aksa POWER GENERATIO

APD125C-6





125 kVA / 100 kW POWERED by CUMMINS

DIESEL GENERATING SET 480/277V, 440/254V, 380/220V, 220/127V- 60 Hz-3 Phase

MODEL			APD125C-6
Power Pf. 0.8	Standby	kVA	125
		kW	100
	Prime	kVA	110
		kW	88

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.

- √ 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











Manufacturer reserves the right to make changes in model, technical specifications, color, equipment and accessories without prior notice.

ENGINE

CUMMINS						
Model		6BT5.9G2				
Engine Power Output	kWm	127				
at rated rpm	HP	170				
Aspiration and Cooling		Turbocharged				
Total Displacement	Litre	5.9				
No. of Cylinders and Build		6- Inline				
Engine Speed	rpm	1800				
Bore and Stroke	mmxmm	102x120				
Compression Ratio		17.3:1				
Governor		Electronic				
Fuel Consumption at full load	L/hr	29.7				
Fuel Tank Capacity	Litre	Open: 195/Canopy: 195				
Oil Capacity	Litre	16.4				
Coolant Capacity	Litre	25				
Radiator Cooling Air	m³/min	136				
Air Intake – Engine	m³/min	8.22				
Exhaust Gas Flow	m³/min	23.7				

- √ Heavy duty Cummins diesel engine
- ✓ Four stroke, water cooled, turbocharged
- ✓ 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:

Generator kVA

Generator kW

Generator Cos (σ)

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 6020 features:

- √ The module is used to monitor main supply and starts and stops of a standby generating set
- ✓ Micro-processor based design
- ✓ Automatic control of main and generator contactors
- Monitors engine performance and AC power output LED alarm indication
- Front panel configuration of timers and alarm trip points
- ✓ CAN and magnetic pick-up versions(specify on ordering)
- √ 4 digital inputs/3 analogue inputs
- ✓ 6 outputs(4 configurable on Magnetic Pick-up, 6 configurable on CANbus version)
- ✓ Easy push button control

STOP/RESET - MANUAL - AUTO - TEST - 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)

Over Current Under / Over Generator Voltage

Low Oil Pressure

Charge fail

c) Alarms:

- ✓ Emergency stop
- ✓ High engine temperature

Over and Under Speed

Start and Stop Failure

Low and High Battery Volt.

d) LED indications

- √ Mains available
- Generator available
- Mains on load

2. Power Outlet Terminal Board Mounted on the Gen-set Base Frame

✓ Generator on load

DSE 6020

OPTIONAL EQUIPMENTS

Diesel Engine

√Oil heater

Alternator

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

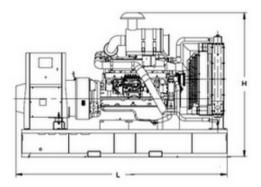
Panel

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

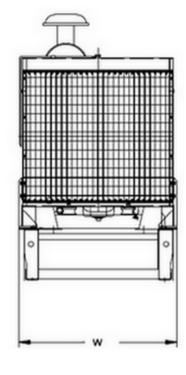
Accessories

- ✓ 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

CHASSIS



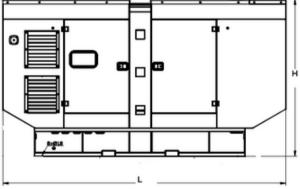
- √ The complete gen-set is mounted as whole on a heavy-duty fabricated, steel base frame
- ✓ Anti-vibration pads are fixed between the engine/ alternator feet and the base frame
- ✓ Base frame design incorporates an integral fuel tank (Up to 750 kVA)
- ✓ The generating set can be lifted or carefully 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)



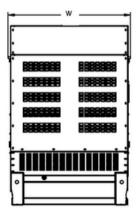
DIMENSIONS

OPEN TYPE							
DIMENSIONS (LxWxH)	mm	2150*1000*1469					
DRY WEIGHT	kg	1280					
SOUND ATTENUATED TYPE							
DIMENSIONS (LxWxH)	mm	3116*1063*1715					
DRY WEIGHT	kg	1700					

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