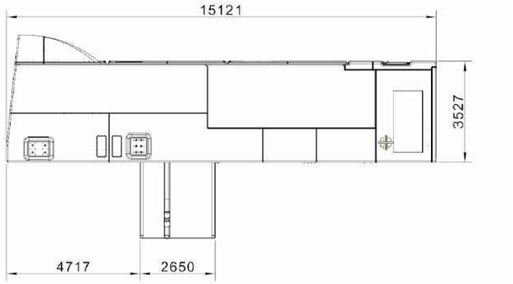
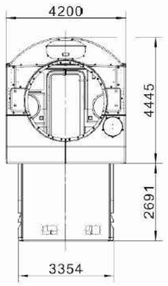
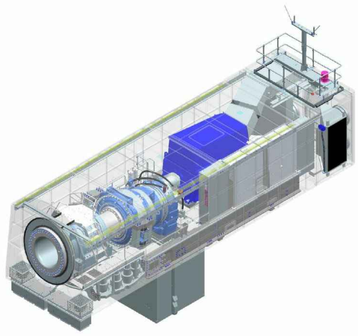






17. Electrical Specifications

Nominal output and grid conditions

Nominal power	6600 kW
Nominal voltage	690 V
Power factor correction	Frequency converter control
Power factor range	0.9 capacitive to 0.9 inductive at nominal balanced voltage

Generator

Type	DFIG Asynchronous
Maximum power	6750 kW @20°C ext. ambient
Nominal speed	1120 rpm-6p (50Hz) 1344 rpm-6p (60Hz)

Generator Protection

Insulation class	Stator H/H Rotor H/H
Winding temperatures	6 Pt 100 sensors
Bearing temperatures	3 Pt 100
Slip Rings	1 Pt 100
Grounding brush	On side no coupling

Generator Cooling

Cooling system	Air cooling
Internal ventilation	Air
Control parameter	Winding, Air, Bearings temperatures

Frequency Converter

Operation	4Q B2B Partial Load PWM
Switching	
Switching freq., grid side	2.5 kHz
Cooling	Liquid/Air

Main Circuit Protection

Short circuit protection	Circuit breaker
Surge arrester	varistors

Peak Power Levels

10 min average	Limited to nominal

Grid Capabilities Specification

Nominal grid frequency	50 or 60 Hz
Minimum voltage	85 % of nominal
Maximum voltage	113 % of nominal
Minimum frequency	92 % of nominal
Maximum frequency	108 % of nominal
Maximum voltage imbalance (negative sequence of component voltage)	≤5 %
Max short circuit level at controller's grid Terminals (690 V)	82 kA

Power Consumption from Grid (approximately)

At stand-by,No yawing	10 kW
At stand-by, yawing	50 kW

Controller back-up

UPS Controller system	Online UPS, Li battery
Back-up time	1 min
Back-up time Scada	Depend on configuration

Transformer Specification

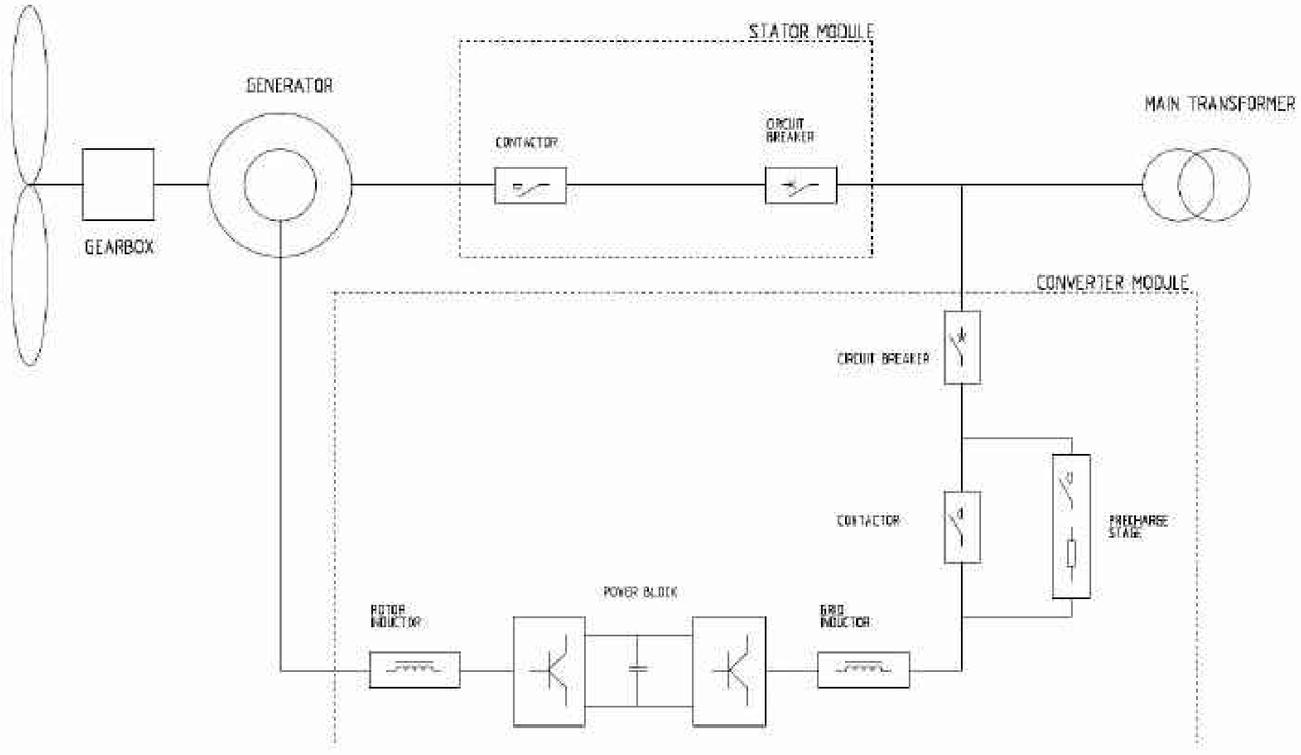
Transformer impedance requirement	8.5 % - 10.5%
Secondary voltage	690 V
Vector group	Dyn 11 or Dyn 1 (star point earthed)

Earthing Specification

Earthing system	Acc. to IEC62305-3 ED 1.0:2010
Foundation reinforcement	Must be connected to earth electrodes
Foundation terminals	Acc. to SGRE Standard
HV connection	HV cable shield shall be connected to earthing system

Simplified Single Line Diagram

Simplified Single Line Diagram



Regione Calabria

COMUNE DI CENTRACHE

COMUNE DI MONTEPAONE

COMUNE DI PETRIZZI

Provincia di Catanzaro

PROGETTO DEFINITIVO RELATIVO ALLA REALIZZAZIONE DI UN IMPIANTO EOLICO COSTITUITO DA 5 AEROGENERATORI DA REALIZZARE NEI COMUNI DI CENTRACHE (CZ) E MONTEPAONE (CZ) E RELATIVE OPERE DI CONNESSIONE ALLA R.T.N. RICADENTI NEL COMUNE DI PETRIZZI (CZ)

SCHEMI FUNZIONALI DEI SINGOLI AEROGENERATORI

ELABORATO

A.16.b.3

PROPONENTE:

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Ing. Alessandro Antezza

Il DIRETTORE TECNICO
Ing. Orazio Tricarico

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EM./REV.	DATA	REDATTO	VERIFICATO	APPROVATO	DESCRIZIONE
0	DIC 2022	B.B.	A.A. - O.T.	A.A. - O.T.	*Progetto Definitivo*