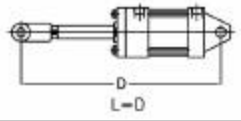
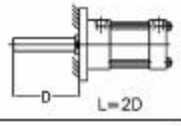
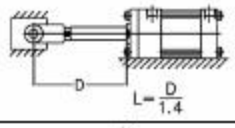
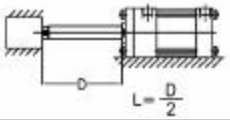
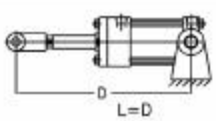
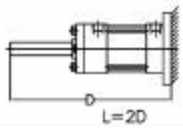
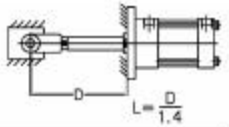
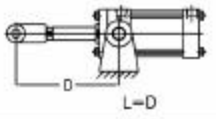
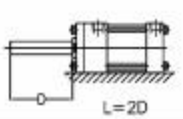
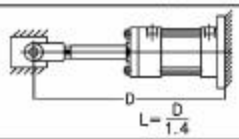
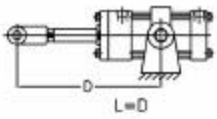
PISTON ROD SELECTION CHART
FOR PNEUMATIC AND PRESSURE RATED HYDRAULIC CYLINDERS
SERIES JHD, JHDH, LSSL, LSSE AND VAC

CATEGORY A BOTH ENDS PIVOTED	CATEGORY B ONE END FIXED; ONE END FREE	CATEGORY C ONE END FIXED; ONE END FREE, BUT GUIDED	CATEGORY D BOTH ENDS FIXED
			
			
			
			

SELECTION CHART

ROD DIA.	5/8	1	1 3/8	1 3/4	2	2 1/2	3	3 1/2	4	4 1/2	5	5 1/2
Thrust in Pounds	VALUE OF "L" IN INCHES											
50	67											
100	59	110										
150	53	103										
250	43	94	146									
400	37	83	134	186								
700	30	68	118	168	202	275						
1,000	27	60	105	155	190	257	330					
1,400	24	53	92	142	174	244	308	385				
1,800	23	48	82	127	160	230	296	366	440			
2,400	19	45	75	114	145	213	281	347	415	488		
3,200	16	41	67	103	130	194	261	329	400	461		
4,000	13	38	63	94	119	175	240	310	378	446		
5,000	9	34	60	87	110	163	225	289	360	426	494	
6,000		30	56	82	102	152	208	274	342	410	476	
8,000		26	50	76	93	137	188	245	310	375	447	
10,000		21	45	70	89	125	172	222	279	349	412	482
15,000			36	61	78	114	154	197	248	326	388	454
20,000			28	52	68	103	136	172	218	282	350	420
25,000			20	45	61	95	128	164	203	270	326	385
30,000				39	55	87	120	156	189	230	285	330
40,000				22	43	74	108	142	177	210	248	294
50,000					30	66	96	130	165	200	234	269
60,000						57	88	119	154	190	225	256
80,000						36	71	104	137	170	204	240
100,000							57	90	120	154	199	222

DETERMINING PROPER PISTON ROD DIAMETER

To determine proper piston rod diameter for your specific application, follow the sequence outlined below:

Step 1) Determine the maximum extension thrust (push) in pounds that your selected bore cylinder will develop.

Step 2) Using the drawings above, locate your mounting category, noting the value of "L" in relation to extended cylinder dimension "D".

Step 3) Prior to determining the final "D" dimension in inches, check to see if cylinder stop is necessary for proper cylinder operation. As a general rule, whenever stroke length exceeds 40", use 1" of stop tube length for each additional 10" of stroke.

Example: If stroke is 54", the stop tube length should be 2"

Cylinders in categories C and D normally do not require stop tube due to the guided loads.

Step 4) Determine final value of "D" in inches, including stop tube addition if applicable. Convert "D" dimension to chart value "L" in inches, using formula shown on applicable drawing.

Step 5) From the Selection Chart, locate the line showing the maximum "Thrust in Pounds" and read to the right until the approximate value of "L" is located. Read vertically upward to find the necessary rod diameter in inches. *Example: If the maximum thrust is 5,000 lbs., and value of "L" has been determined as 110", the minimum rod diameter recommended would be 2"*

Step 6) Note that in some cases the recommended minimum rod diameter may exceed that which is possible for the cylinder bore size selected. In such cases it may be necessary to select a larger bore size cylinder operating at a lower pressure which will still provide the required operation thrust. The larger cylinder may accommodate a larger rod size which will meet the minimum requirement.