PI 1880P

Industrial Generating Set

PRECISION INDUSTRIES — الصناعات الدقيقة

POWERED BY Perkins

MODEL	rpm / Hz	VOLTAGE	PRIME (1)	STANDBY (2)
PI 1880P	**1800 / 60**	**480 / 277**	**1710 kVA / 1368kWe**	**1880 kVA / 1504 kWe**

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)	1440 kW_m
Rated Output (ESP) (2)	1583 kW_m
Engine Make & Model	Perkins 4012-46TAG3A
No. of Cylinders	12, V
Cycle	4 Strokes
Aspiration	Turbocharged & Air to Air Charge Cooled
Cooling Method	Water
Governing Type	Electronic
Governing Class	G2 - ISO 8528 Part 1
Compression Ratio	12.8:1
Displacement	45.84 L (2794.in^3)
BorexStroke (mm)	160x190
Battery and Charger Alternator	24 VDC , 55 Amp

AIR SYSTEM

Air Filter Type	Dry Element
Combustion Air Flow (PRP)	144 m^3/min
Combustion Air Flow (ESP)	150.8 m^3/min
Radiator Air Flow	2046 m^3/min

COOLING SYSTEM

Total Coolant Capacity (L)	233 L (61.5 US gal)
Water Pump Type	Centrifugal Eng-Driven
Radiator Fan Load	86 kW
Heat Radiation to Room (PRP)	116.1 kW
Heat Radiation to Room (ESP)	120 kW

LUBRICATION SYSTEM

Oil Filter Type	Full-flow spin-on oil filters
Total Oil Capacity	157.5 L (41.6 US gal)
Oil Pan	115 L (30.4 US gal)
Oil Type	API CH4/CI4; SAE 15W-40

FUEL SYSTEM

Fuel Filter: Full-flow spin-on fuel oil filters

Recommended Fuel	Class A2 Diesel
Fuel Consumption Standby	390.6 L/hr (103.1 US gal/hr)
Fuel Consumption 100% PRP	380 L/hr (100.3US gal/hr)
Fuel Consumption 75% PRP	286.4 L/hr (75.6 US gal/hr)
Fuel Consumption 50% PRP	191.8 L/hr (50.6 US gal/hr)

EXHAUST SYSTEM

Muffler Type	Residential Grade
Max. Back Pressure	5 kPa
Exhaust Gas Flow	344.9 m^3/min
Exhaust Gas Temperature	405^{0}C

ALTERNATOR SPECIFICATIONS

Rated Output (Prime) (1)	2200 kVA
Rated Output (Standby) (2)	2263 kVA
Alternator Make & Model	Stamford S7L1D-E41
Number of Poles	4
Number of Winding Leads	6
Type of Bearing	Single
Insulation Class / Temp Rise	H/H
Efficiency @ Rated Voltage	95.9%/96%
Ingress Protection Rating	IP 23
Excitation System	Excited by P.M.G.
AVR Model	Stamford - MX341

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	3.02 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.

Data Tolerance limit ± 5%

ISO 9001

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CONTROLLER SPECIFICATIONS

Controller Make & Model	DeepSea 6120
Operation Mode	MRS / AMF (optional)
Display	Graphic Back-lit LCD (128x64) pixles
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	87 dB(A)

GENSET DIMENSIONS & WEIGHT

GENSET TYPE	Length (mm)	Width (mm)	Height (mm)	Fuel Tank Capacity (L)	Dry Weight (kg)	Wet Weight (kg)
OPEN	6000	2275	2875	NA	11500	11600
CLOSE	9000	2350	3850	NA	18500	18600

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 ºC ambient temperature.
- Robust structure design of Enclosure and Baseframe.
- Hevy 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 comperhensive 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 seperator Fuel Filter
- Remote Annunciator

Application

Infrastructure, Industrial , Residential , Telecom, Defense , Mining , Aggriculture

PRECISION INDUSTRIES

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