The MAN L21/31 engine is a compact and reliable power source designed to run on heavy fuel oil (HFO). With its outstanding load pick up capabilities and extremely long time between overhauls (TBO), the MAN L21/31 is ideal for many different applications.

**Benefits at a glance**
- Long time between overhauls
- No unscheduled maintenance and repair work
- Low fuel and lube oil consumption while fulfilling legal emission limits
- Short installation length
### MAN L21/31

#### GenSet

**Dimensions**

<table>
<thead>
<tr>
<th>Cyl. No.</th>
<th>A (mm)</th>
<th>B (mm)</th>
<th>C (mm)</th>
<th>H (mm)</th>
<th>Dry mass (t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>3,959</td>
<td>1,870</td>
<td>5,829</td>
<td>3,183</td>
<td>22.5</td>
</tr>
<tr>
<td>6</td>
<td>4,314</td>
<td>1,870</td>
<td>6,184</td>
<td>3,183</td>
<td>26.0</td>
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<tr>
<td>7</td>
<td>4,669</td>
<td>1,970</td>
<td>6,639</td>
<td>3,289</td>
<td>29.5</td>
</tr>
<tr>
<td>8</td>
<td>5,572</td>
<td>2,110</td>
<td>7,682</td>
<td>3,289</td>
<td>33.0</td>
</tr>
<tr>
<td>9</td>
<td>5,927</td>
<td>2,135</td>
<td>8,062</td>
<td>3,289</td>
<td>36.5</td>
</tr>
</tbody>
</table>

**Output**

<table>
<thead>
<tr>
<th>Speed</th>
<th>Frequency</th>
<th>MAN 5L21/31</th>
<th>MAN 6L21/31</th>
<th>MAN 7L21/31</th>
<th>MAN 8L21/31</th>
<th>MAN 9L21/31</th>
</tr>
</thead>
<tbody>
<tr>
<td>rpm</td>
<td>Hz</td>
<td>kW</td>
<td>kW</td>
<td>kW</td>
<td>kW</td>
<td>kW</td>
</tr>
<tr>
<td>1,000</td>
<td>Eng.</td>
<td>1,000</td>
<td>1,320</td>
<td>1,540</td>
<td>1,760</td>
<td>1,980</td>
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<tr>
<td></td>
<td>Gen.*</td>
<td>950</td>
<td>1,254</td>
<td>1,463</td>
<td>1,672</td>
<td>1,881</td>
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</tr>
</tbody>
</table>

*Based on nominal generator efficiencies of 95%*

**General**
- Engine cycle: four-stroke
- No. of cylinders: 5, 6, 7, 8, 9
- Bore: 210 mm – Stroke: 310 mm
- Swept volume per cyl: 10.74 dm³

**Fuel consumption at 85 % MCR**
- SFOC: 189 g/kWh
- SFOC for part-load-optimized version: 183 g/kWh @ 75 % load

**Cylinder output (MCR)**
- At 900/1000 rpm: 220 kW
- Power-to-weight ratio: 18.4 – 22.5 kg/kW

**Compliance with emission regulations**
- IMO Tier II
- IMO Tier III (with MAN SCR)

**Main features**
- **Turbocharging system**
  - High efficiency constant pressure MAN TCR series exhaust turbo-charging system jet assist for improved load response and start up time
- **Engine automation and control**
  - MAN in-house developed engine attached safety and control system MAN SaCoSone
- **Fuel system**
  - Conventional main injection system
  - Variable injection system for lowest fuel consumption while meeting IMO Tier II emission limits
- **Cooling system**
  - 1-string high and low temperature cooling water systems
- **Starting system**
  - Pressurized air starter (turbine type)

**Engine design**
- “Pipeless engine” design
- Cooling water/lube oil pumps, thermostatic valves integrated in the front-end box

**Optional equipment**
- 100 % PTO on front-end with build-in bearing enable fire-fighting equipment (Fi-Fi)

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