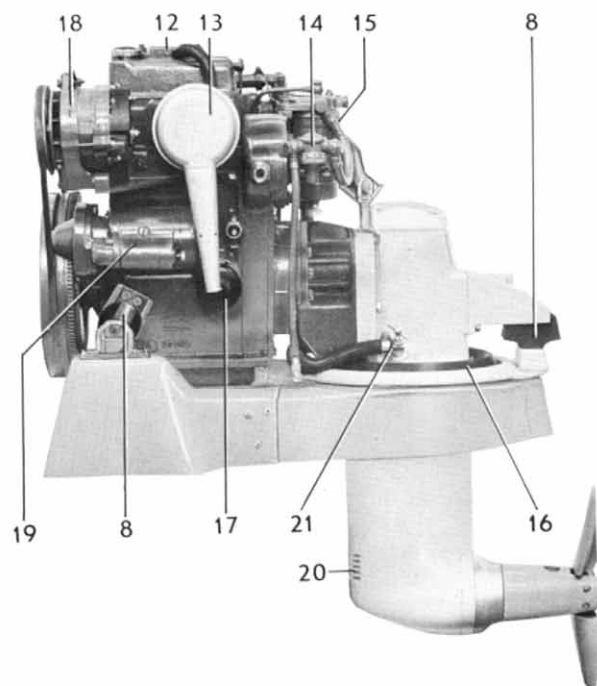
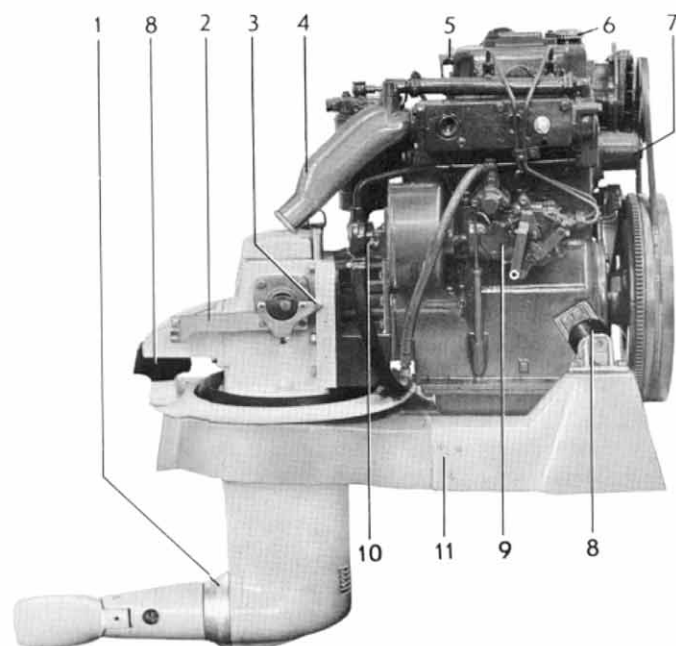


MD 7A/110S



2-cylinder, 4-stroke marine diesel engine with direct injection and sailboat drive 110S

Propeller shaft output 9.6 kW (13 hp)



STANDARD EQUIPMENT

ENGINE BODY — Cylinder block and head made of cast iron. Pistons made of light-alloy with 2 compression rings and one oil scraper ring. Crankshaft journalled in 3 bearings.

Decompression handle (5)

Recess for starting crank handle (7)

Tool kit with starting crank handle is supplied with engine. Bed of glass-fibre reinforced plastic with installation parts (11).

FUEL SYSTEM — Distributor-type injection pump with hydraulic governor for accurate speed regulation (9).

Feed pump with hand primer (14) and flexible hose with fuel pipe connection for suction and return lines

Effective fuel filter (15).

Automatic cold-starting device

COOLING SYSTEM — Thermostat-controlled sea-water cooling. Sea-water pump with neoprene rubber impeller (10).

Cooling water intake in the drive (20).

Cooling water line and cock (21).

LUBRICATING SYSTEM — Pressure-lubrication system with lubricating oil filter of the spin-on type (17). Sealed crankcase ventilation (12). Oil filling in rocker arm cover (6).

INTAKE SYSTEM — Intake silencers (13) with filter.

EXHAUST SYSTEM — Sea-water cooled exhaust manifold of cast iron. Exhaust manifold elbow for hose connection (4). Through-full fitting for exhaust line.

ELECTRICAL SYSTEM — Corrosionsproof 12 V electrical system, with complete instrument panel.

Alternator 35 A, 420 W (18). Starter motor output 0.8 kW (1.1 h.p.) (19).

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) covered with dummy plug.

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

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



ENGINE MOUNTING — Engine and drive are mounted to one unit which is rubber-suspended in the engine bed (8).

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 (2). Lever for shift mechanism (3). Protective ring of zinc which prevents corrosion (1).

EXTRA EQUIPMENT

FUEL SYSTEM

Electrically operated fuel pump
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
Water-cooled silencer, complete
Through hull fitting for exhaust line.

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 lock
Steering cables
Ball joint and fork kit for steering cables

PROPELLERS

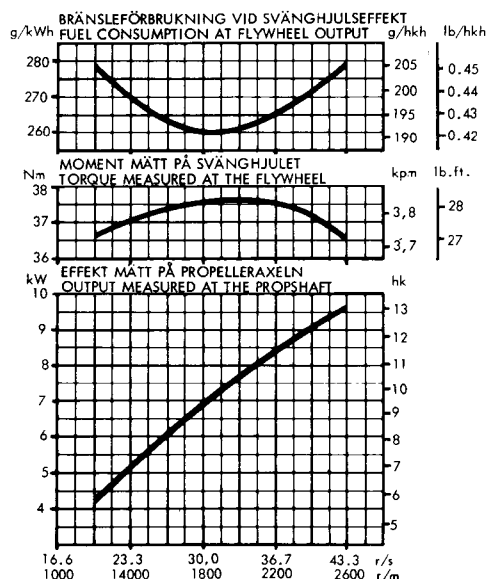
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2-blade I.O.R. 14"x9"
and 3-blade

DATA

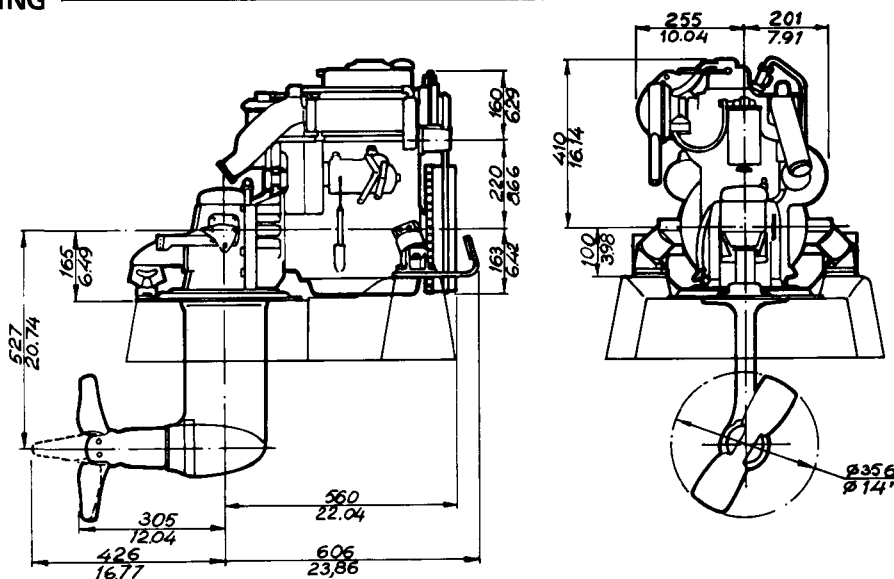
Type of operation 4-stroke diesel engine with direct injection
Designation MD7A/110S
Propeller shaft output¹⁾ 9.6 kW at 43.3 r/s 13 hp at 2600 rpm)
Number of cylinders 2
Capacity, dm³ (in³) 0.744 (45.4)
Bore, mm (in) 76 (2.99)
Stroke, mm (in) 82 (3.23)
Valves overhead
Sailboat drive model/ratio 110S/1.66:1
Weight, engine with sailboat drive, kg (lb), approx. 192 (425)

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% 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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