

### Features

- Easy installation.
- Simple autopilot interface.
- Simple multiple steering station connection.

### Applications

- Fits most power and non-power assist sterndrives.
- Single and multiple drives.

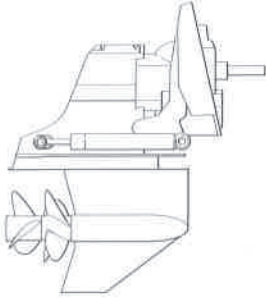
### How to select a steering system for a Sterndrive

1. From the order guide on page 5-2 select the drive configuration based on the number of drives.
2. From the application guide on page 5-3 confirm that a cylinder is available for your specific make, model and year of drive unit. Select the cylinder that is appropriate for the drive.
3. From the order guide select the appropriate helm and accessory hardware. Note that helm pumps of different displacements are available for power steered sterndrives. The displacement of the helm affects the number of turns lock to lock. Select the helm displacement on the basis of the desired steering response.
4. Select the appropriate tube or hose and fitting kits.
5. Confirm that sufficient space is available in the dash and engine compartments for the equipment.



Figure 5-1.

# Order Guide

SYSTEM CONFIGURATION	COMPONENT DESCRIPTION	QTY REQ	MODEL	PART #	PAGE REF #
<b>SINGLE &amp; DUAL STERNDRIVE</b> (For dual sterndrive applications use engine manufactures supplied tie bar.)  	CYLINDER	1	SEE APPLICATION GUIDE		
	HELM	1	* SEASTAR (SEE NOTE 1) ** SEASTAR (SEE NOTE 2)	HH5271-3 HH5272-3	6-6 6-6
	STEERING FLUID TUBE/HOSE	3	SEASTAR FLUID	HA5430	10-1 9-7
	FOR EXTRA STEERING STATION ADD:				
	HELM	1	* SEASTAR (SEE NOTE 1) ** SEASTAR (SEE NOTE 2)	HH5271-3 HH5272-3	6-6 6-6
	FITTING KIT	1	ADD A STATION - FOR USE WITH SEASTAR STEERING "HOSE" - FOR USE WITH SEASTAR TUBE/COPPER	HF6007	9-12
	STEERING FLUID EXTRA TUBE/HOSE	1	SEASTAR FLUID	HF6010	9-13 9-7
	<b>BACK PLATE KIT</b>		(FOR STANDARD HELMS)	<b>HA5418</b>	<b>6-3</b>
	<b>20 DEGREE WEDGE KIT</b>		(FOR STANDARD HELMS)	<b>HA5419</b>	<b>6-3</b>
	<b>AUTOPILOT FITTING KIT</b>		(FOR USE WITH SEASTAR HOSE) (FOR USE WITH SEASTAR TUBE/COPPER)	<b>HF6007</b> <b>HF6010</b>	<b>9-12</b> <b>9-13</b>
<b>POWER ASSIST STEERING</b>			<b>PA1200-2</b>	<b>7-1</b>	

\* ALL HELM DESIGNS CAN BE USED, SEE PAGE 3-18 FOR OPTIONS.

1. SeaStar helms are the standard recommendation for both non-power and power steered applications.
2. SeaStar helms with a higher displacement can be specified for less wheel turns where faster response is desired. Consult chart on page 5-3 for options.
3. For dual stern drives – use the tie bar supplied by the engine manufacturer.

## NOTICE

*These recommendations apply to factory stock stern drives only. Modified installations and high performance applications may require a higher capacity steering system. If in doubt, contact SeaStar Solutions technical service for assistance.*

# Application Guide

ENGINE MANUFACTURER	STEERING CONFIGURATION	ENGINE/DRIVE DESCRIPTION	YEAR	CYLINDER DESCRIPTION		NUMBER TURNS LOCK TO LOCK		NOTES
				MODEL No.	ORDERING PART No.	SEASTAR 1.7 HELM	SEASTAR 2.4 HELM	
<b>MERCUISER</b>	NON POWER ASSIST	ALPHA I	2000 TO DATE	BA135-7EM	HC5332-3	5.0	3.5	1,4,5,6
		BRAVO I	2000 TO DATE	BA135-7EM	HC5332-3	5.0	3.5	1,4,5,6
		BRAVO II	2000 TO DATE	BA135-7EM	HC5332-3	5.0	3.5	1,4,5,6
		BRAVO III	2000 TO DATE	BA135-7EM	HC5332-3	5.0	3.5	1,4,5,6,7
	POWER ASSIST	ALPHA I	2000 TO DATE	125-8EM	HC5328-3	4.9/5.8	3.4/4.1	2
		BRAVO I	2000 TO DATE	125-8EM	HC5328-3	4.9/5.8	3.4/4.1	2
		BRAVO II	2000 TO DATE	125-8EM	HC5328-3	4.9/5.8	3.4/4.1	2
		BRAVO III	2000 TO DATE	125-8EM	HC5328-3	4.9/5.8	3.4/4.1	2
<b>VOLVO</b>	NON POWER ASSIST	290	TO DATE	BA135-7EM	HC5332-3	5.0	3.5	1,4,5,6
		DIESEL	TO DATE	BA135-7EM	HC5332-3	5.0	3.5	1,4,5,6
		DPS	2000 TO DATE	BA135-7EM	HC5332-3	5.0	3.5	1,4,5,6
	POWER ASSIST	290	TO DATE	125-8EM	HC5328-3	4.8/5.8	3.4/4.1	2
		DIESEL	TO DATE	125-8VEM	HC5329-3	4.9/5.8	3.4/4.1	2
		DPS & SX	1996 TO DATE	125-6VPS	HC5331-3	4.8/5.5	3.4/4.1	2
<b>YANMAR</b>	NON POWER ASSIST	ZT370	TO DATE	BA135-7EM	HC5332-3	5.0	3.5	1,4,5,6,7
	POWER ASSIST	ZT370	TO DATE	125-8EM	HC5328-3	4.9/5.8	3.4/4.1	2

1. Balanced system – ie: the number of turns lock to lock is equal port to starboard or vice-versa.  
2. Unbalanced system – ie: the number of turns lock to lock is not equal port to starboard or vice-versa.  
3. Requires cylinder rod end adapter HA5424 supplied by SeaStar Solutions. Refer to diagram on page 5-4.  
4. **HC5332-3 replaces HC5326-3 as of January 2000.** If installing HC5326 additional clevis supplied by engine manufacturer required. Mastry Engine part # SUN144 \*not provided by SeaStar Solutions.  
5. **The installation of the HC5332-3 sterndrive cylinder requires the use of SeaStar Outboard hose only. DO NOT use 3/8" copper or nylon tube.**  
6. If engine outdrive is NOT equipped with a torque tab on the underside of the lower leg one must be installed to reduce prop torque.  
7. Yanmar Engines using the Bravo III drives require the use of cylinder HC5326-3.

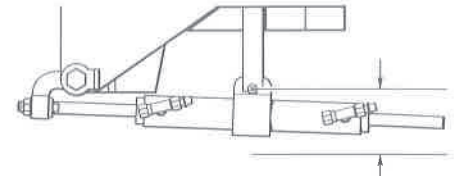
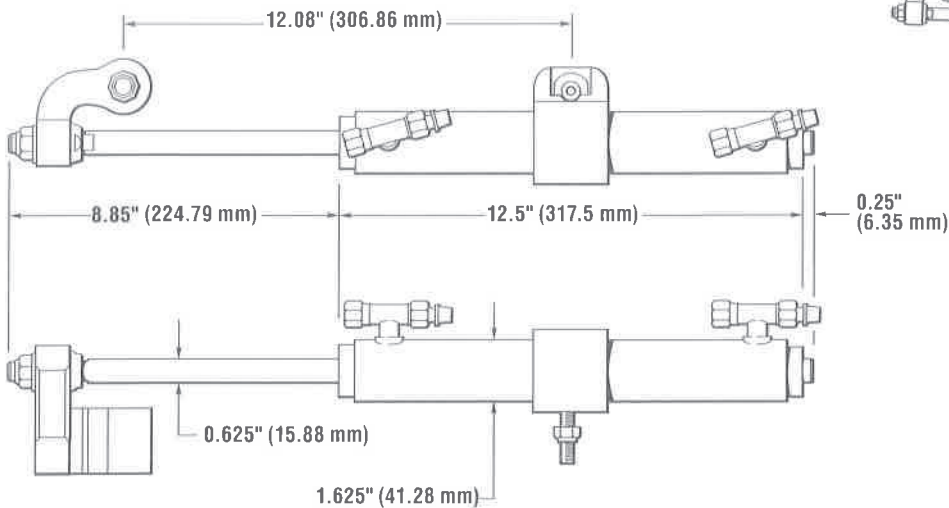
Revision Date: **APRIL 27th 2018**

# General Dimensions

**⚠ CAUTION**

**DO NOT** attempt to install NPT pipe fittings into the cylinder hose fitting ports on any -3 model cylinder. Doing so will lead to irreparable damage to the cylinder. **ONLY** use ORB hose fittings provided by SeaStar Solutions.

**HC5332 BA135-6.88EM**



5" (127mm) REQUIRED FOR UNRESTRICTED MOUNTING

**NOTICE**

If engine outdrive is **NOT** equipped with a torque tab on underside of lower leg, one must be installed to reduce prop torque.

**⚠ CAUTION**

Due to cylinder body movement during steering, this cylinder requires use of SeaStar outboard hose (H051xx), see page 9-2 for details.

Figure 5-2.

**HC5326-3 BA150-7EM**

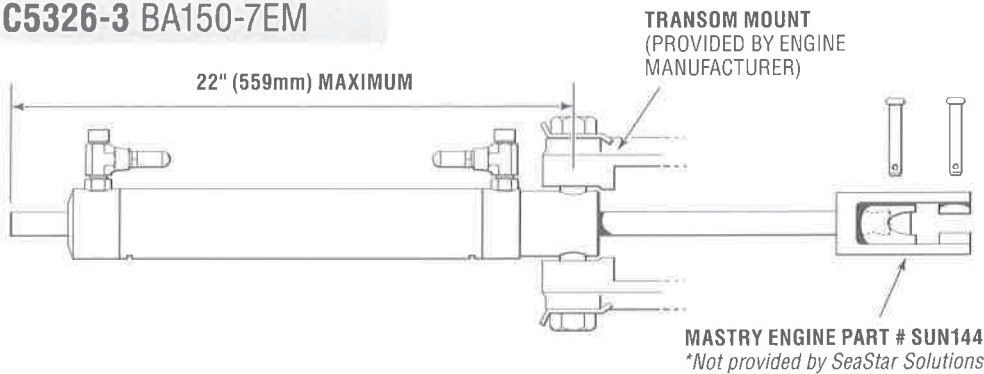


Figure 5-3.

**HC5328-3 125-8EM**

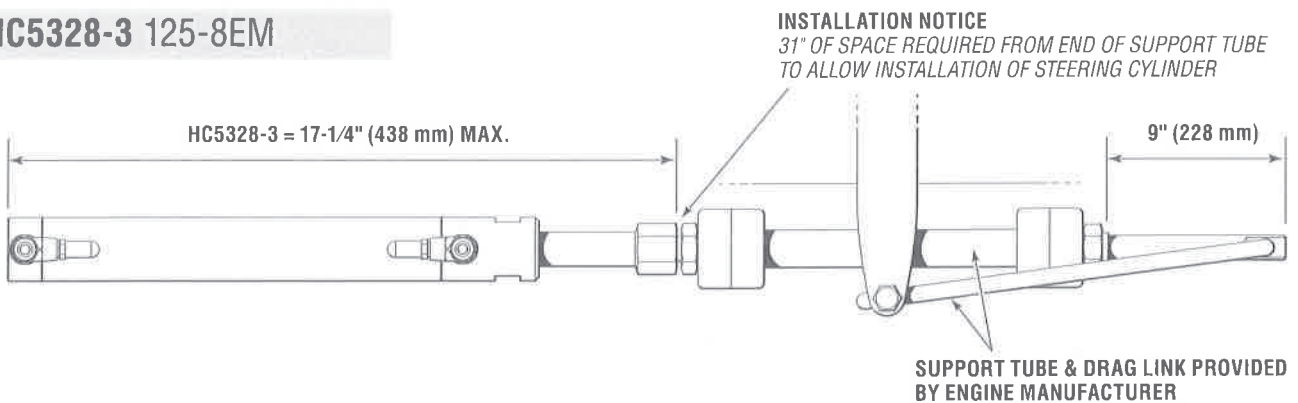


Figure 5-4.

# General Dimensions

## HC5329-3 125-8VPEM

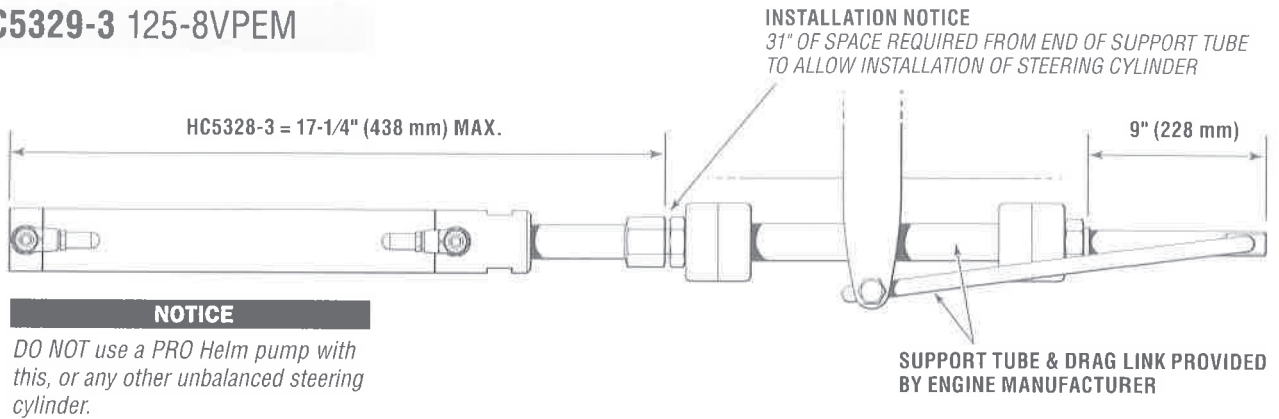


Figure 5-5.

## HC5330-3 BA125-8EMV

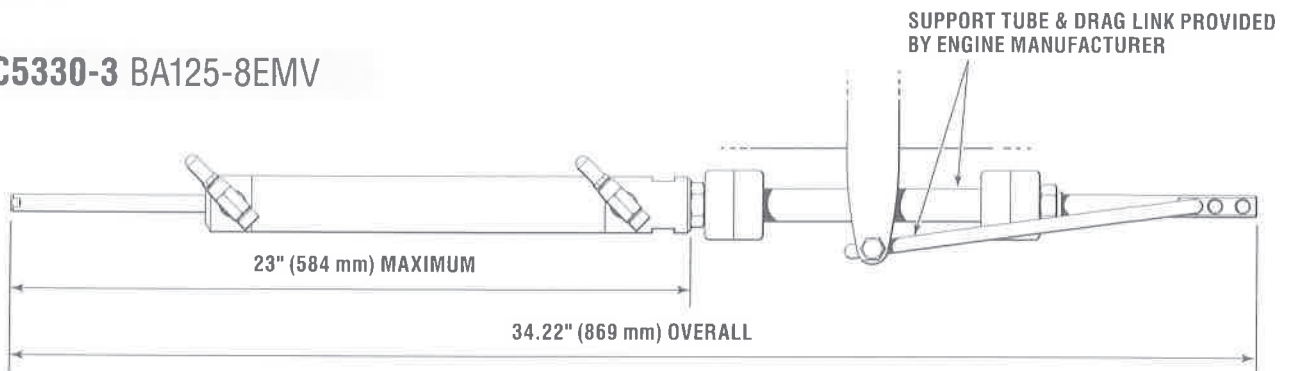


Figure 5-6.

## HC5328-3 Yanmar

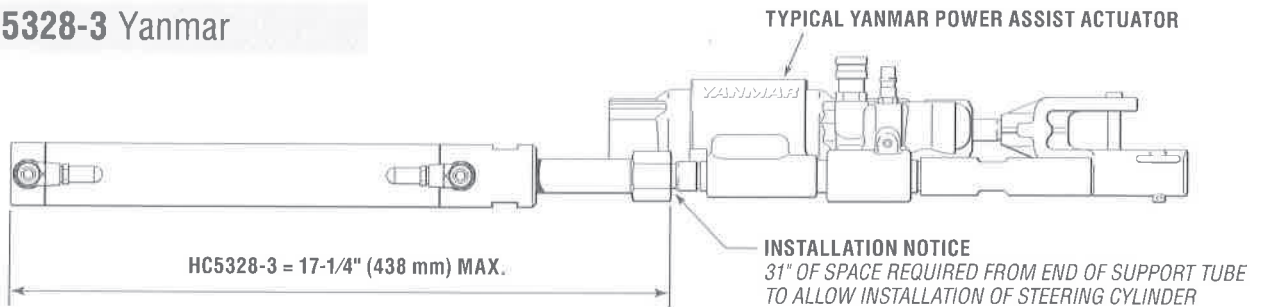


Figure 5-7.

## HC5328-3 Volvo

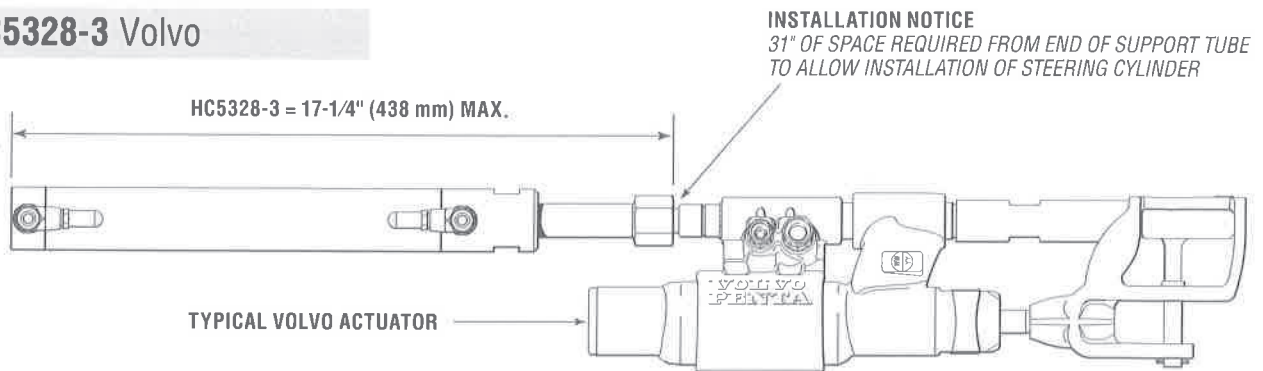


Figure 5-8.

HC5331-3 125-6VPS

General Dimensions

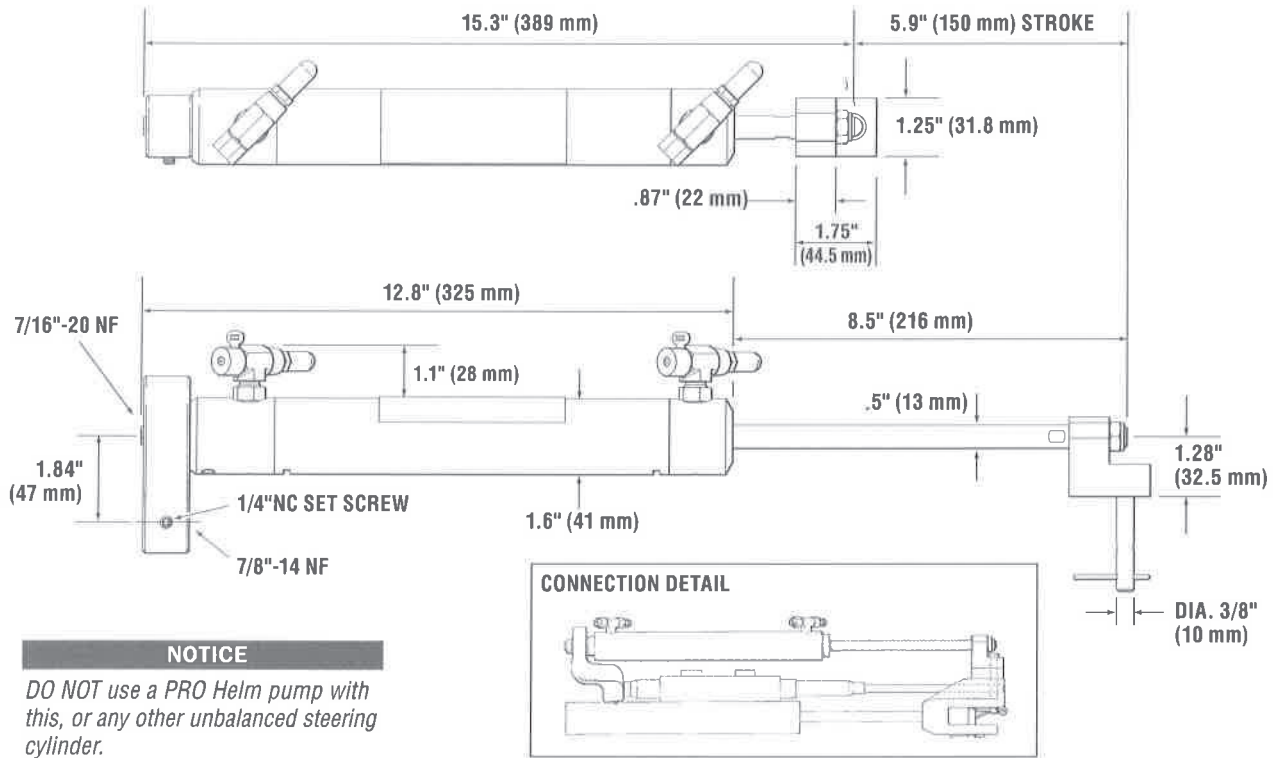


Figure 5-9.

HC5314-3 BA150-7ATM

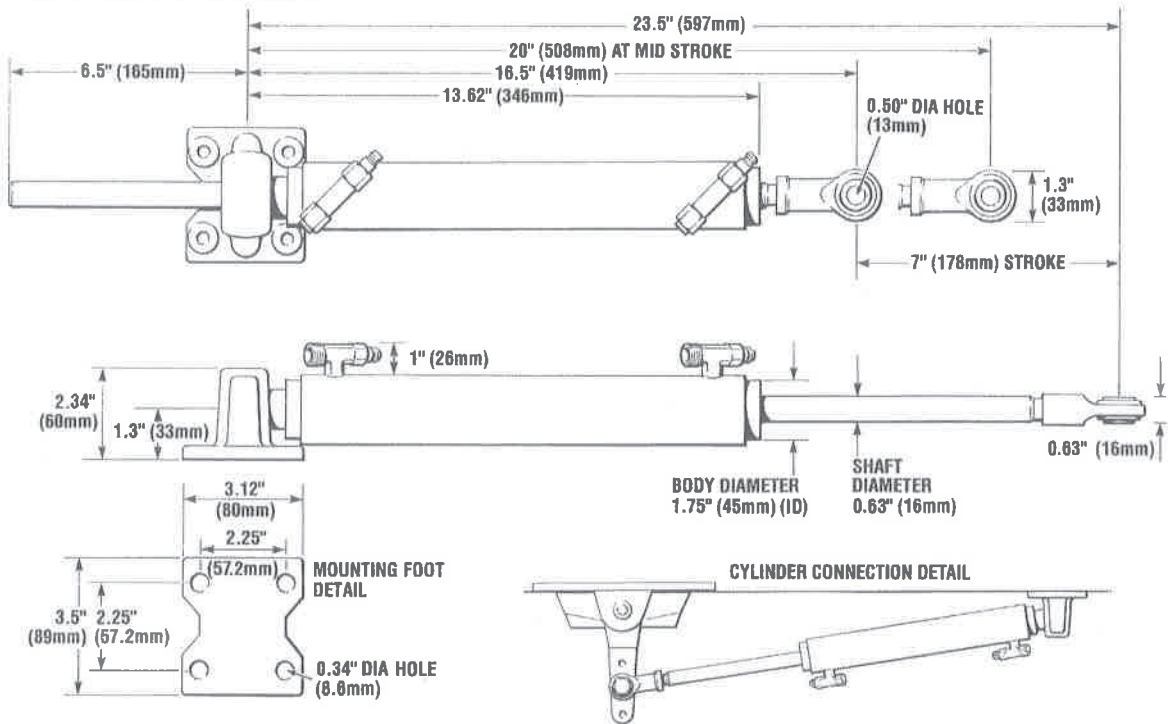


Figure 5-10.

## Performance I/O and Outboard Cylinders

The K-5-B cylinder was designed for inboard/outboard boats requiring external cylinders of substantial size and strength. The K-5 cylinders are nickel plated for aesthetics and protection against the elements. This cylinder does not include the wing plates or hardware required for mounting to the outdrive. Porting is through 1/4 NPT ports on each end of cylinder.

### NOTICE

*K-5-B steering cylinders have a large volume. To keep total wheel turns at a reasonable amount, it is recommended to use a larger displacement helm pump, such as Capilano HH5275 (5.4 cu.in. displacement MAX).*

### K-5-B

BORE	STROKE
1.5" (38mm)	9" (229mm)

DISP EXT.	DISP RET.
15.9cu in	10.5cu in

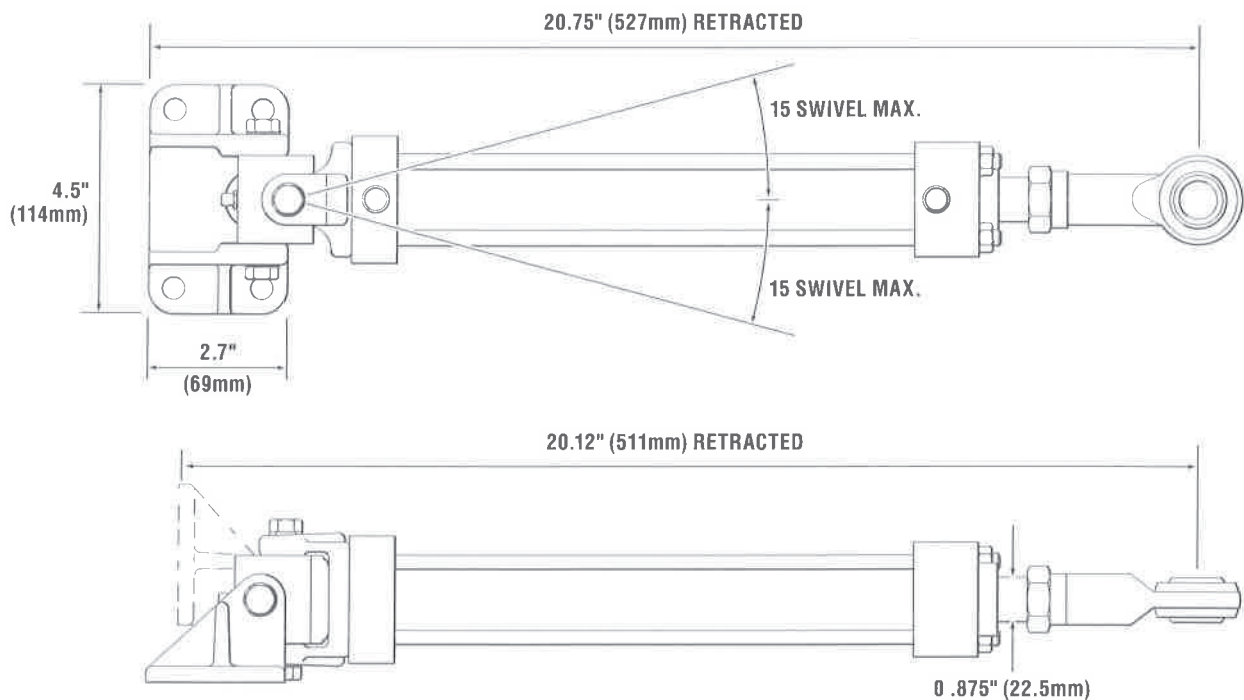
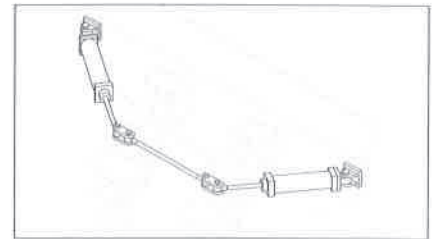


Figure 5-11.

### NOTICE

*K-5 Cylinders are UN-balanced Cylinders, unequal amount of fluid on either side of the piston.*

### NOTICE

*DO NOT use a PRO Helm pump with this, or any other unbalanced steering cylinder.*

### NOTICE

*SeaStar Solutions does NOT make connecting hardware to attach this cylinder to the out drive.*