

SEPARATE STEERING COMPONENTS



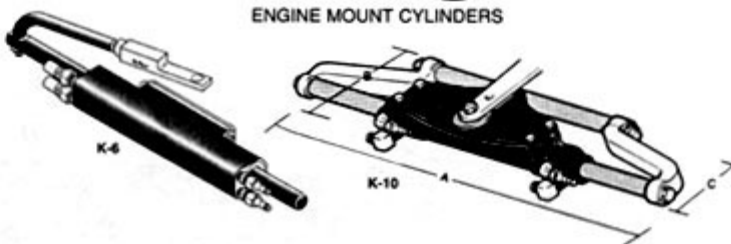
The same quality steering components that comprise the many Hynautic systems may also be ordered independently for both new or retrofit applications. Two basic types of cylinders are available: Aluminum Cylinders for boats 38 feet and under, and Brass Cylinders for boats up to 70 feet.

Aluminum Cylinders

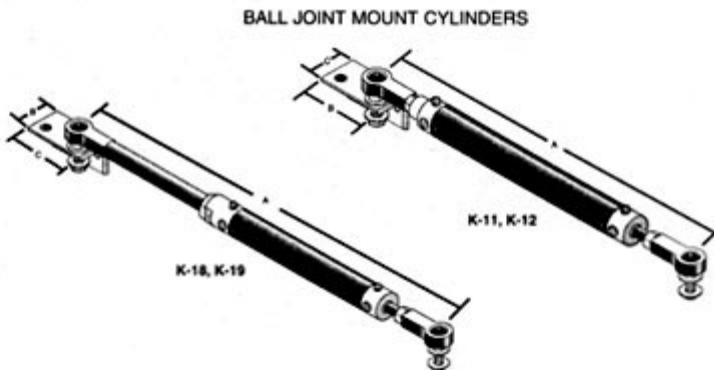
Cylinders with aluminum barrels and end caps are specifically designed for boats up to 38 ft. where steering loads are less than 10,000 in.lbs. of torque. The cylinder barrel and ends are anodized T6061 aluminum. Cylinder rods are 303 stainless steel. All cylinders have replaceable wiper seals.

There are five types of mounting packages for aluminum cylinders: The new universal base-mount for direct attachment to outboards without using the tilt tube; engine-mount for direct attachment to outboards using the tilt tube; tube-mount for direct attachment to outboards and I/O's; ball-joint-mount for I/O's and inboards; and universal-mount for inboards.

Cylinders are available in both balanced and unbalanced versions. Balanced cylinders (rod protrudes through both ends of the cylinder barrel) are preferred if you are adding an autopilot to the system.

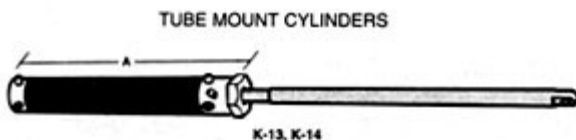


ENGINE MOUNT CYLINDERS

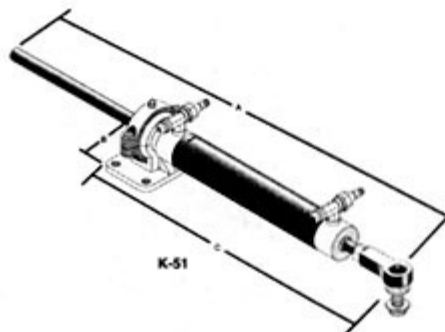


BALL JOINT MOUNT CYLINDERS

UNIVERSAL MOUNT CYLINDERS



TUBE MOUNT CYLINDERS



Cylinder Dimensions

Cylinder Model	Dimensions (in.)		
	a*	b	c
K-6	22.55	5.5	2.5
K-10	25.6	5.5	2.5
K-11	18.25	2.0	3.5
K-12	16.25	2.0	3.5
K-13	13.6	13.5	-
K-14	11.6	13.5	-
K-18	24.5	2.1	3.5
K-19	28.5	2.1	3.5
K-51	24.25	3.6	16.0

All ball joint studs are 1/2", except rod end of K-11 & K-12 which are 3/8"

* With rod retracted.

Cylinder Specifications

MODEL NO.	TYPE OF MOUNT	BALANCED OR UNBALANCED	BORE	STROKE	DISPL. (cu.in.)	OUTPUT FORCE	
						500 PSI Relief	950 PSI Relief
K-6	BASE MOUNT	BALANCED	1-1/2"	7-3/4"	9.0	-	1000
K-10	ENGINE	BALANCED	1-1/4"	9-1/2"	7.5	-	750
K-11	BALL JOINT	UNBALANCED	1-1/4"	9"	11	515	950
K-12	BALL JOINT	UNBALANCED	1-1/4"	7"	8.6	515	950
K-13	TUBE	UNBALANCED	1-1/4"	9"	11	515	950
K-14	TUBE	UNBALANCED	1-1/4"	7"	8.6	515	950
K-18	BALL JOINT	BALANCED	1-1/4"	7"	7	515	950
K-19	BALL JOINT	BALANCED	1-1/4"	9"	9	515	950
K-51	UNIVERSAL	BALANCED	1-1/2"	7"	10.2	730	1390