

1 Standards & Conditions

Design Standards

The designs and the productions are in conformity with:

- Conformance Européenne (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 50°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.

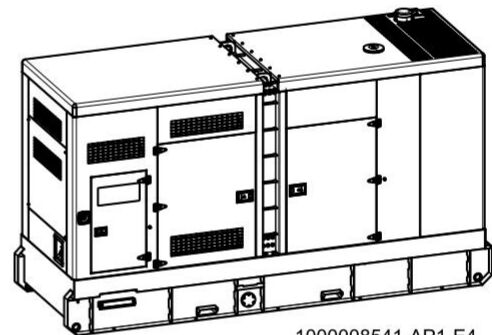
2 General Features

- Perkins engine 2206C-E13TAG3
- Close coupled to a Stamford alternator HCI444F
- Microprocessor control module PLC-7420
- NADER main circuit breaker: 630A
- Rotate speed governor: Electronic fuel injection governor
- Excitation system: Self excited, SHUNT
- A.V.R model: AS440
- Key switch
- Emergency stop switch
- ATS (automatic transfer switch) receptacle
- 2x12V/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 forkslots
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Base fuel tank for 9 hours running
- Drain points for fuel tank
- Operation Manual/ Specifications

3 Equipment Specification

General technical data

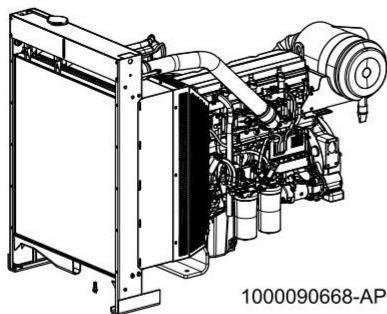


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Model.....P400D5
Structure type R
Tank capacity.....800L
Dry weight.....4778kg
Sound pressure level @7m N/A
Sound power level acc. 2000/14/EC N/A
Dimensions L×W×H..... 4562x1523x2557mm
Standby Power 440kVA/352kW
Prime Power..... 400kVA/320kW

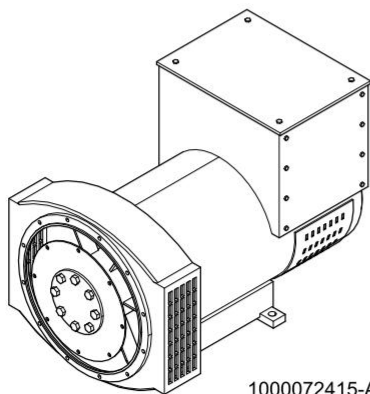
Voltage	380V	400V	415V	440V	
Ampere	607.8A	577.4A	556.5A	524.9A	
Genset Fuel Consumption					
Frequency/Load	25%	50%	75%	100%	110%
50Hz (L/h)	N/A	43.7	61.7	80.7	88.3

Power System



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Engine Manufacturer/Brand	Perkins
Engine Model	2206C-E13TAG3
Dimensions L×W×H	2410×1120×1725mm
Dry Weigh (approx.)	1478Kg
Number of Cylinders	6
Bore	130mm
Stroke	157mm
Displacement	12.5L
Compression Ratio	16.3
Type of injection	Direct injection
Intake System	Turbocharged, air-to-air charge cooled
Intake Resistance	6.4kPa
Cooling System	Water cooled
Fan	Pusher
Battery Voltage	24V
Type of Fuel	BSEN590 or ASTM D975 Class 1D and 2D
Type of Oil	15W40 to API CI4.
Oil Capacity	40L
Type of Coolant	Glycol mixture
Coolant Capacity	51.4L
Back Pressure	N/A
Standby Power	413kW
Prime Power	368kW
Fuel Consumption(100%load)	85L/h

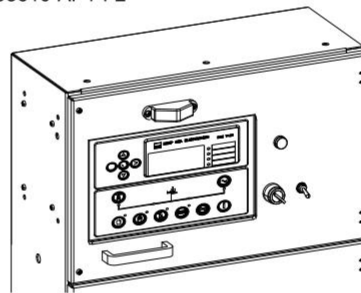


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Alternator Manufacturer/Brand	Stamford
Alternator Model	HCI444F
Exciter	Brushless
Cooling Fan	Cast alloy aluminum
Windings	100% copper
Insulation Class	H
Winding Pitch	2/3
Terminals	12
Drip Proof	IP23
Altitude	≤1000m
Overspeed	2250 rpm
Air Flow	0.8m³/s(50HZ), 0.99m³/s(60HZ)
Voltage Regulation	± 1.0 %
Total harmonic TGH / THCat no load < 1.5 % - on load < 5 %	
Telephone Interference	THF<2%;TIF<50

PLC-7420 Control System

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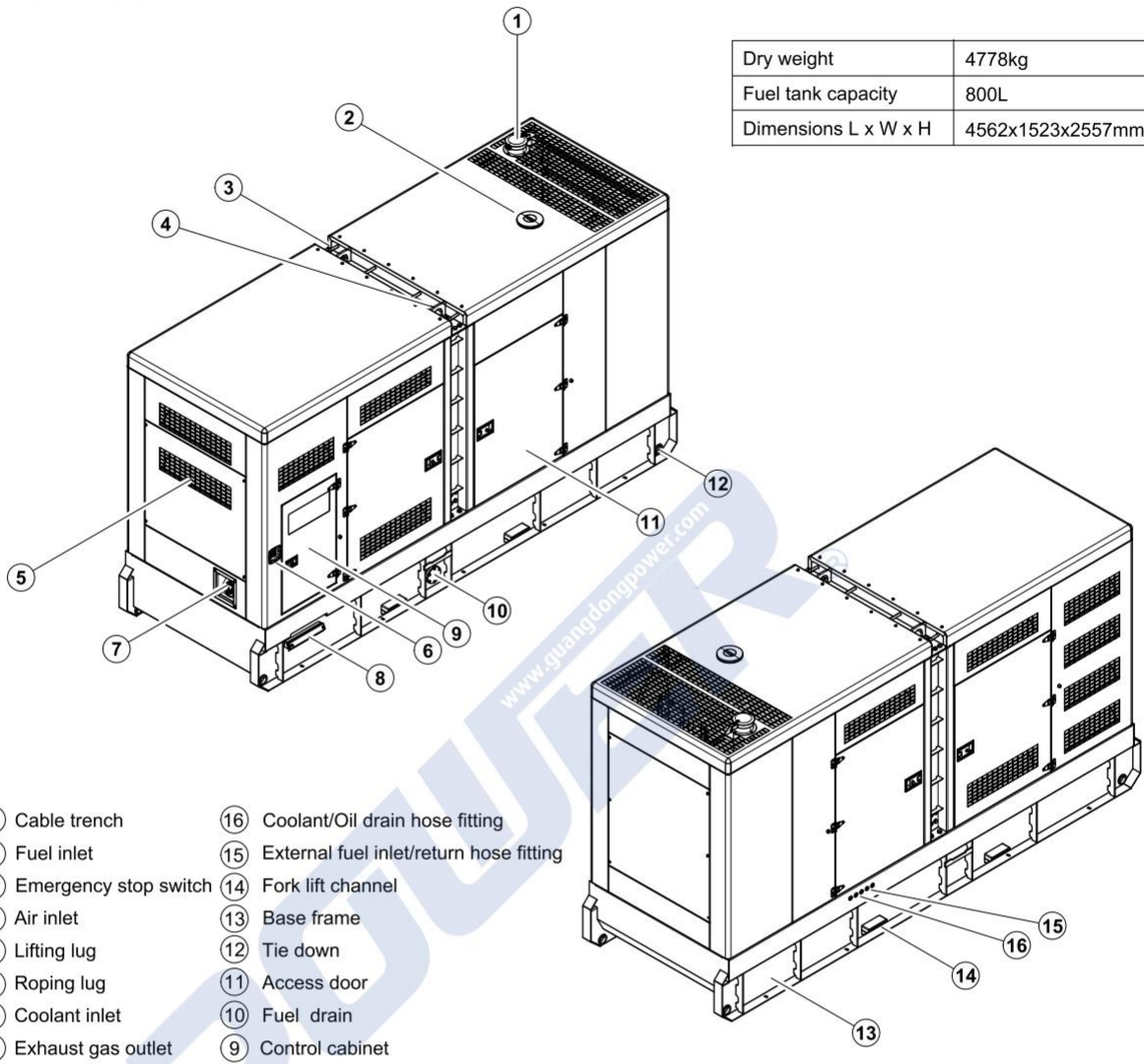


PLC-7420 is an advanced control module based on micro-processor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, and automatically start the engine when the mains is abnormal. Accurately measure various operational parameters and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

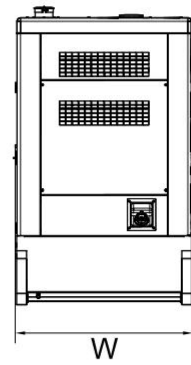
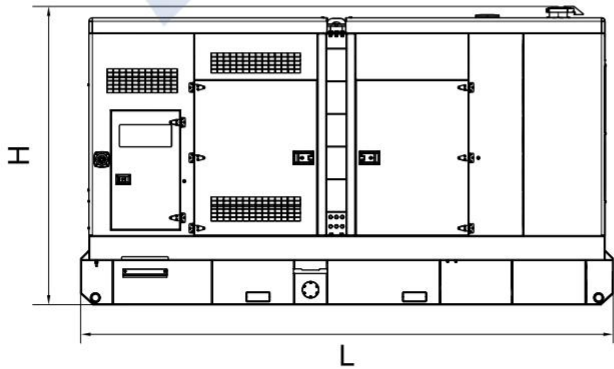
- Microprocessor control, with high stability and credibility
- Monitoring and measuring operational parameters of the mains supply and genset
- Indicating operation status, fault conditions, all parameters and alarms
- Multiple protections; multiple parameters display, like pressure, temp. etc.
- Manual, 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

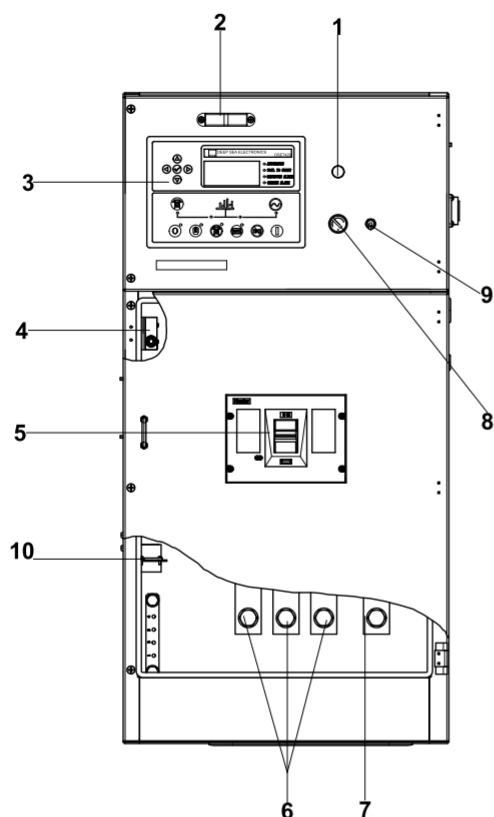
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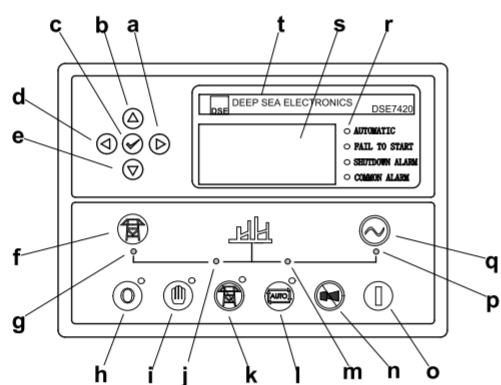
Dry weight	4778kg
Fuel tank capacity	800L
Dimensions L x W x H	4562x1523x2557mm



5 Control System



Control & field wiring cabinet



Control module

Ref.	Description
1	Charge indicator
2	Control cabinet lamp
3	Control module
4	Limit switch
5	Main circuit breaker
6	Live wire terminals
7	Neutral wire terminal
8	Key switch
9	Control cabinet lamp switch
10	ATS communication interface

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

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