

VOLVO PENTA AQUAMATIC DUOPROP

4.3/DP

6-cylinder, 4-stroke, gasoline marine engine
Up to 168 kW (225 hp)

Engine

4.3 liter gasoline engine in a V-6 configuration featuring: seawater cooling with cast iron cylinder block, cylinder heads and exhaust manifolds, which are specially developed for the marine environment. The exhaust manifolds and risers are EDP treated for increased durability.

The 4.3 also features a balance shaft located in the center of the engine. The design offers quiet, virtually vibration-free operation by countering the primary imbalance of a standard V-6 cylinder configuration.

The advanced combustion system minimizes noxious exhaust emissions and enhances overall enjoyment of boating.

In addition, the seawater pump is located on the front of the engine for easy accessibility.

Fuel injection (GXi)

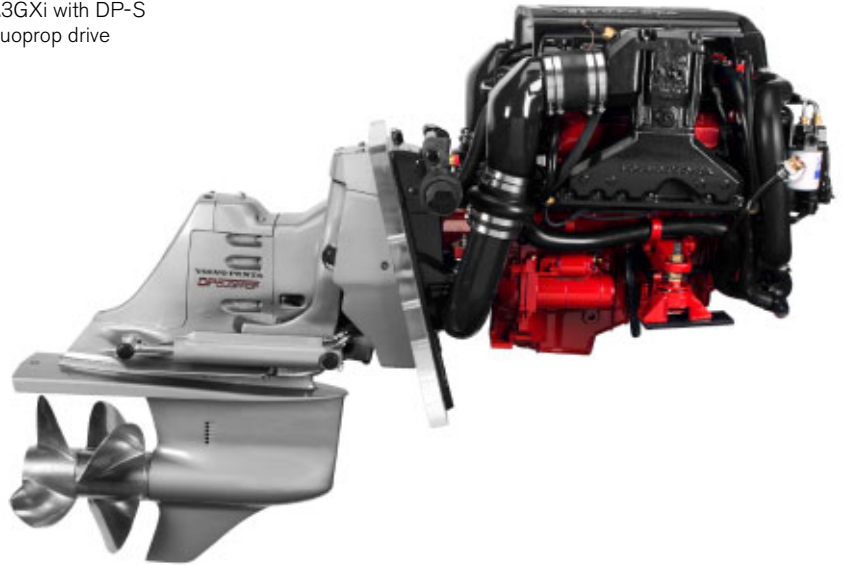
The Multi Port Fuel Injection system is monitored by an Electronic Control Module (ECM) and gives the following advantages: more responsive and smoother acceleration, excellent turnkey starts in all weather conditions, smooth reliable idling, reduced fuel consumption, and improved control of emissions.

Additional features built into the system include: engine knock control for compensation of less than perfect gasoline, overspeed protection, rpm reduction of the engine for low oil pressure and high engine temperature, platinum tipped spark plugs for longer life and trouble free starts, altitude compensation for air density, and self-diagnostic capabilities. Also, there are two fuel pumps for low and high pressure respectively.

Aquamatic sterndrive

The Duoprop drive with its twin counter-rotating propellers features exhaust outlets through the propeller

4.3GXi with DP-S
Duoprop drive



hub and cavitation plate producing a harmonious drive unit with unbeatable characteristics in the boat in terms of speed, acceleration, steering, maneuvering, fuel economy and less noise and vibration.

The drive is equipped with a cone clutch for easy and smooth shifting, pattern-matched spiral bevel gears for optimum strength and minimum gear whine, a break-away shaft coupling to prevent costly drive train repairs, and sacrificial zincs located both on the drive and transom shield.

The drive is equipped with easily maneuvered hydraulic power trim for obtaining the best running position at different sea and load conditions.

A choice of stainless steel and aluminum propellers are available for different applications.

The 4.3 features standard power steering for maximum driving comfort.

Electrical system

The electrical system features a 12 V corrosion-protected marine electrical system which meets the U.S. Coast Guard requirements. The engine is

wired for easy plug-in connection to the instrument panel. The engine electrical system and the electric hydraulic power trim is protected by a 50 A circuit breaker and comes equipped with a 75 A alternator. Full instrumentation including trim gauge and wiring harness (option on certain markets).

Technical description:

Engine and block

- Cylinder block and cylinder heads made of cast iron for good corrosion resistance
- Pistons with two compression rings and one oil scraper ring
- Four-bearing crankshaft
- Valve train consisting of single camshaft, hydraulic valve lifters, push rods and two overhead valves per cylinder
- Gear-driven balance shaft
- Color-coded service points

Engine mounting

- Two adjustable rubber mounts, one on each side of the engine, and two between transom shield assembly and engine

Lubrication system

- Pressure lubrication system with full-flow oil filter of spin-on type
- Remote oil filter (GXi)

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Fuel system

- Multi Port Fuel Injection system – MPI (GXi)
- Fuel filter with water separator
- Two electric fuel feed pumps (GXi)
- Stainless steel fuel lines

Inlet and exhaust system

- Marine intake manifold developed for Multi Port Fuel Injection (GXi)
- Flame arrestor
- Closed crankcase ventilation
- Seawater-cooled exhaust manifolds and risers made of cast iron
- Complete exhaust line with pipe and bellows for exhaust outlet through the drive

Cooling system

- Thermostatically controlled seawater cooling. 4.3GXi can be ordered with factory-mounted freshwater cooling.
- Crankmounted seawater pump
- Serpentine belt with spring tensioner (GXi)
- Electrocoated exhaust risers and manifolds
- Flush fitting – hose connection to flush cooling system with freshwater

Electrical system

- 12 V corrosion-protected electrical system
- ECM unit ensures constant optimum performance with diagnostic capability (GXi)
- Charging regulator with battery sensor for voltage drop compensation
- 75 A alternator with internal transistorized

- voltage regulator
- Breakerless electronic ignition system
- Platinum tipped spark plugs
- One 50 A resettable circuit breaker for the trim system
- One 20 A fuse for protection of the fuel feed pumps and one 15 A fuse for protection of the fuel injection system (GXi)
- Starter motor power 1.0 kW
- Audio alarm kit – engine oil pressure and temperature as well as exhaust overheat. Can be mounted at helm.

Instruments

- (option on certain markets)
- Complete instrument panel including: Rev counter, engine temperature gauge, oil pressure gauge, voltmeter, key switch, two fuses, instrument light switch
- Wiring harness from engine to instrument panel
- Digital trim gauge with active corrosion protection
- Maneuver switch for power trim
- Wiring harness from trim pump to maneuver switch for power trim and trim gauge

Duoprop drive

- Cone clutch
- Coolant water intake for the engine located at the lower part of the drive
- Pattern-matched spiral bevel gears

- Exhaust outlets through propeller hub and cavitation plate
- Overload protection sleeve (break-away coupling)
- The drive can be tilted 55°
- The drive can be turned 28° in each direction with power steering
- Built-in kick-up function to reduce possible damage, in the event the drive strikes an underwater object
- Belt-driven power steering pump
- Oil cooler for power steering
- Active corrosion protection as accessory
- Shift interrupter (4.3GXi)

Power Trim

- Electrically operated hydraulic system with trim gauge for best driving comfort

Accessories

An extensive range of accessories for:

- Fuel system
- Cooling system
- Control system
- Steering system
- Instruments
- Electric system
- Comfort & Safety
- Propeller & Drive
- Maintenance

For detailed information, please see Accessory catalogs.

Technical Data

	4.3GXⁱ ¹⁾	4.3GL
Engine designation	168 (225)	141 (190)
Propeller shaft power kW (hp).....	4800	4600
Max. engine speed, rpm	4.3 (262)	4.3 (262)
Displacement, l (in ³)	V-6	V-6
Number of cylinders	MPI	2 BBL
Fuel system	101.6/88.4	101.6/88.4
Bore/stroke, mm	(4.00/3.48)	(4.00/3.48)
in	9.4:1	9.4:1
Compression ratio	DP-S	DP-S
Volvo Penta Duoprop drive	2.32:1 or 1.95:1	2.32:1 or 1.95:1
Ratio		
Dry weight engine, transom shield and drive, kg (lb)	415 (916)	406 (896)
Dimensions (not for installation):		
Engine length		
inside transom, mm (in.)	825 (32.5)	820 (32.3)
Engine width, mm (in.)	789 (31)	789 (31)
Height above crankshaft, mm (in.)	537 (21.2)	514 (20.3)
Height below crankshaft, mm (in.)	222 (8.8)	240 (9.5)

¹⁾ SAV approved. Please contact Volvo Penta Central Europe GmbH Niederlassung Schweiz CH-3250 Lyss, Switzerland for certificate and label. Certified rating 160 kW/215 hp.

Propshaft power according to ISO 8665
Duty rating: R5 (Pleasure Duty)
IMEC Standard

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.

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