

1000 kVA / 800 kW POWERED by MITSUBISHI









DIESEL GENERATING SET 400/230 V - 50 Hz

MODEL			APD1000M
Power Pf. 0.8	Standby	kVA	1000
		kW	800
	Prime	kVA	910
		kW	728

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 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: Canopy, sound proof canopy and on road trailer













ENGINE



MITSUBISHI						
Model		S12H-PTA				
Engine Power Output	kWm	980				
at rated rpm	HP	1314				
Aspiration and Cooling	1	Turbocharged&Aftercooled				
Total Displacement	Litre	37.11				
No. of Cylinders and Build		12 V				
Engine Speed	rpm	1500				
Bore and Stroke	mmxmm	150x175				
Compression Ratio		14:1				
Governor		Electronic				
Fuel Consumption at full load	L/hr	189				
Fuel Tank Capacity	Litre	N/A				
Oil Capacity	Litre	200				
Coolant Capacity	Litre	244				
Radiator Cooling Air	m³/min	1800				
Air Intake – Engine	m³/min	83				
Exhaust Gas Flow	m³/min	220				

- ✓ Heavy duty Mitsubishi diesel engine
- ✓ Four stroke, water cooled, Turbocharged and 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
AC Waveform Total Harmonic Distortion	inear 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 availab.) ✓ Stator winding with 2/3 pitch for improved harmonics
- Self-exciting and self-regulating

- ✓ Impregnation with tropicalised epoxy varnish
- ✓ Solid state Automatic Voltage Regulator



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:

- ✓ 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 conguration 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)

OPTIONAL EQUIPMENTS

Diesel Engine

✓ Oil heater

Altemator

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

Panel

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



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

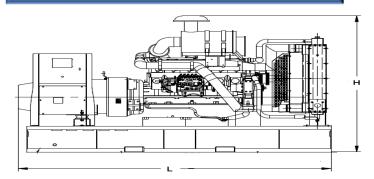
Four configurable LED's like:

- ✓ Mains available
- ✓ Generator available
- ✓ Mains on load
- ✓ Generator on load
- 2. Power Outlet Terminal Board Mounted on the Genset Base frame

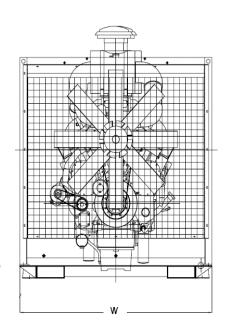
Accessories

- ✓ 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



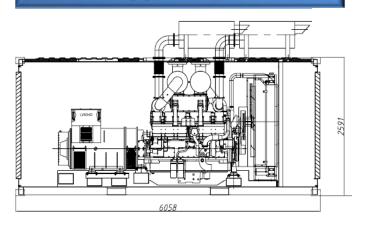
- $\checkmark\,$ The complete gen-set is mounted as whole on a heavy-duty fabricated, steel base frame
- ✓ Antivibration pads are fixed between the engine/ alternator feet and the base frame
- ✓ Base frame design incorporates an integral fuel tank (Up to 750 kVA)
- √ The generating set can be lifted 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	4380x1800x2355				
DRY WEIGHT	kg	8050				
SOUND ATTENUATED TYPE						
DIMENSIONS (LxWxH)	mm	20ft ISO Container				
DRY WEIGHT	kg	16300				

CONTAINER



2438

- ✓ 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

Aksa Power Generation

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