

D49A MS

VOLVO PENTA INBOARD DIESEL

12-cylinder, 4-stroke, direct-injected, turbocharged marine diesel engine with aftercooler – crankshaft power 970 kW (1319 hp)

Powerful and reliable engine for demanding operation in commercial applications

The Volvo Penta D49A MS 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 MS 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.

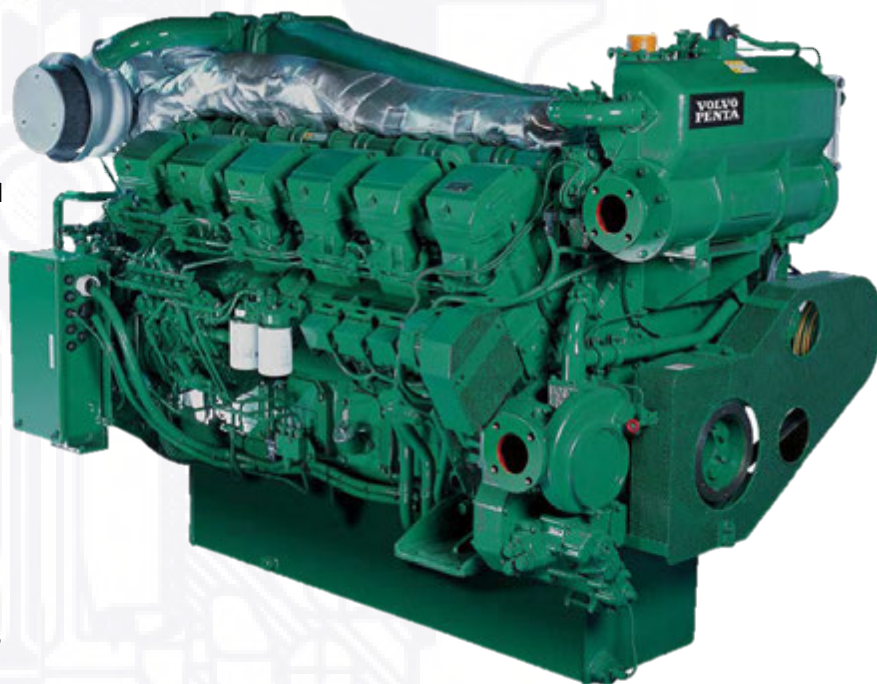
As the dimensions of the D49A MS engine are kept as small as possible, it takes up surprisingly little space. This asset will be subscribed whole-heartedly by the person who is in charge of the engine room. An engine room equipped with this engine is a well-ordered engine room.

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 MS

Technical Data

Engine designation	D49A MS
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	880 (1197)
Rating 2, kW (hp) 1650 rpm	970 (1319)
Torque at calculated propeller load, Rating 1, Nm 1600 rpm	n.a.
Rating 2, Nm 1650 rpm	n.a.
Recommended fuel to conform to	ASTM No. 2-D
Specific fuel cons. at calculated propeller load, Rating 1, g/kWh 1600 rpm	n.a.
Rating 2, g/kWh 1650 rpm	n.a.

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

- Fresh water cooled aftercooler (with insulator cover)
- Fresh 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	880 (1197)
R1, kW (hp) 1500 rpm	862 (1171)
R1, kW (hp) 1400 rpm	833 (1133)
R1, kW (hp) 1300 rpm	776 (1055)
R1, kW (hp) 1200 rpm	712 (969)
Crankshaft power at calculated propeller load,	
R1, kW (hp) 1600 rpm	880 (1197)
R1, kW (hp) 1454 rpm	660 (898)
R1, kW (hp) 1270 rpm	440 (598)
R1, kW (hp) 1008 rpm	220 (299)
Torque at full load,	
R1, Nm 1600 rpm	5463
R1, Nm 1500 rpm	5704
R1, Nm 1400 rpm	5910
R1, Nm 1300 rpm	5926
R1, Nm 1200 rpm	5895
Torque at calculated propeller load,	
R1, Nm 1600 rpm	5463
R1, Nm 1454 rpm	4509
R1, Nm 1270 rpm	3441
R1, Nm 1008 rpm	2168
Specific fuel consumption at full load,	
R1, g/kWh 1600 rpm	200
R1, g/kWh 1500 rpm	201
R1, g/kWh 1400 rpm	201
R1, g/kWh 1300 rpm	202
R1, g/kWh 1200 rpm	204
Specific fuel cons. at calculated propeller load,	
R1, g/kWh 1600 rpm	200
R1, g/kWh 1454 rpm	205
R1, g/kWh 1270 rpm	212
R1, g/kWh 1008 rpm	227

Medium Duty Rating 2

Crankshaft power at full load,	
R2, kW (hp) 1650 rpm	970 (1319)
R2, kW (hp) 1600 rpm	959 (1304)
R2, kW (hp) 1500 rpm	946 (1286)
R2, kW (hp) 1400 rpm	906 (1232)
R2, kW (hp) 1300 rpm	861 (1170)
Crankshaft power at calculated propeller load,	
R2, kW (hp) 1650 rpm	970 (1319)
R2, kW (hp) 1500 rpm	727 (989)
R2, kW (hp) 1310 rpm	485 (659)
R2, kW (hp) 1039 rpm	242 (330)
Torque at full load,	
R2, Nm 1650 rpm	5836
R2, Nm 1600 rpm	5954
R2, Nm 1500 rpm	6262
R2, Nm 1400 rpm	6429
R2, Nm 1300 rpm	6576
Torque at calculated propeller load,,	
R2, Nm 1650 rpm	5836
R2, Nm 1500 rpm	4815
R2, Nm 1310 rpm	3675
R2, Nm 1039 rpm	2317
Specific fuel consumption at full load,	
R2, g/kWh 1650 rpm	204
R2, g/kWh 1600 rpm	204
R2, g/kWh 1500 rpm	202
R2, g/kWh 1400 rpm	202
R2, g/kWh 1300 rpm	202
Specific fuel cons. at calculated propeller load,	
R2, g/kWh 1650 rpm	204
R2, g/kWh 1500 rpm	208
R2, g/kWh 1310 rpm	213
R2, g/kWh 1039 rpm	228

Dimensions D49A MS

Dimensions in mm.
Not for installation.

