## aksa POWER GENERATION

## APD15MA-6





12.3 kVA / 12.3 kW POWERED by AKSA

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

MODEL			APD15MA-6
Power Pf. 1.0	Standby	kVA	12.3
		kW	12.3
	Prime	kVA	11
		kW	11

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













## **ENGINE**

AKSA						
Model		A4CRX19				
Engine Power Output	kWm	15.6				
at rated rpm	HP	20.9				
Aspiration and Cooling		Natural				
Total Displacement	Litre	1.809				
No. of Cylinders and Build		4 - Inline				
Engine Speed	rpm	1800				
Bore and Stroke	mmxmm	80x90				
Compression Ratio		18:1				
Governor		Mechanical				
Fuel Consumption at full load	L/hr	4.51				
Fuel Tank Capacity	Litre	Open: 32 /Canopy: 32				
Oil Capacity	Litre	6				
Coolant Capacity	Litre	16.3				
Radiator Cooling Air	m³/min	135.5				
Air Intake – Engine	m³/min	2				
Exhaust Gas Flow	m³/min	3.14				

- √ Heavy duty Aksa diesel engine
- √ Four stroke, water cooled
- ✓ Direct injection fuel system
- ✓ Mechanical 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	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

## aksa POWER GENERATIO

## **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 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)
- ✓ Generator Frequency (Hz)
- ✓ Plant battery volts
- ✓ Engine hours run
- ✓ Mains Volts (Ph-Ph/Ph-N)
- Generator kVA Generator kW
- Generator Cos (σ)



DSE 6120

#### 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

#### d) LED indications

- √ Mains available
- ✓ Generator available
- ✓ 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**

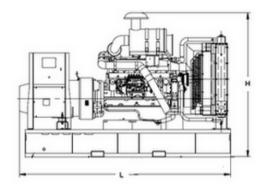
- ✓ Charge ammeter
- ✓ Transfer Switch 3Pole
- ✓ Transfer Switch 4 Pole
- ✓ Earth Fault ,single set

#### **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

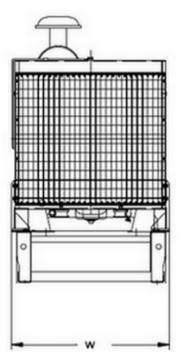
## aksa POWER GENERATIO

## **CHASSIS**



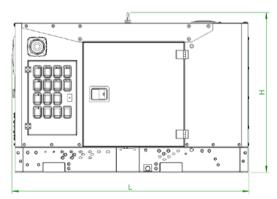
- ✓ The complete gen-set is mounted as whole on a heavy-duty fabricated, steel base frame
- ✓ Anti-vibration pads are fixed between the engine/ alternator feet and the base frame
- ✓ Base frame design incorporates an integral fuel tank (Up to 1000 kVA)
- ✓ The generating set can be lifted or carefully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





OPEN TYPE							
DIMENSIONS (LxWxH)	mm	1400x760x912					
DRY WEIGHT	kg	385					
SOUND ATTENUATED TYPE							
DIMENSIONS (LxWxH)	mm	1672x823x1127					
DRY WEIGHT	kg	515					

## **CANOPY**



W W

- 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