

Perkins series

P100D5

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



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.

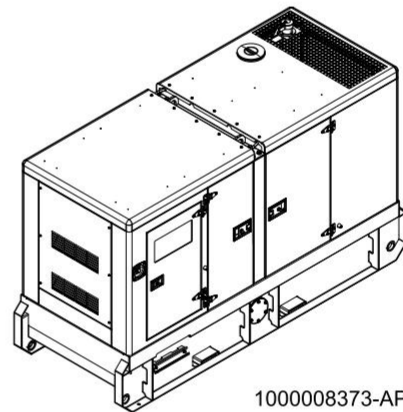
2 General Features

- Perkins engine 1104C-44TAG2
- Close coupled to a Leroy Somer alternator LSA44.2VS45
- Microprocessor control module PLC-7420
- NADER main circuit breaker: 160A
- Rotate speed governor: Electronic fuel injection governor
- Excitation system: Self excited shunt
- A.V.R model: R250
- Key switch
- Emergency stop switch
- ATS (automatic transfer switch) receptacle

- 1x12V/120AH 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 11 hours running
- Drain points for fuel tank
- Operation Manual / Specifications

3 Equipment Specification

General technical data

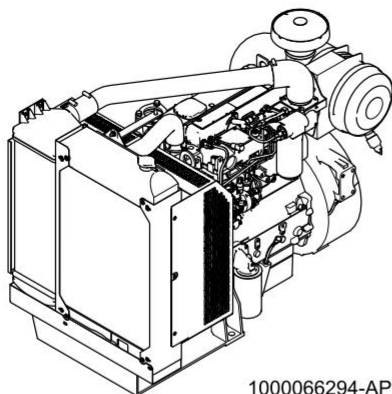


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Model.....P100D5
Structure type R
Tank capacity.....240L
Dry weigh.....1852kg
Noise level @7m68.9dBA
Dimensions L×W×H.....2888x1130x1681mm
Standby Power110kVA/88kW
Prime Power100kVA/80kW

Voltage	380V	400V	415V	440V	
Ampere	151.9A	144.3A	139.1A	131.2A	
Genset Fuel Consumption					
Frequency/Load	25%	50%	75%	100%	110%
50Hz (L/h)	N/A	11.2	17.1	22.6	24.9

Diesel Engine

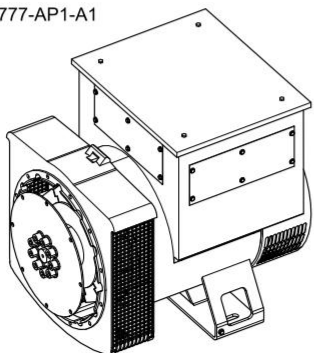


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Engine Manufacturer/Brand.....	Perkins
Engine Model.....	1104C-44TAG2
Dimensions L×W×H.....	1259×721×966mm
Dry Weigh (approx.)	401kg
Number of Cylinders.....	4
Bore.....	105mm
Stroke	127mm
Displacement.....	4.4L
Compression Ratio.....	18.23
Type of Injection	Direct
Intake System.....	Turbocharged, air-to-air charge cooled
Intake Resistance.....	≤8.0kPa
Cooling System	Water cooled
Fan	Pusher
Battery Voltage	12V
Type of Fuel.....	EPA2D 89.330-96
Type of Oil	API-CC/SE or CCMC-D1
Oil Capacity	8.0L
Type of Coolant	Glycol mixture
Coolant Capacity	17.0L
Back Pressure	≤18kPa
Standby Power	103kW
Prime Power	93.6kW
Fuel Consumption(100%load).....	22.6L/h

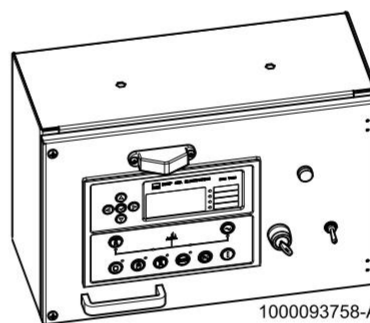
Alternator

1000069777-AP1-A1



Alternator Manufacturer/Brand	Leroy Somer
Alternator Model	LSA44.2VS45
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.....	0.37m³/s(50Hz), 0.44m³/s(60Hz)
Voltage Regulation	±0.5%
Total harmonic TGH / THC at no load < 2 % - on load < 2 %	
Telephone Interference.....	THF<2%;TIF<50

PLC-7420 Control System



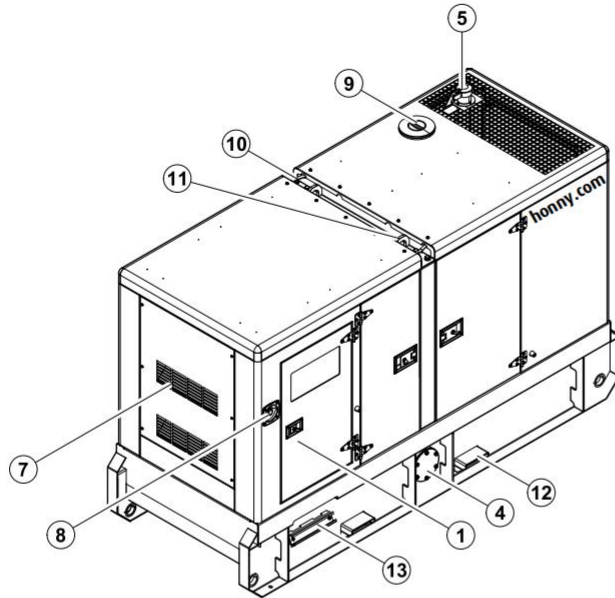
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PLC-7420 is an advanced control module based on micro-processor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, and automatically start the engine when the mains is abnormal.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

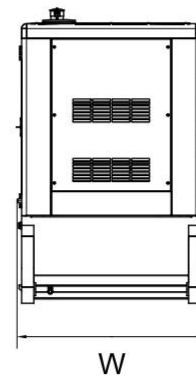
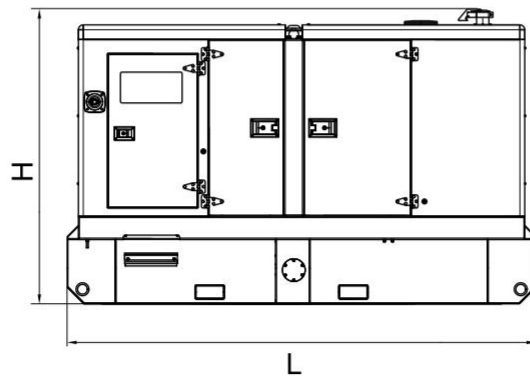
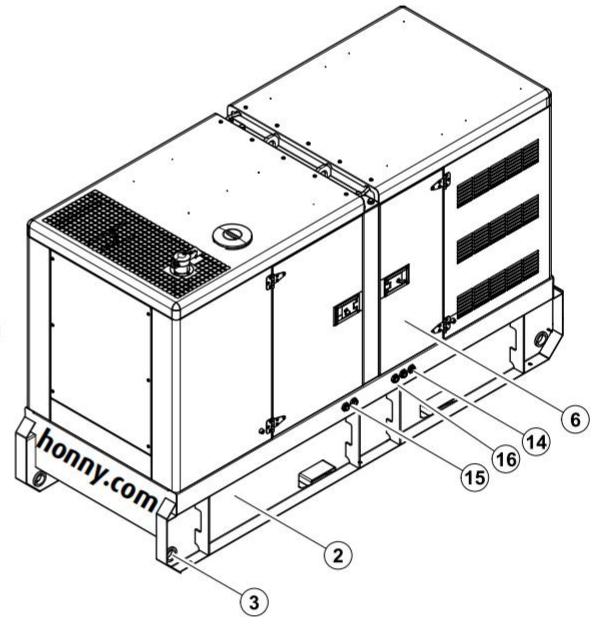
4 Overall Dimensions

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Dry weight	1852kg
Fuel tank capacity	240L
Dimensions L x W x H	2888x1130x1681mm

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

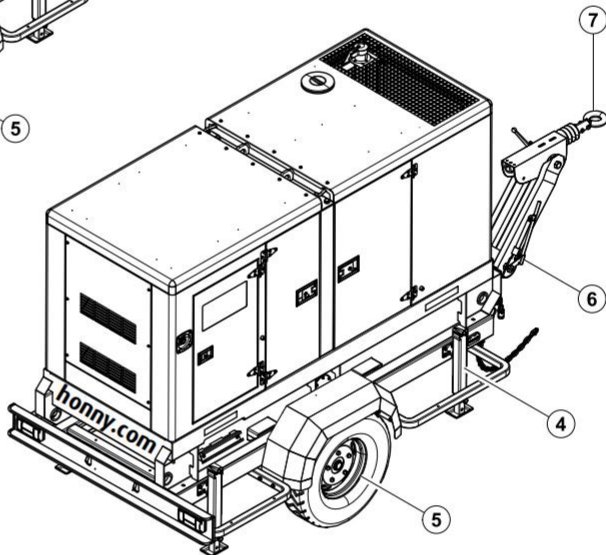
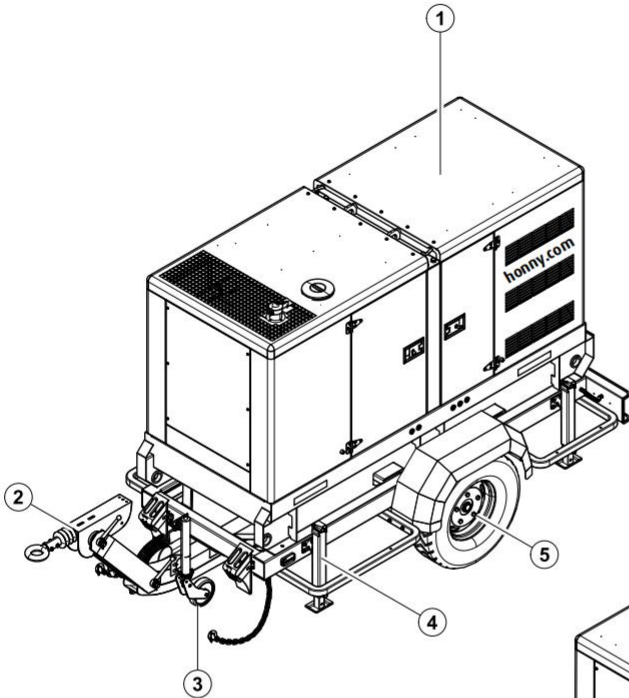


5 Trailor(option)

1000008373-DR3-H3

 HIGHWAY TYPE

Dry weight (with trailer)	2598kg
Towing speed	≤ 80km/h
Tyre size	7.50-16
Dimensions	4570x1865x2366mm



- ⑦ Coupler
- ⑥ Parking brake
- ⑤ Tyre
- ④ Outrigger
- ③ Steerable wheel
- ② Draw bar with service brake
- ① Generator set

