

# SPECIFICATION

**POWERLINK**  
Power Systems

*Power Link the World*

## **MODEL R500C RG SERIES (FOR 50Hz DIESEL GENSET)**

Revision: A2 (11/22)

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# RG series R500C

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

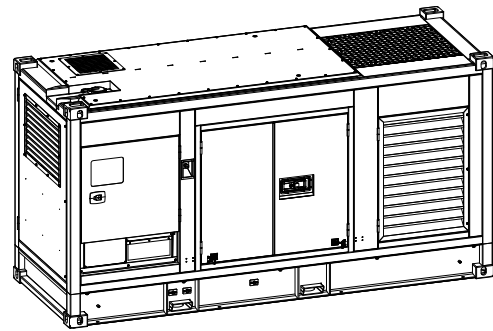
## 2 General Features

- Cummins engine QSZ13-G10
- Close coupled to Leroy Somer alternator LSA47.3M7
- Microprocessor controller PLC500
- ABB main circuit breaker: 800A
- 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 forklifts
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Base fuel tank with 15 hours running
- Drain points for fuel tank
- Operator's Manual / Specifications

## 3 Equipment Specification

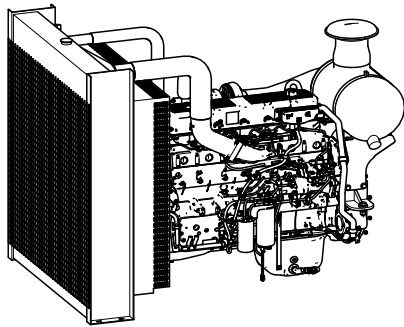
### General technical data



Model.....	R500C
Tank capacity.....	1650L
Dry weight.....	5937kg
Sound pressure level @ 7m.....	73dBA
Dimensions L×W×H.....	4954x1677x2068mm
Standby Power.....	500kVA/400kW
Prime Power.....	550kVA/440kW

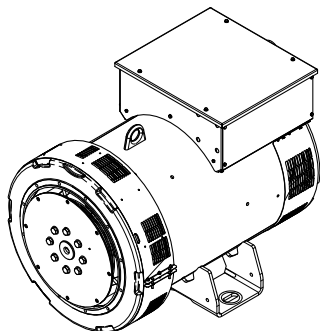
Voltage	380V	400V	415V	440V	
Ampere	759.7A	721.7A	695.6A	656.1A	
<b>Genset Fuel Consumption</b>					
Frequency/Load	25%	50%	75%	100%	110%
50Hz (L/h)	29	54	80	107	118

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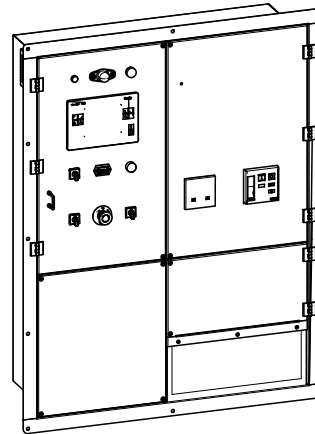
Engine Manufacturer/Brand.....	Cummins
Engine Model.....	QSZ13-G10
Dimensions L×W×H.....	1554.5×1054×1276.3mm
Dry Weight (approx.) .....	1245kg
Number of Cylinders.....	6
Bore.....	130mm
Stroke.....	163mm
Displacement.....	13L
Compression Ratio.....	17
Type of injection.....	Direct injection
Intake System.....	Turbocharged and Charge Air Cooled
Intake Resistance.....	≤3.7kPa
Cooling System .....	Water cooled
Fan .....	Pusher
Battery Voltage .....	24V
Type of Fuel.....	No.2 or ASTM D975
Type of Oil .....	API CD/SE or CCMCD4
Oil Capacity .....	78.0L
Type of Coolant .....	Glycol mixture
Coolant Capacityengine only .....	23.1L
Back Pressure .....	≤13kPa
Standby Power .....	509kW
Prime Power.....	463kW
Fuel Consumption(100%load).....	107L/h

## Alternator



Alternator Manufacturer/Brand .....	Leroy Somer
Alternator Model .....	LSA47.3M7
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

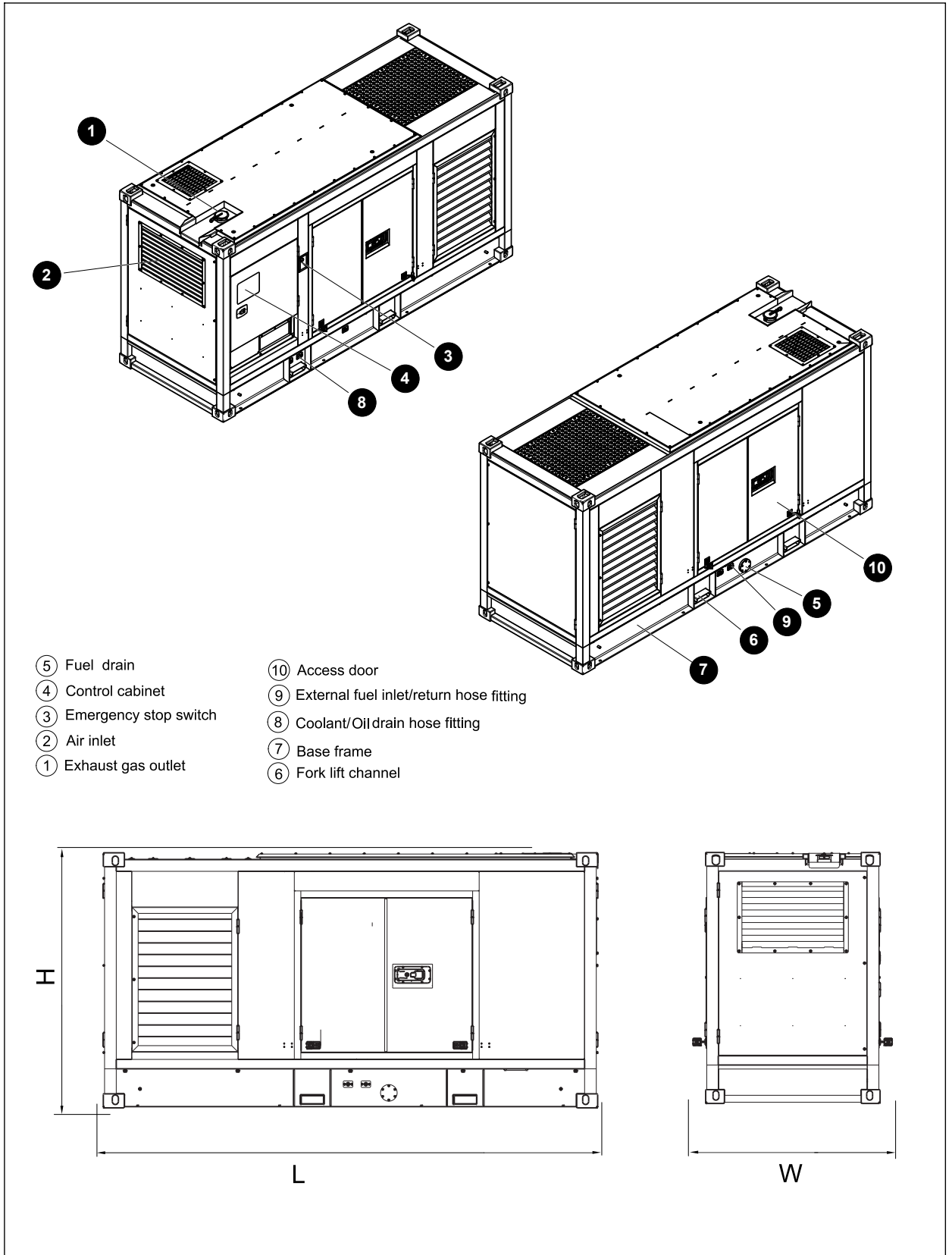
## PLC500 Control System



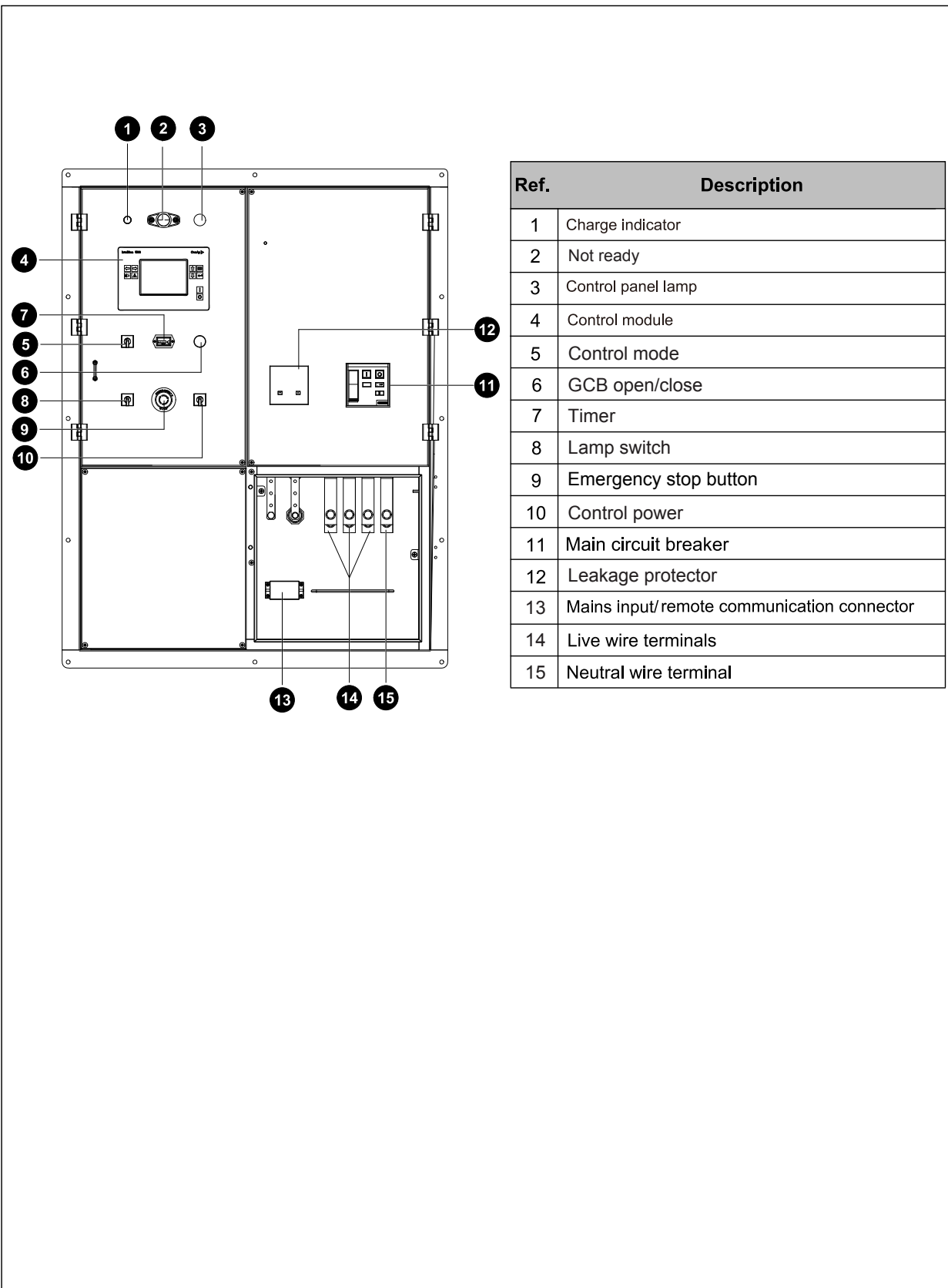
PLC-500 is a microprocessor based control unit containing all necessary functions for protection of the genset and the breaker control. Furthermore, it contains all necessary three-phase measuring circuits and presents all values and alarms on the LCD display. The module has the function of load sharing 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



## 5 Control System



Ref.	Description
1	Charge indicator
2	Not ready
3	Control panel lamp
4	Control module
5	Control mode
6	GCB open/close
7	Timer
8	Lamp switch
9	Emergency stop button
10	Control power
11	Main circuit breaker
12	Leakage protector
13	Mains input/remote communication connector
14	Live wire terminals
15	Neutral wire terminal

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