

Marine

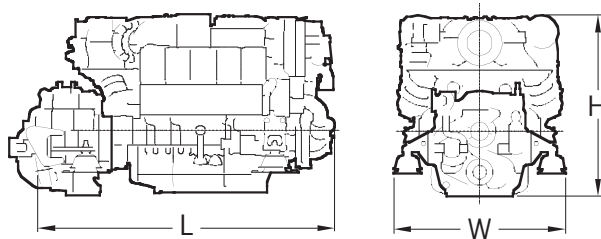
# Diesel Engines 12V/16V 2000 M72

## for Fast Vessels with High Load Factors (1B)



### Dimensions and Masses

2000 M72 - with gearbox	Dimensions (LxWxH) mm (in)	Mass, dry kg (lbs)
12V/ZF 3050	3130x1295x1505 (123.2x51.0x59.3)	4600 (10141)
16V/ZF 4540	2685x1295x1385 (105.7x51.0x54.5)	3680 (8113)



Typical applications: Ferries, monohulls, hydrofoils, catamarans, surface effect ships and displacement yachts

Engine Model	12V 2000 M72	16V 2000 M72
Rated power ICFN      kW (bhp)	1080 (1450)	1440 (1930)
Speed                      rpm	2250	2250
No. of cylinders	12	16
Bore/stroke              mm (in)	135/156 (5.3/6.1)	135/156 (5.3/6.1)
Displacement, total    l (cu in)	26.8 (1635)	35.7 (2179)
Flywheel housing	SAE 1	SAE 1
Gearbox type	ZF 3050 i = 1,3 - 3,0	ZF 4540 i = 1,3 - 4,0
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 Organization (MARPOL)  
 EPA - US marine directive 40 CFR 94  
 EU - Nonroad Directive 97/68/EC including the RheinSchUO (CCNR)  
 2) including Recreational crafts 94/25 EC



Power. Passion. Partnership.

Performance and Fuel Consumption		12V 2000 M72			16V 2000 M72		
Speed	rpm	2250	1950	1200	2250	1950	1200
Maximum power	kW	1080	1060	525	1440	1420	690
	bhp	1450	1420	705	1930	1905	925
Power on propeller curve(n3)	kW	1080	720	170	1440	950	225
	bhp	1450	965	228	1930	1275	300
Fuel consumption on propeller curve <sup>1)</sup>	g/kWh	208	217	218	206	207	216
	l/h	270.7	188.2	44.65	357.4	237.0	58.6
	gal/h (US)	71.5	49.7	11.8	94.4	62.6	15.5

<sup>1)</sup> 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 (CR system), flame proof hose lines, leak-off fuel 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 set of combustion-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, 28V, 2 pole, bilgepump, on-engine PTOs
Oil System	Centrifugal oil filter, oil replenishment system
Fuel System	Duplex fuel pre-filter
Cooling System	Coolant preheating system, integr. seawater gearbox piping
Exhaust System	1 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	<b>smartline, blueLine, bluevision</b>
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
Classification	ABS, BV, CCS, DNV, GL, KR, JG, LR, NK, RINA

> Power definition according ISO 3046

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

> Power reduction at 45°C/32°C: none

> All engines EPA Tier 2 certified

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

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

> Barometric pressure 1000 mbar

> All engines fulfil IMO emission regulation, certificate on request

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