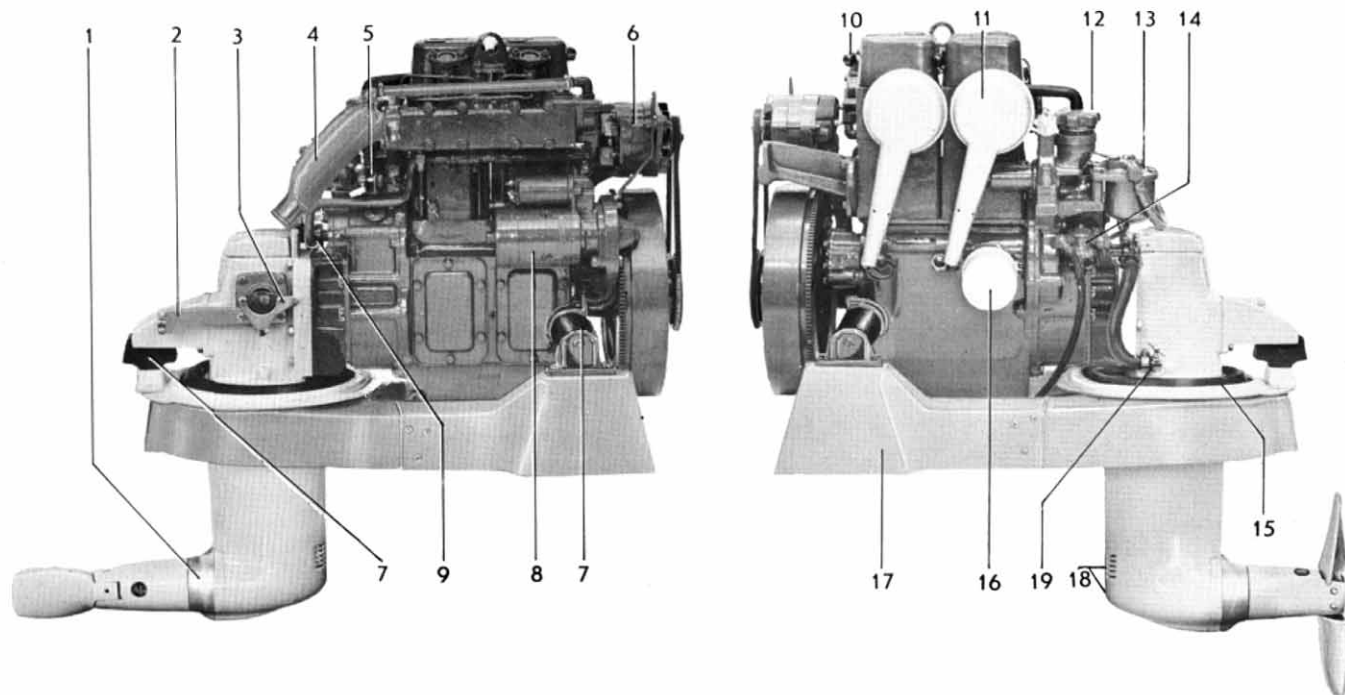


## MD 11C/110S



**2-cylinder, 4-stroke marine diesel engine with direct injection and sailboat drive 110S**  
**Propeller shaft output 17 kW (23 hp)**



### STANDARD EQUIPMENT

**ENGINE BODY** – Cylinder block and head made of cast iron. Replaceable cylinder liners. Pistons made of light-alloy with 3 compression rings and one oil scraper ring. Crankshaft journalled in 3 bearings. Decompression handle (10). Tool kit is supplied with engine. Bed of glass-fibre reinforced plastic with installation parts (17).

**FUEL SYSTEM** – Piston-type injection pump with centrifugal governor for accurate speed regulation (5). Feed pump with hand primer (14) and flexible hose with fuel pipe connection. Effective fuel filter (13). Manual cold-starting device. Stop lever with bracket for push-pull mechanism.

**COOLING SYSTEM** – Thermostat-controlled sea-water cooling. Sea-water pump with neoprene rubber impeller (9). Cooling water intake in the drive (18). Cooling water line and cock (19).

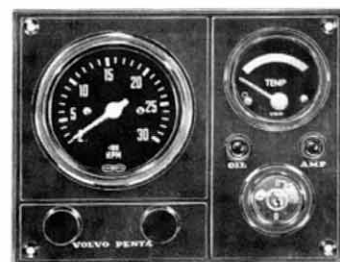
**LUBRICATING SYSTEM** – Pressure-lubrication system with lubricating oil filter of the spin-on type (16). Oil filling (12) and sealed crankcase ventilation.

**INTAKE SYSTEM** – Intake selencers (11) with filter.

**EXHAUST SYSTEM** – Sea-water cooled exhaust manifold of cast iron. Exhaust manifold elbow for hose connection (4).

**ELECTRICAL SYSTEM** – Corrosionsproof 12 V electrical system, with complete instrument panel. Alternator 34 A, 420 W (6). Starter motor output 0.8 kW (1.1 h.p.) (8).

The instrument panel is provided with a key switch, rev counter, temperature gauge, warning lamps for battery charging and oil pressure, a switch for instrument lighting and 1 extra switch. Cable harness, 4 m (13 ft.) in length, with connector. Main fusing with built-in spare fuse is supplied.



**ENGINE MOUNTING** – Engine and drive are mounted to one unit which is rubber-suspended in the engine bed (7).

**SAILBOAT DRIVE** – Complete with rubber diaphragm and attachments against the bed (15). 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 (2). Lever for shift mechanism (3). Protective ring of zinc which prevents corrosion (1).

## EXTRA EQUIPMENT

### FUEL SYSTEM

Electrically operated fuel pump  
Cold starting device, mechanical  
Cold starting device, electrically operated  
Water-separating filter with or without flexible hoses  
Water separator  
Fuel tank  
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

Exhaust rubber hose  
Through hull fitting for exhaust line

Water cooled silencer, complete  
Hull through fitting

### ELECTRICAL SYSTEM AND INSTRUMENTS

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

### 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 lock  
Steering wheels  
Steering cables  
Ball joint and fork for steering cables

### PROPELLERS

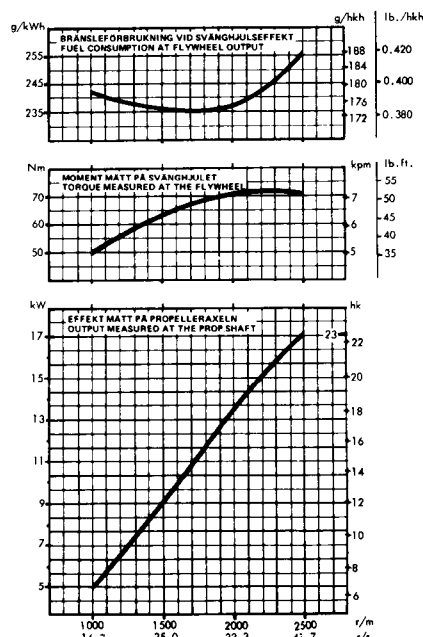
2-blade foldable 15"x9"  
2-blade 16"x11" I.O.R.  
3-blade

## DATA

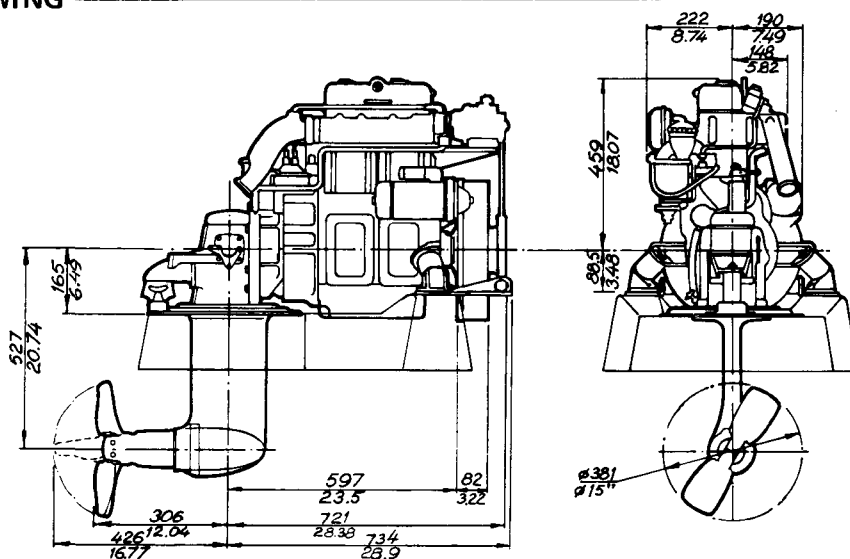
Type of operation . . . . . 4-stroke diesel engine with direct injection  
Designation . . . . . MD11C/110S  
Propeller shaft output<sup>1)</sup> . . . . . 17 kW at 41.7 r/s (23 hp at 2500 rpm)  
Number of cylinders . . . . . 2  
Capacity, dm<sup>3</sup> (in<sup>3</sup>) . . . . . 1.120 (68.4)  
Bore, mm (in) . . . . . 88.9 (3.5)  
Stroke, mm (in) . . . . . 90 (3.54)  
Valves . . . . . overhead  
Sailboat drive model/ratio . . . . . 110S/1.66:1  
Weight, engine with sailboat drive, kg (lb), approx . . . . . 247 (545)

1) The diagram indicated the 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. 4.5 % higher.

1 hk = 1 hp (metric system) = 0.986 HP (Imp./US meas. system)



## DIMENSION DRAWING



We reserve the right to carry out modifications

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