

MITSUBISHI Wind Turbine

MWT-S2000

Superior Technology for A Brighter Future

Variable Speed, Blade Pitch Control System

High Efficiency with Optimum Output Control for Varying Wind Speed.

Gearless Configuration Design

Low Noise and Maintenance Free.

Synchronous Generator With Permanent Magnet Type Rotor

High Quality Electricity by Controlling the Current and Voltage.
No Need of Exciter by Permanent Magnet Rotor.



BLADE

MWT-S2000 Blade Shop



View of MWT-S2000 Blade



LOAD TEST of BLADE

Before Load Test

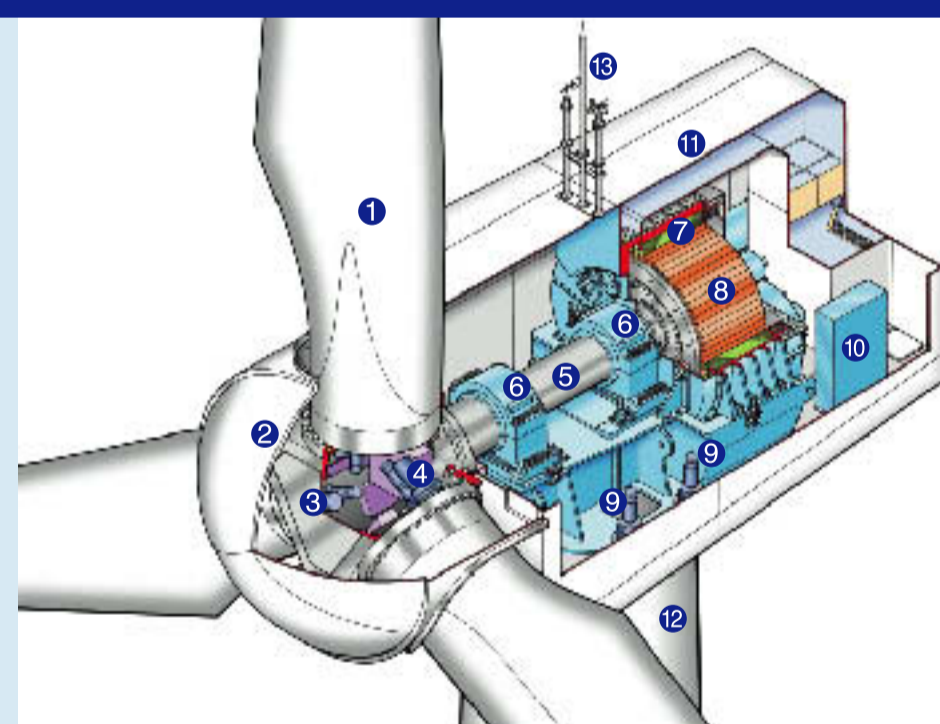


Max. Load Test

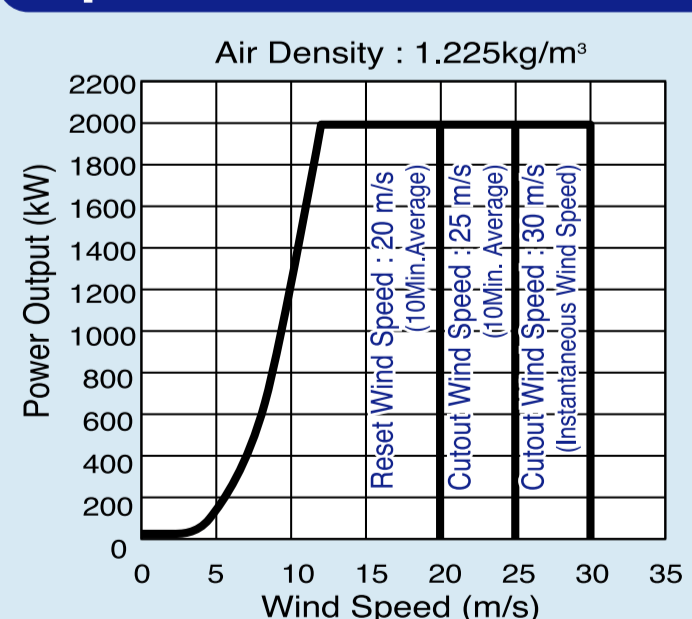


TECHNICAL DRAWING

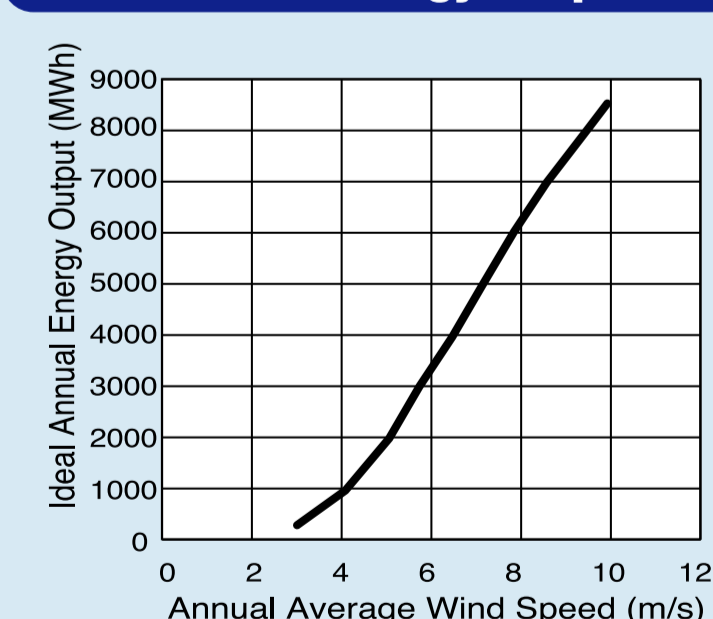
- ① Blade
- ② Front Capsule
- ③ Rotor Head
- ④ Pitch Motor
- ⑤ Main Shaft
- ⑥ Main Bearing
- ⑦ Generator Stator
- ⑧ Generator Rotor
- ⑨ Yawing Gear
- ⑩ Control Panel
- ⑪ Nacelle
- ⑫ Tower
- ⑬ Anemometer



Expected Performance Curve



Ideal Annual Energy Output



Future Development

MODEL	2002	2003	2004	2005	2006	2007
MWT-1000A (Gearing type) for class II (medium and low wind condition)	★					
MWT-S2000 (Gearless type) for class I and off shore		★				
MWT-2000A (Gearing type) for class II (medium and low wind condition)			★			
MWT-S5000 (Gearless type) for class I and off shore						★

★ Development & Trial Operation

SPECIFICATIONS

Wind Turbine

Type : Horizontal Axis, Direct Drive, Variable Speed Propeller Type

Rated Output : 2,000kW
Rotor Diameter : 75m
Rotor revolution : 8~24 rpm
Blade Number : 3 (GFRP)
Rated Wind Speed : 13.0 m/s
Cut In Wind Speed : 2.5 m/s
Cut Out Wind Speed : 25.0 m/s (10 Min. Average)
30.0 m/s (Instantaneous Wind Speed)

Reset of Cut Out : 20.0 m/s (10 Min. Average)
Survival Wind Velocity : 70.0 m/s
Power Regulation : Pitch Control and Variable Speed
Rotational Direction : Clockwise (Front View)
Orientation : Upwind
Cone Angle : 0 degrees
Tilt Angle : 5 degrees

Generator

Type : Synchronous Permanent Magnet Type Gen.
Rated Output : 2,000kW
Voltage, Phase, frequency : 600V×3Phase×50Hz
600V×3Phase×60Hz

Tower

Type : Monopole
Hub Height (Nacelle Center) : 60m / 70m

Control System

Active Pitch Control
Active Yaw Control
Power Control

Wind Class

IEC IA