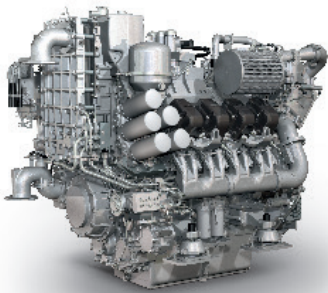




## Marine

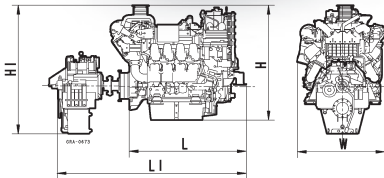
# DIESEL ENGINES 8V 4000 M53R/M53

for vessels with unrestricted continuous operation (1A)



| Engine                   | Dimensions (LxWxH) mm (in)   | Mass, dry kg (lbs) |
|--------------------------|--|--------------------|
| M53R/M53                 | 2040 x 1615 x 2060 (80.3 x 63.6 x 81.1)                            | 5610 (12368)       |
| Engine with gearbox type | Dimensions (L <sub>x</sub> W <sub>x</sub> H <sub>g</sub> ) mm (in) | Mass, dry kg (lbs) |
| M53R/M53 - WAF 562       | 3142 x 1615 x 2417 (123.7 x 63.6 x 95.2)                           | 7117 (15690)       |

\* gear ratio on request



Typical applications: e.g. work boats, tugs, barges, ferries, governmental vessels

Optional equipment and finishing shown. Standard may vary.

| Engine type                                     |           | 8V 4000 M53R                       | 8V 4000 M53                        |
|---|-----------|------------------------------------|------------------------------------|
| Rated power ICFN                                | kW        | 746                                | 920                                |
|   | (bhp)     | (1000)                             | (1234)                             |
| Speed   | rpm       | 1600                               | 1800                               |
| No. of cylinders                                |           | 8                                  | 8                                  |
| Bore/stroke                                     | mm (in)   | 170/210 (6.7/8.3)                  | 170/210 (6.7/8.3)                  |
| Displacement, total                             | l (cu in) | 38.2 (2331)                        | 38.2 (2331)                        |
| Optimization of exhaust emissions <sup>1)</sup> |           | IMO II/EPA 2/EU IIIA <sup>2)</sup> | IMO II/EPA 2/EU IIIA <sup>2)</sup> |

1) IMO - International Maritime Organisation (MARPOL)  
EPA - US Marine Regulation 40 CFR 94  
EU - EU Nonroad Directive 97/68/EC

2) Recognition through the RheinSchUO (CCNR)

M53 - unrestricted continuous duty with average load factors up to approximately 90%

| Fuel Consumption * |         | 20V 4000 M73 | 20V 4000 M73L |
|--------------------|---------|--------------|---------------|
| at rated power     | g/kWh   | 206          | 208           |
|                    | l/hr    | 185.2        | 230.6         |
|                    | (gal/h) | (48.9)       | (60.9)        |

\* Tolerance +5% per ISO 3046, Diesel fuel to DIN EN 590 with a min L.H.V. of 42800kJ/kg (18390 BTU/lb)

| Standard equipment       |   |
|--------------------------|---|
| Starting system          | Electric starter motor 24V, 2 pole  |
| Oil system               | Gear driven lube oil pump, non switchable oil filter, Centrifugal oil filter, lube oil heat exchanger, opened crankcase ventilation, lube oil extraction pump   |
| Fuel system              | Fuel conditioning system with water separator, Fuel delivery pump, duplex lube fuel filter with diverter valve, common rail fuel injection system with high-pressure pump, pressure accumulator and electronic fuel injection with cylinder cutout system, jacketed HP fuel lines, flame- proof hose lines, leak-off fuel tank level monitoring |
| Cooling system           | Engine version for separate heat exchanger, gear driven coolant circulation pump  |
| Combustion air system    | Dry charge air manifolds, engine coolant temperature-controlled intercooler, turbocharging with 2 water-cooled turbochargers, on-engine seawater-resistant air filters  |
| Exhaust system           | Triple-walled, liquid-cooled, on-engine exhaust manifolds, vertical discharge, exhaust bellow   |
| Mounting system          | Rigid Engine Mounting   |
| Power transmission       | Torsional resilient and off-set compensating coupling (Centa CX for D-Drive); Torsional resilient coupling with bearing housing (Centamax for T-Drive)  |
| Auxiliary PTO            | Generator 120A, 28V, 2-pole   |
| Engine management system | Engine control and monitoring system (ADEC); engine interface module - EiM, engine mounted  |
| Engine safety system     | The scope of delivery for the engine fulfils SOLAS requirements for admissible surface temperature and shielding of fuel and lube oil lines   |

| Optional equipment       |  |
|--------------------------|--|
| Starting system          | Coolant preheating system; air starter   |
| Oil system               | Lube oil priming system, oil level monitoring, automatic oil replenishment system with basic scope of monitoring switchable oil filter with extended scope of monitoring               |
| Fuel System              | Switchable pre-filter with water separator in conjunction with switchable additional secondary filter  |
| Cooling system           | Coolant-to-raw water plate core heat exchanger, self priming centrifugal raw water pump, engine mounted coolant expansion tank, raw-water connection for gearbox cooling               |
| Combustion air system    | Intake air silencer  |
| Exhaust system           | 90° elbow for horizontal discharge   |
| Engine Mounting          | Resilient engine mounting  |
| Auxiliary PTO            | Bilgepump as secondary coolant pump, PTOs at free end of engine  |
| Engine management system | Expansion In compliance with extended scope of monitoring (individual exhaust temperature monitoring)  |
| Gearbox Options          | Various reserve reduction gearbox models, elec. actuated, gearbox mounts, PTO for hydraulic pump at driving shaft or at mediate shaft, trolling, trailing pump, propeller shaft flange |
| Classification           | ABS, BV, CCS, CR, DNV, GL, KR, LR, NK, RINA including necessary extensions to scope of supply.   |

Reference conditions:

- > Power definition according ISO 3046
- > Intake air temperature: 25°C/Sea water temperature: 25°C
- > Intake air depression 15 mbar/Exhaust back pressure 30 mbar
- > Barometric pressure 1000 mbar
- > Power reduction at 45°C/32°C: 3%

We reserve the right to change technical data. All data represent approximate values, refer to the installation drawing for full details. Contact your MTU distributor/dealer for more information.