AP938-6

POWER YOUR FUTURE

938KVA / 750.4KW
POWERED by PERKINS

DIESEL GENERATING SET 480/277 V, 440/254V, 380/220V, 220/127V - 60 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>kW</td>
</tr>
<tr>
<td>Standby</td>
<td>938</td>
<td>750.4</td>
</tr>
<tr>
<td>Prime</td>
<td>843.75</td>
<td>675.0</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.

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## ENGINE

<table>
<thead>
<tr>
<th>PERKINS</th>
<th>4006-23TAG3A</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model</strong></td>
<td>PERKINS</td>
</tr>
<tr>
<td><strong>Engine Power Output at rated rpm</strong></td>
<td>kW</td>
</tr>
<tr>
<td></td>
<td>HP</td>
</tr>
<tr>
<td><strong>Aspiration and Cooling</strong></td>
<td>Turbocharged</td>
</tr>
<tr>
<td><strong>Total Displacement</strong></td>
<td>Litre</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</td>
</tr>
<tr>
<td><strong>Bore and Stroke</strong></td>
<td>mm×mm</td>
</tr>
<tr>
<td><strong>Compression Ratio</strong></td>
<td>13.6:1</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</td>
</tr>
<tr>
<td><strong>Fuel Tank Capacity</strong></td>
<td>Litre</td>
</tr>
<tr>
<td><strong>Oil Capacity</strong></td>
<td>Litre</td>
</tr>
<tr>
<td><strong>Coolant Capacity</strong></td>
<td>Litre</td>
</tr>
<tr>
<td><strong>Radiator Cooling Air</strong></td>
<td>m³/min</td>
</tr>
<tr>
<td><strong>Air Intake – Engine</strong></td>
<td>m³/min</td>
</tr>
<tr>
<td><strong>Exhaust Gas Flow</strong></td>
<td>m³/min</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><strong>Design</strong></th>
<th>Brushless single bearing, revolving field</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stator</strong></td>
<td>Single bearing, flexible disc</td>
</tr>
<tr>
<td><strong>Rotor</strong></td>
<td>Class H</td>
</tr>
<tr>
<td><strong>Insulation System</strong></td>
<td>2/3 pitch</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

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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 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

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 500 kVA).

DIMENSIONS

<table>
<thead>
<tr>
<th>OPEN TYPE</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>DIMENSIONS (LxWxH)</td>
<td>mm</td>
<td>3900<em>1690</em>2270</td>
</tr>
<tr>
<td>DRY WEIGHT</td>
<td>kg</td>
<td>6250</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SOUND ATTENUATED TYPE</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>DIMENSIONS (LxWxH)</td>
<td>mm</td>
<td>5920<em>2200</em>(2350+1000)</td>
</tr>
<tr>
<td>DRY WEIGHT</td>
<td>kg</td>
<td>7650</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.