

## GENERATOR MODEL P20

Frequency/ Speed - Voltage	50HZ/1500 RPM-230/400V	
Prime Power	20 KVA	16 KW
Standby Power	22 KVA	17.6 KW



## Features

### Engine

Perkins, 404D-22G, 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-4520, 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: 404D-22G



### STRUCTURE

Number of Cylinders	4
Engine Build	In line
Bore	84 mm
Stroke	100 mm
Displacement	2.2 L
Compression Ratio	23.3:1
Aspiration	Natural
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 Fuel Recommended	Direct injection N°2 Diesel	
	1500 RMP	1800 RPM
Delivery Flow Rate (l/hr)		
Fuel Consumption		
100% Load (g/kWh-L/hr)	5.3	TBA
75% Load (g/kWh-L/hr)	4.8	TBA
50% Load (g/kWh-L/hr)	2.9	TBA



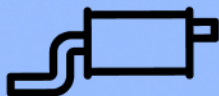
### COOLING SYSTEM

Engine Coolant Capacity	7L	
Air Flow-Radiator	490 l/s	TBA
Radiator with 50 degree		
Cooling Package & Air Cleaner		
Thermostatically-controlled		



### AIR INLET

Air Intake Engine (Clean Filter/Dirty)	3 / 6.4 KPa
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### EXHAUST SYSTEM

Exhaust Gas Temperature	445°C	TBA
Exhaust Gas Flow (Prime)	60.6 l/s	TBA
Maximum Exhaust System Back		
Pressure	10.2 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**

3.5 KW

TBA

**Heat Rejection to Coolant**

17 KW

TBA

**Heat Rejection to Exhaust**

14 KW

TBA

**Heat Rejection to intercooler**

0

TBA

10.6 L **Lubricating System Oil Capacity**

Mechanical

# 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**

0.8/1

**Regulation**

± 1%

**Frequency**

50 Hz

**Voltage Range**

380-415 / 220-240

**IP Rating (Protection)**

Ip23

Synchronous, 3/1 phase, Brushless & Self Excited

# CONTROL MODULE

## Deep Sea Model: DSE 4520



### INDICATIONS

- ✓ Operating Hours
- ✓ 3 Phase Generator Voltage Sensing & Monitoring
- ✓ Current Protection & Monitoring
- ✓ Power Measurement (kW, kVA, kVA<sub>r</sub>, kWh, kVAh, kVA<sub>rh</sub>, 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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