

# PENTA • BB 25

## Main data:

|  |                                |
|--|--------------------------------|
| Output, petrol   | 22—32 h.p. at 1500—2200 r.p.m. |
| Output, paraffin   | 17—25 h.p. at 1500—2200 r.p.m. |
| Valves   | Overhead                       |
| No. of cylinders   | 4                              |
| Displacement   | 1.6 litres (97.6 cu.ins)       |
| Bore   | 79.37 mm (3.125")              |
| Stroke   | 80 mm (3.150")                 |
| Compression ratio:                                       |                                |
| Petrol   | 7.4:1                          |
| Paraffin   | 5:1                            |
| Engine weight, including reverse gear                    | 180 kg (415 lb)                |
| Engine weight, including reverse gear and reduction gear | 235 kg (450 lb)                |
| Direction of rotation (viewed from flywheel)             | Anti-clockwise                 |
| Propeller type   | Right-hand pitch               |

### Cylinder head.

Removable, of special cast-alloy.

### Cylinder block

of special-alloy cast iron.

### Pistons

of light-alloy, provided with two piston rings of which the upper is chromed and one oil ring.

### Connecting rods.

Drop-forged H-section and robustly proportioned.

### Crankshaft.

Drop-forged special steel, precisely balanced, three main bearings.

### Camshaft.

Drop-forged with hardened and ground cams. Three bearings.

### Valves.

Inlet valves of nickel-steel, exhaust valves of silicon-chrome steel with replaceable guides.

### Lubricating system.

Pressure and circulation lubrication by means of gear pump. All the lubricating oil passes through an oil strainer fitted in the sump and an oil cleaner fitted on the starboard side of the engine.

### Cooling system.

Gear type sea-water pump driven from the camshaft. The quantity of water delivered to the engine is thermostatically controlled so that correct running temperature is automatically obtained regardless of loading and water temperature.

### Carburettor.

Marine up-draught carburettor with controllable needle valve and return suction channel which prevents the formation of drops. Easily adjustable and provided with flame damper.

### Electrical equipment.

6 volt starter motor and dynamo with built-in relay.

### Instrument panel

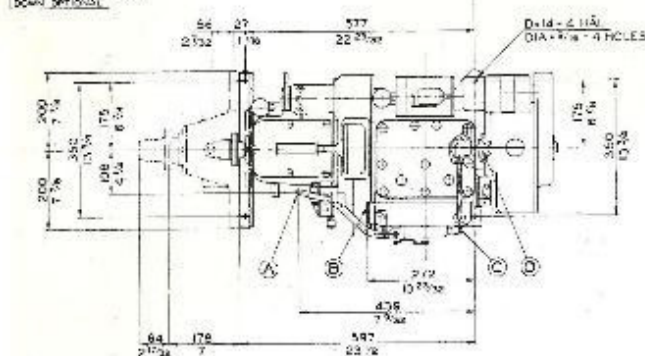
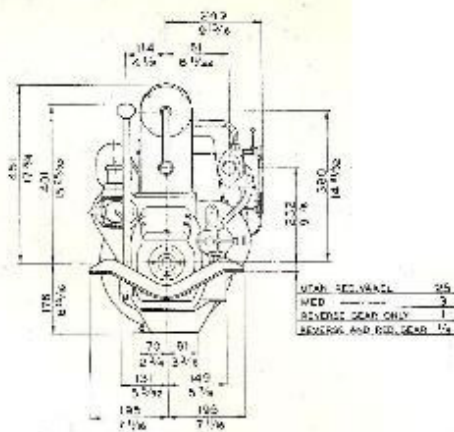
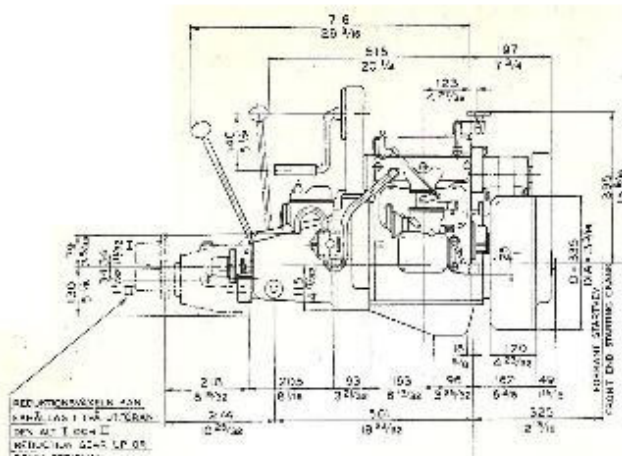
Provided with a key switch, starter button, indicator lamps for oil pressure and charging, also choke control.

### Reverse gear

of planetary type with disc clutch and brake band. Reverse gear wheel made of hardened special steel. Propeller thrust taken up in SKF bearings. The most important moving parts are also carried in SKF bearings. The reverse gear is easily adjustable.

### Extra equipment.

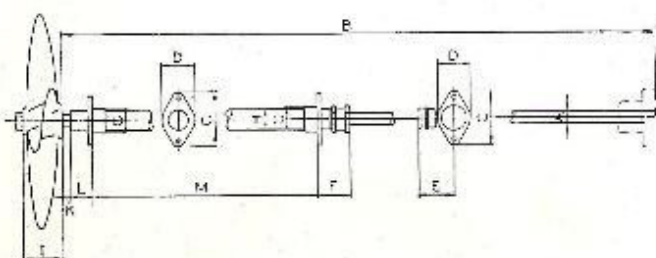
Conversion set for paraffin. Reduction gear 2:1. Bevel gear. Rubber mounting.



**Reduction gear:** 2:1 reduction gear is available; can be mounted directly on the reverse gear with the propeller shaft flange 34 mm (1.34") below or above the reverse gear shaft. The reduction gear has independent lubrication. Picture shows engine with raised hand starter and reduction gear (see picture).

**Net weight**

- Engine with reverse gear approx. 155 kg. (340 lb.).
- Engine with reduction gear approx. 180 kg. (395 lb.).
- Propeller, etc. 25 kg. (55 lb.).



|    | A    | B    | C      | D     | E     | F       | G      | H     | I      | K       | L     | M    |
|----|------|------|--------|-------|-------|---------|--------|-------|--------|---------|-------|------|
| mm | 25   | 2000 | 90     | 58    | 70    | 75      | 42     | 34    | 64     | abt 15  | 37    | 1000 |
| in | 3/16 | 79"  | 3 5/16 | 2 1/8 | 2 3/4 | 2 11/16 | 1 3/32 | 1 1/8 | 2 3/16 | abt 5/8 | 1 3/8 | 39"  |

**Specifications**

**Cylinder head:** removable, compression chamber of the latest design.

**Cylinder block:** chrome-nickel alloyed iron with replaceable wet cylinder liners.

**Pistons:** three compression rings (top ring chromium-plated) and one oil ring.

**Connecting rods:** rugged, forged steel I-sections.

**Bearing shells:** white metal-lined steel bearing shells, extra-strong. Total bearing surface: main bearings 55 cm<sup>2</sup> (8.5 sq.in), connecting rod bearings 30 cm<sup>2</sup> (4.65 sq.in).

**Crankshaft:** steel, crans integral with shaft.

**Valve tappets:** adjustable, hardened and ground.

**Coolant pump:** gear type, driven from camshaft.

**Lubrication:** combination pressure and splash.

External pump and oil filter are easily accessible. Oil gauge provided. On engines with electrical equipment the gauge is replaced by an indicator lamp on the instrument panel. The carburettor is fitted with a flame guard which also serves as explosion protection.

Planetary reverse gear with disc clutch. SKF ball bearings. Pressure lubrication from the engine system.



Göteborg, Sweden  
— a Volvo company