

VOLVO PENTA INBOARD DIESEL

TAMD31S

4-cylinder, 4-stroke, direct-injected turbocharged marine diesel engine with aftercooler and reverse gear. 74 kW (100 hp)*

* Crankshaft power according to ISO 8665

Reliable marine engine

TAMD31S is a reliable and economic marine engine with considerable power resources, developed for displacement craft, such as motorboats and sailing yachts.

Direct injection

Direct injection (DI) results in a low thermal load and low fuel consumption compared with swirl chamber engines (IDI) with the same cylinder capacity.

Turbocharging

The engine is turbocharged with an exhaust-driven turbocompressor. More air can be forced into the cylinder in this way with the result that more fuel can be injected and the engine runs more efficiently. Since combustion takes place in a turbo engine with excess air, the exhaust gases are cleaner than in a naturally-aspirated engine.

The newly-designed turbo is controlled by a wastegate valve and gives a considerably higher torque at low engine speed.

The turbo also acts as an additional silencer both on the induction side and on the exhaust side.

Aftercooler

The air heats up and expands when it is compressed. In other words, it takes up more space. The aftercooler cools the compressed and heated air and raises its oxygen content so that the engine can use the fuel more efficiently.

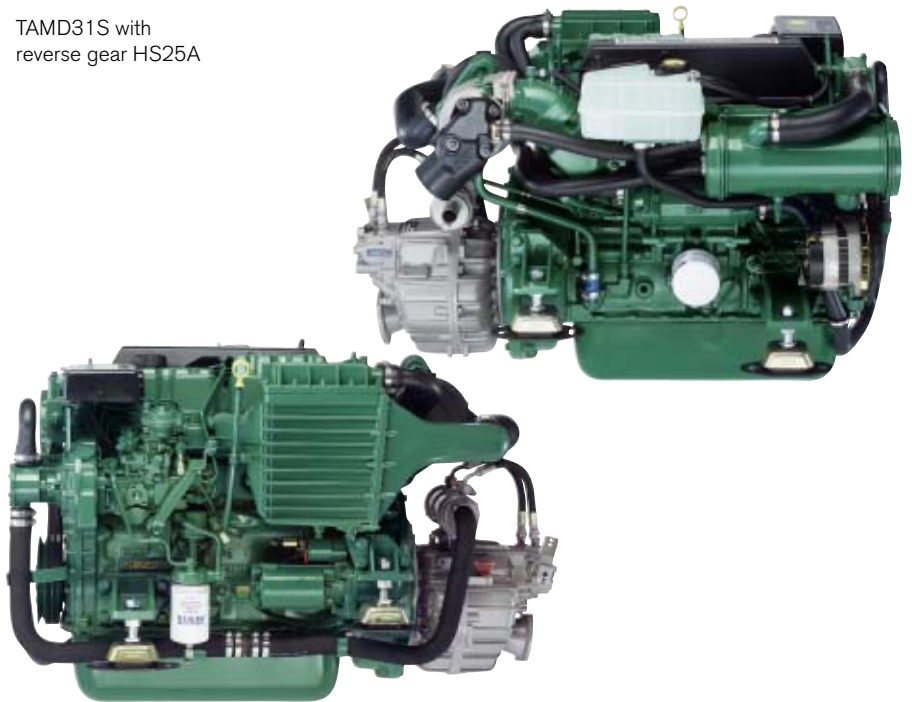
Low exhaust emission levels

The direct injection, turbocharging and aftercooler contribute to minimizing noxious exhaust emissions and enhancing overall enjoyment of boating. The TAMD31S is certified according to BSO II and SAV.

Reverse gear

Volvo Penta's mechanically and hydraulically shifted reverse gears have been specially developed with a view to increasing the standard of comfort on board in terms

TAMD31S with reverse gear HS25A



of quiet running, greater reliability and enhanced efficiency.

The combination of 8° down angle, large drop center and small dimensions provides for optimized installations.

A trolling valve kit is available to meet special demands, e.g. for sportfishing.

At Volvo Penta, focus is on developing the complete drive line ensuring perfectly matched engine/transmission packages for high torque, operational reliability, reduction of engine noise and vibrations.

Comprehensive service network

Volvo Penta has a well-established network of authorized service dealers in more than 100 countries throughout the world. These service centers offer Genuine Volvo Penta Parts as well as skilled personnel to ensure that you enjoy the best possible service.

Technical description:

Engine and block

- Cylinder block and cylinder head made of cast iron for good corrosion resistance and long service life
- Oil-cooled pistons with two compression rings and one oil scraper ring
- Replaceable wet cylinder liners
- Replaceable valve seats
- Five-bearing crankshaft

Engine mounting

- Elastic suspension consisting of 4 rubber pads with adjustable anchorage plates for dampening of sound and vibration

Lubrication system

- Pressure lubrication system with easily replaced full-flow oil filter on the side of the engine
- Tubular oil cooler that can be cleaned

Fuel system

- Rotor-type injection pump with a mechanical governor for accurate speed control
- Smoke limiter
- Fine filter with water separator
- Feed pump with hand primer
- Electrically-operated stopping device

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TAMD31S

Inlet and exhaust system

- Inlet system designed to produce optimal air rotation, which provides perfect combustion. This results in high power and low fuel consumption.
- Inlet silencer with replaceable filter
- Closed crankcase vent system
- Seawater-cooled exhaust elbow of cast iron with a stainless steel insert
- Turbocharged with wastegate

Cooling system

- Thermostatically regulated freshwater cooling
- Tubular heat exchanger with separate transparent expansion tank
- Gear-driven seawater pump with rubber impeller
- Coolant system prepared for hot water outlet

Electrical system

- 12V corrosion-protected electrical system, complete with instrumentation
- 14V/60A marine alternator
- Charging regulator with battery sensor for voltage drop compensation
- The alternator is prepared for a bulk-head-mounted double-diode set which

automatically distributes the charge current

- to two separate battery circuits
- Automatic fuse with reset button
- Starter motor power 3.0 kW
- Extension cable harness with plug-in connection available in various lengths

Instrument panel:

Separate instruments and harness or complete panel fitted with:

- Key switch
- Temperature gauge
- Instrument lighting
- Alarm for temperature, oil pressure and charging
- Voltmeter
- Rev counter
- Hour meter
- Oil pressure gauge
- Alarm test

Reverse gear

HS25A Hydraulic - drop center with 8° down angled output shaft. Trolling valve kit available.

- Ratio 2.29:1/2.29:1 (RH/LH) and 2.71:1/2.71:1 (RH/LH).

MS25A Mechanical - drop center with 8° down angled output shaft.

- Ratio 2.23:1/2.74:1 (RH/LH).

MS25L Mechanical - drop center with straight output shaft.

- Ratio 2.27:1/2.10:1 (RH/LH).

Accessories

An extensive range of accessories for:

- Fuel system
- Cooling system
- Control system
- Instruments
- Electric system
- Comfort & Safety
- Propellers
- Maintenance

For detailed information, please see Accessory catalogues.

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.....	TAMD31S
Crankshaft power, kW (hp).....	74 (100)
Propeller shaft power, kW (hp).....	71 (97)
Engine speed, rpm.....	3000
Displacement, l (in ³).....	2.4 (146)
Number of cylinders.....	4
Bore/stroke, mm (in.).....	92/90 (3.62/3.54)
Compression ratio.....	17.5:1
Dry weight with HS25A/MS25, kg (lb).....	370/364 (816/802)

Operating mode: R5

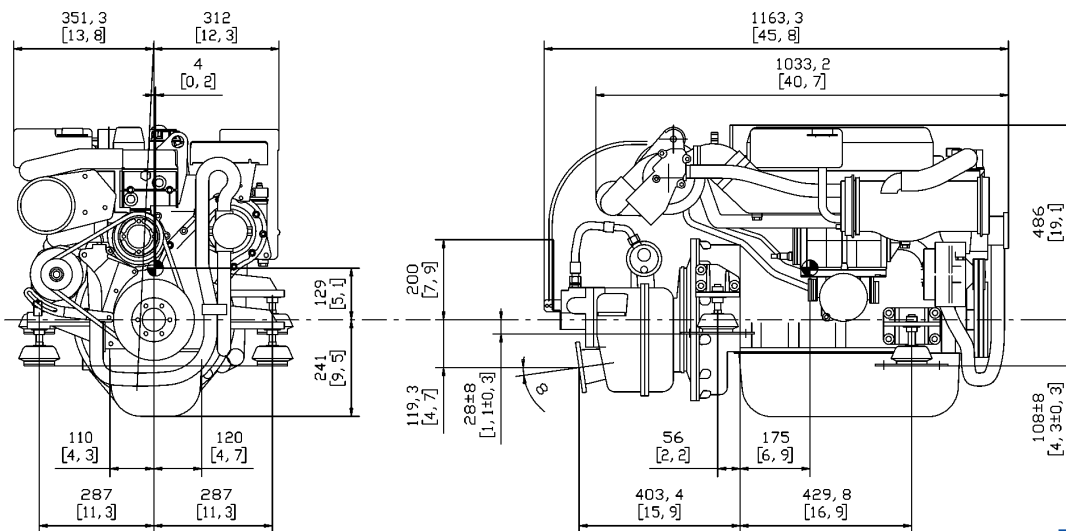
Technical data according to ISO 8665. Fuel with a lower calorific value of 42,700 kJ/kg and density of 840 g/liter at 15°C (60°F).

Merchant fuel may differ from this specification which will influence engine power output and fuel consumption.

The engine is certified according to BSO II and SAV.

Dimensions TAMD31S/HS25A

Not for installation



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AB Volvo Penta

SE-405 08 Göteborg, Sweden
www.volvopenta.com