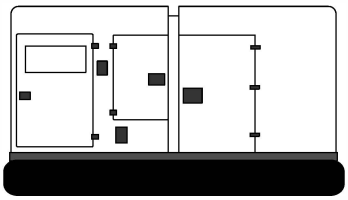
POWERLINK
Power Systems



Generator set
Sound-proof type
WPS450D6S -EPA

SPECIFICATIONS

EPA series
WPS450D6S-EPA ,Tier 3
60 Hz @ 1800rpm,3-phase/4-wiring

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℃ to 45℃.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

- Perkins engine 2506D-E15TAG1
- Close coupled to a Stamford alternator HCI544C
- Microprocessor control module PLC-7420
- ABB main circuit breaker: 1600A
- Rotate speed governor: ECU
- Excitation system: SELF EXCITED
- A.V.R model: AS440
- Key switch
- Emergency stop switch
- ATS (automatic transfer switch) receptacle
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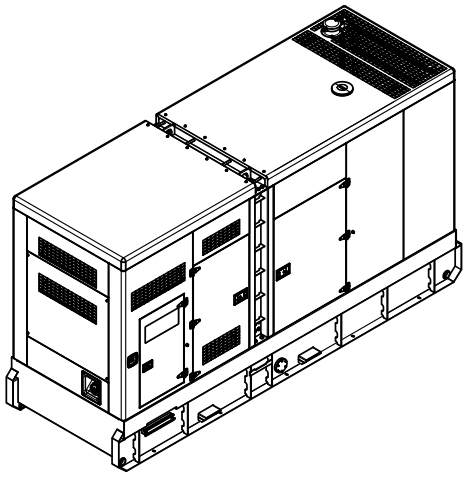
- 2x12V/120AH sealed for life maintenance free battery
- Lockable battery isolator switch
- Power coated canopy
- 50℃ radiator
- Oil pump on the engine
- Steel base frame with forkslots
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Base fuel tank for 6 hours running
- Drain points for fuel tank
- Operation Manual / Specifications

3 Equipment Specification

General technical data

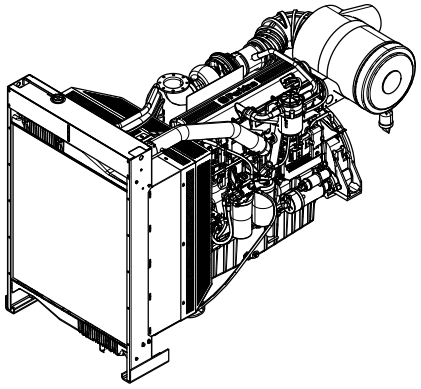


Model.....WPS450D6S-EPA
Structure type ..... R
Tank capacity.....800L
Dry weigh.....4786kg
Noise level @7m .....78.6dB(A)
Dimensions L×W×H.....4242×1463×2512mm
Standby Power 563kVA/450kW

Voltage	380V	400V	415V	440V
Ampere	683.7A	649.5A	626.1A	590.5A

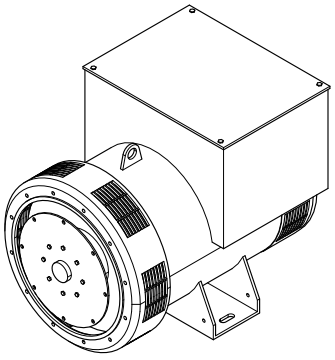
Genset Fuel Consumption					
Frequency/Load	25%	50%	75%	100%	110%
60Hz (L/h)	N/A	60.5	96	121	113.1

Diesel Engine



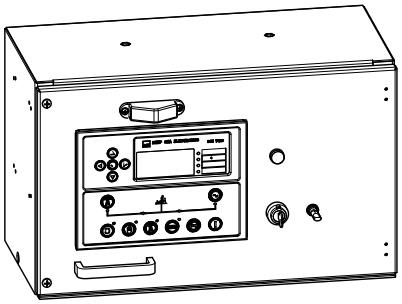
Engine Manufacturer/Brand.....Perkins
Engine Model..... 2506C-E15TAG1
Dimensions L×W×H.....2657×1120×1718mm
Dry Weigh (approx.) 1633kg
Number of Cylinders.....6
Bore 137mm
Stroke 171mm
Displacement.....15.2L
Compression Ratio 16
Type of Injection .....MEUI
Intake System..... Turbocharged, air-to-air charge cooled
Intake Resistance .....≦6.2kPa
Cooling System .....Water cooled
Fan ..... Pusher
Battery Voltage 24V
Type of Fuel..... BS2869 class A2 or BS EN590
Type of Oil .....API CI4 or ACEA E5
Oil Capacity 62L
Type of Coolant .....Glycol Mixture
Coolant capacity.....58L
Back Pressure .....≦6.8kPa
Standby Power 514kW
Continuous Power 458kW
Fuel Consumption(100%load).....199g/kW.h

Alternator



Alternator Manufacturer/Brand ..... Stamford
Alternator Model HCI544C
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..... 0.9m³/s(50Hz),1.1m³/s(60Hz)
Voltage Regulation .....±0.5%
Total harmonic TGH / THCat no load < 1,5 % - on load < 2 %
Telephone Interference.....THF<2%;TIF<50

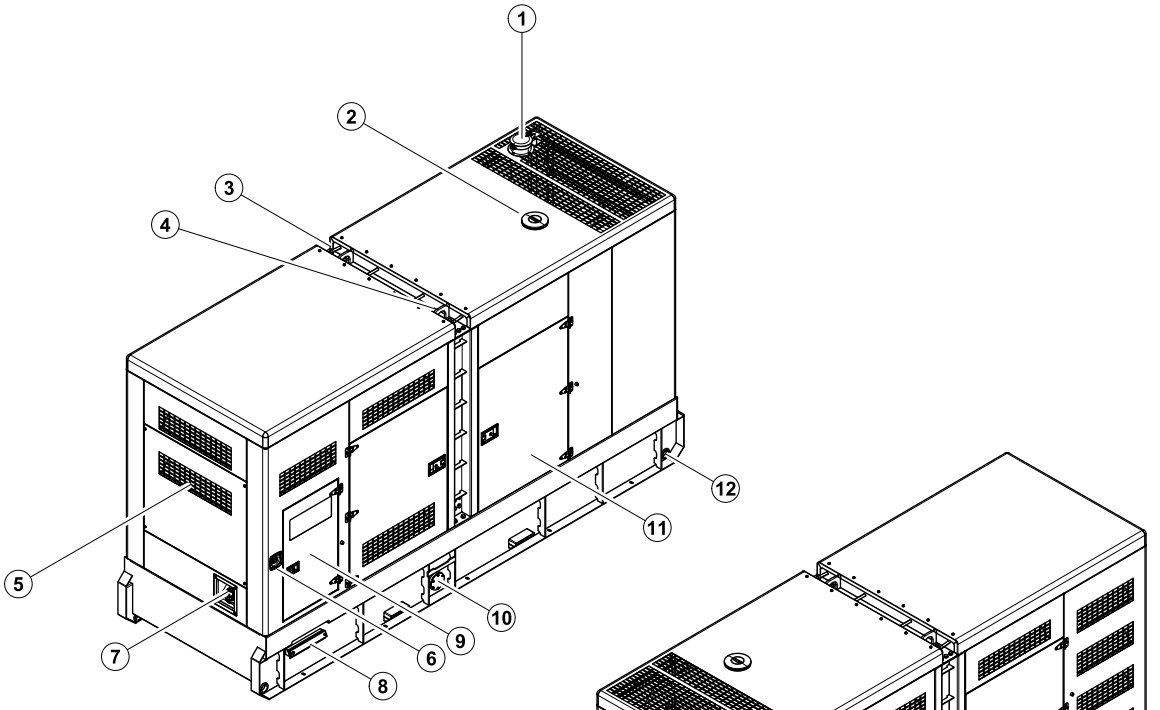
PLC-7420 Control System



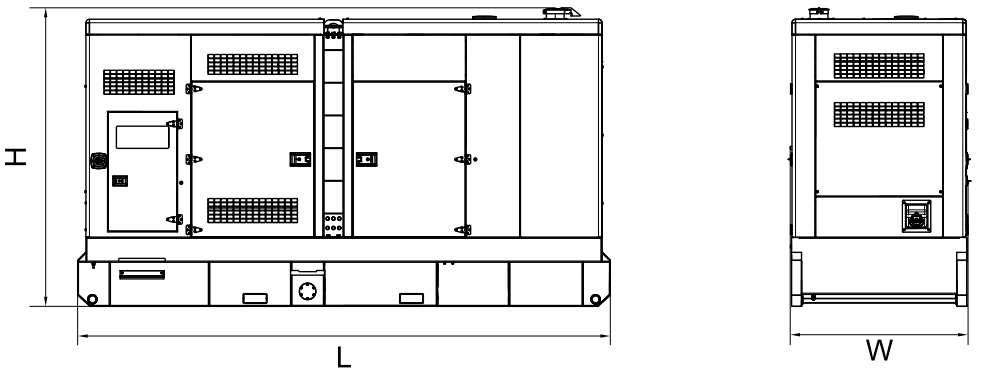
PLC-7420 is an advanced control module based on microprocessor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, and automatically start the engine when the mains is abnormal. Accurately measure various operational parameters and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

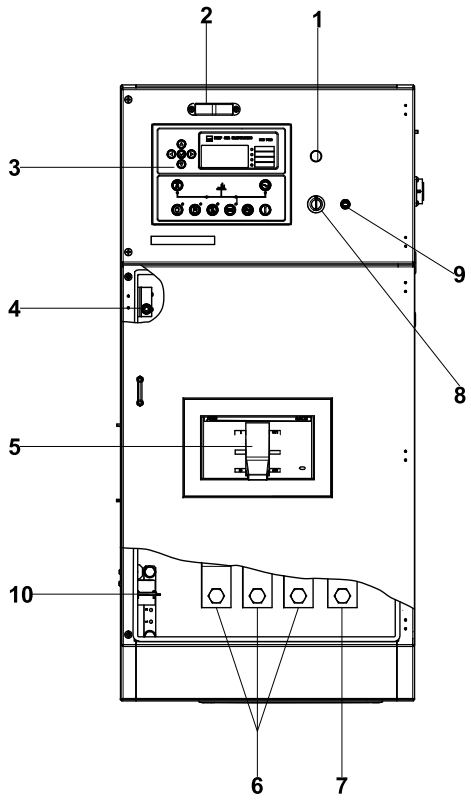
4 Overall Dimensions



(8)	Cable trench	(16)	Coolant/Oil drain hose fitting
(7)	Fuel inlet	(15)	External fuel inlet/return hose fitting
(6)	Emergency stop switch	(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

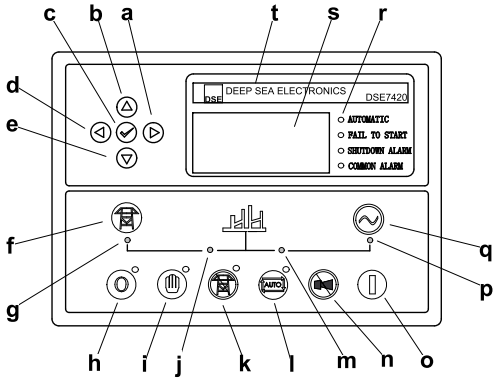


5 Control System



Control & field wiring cabinet

Ref.	Description
1	Charge indicator
2	Control cabinet lamp
3	Control module
4	Limit switch
5	Main circuit breaker
6	Live wire terminals
7	Neutral wire terminal
8	Key switch
9	Control cabinet lamp switch
10	Mains input/remote/AMF communication connector



Control module

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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