AP250

POWER BY PERKINS

DIESEL GENERATING SET  400/230 V - 50 Hz

<table>
<thead>
<tr>
<th>MODEL</th>
<th>Standby</th>
<th>Prime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Pf. 0.8</td>
<td>kVA</td>
<td>250</td>
</tr>
<tr>
<td></td>
<td>kW</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>kVA</td>
<td>230</td>
</tr>
<tr>
<td></td>
<td>kW</td>
<td>184</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.

www.aksapowergen.com
### ENGINE

<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>

- Heavy duty Perkins diesel engine
- Four stroke, water cooled, turbocharged & intercooled
- 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

### PERKINS

<table>
<thead>
<tr>
<th>Model</th>
<th>1506A-E88TAG2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine Power Output at rated rpm</td>
<td>kW/m 236</td>
</tr>
<tr>
<td></td>
<td>HP 316</td>
</tr>
<tr>
<td>Aspiration and Cooling</td>
<td>Air to air after cooled, turbocharged</td>
</tr>
<tr>
<td>Total Displacement</td>
<td>Liter 8.8</td>
</tr>
<tr>
<td>No. of Cylinders and Build</td>
<td>6 : In-line</td>
</tr>
<tr>
<td>Engine Speed</td>
<td>rpm 1500</td>
</tr>
<tr>
<td>Bore and Stroke</td>
<td>mm x mm 112 x 149</td>
</tr>
<tr>
<td>Compression Ratio</td>
<td>16.1:1</td>
</tr>
<tr>
<td>Governor</td>
<td>Electronic</td>
</tr>
<tr>
<td>Fuel Consumption at full load</td>
<td>L/hr 48.6</td>
</tr>
<tr>
<td>Fuel Tank Capacity</td>
<td>Litre 470</td>
</tr>
<tr>
<td>Oil Capacity</td>
<td>Litre 41</td>
</tr>
<tr>
<td>Coolant Capacity</td>
<td>Litre 29.6</td>
</tr>
<tr>
<td>Radiator Cooling Air</td>
<td>m³/min 370</td>
</tr>
<tr>
<td>Air Intake – Engine</td>
<td>m³/min 15</td>
</tr>
<tr>
<td>Exhaust Gas Flow</td>
<td>m³/min 35.7</td>
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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 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 kW
     - Engine oil pressure (PSI-Bar) Generator kW
     - Generator Ampere (L1,L2,L3) Generator Cos (\(\sigma\))
     - Engine temperature (°C & °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 Gen-set Base Frame**

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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
**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>CHASSIS TYPE</th>
<th>DIMENSIONS (LxWxH) (mm)</th>
<th>DRY WEIGHT (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OPEN TYPE</strong></td>
<td>2750<em>1300</em>1700</td>
<td>2130</td>
</tr>
<tr>
<td><strong>SOUND ATTENUATED TYPE</strong></td>
<td>3960<em>1360</em>2100</td>
<td>2860</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