

EHPS – Electro Hydraulic Power Steering Solution

EHPS uses the same hydraulic assist technology as standard systems, but the hydraulic pressure comes from a pump driven by an electric motor instead of a drive belt at the engine.

In this way, the steering effort can be easily controlled by varying the pump speed and because flow can be better matched to actual requirements, the efficiency of the system is improved.

EHPS solution technology can handle the specific demands of the system in all operating conditions through its customized software and a dedicated inverter for mobile applications: PLUS+1[®] Mobile Inverter covers an extensive range from 2 to 50 kW, 24 to 96 V and from 40 to 1000 Amps.

The specific and customized software with CAN interface is downloaded inside the Mobile Inverter (MI06-S-24V – IP67) that drives a three phase asynchronous electric motor (from 2 to 5,5 kW) with external sensors that is mechanically connected to a hydraulic gear unit.

The pump is available as standard gears or in shark[®] and shark[®] continuum[®] variants, in displacement from 4 to 14 cc/rev and with or without relief valve.

Features & Benefits

EHPS high-performance hydraulic steering system can offer several benefits:

❑ SYSTEM DOWN SIZING.

The correct flow is guaranteed by the minimum displacement of the gear unit.

❑ HIGH EFFICIENCY WITH POWER ON DEMAND & ENERGY SAVINGS.

The pressure is generated based on the demand from the steering wheel (up to 50% energy saving comparing the standard solution).

❑ LOWER COST INSTALLATION & MODULAR SOLUTION.

EHPS modular solution leaves pipe connections to almost nothing, with 24V power supplied by the onboard battery.

❑ COMFORT & SIMPLE INTERFACE.

EHPS offers comfort and a simple interface: front or rear axle load-independent and environmentally-friendly.

❑ SPECIFIC CUSTOMIZED CONTROL FUNCTIONS

With the combined powers of PLUS+1[®] technology, PLUS+1[®] GUIDE software platform and a growing portfolio of PLUS+1[®] Compliant products, customers are able to quickly develop a customized electronic machine control. In that way, PLUS+1[®] provides a new level of freedom to design solutions, reducing coding time and testing.

❑ SERVICE TOOL

The PLUS+1[®] PC SERVICE TOOL is an easy way to perform your Field Service: fully customizable with own logo permits multiple access protection levels and customizable service screens. It's available free of charge and downloadable from our web site.

Dimensions



Parameters	Unit	04	06	08	11	14
Power	kW	2 - 5,5				
Voltage	V	24				
IP class		54 - 66 - 6K9K				
Displacement	cm ³ /rev	3,9	6,0	8,4	10,8	14,4
	in ³ /rev	0,24	0,37	0,51	0,66	0,88
Rated Pressure	bar	280	280	280	280	280
	psi	4060	4060	4060	4060	4060
Peak Pressure	bar	250	250	250	250	250
	psi	3625	3625	3625	3625	3625
Minimum Speed	rpm	600	600	600	500	500
Maximum Speed	rpm	4000	4000	4000	4000	3500

Functional Scheme

