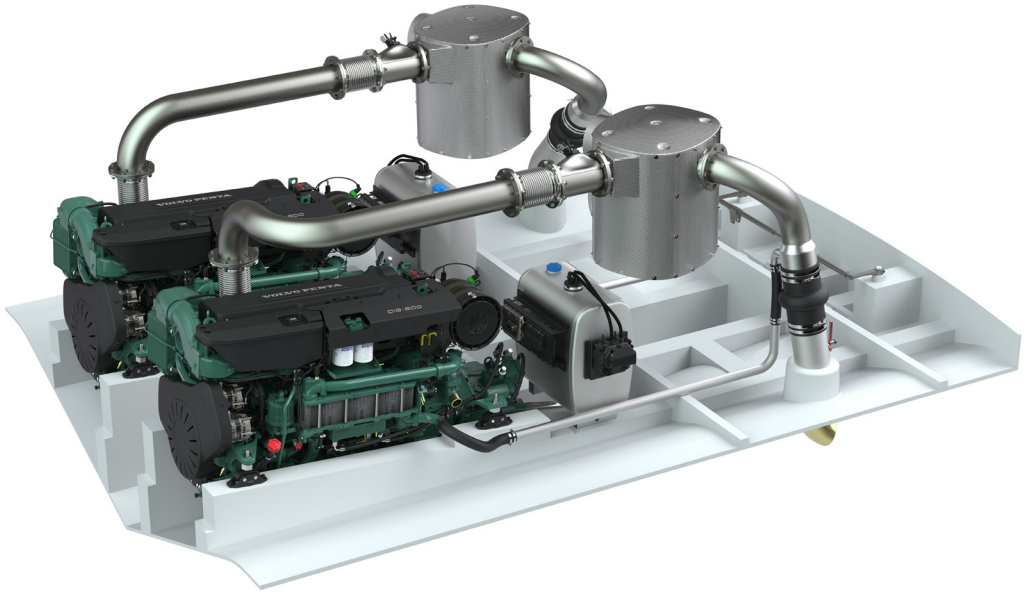
D13-MH

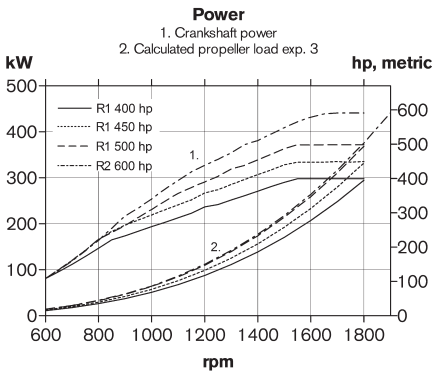
Emission compliance: IMO Tier III and US EPA Tier 3

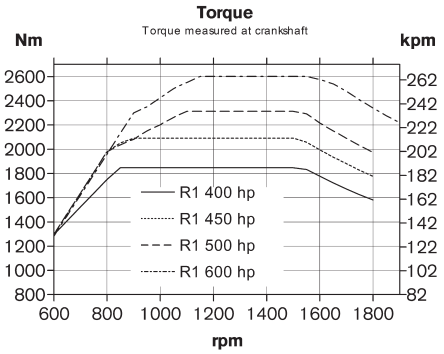


Technical Data

Engine designation	D13 MH			
No. of cylinders and configuration	in-line 6			
Method of operation	4-stroke, direct-injected, turbocharged diesel engine with charge air cooler			
Bore/stroke, mm (in.)	131/158 (5.16/6.22)			
Displacement, l (in³)	12.78 (779.7)			
Compression ratio	18.5			
Dry weight bobtail (KC), kg (lb)	1480 (3263)			
Dry weight bobtail (HE), kg (lb)	1520 (3351)			
	Rating 1 1800 rpm	Rating 1 1800 rpm	Rating 1 1800 rpm	Rating 2 1900 rpm
Crankshaft power, kW (hp)	294 (400)	331 (450)	368 (500)	441 (600)
Max. torque, Nm (lbf.ft) @ 1400 rpm	1830 (1350)	2070 (1527)	2290 (1689)	2601 (1918)
Emission compliance	IMO Tier III,	IMO Tier III,	IMO Tier III,	IMO Tier III,
	US EPA Tier 3	US EPA Tier 3	US EPA Tier 3	US EPA Tier 3
Recommended fuel to conform to	ASTM-D975 1-D & 2-D, EN 590 or JIS KK 2204. Max 1000PPM.			
Flywheel housing/SAE size	14”/SAE1			

Technical data according to ISO 3046 Fuel Stop Power and ISO 8665. Fuel with a lower calorific value 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. Ratings R1 & R2, see explanation in Volvo Penta’s Product Guide.





VOLVO PENTA

D13-MH

Technical description:

Engine and block
- Cylinder block and cylinder head made of cast-iron
- 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
- 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
- Twin full flow oil filters and by-pass filters of spin-on type

Fuel system
- Electronic Unit Injectors, one per cylinder, vertically positioned at the center in between the four valves
- 5-hole high pressure injector nozzles
- Gear-driven fuel pump, driven by timing gear
- Electronically controlled central processing system (EMS – Engine Management System)
- Electronically controlled injection timing
- Twin spin-on fine fuel filters with change over valve

Air inlet and exhaust system
- Air filter with replaceable inserts
- Mid-positioned twin entry turbocharger and charge air cooler

Cooling system
- Freshwater-cooled charge air cooler
- Seawater-cooled plate heat exchanger
- Coolant system prepared for hot water outlet
- Easily accessible seawater impeller pump in rear end

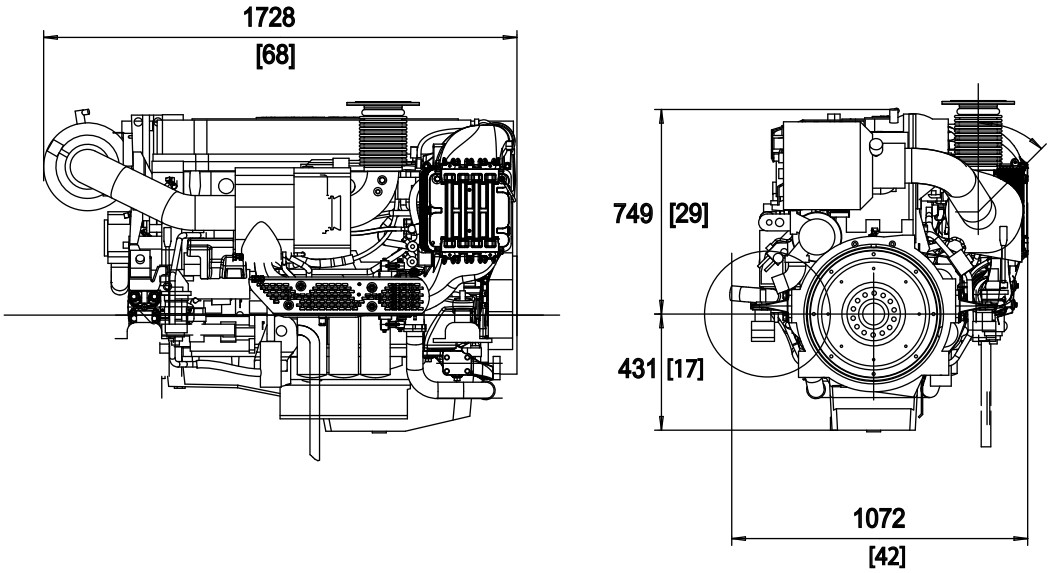
Electrical system
- 24V/110A alternator

Instruments/controls
- Three options for onboard electronic control:
  1. EVC (Electronic Vessel Control), a type-approved system with integrated controls and features.
  2. MCC (Marine Commercial Control), an open system that is type-approved. Incl. separate safety shutdown system
  3. Open CAN Interface, engine delivered without control system. Different options with or without shut down senders and switches.

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
- Prop-to-helm system (IPS)
- SCR unit reduces noice by up to 35 dBA
- Wide range of installation options available

Dimensions

Not for installation, mm [in.]



For further information, please contact your local Volvo Penta dealer or visit www.volvopenta.com.

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