

## APD-EPAP150

POWER  
YOUR  
FUTURE150 – 135 kW  
POWERED by PERKINS

## DIESEL GENERATING SET 480/277 V, 208/120V - 60 Hz

MODEL			APD-EPAP150
Power Pf. 0.8	Standby	kVA	187.5
		kW	150
	Prime	kVA	168.75
		kW	135

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 and testing of the control and safety shut down functions
- Full engineered with a wide range of options and accessories: Sound Attenuated Enclosure and DOT trailer

## ENGINE

- Heavy duty Perkins diesel engine
- Four stroke, water cooled, turbocharged
- Direct injection fuel system
- ECM governor system
- 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
- Operation manuals and wiring diagram documents

## ALTERNATOR

- 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
- Impregnated with tropicalised epoxy varnish
- Solid state Automatic Voltage Regulator
- Stator winding with 2/3 pitch for improved harmonics



## ENGINE



## PERKINS

Model		1106D-E66TAG3
EPA Certification		TIER 3
Engine Power Output at rated rpm	BHP	213.7
	kWm	159.4
	HP	216.9
Aspiration and Cooling		Turbo charged and air cooled
Total Displacement	Cu.in.	402.7
	Litre	6.6
No. of Cylinders and Build		6-Inline
Engine Speed	rpm	1800
Bore and Stroke	inches	4.13x5
	mmxmm	105x127
Compression Ratio		16.2:1
Governor		ECM
Starter Motor Voltage		12V
Fuel Consumption @ 100 % load	gal/hr	10.59
Fuel Consumption @ 75% load		8.34
Fuel Consumption @ 50% load		6.18
Fuel Tank Capacity	gal. Litre	
Oil Capacity	gal.	4.35
	Litre	16.5
Coolant Capacity	gal.	5.54
	Litre	21
Radiator Cooling Air	cfm	11081.7
	m <sup>3</sup> /min	313.8
Air Intake – Engine	cfm	437.9
	m <sup>3</sup> /min	12.4
Exhaust Gas Flow	cfm	1041.7
	m <sup>3</sup> /min	29.5
Standard operating temp degree of radiator	° C	40
Sound Level @1 meter / @ 7 meter	dB	88/78

## ALTERNATOR

Model	Marathon-GM-8.6-4
Size(mm)	365x292x375
Design	Brushless single bearing, revolving field
Stator	2/3 pitch
Rotor	Single bearing, flexible disc
Insulation System	Class H
Standard Temperature Rise	125 °C Prime / 150 °C Stand by
Exciter Type	Self Excited(PMG excitation is optional)
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%

## CONTROL SYSTEM

### Auto Mains Failure Control Panel

Standard Equipment in Control Panel:

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



DSE 7320

### Control module DSE 7320 features:

- ✓ The module is compatible with any two-wire start ATS
- ✓ NFPA110 compliant
- ✓ Micro-processor based design
- ✓ Automatic control of mains and generator contactors
- ✓ 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

### 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)

### 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

### LED Indications:

Four configurable LED's like:

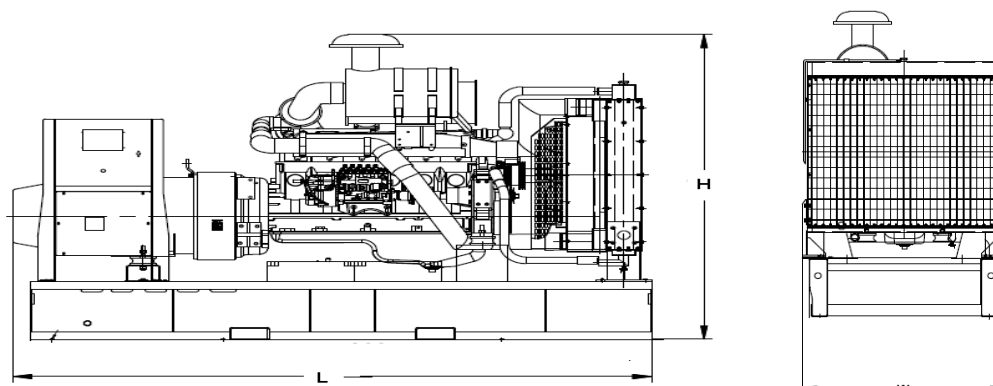
- ✓ Mains available
- ✓ Generator available
- ✓ Mains on load
- ✓ Generator on load

## OPTIONAL EQUIPMENT

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>✓ Oil Heater</li> <li>✓ Alternator Strip Heater</li> <li>✓ Battery Heater Blankets</li> <li>✓ Fuel Water Separator</li> <li>✓ Sound Attenuated Enclosure</li> <li>✓ Remote Annunciators</li> </ul> | <ul style="list-style-type: none"> <li>✓ Automatic &amp; Manual Transfer Switches</li> <li>✓ Sub-base UL142 Double Wall Fuel Tanks</li> <li>✓ DOT Approved Trailers</li> <li>✓ Permanent Magnet Excitation (PMG)</li> <li>✓ NFPA 110 compliant Battery Chargers 5amp &amp; 10 amp</li> </ul> |
|---|--|



## BASEFRAME



- ✓ The complete gen-set is mounted entirely on a heavy-duty fabricated, steel base frame
- ✓ Anti-vibration pads are fixed between the engine/ alternator supports and the base frame
- ✓ Base frame design incorporates an integral fuel tank (up to 178kW)
- ✓ Dial type fuel gauge and drain plug on the fuel tank
- ✓ Forklift pockets within base frame (up to 178kW)

## DIMENSIONS

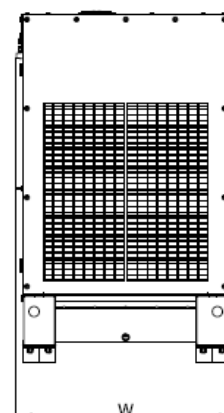
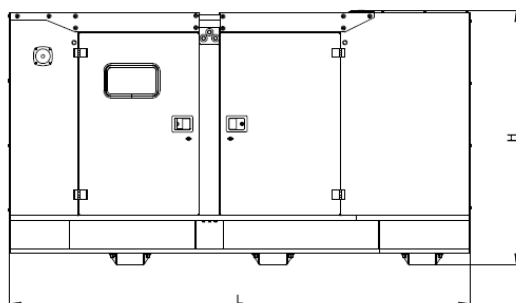
### OPEN TYPE

DIMENSIONS (LxWxH)	inches	<u>90.35x43.31x62.5</u>
	mm	2295x1100x1588
DRY WEIGHT	Lb.	3924
	Kg	1780

### SOUND ATTENUATED TYPE

DIMENSIONS (LxWxH)	inches	<u>128x45.79x70</u>
	mm	3250x1163x1778
DRY WEIGHT	Lb.	4870
	Kg	2209

## SOUND ATTENUATED ENCLOSURE



- ✓ All enclosure parts are designed with modular principles without welding
- ✓ Extra large doors on each side for serviceability
- ✓ All metal canopy parts are painted by electrostatic polyester powder paint
- ✓ Exhaust silencer is protected against environmental influences and is internally mounted with the enclosure
- ✓ Thermally insulated engine exhaust system
- ✓ Emergency stop push button is externally mounted
- ✓ Enclosure designed for easy lifting and moving
- ✓ Easy maintenance and operation

### AKSA USA

371 Exchange Street West Monroe, LA 71292

Tel: 318.855.8377 Fax: 318.855.8381

E-mail: [sales@aksausa.com](mailto:sales@aksausa.com)

[www.aksausa.com](http://www.aksausa.com)

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