The most suitable wind energy converter for every location

ENERCON product overview

Sub MW
E-44, E-48, E-53

MW
E-70, E-82 E2, E-82 E4,
E-92, E-101, E-101 E2,
E-115, E-126 EP4

Multi-MW
E-126
ENERCON wind energy converters – Advantage through innovation.

For more than 25 years, ENERCON wind energy converters have been synonymous with technological progress and high profitability. The importance of technologies contributing to power supply security is constantly increasing. ENERCON’s control systems offer a wide range of technological options which can be adapted to the grid parameters of large power transmission systems. Continuous research and development, as well as a degree of vertical integration that is unrivalled in the industry, ensure the high quality standards, the reliability and the profitability of ENERCON wind energy converters. Together with customer-oriented service, they guarantee the company’s continued success.
### Technical specifications E-44

**Rated power:** 900 kW  
**Rotor diameter:** 44 m  
**Hub height in meter:** 45 / 55  
**Wind zone (DIBt):** -  
**Wind class (IEC):** IEC/EN IA  
**WEC concept:** Gearless, variable speed, single blade adjustment

#### Rotor
- **Type:** Upwind rotor with active pitch control  
- **Rotational direction:** Clockwise  
- **No. of blades:** 3  
- **Swept area:** 1,521 m²  
- **Blade material:** GRP (epoxy resin); Built-in lightning protection  
- **Rotational speed:** Variable, 16 - 34.5 rpm  
- **Pitch control:** ENERCON single blade pitch system; one independent pitch system per rotor blade with allocated emergency supply

#### Drive train with generator
- **Main bearing:** Twin tapered roller bearing  
- **Generator:** ENERCON direct-drive annular generator  
- **Grid feed:** ENERCON inverter  
- **Brake systems:**  
  - 3 independent pitch control systems with emergency power supply  
  - Rotor brake  
  - Rotor lock  
- **Yaw system:** Active via yaw gear, load-dependent damping  
- **Cut-out wind speed:** 28 - 34 m/s (with ENERCON storm control*)  
- **Remote monitoring:** ENERCON SCADA

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* For more information on the ENERCON storm control feature, please see the last page.

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**Rated power:** 900 kW  
**Rotor diameter:** 44 m  
**Hub height in meter:** 45 / 55  
**Wind zone (DIBt):** -  
**Wind class (IEC):** IEC/EN IA  
**WEC concept:** Gearless, variable speed, single blade adjustment

#### Rotor
- **Type:** Upwind rotor with active pitch control  
- **Rotational direction:** Clockwise  
- **No. of blades:** 3  
- **Swept area:** 1,521 m²  
- **Blade material:** GRP (epoxy resin); Built-in lightning protection  
- **Rotational speed:** Variable, 16 - 34.5 rpm  
- **Pitch control:** ENERCON single blade pitch system; one independent pitch system per rotor blade with allocated emergency supply

#### Drive train with generator
- **Main bearing:** Twin tapered roller bearing  
- **Generator:** ENERCON direct-drive annular generator  
- **Grid feed:** ENERCON inverter  
- **Brake systems:**  
  - 3 independent pitch control systems with emergency power supply  
  - Rotor brake  
  - Rotor lock  
- **Yaw system:** Active via yaw gear, load-dependent damping  
- **Cut-out wind speed:** 28 - 34 m/s (with ENERCON storm control*)  
- **Remote monitoring:** ENERCON SCADA

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* For more information on the ENERCON storm control feature, please see the last page.
**Technical specifications E-48**

- **Rated power:** 800 kW
- **Rotor diameter:** 48 m
- **Hub height in meters:** 50 / 60 / 65 / 76
- **Wind zone (DIBt):** WZ III
- **Wind class (IEC):** IEC/EN IIA
- **WEC concept:** Gearless, variable speed, single blade adjustment
- **Rotor**
  - **Type:** Upwind rotor with active pitch control
  - **Rotational direction:** Clockwise
  - **No. of blades:** 3
  - **Swept area:** 1,810 m²
  - **Blade material:** GRP (epoxy resin); Built-in lightning protection
  - **Rotational speed:** Variable, 16 - 31.5 rpm
- **Pitch control:** ENERCON single blade pitch system; one independent pitch system per rotor blade with allocated emergency supply
- **Drive train with generator**
  - **Main bearing:** Twin tapered roller bearing
  - **Generator:** ENERCON direct-drive annular generator
  - **Grid feed:** ENERCON inverter
- **Brake systems:**
  - 3 independent pitch control systems with emergency power supply
  - Rotor brake
  - Rotor lock
- **Yaw system:** Active via yaw gear, load-dependent damping
- **Cut-out wind speed:** 28 - 34 m/s (with ENERCON storm control*)
- **Remote monitoring:** ENERCON SCADA

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* For more information on the ENERCON storm control feature, please see the last page.
**Technical specifications E-53**

**Rated power:** 800 kW

**Rotor diameter:** 52.9 m

**Hub height in meters:** 50 / 60 / 73

**Wind zone (DIBt):** WZ II exp

**Wind class (IEC):** IEC/NVN Class S

\[ V_{av} = 7.5 \text{ m/s}, \ V_{ext} = 57 \text{ m/s} \]

**WEC concept:** Gearless, variable speed, single blade adjustment

**Rotor**

- **Type:** Upwind rotor with active pitch control
- **Rotational direction:** Clockwise
- **No. of blades:** 3
- **Swept area:** 2,198 m²
- **Blade material:** GRP (epoxy resin); built-in lightning protection
- **Rotational speed:** Variable, 11 - 29.5 rpm
- **Pitch control:** ENERCON single blade pitch system, one independent pitch system per rotor blade with allocated emergency supply

**Drive train with generator**

- **Main bearing:** Twin tapered roller bearing
- **Generator:** ENERCON direct-drive annular generator
- **Grid feed:** ENERCON inverter

**Brake systems:**

- 3 independent pitch control systems with emergency power supply
- Rotor brake
- Rotor lock

**Yaw system:**

- Active via yaw gear, load-dependent damping

**Cut-out wind speed:**

\[ 28 - 34 \text{ m/s} \]

(with ENERCON storm control*)

**Remote monitoring:** ENERCON SCADA

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* For more information on the ENERCON storm control feature, please see the last page.
Technical specifications E-70 E4

Rated power: 2,300 kW

Rotor diameter: 71 m

Hub height in meters: 57 / 64 / 85 / 114

Wind zone (DIBt): WZ III

Wind class (IEC): IEC/EN 1A and IEC/EN 2A

WEC concept: Gearless, variable speed, single blade adjustment

Rotor

Type: Upwind rotor with active pitch control

Rotational direction: Clockwise

No. of blades: 3

Swept area: 3,959 m²

Blade material: GRP (epoxy resin); Built-in lightning protection

Rotational speed: Variable, 6 - 21 rpm

Pitch control: ENERCON single blade pitch system; one independent pitch system per rotor blade with allocated emergency supply

Drive train with generator

Main bearing: Double row tapered/cylindrical roller bearings

Generator: ENERCON direct-drive annular generator

Grid feed: ENERCON inverter

Brake systems:
- 3 independent pitch control systems with emergency power supply
- Rotor brake
- Rotor lock

Yaw system: Active via yaw gear; load-dependent damping

Cut-out wind speed: 28 - 34 m/s (with ENERCON storm control*)

Remote monitoring: ENERCON SCADA

* For more information on the ENERCON storm control feature, please see the last page.
Technical specifications E-82 E2

Rated power: 2,000 kW
Rotor diameter: 82 m
Hub height in meters: 78 / 84 / 98 / 108 / 138
Wind zone (DIBt): WZ III
Wind class (IEC): IEC/EN IIA

WEC concept:
- Gearless, variable speed
- Single blade adjustment

Rotor
Type:
- Upwind rotor with active pitch control

Rotational direction:
- Clockwise

No. of blades:
- 3

Swept area: 5,281 m²
Blade material:
- GRP (epoxy resin); Built-in lightning protection

Rotational speed:
- Variable, 6 - 18 rpm

Pitch control:
- ENERCON single blade pitch system; one independent pitch system per rotor blade with allocated emergency supply

Drive train with generator
Main bearing:
- Double row tapered/cylindrical roller bearings

Generator:
- ENERCON direct-drive annular generator

Grid feed:
- ENERCON inverter

Brake systems:
- 3 independent pitch control systems with emergency power supply
- Rotor brake
- Rotor lock

Yaw system:
- Active via yaw gear; load-dependent damping

Cut-out wind speed:
- 28 - 34 m/s (with ENERCON storm control*)

Remote monitoring:
- ENERCON SCADA

* For more information on the ENERCON storm control feature, please see the last page.
p = 1.225 kg/m³

Main carrier
Yaw drive
Annular generator
Blade adapter
Rotor hub
Rotor blade

Technical specifications E-82 E2

- Rated power: 2,300 kW
- Rotor diameter: 82 m
- Hub height in meter: 78 / 84 / 98 / 108 / 138
- Wind zone (DIBt): WZ III
- Wind class (IEC): IEC/EN IIA
- WEC concept: Gearless, variable speed, single blade adjustment

Rotor
- Type: Upwind rotor with active pitch control
- Rotational direction: Clockwise
- No. of blades: 3
- Swept area: 5,281 m²
- Blade material: GRP (epoxy resin); Built-in lightning protection
- Rotational speed: Variable, 6 - 18 rpm
- Pitch control: ENERCON single blade pitch system; one independent pitch system per rotor blade with allocated emergency supply

Drive train with generator
- Main bearing: Double row tapered/cylindrical roller bearings
- Generator: ENERCON direct-drive annular generator
- Grid feed: ENERCON inverter
- Brake systems: 3 independent pitch control systems with emergency power supply; Rotor brake; Rotor lock

Yaw system: Active via yaw gear; load-dependent damping

Cut-out wind speed: 28 - 34 m/s (with ENERCON storm control*)

Remote monitoring: ENERCON SCADA

* For more information on the ENERCON storm control feature, please see the last page.
**Rated power:** 2,350 kW
**Rotor diameter:** 82 m
**Hub height in meter:** 59 / 69 / 78 / 84
**Wind zone (DIBt):** -
**Wind class (IEC):** IEC/EN IA and IEC/EN IIA

**WEC concept:** Gearless, variable speed, single blade adjustment

**Rotor**
- **Type:** Upwind rotor with active pitch control
- **Rotational direction:** Clockwise
- **No. of blades:** 3
- **Swept area:** 5,281 m²
- **Blade material:** GRP (epoxy resin); built-in lightning protection
- **Rotational speed:** Variable, 6 - 18 rpm
- **Pitch control:** ENERCON single blade pitch system; one independent pitch system per rotor blade with allocated emergency supply

**Drive train with generator**
- **Main bearing:** Double row tapered/cylindrical roller bearings
- **Generator:** ENERCON direct-drive annular generator
- **Grid feed:** ENERCON inverter

**Brake systems:**
- 3 independent pitch control systems with emergency power supply
- Rotor brake
- Rotor lock

**Yaw system:** Active via yaw gear; load-dependent damping

**Cut-out wind speed:** 28 - 34 m/s (with ENERCON storm control*)

**Remote monitoring:** ENERCON SCADA

* For more information on the ENERCON storm control feature, please see the last page.
**Technical specifications E-82 E4**

- **Rated power:** 3,000 kW
- **Rotor diameter:** 82 m
- **Hub height in meters:** 69 / 79 / 84
- **Wind zone (DIBt):**
- **Wind class (IEC):** IEC/EN IIA and IEC/EN IIA
- **WEC concept:** Gearless, variable speed, single blade adjustment

**Rotor**

- **Type:** Upwind rotor with active pitch control
- **Rotational direction:** Clockwise
- **No. of blades:** 3
- **Swept area:** 5,281 m²
- **Blade material:** GRP (epoxy resin); Built-in lightning protection
- **Rotational speed:** Variable, 6 - 18 rpm
- **Pitch control:** ENERCON single blade pitch system; one independent pitch system per rotor blade with allocated emergency supply

**Drive train with generator**

- **Main bearing:** Double row tapered/cylindrical roller bearings
- **Generator:** ENERCON direct-drive annular generator
- **Grid feed:** ENERCON inverter
- **Brake systems:**
  - 3 independent pitch control systems with emergency power supply
  - Rotor brake
  - Rotor lock
- **Yaw system:** Active via yaw gear, load-dependent damping

**Cut-out wind speed:** 28 - 34 m/s (with ENERCON storm control*)

**Remote monitoring:** ENERCON SCADA

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* For more information on the ENERCON storm control feature, please see the last page.
**Technical specifications E-92**

**Rated power:** 2,350 kW

**Rotor diameter:** 92 m

**Hub height in meter:** 78 / 84 / 85 / 98 / 104 / 108 / 138

**Wind zone (DIBt):** WZ III

**Wind class (IEC):** IEC/EN IIA

**WEC concept:** Gearless, variable speed, single blade adjustment

**Rotor**
- **Type:** Upwind rotor with active pitch control
- **Rotational direction:** Clockwise
- **No. of blades:** 3
- **Swept area:** 6,648 m²
- **Blade material:** GRP (epoxy resin); Built-in lightning protection
- **Rotational speed:** Variable, 5 - 16 rpm
- **Pitch control:** ENERCON single blade pitch system; one independent pitch system per rotor blade with allocated emergency supply

**Drive train with generator**
- **Main bearing:** Double row tapered/cylindrical roller bearings
- **Generator:** ENERCON direct-drive annular generator
- **Grid feed:** ENERCON inverter
- **Brake systems:**
  - 3 independent pitch control systems with emergency power supply
  - Rotor brake
  - Rotor lock
- **Yaw system:** Active via yaw gear; load-dependent damping
- **Cut-out wind speed:** 28 - 34 m/s (with ENERCON storm control*)
- **Remote monitoring:** ENERCON SCADA

* For more information on the ENERCON storm control feature, please see the last page.
Technical specifications E-101

- **Rated power:** 3,050 kW
- **Rotor diameter:** 101 m
- **Hub height in m:** 99 / 124 / 135 / 149
- **Wind zone (DIBt):** WZ III
- **Wind class (IEC):** IEC/EN IIA
- **WEC concept:** Gearless, variable speed, single blade adjustment

**Rotor**
- **Type:** Upwind rotor with active pitch control
- **Rotational direction:** Clockwise
- **No. of blades:** 3
- **Swept area:** 8,012 m²
- **Blade material:** GRP (epoxy resin); Built-in lightning protection
- **Rotational speed:** Variable, 4 - 14.5 rpm
- **Pitch control:** ENERCON single blade pitch system; one independent pitch system per rotor blade with allocated emergency supply

**Drive train with generator**
- **Main bearing:** Double row tapered/cylindrical roller bearings
- **Generator:** ENERCON direct-drive annular generator
- **Grid feed:** ENERCON inverter

**Brake systems:**
- 3 independent pitch control systems with emergency power supply
- Rotor brake
- Rotor lock, latching [10°]

**Yaw system:** Active via yaw gear; load-dependent damping

**Cut-out wind speed:** 28 - 34 m/s (with ENERCON storm control*)

**Remote monitoring:** ENERCON SCADA

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* For more information on the ENERCON storm control feature, please see the last page.
**Technical specifications E-101 E2**

- **Rated power:** 3,500 kW
- **Rotor diameter:** 101 m
- **Hub height in meter:** 74
- **Wind zone (DIBt):** WZ IV
- **Wind class (IEC):** IEC/EN IA

**WEC concept:** Gearless, variable speed, single blade adjustment

**Rotor**
- **Type:** Upwind rotor with active pitch control
- **Rotational direction:** Clockwise
- **No. of blades:** 3
- **Swept area:** 8,012 m²
- **Blade material:** GRP (epoxy resin); Built-in lightning protection
- **Rotational speed:** Variable, 4 - 14.5 rpm
- **Pitch control:** ENERCON single blade pitch system; one independent pitch system per rotor blade with allocated emergency supply

**Drive train with generator**
- **Main bearing:** Double row tapered/cylindrical roller bearings
- **Generator:** ENERCON direct-drive annular generator
- **Grid feed:** ENERCON inverter
- **Brake systems:**
  - 3 independent pitch control systems with emergency power supply
  - Rotor brake
  - Rotor lock, latching (10°)

**Yaw system:**
- Active via yaw gear; load-dependent damping
- Cut-out wind speed: 28 - 34 m/s (with ENERCON storm control)*

**Remote monitoring:** ENERCON SCADA

* For more information on the ENERCON storm control feature, please see the last page.

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### Calculated power curve

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<th>Power P (kW)</th>
<th>Power coefficient Cp</th>
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</table>
**Technical specifications E-115**

- **Rated power:** 3,000 kW
- **Rotor diameter:** 115.7 m
- **Hub height in meter:** 92 / 122 / 135 / 149
- **Wind zone (DIBt):** WZ III
- **Wind class (IEC):** IEC/EN IIA
- **WEC concept:** Gearless, variable speed, single blade adjustment

**Rotor**
- **Type:** Upwind rotor with active pitch control
- **Rotational direction:** Clockwise
- **No. of blades:** 3
- **Swept area:** 10,515.5 m²
- **Blade material:** GRP (epoxy resin); Built-in lightning protection
- **Rotational speed:** Variable, 4 - 12.8 rpm
- **Pitch control:** ENERCON single blade pitch system; one independent pitch system per rotor blade with allocated emergency supply

**Drive train with generator**
- **Main bearing:** Double row tapered/cylindrical roller bearings
- **Generator:** ENERCON direct-drive annular generator
- **Grid feed:** ENERCON inverter
- **Brake systems:**
  - 3 independent pitch control systems with emergency power supply
  - Rotor brake
  - Rotor lock, latching (10°)

**Yaw system:**
- **Type:** Active via yaw gear; load-dependent damping

**Cut-out wind speed:** 28 - 34 m/s [with ENERCON storm control]

**Remote monitoring:** ENERCON SCADA

*For more information on the ENERCON storm control feature, please see the last page.*
**Technical specifications E-126 EP4**

- **Rated power:** 4,200 kW
- **Rotor diameter:** 127 m
- **Hub height in meters:** 135
- **Wind zone (DIBt):** WZ III
- **Wind class (IEC):** IEC/EN IIA
- **WEC concept:** Gearless, variable speed, single blade adjustment

**Rotor**
- **Type:** Upwind rotor with active pitch control
- **Rotational direction:** Clockwise
- **No. of blades:** 3
- **Swept area:** 12,668 m²
- **Blade material:** GRP (epoxy resin); Built-in lightning protection
- **Rotational speed:** Variable, 3 - 11.6 rpm
- **Pitch control:** ENERCON single blade pitch system; one independent pitch system per rotor blade with allocated emergency supply

**Drive train with generator**
- **Main bearing:** Double row tapered/cylindrical roller bearings
- **Generator:** ENERCON direct-drive annular generator
- **Grid feed:** ENERCON inverter
- **Brake systems:** 3 independent pitch control systems with emergency power supply
- **– Rotor brake**

**Yaw system:**
- **Active via yaw gear, load-dependent damping**

**Cut-out wind speed:** 28 - 34 m/s (with ENERCON storm control*)

**Remote monitoring:** ENERCON SCADA

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* For more information on the ENERCON storm control feature, please see the last page.
**Technical specifications E-126**

- **Rated power:** 7,580 kW
- **Rotor diameter:** 127 m
- **Hub height in meter:** 135
- **Wind zone (DIBt):** WZ III
- **Wind class (IEC):** IEC/EN IA
- **WEC concept:** Gearless, variable speed, single blade adjustment

**Rotor**
- **Type:** Upwind rotor with active pitch control
- **Rotational direction:** Clockwise
- **No. of blades:** 3
- **Swept area:** 12,668 m²
- **Blade material:** GRP (epoxy resin)/GRP; GRP (epoxy resin)/steel; Built-in lightning protection
- **Rotational speed:** Variable, 5 - 12.1 rpm
- **Pitch control:** ENERCON single blade pitch system, one independent pitch system per rotor blade with allocated emergency supply

**Drive train with generator**
- **Main bearing:** Single row tapered roller bearings
- **Generator:** ENERCON direct-drive annular generator
- **Grid feed:** ENERCON inverter
- **Brake systems:** 3 independent pitch control systems with emergency power supply; Rotor brake

**Yaw system:** Active via yaw gear, load-dependent damping

**Cut-out wind speed:** 28 - 34 m/s (with ENERCON storm control*)

**Remote monitoring:** ENERCON SCADA

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* For more information on the ENERCON storm control feature, please see the last page.
ENERCON product overview

The product portfolio comprises wind energy converters in the sub- to multi-megawatt classes.

<table>
<thead>
<tr>
<th>WEC</th>
<th>Rated power</th>
<th>Rotor diameter</th>
<th>Swept area</th>
<th>Hub height</th>
<th>Rotational speed</th>
<th>Cut-out wind speed</th>
<th>Wind zone (DIBt)</th>
<th>Wind class (IEC)</th>
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<tbody>
<tr>
<td>ENERCON E-44</td>
<td>900 kW</td>
<td>44 m</td>
<td>1,521 m²</td>
<td>45 / 55 m</td>
<td>variable, 16 - 34.5 rpm</td>
<td>28 - 34 m/s</td>
<td>-</td>
<td>IEC/EN IA</td>
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<tr>
<td>ENERCON E-48</td>
<td>800 kW</td>
<td>48 m</td>
<td>1,818 m²</td>
<td>50 / 60 / 65 / 76 m</td>
<td>variable, 16 - 31.5 rpm</td>
<td>28 - 34 m/s</td>
<td>WZ III</td>
<td>IEC/EN IIA</td>
</tr>
<tr>
<td>ENERCON E-53</td>
<td>800 kW</td>
<td>52.9 m</td>
<td>2,198 m²</td>
<td>50 / 60 / 73 m</td>
<td>variable, 11 - 29.5 rpm</td>
<td>28 - 34 m/s</td>
<td>WZ II exp</td>
<td>IEC/NVN Class S</td>
</tr>
<tr>
<td>ENERCON E-70</td>
<td>2,300 kW</td>
<td>71 m</td>
<td>3,959 m²</td>
<td>57 / 64 / 75 / 85 / 98 / 114 m</td>
<td>variable, 6 - 21 rpm</td>
<td>28 - 34 m/s</td>
<td>WZ III</td>
<td>IEC/EN IA and IEC/EN IIA</td>
</tr>
<tr>
<td>ENERCON E-82 E2</td>
<td>2,000 kW</td>
<td>82 m</td>
<td>5,281 m²</td>
<td>78 / 84 / 98 / 108 / 138 m</td>
<td>variable, 6 - 18 rpm</td>
<td>28 - 34 m/s</td>
<td>WZ III</td>
<td>IEC/EN IIA</td>
</tr>
<tr>
<td>ENERCON E-82 E2</td>
<td>2,300 kW</td>
<td>82 m</td>
<td>5,281 m²</td>
<td>78 / 84 / 98 / 108 / 138 m</td>
<td>variable, 6 - 18 rpm</td>
<td>28 - 34 m/s</td>
<td>WZ III</td>
<td>IEC/EN IIA</td>
</tr>
<tr>
<td>ENERCON E-82 E4</td>
<td>2,350 kW</td>
<td>82 m</td>
<td>5,281 m²</td>
<td>59 / 69 / 78 / 84 m</td>
<td>variable, 6 - 18 rpm</td>
<td>28 - 34 m/s</td>
<td>-</td>
<td>IEC/EN IA and IEC/EN IIA</td>
</tr>
<tr>
<td>ENERCON E-82 E4</td>
<td>3,000 kW</td>
<td>82 m</td>
<td>5,281 m²</td>
<td>69 / 78 / 84 m</td>
<td>variable, 6 - 18 rpm</td>
<td>28 - 34 m/s</td>
<td>-</td>
<td>IEC/EN IA and IEC/EN IIA</td>
</tr>
<tr>
<td>ENERCON E-92</td>
<td>2,350 kW</td>
<td>92 m</td>
<td>6,648 m²</td>
<td>78 / 84 / 98 / 104 / 108 / 138 m</td>
<td>variable, 5 - 16 rpm</td>
<td>28 - 34 m/s</td>
<td>WZ III</td>
<td>IEC/EN IIA</td>
</tr>
<tr>
<td>ENERCON E-101</td>
<td>3,050 kW</td>
<td>101 m</td>
<td>8,012 m²</td>
<td>99 / 124 / 135 / 149 m</td>
<td>variable, 4 - 14.5 rpm</td>
<td>28 - 34 m/s</td>
<td>WZ III</td>
<td>IEC/EN IIA</td>
</tr>
<tr>
<td>ENERCON E-101 E2</td>
<td>3,500 kW</td>
<td>101 m</td>
<td>8,012 m²</td>
<td>74 m</td>
<td>variable, 4 - 14.5 rpm</td>
<td>28 - 34 m/s</td>
<td>WZ IV</td>
<td>IEC/EN IA</td>
</tr>
<tr>
<td>ENERCON E-115</td>
<td>3,000 kW</td>
<td>115.7 m</td>
<td>10,515.5 m²</td>
<td>92 / 122 / 135 / 149 m</td>
<td>variable, 4 - 12.8 rpm</td>
<td>28 - 34 m/s</td>
<td>WZ III</td>
<td>IEC/EN IIA</td>
</tr>
<tr>
<td>ENERCON E-126 EP4</td>
<td>4,200 kW</td>
<td>127 m</td>
<td>12,668 m²</td>
<td>135 m</td>
<td>variable, 3 - 11.6 rpm</td>
<td>28 - 34 m/s</td>
<td>WZ III</td>
<td>IEC/EN IIA</td>
</tr>
<tr>
<td>ENERCON E-126</td>
<td>7,580 kW</td>
<td>127 m</td>
<td>12,668 m²</td>
<td>135 m</td>
<td>variable, 5 - 12.1 rpm</td>
<td>28 - 34 m/s</td>
<td>WZ III</td>
<td>IEC/EN IA</td>
</tr>
</tbody>
</table>
ENERCON power curves

According to current standards, power curve measurement parameters such as turbulence intensity are not taken into consideration. The results are deviating measurements on the same type of wind turbine at different locations. Again, when comparing yield using power curve measurements from different types of wind turbines, a clear picture cannot be obtained unless all measurement parameters are taken into consideration.

So in order to calculate power yield forecasts for its wind turbines, ENERCON does not use power curve measurements but rather calculated power curves.

These are based on the following:

- Experience gained from numerous power curve measurements on various wind turbine types taken by accredited institutes
- Average turbulence intensity of 12%
- Standard air density of 1.225 kg/m³
- Anemometer specifications according to IEC 61400-12-1

Thus, the power curves for ENERCON wind turbines provide highly reliable and realistic calculations for expected energy yield based on the wind conditions at the respective site.

ENERCON storm control

ENERCON wind energy converters run with a special storm control feature. This slows the wind turbine down so that it can continue to operate even at high wind speeds. Numerous shutdowns which lead to considerable losses in power output can thus be avoided.

When storm control is activated, the rated speed is linearly reduced starting at a predetermined wind speed for each turbine type. Beginning at another turbine-specific wind speed, the limitation of the turbine’s rated speed also reduces active power. The turbine only shuts down at a wind speed of more than 34 m/s (10-minute average).

In comparison: when storm control is deactivated, the wind turbine stops if the wind speed reaches a 3-minute average of 25 m/s or a 15-second average of 30 m/s.

These are based on the following:

- Experience gained from numerous power curve measurements on various wind turbine types taken by accredited institutes
- Average turbulence intensity of 12%
- Standard air density of 1.225 kg/m³
- Anemometer specifications according to IEC 61400-12-1

Thus, the power curves for ENERCON wind turbines provide highly reliable and realistic calculations for expected energy yield based on the wind conditions at the respective site.

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