

VOLVO PENTA AQUAMATIC DUOPROP

# V8-380/DPS

283 kW (380 hp)

NEW!

## Next Generation V-8

V8-380 is the next generation of gasoline engine performance for powerboats. Modern technology and advanced design deliver improved acceleration, impressive mid-range response, reduced fuel consumption, reduced emissions and quiet, smooth operation. All in a lighter and more durable package. This next generation engine is a perfect match for the Duoprop drive, featuring twin counter-rotating propellers.



### Engine

V8 engine featuring: variable valve timing using an hydraulic cam phaser, deep skirt cast iron cylinder block with six bolt main caps, high compression aluminum cylinder heads, steel roller rockers, and Inconel exhaust valves.

V8-380 engine features standard full freshwater cooling and high flow, catalyzed aluminum exhaust system (specially developed for the marine environment).

Engine weight is significantly lower than other engines in this horsepower range.

Seawater pump, coolant reservoir, oil and fuel filters are located on the front of the engine for easy service access.

Integrated engine oil cooler maintains optimal oil temperature for all operating conditions.

### Fuel injection

The Multi Port Fuel Injection system is monitored and controlled by a fourth generation computerized Electronic Control Module (4G ECM). The new 4G ECM provides expanded control and communication capabilities, including the use of wide-band pre-catalyst oxygen sensors for more precise fuel system control.

The advanced design of this new engine also produces smooth reliable

idling, more responsive and smoother acceleration, unparalleled mid-range response, reduced fuel consumption, and reduced emissions.

Computerized engine control provides the following advantages: excellent turnkey starts in all weather conditions, engine knock control to compensate for load or fuel conditions, overspeed protection, rpm reduction of the engine for low oil pressure or high engine temperature, altitude compensation, and self-diagnostic capabilities.

Platinum-iridium tipped spark plugs are installed for longer life and reliability.

### Electrical system

The electrical system features a 12V corrosion-protected marine electrical system which meets U.S. Coast Guard requirements. The engine is wired for easy plug-in connection to the instrument panel.

The engine electrical system, power trim system, and other electrical components are protected by circuit breakers or fuses. A 75 Amp alternator is standard. Full instrumentation including trim gauge and wiring harness is available (optional in certain markets).

### Aquamatic® sterndrive

The Duoprop® sterndrive with its twin counter-rotating propellers produces unbeatable characteristics in terms of speed, acceleration, steering, maneuvering, and fuel economy.

Duoprop drives are equipped with 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 drive train repairs. Sacrificial anodes are located on both the drive and transom shield, and are easily accessible.

The Duoprop drive features exhaust outlets through the propeller hub and cavitation plate, resulting in quieter operation.

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

Stainless steel propellers are available in various sizes for different applications. Helical propeller splines reduce drive loads and corrosion.

All gas engines feature standard power steering for maximum driving comfort.

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# V8-380/DPS

## Technical description:

### Engine and block

- Deep skirt cylinder block with six bolt, powdered metal main caps for extra strength
- High flow aluminum cylinder heads
- Increased compression ratio for better thermal efficiency
- Hydraulic cam phaser for variable camshaft timing optimizes low end torque and high end horse power
- Floating piston pins for reduced noise and increased durability
- Steel camshaft and roller rocker arms for decreased friction and greater reliability
- Inconel exhaust valves for prolonged life
- Color-coded service points

### Lubrication system

- Pressure lubrication system with heavy duty engine oil cooler and remote oil filter
- Paper oil filter element reduces environmental impact of engine service

### Electronic engine control

- Electronic Control Module (4G ECM) ensures constant, optimum performance, greater fuel efficiency and reduced emissions
- 4G ECM supports full diagnostics through connection on engine harness
- Multiple sensors and senders monitor all en-

- gine parameters, providing input for 4G ECM control of the engine
- 4G ECM control of the throttle, fuel delivery, timing and ignition for ultimate performance
- Closed loop system with pre- and post catalyst oxygen sensors helps control fuel delivery and reduce emissions

### Fuel system

- Multi Port Fuel Injection system
- Vapor separating fuel pump system with two electric pumps, pressure regulator, and water separating fuel filter

### Inlet and exhaust system

- Composite intake manifold results in lower noise and weight
- Low weight aluminum exhaust system
- Exhaust passages optimized for torque and power
- Manifolds cooled by engine coolant as part of the standard freshwater cooling system
- Collector (elbow) design maximizes use of the catalyst for reduced back pressure
- 3 inch riser option is a direct replacement for the standard height elbow

### Cooling system

- Full freshwater (closed) cooling system for engine, exhaust manifolds, engine oil cooler
- New, advanced Volvo VCS (yellow) coolant

- for superior corrosion and thermal protection
- Seawater pump mounted on front of engine
- Flush fitting connection to flush cooling system with freshwater

### Electrical system

- 12V corrosion-protected electrical system
- 14-pin engine to boat connection
- 75A alternator with internal transistorized voltage regulator
- Re-settable circuit breaker for the trim system
- Fuse protection of the fuel pumps and the fuel injection system
- Audible alarm kit – engine oil pressure and temperature, exhaust overheat, and low coolant

### Power steering system

- Standard on all gas engines
- Serpentine belt-driven power steering pump

### Available instruments

(optional in some markets)

- Complete instrument panel including: Tachometer, temperature gauge, oil pressure gauge, voltmeter, key switch, two fuses, instrument light switch
- Wiring harness from engine to instrument panel
- Control switch for power trim
- Wiring harness from trim pump to switch for power trim and trim gauge

### Duoprop drive

- Cone clutch for smoother shifting
- Coolant water intake for the engine located at the lower part of the drive
- Pattern-matched spiral bevel gears
- Exhaust through propeller hub and cavitation plate
- Break-away coupling between vertical shafts
- 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 damage, in the event the drive strikes an underwater object
- Active Corrosion Protection system
- Easy access drive and transom shield anodes

### Power Trim

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

### Accessories

An extensive range of accessories is available. For detailed information, please see the Accessories & Maintenance Parts catalog ([www.volvopenta.com](http://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 .....	<b>V8-380</b>
Propeller shaft power kW (hp) .....	283 (380)
Max. engine speed, rpm .....	6000
Displacement, l (cu in) .....	6.0 (364)
Number of cylinders.....	V-8
Fuel system .....	MPI
Bore/stroke, mm .....	101.6/91.9
in. ....	(4.00/3.62)
Compression ratio.....	9.67:1
Volvo Penta Duoprop drive.....	<b>DPS</b>
Ratio.....	2.14:1, 1.95:1
Package weight; engine, transom shield and drive, kg (lb).....	488 (1076)
Dimensions (not for installation):	
Engine length	
along crank center line, mm (in.) .....	973 (38.3)
Engine width, mm (in.).....	830 (32.7)
Height above crankshaft, mm (in.).....	607 (23.9)
Height below crankshaft, mm (in.).....	208 (8.2)

Propshaft power according to ISO 8665

Duty rating: R5 (Pleasure Duty)

The engine is certified according to EU RCD.



V8-380 fulfills the emission requirements of EPA, C.A.R.B. (4-star) regulations and the EU RCD.

# VOLVO PENTA

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