NAVpilot

Model: NAVpilot-700/711/720

Software v1.16/1.09 or higher with Volvo Penta IPS Compatibility

Furuno has received full Volvo-Penta IPS certification for the NAVpilot-700 series when the new FAP-6300 Gateway System is added to any NAVpilot-700. This document describes the basic information on Volvo Penta IPS, FAP-6300, and installation.

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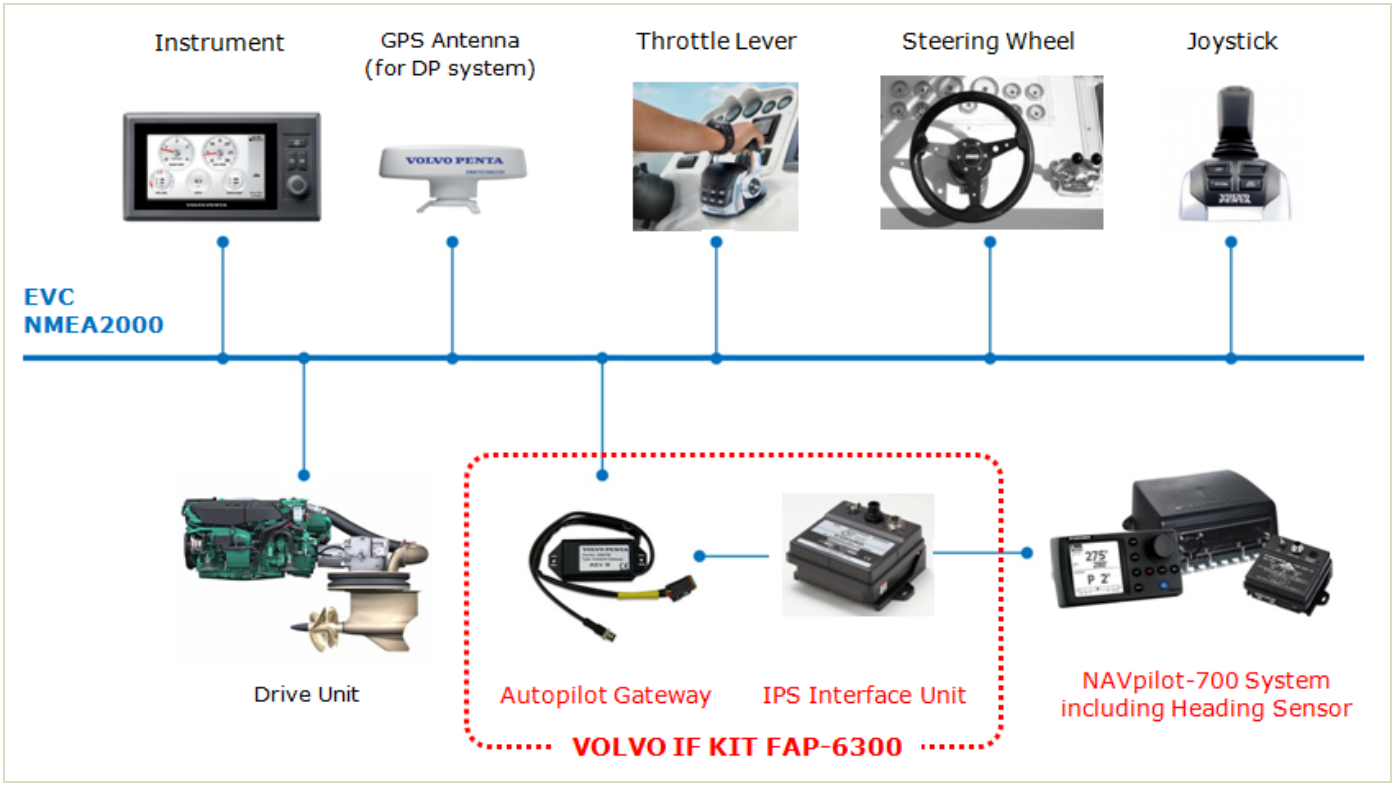
1. Volvo Penta IPS

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 FAP-6300

The IPS consists of a 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 the IPS Interface Unit. The Autopilot Gateway and the IPS Interface Unit are supplied as **VOLVO IF KIT FAP-6300**.



The new VOLVO IF KIT FAP-6300 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 FAP-6300 Gateway. It is easy to confirm whether the IPS drive is a C, D, or E version. If you visually confirm that the boat has the same Throttle and Joystick controllers as pictured below, it is compatible with the NAVpilot-700 and FAP-6300.

2. VOLVO IF KIT FAP-6300

The VOLVO IF KIT FAP-6300 consists of several components.

No	Name	Type	Part No	Qty	Remarks
-	**VOLVO IF KIT**	**FAP-6300**		**1**	

Comprising 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 – FAP-7002
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

Measurement: M3 – L490 x W245 x H120

Weight – 1.5kg

Some Photo Images

IF-700IPS	AUTOPILOT-GATEWAY for FURUNO Autopilot	Y-split cable to connect the IPS Gateway and VOLVO EVC unit
		

Y-split cable to be connected to the Autopilot Gateway at 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 an 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 new Boat Type selection is available once the NAVpilot-700 software has been updated to v1.16/1.09 or higher. 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 features like Safe Helm called “override”. When a user touches a steering wheel or joystick, an override signal coming from VOLVO EVC unit automatically sets the boat to STBY, just like the Safe Helm mode. When this happens, the NAVpilot-700 will display the “OVRD” icon on the top of the screen.

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