

Standby Generator 400



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:

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
- Starter 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:

Control Module Common Features:

- Automatic controls generating set, start and stop
- 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

Common 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

Common Alarms

- Under / Over - generator volts
- Under / Over - generator frequency
- 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

I - Auto Main Failure Control System P 2020

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

Additional Features

- Monitoring AC mains supply
- Provides signal to change over switch gear
- Easy push button control Stop / Reset - Auto - Manual - Test - Start

Additional Metering

- Mains volts (F - F / F - N)
- Mains Frequency (Hz)

Additional Alarms

- Under / over mains volts
- Under / over mains frequency
- Can data fail
- Can ECU fail

2 - Auto Start Control System P 2010

- Control with DSE model 5010 module
- Emergency stop push button

Additional Features

- Provides signal to load transfer
- Easy push button control. Stop / Reset - Auto - Manual - Test - Start.



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Standby Generator 400

230 / 400V - 50 Hz

Output Rating

Power Pf. 0.8

STANDBY 825kVA
660kW

Prime 750 kVA
600 kW

Diesel Engine

Engine Make Cummins
Model VTA 28 G6
Gross engine power output at rated rpm 722kWm
968hp
Aspiration and Cooling Turbo After Cooled
Cylinders Capacity 28Lt
Cylinders and Build 6 - in line
Engine Speed 1500 rpm
Bore and Stroke 140 x 152mm
Compression Ratio 13.1 : 1
Governor Electronic

Fuel Consumption	Load	1/2	3/4	Full
	L/hr	82	120	162

Fuel Tank Capacity 900 L
Oil Capacity 83 L
Water Capacity 176 L

Radiator Cooling Air 850 m³/min
Air Intake - Engine 55 mm³/min
Exhaust Gas Flow 132 m³/min
Exhaust Gas Temperature 489°C
Heat Radiated to Ambient 90kW
Engine Derating - Altitude 4% per 300m. Above 1000m
Engine Derating - Temperature 2% per 10°C Above 40°C
Alternator Voltage Regulation ± %1

OPEN TYPE

Dimensions (length x width x height) 4000 x 1410 x 2160
Dry weight 5890 KG

SOUND ATTENUATED TYPE

Dimensions (length x width x height) 5540 x 1660 x 2630mm
Dry weight 7480KG
Fuel Tank Capacity 1080Lt

UPSPEC OPTIONS

Diesel Engine

- Remote Radiator
- Engine oil heater

Accessories

- Bulk Fuel Tank
- 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