



## HYNAUTIC 3-LINE HEAVY DUTY HYDRAULIC STEERING SYSTEM:

SeaStar offers rugged 3-line Hynautic Heavy Duty steering systems for most work and pleasure vessels up to 70 feet.

Heavy Duty helms combine one or two bi-directional axial piston pumps with pilot check and make-up check valving. The result is a unit which prevents rudder feedback, is very efficient (even at low RPM), and is immediately adaptable to multi-station use.

A wide choice of helm displacements and cylinder configurations make it easy to spec a system which can handle a variety of large boat performance requirements and accommodate most user preferences.

### FEATURES:

- Low friction heavy duty hydraulic steering.
- Helm/cylinder combinations for most inboards. Marine grade materials.
- Heavy duty helms available in three displacements, to accommodate most applications and user preferences.
- Helms available with 1" straight shaft or 3/4" tapered. Mount facing any direction.
- Quick air purge relief valve.
- Fluid fill at remote reservoir.
- Heavy duty brass cylinders. Two-axis articulation. Easy installation for single or dual rudder vessels.
- Meets or exceeds applicable standards.
- Accepts most steering wheels.

COMPONENTS	
Hynautic H-20 helm (1" straight shaft)	H-21 or
Hynautic H-20 helm (3/4" tapered shaft)	H-25 or
Hynautic H-40 helm (1" straight shaft)	H-42 or
Hynautic H-40 helm (3/4" tapered shaft)	H-42-02 or
Hynautic H-40 helm (1" straight shaft)	H-41 or
Hynautic H-40 helm (3/4" tapered shaft)	H-41-02
H-20 Fittings Kit for Main Station	HF-10
H-40 Fittings Kit for Main Station	HF-21
Inboard Cylinder	HCS350
Reservoir - Standard (2 quart)	HP5810HY
Relief Valve (950 PSI)	MSV-21
Relief Fittings (1150 & 1175-21-1)	MSVF-07
Relief Fittings (1175-42-1 & up)	MSVF-13
Copper Tubing	1/2" or 5/8" OD
Fitting Kit (for 1/2" Copper Tubing)	HF5590 or
Fitting Kit (for 5/8" Copper Tubing)	HF5592
Hose Kit for Copper Tubing (2 hoses)	HA5731
SeaStar Oil (1 Gallon)	HA5440
OPTIONS	
Pivot Mount Inboard Cylinder	K-31
Dual Cylinder Hose 2' (.6m)	HA5732
Dual Cylinder Hose 3' (.9m)	HA5733
Dual Cylinder Hose 4' (1.2m)	HA5734
Dual Cylinder Hose 5' (1.5m)	HA5735
Dual Cylinder Hose 6' (1.8m)	HA5736
Relief Valve (500 PSI)	MSV-19
Reservale (500 PSI, top read, 3/8)	Obsolete
Reservale (500 PSI, top read, 3/8, w/pump)	Obsolete
Reservale (500 PSI, top read, 5/16, w/pump)	Obsolete






Reservale (950 PSI, top read, 5/16)	Obsolete
Reservale (950 PSI, frt.read, 5/16, w/pump)	Obsolete
H-20 Fittings Kit for Second Station	HF-11
H-40 Fittings Kit for Second Station	HF-22
SERVICE ITEMS	
Relief Valve (500 PSI)	MSV-19
Reservale (500 PSI, top read, 3/8)	Obsolete
Reservale (500 PSI, top read, 3/8, w/pump)	Obsolete
Reservale (500 PSI, top read, 5/16, w/pump)	Obsolete
SeaStar Oil (1 Gallon)	HA5440



### WE RECOMMEND

The use of SeaStar Steering Fluid ONLY in our hydraulic steering systems. See Page 148

## APPLICATION GUIDE: HYNAUTIC 3-LINE INBOARD STEERING

FOR VESSEL SIZES UP TO:	HELM PUMP MODEL	STEERING WHEEL TURNS	REQUIRES CYLINDER MODEL (2x = 2 cylinders)	TUBING DIAMETERS		MAX. SUGG. H.P.	SUGG. AREA FEET (meters)
				when distance from Cylinder to farthest Helm is: 40 Feet or Less	40 Feet or More		
<b>PLANING HULLS:</b> 							
35-50' (11-15m)	H-21 or H-25	5.0	HC5350 or HC5356	1/2"	5/8"	450	—
40-50' (10-18m)	H-21 or H-25	6.8	HC5351 or HC5357	1/2"	5/8"	750	—
40-50' (10-18m)	H-42	4.7	HC5351 or HC5357	1/2"	5/8"	750	—
45-60' (14-18m)	H-42	7.4	HC5378 or HC5379	1/2"	5/8"	950	—
45-60' (14-18m)	H-41	5.4	HC5378 or HC5379	1/2"	5/8"	950	—
55-65' (17-20m)	H-41	5.4	HC5378 or HC5379	1/2"	5/8"	1200	—
to 70' (to 21m)	H-41	10.8	2x HC5378 or HC5379	1/2"	5/8"	1500	—
to 70' (to 21m)	H-41	14.2	2x K-8	1/2"	5/8"	1500	—
<b>DISPLACEMENT HULLS — TUG BOATS, NET HAULERS:</b> 							
to 30' (6-9m)	H-21 or H-25	5.0	HC5350 or HC5356	1/2"	5/8"	200	—
30-35' (6-11m)	H-21 or H-25	6.8	HC5351 or HC5357	1/2"	5/8"	250	—
30-35' (6-11m)	H-42	4.7	HC5351 or HC5357	1/2"	5/8"	250	—
26-40' (8-12m)	H-42	7.4	HC5378 or HC5379	1/2"	5/8"	400	—
26-40' (8-12m)	H-41	5.4	HC5378 or HC5379	1/2"	5/8"	400	—
30-45' (9-14m)	H-41	5.4	HC5378 or HC5379	1/2"	5/8"	450	—
to 50' (to 15m)	H-41	10.8	2x HC5378 or HC5379	1/2"	5/8"	500	—
to 50' (to 15m)	H-41	14.2	2x K-8	1/2"	5/8"	500	—
to 50' (to 15m)	H-41	20.0	2x K-9	1/2"	5/8"	500	—
<b>DISPLACEMENT HULLS — WORK &amp; PLEASURE BOATS:</b> 							
to 40' (9-12m)	H-21 or H-25	5.0	HC5350 or HC5356	1/2"	5/8"	300	—
40-45' (12-14m)	H-21 or H-25	6.8	HC5351 or HC5357	1/2"	5/8"	350	—
40-45' (12-14m)	H-42	4.7	HC5351 or HC5357	1/2"	5/8"	350	—
40-55' (12-17m)	H-42	7.4	HC5378 or HC5379	1/2"	5/8"	500	—
40-55' (12-17m)	H-41	5.4	HC5378 or HC5379	1/2"	5/8"	500	—
45-65' (14-20m)	H-41	5.4	HC5378 or HC5379	1/2"	5/8"	650	—
to 75' (to 23m)	H-41	10.8	2x HC5378 or HC5379	1/2"	5/8"	750	—
to 75' (to 23m)	H-41	14.2	2x K-8	1/2"	5/8"	750	—
<b>SAILBOATS — SKEG RUDDER:</b> 							
to 40' (9-12m)	H-21 or H-25	5.0	HC5350 or HC5356	1/2"	5/8"	—	Max. Area 9 (.9)
40-45' (12-14m)	H-21 or H-25	6.8	HC5351 or HC5357	1/2"	5/8"	—	10 (1)
40-45' (12-14m)	H-42	4.7	HC5351 or HC5357	1/2"	5/8"	—	10 (1)
40-52' (12-16m)	H-42	7.4	HC5378 or HC5379	1/2"	5/8"	—	17 (1.6)
40-52' (12-16m)	H-41	5.4	HC5378 or HC5379	1/2"	5/8"	—	17 (1.6)
50-60' (15-18m)	H-41	5.4	HC5378 or HC5379	1/2"	5/8"	—	18 (1.7)
to 65' (to 20m)	H-41	10.8	2x HC5378 or HC5379	1/2"	5/8"	—	20 (1.9)
to 65' (to 20m)	H-41	14.2	2x K-8	1/2"	5/8"	—	20 (1.9)
<b>SAILBOATS — SPADE RUDDER:</b> 							
to 40' (9-12m)	H-21 or H-25	5.0	HC5350 or HC5356	1/2"	5/8"	—	7 (.6)
40-45' (12-14m)	H-21 or H-25	6.8	HC5351 or HC5357	1/2"	5/8"	—	8 (.7)
40-45' (12-14m)	H-42	4.7	HC5351 or HC5357	1/2"	5/8"	—	8 (.7)
35-46' (11-16m)	H-42	7.4	HC5378 or HC5379	1/2"	5/8"	—	15 (1.4)
35-46' (11-16m)	H-41	5.4	HC5378 or HC5379	1/2"	5/8"	—	15 (1.4)
40-50' (12-15m)	H-41	5.4	HC5378 or HC5379	1/2"	5/8"	—	15.5 (1.4)
to 60' (to 18m)	H-41	10.8	2x HC5378 or HC5379	1/2"	5/8"	—	16.5 (1.5)
to 60' (to 18m)	H-41	14.2	2x K-8	1/2"	5/8"	—	16.5 (1.5)