

## Model: MP20(S)-1

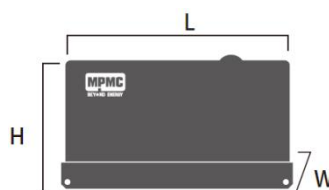
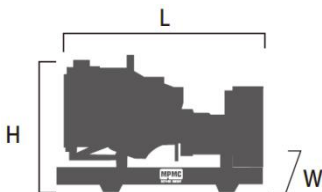
Powered by Perkins



### Applicable Standards

- ISO 8528-5:2018
- GB/T2820.5-2009
- CE

| General Information               |           | Prime power                                     | Standby power |
|-----------------------------------|-----------|---|---------------|
| Rated Power (kVA)                 |           | 20  | 22            |
| Power Rating (kW)                 |           | 16  | 17.6          |
| Frequency (Hz)                    |           | 50  |               |
| Engine Model                      |           | 404D-22G L                                      |               |
| Engine Speed (RPM)                |           | 1500  |               |
| Phase                             |           | 3   |               |
| PF                                |           | 0.8   |               |
| Control System                    |           | Digital   |               |
| Rated voltage (V)                 |           | 400/230<br>(According to customer requirements) |               |
| Fuel tank capacity operating time |           | ≥ 8h @ 75% load                                 |               |
| Fuel Consumption (L/h)            | 110% load | 6.1   |               |
|                                   | 100% load | 5.3   |               |
|                                   | 75% load  | 4.0   |               |
|                                   | 50% load  | 2.9   |               |



### Dimension and Weight

| Model                        | MP20-1<br>Open type | MP20S-1<br>Silent type |
|------------------------------|---------------------|------------------------|
| Length (L) mm                | 1610                | 2100                   |
| Width (W) mm                 | 650                 | 770                    |
| Height (H) mm                | 1300                | 1136                   |
| Dry weight (kg)              | 550                 | 811                    |
| Tank capacity (L)            | 90                  | 52                     |
| The loading capacity (40'HC) | 21 units            | 32 units               |

Note: Specifications and illustrations are subject to revision without notice.

### Environmental Conditions

- Ambient temperature: +5°C~+40°C
  - Altitude: ≤1000m
- Remark: If your conditions are different from the above, please contact our sales.

### Factory Inspection

- Complete design and quality inspection
- 0%, 25%, 50%, 75%, 100%, 110% load test.
- Function test.
- Protection test

### Painting Process

- MPMC has the most advanced automatic spraying / powder coating production line, and is equipped with various sandblasting equipment to ensure higher quality.
- Canopy painting: Henkel pretreatment process and world famous brand AkzoNobel powder.
- Base Frame painting: Sandblasting process and AkzoNobel powder (Hempel paint is optional).



## Engine Specifications

| Engine model & manufacturer  |           | 404D-22G L(Perkins)   |
|--|-----------|---|
| Emission Certification   |           | Stage IIIA  |
| Number of cylinders  |           | 4   |
| Cylinder arrangement   |           | In-line   |
| Cycle  |           | Four stroke   |
| Aspiration   |           | Naturally aspirated   |
| Bore x Stroke  |           | 84 X 100 mm   |
| Displacement   |           | 2.216 L   |
| Compression ratio  |           | 23.3 : 1  |
| Prime power /speed   |           | 18.7 kW/1500 rpm  |
| Standby power /speed   |           | 20.6 kW/1500 rpm  |
| Speed governor   |           | Mechanical  |
| Cooling system   |           | Forced Water Cooling Cycle  |
| Frequency droop  |           | ≤ 5%  |
| Total lubrication system capacity  |           | 10.6 L  |
| Coolant capacity (engine only)   |           | 3.6 L   |
| Fuel consumption   | 100% load | 237 g/kWh @1500 rpm   |
| Starter motor  |           | DC 12V  |
| Charge alternator  |           | DC 12V  |
| <ul style="list-style-type: none"> <li>● Heavy duty diesel engine</li> <li>● Anti-vibration mount</li> <li>● Replaceable fuel filter, oil filter &amp; air filter</li> <li>● Cooling radiator and fan</li> </ul> |           | <ul style="list-style-type: none"> <li>● Starter battery (with lead acid) including rack and cables</li> <li>● Flexible fuel connection hoses</li> <li>● Exhaust silencer and bellows</li> <li>● Operation manuals and circuit diagram documents</li> </ul> |

## Alternator Specifications

| Alternator             |                |
|------------------------|----------------|
| Number of phase        | 3              |
| Power factor (Cos Phi) | 0.8            |
| Poles                  | 4              |
| Insulation type        | H class        |
| Winding Pitch          | 2/3            |
| IP rating              | IP23           |
| Bearing                | Single bearing |
| Voltage regulator      | A.V.R          |
| Coupling               | Flexible disc  |

## Control Panel

### DSE 4520 MKII

Auto start and auto mains failure control module  
(Alternator frequency & can speed sensing)



#### Key benefits

- Ultimate size to feature ratio.
- Automatically transfers between mains (utility) and generator.
- Hours counter provides accurate information for monitoring and maintenance periods.
- User-friendly set-up and button layout for ease of use.
- Multiple parameters are monitored simultaneously which are clearly displayed on the largest back-lit icon display in its class.
- The module can be configured to suit a wide range of applications.
- Compatible with a wide range of CAN engines including Tier 4.
- IP65 rating (with optional gasket) offers increased resistance to water ingress.

#### Key features

- Auto Start and AMF mode in one module.
- J1939-75 support and CAN alarm ignore function.
- Alternator frequency & CAN speed sensing in one variant.
- Largest back-lit icon display in its class.
- Heated display option.
- Real time clock provides accurate event logging.
- Fully configurable via the fascia or PC using USB communication.
- Extremely efficient power save mode.
- 3 phase generator sensing.
- 3 phase mains (utility) sensing
- Compatible with 600 V ph to ph nominal systems.
- Generator/load power monitoring (kW, kVA, kVar, PF).
- Accumulated power monitoring (kWh, kVAh, kVarh).
- Generator overload protection.
- Generator/load current monitoring and protection.
- Fuel and start outputs (configurable when using CAN).
- 4 configurable DC outputs.
- 3 configurable analogue/digital inputs
- 4 configurable digital inputs.
- Configurable staged loading outputs.
- 3 engine maintenance alarms.
- Engine speed protection.
- Engine hours counter.
- Engine pre-heat.
- Engine run-time scheduler.
- Engine idle control for starting & stopping.
- Tier 4 engine instrumentation screens.
- Battery voltage monitoring.
- Start on low battery voltage.
- Configurable remote start input.
- 1 alternative configuration.
- Comprehensive warning, electrical trip or shutdown protection upon fault condition.
- LCD alarm indication.
- Event log (50)

## Options

| Engine  | Alternator   | Fuel System   | Generating Set   |
|---|--|---|--|
| <input type="checkbox"/> Water Jacket Preheater<br><input type="checkbox"/> Oil Preheater<br><input type="checkbox"/> Oil manual pump | <input type="checkbox"/> PMG excitation<br><input type="checkbox"/> Space heater<br><input type="checkbox"/> Winding temperature measuring | <input type="checkbox"/> 12 / 24 hour base tank<br><input type="checkbox"/> Bunded fuel tank<br><input type="checkbox"/> External fuel tank<br><input type="checkbox"/> Automatic fuel feeding<br><input type="checkbox"/> Switch between external tank and base tank (three-way valve) | <input type="checkbox"/> Deepsea, ComAp, Smartgen etc. controller<br><input type="checkbox"/> Trailer<br><input type="checkbox"/> Tools with the machine |



MPMC USA



MPMC UK



MPMC UAE



MPMC PA



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MPMC CN

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