

RISE ABOVE

AW3000

ACCIONA Windpower has seen explosive growth of orders for its AW3000 platform. This success is due to a track record of reliability and product innovation coming from one of the most experienced wind energy companies in the world. The latest evolution is the AW132/3000 for low-wind sites, which delivers the lowest cost of energy in this segment. Partner with ACCIONA Windpower to make your projects rise above the competition.

OPTIMIZED PERFORMANCE FOR ALL SITES

- Full suite of rotor options covering all wind conditions, including the AW132/3000 for low-wind sites
- Steel and concrete tower options with hub heights from 84 to 137.5 meters
- Proven and bankable designs including double-bearing support on main shaft, glass fiber and epoxy blades and DFIG electrical generation

BUILT BY OPERATORS FOR OPERATORS

- Based on a scaled design of our successful AW1500, the AW3000 provides more energy capture per wind turbine location
- Our track record of fleet wind turbine performance includes global average availability over 98% and extremely low failure rates of major components

COMPATIBILITY & CONTROL

- Zero voltage ride-through beyond current regulatory requirements, in addition to grid integration and reactive power solutions to allow for maximum control for stringent grid codes
- Control software that allows intelligent automatic monitoring and operation

SAFETY

- Hydraulic pitch control for safe and reliable blade pitching in all wind environments
- Two-person lift; hub access from inside the nacelle; and spacious, ergonomic nacelle design allow for operational efficiency

12 KV VERSUS 690 V

- This configuration, proven in our wind turbines, can remove the step-up transformer from the equation and is ideal for projects that are in close proximity to the substation
- The result is significant savings over the life of the project
- Up to 50% savings in collection system costs
- Average of 1% greater energy productions due to the avoidance of transformer electrical losses
- Avoidance of maintenance and potential failures of transformers

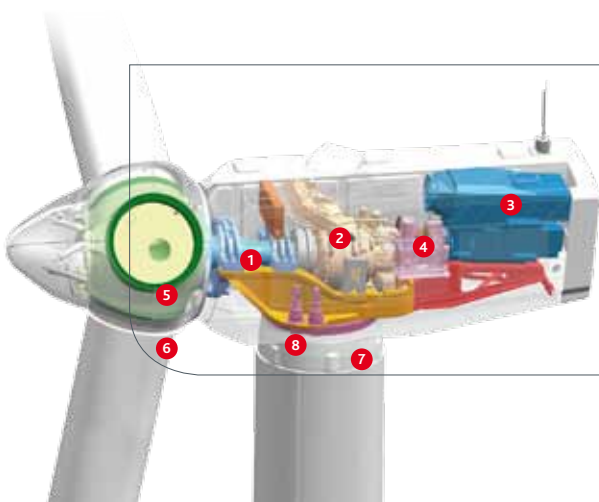
AW3000 DESIGN ADVANTAGES

- 1) Double bearing-supported main shaft
- 2) Robust gearbox with HALT completed
- 3) 6 pole DFIG 12 kV generator
- 4) Elastic coupling
- 5) Cast hub with access from nacelle
- 6) Blades with structural shell design and proven materials including glass fiber and epoxy resin
- 7) Steel and concrete tower options from 84m to 137.5m hub heights
- 8) Yaw bearing and caliper brakes



AW3000

AW 100/3000 | AW 116/3000 | AW 125/3000 | AW 132/3000



AW3000

TECHNICAL SPECIFICATIONS

MODEL	AW 100/3000	AW 116/3000	AW 125/3000	AW 132/3000
Rotor diameter	100 m	116 m	125 m	132 m
Wind class	IEC Ia	IEC IIa	IEC IIb	IEC IIIb
Turbine suitability	High wind sites	Medium wind sites with higher turbulence intensity	Medium wind sites with low turbulence intensity	Low wind sites with low turbulence intensity
OPERATING DATA				
Cut-in wind speed	4 m/s	3.5 m/s	3.5 m/s	3 m/s
Cut-out wind speed	25 m/s	25 m/s	25 m/s	25 m/s
Cold Weather Operational Temperature range (Optional)	-30°C to +40°C			
Power factor range	+/- 0.93 (1,200 kVA) dynamic between +/- 5% p.u. voltage			
Zero voltage ride through	Meets or exceeds global requirements			
ROTOR				
Swept area	7,854 m ²	10,568 m ²	12,305 m ²	13,720 m ²
Power regulation	Independent pitch regulated with variable speed			
DRIVE TRAIN				
Gearbox	3 stages: 2 planetary, 1 parallel (helical)			
Bearings	Double spherical roller bearings			
Lubrication	Pressure and splash with oil cooler/oil filter			
PITCH SYSTEM				
Actuation	Hydraulic cylinders			
Failsafes	Blade-independent piston accumulators on hub			
YAW SYSTEM				
Type	Four-point ball bearing, external gear			
Slewing ring	External			
Braking system	Disk+callipers, plus electro-mechanical brake per motor drive			
GENERATOR				
Type	6 poles, double feeding			
Frequency	50/60 Hz			
Nominal voltage	12,000 V (able to eliminate step-up transformers depending on wind farm layout)			
TOWER				
Steel hub height options (m)	-	92	87.5	84
Steel tower number of sections	-	4	4	4
Concrete hub height options (m)	100	100, 120	100, 120, 137.5	120, 137.5
Concrete tower number of sections	5	5, 6	5, 6, 7	6, 7
NACELLE				
Weight (tons)	111 t (without hub)			
Dimensions	10.9 m (length) 4.09 m (width) 4.15 m (height)			
Transportability	Four options (split nacelle), and rail capable			



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