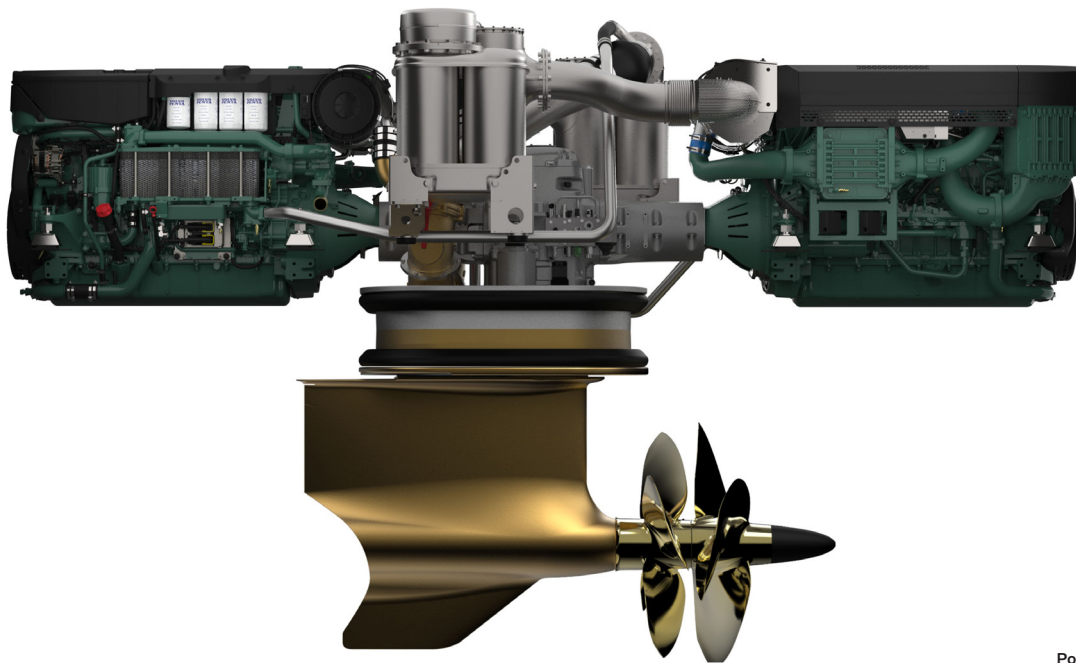


## VOLVO PENTA IPS PROFESSIONAL PLATFORM

# D13-IPS 1800/2100/2400/2700

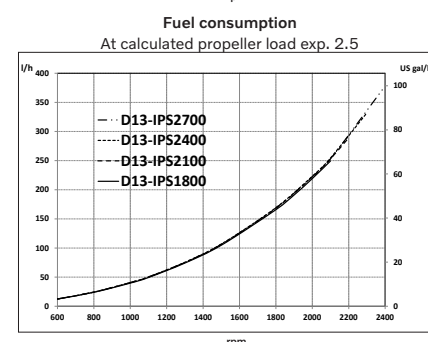
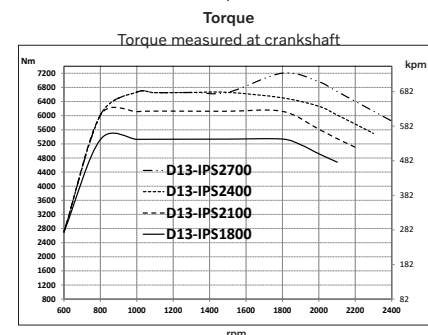
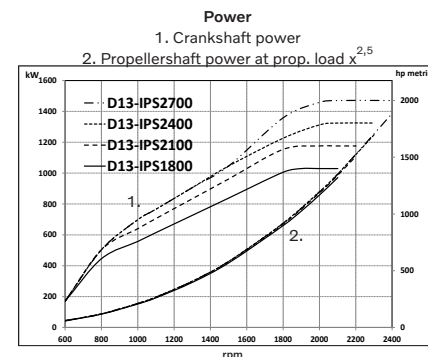
Emission compliance: IMO Tier III



### General Data

| System designation                         | D13-IPS1800                                                                            | D13-IPS2100            | D13-IPS2400            | D13-IPS2700            |
|--------------------------------------------|----------------------------------------------------------------------------------------|------------------------|------------------------|------------------------|
| Configuration                              | 2 x in-line 6                                                                          | 2 x in-line 6          | 2 x in-line 6          | 2 x in-line 6          |
| Bore/stroke, mm (in.)                      | 131/158<br>(5.16/6.22)                                                                 | 131/158<br>(5.16/6.22) | 131/158<br>(5.16/6.22) | 131/158<br>(5.16/6.22) |
| Displacement, l (in <sup>3</sup> )         | 12.8 (780)                                                                             | 12.8 (780)             | 12.8 (780)             | 12.8 (780)             |
| Aspiration                                 | Dual stage turbo with twin charge air coolers                                          |                        |                        |                        |
| Compression ratio                          | 17.1:1                                                                                 | 17.1:1                 | 17.1:1                 | 17.1:1                 |
| Crankshaft power, kW (hp) @ rated speed    | 515 (700) @2100 rpm                                                                    | 588 (800) @2200 rpm    | 662 (900) @2300 rpm    | 735 (1000) @2400 rpm   |
| Propshaft power, kW (hp) @ rated speed     | 485 (659) @2100 rpm                                                                    | 554 (753) @2200 rpm    | 624 (848) @2300 rpm    | 693 (942) @2400 rpm    |
| Dry weight with IPS40 x 2, approx. kg (lb) | 5600 (12348)                                                                           | 5600 (12348)           | 5600 (12348)           | 5600 (12348)           |
| Voltage                                    | 24V                                                                                    | 24V                    | 24V                    | 24V                    |
| Emission compliance                        | IMO Tier III                                                                           | IMO Tier III           | IMO Tier III           | IMO Tier III           |
| Rating                                     | R2                                                                                     | R3                     | R4                     | R5                     |
| Recommended fuel to conform to             | ASTM-D975 1-D & 2-D, EN 590 or JIS KK 2204. Max 1000PPM.                               |                        |                        |                        |
| Application                                | Twin/multiple drive installation in displacement, semi-displacement and planing hulls. |                        |                        |                        |
| Propeller series                           | R2-R14                                                                                 | R2-R14                 | R2-R14                 | R2-R14                 |
| Speed range                                | 13 to 37 knots                                                                         | 14 to 39 knots         | 15 to 41 knots         | 16 to 43 knots         |

Technical data according to ISO 8665 and ISO 3046. 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.



# D13-IPS 1800/2100/2400/2700

Emission compliance: IMO Tier III

## Technical description

### Engine and block

- Cylinder block made of cast iron
- One-piece cast-iron cylinder head
- Ladder frame fitted to engine block
- Replaceable wet cylinder liners and valve seats/guides
- Drop forged crankshaft with induction hardened bearing surfaces and fillets with seven main bearings
- Four-valve-per-cylinder layout with overhead camshaft and center position of unit injectors
- Each cylinder features cross-flow inlet and exhaust ducts
- Monotherm steel pistons
- Rear-end transmission

### Engine mounting

- Flexible engine mounting

### Lubrication system

- Integrated oil cooler in cylinder block
- Rear positioned twin full flow oil filter of spin-on type and by-pass filter

### Fuel system

- Electronic high pressure unit injectors
- Gear-driven fuel pump and injection timing
- Electronically controlled central processing system (EMS – Engine Management System)
- Single fine fuel filter of spin-on type

### Air inlet and exhaust system

- Twin entry turbo technology with freshwater-cooled charge air cooler
- Air filter with replaceable inserts
- Wet exhaust elbow/riser (option)
- Loss of sea water alarm

### Cooling system

- Seawater-cooled plate heat exchanger
- Coolant system prepared for hot water outlet
- Easily accessible seawater pump in rear end of flywheel housing

### Electrical system

- 24V/110A plus an optional extra 12V/115A alternator

### IPS transmission

- Forward-facing, twin counter-rotating propellers
- Gear-ratio 2.91:1
- Dual electronic steering motors, enabling features such as joystick maneuvering
- Integrated exhaust system
- Hydraulic gear shift system with low speed mode as standard
- Water in oil sensor
- Oil change from inside the boat
- Nickel Aluminum Bronze and stainless steel in all main under water components
- Complete range of propellers available
- Several optional jackshaft lengths

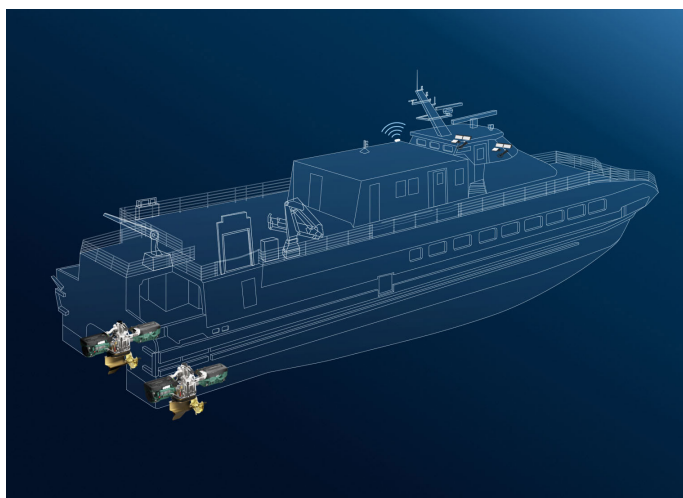


### Electronic Vessel Control (EVC)

- Fully integrates the engines, electronics and the unique set of EVC features, such as Assisted Docking, Joystick Driving, Dynamic Positioning System, Glass Cockpit and more.
- Eco-mode optimizes fuel consumption and running hours. Approximately 50% of the time, half of the engines will be on stand-by. This gives the potential to operate a vessel with unrivaled new levels of efficiency and leads to extended service and maintenance intervals.
- Eco-mode has shown a potential to reduce fuel consumption with 5 to 9 percent
- Local control stations
- Independent control stations
- Shut-down module

### Exhaust aftertreatment system

- SCR (Selective Catalytic Reduction)
- Aqueous UREA solution 32% or 40%
- Complete system – developed, certified, and serviced by one company
- Fully integrated capabilities
- Prop-to-helm system (IPS)
- SCR unit reduces noise by up to 35 dBA
- Wide range of installation options available



Learn more about Volvo Penta IPS and the unique functions the IPS system can be extended with.

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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