

# OIL & GAS

D7A TA / D7C TA



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 +50°C ambient temperature. Suitable for nitrogen pumps, fire pumps, coiled tubing units etc...

## VOLVO PENTA DIESEL D7A TA AND D7C TA EXCELLENT RELIABILITY AND ECONOMY

D7A TA and D7C TA are highly reliable, type approved, marine diesel engines, now adapted for the Oil & Gas Industry. Well-watched engine speed to rated power with excellent torque characteristics along with a variety of power take-off options makes them particularly well suited for displacement and semi-planing workboats in medium and heavy duty service.

### ROBUST AND SILENT

A rigid in-line cylinder block with generously dimensioned crankshaft bearings, together with watercooled exhaust manifold and turbo, are just some of the design features making this silent running and sturdy engine. The owner of a D7A TA or D7C TA benefits from many hours of trouble-free operation and improved comfort.

### ECONOMICAL AND SERVICE FRIENDLY

Price is not the only concern when investing in a new engine. As confirmed by Oil&Gas Industry professionals, it is the operational costs, such as

cost for fuel, spare parts, service and maintenance, that makes the real difference in economy. The D7A TA and D7C TA is equipped with unit pumps that control the fuel distribution for each cylinder. Sixhole high-pressure injection nozzles optimize the fuel-air mixture. This improved combustion results in high thermal efficiency, low fuel consumption, reduced exhaust emissions, faster response to load variations and ease in maintenance. Easily accessible maintenance points and single side servicing contribute to the ease of servicing the engine. Liners of wet and replaceable valve seats make even major maintenance possible to carry out onboard.

### SAFELY SUPPORTED

Volvo Penta has a well-established, well-trained, network of authorized service dealers in more than 100 countries throughout the world. These service centers offer Genuine Volvo Penta Parts as well as skilled service personnel to help you protect your investment.

### MEETING NEW EMISSION STANDARDS

The engine is approved for the EU IWW emission regulations.

### TECHNICAL DATA

No. of cylinders and configuration	in-line 6		
Method of operating	4-stroke, direct-injected turbocharged diesel engine with aftercooler		
Bore, mm (in.)	108 (4.25)		
Stroke, mm (in.)	130 (5.12)		
Displacement, l (in <sup>3</sup> )	7.15 (436)		
Compression ratio	17.6:1		
Dry weight, kg (lb)	690 (1521)		
Dry weight with reverse gear ZF280, kg (lb)	760 (1676)		
Ratings/rpm	R2/2300 rpm	R1/2300 rpm	R1/1900 rpm
Recommended fuel to conform to	ASTM-D975 1-D & 2-D, EN 590 or JIS KK 2204		

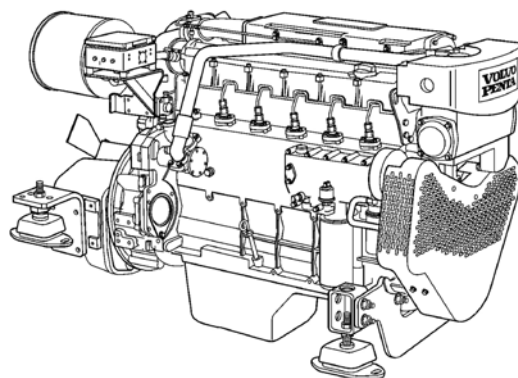
#### D7A TA

Crankshaft power, kW (hp)	(237)	153 (208)	130 (177)
Max. torque, Nm (lbf.ft) @ 1500 rpm	809 (596)	802 (592)	688 (507)
Specific fuel consumption, g/kWh (lb/hph) @ 1900 rpm	226 (0.366)	229 (0.371)	213 (0.345)

#### D7C TA

Crankshaft power, kW (hp)	195 (265)	166 (226)	146 (199)
Max. torque, Nm (lbf.ft) @ 1500 rpm	904 (667)	764 (563)	758 (559)
Specific fuel consumption, g/kWh (lb/hph) @ 2300 rpm	228 (0.369)	230 (0.373)	
g/kWh (lb/hph) @ 1900 rpm			213 (0.344)

Dimensions D7A TA / D7C TA



Fuel temp 40°C (104°F). 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. N.B: The product can also be used in an application with higher rating than stated e.g. R1 can be used for R2. The engine is classifiable by major classification societies and is approved for EU IWW.



## TECHNICAL DESCRIPTION

### ENGINE AND BLOCK

- Cylinder block, head and flywheel housing made of cast iron.
- Belt guard
- Combined 10" and 11,5" flywheel with SAE 2 housing
- Nitrocarburized transmission gears
- Press-hardened crankshaft
- Forged aluminium pistons
- Cylinder liners of wet type

### LUBRICATION SYSTEM

- Oil filler in valve cover
- Oil sump made of cast iron
- Manual oil drain pump
- Rotary lubrication oil pump
- Freshwater-cooled oil cooler
- Full flow oil filters of spin-on type
- Closed crankcase ventilation system

### FUEL SYSTEM

- Fuel feed pump
- Fine fuel filter of spine-on type
- Unit pumps
- Six-hole injectors
- Mechanical governor with smoke limiter

### COOLING SYSTEM

- Option for Keel Cooling system and Radiator Cooled System available as an option.
- Belt-driven freshwater pump
- Freshwater-cooled turbocharger and exhaust manifold

### ELECTRICAL SYSTEM

- Suitable Atex approved electrical systems available on request

### OPTIONAL EQUIPMENT

#### ENGINE

- Flexible suspension for engine and reverse gear
- Combined 10"/11,5" flywheel with SAE 3 housing

### LUBRICATION SYSTEM

- Shallow oil sump
- Twin oil filters, for remote mounting

### FUEL SYSTEM

- Hand pump
- Jacketed fuel pipes
- Single or twin fuel/water separating pre filter
- Twin fuel filters, for remote mounting

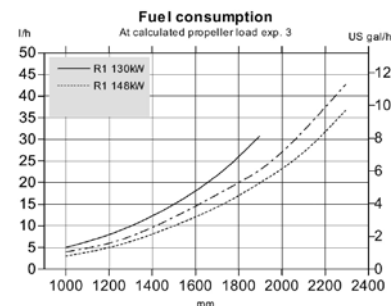
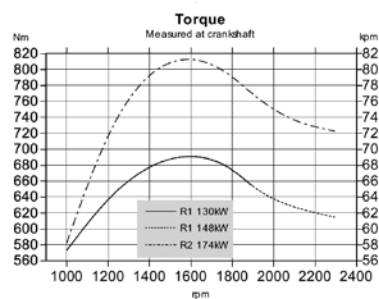
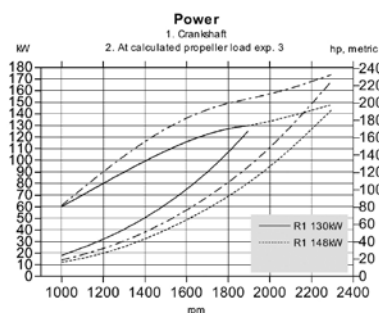
### EXHAUST SYSTEM

- Fully Atex Certified Exhaust Gas Cooling System as an option
- Exhaust elbow, wet
- Exhaust elbow, dry, with integrated flexible compensator
- Silencer, dry

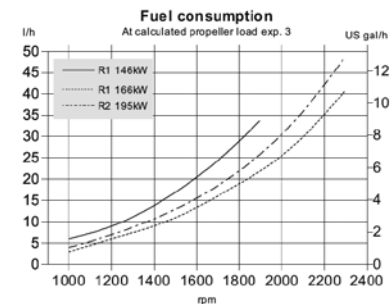
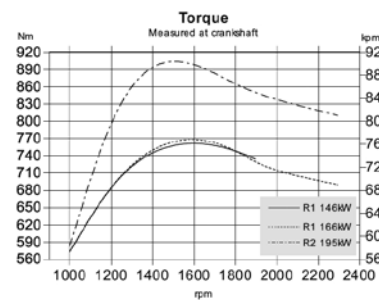
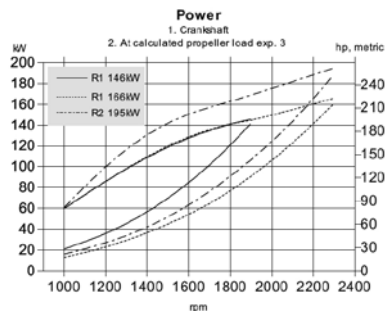
### POWER TRANSMISSION

- PTO crankshaft front end, type stub shaft
- Hydraulic pump for steering and other duties

## VOLVO PENTA D7A TA



## VOLVO PENTA D7C TA

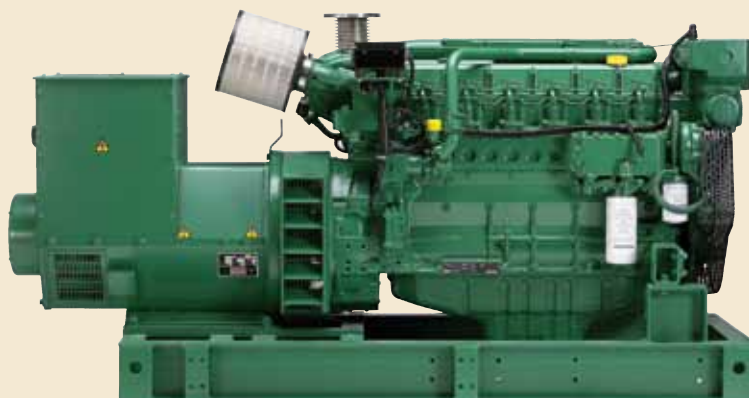






Compliant as a component to ATEX 94/9/EC. Full ATEX upfit accessories available from Pyroban.

In cooperation with:



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.

## Volvo Penta Oil&Gas Division

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M.G Bryan Equipment  
Company L.P.  
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[www.gulliksen.no](http://www.gulliksen.no)

La-Sa Båt og Motor A/S  
[www.lasa.no](http://www.lasa.no)

**The Netherlands**  
J.C. Terlouw B.V.  
[info@terlouwrepair.com](mailto:info@terlouwrepair.com)

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[www.volvopenta.com](http://www.volvopenta.com)