

APPENDIX 4.1: VESTAS V90 TURBINE SPECIFICATION SHEET

V90-3.0 MW  
Facts and figures

+20,000

committed, highly-trained employees around the globe are always ready to help in any aspect of wind power production.

<b>POWER REGULATION</b> pitch regulated with variable speed	
<b>OPERATING DATA</b>	
Rated power	3.0 MW
Cut-in wind speed	3.5 m/s
Rated wind speed	15 m/s
Cut-out wind speed	25 m/s
Re-cut in wind speed	20 m/s
Wind class	IEC IA and IEC IIA
Operating temperature range	standard range: -20 °C to 40 °C  low temperature option: -30 °C to 40 °C
<b>SOUND POWER</b> (Mode 0, 10 m above ground, hub height 80 m, air density 1,225 kg/m³)	
4 m/s	97.9 dB (A)
5 m/s	100.9 dB (A)
6 m/s	104.2 dB (A)
7 m/s	106.1 dB (A)
8 m/s	107.0 dB (A)
9 m/s	106.9 dB (A)
<b>ROTOR</b>	
Rotor diameter	90 m
Swept area	6,362 m²
Nominal revolutions	16.1 rpm
Operational interval	8.6 - 18.4 rpm
Air brake	full blade feathering with 3 pitch cylinders
<b>ELECTRICAL</b>	
Frequency	50/60 Hz
Generator type	4-pole doubly fed generator

<b>GEARBOX</b>	
Type	two planetary stages and one helical stage
<b>TOWER</b>	
Type	tubular steel tower
Hub heights	65 m and 80 m (IEC IA) 105 m (IEC IIA)
<b>BLADE DIMENSIONS</b>	
Length	44 m
Max. chord	3.5 m
<b>NACELLE DIMENSIONS</b>	
Height for transport	4 m
Length	9.65 m
Width	3.65 m (3.85 m installed)
<b>HUB DIMENSIONS</b>	
Max. diameter	3.6 m
Max. width	4.2 m
Length	4.4 m
Max. weight per unit for transportation	70 metric tonnes

POWER CURVE FOR V90-3.0 MW  
Noise reduced sound power modes are available

