

Diesel Generator Set: MPLS20S-1E

General Features

- Every generator set is subjected to a comprehensive test program which includes 50% load, 75% load, 100% load, 110% load and the checking and proving of all control and safety shut-down functions.
- Equipped with battery charger and 12V high performance maintenance-free lead-acid starting batteries and connecting with cables.
- Equipped with industrial silencer and flexible exhaust hose.
- Equipped with 8-hours operation base tank;
- Equipped with CHINT MCCB circuit breaker;
- Designed to Comply with ISO8528/GB2820;
- Powered by Perkins engine and coupled with Leroy Somer alternator.



Benefits

- Function stability credibility, service convenience;
- Low operating cost results in optional economy;
- Gets the job done wherever you are;
- Ease of installation, operation and maintenance.



Dimension and Weight

● Length(L)	mm	2050
● Width(W)	mm	740
● Height(H)	mm	1110
● Weight	kg	740
● Tank capacity	L	50

Environment Condition

● Environment temperature	°C	≤50
● Relative humidity	%	≤90
● Altitude	m	≤1000

Genset Technical Data

Prime power	20 kVA
Standby power	22 kVA
Rated speed	1500 RPM
Output frequency	50 Hz
Phase	3
Rated voltage	400 V
Noise dB(A) @7m	70
Engine model	404D-22G
Alternator model	LSA 40 M5
Fuel consumption of 100% load	5.3 Litres/h
Fuel consumption of 75% load	4.0 Litres/h
Voltage regulation rate	≤ ±1%
Random voltage variation	≤ ±1%
Frequency regulation rate	≤ ±5%
Random frequency variation	≤ ±0.5%

Prime Power:

This rating is for the supply of continuous electrical power (at variable load). There is no limit on the annual hours of operation and 10% overload power can be supplied for 1 hour in 12.

Standby power:

This rating is for the supply of continuous electrical power (at variable load) in the event of a utility power failure. No overload is permitted.

Rated voltage:

Available with customer requirements.

Engine Specifications

Engine model	404D-22G
Engine manufacturer	Perkins
Emissions statement	EU2007 (EU 97/68/EC Stage II) EPA Tier 4Final (EPA 40 CFR Part 1039 Tier 4)
Number of cylinders	4
Cylinder arrangement	Vertical in-line
Cycle	Four stroke
Aspiration	Natural Aspiration
Bore×Stroke (mm×mm)	84 x 100
Displacement (Liter)	2.216
Compression Ratio	23.3:1
Prime power/speed (kW/RPM)	18.4/1500
Standby power/speed (kW/RPM)	20.3/1500
Speed governor	Mechanical
Cooling system	Forced Water Cooling Cycle
Total lubrication system capacity (L)	10.6
Coolant capacity (L)	7.0
Fuel consumption at 100% load (g/kWh)	237 (at 1500RPM)
Starter motor	DC12V
Alternator	AC12V

Alternator Specifications

Alternator model	LSA 40 M5
Alternator manufacturer	Leroy Somer
Exciter type	Single bearing, Brushless, Self-excited
Rated output continuous power	20 kVA
Rated speed	1500 RPM
Rated frequency	50 Hz
Phase	3
Rated voltage	400 V(Available with customer requirements)
Power factor	0.8
Voltage adjust range	≥5%
Voltage regulation NL-FL	≤±1%
Insulation grade	H
Protection grade	IP23

Remark

Alternator option:

Other alternator manufacturer: Stamford, Lisite, Marathon and Mecc Alte.

Control System DSE3110

All MPMC series genset have a control cubicle (the deepsea controller DSE3110 as standard) mounted on a isolated support, which has the following features:

- Electronic digital control module with monitoring/control facility and warning indicators;
- Automatic shutdown protection
- Emergency stop button (lock-down type)
- AC output circuit breaker with over-current protection;
- DC circuit control switch.

The control module gives digital readouts of:

- Generator voltage;
- Output frequency;
- Engine speed;
- Battery voltage;
- Engine hours run.



DSE3110

Note:

1. The engine coolant temperature used temperature meter display;
2. The engine oil pressure used oil pressure meter display;
3. Generator current used current meter display and used change switch for each phase displayed separately

The control module has indicators for failure information:

- Overspeed/underspeed,
- Emergency stop
- Low oil pressure;
- High water temperature
- Failure to start
- Battery charger failure

Automatic shutdown occurs under:

- Low engine oil pressure;
- High engine water temperature;
- Overspeed/underspeed;
- Failure to start after three attempts.

The controller option:



MP170-HC



HGM6120



DSE7110



DSE7120



DSE7510

Remark: the controller detail information please refer to the file “Control System Choice”

Generator Set Options and Accessories

Generator set

- Open generator set
- Trailer generator set
- Single phase generator set
- ABB MCCB circuit breaker

Fuel system

- 12 hour base tank(single wall)
- 24 hour base tank(single wall)
- Dual wall base fuel tank
- Outside fuel tank

Exhaust system

- Residential exhaust silencer

Alternator

- PMG excitation
- Space heater

Low environment temperature

- Water heater
- Oil heater
- Battery heater

Control system

- AMF function
- ATS control cabinet
- Multiple generator automatic synchronising

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MPMC reserves the right to implement specifications or design changes without notice.

WARNING: Do not connect generator to any building's electrical system unless a disconnect switch has been installed.

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