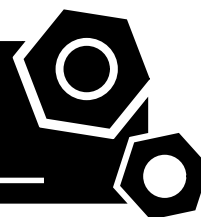


**Generator set**  
**Sound-proof type**  
**WCS700S**

# **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.

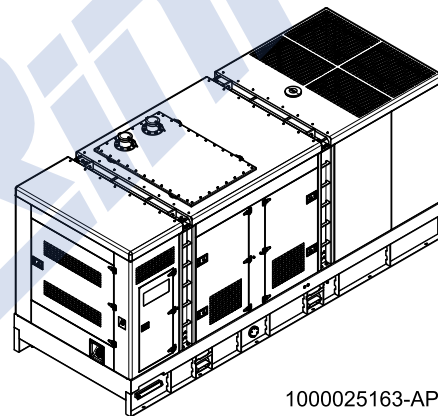
## 2 General Features

- Cummins engine VTA28-G5
- Close coupled to a Stamford alternator HCI544F
- Microprocessor control module PLC-7420
- ABB main circuit breaker: 1000A
- Rotate speed governor: Electronic fuel injection governor
- Excitation system: Self excited
- A.V.R model: AS440
- 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°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 7 hours running
- Drain points for fuel tank
- Operation Manual / Specifications

## 3 Equipment Specification

### General technical data

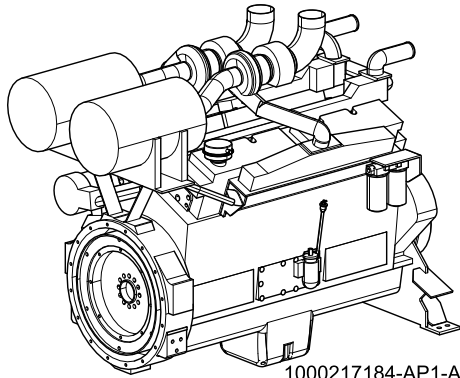


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Model.....	WCS700S
Structure type .....	R
Tank capacity.....	1000L
Dry weight.....	8827kg
Noise level @7m .....	N/A
Sound power level acc. 2000/14/EC .....	N/A
Emissions Compliance .....	N/A
Dimensions L×W×H.....	5456x2061x2665mm
Standby Power .....	706kVA/565kW
Prime Power .....	640kVA/512kW

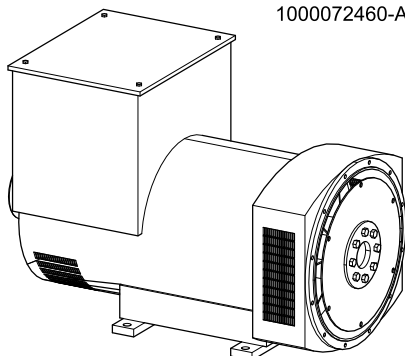
Voltage	380V	400V	415V	440V	
Ampere	972.4A	923.7A	890A	839.8A	
<b>Genset Fuel Consumption</b>					
Frequency/Load	25%	50%	75%	100%	110%
50Hz (L/h)	40.8	69.3	98.8	133	146.3

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Engine Manufacturer/Brand .....	Cummins
Engine Model .....	VTA28-G5
Dimensions L×W×H.....	2098×1330×1692mm
Dry Weight (approx.) .....	2900kg
Number of Cylinders .....	12
Bore .....	140mm
Stroke .....	152mm
Displacement .....	28L
Compression Ratio .....	13
Type of injection.....	Direct injection
Intake System.....	Turbocharged, air-to-air charge cooled
Intake Resistance .....	6.2kPa
Cooling System .....	Water cooled
Fan .....	Pusher
Battery Voltage .....	24V
Type of Fuel .....	No.2 or ASTM D975
Type of Oil .....	API CD/SE or CCMCD4
Oil Capacity .....	91.0L
Type of Coolant .....	Glycol mixture
Coolant Capacityengine only .....	24.0L
Back Pressure .....	10.1kPa
Standby Power .....	612kW
Prime Power .....	560kW
Fuel Consumption(100%load) .....	140L/h

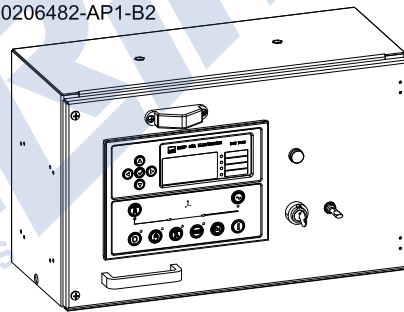


1000072460-AP1-A1

Alternator Manufacturer/Brand .....	Stamford
Alternator Model .....	HCI544F
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.....	1.035m³/s(50HZ), 1.312m³/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

1000206482-AP1-B2



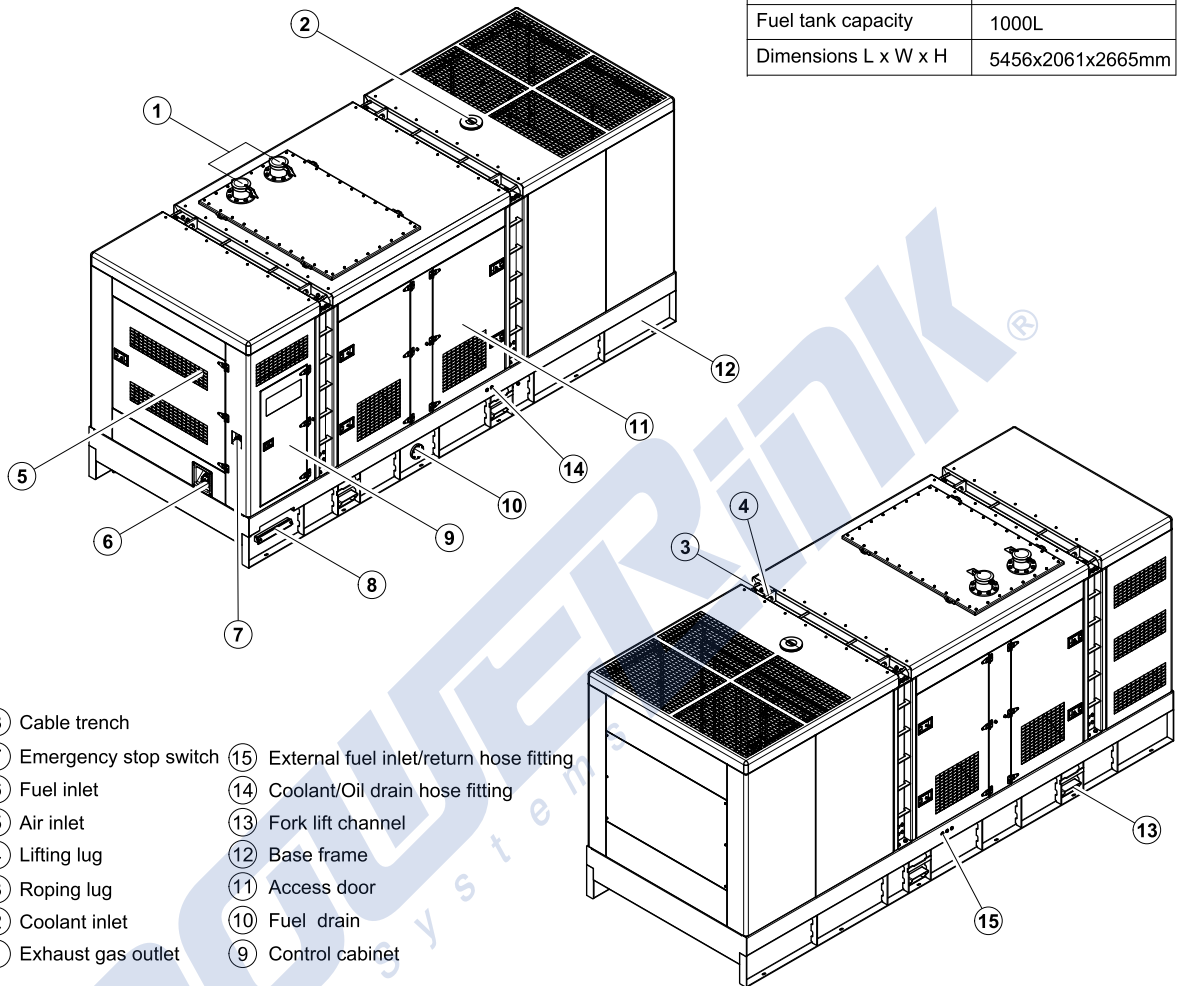
PLC-7420 is an advanced control module based on micro-processor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, and automatically start the engine when the mains is abnormal. Accurately measure various operational parameters and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

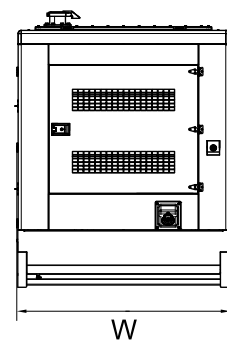
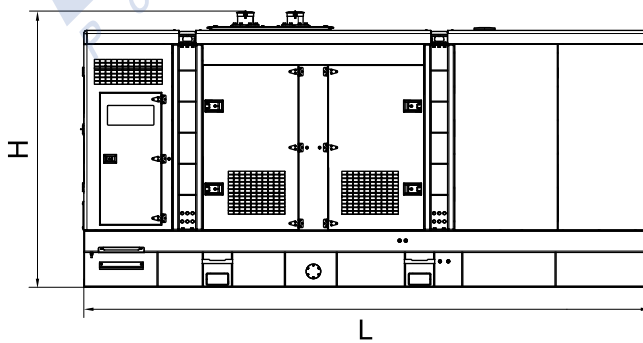
## 4 Overall Dimensions

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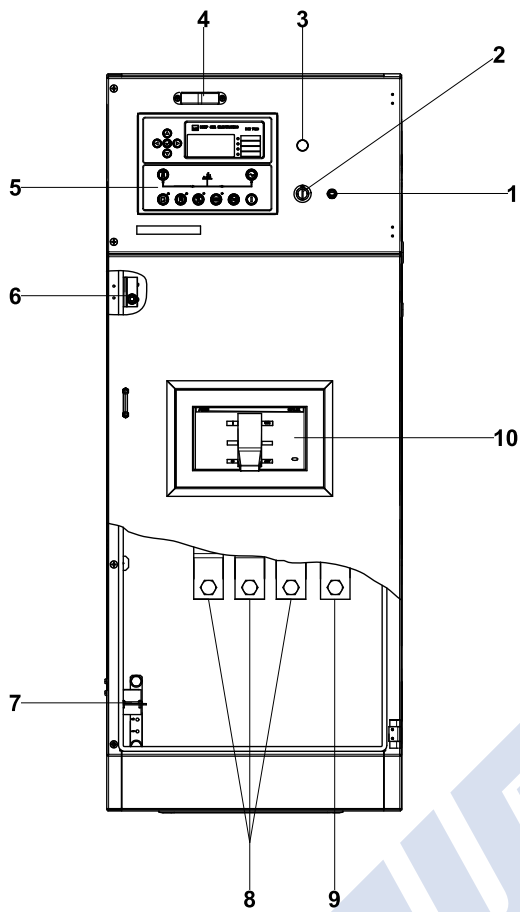
Dry weight	8827kg
Fuel tank capacity	1000L
Dimensions L x W x H	5456x2061x2665mm



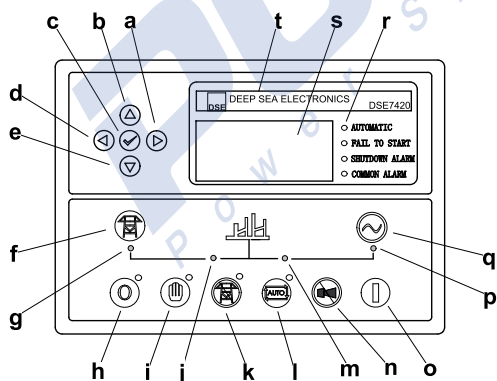
- ⑧ Cable trench
- ⑦ Emergency stop switch
- ⑥ Fuel inlet
- ⑤ Air inlet
- ④ Lifting lug
- ③ Roping lug
- ② Coolant inlet
- ① Exhaust gas outlet
- ⑮ External fuel inlet/return hose fitting
- ⑭ Coolant/Oil drain hose fitting
- ⑬ Fork lift channel
- ⑫ Base frame
- ⑪ Access door
- ⑩ Fuel drain
- ⑨ Control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



## 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

1000025163-A1-E
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04.2014
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