Diesel Generator Set

18V2000 DS1250

Air charge-air cooling/1250kVA/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
— Industry-leading average load factor
— Outstanding fuel economy
— Optimized maintenance intervals
— Low installation costs
— Best-in-class reliability and availability
— Lifting vertically or with diagonal pull
— Compact design

System ratings

<table>
<thead>
<tr>
<th>Standby power</th>
<th>18V2000 DS1250</th>
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<th>18V2000 DS1250</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>992</td>
<td>1000</td>
<td>1000</td>
</tr>
<tr>
<td>kVA</td>
<td>1240</td>
<td>1250</td>
<td>1250</td>
</tr>
<tr>
<td>Amps</td>
<td>1884</td>
<td>1804</td>
<td>1739</td>
</tr>
<tr>
<td>Generator model</td>
<td>740RSL7076</td>
<td>740RSL7076</td>
<td>740RSL7076</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
- 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
- Radiator – unit mounted
- Electric starting motor – 24V
- Governor – electronic isochronous
- Base – formed steel
- SAE flywheel & bell housing
- Charging alternator
- Flexible fuel connectors
- Flexible exhaust connection

**Generator**
- NEMA MGI, IEEE and ANSI standards compliance for temperature rise and motor
- VDE 0530, IEC 60034-1, BS 4999, BS 5000, CSA 22.2-100, AS 1359
- Sustained short circuit current of up to 250% of the rated current for up to 10 seconds
- Self-ventilated and drip-proof 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
- Cooling System (integral set-mounted; engine driven fan)
- 18V2000 diesel engine (35.82 liter (2186 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

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

Engine
Manufacturer: MTU
Model: 18V2000G65TD
Type: 4-stroke
Arrangement: 18V
Displacement/cylinder: 1.99 (121)
Bore: 130 (5.1)
Stroke: 150 (5.9)
Compression ratio: 16:1
Rated speed: 1500 rpm
Engine governor: electronic isochronous
Max power: 1100 (1475) kW (bhp)
Speed regulation: ±0.25%
Air filter: dry

Lube oil capacity
Total oil system: 130 (34) gal

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: 5 (16) ft
Recommended fuel: see MTU fluids & lubrication spec.
Total fuel flow: 600 (159) gal/hr

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>71</td>
<td>269</td>
<td>203</td>
</tr>
<tr>
<td>At 75% of power rating:</td>
<td>53</td>
<td>199</td>
<td>200</td>
</tr>
<tr>
<td>At 50% of power rating:</td>
<td>35</td>
<td>133</td>
<td>201</td>
</tr>
</tbody>
</table>

Cooling/radiator system

- Ambient capacity of radiator: 32 (optional 50)°C
- Max. restriction of cooling air, intake, and discharge side of rad.: 0.2 (0.803) kPa (in. H2O)
- Water pump capacity: 667 (176) l/min (gpm)
- Heat rejection to coolant: 470 (26,728) kW (BTUM)
- Heat rejection to after cooler: 225 (12,796) kW (BTUM)
- Heat radiated to ambient: 50 (2,843) kW (BTUM)
- Engine coolant capacity: 120 (32) gal
- Coolant to cooler temperature: 95 (203)°C

Air requirements

- Aspirating: 75 (2646) m³/min (SCFM)
- Air flow required for rad. cooled unit: 1362 (48051) m³/min

Exhaust system

- Gas temp. (stack): 560 (1040) °C
- Gas volume flow temp: 216 (7620) m³/min (SCFM)
- Maximum allowable back pressure: 8.5 (34) kPa

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1. Values in accordance with ISO 3046-1. Conversion calculated with fuel density of 0.83 g/ml.
2. System ratings at 50°C may differ.
3. 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>4916 x 2140 x 2346 mm (194 x 84 x 92 inch)</td>
<td>6920 kg (15,256 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.