# APD2500P

### **B**Perkins

Sa POWER GENERATION





2500kVA /2000kW POWERED by PERKINS

# DIESEL GENERATING SET 400/230 V - 50 Hz

MODEL			APD2500P
Power Pf. 0.8	Standby	kVA	2500
		kW	2000
	Prime	kVA	2250
		kW	1800

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.

- $\checkmark$  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					
Model		4016-61TRG3			
Engine Power Output	kWm	2183			
at rated rpm	HP	2926			
Aspiration and Cooling		Turbocharged, air to water charge cooled			
Total Displacement	Litre	61.123			
No. of Cylinders and Build		16; Vee 60°			
Engine Speed	rpm	1500			
Bore and Stroke	mmxmm	160×190			
Compression Ratio		13:1			
Governor		Electronic			
Fuel Consumption at full load	L/hr	470			
Fuel Tank Capacity	Litre	open: N/A / canopy:2200			
Oil Capacity	Litre	213			
Coolant Capacity	Litre	440			
Radiator Cooling Air	m³/min	3320			
Air Intake – Engine	m³/min	175			
Exhaust Gas Flow	m³/min	525			

✓ Heavy duty Perkins diesel engine

✓ Four stroke, water cooled, turbocharged

✓ 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 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

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

### 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



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

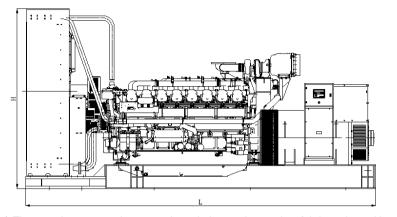
### d) LED indications

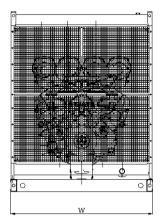
Four configurable LED's like:

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

#### **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





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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  $\checkmark$ 

- $\checkmark$
- $\checkmark$
- 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  $\checkmark$
- ✓ Forklift pockets within base frame (up to 500kVA)

All canopy parts are designed with modular principles

All metal canopy parts are painted by electrostatic

Without welding assembly

polyester powder paint

Doors on each side

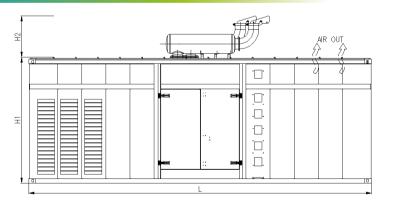
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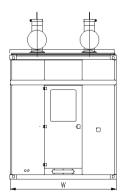
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# DIMENSIONS

OPEN TYPE						
DIMENSIONS (LxWxH)	mm	6238×2590×2859				
DRY WEIGHT	kg	13900				
DIMENSIONS (LxWxH)	mm	9000x2800x4452				
DRY WEIGHT	kg	17000				

## CANOPY





- 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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