

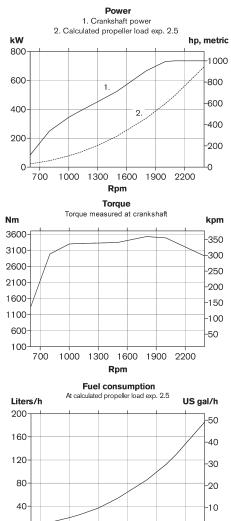
VOLVO PENTA INBOARD DIESEL





Technical Data	
Engine designation	D13-1000
No. of cylinders and configuration	in-line 6
Method of operation	4-stroke, direct-injected, turbo- charged diesel engine with charge air cooler
Bore/stroke, mm (in.)	131/158 (5.16/6.22)
Displacement, I (in ³)	12.78 (779.7)
Compression ratio	17.1:1
Dry weight bobtail, kg (lb)	1635 (3605)
Crankshaft power, kW (hp) @ 2400 rpm	735 (1000)
Max. torque, Nm (lbf.ft) @ 1800 rpm	3527 (2602)
Emission compliance	IMO NOx, EU RCD Stage II, US EPA Tier 3
Rating	R5
Recommended fuel to conform to	ASTM-D975 1-D & 2-D, EN 590 or JIS KK 2204
Flywheel housing/SAE size	14"/SAE1

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.



-0

1600 1900 2200

Rpm

0

700

1000 1300

Technical description

Engine and block

- Cylinder block 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 and center position of unit injectors
- Each cylinder features cross-flow inlet and exhaust ducts
- Monotherm steel pistons
- Rear-end transmission

Engine mounting

• Flexible engine mounting

Lubrication system

- Integrated oil cooler in cylinder blockRear 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 Sys-
- tem) • Single fine fuel filter of spin-on type

- Air inlet and exhaust system
 Twin turbo technology with freshwatercooled charge air cooler
- Air filter with replaceable inserts
- Wet exhaust elbow (option)
- Loss of sea water alarm

Cooling system

- Seawater-cooled plate heat exchanger
- Coolant system prepared for hot water outlet
- Easily accessible seawater pump in rear end of flywheel housing

Electrical system

 24V/110A plus an optional extra 12V/115A alternator

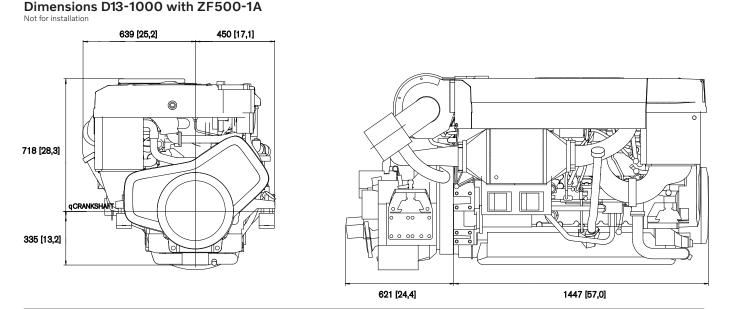


Electronic Vessel Control (EVC)

 Fully integrates the engines, electronics and the unique set of EVC features; Joystick Docking (available for twin engine installations), Glass Cockpit and more

Gear box

- ZF500-1A-E and ZF500-1IV-E, with low speed as option, electronically shifted
- ZF-400A, with low speed as standard, electronically shifted
- Connection kits for Twin disc available



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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