

The background of the entire page is a photograph of offshore wind turbines in the ocean at sunset or sunrise. The sky is a mix of orange, pink, and blue. The water is a deep blue. In the foreground, the red and white structure of a wind turbine is partially visible, framing the top and bottom of the page. The Siemens logo is in the top left corner.

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Wind Turbine SWT-4.0-130

Technical specifications

Product Name: SWT-4.0-130
Application: Offshore
Technology: Direct Drive
Wind Class: I B

Rotor

Type	3-bladed, horizontal axis
Position	Upwind
Diameter	130 m
Swept area	13,300 m ²
Speed range	5-14 rpm
Power regulation	Pitch regulation with variable speed
Rotor tilt	6 degrees

Blade

Type	B63
Blade length	63.45 m
Root chord	4.2 m
Aerodynamic profile	Siemens proprietary airfoils, DU-xx-W-xxx
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	Nodular 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	Winergy PZAB 3546
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	4,000 kW
Protection	IP 54
Cooling	Air to Air
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	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	11-12 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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