AVP275

275kVA / 220kW
POWERED by VOLVO

DIESEL GENERATING SET  400/230 V - 50 Hz - 3 Phase

<table>
<thead>
<tr>
<th>MODEL</th>
<th>kVA</th>
<th>kW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standby</td>
<td>275</td>
<td>220</td>
</tr>
<tr>
<td>Prime</td>
<td>250</td>
<td>200</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 off-road trailer

Manufacturer reserves the right to make changes in model, technical specifications, color, equipment and accessories without prior notice. Pictures for reference only.
**ENGINE**

**VOLVO PENTA**

<table>
<thead>
<tr>
<th>Model</th>
<th>TAD734GE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine Power Output at rated rpm</td>
<td>kWm 250</td>
</tr>
<tr>
<td></td>
<td>HP 340</td>
</tr>
<tr>
<td>Aspiration and Cooling</td>
<td>Turbocharged</td>
</tr>
<tr>
<td>Total Displacement</td>
<td>Litre 7.15</td>
</tr>
<tr>
<td>No. of Cylinders and Build</td>
<td>6 Cylinder, In-Line</td>
</tr>
<tr>
<td>Engine Speed</td>
<td>rpm 1500</td>
</tr>
<tr>
<td>Bore and Stroke</td>
<td>mm x mm 108 x 130</td>
</tr>
<tr>
<td>Compression Ratio</td>
<td>17.1</td>
</tr>
<tr>
<td>Governor</td>
<td>EMS II</td>
</tr>
<tr>
<td>Fuel Consumption at 100% load</td>
<td>L/hr 54</td>
</tr>
<tr>
<td>Fuel Consumption at 75% load</td>
<td>L/hr 43.1</td>
</tr>
<tr>
<td>Fuel Consumption at 50% load</td>
<td>L/hr 30.8</td>
</tr>
<tr>
<td>Fuel Tank Capacity</td>
<td>Litre Open:460/Canopy:460</td>
</tr>
<tr>
<td>Oil Capacity</td>
<td>Litre 29</td>
</tr>
<tr>
<td>Coolant Capacity</td>
<td>Litre 32</td>
</tr>
<tr>
<td>Radiator Cooling Air</td>
<td>m³/min 238.5</td>
</tr>
<tr>
<td>Air Intake – Engine</td>
<td>m³/min 16.3</td>
</tr>
<tr>
<td>Exhaust Gas Flow</td>
<td>m³/min 33.4</td>
</tr>
</tbody>
</table>

- Heavy duty Volvo Penta, diesel engine
- Four stroke, water cooled, turbocharged
- Direct injection fuel system
- Electronic Governor system (Engine Management System)
- 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
- 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>2/3 pitch</td>
</tr>
<tr>
<td>Rotor</td>
<td>Single bearing, flexible disc</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 IP23
- Self-exciting and self-regulating
- All wound components are impregnated with materials and processes designed specifically
- 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 (I1,I2,I3)
      ✓ 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

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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

DIMENSIONS

<table>
<thead>
<tr>
<th>OPEN TYPE</th>
<th>CANOPY TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIMENSIONS (LxWxH)</td>
<td>mm 2750 x 1300 x 1707</td>
</tr>
<tr>
<td>DRY WEIGHT</td>
<td>kg 2020</td>
</tr>
<tr>
<td>DIMENSIONS (LxWxH)</td>
<td>mm 3963x1356x2094</td>
</tr>
<tr>
<td>DRY WEIGHT</td>
<td>kg 2710</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