

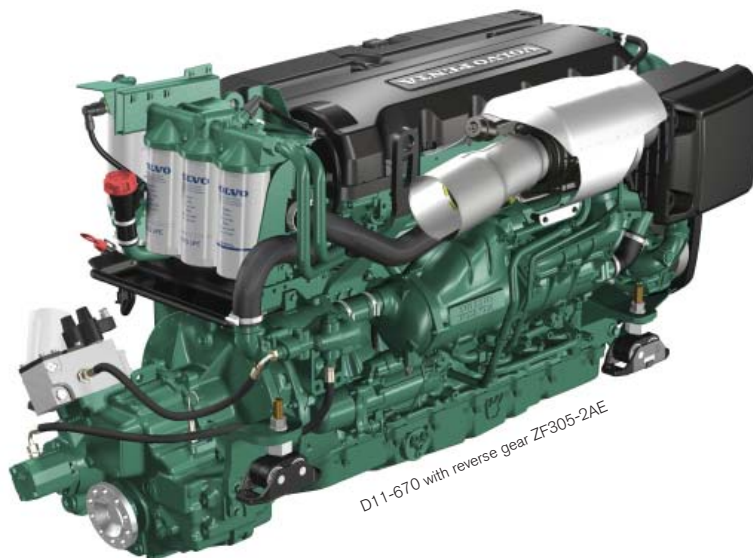
# VOLVO PENTA INBOARD DIESEL

# D11-670

493 kW (670 hp) crankshaft power acc. to ISO 8665

## Excellent Performance and Pleasant Cruising

Volvo Penta's D11 in-line 6 diesel is developed from the latest design in modern diesel technology. The engine has a robust block with ladder frame, high pressure unit injector system, 4 valves per cylinder, "twin entry" wastegate turbo and aftercooler. All together with the electronic engine management system results in a very smooth running engine with world-class diesel performance, combined with low fuel consumption and emissions.



### World-class performance

The high pressure unit injector system, controlled by electronic management, in combination with 4-valve technology, cross-flow inlet, and twin entry wastegate turbo ensure high power, low fuel consumption, and outstanding torque during acceleration, with virtually no sign of smoke. This matched with the engine's high load carrying capability creates a sporty feeling and power, when needed.

Furthermore, the engine management system offers constant power output regardless of fuel temperature (5–55°C/41–131°F), avoiding unnecessary power loss in warm climate.

### Comfort and high quality

The D11-670 is a further development of the new Volvo inline-6 diesel platform with a robust compacted graphite iron (CGI) block design, rear-end transmission, ladder frame and a one-piece cylinder head with overhead camshaft operating 4 valves per cylinder. This contributes to smooth running, high reliability and long-term durability.

The D11-670 base engine is built in the world's most automated diesel engine factory line with robotic machining and assembly made with computer controlled audit checks, which ensures the highest quality level.

### EVC/EC

EVC Electronic Vessel Control is Volvo Penta's common electronic platform to govern the engine and transmission and

to increase the integration of driver information in your boat.

It offers: electronic shift and throttle for smooth and safe control, twin engine synchronization for smooth running, a complete range of easy to read data link gauges, and an EVC System Display (option) and much more, everything in just one CAN cable.

EVC also makes boating easier and safer, having several built-in engine functions for protection and handling. It also offers software functions such as Low Speed (option), which reduces boat speed at idle.

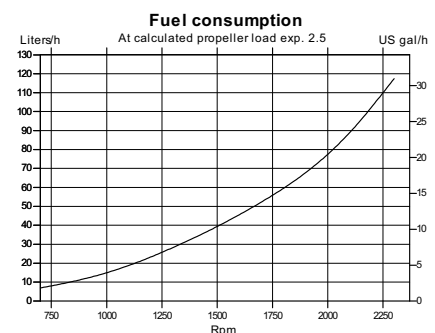
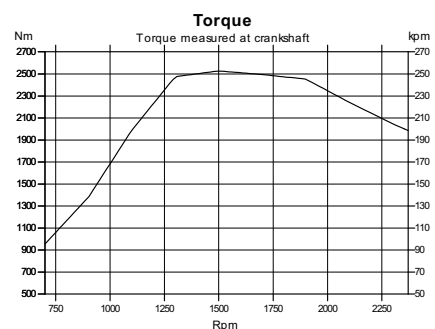
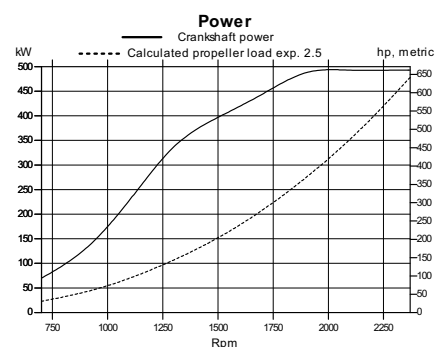
EVC is scalable from one station up to four, from a classic dashboard up to an advanced driver information system. The system is built on the latest automotive technology with waterproof connectors.

### Ease of service and maintenance

The EVC system features a self-diagnostic facility, which indicates at the dashboard if a failure should occur. The engine has a compact and clean design, and with all fluid filters symmetrically positioned at the rear end, the engine is easy to service and maintain.

### Meeting new emission standards

The high pressure unit injector system in combination with electronics and an advanced combustion system are setting new standards in minimizing noxious emissions and particulates. The engine complies with IMO NOx limits and the comprehensive emission requirements EU RCD and US EPA Tier 2.



**VOLVO  
PENTA**

# D11-670

## Technical description:

### Engine and block

- Cylinder block made of compacted graphite iron (CGI)
- One-piece cast-iron cylinder head
- Ladder frame fitted to engine block
- Replaceable wet cylinder liners and valve seats/guides
- Drop forged crankshaft with induction hardened bearing surfaces and fillets with seven main bearings
- Four-valve-per-cylinder layout with overhead camshaft and center position of unit injectors
- Each cylinder features cross-flow inlet and exhaust ducts
- Gallery oil-cooled cast aluminum alloy pistons with three piston rings
- Rear-end transmission

### Engine mounting

- Flexible engine mounting (option)

### Lubrication system

- Integrated oil cooler in cylinder block

- Symmetrically positioned twin full flow oil filter of spin-on type and by-pass filter

### Fuel system

- Electronic high pressure unit injectors
- Gear-driven fuel pump and injection timing
- Electronically controlled central processing system (EMS - Engine Management System)
- Single fine fuel filter of spin-on type, with water separator and water alarm

### Air inlet and exhaust system

- Mid-positioned twin entry turbocharger with aftercooler
- Air filter with replaceable inserts
- Wet exhaust elbow (option)

### Cooling system

- Seawater-cooled tubular heat exchanger
- Coolant system prepared for hot water outlet
- Easily accessible seawater impeller pump in rear end

### Electrical system

- 24V with extra 12V/115A or 24V/80A alternator

### Instruments/controls (option)

- Complete instrumentation including key switch and interlocked alarm
- EVC monitoring panels for single or twin installations
- Electronic remote control for throttle and shift
- Plug-in connectors
- EVC system display

### Reverse gear

- ZF305-2A-E, ZF311A-E, ZF325IV-E, electronically shifted
- Low speed available as option

### Optional equipment

Contact your Volvo Penta representative.

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 .....	<b>D11-670</b>
No. of cylinders and configuration.....	in-line 6
Method of operation .....	4-stroke, direct-injected, turbocharged diesel engine with aftercooler
Bore/stroke, mm (in.) .....	123/152 (4.84/5.98)
Displacement, l (in <sup>3</sup> ).....	10.8 (660)
Compression ratio.....	16.5:1
Dry weight bobtail, kg (lb) .....	1130 (2491)
Crankshaft power, kW (hp) @ 2300 rpm .....	493 (670)
Max. torque, Nm (lb.ft) @ 1500 rpm.....	2527 (1864)
Recommended fuel to conform to.....	ASTM-D975 1-D & 2-D, EN 590 or JIS KK 2204
Specific fuel consumption, g/kWh (lb/hph) @ 2300 rpm .....	211 (0.342)

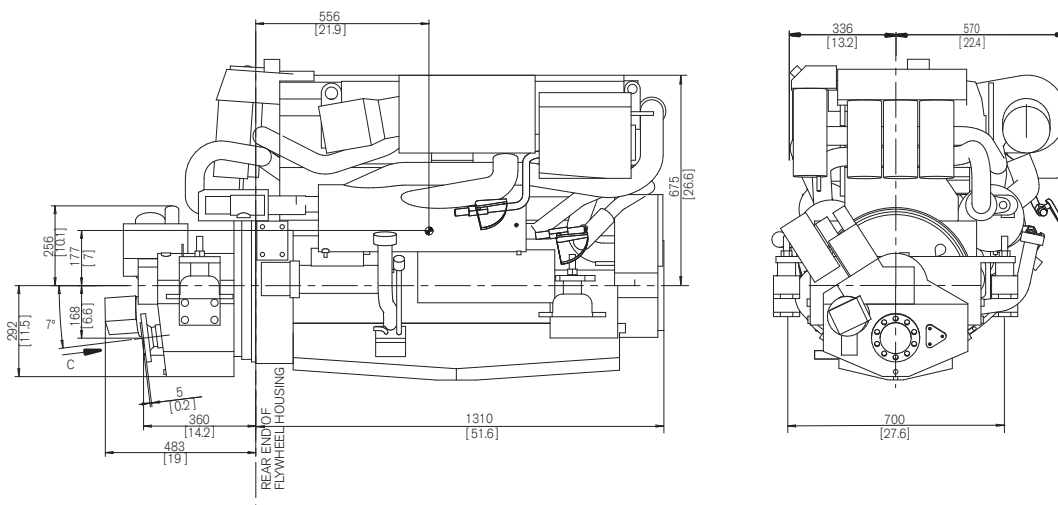
Technical data according to ISO 8665. With fuel having an LHV of 42700 kJ/kg and density of 840 g/liter at 15 °C (60 °F). Merchant fuel may differ from this specification which will influence engine power output and fuel consumption.

Rating: 5

The engine complies with IMO NOx limits, EU RCD, and US EPA Tier 2.

## Dimensions D11-670 with ZF305-2A-E

Not for installation



# VOLVO PENTA

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