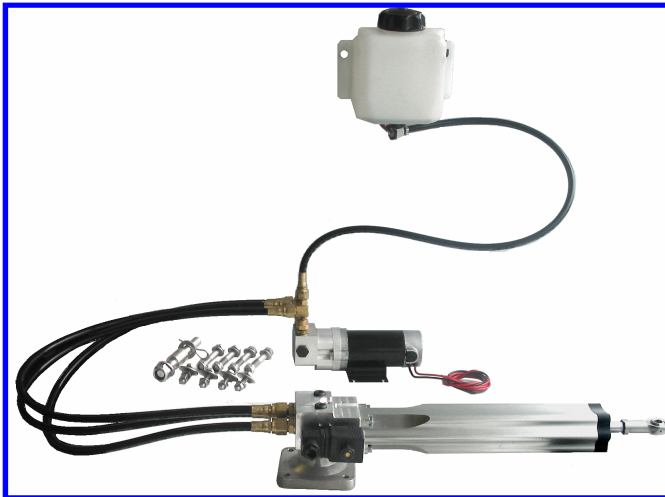


# Hydraulic Projects

Data Sheet HS40PLUS\_d

## HS40PLUS HYDRAULIC STEERING SYSTEM

The HS40PLUS hydraulic steering systems are designed specifically for marine secondary steering applications. They combine a hydraulic cylinder with clutch, reversing pump and reservoir in a compact installation. The solenoid clutch disengages the hydraulic circuit allowing manual mechanical steering to be used in conjunction with the hydraulic system.



### Description

A pre-filled hydraulic system comprising a cylinder with clutch, pump and reservoir. The cylinder is free to float until the solenoid clutch is engaged, the reversing pump is then used to extend and retract it. Integral relief valves protect the installation from damage.

### Application

Designed specifically for the marine autopilot market where they can be used on sailboats and power-craft with displacement and fast planing hulls. The pumps and cylinders can be matched to give the hard-over times and thrusts to suit the application. Further combinations using our 5 reversing pump sizes are also possible. Please refer to our data sheet PR-d for details of the reversing pump range.

### Features

- Shorter than conventional cylinders.
- Integral solenoid bypass valve and relief valves.
- Fully serviceable.
- Quiet operation.
- A number of pump sizes with 12 or 24v options.
- Marine environment protected (under-deck).
- Low power consumption.
- Fitting kit included.
- Rudder reference/feedback option.
- Low back-drive.
- Quick release mounting.
- Low profile.

### Cylinder

Volume	293cc (Nominal)
Stroke	254mm (Nominal)
Max Stroke	264.6mm

### Performance

Max. Av. thrust (intermittent)	717 kg
Hard over time HS40plus 10	13 sec nominal
Hard over time HS40plus 20	9 sec nominal
Temperature rating minimum	-20°C
Temperature rating maximum	+65°C
Relief valve setting	62 bar
Back-drive at 12 sec Hard-over	7kg

### Electrical

Motor voltage nominal	12 or 24v DC
Motor power	100 watt
Max current 12v 25% duty	22.5 A
Max current 24v 25% duty	11.2 A
Rotation	Reversing
Protection	IP44
Connection	1m Flying Lead 2 Core 2.5mm <sup>2</sup>
Ignition protection	BS EN 28846:1993
EMC	BS EN 60945:2002
Orientation	Red lead Positive Cylinder Retracts

Clutch Coil power continuous	12 watt
Connection	DIN 43650
Protection	IP65
Cable Ø (not supplied)	6 - 8mm

### Oil

Recommended	Q8 Dynobear 10
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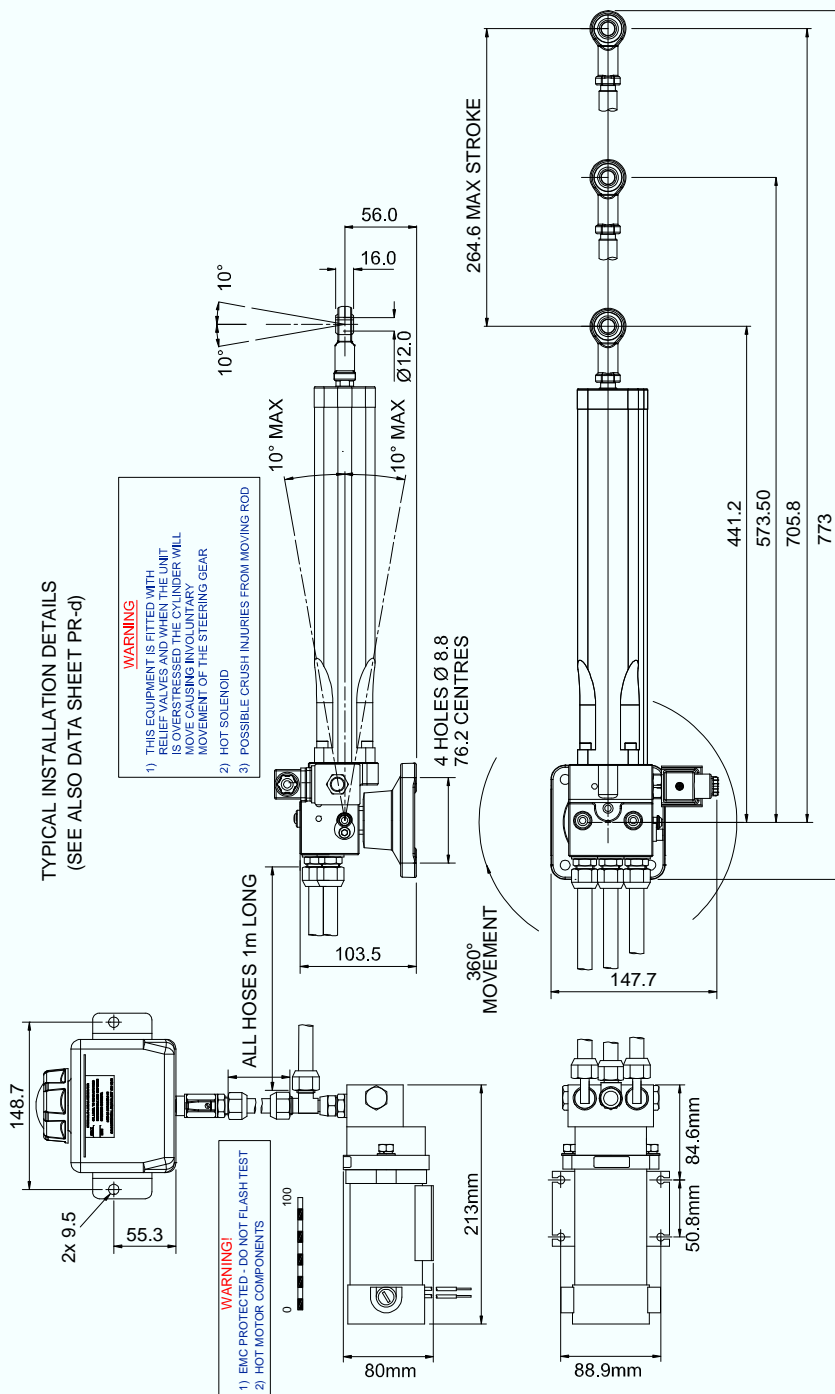
Equivalent	Mineral based hydraulic Min. ISO VG10 Max. ISO VG40
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### Materials

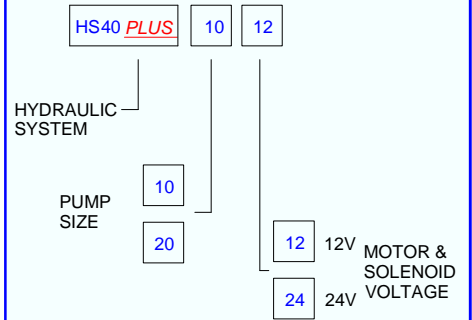
Body	Aluminium BS 1490
Cylinder rod	Chrome Plated Stainless Steel
Seals	Nitrile & PTFE
Body Protection	SP270



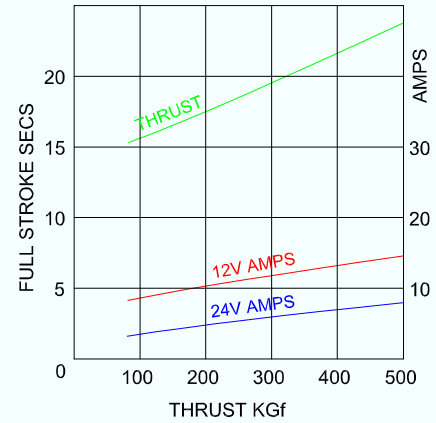
**TYPICAL INSTALLATION DETAILS**  
(SEE ALSO DATA SHEET PR-d)



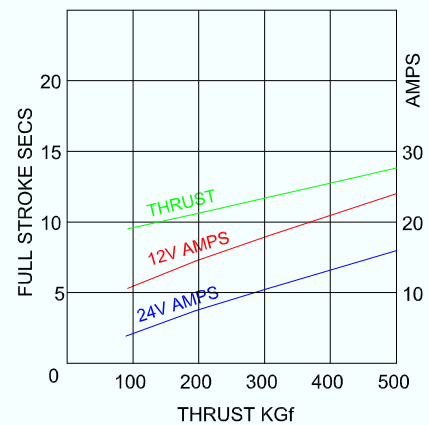
**ORDER CODE**



**HS40 PLUS 10 @25°C**



**HS40 PLUS 20 @25°C**



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