

# SPECIFICATION



*Power Link the World*

## **MODEL R1500C RG SERIES (FOR 50Hz DIESEL GENSET)**

Revision: A2 (02/24)

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**RG series**  
**R1500C, Stage IIIA**  
**50 Hz @ 1500rpm, 3-phase/4-wiring**



**1 Standards & Conditions**

**Design Standards**

The designs and the productions are in conformity with:

- Conformance European (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.

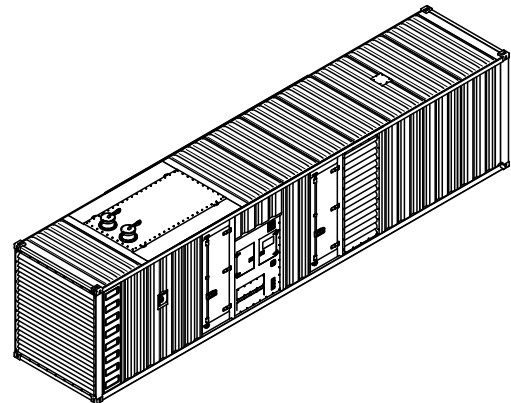
**2 General Features**

- Cummins engine QSK50-G4
- Close coupled to Stamford alternator S7L1D-C41
- Microprocessor controller PLC500
- Schneider main circuit breaker: 2500A,4P
- Rotate speed governor: ECU
- Excitation System: PMG
- A.V.R.Model: MX341
- Key switch
- Emergency stop switch
- ATS (automatic transfer switch) receptacle
- 2x12V/150AH sealed for life maintenance free battery
- Lockable battery isolator switch

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- Powder coated canopy
- Standard container
- 50 C radiator
- Fire extinguisher
- Oil pump on the engine
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Fuel tank with 6 hours running
- Drain points for fuel tank
- Fuel-water separator for fuel tank
- Operation Manual / Specification

**3 Equipment Specification**

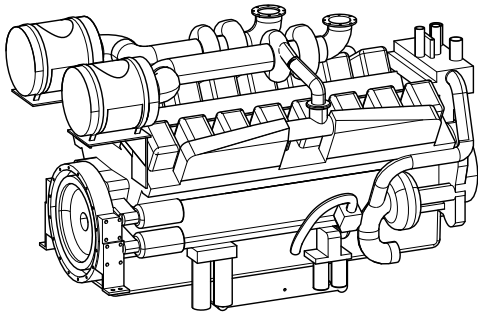
**General technical data**



Model..... R1500C  
 Tank capacity.....2000L  
 Dry weight.....21668kg  
 Sound pressure level @ 7m..... 76dBA  
 Dimensions L×W×H.....12192x2438x2896mm  
 Standby Power ..... 1650kVA/1320kW  
 Prime Power..... 1500kVA/1200kW

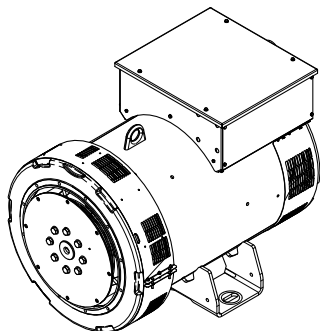
Voltage	380V	400V	415V	440V	
Ampere	2279A	2165A	2086A	1968A	
<b>Genset Fuel Consumption</b>					
Frequency/Load	25%	50%	75%	100%	110%
50Hz (L/h)	96	177	254	330	352

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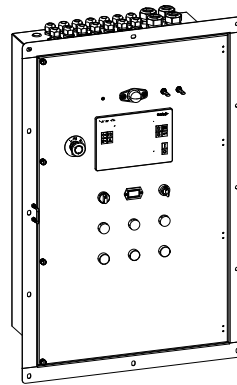
Engine Manufacturer/Brand .....	Cummins
Engine Model .....	QSK50-G4
Dimensions L×W×H.....	2885x1518.9x2005mm
Dry Weigh (approx.) .....	3723kg
Number of Cylinders.....	16
Bore.....	159mm
Stroke .....	159mm
Displacement.....	50.3L
Compression Ratio .....	15.0
Type of injection.....	Direct Injection
Intake System.....	Turbocharged and Aftercooled
Intake Resistance .....	≤6.23kPa
Cooling System .....	Water cooled
Fan .....	Pusher
Battery Voltage .....	24V
Type of Fuel.....	No.2 or ASTM D975
Type of Oil .....	API CH4/SG15W-40
Oil Capacity .....	234.7L
Type of Coolant .....	Glycol mixture
Coolant Capacity(engine only) .....	140L
Back Pressure .....	≤6.8kPa
Standby Power .....	1477kW
Prime Power .....	1328kW
Fuel Consumption(100%load).....	330L/h

## Alternator



Alternator Manufacturer/Brand .....	Stamford
Alternator Model .....	S7L1D-C41
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

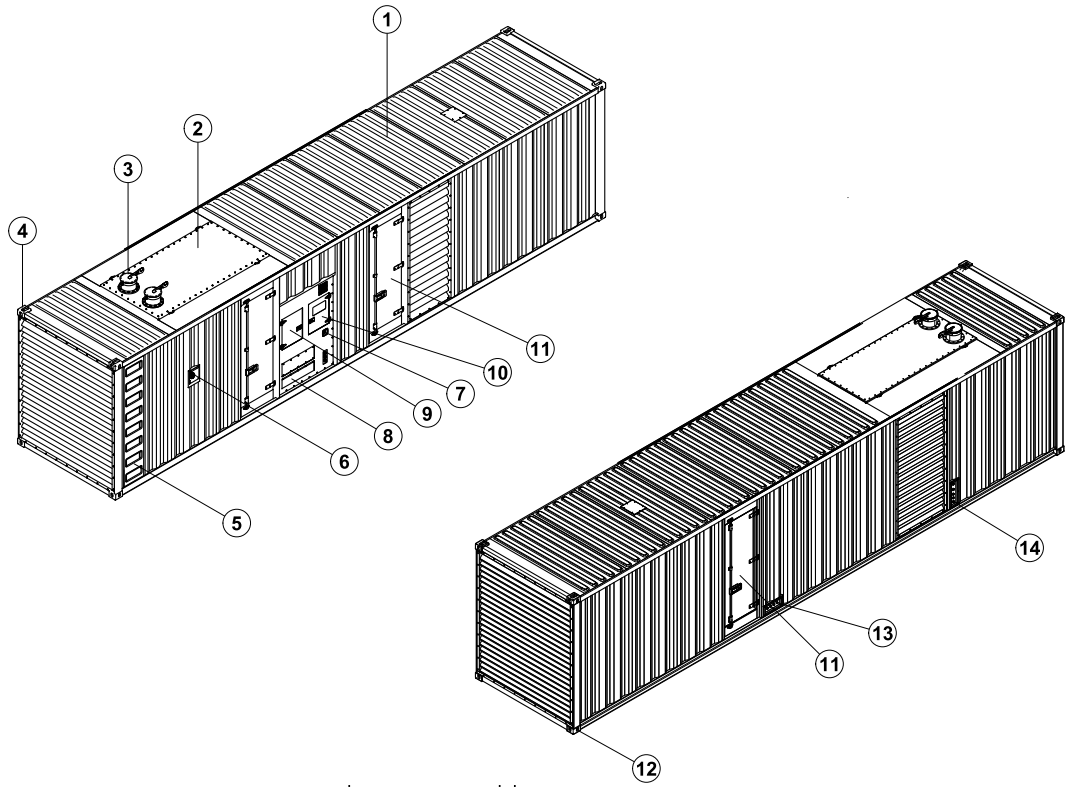
## PLC-500 Control System



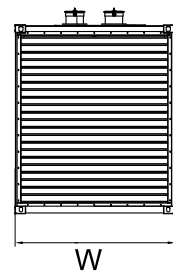
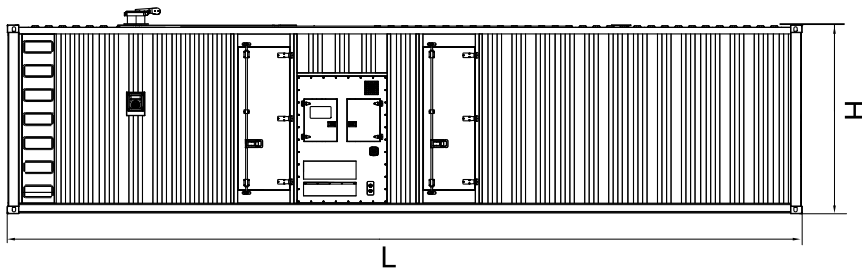
PLC-500 is a microprocessor based control unit containing all necessary functions for protection of the genset and the breaker control. Furthermore, it contains all necessary three-phase measuring circuits and presents all values and alarms on the LCD display. The module has the function of load sharing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

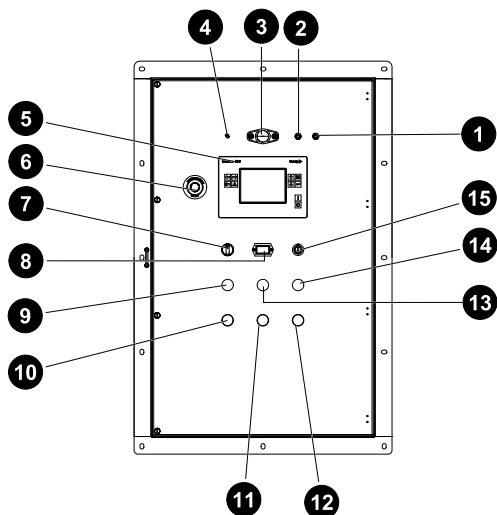
## 4 Overall Dimensions



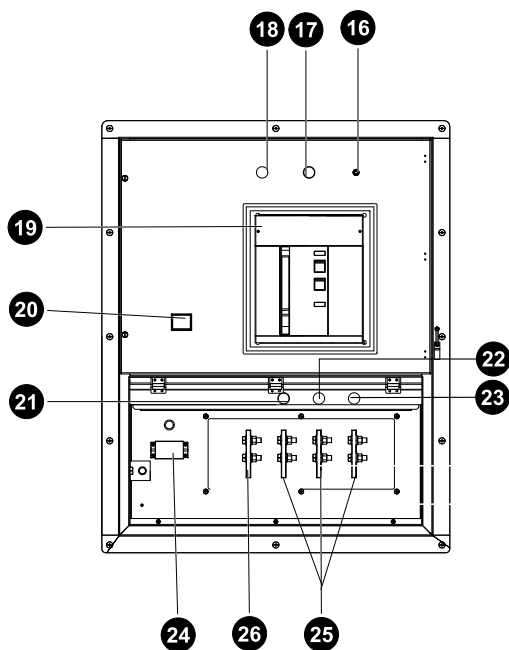
- |                         |   |
|-------------------------|---|
| ⑦ Emergency stop switch | ⑭ External fuel inlet/return hose fitting                                   |
| ⑥ Fuel inlet            | ⑬ External fuel inlet/return hose fitting<br>Coolant/Oil drain hose fitting |
| ⑤ Ladder                | ⑫ Fixing lug  |
| ④ Lifting lug           | ⑪ Access door   |
| ③ Exhaust gas outlet    | ⑩ Switch cabinet  |
| ② Muffler               | ⑨ Control cabinet   |
| ① Canopy                | ⑧ Cable trench  |



## 5 Control System



Control cabinet



Field wiring cabinet

Ref.	Description
1	DC switch
2	Lamp switch
3	Control cabinet lamp
4	Charge indicator
5	Control module
6	Emergency stop switch
7	Oil pump switch
8	Time counter
9	Engine room fan off
10	Engine room fan on
11	Radiator fan on
12	GCB open(green)
13	Radiator fan off
14	GCB close(red)
15	Key switch
16	Lamp switch
17	GCB open(green)
18	GCB close(red)
19	Main circuit breaker
20	R.C.D
21	Busbar L1
22	Busbar L2
23	Busbar L3
24	Ground wire terminal
25	Live wire terminals
26	Neutral wire terminal

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**RG SERIES DIESEL GENSET**

**R1500C**

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