

MITSUBISHI WIND TURBINE GENERATOR

MWT-1000



Technical Data

Operation Data

Rated Power	1000 kW
Hub Height	60 m/69 m
Power Regulation	Blade-Pitch Control
Cut-in Wind Speed	4.0 m/s
Rated Wind Speed	13.5 m/s
Cut-out Wind Speed	25 m/s (10 min. Ave.), 30 m/s (Instantaneous)
Survival Wind Speed	70 m/s
Yaw System	Active

Rotor

Number of Blades	3
Material	GFRP
Diameter	57 m
Swept Area	2,550 m ²
Rotational Speed	21 rpm

Gearbox

Type	3 Stage (1 Planetary, 2 Parallel)
Gear Ratio	1:85.7/1:71.4 (60 Hz/50 Hz)

Generator

Type	Induction Generator (4 Pole Type)
Voltage	600 V/690 V (60 Hz/50 Hz)
Frequency	60 Hz/50 Hz
Rated Speed	1,800 rpm/1,500 rpm (60 Hz/50 Hz)
Grid Connection of Generator	Soft Starter

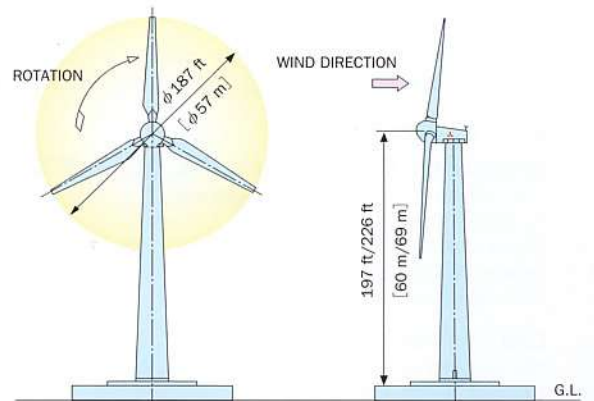
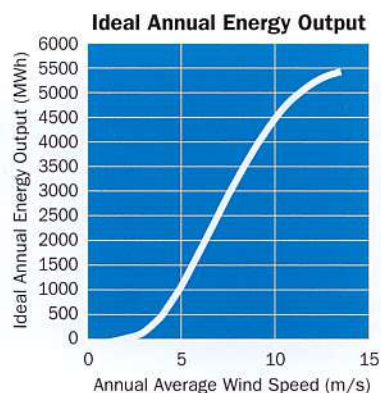
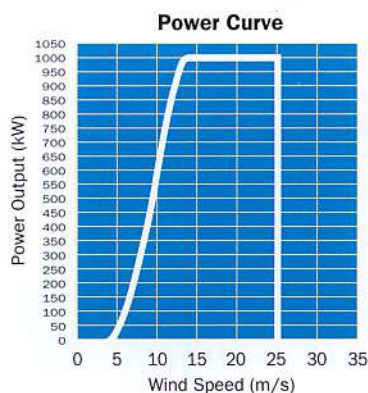
Safety System — Brake

Aerodynamic Brake	Blade Feathering
Mechanical Brake	Disk Brake (High Speed Shaft)

Tower

Type	Taper Monopole 60 m (3 section type) 69 m (3 section type)
------	---------------------------------------------------------------

Impressive Performance



Superior Technology for A Brighter Future

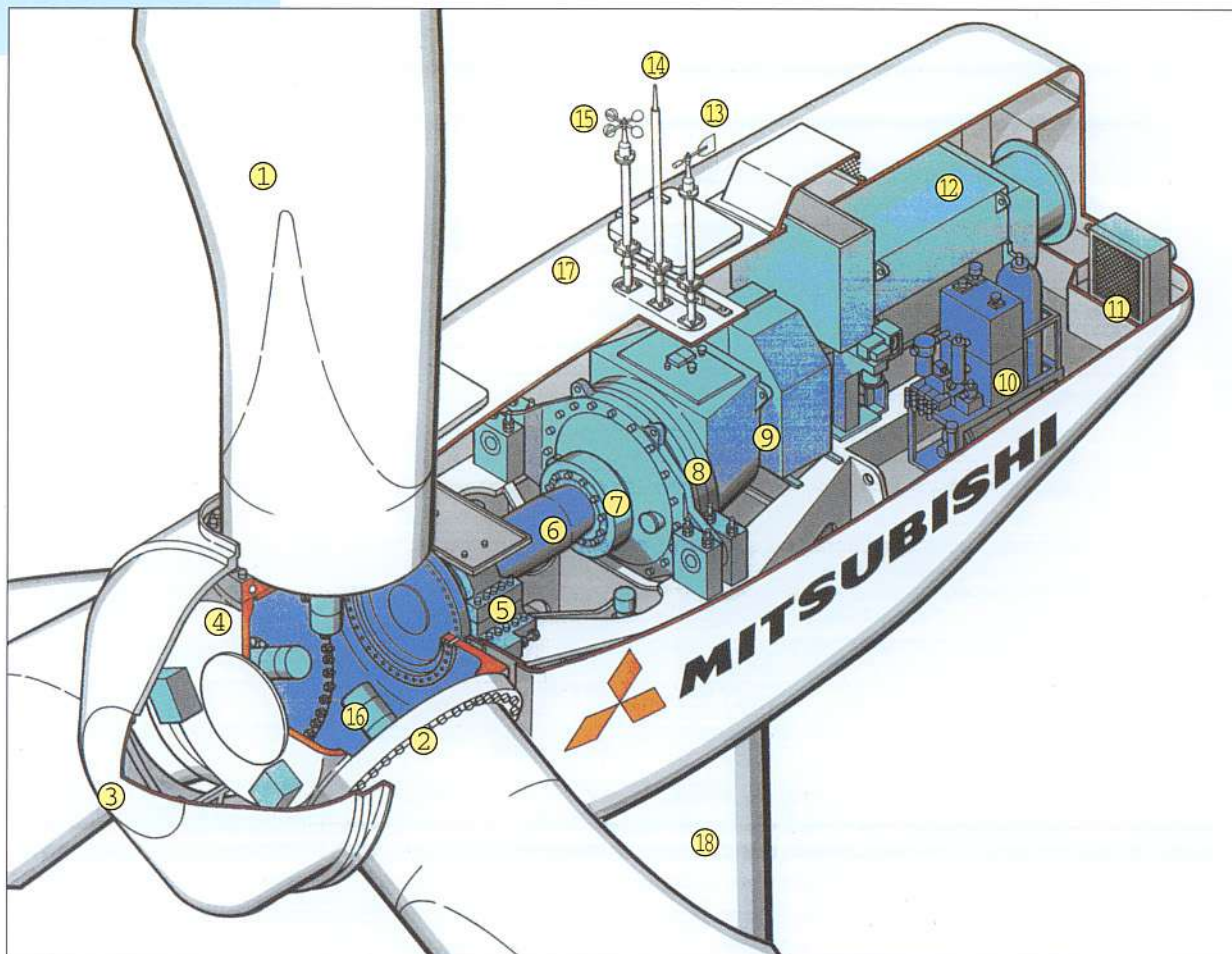
MITSUBISHI WIND TURBINE GENERATOR

MWT-1000

• Higher Production

• Well-proven Technology

for class 1 wind condition



Schematic Diagram

- | | | | |
|-----------------|-------------------------|--------------------------|-------------------------------|
| ① Blade | ⑥ Main Shaft | ⑪ L.O. Cooler (with Fan) | ⑬ Hydraulic Pitch Link System |
| ② Blade Bearing | ⑦ Coupling (Low Speed) | ⑫ Generator | ⑭ Nacelle |
| ③ Front Capsule | ⑧ Gear Box | ⑬ Wind Vane | ⑮ Tower |
| ④ Rotor Head | ⑨ Coupling (High Speed) | ⑭ Lightning Rod | |
| ⑤ Main Bearing | ⑩ Hydraulic Unit | ⑮ Anemometer | |

MITSUBISHI HEAVY INDUSTRIES, LTD.

Head Office

3-1, Minatomirai 3-chome, Nishi-ku, Yokohama 220-8401, Japan
Phone: 81-45-224-9545 Fax: 81-45-223-1725 URL: <http://www.mhi.co.jp>

<North America>

Mitsubishi Power Systems, Inc. (MPS)

100 Colonial Center Parkway, Lake Mary,
FL 32746, U.S.A.
Phone: 1-407-688-6100
Telefax: 1-407-688-6480
URL: <http://www.mpsqh.com>

Los Angeles Office

100 Bayview Circle, Suite 4000
Newport Beach, CA 92660, U.S.A.
Phone: 1-949-856-8400
Telefax: 1-949-856-4481, 4482

<Europe>

Mitsubishi Heavy Industries Europe, Ltd. (MHIE)

Head Office

3rd Floor, Thavies Inn House, 3-4 Holborn Circus,
London EC1N 2HA, United Kingdom
Phone: 44-20-7842-8100
Telefax: 44-20-7842-8101

Munich Branch

Sonnenstr. 32 6F, 80331 Munich, Germany
Phone: 49-89-211079-0
Telefax: 49-89-211079-33

Madrid Branch

C/Serrano 21, 4ª Planta, 28001 Madrid, Spain
Phone: 34-91-577-1632, 576-7591, 576-9320
Telefax: 34-91-576-6653

