APD-EPAP56S

Power Pf. 0.8

Standby

kVA 56
kW 44.8

Prime

kVA 51
kW 40.8

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 and checking and providing of all control and safety shut down functions testing
- Full engineered with a wide range of options and accessories: Canopy, sound proof canopy and on road trailer

ENGINE

- Heavy duty Perkins diesel engine
- Four stroke, water cooled, turbocharged
- Direct injection fuel system
- Electronic governor system
- 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

- Brushless, single bearing system, flexible disc, 4 poles
- Insulation class H
- Standard degree of protection IP21 (IP22/IP23 is avail.)
- Self-exciting and self-regulating
- Impregnation with tropicalised epoxy varnish
- Solid state Automatic Voltage Regulator
- Stator winding with 2/3 pitch for improved harmonics

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

### PERKINS

<table>
<thead>
<tr>
<th>Model</th>
<th>1104D-44TG1</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPA Certification</td>
<td>TIER 3</td>
</tr>
<tr>
<td>Engine Power Output at rated rpm</td>
<td>BHP 84.48 kWm 63</td>
</tr>
<tr>
<td></td>
<td>HP 85.7</td>
</tr>
<tr>
<td>Aspiration and Cooling</td>
<td>Turbo charged</td>
</tr>
<tr>
<td>Total Displacement</td>
<td>Cu.in. 268.5 L 4.4</td>
</tr>
<tr>
<td>No. of Cylinders and Build</td>
<td>4-Inline</td>
</tr>
<tr>
<td>Engine Speed</td>
<td>rpm 1800</td>
</tr>
<tr>
<td>Bore and Stroke</td>
<td>inches 4.13 x mm 105</td>
</tr>
<tr>
<td>Compression Ratio</td>
<td>18.2:1</td>
</tr>
<tr>
<td>Governor</td>
<td>Electronic</td>
</tr>
<tr>
<td>Starter Motor Voltage</td>
<td>12 V</td>
</tr>
<tr>
<td>Fuel Consumption @ 100 % load</td>
<td>gal/hr 4.382</td>
</tr>
<tr>
<td>Fuel Consumption @ 75% load</td>
<td>3.379</td>
</tr>
<tr>
<td>Fuel Consumption @ 50% load</td>
<td>2.376</td>
</tr>
<tr>
<td>Fuel Consumption @ 25% load</td>
<td>1.373</td>
</tr>
<tr>
<td>Fuel Tank Capacity</td>
<td>gal L N/A</td>
</tr>
<tr>
<td>Oil Capacity</td>
<td>gal L 2.21 8.4</td>
</tr>
<tr>
<td>Coolant Capacity</td>
<td>gal L 4.35 16.5</td>
</tr>
<tr>
<td>Radiator Cooling Air</td>
<td>cfm 3467.9 m³/min 98.2</td>
</tr>
<tr>
<td>Air Intake – Engine</td>
<td>cfm 183.6 m³/min 5.2</td>
</tr>
<tr>
<td>Exhaust Gas Flow</td>
<td>cfm 452.02 m³/min 12.8</td>
</tr>
<tr>
<td>Standard operating temp degree of radiator</td>
<td>°C 40</td>
</tr>
<tr>
<td>Sound Level @1 meter / @ 7 meter</td>
<td>dB TBD</td>
</tr>
</tbody>
</table>

## ALTERNATOR

<table>
<thead>
<tr>
<th>Model</th>
<th>Marathon-GM-8.6-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size(mm)</td>
<td>365x292x375</td>
</tr>
<tr>
<td>Design</td>
<td>Brushless single bearing, revolving field</td>
</tr>
<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 °C Prime / 150 °C Stand by</td>
</tr>
<tr>
<td>Exciter Type</td>
<td>Self Excited(PMG excitation is optional)</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>
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 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 3 Pole
✓ Transfer Switch 4 Pole
✓ Earth Fault ,single set

Accessories
✓ Bulk fuel tank
✓ Automatic filling system
✓ Low fuel level alarm
✓ Residential silencer
✓ Enclosure or sound proof canopy
✓ Trailer
✓ Manual oil drain pump
✓ Tool kit for maintenance
✓ Fuel-water separator
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) NON -UL
- 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>OPEN TYPE</th>
<th>SOUND ATTENUATED TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIMENSIONS (LxWxH)</td>
<td>inches</td>
</tr>
<tr>
<td></td>
<td>mm</td>
</tr>
<tr>
<td>DRY WEIGHT</td>
<td>Lb.</td>
</tr>
<tr>
<td></td>
<td>Kg</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

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