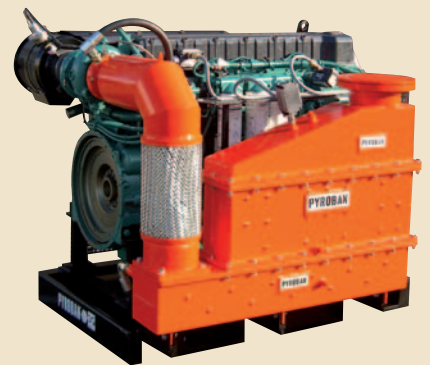


OIL & GAS

D12 MH



HAZARDOUS AREA POWER PACK

**VOLVO
PENTA**

HAZARDOUS AREA POWER PACK

For use in the oil and gas industry Category 3G (Zone2) T3 IIA ATEX Certified (94/9/EC)
up to +40°C ambient temperature. Suitable for nitrogen pumps, fire pumps, coiled tubing units etc...

VOLVO PENTA INBOARD DIESEL D12 MH RELIABILITY AND ECONOMY FOR HEAVY DUTY

The D12 MH marine diesel engine is specially designed for installations in heavy duty commercial displacement craft, featuring the latest advanced diesel technology. Excellent drivability is assured with high low-end and a rich torque curve matched to the power outputs for fast and immediate response.

WORLD-CLASS PERFORMANCE

Low fuel consumption for long operational range and low operational cost and emission levels is assured with:

- Electronic Unit Injectors
- 4-valve technology
- Electronically controlled injection timing
- High pressure 5-hole injector nozzles
- Electronic governing - EMS

This technology optimizes engine performance and minimizes quantity of unburned fuel, reducing fuel consumption, exhaust emission levels.

CONTROL SYSTEM MCC

- MCC a flexible and expandable control and monitoring system for classified installations. Incl. separate safety shutdown system.
- Easy to interface with leading suppliers of ship control systems.
- Possibility to connect relays for remote control functions (potential free contacts).
- Classifiable by all major classification societies.

MEETING THE NEW EMISSION STANDARDS

The advanced combustion system with high pressure unit injectors in combination with electronics are meeting the new legislations aiming to minimize noxious emissions and particles. Closed crancase ventilation (CCV) is included as standard equipment for the US market and is optional for other markets.

TECHNICAL DATA

No. of cylinders and configuration
Method of operating
Bore, mm (in.)
Stroke, mm (in.)
Displacement, l (in³)
Compression ratio
Dry weight, kg (lb)

in-line 6
4-stroke, direct-injected turbocharged diesel engine with aftercooler
131 (5.16)
150 (5.91)
12.13 (740.2)
17.5:1
1400 (3086)

Ratings/rpm

Crankshaft power, kW (hp)
Max. torque, Nm (lbf.ft) @

Rating 1	Rating 1	Rating 1	Rating 1	Rating 2
1800 rpm	1800 rpm	1800 rpm	1800 rpm	1800 rpm
216 (294)	256 (348)	294 (400)	331 (450)	367 (499)
1000 rpm	1200 rpm	1200 rpm	1400 rpm	1200 rpm
1461 (1078)	1592 (1174)	1814 (1338)	2019 (1489)	2204 (1626)
Recommended fuel to conform: ASTM-D975 1-D & 2-D, EN 590 or JIS KK 2204				
1800 rpm	1800 rpm	1800 rpm	1800 rpm	1800 rpm
209 (0.338)	210 (0.34)	207 (0.335)	208 (0.337)	217 (0.351)
IMO NOx, EU IWW	IMO NOx, EU IWW	IMO NOx, EU IWW, US EPA Tier 2	IMO NOx, EU IWW, US EPA Tier 2	IMO NOx, EU IWW, US EPA Tier 2

Certified according to

Technical data according to ISO 3046 Fuel Stop Power and ISO 8665. With fuel having an LHV of 42700 kJ/kg and density of 840 g/liter at 15°C (60°F). Merchant fuels may differ from this specification which will influence engine power output and fuel consumption. Ratings R1 & R2, see explanation in Volvo Penta's Sales Guide.
The engine is classifiable by major classification societies.



TECHNICAL DESCRIPTION

ENGINE AND BLOCK

- Cylinder block and cylinder head made of cast-iron
- One piece cast-iron cylinder head
- Replaceable wet cylinder liners 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 aluminium alloy pistons
- Three piston rings

LUBRICATION SYSTEM

- Integrated oil cooler in cylinder block
- Twin full flow oil filter of spin-on type and by-pass filter

FUEL SYSTEM

- Six Electronic Unit Injectors, one per cylinder, vertically positioned at the center in between the four valves
- Gear-driven fuel pump, driven by timing gear
- Electronically controlled central processing system (EMS - Engine Managment System)
- Electronically controlled injection timing
- 5-hole high pressure injectors nozzles
- Single fine fuel filter of spin-on type, with water separator (not classifiable)

TURBOCHARGER

- Freshwater-cooled turbocharger

COOLING SYSTEM

- Freshwater-cooled charge air cooler
- Gear-driven coolant pumps
- Remote mounted radiator or single-circuit keel-cooling

ELECTRICAL SYSTEM

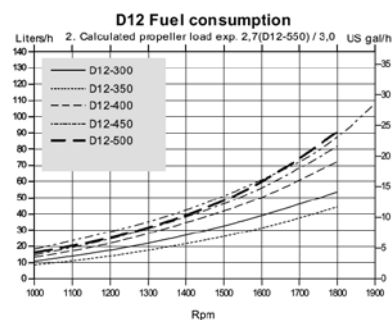
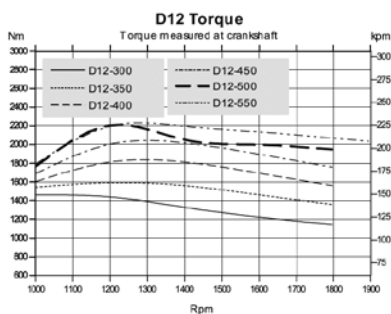
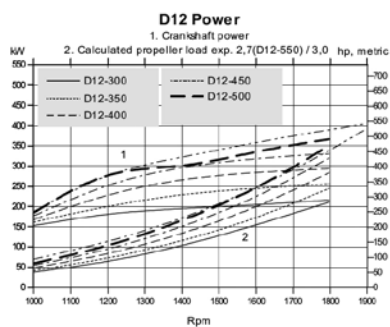
- 24V electrical system, Atex Approved, 24V/60A alternator

INSTRUMENTS/CONTROLS (OPTION)

- Options available on request



VOLVO PENTA D12 MH

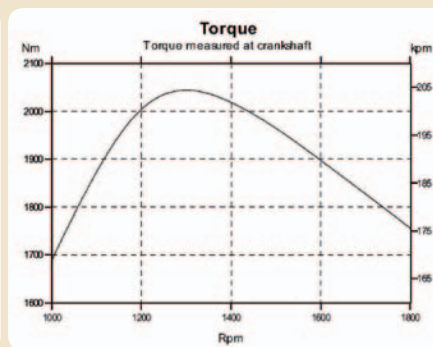
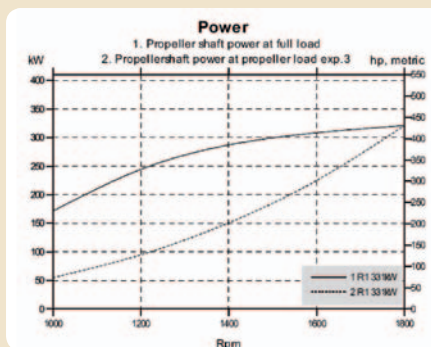




Compliant as a component to ATEX 94/9/EC. Full ATEX upfit accessories available from Pyroban.

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Not all models, standard equipment and accessories are available in all countries. All specifications are subject to change without notice.
Engines illustrated may not be entirely identical to production standard engines.

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