

4-cylinder, 4-stroke, direct-injected turbocharged marine diesel engine with aftercooler and reverse gear. Up to 110 kW (150 hp)*

* Crankshaft power according to ISO 8665

Reliable marine engine

TAMD31 is a reliable and economic marine engine with considerable power resources, developed for planing craft. With its compact dimensions, it is excellent for twin installation.

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 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

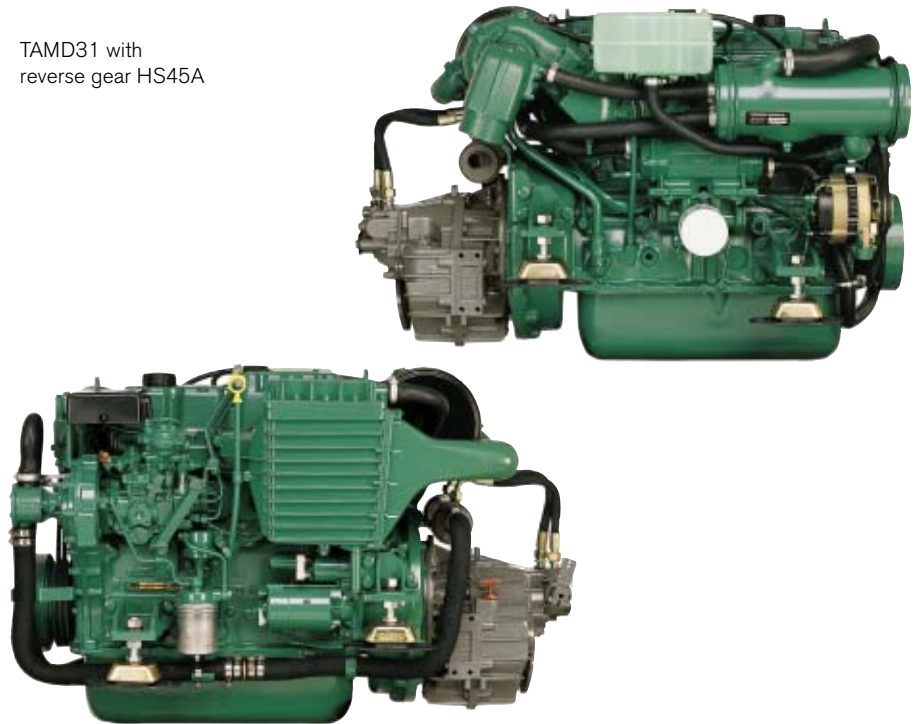
The direct injection, turbocharging and aftercooler contribute to minimizing noxious exhaust emissions and enhancing overall enjoyment of boating.

Reverse gear

Volvo Penta's hydraulically shifted reverse gear has been specially developed with a view to increasing the standard of comfort on board in terms of quiet running, greater reliability and enhanced efficiency.

These benefits originate from a hydraulic shifting mechanism and a

TAMD31 with reverse gear HS45A



gear technology that uses bevel gears throughout the gear train.

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

TAMD31

Air 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.
- Air inlet silencer with replaceable filter
- Closed crankcase vent system
- Seawater-cooled exhaust elbow of cast iron with a stainless steel insert
- Exhaust-driven freshwater-cooled turbo-charger

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 bulkhead-mounted double-diode set which auto-

matically 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

- Bevel gears which results in smooth running at all speeds
- Hydraulically operated clutch for smooth shifting
- Matched drop center and 8° down angle for compact installation and minimum propeller shaft angle
- When under sail propeller shaft can rotate 24 hours without engine start
- Seawater-cooled oilcooler
- Trolling valve kit available

Accessories

An extensive range of accessories for:

- Fuel system
- Cooling system
- Control system
- Instruments
- Electric system
- Comfort & Safety
- Propellers
- Maintenance
- MED (SOLAS) kit available

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	TAMD31P*	TAMD31L*	TAMD31M
Crankshaft power, kW (hp)	110 (150)	96 (130)	81 (110)
Propeller shaft power, kW (hp)	106 (144)	92 (124)	78 (106)
Engine speed, rpm	3900	3800	3250
Displacement, l (in ³)	2.4 (146)	2.4 (146)	2.4 (146)
Number of cylinders	4	4	4
Bore/stroke, mm (in.)	92/90 (3.62/3.54)	92/90 (3.62/3.54)	92/90 (3.62/3.54)
Compression ratio	17.5:1	17.5:1	17.5:1
Dry weight with HS45A, kg (lb)	400 (882)	400 (882)	400 (882)
Duty rating/Reverse gear:			
HS45A, RH (standard) or LH	R5-R4	R5-R3	R5-R2
Ratio: 2.43:1, 2.03:1, 1.51:1			

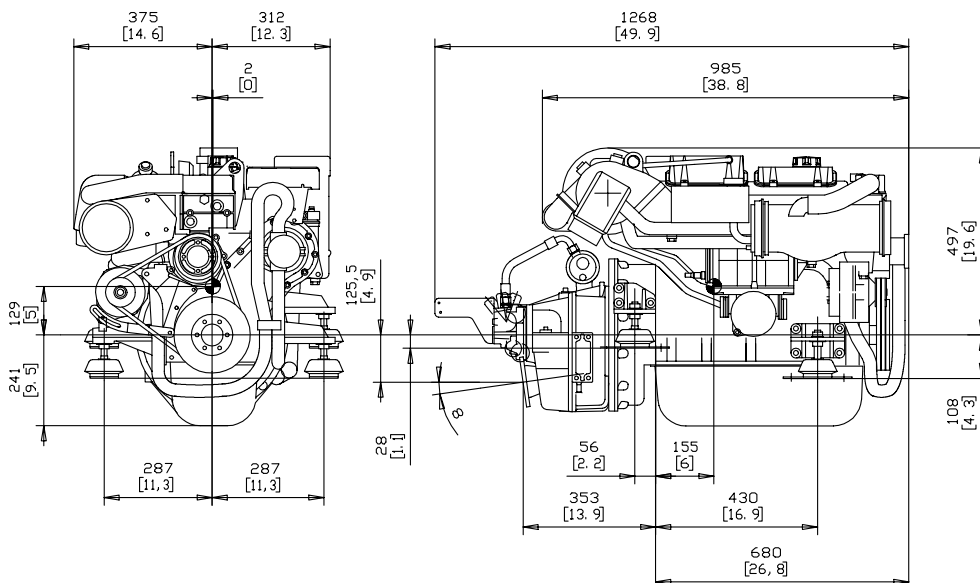
Technical data according to ISO 8665. Fuel with a lower calorific value of 42,700 kJ/kg and density of 840 g/liter at 15°C (60°F). Merchant fuel may differ from this specification which will influence engine power output and fuel consumption.

N.B. The product can also be used in an application with a higher rating than stated, e.g. R2 can be used for R3, R4 or R5.

* Certified according to SAV.

Dimensions TAMD31/HS45A

Not for installation



VOLVO PENTA

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