

# KAMD42

## 4-stroke, Direct Injected, Marine Diesel Engine with Charge Air Compressor, Turbocharger and Aftercooler. - Crankshaft power\* 170 kW (230 hp)

### Compressor-driven, compact Hi-Tech engine

Volvo Penta's 6 cylinder KAMD 42 is a *compressor-driven, turbocharged* high performance engine with *aftercooler* producing high torque at low engine speeds. This means unique acceleration properties and excellent driveability.

The engine is compact and has an advantageous weight to power ratio making it excellent for both single and multi-engine installation.

### Economic and reliable marine engine

KAMD 42 is a reliable and economical marine engine with considerable power resources specially developed for planing pleasure craft.

The engine is equipped with replaceable cylinder liners and valve seats. The pistons are oil-cooled and the engine is freshwater-cooled to ensure reliability and long service life.

Direct injection (DI) results in a reduced thermal load and reduced fuel consumption compared with swirl chamber engines (IDI) with the same cylinder capacity.

### Supercharging system

The engine is supercharged with a mechanically driven compressor and an exhaust turbocharger. The compressor supplies compressed air at low engine speeds and while accelerating. The turbo takes over when the charging pressure has reached the proper level.

The interaction of compressor and turbo produces high torque over the whole speed range and this contributes to cleaner exhaust gases and fuel economy giving excellent acceleration and excellent driving characteristics.

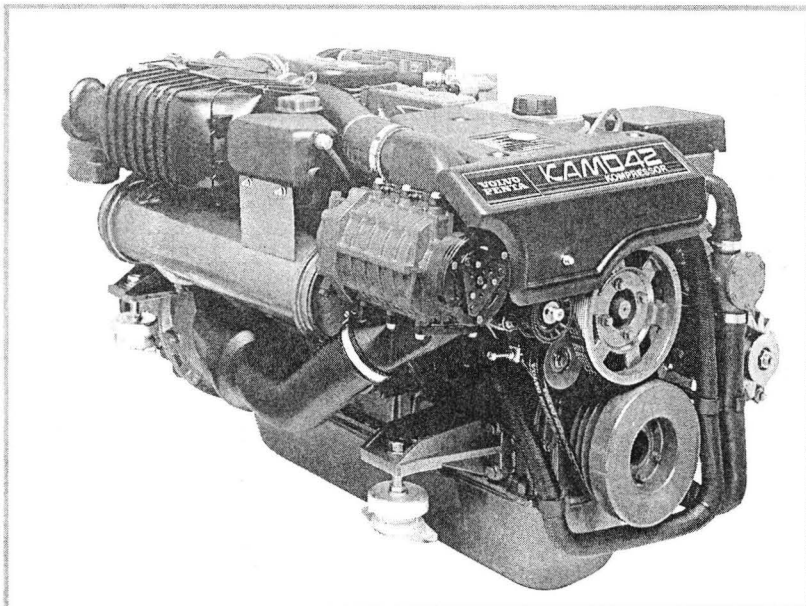
### Aftercooler

Air heats up and expands when it is compressed. In other words, it takes up more space. The aftercooler cools the compressed / heated air and raises its oxygen content so that the engine can use fuel more efficiently.

### Easy to service

The engine is designed for easy maintenance and service. All the important service points on the engine are conveniently located at the top and the port side.

\* Crankshaft power according to ISO 8665.



### Technical description:

#### Engine and block

- The cylinder block and cylinder head are made of cast iron.
- Oil-cooled pistons with two compression rings and one oil scraper ring.
- Replaceable cylinder liners.
- Replaceable valve seats.
- Seven-bearing crankshaft.
- Oil sump of stainless steel.

#### Fuel system

- The rotary-type injection pump has a mechanical governor for accurate engine speed control.
- Smoke limiter.
- Fine filter with water separator.
- Feedpump with hand primer.
- Flexible fuel line connections.
- Electrically-operated stopping device.

#### Cooling system

- Thermostatically regulated freshwater cooling with easily accessible impeller pump.
- Tubular heat exchanger with expansion tank.
- Coolant system prepared for hot water outlet.

#### Air inlet system

- The air inlet system is designed so as to give optimal air rotation and to maintain efficient combustion which results in high power and low fuel consumption.
- Air inlet silencer with replaceable filter.

#### Exhaust system

- Seawater-cooled exhaust elbow made of cast iron with a stainless steel insert.

#### Supercharging system

- Mechanically-driven compressor.
- Exhaust-driven freshwater-cooled turbo compressor.

#### Lubrication system

- Pressure lubrication system with easily replaceable fullflow oil filter.
- Tubular oil cooler.

#### Engine mounting

- Flexible mounting comprising 4 adjustable rubber cushions which provide sound and vibration insulation.

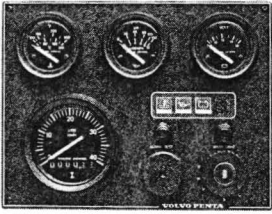
#### Power transmission

- Reverse gear MS5B, ratios 1.94:1 or 2.40:1, 8° angled down.

#### Electrical system

- 12 V corrosion-protected electrical system, complete with instrumentation.
- Alternator with a charging capacity of 14 V 50 A designed for marine use.
- Charging regulator with battery sensor for voltage drop compensation.
- The alternator is prepared for a bulkhead-mounted double-diode set which automatically distributes the charge current to two separate battery circuits.
- Automatic 40 A fuse with reset button.
- Starter motor power 2.2 kW.

# KAMD42



## Instrument panel

Includes:

- Key switch.
- Temperature gauge.
- Instrument lighting.
- Oil pressure gauge.
- Alarm for temperature, oil pressure and charging.
- Voltmeter.
- Tachometer.
- Hour meter.
- Fuses.
- Alarm test button.

## Miscellaneous

- 5 m (16.4 ft.) extension cable for the instrument panel with plug-in connector.

## Accessories

### Fuel system

- Fuel filter with water separator.
- Fuel pipes.
- Fuel cock.
- Separate connection cap for fuel tank.
- Tank vent.
- Shut off valve.

## Coolant system

- Coolant water intake.
- Hot water outlet.
- Water heater.
- Separate expansion tank.
- Seawater filter.

## Exhaust system

- Exhaust temperature sensor.
- Exhaust hose.
- Through hull fitting.
- Watercooled silencer.
- 45° and 90° exhaust elbows.

## Electrical system

- Distributor for charging two independent battery systems.
- Main switch.
- Handed instrument panel.
- Extra instruments: tachometer, fuel, water tank, voltmeter, turbo pressure and rudder indicator.
- Extension cable 3, 5 and 7 meters. (10, 16.5 and 23 ft.)
- Flybridge instrument panel.
- T-connector for Flybridge.
- Extra alternator 12V/50A.

## Control and steering system

- Single lever control for engine speed and gear control, top or side mounted. For single or double installation.
- Neutral safety switch for VP control.
- Control cables, steering gear, steering cables, ball joints and fork for steering cables.
- Steering wheels

## Transmission

- Propellers.
- Propshaft clamp coupling.
- Propshaft coupling, with pilot bore.
- Propshafts.
- Rubber stuffing box.

## Boat accessories

- Electric bilge pump.
- Oil scavenging pump.
- Touch-up paints.
- Onboard kit.
- Batteries.
- Oils.
- Toolkit.

## The complete marine programme

Volvo Penta has a complete and comprehensive programme for marine use.  
 - See the separate accessories catalogue and brochures for shaft systems, propellers and control systems.  
 Specially-designed and tested products to suit your installation.

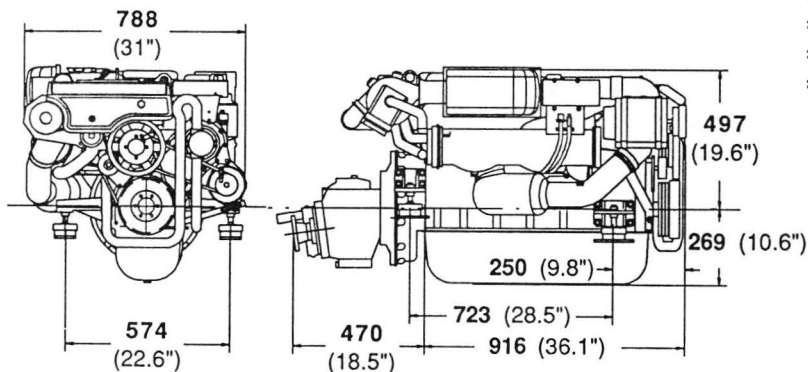
## Technical Data

Engine designation .....	KAMD 42
Crankshaft power <sup>1) 2) 4)</sup> kW (hp) .....	170 (230)
Propellershaft power <sup>3) 4)</sup> kW (hp) .....	164 (223)
Engine speed, rpm .....	3800 - 3900
Displacement, l (cu.in) .....	3,59 (219)
Number of cylinders .....	6
Bore/stroke, mm (in.) .....	92/90 (3.62/3.54)
Compression ratio .....	17,8:1
Weight with reverse gear MS5B, kg (lb) ...	500 (1102)

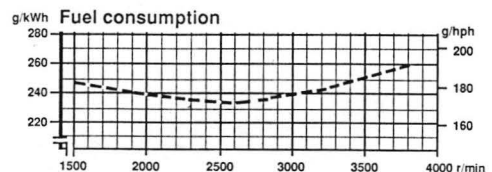
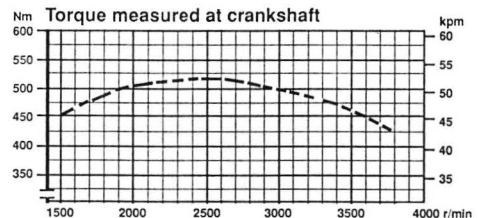
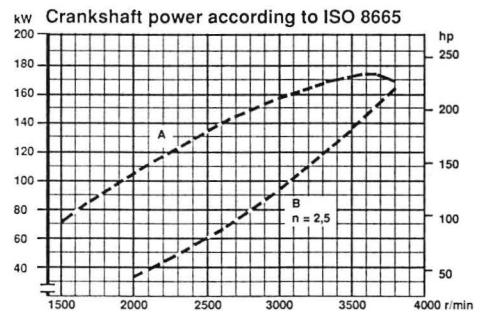
Operating mode: PD = Pleasure duty

- 1) Crankshaft power according to ISO 8665 or SAE J 1228
- 2) The power will be reduced by transmission losses
- 3) Propshaft power according to ISO 8665 or the basically compatible standards SAE J 1228 and ICOMIA 28-83.
- 4) Power rated in accordance with NMMA procedure

## Dimension Drawing



Not for installation



A = Crankshaft power  
 B = Calculated propeller shaft curve exponent 2.5 (planing boats)