82	2212.96
14	8	3515.92	882.20	3.59e-03	0.0	0.0	-3969.00	-52.53	-7.64	-1732.80	882.20	3515.92
		2728.55	761.90	2.35e-03	0.0	15.0	-3924.00	-52.53	-7.64	-1732.80	761.90	2728.55

14	9	2842.17	745.86	2.80e-03	0.0	0.0	-3276.79	-41.98	-6.57	-1460.50	745.86	2842.17
		2212.96	642.82	2.05e-03	0.0	15.0	-3231.79	-41.98	-6.57	-1460.50	642.82	2212.96
14	10	3419.67	862.73	3.48e-03	0.0	0.0	-3870.11	-51.03	-7.49	-1693.90	862.73	3419.67
		2654.89	744.89	2.31e-03	0.0	15.0	-3825.11	-51.03	-7.49	-1693.90	744.89	2654.89
15	2	4032.68	1096.89	5.42e-03	0.0	0.0	-5189.59	-85.85	-12.05	-2340.30	1096.89	4032.68
		2745.87	903.44	3.36e-03	0.0	15.0	-5131.09	-85.85	-12.05	-2340.30	903.44	2745.87
15	3	2164.82	628.62	2.74e-03	0.0	0.0	-2842.53	-45.87	-7.06	-1338.22	628.62	2164.82
		1477.23	515.77	2.03e-03	0.0	15.0	-2797.53	-45.87	-7.06	-1338.22	515.77	1477.23
15	5	2213.95	639.90	2.81e-03	0.0	0.0	-2902.78	-46.93	-7.17	-1362.43	639.90	2213.95
		1510.51	525.17	2.05e-03	0.0	15.0	-2857.78	-46.93	-7.17	-1362.43	525.17	1510.51
15	6	2950.90	809.06	3.94e-03	0.0	0.0	-3806.59	-62.79	-8.91	-1725.71	809.06	2950.90
		2009.79	666.05	2.49e-03	0.0	15.0	-3761.59	-62.79	-8.91	-1725.71	666.05	2009.79
15	7	2213.95	639.90	2.81e-03	0.0	0.0	-2902.78	-46.93	-7.17	-1362.43	639.90	2213.95
		1510.51	525.17	2.05e-03	0.0	15.0	-2857.78	-46.93	-7.17	-1362.43	525.17	1510.51
15	8	2729.81	758.31	3.60e-03	0.0	0.0	-3535.45	-58.03	-8.39	-1616.73	758.31	2729.81
		1860.01	623.79	2.36e-03	0.0	15.0	-3490.45	-58.03	-8.39	-1616.73	623.79	1860.01
15	9	2213.95	639.90	2.81e-03	0.0	0.0	-2902.78	-46.93	-7.17	-1362.43	639.90	2213.95
		1510.51	525.17	2.05e-03	0.0	15.0	-2857.78	-46.93	-7.17	-1362.43	525.17	1510.51
15	10	2656.12	741.40	3.49e-03	0.0	0.0	-3445.07	-56.44	-8.22	-1580.40	741.40	2656.12
		1810.08	609.70	2.32e-03	0.0	15.0	-3400.07	-56.44	-8.22	-1580.40	609.70	1810.08
16	2	1.358e+04	781.09	4.45e-03	0.0	0.0	-5165.36	348.03	-9.65	-4023.49	781.09	8357.54
		8357.54	627.51	3.62e-03	0.0	15.0	-5106.86	348.03	-9.65	-4023.49	627.51	1.358e+04
16	3	7318.35	428.32	2.41e-03	0.0	0.0	-2845.61	187.47	-5.51	-2300.13	428.32	4505.82
		4505.82	341.16	2.15e-03	0.0	15.0	-2800.61	187.47	-5.51	-2300.13	341.16	7318.35
16	5	7482.26	437.37	2.46e-03	0.0	0.0	-2904.73	191.68	-5.61	-2341.80	437.37	4606.63
		4606.63	348.58	2.18e-03	0.0	15.0	-2859.73	191.68	-5.61	-2341.80	348.58	7482.26
16	6	9940.85	573.02	3.26e-03	0.0	0.0	-3791.46	254.77	-7.12	-2966.79	573.02	6118.70
		6118.70	459.87	2.68e-03	0.0	15.0	-3746.46	254.77	-7.12	-2966.79	459.87	9940.85
16	7	7482.26	437.37	2.46e-03	0.0	0.0	-2904.73	191.68	-5.61	-2341.80	437.37	4606.63
		4606.63	348.58	2.18e-03	0.0	15.0	-2859.73	191.68	-5.61	-2341.80	348.58	7482.26
16	8	9203.27	532.32	3.02e-03	0.0	0.0	-3525.44	235.84	-6.66	-2779.29	532.32	5665.08
		5665.08	426.48	2.53e-03	0.0	15.0	-3480.44	235.84	-6.66	-2779.29	426.48	9203.27
16	9	7482.26	437.37	2.46e-03	0.0	0.0	-2904.73	191.68	-5.61	-2341.80	437.37	4606.63
		4606.63	348.58	2.18e-03	0.0	15.0	-2859.73	191.68	-5.61	-2341.80	348.58	7482.26
16	10	8957.41	518.76	2.94e-03	0.0	0.0	-3436.77	229.53	-6.51	-2716.79	518.76	5513.87
		5513.87	415.35	2.48e-03	0.0	15.0	-3391.77	229.53	-6.51	-2716.79	415.35	8957.41
17	2	1.321e+05	3174.75	3.72e-03	0.0	0.0	-1.739e+04	-2361.26	-14.36	-986.80	3174.75	1.321e+05
		9.672e+04	2886.06	1.73e-03	0.0	15.0	-1.736e+04	-2361.26	-14.36	-986.80	2886.06	9.672e+04
17	3	7.580e+04	1975.91	2.15e-03	0.0	0.0	-1.002e+04	-1352.08	-8.86	-568.05	1975.91	7.580e+04
		5.551e+04	1795.54	1.08e-03	0.0	15.0	-1.000e+04	-1352.08	-8.86	-568.05	1795.54	5.551e+04
17	5	7.715e+04	2000.35	2.19e-03	0.0	0.0	-1.020e+04	-1376.41	-8.98	-578.06	2000.35	7.715e+04
		5.650e+04	1817.79	1.09e-03	0.0	15.0	-1.018e+04	-1376.41	-8.98	-578.06	1817.79	5.650e+04
17	6	9.747e+04	2366.92	2.75e-03	0.0	0.0	-1.283e+04	-1741.47	-10.69	-728.26	2366.92	9.747e+04
		7.135e+04	2151.58	1.29e-03	0.0	15.0	-1.282e+04	-1741.47	-10.69	-728.26	2151.58	7.135e+04
17	7	7.715e+04	2000.35	2.19e-03	0.0	0.0	-1.020e+04	-1376.41	-8.98	-578.06	2000.35	7.715e+04
		5.650e+04	1817.79	1.09e-03	0.0	15.0	-1.018e+04	-1376.41	-8.98	-578.06	1817.79	5.650e+04
17	8	9.138e+04	2256.95	2.58e-03	0.0	0.0	-1.204e+04	-1631.95	-10.18	-683.20	2256.95	9.138e+04
		6.690e+04	2051.44	1.23e-03	0.0	15.0	-1.202e+04	-1631.95	-10.18	-683.20	2051.44	6.690e+04
17	9	7.715e+04	2000.35	2.19e-03	0.0	0.0	-1.020e+04	-1376.41	-8.98	-578.06	2000.35	7.715e+04
		5.650e+04	1817.79	1.09e-03	0.0	15.0	-1.018e+04	-1376.41	-8.98	-578.06	1817.79	5.650e+04
17	10	8.934e+04	2220.29	2.52e-03	0.0	0.0	-1.178e+04	-1595.45	-10.01	-668.18	2220.29	8.934e+04
		6.541e+04	2018.06	1.21e-03	0.0	15.0	-1.176e+04	-1595.45	-10.01	-668.18	2018.06	6.541e+04
18	2	7.663e+04	6063.37	3.50e-03	0.0	0.0	-1.711e+04	-1785.57	-9.80	-835.38	6063.37	7.663e+04
		4.984e+04	5791.35	3.00e-03	0.0	15.0	-1.709e+04	-1785.57	-9.80	-835.38	5791.35	4.984e+04
18	3	4.087e+04	3521.46	2.02e-03	0.0	0.0	-1.020e+04	-1045.69	-7.06	-518.77	3521.46	4.087e+04
		2.519e+04	3344.37	1.80e-03	0.0	15.0	-1.018e+04	-1045.69	-7.06	-518.77	3344.37	2.519e+04
18	5	4.182e+04	3581.35	2.06e-03	0.0	0.0	-1.035e+04	-1062.88	-7.08	-525.26	3581.35	4.182e+04
		2.588e+04	3402.58	1.82e-03	0.0	15.0	-1.033e+04	-1062.88	-7.08	-525.26	3402.58	2.588e+04
18	6	5.603e+04	4479.83	2.58e-03	0.0	0.0	-1.269e+04	-1320.64	-7.46	-622.63	4479.83	5.603e+04
		3.622e+04	4275.77	2.23e-03	0.0	15.0	-1.267e+04	-1320.64	-7.46	-622.63	4275.77	3.622e+04
18	7	4.182e+04	3581.35	2.06e-03	0.0	0.0	-1.035e+04	-1062.88	-7.08	-525.26	3581.35	4.182e+04
		2.588e+04	3402.58	1.82e-03	0.0	15.0	-1.033e+04	-1062.88	-7.08	-525.26	3402.58	2.588e+04
18	8	5.177e+04	4210.29	2.42e-03	0.0	0.0	-1.199e+04	-1243.31	-7.35	-593.42	4210.29	5.177e+04
		3.312e+04	4013.81	2.10e-03	0.0	15.0	-1.197e+04	-1243.31	-7.35	-593.42	4013.81	3.312e+04
18	9	4.182e+04	3581.35	2.06e-03	0.0	0.0	-1.035e+04	-1062.88	-7.08	-525.26	3581.35	4.182e+04
		2.588e+04	3402.58	1.82e-03	0.0	15.0	-1.033e+04	-1062.88	-7.08	-525.26	3402.58	2.588e+04

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

18	10	5.034e+04	4120.44	2.37e-03	0.0	0.0	-1.175e+04	-1217.53	-7.31	-583.68	4120.44	5.034e+04
		3.208e+04	3926.49	2.06e-03	0.0	15.0	-1.173e+04	-1217.53	-7.31	-583.68	3926.49	3.208e+04
19	2	1.171e+05	4160.38	2.70e-03	0.0	0.0	-1.170e+04	-1888.47	-21.95	-1215.39	4160.38	1.171e+05
		8.878e+04	3627.84	2.88e-03	0.0	15.0	-1.167e+04	-1888.47	-21.95	-1215.39	3627.84	8.878e+04
19	3	5.654e+04	2486.59	1.42e-03	0.0	0.0	-6858.68	-913.68	-13.48	-706.35	2486.59	5.654e+04
		4.284e+04	2689.48	1.75e-03	0.0	15.0	-6838.88	-913.68	-13.48	-706.35	2689.48	4.284e+04
19	5	5.830e+04	2524.00	1.45e-03	0.0	0.0	-6970.78	-941.93	-13.66	-718.33	2524.00	5.830e+04
		4.417e+04	2196.29	1.77e-03	0.0	15.0	-6950.98	-941.93	-13.66	-718.33	2196.29	4.417e+04
19	6	8.467e+04	3085.18	1.97e-03	0.0	0.0	-8652.23	-1365.74	-16.34	-898.05	3085.18	8.467e+04
		6.419e+04	2689.48	2.14e-03	0.0	15.0	-8632.43	-1365.74	-16.34	-898.05	2689.48	6.419e+04
19	7	5.830e+04	2524.00	1.45e-03	0.0	0.0	-6970.78	-941.93	-13.66	-718.33	2524.00	5.830e+04
		4.417e+04	2196.29	1.77e-03	0.0	15.0	-6950.98	-941.93	-13.66	-718.33	2196.29	4.417e+04
19	8	7.676e+04	2916.82	1.82e-03	0.0	0.0	-8147.79	-1238.59	-15.53	-844.14	2916.82	7.676e+04
		5.818e+04	2541.52	2.03e-03	0.0	15.0	-8127.99	-1238.59	-15.53	-844.14	2541.52	5.818e+04
19	9	5.830e+04	2524.00	1.45e-03	0.0	0.0	-6970.78	-941.93	-13.66	-718.33	2524.00	5.830e+04
		4.417e+04	2196.29	1.77e-03	0.0	15.0	-6950.98	-941.93	-13.66	-718.33	2196.29	4.417e+04
19	10	7.412e+04	2860.71	1.76e-03	0.0	0.0	-7979.65	-1196.21	-15.26	-826.16	2860.71	7.412e+04
		5.618e+04	2492.20	1.99e-03	0.0	15.0	-7959.85	-1196.21	-15.26	-826.16	2492.20	5.618e+04
20	2	4716.79	1108.22	4.42e-03	0.0	0.0	-6500.58	167.26	-10.30	-4141.21	1108.22	2207.04
		2207.04	945.94	3.61e-03	0.0	15.0	-6442.08	167.26	-10.30	-4141.21	945.94	4716.79
20	3	2544.92	614.17	2.39e-03	0.0	0.0	-3655.43	90.09	-5.91	-2366.85	614.17	1193.22
		1193.22	521.65	2.14e-03	0.0	15.0	-3610.43	90.09	-5.91	-2366.85	521.65	2544.92
20	5	2601.71	626.66	2.44e-03	0.0	0.0	-3725.93	92.11	-6.01	-2409.77	626.66	1219.66
		1219.66	532.44	2.17e-03	0.0	15.0	-3680.93	92.11	-6.01	-2409.77	532.44	2601.71
20	6	3453.56	814.04	3.23e-03	0.0	0.0	-4783.51	122.44	-7.60	-3053.50	814.04	1616.35
		1616.35	694.42	2.67e-03	0.0	15.0	-4738.51	122.44	-7.60	-3053.50	694.42	3453.56
20	7	2601.71	626.66	2.44e-03	0.0	0.0	-3725.93	92.11	-6.01	-2409.77	626.66	1219.66
		1219.66	532.44	2.17e-03	0.0	15.0	-3680.93	92.11	-6.01	-2409.77	532.44	2601.71
20	8	3198.00	757.83	3.00e-03	0.0	0.0	-4466.24	113.34	-7.12	-2860.38	757.83	1497.34
		1497.34	645.83	2.52e-03	0.0	15.0	-4421.24	113.34	-7.12	-2860.38	645.83	3198.00
20	9	2601.71	626.66	2.44e-03	0.0	0.0	-3725.93	92.11	-6.01	-2409.77	626.66	1219.66
		1219.66	532.44	2.17e-03	0.0	15.0	-3680.93	92.11	-6.01	-2409.77	532.44	2601.71
20	10	3112.82	739.09	2.92e-03	0.0	0.0	-4360.48	110.31	-6.96	-2796.01	739.09	1457.67
		1457.67	629.63	2.47e-03	0.0	15.0	-4315.48	110.31	-6.96	-2796.01	629.63	3112.82
22	1	2995.60	-9.16	-4.78e-04	0.0	0.0	-4159.90	80.36	-1.72	-1250.29	-9.16	1790.21
		1790.21	-34.62	1.03e-03	0.0	15.0	-4101.40	80.36	-1.72	-1250.29	-34.62	2995.60
22	2	3304.33	50.18	-7.91e-04	0.0	0.0	-5606.51	89.45	-2.35	-1641.61	50.18	1962.67
		1962.67	14.22	1.22e-03	0.0	15.0	-5548.01	89.45	-2.35	-1641.61	14.22	3304.33
22	3	2280.03	-11.71	-3.43e-04	0.0	0.0	-3086.17	61.10	-1.27	-930.99	-11.71	1363.53
		1363.53	-30.47	7.78e-04	0.0	15.0	-3041.17	61.10	-1.27	-930.99	-30.47	2280.03
22	5	2293.75	-9.08	-3.57e-04	0.0	0.0	-3150.46	61.51	-1.30	-948.38	-9.08	1371.19
		1371.19	-28.30	7.87e-04	0.0	15.0	-3105.46	61.51	-1.30	-948.38	-28.30	2293.75
22	6	2499.57	30.48	-5.65e-04	0.0	0.0	-4114.87	67.57	-1.72	-1209.26	30.48	1486.17
		1486.17	4.26	9.16e-04	0.0	15.0	-4069.87	67.57	-1.72	-1209.26	4.26	2499.57
22	7	2293.75	-9.08	-3.57e-04	0.0	0.0	-3150.46	61.51	-1.30	-948.38	-9.08	1371.19
		1371.19	-28.30	7.87e-04	0.0	15.0	-3105.46	61.51	-1.30	-948.38	-28.30	2293.75
22	8	2437.83	18.62	-5.03e-04	0.0	0.0	-3825.55	65.75	-1.60	-1131.00	18.62	1451.67
		1451.67	-5.51	8.77e-04	0.0	15.0	-3780.55	65.75	-1.60	-1131.00	-5.51	2437.83
22	9	2293.75	-9.08	-3.57e-04	0.0	0.0	-3150.46	61.51	-1.30	-948.38	-9.08	1371.19
		1371.19	-28.30	7.87e-04	0.0	15.0	-3105.46	61.51	-1.30	-948.38	-28.30	2293.75
22	10	2417.24	14.66	-4.82e-04	0.0	0.0	-3729.11	65.14	-1.55	-1104.91	14.66	1440.18
		1440.18	-8.76	8.64e-04	0.0	15.0	-3684.11	65.14	-1.55	-1104.91	-8.76	2417.24
23	2	1962.95	89.67	-7.96e-04	0.0	0.0	-6327.07	62.73	-2.57	-1668.56	89.67	1022.17
		1022.17	50.51	1.22e-03	0.0	15.0	-6268.57	62.73	-2.57	-1668.56	50.51	1962.95
23	3	1363.65	9.31	-3.48e-04	0.0	0.0	-3517.97	42.84	-1.43	-945.57	9.31	721.08
		721.08	-11.84	7.78e-04	0.0	15.0	-3472.97	42.84	-1.43	-945.57	-11.84	1363.65
23	5	1371.32	12.44	-3.61e-04	0.0	0.0	-3588.68	43.13	-1.46	-963.28	12.44	724.50
		724.50	-9.19	7.87e-04	0.0	15.0	-3543.68	43.13	-1.46	-963.28	-9.19	1371.32
23	6	1486.36	59.35	-5.70e-04	0.0	0.0	-4649.39	47.38	-1.89	-1229.00	59.35	775.77
		775.77	30.68	9.15e-04	0.0	15.0	-4604.39	47.38	-1.89	-1229.00	30.68	1486.36
23	7	1371.32	12.44	-3.61e-04	0.0	0.0	-3588.68	43.13	-1.46	-963.28	12.44	724.50
		724.50	-9.19	7.87e-04	0.0	15.0	-3543.68	43.13	-1.46	-963.28	-9.19	1371.32
23	8	1451.85	45.28	-5.07e-04	0.0	0.0	-4331.18	46.10	-1.76	-1149.29	45.28	760.39
		760.39	18.72	8.77e-04	0.0	15.0	-4286.18	46.10	-1.76	-1149.29	18.72	1451.85
23	9	1371.32	12.44	-3.61e-04	0.0	0.0	-3588.68	43.13	-1.46	-963.28	12.44	724.50
		724.50	-9.19	7.87e-04	0.0	15.0	-3543.68	43.13	-1.46	-963.28	-9.19	1371.32

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

23	10	1440.34	40.59	-4.87e-04	0.0	0.0	-4225.11	45.68	-1.71	-1122.71	40.59	755.26
		755.26	14.73	8.64e-04	0.0	15.0	-4180.11	45.68	-1.71	-1122.71	14.73	1440.34
28	2	-5361.92	378.77	6.85e-04	0.0	0.0	-5547.17	-222.70	-4.91	-2444.60	378.77	-5361.92
		-8702.36	300.49	1.92e-03	0.0	15.0	-5488.67	-222.70	-4.91	-2444.60	300.49	-8702.36
28	3	-3091.69	228.07	3.98e-04	0.0	0.0	-3053.10	-128.27	-2.99	-1391.64	228.07	-3091.69
		-5015.71	180.37	1.17e-03	0.0	15.0	-3008.10	-128.27	-2.99	-1391.64	180.37	-5015.71
28	5	-3145.83	231.39	4.04e-04	0.0	0.0	-3116.73	-130.53	-3.03	-1417.27	231.39	-3145.83
		-5103.70	183.03	1.18e-03	0.0	15.0	-3071.73	-130.53	-3.03	-1417.27	183.03	-5103.70
28	6	-3957.96	281.15	5.06e-04	0.0	0.0	-4071.25	-164.37	-3.65	-1801.62	281.15	-3957.96
		-6423.41	222.96	1.43e-03	0.0	15.0	-4026.25	-164.37	-3.65	-1801.62	222.96	-6423.41
28	7	-3145.83	231.39	4.04e-04	0.0	0.0	-3116.73	-130.53	-3.03	-1417.27	231.39	-3145.83
		-5103.70	183.03	1.18e-03	0.0	15.0	-3071.73	-130.53	-3.03	-1417.27	183.03	-5103.70
28	8	-3714.32	266.22	4.76e-04	0.0	0.0	-3784.90	-154.22	-3.47	-1686.32	266.22	-3714.32
		-6027.50	210.98	1.35e-03	0.0	15.0	-3739.90	-154.22	-3.47	-1686.32	210.98	-6027.50
28	9	-3145.83	231.39	4.04e-04	0.0	0.0	-3116.73	-130.53	-3.03	-1417.27	231.39	-3145.83
		-5103.70	183.03	1.18e-03	0.0	15.0	-3071.73	-130.53	-3.03	-1417.27	183.03	-5103.70
28	10	-3633.11	261.25	4.66e-04	0.0	0.0	-3689.44	-150.83	-3.41	-1647.88	261.25	-3633.11
		-5895.53	206.99	1.33e-03	0.0	15.0	-3644.44	-150.83	-3.41	-1647.88	206.99	-5895.53
30	2	8355.96	942.04	4.43e-03	0.0	0.0	-5811.28	242.45	-9.92	-4097.24	942.04	4718.35
		4718.35	785.23	3.61e-03	0.0	15.0	-5752.78	242.45	-9.92	-4097.24	785.23	8355.96
30	3	4504.97	519.67	2.40e-03	0.0	0.0	-3238.27	130.59	-5.67	-2342.00	519.67	2545.76
		2545.76	430.45	2.14e-03	0.0	15.0	-3193.27	130.59	-5.67	-2342.00	430.45	4504.97
30	5	4605.75	530.41	2.45e-03	0.0	0.0	-3302.85	133.52	-5.78	-2384.44	530.41	2602.57
		2602.57	439.55	2.18e-03	0.0	15.0	-3257.85	133.52	-5.78	-2384.44	439.55	4605.75
30	6	6117.55	691.58	3.24e-03	0.0	0.0	-4271.52	177.48	-7.31	-3021.12	691.58	3454.71
		3454.71	576.03	2.68e-03	0.0	15.0	-4226.52	177.48	-7.31	-3021.12	576.03	6117.55
30	7	4605.75	530.41	2.45e-03	0.0	0.0	-3302.85	133.52	-5.78	-2384.44	530.41	2602.57
		2602.57	439.55	2.18e-03	0.0	15.0	-3257.85	133.52	-5.78	-2384.44	439.55	4605.75
30	8	5664.01	643.23	3.00e-03	0.0	0.0	-3980.92	164.29	-6.85	-2830.12	643.23	3199.07
		3199.07	535.08	2.53e-03	0.0	15.0	-3935.92	164.29	-6.85	-2830.12	535.08	5664.01
30	9	4605.75	530.41	2.45e-03	0.0	0.0	-3302.85	133.52	-5.78	-2384.44	530.41	2602.57
		2602.57	439.55	2.18e-03	0.0	15.0	-3257.85	133.52	-5.78	-2384.44	439.55	4605.75
30	10	5512.83	627.12	2.93e-03	0.0	0.0	-3884.05	159.90	-6.70	-2766.45	627.12	3113.85
		3113.85	521.44	2.48e-03	0.0	15.0	-3839.05	159.90	-6.70	-2766.45	521.44	5512.83
31	1	-4763.94	1412.76	2.29e-03	0.0	0.0	-9918.27	507.07	-11.71	-1010.59	1412.76	-1.237e+04
		-1.237e+04	1194.00	1.21e-03	0.0	15.0	-9859.77	507.07	-11.71	-1010.59	1194.00	-4763.94
31	2	-2285.55	1829.74	2.66e-03	0.0	0.0	-1.311e+04	597.14	-14.77	-1387.10	1829.74	-1.124e+04
		-1.124e+04	1551.26	1.38e-03	0.0	15.0	-1.306e+04	597.14	-14.77	-1387.10	1551.26	-2285.55
31	3	-3859.45	1053.95	1.73e-03	0.0	0.0	-7378.15	382.98	-8.77	-747.77	1053.95	-9604.40
		-9604.40	890.37	9.14e-04	0.0	15.0	-7333.15	382.98	-8.77	-747.77	890.37	-3859.45
31	4	-1381.06	1470.93	2.11e-03	0.0	0.0	-1.057e+04	473.04	-11.82	-1124.28	1470.93	-8477.00
		-8477.00	1247.63	1.08e-03	0.0	15.0	-1.053e+04	473.04	-11.82	-1124.28	1247.63	-1381.06
31	5	-3749.30	1072.48	1.75e-03	0.0	0.0	-7520.18	386.98	-8.90	-764.51	1072.48	-9554.29
		-9554.29	906.24	9.22e-04	0.0	15.0	-7475.18	386.98	-8.90	-764.51	906.24	-3749.30
31	6	-2097.04	1350.47	2.00e-03	0.0	0.0	-9650.66	447.02	-10.94	-1015.51	1350.47	-8802.70
		-8802.70	1144.42	1.04e-03	0.0	15.0	-9605.66	447.02	-10.94	-1015.51	1144.42	-2097.04
31	7	-3749.30	1072.48	1.75e-03	0.0	0.0	-7520.18	386.98	-8.90	-764.51	1072.48	-9554.29
		-9554.29	906.24	9.22e-04	0.0	15.0	-7475.18	386.98	-8.90	-764.51	906.24	-3749.30
31	8	-2592.72	1267.07	1.92e-03	0.0	0.0	-9011.52	429.01	-10.33	-940.21	1267.07	-9028.17
		-9028.17	1072.97	1.00e-03	0.0	15.0	-8966.52	429.01	-10.33	-940.21	1072.97	-2592.72
31	9	-3749.30	1072.48	1.75e-03	0.0	0.0	-7520.18	386.98	-8.90	-764.51	1072.48	-9554.29
		-9554.29	906.24	9.22e-04	0.0	15.0	-7475.18	386.98	-8.90	-764.51	906.24	-3749.30
31	10	-2757.94	1239.27	1.90e-03	0.0	0.0	-8798.47	423.00	-10.12	-915.11	1239.27	-9103.33
		-9103.33	1049.15	9.90e-04	0.0	15.0	-8753.47	423.00	-10.12	-915.11	1049.15	-2757.94
32	2	9.672e+04	2849.73	5.79e-03	0.0	0.0	-1.670e+04	-2021.91	-17.59	-676.31	2849.73	9.672e+04
		6.639e+04	2553.12	1.85e-03	0.0	15.0	-1.667e+04	-2021.91	-17.59	-676.31	2553.12	6.639e+04
32	3	5.552e+04	1771.67	3.34e-03	0.0	0.0	-9622.75	-1158.10	-10.85	-377.32	1771.67	5.552e+04
		3.814e+04	1585.83	1.15e-03	0.0	15.0	-9602.95	-1158.10	-10.85	-377.32	1585.83	3.814e+04
32	5	5.650e+04	1793.71	3.40e-03	0.0	0.0	-9791.69	-1178.92	-10.99	-384.81	1793.71	5.650e+04
		3.882e+04	1605.65	1.17e-03	0.0	15.0	-9771.89	-1178.92	-10.99	-384.81	1605.65	3.882e+04
32	6	7.135e+04	2124.29	4.28e-03	0.0	0.0	-1.233e+04	-1491.25	-13.10	-497.18	2124.29	7.135e+04
		4.898e+04	1902.95	1.38e-03	0.0	15.0	-1.231e+04	-1491.25	-13.10	-497.18	1902.95	4.898e+04
32	7	5.650e+04	1793.71	3.40e-03	0.0	0.0	-9791.69	-1178.92	-10.99	-384.81	1793.71	5.650e+04
		3.882e+04	1605.65	1.17e-03	0.0	15.0	-9771.89	-1178.92	-10.99	-384.81	1605.65	3.882e+04
32	8	6.690e+04	2025.12	4.01e-03	0.0	0.0	-1.157e+04	-1397.55	-12.47	-463.47	2025.12	6.690e+04
		4.593e+04	1813.76	1.31e-03	0.0	15.0	-1.155e+04	-1397.55	-12.47	-463.47	1813.76	4.593e+04

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

32	9	5.650e+04	1793.71	3.40e-03	0.0	0.0	-9791.69	-1178.92	-10.99	-384.81	1793.71	5.650e+04
		3.882e+04	1605.65	1.17e-03	0.0	15.0	-9771.89	-1178.92	-10.99	-384.81	1605.65	3.882e+04
32	10	6.541e+04	1992.06	3.92e-03	0.0	0.0	-1.131e+04	-1366.32	-12.26	-452.23	1992.06	6.541e+04
		4.492e+04	1784.03	1.29e-03	0.0	15.0	-1.129e+04	-1366.32	-12.26	-452.23	1784.03	4.492e+04
34	2	-2.316e+04	1929.32	4.73e-03	0.0	0.0	-9326.96	392.83	-21.91	-2772.40	1929.32	-2.905e+04
		-2.905e+04	1539.97	2.24e-03	0.0	15.0	-9268.46	392.83	-21.91	-2772.40	1539.97	-2.316e+04
34	3	-1.502e+04	1125.04	2.62e-03	0.0	0.0	-5226.50	313.60	-12.91	-1584.15	1125.04	-1.972e+04
		-1.972e+04	896.24	1.39e-03	0.0	15.0	-5181.50	313.60	-12.91	-1584.15	896.24	-1.502e+04
34	5	-1.516e+04	1143.87	2.67e-03	0.0	0.0	-5328.62	313.00	-13.12	-1612.90	1143.87	-1.986e+04
		-1.986e+04	911.35	1.41e-03	0.0	15.0	-5283.62	313.00	-13.12	-1612.90	911.35	-1.516e+04
34	6	-1.736e+04	1426.18	3.47e-03	0.0	0.0	-6860.38	304.02	-16.22	-2044.16	1426.18	-2.192e+04
		-2.192e+04	1138.09	1.67e-03	0.0	15.0	-6815.38	304.02	-16.22	-2044.16	1138.09	-1.736e+04
34	7	-1.516e+04	1143.87	2.67e-03	0.0	0.0	-5328.62	313.00	-13.12	-1612.90	1143.87	-1.986e+04
		-1.986e+04	911.35	1.41e-03	0.0	15.0	-5283.62	313.00	-13.12	-1612.90	911.35	-1.516e+04
34	8	-1.670e+04	1341.49	3.23e-03	0.0	0.0	-6400.85	306.71	-15.29	-1914.78	1341.49	-2.130e+04
		-2.130e+04	1070.07	1.59e-03	0.0	15.0	-6355.85	306.71	-15.29	-1914.78	1070.07	-1.670e+04
34	9	-1.516e+04	1143.87	2.67e-03	0.0	0.0	-5328.62	313.00	-13.12	-1612.90	1143.87	-1.986e+04
		-1.986e+04	911.35	1.41e-03	0.0	15.0	-5283.62	313.00	-13.12	-1612.90	911.35	-1.516e+04
34	10	-1.648e+04	1313.26	3.15e-03	0.0	0.0	-6247.68	307.61	-14.98	-1871.65	1313.26	-2.110e+04
		-2.110e+04	1047.39	1.56e-03	0.0	15.0	-6202.68	307.61	-14.98	-1871.65	1047.39	-1.648e+04
35	2	-389.49	1237.92	2.76e-03	0.0	0.0	-1.014e+04	-351.46	-14.24	-1487.98	1237.92	-389.49
		-5660.91	990.67	1.40e-03	0.0	15.0	-1.008e+04	-351.46	-14.24	-1487.98	990.67	-5660.91
35	3	-1953.23	708.30	1.76e-03	0.0	0.0	-5647.15	-138.78	-8.36	-797.86	708.30	-1953.23
		-4034.60	564.03	9.27e-04	0.0	15.0	-5602.15	-138.78	-8.36	-797.86	564.03	-4034.60
35	4	-2.89	996.02	2.18e-03	0.0	0.0	-8185.02	-293.96	-11.42	-1206.82	996.02	-2.89
		-4411.96	797.59	1.10e-03	0.0	15.0	-8140.02	-293.96	-11.42	-1206.82	797.59	-4411.96
35	5	-1866.55	721.09	1.78e-03	0.0	0.0	-5759.94	-145.68	-8.49	-816.03	721.09	-1866.55
		-4051.37	574.41	9.35e-04	0.0	15.0	-5714.94	-145.68	-8.49	-816.03	574.41	-4051.37
35	6	-566.32	912.90	2.06e-03	0.0	0.0	-7451.86	-249.13	-10.53	-1088.67	912.90	-566.32
		-4302.94	730.12	1.05e-03	0.0	15.0	-7406.86	-249.13	-10.53	-1088.67	730.12	-4302.94
35	7	-1866.55	721.09	1.78e-03	0.0	0.0	-5759.94	-145.68	-8.49	-816.03	721.09	-1866.55
		-4051.37	574.41	9.35e-04	0.0	15.0	-5714.94	-145.68	-8.49	-816.03	574.41	-4051.37
35	8	-956.39	855.36	1.98e-03	0.0	0.0	-6944.29	-218.10	-9.92	-1006.88	855.36	-956.39
		-4227.47	683.40	1.02e-03	0.0	15.0	-6899.29	-218.10	-9.92	-1006.88	683.40	-4227.47
35	9	-1866.55	721.09	1.78e-03	0.0	0.0	-5759.94	-145.68	-8.49	-816.03	721.09	-1866.55
		-4051.37	574.41	9.35e-04	0.0	15.0	-5714.94	-145.68	-8.49	-816.03	574.41	-4051.37
35	10	-1086.41	836.18	1.95e-03	0.0	0.0	-6775.09	-207.75	-9.72	-979.62	836.18	-1086.41
		-4202.32	667.83	1.00e-03	0.0	15.0	-6730.09	-207.75	-9.72	-979.62	667.83	-4202.32
36	2	2747.78	895.53	5.44e-03	0.0	0.0	-4532.68	-96.93	-13.04	-1998.23	895.53	2747.78
		1294.85	680.05	3.36e-03	0.0	15.0	-4474.18	-96.93	-13.04	-1998.23	680.05	1294.85
36	3	1478.19	511.39	2.75e-03	0.0	0.0	-2455.90	-52.13	-7.59	-1142.31	511.39	1478.19
		696.68	386.55	2.03e-03	0.0	15.0	-2410.90	-52.13	-7.59	-1142.31	386.55	696.68
36	5	1511.50	520.69	2.82e-03	0.0	0.0	-2509.93	-53.31	-7.72	-1163.01	520.69	1511.50
		712.37	393.71	2.06e-03	0.0	15.0	-2464.93	-53.31	-7.72	-1163.01	393.71	712.37
36	6	2011.18	660.24	3.95e-03	0.0	0.0	-3320.42	-70.94	-9.64	-1473.42	660.24	2011.18
		947.76	501.09	2.50e-03	0.0	15.0	-3275.42	-70.94	-9.64	-1473.42	501.09	947.76
36	7	1511.50	520.69	2.82e-03	0.0	0.0	-2509.93	-53.31	-7.72	-1163.01	520.69	1511.50
		712.37	393.71	2.06e-03	0.0	15.0	-2464.93	-53.31	-7.72	-1163.01	393.71	712.37
36	8	1861.28	618.38	3.61e-03	0.0	0.0	-3077.27	-65.65	-9.06	-1380.30	618.38	1861.28
		877.14	468.88	2.37e-03	0.0	15.0	-3032.27	-65.65	-9.06	-1380.30	468.88	877.14
36	9	1511.50	520.69	2.82e-03	0.0	0.0	-2509.93	-53.31	-7.72	-1163.01	520.69	1511.50
		712.37	393.71	2.06e-03	0.0	15.0	-2464.93	-53.31	-7.72	-1163.01	393.71	712.37
36	10	1811.31	604.42	3.50e-03	0.0	0.0	-2996.23	-63.89	-8.87	-1349.26	604.42	1811.31
		853.60	458.14	2.32e-03	0.0	15.0	-2951.23	-63.89	-8.87	-1349.26	458.14	853.60
37	2	-7.552e+04	2537.23	3.11e-04	0.0	0.0	-2.400e+04	611.21	-11.74	-403.82	2537.23	-8.469e+04
		-8.469e+04	2254.29	1.13e-03	0.0	15.0	-2.394e+04	611.21	-11.74	-403.82	2254.29	-7.552e+04
37	3	-3.977e+04	1501.28	2.46e-04	0.0	0.0	-1.415e+04	324.41	-8.45	-153.73	1501.28	-4.464e+04
		-4.464e+04	1311.37	7.27e-04	0.0	15.0	-1.411e+04	324.41	-8.45	-153.73	1311.37	-3.977e+04
37	5	-4.073e+04	1524.90	2.45e-04	0.0	0.0	-1.438e+04	332.05	-8.48	-161.96	1524.90	-4.572e+04
		-4.572e+04	1333.53	7.35e-04	0.0	15.0	-1.433e+04	332.05	-8.48	-161.96	1333.53	-4.073e+04
37	6	-5.514e+04	1879.06	2.41e-04	0.0	0.0	-1.777e+04	446.65	-8.94	-285.32	1879.06	-6.184e+04
		-6.184e+04	1665.89	8.45e-04	0.0	15.0	-1.772e+04	446.65	-8.94	-285.32	1665.89	-5.514e+04
37	7	-4.073e+04	1524.90	2.45e-04	0.0	0.0	-1.438e+04	332.05	-8.48	-161.96	1524.90	-4.572e+04
		-4.572e+04	1333.53	7.35e-04	0.0	15.0	-1.433e+04	332.05	-8.48	-161.96	1333.53	-4.073e+04
37	8	-5.082e+04	1772.81	2.42e-04	0.0	0.0	-1.675e+04	412.27	-8.80	-248.31	1772.81	-5.700e+04
		-5.700e+04	1566.18	8.12e-04	0.0	15.0	-1.671e+04	412.27	-8.80	-248.31	1566.18	-5.082e+04

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

37	9	-4.073e+04	1524.90	2.45e-04	0.0	0.0	-1.438e+04	332.05	-8.48	-161.96	1524.90	-4.572e+04
		-4.572e+04	1333.53	7.35e-04	0.0	15.0	-1.433e+04	332.05	-8.48	-161.96	1333.53	-4.073e+04
37	10	-4.938e+04	1737.40	2.42e-04	0.0	0.0	-1.641e+04	400.81	-8.75	-235.97	1737.40	-5.539e+04
		-5.539e+04	1532.95	8.01e-04	0.0	15.0	-1.637e+04	400.81	-8.75	-235.97	1532.95	-4.938e+04
38	2	-2.476e+04	4618.89	8.41e-04	0.0	0.0	-2.502e+04	827.63	-11.82	-924.13	4618.89	-3.718e+04
		-3.718e+04	4332.94	1.71e-03	0.0	15.0	-2.496e+04	827.63	-11.82	-924.13	4332.94	-2.476e+04
38	3	-1.314e+04	2828.11	4.59e-04	0.0	0.0	-1.473e+04	543.81	-6.76	-527.88	2828.11	-2.129e+04
		-2.129e+04	2661.95	1.04e-03	0.0	15.0	-1.468e+04	543.81	-6.76	-527.88	2661.95	-1.314e+04
38	5	-1.345e+04	2866.11	4.69e-04	0.0	0.0	-1.496e+04	548.67	-6.89	-537.47	2866.11	-2.168e+04
		-2.168e+04	2697.13	1.05e-03	0.0	15.0	-1.492e+04	548.67	-6.89	-537.47	2697.13	-1.345e+04
38	6	-1.809e+04	3436.08	6.17e-04	0.0	0.0	-1.852e+04	621.67	-8.72	-681.36	3436.08	-2.742e+04
		-2.742e+04	3224.79	1.27e-03	0.0	15.0	-1.847e+04	621.67	-8.72	-681.36	3224.79	-1.809e+04
38	7	-1.345e+04	2866.11	4.69e-04	0.0	0.0	-1.496e+04	548.67	-6.89	-537.47	2866.11	-2.168e+04
		-2.168e+04	2697.13	1.05e-03	0.0	15.0	-1.492e+04	548.67	-6.89	-537.47	2697.13	-1.345e+04
38	8	-1.670e+04	3265.09	5.72e-04	0.0	0.0	-1.745e+04	599.77	-8.17	-638.19	3265.09	-2.570e+04
		-2.570e+04	3066.49	1.20e-03	0.0	15.0	-1.741e+04	599.77	-8.17	-638.19	3066.49	-1.670e+04
38	9	-1.345e+04	2866.11	4.69e-04	0.0	0.0	-1.496e+04	548.67	-6.89	-537.47	2866.11	-2.168e+04
		-2.168e+04	2697.13	1.05e-03	0.0	15.0	-1.492e+04	548.67	-6.89	-537.47	2697.13	-1.345e+04
38	10	-1.623e+04	3208.09	5.57e-04	0.0	0.0	-1.710e+04	592.47	-7.99	-623.80	3208.09	-2.512e+04
		-2.512e+04	3013.73	1.18e-03	0.0	15.0	-1.705e+04	592.47	-7.99	-623.80	3013.73	-1.623e+04
40	1	4672.23	-34.44	-4.68e-04	0.0	0.0	-3631.52	111.79	-1.51	-1215.70	-34.44	2995.43
		2995.43	-56.70	1.03e-03	0.0	15.0	-3573.02	111.79	-1.51	-1215.70	-56.70	4672.23
40	2	5169.48	13.90	-7.80e-04	0.0	0.0	-4951.42	124.37	-2.15	-1595.42	13.90	3304.06
		3304.06	-18.86	1.22e-03	0.0	15.0	-4892.92	124.37	-2.15	-1595.42	-18.86	5169.48
40	3	3554.92	-30.30	-3.36e-04	0.0	0.0	-2689.69	85.00	-1.12	-905.29	-30.30	2279.91
		2279.91	-46.59	7.78e-04	0.0	15.0	-2644.69	85.00	-1.12	-905.29	-46.59	3554.92
40	4	4052.18	18.05	-6.47e-04	0.0	0.0	-4009.59	97.58	-1.75	-1285.02	18.05	2588.53
		2588.53	-8.75	9.72e-04	0.0	15.0	-3964.59	97.58	-1.75	-1285.02	-8.75	4052.18
40	5	3577.02	-28.15	-3.50e-04	0.0	0.0	-2748.35	85.56	-1.14	-922.17	-28.15	2293.63
		2293.63	-44.91	7.86e-04	0.0	15.0	-2703.35	85.56	-1.14	-922.17	-44.91	3577.02
40	6	3908.52	4.08	-5.57e-04	0.0	0.0	-3628.29	93.95	-1.56	-1175.32	4.08	2499.38
		2499.38	-19.68	9.16e-04	0.0	15.0	-3583.29	93.95	-1.56	-1175.32	-19.68	3908.52
40	7	3577.02	-28.15	-3.50e-04	0.0	0.0	-2748.35	85.56	-1.14	-922.17	-28.15	2293.63
		2293.63	-44.91	7.86e-04	0.0	15.0	-2703.35	85.56	-1.14	-922.17	-44.91	3577.02
40	8	3809.07	-5.59	-4.95e-04	0.0	0.0	-3364.31	91.43	-1.44	-1099.37	-5.59	2477.65
		2477.65	-27.25	8.77e-04	0.0	15.0	-3319.31	91.43	-1.44	-1099.37	-27.25	3809.07
40	9	3577.02	-28.15	-3.50e-04	0.0	0.0	-2748.35	85.56	-1.14	-922.17	-28.15	2293.63
		2293.63	-44.91	7.86e-04	0.0	15.0	-2703.35	85.56	-1.14	-922.17	-44.91	3577.02
40	10	3775.92	-8.81	-4.74e-04	0.0	0.0	-3276.31	90.60	-1.40	-1074.06	-8.81	2417.08
		2417.08	-29.77	8.64e-04	0.0	15.0	-3231.31	90.60	-1.40	-1074.06	-29.77	3775.92
41	2	0.32	30.00	3.81e-03	0.0	0.0	388.87	-1218.10	-4.22	93.76	30.00	0.32
		-1.827e+04	-54.85	1.13e-03	0.0	15.0	447.37	-1218.10	-4.22	93.76	-54.85	-1.827e+04
41	3	0.20	18.41	2.37e-03	0.0	0.0	256.28	-762.67	-2.83	58.88	18.41	0.20
		-1.144e+04	-39.35	7.63e-04	0.0	15.0	301.28	-762.67	-2.83	58.88	-39.35	-1.144e+04
41	5	0.20	18.66	2.40e-03	0.0	0.0	258.53	-771.81	-2.85	59.57	18.66	0.20
		-1.158e+04	-39.50	7.69e-04	0.0	15.0	303.53	-771.81	-2.85	59.57	-39.50	-1.158e+04
41	6	0.24	22.32	2.84e-03	0.0	0.0	292.22	-908.88	-3.18	69.99	22.32	0.24
		-1.363e+04	-41.74	8.52e-04	0.0	15.0	337.22	-908.88	-3.18	69.99	-41.74	-1.363e+04
41	7	0.20	18.66	2.40e-03	0.0	0.0	258.53	-771.81	-2.85	59.57	18.66	0.20
		-1.158e+04	-39.50	7.69e-04	0.0	15.0	303.53	-771.81	-2.85	59.57	-39.50	-1.158e+04
41	8	0.23	21.22	2.71e-03	0.0	0.0	282.11	-867.76	-3.08	66.86	21.22	0.23
		-1.302e+04	-41.06	8.27e-04	0.0	15.0	327.11	-867.76	-3.08	66.86	-41.06	-1.302e+04
41	9	0.20	18.66	2.40e-03	0.0	0.0	258.53	-771.81	-2.85	59.57	18.66	0.20
		-1.158e+04	-39.50	7.69e-04	0.0	15.0	303.53	-771.81	-2.85	59.57	-39.50	-1.158e+04
41	10	0.23	20.86	2.66e-03	0.0	0.0	278.74	-854.05	-3.05	65.82	20.86	0.23
		-1.281e+04	-40.84	8.19e-04	0.0	15.0	323.74	-854.05	-3.05	65.82	-40.84	-1.281e+04
42	2	-8702.14	298.06	6.56e-04	0.0	0.0	-4877.45	-310.80	-4.81	-2370.78	298.06	-8702.14
		-1.336e+04	220.66	1.92e-03	0.0	15.0	-4818.95	-310.80	-4.81	-2370.78	220.66	-1.336e+04
42	3	-5015.58	178.87	3.81e-04	0.0	0.0	-2649.55	-179.04	-2.92	-1349.80	178.87	-5015.58
		-7701.10	131.81	1.17e-03	0.0	15.0	-2604.55	-179.04	-2.92	-1349.80	131.81	-7701.10
42	5	-5103.56	181.51	3.87e-04	0.0	0.0	-2707.34	-182.19	-2.96	-1374.64	181.51	-5103.56
		-7836.28	133.80	1.19e-03	0.0	15.0	-2662.34	-182.19	-2.96	-1374.64	133.80	-7836.28
42	6	-6423.25	221.15	4.85e-04	0.0	0.0	-3574.09	-229.39	-3.58	-1747.25	221.15	-6423.25
		-9864.05	163.62	1.43e-03	0.0	15.0	-3529.09	-229.39	-3.58	-1747.25	163.62	-9864.05
42	7	-5103.56	181.51	3.87e-04	0.0	0.0	-2707.34	-182.19	-2.96	-1374.64	181.51	-5103.56
		-7836.28	133.80	1.19e-03	0.0	15.0	-2662.34	-182.19	-2.96	-1374.64	133.80	-7836.28

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

42	8	-6027.34	209.26	4.55e-04	0.0	0.0	-3314.06	-215.23	-3.39	-1635.47	209.26	-6027.34
		-9255.72	154.67	1.36e-03	0.0	15.0	-3269.06	-215.23	-3.39	-1635.47	154.67	-9255.72
42	9	-5103.56	181.51	3.87e-04	0.0	0.0	-2707.34	-182.19	-2.96	-1374.64	181.51	-5103.56
		-7836.28	133.80	1.19e-03	0.0	15.0	-2662.34	-182.19	-2.96	-1374.64	133.80	-7836.28
42	10	-5895.37	205.29	4.46e-04	0.0	0.0	-3227.39	-210.51	-3.33	-1598.21	205.29	-5895.37
		-9052.94	151.69	1.33e-03	0.0	15.0	-3182.39	-210.51	-3.33	-1598.21	151.69	-9052.94
44	2	2.087e+04	622.85	4.50e-03	0.0	0.0	-4578.74	485.68	-9.46	-3904.38	622.85	1.358e+04
		1.358e+04	470.93	3.62e-03	0.0	15.0	-4520.24	485.68	-9.46	-3904.38	470.93	2.087e+04
44	3	1.124e+04	338.73	2.43e-03	0.0	0.0	-2485.10	261.66	-5.38	-2232.28	338.73	7319.22
		7319.22	252.76	2.15e-03	0.0	15.0	-2440.10	261.66	-5.38	-2232.28	252.76	1.124e+04
44	5	1.150e+04	346.09	2.49e-03	0.0	0.0	-2539.46	267.53	-5.48	-2272.70	346.09	7483.14
		7483.14	258.50	2.18e-03	0.0	15.0	-2494.46	267.53	-5.48	-2272.70	258.50	1.150e+04
44	6	1.528e+04	456.47	3.30e-03	0.0	0.0	-3354.85	355.54	-6.97	-2879.00	456.47	9942.02
		9942.02	344.59	2.68e-03	0.0	15.0	-3309.85	355.54	-6.97	-2879.00	344.59	1.528e+04
44	7	1.150e+04	346.09	2.49e-03	0.0	0.0	-2539.46	267.53	-5.48	-2272.70	346.09	7483.14
		7483.14	258.50	2.18e-03	0.0	15.0	-2494.46	267.53	-5.48	-2272.70	258.50	1.150e+04
44	8	1.414e+04	423.36	3.05e-03	0.0	0.0	-3110.23	329.14	-6.52	-2697.11	423.36	9204.35
		9204.35	318.76	2.53e-03	0.0	15.0	-3065.23	329.14	-6.52	-2697.11	318.76	1.414e+04
44	9	1.150e+04	346.09	2.49e-03	0.0	0.0	-2539.46	267.53	-5.48	-2272.70	346.09	7483.14
		7483.14	258.50	2.18e-03	0.0	15.0	-2494.46	267.53	-5.48	-2272.70	258.50	1.150e+04
44	10	1.376e+04	412.32	2.97e-03	0.0	0.0	-3028.69	320.34	-6.37	-2636.48	412.32	8958.47
		8958.47	310.15	2.48e-03	0.0	15.0	-2983.69	320.34	-6.37	-2636.48	310.15	1.376e+04
46	2	-2.249e+04	1513.81	4.66e-03	0.0	0.0	-8211.91	44.75	-20.78	-2753.97	1513.81	-2.316e+04
		-2.316e+04	1155.44	2.25e-03	0.0	15.0	-8153.41	44.75	-20.78	-2753.97	1155.44	-2.249e+04
46	3	-1.315e+04	881.09	2.57e-03	0.0	0.0	-4569.09	123.97	-12.23	-1572.41	881.09	-1.501e+04
		-1.501e+04	670.60	1.39e-03	0.0	15.0	-4524.09	123.97	-12.23	-1572.41	670.60	-1.315e+04
46	5	-1.337e+04	895.95	2.63e-03	0.0	0.0	-4660.71	119.27	-12.43	-1601.03	895.95	-1.516e+04
		-1.516e+04	682.04	1.41e-03	0.0	15.0	-4615.71	119.27	-12.43	-1601.03	682.04	-1.337e+04
46	6	-1.663e+04	1118.76	3.42e-03	0.0	0.0	-6034.96	48.87	-15.38	-2030.37	1118.76	-1.736e+04
		-1.736e+04	853.61	1.68e-03	0.0	15.0	-5989.96	48.87	-15.38	-2030.37	853.61	-1.663e+04
46	7	-1.337e+04	895.95	2.63e-03	0.0	0.0	-4660.71	119.27	-12.43	-1601.03	895.95	-1.516e+04
		-1.516e+04	682.04	1.41e-03	0.0	15.0	-4615.71	119.27	-12.43	-1601.03	682.04	-1.337e+04
46	8	-1.565e+04	1051.92	3.18e-03	0.0	0.0	-5622.68	69.99	-14.50	-1901.57	1051.92	-1.670e+04
		-1.670e+04	802.14	1.60e-03	0.0	15.0	-5577.68	69.99	-14.50	-1901.57	802.14	-1.565e+04
46	9	-1.337e+04	895.95	2.63e-03	0.0	0.0	-4660.71	119.27	-12.43	-1601.03	895.95	-1.516e+04
		-1.516e+04	682.04	1.41e-03	0.0	15.0	-4615.71	119.27	-12.43	-1601.03	682.04	-1.337e+04
46	10	-1.533e+04	1029.64	3.10e-03	0.0	0.0	-5485.26	77.03	-14.20	-1858.63	1029.64	-1.648e+04
		-1.648e+04	784.98	1.57e-03	0.0	15.0	-5440.26	77.03	-14.20	-1858.63	784.98	-1.533e+04
47	2	-5.919e+04	2205.07	-8.02e-05	0.0	0.0	-2.209e+04	1089.20	-17.83	-745.67	2205.07	-7.552e+04
		-7.552e+04	1867.33	1.15e-03	0.0	15.0	-2.203e+04	1089.20	-17.83	-745.67	1867.33	-5.919e+04
47	3	-3.130e+04	1282.60	4.51e-05	0.0	0.0	-1.299e+04	564.73	-11.60	-365.52	1282.60	-3.977e+04
		-3.977e+04	1068.90	7.38e-04	0.0	15.0	-1.294e+04	564.73	-11.60	-365.52	1068.90	-3.130e+04
47	5	-3.205e+04	1304.29	4.14e-05	0.0	0.0	-1.320e+04	579.05	-11.71	-376.42	1304.29	-4.073e+04
		-4.073e+04	1088.17	7.46e-04	0.0	15.0	-1.315e+04	579.05	-11.71	-376.42	1088.17	-3.205e+04
47	6	-4.323e+04	1629.50	-4.52e-05	0.0	0.0	-1.635e+04	793.79	-13.37	-540.03	1629.50	-5.514e+04
		-5.514e+04	1377.13	8.59e-04	0.0	15.0	-1.630e+04	793.79	-13.37	-540.03	1377.13	-4.323e+04
47	7	-3.205e+04	1304.29	4.14e-05	0.0	0.0	-1.320e+04	579.05	-11.71	-376.42	1304.29	-4.073e+04
		-4.073e+04	1088.17	7.46e-04	0.0	15.0	-1.315e+04	579.05	-11.71	-376.42	1088.17	-3.205e+04
47	8	-3.988e+04	1531.93	-2.11e-05	0.0	0.0	-1.540e+04	729.37	-12.88	-490.95	1531.93	-5.082e+04
		-5.082e+04	1290.44	8.25e-04	0.0	15.0	-1.536e+04	729.37	-12.88	-490.95	1290.44	-3.988e+04
47	9	-3.205e+04	1304.29	4.14e-05	0.0	0.0	-1.320e+04	579.05	-11.71	-376.42	1304.29	-4.073e+04
		-4.073e+04	1088.17	7.46e-04	0.0	15.0	-1.315e+04	579.05	-11.71	-376.42	1088.17	-3.205e+04
47	10	-3.876e+04	1499.41	1.84e-05	0.0	0.0	-1.509e+04	707.90	-12.71	-474.59	1499.41	-4.938e+04
		-4.938e+04	1261.55	8.14e-04	0.0	15.0	-1.504e+04	707.90	-12.71	-474.59	1261.55	-3.876e+04
48	2	-1.732e+04	3966.74	7.63e-04	0.0	0.0	-2.261e+04	496.06	-25.23	-1383.65	3966.74	-2.476e+04
		-2.476e+04	3461.83	1.74e-03	0.0	15.0	-2.255e+04	496.06	-25.23	-1383.65	3461.83	-1.732e+04
48	3	-8824.85	2433.68	4.26e-04	0.0	0.0	-1.327e+04	287.40	-15.32	-788.64	2433.68	-1.314e+04
		-1.314e+04	2125.62	1.06e-03	0.0	15.0	-1.323e+04	287.40	-15.32	-788.64	2125.62	-8824.85
48	5	-9060.61	2466.06	4.34e-04	0.0	0.0	-1.349e+04	292.34	-15.53	-803.09	2466.06	-1.345e+04
		-1.345e+04	2153.79	1.07e-03	0.0	15.0	-1.344e+04	292.34	-15.53	-803.09	2153.79	-9060.61
48	6	-1.260e+04	2951.72	5.61e-04	0.0	0.0	-1.673e+04	366.39	-18.75	-1019.88	2951.72	-1.809e+04
		-1.809e+04	2576.28	1.30e-03	0.0	15.0	-1.668e+04	366.39	-18.75	-1019.88	2576.28	-1.260e+04
48	7	-9060.61	2466.06	4.34e-04	0.0	0.0	-1.349e+04	292.34	-15.53	-803.09	2466.06	-1.345e+04
		-1.345e+04	2153.79	1.07e-03	0.0	15.0	-1.344e+04	292.34	-15.53	-803.09	2153.79	-9060.61
48	8	-1.154e+04	2806.02	5.23e-04	0.0	0.0	-1.576e+04	344.18	-17.78	-954.84	2806.02	-1.670e+04
		-1.670e+04	2449.53	1.23e-03	0.0	15.0	-1.571e+04	344.18	-17.78	-954.84	2449.53	-1.154e+04

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

48	9	-9060.61	2466.06	4.34e-04	0.0	0.0	-1.349e+04	292.34	-15.53	-803.09	2466.06	-1.345e+04
		-1.345e+04	2153.79	1.07e-03	0.0	15.0	-1.344e+04	292.34	-15.53	-803.09	2153.79	-9060.61
48	10	-1.118e+04	2757.46	5.10e-04	0.0	0.0	-1.543e+04	336.77	-17.46	-933.16	2757.46	-1.623e+04
		-1.623e+04	2407.28	1.21e-03	0.0	15.0	-1.539e+04	336.77	-17.46	-933.16	2407.28	-1.118e+04
49	2	-5659.96	976.10	2.77e-03	0.0	0.0	-8742.79	-751.69	-13.31	-1461.08	976.10	-5659.96
		-1.693e+04	750.15	1.41e-03	0.0	15.0	-8684.29	-751.69	-13.31	-1461.08	750.15	-1.693e+04
49	3	-4033.99	555.84	1.77e-03	0.0	0.0	-4834.20	-361.82	-7.80	-781.55	555.84	-4033.99
		-9460.95	424.00	9.31e-04	0.0	15.0	-4789.20	-361.82	-7.80	-781.55	424.00	-9460.95
49	5	-4050.76	566.06	1.79e-03	0.0	0.0	-4933.33	-373.16	-7.93	-799.49	566.06	-4050.76
		-9647.87	432.02	9.39e-04	0.0	15.0	-4888.33	-373.16	-7.93	-799.49	432.02	-9647.87
49	6	-4302.23	719.39	2.08e-03	0.0	0.0	-6420.22	-543.32	-9.84	-1068.69	719.39	-4302.23
		-1.245e+04	552.36	1.06e-03	0.0	15.0	-6375.22	-543.32	-9.84	-1068.69	552.36	-1.245e+04
49	7	-4050.76	566.06	1.79e-03	0.0	0.0	-4933.33	-373.16	-7.93	-799.49	566.06	-4050.76
		-9647.87	432.02	9.39e-04	0.0	15.0	-4888.33	-373.16	-7.93	-799.49	432.02	-9647.87
49	8	-4226.79	673.39	1.99e-03	0.0	0.0	-5974.15	-492.27	-9.27	-987.93	673.39	-4226.79
		-1.161e+04	516.26	1.02e-03	0.0	15.0	-5929.15	-492.27	-9.27	-987.93	516.26	-1.161e+04
49	9	-4050.76	566.06	1.79e-03	0.0	0.0	-4933.33	-373.16	-7.93	-799.49	566.06	-4050.76
		-9647.87	432.02	9.39e-04	0.0	15.0	-4888.33	-373.16	-7.93	-799.49	432.02	-9647.87
49	10	-4201.64	658.06	1.96e-03	0.0	0.0	-5825.46	-475.26	-9.08	-961.01	658.06	-4201.64
		-1.133e+04	504.22	1.01e-03	0.0	15.0	-5780.46	-475.26	-9.08	-961.01	504.22	-1.133e+04
50	2	1296.77	667.79	5.44e-03	0.0	0.0	-3874.77	-86.64	-13.09	-1378.37	667.79	1296.77
		-1.91	444.87	3.37e-03	0.0	15.0	-3816.27	-86.64	-13.09	-1378.37	444.87	-1.91
50	3	697.64	379.71	2.75e-03	0.0	0.0	-2069.15	-46.61	-7.58	-787.80	379.71	697.64
		-0.97	251.24	2.03e-03	0.0	15.0	-2024.15	-46.61	-7.58	-787.80	251.24	-0.97
50	5	713.36	386.73	2.82e-03	0.0	0.0	-2116.92	-47.66	-7.71	-802.08	386.73	713.36
		-0.99	256.01	2.06e-03	0.0	15.0	-2071.92	-47.66	-7.71	-802.08	256.01	-0.99
50	6	949.15	492.08	3.95e-03	0.0	0.0	-2833.58	-63.42	-9.67	-1016.34	492.08	949.15
		-1.39	327.54	2.50e-03	0.0	15.0	-2788.58	-63.42	-9.67	-1016.34	327.54	-1.39
50	7	713.36	386.73	2.82e-03	0.0	0.0	-2116.92	-47.66	-7.71	-802.08	386.73	713.36
		-0.99	256.01	2.06e-03	0.0	15.0	-2071.92	-47.66	-7.71	-802.08	256.01	-0.99
50	8	878.41	460.47	3.61e-03	0.0	0.0	-2618.58	-58.69	-9.08	-952.06	460.47	878.41
		-1.27	306.08	2.37e-03	0.0	15.0	-2573.58	-58.69	-9.08	-952.06	306.08	-1.27
50	9	713.36	386.73	2.82e-03	0.0	0.0	-2116.92	-47.66	-7.71	-802.08	386.73	713.36
		-0.99	256.01	2.06e-03	0.0	15.0	-2071.92	-47.66	-7.71	-802.08	256.01	-0.99
50	10	854.83	449.94	3.50e-03	0.0	0.0	-2546.92	-57.11	-8.88	-930.63	449.94	854.83
		-1.23	298.92	2.33e-03	0.0	15.0	-2501.92	-57.11	-8.88	-930.63	298.92	-1.23
51	2	-1.827e+04	-72.71	3.80e-03	0.0	0.0	887.28	-1877.11	-9.87	297.19	-72.71	-1.827e+04
		-4.643e+04	-258.49	1.13e-03	0.0	15.0	945.78	-1877.11	-9.87	297.19	-258.49	-4.643e+04
51	3	-1.144e+04	-51.88	2.37e-03	0.0	0.0	561.19	-1214.82	-6.52	187.57	-51.88	-1.144e+04
		-2.966e+04	-176.18	7.63e-04	0.0	15.0	606.19	-1214.82	-6.52	187.57	-176.18	-2.966e+04
51	5	-1.158e+04	-52.09	2.40e-03	0.0	0.0	567.55	-1226.83	-6.58	189.72	-52.09	-1.158e+04
		-2.998e+04	-177.37	7.69e-04	0.0	15.0	612.55	-1226.83	-6.58	189.72	-177.37	-2.998e+04
51	6	-1.363e+04	-55.28	2.83e-03	0.0	0.0	662.95	-1406.98	-7.42	221.99	-55.28	-1.363e+04
		-3.474e+04	-195.19	8.52e-04	0.0	15.0	707.95	-1406.98	-7.42	221.99	-195.19	-3.474e+04
51	7	-1.158e+04	-52.09	2.40e-03	0.0	0.0	567.55	-1226.83	-6.58	189.72	-52.09	-1.158e+04
		-2.998e+04	-177.37	7.69e-04	0.0	15.0	612.55	-1226.83	-6.58	189.72	-177.37	-2.998e+04
51	8	-1.302e+04	-54.32	2.70e-03	0.0	0.0	634.33	-1352.93	-7.17	212.31	-54.32	-1.302e+04
		-3.331e+04	-189.84	8.27e-04	0.0	15.0	679.33	-1352.93	-7.17	212.31	-189.84	-3.331e+04
51	9	-1.158e+04	-52.09	2.40e-03	0.0	0.0	567.55	-1226.83	-6.58	189.72	-52.09	-1.158e+04
		-2.998e+04	-177.37	7.69e-04	0.0	15.0	612.55	-1226.83	-6.58	189.72	-177.37	-2.998e+04
51	10	-1.281e+04	-54.00	2.66e-03	0.0	0.0	624.79	-1334.92	-7.08	209.08	-54.00	-1.281e+04
		-3.283e+04	-188.06	8.19e-04	0.0	15.0	669.79	-1334.92	-7.08	209.08	-188.06	-3.283e+04
53	1	6850.70	-56.40	-4.51e-04	0.0	0.0	-3170.05	145.25	-1.34	-1157.11	-56.40	4672.07
		4672.07	-75.73	1.03e-03	0.0	15.0	-3111.55	145.25	-1.34	-1157.11	-75.73	6850.70
53	2	7590.76	-19.11	-7.61e-04	0.0	0.0	-4391.39	161.45	-1.96	-1518.19	-19.11	5169.22
		5169.22	-48.86	1.22e-03	0.0	15.0	-4332.89	161.45	-1.96	-1518.19	-48.86	7590.76
53	3	5211.58	-46.31	-3.23e-04	0.0	0.0	-2342.46	110.46	-0.98	-861.69	-46.31	3554.81
		3554.81	-60.36	7.77e-04	0.0	15.0	-2297.46	110.46	-0.98	-861.69	-60.36	5211.58
53	4	5951.64	-9.02	-6.32e-04	0.0	0.0	-3563.81	126.65	-1.60	-1222.77	-9.02	4051.95
		4051.95	-33.49	9.72e-04	0.0	15.0	-3518.81	126.65	-1.60	-1222.77	-33.49	5951.64
53	5	5244.47	-44.66	-3.36e-04	0.0	0.0	-2396.74	111.17	-1.01	-877.74	-44.66	3576.90
		3576.90	-59.17	7.86e-04	0.0	15.0	-2351.74	111.17	-1.01	-877.74	-59.17	5244.47
53	6	5737.84	-19.80	-5.43e-04	0.0	0.0	-3210.97	121.97	-1.42	-1118.46	-19.80	3908.33
		3908.33	-41.26	9.16e-04	0.0	15.0	-3165.97	121.97	-1.42	-1118.46	-41.26	5737.84
53	7	5244.47	-44.66	-3.36e-04	0.0	0.0	-2396.74	111.17	-1.01	-877.74	-44.66	3576.90
		3576.90	-59.17	7.86e-04	0.0	15.0	-2351.74	111.17	-1.01	-877.74	-59.17	5244.47

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

53	8	5589.83	-27.25	-4.81e-04	0.0	0.0	-2966.70	118.73	-1.30	-1046.24	-27.25	3808.90
		3808.90	-46.63	8.77e-04	0.0	15.0	-2921.70	118.73	-1.30	-1046.24	-46.63	5589.83
53	9	5244.47	-44.66	-3.36e-04	0.0	0.0	-2396.74	111.17	-1.01	-877.74	-44.66	3576.90
		3576.90	-59.17	7.86e-04	0.0	15.0	-2351.74	111.17	-1.01	-877.74	-59.17	5244.47
53	10	5540.49	-29.74	-4.60e-04	0.0	0.0	-2885.28	117.65	-1.25	-1022.17	-29.74	3775.76
		3775.76	-48.42	8.64e-04	0.0	15.0	-2840.28	117.65	-1.25	-1022.17	-48.42	5540.49
55	2	-1.336e+04	217.82	6.07e-04	0.0	0.0	-4305.66	-405.58	-4.67	-2253.57	217.82	-1.336e+04
		-1.945e+04	141.87	1.92e-03	0.0	15.0	-4247.16	-405.58	-4.67	-2253.57	141.87	-1.945e+04
55	3	-7700.98	130.08	3.52e-04	0.0	0.0	-2296.74	-233.65	-2.83	-1283.17	130.08	-7700.98
		-1.121e+04	83.98	1.17e-03	0.0	15.0	-2251.74	-233.65	-2.83	-1283.17	83.98	-1.121e+04
55	5	-7836.16	132.05	3.58e-04	0.0	0.0	-2349.96	-237.76	-2.87	-1306.77	132.05	-7836.16
		-1.140e+04	85.30	1.19e-03	0.0	15.0	-2304.96	-237.76	-2.87	-1306.77	85.30	-1.140e+04
55	6	-9863.89	161.51	4.48e-04	0.0	0.0	-3148.29	-299.35	-3.47	-1660.88	161.51	-9863.89
		-1.435e+04	105.08	1.43e-03	0.0	15.0	-3103.29	-299.35	-3.47	-1660.88	105.08	-1.435e+04
55	7	-7836.16	132.05	3.58e-04	0.0	0.0	-2349.96	-237.76	-2.87	-1306.77	132.05	-7836.16
		-1.140e+04	85.30	1.19e-03	0.0	15.0	-2304.96	-237.76	-2.87	-1306.77	85.30	-1.140e+04
55	8	-9255.57	152.67	4.21e-04	0.0	0.0	-2908.79	-280.87	-3.29	-1554.65	152.67	-9255.57
		-1.347e+04	99.14	1.36e-03	0.0	15.0	-2863.79	-280.87	-3.29	-1554.65	99.14	-1.347e+04
55	9	-7836.16	132.05	3.58e-04	0.0	0.0	-2349.96	-237.76	-2.87	-1306.77	132.05	-7836.16
		-1.140e+04	85.30	1.19e-03	0.0	15.0	-2304.96	-237.76	-2.87	-1306.77	85.30	-1.140e+04
55	10	-9052.80	149.72	4.12e-04	0.0	0.0	-2828.96	-274.71	-3.23	-1519.24	149.72	-9052.80
		-1.317e+04	97.17	1.33e-03	0.0	15.0	-2783.96	-274.71	-3.23	-1519.24	97.17	-1.317e+04
59	2	-4.286e+04	1836.28	-3.45e-04	0.0	0.0	-2.080e+04	1088.52	-17.44	-1003.58	1836.28	-5.919e+04
		-5.919e+04	1524.28	1.16e-03	0.0	15.0	-2.074e+04	1088.52	-17.44	-1003.58	1524.28	-4.286e+04
59	3	-2.279e+04	1051.56	-9.98e-05	0.0	0.0	-1.220e+04	567.64	-11.05	-524.59	1051.56	-3.130e+04
		-3.130e+04	858.01	7.46e-04	0.0	15.0	-1.216e+04	567.64	-11.05	-524.59	858.01	-2.279e+04
59	5	-2.332e+04	1070.48	-1.08e-04	0.0	0.0	-1.240e+04	581.78	-11.18	-537.56	1070.48	-3.205e+04
		-3.205e+04	874.50	7.54e-04	0.0	15.0	-1.236e+04	581.78	-11.18	-537.56	874.50	-2.332e+04
59	6	-3.133e+04	1354.30	-2.39e-04	0.0	0.0	-1.539e+04	793.82	-13.04	-732.08	1354.30	-4.323e+04
		-4.323e+04	1121.80	8.70e-04	0.0	15.0	-1.534e+04	793.82	-13.04	-732.08	1121.80	-3.133e+04
59	7	-2.332e+04	1070.48	-1.08e-04	0.0	0.0	-1.240e+04	581.78	-11.18	-537.56	1070.48	-3.205e+04
		-3.205e+04	874.50	7.54e-04	0.0	15.0	-1.236e+04	581.78	-11.18	-537.56	874.50	-2.332e+04
59	8	-2.893e+04	1269.16	-2.00e-04	0.0	0.0	-1.449e+04	730.21	-12.48	-673.73	1269.16	-3.988e+04
		-3.988e+04	1047.61	8.35e-04	0.0	15.0	-1.445e+04	730.21	-12.48	-673.73	1047.61	-2.893e+04
59	9	-2.332e+04	1070.48	-1.08e-04	0.0	0.0	-1.240e+04	581.78	-11.18	-537.56	1070.48	-3.205e+04
		-3.205e+04	874.50	7.54e-04	0.0	15.0	-1.236e+04	581.78	-11.18	-537.56	874.50	-2.332e+04
59	10	-2.812e+04	1240.77	-1.87e-04	0.0	0.0	-1.419e+04	709.00	-12.29	-654.27	1240.77	-3.876e+04
		-3.876e+04	1022.88	8.24e-04	0.0	15.0	-1.415e+04	709.00	-12.29	-654.27	1022.88	-2.812e+04
60	2	-1.075e+04	3405.12	6.92e-04	0.0	0.0	-2.127e+04	437.75	-26.50	-1709.60	3405.12	-1.732e+04
		-1.732e+04	2914.07	1.77e-03	0.0	15.0	-2.121e+04	437.75	-26.50	-1709.60	2914.07	-1.075e+04
60	3	-5287.62	2090.41	3.92e-04	0.0	0.0	-1.246e+04	235.80	-16.21	-971.46	2090.41	-8824.70
		-8824.70	1789.23	1.08e-03	0.0	15.0	-1.242e+04	235.80	-16.21	-971.46	1789.23	-5287.62
60	5	-5444.02	2118.14	3.99e-04	0.0	0.0	-1.267e+04	241.09	-16.42	-989.47	2118.14	-9060.46
		-9060.46	1812.94	1.09e-03	0.0	15.0	-1.262e+04	241.09	-16.42	-989.47	1812.94	-5444.02
60	6	-7789.92	2534.01	5.10e-04	0.0	0.0	-1.573e+04	320.45	-19.71	-1259.66	2534.01	-1.260e+04
		-1.260e+04	2168.63	1.32e-03	0.0	15.0	-1.569e+04	320.45	-19.71	-1259.66	2168.63	-7789.92
60	7	-5444.02	2118.14	3.99e-04	0.0	0.0	-1.267e+04	241.09	-16.42	-989.47	2118.14	-9060.46
		-9060.46	1812.94	1.09e-03	0.0	15.0	-1.262e+04	241.09	-16.42	-989.47	1812.94	-5444.02
60	8	-7086.15	2409.25	4.76e-04	0.0	0.0	-1.481e+04	296.64	-18.73	-1178.60	2409.25	-1.154e+04
		-1.154e+04	2061.92	1.25e-03	0.0	15.0	-1.477e+04	296.64	-18.73	-1178.60	2061.92	-7086.15
60	9	-5444.02	2118.14	3.99e-04	0.0	0.0	-1.267e+04	241.09	-16.42	-989.47	2118.14	-9060.46
		-9060.46	1812.94	1.09e-03	0.0	15.0	-1.262e+04	241.09	-16.42	-989.47	1812.94	-5444.02
60	10	-6851.56	2367.66	4.65e-04	0.0	0.0	-1.450e+04	288.71	-18.40	-1151.58	2367.66	-1.118e+04
		-1.118e+04	2026.35	1.23e-03	0.0	15.0	-1.446e+04	288.71	-18.40	-1151.58	2026.35	-6851.56
61	2	3.730e+04	6184.78	4.23e-03	0.0	0.0	-1.866e+04	-672.89	-36.58	-1946.01	6184.78	3.730e+04
		2.721e+04	5459.13	3.33e-03	0.0	15.0	-1.861e+04	-672.89	-36.58	-1946.01	5459.13	2.721e+04
61	3	1.837e+04	3550.19	2.31e-03	0.0	0.0	-1.106e+04	-343.86	-21.96	-1134.45	3550.19	1.837e+04
		1.321e+04	3121.23	1.98e-03	0.0	15.0	-1.102e+04	-343.86	-21.96	-1134.45	3121.23	1.321e+04
61	5	1.891e+04	3613.47	2.36e-03	0.0	0.0	-1.123e+04	-352.97	-22.28	-1153.45	3613.47	1.891e+04
		1.361e+04	3177.74	2.01e-03	0.0	15.0	-1.119e+04	-352.97	-22.28	-1153.45	3177.74	1.361e+04
61	6	2.703e+04	4562.79	3.10e-03	0.0	0.0	-1.383e+04	-489.58	-27.14	-1438.47	4562.79	2.703e+04
		1.968e+04	4025.45	2.46e-03	0.0	15.0	-1.378e+04	-489.58	-27.14	-1438.47	4025.45	1.968e+04
61	7	1.891e+04	3613.47	2.36e-03	0.0	0.0	-1.123e+04	-352.97	-22.28	-1153.45	3613.47	1.891e+04
		1.361e+04	3177.74	2.01e-03	0.0	15.0	-1.119e+04	-352.97	-22.28	-1153.45	3177.74	1.361e+04
61	8	2.459e+04	4278.00	2.88e-03	0.0	0.0	-1.305e+04	-448.60	-25.68	-1352.96	4278.00	2.459e+04
		1.786e+04	3771.13	2.33e-03	0.0	15.0	-1.300e+04	-448.60	-25.68	-1352.96	3771.13	1.786e+04

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

61	9	1.891e+04	3613.47	2.36e-03	0.0	0.0	-1.123e+04	-352.97	-22.28	-1153.45	3613.47	1.891e+04
		1.361e+04	3177.74	2.01e-03	0.0	15.0	-1.119e+04	-352.97	-22.28	-1153.45	3177.74	1.361e+04
61	10	2.378e+04	4183.06	2.80e-03	0.0	0.0	-1.279e+04	-434.94	-25.20	-1324.46	4183.06	2.378e+04
		1.726e+04	3686.36	2.28e-03	0.0	15.0	-1.274e+04	-434.94	-25.20	-1324.46	3686.36	1.726e+04
62	2	6.639e+04	3288.52	5.73e-03	0.0	0.0	-2.061e+04	-1684.82	-15.58	-809.91	3288.52	6.639e+04
		4.112e+04	3060.30	1.91e-03	0.0	15.0	-2.055e+04	-1684.82	-15.58	-809.91	3060.30	4.112e+04
62	3	3.814e+04	2040.89	3.31e-03	0.0	0.0	-1.187e+04	-964.49	-9.73	-448.63	2040.89	3.814e+04
		2.368e+04	1895.14	1.19e-03	0.0	15.0	-1.183e+04	-964.49	-9.73	-448.63	1895.14	2.368e+04
62	5	3.882e+04	2066.51	3.36e-03	0.0	0.0	-1.208e+04	-981.87	-9.85	-457.77	2066.51	3.882e+04
		2.409e+04	1919.20	1.20e-03	0.0	15.0	-1.204e+04	-981.87	-9.85	-457.77	1919.20	2.409e+04
62	6	4.898e+04	2450.80	4.23e-03	0.0	0.0	-1.521e+04	-1242.54	-11.62	-594.88	2450.80	4.898e+04
		3.035e+04	2280.06	1.42e-03	0.0	15.0	-1.517e+04	-1242.54	-11.62	-594.88	2280.06	3.035e+04
62	7	3.882e+04	2066.51	3.36e-03	0.0	0.0	-1.208e+04	-981.87	-9.85	-457.77	2066.51	3.882e+04
		2.409e+04	1919.20	1.20e-03	0.0	15.0	-1.204e+04	-981.87	-9.85	-457.77	1919.20	2.409e+04
62	8	4.594e+04	2335.51	3.97e-03	0.0	0.0	-1.427e+04	-1164.34	-11.09	-553.75	2335.51	4.594e+04
		2.847e+04	2171.80	1.36e-03	0.0	15.0	-1.423e+04	-1164.34	-11.09	-553.75	2171.80	2.847e+04
62	9	3.882e+04	2066.51	3.36e-03	0.0	0.0	-1.208e+04	-981.87	-9.85	-457.77	2066.51	3.882e+04
		2.409e+04	1919.20	1.20e-03	0.0	15.0	-1.204e+04	-981.87	-9.85	-457.77	1919.20	2.409e+04
62	10	4.492e+04	2297.08	3.89e-03	0.0	0.0	-1.396e+04	-1138.27	-10.91	-540.04	2297.08	4.492e+04
		2.785e+04	2135.71	1.33e-03	0.0	15.0	-1.392e+04	-1138.27	-10.91	-540.04	2135.71	2.785e+04
63	1	2.975e+04	2448.67	3.07e-03	0.0	0.0	-1.996e+04	-993.14	-9.55	-177.09	2448.67	2.975e+04
		1.486e+04	2275.28	1.01e-03	0.0	15.0	-1.991e+04	-993.14	-9.55	-177.09	2275.28	1.486e+04
63	2	2.931e+04	2848.24	3.69e-03	0.0	0.0	-2.593e+04	-1183.17	-10.02	-331.90	2848.24	2.931e+04
		1.157e+04	2666.00	1.14e-03	0.0	15.0	-2.587e+04	-1183.17	-10.02	-331.90	2666.00	1.157e+04
63	3	2.292e+04	1852.17	2.31e-03	0.0	0.0	-1.489e+04	-749.01	-7.31	-124.05	1852.17	2.292e+04
		1.169e+04	1719.50	7.70e-04	0.0	15.0	-1.484e+04	-749.01	-7.31	-124.05	1719.50	1.169e+04
63	4	2.248e+04	2251.74	2.93e-03	0.0	0.0	-2.085e+04	-939.04	-7.78	-278.86	2251.74	2.248e+04
		8397.30	2110.21	8.96e-04	0.0	15.0	-2.081e+04	-939.04	-7.78	-278.86	2110.21	8397.30
63	5	2.290e+04	1869.93	2.34e-03	0.0	0.0	-1.515e+04	-757.46	-7.33	-130.93	1869.93	2.290e+04
		1.154e+04	1736.86	7.76e-04	0.0	15.0	-1.511e+04	-757.46	-7.33	-130.93	1736.86	1.154e+04
63	6	2.261e+04	2136.31	2.75e-03	0.0	0.0	-1.913e+04	-884.15	-7.64	-234.13	2136.31	2.261e+04
		9347.56	1997.34	8.60e-04	0.0	15.0	-1.908e+04	-884.15	-7.64	-234.13	1997.34	9347.56
63	7	2.290e+04	1869.93	2.34e-03	0.0	0.0	-1.515e+04	-757.46	-7.33	-130.93	1869.93	2.290e+04
		1.154e+04	1736.86	7.76e-04	0.0	15.0	-1.511e+04	-757.46	-7.33	-130.93	1736.86	1.154e+04
63	8	2.270e+04	2056.40	2.63e-03	0.0	0.0	-1.794e+04	-846.14	-7.55	-203.17	2056.40	2.270e+04
		1.001e+04	1919.20	8.35e-04	0.0	15.0	-1.789e+04	-846.14	-7.55	-203.17	1919.20	1.001e+04
63	9	2.290e+04	1869.93	2.34e-03	0.0	0.0	-1.515e+04	-757.46	-7.33	-130.93	1869.93	2.290e+04
		1.154e+04	1736.86	7.76e-04	0.0	15.0	-1.511e+04	-757.46	-7.33	-130.93	1736.86	1.154e+04
63	10	2.273e+04	2029.76	2.59e-03	0.0	0.0	-1.754e+04	-833.47	-7.52	-192.85	2029.76	2.273e+04
		1.022e+04	1893.15	8.26e-04	0.0	15.0	-1.749e+04	-833.47	-7.52	-192.85	1893.15	1.022e+04
64	2	6.711e+04	4524.75	4.76e-03	0.0	0.0	-1.564e+04	-1298.87	-31.03	-1544.27	4524.75	6.711e+04
		4.762e+04	3964.32	3.10e-03	0.0	15.0	-1.558e+04	-1298.87	-31.03	-1544.27	3964.32	4.762e+04
64	3	3.236e+04	2692.86	2.41e-03	0.0	0.0	-9146.92	-628.83	-18.86	-890.68	2692.86	3.236e+04
		2.293e+04	2353.76	1.88e-03	0.0	15.0	-9101.92	-628.83	-18.86	-890.68	2353.76	2.293e+04
64	5	3.337e+04	2734.15	2.48e-03	0.0	0.0	-9298.21	-648.24	-19.13	-906.26	2734.15	3.337e+04
		2.364e+04	2390.23	1.90e-03	0.0	15.0	-9253.21	-648.24	-19.13	-906.26	2390.23	2.364e+04
64	6	4.851e+04	3353.53	3.46e-03	0.0	0.0	-1.157e+04	-939.41	-23.06	-1139.96	3353.53	4.851e+04
		3.442e+04	2937.26	2.31e-03	0.0	15.0	-1.152e+04	-939.41	-23.06	-1139.96	2937.26	3.442e+04
64	7	3.337e+04	2734.15	2.48e-03	0.0	0.0	-9298.21	-648.24	-19.13	-906.26	2734.15	3.337e+04
		2.364e+04	2390.23	1.90e-03	0.0	15.0	-9253.21	-648.24	-19.13	-906.26	2390.23	2.364e+04
64	8	4.397e+04	3167.71	3.17e-03	0.0	0.0	-1.089e+04	-852.06	-21.88	-1069.85	3167.71	4.397e+04
		3.119e+04	2773.15	2.18e-03	0.0	15.0	-1.084e+04	-852.06	-21.88	-1069.85	2773.15	3.119e+04
64	9	3.337e+04	2734.15	2.48e-03	0.0	0.0	-9298.21	-648.24	-19.13	-906.26	2734.15	3.337e+04
		2.364e+04	2390.23	1.90e-03	0.0	15.0	-9253.21	-648.24	-19.13	-906.26	2390.23	2.364e+04
64	10	4.246e+04	3105.78	3.07e-03	0.0	0.0	-1.066e+04	-822.94	-21.49	-1046.48	3105.78	4.246e+04
		3.011e+04	2718.45	2.14e-03	0.0	15.0	-1.061e+04	-822.94	-21.49	-1046.48	2718.45	3.011e+04
67	2	3.037e+04	465.44	4.58e-03	0.0	0.0	-4079.45	633.45	-9.20	-3712.28	465.44	3.037e+04
		2.087e+04	315.93	3.63e-03	0.0	15.0	-4020.95	633.45	-9.20	-3712.28	315.93	2.087e+04
67	3	1.637e+04	249.88	2.48e-03	0.0	0.0	-2169.83	341.29	-5.22	-2122.58	249.88	1.637e+04
		1.125e+04	165.48	2.15e-03	0.0	15.0	-2124.83	341.29	-5.22	-2122.58	165.48	1.125e+04
67	5	1.673e+04	255.55	2.53e-03	0.0	0.0	-2220.58	348.95	-5.32	-2161.00	255.55	1.673e+04
		1.150e+04	169.54	2.19e-03	0.0	15.0	-2175.58	348.95	-5.32	-2161.00	169.54	1.150e+04
67	6	2.223e+04	340.59	3.35e-03	0.0	0.0	-2981.87	463.72	-6.78	-2737.37	340.59	2.223e+04
		1.528e+04	230.52	2.69e-03	0.0	15.0	-2936.87	463.72	-6.78	-2737.37	230.52	1.528e+04
67	7	1.673e+04	255.55	2.53e-03	0.0	0.0	-2220.58	348.95	-5.32	-2161.00	255.55	1.673e+04
		1.150e+04	169.54	2.19e-03	0.0	15.0	-2175.58	348.95	-5.32	-2161.00	169.54	1.150e+04

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

67	8	2.058e+04	315.08	3.11e-03	0.0	0.0	-2753.49	429.29	-6.34	-2564.46	315.08	1.414e+04
		1.414e+04	212.23	2.54e-03	0.0	15.0	-2708.49	429.29	-6.34	-2564.46	212.23	2.058e+04
67	9	1.673e+04	255.55	2.53e-03	0.0	0.0	-2220.58	348.95	-5.32	-2161.00	255.55	1.150e+04
		1.150e+04	169.54	2.19e-03	0.0	15.0	-2175.58	348.95	-5.32	-2161.00	169.54	1.673e+04
67	10	2.003e+04	306.57	3.02e-03	0.0	0.0	-2677.36	417.81	-6.19	-2506.82	306.57	1.377e+04
		1.377e+04	206.13	2.49e-03	0.0	15.0	-2632.36	417.81	-6.19	-2506.82	206.13	2.003e+04
69	2	-2.249e+04	1135.78	4.59e-03	0.0	0.0	-7193.69	-212.70	-19.42	-2643.98	1135.78	-2.249e+04
		-2.567e+04	807.41	2.26e-03	0.0	15.0	-7135.19	-212.70	-19.42	-2643.98	807.41	-2.567e+04
69	3	-1.315e+04	659.21	2.53e-03	0.0	0.0	-3963.56	-17.11	-11.43	-1509.01	659.21	-1.315e+04
		-1.341e+04	466.32	1.40e-03	0.0	15.0	-3918.56	-17.11	-11.43	-1509.01	466.32	-1.341e+04
69	5	-1.337e+04	670.46	2.58e-03	0.0	0.0	-4045.86	-24.79	-11.61	-1536.52	670.46	-1.337e+04
		-1.374e+04	474.44	1.42e-03	0.0	15.0	-4000.86	-24.79	-11.61	-1536.52	474.44	-1.374e+04
69	6	-1.663e+04	839.08	3.37e-03	0.0	0.0	-5280.37	-139.99	-14.37	-1949.18	839.08	-1.663e+04
		-1.873e+04	596.12	1.69e-03	0.0	15.0	-5235.37	-139.99	-14.37	-1949.18	596.12	-1.873e+04
69	7	-1.337e+04	670.46	2.58e-03	0.0	0.0	-4045.86	-24.79	-11.61	-1536.52	670.46	-1.337e+04
		-1.374e+04	474.44	1.42e-03	0.0	15.0	-4000.86	-24.79	-11.61	-1536.52	474.44	-1.374e+04
69	8	-1.565e+04	788.50	3.13e-03	0.0	0.0	-4910.02	-105.43	-13.54	-1825.38	788.50	-1.565e+04
		-1.723e+04	559.62	1.61e-03	0.0	15.0	-4865.02	-105.43	-13.54	-1825.38	559.62	-1.723e+04
69	9	-1.337e+04	670.46	2.58e-03	0.0	0.0	-4045.86	-24.79	-11.61	-1536.52	670.46	-1.337e+04
		-1.374e+04	474.44	1.42e-03	0.0	15.0	-4000.86	-24.79	-11.61	-1536.52	474.44	-1.374e+04
69	10	-1.533e+04	771.63	3.05e-03	0.0	0.0	-4786.57	-93.91	-13.27	-1784.12	771.63	-1.533e+04
		-1.673e+04	547.45	1.58e-03	0.0	15.0	-4741.57	-93.91	-13.27	-1784.12	547.45	-1.673e+04
71	2	-2.962e+04	1504.25	-5.14e-04	0.0	0.0	-1.944e+04	882.86	-15.15	-1186.53	1504.25	-2.962e+04
		-4.286e+04	1245.05	1.17e-03	0.0	15.0	-1.938e+04	882.86	-15.15	-1186.53	1245.05	-4.286e+04
71	3	-1.586e+04	847.20	-1.90e-04	0.0	0.0	-1.138e+04	462.18	-9.48	-637.67	847.20	-2.279e+04
		-2.279e+04	688.14	7.53e-04	0.0	15.0	-1.133e+04	462.18	-9.48	-637.67	688.14	-1.586e+04
71	5	-1.622e+04	863.45	-2.01e-04	0.0	0.0	-1.156e+04	473.55	-9.59	-652.09	863.45	-2.332e+04
		-2.332e+04	702.27	7.61e-04	0.0	15.0	-1.152e+04	473.55	-9.59	-652.09	702.27	-1.622e+04
71	6	-2.166e+04	1107.13	-3.63e-04	0.0	0.0	-1.437e+04	644.13	-11.30	-868.35	1107.13	-3.133e+04
		-3.133e+04	914.25	8.78e-04	0.0	15.0	-1.433e+04	644.13	-11.30	-868.35	914.25	-2.166e+04
71	7	-1.622e+04	863.45	-2.01e-04	0.0	0.0	-1.156e+04	473.55	-9.59	-652.09	863.45	-2.332e+04
		-2.332e+04	702.27	7.61e-04	0.0	15.0	-1.152e+04	473.55	-9.59	-652.09	702.27	-1.622e+04
71	8	-2.003e+04	1034.03	-3.14e-04	0.0	0.0	-1.353e+04	592.96	-10.79	-803.48	1034.03	-2.893e+04
		-2.893e+04	850.66	8.43e-04	0.0	15.0	-1.349e+04	592.96	-10.79	-803.48	850.66	-2.003e+04
71	9	-1.622e+04	863.45	-2.01e-04	0.0	0.0	-1.156e+04	473.55	-9.59	-652.09	863.45	-2.332e+04
		-2.332e+04	702.27	7.61e-04	0.0	15.0	-1.152e+04	473.55	-9.59	-652.09	702.27	-1.622e+04
71	10	-1.949e+04	1009.66	-2.98e-04	0.0	0.0	-1.325e+04	575.90	-10.62	-781.85	1009.66	-2.812e+04
		-2.812e+04	829.46	8.31e-04	0.0	15.0	-1.320e+04	575.90	-10.62	-781.85	829.46	-1.949e+04
72	2	-5746.39	2876.01	6.55e-04	0.0	0.0	-1.984e+04	333.71	-23.68	-1945.69	2876.01	-1.075e+04
		-1.075e+04	2458.69	1.79e-03	0.0	15.0	-1.978e+04	333.71	-23.68	-1945.69	2458.69	-5746.39
72	3	-2666.52	1765.53	3.75e-04	0.0	0.0	-1.160e+04	174.73	-14.52	-1104.68	1765.53	-5287.48
		-5287.48	1509.03	1.09e-03	0.0	15.0	-1.155e+04	174.73	-14.52	-1104.68	1509.03	-2666.52
72	5	-2758.46	1788.95	3.81e-04	0.0	0.0	-1.179e+04	179.02	-14.71	-1125.23	1788.95	-5443.87
		-5443.87	1529.06	1.11e-03	0.0	15.0	-1.175e+04	179.02	-14.71	-1125.23	1529.06	-2758.46
72	6	-4137.43	2140.26	4.83e-04	0.0	0.0	-1.467e+04	243.48	-17.62	-1433.46	2140.26	-7789.73
		-7789.73	1829.64	1.33e-03	0.0	15.0	-1.463e+04	243.48	-17.62	-1433.46	1829.64	-4137.43
72	7	-2758.46	1788.95	3.81e-04	0.0	0.0	-1.179e+04	179.02	-14.71	-1125.23	1788.95	-5443.87
		-5443.87	1529.06	1.11e-03	0.0	15.0	-1.175e+04	179.02	-14.71	-1125.23	1529.06	-2758.46
72	8	-3723.74	2034.87	4.53e-04	0.0	0.0	-1.381e+04	224.14	-16.75	-1340.99	2034.87	-7085.97
		-7085.97	1739.47	1.26e-03	0.0	15.0	-1.376e+04	224.14	-16.75	-1340.99	1739.47	-3723.74
72	9	-2758.46	1788.95	3.81e-04	0.0	0.0	-1.179e+04	179.02	-14.71	-1125.23	1788.95	-5443.87
		-5443.87	1529.06	1.11e-03	0.0	15.0	-1.175e+04	179.02	-14.71	-1125.23	1529.06	-2758.46
72	10	-3585.84	1999.74	4.42e-04	0.0	0.0	-1.352e+04	217.70	-16.46	-1310.17	1999.74	-6851.39
		-6851.39	1709.41	1.24e-03	0.0	15.0	-1.348e+04	217.70	-16.46	-1310.17	1709.41	-3585.84
73	2	2.721e+04	5382.79	4.34e-03	0.0	0.0	-1.748e+04	-583.74	-35.27	-2704.24	5382.79	2.721e+04
		1.846e+04	4723.39	3.37e-03	0.0	15.0	-1.742e+04	-583.74	-35.27	-2704.24	4723.39	1.846e+04
73	3	1.321e+04	3078.49	2.36e-03	0.0	0.0	-1.033e+04	-289.49	-20.90	-1561.40	3078.49	1.321e+04
		8868.23	2692.28	2.01e-03	0.0	15.0	-1.029e+04	-289.49	-20.90	-1561.40	2692.28	8868.23
73	5	1.361e+04	3134.17	2.41e-03	0.0	0.0	-1.049e+04	-297.86	-21.23	-1588.59	3134.17	1.361e+04
		9147.52	2741.61	2.04e-03	0.0	15.0	-1.045e+04	-297.86	-21.23	-1588.59	2741.61	9147.52
73	6	1.969e+04	3969.30	3.18e-03	0.0	0.0	-1.294e+04	-423.30	-26.12	-1996.51	3969.30	1.969e+04
		1.334e+04	3481.59	2.50e-03	0.0	15.0	-1.290e+04	-423.30	-26.12	-1996.51	3481.59	1.334e+04
73	7	1.361e+04	3134.17	2.41e-03	0.0	0.0	-1.049e+04	-297.86	-21.23	-1588.59	3134.17	1.361e+04
		9147.52	2741.61	2.04e-03	0.0	15.0	-1.045e+04	-297.86	-21.23	-1588.59	2741.61	9147.52
73	8	1.786e+04	3718.76	2.95e-03	0.0	0.0	-1.221e+04	-385.67	-24.65	-1874.13	3718.76	1.786e+04
		1.208e+04	3259.60	2.36e-03	0.0	15.0	-1.216e+04	-385.67	-24.65	-1874.13	3259.60	1.208e+04

73	9	1.361e+04	3134.17	2.41e-03	0.0	0.0	-1.049e+04	-297.86	-21.23	-1588.59	3134.17	1.361e+04
		9147.52	2741.61	2.04e-03	0.0	15.0	-1.045e+04	-297.86	-21.23	-1588.59	2741.61	9147.52
73	10	1.726e+04	3635.24	2.87e-03	0.0	0.0	-1.196e+04	-373.12	-24.17	-1833.34	3635.24	1.726e+04
		1.166e+04	3185.60	2.31e-03	0.0	15.0	-1.192e+04	-373.12	-24.17	-1833.34	3185.60	1.166e+04
74	2	4.112e+04	3070.12	5.87e-03	0.0	0.0	-1.990e+04	-1268.64	-11.35	-907.43	3070.12	4.112e+04
		2.209e+04	2924.38	1.93e-03	0.0	15.0	-1.984e+04	-1268.64	-11.35	-907.43	2924.38	2.209e+04
74	3	2.368e+04	1899.63	3.39e-03	0.0	0.0	-1.145e+04	-726.82	-7.21	-503.34	1899.63	2.368e+04
		1.278e+04	1803.52	1.20e-03	0.0	15.0	-1.141e+04	-726.82	-7.21	-503.34	1803.52	1.278e+04
74	5	2.409e+04	1923.85	3.45e-03	0.0	0.0	-1.165e+04	-739.87	-7.29	-513.55	1923.85	2.409e+04
		1.300e+04	1826.90	1.22e-03	0.0	15.0	-1.161e+04	-739.87	-7.29	-513.55	1826.90	1.300e+04
74	6	3.035e+04	2287.12	4.34e-03	0.0	0.0	-1.468e+04	-935.70	-8.49	-666.62	2287.12	3.035e+04
		1.631e+04	2177.59	1.44e-03	0.0	15.0	-1.464e+04	-935.70	-8.49	-666.62	2177.59	1.631e+04
74	7	2.409e+04	1923.85	3.45e-03	0.0	0.0	-1.165e+04	-739.87	-7.29	-513.55	1923.85	2.409e+04
		1.300e+04	1826.90	1.22e-03	0.0	15.0	-1.161e+04	-739.87	-7.29	-513.55	1826.90	1.300e+04
74	8	2.847e+04	2178.14	4.07e-03	0.0	0.0	-1.377e+04	-876.95	-8.13	-620.70	2178.14	2.847e+04
		1.532e+04	2072.38	1.37e-03	0.0	15.0	-1.373e+04	-876.95	-8.13	-620.70	2072.38	1.532e+04
74	9	2.409e+04	1923.85	3.45e-03	0.0	0.0	-1.165e+04	-739.87	-7.29	-513.55	1923.85	2.409e+04
		1.300e+04	1826.90	1.22e-03	0.0	15.0	-1.161e+04	-739.87	-7.29	-513.55	1826.90	1.300e+04
74	10	2.785e+04	2141.81	3.98e-03	0.0	0.0	-1.347e+04	-857.37	-8.01	-605.39	2141.81	2.785e+04
		1.499e+04	2037.31	1.35e-03	0.0	15.0	-1.343e+04	-857.37	-8.01	-605.39	2037.31	1.499e+04
75	1	1.486e+04	2262.96	3.11e-03	0.0	0.0	-1.926e+04	-807.65	-8.86	-147.09	2262.96	1.486e+04
		2742.44	2111.72	1.03e-03	0.0	15.0	-1.921e+04	-807.65	-8.86	-147.09	2111.72	2742.44
75	2	1.157e+04	2653.25	3.71e-03	0.0	0.0	-2.506e+04	-937.26	-9.37	-288.94	2653.25	1.157e+04
		-2490.91	2494.54	1.16e-03	0.0	15.0	-2.500e+04	-937.26	-9.37	-288.94	2494.54	-2490.91
75	3	1.169e+04	1710.05	2.35e-03	0.0	0.0	-1.436e+04	-611.08	-6.77	-101.99	1710.05	1.169e+04
		2521.08	1594.29	7.84e-04	0.0	15.0	-1.432e+04	-611.08	-6.77	-101.99	1594.29	2521.08
75	4	8397.80	2100.34	2.95e-03	0.0	0.0	-2.016e+04	-740.69	-7.29	-243.84	2100.34	8397.80
		-2712.26	1977.12	9.13e-04	0.0	15.0	-2.011e+04	-740.69	-7.29	-243.84	1977.12	-2712.26
75	5	1.154e+04	1727.39	2.37e-03	0.0	0.0	-1.462e+04	-616.84	-6.80	-108.29	1727.39	1.154e+04
		2288.48	1611.31	7.90e-04	0.0	15.0	-1.458e+04	-616.84	-6.80	-108.29	1611.31	2288.48
75	6	9348.03	1987.59	2.77e-03	0.0	0.0	-1.848e+04	-703.25	-7.14	-202.86	1987.59	9348.03
		-1200.41	1866.53	8.76e-04	0.0	15.0	-1.844e+04	-703.25	-7.14	-202.86	1866.53	-1200.41
75	7	1.154e+04	1727.39	2.37e-03	0.0	0.0	-1.462e+04	-616.84	-6.80	-108.29	1727.39	1.154e+04
		2288.48	1611.31	7.90e-04	0.0	15.0	-1.458e+04	-616.84	-6.80	-108.29	1611.31	2288.48
75	8	1.001e+04	1909.53	2.65e-03	0.0	0.0	-1.732e+04	-677.32	-7.04	-174.49	1909.53	1.001e+04
		-153.74	1789.96	8.50e-04	0.0	15.0	-1.728e+04	-677.32	-7.04	-174.49	1789.96	-153.74
75	9	1.154e+04	1727.39	2.37e-03	0.0	0.0	-1.462e+04	-616.84	-6.80	-108.29	1727.39	1.154e+04
		2288.48	1611.31	7.90e-04	0.0	15.0	-1.458e+04	-616.84	-6.80	-108.29	1611.31	2288.48
75	10	1.023e+04	1883.51	2.61e-03	0.0	0.0	-1.694e+04	-668.68	-7.00	-165.04	1883.51	1.023e+04
		195.15	1764.44	8.41e-04	0.0	15.0	-1.689e+04	-668.68	-7.00	-165.04	1764.44	195.15
76	2	4.763e+04	3932.83	4.95e-03	0.0	0.0	-1.461e+04	-1034.75	-24.96	-1754.35	3932.83	4.763e+04
		3.211e+04	3508.79	3.13e-03	0.0	15.0	-1.455e+04	-1034.75	-24.96	-1754.35	3508.79	3.211e+04
76	3	2.293e+04	2335.21	2.50e-03	0.0	0.0	-8521.46	-500.56	-15.19	-1010.13	2335.21	2.293e+04
		1.542e+04	2078.26	1.90e-03	0.0	15.0	-8476.46	-500.56	-15.19	-1010.13	2078.26	1.542e+04
76	5	2.364e+04	2371.38	2.57e-03	0.0	0.0	-8663.84	-516.05	-15.40	-1027.92	2371.38	2.364e+04
		1.590e+04	2110.80	1.92e-03	0.0	15.0	-8618.84	-516.05	-15.40	-1027.92	2110.80	1.590e+04
76	6	3.442e+04	2913.96	3.60e-03	0.0	0.0	-1.080e+04	-748.31	-18.55	-1294.76	2913.96	3.442e+04
		2.320e+04	2598.94	2.33e-03	0.0	15.0	-1.075e+04	-748.31	-18.55	-1294.76	2598.94	2.320e+04
76	7	2.364e+04	2371.38	2.57e-03	0.0	0.0	-8663.84	-516.05	-15.40	-1027.92	2371.38	2.364e+04
		1.590e+04	2110.80	1.92e-03	0.0	15.0	-8618.84	-516.05	-15.40	-1027.92	2110.80	1.590e+04
76	8	3.119e+04	2751.18	3.29e-03	0.0	0.0	-1.016e+04	-678.63	-17.61	-1214.71	2751.18	3.119e+04
		2.101e+04	2452.50	2.21e-03	0.0	15.0	-1.011e+04	-678.63	-17.61	-1214.71	2452.50	2.101e+04
76	9	2.364e+04	2371.38	2.57e-03	0.0	0.0	-8663.84	-516.05	-15.40	-1027.92	2371.38	2.364e+04
		1.590e+04	2110.80	1.92e-03	0.0	15.0	-8618.84	-516.05	-15.40	-1027.92	2110.80	1.590e+04
76	10	3.011e+04	2696.93	3.18e-03	0.0	0.0	-9945.27	-655.41	-17.29	-1188.02	2696.93	3.011e+04
		2.028e+04	2403.68	2.17e-03	0.0	15.0	-9900.27	-655.41	-17.29	-1188.02	2403.68	2.028e+04
80	2	-1.693e+04	738.27	2.73e-03	0.0	0.0	-7498.09	-1027.89	-12.43	-1394.69	738.27	-1.693e+04
		-3.235e+04	528.83	1.41e-03	0.0	15.0	-7439.59	-1027.89	-12.43	-1394.69	528.83	-3.235e+04
80	3	-9460.35	417.31	1.74e-03	0.0	0.0	-4103.06	-514.19	-7.28	-745.07	417.31	-9460.35
		-1.717e+04	295.08	9.34e-04	0.0	15.0	-4058.06	-514.19	-7.28	-745.07	295.08	-1.717e+04
80	5	-9647.26	425.20	1.76e-03	0.0	0.0	-4190.32	-528.69	-7.40	-762.25	425.20	-9647.26
		-1.758e+04	300.94	9.42e-04	0.0	15.0	-4145.32	-528.69	-7.40	-762.25	300.94	-1.758e+04
80	6	-1.245e+04	543.61	2.04e-03	0.0	0.0	-5499.26	-746.09	-9.19	-1019.98	543.61	-1.245e+04
		-2.364e+04	388.77	1.06e-03	0.0	15.0	-5454.26	-746.09	-9.19	-1019.98	388.77	-2.364e+04
80	7	-9647.26	425.20	1.76e-03	0.0	0.0	-4190.32	-528.69	-7.40	-762.25	425.20	-9647.26
		-1.758e+04	300.94	9.42e-04	0.0	15.0	-4145.32	-528.69	-7.40	-762.25	300.94	-1.758e+04

80	8	-1.161e+04	508.09	1.96e-03	0.0	0.0	-5106.58	-680.87	-8.66	-942.66	508.09	-1.161e+04
		-2.182e+04	362.42	1.03e-03	0.0	15.0	-5061.58	-680.87	-8.66	-942.66	362.42	-2.182e+04
80	9	-9647.26	425.20	1.76e-03	0.0	0.0	-4190.32	-528.69	-7.40	-762.25	425.20	-9647.26
		-1.758e+04	300.94	9.42e-04	0.0	15.0	-4145.32	-528.69	-7.40	-762.25	300.94	-1.758e+04
80	10	-1.133e+04	496.25	1.93e-03	0.0	0.0	-4975.68	-659.13	-8.48	-916.89	496.25	-1.133e+04
		-2.122e+04	353.64	1.01e-03	0.0	15.0	-4930.68	-659.13	-8.48	-916.89	353.64	-2.122e+04
83	2	-1.979e+04	1232.85	-6.22e-04	0.0	0.0	-1.811e+04	654.84	-12.63	-1318.28	1232.85	-2.962e+04
		-2.962e+04	1024.13	1.18e-03	0.0	15.0	-1.805e+04	654.84	-12.63	-1318.28	1024.13	-1.979e+04
83	3	-1.070e+04	681.89	-2.48e-04	0.0	0.0	-1.057e+04	343.96	-7.84	-719.35	681.89	-1.586e+04
		-1.586e+04	554.80	7.58e-04	0.0	15.0	-1.053e+04	343.96	-7.84	-719.35	554.80	-1.070e+04
83	5	-1.093e+04	695.86	-2.60e-04	0.0	0.0	-1.075e+04	352.34	-7.93	-734.80	695.86	-1.622e+04
		-1.622e+04	567.02	7.66e-04	0.0	15.0	-1.071e+04	352.34	-7.93	-734.80	567.02	-1.093e+04
83	6	-1.450e+04	905.37	-4.41e-04	0.0	0.0	-1.339e+04	477.96	-9.41	-966.53	905.37	-2.166e+04
		-2.166e+04	750.21	8.85e-04	0.0	15.0	-1.334e+04	477.96	-9.41	-966.53	750.21	-1.450e+04
83	7	-1.093e+04	695.86	-2.60e-04	0.0	0.0	-1.075e+04	352.34	-7.93	-734.80	695.86	-1.622e+04
		-1.622e+04	567.02	7.66e-04	0.0	15.0	-1.071e+04	352.34	-7.93	-734.80	567.02	-1.093e+04
83	8	-1.343e+04	842.52	-3.87e-04	0.0	0.0	-1.260e+04	440.27	-8.97	-897.01	842.52	-2.003e+04
		-2.003e+04	695.26	8.50e-04	0.0	15.0	-1.255e+04	440.27	-8.97	-897.01	695.26	-1.343e+04
83	9	-1.093e+04	695.86	-2.60e-04	0.0	0.0	-1.075e+04	352.34	-7.93	-734.80	695.86	-1.622e+04
		-1.622e+04	567.02	7.66e-04	0.0	15.0	-1.071e+04	352.34	-7.93	-734.80	567.02	-1.093e+04
83	10	-1.307e+04	821.56	-3.69e-04	0.0	0.0	-1.233e+04	427.71	-8.82	-873.84	821.56	-1.949e+04
		-1.949e+04	676.94	8.38e-04	0.0	15.0	-1.229e+04	427.71	-8.82	-873.84	676.94	-1.307e+04
84	2	-2249.28	2434.13	6.40e-04	0.0	0.0	-1.847e+04	233.12	-20.03	-2116.77	2434.13	-5746.15
		-5746.15	2093.53	1.81e-03	0.0	15.0	-1.841e+04	233.12	-20.03	-2116.77	2093.53	-2249.28
84	3	-866.98	1493.68	3.69e-04	0.0	0.0	-1.077e+04	119.96	-12.30	-1201.67	1493.68	-2666.39
		-2666.39	1284.09	1.10e-03	0.0	15.0	-1.072e+04	119.96	-12.30	-1201.67	1284.09	-866.98
84	5	-912.23	1513.53	3.75e-04	0.0	0.0	-1.095e+04	123.07	-12.46	-1224.03	1513.53	-2758.32
		-2758.32	1301.20	1.12e-03	0.0	15.0	-1.090e+04	123.07	-12.46	-1224.03	1301.20	-912.23
84	6	-1590.98	1811.32	4.73e-04	0.0	0.0	-1.365e+04	169.75	-14.91	-1559.47	1811.32	-4137.26
		-4137.26	1557.77	1.35e-03	0.0	15.0	-1.361e+04	169.75	-14.91	-1559.47	1557.77	-1590.98
84	7	-912.23	1513.53	3.75e-04	0.0	0.0	-1.095e+04	123.07	-12.46	-1224.03	1513.53	-2758.32
		-2758.32	1301.20	1.12e-03	0.0	15.0	-1.090e+04	123.07	-12.46	-1224.03	1301.20	-912.23
84	8	-1387.36	1721.99	4.43e-04	0.0	0.0	-1.284e+04	155.74	-14.17	-1458.84	1721.99	-3723.57
		-3723.57	1480.80	1.28e-03	0.0	15.0	-1.279e+04	155.74	-14.17	-1458.84	1480.80	-1387.36
84	9	-912.23	1513.53	3.75e-04	0.0	0.0	-1.095e+04	123.07	-12.46	-1224.03	1513.53	-2758.32
		-2758.32	1301.20	1.12e-03	0.0	15.0	-1.090e+04	123.07	-12.46	-1224.03	1301.20	-912.23
84	10	-1319.48	1692.21	4.34e-04	0.0	0.0	-1.257e+04	151.07	-13.93	-1425.30	1692.21	-3585.68
		-3585.68	1455.14	1.26e-03	0.0	15.0	-1.252e+04	151.07	-13.93	-1425.30	1455.14	-1319.48
85	2	1.846e+04	4668.89	4.41e-03	0.0	0.0	-1.632e+04	-468.26	-32.24	-3191.68	4668.89	1.846e+04
		1.143e+04	4093.04	3.41e-03	0.0	15.0	-1.626e+04	-468.26	-32.24	-3191.68	4093.04	1.143e+04
85	3	8869.05	2662.05	2.39e-03	0.0	0.0	-9624.08	-229.92	-18.95	-1834.99	2662.05	8869.05
		5420.70	2326.80	2.03e-03	0.0	15.0	-9579.08	-229.92	-18.95	-1834.99	2326.80	5420.70
85	5	9148.37	2710.77	2.44e-03	0.0	0.0	-9777.74	-236.75	-19.26	-1867.50	2710.77	9148.37
		5597.58	2369.87	2.06e-03	0.0	15.0	-9732.74	-236.75	-19.26	-1867.50	2369.87	5597.58
85	6	1.334e+04	3441.55	3.23e-03	0.0	0.0	-1.208e+04	-339.19	-23.86	-2355.11	3441.55	1.334e+04
		8250.80	3015.96	2.52e-03	0.0	15.0	-1.204e+04	-339.19	-23.86	-2355.11	3015.96	8250.80
85	7	9148.37	2710.77	2.44e-03	0.0	0.0	-9777.74	-236.75	-19.26	-1867.50	2710.77	9148.37
		5597.58	2369.87	2.06e-03	0.0	15.0	-9732.74	-236.75	-19.26	-1867.50	2369.87	5597.58
85	8	1.208e+04	3222.32	3.00e-03	0.0	0.0	-1.139e+04	-308.46	-22.48	-2208.83	3222.32	1.208e+04
		7454.84	2822.14	2.38e-03	0.0	15.0	-1.135e+04	-308.46	-22.48	-2208.83	2822.14	7454.84
85	9	9148.37	2710.77	2.44e-03	0.0	0.0	-9777.74	-236.75	-19.26	-1867.50	2710.77	9148.37
		5597.58	2369.87	2.06e-03	0.0	15.0	-9732.74	-236.75	-19.26	-1867.50	2369.87	5597.58
85	10	1.166e+04	3149.24	2.92e-03	0.0	0.0	-1.116e+04	-298.21	-22.02	-2160.07	3149.24	1.166e+04
		7189.52	2757.53	2.34e-03	0.0	15.0	-1.112e+04	-298.21	-22.02	-2160.07	2757.53	7189.52
86	2	2.209e+04	2939.41	5.93e-03	0.0	0.0	-1.926e+04	-882.15	-8.95	-996.87	2939.41	2.209e+04
		8858.82	2838.12	1.95e-03	0.0	15.0	-1.920e+04	-882.15	-8.95	-996.87	2838.12	8858.82
86	3	1.278e+04	1811.28	3.42e-03	0.0	0.0	-1.108e+04	-506.46	-5.76	-554.73	1811.28	1.278e+04
		5179.95	1742.17	1.22e-03	0.0	15.0	-1.103e+04	-506.46	-5.76	-554.73	1742.17	5179.95
86	5	1.300e+04	1834.86	3.48e-03	0.0	0.0	-1.127e+04	-515.49	-5.82	-565.85	1834.86	1.300e+04
		5265.63	1765.28	1.23e-03	0.0	15.0	-1.123e+04	-515.49	-5.82	-565.85	1765.28	5265.63
86	6	1.631e+04	2188.54	4.38e-03	0.0	0.0	-1.421e+04	-650.82	-6.70	-732.61	2188.54	1.631e+04
		6550.84	2112.04	1.46e-03	0.0	15.0	-1.417e+04	-650.82	-6.70	-732.61	2112.04	6550.84
86	7	1.300e+04	1834.86	3.48e-03	0.0	0.0	-1.127e+04	-515.49	-5.82	-565.85	1834.86	1.300e+04
		5265.63	1765.28	1.23e-03	0.0	15.0	-1.123e+04	-515.49	-5.82	-565.85	1765.28	5265.63
86	8	1.532e+04	2082.43	4.11e-03	0.0	0.0	-1.333e+04	-610.22	-6.44	-682.58	2082.43	1.532e+04
		6165.28	2008.01	1.39e-03	0.0	15.0	-1.329e+04	-610.22	-6.44	-682.58	2008.01	6165.28

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

86	9	1.300e+04	1834.86	3.48e-03	0.0	0.0	-1.127e+04	-515.49	-5.82	-565.85	1834.86	1.300e+04
		5265.63	1765.28	1.23e-03	0.0	15.0	-1.123e+04	-515.49	-5.82	-565.85	1765.28	5265.63
86	10	1.499e+04	2047.06	4.02e-03	0.0	0.0	-1.304e+04	-596.68	-6.35	-665.91	2047.06	1.499e+04
		6036.76	1973.34	1.37e-03	0.0	15.0	-1.299e+04	-596.68	-6.35	-665.91	1973.34	6036.76
87	1	2742.97	2105.38	3.10e-03	0.0	0.0	-1.859e+04	-559.68	-7.35	-162.26	2105.38	2742.97
		-5651.92	1987.05	1.05e-03	0.0	15.0	-1.854e+04	-559.68	-7.35	-162.26	1987.05	-5651.92
87	2	-2490.27	2488.81	3.67e-03	0.0	0.0	-2.422e+04	-626.63	-7.70	-301.43	2488.81	-2490.27
		-1.189e+04	2367.30	1.18e-03	0.0	15.0	-2.416e+04	-626.63	-7.70	-301.43	2367.30	-1.189e+04
87	3	2521.48	1589.37	2.34e-03	0.0	0.0	-1.386e+04	-425.26	-5.62	-113.87	1589.37	2521.48
		-3857.16	1498.60	7.96e-04	0.0	15.0	-1.382e+04	-425.26	-5.62	-113.87	1498.60	-3857.16
87	5	2288.89	1606.42	2.36e-03	0.0	0.0	-1.411e+04	-428.23	-5.64	-120.06	1606.42	2288.89
		-4134.38	1515.50	8.02e-04	0.0	15.0	-1.407e+04	-428.23	-5.64	-120.06	1515.50	-4134.38
87	6	-1199.94	1862.04	2.74e-03	0.0	0.0	-1.786e+04	-472.87	-5.87	-212.84	1862.04	-1199.94
		-8292.74	1769.00	8.90e-04	0.0	15.0	-1.782e+04	-472.87	-5.87	-212.84	1769.00	-8292.74
87	7	2288.89	1606.42	2.36e-03	0.0	0.0	-1.411e+04	-428.23	-5.64	-120.06	1606.42	2288.89
		-4134.38	1515.50	8.02e-04	0.0	15.0	-1.407e+04	-428.23	-5.64	-120.06	1515.50	-4134.38
87	8	-153.29	1785.35	2.63e-03	0.0	0.0	-1.674e+04	-459.48	-5.80	-185.00	1785.35	-153.29
		-7045.23	1692.95	8.64e-04	0.0	15.0	-1.669e+04	-459.48	-5.80	-185.00	1692.95	-7045.23
87	9	2288.89	1606.42	2.36e-03	0.0	0.0	-1.411e+04	-428.23	-5.64	-120.06	1606.42	2288.89
		-4134.38	1515.50	8.02e-04	0.0	15.0	-1.407e+04	-428.23	-5.64	-120.06	1515.50	-4134.38
87	10	195.60	1759.79	2.59e-03	0.0	0.0	-1.636e+04	-455.01	-5.78	-175.73	1759.79	195.60
		-6629.39	1667.60	8.55e-04	0.0	15.0	-1.632e+04	-455.01	-5.78	-175.73	1667.60	-6629.39
88	2	3.211e+04	3491.01	5.06e-03	0.0	0.0	-1.369e+04	-736.27	-20.81	-1894.21	3491.01	3.211e+04
		2.106e+04	3150.89	3.16e-03	0.0	15.0	-1.363e+04	-736.27	-20.81	-1894.21	3150.89	2.106e+04
88	3	1.542e+04	2067.86	2.55e-03	0.0	0.0	-7963.93	-355.12	-12.66	-1089.42	2067.86	1.542e+04
		1.009e+04	1861.61	1.91e-03	0.0	15.0	-7918.93	-355.12	-12.66	-1089.42	1861.61	1.009e+04
88	5	1.591e+04	2100.23	2.62e-03	0.0	0.0	-8098.50	-366.20	-12.84	-1108.69	2100.23	1.591e+04
		1.041e+04	1891.07	1.94e-03	0.0	15.0	-8053.50	-366.20	-12.84	-1108.69	1891.07	1.041e+04
88	6	2.320e+04	2585.79	3.68e-03	0.0	0.0	-1.012e+04	-532.29	-15.47	-1397.78	2585.79	2.320e+04
		1.522e+04	2333.09	2.35e-03	0.0	15.0	-1.007e+04	-532.29	-15.47	-1397.78	2333.09	1.522e+04
88	7	1.591e+04	2100.23	2.62e-03	0.0	0.0	-8098.50	-366.20	-12.84	-1108.69	2100.23	1.591e+04
		1.041e+04	1891.07	1.94e-03	0.0	15.0	-8053.50	-366.20	-12.84	-1108.69	1891.07	1.041e+04
88	8	2.101e+04	2440.12	3.36e-03	0.0	0.0	-9511.39	-482.46	-14.68	-1311.06	2440.12	2.101e+04
		1.378e+04	2200.49	2.23e-03	0.0	15.0	-9466.39	-482.46	-14.68	-1311.06	2200.49	1.378e+04
88	9	1.591e+04	2100.23	2.62e-03	0.0	0.0	-8098.50	-366.20	-12.84	-1108.69	2100.23	1.591e+04
		1.041e+04	1891.07	1.94e-03	0.0	15.0	-8053.50	-366.20	-12.84	-1108.69	1891.07	1.041e+04
88	10	2.028e+04	2391.57	3.25e-03	0.0	0.0	-9309.55	-465.85	-14.42	-1282.15	2391.57	2.028e+04
		1.330e+04	2156.29	2.18e-03	0.0	15.0	-9264.55	-465.85	-14.42	-1282.15	2156.29	1.330e+04
94	2	-1.291e+04	1016.89	-6.89e-04	0.0	0.0	-1.685e+04	459.25	-10.41	-1415.30	1016.89	-1.291e+04
		-1.979e+04	849.37	1.19e-03	0.0	15.0	-1.679e+04	459.25	-10.41	-1415.30	849.37	-1.979e+04
94	3	-7063.88	551.40	-2.85e-04	0.0	0.0	-9814.68	242.19	-6.42	-779.70	551.40	-7063.88
		-1.070e+04	450.05	7.63e-04	0.0	15.0	-9769.68	242.19	-6.42	-779.70	450.05	-1.070e+04
94	5	-7213.96	563.50	-2.98e-04	0.0	0.0	-9979.55	248.01	-6.50	-795.90	563.50	-7213.96
		-1.093e+04	460.71	7.71e-04	0.0	15.0	-9934.55	248.01	-6.50	-795.90	460.71	-1.093e+04
94	6	-9465.21	745.00	-4.91e-04	0.0	0.0	-1.245e+04	335.36	-7.75	-1038.85	745.00	-9465.21
		-1.450e+04	620.57	8.91e-04	0.0	15.0	-1.241e+04	335.36	-7.75	-1038.85	620.57	-1.450e+04
94	7	-7213.96	563.50	-2.98e-04	0.0	0.0	-9979.55	248.01	-6.50	-795.90	563.50	-7213.96
		-1.093e+04	460.71	7.71e-04	0.0	15.0	-9934.55	248.01	-6.50	-795.90	460.71	-1.093e+04
94	8	-8789.84	690.55	-4.33e-04	0.0	0.0	-1.171e+04	309.15	-7.38	-965.96	690.55	-8789.84
		-1.343e+04	572.61	8.55e-04	0.0	15.0	-1.167e+04	309.15	-7.38	-965.96	572.61	-1.343e+04
94	9	-7213.96	563.50	-2.98e-04	0.0	0.0	-9979.55	248.01	-6.50	-795.90	563.50	-7213.96
		-1.093e+04	460.71	7.71e-04	0.0	15.0	-9934.55	248.01	-6.50	-795.90	460.71	-1.093e+04
94	10	-8564.71	672.40	-4.14e-04	0.0	0.0	-1.146e+04	300.42	-7.25	-941.67	672.40	-8564.71
		-1.307e+04	556.63	8.43e-04	0.0	15.0	-1.142e+04	300.42	-7.25	-941.67	556.63	-1.307e+04
95	1	325.13	1695.50	4.95e-04	0.0	0.0	-1.337e+04	103.73	-13.63	-1709.15	1695.50	-1230.97
		-1230.97	1469.32	1.48e-03	0.0	15.0	-1.331e+04	103.73	-13.63	-1709.15	1469.32	325.13
95	2	7.26	2077.71	6.39e-04	0.0	0.0	-1.716e+04	150.41	-16.67	-2241.83	2077.71	-2249.05
		-2249.05	1801.55	1.83e-03	0.0	15.0	-1.710e+04	150.41	-16.67	-2241.83	1801.55	7.26
95	3	275.09	1274.17	3.70e-04	0.0	0.0	-9982.61	76.12	-10.25	-1272.85	1274.17	-866.84
		-866.84	1104.12	1.11e-03	0.0	15.0	-9937.61	76.12	-10.25	-1272.85	1104.12	275.09
95	5	260.97	1291.16	3.76e-04	0.0	0.0	-1.015e+04	78.20	-10.38	-1296.52	1291.16	-912.09
		-912.09	1118.89	1.13e-03	0.0	15.0	-1.011e+04	78.20	-10.38	-1296.52	1118.89	260.97
95	6	49.06	1545.97	4.72e-04	0.0	0.0	-1.268e+04	109.32	-12.41	-1651.64	1545.97	-1590.81
		-1590.81	1340.38	1.36e-03	0.0	15.0	-1.264e+04	109.32	-12.41	-1651.64	1340.38	49.06
95	7	260.97	1291.16	3.76e-04	0.0	0.0	-1.015e+04	78.20	-10.38	-1296.52	1291.16	-912.09
		-912.09	1118.89	1.13e-03	0.0	15.0	-1.011e+04	78.20	-10.38	-1296.52	1118.89	260.97

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel 099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

95	8	112.63	1469.53	4.43e-04	0.0	0.0	-1.192e+04	99.98	-11.80	-1545.10	1469.53	-1387.20
		-1387.20	1273.93	1.29e-03	0.0	15.0	-1.188e+04	99.98	-11.80	-1545.10	1273.93	112.63
95	9	260.97	1291.16	3.76e-04	0.0	0.0	-1.015e+04	78.20	-10.38	-1296.52	1291.16	-912.09
		-912.09	1118.89	1.13e-03	0.0	15.0	-1.011e+04	78.20	-10.38	-1296.52	1118.89	260.97
95	10	133.82	1444.04	4.34e-04	0.0	0.0	-1.167e+04	96.87	-11.60	-1509.59	1444.04	-1319.32
		-1319.32	1251.78	1.27e-03	0.0	15.0	-1.163e+04	96.87	-11.60	-1509.59	1251.78	133.82
96	2	1.144e+04	4054.99	4.45e-03	0.0	0.0	-1.521e+04	-348.65	-28.60	-3509.26	4054.99	1.144e+04
		6206.09	3561.76	3.44e-03	0.0	15.0	-1.515e+04	-348.65	-28.60	-3509.26	3561.76	6206.09
96	3	5421.54	2305.91	2.41e-03	0.0	0.0	-8946.08	-170.54	-16.72	-2012.80	2305.91	5421.54
		2863.90	2019.95	2.05e-03	0.0	15.0	-8901.08	-170.54	-16.72	-2012.80	2019.95	2863.90
96	5	5598.44	2348.55	2.46e-03	0.0	0.0	-9090.56	-175.66	-17.00	-2048.79	2348.55	5598.44
		2964.02	2057.68	2.08e-03	0.0	15.0	-9045.56	-175.66	-17.00	-2048.79	2057.68	2964.02
96	6	8251.94	2988.04	3.26e-03	0.0	0.0	-1.126e+04	-252.44	-21.15	-2588.68	2988.04	8251.94
		4465.85	2623.71	2.55e-03	0.0	15.0	-1.121e+04	-252.44	-21.15	-2588.68	2623.71	4465.85
96	7	5598.44	2348.55	2.46e-03	0.0	0.0	-9090.56	-175.66	-17.00	-2048.79	2348.55	5598.44
		2964.02	2057.68	2.08e-03	0.0	15.0	-9045.56	-175.66	-17.00	-2048.79	2057.68	2964.02
96	8	7455.89	2796.19	3.02e-03	0.0	0.0	-1.061e+04	-229.41	-19.90	-2426.72	2796.19	7455.89
		4015.30	2453.90	2.41e-03	0.0	15.0	-1.056e+04	-229.41	-19.90	-2426.72	2453.90	4015.30
96	9	5598.44	2348.55	2.46e-03	0.0	0.0	-9090.56	-175.66	-17.00	-2048.79	2348.55	5598.44
		2964.02	2057.68	2.08e-03	0.0	15.0	-9045.56	-175.66	-17.00	-2048.79	2057.68	2964.02
96	10	7190.54	2732.24	2.94e-03	0.0	0.0	-1.039e+04	-221.73	-19.49	-2372.73	2732.24	7190.54
		3865.12	2397.30	2.36e-03	0.0	15.0	-1.035e+04	-221.73	-19.49	-2372.73	2397.30	3865.12
97	2	8859.85	2856.07	5.93e-03	0.0	0.0	-1.865e+04	-559.47	-7.28	-1084.74	2856.07	8859.85
		468.27	2784.57	1.98e-03	0.0	15.0	-1.860e+04	-559.47	-7.28	-1084.74	2784.57	468.27
97	3	5180.55	1751.79	3.42e-03	0.0	0.0	-1.072e+04	-322.44	-4.75	-606.09	1751.79	5180.55
		344.30	1700.97	1.23e-03	0.0	15.0	-1.068e+04	-322.44	-4.75	-606.09	1700.97	344.30
97	5	5266.24	1775.13	3.48e-03	0.0	0.0	-1.091e+04	-328.09	-4.79	-618.06	1775.13	5266.24
		345.14	1724.09	1.25e-03	0.0	15.0	-1.087e+04	-328.09	-4.79	-618.06	1724.09	345.14
97	6	6551.61	2125.17	4.38e-03	0.0	0.0	-1.376e+04	-412.96	-5.46	-797.59	2125.17	6551.61
		357.64	2070.85	1.47e-03	0.0	15.0	-1.372e+04	-412.96	-5.46	-797.59	2070.85	357.64
97	7	5266.24	1775.13	3.48e-03	0.0	0.0	-1.091e+04	-328.09	-4.79	-618.06	1775.13	5266.24
		345.14	1724.09	1.25e-03	0.0	15.0	-1.087e+04	-328.09	-4.79	-618.06	1724.09	345.14
97	8	6166.00	2020.16	4.11e-03	0.0	0.0	-1.291e+04	-387.50	-5.26	-743.73	2020.16	6166.00
		353.89	1966.82	1.41e-03	0.0	15.0	-1.286e+04	-387.50	-5.26	-743.73	1966.82	353.89
97	9	5266.24	1775.13	3.48e-03	0.0	0.0	-1.091e+04	-328.09	-4.79	-618.06	1775.13	5266.24
		345.14	1724.09	1.25e-03	0.0	15.0	-1.087e+04	-328.09	-4.79	-618.06	1724.09	345.14
97	10	6037.46	1985.15	4.02e-03	0.0	0.0	-1.262e+04	-379.01	-5.20	-725.78	1985.15	6037.46
		352.64	1932.14	1.38e-03	0.0	15.0	-1.258e+04	-379.01	-5.20	-725.78	1932.14	352.64
98	2	-1.189e+04	2366.78	3.58e-03	0.0	0.0	-2.342e+04	-344.09	-5.92	-341.39	2366.78	-1.189e+04
		-1.705e+04	2280.74	1.20e-03	0.0	15.0	-2.336e+04	-344.09	-5.92	-341.39	2280.74	-1.705e+04
98	3	-3856.76	1497.02	2.30e-03	0.0	0.0	-1.339e+04	-252.75	-4.44	-142.01	1497.02	-3856.76
		-7647.80	1429.61	8.08e-04	0.0	15.0	-1.334e+04	-252.75	-4.44	-142.01	1429.61	-7647.80
98	5	-4133.98	1513.99	2.33e-03	0.0	0.0	-1.363e+04	-253.38	-4.45	-148.33	1513.99	-4133.98
		-7934.40	1446.63	8.14e-04	0.0	15.0	-1.358e+04	-253.38	-4.45	-148.33	1446.63	-7934.40
98	6	-8292.26	1768.41	2.68e-03	0.0	0.0	-1.727e+04	-262.76	-4.53	-243.16	1768.41	-8292.26
		-1.223e+04	1702.03	9.04e-04	0.0	15.0	-1.722e+04	-262.76	-4.53	-243.16	1702.03	-1.223e+04
98	7	-4133.98	1513.99	2.33e-03	0.0	0.0	-1.363e+04	-253.38	-4.45	-148.33	1513.99	-4133.98
		-7934.40	1446.63	8.14e-04	0.0	15.0	-1.358e+04	-253.38	-4.45	-148.33	1446.63	-7934.40
98	8	-7044.78	1692.08	2.58e-03	0.0	0.0	-1.618e+04	-259.95	-4.51	-214.71	1692.08	-7044.78
		-1.094e+04	1625.41	8.77e-04	0.0	15.0	-1.613e+04	-259.95	-4.51	-214.71	1625.41	-1.094e+04
98	9	-4133.98	1513.99	2.33e-03	0.0	0.0	-1.363e+04	-253.38	-4.45	-148.33	1513.99	-4133.98
		-7934.40	1446.63	8.14e-04	0.0	15.0	-1.358e+04	-253.38	-4.45	-148.33	1446.63	-7934.40
98	10	-6628.95	1666.64	2.54e-03	0.0	0.0	-1.581e+04	-259.01	-4.50	-205.23	1666.64	-6628.95
		-1.051e+04	1599.87	8.68e-04	0.0	15.0	-1.577e+04	-259.01	-4.50	-205.23	1599.87	-1.051e+04
99	2	2.107e+04	3140.67	5.12e-03	0.0	0.0	-1.283e+04	-483.84	-17.60	-1996.57	3140.67	2.107e+04
		1.381e+04	2860.47	3.19e-03	0.0	15.0	-1.277e+04	-483.84	-17.60	-1996.57	2860.47	1.381e+04
99	3	1.009e+04	1855.69	2.59e-03	0.0	0.0	-7440.20	-232.06	-10.71	-1147.30	1855.69	1.009e+04
		6613.18	1685.68	1.93e-03	0.0	15.0	-7395.20	-232.06	-10.71	-1147.30	1685.68	6613.18
99	5	1.041e+04	1885.05	2.66e-03	0.0	0.0	-7567.40	-239.40	-10.86	-1167.67	1885.05	1.041e+04
		6823.36	1712.65	1.95e-03	0.0	15.0	-7522.40	-239.40	-10.86	-1167.67	1712.65	6823.36
99	6	1.522e+04	2325.54	3.72e-03	0.0	0.0	-9475.42	-349.58	-13.08	-1473.16	2325.54	1.522e+04
		9976.14	2117.35	2.37e-03	0.0	15.0	-9430.42	-349.58	-13.08	-1473.16	2117.35	9976.14
99	7	1.041e+04	1885.05	2.66e-03	0.0	0.0	-7567.40	-239.40	-10.86	-1167.67	1885.05	1.041e+04
		6823.36	1712.65	1.95e-03	0.0	15.0	-7522.40	-239.40	-10.86	-1167.67	1712.65	6823.36
99	8	1.378e+04	2193.40	3.40e-03	0.0	0.0	-8903.01	-316.53	-12.42	-1381.51	2193.40	1.378e+04
		9030.31	1995.94	2.24e-03	0.0	15.0	-8858.01	-316.53	-12.42	-1381.51	1995.94	9030.31

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

99	9	1.041e+04	1885.05	2.66e-03	0.0	0.0	-7567.40	-239.40	-10.86	-1167.67	1885.05	1.041e+04
		6823.36	1712.65	1.95e-03	0.0	15.0	-7522.40	-239.40	-10.86	-1167.67	1712.65	6823.36
99	10	1.330e+04	2149.35	3.30e-03	0.0	0.0	-8712.21	-305.51	-12.19	-1350.96	2149.35	1.330e+04
		8715.03	1955.47	2.20e-03	0.0	15.0	-8667.21	-305.51	-12.19	-1350.96	1955.47	8715.03
105	2	-8275.13	845.14	-7.31e-04	0.0	0.0	-1.566e+04	308.69	-8.61	-1488.33	845.14	-1.291e+04
		-1.291e+04	709.34	1.20e-03	0.0	15.0	-1.560e+04	308.69	-8.61	-1488.33	709.34	-8275.13
105	3	-4608.85	448.33	-3.08e-04	0.0	0.0	-9098.53	163.68	-5.28	-825.31	448.33	-7063.97
		-7063.97	366.66	7.66e-04	0.0	15.0	-9053.53	163.68	-5.28	-825.31	366.66	-4608.85
105	5	-4700.94	458.91	-3.21e-04	0.0	0.0	-9252.98	167.55	-5.35	-842.07	458.91	-7214.06
		-7214.06	376.04	7.74e-04	0.0	15.0	-9207.98	167.55	-5.35	-842.07	376.04	-4700.94
105	6	-6082.16	617.56	-5.21e-04	0.0	0.0	-1.157e+04	225.55	-6.41	-1093.33	617.56	-9465.38
		-9465.38	516.78	8.96e-04	0.0	15.0	-1.152e+04	225.55	-6.41	-1093.33	516.78	-6082.16
105	7	-4700.94	458.91	-3.21e-04	0.0	0.0	-9252.98	167.55	-5.35	-842.07	458.91	-7214.06
		-7214.06	376.04	7.74e-04	0.0	15.0	-9207.98	167.55	-5.35	-842.07	376.04	-4700.94
105	8	-5667.79	569.97	-4.61e-04	0.0	0.0	-1.087e+04	208.15	-6.09	-1017.95	569.97	-8789.99
		-8789.99	474.56	8.59e-04	0.0	15.0	-1.083e+04	208.15	-6.09	-1017.95	474.56	-5667.79
105	9	-4700.94	458.91	-3.21e-04	0.0	0.0	-9252.98	167.55	-5.35	-842.07	458.91	-7214.06
		-7214.06	376.04	7.74e-04	0.0	15.0	-9207.98	167.55	-5.35	-842.07	376.04	-4700.94
105	10	-5529.67	554.10	-4.41e-04	0.0	0.0	-1.064e+04	202.35	-5.99	-992.82	554.10	-8564.85
		-8564.85	460.48	8.47e-04	0.0	15.0	-1.060e+04	202.35	-5.99	-992.82	460.48	-5529.67
106	2	1328.37	1791.19	6.46e-04	0.0	0.0	-1.593e+04	88.05	-13.91	-2334.25	1791.19	7.49
		7.49	1565.29	1.84e-03	0.0	15.0	-1.588e+04	88.05	-13.91	-2334.25	1565.29	1328.37
106	3	927.74	1097.59	3.74e-04	0.0	0.0	-9242.90	43.50	-8.55	-1325.63	1097.59	275.23
		275.23	958.43	1.12e-03	0.0	15.0	-9197.90	43.50	-8.55	-1325.63	958.43	927.74
106	4	1038.70	1428.12	5.19e-04	0.0	0.0	-1.280e+04	72.08	-11.08	-1879.91	1428.12	-42.59
		-42.59	1248.14	1.47e-03	0.0	15.0	-1.275e+04	72.08	-11.08	-1879.91	1248.14	1038.70
106	5	932.67	1112.28	3.81e-04	0.0	0.0	-9400.87	44.77	-8.66	-1350.26	1112.28	261.10
		261.10	971.30	1.14e-03	0.0	15.0	-9355.87	44.77	-8.66	-1350.26	971.30	932.67
106	6	1006.65	1332.63	4.77e-04	0.0	0.0	-1.177e+04	63.82	-10.35	-1719.78	1332.63	49.23
		49.23	1164.45	1.37e-03	0.0	15.0	-1.173e+04	63.82	-10.35	-1719.78	1164.45	1006.65
106	7	932.67	1112.28	3.81e-04	0.0	0.0	-9400.87	44.77	-8.66	-1350.26	1112.28	261.10
		261.10	971.30	1.14e-03	0.0	15.0	-9355.87	44.77	-8.66	-1350.26	971.30	932.67
106	8	984.46	1266.53	4.48e-04	0.0	0.0	-1.106e+04	58.11	-9.84	-1608.93	1266.53	112.79
		112.79	1106.50	1.30e-03	0.0	15.0	-1.101e+04	58.11	-9.84	-1608.93	1106.50	984.46
106	9	932.67	1112.28	3.81e-04	0.0	0.0	-9400.87	44.77	-8.66	-1350.26	1112.28	261.10
		261.10	971.30	1.14e-03	0.0	15.0	-9355.87	44.77	-8.66	-1350.26	971.30	932.67
106	10	977.06	1244.49	4.39e-04	0.0	0.0	-1.082e+04	56.20	-9.68	-1571.97	1244.49	133.98
		133.98	1087.19	1.28e-03	0.0	15.0	-1.078e+04	56.20	-9.68	-1571.97	1087.19	977.06
107	2	6207.65	3535.34	4.47e-03	0.0	0.0	-1.416e+04	-242.46	-25.00	-3721.51	3535.34	6207.65
		2571.58	3115.61	3.47e-03	0.0	15.0	-1.410e+04	-242.46	-25.00	-3721.51	3115.61	2571.58
107	3	2864.75	2005.61	2.42e-03	0.0	0.0	-8301.37	-118.31	-14.57	-2131.44	2005.61	2864.75
		1090.58	1762.97	2.06e-03	0.0	15.0	-8256.37	-118.31	-14.57	-2131.44	1762.97	1090.58
107	5	2964.89	2043.03	2.47e-03	0.0	0.0	-8437.06	-121.88	-14.81	-2169.77	2043.03	2964.89
		1137.10	1796.19	2.09e-03	0.0	15.0	-8392.06	-121.88	-14.81	-2169.77	1796.19	1137.10
107	6	4466.99	2604.35	3.27e-03	0.0	0.0	-1.047e+04	-175.51	-18.48	-2744.75	2604.35	4466.99
		1834.99	2294.42	2.57e-03	0.0	15.0	-1.043e+04	-175.51	-18.48	-2744.75	2294.42	1834.99
107	7	2964.89	2043.03	2.47e-03	0.0	0.0	-8437.06	-121.88	-14.81	-2169.77	2043.03	2964.89
		1137.10	1796.19	2.09e-03	0.0	15.0	-8392.06	-121.88	-14.81	-2169.77	1796.19	1137.10
107	8	4016.36	2435.95	3.03e-03	0.0	0.0	-9861.80	-159.42	-17.38	-2572.26	2435.95	4016.36
		1625.62	2144.95	2.43e-03	0.0	15.0	-9816.80	-159.42	-17.38	-2572.26	2144.95	1625.62
107	9	2964.89	2043.03	2.47e-03	0.0	0.0	-8437.06	-121.88	-14.81	-2169.77	2043.03	2964.89
		1137.10	1796.19	2.09e-03	0.0	15.0	-8392.06	-121.88	-14.81	-2169.77	1796.19	1137.10
107	10	3866.15	2379.82	2.95e-03	0.0	0.0	-9658.27	-154.06	-17.01	-2514.76	2379.82	3866.15
		1555.83	2095.13	2.38e-03	0.0	15.0	-9613.27	-154.06	-17.01	-2514.76	2095.13	1555.83
108	2	469.30	2804.36	5.91e-03	0.0	0.0	-1.803e+04	-332.30	-5.85	-1175.97	2804.36	469.30
		-4514.67	2757.18	2.00e-03	0.0	15.0	-1.797e+04	-332.30	-5.85	-1175.97	2757.18	-4514.67
108	3	344.90	1711.78	3.41e-03	0.0	0.0	-1.036e+04	-192.94	-3.88	-659.94	1711.78	344.90
		-2548.92	1675.89	1.24e-03	0.0	15.0	-1.032e+04	-192.94	-3.88	-659.94	1675.89	-2548.92
108	5	345.75	1735.13	3.47e-03	0.0	0.0	-1.055e+04	-196.23	-3.91	-672.76	1735.13	345.75
		-2597.35	1699.21	1.26e-03	0.0	15.0	-1.050e+04	-196.23	-3.91	-672.76	1699.21	-2597.35
108	6	358.40	2085.36	4.36e-03	0.0	0.0	-1.330e+04	-245.51	-4.40	-865.13	2085.36	358.40
		-3323.80	2049.13	1.49e-03	0.0	15.0	-1.326e+04	-245.51	-4.40	-865.13	2049.13	-3323.80
108	7	345.75	1735.13	3.47e-03	0.0	0.0	-1.055e+04	-196.23	-3.91	-672.76	1735.13	345.75
		-2597.35	1699.21	1.26e-03	0.0	15.0	-1.050e+04	-196.23	-3.91	-672.76	1699.21	-2597.35
108	8	354.61	1980.29	4.10e-03	0.0	0.0	-1.248e+04	-230.72	-4.25	-807.42	1980.29	354.61
		-3105.87	1944.16	1.42e-03	0.0	15.0	-1.243e+04	-230.72	-4.25	-807.42	1944.16	-3105.87

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

108	9	345.75	1735.13	3.47e-03	0.0	0.0	-1.055e+04	-196.23	-3.91	-672.76	1735.13	345.75
		-2597.35	1699.21	1.26e-03	0.0	15.0	-1.050e+04	-196.23	-3.91	-672.76	1699.21	-2597.35
108	10	353.34	1945.27	4.01e-03	0.0	0.0	-1.220e+04	-225.79	-4.21	-788.18	1945.27	353.34
		-3033.22	1909.16	1.40e-03	0.0	15.0	-1.216e+04	-225.79	-4.21	-788.18	1909.16	-3033.22
109	2	-1.705e+04	2283.91	3.48e-03	0.0	0.0	-2.263e+04	-122.43	-4.32	-394.82	2283.91	-1.705e+04
		-1.889e+04	2228.09	1.22e-03	0.0	15.0	-2.257e+04	-122.43	-4.32	-394.82	2228.09	-1.889e+04
109	3	-7647.40	1430.37	2.25e-03	0.0	0.0	-1.292e+04	-115.81	-3.40	-177.66	1430.37	-7647.40
		-9384.37	1382.53	8.19e-04	0.0	15.0	-1.288e+04	-115.81	-3.40	-177.66	1382.53	-9384.37
109	5	-7934.00	1447.49	2.28e-03	0.0	0.0	-1.316e+04	-114.68	-3.40	-184.27	1447.49	-7934.00
		-9653.96	1399.90	8.26e-04	0.0	15.0	-1.311e+04	-114.68	-3.40	-184.27	1399.90	-9653.96
109	6	-1.223e+04	1704.19	2.61e-03	0.0	0.0	-1.668e+04	-97.67	-3.34	-283.38	1704.19	-1.223e+04
		-1.370e+04	1660.46	9.18e-04	0.0	15.0	-1.664e+04	-97.67	-3.34	-283.38	1660.46	-1.370e+04
109	7	-7934.00	1447.49	2.28e-03	0.0	0.0	-1.316e+04	-114.68	-3.40	-184.27	1447.49	-7934.00
		-9653.96	1399.90	8.26e-04	0.0	15.0	-1.311e+04	-114.68	-3.40	-184.27	1399.90	-9653.96
109	8	-1.094e+04	1627.18	2.51e-03	0.0	0.0	-1.558e+04	-102.77	-3.35	-253.65	1627.18	-1.094e+04
		-1.248e+04	1582.30	8.90e-04	0.0	15.0	-1.558e+04	-102.77	-3.35	-253.65	1582.30	-1.248e+04
109	9	-7934.00	1447.49	2.28e-03	0.0	0.0	-1.316e+04	-114.68	-3.40	-184.27	1447.49	-7934.00
		-9653.96	1399.90	8.26e-04	0.0	15.0	-1.311e+04	-114.68	-3.40	-184.27	1399.90	-9653.96
109	10	-1.051e+04	1601.51	2.48e-03	0.0	0.0	-1.527e+04	-104.47	-3.36	-243.74	1601.51	-1.051e+04
		-1.208e+04	1556.24	8.81e-04	0.0	15.0	-1.523e+04	-104.47	-3.36	-243.74	1556.24	-1.208e+04
110	2	1.381e+04	2854.41	5.17e-03	0.0	0.0	-1.199e+04	-305.10	-14.91	-2083.89	2854.41	1.381e+04
		9235.98	2620.19	3.21e-03	0.0	15.0	-1.193e+04	-305.10	-14.91	-2083.89	2620.19	9235.98
110	3	6614.08	1682.23	2.61e-03	0.0	0.0	-6933.84	-145.71	-9.09	-1196.63	1682.23	6614.08
		4428.88	1540.01	1.94e-03	0.0	15.0	-6888.84	-145.71	-9.09	-1196.63	1540.01	4428.88
110	5	6824.29	1709.14	2.68e-03	0.0	0.0	-7053.84	-150.37	-9.21	-1217.93	1709.14	6824.29
		4569.14	1564.94	1.97e-03	0.0	15.0	-7008.84	-150.37	-9.21	-1217.93	1564.94	4569.14
110	6	9977.45	2112.88	3.75e-03	0.0	0.0	-8853.83	-220.34	-11.09	-1537.45	2112.88	9977.45
		6673.03	1938.84	2.38e-03	0.0	15.0	-8808.83	-220.34	-11.09	-1537.45	1938.84	6673.03
110	7	6824.29	1709.14	2.68e-03	0.0	0.0	-7053.84	-150.37	-9.21	-1217.93	1709.14	6824.29
		4569.14	1564.94	1.97e-03	0.0	15.0	-7008.84	-150.37	-9.21	-1217.93	1564.94	4569.14
110	8	9031.50	1991.76	3.43e-03	0.0	0.0	-8313.84	-199.35	-10.52	-1441.59	1991.76	9031.50
		6041.86	1826.67	2.26e-03	0.0	15.0	-8268.84	-199.35	-10.52	-1441.59	1826.67	6041.86
110	9	6824.29	1709.14	2.68e-03	0.0	0.0	-7053.84	-150.37	-9.21	-1217.93	1709.14	6824.29
		4569.14	1564.94	1.97e-03	0.0	15.0	-7008.84	-150.37	-9.21	-1217.93	1564.94	4569.14
110	10	8716.19	1951.39	3.32e-03	0.0	0.0	-8133.84	-192.35	-10.34	-1409.64	1951.39	8716.19
		5831.47	1789.28	2.22e-03	0.0	15.0	-8088.84	-192.35	-10.34	-1409.64	1789.28	5831.47
115	2	-5269.31	706.89	-7.56e-04	0.0	0.0	-1.453e+04	200.41	-7.20	-1544.33	706.89	-8275.38
		-8275.38	595.01	1.20e-03	0.0	15.0	-1.447e+04	200.41	-7.20	-1544.33	595.01	-5269.31
115	3	-3002.02	365.90	-3.23e-04	0.0	0.0	-8422.07	107.13	-4.40	-860.45	365.90	-4608.96
		-4608.96	298.99	7.69e-04	0.0	15.0	-8377.07	107.13	-4.40	-860.45	298.99	-3002.02
115	5	-3057.13	375.22	-3.36e-04	0.0	0.0	-8566.61	109.60	-4.46	-877.62	375.22	-4701.05
		-4701.05	307.31	7.77e-04	0.0	15.0	-8521.61	109.60	-4.46	-877.62	307.31	-3057.13
115	6	-3883.75	515.08	-5.40e-04	0.0	0.0	-1.073e+04	146.58	-5.36	-1135.12	515.08	-6082.34
		-6082.34	432.10	9.00e-04	0.0	15.0	-1.069e+04	146.58	-5.36	-1135.12	432.10	-3883.75
115	7	-3057.13	375.22	-3.36e-04	0.0	0.0	-8566.61	109.60	-4.46	-877.62	375.22	-4701.05
		-4701.05	307.31	7.77e-04	0.0	15.0	-8521.61	109.60	-4.46	-877.62	307.31	-3057.13
115	8	-3635.77	473.12	-4.79e-04	0.0	0.0	-1.008e+04	135.48	-5.09	-1057.87	473.12	-5667.95
		-5667.95	394.66	8.63e-04	0.0	15.0	-1.004e+04	135.48	-5.09	-1057.87	394.66	-3635.77
115	9	-3057.13	375.22	-3.36e-04	0.0	0.0	-8566.61	109.60	-4.46	-877.62	375.22	-4701.05
		-4701.05	307.31	7.77e-04	0.0	15.0	-8521.61	109.60	-4.46	-877.62	307.31	-3057.13
115	10	-3553.10	459.13	-4.58e-04	0.0	0.0	-9867.48	131.79	-5.00	-1032.12	459.13	-5529.82
		-5529.82	382.18	8.51e-04	0.0	15.0	-9822.48	131.79	-5.00	-1032.12	382.18	-3553.10
116	2	1983.42	1558.27	6.57e-04	0.0	0.0	-1.477e+04	43.65	-11.73	-2403.09	1558.27	1328.60
		1328.60	1370.46	1.86e-03	0.0	15.0	-1.471e+04	43.65	-11.73	-2403.09	1370.46	1983.42
116	3	1234.45	953.99	3.81e-04	0.0	0.0	-8543.91	20.43	-7.21	-1365.06	953.99	927.88
		927.88	838.26	1.13e-03	0.0	15.0	-8498.91	20.43	-7.21	-1365.06	838.26	1234.45
116	5	1249.72	966.81	3.88e-04	0.0	0.0	-8691.56	21.12	-7.31	-1390.41	966.81	932.81
		932.81	849.58	1.14e-03	0.0	15.0	-8646.56	21.12	-7.31	-1390.41	849.58	1249.72
116	6	1478.73	1159.21	4.85e-04	0.0	0.0	-1.091e+04	31.45	-8.73	-1770.55	1159.21	1006.82
		1006.82	1019.37	1.38e-03	0.0	15.0	-1.086e+04	31.45	-8.73	-1770.55	1019.37	1478.73
116	7	1249.72	966.81	3.88e-04	0.0	0.0	-8691.56	21.12	-7.31	-1390.41	966.81	932.81
		932.81	849.58	1.14e-03	0.0	15.0	-8646.56	21.12	-7.31	-1390.41	849.58	1249.72
116	8	1410.03	1101.49	4.56e-04	0.0	0.0	-1.024e+04	28.36	-8.30	-1656.51	1101.49	984.62
		984.62	968.43	1.31e-03	0.0	15.0	-1.020e+04	28.36	-8.30	-1656.51	968.43	1410.03
116	9	1249.72	966.81	3.88e-04	0.0	0.0	-8691.56	21.12	-7.31	-1390.41	966.81	932.81
		932.81	849.58	1.14e-03	0.0	15.0	-8646.56	21.12	-7.31	-1390.41	849.58	1249.72

116	10	1387.13	1082.25	4.46e-04	0.0	0.0	-1.002e+04	27.32	-8.16	-1618.49	1082.25	977.22
		977.22	951.45	1.28e-03	0.0	15.0	-9975.39	27.32	-8.16	-1618.49	951.45	1387.13
117	2	2573.15	3097.11	4.47e-03	0.0	0.0	-1.315e+04	-156.44	-21.77	-3867.92	3097.11	2573.15
		227.40	2738.99	3.49e-03	0.0	15.0	-1.309e+04	-156.44	-21.77	-3867.92	2738.99	227.40
117	3	1091.42	1753.07	2.42e-03	0.0	0.0	-7689.44	-76.03	-12.65	-2213.25	1753.07	1091.42
		-48.62	1546.50	2.08e-03	0.0	15.0	-7644.44	-76.03	-12.65	-2213.25	1546.50	-48.62
117	5	1137.97	1786.06	2.47e-03	0.0	0.0	-7816.74	-78.35	-12.87	-2253.19	1786.06	1137.97
		-36.90	1575.87	2.11e-03	0.0	15.0	-7771.74	-78.35	-12.87	-2253.19	1575.87	-36.90
117	6	1836.13	2280.89	3.27e-03	0.0	0.0	-9726.18	-113.19	-16.08	-2852.41	2280.89	1836.13
		138.87	2016.52	2.59e-03	0.0	15.0	-9681.18	-113.19	-16.08	-2852.41	2016.52	138.87
117	7	1137.97	1786.06	2.47e-03	0.0	0.0	-7816.74	-78.35	-12.87	-2253.19	1786.06	1137.97
		-36.90	1575.87	2.11e-03	0.0	15.0	-7771.74	-78.35	-12.87	-2253.19	1575.87	-36.90
117	8	1626.68	2132.44	3.03e-03	0.0	0.0	-9153.35	-102.74	-15.12	-2672.64	2132.44	1626.68
		86.14	1884.33	2.44e-03	0.0	15.0	-9108.35	-102.74	-15.12	-2672.64	1884.33	86.14
117	9	1137.97	1786.06	2.47e-03	0.0	0.0	-7816.74	-78.35	-12.87	-2253.19	1786.06	1137.97
		-36.90	1575.87	2.11e-03	0.0	15.0	-7771.74	-78.35	-12.87	-2253.19	1575.87	-36.90
117	10	1556.87	2082.96	2.95e-03	0.0	0.0	-8962.40	-99.26	-14.80	-2612.72	2082.96	1556.87
		68.56	1840.26	2.39e-03	0.0	15.0	-8917.40	-99.26	-14.80	-2612.72	1840.26	68.56
118	2	-4513.63	2777.99	5.87e-03	0.0	0.0	-1.731e+04	-152.78	-4.42	-1275.05	2777.99	-4513.63
		-6804.79	2753.77	2.02e-03	0.0	15.0	-1.731e+04	-152.78	-4.42	-1275.05	2753.77	-6804.79
118	3	-2548.32	1687.39	3.39e-03	0.0	0.0	-9979.51	-93.44	-3.02	-718.57	1687.39	-2548.32
		-3949.69	1665.59	1.26e-03	0.0	15.0	-9934.51	-93.44	-3.02	-718.57	1665.59	-3949.69
118	5	-2596.74	1710.95	3.45e-03	0.0	0.0	-1.016e+04	-94.71	-3.04	-732.32	1710.95	-2596.74
		-4017.04	1689.32	1.27e-03	0.0	15.0	-1.011e+04	-94.71	-3.04	-732.32	1689.32	-4017.04
118	6	-3323.04	2064.41	4.33e-03	0.0	0.0	-1.281e+04	-113.64	-3.34	-938.51	2064.41	-3323.04
		-5027.23	2045.27	1.51e-03	0.0	15.0	-1.277e+04	-113.64	-3.34	-938.51	2045.27	-5027.23
118	7	-2596.74	1710.95	3.45e-03	0.0	0.0	-1.016e+04	-94.71	-3.04	-732.32	1710.95	-2596.74
		-4017.04	1689.32	1.27e-03	0.0	15.0	-1.011e+04	-94.71	-3.04	-732.32	1689.32	-4017.04
118	8	-3105.15	1958.37	4.07e-03	0.0	0.0	-1.202e+04	-107.96	-3.25	-876.65	1958.37	-3105.15
		-4724.18	1938.49	1.44e-03	0.0	15.0	-1.197e+04	-107.96	-3.25	-876.65	1938.49	-4724.18
118	9	-2596.74	1710.95	3.45e-03	0.0	0.0	-1.016e+04	-94.71	-3.04	-732.32	1710.95	-2596.74
		-4017.04	1689.32	1.27e-03	0.0	15.0	-1.011e+04	-94.71	-3.04	-732.32	1689.32	-4017.04
118	10	-3032.52	1923.03	3.98e-03	0.0	0.0	-1.175e+04	-106.07	-3.22	-856.03	1923.03	-3032.52
		-4623.16	1902.89	1.41e-03	0.0	15.0	-1.171e+04	-106.07	-3.22	-856.03	1902.89	-4623.16
119	2	-1.867e+04	2233.83	3.38e-03	0.0	0.0	-2.181e+04	14.11	-2.92	-455.53	2233.83	-1.888e+04
		-1.888e+04	2203.41	1.24e-03	0.0	15.0	-2.175e+04	14.11	-2.92	-455.53	2203.41	-1.867e+04
119	3	-9383.98	1384.93	2.20e-03	0.0	0.0	-1.245e+04	-30.01	-2.51	-216.97	1384.93	-9383.98
		-9833.92	1353.23	8.30e-04	0.0	15.0	-1.240e+04	-30.01	-2.51	-216.97	1353.23	-9833.92
119	5	-9653.57	1402.41	2.22e-03	0.0	0.0	-1.267e+04	-27.87	-2.50	-223.97	1402.41	-9653.57
		-1.007e+04	1371.14	8.37e-04	0.0	15.0	-1.263e+04	-27.87	-2.50	-223.97	1371.14	-1.007e+04
119	6	-1.363e+04	1664.56	2.54e-03	0.0	0.0	-1.608e+04	4.26	-2.29	-328.89	1664.56	-1.370e+04
		-1.370e+04	1639.82	9.31e-04	0.0	15.0	-1.603e+04	4.26	-2.29	-328.89	1639.82	-1.363e+04
119	7	-9653.57	1402.41	2.22e-03	0.0	0.0	-1.267e+04	-27.87	-2.50	-223.97	1402.41	-9653.57
		-1.007e+04	1371.14	8.37e-04	0.0	15.0	-1.263e+04	-27.87	-2.50	-223.97	1371.14	-1.007e+04
119	8	-1.248e+04	1585.91	2.44e-03	0.0	0.0	-1.506e+04	-5.38	-2.35	-297.41	1585.91	-1.248e+04
		-1.256e+04	1559.22	9.03e-04	0.0	15.0	-1.501e+04	-5.38	-2.35	-297.41	1559.22	-1.256e+04
119	9	-9653.57	1402.41	2.22e-03	0.0	0.0	-1.267e+04	-27.87	-2.50	-223.97	1402.41	-9653.57
		-1.007e+04	1371.14	8.37e-04	0.0	15.0	-1.263e+04	-27.87	-2.50	-223.97	1371.14	-1.007e+04
119	10	-1.208e+04	1559.70	2.41e-03	0.0	0.0	-1.472e+04	-8.59	-2.37	-286.92	1559.70	-1.208e+04
		-1.221e+04	1532.35	8.93e-04	0.0	15.0	-1.467e+04	-8.59	-2.37	-286.92	1532.35	-1.221e+04
120	2	9237.80	2615.77	5.19e-03	0.0	0.0	-1.116e+04	-173.21	-12.48	-2172.34	2615.77	9237.80
		6640.60	2417.60	3.23e-03	0.0	15.0	-1.110e+04	-173.21	-12.48	-2172.34	2417.60	6640.60
120	3	4429.80	1537.55	2.62e-03	0.0	0.0	-6434.41	-82.23	-7.62	-1246.66	1537.55	4429.80
		3196.78	1417.14	1.95e-03	0.0	15.0	-6389.41	-82.23	-7.62	-1246.66	1417.14	3196.78
120	5	4570.08	1562.43	2.69e-03	0.0	0.0	-6547.23	-84.91	-7.73	-1268.91	1562.43	4570.08
		3296.97	1440.34	1.98e-03	0.0	15.0	-6502.23	-84.91	-7.73	-1268.91	1440.34	3296.97
120	6	6674.35	1935.59	3.77e-03	0.0	0.0	-8239.53	-125.01	-9.28	-1602.58	1935.59	6674.35
		4799.87	1788.31	2.40e-03	0.0	15.0	-8194.53	-125.01	-9.28	-1602.58	1788.31	4799.87
120	7	4570.08	1562.43	2.69e-03	0.0	0.0	-6547.23	-84.91	-7.73	-1268.91	1562.43	4570.08
		3296.97	1440.34	1.98e-03	0.0	15.0	-6502.23	-84.91	-7.73	-1268.91	1440.34	3296.97
120	8	6043.07	1823.64	3.45e-03	0.0	0.0	-7731.84	-112.98	-8.82	-1502.48	1823.64	6043.07
		4349.00	1683.92	2.27e-03	0.0	15.0	-7686.84	-112.98	-8.82	-1502.48	1683.92	4349.00
120	9	4570.08	1562.43	2.69e-03	0.0	0.0	-6547.23	-84.91	-7.73	-1268.91	1562.43	4570.08
		3296.97	1440.34	1.98e-03	0.0	15.0	-6502.23	-84.91	-7.73	-1268.91	1440.34	3296.97
120	10	5832.64	1786.32	3.34e-03	0.0	0.0	-7562.61	-108.97	-8.66	-1469.11	1786.32	5832.64
		4198.71	1649.12	2.23e-03	0.0	15.0	-7517.61	-108.97	-8.66	-1469.11	1649.12	4198.71

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

125	2	-3369.97	593.59	-7.71e-04	0.0	0.0	-1.346e+04	126.65	-6.11	-1587.73	593.59	-5269.58
		-5269.58	499.66	1.21e-03	0.0	15.0	-1.341e+04	126.65	-6.11	-1587.73	499.66	-3369.97
125	3	-1973.54	298.77	-3.32e-04	0.0	0.0	-7780.41	68.58	-3.71	-887.85	298.77	-3002.13
		-3002.13	242.93	7.71e-04	0.0	15.0	-7735.41	68.58	-3.71	-887.85	242.93	-1973.54
125	5	-2005.98	307.04	-3.45e-04	0.0	0.0	-7915.48	70.09	-3.76	-905.33	307.04	-3057.24
		-3057.24	250.34	7.79e-04	0.0	15.0	-7870.48	70.09	-3.76	-905.33	250.34	-2005.98
125	6	-2492.49	431.15	-5.51e-04	0.0	0.0	-9941.64	92.77	-4.54	-1167.55	431.15	-3883.94
		-3883.94	361.54	9.03e-04	0.0	15.0	-9896.64	92.77	-4.54	-1167.55	361.54	-2492.49
125	7	-2005.98	307.04	-3.45e-04	0.0	0.0	-7915.48	70.09	-3.76	-905.33	307.04	-3057.24
		-3057.24	250.34	7.79e-04	0.0	15.0	-7870.48	70.09	-3.76	-905.33	250.34	-2005.98
125	8	-2346.53	393.92	-4.89e-04	0.0	0.0	-9333.79	85.97	-4.31	-1088.88	393.92	-3635.93
		-3635.93	328.18	8.66e-04	0.0	15.0	-9288.79	85.97	-4.31	-1088.88	328.18	-2346.53
125	9	-2005.98	307.04	-3.45e-04	0.0	0.0	-7915.48	70.09	-3.76	-905.33	307.04	-3057.24
		-3057.24	250.34	7.79e-04	0.0	15.0	-7870.48	70.09	-3.76	-905.33	250.34	-2005.98
125	10	-2297.88	381.51	-4.69e-04	0.0	0.0	-9131.18	83.70	-4.23	-1062.66	381.51	-3553.26
		-3553.26	317.06	8.54e-04	0.0	15.0	-9086.18	83.70	-4.23	-1062.66	317.06	-2297.88
126	2	2182.51	1365.50	6.69e-04	0.0	0.0	-1.366e+04	13.25	-10.04	-2454.35	1365.50	1983.65
		1983.65	1206.33	1.87e-03	0.0	15.0	-1.360e+04	13.25	-10.04	-2454.35	1206.33	2182.51
126	3	1305.29	835.10	3.88e-04	0.0	0.0	-7880.63	4.71	-6.17	-1394.53	835.10	1234.59
		1234.59	737.02	1.13e-03	0.0	15.0	-7835.63	4.71	-6.17	-1394.53	737.02	1305.29
126	5	1324.87	846.39	3.95e-04	0.0	0.0	-8018.38	5.00	-6.25	-1420.39	846.39	1249.86
		1249.86	747.03	1.15e-03	0.0	15.0	-7973.38	5.00	-6.25	-1420.39	747.03	1324.87
126	6	1618.60	1015.66	4.94e-04	0.0	0.0	-1.008e+04	9.31	-7.47	-1808.37	1015.66	1478.90
		1478.90	897.15	1.39e-03	0.0	15.0	-1.004e+04	9.31	-7.47	-1808.37	897.15	1618.60
126	7	1324.87	846.39	3.95e-04	0.0	0.0	-8018.38	5.00	-6.25	-1420.39	846.39	1249.86
		1249.86	747.03	1.15e-03	0.0	15.0	-7973.38	5.00	-6.25	-1420.39	747.03	1324.87
126	8	1530.48	964.88	4.64e-04	0.0	0.0	-9464.76	8.01	-7.11	-1691.98	964.88	1410.19
		1410.19	852.12	1.32e-03	0.0	15.0	-9419.76	8.01	-7.11	-1691.98	852.12	1530.48
126	9	1324.87	846.39	3.95e-04	0.0	0.0	-8018.38	5.00	-6.25	-1420.39	846.39	1249.86
		1249.86	747.03	1.15e-03	0.0	15.0	-7973.38	5.00	-6.25	-1420.39	747.03	1324.87
126	10	1501.11	947.95	4.55e-04	0.0	0.0	-9258.14	7.58	-6.98	-1653.18	947.95	1387.29
		1387.29	837.10	1.29e-03	0.0	15.0	-9213.14	7.58	-6.98	-1653.18	837.10	1501.11
127	2	228.97	2725.78	4.46e-03	0.0	0.0	-1.220e+04	-90.53	-19.03	-3971.94	2725.78	228.97
		-1128.20	2417.41	3.51e-03	0.0	15.0	-1.214e+04	-90.53	-19.03	-3971.94	2417.41	-1128.20
127	3	-47.77	1539.54	2.41e-03	0.0	0.0	-7107.66	-43.54	-11.04	-2271.41	1539.54	-47.77
		-700.42	1361.98	2.09e-03	0.0	15.0	-7062.66	-43.54	-11.04	-2271.41	1361.98	-700.42
127	5	-36.03	1568.75	2.47e-03	0.0	0.0	-7226.93	-44.91	-11.23	-2312.51	1568.75	-36.03
		-709.20	1388.06	2.12e-03	0.0	15.0	-7181.93	-44.91	-11.23	-2312.51	1388.06	-709.20
127	6	140.02	2006.88	3.27e-03	0.0	0.0	-9015.95	-65.43	-14.06	-2928.90	2006.88	140.02
		-840.84	1779.29	2.60e-03	0.0	15.0	-8970.95	-65.43	-14.06	-2928.90	1779.29	-840.84
127	7	-36.03	1568.75	2.47e-03	0.0	0.0	-7226.93	-44.91	-11.23	-2312.51	1568.75	-36.03
		-709.20	1388.06	2.12e-03	0.0	15.0	-7181.93	-44.91	-11.23	-2312.51	1388.06	-709.20
127	8	87.20	1875.44	3.03e-03	0.0	0.0	-8479.25	-59.27	-13.21	-2743.98	1875.44	87.20
		-801.35	1661.92	2.46e-03	0.0	15.0	-8434.25	-59.27	-13.21	-2743.98	1661.92	-801.35
127	9	-36.03	1568.75	2.47e-03	0.0	0.0	-7226.93	-44.91	-11.23	-2312.51	1568.75	-36.03
		-709.20	1388.06	2.12e-03	0.0	15.0	-7181.93	-44.91	-11.23	-2312.51	1388.06	-709.20
127	10	69.60	1831.63	2.95e-03	0.0	0.0	-8300.34	-57.22	-12.93	-2682.34	1831.63	69.60
		-788.19	1622.80	2.41e-03	0.0	15.0	-8255.34	-57.22	-12.93	-2682.34	1622.80	-788.19
128	2	-6177.54	2813.30	5.82e-03	0.0	0.0	-1.670e+04	41.71	-2.46	-1390.34	2813.30	-6803.76
		-6803.76	2793.60	2.04e-03	0.0	15.0	-1.664e+04	41.71	-2.46	-1390.34	2793.60	-6177.54
128	3	-3764.51	1699.65	3.36e-03	0.0	0.0	-9586.98	12.29	-1.86	-786.53	1699.65	-3949.10
		-3949.10	1681.13	1.27e-03	0.0	15.0	-9541.98	12.29	-1.86	-786.53	1681.13	-3764.51
128	5	-3816.27	1724.00	3.42e-03	0.0	0.0	-9757.86	13.32	-1.87	-801.36	1724.00	-4016.43
		-4016.43	1705.65	1.29e-03	0.0	15.0	-9712.86	13.32	-1.87	-801.36	1705.65	-3816.27
128	6	-4592.69	2089.17	4.30e-03	0.0	0.0	-1.232e+04	28.89	-1.89	-1023.86	2089.17	-5026.48
		-5026.48	2073.47	1.52e-03	0.0	15.0	-1.228e+04	28.89	-1.89	-1023.86	2073.47	-4592.69
128	7	-3816.27	1724.00	3.42e-03	0.0	0.0	-9757.86	13.32	-1.87	-801.36	1724.00	-4016.43
		-4016.43	1705.65	1.29e-03	0.0	15.0	-9712.86	13.32	-1.87	-801.36	1705.65	-3816.27
128	8	-4359.76	1979.62	4.03e-03	0.0	0.0	-1.155e+04	24.22	-1.88	-957.11	1979.62	-4723.46
		-4723.46	1963.13	1.45e-03	0.0	15.0	-1.151e+04	24.22	-1.88	-957.11	1963.13	-4359.76
128	9	-3816.27	1724.00	3.42e-03	0.0	0.0	-9757.86	13.32	-1.87	-801.36	1724.00	-4016.43
		-4016.43	1705.65	1.29e-03	0.0	15.0	-9712.86	13.32	-1.87	-801.36	1705.65	-3816.27
128	10	-4282.12	1943.10	3.95e-03	0.0	0.0	-1.130e+04	22.67	-1.88	-934.86	1943.10	-4622.46
		-4622.46	1926.34	1.43e-03	0.0	15.0	-1.125e+04	22.67	-1.88	-934.86	1926.34	-4282.12
129	2	-1.796e+04	2210.96	3.30e-03	0.0	0.0	-2.094e+04	47.24	-1.63	-521.45	2210.96	-1.867e+04
		-1.867e+04	2202.99	1.25e-03	0.0	15.0	-2.088e+04	47.24	-1.63	-521.45	2202.99	-1.796e+04

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

129	3	-9833.54	1356.75	2.16e-03	0.0	0.0	-1.194e+04	-7.34	-1.72	-258.66	1356.75	-9833.54
		-9943.41	1338.90	8.41e-04	0.0	15.0	-1.190e+04	-7.34	-1.72	-258.66	1338.90	-9943.41
129	5	-1.007e+04	1374.78	2.18e-03	0.0	0.0	-1.216e+04	-5.05	-1.70	-266.13	1374.78	-1.007e+04
		-1.015e+04	1357.55	8.47e-04	0.0	15.0	-1.212e+04	-5.05	-1.70	-266.13	1357.55	-1.015e+04
129	6	-1.319e+04	1645.25	2.47e-03	0.0	0.0	-1.543e+04	29.30	-1.33	-378.14	1645.25	-1.363e+04
		-1.363e+04	1637.24	9.44e-04	0.0	15.0	-1.539e+04	29.30	-1.33	-378.14	1637.24	-1.319e+04
129	7	-1.007e+04	1374.78	2.18e-03	0.0	0.0	-1.216e+04	-5.05	-1.70	-266.13	1374.78	-1.007e+04
		-1.015e+04	1357.55	8.47e-04	0.0	15.0	-1.212e+04	-5.05	-1.70	-266.13	1357.55	-1.015e+04
129	8	-1.228e+04	1564.11	2.38e-03	0.0	0.0	-1.445e+04	18.99	-1.44	-344.54	1564.11	-1.256e+04
		-1.256e+04	1553.33	9.15e-04	0.0	15.0	-1.441e+04	18.99	-1.44	-344.54	1553.33	-1.228e+04
129	9	-1.007e+04	1374.78	2.18e-03	0.0	0.0	-1.216e+04	-5.05	-1.70	-266.13	1374.78	-1.007e+04
		-1.015e+04	1357.55	8.47e-04	0.0	15.0	-1.212e+04	-5.05	-1.70	-266.13	1357.55	-1.015e+04
129	10	-1.197e+04	1537.07	2.35e-03	0.0	0.0	-1.412e+04	15.56	-1.48	-333.33	1537.07	-1.221e+04
		-1.221e+04	1525.36	9.05e-04	0.0	15.0	-1.408e+04	15.56	-1.48	-333.33	1525.36	-1.197e+04
130	2	6642.43	2446.10	5.21e-03	0.0	0.0	-1.045e+04	-9.46	-9.82	-2273.40	2446.10	6642.43
		6501.51	2257.40	3.25e-03	0.0	15.0	-1.039e+04	-9.46	-9.82	-2273.40	2257.40	6501.51
130	3	3264.00	1433.89	2.62e-03	0.0	0.0	-5990.04	4.39	-6.04	-1304.05	1433.89	3197.70
		3197.70	1319.67	1.96e-03	0.0	15.0	-5945.04	4.39	-6.04	-1304.05	1319.67	3264.00
130	5	3355.06	1457.36	2.70e-03	0.0	0.0	-6097.23	3.78	-6.12	-1327.36	1457.36	3297.92
		3297.92	1341.51	1.99e-03	0.0	15.0	-6052.23	3.78	-6.12	-1327.36	1341.51	3355.06
130	6	4801.20	1809.40	3.78e-03	0.0	0.0	-7704.97	-5.39	-7.31	-1677.04	1809.40	4801.20
		4720.98	1669.24	2.41e-03	0.0	15.0	-7659.97	-5.39	-7.31	-1677.04	1669.24	4720.98
130	7	3355.06	1457.36	2.70e-03	0.0	0.0	-6097.23	3.78	-6.12	-1327.36	1457.36	3297.92
		3297.92	1341.51	1.99e-03	0.0	15.0	-6052.23	3.78	-6.12	-1327.36	1341.51	3355.06
130	8	4350.21	1703.79	3.46e-03	0.0	0.0	-7222.64	-2.64	-6.95	-1572.14	1703.79	4350.21
		4311.20	1570.92	2.29e-03	0.0	15.0	-7177.64	-2.64	-6.95	-1572.14	1570.92	4311.20
130	9	3355.06	1457.36	2.70e-03	0.0	0.0	-6097.23	3.78	-6.12	-1327.36	1457.36	3297.92
		3297.92	1341.51	1.99e-03	0.0	15.0	-6052.23	3.78	-6.12	-1327.36	1341.51	3355.06
130	10	4199.89	1668.58	3.35e-03	0.0	0.0	-7061.87	-1.72	-6.83	-1537.17	1668.58	4199.89
		4174.61	1538.15	2.24e-03	0.0	15.0	-7016.87	-1.72	-6.83	-1537.17	1538.15	4174.61
135	2	-2186.55	498.83	-7.81e-04	0.0	0.0	-1.244e+04	78.92	-5.27	-1621.44	498.83	-3370.24
		-3370.24	418.48	1.21e-03	0.0	15.0	-1.239e+04	78.92	-5.27	-1621.44	418.48	-2186.55
135	3	-1319.10	242.99	-3.38e-04	0.0	0.0	-7168.95	43.64	-3.18	-909.30	242.99	-1973.66
		-1973.66	195.51	7.73e-04	0.0	15.0	-7123.95	43.64	-3.18	-909.30	195.51	-1319.10
135	5	-1338.12	250.36	-3.52e-04	0.0	0.0	-7294.95	44.54	-3.23	-927.02	250.36	-2006.10
		-2006.10	202.13	7.81e-04	0.0	15.0	-7249.95	44.54	-3.23	-927.02	202.13	-1338.12
135	6	-1623.44	361.02	-5.58e-04	0.0	0.0	-9184.89	57.96	-3.91	-1192.75	361.02	-2492.68
		-2492.68	301.52	9.06e-04	0.0	15.0	-9139.89	57.96	-3.91	-1192.75	301.52	-1623.44
135	7	-1338.12	250.36	-3.52e-04	0.0	0.0	-7294.95	44.54	-3.23	-927.02	250.36	-2006.10
		-2006.10	202.13	7.81e-04	0.0	15.0	-7249.95	44.54	-3.23	-927.02	202.13	-1338.12
135	8	-1537.84	327.82	-4.96e-04	0.0	0.0	-8617.91	53.93	-3.71	-1113.03	327.82	-2346.71
		-2346.71	271.70	8.69e-04	0.0	15.0	-8572.91	53.93	-3.71	-1113.03	271.70	-1537.84
135	9	-1338.12	250.36	-3.52e-04	0.0	0.0	-7294.95	44.54	-3.23	-927.02	250.36	-2006.10
		-2006.10	202.13	7.81e-04	0.0	15.0	-7249.95	44.54	-3.23	-927.02	202.13	-1338.12
135	10	-1509.31	316.76	-4.76e-04	0.0	0.0	-8428.91	52.59	-3.64	-1086.46	316.76	-2298.05
		-2298.05	261.76	8.56e-04	0.0	15.0	-8383.91	52.59	-3.64	-1086.46	261.76	-1509.31
136	2	2182.74	1202.65	6.81e-04	0.0	0.0	-1.260e+04	-7.19	-8.73	-2492.00	1202.65	2182.74
		2075.06	1065.08	1.88e-03	0.0	15.0	-1.254e+04	-7.19	-8.73	-2492.00	1065.08	2075.06
136	3	1305.43	734.66	3.95e-04	0.0	0.0	-7248.61	-5.86	-5.37	-1416.27	734.66	1305.43
		1217.56	649.90	1.14e-03	0.0	15.0	-7203.61	-5.86	-5.37	-1416.27	649.90	1217.56
136	5	1325.02	744.64	4.02e-04	0.0	0.0	-7376.84	-5.85	-5.44	-1442.51	744.64	1325.02
		1237.41	658.78	1.16e-03	0.0	15.0	-7331.84	-5.85	-5.44	-1442.51	658.78	1237.41
136	6	1618.78	894.40	5.03e-04	0.0	0.0	-9300.30	-5.58	-6.50	-1836.17	894.40	1618.78
		1535.13	791.97	1.39e-03	0.0	15.0	-9255.30	-5.58	-6.50	-1836.17	791.97	1535.13
136	7	1325.02	744.64	4.02e-04	0.0	0.0	-7376.84	-5.85	-5.44	-1442.51	744.64	1325.02
		1237.41	658.78	1.16e-03	0.0	15.0	-7331.84	-5.85	-5.44	-1442.51	658.78	1237.41
136	8	1530.65	849.47	4.73e-04	0.0	0.0	-8723.26	-5.66	-6.18	-1718.07	849.47	1530.65
		1445.81	752.01	1.32e-03	0.0	15.0	-8678.26	-5.66	-6.18	-1718.07	752.01	1445.81
136	9	1325.02	744.64	4.02e-04	0.0	0.0	-7376.84	-5.85	-5.44	-1442.51	744.64	1325.02
		1237.41	658.78	1.16e-03	0.0	15.0	-7331.84	-5.85	-5.44	-1442.51	658.78	1237.41
136	10	1501.27	834.49	4.63e-04	0.0	0.0	-8530.92	-5.69	-6.08	-1678.71	834.49	1501.27
		1416.04	738.69	1.30e-03	0.0	15.0	-8485.92	-5.69	-6.08	-1678.71	738.69	1416.04
137	2	-1126.64	2407.69	4.45e-03	0.0	0.0	-1.129e+04	-41.48	-16.79	-4047.16	2407.69	-1126.64
		-1748.09	2138.68	3.53e-03	0.0	15.0	-1.123e+04	-41.48	-16.79	-4047.16	2138.68	-1748.09
137	3	-699.58	1356.94	2.41e-03	0.0	0.0	-6552.80	-19.20	-9.72	-2313.56	1356.94	-699.58
		-987.19	1202.27	2.10e-03	0.0	15.0	-6507.80	-19.20	-9.72	-2313.56	1202.27	-987.19

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

137	5	-708.33	1382.89	2.46e-03	0.0	0.0	-6664.36	-19.87	-9.89	-2355.47	1382.89	-708.33
		-1005.93	1225.48	2.13e-03	0.0	15.0	-6619.36	-19.87	-9.89	-2355.47	1225.48	-1005.93
137	6	-839.70	1772.21	3.26e-03	0.0	0.0	-8337.82	-29.86	-12.40	-2984.22	1772.21	-839.70
		-1287.02	1573.71	2.62e-03	0.0	15.0	-8292.82	-29.86	-12.40	-2984.22	1573.71	-1287.02
137	7	-708.33	1382.89	2.46e-03	0.0	0.0	-6664.36	-19.87	-9.89	-2355.47	1382.89	-708.33
		-1005.93	1225.48	2.13e-03	0.0	15.0	-6619.36	-19.87	-9.89	-2355.47	1225.48	-1005.93
137	8	-800.29	1655.41	3.02e-03	0.0	0.0	-7835.78	-26.86	-11.65	-2795.60	1655.41	-800.29
		-1202.70	1469.24	2.47e-03	0.0	15.0	-7790.78	-26.86	-11.65	-2795.60	1469.24	-1202.70
137	9	-708.33	1382.89	2.46e-03	0.0	0.0	-6664.36	-19.87	-9.89	-2355.47	1382.89	-708.33
		-1005.93	1225.48	2.13e-03	0.0	15.0	-6619.36	-19.87	-9.89	-2355.47	1225.48	-1005.93
137	10	-787.15	1616.48	2.94e-03	0.0	0.0	-7668.44	-25.86	-11.40	-2732.72	1616.48	-787.15
		-1174.59	1434.42	2.42e-03	0.0	15.0	-7623.44	-25.86	-11.40	-2732.72	1434.42	-1174.59
138	2	-6176.52	2821.64	5.81e-03	0.0	0.0	-1.631e+04	-121.00	-1.55	-1469.17	2809.09	-6176.52
		-7991.08	2809.09	2.06e-03	0.0	15.0	-1.625e+04	-121.00	-1.55	-1469.17	2821.64	-7991.08
138	3	-3763.92	1690.08	3.35e-03	0.0	0.0	-9355.43	-85.21	-1.34	-833.37	1689.86	-3763.92
		-5041.74	1689.86	1.28e-03	0.0	15.0	-9310.43	-85.21	-1.34	-833.37	1690.08	-5041.74
138	5	-3815.67	1715.26	3.41e-03	0.0	0.0	-9522.52	-85.62	-1.33	-848.92	1714.55	-3815.67
		-5099.68	1714.55	1.30e-03	0.0	15.0	-9477.52	-85.62	-1.33	-848.92	1715.26	-5099.68
138	6	-4591.94	2093.00	4.29e-03	0.0	0.0	-1.203e+04	-91.81	-1.22	-1082.27	2084.87	-4591.94
		-5968.72	2084.87	1.54e-03	0.0	15.0	-1.198e+04	-91.81	-1.22	-1082.27	2093.00	-5968.72
138	7	-3815.67	1715.26	3.41e-03	0.0	0.0	-9522.52	-85.62	-1.33	-848.92	1714.55	-3815.67
		-5099.68	1714.55	1.30e-03	0.0	15.0	-9477.52	-85.62	-1.33	-848.92	1715.26	-5099.68
138	8	-4359.06	1979.68	4.03e-03	0.0	0.0	-1.128e+04	-89.95	-1.25	-1012.26	1973.77	-4359.06
		-5708.01	1973.77	1.47e-03	0.0	15.0	-1.123e+04	-89.95	-1.25	-1012.26	1979.68	-5708.01
138	9	-3815.67	1715.26	3.41e-03	0.0	0.0	-9522.52	-85.62	-1.33	-848.92	1714.55	-3815.67
		-5099.68	1714.55	1.30e-03	0.0	15.0	-9477.52	-85.62	-1.33	-848.92	1715.26	-5099.68
138	10	-4281.43	1941.91	3.94e-03	0.0	0.0	-1.103e+04	-89.33	-1.27	-988.93	1936.74	-4281.43
		-5621.10	1936.74	1.44e-03	0.0	15.0	-1.098e+04	-89.33	-1.27	-988.93	1941.91	-5621.10
139	2	-1.705e+04	2226.53	3.21e-03	0.0	0.0	-2.001e+04	61.15	-0.38	-592.24	2211.92	-1.796e+04
		-1.796e+04	2211.92	1.27e-03	0.0	15.0	-1.995e+04	61.15	-0.38	-592.24	2226.53	-1.705e+04
139	3	-9943.04	1343.29	2.11e-03	0.0	0.0	-1.141e+04	-2.08	-0.98	-302.38	1343.29	-9943.04
		-9974.02	1339.00	8.52e-04	0.0	15.0	-1.137e+04	-2.08	-0.98	-302.38	1339.00	-9974.02
139	5	-1.014e+04	1362.07	2.13e-03	0.0	0.0	-1.162e+04	0.50	-0.95	-310.41	1362.07	-1.015e+04
		-1.015e+04	1358.59	8.58e-04	0.0	15.0	-1.157e+04	0.50	-0.95	-310.41	1358.59	-1.014e+04
139	6	-1.261e+04	1652.44	2.41e-03	0.0	0.0	-1.475e+04	39.12	-0.41	-430.86	1643.70	-1.319e+04
		-1.319e+04	1643.70	9.57e-04	0.0	15.0	-1.471e+04	39.12	-0.41	-430.86	1652.44	-1.261e+04
139	7	-1.014e+04	1362.07	2.13e-03	0.0	0.0	-1.162e+04	0.50	-0.95	-310.41	1362.07	-1.015e+04
		-1.015e+04	1358.59	8.58e-04	0.0	15.0	-1.157e+04	0.50	-0.95	-310.41	1358.59	-1.014e+04
139	8	-1.187e+04	1564.29	2.33e-03	0.0	0.0	-1.381e+04	27.53	-0.57	-394.73	1559.21	-1.228e+04
		-1.228e+04	1559.21	9.27e-04	0.0	15.0	-1.377e+04	27.53	-0.57	-394.73	1564.29	-1.187e+04
139	9	-1.014e+04	1362.07	2.13e-03	0.0	0.0	-1.162e+04	0.50	-0.95	-310.41	1362.07	-1.015e+04
		-1.015e+04	1358.59	8.58e-04	0.0	15.0	-1.157e+04	0.50	-0.95	-310.41	1358.59	-1.014e+04
139	10	-1.162e+04	1534.90	2.30e-03	0.0	0.0	-1.350e+04	23.67	-0.62	-382.68	1531.05	-1.197e+04
		-1.197e+04	1531.05	9.17e-04	0.0	15.0	-1.345e+04	23.67	-0.62	-382.68	1534.90	-1.162e+04
140	2	6503.35	2243.24	5.24e-03	0.0	0.0	-9845.93	-41.94	-8.97	-2330.79	2243.24	6503.35
		5875.21	2083.34	3.27e-03	0.0	15.0	-9787.43	-41.94	-8.97	-2330.79	2083.34	5875.21
140	3	3264.93	1311.64	2.64e-03	0.0	0.0	-5624.01	-18.04	-5.51	-1336.19	1311.64	3264.93
		2994.78	1214.69	1.97e-03	0.0	15.0	-5579.01	-18.04	-5.51	-1336.19	1214.69	2994.78
140	5	3356.02	1333.33	2.71e-03	0.0	0.0	-5726.22	-18.79	-5.58	-1360.13	1333.33	3356.02
		3074.70	1235.02	2.00e-03	0.0	15.0	-5681.22	-18.79	-5.58	-1360.13	1235.02	3074.70
140	6	4722.31	1658.81	3.81e-03	0.0	0.0	-7259.31	-29.97	-6.67	-1719.25	1658.81	4722.31
		4273.49	1540.01	2.43e-03	0.0	15.0	-7214.31	-29.97	-6.67	-1719.25	1540.01	4273.49
140	7	3356.02	1333.33	2.71e-03	0.0	0.0	-5726.22	-18.79	-5.58	-1360.13	1333.33	3356.02
		3074.70	1235.02	2.00e-03	0.0	15.0	-5681.22	-18.79	-5.58	-1360.13	1235.02	3074.70
140	8	4312.42	1561.16	3.48e-03	0.0	0.0	-6799.38	-26.61	-6.34	-1611.52	1561.16	4312.42
		3913.85	1448.51	2.30e-03	0.0	15.0	-6754.38	-26.61	-6.34	-1611.52	1448.51	3913.85
140	9	3356.02	1333.33	2.71e-03	0.0	0.0	-5726.22	-18.79	-5.58	-1360.13	1333.33	3356.02
		3074.70	1235.02	2.00e-03	0.0	15.0	-5681.22	-18.79	-5.58	-1360.13	1235.02	3074.70
140	10	4175.79	1528.62	3.37e-03	0.0	0.0	-6646.08	-25.49	-6.23	-1575.60	1528.62	4175.79
		3793.97	1418.01	2.26e-03	0.0	15.0	-6601.08	-25.49	-6.23	-1575.60	1418.01	3793.97
144	2	-1438.83	417.98	-7.88e-04	0.0	0.0	-1.147e+04	49.88	-4.61	-1647.30	417.98	-1438.83
		-2186.83	347.98	1.21e-03	0.0	15.0	-1.141e+04	49.88	-4.61	-1647.30	347.98	-2186.83
144	3	-891.22	195.70	-3.42e-04	0.0	0.0	-6583.82	28.54	-2.77	-925.96	195.70	-1319.22
		-1319.22	154.63	7.75e-04	0.0	15.0	-6538.82	28.54	-2.77	-925.96	154.63	-891.22
144	5	-902.52	202.30	-3.56e-04	0.0	0.0	-6701.07	29.05	-2.81	-943.85	202.30	-1338.25
		-1338.25	160.56	7.83e-04	0.0	15.0	-6656.07	29.05	-2.81	-943.85	160.56	-902.52

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

144	6	-1072.02	301.23	-5.63e-04	0.0	0.0	-8459.78	36.78	-3.42	-1212.13	301.23	-1623.63
		-1623.63	249.45	9.09e-04	0.0	15.0	-8414.78	36.78	-3.42	-1212.13	249.45	-1072.02
144	7	-902.52	202.30	-3.56e-04	0.0	0.0	-6701.07	29.05	-2.81	-943.85	202.30	-1338.25
		-1338.25	160.56	7.83e-04	0.0	15.0	-6656.07	29.05	-2.81	-943.85	160.56	-902.52
144	8	-1021.17	271.55	-5.01e-04	0.0	0.0	-7932.16	34.46	-3.24	-1131.64	271.55	-1538.02
		-1538.02	222.78	8.71e-04	0.0	15.0	-7887.16	34.46	-3.24	-1131.64	222.78	-1021.17
144	9	-902.52	202.30	-3.56e-04	0.0	0.0	-6701.07	29.05	-2.81	-943.85	202.30	-1338.25
		-1338.25	160.56	7.83e-04	0.0	15.0	-6656.07	29.05	-2.81	-943.85	160.56	-902.52
144	10	-1004.22	261.66	-4.80e-04	0.0	0.0	-7756.29	33.69	-3.18	-1104.81	261.66	-1509.48
		-1509.48	213.89	8.58e-04	0.0	15.0	-7711.29	33.69	-3.18	-1104.81	213.89	-1004.22
145	2	2075.31	1062.18	6.92e-04	0.0	0.0	-1.159e+04	-21.30	-7.73	-2518.66	1062.18	2075.31
		1755.99	941.00	1.88e-03	0.0	15.0	-1.153e+04	-21.30	-7.73	-2518.66	941.00	1755.99
145	3	1217.70	648.03	4.01e-04	0.0	0.0	-6644.17	-13.22	-4.75	-1431.75	648.03	1217.70
		1019.45	573.40	1.15e-03	0.0	15.0	-6599.17	-13.22	-4.75	-1431.75	573.40	1019.45
145	5	1237.55	656.89	4.08e-04	0.0	0.0	-6763.22	-13.39	-4.81	-1458.26	656.89	1237.55
		1036.81	581.28	1.16e-03	0.0	15.0	-6718.22	-13.39	-4.81	-1458.26	581.28	1036.81
145	6	1535.31	789.80	5.11e-04	0.0	0.0	-8548.90	-15.87	-5.75	-1855.87	789.80	1535.31
		1297.32	699.58	1.40e-03	0.0	15.0	-8503.90	-15.87	-5.75	-1855.87	699.58	1297.32
145	7	1237.55	656.89	4.08e-04	0.0	0.0	-6763.22	-13.39	-4.81	-1458.26	656.89	1237.55
		1036.81	581.28	1.16e-03	0.0	15.0	-6718.22	-13.39	-4.81	-1458.26	581.28	1036.81
145	8	1445.98	749.93	4.80e-04	0.0	0.0	-8013.20	-15.13	-5.47	-1736.59	749.93	1445.98
		1219.17	664.09	1.33e-03	0.0	15.0	-7968.20	-15.13	-5.47	-1736.59	664.09	1219.17
145	9	1237.55	656.89	4.08e-04	0.0	0.0	-6763.22	-13.39	-4.81	-1458.26	656.89	1237.55
		1036.81	581.28	1.16e-03	0.0	15.0	-6718.22	-13.39	-4.81	-1458.26	581.28	1036.81
145	10	1416.21	736.64	4.70e-04	0.0	0.0	-7834.63	-14.88	-5.37	-1696.83	736.64	1416.21
		1193.12	652.26	1.30e-03	0.0	15.0	-7789.63	-14.88	-5.37	-1696.83	652.26	1193.12
146	2	-1746.53	2131.23	4.44e-03	0.0	0.0	-1.041e+04	-4.88	-14.99	-4101.30	2131.23	-1746.53
		-1818.94	1893.02	3.55e-03	0.0	15.0	-1.035e+04	-4.88	-14.99	-4101.30	1893.02	-1818.94
146	3	-986.34	1198.47	2.40e-03	0.0	0.0	-6021.75	-0.85	-8.67	-2343.98	1198.47	-986.34
		-998.70	1061.68	2.11e-03	0.0	15.0	-5976.75	-0.85	-8.67	-2343.98	1061.68	-998.70
146	5	-1005.06	1221.58	2.45e-03	0.0	0.0	-6125.89	-1.00	-8.82	-2386.49	1221.58	-1005.06
		-1019.69	1082.36	2.14e-03	0.0	15.0	-6080.89	-1.00	-8.82	-2386.49	1082.36	-1019.69
146	6	-1285.88	1568.29	3.25e-03	0.0	0.0	-7688.01	-3.29	-11.07	-3024.06	1568.29	-1285.88
		-1334.59	1392.54	2.63e-03	0.0	15.0	-7643.01	-3.29	-11.07	-3024.06	1392.54	-1334.59
146	7	-1005.06	1221.58	2.45e-03	0.0	0.0	-6125.89	-1.00	-8.82	-2386.49	1221.58	-1005.06
		-1019.69	1082.36	2.14e-03	0.0	15.0	-6080.89	-1.00	-8.82	-2386.49	1082.36	-1019.69
146	8	-1201.63	1464.28	3.01e-03	0.0	0.0	-7219.37	-2.60	-10.39	-2832.79	1464.28	-1201.63
		-1240.12	1299.49	2.48e-03	0.0	15.0	-7174.37	-2.60	-10.39	-2832.79	1299.49	-1240.12
146	9	-1005.06	1221.58	2.45e-03	0.0	0.0	-6125.89	-1.00	-8.82	-2386.49	1221.58	-1005.06
		-1019.69	1082.36	2.14e-03	0.0	15.0	-6080.89	-1.00	-8.82	-2386.49	1082.36	-1019.69
146	10	-1173.55	1429.61	2.93e-03	0.0	0.0	-7063.16	-2.37	-10.17	-2769.03	1429.61	-1173.55
		-1208.63	1268.47	2.43e-03	0.0	15.0	-7018.16	-2.37	-10.17	-2769.03	1268.47	-1208.63
147	2	-7990.06	2874.87	5.79e-03	0.0	0.0	-1.581e+04	-232.95	-0.83	-1563.62	2842.31	-7990.06
		-1.148e+04	2842.31	2.09e-03	0.0	15.0	-1.575e+04	-232.95	-0.83	-1563.62	2874.87	-1.148e+04
147	3	-5041.16	1713.78	3.34e-03	0.0	0.0	-9069.97	-161.71	-0.93	-889.03	1701.88	-5041.16
		-7466.45	1701.88	1.30e-03	0.0	15.0	-9024.97	-161.71	-0.93	-889.03	1713.78	-7466.45
147	5	-5099.08	1739.87	3.40e-03	0.0	0.0	-9232.12	-162.62	-0.92	-905.47	1727.27	-5099.08
		-7538.12	1727.27	1.31e-03	0.0	15.0	-9187.12	-162.62	-0.92	-905.47	1739.87	-7538.12
147	6	-5967.97	2131.17	4.27e-03	0.0	0.0	-1.166e+04	-176.37	-0.69	-1152.18	2108.25	-5967.97
		-8613.16	2108.25	1.56e-03	0.0	15.0	-1.162e+04	-176.37	-0.69	-1152.18	2131.17	-8613.16
147	7	-5099.08	1739.87	3.40e-03	0.0	0.0	-9232.12	-162.62	-0.92	-905.47	1727.27	-5099.08
		-7538.12	1727.27	1.31e-03	0.0	15.0	-9187.12	-162.62	-0.92	-905.47	1739.87	-7538.12
147	8	-5707.30	2013.78	4.01e-03	0.0	0.0	-1.093e+04	-172.25	-0.76	-1078.17	1993.95	-5707.30
		-8290.65	1993.95	1.48e-03	0.0	15.0	-1.089e+04	-172.25	-0.76	-1078.17	2013.78	-8290.65
147	9	-5099.08	1739.87	3.40e-03	0.0	0.0	-9232.12	-162.62	-0.92	-905.47	1727.27	-5099.08
		-7538.12	1727.27	1.31e-03	0.0	15.0	-9187.12	-162.62	-0.92	-905.47	1739.87	-7538.12
147	10	-5620.41	1974.65	3.92e-03	0.0	0.0	-1.069e+04	-170.87	-0.78	-1053.50	1955.86	-5620.41
		-8183.15	1955.86	1.46e-03	0.0	15.0	-1.065e+04	-170.87	-0.78	-1053.50	1974.65	-8183.15
148	2	-1.566e+04	2287.62	3.14e-03	0.0	0.0	-1.923e+04	92.35	1.16	-673.31	2261.12	-1.704e+04
		-1.704e+04	2261.12	1.29e-03	0.0	15.0	-1.917e+04	92.35	1.16	-673.31	2287.62	-1.566e+04
148	3	-9834.15	1361.31	2.07e-03	0.0	0.0	-1.095e+04	9.29	-0.11	-351.36	1358.48	-9973.65
		-9973.65	1358.48	8.62e-04	0.0	15.0	-1.090e+04	9.29	-0.11	-351.36	1361.31	-9834.15
148	5	-9950.07	1382.19	2.08e-03	0.0	0.0	-1.115e+04	12.52	-0.06	-360.09	1378.44	-1.014e+04
		-1.014e+04	1378.44	8.69e-04	0.0	15.0	-1.110e+04	12.52	-0.06	-360.09	1382.19	-9950.07
148	6	-1.169e+04	1695.45	2.36e-03	0.0	0.0	-1.417e+04	61.08	0.73	-491.07	1677.90	-1.261e+04
		-1.261e+04	1677.90	9.70e-04	0.0	15.0	-1.412e+04	61.08	0.73	-491.07	1695.45	-1.169e+04

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

148	7	-9950.07	1382.19	2.08e-03	0.0	0.0	-1.115e+04	12.52	-0.06	-360.09	1378.44	-1.014e+04
		-1.014e+04	1378.44	8.69e-04	0.0	15.0	-1.110e+04	12.52	-0.06	-360.09	1382.19	-9950.07
148	8	-1.117e+04	1601.47	2.27e-03	0.0	0.0	-1.326e+04	46.51	0.50	-451.77	1588.06	-1.187e+04
		-1.187e+04	1588.06	9.40e-04	0.0	15.0	-1.322e+04	46.51	0.50	-451.77	1601.47	-1.117e+04
148	9	-9950.07	1382.19	2.08e-03	0.0	0.0	-1.115e+04	12.52	-0.06	-360.09	1378.44	-1.014e+04
		-1.014e+04	1378.44	8.69e-04	0.0	15.0	-1.110e+04	12.52	-0.06	-360.09	1382.19	-9950.07
148	10	-1.099e+04	1570.15	2.25e-03	0.0	0.0	-1.296e+04	41.66	0.42	-438.68	1558.12	-1.162e+04
		-1.162e+04	1558.12	9.29e-04	0.0	15.0	-1.291e+04	41.66	0.42	-438.68	1570.15	-1.099e+04
149	2	5877.06	2072.40	5.26e-03	0.0	0.0	-9200.56	-11.08	-8.90	-2399.11	2072.40	5877.06
		5711.83	1916.81	3.28e-03	0.0	15.0	-9142.06	-11.08	-8.90	-2399.11	1916.81	5711.83
149	3	2995.71	1208.52	2.65e-03	0.0	0.0	-5232.70	-3.33	-5.43	-1374.64	1208.52	2995.71
		2946.29	1114.62	1.98e-03	0.0	15.0	-5187.70	-3.33	-5.43	-1374.64	1114.62	2946.29
149	5	3075.65	1228.74	2.73e-03	0.0	0.0	-5329.39	-3.60	-5.51	-1399.32	1228.74	3075.65
		3022.17	1133.49	2.01e-03	0.0	15.0	-5284.39	-3.60	-5.51	-1399.32	1133.49	3022.17
149	6	4274.83	1531.96	3.82e-03	0.0	0.0	-6779.83	-7.68	-6.62	-1769.53	1531.96	4274.83
		4160.26	1416.43	2.44e-03	0.0	15.0	-6734.83	-7.68	-6.62	-1769.53	1416.43	4160.26
149	7	3075.65	1228.74	2.73e-03	0.0	0.0	-5329.39	-3.60	-5.51	-1399.32	1228.74	3075.65
		3022.17	1133.49	2.01e-03	0.0	15.0	-5284.39	-3.60	-5.51	-1399.32	1133.49	3022.17
149	8	3915.08	1440.99	3.49e-03	0.0	0.0	-6344.70	-6.46	-6.29	-1658.47	1440.99	3915.08
		3818.83	1331.55	2.31e-03	0.0	15.0	-6299.70	-6.46	-6.29	-1658.47	1331.55	3818.83
149	9	3075.65	1228.74	2.73e-03	0.0	0.0	-5329.39	-3.60	-5.51	-1399.32	1228.74	3075.65
		3022.17	1133.49	2.01e-03	0.0	15.0	-5284.39	-3.60	-5.51	-1399.32	1133.49	3022.17
149	10	3795.16	1410.67	3.38e-03	0.0	0.0	-6199.66	-6.05	-6.18	-1621.45	1410.67	3795.16
		3705.02	1303.25	2.27e-03	0.0	15.0	-6154.66	-6.05	-6.18	-1621.45	1303.25	3705.02
151	2	-931.64	347.66	-7.92e-04	0.0	0.0	-1.053e+04	33.84	-4.09	-1666.50	347.66	-1439.10
		-1439.10	285.71	1.22e-03	0.0	15.0	-1.047e+04	33.84	-4.09	-1666.50	285.71	-931.64
151	3	-585.98	154.88	-3.45e-04	0.0	0.0	-6021.98	20.36	-2.44	-938.57	154.88	-891.34
		-891.34	118.80	7.76e-04	0.0	15.0	-5976.98	20.36	-2.44	-938.57	118.80	-585.98
151	5	-592.83	160.78	-3.59e-04	0.0	0.0	-6130.77	20.66	-2.48	-956.57	160.78	-902.64
		-902.64	124.10	7.84e-04	0.0	15.0	-6085.77	20.66	-2.48	-956.57	124.10	-592.83
151	6	-695.57	249.27	-5.67e-04	0.0	0.0	-7762.62	25.12	-3.03	-1226.55	249.27	-1072.22
		-1072.22	203.49	9.10e-04	0.0	15.0	-7717.62	25.12	-3.03	-1226.55	203.49	-695.57
151	7	-592.83	160.78	-3.59e-04	0.0	0.0	-6130.77	20.66	-2.48	-956.57	160.78	-902.64
		-902.64	124.10	7.84e-04	0.0	15.0	-6085.77	20.66	-2.48	-956.57	124.10	-592.83
151	8	-664.75	222.73	-5.05e-04	0.0	0.0	-7273.07	23.78	-2.87	-1145.55	222.73	-1021.34
		-1021.34	179.67	8.73e-04	0.0	15.0	-7228.07	23.78	-2.87	-1145.55	179.67	-664.75
151	9	-592.83	160.78	-3.59e-04	0.0	0.0	-6130.77	20.66	-2.48	-956.57	160.78	-902.64
		-902.64	124.10	7.84e-04	0.0	15.0	-6085.77	20.66	-2.48	-956.57	124.10	-592.83
151	10	-654.47	213.88	-4.84e-04	0.0	0.0	-7109.88	23.33	-2.81	-1118.56	213.88	-1004.39
		-1004.39	171.73	8.60e-04	0.0	15.0	-7064.88	23.33	-2.81	-1118.56	171.73	-654.47
152	2	1756.24	938.59	7.01e-04	0.0	0.0	-1.062e+04	-32.29	-6.94	-2535.98	938.59	1756.24
		1271.98	829.93	1.89e-03	0.0	15.0	-1.056e+04	-32.29	-6.94	-2535.98	829.93	1271.98
152	3	1019.59	571.85	4.07e-04	0.0	0.0	-6064.40	-19.09	-4.27	-1441.92	571.85	1019.59
		733.35	504.96	1.15e-03	0.0	15.0	-6019.40	-19.09	-4.27	-1441.92	504.96	733.35
152	5	1036.96	579.72	4.14e-04	0.0	0.0	-6174.57	-19.39	-4.32	-1468.60	579.72	1036.96
		746.20	511.96	1.17e-03	0.0	15.0	-6129.57	-19.39	-4.32	-1468.60	511.96	746.20
152	6	1297.51	697.78	5.18e-04	0.0	0.0	-7827.05	-23.91	-5.17	-1868.68	697.78	1297.51
		938.92	616.88	1.41e-03	0.0	15.0	-7782.05	-23.91	-5.17	-1868.68	616.88	938.92
152	7	1036.96	579.72	4.14e-04	0.0	0.0	-6174.57	-19.39	-4.32	-1468.60	579.72	1036.96
		746.20	511.96	1.17e-03	0.0	15.0	-6129.57	-19.39	-4.32	-1468.60	511.96	746.20
152	8	1219.34	662.36	4.87e-04	0.0	0.0	-7331.31	-22.56	-4.91	-1748.66	662.36	1219.34
		881.10	585.41	1.33e-03	0.0	15.0	-7286.31	-22.56	-4.91	-1748.66	585.41	881.10
152	9	1036.96	579.72	4.14e-04	0.0	0.0	-6174.57	-19.39	-4.32	-1468.60	579.72	1036.96
		746.20	511.96	1.17e-03	0.0	15.0	-6129.57	-19.39	-4.32	-1468.60	511.96	746.20
152	10	1193.29	650.55	4.76e-04	0.0	0.0	-7166.06	-22.10	-4.83	-1708.65	650.55	1193.29
		861.83	574.91	1.31e-03	0.0	15.0	-7121.06	-22.10	-4.83	-1708.65	574.91	861.83
153	2	-1456.59	1887.05	4.43e-03	0.0	0.0	-9570.19	24.00	-13.55	-4138.64	1887.05	-1817.37
		-1817.37	1672.80	3.56e-03	0.0	15.0	-9511.69	24.00	-13.55	-4138.64	1672.80	-1456.59
153	3	-789.60	1058.68	2.40e-03	0.0	0.0	-5511.87	13.86	-7.82	-2365.04	1058.68	-997.86
		-997.86	935.82	2.12e-03	0.0	15.0	-5466.87	13.86	-7.82	-2365.04	935.82	-789.60
153	5	-806.95	1079.27	2.45e-03	0.0	0.0	-5608.83	14.10	-7.96	-2407.95	1079.27	-1018.83
		-1018.83	954.21	2.15e-03	0.0	15.0	-5563.83	14.10	-7.96	-2407.95	954.21	-806.95
153	6	-1067.09	1388.21	3.24e-03	0.0	0.0	-7063.33	17.72	-10.01	-3051.55	1388.21	-1333.44
		-1333.44	1230.16	2.64e-03	0.0	15.0	-7018.33	17.72	-10.01	-3051.55	1230.16	-1067.09
153	7	-806.95	1079.27	2.45e-03	0.0	0.0	-5608.83	14.10	-7.96	-2407.95	1079.27	-1018.83
		-1018.83	954.21	2.15e-03	0.0	15.0	-5563.83	14.10	-7.96	-2407.95	954.21	-806.95

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Direttore Tecnico: ING. LEONARDO FILOTICO

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

153	8	-989.05	1295.53	3.01e-03	0.0	0.0	-6626.98	16.63	-9.39	-2858.47	1295.53	-1239.06
		-1239.06	1147.38	2.49e-03	0.0	15.0	-6581.98	16.63	-9.39	-2858.47	1147.38	-989.05
153	9	-806.95	1079.27	2.45e-03	0.0	0.0	-5608.83	14.10	-7.96	-2407.95	1079.27	-1018.83
		-1018.83	954.21	2.15e-03	0.0	15.0	-5563.83	14.10	-7.96	-2407.95	954.21	-806.95
153	10	-963.03	1264.63	2.93e-03	0.0	0.0	-6481.53	16.27	-9.19	-2794.11	1264.63	-1207.60
		-1207.60	1119.78	2.44e-03	0.0	15.0	-6436.53	16.27	-9.19	-2794.11	1119.78	-963.03
154	2	-1.148e+04	2951.89	5.74e-03	0.0	0.0	-1.542e+04	-222.50	8.79e-03	-1669.48	2899.28	-1.148e+04
		-1.482e+04	2899.28	2.11e-03	0.0	15.0	-1.536e+04	-222.50	8.79e-03	-1669.48	2951.89	-1.482e+04
154	3	-7465.86	1751.98	3.31e-03	0.0	0.0	-8842.41	-177.30	-0.45	-950.95	1727.88	-7465.86
		-1.013e+04	1727.88	1.31e-03	0.0	15.0	-8797.41	-177.30	-0.45	-950.95	1751.98	-1.013e+04
154	5	-7537.52	1779.17	3.36e-03	0.0	0.0	-9000.77	-176.98	-0.42	-968.42	1754.21	-7537.52
		-1.019e+04	1754.21	1.33e-03	0.0	15.0	-8955.77	-176.98	-0.42	-968.42	1779.17	-1.019e+04
154	6	-8612.42	2187.02	4.23e-03	0.0	0.0	-1.138e+04	-172.15	-0.07	-1230.46	2149.19	-8612.42
		-1.119e+04	2149.19	1.57e-03	0.0	15.0	-1.133e+04	-172.15	-0.07	-1230.46	2187.02	-1.119e+04
154	7	-7537.52	1779.17	3.36e-03	0.0	0.0	-9000.77	-176.98	-0.42	-968.42	1754.21	-7537.52
		-1.019e+04	1754.21	1.33e-03	0.0	15.0	-8955.77	-176.98	-0.42	-968.42	1779.17	-1.019e+04
154	8	-8289.95	2064.67	3.97e-03	0.0	0.0	-1.066e+04	-173.59	-0.17	-1151.85	2030.70	-8289.95
		-1.089e+04	2030.70	1.50e-03	0.0	15.0	-1.062e+04	-173.59	-0.17	-1151.85	2064.67	-1.089e+04
154	9	-7537.52	1779.17	3.36e-03	0.0	0.0	-9000.77	-176.98	-0.42	-968.42	1754.21	-7537.52
		-1.019e+04	1754.21	1.33e-03	0.0	15.0	-8955.77	-176.98	-0.42	-968.42	1779.17	-1.019e+04
154	10	-8182.46	2023.88	3.89e-03	0.0	0.0	-1.043e+04	-174.08	-0.21	-1125.65	1991.20	-8182.46
		-1.079e+04	1991.20	1.47e-03	0.0	15.0	-1.038e+04	-174.08	-0.21	-1125.65	2023.88	-1.079e+04
155	2	-1.566e+04	2351.78	3.10e-03	0.0	0.0	-1.869e+04	-238.93	2.26	-734.06	2296.21	-1.566e+04
		-1.924e+04	2296.21	1.31e-03	0.0	15.0	-1.863e+04	-238.93	2.26	-734.06	2351.78	-1.924e+04
155	3	-9833.79	1385.13	2.04e-03	0.0	0.0	-1.064e+04	-197.77	0.50	-388.53	1365.86	-9833.79
		-1.280e+04	1365.86	8.73e-04	0.0	15.0	-1.059e+04	-197.77	0.50	-388.53	1385.13	-1.280e+04
155	5	-9949.71	1407.36	2.06e-03	0.0	0.0	-1.083e+04	-197.03	0.56	-397.77	1386.85	-9949.71
		-1.291e+04	1386.85	8.80e-04	0.0	15.0	-1.079e+04	-197.03	0.56	-397.77	1407.36	-1.291e+04
155	6	-1.169e+04	1740.69	2.33e-03	0.0	0.0	-1.377e+04	-186.05	1.54	-536.25	1701.72	-1.169e+04
		-1.448e+04	1701.72	9.83e-04	0.0	15.0	-1.373e+04	-186.05	1.54	-536.25	1740.69	-1.448e+04
155	7	-9949.71	1407.36	2.06e-03	0.0	0.0	-1.083e+04	-197.03	0.56	-397.77	1386.85	-9949.71
		-1.291e+04	1386.85	8.80e-04	0.0	15.0	-1.079e+04	-197.03	0.56	-397.77	1407.36	-1.291e+04
155	8	-1.117e+04	1640.69	2.25e-03	0.0	0.0	-1.289e+04	-189.34	1.25	-494.71	1607.26	-1.117e+04
		-1.401e+04	1607.26	9.52e-04	0.0	15.0	-1.285e+04	-189.34	1.25	-494.71	1640.69	-1.401e+04
155	9	-9949.71	1407.36	2.06e-03	0.0	0.0	-1.083e+04	-197.03	0.56	-397.77	1386.85	-9949.71
		-1.291e+04	1386.85	8.80e-04	0.0	15.0	-1.079e+04	-197.03	0.56	-397.77	1407.36	-1.291e+04
155	10	-1.099e+04	1607.35	2.22e-03	0.0	0.0	-1.260e+04	-190.44	1.15	-480.86	1575.77	-1.099e+04
		-1.385e+04	1575.77	9.42e-04	0.0	15.0	-1.255e+04	-190.44	1.15	-480.86	1607.35	-1.385e+04
156	2	7245.31	1905.82	5.28e-03	0.0	0.0	-8619.41	102.05	-9.57	-2471.48	1905.82	5713.69
		5713.69	1734.58	3.30e-03	0.0	15.0	-8560.91	102.05	-9.57	-2471.48	1734.58	7245.31
156	3	3804.56	1108.45	2.66e-03	0.0	0.0	-4876.96	57.12	-5.78	-1415.37	1108.45	2947.23
		2947.23	1006.19	1.99e-03	0.0	15.0	-4831.96	57.12	-5.78	-1415.37	1006.19	3804.56
156	5	3897.27	1127.19	2.73e-03	0.0	0.0	-4968.87	58.24	-5.86	-1440.83	1127.19	3023.13
		3023.13	1023.39	2.02e-03	0.0	15.0	-4923.87	58.24	-5.86	-1440.83	1023.39	3897.27
156	6	5288.03	1408.34	3.83e-03	0.0	0.0	-6347.52	75.05	-7.11	-1822.79	1408.34	4161.61
		4161.61	1281.37	2.45e-03	0.0	15.0	-6302.52	75.05	-7.11	-1822.79	1281.37	5288.03
156	7	3897.27	1127.19	2.73e-03	0.0	0.0	-4968.87	58.24	-5.86	-1440.83	1127.19	3023.13
		3023.13	1023.39	2.02e-03	0.0	15.0	-4923.87	58.24	-5.86	-1440.83	1023.39	3897.27
156	8	4870.80	1324.00	3.50e-03	0.0	0.0	-5933.92	70.01	-6.74	-1708.20	1324.00	3820.07
		3820.07	1203.98	2.32e-03	0.0	15.0	-5888.92	70.01	-6.74	-1708.20	1203.98	4870.80
156	9	3897.27	1127.19	2.73e-03	0.0	0.0	-4968.87	58.24	-5.86	-1440.83	1127.19	3023.13
		3023.13	1023.39	2.02e-03	0.0	15.0	-4923.87	58.24	-5.86	-1440.83	1023.39	3897.27
156	10	4731.73	1295.88	3.39e-03	0.0	0.0	-5796.06	68.33	-6.61	-1670.01	1295.88	3706.22
		3706.22	1178.18	2.28e-03	0.0	15.0	-5751.06	68.33	-6.61	-1670.01	1178.18	4731.73
158	2	-528.21	285.46	-7.96e-04	0.0	0.0	-9620.48	26.92	-3.67	-1679.70	285.46	-931.91
		-931.91	229.88	1.22e-03	0.0	15.0	-9561.98	26.92	-3.67	-1679.70	229.88	-528.21
158	3	-328.77	119.06	-3.47e-04	0.0	0.0	-5481.20	17.16	-2.17	-947.55	119.06	-586.10
		-586.10	86.97	7.77e-04	0.0	15.0	-5436.20	17.16	-2.17	-947.55	86.97	-328.77
158	5	-332.84	124.33	-3.61e-04	0.0	0.0	-5581.80	17.35	-2.21	-965.61	124.33	-592.95
		-592.95	91.68	7.85e-04	0.0	15.0	-5536.80	17.35	-2.21	-965.61	91.68	-332.84
158	6	-393.81	203.37	-5.69e-04	0.0	0.0	-7090.82	20.14	-2.72	-1236.51	203.37	-695.77
		-695.77	162.33	9.12e-04	0.0	15.0	-7045.82	20.14	-2.72	-1236.51	162.33	-393.81
158	7	-332.84	124.33	-3.61e-04	0.0	0.0	-5581.80	17.35	-2.21	-965.61	124.33	-592.95
		-592.95	91.68	7.85e-04	0.0	15.0	-5536.80	17.35	-2.21	-965.61	91.68	-332.84
158	8	-375.52	179.66	-5.07e-04	0.0	0.0	-6638.11	19.30	-2.57	-1155.24	179.66	-664.92
		-664.92	141.14	8.74e-04	0.0	15.0	-6593.11	19.30	-2.57	-1155.24	141.14	-375.52

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

158	9	-332.84	124.33	-3.61e-04	0.0	0.0	-5581.80	17.35	-2.21	-965.61	124.33	-592.95
		-592.95	91.68	7.85e-04	0.0	15.0	-5536.80	17.35	-2.21	-965.61	91.68	-332.84
158	10	-369.42	171.75	-4.86e-04	0.0	0.0	-6487.21	19.02	-2.51	-1128.15	171.75	-654.64
		-654.64	134.07	8.61e-04	0.0	15.0	-6442.21	19.02	-2.51	-1128.15	134.07	-369.42
159	2	1272.23	827.82	7.08e-04	0.0	0.0	-9678.29	-43.19	-6.34	-2544.91	827.82	1272.23
		624.57	728.75	1.90e-03	0.0	15.0	-9619.79	-43.19	-6.34	-2544.91	728.75	624.57
159	3	733.50	503.61	4.11e-04	0.0	0.0	-5507.19	-25.09	-3.89	-1447.32	503.61	733.50
		357.19	442.68	1.15e-03	0.0	15.0	-5462.19	-25.09	-3.89	-1447.32	442.68	357.19
159	5	746.35	510.59	4.18e-04	0.0	0.0	-5608.76	-25.52	-3.94	-1474.07	510.59	746.35
		363.65	448.86	1.17e-03	0.0	15.0	-5563.76	-25.52	-3.94	-1474.07	448.86	363.65
159	6	939.10	615.31	5.23e-04	0.0	0.0	-7132.31	-31.91	-4.71	-1875.31	615.31	939.10
		460.56	541.56	1.41e-03	0.0	15.0	-7087.31	-31.91	-4.71	-1875.31	541.56	460.56
159	7	746.35	510.59	4.18e-04	0.0	0.0	-5608.76	-25.52	-3.94	-1474.07	510.59	746.35
		363.65	448.86	1.17e-03	0.0	15.0	-5563.76	-25.52	-3.94	-1474.07	448.86	363.65
159	8	881.27	583.89	4.91e-04	0.0	0.0	-6675.25	-29.99	-4.48	-1754.94	583.89	881.27
		431.49	513.75	1.34e-03	0.0	15.0	-6630.25	-29.99	-4.48	-1754.94	513.75	431.49
159	9	746.35	510.59	4.18e-04	0.0	0.0	-5608.76	-25.52	-3.94	-1474.07	510.59	746.35
		363.65	448.86	1.17e-03	0.0	15.0	-5563.76	-25.52	-3.94	-1474.07	448.86	363.65
159	10	862.00	573.42	4.81e-04	0.0	0.0	-6522.89	-29.35	-4.41	-1714.82	573.42	862.00
		421.80	504.48	1.31e-03	0.0	15.0	-6477.89	-29.35	-4.41	-1714.82	504.48	421.80
160	2	-703.82	1667.78	4.42e-03	0.0	0.0	-8759.84	50.03	-12.42	-4161.29	1667.78	-1455.03
		-1455.03	1472.14	3.57e-03	0.0	15.0	-8701.34	50.03	-12.42	-4161.29	1472.14	-703.82
160	3	-377.66	933.31	2.39e-03	0.0	0.0	-5021.13	27.38	-7.16	-2377.89	933.31	-788.76
		-788.76	821.27	2.12e-03	0.0	15.0	-4976.13	27.38	-7.16	-2377.89	821.27	-377.66
160	5	-386.24	951.64	2.44e-03	0.0	0.0	-5111.15	27.96	-7.28	-2421.04	951.64	-806.09
		-806.09	837.58	2.16e-03	0.0	15.0	-5066.15	27.96	-7.28	-2421.04	837.58	-386.24
160	6	-514.99	1226.52	3.24e-03	0.0	0.0	-6461.37	36.69	-9.16	-3068.23	1226.52	-1065.95
		-1065.95	1082.23	2.65e-03	0.0	15.0	-6416.37	36.69	-9.16	-3068.23	1082.23	-514.99
160	7	-386.24	951.64	2.44e-03	0.0	0.0	-5111.15	27.96	-7.28	-2421.04	951.64	-806.09
		-806.09	837.58	2.16e-03	0.0	15.0	-5066.15	27.96	-7.28	-2421.04	837.58	-386.24
160	8	-476.37	1144.06	3.00e-03	0.0	0.0	-6056.30	34.07	-8.60	-2874.07	1144.06	-987.99
		-987.99	1008.83	2.50e-03	0.0	15.0	-6011.30	34.07	-8.60	-2874.07	1008.83	-476.37
160	9	-386.24	951.64	2.44e-03	0.0	0.0	-5111.15	27.96	-7.28	-2421.04	951.64	-806.09
		-806.09	837.58	2.16e-03	0.0	15.0	-5066.15	27.96	-7.28	-2421.04	837.58	-386.24
160	10	-463.49	1116.57	2.92e-03	0.0	0.0	-5921.28	33.20	-8.41	-2809.36	1116.57	-962.00
		-962.00	984.37	2.45e-03	0.0	15.0	-5876.28	33.20	-8.41	-2809.36	984.37	-463.49
161	2	-1.482e+04	3059.45	5.74e-03	0.0	0.0	-1.500e+04	-847.00	1.40	-1788.65	2970.81	-1.482e+04
		-2.752e+04	2970.81	2.13e-03	0.0	15.0	-1.494e+04	-847.00	1.40	-1788.65	3059.45	-2.752e+04
161	3	-1.012e+04	1805.35	3.30e-03	0.0	0.0	-8608.75	-554.93	0.37	-1022.24	1761.34	-1.012e+04
		-1.845e+04	1761.34	1.32e-03	0.0	15.0	-8563.75	-554.93	0.37	-1022.24	1805.35	-1.845e+04
161	5	-1.019e+04	1834.08	3.36e-03	0.0	0.0	-8762.41	-560.00	0.40	-1040.77	1788.80	-1.019e+04
		-1.859e+04	1788.80	1.34e-03	0.0	15.0	-8717.41	-560.00	0.40	-1040.77	1834.08	-1.859e+04
161	6	-1.119e+04	2265.02	4.23e-03	0.0	0.0	-1.107e+04	-635.96	0.96	-1318.85	2200.74	-1.119e+04
		-2.073e+04	2200.74	1.59e-03	0.0	15.0	-1.102e+04	-635.96	0.96	-1318.85	2265.02	-2.073e+04
161	7	-1.019e+04	1834.08	3.36e-03	0.0	0.0	-8762.41	-560.00	0.40	-1040.77	1788.80	-1.019e+04
		-1.859e+04	1788.80	1.34e-03	0.0	15.0	-8717.41	-560.00	0.40	-1040.77	1834.08	-1.859e+04
161	8	-1.089e+04	2135.74	3.97e-03	0.0	0.0	-1.038e+04	-613.17	0.79	-1235.43	2077.16	-1.089e+04
		-2.009e+04	2077.16	1.52e-03	0.0	15.0	-1.033e+04	-613.17	0.79	-1235.43	2135.74	-2.009e+04
161	9	-1.019e+04	1834.08	3.36e-03	0.0	0.0	-8762.41	-560.00	0.40	-1040.77	1788.80	-1.019e+04
		-1.859e+04	1788.80	1.34e-03	0.0	15.0	-8717.41	-560.00	0.40	-1040.77	1834.08	-1.859e+04
161	10	-1.079e+04	2092.64	3.88e-03	0.0	0.0	-1.015e+04	-605.57	0.74	-1207.62	2035.96	-1.079e+04
		-1.988e+04	2035.96	1.49e-03	0.0	15.0	-1.010e+04	-605.57	0.74	-1207.62	2092.64	-1.988e+04
162	2	-1.924e+04	2446.67	3.01e-03	0.0	0.0	-1.814e+04	-223.66	3.28	-797.55	2364.98	-1.924e+04
		-2.260e+04	2364.98	1.32e-03	0.0	15.0	-1.808e+04	-223.66	3.28	-797.55	2446.67	-2.260e+04
162	3	-1.280e+04	1427.20	1.99e-03	0.0	0.0	-1.032e+04	-218.91	1.08	-426.79	1392.44	-1.280e+04
		-1.608e+04	1392.44	8.84e-04	0.0	15.0	-1.027e+04	-218.91	1.08	-426.79	1427.20	-1.608e+04
162	5	-1.290e+04	1451.04	2.01e-03	0.0	0.0	-1.051e+04	-216.45	1.15	-436.58	1414.81	-1.290e+04
		-1.615e+04	1414.81	8.91e-04	0.0	15.0	-1.046e+04	-216.45	1.15	-436.58	1451.04	-1.615e+04
162	6	-1.448e+04	1808.69	2.26e-03	0.0	0.0	-1.337e+04	-179.60	2.29	-583.39	1750.38	-1.448e+04
		-1.717e+04	1750.38	9.97e-04	0.0	15.0	-1.332e+04	-179.60	2.29	-583.39	1808.69	-1.717e+04
162	7	-1.290e+04	1451.04	2.01e-03	0.0	0.0	-1.051e+04	-216.45	1.15	-436.58	1414.81	-1.290e+04
		-1.615e+04	1414.81	8.91e-04	0.0	15.0	-1.046e+04	-216.45	1.15	-436.58	1451.04	-1.615e+04
162	8	-1.401e+04	1701.40	2.19e-03	0.0	0.0	-1.251e+04	-190.66	1.95	-539.35	1649.71	-1.401e+04
		-1.687e+04	1649.71	9.65e-04	0.0	15.0	-1.246e+04	-190.66	1.95	-539.35	1701.40	-1.687e+04
162	9	-1.290e+04	1451.04	2.01e-03	0.0	0.0	-1.051e+04	-216.45	1.15	-436.58	1414.81	-1.290e+04
		-1.615e+04	1414.81	8.91e-04	0.0	15.0	-1.046e+04	-216.45	1.15	-436.58	1451.04	-1.615e+04

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

162	10	-1.385e+04	1665.63	2.16e-03	0.0	0.0	-1.222e+04	-194.34	1.84	-524.66	1616.15	-1.385e+04
		-1.676e+04	1616.15	9.55e-04	0.0	15.0	-1.218e+04	-194.34	1.84	-524.66	1665.63	-1.676e+04
163	2	7247.18	1747.23	5.33e-03	0.0	0.0	-7894.74	-76.81	-10.00	-2518.64	1747.23	7247.18
		6095.98	1601.45	3.31e-03	0.0	15.0	-7836.24	-76.81	-10.00	-2518.64	1601.45	6095.98
163	3	3805.50	1013.30	2.69e-03	0.0	0.0	-4447.04	-38.03	-5.98	-1441.80	1013.30	3805.50
		3235.52	926.05	2.00e-03	0.0	15.0	-4402.04	-38.03	-5.98	-1441.80	926.05	3235.52
163	5	3898.24	1030.64	2.76e-03	0.0	0.0	-4532.26	-39.13	-6.07	-1467.78	1030.64	3898.24
		3311.72	942.08	2.03e-03	0.0	15.0	-4487.26	-39.13	-6.07	-1467.78	942.08	3311.72
163	6	5289.39	1290.68	3.87e-03	0.0	0.0	-5810.65	-55.69	-7.41	-1857.48	1290.68	5289.39
		4454.75	1182.55	2.46e-03	0.0	15.0	-5765.65	-55.69	-7.41	-1857.48	1182.55	4454.75
163	7	3898.24	1030.64	2.76e-03	0.0	0.0	-4532.26	-39.13	-6.07	-1467.78	1030.64	3898.24
		3311.72	942.08	2.03e-03	0.0	15.0	-4487.26	-39.13	-6.07	-1467.78	942.08	3311.72
163	8	4872.04	1212.67	3.54e-03	0.0	0.0	-5427.13	-50.72	-7.01	-1740.57	1212.67	4872.04
		4111.84	1110.41	2.33e-03	0.0	15.0	-5382.13	-50.72	-7.01	-1740.57	1110.41	4111.84
163	9	3898.24	1030.64	2.76e-03	0.0	0.0	-4532.26	-39.13	-6.07	-1467.78	1030.64	3898.24
		3311.72	942.08	2.03e-03	0.0	15.0	-4487.26	-39.13	-6.07	-1467.78	942.08	3311.72
163	10	4732.93	1186.66	3.43e-03	0.0	0.0	-5299.29	-49.07	-6.88	-1701.60	1186.66	4732.93
		3997.54	1086.36	2.29e-03	0.0	15.0	-5254.29	-49.07	-6.88	-1701.60	1086.36	3997.54
165	2	-126.60	229.64	-7.98e-04	0.0	0.0	-8746.47	26.80	-3.33	-1687.12	229.64	-528.49
		-528.49	179.19	1.22e-03	0.0	15.0	-8687.97	26.80	-3.33	-1687.12	179.19	-126.60
165	3	-61.38	87.20	-3.49e-04	0.0	0.0	-4960.15	17.84	-1.95	-953.07	87.20	-328.89
		-328.89	58.38	7.77e-04	0.0	15.0	-4915.15	17.84	-1.95	-953.07	58.38	-61.38
165	5	-63.27	91.89	-3.63e-04	0.0	0.0	-5052.82	17.98	-1.98	-971.14	91.89	-332.96
		-332.96	62.55	7.86e-04	0.0	15.0	-5007.82	17.98	-1.98	-971.14	62.55	-63.27
165	6	-91.58	162.22	-5.71e-04	0.0	0.0	-6442.91	20.17	-2.46	-1242.19	162.22	-394.01
		-394.01	125.03	9.13e-04	0.0	15.0	-6397.91	20.17	-2.46	-1242.19	125.03	-91.58
165	7	-63.27	91.89	-3.63e-04	0.0	0.0	-5052.82	17.98	-1.98	-971.14	91.89	-332.96
		-332.96	62.55	7.86e-04	0.0	15.0	-5007.82	17.98	-1.98	-971.14	62.55	-63.27
165	8	-83.09	141.12	-5.09e-04	0.0	0.0	-6025.88	19.51	-2.32	-1160.87	141.12	-375.69
		-375.69	106.28	8.75e-04	0.0	15.0	-5980.88	19.51	-2.32	-1160.87	106.28	-83.09
165	9	-63.27	91.89	-3.63e-04	0.0	0.0	-5052.82	17.98	-1.98	-971.14	91.89	-332.96
		-332.96	62.55	7.86e-04	0.0	15.0	-5007.82	17.98	-1.98	-971.14	62.55	-63.27
165	10	-80.26	134.09	-4.88e-04	0.0	0.0	-5886.87	19.29	-2.27	-1133.77	134.09	-369.59
		-369.59	100.03	8.62e-04	0.0	15.0	-5841.87	19.29	-2.27	-1133.77	100.03	-80.26
166	2	624.82	726.82	7.12e-04	0.0	0.0	-8775.37	-57.10	-5.87	-2545.77	726.82	624.82
		-231.50	635.05	1.90e-03	0.0	15.0	-8716.87	-57.10	-5.87	-2545.77	635.05	-231.50
166	3	357.34	441.44	4.13e-04	0.0	0.0	-4971.23	-32.96	-3.60	-1448.12	441.44	357.34
		-136.99	385.08	1.16e-03	0.0	15.0	-4926.23	-32.96	-3.60	-1448.12	385.08	-136.99
166	5	363.80	447.61	4.20e-04	0.0	0.0	-5064.49	-33.53	-3.64	-1474.86	447.61	363.80
		-139.14	390.50	1.17e-03	0.0	15.0	-5019.49	-33.53	-3.64	-1474.86	390.50	-139.14
166	6	460.74	540.12	5.26e-04	0.0	0.0	-6463.34	-42.15	-4.36	-1876.00	540.12	460.74
		-171.45	471.82	1.41e-03	0.0	15.0	-6418.34	-42.15	-4.36	-1876.00	471.82	-171.45
166	7	363.80	447.61	4.20e-04	0.0	0.0	-5064.49	-33.53	-3.64	-1474.86	447.61	363.80
		-139.14	390.50	1.17e-03	0.0	15.0	-5019.49	-33.53	-3.64	-1474.86	390.50	-139.14
166	8	431.66	512.36	4.94e-04	0.0	0.0	-6043.69	-39.57	-4.15	-1755.66	512.36	431.66
		-161.76	447.42	1.34e-03	0.0	15.0	-5998.69	-39.57	-4.15	-1755.66	447.42	-161.76
166	9	363.80	447.61	4.20e-04	0.0	0.0	-5064.49	-33.53	-3.64	-1474.86	447.61	363.80
		-139.14	390.50	1.17e-03	0.0	15.0	-5019.49	-33.53	-3.64	-1474.86	390.50	-139.14
166	10	421.96	503.11	4.84e-04	0.0	0.0	-5903.80	-38.71	-4.08	-1715.55	503.11	421.96
		-158.53	439.29	1.32e-03	0.0	15.0	-5858.80	-38.71	-4.08	-1715.55	439.29	-158.53
167	2	475.14	1467.73	4.41e-03	0.0	0.0	-7978.00	78.44	-11.52	-4169.92	1467.73	-702.26
		-702.26	1286.47	3.59e-03	0.0	15.0	-7919.50	78.44	-11.52	-4169.92	1286.47	475.14
167	3	259.82	819.07	2.39e-03	0.0	0.0	-4548.25	42.41	-6.63	-2382.88	819.07	-376.82
		-376.82	715.40	2.13e-03	0.0	15.0	-4503.25	42.41	-6.63	-2382.88	715.40	259.82
167	5	265.36	835.32	2.44e-03	0.0	0.0	-4631.53	43.35	-6.75	-2426.11	835.32	-385.38
		-385.38	729.77	2.16e-03	0.0	15.0	-4586.53	43.35	-6.75	-2426.11	729.77	265.36
167	6	348.45	1079.03	3.23e-03	0.0	0.0	-5880.69	57.45	-8.50	-3074.61	1079.03	-513.85
		-513.85	945.36	2.66e-03	0.0	15.0	-5835.69	57.45	-8.50	-3074.61	945.36	348.45
167	7	265.36	835.32	2.44e-03	0.0	0.0	-4631.53	43.35	-6.75	-2426.11	835.32	-385.38
		-385.38	729.77	2.16e-03	0.0	15.0	-4586.53	43.35	-6.75	-2426.11	729.77	265.36
167	8	323.52	1005.92	2.99e-03	0.0	0.0	-5505.94	53.22	-7.98	-2880.06	1005.92	-475.31
		-475.31	880.69	2.51e-03	0.0	15.0	-5460.94	53.22	-7.98	-2880.06	880.69	323.52
167	9	265.36	835.32	2.44e-03	0.0	0.0	-4631.53	43.35	-6.75	-2426.11	835.32	-385.38
		-385.38	729.77	2.16e-03	0.0	15.0	-4586.53	43.35	-6.75	-2426.11	729.77	265.36
167	10	315.21	981.55	2.92e-03	0.0	0.0	-5381.03	51.81	-7.80	-2815.21	981.55	-462.46
		-462.46	859.13	2.46e-03	0.0	15.0	-5336.03	51.81	-7.80	-2815.21	859.13	315.21

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

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Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

168	2	-2.752e+04	3226.24	5.67e-03	0.0	0.0	-1.448e+04	-1374.87	3.43	-1922.17	3096.78	-2.752e+04
		-4.814e+04	3096.78	2.16e-03	0.0	15.0	-1.442e+04	-1374.87	3.43	-1922.17	3226.24	-4.814e+04
168	3	-1.845e+04	1894.10	3.26e-03	0.0	0.0	-8311.17	-901.79	1.53	-1101.46	1826.62	-1.845e+04
		-3.197e+04	1826.62	1.34e-03	0.0	15.0	-8266.17	-901.79	1.53	-1101.46	1894.10	-3.197e+04
168	5	-1.859e+04	1924.90	3.31e-03	0.0	0.0	-8459.32	-909.95	1.59	-1121.23	1855.74	-1.859e+04
		-3.224e+04	1855.74	1.36e-03	0.0	15.0	-8414.32	-909.95	1.59	-1121.23	1924.90	-3.224e+04
168	6	-2.073e+04	2386.95	4.18e-03	0.0	0.0	-1.068e+04	-1032.46	2.46	-1417.77	2292.54	-2.073e+04
		-3.622e+04	2292.54	1.61e-03	0.0	15.0	-1.064e+04	-1032.46	2.46	-1417.77	2386.95	-3.622e+04
168	7	-1.859e+04	1924.90	3.31e-03	0.0	0.0	-8459.32	-909.95	1.59	-1121.23	1855.74	-1.859e+04
		-3.224e+04	1855.74	1.36e-03	0.0	15.0	-8414.32	-909.95	1.59	-1121.23	1924.90	-3.224e+04
168	8	-2.009e+04	2248.33	3.92e-03	0.0	0.0	-1.001e+04	-995.71	2.20	-1328.81	2161.50	-2.009e+04
		-3.502e+04	2161.50	1.53e-03	0.0	15.0	-9969.91	-995.71	2.20	-1328.81	2248.33	-3.502e+04
168	9	-1.859e+04	1924.90	3.31e-03	0.0	0.0	-8459.32	-909.95	1.59	-1121.23	1855.74	-1.859e+04
		-3.224e+04	1855.74	1.36e-03	0.0	15.0	-8414.32	-909.95	1.59	-1121.23	1924.90	-3.224e+04
168	10	-1.988e+04	2202.13	3.84e-03	0.0	0.0	-9792.68	-983.46	2.11	-1299.15	2117.82	-1.988e+04
		-3.463e+04	2117.82	1.51e-03	0.0	15.0	-9747.68	-983.46	2.11	-1299.15	2202.13	-3.463e+04
169	2	-2.260e+04	2245.74	2.89e-03	0.0	0.0	-1.505e+04	-28.20	-5.35	-920.12	2245.74	-2.260e+04
		-2.302e+04	2143.31	1.34e-03	0.0	15.0	-1.499e+04	-28.20	-5.35	-920.12	2143.31	-2.302e+04
169	3	-1.608e+04	1308.65	1.89e-03	0.0	0.0	-8528.79	-34.44	-3.67	-494.27	1308.65	-1.608e+04
		-1.660e+04	1239.42	8.95e-04	0.0	15.0	-8483.79	-34.44	-3.67	-494.27	1239.42	-1.660e+04
169	5	-1.615e+04	1330.60	1.91e-03	0.0	0.0	-8688.44	-33.77	-3.70	-505.46	1330.60	-1.615e+04
		-1.666e+04	1260.87	9.03e-04	0.0	15.0	-8643.44	-33.77	-3.70	-505.46	1260.87	-1.666e+04
169	6	-1.717e+04	1659.93	2.17e-03	0.0	0.0	-1.108e+04	-23.75	-4.05	-622.98	1659.93	-1.717e+04
		-1.753e+04	1582.69	1.01e-03	0.0	15.0	-1.104e+04	-23.75	-4.05	-622.98	1582.69	-1.753e+04
169	7	-1.615e+04	1330.60	1.91e-03	0.0	0.0	-8688.44	-33.77	-3.70	-505.46	1330.60	-1.615e+04
		-1.666e+04	1260.87	9.03e-04	0.0	15.0	-8643.44	-33.77	-3.70	-505.46	1260.87	-1.666e+04
169	8	-1.687e+04	1561.14	2.09e-03	0.0	0.0	-1.036e+04	-26.75	-3.94	-622.98	1561.14	-1.687e+04
		-1.727e+04	1486.14	9.79e-04	0.0	15.0	-1.032e+04	-26.75	-3.94	-622.98	1486.14	-1.727e+04
169	9	-1.615e+04	1330.60	1.91e-03	0.0	0.0	-8688.44	-33.77	-3.70	-505.46	1330.60	-1.615e+04
		-1.666e+04	1260.87	9.03e-04	0.0	15.0	-8643.44	-33.77	-3.70	-505.46	1260.87	-1.666e+04
169	10	-1.676e+04	1528.20	2.07e-03	0.0	0.0	-1.013e+04	-27.76	-3.91	-606.19	1528.20	-1.676e+04
		-1.718e+04	1453.96	9.68e-04	0.0	15.0	-1.008e+04	-27.76	-3.91	-606.19	1453.96	-1.718e+04
170	2	6209.78	1603.32	5.34e-03	0.0	0.0	-7218.03	7.40	-9.62	-2576.79	1603.32	6097.86
		6097.86	1473.96	3.32e-03	0.0	15.0	-7159.53	7.40	-9.62	-2576.79	1473.96	6209.78
170	3	3337.34	927.13	2.70e-03	0.0	0.0	-4043.93	6.69	-5.73	-1474.22	927.13	3236.47
		3236.47	849.32	2.01e-03	0.0	15.0	-3998.93	6.69	-5.73	-1474.22	849.32	3337.34
170	5	3412.79	943.18	2.77e-03	0.0	0.0	-4123.00	6.64	-5.81	-1500.84	943.18	3312.70
		3312.70	864.23	2.04e-03	0.0	15.0	-4078.00	6.64	-5.81	-1500.84	864.23	3412.79
170	6	4544.59	1183.94	3.88e-03	0.0	0.0	-5309.04	5.85	-7.13	-1900.22	1183.94	4456.11
		4456.11	1087.93	2.47e-03	0.0	15.0	-5264.04	5.85	-7.13	-1900.22	1087.93	4544.59
170	7	3412.79	943.18	2.77e-03	0.0	0.0	-4123.00	6.64	-5.81	-1500.84	943.18	3312.70
		3312.70	864.23	2.04e-03	0.0	15.0	-4078.00	6.64	-5.81	-1500.84	864.23	3412.79
170	8	4205.05	1111.71	3.55e-03	0.0	0.0	-4953.23	6.09	-6.73	-1780.41	1111.71	4113.09
		4113.09	1020.82	2.34e-03	0.0	15.0	-4908.23	6.09	-6.73	-1780.41	1020.82	4205.05
170	9	3412.79	943.18	2.77e-03	0.0	0.0	-4123.00	6.64	-5.81	-1500.84	943.18	3312.70
		3312.70	864.23	2.04e-03	0.0	15.0	-4078.00	6.64	-5.81	-1500.84	864.23	3412.79
170	10	4091.87	1087.63	3.44e-03	0.0	0.0	-4834.62	6.17	-6.60	-1740.47	1087.63	3998.75
		3998.75	998.45	2.30e-03	0.0	15.0	-4789.62	6.17	-6.60	-1740.47	998.45	4091.87
172	2	360.49	178.94	-7.99e-04	0.0	0.0	-7904.38	32.50	-3.04	-1688.51	178.94	-126.88
		-126.88	132.76	1.22e-03	0.0	15.0	-7845.88	32.50	-3.04	-1688.51	132.76	360.49
172	3	269.36	58.58	-3.50e-04	0.0	0.0	-4458.46	22.06	-1.76	-955.01	58.58	-61.50
		-61.50	32.55	7.78e-04	0.0	15.0	-4413.46	22.06	-1.76	-955.01	32.55	269.36
172	5	269.78	62.72	-3.64e-04	0.0	0.0	-4543.47	22.22	-1.79	-973.04	62.72	-63.40
		-63.40	36.20	7.86e-04	0.0	15.0	-4498.47	22.22	-1.79	-973.04	36.20	269.78
172	6	276.02	124.90	-5.72e-04	0.0	0.0	-5818.70	24.53	-2.25	-1243.40	124.90	-91.78
		-91.78	90.90	9.14e-04	0.0	15.0	-5773.70	24.53	-2.25	-1243.40	90.90	276.02
172	7	269.78	62.72	-3.64e-04	0.0	0.0	-4543.47	22.22	-1.79	-973.04	62.72	-63.40
		-63.40	36.20	7.86e-04	0.0	15.0	-4498.47	22.22	-1.79	-973.04	36.20	269.78
172	8	274.15	106.24	-5.10e-04	0.0	0.0	-5436.14	23.83	-2.11	-1162.29	106.24	-83.27
		-83.27	74.49	8.76e-04	0.0	15.0	-5391.14	23.83	-2.11	-1162.29	74.49	274.15
172	9	269.78	62.72	-3.64e-04	0.0	0.0	-4543.47	22.22	-1.79	-973.04	62.72	-63.40
		-63.40	36.20	7.86e-04	0.0	15.0	-4498.47	22.22	-1.79	-973.04	36.20	269.78
172	10	273.52	100.03	-4.89e-04	0.0	0.0	-5308.61	23.60	-2.06	-1135.25	100.03	-80.43
		-80.43	69.02	8.63e-04	0.0	15.0	-5263.61	23.60	-2.06	-1135.25	69.02	273.52
173	2	-231.25	633.20	7.13e-04	0.0	0.0	-7907.01	-77.57	-5.51	-2538.24	633.20	-231.25
		-1394.75	546.89	1.91e-03	0.0	15.0	-7848.51	-77.57	-5.51	-2538.24	546.89	-1394.75

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

173	3	-136.85	383.90	4.14e-04	0.0	0.0	-4456.17	-44.69	-3.37	-1444.14	383.90	-136.85
		-807.10	330.97	1.16e-03	0.0	15.0	-4411.17	-44.69	-3.37	-1444.14	330.97	-807.10
173	5	-139.00	389.30	4.21e-04	0.0	0.0	-4541.41	-45.47	-3.42	-1470.79	389.30	-139.00
		-821.04	335.67	1.18e-03	0.0	15.0	-4496.41	-45.47	-3.42	-1470.79	335.67	-821.04
173	6	-171.27	470.43	5.27e-04	0.0	0.0	-5820.03	-57.26	-4.10	-1870.50	470.43	-171.27
		-1030.01	406.21	1.42e-03	0.0	15.0	-5775.03	-57.26	-4.10	-1870.50	406.21	-1030.01
173	7	-139.00	389.30	4.21e-04	0.0	0.0	-4541.41	-45.47	-3.42	-1470.79	389.30	-139.00
		-821.04	335.67	1.18e-03	0.0	15.0	-4496.41	-45.47	-3.42	-1470.79	335.67	-821.04
173	8	-161.58	446.09	4.95e-04	0.0	0.0	-5436.44	-53.72	-3.89	-1750.59	446.09	-161.58
		-967.32	385.05	1.35e-03	0.0	15.0	-5391.44	-53.72	-3.89	-1750.59	385.05	-967.32
173	9	-139.00	389.30	4.21e-04	0.0	0.0	-4541.41	-45.47	-3.42	-1470.79	389.30	-139.00
		-821.04	335.67	1.18e-03	0.0	15.0	-4496.41	-45.47	-3.42	-1470.79	335.67	-821.04
173	10	-158.36	437.98	4.85e-04	0.0	0.0	-5308.58	-52.54	-3.82	-1710.62	437.98	-158.36
		-946.42	378.00	1.32e-03	0.0	15.0	-5263.58	-52.54	-3.82	-1710.62	378.00	-946.42
174	2	2205.48	1282.42	4.41e-03	0.0	0.0	-7224.35	115.20	-10.83	-4163.94	1282.42	476.70
		476.70	1112.10	3.60e-03	0.0	15.0	-7165.85	115.20	-10.83	-4163.94	1112.10	2205.48
174	3	1192.37	713.38	2.39e-03	0.0	0.0	-4092.80	62.09	-6.22	-2379.61	713.38	260.66
		260.66	616.11	2.14e-03	0.0	15.0	-4047.80	62.09	-6.22	-2379.61	616.11	1192.37
174	5	1218.80	727.70	2.44e-03	0.0	0.0	-4169.56	63.48	-6.33	-2422.77	727.70	266.22
		266.22	628.66	2.17e-03	0.0	15.0	-4124.56	63.48	-6.33	-2422.77	628.66	1218.80
174	6	1615.21	942.43	3.23e-03	0.0	0.0	-5321.00	84.34	-7.99	-3070.22	942.43	349.59
		349.59	816.86	2.66e-03	0.0	15.0	-5276.00	84.34	-7.99	-3070.22	816.86	1615.21
174	7	1218.80	727.70	2.44e-03	0.0	0.0	-4169.56	63.48	-6.33	-2422.77	727.70	266.22
		266.22	628.66	2.17e-03	0.0	15.0	-4124.56	63.48	-6.33	-2422.77	628.66	1218.80
174	8	1496.28	878.01	2.99e-03	0.0	0.0	-4975.57	78.08	-7.49	-2875.99	878.01	324.58
		324.58	760.40	2.52e-03	0.0	15.0	-4930.57	78.08	-7.49	-2875.99	760.40	1496.28
174	9	1218.80	727.70	2.44e-03	0.0	0.0	-4169.56	63.48	-6.33	-2422.77	727.70	266.22
		266.22	628.66	2.17e-03	0.0	15.0	-4124.56	63.48	-6.33	-2422.77	628.66	1218.80
174	10	1456.64	856.54	2.91e-03	0.0	0.0	-4860.43	75.99	-7.33	-2811.24	856.54	316.24
		316.24	741.58	2.47e-03	0.0	15.0	-4815.43	75.99	-7.33	-2811.24	741.58	1456.64
175	2	-4.814e+04	2961.00	5.33e-03	0.0	0.0	-1.188e+04	-213.93	-8.65	-2069.86	2961.00	-4.814e+04
		-5.135e+04	2819.83	2.18e-03	0.0	15.0	-1.182e+04	-213.93	-8.65	-2069.86	2819.83	-5.135e+04
175	3	-3.197e+04	1738.33	3.03e-03	0.0	0.0	-6769.38	-144.26	-5.39	-1185.59	1738.33	-3.197e+04
		-3.414e+04	1649.89	1.35e-03	0.0	15.0	-6724.38	-144.26	-5.39	-1185.59	1649.89	-3.414e+04
175	5	-3.224e+04	1766.61	3.09e-03	0.0	0.0	-6893.46	-145.32	-5.45	-1206.91	1766.61	-3.224e+04
		-3.442e+04	1677.10	1.37e-03	0.0	15.0	-6848.46	-145.32	-5.45	-1206.91	1677.10	-3.442e+04
175	6	-3.622e+04	2190.70	3.93e-03	0.0	0.0	-8754.61	-161.29	-6.45	-1526.62	2190.70	-3.622e+04
		-3.864e+04	2085.36	1.63e-03	0.0	15.0	-8709.61	-161.29	-6.45	-1526.62	2085.36	-3.864e+04
175	7	-3.224e+04	1766.61	3.09e-03	0.0	0.0	-6893.46	-145.32	-5.45	-1206.91	1766.61	-3.224e+04
		-3.442e+04	1677.10	1.37e-03	0.0	15.0	-6848.46	-145.32	-5.45	-1206.91	1677.10	-3.442e+04
175	8	-3.502e+04	2063.47	3.68e-03	0.0	0.0	-8196.26	-156.50	-6.15	-1430.71	2063.47	-3.502e+04
		-3.737e+04	1962.88	1.55e-03	0.0	15.0	-8151.26	-156.50	-6.15	-1430.71	1962.88	-3.737e+04
175	9	-3.224e+04	1766.61	3.09e-03	0.0	0.0	-6893.46	-145.32	-5.45	-1206.91	1766.61	-3.224e+04
		-3.442e+04	1677.10	1.37e-03	0.0	15.0	-6848.46	-145.32	-5.45	-1206.91	1677.10	-3.442e+04
175	10	-3.463e+04	2021.06	3.59e-03	0.0	0.0	-8010.15	-154.90	-6.05	-1398.74	2021.06	-3.463e+04
		-3.695e+04	1922.06	1.52e-03	0.0	15.0	-7965.15	-154.90	-6.05	-1398.74	1922.06	-3.695e+04
176	2	-1.124e+04	2111.67	2.69e-03	0.0	0.0	-1.446e+04	784.84	-12.54	-1214.97	2111.67	-2.302e+04
		-2.302e+04	1861.60	1.36e-03	0.0	15.0	-1.440e+04	784.84	-12.54	-1214.97	1861.60	-1.124e+04
176	3	-9605.03	1221.28	1.77e-03	0.0	0.0	-8168.25	466.19	-7.61	-655.62	1221.28	-1.660e+04
		-1.660e+04	1071.92	9.05e-04	0.0	15.0	-8123.25	466.19	-7.61	-655.62	1071.92	-9605.03
176	4	-8477.77	1696.68	2.13e-03	0.0	0.0	-1.165e+04	628.40	-10.01	-984.65	1696.68	-1.790e+04
		-1.790e+04	1496.62	1.07e-03	0.0	15.0	-1.161e+04	628.40	-10.01	-984.65	1496.62	-8477.77
176	5	-9554.93	1242.41	1.78e-03	0.0	0.0	-8323.20	473.40	-7.72	-670.24	1242.41	-1.666e+04
		-1.666e+04	1090.80	9.13e-04	0.0	15.0	-8278.20	473.40	-7.72	-670.24	1090.80	-9554.93
176	6	-8803.42	1559.35	2.02e-03	0.0	0.0	-1.065e+04	581.54	-9.32	-889.59	1559.35	-1.753e+04
		-1.753e+04	1373.93	1.02e-03	0.0	15.0	-1.060e+04	581.54	-9.32	-889.59	1373.93	-8803.42
176	7	-9554.93	1242.41	1.78e-03	0.0	0.0	-8323.20	473.40	-7.72	-670.24	1242.41	-1.666e+04
		-1.666e+04	1090.80	9.13e-04	0.0	15.0	-8278.20	473.40	-7.72	-670.24	1090.80	-9554.93
176	8	-9028.87	1464.27	1.95e-03	0.0	0.0	-9950.22	549.10	-8.84	-823.79	1464.27	-1.727e+04
		-1.727e+04	1288.99	9.91e-04	0.0	15.0	-9905.22	549.10	-8.84	-823.79	1288.99	-9028.87
176	9	-9554.93	1242.41	1.78e-03	0.0	0.0	-8323.20	473.40	-7.72	-670.24	1242.41	-1.666e+04
		-1.666e+04	1090.80	9.13e-04	0.0	15.0	-8278.20	473.40	-7.72	-670.24	1090.80	-9554.93
176	10	-9104.02	1432.57	1.93e-03	0.0	0.0	-9717.79	538.29	-8.68	-801.85	1432.57	-1.718e+04
		-1.718e+04	1260.67	9.80e-04	0.0	15.0	-9672.79	538.29	-8.68	-801.85	1260.67	-9104.02
177	2	6211.67	1437.49	5.38e-03	0.0	0.0	-6405.62	-67.45	-10.08	-2570.30	1437.49	6211.67
		5200.84	1278.29	3.34e-03	0.0	15.0	-6347.12	-67.45	-10.08	-2570.30	1278.29	5200.84

PROJETTO engineering s.r.l.

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Direttore Tecnico: ING. LEONARDO FILOTICO

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

177	3	3338.29	828.67	2.72e-03	0.0	0.0	-3568.36	-37.45	-5.98	-1470.50	828.67	3338.29
		2777.05	734.71	2.01e-03	0.0	15.0	-3523.36	-37.45	-5.98	-1470.50	734.71	2777.05
177	5	3413.77	843.19	2.79e-03	0.0	0.0	-3639.60	-38.20	-6.07	-1497.06	843.19	3413.77
		2841.19	747.74	2.04e-03	0.0	15.0	-3594.60	-38.20	-6.07	-1497.06	747.74	2841.19
177	6	4545.97	1061.07	3.91e-03	0.0	0.0	-4708.20	-49.56	-7.47	-1895.44	1061.07	4545.97
		3803.29	943.21	2.48e-03	0.0	15.0	-4663.20	-49.56	-7.47	-1895.44	943.21	3803.29
177	7	3413.77	843.19	2.79e-03	0.0	0.0	-3639.60	-38.20	-6.07	-1497.06	843.19	3413.77
		2841.19	747.74	2.04e-03	0.0	15.0	-3594.60	-38.20	-6.07	-1497.06	747.74	2841.19
177	8	4206.31	995.70	3.57e-03	0.0	0.0	-4387.62	-46.15	-7.05	-1775.93	995.70	4206.31
		3514.66	884.57	2.35e-03	0.0	15.0	-4342.62	-46.15	-7.05	-1775.93	884.57	3514.66
177	9	3413.77	843.19	2.79e-03	0.0	0.0	-3639.60	-38.20	-6.07	-1497.06	843.19	3413.77
		2841.19	747.74	2.04e-03	0.0	15.0	-3594.60	-38.20	-6.07	-1497.06	747.74	2841.19
177	10	4093.09	973.92	3.46e-03	0.0	0.0	-4280.76	-45.02	-6.91	-1736.09	973.92	4093.09
		3418.45	865.02	2.30e-03	0.0	15.0	-4235.76	-45.02	-6.91	-1736.09	865.02	3418.45
179	2	1022.45	132.48	-7.99e-04	0.0	0.0	-7096.22	44.16	-2.79	-1682.97	132.48	360.21
		360.21	89.98	1.22e-03	0.0	15.0	-7037.72	44.16	-2.79	-1682.97	89.98	1022.45
179	3	721.21	32.71	-3.49e-04	0.0	0.0	-3976.94	30.14	-1.59	-952.87	32.71	269.24
		269.24	9.18	7.78e-04	0.0	15.0	-3931.94	30.14	-1.59	-952.87	9.18	721.21
179	5	724.63	36.34	-3.63e-04	0.0	0.0	-4054.61	30.34	-1.62	-970.79	36.34	269.65
		269.65	12.32	7.87e-04	0.0	15.0	-4009.61	30.34	-1.62	-970.79	12.32	724.63
179	6	775.97	90.75	-5.72e-04	0.0	0.0	-5219.65	33.35	-2.06	-1239.48	90.75	275.82
		275.82	59.53	9.15e-04	0.0	15.0	-5174.65	33.35	-2.06	-1239.48	59.53	775.97
179	7	724.63	36.34	-3.63e-04	0.0	0.0	-4054.61	30.34	-1.62	-970.79	36.34	269.65
		269.65	12.32	7.87e-04	0.0	15.0	-4009.61	30.34	-1.62	-970.79	12.32	724.63
179	8	760.57	74.43	-5.09e-04	0.0	0.0	-4870.14	32.45	-1.93	-1158.87	74.43	273.97
		273.97	45.37	8.76e-04	0.0	15.0	-4825.14	32.45	-1.93	-1158.87	45.37	760.57
179	9	724.63	36.34	-3.63e-04	0.0	0.0	-4054.61	30.34	-1.62	-970.79	36.34	269.65
		269.65	12.32	7.87e-04	0.0	15.0	-4009.61	30.34	-1.62	-970.79	12.32	724.63
179	10	755.43	68.98	-4.88e-04	0.0	0.0	-4753.63	32.14	-1.88	-1132.00	68.98	273.35
		273.35	40.65	8.64e-04	0.0	15.0	-4708.63	32.14	-1.88	-1132.00	40.65	755.43
180	2	-1.511e+05	-1.700e+04	-1.33e-03	0.0	0.0	-2.066e+04	1170.54	611.06	2713.82	-2.624e+04	-1.693e+05
		-1.693e+05	-2.624e+04	3.53e-04	0.0	15.0	-2.060e+04	1170.54	611.06	2713.82	-1.700e+04	-1.511e+05
180	3	-8.158e+04	-1.136e+04	-7.08e-04	0.0	0.0	-1.245e+04	670.04	371.38	1522.38	-1.700e+04	-9.198e+04
		-9.198e+04	-1.700e+04	3.20e-04	0.0	15.0	-1.240e+04	670.04	371.38	1522.38	-1.136e+04	-8.158e+04
180	5	-8.339e+04	-1.145e+04	-7.25e-04	0.0	0.0	-1.263e+04	682.12	376.55	1552.01	-1.145e+04	-9.399e+04
		-9.399e+04	-1.716e+04	3.17e-04	0.0	15.0	-1.258e+04	682.12	376.55	1552.01	-1.145e+04	-8.339e+04
180	6	-1.106e+05	-1.280e+04	-9.73e-04	0.0	0.0	-1.533e+04	863.26	454.13	1996.40	-1.967e+04	-1.241e+05
		-1.241e+05	-1.967e+04	2.79e-04	0.0	15.0	-1.529e+04	863.26	454.13	1996.40	-1.280e+04	-1.106e+05
180	7	-8.339e+04	-1.145e+04	-7.25e-04	0.0	0.0	-1.263e+04	682.12	376.55	1552.01	-1.145e+04	-9.399e+04
		-9.399e+04	-1.716e+04	3.17e-04	0.0	15.0	-1.258e+04	682.12	376.55	1552.01	-1.145e+04	-8.339e+04
180	8	-1.025e+05	-1.239e+04	-8.99e-04	0.0	0.0	-1.452e+04	808.92	430.86	1863.08	-1.892e+04	-1.150e+05
		-1.150e+05	-1.892e+04	2.91e-04	0.0	15.0	-1.448e+04	808.92	430.86	1863.08	-1.239e+04	-1.025e+05
180	9	-8.339e+04	-1.145e+04	-7.25e-04	0.0	0.0	-1.263e+04	682.12	376.55	1552.01	-1.145e+04	-9.399e+04
		-9.399e+04	-1.716e+04	3.17e-04	0.0	15.0	-1.258e+04	682.12	376.55	1552.01	-1.145e+04	-8.339e+04
180	10	-9.973e+04	-1.226e+04	-8.74e-04	0.0	0.0	-1.425e+04	790.80	423.10	1818.64	-1.867e+04	-1.120e+05
		-1.120e+05	-1.867e+04	2.94e-04	0.0	15.0	-1.421e+04	790.80	423.10	1818.64	-1.226e+04	-9.973e+04
181	1	-2.883e+05	1.377e+04	-2.90e-03	0.0	0.0	-1.596e+04	1118.35	-434.98	1620.53	1.377e+04	-3.074e+05
		-3.074e+05	7248.26	1.45e-03	0.0	15.0	-1.590e+04	1118.35	-434.98	1620.53	7248.26	-2.883e+05
181	2	-3.937e+05	1.325e+04	-3.95e-03	0.0	0.0	-1.990e+04	1486.86	-512.13	2230.33	1.325e+04	-4.192e+05
		-4.192e+05	5598.30	1.58e-03	0.0	15.0	-1.984e+04	1486.86	-512.13	2230.33	5598.30	-3.937e+05
181	3	-2.135e+05	1.064e+04	-2.15e-03	0.0	0.0	-1.197e+04	831.29	-328.53	1198.61	1.064e+04	-2.277e+05
		-2.277e+05	5705.33	1.10e-03	0.0	15.0	-1.192e+04	831.29	-328.53	1198.61	5705.33	-2.135e+05
181	4	-3.189e+05	1.011e+04	-3.20e-03	0.0	0.0	-1.590e+04	1199.80	-405.68	1808.42	1.011e+04	-3.395e+05
		-3.395e+05	4055.36	1.23e-03	0.0	15.0	-1.586e+04	1199.80	-405.68	1808.42	4055.36	-3.189e+05
181	5	-2.182e+05	1.061e+04	-2.20e-03	0.0	0.0	-1.214e+04	847.67	-331.96	1225.71	1.061e+04	-2.326e+05
		-2.326e+05	5632.00	1.11e-03	0.0	15.0	-1.210e+04	847.67	-331.96	1225.71	5632.00	-2.182e+05
181	6	-2.885e+05	1.026e+04	-2.90e-03	0.0	0.0	-1.477e+04	1093.34	-383.40	1632.25	1.026e+04	-3.072e+05
		-3.072e+05	4532.02	1.20e-03	0.0	15.0	-1.472e+04	1093.34	-383.40	1632.25	4532.02	-2.885e+05
181	7	-2.182e+05	1.061e+04	-2.20e-03	0.0	0.0	-1.214e+04	847.67	-331.96	1225.71	1.061e+04	-2.326e+05
		-2.326e+05	5632.00	1.11e-03	0.0	15.0	-1.210e+04	847.67	-331.96	1225.71	5632.00	-2.182e+05
181	8	-2.674e+05	1.037e+04	-2.69e-03	0.0	0.0	-1.398e+04	1019.64	-367.97	1510.29	1.037e+04	-2.848e+05
		-2.848e+05	4862.01	1.17e-03	0.0	15.0	-1.393e+04	1019.64	-367.97	1510.29	4862.01	-2.674e+05
181	9	-2.182e+05	1.061e+04	-2.20e-03	0.0	0.0	-1.214e+04	847.67	-331.96	1225.71	1.061e+04	-2.326e+05
		-2.326e+05	5632.00	1.11e-03	0.0	15.0	-1.210e+04	847.67	-331.96	1225.71	5632.00	-2.182e+05
181	10	-2.603e+05	1.040e+04	-2.62e-03	0.0	0.0	-1.372e+04	995.07	-362.82	1469.63	1.040e+04	-2.774e+05
		-2.774e+05	4972.01	1.16e-03	0.0	15.0	-1.367e+04	995.07	-362.82	1469.63	4972.01	-2.603e+05

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

182	2	1.290e+05	1.705e+04	4.09e-03	0.0	0.0	-1.804e+04	-1035.37	377.68	-3237.39	1.169e+04	1.290e+05
		1.129e+05	1.169e+04	4.05e-03	0.0	15.0	-1.798e+04	-1035.37	377.68	-3237.39	1.705e+04	1.129e+05
182	3	6.863e+04	9526.34	2.27e-03	0.0	0.0	-1.097e+04	-592.61	244.10	-1720.50	6044.15	6.863e+04
		5.944e+04	6044.15	2.37e-03	0.0	15.0	-1.093e+04	-592.61	244.10	-1720.50	9526.34	5.944e+04
182	5	7.023e+04	9714.40	2.32e-03	0.0	0.0	-1.112e+04	-603.30	246.53	-1760.85	6198.57	7.023e+04
		6.088e+04	6198.57	2.41e-03	0.0	15.0	-1.108e+04	-603.30	246.53	-1760.85	9714.40	6.088e+04
182	6	9.428e+04	1.254e+04	3.01e-03	0.0	0.0	-1.341e+04	-763.56	283.04	-2366.14	8514.83	9.428e+04
		8.242e+04	8514.83	2.99e-03	0.0	15.0	-1.336e+04	-763.56	283.04	-2366.14	1.254e+04	8.242e+04
182	7	7.023e+04	9714.40	2.32e-03	0.0	0.0	-1.112e+04	-603.30	246.53	-1760.85	6198.57	7.023e+04
		6.088e+04	6198.57	2.41e-03	0.0	15.0	-1.108e+04	-603.30	246.53	-1760.85	9714.40	6.088e+04
182	8	8.707e+04	1.169e+04	2.80e-03	0.0	0.0	-1.272e+04	-715.48	272.09	-2184.55	7819.95	8.707e+04
		7.596e+04	7819.95	2.82e-03	0.0	15.0	-1.268e+04	-715.48	272.09	-2184.55	1.169e+04	7.596e+04
182	9	7.023e+04	9714.40	2.32e-03	0.0	0.0	-1.112e+04	-603.30	246.53	-1760.85	6198.57	7.023e+04
		6.088e+04	6198.57	2.41e-03	0.0	15.0	-1.108e+04	-603.30	246.53	-1760.85	9714.40	6.088e+04
182	10	8.466e+04	1.141e+04	2.73e-03	0.0	0.0	-1.249e+04	-699.45	268.44	-2124.02	7588.33	8.466e+04
		7.380e+04	7588.33	2.76e-03	0.0	15.0	-1.245e+04	-699.45	268.44	-2124.02	1.141e+04	7.380e+04
183	2	2.169e+05	3.078e+04	3.79e-03	0.0	0.0	-1.420e+04	-851.25	-544.37	-3954.10	3.078e+04	2.169e+05
		2.014e+05	2.246e+04	5.02e-03	0.0	15.0	-1.414e+04	-851.25	-544.37	-3954.10	2.246e+04	2.014e+05
183	3	1.134e+05	1.886e+04	2.08e-03	0.0	0.0	-8721.98	-471.99	-341.08	-2081.68	1.886e+04	1.134e+05
		1.049e+05	1.365e+04	3.00e-03	0.0	15.0	-8676.98	-471.99	-341.08	-2081.68	1.365e+04	1.049e+05
183	5	1.162e+05	1.911e+04	2.12e-03	0.0	0.0	-8837.22	-481.58	-345.15	-2132.00	1.911e+04	1.162e+05
		1.075e+05	1.384e+04	3.05e-03	0.0	15.0	-8792.22	-481.58	-345.15	-2132.00	1.384e+04	1.075e+05
183	6	1.582e+05	2.290e+04	2.78e-03	0.0	0.0	-1.057e+04	-625.32	-406.22	-2886.79	2.290e+04	1.582e+05
		1.468e+05	1.669e+04	3.73e-03	0.0	15.0	-1.052e+04	-625.32	-406.22	-2886.79	1.669e+04	1.468e+05
183	7	1.162e+05	1.911e+04	2.12e-03	0.0	0.0	-8837.22	-481.58	-345.15	-2132.00	1.911e+04	1.162e+05
		1.075e+05	1.384e+04	3.05e-03	0.0	15.0	-8792.22	-481.58	-345.15	-2132.00	1.384e+04	1.075e+05
183	8	1.456e+05	2.176e+04	2.58e-03	0.0	0.0	-1.005e+04	-582.20	-387.90	-2660.35	2.176e+04	1.456e+05
		1.350e+05	1.584e+04	3.52e-03	0.0	15.0	-1.000e+04	-582.20	-387.90	-2660.35	1.584e+04	1.350e+05
183	9	1.162e+05	1.911e+04	2.12e-03	0.0	0.0	-8837.22	-481.58	-345.15	-2132.00	1.911e+04	1.162e+05
		1.075e+05	1.384e+04	3.05e-03	0.0	15.0	-8792.22	-481.58	-345.15	-2132.00	1.384e+04	1.075e+05
183	10	1.414e+05	2.138e+04	2.52e-03	0.0	0.0	-9874.34	-567.82	-381.79	-2584.87	2.138e+04	1.414e+05
		1.311e+05	1.555e+04	3.45e-03	0.0	15.0	-9829.34	-567.82	-381.79	-2584.87	1.555e+04	1.311e+05
184	2	1.217e+04	-2284.11	-2.98e-03	0.0	0.0	-1.037e+04	7.26	112.03	-4101.44	-3751.28	1.210e+04
		1.210e+04	-3751.28	1.05e-04	0.0	15.0	-1.031e+04	7.26	112.03	-4101.44	-2284.11	1.217e+04
184	3	7374.19	-1377.96	-1.55e-03	0.0	0.0	-6245.17	-3.94	81.34	-2391.51	-2469.46	7374.19
		7295.39	-2469.46	1.20e-04	0.0	15.0	-6200.17	-3.94	81.34	-2391.51	-1377.96	7295.39
184	5	7475.67	-1397.83	-1.59e-03	0.0	0.0	-6335.86	-3.44	81.59	-2431.53	-2491.27	7475.67
		7403.56	-2491.27	1.18e-04	0.0	15.0	-6290.86	-3.44	81.59	-2431.53	-1397.83	7403.56
184	6	9026.14	-1695.87	-2.17e-03	0.0	0.0	-7696.22	4.05	85.40	-3031.82	-2818.48	8997.76
		8997.76	-2818.48	8.70e-05	0.0	15.0	-7651.22	4.05	85.40	-3031.82	-1695.87	9026.14
184	7	7475.67	-1397.83	-1.59e-03	0.0	0.0	-6335.86	-3.44	81.59	-2431.53	-2491.27	7475.67
		7403.56	-2491.27	1.18e-04	0.0	15.0	-6290.86	-3.44	81.59	-2431.53	-1397.83	7403.56
184	8	8541.13	-1606.46	-2.00e-03	0.0	0.0	-7288.11	1.80	84.26	-2851.73	-2720.32	8541.13
		8539.37	-2720.32	9.62e-05	0.0	15.0	-7243.11	1.80	84.26	-2851.73	-1606.46	8539.37
184	9	7475.67	-1397.83	-1.59e-03	0.0	0.0	-6335.86	-3.44	81.59	-2431.53	-2491.27	7475.67
		7403.56	-2491.27	1.18e-04	0.0	15.0	-6290.86	-3.44	81.59	-2431.53	-1397.83	7403.56
184	10	8388.92	-1576.66	-1.94e-03	0.0	0.0	-7152.08	1.05	83.88	-2791.70	-2687.59	8388.92
		8377.11	-2687.59	9.92e-05	0.0	15.0	-7107.08	1.05	83.88	-2791.70	-1576.66	8377.11
185	1	-1.749e+05	914.40	-5.49e-03	0.0	0.0	-1.305e+04	3579.73	-287.23	3099.55	914.40	-2.301e+05
		-2.301e+05	-3324.12	1.50e-03	0.0	15.0	-1.299e+04	3579.73	-287.23	3099.55	-3324.12	-1.749e+05
185	2	-2.402e+05	-1376.23	-7.49e-03	0.0	0.0	-1.616e+04	4851.08	-299.45	4227.43	-1376.23	-3.150e+05
		-3.150e+05	-5777.21	1.59e-03	0.0	15.0	-1.610e+04	4851.08	-299.45	4227.43	-5777.21	-2.402e+05
185	3	-1.294e+05	883.50	-4.06e-03	0.0	0.0	-9790.96	2653.67	-219.99	2295.58	883.50	-1.704e+05
		-1.704e+05	-2364.12	1.14e-03	0.0	15.0	-9745.96	2653.67	-219.99	2295.58	-2364.12	-1.294e+05
185	5	-1.323e+05	781.69	-4.15e-03	0.0	0.0	-9929.46	2710.17	-220.53	2345.71	781.69	-1.741e+05
		-1.741e+05	-2473.15	1.15e-03	0.0	15.0	-9884.46	2710.17	-220.53	2345.71	-2473.15	-1.323e+05
185	6	-1.758e+05	-745.39	-5.49e-03	0.0	0.0	-1.201e+04	3557.74	-228.67	3097.63	-745.39	-2.307e+05
		-2.307e+05	-4108.54	1.21e-03	0.0	15.0	-1.196e+04	3557.74	-228.67	3097.63	-4108.54	-1.758e+05
185	7	-1.323e+05	781.69	-4.15e-03	0.0	0.0	-9929.46	2710.17	-220.53	2345.71	781.69	-1.741e+05
		-1.741e+05	-2473.15	1.15e-03	0.0	15.0	-9884.46	2710.17	-220.53	2345.71	-2473.15	-1.323e+05
185	8	-1.628e+05	-287.26	-5.09e-03	0.0	0.0	-1.138e+04	3303.47	-226.23	2872.05	-287.26	-2.137e+05
		-2.137e+05	-3617.93	1.19e-03	0.0	15.0	-1.134e+04	3303.47	-226.23	2872.05	-3617.93	-1.628e+05
185	9	-1.323e+05	781.69	-4.15e-03	0.0	0.0	-9929.46	2710.17	-220.53	2345.71	781.69	-1.741e+05
		-1.741e+05	-2473.15	1.15e-03	0.0	15.0	-9884.46	2710.17	-220.53	2345.71	-2473.15	-1.323e+05
185	10	-1.584e+05	-134.56	-4.95e-03	0.0	0.0	-1.118e+04	3218.71	-225.42	2796.86	-134.56	-2.081e+05
		-2.081e+05	-3454.39	1.18e-03	0.0	15.0	-1.113e+04	3218.71	-225.42	2796.86	-3454.39	-1.584e+05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.900,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

186	2	-1.173e+04	4696.34	5.21e-03	0.0	0.0	-8640.79	-3.99	-60.03	118.85	4696.34	-1.173e+04
		-1.185e+04	3861.93	5.01e-03	0.0	15.0	-8582.29	-3.99	-60.03	118.85	3861.93	-1.185e+04
186	3	-6925.18	3041.27	2.82e-03	0.0	0.0	-5183.95	3.38	-39.45	-185.61	3041.27	-6954.00
		-6954.00	2496.70	2.95e-03	0.0	15.0	-5138.95	3.38	-39.45	-185.61	2496.70	-6925.18
186	5	-7039.96	3071.22	2.88e-03	0.0	0.0	-5260.63	3.04	-39.80	-171.09	3071.22	-7062.43
		-7062.43	2521.55	3.00e-03	0.0	15.0	-5215.63	3.04	-39.80	-171.09	2521.55	-7039.96
186	6	-8688.97	3520.43	3.82e-03	0.0	0.0	-6410.82	-2.03	-45.09	46.74	3520.43	-8688.97
		-8761.66	2894.26	3.71e-03	0.0	15.0	-6365.82	-2.03	-45.09	46.74	2894.26	-8761.66
186	7	-7039.96	3071.22	2.88e-03	0.0	0.0	-5260.63	3.04	-39.80	-171.09	3071.22	-7062.43
		-7062.43	2521.55	3.00e-03	0.0	15.0	-5215.63	3.04	-39.80	-171.09	2521.55	-7039.96
186	8	-8201.01	3385.66	3.54e-03	0.0	0.0	-6065.76	-0.51	-43.51	-18.61	3385.66	-8201.01
		-8245.15	2782.45	3.50e-03	0.0	15.0	-6020.76	-0.51	-43.51	-18.61	2782.45	-8245.15
186	9	-7039.96	3071.22	2.88e-03	0.0	0.0	-5260.63	3.04	-39.80	-171.09	3071.22	-7062.43
		-7062.43	2521.55	3.00e-03	0.0	15.0	-5215.63	3.04	-39.80	-171.09	2521.55	-7039.96
186	10	-8038.36	3340.74	3.44e-03	0.0	0.0	-5950.74	-2.82e-03	-42.98	-40.39	3340.74	-8038.36
		-8072.98	2745.18	3.42e-03	0.0	15.0	-5905.74	-2.82e-03	-42.98	-40.39	2745.18	-8072.98
187	2	1.992e+05	2.238e+04	4.87e-03	0.0	0.0	-1.308e+04	-2555.55	-671.48	-4288.63	2.238e+04	1.992e+05
		1.597e+05	1.223e+04	5.22e-03	0.0	15.0	-1.302e+04	-2555.55	-671.48	-4288.63	1.223e+04	1.597e+05
187	3	1.037e+05	1.361e+04	2.65e-03	0.0	0.0	-8051.77	-1362.30	-420.84	-2249.76	1.361e+04	1.037e+05
		8.271e+04	7262.92	3.12e-03	0.0	15.0	-8006.77	-1362.30	-420.84	-2249.76	7262.92	8.271e+04
187	5	1.063e+05	1.380e+04	2.70e-03	0.0	0.0	-8157.17	-1393.94	-425.86	-2304.76	1.380e+04	1.063e+05
		8.482e+04	7375.52	3.17e-03	0.0	15.0	-8112.17	-1393.94	-425.86	-2304.76	7375.52	8.482e+04
187	6	1.453e+05	1.663e+04	3.57e-03	0.0	0.0	-9738.14	-1868.47	-501.09	-3129.73	1.663e+04	1.453e+05
		1.164e+05	9064.54	3.87e-03	0.0	15.0	-9693.14	-1868.47	-501.09	-3129.73	9064.54	1.164e+05
187	7	1.063e+05	1.380e+04	2.70e-03	0.0	0.0	-8157.17	-1393.94	-425.86	-2304.76	1.380e+04	1.063e+05
		8.482e+04	7375.52	3.17e-03	0.0	15.0	-8112.17	-1393.94	-425.86	-2304.76	7375.52	8.482e+04
187	8	1.336e+05	1.578e+04	3.31e-03	0.0	0.0	-9263.85	-1726.11	-478.52	-2882.24	1.578e+04	1.336e+05
		1.069e+05	8557.83	3.66e-03	0.0	15.0	-9218.85	-1726.11	-478.52	-2882.24	8557.83	1.069e+05
187	9	1.063e+05	1.380e+04	2.70e-03	0.0	0.0	-8157.17	-1393.94	-425.86	-2304.76	1.380e+04	1.063e+05
		8.482e+04	7375.52	3.17e-03	0.0	15.0	-8112.17	-1393.94	-425.86	-2304.76	7375.52	8.482e+04
187	10	1.297e+05	1.550e+04	3.22e-03	0.0	0.0	-9105.75	-1678.65	-470.99	-2799.74	1.550e+04	1.297e+05
		1.038e+05	8388.93	3.59e-03	0.0	15.0	-9060.75	-1678.65	-470.99	-2799.74	8388.93	1.038e+05
188	2	-7.780e+04	-2123.59	-2.64e-03	0.0	0.0	-1.820e+04	2352.29	386.69	1932.88	-7862.45	-1.133e+05
		-1.133e+05	-7862.45	1.79e-04	0.0	15.0	-1.814e+04	2352.29	386.69	1932.88	-2123.59	-7.780e+04
188	3	-4.104e+04	-2036.50	-1.41e-03	0.0	0.0	-1.096e+04	1296.45	242.20	1117.45	-5645.24	-6.059e+04
		-6.059e+04	-5645.24	1.98e-04	0.0	15.0	-1.092e+04	1296.45	242.20	1117.45	-2036.50	-4.104e+04
188	4	-6.322e+04	-1561.22	-2.15e-03	0.0	0.0	-1.454e+04	1901.51	307.36	1553.11	-6120.32	-9.189e+04
		-9.189e+04	-6120.32	1.27e-04	0.0	15.0	-1.450e+04	1901.51	307.36	1553.11	-1561.22	-6.322e+04
188	5	-4.202e+04	-2015.38	-1.45e-03	0.0	0.0	-1.112e+04	1323.34	245.09	1136.81	-5666.36	-6.198e+04
		-6.198e+04	-5666.36	1.95e-04	0.0	15.0	-1.108e+04	1323.34	245.09	1136.81	-2015.38	-4.202e+04
188	6	-5.681e+04	-1698.53	-1.93e-03	0.0	0.0	-1.351e+04	1726.71	288.54	1427.25	-5983.07	-8.285e+04
		-8.285e+04	-5983.07	1.48e-04	0.0	15.0	-1.346e+04	1726.71	288.54	1427.25	-1698.53	-5.681e+04
188	7	-4.202e+04	-2015.38	-1.45e-03	0.0	0.0	-1.112e+04	1323.34	245.09	1136.81	-5666.36	-6.198e+04
		-6.198e+04	-5666.36	1.95e-04	0.0	15.0	-1.108e+04	1323.34	245.09	1136.81	-2015.38	-4.202e+04
188	8	-5.238e+04	-1793.58	-1.79e-03	0.0	0.0	-1.279e+04	1605.70	275.51	1340.12	-5888.06	-7.659e+04
		-7.659e+04	-5888.06	1.62e-04	0.0	15.0	-1.275e+04	1605.70	275.51	1340.12	-1793.58	-5.238e+04
188	9	-4.202e+04	-2015.38	-1.45e-03	0.0	0.0	-1.112e+04	1323.34	245.09	1136.81	-5666.36	-6.198e+04
		-6.198e+04	-5666.36	1.95e-04	0.0	15.0	-1.108e+04	1323.34	245.09	1136.81	-2015.38	-4.202e+04
188	10	-5.090e+04	-1825.27	-1.74e-03	0.0	0.0	-1.255e+04	1565.37	271.16	1311.07	-5856.39	-7.450e+04
		-7.450e+04	-5856.39	1.67e-04	0.0	15.0	-1.251e+04	1565.37	271.16	1311.07	-1825.27	-5.090e+04
189	1	-2.318e+05	7263.88	-4.45e-03	0.0	0.0	-1.472e+04	3505.77	-429.54	4394.49	7263.88	-2.860e+05
		-2.860e+05	877.58	1.50e-03	0.0	15.0	-1.466e+04	3505.77	-429.54	4394.49	877.58	-2.318e+05
189	2	-3.173e+05	5635.74	-6.06e-03	0.0	0.0	-1.833e+04	4740.24	-477.18	6040.76	5635.74	-3.906e+05
		-3.906e+05	-1428.31	1.62e-03	0.0	15.0	-1.827e+04	4740.24	-477.18	6040.76	-1428.31	-3.173e+05
189	3	-1.716e+05	5715.62	-3.29e-03	0.0	0.0	-1.104e+04	2599.68	-326.67	3250.93	5715.62	-2.118e+05
		-2.118e+05	856.38	1.15e-03	0.0	15.0	-1.100e+04	2599.68	-326.67	3250.93	856.38	-1.716e+05
189	4	-2.571e+05	4087.48	-4.91e-03	0.0	0.0	-1.465e+04	3834.15	-374.31	4897.20	4087.48	-3.163e+05
		-3.163e+05	-1449.51	1.26e-03	0.0	15.0	-1.460e+04	3834.15	-374.31	4897.20	-1449.51	-2.571e+05
189	5	-1.754e+05	5643.26	-3.37e-03	0.0	0.0	-1.120e+04	2654.54	-328.79	3324.09	5643.26	-2.164e+05
		-2.164e+05	753.89	1.15e-03	0.0	15.0	-1.116e+04	2654.54	-328.79	3324.09	753.89	-1.754e+05
189	6	-2.324e+05	4557.83	-4.44e-03	0.0	0.0	-1.361e+04	3477.52	-360.54	4421.61	4557.83	-2.861e+05
		-2.861e+05	-783.37	1.23e-03	0.0	15.0	-1.356e+04	3477.52	-360.54	4421.61	-783.37	-2.324e+05
189	7	-1.754e+05	5643.26	-3.37e-03	0.0	0.0	-1.120e+04	2654.54	-328.79	3324.09	5643.26	-2.164e+05
		-2.164e+05	753.89	1.15e-03	0.0	15.0	-1.116e+04	2654.54	-328.79	3324.09	753.89	-1.754e+05
189	8	-2.153e+05	4883.46	-4.12e-03	0.0	0.0	-1.288e+04	3230.63	-351.02	4092.35	4883.46	-2.652e+05
		-2.652e+05	-322.19	1.21e-03	0.0	15.0	-1.284e+04	3230.63	-351.02	4092.35	-322.19	-2.153e+05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

189	9	-1.754e+05	5643.26	-3.37e-03	0.0	0.0	-1.120e+04	2654.54	-328.79	3324.09	5643.26	-2.164e+05
		-2.164e+05	753.89	1.15e-03	0.0	15.0	-1.116e+04	2654.54	-328.79	3324.09	753.89	-1.754e+05
189	10	-2.096e+05	4992.00	-4.01e-03	0.0	0.0	-1.264e+04	3148.33	-347.84	3982.60	4992.00	-2.582e+05
		-2.582e+05	-168.46	1.20e-03	0.0	15.0	-1.260e+04	3148.33	-347.84	3982.60	-168.46	-2.096e+05
190	2	1.126e+05	1.787e+04	4.68e-03	0.0	0.0	-1.662e+04	-1837.99	117.57	-867.87	1.640e+04	1.126e+05
		8.402e+04	1.640e+04	4.21e-03	0.0	15.0	-1.656e+04	-1837.99	117.57	-867.87	1.787e+04	1.126e+05
190	3	5.931e+04	1.039e+04	2.58e-03	0.0	0.0	-1.010e+04	-1007.08	93.14	-487.83	9170.86	5.931e+04
		4.367e+04	9170.86	2.46e-03	0.0	15.0	-1.005e+04	-1007.08	93.14	-487.83	1.039e+04	5.931e+04
190	5	6.074e+04	1.057e+04	2.64e-03	0.0	0.0	-1.024e+04	-1028.40	93.00	-497.25	9351.35	6.074e+04
		4.477e+04	9351.35	2.50e-03	0.0	15.0	-1.019e+04	-1028.40	93.00	-497.25	1.057e+04	6.074e+04
190	6	8.222e+04	1.320e+04	3.44e-03	0.0	0.0	-1.235e+04	-1348.23	90.87	-638.60	1.206e+04	8.222e+04
		6.125e+04	1.206e+04	3.11e-03	0.0	15.0	-1.231e+04	-1348.23	90.87	-638.60	1.320e+04	8.222e+04
190	7	6.074e+04	1.057e+04	2.64e-03	0.0	0.0	-1.024e+04	-1028.40	93.00	-497.25	9351.35	6.074e+04
		4.477e+04	9351.35	2.50e-03	0.0	15.0	-1.019e+04	-1028.40	93.00	-497.25	1.057e+04	6.074e+04
190	8	7.578e+04	1.241e+04	3.20e-03	0.0	0.0	-1.172e+04	-1252.28	91.51	-596.20	1.125e+04	7.578e+04
		5.631e+04	1.125e+04	2.93e-03	0.0	15.0	-1.167e+04	-1252.28	91.51	-596.20	1.241e+04	7.578e+04
190	9	6.074e+04	1.057e+04	2.64e-03	0.0	0.0	-1.024e+04	-1028.40	93.00	-497.25	9351.35	6.074e+04
		4.477e+04	9351.35	2.50e-03	0.0	15.0	-1.019e+04	-1028.40	93.00	-497.25	1.057e+04	6.074e+04
190	10	7.363e+04	1.215e+04	3.12e-03	0.0	0.0	-1.151e+04	-1220.30	91.72	-582.06	1.098e+04	7.363e+04
		5.466e+04	1.098e+04	2.86e-03	0.0	15.0	-1.146e+04	-1220.30	91.72	-582.06	1.215e+04	7.363e+04
191	1	9165.24	1896.21	-2.00e-03	0.0	0.0	-7075.34	-134.03	141.07	-6424.55	16.75	9165.24
		7588.67	16.75	1.33e-04	0.0	15.0	-7016.84	-134.03	141.07	-6424.55	1896.21	7588.67
191	2	1.155e+04	1843.24	-2.85e-03	0.0	0.0	-8802.02	-173.17	162.76	-8546.12	-294.05	1.155e+04
		9545.78	-294.05	7.94e-05	0.0	15.0	-8743.52	-173.17	162.76	-8546.12	1843.24	9545.78
191	3	6862.39	1462.79	-1.48e-03	0.0	0.0	-5306.79	-100.02	106.81	-4775.13	37.32	6862.39
		5683.54	37.32	1.06e-04	0.0	15.0	-5261.79	-100.02	106.81	-4775.13	1462.79	5683.54
191	5	6968.54	1460.43	-1.51e-03	0.0	0.0	-5383.54	-101.76	107.77	-4869.43	23.51	6968.54
		5770.53	23.51	1.04e-04	0.0	15.0	-5338.54	-101.76	107.77	-4869.43	1460.43	5770.53
191	6	8560.69	1425.12	-2.08e-03	0.0	0.0	-6534.65	-127.85	122.23	-6283.81	-183.69	8560.69
		7075.27	-183.69	6.84e-05	0.0	15.0	-6489.65	-127.85	122.23	-6283.81	1425.12	7075.27
191	7	6968.54	1460.43	-1.51e-03	0.0	0.0	-5383.54	-101.76	107.77	-4869.43	23.51	6968.54
		5770.53	23.51	1.04e-04	0.0	15.0	-5338.54	-101.76	107.77	-4869.43	1460.43	5770.53
191	8	8083.04	1435.72	-1.91e-03	0.0	0.0	-6189.32	-120.03	117.89	-5859.50	-121.53	8083.04
		6683.84	-121.53	7.91e-05	0.0	15.0	-6144.32	-120.03	117.89	-5859.50	1435.72	6683.84
191	9	6968.54	1460.43	-1.51e-03	0.0	0.0	-5383.54	-101.76	107.77	-4869.43	23.51	6968.54
		5770.53	23.51	1.04e-04	0.0	15.0	-5338.54	-101.76	107.77	-4869.43	1460.43	5770.53
191	10	7923.83	1439.25	-1.85e-03	0.0	0.0	-6074.21	-117.42	116.45	-5718.06	-100.81	7923.83
		6553.37	-100.81	8.26e-05	0.0	15.0	-6029.21	-117.42	116.45	-5718.06	1439.25	6553.37
192	2	-1.308e+05	-8312.31	-9.16e-03	0.0	0.0	-1.289e+04	3094.76	-101.41	-595.64	-8312.31	-1.777e+05
		-1.777e+05	-9821.62	1.45e-03	0.0	15.0	-1.283e+04	3094.76	-101.41	-595.64	-9821.62	-1.308e+05
192	3	-6.968e+04	-4349.29	-4.96e-03	0.0	0.0	-7907.36	1691.39	-85.26	-269.90	-4349.29	-9.530e+04
		-9.530e+04	-5611.31	1.08e-03	0.0	15.0	-7862.36	1691.39	-85.26	-269.90	-5611.31	-6.968e+04
192	5	-7.130e+04	-4456.48	-5.07e-03	0.0	0.0	-8012.51	1727.52	-84.88	-279.77	-4456.48	-9.747e+04
		-9.747e+04	-5713.20	1.08e-03	0.0	15.0	-7967.51	1727.52	-84.88	-279.77	-5713.20	-7.130e+04
192	6	-9.564e+04	-6064.28	-6.71e-03	0.0	0.0	-9589.71	2269.42	-79.17	-427.82	-6064.28	-1.300e+05
		-1.300e+05	-7241.58	1.11e-03	0.0	15.0	-9544.71	2269.42	-79.17	-427.82	-7241.58	-9.564e+04
192	7	-7.130e+04	-4456.48	-5.07e-03	0.0	0.0	-8012.51	1727.52	-84.88	-279.77	-4456.48	-9.747e+04
		-9.747e+04	-5713.20	1.08e-03	0.0	15.0	-7967.51	1727.52	-84.88	-279.77	-5713.20	-7.130e+04
192	8	-8.834e+04	-5581.94	-6.22e-03	0.0	0.0	-9116.55	2106.85	-80.89	-383.40	-5581.94	-1.203e+05
		-1.203e+05	-6783.06	1.10e-03	0.0	15.0	-9071.55	2106.85	-80.89	-383.40	-6783.06	-8.834e+04
192	9	-7.130e+04	-4456.48	-5.07e-03	0.0	0.0	-8012.51	1727.52	-84.88	-279.77	-4456.48	-9.747e+04
		-9.747e+04	-5713.20	1.08e-03	0.0	15.0	-7967.51	1727.52	-84.88	-279.77	-5713.20	-7.130e+04
192	10	-8.591e+04	-5421.16	-6.06e-03	0.0	0.0	-8958.83	2052.66	-81.46	-368.60	-5421.16	-1.170e+05
		-1.170e+05	-6630.23	1.10e-03	0.0	15.0	-8913.83	2052.66	-81.46	-368.60	-6630.23	-8.591e+04
193	2	-1.109e+04	3893.36	5.15e-03	0.0	0.0	-7903.62	56.32	-46.21	593.71	3893.36	-1.187e+04
		-1.187e+04	3252.90	5.04e-03	0.0	15.0	-7845.12	56.32	-46.21	593.71	3252.90	-1.109e+04
193	3	-6443.25	2519.64	2.78e-03	0.0	0.0	-4726.24	34.25	-31.26	53.76	2519.64	-6929.98
		-6929.98	2091.13	2.97e-03	0.0	15.0	-4681.24	34.25	-31.26	53.76	2091.13	-6443.25
193	5	-6552.83	2544.56	2.85e-03	0.0	0.0	-4797.19	34.73	-31.49	74.88	2544.56	-7045.27
		-7045.27	2112.67	3.02e-03	0.0	15.0	-4752.19	34.73	-31.49	74.88	2112.67	-6552.83
193	6	-8196.50	2918.24	3.77e-03	0.0	0.0	-5861.41	41.86	-34.85	391.71	2918.24	-8774.64
		-8774.64	2435.92	3.73e-03	0.0	15.0	-5816.41	41.86	-34.85	391.71	2435.92	-8196.50
193	7	-6552.83	2544.56	2.85e-03	0.0	0.0	-4797.19	34.73	-31.49	74.88	2544.56	-7045.27
		-7045.27	2112.67	3.02e-03	0.0	15.0	-4752.19	34.73	-31.49	74.88	2112.67	-6552.83
193	8	-7703.40	2806.14	3.50e-03	0.0	0.0	-5542.14	39.72	-33.84	296.66	2806.14	-8255.83
		-8255.83	2338.95	3.52e-03	0.0	15.0	-5497.14	39.72	-33.84	296.66	2338.95	-7703.40

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

193	9	-6552.83	2544.56	2.85e-03	0.0	0.0	-4797.19	34.73	-31.49	74.88	2544.56	-7045.27
		-7045.27	2112.67	3.02e-03	0.0	15.0	-4752.19	34.73	-31.49	74.88	2112.67	-6552.83
193	10	-7539.03	2768.77	3.40e-03	0.0	0.0	-5435.72	39.01	-33.51	264.98	2768.77	-8082.89
		-8082.89	2306.62	3.45e-03	0.0	15.0	-5390.72	39.01	-33.51	264.98	2306.62	-7539.03
194	2	1.592e+05	1.223e+04	5.59e-03	0.0	0.0	-1.164e+04	-2565.51	-505.74	-2891.03	1.223e+04	1.592e+05
		1.196e+05	4655.58	5.30e-03	0.0	15.0	-1.158e+04	-2565.51	-505.74	-2891.03	4655.58	1.196e+05
194	3	8.246e+04	7263.28	3.01e-03	0.0	0.0	-7207.37	-1359.76	-316.67	-1538.18	7263.28	8.246e+04
		6.146e+04	2530.96	3.17e-03	0.0	15.0	-7162.37	-1359.76	-316.67	-1538.18	2530.96	6.146e+04
194	5	8.455e+04	7375.57	3.08e-03	0.0	0.0	-7298.95	-1391.93	-320.46	-1574.12	7375.57	8.455e+04
		6.306e+04	2586.01	3.21e-03	0.0	15.0	-7253.95	-1391.93	-320.46	-1574.12	2586.01	6.306e+04
194	6	1.160e+05	9059.98	4.09e-03	0.0	0.0	-8672.59	-1874.49	-377.36	-2113.27	9059.98	1.160e+05
		8.706e+04	3411.82	3.93e-03	0.0	15.0	-8627.59	-1874.49	-377.36	-2113.27	3411.82	8.706e+04
194	7	8.455e+04	7375.57	3.08e-03	0.0	0.0	-7298.95	-1391.93	-320.46	-1574.12	7375.57	8.455e+04
		6.306e+04	2586.01	3.21e-03	0.0	15.0	-7253.95	-1391.93	-320.46	-1574.12	2586.01	6.306e+04
194	8	1.066e+05	8554.66	3.79e-03	0.0	0.0	-8260.50	-1729.72	-360.29	-1951.53	8554.66	1.066e+05
		7.986e+04	3164.08	3.71e-03	0.0	15.0	-8215.50	-1729.72	-360.29	-1951.53	3164.08	7.986e+04
194	9	8.455e+04	7375.57	3.08e-03	0.0	0.0	-7298.95	-1391.93	-320.46	-1574.12	7375.57	8.455e+04
		6.306e+04	2586.01	3.21e-03	0.0	15.0	-7253.95	-1391.93	-320.46	-1574.12	2586.01	6.306e+04
194	10	1.034e+05	8386.22	3.69e-03	0.0	0.0	-8123.13	-1681.47	-354.60	-1897.61	8386.22	1.034e+05
		7.746e+04	3081.50	3.64e-03	0.0	15.0	-8078.13	-1681.47	-354.60	-1897.61	3081.50	7.746e+04
195	2	-1.139e+05	-7835.61	-2.14e-03	0.0	0.0	-1.953e+04	2384.93	610.95	1621.06	-1.698e+04	-1.508e+05
		-1.508e+05	-1.698e+04	2.18e-04	0.0	15.0	-1.947e+04	2384.93	610.95	1621.06	-7835.61	-1.139e+05
195	3	-6.094e+04	-5637.00	-1.14e-03	0.0	0.0	-1.176e+04	1326.11	379.75	964.73	-1.134e+04	-6.094e+04
		-8.143e+04	-1.134e+04	2.29e-04	0.0	15.0	-1.172e+04	1326.11	379.75	964.73	-5637.00	-6.094e+04
195	5	-6.234e+04	-5657.46	-1.17e-03	0.0	0.0	-1.193e+04	1352.76	384.48	979.52	-1.143e+04	-6.234e+04
		-8.324e+04	-1.143e+04	2.26e-04	0.0	15.0	-1.189e+04	1352.76	384.48	979.52	-5657.46	-6.234e+04
195	6	-8.333e+04	-5964.42	-1.56e-03	0.0	0.0	-1.450e+04	1752.55	455.41	1201.45	-1.278e+04	-8.333e+04
		-1.104e+05	-1.278e+04	1.78e-04	0.0	15.0	-1.445e+04	1752.55	455.41	1201.45	-5964.42	-8.333e+04
195	7	-6.234e+04	-5657.46	-1.17e-03	0.0	0.0	-1.193e+04	1352.76	384.48	979.52	-1.143e+04	-6.234e+04
		-8.324e+04	-1.143e+04	2.26e-04	0.0	15.0	-1.189e+04	1352.76	384.48	979.52	-5657.46	-6.234e+04
195	8	-7.703e+04	-5872.34	-1.45e-03	0.0	0.0	-1.373e+04	1632.61	434.13	1134.87	-1.238e+04	-7.703e+04
		-1.023e+05	-1.238e+04	1.92e-04	0.0	15.0	-1.368e+04	1632.61	434.13	1134.87	-5872.34	-7.703e+04
195	9	-6.234e+04	-5657.46	-1.17e-03	0.0	0.0	-1.193e+04	1352.76	384.48	979.52	-1.143e+04	-6.234e+04
		-8.324e+04	-1.143e+04	2.26e-04	0.0	15.0	-1.189e+04	1352.76	384.48	979.52	-5657.46	-6.234e+04
195	10	-7.494e+04	-5841.64	-1.41e-03	0.0	0.0	-1.347e+04	1592.64	427.04	1112.68	-1.224e+04	-7.494e+04
		-9.956e+04	-1.224e+04	1.97e-04	0.0	15.0	-1.343e+04	1592.64	427.04	1112.68	-5841.64	-7.494e+04
196	1	9850.07	130.82	-2.05e-03	0.0	0.0	-7714.25	-72.40	151.87	-4864.57	-1934.83	9850.07
		9077.24	-1934.83	1.31e-04	0.0	15.0	-7655.75	-72.40	151.87	-4864.57	130.82	9077.24
196	2	1.233e+04	-148.94	-2.91e-03	0.0	0.0	-9597.76	-87.50	168.35	-6380.03	-2406.36	1.233e+04
		1.144e+04	-2406.36	8.05e-05	0.0	15.0	-9539.26	-87.50	168.35	-6380.03	-148.94	1.144e+04
196	3	7382.25	122.63	-1.51e-03	0.0	0.0	-5785.93	-54.51	115.52	-3622.81	-1451.25	7382.25
		6796.85	-1451.25	1.05e-04	0.0	15.0	-5740.93	-54.51	115.52	-3622.81	122.63	6796.85
196	5	7492.32	110.19	-1.55e-03	0.0	0.0	-5869.64	-55.18	116.26	-3690.17	-1472.21	7492.32
		6901.78	-1472.21	1.03e-04	0.0	15.0	-5824.64	-55.18	116.26	-3690.17	110.19	6901.78
196	6	9143.28	-76.31	-2.12e-03	0.0	0.0	-7125.32	-65.24	127.25	-4700.47	-1786.56	9143.28
		8475.74	-1786.56	6.88e-05	0.0	15.0	-7080.32	-65.24	127.25	-4700.47	-76.31	8475.74
196	7	7492.32	110.19	-1.55e-03	0.0	0.0	-5869.64	-55.18	116.26	-3690.17	-1472.21	7492.32
		6901.78	-1472.21	1.03e-04	0.0	15.0	-5824.64	-55.18	116.26	-3690.17	110.19	6901.78
196	8	8647.99	-20.36	-1.95e-03	0.0	0.0	-6748.61	-62.22	123.95	-4397.38	-1692.26	8647.99
		8003.55	-1692.26	7.89e-05	0.0	15.0	-6703.61	-62.22	123.95	-4397.38	-20.36	8003.55
196	9	7492.32	110.19	-1.55e-03	0.0	0.0	-5869.64	-55.18	116.26	-3690.17	-1472.21	7492.32
		6901.78	-1472.21	1.03e-04	0.0	15.0	-5824.64	-55.18	116.26	-3690.17	110.19	6901.78
196	10	8482.89	-1.71	-1.89e-03	0.0	0.0	-6223.05	-61.21	122.85	-4296.35	-1660.82	8482.89
		7846.16	-1660.82	8.23e-05	0.0	15.0	-6578.05	-61.21	122.85	-4296.35	-1.71	7846.16
197	2	-1.780e+05	-5737.45	-8.47e-03	0.0	0.0	-1.436e+04	4033.39	-176.71	1707.54	-8330.71	-1.780e+05
		-2.391e+05	-8330.71	1.53e-03	0.0	15.0	-1.431e+04	4033.39	-176.71	1707.54	-5737.45	-2.391e+05
197	3	-9.548e+04	-2338.80	-4.59e-03	0.0	0.0	-8758.93	2204.47	-137.73	957.97	-2338.80	-9.548e+04
		-1.289e+05	-4364.58	1.12e-03	0.0	15.0	-8713.93	2204.47	-137.73	957.97	-4364.58	-1.289e+05
197	5	-9.765e+04	-2447.55	-4.69e-03	0.0	0.0	-8879.01	2251.55	-137.64	976.61	-2447.55	-9.765e+04
		-1.318e+05	-4471.70	1.12e-03	0.0	15.0	-8834.01	2251.55	-137.64	976.61	-4471.70	-9.765e+04
197	6	-1.303e+05	-4078.81	-6.21e-03	0.0	0.0	-1.068e+04	2957.75	-136.22	1256.15	-4078.81	-1.303e+05
		-1.751e+05	-6078.62	1.17e-03	0.0	15.0	-1.064e+04	2957.75	-136.22	1256.15	-6078.62	-1.303e+05
197	7	-9.765e+04	-2447.55	-4.69e-03	0.0	0.0	-8879.01	2251.55	-137.64	976.61	-2447.55	-9.765e+04
		-1.318e+05	-4471.70	1.12e-03	0.0	15.0	-8834.01	2251.55	-137.64	976.61	-4471.70	-9.765e+04
197	8	-1.205e+05	-3589.43	-5.75e-03	0.0	0.0	-1.014e+04	2745.89	-136.65	1172.29	-3589.43	-1.205e+05
		-1.621e+05	-5596.54	1.15e-03	0.0	15.0	-1.009e+04	2745.89	-136.65	1172.29	-5596.54	-1.621e+05

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

197	9	-9.765e+04	-2447.55	-4.69e-03	0.0	0.0	-8879.01	2251.55	-137.64	976.61	-2447.55	-1.318e+05
		-1.318e+05	-4471.70	1.12e-03	0.0	15.0	-8834.01	2251.55	-137.64	976.61	-4471.70	-9.765e+04
197	10	-1.172e+05	-3426.30	-5.60e-03	0.0	0.0	-9959.73	2675.27	-136.79	1144.33	-3426.30	-1.577e+05
		-1.577e+05	-5435.85	1.15e-03	0.0	15.0	-9914.73	2675.27	-136.79	1144.33	-5435.85	-1.172e+05
198	2	-2.573e+04	1016.26	-3.11e-03	0.0	0.0	-1.578e+04	1489.50	23.98	2794.49	691.49	-4.804e+04
		-4.804e+04	691.49	2.06e-04	0.0	15.0	-1.572e+04	1489.50	23.98	2794.49	1016.26	-2.573e+04
198	3	-1.263e+04	7.38	-1.65e-03	0.0	0.0	-9510.36	809.17	17.06	1516.87	-232.33	-2.476e+04
		-2.476e+04	-232.33	2.04e-04	0.0	15.0	-9465.36	809.17	17.06	1516.87	7.38	-1.263e+04
198	5	-1.301e+04	47.97	-1.69e-03	0.0	0.0	-9648.11	826.81	17.13	1550.04	-192.26	-2.540e+04
		-2.540e+04	-192.26	2.02e-04	0.0	15.0	-9603.11	826.81	17.13	1550.04	47.97	-1.301e+04
198	6	-1.864e+04	656.84	-2.28e-03	0.0	0.0	-1.171e+04	1091.48	18.22	2047.56	408.65	-3.499e+04
		-3.499e+04	408.65	1.66e-04	0.0	15.0	-1.167e+04	1091.48	18.22	2047.56	656.84	-1.864e+04
198	7	-1.301e+04	47.97	-1.69e-03	0.0	0.0	-9648.11	826.81	17.13	1550.04	-192.26	-2.540e+04
		-2.540e+04	-192.26	2.02e-04	0.0	15.0	-9603.11	826.81	17.13	1550.04	47.97	-1.301e+04
198	8	-1.695e+04	474.18	-2.10e-03	0.0	0.0	-1.109e+04	1012.08	17.90	1898.30	228.37	-3.211e+04
		-3.211e+04	228.37	1.77e-04	0.0	15.0	-1.105e+04	1012.08	17.90	1898.30	474.18	-1.695e+04
198	9	-1.301e+04	47.97	-1.69e-03	0.0	0.0	-9648.11	826.81	17.13	1550.04	-192.26	-2.540e+04
		-2.540e+04	-192.26	2.02e-04	0.0	15.0	-9603.11	826.81	17.13	1550.04	47.97	-1.301e+04
198	10	-1.638e+04	413.30	-2.04e-03	0.0	0.0	-1.089e+04	985.61	17.79	1848.55	168.28	-3.115e+04
		-3.115e+04	168.28	1.80e-04	0.0	15.0	-1.084e+04	985.61	17.79	1848.55	413.30	-1.638e+04
199	2	8.348e+04	1.775e+04	5.05e-03	0.0	0.0	-1.547e+04	-1785.33	-46.99	-626.80	1.775e+04	8.348e+04
		5.636e+04	1.688e+04	4.36e-03	0.0	15.0	-1.542e+04	-1785.33	-46.99	-626.80	1.688e+04	5.636e+04
199	3	4.339e+04	1.032e+04	2.77e-03	0.0	0.0	-9403.76	-966.65	-10.00	-396.63	1.032e+04	4.339e+04
		2.873e+04	1.007e+04	2.55e-03	0.0	15.0	-9358.76	-966.65	-10.00	-396.63	1.007e+04	2.873e+04
199	5	4.449e+04	1.050e+04	2.83e-03	0.0	0.0	-9534.77	-987.97	-11.37	-401.12	1.050e+04	4.449e+04
		2.949e+04	1.023e+04	2.59e-03	0.0	15.0	-9489.77	-987.97	-11.37	-401.12	1.023e+04	2.949e+04
199	6	6.086e+04	1.312e+04	3.71e-03	0.0	0.0	-1.150e+04	-1307.74	-31.93	-468.36	1.312e+04	6.086e+04
		4.100e+04	1.251e+04	3.23e-03	0.0	15.0	-1.145e+04	-1307.74	-31.93	-468.36	1.251e+04	4.100e+04
199	7	4.449e+04	1.050e+04	2.83e-03	0.0	0.0	-9534.77	-987.97	-11.37	-401.12	1.050e+04	4.449e+04
		2.949e+04	1.023e+04	2.59e-03	0.0	15.0	-9489.77	-987.97	-11.37	-401.12	1.023e+04	2.949e+04
199	8	5.595e+04	1.233e+04	3.44e-03	0.0	0.0	-1.091e+04	-1211.81	-25.76	-448.19	1.233e+04	5.595e+04
		3.755e+04	1.183e+04	3.04e-03	0.0	15.0	-1.087e+04	-1211.81	-25.76	-448.19	1.183e+04	3.755e+04
199	9	4.449e+04	1.050e+04	2.83e-03	0.0	0.0	-9534.77	-987.97	-11.37	-401.12	1.050e+04	4.449e+04
		2.949e+04	1.023e+04	2.59e-03	0.0	15.0	-9489.77	-987.97	-11.37	-401.12	1.023e+04	2.949e+04
199	10	5.431e+04	1.207e+04	3.36e-03	0.0	0.0	-1.071e+04	-1179.83	-23.71	-441.46	1.207e+04	5.431e+04
		3.640e+04	1.160e+04	2.97e-03	0.0	15.0	-1.067e+04	-1179.83	-23.71	-441.46	1.160e+04	3.640e+04
200	2	6643.25	3804.98	-2.75e-03	0.0	0.0	-7123.71	-412.04	74.70	-1.169e+04	3012.84	6643.25
		1177.24	3012.84	1.27e-04	0.0	15.0	-7065.21	-412.04	74.70	-1.169e+04	3804.98	1177.24
200	3	4034.77	2606.21	-1.42e-03	0.0	0.0	-4285.82	-227.73	38.15	-6403.72	2215.04	4034.77
		1007.35	2215.04	1.43e-04	0.0	15.0	-4240.82	-227.73	38.15	-6403.72	2606.21	1007.35
200	4	5303.16	2984.45	-2.24e-03	0.0	0.0	-5694.01	-332.97	60.93	-9457.57	2335.97	5303.16
		887.30	2335.97	8.97e-05	0.0	15.0	-5649.01	-332.97	60.93	-9457.57	2984.45	887.30
200	5	4091.15	2623.02	-1.46e-03	0.0	0.0	-4348.41	-232.40	39.16	-6539.45	2220.42	4091.15
		1002.02	2220.42	1.40e-04	0.0	15.0	-4303.41	-232.40	39.16	-6539.45	2623.02	1002.02
200	6	4936.74	2875.18	-2.00e-03	0.0	0.0	-5287.20	-302.56	54.35	-8575.35	2301.03	4936.74
		921.98	2301.03	1.05e-04	0.0	15.0	-5242.20	-302.56	54.35	-8575.35	2875.18	921.98
200	7	4091.15	2623.02	-1.46e-03	0.0	0.0	-4348.41	-232.40	39.16	-6539.45	2220.42	4091.15
		1002.02	2220.42	1.40e-04	0.0	15.0	-4303.41	-232.40	39.16	-6539.45	2623.02	1002.02
200	8	4683.06	2799.53	-1.84e-03	0.0	0.0	-5005.56	-281.52	49.79	-7964.58	2276.85	4683.06
		945.99	2276.85	1.16e-04	0.0	15.0	-4960.56	-281.52	49.79	-7964.58	2799.53	945.99
200	9	4091.15	2623.02	-1.46e-03	0.0	0.0	-4348.41	-232.40	39.16	-6539.45	2220.42	4091.15
		1002.02	2220.42	1.40e-04	0.0	15.0	-4303.41	-232.40	39.16	-6539.45	2623.02	1002.02
200	10	4598.50	2774.31	-1.78e-03	0.0	0.0	-4911.68	-274.50	48.27	-7760.99	2274.31	4598.50
		954.00	2274.31	1.19e-04	0.0	15.0	-4866.68	-274.50	48.27	-7760.99	2774.31	954.00
201	2	-7.393e+04	-1.059e+04	-0.01	0.0	0.0	-1.061e+04	1535.23	-19.78	-3622.37	-1.059e+04	-9.703e+04
		-9.703e+04	-1.096e+04	1.28e-03	0.0	15.0	-1.055e+04	1535.23	-19.78	-3622.37	-9.703e+04	-7.393e+04
201	3	-3.854e+04	-6325.86	-5.41e-03	0.0	0.0	-6599.08	840.86	-27.19	-1900.91	-6325.86	-5.119e+04
		-5.119e+04	-6765.71	9.75e-04	0.0	15.0	-6554.08	840.86	-27.19	-1900.91	-6765.71	-3.854e+04
201	5	-3.950e+04	-6421.38	-5.53e-03	0.0	0.0	-6681.07	858.68	-26.56	-1947.33	-6421.38	-5.242e+04
		-5.242e+04	-6853.16	9.76e-04	0.0	15.0	-6636.07	858.68	-26.56	-1947.33	-6853.16	-3.950e+04
201	6	-5.391e+04	-7854.14	-7.33e-03	0.0	0.0	-7910.89	1126.09	-17.15	-2643.61	-7854.14	-7.086e+04
		-7.086e+04	-8164.95	9.85e-04	0.0	15.0	-7865.89	1126.09	-17.15	-2643.61	-8164.95	-5.391e+04
201	7	-3.950e+04	-6421.38	-5.53e-03	0.0	0.0	-6681.07	858.68	-26.56	-1947.33	-6421.38	-5.242e+04
		-5.242e+04	-6853.16	9.76e-04	0.0	15.0	-6636.07	858.68	-26.56	-1947.33	-6853.16	-3.950e+04
201	8	-4.959e+04	-7424.31	-6.79e-03	0.0	0.0	-7541.95	1045.87	-19.97	-2434.73	-7424.31	-6.533e+04
		-6.533e+04	-7771.42	9.83e-04	0.0	15.0	-7496.95	1045.87	-19.97	-2434.73	-7771.42	-4.959e+04

201	9	-3.950e+04	-6421.38	-5.53e-03	0.0	0.0	-6681.07	858.68	-26.56	-1947.33	-6421.38	-5.242e+04
		-5.242e+04	-6853.16	9.76e-04	0.0	15.0	-6636.07	858.68	-26.56	-1947.33	-6853.16	-3.950e+04
201	10	-4.815e+04	-7281.03	-6.61e-03	0.0	0.0	-7418.96	1019.13	-20.91	-2365.10	-7281.03	-6.348e+04
		-6.348e+04	-7640.24	9.82e-04	0.0	15.0	-7373.96	1019.13	-20.91	-2365.10	-7640.24	-4.815e+04
202	2	-9474.94	3278.21	5.10e-03	0.0	0.0	-7201.81	116.64	-37.64	1062.35	3278.21	-1.113e+04
		-1.113e+04	2755.92	5.06e-03	0.0	15.0	-7143.31	116.64	-37.64	1062.35	2755.92	-9474.94
202	3	-5518.84	2111.02	2.75e-03	0.0	0.0	-4292.79	65.18	-27.15	290.75	2111.02	-6459.32
		-6459.32	1739.18	2.99e-03	0.0	15.0	-4247.79	65.18	-27.15	290.75	1739.18	-5518.84
202	5	-5611.60	2132.55	2.81e-03	0.0	0.0	-4358.16	66.47	-27.25	318.35	2132.55	-6569.68
		-6569.68	1759.14	3.04e-03	0.0	15.0	-4313.16	66.47	-27.25	318.35	1759.14	-5611.60
202	6	-7003.00	2455.46	3.73e-03	0.0	0.0	-5338.72	85.76	-28.66	732.28	2455.46	-8225.14
		-8225.14	2058.53	3.75e-03	0.0	15.0	-5293.72	85.76	-28.66	732.28	2058.53	-7003.00
202	7	-5611.60	2132.55	2.81e-03	0.0	0.0	-4358.16	66.47	-27.25	318.35	2132.55	-6569.68
		-6569.68	1759.14	3.04e-03	0.0	15.0	-4313.16	66.47	-27.25	318.35	1759.14	-5611.60
202	8	-6585.58	2358.59	3.46e-03	0.0	0.0	-5044.55	79.97	-28.24	608.10	2358.59	-7728.50
		-7728.50	1968.71	3.53e-03	0.0	15.0	-4999.55	79.97	-28.24	608.10	1968.71	-6585.58
202	9	-5611.60	2132.55	2.81e-03	0.0	0.0	-4358.16	66.47	-27.25	318.35	2132.55	-6569.68
		-6569.68	1759.14	3.04e-03	0.0	15.0	-4313.16	66.47	-27.25	318.35	1759.14	-5611.60
202	10	-6446.44	2326.30	3.37e-03	0.0	0.0	-4946.49	78.05	-28.10	566.71	2326.30	-7562.96
		-7562.96	1938.77	3.46e-03	0.0	15.0	-4901.49	78.05	-28.10	566.71	1938.77	-6446.44
203	1	8.319e+04	3438.89	4.41e-03	0.0	0.0	-8647.20	-1518.00	-264.72	-925.30	3438.89	8.319e+04
		6.023e+04	-491.30	4.24e-03	0.0	15.0	-8588.70	-1518.00	-264.72	-925.30	-491.30	6.023e+04
203	2	1.190e+05	4676.84	6.07e-03	0.0	0.0	-1.045e+04	-2119.12	-319.26	-1233.09	4676.84	1.190e+05
		8.697e+04	-73.03	5.31e-03	0.0	15.0	-1.039e+04	-2119.12	-319.26	-1233.09	-73.03	8.697e+04
203	3	6.117e+04	2547.96	3.26e-03	0.0	0.0	-6510.13	-1120.43	-199.34	-687.57	2547.96	6.117e+04
		4.422e+04	-410.81	3.17e-03	0.0	15.0	-6465.13	-1120.43	-199.34	-687.57	-410.81	4.422e+04
203	5	6.277e+04	2602.98	3.34e-03	0.0	0.0	-6590.14	-1147.14	-201.77	-701.25	2602.98	6.277e+04
		4.541e+04	-392.22	3.22e-03	0.0	15.0	-6545.14	-1147.14	-201.77	-701.25	-392.22	4.541e+04
203	6	8.666e+04	3428.28	4.44e-03	0.0	0.0	-7790.30	-1547.89	-238.13	-906.44	3428.28	8.666e+04
		6.324e+04	-113.38	3.94e-03	0.0	15.0	-7745.30	-1547.89	-238.13	-906.44	-113.38	6.324e+04
203	7	6.277e+04	2602.98	3.34e-03	0.0	0.0	-6590.14	-1147.14	-201.77	-701.25	2602.98	6.277e+04
		4.541e+04	-392.22	3.22e-03	0.0	15.0	-6545.14	-1147.14	-201.77	-701.25	-392.22	4.541e+04
203	8	7.950e+04	3180.69	4.11e-03	0.0	0.0	-7430.25	-1427.66	-227.22	-844.88	3180.69	7.950e+04
		5.789e+04	-197.03	3.73e-03	0.0	15.0	-7385.25	-1427.66	-227.22	-844.88	-197.03	5.789e+04
203	9	6.277e+04	2602.98	3.34e-03	0.0	0.0	-6590.14	-1147.14	-201.77	-701.25	2602.98	6.277e+04
		4.541e+04	-392.22	3.22e-03	0.0	15.0	-6545.14	-1147.14	-201.77	-701.25	-392.22	4.541e+04
203	10	7.711e+04	3098.16	4.00e-03	0.0	0.0	-7310.24	-1387.59	-223.58	-824.37	3098.16	7.711e+04
		5.611e+04	-224.92	3.65e-03	0.0	15.0	-7265.24	-1387.59	-223.58	-824.37	-224.92	5.611e+04
204	1	-3.372e+04	-194.63	-2.13e-03	0.0	0.0	-1.355e+04	1446.68	164.12	1849.21	-2619.16	-5.552e+04
		-5.552e+04	-2619.16	2.47e-04	0.0	15.0	-1.349e+04	1446.68	164.12	1849.21	-2619.16	-3.372e+04
204	2	-4.814e+04	715.05	-2.95e-03	0.0	0.0	-1.686e+04	1960.00	195.30	2466.32	-2156.32	-7.766e+04
		-7.766e+04	-2156.32	1.83e-04	0.0	15.0	-1.681e+04	1960.00	195.30	2466.32	-2156.32	-4.814e+04
204	3	-2.481e+04	-221.25	-1.57e-03	0.0	0.0	-1.016e+04	1072.47	123.79	1373.95	-2051.13	-4.096e+04
		-4.096e+04	-2051.13	1.95e-04	0.0	15.0	-1.012e+04	1072.47	123.79	1373.95	-2051.13	-2.481e+04
204	5	-2.545e+04	-180.82	-1.61e-03	0.0	0.0	-1.031e+04	1095.28	125.18	1401.37	-2030.56	-4.195e+04
		-4.195e+04	-2030.56	1.92e-04	0.0	15.0	-1.027e+04	1095.28	125.18	1401.37	-2030.56	-2.545e+04
204	6	-3.506e+04	425.63	-2.16e-03	0.0	0.0	-1.252e+04	1437.50	145.97	1812.78	-1722.00	-5.671e+04
		-5.671e+04	-1722.00	1.49e-04	0.0	15.0	-1.247e+04	1437.50	145.97	1812.78	-1722.00	-3.506e+04
204	7	-2.545e+04	-180.82	-1.61e-03	0.0	0.0	-1.031e+04	1095.28	125.18	1401.37	-2030.56	-4.195e+04
		-4.195e+04	-2030.56	1.92e-04	0.0	15.0	-1.027e+04	1095.28	125.18	1401.37	-2030.56	-2.545e+04
204	8	-3.217e+04	243.70	-1.99e-03	0.0	0.0	-1.186e+04	1334.83	139.73	1689.36	-1814.57	-5.228e+04
		-5.228e+04	-1814.57	1.62e-04	0.0	15.0	-1.181e+04	1334.83	139.73	1689.36	-1814.57	-3.217e+04
204	9	-2.545e+04	-180.82	-1.61e-03	0.0	0.0	-1.031e+04	1095.28	125.18	1401.37	-2030.56	-4.195e+04
		-4.195e+04	-2030.56	1.92e-04	0.0	15.0	-1.027e+04	1095.28	125.18	1401.37	-2030.56	-2.545e+04
204	10	-3.121e+04	183.05	-1.94e-03	0.0	0.0	-1.164e+04	1300.61	137.65	1648.22	-1845.43	-5.080e+04
		-5.080e+04	-1845.43	1.66e-04	0.0	15.0	-1.159e+04	1300.61	137.65	1648.22	-1845.43	-3.121e+04
205	2	9790.52	3177.02	-2.80e-03	0.0	0.0	-7961.15	-270.07	120.98	-1.032e+04	1685.06	9790.52
		6353.64	1685.06	9.77e-05	0.0	15.0	-7902.65	-270.07	120.98	-1.032e+04	3177.02	6353.64
205	3	5817.07	2306.84	-1.44e-03	0.0	0.0	-4796.38	-151.68	74.52	-5701.78	1371.97	5817.07
		3876.63	1371.97	1.21e-04	0.0	15.0	-4751.38	-151.68	74.52	-5701.78	2306.84	3876.63
205	4	7838.74	2468.45	-2.28e-03	0.0	0.0	-6362.18	-217.80	96.39	-8338.94	1282.61	7838.74
		5068.78	1282.61	6.69e-05	0.0	15.0	-6317.18	-217.80	96.39	-8338.94	2468.45	5068.78
205	5	5906.92	2314.02	-1.48e-03	0.0	0.0	-4865.97	-154.62	75.49	-5818.98	1368.00	5906.92
		3929.61	1368.00	1.19e-04	0.0	15.0	-4820.97	-154.62	75.49	-5818.98	2314.02	3929.61
205	6	7254.70	2421.76	-2.04e-03	0.0	0.0	-5909.84	-198.70	90.07	-7577.09	1308.42	7254.70
		4724.38	1308.42	8.26e-05	0.0	15.0	-5864.84	-198.70	90.07	-7577.09	2421.76	4724.38

205	7	5906.92	2314.02	-1.48e-03	0.0	0.0	-4865.97	-154.62	75.49	-5818.98	1368.00	5906.92
		3929.61	1368.00	1.19e-04	0.0	15.0	-4820.97	-154.62	75.49	-5818.98	2314.02	3929.61
205	8	6850.37	2389.44	-1.87e-03	0.0	0.0	-5596.68	-185.48	85.69	-7049.66	1326.30	6850.37
		4485.95	1326.30	9.34e-05	0.0	15.0	-5551.68	-185.48	85.69	-7049.66	2389.44	4485.95
205	9	5906.92	2314.02	-1.48e-03	0.0	0.0	-4865.97	-154.62	75.49	-5818.98	1368.00	5906.92
		3929.61	1368.00	1.19e-04	0.0	15.0	-4820.97	-154.62	75.49	-5818.98	2314.02	3929.61
205	10	6715.59	2378.67	-1.81e-03	0.0	0.0	-5492.29	-181.07	84.24	-6873.85	1332.25	6715.59
		4406.48	1332.25	9.70e-05	0.0	15.0	-5447.29	-181.07	84.24	-6873.85	2378.67	4406.48
206		2-9.710e+04	-9827.32	-9.65e-03	0.0	0.0	-1.169e+04	2222.09	-46.87	-2354.18	-9827.32	-1.306e+05
		-1.306e+05	-1.056e+04	1.37e-03	0.0	15.0	-1.163e+04	2222.09	-46.87	-2354.18	-1.056e+04	-9.710e+04
206		3-5.123e+04	-5609.12	-5.22e-03	0.0	0.0	-7221.46	1215.51	-46.51	-1214.26	-5609.12	-6.954e+04
		-6.954e+04	-6315.60	1.03e-03	0.0	15.0	-7176.46	1215.51	-46.51	-1214.26	-6315.60	-5.123e+04
206		5-5.246e+04	-5711.36	-5.34e-03	0.0	0.0	-7314.34	1241.39	-45.96	-1245.54	-5711.36	-7.116e+04
		-7.116e+04	-6410.54	1.03e-03	0.0	15.0	-7269.34	1241.39	-45.96	-1245.54	-6410.54	-5.246e+04
206		6-7.091e+04	-7244.90	-7.07e-03	0.0	0.0	-8707.54	1629.66	-37.74	-1714.68	-7244.90	-9.546e+04
		-9.546e+04	-7834.65	1.05e-03	0.0	15.0	-8662.54	1629.66	-37.74	-1714.68	-7834.65	-7.091e+04
206		7-5.246e+04	-5711.36	-5.34e-03	0.0	0.0	-7314.34	1241.39	-45.96	-1245.54	-5711.36	-7.116e+04
		-7.116e+04	-6410.54	1.03e-03	0.0	15.0	-7269.34	1241.39	-45.96	-1245.54	-6410.54	-5.246e+04
206		8-6.538e+04	-6784.84	-6.55e-03	0.0	0.0	-8289.58	1513.18	-40.21	-1573.93	-6784.84	-8.817e+04
		-8.817e+04	-7407.41	1.04e-03	0.0	15.0	-8244.58	1513.18	-40.21	-1573.93	-7407.41	-6.538e+04
206		9-5.246e+04	-5711.36	-5.34e-03	0.0	0.0	-7314.34	1241.39	-45.96	-1245.54	-5711.36	-7.116e+04
		-7.116e+04	-6410.54	1.03e-03	0.0	15.0	-7269.34	1241.39	-45.96	-1245.54	-6410.54	-5.246e+04
206		10-6.353e+04	-6631.49	-6.38e-03	0.0	0.0	-8105.26	1474.35	-41.03	-1527.02	-6631.49	-8.574e+04
		-8.574e+04	-7265.00	1.04e-03	0.0	15.0	-8105.26	1474.35	-41.03	-1527.02	-7265.00	-6.353e+04
207	1	1943.22	-595.47	-2.28e-03	0.0	0.0	-1.111e+04	519.28	-90.51	1615.63	-595.47	-5750.80
		-5750.80	-1967.37	2.68e-04	0.0	15.0	-1.105e+04	519.28	-90.51	1615.63	-1967.37	1943.22
207	2	771.34	101.55	-3.19e-03	0.0	0.0	-1.383e+04	720.05	-114.30	2315.47	101.55	-9893.07
		-9893.07	-1632.43	2.29e-04	0.0	15.0	-1.377e+04	720.05	-114.30	2315.47	-1632.43	771.34
207	3	1586.93	-512.87	-1.68e-03	0.0	0.0	-8331.48	383.66	-67.75	1187.76	-512.87	-4097.97
		-4097.97	-1539.70	2.09e-04	0.0	15.0	-8286.48	383.66	-67.75	1187.76	-1539.70	1586.93
207	4	415.05	184.16	-2.59e-03	0.0	0.0	-1.105e+04	584.43	-91.54	1887.60	184.16	-8240.24
		-8240.24	-1204.76	1.71e-04	0.0	15.0	-1.101e+04	584.43	-91.54	1887.60	-1204.76	415.05
207	5	1534.85	-481.89	-1.72e-03	0.0	0.0	-8452.33	392.58	-68.81	1218.86	-481.89	-4282.08
		-4282.08	-1524.82	2.07e-04	0.0	15.0	-8407.33	392.58	-68.81	1218.86	-1524.82	1534.85
207	6	753.59	-17.20	-2.33e-03	0.0	0.0	-1.027e+04	526.43	-84.67	1685.43	-17.20	-7043.59
		-7043.59	-1301.52	1.82e-04	0.0	15.0	-1.022e+04	526.43	-84.67	1685.43	-1301.52	753.59
207	7	1534.85	-481.89	-1.72e-03	0.0	0.0	-8452.33	392.58	-68.81	1218.86	-481.89	-4282.08
		-4282.08	-1524.82	2.07e-04	0.0	15.0	-8407.33	392.58	-68.81	1218.86	-1524.82	1534.85
207	8	987.97	-156.61	-2.15e-03	0.0	0.0	-9721.21	486.27	-79.91	1545.46	-156.61	-6215.13
		-6215.13	-1368.51	1.89e-04	0.0	15.0	-9676.21	486.27	-79.91	1545.46	-1368.51	987.97
207	9	1534.85	-481.89	-1.72e-03	0.0	0.0	-8452.33	392.58	-68.81	1218.86	-481.89	-4282.08
		-4282.08	-1524.82	2.07e-04	0.0	15.0	-8407.33	392.58	-68.81	1218.86	-1524.82	1534.85
207	10	1066.09	-203.08	-2.09e-03	0.0	0.0	-9539.95	472.89	-78.32	1498.80	-203.08	-5938.98
		-5938.98	-1390.84	1.92e-04	0.0	15.0	-9494.95	472.89	-78.32	1498.80	-1390.84	1066.09
208	2	5.616e+04	1.683e+04	5.27e-03	0.0	0.0	-1.436e+04	-1474.87	-121.18	-1025.71	1.683e+04	5.616e+04
		3.380e+04	1.495e+04	4.51e-03	0.0	15.0	-1.431e+04	-1474.87	-121.18	-1025.71	1.495e+04	3.380e+04
208	3	2.862e+04	1.004e+04	2.88e-03	0.0	0.0	-8726.49	-790.96	-60.00	-642.46	1.004e+04	2.862e+04
		1.665e+04	9104.40	2.64e-03	0.0	15.0	-8681.49	-790.96	-60.00	-642.46	9104.40	1.665e+04
208	5	2.939e+04	1.019e+04	2.94e-03	0.0	0.0	-8848.24	-808.97	-61.74	-650.14	1.019e+04	2.939e+04
		1.714e+04	9230.12	2.68e-03	0.0	15.0	-8803.24	-808.97	-61.74	-650.14	9230.12	1.714e+04
208	6	4.085e+04	1.248e+04	3.86e-03	0.0	0.0	-1.067e+04	-1079.10	-87.86	-765.37	1.248e+04	4.085e+04
		2.449e+04	1.112e+04	3.33e-03	0.0	15.0	-1.063e+04	-1079.10	-87.86	-765.37	1.112e+04	2.449e+04
208	7	2.939e+04	1.019e+04	2.94e-03	0.0	0.0	-8848.24	-808.97	-61.74	-650.14	1.019e+04	2.939e+04
		1.714e+04	9230.12	2.68e-03	0.0	15.0	-8803.24	-808.97	-61.74	-650.14	9230.12	1.714e+04
208	8	3.741e+04	1.179e+04	3.59e-03	0.0	0.0	-1.013e+04	-998.06	-80.02	-730.80	1.179e+04	3.741e+04
		2.228e+04	1.055e+04	3.14e-03	0.0	15.0	-1.008e+04	-998.06	-80.02	-730.80	1.055e+04	2.228e+04
208	9	2.939e+04	1.019e+04	2.94e-03	0.0	0.0	-8848.24	-808.97	-61.74	-650.14	1.019e+04	2.939e+04
		1.714e+04	9230.12	2.68e-03	0.0	15.0	-8803.24	-808.97	-61.74	-650.14	9230.12	1.714e+04
208	10	3.626e+04	1.156e+04	3.50e-03	0.0	0.0	-9943.97	-971.05	-77.41	-719.28	1.156e+04	3.626e+04
		2.155e+04	1.036e+04	3.07e-03	0.0	15.0	-9898.97	-971.05	-77.41	-719.28	1.036e+04	2.155e+04
209	2	-6419.34	3460.11	-2.72e-03	0.0	0.0	-5365.67	-868.04	-31.00	-1.328e+04	3460.11	-6419.34
		-1.871e+04	2685.17	1.96e-04	0.0	15.0	-5307.17	-868.04	-31.00	-1.328e+04	2685.17	-1.871e+04
209	3	-3161.98	2193.97	-1.40e-03	0.0	0.0	-3202.74	-473.20	-46.67	-7186.07	2193.97	-3161.98
		-9864.88	1331.98	1.90e-04	0.0	15.0	-3157.74	-473.20	-46.67	-7186.07	1331.98	-9864.88
209	5	-3255.07	2218.48	-1.44e-03	0.0	0.0	-3251.21	-483.40	-45.47	-7344.80	2218.48	-3255.07
		-1.010e+04	1370.43	1.88e-04	0.0	15.0	-3206.21	-483.40	-45.47	-7344.80	1370.43	-1.010e+04

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

209	6	-4651.50	2586.19	-1.98e-03	0.0	0.0	-3978.29	-636.35	-27.53	-9725.64	2586.19	-4651.50
		-1.366e+04	1947.20	1.57e-04	0.0	15.0	-3933.29	-636.35	-27.53	-9725.64	1947.20	-1.366e+04
209	7	-3255.07	2218.48	-1.44e-03	0.0	0.0	-3251.21	-483.40	-45.47	-7344.80	2218.48	-3255.07
		-1.010e+04	1370.43	1.88e-04	0.0	15.0	-3206.21	-483.40	-45.47	-7344.80	1370.43	-1.010e+04
209	8	-4232.57	2475.88	-1.82e-03	0.0	0.0	-3760.17	-590.46	-32.91	-9011.39	2475.88	-4232.57
		-1.259e+04	1774.17	1.66e-04	0.0	15.0	-3715.17	-590.46	-32.91	-9011.39	1774.17	-1.259e+04
209	9	-3255.07	2218.48	-1.44e-03	0.0	0.0	-3251.21	-483.40	-45.47	-7344.80	2218.48	-3255.07
		-1.010e+04	1370.43	1.88e-04	0.0	15.0	-3206.21	-483.40	-45.47	-7344.80	1370.43	-1.010e+04
209	10	-4092.93	2439.11	-1.77e-03	0.0	0.0	-3687.46	-575.17	-34.71	-8773.30	2439.11	-4092.93
		-1.224e+04	1716.50	1.69e-04	0.0	15.0	-3642.46	-575.17	-34.71	-8773.30	1716.50	-1.224e+04
210	2	-4.789e+04	-1.115e+04	-0.01	0.0	0.0	-8808.75	709.55	11.10	-5677.57	-1.118e+04	-5.847e+04
		-5.847e+04	-1.118e+04	1.10e-03	0.0	15.0	-8750.25	709.55	11.10	-5677.57	-1.115e+04	-4.789e+04
210	3	-2.427e+04	-7058.16	-5.67e-03	0.0	0.0	-5558.36	388.29	-5.21	-3032.67	-7058.16	-3.006e+04
		-3.006e+04	-7204.96	8.63e-04	0.0	15.0	-5513.36	388.29	-5.21	-3032.67	-7204.96	-2.427e+04
210	5	-2.493e+04	-7139.02	-5.80e-03	0.0	0.0	-5622.19	396.54	-4.49	-3102.64	-7139.02	-3.084e+04
		-3.084e+04	-7276.99	8.62e-04	0.0	15.0	-5577.19	396.54	-4.49	-3102.64	-7276.99	-2.493e+04
210	6	-3.481e+04	-8352.03	-7.70e-03	0.0	0.0	-6579.58	520.40	6.32	-4152.09	-8352.03	-4.257e+04
		-4.257e+04	-8357.47	8.52e-04	0.0	15.0	-6534.58	520.40	6.32	-4152.09	-8357.47	-3.481e+04
210	7	-2.493e+04	-7139.02	-5.80e-03	0.0	0.0	-5622.19	396.54	-4.49	-3102.64	-7139.02	-3.084e+04
		-3.084e+04	-7276.99	8.62e-04	0.0	15.0	-5577.19	396.54	-4.49	-3102.64	-7276.99	-2.493e+04
210	8	-3.185e+04	-7988.13	-7.13e-03	0.0	0.0	-6292.36	483.24	3.08	-3837.25	-7988.13	-3.905e+04
		-3.905e+04	-8033.33	8.55e-04	0.0	15.0	-6247.36	483.24	3.08	-3837.25	-8033.33	-3.185e+04
210	9	-2.493e+04	-7139.02	-5.80e-03	0.0	0.0	-5622.19	396.54	-4.49	-3102.64	-7139.02	-3.084e+04
		-3.084e+04	-7276.99	8.62e-04	0.0	15.0	-5577.19	396.54	-4.49	-3102.64	-7276.99	-2.493e+04
210	10	-3.086e+04	-7866.83	-6.94e-03	0.0	0.0	-6196.62	470.86	2.00	-3732.31	-7866.83	-3.788e+04
		-3.788e+04	-7925.28	8.56e-04	0.0	15.0	-6151.62	470.86	2.00	-3732.31	-7925.28	-3.086e+04
211	2	-6822.61	2776.05	5.05e-03	0.0	0.0	-6477.28	185.20	-31.23	1507.80	2776.05	-9506.66
		-9506.66	2339.81	5.08e-03	0.0	15.0	-6418.78	185.20	-31.23	1507.80	2339.81	-6822.61
211	3	-4060.88	1756.58	2.72e-03	0.0	0.0	-3845.03	100.53	-24.23	516.05	1756.58	-5530.14
		-5530.14	1423.77	3.00e-03	0.0	15.0	-3800.03	100.53	-24.23	516.05	1423.77	-4060.88
211	5	-4123.11	1776.44	2.78e-03	0.0	0.0	-3904.66	102.73	-24.22	549.80	1776.44	-5623.58
		-5623.58	1443.48	3.05e-03	0.0	15.0	-3859.66	102.73	-24.22	549.80	1443.48	-4123.11
211	6	-5056.67	2074.32	3.70e-03	0.0	0.0	-4799.06	135.70	-24.06	1056.01	2074.32	-7025.29
		-7025.29	1739.19	3.76e-03	0.0	15.0	-4754.06	135.70	-24.06	1056.01	1739.19	-5056.67
211	7	-4123.11	1776.44	2.78e-03	0.0	0.0	-3904.66	102.73	-24.22	549.80	1776.44	-5623.58
		-5623.58	1443.48	3.05e-03	0.0	15.0	-3859.66	102.73	-24.22	549.80	1443.48	-4123.11
211	8	-4776.60	1984.96	3.42e-03	0.0	0.0	-4530.74	125.81	-24.11	904.15	1984.96	-6604.78
		-6604.78	1650.48	3.55e-03	0.0	15.0	-4485.74	125.81	-24.11	904.15	1650.48	-4776.60
211	9	-4123.11	1776.44	2.78e-03	0.0	0.0	-3904.66	102.73	-24.22	549.80	1776.44	-5623.58
		-5623.58	1443.48	3.05e-03	0.0	15.0	-3859.66	102.73	-24.22	549.80	1443.48	-4123.11
211	10	-4683.25	1955.17	3.33e-03	0.0	0.0	-4441.30	122.51	-24.12	853.52	1955.17	-6464.61
		-6464.61	1620.91	3.48e-03	0.0	15.0	-4396.30	122.51	-24.12	853.52	1620.91	-4683.25
212	2	8.681e+04	-53.25	6.41e-03	0.0	0.0	-9433.39	-1612.73	-181.27	279.72	-53.25	8.681e+04
		6.243e+04	-2750.71	5.30e-03	0.0	15.0	-9374.89	-1612.73	-181.27	279.72	-2750.71	6.243e+04
212	3	4.414e+04	-395.24	3.43e-03	0.0	0.0	-5909.52	-851.95	-112.85	92.38	-395.24	4.414e+04
		3.127e+04	-2067.88	3.16e-03	0.0	15.0	-5864.52	-851.95	-112.85	92.38	-2067.88	3.127e+04
212	4	7.084e+04	22.61	5.20e-03	0.0	0.0	-7498.14	-1310.29	-144.21	237.20	22.61	7.084e+04
		5.103e+04	-2124.55	4.24e-03	0.0	15.0	-7453.14	-1310.29	-144.21	237.20	-2124.55	5.103e+04
212	5	4.533e+04	-376.67	3.51e-03	0.0	0.0	-5980.13	-872.32	-114.24	98.82	-376.67	4.533e+04
		3.214e+04	-2070.40	3.21e-03	0.0	15.0	-5935.13	-872.32	-114.24	98.82	-2070.40	3.214e+04
212	6	6.313e+04	-98.10	4.69e-03	0.0	0.0	-7039.21	-1177.88	-135.15	195.36	-98.10	6.313e+04
		4.532e+04	-2108.18	3.93e-03	0.0	15.0	-6994.21	-1177.88	-135.15	195.36	-2108.18	4.532e+04
212	7	4.533e+04	-376.67	3.51e-03	0.0	0.0	-5980.13	-872.32	-114.24	98.82	-376.67	4.533e+04
		3.214e+04	-2070.40	3.21e-03	0.0	15.0	-5935.13	-872.32	-114.24	98.82	-2070.40	3.214e+04
212	8	5.779e+04	-181.67	4.33e-03	0.0	0.0	-6721.48	-1086.21	-128.88	166.40	-181.67	5.779e+04
		4.137e+04	-2096.85	3.71e-03	0.0	15.0	-6676.48	-1086.21	-128.88	166.40	-2096.85	4.137e+04
212	9	4.533e+04	-376.67	3.51e-03	0.0	0.0	-5980.13	-872.32	-114.24	98.82	-376.67	4.533e+04
		3.214e+04	-2070.40	3.21e-03	0.0	15.0	-5935.13	-872.32	-114.24	98.82	-2070.40	3.214e+04
212	10	5.601e+04	-209.53	4.22e-03	0.0	0.0	-6615.58	-1055.66	-126.79	156.75	-209.53	5.601e+04
		4.005e+04	-2093.07	3.64e-03	0.0	15.0	-6570.58	-1055.66	-126.79	156.75	-2093.07	4.005e+04
213	1	-5724.83	95.46	-2.28e-03	0.0	0.0	-1.185e+04	776.89	-44.89	1954.11	95.46	-1.732e+04
		-1.732e+04	-590.56	2.68e-04	0.0	15.0	-1.179e+04	776.89	-44.89	1954.11	-590.56	-5724.83
213	2	-9855.61	1004.24	-3.18e-03	0.0	0.0	-1.475e+04	1066.98	-58.36	2721.52	1004.24	-2.577e+04
		-2.577e+04	109.07	2.23e-04	0.0	15.0	-1.469e+04	1066.98	-58.36	2721.52	109.07	-9855.61
213	3	-4078.91	1.97	-1.69e-03	0.0	0.0	-8888.71	574.79	-33.47	1442.82	1.97	-1.266e+04
		-1.266e+04	-509.29	2.10e-04	0.0	15.0	-8843.71	574.79	-33.47	1442.82	-509.29	-4078.91

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

213	5	-4262.50	42.36	-1.73e-03	0.0	0.0	-9017.50	587.69	-34.07	1476.93	42.36	-1.303e+04
		-1.303e+04	-478.19	2.08e-04	0.0	15.0	-8972.50	587.69	-34.07	1476.93	-478.19	-4262.50
213	6	-7016.34	648.22	-2.33e-03	0.0	0.0	-1.095e+04	781.08	-43.05	1988.53	648.22	-1.867e+04
		-1.867e+04	-11.78	1.78e-04	0.0	15.0	-1.090e+04	781.08	-43.05	1988.53	-11.78	-7016.34
213	7	-4262.50	42.36	-1.73e-03	0.0	0.0	-9017.50	587.69	-34.07	1476.93	42.36	-1.303e+04
		-1.303e+04	-478.19	2.08e-04	0.0	15.0	-8972.50	587.69	-34.07	1476.93	-478.19	-4262.50
213	8	-6190.19	466.46	-2.15e-03	0.0	0.0	-1.037e+04	723.06	-40.36	1835.05	466.46	-1.698e+04
		-1.698e+04	-151.70	1.87e-04	0.0	15.0	-1.032e+04	723.06	-40.36	1835.05	-151.70	-6190.19
213	9	-4262.50	42.36	-1.73e-03	0.0	0.0	-9017.50	587.69	-34.07	1476.93	42.36	-1.303e+04
		-1.303e+04	-478.19	2.08e-04	0.0	15.0	-8972.50	587.69	-34.07	1476.93	-478.19	-4262.50
213	10	-5914.81	405.87	-2.09e-03	0.0	0.0	-1.018e+04	703.72	-39.46	1783.89	405.87	-1.641e+04
		-1.641e+04	-198.34	1.90e-04	0.0	15.0	-1.013e+04	703.72	-39.46	1783.89	-198.34	-5914.81
214	1	1519.46	3306.58	-1.91e-03	0.0	0.0	-4986.34	-439.20	-3.32	-9290.10	3306.58	1519.46
		-4562.11	3022.50	2.13e-04	0.0	15.0	-4927.84	-439.20	-3.32	-9290.10	3022.50	-4562.11
214	2	1479.93	3641.22	-2.73e-03	0.0	0.0	-6233.01	-594.22	20.08	-1.265e+04	3641.22	1479.93
		-6743.18	3619.26	1.62e-04	0.0	15.0	-6174.51	-594.22	20.08	-1.265e+04	3619.26	-6743.18
214	3	1171.93	2517.21	-1.40e-03	0.0	0.0	-3737.62	-325.65	-4.39	-6881.94	2517.21	1171.93
		-3337.81	2278.07	1.68e-04	0.0	15.0	-3692.62	-325.65	-4.39	-6881.94	2278.07	-3337.81
214	5	1170.17	2532.09	-1.44e-03	0.0	0.0	-3793.02	-332.54	-3.35	-7031.32	2532.09	1170.17
		-3434.75	2304.59	1.65e-04	0.0	15.0	-3748.02	-332.54	-3.35	-7031.32	2304.59	-3434.75
214	6	1143.81	2755.18	-1.98e-03	0.0	0.0	-4624.14	-435.89	12.25	-9272.06	2755.18	1143.81
		-4888.80	2702.44	1.32e-04	0.0	15.0	-4579.14	-435.89	12.25	-9272.06	2702.44	-4888.80
214	7	1170.17	2532.09	-1.44e-03	0.0	0.0	-3793.02	-332.54	-3.35	-7031.32	2532.09	1170.17
		-3434.75	2304.59	1.65e-04	0.0	15.0	-3748.02	-332.54	-3.35	-7031.32	2304.59	-3434.75
214	8	1151.72	2688.25	-1.82e-03	0.0	0.0	-4374.81	-404.89	7.57	-8599.84	2688.25	1151.72
		-4452.58	2583.09	1.42e-04	0.0	15.0	-4329.81	-404.89	7.57	-8599.84	2583.09	-4452.58
214	9	1170.17	2532.09	-1.44e-03	0.0	0.0	-3793.02	-332.54	-3.35	-7031.32	2532.09	1170.17
		-3434.75	2304.59	1.65e-04	0.0	15.0	-3748.02	-332.54	-3.35	-7031.32	2304.59	-3434.75
214	10	1154.35	2665.94	-1.77e-03	0.0	0.0	-4291.69	-394.55	6.01	-8375.77	2665.94	1154.35
		-4307.18	2543.30	1.45e-04	0.0	15.0	-4246.69	-394.55	6.01	-8375.77	2543.30	-4307.18
215	2	-5.845e+04	-1.101e+04	-0.01	0.0	0.0	-9683.94	1030.25	0.07	-4686.61	-1.101e+04	-7.391e+04
		-7.391e+04	-1.112e+04	1.19e-03	0.0	15.0	-9625.44	1030.25	0.07	-4686.61	-1.112e+04	-5.845e+04
215	3	-3.005e+04	-6786.73	-5.55e-03	0.0	0.0	-6065.72	564.96	-12.63	-2484.39	-6786.73	-3.853e+04
		-3.853e+04	-7028.07	9.20e-04	0.0	15.0	-6020.72	564.96	-12.63	-2484.39	-7028.07	-3.005e+04
215	5	-3.083e+04	-6874.96	-5.68e-03	0.0	0.0	-6138.24	576.89	-11.97	-2543.13	-6874.96	-3.949e+04
		-3.949e+04	-7108.01	9.20e-04	0.0	15.0	-6093.24	576.89	-11.97	-2543.13	-7108.01	-3.083e+04
215	6	-4.256e+04	-8198.28	-7.53e-03	0.0	0.0	-7226.05	755.80	-1.99	-3424.33	-8198.28	-5.390e+04
		-5.390e+04	-8307.11	9.19e-04	0.0	15.0	-7181.05	755.80	-1.99	-3424.33	-8307.11	-4.256e+04
215	7	-3.083e+04	-6874.96	-5.68e-03	0.0	0.0	-6138.24	576.89	-11.97	-2543.13	-6874.96	-3.949e+04
		-3.949e+04	-7108.01	9.20e-04	0.0	15.0	-6093.24	576.89	-11.97	-2543.13	-7108.01	-3.083e+04
215	8	-3.904e+04	-7801.28	-6.98e-03	0.0	0.0	-6899.71	702.13	-4.98	-3159.97	-7801.28	-4.958e+04
		-4.958e+04	-7947.38	9.19e-04	0.0	15.0	-6854.71	702.13	-4.98	-3159.97	-7947.38	-3.904e+04
215	9	-3.083e+04	-6874.96	-5.68e-03	0.0	0.0	-6138.24	576.89	-11.97	-2543.13	-6874.96	-3.949e+04
		-3.949e+04	-7108.01	9.20e-04	0.0	15.0	-6093.24	576.89	-11.97	-2543.13	-7108.01	-3.083e+04
215	10	-3.787e+04	-7668.95	-6.79e-03	0.0	0.0	-6790.92	684.23	-5.98	-3071.85	-7668.95	-4.814e+04
		-4.814e+04	-7827.47	9.19e-04	0.0	15.0	-6745.92	684.23	-5.98	-3071.85	-7827.47	-3.787e+04
216	2	1.061e+04	-3257.65	-3.10e-03	0.0	0.0	-1.205e+04	255.86	-56.24	74.19	-3257.65	7069.98
		7069.98	-4190.58	1.85e-04	0.0	15.0	-1.199e+04	255.86	-56.24	74.19	-4190.58	1.061e+04
216	3	6685.62	-2464.97	-1.63e-03	0.0	0.0	-7255.05	130.00	-26.77	-93.74	-2464.97	4888.28
		4888.28	-2921.37	1.73e-04	0.0	15.0	-7210.05	130.00	-26.77	-93.74	-2921.37	6685.62
216	5	6763.19	-2467.11	-1.67e-03	0.0	0.0	-7360.52	133.51	-27.64	-85.84	-2467.11	4917.12
		4917.12	-2937.21	1.71e-04	0.0	15.0	-7315.52	133.51	-27.64	-85.84	-2937.21	6763.19
216	6	7926.70	-2499.29	-2.26e-03	0.0	0.0	-8942.67	186.04	-40.60	32.75	-2499.29	5349.71
		5349.71	-3174.79	1.47e-04	0.0	15.0	-8897.67	186.04	-40.60	32.75	-3174.79	7926.70
216	7	6763.19	-2467.11	-1.67e-03	0.0	0.0	-7360.52	133.51	-27.64	-85.84	-2467.11	4917.12
		4917.12	-2937.21	1.71e-04	0.0	15.0	-7315.52	133.51	-27.64	-85.84	-2937.21	6763.19
216	8	7577.64	-2489.63	-2.09e-03	0.0	0.0	-8468.02	170.28	-36.71	-2.83	-2489.63	5219.93
		5219.93	-3103.51	1.54e-04	0.0	15.0	-8423.02	170.28	-36.71	-2.83	-3103.51	7577.64
216	9	6763.19	-2467.11	-1.67e-03	0.0	0.0	-7360.52	133.51	-27.64	-85.84	-2467.11	4917.12
		4917.12	-2937.21	1.71e-04	0.0	15.0	-7315.52	133.51	-27.64	-85.84	-2937.21	6763.19
216	10	7461.29	-2486.42	-2.03e-03	0.0	0.0	-8309.81	165.03	-35.42	-14.69	-2486.42	5176.67
		5176.67	-3079.76	1.57e-04	0.0	15.0	-8264.81	165.03	-35.42	-14.69	-3079.76	7461.29
217	2	3.369e+04	1.495e+04	5.38e-03	0.0	0.0	-1.340e+04	-1103.32	-156.13	-1394.68	1.495e+04	3.369e+04
		1.705e+04	1.263e+04	4.63e-03	0.0	15.0	-1.334e+04	-1103.32	-156.13	-1394.68	1.263e+04	1.705e+04
217	3	1.660e+04	9101.25	2.93e-03	0.0	0.0	-8137.97	-586.17	-86.71	-871.18	9101.25	1.660e+04
		7768.50	7811.43	2.71e-03	0.0	15.0	-8092.97	-586.17	-86.71	-871.18	7811.43	7768.50

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

217	5	1.708e+04	9227.00	3.00e-03	0.0	0.0	-8251.77	-599.93	-88.46	-881.75	9227.00	1.708e+04
		8048.95	7911.20	2.76e-03	0.0	15.0	-8206.77	-599.93	-88.46	-881.75	7911.20	8048.95
217	6	2.441e+04	1.111e+04	3.94e-03	0.0	0.0	-9958.78	-806.36	-114.71	-1040.31	1.111e+04	2.441e+04
		1.226e+04	9407.62	3.42e-03	0.0	15.0	-9913.78	-806.36	-114.71	-1040.31	9407.62	1.226e+04
217	7	1.708e+04	9227.00	3.00e-03	0.0	0.0	-8251.77	-599.93	-88.46	-881.75	9227.00	1.708e+04
		8048.95	7911.20	2.76e-03	0.0	15.0	-8206.77	-599.93	-88.46	-881.75	7911.20	8048.95
217	8	2.221e+04	1.055e+04	3.66e-03	0.0	0.0	-9446.68	-744.43	-106.84	-992.74	1.055e+04	2.221e+04
		1.099e+04	8958.69	3.22e-03	0.0	15.0	-9401.68	-744.43	-106.84	-992.74	8958.69	1.099e+04
217	9	1.708e+04	9227.00	3.00e-03	0.0	0.0	-8251.77	-599.93	-88.46	-881.75	9227.00	1.708e+04
		8048.95	7911.20	2.76e-03	0.0	15.0	-8206.77	-599.93	-88.46	-881.75	7911.20	8048.95
217	10	2.148e+04	1.036e+04	3.57e-03	0.0	0.0	-9275.98	-723.79	-104.21	-976.89	1.036e+04	2.148e+04
		1.057e+04	8809.05	3.16e-03	0.0	15.0	-9230.98	-723.79	-104.21	-976.89	8809.05	1.057e+04
218	1	-2.603e+04	-490.25	-2.01e-03	0.0	0.0	-2879.71	-1282.49	-210.91	-9707.65	-490.25	-2.603e+04
		-4.477e+04	-3837.17	2.69e-04	0.0	15.0	-2821.21	-1282.49	-210.91	-9707.65	-3837.17	-4.477e+04
218	2	-3.596e+04	676.83	-2.87e-03	0.0	0.0	-3678.06	-1753.02	-171.85	-1.332e+04	676.83	-3.596e+04
		-6.159e+04	-2162.93	2.37e-04	0.0	15.0	-3619.56	-1753.02	-171.85	-1.332e+04	-2162.93	-6.159e+04
218	3	-1.924e+04	-468.89	-1.48e-03	0.0	0.0	-2152.39	-949.53	-165.31	-7183.19	-468.89	-1.924e+04
		-3.312e+04	-3083.32	2.09e-04	0.0	15.0	-2107.39	-949.53	-165.31	-7183.19	-3083.32	-3.312e+04
218	4	-2.918e+04	698.20	-2.34e-03	0.0	0.0	-2950.74	-1420.06	-126.25	-1.080e+04	698.20	-2.918e+04
		-4.993e+04	-1409.08	1.78e-04	0.0	15.0	-2905.74	-1420.06	-126.25	-1.080e+04	-1409.08	-4.993e+04
218	5	-1.968e+04	-417.02	-1.52e-03	0.0	0.0	-2187.87	-970.45	-163.58	-7343.84	-417.02	-1.968e+04
		-3.386e+04	-3008.91	2.08e-04	0.0	15.0	-2142.87	-970.45	-163.58	-7343.84	-3008.91	-3.386e+04
218	6	-2.432e+04	361.04	-2.09e-03	0.0	0.0	-2720.10	-1284.13	-137.53	-9753.68	361.04	-2.432e+04
		-4.508e+04	-1892.75	1.87e-04	0.0	15.0	-2675.10	-1284.13	-137.53	-9753.68	-1892.75	-4.508e+04
218	7	-1.968e+04	-417.02	-1.52e-03	0.0	0.0	-2187.87	-970.45	-163.58	-7343.84	-417.02	-1.968e+04
		-3.386e+04	-3008.91	2.08e-04	0.0	15.0	-2142.87	-970.45	-163.58	-7343.84	-3008.91	-3.386e+04
218	8	-2.432e+04	127.62	-1.92e-03	0.0	0.0	-2560.43	-1190.03	-145.35	-9030.73	127.62	-2.432e+04
		-4.171e+04	-2227.60	1.93e-04	0.0	15.0	-2515.43	-1190.03	-145.35	-9030.73	-2227.60	-4.171e+04
218	9	-1.968e+04	-417.02	-1.52e-03	0.0	0.0	-2187.87	-970.45	-163.58	-7343.84	-417.02	-1.968e+04
		-3.386e+04	-3008.91	2.08e-04	0.0	15.0	-2142.87	-970.45	-163.58	-7343.84	-3008.91	-3.386e+04
218	10	-2.365e+04	49.82	-1.86e-03	0.0	0.0	-2507.21	-1158.66	-147.95	-8789.75	49.82	-2.365e+04
		-4.059e+04	-2339.21	1.95e-04	0.0	15.0	-2462.21	-1158.66	-147.95	-8789.75	-2339.21	-4.059e+04
219	1	-3.485e+04	-1.069e+04	-0.01	0.0	0.0	-7410.24	384.60	39.25	-7846.67	-1.110e+04	-4.039e+04
		-4.039e+04	-1.110e+04	9.24e-04	0.0	15.0	-7351.74	384.60	39.25	-7846.67	-1.069e+04	-4.039e+04
219	3	-1.723e+04	-7145.69	-5.85e-03	0.0	0.0	-4730.20	206.86	15.78	-4243.48	-7286.08	-2.021e+04
		-2.021e+04	-7286.08	7.46e-04	0.0	15.0	-4685.20	206.86	15.78	-4243.48	-7145.69	-2.021e+04
219	5	-1.773e+04	-7202.26	-5.98e-03	0.0	0.0	-4781.05	211.53	16.53	-4337.43	-7351.69	-2.077e+04
		-2.077e+04	-7351.69	7.44e-04	0.0	15.0	-4736.05	211.53	16.53	-4337.43	-7202.26	-2.077e+04
219	6	-2.526e+04	-8050.84	-7.96e-03	0.0	0.0	-5543.73	281.50	27.87	-5746.80	-8335.89	-2.932e+04
		-2.932e+04	-8335.89	7.17e-04	0.0	15.0	-5498.73	281.50	27.87	-5746.80	-8050.84	-2.932e+04
219	7	-1.773e+04	-7202.26	-5.98e-03	0.0	0.0	-4781.05	211.53	16.53	-4337.43	-7351.69	-2.077e+04
		-2.077e+04	-7351.69	7.44e-04	0.0	15.0	-4736.05	211.53	16.53	-4337.43	-7202.26	-2.077e+04
219	8	-2.300e+04	-7796.26	-7.37e-03	0.0	0.0	-5314.93	260.50	24.47	-5323.99	-8040.63	-2.675e+04
		-2.675e+04	-8040.63	7.25e-04	0.0	15.0	-5269.93	260.50	24.47	-5323.99	-7796.26	-2.675e+04
219	9	-1.773e+04	-7202.26	-5.98e-03	0.0	0.0	-4781.05	211.53	16.53	-4337.43	-7351.69	-2.077e+04
		-2.077e+04	-7351.69	7.44e-04	0.0	15.0	-4736.05	211.53	16.53	-4337.43	-7202.26	-2.077e+04
219	10	-2.225e+04	-7711.41	-7.17e-03	0.0	0.0	-5238.66	253.51	23.33	-5183.05	-7942.21	-2.590e+04
		-2.590e+04	-7942.21	7.28e-04	0.0	15.0	-5193.66	253.51	23.33	-5183.05	-7711.41	-2.590e+04
220	2	-2739.13	2356.07	5.01e-03	0.0	0.0	-5781.24	283.51	-30.19	1928.58	2356.07	-6874.30
		-6874.30	1930.70	5.10e-03	0.0	15.0	-5722.74	283.51	-30.19	1928.58	1930.70	-2739.13
220	3	-1854.93	1439.46	2.70e-03	0.0	0.0	-3417.13	151.89	-26.07	729.89	1439.46	-4082.50
		-4082.50	1077.35	3.01e-03	0.0	15.0	-3372.13	151.89	-26.07	729.89	1077.35	-1854.93
220	5	-1868.15	1459.00	2.76e-03	0.0	0.0	-3471.12	155.36	-25.92	769.40	1459.00	-4145.69
		-4145.69	1098.72	3.06e-03	0.0	15.0	-3426.12	155.36	-25.92	769.40	1098.72	-1868.15
220	6	-2066.36	1752.22	3.67e-03	0.0	0.0	-4280.98	207.41	-23.68	1361.97	1752.22	-5093.50
		-5093.50	1419.38	3.78e-03	0.0	15.0	-4235.98	207.41	-23.68	1361.97	1419.38	-2066.36
220	7	-1868.15	1459.00	2.76e-03	0.0	0.0	-3471.12	155.36	-25.92	769.40	1459.00	-4145.69
		-4145.69	1098.72	3.06e-03	0.0	15.0	-3426.12	155.36	-25.92	769.40	1098.72	-1868.15
220	8	-2006.90	1664.25	3.39e-03	0.0	0.0	-4038.03	191.79	-24.36	1184.20	1664.25	-4809.16
		-4809.16	1323.18	3.56e-03	0.0	15.0	-3993.03	191.79	-24.36	1184.20	1323.18	-2006.90
220	9	-1868.15	1459.00	2.76e-03	0.0	0.0	-3471.12	155.36	-25.92	769.40	1459.00	-4145.69
		-4145.69	1098.72	3.06e-03	0.0	15.0	-3426.12	155.36	-25.92	769.40	1098.72	-1868.15
220	10	-1987.08	1634.93	3.30e-03	0.0	0.0	-3957.04	186.59	-24.58	1124.94	1634.93	-4714.38
		-4714.38	1291.12	3.49e-03	0.0	15.0	-3912.04	186.59	-24.58	1124.94	1291.12	-1987.08
221	2	6.233e+04	-2745.27	6.63e-03	0.0	0.0	-8600.28	-1146.91	-80.54	1448.43	-2745.27	6.233e+04
		4.515e+04	-3962.71	5.27e-03	0.0	15.0	-8541.78	-1146.91	-80.54	1448.43	-3962.71	4.515e+04

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

221	3	3.121e+04	-2061.25	3.54e-03	0.0	0.0	-5414.93	-606.52	-49.33	698.64	-2061.25	3.121e+04
		2.213e+04	-2800.06	3.14e-03	0.0	15.0	-5369.93	-606.52	-49.33	698.64	-2800.06	2.213e+04
221	5	3.209e+04	-2063.90	3.63e-03	0.0	0.0	-5477.87	-620.97	-49.99	720.42	-2063.90	3.209e+04
		2.279e+04	-2813.07	3.19e-03	0.0	15.0	-5432.87	-620.97	-49.99	720.42	-2813.07	2.279e+04
221	6	4.525e+04	-2103.60	4.85e-03	0.0	0.0	-6421.94	-837.77	-59.92	1047.15	-2103.60	4.525e+04
		3.270e+04	-2949.67	3.90e-03	0.0	15.0	-6376.94	-837.77	-59.92	1047.15	-2949.67	3.270e+04
221	7	3.209e+04	-2063.90	3.63e-03	0.0	0.0	-5477.87	-620.97	-49.99	720.42	-2063.90	3.209e+04
		2.279e+04	-2813.07	3.19e-03	0.0	15.0	-5432.87	-620.97	-49.99	720.42	-2813.07	2.279e+04
221	8	4.130e+04	-2091.69	4.48e-03	0.0	0.0	-6138.72	-772.73	-56.94	949.13	-2091.69	4.130e+04
		2.973e+04	-2949.67	3.69e-03	0.0	15.0	-6093.72	-772.73	-56.94	949.13	-2949.67	2.973e+04
221	9	3.209e+04	-2063.90	3.63e-03	0.0	0.0	-5477.87	-620.97	-49.99	720.42	-2063.90	3.209e+04
		2.279e+04	-2813.07	3.19e-03	0.0	15.0	-5432.87	-620.97	-49.99	720.42	-2813.07	2.279e+04
221	10	3.999e+04	-2087.72	4.36e-03	0.0	0.0	-6044.31	-751.05	-55.95	916.46	-2087.72	3.999e+04
		2.873e+04	-2930.15	3.62e-03	0.0	15.0	-5999.31	-751.05	-55.95	916.46	-2930.15	2.873e+04
222	2	7140.97	-1645.43	-3.16e-03	0.0	0.0	-1.292e+04	445.29	-102.52	1421.78	-1645.43	639.13
		639.13	-3226.93	2.15e-04	0.0	15.0	-1.287e+04	445.29	-102.52	1421.78	-3226.93	7140.97
222	3	4924.47	-1547.27	-1.66e-03	0.0	0.0	-7785.74	233.23	-58.16	668.98	-1547.27	1517.77
		1517.77	-2446.16	1.96e-04	0.0	15.0	-7740.74	233.23	-58.16	668.98	-2446.16	4924.47
222	4	5595.08	-1215.20	-2.57e-03	0.0	0.0	-1.033e+04	362.14	-82.57	1169.88	-1215.20	307.51
		307.51	-2488.73	1.60e-04	0.0	15.0	-1.028e+04	362.14	-82.57	1169.88	-2488.73	5595.08
222	5	4954.28	-1532.51	-1.70e-03	0.0	0.0	-7898.78	238.96	-59.25	691.24	-1532.51	1463.98
		1463.98	-2448.05	1.94e-04	0.0	15.0	-7853.78	238.96	-59.25	691.24	-2448.05	4954.28
222	6	5401.35	-1311.13	-2.30e-03	0.0	0.0	-9594.35	324.90	-75.52	1025.18	-1311.13	657.14
		657.14	-2476.43	1.70e-04	0.0	15.0	-9549.35	324.90	-75.52	1025.18	-2476.43	5401.35
222	7	4954.28	-1532.51	-1.70e-03	0.0	0.0	-7898.78	238.96	-59.25	691.24	-1532.51	1463.98
		1463.98	-2448.05	1.94e-04	0.0	15.0	-7853.78	238.96	-59.25	691.24	-2448.05	4954.28
222	8	5267.23	-1377.54	-2.12e-03	0.0	0.0	-9085.68	299.12	-70.64	925.00	-1377.54	899.19
		899.19	-2467.92	1.78e-04	0.0	15.0	-9040.68	299.12	-70.64	925.00	-2467.92	5267.23
222	9	4954.28	-1532.51	-1.70e-03	0.0	0.0	-7898.78	238.96	-59.25	691.24	-1532.51	1463.98
		1463.98	-2448.05	1.94e-04	0.0	15.0	-7853.78	238.96	-59.25	691.24	-2448.05	4954.28
222	10	5222.52	-1399.68	-2.06e-03	0.0	0.0	-8916.12	290.53	-69.01	891.61	-1399.68	979.88
		979.88	-2465.08	1.80e-04	0.0	15.0	-8871.12	290.53	-69.01	891.61	-2465.08	5222.52
223	2	-1.841e+04	2534.82	-2.77e-03	0.0	0.0	-4490.01	-1234.81	-95.39	-1.349e+04	2534.82	-1.841e+04
		-3.625e+04	815.12	2.23e-04	0.0	15.0	-4431.51	-1234.81	-95.39	-1.349e+04	815.12	-3.625e+04
223	3	-9700.71	1254.38	-1.42e-03	0.0	0.0	-2658.57	-670.83	-100.29	-7279.21	1254.38	-9700.71
		-1.939e+04	-398.23	2.06e-04	0.0	15.0	-2613.57	-670.83	-100.29	-7279.21	-398.23	-1.939e+04
223	5	-9934.49	1290.84	-1.46e-03	0.0	0.0	-2700.26	-685.46	-98.88	-7441.68	1290.84	-9934.49
		-1.984e+04	-344.49	2.04e-04	0.0	15.0	-2655.26	-685.46	-98.88	-7441.68	-344.49	-1.984e+04
223	6	-1.344e+04	1837.69	-2.02e-03	0.0	0.0	-3325.58	-904.85	-77.72	-9878.76	1837.69	-1.344e+04
		-2.651e+04	461.65	1.77e-04	0.0	15.0	-3280.58	-904.85	-77.72	-9878.76	461.65	-2.651e+04
223	7	-9934.49	1290.84	-1.46e-03	0.0	0.0	-2700.26	-685.46	-98.88	-7441.68	1290.84	-9934.49
		-1.984e+04	-344.49	2.04e-04	0.0	15.0	-2655.26	-685.46	-98.88	-7441.68	-344.49	-1.984e+04
223	8	-1.239e+04	1673.63	-1.85e-03	0.0	0.0	-3137.99	-839.03	-84.07	-9147.64	1673.63	-1.239e+04
		-2.451e+04	219.81	1.85e-04	0.0	15.0	-3092.99	-839.03	-84.07	-9147.64	219.81	-2.451e+04
223	9	-9934.49	1290.84	-1.46e-03	0.0	0.0	-2700.26	-685.46	-98.88	-7441.68	1290.84	-9934.49
		-1.984e+04	-344.49	2.04e-04	0.0	15.0	-2655.26	-685.46	-98.88	-7441.68	-344.49	-1.984e+04
223	10	-1.204e+04	1618.95	-1.79e-03	0.0	0.0	-3075.45	-817.10	-86.18	-8903.93	1618.95	-1.204e+04
		-2.384e+04	139.20	1.88e-04	0.0	15.0	-3030.45	-817.10	-86.18	-8903.93	139.20	-2.384e+04
224	2	-4.029e+04	-1.101e+04	-0.01	0.0	0.0	-8062.53	522.67	25.27	-6734.75	-1.123e+04	-4.029e+04
		-4.798e+04	-1.123e+04	1.01e-03	0.0	15.0	-8004.03	522.67	25.27	-6734.75	-1.101e+04	-4.798e+04
224	3	-2.015e+04	-7240.93	-5.77e-03	0.0	0.0	-5122.44	283.74	5.69	-3621.90	-7242.86	-2.015e+04
		-2.432e+04	-7242.86	8.05e-04	0.0	15.0	-5077.44	283.74	5.69	-3621.90	-7240.93	-2.432e+04
224	5	-2.072e+04	-7305.40	-5.90e-03	0.0	0.0	-5179.03	289.94	6.41	-3703.61	-7315.95	-2.072e+04
		-2.498e+04	-7315.95	8.03e-04	0.0	15.0	-5134.03	289.94	6.41	-3703.61	-7305.40	-2.498e+04
224	6	-2.924e+04	-8272.42	-7.84e-03	0.0	0.0	-6027.83	382.97	17.22	-4929.18	-8412.19	-2.924e+04
		-3.488e+04	-8412.19	7.84e-04	0.0	15.0	-5982.83	382.97	17.22	-4929.18	-8272.42	-3.488e+04
224	7	-2.072e+04	-7305.40	-5.90e-03	0.0	0.0	-5179.03	289.94	6.41	-3703.61	-7315.95	-2.072e+04
		-2.498e+04	-7315.95	8.03e-04	0.0	15.0	-5134.03	289.94	6.41	-3703.61	-7305.40	-2.498e+04
224	8	-2.669e+04	-7982.31	-7.26e-03	0.0	0.0	-5773.19	355.06	13.98	-4561.51	-8083.32	-2.669e+04
		-3.191e+04	-8083.32	7.90e-04	0.0	15.0	-5728.19	355.06	13.98	-4561.51	-7982.31	-3.191e+04
224	9	-2.072e+04	-7305.40	-5.90e-03	0.0	0.0	-5179.03	289.94	6.41	-3703.61	-7315.95	-2.072e+04
		-2.498e+04	-7315.95	8.03e-04	0.0	15.0	-5134.03	289.94	6.41	-3703.61	-7305.40	-2.498e+04
224	10	-2.583e+04	-7885.61	-7.06e-03	0.0	0.0	-5688.31	345.76	12.90	-4438.95	-7973.69	-2.583e+04
		-3.092e+04	-7973.69	7.92e-04	0.0	15.0	-5643.31	345.76	12.90	-4438.95	-7885.61	-3.092e+04
225	2	1.189e+04	-3661.11	-3.04e-03	0.0	0.0	-1.116e+04	91.63	49.47	-1878.90	-4251.23	1.049e+04
		1.049e+04	-4251.23	1.41e-04	0.0	15.0	-1.110e+04	91.63	49.47	-1878.90	-3661.11	1.189e+04

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

225	3	7257.78	-2414.67	-1.59e-03	0.0	0.0	-6719.38	41.34	42.46	-1176.08	-2958.64	6622.01
		6622.01	-2958.64	1.43e-04	0.0	15.0	-6674.38	41.34	42.46	-1176.08	-2414.67	7257.78
225	5	7356.69	-2435.72	-1.63e-03	0.0	0.0	-6817.11	42.86	42.22	-1190.19	-2974.97	6697.92
		6697.92	-2974.97	1.41e-04	0.0	15.0	-6772.11	42.86	42.22	-1190.19	-2435.72	7356.69
225	6	8840.27	-2751.47	-2.22e-03	0.0	0.0	-8283.05	65.78	38.76	-1401.89	-3219.93	7836.61
		7836.61	-3219.93	1.14e-04	0.0	15.0	-8238.05	65.78	38.76	-1401.89	-2751.47	8840.27
225	7	7356.69	-2435.72	-1.63e-03	0.0	0.0	-6817.11	42.86	42.22	-1190.19	-2974.97	6697.92
		6697.92	-2974.97	1.41e-04	0.0	15.0	-6772.11	42.86	42.22	-1190.19	-2435.72	7356.69
225	8	8395.19	-2656.74	-2.04e-03	0.0	0.0	-7843.27	58.91	39.80	-1338.38	-3146.44	7495.00
		7495.00	-3146.44	1.22e-04	0.0	15.0	-7798.27	58.91	39.80	-1338.38	-2656.74	8395.19
225	9	7356.69	-2435.72	-1.63e-03	0.0	0.0	-6817.11	42.86	42.22	-1190.19	-2974.97	6697.92
		6697.92	-2974.97	1.41e-04	0.0	15.0	-6772.11	42.86	42.22	-1190.19	-2435.72	7356.69
225	10	8246.84	-2625.17	-1.98e-03	0.0	0.0	-7696.67	56.62	40.15	-1317.21	-3121.94	7381.14
		7381.14	-3121.94	1.25e-04	0.0	15.0	-7651.67	56.62	40.15	-1317.21	-2625.17	8246.84
226	2	1.700e+04	1.265e+04	5.42e-03	0.0	0.0	-1.248e+04	-783.23	-149.77	-1527.84	1.265e+04	1.700e+04
		5207.50	1.047e+04	4.73e-03	0.0	15.0	-1.242e+04	-783.23	-149.77	-1527.84	1.047e+04	5207.50
226	3	7743.02	7826.39	2.95e-03	0.0	0.0	-7566.89	-411.44	-86.45	-969.71	7826.39	7743.02
		1559.78	6567.67	2.77e-03	0.0	15.0	-7521.89	-411.44	-86.45	-969.71	6567.67	1559.78
226	5	8022.46	7926.41	3.01e-03	0.0	0.0	-7673.33	-421.46	-87.96	-980.48	7926.41	8022.46
		1688.00	6645.65	2.82e-03	0.0	15.0	-7628.33	-421.46	-87.96	-980.48	6645.65	1688.00
226	6	1.221e+04	9426.66	3.97e-03	0.0	0.0	-9270.00	-571.67	-110.57	-1142.11	9426.66	1.221e+04
		3611.26	7815.40	3.50e-03	0.0	15.0	-9225.00	-571.67	-110.57	-1142.11	7815.40	3611.26
226	7	8022.46	7926.41	3.01e-03	0.0	0.0	-7673.33	-421.46	-87.96	-980.48	7926.41	8022.46
		1688.00	6645.65	2.82e-03	0.0	15.0	-7628.33	-421.46	-87.96	-980.48	6645.65	1688.00
226	8	1.096e+04	8976.58	3.69e-03	0.0	0.0	-8791.00	-526.60	-103.79	-1093.62	8976.58	1.096e+04
		3034.28	7464.47	3.29e-03	0.0	15.0	-8746.00	-526.60	-103.79	-1093.62	7464.47	3034.28
226	9	8022.46	7926.41	3.01e-03	0.0	0.0	-7673.33	-421.46	-87.96	-980.48	7926.41	8022.46
		1688.00	6645.65	2.82e-03	0.0	15.0	-7628.33	-421.46	-87.96	-980.48	6645.65	1688.00
226	10	1.054e+04	8826.56	3.59e-03	0.0	0.0	-8631.33	-511.58	-101.53	-1077.46	8826.56	1.054e+04
		2841.95	7347.50	3.23e-03	0.0	15.0	-8586.33	-511.58	-101.53	-1077.46	7347.50	2841.95
227	1	-4.459e+04	-3924.60	-2.16e-03	0.0	0.0	-2254.43	-1766.65	-319.13	-9111.24	-3924.60	-4.459e+04
		-7.065e+04	-8876.03	2.49e-04	0.0	15.0	-2195.93	-1766.65	-319.13	-9111.24	-8876.03	-7.065e+04
227	2	-6.134e+04	-2286.56	-3.07e-03	0.0	0.0	-2930.62	-2423.52	-273.47	-1.248e+04	-2286.56	-6.134e+04
		-9.709e+04	-6619.18	2.30e-04	0.0	15.0	-2872.12	-2423.52	-273.47	-1.248e+04	-6619.18	-9.709e+04
227	3	-3.298e+04	-3147.73	-1.59e-03	0.0	0.0	-1681.01	-1307.31	-249.07	-6743.40	-3147.73	-3.298e+04
		-5.227e+04	-7005.17	1.93e-04	0.0	15.0	-1636.01	-1307.31	-249.07	-6743.40	-7005.17	-5.227e+04
227	4	-4.973e+04	-1509.69	-2.50e-03	0.0	0.0	-2357.19	-1964.18	-203.41	-1.012e+04	-1509.69	-4.973e+04
		-7.871e+04	-4748.33	1.74e-04	0.0	15.0	-2312.19	-1964.18	-203.41	-1.012e+04	-4748.33	-7.871e+04
227	5	-3.373e+04	-3074.93	-1.63e-03	0.0	0.0	-1711.06	-1336.50	-247.04	-6893.32	-3074.93	-3.373e+04
		-5.344e+04	-6904.87	1.92e-04	0.0	15.0	-1666.06	-1336.50	-247.04	-6893.32	-6904.87	-5.344e+04
227	6	-4.489e+04	-1982.90	-2.24e-03	0.0	0.0	-2161.85	-1774.42	-216.60	-9142.18	-1982.90	-4.489e+04
		-7.107e+04	-5400.31	1.80e-04	0.0	15.0	-2116.85	-1774.42	-216.60	-9142.18	-5400.31	-7.107e+04
227	7	-3.373e+04	-3074.93	-1.63e-03	0.0	0.0	-1711.06	-1336.50	-247.04	-6893.32	-3074.93	-3.373e+04
		-5.344e+04	-6904.87	1.92e-04	0.0	15.0	-1666.06	-1336.50	-247.04	-6893.32	-6904.87	-5.344e+04
227	8	-4.154e+04	-2310.51	-2.06e-03	0.0	0.0	-2026.61	-1643.04	-225.74	-8467.52	-2310.51	-4.154e+04
		-6.578e+04	-5851.67	1.83e-04	0.0	15.0	-1981.61	-1643.04	-225.74	-8467.52	-5851.67	-6.578e+04
227	9	-3.373e+04	-3074.93	-1.63e-03	0.0	0.0	-1711.06	-1336.50	-247.04	-6893.32	-3074.93	-3.373e+04
		-5.344e+04	-6904.87	1.92e-04	0.0	15.0	-1666.06	-1336.50	-247.04	-6893.32	-6904.87	-5.344e+04
227	10	-4.043e+04	-2419.71	-2.00e-03	0.0	0.0	-1981.53	-1599.25	-228.78	-8242.64	-2419.71	-4.043e+04
		-6.402e+04	-6002.13	1.85e-04	0.0	15.0	-1936.53	-1599.25	-228.78	-8242.64	-6002.13	-6.402e+04
228	2	-3.114e+04	-9022.83	-0.01	0.0	0.0	-5942.37	274.64	92.04	-1.015e+04	-1.009e+04	-3.483e+04
		-3.483e+04	-1.009e+04	7.53e-04	0.0	15.0	-5883.87	274.64	92.04	-1.015e+04	-9022.83	-3.114e+04
228	3	-1.529e+04	-6176.88	-5.99e-03	0.0	0.0	-3831.33	136.28	54.09	-5533.01	-6176.88	-1.529e+04
		-1.710e+04	-6817.99	6.30e-04	0.0	15.0	-3786.33	136.28	54.09	-5533.01	-6176.88	-1.529e+04
228	5	-1.574e+04	-6216.91	-6.13e-03	0.0	0.0	-3870.11	140.21	54.96	-5652.20	-6216.91	-1.574e+04
		-1.760e+04	-6867.47	6.28e-04	0.0	15.0	-3825.11	140.21	54.96	-5652.20	-6216.91	-1.574e+04
228	6	-2.256e+04	-6817.45	-8.17e-03	0.0	0.0	-4451.74	199.16	68.10	-7439.95	-6817.45	-2.256e+04
		-2.523e+04	-7609.60	5.88e-04	0.0	15.0	-4406.74	199.16	68.10	-7439.95	-6817.45	-2.256e+04
228	7	-1.574e+04	-6216.91	-6.13e-03	0.0	0.0	-3870.11	140.21	54.96	-5652.20	-6216.91	-1.574e+04
		-1.760e+04	-6867.47	6.28e-04	0.0	15.0	-3825.11	140.21	54.96	-5652.20	-6216.91	-1.574e+04
228	8	-2.051e+04	-6637.29	-7.56e-03	0.0	0.0	-4277.25	181.48	64.16	-6903.63	-6637.29	-2.051e+04
		-2.294e+04	-7386.96	6.00e-04	0.0	15.0	-4232.25	181.48	64.16	-6903.63	-6637.29	-2.051e+04
228	9	-1.574e+04	-6216.91	-6.13e-03	0.0	0.0	-3870.11	140.21	54.96	-5652.20	-6216.91	-1.574e+04
		-1.760e+04	-6867.47	6.28e-04	0.0	15.0	-3825.11	140.21	54.96	-5652.20	-6216.91	-1.574e+04
228	10	-1.983e+04	-6577.24	-7.36e-03	0.0	0.0	-4219.09	175.58	62.85	-6724.85	-6577.24	-1.983e+04
		-2.218e+04	-7312.75	6.04e-04	0.0	15.0	-4174.09	175.58	62.85	-6724.85	-6577.24	-1.983e+04

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

229	2	3444.89	1945.21	4.98e-03	0.0	0.0	-5070.56	422.15	-33.81	2294.86	1945.21	-2777.30
		-2777.30	1463.58	5.12e-03	0.0	15.0	-5012.06	422.15	-33.81	2294.86	1463.58	3444.89
229	3	1456.60	1092.50	2.68e-03	0.0	0.0	-2979.61	224.84	-31.55	917.56	1092.50	-1869.36
		-1869.36	647.78	3.02e-03	0.0	15.0	-2934.61	224.84	-31.55	917.56	647.78	1456.60
229	5	1519.15	1113.67	2.74e-03	0.0	0.0	-3027.88	230.07	-31.26	961.99	1113.67	-1883.35
		-1883.35	672.84	3.07e-03	0.0	15.0	-2982.88	230.07	-31.26	961.99	672.84	1519.15
229	6	2457.45	1431.18	3.65e-03	0.0	0.0	-3751.91	308.62	-26.90	1628.55	1431.18	-2093.31
		-2093.31	1048.73	3.79e-03	0.0	15.0	-3706.91	308.62	-26.90	1628.55	1048.73	2457.45
229	7	1519.15	1113.67	2.74e-03	0.0	0.0	-3027.88	230.07	-31.26	961.99	1113.67	-1883.35
		-1883.35	672.84	3.07e-03	0.0	15.0	-2982.88	230.07	-31.26	961.99	672.84	1519.15
229	8	2175.96	1335.93	3.37e-03	0.0	0.0	-3534.70	285.06	-28.21	1428.58	1335.93	-2030.33
		-2030.33	935.96	3.57e-03	0.0	15.0	-3489.70	285.06	-28.21	1428.58	935.96	2175.96
229	9	1519.15	1113.67	2.74e-03	0.0	0.0	-3027.88	230.07	-31.26	961.99	1113.67	-1883.35
		-1883.35	672.84	3.07e-03	0.0	15.0	-2982.88	230.07	-31.26	961.99	672.84	1519.15
229	10	2082.13	1304.18	3.28e-03	0.0	0.0	-3462.30	277.20	-28.65	1361.93	1304.18	-2009.33
		-2009.33	898.37	3.50e-03	0.0	15.0	-3417.30	277.20	-28.65	1361.93	898.37	2082.13
230	2	4.515e+04	-3974.06	6.80e-03	0.0	0.0	-7832.48	-770.79	-22.29	2250.07	-3974.06	4.515e+04
		3.365e+04	-4349.72	5.23e-03	0.0	15.0	-7773.98	-770.79	-22.29	2250.07	-4349.72	3.365e+04
230	3	2.213e+04	-2803.55	3.62e-03	0.0	0.0	-4953.38	-408.78	-13.06	1113.53	-2803.55	2.213e+04
		1.603e+04	-3017.44	3.11e-03	0.0	15.0	-4908.38	-408.78	-13.06	1113.53	-3017.44	1.603e+04
230	5	2.279e+04	-2816.84	3.71e-03	0.0	0.0	-5009.55	-418.43	-13.27	1145.89	-2816.84	2.279e+04
		1.654e+04	-3034.66	3.16e-03	0.0	15.0	-4964.55	-418.43	-13.27	1145.89	-3034.66	1.654e+04
230	6	3.269e+04	-3016.09	4.97e-03	0.0	0.0	-5852.15	-563.21	-16.48	1631.26	-3016.09	3.269e+04
		2.429e+04	-3292.96	3.88e-03	0.0	15.0	-5807.15	-563.21	-16.48	1631.26	-3292.96	2.429e+04
230	7	2.279e+04	-2816.84	3.71e-03	0.0	0.0	-5009.55	-418.43	-13.27	1145.89	-2816.84	2.279e+04
		1.654e+04	-3034.66	3.16e-03	0.0	15.0	-4964.55	-418.43	-13.27	1145.89	-3034.66	1.654e+04
230	8	2.972e+04	-2956.32	4.59e-03	0.0	0.0	-5599.37	-519.78	-15.52	1485.65	-2956.32	2.972e+04
		2.197e+04	-3215.47	3.66e-03	0.0	15.0	-5554.37	-519.78	-15.52	1485.65	-3215.47	2.197e+04
230	9	2.279e+04	-2816.84	3.71e-03	0.0	0.0	-5009.55	-418.43	-13.27	1145.89	-2816.84	2.279e+04
		1.654e+04	-3034.66	3.16e-03	0.0	15.0	-4964.55	-418.43	-13.27	1145.89	-3034.66	1.654e+04
230	10	2.873e+04	-2936.39	4.46e-03	0.0	0.0	-5515.11	-505.30	-15.20	1437.11	-2936.39	2.873e+04
		2.119e+04	-3189.64	3.59e-03	0.0	15.0	-5470.11	-505.30	-15.20	1437.11	-3189.64	2.119e+04
231	2	-3.463e+04	-1.007e+04	-0.01	0.0	0.0	-7016.28	49.81	59.38	-9041.37	-1.079e+04	-3.501e+04
		-3.501e+04	-1.079e+04	8.37e-04	0.0	15.0	-6957.78	49.81	59.38	-9041.37	-1.007e+04	-3.463e+04
231	3	-1.699e+04	-6823.25	-5.91e-03	0.0	0.0	-4471.28	35.43	31.33	-4910.82	-7197.24	-1.732e+04
		-1.732e+04	-7197.24	6.87e-04	0.0	15.0	-4426.28	35.43	31.33	-4910.82	-6823.25	-1.699e+04
231	5	-1.749e+04	-6871.67	-6.04e-03	0.0	0.0	-4519.81	35.58	32.09	-5017.97	-7254.99	-1.782e+04
		-1.782e+04	-7254.99	6.85e-04	0.0	15.0	-4474.81	35.58	32.09	-5017.97	-6871.67	-1.749e+04
231	6	-2.508e+04	-7597.94	-8.04e-03	0.0	0.0	-5247.81	37.85	43.36	-6625.21	-8121.17	-2.538e+04
		-2.538e+04	-8121.17	6.51e-04	0.0	15.0	-5202.81	37.85	43.36	-6625.21	-7597.94	-2.508e+04
231	7	-1.749e+04	-6871.67	-6.04e-03	0.0	0.0	-4519.81	35.58	32.09	-5017.97	-7254.99	-1.782e+04
		-1.782e+04	-7254.99	6.85e-04	0.0	15.0	-4474.81	35.58	32.09	-5017.97	-6871.67	-1.749e+04
231	8	-2.281e+04	-7380.06	-7.44e-03	0.0	0.0	-5029.41	37.17	39.98	-6143.04	-7861.32	-2.311e+04
		-2.311e+04	-7861.32	6.61e-04	0.0	15.0	-4984.41	37.17	39.98	-6143.04	-7380.06	-2.281e+04
231	9	-1.749e+04	-6871.67	-6.04e-03	0.0	0.0	-4519.81	35.58	32.09	-5017.97	-7254.99	-1.782e+04
		-1.782e+04	-7254.99	6.85e-04	0.0	15.0	-4474.81	35.58	32.09	-5017.97	-6871.67	-1.749e+04
231	10	-2.205e+04	-7307.43	-7.24e-03	0.0	0.0	-4956.61	36.94	38.85	-5982.31	-7774.70	-2.236e+04
		-2.236e+04	-7774.70	6.64e-04	0.0	15.0	-4911.61	36.94	38.85	-5982.31	-7307.43	-2.205e+04
232	1	2312.34	8750.76	3.97e-03	0.0	0.0	-9415.89	-368.45	-109.97	-1254.61	8750.76	2312.34
		-3220.52	7171.84	3.78e-03	0.0	15.0	-9357.39	-368.45	-109.97	-1254.61	7171.84	-3220.52
232	2	5185.81	1.051e+04	5.42e-03	0.0	0.0	-1.167e+04	-523.29	-137.90	-1445.62	1.051e+04	5185.81
		-2687.90	8530.81	4.81e-03	0.0	15.0	-1.161e+04	-523.29	-137.90	-1445.62	8530.81	-2687.90
232	3	1552.78	6592.76	2.94e-03	0.0	0.0	-7065.95	-271.25	-82.40	-950.07	6592.76	1552.78
		-2519.20	5409.94	2.83e-03	0.0	15.0	-7020.95	-271.25	-82.40	-950.07	5409.94	-2519.20
232	5	1680.49	6671.09	3.01e-03	0.0	0.0	-7166.02	-278.13	-83.64	-958.55	6671.09	1680.49
		-2495.53	5470.34	2.87e-03	0.0	15.0	-7121.02	-278.13	-83.64	-958.55	5470.34	-2495.53
232	6	3596.13	7846.11	3.97e-03	0.0	0.0	-8667.02	-381.36	-102.26	-1085.90	7846.11	3596.13
		-2140.46	6376.32	3.56e-03	0.0	15.0	-8622.02	-381.36	-102.26	-1085.90	6376.32	-2140.46
232	7	1680.49	6671.09	3.01e-03	0.0	0.0	-7166.02	-278.13	-83.64	-958.55	6671.09	1680.49
		-2495.53	5470.34	2.87e-03	0.0	15.0	-7121.02	-278.13	-83.64	-958.55	5470.34	-2495.53
232	8	3021.44	7493.60	3.68e-03	0.0	0.0	-8216.72	-350.39	-96.67	-1047.69	7493.60	3021.44
		-2246.98	6104.53	3.35e-03	0.0	15.0	-8171.72	-350.39	-96.67	-1047.69	6104.53	-2246.98
232	9	1680.49	6671.09	3.01e-03	0.0	0.0	-7166.02	-278.13	-83.64	-958.55	6671.09	1680.49
		-2495.53	5470.34	2.87e-03	0.0	15.0	-7121.02	-278.13	-83.64	-958.55	5470.34	-2495.53
232	10	2829.87	7376.10	3.58e-03	0.0	0.0	-8066.62	-340.07	-94.81	-1034.96	7376.10	2829.87
		-2282.49	6013.93	3.28e-03	0.0	15.0	-8021.62	-340.07	-94.81	-1034.96	6013.93	-2282.49

233	2	-2.424e+04	-6191.11	-0.01	0.0	0.0	-4738.29	230.14	146.83	-1.208e+04	-7990.28	-2.710e+04
		-2.710e+04	-7990.28	6.12e-04	0.0	15.0	-4679.79	230.14	146.83	-1.208e+04	-6191.11	-2.424e+04
233	3	-1.193e+04	-4243.52	-6.12e-03	0.0	0.0	-3065.51	111.04	96.94	-6618.85	-5472.00	-1.327e+04
		-1.327e+04	-5472.00	5.33e-04	0.0	15.0	-3020.51	111.04	96.94	-6618.85	-4243.52	-1.193e+04
233	5	-1.228e+04	-4270.72	-6.26e-03	0.0	0.0	-3095.87	114.50	97.78	-6758.96	-5507.35	-1.367e+04
		-1.367e+04	-5507.35	5.30e-04	0.0	15.0	-3050.87	114.50	97.78	-6758.96	-4270.72	-1.228e+04
233	6	-1.757e+04	-4678.70	-8.36e-03	0.0	0.0	-3551.40	166.39	110.37	-8860.62	-6037.60	-1.963e+04
		-1.963e+04	-6037.60	4.81e-04	0.0	15.0	-3506.40	166.39	110.37	-8860.62	-4678.70	-1.757e+04
233	7	-1.228e+04	-4270.72	-6.26e-03	0.0	0.0	-3095.87	114.50	97.78	-6758.96	-5507.35	-1.367e+04
		-1.367e+04	-5507.35	5.30e-04	0.0	15.0	-3050.87	114.50	97.78	-6758.96	-4270.72	-1.228e+04
233	8	-1.598e+04	-4556.31	-7.73e-03	0.0	0.0	-3414.74	150.82	106.59	-8230.12	-5878.52	-1.784e+04
		-1.784e+04	-5878.52	4.96e-04	0.0	15.0	-3369.74	150.82	106.59	-8230.12	-4556.31	-1.598e+04
233	9	-1.228e+04	-4270.72	-6.26e-03	0.0	0.0	-3095.87	114.50	97.78	-6758.96	-5507.35	-1.367e+04
		-1.367e+04	-5507.35	5.30e-04	0.0	15.0	-3050.87	114.50	97.78	-6758.96	-4270.72	-1.228e+04
233	10	-1.545e+04	-4515.51	-7.52e-03	0.0	0.0	-3369.19	145.63	105.33	-8019.96	-5825.50	-1.724e+04
		-1.724e+04	-5825.50	5.01e-04	0.0	15.0	-3324.19	145.63	105.33	-8019.96	-4515.51	-1.545e+04
234	2	1.274e+04	1478.80	4.97e-03	0.0	0.0	-4391.11	631.72	-45.58	2599.77	1478.80	3392.49
		3392.49	826.09	5.13e-03	0.0	15.0	-4332.61	631.72	-45.58	2599.77	826.09	1.274e+04
234	3	6414.42	663.72	2.68e-03	0.0	0.0	-2562.84	335.73	-44.54	1077.98	663.72	1434.91
		1434.91	27.79	3.03e-03	0.0	15.0	-2517.84	335.73	-44.54	1077.98	27.79	6414.42
234	5	6591.86	688.56	2.74e-03	0.0	0.0	-2605.56	343.60	-44.05	1126.30	688.56	1496.49
		1496.49	59.64	3.08e-03	0.0	15.0	-2560.56	343.60	-44.05	1126.30	59.64	6591.86
234	6	9253.52	1061.12	3.64e-03	0.0	0.0	-3246.34	461.71	-36.59	1851.14	1061.12	2420.14
		2420.14	537.44	3.80e-03	0.0	15.0	-3201.34	461.71	-36.59	1851.14	537.44	9253.52
234	7	6591.86	688.56	2.74e-03	0.0	0.0	-2605.56	343.60	-44.05	1126.30	688.56	1496.49
		1496.49	59.64	3.08e-03	0.0	15.0	-2560.56	343.60	-44.05	1126.30	59.64	6591.86
234	8	8455.02	949.35	3.37e-03	0.0	0.0	-3054.10	426.28	-38.83	1633.69	949.35	2143.05
		2143.05	394.10	3.58e-03	0.0	15.0	-3009.10	426.28	-38.83	1633.69	394.10	8455.02
234	9	6591.86	688.56	2.74e-03	0.0	0.0	-2605.56	343.60	-44.05	1126.30	688.56	1496.49
		1496.49	59.64	3.08e-03	0.0	15.0	-2560.56	343.60	-44.05	1126.30	59.64	6591.86
234	10	8188.86	912.10	3.28e-03	0.0	0.0	-2990.03	414.47	-39.58	1561.21	912.10	2050.68
		2050.68	346.32	3.51e-03	0.0	15.0	-2945.03	414.47	-39.58	1561.21	346.32	8188.86
235	2	3.367e+04	-4230.91	6.92e-03	0.0	0.0	-7155.32	-490.87	13.97	2807.94	-4375.47	3.367e+04
		2.643e+04	-4375.47	5.19e-03	0.0	15.0	-7096.82	-490.87	13.97	2807.94	-4230.91	2.643e+04
235	3	1.604e+04	-2911.81	3.68e-03	0.0	0.0	-4546.34	-261.76	9.96	1399.46	-3029.44	1.604e+04
		1.217e+04	-3029.44	3.09e-03	0.0	15.0	-4501.34	-261.76	9.96	1399.46	-2911.81	1.217e+04
235	5	1.655e+04	-2929.77	3.76e-03	0.0	0.0	-4596.55	-267.83	10.01	1439.33	-3047.07	1.655e+04
		1.260e+04	-3047.07	3.13e-03	0.0	15.0	-4551.55	-267.83	10.01	1439.33	-2929.77	1.260e+04
235	6	2.431e+04	-3199.26	5.05e-03	0.0	0.0	-5349.61	-358.91	10.62	2037.29	-3311.50	2.431e+04
		1.901e+04	-3311.50	3.85e-03	0.0	15.0	-5304.61	-358.91	10.62	2037.29	-3199.26	1.901e+04
235	7	1.655e+04	-2929.77	3.76e-03	0.0	0.0	-4596.55	-267.83	10.01	1439.33	-3047.07	1.655e+04
		1.260e+04	-3047.07	3.13e-03	0.0	15.0	-4551.55	-267.83	10.01	1439.33	-2929.77	1.260e+04
235	8	2.198e+04	-3118.42	4.67e-03	0.0	0.0	-5123.69	-331.59	10.44	1857.90	-3232.17	2.198e+04
		1.709e+04	-3232.17	3.63e-03	0.0	15.0	-5078.69	-331.59	10.44	1857.90	-3118.42	1.709e+04
235	9	1.655e+04	-2929.77	3.76e-03	0.0	0.0	-4596.55	-267.83	10.01	1439.33	-3047.07	1.655e+04
		1.260e+04	-3047.07	3.13e-03	0.0	15.0	-4551.55	-267.83	10.01	1439.33	-2929.77	1.260e+04
235	10	2.121e+04	-3091.47	4.54e-03	0.0	0.0	-5048.39	-322.48	10.37	1798.11	-3205.73	2.121e+04
		1.645e+04	-3205.73	3.56e-03	0.0	15.0	-5003.39	-322.48	10.37	1798.11	-3091.47	1.645e+04
236	2	-2.684e+04	-7794.86	-0.01	0.0	0.0	-5423.59	338.61	118.52	-1.119e+04	-9200.27	-3.136e+04
		-3.136e+04	-9200.27	6.78e-04	0.0	15.0	-5365.09	338.61	118.52	-1.119e+04	-7794.86	-2.684e+04
236	3	-1.313e+04	-5363.38	-6.07e-03	0.0	0.0	-3502.09	172.59	74.44	-6119.31	-6274.22	-1.541e+04
		-1.541e+04	-6274.22	5.79e-04	0.0	15.0	-3457.09	172.59	74.44	-6119.31	-5363.38	-1.313e+04
236	5	-1.352e+04	-5396.54	-6.21e-03	0.0	0.0	-3537.21	177.20	75.32	-6249.90	-6316.30	-1.587e+04
		-1.587e+04	-6316.30	5.76e-04	0.0	15.0	-3492.21	177.20	75.32	-6249.90	-5396.54	-1.352e+04
236	6	-1.943e+04	-5894.00	-8.28e-03	0.0	0.0	-4063.95	246.29	88.47	-8208.68	-6947.63	-2.272e+04
		-2.272e+04	-6947.63	5.31e-04	0.0	15.0	-4018.95	246.29	88.47	-8208.68	-5894.00	-1.943e+04
236	7	-1.352e+04	-5396.54	-6.21e-03	0.0	0.0	-3537.21	177.20	75.32	-6249.90	-6316.30	-1.587e+04
		-1.587e+04	-6316.30	5.76e-04	0.0	15.0	-3492.21	177.20	75.32	-6249.90	-5396.54	-1.352e+04
236	8	-1.766e+04	-5744.76	-7.66e-03	0.0	0.0	-3905.92	225.56	84.53	-7621.04	-6758.23	-2.066e+04
		-2.066e+04	-6758.23	5.44e-04	0.0	15.0	-3860.92	225.56	84.53	-7621.04	-5744.76	-1.766e+04
236	9	-1.352e+04	-5396.54	-6.21e-03	0.0	0.0	-3537.21	177.20	75.32	-6249.90	-6316.30	-1.587e+04
		-1.587e+04	-6316.30	5.76e-04	0.0	15.0	-3492.21	177.20	75.32	-6249.90	-5396.54	-1.352e+04
236	10	-1.707e+04	-5695.02	-7.45e-03	0.0	0.0	-3853.25	218.66	83.21	-7425.16	-6695.10	-1.998e+04
		-1.998e+04	-6695.10	5.49e-04	0.0	15.0	-3808.25	218.66	83.21	-7425.16	-5695.02	-1.707e+04
237	2	-2698.04	8578.03	5.38e-03	0.0	0.0	-1.085e+04	-327.56	-114.21	-1176.14	8578.03	-2698.04
		-7635.36	6955.32	4.88e-03	0.0	15.0	-1.080e+04	-327.56	-114.21	-1176.14	6955.32	-7635.36

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

237	3	-2519.46	5439.43	2.92e-03	0.0	0.0	-6559.75	-166.46	-69.55	-827.32	5439.43	-2519.46
		-5020.04	4453.63	2.87e-03	0.0	15.0	-6514.75	-166.46	-69.55	-827.32	4453.63	-5020.04
237	4	-1995.74	6806.46	4.36e-03	0.0	0.0	-8670.27	-267.32	-91.14	-918.61	6806.46	-1995.74
		-6026.47	5511.14	3.91e-03	0.0	15.0	-8625.27	-267.32	-91.14	-918.61	5511.14	-6026.47
237	5	-2496.18	5500.18	2.98e-03	0.0	0.0	-6653.55	-170.94	-70.51	-831.38	5500.18	-2496.18
		-5064.77	4500.63	2.91e-03	0.0	15.0	-6608.55	-170.94	-70.51	-831.38	4500.63	-5064.77
237	6	-2147.03	6411.54	3.94e-03	0.0	0.0	-8060.56	-238.18	-84.90	-892.24	6411.54	-2147.03
		-5735.72	5205.63	3.61e-03	0.0	15.0	-8015.56	-238.18	-84.90	-892.24	5205.63	-5735.72
237	7	-2496.18	5500.18	2.98e-03	0.0	0.0	-6653.55	-170.94	-70.51	-831.38	5500.18	-2496.18
		-5064.77	4500.63	2.91e-03	0.0	15.0	-6608.55	-170.94	-70.51	-831.38	4500.63	-5064.77
237	8	-2251.78	6138.13	3.66e-03	0.0	0.0	-7638.46	-218.01	-80.59	-873.98	6138.13	-2251.78
		-5534.44	4994.13	3.40e-03	0.0	15.0	-7593.46	-218.01	-80.59	-873.98	4994.13	-5534.44
237	9	-2496.18	5500.18	2.98e-03	0.0	0.0	-6653.55	-170.94	-70.51	-831.38	5500.18	-2496.18
		-5064.77	4500.63	2.91e-03	0.0	15.0	-6608.55	-170.94	-70.51	-831.38	4500.63	-5064.77
237	10	-2286.69	6047.00	3.56e-03	0.0	0.0	-7497.76	-211.28	-79.15	-867.89	6047.00	-2286.69
		-5467.34	4923.63	3.33e-03	0.0	15.0	-7452.76	-211.28	-79.15	-867.89	4923.63	-5467.34
238	2	-2.295e+04	-1303.81	-0.01	0.0	0.0	-3622.82	59.48	230.78	-1.324e+04	-4333.68	-2.313e+04
		-2.313e+04	-4333.68	5.20e-04	0.0	15.0	-3564.32	59.48	230.78	-1.324e+04	-1303.81	-2.295e+04
238	3	-1.159e+04	-662.41	-6.21e-03	0.0	0.0	-2314.76	12.58	163.25	-7277.19	-2864.54	-1.159e+04
		-1.179e+04	-2864.54	4.70e-04	0.0	15.0	-2269.76	12.58	163.25	-7277.19	-662.41	-1.179e+04
238	5	-1.191e+04	-680.26	-6.36e-03	0.0	0.0	-2339.50	14.32	164.00	-7429.76	-2889.13	-1.191e+04
		-1.210e+04	-2889.13	4.66e-04	0.0	15.0	-2294.50	14.32	164.00	-7429.76	-680.26	-1.210e+04
238	6	-1.671e+04	-948.01	-8.50e-03	0.0	0.0	-2710.65	40.40	175.22	-9718.32	-3257.95	-1.671e+04
		-1.679e+04	-3257.95	4.11e-04	0.0	15.0	-2665.65	40.40	175.22	-9718.32	-948.01	-1.679e+04
238	7	-1.191e+04	-680.26	-6.36e-03	0.0	0.0	-2339.50	14.32	164.00	-7429.76	-2889.13	-1.191e+04
		-1.210e+04	-2889.13	4.66e-04	0.0	15.0	-2294.50	14.32	164.00	-7429.76	-680.26	-1.210e+04
238	8	-1.532e+04	-867.68	-7.86e-03	0.0	0.0	-2599.31	32.58	171.85	-9031.75	-3147.30	-1.532e+04
		-1.533e+04	-3147.30	4.28e-04	0.0	15.0	-2554.31	32.58	171.85	-9031.75	-867.68	-1.533e+04
238	9	-1.191e+04	-680.26	-6.36e-03	0.0	0.0	-2339.50	14.32	164.00	-7429.76	-2889.13	-1.191e+04
		-1.210e+04	-2889.13	4.66e-04	0.0	15.0	-2294.50	14.32	164.00	-7429.76	-680.26	-1.210e+04
238	10	-1.484e+04	-840.91	-7.64e-03	0.0	0.0	-2562.19	29.97	170.73	-8802.89	-3110.42	-1.484e+04
		-1.486e+04	-3110.42	4.33e-04	0.0	15.0	-2517.19	29.97	170.73	-8802.89	-840.91	-1.486e+04
239	1	1.871e+04	132.67	3.64e-03	0.0	0.0	-2877.66	668.67	-83.77	1644.52	132.67	8736.90
		8736.90	-1075.93	4.05e-03	0.0	15.0	-2819.16	668.67	-83.77	1644.52	-1075.93	1.871e+04
239	2	2.657e+04	845.29	5.00e-03	0.0	0.0	-3716.80	929.92	-67.03	2772.06	845.29	1.272e+04
		1.272e+04	-118.85	5.14e-03	0.0	15.0	-3658.30	929.92	-67.03	2772.06	-118.85	2.657e+04
239	3	1.378e+04	46.02	2.69e-03	0.0	0.0	-2147.60	493.82	-65.75	1176.35	46.02	6407.83
		6407.83	-902.90	3.03e-03	0.0	15.0	-2102.60	493.82	-65.75	1176.35	-902.90	1.378e+04
239	5	1.413e+04	77.69	2.75e-03	0.0	0.0	-2184.89	505.43	-65.01	1226.46	77.69	6584.67
		6584.67	-860.36	3.08e-03	0.0	15.0	-2139.89	505.43	-65.01	1226.46	-860.36	1.413e+04
239	6	1.936e+04	552.77	3.66e-03	0.0	0.0	-2744.32	679.60	-53.85	1978.16	552.77	9237.17
		9237.17	-222.31	3.81e-03	0.0	15.0	-2699.32	679.60	-53.85	1978.16	-222.31	1.936e+04
239	7	1.413e+04	77.69	2.75e-03	0.0	0.0	-2184.89	505.43	-65.01	1226.46	77.69	6584.67
		6584.67	-860.36	3.08e-03	0.0	15.0	-2139.89	505.43	-65.01	1226.46	-860.36	1.413e+04
239	8	1.779e+04	410.25	3.39e-03	0.0	0.0	-2576.49	627.35	-57.20	1752.65	410.25	8441.42
		8441.42	-413.72	3.59e-03	0.0	15.0	-2531.49	627.35	-57.20	1752.65	-413.72	1.779e+04
239	9	1.413e+04	77.69	2.75e-03	0.0	0.0	-2184.89	505.43	-65.01	1226.46	77.69	6584.67
		6584.67	-860.36	3.08e-03	0.0	15.0	-2139.89	505.43	-65.01	1226.46	-860.36	1.413e+04
239	10	1.727e+04	362.74	3.29e-03	0.0	0.0	-2520.55	609.93	-58.31	1677.48	362.74	8176.17
		8176.17	-477.53	3.52e-03	0.0	15.0	-2475.55	609.93	-58.31	1677.48	-477.53	1.727e+04
240	2	2.648e+04	-3909.20	7.01e-03	0.0	0.0	-6498.74	-298.51	29.22	3161.78	-4266.60	2.648e+04
		2.213e+04	-4266.60	5.16e-03	0.0	15.0	-6440.24	-298.51	29.22	3161.78	-3909.20	2.213e+04
240	3	1.220e+04	-2682.23	3.72e-03	0.0	0.0	-4147.04	-160.34	19.21	1574.50	-2929.53	1.220e+04
		9856.13	-2929.53	3.06e-03	0.0	15.0	-4102.04	-160.34	19.21	1574.50	-2682.23	9856.13
240	5	1.263e+04	-2699.26	3.81e-03	0.0	0.0	-4191.71	-163.97	19.38	1619.46	-2948.01	1.263e+04
		1.023e+04	-2948.01	3.11e-03	0.0	15.0	-4146.71	-163.97	19.38	1619.46	-2699.26	1.023e+04
240	6	1.905e+04	-2954.68	5.12e-03	0.0	0.0	-4861.61	-218.45	21.95	2293.81	-3225.15	1.905e+04
		1.587e+04	-3225.15	3.82e-03	0.0	15.0	-4816.61	-218.45	21.95	2293.81	-2954.68	1.587e+04
240	7	1.263e+04	-2699.26	3.81e-03	0.0	0.0	-4191.71	-163.97	19.38	1619.46	-2948.01	1.263e+04
		1.023e+04	-2948.01	3.11e-03	0.0	15.0	-4146.71	-163.97	19.38	1619.46	-2699.26	1.023e+04
240	8	1.712e+04	-2878.06	4.73e-03	0.0	0.0	-4660.64	-202.11	21.18	2091.51	-3142.01	1.712e+04
		1.418e+04	-3142.01	3.61e-03	0.0	15.0	-4615.64	-202.11	21.18	2091.51	-2878.06	1.418e+04
240	9	1.263e+04	-2699.26	3.81e-03	0.0	0.0	-4191.71	-163.97	19.38	1619.46	-2948.01	1.263e+04
		1.023e+04	-2948.01	3.11e-03	0.0	15.0	-4146.71	-163.97	19.38	1619.46	-2699.26	1.023e+04
240	10	1.648e+04	-2852.52	4.60e-03	0.0	0.0	-4593.65	-196.66	20.92	2024.07	-3114.30	1.648e+04
		1.361e+04	-3114.30	3.54e-03	0.0	15.0	-4548.65	-196.66	20.92	2024.07	-2852.52	1.361e+04

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

241	2	-2.280e+04	-4118.86	-0.01	0.0	0.0	-4171.83	161.20	180.15	-1.279e+04	-6398.40	-2.454e+04
		-2.454e+04	-6398.40	5.59e-04	0.0	15.0	-4113.33	161.20	180.15	-1.279e+04	-4118.86	-2.280e+04
241	3	-1.141e+04	-2742.41	-6.17e-03	0.0	0.0	-2689.77	70.35	123.79	-7017.94	-4360.11	-1.210e+04
		-1.210e+04	-4360.11	4.96e-04	0.0	15.0	-2644.77	70.35	123.79	-7017.94	-2742.41	-1.141e+04
241	5	-1.173e+04	-2764.74	-6.31e-03	0.0	0.0	-2716.99	73.16	124.57	-7165.63	-4389.56	-1.245e+04
		-1.245e+04	-4389.56	4.93e-04	0.0	15.0	-2671.99	73.16	124.57	-7165.63	-2764.74	-1.173e+04
241	6	-1.655e+04	-3099.65	-8.43e-03	0.0	0.0	-3125.33	115.35	136.19	-9381.00	-4831.24	-1.779e+04
		-1.779e+04	-4831.24	4.41e-04	0.0	15.0	-3080.33	115.35	136.19	-9381.00	-3099.65	-1.655e+04
241	7	-1.173e+04	-2764.74	-6.31e-03	0.0	0.0	-2716.99	73.16	124.57	-7165.63	-4389.56	-1.245e+04
		-1.245e+04	-4389.56	4.93e-04	0.0	15.0	-2671.99	73.16	124.57	-7165.63	-2764.74	-1.173e+04
241	8	-1.510e+04	-2999.18	-7.80e-03	0.0	0.0	-3002.83	102.69	132.71	-8716.39	-4698.74	-1.619e+04
		-1.619e+04	-4698.74	4.56e-04	0.0	15.0	-2957.83	102.69	132.71	-8716.39	-2999.18	-1.510e+04
241	9	-1.173e+04	-2764.74	-6.31e-03	0.0	0.0	-2716.99	73.16	124.57	-7165.63	-4389.56	-1.245e+04
		-1.245e+04	-4389.56	4.93e-04	0.0	15.0	-2671.99	73.16	124.57	-7165.63	-2764.74	-1.173e+04
241	10	-1.462e+04	-2965.69	-7.58e-03	0.0	0.0	-2962.00	98.47	131.54	-8494.85	-4654.57	-1.565e+04
		-1.565e+04	-4654.57	4.61e-04	0.0	15.0	-2917.00	98.47	131.54	-8494.85	-2965.69	-1.462e+04
242	2	-7651.18	7002.36	5.33e-03	0.0	0.0	-1.011e+04	-183.72	-95.43	-797.56	7002.36	-7651.18
		-1.044e+04	5658.42	4.93e-03	0.0	15.0	-1.006e+04	-183.72	-95.43	-797.56	5658.42	-1.044e+04
242	3	-5023.94	4483.82	2.89e-03	0.0	0.0	-6099.88	-90.31	-59.66	-643.47	4483.82	-5023.94
		-6386.33	3646.20	2.90e-03	0.0	15.0	-6054.88	-90.31	-59.66	-643.47	3646.20	-6386.33
242	5	-5069.11	4531.14	2.95e-03	0.0	0.0	-6187.95	-92.99	-60.38	-641.90	4531.14	-5069.11
		-6472.51	3683.23	2.95e-03	0.0	15.0	-6142.95	-92.99	-60.38	-641.90	3683.23	-6472.51
242	6	-5746.56	5240.85	3.91e-03	0.0	0.0	-7509.03	-133.10	-71.19	-618.34	5240.85	-5746.56
		-7765.23	4238.69	3.65e-03	0.0	15.0	-7464.03	-133.10	-71.19	-618.34	4238.69	-7765.23
242	7	-5069.11	4531.14	2.95e-03	0.0	0.0	-6187.95	-92.99	-60.38	-641.90	4531.14	-5069.11
		-6472.51	3683.23	2.95e-03	0.0	15.0	-6142.95	-92.99	-60.38	-641.90	3683.23	-6472.51
242	8	-5543.32	5027.93	3.62e-03	0.0	0.0	-7112.71	-121.06	-67.95	-625.41	5027.93	-5543.32
		-7377.41	4072.05	3.44e-03	0.0	15.0	-7067.71	-121.06	-67.95	-625.41	4072.05	-7377.41
242	9	-5069.11	4531.14	2.95e-03	0.0	0.0	-6187.95	-92.99	-60.38	-641.90	4531.14	-5069.11
		-6472.51	3683.23	2.95e-03	0.0	15.0	-6142.95	-92.99	-60.38	-641.90	3683.23	-6472.51
242	10	-5475.58	4956.96	3.52e-03	0.0	0.0	-6980.60	-117.05	-66.86	-627.76	4956.96	-5475.58
		-7248.14	4016.51	3.37e-03	0.0	15.0	-6935.60	-117.05	-66.86	-627.76	4016.51	-7248.14
243	1	-1.863e+04	8339.10	-8.53e-03	0.0	0.0	-2122.97	-284.55	392.33	-9837.36	2757.24	-1.863e+04
		-2.355e+04	2757.24	5.99e-04	0.0	15.0	-2064.47	-284.55	392.33	-9837.36	8339.10	-2.355e+04
243	2	-2.597e+04	8173.62	-0.01	0.0	0.0	-2585.30	-354.33	410.40	-1.330e+04	2413.17	-2.597e+04
		-3.217e+04	2413.17	5.10e-04	0.0	15.0	-2526.80	-354.33	410.40	-1.330e+04	8173.62	-3.217e+04
243	3	-1.375e+04	6427.71	-6.30e-03	0.0	0.0	-1596.70	-213.40	300.37	-7295.30	2148.01	-1.375e+04
		-1.743e+04	2148.01	4.67e-04	0.0	15.0	-1551.70	-213.40	300.37	-7295.30	6427.71	-1.743e+04
243	4	-2.109e+04	6262.22	-9.57e-03	0.0	0.0	-2059.03	-283.18	318.44	-1.075e+04	1803.94	-2.109e+04
		-2.606e+04	1803.94	3.79e-04	0.0	15.0	-2014.03	-283.18	318.44	-1.075e+04	6262.22	-2.606e+04
243	5	-1.408e+04	6420.35	-6.45e-03	0.0	0.0	-1617.25	-216.50	301.18	-7448.98	2132.72	-1.408e+04
		-1.782e+04	2132.72	4.63e-04	0.0	15.0	-1572.25	-216.50	301.18	-7448.98	6420.35	-1.782e+04
243	6	-1.897e+04	6310.03	-8.63e-03	0.0	0.0	-1925.47	-263.02	313.22	-9754.17	1903.34	-1.897e+04
		-2.357e+04	1903.34	4.04e-04	0.0	15.0	-1880.47	-263.02	313.22	-9754.17	6310.03	-2.357e+04
243	7	-1.408e+04	6420.35	-6.45e-03	0.0	0.0	-1617.25	-216.50	301.18	-7448.98	2132.72	-1.408e+04
		-1.782e+04	2132.72	4.63e-04	0.0	15.0	-1572.25	-216.50	301.18	-7448.98	6420.35	-1.782e+04
243	8	-1.750e+04	6343.13	-7.97e-03	0.0	0.0	-1833.00	-249.06	309.61	-9062.61	1972.15	-1.750e+04
		-2.184e+04	1972.15	4.22e-04	0.0	15.0	-1788.00	-249.06	309.61	-9062.61	6343.13	-2.184e+04
243	9	-1.408e+04	6420.35	-6.45e-03	0.0	0.0	-1617.25	-216.50	301.18	-7448.98	2132.72	-1.408e+04
		-1.782e+04	2132.72	4.63e-04	0.0	15.0	-1572.25	-216.50	301.18	-7448.98	6420.35	-1.782e+04
243	10	-1.702e+04	6354.16	-7.76e-03	0.0	0.0	-1802.18	-244.41	308.40	-8832.09	1995.09	-1.702e+04
		-2.127e+04	1995.09	4.28e-04	0.0	15.0	-1757.18	-244.41	308.40	-8832.09	6354.16	-2.127e+04
244	1	3.328e+04	-1048.02	3.69e-03	0.0	0.0	-2369.65	974.27	-126.19	1684.94	-1048.02	1.871e+04
		1.871e+04	-2881.97	4.05e-03	0.0	15.0	-2311.15	974.27	-126.19	1684.94	-2881.97	3.328e+04
244	2	4.681e+04	-92.46	5.07e-03	0.0	0.0	-3097.29	1355.82	-102.24	2798.01	-92.46	2.655e+04
		2.655e+04	-1566.61	5.14e-03	0.0	15.0	-3038.79	1355.82	-102.24	2798.01	-1566.61	4.681e+04
244	3	2.453e+04	-881.31	2.73e-03	0.0	0.0	-1765.59	719.44	-98.95	1208.59	-881.31	1.377e+04
		1.377e+04	-2320.33	3.03e-03	0.0	15.0	-1720.59	719.44	-98.95	1208.59	-2320.33	2.453e+04
244	4	3.806e+04	74.25	4.11e-03	0.0	0.0	-2493.24	1100.99	-75.00	2321.65	74.25	2.162e+04
		2.162e+04	-1004.97	4.12e-03	0.0	15.0	-2448.24	1100.99	-75.00	2321.65	-1004.97	3.806e+04
244	5	2.513e+04	-838.84	2.79e-03	0.0	0.0	-1797.93	736.40	-97.89	1258.06	-838.84	1.412e+04
		1.412e+04	-2261.87	3.08e-03	0.0	15.0	-1752.93	736.40	-97.89	1258.06	-2261.87	2.513e+04
244	6	3.415e+04	-201.80	3.71e-03	0.0	0.0	-2283.03	990.76	-81.92	2000.10	-201.80	1.935e+04
		1.935e+04	-1384.96	3.81e-03	0.0	15.0	-2238.03	990.76	-81.92	2000.10	-1384.96	3.415e+04
244	7	2.513e+04	-838.84	2.79e-03	0.0	0.0	-1797.93	736.40	-97.89	1258.06	-838.84	1.412e+04
		1.412e+04	-2261.87	3.08e-03	0.0	15.0	-1752.93	736.40	-97.89	1258.06	-2261.87	2.513e+04

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

244	8	3.145e+04	-392.91	3.43e-03	0.0	0.0	-2137.50	914.45	-86.71	1777.49	-392.91	1.778e+04
		1.778e+04	-1648.03	3.59e-03	0.0	15.0	-2092.50	914.45	-86.71	1777.49	-1648.03	3.145e+04
244	9	2.513e+04	-838.84	2.79e-03	0.0	0.0	-1797.93	736.40	-97.89	1258.06	-838.84	1.412e+04
		1.412e+04	-2261.87	3.08e-03	0.0	15.0	-1752.93	736.40	-97.89	1258.06	-2261.87	2.513e+04
244	10	3.055e+04	-456.62	3.34e-03	0.0	0.0	-2088.99	889.02	-88.31	1703.28	-456.62	1.726e+04
		1.726e+04	-1735.73	3.51e-03	0.0	15.0	-2043.99	889.02	-88.31	1703.28	-1735.73	3.055e+04
245	2	2.219e+04	-3493.41	7.10e-03	0.0	0.0	-5909.04	-187.29	36.16	3400.61	-3950.05	2.219e+04
		1.954e+04	-3950.05	5.12e-03	0.0	15.0	-5850.54	-187.29	36.16	3400.61	-3493.41	1.954e+04
245	3	9886.96	-2387.73	3.76e-03	0.0	0.0	-3787.94	-100.69	23.91	1684.88	-2702.83	9886.96
		8453.46	-2702.83	3.04e-03	0.0	15.0	-3742.94	-100.69	23.91	1684.88	-2387.73	8453.46
245	5	1.026e+04	-2403.43	3.85e-03	0.0	0.0	-3827.64	-102.96	24.11	1733.68	-2720.43	1.026e+04
		8798.13	-2720.43	3.09e-03	0.0	15.0	-3782.64	-102.96	24.11	1733.68	-2403.43	8798.13
245	6	1.591e+04	-2638.93	5.19e-03	0.0	0.0	-4423.24	-137.07	27.19	2465.70	-2984.36	1.591e+04
		1.397e+04	-2984.36	3.80e-03	0.0	15.0	-4378.24	-137.07	27.19	2465.70	-2638.93	1.397e+04
245	7	1.026e+04	-2403.43	3.85e-03	0.0	0.0	-3827.64	-102.96	24.11	1733.68	-2720.43	1.026e+04
		8798.13	-2720.43	3.09e-03	0.0	15.0	-3782.64	-102.96	24.11	1733.68	-2403.43	8798.13
245	8	1.422e+04	-2568.28	4.79e-03	0.0	0.0	-4244.56	-126.84	26.27	2246.09	-2905.18	1.422e+04
		1.242e+04	-2905.18	3.58e-03	0.0	15.0	-4199.56	-126.84	26.27	2246.09	-2568.28	1.242e+04
245	9	1.026e+04	-2403.43	3.85e-03	0.0	0.0	-3827.64	-102.96	24.11	1733.68	-2720.43	1.026e+04
		8798.13	-2720.43	3.09e-03	0.0	15.0	-3782.64	-102.96	24.11	1733.68	-2403.43	8798.13
245	10	1.365e+04	-2544.73	4.65e-03	0.0	0.0	-4185.00	-123.43	25.96	2172.89	-2878.79	1.365e+04
		1.190e+04	-2878.79	3.51e-03	0.0	15.0	-4140.00	-123.43	25.96	2172.89	-2544.73	1.190e+04
246	1	-1.631e+04	2916.88	-8.47e-03	0.0	0.0	-2599.61	-95.65	287.47	-9959.76	-1068.18	-1.631e+04
		-1.832e+04	-1068.18	5.87e-04	0.0	15.0	-2541.11	-95.65	287.47	-9959.76	2916.88	-1.832e+04
246	2	-2.332e+04	2620.78	-0.01	0.0	0.0	-3108.38	-96.02	304.38	-1.345e+04	-1519.87	-2.332e+04
		-2.555e+04	-1519.87	5.01e-04	0.0	15.0	-3049.88	-96.02	304.38	-1.345e+04	2620.78	-2.555e+04
246	3	-1.199e+04	2267.04	-6.26e-03	0.0	0.0	-1959.69	-73.54	219.80	-7387.26	-786.16	-1.199e+04
		-1.352e+04	-786.16	4.58e-04	0.0	15.0	-1914.69	-73.54	219.80	-7387.26	2267.04	-1.352e+04
246	5	-1.230e+04	2253.88	-6.40e-03	0.0	0.0	-1982.31	-73.56	220.55	-7542.18	-806.23	-1.230e+04
		-1.385e+04	-806.23	4.54e-04	0.0	15.0	-1937.31	-73.56	220.55	-7542.18	2253.88	-1.385e+04
246	6	-1.698e+04	2056.48	-8.56e-03	0.0	0.0	-2321.48	-73.81	231.82	-9865.99	-1107.36	-1.698e+04
		-1.867e+04	-1107.36	3.97e-04	0.0	15.0	-2276.48	-73.81	231.82	-9865.99	2056.48	-1.867e+04
246	7	-1.230e+04	2253.88	-6.40e-03	0.0	0.0	-1982.31	-73.56	220.55	-7542.18	-806.23	-1.230e+04
		-1.385e+04	-806.23	4.54e-04	0.0	15.0	-1937.31	-73.56	220.55	-7542.18	2253.88	-1.385e+04
246	8	-1.558e+04	2115.70	-7.91e-03	0.0	0.0	-2219.73	-73.74	228.44	-9168.85	-1017.02	-1.558e+04
		-1.722e+04	-1017.02	4.14e-04	0.0	15.0	-2174.73	-73.74	228.44	-9168.85	2115.70	-1.722e+04
246	9	-1.230e+04	2253.88	-6.40e-03	0.0	0.0	-1982.31	-73.56	220.55	-7542.18	-806.23	-1.230e+04
		-1.385e+04	-806.23	4.54e-04	0.0	15.0	-1937.31	-73.56	220.55	-7542.18	2253.88	-1.385e+04
246	10	-1.511e+04	2135.44	-7.70e-03	0.0	0.0	-2185.81	-73.71	227.31	-8936.46	-986.91	-1.511e+04
		-1.674e+04	-986.91	4.20e-04	0.0	15.0	-2140.81	-73.71	227.31	-8936.46	2135.44	-1.674e+04
247	2	-1.045e+04	5701.72	5.28e-03	0.0	0.0	-9352.77	-80.72	-74.67	-353.48	5701.72	-1.045e+04
		-1.170e+04	4658.69	4.97e-03	0.0	15.0	-9294.27	-80.72	-74.67	-353.48	4658.69	-1.170e+04
247	3	-6385.19	3674.91	2.85e-03	0.0	0.0	-5625.68	-36.34	-47.47	-422.93	3674.91	-6385.19
		-6944.62	3015.25	2.93e-03	0.0	15.0	-5580.68	-36.34	-47.47	-422.93	3015.25	-6944.62
247	5	-6471.72	3712.18	2.92e-03	0.0	0.0	-5707.92	-37.69	-47.99	-415.02	3712.18	-6471.72
		-7052.47	3045.04	2.98e-03	0.0	15.0	-5662.92	-37.69	-47.99	-415.02	3045.04	-7052.47
247	6	-7769.81	4271.26	3.86e-03	0.0	0.0	-6941.42	-57.94	-55.83	-296.27	4271.26	-7769.81
		-8670.13	3491.94	3.68e-03	0.0	15.0	-6896.42	-57.94	-55.83	-296.27	3491.94	-8670.13
247	7	-6471.72	3712.18	2.92e-03	0.0	0.0	-5707.92	-37.69	-47.99	-415.02	3712.18	-6471.72
		-7052.47	3045.04	2.98e-03	0.0	15.0	-5662.92	-37.69	-47.99	-415.02	3045.04	-7052.47
247	8	-7380.39	4103.53	3.58e-03	0.0	0.0	-6571.37	-51.86	-53.48	-331.89	4103.53	-7380.39
		-8184.83	3357.87	3.47e-03	0.0	15.0	-6526.37	-51.86	-53.48	-331.89	3357.87	-8184.83
247	9	-6471.72	3712.18	2.92e-03	0.0	0.0	-5707.92	-37.69	-47.99	-415.02	3712.18	-6471.72
		-7052.47	3045.04	2.98e-03	0.0	15.0	-5662.92	-37.69	-47.99	-415.02	3045.04	-7052.47
247	10	-7250.58	4047.63	3.48e-03	0.0	0.0	-6448.02	-49.84	-52.69	-343.77	4047.63	-7250.58
		-8023.07	3313.18	3.40e-03	0.0	15.0	-6403.02	-49.84	-52.69	-343.77	3313.18	-8023.07
248	1	-2.392e+04	1.573e+04	-8.61e-03	0.0	0.0	-1702.60	-545.28	519.30	-9469.39	8198.68	-2.392e+04
		-3.278e+04	8198.68	6.51e-04	0.0	15.0	-1644.10	-545.28	519.30	-9469.39	1.573e+04	-3.278e+04
248	2	-3.268e+04	1.572e+04	-0.01	0.0	0.0	-2129.84	-718.24	538.38	-1.283e+04	7988.91	-3.268e+04
		-4.438e+04	7988.91	5.61e-04	0.0	15.0	-2071.34	-718.24	538.38	-1.283e+04	1.572e+04	-4.438e+04
248	3	-1.771e+04	1.210e+04	-6.36e-03	0.0	0.0	-1276.10	-405.85	397.96	-7020.00	6323.17	-1.771e+04
		-2.431e+04	6323.17	5.08e-04	0.0	15.0	-1231.10	-405.85	397.96	-7020.00	1.210e+04	-2.431e+04
248	4	-2.647e+04	1.209e+04	-9.65e-03	0.0	0.0	-1703.34	-578.81	417.04	-1.038e+04	6113.40	-2.647e+04
		-3.591e+04	6113.40	4.18e-04	0.0	15.0	-1658.34	-578.81	417.04	-1.038e+04	1.209e+04	-3.591e+04
248	5	-1.810e+04	1.210e+04	-6.51e-03	0.0	0.0	-1295.09	-413.53	398.81	-7169.30	6313.85	-1.810e+04
		-2.482e+04	6313.85	5.04e-04	0.0	15.0	-1250.09	-413.53	398.81	-7169.30	1.210e+04	-2.482e+04

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Loffo 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

248	6	-2.394e+04	1.209e+04	-8.70e-03	0.0	0.0	-1579.91	-528.84	411.53	-9408.84	6174.00	-2.394e+04
		-3.256e+04	6174.00	4.44e-04	0.0	15.0	-1534.91	-528.84	411.53	-9408.84	1.209e+04	-3.256e+04
248	7	-1.810e+04	1.210e+04	-6.51e-03	0.0	0.0	-1295.09	-413.53	398.81	-7169.30	6313.85	-1.810e+04
		-2.482e+04	6313.85	5.04e-04	0.0	15.0	-1250.09	-413.53	398.81	-7169.30	1.210e+04	-2.482e+04
248	8	-2.219e+04	1.209e+04	-8.04e-03	0.0	0.0	-1494.46	-494.25	407.71	-8736.98	6215.96	-2.219e+04
		-3.024e+04	6215.96	4.62e-04	0.0	15.0	-1449.46	-494.25	407.71	-8736.98	1.209e+04	-3.024e+04
248	9	-1.810e+04	1.210e+04	-6.51e-03	0.0	0.0	-1295.09	-413.53	398.81	-7169.30	6313.85	-1.810e+04
		-2.482e+04	6313.85	5.04e-04	0.0	15.0	-1250.09	-413.53	398.81	-7169.30	1.210e+04	-2.482e+04
248	10	-2.161e+04	1.209e+04	-7.83e-03	0.0	0.0	-1465.98	-482.72	406.44	-8513.02	6229.94	-2.161e+04
		-2.946e+04	6229.94	4.68e-04	0.0	15.0	-1420.98	-482.72	406.44	-8513.02	1.209e+04	-2.946e+04
249	1	5.412e+04	-2848.58	3.79e-03	0.0	0.0	-1899.28	1386.38	-181.44	1519.94	-2848.58	3.332e+04
		3.332e+04	-5501.70	4.03e-03	0.0	15.0	-1840.78	1386.38	-181.44	1519.94	-5501.70	5.412e+04
249	2	7.584e+04	-1530.03	5.22e-03	0.0	0.0	-2530.26	1933.04	-150.05	2518.12	-1530.03	4.685e+04
		4.685e+04	-3702.78	5.14e-03	0.0	15.0	-2471.76	1933.04	-150.05	2518.12	-3702.78	7.584e+04
249	3	3.992e+04	-2294.90	2.80e-03	0.0	0.0	-1411.37	1023.46	-142.03	1090.70	-2294.90	2.456e+04
		2.456e+04	-4373.53	3.01e-03	0.0	15.0	-1366.37	1023.46	-142.03	1090.70	-4373.53	3.992e+04
249	4	6.164e+04	-976.35	4.23e-03	0.0	0.0	-2042.35	1570.13	-110.65	2088.87	-976.35	3.810e+04
		3.810e+04	-2574.61	4.12e-03	0.0	15.0	-1997.35	1570.13	-110.65	2088.87	-2574.61	6.164e+04
249	5	4.089e+04	-2236.30	2.87e-03	0.0	0.0	-1439.41	1047.76	-140.64	1135.06	-2236.30	2.517e+04
		2.517e+04	-4293.58	3.06e-03	0.0	15.0	-1394.41	1047.76	-140.64	1135.06	-4293.58	4.089e+04
249	6	5.537e+04	-1357.26	3.82e-03	0.0	0.0	-1860.07	1412.20	-119.71	1800.51	-1357.26	3.419e+04
		3.419e+04	-3094.30	3.80e-03	0.0	15.0	-1815.07	1412.20	-119.71	1800.51	-3094.30	5.537e+04
249	7	4.089e+04	-2236.30	2.87e-03	0.0	0.0	-1439.41	1047.76	-140.64	1135.06	-2236.30	2.517e+04
		2.517e+04	-4293.58	3.06e-03	0.0	15.0	-1394.41	1047.76	-140.64	1135.06	-4293.58	4.089e+04
249	8	5.103e+04	-1620.97	3.53e-03	0.0	0.0	-1733.87	1302.87	-125.99	1600.87	-1620.97	3.148e+04
		3.148e+04	-3454.08	3.58e-03	0.0	15.0	-1688.87	1302.87	-125.99	1600.87	-3454.08	5.103e+04
249	9	4.089e+04	-2236.30	2.87e-03	0.0	0.0	-1439.41	1047.76	-140.64	1135.06	-2236.30	2.517e+04
		2.517e+04	-4293.58	3.06e-03	0.0	15.0	-1394.41	1047.76	-140.64	1135.06	-4293.58	4.089e+04
249	10	4.958e+04	-1708.88	3.44e-03	0.0	0.0	-1691.81	1266.42	-128.08	1534.33	-1708.88	3.058e+04
		3.058e+04	-3574.01	3.51e-03	0.0	15.0	-1646.81	1266.42	-128.08	1534.33	-3574.01	4.958e+04
250	2	1.961e+04	-3104.75	7.18e-03	0.0	0.0	-5340.27	-134.23	34.30	3548.78	-3534.92	1.961e+04
		1.775e+04	-3534.92	5.10e-03	0.0	15.0	-5281.77	-134.23	34.30	3548.78	-3104.75	1.775e+04
250	3	8490.97	-2111.97	3.79e-03	0.0	0.0	-3435.81	-70.41	22.61	1743.46	-2408.61	8490.97
		7510.87	-2408.61	3.02e-03	0.0	15.0	-3390.81	-70.41	22.61	1743.46	-2111.97	7510.87
250	5	8836.72	-2126.45	3.88e-03	0.0	0.0	-3471.04	-72.13	22.81	1795.17	-2424.89	8836.72
		7833.03	-2424.89	3.07e-03	0.0	15.0	-3426.04	-72.13	22.81	1795.17	-2126.45	7833.03
250	6	1.402e+04	-2343.70	5.25e-03	0.0	0.0	-3999.50	-97.96	25.78	2570.74	-2669.08	1.402e+04
		1.267e+04	-2669.08	3.77e-03	0.0	15.0	-3954.50	-97.96	25.78	2570.74	-2343.70	1.267e+04
250	7	8836.72	-2126.45	3.88e-03	0.0	0.0	-3471.04	-72.13	22.81	1795.17	-2424.89	8836.72
		7833.03	-2424.89	3.07e-03	0.0	15.0	-3426.04	-72.13	22.81	1795.17	-2126.45	7833.03
250	8	1.247e+04	-2278.53	4.84e-03	0.0	0.0	-3840.96	-90.21	24.89	2338.07	-2595.82	1.247e+04
		1.122e+04	-2595.82	3.56e-03	0.0	15.0	-3795.96	-90.21	24.89	2338.07	-2278.53	1.122e+04
250	9	8836.72	-2126.45	3.88e-03	0.0	0.0	-3471.04	-72.13	22.81	1795.17	-2424.89	8836.72
		7833.03	-2424.89	3.07e-03	0.0	15.0	-3426.04	-72.13	22.81	1795.17	-2126.45	7833.03
250	10	1.195e+04	-2256.80	4.70e-03	0.0	0.0	-3788.11	-87.62	24.59	2260.51	-2571.40	1.195e+04
		1.073e+04	-2571.40	3.49e-03	0.0	15.0	-3743.11	-87.62	24.59	2260.51	-2256.80	1.073e+04
251	2	1.783e+04	-2756.01	7.26e-03	0.0	0.0	-4849.41	-122.36	30.91	3636.08	-3143.36	1.783e+04
		1.617e+04	-3143.36	5.07e-03	0.0	15.0	-4790.91	-122.36	30.91	3636.08	-2756.01	1.617e+04
251	3	7548.29	-1851.25	3.83e-03	0.0	0.0	-3127.90	-60.46	21.20	1766.98	-2131.18	7548.29
		6727.14	-2131.18	3.01e-03	0.0	15.0	-3082.90	-60.46	21.20	1766.98	-1851.25	6727.14
251	5	7871.59	-1865.34	3.92e-03	0.0	0.0	-3159.47	-62.23	21.34	1820.98	-2146.21	7871.59
		7026.55	-2146.21	3.05e-03	0.0	15.0	-3114.47	-62.23	21.34	1820.98	-1865.34	7026.55
251	6	1.272e+04	-2076.66	5.30e-03	0.0	0.0	-3633.15	-88.69	23.36	2630.85	-2371.71	1.272e+04
		1.152e+04	-2371.71	3.76e-03	0.0	15.0	-3588.15	-88.69	23.36	2630.85	-2076.66	1.152e+04
251	7	7871.59	-1865.34	3.92e-03	0.0	0.0	-3159.47	-62.23	21.34	1820.98	-2146.21	7871.59
		7026.55	-2146.21	3.05e-03	0.0	15.0	-3114.47	-62.23	21.34	1820.98	-1865.34	7026.55
251	8	1.127e+04	-2013.26	4.89e-03	0.0	0.0	-3491.05	-80.75	22.75	2387.89	-2304.06	1.127e+04
		1.017e+04	-2304.06	3.55e-03	0.0	15.0	-3446.05	-80.75	22.75	2387.89	-2013.26	1.017e+04
251	9	7871.59	-1865.34	3.92e-03	0.0	0.0	-3159.47	-62.23	21.34	1820.98	-2146.21	7871.59
		7026.55	-2146.21	3.05e-03	0.0	15.0	-3114.47	-62.23	21.34	1820.98	-1865.34	7026.55
251	10	1.078e+04	-1992.13	4.75e-03	0.0	0.0	-3443.68	-78.11	22.55	2306.90	-2281.51	1.078e+04
		9721.31	-2281.51	3.47e-03	0.0	15.0	-3398.68	-78.11	22.55	2306.90	-1992.13	9721.31
252	2	1.625e+04	-2496.83	7.33e-03	0.0	0.0	-4409.67	-105.07	24.36	3661.57	-2790.52	1.625e+04
		1.485e+04	-2790.52	5.05e-03	0.0	15.0	-4351.17	-105.07	24.36	3661.57	-2496.83	1.485e+04
252	3	6768.42	-1640.59	3.85e-03	0.0	0.0	-2840.63	-48.83	17.59	1756.43	-1868.25	6768.42
		6119.56	-1868.25	2.99e-03	0.0	15.0	-2795.63	-48.83	17.59	1756.43	-1640.59	6119.56

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

252	5	7069.06	-1655.27	3.95e-03	0.0	0.0	-2869.54	-50.51	17.65	1812.01	-1882.84	7069.06
		6397.59	-1882.84	3.04e-03	0.0	15.0	-2824.54	-50.51	17.65	1812.01	-1655.27	6397.59
252	6	1.158e+04	-1875.47	5.35e-03	0.0	0.0	-3303.11	-75.67	18.55	2645.60	-2101.67	1.158e+04
		1.057e+04	-2101.67	3.74e-03	0.0	15.0	-3258.11	-75.67	18.55	2645.60	-1875.47	1.057e+04
252	7	7069.06	-1655.27	3.95e-03	0.0	0.0	-2869.54	-50.51	17.65	1812.01	-1882.84	7069.06
		6397.59	-1882.84	3.04e-03	0.0	15.0	-2824.54	-50.51	17.65	1812.01	-1655.27	6397.59
252	8	1.023e+04	-1809.41	4.93e-03	0.0	0.0	-3173.04	-68.12	18.28	2395.52	-2036.02	1.023e+04
		9316.86	-2036.02	3.53e-03	0.0	15.0	-3128.04	-68.12	18.28	2395.52	-1809.41	9316.86
252	9	7069.06	-1655.27	3.95e-03	0.0	0.0	-2869.54	-50.51	17.65	1812.01	-1882.84	7069.06
		6397.59	-1882.84	3.04e-03	0.0	15.0	-2824.54	-50.51	17.65	1812.01	-1655.27	6397.59
252	10	9774.79	-1787.39	4.79e-03	0.0	0.0	-3129.68	-65.60	18.19	2312.16	-2014.14	9774.79
		8899.82	-2014.14	3.46e-03	0.0	15.0	-3084.68	-65.60	18.19	2312.16	-1787.39	8899.82
253	2	1.514e+04	-2306.50	7.39e-03	0.0	0.0	-4100.93	1.10	20.16	3633.00	-2530.95	1.494e+04
		1.494e+04	-2530.95	5.03e-03	0.0	15.0	-4042.43	1.10	20.16	3633.00	-2306.50	1.514e+04
253	3	6207.76	-1453.73	3.88e-03	0.0	0.0	-2618.43	-2.95	16.43	1715.02	-1657.79	6161.89
		6161.89	-1657.79	2.98e-03	0.0	15.0	-2573.43	-2.95	16.43	1715.02	-1453.73	6207.76
253	5	6492.95	-1470.53	3.97e-03	0.0	0.0	-2646.53	-2.75	16.38	1771.61	-1672.95	6441.28
		6441.28	-1672.95	3.02e-03	0.0	15.0	-2601.53	-2.75	16.38	1771.61	-1470.53	6492.95
253	6	1.077e+04	-1722.54	5.39e-03	0.0	0.0	-3068.09	0.24	15.66	2620.49	-1900.26	1.063e+04
		1.063e+04	-1900.26	3.73e-03	0.0	15.0	-3023.09	0.24	15.66	2620.49	-1722.54	1.077e+04
253	7	6492.95	-1470.53	3.97e-03	0.0	0.0	-2646.53	-2.75	16.38	1771.61	-1672.95	6441.28
		6441.28	-1672.95	3.02e-03	0.0	15.0	-2601.53	-2.75	16.38	1771.61	-1470.53	6492.95
253	8	9487.39	-1646.94	4.96e-03	0.0	0.0	-2941.62	-0.66	15.88	2365.82	-1832.06	9374.90
		9374.90	-1832.06	3.52e-03	0.0	15.0	-2896.62	-0.66	15.88	2365.82	-1646.94	9487.39
253	9	6492.95	-1470.53	3.97e-03	0.0	0.0	-2646.53	-2.75	16.38	1771.61	-1672.95	6441.28
		6441.28	-1672.95	3.02e-03	0.0	15.0	-2601.53	-2.75	16.38	1771.61	-1470.53	6492.95
253	10	9059.61	-1621.73	4.82e-03	0.0	0.0	-2899.47	-0.96	15.95	2280.94	-1809.33	8955.81
		8955.81	-1809.33	3.45e-03	0.0	15.0	-2854.47	-0.96	15.95	2280.94	-1621.73	9059.61
254	2	1.467e+04	-392.07	3.79e-03	0.0	0.0	-2679.39	97.17	68.18	3270.56	-904.17	1.383e+04
		1.383e+04	-904.17	2.49e-03	0.0	7.5	-2650.14	97.17	68.18	3270.56	-392.07	1.467e+04
254	3	6923.36	90.65	1.98e-03	0.0	0.0	-1660.84	80.90	53.88	1462.79	-315.79	6263.55
		6263.55	-315.79	1.47e-03	0.0	7.5	-1638.34	80.90	53.88	1462.79	90.65	6923.36
254	5	7152.14	70.09	2.03e-03	0.0	0.0	-1681.82	80.58	53.81	1517.99	-335.69	6493.07
		6493.07	-335.69	1.50e-03	0.0	7.5	-1659.32	80.58	53.81	1517.99	70.09	7152.14
254	6	1.058e+04	-238.33	2.77e-03	0.0	0.0	-1996.51	75.74	52.68	2345.97	-634.27	9935.86
		9935.86	-634.27	1.85e-03	0.0	7.5	-1974.01	75.74	52.68	2345.97	-238.33	1.058e+04
254	7	7152.14	70.09	2.03e-03	0.0	0.0	-1681.82	80.58	53.81	1517.99	-335.69	6493.07
		6493.07	-335.69	1.50e-03	0.0	7.5	-1659.32	80.58	53.81	1517.99	70.09	7152.14
254	8	9554.39	-145.80	2.54e-03	0.0	0.0	-1902.10	77.19	53.02	2097.58	-544.70	8903.03
		8903.03	-544.70	1.74e-03	0.0	7.5	-1879.60	77.19	53.02	2097.58	-145.80	9554.39
254	9	7152.14	70.09	2.03e-03	0.0	0.0	-1681.82	80.58	53.81	1517.99	-335.69	6493.07
		6493.07	-335.69	1.50e-03	0.0	7.5	-1659.32	80.58	53.81	1517.99	70.09	7152.14
254	10	9211.21	-114.96	2.47e-03	0.0	0.0	-1870.63	77.68	53.13	2014.78	-514.84	8558.75
		8558.75	-514.84	1.71e-03	0.0	7.5	-1848.13	77.68	53.13	2014.78	-114.96	9211.21
255	2	1.524e+04	-1695.82	7.46e-03	0.0	0.0	-3379.24	-71.34	29.05	3560.98	-2070.42	1.524e+04
		1.436e+04	-2070.42	5.01e-03	0.0	15.0	-3320.74	-71.34	29.05	3560.98	-1695.82	1.436e+04
255	3	6254.22	-1014.45	3.91e-03	0.0	0.0	-2177.12	-18.81	22.17	1657.06	-1319.66	6254.22
		6062.53	-1319.66	2.97e-03	0.0	15.0	-2132.12	-18.81	22.17	1657.06	-1014.45	6062.53
255	5	6540.90	-1029.65	4.00e-03	0.0	0.0	-2199.26	-20.70	22.18	1713.79	-1333.97	6540.90
		6323.69	-1333.97	3.01e-03	0.0	15.0	-2154.26	-20.70	22.18	1713.79	-1029.65	6323.69
255	6	1.084e+04	-1257.70	5.44e-03	0.0	0.0	-2531.30	-49.06	22.32	2564.67	-1548.60	1.084e+04
		1.024e+04	-1548.60	3.71e-03	0.0	15.0	-2486.30	-49.06	22.32	2564.67	-1257.70	1.024e+04
255	7	6540.90	-1029.65	4.00e-03	0.0	0.0	-2199.26	-20.70	22.18	1713.79	-1333.97	6540.90
		6323.69	-1333.97	3.01e-03	0.0	15.0	-2154.26	-20.70	22.18	1713.79	-1029.65	6323.69
255	8	9551.04	-1189.29	5.01e-03	0.0	0.0	-2431.69	-40.55	22.28	2309.41	-1484.21	9551.04
		9065.85	-1484.21	3.50e-03	0.0	15.0	-2386.69	-40.55	22.28	2309.41	-1189.29	9065.85
255	9	6540.90	-1029.65	4.00e-03	0.0	0.0	-2199.26	-20.70	22.18	1713.79	-1333.97	6540.90
		6323.69	-1333.97	3.01e-03	0.0	15.0	-2154.26	-20.70	22.18	1713.79	-1029.65	6323.69
255	10	9121.02	-1166.48	4.87e-03	0.0	0.0	-2398.48	-37.71	22.26	2224.32	-1462.75	9121.02
		8674.11	-1462.75	3.43e-03	0.0	15.0	-2353.48	-37.71	22.26	2224.32	-1166.48	8674.11
256	1	1.245e+04	1486.47	5.40e-03	0.0	0.0	-1899.04	179.98	95.01	1933.10	66.80	9592.69
		9592.69	66.80	3.94e-03	0.0	15.0	-1840.54	179.98	95.01	1933.10	1486.47	1.245e+04
256	2	1.799e+04	949.69	7.62e-03	0.0	0.0	-2287.41	199.02	91.29	3151.37	-400.99	1.477e+04
		1.477e+04	-400.99	4.98e-03	0.0	15.0	-2228.91	199.02	91.29	3151.37	949.69	1.799e+04
256	3	9137.47	1185.64	3.97e-03	0.0	0.0	-1430.26	136.94	73.37	1391.20	88.17	6971.60
		6971.60	88.17	2.95e-03	0.0	15.0	-1385.26	136.94	73.37	1391.20	1185.64	9137.47

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO /IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

256	5	9383.94	1161.79	4.07e-03	0.0	0.0	-1447.52	137.79	73.21	1445.35	67.38	7201.87
		7201.87	67.38	2.99e-03	0.0	15.0	-1402.52	137.79	73.21	1445.35	1161.79	9383.94
256	6	1.308e+04	803.94	5.56e-03	0.0	0.0	-1706.44	150.49	70.73	2257.53	-244.48	1.066e+04
		1.066e+04	-244.48	3.69e-03	0.0	15.0	-1661.44	150.49	70.73	2257.53	803.94	1.308e+04
256	7	9383.94	1161.79	4.07e-03	0.0	0.0	-1447.52	137.79	73.21	1445.35	67.38	7201.87
		7201.87	67.38	2.99e-03	0.0	15.0	-1402.52	137.79	73.21	1445.35	1161.79	9383.94
256	8	1.197e+04	911.29	5.11e-03	0.0	0.0	-1628.76	146.68	71.47	2013.88	-150.92	9619.64
		9619.64	-150.92	3.48e-03	0.0	15.0	-1583.76	146.68	71.47	2013.88	911.29	1.197e+04
256	9	9383.94	1161.79	4.07e-03	0.0	0.0	-1447.52	137.79	73.21	1445.35	67.38	7201.87
		7201.87	67.38	2.99e-03	0.0	15.0	-1402.52	137.79	73.21	1445.35	1161.79	9383.94
256	10	1.160e+04	947.08	4.96e-03	0.0	0.0	-1602.87	145.41	71.72	1932.66	-119.74	9274.24
		9274.24	-119.74	3.41e-03	0.0	15.0	-1557.87	145.41	71.72	1932.66	947.08	1.160e+04
257	2	1.445e+04	-1153.14	7.53e-03	0.0	0.0	-3037.52	-76.74	42.14	3416.80	-1727.12	1.445e+04
		1.350e+04	-1727.12	5.00e-03	0.0	15.0	-2979.02	-76.74	42.14	3416.80	-1153.14	1.350e+04
257	3	6105.53	-562.58	3.93e-03	0.0	0.0	-1943.93	-18.10	32.66	1561.56	-1027.85	6105.53
		5930.89	-1027.85	2.96e-03	0.0	15.0	-1898.93	-18.10	32.66	1561.56	-562.58	5930.89
257	5	6368.09	-579.58	4.03e-03	0.0	0.0	-1964.51	-20.25	32.65	1617.48	-1043.61	6368.09
		6164.39	-1043.61	3.00e-03	0.0	15.0	-1919.51	-20.25	32.65	1617.48	-579.58	6164.39
257	6	1.031e+04	-834.70	5.49e-03	0.0	0.0	-2273.23	-52.43	32.45	2456.25	-1280.05	1.031e+04
		9666.96	-1280.05	3.70e-03	0.0	15.0	-2228.23	-52.43	32.45	2456.25	-834.70	9666.96
257	7	6368.09	-579.58	4.03e-03	0.0	0.0	-1964.51	-20.25	32.65	1617.48	-1043.61	6368.09
		6164.39	-1043.61	3.00e-03	0.0	15.0	-1919.51	-20.25	32.65	1617.48	-579.58	6164.39
257	8	9124.92	-758.17	5.05e-03	0.0	0.0	-2180.62	-42.78	32.51	2204.62	-1209.12	9124.92
		8616.19	-1209.12	3.49e-03	0.0	15.0	-2135.62	-42.78	32.51	2204.62	-758.17	8616.19
257	9	6368.09	-579.58	4.03e-03	0.0	0.0	-1964.51	-20.25	32.65	1617.48	-1043.61	6368.09
		6164.39	-1043.61	3.00e-03	0.0	15.0	-1919.51	-20.25	32.65	1617.48	-579.58	6164.39
257	10	8731.09	-732.65	4.91e-03	0.0	0.0	-2149.74	-39.56	32.53	2120.74	-1185.48	8731.09
		8265.93	-1185.48	3.42e-03	0.0	15.0	-2104.74	-39.56	32.53	2120.74	-732.65	8265.93
258	1	1.814e+04	3760.84	5.43e-03	0.0	0.0	-1596.69	360.33	150.23	1809.72	1490.11	1.256e+04
		1.256e+04	1490.11	3.95e-03	0.0	15.0	-1538.19	360.33	150.23	1809.72	3760.84	1.814e+04
258	2	2.505e+04	3153.56	7.68e-03	0.0	0.0	-1968.80	442.19	146.25	2994.60	948.79	1.816e+04
		1.816e+04	948.79	4.98e-03	0.0	15.0	-1910.30	442.19	146.25	2994.60	3153.56	2.505e+04
258	3	1.341e+04	2940.71	4.00e-03	0.0	0.0	-1198.96	270.74	115.88	1298.92	1188.80	9220.40
		9220.40	1188.80	2.95e-03	0.0	15.0	-1153.96	270.74	115.88	1298.92	2940.71	1.341e+04
258	4	2.032e+04	2333.42	6.25e-03	0.0	0.0	-1571.07	352.60	111.90	2483.80	647.49	1.482e+04
		1.482e+04	647.49	3.99e-03	0.0	15.0	-1526.07	352.60	111.90	2483.80	2333.42	2.032e+04
258	5	1.371e+04	2913.72	4.10e-03	0.0	0.0	-1215.50	274.38	115.70	1351.58	1164.74	9469.33
		9469.33	1164.74	3.00e-03	0.0	15.0	-1170.50	274.38	115.70	1351.58	2913.72	1.371e+04
258	6	1.832e+04	2508.86	5.60e-03	0.0	0.0	-1463.57	328.95	113.05	2141.50	803.87	1.320e+04
		1.320e+04	803.87	3.69e-03	0.0	15.0	-1418.57	328.95	113.05	2141.50	2508.86	1.832e+04
258	7	1.371e+04	2913.72	4.10e-03	0.0	0.0	-1215.50	274.38	115.70	1351.58	1164.74	9469.33
		9469.33	1164.74	3.00e-03	0.0	15.0	-1170.50	274.38	115.70	1351.58	2913.72	1.371e+04
258	8	1.694e+04	2630.32	5.15e-03	0.0	0.0	-1389.15	312.58	113.84	1904.53	912.13	1.208e+04
		1.208e+04	912.13	3.48e-03	0.0	15.0	-1344.15	312.58	113.84	1904.53	2630.32	1.694e+04
258	9	1.371e+04	2913.72	4.10e-03	0.0	0.0	-1215.50	274.38	115.70	1351.58	1164.74	9469.33
		9469.33	1164.74	3.00e-03	0.0	15.0	-1170.50	274.38	115.70	1351.58	2913.72	1.371e+04
258	10	1.648e+04	2670.80	5.00e-03	0.0	0.0	-1364.34	307.12	114.11	1825.53	948.22	1.171e+04
		1.171e+04	948.22	3.41e-03	0.0	15.0	-1319.34	307.12	114.11	1825.53	2670.80	1.648e+04
259	2	1.377e+04	-868.05	3.78e-03	0.0	0.0	-2632.90	11.59	31.64	3318.26	-1170.62	1.358e+04
		1.358e+04	-1170.62	2.50e-03	0.0	7.5	-2603.65	11.59	31.64	3318.26	-868.05	1.377e+04
259	3	6234.33	-300.32	1.97e-03	0.0	0.0	-1680.23	28.52	30.89	1498.38	-569.62	5969.89
		5969.89	-569.62	1.48e-03	0.0	7.5	-1657.73	28.52	30.89	1498.38	-300.32	6234.33
259	5	6462.96	-319.58	2.02e-03	0.0	0.0	-1698.32	27.49	30.54	1553.63	-586.96	6204.60
		6204.60	-586.96	1.50e-03	0.0	7.5	-1675.82	27.49	30.54	1553.63	-319.58	6462.96
259	6	9892.50	-608.47	2.76e-03	0.0	0.0	-1969.65	12.08	25.40	2382.49	-847.11	9725.26
		9725.26	-847.11	1.85e-03	0.0	7.5	-1947.15	12.08	25.40	2382.49	-608.47	9892.50
259	7	6462.96	-319.58	2.02e-03	0.0	0.0	-1698.32	27.49	30.54	1553.63	-586.96	6204.60
		6204.60	-586.96	1.50e-03	0.0	7.5	-1675.82	27.49	30.54	1553.63	-319.58	6462.96
259	8	8863.64	-521.80	2.54e-03	0.0	0.0	-1888.25	16.70	26.94	2133.83	-769.07	8669.06
		8669.06	-769.07	1.74e-03	0.0	7.5	-1865.75	16.70	26.94	2133.83	-521.80	8863.64
259	9	6462.96	-319.58	2.02e-03	0.0	0.0	-1698.32	27.49	30.54	1553.63	-586.96	6204.60
		6204.60	-586.96	1.50e-03	0.0	7.5	-1675.82	27.49	30.54	1553.63	-319.58	6462.96
259	10	8520.68	-492.91	2.46e-03	0.0	0.0	-1861.12	18.24	27.45	2050.95	-743.05	8317.00
		8317.00	-743.05	1.71e-03	0.0	7.5	-1838.62	18.24	27.45	2050.95	-492.91	8520.68
260	1	2.804e+04	7260.59	5.48e-03	0.0	0.0	-1335.18	631.83	229.35	1720.83	3778.70	1.833e+04
		1.833e+04	3778.70	3.97e-03	0.0	15.0	-1276.68	631.83	229.35	1720.83	7260.59	2.804e+04

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

260	2	3.795e+04	6625.03	7.75e-03	0.0	0.0	-1702.44	818.34	227.51	2874.25	3170.63	2.533e+04
		2.533e+04	3170.63	5.00e-03	0.0	15.0	-1643.94	818.34	227.51	2874.25	6625.03	3.795e+04
260	3	2.079e+04	5635.05	4.04e-03	0.0	0.0	-998.18	471.36	176.57	1233.02	2954.51	1.355e+04
		1.355e+04	2954.51	2.97e-03	0.0	15.0	-953.18	471.36	176.57	1233.02	5635.05	2.079e+04
260	4	3.070e+04	4999.48	6.31e-03	0.0	0.0	-1365.45	657.87	174.73	2386.44	2346.43	2.055e+04
		2.055e+04	2346.43	4.00e-03	0.0	15.0	-1320.45	657.87	174.73	2386.44	4999.48	3.070e+04
260	5	2.123e+04	5606.80	4.14e-03	0.0	0.0	-1014.51	479.64	176.49	1284.28	2927.48	1.386e+04
		1.386e+04	2927.48	3.02e-03	0.0	15.0	-969.51	479.64	176.49	1284.28	5606.80	2.123e+04
260	6	2.784e+04	5183.09	5.65e-03	0.0	0.0	-1259.35	603.99	175.26	2053.23	2522.10	1.853e+04
		1.853e+04	2522.10	3.70e-03	0.0	15.0	-1214.35	603.99	175.26	2053.23	5183.09	2.784e+04
260	7	2.123e+04	5606.80	4.14e-03	0.0	0.0	-1014.51	479.64	176.49	1284.28	2927.48	1.386e+04
		1.386e+04	2927.48	3.02e-03	0.0	15.0	-969.51	479.64	176.49	1284.28	5606.80	2.123e+04
260	8	2.585e+04	5310.20	5.20e-03	0.0	0.0	-1185.90	566.68	175.63	1822.55	2643.71	1.713e+04
		1.713e+04	2643.71	3.50e-03	0.0	15.0	-1140.90	566.68	175.63	1822.55	5310.20	2.585e+04
260	9	2.123e+04	5606.80	4.14e-03	0.0	0.0	-1014.51	479.64	176.49	1284.28	2927.48	1.386e+04
		1.386e+04	2927.48	3.02e-03	0.0	15.0	-969.51	479.64	176.49	1284.28	5606.80	2.123e+04
260	10	2.519e+04	5352.57	5.05e-03	0.0	0.0	-1161.41	554.25	175.75	1745.65	2684.25	1.666e+04
		1.666e+04	2684.25	3.43e-03	0.0	15.0	-1116.41	554.25	175.75	1745.65	5352.57	2.519e+04

Pilas.	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	N	V 2	V 3	T
	-4.192e+05	-2.624e+04	-0.01	0.0	-2.593e+04	-2565.51	-671.48	-1.349e+04
	2.169e+05	3.078e+04	7.75e-03	0.0	945.78	4851.08	611.06	6040.76

Trave	Cmb	M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3	Pos.	N	V 2	V 3	T	M 2	M 3
		daN cm	daN cm	cm	daN	cm	daN	daN	daN	daN cm	daN cm	daN cm
3	1	7.779e+04	997.05	0.03	-2720.60	0.0	463.97	1713.44	-23.94	4888.58	997.05	1.197e+04
		1.197e+04	-281.84	7.34e-03	0.0	122.0	463.97	-1007.16	-23.94	4888.58	-281.84	5.505e+04
3	2	1.095e+05	1421.21	0.05	-3983.30	0.0	526.57	2472.55	-30.05	6421.39	1421.21	1.593e+04
		1.593e+04	-85.11	9.56e-03	0.0	122.0	526.57	-1510.75	-30.05	6421.39	-85.11	7.460e+04
3	3	5.734e+04	733.61	0.02	-1993.48	0.0	351.98	1258.34	-17.93	3639.92	733.61	8893.01
		8893.01	-232.27	5.47e-03	0.0	122.0	351.98	-735.14	-17.93	3639.92	-232.27	4.081e+04
3	5	5.875e+04	752.46	0.02	-2049.60	0.0	354.76	1292.08	-18.20	3708.04	752.46	9069.12
		9069.12	-223.53	5.57e-03	0.0	122.0	354.76	-757.52	-18.20	3708.04	-223.53	4.168e+04
3	6	7.992e+04	1035.23	0.03	-2891.40	0.0	396.49	1798.15	-22.28	4729.92	1035.23	1.171e+04
		1.171e+04	-92.37	7.05e-03	0.0	122.0	396.49	-1093.25	-22.28	4729.92	-92.37	5.471e+04
3	7	5.875e+04	752.46	0.02	-2049.60	0.0	354.76	1292.08	-18.20	3708.04	752.46	9069.12
		9069.12	-223.53	5.57e-03	0.0	122.0	354.76	-757.52	-18.20	3708.04	-223.53	4.168e+04
3	8	7.357e+04	950.40	0.03	-2638.86	0.0	383.97	1646.33	-21.06	4423.35	950.40	1.092e+04
		1.092e+04	-131.72	6.61e-03	0.0	122.0	383.97	-992.53	-21.06	4423.35	-131.72	5.080e+04
3	9	5.875e+04	752.46	0.02	-2049.60	0.0	354.76	1292.08	-18.20	3708.04	752.46	9069.12
		9069.12	-223.53	5.57e-03	0.0	122.0	354.76	-757.52	-18.20	3708.04	-223.53	4.168e+04
3	10	7.145e+04	922.12	0.03	-2554.68	0.0	379.80	1595.72	-20.65	4321.17	922.12	1.065e+04
		1.065e+04	-144.84	6.46e-03	0.0	122.0	379.80	-958.96	-20.65	4321.17	-144.84	4.950e+04
6	2	2.037e+04	244.03	-0.11	-3983.30	0.0	5856.33	2543.69	35.56	3921.31	-5979.46	-7.867e+04
		-7.867e+04	-5979.46	-3.92e-04	0.0	122.0	5856.33	-1439.61	35.56	3921.31	244.03	-1.32e+04
6	3	9720.32	-43.97	-0.06	-1993.48	0.0	3048.92	1312.26	16.83	1832.78	-3126.46	-4.287e+04
		-4.287e+04	-3126.46	-1.43e-04	0.0	122.0	3048.92	-681.22	16.83	1832.78	-43.97	-4376.15
6	5	1.001e+04	-31.83	-0.06	-2049.60	0.0	3125.24	1346.04	17.38	1894.82	-3203.68	-4.379e+04
		-4.379e+04	-3203.68	-1.52e-04	0.0	122.0	3125.24	-703.56	17.38	1894.82	-31.83	-4603.30
6	6	1.471e+04	150.35	-0.08	-2891.40	0.0	4270.04	1852.74	25.66	2825.49	-4361.99	-5.767e+04
		-5.767e+04	-4361.99	-2.76e-04	0.0	122.0	4270.04	-1038.66	25.66	2825.49	150.35	-8010.49
6	7	1.001e+04	-31.83	-0.06	-2049.60	0.0	3125.24	1346.04	17.38	1894.82	-3203.68	-4.379e+04
		-4.379e+04	-3203.68	-1.52e-04	0.0	122.0	3125.24	-703.56	17.38	1894.82	-31.83	-4603.30
6	8	1.329e+04	95.70	-0.07	-2638.86	0.0	3926.60	1700.73	23.17	2546.29	-4014.49	-5.351e+04
		-5.351e+04	-4014.49	-2.39e-04	0.0	122.0	3926.60	-938.13	23.17	2546.29	95.70	-6988.33
6	9	1.001e+04	-31.83	-0.06	-2049.60	0.0	3125.24	1346.04	17.38	1894.82	-3203.68	-4.379e+04
		-4.379e+04	-3203.68	-1.52e-04	0.0	122.0	3125.24	-703.56	17.38	1894.82	-31.83	-4603.30
6	10	1.282e+04	77.48	-0.07	-2554.68	0.0	3812.12	1650.06	22.35	2453.22	-3898.66	-5.212e+04
		-5.212e+04	-3898.66	-2.26e-04	0.0	122.0	3812.12	-904.62	22.35	2453.22	77.48	-6647.61
7	1	-5892.96	1.650e+04	2.43e-04	-179.40	0.0	1583.54	286.08	-317.13	1.331e+04	1.650e+04	-1.493e+04
		-1.493e+04	4039.96	1.03e-03	0.0	46.0	1583.54	106.68	-317.13	1.331e+04	4039.96	-5892.96
7	2	-7714.16	2.199e+04	2.51e-04	-179.40	0.0	1770.44	214.01	-431.01	1.813e+04	2.199e+04	-1.343e+04
		-1.343e+04	5064.78	1.44e-03	0.0	46.0	1770.44	34.61	-431.01	1.813e+04	5064.78	-7714.16
7	3	-4389.84	1.226e+04	1.86e-04	-138.00	0.0	1203.41	225.73	-234.99	9859.42	1.226e+04	-1.160e+04
		-1.160e+04	3027.07	7.60e-04	0.0	46.0	1203.41	87.73	-234.99	9859.42	3027.07	-4389.84

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

7	5	-4470.78	1.251e+04	1.87e-04	-138.00	0.0	1211.72	222.53	-240.06	1.007e+04	1.251e+04	-1.153e+04
		-1.153e+04	3072.62	7.79e-04	0.0	46.0	1211.72	84.53	-240.06	1.007e+04	3072.62	-4470.78
7	6	-5684.92	1.616e+04	1.92e-04	-138.00	0.0	1336.32	174.48	-315.98	1.329e+04	1.616e+04	-1.054e+04
		-1.054e+04	3755.84	1.05e-03	0.0	46.0	1336.32	36.48	-315.98	1.329e+04	3755.84	-5684.92
7	7	-4470.78	1.251e+04	1.87e-04	-138.00	0.0	1211.72	222.53	-240.06	1.007e+04	1.251e+04	-1.153e+04
		-1.153e+04	3072.62	7.79e-04	0.0	46.0	1211.72	84.53	-240.06	1.007e+04	3072.62	-4470.78
7	8	-5320.68	1.507e+04	1.90e-04	-138.00	0.0	1298.94	188.90	-293.20	1.232e+04	1.507e+04	-1.084e+04
		-1.084e+04	3550.87	9.69e-04	0.0	46.0	1298.94	50.90	-293.20	1.232e+04	3550.87	-5320.68
7	9	-4470.78	1.251e+04	1.87e-04	-138.00	0.0	1211.72	222.53	-240.06	1.007e+04	1.251e+04	-1.153e+04
		-1.153e+04	3072.62	7.79e-04	0.0	46.0	1211.72	84.53	-240.06	1.007e+04	3072.62	-4470.78
7	10	-5199.26	1.470e+04	1.90e-04	-138.00	0.0	1286.48	193.70	-285.61	1.200e+04	1.470e+04	-1.094e+04
		-1.094e+04	3482.55	9.41e-04	0.0	46.0	1286.48	55.70	-285.61	1.200e+04	3482.55	-5199.26
8	2	-1856.60	-3883.25	0.02	-179.40	0.0	1090.19	22.23	211.21	-171.13	-1.289e+04	-1920.04
		-5022.97	-1.289e+04	1.93e-03	0.0	46.0	1090.19	-157.17	211.21	-171.13	-3883.25	-5022.97
8	3	-2464.31	-2285.65	9.06e-03	-138.00	0.0	729.07	90.60	111.77	213.17	-7090.99	-3829.53
		-3829.53	-7090.99	1.11e-03	0.0	46.0	729.07	-47.40	111.77	213.17	-2285.65	-2835.63
8	4	-1054.81	-3112.98	0.01	-138.00	0.0	858.26	3.91	171.57	-193.51	-1.043e+04	-1054.81
		-4048.31	-1.043e+04	1.56e-03	0.0	46.0	858.26	-134.09	171.57	-193.51	-3112.98	-4048.31
8	5	-2451.88	-2322.42	9.22e-03	-138.00	0.0	734.81	86.74	114.43	195.10	-7239.24	-3706.21
		-3706.21	-7239.24	1.13e-03	0.0	46.0	734.81	-51.26	114.43	195.10	-2322.42	-2889.53
8	6	-1718.16	-2873.97	0.01	-138.00	0.0	820.94	28.95	154.29	-76.02	-9463.05	-1856.40
		-3697.98	-9463.05	1.43e-03	0.0	46.0	820.94	-109.05	154.29	-76.02	-2873.97	-3697.98
8	7	-2451.88	-2322.42	9.22e-03	-138.00	0.0	734.81	86.74	114.43	195.10	-7239.24	-3706.21
		-3706.21	-7239.24	1.13e-03	0.0	46.0	734.81	-51.26	114.43	195.10	-2322.42	-2889.53
8	8	-2054.31	-2708.51	0.01	-138.00	0.0	795.10	46.29	142.33	5.31	-8795.91	-2411.34
		-3455.45	-8795.91	1.34e-03	0.0	46.0	795.10	-91.71	142.33	5.31	-2708.51	-3455.45
8	9	-2451.88	-2322.42	9.22e-03	-138.00	0.0	734.81	86.74	114.43	195.10	-7239.24	-3706.21
		-3706.21	-7239.24	1.13e-03	0.0	46.0	734.81	-51.26	114.43	195.10	-2322.42	-2889.53
8	10	-2144.27	-2653.35	0.01	-138.00	0.0	786.49	52.07	138.35	32.43	-8573.53	-2596.32
		-3374.60	-8573.53	1.31e-03	0.0	46.0	786.49	-85.93	138.35	32.43	-2653.35	-3374.60
9	1	5994.94	853.19	0.01	0.0	0.0	12.10	20.28	14.71	-9913.64	778.03	5061.64
		5061.64	778.03	1.25e-03	0.0	46.0	12.10	20.28	14.71	-9913.64	853.19	5994.94
9	2	5545.69	1247.39	0.02	0.0	0.0	210.55	25.67	19.16	-1.469e+04	1247.39	4364.21
		4364.21	1240.53	1.67e-03	0.0	46.0	210.55	25.67	19.16	-1.469e+04	1240.53	5545.69
9	3	4646.82	625.84	9.11e-03	0.0	0.0	-6.30	15.18	10.97	-7250.07	561.57	3948.41
		3948.41	561.57	9.27e-04	0.0	46.0	-6.30	15.18	10.97	-7250.07	625.84	4646.82
9	4	4197.57	1030.93	0.01	0.0	0.0	192.15	20.57	15.41	-1.203e+04	1030.93	3250.98
		3250.98	1013.18	1.35e-03	0.0	46.0	192.15	20.57	15.41	-1.203e+04	1013.18	4197.57
9	5	4626.85	643.05	9.26e-03	0.0	0.0	2.52	15.42	11.17	-7462.48	582.44	3917.42
		3917.42	582.44	9.45e-04	0.0	46.0	2.52	15.42	11.17	-7462.48	643.05	4626.85
9	6	4327.35	901.28	0.01	0.0	0.0	134.82	19.01	14.13	-1.065e+04	895.34	3452.46
		3452.46	895.34	1.23e-03	0.0	46.0	134.82	19.01	14.13	-1.065e+04	901.28	4327.35
9	7	4626.85	643.05	9.26e-03	0.0	0.0	2.52	15.42	11.17	-7462.48	582.44	3917.42
		3917.42	582.44	9.45e-04	0.0	46.0	2.52	15.42	11.17	-7462.48	643.05	4626.85
9	8	4417.20	823.81	0.01	0.0	0.0	95.13	17.93	13.24	-9692.82	801.47	3591.95
		3591.95	801.47	1.14e-03	0.0	46.0	95.13	17.93	13.24	-9692.82	823.81	4417.20
9	9	4626.85	643.05	9.26e-03	0.0	0.0	2.52	15.42	11.17	-7462.48	582.44	3917.42
		3917.42	582.44	9.45e-04	0.0	46.0	2.52	15.42	11.17	-7462.48	643.05	4626.85
9	10	4447.15	797.99	0.01	0.0	0.0	81.90	17.57	12.94	-9374.20	770.18	3638.44
		3638.44	770.18	1.12e-03	0.0	46.0	81.90	17.57	12.94	-9374.20	797.99	4447.15
10	2	4.383e+04	1840.45	0.04	-3983.30	0.0	4404.68	2628.94	-23.63	4891.76	1840.45	-6.182e+04
		-6.182e+04	524.90	8.98e-03	0.0	122.0	4404.68	-1354.36	-23.63	4891.76	524.90	1.593e+04
10	3	2.179e+04	1037.37	0.02	-1993.48	0.0	2528.43	1343.66	-13.97	2784.24	1037.37	-3.343e+04
		-3.343e+04	224.77	5.18e-03	0.0	122.0	2528.43	-649.82	-13.97	2784.24	224.77	8892.57
10	5	2.242e+04	1057.20	0.02	-2049.60	0.0	2573.50	1379.23	-14.19	2835.54	1057.20	-3.417e+04
		-3.417e+04	234.15	5.27e-03	0.0	122.0	2573.50	-670.37	-14.19	2835.54	234.15	9068.67
10	6	3.179e+04	1354.70	0.03	-2891.40	0.0	3249.54	1912.81	-17.50	3605.05	1354.70	-4.528e+04
		-4.528e+04	374.90	6.63e-03	0.0	122.0	3249.54	-978.59	-17.50	3605.05	374.90	1.171e+04
10	7	2.242e+04	1057.20	0.02	-2049.60	0.0	2573.50	1379.23	-14.19	2835.54	1057.20	-3.417e+04
		-3.417e+04	234.15	5.27e-03	0.0	122.0	2573.50	-670.37	-14.19	2835.54	234.15	9068.67
10	8	2.898e+04	1265.45	0.03	-2638.86	0.0	3046.72	1752.73	-16.50	3374.19	1265.45	-4.195e+04
		-4.195e+04	332.68	6.22e-03	0.0	122.0	3046.72	-886.13	-16.50	3374.19	332.68	1.092e+04
10	9	2.242e+04	1057.20	0.02	-2049.60	0.0	2573.50	1379.23	-14.19	2835.54	1057.20	-3.417e+04
		-3.417e+04	234.15	5.27e-03	0.0	122.0	2573.50	-670.37	-14.19	2835.54	234.15	9068.67
10	10	2.804e+04	1235.70	0.03	-2554.68	0.0	2979.12	1699.38	-16.17	3297.24	1235.70	-4.084e+04
		-4.084e+04	318.60	6.09e-03	0.0	122.0	2979.12	-855.30	-16.17	3297.24	318.60	1.065e+04

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

21	2	3.179e+04	-789.42	0.05	-3983.30	0.0	3926.92	1279.20	-91.35	3656.41	-789.42	6753.53
		-8.016e+04	-1.067e+04	7.94e-03	0.0	122.0	3926.92	-2704.10	-91.35	3656.41	-1.067e+04	-8.016e+04
21	3	1.571e+04	-572.84	0.03	-1993.48	0.0	2050.59	614.12	-51.76	1939.10	-572.84	4168.38
		-4.251e+04	-6148.17	4.54e-03	0.0	122.0	2050.59	-1379.36	-51.76	1939.10	-6148.17	-4.251e+04
21	5	1.617e+04	-574.64	0.03	-2049.60	0.0	2101.44	633.51	-52.73	1984.89	-574.64	4222.20
		-4.352e+04	-6256.02	4.62e-03	0.0	122.0	2101.44	-1416.09	-52.73	1984.89	-6256.02	-4.352e+04
21	6	2.305e+04	-601.70	0.04	-2891.40	0.0	2864.23	924.34	-67.28	2671.73	-601.70	5029.44
		-5.858e+04	-7873.69	5.86e-03	0.0	122.0	2864.23	-1967.06	-67.28	2671.73	-7873.69	-5.858e+04
21	7	1.617e+04	-574.64	0.03	-2049.60	0.0	2101.44	633.51	-52.73	1984.89	-574.64	4222.20
		-4.352e+04	-6256.02	4.62e-03	0.0	122.0	2101.44	-1416.09	-52.73	1984.89	-6256.02	-4.352e+04
21	8	2.098e+04	-593.58	0.03	-2638.86	0.0	2635.40	837.09	-62.92	2465.68	-593.58	4787.27
		-5.406e+04	-7388.39	5.49e-03	0.0	122.0	2635.40	-1801.77	-62.92	2465.68	-7388.39	-5.406e+04
21	9	1.617e+04	-574.64	0.03	-2049.60	0.0	2101.44	633.51	-52.73	1984.89	-574.64	4222.20
		-4.352e+04	-6256.02	4.62e-03	0.0	122.0	2101.44	-1416.09	-52.73	1984.89	-6256.02	-4.352e+04
21	10	2.029e+04	-590.88	0.03	-2554.68	0.0	2559.12	808.01	-61.46	2396.99	-590.88	4706.54
		-5.255e+04	-7226.62	5.36e-03	0.0	122.0	2559.12	-1746.67	-61.46	2396.99	-7226.62	-5.255e+04
24	2	4.299e+04	941.11	7.06e-03	-3983.30	0.0	-2981.68	1347.12	-15.85	2708.17	941.11	1.536e+04
		-6.327e+04	-99.47	4.71e-03	0.0	122.0	-2981.68	-2636.18	-15.85	2708.17	-99.47	-6.327e+04
24	3	2.106e+04	624.31	4.14e-03	-1993.48	0.0	-1351.93	643.22	-9.03	1534.48	624.31	8408.87
		-3.472e+04	28.01	2.65e-03	0.0	122.0	-1351.93	-1350.26	-9.03	1534.48	28.01	-3.472e+04
24	5	2.169e+04	629.53	4.21e-03	-2049.60	0.0	-1401.29	663.82	-9.20	1563.24	629.53	8587.43
		-3.545e+04	22.53	2.70e-03	0.0	122.0	-1401.29	-1385.78	-9.20	1563.24	22.53	-3.545e+04
24	6	3.113e+04	707.87	5.22e-03	-2891.40	0.0	-2141.72	972.85	-11.68	1994.70	707.87	1.127e+04
		-4.642e+04	-59.66	3.47e-03	0.0	122.0	-2141.72	-1918.55	-11.68	1994.70	-59.66	-4.642e+04
24	7	2.169e+04	629.53	4.21e-03	-2049.60	0.0	-1401.29	663.82	-9.20	1563.24	629.53	8587.43
		-3.545e+04	22.53	2.70e-03	0.0	122.0	-1401.29	-1385.78	-9.20	1563.24	22.53	-3.545e+04
24	8	2.830e+04	684.37	4.92e-03	-2638.86	0.0	-1919.59	880.14	-10.94	1865.26	684.37	1.046e+04
		-4.313e+04	-35.00	3.24e-03	0.0	122.0	-1919.59	-1758.72	-10.94	1865.26	-35.00	-4.313e+04
24	9	2.169e+04	629.53	4.21e-03	-2049.60	0.0	-1401.29	663.82	-9.20	1563.24	629.53	8587.43
		-3.545e+04	22.53	2.70e-03	0.0	122.0	-1401.29	-1385.78	-9.20	1563.24	22.53	-3.545e+04
24	10	2.735e+04	676.53	4.82e-03	-2554.68	0.0	-1845.55	849.24	-10.69	1822.12	676.53	1.019e+04
		-4.203e+04	-26.78	3.16e-03	0.0	122.0	-1845.55	-1705.44	-10.69	1822.12	-26.78	-4.203e+04
25	2	1.085e+05	1503.59	-0.10	-3983.30	0.0	-2244.23	2798.33	2.36	1878.67	1503.59	8.709e+04
		-1.132e+04	681.04	-4.47e-04	0.0	122.0	-2244.23	-1184.97	2.36	1878.67	681.04	-1.132e+04
25	3	5.911e+04	708.44	-0.06	-1993.48	0.0	-1518.47	1441.41	2.14	918.60	708.44	4.987e+04
		-4377.41	185.25	-2.74e-04	0.0	122.0	-1518.47	-552.07	2.14	918.60	185.25	-4377.41
25	5	6.037e+04	731.94	-0.06	-2049.60	0.0	-1529.36	1478.69	2.12	946.20	731.94	5.077e+04
		-4604.58	203.00	-2.78e-04	0.0	122.0	-1529.36	-570.91	2.12	946.20	203.00	-4604.58
25	6	7.955e+04	1084.33	-0.08	-2891.40	0.0	-1692.80	2037.86	1.86	1360.21	1084.33	6.423e+04
		-8012.21	469.26	-3.33e-04	0.0	122.0	-1692.80	-853.54	1.86	1360.21	469.26	-8012.21
25	7	6.037e+04	731.94	-0.06	-2049.60	0.0	-1529.36	1478.69	2.12	946.20	731.94	5.077e+04
		-4604.58	203.00	-2.78e-04	0.0	122.0	-1529.36	-570.91	2.12	946.20	203.00	-4604.58
25	8	7.378e+04	978.61	-0.07	-2638.86	0.0	-1643.77	1870.11	1.94	1236.01	978.61	6.989e+04
		-6989.92	389.38	-3.16e-04	0.0	122.0	-1643.77	-768.75	1.94	1236.01	389.38	-6989.92
25	9	6.037e+04	731.94	-0.06	-2049.60	0.0	-1529.36	1478.69	2.12	946.20	731.94	5.077e+04
		-4604.58	203.00	-2.78e-04	0.0	122.0	-1529.36	-570.91	2.12	946.20	203.00	-4604.58
25	10	7.186e+04	943.37	-0.07	-2554.68	0.0	-1627.43	1814.19	1.97	1194.61	943.37	5.885e+04
		-6649.16	362.76	-3.11e-04	0.0	122.0	-1627.43	-740.49	1.97	1194.61	362.76	-6649.16
26	1	2648.77	5367.89	-1.02e-05	-179.40	0.0	1109.57	275.39	-177.60	1.971e+04	5367.89	-5892.95
		-5892.95	26.28	1.38e-03	0.0	46.0	1109.57	95.99	-177.60	1.971e+04	26.28	-5892.95
26	2	842.82	6876.99	-8.92e-05	-179.40	0.0	1334.00	275.72	-240.66	2.689e+04	6876.99	-7714.16
		-7714.16	-333.85	1.88e-03	0.0	46.0	1334.00	96.32	-240.66	2.689e+04	-333.85	-7714.16
26	3	2179.52	4010.48	-3.77e-06	-138.00	0.0	835.87	211.81	-131.66	1.459e+04	4010.48	-4389.83
		-4389.83	48.53	1.02e-03	0.0	46.0	835.87	73.81	-131.66	1.459e+04	48.53	-4389.83
26	5	2099.25	4077.55	-5.96e-06	-138.00	0.0	845.85	211.83	-134.46	1.491e+04	4077.55	-4470.77
		-4470.77	32.53	1.04e-03	0.0	46.0	845.85	73.83	-134.46	1.491e+04	32.53	-4470.77
26	6	895.29	5083.62	-5.73e-05	-138.00	0.0	995.46	212.05	-176.50	1.970e+04	5083.62	-5684.91
		-5684.91	-207.56	1.37e-03	0.0	46.0	995.46	74.05	-176.50	1.970e+04	-207.56	-5684.91
26	7	2099.25	4077.55	-5.96e-06	-138.00	0.0	845.85	211.83	-134.46	1.491e+04	4077.55	-4470.77
		-4470.77	32.53	1.04e-03	0.0	46.0	845.85	73.83	-134.46	1.491e+04	32.53	-4470.77
26	8	1256.48	4781.80	-4.07e-05	-138.00	0.0	950.58	211.98	-163.89	1.827e+04	4781.80	-5320.67
		-5320.67	-135.53	1.27e-03	0.0	46.0	950.58	73.98	-163.89	1.827e+04	-135.53	-5320.67
26	9	2099.25	4077.55	-5.96e-06	-138.00	0.0	845.85	211.83	-134.46	1.491e+04	4077.55	-4470.77
		-4470.77	32.53	1.04e-03	0.0	46.0	845.85	73.83	-134.46	1.491e+04	32.53	-4470.77
26	10	1376.87	4681.19	-3.52e-05	-138.00	0.0	935.61	211.96	-159.68	1.779e+04	4681.19	-5199.26
		-5199.26	-111.52	1.24e-03	0.0	46.0	935.61	73.96	-159.68	1.779e+04	-111.52	-5199.26

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

27	1	-6343.86	7782.70	0.01	-179.40	0.0	1059.71	-17.50	73.04	-1.144e+04	5205.34	-6343.86
		-1.127e+04	5205.34	1.87e-03	0.0	46.0	1059.71	-196.90	73.04	-1.144e+04	7782.70	-1.127e+04
27	2	-7695.22	1.120e+04	0.02	-179.40	0.0	1275.66	22.18	113.81	-1.687e+04	7159.64	-7758.53
		-1.086e+04	7159.64	2.52e-03	0.0	46.0	1275.66	-157.22	113.81	-1.687e+04	1.120e+04	-1.086e+04
27	3	-4768.65	5717.67	9.41e-03	-138.00	0.0	798.18	-16.58	52.98	-8372.79	3850.44	-4768.65
		-8704.29	3850.44	1.39e-03	0.0	46.0	798.18	-154.58	52.98	-8372.79	5717.67	-8704.29
27	5	-4831.53	5869.73	9.55e-03	-138.00	0.0	807.78	-14.82	54.79	-8614.02	3937.29	-4831.53
		-8686.02	3937.29	1.42e-03	0.0	46.0	807.78	-152.82	54.79	-8614.02	5869.73	-8686.02
27	6	-5753.50	8150.51	0.01	-138.00	0.0	951.75	11.64	81.97	-1.223e+04	5240.16	-5774.64
		-8411.96	5240.16	1.85e-03	0.0	46.0	951.75	-126.36	81.97	-1.223e+04	8150.51	-8411.96
27	7	-4831.53	5869.73	9.55e-03	-138.00	0.0	807.78	-14.82	54.79	-8614.02	3937.29	-4831.53
		-8686.02	3937.29	1.42e-03	0.0	46.0	807.78	-152.82	54.79	-8614.02	5869.73	-8686.02
27	8	-5491.71	7466.28	0.01	-138.00	0.0	908.56	3.70	73.82	-1.115e+04	4849.30	-5491.71
		-8494.18	4849.30	1.72e-03	0.0	46.0	908.56	-134.30	73.82	-1.115e+04	7466.28	-8494.18
27	9	-4831.53	5869.73	9.55e-03	-138.00	0.0	807.78	-14.82	54.79	-8614.02	3937.29	-4831.53
		-8686.02	3937.29	1.42e-03	0.0	46.0	807.78	-152.82	54.79	-8614.02	5869.73	-8686.02
27	10	-5397.39	7238.20	0.01	-138.00	0.0	894.16	1.06	71.10	-1.079e+04	4719.01	-5397.39
		-8521.58	4719.01	1.68e-03	0.0	46.0	894.16	-136.94	71.10	-1.079e+04	7238.20	-8521.58
29	2	-2654.07	7915.29	0.02	0.0	0.0	949.58	-111.05	71.59	-1.699e+04	5438.32	-2654.07
		-7761.73	5438.32	2.25e-03	0.0	46.0	949.58	-111.05	71.59	-1.699e+04	7915.29	-7761.73
29	3	-852.20	4225.51	9.50e-03	0.0	0.0	539.73	-85.19	36.18	-8317.51	2948.12	-852.20
		-4770.57	2948.12	1.24e-03	0.0	46.0	539.73	-85.19	36.18	-8317.51	4225.51	-4770.57
29	5	-914.55	4323.17	9.64e-03	0.0	0.0	549.73	-85.20	37.17	-8566.62	3012.87	-914.55
		-4833.47	3012.87	1.26e-03	0.0	46.0	549.73	-85.20	37.17	-8566.62	4323.17	-4833.47
29	6	-1849.76	5788.18	0.01	0.0	0.0	699.69	-85.38	52.02	-1.230e+04	3984.10	-1849.76
		-5777.01	3984.10	1.65e-03	0.0	46.0	699.69	-85.38	52.02	-1.230e+04	5788.18	-5777.01
29	7	-914.55	4323.17	9.64e-03	0.0	0.0	549.73	-85.20	37.17	-8566.62	3012.87	-914.55
		-4833.47	3012.87	1.26e-03	0.0	46.0	549.73	-85.20	37.17	-8566.62	4323.17	-4833.47
29	8	-1569.19	5348.68	0.01	0.0	0.0	654.70	-85.33	47.57	-1.118e+04	3692.73	-1569.19
		-5493.95	3692.73	1.53e-03	0.0	46.0	654.70	-85.33	47.57	-1.118e+04	5348.68	-5493.95
29	9	-914.55	4323.17	9.64e-03	0.0	0.0	549.73	-85.20	37.17	-8566.62	3012.87	-914.55
		-4833.47	3012.87	1.26e-03	0.0	46.0	549.73	-85.20	37.17	-8566.62	4323.17	-4833.47
29	10	-1475.67	5202.17	0.01	0.0	0.0	639.70	-85.31	46.08	-1.081e+04	3595.61	-1475.67
		-5399.60	3595.61	1.49e-03	0.0	46.0	639.70	-85.31	46.08	-1.081e+04	5202.17	-5399.60
33	2	3.039e+04	-416.94	-0.03	-3983.30	0.0	7398.84	2744.80	59.94	4435.58	-9036.61	-8.498e+04
		-8.498e+04	-9036.61	6.63e-04	0.0	122.0	7398.84	-1238.50	59.94	4435.58	-416.94	6899.67
33	3	1.478e+04	-393.19	-0.02	-1993.48	0.0	3945.34	1405.84	33.63	2788.63	-5232.97	-4.566e+04
		-4.566e+04	-5232.97	2.90e-04	0.0	122.0	3945.34	-587.64	33.63	2788.63	-393.19	4246.48
33	4	2.492e+04	-307.72	-0.03	-3256.18	0.0	6004.72	2237.98	48.35	3523.83	-7259.55	-6.891e+04
		-6.891e+04	-7259.55	5.53e-04	0.0	122.0	6004.72	-1018.20	48.35	3523.83	-307.72	5497.81
33	5	1.523e+04	-389.39	-0.02	-2049.60	0.0	4036.87	1442.82	34.28	2821.30	-5323.04	-4.670e+04
		-4.670e+04	-5323.04	3.01e-04	0.0	122.0	4036.87	-606.78	34.28	2821.30	-389.39	4302.09
33	6	2.199e+04	-332.41	-0.02	-2891.40	0.0	5409.79	1997.58	44.09	3311.44	-6674.10	-6.219e+04
		-6.219e+04	-6674.10	4.73e-04	0.0	122.0	5409.79	-893.82	44.09	3311.44	-332.41	5136.32
33	7	1.523e+04	-389.39	-0.02	-2049.60	0.0	4036.87	1442.82	34.28	2821.30	-5323.04	-4.670e+04
		-4.670e+04	-5323.04	3.01e-04	0.0	122.0	4036.87	-606.78	34.28	2821.30	-389.39	4302.09
33	8	1.996e+04	-349.51	-0.02	-2638.86	0.0	4997.91	1831.16	41.15	3164.40	-6268.78	-5.754e+04
		-5.754e+04	-6268.78	4.19e-04	0.0	122.0	4997.91	-807.70	41.15	3164.40	-349.51	4886.05
33	9	1.523e+04	-389.39	-0.02	-2049.60	0.0	4036.87	1442.82	34.28	2821.30	-5323.04	-4.670e+04
		-4.670e+04	-5323.04	3.01e-04	0.0	122.0	4036.87	-606.78	34.28	2821.30	-389.39	4302.09
33	10	1.928e+04	-355.20	-0.02	-2554.68	0.0	4860.62	1775.68	40.17	3115.38	-6133.68	-5.599e+04
		-5.599e+04	-6133.68	4.02e-04	0.0	122.0	4860.62	-779.00	40.17	3115.38	-355.20	4802.63
39	2	1.033e+05	1195.18	0.07	-3983.30	0.0	-1148.05	1374.14	-42.42	6996.29	1195.18	7.460e+04
		-736.27	-1479.75	9.82e-03	0.0	122.0	-1148.05	-2609.16	-42.42	6996.29	-1479.75	-736.27
39	3	5.486e+04	489.01	0.03	-1993.48	0.0	-663.49	680.06	-24.61	4009.66	489.01	4.081e+04
		2174.86	-1092.59	5.52e-03	0.0	122.0	-663.49	-1313.42	-24.61	4009.66	-1092.59	2174.86
39	4	8.388e+04	996.59	0.05	-3256.18	0.0	-922.52	1124.67	-34.07	5627.96	996.59	6.036e+04
		-1058.23	-1146.46	7.92e-03	0.0	122.0	-922.52	-2131.51	-34.07	5627.96	-1146.46	-1058.23
39	5	5.615e+04	511.57	0.03	-2049.60	0.0	-675.00	699.82	-25.03	4081.59	511.57	4.168e+04
		2031.17	-1094.99	5.62e-03	0.0	122.0	-675.00	-1349.78	-25.03	4081.59	-1094.99	2031.17
39	6	7.549e+04	849.96	0.05	-2891.40	0.0	-847.69	996.23	-31.34	5160.45	849.96	5.471e+04
		-124.23	-1130.90	7.22e-03	0.0	122.0	-847.69	-1895.17	-31.34	5160.45	-1130.90	-124.23
39	7	5.615e+04	511.57	0.03	-2049.60	0.0	-675.00	699.82	-25.03	4081.59	511.57	4.168e+04
		2031.17	-1094.99	5.62e-03	0.0	122.0	-675.00	-1349.78	-25.03	4081.59	-1094.99	2031.17
39	8	6.967e+04	748.44	0.04	-2638.86	0.0	-795.88	907.31	-29.44	4836.79	748.44	5.080e+04
		522.39	-1120.12	6.74e-03	0.0	122.0	-795.88	-1731.55	-29.44	4836.79	-1120.12	522.39

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

39	9	5.615e+04	511.57	0.03	-2049.60	0.0	-675.00	699.82	-25.03	4081.59	511.57	4.168e+04
		2031.17	-1094.99	5.62e-03	0.0	122.0	-675.00	-1349.78	-25.03	4081.59	-1094.99	2031.17
39	10	6.774e+04	714.60	0.04	-2554.68	0.0	-778.61	877.66	-28.81	4728.91	714.60	4.950e+04
		737.93	-1116.53	6.58e-03	0.0	122.0	-778.61	-1677.02	-28.81	4728.91	-1116.53	737.93
43	2	3.913e+04	2509.54	-1.09e-03	-3983.30	0.0	-2471.37	2821.97	-21.27	3146.75	2509.54	-8.272e+04
		-8.272e+04	945.59	5.30e-03	0.0	122.0	-2471.37	-1161.33	-21.27	3146.75	945.59	1.858e+04
43	3	1.902e+04	1513.71	-4.97e-04	-1993.48	0.0	-1060.88	1457.31	-12.32	1802.40	1513.71	-4.593e+04
		-4.593e+04	601.44	3.03e-03	0.0	122.0	-1060.88	-536.17	-12.32	1802.40	601.44	1.026e+04
43	5	1.958e+04	1535.55	-5.14e-04	-2049.60	0.0	-1104.92	1494.71	-12.53	1834.80	1535.55	-4.685e+04
		-4.685e+04	608.04	3.09e-03	0.0	122.0	-1104.92	-554.89	-12.53	1834.80	608.04	1.047e+04
43	6	2.828e+04	1863.20	-7.83e-04	-2891.40	0.0	-1765.54	2055.67	-15.71	2320.87	1863.20	-6.078e+04
		-6.078e+04	707.07	3.91e-03	0.0	122.0	-1765.54	-835.73	-15.71	2320.87	707.07	1.364e+04
43	7	1.958e+04	1535.55	-5.14e-04	-2049.60	0.0	-1104.92	1494.71	-12.53	1834.80	1535.55	-4.685e+04
		-4.685e+04	608.04	3.09e-03	0.0	122.0	-1104.92	-554.89	-12.53	1834.80	608.04	1.047e+04
43	8	2.562e+04	1764.91	-7.02e-04	-2638.86	0.0	-1567.36	1887.38	-14.75	2175.05	1764.91	-5.660e+04
		-5.660e+04	677.36	3.66e-03	0.0	122.0	-1567.36	-751.48	-14.75	2175.05	677.36	1.269e+04
43	9	1.958e+04	1535.55	-5.14e-04	-2049.60	0.0	-1104.92	1494.71	-12.53	1834.80	1535.55	-4.685e+04
		-4.685e+04	608.04	3.09e-03	0.0	122.0	-1104.92	-554.89	-12.53	1834.80	608.04	1.047e+04
43	10	2.474e+04	1732.14	-6.75e-04	-2554.68	0.0	-1501.29	1831.29	-14.44	2126.44	1732.14	-5.521e+04
		-5.521e+04	667.45	3.58e-03	0.0	122.0	-1501.29	-723.39	-14.44	2126.44	667.45	1.237e+04
45	1	3093.58	480.96	0.01	-179.40	0.0	438.45	164.98	53.40	-6223.00	-1140.11	-395.01
		-395.01	-1140.11	1.18e-03	0.0	46.0	438.45	-14.42	53.40	-6223.00	480.96	3068.26
45	2	1941.73	917.80	0.02	-179.40	0.0	635.74	175.81	75.42	-9267.76	-1319.12	-2019.92
		-2019.92	-1319.12	1.56e-03	0.0	46.0	635.74	-3.59	75.42	-9267.76	917.80	1941.73
45	3	2470.71	335.62	8.92e-03	-138.00	0.0	321.76	126.05	39.35	-4547.51	-862.93	-176.08
		-176.08	-862.93	8.81e-04	0.0	46.0	321.76	-11.95	39.35	-4547.51	335.62	2448.79
45	5	2419.26	355.04	9.07e-03	-138.00	0.0	330.53	126.54	40.33	-4682.83	-870.88	-248.30
		-248.30	-870.88	8.98e-04	0.0	46.0	330.53	-11.46	40.33	-4682.83	355.04	2398.72
45	6	1647.70	646.26	0.01	-138.00	0.0	462.05	133.76	55.00	-6712.67	-990.23	-1331.57
		-1331.57	-990.23	1.15e-03	0.0	46.0	462.05	-4.24	55.00	-6712.67	646.26	1647.70
45	7	2419.26	355.04	9.07e-03	-138.00	0.0	330.53	126.54	40.33	-4682.83	-870.88	-248.30
		-248.30	-870.88	8.98e-04	0.0	46.0	330.53	-11.46	40.33	-4682.83	355.04	2398.72
45	8	1879.00	558.89	0.01	-138.00	0.0	422.60	131.59	50.60	-6103.72	-954.43	-1006.59
		-1006.59	-954.43	1.07e-03	0.0	46.0	422.60	-6.41	50.60	-6103.72	558.89	1873.00
45	9	2419.26	355.04	9.07e-03	-138.00	0.0	330.53	126.54	40.33	-4682.83	-870.88	-248.30
		-248.30	-870.88	8.98e-04	0.0	46.0	330.53	-11.46	40.33	-4682.83	355.04	2398.72
45	10	1956.18	529.77	0.01	-138.00	0.0	409.44	130.87	49.13	-5900.73	-942.49	-898.26
		-898.26	-942.49	1.05e-03	0.0	46.0	409.44	-7.13	49.13	-5900.73	529.77	1948.11
52	2	3.544e+04	-340.64	0.07	-3983.30	0.0	4573.29	1537.62	-73.78	4761.78	-340.64	-734.75
		-5.613e+04	-8079.59	9.12e-03	0.0	122.0	4573.29	-2445.68	-73.78	4761.78	-8079.59	-5.613e+04
52	3	1.864e+04	-436.03	0.04	-1993.48	0.0	2317.90	733.73	-38.83	3014.84	-436.03	2175.65
		-2.991e+04	-4397.32	5.00e-03	0.0	122.0	2317.90	-1259.75	-38.83	3014.84	-4397.32	-2.991e+04
52	4	2.881e+04	-230.81	0.06	-3256.18	0.0	3733.24	1263.36	-59.97	3779.20	-230.81	-1057.00
		-4.555e+04	-6541.23	7.38e-03	0.0	122.0	3733.24	-1992.82	-59.97	3779.20	-6541.23	-4.555e+04
52	5	1.910e+04	-426.91	0.04	-2049.60	0.0	2380.80	757.27	-39.77	3048.81	-426.91	2031.98
		-3.061e+04	-4492.61	5.11e-03	0.0	122.0	2380.80	-1292.33	-39.77	3048.81	-4492.61	-3.061e+04
52	6	2.587e+04	-290.09	0.05	-2891.40	0.0	3324.36	1110.36	-53.86	3558.38	-290.09	-123.12
		-4.103e+04	-5921.88	6.69e-03	0.0	122.0	3324.36	-1781.04	-53.86	3558.38	-5921.88	-4.103e+04
52	7	1.910e+04	-426.91	0.04	-2049.60	0.0	2380.80	757.27	-39.77	3048.81	-426.91	2031.98
		-3.061e+04	-4492.61	5.11e-03	0.0	122.0	2380.80	-1292.33	-39.77	3048.81	-4492.61	-3.061e+04
52	8	2.384e+04	-331.14	0.05	-2638.86	0.0	3041.30	1004.43	-49.64	3405.51	-331.14	523.41
		-3.791e+04	-5493.10	6.22e-03	0.0	122.0	3041.30	-1634.43	-49.64	3405.51	-5493.10	-3.791e+04
52	9	1.910e+04	-426.91	0.04	-2049.60	0.0	2380.80	757.27	-39.77	3048.81	-426.91	2031.98
		-3.061e+04	-4492.61	5.11e-03	0.0	122.0	2380.80	-1292.33	-39.77	3048.81	-4492.61	-3.061e+04
52	10	2.316e+04	-344.82	0.04	-2554.68	0.0	2946.94	969.12	-48.23	3354.56	-344.82	738.92
		-3.686e+04	-5350.17	6.06e-03	0.0	122.0	2946.94	-1585.56	-48.23	3354.56	-5350.17	-3.686e+04
54	2	-1944.85	-729.40	0.02	-179.40	0.0	925.17	154.92	103.24	-6047.20	-4400.14	-5021.59
		-5021.59	-4400.14	1.63e-03	0.0	46.0	925.17	-24.48	103.24	-6047.20	-729.40	-2021.09
54	3	-156.92	-570.64	8.93e-03	-138.00	0.0	559.37	126.78	54.39	-2876.84	-2540.35	-2834.83
		-2834.83	-2540.35	9.34e-04	0.0	46.0	559.37	-11.22	54.39	-2876.84	-570.64	-176.76
54	4	-1735.43	-559.36	0.01	-138.00	0.0	739.00	117.80	83.91	-4970.16	-3536.23	-4047.21
		-4047.21	-3536.23	1.31e-03	0.0	46.0	739.00	-20.20	83.91	-4970.16	-559.36	-1801.93
54	5	-228.00	-570.14	9.08e-03	-138.00	0.0	567.35	126.38	55.70	-2969.88	-2584.61	-2888.72
		-2888.72	-2584.61	9.51e-04	0.0	46.0	567.35	-11.62	55.70	-2969.88	-570.14	-248.99
54	6	-1280.85	-562.62	0.01	-138.00	0.0	687.10	120.39	75.38	-4365.42	-3248.53	-3696.97
		-3696.97	-3248.53	1.20e-03	0.0	46.0	687.10	-17.61	75.38	-4365.42	-562.62	-1332.44

54	7	-228.00	-570.14	9.08e-03	-138.00	0.0	567.35	126.38	55.70	-2969.88	-2584.61	-2888.72
		-2888.72	-2584.61	9.51e-04	0.0	46.0	567.35	-11.62	55.70	-2969.88	-570.14	-248.99
54	8	-966.13	-564.88	0.01	-138.00	0.0	651.18	122.19	69.47	-3946.76	-3049.35	-3454.49
		-3454.49	-3049.35	1.13e-03	0.0	46.0	651.18	-15.81	69.47	-3946.76	-564.88	-1007.40
54	9	-228.00	-570.14	9.08e-03	-138.00	0.0	567.35	126.38	55.70	-2969.88	-2584.61	-2888.72
		-2888.72	-2584.61	9.51e-04	0.0	46.0	567.35	-11.62	55.70	-2969.88	-570.14	-248.99
54	10	-861.23	-565.63	0.01	-138.00	0.0	639.20	122.79	67.51	-3807.20	-2982.96	-3373.67
		-3373.67	-2982.96	1.10e-03	0.0	46.0	639.20	-15.21	67.51	-3807.20	-565.63	-899.06
56	2	1.834e+05	1620.20	-0.08	-3983.30	0.0	-1.372e+04	2508.22	-4.80	882.57	1620.20	8.709e+04
		8.709e+04	1289.92	3.30e-04	0.0	122.0	-1.372e+04	-1475.08	-4.80	882.57	1289.92	1.501e+05
56	3	9.981e+04	753.87	-0.04	-1993.48	0.0	-7840.43	1277.92	-1.77	369.30	753.87	4.987e+04
		4.987e+04	639.05	8.48e-05	0.0	122.0	-7840.43	-715.56	-1.77	369.30	639.05	8.417e+04
56	5	1.020e+05	779.68	-0.04	-2049.60	0.0	-7982.67	1312.07	-1.87	385.53	779.68	5.077e+04
		5.077e+04	657.56	9.37e-05	0.0	122.0	-7982.67	-737.53	-1.87	385.53	657.56	8.581e+04
56	6	1.344e+05	1166.88	-0.06	-2891.40	0.0	-1.012e+04	1824.33	-3.38	628.97	1166.88	6.423e+04
		6.423e+04	935.28	2.27e-04	0.0	122.0	-1.012e+04	-1067.07	-3.38	628.97	935.28	1.104e+05
56	7	1.020e+05	779.68	-0.04	-2049.60	0.0	-7982.67	1312.07	-1.87	385.53	779.68	5.077e+04
		5.077e+04	657.56	9.37e-05	0.0	122.0	-7982.67	-737.53	-1.87	385.53	657.56	8.581e+04
56	8	1.247e+05	1050.72	-0.05	-2638.86	0.0	-9476.10	1670.65	-2.93	555.94	1050.72	6.019e+04
		6.019e+04	851.96	1.87e-04	0.0	122.0	-9476.10	-968.21	-2.93	555.94	851.96	1.030e+05
56	9	1.020e+05	779.68	-0.04	-2049.60	0.0	-7982.67	1312.07	-1.87	385.53	779.68	5.077e+04
		5.077e+04	657.56	9.37e-05	0.0	122.0	-7982.67	-737.53	-1.87	385.53	657.56	8.581e+04
56	10	1.215e+05	1012.00	-0.05	-2554.68	0.0	-9262.75	1619.42	-2.78	531.59	1012.00	5.884e+04
		5.884e+04	824.19	1.74e-04	0.0	122.0	-9262.75	-935.26	-2.78	531.59	824.19	1.006e+05
57	1	6854.28	1402.81	0.01	-179.40	0.0	-31.73	81.89	42.07	-9321.29	444.65	5995.86
		5636.96	444.65	1.26e-03	0.0	46.0	-31.73	-97.51	42.07	-9321.29	1402.81	5636.96
57	2	6396.31	1943.74	0.02	-179.40	0.0	158.58	81.44	59.94	-1.385e+04	636.27	5546.86
		5167.47	636.27	1.69e-03	0.0	46.0	158.58	-97.96	59.94	-1.385e+04	1943.74	5167.47
57	3	5308.53	1036.55	9.21e-03	-138.00	0.0	-39.37	63.03	30.96	-6814.43	326.97	4647.51
		4373.04	326.97	9.36e-04	0.0	46.0	-39.37	-74.97	30.96	-6814.43	1036.55	4373.04
57	4	4850.57	1577.48	0.01	-138.00	0.0	150.94	62.58	48.83	-1.134e+04	518.59	4198.51
		3903.55	518.59	1.37e-03	0.0	46.0	150.94	-75.42	48.83	-1.134e+04	1577.48	3903.55
57	5	5288.18	1060.59	9.36e-03	-138.00	0.0	-30.92	63.01	31.75	-7015.53	335.48	4627.55
		4352.18	335.48	9.55e-04	0.0	46.0	-30.92	-74.99	31.75	-7015.53	1060.59	4352.18
57	6	4982.87	1421.21	0.01	-138.00	0.0	95.96	62.71	43.67	-1.003e+04	463.23	4328.22
		4039.18	463.23	1.24e-03	0.0	46.0	95.96	-75.29	43.67	-1.003e+04	1421.21	4039.18
57	7	5288.18	1060.59	9.36e-03	-138.00	0.0	-30.92	63.01	31.75	-7015.53	335.48	4627.55
		4352.18	335.48	9.55e-04	0.0	46.0	-30.92	-74.99	31.75	-7015.53	1060.59	4352.18
57	8	5074.46	1313.03	0.01	-138.00	0.0	57.90	62.80	40.09	-9127.09	424.91	4418.02
		4133.08	424.91	1.16e-03	0.0	46.0	57.90	-75.20	40.09	-9127.09	1313.03	4133.08
57	9	5288.18	1060.59	9.36e-03	-138.00	0.0	-30.92	63.01	31.75	-7015.53	335.48	4627.55
		4352.18	335.48	9.55e-04	0.0	46.0	-30.92	-74.99	31.75	-7015.53	1060.59	4352.18
57	10	5104.99	1276.97	0.01	-138.00	0.0	45.21	62.83	38.90	-8825.44	412.13	4447.95
		4164.38	412.13	1.13e-03	0.0	46.0	45.21	-75.17	38.90	-8825.44	1276.97	4164.38
58	1	8422.30	1535.21	1.13e-04	-179.40	0.0	477.26	215.21	-126.26	2.316e+04	1535.21	2648.77
		2648.77	-1169.23	1.43e-03	0.0	46.0	477.26	35.81	-126.26	2.316e+04	-1169.23	8422.30
58	2	7354.63	1726.26	-6.51e-05	-179.40	0.0	696.59	231.26	-170.66	3.163e+04	1726.26	842.81
		842.81	-1885.26	1.93e-03	0.0	46.0	696.59	51.86	-170.66	3.163e+04	-1885.26	7354.63
58	3	6562.64	1165.91	9.93e-05	-138.00	0.0	349.88	164.29	-93.63	1.715e+04	1165.91	2179.52
		2179.52	-843.11	1.06e-03	0.0	46.0	349.88	26.29	-93.63	1.715e+04	-843.11	6562.64
58	4	5494.98	1356.95	-6.79e-05	-138.00	0.0	569.20	180.34	-138.03	2.562e+04	1356.95	373.56
		373.56	-1559.13	1.56e-03	0.0	46.0	569.20	42.34	-138.03	2.562e+04	-1559.13	5494.98
58	5	6515.19	1174.40	9.21e-05	-138.00	0.0	359.63	165.00	-95.60	1.752e+04	1174.40	2099.26
		2099.26	-874.93	1.09e-03	0.0	46.0	359.63	27.00	-95.60	1.752e+04	-874.93	6515.19
58	6	5803.42	1301.76	-3.65e-05	-138.00	0.0	505.84	175.70	-125.20	2.317e+04	1301.76	895.28
		895.28	-1352.28	1.41e-03	0.0	46.0	505.84	37.70	-125.20	2.317e+04	-1352.28	5803.42
58	7	6515.19	1174.40	9.21e-05	-138.00	0.0	359.63	165.00	-95.60	1.752e+04	1174.40	2099.26
		2099.26	-874.93	1.09e-03	0.0	46.0	359.63	27.00	-95.60	1.752e+04	-874.93	6515.19
58	8	6016.95	1263.56	-2.05e-05	-138.00	0.0	461.98	172.49	-116.32	2.148e+04	1263.56	1256.48
		1256.48	-1209.07	1.32e-03	0.0	46.0	461.98	34.49	-116.32	2.148e+04	-1209.07	6016.95
58	9	6515.19	1174.40	9.21e-05	-138.00	0.0	359.63	165.00	-95.60	1.752e+04	1174.40	2099.26
		2099.26	-874.93	1.09e-03	0.0	46.0	359.63	27.00	-95.60	1.752e+04	-874.93	6515.19
58	10	6088.13	1250.82	2.72e-05	-138.00	0.0	447.36	171.42	-113.36	2.091e+04	1250.82	1376.87
		1376.87	-1161.34	1.28e-03	0.0	46.0	447.36	33.42	-113.36	2.091e+04	-1161.34	6088.13
65	2	7.757e+04	1190.91	-2.14e-03	-3983.30	0.0	-3891.33	1967.66	-12.77	2596.34	1190.91	1.829e+04
		1.536e+04	493.07	4.34e-03	0.0	122.0	-3891.33	-2015.64	-12.77	2596.34	493.07	1.536e+04

65	3	3.978e+04	778.21	1.40e-03	-1993.48	0.0	-1905.08	980.91	-7.29	1458.38	778.21	1.034e+04
		8408.80	371.82	2.39e-03	0.0	122.0	-1905.08	-1012.57	-7.29	1458.38	371.82	8408.80
65	5	4.082e+04	785.43	1.40e-03	-2049.60	0.0	-1962.13	1008.83	-7.42	1486.62	785.43	1.054e+04
		8587.36	372.21	2.44e-03	0.0	122.0	-1962.13	-1040.77	-7.42	1486.62	372.21	8587.36
65	6	5.646e+04	893.84	-1.52e-03	-2891.40	0.0	-2817.81	1427.67	-9.41	1910.28	893.84	1.347e+04
		1.127e+04	378.08	3.19e-03	0.0	122.0	-2817.81	-1463.73	-9.41	1910.28	378.08	1.127e+04
65	7	4.082e+04	785.43	1.40e-03	-2049.60	0.0	-1962.13	1008.83	-7.42	1486.62	785.43	1.054e+04
		8587.36	372.21	2.44e-03	0.0	122.0	-1962.13	-1040.77	-7.42	1486.62	372.21	8587.36
65	8	5.177e+04	861.32	1.36e-03	-2638.86	0.0	-2561.10	1302.02	-8.82	1783.18	861.32	1.259e+04
		1.046e+04	376.32	2.96e-03	0.0	122.0	-2561.10	-1336.84	-8.82	1783.18	376.32	1.046e+04
65	9	4.082e+04	785.43	1.40e-03	-2049.60	0.0	-1962.13	1008.83	-7.42	1486.62	785.43	1.054e+04
		8587.36	372.21	2.44e-03	0.0	122.0	-1962.13	-1040.77	-7.42	1486.62	372.21	8587.36
65	10	5.020e+04	850.48	1.36e-03	-2554.68	0.0	-2475.53	1260.13	-8.62	1740.82	850.48	1.229e+04
		1.019e+04	375.73	2.89e-03	0.0	122.0	-2475.53	-1294.55	-8.62	1740.82	375.73	1.019e+04
66	2	7.096e+04	1053.11	0.05	-3983.30	0.0	194.10	1934.87	-39.53	5801.28	1053.11	1.368e+04
		6752.48	-1772.80	8.84e-03	0.0	122.0	194.10	-2048.43	-39.53	5801.28	-1772.80	6752.48
66	3	3.662e+04	499.53	0.03	-1993.48	0.0	24.53	963.05	-22.70	3291.37	499.53	8277.47
		4167.82	-1131.76	5.11e-03	0.0	122.0	24.53	-1030.43	-22.70	3291.37	-1131.76	4167.82
66	5	3.756e+04	515.81	0.03	-2049.60	0.0	31.07	990.59	-23.10	3352.76	515.81	8395.15
		4221.62	-1143.92	5.20e-03	0.0	122.0	31.07	-1059.01	-23.10	3352.76	-1143.92	4221.62
66	6	5.169e+04	760.00	0.03	-2891.40	0.0	129.18	1403.63	-29.17	4273.62	760.00	1.016e+04
		5028.67	-1326.28	6.53e-03	0.0	122.0	129.18	-1487.77	-29.17	4273.62	-1326.28	5028.67
66	7	3.756e+04	515.81	0.03	-2049.60	0.0	31.07	990.59	-23.10	3352.76	515.81	8395.15
		4221.62	-1143.92	5.20e-03	0.0	122.0	31.07	-1059.01	-23.10	3352.76	-1143.92	4221.62
66	8	4.745e+04	686.74	0.03	-2638.86	0.0	99.75	1279.72	-27.35	3997.36	686.74	9630.72
		4786.55	-1271.57	6.13e-03	0.0	122.0	99.75	-1359.14	-27.35	3997.36	-1271.57	4786.55
66	9	3.756e+04	515.81	0.03	-2049.60	0.0	31.07	990.59	-23.10	3352.76	515.81	8395.15
		4221.62	-1143.92	5.20e-03	0.0	122.0	31.07	-1059.01	-23.10	3352.76	-1143.92	4221.62
66	10	4.604e+04	662.32	0.03	-2554.68	0.0	89.94	1238.42	-26.74	3905.28	662.32	9454.21
		4705.85	-1253.34	6.00e-03	0.0	122.0	89.94	-1316.26	-26.74	3905.28	-1253.34	4705.85
68	2	2.198e+05	1414.29	-0.03	-3983.30	0.0	-2.210e+04	2136.52	-4.58	721.60	1414.29	1.501e+05
		1.501e+05	1086.29	1.04e-03	0.0	122.0	-2.210e+04	-1846.78	-4.58	721.60	1086.29	1.678e+05
68	3	1.193e+05	687.45	-0.02	-1993.48	0.0	-1.240e+04	1073.25	-1.67	282.14	687.45	8.417e+04
		8.417e+04	572.61	4.34e-04	0.0	122.0	-1.240e+04	-920.23	-1.67	282.14	572.61	9.351e+04
68	5	1.220e+05	708.45	-0.02	-2049.60	0.0	-1.264e+04	1103.14	-1.77	296.45	708.45	8.581e+04
		8.581e+04	586.40	4.53e-04	0.0	122.0	-1.264e+04	-946.46	-1.77	296.45	586.40	9.537e+04
68	6	1.611e+05	1023.32	-0.02	-2891.40	0.0	-1.626e+04	1551.50	-3.23	511.05	1023.32	1.104e+05
		1.104e+05	793.19	7.42e-04	0.0	122.0	-1.626e+04	-1339.90	-3.23	511.05	793.19	1.233e+05
68	7	1.220e+05	708.45	-0.02	-2049.60	0.0	-1.264e+04	1103.14	-1.77	296.45	708.45	8.581e+04
		8.581e+04	586.40	4.53e-04	0.0	122.0	-1.264e+04	-946.46	-1.77	296.45	586.40	9.537e+04
68	8	1.493e+05	928.86	-0.02	-2638.86	0.0	-1.517e+04	1416.99	-2.79	446.67	928.86	1.030e+05
		1.030e+05	731.15	6.55e-04	0.0	122.0	-1.517e+04	-1221.87	-2.79	446.67	731.15	1.149e+05
68	9	1.220e+05	708.45	-0.02	-2049.60	0.0	-1.264e+04	1103.14	-1.77	296.45	708.45	8.581e+04
		8.581e+04	586.40	4.53e-04	0.0	122.0	-1.264e+04	-946.46	-1.77	296.45	586.40	9.537e+04
68	10	1.454e+05	897.37	-0.02	-2554.68	0.0	-1.481e+04	1372.16	-2.64	425.21	897.37	1.006e+05
		1.006e+05	710.47	6.26e-04	0.0	122.0	-1.481e+04	-1182.52	-2.64	425.21	710.47	1.121e+05
70	1	1.109e+04	424.65	4.76e-04	-179.40	0.0	-61.83	144.19	-105.18	2.489e+04	424.65	8422.32
		8422.32	-1189.89	1.40e-03	0.0	46.0	-61.83	-35.21	-105.18	2.489e+04	-1189.89	1.093e+04
70	2	1.049e+04	292.69	2.69e-04	-179.40	0.0	131.27	156.29	-141.88	3.402e+04	292.69	7354.64
		7354.64	-1827.49	1.87e-03	0.0	46.0	131.27	-23.11	-141.88	3.402e+04	-1827.49	1.042e+04
70	3	8577.26	337.03	3.82e-04	-138.00	0.0	-62.75	109.96	-78.02	1.843e+04	337.03	6562.66
		6562.66	-865.16	1.04e-03	0.0	46.0	-62.75	-28.04	-78.02	1.843e+04	-865.16	8447.04
70	4	7978.12	205.07	1.76e-04	-138.00	0.0	130.36	122.07	-114.73	2.756e+04	205.07	5494.98
		5494.98	-1502.77	1.51e-03	0.0	46.0	130.36	-15.93	-114.73	2.756e+04	-1502.77	7936.10
70	5	8549.91	331.16	3.73e-04	-138.00	0.0	-54.16	110.50	-79.66	1.883e+04	331.16	6515.21
		6515.21	-893.50	1.06e-03	0.0	46.0	-54.16	-27.50	-79.66	1.883e+04	-893.50	8424.33
70	6	8145.83	243.19	2.35e-04	-138.00	0.0	74.57	118.57	-104.12	2.492e+04	243.19	5803.42
		5803.42	-1318.57	1.37e-03	0.0	46.0	74.57	-19.43	-104.12	2.492e+04	-1318.57	8083.71
70	7	8549.91	331.16	3.73e-04	-138.00	0.0	-54.16	110.50	-79.66	1.883e+04	331.16	6515.21
		6515.21	-893.50	1.06e-03	0.0	46.0	-54.16	-27.50	-79.66	1.883e+04	-893.50	8424.33
70	8	8262.76	269.58	2.77e-04	-138.00	0.0	35.95	116.15	-96.78	2.309e+04	269.58	6016.96
		6016.96	-1191.05	1.28e-03	0.0	46.0	35.95	-21.85	-96.78	2.309e+04	-1191.05	8185.89
70	9	8549.91	331.16	3.73e-04	-138.00	0.0	-54.16	110.50	-79.66	1.883e+04	331.16	6515.21
		6515.21	-893.50	1.06e-03	0.0	46.0	-54.16	-27.50	-79.66	1.883e+04	-893.50	8424.33
70	10	8303.78	278.38	2.91e-04	-138.00	0.0	23.08	115.34	-94.34	2.248e+04	278.38	6088.14
		6088.14	-1148.54	1.25e-03	0.0	46.0	23.08	-22.66	-94.34	2.248e+04	-1148.54	8219.96

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

77	2	7.659e+04	1527.06	-5.71e-03	-3983.30	0.0	-2703.12	2031.69	-12.60	2374.17	1527.06	1.340e+04
		1.340e+04	775.77	3.82e-03	0.0	122.0	-2703.12	-1951.61	-12.60	2374.17	775.77	1.829e+04
77	3	3.926e+04	982.23	-2.68e-03	-1993.48	0.0	-1247.06	1021.10	-7.17	1327.23	982.23	7368.75
		7368.75	546.18	2.04e-03	0.0	122.0	-1247.06	-972.38	-7.17	1327.23	546.18	1.034e+04
77	5	4.029e+04	992.32	-2.77e-03	-2049.60	0.0	-1290.69	1049.50	-7.30	1353.39	992.32	7522.84
		7522.84	548.83	2.09e-03	0.0	122.0	-1290.69	-1000.10	-7.30	1353.39	548.83	1.054e+04
77	6	5.574e+04	1143.63	-4.11e-03	-2891.40	0.0	-1945.08	1475.46	-9.29	1745.79	1143.63	9834.27
		9834.27	588.59	2.79e-03	0.0	122.0	-1945.08	-1415.94	-9.29	1745.79	588.59	1.347e+04
77	7	4.029e+04	992.32	-2.77e-03	-2049.60	0.0	-1290.69	1049.50	-7.30	1353.39	992.32	7522.84
		7522.84	548.83	2.09e-03	0.0	122.0	-1290.69	-1000.10	-7.30	1353.39	548.83	1.054e+04
77	8	5.111e+04	1098.23	-3.71e-03	-2638.86	0.0	-1748.76	1347.67	-8.69	1628.07	1098.23	9140.84
		9140.84	576.66	2.58e-03	0.0	122.0	-1748.76	-1291.19	-8.69	1628.07	576.66	1.259e+04
77	9	4.029e+04	992.32	-2.77e-03	-2049.60	0.0	-1290.69	1049.50	-7.30	1353.39	992.32	7522.84
		7522.84	548.83	2.09e-03	0.0	122.0	-1290.69	-1000.10	-7.30	1353.39	548.83	1.054e+04
77	10	4.956e+04	1083.10	-3.58e-03	-2554.68	0.0	-1683.32	1305.08	-8.49	1588.83	1083.10	8909.70
		8909.70	572.68	2.51e-03	0.0	122.0	-1683.32	-1249.60	-8.49	1588.83	572.68	1.229e+04
78	1	5.248e+04	1354.19	0.03	-2720.60	0.0	-961.43	1360.97	-24.44	4526.03	1354.19	1.095e+04
		1.095e+04	-106.38	6.71e-03	0.0	122.0	-961.43	-1359.63	-24.44	4526.03	-106.38	1.103e+04
78	2	7.475e+04	1833.39	0.04	-3983.30	0.0	-1331.07	1986.23	-31.25	5929.41	1833.39	1.434e+04
		1.368e+04	13.79	8.59e-03	0.0	122.0	-1331.07	-1997.07	-31.25	5929.41	13.79	1.368e+04
78	3	3.862e+04	1004.01	0.02	-1993.48	0.0	-710.50	997.73	-18.26	3371.21	1004.01	8155.74
		8155.74	-91.28	5.02e-03	0.0	122.0	-710.50	-995.75	-18.26	3371.21	-91.28	8276.96
78	5	3.961e+04	1025.30	0.02	-2049.60	0.0	-726.93	1025.52	-18.56	3433.58	1025.30	8306.41
		8306.41	-85.94	5.10e-03	0.0	122.0	-726.93	-1024.08	-18.56	3433.58	-85.94	8394.62
78	6	5.446e+04	1344.77	0.03	-2891.40	0.0	-973.35	1442.36	-23.11	4369.17	1344.77	1.057e+04
		1.016e+04	-5.83	6.35e-03	0.0	122.0	-973.35	-1449.04	-23.11	4369.17	-5.83	1.016e+04
78	7	3.961e+04	1025.30	0.02	-2049.60	0.0	-726.93	1025.52	-18.56	3433.58	1025.30	8306.41
		8306.41	-85.94	5.10e-03	0.0	122.0	-726.93	-1024.08	-18.56	3433.58	-85.94	8394.62
78	8	5.000e+04	1248.93	0.03	-2638.86	0.0	-899.42	1317.31	-21.74	4088.49	1248.93	9888.47
		9630.08	-29.86	5.98e-03	0.0	122.0	-899.42	-1321.55	-21.74	4088.49	-29.86	9630.08
78	9	3.961e+04	1025.30	0.02	-2049.60	0.0	-726.93	1025.52	-18.56	3433.58	1025.30	8306.41
		8306.41	-85.94	5.10e-03	0.0	122.0	-726.93	-1024.08	-18.56	3433.58	-85.94	8394.62
78	10	4.852e+04	1216.98	0.03	-2554.68	0.0	-874.78	1275.63	-21.29	3994.93	1216.98	9662.46
		9453.58	-37.87	5.85e-03	0.0	122.0	-874.78	-1279.05	-21.29	3994.93	-37.87	9453.58
79	1	5336.50	1100.28	0.01	-179.40	0.0	164.94	132.98	41.37	-8013.55	44.27	3069.18
		3069.18	44.27	1.21e-03	0.0	46.0	164.94	-46.42	41.37	-8013.55	1100.28	5060.72
79	2	4537.86	1719.08	0.02	-179.40	0.0	360.06	142.30	58.53	-1.187e+04	274.27	1942.90
		1942.90	274.27	1.61e-03	0.0	46.0	360.06	-37.10	58.53	-1.187e+04	1719.08	4363.04
79	3	4168.29	797.71	9.03e-03	-138.00	0.0	111.54	101.56	30.47	-5860.84	15.97	2449.47
		2449.47	15.97	8.96e-04	0.0	46.0	111.54	-36.44	30.47	-5860.84	797.71	3947.72
79	4	3372.30	1416.52	0.01	-138.00	0.0	306.65	110.88	47.63	-9719.62	245.96	1323.19
		1323.19	245.96	1.30e-03	0.0	46.0	306.65	-27.12	47.63	-9719.62	1416.52	3250.04
79	5	4132.52	825.21	9.17e-03	-138.00	0.0	120.21	101.98	31.24	-6032.35	26.19	2399.41
		2399.41	26.19	9.13e-04	0.0	46.0	120.21	-36.02	31.24	-6032.35	825.21	3916.72
79	6	3597.06	1237.75	0.01	-138.00	0.0	250.29	108.19	42.68	-8604.86	179.52	1648.56
		1648.56	179.52	1.18e-03	0.0	46.0	250.29	-29.81	42.68	-8604.86	1237.75	3451.59
79	7	4132.52	825.21	9.17e-03	-138.00	0.0	120.21	101.98	31.24	-6032.35	26.19	2399.41
		2399.41	26.19	9.13e-04	0.0	46.0	120.21	-36.02	31.24	-6032.35	825.21	3916.72
79	8	3756.93	1113.99	0.01	-138.00	0.0	211.26	106.32	39.25	-7833.11	133.52	1873.82
		1873.82	133.52	1.10e-03	0.0	46.0	211.26	-31.68	39.25	-7833.11	1113.99	3591.13
79	9	4132.52	825.21	9.17e-03	-138.00	0.0	120.21	101.98	31.24	-6032.35	26.19	2399.41
		2399.41	26.19	9.13e-04	0.0	46.0	120.21	-36.02	31.24	-6032.35	825.21	3916.72
79	10	3810.58	1072.73	0.01	-138.00	0.0	198.26	105.70	38.10	-7575.85	118.19	1948.90
		1948.90	118.19	1.07e-03	0.0	46.0	198.26	-32.30	38.10	-7575.85	1072.73	3637.64
81	2	1.884e+05	1191.43	0.01	-3983.30	0.0	-2.051e+04	1162.93	-5.06	725.42	1191.43	1.678e+05
		6.668e+04	802.48	1.64e-03	0.0	122.0	-2.051e+04	-2820.37	-5.06	725.42	802.48	6.668e+04
81	3	1.024e+05	612.13	0.01	-1993.48	0.0	-1.145e+04	539.45	-2.04	298.54	612.13	9.351e+04
		3.772e+04	456.04	7.43e-04	0.0	122.0	-1.145e+04	-1454.03	-2.04	298.54	456.04	3.772e+04
81	5	1.046e+05	628.09	0.01	-2049.60	0.0	-1.167e+04	558.06	-2.13	312.14	628.09	9.537e+04
		3.843e+04	464.50	7.70e-04	0.0	122.0	-1.167e+04	-1491.54	-2.13	312.14	464.50	3.843e+04
81	6	1.380e+05	867.40	0.01	-2891.40	0.0	-1.508e+04	837.29	-3.60	516.17	867.40	1.233e+05
		4.910e+04	591.29	1.18e-03	0.0	122.0	-1.508e+04	-2054.11	-3.60	516.17	591.29	4.910e+04
81	7	1.046e+05	628.09	0.01	-2049.60	0.0	-1.167e+04	558.06	-2.13	312.14	628.09	9.537e+04
		3.843e+04	464.50	7.70e-04	0.0	122.0	-1.167e+04	-1491.54	-2.13	312.14	464.50	3.843e+04
81	8	1.279e+05	795.60	0.01	-2638.86	0.0	-1.406e+04	753.52	-3.16	454.96	795.60	1.149e+05
		4.590e+04	553.25	1.05e-03	0.0	122.0	-1.406e+04	-1885.34	-3.16	454.96	553.25	4.590e+04

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

81	9	1.046e+05	628.09	0.01	-2049.60	0.0	-1.167e+04	558.06	-2.13	312.14	628.09	9.537e+04
		3.843e+04	464.50	7.70e-04	0.0	122.0	-1.167e+04	-1491.54	-2.13	312.14	464.50	3.843e+04
81	10	1.246e+05	771.67	0.01	-2554.68	0.0	-1.372e+04	725.60	-3.01	434.56	771.67	1.121e+05
		4.483e+04	540.57	1.01e-03	0.0	122.0	-1.372e+04	-1829.08	-3.01	434.56	540.57	4.483e+04
82	1	1.241e+04	439.63	9.39e-04	-179.40	0.0	-392.11	107.43	-97.95	2.565e+04	439.63	1.093e+04
		1.093e+04	-796.41	1.38e-03	0.0	46.0	-392.11	-71.97	-97.95	2.565e+04	-796.41	1.174e+04
82	2	1.206e+04	400.38	7.12e-04	-179.40	0.0	-227.31	113.32	-132.05	3.507e+04	400.38	1.042e+04
		1.042e+04	-1202.53	1.81e-03	0.0	46.0	-227.31	-66.08	-132.05	3.507e+04	-1202.53	1.150e+04
82	4	9228.17	302.01	5.13e-04	-138.00	0.0	-149.78	88.07	-106.76	2.841e+04	302.01	7936.13
		7936.13	-986.81	1.46e-03	0.0	46.0	-149.78	-49.93	-106.76	2.841e+04	-986.81	8813.14
82	5	9554.52	339.52	7.30e-04	-138.00	0.0	-307.26	82.43	-74.18	1.941e+04	339.52	8424.37
		8424.37	-598.74	1.04e-03	0.0	46.0	-307.26	-55.57	-74.18	1.941e+04	-598.74	9042.37
82	6	9326.84	313.35	5.79e-04	-138.00	0.0	-197.39	86.36	-96.91	2.569e+04	313.35	8083.74
		8083.74	-869.48	1.33e-03	0.0	46.0	-197.39	-51.64	-96.91	2.569e+04	-869.48	8882.44
82	7	9554.52	339.52	7.30e-04	-138.00	0.0	-307.26	82.43	-74.18	1.941e+04	339.52	8424.37
		8424.37	-598.74	1.04e-03	0.0	46.0	-307.26	-55.57	-74.18	1.941e+04	-598.74	9042.37
82	8	9395.14	321.20	6.24e-04	-138.00	0.0	-230.35	85.18	-90.09	2.380e+04	321.20	8185.93
		8185.93	-788.26	1.25e-03	0.0	46.0	-230.35	-52.82	-90.09	2.380e+04	-788.26	8930.42
82	9	9554.52	339.52	7.30e-04	-138.00	0.0	-307.26	82.43	-74.18	1.941e+04	339.52	8424.37
		8424.37	-598.74	1.04e-03	0.0	46.0	-307.26	-55.57	-74.18	1.941e+04	-598.74	9042.37
82	10	9417.91	323.82	6.39e-04	-138.00	0.0	-241.34	84.79	-87.82	2.318e+04	323.82	8219.99
		8219.99	-761.19	1.22e-03	0.0	46.0	-241.34	-53.21	-87.82	2.318e+04	-761.19	8946.41
89	1	2.593e+04	1827.60	-6.20e-03	-2720.60	0.0	259.07	1875.83	-10.79	1552.58	1827.60	-5.296e+04
		-5.296e+04	1020.79	2.14e-03	0.0	122.0	259.07	-844.77	-10.79	1552.58	1020.79	9933.90
89	2	3.889e+04	2224.44	-9.50e-03	-3983.30	0.0	-68.03	2692.36	-14.31	2061.20	2224.44	-7.208e+04
		-7.208e+04	1154.94	3.10e-03	0.0	122.0	-68.03	-1290.94	-14.31	2061.20	1154.94	1.340e+04
89	3	1.893e+04	1374.64	-4.51e-03	-1993.48	0.0	225.01	1378.74	-8.02	1154.30	1374.64	-3.923e+04
		-3.923e+04	774.67	1.57e-03	0.0	122.0	225.01	-614.74	-8.02	1154.30	774.67	7368.83
89	4	3.189e+04	1771.48	-7.81e-03	-3256.18	0.0	-102.10	2195.27	-11.54	1662.92	1771.48	-5.836e+04
		-5.836e+04	908.82	2.53e-03	0.0	122.0	-102.10	-1060.91	-11.54	1662.92	908.82	1.084e+04
89	5	1.951e+04	1392.28	-4.66e-03	-2049.60	0.0	210.47	1415.03	-8.18	1176.90	1392.28	-4.008e+04
		-4.008e+04	780.64	1.62e-03	0.0	122.0	210.47	-634.57	-8.18	1176.90	780.64	7522.92
89	6	2.814e+04	1656.84	-6.86e-03	-2891.40	0.0	-7.60	1959.38	-10.52	1515.98	1656.84	-5.283e+04
		-5.283e+04	870.07	2.25e-03	0.0	122.0	-7.60	-932.02	-10.52	1515.98	870.07	9834.39
89	7	1.951e+04	1392.28	-4.66e-03	-2049.60	0.0	210.47	1415.03	-8.18	1176.90	1392.28	-4.008e+04
		-4.008e+04	780.64	1.62e-03	0.0	122.0	210.47	-634.57	-8.18	1176.90	780.64	7522.92
89	8	2.555e+04	1577.47	-6.20e-03	-2638.86	0.0	57.82	1796.08	-9.82	1414.26	1577.47	-4.901e+04
		-4.901e+04	843.24	2.06e-03	0.0	122.0	57.82	-842.78	-9.82	1414.26	843.24	9140.95
89	9	1.951e+04	1392.28	-4.66e-03	-2049.60	0.0	210.47	1415.03	-8.18	1176.90	1392.28	-4.008e+04
		-4.008e+04	780.64	1.62e-03	0.0	122.0	210.47	-634.57	-8.18	1176.90	780.64	7522.92
89	10	2.469e+04	1551.02	-5.98e-03	-2554.68	0.0	79.63	1741.64	-9.58	1380.35	1551.02	-4.773e+04
		-4.773e+04	834.30	2.00e-03	0.0	122.0	79.63	-813.04	-9.58	1380.35	834.30	8909.80
90	2	4.695e+04	3476.13	0.04	-3983.30	0.0	-873.52	2523.51	-35.35	5227.24	3476.13	-5.055e+04
		-5.055e+04	877.45	7.84e-03	0.0	122.0	-873.52	-1459.79	-35.35	5227.24	877.45	1.434e+04
90	3	2.309e+04	1993.47	0.02	-1993.48	0.0	-338.93	1293.19	-20.57	2977.69	1993.47	-2.801e+04
		-2.801e+04	460.74	4.61e-03	0.0	122.0	-338.93	-700.29	-20.57	2977.69	460.74	8155.29
90	5	2.378e+04	2029.14	0.02	-2049.60	0.0	-356.39	1327.16	-20.91	3032.37	2029.14	-2.858e+04
		-2.858e+04	471.97	4.69e-03	0.0	122.0	-356.39	-722.44	-20.91	3032.37	471.97	8305.95
90	6	3.402e+04	2564.19	0.03	-2891.40	0.0	-618.23	1836.65	-26.13	3852.68	2564.19	-3.713e+04
		-3.713e+04	640.41	5.80e-03	0.0	122.0	-618.23	-1054.75	-26.13	3852.68	640.41	1.057e+04
90	7	2.378e+04	2029.14	0.02	-2049.60	0.0	-356.39	1327.16	-20.91	3032.37	2029.14	-2.858e+04
		-2.858e+04	471.97	4.69e-03	0.0	122.0	-356.39	-722.44	-20.91	3032.37	471.97	8305.95
90	8	3.095e+04	2403.68	0.02	-2638.86	0.0	-539.68	1683.80	-24.56	3606.59	2403.68	-3.457e+04
		-3.457e+04	589.88	5.47e-03	0.0	122.0	-539.68	-955.06	-24.56	3606.59	589.88	9887.90
90	9	2.378e+04	2029.14	0.02	-2049.60	0.0	-356.39	1327.16	-20.91	3032.37	2029.14	-2.858e+04
		-2.858e+04	471.97	4.69e-03	0.0	122.0	-356.39	-722.44	-20.91	3032.37	471.97	8305.95
90	10	2.992e+04	2350.17	0.02	-2554.68	0.0	-513.49	1632.85	-24.04	3524.56	2350.17	-3.371e+04
		-3.371e+04	573.04	5.36e-03	0.0	122.0	-513.49	-921.83	-24.04	3524.56	573.04	9661.91
91	1	3407.16	4185.72	0.01	-179.40	0.0	327.72	-11.60	66.81	-9733.90	2020.16	3407.16
		-1252.22	2020.16	1.52e-03	0.0	46.0	327.72	-191.00	66.81	-9733.90	4185.72	-1252.22
91	2	2595.93	5770.85	0.02	-179.40	0.0	533.46	-24.47	96.04	-1.456e+04	2723.91	2595.93
		-2655.28	2723.91	2.04e-03	0.0	46.0	533.46	-203.87	96.04	-1.456e+04	5770.85	-2655.28
91	3	2684.68	3095.14	9.52e-03	-138.00	0.0	235.92	-7.91	49.09	-7108.22	1498.63	2684.68
		-852.92	1498.63	1.12e-03	0.0	46.0	235.92	-145.91	49.09	-7108.22	3095.14	-852.92
91	5	2648.62	3165.59	9.66e-03	-138.00	0.0	245.06	-8.48	50.39	-7322.66	1529.91	2648.62
		-915.28	1529.91	1.15e-03	0.0	46.0	245.06	-146.48	50.39	-7322.66	3165.59	-915.28

91	6	2107.81	4222.34	0.01	-138.00	0.0	382.22	-17.06	69.88	-1.054e+04	1999.07	2107.81
		-1850.65	1999.07	1.50e-03	0.0	46.0	382.22	-155.06	69.88	-1.054e+04	4222.34	-1850.65
91	7	2648.62	3165.59	9.66e-03	-138.00	0.0	245.06	-8.48	50.39	-7322.66	1529.91	2648.62
		-915.28	1529.91	1.15e-03	0.0	46.0	245.06	-146.48	50.39	-7322.66	3165.59	-915.28
91	8	2270.05	3905.32	0.01	-138.00	0.0	341.07	-14.49	64.03	-9574.30	1858.32	2270.05
		-1570.04	1858.32	1.39e-03	0.0	46.0	341.07	-152.49	64.03	-9574.30	3905.32	-1570.04
91	9	2648.62	3165.59	9.66e-03	-138.00	0.0	245.06	-8.48	50.39	-7322.66	1529.91	2648.62
		-915.28	1529.91	1.15e-03	0.0	46.0	245.06	-146.48	50.39	-7322.66	3165.59	-915.28
91	10	2324.13	3799.64	0.01	-138.00	0.0	327.35	-13.63	62.08	-9252.63	1811.41	2324.13
		-1476.50	1811.41	1.36e-03	0.0	46.0	327.35	-151.63	62.08	-9252.63	3799.64	-1476.50
92	2	9.428e+04	927.70	0.03	-3983.30	0.0	-1.093e+04	1346.34	-4.81	904.78	927.70	6.668e+04
		-1.205e+04	627.94	2.10e-03	0.0	122.0	-1.093e+04	-2636.96	-4.81	904.78	627.94	-1.205e+04
92	3	4.980e+04	510.10	0.02	-1993.48	0.0	-6040.09	628.38	-1.91	418.33	510.10	3.772e+04
		-7222.04	408.87	1.00e-03	0.0	122.0	-6040.09	-1365.10	-1.91	418.33	408.87	-7222.04
92	5	5.099e+04	520.77	0.02	-2049.60	0.0	-6164.17	649.73	-2.01	432.88	520.77	3.843e+04
		-7329.32	412.75	1.03e-03	0.0	122.0	-6164.17	-1399.87	-2.01	432.88	412.75	-7329.32
92	6	6.886e+04	680.79	0.03	-2891.40	0.0	-8025.46	969.96	-3.41	651.20	680.79	4.910e+04
		-8938.55	471.07	1.51e-03	0.0	122.0	-8025.46	-1921.44	-3.41	651.20	471.07	-8938.55
92	7	5.099e+04	520.77	0.02	-2049.60	0.0	-6164.17	649.73	-2.01	432.88	520.77	3.843e+04
		-7329.32	412.75	1.03e-03	0.0	122.0	-6164.17	-1399.87	-2.01	432.88	412.75	-7329.32
92	8	6.350e+04	632.79	0.02	-2638.86	0.0	-7467.07	873.89	-2.99	585.71	632.79	4.590e+04
		-8455.78	453.57	1.37e-03	0.0	122.0	-7467.07	-1764.97	-2.99	585.71	453.57	-8455.78
92	9	5.099e+04	520.77	0.02	-2049.60	0.0	-6164.17	649.73	-2.01	432.88	520.77	3.843e+04
		-7329.32	412.75	1.03e-03	0.0	122.0	-6164.17	-1399.87	-2.01	432.88	412.75	-7329.32
92	10	6.171e+04	616.78	0.02	-2554.68	0.0	-7280.95	841.87	-2.85	563.87	616.78	4.483e+04
		-8294.86	447.74	1.32e-03	0.0	122.0	-7280.95	-1712.81	-2.85	563.87	447.74	-8294.86
93	1	1.295e+04	843.64	1.43e-03	-179.40	0.0	-526.41	96.95	-101.30	2.580e+04	843.64	1.174e+04
		1.174e+04	-544.09	1.38e-03	0.0	46.0	-526.41	-82.45	-101.30	2.580e+04	-544.09	1.208e+04
93	2	1.274e+04	1040.81	1.20e-03	-179.40	0.0	-384.58	98.26	-136.72	3.531e+04	1040.81	1.150e+04
		1.150e+04	-771.17	1.81e-03	0.0	46.0	-384.58	-81.14	-136.72	3.531e+04	-771.17	1.190e+04
93	4	9769.85	830.62	8.84e-04	-138.00	0.0	-274.26	75.78	-110.56	2.861e+04	830.62	8813.20
		8813.20	-627.75	1.45e-03	0.0	46.0	-274.26	-62.22	-110.56	2.861e+04	-627.75	9125.28
93	5	9966.62	642.21	1.11e-03	-138.00	0.0	-409.78	74.53	-76.71	1.952e+04	642.21	9042.44
		9042.44	-410.77	1.05e-03	0.0	46.0	-409.78	-63.47	-76.71	1.952e+04	-410.77	9296.80
93	6	9829.34	773.66	9.52e-04	-138.00	0.0	-315.23	75.40	-100.33	2.586e+04	773.66	8882.50
		8882.50	-562.15	1.33e-03	0.0	46.0	-315.23	-62.60	-100.33	2.586e+04	-562.15	9177.14
93	7	9966.62	642.21	1.11e-03	-138.00	0.0	-409.78	74.53	-76.71	1.952e+04	642.21	9042.44
		9042.44	-410.77	1.05e-03	0.0	46.0	-409.78	-63.47	-76.71	1.952e+04	-410.77	9296.80
93	8	9870.52	734.23	9.99e-04	-138.00	0.0	-343.59	75.14	-93.24	2.396e+04	734.23	8930.48
		8930.48	-516.74	1.25e-03	0.0	46.0	-343.59	-62.86	-93.24	2.396e+04	-516.74	9213.03
93	9	9966.62	642.21	1.11e-03	-138.00	0.0	-409.78	74.53	-76.71	1.952e+04	642.21	9042.44
		9042.44	-410.77	1.05e-03	0.0	46.0	-409.78	-63.47	-76.71	1.952e+04	-410.77	9296.80
93	10	9884.25	721.08	1.01e-03	-138.00	0.0	-353.05	75.05	-90.88	2.333e+04	721.08	8946.48
		8946.48	-501.60	1.22e-03	0.0	46.0	-353.05	-62.95	-90.88	2.333e+04	-501.60	9225.00
100	2	3.850e+04	1219.88	-2.13e-03	-3983.30	0.0	-2685.96	1205.11	-11.43	1950.75	1219.88	1.628e+04
		-7.968e+04	464.66	2.41e-03	0.0	122.0	-2685.96	-2778.19	-11.43	1950.75	464.66	-7.968e+04
100	3	1.854e+04	778.97	-5.72e-04	-1993.48	0.0	-1348.61	557.54	-6.35	1134.00	778.97	9136.44
		-4.445e+04	375.55	1.13e-03	0.0	122.0	-1348.61	-1435.94	-6.35	1134.00	375.55	-4.445e+04
100	4	3.161e+04	966.97	-1.84e-03	-3256.18	0.0	-2194.87	993.30	-9.23	1566.35	966.97	1.313e+04
		-6.431e+04	354.18	1.99e-03	0.0	122.0	-2194.87	-2262.88	-9.23	1566.35	354.18	-6.431e+04
100	5	1.910e+04	787.32	-6.24e-04	-2049.60	0.0	-1386.22	576.90	-6.47	1153.22	787.32	9314.08
		-4.533e+04	374.60	1.16e-03	0.0	122.0	-1386.22	-1472.70	-6.47	1153.22	374.60	-4.533e+04
100	6	2.782e+04	912.66	-1.46e-03	-2891.40	0.0	-1950.40	867.41	-8.39	1441.45	912.66	1.198e+04
		-5.857e+04	360.35	1.74e-03	0.0	122.0	-1950.40	-2023.99	-8.39	1441.45	360.35	-5.857e+04
100	7	1.910e+04	787.32	-6.24e-04	-2049.60	0.0	-1386.22	576.90	-6.47	1153.22	787.32	9314.08
		-4.533e+04	374.60	1.16e-03	0.0	122.0	-1386.22	-1472.70	-6.47	1153.22	374.60	-4.533e+04
100	8	2.521e+04	875.06	-1.20e-03	-2638.86	0.0	-1781.14	780.26	-7.82	1354.98	875.06	1.118e+04
		-5.460e+04	364.63	1.57e-03	0.0	122.0	-1781.14	-1858.60	-7.82	1354.98	364.63	-5.460e+04
100	9	1.910e+04	787.32	-6.24e-04	-2049.60	0.0	-1386.22	576.90	-6.47	1153.22	787.32	9314.08
		-4.533e+04	374.60	1.16e-03	0.0	122.0	-1386.22	-1472.70	-6.47	1153.22	374.60	-4.533e+04
100	10	2.433e+04	862.52	-1.11e-03	-2554.68	0.0	-1724.73	751.21	-7.63	1326.16	862.52	1.091e+04
		-5.328e+04	366.05	1.51e-03	0.0	122.0	-1724.73	-1803.47	-7.63	1326.16	366.05	-5.328e+04
101	2	3.986e+04	723.55	0.04	-3983.30	0.0	-4981.54	1174.02	-24.73	4461.83	723.55	1.883e+04
		-8.092e+04	-823.01	7.23e-03	0.0	122.0	-4981.54	-2809.28	-24.73	4461.83	-823.01	-8.092e+04
101	3	1.963e+04	448.56	0.02	-1993.48	0.0	-2627.97	546.42	-14.42	2565.90	448.56	1.056e+04
		-4.438e+04	-464.88	4.26e-03	0.0	122.0	-2627.97	-1447.06	-14.42	2565.90	-464.88	-4.438e+04

101	5	2.019e+04	454.22	0.02	-2049.60	0.0	-2691.08	565.11	-14.66	2611.31	454.22	1.077e+04
		-4.531e+04	-473.70	4.33e-03	0.0	122.0	-2691.08	-1484.49	-14.66	2611.31	-473.70	-4.531e+04
101	6	2.886e+04	539.15	0.03	-2891.40	0.0	-3637.76	845.56	-18.28	3292.45	539.15	1.385e+04
		-5.936e+04	-605.96	5.35e-03	0.0	122.0	-3637.76	-2045.84	-18.28	3292.45	-605.96	-5.936e+04
101	7	2.019e+04	454.22	0.02	-2049.60	0.0	-2691.08	565.11	-14.66	2611.31	454.22	1.077e+04
		-4.531e+04	-473.70	4.33e-03	0.0	122.0	-2691.08	-1484.49	-14.66	2611.31	-473.70	-4.531e+04
101	8	2.624e+04	513.68	0.03	-2638.86	0.0	-3353.76	761.43	-17.19	3088.11	513.68	1.293e+04
		-5.515e+04	-566.28	5.04e-03	0.0	122.0	-3353.76	-1877.43	-17.19	3088.11	-566.28	-5.515e+04
101	9	2.019e+04	454.22	0.02	-2049.60	0.0	-2691.08	565.11	-14.66	2611.31	454.22	1.077e+04
		-4.531e+04	-473.70	4.33e-03	0.0	122.0	-2691.08	-1484.49	-14.66	2611.31	-473.70	-4.531e+04
101	10	2.536e+04	505.18	0.03	-2554.68	0.0	-3259.09	733.38	-16.83	3020.00	505.18	1.262e+04
		-5.374e+04	-553.05	4.94e-03	0.0	122.0	-3259.09	-1821.30	-16.83	3020.00	-553.05	-5.374e+04
102	1	5853.64	2536.55	0.01	-179.40	0.0	67.75	41.17	58.38	-9118.14	885.39	5637.91
		3406.19	885.39	1.34e-03	0.0	46.0	67.75	-138.23	58.38	-9118.14	2536.55	3406.19
102	2	5314.65	3496.61	0.02	-179.40	0.0	261.15	33.73	84.03	-1.359e+04	1174.41	5168.67
		2594.72	1174.41	1.80e-03	0.0	46.0	261.15	-145.67	84.03	-1.359e+04	3496.61	2594.72
102	3	4546.43	1875.70	9.40e-03	-138.00	0.0	36.91	32.26	42.89	-6661.99	658.34	4373.75
		2683.96	658.34	9.98e-04	0.0	46.0	36.91	-105.74	42.89	-6661.99	1875.70	2683.96
102	4	4007.05	2835.76	0.01	-138.00	0.0	230.31	24.82	68.54	-1.114e+04	947.36	3904.51
		1872.49	947.36	1.46e-03	0.0	46.0	230.31	-113.18	68.54	-1.114e+04	2835.76	1872.49
102	5	4521.77	1918.37	9.55e-03	-138.00	0.0	45.50	31.93	44.03	-6860.93	671.19	4352.90
		2647.89	671.19	1.02e-03	0.0	46.0	45.50	-106.07	44.03	-6860.93	1918.37	2647.89
102	6	4161.14	2558.41	0.01	-138.00	0.0	174.44	26.97	61.13	-9844.93	863.87	4040.07
		2106.91	863.87	1.32e-03	0.0	46.0	174.44	-111.03	61.13	-9844.93	2558.41	2106.91
102	7	4521.77	1918.37	9.55e-03	-138.00	0.0	45.50	31.93	44.03	-6860.93	671.19	4352.90
		2647.89	671.19	1.02e-03	0.0	46.0	45.50	-106.07	44.03	-6860.93	1918.37	2647.89
102	8	4267.82	2366.40	0.01	-138.00	0.0	135.76	28.45	56.00	-8949.73	806.06	4133.92
		2269.21	806.06	1.23e-03	0.0	46.0	135.76	-109.55	56.00	-8949.73	2366.40	2269.21
102	9	4521.77	1918.37	9.55e-03	-138.00	0.0	45.50	31.93	44.03	-6860.93	671.19	4352.90
		2647.89	671.19	1.02e-03	0.0	46.0	45.50	-106.07	44.03	-6860.93	1918.37	2647.89
102	10	4303.38	2302.39	0.01	-138.00	0.0	122.86	28.95	54.29	-8651.33	786.80	4165.20
		2323.30	786.80	1.20e-03	0.0	46.0	122.86	-109.05	54.29	-8651.33	2302.39	2323.30
103	2	-848.47	793.97	0.03	-3983.30	0.0	-568.66	863.05	-5.48	1266.48	793.97	-1.205e+04
		-1.497e+05	541.28	2.48e-03	0.0	122.0	-568.66	-3120.25	-5.48	1266.48	541.28	-1.497e+05
103	3	-3452.87	488.62	0.02	-1993.48	0.0	-138.40	351.64	-2.31	640.16	488.62	-7221.53
		-8.592e+04	164.74	1.24e-03	0.0	122.0	-138.40	-1641.84	-2.31	640.16	164.74	-8.592e+04
103	4	-92.08	632.66	0.03	-3256.18	0.0	-491.09	719.91	-4.56	1034.16	632.66	-9635.24
		-1.204e+05	416.30	2.03e-03	0.0	122.0	-491.09	-2536.27	-4.56	1034.16	416.30	-1.204e+05
103	5	-3306.08	495.02	0.02	-2049.60	0.0	-154.07	368.00	-2.41	657.67	495.02	-7328.81
		-8.746e+04	416.72	1.28e-03	0.0	122.0	-154.07	-1681.60	-2.41	657.67	416.72	-8.746e+04
103	6	-1104.31	591.05	0.03	-2891.40	0.0	-389.20	613.52	-3.91	920.34	591.05	-8937.95
		-1.105e+05	416.43	1.80e-03	0.0	122.0	-389.20	-2277.88	-3.91	920.34	416.43	-1.105e+05
103	7	-3306.08	495.02	0.02	-2049.60	0.0	-154.07	368.00	-2.41	657.67	495.02	-7328.81
		-8.746e+04	416.72	1.28e-03	0.0	122.0	-154.07	-1681.60	-2.41	657.67	416.72	-8.746e+04
103	8	-1764.84	562.24	0.02	-2638.86	0.0	-318.66	539.87	-3.46	841.54	562.24	-8455.21
		-1.036e+05	416.52	1.64e-03	0.0	122.0	-318.66	-2098.99	-3.46	841.54	416.52	-1.036e+05
103	9	-3306.08	495.02	0.02	-2049.60	0.0	-154.07	368.00	-2.41	657.67	495.02	-7328.81
		-8.746e+04	416.72	1.28e-03	0.0	122.0	-154.07	-1681.60	-2.41	657.67	416.72	-8.746e+04
103	10	-1985.02	552.64	0.02	-2554.68	0.0	-295.15	515.31	-3.31	815.27	552.64	-8294.29
		-1.013e+05	416.54	1.59e-03	0.0	122.0	-295.15	-2039.37	-3.31	815.27	416.54	-1.013e+05
104	1	1.264e+04	1087.01	1.94e-03	-179.40	0.0	-479.29	66.03	-115.91	2.549e+04	1087.01	1.208e+04
		1.099e+04	-1020.13	1.40e-03	0.0	46.0	-479.29	-113.37	-115.91	2.549e+04	-1020.13	1.099e+04
104	2	1.241e+04	1461.64	1.70e-03	-179.40	0.0	-353.58	63.54	-156.90	3.492e+04	1461.64	1.190e+04
		1.070e+04	-1339.15	1.83e-03	0.0	46.0	-353.58	-115.86	-156.90	3.492e+04	-1339.15	1.070e+04
104	4	9515.58	1181.33	1.27e-03	-138.00	0.0	-252.86	48.50	-126.93	2.829e+04	1181.33	9125.36
		8182.19	-1078.65	1.48e-03	0.0	46.0	-252.86	-89.50	-126.93	2.829e+04	-1078.65	8182.19
104	5	9728.21	823.35	1.50e-03	-138.00	0.0	-372.98	50.88	-87.76	1.929e+04	823.35	9296.90
		8463.32	-773.81	1.06e-03	0.0	46.0	-372.98	-87.12	-87.76	1.929e+04	-773.81	8463.32
104	6	9579.86	1073.10	1.34e-03	-138.00	0.0	-289.18	49.22	-115.09	2.557e+04	1073.10	9177.22
		8267.18	-986.49	1.35e-03	0.0	46.0	-289.18	-88.78	-115.09	2.557e+04	-986.49	8267.18
104	7	9728.21	823.35	1.50e-03	-138.00	0.0	-372.98	50.88	-87.76	1.929e+04	823.35	9296.90
		8463.32	-773.81	1.06e-03	0.0	46.0	-372.98	-87.12	-87.76	1.929e+04	-773.81	8463.32
104	8	9624.37	998.18	1.39e-03	-138.00	0.0	-314.32	49.71	-106.89	2.369e+04	998.18	9213.13
		8326.02	-922.68	1.26e-03	0.0	46.0	-314.32	-88.29	-106.89	2.369e+04	-922.68	8326.02
104	9	9728.21	823.35	1.50e-03	-138.00	0.0	-372.98	50.88	-87.76	1.929e+04	823.35	9296.90
		8463.32	-773.81	1.06e-03	0.0	46.0	-372.98	-87.12	-87.76	1.929e+04	-773.81	8463.32

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

104	10	9639.20	973.20	1.41e-03	-138.00	0.0	-322.70	49.88	-104.16	2.306e+04	973.20	9225.09
		8345.64	-901.42	1.23e-03	0.0	46.0	-322.70	-88.12	-104.16	2.306e+04	-901.42	8345.64
111	2	8.112e+04	1287.06	-7.89e-03	-3983.30	0.0	-5501.04	1924.64	-8.59	1969.28	1287.06	2.446e+04
		1.628e+04	890.41	1.87e-03	0.0	122.0	-5501.04	-2058.66	-8.59	1969.28	890.41	1.628e+04
111	3	4.208e+04	754.49	-3.42e-03	-1993.48	0.0	-3073.23	955.06	-4.53	1161.74	754.49	1.422e+04
		9136.47	585.71	7.74e-04	0.0	122.0	-3073.23	-1038.42	-4.53	1161.74	585.71	9136.47
111	5	4.314e+04	766.83	-3.56e-03	-2049.60	0.0	-3133.95	982.60	-4.64	1180.25	766.83	1.446e+04
		9314.11	590.91	8.09e-04	0.0	122.0	-3133.95	-1067.00	-4.64	1180.25	590.91	9314.11
111	6	5.912e+04	952.05	-5.63e-03	-2891.40	0.0	-4044.74	1395.74	-6.27	1457.88	952.05	1.807e+04
		1.198e+04	668.93	1.33e-03	0.0	122.0	-4044.74	-1495.66	-6.27	1457.88	668.93	1.198e+04
111	7	4.314e+04	766.83	-3.56e-03	-2049.60	0.0	-3133.95	982.60	-4.64	1180.25	766.83	1.446e+04
		9314.11	590.91	8.09e-04	0.0	122.0	-3133.95	-1067.00	-4.64	1180.25	590.91	9314.11
111	8	5.433e+04	896.49	-5.01e-03	-2638.86	0.0	-3771.50	1271.80	-5.78	1374.59	896.49	1.699e+04
		1.118e+04	645.52	1.17e-03	0.0	122.0	-3771.50	-1367.06	-5.78	1374.59	645.52	1.118e+04
111	9	4.314e+04	766.83	-3.56e-03	-2049.60	0.0	-3133.95	982.60	-4.64	1180.25	766.83	1.446e+04
		9314.11	590.91	8.09e-04	0.0	122.0	-3133.95	-1067.00	-4.64	1180.25	590.91	9314.11
111	10	5.273e+04	877.97	-4.80e-03	-2554.68	0.0	-3680.42	1230.49	-5.62	1346.83	877.97	1.663e+04
		1.091e+04	637.72	1.12e-03	0.0	122.0	-3680.42	-1324.19	-5.62	1346.83	637.72	1.091e+04
112	2	8.472e+04	892.63	0.04	-3983.30	0.0	-9125.16	1907.35	-19.25	4357.79	892.63	2.911e+04
		1.883e+04	-16.98	7.06e-03	0.0	122.0	-9125.16	-2075.95	-19.25	4357.79	-16.98	1.883e+04
112	3	4.400e+04	555.07	0.02	-1993.48	0.0	-4984.71	946.97	-11.18	2515.04	555.07	1.663e+04
		1.056e+04	21.56	4.15e-03	0.0	122.0	-4984.71	-1046.51	-11.18	2515.04	21.56	1.056e+04
112	4	6.897e+04	710.24	0.03	-3256.18	0.0	-7384.44	1560.54	-15.46	3502.36	710.24	2.343e+04
		1.519e+04	-19.27	5.66e-03	0.0	122.0	-7384.44	-1695.64	-15.46	3502.36	-19.27	1.519e+04
112	5	4.511e+04	561.97	0.02	-2049.60	0.0	-5091.37	974.24	-11.37	2558.92	561.97	1.694e+04
		1.077e+04	19.74	4.21e-03	0.0	122.0	-5091.37	-1075.36	-11.37	2558.92	19.74	1.077e+04
112	6	6.175e+04	665.41	0.03	-2891.40	0.0	-6691.18	1383.28	-14.23	3217.13	665.41	2.147e+04
		1.385e+04	-7.48	5.22e-03	0.0	122.0	-6691.18	-1508.12	-14.23	3217.13	-7.48	1.385e+04
112	7	4.511e+04	561.97	0.02	-2049.60	0.0	-5091.37	974.24	-11.37	2558.92	561.97	1.694e+04
		1.077e+04	19.74	4.21e-03	0.0	122.0	-5091.37	-1075.36	-11.37	2558.92	19.74	1.077e+04
112	8	5.676e+04	634.38	0.02	-2638.86	0.0	-6211.24	1260.57	-13.37	3019.67	634.38	2.011e+04
		1.293e+04	0.69	4.92e-03	0.0	122.0	-6211.24	-1378.29	-13.37	3019.67	0.69	1.293e+04
112	9	4.511e+04	561.97	0.02	-2049.60	0.0	-5091.37	974.24	-11.37	2558.92	561.97	1.694e+04
		1.077e+04	19.74	4.21e-03	0.0	122.0	-5091.37	-1075.36	-11.37	2558.92	19.74	1.077e+04
112	10	5.509e+04	624.04	0.02	-2554.68	0.0	-6051.26	1219.66	-13.09	2953.85	624.04	1.965e+04
		1.262e+04	3.41	4.82e-03	0.0	122.0	-6051.26	-1335.02	-13.09	2953.85	3.41	1.262e+04
113	1	5.732e+04	1715.19	0.01	-2720.60	0.0	1580.91	2965.24	-11.93	1641.89	1715.19	-1.385e+05
		-1.385e+05	829.59	2.21e-03	0.0	122.0	1580.91	244.64	-11.93	1641.89	829.59	5.732e+04
113	2	7.906e+04	2166.69	0.01	-3983.30	0.0	1546.52	4132.18	-16.27	2270.25	2166.69	-1.821e+05
		-1.821e+05	968.37	3.09e-03	0.0	122.0	1546.52	148.88	-16.27	2270.25	968.37	7.906e+04
113	3	4.238e+04	1283.87	8.31e-03	-1993.48	0.0	1218.79	2189.20	-8.84	1213.58	1283.87	-1.031e+05
		-1.031e+05	627.24	1.63e-03	0.0	122.0	1218.79	195.72	-8.84	1213.58	627.24	4.238e+04
113	4	6.412e+04	1735.38	9.72e-03	-3256.18	0.0	1184.40	3356.13	-13.18	1841.95	1735.38	-1.467e+05
		-1.467e+05	766.01	2.51e-03	0.0	122.0	1184.40	99.95	-13.18	1841.95	766.01	6.412e+04
113	5	4.335e+04	1303.94	8.37e-03	-2049.60	0.0	1217.26	2241.06	-9.03	1241.51	1303.94	-1.050e+05
		-1.050e+05	633.40	1.67e-03	0.0	122.0	1217.26	191.46	-9.03	1241.51	633.40	4.335e+04
113	6	5.784e+04	1604.94	9.31e-03	-2891.40	0.0	1194.33	3019.02	-11.92	1660.42	1604.94	-1.341e+05
		-1.341e+05	725.92	2.26e-03	0.0	122.0	1194.33	127.62	-11.92	1660.42	725.92	5.784e+04
113	7	4.335e+04	1303.94	8.37e-03	-2049.60	0.0	1217.26	2241.06	-9.03	1241.51	1303.94	-1.050e+05
		-1.050e+05	633.40	1.67e-03	0.0	122.0	1217.26	191.46	-9.03	1241.51	633.40	4.335e+04
113	8	5.349e+04	1514.64	9.03e-03	-2638.86	0.0	1201.21	2785.63	-11.06	1534.75	1514.64	-1.254e+05
		-1.254e+05	698.17	2.08e-03	0.0	122.0	1201.21	146.77	-11.06	1534.75	698.17	5.349e+04
113	9	4.335e+04	1303.94	8.37e-03	-2049.60	0.0	1217.26	2241.06	-9.03	1241.51	1303.94	-1.050e+05
		-1.050e+05	633.40	1.67e-03	0.0	122.0	1217.26	191.46	-9.03	1241.51	633.40	4.335e+04
113	10	5.204e+04	1484.54	8.94e-03	-2554.68	0.0	1203.50	2707.84	-10.77	1492.86	1484.54	-1.225e+05
		-1.225e+05	688.91	2.02e-03	0.0	122.0	1203.50	153.16	-10.77	1492.86	688.91	5.204e+04
114	1	1.099e+04	571.15	2.41e-03	-179.40	0.0	-208.64	-5.43	-143.58	2.477e+04	571.15	1.099e+04
		6613.40	-2932.39	1.38e-03	0.0	46.0	-208.64	-184.83	-143.58	2.477e+04	-2932.39	6613.40
114	2	1.070e+04	841.85	2.16e-03	-179.40	0.0	-92.24	-10.68	-195.36	3.395e+04	841.85	1.070e+04
		6078.00	-3891.20	1.82e-03	0.0	46.0	-92.24	-190.08	-195.36	3.395e+04	-3891.20	6078.00
114	4	8182.30	688.76	1.62e-03	-138.00	0.0	-53.24	-9.01	-158.16	2.752e+04	688.76	8182.30
		4593.93	-3139.10	1.46e-03	0.0	46.0	-53.24	-147.01	-158.16	2.752e+04	-3139.10	4593.93
114	5	8463.45	430.09	1.87e-03	-138.00	0.0	-164.47	-4.00	-108.68	1.874e+04	430.09	8463.45
		5105.54	-2222.91	1.05e-03	0.0	46.0	-164.47	-142.00	-108.68	1.874e+04	-2222.91	5105.54
114	6	8267.30	610.56	1.70e-03	-138.00	0.0	-86.87	-7.49	-143.20	2.486e+04	610.56	8267.30
		4748.60	-2862.11	1.34e-03	0.0	46.0	-86.87	-145.49	-143.20	2.486e+04	-2862.11	4748.60

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO / IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

114	7	8463.45	430.09	1.87e-03	-138.00	0.0	-164.47	-4.00	-108.68	1.874e+04	430.09	8463.45
		5105.54	-2222.91	1.05e-03	0.0	46.0	-164.47	-142.00	-108.68	1.874e+04	-2222.91	5105.54
114	8	8326.14	556.42	1.75e-03	-138.00	0.0	-110.15	-6.45	-132.84	2.303e+04	556.42	8326.14
		4855.68	-2670.35	1.25e-03	0.0	46.0	-110.15	-144.45	-132.84	2.303e+04	-2670.35	4855.68
114	9	8463.45	430.09	1.87e-03	-138.00	0.0	-164.47	-4.00	-108.68	1.874e+04	430.09	8463.45
		5105.54	-2222.91	1.05e-03	0.0	46.0	-164.47	-142.00	-108.68	1.874e+04	-2222.91	5105.54
114	10	8345.76	538.37	1.76e-03	-138.00	0.0	-117.91	-6.10	-129.39	2.242e+04	538.37	8345.76
		4891.38	-2606.43	1.22e-03	0.0	46.0	-117.91	-144.10	-129.39	2.242e+04	-2606.43	4891.38
121	2	8.522e+04	1245.27	-0.02	-3983.30	0.0	-5786.12	1991.37	-7.58	1952.64	1245.27	2.449e+04
		2.446e+04	963.30	1.28e-03	0.0	122.0	-5786.12	-1991.93	-7.58	1952.64	963.30	2.446e+04
121	3	4.475e+04	659.18	-7.64e-03	-1993.48	0.0	-3352.53	994.61	-3.95	1166.52	659.18	1.448e+04
		1.422e+04	561.99	4.31e-04	0.0	122.0	-3352.53	-998.87	-3.95	1166.52	561.99	1.422e+04
121	5	4.584e+04	674.84	-7.88e-03	-2049.60	0.0	-3410.10	1022.77	-4.05	1184.11	674.84	1.471e+04
		1.446e+04	571.37	4.60e-04	0.0	122.0	-3410.10	-1026.83	-4.05	1184.11	571.37	1.446e+04
121	6	6.220e+04	909.72	-0.01	-2891.40	0.0	-4273.71	1445.18	-5.53	1447.91	909.72	1.814e+04
		1.807e+04	712.13	8.96e-04	0.0	122.0	-4273.71	-1446.22	-5.53	1447.91	712.13	1.807e+04
121	7	4.584e+04	674.84	-7.88e-03	-2049.60	0.0	-3410.10	1022.77	-4.05	1184.11	674.84	1.471e+04
		1.446e+04	571.37	4.60e-04	0.0	122.0	-3410.10	-1026.83	-4.05	1184.11	571.37	1.446e+04
121	8	5.729e+04	839.26	-0.01	-2638.86	0.0	-4014.63	1318.45	-5.08	1368.77	839.26	1.711e+04
		1.699e+04	669.90	7.65e-04	0.0	122.0	-4014.63	-1320.41	-5.08	1368.77	669.90	1.699e+04
121	9	4.584e+04	674.84	-7.88e-03	-2049.60	0.0	-3410.10	1022.77	-4.05	1184.11	674.84	1.471e+04
		1.446e+04	571.37	4.60e-04	0.0	122.0	-3410.10	-1026.83	-4.05	1184.11	571.37	1.446e+04
121	10	5.566e+04	815.77	-1.00e-02	-2554.68	0.0	-3928.27	1276.21	-4.93	1342.39	815.77	1.717e+04
		1.663e+04	655.82	7.21e-04	0.0	122.0	-3928.27	-1278.47	-4.93	1342.39	655.82	1.663e+04
122	2	9.126e+04	1007.16	0.03	-3983.30	0.0	-1.095e+04	1968.61	-18.01	4174.45	1007.16	3.192e+04
		2.911e+04	188.29	6.78e-03	0.0	122.0	-1.095e+04	-2014.69	-18.01	4174.45	188.29	2.911e+04
122	3	4.784e+04	625.35	0.01	-1993.48	0.0	-6006.05	983.60	-10.44	2412.75	625.35	1.824e+04
		1.663e+04	147.97	3.96e-03	0.0	122.0	-6006.05	-1009.88	-10.44	2412.75	147.97	1.663e+04
122	4	7.422e+04	801.54	0.02	-3256.18	0.0	-8853.62	1609.54	-14.46	3354.37	801.54	2.569e+04
		2.343e+04	144.28	5.44e-03	0.0	122.0	-8853.62	-1646.64	-14.46	3354.37	144.28	2.343e+04
122	5	4.901e+04	633.18	0.01	-2049.60	0.0	-6132.61	1011.42	-10.62	2454.60	633.18	1.857e+04
		1.694e+04	147.80	4.03e-03	0.0	122.0	-6132.61	-1038.18	-10.62	2454.60	147.80	1.694e+04
122	6	6.660e+04	750.64	0.02	-2891.40	0.0	-8030.99	1428.71	-13.30	3082.35	750.64	2.354e+04
		2.147e+04	145.35	5.01e-03	0.0	122.0	-8030.99	-1462.69	-13.30	3082.35	145.35	2.147e+04
122	7	4.901e+04	633.18	0.01	-2049.60	0.0	-6132.61	1011.42	-10.62	2454.60	633.18	1.857e+04
		1.694e+04	147.80	4.03e-03	0.0	122.0	-6132.61	-1038.18	-10.62	2454.60	147.80	1.694e+04
122	8	6.132e+04	715.40	0.02	-2638.86	0.0	-7461.48	1303.53	-12.50	2894.03	715.40	2.205e+04
		2.011e+04	146.08	4.72e-03	0.0	122.0	-7461.48	-1335.33	-12.50	2894.03	146.08	2.011e+04
122	9	4.901e+04	633.18	0.01	-2049.60	0.0	-6132.61	1011.42	-10.62	2454.60	633.18	1.857e+04
		1.694e+04	147.80	4.03e-03	0.0	122.0	-6132.61	-1038.18	-10.62	2454.60	147.80	1.694e+04
122	10	5.956e+04	703.66	0.02	-2554.68	0.0	-7271.64	1261.80	-12.23	2831.25	703.66	2.155e+04
		1.965e+04	146.33	4.62e-03	0.0	122.0	-7271.64	-1292.88	-12.23	2831.25	146.33	1.965e+04
123	2	1.193e+05	1395.07	0.03	-3983.30	0.0	-5973.32	1624.65	-10.78	2316.62	1395.07	7.906e+04
		3.428e+04	840.11	3.73e-03	0.0	122.0	-5973.32	-2358.65	-10.78	2316.62	840.11	3.428e+04
123	3	6.248e+04	856.20	0.02	-1993.48	0.0	-3110.33	812.51	-5.97	1247.55	856.20	4.238e+04
		1.991e+04	536.03	2.03e-03	0.0	122.0	-3110.33	-1180.97	-5.97	1247.55	536.03	1.991e+04
123	5	6.401e+04	867.57	0.02	-2049.60	0.0	-3188.15	835.43	-6.09	1275.57	867.57	4.335e+04
		2.025e+04	541.80	2.07e-03	0.0	122.0	-3188.15	-1214.17	-6.09	1275.57	541.80	2.025e+04
123	6	8.702e+04	1038.14	0.02	-2891.40	0.0	-4355.42	1179.21	-7.92	1695.81	1038.14	5.784e+04
		2.533e+04	628.46	2.73e-03	0.0	122.0	-4355.42	-1712.19	-7.92	1695.81	628.46	2.533e+04
123	7	6.401e+04	867.57	0.02	-2049.60	0.0	-3188.15	835.43	-6.09	1275.57	867.57	4.335e+04
		2.025e+04	541.80	2.07e-03	0.0	122.0	-3188.15	-1214.17	-6.09	1275.57	541.80	2.025e+04
123	8	8.012e+04	986.97	0.02	-2638.86	0.0	-4005.24	1076.08	-7.37	1569.74	986.97	5.349e+04
		2.380e+04	602.47	2.54e-03	0.0	122.0	-4005.24	-1562.78	-7.37	1569.74	602.47	2.380e+04
123	9	6.401e+04	867.57	0.02	-2049.60	0.0	-3188.15	835.43	-6.09	1275.57	867.57	4.335e+04
		2.025e+04	541.80	2.07e-03	0.0	122.0	-3188.15	-1214.17	-6.09	1275.57	541.80	2.025e+04
123	10	7.782e+04	969.91	0.02	-2554.68	0.0	-3888.51	1041.70	-7.19	1527.71	969.91	5.204e+04
		2.330e+04	593.80	2.47e-03	0.0	122.0	-3888.51	-1512.98	-7.19	1527.71	593.80	2.330e+04
124	1	6613.60	-1425.19	2.70e-03	-179.40	0.0	300.96	-93.67	-187.74	2.387e+04	-1425.19	6613.60
		-1821.40	-7206.07	1.22e-03	0.0	46.0	300.96	-273.07	-187.74	2.387e+04	-7206.07	-1821.40
124	2	6078.18	-1822.14	2.43e-03	-179.40	0.0	414.00	-90.65	-257.50	3.272e+04	-1822.14	6078.18
		-2217.81	-9746.10	1.60e-03	0.0	46.0	414.00	-270.05	-257.50	3.272e+04	-9746.10	-2217.81
124	3	5129.48	-1065.09	2.10e-03	-138.00	0.0	222.62	-72.29	-138.93	1.766e+04	-1065.09	5129.48
		-1369.91	-5343.40	9.09e-04	0.0	46.0	222.62	-210.29	-138.93	1.766e+04	-5343.40	-1369.91
124	5	5105.69	-1082.73	2.09e-03	-138.00	0.0	227.64	-72.16	-142.03	1.806e+04	-1082.73	5105.69
		-1387.53	-5456.29	9.26e-04	0.0	46.0	227.64	-210.16	-142.03	1.806e+04	-5456.29	-1387.53

124	6	4748.74	-1347.36	1.90e-03	-138.00	0.0	303.00	-70.14	-188.53	2.396e+04	-1347.36	4748.74
		-1651.80	-7149.65	1.18e-03	0.0	46.0	303.00	-208.14	-188.53	2.396e+04	-7149.65	-1651.80
124	7	5105.69	-1082.73	2.09e-03	-138.00	0.0	227.64	-72.16	-142.03	1.806e+04	-1082.73	5105.69
		-1387.53	-5456.29	9.26e-04	0.0	46.0	227.64	-210.16	-142.03	1.806e+04	-5456.29	-1387.53
124	8	4855.82	-1267.97	1.96e-03	-138.00	0.0	280.39	-70.75	-174.58	2.219e+04	-1267.97	4855.82
		-1572.52	-6641.64	1.10e-03	0.0	46.0	280.39	-208.75	-174.58	2.219e+04	-6641.64	-1572.52
124	9	5105.69	-1082.73	2.09e-03	-138.00	0.0	227.64	-72.16	-142.03	1.806e+04	-1082.73	5105.69
		-1387.53	-5456.29	9.26e-04	0.0	46.0	227.64	-210.16	-142.03	1.806e+04	-5456.29	-1387.53
124	10	4891.52	-1241.51	1.98e-03	-138.00	0.0	272.86	-70.95	-169.93	2.160e+04	-1241.51	4891.52
		-1546.09	-6472.31	1.08e-03	0.0	46.0	272.86	-208.95	-169.93	2.160e+04	-6472.31	-1546.09
131	2	8.192e+04	1015.68	-0.02	-3983.30	0.0	-3320.06	2046.12	-6.00	1975.09	1015.68	1.785e+04
		1.785e+04	925.35	7.16e-04	0.0	122.0	-3320.06	-1937.18	-6.00	1975.09	925.35	2.449e+04
131	3	4.306e+04	466.83	-0.01	-1993.48	0.0	-2042.65	1026.60	-3.17	1195.38	464.58	1.084e+04
		1.084e+04	464.58	1.38e-04	0.0	122.0	-2042.65	-966.88	-3.17	1195.38	466.83	1.448e+04
131	5	4.411e+04	481.18	-0.01	-2049.60	0.0	-2069.45	1055.29	-3.24	1212.36	481.18	1.099e+04
		1.099e+04	479.67	1.60e-04	0.0	122.0	-2069.45	-994.31	-3.24	1212.36	479.67	1.471e+04
131	6	5.979e+04	730.21	-0.02	-2891.40	0.0	-2471.43	1485.66	-4.38	1467.06	730.21	1.326e+04
		1.326e+04	672.30	4.85e-04	0.0	122.0	-2471.43	-1405.74	-4.38	1467.06	672.30	1.814e+04
131	7	4.411e+04	481.18	-0.01	-2049.60	0.0	-2069.45	1055.29	-3.24	1212.36	481.18	1.099e+04
		1.099e+04	479.67	1.60e-04	0.0	122.0	-2069.45	-994.31	-3.24	1212.36	479.67	1.471e+04
131	8	5.509e+04	655.50	-0.02	-2638.86	0.0	-2350.84	1356.55	-4.04	1390.65	655.50	1.258e+04
		1.258e+04	614.51	3.87e-04	0.0	122.0	-2350.84	-1282.31	-4.04	1390.65	614.51	1.711e+04
131	9	4.411e+04	481.18	-0.01	-2049.60	0.0	-2069.45	1055.29	-3.24	1212.36	481.18	1.099e+04
		1.099e+04	479.67	1.60e-04	0.0	122.0	-2069.45	-994.31	-3.24	1212.36	479.67	1.471e+04
131	10	5.352e+04	630.60	-0.02	-2554.68	0.0	-2310.64	1313.51	-3.93	1365.18	630.60	1.235e+04
		1.235e+04	595.25	3.55e-04	0.0	122.0	-2310.64	-1241.17	-3.93	1365.18	595.25	1.677e+04
132	2	9.045e+04	1160.50	0.02	-3983.30	0.0	-1.002e+04	2028.08	-17.56	3965.06	1160.50	2.748e+04
		2.748e+04	332.43	6.42e-03	0.0	122.0	-1.002e+04	-1955.22	-17.56	3965.06	332.43	3.192e+04
132	3	4.735e+04	717.50	8.42e-03	-1993.48	0.0	-5446.65	1017.86	-10.18	2290.69	717.50	1.566e+04
		1.566e+04	235.18	3.73e-03	0.0	122.0	-5446.65	-975.62	-10.18	2290.69	235.18	1.824e+04
132	5	4.851e+04	726.68	8.61e-03	-2049.60	0.0	-5565.13	1046.28	-10.35	2330.49	726.68	1.595e+04
		1.595e+04	236.26	3.80e-03	0.0	122.0	-5565.13	-1003.32	-10.35	2330.49	236.26	1.857e+04
132	6	6.599e+04	864.44	0.01	-2891.40	0.0	-7342.34	1472.61	-12.97	2927.57	864.44	2.025e+04
		2.025e+04	252.41	4.75e-03	0.0	122.0	-7342.34	-1418.79	-12.97	2927.57	252.41	2.354e+04
132	7	4.851e+04	726.68	8.61e-03	-2049.60	0.0	-5565.13	1046.28	-10.35	2330.49	726.68	1.595e+04
		1.595e+04	236.26	3.80e-03	0.0	122.0	-5565.13	-1003.32	-10.35	2330.49	236.26	1.857e+04
132	8	6.075e+04	823.11	0.01	-2638.86	0.0	-6809.18	1344.71	-12.18	2748.45	823.11	1.896e+04
		1.896e+04	247.56	4.46e-03	0.0	122.0	-6809.18	-1294.15	-12.18	2748.45	247.56	2.205e+04
132	9	4.851e+04	726.68	8.61e-03	-2049.60	0.0	-5565.13	1046.28	-10.35	2330.49	726.68	1.595e+04
		1.595e+04	236.26	3.80e-03	0.0	122.0	-5565.13	-1003.32	-10.35	2330.49	236.26	1.857e+04
132	10	5.900e+04	809.33	0.01	-2554.68	0.0	-6631.46	1302.08	-11.92	2688.74	809.33	1.853e+04
		1.853e+04	245.95	4.37e-03	0.0	122.0	-6631.46	-1252.60	-11.92	2688.74	245.95	2.155e+04
133	2	9.035e+04	1198.86	0.04	-3983.30	0.0	-4997.94	1914.97	-9.06	2211.14	1198.86	3.428e+04
		2.493e+04	815.65	4.28e-03	0.0	122.0	-4997.94	-2068.33	-9.06	2211.14	815.65	2.493e+04
133	3	4.760e+04	730.01	0.03	-1993.48	0.0	-2716.24	952.30	-4.99	1207.51	730.01	1.991e+04
		1.449e+04	516.18	2.37e-03	0.0	122.0	-2716.24	-1041.18	-4.99	1207.51	516.18	1.449e+04
133	5	4.875e+04	740.09	0.03	-2049.60	0.0	-2775.39	979.60	-5.09	1233.37	740.09	2.025e+04
		1.473e+04	522.02	2.41e-03	0.0	122.0	-2775.39	-1070.00	-5.09	1233.37	522.02	1.473e+04
133	6	6.597e+04	891.20	0.03	-2891.40	0.0	-3662.58	1389.06	-6.65	1621.30	891.20	2.533e+04
		1.842e+04	609.48	3.14e-03	0.0	122.0	-3662.58	-1502.34	-6.65	1621.30	609.48	1.842e+04
133	7	4.875e+04	740.09	0.03	-2049.60	0.0	-2775.39	979.60	-5.09	1233.37	740.09	2.025e+04
		1.473e+04	522.02	2.41e-03	0.0	122.0	-2775.39	-1070.00	-5.09	1233.37	522.02	1.473e+04
133	8	6.080e+04	845.87	0.03	-2638.86	0.0	-3396.42	1266.22	-6.18	1504.92	845.87	2.381e+04
		1.731e+04	583.24	2.92e-03	0.0	122.0	-3396.42	-1372.64	-6.18	1504.92	583.24	1.731e+04
133	9	4.875e+04	740.09	0.03	-2049.60	0.0	-2775.39	979.60	-5.09	1233.37	740.09	2.025e+04
		1.473e+04	522.02	2.41e-03	0.0	122.0	-2775.39	-1070.00	-5.09	1233.37	522.02	1.473e+04
133	10	5.908e+04	830.75	0.03	-2554.68	0.0	-3307.70	1225.28	-6.02	1466.13	830.75	2.330e+04
		1.695e+04	574.50	2.85e-03	0.0	122.0	-3307.70	-1329.40	-6.02	1466.13	574.50	1.695e+04
134	1	-1820.86	-5893.52	2.64e-03	-179.40	0.0	928.11	-183.95	-237.34	2.382e+04	-5893.52	-1820.86
		-1.441e+04	-1.449e+04	7.27e-04	0.0	46.0	928.11	-363.35	-237.34	2.382e+04	-1.449e+04	-1.441e+04
134	2	-2217.33	-7942.77	2.34e-03	-179.40	0.0	1036.24	-135.79	-329.40	3.261e+04	-7942.77	-2217.33
		-1.259e+04	-1.992e+04	9.36e-04	0.0	46.0	1036.24	-315.19	-329.40	3.261e+04	-1.992e+04	-1.259e+04
134	3	-1369.49	-4372.34	2.06e-03	-138.00	0.0	705.43	-145.29	-175.33	1.764e+04	-4372.34	-1369.49
		-1.123e+04	-1.072e+04	5.43e-04	0.0	46.0	705.43	-283.29	-175.33	1.764e+04	-1.072e+04	-1.123e+04
134	5	-1387.11	-4463.42	2.04e-03	-138.00	0.0	710.24	-143.15	-179.42	1.803e+04	-4463.42	-1387.11
		-1.115e+04	-1.096e+04	5.52e-04	0.0	46.0	710.24	-281.15	-179.42	1.803e+04	-1.096e+04	-1.115e+04

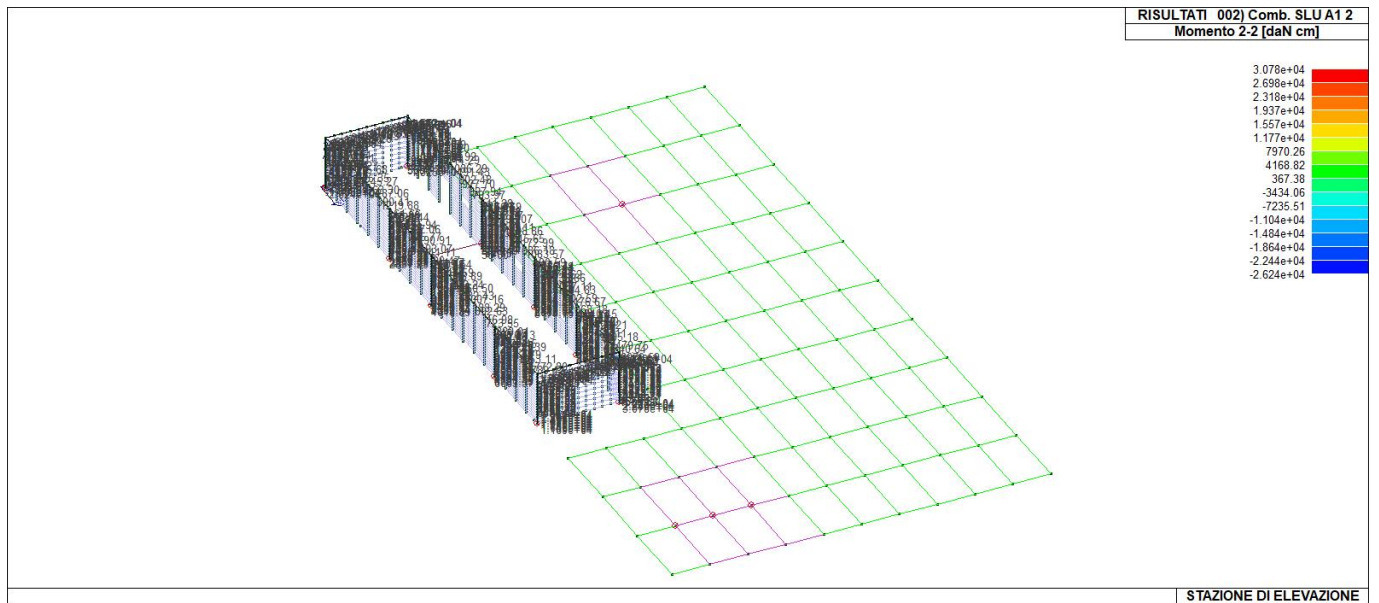
134	6	-1651.42	-5829.59	1.84e-03	-138.00	0.0	782.32	-111.04	-240.79	2.389e+04	-5829.59	-1651.42
		-9933.00	-1.458e+04	6.92e-04	0.0	46.0	782.32	-249.04	-240.79	2.389e+04	-1.458e+04	-9933.00
134	7	-1387.11	-4463.42	2.04e-03	-138.00	0.0	710.24	-143.15	-179.42	1.803e+04	-4463.42	-1387.11
		-1.115e+04	-1.096e+04	5.52e-04	0.0	46.0	710.24	-281.15	-179.42	1.803e+04	-1.096e+04	-1.115e+04
134	8	-1572.13	-5419.74	1.90e-03	-138.00	0.0	760.70	-120.67	-222.38	2.213e+04	-5419.74	-1572.13
		-1.030e+04	-1.350e+04	6.50e-04	0.0	46.0	760.70	-258.67	-222.38	2.213e+04	-1.350e+04	-1.030e+04
134	9	-1387.11	-4463.42	2.04e-03	-138.00	0.0	710.24	-143.15	-179.42	1.803e+04	-4463.42	-1387.11
		-1.115e+04	-1.096e+04	5.52e-04	0.0	46.0	710.24	-281.15	-179.42	1.803e+04	-1.096e+04	-1.115e+04
134	10	-1545.70	-5283.12	1.92e-03	-138.00	0.0	753.49	-123.88	-216.25	2.154e+04	-5283.12	-1545.70
		-1.042e+04	-1.314e+04	6.36e-04	0.0	46.0	753.49	-261.88	-216.25	2.154e+04	-1.314e+04	-1.042e+04
141	1	5.153e+04	382.36	-0.02	-2720.60	0.0	805.88	1432.37	0.46	1861.05	-245.08	5647.83
		5647.83	-245.08	-2.17e-05	0.0	122.0	805.88	-1288.23	0.46	1861.05	382.36	1.444e+04
141	2	7.312e+04	696.27	-0.03	-3983.30	0.0	1375.31	2081.41	0.83	2283.94	-107.51	6898.96
		6898.96	-107.51	2.96e-04	0.0	122.0	1375.31	-1901.89	0.83	2283.94	696.27	1.785e+04
141	3	3.794e+04	269.44	-0.02	-1993.48	0.0	575.13	1050.79	0.33	1398.33	-199.34	4246.11
		4246.11	-199.34	-4.02e-05	0.0	122.0	575.13	-942.69	0.33	1398.33	269.44	1.084e+04
141	5	3.890e+04	283.39	-0.02	-2049.60	0.0	600.44	1079.63	0.34	1417.12	-193.23	4301.71
		4301.71	-193.23	-2.63e-05	0.0	122.0	600.44	-969.97	0.34	1417.12	283.39	1.099e+04
141	6	5.329e+04	492.67	-0.02	-2891.40	0.0	980.06	1512.33	0.59	1699.04	-101.51	5135.80
		5135.80	-101.51	1.84e-04	0.0	122.0	980.06	-1379.07	0.59	1699.04	492.67	1.326e+04
141	7	3.890e+04	283.39	-0.02	-2049.60	0.0	600.44	1079.63	0.34	1417.12	-193.23	4301.71
		4301.71	-193.23	-2.63e-05	0.0	122.0	600.44	-969.97	0.34	1417.12	283.39	1.099e+04
141	8	4.898e+04	429.88	-0.02	-2638.86	0.0	866.18	1382.52	0.52	1614.47	-129.03	4885.57
		4885.57	-129.03	1.21e-04	0.0	122.0	866.18	-1256.34	0.52	1614.47	429.88	1.258e+04
141	9	3.890e+04	283.39	-0.02	-2049.60	0.0	600.44	1079.63	0.34	1417.12	-193.23	4301.71
		4301.71	-193.23	-2.63e-05	0.0	122.0	600.44	-969.97	0.34	1417.12	283.39	1.099e+04
141	10	4.754e+04	408.95	-0.02	-2554.68	0.0	828.21	1339.25	0.49	1586.27	-138.20	4802.16
		4802.16	-138.20	1.00e-04	0.0	122.0	828.21	-1215.43	0.49	1586.27	408.95	1.235e+04
142	2	8.377e+04	1518.89	6.44e-03	-3983.30	0.0	-6883.29	2064.60	-18.10	3646.52	1518.89	1.858e+04
		1.858e+04	522.24	5.97e-03	0.0	122.0	-6883.29	-1918.70	-18.10	3646.52	522.24	2.748e+04
142	3	4.336e+04	931.00	3.34e-03	-1993.48	0.0	-3608.68	1040.97	-10.49	2100.85	931.00	1.026e+04
		1.026e+04	348.93	3.45e-03	0.0	122.0	-3608.68	-952.51	-10.49	2100.85	348.93	1.566e+04
142	5	4.447e+04	943.44	3.43e-03	-2049.60	0.0	-3697.06	1069.65	-10.67	2137.76	943.44	1.047e+04
		1.047e+04	351.70	3.51e-03	0.0	122.0	-3697.06	-979.95	-10.67	2137.76	351.70	1.595e+04
142	6	6.104e+04	1130.09	4.69e-03	-2891.40	0.0	-5022.87	1499.90	-13.37	2691.44	1130.09	1.364e+04
		1.364e+04	393.21	4.41e-03	0.0	122.0	-5022.87	-1391.50	-13.37	2691.44	393.21	2.025e+04
142	7	4.447e+04	943.44	3.43e-03	-2049.60	0.0	-3697.06	1069.65	-10.67	2137.76	943.44	1.047e+04
		1.047e+04	351.70	3.51e-03	0.0	122.0	-3697.06	-979.95	-10.67	2137.76	351.70	1.595e+04
142	8	5.607e+04	1074.10	4.31e-03	-2638.86	0.0	-4625.13	1370.83	-12.56	2525.34	1074.10	1.269e+04
		1.269e+04	380.76	4.14e-03	0.0	122.0	-4625.13	-1268.03	-12.56	2525.34	380.76	1.896e+04
142	9	4.447e+04	943.44	3.43e-03	-2049.60	0.0	-3697.06	1069.65	-10.67	2137.76	943.44	1.047e+04
		1.047e+04	351.70	3.51e-03	0.0	122.0	-3697.06	-979.95	-10.67	2137.76	351.70	1.595e+04
142	10	5.441e+04	1055.43	4.19e-03	-2554.68	0.0	-4492.55	1327.80	-12.29	2469.97	1055.43	1.237e+04
		1.237e+04	376.61	4.05e-03	0.0	122.0	-4492.55	-1226.88	-12.29	2469.97	376.61	1.853e+04
143	2	6.871e+04	1172.99	0.05	-3983.30	0.0	-2375.19	1691.57	-10.07	2314.33	1172.99	2.493e+04
		-1.168e+04	686.18	4.79e-03	0.0	122.0	-2375.19	-2291.73	-10.07	2314.33	686.18	-1.168e+04
143	3	3.509e+04	712.93	0.03	-1993.48	0.0	-1210.00	821.97	-5.52	1283.82	712.93	1.449e+04
		-6834.03	450.53	2.69e-03	0.0	122.0	-1210.00	-1171.51	-5.52	1283.82	450.53	-6834.03
143	5	3.602e+04	722.86	0.03	-2049.60	0.0	-1242.35	847.09	-5.64	1309.84	722.86	1.473e+04
		-6946.70	454.59	2.74e-03	0.0	122.0	-1242.35	-1202.51	-5.64	1309.84	454.59	-6946.70
143	6	4.999e+04	871.76	0.04	-2891.40	0.0	-1727.54	1223.91	-7.38	1700.18	871.76	1.842e+04
		-8636.79	515.36	3.52e-03	0.0	122.0	-1727.54	-1667.49	-7.38	1700.18	515.36	-8636.79
143	7	3.602e+04	722.86	0.03	-2049.60	0.0	-1242.35	847.09	-5.64	1309.84	722.86	1.473e+04
		-6946.70	454.59	2.74e-03	0.0	122.0	-1242.35	-1202.51	-5.64	1309.84	454.59	-6946.70
143	8	4.580e+04	827.09	0.04	-2638.86	0.0	-1581.99	1110.86	-6.86	1583.08	827.09	1.731e+04
		-8129.76	497.13	3.29e-03	0.0	122.0	-1581.99	-1528.00	-6.86	1583.08	497.13	-8129.76
143	9	3.602e+04	722.86	0.03	-2049.60	0.0	-1242.35	847.09	-5.64	1309.84	722.86	1.473e+04
		-6946.70	454.59	2.74e-03	0.0	122.0	-1242.35	-1202.51	-5.64	1309.84	454.59	-6946.70
143	10	4.440e+04	812.20	0.04	-2554.68	0.0	-1533.47	1073.18	-6.69	1544.05	812.20	1.695e+04
		-7960.76	491.05	3.21e-03	0.0	122.0	-1533.47	-1481.50	-6.69	1544.05	491.05	-7960.76
150	2	-2526.38	1083.57	0.05	-3983.30	0.0	3507.90	773.47	-12.21	2736.90	1083.57	-1.168e+04
		-1.603e+05	490.59	5.27e-03	0.0	122.0	3507.90	-3209.83	-12.21	2736.90	490.59	-1.603e+05
150	3	-4451.68	672.27	0.03	-1993.48	0.0	2203.40	280.77	-6.75	1541.67	672.27	-6833.37
		-9.418e+04	353.75	2.99e-03	0.0	122.0	2203.40	-1712.71	-6.75	1541.67	353.75	-9.418e+04
150	4	-1451.27	862.45	0.04	-3256.18	0.0	2787.20	651.36	-9.86	2206.44	862.45	-9368.23
		-1.285e+05	381.62	4.24e-03	0.0	122.0	2787.20	-2604.82	-9.86	2206.44	381.62	-1.285e+05

150	5	-4366.65	680.72	0.03	-2049.60	0.0	2229.34	297.24	-6.89	1571.21	680.72	-6946.03
		-9.571e+04	354.99	3.04e-03	0.0	122.0	2229.34	-1752.36	-6.89	1571.21	354.99	-9.571e+04
150	6	-2385.71	807.51	0.04	-2891.40	0.0	2618.55	544.30	-8.96	2014.40	807.51	-8635.94
		-1.186e+05	373.57	3.88e-03	0.0	122.0	2618.55	-2347.10	-8.96	2014.40	373.57	-1.186e+05
150	7	-4366.65	680.72	0.03	-2049.60	0.0	2229.34	297.24	-6.89	1571.21	680.72	-6946.03
		-9.571e+04	354.99	3.04e-03	0.0	122.0	2229.34	-1752.36	-6.89	1571.21	354.99	-9.571e+04
150	8	-3032.62	769.47	0.03	-2638.86	0.0	2501.79	470.18	-8.34	1881.44	769.47	-8128.97
		-1.117e+05	367.99	3.63e-03	0.0	122.0	2501.79	-2168.68	-8.34	1881.44	367.99	-1.117e+05
150	9	-4366.65	680.72	0.03	-2049.60	0.0	2229.34	297.24	-6.89	1571.21	680.72	-6946.03
		-9.571e+04	354.99	3.04e-03	0.0	122.0	2229.34	-1752.36	-6.89	1571.21	354.99	-9.571e+04
150	10	-3248.26	756.79	0.03	-2554.68	0.0	2462.87	445.47	-8.13	1837.12	756.79	-7959.98
		-1.094e+05	366.14	3.54e-03	0.0	122.0	2462.87	-2109.21	-8.13	1837.12	366.14	-1.094e+05
157	2	4.850e+04	3586.44	0.03	-3983.30	0.0	6169.06	3913.50	-29.18	4177.55	3586.44	-1.860e+05
		-1.860e+05	1478.62	6.18e-03	0.0	122.0	6169.06	-69.80	-29.18	4177.55	1478.62	4.850e+04
157	3	2.367e+04	2119.93	0.01	-1993.48	0.0	3969.86	2072.62	-16.84	2382.69	2119.93	2.367e+04
		-1.076e+05	895.03	3.54e-03	0.0	122.0	3969.86	79.14	-16.84	2382.69	895.03	2.367e+04
157	5	2.438e+04	2153.42	0.01	-2049.60	0.0	4010.51	2121.77	-17.13	2426.24	2153.42	-1.094e+05
		-1.094e+05	907.74	3.61e-03	0.0	122.0	4010.51	72.17	-17.13	2426.24	907.74	2.438e+04
157	6	3.511e+04	2655.76	0.02	-2891.40	0.0	4620.34	2859.13	-21.54	3079.50	2655.76	-1.262e+05
		-1.373e+05	1098.31	4.56e-03	0.0	122.0	4620.34	-32.27	-21.54	3079.50	1098.31	3.511e+04
157	7	2.438e+04	2153.42	0.01	-2049.60	0.0	4010.51	2121.77	-17.13	2426.24	2153.42	-1.094e+05
		-1.094e+05	907.74	3.61e-03	0.0	122.0	4010.51	72.17	-17.13	2426.24	907.74	2.438e+04
157	8	3.189e+04	2505.06	0.02	-2638.86	0.0	4437.39	2637.92	-20.22	2883.52	2505.06	-1.290e+05
		-1.290e+05	1041.13	4.27e-03	0.0	122.0	4437.39	-0.94	-20.22	2883.52	1041.13	3.189e+04
157	9	2.438e+04	2153.42	0.01	-2049.60	0.0	4010.51	2121.77	-17.13	2426.24	2153.42	-1.094e+05
		-1.094e+05	907.74	3.61e-03	0.0	122.0	4010.51	72.17	-17.13	2426.24	907.74	2.438e+04
157	10	3.082e+04	2454.82	0.02	-2554.68	0.0	4376.41	2564.19	-19.78	2818.20	2454.82	-1.262e+05
		-1.262e+05	1022.08	4.18e-03	0.0	122.0	4376.41	9.51	-19.78	2818.20	1022.08	3.082e+04
164	2	1.000e+05	2236.66	0.04	-3983.30	0.0	-592.04	1836.77	-20.25	4020.30	2236.66	4.850e+04
		2.960e+04	1087.11	7.18e-03	0.0	122.0	-592.04	-2146.53	-20.25	4020.30	1087.11	2.960e+04
164	3	5.057e+04	1327.77	0.02	-1993.48	0.0	9.33	939.35	-11.76	2297.25	1327.77	2.367e+04
		1.666e+04	647.64	4.14e-03	0.0	122.0	9.33	-1054.13	-11.76	2297.25	647.64	1.666e+04
164	5	5.194e+04	1348.36	0.02	-2049.60	0.0	-15.03	964.17	-11.96	2338.94	1348.36	2.438e+04
		1.698e+04	657.53	4.21e-03	0.0	122.0	-15.03	-1085.43	-11.96	2338.94	657.53	1.698e+04
164	6	7.268e+04	1657.16	0.03	-2891.40	0.0	-380.46	1336.52	-14.96	2964.27	1657.16	3.511e+04
		2.179e+04	805.82	5.30e-03	0.0	122.0	-380.46	-1554.88	-14.96	2964.27	805.82	2.179e+04
164	7	5.194e+04	1348.36	0.02	-2049.60	0.0	-15.03	964.17	-11.96	2338.94	1348.36	2.438e+04
		1.698e+04	657.53	4.21e-03	0.0	122.0	-15.03	-1085.43	-11.96	2338.94	657.53	1.698e+04
164	8	6.645e+04	1564.52	0.02	-2638.86	0.0	-270.83	1224.81	-14.06	2776.67	1564.52	3.189e+04
		2.035e+04	761.33	4.98e-03	0.0	122.0	-270.83	-1414.05	-14.06	2776.67	761.33	2.035e+04
164	9	5.194e+04	1348.36	0.02	-2049.60	0.0	-15.03	964.17	-11.96	2338.94	1348.36	2.438e+04
		1.698e+04	657.53	4.21e-03	0.0	122.0	-15.03	-1085.43	-11.96	2338.94	657.53	1.698e+04
164	10	6.438e+04	1533.64	0.02	-2554.68	0.0	-234.29	1187.58	-13.76	2714.14	1533.64	3.082e+04
		1.987e+04	746.50	4.87e-03	0.0	122.0	-234.29	-1367.10	-13.76	2714.14	746.50	1.987e+04
171	2	7.731e+04	1684.83	0.05	-3983.30	0.0	-356.80	1765.09	-18.48	3632.94	1684.83	2.960e+04
		1963.19	602.59	7.90e-03	0.0	122.0	-356.80	-2218.21	-18.48	3632.94	602.59	1963.19
171	3	3.985e+04	989.65	0.02	-1993.48	0.0	-36.83	870.38	-10.72	2079.97	989.65	1.667e+04
		1248.87	353.42	4.57e-03	0.0	122.0	-36.83	-1123.10	-10.72	2079.97	353.42	1248.87
171	5	4.087e+04	1005.71	0.02	-2049.60	0.0	-49.28	895.92	-10.90	2117.43	1005.71	1.699e+04
		1262.57	359.19	4.65e-03	0.0	122.0	-49.28	-1153.68	-10.90	2117.43	359.19	1262.57
171	6	5.630e+04	1246.61	0.03	-2891.40	0.0	-236.13	1279.15	-13.65	2679.31	1246.61	2.179e+04
		1468.00	445.77	5.84e-03	0.0	122.0	-236.13	-1612.25	-13.65	2679.31	445.77	1468.00
171	7	4.087e+04	1005.71	0.02	-2049.60	0.0	-49.28	895.92	-10.90	2117.43	1005.71	1.699e+04
		1262.57	359.19	4.65e-03	0.0	122.0	-49.28	-1153.68	-10.90	2117.43	359.19	1262.57
171	8	5.167e+04	1174.34	0.03	-2638.86	0.0	-180.08	1164.18	-12.82	2510.74	1174.34	2.035e+04
		1406.37	419.80	5.48e-03	0.0	122.0	-180.08	-1474.68	-12.82	2510.74	419.80	1406.37
171	9	4.087e+04	1005.71	0.02	-2049.60	0.0	-49.28	895.92	-10.90	2117.43	1005.71	1.699e+04
		1262.57	359.19	4.65e-03	0.0	122.0	-49.28	-1153.68	-10.90	2117.43	359.19	1262.57
171	10	5.013e+04	1150.25	0.03	-2554.68	0.0	-161.39	1125.86	-12.55	2454.56	1150.25	1.987e+04
		1385.83	411.14	5.36e-03	0.0	122.0	-161.39	-1428.82	-12.55	2454.56	411.14	1385.83
178	2	3.499e+04	1176.67	0.05	-3983.30	0.0	2772.19	1468.80	-12.53	3856.32	1176.67	1964.25
		-6.182e+04	868.18	8.36e-03	0.0	122.0	2772.19	-2514.50	-12.53	3856.32	868.18	-6.182e+04
178	3	1.674e+04	682.40	0.02	-1993.48	0.0	1650.67	712.46	-7.37	2206.20	682.40	1249.42
		-3.343e+04	481.76	4.83e-03	0.0	122.0	1650.67	-1281.02	-7.37	2206.20	481.76	-3.343e+04
178	5	1.728e+04	694.08	0.03	-2049.60	0.0	1675.93	734.34	-7.49	2246.05	694.08	1263.13
		-3.417e+04	491.51	4.92e-03	0.0	122.0	1675.93	-1315.26	-7.49	2246.05	491.51	-3.417e+04

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

178	6	2.528e+04	869.20	0.04	-2891.40	0.0	2054.75	1062.53	-9.27	2843.79	869.20	1468.78
		-4.528e+04	637.82	6.17e-03	0.0	122.0	2054.75	-1828.87	-9.27	2843.79	637.82	-4.528e+04
178	7	1.728e+04	694.08	0.03	-2049.60	0.0	1675.93	734.34	-7.49	2246.05	694.08	1263.13
		-3.417e+04	491.51	4.92e-03	0.0	122.0	1675.93	-1315.26	-7.49	2246.05	491.51	-3.417e+04
178	8	2.288e+04	816.67	0.03	-2638.86	0.0	1941.10	964.07	-8.74	2664.47	816.67	1407.08
		-4.195e+04	593.93	5.80e-03	0.0	122.0	1941.10	-1674.79	-8.74	2664.47	593.93	-4.195e+04
178	9	1.728e+04	694.08	0.03	-2049.60	0.0	1675.93	734.34	-7.49	2246.05	694.08	1263.13
		-3.417e+04	491.51	4.92e-03	0.0	122.0	1675.93	-1315.26	-7.49	2246.05	491.51	-3.417e+04
178	10	2.208e+04	799.15	0.03	-2554.68	0.0	1903.22	931.25	-8.56	2604.69	799.15	1386.52
		-4.084e+04	579.30	5.67e-03	0.0	122.0	1903.22	-1623.43	-8.56	2604.69	579.30	-4.084e+04
Trave		M3 mx/mn	M2 mx/mn	D 2 / D 3	Q 2 / Q 3		N	V 2	V 3	T		
		-1.860e+05	-1.992e+04	-0.11	-3983.30		-2.210e+04	-3209.83	-431.01	-1.699e+04		
		2.198e+05	2.199e+04	0.07	0.0		7398.84	4132.18	211.21	3.531e+04		



43_RIS_M2_002_Comb. SLU A1 2

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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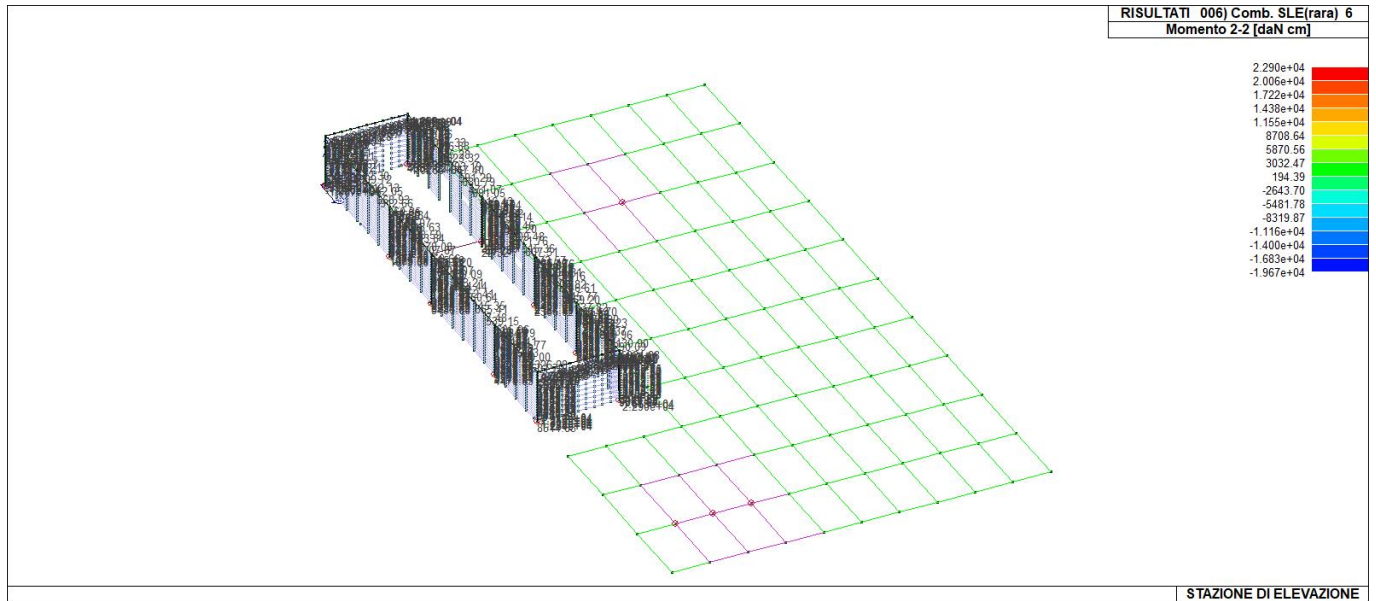
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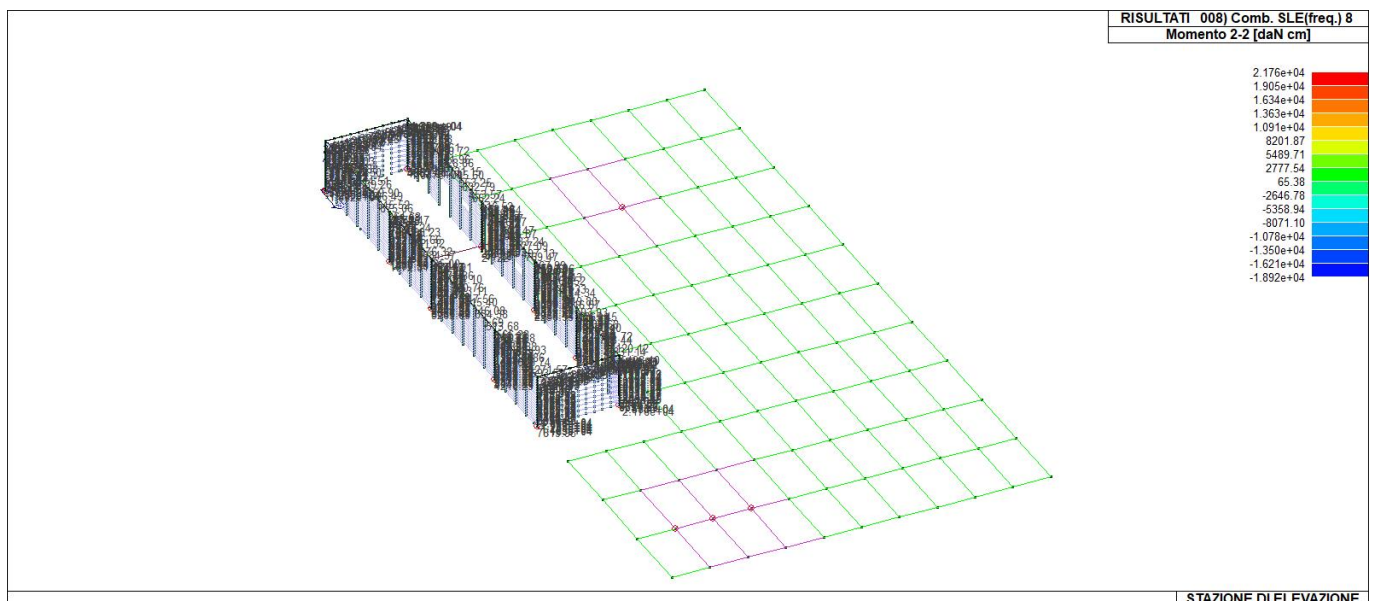
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Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.



43_RIS_M2_006_Comb. SLE(rara) 6



43_RIS_M2_008_Comb. SLE(freq.) 8

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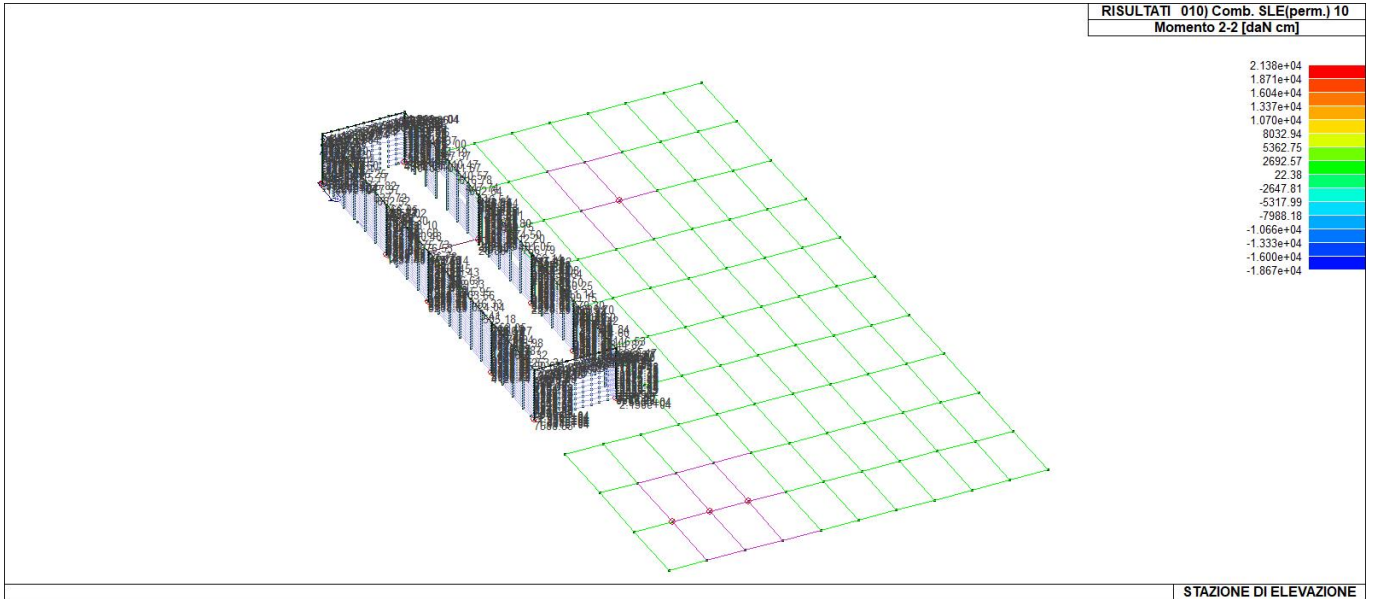
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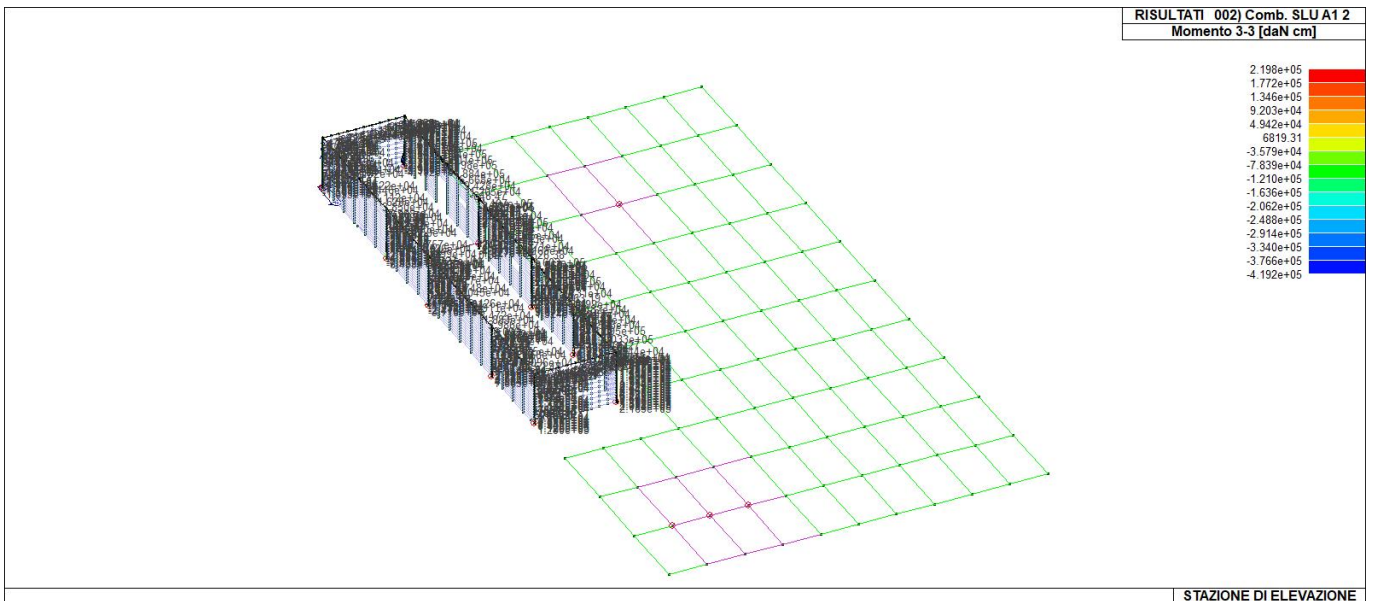
SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO /IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.



43_RIS_M2_010_Comb. SLE(perm.) 10



43_RIS_M3_002_Comb. SLU A1 2

PROJETTO engineering s.r.l.

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 Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733
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 Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto
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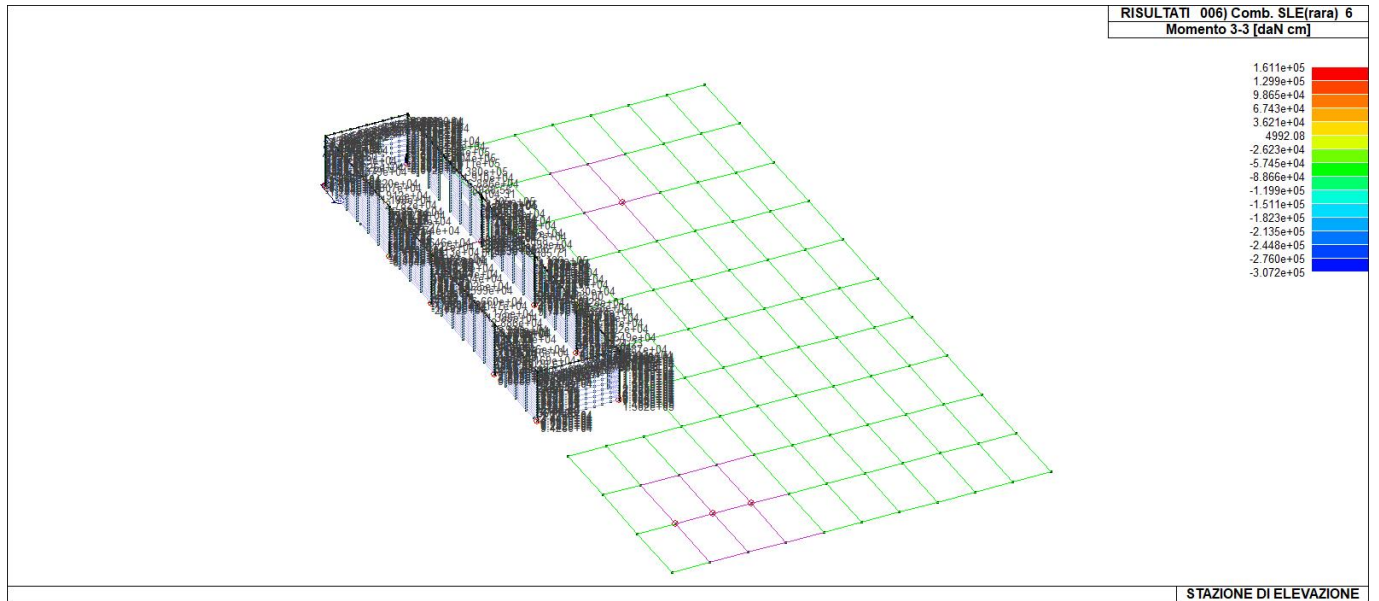
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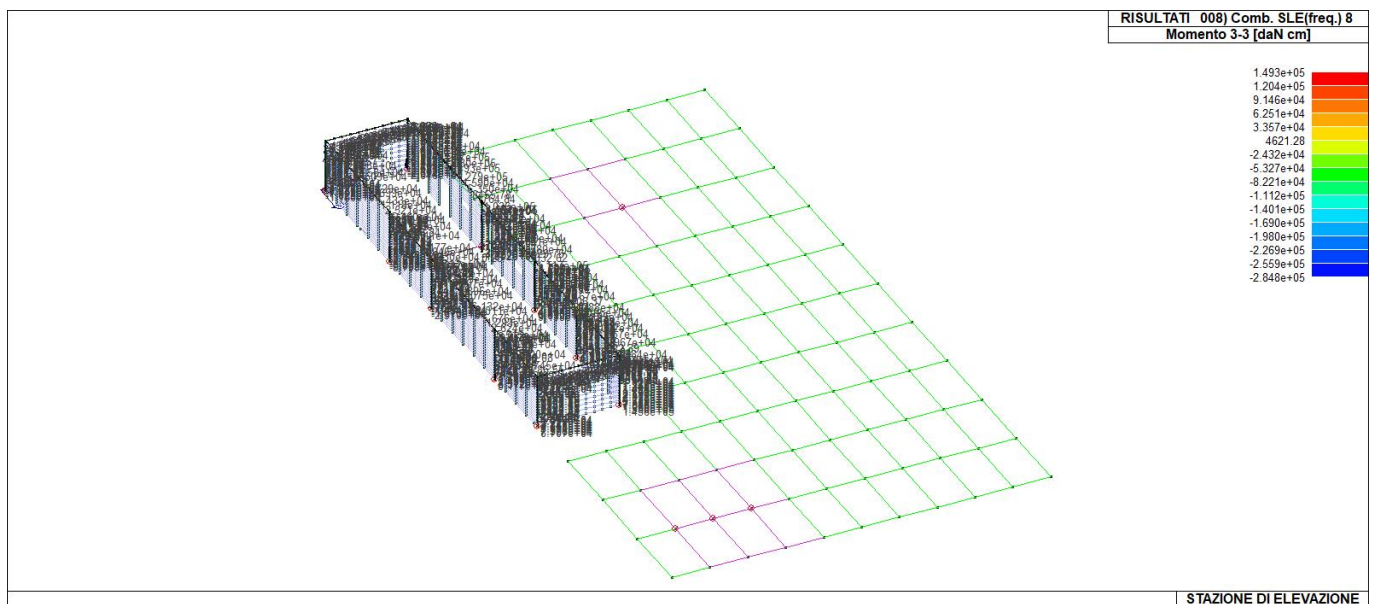
SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO /IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

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43_RIS_M3_006_Comb. SLE(rara) 6



43_RIS_M3_008_Comb. SLE(freq.) 8

PROJETTO engineering s.r.l.

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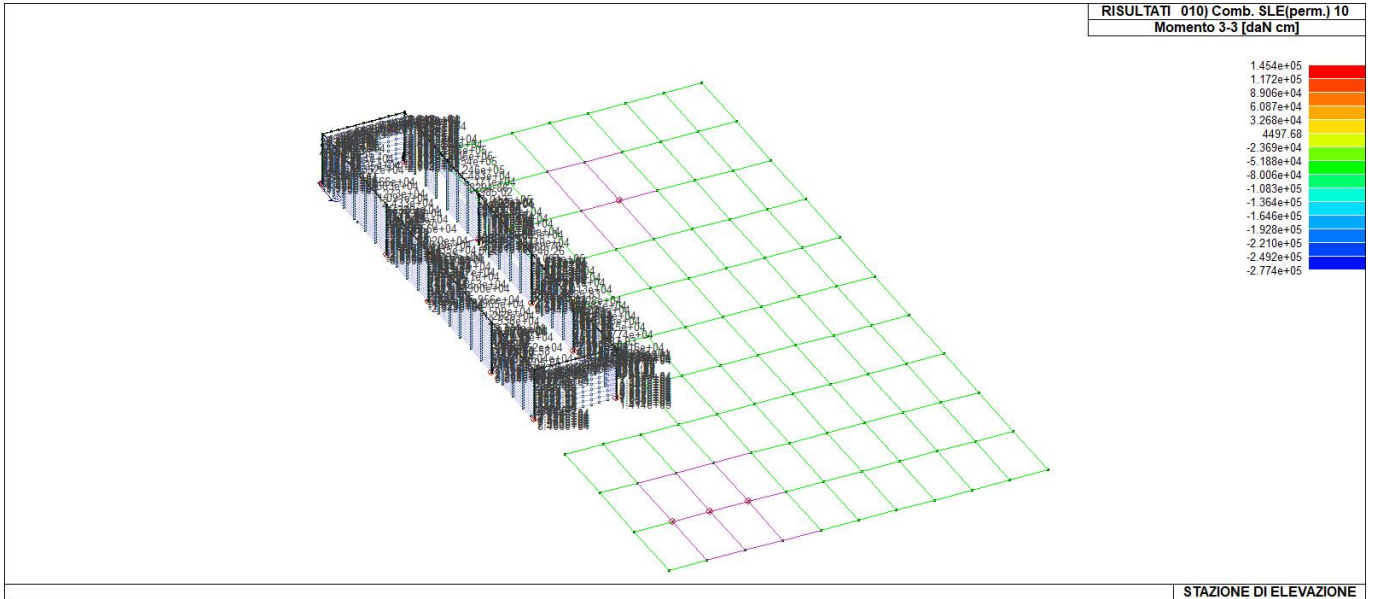
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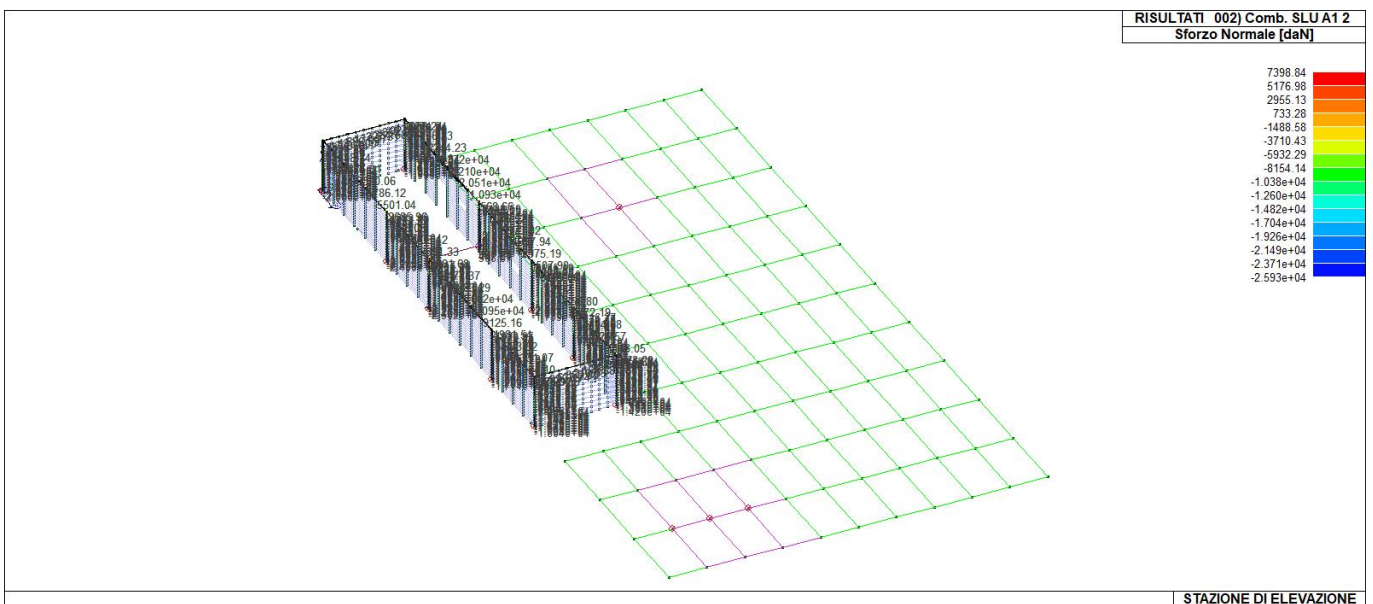
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SR EN ISO 14001:2015 Certificate No. E81
SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.



43_RIS_M3_010_Comb. SLE(perm.) 10



43_RIS_N_002_Comb. SLU A1 2

PROJETTO engineering s.r.l.

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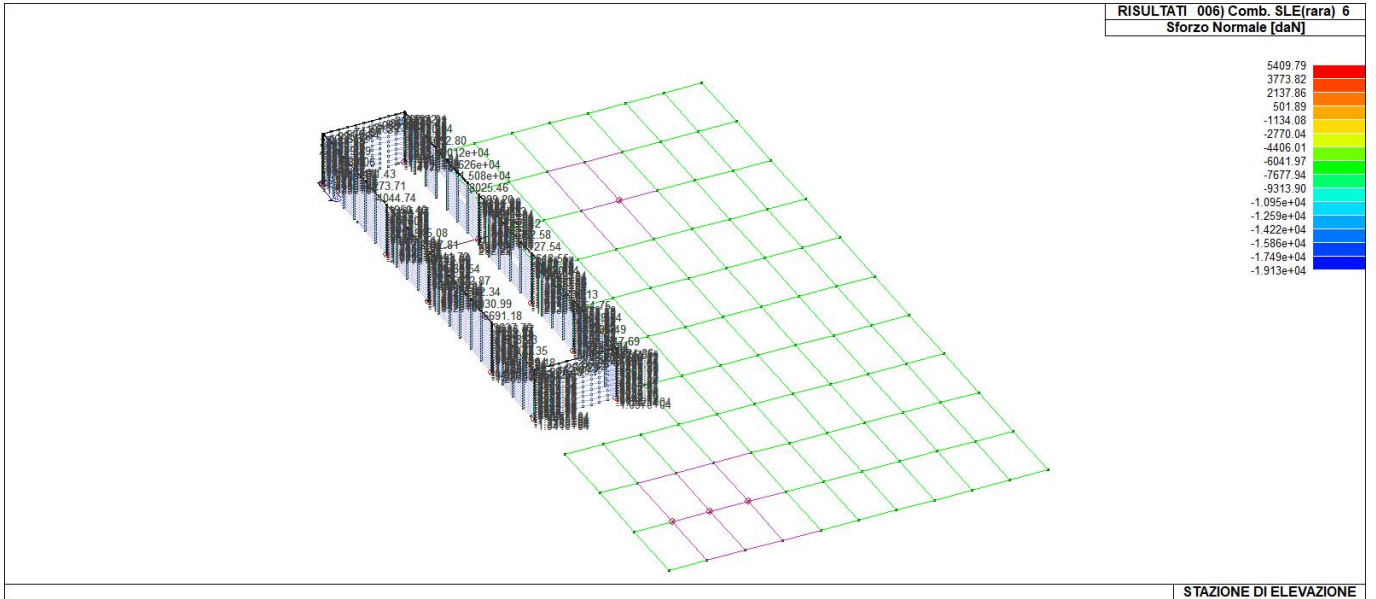
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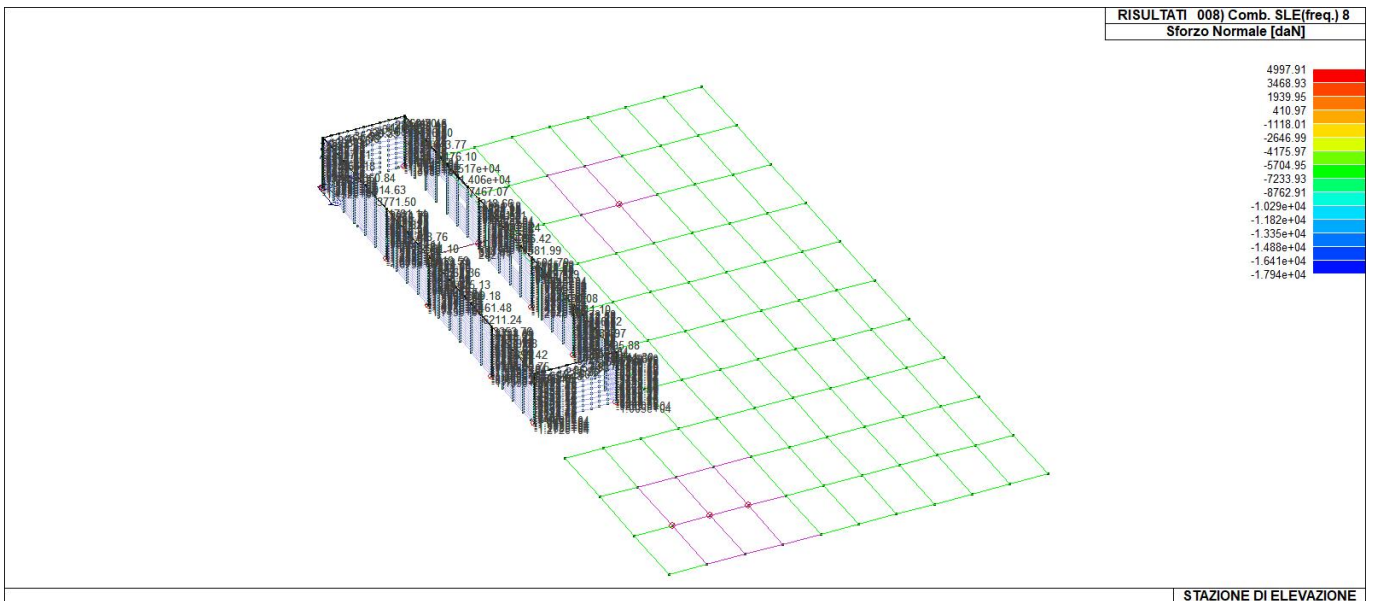
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 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

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43_RIS_N_006_Comb. SLE(rara) 6



43_RIS_N_008_Comb. SLE(freq.) 8

PROJETTO engineering s.r.l.

società d'ingegneria

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Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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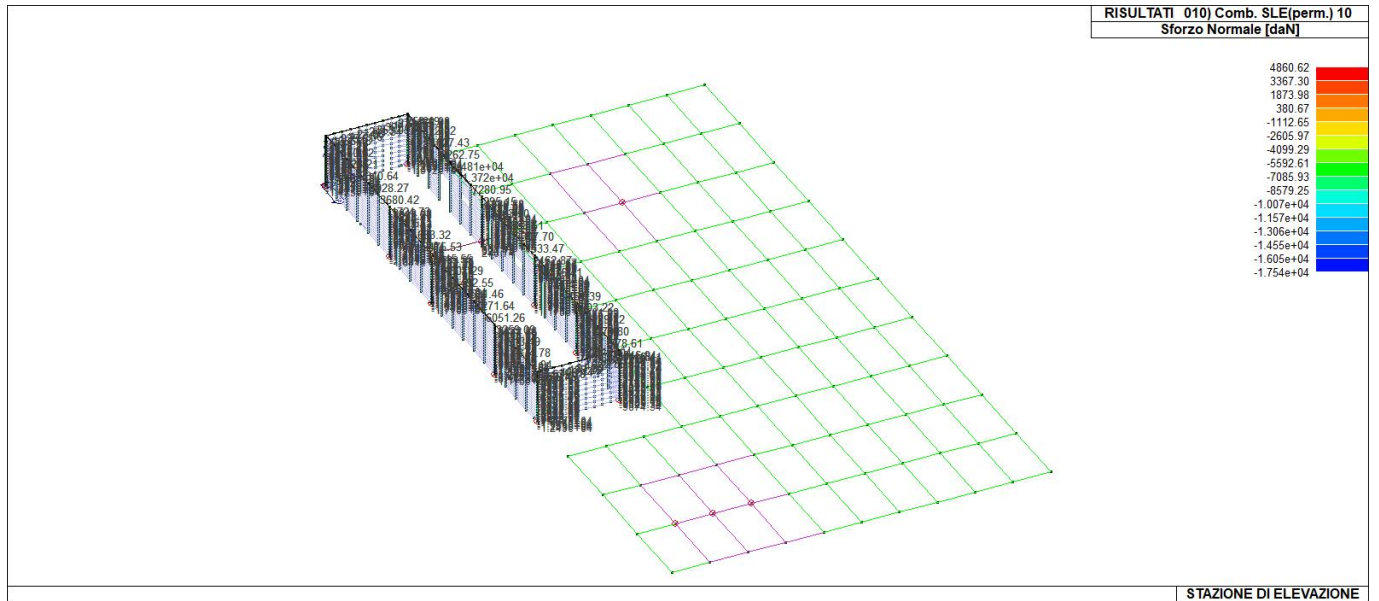
RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO /IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.



43_RIS_N_010_Comb. SLE(perm.) 10

PROJETTO engineering s.r.l.

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RELAZIONE DI CALCOLO

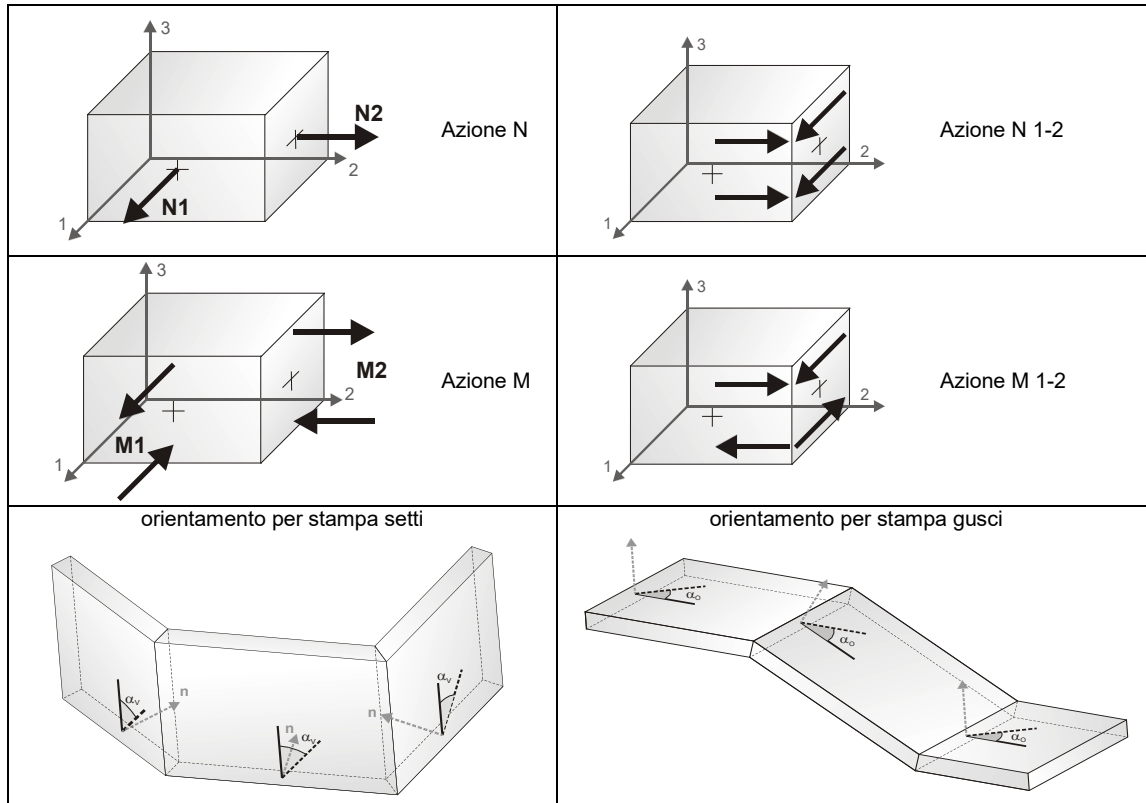


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SR EN ISO 14001:2015 Certificate No. E81
SR EN ISO /IEC 17001:2017 Certificate No. E01

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:

tensione di Von Mises		(valore riassuntivo del complessivo stato di sollecitazione)
N max		sforzo membranale principale massimo
N min		sforzo membranale principale minimo
M max		sforzo flessionale principale massimo
M min		sforzo flessionale principale minimo
N1	N2	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)
N1-2	M1	
M2	M1-2	

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 α_o attorno all'asse Z per i gusci e ruotata di α_v attorno alla normale (che per definizione è orizzontale) al piano del setto.

Per i setti, in particolare, se α_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:

N memb.	Azione membranale complessiva agente sulla parete in direzione Z
V memb.	Azione complessiva di taglio agente nel piano del macroelemento

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Partita Iva : 02658050733

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Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO /IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

V orto	Azione complessiva di taglio agente in direzione perpendicolare al macroelemento
M memb.	Azione flessionale complessiva agente nel piano del macroelemento
M orto	Azione flessionale complessiva agente in direzione perpendicolare al macroelemento
T	Azione torsionale complessiva agente nel piano orizzontale

Macro	Tipo	Angolo 1-Z (gradi)
1	Setto	0.0

M_S	Cmb	Z cm	N memb. daN	V memb. daN	V orto daN	M memb. daN cm	M orto daN cm	T daN cm
1	2	0.0	-1.502e+04	381.82	100.35	-2.719e+06	631.95	-1446.35
1	2	15.00	-1.865e+04	-2114.55	192.20	-2.423e+06	3621.36	-3.243e+04
1	2	30.00	-2.818e+04	-3218.69	205.80	-4.953e+06	1.016e+04	-5.582e+04
1	2	45.00	-2.549e+04	-2695.11	173.37	-7.119e+04	1.180e+04	-5.986e+04
1	2	60.00	-2.915e+04	-2360.29	123.59	-7.271e+04	1.456e+04	-6.218e+04
1	2	75.00	-3.250e+04	-2063.27	73.47	-7.564e+04	1.627e+04	-6.377e+04
1	2	90.00	-3.557e+04	-1825.78	33.85	-7.396e+04	1.716e+04	-6.507e+04
1	2	105.00	-3.843e+04	-1642.11	1.65	-6.313e+04	1.741e+04	-6.627e+04
1	2	120.00	-4.111e+04	-1501.20	-19.07	-3.910e+04	1.728e+04	-6.746e+04
1	2	135.00	-4.365e+04	-1388.16	-33.32	-6335.37	1.692e+04	-6.863e+04
1	2	150.00	-4.610e+04	-1298.66	-48.25	5.853e+04	1.652e+04	-6.970e+04
1	2	165.00	-4.844e+04	-1216.73	-60.34	1.100e+05	1.596e+04	-7.061e+04
1	2	180.00	-5.072e+04	-1149.68	-82.79	1.792e+05	1.526e+04	-7.122e+04
1	2	195.00	-5.293e+04	-1092.15	-112.03	2.545e+05	1.423e+04	-7.153e+04
1	2	210.00	-5.505e+04	-1042.90	-144.00	3.287e+05	1.277e+04	-7.159e+04
1	2	225.00	-5.709e+04	-1001.68	-177.23	4.022e+05	1.083e+04	-7.147e+04
1	2	240.00	-5.900e+04	-967.09	-208.29	4.735e+05	8402.92	-7.126e+04
1	2	255.00	-6.073e+04	-940.70	-236.26	5.409e+05	5506.69	-7.101e+04
1	2	270.00	-6.222e+04	-922.39	-259.06	6.034e+05	2177.42	-7.073e+04
1	2	285.00	-6.330e+04	-914.07	-274.21	6.614e+05	-1500.11	-7.021e+04
1	2	300.00	-6.379e+04	-905.14	-276.65	7.257e+05	-5395.26	-6.822e+04
1	3	0.0	-8810.52	203.33	56.15	-1.567e+06	241.83	-625.61
1	3	15.00	-1.091e+04	-1246.37	109.51	-1.383e+06	1947.27	-1.780e+04
1	3	30.00	-1.635e+04	-1790.20	119.70	-2.964e+06	5701.08	-3.131e+04
1	3	45.00	-1.447e+04	-1514.33	100.26	-7.254e+04	6655.89	-3.373e+04
1	3	60.00	-1.636e+04	-1332.21	70.56	-7.892e+04	8244.71	-3.519e+04
1	3	75.00	-1.807e+04	-1167.28	40.57	-8.496e+04	9203.54	-3.622e+04
1	3	90.00	-1.960e+04	-1033.93	17.37	-8.691e+04	9677.10	-3.710e+04
1	3	105.00	-2.099e+04	-930.22	-1.08	-8.257e+04	9779.59	-3.791e+04
1	3	120.00	-2.227e+04	-850.48	-12.02	-6.939e+04	9670.08	-3.872e+04
1	3	135.00	-2.347e+04	-786.68	-18.81	-5.058e+04	9453.19	-3.950e+04
1	3	150.00	-2.460e+04	-736.20	-26.19	-1.085e+04	9229.98	-4.020e+04
1	3	165.00	-2.566e+04	-690.24	-32.21	1.996e+04	8936.13	-4.077e+04
1	3	180.00	-2.667e+04	-652.51	-45.30	6.187e+04	8559.69	-4.115e+04
1	3	195.00	-2.764e+04	-619.94	-63.27	1.073e+05	7979.47	-4.131e+04
1	3	210.00	-2.855e+04	-591.82	-83.44	1.515e+05	7119.90	-4.131e+04
1	3	225.00	-2.940e+04	-567.95	-104.81	1.947e+05	5948.94	-4.119e+04
1	3	240.00	-3.018e+04	-547.55	-125.09	2.360e+05	4449.66	-4.102e+04
1	3	255.00	-3.086e+04	-531.48	-143.51	2.743e+05	2639.04	-4.084e+04
1	3	270.00	-3.141e+04	-519.67	-158.69	3.089e+05	544.89	-4.067e+04
1	3	285.00	-3.175e+04	-513.32	-168.91	3.393e+05	-1769.96	-4.038e+04
1	3	300.00	-3.178e+04	-507.00	-171.71	3.709e+05	-4217.00	-3.926e+04
1	5	0.0	-8954.32	208.06	57.25	-1.594e+06	254.64	-651.13
1	5	15.00	-1.109e+04	-1266.30	111.52	-1.408e+06	1991.22	-1.818e+04
1	5	30.00	-1.663e+04	-1826.14	121.72	-3.008e+06	5811.95	-3.192e+04
1	5	45.00	-1.474e+04	-1543.62	101.99	-7.161e+04	6782.65	-3.437e+04
1	5	60.00	-1.668e+04	-1357.54	71.84	-7.771e+04	8399.80	-3.585e+04

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1	5	75.00	-1.843e+04	-1189.29	41.40	-8.356e+04	9377.30	-3.689e+04
1	5	90.00	-2.000e+04	-1053.35	17.83	-8.534e+04	9861.80	-3.778e+04
1	5	105.00	-2.144e+04	-947.67	-0.96	-8.079e+04	9969.03	-3.860e+04
1	5	120.00	-2.276e+04	-866.43	-12.16	-6.733e+04	9859.84	-3.941e+04
1	5	135.00	-2.400e+04	-801.41	-19.17	-4.819e+04	9640.11	-4.020e+04
1	5	150.00	-2.517e+04	-749.98	-26.76	-7918.55	9412.12	-4.091e+04
1	5	165.00	-2.627e+04	-703.12	-32.96	2.335e+04	9111.39	-4.148e+04
1	5	180.00	-2.732e+04	-664.66	-46.26	6.585e+04	8726.21	-4.186e+04
1	5	195.00	-2.832e+04	-631.48	-64.47	1.119e+05	8134.89	-4.203e+04
1	5	210.00	-2.927e+04	-602.85	-84.87	1.568e+05	7261.43	-4.203e+04
1	5	225.00	-3.016e+04	-578.57	-106.46	2.007e+05	6073.87	-4.191e+04
1	5	240.00	-3.098e+04	-557.85	-126.93	2.427e+05	4555.24	-4.174e+04
1	5	255.00	-3.170e+04	-541.55	-145.52	2.817e+05	2722.74	-4.157e+04
1	5	270.00	-3.227e+04	-529.63	-160.82	3.170e+05	604.12	-4.139e+04
1	5	285.00	-3.263e+04	-523.27	-171.12	3.482e+05	-1737.67	-4.110e+04
1	5	300.00	-3.269e+04	-516.92	-173.86	3.807e+05	-4213.50	-3.995e+04
1	6	0.0	-1.111e+04	279.13	73.80	-2.007e+06	446.71	-1034.04
1	6	15.00	-1.379e+04	-1565.26	141.66	-1.786e+06	2650.44	-2.379e+04
1	6	30.00	-2.081e+04	-2365.31	152.08	-3.673e+06	7474.98	-4.107e+04
1	6	45.00	-1.878e+04	-1983.03	128.02	-5.763e+04	8684.06	-4.406e+04
1	6	60.00	-2.144e+04	-1737.64	91.12	-5.964e+04	1.073e+04	-4.579e+04
1	6	75.00	-2.388e+04	-1519.41	53.95	-6.251e+04	1.198e+04	-4.698e+04
1	6	90.00	-2.611e+04	-1344.69	24.64	-6.173e+04	1.263e+04	-4.797e+04
1	6	105.00	-2.818e+04	-1209.46	0.89	-5.405e+04	1.281e+04	-4.887e+04
1	6	120.00	-3.011e+04	-1105.69	-14.24	-3.642e+04	1.271e+04	-4.977e+04
1	6	135.00	-3.195e+04	-1022.47	-24.53	-1.225e+04	1.244e+04	-5.065e+04
1	6	150.00	-3.371e+04	-956.59	-35.35	3.601e+04	1.214e+04	-5.146e+04
1	6	165.00	-3.539e+04	-896.32	-44.13	7.422e+04	1.174e+04	-5.213e+04
1	6	180.00	-3.702e+04	-846.98	-60.72	1.256e+05	1.122e+04	-5.258e+04
1	6	195.00	-3.860e+04	-804.60	-82.48	1.815e+05	1.047e+04	-5.281e+04
1	6	210.00	-4.012e+04	-768.29	-106.36	2.365e+05	9384.33	-5.285e+04
1	6	225.00	-4.157e+04	-737.85	-131.24	2.909e+05	7947.83	-5.275e+04
1	6	240.00	-4.293e+04	-712.24	-154.55	3.436e+05	6138.93	-5.259e+04
1	6	255.00	-4.416e+04	-692.63	-175.58	3.932e+05	3978.36	-5.240e+04
1	6	270.00	-4.521e+04	-678.91	-192.73	4.391e+05	1492.67	-5.219e+04
1	6	285.00	-4.596e+04	-672.51	-204.15	4.814e+05	-1253.29	-5.181e+04
1	6	300.00	-4.628e+04	-665.73	-206.18	5.280e+05	-4160.98	-5.035e+04
1	7	0.0	-8954.32	208.06	57.25	-1.594e+06	254.64	-651.13
1	7	15.00	-1.109e+04	-1266.30	111.52	-1.408e+06	1991.22	-1.818e+04
1	7	30.00	-1.663e+04	-1826.14	121.72	-3.008e+06	5811.95	-3.192e+04
1	7	45.00	-1.474e+04	-1543.62	101.99	-7.161e+04	6782.65	-3.437e+04
1	7	60.00	-1.668e+04	-1357.54	71.84	-7.771e+04	8399.80	-3.585e+04
1	7	75.00	-1.843e+04	-1189.29	41.40	-8.356e+04	9377.30	-3.689e+04
1	7	90.00	-2.000e+04	-1053.35	17.83	-8.534e+04	9861.80	-3.778e+04
1	7	105.00	-2.144e+04	-947.67	-0.96	-8.079e+04	9969.03	-3.860e+04
1	7	120.00	-2.276e+04	-866.43	-12.16	-6.733e+04	9859.84	-3.941e+04
1	7	135.00	-2.400e+04	-801.41	-19.17	-4.819e+04	9640.11	-4.020e+04
1	7	150.00	-2.517e+04	-749.98	-26.76	-7918.55	9412.12	-4.091e+04
1	7	165.00	-2.627e+04	-703.12	-32.96	2.335e+04	9111.39	-4.148e+04
1	7	180.00	-2.732e+04	-664.66	-46.26	6.585e+04	8726.21	-4.186e+04
1	7	195.00	-2.832e+04	-631.48	-64.47	1.119e+05	8134.89	-4.203e+04
1	7	210.00	-2.927e+04	-602.85	-84.87	1.568e+05	7261.43	-4.203e+04
1	7	225.00	-3.016e+04	-578.57	-106.46	2.007e+05	6073.87	-4.191e+04
1	7	240.00	-3.098e+04	-557.85	-126.93	2.427e+05	4555.24	-4.174e+04
1	7	255.00	-3.170e+04	-541.55	-145.52	2.817e+05	2722.74	-4.157e+04
1	7	270.00	-3.227e+04	-529.63	-160.82	3.170e+05	604.12	-4.139e+04
1	7	285.00	-3.263e+04	-523.27	-171.12	3.482e+05	-1737.67	-4.110e+04
1	7	300.00	-3.269e+04	-516.92	-173.86	3.807e+05	-4213.50	-3.995e+04
1	8	0.0	-1.046e+04	257.81	68.84	-1.883e+06	389.09	-919.16
1	8	15.00	-1.298e+04	-1475.57	132.62	-1.673e+06	2452.67	-2.211e+04
1	8	30.00	-1.956e+04	-2203.56	142.97	-3.474e+06	6976.07	-3.832e+04
1	8	45.00	-1.757e+04	-1851.21	120.21	-6.182e+04	8113.64	-4.115e+04
1	8	60.00	-2.001e+04	-1623.61	85.33	-6.506e+04	1.003e+04	-4.281e+04
1	8	75.00	-2.225e+04	-1420.38	50.18	-6.882e+04	1.120e+04	-4.395e+04
1	8	90.00	-2.428e+04	-1257.29	22.60	-6.881e+04	1.180e+04	-4.491e+04
1	8	105.00	-2.616e+04	-1130.92	0.34	-6.207e+04	1.196e+04	-4.579e+04

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1	8	120.00	-2.791e+04	-1033.91	-13.62	-4.569e+04	1.185e+04	-4.666e+04
1	8	135.00	-2.956e+04	-956.15	-22.92	-2.303e+04	1.160e+04	-4.751e+04
1	8	150.00	-3.115e+04	-894.61	-32.78	2.283e+04	1.132e+04	-4.829e+04
1	8	165.00	-3.266e+04	-838.36	-40.78	5.896e+04	1.095e+04	-4.894e+04
1	8	180.00	-3.411e+04	-792.28	-56.38	1.077e+05	1.047e+04	-4.937e+04
1	8	195.00	-3.552e+04	-752.67	-77.08	1.607e+05	9766.89	-4.958e+04
1	8	210.00	-3.687e+04	-718.66	-99.91	2.126e+05	8747.46	-4.960e+04
1	8	225.00	-3.815e+04	-690.06	-123.81	2.638e+05	7385.64	-4.950e+04
1	8	240.00	-3.935e+04	-665.92	-146.27	3.133e+05	5663.82	-4.933e+04
1	8	255.00	-4.042e+04	-647.30	-166.56	3.598e+05	3601.67	-4.915e+04
1	8	270.00	-4.132e+04	-634.12	-183.16	4.025e+05	1226.11	-4.895e+04
1	8	285.00	-4.196e+04	-627.74	-194.24	4.415e+05	-1398.60	-4.860e+04
1	8	300.00	-4.220e+04	-621.09	-196.49	4.838e+05	-4176.73	-4.723e+04
1	9	0.0	-8954.32	208.06	57.25	-1.594e+06	254.64	-651.13
1	9	15.00	-1.109e+04	-1266.30	111.52	-1.408e+06	1991.22	-1.818e+04
1	9	30.00	-1.663e+04	-1826.14	121.72	-3.008e+06	5811.95	-3.192e+04
1	9	45.00	-1.474e+04	-1543.62	101.99	-7.161e+04	6782.65	-3.437e+04
1	9	60.00	-1.668e+04	-1357.54	71.84	-7.771e+04	8399.80	-3.585e+04
1	9	75.00	-1.843e+04	-1189.29	41.40	-8.356e+04	9377.30	-3.689e+04
1	9	90.00	-2.000e+04	-1053.35	17.83	-8.534e+04	9861.80	-3.778e+04
1	9	105.00	-2.144e+04	-947.67	-0.96	-8.079e+04	9969.03	-3.860e+04
1	9	120.00	-2.276e+04	-866.43	-12.16	-6.733e+04	9859.84	-3.941e+04
1	9	135.00	-2.400e+04	-801.41	-19.17	-4.819e+04	9640.11	-4.020e+04
1	9	150.00	-2.517e+04	-749.98	-26.76	-7918.55	9412.12	-4.091e+04
1	9	165.00	-2.627e+04	-703.12	-32.96	2.335e+04	9111.39	-4.148e+04
1	9	180.00	-2.732e+04	-664.66	-46.26	6.585e+04	8726.21	-4.186e+04
1	9	195.00	-2.832e+04	-631.48	-64.47	1.119e+05	8134.89	-4.203e+04
1	9	210.00	-2.927e+04	-602.85	-84.87	1.568e+05	7261.43	-4.203e+04
1	9	225.00	-3.016e+04	-578.57	-106.46	2.007e+05	6073.87	-4.191e+04
1	9	240.00	-3.098e+04	-557.85	-126.93	2.427e+05	4555.24	-4.174e+04
1	9	255.00	-3.170e+04	-541.55	-145.52	2.817e+05	2722.74	-4.157e+04
1	9	270.00	-3.227e+04	-529.63	-160.82	3.170e+05	604.12	-4.139e+04
1	9	285.00	-3.263e+04	-523.27	-171.12	3.482e+05	-1737.67	-4.110e+04
1	9	300.00	-3.269e+04	-516.92	-173.86	3.807e+05	-4213.50	-3.995e+04
1	10	0.0	-1.025e+04	250.70	67.18	-1.842e+06	369.88	-880.87
1	10	15.00	-1.271e+04	-1445.67	129.60	-1.635e+06	2386.75	-2.154e+04
1	10	30.00	-1.914e+04	-2149.64	139.94	-3.407e+06	6809.77	-3.741e+04
1	10	45.00	-1.716e+04	-1807.27	117.61	-6.322e+04	7923.50	-4.018e+04
1	10	60.00	-1.954e+04	-1585.60	83.41	-6.687e+04	9795.66	-4.181e+04
1	10	75.00	-2.170e+04	-1387.36	48.93	-7.093e+04	1.094e+04	-4.295e+04
1	10	90.00	-2.367e+04	-1228.15	21.92	-7.117e+04	1.152e+04	-4.389e+04
1	10	105.00	-2.548e+04	-1104.74	0.15	-6.474e+04	1.167e+04	-4.476e+04
1	10	120.00	-2.717e+04	-1009.99	-13.41	-4.878e+04	1.157e+04	-4.562e+04
1	10	135.00	-2.877e+04	-934.05	-22.38	-2.662e+04	1.132e+04	-4.647e+04
1	10	150.00	-3.029e+04	-873.94	-31.92	1.844e+04	1.105e+04	-4.724e+04
1	10	165.00	-3.174e+04	-819.04	-39.66	5.387e+04	1.069e+04	-4.787e+04
1	10	180.00	-3.314e+04	-774.05	-54.94	1.017e+05	1.022e+04	-4.829e+04
1	10	195.00	-3.449e+04	-735.36	-75.28	1.537e+05	9533.75	-4.850e+04
1	10	210.00	-3.578e+04	-702.12	-97.76	2.046e+05	8535.17	-4.852e+04
1	10	225.00	-3.701e+04	-674.14	-121.33	2.548e+05	7198.25	-4.842e+04
1	10	240.00	-3.815e+04	-650.48	-143.50	3.032e+05	5505.45	-4.825e+04
1	10	255.00	-3.918e+04	-632.19	-163.55	3.486e+05	3476.11	-4.807e+04
1	10	270.00	-4.003e+04	-619.19	-179.97	3.903e+05	1137.25	-4.787e+04
1	10	285.00	-4.063e+04	-612.81	-190.94	4.281e+05	-1447.04	-4.753e+04
1	10	300.00	-4.084e+04	-606.21	-193.25	4.691e+05	-4181.99	-4.619e+04
M_S			N memb.	V memb.	V orto	M memb.	M orto	T
			-6.379e+04	-3218.69	-276.65	-4.953e+06	-5395.26	-7.159e+04
			-8810.52	381.82	205.80	7.257e+05	1.741e+04	-625.61

Macro	Tipo	Angolo 1-Z (gradi)
2	Setto	0.0

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 27001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

M_S	Cmb	Z cm	N memb. daN	V memb. daN	V orto daN	M memb. daN cm	M orto daN cm	T daN cm
2	2	0.0	-715.57	-216.68	450.93	-1.424e+04	4319.74	-1701.97
2	2	15.00	-1883.16	-426.90	146.54	4.848e+04	1.456e+04	3446.51
2	2	30.00	-2384.29	-694.21	187.50	7.556e+04	1.868e+04	6388.18
2	2	45.00	-2788.25	-658.24	-106.92	7.541e+04	2.210e+04	9966.83
2	2	60.00	-3205.96	-706.76	-132.21	7.871e+04	2.116e+04	1.206e+04
2	2	75.00	-3194.81	-565.95	-200.53	1.065e+05	1.840e+04	1.561e+04
2	2	90.00	-3475.19	-537.79	-171.43	1.127e+05	1.574e+04	1.811e+04
2	2	105.00	-3317.91	-465.22	-147.69	1.366e+05	1.303e+04	2.063e+04
2	2	120.00	-3524.48	-444.66	-104.82	1.385e+05	1.092e+04	2.286e+04
2	2	135.00	-3278.97	-418.03	-69.54	1.545e+05	9478.79	2.503e+04
2	2	150.00	-3437.59	-414.14	-35.51	1.491e+05	8400.62	2.707e+04
2	2	165.00	-3127.19	-411.52	-8.62	1.578e+05	8011.35	2.904e+04
2	2	180.00	-3249.85	-417.29	18.28	1.446e+05	7798.79	3.088e+04
2	2	195.00	-2892.30	-422.52	45.21	1.472e+05	8232.67	3.253e+04
2	2	210.00	-2986.93	-430.56	84.17	1.272e+05	8903.19	3.405e+04
2	2	225.00	-2569.14	-442.69	88.53	1.320e+05	1.010e+04	3.528e+04
2	2	240.00	-2625.25	-451.13	132.76	1.119e+05	1.156e+04	3.628e+04
2	2	247.50	-2108.60	-454.44	142.77	1.095e+05	1.266e+04	3.640e+04
2	2	255.00	-2239.22	-447.13	165.81	1.020e+05	1.359e+04	3.650e+04
2	2	270.00	-2241.30	-445.86	204.52	8.996e+04	1.630e+04	3.660e+04
2	2	285.00	-1787.97	-430.10	235.17	8.586e+04	1.908e+04	3.538e+04
2	2	300.00	-1833.37	-378.43	261.82	7.107e+04	2.287e+04	3.449e+04
2	3	0.0	-408.78	-123.25	235.44	-7077.93	2322.43	-1013.45
2	3	15.00	-1136.01	-247.83	66.48	3.169e+04	7540.58	1453.19
2	3	30.00	-1462.66	-400.62	84.49	4.409e+04	9512.53	2751.27
2	3	45.00	-1663.51	-385.96	-68.76	4.409e+04	1.106e+04	4676.93
2	3	60.00	-1951.03	-414.42	-80.51	4.270e+04	1.037e+04	5745.89
2	3	75.00	-1903.57	-330.84	-113.68	5.981e+04	8766.49	7592.35
2	3	90.00	-2113.08	-313.62	-96.27	6.054e+04	7236.20	8883.94
2	3	105.00	-1982.95	-269.87	-81.59	7.564e+04	5733.18	1.018e+04
2	3	120.00	-2152.50	-257.12	-57.27	7.414e+04	4561.80	1.131e+04
2	3	135.00	-1973.24	-240.39	-37.08	8.495e+04	3784.58	1.239e+04
2	3	150.00	-2117.31	-237.55	-17.64	7.955e+04	3204.73	1.340e+04
2	3	165.00	-1901.22	-234.84	-2.08	8.653e+04	3028.76	1.437e+04
2	3	180.00	-2025.37	-237.99	13.41	7.713e+04	2949.61	1.526e+04
2	3	195.00	-1781.22	-240.07	28.55	8.120e+04	3245.84	1.605e+04
2	3	210.00	-1887.79	-245.34	48.76	6.857e+04	3661.71	1.678e+04
2	3	225.00	-1610.10	-251.30	54.57	7.378e+04	4408.22	1.735e+04
2	3	240.00	-1695.37	-256.90	78.93	6.090e+04	5293.62	1.780e+04
2	3	247.50	-1317.94	-259.35	84.94	6.146e+04	5948.19	1.785e+04
2	3	255.00	-1433.64	-253.89	97.32	5.747e+04	6511.43	1.789e+04
2	3	270.00	-1478.24	-255.59	119.11	5.057e+04	8097.91	1.790e+04
2	3	285.00	-1160.65	-246.40	135.46	5.095e+04	9733.45	1.729e+04
2	3	300.00	-1225.17	-219.57	149.07	4.144e+04	1.191e+04	1.684e+04
2	5	0.0	-416.20	-125.53	241.28	-7281.08	2374.87	-1028.96
2	5	15.00	-1152.39	-252.05	68.91	3.198e+04	7732.58	1515.98
2	5	30.00	-1482.13	-407.61	87.62	4.483e+04	9767.20	2864.64
2	5	45.00	-1688.74	-392.27	-69.47	4.482e+04	1.138e+04	4833.66
2	5	60.00	-1978.04	-421.20	-81.62	4.363e+04	1.068e+04	5930.86
2	5	75.00	-1932.61	-336.32	-115.81	6.097e+04	9049.08	7823.79
2	5	90.00	-2142.44	-318.86	-98.14	6.191e+04	7491.70	9148.60
2	5	105.00	-2012.79	-274.49	-83.27	7.718e+04	5957.92	1.047e+04
2	5	120.00	-2181.78	-261.57	-58.50	7.584e+04	4763.11	1.164e+04
2	5	135.00	-2002.02	-244.64	-37.94	8.673e+04	3968.40	1.275e+04
2	5	150.00	-2144.94	-241.80	-18.15	8.139e+04	3375.47	1.379e+04
2	5	165.00	-1927.66	-239.12	-2.32	8.835e+04	3193.03	1.479e+04
2	5	180.00	-2050.25	-242.34	13.45	7.891e+04	3109.46	1.571e+04
2	5	195.00	-1804.48	-244.52	28.87	8.288e+04	3407.66	1.652e+04
2	5	210.00	-1909.28	-249.84	49.60	7.011e+04	3828.77	1.727e+04
2	5	225.00	-1629.29	-255.98	55.28	7.524e+04	4584.55	1.786e+04
2	5	240.00	-1712.36	-261.62	80.15	6.222e+04	5482.32	1.833e+04
2	5	247.50	-1333.88	-264.08	86.25	6.266e+04	6146.86	1.838e+04

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015
Certificate No. Q204

SR EN ISO 14001:2015
Certificate No. E81

SR EN ISO/IEC 27001:2017
Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

2	5	255.00	-1448.78	-258.61	98.91	5.857e+04	6718.09	1.842e+04
2	5	270.00	-1491.13	-260.17	121.11	5.155e+04	8330.83	1.844e+04
2	5	285.00	-1171.91	-250.82	137.85	5.174e+04	9992.72	1.781e+04
2	5	300.00	-1234.87	-223.32	151.81	4.213e+04	1.220e+04	1.735e+04
2	6	0.0	-527.59	-159.67	328.90	-1.033e+04	3161.52	-1261.51
2	6	15.00	-1398.17	-315.39	105.26	3.639e+04	1.061e+04	2457.94
2	6	30.00	-1774.16	-512.49	134.59	5.586e+04	1.359e+04	4565.16
2	6	45.00	-2067.18	-486.92	-80.07	5.576e+04	1.604e+04	7184.55
2	6	60.00	-2383.04	-522.82	-98.28	5.767e+04	1.532e+04	8705.43
2	6	75.00	-2368.20	-418.49	-147.71	7.838e+04	1.329e+04	1.130e+04
2	6	90.00	-2582.88	-397.55	-126.13	8.244e+04	1.132e+04	1.312e+04
2	6	105.00	-2460.42	-343.67	-108.44	1.004e+05	9328.98	1.495e+04
2	6	120.00	-2621.04	-328.35	-76.86	1.013e+05	7782.66	1.657e+04
2	6	135.00	-2433.73	-308.47	-50.85	1.134e+05	6725.76	1.815e+04
2	6	150.00	-2559.30	-305.50	-25.75	1.090e+05	5936.65	1.962e+04
2	6	165.00	-2324.19	-303.37	-5.90	1.157e+05	5657.12	2.105e+04
2	6	180.00	-2423.35	-307.61	13.96	1.057e+05	5507.22	2.239e+04
2	6	195.00	-2153.29	-311.32	33.77	1.081e+05	5834.92	2.357e+04
2	6	210.00	-2231.53	-317.35	62.17	9.310e+04	6334.59	2.467e+04
2	6	225.00	-1917.21	-326.14	65.92	9.706e+04	7229.56	2.556e+04
2	6	240.00	-1967.15	-332.49	98.38	8.202e+04	8312.76	2.628e+04
2	6	247.50	-1572.96	-335.02	105.81	8.058e+04	9126.87	2.636e+04
2	6	255.00	-1675.89	-329.42	122.67	7.505e+04	9818.08	2.643e+04
2	6	270.00	-1684.43	-328.87	151.16	6.620e+04	1.182e+04	2.650e+04
2	6	285.00	-1340.73	-317.22	173.57	6.361e+04	1.388e+04	2.562e+04
2	6	300.00	-1380.43	-279.56	192.96	5.253e+04	1.668e+04	2.496e+04
2	7	0.0	-416.20	-125.53	241.28	-7281.08	2374.87	-1028.96
2	7	15.00	-1152.39	-252.05	68.91	3.198e+04	7732.58	1515.98
2	7	30.00	-1482.13	-407.61	87.62	4.483e+04	9767.20	2864.64
2	7	45.00	-1688.74	-392.27	-69.47	4.482e+04	1.138e+04	4833.66
2	7	60.00	-1978.04	-421.20	-81.62	4.363e+04	1.068e+04	5930.86
2	7	75.00	-1932.61	-336.32	-115.81	6.097e+04	9049.08	7823.79
2	7	90.00	-2142.44	-318.86	-98.14	6.191e+04	7491.70	9148.60
2	7	105.00	-2012.79	-274.49	-83.27	7.718e+04	5957.92	1.047e+04
2	7	120.00	-2181.78	-261.57	-58.50	7.584e+04	4763.11	1.164e+04
2	7	135.00	-2002.02	-244.64	-37.94	8.673e+04	3968.40	1.275e+04
2	7	150.00	-2144.94	-241.80	-18.15	8.139e+04	3375.47	1.379e+04
2	7	165.00	-1927.66	-239.12	-2.32	8.835e+04	3193.03	1.479e+04
2	7	180.00	-2050.25	-242.34	13.45	7.891e+04	3109.46	1.571e+04
2	7	195.00	-1804.48	-244.52	28.87	8.288e+04	3407.66	1.652e+04
2	7	210.00	-1909.28	-249.84	49.60	7.011e+04	3828.77	1.727e+04
2	7	225.00	-1629.29	-255.98	55.28	7.524e+04	4584.55	1.786e+04
2	7	240.00	-1712.36	-261.62	80.15	6.222e+04	5482.32	1.833e+04
2	7	247.50	-1333.88	-264.08	86.25	6.266e+04	6146.86	1.838e+04
2	7	255.00	-1448.78	-258.61	98.91	5.857e+04	6718.09	1.842e+04
2	7	270.00	-1491.13	-260.17	121.11	5.155e+04	8330.83	1.844e+04
2	7	285.00	-1171.91	-250.82	137.85	5.174e+04	9992.72	1.781e+04
2	7	300.00	-1234.87	-223.32	151.81	4.213e+04	1.220e+04	1.735e+04
2	8	0.0	-494.17	-149.43	302.61	-9414.20	2925.52	-1191.74
2	8	15.00	-1324.43	-296.39	94.36	3.506e+04	9748.59	2175.35
2	8	30.00	-1686.55	-481.03	120.50	5.255e+04	1.244e+04	4055.00
2	8	45.00	-1953.65	-458.53	-76.89	5.248e+04	1.464e+04	6479.29
2	8	60.00	-2261.54	-492.33	-93.28	5.346e+04	1.393e+04	7873.06
2	8	75.00	-2237.52	-393.84	-138.14	7.316e+04	1.202e+04	1.025e+04
2	8	90.00	-2450.75	-373.94	-117.73	7.628e+04	1.017e+04	1.193e+04
2	8	105.00	-2326.13	-322.91	-100.89	9.341e+04	8317.66	1.361e+04
2	8	120.00	-2489.26	-308.32	-71.35	9.365e+04	6876.80	1.509e+04
2	8	135.00	-2304.22	-289.32	-46.98	1.054e+05	5898.56	1.653e+04
2	8	150.00	-2434.99	-286.39	-23.47	1.007e+05	5168.30	1.787e+04
2	8	165.00	-2205.23	-284.10	-4.82	1.075e+05	4917.90	1.917e+04
2	8	180.00	-2311.42	-288.03	13.80	9.768e+04	4787.89	2.038e+04
2	8	195.00	-2048.65	-291.28	32.30	1.005e+05	5106.74	2.146e+04
2	8	210.00	-2134.86	-297.10	58.39	8.621e+04	5582.84	2.245e+04
2	8	225.00	-1830.83	-305.09	62.73	9.051e+04	6436.06	2.325e+04
2	8	240.00	-1890.72	-311.23	92.91	7.608e+04	7463.63	2.389e+04
2	8	247.50	-1501.24	-313.74	99.94	7.520e+04	8232.87	2.397e+04

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO /IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

2	8	255.00	-1607.76	-308.18	115.54	7.011e+04	8888.08	2.403e+04
2	8	270.00	-1626.44	-308.26	142.14	6.180e+04	1.078e+04	2.408e+04
2	8	285.00	-1290.09	-297.30	162.85	6.005e+04	1.271e+04	2.327e+04
2	8	300.00	-1336.76	-262.69	180.61	4.941e+04	1.533e+04	2.268e+04
2	9	0.0	-416.20	-125.53	241.28	-7281.08	2374.87	-1028.96
2	9	15.00	-1152.39	-252.05	68.91	3.198e+04	7732.58	1515.98
2	9	30.00	-1482.13	-407.61	87.62	4.483e+04	9767.20	2864.64
2	9	45.00	-1688.74	-392.27	-69.47	4.482e+04	1.138e+04	4833.66
2	9	60.00	-1978.04	-421.20	-81.62	4.363e+04	1.068e+04	5930.86
2	9	75.00	-1932.61	-336.32	-115.81	6.097e+04	9049.08	7823.79
2	9	90.00	-2142.44	-318.86	-98.14	6.191e+04	7491.70	9148.60
2	9	105.00	-2012.79	-274.49	-83.27	7.718e+04	5957.92	1.047e+04
2	9	120.00	-2181.78	-261.57	-58.50	7.584e+04	4763.11	1.164e+04
2	9	135.00	-2002.02	-244.64	-37.94	8.673e+04	3968.40	1.275e+04
2	9	150.00	-2144.94	-241.80	-18.15	8.139e+04	3375.47	1.379e+04
2	9	165.00	-1927.66	-239.12	-2.32	8.835e+04	3193.03	1.479e+04
2	9	180.00	-2050.25	-242.34	13.45	7.891e+04	3109.46	1.571e+04
2	9	195.00	-1804.48	-244.52	28.87	8.288e+04	3407.66	1.652e+04
2	9	210.00	-1909.28	-249.84	49.60	7.011e+04	3828.77	1.727e+04
2	9	225.00	-1629.29	-255.98	55.28	7.524e+04	4584.55	1.786e+04
2	9	240.00	-1712.36	-261.62	80.15	6.222e+04	5482.32	1.833e+04
2	9	247.50	-1333.88	-264.08	86.25	6.266e+04	6146.86	1.838e+04
2	9	255.00	-1448.78	-258.61	98.91	5.857e+04	6718.09	1.842e+04
2	9	270.00	-1491.13	-260.17	121.11	5.155e+04	8330.83	1.844e+04
2	9	285.00	-1171.91	-250.82	137.85	5.174e+04	9992.72	1.781e+04
2	9	300.00	-1234.87	-223.32	151.81	4.213e+04	1.220e+04	1.735e+04
2	10	0.0	-483.03	-146.01	293.85	-9109.47	2846.86	-1168.49
2	10	15.00	-1299.86	-290.06	90.72	3.462e+04	9460.59	2081.16
2	10	30.00	-1657.35	-470.54	115.81	5.145e+04	1.206e+04	3884.95
2	10	45.00	-1915.80	-449.06	-75.83	5.139e+04	1.418e+04	6244.20
2	10	60.00	-2221.04	-482.17	-91.62	5.206e+04	1.346e+04	7595.60
2	10	75.00	-2193.96	-385.62	-134.95	7.142e+04	1.159e+04	9906.76
2	10	90.00	-2406.70	-366.07	-114.93	7.423e+04	9791.23	1.153e+04
2	10	105.00	-2281.37	-316.00	-98.37	9.109e+04	7980.56	1.316e+04
2	10	120.00	-2445.33	-301.64	-69.52	9.111e+04	6574.84	1.460e+04
2	10	135.00	-2261.05	-282.94	-45.68	1.027e+05	5622.82	1.599e+04
2	10	150.00	-2393.56	-280.02	-22.71	9.796e+04	4912.18	1.729e+04
2	10	165.00	-2165.58	-277.67	-4.47	1.048e+05	4671.49	1.855e+04
2	10	180.00	-2274.11	-281.50	13.75	9.500e+04	4548.12	1.972e+04
2	10	195.00	-2013.77	-284.60	31.81	9.799e+04	4864.02	2.075e+04
2	10	210.00	-2102.63	-290.35	57.14	8.391e+04	5332.26	2.171e+04
2	10	225.00	-1802.04	-298.07	61.66	8.833e+04	6171.56	2.248e+04
2	10	240.00	-1865.24	-304.14	91.09	7.410e+04	7180.58	2.310e+04
2	10	247.50	-1477.33	-306.65	97.98	7.341e+04	7934.87	2.317e+04
2	10	255.00	-1585.05	-301.10	113.17	6.846e+04	8578.08	2.323e+04
2	10	270.00	-1607.11	-301.39	139.14	6.034e+04	1.043e+04	2.328e+04
2	10	285.00	-1273.20	-290.66	159.28	5.886e+04	1.233e+04	2.249e+04
2	10	300.00	-1322.20	-257.07	176.50	4.837e+04	1.489e+04	2.192e+04
M_S			N memb.	V memb.	V orto	M memb.	M orto	T
			-3524.48	-706.76	-200.53	-1.424e+04	2322.43	-1701.97
			-408.78	-123.25	450.93	1.578e+05	2.287e+04	3.660e+04

Macro	Tipo	Angolo 1-Z (gradi)
4	Setto	0.0

M_S	Cmb	Z	N memb.	V memb.	V orto	M memb.	M orto	T
		cm	daN	daN	daN	daN cm	daN cm	daN cm
4	2	0.0	-1138.04	290.32	-1410.46	1.143e+05	-9576.90	1.808e+04
4	2	15.00	-2722.41	561.77	-272.42	1.422e+05	-2.608e+04	1.919e+04
4	2	30.00	-3286.44	331.19	-342.43	1.865e+05	-3.509e+04	2.636e+04

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO /IEC 27001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

4	2	45.00	-3570.25	443.83	228.82	2.710e+05	-3.664e+04	8810.12
4	2	60.00	-3603.36	225.43	269.40	2.839e+05	-3.412e+04	4331.79
4	2	75.00	-3632.48	201.80	390.81	3.271e+05	-2.860e+04	-1166.35
4	2	90.00	-3591.57	102.11	357.70	3.448e+05	-2.310e+04	-4102.47
4	2	105.00	-3458.66	137.23	301.32	3.901e+05	-1.749e+04	-7216.94
4	2	120.00	-3371.58	122.90	268.67	3.963e+05	-1.254e+04	-1.047e+04
4	2	135.00	-3469.38	506.44	91.92	4.966e+05	-9309.93	-1.779e+04
4	2	150.00	-2960.54	274.12	162.04	3.820e+05	-5542.75	-2.995e+04
4	2	165.00	-2607.37	458.91	116.59	3.106e+05	-4128.82	-9.297e+04
4	2	180.00	-2688.58	512.12	-49.02	2.914e+05	-3682.71	-1.266e+05
4	2	195.00	-2219.97	423.05	-21.77	2.631e+05	-4037.78	-1.189e+05
4	2	210.00	-2265.76	410.23	-89.87	2.262e+05	-5044.04	-1.230e+05
4	2	225.00	-1932.62	340.71	-118.02	1.991e+05	-6549.96	-1.243e+05
4	2	240.00	-2077.16	323.18	-166.01	1.566e+05	-8781.75	-1.259e+05
4	2	255.00	-1785.64	304.10	-194.08	1.344e+05	-1.123e+04	-1.262e+05
4	2	270.00	-1969.94	320.03	-249.45	9.277e+04	-1.471e+04	-1.264e+05
4	2	285.00	-1654.40	342.25	-271.96	7.314e+04	-1.769e+04	-1.241e+05
4	2	300.00	-1841.46	387.05	-293.92	3.768e+04	-2.239e+04	-1.212e+05
4	3	0.0	-692.12	152.02	-765.43	6.803e+04	-5222.33	9792.23
4	3	15.00	-1656.98	305.55	-141.44	8.696e+04	-1.409e+04	1.038e+04
4	3	30.00	-2024.73	140.65	-177.59	1.077e+05	-1.888e+04	1.422e+04
4	3	45.00	-2162.37	220.75	131.06	1.626e+05	-1.959e+04	4712.29
4	3	60.00	-2207.51	92.44	151.57	1.664e+05	-1.813e+04	2273.00
4	3	75.00	-2188.32	82.45	216.55	1.948e+05	-1.506e+04	-710.18
4	3	90.00	-2183.16	28.16	197.45	2.031e+05	-1.203e+04	-2312.83
4	3	105.00	-2068.92	54.20	166.50	2.330e+05	-8944.34	-4015.19
4	3	120.00	-2031.52	51.46	147.91	2.347e+05	-6224.53	-5799.38
4	3	135.00	-2070.56	301.69	52.52	3.008e+05	-4448.83	-9810.75
4	3	150.00	-1760.35	158.27	88.86	2.252e+05	-2392.57	-1.644e+04
4	3	165.00	-1505.46	283.99	63.58	1.842e+05	-1606.77	-5.059e+04
4	3	180.00	-1583.83	315.24	-25.00	1.715e+05	-1347.97	-6.877e+04
4	3	195.00	-1269.45	260.47	-13.56	1.539e+05	-1566.81	-6.454e+04
4	3	210.00	-1344.43	251.69	-51.83	1.296e+05	-2138.72	-6.668e+04
4	3	225.00	-1125.87	207.15	-68.76	1.153e+05	-3023.41	-6.733e+04
4	3	240.00	-1276.11	194.92	-95.94	8.857e+04	-4302.40	-6.815e+04
4	3	255.00	-1089.52	182.13	-112.05	7.807e+04	-5732.09	-6.831e+04
4	3	270.00	-1269.85	189.42	-142.35	5.192e+04	-7716.85	-6.836e+04
4	3	285.00	-1058.35	204.12	-154.35	4.266e+04	-9440.34	-6.711e+04
4	3	300.00	-1229.53	227.17	-165.02	2.012e+04	-1.207e+04	-6.558e+04
4	5	0.0	-701.73	155.76	-782.18	6.908e+04	-5334.75	1.001e+04
4	5	15.00	-1679.90	312.19	-145.01	8.813e+04	-1.440e+04	1.061e+04
4	5	30.00	-2051.11	146.64	-182.09	1.096e+05	-1.930e+04	1.454e+04
4	5	45.00	-2192.98	227.07	133.42	1.650e+05	-2.004e+04	4820.52
4	5	60.00	-2237.09	96.69	154.48	1.691e+05	-1.855e+04	2328.52
4	5	75.00	-2220.08	86.26	220.95	1.978e+05	-1.542e+04	-719.98
4	5	90.00	-2213.54	30.80	201.52	2.064e+05	-1.233e+04	-2357.02
4	5	105.00	-2099.93	56.89	169.93	2.365e+05	-9180.88	-4095.72
4	5	120.00	-2060.98	53.72	150.99	2.384e+05	-6403.72	-5917.67
4	5	135.00	-2101.92	306.30	53.48	3.051e+05	-4591.03	-1.001e+04
4	5	150.00	-1787.45	161.02	90.73	2.288e+05	-2490.65	-1.678e+04
4	5	165.00	-1531.68	287.61	64.95	1.870e+05	-1689.03	-5.169e+04
4	5	180.00	-1609.22	319.36	-25.67	1.743e+05	-1425.81	-7.027e+04
4	5	195.00	-1292.42	263.88	-13.73	1.564e+05	-1647.50	-6.595e+04
4	5	210.00	-1365.31	255.04	-52.74	1.320e+05	-2230.00	-6.814e+04
4	5	225.00	-1144.78	210.03	-69.92	1.173e+05	-3129.04	-6.881e+04
4	5	240.00	-1292.98	197.74	-97.60	9.024e+04	-4430.98	-6.966e+04
4	5	255.00	-1104.41	184.85	-114.00	7.939e+04	-5884.51	-6.982e+04
4	5	270.00	-1282.72	192.39	-144.94	5.294e+04	-7905.68	-6.988e+04
4	5	285.00	-1069.58	207.22	-157.22	4.338e+04	-9658.98	-6.860e+04
4	5	300.00	-1239.34	230.87	-168.23	2.058e+04	-1.234e+04	-6.703e+04
4	6	0.0	-845.85	211.82	-1033.43	8.473e+04	-7020.96	1.325e+04
4	6	15.00	-2023.65	411.71	-198.57	1.057e+05	-1.910e+04	1.406e+04
4	6	30.00	-2446.85	236.36	-249.57	1.377e+05	-2.569e+04	1.930e+04
4	6	45.00	-2652.16	321.95	168.77	2.010e+05	-2.680e+04	6443.99
4	6	60.00	-2680.80	160.35	198.25	2.100e+05	-2.494e+04	3161.31
4	6	75.00	-2696.49	143.49	287.06	2.424e+05	-2.088e+04	-867.03

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015
Certificate No. Q204

SR EN ISO 14001:2015
Certificate No. E81

SR EN ISO/IEC 27001:2017
Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

4	6	90.00	-2669.27	70.42	262.62	2.552e+05	-1.684e+04	-3019.79
4	6	105.00	-2565.09	97.28	221.25	2.893e+05	-1.273e+04	-5303.70
4	6	120.00	-2502.88	87.59	197.19	2.935e+05	-9091.50	-7692.04
4	6	135.00	-2572.27	375.40	67.78	3.689e+05	-6723.96	-1.306e+04
4	6	150.00	-2193.95	202.38	118.87	2.828e+05	-3961.87	-2.198e+04
4	6	165.00	-1924.99	341.87	85.47	2.301e+05	-2922.91	-6.814e+04
4	6	180.00	-1990.03	381.24	-35.66	2.157e+05	-2593.36	-9.274e+04
4	6	195.00	-1636.99	314.95	-16.23	1.946e+05	-2857.73	-8.712e+04
4	6	210.00	-1678.62	305.26	-66.34	1.668e+05	-3599.18	-9.009e+04
4	6	225.00	-1428.44	253.23	-87.23	1.471e+05	-4713.43	-9.104e+04
4	6	240.00	-1545.93	239.94	-122.58	1.153e+05	-6359.58	-9.222e+04
4	6	255.00	-1327.75	225.57	-143.29	9.931e+04	-8170.73	-9.246e+04
4	6	270.00	-1475.74	237.02	-183.90	6.823e+04	-1.074e+04	-9.257e+04
4	6	285.00	-1238.05	253.73	-200.35	5.407e+04	-1.294e+04	-9.087e+04
4	6	300.00	-1386.35	286.35	-216.24	2.755e+04	-1.639e+04	-8.879e+04
4	7	0.0	-701.73	155.76	-782.18	6.908e+04	-5334.75	1.001e+04
4	7	15.00	-1679.90	312.19	-145.01	8.813e+04	-1.440e+04	1.061e+04
4	7	30.00	-2051.11	146.64	-182.09	1.096e+05	-1.930e+04	1.454e+04
4	7	45.00	-2192.98	227.07	133.42	1.650e+05	-2.004e+04	4820.52
4	7	60.00	-2237.09	96.69	154.48	1.691e+05	-1.855e+04	2328.52
4	7	75.00	-2220.08	86.26	220.95	1.978e+05	-1.542e+04	-719.98
4	7	90.00	-2213.54	30.80	201.52	2.064e+05	-1.233e+04	-2357.02
4	7	105.00	-2099.93	56.89	169.93	2.365e+05	-9180.88	-4095.72
4	7	120.00	-2060.98	53.72	150.99	2.384e+05	-6403.72	-5917.67
4	7	135.00	-2101.92	306.30	53.48	3.051e+05	-4591.03	-1.001e+04
4	7	150.00	-1787.45	161.02	90.73	2.288e+05	-2490.65	-1.678e+04
4	7	165.00	-1531.68	287.61	64.95	1.870e+05	-1689.03	-5.169e+04
4	7	180.00	-1609.22	319.36	-25.67	1.743e+05	-1425.81	-7.027e+04
4	7	195.00	-1292.42	263.88	-13.73	1.564e+05	-1647.50	-6.595e+04
4	7	210.00	-1365.31	255.04	-52.74	1.320e+05	-2230.00	-6.814e+04
4	7	225.00	-1144.78	210.03	-69.92	1.173e+05	-3129.04	-6.881e+04
4	7	240.00	-1292.98	197.74	-97.60	9.024e+04	-4430.98	-6.966e+04
4	7	255.00	-1104.41	184.85	-114.00	7.939e+04	-5884.51	-6.982e+04
4	7	270.00	-1282.72	192.39	-144.94	5.294e+04	-7905.68	-6.988e+04
4	7	285.00	-1069.58	207.22	-157.22	4.338e+04	-9658.98	-6.860e+04
4	7	300.00	-1239.34	230.87	-168.23	2.058e+04	-1.234e+04	-6.703e+04
4	8	0.0	-802.62	195.00	-958.05	8.003e+04	-6515.10	1.227e+04
4	8	15.00	-1920.53	381.85	-182.50	1.005e+05	-1.769e+04	1.302e+04
4	8	30.00	-2328.13	209.44	-229.32	1.293e+05	-2.377e+04	1.787e+04
4	8	45.00	-2514.40	293.48	158.16	1.902e+05	-2.477e+04	5956.95
4	8	60.00	-2547.69	141.25	185.12	1.977e+05	-2.302e+04	2911.47
4	8	75.00	-2553.57	126.32	267.23	2.290e+05	-1.924e+04	-822.91
4	8	90.00	-2532.55	58.54	244.29	2.406e+05	-1.549e+04	-2820.96
4	8	105.00	-2425.54	85.16	205.85	2.734e+05	-1.166e+04	-4941.30
4	8	120.00	-2370.31	77.43	183.33	2.770e+05	-8285.17	-7159.73
4	8	135.00	-2431.16	354.67	63.49	3.497e+05	-6084.08	-1.214e+04
4	8	150.00	-2072.00	189.97	110.43	2.666e+05	-3520.50	-2.042e+04
4	8	165.00	-1807.00	325.59	79.32	2.172e+05	-2552.75	-6.321e+04
4	8	180.00	-1875.78	362.68	-32.66	2.032e+05	-2243.09	-8.600e+04
4	8	195.00	-1533.62	299.63	-15.48	1.831e+05	-2494.66	-8.077e+04
4	8	210.00	-1584.63	290.19	-62.26	1.564e+05	-3188.42	-8.351e+04
4	8	225.00	-1343.34	240.27	-82.04	1.381e+05	-4238.11	-8.437e+04
4	8	240.00	-1470.04	227.28	-115.09	1.078e+05	-5781.00	-8.545e+04
4	8	255.00	-1260.75	213.35	-134.50	9.333e+04	-7484.87	-8.567e+04
4	8	270.00	-1417.84	223.63	-172.21	6.364e+04	-9888.38	-8.576e+04
4	8	285.00	-1187.51	239.78	-187.42	5.086e+04	-1.195e+04	-8.419e+04
4	8	300.00	-1342.25	269.71	-201.84	2.546e+04	-1.518e+04	-8.226e+04
4	9	0.0	-701.73	155.76	-782.18	6.908e+04	-5334.75	1.001e+04
4	9	15.00	-1679.90	312.19	-145.01	8.813e+04	-1.440e+04	1.061e+04
4	9	30.00	-2051.11	146.64	-182.09	1.096e+05	-1.930e+04	1.454e+04
4	9	45.00	-2192.98	227.07	133.42	1.650e+05	-2.004e+04	4820.52
4	9	60.00	-2237.09	96.69	154.48	1.691e+05	-1.855e+04	2328.52
4	9	75.00	-2220.08	86.26	220.95	1.978e+05	-1.542e+04	-719.98
4	9	90.00	-2213.54	30.80	201.52	2.064e+05	-1.233e+04	-2357.02
4	9	105.00	-2099.93	56.89	169.93	2.365e+05	-9180.88	-4095.72
4	9	120.00	-2060.98	53.72	150.99	2.384e+05	-6403.72	-5917.67

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 27001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

4	9	135.00	-2101.92	306.30	53.48	3.051e+05	-4591.03	-1.001e+04
4	9	150.00	-1787.45	161.02	90.73	2.288e+05	-2490.65	-1.678e+04
4	9	165.00	-1531.68	287.61	64.95	1.870e+05	-1689.03	-5.169e+04
4	9	180.00	-1609.22	319.36	-25.67	1.743e+05	-1425.81	-7.027e+04
4	9	195.00	-1292.42	263.88	-13.73	1.564e+05	-1647.50	-6.595e+04
4	9	210.00	-1365.31	255.04	-52.74	1.320e+05	-2230.00	-6.814e+04
4	9	225.00	-1144.78	210.03	-69.92	1.173e+05	-3129.04	-6.881e+04
4	9	240.00	-1292.98	197.74	-97.60	9.024e+04	-4430.98	-6.966e+04
4	9	255.00	-1104.41	184.85	-114.00	7.939e+04	-5884.51	-6.982e+04
4	9	270.00	-1282.72	192.39	-144.94	5.294e+04	-7905.68	-6.988e+04
4	9	285.00	-1069.58	207.22	-157.22	4.338e+04	-9658.98	-6.860e+04
4	9	300.00	-1239.34	230.87	-168.23	2.058e+04	-1.234e+04	-6.703e+04
4	10	0.0	-788.20	189.40	-932.93	7.847e+04	-6346.47	1.195e+04
4	10	15.00	-1886.15	371.90	-177.15	9.870e+04	-1.722e+04	1.268e+04
4	10	30.00	-2288.56	200.47	-222.58	1.265e+05	-2.313e+04	1.740e+04
4	10	45.00	-2468.49	284.00	154.63	1.866e+05	-2.410e+04	5794.60
4	10	60.00	-2503.32	134.88	180.74	1.937e+05	-2.238e+04	2828.19
4	10	75.00	-2505.93	120.60	260.62	2.246e+05	-1.870e+04	-808.21
4	10	90.00	-2486.97	54.57	238.18	2.357e+05	-1.504e+04	-2754.68
4	10	105.00	-2379.03	81.12	200.72	2.682e+05	-1.131e+04	-4820.51
4	10	120.00	-2326.12	74.04	178.71	2.715e+05	-8016.39	-6982.29
4	10	135.00	-2384.13	347.76	62.06	3.434e+05	-5870.79	-1.184e+04
4	10	150.00	-2031.35	185.84	107.62	2.612e+05	-3373.38	-1.990e+04
4	10	165.00	-1767.67	320.17	77.27	2.129e+05	-2429.36	-6.156e+04
4	10	180.00	-1837.70	356.49	-31.66	1.991e+05	-2126.34	-8.375e+04
4	10	195.00	-1499.16	294.52	-15.23	1.793e+05	-2373.64	-7.865e+04
4	10	210.00	-1553.30	285.17	-60.90	1.529e+05	-3051.50	-8.131e+04
4	10	225.00	-1314.98	235.95	-80.30	1.351e+05	-4079.67	-8.215e+04
4	10	240.00	-1444.75	223.06	-112.59	1.053e+05	-5588.14	-8.319e+04
4	10	255.00	-1238.42	209.28	-131.58	9.134e+04	-7256.24	-8.340e+04
4	10	270.00	-1398.53	219.17	-168.32	6.211e+04	-9605.14	-8.349e+04
4	10	285.00	-1170.66	235.13	-183.10	4.979e+04	-1.163e+04	-8.196e+04
4	10	300.00	-1327.54	264.16	-197.04	2.476e+04	-1.477e+04	-8.009e+04

M_S	N memb.	V memb.	V orto	M memb.	M orto	T
	-3632.48	28.16	-1410.46	2.012e+04	-3.664e+04	-1.266e+05
	-692.12	561.77	390.81	4.966e+05	-1347.97	2.636e+04

Macro	Tipo	Angolo 1-Z (gradi)
7	Setto	0.0

M_S	Cmb	Z	N memb.	V memb.	V orto	M memb.	M orto	T
		cm	daN	daN	daN	daN cm	daN cm	daN cm
7	2	0.0	-2.310e+04	5927.18	-32.76	-6.135e+06	7337.80	-292.30
7	2	15.00	-2.533e+04	5124.71	-7.61	-6.040e+06	7671.78	-2384.36
7	2	30.00	-2.968e+04	2729.97	-26.23	-5.114e+06	7699.90	-4787.59
7	2	45.00	-2.539e+04	2898.56	-30.64	1.081e+06	5266.49	-6235.53
7	2	60.00	-2.856e+04	2242.58	-39.94	1.664e+06	4641.26	-8003.29
7	2	75.00	-3.126e+04	1697.53	-44.36	2.118e+06	3942.81	-9621.76
7	2	90.00	-3.371e+04	1298.71	-46.78	2.489e+06	3291.39	-1.115e+04
7	2	105.00	-3.606e+04	1068.05	-48.70	2.788e+06	2691.40	-1.244e+04
7	2	120.00	-3.824e+04	796.99	-51.05	3.078e+06	2145.78	-1.246e+04
7	2	135.00	-4.006e+04	932.33	-54.98	1.887e+06	1597.63	-1.317e+04
7	2	150.00	-4.184e+04	954.34	-55.28	1.919e+06	1098.89	-1.467e+04
7	2	165.00	-4.294e+04	1425.59	-55.16	3.708e+06	592.38	-1.678e+04
7	2	180.00	-4.315e+04	1773.36	-54.51	3.279e+06	86.68	-2.004e+04
7	2	195.00	-4.521e+04	1990.07	-73.40	-1.722e+05	-599.70	-2.773e+04
7	2	210.00	-4.884e+04	1471.73	-62.35	-1.309e+06	-831.31	-3.788e+04
7	2	225.00	-5.260e+04	-450.47	-55.67	1.485e+06	-860.63	-6.022e+04
7	2	240.00	-5.456e+04	-221.92	-53.18	1.405e+06	-703.34	-6.297e+04
7	2	247.50	-5.477e+04	367.28	-53.79	1.604e+06	-407.93	-6.324e+04

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Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO/IEC 27001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

7	2	255.00	-5.644e+04	517.11	-51.29	1.525e+06	-446.18	-6.370e+04
7	2	270.00	-5.852e+04	1423.97	-47.92	1.281e+06	-330.13	-6.367e+04
7	2	285.00	-6.012e+04	2079.92	-46.72	1.246e+06	-305.31	-6.297e+04
7	2	300.00	-6.408e+04	2368.18	-48.64	-9.296e+05	-151.20	-6.173e+04
7	3	0.0	-1.332e+04	3142.58	-19.72	-3.627e+06	4647.33	-201.57
7	3	15.00	-1.457e+04	2756.70	-9.64	-3.580e+06	4842.41	-1205.85
7	3	30.00	-1.679e+04	1544.71	-24.35	-3.066e+06	4771.09	-2505.47
7	3	45.00	-1.400e+04	1640.25	-28.65	5.205e+05	3167.55	-3255.92
7	3	60.00	-1.555e+04	1283.53	-33.52	8.394e+05	2628.99	-4211.11
7	3	75.00	-1.683e+04	982.74	-34.70	1.086e+06	2057.91	-5099.09
7	3	90.00	-1.797e+04	760.36	-34.16	1.286e+06	1539.45	-5950.02
7	3	105.00	-1.904e+04	632.35	-33.34	1.447e+06	1078.62	-6683.99
7	3	120.00	-2.001e+04	489.29	-32.59	1.602e+06	679.88	-6728.76
7	3	135.00	-2.081e+04	572.45	-32.75	9.853e+05	308.82	-7152.99
7	3	150.00	-2.159e+04	605.88	-30.56	1.006e+06	1.28	-8053.06
7	3	165.00	-2.202e+04	896.85	-27.99	1.930e+06	-274.72	-9244.53
7	3	180.00	-2.197e+04	1108.98	-24.81	1.724e+06	-503.48	-1.106e+04
7	3	195.00	-2.285e+04	1345.16	-32.54	-3.330e+04	-808.38	-1.503e+04
7	3	210.00	-2.469e+04	1016.10	-23.45	-5.812e+05	-787.33	-2.069e+04
7	3	225.00	-2.659e+04	-326.95	-15.42	8.031e+05	-597.87	-3.330e+04
7	3	240.00	-2.742e+04	-249.27	-10.68	7.652e+05	-253.19	-3.491e+04
7	3	247.50	-2.731e+04	60.40	-9.79	8.318e+05	49.77	-3.508e+04
7	3	255.00	-2.823e+04	144.06	-6.66	8.183e+05	197.34	-3.537e+04
7	3	270.00	-2.912e+04	640.84	-2.41	6.907e+05	610.03	-3.536e+04
7	3	285.00	-2.977e+04	1000.94	-0.09	6.627e+05	1001.21	-3.495e+04
7	3	300.00	-3.166e+04	1158.24	-0.09	-4.819e+05	1476.23	-3.424e+04
7	5	0.0	-1.355e+04	3216.84	-20.01	-3.685e+06	4699.60	-202.79
7	5	15.00	-1.482e+04	2818.84	-9.44	-3.635e+06	4897.92	-1238.79
7	5	30.00	-1.711e+04	1573.82	-24.13	-3.112e+06	4831.47	-2567.18
7	5	45.00	-1.429e+04	1671.15	-28.38	5.368e+05	3213.87	-3336.68
7	5	60.00	-1.589e+04	1306.67	-33.37	8.624e+05	2678.33	-4313.08
7	5	75.00	-1.721e+04	999.67	-34.67	1.115e+06	2109.02	-5219.77
7	5	90.00	-1.839e+04	772.87	-34.25	1.319e+06	1591.47	-6087.63
7	5	105.00	-1.949e+04	642.27	-33.56	1.484e+06	1130.60	-6835.21
7	5	120.00	-2.050e+04	495.77	-32.94	1.642e+06	730.77	-6878.39
7	5	135.00	-2.134e+04	580.04	-33.25	1.010e+06	357.05	-7309.15
7	5	150.00	-2.215e+04	612.60	-31.18	1.031e+06	45.52	-8222.53
7	5	165.00	-2.259e+04	907.33	-28.75	1.978e+06	-236.43	-9436.44
7	5	180.00	-2.255e+04	1122.35	-25.70	1.766e+06	-473.59	-1.128e+04
7	5	195.00	-2.347e+04	1354.89	-33.79	-3.850e+04	-790.18	-1.536e+04
7	5	210.00	-2.537e+04	1022.18	-24.74	-6.035e+05	-779.58	-2.113e+04
7	5	225.00	-2.732e+04	-327.97	-16.86	8.208e+05	-601.23	-3.399e+04
7	5	240.00	-2.818e+04	-245.15	-12.26	7.818e+05	-268.27	-3.562e+04
7	5	247.50	-2.809e+04	72.04	-11.45	8.528e+05	30.72	-3.579e+04
7	5	255.00	-2.902e+04	157.36	-8.38	8.369e+05	169.01	-3.608e+04
7	5	270.00	-2.995e+04	664.67	-4.21	7.061e+05	564.75	-3.607e+04
7	5	285.00	-3.063e+04	1032.34	-1.97	6.782e+05	936.41	-3.565e+04
7	5	300.00	-3.258e+04	1193.02	-2.05	-4.941e+05	1392.75	-3.493e+04
7	6	0.0	-1.705e+04	4330.85	-24.32	-4.543e+06	5483.63	-221.09
7	6	15.00	-1.869e+04	3750.89	-6.47	-4.474e+06	5730.57	-1732.79
7	6	30.00	-2.185e+04	2010.42	-20.85	-3.794e+06	5737.21	-3492.88
7	6	45.00	-1.864e+04	2134.60	-24.39	7.814e+05	3908.63	-4548.07
7	6	60.00	-2.093e+04	1653.85	-31.18	1.209e+06	3418.39	-5842.63
7	6	75.00	-2.288e+04	1253.69	-34.22	1.542e+06	2875.67	-7030.02
7	6	90.00	-2.465e+04	960.52	-35.69	1.813e+06	2371.77	-8151.66
7	6	105.00	-2.633e+04	791.05	-36.80	2.032e+06	1910.36	-9103.51
7	6	120.00	-2.790e+04	593.10	-38.19	2.244e+06	1494.04	-9122.86
7	6	135.00	-2.920e+04	693.84	-40.75	1.376e+06	1080.54	-9651.59
7	6	150.00	-3.048e+04	713.43	-40.59	1.400e+06	709.17	-1.076e+04
7	6	165.00	-3.126e+04	1064.39	-40.10	2.704e+06	337.87	-1.232e+04
7	6	180.00	-3.138e+04	1322.97	-39.17	2.393e+06	-25.28	-1.471e+04
7	6	195.00	-3.286e+04	1500.88	-52.60	-1.165e+05	-517.29	-2.031e+04
7	6	210.00	-3.549e+04	1113.39	-44.01	-9.384e+05	-663.32	-2.778e+04
7	6	225.00	-3.822e+04	-343.36	-38.41	1.087e+06	-651.67	-4.422e+04
7	6	240.00	-3.962e+04	-183.38	-36.03	1.030e+06	-494.61	-4.626e+04
7	6	247.50	-3.974e+04	246.69	-36.28	1.169e+06	-255.15	-4.646e+04

PROJETTO engineering s.r.l.

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Direttore Tecnico: ING. LEONARDO FILOTICO

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO /IEC 27001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

7	6	255.00	-4.096e+04	356.85	-34.16	1.116e+06	-256.03	-4.680e+04
7	6	270.00	-4.245e+04	1022.05	-31.31	9.376e+05	-114.59	-4.678e+04
7	6	285.00	-4.359e+04	1503.32	-30.16	9.110e+05	-35.49	-4.626e+04
7	6	300.00	-4.645e+04	1714.67	-31.39	-6.774e+05	140.56	-4.534e+04
7	7	0.0	-1.355e+04	3216.84	-20.01	-3.685e+06	4699.60	-202.79
7	7	15.00	-1.482e+04	2818.84	-9.44	-3.635e+06	4897.92	-1238.79
7	7	30.00	-1.711e+04	1573.82	-24.13	-3.112e+06	4831.47	-2567.18
7	7	45.00	-1.429e+04	1671.15	-28.38	5.368e+05	3213.87	-3336.68
7	7	60.00	-1.589e+04	1306.67	-33.37	8.624e+05	2678.33	-4313.08
7	7	75.00	-1.721e+04	999.67	-34.67	1.115e+06	2109.02	-5219.77
7	7	90.00	-1.839e+04	772.87	-34.25	1.319e+06	1591.47	-6087.63
7	7	105.00	-1.949e+04	642.27	-33.56	1.484e+06	1130.60	-6835.21
7	7	120.00	-2.050e+04	495.77	-32.94	1.642e+06	730.77	-6878.39
7	7	135.00	-2.134e+04	580.04	-33.25	1.010e+06	357.05	-7309.15
7	7	150.00	-2.215e+04	612.60	-31.18	1.031e+06	45.52	-8222.53
7	7	165.00	-2.259e+04	907.33	-28.75	1.978e+06	-236.43	-9436.44
7	7	180.00	-2.255e+04	1122.35	-25.70	1.766e+06	-473.59	-1.128e+04
7	7	195.00	-2.347e+04	1354.89	-33.79	-3.850e+04	-790.18	-1.536e+04
7	7	210.00	-2.537e+04	1022.18	-24.74	-6.035e+05	-779.58	-2.113e+04
7	7	225.00	-2.732e+04	-327.97	-16.86	8.208e+05	-601.23	-3.399e+04
7	7	240.00	-2.818e+04	-245.15	-12.26	7.818e+05	-268.27	-3.562e+04
7	7	247.50	-2.809e+04	72.04	-11.45	8.528e+05	30.72	-3.579e+04
7	7	255.00	-2.902e+04	157.36	-8.38	8.369e+05	169.01	-3.608e+04
7	7	270.00	-2.995e+04	664.67	-4.21	7.061e+05	564.75	-3.607e+04
7	7	285.00	-3.063e+04	1032.34	-1.97	6.782e+05	936.41	-3.565e+04
7	7	300.00	-3.258e+04	1193.02	-2.05	-4.941e+05	1392.75	-3.493e+04
7	8	0.0	-1.600e+04	3996.65	-23.02	-4.286e+06	5248.42	-215.60
7	8	15.00	-1.753e+04	3471.28	-7.36	-4.222e+06	5480.77	-1584.59
7	8	30.00	-2.043e+04	1879.44	-21.83	-3.589e+06	5465.49	-3215.17
7	8	45.00	-1.733e+04	1995.56	-25.59	7.080e+05	3700.20	-4184.65
7	8	60.00	-1.942e+04	1549.70	-31.83	1.105e+06	3196.37	-5383.76
7	8	75.00	-2.118e+04	1177.48	-34.35	1.414e+06	2645.67	-6486.94
7	8	90.00	-2.277e+04	904.22	-35.26	1.665e+06	2137.68	-7532.45
7	8	105.00	-2.428e+04	746.42	-35.83	1.868e+06	1676.43	-8423.02
7	8	120.00	-2.568e+04	563.90	-36.62	2.063e+06	1265.06	-8449.52
7	8	135.00	-2.684e+04	659.70	-38.50	1.266e+06	863.49	-8948.86
7	8	150.00	-2.798e+04	683.18	-37.77	1.290e+06	510.07	-1.000e+04
7	8	165.00	-2.866e+04	1017.27	-36.70	2.486e+06	165.58	-1.145e+04
7	8	180.00	-2.873e+04	1262.78	-35.13	2.205e+06	-159.78	-1.368e+04
7	8	195.00	-3.004e+04	1457.08	-46.96	-9.307e+04	-599.15	-1.883e+04
7	8	210.00	-3.245e+04	1086.03	-38.23	-8.380e+05	-698.20	-2.578e+04
7	8	225.00	-3.495e+04	-338.74	-31.94	1.007e+06	-636.54	-4.115e+04
7	8	240.00	-3.619e+04	-201.91	-28.90	9.556e+05	-426.71	-4.307e+04
7	8	247.50	-3.624e+04	194.30	-28.83	1.074e+06	-169.39	-4.326e+04
7	8	255.00	-3.738e+04	297.01	-26.43	1.032e+06	-128.52	-4.358e+04
7	8	270.00	-3.870e+04	914.84	-23.18	8.681e+05	89.21	-4.357e+04
7	8	285.00	-3.970e+04	1362.03	-21.70	8.411e+05	256.08	-4.308e+04
7	8	300.00	-4.229e+04	1558.18	-22.59	-6.224e+05	516.22	-4.222e+04
7	9	0.0	-1.355e+04	3216.84	-20.01	-3.685e+06	4699.60	-202.79
7	9	15.00	-1.482e+04	2818.84	-9.44	-3.635e+06	4897.92	-1238.79
7	9	30.00	-1.711e+04	1573.82	-24.13	-3.112e+06	4831.47	-2567.18
7	9	45.00	-1.429e+04	1671.15	-28.38	5.368e+05	3213.87	-3336.68
7	9	60.00	-1.589e+04	1306.67	-33.37	8.624e+05	2678.33	-4313.08
7	9	75.00	-1.721e+04	999.67	-34.67	1.115e+06	2109.02	-5219.77
7	9	90.00	-1.839e+04	772.87	-34.25	1.319e+06	1591.47	-6087.63
7	9	105.00	-1.949e+04	642.27	-33.56	1.484e+06	1130.60	-6835.21
7	9	120.00	-2.050e+04	495.77	-32.94	1.642e+06	730.77	-6878.39
7	9	135.00	-2.134e+04	580.04	-33.25	1.010e+06	357.05	-7309.15
7	9	150.00	-2.215e+04	612.60	-31.18	1.031e+06	45.52	-8222.53
7	9	165.00	-2.259e+04	907.33	-28.75	1.978e+06	-236.43	-9436.44
7	9	180.00	-2.255e+04	1122.35	-25.70	1.766e+06	-473.59	-1.128e+04
7	9	195.00	-2.347e+04	1354.89	-33.79	-3.850e+04	-790.18	-1.536e+04
7	9	210.00	-2.537e+04	1022.18	-24.74	-6.035e+05	-779.58	-2.113e+04
7	9	225.00	-2.732e+04	-327.97	-16.86	8.208e+05	-601.23	-3.399e+04
7	9	240.00	-2.818e+04	-245.15	-12.26	7.818e+05	-268.27	-3.562e+04
7	9	247.50	-2.809e+04	72.04	-11.45	8.528e+05	30.72	-3.579e+04

PROJETTO engineering s.r.l.

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015
Certificate No. Q204

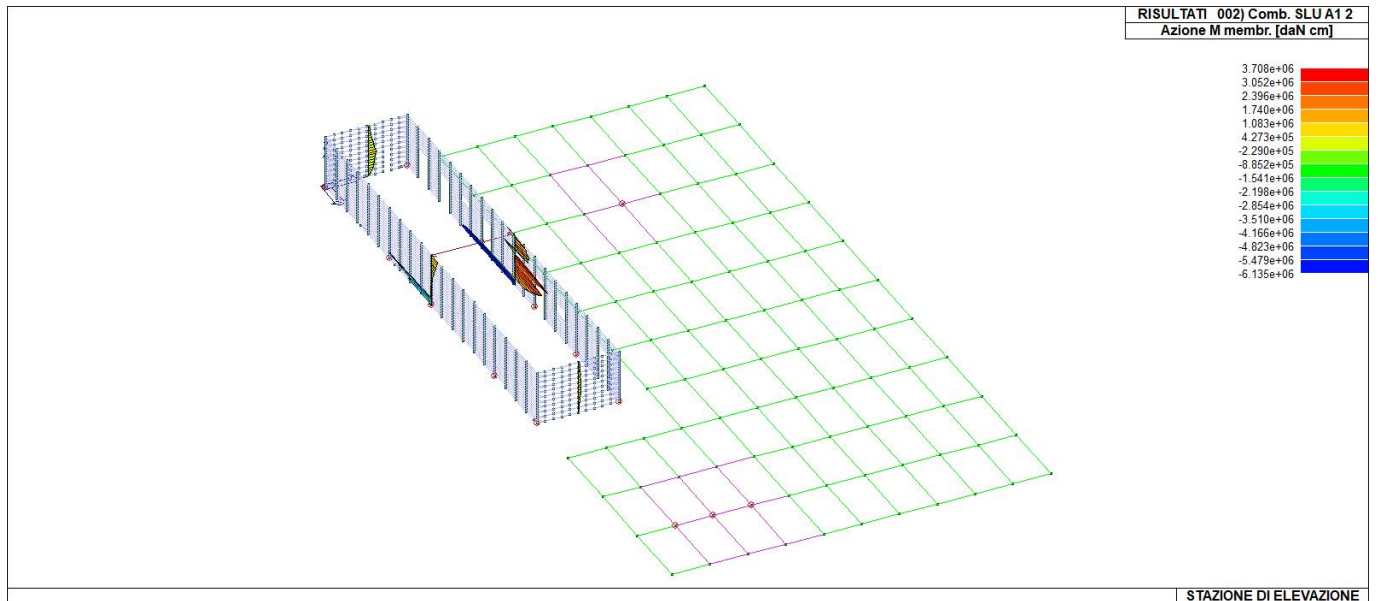
SR EN ISO 14001:2015
Certificate No. E81

SR EN ISO/IEC 27001:2017
Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

7	9	255.00	-2.902e+04	157.36	-8.38	8.369e+05	169.01	-3.608e+04
7	9	270.00	-2.995e+04	664.67	-4.21	7.061e+05	564.75	-3.607e+04
7	9	285.00	-3.063e+04	1032.34	-1.97	6.782e+05	936.41	-3.565e+04
7	9	300.00	-3.258e+04	1193.02	-2.05	-4.941e+05	1392.75	-3.493e+04
7	10	0.0	-1.565e+04	3885.25	-22.59	-4.200e+06	5170.02	-213.77
7	10	15.00	-1.714e+04	3378.07	-7.66	-4.138e+06	5397.51	-1535.19
7	10	30.00	-1.995e+04	1835.78	-22.16	-3.521e+06	5374.91	-3122.60
7	10	45.00	-1.690e+04	1949.22	-25.99	6.836e+05	3630.73	-4063.51
7	10	60.00	-1.892e+04	1514.98	-32.05	1.070e+06	3122.37	-5230.81
7	10	75.00	-2.061e+04	1152.08	-34.40	1.371e+06	2569.01	-6305.92
7	10	90.00	-2.214e+04	885.46	-35.11	1.615e+06	2059.65	-7326.05
7	10	105.00	-2.360e+04	731.54	-35.50	1.813e+06	1598.46	-8196.19
7	10	120.00	-2.494e+04	554.17	-36.09	2.003e+06	1188.73	-8225.08
7	10	135.00	-2.606e+04	648.32	-37.75	1.230e+06	791.14	-8714.61
7	10	150.00	-2.715e+04	673.10	-36.83	1.253e+06	443.71	-9747.75
7	10	165.00	-2.779e+04	1001.57	-35.56	2.414e+06	108.15	-1.116e+04
7	10	180.00	-2.785e+04	1242.72	-33.78	2.143e+06	-204.61	-1.334e+04
7	10	195.00	-2.910e+04	1442.48	-45.08	-8.527e+04	-626.44	-1.833e+04
7	10	210.00	-3.144e+04	1076.91	-36.30	-8.045e+05	-709.82	-2.512e+04
7	10	225.00	-3.386e+04	-337.20	-29.79	9.808e+05	-631.50	-4.013e+04
7	10	240.00	-3.505e+04	-208.09	-26.52	9.308e+05	-404.07	-4.200e+04
7	10	247.50	-3.508e+04	176.83	-26.35	1.043e+06	-140.80	-4.219e+04
7	10	255.00	-3.619e+04	277.06	-23.85	1.004e+06	-86.02	-4.251e+04
7	10	270.00	-3.745e+04	879.10	-20.47	8.450e+05	157.14	-4.250e+04
7	10	285.00	-3.841e+04	1314.93	-18.88	8.179e+05	353.27	-4.202e+04
7	10	300.00	-4.090e+04	1506.01	-19.65	-6.041e+05	641.43	-4.118e+04
M_S			N memb.	V memb.	V orto	M memb.	M orto	T
			-6.408e+04	-450.47	-73.40	-6.135e+06	-860.63	-6.370e+04
			-1.332e+04	5927.18	-0.09	3.708e+06	7699.90	-201.57



47_RIS_M_002_Comb. SLU A1 2

PROJETTO engineering s.r.l.

società d'ingegneria

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Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

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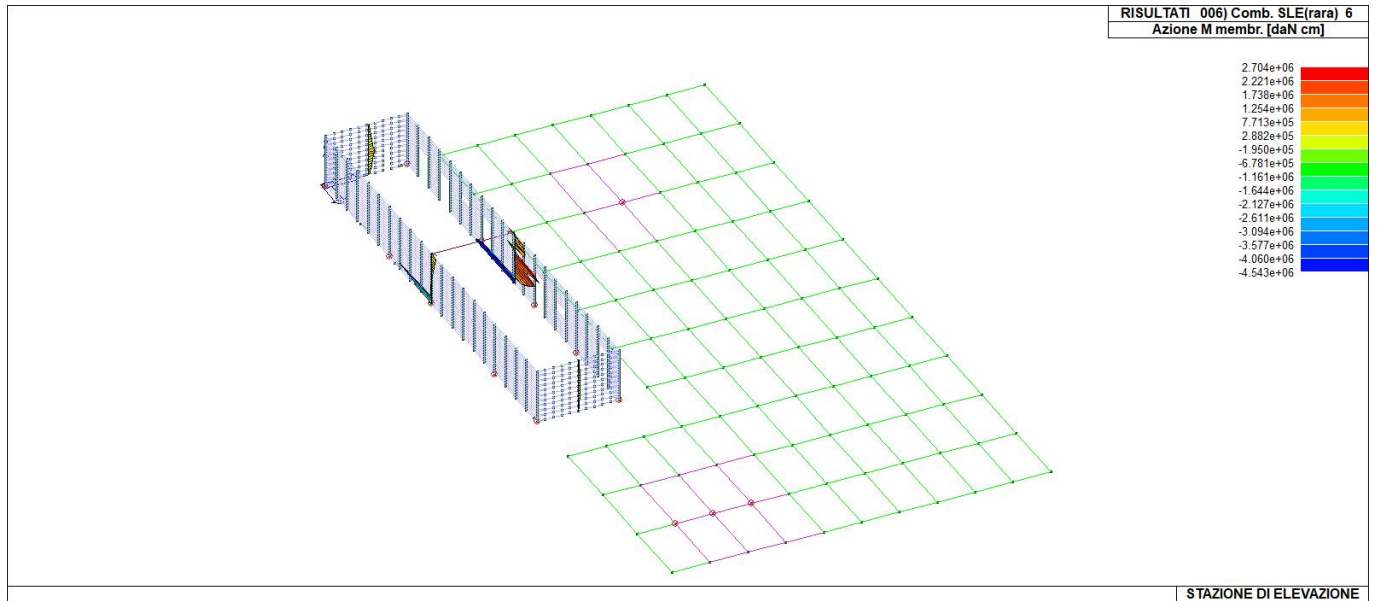
RELAZIONE DI CALCOLO



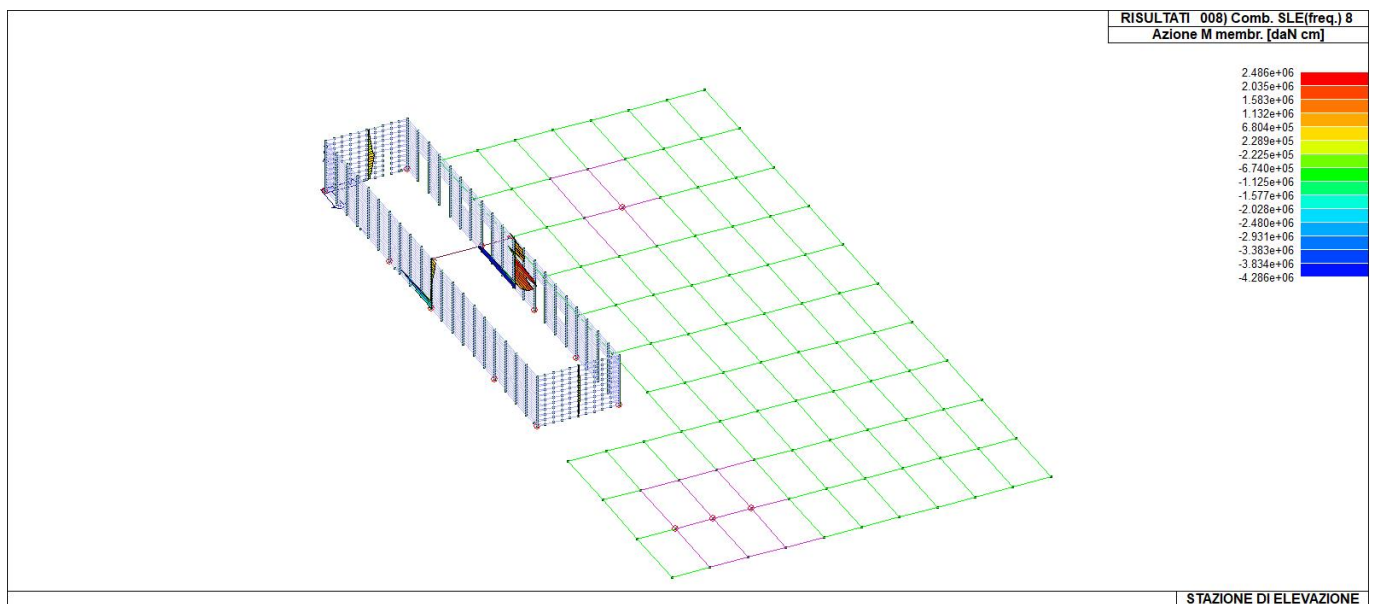
SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO /IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

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47_RIS_M_006_Comb. SLE(rara) 6



47_RIS_M_008_Comb. SLE(freq.) 8

PROJETTO engineering s.r.l.

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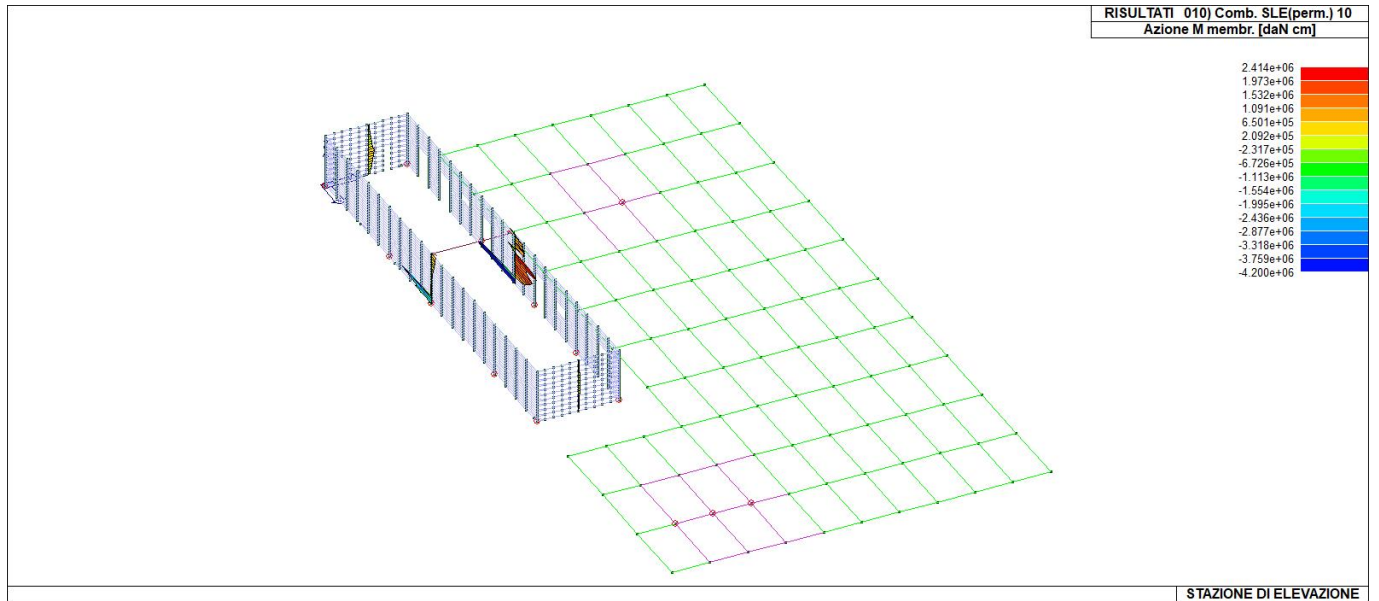
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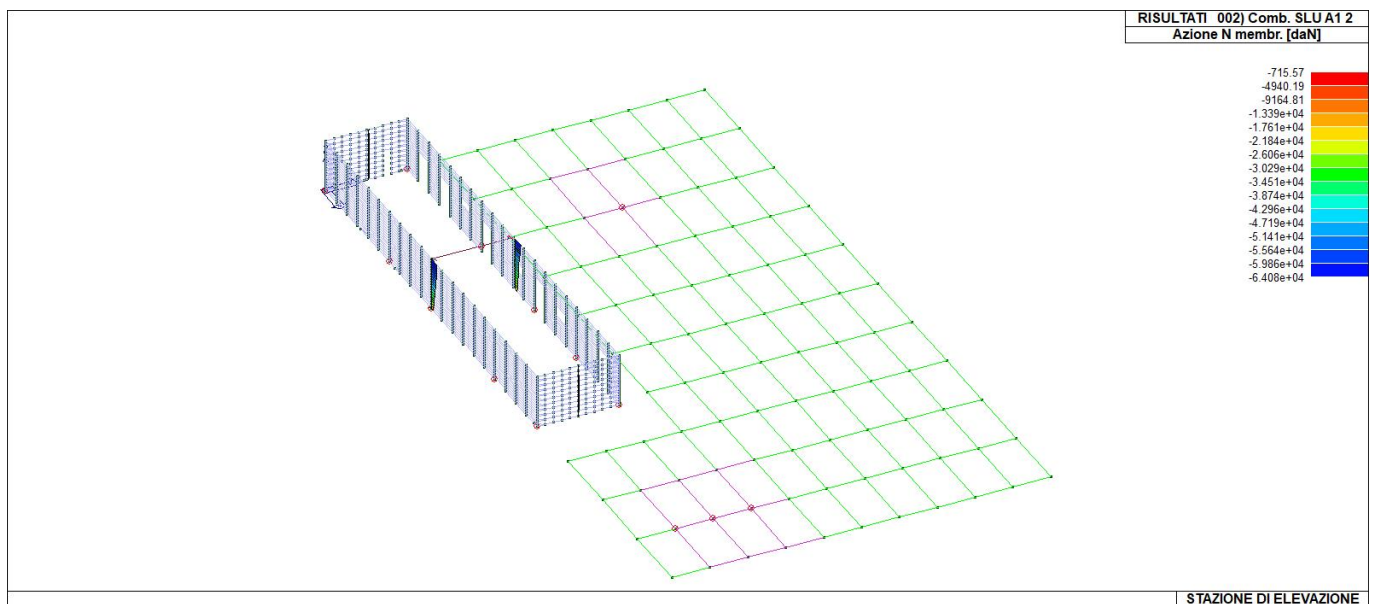
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47_RIS_M_010_Comb. SLE(perm.) 10



47_RIS_N_002_Comb. SLU A1 2

PROJETTO engineering s.r.l.

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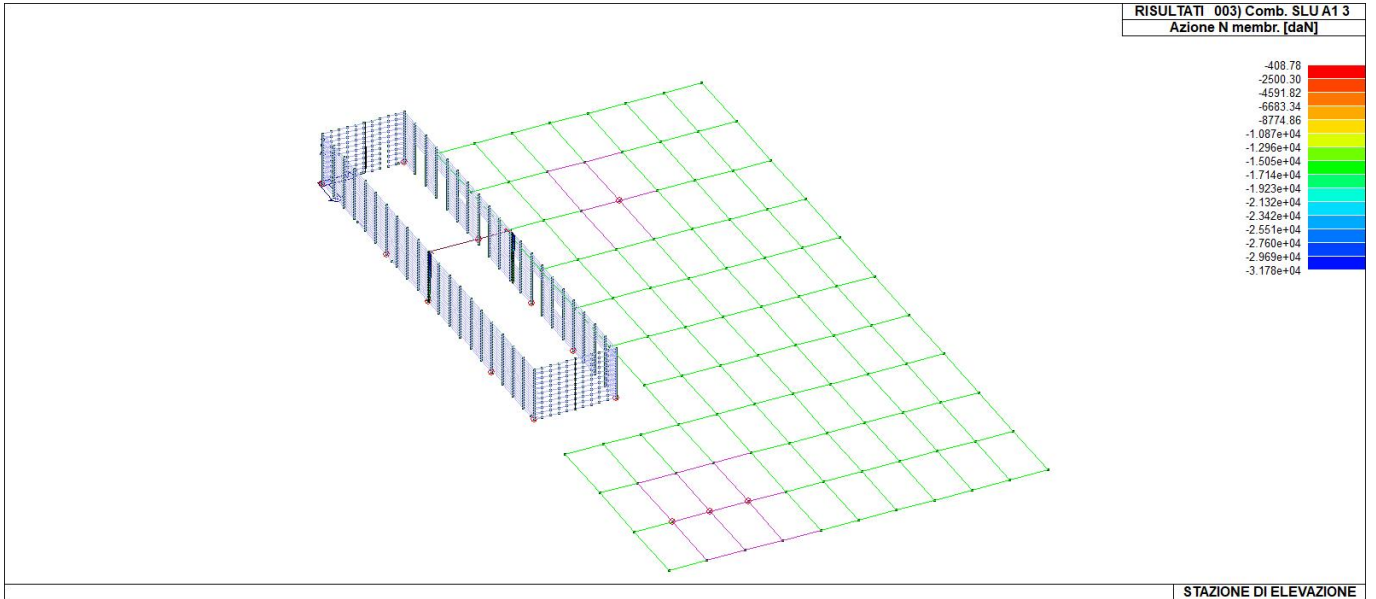
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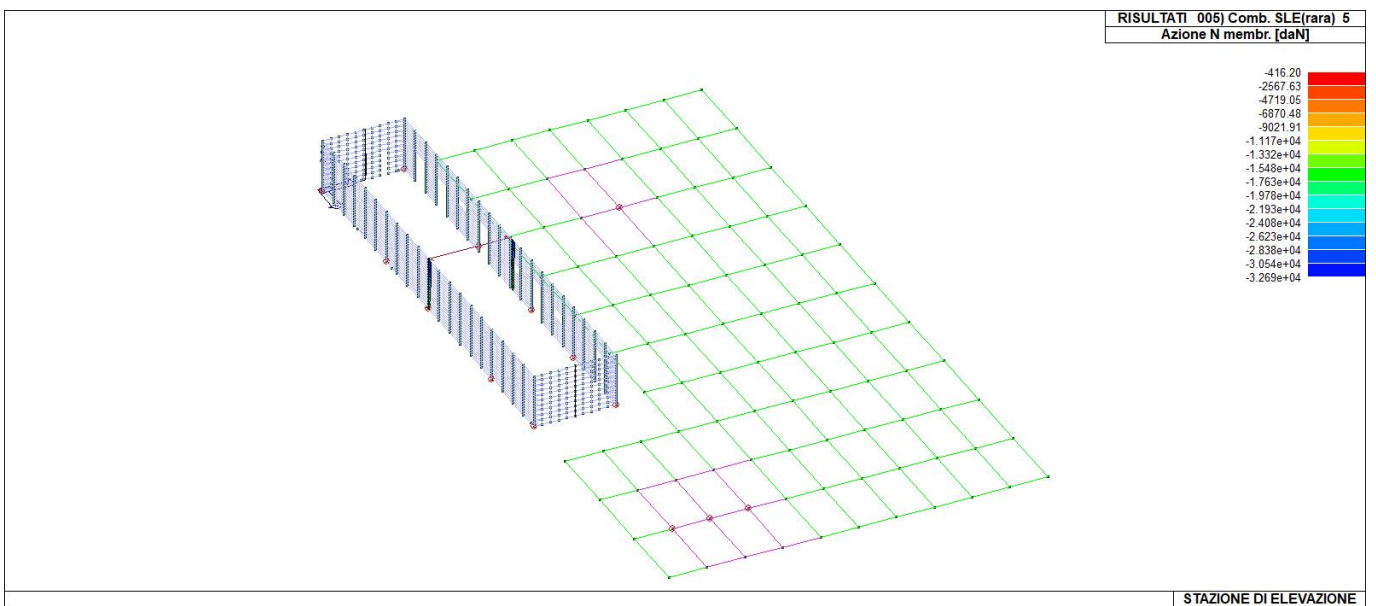
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47_RIS_N_003_Comb. SLU A1 3



47_RIS_N_005_Comb. SLE(rara) 5

PROJETTO engineering s.r.l.

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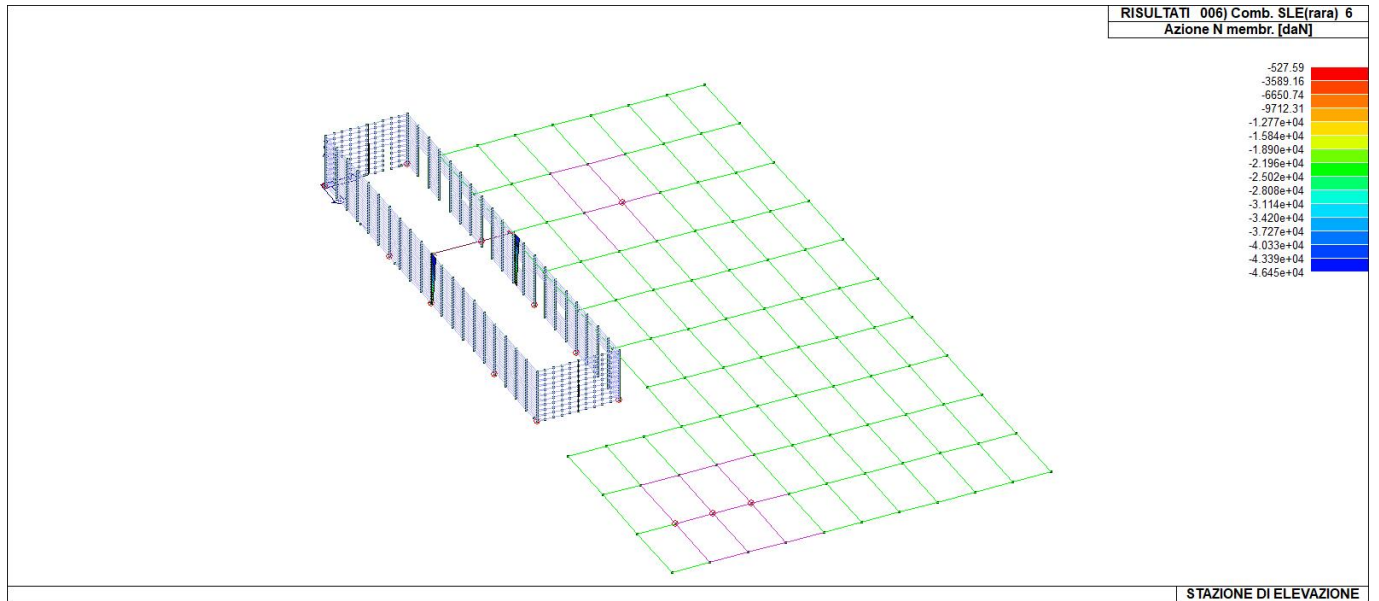
RELAZIONE DI CALCOLO



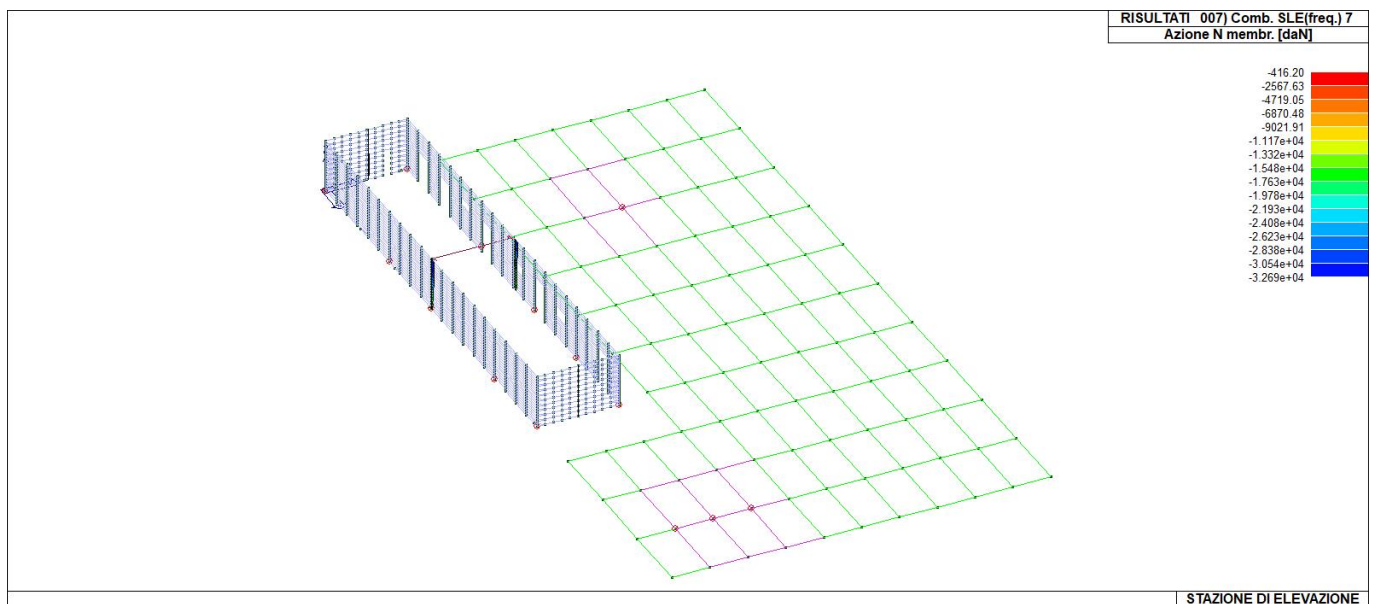
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47_RIS_N_006_Comb. SLE(rara) 6



47_RIS_N_007_Comb. SLE(freq.) 7

PROJETTO engineering s.r.l.

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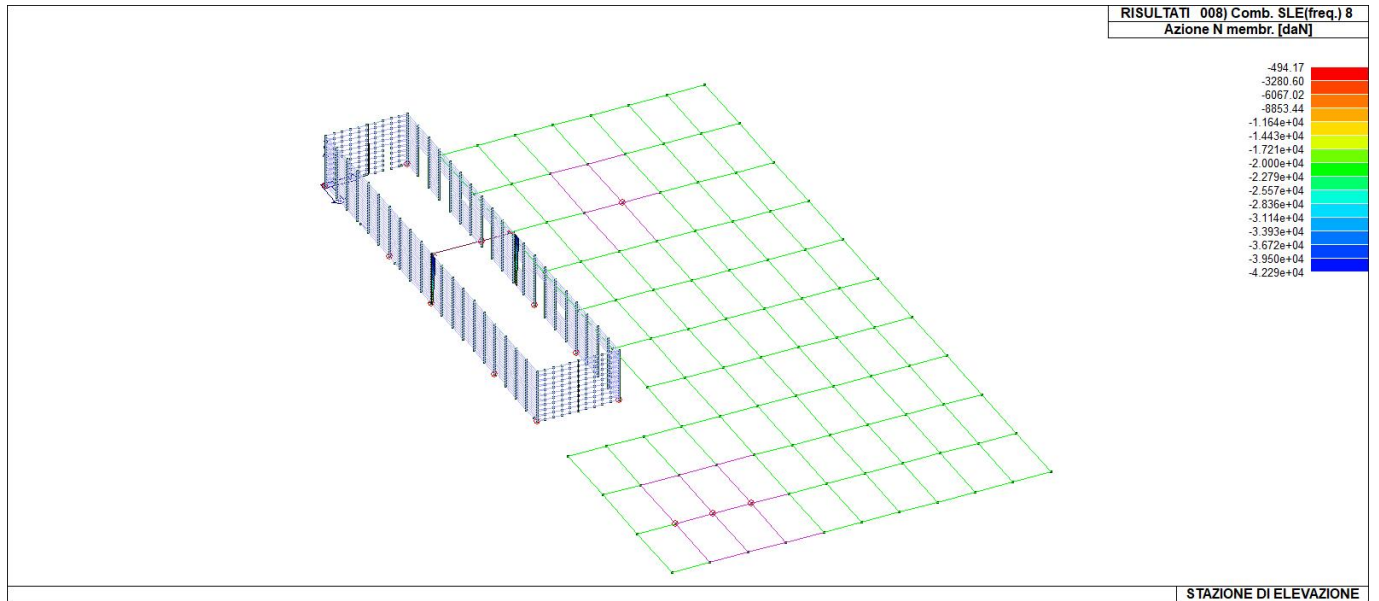
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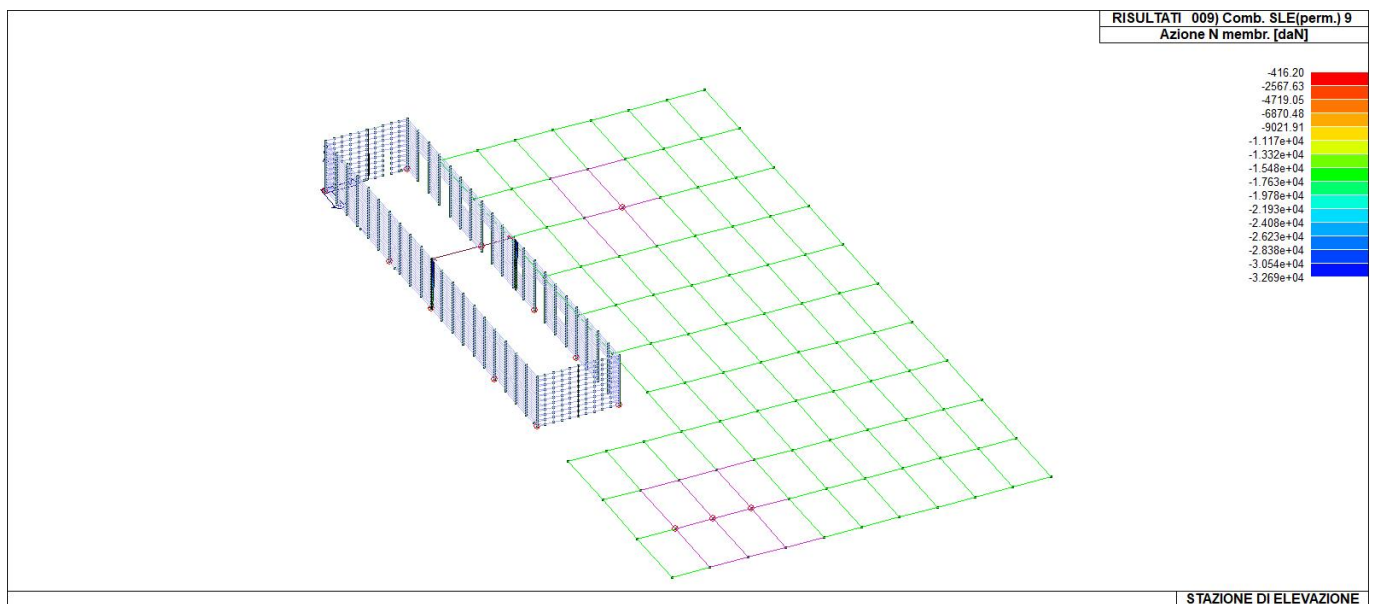
SR EN ISO 9001:2015 Certificate No. Q204
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Progetto degli impianti per la connessione degli impianti fotovoltaici:

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47_RIS_N_008_Comb. SLE(freq.) 8



47_RIS_N_009_Comb. SLE(perm.) 9

PROJETTO engineering s.r.l.

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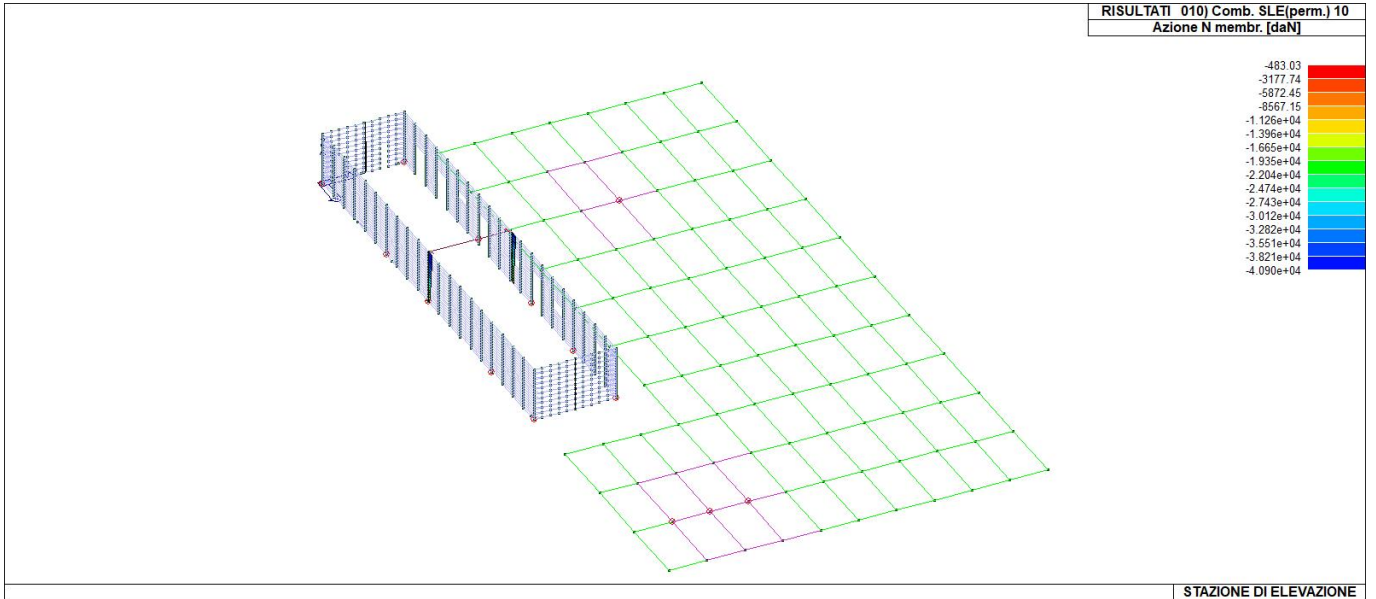
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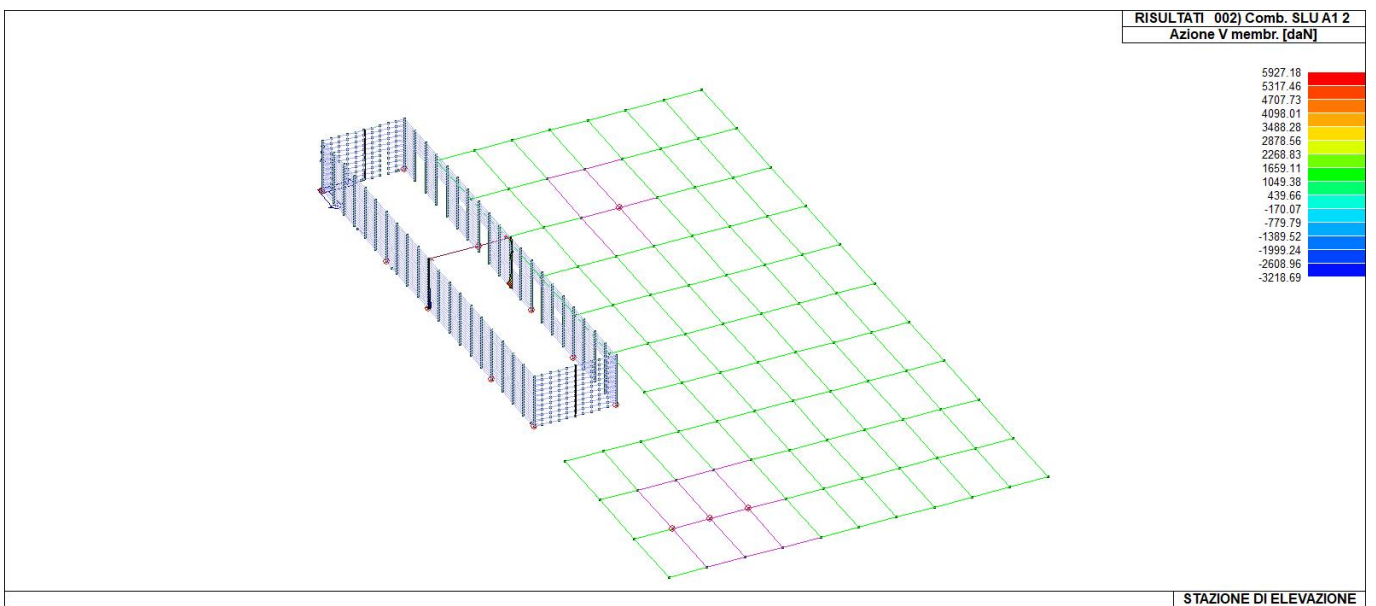
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47_RIS_N_010_Comb. SLE(perm.) 10



47_RIS_V_002_Comb. SLU A1 2

PROJETTO engineering s.r.l.

società d'ingegneria

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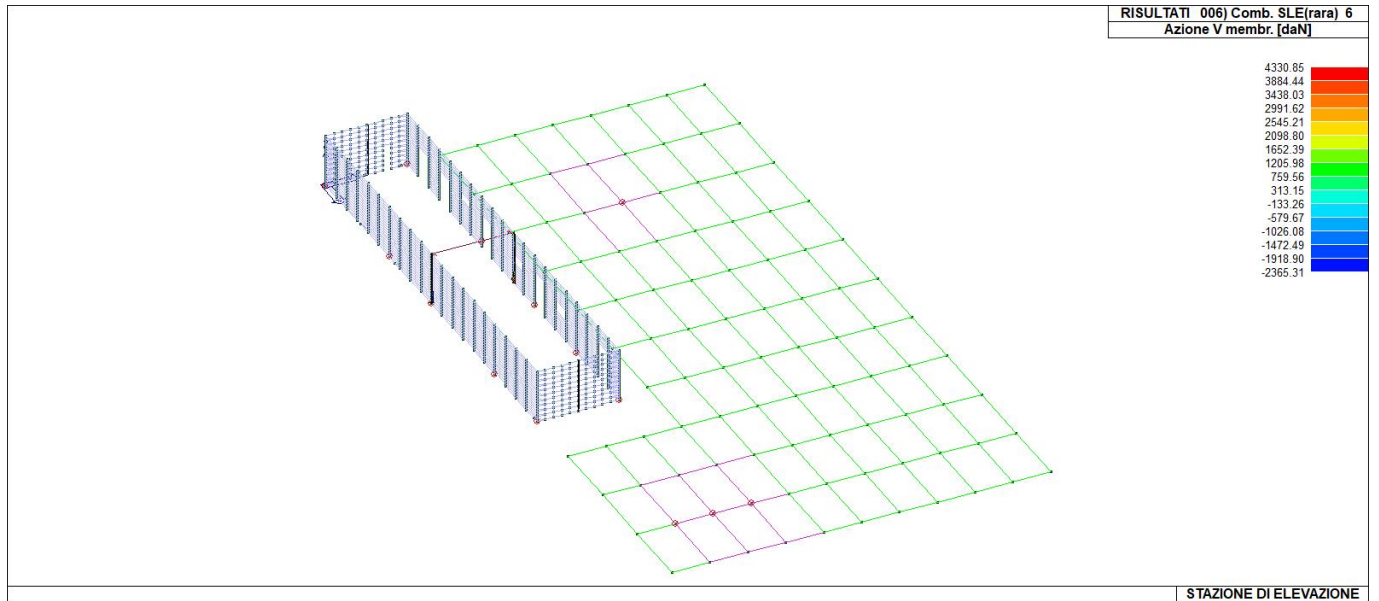
RELAZIONE DI CALCOLO



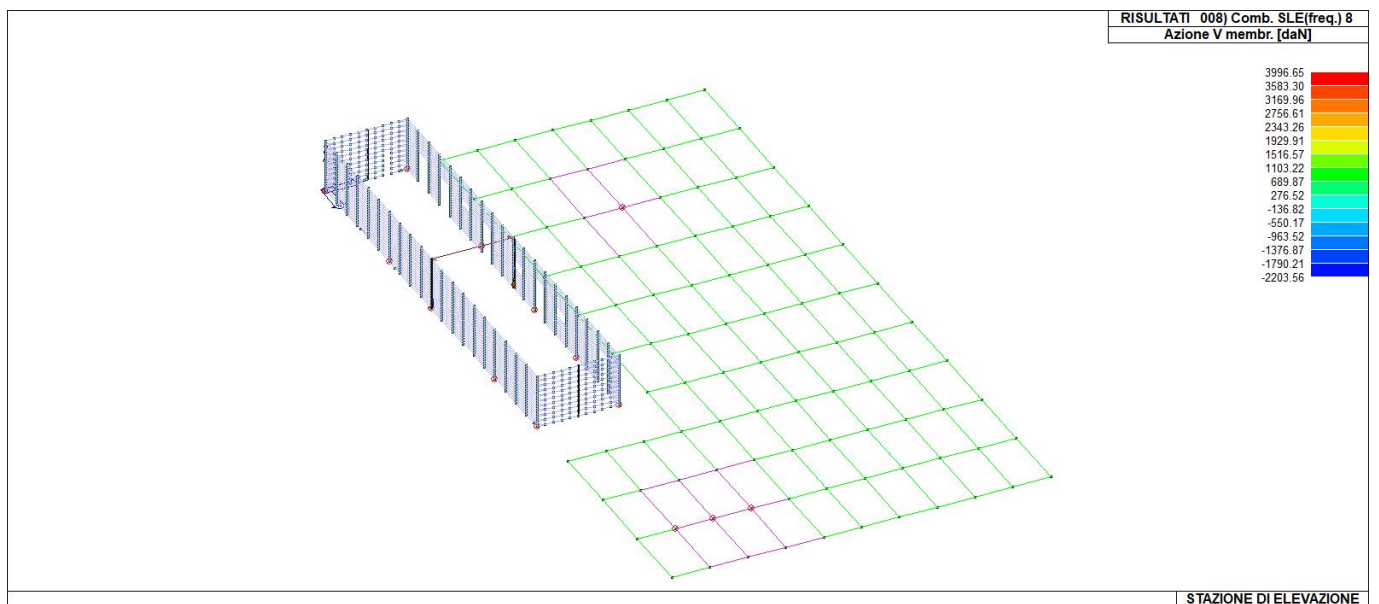
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47_RIS_V_006_Comb. SLE(rara) 6



47_RIS_V_008_Comb. SLE(freq.) 8

PROJETTO engineering s.r.l.

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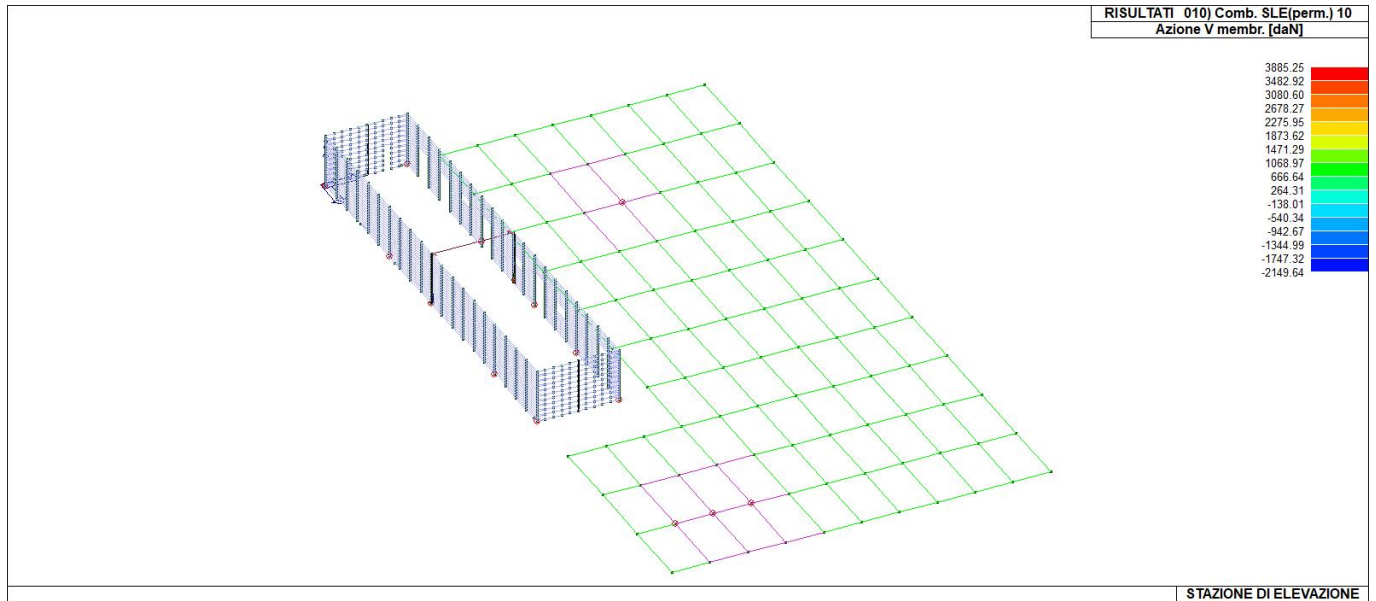
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47_RIS_V_010_Comb. SLE(perm.) 10

Macro	Tipo	Angolo 1-X (gradi)
3	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
3	1	7						527.68	-277.45	46.90	203.33	394.89
3	1	8						706.08	-1333.21	-590.03	-37.10	981.45
3	1	9						150.66	-1264.62	-13.11	-1100.85	452.72
3	1	10						1328.95	-2256.73	-265.02	-662.76	1781.78
3	1	11						-225.23	-1609.13	-479.17	-1355.18	535.67
3	1	12						1217.03	-3140.21	880.44	-2803.62	1163.32
3	1	13						1003.75	-1293.32	997.51	-1287.07	-119.59
3	1	14						-324.60	-3962.55	-327.14	-3960.01	-96.03
3	1	15						0.45	-1697.13	-540.55	-1156.13	-791.02
3	1	16						1553.14	-3174.01	1082.75	-2703.62	-1415.04
3	1	17						444.43	-1414.82	-69.04	-901.34	-831.28
3	1	18						1806.72	-2272.30	36.10	-501.68	-2021.71
3	1	19						430.08	-1205.23	-9.88	-765.26	-725.19
3	1	20						1443.72	-1229.54	-121.75	335.93	-1316.89
3	1	21						634.98	-290.63	181.58	162.77	-462.71
3	1	22						601.06	-968.79	-366.17	-1.56	-763.46
3	1	26						-136.89	-1813.01	-1769.97	-179.93	265.13
3	1	27						307.33	-2876.32	-2846.75	277.76	305.42
3	1	28						-7207.70	-7445.80	-7238.99	-7414.52	80.44
3	1	30						-7087.48	-7560.77	-7103.08	-7545.17	84.50
3	1	31						452.63	-2246.90	-2242.12	447.85	-113.53
3	1	32						1282.32	-453.93	-396.81	1225.20	-309.69
3	1	33						97.35	-420.75	-114.69	-208.72	-254.75
3	1	37						428.95	-1231.45	-884.76	82.26	-674.86
3	1	38						-31.79	-2981.37	-1436.30	-1576.86	-1473.11
3	1	39						-524.69	-3925.29	-783.60	-3666.38	-901.90
3	1	40						-2300.68	-4644.38	-2311.49	-4633.56	158.84
3	1	41						-154.05	-3898.84	-675.17	-3377.71	1296.12

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 Certificate No. Q204
 SR EN ISO 14001:2015 Certificate No. E81
 SR EN ISO /IEC 17001:2017 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

3	1	42	449.34	-3341.24	-1504.41	-1387.49	1894.39
3	1	43	117.27	-2094.07	-1367.69	-609.11	1038.58
3	1	44	318.34	-977.35	-761.47	102.46	482.82
3	1	48	975.60	-250.97	734.32	-9.69	-487.58
3	1	49	896.61	-1541.71	742.15	-1387.26	-593.93
3	1	50	1110.85	-1710.73	1032.60	-1632.48	-463.32
3	1	51	1590.05	-1468.09	1587.00	-1465.04	96.53
3	1	52	1074.77	-1574.02	915.15	-1414.40	630.34
3	1	53	710.07	-1607.83	474.18	-1371.93	700.80
3	1	54	342.91	-1524.87	32.23	-1214.19	695.53
3	1	55	502.41	-446.42	47.68	8.31	474.00
3	1	59	431.43	-92.26	322.89	16.28	-212.27
3	1	60	255.24	-1261.20	226.01	-1231.98	-208.48
3	1	61	298.64	-1304.21	293.28	-1298.86	-92.53
3	1	62	427.06	-1125.42	426.81	-1125.17	19.63
3	1	63	308.49	-1122.20	298.65	-1112.35	118.28
3	1	64	185.29	-1315.35	159.35	-1289.40	195.60
3	1	65	71.14	-1262.84	16.99	-1208.69	263.25
3	1	66	319.78	-169.19	139.24	11.35	235.98
3	1	70	-28.78	-151.58	-142.80	-37.55	-31.63
3	1	71	-221.40	-1150.25	-224.35	-1147.30	-52.27
3	1	72	-235.17	-1275.22	-235.48	-1274.90	-18.06
3	1	73	-215.10	-1125.37	-215.13	-1125.35	5.06
3	1	74	-247.72	-1115.46	-249.04	-1114.15	33.75
3	1	75	-287.95	-1259.41	-294.22	-1253.14	77.80
3	1	76	-277.87	-1165.84	-298.68	-1145.02	134.35
3	1	77	110.46	-193.87	-76.89	-6.52	148.04
3	1	78	285.06	35.51	37.32	283.26	21.14
3	1	79	12.27	-182.36	-156.97	-13.12	65.55
3	1	80	772.32	-166.30	-65.42	671.44	-290.71
3	1	81	1230.57	-88.81	647.75	494.02	-655.19
3	1	82	-118.54	-1284.27	-261.31	-1141.50	-382.17
3	1	83	-525.67	-1304.46	-605.37	-1224.76	-236.05
3	1	84	-726.94	-1152.82	-767.28	-1112.48	-124.71
3	1	85	-864.48	-1116.59	-866.43	-1114.64	-22.07
3	1	86	-889.71	-1253.28	-903.86	-1239.13	70.32
3	1	87	-780.49	-1186.51	-860.07	-1106.93	161.18
3	1	88	43.26	-608.22	-550.11	-14.85	185.69
3	1	89	113.21	-396.95	-124.31	-159.44	-254.48
3	1	90	35.76	-153.54	-27.18	-90.59	-89.18
3	1	91	227.96	-826.79	-328.65	-270.17	-526.56
3	1	92	324.61	-1348.96	-788.17	-236.18	-789.95
3	1	93	312.05	-1671.91	-699.11	-660.75	-991.79
3	1	94	-271.02	-1894.34	-1261.60	-903.77	-791.70
3	1	95	-549.37	-1665.77	-1469.54	-745.60	-424.93
3	1	96	-815.92	-1589.91	-1574.89	-830.94	-106.75
3	1	97	-1000.68	-1647.42	-1608.07	-1040.03	154.59
3	1	98	-842.55	-1700.23	-1474.07	-1068.72	377.92
3	1	99	202.10	-979.46	-895.06	117.69	304.32
3	1	100	-1315.00	-1858.30	-1563.92	-1609.37	-270.69
3	1	101	187.09	-950.89	-932.81	169.01	-142.31
3	1	104	351.74	-1515.24	-185.33	-978.18	-845.14
3	1	105	1343.80	-63.90	849.30	430.60	-671.99
3	1	106	1353.47	373.07	1125.86	600.68	-413.93
3	1	107	1174.81	365.74	1155.06	385.50	-124.88
3	1	108	1078.10	75.47	1063.04	90.53	121.95
3	1	109	973.17	-120.26	857.12	-4.22	336.78
3	1	110	552.16	-246.50	439.94	-134.29	277.54
3	1	111	109.10	-924.78	108.60	-924.28	22.82
3	1	112	-25.29	-762.46	-644.02	-143.72	270.71
3	1	115	-77.57	-1479.26	-167.30	-1389.53	-343.10
3	1	116	612.99	-471.40	-345.65	487.24	-347.20
3	1	117	854.82	-201.34	-184.11	837.59	-133.80
3	1	118	564.28	-72.21	-72.05	564.12	10.20
3	1	119	206.48	-52.56	-14.14	168.06	92.07
3	1	120	126.27	-159.06	88.35	-121.14	96.86

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

3	1	121	210.65	-100.03	21.11	89.51	151.53
3	5	7	405.91	-213.42	36.07	156.41	303.76
3	5	8	543.14	-1025.55	-453.87	-28.54	754.96
3	5	9	115.89	-972.78	-10.08	-846.81	348.25
3	5	10	1022.27	-1735.95	-203.87	-509.82	1370.60
3	5	11	-173.25	-1237.79	-368.59	-1042.45	412.05
3	5	12	936.17	-2415.55	677.26	-2156.63	894.86
3	5	13	772.12	-994.86	767.32	-990.06	-91.99
3	5	14	-249.69	-3048.11	-251.64	-3046.16	-73.87
3	5	15	0.35	-1305.49	-415.80	-889.33	-608.48
3	5	16	1194.72	-2441.55	832.88	-2079.71	-1088.50
3	5	17	341.87	-1088.32	-53.11	-693.34	-639.44
3	5	18	1389.79	-1747.92	27.77	-385.90	-1555.16
3	5	19	330.83	-927.10	-7.60	-588.66	-557.84
3	5	20	1110.55	-945.80	-93.65	258.40	-1013.00
3	5	21	488.44	-223.56	139.68	125.21	-355.93
3	5	22	462.35	-745.22	-281.67	-1.20	-587.28
3	5	26	-105.30	-1394.62	-1361.51	-138.41	203.94
3	5	27	236.41	-2212.56	-2189.81	213.66	234.94
3	5	28	-5544.39	-5727.54	-5568.45	-5703.48	61.87
3	5	30	-5451.91	-5815.97	-5463.91	-5803.97	65.00
3	5	31	348.18	-1728.39	-1724.71	344.50	-87.33
3	5	32	986.40	-349.18	-305.24	942.46	-238.23
3	5	33	74.88	-323.65	-88.22	-160.55	-195.96
3	5	37	329.96	-947.27	-680.59	63.28	-519.13
3	5	38	-24.46	-2293.36	-1104.85	-1212.97	-1133.16
3	5	39	-403.60	-3019.45	-602.77	-2820.29	-693.77
3	5	40	-1769.75	-3572.60	-1778.07	-3564.28	122.18
3	5	41	-118.50	-2999.11	-519.36	-2598.24	997.02
3	5	42	345.64	-2570.18	-1157.24	-1067.30	1457.22
3	5	43	90.20	-1610.82	-1052.07	-468.55	798.90
3	5	44	244.88	-751.81	-585.74	78.81	371.40
3	5	48	750.46	-193.05	564.86	-7.45	-375.06
3	5	49	689.70	-1185.93	570.89	-1067.12	-456.87
3	5	50	854.50	-1315.94	794.31	-1255.75	-356.40
3	5	51	1223.11	-1129.30	1220.77	-1126.96	74.25
3	5	52	826.75	-1210.79	703.96	-1088.00	484.88
3	5	53	546.21	-1236.79	364.75	-1055.33	539.08
3	5	54	263.78	-1172.98	24.79	-933.99	535.02
3	5	55	386.47	-343.40	36.68	6.39	364.62
3	5	59	331.87	-70.97	248.38	12.52	-163.29
3	5	60	196.34	-970.16	173.86	-947.68	-160.37
3	5	61	229.72	-1003.24	225.60	-999.12	-71.18
3	5	62	328.51	-865.70	328.32	-865.51	15.10
3	5	63	237.30	-863.23	229.73	-855.65	90.99
3	5	64	142.53	-1011.81	122.57	-991.85	150.46
3	5	65	54.72	-971.42	13.07	-929.76	202.50
3	5	66	245.99	-130.15	107.11	8.73	181.52
3	5	70	-22.14	-116.60	-109.85	-28.89	-24.33
3	5	71	-170.31	-884.81	-172.58	-882.54	-40.21
3	5	72	-180.90	-980.93	-181.14	-980.69	-13.89
3	5	73	-165.46	-865.67	-165.48	-865.65	3.89
3	5	74	-190.56	-858.05	-191.57	-857.04	25.96
3	5	75	-221.50	-968.78	-226.32	-963.96	59.85
3	5	76	-213.74	-896.80	-229.75	-880.79	103.35
3	5	77	84.97	-149.13	-59.14	-5.02	113.88
3	5	78	219.28	27.32	28.71	217.89	16.26
3	5	79	9.44	-140.28	-120.75	-10.09	50.43
3	5	80	594.09	-127.92	-50.32	516.49	-223.62
3	5	81	946.59	-68.31	498.27	380.01	-503.99
3	5	82	-91.19	-987.90	-201.01	-878.08	-293.97
3	5	83	-404.36	-1003.43	-465.67	-942.12	-181.57
3	5	84	-559.18	-886.79	-590.22	-855.76	-95.93
3	5	85	-664.99	-858.91	-666.49	-857.41	-16.98
3	5	86	-684.39	-964.06	-695.28	-953.18	54.09
3	5	87	-600.38	-912.70	-661.59	-851.49	123.98

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO /IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

3	5	88	33.28	-467.86	-423.16	-11.43	142.84
3	5	89	87.08	-305.35	-95.62	-122.65	-195.75
3	5	90	27.51	-118.11	-20.91	-69.68	-68.60
3	5	91	175.36	-635.99	-252.81	-207.83	-405.05
3	5	92	249.70	-1037.66	-606.29	-181.67	-607.66
3	5	93	240.04	-1286.08	-537.77	-508.27	-762.92
3	5	94	-208.48	-1457.19	-970.46	-695.21	-609.00
3	5	95	-422.59	-1281.36	-1130.41	-573.54	-326.87
3	5	96	-627.63	-1223.00	-1211.45	-639.18	-82.12
3	5	97	-769.76	-1267.25	-1236.98	-800.02	118.92
3	5	98	-648.12	-1307.87	-1133.90	-822.09	290.71
3	5	99	155.46	-753.43	-688.50	90.53	234.09
3	5	100	-1011.54	-1429.46	-1203.02	-1237.98	-208.23
3	5	101	143.92	-731.46	-717.54	130.01	-109.47
3	5	104	270.57	-1165.57	-142.56	-752.44	-650.10
3	5	105	1033.69	-49.15	653.31	331.23	-516.92
3	5	106	1041.13	286.98	866.05	462.06	-318.41
3	5	107	903.70	281.34	888.50	296.54	-96.06
3	5	108	829.31	58.06	817.72	69.64	93.81
3	5	109	748.59	-92.51	659.32	-3.24	259.06
3	5	110	424.73	-189.62	338.42	-103.30	213.49
3	5	111	83.92	-711.37	83.54	-710.98	17.56
3	5	112	-19.45	-586.50	-495.40	-110.56	208.24
3	5	115	-59.67	-1137.89	-128.69	-1068.87	-263.93
3	5	116	471.53	-362.61	-265.89	374.80	-267.07
3	5	117	657.55	-154.87	-141.62	644.30	-102.92
3	5	118	434.06	-55.55	-55.42	433.94	7.84
3	5	119	158.83	-40.43	-10.88	129.28	70.82
3	5	120	97.13	-122.35	67.96	-93.18	74.51
3	5	121	162.04	-76.95	16.24	68.85	116.56
3	7	7	405.91	-213.42	36.07	156.41	303.76
3	7	8	543.14	-1025.55	-453.87	-28.54	754.96
3	7	9	115.89	-972.78	-10.08	-846.81	348.25
3	7	10	1022.27	-1735.95	-203.87	-509.82	1370.60
3	7	11	-173.25	-1237.79	-368.59	-1042.45	412.05
3	7	12	936.17	-2415.55	677.26	-2156.63	894.86
3	7	13	772.12	-994.86	767.32	-990.06	-91.99
3	7	14	-249.69	-3048.11	-251.64	-3046.16	-73.87
3	7	15	0.35	-1305.49	-415.80	-889.33	-608.48
3	7	16	1194.72	-2441.55	832.88	-2079.71	-1088.50
3	7	17	341.87	-1088.32	-53.11	-693.34	-639.44
3	7	18	1389.79	-1747.92	27.77	-385.90	-1555.16
3	7	19	330.83	-927.10	-7.60	-588.66	-557.84
3	7	20	1110.55	-945.80	-93.65	258.40	-1013.00
3	7	21	488.44	-223.56	139.68	125.21	-355.93
3	7	22	462.35	-745.22	-281.67	-1.20	-587.28
3	7	26	-105.30	-1394.62	-1361.51	-138.41	203.94
3	7	27	236.41	-2212.56	-2189.81	213.66	234.94
3	7	28	-5544.39	-5727.54	-5568.45	-5703.48	61.87
3	7	30	-5451.91	-5815.97	-5463.91	-5803.97	65.00
3	7	31	348.18	-1728.39	-1724.71	344.50	-87.33
3	7	32	986.40	-349.18	-305.24	942.46	-238.23
3	7	33	74.88	-323.65	-88.22	-160.55	-195.96
3	7	37	329.96	-947.27	-680.59	63.28	-519.13
3	7	38	-24.46	-2293.36	-1104.85	-1212.97	-1133.16
3	7	39	-403.60	-3019.45	-602.77	-2820.29	-693.77
3	7	40	-1769.75	-3572.60	-1778.07	-3564.28	122.18
3	7	41	-118.50	-2999.11	-519.36	-2598.24	997.02
3	7	42	345.64	-2570.18	-1157.24	-1067.30	1457.22
3	7	43	90.20	-1610.82	-1052.07	-468.55	798.90
3	7	44	244.88	-751.81	-585.74	78.81	371.40
3	7	48	750.46	-193.05	564.86	-7.45	-375.06
3	7	49	689.70	-1185.93	570.89	-1067.12	-456.87
3	7	50	854.50	-1315.94	794.31	-1255.75	-356.40
3	7	51	1223.11	-1129.30	1220.77	-1126.96	74.25
3	7	52	826.75	-1210.79	703.96	-1088.00	484.88

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO /IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

3	7	53	546.21	-1236.79	364.75	-1055.33	539.08
3	7	54	263.78	-1172.98	24.79	-933.99	535.02
3	7	55	386.47	-343.40	36.68	6.39	364.62
3	7	59	331.87	-70.97	248.38	12.52	-163.29
3	7	60	196.34	-970.16	173.86	-947.68	-160.37
3	7	61	229.72	-1003.24	225.60	-999.12	-71.18
3	7	62	328.51	-865.70	328.32	-865.51	15.10
3	7	63	237.30	-863.23	229.73	-855.65	90.99
3	7	64	142.53	-1011.81	122.57	-991.85	150.46
3	7	65	54.72	-971.42	13.07	-929.76	202.50
3	7	66	245.99	-130.15	107.11	8.73	181.52
3	7	70	-22.14	-116.60	-109.85	-28.89	-24.33
3	7	71	-170.31	-884.81	-172.58	-882.54	-40.21
3	7	72	-180.90	-980.93	-181.14	-980.69	-13.89
3	7	73	-165.46	-865.67	-165.48	-865.65	3.89
3	7	74	-190.56	-858.05	-191.57	-857.04	25.96
3	7	75	-221.50	-968.78	-226.32	-963.96	59.85
3	7	76	-213.74	-896.80	-229.75	-880.79	103.35
3	7	77	84.97	-149.13	-59.14	-5.02	113.88
3	7	78	219.28	27.32	28.71	217.89	16.26
3	7	79	9.44	-140.28	-120.75	-10.09	50.43
3	7	80	594.09	-127.92	-50.32	516.49	-223.62
3	7	81	946.59	-68.31	498.27	380.01	-503.99
3	7	82	-91.19	-987.90	-201.01	-878.08	-293.97
3	7	83	-404.36	-1003.43	-465.67	-942.12	-181.57
3	7	84	-559.18	-886.79	-590.22	-855.76	-95.93
3	7	85	-664.99	-858.91	-666.49	-857.41	-16.98
3	7	86	-684.39	-964.06	-695.28	-953.18	54.09
3	7	87	-600.38	-912.70	-661.59	-851.49	123.98
3	7	88	33.28	-467.86	-423.16	-11.43	142.84
3	7	89	87.08	-305.35	-95.62	-122.65	-195.75
3	7	90	27.51	-118.11	-20.91	-69.68	-68.60
3	7	91	175.36	-635.99	-252.81	-207.83	-405.05
3	7	92	249.70	-1037.66	-606.29	-181.67	-607.66
3	7	93	240.04	-1286.08	-537.77	-508.27	-762.92
3	7	94	-208.48	-1457.19	-970.46	-695.21	-609.00
3	7	95	-422.59	-1281.36	-1130.41	-573.54	-326.87
3	7	96	-627.63	-1223.00	-1211.45	-639.18	-82.12
3	7	97	-769.76	-1267.25	-1236.98	-800.02	118.92
3	7	98	-648.12	-1307.87	-1133.90	-822.09	290.71
3	7	99	155.46	-753.43	-688.50	90.53	234.09
3	7	100	-1011.54	-1429.46	-1203.02	-1237.98	-208.23
3	7	101	143.92	-731.46	-717.54	130.01	-109.47
3	7	104	270.57	-1165.57	-142.56	-752.44	-650.10
3	7	105	1033.69	-49.15	653.31	331.23	-516.92
3	7	106	1041.13	286.98	866.05	462.06	-318.41
3	7	107	903.70	281.34	888.50	296.54	-96.06
3	7	108	829.31	58.06	817.72	69.64	93.81
3	7	109	748.59	-92.51	659.32	-3.24	259.06
3	7	110	424.73	-189.62	338.42	-103.30	213.49
3	7	111	83.92	-711.37	83.54	-710.98	17.56
3	7	112	-19.45	-586.50	-495.40	-110.56	208.24
3	7	115	-59.67	-1137.89	-128.69	-1068.87	-263.93
3	7	116	471.53	-362.61	-265.89	374.80	-267.07
3	7	117	657.55	-154.87	-141.62	644.30	-102.92
3	7	118	434.06	-55.55	-55.42	433.94	7.84
3	7	119	158.83	-40.43	-10.88	129.28	70.82
3	7	120	97.13	-122.35	67.96	-93.18	74.51
3	7	121	162.04	-76.95	16.24	68.85	116.56
3	9	7	405.91	-213.42	36.07	156.41	303.76
3	9	8	543.14	-1025.55	-453.87	-28.54	754.96
3	9	9	115.89	-972.78	-10.08	-846.81	348.25
3	9	10	1022.27	-1735.95	-203.87	-509.82	1370.60
3	9	11	-173.25	-1237.79	-368.59	-1042.45	412.05
3	9	12	936.17	-2415.55	677.26	-2156.63	894.86
3	9	13	772.12	-994.86	767.32	-990.06	-91.99

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO /IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

3	9	14	-249.69	-3048.11	-251.64	-3046.16	-73.87
3	9	15	0.35	-1305.49	-415.80	-889.33	-608.48
3	9	16	1194.72	-2441.55	832.88	-2079.71	-1088.50
3	9	17	341.87	-1088.32	-53.11	-693.34	-639.44
3	9	18	1389.79	-1747.92	27.77	-385.90	-1555.16
3	9	19	330.83	-927.10	-7.60	-588.66	-557.84
3	9	20	1110.55	-945.80	-93.65	258.40	-1013.00
3	9	21	488.44	-223.56	139.68	125.21	-355.93
3	9	22	462.35	-745.22	-281.67	-1.20	-587.28
3	9	26	-105.30	-1394.62	-1361.51	-138.41	203.94
3	9	27	236.41	-2212.56	-2189.81	213.66	234.94
3	9	28	-5544.39	-5727.54	-5568.45	-5703.48	61.87
3	9	30	-5451.91	-5815.97	-5463.91	-5803.97	65.00
3	9	31	348.18	-1728.39	-1724.71	344.50	-87.33
3	9	32	986.40	-349.18	-305.24	942.46	-238.23
3	9	33	74.88	-323.65	-88.22	-160.55	-195.96
3	9	37	329.96	-947.27	-680.59	63.28	-519.13
3	9	38	-24.46	-2293.36	-1104.85	-1212.97	-1133.16
3	9	39	-403.60	-3019.45	-602.77	-2820.29	-693.77
3	9	40	-1769.75	-3572.60	-1778.07	-3564.28	122.18
3	9	41	-118.50	-2999.11	-519.36	-2598.24	997.02
3	9	42	345.64	-2570.18	-1157.24	-1067.30	1457.22
3	9	43	90.20	-1610.82	-1052.07	-468.55	798.90
3	9	44	244.88	-751.81	-585.74	78.81	371.40
3	9	48	750.46	-193.05	564.86	-7.45	-375.06
3	9	49	689.70	-1185.93	570.89	-1067.12	-456.87
3	9	50	854.50	-1315.94	794.31	-1255.75	-356.40
3	9	51	1223.11	-1129.30	1220.77	-1126.96	74.25
3	9	52	826.75	-1210.79	703.96	-1088.00	484.88
3	9	53	546.21	-1236.79	364.75	-1055.33	539.08
3	9	54	263.78	-1172.98	24.79	-933.99	535.02
3	9	55	386.47	-343.40	36.68	6.39	364.62
3	9	59	331.87	-70.97	248.38	12.52	-163.29
3	9	60	196.34	-970.16	173.86	-947.68	-160.37
3	9	61	229.72	-1003.24	225.60	-999.12	-71.18
3	9	62	328.51	-865.70	328.32	-865.51	15.10
3	9	63	237.30	-863.23	229.73	-855.65	90.99
3	9	64	142.53	-1011.81	122.57	-991.85	150.46
3	9	65	54.72	-971.42	13.07	-929.76	202.50
3	9	66	245.99	-130.15	107.11	8.73	181.52
3	9	70	-22.14	-116.60	-109.85	-28.89	-24.33
3	9	71	-170.31	-884.81	-172.58	-882.54	-40.21
3	9	72	-180.90	-980.93	-181.14	-980.69	-13.89
3	9	73	-165.46	-865.67	-165.48	-865.65	3.89
3	9	74	-190.56	-858.05	-191.57	-857.04	25.96
3	9	75	-221.50	-968.78	-226.32	-963.96	59.85
3	9	76	-213.74	-896.80	-229.75	-880.79	103.35
3	9	77	84.97	-149.13	-59.14	-5.02	113.88
3	9	78	219.28	27.32	28.71	217.89	16.26
3	9	79	9.44	-140.28	-120.75	-10.09	50.43
3	9	80	594.09	-127.92	-50.32	516.49	-223.62
3	9	81	946.59	-68.31	498.27	380.01	-503.99
3	9	82	-91.19	-987.90	-201.01	-878.08	-293.97
3	9	83	-404.36	-1003.43	-465.67	-942.12	-181.57
3	9	84	-559.18	-886.79	-590.22	-855.76	-95.93
3	9	85	-664.99	-858.91	-666.49	-857.41	-16.98
3	9	86	-684.39	-964.06	-695.28	-953.18	54.09
3	9	87	-600.38	-912.70	-661.59	-851.49	123.98
3	9	88	33.28	-467.86	-423.16	-11.43	142.84
3	9	89	87.08	-305.35	-95.62	-122.65	-195.75
3	9	90	27.51	-118.11	-20.91	-69.68	-68.60
3	9	91	175.36	-635.99	-252.81	-207.83	-405.05
3	9	92	249.70	-1037.66	-606.29	-181.67	-607.66
3	9	93	240.04	-1286.08	-537.77	-508.27	-762.92
3	9	94	-208.48	-1457.19	-970.46	-695.21	-609.00
3	9	95	-422.59	-1281.36	-1130.41	-573.54	-326.87

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

3	9	96	-627.63	-1223.00	-1211.45	-639.18	-82.12				
3	9	97	-769.76	-1267.25	-1236.98	-800.02	118.92				
3	9	98	-648.12	-1307.87	-1133.90	-822.09	290.71				
3	9	99	155.46	-753.43	-688.50	90.53	234.09				
3	9	100	-1011.54	-1429.46	-1203.02	-1237.98	-208.23				
3	9	101	143.92	-731.46	-717.54	130.01	-109.47				
3	9	104	270.57	-1165.57	-142.56	-752.44	-650.10				
3	9	105	1033.69	-49.15	653.31	331.23	-516.92				
3	9	106	1041.13	286.98	866.05	462.06	-318.41				
3	9	107	903.70	281.34	888.50	296.54	-96.06				
3	9	108	829.31	58.06	817.72	69.64	93.81				
3	9	109	748.59	-92.51	659.32	-3.24	259.06				
3	9	110	424.73	-189.62	338.42	-103.30	213.49				
3	9	111	83.92	-711.37	83.54	-710.98	17.56				
3	9	112	-19.45	-586.50	-495.40	-110.56	208.24				
3	9	115	-59.67	-1137.89	-128.69	-1068.87	-263.93				
3	9	116	471.53	-362.61	-265.89	374.80	-267.07				
3	9	117	657.55	-154.87	-141.62	644.30	-102.92				
3	9	118	434.06	-55.55	-55.42	433.94	7.84				
3	9	119	158.83	-40.43	-10.88	129.28	70.82				
3	9	120	97.13	-122.35	67.96	-93.18	74.51				
3	9	121	162.04	-76.95	16.24	68.85	116.56				
M_G		N max	N min	N 1	N 2	N 1-2	M max	M min	M 1	M 2	M 1-2
		0.0	0.0	0.0	0.0	0.0	1806.72	-7560.77	-7238.99	-7545.17	-2021.71
				0.0	0.0	0.0			1587.00	1225.20	1894.39

Macro	Tipo	Angolo 1-X (gradi)
5	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
5	1	12						-51.56	-9698.85	-1207.46	-8542.95	3132.91
5	1	14						8524.46	-5140.93	8522.38	-5138.86	-168.40
5	1	16						596.86	-9858.82	-828.74	-8433.22	-3587.93
5	1	28						-3135.67	-1.463e+04	-1.463e+04	-3137.96	162.08
5	1	29						-2.870e+04	-3.217e+04	-2.871e+04	-3.216e+04	145.30
5	1	30						-3301.96	-1.423e+04	-1.423e+04	-3303.50	129.35
5	1	39						-2527.25	-1.066e+04	-3501.31	-9682.51	-2640.01
5	1	40						6473.31	-5888.29	6464.21	-5879.19	335.16
5	1	41						-1687.14	-1.081e+04	-3238.61	-9256.84	3426.99
5	5	12						-39.66	-7460.65	-928.81	-6571.50	2409.93
5	5	14						6557.28	-3954.56	6555.68	-3952.97	-129.54
5	5	16						459.12	-7583.70	-637.49	-6487.09	-2759.95
5	5	28						-2412.06	-1.125e+04	-1.125e+04	-2413.82	124.68
5	5	29						-2.208e+04	-2.475e+04	-2.208e+04	-2.474e+04	111.77
5	5	30						-2539.97	-1.094e+04	-1.094e+04	-2541.15	99.50
5	5	39						-1944.04	-8197.36	-2693.31	-7448.08	-2030.77
5	5	40						4979.47	-4529.45	4972.47	-4522.46	257.81
5	5	41						-1297.80	-8314.09	-2491.24	-7120.65	2636.14
5	7	12						-39.66	-7460.65	-928.81	-6571.50	2409.93
5	7	14						6557.28	-3954.56	6555.68	-3952.97	-129.54
5	7	16						459.12	-7583.70	-637.49	-6487.09	-2759.95
5	7	28						-2412.06	-1.125e+04	-1.125e+04	-2413.82	124.68
5	7	29						-2.208e+04	-2.475e+04	-2.208e+04	-2.474e+04	111.77
5	7	30						-2539.97	-1.094e+04	-1.094e+04	-2541.15	99.50
5	7	39						-1944.04	-8197.36	-2693.31	-7448.08	-2030.77
5	7	40						4979.47	-4529.45	4972.47	-4522.46	257.81
5	7	41						-1297.80	-8314.09	-2491.24	-7120.65	2636.14
5	9	12						-39.66	-7460.65	-928.81	-6571.50	2409.93
5	9	14						6557.28	-3954.56	6555.68	-3952.97	-129.54

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

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RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

5	9	16				459.12	-7583.70	-637.49	-6487.09	-2759.95		
5	9	28				-2412.06	-1.125e+04	-1.125e+04	-2413.82	124.68		
5	9	29				-2.208e+04	-2.475e+04	-2.208e+04	-2.474e+04	111.77		
5	9	30				-2539.97	-1.094e+04	-1.094e+04	-2541.15	99.50		
5	9	39				-1944.04	-8197.36	-2693.31	-7448.08	-2030.77		
5	9	40				4979.47	-4529.45	4972.47	-4522.46	257.81		
5	9	41				-1297.80	-8314.09	-2491.24	-7120.65	2636.14		
M_G			N max	N min	N 1	N 2	N 1-2	M max	M min	M 1	M 2	M 1-2
			0.0	0.0	0.0	0.0	0.0	-3.217e+04	-2.871e+04	-3.216e+04	-3587.93	
			0.0		0.0	0.0	0.0	8524.46		8522.38	-2413.82	3426.99

Macro	Tipo	Angolo 1-X (gradi)
6	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
6	1	89						303.77	-875.59	-110.17	-461.65	-562.88
6	1	91						898.39	-1475.26	-108.52	-468.35	-1173.11
6	1	92						2153.45	-2249.04	47.80	-143.40	-2199.17
6	1	93						813.13	-3719.57	-1520.75	-1385.69	-2265.34
6	1	100						-1215.48	-3212.90	-3087.49	-1340.89	-484.54
6	1	102						-1876.88	-3709.34	-3014.56	-2571.67	-889.07
6	1	103						-1101.01	-3952.16	-2294.49	-2758.68	-1406.55
6	1	104						1235.13	-1990.38	-151.03	-604.22	-1596.76
6	1	111						197.53	-1114.50	189.49	-1106.46	102.38
6	1	113						395.61	-2608.94	390.37	-2603.70	-125.36
6	1	114						508.37	-2570.00	461.59	-2523.21	-376.61
6	1	115						41.95	-1777.41	-156.60	-1578.86	-567.29
6	5	89						233.67	-673.53	-84.75	-355.12	-432.99
6	5	91						691.07	-1134.81	-83.47	-360.27	-902.39
6	5	92						1656.50	-1730.03	36.77	-110.31	-1691.67
6	5	93						625.48	-2861.21	-1169.81	-1065.92	-1742.57
6	5	100						-934.98	-2471.46	-2374.99	-1031.46	-372.72
6	5	102						-1443.76	-2853.34	-2318.89	-1978.21	-683.90
6	5	103						-846.93	-3040.12	-1764.99	-2122.06	-1081.97
6	5	104						950.10	-1531.06	-116.18	-464.78	-1228.28
6	5	111						151.95	-857.31	145.76	-851.12	78.76
6	5	113						304.32	-2006.87	300.29	-2002.84	-96.43
6	5	114						391.06	-1976.92	355.07	-1940.93	-289.70
6	5	115						32.27	-1367.24	-120.46	-1214.51	-436.37
6	7	89						233.67	-673.53	-84.75	-355.12	-432.99
6	7	91						691.07	-1134.81	-83.47	-360.27	-902.39
6	7	92						1656.50	-1730.03	36.77	-110.31	-1691.67
6	7	93						625.48	-2861.21	-1169.81	-1065.92	-1742.57
6	7	100						-934.98	-2471.46	-2374.99	-1031.46	-372.72
6	7	102						-1443.76	-2853.34	-2318.89	-1978.21	-683.90
6	7	103						-846.93	-3040.12	-1764.99	-2122.06	-1081.97
6	7	104						950.10	-1531.06	-116.18	-464.78	-1228.28
6	7	111						151.95	-857.31	145.76	-851.12	78.76
6	7	113						304.32	-2006.87	300.29	-2002.84	-96.43
6	7	114						391.06	-1976.92	355.07	-1940.93	-289.70
6	7	115						32.27	-1367.24	-120.46	-1214.51	-436.37
6	9	89						233.67	-673.53	-84.75	-355.12	-432.99
6	9	91						691.07	-1134.81	-83.47	-360.27	-902.39
6	9	92						1656.50	-1730.03	36.77	-110.31	-1691.67
6	9	93						625.48	-2861.21	-1169.81	-1065.92	-1742.57
6	9	100						-934.98	-2471.46	-2374.99	-1031.46	-372.72
6	9	102						-1443.76	-2853.34	-2318.89	-1978.21	-683.90
6	9	103						-846.93	-3040.12	-1764.99	-2122.06	-1081.97
6	9	104						950.10	-1531.06	-116.18	-464.78	-1228.28

PROJETTO engineering s.r.l.

società d'ingegneria

Direttore Tecnico: ING. LEONARDO FILOTICO

Cap. Soc. 119.000,00 € Codice Fiscale: 02658050733

Partita Iva : 02658050733

Sede Legale: Via dei Mille 5, 74024 Manduria - Taranto

Sede Operativa: Z.I. Lotto 31, 74020 San Marzano di San Giuseppe - Taranto

Tel099 9574694 fax 099 2222834 mob. 3491735914

RELAZIONE DI CALCOLO



SR EN ISO 9001:2015 SR EN ISO 14001:2015 SR EN ISO/IEC 17001:2017
Certificate No. Q204 Certificate No. E81 Certificate No. E01

Progetto degli impianti per la connessione degli impianti fotovoltaici:

- Stazione di elevazione di Ripizzata da 17 MWac sito nei Comuni di Manduria (TA) e Erchie (BR), codice pratica 202000514.

6	9	111				151.95	-857.31	145.76	-851.12	78.76		
6	9	113				304.32	-2006.87	300.29	-2002.84	-96.43		
6	9	114				391.06	-1976.92	355.07	-1940.93	-289.70		
6	9	115				32.27	-1367.24	-120.46	-1214.51	-436.37		
M_G			N max	N min	N 1	N 2	N 1-2	M max	M min	M 1	M 2	M 1-2
			0.0	0.0	0.0	0.0	0.0	-3952.16	-3087.49	-2758.68	-2265.34	
			0.0		0.0	0.0	0.0	2153.45		461.59	-110.31	102.38

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