

# Standby Generator 250kVA



## DESIGN SPECIFICATIONS

- High quality, reliable and complete power unit.
- Compact design
- Easy Start and maintenance possibility
- Every generating set is subject to a comprehensive test programme which includes full load testing and checking and proving of all control and safety shut down functions testing
- Fully engineered with a wide range of options and accessories: Canopy, soundproof canopy and mobile units.

### Standard Genset Specification Engine

- Cummins heavy - duty diesel engine
- Four cycle, water cooled, turbo charged
- Electronic Governor Control System
- Direct injection fuel system
- Replaceable wet type cylinder liners
- 4 Valves per cylinder (for AC 400 and AC 440)
- 24 Volt D.C. starter and charge alternator
- Replaceable fuel filters, oil filters and dry element air filters
- Cooling radiator and fan
- Starter battery (with lead acid) including Rack and Cables
- Flexible fuel connection hose and manual sump oil drain valve
- Industrial capacity silencer and steel bellows
- Jacket water heater (automatic models)
- Operation manuals and diagram documents

### Alternator

- Brushless, single bearing system, 4 poles
- Insulation class H
- Standard degree of protection IP21
- Self-exciting and self-regulating
- Stator winding with 2/3 pitch for improved harmonics
- Impregnation with tropicalised epoxy varnish
- Solid state Automatic Voltage Regulator

### Chassis

- The complete generating set is mounted as whole on a heavy - duty fabricated, steel base frame. Antivibration pads are fixed between the engine / alternator feet and the base frame
- The generating set can be lifted or carefully pushed / pulled by base frame
- Base frame design incorporates an integral fuel tank
- Dial type fuel gauge and drain bung on the fuel tank

### Canopy

- All canopy parts are designed with modular principles
- Without welding assembly
- All metal canopy parts are painted by electrostatic polyester powder paint
- Exhaust silencer is protected against environment influences
- Thermally insulated engine exhaust system
- Emergency stop push button outside of canopy
- Easy lifting and moving
- Easy maintenance and operation

### Quality Standards

- The equipment meets the following standards: ISO 3046, VDE 0530, BS 5000, IEC 34. The generating set manufactured by a fully accredited NQA ISO 9001

### Control System

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

### Auto Main Failure Control System P2020:

- Control with DSE module 5220 module
- Static battery charger
- Emergency stop push button

### Control Module Features:

#### DSE Model 5220

- Automatic controls generating set, start and shutdown
- Front panel programming of the module settings
- Remote communication via RS 232 port or RS 485 "modbus" output
- Scrolling digital LCD display
- Event logging of shutdown alarms
- Monitoring AC mains supply
- Provides signal to change over switchgear
- Easy pushbutton control. Stop / Reset - Auto - Manual - Test - Start

### Metering via LCD Display:

- Generator Volts (F - F / F - N)
- Generator Amperes (L1, L2, L3)
- Generator Frequency (Hz)
- Generator kVA
- Generator kW
- Generator Cos
- Mains frequency (Hz)
- Engine oil pressure (PSI & Bar)
- Engine Temperature (\*C & \*F )
- Engine speed RPM
- Engine hours run
- Plant battery volts
- Main volts (F - F / F - N)

### Alarms

- Under / Over - generator volts
- Under / Over - generator frequency (Hz)
- Over current
- Low oil pressure
- High engine temperature
- Under / Over speed
- Under / Over main volts
- Under / Over main frequency
- Low coolant level
- Fail to start
- Fail to stop
- Emergency stop
- Charge fail
- Low / High battery volts
- Can data fail
- Can ECU fail



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## Standby Generator 250kVA

400 / 230 V - 50 Hz

### Output Rating

Power Pf. 0.8

**STANDBY** 250kVA  
200kW

**Prime** 225 kVA  
180 kW

### Diesel Engine

Engine Make Cummins  
Model 6CTAA 8,3 G2  
Gross engine power output at rated rpm 321kWm  
310hp  
Aspiration and Cooling Turbo Charged - Charge Cooled  
Cylinders Capacity 8.3Lt  
Cylinders and Build 6 - in line  
Engine Speed 1500 rpm  
Bore and Stroke 114 x 135mm  
Compression Ratio 16.7 : 1  
Governor Electronic

Fuel Consumption	Load	1/2	3/4	Full
L/hr	25	38	51.8	

Fuel Tank Capacity 370L  
Oil Capacity 23.8L  
Water Capacity 40 L

Radiator Cooling Air 186 m<sup>3</sup>/min  
Air Intake - Engine 15.3m<sup>3</sup>/min  
Exhaust Gas Flow 41 m<sup>3</sup>/min  
Exhaust Gas Temperature 565°C  
Heat Radiated to Ambient 24kW  
Engine Derating - Altitude 4% per 300m. Above 1000m  
Engine Derating - Temperature 6% per 10°C Above 40°C  
Alternator Voltage Regulation ± %1

### OPEN TYPE

Dimensions (length x width x height) 2400 x 1130 x 1730  
Dry weight 1960 KG

### SOUND ATTENUATED TYPE

Dimensions (length x width x height) 4000 x 1210 x 2050MM  
Dry weight 2700KG  
Fuel Tank Capacity 370Lt

## UPSPEC OPTIONS

### Diesel Engine

- Remote Radiator
- Engine oil heater

### Alternator

- 3 pole output circuit breaker
- Anti condensation heater
- Over sized alternator

### Accessories

- Bulk Fuel Tank
- Automatic Fuel filling system
- Fuel warter seperator filter
- Residential silencer
- Sound Proof Canopy
- Manual fuel filling system
- Low fuel alarm
- 4 Pole contactor
- Electrical oil drain pump

## GO CUSTOMISED

- Skid Mount Options
- External Switches
- Lifting Frames & Fabrication
- Custom Paint