

Generator set
Sound-proof type
WPS20S

SPECIFICATIONS



1 Standards & Conditions

Design Standards

The designs and the productions are in conformity with:

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

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.

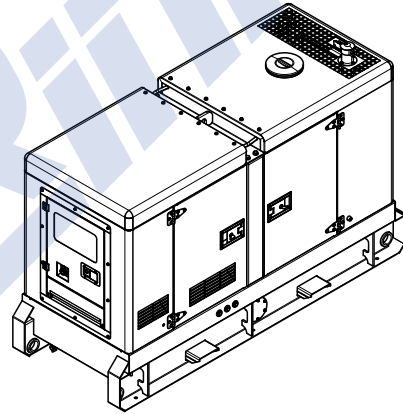
2 General Features

- Perkins engine 404A-22G1
- Close coupled to a Leroy Somer alternator LSA40M5
- Microprocessor control module PLC-920
- Main circuit breaker: 32A
- Rotate speed governor: Mechanical governor
- Excitation System: SHUNT
- A.V.R.Model: R220
- 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 19 hours running
- Drain points for fuel tank
- Operation Manual / Specifications

3 Equipment Specification

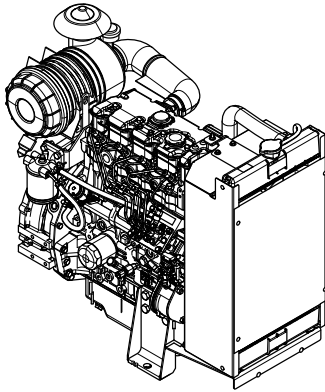
General technical data



Model.....	WPS20S
Structure type	R
Tank capacity.....	100L
Dry weight.....	947kg
Noise level @7m	N/A
Dimensions L×W×H.....	2300*830*1358mm
Standby Power	22kVA/18kW
Prime Power	20kVA/16kW

Voltage	380V	400V	415V	440V	
	Ampere	30.4A	28.9A	27.8A	26.2A
Genset Fuel Consumption					
Frequency/Load	25%	50%	75%	100%	110%
50Hz (L/h)	N/A	2.9	4.0	5.3	6.1

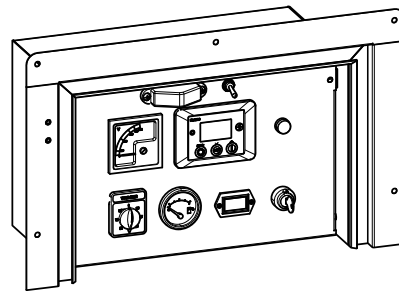
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Engine Manufacturer/Brand.....	Perkins
Engine Model.....	404A-22G1
Dimensions L×W×H.....	948×498×841mm
Dry Weigh (approx.).....	242kg
Number of Cylinders.....	4
Bore.....	84mm
Stroke.....	100mm
Displacement.....	2.216L
Compression Ratio.....	23.3
Type 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.....	22.3kW
Prime Power.....	20.3kW
Fuel Consumption(100%load).....	5.3L/h

Alternator Manufacturer/Brand.....	Leroy Somer
Alternator Model.....	LSA40M5
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.....	5.3m³/min(50Hz),5.8m³/min(60Hz)
Voltage Regulation.....	±1.0%
Total harmonic TGH / THCat no load < 1.5 % - on load < 5%	
Telephone Interference.....	THF<2%;TIF<45

PLC-920 Control System

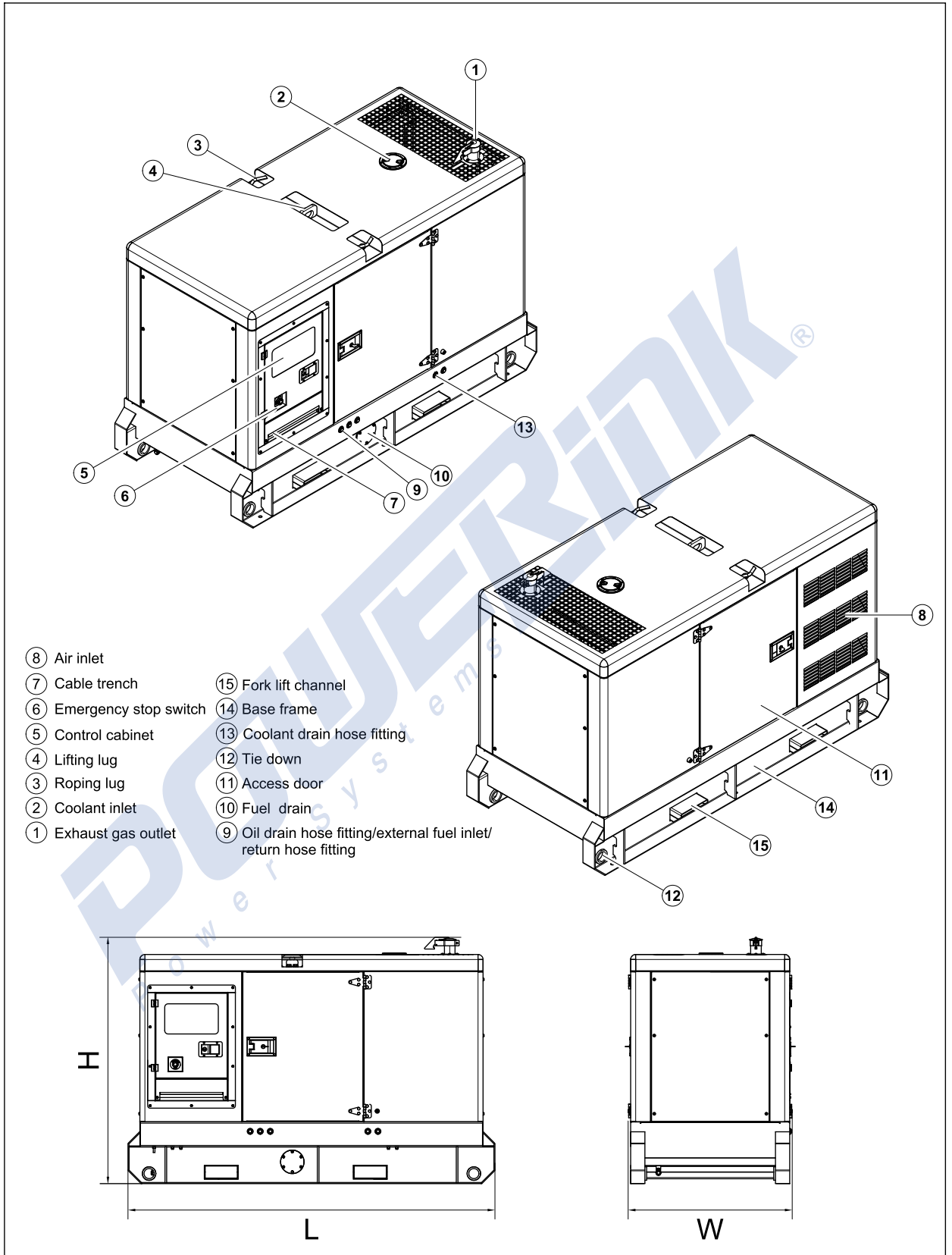


PLC-920 is an advanced control module based on micro-processor designed to control the engine via a key switch and push buttons on the front panel. The module is used to start and stop the engine and indicate fault conditions, automatically shutting down the engine and giving a true first up fault condition of an engine failure.

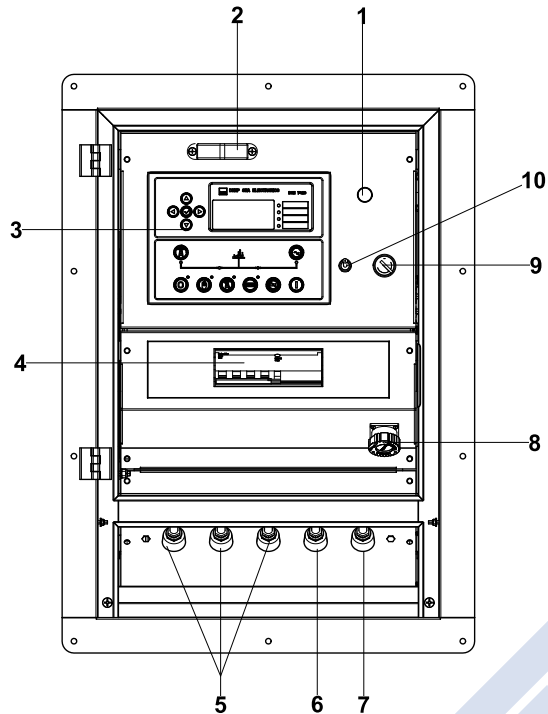
Standard Control Function

- Manual Engine Control Module
- Low Oil Pressure
- High Engine Temperature
- Auxiliary Shutdown
- Overspeed Protection
- Protection hold-off timer
- Charge Failure warning

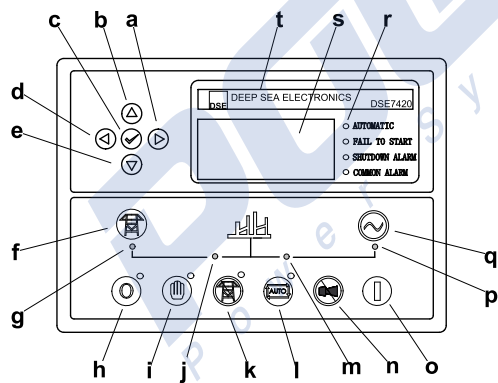
4 Overall Dimensions



5 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

1000032368
01.2021

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*Specification may change without prior notice. For more info.,
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