Marine

**DIESEL ENGINES 12/16/20V 4000 M05**

for on-board power generation and diesel-electric drives in continuous operation (3A/3B) - 50 Hz

<table>
<thead>
<tr>
<th>Engine Model</th>
<th>12V 4000 M05</th>
<th>16V 4000 M05</th>
<th>20V 4000 M05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated power ICFN kW (bhp)</td>
<td>1380 (1851)</td>
<td>1560 (2092)</td>
<td>1840 (2467)</td>
</tr>
<tr>
<td>Speed rpm</td>
<td>1500</td>
<td>1500</td>
<td>1500</td>
</tr>
<tr>
<td>No. of cylinders</td>
<td>12</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Displacement l (cu in)</td>
<td>57.2 (3491)</td>
<td>76.3 (4656)</td>
<td>95.4 (5822)</td>
</tr>
<tr>
<td>Emission legislation*</td>
<td>IMO II/IMO III** EPA 4**</td>
<td>IMO II/IMO III** EPA 4**</td>
<td>IMO II/IMO III** EPA 4**</td>
</tr>
</tbody>
</table>

* IMO - International Maritime Organisation (MARPOL); EPA - US Marine Regulation 40 CFR 1042 ** IMO III with SCR

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<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>2750 x 1793 x 2070 (108 x 71 x 81)</td>
<td>8000 (17637)</td>
</tr>
<tr>
<td>16V</td>
<td>3190 x 1550 x 2070 (126 x 61 x 81)</td>
<td>9460 (20856)</td>
</tr>
<tr>
<td>20V</td>
<td>3710 x 1550 x 2070 (146 x 61 x 81)</td>
<td>11600 (25575)</td>
</tr>
</tbody>
</table>

All dimensions are approximate, for complete information refer to the installation drawing.
### Standard Equipment

<table>
<thead>
<tr>
<th>System</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Starting system</td>
<td>Electric starter motor 24V, 2 pole</td>
</tr>
<tr>
<td>Oil system</td>
<td>Gear driven lube oil pump, switchable oil filter, centrifugal oil filter, lube oil heat exchanger, closed crankcase ventilation</td>
</tr>
<tr>
<td>Fuel system</td>
<td>Fuel delivery pump, duplex lube fuel filter with diverter valve, common rail fuel injection system with high-pressure pump, pressure accumulator and electronic fuel injection with cylinder cutout system, jacketed HP fuel lines, flame-proof hose lines, leak-off fuel monitoring, switchable pre-filter with water separator in conjunction with switchable additional secondary filter</td>
</tr>
<tr>
<td>Cooling system</td>
<td>Separate high and low temperature cooling circuit (engine version for separate heat exchanger), gear driven coolant circulation pumps</td>
</tr>
<tr>
<td>Combustion air system</td>
<td>Dry charge air manifolds, engine coolant temperature-controlled intercooler, turbocharging with 2 water-cooled turbochargers, on-engine seawater-resistant air filters, intake air silencer (16V/20V)</td>
</tr>
<tr>
<td>Exhaust system</td>
<td>Triple-walled, liquid-cooled, on-engine exhaust manifolds, 30° (upwards against horizontal) elbows discharge, exhaust bellow</td>
</tr>
<tr>
<td>Mounting system</td>
<td>Resilient engine mounting</td>
</tr>
<tr>
<td>Auxiliary PTO</td>
<td>Charging generator, 120A, 28V, 2 pole</td>
</tr>
<tr>
<td>Engine management system</td>
<td>Engine control and monitoring system (ADEC); engine interface module - EIM, engine mounted, expansion in compliance with extended scope of monitoring*</td>
</tr>
<tr>
<td>Engine safety system</td>
<td>The scope of delivery for the engine fulfils SOLAS requirements for admissible surface temperature and shielding of fuel and lube oil lines</td>
</tr>
</tbody>
</table>

### Optional Equipment

<table>
<thead>
<tr>
<th>System</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Starting system</td>
<td>Coolant preheating system, air starter</td>
</tr>
<tr>
<td>Oil system</td>
<td>Lube oil priming system, oil level monitoring, automatic oil replenishment system with basic scope of monitoring, automatic oil filter, lube oil extraction pump</td>
</tr>
<tr>
<td>Fuel system</td>
<td>Fuel conditioning system with water separator</td>
</tr>
<tr>
<td>Cooling system</td>
<td>Gear driven coolant circulation pump, coolant-to-raw water plate core heat exchanger (engine mounted coolant expansion tank), self priming centrifugal raw-water pump, raw-water connection for generator cooling</td>
</tr>
<tr>
<td>Combustion air system</td>
<td>Intake air silencer (12V)</td>
</tr>
<tr>
<td>Exhaust system</td>
<td>90° elbow for horizontal discharge</td>
</tr>
<tr>
<td>Engine mounting</td>
<td>Rigid engine mounting</td>
</tr>
<tr>
<td>Auxiliary PTO</td>
<td>Bilgepump, PTOs at free end of engine</td>
</tr>
<tr>
<td>Engine management system</td>
<td>Expansion in compliance with extended scope of monitoring (individual exhaust temperature monitoring)</td>
</tr>
<tr>
<td>Classification</td>
<td>ABS, BV, DNV, GL, LR including necessary extensions to scope of supply</td>
</tr>
</tbody>
</table>

* only above 2250 kW
> Intake air temperature 25°C/Sea water temperature 25°C
> Barometric pressure 1000 mbar
Specifications are subject to change without notice. All dimensions are approximate, for complete information refer to installation drawing. For further information consult your MTU distributor.