

## GENERATOR MODEL P45

|                               |                        |       |
|-------------------------------|------------------------|-------|
| Frequency/<br>Speed - Voltage | 50HZ/1500 RPM-230/400V |       |
| Prime Power                   | 45 KVA                 | 36 KW |
| Standby Power                 | 50 KVA                 | 40 KW |



## Features



### Engine

Perkins, 1103A-33TG1, Made in UK, in accordance to ISO3046, ISO8528, DIN6271



### Alternator

Leroy Somer-France / Meccalte-Uk Complying to the following norms: CEE/CEI2-3/ EN60034-1/ IEC34-1/ VDE/ BS/CAN/ CSA



### Control Panel

Deep Sea, DSE-6020, Made In UK, complying to the norms: comply to the norms BS EN 61000, BS EN 60950, BS EN 60068



### Base Frame

Black steel with Anti-vibration pads, Built in fuel tank



### Sound Proof Canopy

Modular SPC, Powder Coated, Extremely Durable, Designed to Reduce Sound Level with Maximum Service Accessibility and Minimum Foot Prints



### Countrywide Support

Empower Products are distributed through its dealer Network For more information you may Contact us.

## Definition



### Standby Power

**Standby Power:** Continuous running at variable load for duration of an emergency. No overload is permitted on this ratings.



### Prime Power

**Prime Power:** Continuous running at variable load for unlimited periods with 10 % overload 1 hour in any 12 hours Period.

# PERKINS ENGINE TECHNICAL DATA

Model: 1103A-33TG1



## STRUCTURE

|                     |              |
|---------------------|--------------|
| Number of Cylinders | 3            |
| Engine Build        | In line      |
| Bore                | 105 mm       |
| Stroke              | 127 mm       |
| Displacement        | 3.3 L        |
| Compression Ratio   | 17.25:1      |
| Aspiration          | Turbocharged |
| Cooling             | Water Cooled |



## FUEL

|                                 |   |   |
|---------------------------------|---|---|
|                                 | 1500 RPM  | 1800 RPM  |
| Fuel Tank                       | Built in fuel tank for atleast 10 hours operation @ full load | Built in fuel tank for atleast 10 hours operation @ full load |
| Fuel System<br>Fuel Recommended | Direct injection<br>N°2 Diesel                                |   |
|                                 | 1500 RMP  | 1800 RPM  |
| Delivery Flow Rate (l/hr)       |   |   |
| Fuel Consumption                |   |   |
| 100% Load (g/kWh-L/hr)          | 10.7  | TBA   |
| 75% Load (g/kWh-L/hr)           | 8.2   | TBA   |
| 50% Load (g/kWh-L/hr)           | 5.7   | TBA   |



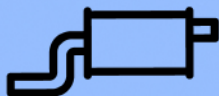
## COOLING SYSTEM

|                               |           |     |
|-------------------------------|-----------|-----|
| Engine Coolant Capacity       | 10.2 L    |     |
| Air Flow-Radiator             | 883.3 l/s | TBA |
| Radiator with 50 degree       |           |     |
| Cooling Package & Air Cleaner |           |     |
| Thermostatically-controlled   |           |     |



## AIR INLET

|  |         |
|--|---------|
| Air Intake Engine (Clean Filter/Dirty) | 5/8 KPa |
|--|---------|



## EXHAUST SYSTEM

|                               |           |     |
|-------------------------------|-----------|-----|
| Exhaust Gas Temperature       | 492°C     | TBA |
| Exhaust Gas Flow (Prime)      | 119.6 l/s | TBA |
| Maximum Exhaust System Back   |           |     |
| Pressure                      | 10 kPa    | TBA |
| Stainless Steel exhaust flex- |           |     |



## DC SYSTEM STARTING/CHARGING



## Heat Rejection(prime)



## LUBE SYSTEM



## GOVERNOR



## STRUCTURE

**Cranking Battery Voltage**

12 V

**Battery Charging Alternator**

65 A

Dc Voltage Monitoring via

**Radiated Heat to Ambient**

7 KW

TBA

**Heat Rejection to Coolant**

26 KW

TBA

**Heat Rejection to Exhaust**

30 KW

TBA

**Heat Rejection to intercooler**

0

TBA

7.9 L **Lubricating System Oil Capacity**

Electronic

# ALTERNATOR TECHNICAL DATA



**Insulation System**

Class H

**Winding Pitch**

2/3 to minimize harmonics effects

**Number of Poles**

4

**Number of Bearings**

Single bearing

**RPM**

1500 RPM

**Power Factor**

0.8

**Regulation**

± 1%

**Frequency**

50 Hz

**Voltage Range**

380-415 / 220-240

**IP Rating (Protection)**

Ip23

Synchronous, 3 phase, Brushless & Self Excited

# CONTROL MODULE

## Deep Sea Model: DSE 6020



### INDICATIONS

- ✓ Operating Hours
- ✓ 3 Phase Generator Voltage Sensing & Monitoring
- ✓ Current Protection & Monitoring
- ✓ Power Measurement (kW, kVA, kVAr, kWh, kVAh, kVArh, pf)
- ✓ Frequency Monitoring (Hz)
- ✓ Oil Pressure/Coolant Temperature
- ✓ Battery Voltage Monitoring (DC)
- ✓ Alarm Acknowledge



### CONTROL

- ✓ Engine Cool Down Timer
- ✓ Emergency Stop Push button/ Alarm Acknowledge
- ✓ Warm-up Timer
- ✓ Load Switching Timer
- ✓ Engine Cycle Crank



### WARNING & SHUTDOWN ALARMS

- ✓ Generator Over/Under Voltage & Frequency
- ✓ Crank Disconnect (Failure to Start)
- ✓ Under/Over Speed
- ✓ Over Current
- ✓ Low Oil Pressure
- ✓ High Water Temperature
- ✓ Low Fuel Level
- ✓ Low Water Level



### FEATURES

- ✓ User Friendly
- ✓ Compatible With CAN Engines
- ✓ License Free Software
- ✓ Largest Backlit Icon Display In Its Class
- ✓ Fully Configured Via The Fascia Or Pc Using Usb
- ✓ Efficient Power Save Mode

### Contact Numbers

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