

Standby Generator 60kVA



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
- 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 60kVA

Diesel Generating Set STANDBY 60: 400 / 230 V - 50 Hz

Output Rating

Power Pf. 0.8

STANDBY 70kVA
56kW

Prime 63 kVA
50.4 kW

Diesel Engine

Engine Make Cummins
Model 4 BT 3.9-G4
Gross engine power output at rated rpm 64kWm
85hp
Aspiration and Cooling Turbo 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	8	11	15

Fuel Tank Capacity 160L
Oil Capacity 11L
Water Capacity 19.2L

Air Intake - Engine 4.3 m³/min
Exhaust Gas Flow 11 m³/min
Alternator Voltage Regulation ± %1.5

OPEN TYPE

Dimensions (length x width x height) 1860 x 920 x 1320
Dry weight 895 KG

SOUND ATTENUATED TYPE

Canopy Model ASM4
Dimensions (length x width x height) 2500 x 970 x 1570MM
Dry weight 1260KG

UPSPEC OPTIONS

- Electronic governor control system
- 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

GO CUSTOMISED

- Skid Mount Options
- External Switches
- Lifting Frames & Fabrication
- Self Contained Fuel Tanks
- Custom Paint

Standby Generator 90kVA



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 90kVA

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 m³/min
Exhaust Gas Flow 10 m³/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

Standby Generator 100kVA



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 fullload testing and checking and providing of all control and safety shut down functions testing.
- Full engineered with a wide range of options and accessories: Canopy, soundproof canopy and on road trailer

STANDARD GENSET SPECIFICATIONS ENGINE:

- CUMMINS heavy duty diesel engine
- Four stroke, water cooled, turbo charged
- Mechanical Governor Control System (Except AC 160 and AC 250)
- Direct injection fuel system
- Replaceable type cylinder liners
- 4 valves per cylinder
- 12 V D.C. 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 pump
- Industrial capacity exhaust silencer and steel bellows
- Jacket water heater (at automatic models)
- Operation manuals and circuit diagram documents

ALTERNATOR:

- Brushless, single bearing system, 4 poles
- Insulation class H
- Standard degree of protection IP21 or IP23
- Self-exciting and self-regulating
- Stator winding with 2/3 pitch
- 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

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

QUALITY STANDARDS:

- The equipment meets the following standards: ISO 3046, VDE 0530, BS 4999, BS 5000, EN 60034-I, 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 panels are mounted on the genset base frame. The control panel is equipped as follows:
- Common Instruments:
- 3 Ammeters
- 1 Hours run meter
- 1 Volt-Frequencymeter(by LED) and selector switch
- Engine oil pressure gauge
- Engine coolant temperature gauge
- Emergency stop push button

1) Auto start Control System-P 500

- Control with DSE 704 Module
- Static battery charger
- Thermally delayed overload protection
- Engine water heater control

a) DSE 704 Module Features

- Three phases mains sensing
- Engine protection
- Automatic engine starting and stopping
- Simple push button controlled operation Stop-Reset/Manual/Auto
- Micro processor based design
- Configurable via front panel
- Configurable timer settings
- Adjustable mains fail voltage level
- Mains/Generator, change- over contactor control
- External remote start input

b) Status and fault conditions Displayed by LED illumination:

- High engine temperature, shutdown
- Low oil pressure, shutdown
- Over speed, shutdown
- Charge alternator fault, warning
- Indications for mains/generator and their contactor status

2) Manual Start Control System-ME 40

Control with DSE 701 Module

a) DSE 701 Module Features

- Engine supervision and protection
- Key switch Off/Manual start positions
- Manual start pushbutton

b) Module Emergency LED's

- High engine temperature ,shutdown
- Low oil pressure, shutdown
- Over speed,shutdown
- Low coolant level,shutdown
- Charge failure warning

c) Metering

- 3 Ammeters
- Hours runmeter
- Volt/Frequency meter(by LED) and selector switch
- Engine oil pressure gauge
- Engine coolant temperature gauge
- Emergency stop pushbutton
- 2-1 Alternator Circuit Breaker (Manual Model)

Standby Generator 100kVA

400 / 230 V - 50 Hz

Output Rating

Power Pf. 0.8

STANDBY 110kVA
88kW

Prime 100 kVA
80 kW

Diesel Engine

Engine Make Cummins
Model 6 BT 5.9-G6
Gross engine power output at rated rpm 107kWm
143hp
Aspiration and Cooling Turbo Charged
Cylinders Capacity 5.88Lt
Cylinders and Build 6 - 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	12	17.8	24

Fuel Tank Capacity 220L
Oil Capacity 14L
Water Capacity 23L

Air Intake - Engine 5.1 m³/min
Exhaust Gas Flow 1019 m³/min
Alternator Voltage Regulation ± %1

OPEN TYPE

Dimensions (length x width x height) 2150 x 1000 x 1370
Dry weight 1140 KG

SOUND ATTENUATED TYPE

Canopy Model ASM5
Dimensions (length x width x height) 3100 x 1000 x 1670MM
Dry weight 1600KG

OPTIONAL EQUIPMENT

- * Electronic governor control system
- * Fuel - Water separator filter
- * Automatic fuel filling system
- * Engine oil heater
- * Manual sump oil drain pump
- * Residential silencer
- * Critical silencer
- * Enclosure, Sound proof canopy
- * 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
- * Trailer

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

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	<table border="1"> <tr> <td>Load</td> <td>1/2</td> <td>3/4</td> <td>Full</td> </tr> <tr> <td>L/hr</td> <td>25</td> <td>38</td> <td>51.8</td> </tr> </table>	Load	1/2	3/4	Full	L/hr	25	38	51.8
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 ³ /min								
Air Intake - Engine	15.3m ³ /min								
Exhaust Gas Flow	41 m ³ /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

Standby Generator 350kVA



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:

- Control Modules Common Features
- Automatic controls generating set, start and shutdown
- Front panel programming of the module settings
- Remote communication via RS232 port or RS 485 "modbus" output
- Scrolling digital LCD display
- Event logging of shutdown alarms
- Control Metering via LCD display
- Generator Volts(F-F/F-N)
- Generator Amperes(L1,L2,L3)
- Generator Frequency (Hz)
- Generator kVA
- Generator kW
- Generator Cosφ
- 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
- Low coolantlevel
- Fail to start
- Fail to stop
- Emergency stop
- Charge fail
- Low / High battery volts

1 Auto Mains Failure Control System P2020

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

Additional Features

- Monitoring AC mains supply
- Provides signal to change over switch gear
- Easy pushbutton 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
- Auto Start Control System P2010
- Control with DSE model 5010 module
- Emergency stop push button

Additional Features

- Provides signal to load transfer
- Easy pushbutton control
- Stop / Reset-Auto-Manual-Test-Start

Standby Generator 350kVA

400 / 230 V - 50 Hz

Output Rating	
Power	Pf. 0.8
STANDBY	350kVA 280kW
Prime	316 kVA 253 kW

Diesel Engine				
Engine Make	Cummins			
Model	NT 855 G6			
Gross engine power output at rated rpm	310kWm 415hp			
Aspiration and Cooling	Turbo Charged			
Cylinders Capacity	14Lt			
Cylinders and Build	6 - in line			
Engine Speed	1500 rpm			
Bore and Stroke	140 x 152mm			
Compression Ratio	14.0 : 1			
Governor	Electronic			
Fuel Consumption	Load	1/2	3/4	Full
	L/hr	36	52	69
Fuel Tank Capacity	420 L			
Oil Capacity	38 L			
Water Capacity	70 L			
Air Intake - Engine	21.6 mm ³ /min			
Exhaust Gas Flow	64.0 m ³ /min			
Alternator Voltage Regulation	± %1			

OPEN TYPE	
Dimensions (length x width x height)	3230 x 1100 x 2000
Dry weight	2910 KG

SOUND ATTENUATED TYPE	
Dimensions (length x width x height)	4400 x 1430 x 2270MM
Dry weight	3900KG

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

Standby Generator 400kVA



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

Standby Generator 400kVA

400 / 230 V - 50 Hz

Output Rating	
Power	Pf. 0.8
STANDBY	400kVA 320kW
Prime	356 kVA 284 kW

Diesel Engine									
Engine Make	Cummins								
Model	NTA 855G4								
Gross engine power output at rated rpm	351kWm 470hp								
Aspiration and Cooling	Turbo After Cooled								
Cylinders Capacity	14Lt								
Cylinders and Build	6 - in line								
Engine Speed	1500 rpm								
Bore and Stroke	140 x 152mm								
Compression Ratio	14.0 : 1								
Governor	Electronic								
Fuel Consumption	<table border="1"> <thead> <tr> <th>Load</th> <th>1/2</th> <th>3/4</th> <th>Full</th> </tr> </thead> <tbody> <tr> <td>L/hr</td> <td>39</td> <td>57</td> <td>76</td> </tr> </tbody> </table>	Load	1/2	3/4	Full	L/hr	39	57	76
Load	1/2	3/4	Full						
L/hr	39	57	76						
Fuel Tank Capacity	420 L								
Oil Capacity	38.6 L								
Water Capacity	70 L								
Radiator Cooling Air	498 m ³ /min								
Air Intake - Engine	24.5 mm ³ /min								
Exhaust Gas Flow	67.6 m ³ /min								
Exhaust Gas Temperature	524°C								
Heat Radiated to Ambient	65kW								
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)	3230 x 1100 x 2200
Dry weight	3250 KG

SOUND ATTENUATED TYPE	
Dimensions (length x width x height)	4550 x 1460 x 2270MM
Dry weight	4540KG
Fuel Tank Capacity	650Lt

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

Standby Generator 500kVA



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
- 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:

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.

Standby Generator 500kVA

230 / 400 V - 50 Hz

Output Rating	
Power	Pf. 0.8
STANDBY	
	550kVA 440kW
Prime	
	500 kVA 400 kW

Diesel Engine									
Engine Make	Cummins								
Model	KTA 19 G4								
Gross engine power output at rated rpm	504kWm 675hp								
Aspiration and Cooling	Turbo After Cooled								
Cylinders Capacity	18.9Lt								
Cylinders and Build	6 - in line								
Engine Speed	1500 rpm								
Bore and Stroke	159 x 159mm								
Compression Ratio	13.9 : 1								
Governor	Electronic								
Fuel Consumption	<table border="1"> <tr> <td>Load</td> <td>1/2</td> <td>3/4</td> <td>Full</td> </tr> <tr> <td>L/hr</td> <td>57</td> <td>82</td> <td>107</td> </tr> </table>	Load	1/2	3/4	Full	L/hr	57	82	107
Load	1/2	3/4	Full						
L/hr	57	82	107						
Fuel Tank Capacity	550 L								
Oil Capacity	50 L								
Water Capacity	92 L								
Radiator Cooling Air	780 m ³ /min								
Air Intake - Engine	32 mm ³ /min								
Exhaust Gas Flow	88 m ³ /min								
Exhaust Gas Temperature	538°C								
Heat Radiated to Ambient	64kW								
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)	3430 x 1300 x 2110
Dry weight	4100 KG

SOUND ATTENUATED TYPE	
Dimensions (length x width x height)	4900 x 1590 x 2520MM
Dry weight	5550KG
Fuel Tank Capacity	850Lt

UPSPEC OPTIONS

Diesel Engine

- 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

Standby Generator 600kVA



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:

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.

Standby Generator 600kVA

230 / 400V - 50 Hz

Output Rating	
Power	Pf. 0.8
STANDBY	650kVA 520kW
Prime	590 kVA 472 kW

Diesel Engine									
Engine Make	Cummins								
Model	KTA 19 G8								
Gross engine power output at rated rpm	575kWm 771hp								
Aspiration and Cooling	Turbo After Cooled								
Cylinders Capacity	18.9L								
Cylinders and Build	6 - in line								
Engine Speed	1500 rpm								
Bore and Stroke	159 x 159mm								
Compression Ratio	13.9 : 1								
Governor	Electronic								
Fuel Consumption	<table border="1"> <thead> <tr> <th>Load</th> <th>1/2</th> <th>3/4</th> <th>Full</th> </tr> </thead> <tbody> <tr> <td>L/hr</td> <td>60</td> <td>95</td> <td>120</td> </tr> </tbody> </table>	Load	1/2	3/4	Full	L/hr	60	95	120
Load	1/2	3/4	Full						
L/hr	60	95	120						
Fuel Tank Capacity	550 L								
Oil Capacity	50 L								
Water Capacity	135 L								
Radiator Cooling Air	780 m ³ /min								
Air Intake - Engine	40 mm ³ /min								
Exhaust Gas Flow	107 m ³ /min								
Exhaust Gas Temperature	549°C								
Heat Radiated to Ambient	70kW								
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)	3430 x 1300 x 2110
Dry weight	4280 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

Standby Generator 750kVA



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.

Standby Generator 750kVA

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	<table border="1"> <thead> <tr> <th>Load</th> <th>1/2</th> <th>3/4</th> <th>Full</th> </tr> </thead> <tbody> <tr> <td>L/hr</td> <td>82</td> <td>120</td> <td>162</td> </tr> </tbody> </table>	Load	1/2	3/4	Full	L/hr	82	120	162
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 m ³ /min								
Air Intake - Engine	55 mm ³ /min								
Exhaust Gas Flow	132 m ³ /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

Standby Generator 1000kVA



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

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 or IP23
- Self-exciting and self-regulating
- Stator winding with 2/3 pitch
- 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

- The generating set can be lifted or carefully pushed / pulled by the base frame
- Lifting eyes allow easy transportation

Canopy

- 30' Container
- Sandwich mineral wool attenuation
- Large lockable doors
- Acoustic baffles for the air inlet and outlet
- Steel internal floor
- Residential silencer
- White paint finishing (RAL 9010)
- 2000 litres fuel tank with retention bund

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 Modules Common Features

- 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
- Control Modules Common Features
- Generator Volts(F-F/F-N)
- Generator Amperes(L1,L2,L3)
- Generator Frequency (Hz)
- Generator kVA
- Generator kW
- Generator Cos j
- Engine Temperature
- 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
- Low coolant level
- Fail to start
- Fail to stop
- Emergency stop
- Charge fail
- Low / High battery volts

Auto Mains Failure Control System P2020

- Control with DSE model 5220
- 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

Auto Start Control System P2010

- Control with DSE model 5210 module
- Emergency stop push button

Additional Features

- Provides signal to load transfer
- Easy pushbutton control
- Stop / Reset-Auto-Manual-Test-Start

Standby Generator 1000kVA

230 / 400V - 50 Hz

Output Rating	
Power	Pf. 0.8
STANDBY	
	1130 kVA 904 kW
Prime	
	1030 kVA 824 kW

Diesel Engine									
Engine Make	Cummins								
Model	KTA 38 G5								
Gross engine power output at rated rpm	970kWm 1300hp								
Aspiration and Cooling	Turbo Charged After Cooled								
Cylinders Capacity	37.8L								
Cylinders and Build	12-60°V								
Engine Speed	1500 rpm								
Bore and Stroke	159 x 159mm								
Compression Ratio	13.1 : 1								
Governor	Electronic								
Fuel Consumption	<table border="1"> <thead> <tr> <th>Load</th> <th>1/2</th> <th>3/4</th> <th>Full</th> </tr> </thead> <tbody> <tr> <td>L/hr</td> <td>113</td> <td>161</td> <td>209</td> </tr> </tbody> </table>	Load	1/2	3/4	Full	L/hr	113	161	209
Load	1/2	3/4	Full						
L/hr	113	161	209						
Fuel Tank Capacity	1250 L								
Oil Capacity	135 L								
Water Capacity	280 L								
Air Intake - Engine	69 mm ³ /min								
Exhaust Gas Flow	183 m ³ /min								
Alternator Voltage Regulation	± %1								

OPEN TYPE	
Dimensions (length x width x height)	4320 x 1760 x 2350
Dry weight	7720 KG

SOUND ATTENUATED TYPE	
Dimensions (length x width x height)	9125 x 2438 x 2591mm
Dry weight	14700KG

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

Standby Generator 1500kVA



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

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 or IP23
- Self-exciting and self-regulating
- Stator winding with 2/3 pitch
- 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

- The generating set can be lifted or carefully pushed / pulled by the base frame
- Lifting eyes allow easy transportation

Canopy

- 30' Container
- Sandwich mineral wool attenuation
- Large lockable doors
- Acoustic baffles for the air inlet and outlet
- Steel internal floor
- Residential silencer
- White paint finishing (RAL 9010)
- 2000 litres fuel tank with retention bund

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 Modules Common Features

- 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
- Control Modules Common Features
- Generator Volts(F-F/F-N)
- Generator Amperes(L1,L2,L3)
- Generator Frequency (Hz)
- Generator kVA
- Generator kW
- Generator Cos j
- Engine Temperature
- 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
- Low coolant level
- Fail to start
- Fail to stop
- Emergency stop
- Charge fail
- Low / High battery volts

Auto Mains Failure Control System P2020

- Control with DSE model 5220
- 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

Auto Start Control System P2010

- Control with DSE model 5210 module
- Emergency stop push button

Additional Features

- Provides signal to load transfer
- Easy pushbutton control
- Stop / Reset-Auto-Manual-Test-Start

Standby Generator 1500kVA

230 / 400V - 50 Hz



Output Rating	
Power	Pf. 0.8
STANDBY	1675 kVA 1340 kW
Prime	1500 kVA 1200 kW

Diesel Engine									
Engine Make	Cummins								
Model	KTA 50 GS8								
Gross engine power output at rated rpm	1429kWm 1915hp								
Aspiration and Cooling	Turbo Charged After Cooled								
Cylinders Capacity	50.3Lt								
Cylinders and Build	16-60°V								
Engine Speed	1500 rpm								
Bore and Stroke	159 x 159mm								
Compression Ratio	14.9 : 1								
Governor	Electronic								
Fuel Consumption	<table border="1"> <thead> <tr> <th>Load</th> <th>1/2</th> <th>3/4</th> <th>Full</th> </tr> </thead> <tbody> <tr> <td>L/hr</td> <td>167</td> <td>238</td> <td>309</td> </tr> </tbody> </table>	Load	1/2	3/4	Full	L/hr	167	238	309
Load	1/2	3/4	Full						
L/hr	167	238	309						
Fuel Tank Capacity	2000 L								
Oil Capacity	204 L								
Water/coolant Capacity	345 L								
Air Intake - Engine	95 mm ³ /min								
Exhaust Gas Flow	242 m ³ /min								
Exhaust Gas Temp	499°C								
Engine Derating - Temp	12% per 10°C over 40°C								
Alternator Voltage Regulation	± %1								

SOUND ATTENUATED 40' CONTAINER	
Dimensions (length x width x height)	12192 x 2438 x 2591mm
Dry weight	18300 KG

SOUND ATTENUATED 30' CONTAINER	
Dimensions (length x width x height)	912 x 2438 x 2591mm
Dry weight	14300 KG
Based on 40' Container	

UPSPEC OPTIONS

Diesel Engine

- Remote Radiator
- Engine oil heater

Accessories

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GO CUSTOMISED

- Custom Paint