

POCKET GUIDE

FOR THE SALES PROFESSIONAL



**VOLVO
PENTA**

Welcome aboard. This publication is packed with useful information.

This guide is made for leisure boat-selling personnel and Volvo Penta dealers. It is filled with facts, questions and answers, technical data and more.

Take a few minutes to get acquainted with it. You'll find interesting and helpful selling information. Plus you'll know where to look the next time you get a technical question from a customer.

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NEWS

VOLVO PENTA IPS

- IPS1050 and IPS1200
- IPS350 to IPS600
for semi planing boats
- Low-speed mode
- Single-lever mode
- Cruise control
- More sportfish features
- Dynamic Positioning System
- Palm Beach Controls

STERNDRIVE

- OceanX drive
- Joystick for twin sterndrives
- Tow-mode for watersport
- Single-lever mode
- Cruise control

INBOARD POWERBOAT

- Single-lever mode
- Cruise control
- D13-800

EVC

- New generation controls
- New displays
- New functionality

ALL-INCLUSIVE DISPLAYS

Multi-information displays make it possible to have all the information in one place. This year we are introducing a new interface for the 7" display and a new compact 2.5" display.



NEW GENERATION CONTROLS

Form and function go hand in hand in these new controls. Available for single, twin and multi installations. Integrated buttons for all vital functions. Quite simply top-of-the-line. **Page 8.**





NEW IPS1050 AND IPS1200

The new IPS1050 and IPS1200 are the biggest yet, giving exceptional efficiency to boats up to 100 feet. Powered by the D13 marine diesel coupled to a new larger and perfectly matched pod. **Page 86.**

SEMI PLANING VOLVO PENTA IPS

The benefits of Volvo Penta IPS350 to IPS600 is now also available for trawlers and other semi-planing boats. Better on-board comfort, joystick docking and – get this – no irritating diesel fumes on the aft deck.





NEW D13

Outstanding overall performance, yet quiet and smooth running. The fuel economy is world class with low emission of CO₂. Now available in 800 and 900 hp versions. **Page 70.**

UNIQUE SPORTFISH FEATURES

Volvo Penta IPS offers three features that greatly improve fishability. All easily managed from the sportfish panel: Sportfish mode, Clear wake exhaust system and Single-lever mode. **Page 79.**

MORE EVC FUNCTIONALITY

The new generation EVC – Electronic Vessel Control – enables new and very useful driving features: Single-lever mode for twin and multi installations, Tow-mode for sterndrives and Cruise control for all powerboat engines. Driving becomes easier, more enjoyable and safer.



CONTROL THE POWER

Welcome to a better driving experience. Our new generation controls are designed around the driver for a new level of control.

Conveniently located push-buttons for functions and features:

- Powertrim assistant on/off
- Cruise control on/off
- Low-speed mode on/off
- Single-lever mode on/off
- Station on/off/lock
- Throttle only

Ergonomic and solid feel.

Powertrim. Trims both drives in sync in twin installation.

Top-mounted for single or twin installations.





**Top-mounted,
reverse view**





SINGLE STERNDRIVE

Conveniently located push-buttons for functions and features:

- **Cruise control and tow-mode adjustment**
- **Tow-mode on/off**
- **Cruise control on/off**
- **Powertrim assistant on/off**



TAILOR YOUR CONTROL.

	IPS	Inboard		Sterndrive		
						
Engine installation	Twin ¹⁾	Twin	Single	Twin	Single	Single
Features						
Throttle only	●	●	●	●	●	●
Station on/off/lock	●	●	●	●	●	
Engine RPM sync	●	●		●		
Trim button in lever				●	●	●
Individual SB/PT trim buttons				●		
Safety lanyard						●
Cruise control	○	○	○	○	○	○
Single-lever mode	○	○		○		
Low-speed mode	○/● ²⁾	○ ³⁾	○ ³⁾			
Powertrim Assistant				○	○	○
Tow-mode						○



BENEFITS OF VOLVO PENTA POWER

“Powered by Volvo Penta” means much more than reliable power. Thanks to unique features, perfect matching and the broadest support organisation, a Volvo Penta owner gets:

- **Clean and quiet boating**
- **Unequalled customer care**
- **Marine performance**
- **First-rate overall economy**
- **Excellent onboard comfort**



**POWERED BY
VOLVO
PENTA**





CLEAN AND QUIET BOATING

Care for the environment is one of our core values. Our low emission engines combined with our leadership in transmission innovations gives unique environmental and comfort benefits:

- Higher efficiency
- Lower fuel consumption
- Reduced emissions
- Lower sound





- **Sterndrive and Duoprop.** Radically reduced fuel consumption compared to both outboards and traditional inboard shafts.
- **Volvo Penta IPS.** Tests show approximately 50% less fuel consumption than traditional inboard shafts at cruising speed.
- **The trip computer.** Helps the driver find optimum fuel economy.
- **The power trim assistant.** Automatically keeps a sterndrive boat at a fuel efficient running attitude.
- **The unique marine torque.** Fast on the plane and a fuel-saving cruising speed.

Meet stringent demands

The entire D-series diesel engine range complies with US EPA, a regulation significantly more stringent than the European RCD regulation.

The 8-cylinder gasoline engines are available with catalytic converters. These engines comply with US EPA and California's CARB 4 star, two of the world's most stringent marine engine emission standards.

For information on alternative fuels, visit **volvopenta.com**.



UNEQUALLED CUSTOMER CARE

Our reason for creating the most comprehensive system of customer care is very simple: It's a lot easier to enjoy yourself on the water when you leave your cares on land.

- **First Launch**
- **Volvo Action Service**
- **2-year limited factory warranty***
- **Rapid Response**
- **72-hour parts guarantee**

* Except OceanX





First launch

First Launch is an informative christening exercise for new owners of Volvo Penta diesel-powered propulsion systems. Its purpose is to ensure your first outing live up to our mutual standards.

You'll be guided through the intricacies of your new boat's operation, checking to see that every function is in proper working order. You'll see firsthand the

**FIRST
LAUNCH**

value of our 40-point check system, and appreciate the thorough walk-through on finer points of your

new boat's features.

Once you've completed your First launch, which lasts about an hour, you'll be set for a lifetime of reliable, trouble-free pleasure on the water.*

* See Volvo Penta of the America's, Inc.'s express limited warranty for North America for details (Publication No. 796733-9). Available on VPPN.

**Gasoline Engines:**

(877) 33-PENTA (73682) or
(336) 393-4966

Diesel Engines:

(877) 74-PENTA (73682) or
(336) 393-4967

Industrial Engines:

(877) 77-VOLVO (86586) or
(336) 393-3333

Volvo Penta Action Service

This is the gold standard of marine customer support: Free telephone access to service assistance, technical or parts support 24 hours a day, seven days a week, 365 days a year anywhere in North America.

2-year limited factory warranty*

Volvo Penta covers pleasure-duty diesel engines for two years, the only comprehensive 2-Year Limited Factory Warranty of sterndrives and inboards in the industry. It's "double" the warranty that competitors offer and it means twice

the carefree boating for you. And our diesel propulsion system is backed by one company – not two as in the case of some competitive offerings. Plus, major components of diesel engines 6 liters and larger are covered for three additional years.

**Rapid Response**

Volvo Penta diesel engine owners enjoy the highest level of service available from the nation's top servicing dealers. A Volvo Penta

* Except OceanX

Rapid Response dealer must meet stringent standards. State-of-the-art facilities, diesel parts and tools, and top-notch training – coupled with mobile and fixed-service locations – are all part of a Rapid Response dealer's commitment to your satisfaction.



For assistance, Volvo Action Service will put you in touch with the nearest Rapid Response dealer, who will return your call within the hour. Your problem will be investigated and diagnosed

within 24 hours.

In recognition of this outstanding level of service, Volvo Penta compensates Rapid Response dealers at the highest warranty pay rate in the industry, ensuring the most motivated service network of its kind.

72-hours parts guarantee

Timing is everything when it comes to getting you back on the water. If part replacements are needed, we first look to our dealer's amply



stocked shelves for immediate turnaround.

In the unlikely event a Rapid Response dealer must order the part, we guarantee delivery to the dealer within 72 hours from our Duluth, Georgia distribution center – or the part is free. It's one more way we ensure quality time on the water.*

* See Volvo Penta of the Americas, Inc.'s express limited warranty for North America for details (Publication No. 796733-9). Available on VPPN.



MARINE PERFORMANCE

Volvo Penta innovations are combined with the latest in technology and all parts are perfectly matched. That's the secret behind Volvo Penta's exceptional performance.

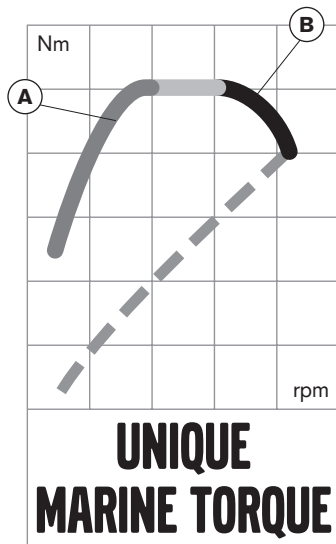
- **Unique marine torque**
- **Perfectly matched, thoroughly tested**
- **Full diesel power – always**
- **Certified installation**

Unique marine torque

The key to true marine performance lies in torque.

Volvo Penta uses the latest engine technology to deliver what we call unique marine torque:

- A** High torque directly from low revs gives:
 - Easy and powerful maneuvering.
 - Rapid acceleration, out of the hole and onto the plane.
- B** The “torque rise” at higher rpm, i.e. full throttle torque increases if engine loses rpm due to heavy load:
 - Better load-carrying ability.
 - High cruising speed even with a fully loaded boat.



Matched and tested

We develop and match anything from engines to transmissions, control systems, drives and propellers – because it means better reliability and performance.

At our own test facilities in Sweden and the US, we perform thorough around-the-clock tests of every product.

Most boat builders participate in our **Certified Installation** programme, to ensure maximum efficiency and reliability.

Full diesel power – always

Ordinary diesels lose up to 10% power due to the fuel getting warmer because of:

- Hot return fuel from the engine to the fuel tank.
- Boating in a warm climate.

Volvo Penta electronically controlled diesel engines always deliver full power, regardless of fuel temperature (5–55°C, 41–131°F).

The common rail D3, D4 and D6 also compensate for fuel quality and give rated power with heavy, regular or environmentally adapted diesel fuel.

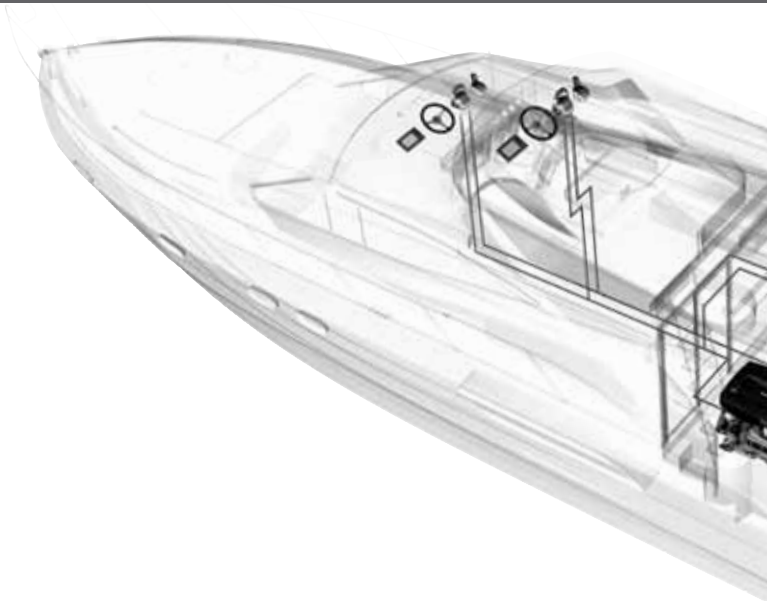


EVC - Electronic Vessel Control

Volvo Penta's common electronic platform, based on the same CAN-bus technology used in ships, planes and cars.

- Higher reliability
- Better instrumentation and controls
- Many opportunities for new and advanced functionality
- Plug-and-play installation

Unlike other competing systems this is an open system and communication with other CAN-bus devices is possible.





Brief facts about EVC – Electronic Vessel Control

Higher reliability

- Greatly reduced wiring and fewer connectors
- Pre-start function tests, constant monitoring and even corrective measures
- Malfunction messages in plain text
- Power reduction to protect engine in case of malfunction, still making it possible to continue driving
- Easier, more efficient service thanks to stored engine fault history

Advanced functionality available

- Joystick docking function for Volvo Penta IPS and sterndrive
- Powertrim assistant for sterndrive
- Low-speed mode for most inboards and Volvo Penta IPS
- Engine rpm sync
- Drive trim sync
- Trip computer
- NMEA interface
- Cruise control
- Single lever mode
- Tow-mode for sterndrive
- Dynamic Positioning System





EVC ON GASOLINE ENGINES

Sterndrive EVC models

EVC is available on 4.3, 5.0, 5.7 and 8.1 engines including catalyst versions.

Features Maneuvering

- Electronic shifting
- Electronic throttle
 - Engine speed control
- Engine Synchronizer (twin engine)
- Electronic trim

- Adjustable tilt limits
 - Trim synchronization
 - Powertrim Assistant (PTA)
 - Start/Stop over CAN-bus
 - Start in gear protection
 - Multiple station support (up to 4)
 - Dual and Single function Lever Support
 - Cruise control
 - Single-lever mode*
 - Tow-mode*
 - Joystick*
- * Optional

Trip Computer*

- Instant fuel rate (gallons/hour)

- Average fuel rate (gallons/hour)
 - Trip fuel (consumed fuel since last reset)
 - Trip time
 - Distance to empty*
 - Instant fuel economy (mpg)*
 - Average fuel economy (mpg)*
- * Requires a speed input (multi sensor or NMEA interface)

Installation

- Engine mounted PCU
- Engine mounted shift actuator
- Compatible with 3rd party gauges
- Do not require matching of HCU and PCU

VOLVO PENTA CATALYST ENGINES

5.0, 5.7, 8.1

Compliant with US EPA and California Air Resource Board (CARB) 4-star requirements – “Super Ultra Low Emissions”



Sterndrive Catalyst model Line-up 2011*

Electronic Shift and Throttle
Engines (EVC):

- 5.0GXiCE 270 hp
- 5.7GiCE 300 hp
- 8.1GiCE 400 hp

Note “C” for “Catalyst”, “E” for “EVC”
and “F” for “Fresh water cooled”.

* OceanX available for all catalyst models.



FIRST-RATE OVERALL ECONOMY

Selecting Volvo Penta power is also a good deal economically. If you look at the overall economy over the whole period the customer owns his or her boat, two important factors should be considered:

- **Fuel consumption**
- **Expected service life**

Low on fuel

All Volvo Penta engines have low fuel consumption. And thanks to totally matched drive systems, like Duoprop or Volvo Penta IPS, consumption per nautical mile is even lower. This is good for economy and gives you a longer cruising range.

Long service life

A Volvo Penta engine lasts a long time. This is absolutely vital for good boating economy.

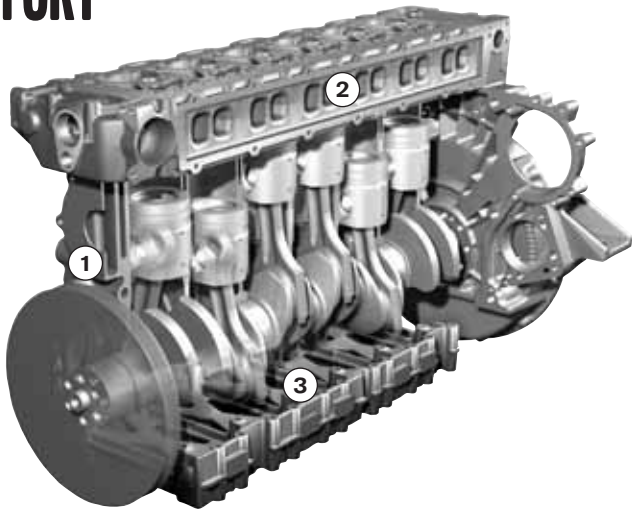




EXCELLENT ONBOARD COMFORT

Volvo Penta engines provide excellent onboard comfort by reducing the things that cause irritation. That's why we focus on providing:

- **Low sound levels**
- **Minimal vibrations**
- **Virtually no fumes or smell**



Minimal vibrations and sound

Robust and immensely strong for minimal vibrations and sound: Rigid engine block ①, one-piece cylinder head ② and reinforcement ladder frame ③.

With Volvo Penta IPS and sterndrive, sound and vibrations are further reduced, to a level impossible with traditional inboard shafts.

The Saildrive gives the same improvements for sailboats.

Minimal smoke and smell

Thanks to state-of-the-art engine technology, Volvo Penta engines are low on irritating exhausts, such as start up fumes, acceleration smoke etc.

With Volvo Penta IPS and sterndrive, exhaust is emitted through the drive/pod, into the propwash and carried well behind the boat. This practically eliminates smell.

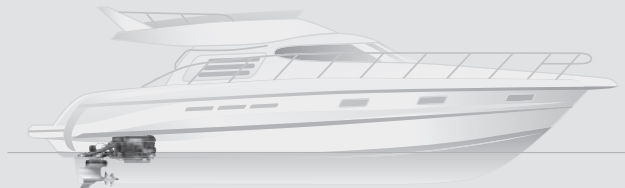
Low emissions

The entire D-series diesel engine range complies with US EPA, a regulation significantly more stringent than the European RCD regulation.

The 8-cylinder gasoline engines are available with catalytic converters. These engines comply with US EPA and California's CARB 4 star, two of the world's most stringent marine engine emission standards.

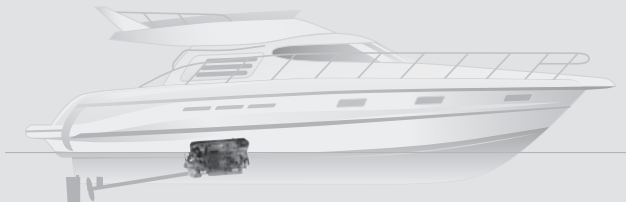


POWERBOAT DRIVE SYSTEMS



VOLVO PENTA IPS – INBOARD PERFORMANCE SYSTEM

The modern inboard system, integrated and complete from one supplier. Individually steerable pods under the hull that offer outstanding performance, comfort and handling plus unique features like the joystick. Details on **page 72**.



TRADITIONAL INBOARD SHAFT

The traditional alternative. The engine is coupled to a gearbox with a straight shaft that goes through the hull and drives a single propeller.

Details on **page 56**.



STERNDRIVE

Sterndrive, especially with Duoprop, gives an unequalled sport performance. Perfect reliability and easy service thanks to one supplier of the whole package. Joystick docking available.

Details on **page 32**.



STERNDRIVE

The sterndrive was invented by Volvo Penta and introduced to the boating world in 1959 as “Aquamatic”.

Sterndrive combines the ruggedness of inboards with easy maneuvering at low speed and exceptional high-speed handling.

Compared to outboards

- Diesel available from 130 hp – higher reliability, much lower fuel consumption.
- Low sound and vibrations give better onboard comfort
- Freshwater cooling as standard with OceanX for longer service life
- Lower center of gravity – better sea-keeping
- Engine safely inside the boat and an uncluttered transom
- Optional powertrim assistant, tow-mode and joystick
- Greatly improved back-of-boat fishability

Compared to traditional inboard shafts

- Reduced sound and vibrations
 - better onboard comfort
- Improved handling and easier maneuvering
- Compact, aft installation for more onboard space
- Higher efficiency – better performance and lower fuel consumption
- Kick-up function on drive for impact protection
- Through-the-drive exhausts.
- Powertrim and optional powertrim assistant (PTA) to automatically optimise ride
- Joystick as an option





DPH



DPR



DRIVES FOR D4 AND D6

DPH Duoprop

- Immensely robust to handle the torque and power of the D4 and D6
- External hydraulic steering cylinders
- Patented X-act steering with perfect control and driving feel
- Patented, high-strength, nickel, aluminium, bronze propellers for minimal growth and corrosion risk
- Electronic shift

DPR high-speed Duoprop

- High-speed version of the DPH
- Perfect control for boats with top speeds in excess of 45 knots

DPS



SX



DRIVES FOR D3 AND GASOLINE ENGINES

SX single prop and DPS Duoprop

- Hydrodynamically optimized design giving better speed and performance
- Durable internal drive train for longer service life.
- Low weight for better performance
- Reduced maintenance need (e.g. only 2 anodes and maintenance-free gimbal bearing)
- High capacity through-the-drive exhaust for great sound reduction and efficiency improvement
- Integrated speedometer pick up



OCEAN X DUOPROP

Salt water ready Duoprop drive

OceanX is protected by a revolutionary titanium-ceramic coating and new sensor technology.

The Toughest Coating

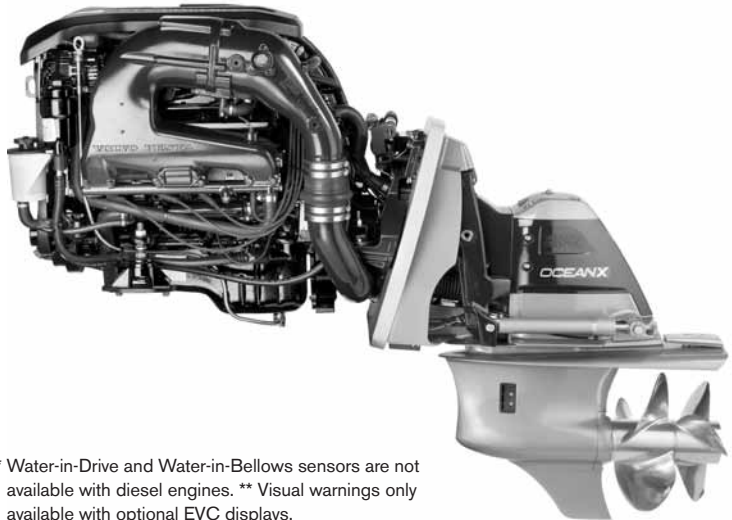
OceanX's titanium-ceramic coating is applied using a state-of-the-art electro-deposition process. The coating greatly improves corrosion resistance. The titanium ceramic coating is highly durable, flexible and covers the entire drive and transom shield for maximum protection.

Protecting What You Can't See

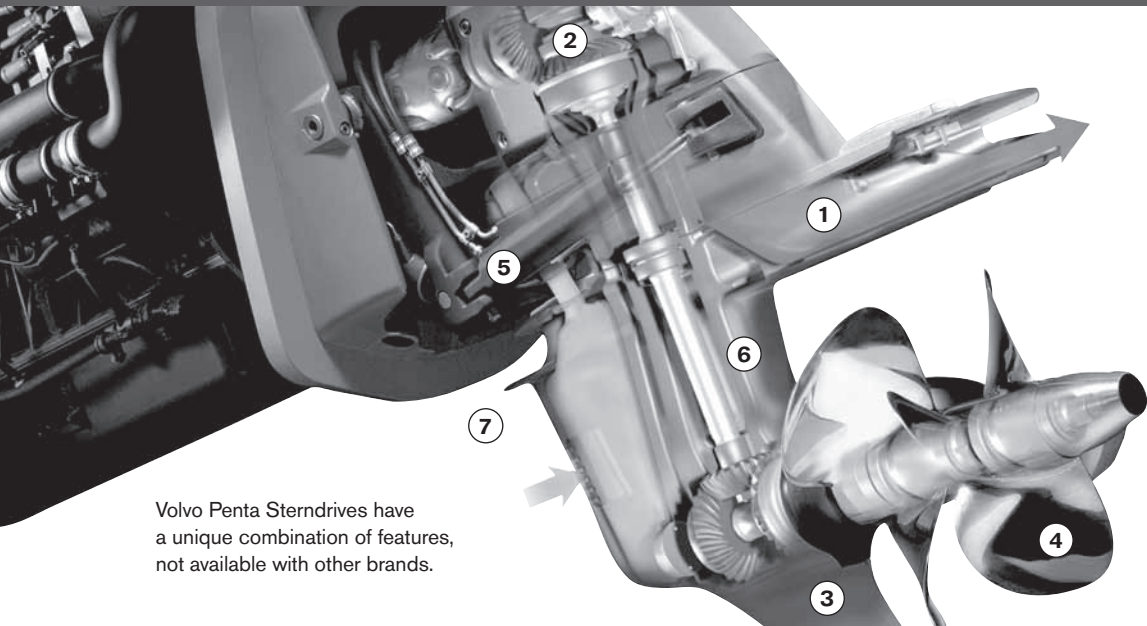
Two electronic sensors help protect internal components of the drive*. These sensors provide audible and visual** warning alerts:

- The Drive sensor monitors the quality and level of the drive's critical gear lubricant.
- The U Joint Bellows sensor alerts if water intrudes in the bellows area.





* Water-in-Drive and Water-in-Bellows sensors are not available with diesel engines. ** Visual warnings only available with optional EVC displays.



Volvo Penta Sterndrives have a unique combination of features, not available with other brands.

Unique Sterndrive features

Volvo Penta sterndrives have a unique combination of features, not available with other brands.

1. Quiet and efficient genuine through-the-drive exhaust system.
2. Smooth shifting and exceptional durability with patented cone clutch
3. Excellent corrosion resistance from saltwater-grade aluminium and multi-layer surface treatment
4. Patented nickel-aluminium bronze alloy propellers: immensely strong, corrosion and growth-resistant (DPH)
5. Patented fully hydraulic and X-act steering with direct-mounted external steering cylinders (DPH/DPR)
6. Hydrodynamically designed lower housing reduces drag and increases performance
7. Unique corrosion resistant Titanium-ceramic coating. Warning sensors for low drive oil and water in bellow (OceanX)



DIESEL STERNDRIVE

Volvo Penta is the leading supplier of diesel sterndrives. The D-series offers a unique combination of performance and comfort, diesel reliability, operating economy and environmental performance.

Fast acceleration, high top speed

- Fully matched components from one company
- Electronically controlled common rail
- Turbo, aftercooler and 4-valve technology

Environment and comfort

- Low emissions – EU RCD and US EPA
- Minimal vibrations and low noise
- Powertrim assistant as option
- High efficiency = low overall emissions
- RPM sync in twin installation

Exceptional reliability

- Robust design
- Freshwater cooling
- Easy-to-maintain package and a one-stop service contact
- EVC with constant monitoring and diagnostics



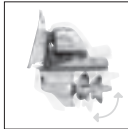
EVC

All diesel sterndrive engines come with EVC as standard, electronic shift and throttle.

Options:



Joystick docking
(twin Duoprop with electronic steering). Move your boat in any direction, with just the joystick.



Powertrim assistant
Automatically gives you the best possible drive trim. The result is a perfect running attitude.



Cruise control
The driver can fine-tune speed with the easy-to-reach button on the control.



Single-lever mode
Operate twin engines with one lever. Easy and precise even in rough seas.



Tow-mode
For all single sterndrive. When activated, the engine is limited to your preset maximum rpm, and maintains that speed, compensating for any changes in load.

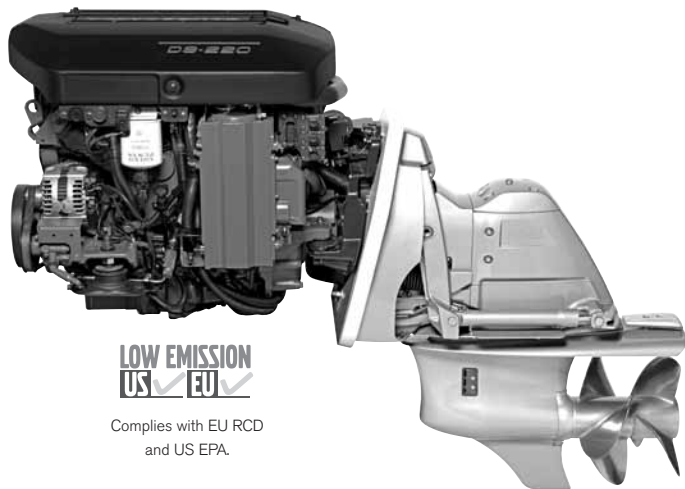


D3-SERIES

The sport diesel. All-aluminum, lightweight and high-tech that outperforms any gasoline alternative, without increasing weight. SX single-prop or DPS Duoprop drive gives justice to the engines' brutal torque.

Fuel economy is unbeaten thanks to high tech throughout. Onboard comfort is miles ahead of outboards, thanks to much lower noise, vibrations and exhaust.

Engine	D3-140	D3-170	D3-200	D3-220
Propeller shaft, kW/hp	98/133	119/162	140/190	154/209
Crankshaft, kW/hp	103/140	125/170	147/200	162/220
Rated rpm	4000	4000	4000	4000
Displacement, liters/cui	2.4/146	2.4/146	2.4/146	2.4/146
No. of cylinders	5	5	5	5
Alternator 12 V	140A	140A	140A	140A
Weight with SX, kg (lbs)	358 (789)	358 (789)	358 (789)	358 (789)
with DPS, kg (lbs)	363 (800)	363 (800)	363 (800)	363 (800)



LOW EMISSION
US ✓ EU ✓

Complies with EU RCD
and US EPA.

Features

- Common rail fuel injection
- Electronic controls as standard
- In-line 5-cylinder
- Variable-geometry turbo
- Engine-mounted seawater filter
- Robust design with ladder frame bolted to engine block
- Genuine through-the-drive exhaust
- DPS and OceanX Duoprop or SX single-prop

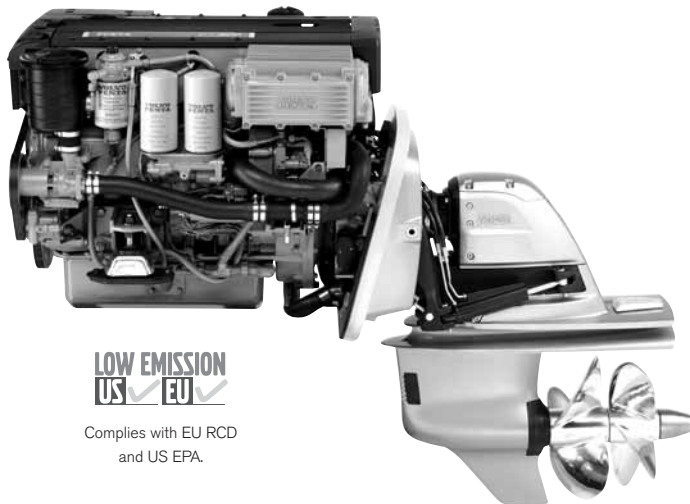


D4-SERIES

The D4-series is compact high-performance. The D4-300 even matches big-block gasoline V8s. Coupled to the fully matched DPH drive, the D4-engines give perfect driving feel, reliability and safety. Low on noise and exhaust, plus low vibrations further reduced by the balance shafts and optimised engine suspension. Fuel consumption is low compared to other diesels, minimal compared to gasoline alternatives.

Engine	D4-225	D4-260	D4-300
Propeller shaft, kW/hp	158/215	184/250	214/291
Crankshaft, kW/hp	165/225	191/260	221/300
Rated rpm	3500	3500	3500
Displacement, liters/cui	3.7/224	3.7/224	3.7/224
No. of cylinders	4	4	4
Alternator 12 V	115A*	115A*	115A*
Weight with DPH, kg (lbs)	644 (1420)	660 (1455)	663 (1462)
with DPR, kg (lbs)	–	–	663 (1462)

* With built-in charging sensor.



Complies with EU RCD
and US EPA.

Features

- Common rail fuel injection
- Electronic controls as standard
- In-line 4-cylinder compactness
- Turbo and aftercooler
- Compressor on D4-260/300
- Robust design with ladder frame
- Integrated balance shafts
- Engine-mounted seawater filter
- Patented X-act steering with external steering cylinders
- Patented nickel, aluminium, bronze alloy propellers
- Genuine through-the-drive exhaust
- DPH or high-speed DPR drive



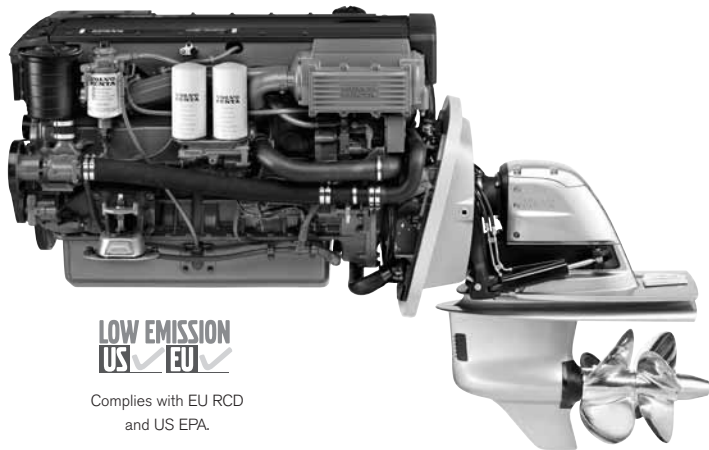
D6-SERIES

The undisputed leader in diesel sterndrives available with an impressive 370 hp.

DPH or +45 knots DPR drive, both perfectly matched transforming the massive power into rapid acceleration and high top speed. Responsive and safe handling at both low and high speed. Onboard comfort is top class, and fuel economy equally impressive.

Engine	D6-330	D6-370
Propeller shaft, kW/hp	233/317	261/355
Crankshaft, kW/hp	243/330	272/370
Rated rpm	3500	3500
Displacement, liters/cui	5.5/336	5.5/336
No. of cylinders	6	6
Alternator 12 V	115A*	115A*
Weight with DPH, kg (lbs)	750 (1653)	770 (1698)
with DPR, kg (lbs)	–	768 (1693)

* With built-in charging sensor.



Complies with EU RCD
and US EPA.

Features

- Common rail fuel injection
- Electronic controls as standard
- In-line 6-cylinder
- Turbo and aftercooler
- Compressor on D6-370
- Robust design with ladder frame
- Engine-mounted seawater filter
- Patented X-act steering with external steering cylinders
- Patented nickel, aluminium, bronze alloy propellers
- Genuine through-the-drive exhaust
- DPH or high-speed DPR drive



GASOLINE STERNDRIVE

Volvo Penta offers a complete range of state-of-the-art gasoline sterndrive packages. Perfect performance, comfort and reliability from V6s and V8s. Catalytic converter available on the V8s.

Sporty performance

- Excellent power-to-weight ratio
- Platinum-tipped spark plugs
- Single prop SX, DPS Duoprop and OceanX Duoprop drives

High comfort and reliability

- Low engine sound, minimal vibrations
- US EPA, CARB 4-stars and EU RCD emission regulations

- Crank-mounted water pump
- Genuine through-the-drive exhaust leads fumes away and reduces noise

EVC

Gasoline engines with fuel injection are available with EVC, electronic shift and throttle.

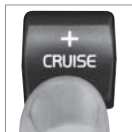
Options:



Joystick docking
(twin Duoprop with electronic steering). Move your boat in any direction, with just the joystick.



Powertrim assistant
Automatically gives you the best possible drive trim. The result is a perfect running attitude.



Cruise control
The driver can fine-tune speed with the easy-to-reach button on the control.



Single-lever mode
Operate twin engines with one lever. Easy and precise even in rough seas.



Tow-mode
For all single sterndrive. When activated, the engine is limited to your preset maximum rpm, and maintains that speed, compensating for any changes in load.

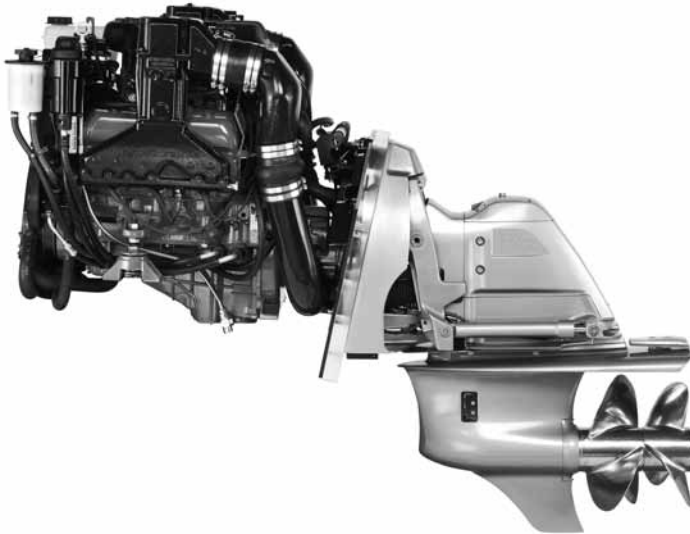


V6-SERIES

The V6 engines are available with electronic fuel injection for even better performance and reliability. Onboard comfort is superior to with conventional V6 engines, thanks to the balance shafts.

The SX single-prop and DPS Duoprop drives mean better performance and reduced maintenance.

Engine	4.3GXIE
Power, kW/hp	168/225
Displacement, liters/cui	4.3/262
Rated rpm	4800
No. of cylinders	V6
Alternator 12 V	75A
Weight with SX, kg (lbs)	415 (914)
with DPS, kg (lbs)	419 (922)



Features

- Centrally mounted balance shaft
- Two-barrel carburettor or MPI – Multi-port electronic fuel injection
- V6 configuration
- Crank-mounted water pump
- Platinum-tipped spark plugs
- DPS Duoprop or SX single-prop drive
- Quiet and efficient genuine through-the-drive exhaust system
- Top-mounted filters for easier service

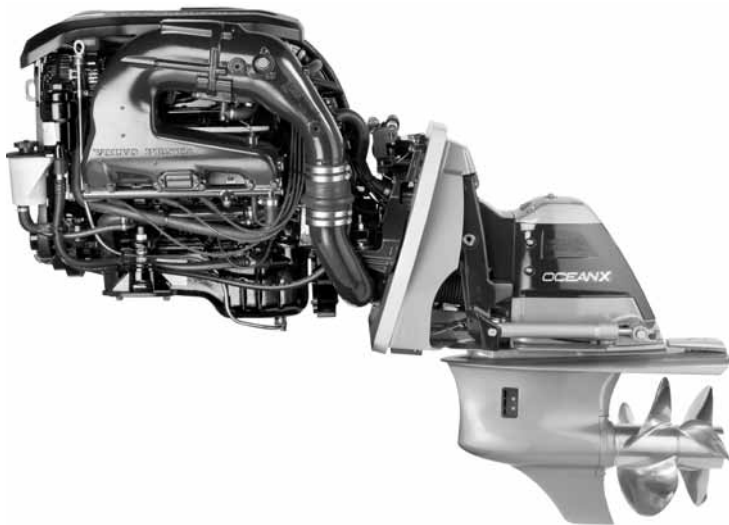


V8-SERIES

The V8s deliver fantastic driving pleasure that is further improved by the SX single-prop and DPS or OceanX Duoprop drives.

MPI electronic fuel injection is now standard on all models for even better performance and reliability. The V8 models are available with catalytic converters. They comply with California CARB 4 Star and the US EPA emission requirements.

Engine	5.0GXiE	5.7GiE-300	5.7GXiE	5.0GXiCE	5.7GiCE-300
Power, kW/hp	201/270	224/300	239/320	201/270	224/300
Displacement, liters/cui	5.7/305	5.7/350	5.7/350	5.7/350	5.7/350
Rated rpm	5000	5000	5200	5200	5200
No. of cylinders	V8	V8	V8	V8	V8
Catalytic converter	NO	NO	NO	YES	YES
Alternator 12 V	75A	75A	75A	75A	75A
Weight with SX, kg (lbs)	452 (997)	483 (1065)	483 (1065)	452 (997)	483 (1065)
with DPS, kg (lbs)	454 (1001)	485 (1070)	485 (1070)	454 (1001)	485 (1070)



Features

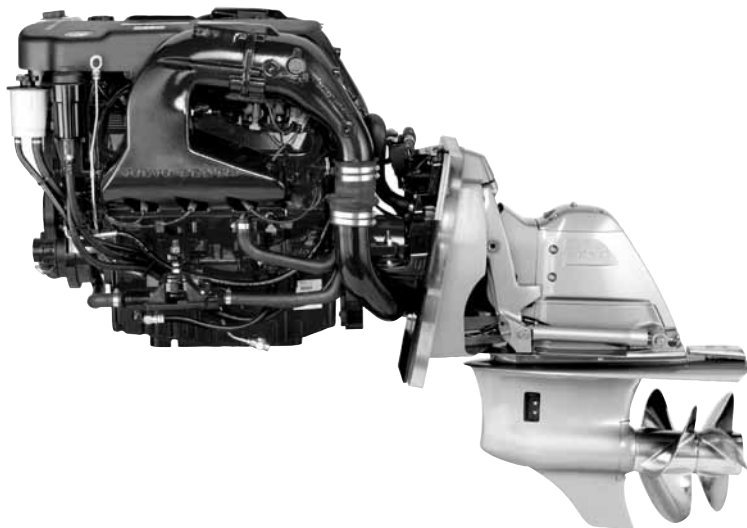
- MPI – Multi-port electronic fuel injection
- Crank-mounted water pump
- Platinum-tipped spark plugs
- DPS and OceanX Duoprop or SX single-prop drive
- Quiet and efficient genuine through-the-drive exhaust system
- Factory installed freshwater cooling as option with OceanX
- Top-mounted filters for easier service



V8-SERIES

8.1-liter V8 is the ultimate in gasoline power. The Volvo Penta 8.1 delivers uncompromising performance with reliability and safety thanks to the MPI electronic fuel injection and the DPS or OceanX Duoprop drive. The 8.1 are available with catalytic converters that dramatically reduce emissions to a level that complies with California's CARB 4 Star and the US EPA emission requirements.

Engine	8.1GiE	8.1GXiE	8.1GiCE
Power, kW/hp	280/375	313/420	298/400
Displacement, liters/cui	8.1/496	8.1/496	8.1/496
Rated rpm	4600	5000	4800
No. of cylinders	V8	V8	V8
Catalytic converter	NO	NO	YES
Alternator 12 V	75A	75A	75A
Weight with DPS, kg (lbs)	576 (1271)	576 (1271)	572 (1261)



Features

- Big-block V8 configuration
- MPI – Multi-port electronic fuel injection
- Crank-mounted water pump
- Platinum-tipped spark plugs
- DPS or OceanX Duoprop drive
- Quiet and efficient genuine through-the-drive exhaust system
- OceanX with freshwater cooling is optional
- Top-mounted filters for easier service



INBOARD POWERBOAT

Volvo Penta inboards employ the latest technology to give a totally new cruising experience. Noise, vibrations and emissions are minimal, thus assuring the highest possible onboard comfort. The exceptional performance is complemented by low fuel consumption and long cruising range. The well-known reliability gives you confidence at sea.

Compared to outboards

- The engine safely inside the boat
- Uncluttered transom, free for swimming or fishing
- Propeller under the boat – out of the way and out of the sun, minimizing marine growth
- Much lower sound for better onboard comfort
- Lower center of gravity – better sea-keeping
- Easier access for service
- Stainless steel and bronze under the waterline

Compared to Sterndrives

- Uncluttered transom, free for swimming or fishing
- Propeller under the boat – out of the way and out of the sun, minimizing marine growth
- Stainless steel and bronze under the waterline





DIESEL INBOARD POWERBOAT

A complete range of electronically controlled, state-of-the-art marine diesels that offer a unique combination of benefits:

Marine performance

- Unique marine torque and high power for immediate response and high cruising speed
- 4-valve technology, turbo and aftercooler
- Electronic fuel injection: common rail fuel system (D3, D4, D6), unit injectors (D9, D11, D13)

Excellent comfort

- Electronic controls
- Low-speed mode as option (not D3)
- Low emissions – EU RCD and US EPA
- Minimal vibrations and low noise
- Rpm sync in twin installation

Exceptional reliability

- Robust design
- Freshwater cooling
- Easy-to-maintain and a one-stop service contact
- EVC – Electronic Vessel Control with constant monitoring and diagnostics



EVC

All diesel inboard engines come with EVC as standard, electronic shift and throttle.

Options:



Cruise control

The driver can fine-tune speed with the easy-to-reach button on the control.



Single-lever mode

Operate twin engines with one lever. Easy and precise even in rough seas.



Low-speed mode

Reduces boat speed at idling by 50 % from 5-6 knots to 2-3 knots. Integrated in control and perfect when driving in marinas and canals.





D3-SERIES

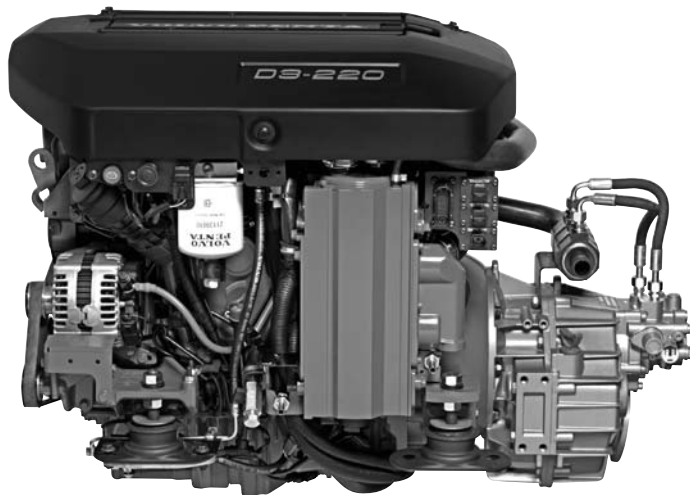
High-tech, all aluminium, lightweight and compact marine diesel that is absolutely perfect where weight and/or space is an issue.

The D3 features all the latest diesel technology to deliver outstanding performance and excellent onboard comfort with low fuel consumption.

Engine	D3-110	D3-150	D3-170	D3-200	D3-220
Propeller shaft, kW/hp	78/107	107/146	121/165	143/194	157/213
Crankshaft, kW/hp	81/110	110/150	125/170	147/200	162/220
Rated rpm	3000	4000	4000	4000	4000
Displacement, liters/cui	2.4/146	2.4/146	2.4/146	2.4/146	2.4/146
No. of cylinders	5	5	5	5	5
Alternator 12 V	150A	150A	150A	150A	150A
Weight HS25AE, kg (lbs)	297 (655)	297 (655)			
Weight HS45AE, kg (lbs)	301 (664)	301 (664)	301 (664)	301 (664)	301 (664)
Weight HS631VE, kg (lbs)			335 (739)	335 (739)	335 (739)



Complies with EU RCD
and US EPA.



Features

- Electronically controlled common rail fuel system
- Electronic controls
- In-line 5-cylinder
- Variable geometry turbo
- Robust design with ladder frame bolted to engine block
- Easily accessible service points
- PTO capability



D4-SERIES

The 4-cylinder D4 features all the benefits of the D6 – in a more compact size.

Immediate response and high performance is matched by low sound and low vibrations further reduced by the balance shafts and the optimised engine suspension. Low fuel consumption gives good overall economy.

Engine	D4-180	D4-225	D4-260	D4-300
Propeller shaft, kW/hp	128/174	160/218	186/253	212/288
Crankshaft, kW/hp	132/180	165/225	191/260	221/300
Rated rpm	2800	3500	3500	3500
Displacement, liters/cui	3.7/224	3.7/224	3.7/224	3.7/224
No. of cylinders	4	4	4	4
Alternator 12 V	115A*	115A*	115A*	115A*
Weight bobtail, kg (lbs)	482 (1063)	482 (1063)	482 (1063)	483 (1065)

Low speed available with reverse gear:
HS63AE, HS63IVE.



Complies with EU RCD
and US EPA.

* With built-in charging sensor.



Features

- Electronically controlled common rail fuel system
- In-line 4-cylinder
- Compact dimensions
- Electronic controls as standard
- Easily accessible service points
- Robust design with ladder frame bolted to engine block
- Integrated balance shafts
- Heavy-duty engine cover
- PTO capability



D6-SERIES

This state-of-the-art engine delivers silk-smooth running for onboard comfort and powerful response to driver commands. All thanks to the latest in diesel technology. Immediate response and high performance is matched by low sound and low vibrations. Low fuel consumption gives good overall economy.

Engine	D6-330	D6-370	D6-435
Propeller shaft, kW/hp	237/322	267/363	310/422
Crankshaft, kW/hp	243/330	272/370	320/435
Rated rpm	3500	3500	3500
Displacement, liters/cui	5.5/336	5.5/336	5.5/336
No. of cylinders	6	6	6
Alternator 12 V	115A*	115A*	115A*
Alternator 24 V	80A*	80A*	80A*
Weight bobtail, kg (lbs)	580 (1279)	580 (1279)	594 (1310)

Low speed available with reverse gear:
HS63AE, HS63IVE, HS80AE, HS80IVE
HS85AE, HS85IVE.



Complies with EU RCD
and US EPA.

* With built-in charging sensor.



Features

- Electronically controlled common rail fuel system
- In-line 6-cylinder
- Electronic controls as standard
- Easily accessible service points
- Robust design with ladder frame bolted to engine block
- Heavy-duty engine cover
- PTO capability



D9-SERIES

A truly extraordinary engine for the 500–600 hp segment. The unique twin-entry turbo enables pulse charging to deliver a magnificent torque for powerful acceleration.

High efficiency for extended cruising range plus low noise and emissions giving perfect onboard comfort. Reliability and safety are top-notch too making it a perfect partner at sea.

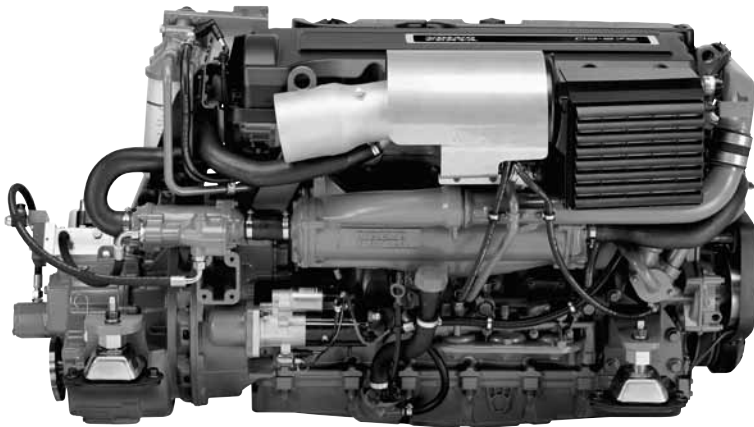
Engine	D9-500	D9-575
Propeller shaft, kW/hp	357/486	410/558
Crankshaft, kW/hp	368/500	423/575
Rated rpm	2600	2500
Displacement, liters/cui	9.4/571	9.4/571
No. of cylinders	6	6
Alternator 12 V	115A*	115A*
Alternator 24 V	80A*	80A*
Weight bobtail, kg (lbs)	1075 (2370)	1075 (2370)

Low speed available with reverse gear:
ZF286A, ZF286IV, ZF280A, ZF280IV,
MG5075A, MG5065A.

* With built-in charging sensor.



Complies with EU RCD
and US EPA.



Features

- Twin-entry turbo that enables pulse charging
- Electronically controlled unit injectors
- In-line 6-cylinder
- Electronic controls as standard
- Easily accessible service points
- Robust design with ladder frame bolted to engine block
- PTO capability



D11-SERIES

Extremely powerful, yet the most compact engine in its power class. The D11 features the unique twin-entry turbo that enables pulse charging, creating a magnificent torque for powerful acceleration. High efficiency equals long cruising range.

Immensely strong construction with engine block in compact graphite iron give quiet and smooth running plus high reliability.

Engine

D11-670

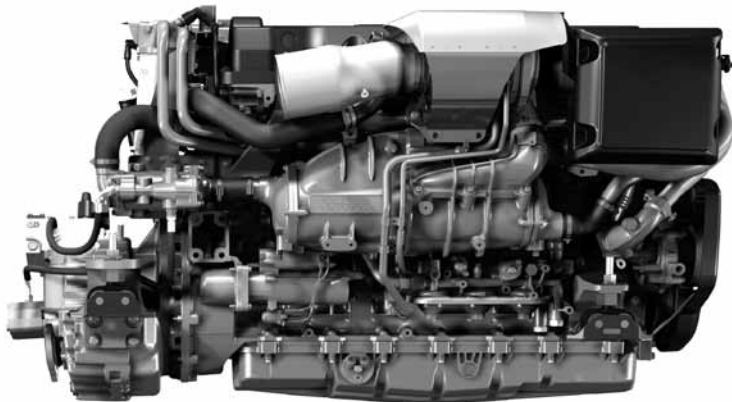
Propeller shaft, kW/hp	478/650
Crankshaft, kW/hp	493/670
Rated rpm	2300
Displacement, liters/cui	10.8/660
No. of cylinders	6
Alternator 24 V	80A*
Weight bobtail, kg (lbs)	1130/2491

Low speed available with reverse gear:
ZF311A, ZF325IV, ZF305-2A.

* With built-in charging sensor.



Complies with EU RCD
and US EPA.

**Features:**

- Twin-entry turbo that enables pulse charging
- Electronically controlled unit injectors
- In-line 6-cylinder
- Electronic controls as standard
- Easily accessible service points
- Robust design with compact graphite iron engine block and ladder frame
- PTO capability



D13-SERIES

At the top of the range, this is an engine with outstanding overall performance, yet quiet and smooth running. The fuel economy is world class with low emission of CO₂. The secret behind this is the centre mounted twin-entry turbo and on the 900 also a dual stage turbo. 800 or 900 hp.

Engine	D13-800	D13-900
Propeller shaft, kW/hp	564/768	636/864
Crankshaft, kW/hp	588/800	662/900
Rated rpm	2300	2300
Displacement, liters/cui	12.8/780	12.8/780
No. of cylinders	6	6
Alternator 24 V	110A*	110A*
Weight bobtail, kg (lbs)	1450 (3197)	1560 (3439)

Low speed available with all reverse gears. Standard on: MGX5096-A, MGX5014-IV. Option for: ZF335-AE, ZF325-IAE, ZF325-IV.



Complies with EU RCD
and US EPA Tier 2.

* With built-in charging sensor.



Features

- Twin-entry turbo that enables pulse charging
- Dual stage turbo on the D13-900
- Electronically controlled unit injectors
- In-line 6-cylinder
- Electronic controls as standard
- Easily accessible service points
- Robust design with compact graphite iron engine block and ladder frame
- Quick-shift available
- PTO capability



VOLVO PENTA IPS

Volvo Penta's Inboard Performance System with individually steerable pods under the hull. Developed as a modern, alternative to traditional inboard shafts.

Compared to traditional inboard shafts:

- High efficiency gives, high top speed and approx. 30% less fuel consumption at cruising
- Complete and integrated system from one supplier
- Excellent onboard comfort
- Minimal noise and vibrations

- Virtually no exhaust fumes or smell
- Unique low-speed maneuverability
- Perfect handling at high speed
- Joystick and Dynamic Positioning System for easy docking
- More onboard space
- Very high safety
- Sportfish functions

Compared to sterndrives:

- High-grade bronze and stainless steel below the waterline
- Propellers under the hull giving minimal risk of marine growth
- Available for boats up to plus 100 feet
- Sportfish functions



EVC

All Volvo Penta IPS come with EVC as standard, electronic shift and throttle.

Options:



Joystick docking

Move your boat in any direction, with just the joystick.



Low-speed mode

Reduces boat speed at idling by 50 % from 5–6 knots to 2–3 knots. Integrated in control and perfect when driving in marinas and canals.



Single-lever mode

Operate twin engines with one lever. Easy and precise even in rough seas.



Dynamic Positioning System

Press a button and the Dynamic Positioning System holds your boat's position and heading and keeps it within a very limited area.

The perfect feature for waiting at the fuel dock or for a bridge or lock to open.



Cruise control

The driver can fine-tune speed with the easy-to-reach button on the control.



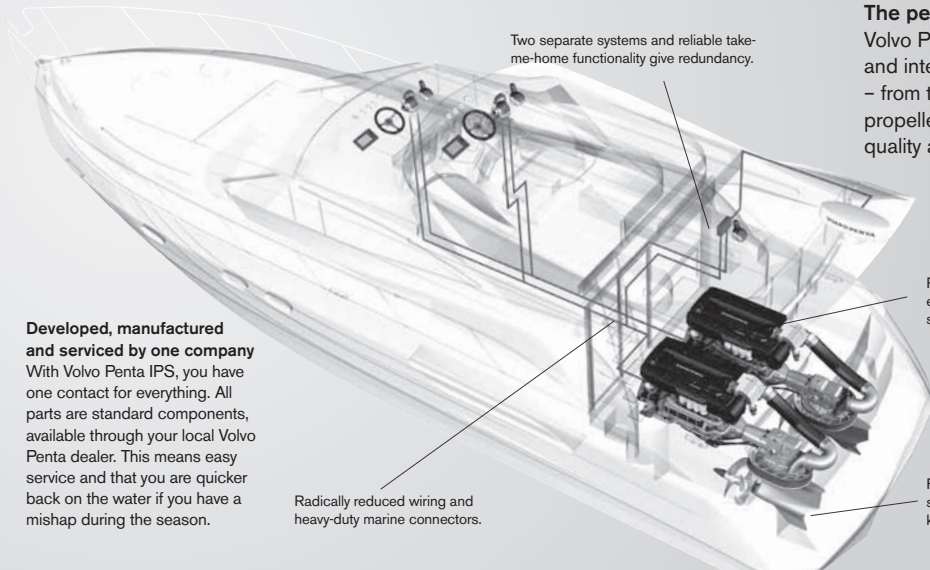
FORWARD THINKING

Volvo Penta IPS is the new inboard revolution. A worldwide success available in more than 100 boat models from boat builders world-wide. Volvo Penta IPS offers dramatic improvements compared to traditional inboard shafts:

The Unique Benefits of Volvo Penta IPS:

- Up to 40% longer cruising range
- Up to 20% higher top speed
- Up to 30% reduced fuel consumption
- Up to 30% less CO₂ emissions
- Up to 50% lower perceived noise level
- Safe and predictable handling
- Joystick docking
- Virtually no fumes

Compared with inboard shafts at cruising with planing hulls, approximate figures.



Developed, manufactured and serviced by one company

With Volvo Penta IPS, you have one contact for everything. All parts are standard components, available through your local Volvo Penta dealer. This means easy service and that you are quicker back on the water if you have a mishap during the season.

Two separate systems and reliable take-me-home functionality give redundancy.

Radically reduced wiring and heavy-duty marine connectors.

The perfect match

Volvo Penta IPS is a complete and integrated propulsion system – from the helm station to the propellers. This greatly increases quality and reliability.

Powerful, low emission marine engines perfectly matched to the system.

Forward-facing, high-efficiency pod system designed with safety as a key feature.



SMART FUNCTIONS FOR COMFORTABLE DRIVING

Volvo Penta IPS enables a number of smart functions for easier, more comfortable driving and better fishing. All equally simple to use thanks to the new control. Enjoy a new level of easy driving, no matter if it is a twin, triple or quadruple installation.



Low-speed mode

Integrated in the controls and perfect when driving in marinas and canals.

The adjustable low-speed mode works by a slip coupling in the gearbox, which reduces boat speed at idling by around 50%, from 5–6 knots to 2–3 knots.



Single-lever mode

Lets you control twin, triple or quad engines with one

lever. Very comfortable and safe when driving in rough seas.



Cruise control

The driver can fine-tune speed with

the easy-to-reach button on the control.



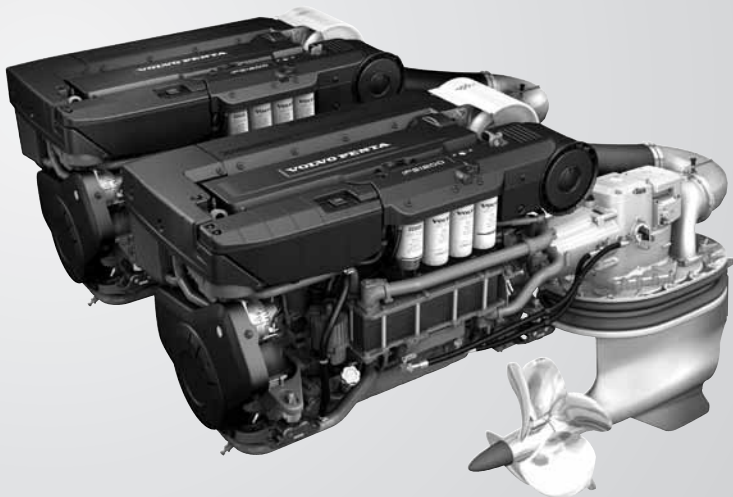
Joystick

The skipper's best friend that makes docking easy, even fun. Forget complicated shift, throttle and steering wheel combinations in close-quarter maneuvering – simply move the joystick in the direction you want the boat to move: sideways, diagonally, forwards, backwards or rotate.



Dynamic Positioning System

Press a button and the Dynamic Positioning System holds your boat's position and heading and keeps it within a very limited area. The perfect feature for waiting at the fuel dock or for a bridge or lock to open. When docking, the Dynamic Positioning System gives your crew time to prepare fenders and lines.



A new era for yachts

The new IPS1050 and IPS1200 are the biggest yet, giving exceptional efficiency to boats up to 100 feet. Powered by the D13 marine diesel coupled to a new larger and perfectly matched pod.



Unique Sportfish Features

Volvo Penta IPS offers features that greatly improve fishability. All easily managed from the sportfish panel.

Sportfish mode makes the boat extremely maneuverable. The pods are locked toeout, making it possible to rapidly turn the boat around its own axis and follow the fish at high speed in reverse, using only the Palm Beach controls.

Clear wake exhaust system bypasses the exhausts to the side of the boat. This cleans up the water behind the boat from exhaust bubbles, making it easier for the fish to see the bait (available for IPS800-IPS1200).

Single-lever mode makes it possible to operate shift and throttle for all engines with one lever.



Palm Beach
Controls as option.

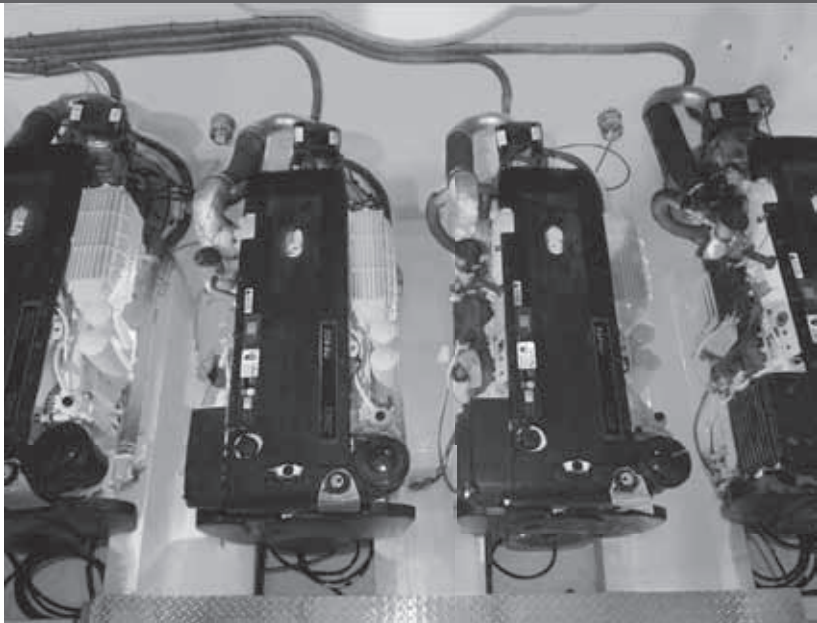




Triple and quad for multiple benefits

Volvo Penta IPS can be installed as triple or quad. For motor yachts, the benefits compared to traditional inboard shafts are enormous:

- Radically reduced fuel consumption and overall emissions.
- Amazing improvements in on-board comfort – minimal smoke, noise and vibrations.
- Easy to drive – operated with standard twin controls and one steering wheel.
- All options available – including the joystick.



- Higher and more even quality.
- Much faster installation with minimal adjustments.

As easy as twin

Driving a boat with triple or quad installation is as easy as a twin. The same standard twin controls and one single steering wheel are used. Driving is a lot easier than with traditional inboard shafts – and much more fun.

Gasoline power

Volvo Penta IPS550G is powered by an 8.1 liter V8 gasoline engine with catalytic converter. Equal in performance to IPS500 diesel and most EVC options available. (Not low-speed mode and Dynamic Positioning System.)





VOLVO PENTA IPS350-IPS600

IPS350 and IPS400 are powered by the 4-cylinder Volvo Penta D4. IPS450, IPS500 and IPS600 by the 6-cylinder Volvo Penta D6. All diesels with EVC common-rail turbo and aftercooler.

The IPS550G is powered by the 8.1 gasoline V8 with catalytic converter.

Model	IPS350	IPS400	IPS450	IPS500	IPS600	IPS550G
Propeller shaft, kW/hp	182/248	212/289	230/314	259/352	307/418	280/376
Crankshaft, kW/hp	191/260	221/300	243/330	272/370	320/435	298/400
Rated rpm	3500	3500	3500	3500	3500	4800
Displacement, liters/cui	3.7/224	3.7/224	5.5/336	5.5/336	5.5/336	8.1/496
No. of cylinders	4	4	6	6	6	V8
Alternator 12 V	115A*	115A*	115A*	115A*	115A*	120A
Alternator 24 V	–	80A*	80A*	80A*	80A*	–
Weight, kg (lbs)	780 (1720)	780 (1720)	863 (1903)	887 (1955)	901 (1986)	833 (1836)

The numbers in the model designation indicate the power required from a traditional inboard shaft engine to deliver equal performance.

* With built-in charging sensor.



Features

- Totally integrated system with everything from steering wheel to propeller cone.
- Standard Volvo Penta parts
- Unique, steerable pods
- Integrated seawater and exhaust system
- Twin rubber suspension and sealing rings plus soft suspended engines
- Patented counter-rotating propellers.
- Joystick, Dynamic Positioning System and Sportfish options



Complies with EU RCD
and US EPA.



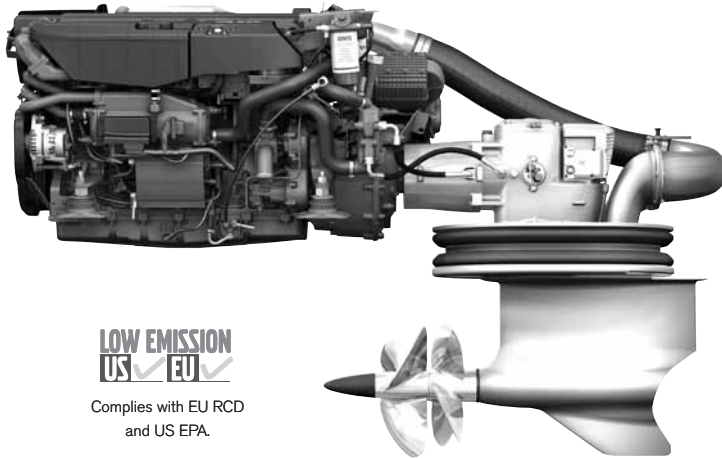
VOLVO PENTA IPS800 AND IPS900

The mid-range models are powered by the 6-cylinder D11. An 11-liter, EVC-managed diesel with twin entry turbo and aftercooler, delivering 600 and 700 hp. The pod is significantly larger than with the 350-600 models and it is perfectly matched to the engines considerably larger torque.

Engine	IPS800	IPS900
Propellershaft, kW/hp	417/567	487/662
Crankshaft, kW/hp	441/600	515/700
Displacement, liters/cui	10.8/661	10.8/661
Rated rpm	2300	2300
No. of cylinders	6	6
Alternator 24 V	80A*	80A*
Weight, kg (lbs)	1800 (3968)	1800 (3968)

The numbers in the model designation indicate the power required from a traditional inboard shaft engine to deliver equal performance.

* With built-in charging sensor.



Complies with EU RCD
and US EPA.

Features

- Totally integrated system with everything from steering wheel to propeller cone.
- Standard Volvo Penta parts.
- Unique, steerable pods.
- Integrated seawater and exhaust system.
- Twin rubber suspension and sealing rings plus soft suspended engines.
- Patented counter-rotating propellers.
- Joystick, Dynamic Positioning System and Sportfish functions as option.



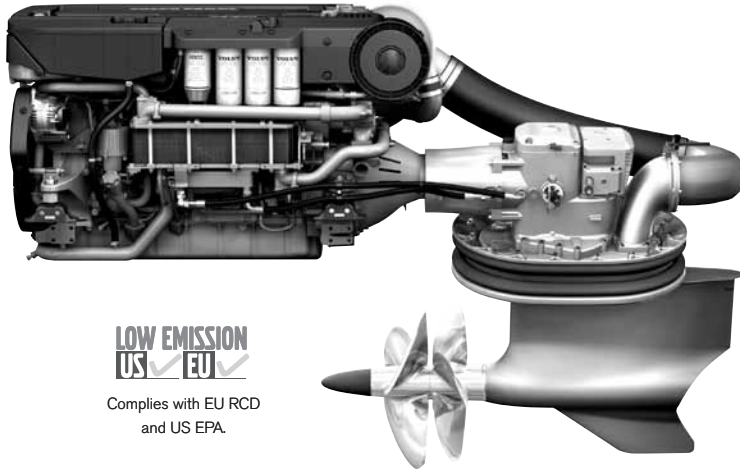
VOLVO PENTA IPS1050 AND IPS1200

The largest models are powered by the 6-cylinder D13 at 800 and 900 hp. With its twin entry dual stage turbo, aftercooler and electronic fuel injection it delivers massive torque and high power. The pod and propeller series are also the largest in the range, exclusively developed for the engines characteristics.

Engine	IPS1050	IPS1200
Propellershaft, kW/hp	564/768	636/864
Crankshaft, kW/hp	588/800	662/900
Displacement, liters/cui	12.8/780	12.8/780
Rated rpm	2300	2300
No. of cylinders	6	6
Alternator 24 V	110A*	110A*
Weight, kg (lbs)	1800 (3968)	1800 (3968)

The numbers in the model designation indicate the power required from a traditional inboard shaft engine to deliver equal performance.

* With built-in charging sensor.



Complies with EU RCD
and US EPA.

Features

- Totally integrated system with everything from steering wheel to propeller cone.
- Standard Volvo Penta parts
- Unique, steerable pods
- Integrated seawater and exhaust system
- Twin rubber suspension and sealing rings plus soft suspended engines
- Patented counter-rotating propellers
- Joystick, Dynamic Positioning System and Sportfish functions as option



QUESTIONS & ANSWERS

VOLVO PENTA IPS

What is it?

Volvo Penta IPS – Inboard Performance System – is a complete propulsion package.

It consists of marine engines, reverse gears steerable pods with twin counter rotating propellers, integrated water/exhaust, electronic steering, shift, throttle and instrumentation integrated in the EVC system.

It is installed through the hull in a mounting collar.

What's the difference compared to traditional inboard shafts?

Steerable pods instead of fixed propellers and rudder give much better slow-speed maneuverability and greatly improved high-speed handling.

Approximately 35% higher

efficiency gives faster acceleration, higher top speed and lower fuel consumption. Less power is needed for equal performance.

Lower sound, vibrations and exhausts mean greatly improved onboard comfort.

What's the difference compared to sterndrives?

Volvo Penta IPS is designed to

replace inboards in boats 30–100 feet. The pods are of bronze and stainless steel, rather than aluminium. Combined with the placement under the hull, out of the sun, means reduced risk of marine growth.

Service requirements are lower for Volvo Penta IPS.

Will it give better performance?

Yes. Compared to traditional inboard shafts, efficiency is approximately 35% better. Top speed will be higher, acceleration faster and

fuel consumption lower. Exact figures depend on the boat model.

Compared to sterndrives the difference is marginal.

Why forward facing propellers?

Forward facing propellers work in undisturbed water giving better efficiency. They are farther away from the transom – minimising the risk of cavitation. Pulsation from the propellers is minimal, reducing on-board sound levels.

It is designed for flat surface V-hull with no tunnels – always the most efficient and economical solution.

What about reliability?

Volvo Penta IPS is a complete system, with every part optimised for its function. This gives far better reliability than with traditional inboard shafts that are commonly with parts from several suppliers.

Volvo Penta IPS also has full redundancy – always with minimum twin installation, i.e. all systems are doubled. Should one engine fail, the boat still has almost full maneuverability and can be driven back to port.



What happens if I run aground?

Volvo Penta IPS is designed with safety as a key feature in every sense of the word. Robust design, flexible-suspended and full redundancy in the EVC system.

In a slow-speed harbour incident, the risk of damage is mainly related to the propellers. High-speed impact is always a serious situation, regardless of what drive system the boat has. Volvo Penta IPS has a series of built-in features, e.g. pre-set break points, all to reduce the risk of causing leakage. Maneuverability

with one engine further increase safety.

Repair work is much easier than with traditional inboard shafts. All parts are easily available off-the-shelf, getting the boat quickly back on the water.

How much service is needed?

Service requirements are low, compared to traditional inboard shafts and sterndrives. Apart from standard engine service, the oil in the pod needs changing every two years or 400 hrs. No glands to change, no propeller shaft alignments etc.

How does the joystick work?

The joystick function is an option for all Volvo Penta IPS-powered boats. The helmsman can drive and maneuver the boat with the joystick, at low speed. The joystick uses the engines and drive units in the Volvo Penta IPS system. Since they are individually steerable and electronically controlled, different steering angles, gear and throttle positions can make the boat move in any direction. It is the highly sophisticated and specially developed software in the EVC system that transforms the driver's joystick movements into steering angles.

For how long can I use the joystick?

The joystick uses the ordinary engines and drive units. This means you can maneuver with the joystick for as long as you have fuel in the tank. No time limit.

What is Dynamic Positioning System?

When activated, the Dynamic Positioning System automatically holds the boat's heading and keeps it within a very limited area. The system uses twin GPS receivers in the special antenna to deter-

mine the boat's position and heading. Sophisticated and specially developed software in the EVC system transforms this data into steering angles, gear shifts and throttle positions to keep the boat still. Engines, pods and propellers are therefore active and your boat should be regarded as under way with the driver responsible. No one should, of course, be in the water close to the boat. Dynamic Positioning System requires that Low-speed mode is installed. (Not available for IP-S550G).

Can I have multiple helm stations?

Yes, up to four helm stations. A helm station is either complete with wheel and controls or a "Docking station", which is a stand-alone joystick.

Is triple and quad a good alternative?

Definitely. The benefits are huge with improvements in performance, handling, onboard comfort and more interior space. Plus, radically reduced fuel and exhausts. Driving is just like a standard twin. The controls are the same.



What's available for sportfishers?

Volvo Penta IPS is highly suited for sportfishing, even more so with the special sportfishing functions.

In Sportfish mode the pods are directed outward to the very maximum, giving outstanding maneuverability.

When the driver operates one engine forward and the other in reverse, using the Palm Beach controls, the torque is many times as great as when the propellers face backwards – which they always do with conventional inboard engines. Following a fish has never been easier.

Single-lever mode allows twin engines to be controlled with one lever, the Single-lever mode makes maneuvering more secure and comfortable. The Single-lever mode is included in the Sportfish mode software.

The Clear wake exhaust system provides calm and quiet conditions at idling and low speed, thus enabling the angler see the bait at all times. This option is turned on and off using the Sportfish mode panel. Available for Volvo Penta IPS800–1200.

What's the difference compared to other pods?

Volvo Penta IPS is unique in many aspects, the forward facing propellers, integrated water/exhausts and many more, patented features. But what really puts Volvo Penta IPS ahead of the competition is the fact that it is a complete propulsion system from one company.

Every detail from helm to propellers is developed as a unit and matched. This leads to unequalled efficiency and much

higher reliability. The boat builder also benefits from this with easy installation, service and fast parts supply.

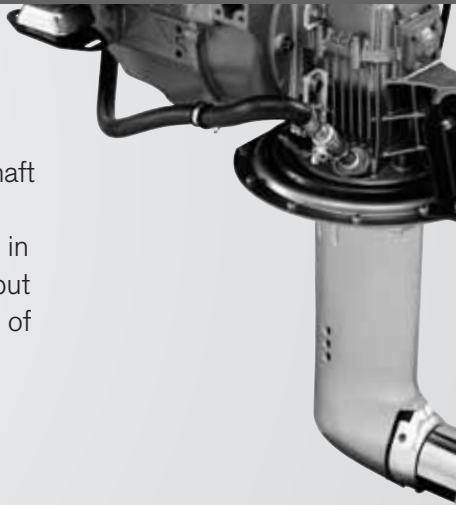




SAILBOAT DRIVE SYSTEMS

For sailboats there are two drive systems available: Inboard shaft and Saildrive.

The Saildrive was invented by Volvo Penta and launched in 1973. Today there are other makes on the market as well, but none offer all the onboard comfort, performance and safety of Volvo Penta's current series of Saildrives.

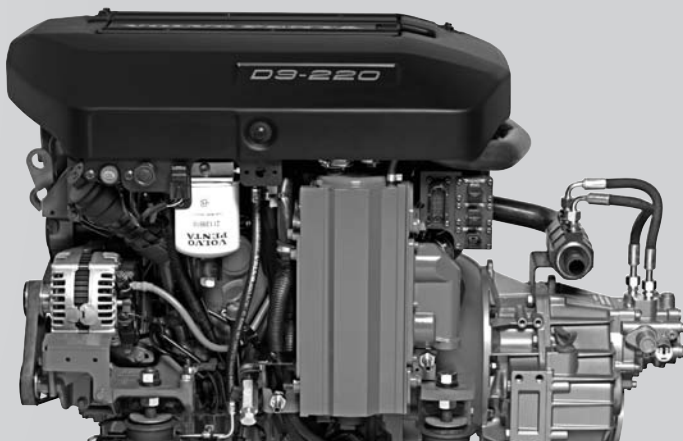




The Saildrive gives several benefits compared to traditional inboard shaft:

- Minimal vibrations and low sound
 - Low drag while sailing
 - High efficiency under power
 - Three-point mounting: no need for alignment
 - Integrated water intake
 - Electrically isolated drive and propeller
 - Crash absorber keeps engine in place in the event of an impact
 - Split anode, replaceable without removing propeller
 - Saildrive oil can be changed from inside the boat
- 

Inboard shaft is the traditional installation for sailboats. On classic boats with long keels, it is the only option.





SAILBOAT POWER

Diesel engines from 12 to 180 hp specially designed for sailboats: low revs, low emissions and powerful thrust. For larger yachts (even sailing ships.) Volvo Penta offers suitable engines all the way up to 900 hp.

EVC is available for all sailboat engines, with more opportunities for smart instrumentation.



Improved performance

- High torque from low rpm
- High-efficiency Saildrive
- Patented high-thrust propellers

Greater comfort

- Low revs
- Low emissions
- Electrical stop as standard
- Minimal vibrations and low noise
- Smart, flexible instrumentation

More efficient charging

- 115 or 150A alternators
- Built-in charging sensor (115A)

Reliable, simple boat ownership

- Robust design
- Freshwater cooling as standard
- Relay-activated starter solenoid
- “Crash absorber” on the Saildrive
- Electrically isolated Saildrive
- Easy-to-maintain engine and a one-stop service contact

EVC options**D1 and D2**

- Instrumentation at up to 4 Helm Stations
- NMEA 2000 interface

D3 and D4

- Trip computer functionality.
- Instrumentation at up to 4 Helm Stations
- NMEA 2000 interface



DETAILS THAT MAKE THE DIFFERENCE

Low revs

The D-series low max rpm and high torque makes it possible to cruise at a low RPM – essential for low sound and vibrations.

Powerful low end torque also facilitates docking and maneuvering.

Safe start and stop

- Relay-activated starter solenoid
- Electrical stop as standard on all models

EVC

Easy to install several displays – or get engine data in a chart plotter.



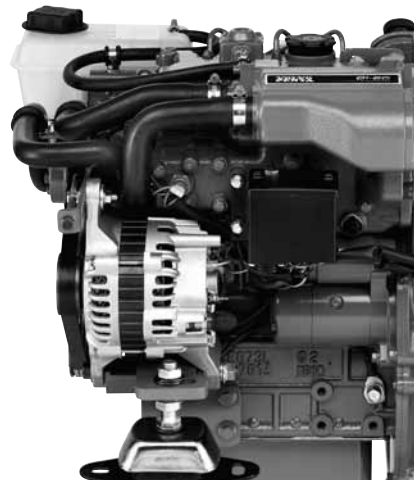


Efficient charging



The D-series has the best battery charging in the business – as standard: 115A alternator and built-in charging sensor that gives correct voltage at the batteries. This compensates for inevitable voltage drops and gives correct battery charging, always. (D3 has a 150A alternator, no charging sensor.)

The built-in charging sensor compensates for voltage drops
= always correct battery charging.





D1-SERIES

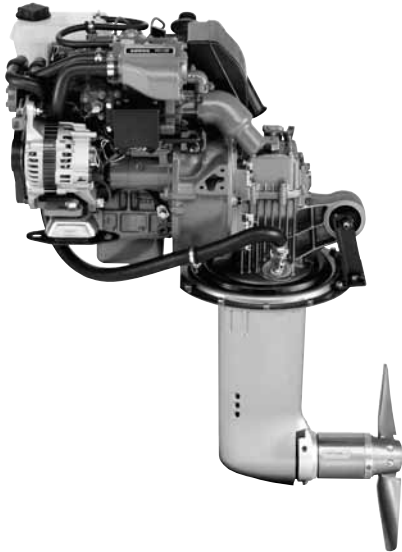
2 and 3-cylinder marine diesels for sail and displacement boats with typical cruising rpm as low as 1,800–2,300 for excellent comfort. Unique marine torque gives easy maneuvering and safety in a strong head wind.

Engine	D1-13	D1-20	D1-30
Propellershaft, kW/hp	8.6/11.8	13/18	20/27
Crankshaft, kW/hp	9.0/12.2	14/19	21/29
Displacement, liters/cui	0.5/31	0.8/46.5	1.13/69
Rated rpm	3200	3200	3200
No. of cylinders	2	3	3
Alternator 12 V	115A*	115A*	115A*
Weight with MS10L/A, kg (lbs)	112 (247)	130 (287)	144 (317)
with MS15L/A, kg (lbs)			156 (344)
with 130S, kg (lbs)	126 (278)	144 (317)	158 (348)

* With built-in charging sensor.



Complies with EU RCD
and US EPA.



Features

- Electrically isolated drive and propeller
- Split anode, replaceable without removing propeller
- Saildrive oil can be changed from inside the boat
- EVC instrumentation
- 115A alternator with built-in charging sensor
- Dedicated oil change pipe
- Relay-activated starter solenoid
- Freshwater cooling as standard
- High-capacity hot water outlet

Also available with marine gearbox.



D2-SERIES

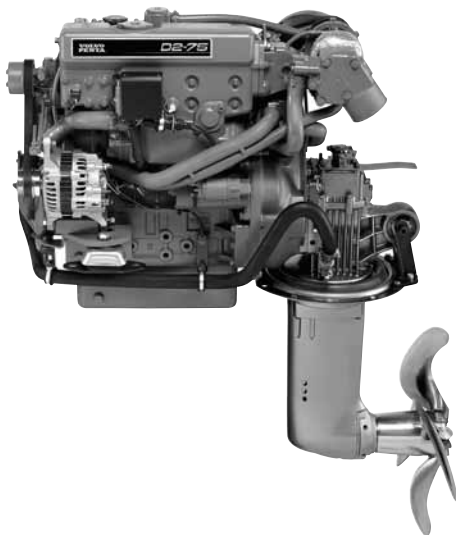
4-cylinder marine diesels for sail and displacement boats with typical cruising rpm as low as 1,800–2,300 for excellent comfort. Unique marine torque gives easy maneuvering and safety in a strong head wind.

Engine	D2-40	D2-55	D2-75
Propellershaft, kW/hp	28/38	39/53	53/72
Crankshaft, kW/hp	29/40	41/55	55/75
Displacement, liters/cui	1.51/92.1	2.2/134.2	2.2/134.2
Rated rpm	3200	3000	3000
No. of cylinders	4	4	4
Alternator 12 V	115A*	115A*	115A*
Weight with MS15L/A, kg (lbs)	177 (390)		
with MS25L/A, kg (lbs)		243 (536)	258 (569)
with HS25A, kg (lbs)		249 (549)	264 (582)
with 130S, kg (lbs)	189 (417)	253 (558)	
with 150S, kg (lbs)			264 (582)

* With built-in charging sensor.



Complies with EU RCD
and US EPA.



Features

- Electrically isolated drive and propeller
- Split anode, replaceable without removing propeller
- Saildrive oil can be changed from inside the boat
- 115A alternator with built-in charging sensor
- Dedicated oil change pipe
- Relay-activated starter solenoid
- Freshwater cooling as standard
- High-capacity hot water outlet
- PTO capability

Also available with marine gearbox.



D3-SERIES

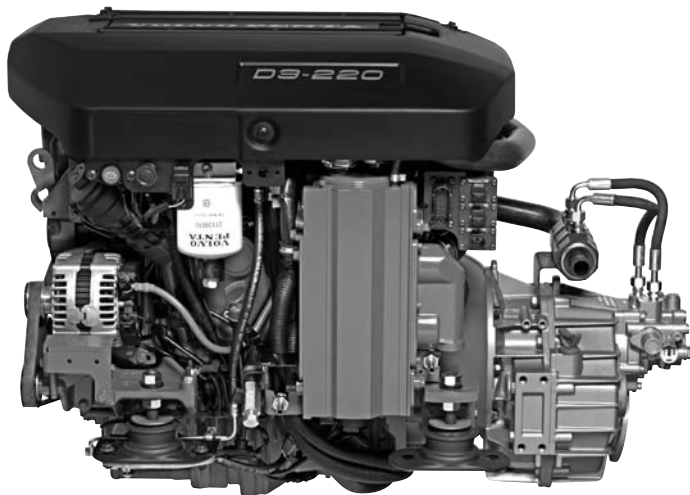
Dedicated sail and displacement versions of the D3 marine diesel, bringing the latest in diesel high tech. The D3 offers a combination of performance, comfort and fuel economy that conventional diesels cannot match.

Typical cruising rpm as low as 1,800–2,400 gives excellent comfort with low sound and vibrations and the unique marine torque gives easy and powerful maneuvering plus safety in a strong head wind.

Engine	D3-110	D3-150
Propellershaft, kW/hp	78/106	107/146
Crankshaft, kW/hp	81/110	110/150
Displacement, liters/cui	2.4/146	2.4/146
Rated rpm	3000	3000
No. of cylinders	5	5
Alternator 12 V	150A	150A
Weight with HS25A, kg (lbs)	297 (655)	297 (655)
with HS45A, kg (lbs)	301 (664)	301 (664)
with HS63IV, kg (lbs)	365 (804)	365 (804)



Complies with EU RCD
and US EPA.



Features

- Electronically controlled common rail fuel system
- In-line 5-cylinder
- Variable-geometry turbo
- Robust design with ladder frame bolted to engine block
- Relay-activated starter solenoid
- 150A alternator
- Freshwater cooling as standard
- High-capacity hot water outlet
- Trip computer software
- PTO capability
- Electronic controls



D4-180

Dedicated sail and displacement version of the D4 marine diesel bringing the latest in diesel high tech. The D4 offers a combination of performance, comfort and fuel economy that conventional diesels cannot match.

Typical cruising rpm as low as 1,800–2,300 gives excellent comfort with low sound and vibrations and the unique marine torque gives easy and powerful maneuvering plus safety in a strong head wind.

Engine	D4-180
Propellershaft, kW/hp	128/174
Crankshaft, kW/hp	132/180
Displacement, liters/cui	3.7/226
Rated rpm	2800
No. of cylinders	4
Alternator 12 V	115A*
Weight with HS45AE, kg (lbs)	546 (1204)
with HS63LE, kg (lbs)	564 (1243)
with HS63IVE, kg (lbs)	580 (1279)

* With built-in charging sensor.



Complies with EU RCD
and US EPA.



Features

- Electronically controlled common rail fuel system
- In-line 4-cylinder
- Compact dimensions
- Electronic controls as standard
- Robust design with ladder frame bolted to engine block
- Integrated balance shafts
- Heavy-duty engine cover
- Relay-activated starter solenoid
- 115A alternator with built-in charging sensor
- High-capacity hot water outlet
- Trip computer software
- PTO capability



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Detailed information on every Volvo Penta engine.

Web catalogue

All maintenance parts and Volvo Penta accessories.

Repowering info

The “Engine configurator” guides you to the engine best suited for you. The “Repowering guide” can be downloaded.

Operator's manuals

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Propeller guide

Correct propeller choice to optimise performance and fuel economy.





