

APD88PEM-III A



**POWER
YOUR
FUTURE**

**88kVA / 70.4 kW
POWERED by PERKINS**

DIESEL GENERATING SET 400/230 V - 50 Hz

MODEL			APD88P EM-III A
Power Pf. 0.8	Standby	kVA	88
		kW	70.4
	Prime	kVA	80
		kW	64

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

PERKINS

PERKINS		
Model		1104D-E44TAG1
Engine Power Output at rated rpm	kWm	80.7
	HP	108.2
Aspiration and Cooling		Turbocharged
Total Displacement	Litre	4.4
No. of Cylinders and Build		4 - Inline
Engine Speed	rpm	1500
Bore and Stroke	mmxmm	105x127
Compression Ratio		17.25:1
Governor		Mechanical
Fuel Consumption at full load	L/hr	18.7
Fuel Tank Capacity	Litre	Open: 154/Canopy: 154
Oil Capacity	Litre	8
Coolant Capacity	Litre	13
Radiator Cooling Air	m ³ /min	89
Air Intake – Engine	m ³ /min	5.14
Exhaust Gas Flow	m ³ /min	13.3

- Heavy duty Perkins diesel engine
- Four stroke, water cooled, turbocharged
- 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 (Stamford-UCI224G)

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:

1. Auto Mains Failure Control Panel

Panel equipments:

- Control with AMF module
- Static battery charger
- Emergency stop push button



DSE 6120

a) Generating set control module DSE 6120 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) Generator kVA
- Engine oil pressure (PSI-Bar) Generator kW
- ✓ Generator Ampere (L1,L2,L3) Generator Cos (ϕ)
- ✓ Engine temperature ($^{\circ}$ C & $^{\circ}$ F)
- Generator Frequency (Hz)
- Plant battery volts
- Engine hours run
- Mains Volts (Ph-Ph/Ph-N)

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

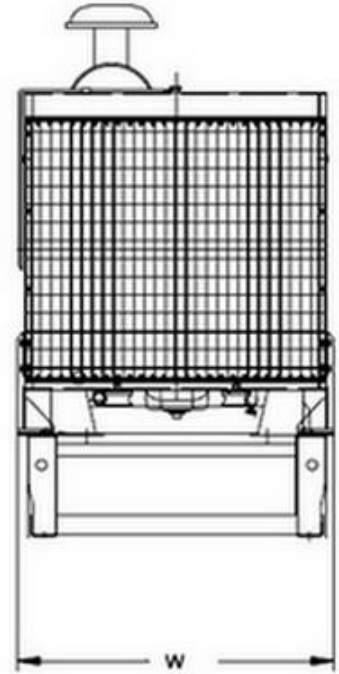
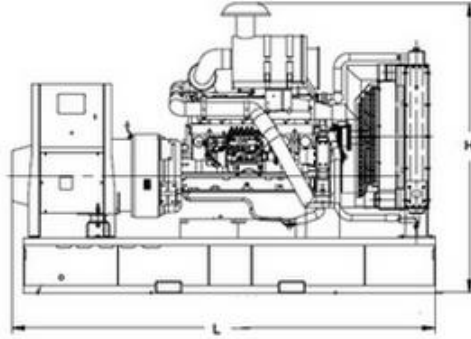
Panel

- Charge ammeter
- Transfer Switch 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



- ✓ 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

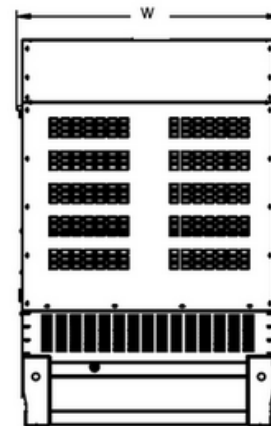
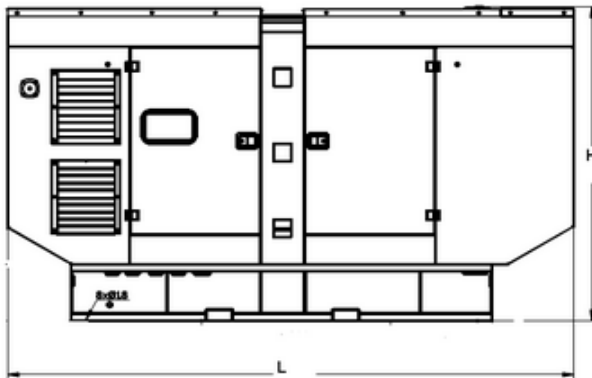
OPEN TYPE

DIMENSIONS (LxWxH)	mm	1860*900*1285
DRY WEIGHT	kg	1015

SOUND ATTENUATED TYPE

DIMENSIONS (LxWxH)	mm	2494*963*1542
DRY WEIGHT	kg	1335

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