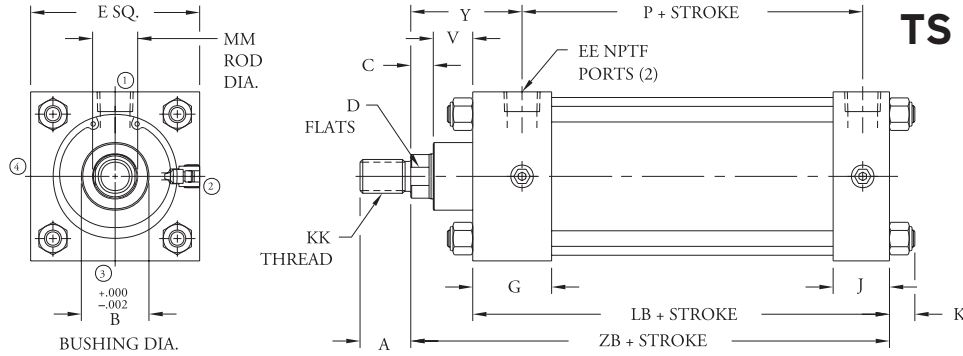
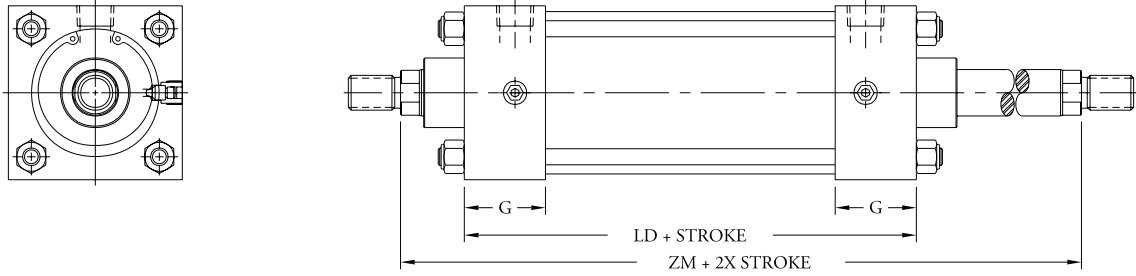


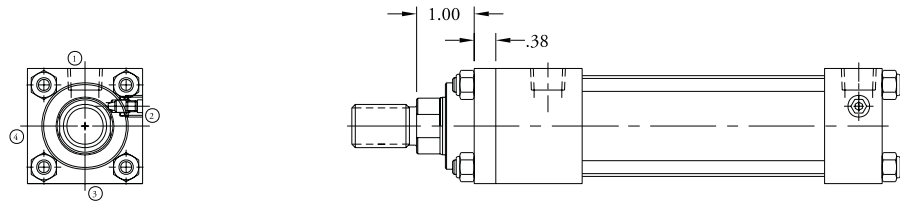
NFPA TIE-ROD CYLINDERS TDE / TSDE TMDE / TSMDE TS / TSM / TLS



SERIES T/TM/TL SERIES TS/TSM/TLS (oversized rod)



SERIES TDE/TMDE SERIES TSDE/TSMDE (oversized rod)



SERIES TS/TSM/TLS (1 1/2 BORE oversized rod)

DIMENSION REFERENCE	CYLINDER BORE										DIMENSION REFERENCE	CYLINDER BORE																				
	1 1/2	2	2 1/2	3 1/4	4	5	6	8	1 1/2	2		2 1/2	3 1/4	4	5	6	8															
A	3/4	1 1/8	3/4	1 1/8	3/4	1 1/8	1 1/8	1 5/8	1 1/8	1 5/8	1 1/8	1 5/8	1 1/8	2	1 5/8	2	LB	3 5/8	3 5/8	3 3/4	4 1/4	4 1/4	4 1/2	5	5 1/8							
B	1.124	1.499	1.124	1.499	1.124	1.499	1.499	1.999	1.499	1.999	1.499	1.999	1.999	2.374	1.999	2.374	LD	4 1/8	4 1/8	4 1/4	4 3/4	4 3/4	5	5 1/2	5 5/8							
C	3/8	1/2	3/8	1/2	3/8	1/2	1/2	5/8	1/2	5/8	1/2	5/8	5/8	3/4	5/8	3/4	MM (Rod Dia.)	5/8	1	5/8	1	5/8	1	1	1 3/8	1	1 3/8	1	1 3/8	1 3/4	1 3/8	1 3/4
D	1 1/2	7/8	1 1/2	7/8	1 1/2	7/8	7/8	1 7/32	7/8	1 7/32	7/8	1 7/32	1 1/8	1 1/2	1 1/8	1 1/2	P	2 5/16	2 5/16	2 7/16	2 9/16	2 9/16	2 13/16	3 3/16	3 5/16							
E	2	2 1/2	3	3 3/4	4 1/2	5 1/2	6 1/2	8 1/2	V	5/8	7/8	5/8	7/8	5/8	7/8	7/8	1	7/8	1	7/8	1	7/8	1	1	1 1/8	1	1 1/8					
EE	1/4*	1/4*	1/4*	1/2	1/2	1/2	3/4	3/4	Y	1 29/32	2 7/32	1 29/32	2 7/32	1 29/32	2 7/32	2 15/32	2 23/32	2 15/32	2 23/32	2 15/32	2 23/32	2 15/32	2 23/32	2 25/32	3 1/32	2 25/32	3 1/32					
G	1 1/2	1 1/2	1 1/2	1 3/4	1 3/4	1 3/4	2	2	ZB	4 5/8	5	4 5/8	5	4 3/4	5 1/8	5 5/8	5 7/8	5 5/8	5 7/8	5 5/8	5 7/8	5 7/8	6 1/8	6 5/8	6 7/8	6 3/4	7					
J	1	1	1	1 1/4	1 1/4	1 1/4	1 1/2	1 1/2	ZM	6 1/8	6 7/8	6 1/8	6 7/8	6 1/4	7	7 1/2	8	7 1/2	8	7 3/4	8 1/4	8 3/4	9 1/4	8 7/8	9 3/8							
K	7/16	15/32	15/32	9/16	9/16	3/4	3/4	7/8																								
KK	7/16-20	7/16-16	7/16-20	7/16-16	7/16-20	7/16-16	1-14	7/16-16	1-14	7/16-16	1-14	7/16-16	1-14	1 1/4-12	1-14	1 1/4-12																

*3/8" ports optional on 1 1/2", 2" and 2 1/2" bore cylinders.