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, glassfiber and epoxy blades and DFIG electrical generation

**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

**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

**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 a significant saving 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
## TECHNICAL SPECIFICATIONS

### MODEL

<table>
<thead>
<tr>
<th></th>
<th>AW 100/3000</th>
<th>AW 116/3000</th>
<th>AW 125/3000</th>
<th>AW 132/3000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rotor diameter</td>
<td>100 m</td>
<td>116 m</td>
<td>125 m</td>
<td>132 m</td>
</tr>
<tr>
<td>Wind class</td>
<td>IEC Ia</td>
<td>IEC IIA</td>
<td>IEC IIIB/IIIA</td>
<td>IEC IIIB</td>
</tr>
<tr>
<td>Turbine suitability</td>
<td>High wind sites</td>
<td>Medium wind sites with higher turbulence intensity</td>
<td>Medium wind sites with low turbulence intensity</td>
<td>Low wind sites with low turbulence intensity</td>
</tr>
</tbody>
</table>

### OPERATING DATA

<table>
<thead>
<tr>
<th></th>
<th>AW 100/3000</th>
<th>AW 116/3000</th>
<th>AW 125/3000</th>
<th>AW 132/3000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cut-in wind speed</td>
<td>4 m/s</td>
<td>3.5 m/s</td>
<td>3.5 m/s</td>
<td>3 m/s</td>
</tr>
<tr>
<td>Cut-out wind speed</td>
<td>25 m/s</td>
<td>25 m/s</td>
<td>25 m/s</td>
<td>25 m/s</td>
</tr>
<tr>
<td>Temperature range (Optional)</td>
<td>-30°C to +40°C</td>
<td>-30°C to +40°C</td>
<td>-30°C to +40°C</td>
<td>-30°C to +40°C</td>
</tr>
<tr>
<td>Power factor range</td>
<td>+/- 0.93 (1,200 kVA) dynamic between +/- 5% p.u. voltage</td>
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</tr>
<tr>
<td>Zero voltage ride through</td>
<td>Meets or exceeds global requirements</td>
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<td>Meets or exceeds global requirements</td>
<td>Meets or exceeds global requirements</td>
</tr>
</tbody>
</table>

### Rotor

- Swept area: 7,854 m², 10,568 m², 12,305 m², 13,720 m²
- 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 accumulator 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
- Concrete tower number of sections: 5, 6, 5, 6, 7, 6

### 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

### Life and Hoist Capacities

- Service lift capacity: 250 kg
- Onboard crane hoist lift capacity: 500 kg

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The technical data included in this brochure is not contractually binding.