

AT A GLANCE

FEATURES

- Variable displacement helms for adjustable number of steering wheel turns.
- Heavy duty brass cylinders with bleed fittings; chrome-plated stainless steel rods.
- Stainless steel and bronze mounting hardware.
- Easy installation on single and dual rudder vessels.
- Systems are not air-pressurized; no air leaks or pressure drops; separate reservoir not needed.
- Built-in pressure relief in helm protects system from effects of thermal expansion.
- Standard 3/4" tapered steering shaft.
- Meets ABS/Lloyd/Det Norske Veritas specifications.



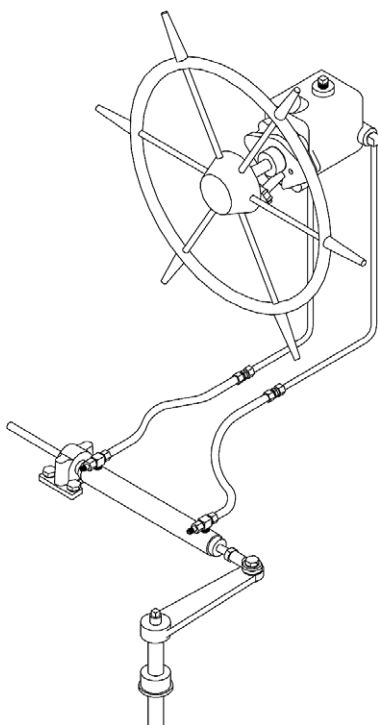
CAPILANO 2-LINE HEAVY DUTY HYDRAULIC STEERING SYSTEM

Uncompromising Design. Capilano steering stands for ruggedness and reliability worldwide. Helms include a variable displacement feature enabling the helmsman to adjust the number of steering wheel turns to suit maneuvering and weather conditions. Capilano systems install easily and give years of dependable service.

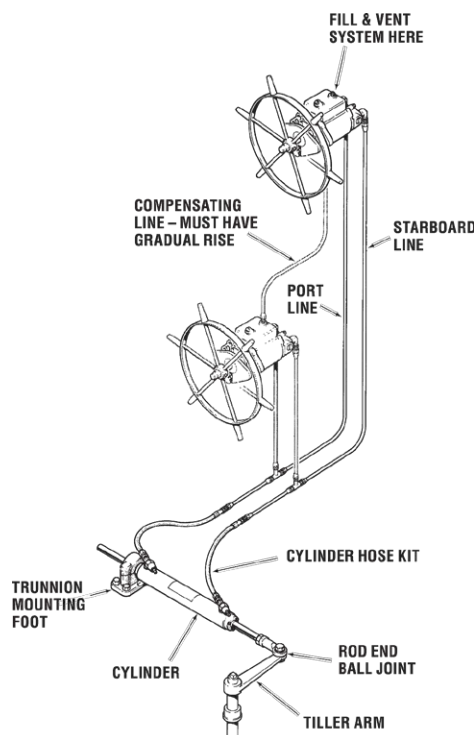
APPLICATIONS

Most inboard powered boats with single or dual engines including planing/displacement hull craft from 30-55 feet in length. Suitable for dual station use with the purchase of extra helm, tubing/hose & fittings. Capilano systems use Dexron II® type ATF fluid.

SINGLE STATION SYSTEM



DUAL STATION SYSTEM



ORDER INFORMATION

COMPLETE SYSTEMS	
System components sold separately. See application and ordering guides to select appropriate components.	
COMPONENTS	
Capilano 1250V Helm	HH5250 or
Capilano 1275V Helm	HH5275
Inboard Cylinder	HC5351
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 - 18 inches long)	HAS731
Steering Fluid (customer supplied)	Dexron II® ATF
OPTIONS	
Dual Cylinder Hose 2' (.6m)	HAS732
Dual Cylinder Hose 3' (.9m)	HAS733
Dual Cylinder Hose 4' (1.2m)	HAS734
Dual Cylinder Hose 5' (1.5m)	HAS735
Dual Cylinder Hose 6' (1.8m)	HAS736
Fixed Mount Cylinder (13.3 cu. in.) (one ball joint end)	K-22
Pivot Mount Cylinder (25.5 cu. in.)	K-31
Universal Mount Cylinder (55 cu. in.)	K-9
Add-A-Station Fitting Kit (1/2" tubing)	HF5591
Add-A-Station Fitting Kit (5/8" tubing)	HF5593
Helm Remote Fill Kit (through-dash)	HAS450
SERVICE ITEMS	
Steering Fluid (customer supplied)	Dexron II® ATF

APPLICATION GUIDE

This application guide should be used with discretion. The chart below is only a guide to selecting a steering system. A steering system manufacturer cannot anticipate all the variables in boat-rudder design that affect steering loads. It is the final responsibility of the boat designer/builder to specify maximum expected steering loads.

FOR VESSEL SIZES UP TO:	HELM PUMP MODEL	STEERING WHEEL TURNS ADJUST. RANGE Min-Max.	REQUIRES CYLINDER MODEL (2X=2Cylinders)	TUBING HOSE DIAMETERS		MAXIMUM OUTPUT TORQUE FROM CYLINDER(S)	
				When distance from cylinder to farthest helm is:		in.-lb	kg m
PLANING HULLS							
35' (11m)	1250V	3 - 6	BA150-7TM_	1/2"	N/A	6,548	75
40' (12m)	1250V	4 - 8	BA175-7TM_	1/2"	N/A	8,795	100
50' (15m)	1250V	5.5 - 11	BA200-7TM_	1/2"	5/8"	12,134	140
50' (15m)	1275V	3.5 - 7	BA200-7TM_	1/2"	5/8"	12,134	140
50' (15m)	1275V	4 - 8	2x BA150-7TM_	1/2"	5/8"	14,766	170



APPLICATION GUIDE

FOR VESSEL SIZES UP TO:	HELM PUMP MODEL	STEERING WHEEL TURNS ADJUST. RANGE Min-Max.	REQUIRES CYLINDER MODEL (2X=2Cylinders)	TUBING HOSE DIAMETERS		MAXIMUM OUTPUT TORQUE FROM CYLINDER(S)	
				When distance from cylinder to farthest helm is: 40 feet or less	40 Feet or more	in.-lb	kg m
PLANING HULLS							
55' (17m)	1275V	5.5 - 11	BA200-11TM_	1/2"	5/8"	19,900	230
55' (17m)	1275V	5.5 - 11	2x BA175-7TM_	1/2"	5/8"	19,902	230
60' (18m)	1275V	7.5 - 15	2x BA200-7TM_	1/2"	5/8"	26,322	300
DISPLACEMENT HULLS							
30' (9m)	1250V	3 - 6	BA150-7TM_	1/2"	N/A	6,548	75
38' (11.5m)	1250V	4 - 8	BA175-7TM_	1/2"	N/A	8,795	100
45' (14m)	1250V	5.5 - 11	BA200-7TM_	1/2"	5/8"	12,134	140
45' (14m)	1275V	3.5 - 7	BA200-7TM_	1/2"	5/8"	12,134	140
45' (14m)	1275V	4 - 8	2x BA150-7TM_	1/2"	5/8"	14,766	170
50' (15m)	1275V	5.5 - 11	BA200-11TM_	1/2"	5/8"	19,900	230
50' (15m)	1275V	5.5 - 11	2x BA175-7TM_	1/2"	5/8"	19,902	230
50' (15m)	1275V	7.5 - 15	2x BA200-7TM_	1/2"	5/8"	26,322	300

CAPILANO HELM OPTIONS

A unique variable displacement feature on the helm allows the number of steering wheel turns to be adjusted by the helmsman to his preference within a pre-determined range.

HELM TYPE	MODEL	DISPLACEMENT ADJUSTMENT RANGE	RELIEF VALVE SETTING
HH5250	1250V	1.7-3.4 cu.in. (27.8-55.7 cc)	1000 PSI (70 BAR)
HH5275	1275V	2.7-5.4 cu.in. (44.2-88.4 cc)	1000 PSI (70 BAR)

CAPILANO TUBING/HOSE OPTIONS

We recommend use of soft refrigeration type copper tubing for optimum performance. If hose must be used, select a hydraulic hose rated for 1000 PSI (70 bar) working pressure, and with a very low volumetric expansion rating.

A hydraulic hose that expands too much at 500 PSI (35 bar) will make the steering spongy.

HELM TYPE	DISTANCE — CYLINDER TO FURTHEST HELM	
	40 Feet or Less	More Than 40 Feet
1250V	1/2" O.D. Copper Tubing	5/8" O.D. Copper Tubing
	1/2" I.D. Hydraulic Hose	5/8" I.D. Hydraulic Hose
1275V	5/8" O.D. Copper Tubing	5/8" O.D. Copper Tubing
	5/8" I.D. Hydraulic Hose	5/8" I.D. Hydraulic Hose



CAPILANO CYLINDER OPTIONS

Cylinders are made from brass & stainless steel. Available with stainless rod & ball joint (TMB models) or stainless rod & bronze clevis (TMC models.) Cylinders with ball joints have 2-axis articulation.

PART NO.	DESCRIPTION/MODEL/ROD END CONFIG.
7" STROKE MODELS	
HCS349	Cylinder BA150-7TMB (rod end ball joint)
HCS350	Cylinder BA175-7TMB (rod end ball joint)
HCS351	Cylinder BA200-7TMB (rod end ball joint)
HCS355	Cylinder BA150-7TMC (rod end clevis)
HCS356	Cylinder BA175-7TMC (rod end clevis)
HCS357	Cylinder BA200-7TMC (rod end clevis)
9" STROKE MODEL	
HCS373	Cylinder BA175-9TMB (rod end ball joint)
11" STROKE MODELS	
HCS378	Cylinder BA200-11TMB (rod end ball joint)
HCS379	Cylinder BA200-11TMC (rod end clevis)

Also available are fixed mount cylinders K-22 (13.3 cu. in. displacement); pivot mount cylinder K-31 (25.5 cu. in.); and universal mount cylinders K-9 (55 cu.in.). See cylinder specifications and dimensions, later in this catalog, for more information. The number of steering wheel turns is based on total displacement of the cylinder(s) divided by the displacement of one helm.

