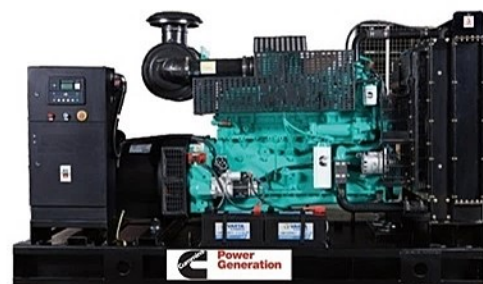


Model: ZMC100

Powered by CUMMINS



POWER DEFINITION

PRP: Prime Power is available for an unlimited number of annual operating hours in variable load applications, in accordance with ISO 8528-1.

ESP: The standby power rating is applicable for supplying emergency power in variable load applications in accordance with ISO 8528-1. Overload is not allowed.

TERMS OF USE

According to the standard, the nominal power assigned by the genset is given for 25 ° C Air Inlet Temperature, of a barometric pressure of 100 kPa (100 m A.S.L), and 30 % relative humidity. For particular conditions in your installation, refer to the derating table.

TERMS OF USE

For the generating sets used indoor, where the acoustic pressure levels depends on the installation conditions, it is not possible to specify the ambient noise level in the exploitation and maintenance instructions.

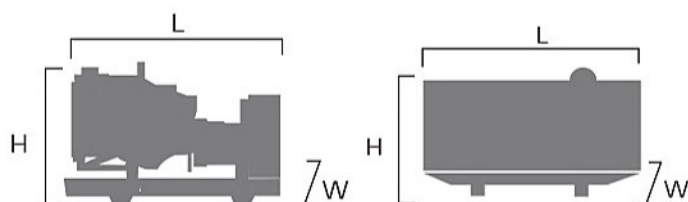
You will also find in our exploitation and maintenance instructions a warning concerning the air noise dangers and the need to implement appropriated preventive measures.

| SERVICE | | PRP | EPS |
|-----------------------|---------|-------------------|-----|
| POWER | kVA | 100 | 110 |
| POWER | kW | 80 | 88 |
| RATED SPEED | r.p.m | 1500 | |
| STANDARD VOLTAGE | V | 400/230 | |
| AVAILABLE VOLTAGES | V | 380/220 · 415/240 | |
| RATED AT POWER FACTOR | Cos Phi | 0,8 | |

Generator Specification

| | | | | |
|---|---|---|---|--|
|  WATER-COOLED |  THREE PHASE |  50 HZ |  DIESEL |  STACKABLE CANOPY |
|---|---|---|---|--|

Weight And Dimensions



| Dimension | | Open | Silent |
|------------|----|------|--------|
| Length(L) | mm | 2150 | 2950 |
| Width(W) | mm | 1025 | 998 |
| Height(H) | mm | 1485 | 1250 |
| Net Weight | Kg | 1080 | 1600 |
| Fuel Tank | L | 260 | 175 |



Engine Specifications

| General Engine Data | | |
|-------------------------------------|-----------------|---------|
| Engine brand | CUMMINS | |
| Engine ref. | 6BT5.9G2 | |
| Engine type | 4-stroke diesel | |
| Governor type | Electronic | |
| Injection | Direct | |
| Aspiration | Turbocharged | |
| Number of cylinders and arrangement | 6-L | |
| Bore and stroke | mm | 102*120 |
| Displacement | L | 5.9 |
| Cooling system | Water-cooled | |

| General Engine Data | | |
|-------------------------------------|-----------------------------|------|
| Lube oil consumption with full load | 0.5%-1% of fuel consumption | |
| Compression Ratio | 17.3:1 | |
| Engine oil capacity | L | 16.4 |
| Total coolant capacity | L | 22.4 |
| Air Filter | Type | Dry |
| Fuel | | |
| Consumption @ 100% load ESP | L/H | 26.5 |
| Consumption @ 100% load PRP | L/H | 24.2 |
| Consumption @ 75% load PRP | L/H | 18.2 |
| Consumption @ 50% load PRP | L/H | 12.5 |



- Diesel engine
 - 4-stroke cycle
 - Water-cooled
 - 12V electrical system
 - Water separator filter
- Dry air filter
 - Radiator with pusher fan
 - Electronic governor
 - Hot parts protection
 - Moving parts protection
- Water jacked heater (Optional)
 - Radiator water level sensor (Optional)
 - Oil heater (Optional)
 - Heavy duty air filter (Optional)

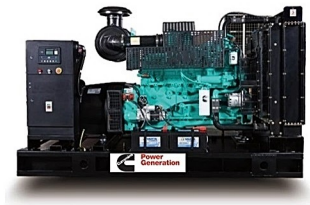
Alternator Specifications

| Alternator Specifications | |
|--------------------------------|------------|
| Number of phase | 3 |
| Power factor (Cos Phi) | 0.8 |
| Poles | 4 |
| Winding Connections (standard) | Star-serie |
| Insulation | H class |
| Enclosure(according IEC-34-5) | IP23 |

| Alternator Specifications | |
|---------------------------|--------------------------------|
| Excitation system | Self-excited, brushless |
| Voltage regulator | AVR (Electronic) |
| No. of bearings | Single bearing |
| Coupling system | Flexible disc |
| Coating type | Standard (Vacuum impregnation) |

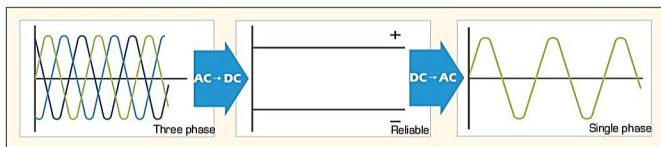


- Self-excited and self-regulated
 - IP23 protection
 - H class insulation
- Alternator pre-heater (Optional)
 - Winding temp. measuring instrument (Optional)
 - PMG/AREP/MAUX (Optional)

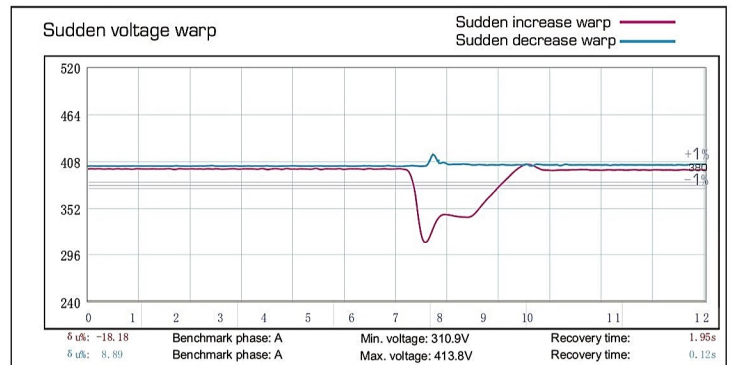


■ Alternator Specification

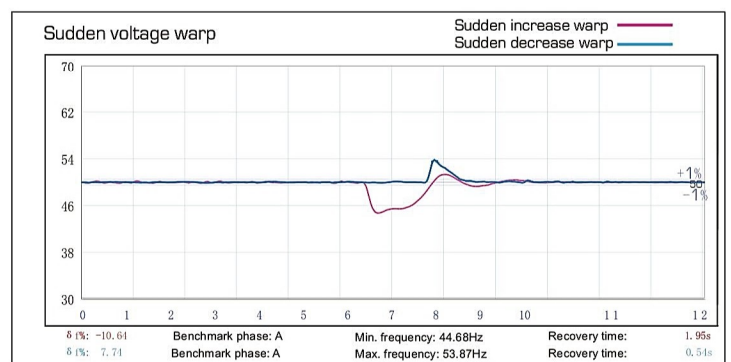
| Alternator | |
|--------------------------------|---------------------|
| Number of phase | 3 |
| Power factor (Cos Phi) | 0.8 |
| Poles | 4 |
| Winding Connections (standard) | Star-serie |
| Terminals | 12 |
| Insulation type | H class |
| Winding Pitch | 2/3 |
| IP rating | IP23 |
| Excitation system | Self-excited |
| Bearing | Single bearing |
| Coating | Vacuum impregnation |
| Voltage regulator | A.V.R |
| Coupling | Flexible disc |



Emergency voltage curve



Emergency frequency curve



■ Options

| Engine | Alternator | Generator Sets | Fuel System |
|--|--|--|---|
| <ul style="list-style-type: none"> Water Jacket Pre-heater Fuel heater | <ul style="list-style-type: none"> Winding Temp measuring Instrument Alternator Pre-heater PMG Anti-damp and anti-corrosion treatment Anti-condensation heater Winding and bearing RTD | <ul style="list-style-type: none"> Tools with the machine Extended range fuel tank Bunded fuel tank | <ul style="list-style-type: none"> Low fuel level alarm Automatic fuel feeding system Fuel T-valves |
| Canopy | Lub oil system | Cooling System | Control Panel |
| <ul style="list-style-type: none"> Rental type Canopy Trailer | <ul style="list-style-type: none"> Oil Pre-heater Oil temp sensor | <ul style="list-style-type: none"> Front heat protection | <ul style="list-style-type: none"> Remote control panel ATS Synchronizing controller Adjustable earth leakage relay |



■ Control Panel

Configuration

- Emergency stop button
- Protection MCB
- Battery charger
- Integrated aviation plug
- ATS connection
- Digital control module

Features

- 3 phase generator set monitoring
- Support of engines equipped with electronic control unit
- Comprehensive diagnostic message
- Automatic or manual start/stop of the gensets
- Push buttons for simple control, lamp test
- Graphic back-lit LCD display
- Parameters adjustable via keyboard or PC
- Mains measurements (50HZ/60HZ)
- Generator measurements (50HZ/60HZ)
- Comprehensive shutdown or warning on fault condition
- 3 phase Generator protections
 - Over-/under voltage
 - Over-/under frequency
 - Current/voltage asymmetry
 - Over current/overload
- 3 phase AMF function
 - Over-/under frequency
 - Over-/under voltage
 - Voltage asymmetry
- Configurable analog inputs
- Battery voltage, engine speed (pick-up) measurement
- Configurable programmable binary inputs and outputs
- Warm-up and cooling functions
- Generator C.B. and Mains C.B. control with feedback and return timer
- RS232 interface
- Modem communication support
- Hours counter
- Sealed to Ip65
- Event log

Benefits

- Less wiring and components
- Integrated solution
- Less engineering and programming
- User friendly set-up and button layout
- Module can be configured to suit individual applications
- PC software for simplified configuration
- Wide range of communication capabilities

Operation conditions

- Operation temp: -20 °C to + 70 °C
- Storage temp: -30 °C to + 80 °C
- Operating humidity: 95% w/o condensation
- Vibration : 5-25Hz, ± 1.6 mm
5-100Hz, $a=4g$
- Shocks: $a= 500m/s^2$

Options

- Ethernet interface (Remote monitoring and control)
- GSM modem/wireless internet (Remote monitoring and control)
- RS232-RS485 Dual port interface
- Synchronizing control panel
- Distribution board with sockets kit and power busbar
- Battery trickle charge ammeter
- Earth leakage protection
- Earth fault protection
- Low fuel level alarm
- Low fuel level shutdown
- High fuel level alarm
- Fuel transfer system control
- Low coolant level shutdown
- High lube oil temp shutdown
- Overload via alarm switch on breaker
- Engine coolant heater controls
- Control panel heater
- Speed adjust switch
- Oil temp displayed on LCD screen
- Additional 8 inputs and outputs