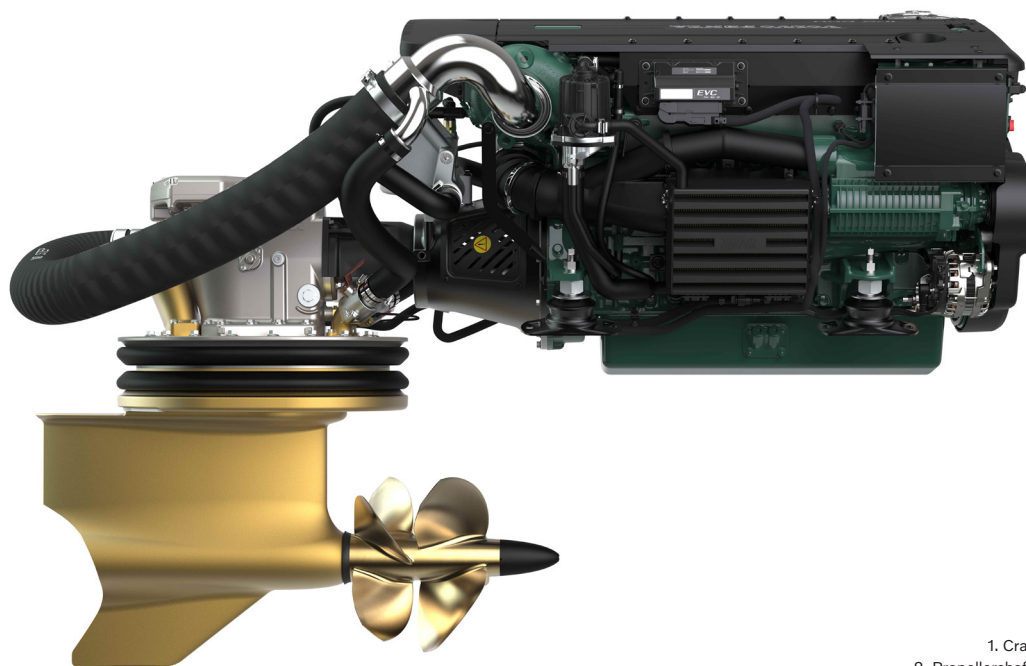


# VOLVO PENTA

## VOLVO PENTA INBOARD PERFORMANCE SYSTEM

# D6-IPS 400/450/500/600/650

5.5 liter, in-line 6 cylinder



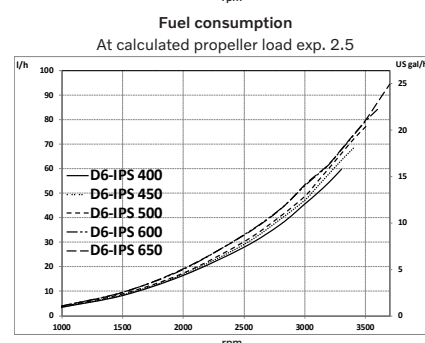
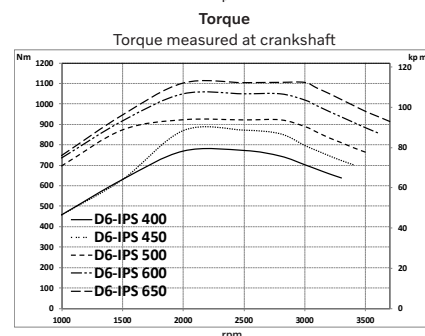
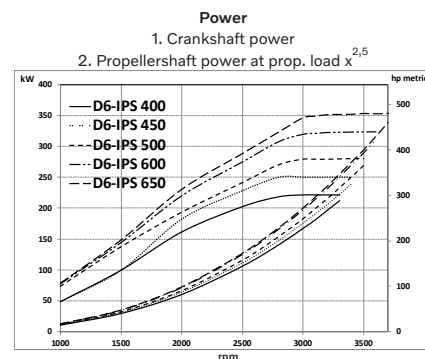
### Technical Data

Product designation	D6-IPS400	D6-IPS450	D6-IPS500	D6-IPS600	D6-IPS650
Crankshaft power, kW (hp)	221 (300)	250 (340)	280 (380)	324 (440)	353 (480)
Propshaft power, kW (hp)	212 (289)	241 (327)	269 (366)	311 (423)	339 (461)
Engine speed, rpm	3300	3400	3500	3600	3700
Engine displacement, l (in <sup>3</sup> )	5.5 (335.6)	5.5 (335.6)	5.5 (335.6)	5.5 (335.6)	5.5 (335.6)
Engine configuration	in-line 6	in-line 6	in-line 6	in-line 6	in-line 6
Aspiration	turbo, after cooler		turbo, after cooler, compressor		
Rating	R4*	R4*	R4*	R5**	R5**
Dry weight with IPS10, kg (lb)	885 (1951)	885 (1951)	900 (1984)	920 (2028)	920 (2028)
Propeller series	TS3-TS6, T2-T10	TS3-TS6, T2-T10	TS3-TS6, T2-T10	TS3-TS6, T2-T10	TS3-TS6, T2-T10
Ratio	1.853:1	1.853:1	1.853:1	1.853:1	1.853:1
Voltage	12V or 24V	12 V or 24V	12V or 24V	12V or 24V	12V or 24V
Emission compliance	IMO NOx, EU RCD Stage II, US EPA Tier 3				
Speed range, kn	15 - 50	15 - 50	15 - 50	15 - 50	15 - 50

Technical data according to ISO 8665. With fuel having an LHV of 42700 kJ/kg and density of 840 g/liter at 15 °C (60 °F). Merchant fuel may differ from this specification which will influence engine power output and fuel consumption.

\*R4. For light planing craft in commercial operation.

\*\*R5. For pleasure craft applications, and can be used for high speed planing crafts in commercial applications.



# D6-IPS 400/450/500/600/650

5.5 liter, in-line 6 cylinder

## Technical description

### Engine block and head

- Cylinder block and cylinder head made of cast-iron
- Ladder frame fitted to engine block
- 4-valve technology with hydraulic lash adjusters
- Double overhead camshafts
- Oil cooled pistons with two compression rings and one oil scraper ring
- Integrated cylinder liners
- Seven bearing crankshaft
- Rear end camshaft transmission

### Engine mounting

- Flexible engine mounting

### Lubrication system

- Replaceable separate full-flow and by-pass oil filter
- Seawater cooled tubular oil cooler
- Oil level and oil temperature sensors
- Crankcase oil separator, maintenance free unit

### Fuel system

- Common rail injection system, 2000 bar
- Electronically controlled central processing system (EMS - Engine Management System)
- Fuel pressure sensor that indicates clogging in fuel filters
- Single fine fuel filter of spin-on type, with water separator and water in fuel alarm

### Air inlet and exhaust system

- Belt-driven compressor with silencer (no compressor on IPS400 and IPS450)
- Air filter with replaceable insert
- Crankcase gases vented into the air inlet
- Exhaust elbow or exhaust riser
- Turbocharger, freshwater cooled
- Loss of seawater alarm

### Cooling system

- Thermostatically regulated freshwater cooling
- Seawater cooled tubular heat exchanger
- Coolant system prepared for hot water outlet
- Seawater impeller pump
- Engine mounted seawater strainer

### Electrical system

- Marine alternator (12V/150A or 24V/80A) prepared for Pulse Width Modulation (PWM)
- Automatic fuses for engine, transmission and EVC
- Auxiliary stop switch in front of engine
- Engine available as 12V or 24V
- Power connections and fuses co-located in one connection box on engine

### Electronic Vessel Control (EVC)

- Fully integrates the engines, electronics and EVC features with Glass Cockpit
- Steer-by-wire
- Electronic shift and throttle as standard

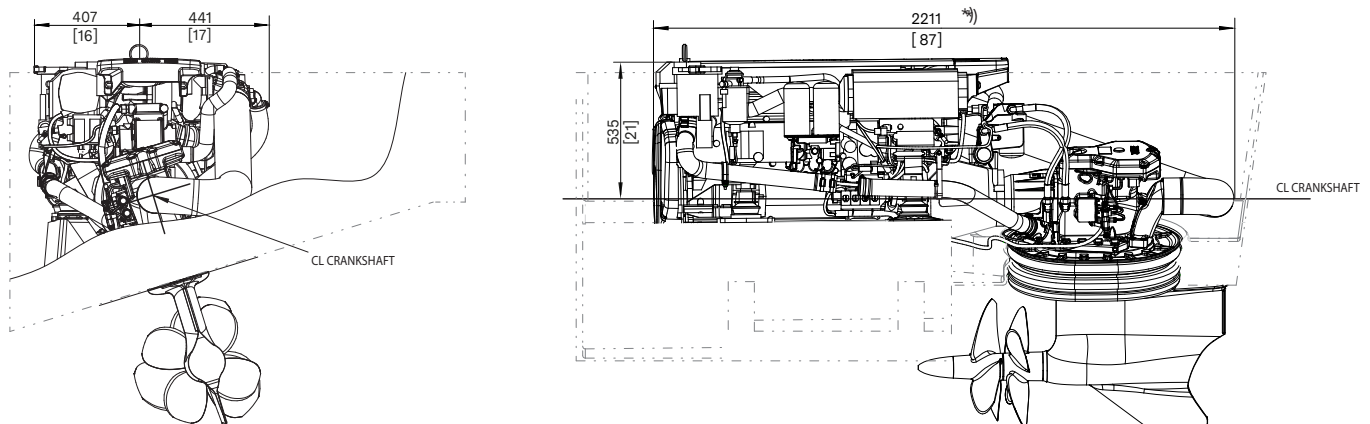
- Low Speed control as standard
- Support for triple engine application
- Joystick option
- Autopilot with Joystick Driving as option
- Dynamic Positioning System (DPS) as option
- Support for Easy Connect app
- Maintenance Assistant with service alert

### IPS transmission

- Forward-facing, twin counter-rotating propellers
- Electronic steering, enabling features such as joystick and DPS
- Integrated seawater and exhaust system
- Hydraulic gear shift system with low speed mode
- Nickel Aluminum Bronze and stainless steel in all main under water components
- Complete range of propellers available, covering boat speeds from 15 to 50 knots
- Several optional jackshaft lengths
- High capacity oil filter with pressure sensors that detect clogged filter
- Oil level sensor
- Water in oil sensor
- Compatible with 12V or 24V
- Oil exchange is done from inside vessel

## Dimensions D6-IPS 400/450/500/600/650

Not for installation



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.

Contact your local Volvo Penta dealer for more information regarding Volvo Penta engines and optional equipment/ accessories or visit [www.volvopenta.com](http://www.volvopenta.com)



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