Perkins series
P2000D5
50 Hz @ 1500rpm,3-phase/5-wiring

1 Standards & Conditions

Design Standards

The designs and the productions are in conformity with:

- Conformite 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℃ 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

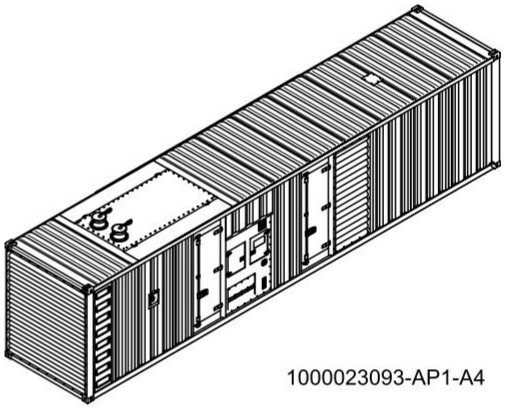
- Painting process specifications and colors are based on the manufacturer's standard.
- The customer could also choose the color which the manufacturer offers.

2 General Features

- Perkins engine 4016TAG2A
- Close coupled to a Leroy Somer alternator LSA51.2M60
- Microprocessor control module PLC-8610
- ABB main circuit breaker: 3200A
- Rotate speed governor: Electronic fuel injection governor
- Excitation System: AREP
- A.V.R.Model: R448
- Key switch
- Emergency stop switch
- ATS (automatic transfer switch) receptacle
- 2x12V/150AH sealed for life maintenance free battery
- Lockable battery isolator switch
- Powder coated canopy
- 50℃ radiator
- Fire extinguisher
- Oil pump on the engine
- Steel base frame with forkslots
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Fuel tank for 4 hours running
- Drain points for fuel tank
- Fuel inlet pump and it's control box for the fuel tank
- Added fuel-water separator for fuel tank
- Operation Manual / Specifications

3 Equipment Specification

General technical data



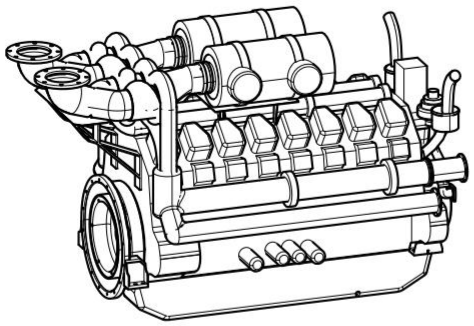
1000023093-AP1-A4

Model.....P2000D5
Structure type..... C
Tank capacity.....2000L
Dry weight..... 24088kg
Noise level @7m .....N/A
Dimensions L×W×H.....12192×2438×3150mm
Standby Power 2100kVA/1680kW
Prime Power..... 2000kVA/1600kW

Voltage	380V	400V	415V	440V
Ampere	3039A	2887A	2782A	2624A

Genset Fuel Consumption					
Frequency/Load	25%	50%	75%	100%	110%
50Hz (L/h)	112	212	326	447	488

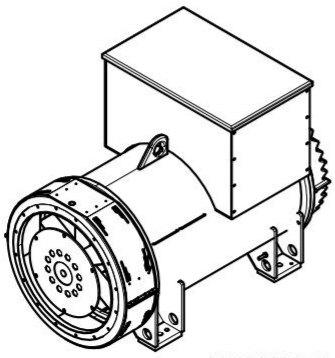
Diesel Engine



1000169985-AP1-B2

Engine Manufacturer/Brand	Perkins
Engine Model	4016TAG2A
Dimensions L×W×H	3302×1723×2128mm
Dry Weigh (approx.)	5570kg
Number of Cylinders	16
Bore	160mm
Stroke	190mm
Displacement	61.12L
Compression Ratio	13.6
Type of Injection	Direct injection
Intake System	Turbocharged
Intake Resistance	≦3.7kPa
Cooling System	Water cooled
Fan	Pusher
Battery Voltage	24V
Type of Fuel	BS2869 1998 Class A1, A2
Type of Oil	API CG4 15W/40
Oil Capacity	214L
Type of Coolant	Glycol mixture
Coolant capacity	316L
Back Pressure	≦6.6kPa
Standby Power	1937kW
Prime Power	1766kW
Fuel Consumption(100%load)	209g/kW.h

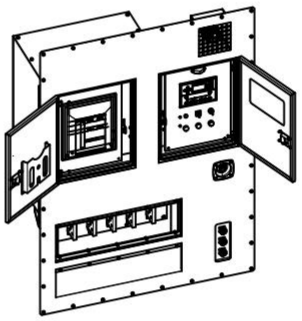
Alternator



1000169977-AP1-A1

Alternator Manufacturer/Brand	Leroy Somer
Alternator Model	LSA51.2M60
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	2.5m³/s
Excitation System	AREP or PMI
A.V.R. Model	R449
Voltage Regulation	±0.5%
Sustained Short-circuit Current	300% (3 IN) : 10s
Total harmonic TGH / THC	< 2.5%
Telephone Interference	THF<2%;TIF<50

PLC-8610 Control System



1000177249-AP1-B2

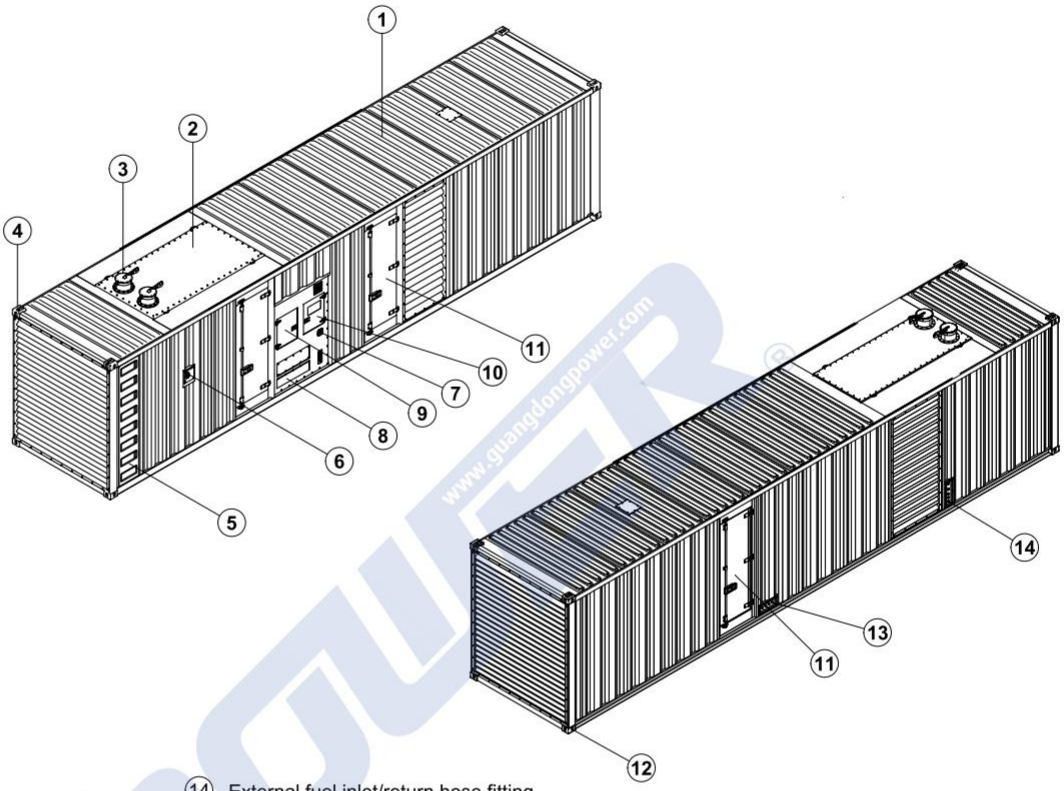
PLC-8610 is a microprocessor based control unit containing all necessary functions for protection of the genset and the breaker control. Furthermore, it contains all necessary three-phase measuring circuits and presents all values and alarms on the LCD display. The module has the function of load sharing which enables the module to share the active load (kW) equally when operating in parallel with other gensets. The load sharing is performed so each genset takes a portion of the load that is calculated in percent according to the nominal power.

- Microprocessor control, with high stability and credibility
- Monitoring and measuring operational parameters of the 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
- RS232 & RS485 can be used at the same time
- Real time clock for time and date display, overall runtime display, 250 log entries

4 Overall Dimensions

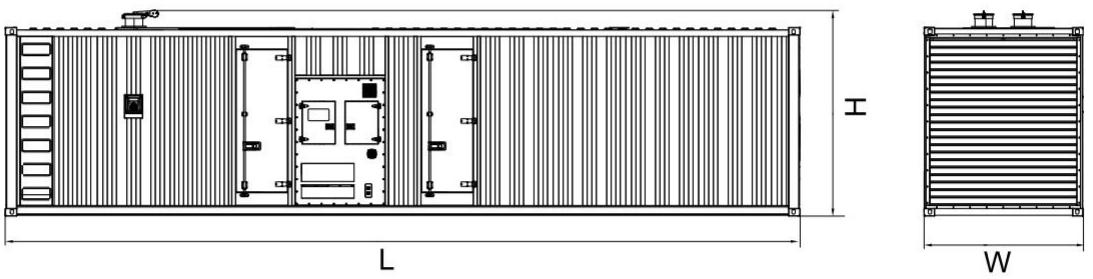
1000023093-DR1-A4

Dry weight	24088kg
Fuel tank capacity	2000L
Dimensions L x W x H	12192x2438x3150mm

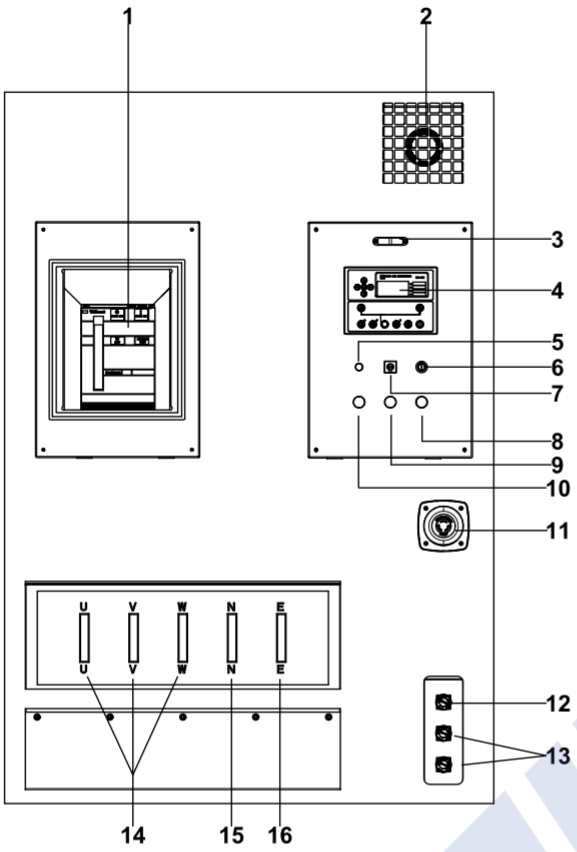


7 Emergency stop switch
6 Fuel inlet
5 Ladder
4 Lifting lug
3 Exhaust gas outlet
2 Muffler
1 Canopy

14 External fuel inlet/return hose fitting
13 External fuel inlet/return hose fitting
Coolant/Oil drain hose fitting
12 Fixing lug
11 Access door
10 Switch cabinet
9 Control cabinet
8 Cable trench

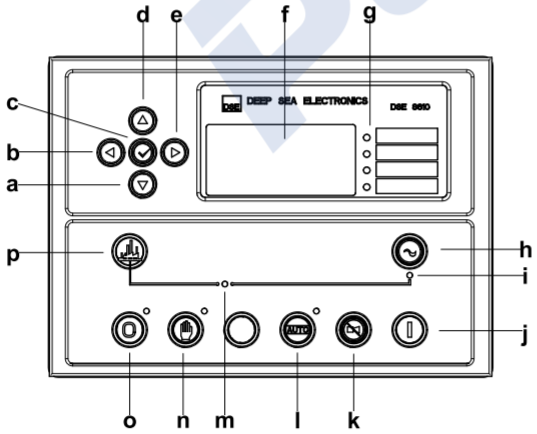


5 Control System



Control & Field Wiring Cabinet

Ref.	Description
1	Main circuit breaker
2	Alarm indicator
3	Control panel lamp
4	PLC-8610 control module
5	Charge indicator
6	Key switch
7	Control panel lamp switch
8	Alarm reset button
9	Genset close indicator
10	Genset open indicator
11	Emergency stop button
12	Mains input/ remote communication connector
13	Exparalleling communication connectors
14	Live wire terminals
15	Neutral wire terminal
16	Ground wire terminals



Control Module

a	Decrease value / next item
b	Previous page
c	Accept
d	Increase value / previous item
e	Next page
f	LCD display
g	Four alarm LEDs
h	Close genset
i	Genset available LED
j	Manual start
k	Mute alarm / lamp test
l	Auto mode (with LED)
m	Genset breaker on LED
n	Manual mode (with LED)
o	Stop / reset (with LED)
p	Open genset

1000177249-IT1-B2