VOLVO PENTA AQUAMATIC

4.3/SX EVC-D

168 kW (225 hp)

Smooth-running

The 4.3GXiE-225 is a V-6 gasoline engine with first-class comfort characteristics. With a balance shaft located in the center of the engine, the design offers quiet and virtually vibration-free operation. The engine is a perfect match for the SX single-propeller drive. Power steering is fitted as standard for maximum driving comfort.

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

The Multi Port Fuel Injection system is monitored by an Eletronic 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, high engine temperature, and low voltage, 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.

EVC-D

EVC-D, a new generation of the proven Electronic Vessel Control offers the best driver experience available!

The new ergonomically designed controls engage smoothly and allow for maneuvering with fingertip precision in any situation. Integrated pushbuttons give easy access to functions such as Power Trim Assistant, Tow Mode and Single Lever Control, which allows for safe and easy boating.

Complete the helm with your choice from the full range of easy to read gauges and displays including the new 7" color display. Add the trip computer function for accurate fuel management and minimized environmental impact.
Engine synchronisation is of course standard in twin installations.

Aquamatic sterndrive

The SX single propeller drive is of the most modern design featuring exhaust through the propeller hub and cavitation plate for quiet and efficient operation, a cone clutch for easy and smooth shifting, pattern-matched spiral bevel gears for optimum strength and minimum gear whine, and a break-away shaft coupling to prevent costly drivetrain repairs.

The hydrodynamic design of the lower drive housing ensures excellent course stability both at high speed and when maneuvering at low speeds and in reverse. The drive is equipped with easily maneuvered hydraulic power trim for obtaining the best running position at different sea and load conditions.

For maximum corrosion protection the drive has gone through a 23 step paint process and comes equipped with sacrificial anodes both on the drive and transom shield.

Either right- (standard) or left-handed propellers can be used. 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.

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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 and environmentally friendly replaceable paper insert
- Remote oil filter

Fuel system
- Multi Port Fuel Injection system – MPI
- Fuel filter with water separator
- Two electric fuel feed pumps
- Flexible fuel lines

Inlet and exhaust system
- Marine intake manifold developed for Multi Port Fuel Injection
- 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
- Crankmounted seawater pump
- Serpentine belt with spring tensioner
- Electrocoated exhaust risers and manifolds
- Flush fitting – hose connection to flush cooling system with freshwater

Electrical system
- 12 V corrosion-protected electrical system
- 14-pin engine to boat connection
- ECM unit ensures constant optimum performance with diagnostic capability
- Charging regulator with battery sensor for voltage drop compensation
- 75 A alternator with internal transistorized voltage regulator and internal fan
- Breakerless electronic ignition system
- Platinum tipped spark plugs
- One 40 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
- Starter motor power 1.0 kW
- Audio alarm kit – engine oil pressure and temperature as well as exhaust overheat. The engine also has a low voltage audio alarm. Can be mounted at helm.

Instruments
(option on certain markets)
- Supports NMEA 2000 engine messages
- 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 as accessory
- Maneuver switch for power trim
- Wiring harness from trim pump to maneuver switch for power trim and trim gauge

Drive
- Single propeller drive which can be run with both right- and left-hand propellers
- 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 drive cavitation plate
- Overload protection sleeve (break-away coupling)
- Power Trim adjustable with EVC-D
- Standard tilt specification 52° (42° and 32° available as option on engine order)
- The drive can be turned 28° in each direction
- Built-in kick-up function to reduce possible damage, in the event the drive strikes an underwater object
- Serpentine belt-driven power steering pump
- Oil cooler for power steering
- Active corrosion protection as accessory
- Integrated speedometer (pitot tube) pickup in lower drive leg
- Easy to access drive anode placed on the back of the cavitation plate
- Industry standard transom cutout with 8 stud hole pattern
- Tow mode – option for leisure watersports. Single installation only.

Power Trim
- Electrically operated hydraulic system with trim gauge for best driving comfort
- High capacity trim pump integrated with transom shield to ease installation and save space in engine compartment

Accessories
For detailed information, please see the Accessories & Maintenance Parts catalog (www.volvopenta.com).

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.

Technical Data

Engine designation	**4.3GXiE-225**
Propeller shaft power kW (hp)	168 (225)
Max. engine speed, rpm	4800
Displacement, l (in^3)	4.3 (262)
Number of cylinders	V-6
Fuel system	MPI
Bore/stroke, mm	101.6/88.4
(in.)	(4.00/3.48)
Compression ratio	9.4:1
Volvo Penta Aquamatic drive	**SX**
Ratio	1.97:1*, 1.89:1*, 1.79:1, 1.66:1 or 1.60:1
Dry weight engine, transom shield and drive, kg (lb)	415 (914)
Dimensions (not for installation):	
Engine length inside transom, mm (in.)	825 (32.5)
Engine width, mm (in.)	758 (29.8)
Height above crankshaft, mm (in.)	537 (21.2)
Height below crankshaft, mm (in.)	222 (8.8)

* High altitude 1000 m (3500 ft)

Propshaft power according to ISO 8665
Duty rating: R5 (Pleasure Duty)
The engines are certified according to EU RCD.

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