Diesel Generator Set

16V2000 DS1140

Water charge-air cooling/1140kVA/50 Hz/
standby power (fuel consumption optimized)/380 - 415V

Optional equipment shown. Standard equipment and colors (base frame, generator: grey, engine: blue) may vary.

Product highlights

Benefits
— Low installation costs
— Best fuel consumption values
— Long maintenance intervals
— Best-in-class reliability and availability
— Lifting vertically or with diagonal pull
— Compact design

System ratings 1)

<table>
<thead>
<tr>
<th>Standby power</th>
<th>16V2000 DS1140</th>
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<th>16V2000 DS1140</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage (L-L)</td>
<td>380V</td>
<td>400V</td>
<td>415V</td>
</tr>
<tr>
<td>Phase</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>PF</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>Hz</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>kW</td>
<td>904</td>
<td>912</td>
<td>840</td>
</tr>
<tr>
<td>kVA</td>
<td>1130</td>
<td>1140</td>
<td>1050</td>
</tr>
<tr>
<td>Amps</td>
<td>1717</td>
<td>1645</td>
<td>1461</td>
</tr>
<tr>
<td>Generator model</td>
<td>575RSL7074</td>
<td>575RSL7074</td>
<td>575RSL7074</td>
</tr>
<tr>
<td>Temp rise</td>
<td>150°C/40°C</td>
<td>150°C/40°C</td>
<td>150°C/40°C</td>
</tr>
<tr>
<td>Connection</td>
<td>6 LEAD HI WYE</td>
<td>6 LEAD HI WYE</td>
<td>6 LEAD HI WYE</td>
</tr>
</tbody>
</table>

1 Power available up to 40°C/400 m
Certifications and standards

- Engine-generator set is designed and manufactured in facilities certified to standards ISO 9001:2008 and ISO 14001:2004
- Performance Assurance Certification (PAC)
  - Engine-generator set tested according to ISO 8528-5 for transient response
  - Verified product design, quality and performance integrity
  - All engine systems are prototype and factory tested
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- Performance Assurance Certification (PAC)
  - Engine-generator set tested according to ISO 8528-5 for transient response
  - Verified product design, quality and performance integrity
  - All engine systems are prototype and factory tested
- Power rating
  - Permissible average power output during 24 hours of operation up to 85%

Standard equipment

**Engine**
- Air filters
- Oil pump for draining
- Full flow oil filters
- Closed crankcase ventilation
- Jacket water pump
- Thermostats
- Exhaust manifold - dry
- Belt driven radiator fan
- Electric starting motor – 24V
- Governor – electronic isochronous
- Base – formed steel
- SAE flywheel & bell housing
- Charging alternator
- Flexible fuel connectors
- Flexible exhaust connection

**Generator**
- NEMA MG1, IEEE and ANSI standards compliance for temperature rise and motor
- VDE 0530, IEC 60034-1, BS4999, BS5000, CSA22.2-100, AS 1361
- Sustained short circuit current of up to 250% of the rated current for up to 10 seconds
- Self-ventilated and drip-proof according to IP23
- Superior voltage waveform
- Digital, volts-per-hertz regulator
- No load to full load regulation
- Brushless alternator with brushless pilot exciter
- 4 Pole, rotating field
- 150 °C maximum standby temperature rise
- Heavy duty shielded ball bearings with a minimum B-10 life of 40,000 hrs
- Flexible coupling
- Full amortisseur windings
- 3-phase voltage sensing
- ±0.25% voltage regulation
- 100% of rated load – one step according to NFPA 110
- 3% maximum harmonic content

Standard features

- The engine-generator set complies to G3
- Engine generator set tested according to ISO 8528-5 for transient response
- Accepts rated load in one step as per NFPA 110
- All engine-generator sets are type and factory tested
- Global product support
- 16V2000 diesel engine (31.84 liter (1943 cu inch) displacement; 4-stroke)
- Engine-generator resiliently mounted
- Complete range of accessories
- Brushless, rotating field generator (PMG excitation; 250% short circuit capability; 2/3 pitch stator windings)
- Complete system metering
- LCD display

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1 Represents standard product only. Consult your local MTU distributor for additional configurations.
Application data

**Engine**
- Manufacturer: MTU
- Model: 16V2000G65TB
- Type: 4-stroke
- Arrangement: 16V
- Displacement/cylinder: l (cu inch): 1.99 (121)
- Bore: mm (inch): 130 (5.1)
- Stroke: mm (inch): 150 (5.9)
- Compression ratio: 16:1
- Rated speed: rpm: 1500
- Engine governor: electronic isochronous
- Max power: kWm (bhp): 975 (1307)
- Speed regulation: ±0.25%

**Lube oil capacity**
- Total oil system: l (gal): 102 (27)

**Electrical**
- Electric Volts DC: 24
- Cold cranking amps under -17.8°C (0°F): 1000

**Fuel system**
- Fuel supply connection size: M22 x 1.5 - 60°/male
- Fuel return connection size: M12 x 1.5 - 60°/male
- Maximum fuel lift: m (ft): 5 (16)
- Recommended fuel: see MTU fluids & lubrication spec.
- Total fuel flow: l/hr (gal/hr): 600 (159)

**Fuel consumption**

<table>
<thead>
<tr>
<th></th>
<th>gal/hr</th>
<th>l/hr</th>
<th>g/kwh</th>
</tr>
</thead>
<tbody>
<tr>
<td>At 100% of power rating:</td>
<td>62</td>
<td>234</td>
<td>199</td>
</tr>
<tr>
<td>At 75% of power rating:</td>
<td>45</td>
<td>172</td>
<td>195</td>
</tr>
<tr>
<td>At 50% of power rating:</td>
<td>31</td>
<td>116</td>
<td>198</td>
</tr>
</tbody>
</table>

**Cooling/radiator system**
- Water pump capacity: l/min (gpm): 667 (176)
- Heat rejection to coolant: kW (BTUM): 395 (22,463)
- Heat rejection to after cooler: kW (BTUM): 225 (12,796)
- Heat radiated to ambient: kW (BTUM): 45 (2,559)

**Air requirements**
- Aspirating: m³/min (SCFM): 72 (2540)

**Exhaust system**
- Gas temp. (stack): °C (°F): 565 (1049)
- Gas volume flow temp: m³/min (SCFM): 198 (6991)
- Maximum allowable back pressure: kPA: 8.5

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1. Values in accordance with ISO 3046-1. Conversion calculated with fuel density of 0.83 g/mL.
2. Air density = 1.184 kg/m³ (0.0739 lbm/ft³)
Weights and dimensions

Drawing above for illustration purposes only, based on standard open power 400 Volt engine-generator set. Lengths may vary with other voltages. Do not use for installation design. See website for unit specific template drawings.

<table>
<thead>
<tr>
<th>System</th>
<th>Dimensions (L x W x H)</th>
<th>Weight (dry/less tank)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open power unit (OPU)</td>
<td>4100 x 1750 x 1809 mm (161.4 x 69 x 71.2 inch)</td>
<td>5945 kg (13,106 lbs)</td>
</tr>
</tbody>
</table>

Weights and dimensions are based on open power units and are estimates only. Consult the factory for accurate weights and dimensions for your specific engine-generator set.

Sound data

— Consult your local MTU distributor for sound data.

Emissions data

— Consult your local MTU distributor for emissions data.

Rating definitions and conditions

— Standby ratings apply to installations served by a reliable utility source. The standby rating is applicable to varying loads for the duration of a power outage. No overload capability for this rating. Ratings are in accordance with ISO 8528-1, ISO-3046-1, BS 5514 and AS 2789. Average load factor: ≤ 85%.
— Operating hours/year: max. 500.
— Consult your local MTU distributor for derating information.