APD20A

Power Pf. 0.8

Standby

kVA 20
kW 16

Prime

kVA 18
kW 14.4

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>Model</th>
<th>AKSA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine Power Output</td>
<td>A4CRX24</td>
</tr>
<tr>
<td>at rated rpm</td>
<td>kWm: 21</td>
</tr>
<tr>
<td></td>
<td>HP: 28</td>
</tr>
<tr>
<td>Aspiration and Cooling</td>
<td>Natural</td>
</tr>
<tr>
<td>Total Displacement</td>
<td>Litre: 2.545</td>
</tr>
<tr>
<td>No. of Cylinders and Build</td>
<td>4 - Inline</td>
</tr>
<tr>
<td>Engine Speed</td>
<td>rpm: 1500</td>
</tr>
<tr>
<td>Bore and Stroke</td>
<td>mmxmm: 90x100</td>
</tr>
<tr>
<td>Compression Ratio</td>
<td>18.1</td>
</tr>
<tr>
<td>Governor</td>
<td>Mechanical</td>
</tr>
<tr>
<td>Fuel Consumption at full load</td>
<td>L/hr: 5.4</td>
</tr>
<tr>
<td>Fuel Tank Capacity</td>
<td>Litre: Open: 95/Canopy: 95</td>
</tr>
<tr>
<td>Oil Capacity</td>
<td>Litre: 8.5</td>
</tr>
<tr>
<td>Coolant Capacity</td>
<td>Litre: 18.5</td>
</tr>
<tr>
<td>Radiator Cooling Air</td>
<td>m³/min: 174</td>
</tr>
<tr>
<td>Air Intake – Engine</td>
<td>m³/min: 1.542</td>
</tr>
<tr>
<td>Exhaust Gas Flow</td>
<td>m³/min: 3.9</td>
</tr>
</tbody>
</table>

- Heavy duty Aksa diesel engine
- Four stroke, water cooled, Natural
- 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
- 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 disturbing 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
   ✓ Generator Cos (σ)

   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 kVA
      ✓ Engine oil pressure (PSI-Bar)  Generator kW
      ✓ Generator Ampere (L1,L2,L3)  Generator Cos (σ)
      ✓ 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

OPTIONAL EQUIPMENTS

<table>
<thead>
<tr>
<th>Diesel Engine</th>
<th>Panel</th>
<th>Accessories</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Oil heater</td>
<td>✓ Charge ammeter</td>
<td>✓ Bulk fuel tank</td>
</tr>
<tr>
<td>Alternator</td>
<td>✓ Transfer Switch 3Pole</td>
<td>✓ Automatic filling system</td>
</tr>
<tr>
<td>✓ 3/4 Pole Output Circuit Breaker</td>
<td>✓ Transfer Switch 4 Pole</td>
<td>✓ Fuel-water separator filter</td>
</tr>
<tr>
<td>✓ Anti-condensation Heater</td>
<td>✓ Earth Fault, single set</td>
<td>✓ Low fuel level alarm</td>
</tr>
</tbody>
</table>

www.aksapowergen.com
**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></th>
<th>OPEN TYPE</th>
<th>SOUND ATTENUATED TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIMENSIONS (LxWxH)</td>
<td>mm</td>
<td>1,500x900x1061</td>
</tr>
<tr>
<td>DRY WEIGHT</td>
<td>kg</td>
<td>640</td>
</tr>
<tr>
<td>DIMENSIONS (LxWxH)</td>
<td>mm</td>
<td>1,933x963x1213</td>
</tr>
<tr>
<td>DRY WEIGHT</td>
<td>kg</td>
<td>870</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

---

Aksa Power Generation
Evren Mah. Gülbahar Caddesi 1.Sokak Gunesli-Istanbul-TURKEY
Tel:+90 212 478 66 66  Fax:+90 212 657 55 16  E-mail: aksa@aksapowergen.com
www.aksapowergen.com
Aksa Power Generation is a member of www.aksa.com.tr