# APD825M





Sa POWER GENERATION

825 kVA / 660 kW POWERED by MITSUBISHI

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

MODEL			APD825M
Power Pf. 0.8	Standby	kVA	825
		kW	660
	Prime	kVA	750
		kW	600

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

MITSUBISHI					
Model		S6R2-PTAA			
Engine Power Output	kWm	730			
at rated rpm	HP	978			
Aspiration and Cooling		Turbocharged & Intercooled			
Total Displacement	Litre	29.96			
No. of Cylinders and Build		6 – Inline			
Engine Speed	Rpm	1500			
Bore and Stroke	mmxmm	170x220			
Compression Ratio		14:1			
Governor		Electronic			
Fuel Consumption at full load	L/hr	156.7			
Fuel Tank Capacity	Litre	1300			
Oil Capacity	Litre	100			
Coolant Capacity	Litre	132			
Radiator Cooling Air	m³/min	726			
Air Intake – Engine	m³/min	67			
Exhaust Gas Flow	m³/min	178			

✓ Heavy duty Mitsubishi diesel engine

✓ Four stroke, water cooled, turbocharged & intercooled

✓ 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 avail.)

✓ 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:

- 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
- $\checkmark\,$  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 voltsEngine hours run
- ✓ Mains Volts (Ph-Ph/Ph-N)
- ✓ Generator kVA, kWh
- ✓ Generator kW as % of rated kW setting
- ✓ Generator Cos ( $\sigma$ )

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### c) Alarms:

- ✓ Over and Under Speed
- ✓ Low and High Battery Volt.
- ✓ Start and Stop Failure
- ✓ Charge fail
- ✓ Over Current
- ✓ Under / Over Generator Voltage

DSE 7320

- ✓ 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

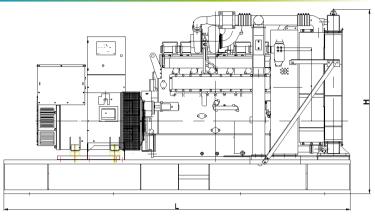
#### Alternator

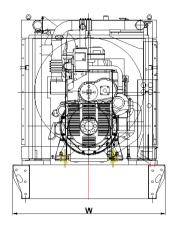
- ✓ 3/4 Pole Output Circuit Breaker
- ✓ Anti-condensation Heater
- Panel
- ✓ Charge ammeter
- ✓ Transfer Switch 3 Pole
- ✓ Transfer Switch 4 Pole
- ✓ Earth Fault ,single set

#### 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

# **CHASSIS**





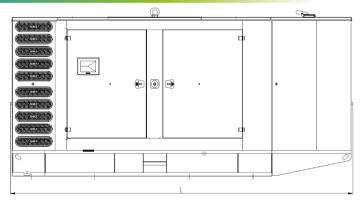
 $\checkmark\,$  The complete gen-set is mounted as whole on a heavy-duty fabricated, steel base frame

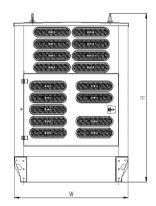
- ✓ Anti-vibration pads are fixed between the engine/ alternator feet and the base frame ✓ Base frame design incorporates an integral fuel tank (Up to 1000 kVA)
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- ✓ The generating set can be lifted or carefully pushed / pulled by the base frame
- ✓ 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	4100x1800x2181					
DRY WEIGHT	kg	5740					
SOUND ATTENUATED TYPE							
DIMENSIONS (LxWxH)	mm	5410x1864x2654					
DRY WEIGHT	kg	6900					

## CANOPY





- All canopy parts are designed with modular principles
- Without welding assembly
- ✓ Doors on each side
- $\checkmark\,$  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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