18V2000 DS1290

Water charge-air cooling/1270kVA/50 Hz/
standby power (fuel consumption optimized)/380 - 415V

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

<table>
<thead>
<tr>
<th>Standby power</th>
<th>18V2000 DS1290</th>
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<th>18V2000 DS1290</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage (L-L)</td>
<td>380V</td>
<td>400V</td>
<td>415V</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Phase</td>
<td>3</td>
<td>3</td>
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</tr>
<tr>
<td>PF</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
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<tr>
<td>Hz</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>kW</td>
<td>1016</td>
<td>1016</td>
<td>1016</td>
</tr>
<tr>
<td>kVA</td>
<td>1270</td>
<td>1270</td>
<td>1270</td>
</tr>
<tr>
<td>Amps</td>
<td>1930</td>
<td>1833</td>
<td>1767</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>
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<tr>
<td>Connection</td>
<td>6 LEAD HI WYE</td>
<td>6 LEAD HI WYE</td>
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</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
- 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, BS4999, BS5000, CSA22.2-100, AS 1362
- 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
- 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  18V2000G65TB
Type  4-stroke
Arrangement  18V
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)  1100 (1475)
Speed regulation  ±0.25%
Air filter  dry

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

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>Power Rating</th>
<th>gal/hr</th>
<th>l/hr</th>
<th>g/kwh</th>
</tr>
</thead>
<tbody>
<tr>
<td>At 100%</td>
<td>71</td>
<td>269</td>
<td>203</td>
</tr>
<tr>
<td>At 75%</td>
<td>53</td>
<td>199</td>
<td>200</td>
</tr>
<tr>
<td>At 50%</td>
<td>35</td>
<td>133</td>
<td>201</td>
</tr>
</tbody>
</table>

Cooling/radiator system
Water pump capacity: l/min (gpm)  667 (176)
Heat rejection to coolant: kW (BTU)  445 (25,307)
Heat rejection to after cooler: kW (BTU)  250 (14,217)
Heat radiated to ambient: kW (BTU)  50 (2,843)
Engine coolant capacity: l (gal)  140 (37)

Air requirements
Aspirating: m³/min (SCFM)  75 (2646)

Exhaust system
Gas temp. (stack): °C (°F)  550 (1022)
Gas volume flow temp: m³/min (SCFM)  216 (7627)
Maximum allowable back pressure: kPA  8.5

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 (0.0759 lbm/ft³)
Weights and dimensions

<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>4325 x 1750 x 1821 mm</td>
<td>6478 kg (14,283 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.