

# **SPECIFICATION**



## **MODEL R225C RG SERIES (FOR 50Hz DIESEL GENSET)**

Revision: A4 (11/22)

# RS series

## R225C

50 Hz @ 1500rpm,3-phase/4-wiring

### 1 Standards & Conditions

#### Design Standards

The designs and the productions are in conformity with:

- Conformance Européenne (CE)
- ISO8528-5:2005
- GB/T2820.5-2009

#### Environmental Operating Conditions

- Installation place: Outdoors or indoors (well ventilated).
- Ambient temperature: -25°C to 45°C. The coolant heater is needed when the temperature is below 5°C
- Humidity: Less than 90%.
- Altitude: Below one thousand (1000) meters above sea level.

#### Factory Inspection

- Inspection items.
- Protection devices working test.
- Starting ability in normal temperature.
- 50% rated power load moment capability.
- Voltage deviation and speed variation: 0%, 25%, 50%, 75%, 100%, 110% Load.

#### Painting Process

- Painting process and colors are based on the manufacturer's standard.
- The customer could also choose the color which the manufacturer offers.

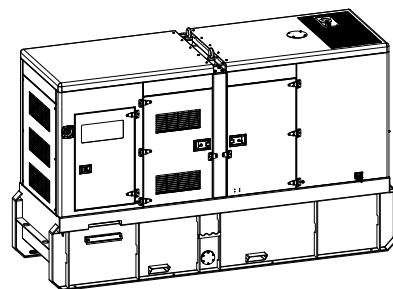
### 2 General Features

- Cummins engine QSB6.7-G31
- Close coupled to Leroy Somer alternator LSA46.3S4
- Microprocessor controller PLC500
- ABB main circuit breaker: 320A
- Rotate speed governor: ECU
- Excitation System: Self Excited, SHUNT
- A.V.R. Model: R250
- Key switch
- Emergency stop switch
- ATS (automatic transfer switch) receptacle
- Remote run connector

- 2x12V/120AH sealed for life maintenance free battery
- Lockable battery isolator switch
- Powder coated canopy
- 50°C radiator
- Steel base frame with forklift slots
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Base fuel tank with 22 hours running
- Drain points for fuel tank
- Operator's Manual / Specifications

### 3 Equipment Specification

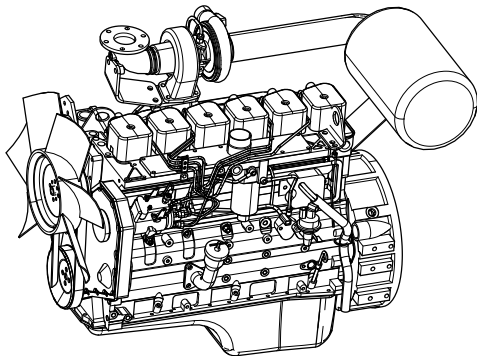
#### General technical data



|                                 |                  |
|---------------------------------|------------------|
| Model.....                      | R225C            |
| Tank capacity.....              | 1087L            |
| Dry weight.....                 | 2976kg           |
| Sound pressure level @ 7m ..... | 74.3dBA          |
| Dimensions L×W×H.....           | 3518x1222x2153mm |
| Standby Power .....             | 250kVA/200kW     |
| Prime Power .....               | 225kVA/180kW     |

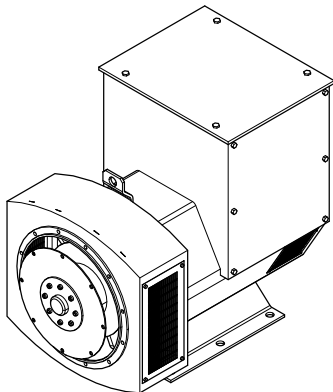
|                         |        |        |        |        |      |
|-------------------------|--------|--------|--------|--------|------|
| Voltage                 | 380V   | 400V   | 415V   | 440V   |      |
| Ampere                  | 285.6A | 271.4A | 261.6A | 246.7A |      |
| Genset Fuel Consumption |        |        |        |        |      |
| Frequency/Load          | 25%    | 50%    | 75%    | 100%   | 110% |
| 50Hz (L/h)              | 15.4   | 27.5   | 37.0   | 48.8   | 53.5 |

Power System



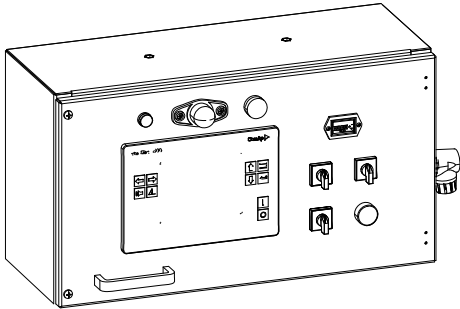
|                           |                           |
|---------------------------|---------------------------|
| Engine Manufacturer/Brand | Cummins                   |
| Engine Model              | QSB6.7-G31                |
| Dimensions L×W×H          | 1048x705x1019mm           |
| Dry Weigh (approx.)       | 552kg                     |
| Number of Cylinders       | 6                         |
| Bore                      | 107mm                     |
| Stroke                    | 124mm                     |
| Displacement              | 6.7L                      |
| Compression Ratio         | 18.5                      |
| Type of injection         | High pressure common rail |
| Intake System             | Turbocharged              |
| Intake Resistance         | ≤3.7kPa                   |
| Cooling System            | Water cooled              |
| Fan                       | Pusher                    |
| Battery Voltage           | 24V                       |
| Type of Fuel              | No.2 or ASTM D975         |
| Type of Oil               | 15W40-CH4                 |
| Oil Capacity              | 19.5L                     |
| Type of Coolant           | Glycol mixture            |
| Coolant Capacity          | 10.0L                     |
| Back Pressure             | ≤10.0kPa                  |
| Standby Power             | 230kW                     |
| Prime Power               | 209kW                     |

Alternator



|                                    |                        |
|------------------------------------|------------------------|
| Alternator Manufacturer/Brand      | Leroy Somer            |
| Alternator Model                   | LSA46.3S4              |
| Exciter                            | Brushless              |
| Cooling Fan                        | Cast alloy aluminum    |
| Windings                           | 100% copper            |
| Insulation Class                   | H                      |
| Winding Pitch                      | 2/3                    |
| Terminals                          | 12                     |
| Drip Proof                         | IP23                   |
| Altitude                           | ≤1000m                 |
| Overspeed                          | 2250rpm                |
| Air Flow                           | N/A                    |
| Voltage Regulation                 | ±1.0%                  |
| Total Harmonic TGH / THCat no load | < 1.5 % - on load < 5% |
| Telephone Interference             | THF<2%;TIF<50          |

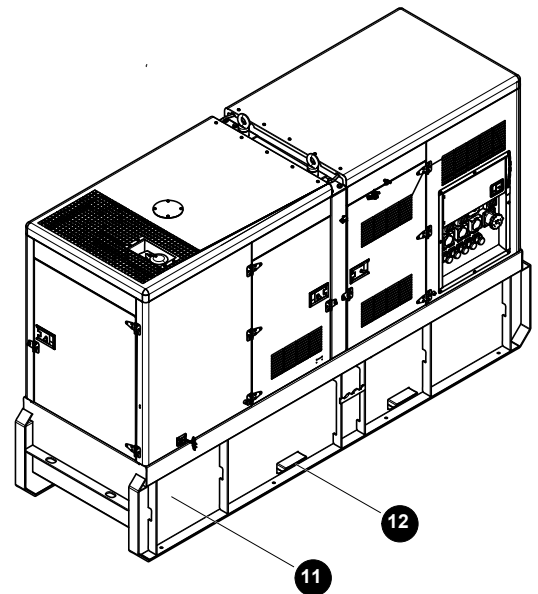
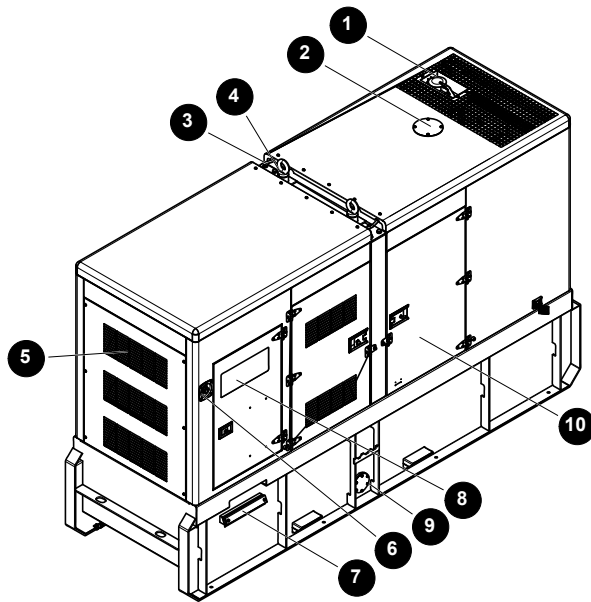
PLC500 Control System



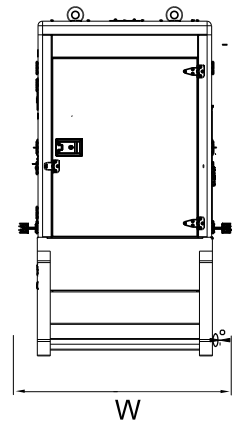
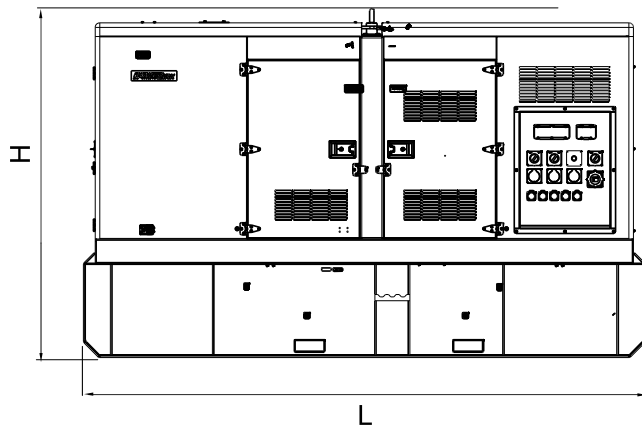
PLC-500 is a microprocessor based control unit containing all necessary functions for protection of the genset and the breaker control. Furthermore, it contains all necessary three-phase measuring circuits and presents all values and alarms on the LCD display. The module has the function of load sharing which enables the module to share the active load (kW) equally when operating in parallel with other gensets. The load sharing is performed so each genset takes a portion of the load that is calculated in percent according to the nominal power.

- Microprocessor control, with high stability and credibility
- Monitoring and measuring operational parameters of the genset
- Indicating operation status, fault conditions, all parameters and alarms
- Multiple protections; multiple parameters display, like pressure, temp. etc.
- Manual, automatic and remote work mode selectable
- RS232 & RS485 can be used at the same time
- Real time clock for time and date display, overall runtime display, 250 log entries

## 4 Overall Dimensions



- |                         |                     |
|-------------------------|---------------------|
| ⑥ Emergency stop switch | ⑫ Fork lift channel |
| ⑤ Air inlet             | ⑪ Base frame        |
| ④ Lifting lug           | ⑩ Access door       |
| ③ Roping lug            | ⑨ Fuel drain        |
| ② Coolant inlet         | ⑧ Control cabinet   |
| ① Exhaust gas outlet    | ⑦ Cable trench      |



# 5 Control System

