



**Model :**  
**KDC-50/S**

PRP		ESP		Standby	Voltage/Ph	Hz/rpm	PF
kW	kVA	kW	kVA	Amps			
<b>40</b>	<b>50</b>	<b>44</b>	<b>55</b>	<b>79</b>	<b>400/3Ph</b>	<b>50/1500</b>	<b>0.8</b>

### Prime power

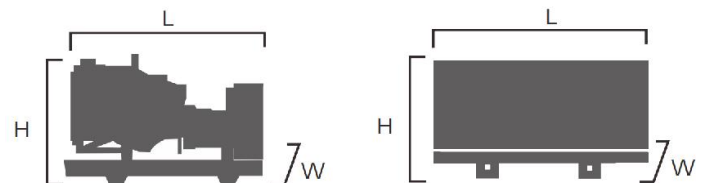
According to ISO8528-1, prime power is the maximum power available during a variable power sequence, which may be run for an unlimited number of hours per year, between stated maintenance intervals. The permissible average power output during at 24 hours period shall not exceed 80% of the prime power. 10% overload available for governing purposes only.

### Standby power

According to ISO 8528-1, It is defined as the maximum power available, under the agreed operating conditions, for which the generating set is capable of delivering for up to 500 hours of operation per year (of which no more than 300 hours for continuative use) with the maintenance intervals and procedures being carried out as prescribed by the manufacturers. No overload capability is available.

### Diesel Generator Set

Engine Make /Model	Cummins 4BTA3.9G2
Alternator Make /Model	Brushless, self-exciting
Control Panel	Smartgen HGM6120N
Base Frame / Silent Canopy	Robust Structure/ Corrosion Resistant
Circuit Breaker Type	3pole MCCB (4P Available as option)
Built in Base Fuel Tank Capacity	8-10hrs (Silent)
Battery	Maintenance free Lead Acid



### Fuel Consumption ( L/H )

100% standby power	14.1
100% prime power	12.9
75% prime power	10.0
50% prime power	7.0

### Dimension and Weight

Dimension	Open	Silent
Length (L)	1800mm	2300mm
Width (W)	750mm	960mm
Height (H)	1300mm	1400mm
Net Weight	875KG	1130KG

## § Engine Specification: 4BTA3.9G2

### Basic technical data

No. of cylinders	4
Cylinder arrangement	In-line
Cycle	4 stroke
Aspiration	Turbocharged & Aftercooler
Compression ratio	17.3:1
Bore	102mm
Stroke	120mm
Displacement	3.9L

### Cooling system

Coolant capacity-engine	8.3L
Maximum coolant friction head external to engine:	
-1500 rpm	28kPa
Maximum static head of coolant above engine crank centerline	14.0m
Standard Thermostat (Modulating) Range	83 - 95 °C
Minimum Pressure Cap	69 kPa
Maximum Top Tank Temperature for Standby / Prime Power	104 / 100 °C

### Fuel system

Injection system	BYC A Direct Injection
Governor type	Electronic
Maximum Restriction at Lift Pump	13.6 kPa
Maximum Fuel Inlet Temperature.	70°C
Total Drain Flow (constant for all loads)	30 litre / hour

### Air intake system

Maximum intake air restriction

with heavy duty air cleaner:

-Dirty element	6.2kpa
-Clean element	3.7kpa

### Lubrication system

Engine oil pressure for engine

protection devices:

— Idle speed(Minimum )	103kPa
— Governed speed(Maximum )	345kPa

Maximum oil temperature 121 °C

Minimum Required Lube System Capacity

- Sump plus Filters 10.9 litre

### General installation

### Prime power

Gross engine power output	50 kw
Piston speed	6.0 m/s
Friction horsepower	8.2 kW
Engine water flow to engine	1.6 L/sec
Intake Air Flow	49 l/sec
Exhaust gas flow	125 l/sec
Exhaust gas temperature	526 °C
Radiated heat to ambient	16.2 kW
Heat Rejection to Coolant	29.1 kW
Heat Rejection to Fue	46.6 kW

§ Diesel engine  
§ 4-stroke cycle  
§ Water-cooled  
§ 24V electrical system  
§ Water separator filter

§ Dry air filter  
§ Radiator with pusher fan  
§ Electronic governor  
§ Hot parts protection  
§ Moving parts protection

§ Water jacked heater (Optional)  
§ Radiator water level sensor (Optional)  
§ Oil heater (Optional)  
§ Heavy duty air filter (Optional)

## § Alternator

Alternator	
Number of phase	3
Power factor (Cos Phi)	0.8
Poles	4
Winding Connections (standard)	Star-serie
Terminals	12
Insulation type	H class
Winding Pitch	2/3
IP rating	IP23
Excitation system	Self-excited
Bearing	Single bearing
Coating	Vacuum impregnation
Voltage regulator	A.V.R
Couping	Flexible disc

## § Controller

### Configuration

- Emergency stop button
- Protection MCB
- Battery charger
- Integrated aviation plug
- ATS connection
- Digital control module



### Main Features

- Automatic mains failure
- Engine control, Generator protection
- Built in alarms and warnings
- Remote Start operation available
- Daily / weekly / monthly exerciser
- Weekly operation schedule programs
- Fuel pump control
- Mains simulation
- Block heater control
- Field adjustable parameters
- Free MS-Windows Remote monitoring
- LED displays
- Configurable analogue inputs
- I/O expansion capability



## § Options

### Engine

- Water Jacket Pre-heater
- Fuel heater

### Alternator

- Winding Temp measuring Instrument
- Alternator Pre-heater
- PMG
- Anti-damp and anti-corrosion treatment
- Anti-condensation heater
- Winding and bearing RTD

### Generator Sets

- Tools with the machine
- Extended range fuel tank
- Bunded fuel tank

### Fuel System

- Low fuel level alarm
- Automatic fuel feeding system
- Fuel T-valves

### Canopy

- Rental type Canopy
- Trailer

### Control Panel

- Remote control panel
- ATS
- Synchronizing controller
- Adjustable ear th leakage relay