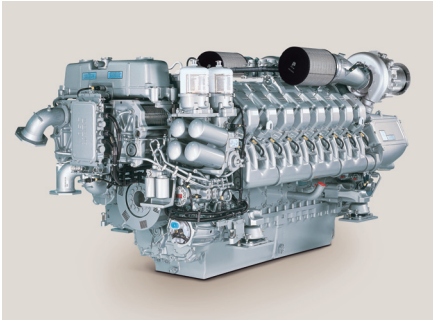


Marine

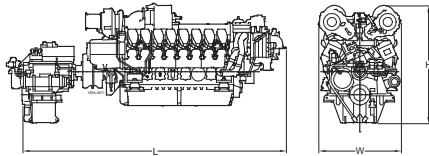
Diesel Engines 12V/16V 4000 M71

for Fast Vessels with High Load Factors (1B)



Dimensions and Masses

4000 M71 - with gearbox	Dimensions (LxWxH) mm (in)	Mass, dry kg (lbs)
12V/ZF 7550	4055x1520x1890 (159.6x59.8x74.4)	7855 (17317)
16V/ZF 7600	4525x1520x1890 (178.1x59.8x74.4)	9060 (19974)



Typical applications: Ferries, Monohulls, Hydrofoils, Catamarans, Surface Effect Ships and Yachts

Engine Model	12V 4000 M71	16V 4000 M71
Rated power ICFN kW (bhp)	1850 (2480)	2465 (3305)
Speed rpm	2000	2000
No. of cylinders	12	16
Bore/stroke mm (in)	165/190 (6.5/7.5)	165/190 (6.5/7.5)
Displacement, total l (cu in)	48.7 (2972)	65.0 (3967)
Flywheel housing	SAE 00	SAE 00
Gearbox type	ZF 7550	ZF 7600
	i = 1.5 – 3.0	i = 1.5 – 2.5
Optimization of exhaust emissions ¹⁾	IMO I	IMO I

1) IMO - International Maritime Organization (MARPOL)



Power. Passion. Partnership.

Performance & Fuel Consumption ¹⁾		12V 4000 M71			16V 4000 M71			
Speed	rpm	2000	1800	1200	2000	1800	1200	
Maximum power	kW	1850	1750	770	2465	2395	1140	
	bhp	2480	2345	1035	3305	3210	1530	
Power on propeller curve(n ³)	kW	1850	1350	400	2465	1800	530	
	bhp	2480	1810	535	3305	2415	710	
Fuel consumption	g/kWh	209	209	213	209	211	213	
	on propeller curve	l/h	465.8	340.0	102.7	620.7	457.6	136.0
	gal/h	123.6	89.8	27.1	164.0	121.0	96.0	

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, 2 pole
Oil system	Gear driven lube oil pump, lube-oil duplex filter with diverter valve, centrifugal oil filter, lube-oil heat exchanger, handpump for oil extraction
Fuel system	Fuel delivery pump, fuel duplex 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 monitored, fuel hand pump, fuel pre-filter with water separator
Cooling system	MTU-split-circuit coolant system, coolant-to-raw water plate core heat exchanger, self priming centrifugal raw water pump, gear driven coolant circulation pump, raw-water connection for gearbox cooling
Combustion air system	Engine coolant temperature-controlled intercooler, sequential turbocharging with 2 water-cooled turbochargers, on-engine set of seawater-resistant combustion-air filters
Exhaust system	Triple-walled, liquid-cooled, on-engine exhaust manifolds, exhaust bellows (horizontal discharge)
Mounting system	Resilient mounts
Power Transmission	Torsional and offset compensating couplings
Auxiliary PTO	Charging generator, 120A, 28V, 2 pole
Engine management system	Engine control and monitoring system (MDEC), interface to gearbox control, interface to remote control and monitoring system, local operating panel (LOP)

Optional Equipment	
Starting system	Coolant preheating system
Oil system	Lube oil priming system
Cooling System	Engine version for sealed engine coolant system in conjunction with ship`s side recooling system
Exhaust System	Exhaust outlet elbow (45°, 70°, 90°)
Auxiliary PTO	Bilgepump
Engine management system	In compliance with Classification Society Regulations
Monitoring / Control system	Fuel consumption measurement device (KRAL), monitoring and control system MCS-5, remote control system RCS-5
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 incl. necessary extensions to scope of supply

> The rated power corresponds to ISO 3046-1:2002 (E) and ISO 15550:2002(E)

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

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

> Barometric pressure 1000 mbar

The power produced at the flywheel will be within the tolerance of ±3% - according to ISO 15550:2002(E)- up to 45°C (113°F) combustion air temperature measured at the air cleaner inlet and up to 32°C (89,6°F) sea or raw water temperature measured at the sea water pump suction inlet. Specifications are subject to change without notice. All dimensions are approximate. For complete information refer to installation drawing. For further information consult your MTU dealer.

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