# Oil & Gas

## Series 4000 GenDrive Engines for the Oil & Gas Industry

### Dimensions and Masses

<table>
<thead>
<tr>
<th>Engine</th>
<th>Dimensions LxWxH (mm/in)</th>
<th>Mass, dry kg (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12V</td>
<td>2530 x 1590 x 2065 (100 x 63 x 81)</td>
<td>7300 (16093)</td>
</tr>
<tr>
<td>16V</td>
<td>3000 x 1590 x 2065 (118 x 63 x 81)</td>
<td>8800 (19400)</td>
</tr>
<tr>
<td>20V</td>
<td>3470 x 1590 x 2065 (137 x 63 x 81)</td>
<td>10680 (23545)</td>
</tr>
</tbody>
</table>

All dimensions are approximate; for complete information refer to the installation drawing.

### Engine Model

<table>
<thead>
<tr>
<th>Bore/stroke</th>
<th>170/210 (6.7/8.3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cylinder configuration</td>
<td>90°V</td>
</tr>
<tr>
<td>Displacement/cylinder</td>
<td>4.77 (291)</td>
</tr>
<tr>
<td>Displacement, total</td>
<td>12V: 57.2 (3491); 16V: 76.3 (4655); 20V: 95.4 (5822)</td>
</tr>
<tr>
<td>Fuel specification</td>
<td>EN 590, Grade No.1-D/2-D (ASTM D975-00), DMA</td>
</tr>
</tbody>
</table>

### Application

<table>
<thead>
<tr>
<th>Application</th>
<th>Power Definition</th>
<th>Continuous Power (3A)</th>
<th>Prime Power (3B)</th>
<th>Prime Power Limited (3C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3A</td>
<td>Continuous operation w/100% load</td>
<td>Load factor: ≤ 100 %, Operating hours: unrestricted, Overload: 10% capability (ICXN)</td>
<td>1350 (1810)</td>
<td>1560 (2092)</td>
</tr>
<tr>
<td>3B</td>
<td>Continuous operation w/variable load</td>
<td>Load factor: &lt; 75%, Operating hours: unrestricted, Overload: 10% capability (ICXN)</td>
<td>1800 (2414)</td>
<td>2080 (2789)</td>
</tr>
<tr>
<td>3C</td>
<td>Standby operation w/variable load</td>
<td>Load factor: &lt; 75%, Operating hours: max. 1000/yr, Overload: 10% capability (ICXN)</td>
<td>2245 (3011)</td>
<td>2600 (3487)</td>
</tr>
</tbody>
</table>

Power output within 5% tolerance at standard conditions. Power definition according to ISO 3046 (ratings also correspond to SAE J 1995 and SAE J 1349 standard conditions) Consult your MTU distributor/dealer for the rating that will apply to your specific application.
### Standard Equipment

**Starting System**
- Electric starter motor

**Fuel System**
- Common rail injection system, Double-walled high pressure injection pipes with monitoring, Duplex fuel filters with changeover valves

**Lube Oil System**
- Automatic lube oil filter with lube oil centrifuge, Closed crankcase breather system

**Combustion Air System**
- Elbow for vertical inlet

**Exhaust Gas System**
- Water cooled exhaust gas manifolds and turbo-chargers < 220°C, Vertical exhaust gas outlets

**Cooling System**
- HT (JW) and LT (CAC) coolant circuits with coolant pumps, Coolant thermostats for HT (JW) and LT (CAC)

**Flywheel/Housing**
- Flywheel 21", SAE 00 flywheel housing

**Engine Mounting**
- Engine mounting brackets

**Electronics and Instrumentation**
- ADEC engine control and management system, Extended sensor scope for offshore application

### Optional Equipment

**Starting System**
- Redundant starting system (electric, pneumatic, hydraulic)

**Fuel System**
- Duplex fuel pre-filter with water separator

**Lube Oil System**
- Special oil sump for increased inclinations up to 25° in all directions

**Combustion Air System**
- Air filters engine mounted, Heavy duty air filters (shipped loose), Electrically operated air shut-off flaps

**Exhaust Gas System**
- Horizontal exhaust gas outlet, Exhaust gas bellows with counter flanges

**Coolant System**
- Coolant connections (weld on flanges w. rubber bellows), Coolant preheating system, 400-480 V

**Accessory Drives**
- Add PTO’s for hyd. pump drives, Battery charging alternator, 2B VDC/120 A

**Engine Mounting**
- Height adjustable engine mounts

**Electronics and Instrumentation**
- EMU (Engine Monitoring Unit) with extended sensor scope for classification, redundant electronic controller for NFPA20 standard

**Certification**
- 3rd party certification (DNV, LRS, ABS, BV, GL & RS), ATEX (Zone II)

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**Reference conditions:**
- Intake-air temperature: 25°C (77°F)
- Charge air coolant temp.: 45°C (113°F)
- Ambient air pressure: 1000 mbar (14.5 psi)
- Altitude above sea level: 100 m (328 ft)
- Rated power available up to 40°C (104°F) and 400 m (1312 ft)

Subject to change without notice. Customization possible. Engines illustrated in this document may feature options not fitted as standard.