



| MODEL    | rpm / Hz  | VOLTAGE   | PRIME <sup>(1)</sup> | STANDBY <sup>(2)</sup> |
|----------|-----------|-----------|----------------------|------------------------|
| PI 1093P | 1500 / 50 | 400 / 230 | 1000.0 kVA / 800kWe  | 1093 kVA / 874.4kWe    |

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) <sup>(1)</sup> | 899 kW <sub>m</sub>                       |
| Rated Output (ESP) <sup>(2)</sup> | 985 kW <sub>m</sub>                       |
| Engine Make & Model               | Perkins 4008TAG2A                         |
| No. of Cylinders                  | 8 Vertical In-line                        |
| Cycle                             | 4 Strokes                                 |
| Aspiration                        | Turbocharged and Air to air Charge Cooled |
| Cooling Method                    | Water                                     |
| Governing Type                    | Electronic                                |
| Governing Class                   | G2 - ISO 8528 Part 5                      |
| Compression Ratio                 | 13.6:1                                    |
| Displacement                      | 30.56 L (1397.in <sup>3</sup> )           |
| BorexStroke                       | 160x190 mm                                |
| Battery and Charger Alternator    | 24 VDC , 40 Amp                           |

### AIR SYSTEM

|                           |                          |
|---------------------------|--------------------------|
| Air Filter Type           | cylinder paper pleat     |
| Combustion Air Flow (PRP) | 75 m <sup>3</sup> /min   |
| Combustion Air Flow (ESP) | 80.5 m <sup>3</sup> /min |
| Radiator Air Flow         | 1350 m <sup>3</sup> /min |

### COOLING SYSTEM

|                              |                        |
|------------------------------|------------------------|
| Total Coolant Capacity (L)   | 143 L (37.77 US gal)   |
| Water Pump Type              | Centrifugal Eng-Driven |
| Radiator Fan Load            | 38 kW                  |
| Heat Radiation to Room (PRP) | 80 kW                  |
| Heat Radiation to Room (ESP) | 100 kW                 |

### LUBRICATION SYSTEM

|                    |                               |
|--------------------|-------------------------------|
| Oil Filter Type    | Full-flow spin-on oil filters |
| Total Oil Capacity | 153 L (40.4 US gal)           |
| Oil Pan            | 153 L (40.4 US gal)           |
| Oil Type           | API CH4/C14; SAE 15W-40       |

### FUEL SYSTEM

|   |                           |
|---|---------------------------|
| Fuel Filter: Full-flow spin-on fuel oil filters |                           |
| Recommended Fuel                                | Class A2 Diesel           |
| Fuel Consumption Standby                        | 240 L/hr (63.4 US gal/hr) |
| Fuel Consumption 100% PRP                       | 215 L/hr (56.7 US gal/hr) |
| Fuel Consumption 75% PRP                        | 162 L/hr (42.8 US gal/hr) |
| Fuel Consumption 50% PRP                        | 111 L/hr (29.3 US gal/hr) |

### EXHAUST SYSTEM

|                                   |                                       |
|-----------------------------------|---------------------------------------|
| Muffler Type                      | Residential Grade                     |
| Max. Back Pressure                | 3 kPa                                 |
| Exhaust Gas Flow                  | 200 m <sup>3</sup> /min               |
| Exhaust Gas Temperature (PRP/ESP) | 438 <sup>0</sup> C/465 <sup>0</sup> C |

### ALTERNATOR SPECIFICATIONS

|                                       |                       |
|---------------------------------------|-----------------------|
| Rated Output (Prime) <sup>(1)</sup>   | 1000 kVA              |
| Rated Output (Standby) <sup>(2)</sup> | 1100 kVA              |
| Alternator Make & Model               | Leroy somer TAL 049 E |
| Number of Poles                       | 4                     |
| Number of Winding Leads               | 6/12                  |
| Type of Bearing                       | Single                |
| Insulation Class / Temp Rise          | H/H                   |
| Efficiency @ Rated Voltage            | 95.2%                 |
| Ingress Protection Rating             | IP 23                 |
| Excitation System                     | shunt                 |
| AVR Model                             | R150                  |

### ALTERNATOR OPERATING DATA

|                     |                                     |
|---------------------|-------------------------------------|
| Overspeed           | 2250 r.p.m                          |
| Voltage Regulation  | ± 0.8 %                             |
| Waveform distortion | No load < 1.5%,<br>Linear load < 5% |
| Radio Interface     | EN 61000-6-2 & EN 61000-6-4         |
| Cooling Air Flow    | 1 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     | 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  | Polyurethane paint with anti corrosive base coat. |
| Ingress Protection Rating | IP22  |
| Lifting                   | ISO Standard Lifting                              |
| Emergency                 | External Emergency Push Button                    |
| Container RAL Color       | RAL 9010  |
| Baseframe RAL Color       | RAL 9010  |
| Noise Pressure level @ 1m | 90 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        | 4850        | 2295       | 2670        | 2480(11H)              | 8850                 | 9150                 |
| CLOSE       | 6760        | 2190       | 3385        | 2020(8.5H)             | 10500                | 10800                |

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

Jacket water pre-heater

Static Battery Charger

Critical grade muffler

Fuel Filter / Water separator Fuel Filter

Remote Annunciator

### Application

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

### 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.

