



**APD50P**

**POWER YOUR  
FUTURE!**



**DIESEL GENERATING SET 400/230 V - 50 Hz**

MODEL		APD50P	
Power Pf. 0.8	Standby	kVA	50
		kW	40
	Prime	kVA	45
		kW	36

**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**

<b>Model</b>		<b>1103A-33TG1</b>
<b>Engine Power Output at rated rpm</b>	<b>kWm</b>	<b>45.6</b>
	<b>HP</b>	<b>61.1496</b>
<b>Aspiration and Cooling</b>		<b>Turbocharged</b>
<b>Total Displacement</b>	<b>Litre</b>	<b>3.3</b>
<b>No. of Cylinders and Build</b>		<b>3 - Inline</b>
<b>Engine Speed</b>	<b>rpm</b>	<b>1500</b>
<b>Bore and Stroke</b>	<b>mmxmm</b>	<b>105x127</b>
<b>Compression Ratio</b>		<b>17.25:1</b>
<b>Governor</b>		<b>Mechanical</b>
<b>Fuel Consumption at full load</b>	<b>L/hr</b>	<b>10.7</b>
<b>Fuel Tank Capacity</b>	<b>Litre</b>	<b>82</b>
<b>Oil Capacity</b>	<b>Litre</b>	<b>8.3</b>
<b>Coolant Capacity</b>	<b>Litre</b>	<b>10.2</b>
<b>Radiator Cooling Air</b>	<b>m<sup>3</sup>/min</b>	<b>53</b>
<b>Air Intake – Engine</b>	<b>m<sup>3</sup>/min</b>	<b>2.9</b>
<b>Exhaust Gas Flow</b>	<b>m<sup>3</sup>/min</b>	<b>7</b>

- ✓ 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**

<b>Design</b>	<b>Brushless single bearing, revolving field</b>
<b>Stator</b>	<b>2/3 pitch</b>
<b>Rotor</b>	<b>Single bearing, flexible disc</b>
<b>Insulation System</b>	<b>Class H</b>
<b>Standard Temperature Rise</b>	<b>125 - 163°C Continuous</b>
<b>Exciter Type</b>	<b>Self Excited</b>
<b>Phase Rotation</b>	<b>A (U), B (V), C (W)</b>
<b>Alternator Cooling</b>	<b>Direct drive centrifugal blower fan</b>
<b>AC Waveform Total Harmonic Distortion</b>	<b>No load &lt; 1.5%. Non distorting balanced inear load &lt; 5%</b>
<b>Telephone Influence Factor (TIF)</b>	<b>&lt;50 per NEMA MG1-22.43</b>
<b>Telephone Harmonic Factor (THF)</b>	<b>&lt;2%</b>

- ✓ Brushless, single bearing system, flexible disc, 4 poles
- ✓ Insulation class H
- ✓ Standard degree of protection IP21 (\*IP22/IP23 is availab.)
- ✓ 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:



DSE 6020

### 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 6020 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 ( $\sigma$ )
- ✓ 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 Genset Base frame

## OPTIONAL EQUIPMENTS

#### Diesel Engine

- ✓ Oil heater

#### Alternator

- ✓ 3/4 Pole Output Circuit Breaker
- ✓ Anti-condensation Heater

#### Panel

- ✓ Charge ammeter
- ✓ Transfer Switch 3Pole
- ✓ Transfer Switch 4 Pole
- ✓ Earth Fault ,single set

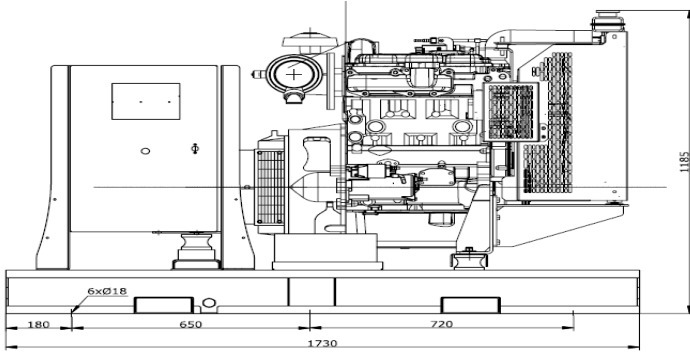
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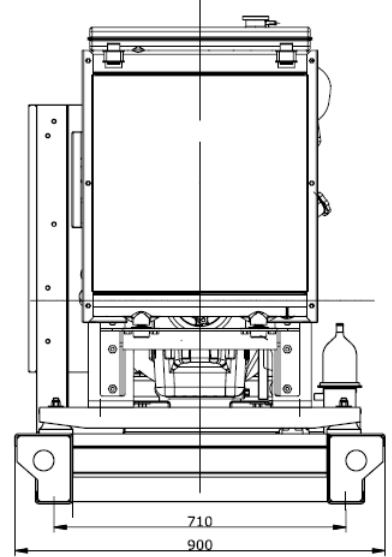
#### Accessories

- ✓ 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
- ✓ 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

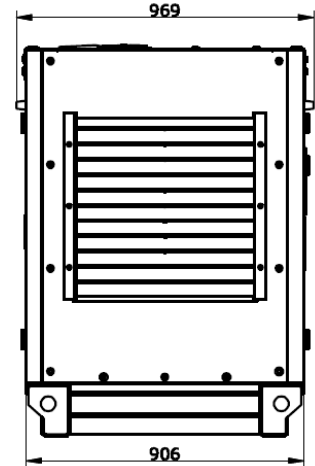
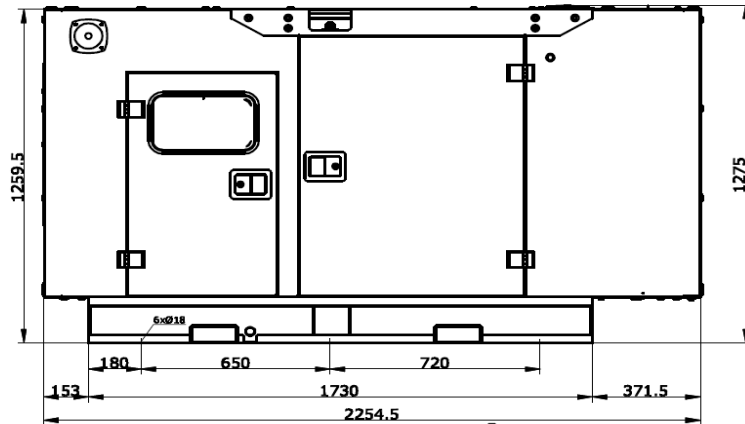
## OPEN TYPE

DIMENSIONS (LxWxH)	mm	1730x900x1185
DRY WEIGHT	kg	800

## SOUND ATTENUATED TYPE

DIMENSIONS (LxWxH)	mm	2255x969x1275
DRY WEIGHT	kg	1000

# 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

## Aksa Power Generation

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