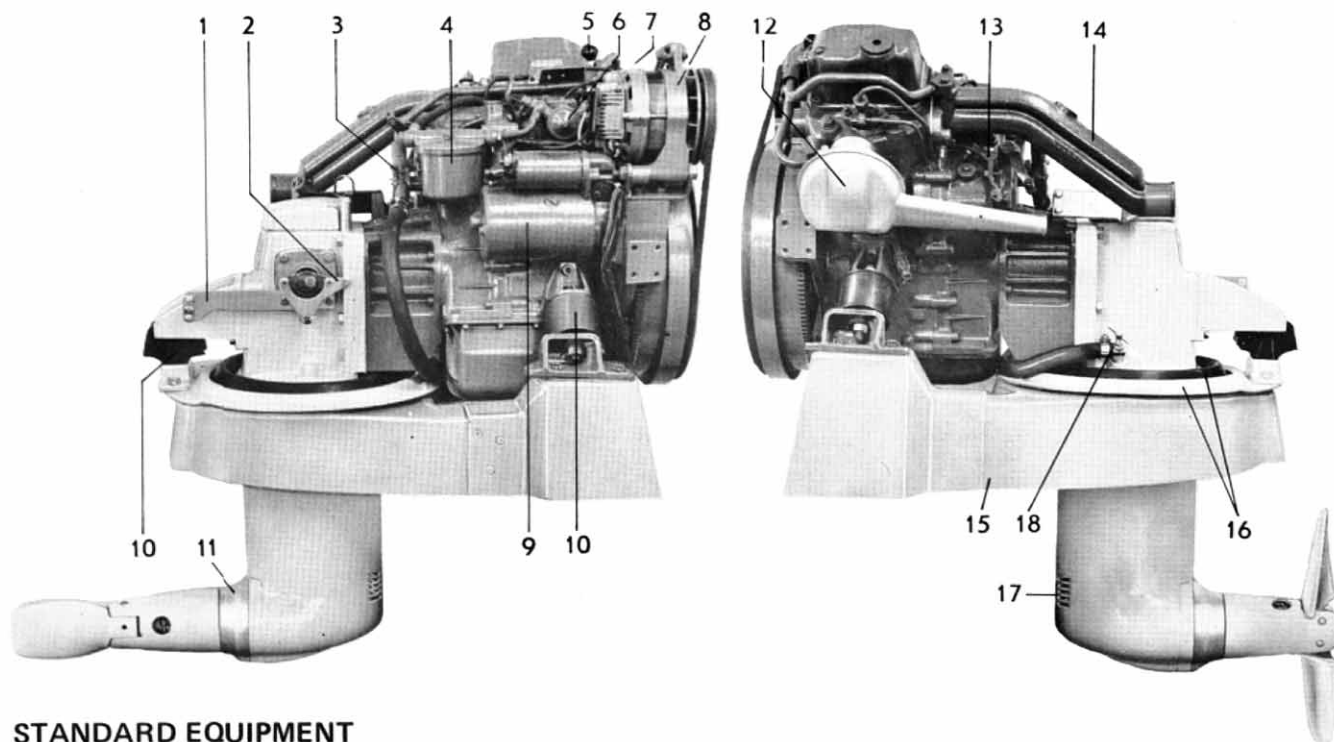


## MD 5A/110S



1-cylinder, 4-stroke marine diesel engine with overhead valves and sailboat drive 110S.  
Propeller shaft output 5.5 kW (7.5 hp)



### STANDARD EQUIPMENT

**ENGINE BODY** – Cylinder block and head made of cast iron. Replaceable cylinder liner. Piston made of light-alloy with 2 compression rings and one oil scraper ring. Cylinder inclination 45°.

Decompression handle (5)  
Tool kit is supplied with engine.  
Bed of fiberglass with attachments.

**FUEL SYSTEM** – Piston-type injection pump with centrifugal governor for accurate speed regulation (13)  
Feed pump with hand primer (6).

Effective fuel filter (4)  
Manual cold-starting device with control bracket and lever mounted

**COOLING SYSTEM** – Thermostat-controlled sea-water cooling. Sea-water pump with neoprene rubber impeller (3).  
Cooling water intake in the drive (17)  
Cooling water line and cock (18)

**LUBRICATING SYSTEM** – Pressure-lubrication system with full-flow lubricating oil filter of the spin-on type  
Sealed crankcase ventilation.  
Oil filling (7)

**INTAKE SYSTEM** – Intake silencer (12) with filter.

**EXHAUST SYSTEM** – Exhaust manifold elbow for hose connection.

**ELECTRICAL SYSTEM** – Corrosionproof 12 V electrical system, with complete instrument panel. Alternator 35 A, 420 W (8). Starter motor output 0.8 kW (1.1 hp) (9).

The instrument panel is provided with a key switch, warning lamps for battery charging, cooling water temperature and oil pressure, and 2 extra switches.

Automatic alarm with buzzer for low oil pressure and high cooling water temperature. Also wired for indicating the respective warning lamps.

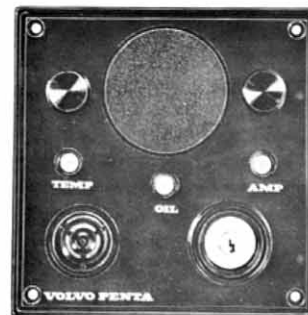
Recess for extra instrument (diam. 52 mm = 2") covered with dummy plug.

Cable harness, 4 m (13 ft.) in length, with connector.

Main fusing, with built in spare fuse, is mounted on engine.

**ENGINE MOUNTING** – Engine and drive are mounted to one unit which is rubber-suspended in the engine bed (10).

**SAILBOAT DRIVE** – Complete with rubber diaphragm and attachments against the bed (16). Silent Shift cone clutch (patented) ensures reliability in operation and quiet engagement with small manoeuvring forces. Both speed and manoeuvring are operated by one and the same control lever. Bracket for control cable (1). Lever for shift mechanism (2). Protective ring of zinc which prevents corrosion (11).



## EXTRA EQUIPMENT

### FUEL SYSTEM

Electrically operated fuel pump  
 Water-separating filter with or without flexible hoses  
 Water separator  
 Fuel tank (portable) compl. with water separator, cock, hoses and nipples.  
 Flexible fuel hose for feed pump – suction pipe  
 Fuel tank 40 litres  
 Cap with connections for fuel tank.  
 Fuel line kit with copper piping and installation parts

### COOLING SYSTEM

Sea-water filter complete with attachment  
 Vacuum valve

## EXHAUST SYSTEM

Hull through fitting  
 Exhaust rubber hose  
 Water-cooled silencer, complete

## ELECTRICAL SYSTEM AND INSTRUMENTS

Charging distributor for charging 2-battery system  
 Extra instruments: Hourmeter, fuel- and water gauge, voltmeter, rudder indicator.  
 Master switch  
 Cable harness extension  
 Instrument panel for extra instrument

## BOAT ACCESSORIES

Electrically operated bilge pump  
 Original paint  
 Oils

## CONTROLS AND CONTROL SYSTEM

VP single-control lever for both speed and forward-reverse operation, top-mounted or side-mounted.  
 Neutral-position switch – automatic safety interlock for VP controls  
 Push-pull controls  
 Control cables  
 Steering gears  
 Steering cables  
 Ball joint and clevis kit for steering cables

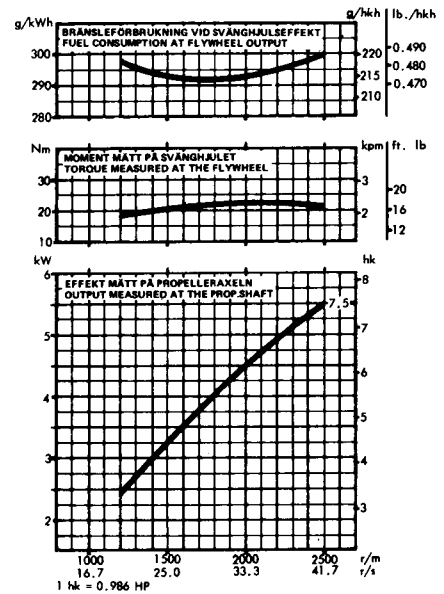
## PROPELLERS

2-blade I.O.R. 14x7  
 2-blade foldable 14x7  
 and 3-blade

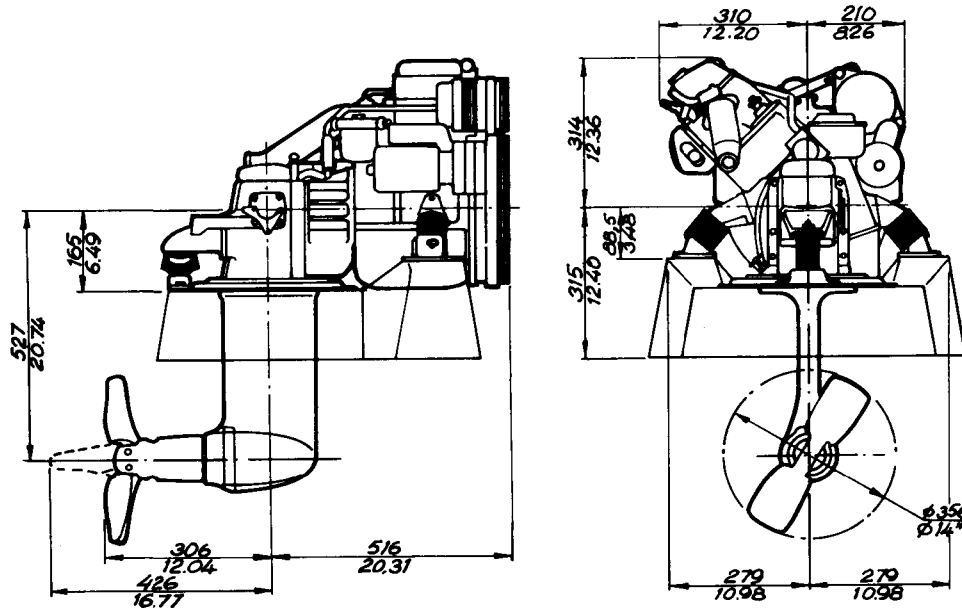
## DATA

Type of operation . . . . . 4-stroke diesel engine with direct injection  
 Designation . . . . . MD5A/110S  
 Propeller shaft output<sup>1)</sup> . . . . . 5.5 kW at 41.7 (7.5 h.p./2500 r.p.m.)  
 Number of cylinders . . . . . 1  
 Cylinder inclination . . . . . 45°  
 Capacity, dm<sup>3</sup> (cu.in.) . . . . . 0.443 (27)  
 Bore, mm (in) . . . . . 84 (3.31)  
 Stroke, mm (in) . . . . . 80 (3.15)  
 Valves . . . . . overhead  
 Weight, engine with sailboat drive, kg (lb), approx . . . . . 128 (282)

<sup>1)</sup> Propeller shaft output for a run-in engine with sailboat drive according to DIN 6270 Leistung B für Dauerbetrieb. The engine flywheel output is approx. 9% higher.



## DIMENSION DRAWING



We reserve the right for carry out modifications.

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