



**Millennium Power Manufacturing Corp.**  
*<http://www.mpmc-china.com>*

# **MCS130-2(6BTAA5.9-G2)**

## **Generating set Technical Data Sheet**



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**ISO9001:2000**  
MPMC GENERATING SETS



## STANDARD SPECIFICATION

### General features:

- Composed of Cummins diesel engine and Stamford or MPMC alternator
- 24V DC start motor and storage battery
- Brushless, Self-excited, IP23, insulation class H alternator
- 40°C radiator as standard, 50°C is optional
- Key start panel control system as standard, digital auto-start panel is optional
- 8-hour operation base tank
- Optional open type or silent type
- All generator sets are gone through rigorous testing before being released to the market place, including 50% load, 75% load, 100% load , 110% load and all protection function (overspeed stop, high water temperature, low oil pressure, battery charging fail, emergency stop)



### Genset Main Technical Data

**3-PH, 60Hz@1800RPM, 480/277V** (Also Can Be Made According To Customers' Special Requirements)

| Genset Model | Genset Specification |     |                  |           |          | Engine Specification |      |      |      | Alternator Model |
|--------------|----------------------|-----|------------------|-----------|----------|----------------------|------|------|------|------------------|
|              | kW                   |     | Cons. 100% (L/H) | dB(A) @7m | Tank (L) | Model                | Cyl. | Gov. | Asp. |                  |
|              | ESP                  | PRP |                  |           |          |                      |      |      |      |                  |
| MCS130-2     | 130                  | 118 | 33.2             | N/A       | 300      | 6BTAA5.9-G2          | 6    | E    | TCA  | UCI 274E         |
| MCS130S-2    | 130                  | 118 | 33.2             | 75        | 300      | 6BTAA5.9-G2          | 6    | E    | TCA  | UCI 274E         |
| MCM130-2     | 130                  | 118 | 33.2             | N/A       | 300      | 6BTAA5.9-G2          | 6    | E    | TCA  | MPA 274CC        |
| MCM130S-2    | 130                  | 118 | 33.2             | 75        | 300      | 6BTAA5.9-G2          | 6    | E    | TCA  | MPA 274CC        |

- 1) Available in various voltages
- 2) To show MPMC Generating Sets Model  
For example: MCM38-1A, it is the open generation set.  
MCM38S-1A, it is the silent generating set.
- 3) ESP=Standby power standby duty, operation under variable load, without overload  
PRP=Prime power continuous duty operation, under variable load, 10% overload permissible 1/12hr
- 4) E=Electronic speed governor;  
M=Mechanical speed governor
- 5) Asp=Aspiration;  
NA=Naturally Asp;  
TC=Turbocharged;  
TW=Turbocharged after water-cooled;  
TCA= Turbocharged air-air after cooled
- 6) Technical data is subject to work test conditions

## Reliable Performance

### Voltage regulation

Voltage regulation maintained within  $\pm 0.5\%$  as follow:

- Power factor Between 0.8~1.0 lag
- From no load to full load, any steady load
- Speed droop variation under 4.5%

### Frequency/Speed undulation

- Change load from 0-100%, Frequency/Speed Droop Ratio within 5%
- Load from 25-100%, any steady load Frequency/Speed undulation within 0.25%

### Effect factor of telecom

- TIF( MA MG1-22) better than 50
- THF( BS EN60034) better than 2%

## Criterion

- ISO8528, GB/T2820
- EN12601:2001, EN60034-22:1997, EN60204-1:2006
- ISO9001:2000 Quality Control System

## Dimension and Weight



### Open Type

Overall size (L\*W\*H)

2200×895×1490

**Weight: 1200kg**



### Silent Type

Overall size (L\*W\*H)

3300×1200×1695

**Weight: 1550kg**

## ENGINE SPECIFICATION

### Cummins Diesel Engine

#### Technical Data

|                                         |                                                           |
|-----------------------------------------|-----------------------------------------------------------|
| Engine Model                            | 6BTAA5.9-G2                                               |
| Number of Cylinders                     | 6                                                         |
| Cylinder arrangement                    | Vertical in-line                                          |
| Cycle                                   | Four stroke                                               |
| Aspiration                              | Turbocharged air-air after cooled                         |
| Bore×Stroke (mm×mm)                     | 102 x 120                                                 |
| Displacement (Liter)                    | 5.9                                                       |
| Compression Ratio                       | 17.5:1                                                    |
| Prime Power/Speed (kW/rpm)              | 132/1800                                                  |
| Standby Power/Speed (kW/rpm)            | 140/1800                                                  |
| Speed Governor                          | electrical                                                |
| Cooling System                          | Water-cooled , 40℃ Radiator As Standard, 50℃ Is Optional. |
| Speed Stability (%)                     | ≤5%                                                       |
| Total lubrication system capacity (L)   | 16.4                                                      |
| Coolant capacity (without radiator) (L) | 9.1                                                       |
| Fuel Consumption at 100% Load (g/kWh)   | 215 (at 1800RPM)                                          |
| Starter Motor                           | DC24V,                                                    |
| Alternator                              | AC24V                                                     |

## Alternator SPECIFICATION

### Stamford Alternator (Standard)

### MPMC Alternator (Option)

#### Technical Data

|                          |                                                                                            |
|--------------------------|--------------------------------------------------------------------------------------------|
| Alternator Model         | UCI XXXX (Stamford)<br>MPA XXXX(MPMC)<br>Please Refer To The “ Genset Main Technical Data” |
| Exciter type             | Brushless, Self-excited                                                                    |
| Power factor             | 0.8                                                                                        |
| Voltage Adjust range     | ≥5%                                                                                        |
| Voltage Regulation NL-FL | ≤±0.5%                                                                                     |
| Insulation Grade         | H                                                                                          |
| Protection Grade         | IP23                                                                                       |

## Control System

### 1. Standard: MP170HC Key Start

Providing the standard functions as follows:

(Also can be made according to the customers' special requirements)

- \* Start/Stop controller
- \* Ampere meter
- \* Voltmeter and selector switch
- \* Frequency meter/ Water temperature gauge/ Oil pressure gauge/  
Hour counter/ Battery voltage meter
- \* Emergency stop pushbutton
- \* Alarm System: Over speed、High Engine Temperature  
Low Oil Pressure、Charge Fail
- \* Protection System: Over speed、High Engine Temperature、Low Oil  
Pressure、Emergency Stop. And the other protection function  
pre-setting

### 2. Option: Smartgen HGM6110 Digital Auto Start

### 3. Option: Smartgen HGM6120 Digital Auto Start

(Option assembled with the ATS)

### 4. Option: Deep Sea DSE5210 Digital Auto Start

### 5. Option: Deep Sea DSE5220 Digital Auto Start

(Option assembled with the ATS)

Digital Auto-start Generator controller integrating digital, intelligent and network techniques is used for automatic control system of diesel generator. It can carry out functions including automatic start/stop, data measure and alarming. Optionally assembled with the ATS, it can carry out auto-switching between the outer power and generating set power. (AMF)

#### Functions:

- \* Automatic Start/Stop
- \* 3 start attempts failure and Automatic Crank Disconnect
- \* Parameters display (V/A/Hz/Hour)
- \* Engine monitoring and protection
- \* Charge alternator exciting and Charge alternator fail alarm
- \* Running hour counting
- \* Settings can be adjustable via key buttons on front panel

### 6. option: BGC-L

(Main used in Multiple gen-sets, load sharing)



(1)



(2)



(3)



(4)



(5)



(6)