APD1100P

POWER YOUR FUTURE

1100kVA /880kW
POWERED by PERKINS

DIESEL GENERATING SET  400/230 V - 50 Hz

<table>
<thead>
<tr>
<th>MODEL</th>
<th>APD1100P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>kVA</td>
</tr>
<tr>
<td>Standby</td>
<td>1100</td>
</tr>
<tr>
<td>Prime</td>
<td>1000</td>
</tr>
</tbody>
</table>

Manufacturer reserves the right to make changes in model, technical specifications, color, equipment and accessories without prior notice.

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
## ENGINE

<table>
<thead>
<tr>
<th>Model</th>
<th>PERKINS 4008-TAG2A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine Power Output at rated rpm</td>
<td>kW/m 985, HP 1320</td>
</tr>
<tr>
<td>Aspiration and Cooling</td>
<td>Turbocharged</td>
</tr>
<tr>
<td>Total Displacement</td>
<td>Litre 30,561</td>
</tr>
<tr>
<td>No. of Cylinders and Build</td>
<td>8, in-line</td>
</tr>
<tr>
<td>Engine Speed</td>
<td>rpm 1500</td>
</tr>
<tr>
<td>Bore and Stroke</td>
<td>mm×mm 160×190</td>
</tr>
<tr>
<td>Compression Ratio</td>
<td>13.6:1</td>
</tr>
<tr>
<td>Governor</td>
<td>Electronic</td>
</tr>
<tr>
<td>Fuel Consumption at full load</td>
<td>L/hr 215</td>
</tr>
<tr>
<td>Fuel Tank Capacity</td>
<td>Litre open: N/A / canopy:1500</td>
</tr>
<tr>
<td>Oil Capacity</td>
<td>Litre 153</td>
</tr>
<tr>
<td>Coolant Capacity</td>
<td>Litre 183</td>
</tr>
<tr>
<td>Radiator Cooling Air</td>
<td>m³/min 1560</td>
</tr>
<tr>
<td>Air Intake – Engine</td>
<td>m³/min 80.5</td>
</tr>
<tr>
<td>Exhaust Gas Flow</td>
<td>m³/min 200</td>
</tr>
</tbody>
</table>

- 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

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

- 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 tropicalized 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

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

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

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

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

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

<table>
<thead>
<tr>
<th>OPEN TYPE</th>
<th>DRY WEIGHT</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIMENSIONS (LxWxH)</td>
<td>mm</td>
<td>4866 × 2060 × 2468</td>
</tr>
<tr>
<td>DRY WEIGHT</td>
<td>kg</td>
<td>8250</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SOUND ATTENUATED TYPE</th>
<th>DRY WEIGHT</th>
<th>kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIMENSIONS (LxWxH)</td>
<td>mm</td>
<td>7500<em>2300</em>2620</td>
</tr>
<tr>
<td>DRY WEIGHT</td>
<td>kg</td>
<td>10500</td>
</tr>
</tbody>
</table>

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