

MD22

4-cylinder, freshwater cooled marine diesel engine Crankshaft power* 43.6 kW (59 hp)

* Crankshaft power according to ISO 8665

The MD22 is a marine engine of advanced design manufactured from quality components and designed to fulfil customer requirements.

Service Life

The MD22 is fitted with freshwater cooling as standard. This reduces internal corrosion and enables the engine to maintain a consistent and optimal working temperature under all conditions.

Comfort

Even running with very low vibration levels results from a dynamically balanced design and high efficiency rubber insulation.

The engine's high torque provides excellent operating characteristics to aid maneuvering, particularly narrow harbors handling.

Additional on board comfort features are available from an extensive range of matched accessories.

Environment

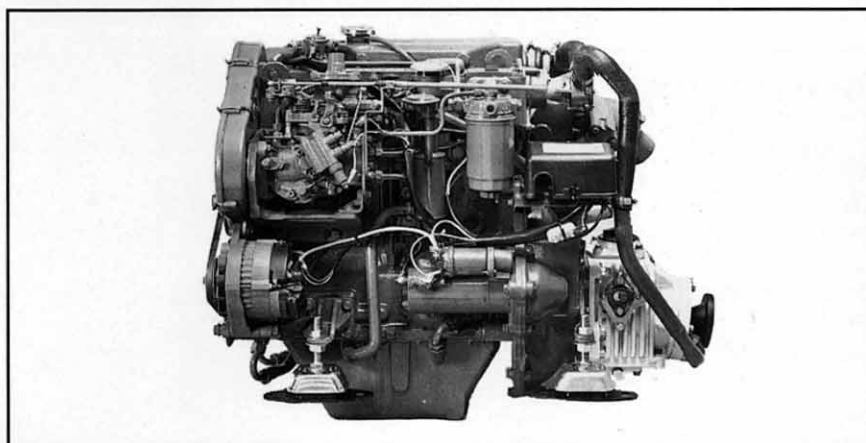
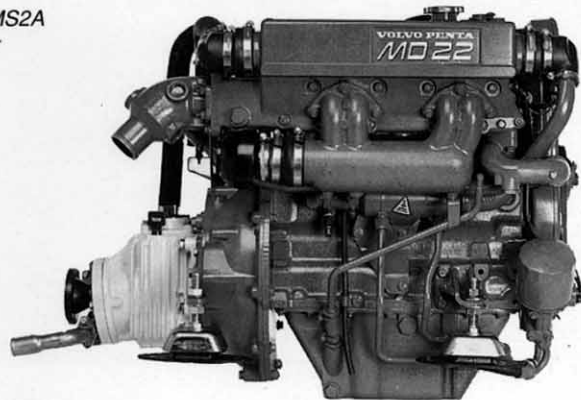
An advanced combustion system increases fuel burning efficiency to minimize noxious exhaust emissions and enhance overall enjoyment of boating.

The engine is certified for use on Lake Constance – where exhaust emission regulations are probably the toughest in the world.

Transmissions

Four matched transmission options are available, each built for durability and smooth running.

MD22 with MS2A
reverse gear



Technical description:

Engine and block

- Engine block manufactured from high grade cast iron and cylinder head and pistons of aluminum alloy
- Pistons fitted with two compression rings and a single oil scraper ring
- Overhead camshaft
- Replaceable, hardened valve seats in cylinder head
- Flexible coupling on flywheel

Fuel system

- Flange mounted injection pump of rotor type with mechanical regulator for accurate speed control
- Feed pump with hand primer
- Spin-on type fine fuel filter

Cooling system

- Freshwater cooling system governed by thermostat and circulation pump
- Tubular heat exchanger with integral expansion tank

- Coolant system prepared for hot water outlet fittings
- Impeller pump for seawater system

Exhaust system

- Freshwater cooled exhaust manifold and seawater cooled exhaust elbow

Lubrication system

- Spin-on fullflow oil filter
- Separate oil scavenger pipe
- Closed circuit crankcase ventilation
- Oil cooler

Electrical system

- 12V, two pole, corrosion protected electrical system
- 14V/60A marine alternator
- Charging regulator with electronic sensor for voltage drop compensation
- Electrically operated stop
- Glow plugs for excellent cold starting
- Electric starter motor (1.8 kW output)
- Extension cable harness with plug-in connection available in 3, 5 or 7 m lengths

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MD22

Choice of instrument panel:

Standard panel, including:

- Rev counter
- Key switch
- Alarm (for monitoring temperature, oil pressure and charge rate)
- Instrument panel lighting
- Alarm test button

De Luxe panel including:

- Rev counter
- Key switch
- Temperature gauge
- Oil pressure gauge
- Voltmeter
- Alarm (for monitoring temperature, oil pressure and charge rate)
- Instrument panel lighting
- Alarm test button

Engine mounting:

- Tuned front and rear cushion-type rubber mounts. Adjustable.

Choice of transmissions:

MS2A – reverse gear with 7° down angle output. Ratio 2.4:1 or 3.0:1.

MS2L – reverse gear with straight output

120S - S-drive

- Housing of gravity die-cast aluminum alloy
- Pattern-matched helical cut gears
- Mechanical, molybdenum-coated cone clutch shift
- Safety coupling with built-in overload protection
- Internal oil cooler (MS2)

Accessories

- Engine controls and steering systems
- Additional instrument panels and instruments
- Extra alternator kits
- Battery and battery switches
- Hot water systems
- Separate expansion tanks
- Cooling water seacocks, strainers and hoses
- Exhaust systems and hull fittings
- Fuel systems including filters, pipes etc.
- Pulleys and universal brackets for power take-off (PTO)
- Propeller shaft systems and propellers
- Chemical products – paints, oils, cleaners etc.

Contact your local Volvo Penta dealer for further information.

Not all models, standard equipment and accessories are available in all countries. All specifications are subject to change without notice.

The engine illustrated may not be entirely identical to production standard engines.

Technical Data

Engine designation	MD22*
Crankshaft power ^{1) 2) 4)} kW (hp)	43.6 (59)
Propeller shaft power ^{3) 4) 5)} kW (hp)	41.9 (57)
Max engine speed, rpm	3600–4000
Displacement, l (cu. in.)	2.0 (122)
Number of cylinders	4
Bore/stroke, mm (in.)	84/89 (3.3/3.5)
Compression ratio	18:1
Dry weight with reverse gear MS2A/MS2L, kg (lb)	231 (508.9)
Dry weight with sail drive 120S, kg (lb)	239 (526.5)

Operating mode: PD = Pleasure duty, LD = Light duty

* Certified for Lake Constance

1) Crankshaft power according to ISO 8665 or SAE J 1228

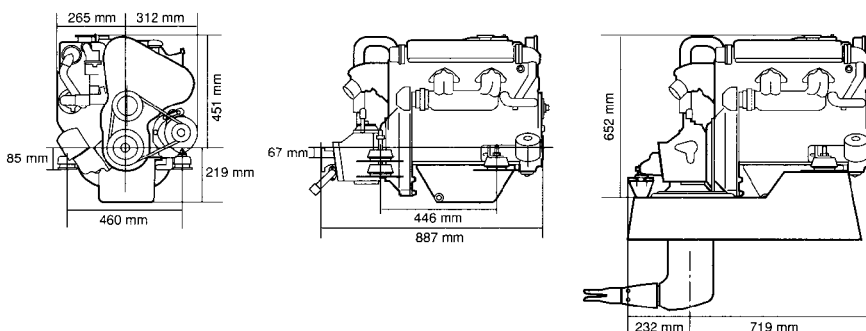
2) The power will be reduced by transmission losses

3) Propshaft power according to ISO 8665 or the basically compatible standards SAE J 1228 and ICOMIA 28-83

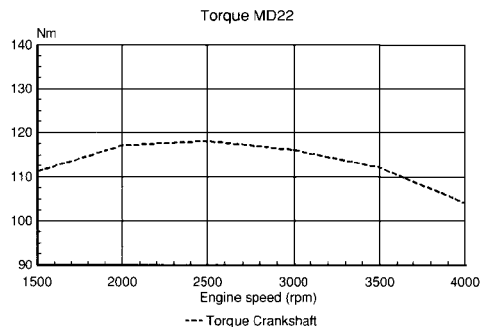
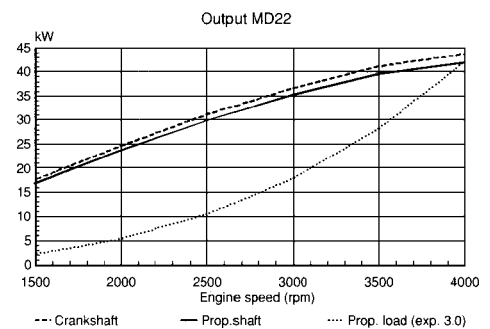
4) Power rated in accordance with NMMA procedure

5) With MS2

Dimensional Drawing



Not for installation



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