


Mechanical Power driven by  Perkins®

- Manufactured in facilities certified with ISO 9001:2015, ISO 14001:2015 & OHSAS 18001:2007.
- Manufactured in accordance to 8528-1 to 12.
- Engine performance according to ISO 3046, BS 5514, DIN 6271.
- Alternator performance according to NEMA-MG1, BS 5000, DIN EN, relevant ISO, IEC60034.
- Breaker complies with IEC — 60947-2.

High شركة الأداء العالي للصناعة  
**Performance Industry**  
 Power Generators



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| MODEL   | rpm / Hz  | VOLTAGE   | PRIME <sup>(1)</sup> | STANDBY <sup>(2)</sup> |
|---------|-----------|-----------|----------------------|------------------------|
| PI 750P | 1800 / 60 | 480 / 277 | 681 kVA / 544.8 kWe  | 750 kVA / 600 kWe      |

### ENGINE SPECIFICATIONS

|                                   |   |
|-----------------------------------|---|
| Rated Output (PRP) <sup>(1)</sup> | 618 kW <sub>m</sub>                     |
| Rated Output (ESP) <sup>(2)</sup> | 678 kW <sub>m</sub>                     |
| Engine Make & Model               | Perkins 2806A-E18TAG3A                  |
| No. of Cylinders                  | 6 Vertical In-line                      |
| Cycle                             | 4 Strokes                               |
| Aspiration                        | Turbocharged & Air to Air Charge Cooled |
| Cooling Method                    | Water                                   |
| Governing Type                    | Electrical                              |
| Governing Class                   | G2 - ISO 8528 Part 1                    |
| Compression Ratio                 | 14.5:1                                  |
| Displacement                      | 18.1 L (1104.in <sup>3</sup> )          |
| BorexStroke                       | 145x183 mm                              |
| Battery and Charger Alternator    | 24 VDC , 70 Amp                         |

### AIR SYSTEM

|                           |                          |
|---------------------------|--------------------------|
| Air Filter Type           | Dry Element              |
| Combustion Air Flow (PRP) | 47.2 m <sup>3</sup> /min |
| Combustion Air Flow (ESP) | 50.5 m <sup>3</sup> /min |
| Radiator Air Flow         | 852 m <sup>3</sup> /min  |

### COOLING SYSTEM

|                              |                        |
|------------------------------|------------------------|
| Total Coolant Capacity (L)   | 61 L (16.1 US gal)     |
| Water Pump Type              | Centrifugal Eng-Driven |
| Radiator Fan Load            | 15 kW                  |
| Heat Radiation to Room (PRP) | 45 kW                  |
| Heat Radiation to Room (ESP) | 49 kW                  |

### LUBRICATION SYSTEM

|                    |  |
|--------------------|--|
| Oil Filter Type    | Full-flow replaceable 'Ecoplus' filter |
| Total Oil Capacity | 62 L (16.3 US gal)                     |
| Oil Pan            | 53 L (14 US gal)                       |
| Oil Type           | API CH4/C14; 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  | 157 L/hr (41.47 US gal/hr) |
| Fuel Consumption 100% PRP   | 144 L/hr (38.04 US gal/hr) |
| Fuel Consumption 75% PRP  | 104 L/hr (27.47 US gal/hr) |
| Fuel Consumption 50% PRP  | 72 L/hr (19.02 US gal/hr)  |

### EXHAUST SYSTEM

|                                   |                                 |
|-----------------------------------|---------------------------------|
| Muffler Type                      | Industrial Grade                |
| Max. Back Pressure                | 6 kPa                           |
| Exhaust Gas Flow (PRP/ESP)        | 125 / 135.7 m <sup>3</sup> /min |
| Exhaust Gas Temperature (PRP/ESP) | 517.6°C/542.8°C                 |

### ALTERNATOR SPECIFICATIONS

|                                       |                   |
|---------------------------------------|-------------------|
| Rated Output (Prime) <sup>(1)</sup>   | 825 kVA           |
| Rated Output (Standby) <sup>(2)</sup> | 906 kVA           |
| Alternator Make & Model               | HCI544F/ S5L1D-F4 |
| Number of Poles                       | 4                 |
| Number of Winding Leads               | 12                |
| Type of Bearing                       | Single            |
| Insulation Class / Temp Rise          | H/H               |
| Efficiency @ Rated Voltage            | 94.9%             |
| 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%,<br>Linear load < 5% |
| Radio Interface     | EN 61000-6-2 & EN 61000-6-4         |
| Cooling Air Flow    | 1.312 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 6120                         |
| Operation Mode            | MRS / AMF (optional)                 |
| Display                   | Graphic Back-lit LCD (128x64) pixels |
| Ingress Protection Rating | IP65                                 |
| Binary Inputs/Outputs     | 6 / 4                                |
| 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 2000                                 |
| Baseframe RAL Color       | RAL 9011                                 |
| Noise Pressure level @ 7m | 80 dB(A)                                 |

### GENSET DIMENSIONS & WEIGHT

| GENSET TYPE | Length (mm) | Width (mm) | Height (mm) | Fuel Tank Capacity (L) | Dry Weight (kg) | Wet Weight (kg) |
|-------------|-------------|------------|-------------|------------------------|-----------------|-----------------|
| OPEN        | 3450        | 1850       | 2340        | 1280                   | 4170            | 4250            |
| CLOSE       | 5362        | 1670       | 2738        | 720                    | 5665            | 5750            |

### 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

Residential / Critical grade muffler

Fuel Filter / Water separator Fuel Filter

Remote Annunciator

### Application

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

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