



# Diesel Generating Sets Y-C42

Model	Prime Power	Standby Power
<b>50Hz Diesel Spec Sheets</b>		
Y-C42	42kVA / 34kW	46kVA / 37kW

### Notice:

- a) Prime Power(PRP): Prime power is available for an unlimited number of annual hours in variable load application, in accordance with GB/T2820-97 (eqv ISO8528) ; A 10% overload capacity is available for a period of 1 hours within a 12-hours period of operation.
- b) Standby Power(ESP): The standby power rating is applicable for supplying emergency power for the duration of a utility power interruption. No overload, utility parallel or negotiated outage operation capacity is available at this rating.
- c) Ambient reference conditions: 1,000mbar, 27°C, 30% relative humidity.

Generator Rating					
Voltage	Frequency	Phase	Power Factor	PRP	ESP
380/220 V	50Hz	3-Phase	0.8	42kVA / 34kW	46kVA / 37kW
400/230 V	50Hz	3-Phase	0.8	42kVA / 34kW	46kVA / 37kW
415/240 V	50Hz	3-Phase	0.8	42kVA / 34kW	46kVA / 37kW
440/254 V	50Hz	3-Phase	0.8	42kVA / 34kW	46kVA / 37kW

Standard Features
Engine Cummins 4BT3.9-G1
Alternator YDSF.I184J
Radiator 50°C max, fans are driven by belt with safety guard
24V charge alternator
Alternator: Single bearing alternator IP23, insulation class H
Anti-shock system
Dry type air filter, fuel filter, oil filter
Main line fuse breaker
Standard control panel
Two 12V batteries, rack and cable
Ripple flex exhaust pipe, exhaust siphon, flange, muffler
User manual book



Photo for reference only



## Diesel Generating Sets Y-C42

### ENGINE DATA

Manufacturer / Model : DCEC Cummins 4BT3.9-G1 , 4-cycle

Air Intake System : Turbo

Fuel System : A model fuel pump

Cylinder Arrangement : 4 in line

Displacement : 3.9L

Bore and Stroke : 102\*120 (mm)

Compression Ratio : 16.5:1

Rated RPM : 1500rpm

Max.Standby Power at Rated RPM : 40kW / 54.4HP

Governor Type : Mechanical Speed Control System

Frequency Regulation, Steady State :  $\leq 1.5\%$

### Exhaust System

Exhaust Gas Flow : 6.48CBM/min

Exhaust Temperature : 487°C

Max Back Pressure : 10kPa

### Air Intake System

Max Intake Restriction : 6.2kPa

Burning Capacity : 2.62CBM/min

Intake Flow : 136CBM/min

### Fuel System

110%(Standby Power) Load : 9.6L/h

100%(Prime Power) Load : 9.5L/h

Total Fuel Flow :

### Oil System

Total Oil Capacity : 11L

Oil Consumption :  $\leq 4\text{g/kwh}$

Engine Oil Tank Capacity : 8L

Oil Pressure at Rated RPM : 350kPa

### Cooling System

Total Coolant Capacity : 20L

Thermostat : 83-95°C

Max Water Temperature : 100°C



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### ALTERNATOR STANDARD

Compliance as following standard:

GB755, Third part of BS5000, VDE0530, NEMA MG1-22, IEC34, CSA C22.2-100 and ASB59

### ALTERNATOR DATA

Model : YDSF.1184J

Exciter Type : Brushless , Self-exciter

Alternator Capacity : 40.0kVA

Number of Phase : 3-phase, 4-wires, Y type connecting

Connecting Type : Reconnectable

Number of Bearing : Single bearing

Power Factor : 0.8

Protection Grade : IP23

Altitude :  $\leq 1000\text{m}$

Insulation Class , Temperature Rise : Class H

Pitch : 2/3

Amortisseur Winding : Full

Voltage Regulator : SX440

Voltage Regulation NL - FL :  $\pm 1.0\%$

Telephone Influence Factor (TIF) :  $< 50$

THF :  $< 2\%$

Alternator Efficiencies : 87.0%

Air Cooling Flow : 0.15CBM/s

Cooling Fan : Cast alloy aluminium

Sudden Voltage Warp (100% Sudden Reduce) :  $\pm 25\%$

Sudden Voltage Warp (Sudden Increase) :  $\pm 20\%$

Voltage Stable Time (100% Sudden Reduce) :  $< 6\text{s}$

Voltage Stable Time (Sudden Increase) :  $< 6\text{s}$

Frequency Reduce : 0-5% adjustable

Frequency Regulation, Stead State :  $< 1.5\%$

Frequency Waving :  $< 0.8\%$

Sudden Frequency Warp (100% Sudden Reduce) :  $\pm 12\%$

Sudden Frequency Warp (Sudden Increase) :  $\pm 10\%$

Frequency Recovery Time (100% Sudden Reduce) :  $< 5\text{s}$

Frequency Recovery Time (Sudden Increase) :  $< 5\text{s}$



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## STANDARD MANUAL CONTROL PANEL

Standard control panel M170



- |  |                                    |
|--|------------------------------------|
| 1. Calculagraph(gen-set run times)   | 8. Current change phase            |
| 2. Voltage meter   | 9. Key starter                     |
| 3. Frequency meter   | 10. Battery ampere gauge           |
| 4. Current meter   | 11. Oil pressure gauge             |
| 5. Engine protector system(speed up, oil pressure low, water Temp. high, oil Temp. high) | 12. Water temperature gauge        |
| 6. Voltage change phase  | 13. Fuse breaker( Circuit breaker) |
| 7. Fuel level gauge  | 14. Emergency stop button          |

## Optional CONTROL PANEL D240



Control Panel - D240

1. UK Deepsea 5110

1.1 meter showing

a. phase L1-L2-L3

b. oil pressure BAR, HPA, PSI

c. voltage

d. temperature 'F, 'C

f. frequency

g. amperes

h. speed

i. hours run

j. AC

k. parameter being adjusted

l. DC

1.2 alarm indications

a. warning alarm

b. shutdown alarm

c. electrical trip

d. fault to stop

e. low oil pressure

f. over speed

g. charge fail

h. high coolant temperature

i. under speed

j. emergency stop

k. fail to start( over crank)

l. auxiliary indication

m. over voltage

n. under voltage

o. over current

2. Key starter

3. Buzzer

4. Emergency stop

Customer can visit our website got more Control Panel design method.

<http://www.eagle-power.com>



## Diesel Generating Sets Y-C42

### Soundproof Canopy



C12 Soundproof Canopy



C13 Soundproof Canopy

Customer can via visit our website got more Soundproof Canopy design method.  
<http://www.eagle-power.com>