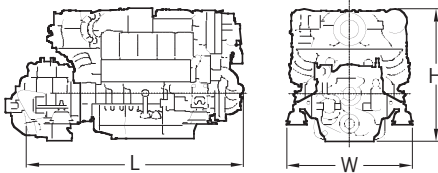
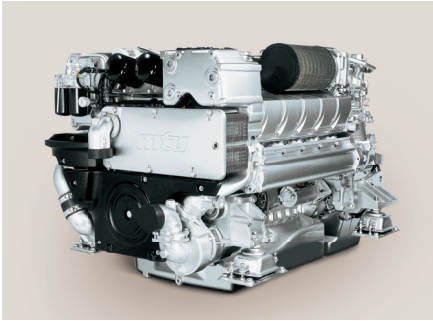


Diesel Engines 12V/16V 2000 M84

for Fast Vessels with Intermittent Load Factors (1D)



Dimensions and Masses

2000 M84	Dimensions (LxWxH) mm (in)	Mass, dry kg (lbs)
12V	1900x1295x1370 (74.8x51.0x53.9)	2810 (6195)
16V	2315x1295x1410 (91.1x51.0x55.5)	3380 (7452)

2000 M84 - with Gearbox type*	Dimensions (LxWxH) mm (in)	Mass, dry kg (lbs)
12V - ZF 2050	2440x1295x1320 mm (96.1x51.0x52.0 in)	3270 kg (7209 lbs)
16V - ZF 3060	2950x1295x1400 mm (116.1x51.0x55.1 in)	4010 kg (8840 lbs)

* gear ratio on request

Typical applications: Fast yachts, fast patrolboats, police craft and fire-fighting vessels

Engine Model	12V 2000 M84	16V 2000 M84
Rated power ICFN kW (bhp)	1220 (1635)	1630 (2185)
Speed rpm	2450	2450
No. of cylinders	12	16
Bore/stroke mm (in)	135/156 (5.4/6.1)	135/156 (5.4/6.1)
Displacement, total l (cu in)	26.8 (1635)	35.7 (2179)
Flywheel housing	SAE 0	SAE 0
Gearbox type	ZF 2050	ZF 3060
Optimization of exhaust emissions ²⁾	IMO II/EPA 2/EU ³⁾	IMO II/EPA 2/EU ³⁾
Solas compliance	Yes	Yes

²⁾ IMO – International Maritime Organisation
EPA – US Marine Directive 40 CFR 94
EU – Recreational crafts 94/25 EC

³⁾ EU IIIA/RheinSchUO (CCNR) on request



Performance and Fuel Consumption		12V 2000 M84				16V 2000 M84				
Speed	rpm	2450	2100	1700	1200	2450	2100	1700	1200	
Maximum power	kW	1220	1210	975	600	1630	1595	1310	790	
	bhp	1636	1623	1307	805	2185	2139	1757	1059	
Power on propeller curve (n ³)	kW	1220	775	410	145	1630	1020	545	190	
	bhp	1636	1039	550	194	2185	1368	731	255	
Fuel consumption	g/kWh	217	212	217	229	216	210	211	229	
	on propeller curve (n ³) ¹⁾	l/h	319.0	198.0	107.2	40.0	424.2	258.1	138.5	52.4
	gal/h	84.3	52.3	28.3	10.6	112.1	68.1	36.6	13.8	

¹⁾ 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 24 V
Auxiliary PTO	Charging generator, 80A, 28V, 2 pole
Oil system	Gear driven lube oil pump, lube-oil duplex filter with diverter valve, lube-oil heat exchanger, handpump for oil extraction
Fuel system	Fuel feed pump, fuel hand pump, fuel pre-filter, fuel main filter with diverter valve, on-engine fuel oil cooler, HP fuel pump, jacketed HP fuel lines, injection nozzles (Common rail system) flame proof hose lines, leak-off tank level monitored
Cooling system	Coolant-to-raw water plate core heat exchanger, self priming centrifugal raw water pump, gear driven coolant circulation pump
Combustion air system	Sequential turbocharging with 2 water-cooled exhaust-gas turbochargers, on-engine intake air filters
Exhaust system	Triple-walled, liquid-cooled, on-engine exhaust manifolds, single centrally located exhaust outlet, 1 exhaust bellows vertical discharge
Mounting system	Resilient mounts at free end
Engine management system	Engine and gearbox control and monitoring system (ADEC)

Optional Equipment	
Auxiliary PTO	Charging generator, 140A or 200A, 28V, 2 pole, bilgepump, on-engine PTPs
Oil system	Centrifugal oil filter, oil replenishment system
Fuel System	Duplex fuel pre-filter
Cooling System	Coolant preheating system engine mounted, integr. seawater gearbox piping
Exhaust System	Exhaust bellows horizontal discharge
Mounting System	Resilient mounts at driving end
Engine Management System	In compliance with Classification Society Regulations (EMU + MEU)
Monitoring/Control System	smartline, blueLine, bluevision
Power Transmission	Torsionally resilient coupling
Gearbox Options	Reverse reduction gearbox, el. actuated, gearbox mounts, trolling mode for dead-slow propulsion, free auxiliary PTO, hydraulic pump drives

> Power definition according ISO 3046

> Intake air depression 15 mbar/Exhaust back pressure 30 mbar

> Power reduction at 45°C/32°C: none

Specifications are subject to change without notice. All dimensions are approximate, for complete information refer to installation drawing. For further information consult your MTU distributor/dealer.

> Intake air temperature 25°C/Sea water temperature 25°C

> Barometric pressure 1000 mbar