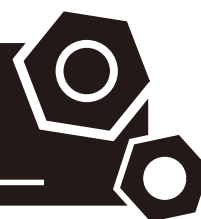


**Generator set**

**Open type**

**WCS400**

# **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: 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.

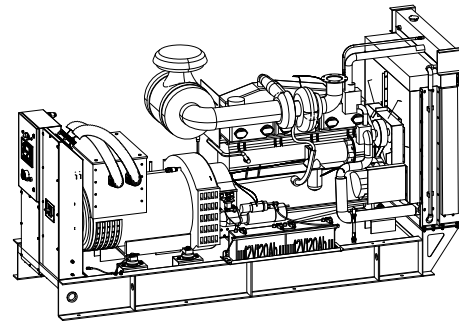
## 2 General Features

- Cummins engine NTA855-G4
- Close coupled to a Stamford alternator HCI444E
- Microprocessor control module PLC-7420
- NADER main circuit breaker: 630A
- Rotate speed governor: Electrical governor FP801
- Excitation system: Self excited
- 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
- 50°C radiator
- Oil pump on the engine
- Steel base frame with lifting lugs
- 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

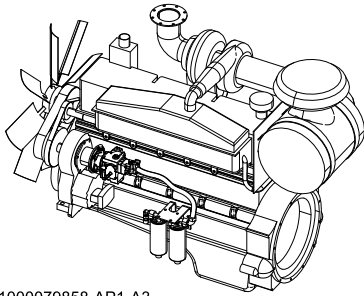


100000698-AP1-E5

Model.....	WCS400
Structure type .....	A
Tank capacity.....	715L
Dry weight.....	3300kg
Noise level @7m .....	N/A
Dimensions L×W×H.....	3418×1130×2050mm
Standby Power .....	390kVA/312kW
Prime Power .....	350kVA/280kW

Voltage	380V	400V	415V	440V	
Ampere	532A	505A	487A	459A	
<b>Genset Fuel Consumption</b>					
Frequency/Load	25%	50%	75%	100%	110%
50Hz (L/h)	21.0	39.0	57.0	76.0	84.0

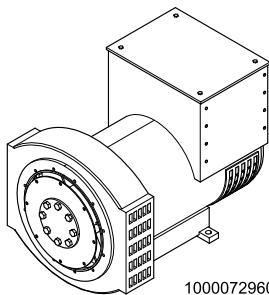
## Power System



1000079858-AP1-A3

Engine Manufacturer/Brand.....	Cummins
Engine Model.....	NTA855-G4
Dimensions L×W×H.....	2055x990x1535mm
Dry Weight (approx.).....	1410Kg
Number of Cylinders.....	6
Bore.....	140mm
Stroke.....	152mm
Displacement.....	14L
Compression Ratio.....	14
Type of injection.....	Direct injection
Intake System.....	Turbocharged
Intake Resistance.....	≤6.25kPa
Cooling System.....	Water cooled
Fan.....	Pusher
Battery Voltage.....	24V
Type of Fuel.....	No.2-D per ASTM D975
Type of Oil.....	API CD/SE or CCMCD4
Oil Capacity.....	38.6L
Type of Coolant.....	Glycol mixture
Coolant Capacity.....	60.6L
Heat Rejected To Exhaust System.....	198kW(11280BTU/min)
Heat Rejected To Water&Oil.....	238kW(13530BTU/min)
Back Pressure.....	≤10kPa
Standby Power.....	351kW
Prime Power.....	317kW
Fuel Consumption(100%load).....	76L/h

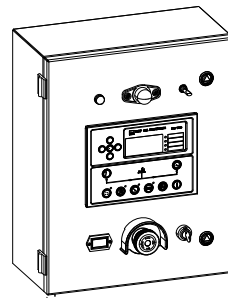
## Alternator



1000072960-AP1-A1

Alternator Manufacturer/Brand.....	Stamford
Alternator Model.....	HCI444E
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.....	0.8m³/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



1000246420-AP1-A1

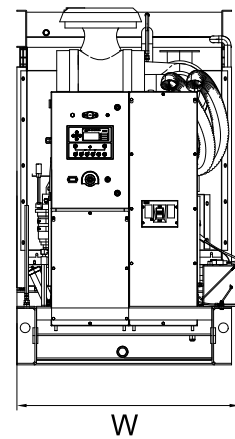
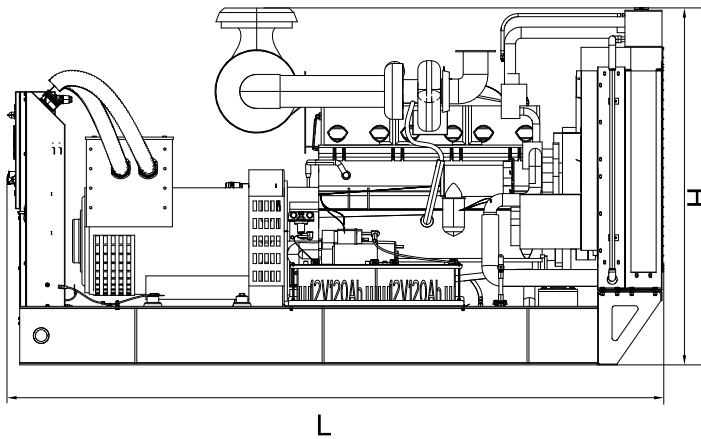
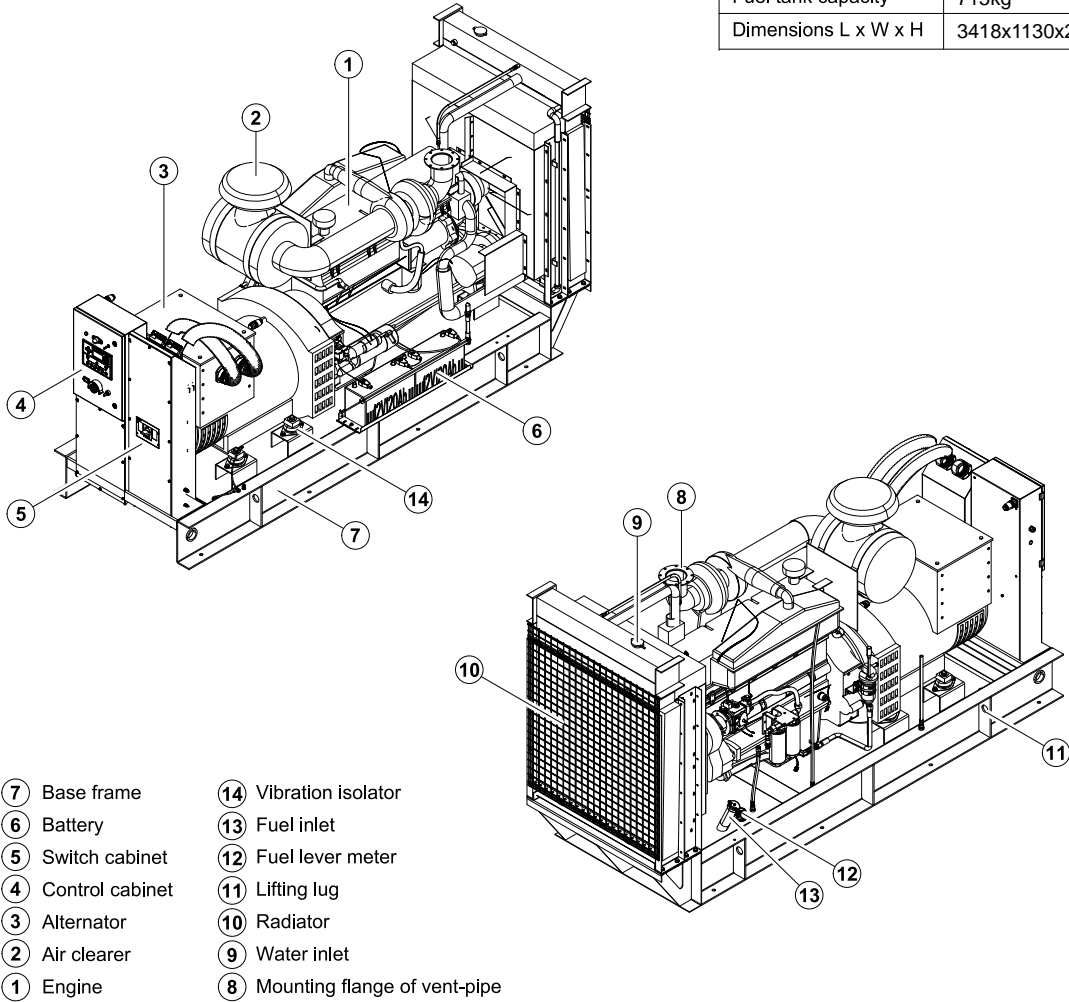
PLC-7420 is an advanced control module based on micro-processor, containing all necessary functions for protection of the genset and the breaker control. It can monitor the mains supply, and automatically start the engine when the mains is abnormal. Accurately measure various operational parameters and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

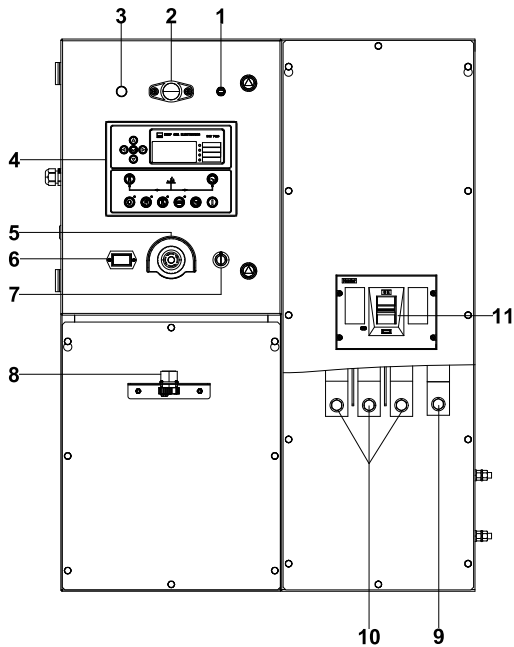
## 4 Overall Dimensions

100000698-DR1-E5

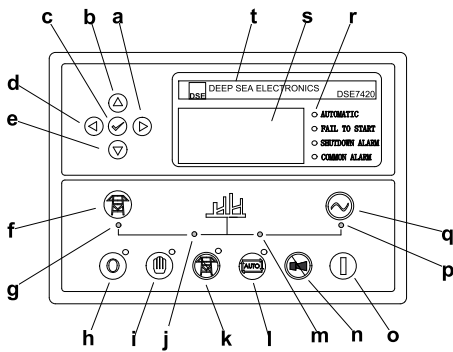
Dry weight	3300kg
Fuel tank capacity	715kg
Dimensions L x W x H	3418x1130x2050mm



## 5 Control System



**Control & field wiring cabinet**



**Control module**

1000246420-IT1-A1

Ref.	Description
1	Control cabinet lamp switch
2	Charge indicator
3	Control panel lamp
4	Control module
5	Emergency stop switch
6	Time counter
7	Key switch
8	Mains input/Remote control/ ATS communication connector
9	Neutral wire terminal
10	Live wire terminals
11	Main circuit breaker

Ref.	Description
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

1000025158-A-E
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12.2018
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<http://www.powerlinkworld.com>

*Specification may change without prior notice. For more info.,  
contact Power Link or your local distributors please.*