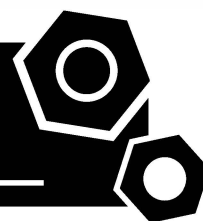


Generator set
Sound-proof type
WPS100D6S-EPA

SPECIFICATIONS



1 Standards & Conditions

Design Standards

The designs and the productions are in conformity with:

- ISO8528
- GB/T2820
- YD/502-2007
- JB/T20136-2006

Electrical devices have obtained the certification of:

- CSA
- UL

Environmental Operating Conditions

- Installation place: Outdoors or indoors (well ventilated).
- Ambient temperature: -25°C to 50°C. The coolant heater is needed when the temperature is below 5°C
- 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.

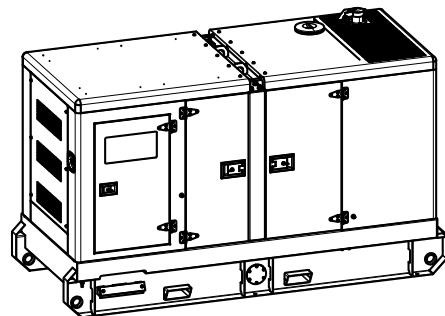
2 General Features

- Perkins engine 1104D-E44TAG2
- Close coupled to Leroy-somer alternator LSA44.3S5
- Microprocessor control module PLC-7420
- Communication gateway DSE 892
- ABB main circuit breaker: 400A
- Rotate speed governor: ECU
- Excitation system: Self excited , SHUNT
- A.V.R model: R250
- Key switch

- Emergency stop switch
- ATS (automatic transfer switch) receptacle
- 1x12V/120AH sealed for life maintenance free battery
- Lockable battery isolator switch
- Power coated canopy
- 50°C radiator
- Oil pump on the engine
- Steel base frame with forklifts
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Base fuel tank for 8 hours running
- Drain points for fuel tank
- Operation Manual / Specifications

3 Equipment Specification

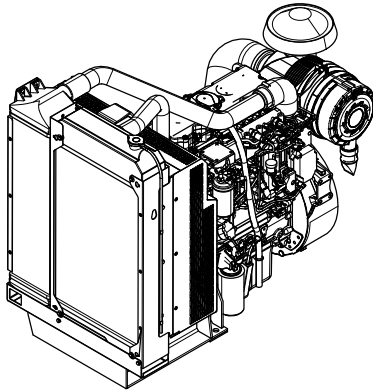
General technical data



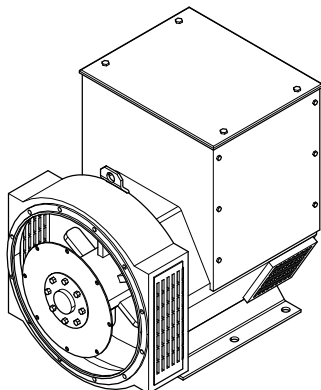
Model..... WPS100D6S-EPA
Structure type R
Tank capacity.....240L
Dry weight.....1775kg
Sound pressure level @ 7m71.2dBA
Dimensions L×W×H..... 2788x1130x1680mm
Standby Power 125kVA/100kW
Prime Power..... 114kVA/91kW

Voltage	208V	220V	230V	240V	
Ampere	305A	289A	276A	264A	
Genset Fuel Consumption					
Frequency/Load	25%	50%	75%	100%	110%
60Hz (L/h)	N/A	15.9	22.2	27.5	29.8

Power System

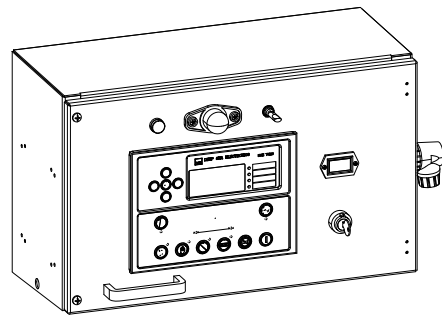


Engine Manufacturer/Brand.....	Perkins
Engine Model.....	1104D-E44TAG2
Dimensions L×W×H.....	1358×749×1086mm
Dry Weigh (approx.)	439kg
Number of Cylinders.....	4
Bore.....	105mm
Stroke	127mm
Displacement.....	4.4L
Compression Ratio.....	16.7
Type of Injection	Direct
Intake System.....	Turbocharged, air-to-air charge cooled
Intake Resistance	≤5.0kPa
Cooling System	Water cooled
Fan	Pusher
Battery Voltage	12V
Type of Fuel.....	EPA2D 89.330-96
Type of Oil	API-CC/SE or CCMC-D1
Oil Capacity	8.4L
Type of Coolant	Glycol mixture
Coolant Capacity	17L
Back Pressure	≤15kPa
Standby Power	120.1kW
Prime Power	109.7kW
Fuel Consumption(100%load).....	27.65L/h



Alternator Manufacturer/Brand	Leroy-somer
Alternator Model	LSA44.3S5
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.....	0.514m³/s(50HZ),0.617m³/s(60HZ)
Voltage Regulation	±1.0%
Total harmonic TGH / THCat no load < 1.5 % - on load < 5%	
Telephone Interference.....	THF<2%;TIF<50

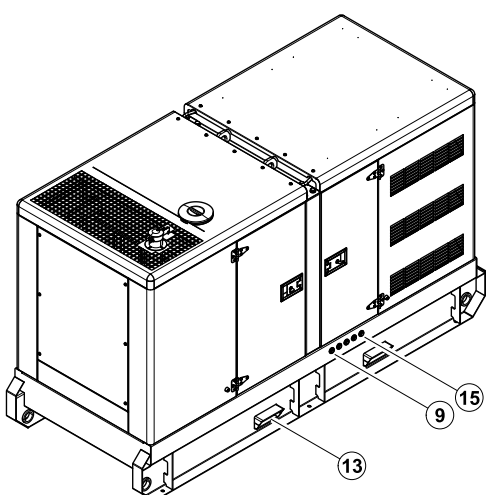
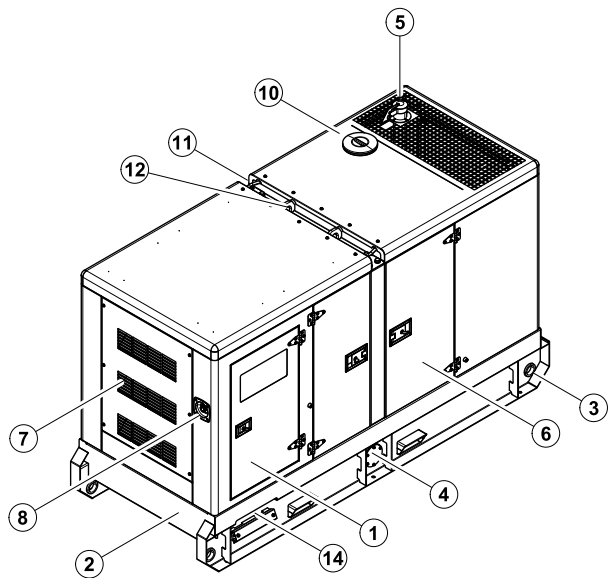
PLC-7420 Control System



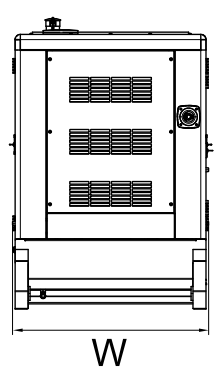
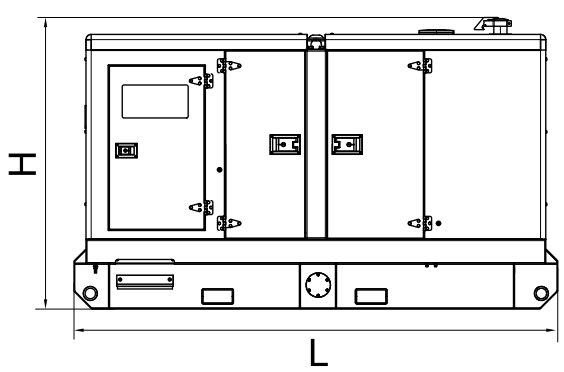
PLC-7420 is an advanced control module based on micro-processor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, and automatically start the engine when the mains is abnormal. Accurately measure various operational parameters and 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

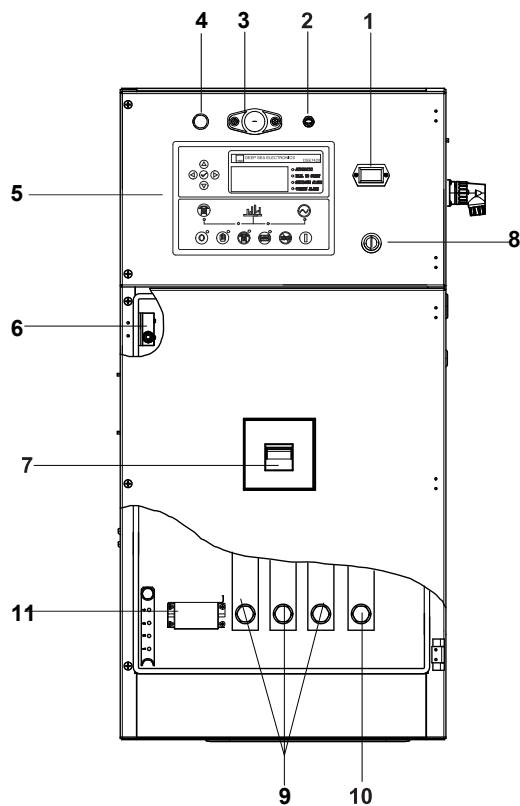
4 Overall Dimensions



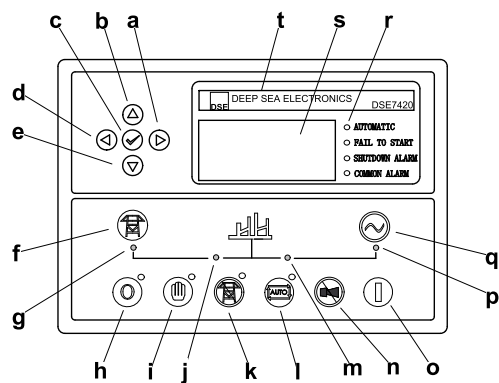
- ⑧ Emergency stop switch
- ⑦ Air inlet
- ⑥ Access door
- ⑤ Exhaust gas outlet
- ④ Fuel drain
- ③ Tie down
- ② Base frame
- ① Control cabinet
- ⑮ External fuel inlet/return hose fitting
- ⑭ Cable trench
- ⑬ Fork lift channel
- ⑫ Lifting lug
- ⑪ Roping lug
- ⑩ Coolant inlet
- ⑨ Coolant/Oil drain hose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



5 Control System



Control & field wiring cabinet



Control module

Ref.	Description
1	Time counter
2	Control panel lamp switch
3	Control panel lamp
4	Charge indicator
5	Control module
6	Limit switch
7	Main circuit breaker
8	Key switch
9	Live wire terminals
10	Neutral wire terminal
11	Mains input/Remote control communication connector

a	Button (next page)
b	Button (increase value / previous item)
c	Button (accept)
d	Button (previous page)
e	Button (decrease value / next item)
f	Button (transfer the load to the mains supply, when in Manual mode only)
g	Mains supply available LED
h	Stop / Reset button
i	Manual button (Manual control mode)
j	Mains supply on load LED
k	Test button (Test mode)
l	Auto button (Auto mode)
m	Genset on load LED
n	Mute/Lamp test button
o	Start button (Manual)
p	Genset available LED
q	Button (transfer the load to the genset, when in Manual mode only)
r	Alarm LED (4 alarm items)
s	LCD display
t	Control module name

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10.2023