Let your fuel take you further. By combining diesel and gas technologies in one engine, the MAN 51/60DF gives you absolute fuel flexibility. There’s no better way to keep your engine running effectively and economically. Full steam ahead.

Benefits at a glance
- Highest power output in its class
- Low fuel consumption over entire engine load
- Best load acceptance behaviour
- Full fuel flexibility
- High reliability and long TBOs
- Gas start capability
- Full power output down to MN70
MAN L51/60DF

Propulsion – High power

Dimensions

<table>
<thead>
<tr>
<th>Cyl. No.</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>mm</td>
<td>8,494</td>
<td>9,314</td>
<td>10,134</td>
</tr>
<tr>
<td>L1</td>
<td>mm</td>
<td>7,455</td>
<td>8,275</td>
<td>9,095</td>
</tr>
<tr>
<td>W</td>
<td>mm</td>
<td>3,165</td>
<td>3,165</td>
<td>3,165</td>
</tr>
<tr>
<td>Dry mass</td>
<td>t</td>
<td>106</td>
<td>119</td>
<td>135</td>
</tr>
</tbody>
</table>

Output

<table>
<thead>
<tr>
<th>Speed</th>
<th>rpm</th>
<th>514</th>
<th>500</th>
</tr>
</thead>
<tbody>
<tr>
<td>mep</td>
<td>bar</td>
<td>21.9</td>
<td>22.5</td>
</tr>
<tr>
<td>MAN 6L51/60DF</td>
<td>kW</td>
<td>6,900</td>
<td>6,900</td>
</tr>
<tr>
<td>MAN 7L51/60DF</td>
<td>kW</td>
<td>8,050</td>
<td>8,050</td>
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<tr>
<td>MAN 8L51/60DF</td>
<td>kW</td>
<td>9,200</td>
<td>9,200</td>
</tr>
<tr>
<td>MAN 9L51/60DF</td>
<td>kW</td>
<td>10,350</td>
<td>10,350</td>
</tr>
</tbody>
</table>

Turbocharging system
- High efficiency constant pressure MAN TCA series exhaust turbocharging system

Engine automation and control
- MAN in-house developed engine attached safety and control system MAN SaCoSone

Air management
- Variable turbine area allowing improved adaption for diesel and gas mode operation while maintaining highest turbocharger efficiency over entire engine load

Fuel system
- Common rail pilot fuel injection system
- Conventional main injection system
- Variable injection timing for lowest fuel consumption while meeting IMO Tier II emission limits in diesel mode

Gas system
- Cylinder individual low pressure gas admission system, 5.7 bar(g) at inlet of gas valve unit

Cooling system
- 2-string high and low temperature cooling water systems

Starting system
- Starting air valves within cylinder heads

Engine mounting
- Resilient or rigid mounting

Optional equipment
- Fuel sharing mode for highest fuel flexibility
- Gas start capability
- 100 % power take-off at engine free end available
- Variable inlet valve timing for improved combustion in part load operation

General
- Engine cycle: four-stroke
- No. of cylinders: 6, 7, 8, 9
- Bore: 510 mm – Stroke: 600 mm
- Swept volume per cyl: 122.6 dm³

Fuel consumption at 85 % MCR
- Liquid fuel mode: 182 g/kWh
- Gas mode: 7,400 kJ/kWh

Cylinder output (MCR)
- At 500/514 rpm: 1,150 kW
- Power-to-weight ratio: 14.3 – 15.4 kg/kW

Compliance with emission regulations
- IMO Tier II
- IMO Tier III (gas mode)
- IMO Tier III (diesel mode with MAN SCR-LP)

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