Let your fuel take you further. By combining diesel and gas technologies in one engine, the MAN V51/60DF 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 V51/60DF

Propulsion – High power

Dimensions

<table>
<thead>
<tr>
<th>Cyl. No.</th>
<th>L (mm)</th>
<th>L1 (mm)</th>
<th>Dry mass (t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>10,254</td>
<td>9,088</td>
<td>187</td>
</tr>
<tr>
<td>14</td>
<td>11,254</td>
<td>10,088</td>
<td>213</td>
</tr>
<tr>
<td>16</td>
<td>12,254</td>
<td>11,088</td>
<td>240</td>
</tr>
<tr>
<td>18</td>
<td>13,644</td>
<td>12,088</td>
<td>265</td>
</tr>
</tbody>
</table>

Output

<table>
<thead>
<tr>
<th>Speed (rpm)</th>
<th>mep</th>
<th>MAN V51/60DF kW</th>
<th>MAN 14V51/60DF kW</th>
<th>MAN 16V51/60DF kW</th>
<th>MAN 18V51/60DF kW</th>
</tr>
</thead>
<tbody>
<tr>
<td>514</td>
<td>21.9</td>
<td>13,800</td>
<td>16,100</td>
<td>18,400</td>
<td>20,700</td>
</tr>
<tr>
<td>500</td>
<td>22.5</td>
<td>13,800</td>
<td>16,100</td>
<td>18,400</td>
<td>20,700</td>
</tr>
</tbody>
</table>

Minimum centerline distance for twin engine installation: 4,800 mm

LHV of fuel gas ≥ 28,000 kJ/Nm³ (Nm³ corresponds to one cubic meter of gas at 0°C and 1.013 bar)

Last updated July 2018

General

- Engine cycle: four-stroke
- No. of cylinders: 12, 14, 16, 18
- 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: 12.8 – 13.6 kg/kW

Compliance with emission regulations

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

Main features

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

MCR = Maximum continuous rating
SCR-LP = Selective catalytic reduction (low pressure)

All data provided in this document is non-binding. This data serves informational purposes only and is not guaranteed in any way. Depending on the subsequent specific individual projects, the relevant data may be subject to changes and will be assessed and determined individually for each project. This will depend on the particular characteristics of each individual project, especially specific site and operational conditions.