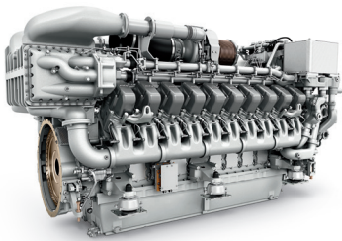




Rail

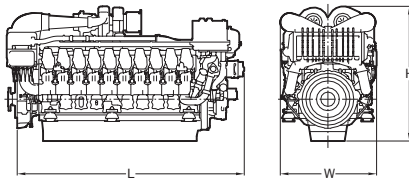
DIESEL ENGINES SERIES 4000 R03

for push-pull trains and locomotives
EU Stage IIIA compliant, UIC IIIA



| Engine | Dimensions (LxWxH) mm (in) | Mass, dry kg (lbs) |
|-----------|--|--------------------|
| 8V - R43 | 2000 x 1565 x 1860 (78.7 x 61.6 x 73.2) | 5270 (11618) |
| 12V - R43 | 2386 x 1562 x 2015 (93.9 x 61.5 x 79.3) | 6613 (14579) |
| 16V - R43 | 2865 x 1562 x 2015 (112.8 x 61.5 x 79.3) | 7930 (17483) |
| 20V - R43 | 3335 x 1562 x 2015 (131.3 x 61.5 x 79.3) | 9860 (21738) |
| 20V - R63 | 3592 x 1570 x 2015 (141.4 x 61.8 x 79.3) | 10400 (22928) |

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



Optional equipment and finishing shown. Standard may vary.

| Engine | | |
|------------------------|-----------|--|
| Bore/stroke | mm (in) | 170/210 (6.7/8.3) |
| Cylinder configuration | | 90° V |
| Displacement | l (cu in) | 4.77 (291) |
| Displacement, total | l (cu in) | 8V: 38.1 (2327); 12V: 57.2 (3491); 16V: 76.3 (4656); 20V: 95.3 (5818) |
| Fuel specification | | DIN EN 590 |

| Engine type | Rated power | | | Peak torque | | | Fuel consumpt. at | | Optim. * |
|---------------|-------------|------|------|-------------|-------|------|-------------------|------------|--|
| | kW | bhp | rpm | Nm | lb-ft | rpm | rated power | best point | |
| 8V 4000 R43 | 1000 | 1341 | 1800 | 5457 | 4024 | 1750 | 206 | 194 | EU IIIA compl. ¹⁾ /UIC IIIA |
| 8V 4000 R43L | 1200 | 1609 | 1800 | 6548 | 4829 | 1750 | 206 | 194 | EU IIIA compl. ¹⁾ /UIC IIIA |
| 12V 4000 R43 | 1500 | 2012 | 1800 | 8185 | 6036 | 1750 | 205 | 192 | EU IIIA compl. ¹⁾ /UIC IIIA |
| 12V 4000 R43L | 1800 | 2414 | 1800 | 9822 | 7243 | 1750 | 210 | 190 | EU IIIA compl. ¹⁾ /UIC IIIA |

* Emissions:
EU: Nonroad Directive 97/68/EC (as amended by 2004/26/EC)
UIC: International Union of Railways (UIC Code 624) (UIC Stage IIIA corresponds to the EU Stage IIIA)
1) EU IIIA type approved. Under special preconditions certification available on request.

| Engine type | Rated power | | | Peak torque | | | Fuel consumpt. at rated power best point | | Optim. * |
|---------------|-------------|------|------|-------------|-------|------|--|-------|---------------------------------------|
| | kW | bhp | rpm | Nm | lb-ft | rpm | g/kWh | g/kWh | g/kWh |
| 16V 4000 R43R | 2000 | 2682 | 1800 | 10913 | 8048 | 1750 | 207 | 196 | EU IIIA compl. ⁹ /UIC IIIA |
| 16V 4000 R43 | 2200 | 2950 | 1800 | 12005 | 8853 | 1750 | 206 | 196 | EU IIIA compl. ⁹ /UIC IIIA |
| 16V 4000 R43L | 2400 | 3218 | 1800 | 13096 | 9658 | 1750 | 205 | 196 | EU IIIA compl. ⁹ /UIC IIIA |
| 20V 4000 R43 | 2700 | 3621 | 1800 | 14733 | 10865 | 1750 | 208 | 194 | EU IIIA compl. ⁹ /UIC IIIA |
| 20V 4000 R43L | 3000 | 4023 | 1800 | 16370 | 12072 | 1750 | 210 | 194 | EU IIIA compl. ⁹ /UIC IIIA |
| 20V 4000 R63R | 2700 | 3621 | 1800 | 14733 | 10865 | 1750 | 204 | 194 | EU IIIA compl. ⁹ /UIC IIIA |
| 20V 4000 R63 | 3000 | 4023 | 1800 | 16370 | 12072 | 1750 | 206 | 197 | EU IIIA compl. ⁹ /UIC IIIA |
| 20V 4000 R63L | 3300 | 4425 | 1800 | 18007 | 13280 | 1750 | 206 | 195 | EU IIIA compl. ⁹ /UIC IIIA |

| Standard Equipment | Optional Equipment |
|--|--|
| ADEC engine control | Dry-type air filter |
| Common rail injection system | Auxiliary PTOs |
| Turbocharging | Assembly and drive parts for hydrostatic pump |
| Charge-air cooling as separate circuit | Transformer: 64-72 V DC/24 V DC or 96/110 V DC/24 V DC |
| Flywheel housing SAE #00 | Various interfaces for I/O signals |
| Resilient engine mountings | Fuel prefilter |
| 24V starter | Various adapters for connections and interfaces |
| 28V DC/120A battery-charging generator | Coupling for main drive |
| Power Output Module (POM) 24V | Displays for installation in vehicle |
| Connection interface (PAU) | |
| Long-life 4-valve cylinder heads | |

Reference conditions:

- > Intake temperature: 25°C (77°F)
- > Ambient air pressure: 1000 mbar
- > Charge air coolant temp.: 45°C (113°F)
- > Altitude above sea level: 100 m (328 ft)
- > Air intake restriction: 25 mbar

Subject to change without notice. Customization possible. Engines illustrated in this document may feature options not fitted as standard to standard engine.