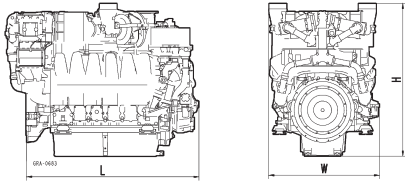
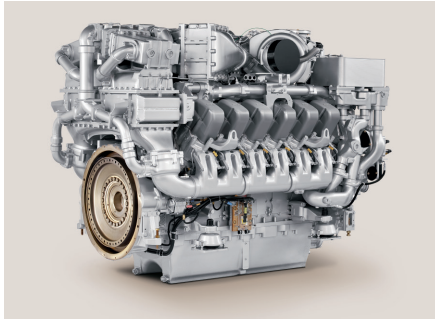


Rail

Diesel Engines Series 4000 R04

for Push-pull Trains and Locomotives

EU Stage IIIB



Dimensions and Masses

4000	Dimensions (LxWxH) mm (in)	Mass, dry kg (lbs)
12V	2670 x 1696 x 2001 (105.1 x 66.8 x 78.8)	7700 (16976)
16V	3140 x 1696 x 2001 (123.6 x 66.8 x 78.8)	9050 (19952)

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

Engine Model

Bore/stroke	mm (in)	170/210 (6.7/8.3)
Cylinder configuration		90° V
Displacement/cylinder	l (cu in)	4.77 (291)
Displacement, total	l (cu in)	12V: 57.2 (3491); 16V: 76.3 (4654)
Fuel specification		DIN EN 590

Engine Type	Rated Power			Peak Torque			Fuel consumption at		Optimization*
	Model	kW	bhp	rpm	Nm	lb-ft	rpm	g/kWh	g/kWh
12V 4000 R64	1500	2012	1800	8185	6036	1750	203	193	EU IIIB
12V 4000 R84	1800	2414	1800	9822	7243	1750	202	193	EU IIIB
16V 4000 R64	2000	2682	1800	10913	8048	1750	201	190	EU IIIB
16V 4000 R74	2200	2950	1800	12005	8853	1750	202	190	EU IIIB
16V 4000 R84	2400	3218	1800	13096	9658	1750	199	190	EU IIIB

* Emission: EU: Nonroad Directive 97/68/EC (as amended by 2004/26/EC)

For additional technical data and project support please consult your distributor.

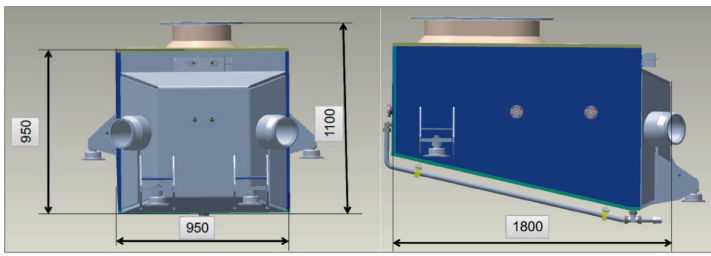


Power. Passion. Partnership.

Standard Equipment
Advanced Diesel Engine Control (ADEC)
Common rail injection system
Two-stage turbocharging
Charge-air cooling as separate circuit
Flywheel housing SAE # 00
Resilient engine mountings
24V Starter
28V DC/140A Battery-charging generator
Power Output Module (POM) 24V
Connection interface (PAU)
Long-life 4-valve cylinder heads
Diesel particle filter

Optional Equipment
Dry-type air filter
Auxiliary PTOs
Assembly and drive parts for hydrostatic pump
Transformer: 64-72V DC/24V DC or 96/110V DC/24V DC
Various interface for I/O signals
Fuel prefilter
CaPoS - Capacitor Power System
Various adapters for connections and interfaces
Coupling for main drive

Diesel Particulate Filter – 12V 4000 R64/R84

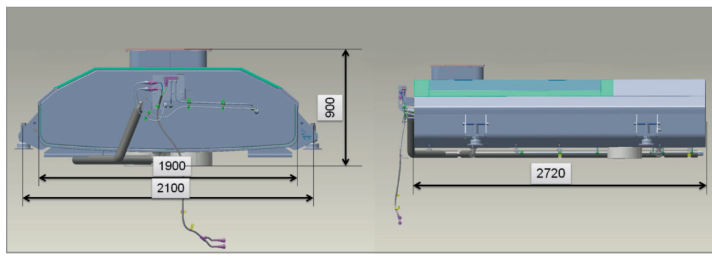


Dimensions and Masses

Engine	Dimensions (LxWxH) mm (in)	Mass, kg (lbs)
12V	1800 x 950 x 1100 (70.9 x 37.4 x 43.3)	850 (1874)

Reference conditions:
 > Intake-air temperature: 25°C (77°F) > Charge air coolant temp.: 45°C (113°F)
 > Ambient air pressure: 1000 mbar > Altitude above sea level: 100 m (328 ft)
 Subject to change without notice. Customization possible. Engines illustrated in this document may feature options not fitted as standard to standard engine.

Diesel Particulate Filter – 16V 4000 R64/R74/R84



Dimensions and Masses

Engine	Dimensions (LxWxH) mm (in)	Mass, kg (lbs)
16V	2720 x 2100 x 900 (107.1 x 82.7 x 35.4)	1300 (2866)