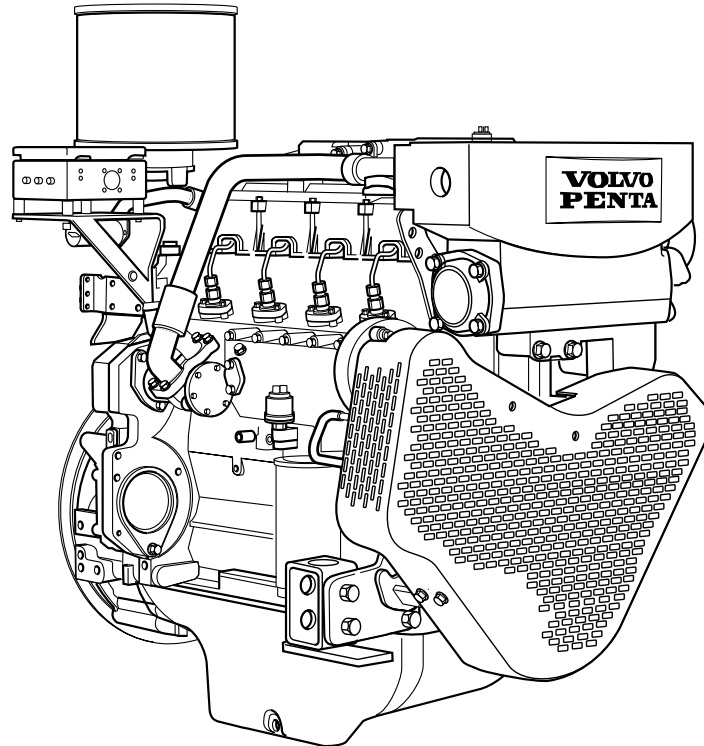


# D5A TA

**4.76 litre, in-line 4 cylinder - Variable engine speed**

89, 102, 103 and 118 kW

CCNR Stage 2



**D5A TA is a reliable, type-approved, marine diesel engine. It's designed by Volvo Penta to power a wide range of marine auxiliary applications.**

The rigid in-line 4 cylinder block has a high-pressure injection system with single injection pump and six-hole injection nozzles that operate under high pressure. In combination with the turbo and charge-air-cooler, the engine has high torque, low fuel consumption and low emission levels. The robust design, including a stable engine block and over-sized crankshaft bearings provide smooth operation and low noise.

**Typical applications:**

- Pumps
- Cranes
- Hydraulic power packs
- Air compressors
- High-pressure water systems
- Fire-fighting equipment
- Nitrogen pumps
- Dry bulk handling

The compact, space saving design makes for easy installation and easily accessible service points.

- **Rigid and robust design**
- **Fuel-efficient and low emission levels**
- **Responsive**
- **Low weight, noise and vibrations**
- **Type-approved**
- **Classifiable by all major societies**
- **Compact installation and easy to service**

The engine can be equipped with a wide range of optional equipment and is available with a Heat Exchanger (HE) or Keel Cooled (KC) cooling system. The engine and equipment can be covered with the Extended Coverage which prolongs the standard warranty up to five years - or the corresponding number of running hours.

# D5A TA

## Technical data

### General

Engine designation	D5A TA
Displacement, litre (in <sup>3</sup> )	4.76 (290.7)
Configuration and number of cylinders	in-line 4
Method of operation	4-stroke, direct-injected, turbocharged diesel engine with charge air cooler
Bore/stroke, mm (in.)	108/130 (4.25/5.12)
Compression ratio	17.6
Dry weight bobtail HE <sup>1)</sup> , kg (lb)	580 (1279)
Dry weight bobtail KC <sup>2)</sup> , kg (lb)	560 (1235)
Flywheel housing/SAE size	14"/SAE1, 10"/11,.5"/SAE2 and SAE3

### Performance, fuel & emissions

Rating <sup>3)</sup>	1	1	2	2
Rated speed	1900 rpm	2300 rpm	1900 rpm	2300 rpm
Crankshaft power, kW (hp)	89 (121)	102 (139)	103 (140)	118 (160)
Max. torque, Nm (lb.ft) @ 1500 rpm <sup>4)</sup>	490 (362)	490 (362)	579 (427)	579 (427)
Spec. fuel consumpt. at 100% load:				
g/kWh (lb/hph) @ 1200 rpm	215 (0.348)	215 (0.348)	215 (0.348)	215 (0.348)
g/kWh (lb/hph) @ 1500 rpm	205 (0.332)	205 (0.332)	205 (0.332)	205 (0.332)
g/kWh (lb/hph) @ 1800 rpm	202 (0.327)	202 (0.327)	202 (0.327)	202 (0.327)
g/kWh (lb/hph) @ 1900 rpm	203 (0.329)	203 (0.329)	202 (0.327)	202 (0.327)
g/kWh (lb/hph) @ 2300 rpm		214 (0.347)		210 (0.34)
Emission compliance	CCNR Stage 2	CCNR Stage 2	CCNR Stage 2	CCNR Stage 2
Recommended fuel to conform to	ASTM-D975 1-D and 2-D, EN 590 or JIS KK 2204			

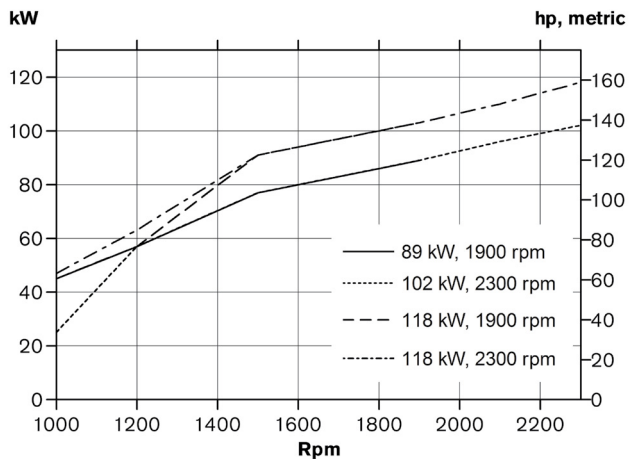
Technical data according to ISO 3046 Fuel Stop Power and ISO 8665. Fuel with a lower calorific value of 42700 kJ/kg and density of 840 g/liter at 15 °C (60 °F). Merchant fuel may differ from this specification which will influence engine power output and fuel consumption.

<sup>1)</sup> Heat Exchanger cooled system (HE), <sup>2)</sup> Keel Cooled system (KC)

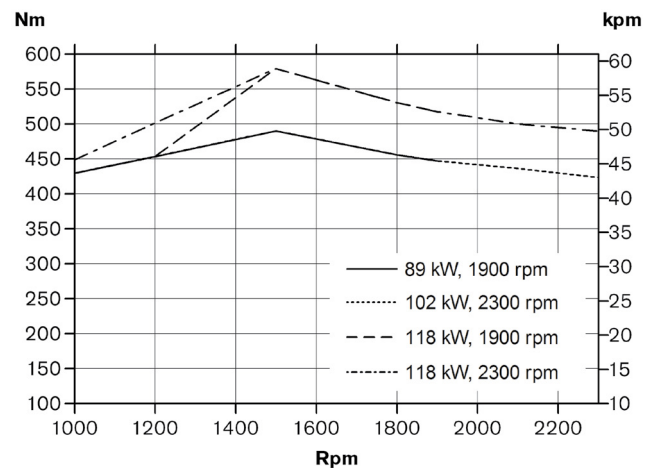
<sup>3)</sup> Rating 1: Heavy Duty Commercial operation. Rating 2: Medium Duty Commercial operation.

<sup>4)</sup> Measured at crankshaft.

### Power at crankshaft



### Torque at crankshaft



# D5A TA

## Technical description

### Engine and block

- Cylinder block, head and flywheel housing made of cast iron
- Belt guard
- Nitrocarburized transmission gears
- Press-hardened crankshaft
- Forged aluminum pistons
- Cylinder liners of wet type
- Exhaust elbow, dry, with integrated flexible compensator

### Lubrication system

- Oil filler in valve cover
- Manual oil drain pump
- Lubrication oil pump of rotor type
- Freshwater-cooled oil cooler
- Full flow oil filters of spin-on type
- Closed crankcase ventilation system

### Fuel system

- Fuel feed pump
- Jacketed fuel pipes
- Fine fuel filter of spin-on type
- Unit pumps
- Six-hole injectors
- Mechanical governor with smoke delimiter
- Fuel stopping solenoid 24V

### Heat Exchanger cooled system (HE)

- For seawater- and central-cooled engines
- V-belt-driven freshwater pump

- Gear-driven seawater pump
- Engine-mounted tubular heat exchanger with integrated expansion tank

### Keel cooled system (KC)

- 2-circuit keel cooling system
- Gear-driven pump (LT circuit)
- Belt-driven pump (HT circuit)
- Engine-mounted expansion tank (HT circuit)

## Optional equipment

### Engine

- Flexible suspension for engine.

### Lubrication system

- Shallow oil sump
- Twin oil filters, for remote mounting

### Fuel system

- Hand pump
- Jacketed fuel pipes
- Single fuel/water separating pre filter
- Twin fuel filters, for remote mounting

### Exhaust system

- Exhaust elbow, wet
- Exhaust elbow, dry, with integrated flexible compensator
- Silencer, dry

### Cooling system

- Engine-mounted tubular heat exchanger with integrated expansion tank
- Seawater filter

### Electrical system

- 1-pole 12V electrical system, 12V/95A alternator, 12V/3.1kW starter
- 24V/140A alternator
- Engine heater 230V/600W
- Senders:
  - Charge air pressure
  - Gearbox oil pressure
- Cable harness in different lengths
- Various instrument panels

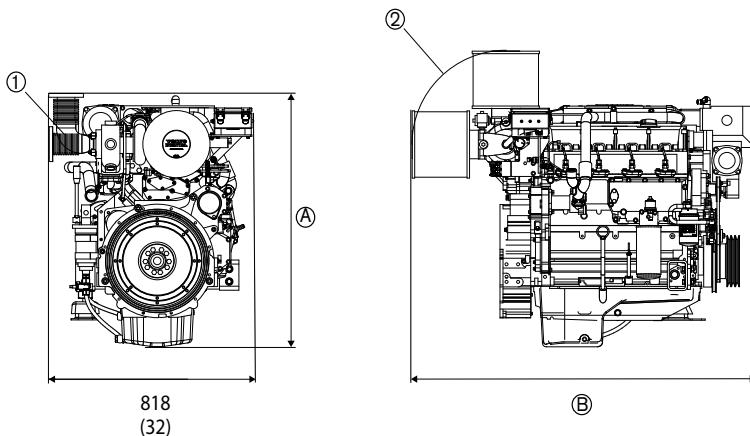
### Power transmission

- PTO crankshaft front end, type stub shaft
- Hydraulic pump for steering and other duties

## Dimensions

Not for installation, mm (in.)

### Engine with HE (illustrated) & KC



Ⓐ HE 1000 (39) KC 1185 (347)

Ⓑ HE 1367 (54) KC 1354 (53)

① HE: 90° or straight (option), KC: 90°.

② Adjustable position.

Volvo Penta is part of the Volvo Group, the world's leading manufacturer of trucks, buses, construction equipment and diesel engines. Volvo Penta has approximately 4,000 dealers in some 130 countries.

For further information, please contact your local Volvo Penta dealer or visit [www.volvopenta.com](http://www.volvopenta.com).

Not all models, standard equipment and accessories are available in all countries. All specifications are subject to change without notice. The engine illustrated may not be entirely identical to production standard engines.

# VOLVO PENTA

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