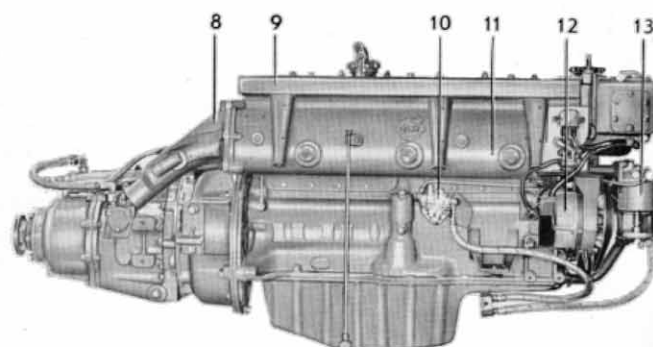
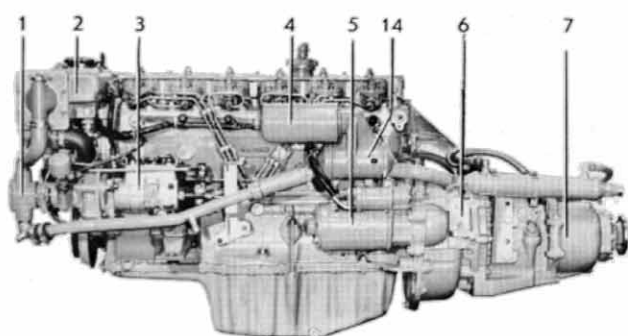


VOLVO PENTA

MD 32 A



6-cylinder, 4-stroke marine diesel engine with swirl chambers
Propeller shaft output 65 kW (89 hp)



STANDARD EQUIPMENT

ENGINE BODY — Cylinder block made of cast iron and cylinder head of light-alloy. Pistons made of light-alloy with three compression rings and one oil scraper ring. Crankshaft journalled in seven bearings. Overhead valves with replaceable seats. Tool kit for minor adjustments supplied with engine.

FUEL SYSTEM — Rotor-type injection pump with mechanical governor for accurate speed regulation (3).

Feed pump (10) with hand primer and flexible hoses with fuel pipe connection for suction and return lines.

Fine filter (13) with water separator.

COOLING SYSTEM — Thermostat-controlled fresh-water cooling with heat exchanger (2) and circulation pump. Extra expansion tank for separate mounting is supplied. Sea-water pump with neoprene rubber impeller (1). Cleanable sea-water filter is supplied.

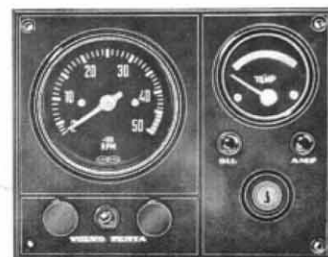
LUBRICATING SYSTEM — Pressure lubricating system with full-flow lubricating oil filter of the spin-on type (4). Cleanable, tubular-type oil cooler (14). Sealed crankcase ventilation.

INTAKE SYSTEM — Intake silencer (9) with filter.

EXHAUST SYSTEM — Sea-water cooled exhaust manifold and exhaust manifold elbow of cast iron (11).

ELECTRICAL SYSTEM — Corrosionproof 12 V electrical system, with complete instrument panel. Main fusing with built-in spare fuse is mounted on engine. Brushless alternator with built-in transistor regulator, 35 A, 420 W (12). Starter motor output 2.2 kW (3 h.p.) (5). Automatic alarm for oil pressure and water temperature.

The instrument panel is provided with a key switch, rev counter, temperature gauge, warning lamps for battery charging, oil pressure and for connection of glow plugs, switch for instrument panel light and one extra switch. Cable harness, 7 m (23 ft.) in length, with plug-in contact already fitted.



ENGINE MOUNTING — The engine is supplied with engine brackets for fixed mounting (6).

POWER TRANSMISSION — Hydraulic reverse gear type Borg Warner. The engine is supplied with reverse gear as follows:

Alt. 1 Reverse gear type BW red. ratio 2:1, R-H prop. (7)

2 Reverse gear type BW red. ratio 2:1, L-H prop. (7)

3 Reverse gear type BW red. ratio 2.9:1, L-H prop. (7)

Propeller shaft flange for 35 mm propeller shaft — red. ratio 2:1

Propeller shaft flange for 40 mm propeller shaft — red. ratio 2.9:1

EXTRA EQUIPMENT

FUEL SYSTEM

Water-separating filter with or without flexible hoses
 Fuel line kit with copper piping and installation parts

COOLING SYSTEM

Cooling water intake complete with cock and hose

EXHAUST SYSTEM

Exhaust manifold flange
 Hull through fitting
 Exhaust rubber hose
 Exhaust boot

ELECTRICAL SYSTEM

Charging distributor for charging 2-battery system
 Instrument panel for extra instrument
 Master switch
 Cable harness extension for instrument panel

ENGINE MOUNTING

Flexible engine mounting

POWER TRANSMISSION

Extra belt pulley

BOAT ACCESSORIES

Electrically operated bilge pump
 Original paint
 Oils
 Electro-mechanical trim tabs

CONTROLS AND CONTROL SYSTEM

VP single-control lever for both speed and forward-reverse operation, top-mounted or side-mounted. Single or twin installation.
 Neutral position switch – automatic safety interlock, VP controls
 Control cables
 Steering gears
 Steering wheels
 Steering cables
 Ball joint and fork kit for steering cable

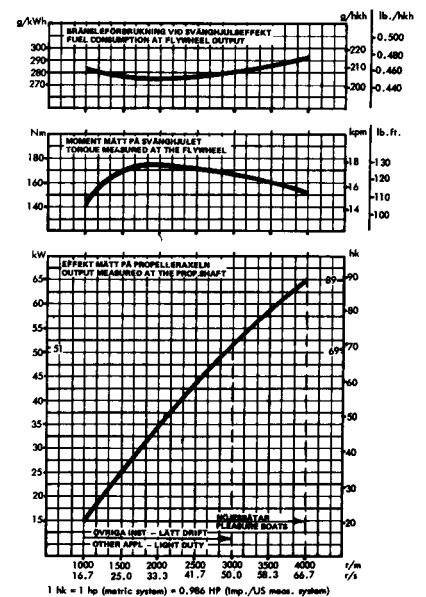
PROPELLER EQUIPMENT

Flexible coupling
 Clamp coupling
 Propeller shaft
 Propeller shaft sleeves
 Propellers

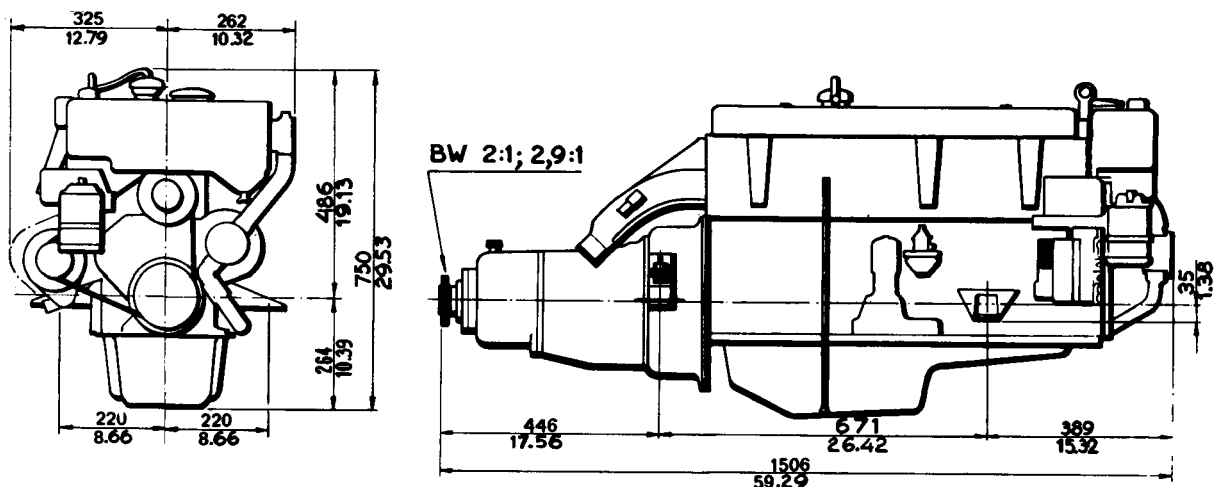
DATA

Type of operation	4-stroke diesel engine with swirl chambers
Designation	MD32A
Propeller shaft output ¹⁾	65 kW at 66.7 r/s (89 hp at 4000 rpm) 51 kW at 50 r/s (69 hp at 3000 rpm)
Number of cylinders	6 in-line
Capacity, dm ³ (in ³)	3.168 (193)
Bore/stroke, mm (in)	90/83 (3.54/3.27)
Valves	overhead
Weight, engine with rev. gear, approx. kg (lb)	395 (870)

1) The diagram indicates the propeller shaft output for a run-in engine with mechanical reverse gear according to DIN 6270 Leistung B. The engine flywheel output is approx. 3,5% higher. To calculate the propeller shaft output with a hydraulic reverse gear type BW, reduce the indicated output by 12% at maximum speed. The engine is delivered to be used for pleasure boats adjusted to 66.7 r/s (4000 rpm). For other installations – light operation, the engine is adjusted to 50 r/s (3000 rpm) according to the adjacent curve.



DIMENSION DRAWING



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We reserve the right to carry out modifications