



# PI 700M

## Industrial Generating Set

POWERED BY



Rev-00

MODEL	rpm / Hz	VOLTAGE	PRIME <sup>(1)</sup>	STANDBY <sup>(2)</sup>
PI 700M	1500 / 50	400 / 230	630kVA / 504 kWe	700 kVA / 560kWe

Full rated power available upto 100 meter elevation at ambient of 27degC, for other temperature and altitude limits please consult application team.

### ENGINE SPECIFICATIONS

Rated Output (PRP) <sup>(1)</sup>	567 kW <sub>m</sub>
Rated Output (ESP) <sup>(2)</sup>	586 kW <sub>m</sub>
Engine Make & Model	Mitsubishi S6R-PTAR
No. of Cylinders	6 Vertical In-line
Cycle	4 Strokes
Aspiration	Turbocharged
Cooling Method	Water
Governing Type	Electrical
Governing Class	ISO 8528-5
Compression Ratio	14.0:1
Displacement	24.51 L (1496 in <sup>3</sup> )
BorexStroke	170x180 mm
Battery and Charger Alternator	24 VDC , 30 Amp

### AIR SYSTEM

Air Filter Type	Turbo Filter
Combustion Air Flow (PRP)	47 m <sup>3</sup> /min
Combustion Air Flow (ESP)	51 m <sup>3</sup> /min
Radiator Air Flow	582 m <sup>3</sup> /min

### COOLING SYSTEM

Total Coolant Capacity (L)	110 litres
Water Pump Type	Centrifugal Eng-Driven
Radiator Fan Load	15 kW
Heat Radiation to Room (PRP)	40.8 kW
Heat Radiation to Room (ESP)	45.0 kW

### LUBRICATION SYSTEM

Oil Filter Type	Full Flow Paper Element
Total Oil Capacity	100 litres
Oil Pan	80 L (21.1 US gal)
Oil Type	SAE 10W/SAE 30W/SAE15W-40

### FUEL SYSTEM

Fuel Filter:***TBA	
Recommended Fuel	Class A2 Diesel
Fuel Consumption Standby	147 L/hr
Fuel Consumption 100% PRP	135 L/hr
Fuel Consumption 75% PRP	106 L/hr
Fuel Consumption 50% PRP	78 L/hr

### EXHAUST SYSTEM

Muffler Type	Residential Grade
Max. Back Pressure	5.88 kPa
Exhaust Gas Flow (PRP/ESP)	123 /136 m <sup>3</sup> /min
Exhaust Gas Temperature (PRP/ESP)	550 <sup>0</sup> C/550 <sup>0</sup> C

### ALTERNATOR SPECIFICATIONS

Rated Output (Prime) <sup>(1)</sup>	670 kVA
Rated Output (Standby) <sup>(2)</sup>	738 kVA
Alternator Make & Model	HCI544F/S5L1D-F41
Number of Poles	4
Number of Winding Leads	12
Type of Bearing	Single
Insulation Class / Temp Rise	H/H
Efficiency @ Rated Voltage	94.8%/94.6%
Ingress Protection Rating	IP 23
Excitation System	Self-Excited
AVR Model	Stamford - AS440

### ALTERNATOR OPERATING DATA

Overspeed	2250 r.p.m
Voltage Regulation	± 1 %
Waveform distortion	No load < 1.5%, Linear load < 5%
Radio Interface	EN 61000-6-2 &EN 61000-6-4
Cooling Air Flow	1.12 m <sup>3</sup> /sec

<sup>(1)</sup> **PRIME POWER RATING (PRP):** PRP is defined as the maximum power which a Generating set is capable of delivering continuously whilst supplying a variable electrical load when operated for an unlimited number of hours per year. The permissible average power output over 24 hours shall not exceed 70% of PRP unless otherwise agreed by RIC engine manufacturer. An overload capability of 10% of 100% of the prime rated electrical power is permitted for emergency use for a period of 1 hour within 12 hours of operation

<sup>(2)</sup> **EMERGENCY STANDBY POWER RATING (ESP):** ESP is defined as the maximum power available during a variable electrical power sequence, under the stated operation condition, for which a generating set is capable of delivering power in the event of a utility power outage or under test condition for up to 200 Hours of operation per year. The permissible average output over 24 hour of operation shall not exceed 70 % of the ESP power rating noting that no over load is permitted.





### CONTROLLER SPECIFICATIONS

Controller Make & Model	DeepSea 6120MKIII
Operation Mode	MRS / AMF (optional)
Display	Graphic Back-lit LCD (128x64) pixels
Ingress Protection Rating	IP65
Binary Inputs/Outputs	8 / 6
Analog Inputs	4
Measurement	Vac, A, Hz, kVA, kW, Vdc
Event Log	Alarms log, Hrs log
Communication	USB

### ENCLOSURE SPECIFICATIONS

Enclosure Type	Acoustic & Weather Proof
Anticorrosive Protection	
Polyester Powder Coated Galvanized Sheet	
Ingress Protection Rating	IP22
Lifting	ISO Standard Lifting
Emergency	External Emergency Push Button
Canopy RAL Color	RAL 2000
Baseframe RAL Color	RAL 9011
Noise Pressure level @ 7m	85 dB(A)

### GENSET DIMENSIONS & WEIGHT

GENSET TYPE	Length (mm)	Width (mm)	Height (mm)	Fuel Tank Capacity (L)	Dry Weight (kg)	Wet Weight (kg)
OPEN	4405	2100	2350	1350	5005	5145
CLOSE	5600	2250	2800	1350	7000	8000

Note: These dimensions are for preliminary guidance. Please refer to GA drawing.

### STANDARD MECHANICAL FEATURES

Genset design provides a low noise level with an optimized performance of the ventilation and exhaust systems at 50 °C ambient temperature.

Robust structure design of Enclosure and Baseframe.

Heavy duty lifting lugs.

Multi doors for easy access & maintenance.

Ingress Protection Rating according to BS EN 60529.

Heavy Duty Baseframe with built-in tank & forklift pockets.

Industrial Grade Muffler with rain cap.

### STANDARD ELECTRICAL FEATURES

An advance Control system is designed to provide a comprehensive protection and to monitor the parameters of generating set.

MCCB power circuit breaker.

Battery with charging alternator, cables, and tray.

Sealed harness & high resistant electrical connections.

Fast and accurate protection response.

Generating Set remote start function.

Numeric display with LED. Various languages capable.

### OPTIONAL FEATURES

Advanced Controllers are available on request.

4 poles manual / Motorized Circuit breaker

Jacket water pre-heater

Static Battery Charger

Critical grade muffler

Fuel Filter / Water separator Fuel Filter

Remote Annunciator

### Application

Infrastructure, Industrial, Residential, Telecom,  
Defense, Mining, Agriculture

