



GENERATION

9.6 kVA / 9.6 kW POWERED by AKSA

# DIESEL GENERATING SET 220/110V-1Ph- 60 Hz

	MODEL		APD13MA-6
Power Pf. 1.0	Standby	kVA	9.6
		kW	9.6
	Prime	kVA	9
		kW	9

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





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

# ENGINE

AKSA				
Model		A3CRX15		
Engine Power Output	kWm	12.3		
at rated rpm	HP	16.5		
Aspiration and Cooling		Natural		
Total Displacement	Litre	1.532		
No. of Cylinders and Build		3 - Inline		
Engine Speed	rpm	1800		
Bore and Stroke	mmxmm	85x90		
Compression Ratio		18:1		
Governor		Mechanical		
Fuel Consumption at full load	L/hr	4.22		
Fuel Tank Capacity	Litre	Open: 32 /Canopy: 32		
Oil Capacity	Litre	5		
Coolant Capacity	Litre	9.1		
Radiator Cooling Air	m³/min	84.05		
Air Intake – Engine	m³/min	1.67		
Exhaust Gas Flow	m³/min	2.6		

✓ Heavy duty Aksa diesel engine

✓ Four stroke, water cooled

✓ Direct injection fuel system

- ✓ Mechanical Governor system
- ✓ 12V D.C. starter and charge alternator
- ✓ Replaceable fuel filter, oil filter and dry element air filter
- Cooling radiator and fan  $\checkmark$

Starter battery (with lead acid) including Rack and Cables  $\checkmark$ 

- Flexible fuel connection hoses and manual oil sump drain valve Industrial capacity exhaust silencer and steel bellows  $\checkmark$
- $\checkmark$
- Jacket water heater(at automatic models)  $\checkmark$
- ✓ 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	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 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 ( $\sigma$ )

### 1. Auto Mains Failure Control Panel

- Panel equipments:
- ✓ Control with AMF module
- ✓ Static battery charger
- ✓ Emergency stop push button

### a) Generating set control module DSE6120 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
- ✓ 4 configurable analogue/digital inputs, 8 configurable digital inputs
- ✓ 6 configurable DC outputs
- ✓ Easy push button control

STOP/RESET - MANUAL - AUTO - TEST - START

### b) Metering via LCD display:

- Generator Volts (L-L / L-N)
- √ Engine oil pressure (PSI-Bar)
- ✓ Generator Ampere (L1,L2,L3) ✓ Engine temperature (° C&° F)
- 1
- Generator Frequency (Hz) 1
- Plant battery volts Engine hours run
- ~
- Mains Volts (Ph-Ph/Ph-N)



**DSE 6120** 

#### c) Alarms:

- Over and Under Speed
- 1 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

#### d) LED indications

- ✓ Mains available
- Generator available
- 1 Mains on load
- ✓ Generator on load

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

## **OPTIONAL EQUIPMENTS**

### **Diesel Engine**

✓Oil heater

#### Alternator

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

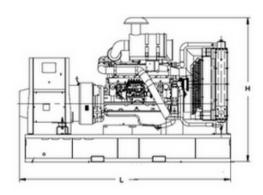
### Panel

- ✓ 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**

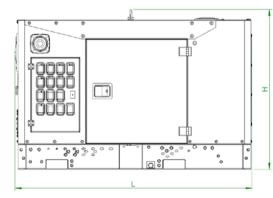


- $\checkmark$  The complete gen-set is mounted as whole on a heavy-duty fabricated, steel base frame
- $\checkmark$  Anti-vibration pads are fixed between the engine/ alternator feet and the base frame
- ✓ Base frame design incorporates an integral fuel tank (Up to 1000 kVA)
- ✓ The generating set can 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)

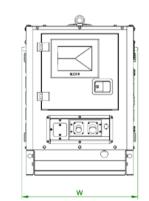
# DIMENSIONS

OPEN TYPE						
DIMENSIONS (LxWxH)	mm	1400x760x864				
DRY WEIGHT	kg	370				
SOUN	D ATTENU	ATED TYPE				
SOUN DIMENSIONS (LxWxH)	D ATTENU	ATED TYPE 1522×823×1127				

# 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

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