



Model :  
**KDC-45/S**

PRP		ESP		Standby	Voltage/Ph	Hz/rpm	PF
kW	kVA	kW	kVA	Amps			
36	45	40	50	130	220/3Ph	60/1800	0.8

### Prime power

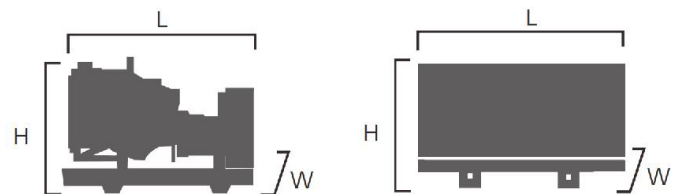
According to ISO8528-1, prime power is the maximum power available during a variable power sequence, which may be run for an unlimited number of hours per year, between stated maintenance intervals. The permissible average power output during at 24 hours period shall not exceed 80% of the prime power. 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 4BT3.9G2
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	11.7
100% prime power	10.7
75% prime power	8.4
50% prime power	6.2

### Dimension and Weight

Dimension	Open	Silent
Length (L)	1700mm	2300mm
Width (W)	750mm	960mm
Height (H)	1300mm	1300mm
Net Weight	875KG	1150KG

## § Engine Specification: 4BT3.9G2

Basic technical data	
No. of cylinders	4
Cylinder arrangement	In-line
Cycle	4 stroke
Induction system	Turbocharged
Compression ratio	17.3:1
Bore	102mm
Stroke	120mm
Displacement	3.9L

Cooling system	
Coolant capacity-engine	7.2L
Maximum coolant friction head external to engine:	
-1800 rpm	35kPa
Maximum static head of coolant above engine crank centerline	14.0m
Standard Thermostat (Modulating) Range	82 - 95 °C
Minimum Pressure Cap	69 kPa
Maximum Top Tank Temperature for Standby / Prime Power	104 / 100 °C

Fuel system	
Injection system	BYCA
Governor type	Electronic
Maximum restriction at lift pump	102-mmHg
Maximum fuel inlet temperature	/
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 )	207kPa
— Governed speed(Maximum )	345kPa
Maximum oil temperature	121 °C
Maximum oil consumption	
Oil pan capacity-low/high	10.9 L

General installation	Prime power
Gross engine power output	40kw
Piston speed	7.2 m/s
Friction horsepower	8.2 kW
Engine water flow to engine	2.8 l/sec
Intake Air Flow	53.1 l/sec
Exhaust gas flow	101 l/sec
Exhaust gas temperature	350 °C
Radiated heat to ambient	TBD
Heat rejection to coolant	32 kW
Heat rejection to fuel	TBD

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

§ Dry air filter  
 § Radiator with pusher fan  
 § Mechanical 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