

VESTAS Product sheet

V150-4.5 MW™ IEC IIIB

Power regulation	Pitch regulated with variable speed
Operating data	
Rated power	4,500kW
Cut-in wind speed	3m/s
Cut-out wind speed	24.5m/s
Re cut-in wind speed	22.5m/s
Wind class	IEC S
Standard operating temperature range from -30°C* to +45°C with de-rating above 23°C	
*Subject to different temperature options	
Sound power	
Maximum	107.6dB(A) [†]
†Sound Optimized Modes dependent on site and country	
Rotor	
Rotor diameter	150m
Swept area	17,671m ²
Air brake	full blade feathering with 3 pitch cylinders
Electrical	
Frequency	50/60Hz
Converter	full scale
Gearbox	
Type	two planetary stages and one helical stage
Tower	
Hub heights	90m (IEC IIIB) 105m (IEC IIIB)
Nacelle dimensions	
Height for transport	3.5m
Height installed (incl. CoolerTop [®])	8.4m
Length	12.96m
Width	3.98m
Hub dimensions	
Max. transport height	3.5m
Max. transport width	3.7m
Max. transport length	5.5m

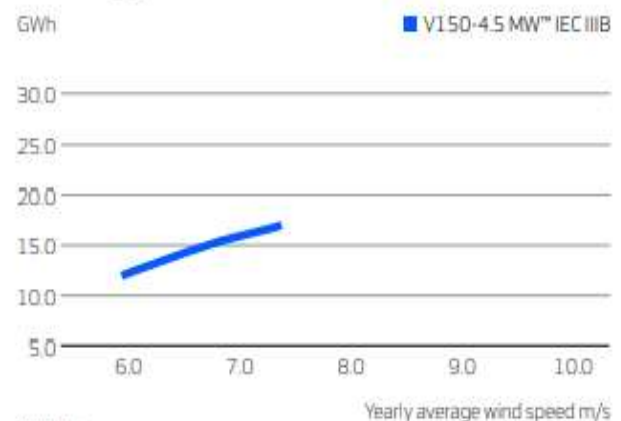
Blade dimensions	
Length	73.7m
Max chord	4.2m
Max. weight per unit for transportation	
	70 metric tonnes

- Turbine options**
- Condition Monitoring System
 - Service Personnel Lift
 - Vestas Anti-Icing System™
 - Vestas Ice Detection
 - Low Temperature Operation to -30°C
 - Fire Suppression
 - Shadow detection
 - Vestas Bat Protection System
 - Aviation Lights
 - Aviation Markings on the Blades
 - Vestas IntelliLight[®]
 - Nacelle Hatch for Air Inlet

Sustainability	
Carbon Footprint	5.6g CO ₂ e/kWh
Return on energy break-even	5.9 months
Lifetime return on energy	41 times
Recyclability rate	82.8%

Configuration: 105m hub height and wind class IEC IIIB. Depending on site-specific conditions. Metrics are based on an externally reviewed Life Cycle Assessment available on vestas.com

Annual energy production



Assumptions
One wind turbine, 100% availability, 0% losses, k factor = 2

V162-6.2 MW™ IEC S



- Condition Monitoring System
- Oil Debris Monitoring System
- Service Personnel Lift
- Low Temperature Operation to -30°C
- Vestas Ice Detection™
- Vestas Anti-Icing System™
- Vestas Shadow Flicker Control System
- Aviation Lights
- Aviation Markings on the Blades
- Fire Suppression System
- Vestas Bat Protection System
- Lightning Detection System
- Power Optimised Modes

Connecting proven system designs from the 2 MW, 4 MW, and 9 MW platforms, EnVentus™ variants feature a nominal rating of 6.2 MW with additional power optimised modes.
IEC S

The V162-6.2 MW™ IEC S is designed for low to medium wind sites, with extensive application in high wind speeds.
40 years

With more than 181 GW of wind turbine capacity installed and 40 years of experience in relentlessly pursuing performance improvements, EnVentus™ is Vestas' next generation in the evolution of wind turbines.

Technical specifications

Power regulation operational data

Pitch regulated with variable speed

Rated power	6,200kW
Cut-in wind speed	3m/s
Cut-out wind speed	25m/s
Wind class	IEC S
Standard operating temperature range	from -20°C* to +45°C

SOUND POWER

Maximum	104.8dB(A)**
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ROTOR

Rotor diameter	162m
Swept area	20,612m ²
Aerodynamic brake	full blade feathering with 3 pitch cylinders

ELECTRICAL

Frequency	50/60 Hz
Converter	full scale

GEARBOX

Type	two planetary stages
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TOWER

Hub heights	119 m (IEC S/DIBt S), 125 m (IEC S), 149 m (IEC S), 166 m (IEC S/DIBt S) and 169 m (DIBt S)
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SUSTAINABILITY METRICS

Carbon Footprint	6.2g CO ₂ e/kWh
Return on energy break-even	6.5 months
Lifetime return on energy	37 times
Recyclability rate	84%

Configuration: 149m hub height, V_{avg}=7.4m/s, k=2.22. Depending on site-specific conditions.
Metrics are based on an externally reviewed Life Cycle Assessment available on [vestas.com](https://www.vestas.com)

V172-7.2 MW™ IEC S



- 6.5 MW Operational Mode
 - 6.8 MW Operational Mode
 - Oil Debris Monitoring System
 - High Temperature Cooler Top
 - Service Personnel Lift
 - Low Temperature Operation to -30°C
 - Vestas Ice Detection™
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- Vestas Shadow Flicker Control System
 - Aviation Lights
 - Aviation Markings on the Blades
 - Fire Suppression System
 - Vestas Bat Protection System
 - Lightning Detection System

Technical specifications

POWER REGULATION OPERATIONAL DATA

Pitch regulated with variable speed

Standard rated power
7,200kW

Cut-in wind speed 3m/s

Cut-out wind speed 25m/s

Wind class IEC S

Standard operating temperature range from -20°C* to +45°C

*High wind Operation available as standard

SOUND POWER

Maximum 106.9dB(A)**

**Sound Optimised Modes available dependent on site and country

ROTOR

Rotor diameter 172m

Swept area 23,235m²

Aerodynamic brake full blade feathering with 3 pitch cylinders

ELECTRICAL

Frequency 50/60 Hz

Converter full scale

GEARBOX Type two planetary stages

TOWER Hub heights*

114 m (IEC S), 150 m (IEC S), 164 m (DIBt), 166 m (IEC S), 175 m (DIBt) and 199 m (DIBt)

*Site specific towers available on request

SUSTAINABILITY

Carbon Footprint CO ₂ e/kWh	6.4g
Return on energy break-even	6.9 months
Lifetime return on energy	34 times
Recyclability rate	86.6%

Configuration: 166m hub height, $V_{avg}=7.4\text{m/s}$, $k=2.48$. Depending on site-specific conditions. Metrics are based on an internal streamlined assessment. An externally reviewed Life Cycle Assessment will be made available on vestas.com once finalized.