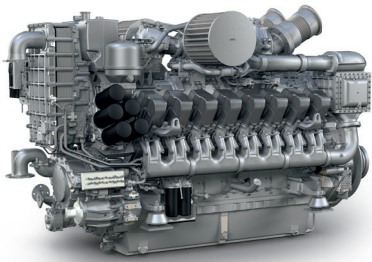




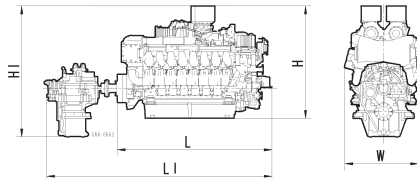
Marine

DIESEL ENGINES 16V 4000 M24S/M34S

for on-board power generation and diesel-electric drives
in continuous operation (3A/3B)



Engine	Dimensions (L x W x H) mm (in)	Mass, dry kg (lbs)
M24S/ M34S	3108 x 1690 x 2064 (122.4 x 66.5 x 81.3)	9070 (19996)



Optional equipment and finishing shown. Standard may vary.

Engine type		16V 4000 M24S	16V 4000 M34S
Rated power ICFN	kW	1685	1999
	(bhp)	(2260)	(2681)
Speed	rpm	1800	1800
Frequenz	Hz	60	60
No. of cylinders		16	16
Bore/stroke	mm (in)	170/210 (6.7/8.3)	170/210 (6.7/8.3)
Displacement, total	l (cu in)	76.3 (4656)	76.3 (4656)
Flywheel housing		SAE 0	SAE 0
Exhaust optimization 1)		IMO II/EPA 3 C	IMO II/EPA 3 C

1) IMO - International Maritime Organisation (MARPOL)
EPA - US Marine Regulation 40 CFR 1042

Fuel consumption *		16V 4000 M24S	16V 4000 M34S
at 100% power	g/kWh	on request	202
	l/h (gal/h)	on request (on request)	484.0 (127.9)
at 75% power	g/kWh	on request	228
	l/h (gal/h)	on request (on request)	410.3 (108.3)

* 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, pump for lube oil extraction, closed crankcase ventilation
Fuel system	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 monitoring, switchable pre-filter with water separator in conjunction with switchable additional secondary filter
Cooling system	Gear driven coolant circulation pump, coolant-to-raw water plate core heat exchanger, engine mounted coolant expansion tank, self priming centrifugal raw-water pump, raw-water connection for generator cooling
Combustion air system	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, 30° discharge elbow, exhaust bellows
Mounting system	Rigid engine mounting
Auxiliary PTO	Charging 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, automatic oil filter
Fuel system	Fuel conditioning system with water separator
Cooling system	Engine version for separate heat exchanger
Combustion air system	Intake air silencer
Exhaust system	90° discharge elbow
Engine mounting	Resilient engine mounting
Auxiliary PTO	Bilgepump, PTOs at free end of engine
Engine management system	Expansion In compliance with extended scope of monitoring (individual exhaust temperature monitoring)
Classification	ABS, BV, DNV, GL, LR including necessary extensions to scope of supply

Reference conditions:

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

> Barometric pressure 1000 mbar

Specifications are subject to change without notice.

All dimensions are approximate, for complete information refer to installation drawing. For further information consult your distributor/dealer.