### AD440-6

**Power Pf. 0.8**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>AD440-6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standby</td>
<td>440 kVA</td>
</tr>
<tr>
<td>Prime</td>
<td>400 kVA</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.

[AKSA Power Generation](www.aksapowergen.com)
## ENGINE

<table>
<thead>
<tr>
<th>Model</th>
<th>P158LE-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine Power Output at rated rpm</td>
<td>kWm</td>
</tr>
<tr>
<td></td>
<td>HP</td>
</tr>
<tr>
<td>Aspiration and Cooling</td>
<td></td>
</tr>
<tr>
<td>Total Displacement</td>
<td>Litr</td>
</tr>
<tr>
<td>No. of Cylinders and Build</td>
<td></td>
</tr>
<tr>
<td>Engine Speed</td>
<td>rpm</td>
</tr>
<tr>
<td>Bore and Stroke</td>
<td>mmxmm</td>
</tr>
<tr>
<td>Governor</td>
<td></td>
</tr>
<tr>
<td>Fuel Consumption at full load</td>
<td>L/hr</td>
</tr>
<tr>
<td>Fuel Tank Capacity</td>
<td>Litr</td>
</tr>
<tr>
<td>Oil Capacity</td>
<td>Litr</td>
</tr>
<tr>
<td>Coolant Capacity</td>
<td>Litr</td>
</tr>
<tr>
<td>Radiator Cooling Air</td>
<td>m³/min</td>
</tr>
<tr>
<td>Air Intake – Engine</td>
<td>m³/min</td>
</tr>
<tr>
<td>Exhaust Gas Flow</td>
<td>m³/min</td>
</tr>
</tbody>
</table>

- Heavy duty DOOSAN diesel engine
- Four stroke, water cooled, Natural
- 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>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 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 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 Genset 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

<table>
<thead>
<tr>
<th>OPEN TYPE</th>
<th>SOUND ATTENUATED TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIMENSIONS (LxWxH)</td>
<td>3030<em>1550</em>1990</td>
</tr>
<tr>
<td>DRY WEIGHT</td>
<td>3030</td>
</tr>
<tr>
<td>DIMENSIONS (LxWxH)</td>
<td>4460<em>1610</em>2480</td>
</tr>
<tr>
<td>DRY WEIGHT</td>
<td>4025</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