**Technical information**

<table>
<thead>
<tr>
<th>Rotor diameter</th>
<th>AW-70/1500</th>
<th>AW-77/1500</th>
<th>AW-82/1500</th>
</tr>
</thead>
<tbody>
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<td>70 m</td>
<td>77 m</td>
<td>82 m</td>
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</tbody>
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<tr>
<th>Wind class (IEC)</th>
<th>IEC Ia</th>
<th>IEC IIa</th>
<th>IEC IIIb</th>
</tr>
</thead>
</table>

### OPERATING DATA
- Cut-in wind speed: 4 m/s, 3.5 m/s, 3 m/s
- Nominal power wind speed: 11.6 m/s, 11.1 m/s, 10.5 m/s
- Cut-out wind speed: 25 m/s, 20 m/s
- Nominal power: 1,500 kW

### COMPONENT DATA
- Diameter: 70 m, 77 m, 82 m
- Swept area: 3,855 m², 4,615 m², 5,289 m²
- Nominal rotation speed: 20.2 rpm, 18.3 rpm, 16.7 rpm
- Power regulation: Full span blade pitch
- Nominal tip speed: 74.1 m/s, 73.9 m/s, 71.7 m/s

### BLADES
- Length: 34.0 m, 37.3 m, 40.3 m

### PITCH SYSTEM
- Pitch bearings: Double row four point contact
- Actuation: Hydraulic
- Fail safes: Piston accumulators on hub

### DRIVE TRAIN
- Gearbox: 3 stages planetary/helical
- Gearbox nominal power: 1,500 kW
- Gearbox ratio: 159 [50 Hz]/17 [60 Hz], 1.65 [50 Hz]/1.78 [60 Hz]
- Input nominal speed: 20.2 rpm, 18.3 rpm, 16.7 rpm
- Output nominal speed: 1,200 [50 Hz]/1,440 [60 Hz], 1,100 [50 Hz]/1,320 [60 Hz]
- Lubrication: Pressure and splash with oil cooler/oil filter

### Rotor shaft
- Support: 2 bearings
- Bearings: Double spherical roller bearings

### YAW SYSTEM
- Type: Four point ball bearing
- Slewing ring: External
- Braking system: Friction pads

### YAW GEARS AND MOTORS
- Type: 4 Planetary stages

### GENERATOR
- Type: 6 poles, double feeding
- Insulation type (stator/rotor): H/H
- Rated power: 1,500 kW
- Frequency: 50/60 Hz
- Voltage: 12,000 V
- Speed range: 770 - 1,320 rpm (50 Hz), 924 - 1,584 rpm (60 Hz)

### CONTROL SYSTEM
- Type: Ingecon-W
- Scada interface: OPMT

### TOWER
- Type: Tubular steel tower
- Tower height: 56.9 m/76.9 m
- Access to tower: Door with lock system
- Access to nacelle cabin: Ladder or lift
- Weight: Steel tower (80/80 m): 95 t/135 t
- Foundation connection: Two studs races embedded in concrete

### WEIGHT
- Nacelle: 52.5 t
- Nacelle + hub: 67.5 t

### DIMENSIONS NACELLE + HUB
- Length: 12.5 m
- Width: 4.2 m
- Height: 4.0 m