





**Perkins** 





# DIESEL GENERATING SET 400/230 V - 50 Hz

MODEL			APD880P
Power Pf. 0.8	Standby	kVA	880
		kW	704
	Prime	kVA	800
		kW	640

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
- ✓ Fully engineered with a wide range of options and accessories: Canopy, sound proof canopy and on road trailer













# **ENGINE**

# **Perkins**

PERKINS						
Model	4006-23TAG3a					
Engine Power Output	kWm	760				
at rated rpm	HP	1019.16				
Aspiration and Cooling	1	Turbocharged&Intercooled				
Total Displacement	Litre	22.921				
No. of Cylinders and Build		6- Inline				
Engine Speed	rpm	1500				
Bore and Stroke	mmxmm	160x190				
Compression Ratio		13.6:1				
Governor	1	Electronic				
Fuel Consumption at full load	L/hr	175				
Fuel Tank Capacity	Litre	1000				
Oil Capacity	Litre	113.4				
Coolant Capacity	Litre	105				
Radiator Cooling Air	m³/min	1200				
Air Intake – Engine	m³/min	69				
Exhaust Gas Flow m³/m		193				

- ✓ Heavy duty Perkins 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
AC Waveloriii Total Harrionic Distortion	inear load < 5%
Telephone Influence Factor (TIF)	<50 per NEMA MG1-22.43
Telephone Harmonic Factor (THF)	<b> &lt;2%</b>

- 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

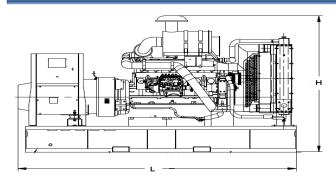
Four configurable LED's like:

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

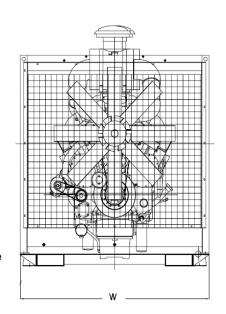
### **Accessories**

- ✓ 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)	l mm	4000x1800x2300				
DRY WEIGHT	kg	4750				
SOUND ATTENUATED TYPE						
DIMENSIONS (LxWxH)	mm	6058x2438x2591				
DRY WEIGHT	kg	9750				

# CANOPY

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- ✓ 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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