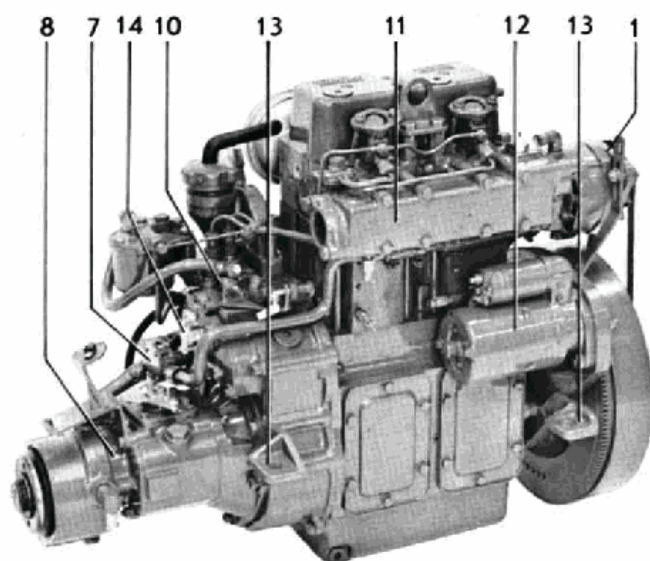
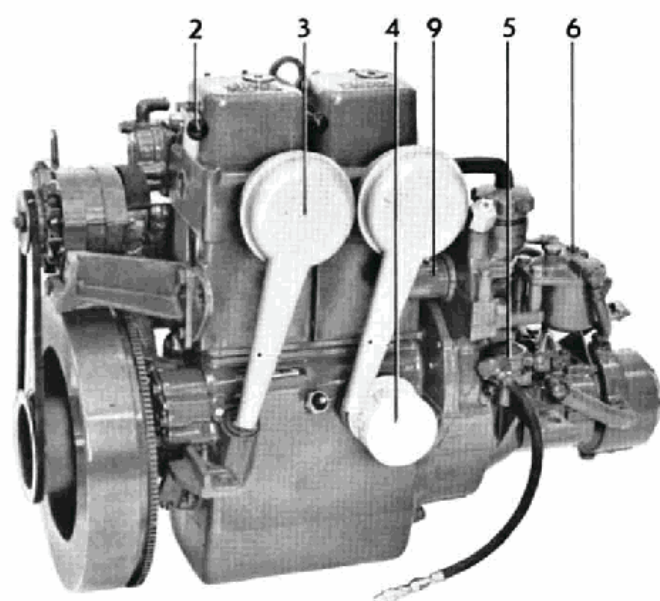


# VOLVO PENTA

## MD 11C



2-cylinder, 4-stroke marine diesel engine with direct injection  
Propeller shaft output 17 kW (23 hp)



### STANDARD EQUIPMENT

**ENGINE BODY** — Cylinder block and heads made of cast iron. Replaceable cylinder liners. Pistons made of light-alloy with 3 compression rings and one oil scraper ring. Crankshaft journaled in 3 bearings.

Decompression handle (2)

Recess for starting crank handle (9)

Tool kit with starting crank handle is supplied with engine.

**FUEL SYSTEM** — Piston-type injection pump with centrifugal governor for accurate speed regulation (10).

Feed pump with hand primer (5) and flexible hose with fuel pipe connection.

Effective fuel filter (6)

Manual cold-starting device.

Stop lever with bracket for push-pull mechanism (14).

**COOLING SYSTEM** — Thermostat-controlled sea-water cooling. Sea-water pump with neoprene rubber impeller (7). The reverse gear reduction gear is water-cooled.

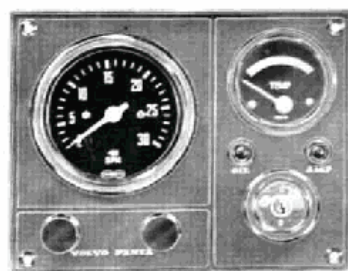
**LUBRICATING SYSTEM** — Pressure-lubrication system with full-flow lubricating oil filter of the spin-on type (4). Sealed crankcase ventilation.

**INTAKE SYSTEM** — Intake silencers (3) with filter.

**EXHAUST SYSTEM** — Sea-water cooled exhaust manifold of cast iron with R 1 1/4" connection (11).

**ELECTRICAL SYSTEM** — Corrosionproof 12 V electrical system, with complete instrument panel. Alternator 35 A, 420 W (1). Starter motor output 1.5 kW (2 h.p.) (12).

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

**POWER TRANSMISSION** — MS-B (Mono-Shift) type reverse gear. Single control lever for both speed and operating the reverse gear should be used. Bracket for control cables included.

Delivered without propeller shaft flange.

Reverse gear type MS-B red. ratio 1.91:1, L-H prop. (8).

# PRODUCT BULLETIN

## FUEL SYSTEM

## COOLING SYSTEM

## EXHAUST SYSTEM

Water-cooled exhaust elbow  
Hull through fitting  
Exhaust rubber hose

Water-cooled silencer, complete  
Exhaust boot  
Silencer  
Compensator

## 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
- Automatic alarm for oil pressure and water temperature

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

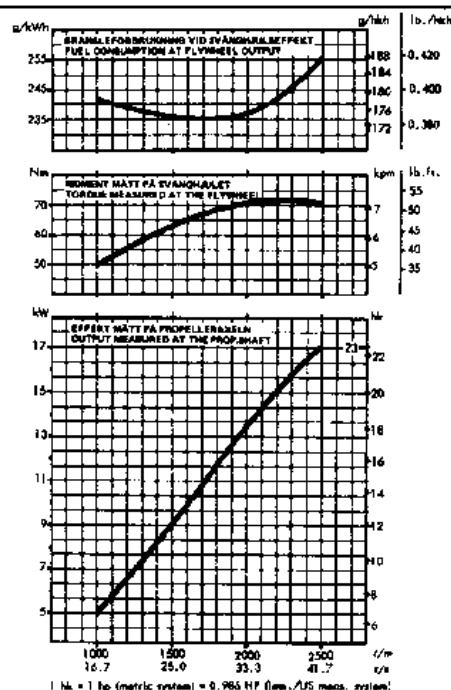
## PROPELLER EQUIPMENT

Flexible coupling  
Clamp coupling  
Propeller shafts  
Propeller shaft sleeves  
Propellers

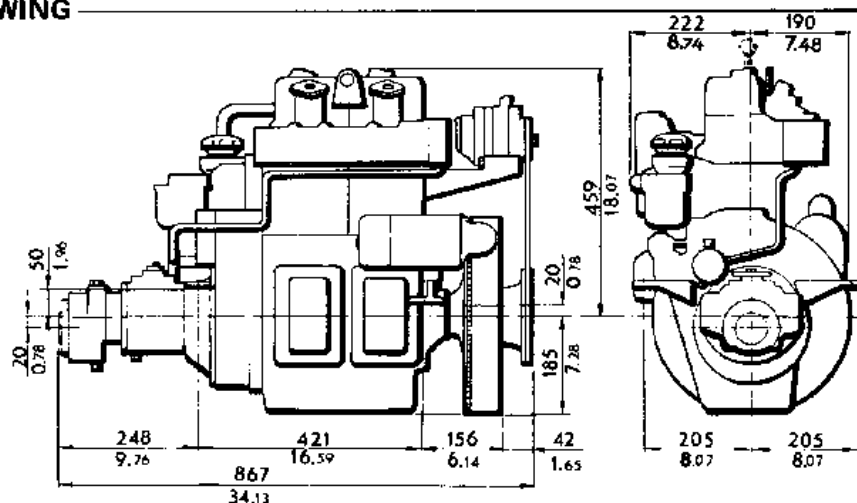
## DATA

Type of operation	4-stroke diesel engine with direct injection
Designation	MD11C
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
Weight, engine with MS-B rev. gear 1.91:1, kg (lb), approx	230 (505)

1) The diagram indicates the 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. 4.5% higher.



### DIMENSION DRAWING



## VOLVO PENTA

**S-405 08 Göteborg, Sweden**  
**Telephone: 031/23 54 60**  
**Cables: Penta Göteborg**  
**Telex: 207 55 PENTA S**

**We reserve the right to carry out modifications**

Printed in Sweden, Gotab, Kungälv, 1977 23120

# MD11C, Invertitore **MD11C**



1. Interruttore fuso girato.
2. Fuso girato.
3. Pompa di aspirazione.
4. Tappo riempimento olio motore.
5. Separatore di aria motore a freddo MD11C.
6. Valvola di ritorno di olio motore.
7. Pompa olio di motore.
8. Pompa olio di motore.
9. Tappo riempimento olio motore.
10. Tappo olio motore.
11. Pompa olio di motore.
12. Pompa olio di motore.
13. Pompa olio di motore.
14. Pompa olio di motore.



15. Pompa olio motore.
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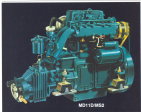




#

**VOLVO  
PENTA**

**MD11D**



**MD11D-M50**

**3-cylinder marine diesel engine with direct injection  
Propeller shaft output, borecraft – 18.4 kW (25 hp)**

The new Volvo Penta MD11D with its higher speed (3000 rpm) and greater output (25 hp) together with the latest and unique Volvo Penta borecraft gives significant improvements in propeller thrust.

In practice this new combination means better manoeuvrability, better fuel consumption and faster acceleration, reduced speed losses when using wave and high transoms.

The robust compact built-in marine engine with features like anti-sink thickness, 12 tie-mounting points and replaceable pulleys makes the MD11D very resistant to corrosion and wear.

The very accurate fuel metering system of the 3-cylinder marine engine, again without gears and a very low fuel consumption.

The new Volvo Penta M50 marine reduction gear has a slip coupling built in and many other new details, featured also found in the model variations.

An experienced and professionally created network of authorized Volvo Penta companies ensures you of the best service and parts facilities.

**MD11D/120B**



**3000**  
RPM

system (PS) and a solar cell charge (PS). Both PS systems contain two 100-ohm resistors connected across PS. The PS systems are rated for 100,000 cycles. The PS systems are rated for 100,000 cycles.

### Installation and Use

The PS systems should not be connected to the PS system. The PS systems are rated for 100,000 cycles. The PS systems are rated for 100,000 cycles.

These PS systems are rated for 100,000 cycles.

### WARNING SYSTEM

These PS systems are rated for 100,000 cycles. The PS systems are rated for 100,000 cycles.

### INSTRUMENT PANEL

These PS systems are rated for 100,000 cycles. The PS systems are rated for 100,000 cycles.



Instrument panel showing two analog gauges.

### PS-1000

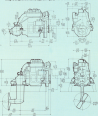
These PS systems are rated for 100,000 cycles.

## Data



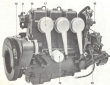
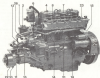
The graphs show the relationship between pressure and temperature for a constant volume, constant pressure, and constant pressure.

Pressure (psia)	1000
Temperature (°F)	1000
Volume (ft³)	1000
Pressure (psia)	1000
Temperature (°F)	1000
Volume (ft³)	1000
Pressure (psia)	1000
Temperature (°F)	1000
Volume (ft³)	1000















MD17D1500

**3-cylinder marine diesel engine with direct injection  
Propeller shaft output, leisure craft – 28.5 kW (39 hp)**

The new Volvo Penta MD17D with its higher output (39 kW) meets and goes beyond (39 kW) together with the latest 400-unique Volvo Penta transmission gives significant improvements in propeller thrust.

In practice this new combination means better manoeuvrability, better fuel economy and faster stoppage without speed fluctuations and high revs.

The special purpose built marine engine with features like silencing and electronic fuel injection and turbocharger makes Volvo Penta MD17D easy to install and maintain.

The very accurate fuel metering pump in the throttle makes extremely clean exhaust gases and a steady fuel consumption.

The new Volvo Penta MD17D marine engine gear box is fully coupling built in and made with Cast-Steel. Features also found in the Volvo 3000 series.

An experienced and strategically placed network of authorized Volvo Penta workshops ensure you of the best service and parts supply.

MD17D1500



depth is increasing. The engine does not get a constant load but has to work harder every second the engine is thrown a roller for change.

But a variable workload also means a higher constant load. The engine wastes more fuel than could be saved by the roller load, since fuel.

### ELECTRICAL SYSTEM

For maximum performance, the generator sets themselves are compact and powerful too. Available in 10 to 100 hp, equipped for marine use, voltage output can be changed from 24 to 280 volts.

Because power for remote areas tends to come from large quantities of independent fuel, it runs better.

### HEATING SYSTEM

Heats water for hot water, 1,000-2 gal.

### INSTRUMENT PANEL

Complete with options for analog read, electronic, full-function panel, warning lights, engine oil oil pressure, and also, water in engine cooling. Radio can be built in, even built into the engine panel.



Instrument, large 4 in., with 100-1000.

### PRICE SET

Call for the nearest distributor.



Engine speed vs. engine load. The curve shows a significant increase in RPM as load increases.

## Data

Engine type	4 stroke diesel with direct injection
Engine power output	100 to 1000 hp at 1500 rpm
Engine speed (RPM)	1500, 1800, 2100, 2400
Engine dimensions (mm)	1000 x 1000 x 1000
Engine weight (kg)	1000
Engine oil capacity (liters)	100
Engine oil change interval (hours)	1000
Engine oil change interval (km)	1000
Engine oil change interval (liters)	100
Engine oil change interval (kg)	100

