

# Standby Generator 90



## DESIGN SPECIFICATIONS

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

## STANDARD GENSET SPECIFICATIONS ENGINE:

- CUMMINS heavy duty diesel engine
- Four cycle, water cooled, turbo charged
- Mechanical Governor Control System
- Electronic Governor on AC 90
- Direct injection fuel system
- 12 Vdc starter and charge alternator
- Replaceable fuel filter ,oil filter and dry element air filter
- Cooling radiator and fan
- Starter battery (with lead acid) including Rack and Cables
- Flexible fuel connection hoses and manual sump oil drain valve
- Industrial capacity exhaust silencer and steel bellow
- Jacket water heater (automatic models)
- Operation manuals and circuit 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.
- Base frame design incorporates an integral fuel tank.
- The generating set can be lifted or carefully pushed / pulled by the base frame
- Dial type fuel gauge and drain bung on the fuel tank
- Forklift pockets within base frame

## 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 is installed outside of canopy
- Easy lifting and moving
- Easy maintenance and operation
- Modular canopy can also be installed at a later date

## QUALITY STANDARDS:

- The equipment meets the following standards: ISO 3046, VDE 0530, BS 4999, BS 5000, IEC 34. The generating set is manufactured by a full accredited NQA-ISO 9001.

## WARRANTY:

- 12 months warranty from commissioning date as standard.

## CONTROL SYSTEM:

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

### 1) Auto. Mains Failure Control Panel – P300 Control Panel Equipment

- Control panel with DSE 720 module
- Static battery charger
- Emergency stop push button

### a) Generating Set control module

#### DSE720 features:

- The module is used to monitor a mains supply and automatically start a standby generator set.
- Scrolling digital LCD display
- Front panel configuration of timers and alarm trip points
- Easy push button control
- STOP/RESET – MANUAL – AUTO – TEST - START
- LCD display Scroll push button

### b) Metering via LCD Display

- Generator Volt (F-N)
- Generator Ampere (L1, L2, L3)
- Generator Frequency (Hz)
- Mains Volts (F-F/F-N)
- Engine Temperature
- Engine Oil Pressure
- Engine Speed
- Engine Hours run
- Plant Battery Volt

### c) Alarms

- Over current
- Over Speed
- Under/Over mains volt
- Under/Over mains frequency
- Low oil pressure
- High Engine temperature
- Low battery volt
- Charge fail
- Start failure
- Emergency stop

### d) LED indications

- Mains Available
- Mains on load
- Generator available
- Generator on load



# Standby Generator 90

Diesel Generating Set 400 / 230 V - 50 Hz

## Output Rating

Power Pf. 0,8

**STANDBY** 90kVA  
72kW

**Prime** 90 kVA  
64 kW

## Diesel Engine

Engine Make Cummins  
Model 4 BT 3.9-G4  
Gross engine power output at rated rpm 81kWm  
108hp  
Aspiration and Cooling Turbo After Charged  
Cylinders Capacity 3.92Lt  
Cylinders and Build 4 - in line  
Engine Speed 1500 rpm  
Bore and Stroke 102 x 120mm  
Compression Ratio 16.5 : 1  
Governor Mechanical

Fuel Consumption	Load	1/2	3/4	Full
L/hr	9	14	18	

Fuel Tank Capacity 160L  
Oil Capacity 11L  
Water Capacity 20L

Air Intake - Engine 5.1 m<sup>3</sup>/min  
Exhaust Gas Flow 10 m<sup>3</sup>/min  
Alternator Voltage Regulation ± %1.5

## OPEN TYPE

Dimensions (length x width x height) 1860 x 920 x 1320  
Dry weight 940 KG

## SOUND ATTENUATED TYPE

Canopy Model ASM4  
Dimensions (length x width x height) 2500 x 970 x 1570MM  
Dry weight 1340KG

## UPSPEC OPTIONS

- \* Fuel - water separator filter
- \* Remote Radiator
- \* Automatic fuel filling system
- \* Engine oil heater
- \* Manual sump oil drain pump
- \* Residential silencer
- \* Low fuel level alarm
- \* Charge voltmeter
- \* Charge ammeter
- \* Anti condensation heater for alternator
- \* Main fuel tank
- \* 3 pole alternator circuit breaker  
(only for automatic models)
- \* 4 Pole contactor
- \* Tool kit
- \* Over sized alternator
- \* Automatic Transfer Switch by contactor or motorized circuit breaker