

# D49A MT

## VOLVO PENTA INBOARD DIESEL

12-cylinder, 4-stroke, direct-injected, turbocharged marine diesel engine with aftercooler – crankshaft power 1040 kW (1414 hp)

### Powerful and reliable engine for demanding operation in commercial applications

The Volvo Penta D49A MT engine is constructed to meet the most demanding requirements, such as marine main propulsion or marine generator drive. Its compactness and durability applies the most advanced technologies and engineering know-how; all this to benefit the operator.

The Volvo Penta D49A MT diesel engine is built to the highest quality standards recognized by all the major marine classification societies, such as Germanischer Lloyds, Norske Veritas etc. as well as the national Shipping Inspections.

Volvo Penta is continuously making intensive research work on the marine application of the engine to produce an engine with a compact design, which gives many advantages, such as low running costs in relation to high output.

An optimal combination of combustion chambers, fuel injection system, and effective turbocharger and charge air cooling system, provide an excellent fuel consumption over the whole range of engine speeds, through which the engine is economical in operation.

Maintenance is very easy, as supplementary equipment such as fuel injection pump, governor; water pump and turbocharger do not need any separate lubrication. The cylinder heads are individually divided by cylinder, and the engine has large inspection covers in crankcase and oil pan.

As the dimensions of the D49A MT engine are kept as small as possible, it takes up surprisingly little space. This asset will be subscribed whole-heartedly by the person who is in charge of the engine room. An engine room equipped with this engine is a well-ordered engine room.

### Warranty and Service

All Volvo Penta marine engines come with the additional benefit and security of the Cost Control Program, a unique system of operator support and financial control – from installation to after-sales service.

The optional international limited Volvo Penta three-year warranty provides the owner peace of mind.

Qualified Volvo Penta dealers stand by for service and support in more than 100 countries all over the world.



# D49A MT

## Technical Data

Engine designation .....	<b>D49A MT</b>
No. of cylinders and configuration .....	V 12
Method of operation .... 4-stroke, direct-injected, turbocharged diesel engine with aftercooler	
Bore, mm .....	170
Stroke, mm .....	180
Displacement, l .....	49.03
Compression ratio .....	14:1
Dry weight, kg .....	4800
Crankshaft power at calculated propeller load, Rating 1, kW (hp) 1600 rpm .....	940 (1278)
Rating 2, kW (hp) 1650 rpm .....	1040 (1414)
Torque at calculated propeller load, Rating 1, Nm 1600 rpm .....	5833
Rating 2, Nm 1650 rpm .....	6258
Recommended fuel to conform to .....	ASTM No. 2-D
Specific fuel cons. at calculated propeller load, Rating 1, g/kWh 1600 rpm .....	196
Rating 2, g/kWh 1650 rpm .....	196

All data represent net performance with standard accessories such as fuel injection pump, water pump, L.O. pump and charging alternator under the conditions of 100kPa (750 mm Hg), barometric pressure 300K (27°C) ambient temperature and 60% relative humidity.

## Standard Equipment:

### Engine

- Flywheel housing with connection acc. to SAE 00
- Flywheel (21")
- Engine brackets

### Lubrication system

- Fresh water cooled oil cooler
- Spin-on type oil filter with shift valve
- Spin-on type oil by-pass filter

### Fuel system

- Hydraulic governor
- Jacketed fuel pipes
- Spin-on type fuel filter (change over type)
- 24V fuel shut-off valve, electrically operated

## Exhaust system

- Dry exhaust manifold with insulator cover
- Non-cooled turbocharger
- Air inlet filter/silencer

## Cooling system

- Raw water cooled aftercooler with insulator cover
- Fresh water pump (V-belt driven)
- Raw water pump (V-belt driven)

## Electrical system

- Starter motor (DC 24V-7.5kW)
- Alternator (24V-35A)

## Other equipment

- Front P.T.O. pulley (2x B groove)
- Front safety cover
- Standard tools

## Optional Equipment:

- Electrical system including wiring, senders, switches and terminal box mounted on engine
- Instrument panel for engine-room and wheel-house
- Air starting system on request
- Oil drain pump
- Flexible exhaust hose for dry exhaust line
- Dry exhaust silencer
- Fuel filter/water separator with shift valve
- Classification under regulations of: LR, ABS, DNV or GL
- Gearbox on request
- Spare parts
- Spare parts according to classification recommendations

Contact Volvo Penta for further information.

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.

## Performance Data

### Heavy Duty Rating 1

Crankshaft power at full load, R1, kW (hp) 1600 rpm .....	940 (1278)
R1, kW (hp) 1500 rpm .....	918 (1248)
R1, kW (hp) 1400 rpm .....	879 (1195)
R1, kW (hp) 1300 rpm .....	830 (1128)
R1, kW (hp) 1200 rpm .....	768 (1045)
Crankshaft power at calculated propeller load, R1, kW (hp) 1600 rpm .....	940 (1278)
R1, kW (hp) 1454 rpm .....	705 (958)
R1, kW (hp) 1270 rpm .....	470 (639)
R1, kW (hp) 1008 rpm .....	235 (319)
Torque at full load, R1, Nm 1600 rpm .....	5833
R1, Nm 1500 rpm .....	6074
R1, Nm 1400 rpm .....	6233
R1, Nm 1300 rpm .....	6336
R1, Nm 1200 rpm .....	6358
Torque at calculated propeller load, R1, Nm 1600 rpm .....	5833
R1, Nm 1454 rpm .....	4814
R1, Nm 1270 rpm .....	3675
R1, Nm 1008 rpm .....	2315
Specific fuel consumption at full load, R1, g/kWh 1600 rpm .....	196
R1, g/kWh 1500 rpm .....	194
R1, g/kWh 1400 rpm .....	194
R1, g/kWh 1300 rpm .....	196
R1, g/kWh 1200 rpm .....	197
Specific fuel cons. at calculated propeller load, R1, g/kWh 1600 rpm .....	196
R1, g/kWh 1454 rpm .....	197
R1, g/kWh 1270 rpm .....	202
R1, g/kWh 1008 rpm .....	217

### Medium Duty Rating 2

Crankshaft power at full load, R2, kW (hp) 1650 rpm .....	1040(1414)
R2, kW (hp) 1500 rpm .....	997 (1356)
R2, kW (hp) 1400 rpm .....	964 (1310)
R2, kW (hp) 1300 rpm .....	908 (1234)
Crankshaft power at calculated propeller load, R2, kW (hp) 1650 rpm .....	1040 (1414)
R2, kW (hp) 1500 rpm .....	780 (1061)
R2, kW (hp) 1310 rpm .....	520 (707)
R2, kW (hp) 1039 rpm .....	260 (354)
Torque at full load, R2, Nm 1650 rpm .....	6258
R2, Nm 1500 rpm .....	6603
R2, Nm 1400 rpm .....	6836
R2, Nm 1300 rpm .....	6935
Torque at calculated propeller load,, R2, Nm 1650 rpm .....	6258
R2, Nm 1500 rpm .....	5165
R2, Nm 1310 rpm .....	3941
R2, Nm 1039 rpm .....	2488
Specific fuel consumption at full load, R2, g/kWh 1650 rpm .....	196
R2, g/kWh 1500 rpm .....	196
R2, g/kWh 1400 rpm .....	194
R2, g/kWh 1300 rpm .....	194
Specific fuel cons. at calculated propeller load, R2, g/kWh 1650 rpm .....	196
R2, g/kWh 1500 rpm .....	197
R2, g/kWh 1310 rpm .....	200
R2, g/kWh 1039 rpm .....	208

## Dimensions D49A MT

Dimensions in mm.  
Not for installation.

