Cumins series
G650DG
50 Hz @ 1500rpm,3-phase/4-wiring

1 Standards & Conditions

Design Standards

The designs and the productions are in conformity with:

- Conformite Europeenne (CE)
- China Compulsory Certification (CCC)
- ISO8528-5:2005
- GB/T2820.5-2009

Environmental Operating Conditions

- Installation place: Indoors (well ventilated).
- Ambient temperature: -25℃ to 45℃. The coolant heater is needed when the temperature is below 5℃
- Humidity: Less than 80%.
- 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

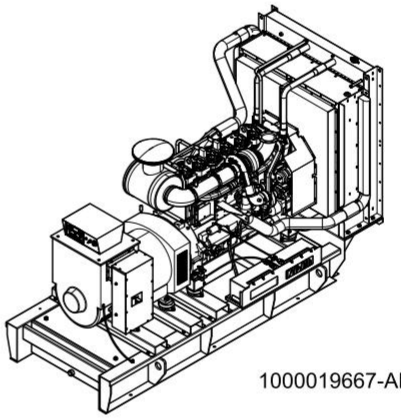
- Painting process specifications and colors are based on the manufacturer's standard.
- The customer could also choose the color which the manufacturer offers.

2 General Features

- Cummins engine QSK19-G4
- Coupled to a Leroy-Somer or Stamford alternator
- Microprocessor control module PLC-7420
- DMA main circuit breaker: 1000A
- Rotate speed governor: Electronic fuel injection governor
- Excitation System: Self excited,SHUNT
- A.V.R.Model: AS440
- Key switch
- Emergency stop switch
- ATS (automatic transfer switch) receptacle
- 2x12V/150AH sealed for life maintenance free battery
- Lockable battery isolator switch
- 50℃ radiator
- Oil pump on the engine
- Steel base frame with lifting lugs
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Base fuel tank for 9 hours running
- Drain points for fuel tank
- Operation Manual / Specifications

3 Equipment Specification

General technical data



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Model.....G650DG

Structure type ..... A

Tank capacity.....1300L

Dry weight.....5256kg

Noise level @7m .....N/A

Dimensions L×W×H.....3823×1683×2386mm

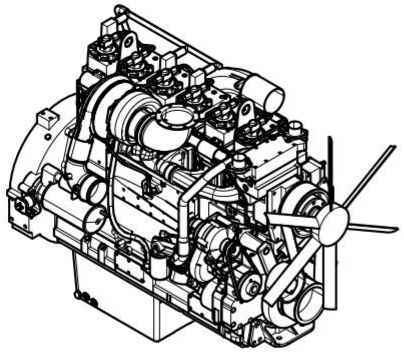
Standby Power 710kVA/568kW

Prime Power..... 650kVA/520kW

Voltage	380V	400V	415V	440V
Ampere	987.6A	938.2A	904.3A	852.9A

Genset Fuel Consumption					
Frequency/Load	25%	50%	75%	100%	110%
50Hz (L/h)	40	77	109	143	156

Diesel engine



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Engine Manufacturer/Brand	Cummins
Engine Model	QSK19-G4
Dimensions L×W×H	1784×1126×1550mm
Dry Weigh (approx.)	1900kg
Number of Cylinders	6
Bore	159mm
Stroke	159mm
Displacement	19L
Compression Ratio	15
Type of injection	Cummins MCRS
Intake System	Turbocharged,air-to-air charged cooled
Intake Resistance	≤6.22KPa
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	84.4L
Type of Coolant	Glycol mixture
Coolant Capacity	41.6L(only engine)
Back Pressure	≤7.8KPa
Standby Power	634kW
Prime Power	574kW
Fuel Consumption(100%load)	143L/h

Alternator

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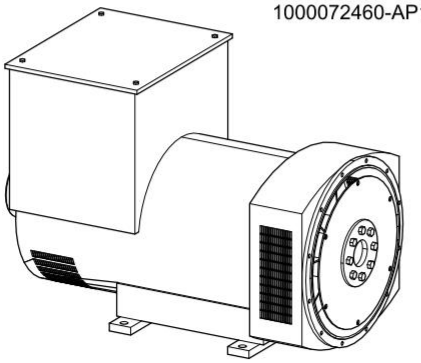
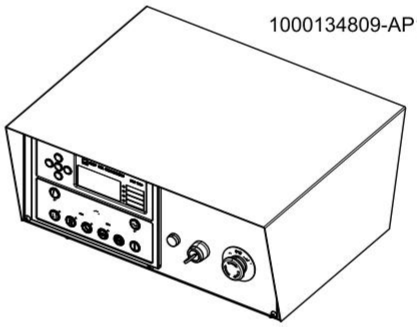


Alternator Manufacturer/Brand	LEROY SOMER
Alternator Model	TAL-A473-F
Exciter	Brushless
Cooling Fan	Cast alloy aluminum
Windings	100% copper
Insulation Class	H
Winding Pitch	2/3
Terminals	12
Drip Proof	IP23
Altitude	≤1000m
Overspeed	2250 rpm
Air Flow	1.035m³/s(50HZ),1.312m³/s(60HZ)
Voltage Regulation	±1.0%
Total harmonic	TGH / THCat no load < 1.5 % - on load < 5%
Telephone Interference	THF<2%;TIF<50

PLC-7420 Control System

1000134809-AP1-D2



PLC-7420 is an advanced control module based on micro-processor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, and automatically start the engine when the mains is abnormal. Accurately measure various operational parameters and display all values and alarms information on the LCD. In addition, the control module can automatically shut down the engine and indicate the engine failure.

- Microprocessor control, with high stability and credibility
- Monitoring and measuring operational parameters of the mains supply and 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
- Real time clock for time and date display, overall runtime display, 250 log entries
- Overall power output display
- Integral speed/frequency detecting, telling status of start, rated operation, overspeed etc.
- Communication with PC via RS485 OR RS232 interface, using MODBUS protocol

4. Open Type Overall Dimensions

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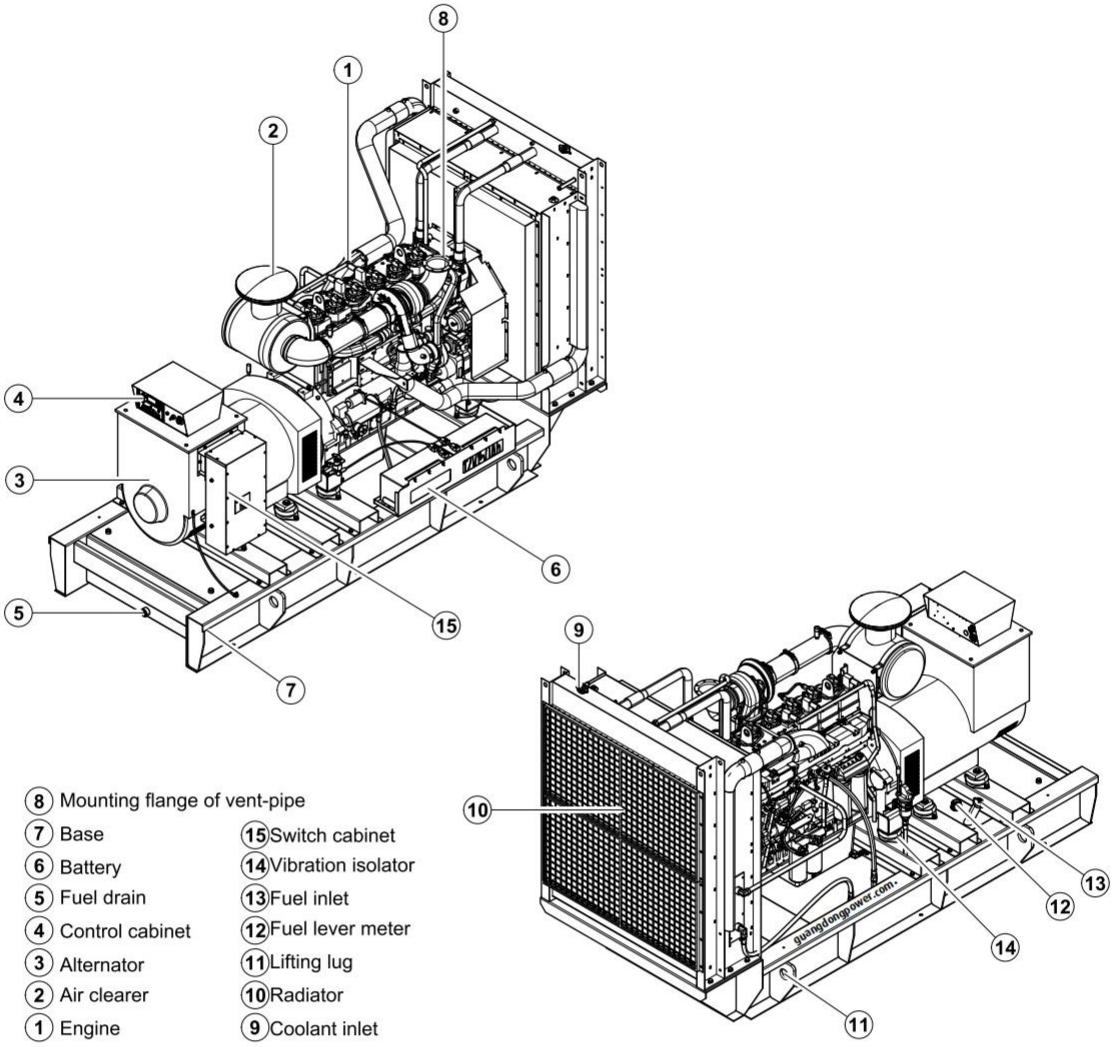
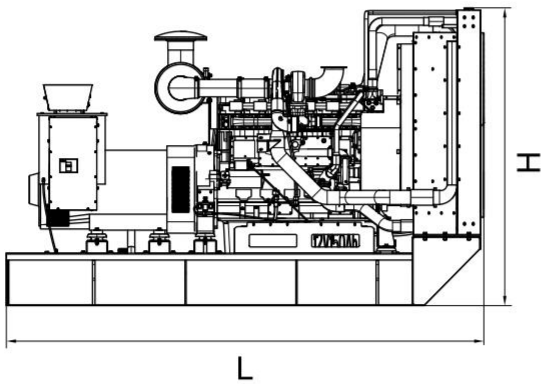
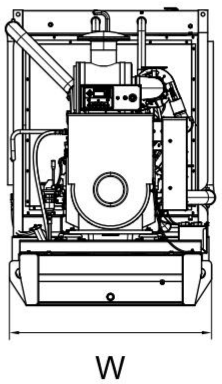


8	Mounting flange of vent-pipe		
7	Base	15	Switch cabinet
6	Battery	14	Vibration isolator
5	Fuel drain	13	Fuel inlet
4	Control cabinet	12	Fuel lever meter
3	Alternator	11	Lifting lug
2	Air clearer	10	Radiator
1	Engine	9	Coolant inlet





5. Silent Type Overall Dimensions

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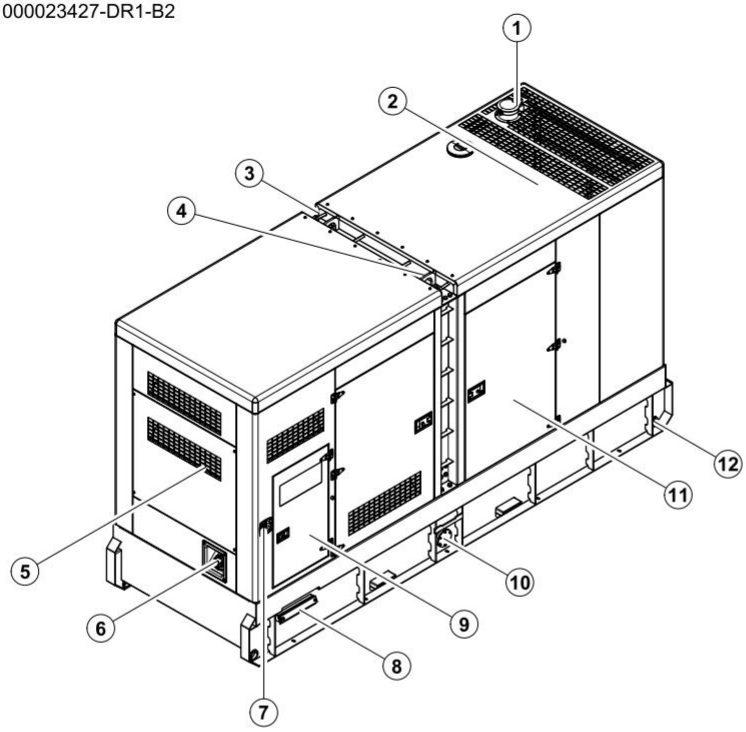

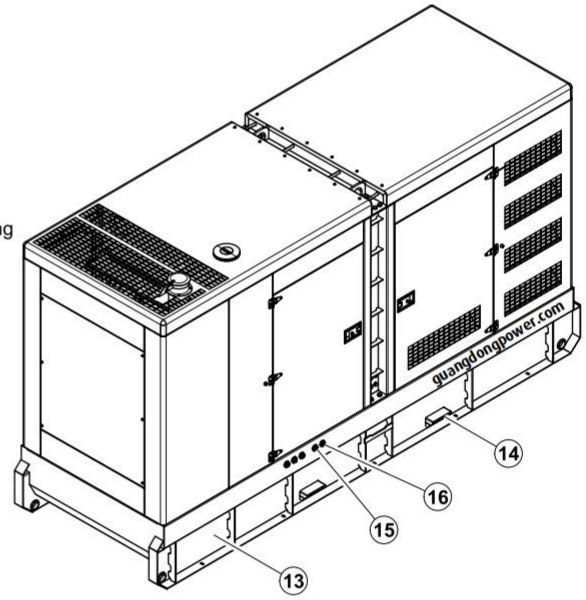

8	Cable trench	16	External fuel inlet/return hose fitting
7	Emergency stop switch	15	Coolant/Oil drain hose fitting
6	Fuel inlet	14	Fork lift channel
5	Air inlet	13	Base frame
4	Lifting lug	12	Tie down
3	Roping lug	11	Access door
2	Coolant inlet	10	Fuel drain
1	Exhaust gas outlet	9	Control cabinet