# aksa POWER GENERATION

## AC2250





2250kVA / 1800kW POWERED by CUMMINS

# DIESEL GENERATING SET 400/230 V - 50 Hz - 3 Phase

MODEL			AC2250
Power Pf. 0.8	Standby	kVA	2250
		kW	1800
	Prime	kVA	2000
		kW	1600

Standby: Continuous running at variable load for duration of an emergency. No overload is permitted on these ratings. In accordance with ISO 3046.

Prime: Continuous running at variable load for unlimited periods with 10% overload available for 1 hour in any 12 hour period. In accordance with ISO 8528,ISO 3046.

- $\checkmark$  High quality, reliable and complete power unit
- ✓ Compact design
- √ Easy start and maintenance possibility
- ✓ Every generating set is subject to a comprehensive test program which includes full load testing, checking and provision of all control and safety shut down functions testing
- √ Fully engineered with a wide range of options and accessories: Canopy, sound proof canopy and on-road trailer













# **ENGINE**

CUMMINS						
Model		QSK60G4				
Engine Power Output	kWm	1915				
at rated rpm	HP	2567				
Aspiration and Cooling		Turbocharged and Low Temperature Aftercooled (2 Pump / 2 Loop)				
Total Displacement	Litre	60.2				
No. of Cylinders and Build		16 V				
Engine Speed	rpm	1500				
Bore and Stroke	mmxmm	159x190				
Compression Ratio		14.5:1				
Governor		Electric				
Fuel Consumption at full load	L/hr	394				
Fuel Tank Capacity	Litre	OPEN: N/A / CANOPY: 2200				
Oil Capacity	Litre	280				
Coolant Capacity	Litre	482				
Radiator Cooling Air	m³/min	1991.4				
Air Intake – Engine	m³/min	144.3				
Exhaust Gas Flow	m³/min	336.6				

- √ Heavy duty Cummins diesel engine
- ✓ Four stroke, water cooled, turbocharged & aftercooled
- ✓ Direct injection fuel system
- ✓ Electronic Governor system
- ✓ 12/24 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 oil sump drain valve ✓ Industrial capacity exhaust silencer and steel bellows
- Jacket water heater(at automatic models)
- ✓ Operation manuals and circuit diagram documents

# **ALTERNATOR**

Design	Brushless single bearing, revolving field
Stator	2/3 pitch
Rotor	Single bearing, flexible disc
Insulation System	Class H
Standard Temperature Rise	125 - 163°C Continuous
Exciter Type	Self Excited
Phase Rotation	A (U), B (V), C (W)
Alternator Cooling	Direct drive centrifugal blower fan
AC Waveform Total Harmonic Distortion	No load < 1.5%. Non distorting balanced linear load < 5%
Telephone Influence Factor (TIF)	<50 per NEMA MG1-22.43
Telephone Harmonic Factor (THF)	<2%

- ✓ Brushless, single bearing system, flexible disc, 4 poles
- ✓ Insulation class H
- ✓ Standard degree of protection IP21 (\*IP22/IP23 is available.)
- ✓ Self-exciting and self-regulating

- ✓ Impregnation with tropicalised epoxy varnish
- ✓ Solid state Automatic Voltage Regulator
   ✓ Stator winding with 2/3 pitch for improved harmonics

## **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

Panel equipments:

- ✓ Control with AMF module
- √ Static battery charger
- ✓ Emergency stop push button

## a) Generating set control module DSE 7320 features:

- $\checkmark \text{The module is used to monitor a mains supply and starts and stops a standby generating set}$
- √ Micro-processor based design
- ✓ Automatic control of mains and generator contactors
- √ Monitors engine performance and AC power output
- ✓ LED alarm indication
- ✓ Front panel configuration of timers and alarm trip points
- ✓Easy push button control

STOP/RESET - MANUAL -TEST- AUTO - MUTE ALARM - START

## b) Metering via LED display:

- ✓ Generator Volts (L-L / L-N)
- ✓ Engine oil pressure (PSI-Bar)
- ✓ Generator Ampere (L1,L2,L3)
- ✓ Engine temperature (° C&° F)
- ✓ Generator Frequency (Hz)
- ✓ Plant battery volts
- ✓ Engine hours run
- ✓ Mains Volts (Ph-Ph/Ph-N)
- ✓ Generator kVA, kWh
- ✓ Generator kW as % of rated kW setting
- ✓ Generator Cos (σ)

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DSE 7320

#### c) Alarms:

- ✓ Over and Under Speed
- ✓ Low and High Battery Volt.
- √ Start and Stop Failure
- √ Charge fail
- ✓ Over Current
- ✓ Under / Over Generator Voltage
- √ Low Oil Pressure
- √ Emergency stop
- √ High engine temperature
- √ kW overload
- ✓ Unbalanced load
- ✓ Independent earth fault trip

### d) LED indications

Four configurable LED's like:

- √ Mains available
- √ Generator available
- ✓ Mains on load
- √ Generator on load

## 2. Power Outlet Terminal Board Mounted on the Genset Base Frame

# **OPTIONAL EQUIPMENTS**

## **Diesel Engine**

✓ Oil heater

#### **Alternator**

- √ 3/4 Pole Output Circuit Breaker
- ✓ Anti-condensation Heater

## **Panel**

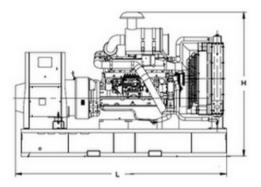
- ✓ Charge ammeter
- ✓ Transfer Switch 3 Pole
- ✓ Transfer Switch 4 Pole
- ✓ Earth Fault ,single set

#### **Accessories**

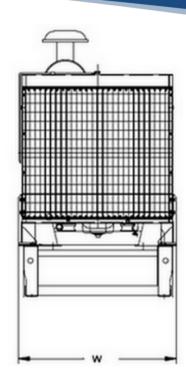
- ✓ Bulk fuel tank
- ✓ Automatic filling system
- ✓ Fuel-water separator filter
- ✓ Low fuel level alarm
- ✓ Residential silencer
- ✓ Enclosure or sound proof canopy
- ✓ Trailer
- √ Manual oil drain pump
- √ Tool kit for maintenance

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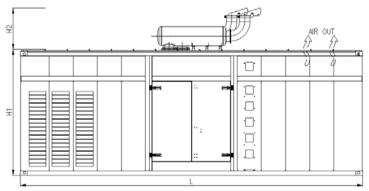
- ✓ The complete gen-set is mounted as whole on a heavy-duty fabricated, steel base frame
- ✓ Anti-vibration pads are fixed between the engine/ alternator feet and the base frame
- ✓ Base frame design incorporates an integral fuel tank (Up to 750 kVA)
- ✓ The generating set can be lifted or carefully pushed / pulled by the base frame
- ✓ Dial type fuel gauge and drain plug on the fuel tank
- ✓ Forklift pockets within base frame (up to 500kVA)

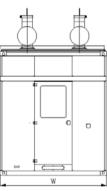


# **DIMENSIONS**

OPEN TYPE							
DIMENSIONS (LxWxH)	mm	5960x2250x2541					
DRY WEIGHT	kg	14200					
SOUND ATTENUATED TYPE							
DIMENSIONS (LxWxH)	mm	9000x2800x4394					
DRY WEIGHT	kg	18000					

# **CANOPY**





- All canopy parts are designed with modular principles
- ✓ Without welding assembly
- ✓ Doors on each side
- 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 the canopy
- ✓ Easy lifting and moving
- ✓ Easy maintenance and operation