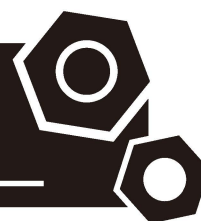


**Generator set  
Sound-proof type  
WPS650S**

**SPECIFICATIONS**



## 1 Standards & Conditions

### Design Standards

The designs and the productions are in conformity with:

- Conformance Europeenne (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.

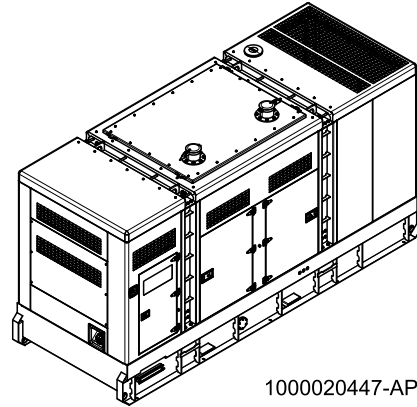
## 2 General Features

- Perkins engine 2806A-E18TAG2
- Close coupled to a Leroy Somer alternator LSA47.3L10
- Microprocessor control module DSE8610
- Breaker Brand: NADER
- Rotate speed governor: Electronic fuel injection governor
- Excitation System: SHUNT
- A.V.R.Model: R250
- Key switch
- Emergency stop switch
- ATS (automatic transfer switch) receptacle
- 2x12V 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 7 hours running
- Drain points for fuel tank
- Operation Manual / Specifications

## 3 Equipment Specification

### General technical data

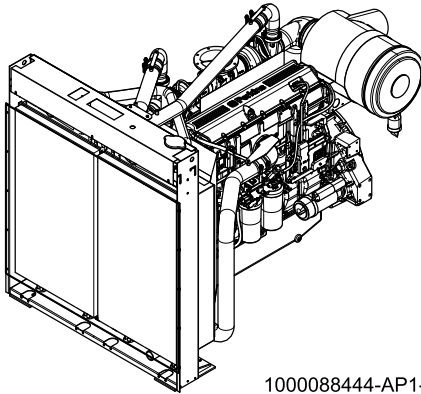


1000020447-AP1-B3

Model.....	WPS650S
Structure type .....	R
Tank capacity.....	945L
Dry weigh.....	6482kg
Noise level @7m .....	75.7dB(A)
Dimensions L×W×H.....	4692x1763x2516mm
Standby Power .....	700kVA/560kW
Prime Power .....	650kVA/520kW

Voltage	380V	400V	415V		
Ampere	987.6A	938.2A	804.3A		
<b>Genset Fuel Consumption</b>					
Frequency/Load	25%	50%	75%	100%	110%
50Hz (L/h)	N/A	66	97	132	143

## Diesel Engine

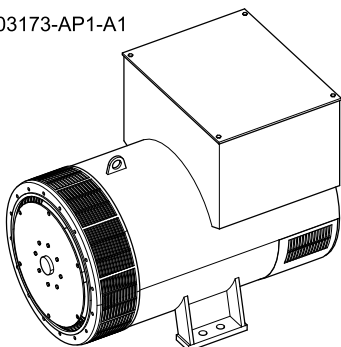


1000088444-AP1-A3

Engine Manufacturer/Brand.....	Perkins
Engine Model.....	2806A-E18TAG2
Dimensions L×W×H.....	2545×1536×1807.5mm
Dry Weigh (approx.) .....	2050kg
Number of Cylinders.....	6
Bore.....	145mm
Stroke .....	183mm
Displacement.....	18.13L
Compression Ratio.....	14.5
Type of Injection .....	MEUI
Intake System.....	Turbocharged, air-to-air charge cooled
Intake Resistance.....	≤6.4kPa
Cooling System .....	Water cooled
Fan .....	Pusher
Battery Voltage .....	24V
Type of Fuel.....	BS2869 class A2 or BS EN590
Type of Oil .....	API CG4 or APEA E5
Oil Capacity .....	62L
Type of Coolant .....	Glycol Mixture
Coolant capacity.....	61L
Back Pressure .....	≤6.9kPa
Standby Power .....	560kW
Prime Power .....	520kW
Fuel Consumption(100%load).....	132L/h

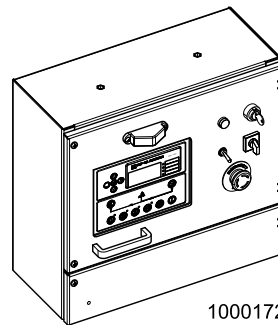
## Alternator

1000103173-AP1-A1



Alternator Manufacturer/Brand .....	Leroy Somer
Alternator Model .....	LSA47.3L10
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.....	0.9m³/s(50Hz), 1.1m³/s(60Hz)
Voltage Regulation .....	±0.5%
Total harmonicTGH / THC at no load < 1.5 % - on load < 2%	
Telephone Interference.....	THF<2%; TIF<50

## PLC-7420 Control System



1000172720-AP1-F2

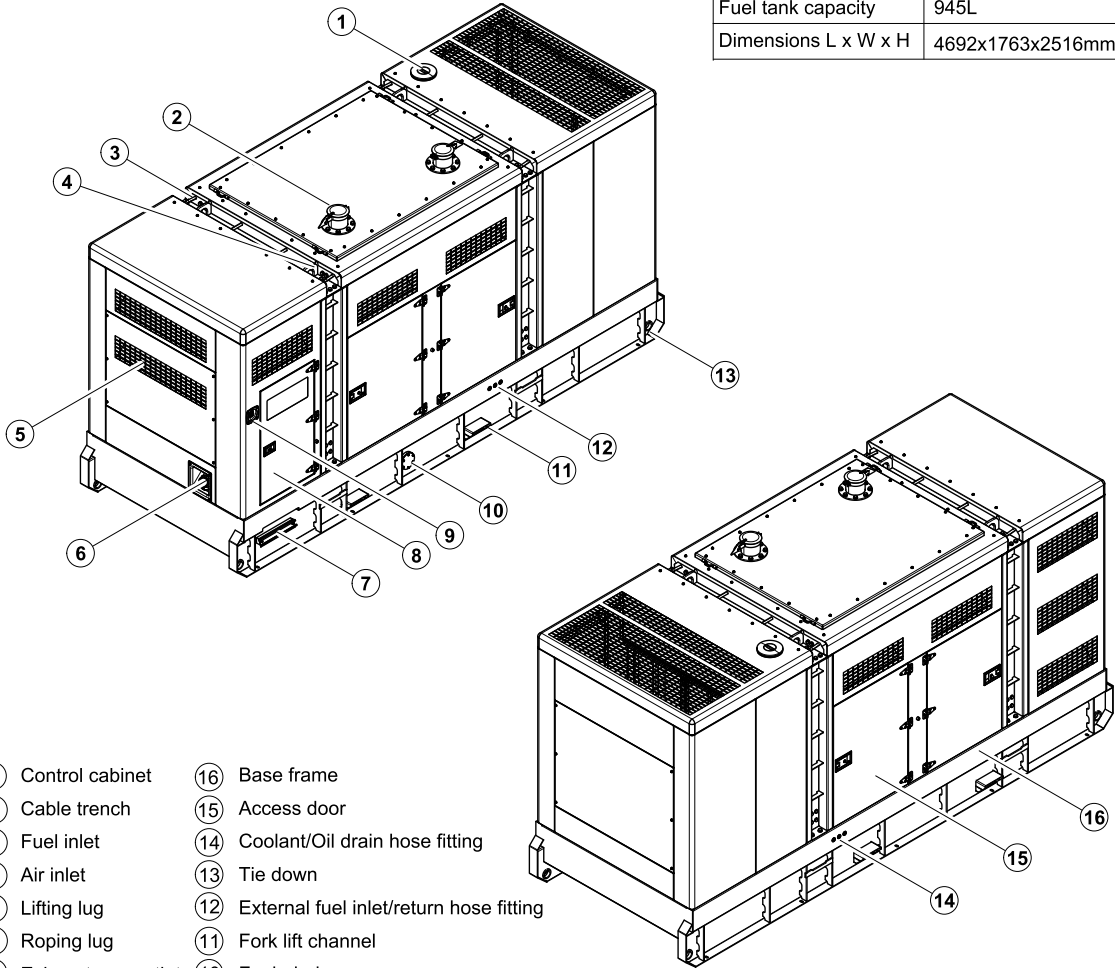
PLC-7420 is an advanced control module based on micro-processor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, and automatically start the engine when the mains is abnormal. Accurately measure various operational parameters and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

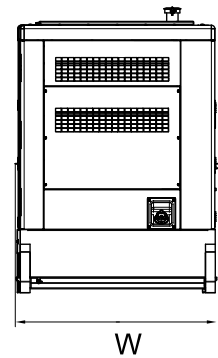
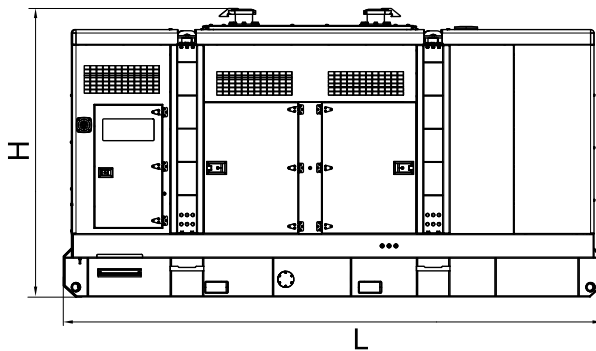
## 4 Overall Dimensions

1000020447-DR1-B3

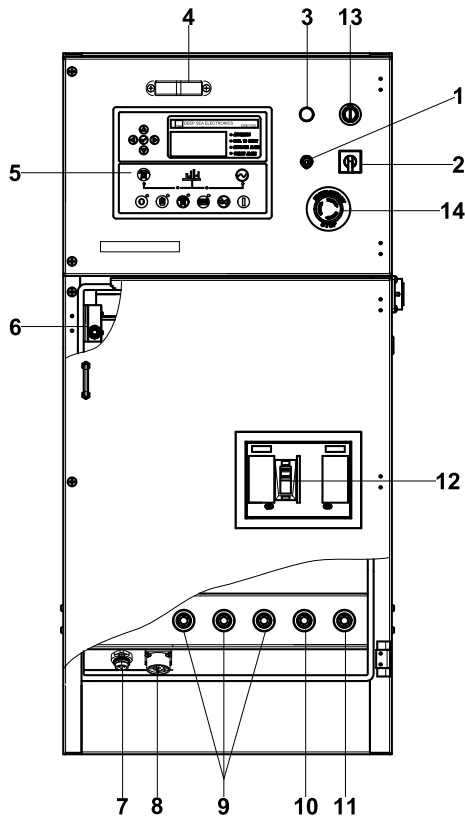
Dry weight	6482kg
Fuel tank capacity	945L
Dimensions L x W x H	4692x1763x2516mm



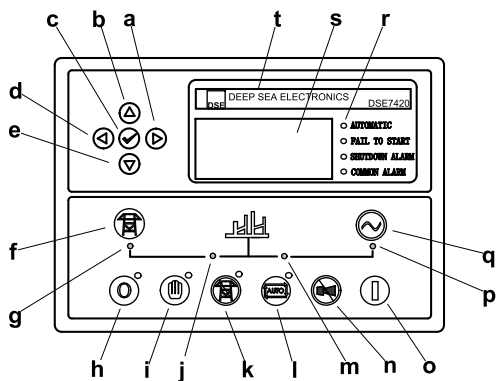
- (8) Control cabinet
- (7) Cable trench
- (6) Fuel inlet
- (5) Air inlet
- (4) Lifting lug
- (3) Roping lug
- (2) Exhaust gas outlet
- (1) Coolant inlet
- (16) Base frame
- (15) Access door
- (14) Coolant/Oil drain hose fitting
- (13) Tie down
- (12) External fuel inlet/return hose fitting
- (11) Fork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



## 5 Control System



**Control & Field wiring cabinet**



**Control Module**

Ref.	Description
1	Control cabinet lamp switch
2	Mains input changeover switch
3	Charge indicator
4	Control cabinet lamp
5	Control module
6	Limit switch
7	Remote communication interface
8	ATS communication interface
9	Live wire terminals
10	Neutral wire terminal
11	Ground wire terminal
12	Main circuit breaker
13	Key switch
14	Emergency stop 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

100020447-B3-E
05.2012