APD660P

![Diesel Generating Set 400/230 V - 50 Hz](image)

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

<table>
<thead>
<tr>
<th>MODEL</th>
<th>kVA</th>
<th>kW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standby</td>
<td>660</td>
<td>528</td>
</tr>
<tr>
<td>Prime</td>
<td>600</td>
<td>480</td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th><strong>PERKINS</strong></th>
<th>2806A-E18TAG1A</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model</strong></td>
<td>2806A-E18TAG1A</td>
</tr>
<tr>
<td><strong>Engine Power Output at rated rpm</strong></td>
<td>kWhm 592.7</td>
</tr>
<tr>
<td></td>
<td>HP 795</td>
</tr>
<tr>
<td><strong>Aspiration and Cooling</strong></td>
<td>turbocharged, air-to-air charge cooling</td>
</tr>
<tr>
<td><strong>Total Displacement</strong></td>
<td>Litre 18.13</td>
</tr>
<tr>
<td><strong>No. of Cylinders and Build</strong></td>
<td>6: vertical in-line</td>
</tr>
<tr>
<td><strong>Engine Speed</strong></td>
<td>rpm 1500</td>
</tr>
<tr>
<td><strong>Bore and Stroke</strong></td>
<td>mm x mm 145 x 183</td>
</tr>
<tr>
<td><strong>Compression Ratio</strong></td>
<td>14.5:1</td>
</tr>
<tr>
<td><strong>Governor</strong></td>
<td>Electronic</td>
</tr>
<tr>
<td><strong>Fuel Consumption at full load</strong></td>
<td>L/hr 129</td>
</tr>
<tr>
<td><strong>Fuel Tank Capacity</strong></td>
<td>Litre 1150</td>
</tr>
<tr>
<td><strong>Oil Capacity</strong></td>
<td>Litre 62</td>
</tr>
<tr>
<td><strong>Coolant Capacity</strong></td>
<td>Litre 61</td>
</tr>
<tr>
<td><strong>Radiator Cooling Air</strong></td>
<td>m³/min 702</td>
</tr>
<tr>
<td><strong>Air Intake – Engine</strong></td>
<td>m³/min 36</td>
</tr>
<tr>
<td><strong>Exhaust Gas Flow</strong></td>
<td>m³/min 104</td>
</tr>
</tbody>
</table>

- Heavy duty Perkins diesel engine
- Four stroke, water cooled, turbocharged and air charge cooled
- 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><strong>Design</strong></th>
<th>Brushless single bearing, revolving field</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stator</strong></td>
<td>2/3 pitch</td>
</tr>
<tr>
<td><strong>Rotor</strong></td>
<td>Single bearing, flexible disc</td>
</tr>
<tr>
<td><strong>Insulation System</strong></td>
<td>Class H</td>
</tr>
<tr>
<td><strong>Standard Temperature Rise</strong></td>
<td>105 - 130°C Continuous</td>
</tr>
<tr>
<td><strong>Exciter Type</strong></td>
<td>Self Excited</td>
</tr>
<tr>
<td><strong>Phase Rotation</strong></td>
<td>A (U), B (V), C (W)</td>
</tr>
<tr>
<td><strong>Alternator Cooling</strong></td>
<td>Direct drive centrifugal blower fan</td>
</tr>
<tr>
<td><strong>AC Waveform Total Harmonic Distortion</strong></td>
<td>No load &lt; 1.5%. Non distorting balanced linear load &lt; 5%</td>
</tr>
<tr>
<td><strong>Telephone Influence Factor (TIF)</strong></td>
<td>&lt;50 per NEMA MG1-22.43</td>
</tr>
<tr>
<td><strong>Telephone Harmonic Factor (THF)</strong></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 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 (σ)

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

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

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
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 500 kVA).

**DIMENSIONS**

<table>
<thead>
<tr>
<th>Type</th>
<th>Dimensions (LxWxH)</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OPEN TYPE</strong></td>
<td>3450<em>1800</em>2178</td>
<td>4410</td>
</tr>
<tr>
<td><strong>SOUND ATTENUATED TYPE</strong></td>
<td>5409<em>1856</em>2654</td>
<td>5590</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.