

**SIEMENS***Ingenuity for life*

Wind Turbine SWT-4.0-120

Technical specifications

Product Name: SWT-4.0-120
Application: Offshore
Technology: Direct Drive
Wind Class: IA

Rotor

Type	3-bladed, horizontal axis
Position	Upwind
Diameter	120 m
Swept area	11,300 m ²
Speed range	5-14 rpm
Power regulation	Pitch regulation with variable speed
Rotor tilt	6 degrees

Blade

Type	B58
Blade length	58.5 m
Root chord	4.2 m
Aerodynamic profile	NACA 63.xxx, FFAxxx
Material	GRE
Surface gloss	Semi-gloss, < 30 / ISO2813
Surface colour	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 bearings	Spherical roller bearings
Main shaft	Alloy steel
Nacelle bed frame	Cast iron

Transmission system

Coupling hub - shaft	Flange
Coupling shaft – gearbox	Shrink disc
Gearbox type	3-stage planetary/helical
Gearbox ratio	1 : 119
Gearbox lubrication	Forced lubrication
Oil volume	Approx. 750 l
Gearbox cooling	Separate oil cooler
Gearbox designation	PZAB 3546
Gearbox manufacturer	Winergy AG
Coupling gear - generator	Double flexible coupling

Mechanical Brake

Type	Hydraulic disc brake
Position	High speed shaft
Number of callipers	2

Generator

Type	Asynchronous
Nominal power	4,000 kW
Protection	IP 54
Cooling	Integrated heat exchanger
Insulation class	F

Canopy

Type	Totally enclosed
Material	Steel / Aluminium
Surface gloss	Semi-gloss, 25-45, ISO2813
Color	Light grey, RAL 7035

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Yaw System

Type	Active
Yaw bearing	Internally geared ball bearing
Yaw drive	Six electric gear motors
Yaw brake	Active friction brake

Controller

Type	Microprocessor
SCADA system	Web WPS
Controller designation	WTC 3

Tower

Type	Cylindrical and/or tapered tubular
Hub height	90 m or site-specific
Corrosion protection	Painted
Surface gloss	Semi-gloss, 25-45, ISO2813
Colour	Light grey, RAL 7035

Operational data

Cut-in wind speed	3-5 m/s
Nominal power at	13-14 m/s
Cut-out wind speed	32 m/s applying High Wind Ride Through
Maximum 3 s gust	70 m/s (IEC version)

Weights (approximate)

Rotor	100 t
Nacelle	140 t

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