



الصناعات الدقيقة
PRECISION INDUSTRIES®

PI 1500Y

Industrial Generating Set

POWERED BY



| MODEL | rpm / Hz | VOLTAGE | PRIME ⁽¹⁾ | STANDBY ⁽²⁾ |
|----------|-----------|-------------|----------------------|------------------------|
| PI 1500Y | 1500 / 50 | 400 / 230 V | 1375kVA / 1100kWe | 1500kVA / 1200kWe |

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) ⁽¹⁾ | 1282 kW _m |
| Rated Output (ESP) ⁽²⁾ | 1160 kW _m |
| Engine Make & Model | YC12VTD1830-D30 |
| No. of Cylinders | 12 V-TYPE |
| Cycle | 4 Strokes |
| Aspiration | Turbocharged, water-air intercooled |
| Cooling Method | Water |
| Governing Type | Electronic |
| Governing Class | ISO 8528 G3 |
| Compression Ratio | 14:01 |
| Displacement | 39.2 L |
| BorexStroke (mm) | 152×180 mm |
| Battery and Charger Alternator | 24V |

AIR SYSTEM

| | |
|---------------------------|--------------------------|
| Air Filter Type | Dry paper element |
| Combustion Air Flow (PRP) | 75.8 m ³ /min |
| Combustion Air Flow (ESP) | 80.7 m ³ /min |
| Radiator Air Flow | 2050 m ³ /min |

COOLING SYSTEM

| | |
|------------------------------|------------------------|
| Total Coolant Capacity (L) | 419 L |
| Water Pump Type | Centrifugal Eng-Driven |
| Radiator Fan Load | 58 kW |
| Heat Radiation to Room (PRP) | 74 kW |
| Heat Radiation to Room (ESP) | 120 kW |

LUBRICATION SYSTEM

| | |
|-------------------------------|-------------------------|
| Oil Filter | TBA |
| Total Oil Capacity | (215) L |
| Oil Pan low level/ high level | 160/210 L |
| Oil Type | API CH4/CI4; SAE 15W-40 |

FUEL SYSTEM

| | |
|---------------------------|-----------------|
| Fuel Filter: | |
| Recommended Fuel | Class A2 Diesel |
| Fuel Consumption Standby | 307.6 L/hr |
| Fuel Consumption 100% PRP | 281.9 L/hr |
| Fuel Consumption 75% PRP | 216.3 L/hr |
| Fuel Consumption 50% PRP | 143.1 L/hr |

EXHAUST SYSTEM

| | |
|-----------------------------------|---|
| Muffler Type | Residential grade |
| Max. Back Pressure | 10 kPa |
| Exhaust Gas Flow (PRP/ESP) | 178.1 / 195.9 m ³ /min |
| Exhaust Gas Temperature (PRP/ESP) | ≤550 ⁰ C/≤500 ⁰ C |

ALTERNATOR SPECIFICATIONS

| | |
|------------------------------|------------------------------|
| Rated Output (Prime) (1) | 1400 kVA |
| Rated Output (Standby) (2) | 1460kVA |
| Alternator Make & Model | Stamford S6L1D-H41 |
| Number of Poles | 4 |
| Number of Winding Leads | 6 Lead std/ 12 lead optional |
| Type of Bearing | Single |
| Insulation Class / Temp Rise | H/H |
| Efficiency @ Rated Voltage | 95.80% |
| Ingress Protection Rating | IP 23 |
| Excitation System | PMG |
| AVR Model | MX321 |

ALTERNATOR OPERATING DATA

| | |
|---------------------|--|
| Overspeed | 2250 r.p.m |
| Voltage Regulation | ±0.5% |
| Waveform distortion | NO LOAD < 1.5% NON-DISTORTING BALANCED LINEAR LOAD < 5.0% |
| Radio Interface | BS EN 61000-6-2 & BS EN 61000-6-4, VDE 0875G, VDE 0875N |
| Cooling Air Flow | 1.89 m ³ /sec |

⁽¹⁾ **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

⁽²⁾ **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 6120 MKII |
| 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 | IP23 |
| Lifting | ISO Standard Lifting |
| Emergency | External Emergency Push Button |
| Canopy RAL Color | RAL 9010 |
| 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) Appx | Wet Weight (kg) Appx |
|-------------|----------------------|------------|-------------|------------------------|----------------------|----------------------|
| OPEN | 5000 | 2475 | 2650 | N/A | 9200 | 9450 |
| CLOSE | 30 FEET HC CONTAINER | | | N/A | 11742 | 11840 |

Note: The following dimensions are for preliminary guidance. For more detailed and accurate dimensions, please refer to the General Arrangement Drawing (GAD).

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.

Residential 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

Pre heating system

Static Battery Charger

Critical grade muffler

Electronic governor

Remote Annunciator

Application

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

