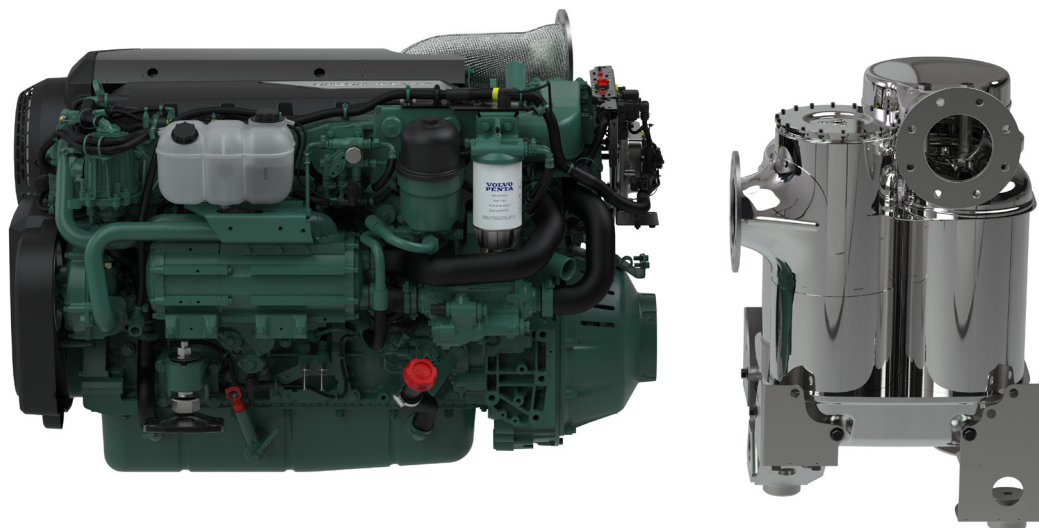


VOLVO PENTA INBOARD DIESEL

D8-450/510/550

7.7 liter, in-line 6 cylinder with Exhaust aftertreatment system

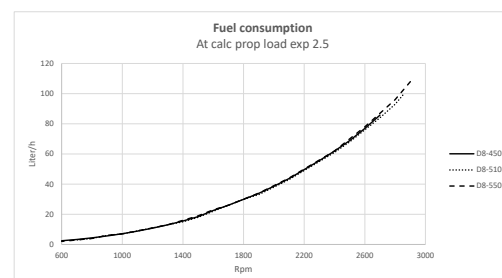
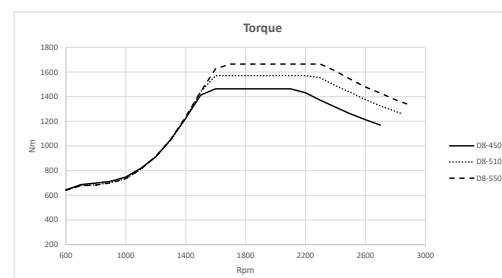
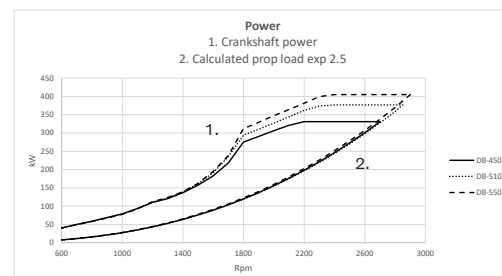


General

Engine designations	D8-450, D8-510 & D8-550
Displacement, l (in ³)	7.7 (469.7)
Configuration	in-line 6
Method of operation	4-stroke, direct-injected, turbocharged diesel engine with aftercooler
Bore/stroke, mm (in.)	110/135
Compression ratio	16.5:1
Dry weight bobtail, kg (lb)	840 (1852)
Emission compliance	IMO II, IMO III
Recommended fuel to conform to	ASTM-D975 1-D & 2-D, EN 590 or JIS KK 2204
Flywheel housing/SAE size	11.5"/SAE 2

Performance, fuel & rating

Engine designation	D8-450	D8-510	D8-550
Rating	3	4	4
Rated RPM	2700	2850	2900
Crankshaft power, kW (hp)	331 (450)	377 (513)	405 (551)
Max. torque, Nm (lbf.ft) @ rpm	1464 (1080) @ 1510	1571 (1159) @ 1580	1665 (1228) @ 1630
Specific fuel consumption, g/kWh (lb/hph)	217 (0.351)	220 (0.357)	224 (0.363)



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.

D8-450/510/550

7.7 liter, in-line 6 cylinder with Exhaust aftertreatment system

Technical description

Engine and block

- Cylinder block made of cast iron
- One-piece cast-iron cylinder head
- Ladder frame fitted to engine block
- Replaceable dry 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
- 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

- Seawater-cooled tubular oil cooler
- Single cartridge type oil filter, easy to replace, with no spillage

Fuel system

- Common rail fuel injection system

- 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)
- Loss of sea water alarm

Cooling system

Two options available:

1. HE (Heat Exchanger)
 - Seawater-cooled tubular heat exchanger
 - Coolant system prepared for hot water outlet
 - Easily accessible seawater impeller pump in rear end
2. KC (Keel Cooling)
 - 1,5-circuit cooling system
 - Belt-driven centrifugal cooling water pump in HT circuit
 - Engine mounted expansion tank in HT circuit

- Gear driven rubber impeller cooling water pump in CAC LT circuit

Electrical system

- 24V with extra 12V/115A or 24V/110A alternator

Electronic Vessel Control (EVC)

- A type-approved system that fully integrates the engines, electronics and the unique set of EVC features.

Reverse gear

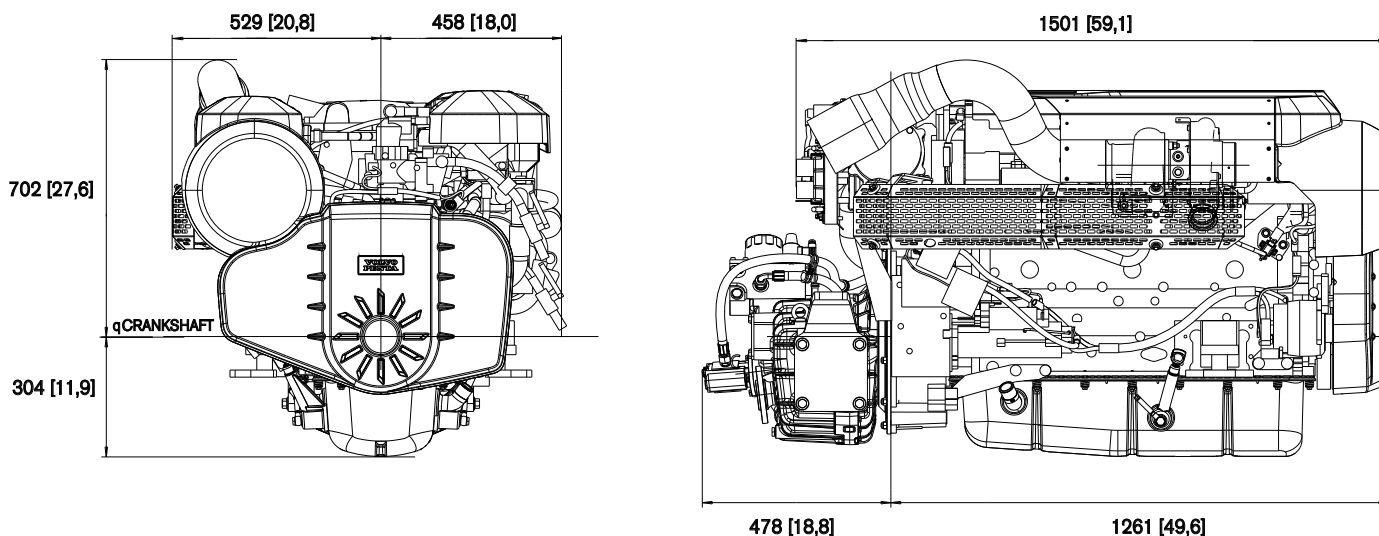
- ZF reverse gears, with low speed as option, electronically shifted
- Connection kits for Twin disc available

Exhaust aftertreatment system

- SCR (Selective Catalytic Reduction)
- Aqueous UREA solution 32% or 40%
- Complete system – developed, certified, and serviced by one company
- Fully integrated capabilities
- SCR unit reduces noise by up to 35 dBA
- Wide range of installation options available

Dimensions D8-550 with ZF286A

Not for installation, mm [in.]



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.

Contact your local Volvo Penta dealer for more information regarding Volvo Penta engines and optional equipment/ accessories or visit www.volvopenta.com



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