



NAV*pilot*

Model: NavPilot 700/711/720

v1.16/1.09 with Volvo Penta IPS Compatibility

Furuno has received full Volvo Penta IPS certification for the NavPilot 700 series when installed with the new FAP6300 Gateway System. This document provides an overview of the Volvo Penta IPS and the FAP6300 Gateway System, and includes basic installation and operation instructions.

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1. Volvo Penta IPS

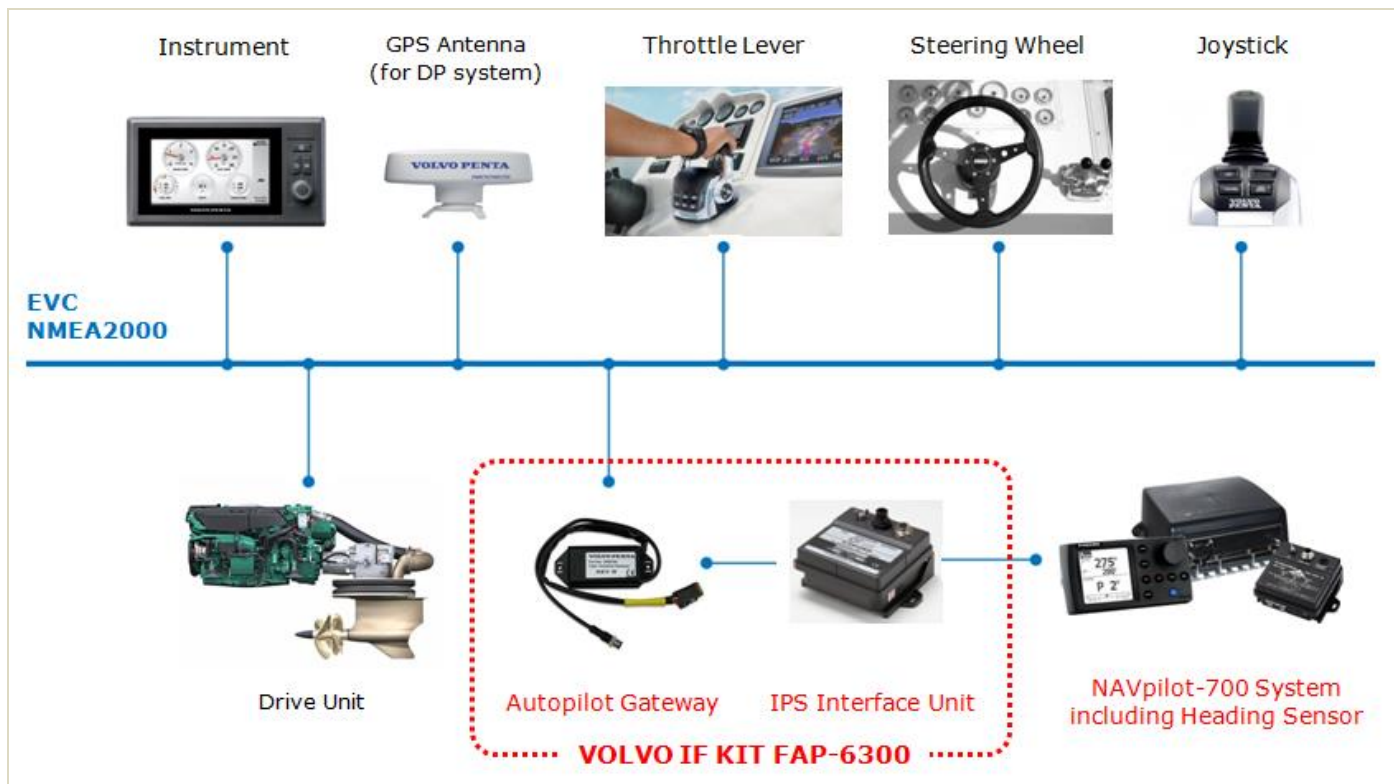
1-1. What is Volvo Penta IPS?

Volvo Penta IPS (Inboard Performance System) is a modern, inboard steering and throttle control system with multiple pod drive units, which can rotate 360 degrees. IPS provides easy maneuverability, better fuel efficiency, less CO2 emissions, higher efficiency, speed etc. The IPS Joystick Controller allows simple lateral or rotational boat movement. For more details, visit <http://www.volvopenta.com>.



1-2. IPS Network via New Volvo IF KIT FAP6300

The IPS consists of an NMEA2000 based network called EVC (Electric Vessel Control), and the system is controlled electrically. The NavPilot 700 is interfaced with the EVC via two units: Autopilot Gateway and IPS Interface Unit. The Autopilot Gateway and the IPS Interface Unit are both supplied in the **FAP6300 Volvo IF Kit**.



The new FAP6300 Volvo IF Kit is compatible with Volvo Penta (VP) IPS drive versions C, D or E type. These VP IPS drive versions have been installed on all IPS systems for the past several years. All new VP IPS vessels are compatible with the NavPilot 700 and FAP6300 Gateway. It is easy to confirm whether the IPS drive is a C, D or E version. If the boat has either of the following throttle or joystick controllers, it is compatible with the NavPilot 700 and FAP6300.



2. Volvo IF KIT FAP6300

The FAP6300 Volvo IF KIT consists of several components.

No	Name	Type	Part No	Qty	Remarks
-	Volvo IF KIT	FAP6300	000-022-971-00	1	

Consisting of:

1	IPS INTERFACE UNIT	IF-700IPS	000-022-972-00	1	
2	VOLVO IPS GATEWAY	AUTOPILOT-GATEWAY for FURUNO Autopilot	000-022-974-00	1	w/ 1 x cable for EVC 1 x cable for IF-700IPS
3	CABLE ASSEMBLY	MJ-A7SPF0005-020C	000-159-699-10	1	2m, IF-700IPS – FAP7002
4	SELF TAPPING SCREW	4X16 SUS304	000-162-605-10	4	
5	GLASS TUBE FUSE	FGMB 125V 1A PBF	000-157-478-10	1	For spare

Photo Images

IF-7000IPS	Autopilot-Gateway for Furuno Autopilot	Y-split cable to connect the IPS Gateway and the Volvo EVC unit
		

Y-split cable to be connected to the Autopilot Gateway during installation



3. Basic Installation

3-1. Wiring

1. Find the "EVC" black box on the IPS drive vessel. The number of EVC units is equivalent to the number of IPS engine units on the vessel. In this example, the vessel has twin IPS drives. The NavPilot 700 is compatible with two, three or four drives.



2. Locate the "MULTI LINK" bus cable or find an Open Port on an EVC Bus connector to make the VP IPS Gateway Connection. The bus cable connections and hub (if installed) will be located close to the EVC unit.



3. Disconnect the "MULTI LINK" cable connector and install the "Y-split" cable for MULTI LINK cable installation or simply plug the VP IPS gateway into the open port on the hub and disregard the Y-Split Cable.



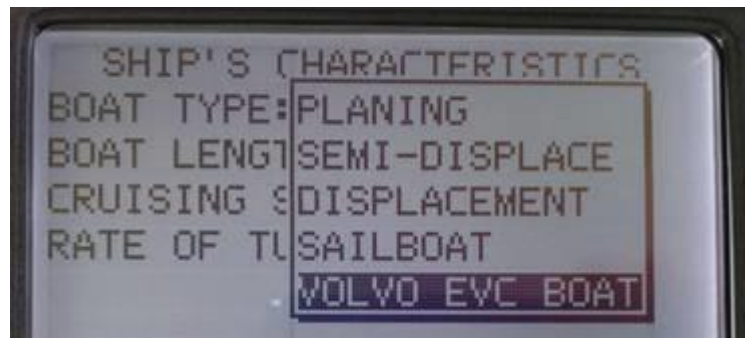
4. Check that all cables are re-connected.



3-2. Initial Settings on NavPilot 700

1. In [**Installation**] – [**SHIP'S CHARACTERISTICS**] – [**BOAT TYPE**], select [**VOLVO EVC BOAT**].

This Boat Type selection will only appear after the NavPilot 700 software has been updated to v1.16/1.09. Selecting "VOLVO EVC BOAT" will allow the NavPilot 700 system to communicate with the Volvo IPS gateway and IF-700IPS.



2. Set the boat length/cruising speed and Rate of Turn information to fit the customer's boat characteristics. You do not need to carry out the rudder limit set-up and rudder test, because those values are already fixed by the VP IPS system.

3-3. Tips on Operation

The VP IPS system automatically incorporates feature like Safe Helm, which is also referred to as "override". When a user touches the steering wheel or joystick, an override signal from Volvo EVC unit automatically sets the boat in STBY, just like Safe Helm mode. When this happens, the NavPilot 700 will display the "OVRD" icon on the top of the screen.



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