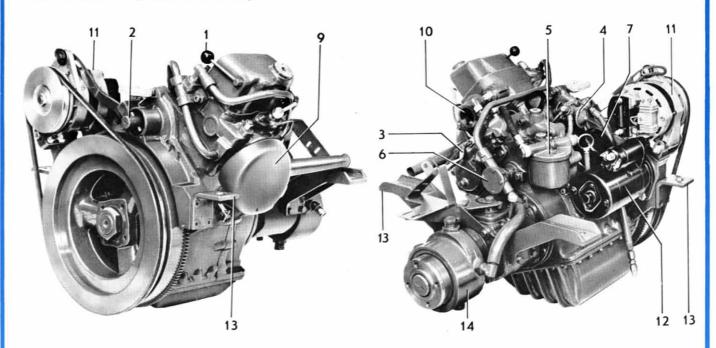


# MD 5A



1-cylinder, 4-stroke marine diesel engine with overhead valves and direct injection. Cylinder inclination 45° Propeller shaft output 5.5 kW (7.5 hp)



# STANDARD EQUIPMENT

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

Decompression handle (1)

Recess for starting crank handle (2)

Tool kit with starting crank handle is supplied with engine.

**FUEL SYSTEM** — Piston-type injection pump with centrifugal governor for accurate speed regulation (3)

Feed pump with hand primer (4) and flexible hose with fuel pipe connection for suction line

Effective fuel filter (5)

Manual cold-starting device with control bracket and lever mounted

**COOLING SYSTEM** — Thermostat-controlled sea-water cooling. Sea-water pump with neoprene rubber impeller (6). The reverse gear reduction gear is water-cooled.

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

INTAKE SYSTEM - Intake silencer (9) with filter.

**EXHAUST SYSTEM** — Exhaust outlet in rear of cylinder head with R 1 1/4" connection flange (10).

**ELECTRICAL SYSTEM** — Corrosionproof 12 V electrical system, with complete instrument panel. Alternator 35 A, 420 W (11). Starter motor output 0.8 kW (1.1 hp) (12).

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 is supplied with engine brackets for fixed suspension (13).

**POWER TRANSMISSION** — MS (Mono-Shift) type reverse gear. Single-control lever for both speed and operating the reverse gear. Bracket for control cables included. Propeller shaft flange for 25 mm (1") propeller shaft. Reverse gear type MS red. ratio 1.91:1, L- H prop. (14)

## **EXTRA EQUIPMENT —**

## **FUEL SYSTEM**

Electrically operated fuel pump Water-separating filter with or without flexible hoses

Fuel tank

Fuel line kit with copper piping and installation parts

## **COOLING SYSTEM**

Sea-water filter complete with attachment

Cooling water intake complete with cock and hose

## **EXHAUST SYSTEM**

Water-cooled exhaust elbow Hull through fitting Exhaust rubber hose Water-cooled silencer, complete Vacuum valve Exhaust boot Silencer Compensator

# ELECTRICAL SYSTEM AND INSTRUMENTS

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

#### **ENGINE MOUNTING**

Flexible engine mounting

# **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

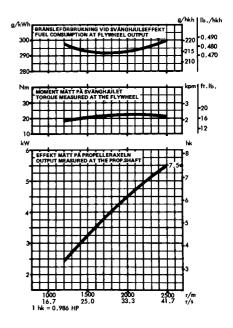
#### PROPELLER EQUIPMENT

Flexible coupling Clamp coupling Propeller shafts Propeller shaft sleeves Propellers

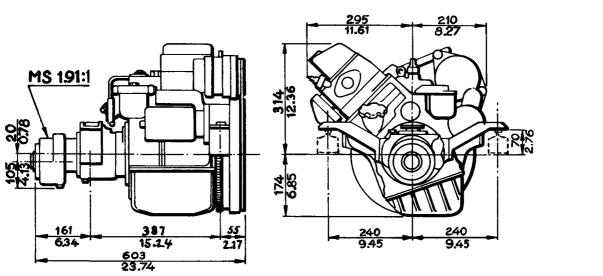
# DATA -

Type of operation	. 4-strol	ke diesel e	engine with direct injection
Designation			MD5A
Propeller shaft output 1)	5.5 !	kW at 41.	7 r/s (7,5 h,p,/2500 r,p,m,
Number of cylinders			
Cylinder inclination			
Capacity, dm <sup>3</sup> (cu.in)			0.443 (27
Bore, mm (in)			84 (3.31
Stroke, mm (in)			
Valves			
Weight, engine with MS rev. go			

1) Propeller shaft output for a run-in engine with mechanical reverse gear according to DIN 6270 Leistung B für Dauerbetrieb. The engine flywheel output is approx. 9 % higher.



# **DIMENSION DRAWING -**





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