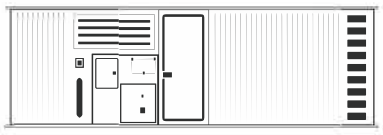
POWERINK
Power Systems



Generator set

Containerized type

HVC1400S

SPECIFICATIONS

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HV series
HVC1400S, Tier2
50 Hz @ 1500rpm, 10500V

1 Standards & Conditions

Design Standards

The designs and the productions are in conformity with:

- Conformite Europeenne (CE)
- ISO8528-5:2005
- GB/T2820.5-2009

Environmental Operating Conditions

- Installation place: Outdoors or indoors (well ventilated).
- Ambient temperature: -25℃ to 50℃. The coolant heater is needed when the temperature is below 5℃
- Humidity: Less than 80%.
- Altitude: Below one thousand (1000) meters.

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

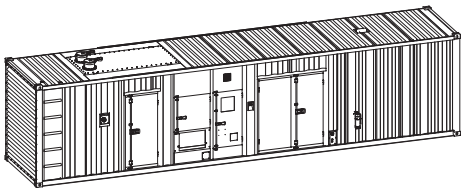
- Painting process specifications and colors are based on the manufacturer's standard.
- The customer could also choose the color which the manufacturer offers.

2 General Features

- Cummins engine QSK50-G3
- Close coupled to Leroy Somer alternator LSA52.2ZL65
- Microprocessor control module PLC-500
- HV Switchgear Panel: ABB 630A
- PT Cabinet
- DC Power Cabinet
- Rotate speed governor: Electrical governor
- Excitation System: AREP
- A.V.R. Model: R448
- Key switch
- Emergency stop switch
- 4x12V/150AH sealed for life maintenance free battery
- Lockable battery isolator switch
- Powder coated canopy
- 50℃ radiator
- Fire extinguisher
- Heat exchanger
- Coolant heater
- Oil pump on the engine
- Steel base frame with forkslots
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Fuel tank for 6 hours running
- Drain points for fuel tank
- Fuel inlet pump and it's control box for the fuel tank
- Added fuel-water separator for fuel tank
- Operation Manual / Specifications

3 Equipment Specification

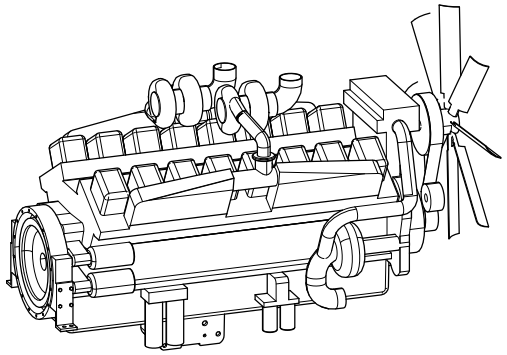
General technical data



Model..... HVC1400S
Structure type C
Fuel tank.....1450L
Dry weight..... 15470kg
Noise level @7m 80dAB
Dimensions L×W×H.....12192x2438x3153mm
Standby Power 1540kVA/1232kW
Prime Power..... 1400kVA/1120kW
Voltage/Ampere 10500V/77A

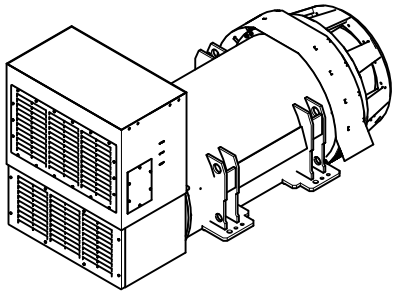
Genset Fuel Consumption					
Frequency/Load	25%	50%	75%	100%	110%
50Hz (L/h)	90	162	237	301	344

Diesel Engine



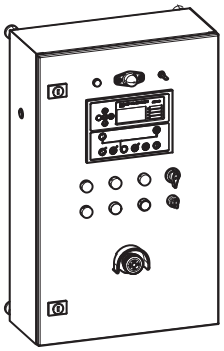
Engine Manufacturer/Brand.....Cummins
Engine Model.....QSK50-G3
Dimensions L×W×H.....2935x1620x2086mm
Dry Weigh (approx.) 5410kg
Number of Cylinders.....16
Bore 159mm
Stroke 159mm
Displacement.....50.3L
Compression Ratio 15.0
Type of injection..... Direct injection
Intake System.....Turbocharged and aftercooled
Intake Resistance 6.23kPa
Cooling System .....Water cooled
Fan .....Push
Battery Voltage 24V
Type of Fuel.....NO.2 or ASTMD975
Type of Oil CF4/SG15W-40
Oil Capacity 235L
Type of Coolant ..... Glycol mixture
Coolant Capacity engine only.....237L
Back Pressure .....≦10kPa
Standby Power 1400kW
Prime Power.....1210kW

HV Alternator



Alternator Manufacturer/Brand ..... Leroy Somer
Alternator Model LSA52.2ZL65
Exciter.....Brushless
Cooling Fan ..... Cast alloy aluminum
Windings.....100% copper
Insulation Class ..... H
Winding Pitch.....2/3
Terminals 6
Drip Proof IP23
Altitude.....≤1000m
Overspeed 2250rpm
Air Flow.....2.5m³/s
Voltage Regulation .....±0.5%
Total harmonic TGH / THC ..... < 3.5%
Telephone Interference.....FHT<2%;TIF<50

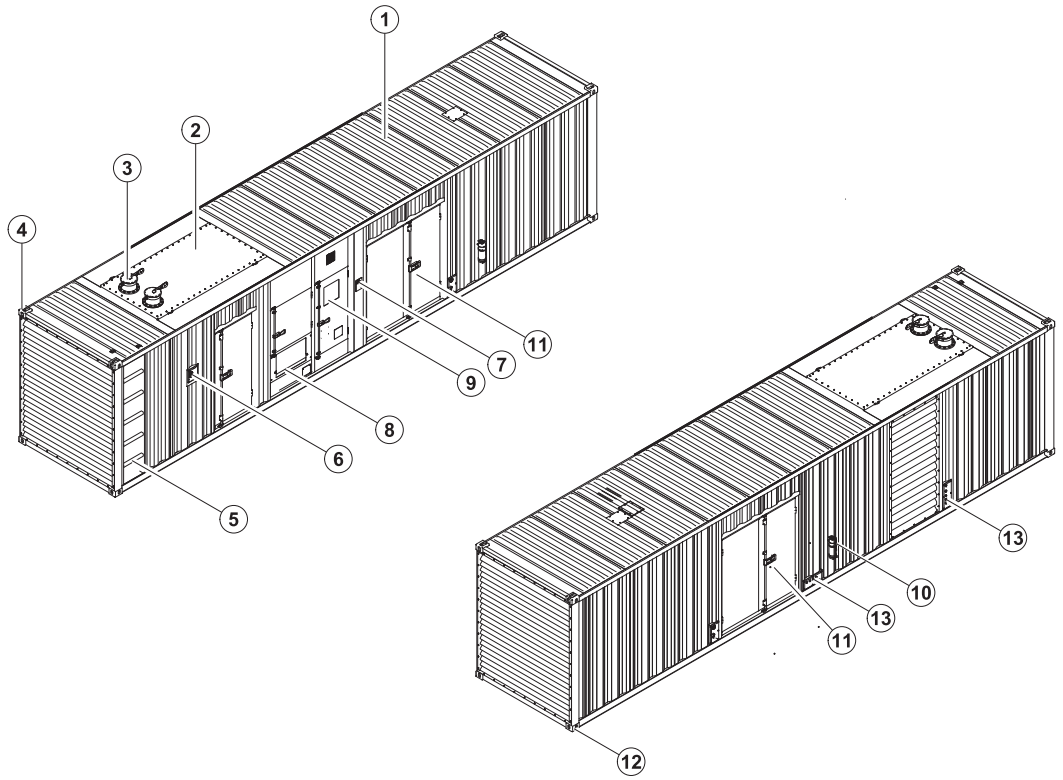
PLC-500 Control System



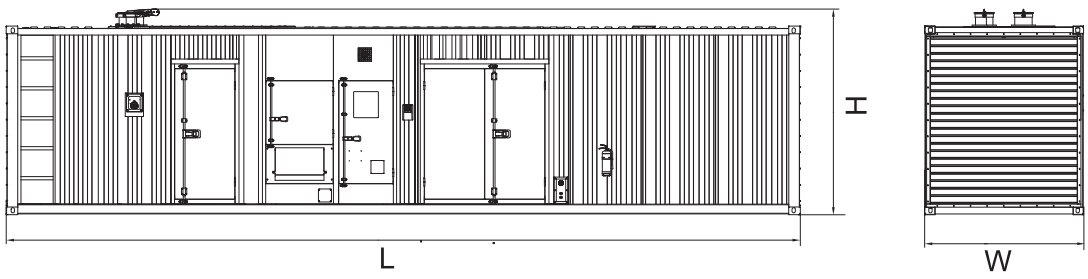
PLC-500 is a microprocessor based control unit containing all necessary functions for protection of the genset and the breaker control. Furthermore, it contains all necessary three-phase measuring circuits and presents all values and alarms on the LCD display. The module has the function of load sharing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

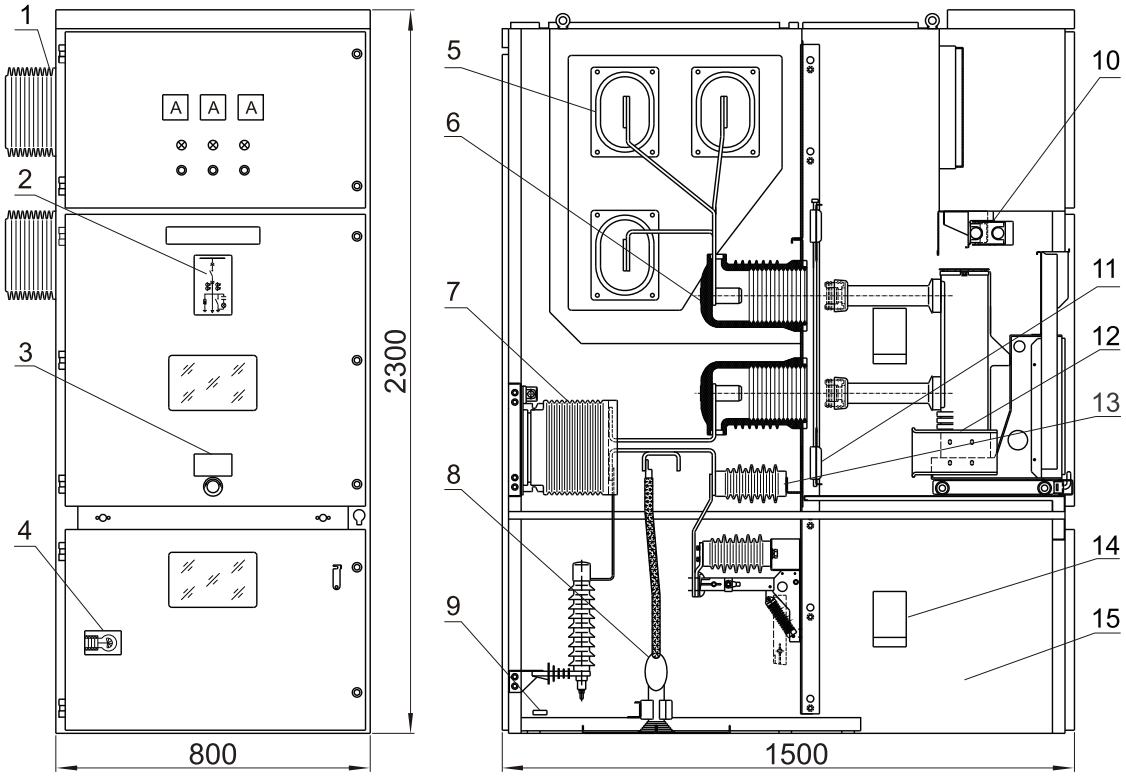
4 Overall Dimensions



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



5 Switchgear Panel



1.Passing bushing 2. Primary diagram 3. Nameplate 4. Lighting lamp 5. Main bus
6. Contact box 7. CT 8. Incoming cable 9. Earthing bus bar 10. Secondary interlocking device
11. Valve mechanism 12. CB trolley 13. Insulator 14. Heater 15. Frame

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