Pioneer Wincon 750/57

Estd. 1996



Robust Wind Technology

Corporate Profile

Pioneer Wincon (PW) is a member company of the Pioneer Asia Group having diverse interests in safety matches, chemicals, non-ferrous, forgings, textiles, information technology etc. The promoters of Pioneer Asia Group are the first in India to install and connect private wind farms to the state electricity board as early as 1989. PW was incorporated in the year 1996 and has over the last two decades become a trusted name and an emerging market leader in wind energy. The core business consists of design, manufacture, marketing and maintenance of wind power systems that harness the energy of wind to generate green power. PW is an ISO 9001:2015 certified company. The corporate office is in Chennai and the manufacturing facility is in Pondicherry, 160 km from Chennai.

Technical know-how

Market Leaders Land mark in Exports Pioneer Wincon (PW) is a member company of the Pioneer Asia Group having diverse interests in safety matches, chemicals, nonferrous, forgings, textiles, information technology etc. The promoters of Pioneer Asia Group are the first in India to install and connect private wind farms to the state electricity board as early as 1989. PW was incorporated in the year 1996 and has over the 25 years has become a trusted name and an emerging market leader in wind energy. The core business consists of design, manufacture, marketing and maintenance of wind power systems that harness the energy of wind to generate green power. PW is an ISO 9001:2015 certified company. The corporate office is in Chennai and the manufacturing facility is in Pondicherry.

Pioneer Wincon was formed as a joint venture between Pioneer Asia Group and Wincon West Wind of Denmark (as a division of Vest Frost, A/s Denmark) well known for their turbine's simple and sturdy design and advanced power electronics. Now Pioneer Wincon is fully owned by Pioneer Asia Group and is having 100% worldwide rights for the Technical Know how for the 250KW & 750 KW wind turbines.The P750/57 was re-designed based on Wincon's technology by Pioneer Wincon and Aerovide from Germany.

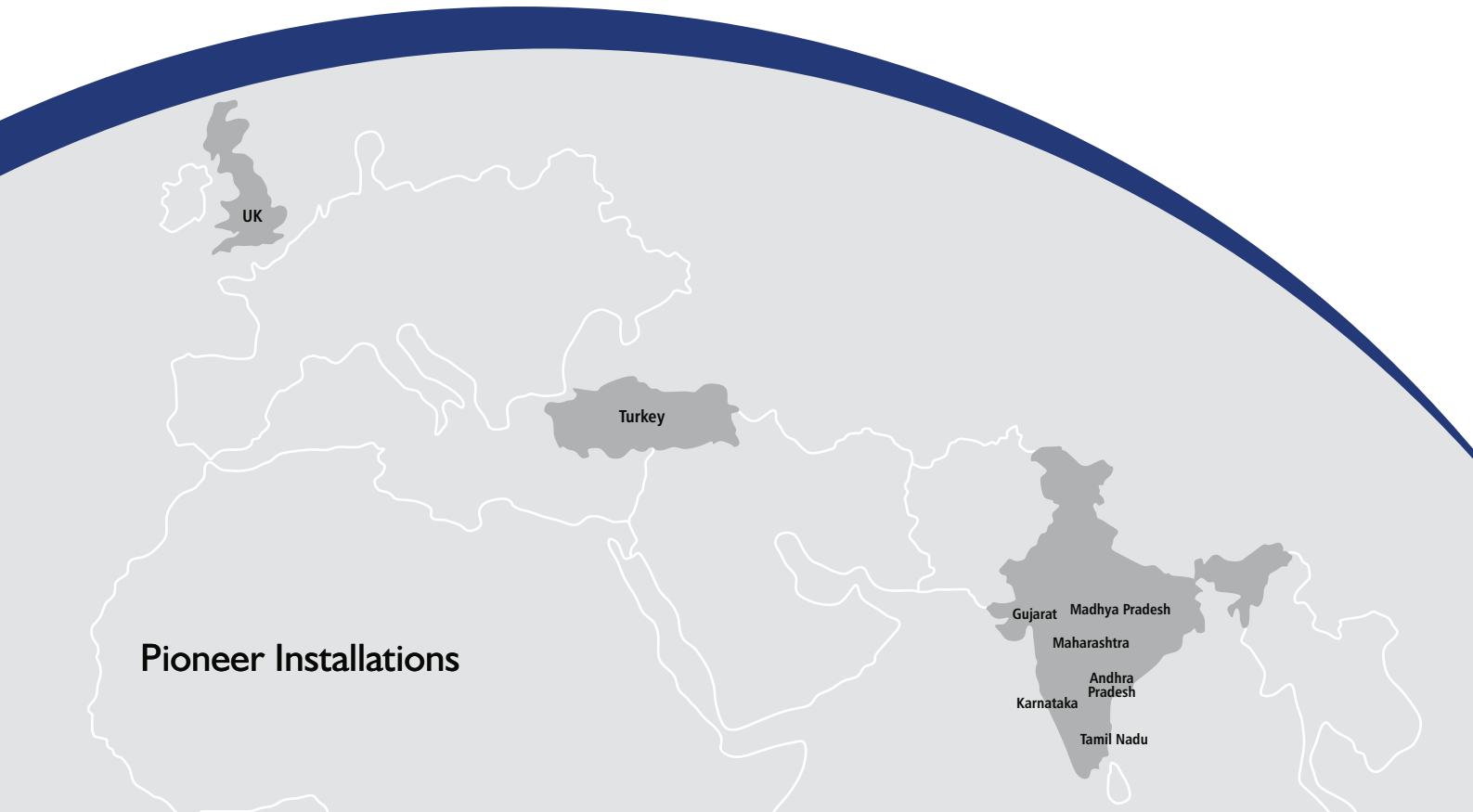
Market Leaders

PW is the market leader in the Indian wind industry with more than two decades of experience and over 1000 numbers of Wind turbines in operation.

Land mark in Exports

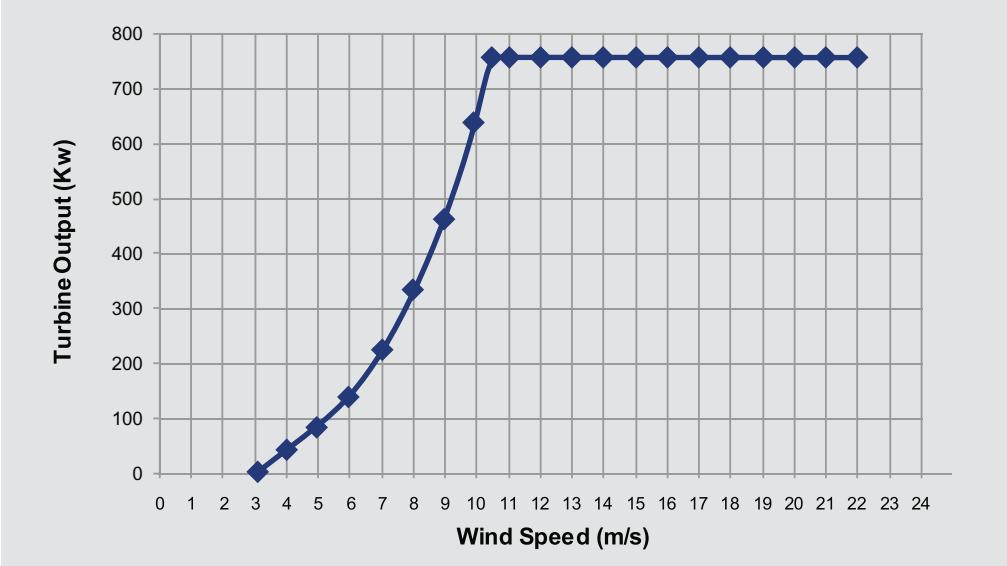
Our 250Kw Wind turbines are running successfully in Turkey and U.K.

Pioneer Installations

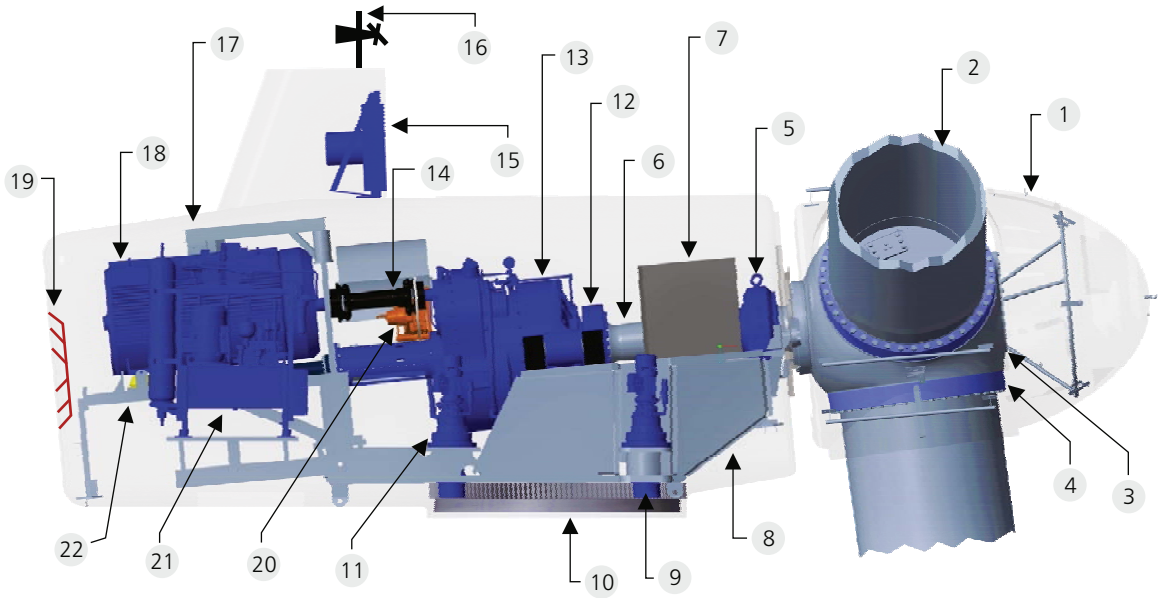




Power curve chart for Pioneer Wincon 750/57



Nacelle diagram with components



1. Nose cone
2. Blade
3. Hub
4. Blade Bearing
5. Bearing Housing
6. Main Shaft
7. Top Panel
8. Bottom Frame
9. Yaw Pinion
10. Yaw Flange
11. Yaw Motor
12. Shrink Disc
13. Gear Box
14. CD Coupling
15. Gear Box Cooler
16. Anemometer & Windvane
17. Material Lifting Crane
18. Generator
19. Rear Louver
20. Mechanical Brake Unit
21. Hydraulic Power Unit
22. Generator Console



Powered By

AEROVIDE

Technical Specifications* - PIONEER WINCON 750/57

1. General Data

Nominal power	750 kW
Rotor diameter	57.0
Swept area	2551. 7 Sq.m
Hub height	61.5 / 75.0 M
Wind Turbine Class	III A, IEC 61400-1,ed.3

2. Operational Data

Cut-in, wind speed	4.0 m/s
Rated wind speed	10.7 m/s
Cut- out, wind speed	25.0 m/s
Survival, wind speed for 2s max	>52.5 m/s
Maintenance wind speed	13.0 m/s

3. Rotor

No. of blades	3
Rotor position	Up wind
Rotor speed	25.20 RPM
Rotor diameter	57.0 m
Swept area	2551.7 Sq.m
Regulation	variable speed with pitch
Weight, rotor (including hub)	14237 Kg.

4. Blade

Type	PW 28
Profile data	NACA 63
Length	28.0 m
Material	Fiber glass reinforced polyester
Weight	2472 kg

5. Hub

Type	Cast Steel
Material	Cast.GGG 40.3

6. Main Shaft and Bearings

Type, shaft	Forged
Material	Steel alloy, 34CrNiMo6
Type, bearings	Spherical roller bearings
No. of bearings	1

7. Gearbox

Type	3-Stage: 1Planetary + 2 Helical
Ratio	1:67.7
Lubrication	ISO - VG 320 (Injection method)
Oil volume	157 lts.

8. Brake Systems

Mechanical brake	Hydraulic Brake Caliper Type
Brake position	High-speed shaft
Aerodynamic brake	Hydraulically activated blade pitching

9. Couplings

Main shaft – gearbox	Shrink disc
Gearbox – generator	Cordon link coupling

10. Generator

Type	4 pole, Induction
Rated power	750 KW
Voltage	690 V, 3 phase, AC
Operating Speed Range	1049 – 1993 RPM
Rated speed	1705 RPM
Insulation class	H
Protection class	IP 55
Weight	4500 Kgs.

11. Bedplate

Type	Welded
Profiles, steel	Bend Plate, RHS
Surface treatment	Zinc spray and 2 coat PU paint

12. Yaw System

Yaw top	Flange Type
Yaw drives, motor	Electric (4 x 1.5 KW)
Yaw drives, gear	Planetary (x 4)
Dampening system	Yaw arms with friction pads (5nos)
Yaw speed	0.486 ° per sec

13. Wind Turbine Controller

Type	PLC
Power factor	Cos phi > 0.95
Control and monitoring of	Power, Voltage, Frequency, Reactive Power, Imbalance Generator overload Yaw drives overload, Automatic cable untwisting Activation of brake systems Grid Voltage fluctuations, Grid failure Generator over speed Rotor Over speed Automatic adjustment of power factor Pitch angel and Pitching distance
Temp. Measurements on:	Control panel, converter, Gear oil High-speed shaft bearings, Main Bearing Generator windings & Bearings Transformer windings & Oil Outside temp, Nacelle inside temp Hydraulic Oil Converter Cooler Water Temp

14. Tower

Type	Lattice tower
Height	90 / 73 M
Surface treatment	Hot dip Galvanized

15. Nacelle

Weight, excl. rotor	24000 kgs.

16. Convertor

Type	Full power IGBT converter
Rated Power	750 KW
Voltage	690 V, 3 phase, AC
Power Regulation	Speed controlled with power (control above rated wind)
Grid Frequency	50 Hz
Protection Class	IP 54
Cooling	Liquid - cooled
LVRT Compatible	Yes

17. Scada

Web Scada	Yes (Optional)

* In view of continuous product improvement, specifications are subject to change without prior notice.



Estd. 1996

Pioneer Wincon

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