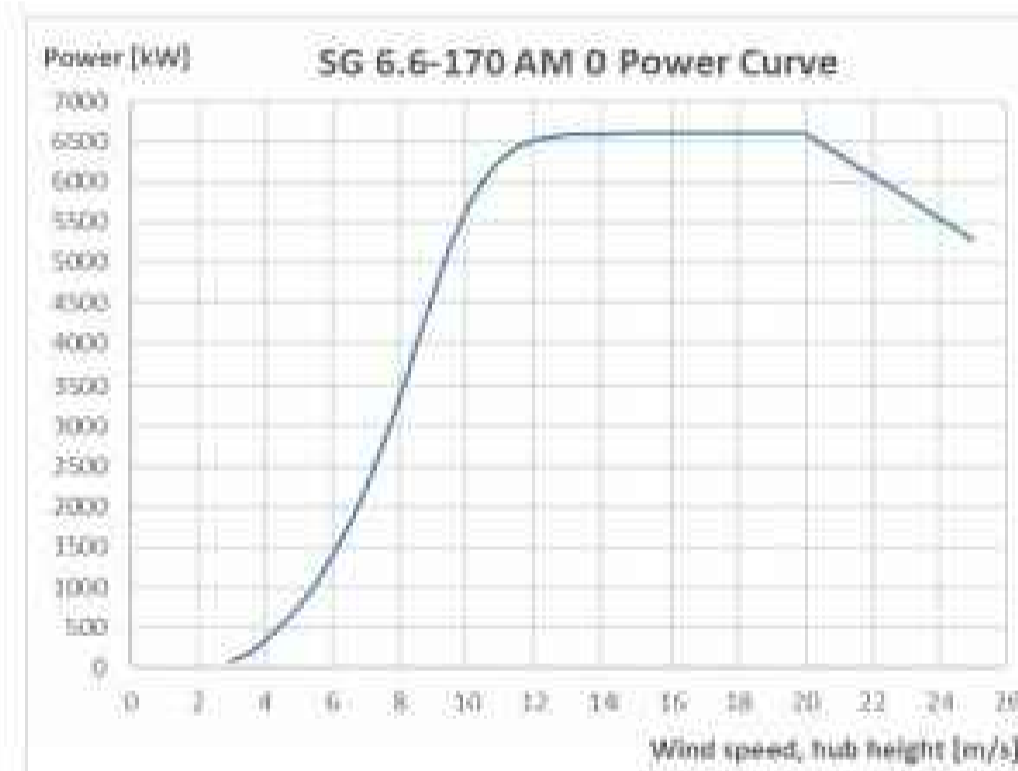


SCHEMA ELETTRICO SEMPLIFICATO DEL SINGOLO AEROGENERATORE

Technical specification

Rated power	6.6 MW
Flexible power rating	From 6.0 MW to 6.6 MW available
IEC class	S/III B (25 years lifetime) / III A (20 years lifetime)
Control	Pitch and variable speed
Rotor diameter	170 m
Swept area	22,697 m <sup>2</sup>
Tower height	100, 115, 135, 145, 155, 165 m and site-specific
Technology	Geared
First prototype	2021

Wind Speed [m/s]	Power [kW]
3.0	89
3.5	178
4.0	328
4.5	522
5.0	758
5.5	1040
6.0	1376
6.5	1771
7.0	2230
7.5	2757
8.0	3348
8.5	3974
9.0	4600
9.5	5176
10.0	5800
10.5	6024
11.0	6271
11.5	6424
12.0	6510
12.5	6556
13.0	6579
13.5	6590
14.0	6596
14.5	6598
15.0	6599
15.5	6600
16.0	6600
16.5	6600
17.0	6600
17.5	6600
18.0	6600
18.5	6600
19.0	6600
19.5	6600
20.0	6600
20.5	6488
21.0	6336
21.5	6204
22.0	6072
22.5	5940
23.0	5808
23.5	5676
24.0	5544
24.5	5412
25.0	5280



CURVA DI POTENZA

Rotor	
Type	3-bladed, horizontal axis
Position	Upwind
Diameter	170 m
Swept area	22,698 m <sup>2</sup>
Power regulation	Pitch & torque regulation with variable speed
Rotor tilt	0 degrees

Blade	
Type	Self-supporting
Blade length	83.5 m
Max chord	4.5 m
Aerodynamic profile	Siemens Gamesa proprietary airfoils
Material	G (Glassfiber) - CRP (Carbon Reinforced Plastic)
Surface gloss	Semi-gloss, < 30 / ISO2813
Surface color	Light grey, RAL 7035 or White, RAL 9018

Aerodynamic Brake	
Type	Full span pitching
Activation	Active, hydraulic

Load-supporting Parts	
Hub	Nodular cast iron
Main shaft	Nodular cast iron
Nacelle bed frame	Nodular cast iron

Mechanical Brake	
Type	Hydraulic disc brake
Position	Gearbox rear end

Nacelle Cover	
Type	Totally enclosed
Surface gloss	Semi-gloss, <30 / ISO2813
	Light Grey, RAL 7035 or White, RAL 9018
Color	

Generator	
Type	Asynchronous, DFIG

Grid Terminals (LV)	
Baseline nominal power	6.6MW
Voltage	690 V
Frequency	50 Hz or 60 Hz

Yaw System	
Type	Active
Yaw bearing	Externally geared
Yaw drive	Electric gear motors
Yaw brake	Active friction brake

Controller	
Type	Siemens Integrated Control System (SICS)
SCADA system	SGRE SCADA System

Tower	
Type	Tubular steel / Hybrid
Hub height	115m to 165 m and site-specific
Corrosion protection	
Surface gloss	Painted
	Semi-gloss, <30 / ISO-2813
Color	Light grey, RAL 7035 or White, RAL 9018

Operational Data	
Cut-in wind speed	3 m/s
Rated wind speed	11.5 m/s (steady wind without turbulence, as defined by IEC61400-1)
Cut-out wind speed	25 m/s
Restart wind speed	22 m/s

Weight	
Modular approach	Different modules depending on restriction

REGIONE BASILICATA Provincia MATERA Provincia POTENZA

Comuni:  
Tricarico (MT)  
Vaglio Basilicata (PZ)  
Brindisi Montagna (PZ)

IMPIANTO EOLICO DI POTENZA PARI A 79,20 MW

RICHIEDENTE  
**DOLOMITI WIND FARM S.r.l.**  
Via Dante, 7  
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P.IVA: 12532370967

**DOLOMITI WIND FARM**  
ENERGY & INFRASTRUCTURE

Titolo:  
SCHEMI FUNZIONALI DEI SINGOLI AEROGENERATORI

Elaborato: **A\_16\_b\_3**

Progettazione: **STUDIO ISITREN**  
dott. ing. Gianluca PANTILE  
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Scala N.A. in A1

22.05.2023	0	PRIMA EMISSIONE	dott. ing. Gianluca PANTILE	dott. ing. Gianluca PANTILE
Data	Revisione	DESCRIZIONE	Elaborazione	Verifica e controllo
REVISIONI				