



 **Powered By Cummins**

Model :
KDC-450/S

PRP		ESP		Standby	Voltage/Ph	Hz/rpm	PF
kW	kVA	kW	kVA	Amps			
360	450	400	500	656	440/3Ph	60/1800	0.8

Prime power

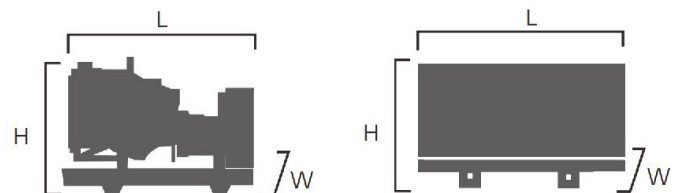
According to ISO8528-1, prime power is the maximum power available during a variable power sequence, which may be run for an unlimited number of hours per year, between stated maintenance intervals. The permissible average power output during at 24 hours period shall not exceed 80% of the prime power. 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 QSZ13G2
Alternator Make /Model	Brushless, self-exciting
Control Panel	Smartgen HGM6120N
Base Frame / Silent Canopy	Robust Structure/ Corrosion Resistant
Circuit Breaker Type	MCCB
Built in Base Fuel Tank Capacity	8-10hrs (Silent)
Battery	Maintenance free Lead Acid



Fuel Consumption (L/H)

100% standby power	N/A
100% prime power	73.6
75% prime power	53.1
50% prime power	39.9

Dimension and Weight

Dimension	Open	Silent
Length (L)	3250mm	4500mm
Width (W)	1400mm	1700mm
Height (H)	2100mm	2230mm
Net Weight	3175KG	4500KG

§ Engine Specification: QSZ13G2

Basic technical data	
No. of cylinders	6
Cylinder arrangement	In-line
Cycle	4 stroke
Induction system	Turbocharged & Charge Air Cooled
Compression ratio	17.0:1
Bore	130mm
Stroke	163mm
Displacement	13L

Cooling system	
Coolant capacity-engine	23.1L
Engine coolant circuit thermostat opening temperature	82°C
Maximum coolant temperature - engine out	102°C
Minimum operating block coolant temperature	71°C
Minimum pressure cap rating at sea level	103kPa
Maximum coolant temperature for engine protection controls	107°C

Fuel system	
Injection system	XPI
Governor type	ECU
Maximum fuel supply restriction as OEM connection point at 1,800 rpm and No load with clean fuel filter element(s) at maximum fuel flow	13.5kPa
Maximum fuel drain restriction (total head) before (or without) check valve	27kPa

Air intake system	
Maximum intake air restriction with heavy duty air cleaner:	
-Dirty element	6.2kPa
-Clean element	2.5kPa

Lubrication system	
Oil pressure @ idle - minimum	89.6kPa
Typical oil pressure range - warm engine:	207-345kPa
Total system capacity (standard pan):	45.42L
Maximum lube oil flow to all accessories	7.57 L/min

General installation	Prime power
Gross engine power output	408kw
Piston speed	9.78m/s
Friction horsepower	40kW
Engine Water Flow to Engine	13L/sec
Intake Air Flow	550litre/sec
Exhaust gas flow	34.3kg/min
Exhaust gas temperature	1156°C
Heat Rejection to Ambient	30kW
Heat Rejection to JacketCoolant	147kW
Heat rejection to fuel	1.5kW

§ 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
Coupling	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