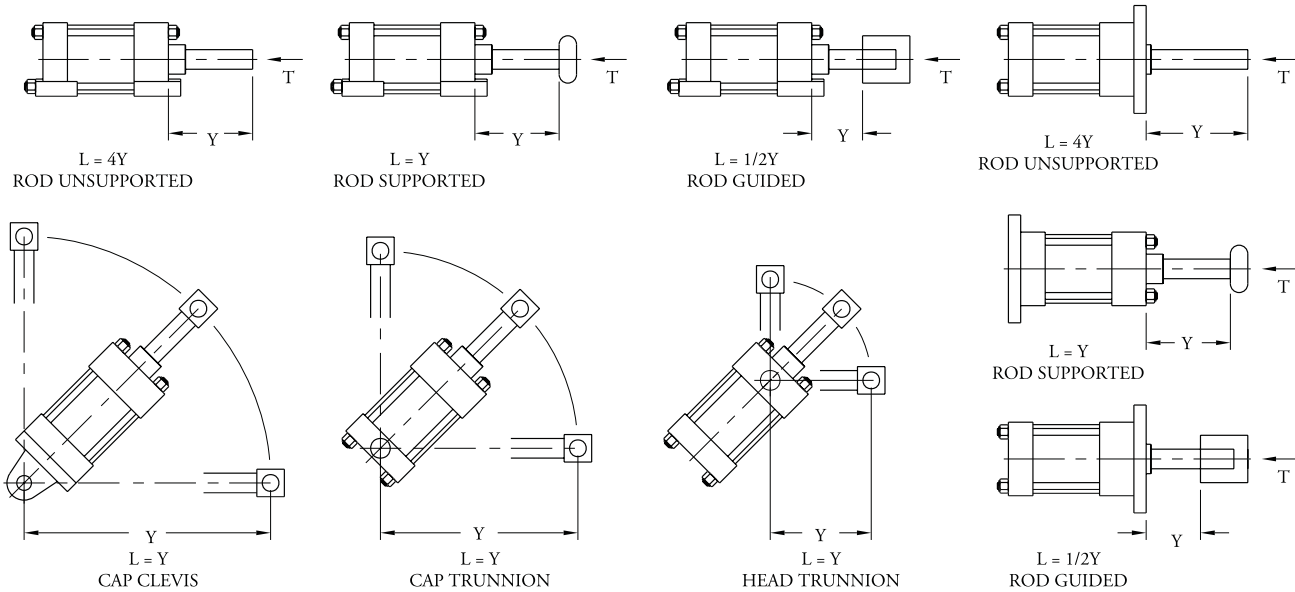


# ROD DIAMETER & STOP TUBE SELECTION

## NFPA CYLINDERS



All rods shown in extended position.

In most cylinder applications, the standard rod diameter is suitable. In long stroke or high force applications, an oversized rod may be required. To select the minimum rod size for a particular application, determine bore size, stroke and force (see page 12). Select the type of mount from the above illustrations and determine the "L" length with the rod fully extended. Using the chart to the right, find the maximum force for your application, then look across that row and find the "L" length calculated from above drawing. If the exact value is not shown, use the next larger number to determine the appropriate rod diameter for your cylinder.

FORCE IN POUNDS	PISTON ROD DIAMETER			
	5/8	1	1 3/8	1 3/4
50	62			
100	55	112		
200	47	99		
300	44	88	142	
500	38	75	130	180
750	28	70	122	170
1,000	25	60	103	156
1,250	21	52	94	140
1,500	19	50	92	136
2,000	15	43	81	113
4,000	12	31	62	96
6,000		25	52	80
8,000		22	45	75
10,000		21	40	67
20,000			27	48
30,000				40

## STOP TUBE

Stop tubes are located between the piston and the head on long stroke cylinders. Stop tubes add length to the distance between the piston and the rod bearing which reduces the bearing load when the cylinder is fully extended.

To determine if a stop tube is required and the length of the stop tube, determine the "L" length from the above drawings. If "L" is less than 40 inches, no stop tube is required. If "L" is over 40 inches, one inch of stop tube is recommended for every 10 inches or fraction thereof which is over 40 inches.

"L" (INCHES)	STOP TUBE LENGTH (INCHES)	"L" (INCHES)	STOP TUBE LENGTH (INCHES)
0-40	0	101-110	7
41-50	1	111-120	8
51-60	2	121-130	9
61-70	3	131-140	10
71-80	4	141-150	11
81-90	5	151-160	12
91-100	6	161-170	13

Note: "L" is calculated from mounting point with rod extended.