# R4 Raythean Pawer 雷天动力设备 (苏州) 有限公司

## RAYTHEON POWER MACHINERY (SUZHOU) CO., LTD

# **Diesel Generator Set RCS250**



Photos reference only

## **Genset Technical Data**

Prime power	250kVA/200kW
Standby power	275kVA/220kW
Rated speed	1500 RPM
Output frequency	50 Hz
Phase	3
Rated voltage	400 V
Engine model(Cummins)	6LTAA8.9-G2
Alternator model(Stamford)	UCD 274K
Fuel consumption of 100% load	46 L/h
Fuel consumption of 75% load	35 L/h
Voltage regulation rate	≤±1%

#### **Prime Power**

This rating is for the supply of continuous electrical power (at variable load). There is no limit on the annual hours of operation and 10% overload power can be supplied for 1 hour in 12.

#### **Standby power**

This rating is for the supply of continuous electrical power (at variable load) in the event of a utility power failure. No overload is permitted.

#### **Rated voltage**

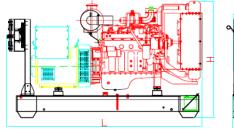
Subject to customer requirement

## **Advantages**

- ✓ High quality, reliable and complete power unit
- ✓ Compact design
- ✓ Easy start and maintenance possibility
- ✓ Every generating set is subject to a comprehensive test program which includes 50%, 75%, 100%, 110% load testing, checking and provision of all control and safety shut down functions testing
- ✓ The 24V high performance maintenance-free lead-acid starting battery including Rack and Cables
- ✓ Industrial capacity exhaust silencer and flexible exhaust
- ✓ With Chint Moulded Case Circuit Breaker (Up to1250A)
- ✓ Packing: be secured with polythene dust cover

## **Dimension and Weight**

Length (L)	mm	2550
Width (W)	mm	950
Height (H)	mm	1400
Weight	kg	1930
Tank capacity	L	270



## Chassis

- ✓ The complete gen-set is mounted as whole on a heavy-duty fabricated, steel base frame
- ✓ Anti-vibration pads are fixed between the engine/ alternator feet and the base frame
- ✓ Base frame design incorporates an 8-houres integral
- ✓ The generator set can be lifted or carefully pushed / pulled by the base frame
- ✓ Dial type fuel gauge and drain plug on the fuel tank

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# **Engine**

Engine manufacturer		Cummins	
Engine model		6LTAA8.9-G2	
Emissions statement	Emissions statement		
Number of cylinders		6	
Cylinder arrangement		Vertical in-line	
Cycle		Four stroke	
Aspiration		Turbocharged and Charge Air Cooled	
Bore×Stroke	mm×mm	114*145	
Displacement	Liter	8.9	
Compression Ratio		16.6:1	
Prime power/speed	kW/RPM	220/1500	
Standby power/speed	kW/RPM	240/1500	
Speed governor		Electrical	
Cooling system		Forced Water Cooling Cycle	
Steady speed droop	%	≤1%	
Total lubrication system capacity	L	27.6	
Coolant capacity (engine only)	L	11.1	
Fuel consumption at 100% load	g/kWh	197(at 1500RPM)	
Starter motor & Alternator		DC24V	

## Alternator

Design	Brushless, single bearing, flexible disc		
Protection grade	IP23		
Alternator cooling	Direct drive centrifugal blower fan		
Insulation grade	Class H		
Standard temperature rise	125°C		
Exciter type	Self-excited & AVR(Automatic Voltage Regulator)		
Power factor	0.8		
Rated voltage	380-415V(Subject to customer requirement)		
Voltage regulation rate	≤±1%		

## Alternator brand option

<b>Alternator Brand</b>	Alternator Model	Phase	Rated Speed	Rated Prime Power(kVA)
Stamford	UCD 274K	3	1500RPM	250
Leroy Somer	LSA 46.2L6	3	1500RPM	250
FARADAY	FD3H	3	1500RPM	250
Raytheon Power	WHI4C	3	1500RPM	250

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## **Control System**

Control supervision and protection panel is mounted on the genset base frame. The control panel is equipped as follows:

#### 1. Manual & Auto Start Control Panel

Panel equipment:

- ✓ The deepsea (UK original) control module
- ✓ Static battery charger
- ✓ Emergency stop push button

#### a) Generator set control module DSE4620 features:

- ✓ The module be utilised as a Manual or Auto Start Module for single gen-set applications
- ✓ Back-lit LCD display
- ✓ Remote start input
- ✓ Hours counter provides accurate information for monitoring maintenance and warranty periods
- ✓ Full engine monitoring and protection
- ✓ The module can be programmed using the front panel or by using the DSE Configuration Suite PC software
- ✓ 4 customizable Digital Inputs
- ✓ 4 customizable Outputs
- ✓ Easy push button control STOP/RESET -MANUAL -AUTO START

#### b) Parameters via LED display:

- ✓ Generator Volts (L-N)
- ✓ Generator Frequency (Hz)
- ✓ Engine speed
- ✓ Engine run time
- ✓ Battery volts

**DSE4620** 

### c) Parameters display via the pointer instruments:

- ✓ Generator Ampere (L1,L2,L3)
- ✓ Engine oil pressure
- ✓ Engine water temperature

#### d) Alarms & Auto shutdown protect:

- ✓ Over and Under Speed
- ✓ Low and High Battery Volt
- ✓ Engine start failure
- ✓ Charge fail
- ✓ Over Current
- ✓ Under / Over Generator Voltage
- ✓ Low Oil Pressure
- ✓ Emergency stop
- ✓ High engine temperature

### 2. Power Outlet Terminal Board Mounted on the Gen-set Base Frame

## The control modules option:



HGM6120



**DSE7320** 



DSE8610

Remarks: For the specific and detailed features of the above types, please refer to "Control System Selection" file.

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# **Generator Set Options and Accessories**

Alternator
☐ PMG excitation
☐ Space heater
Low environment temperature
☐ Water heater
☐ Oil heater
☐ Battery heater
Control system
☐ AMF function
☐ ATS control cabinet
☐ Multiple generator automatic paralleling

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