

Industrial Motors  
Commercial &  
Appliance Motors  
Automation  
Digital &  
Systems  
**Energy**  
Transmission &  
Distribution  
Coatings

# WIND TURBINE AGW 172 / 7.X

Clean energy  
generation with  
**efficiency and  
sustainability**



Driving efficiency and sustainability



# Reliable wind turbines

## Operational data

Model	AGW 172 / 7.X
Rated power	6.0 - 7.X MW
Wind class (IEC)	S ( $V_{ave} = 9.5$ m/s; $I_{ref} = 0.145$ ; $V_{ref} = 37.5$ m/s)
Temperature operation	0 °C up to 45 °C
Survival temperature	-20 °C up to 50 °C

## Rotor

Rotor diameter	172 m
Swept area	23,235.20 m <sup>2</sup>
Power regulation	Variable speed with pitch angle control independent for each blade

## Generator

Type	Synchronous with permanent magnets
Drive train	With medium speed multiplier gearbox
Stator voltage	900 V
Grid connection	Full power converter
Cooling	Air-water
Stator impregnation	VPI (Vacuum Pressure Impregnation)

## Converter

Type	Full power converter
Frequency	50 Hz or 60 Hz
Nominal voltage, generator side	900 V
Nominal voltage, transformer side	925 V
Power factor <sup>1)</sup>	0.95 IND - 0.95 CAP
Cooling	Liquid cooling
Gearbox	Medium-speed gearbox

## Nacelle

Yaw system	Active, driven by electric gear motors
Main brake	Aerodynamic
Secondary brake	Electromechanical
Auxiliary brake	Electromechanical lock pin

## Transformer

Output voltage	33 kV or 34.5 kV
Cooling	Passive air cooling

## Tower

Hub height <sup>2)</sup>	112 m, 134 m or site-specific
Type	Conical tubular in concrete
Nacelle access	Service ladder and lift

## Additional information

Design service life <sup>3)</sup>	20 years
Control system	PLC and MPU
SCADA system	Wind Power SCADA
Lightning protection	Built-in in blades, rotor and tower, in compliance with IEC 61400-24
Optional	50/60 Hz, marine environment, dust protection, low temperatures, aerial signaling (painting and lighting), continuous monitoring system (CMS)

Notes: 1) Power factor measured at the low voltage terminals of the step-up transformer of the wind turbine itself.

2) Other cube height options upon request.

3) Project useful lifespans exceeding 20 years upon request.



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