**AP50**

**POWER YOUR FUTURE**

50kVA / 40 kW
POWERED by PERKINS

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

<table>
<thead>
<tr>
<th>MODEL</th>
<th>AP50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standby</td>
<td>kVA</td>
</tr>
<tr>
<td></td>
<td>kW</td>
</tr>
<tr>
<td>Prime</td>
<td>kVA</td>
</tr>
<tr>
<td></td>
<td>kW</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>Model</th>
<th>PERKINS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine Power Output</td>
<td>kWm 46.5</td>
</tr>
<tr>
<td>at rated rpm</td>
<td>HP 62</td>
</tr>
<tr>
<td>Aspiration and Cooling</td>
<td>Turbocharged</td>
</tr>
<tr>
<td>Total Displacement</td>
<td>Litre 3.3</td>
</tr>
<tr>
<td>No. of Cylinders and Build</td>
<td>3; Vertical in-line</td>
</tr>
<tr>
<td>Engine Speed</td>
<td>rpm 1500</td>
</tr>
<tr>
<td>Bore and Stroke</td>
<td>mm×mm 105×127</td>
</tr>
<tr>
<td>Compression Ratio</td>
<td>17.25 : 1</td>
</tr>
<tr>
<td>Governor</td>
<td>Mechanical</td>
</tr>
<tr>
<td>Fuel Consumption at full load</td>
<td>L/hr 10.8</td>
</tr>
<tr>
<td>Fuel Tank Capacity</td>
<td>Litre 80</td>
</tr>
<tr>
<td>Oil Capacity</td>
<td>Litre 8.3</td>
</tr>
<tr>
<td>Coolant Capacity</td>
<td>Litre 10.2</td>
</tr>
<tr>
<td>Radiator Cooling Air</td>
<td>m³/min 53</td>
</tr>
<tr>
<td>Air Intake – Engine</td>
<td>m³/min 3.1</td>
</tr>
<tr>
<td>Exhaust Gas Flow</td>
<td>m³/min 7.7</td>
</tr>
</tbody>
</table>

Heavy duty Perkins diesel engine
Four stroke, water cooled, turbocharged
Direct injection fuel system
Mechanical Governor system
12/24 V D.C. starter and charge alternator
Replaceable fuel filter, oil filter and dry element air filter

ALTERNATOR

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

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 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)
      - 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)
   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

OPTIONAL EQUIPMENTS

**Diesel Engine**
- Oil heater

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

**Panel**
- Charge ammeter
- Transfer Switch 3Pole
- 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

**OPEN TYPE**

<table>
<thead>
<tr>
<th>DIMENSIONS (LxWxH)</th>
<th>mm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1780<em>950</em>1210</td>
</tr>
<tr>
<td>DRY WEIGHT</td>
<td>kg</td>
</tr>
<tr>
<td></td>
<td>800</td>
</tr>
</tbody>
</table>

**SOUND ATTENUATED TYPE**

<table>
<thead>
<tr>
<th>DIMENSIONS (LxWxH)</th>
<th>mm</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>2470<em>1010</em>1460</td>
</tr>
<tr>
<td>DRY WEIGHT</td>
<td>kg</td>
</tr>
<tr>
<td></td>
<td>1030</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