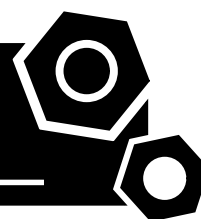


Generator set
Sound-proof type
WCS220S

SPECIFICATIONS



1 Standards & Conditions

Design Standards

The designs and the productions are in conformity with:

- ISO8528
- GB/T2820
- YD/502-2007
- JB/T20136-2006

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 above sea Level.

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.

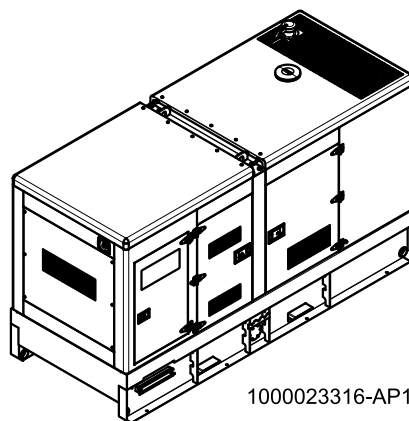
2 General Features

- Cummins engine QSB7-G5
- Close coupled to a Stamford alternator UCI274H
- Microprocessor control module PLC-7420
- ABB main circuit breaker: 320A
- 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/200AH 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 with 11 hours running
- Drain points for fuel tank
- Operation Manual / Specifications

3 Equipment Specification

General technical data

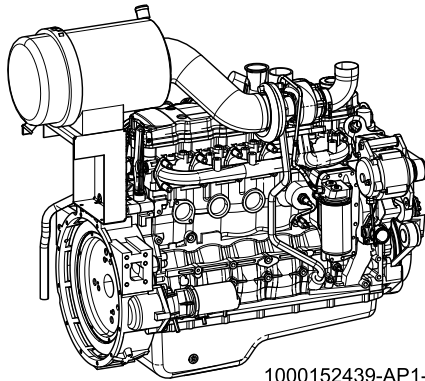


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Model.....	WCS220S
Structure type	R
Tank capacity.....	480L
Dry weight.....	3107kg
Sound pressure level @7m	N/A
Sound power level acc. 2000/14/EC	N/A
Emissions Compliance	EU STAGE IIIA
Dimensions L×W×H.....	3262x1322x1894mm
Standby Power	220kVA/176kW
Prime Power	200kVA/160kW

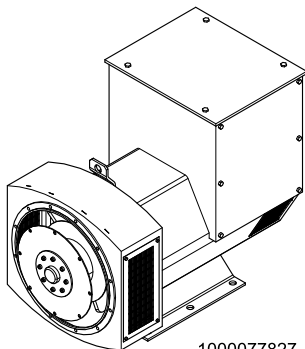
Voltage	380V	400V	415V	440V	
Ampere	303.8A	288.6A	278.2A	262.4A	
Genset Fuel Consumption					
Frequency/Load	25%	50%	75%	100%	110%
50Hz (L/h)	12.3	24.7	34.2	42.7	48.4

Dck Yf GrghYa



1000152439-AP1-A1

Engine Manufacturer/Brand.....	Cummins
Engine Model.....	QSB7-G5
Dimensions L×W×H.....	1688×862×1190mm
Dry Weight (approx.)	585kg
Number of Cylinders.....	6
Bore.....	107mm
Stroke.....	124mm
Displacement.....	6.69L
Compression Ratio.....	17.2
Type of injection.....	Direct injection
Intake System.....	Turbocharged, air-to-air charge cooled
Intake Resistance.....	N/A
Cooling System.....	Water cooled
Fan.....	Pusher
Battery Voltage.....	12V
Type of Fuel.....	No.2 or ASTM D975
Type of Oil.....	API CD/SE or CCMCD4
Oil Capacity.....	18.9L
Type of Coolant.....	Glycol mixture
Coolant Capacity.....	26.0L
Back Pressure.....	10.2kPa
Standby Power.....	213kW
Prime Power.....	182kW
Fuel Consumption(100%load).....	45L/h

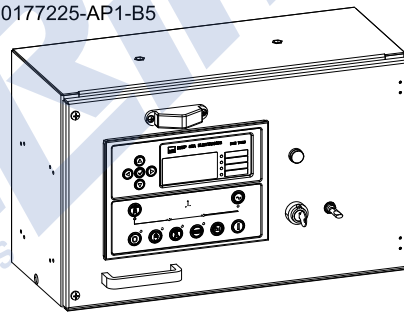


1000077827-AP1-A1

Alternator Manufacturer/Brand.....	Stamford
Alternator Model.....	UCI274H
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.....	0.514m³/s(50Hz),0.617m³/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

1000177225-AP1-B5



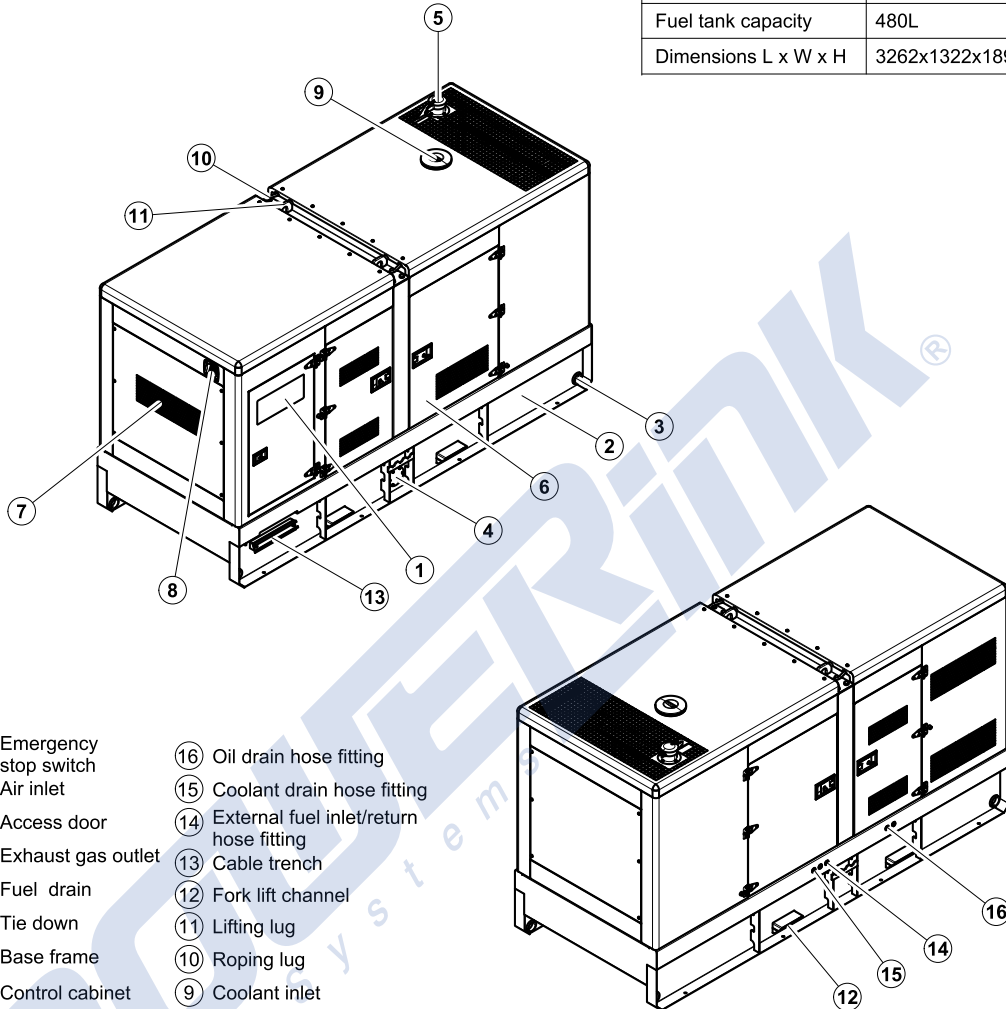
PLC-7420 is an advanced control module based on micro-processor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, and automatically start the engine when the mains is abnormal. Accurately measure various operational parameters and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

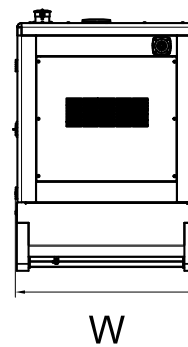
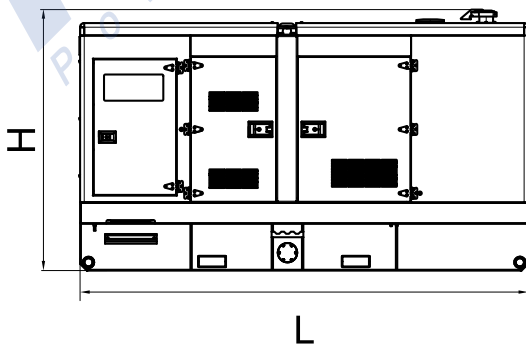
4 Overall Dimensions

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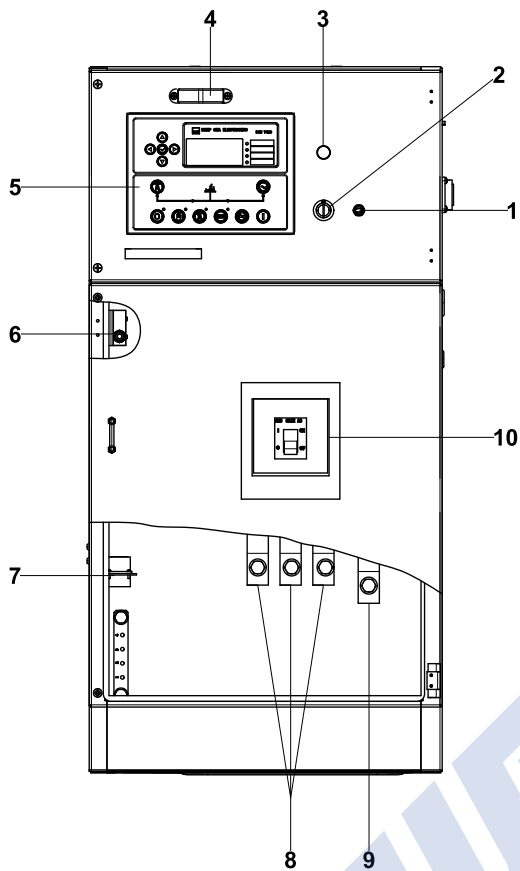
Dry weight	3107kg
Fuel tank capacity	480L
Dimensions L x W x H	3262x1322x1894mm



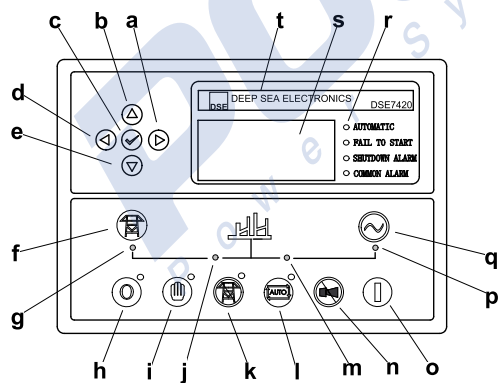
- ⑧ Emergency stop switch
- ⑦ Air inlet
- ⑥ Access door
- ⑤ Exhaust gas outlet
- ④ Fuel drain
- ③ Tie down
- ② Base frame
- ① Control cabinet
- ⑬ Cable trench
- ⑫ Fork lift channel
- ⑪ Lifting lug
- ⑩ Roping lug
- ⑨ Coolant inlet
- ⑯ Oil drain hose fitting
- ⑮ Coolant drain hose fitting
- ⑭ External fuel inlet/return hose fitting
- ⑰ Oil drain hose fitting



5 Control System



Control & field wiring cabinet



Control module

Ref.	Description
1	Control panel lamp switch
2	Key switch
3	Charge indicator
4	Control panel lamp
5	Control module
6	Limit switch
7	Mains input/remote/ATS/AMF communication connector
8	Live wire terminals
9	Neutral wire terminal
10	Main circuit breaker

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

1000023316-A3-E

04.2014

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