**Power Your Future**

**AJD90**

**DIESEL GENERATING SET** 400/230V- 3phase -50HZ

<table>
<thead>
<tr>
<th>MODEL</th>
<th>kVA</th>
<th>kW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standby</td>
<td>90</td>
<td>72</td>
</tr>
<tr>
<td>Prime</td>
<td>80</td>
<td>64</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 off-road trailer

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

www.aksapowergen.com
**ENGINE**

**JOHN DEERE**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>4045TF220</td>
</tr>
<tr>
<td>Engine Power Output at rated rpm</td>
<td>kWm 83</td>
</tr>
<tr>
<td></td>
<td>HP 111</td>
</tr>
<tr>
<td>Aspiration and Cooling</td>
<td>Turbocharged</td>
</tr>
<tr>
<td>Total Displacement</td>
<td>Litre 4.5</td>
</tr>
<tr>
<td>No. of Cylinders and Build</td>
<td>4, In-line</td>
</tr>
<tr>
<td>Engine Speed</td>
<td>rpm 1500</td>
</tr>
<tr>
<td>Bore and Stroke</td>
<td>mm x mm 106 x 127</td>
</tr>
<tr>
<td>Compression Ratio</td>
<td>17:0:1</td>
</tr>
<tr>
<td>Governor</td>
<td>Mechanical</td>
</tr>
<tr>
<td>Fuel Consumption at 100% load</td>
<td>L/hr 22.94</td>
</tr>
<tr>
<td>Fuel Consumption at 75% load</td>
<td>L/hr 16.47</td>
</tr>
<tr>
<td>Fuel Consumption at 50% load</td>
<td>L/hr 11.76</td>
</tr>
<tr>
<td>Fuel Tank Capacity</td>
<td>Litre Open:240/Canopy:240</td>
</tr>
<tr>
<td>Oil Capacity</td>
<td>Litre 13.2</td>
</tr>
<tr>
<td>Coolant Capacity</td>
<td>Litre 8.5</td>
</tr>
<tr>
<td>Radiator Cooling Air</td>
<td>m³/min 108</td>
</tr>
<tr>
<td>Air Intake – Engine</td>
<td>m³/min 6.1</td>
</tr>
<tr>
<td>Exhaust Gas Flow</td>
<td>m³/min 13.6</td>
</tr>
</tbody>
</table>

- Heavy duty John Deere diesel engine
- Four stroke, water cooled, Turbocharged
- Direct injection fuel system
- Mechanical Governor system
- 12 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
- 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 IP23
- Self-exciting and self-regulating
- All wound components are impregnated with materials and processes designed specifically
- 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) 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

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.

**DIMENSIONS**

<table>
<thead>
<tr>
<th>Type</th>
<th>Dimensions (LxWxH)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OPEN TYPE</strong></td>
<td>2150x1050x1458</td>
<td>930 kg</td>
</tr>
<tr>
<td><strong>SOUND ATTENUATED TYPE</strong></td>
<td>3100x1104x1741</td>
<td>1130 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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