

Inboard Hydraulic Steering

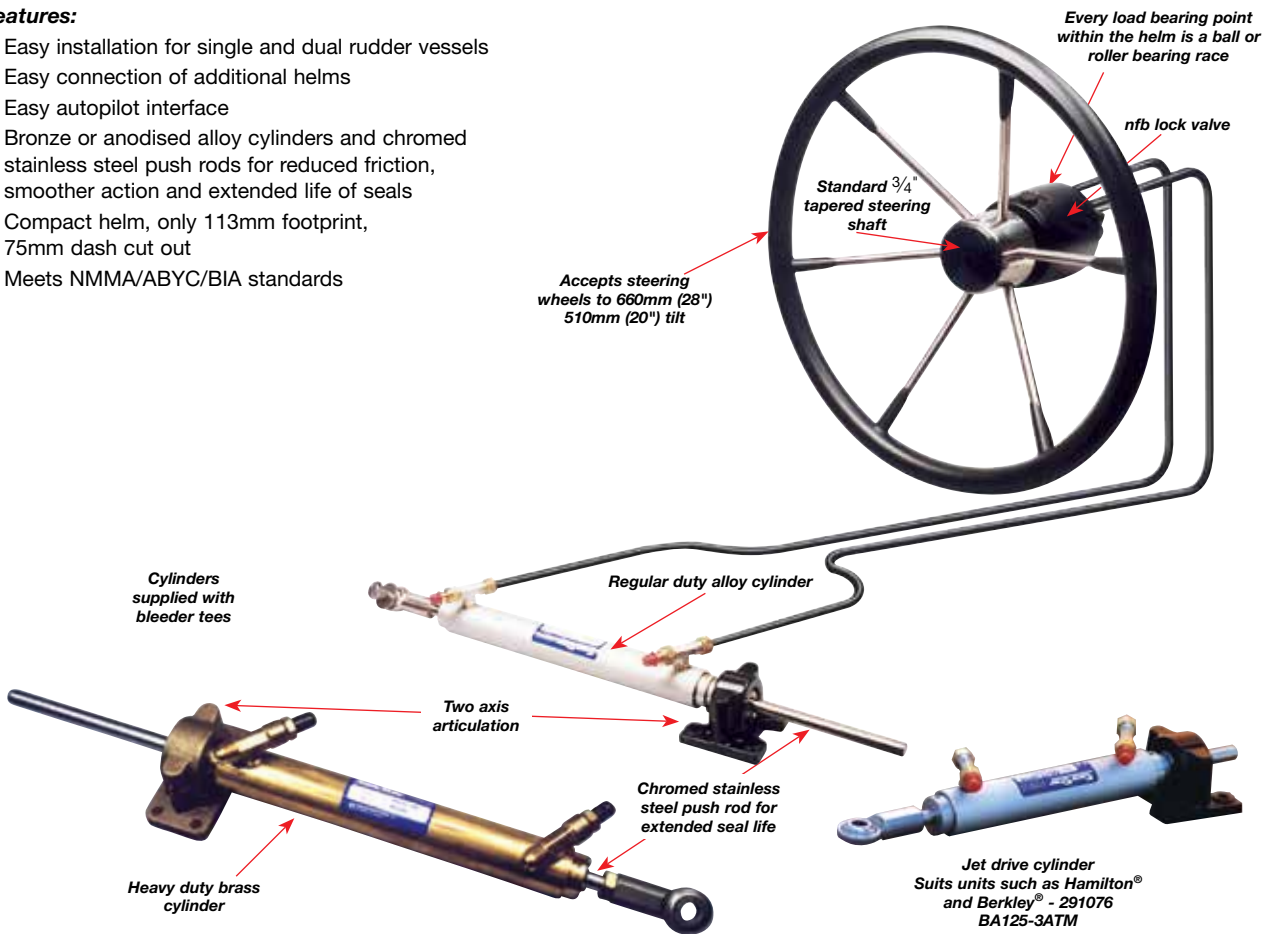
No other manual hydraulic steering system gets you closer to power steering than SeaStar®



Unmatched comfort and control. Only with SeaStar® steering. The most popular inboard hydraulic steering system offers smooth, super efficient steering designed for today's inboard powered vessels to 15 metres. It's the first choice of leading OEMs, with a wide range of helm and cylinder displacements to cover most applications.

Features:

- Easy installation for single and dual rudder vessels
- Easy connection of additional helms
- Easy autopilot interface
- Bronze or anodised alloy cylinders and chromed stainless steel push rods for reduced friction, smoother action and extended life of seals
- Compact helm, only 113mm footprint, 75mm dash cut out
- Meets NMMA/ABYC/BIA standards



Selecting an Inboard Hydraulic Steering System

From the order guide (opposite page) select the system number appropriate for the vessel based on:

- Hull type - displacement or planing
- Length of vessel
- Number of engines/rudders
- Usage of vessel

Select the optional helms and accessory hardware for each steering station.

From the order guide (opposite page) select the fitting and hose kits required for the installation.

Confirm that you have sufficient space available in the dash and engine compartments for the steering components.

Alternatively, you can order one of our complete steering systems. These systems contain a helm, cylinder, hose or tubing and oil. (As detailed in the right hand column of the order guide).

Inboard Steering Application Guide

Boat Length Up To		Single Engine		Twin Engine		Single Engine		Twin Engine		Single Engine	
M	Ft	Pleasure	Work	Pleasure	Work	Pleasure	Work	Pleasure	Work	Pleasure	Work
8	26	1	4	1	4	2	4	2	4	4	4
10	32	2	4	1	4	3	4	3	4	4	4
11.5	38	3	5	2	5	5	5	3	5	4	5
13.5	44	5	-	3	5	-	-	5	-	5	-
15	50	-	-	5	-	-	-	-	-	-	-

Please contact BLA sales on 1300 252 725 for further specifications. N.B. If your requirements fall outside these parameters please refer pages 791-793.

Inboard Hydraulic Steering Order Guide



1 4 turns lock-to-lock - Torque 57.9 kg-m (5025 in-lb)

BLA Code	Kit Inclusions	Cat. Ref. Page
291620	1 x 291060 Cylinder - BA125-7ATM - alloy	815
	1 x 291502 Helm - *SeaStar® 1.7 - front mount	812
	3 x 291902 1 litre SeaStar Solutions® oil	814
	1 x 292997 Tube - 3/8" dia nylon (see note 1 & 3)	819
	4 x 293610 Nut & olive kit	817
For extra steering station add:		
1 x 291502 Helm - SeaStar® 1.7 - front mount	812	
1 x 293604 Add a station/pilot fitting kit	816	
1 x 291902 1 litre SeaStar Solutions® oil	814	
2 x 293610 Nut and olive kit	817	

2 5 turns lock-to-lock - Torque 66.1 kg-m (5741 in-lb)

BLA Code	Kit Inclusions	Cat. Ref. Page
291622	1 x 291062 Cylinder - BA135-7ATM - alloy	815
	1 x 291502 Helm - *SeaStar® 1.7 - front mount	812
	3 x 291902 1 litre SeaStar Solutions® oil	814
	1 x 292997 Tube - 3/8" dia nylon (see note 1 & 3)	819
	4 x 293610 Nut & olive kit	817
For extra steering station add:		
1 x 291502 Helm - SeaStar® 1.7 - front mount	812	
1 x 293604 Add a station/pilot fitting kit	816	
1 x 291902 1 litre SeaStar Solutions® oil	814	
2 x 293610 Nut and olive kit	817	

3 6 turns lock-to-lock - Torque 82.0 kg-m (7117 in-lb)

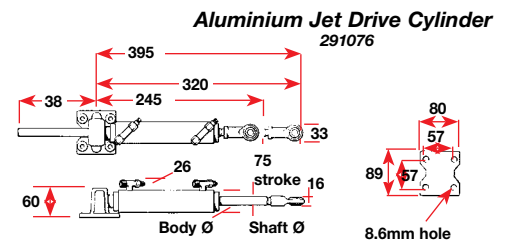
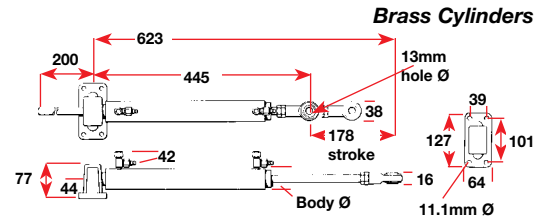
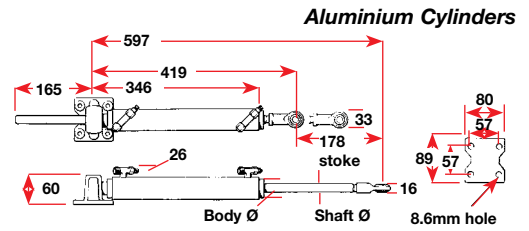
BLA Code	Kit Inclusions	Cat. Ref. Page
291624	1 x 291064 Cylinder - BA150-7ATM - alloy	815
	1 x 291502 Helm - *SeaStar® 1.7 - front mount	812
	3 x 291902 1 litre SeaStar Solutions® oil	814
	1 x 292997 Tube - 3/8" dia nylon (see note 1 & 3)	819
	4 x 293610 Nut & olive kit	817
For extra steering station add:		
1 x 291502 Helm - SeaStar® 1.7 - front mount	812	
1 x 293604 Add a station/pilot fitting kit	816	
1 x 291902 1 litre SeaStar Solutions® oil	814	
2 x 293610 Nut and olive kit	817	

4 4 1/4 turns lock-to-lock - Torque 82.0 kg-m (7117 in-lb)

BLA Code	Kit Inclusions	Cat. Ref. Page
291626	1 x 291066 Cylinder - BA150-7ATM - brass	815
	1 x 291506 Helm - **SeaStar® 2.4 - front mount	812
	3 x 291902 1 litre SeaStar Solutions® oil	814
	1 x 293202 Hose kit	816
	Copper tube - 3/8" dia (see note 2 & 3)	
For extra steering station add:		
1 x 291506 Helm - SeaStar Solutions® 2.4 - front mount	812	
1 x 293604 Add a station/pilot fitting kit	816	
1 x 291902 1 litre SeaStar Solutions® oil	814	
Extra tube as above (see note 1 & 3)		

5 5 1/2 turns lock-to-lock - Torque 110.2 kg-m (9569 in-lb)

BLA Code	Kit Inclusions	Cat. Ref. Page
291628	1 x 291068 Cylinder - BA175-7TM - brass	815
	1 x 291506 Helm - **SeaStar® 2.4 - front mount	812
	3 x 291902 1 litre SeaStar Solutions® oil	814
	1 x 293202 Hose kit	816
	Copper tube - 3/8" dia (see note 2 & 3)	
For extra steering station add:		
1 x 291506 Helm - SeaStar Solutions® 2.4 - front mount	812	
1 x 293604 Add a station/pilot fitting kit	816	
1 x 291902 1 litre SeaStar Solutions® oil	814	
Extra tube as above (see note 1 & 3)		



Cylinder Dimensions Specific To Model

Cylinder Body	Body Dia.	Shaft Dia.
291060	35mm 1.38"	12.7mm
291062	38mm 1.5"	15.9mm
291064	38mm 1.5"	15.9mm
291066	38mm 1.5"	15.9mm
291068	45mm 1.75"	19.1mm
291076	38mm 1.5"	15.9mm

BLA Code	Optional Equipment
291908	Back plate kit for front mount helms
291906	20° wedge kit for front mount helms
293604	Autopilot fitting kit for all helms
291508	Helm - SeaStar® 3.0 - front mount
291512	Helm - SeaStar® 1.7 - tilt
291515	Helm - Seastar® 1.7 - sport tilt
291516	Helm - SeaStar® 2.4 - tilt
291522	Helm - SeaStar® 1.7 - rear mount
291526	Helm - SeaStar® 2.4 - rear mount
291528	Helm - SeaStar® 3.0 - rear mount
291540	Helm - SeaStar® 2.0 - Pro front mount
291542	Helm - SeaStar® 2.0 - Pro tilt
2930XX	Hose - Outboard (see note 3)
2931XX	Hose - SeaStar® pro (see note 3)

Notes:

- For systems 1, 2 & 3 nylon semi-rigid tubing (3/8" diameter) is the standard requirement for plumbing the system. Copper tubing (3/8" diameter) can be substituted, but fitting kit 293202 is required.
- For systems 4 & 5 copper tubing (3/8" diameter) is the standard requirement for plumbing the system. Fitting kit 293202 is required.
- For systems 1, 2, 3, 4 & 5 SeaStar® outboard or Pro hose can be substituted for nylon or copper tubing. These hoses are available in 305mm (1ft) increments from 600mm (2ft) to 12m (40ft). Refer to page 819.
- Steering systems installed using outboard or Pro hose require kit 293602 when adding a second station.

N.B. Other influences in the boat's type, hull shape, weight, type of propellers, engine and hull geometry have effects on the handling of the vessel. Guides within this section are typical set ups. For fitting to unusual or special combinations, please contact BLA on 1300 252 725.