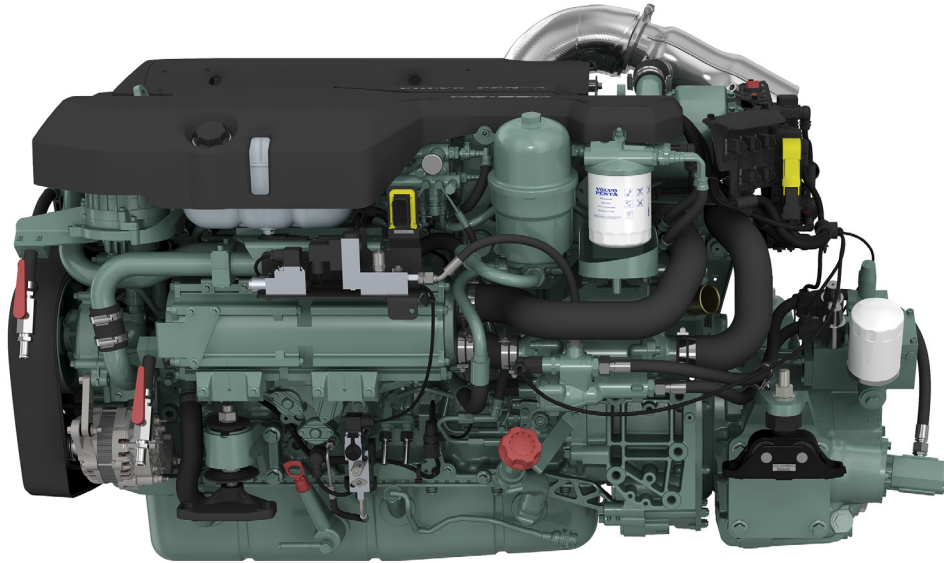


# D8-450, -510, -550

**NEW!****General**

Engine designations	D8-450, D8-510 & D8-550
Displacement, l (in <sup>3</sup> )	7.7 (469.7)
Configuration and no. of cylinders	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 NOx, US EPA Tier 3
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)	374 (509)	405 (550)
Max. torque, Nm (lb.ft) @ rpm	1464 (1080) @ 1510	1571 (1159) @ 1580	1665 (1228) @ 1630
Specific fuel consumption, g/kWh (lb/hph)	219 (0.355)	226 (0.366)	224 (0.364)

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

## 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/80A alternator

### Electronic Vessel Control (EVC)

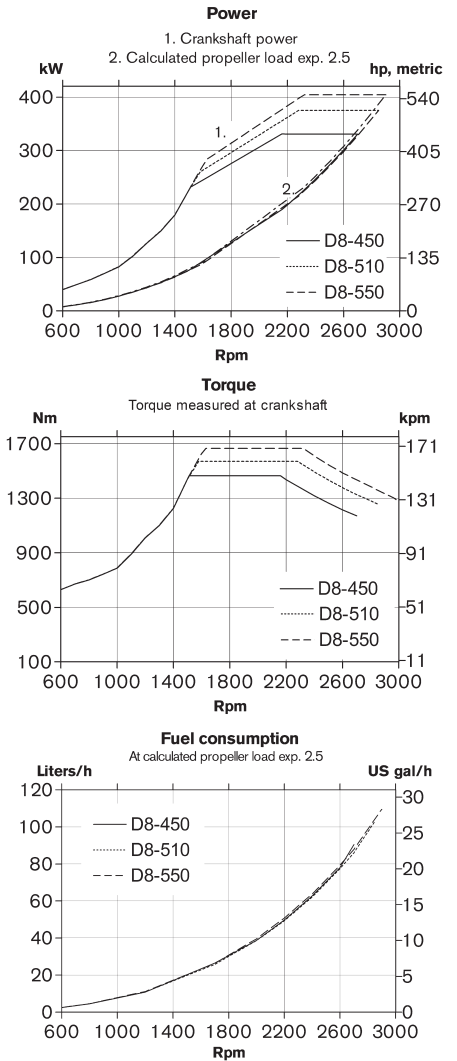
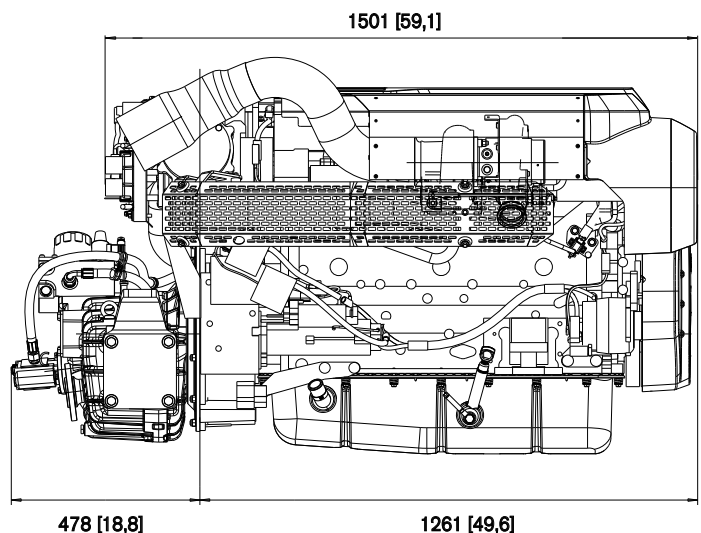
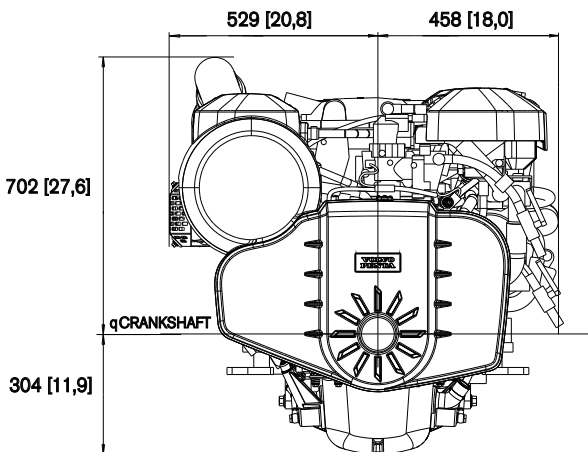
- A type-approved system that fully integrates the engines, electronics and the unique set of EVC features.

### Reverse gear

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

## Dimensions D8-550 with ZF286A

Not for installation, mm [in.]



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