



PI 1500Y

Industrial Generating Set

POWERED BY



| MODEL | rpm / Hz | VOLTAGE | PRIME ⁽¹⁾ | STANDBY ⁽²⁾ |
|---------|-----------|------------|----------------------|------------------------|
| PI1500Y | 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⁾ | 1120 kW _m |
| Rated Output (ESP) ⁽²⁾ | 1232 kW _m |
| Engine Make & Model | Yuchai YC12VTD1860-D32 |
| No. of Cylinders | 12 V , 90° |
| Cycle | 4 Strokes |
| Aspiration | Turbocharged & intercooled |
| Cooling Method | Water |
| Governing Type | Electronic control |
| Governing Class | G2 - ISO 8528 Part 1 |
| Compression Ratio | 14:1 |
| Displacement | 39.2 L |
| BorexStroke (mm) | 152 x 180 |
| Battery and Charger Alternator | 24 VDC, 55 Amp |

AIR SYSTEM

| | |
|---------------------------|--------------------------|
| Air Filter Type | Dry 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 (110.7 US gal) |
| Water Pump Type | Centrifugal Eng-Driven |
| Radiator Fan Load | 58 kW |
| Heat Radiation to Room (PRP) | 65 kW |
| Heat Radiation to Room (ESP) | 105 kW |

LUBRICATION SYSTEM

| | |
|--------------------|--------------------------|
| Oil Filter Type | Spin on full flow filter |
| Total Oil Capacity | 215 L (56.8 US gal) |
| Oil Pan | 210 L (55.5 US gal) |
| Oil Type | API CH4/CI4; SAE 15W-40 |

FUEL SYSTEM

| | |
|--|----------------------------|
| Fuel Filter: Split element fuel filter | |
| Recommended Fuel | Class A2 Diesel |
| Fuel Consumption Standby | 307.6 L/hr (81.26 US gal/) |
| Fuel Consumption 100% PRP | 281.9 L/hr (74.5 US gal/) |
| Fuel Consumption 75% PRP | 216.3 L/hr (57.14 US gal/) |
| Fuel Consumption 50% PRP | 143.1 L/hr (37.8 US gal/) |

EXHAUST SYSTEM

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

ALTERNATOR SPECIFICATIONS

| | |
|---------------------------------------|--------------------|
| Rated Output (Prime) ⁽¹⁾ | 1400 kVA |
| Rated Output (Standby) ⁽²⁾ | 1500 kVA |
| Alternator Make & Model | Stamford S6L1D-H41 |
| Number of Poles | 4 |
| Number of Winding Leads | 6 |
| Type of Bearing | Single |
| Insulation Class / Temp Rise | H/H |
| Efficiency @ Rated Voltage | 95.00% |
| 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- |
| Radio Interface | BS EN 61000-6-2 & BS EN 6100 |
| 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 | IP22 |
| Lifting | ISO Standard Lifting |
| Emergency | External Emergency Push Button |
| Container RAL Color | RAL 9001 |
| 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 | 6219 | 2005 | 2751 | NA | 10777 | NA |
| CLOSE | 9m fabricated CONTAINER | | | NA | 13000 | 13100 |

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.

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

STANDARD ELECTRICAL FEATURES

An advanced 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.

