

Diesel Generator Set: MCL390-2

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 24V 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 Cummins engine and coupled with Lisite 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 | 3590 |
| ● Width(W) | mm | 1250 |
| ● Height(H) | mm | 1990 |
| ● Weight | kg | 3930 |
| ● Tank capacity | L | 680 |

Environment Condition

| | | |
|---------------------------|----|-------|
| ● Environment temperature | °C | ≤40 |
| ● Relative humidity | % | ≤90 |
| ● Altitude | m | ≤1000 |

Genset Technical Data

| | |
|-------------------------------|-------------|
| Standby power | 390 kW |
| Prime power | 355 kW |
| Rated speed | 1800 RPM |
| Output frequency | 60 Hz |
| Phase | 3 |
| Rated voltage | 480V |
| Engine model | KTA19-G2 |
| Alternator model | LYG 314E |
| Fuel consumption of 100% load | 98 Litres/h |
| Fuel consumption of 75% load | 76 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 | KTA19-G2 |
| Engine manufacturer | Cummins |
| Number of cylinders | 6 |
| Cylinder arrangement | Vertical in-line |
| Cycle | Four stroke |
| Aspiration | Turbocharged and Aftercooled |
| Bore×Stroke (mm×mm) | 159 x 159 |
| Displacement (Liter) | 18.9 |
| Compression Ratio | 13.9:1 |
| Prime power/speed (kW/RPM) | 392/1800 |
| Standby power/speed (kW/RPM) | 448/1800 |
| Speed governor | Electrical |
| Cooling system | Forced Water Cooling Cycle |
| Steady speed droop (%) | ≤1% |
| Total lubrication system capacity (L) | 50 |
| Coolant capacity (engine only) (L) | 30 |
| Fuel consumption at 100% load (g/kWh) | 212(at 1800RPM) |
| Starter motor | DC24V, |
| Alternator | AC24V |

Alternator Specifications

| | |
|--------------------------|---|
| Alternator model | LYG 314E |
| Alternator manufacturer | Lisite |
| Exciter type | Single bearing, Brushless, Self-excited |
| Rated output prime power | 390 kW |
| Rated speed | 1800 RPM |
| Rated frequency | 60 Hz |
| Phase | 3 |
| Rated voltage | 480 V(Available with customer requirements) |
| Power factor | 0.8 |
| Voltage adjust range | ≥5% |
| Voltage regulation NL-FL | ≤±1% |
| Insulation grade | H |
| Protection grade | IP22 |

Remark

Alternator option:

Other alternator manufacturer: Stamford, Leroy Somer, 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

- Silence generator set
- Trailer generator set
- ABB MCCB circuit breaker
- 50°C Radiator

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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