

The Siemens logo, consisting of the word "SIEMENS" in a bold, teal, sans-serif font.

Ingenuity for life

Wind Turbine SWT-2.3-93

Technical specifications

Product Name: SWT-2.3-93

Application: Onshore

Technology: Geared drive

Rotor

Type	3-bladed, horizontal axis
Position	Upwind
Diameter	93 m
Swept area	6,800 m ²
Speed range	6-16 rpm
Power regulation	Pitch regulation
Rotor tilt	6 degrees

Blade

Type	Self-supporting
Blade Length	45 m
Tip chord	0.8 m
Root chord	3.5 m
Aerodynamic profile	NACA 63.xxx, FFAxxx
Material	GRE
Surface gloss	Semi-matt, <30 / ISO2813
Surface color	Light grey, RAL 7035

Aerodynamic Brake

Type	Full span pitching
Activation	Active, hydraulic

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Load-Supporting Parts

Hub	Nodular cast iron
Main bearing	Spherical roller bearing
Main shaft	Alloy steel
Nacelle bed frame	Steel

Transmission system

Coupling hub - shaft	Flange
Coupling shaft - gearbox	Shrink disc
Gearbox type	3-stage planetary-helical
Gearbox ratio	1:91
Gearbox lubrication	Splash / forced lubrication
Oil volume	Approx. 400 l
Gearbox cooling	Separate oil cooler
Gearbox designation	PEAB 4456
Gearbox manufacturer	Winergy AG
Coupling gear - generator	Double flexible coupling

Mechanical Brake

Type	Hydraulic disc brake
Position	High-speed shaft
Number of calipers	2

Generator

Type	Asynchronous
Nominal Power	2,300 kW
Synchronous speed	1,500 rpm
Voltage	690 V
Frequency	50 Hz
Protection	IP54
Cooling	Integrated heat exchanger
Insulation class	F
Generator designation	AMA 500L4 BAYH

Canopy

Type	Totally enclosed
Material	Steel

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Yaw System

Type	Active
Yaw bearing	Externally geared slew ring
Yaw drive	Eight electric gear motors
Yaw brake	Passive friction brake

Controller

Type	Microprocessor
SCADA system	WPS via modem
Controller designation	KK WTC 3.0

Tower

Type	Cylindrical or tapered tubular steel tower
Hub heights	80 m or site-specific
Corrosion protection	Painted
Surface gloss	Semi gloss, 30-50 / ISO 2813
Surface Color	Light grey, RAL 7035

Operational data

Cut-in wind speed	4 m/s
Nominal power at	13-14 m/s
Cut-out wind speed	25 m/s
Maximum 2 s gust	55 m/s (standard version) 59.5 m/s (special version)

Masses (approximate)

Rotor	60 t
Nacelle excl. rotor	82 t
Tower (80 m)	162 t

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