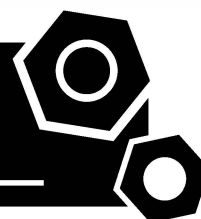


Generator set
Sound-proof type
WPS21D6S-EPA

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 45°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.

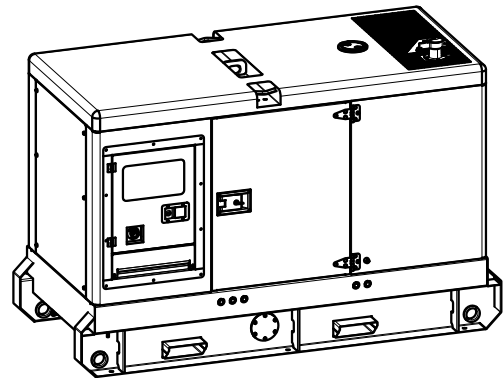
2 General Features

- Perkins engine 404D-22G
- Close coupled to Stamford alternator S0L2-M
- Microprocessor control module PLC-7420
- ABB main circuit breaker: 80A
- Rotate speed governor: Mechanical governor
- Excitation System: Self-Excited / Aux winding
- A.V.R.Model: AS540
- Key switch
- Emergency stop switch
- ATS (automatic transfer switch) receptacle
- 1x12V/70AH sealed for life maintenance free battery

- Lockable battery isolator switch
- Powder 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 22 hours running
- Drain points for fuel tank
- Operation Manual / Specifications

3 Equipment Specification

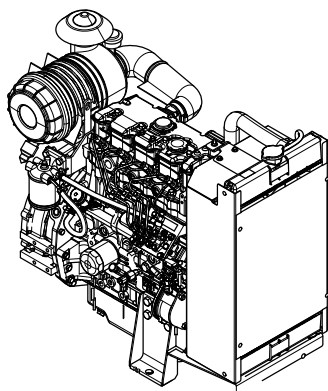
General technical data



Model.....	WPS21D6S-EPA
Structure type	R
Tank capacity.....	140L
Dry weight.....	962kg
Noise level @7m	68.1dBA
Dimensions L×W×H.....	2300x863x1358mm
Standby Power	27kVA/21kW
Prime Power	24kVA/19kW

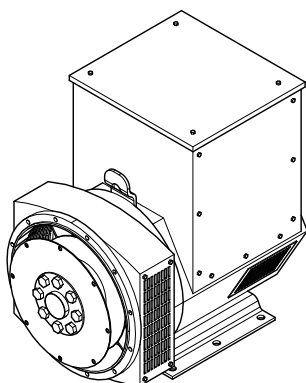
Voltage	208V	220V	230V	240V	
Ampere	66.6A	63.0A	60.2A	57.7A	
Genset Fuel Consumption					
Frequency/Load	25%	50%	75%	100%	110%
60Hz (L/h)	N/A	3.5	4.8	6.2	6.9

Diesel engine



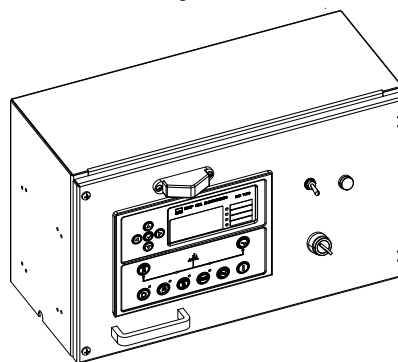
Engine Manufacturer/Brand.....	Perkins
Engine Model.....	404D-22G
Dimensions L×W×H.....	915×477×840mm
Dry Weigh (approx.)	242kg
Number of Cylinders.....	4
Bore.....	84mm
Stroke	100mm
Displacement.....	2.216L
Compression Ratio	23.3
Type of injection.....	Indirect injection
Intake System.....	Natural aspirated
Intake Resistance	≤6.4kPa
Cooling System	Water cooled
Fan	Pusher
Battery Voltage	12V
Type of Fuel.....	EPA2D 89.330-96/CEC RF-06-99
Type of Oil	API-CH-4/ ACEA E5
Oil Capacity	10.6L
Type of Coolant	Glycol mixture
Coolant Capacity	7.0L
Back Pressure	≤10.2kPa
Standby Power	24.3kW
Fuel Consumption(100%load).....	245g/kWh

Alternator



Alternator Manufacturer/Brand	Stamford
Alternator Model	S0L2-M
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.....	0.06m³/s(50HZ),0.072m³/s(60HZ)
Voltage Regulation	±1.0%
Total harmonic TGH / THC at no load < 3 % - on load < 2%	
Telephone Interference.....	THF<2%;TIF<50

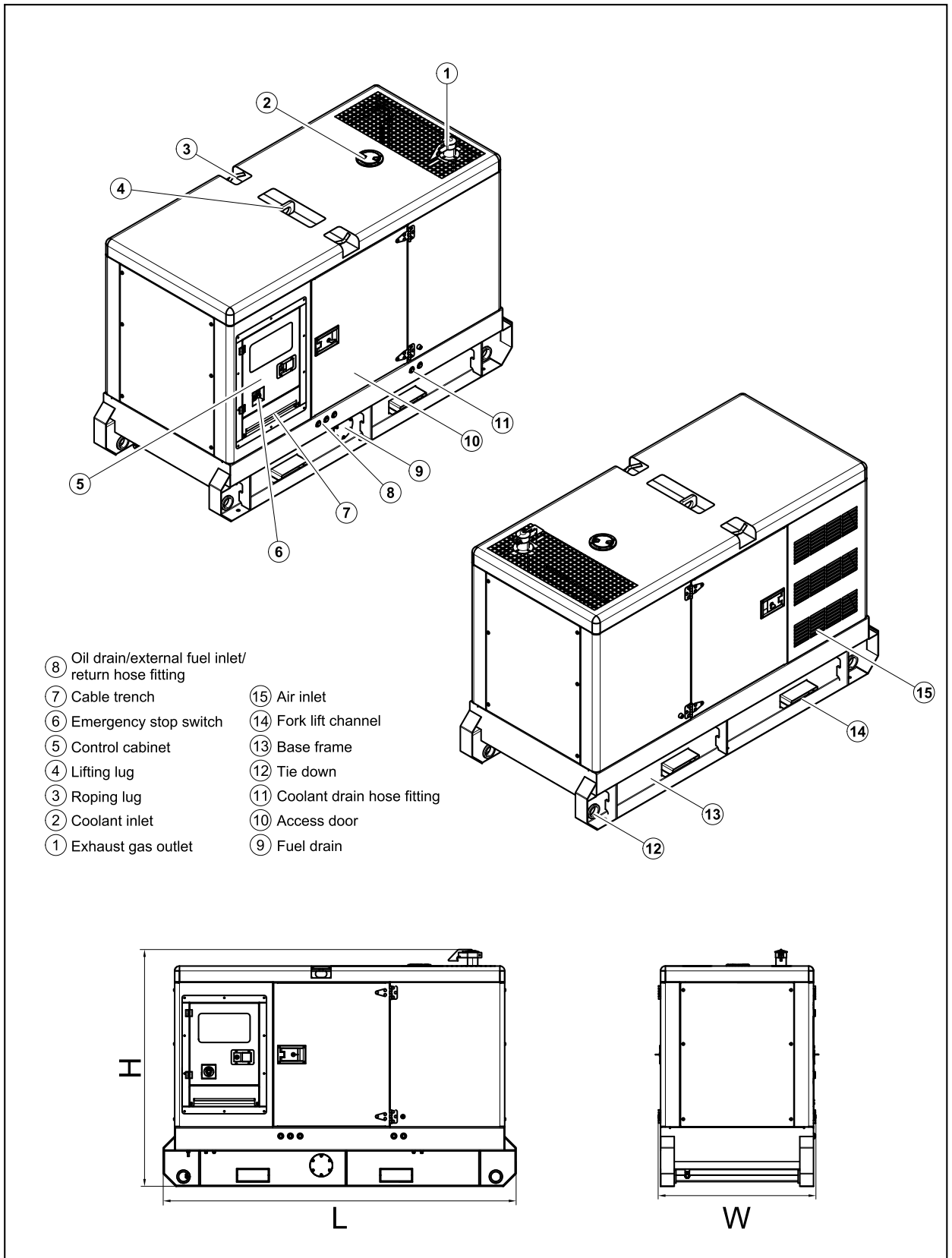
PLC-7420 Control System



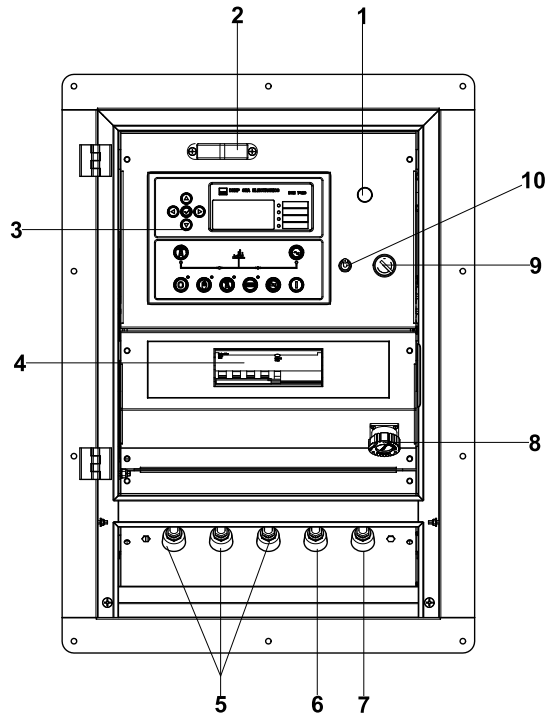
PLC-7420 is an advanced control module based on micro-processor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, and automatically start the engine when the mains is abnormal. Accurately measure various operational parameters and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

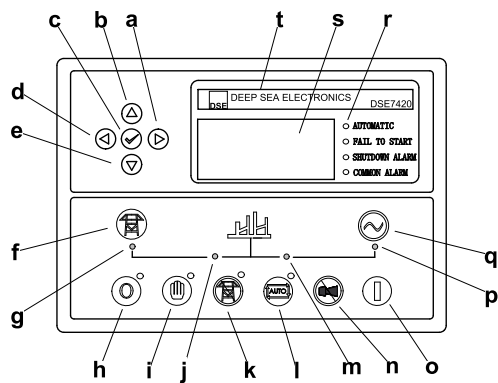
4 Overall Dimensions



6 Control System



Control & field wiring cabinet



Control module

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

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

1000022648-A2-E
03.2023