DIESEL GENERATING SET  400/230 V - 50 Hz - 3 Phase

<table>
<thead>
<tr>
<th>MODEL</th>
<th>kVA</th>
<th>AC550</th>
<th>kW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standby</td>
<td>550</td>
<td>440</td>
<td></td>
</tr>
<tr>
<td>Prime</td>
<td>500</td>
<td>400</td>
<td></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
# ENGINE

<table>
<thead>
<tr>
<th>Model</th>
<th>CUMMINS QSX15G8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine Power Output</td>
<td>kWm 500</td>
</tr>
<tr>
<td>at rated rpm</td>
<td>HP 670</td>
</tr>
<tr>
<td>Aspiration and Cooling</td>
<td>Turbocharged and Charge Air Cooled</td>
</tr>
<tr>
<td>Total Displacement</td>
<td>Litre 15</td>
</tr>
<tr>
<td>No. of Cylinders and Build</td>
<td>6 In-line</td>
</tr>
<tr>
<td>Engine Speed</td>
<td>rpm 1500</td>
</tr>
<tr>
<td>Bore and Stroke</td>
<td>mmxmm 137x169</td>
</tr>
<tr>
<td>Compression Ratio</td>
<td>17:01</td>
</tr>
<tr>
<td>Governor</td>
<td>ECM</td>
</tr>
<tr>
<td>Fuel Consumption at full load</td>
<td>L/hr 103</td>
</tr>
<tr>
<td>Fuel Tank Capacity</td>
<td>Litre Open: 870/Canopy: 893</td>
</tr>
<tr>
<td>Oil Capacity</td>
<td>Litre 91</td>
</tr>
<tr>
<td>Coolant Capacity</td>
<td>Litre 42</td>
</tr>
<tr>
<td>Radiator Cooling Air</td>
<td>m³/min 708</td>
</tr>
<tr>
<td>Air Intake – Engine</td>
<td>m³/min 36.3</td>
</tr>
<tr>
<td>Exhaust Gas Flow</td>
<td>m³/min 82.2</td>
</tr>
</tbody>
</table>

✓ Heavy duty Cummins diesel engine
✓ Four stroke, water cooled, turbocharged & Charge Air Cooled
✓ Direct injection fuel system
✓ ECM 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)

2. Power Outlet Terminal Board Mounted on the Genset Base Frame

OPTIMAL 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
- Fuel-water separator filter
- Low fuel level alarm
- Residential silencer
- Enclosure or sound proof canopy
- Trailer
- Manual oil drain pump
- Tool kit for maintenance

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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 500 kVA)

DIMENSIONS

<table>
<thead>
<tr>
<th>OPEN TYPE</th>
<th>SOUND ATTENUATED TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DIMENSIONS (LxWxH)</strong></td>
<td><strong>DIMENSIONS (LxWxH)</strong></td>
</tr>
<tr>
<td><strong>DRY WEIGHT</strong></td>
<td><strong>DRY WEIGHT</strong></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