PI 802P / PI 909P

Industrial Generating Set

POWERED BY Perkins

MODEL	rpm / Hz	VOLTAGE	PRIME (1)	STANDBY (2)
PI 802P / PI 909P	1800 / 60	480 / 277	802 kVA / 641.6 kWe	880 kVA / 704 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)	720 kW_m
Rated Output (ESP) (2)	793 kW_m
Engine Make & Model	Perkins 2806A - E18TTAG4/5
No. of Cylinders	6 Vertical In-line
Cycle	4 Strokes
Aspiration	Turbocharged
Cooling Method	Water
Governing Type	Electrical
Governing Class	G2 - ISO 8528 Part 1
Compression Ratio	14.5:1
Displacement	18.1 L (1104.in^3)
BorexStroke	145x183 mm
Battery and Charger Alternator	24 VDC , 70 Amp

AIR SYSTEM

Air Filter Type	Dry Element
Combustion Air Flow (PRP)	37 m^3/min
Combustion Air Flow (ESP)	40 m^3/min
Radiator Air Flow	702 m^3/min

COOLING SYSTEM

Total Coolant Capacity (L)	110 litres
Water Pump Type	Centrifugal Eng-Driven
Radiator Fan Load	45 kW
Heat Radiation to Room (PRP)	120 kW
Heat Radiation to Room (ESP)	132 kW

LUBRICATION SYSTEM

Oil Filter Type	Full-flow replaceable 'Ecoplus' filter
Total Oil Capacity	68 litres
Oil Pan	56 L (14 US gal)
Oil Type	API CH4/CI4; SAE 15W-40

FUEL SYSTEM

Fuel Filter: Replaceable 'Ecoplus' fuel filter elements with primary filter/water separator

Recommended Fuel	Class A2 Diesel
Fuel Consumption Standby	196 L/hr
Fuel Consumption 100% PRP	178 L/hr
Fuel Consumption 75% PRP	130 L/hr
Fuel Consumption 50% PRP	90 L/hr

EXHAUST SYSTEM

Muffler Type	Residential Grade
Max. Back Pressure	8.5 kPa
Exhaust Gas Flow (PRP/ESP)	148 / 157 m^3/min
Exhaust Gas Temperature (PRP/ESP)	433^{0}C/455^{0}C

ALTERNATOR SPECIFICATIONS

Rated Output (Prime) (1)	1025 kVA
Rated Output (Standby) (2)	1130 kVA
Alternator Make & Model	Leroysomer TAL049C
Number of Poles	4
Number of Winding Leads	6
Type of Bearing	Single
Insulation Class / Temp Rise	H/H
Efficiency @ Rated Voltage	94.6%
Ingress Protection Rating	IP 23
Excitation System	Shunt
AVR Model	Leroysomer R150

ALTERNATOR OPERATING DATA

Overspeed	2250 r.p.m
Voltage Regulation	± 1 %
Waveform distortion	No load < 3.5%, Linear load < 5%
Radio Interface	EN 61000-6-2 & EN 61000-6-4
Cooling Air Flow	1.2 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 = +/-5%

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CONTROLLER SPECIFICATIONS

Controller Make & Model	DeepSea 6120MKIII
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 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	84 dB(A)

GENSET DIMENSIONS & WEIGHT

GENSET TYPE	Length (mm)	Width (mm)	Height (mm)	Fuel Tank Capacity (L)	Dry Weight (kg)	Wet Weight (kg)
OPEN	3650	2110	2630	1430	5875	5990
CLOSE	5965	2200	3315	1765	8560	8675

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 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.
- Industrial 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

Address: 24b St., Community 365 Al Quoz Ind. 2, Dubai, UAE | Tel: +971 4 338 4033 | Fax: +971 4 338 3997

info@pi-dubai.com | www.pi-dubai.com