

VOLVO PENTA AQUAMATIC DUOPROP

KAD300/DP

6-cylinder, 24-valve, direct-injected marine diesel engine with charge air compressor, turbocharger, aftercooler and Duoprop drive. 210 kW (285 hp)*

* Crankshaft power according to ISO 8665

Compressor-charged Hi-Tech propulsion package

Volvo Penta's 6-cylinder KAD300 is packed with virtually everything. Compressor, turbo and aftercooler, which are precisely controlled by the EDC system (Electronic Diesel Control), all help to produce unmatched diesel performance. This coupled to the efficient Duoprop drive gives power to the most demanding boat owners.

The compressor – fitted with silencers – is controlled by the EDC unit and acts as a “torque controller”. It supplies compressed air at low engine speed and while accelerating, when the extra torque is needed.

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 driving characteristics.

Innovative EDC

Equipped with EDC (Electronic Diesel Control) – an electronically controlled processing system, which optimizes engine performance. The system determines the precise quantity of fuel required at any given moment, taking full account of variation in operating temperatures, air pressure and other contributing factors.

A great advantage with the EDC system is its monitoring of fuel temperature, which keeps the engine on a constant output from 5 to 55°C (41–131°F).

The EDC system includes electric shift and throttle control with wiring giving precise and smooth operation, with no noise transmitted along the cables.

If twin engines are fitted, a synchronizing function keeps the engines on the same rpm.

The original Duoprop drive

The reinforced and new-designed DP drive with its twin counter-rotating stainless steel propellers produces a harmonious drive unit with unbeatable characteristics in the boat in terms of top speed, acceleration and drivability.

It also produces less noise and vibrations, better steering and maneuvering characteristics, a good grip in the water and a short time to planing.



KAD300 with DP-G Duoprop drive

The drive features standard power steering for maximum driving comfort.

High output, excellent power/weight ratio

The engine is compact with no remote-mounted functions, and has an advantageous weight to power ratio making it excellent for both single- and multi-engine installation in planing craft.

Low exhaust emission levels and a professional exhaust system

Direct injection, 4-valve technology, EDC and the advanced combustion system all minimize noxious exhaust emissions and enhance overall enjoyment of boating.

The DP-G drive has been designed to lead exhaust gases into the propeller path, to avoid the “wagon-back effect” and keep noise level at a minimum.

The engine is certified according to SAV and IMO.

A propulsion package fully matched, tested and supported by one company

The combination of power and unbeaten propulsion efficiency ensures maximum

thrust for excellent acceleration, top speed performance and driving comfort.

Easy installation and maintenance

The installation does not require any extra through-hull fittings. All necessary connections like exhaust, seawater inlet etc. are integrated in the drive. Only a minimum of loose parts, making installation easy and time-saving.

Electronic control and instrument wiring are of plug-in type. The EDC system includes a self-diagnostic facility.

Service points such as seawater strainer, cooling water tank and oil dipstick are easily accessible on the engine.

Comprehensive service network

Volvo Penta has a well-established network of authorized service dealers in more than 100 countries throughout the world. These service centers offer Genuine Volvo Penta Parts as well as skilled personnel to ensure that you enjoy the best possible service.

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KAD300/DP

Technical description:

Engine and block

- Cylinder block and cylinder head made of cast iron for good corrosion resistance and long service life
- 4-valve technology
- Oil-cooled pistons with two compression rings and one oil scraper ring
- Replaceable wet cylinder liners
- Replaceable valve seats
- Seven-bearing crankshaft

Engine mounting

- Flexible mounting providing sound and vibration insulation. Two adjustable rubber mounts in front and rubber suspension between flywheel housing and transom shield

Lubrication system

- Pressure lubrication system with easily replaceable full-flow oil filter
- Tubular oil cooler that can be cleaned

Fuel system

- Rotor-type injection pump with electronic actuator
- EDC unit for processing the input for precise engine governing
- Two-stage injectors
- Fine filter with water separator
- Feed pump with hand primer
- Electrically operated stopping device

Air inlet and exhaust system

- Inlet system designed to produce optimal air rotation which provides perfect combustion
- Air inlet silencer with replaceable filter
- Crankcase gases vented into the air inlet
- Seawater-cooled exhaust elbow of cast iron with a stainless steel insert
- Complete connection for exhaust outlet through the drive
- Exhaust-driven freshwater-cooled turbo-charger
- Belt-driven compressor with silencer of absorption type on both inlet and outlet port

Cooling system

- Thermostatically regulated freshwater cooling
- Tubular heat exchanger with separate transparent expansion tank
- Coolant system prepared for hot water outlet
- Seawater strainer and easily accessible impeller pump

Electrical system

- 12V two-pole electrical system
- 14V/60A marine alternator with Zener-diodes to protect entire system from peak voltage
- Charging regulator with battery sensor for maximum use of alternator
- Automatic fuses with manual reset
- Starter motor power 3.0 kW
- Extension cable harness with plug-in connection available in various lengths

Instruments/control

- Complete instrument panel with key switch, instruments and interlocked alarm. Alternatively separate instruments.
- Digital instrument for drive trim angle
- EDC monitoring panels for single or twin installations
- Electronic remote control for throttle and shift
- Plug-in connections for both EDC and electrics

Drive

- Complete with transom shield, flywheel cover and installation components
- The drive can be tilted up by 42°
- Protective zinc anodes prevent corrosion
- Coolant water inlet at the front of the drive
- Built-in kick-up function to reduce possible damage, in the event the drive strikes an underwater object
- Electrical shifting performed by electronic actuator controlled by the EDC unit
- Power Trim is an electrically operated hydraulic system for trimming the drive for best driving comfort
- Power steering

Accessories

An extensive range of accessories are available. For detailed information, please see Accessory catalogs.

Technical Data

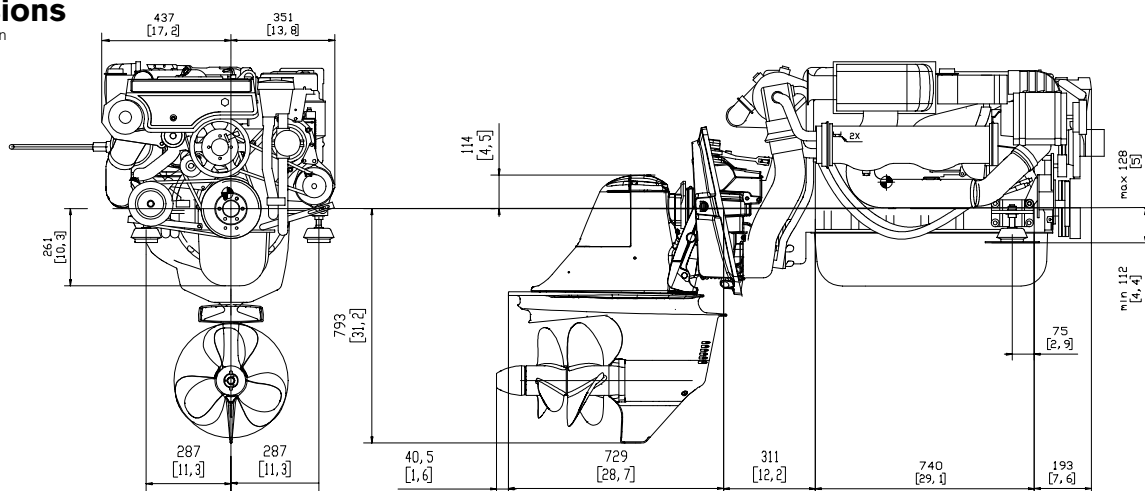
Engine designation	KAD300
Crankshaft power, kW (hp)	210 (285)
Propeller shaft power, kW (hp).....	200 (272)
Engine speed, rpm.....	3800
Displacement, l (in ³)	3.6 (219)
Number of cylinders	6
Bore/stroke, mm (in.).....	92/90 (3.62/3.54)
Compression ratio	16.9:1
Volvo Penta Duoprop drive.....	DP-G
Ratio.....	1.68:1, (1.59:1)
Dry weight with DP, incl. prop., kg (lb).....	576 (1270)

Duty rating: R5

Technical data according to ISO 8665. Fuel with a lower calorific value of 42,700 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. The engine is certified according to SAV and IMO.

Dimensions

Not for installation



Contact your local Volvo Penta dealer for further information.

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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