### AJD170

170kVA / 136kW
POWERED by JOHN DEERE

#### 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>170</td>
<td>136</td>
</tr>
<tr>
<td>Prime</td>
<td>155</td>
<td>124</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.
## ENGINE

<table>
<thead>
<tr>
<th><strong>JOHN DEERE</strong></th>
<th><strong>6068HF120</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Engine Power Output</strong> at rated rpm kWh &amp; HP</td>
<td>155 &amp; 208</td>
</tr>
<tr>
<td><strong>Aspiration and Cooling</strong></td>
<td>Turbocharged</td>
</tr>
<tr>
<td><strong>Total Displacement</strong> Litre</td>
<td>6.8</td>
</tr>
<tr>
<td><strong>No. of Cylinders and Build</strong></td>
<td>6, In-line</td>
</tr>
<tr>
<td><strong>Engine Speed</strong> rpm</td>
<td>1500</td>
</tr>
<tr>
<td><strong>Bore and Stroke</strong> mm x mm</td>
<td>106 x 127</td>
</tr>
<tr>
<td><strong>Compression Ratio</strong></td>
<td>17.0:1</td>
</tr>
<tr>
<td><strong>Governor</strong></td>
<td>Mechanical</td>
</tr>
<tr>
<td><strong>Fuel Consumption at 100% load</strong> L/hr</td>
<td>33.88</td>
</tr>
<tr>
<td><strong>Fuel Consumption at 75% load</strong> L/hr</td>
<td>26.24</td>
</tr>
<tr>
<td><strong>Fuel Consumption at 50% load</strong> L/hr</td>
<td>17.76</td>
</tr>
<tr>
<td><strong>Fuel Tank Capacity</strong> Litre</td>
<td>Open: 380/Canopy: 380</td>
</tr>
<tr>
<td><strong>Oil Capacity</strong> Litre</td>
<td>24.6</td>
</tr>
<tr>
<td><strong>Coolant Capacity</strong> Litre</td>
<td>11.3</td>
</tr>
<tr>
<td><strong>Radiator Cooling Air</strong> m³/min</td>
<td>252.1</td>
</tr>
<tr>
<td><strong>Air Intake – Engine</strong> m³/min</td>
<td>9.8</td>
</tr>
<tr>
<td><strong>Exhaust Gas Flow</strong> m³/min</td>
<td>20.8</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><strong>Design</strong></th>
<th>Brushless single bearing, revolving field</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stator</strong></td>
<td>2/3 pitch</td>
</tr>
<tr>
<td><strong>Rotor</strong></td>
<td>Single bearing, flexible disc</td>
</tr>
<tr>
<td><strong>Insulation System</strong></td>
<td>Class H</td>
</tr>
<tr>
<td><strong>Standard Temperature Rise</strong></td>
<td>125 - 163°C Continuous</td>
</tr>
<tr>
<td><strong>Exciter Type</strong></td>
<td>Self Excited</td>
</tr>
<tr>
<td><strong>Phase Rotation</strong></td>
<td>A (U), B (V), C (W)</td>
</tr>
<tr>
<td><strong>Alternator Cooling</strong></td>
<td>Direct drive centrifugal blower fan</td>
</tr>
<tr>
<td><strong>AC Waveform Total Harmonic Distortion</strong></td>
<td>No load &lt; 1.5%. Non distorting balanced linear load &lt; 5%</td>
</tr>
<tr>
<td><strong>Telephone Influence Factor (TIF)</strong></td>
<td>&lt;50 per NEMA MG1-22.43</td>
</tr>
<tr>
<td><strong>Telephone Harmonic Factor (THF)</strong></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
- ✓ 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
- ✓ 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>OPEN TYPE</th>
<th></th>
<th>SOUND ATTENUATED TYPE</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>DIMENSIONS (LxWxH)</td>
<td>mm</td>
<td>2416x1150x1565</td>
<td>3414x1206x1942</td>
</tr>
<tr>
<td>DRY WEIGHT</td>
<td>kg</td>
<td>1570</td>
<td>2020</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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