The MAN VP185 is a compact, medium and high-speed diesel engine which offers proven class-beating performance and reliability. The water-jacketed exhaust system helps to maintain a low engine compartment temperature whilst the two-stage turbocharging arrangement provides a wide torque curve.

Benefits at a glance
- High reliability
- High operating efficiency across the full power and speed range
- High power-to-weight/power density ratios
- Minimal derating to adverse site conditions
- Long periods between maintenance intervals
- Engine rating speed flexibility

General
- Engine cycle: Four-Stroke
- No. of cylinders: 12, 18
- Bore: 185 mm - Stroke: 196 mm
- Swept volume per cyl: 5.269 litres

Fuel consumption at maximum power
- SFOC*: between 195-208 g/kWb indicative depending on engine speed

Cylinder output
- At 1500 r/min: 192 kWb
- Weight-to-power ratio: 3.08 - 3.56 kg/kWb

Compliance with emission regulations
- EU Stage IIIA with EFI*
- EU Stage IIIIB with MAN SCR*
High Performance
The VP185 Engine

The proven MAN VP185 range of rail traction engines provides a lightweight and high power density solution for new and retrofitted passenger and freight locomotives.

### Dimensions

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>12VP185TL</th>
<th>18VP185TL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>3224 mm</td>
<td>4059 mm</td>
</tr>
<tr>
<td>Width</td>
<td>1703 mm</td>
<td>1703 mm</td>
</tr>
<tr>
<td>Height</td>
<td>2212 mm</td>
<td>2447 mm</td>
</tr>
<tr>
<td>Dry Mass</td>
<td>7.7 t</td>
<td>10.8 t</td>
</tr>
</tbody>
</table>

*Note: Quoted dry mass includes air filters and electric starting motors.*

### Output

<table>
<thead>
<tr>
<th>Engine speed</th>
<th>12VP185TL</th>
<th>18VP185TL</th>
<th>12VP185TL</th>
<th>18VP185TL</th>
</tr>
</thead>
<tbody>
<tr>
<td>t/min</td>
<td>1200</td>
<td>1500</td>
<td>1800</td>
<td></td>
</tr>
<tr>
<td>kWb</td>
<td>2165</td>
<td>3175</td>
<td>2300</td>
<td>3450</td>
</tr>
<tr>
<td>bhp</td>
<td>2903</td>
<td>4258</td>
<td>3084</td>
<td>4627</td>
</tr>
</tbody>
</table>

*Note: Nominal ratings, subject to altitude and ambient temperature range, operating profile, cooler group size and AC traction generation limitations.*

### Main features

#### Turbocharging system
- High efficiency two-stage turbocharging system, using multiple low inertia automotive style turbochargers within a water-jacketed housing

#### Engine automation and control
- Engine Control and Safety system monitors the traction system status within pre-defined parameters

#### Charger air
- Inter-cooled and after-cooled passive regulation of air temperature from cooler configuration

### Fuel system
- Low pressure fuel system feeds MFI* or EFI* pump injectors eliminating high pressure fuel galleries

### Exhaust Gas system
- Water-cooled jackets surround the exhaust manifolds and turbochargers to provide a low engine surface temperature

### Cooling system
- Primary water system with gear driven engine mounted water pump.
- Secondary water system with gear driven engine mounted water pump

### Starting system
- 2 x 9 kW DC electric starter motors in parallel

### Engine mounting
- Four point engine feet

### Optional equipment
- PTO at free end of engine
- Electronically Fuel Injected engine

*SCR = Selective Catalytic Reduction / SFOC = Specific Fuel Oil Consumption / MFI = Mechanical Fuel Injection / EFI = Electronic Fuel Injection.

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.

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