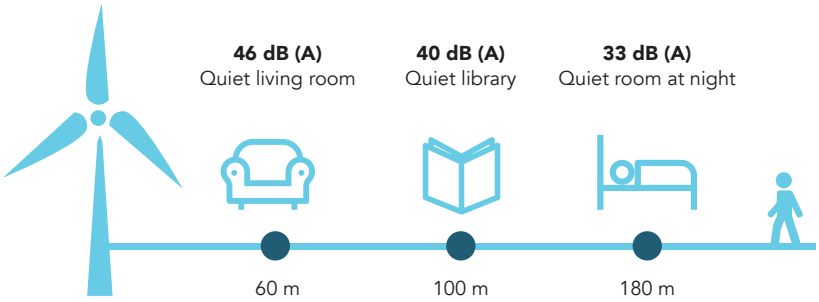
E-20

DATA SHEET

The E-20 is capable of supplying electricity to 13 homes each year.

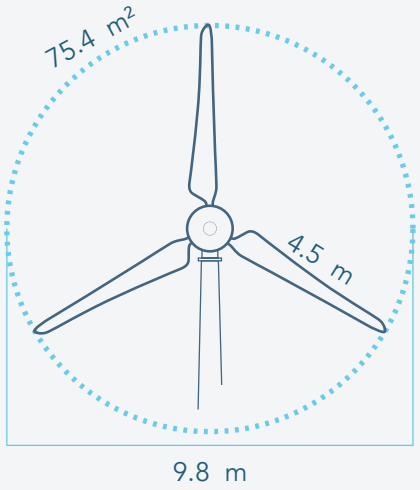
GENERATOR	Type	Permanent Magnet
	Maximum Power	20 kW
	Rated Power	18 kW
ROTOR	Configuration	Horizontal Axis
	No. of Blades	3
	Blade Material	Glass fibre
	Blade Length	4.5 m
	Rotor Diameter	9.8 m
	Swept Area	75.4 m^2
	Nominal Rotor Speed	120 rpm
	Pitch/Yaw	Downwind active pitch with assisted yaw
WIND	Cut-In Speed	2 m/s
	Rated Wind Speed	11 m/s
	Cut-Out Speed	30 m/s
	Survival Speed	70 m/s
WEIGHTS	Nacelle/Rotor	1,000 kg
TOWERS	Lattice	15 – 36 m
	Monopole	18 – 27 m
	Tilt-Up	18 – 27 m
DESIGN PARAMETERS	Turbine Design Class	IEC 61400-2 Class I
	Temperature Range	-20° to 50°C
	Lifespan & Servicing	20 years, subject to regular maintenance

NOISE



Approx. Data

TECHNICAL PROFILE



CLASS I

ACTIVE REGULATION

SAFETY

- Base Level: Active blade pitch control, with 90° of movement, limits power output and can put blades in a total stall position.
- Second Level: Electronic control system activates mechanical brake with shaft lock and electromagnetic induction brake.
- Third Level: Passive springs deploy, putting the turbine blades in a stall position, spoiling the rotor aerodynamics and subsequently its ability to rotate.

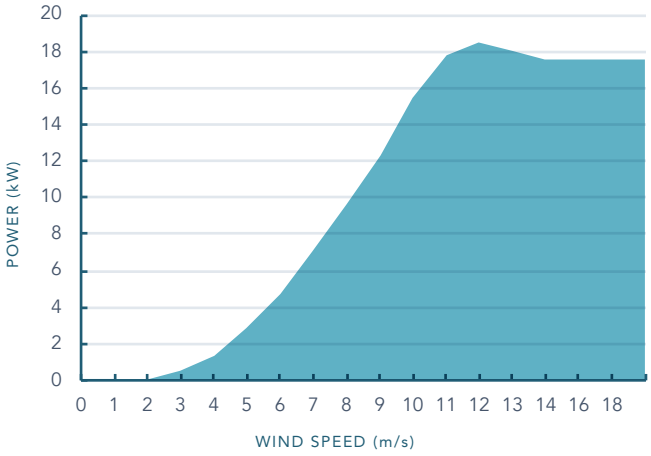
DATA INPUT & MANAGEMENT

- Remote Control: Allows the remote customization of the wind turbine in order for Ryse to provide optimum performance in every site.
- Storm Detection: Intelligent storm detection algorithm and automatic safety lock protect the turbine in the event of dangerous gusts/hurricane weather.
- LCD display in control box. Can output to local PC or be monitored remotely via the internet.

CONSTRUCTION & MAINTENANCE

- Anti-Corrosive Blades: The blades and nacelle are treated with epoxy paint and hermetically sealed. This gives corrosion and saline protection, making the turbine ideal for island, coastal or desert deployments.
- Ryse service contract available.
- Online store for easy purchase of spare parts & equipment: *ryse.energy/shop*

POWER CURVE



ENERGY OUTPUT

Annual Mean Wind Speed (m/s)	Estimated Annual Output (kWh)
2	4,080
3	10,700
4	20,500
5	32,200
6	47,800
7	64,800
8	81,300
9	95,900
10	107,800