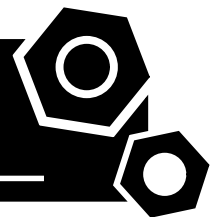


**Generator set**  
**Containerized type**  
**WCS1400S**

# **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.

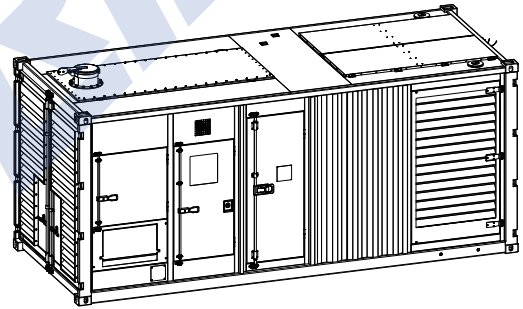
## 2 General Features

- Cummins engine KTA50-G3
- Close coupled to a Stamford alternator PI734A
- Microprocessor control module PLC-7420
- ABB main circuit breaker: 2000A
- Rotate speed governor: Electrical governor FP801
- Excitation system: PMG
- A.V.R model: MX341
- Key switch
- Emergency stop switch
- Fuel adding device
- 2x ventilation fan + 1x cooling fan
- ATS (automatic transfer switch) receptacle

- 2x12V/150AH sealed for life maintenance free battery
- Lockable battery isolator switch
- Powder coated canopy
- Fire extinguisher
- 50°C radiator
- Oil pump on the engine
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Added fuel-water separator for fuel tank
- Base fuel tank with 4 hours running
- Drain points for fuel tank
- Operation Manual / Specifications

## 3 Equipment Specification

### General technical data

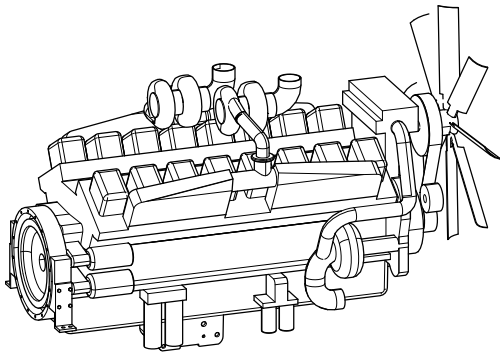


1000023330-AP1-B3

Model.....	WCS1400S
Structure type .....	C
Tank capacity.....	1100L
Dry weight.....	15843kg
Noise level @7m .....	N/A
Dimensions L×W×H.....	6058x2438x2591mm
Standby Power .....	1400kVA/1120kW
Prime Power.....	1275kVA/1020kW

Voltage	380V	400V	415V		
Ampere	1937A	1840.3A	1773.8A		
<b>Genset Fuel Consumption</b>					
Frequency/Load	25%	50%	75%	100%	110%
50Hz (L/h)	82	138	195	254	282

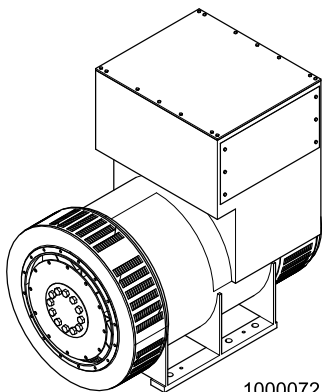
## Diesel engine



1000098180-AP1-A2

Engine Manufacturer/Brand.....	Cummins
Engine Model.....	KTA50-G3
Dimensions L×W×H.....	2885*1518.9*2005
Dry Weigh (approx.).....	5058kg
Number of Cylinders.....	16
Bore.....	159mm
Stroke.....	159mm
Displacement.....	50.3L
Compression Ratio.....	13.9
Type of injection.....	Direct injection
Intake System.....	Turbocharged and aftercooled
Intake Resistance.....	6.23kPa
Cooling System.....	Water cooled
Fan.....	Push
Battery Voltage.....	24V
Type of Fuel.....	NO.2 or ASTM D975
Type of Oil.....	CF4/SG15W-40
Oil Capacity.....	177L
Type of Coolant.....	Glycol mixture
Coolant Capacity engine only.....	161L
Back Pressure.....	≤10kPa
Standby Power.....	1227kW
Prime Power.....	1097kW
Fuel Consumption(100%load).....	261L/h

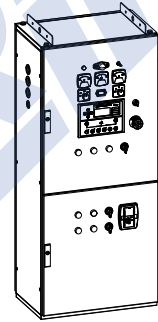
## Alternator



1000072165-AP1-A1

Alternator Manufacturer/Brand.....	Stamford
Alternator Model.....	PI734A
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.....	2250 rpm
Air Flow.....	2.69m³/s(50HZ), 3.45m³/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



1000196934-AP1-A1

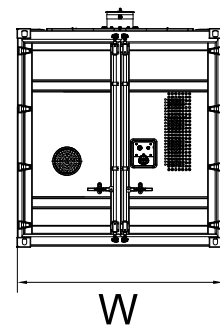
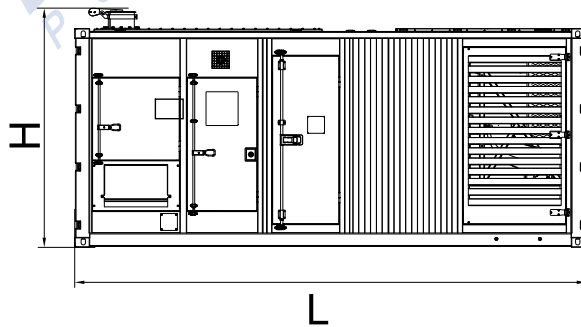
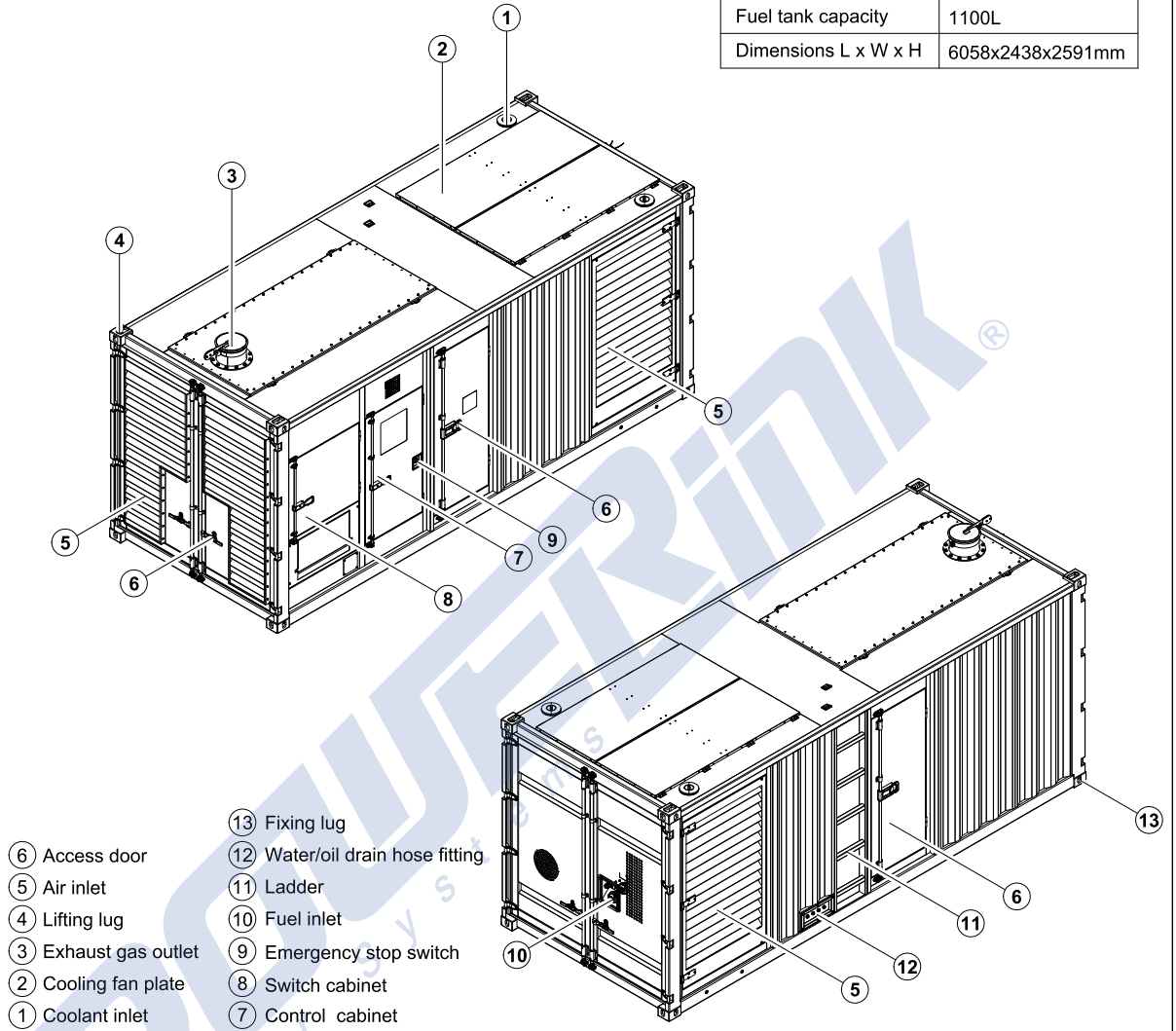
PLC-7420 is an advanced control module based on micro-processor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, and automatically start the engine when the mains is abnormal. Accurately measure various operational parameters and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

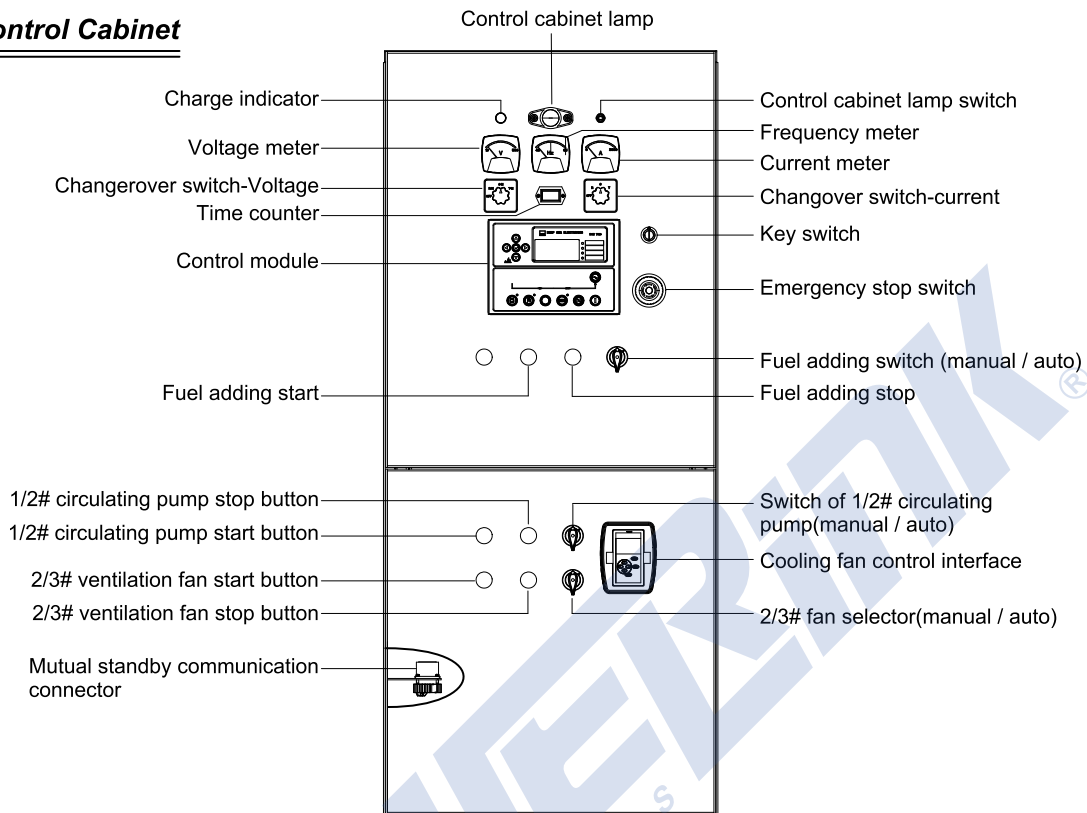
1000023330-DR1-B3

Dry weight	15843kg
Fuel tank capacity	1100L
Dimensions L x W x H	6058x2438x2591mm

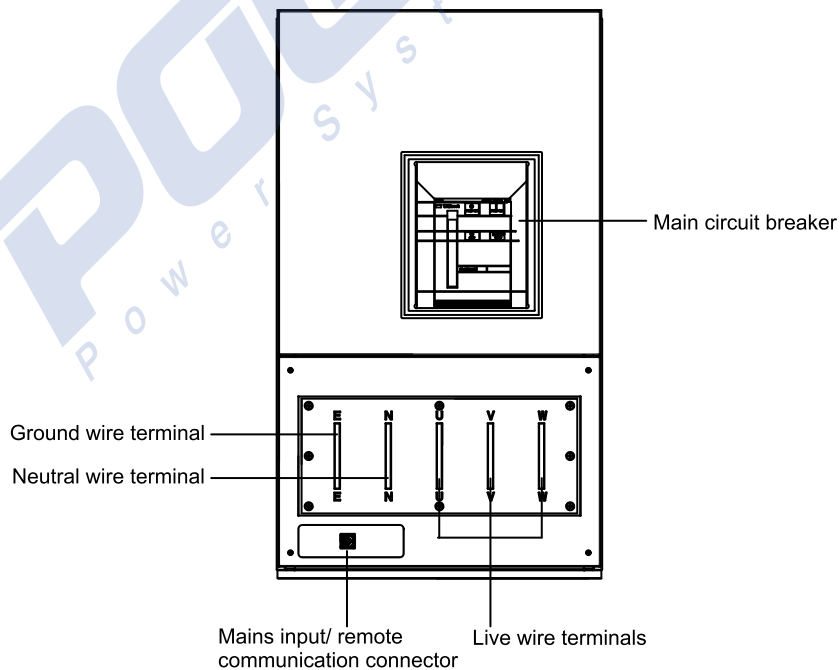


## 5 Control system

### Control Cabinet



### Breaker Cabinet



1000023330-B3-E
12.2014

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Power Systems

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