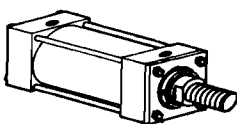
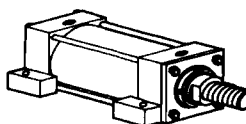
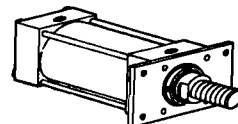
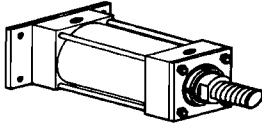
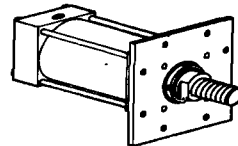
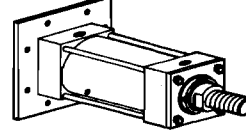
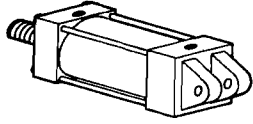
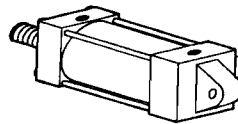
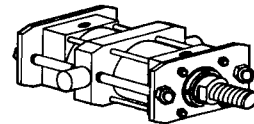
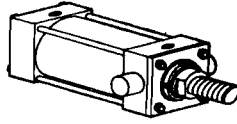
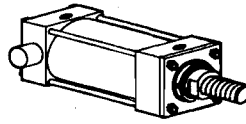
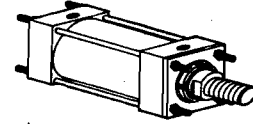
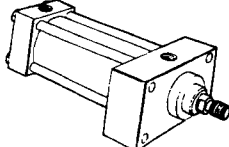
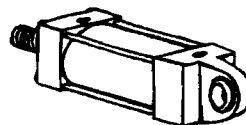
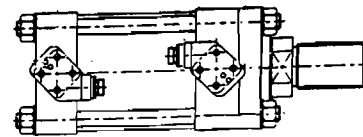
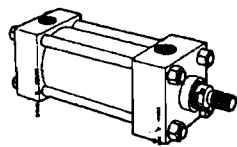
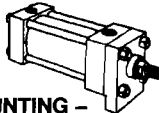
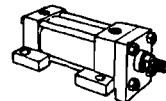
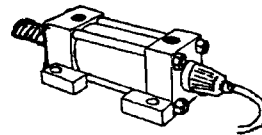


# Index to Mounting Styles

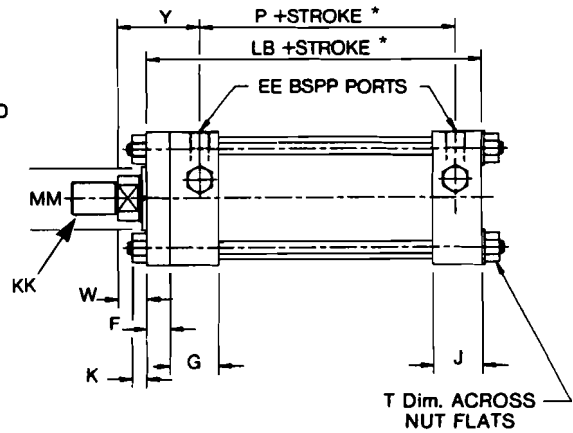
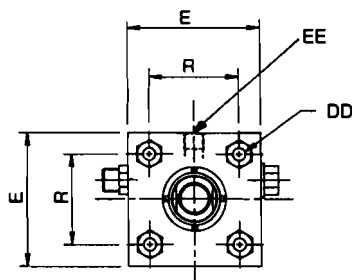
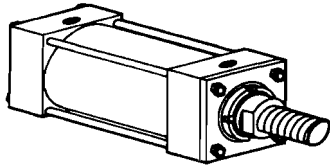
FOR ALL SIZES 38.1 to 203.2mm.

<p><b>BASIC CYLINDER — STYLE NM</b> (N.F.P.A. style MXO)</p>  <p>Pages 14, 15</p>	<p><b>SIDE MOUNTING — STYLE SL</b> (N.F.P.A. style MS2)</p>  <p>Pages 16, 17</p>	<p><b>RECTANGULAR FLANGE MOUNTING — STYLE RFH</b> (N.F.P.A. style MF1)</p>  <p>Pages 18, 19</p>
<p><b>RECTANGULAR FLANGE MOUNTING — STYLE RFC</b> (N.F.P.A. style MF2)</p>  <p>Pages 18, 19</p>	<p><b>SQUARE FLANGE MOUNTING — STYLE SFH</b> (N.F.P.A. style MF5)</p>  <p>Pages 18, 19</p>	<p><b>SQUARE FLANGE MOUNTING — STYLE SFC</b> (N.F.P.A. style MF6)</p>  <p>Pages 18, 19</p>
<p><b>FIXED CLEVIS MOUNTING — STYLE FCM</b> (N.F.P.A. style MP1)</p>  <p>Pages 22, 23</p>	<p><b>FIXED EYE MOUNTING — STYLE FEM</b> (N.F.P.A. style MP2)</p>  <p>Pages 22, 23</p>	<p><b>INTERMEDIATE TRUNNION MOUNTING — STYLE IT</b></p>  <p>If "CB" Alt. Cush. Req.</p> <p>Pages 20, 21</p>
<p><b>HEAD TRUNNION MOUNTING — STYLE HT</b> (N.F.P.A. style MT1)</p>  <p>Pages 20, 21</p>	<p><b>CAP TRUNNION MOUNTING — STYLE CT</b> (N.F.P.A. style MT2)</p>  <p>Pages 20, 21</p>	<p><b>EXTENDED TIE BOLT MOUNTING — STYLES TB, TC, TH</b> (N.F.P.A. styles MX1, MX2, MX3)</p>  <p>Pages 16, 17</p>
<p><b>HEAD RECTANGULAR MOUNTING — STYLE HR</b> (N.F.P.A. style ME5)</p>  <p>Page 24</p>	<p><b>SPHERICAL BEARING — STYLE SB</b></p>  <p>Pages 25, 26</p>	<p><b>PROXIMITY SWITCHES — STYLE PRX</b></p>  <p>Pages 29,30,31</p>
<p><b>TAPPED MOUNTING — STYLE NMT</b></p>  <p>Page 27</p>	<p><b>KEYED TAPPED MOUNTING — STYLE KT</b></p>  <p><b>KEYED SIDE LUG MOUNTING — STYLE KSL</b></p>  <p>Page 28</p>	<p><b>TEMPOSONIC SENSOR — STYLE LT</b></p>  <p>Pages 32, 33, 34, 35</p>

# Basic Cylinder

NO MOUNTING  
38.1 to 203.2mm bore sizes

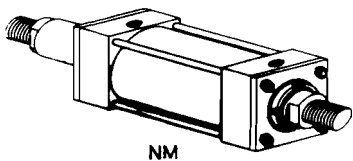
## SINGLE END CYLINDER — STYLE NM (N.F.P.A. style MXO)



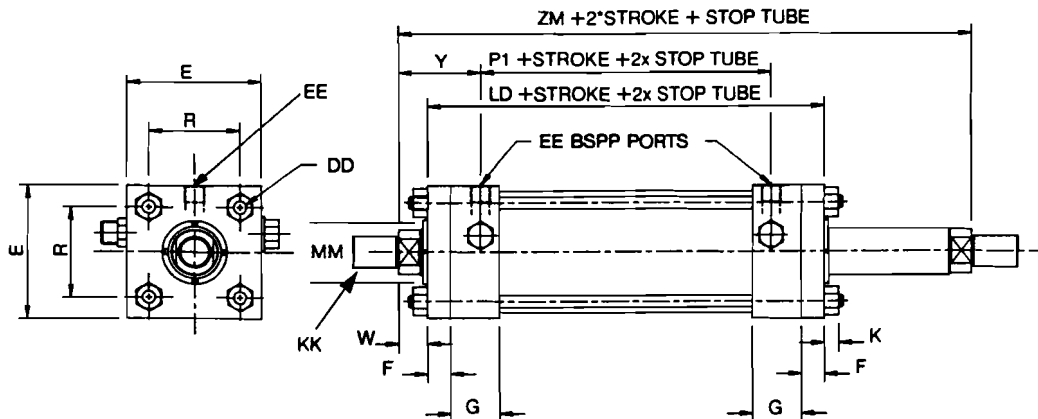
Refer Page 36 for Head End and Rod End detail.

\* Add stop tube if applicable.

## DOUBLE ENDED CYLINDER — STYLE NM



NM



Refer Page 36 for Head End and Rod End detail.

# Basic Cylinder

**No Mounting**

**38.1 to 203.2mm bore sizes**

Dim. BORE Ø	ROD Ø MM	D	DD	E	EE BSPP	F	G	J	K	KK (INCH) Class 2
38.1 (1.50")	15.88 (0.625") Std.	12.70	.375"-24	64	.50"	9.5	46.0	42.9	8.4	0.4375-20
	25.40 (1.000")	22.23								0.750-16
50.8 (2.00")	25.40 (1.000") Std.	22.23	.500"-20	77	.50"	15.9	49.3	42.9	11.2	0.750-16
	34.93 (1.375")	28.58								1.000-14
63.5 (2.50")	25.40 (1.000") Std.	22.23	.500"-20	89	.50"	15.9	49.3	42.9	11.2	0.750-16
	34.93 (1.375")	28.70								1.000-14
	44.45 (1.750")	38.10								1.250-12
82.6 (3.25")	34.93 (1.375") Std.	28.58	.625"-18	115	.75"	19.1	45.5	45.5	14.0	1.000-14
	44.45 (1.750")	38.10								1.250-12
	50.80 (2.000")	42.88								1.500-12
101.6 (4.00")	44.45 (1.750") Std.	38.10	.625"-18	127	.75"	22.2	45.5	45.5	14.0	1.250-12
	50.80 (2.000")	42.88								1.500-12
	63.50 (2.500")	52.37								1.875-12
127.0 (5.00")	50.80 (2.000") Std.	42.88	.875"-14	166	.75"	22.2	46.7	46.7	22.5	1.500-12
	63.50 (2.500")	52.37								1.875-12
	88.90 (3.500")	76.20								2.500-12
152.4 (6.00")	63.50 (2.500") Std.	52.37	1.000"-14	191	1.00"	25.4	53.1	53.1	25.2	1.875-12
	76.20 (3.000")	66.68								2.250-12
	101.60 (4.000")	85.73								3.000-12
177.8 (7.00")	76.20 (3.000") Std.	66.68	1.125"-12	216	1.25"	25.4	65.8	65.8	28.8	2.250-12
	101.60 (4.000")	85.73								3.000-12
203.2 (8.00")	88.90 (3.500") Std.	76.20	1.250"-12	242	1.50"	25.4	75.2	75.2	31.1	2.500-12
	101.60 (4.000")	85.73								3.000-12

**ADD STOP TUBE TO THESE DIMENSIONS  
2X FOR DOUBLE ENDED CYLINDER**

Dim. BORE Ø	ROD Ø MM	R	T	W	Y	LB	P	LD	P1	ZM			
38.1 (1.50")	15.88 (0.625") Std.	41.3	14.2	15.9	50.8	127.0	73.0	142.9	73.0	▲			
	25.40 (1.000")			25.4	60.3					193.7			
50.8 (2.00")	25.40 (1.000") Std.	52.1	19.1	19.1	60.3	133.4	73.0	155.6	73.0	193.7			
	34.93 (1.375")			25.4	66.7					206.4			
63.5 (2.50")	25.40 (1.000") Std.	64.8	19.1	19.1	60.3	136.5	76.2	158.8	76.2	196.8			
	34.93 (1.375")			25.4	66.7					209.6			
	44.45 (1.750")			31.8	73.0					222.3			
82.6 (3.25")	34.93 (1.375") Std.	82.6	23.9	22.2	66.7	158.8	92.1	184.2	95.3	228.5			
	44.45 (1.750")			28.6	73.0					241.3			
	50.80 (2.000")			31.8	76.2					247.7			
101.6 (4.00")	44.45 (1.750") Std.	97.0	23.9	25.4	73.0	168.3	98.4	196.9	101.6	247.7			
	50.80 (2.000")			28.6	76.3					253.6			
	63.50 (2.500")			34.9	82.6					266.7			
127.0 (5.00")	50.80 (2.000") Std.	125.7	33.3	28.6	77.0	181.0	110.3	209.6	112.7	266.7			
	63.50 (2.500")			34.9	83.3					279.3			
	88.90 (3.500")												
152.4 (6.00")	63.50 (2.500") Std.	145.5	38.1	31.8	86.5	212.7	128.6	238.1	128.6	301.6			
	76.20 (3.000")												
	101.60 (4.000")												
177.8 (7.00")	76.20 (3.000") Std.	167.1	42.9	31.8	94.5	241.3	141.3	266.7	141.3	330.2			
	101.60 (4.000")												
203.2 (8.00")	88.90 (3.500") Std.	190.4	47.8	31.8	100.0	266.7	155.6	292.1	155.6	355.6			
	101.60 (4.000")												

\* **NOTE:** Add twice Stop Tube length if Stop Tube is required at both ends.

When required at one end only specify the appropriate end in relation to the selected mounting style.

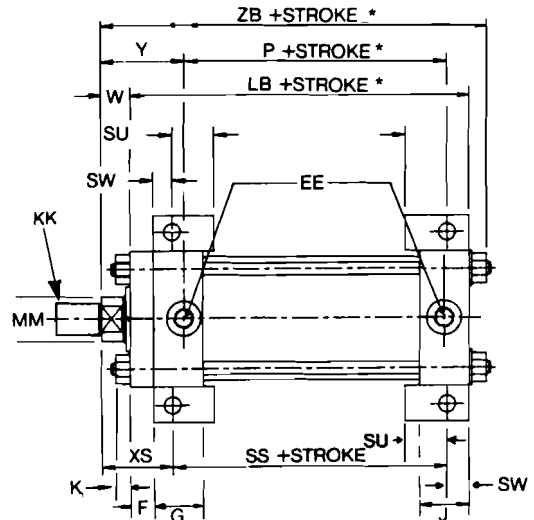
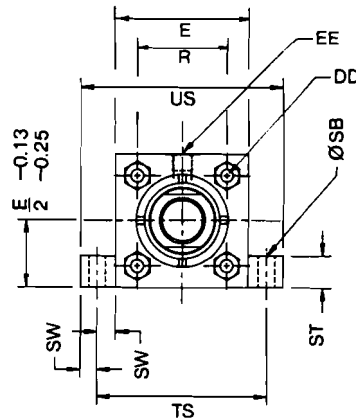
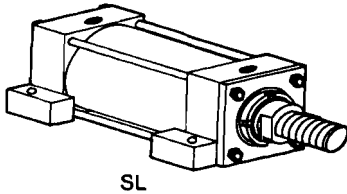
▲ Cylinder not available in double ended version with 15.88 rod.

# Side Lug and Extended Tie-Bolt Mountings

## TIE-BOLT MOUNTINGS

38.1 to 203.2mm bore sizes

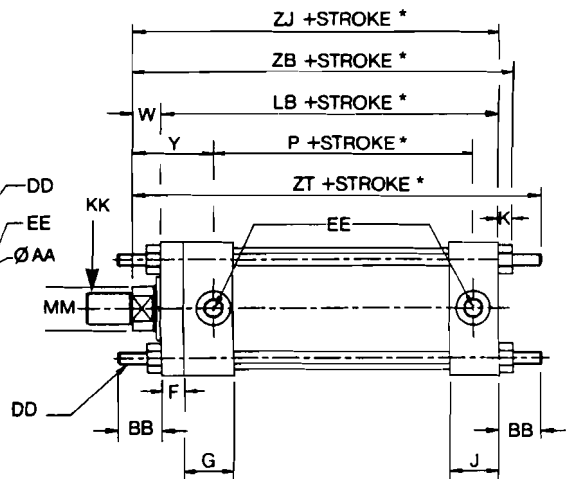
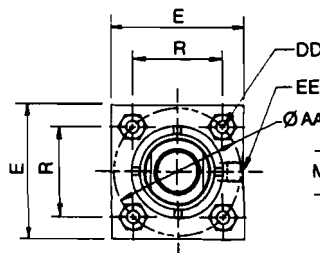
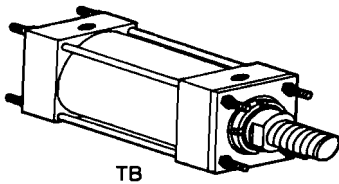
### SIDE LUG MOUNTING – STYLE SL (N.F.P.A. style MS2)



Refer Page 36 for Head End and Rod End detail.

\* Add stop tube if applicable.

### EXTENDED TIE-BOLT MOUNTINGS – STYLE TB, TC, TH (N.F.P.A. style MX1, MX2, MX3)



HEAD END EXTENSION = TH  
CAP END EXTENSION = TC  
HEAD PLUS CAP END EXTENSION = TB

Refer Page 36 for Head End and Rod End detail.

\* Add stop tube if applicable.

# Side Lug and Extended Tie-Bolt Mountings

38.1 to 203.2mm bore sizes

Dim. BORE Ø	ROD Ø MM	AA	BB	DD	E	EE BSPP	F	G	J	K	KK (INCH) Class 2	R	SB	ST
38.1 (1.50")	15.88 (0.625") Std.	58.4	34.9	.375"-24	64	.50"	9.5	46.0	42.9	8.4	0.4375-20	41.3	11.1	12.7
	25.40 (1.000")										0.750-16			
50.8 (2.00")	25.40 (1.000") Std.	73.7	46.0	.500"-20	77	.50"	15.9	49.3	42.9	11.2	0.750-16	52.1	14.3	19.1
	34.93 (1.375")										1.000-14			
63.5 (2.50")	25.40 (1.000") Std.	91.4	46.0	.500"-20	89	.50"	15.9	49.3	42.9	11.2	0.750-16	64.8	20.6	25.4
	34.93 (1.375")										1.000-14			
	44.45 (1.750")										1.250-12			
82.6 (3.25")	34.93 (1.375") Std.	116.8	58.7	.625"-18	114	.75"	19.1	45.5	45.5	14.0	1.000-14	82.6	20.6	25.4
	44.45 (1.750")										1.250-12			
	50.80 (2.000")										1.500-12			
101.6 (4.00")	44.45 (1.750") Std.	137.2	58.7	.625"-18	127	.75"	22.2	45.5	45.5	14.0	1.250-12	97.0	27.0	31.8
	50.80 (2.000")										1.500-12			
	63.50 (2.500")										1.875-12			
127.0 (5.00")	50.80 (2.000") Std.	177.8	80.9	.875"-14	166	.75"	22.2	46.7	46.7	22.5	1.500-12	125.7	27.0	31.8
	63.50 (2.500")										1.875-12			
	88.90 (3.500")										2.500-12			
152.4 (6.00")	63.50 (2.500") Std.	205.7	92.1	1.000"-14	191	1.00"	25.4	53.1	53.1	25.2	1.875-12	145.5	33.3	38.1
	76.20 (3.000")										2.250-12			
	101.60 (4.000")										3.000-12			
177.8 (7.00")	76.20 (3.000") Std.	236.2	104.8	1.125"-12	216	1.25"	25.4	65.8	65.8	28.8	2.250-12	167.1	39.7	44.5
	101.60 (4.000")										3.000-12			
203.2 (8.00")	88.90 (3.500") Std.	269.2	114.3	1.250"-12	242	1.50"	25.4	75.2	75.2	31.1	2.500-12	190.4	39.7	44.5
	101.60 (4.000")										3.000-12			

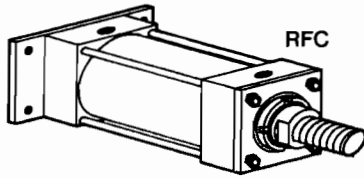
ADD STOP TUBE TO THESE DIMENSIONS

Dim. BORE Ø	ROD Ø MM	SU	SW	TS	US	W	XS	Y	LB	P	SS	ZB	ZJ	ZT
38.1 (1.50")	15.88 (0.625") Std.	23.8	9.5	82.6	101.6	15.9	35.0	50.8	127.0	73.0	98.4	150.5	142.9	177.8
	25.40 (1.000")					25.4	44.5	60.3				160.1	152.4	187.3
50.8 (2.00")	25.40 (1.000") Std.	31.8	12.7	101.6	127.0	19.1	47.6	60.3	133.4	73.0	92.1	166.8	155.6	201.6
	34.93 (1.375")					25.4	54.0	66.7				170.0	158.8	204.4
63.5 (2.50")	25.40 (1.000") Std.	46.0	17.4	123.8	158.8	19.1	52.4	60.3	136.5	76.2	85.7	166.8	155.6	201.6
	34.93 (1.375")					25.4	58.7	66.7				173.1	161.9	207.9
	44.45 (1.750")					31.8	65.1	73.0				179.5	168.3	214.3
82.6 (3.25")	34.93 (1.375") Std.	46.0	17.4	149.2	184.2	22.2	58.7	66.7	158.8	92.1	104.8	195.0	181.0	239.7
	44.45 (1.750")					28.6	65.0	73.0				201.4	187.4	246.0
	50.80 (2.000")					31.8	68.2	76.2				204.6	190.6	249.2
101.6 (4.00")	44.45 (1.750") Std.	57.0	22.2	171.5	215.9	25.4	69.9	73.0	168.3	98.4	101.6	207.7	193.7	252.4
	50.80 (2.000")					28.6	73.1	76.3				210.9	196.9	255.6
	63.50 (2.500")					34.9	79.4	82.6				217.2	203.2	261.9
127.0 (5.00")	50.80 (2.000") Std.	57.0	22.2	209.6	254.0	28.6	73.0	77.0	181.0	110.3	114.3	232.6	209.6	290.5
	63.50 (2.500")					34.9	79.4	83.3				238.9	215.9	296.9
	88.90 (3.500")					34.9	79.4	83.3				238.9	215.9	296.9
152.4 (6.00")	63.50 (2.500") Std.	69.8	28.6	247.7	304.8	31.8	85.7	86.5	212.7	128.6	130.2	270.3	244.5	336.6
	76.20 (3.000")					31.8	85.7	86.5				270.3	244.5	336.6
	101.60 (4.000")					31.8	85.7	86.5				270.3	244.5	336.6
177.8 (7.00")	76.20 (3.000") Std.	79.2	34.9	285.8	355.6	31.8	92.1	94.5	241.3	141.3	146.1	302.6	273.1	377.8
	101.60 (4.000")					31.8	92.1	94.5				302.6	273.1	377.8
203.2 (8.00")	88.90 (3.500") Std.	79.2	34.9	311.2	381.0	31.8	92.1	100.0	266.7	155.6	171.5	330.4	298.5	412.8
	101.60 (4.000")					31.8	92.1	100.0				330.4	298.5	412.8

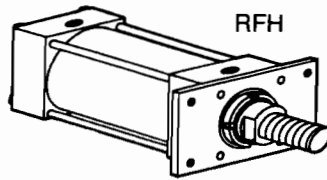
# Rectangular and Square Flange Mountings

38.1 to 203.2mm bore sizes

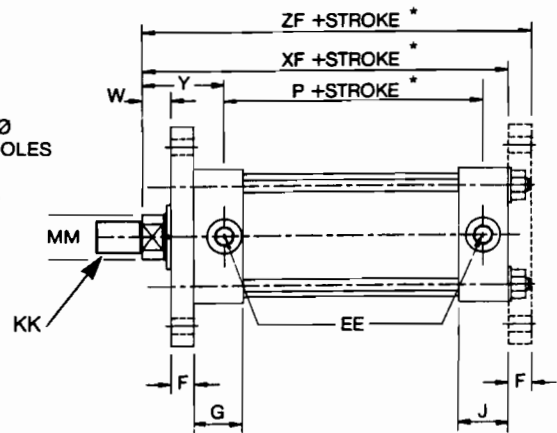
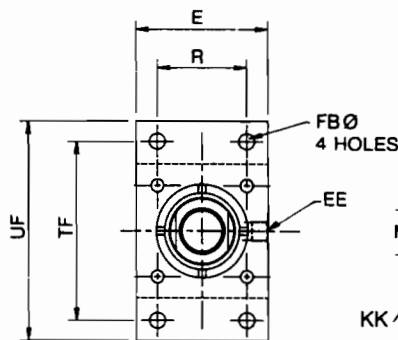
**RECTANGULAR FLANGE – STYLE RFH and RFC**  
(N.F.P.A. style MF1 and MF2)



RFC



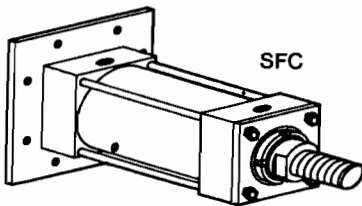
RFH



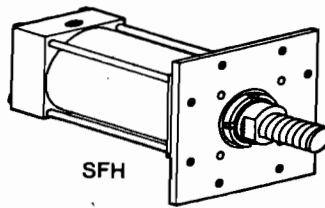
Refer Page 36 for Head End and Rod End detail.

\* Add stop tube if applicable.

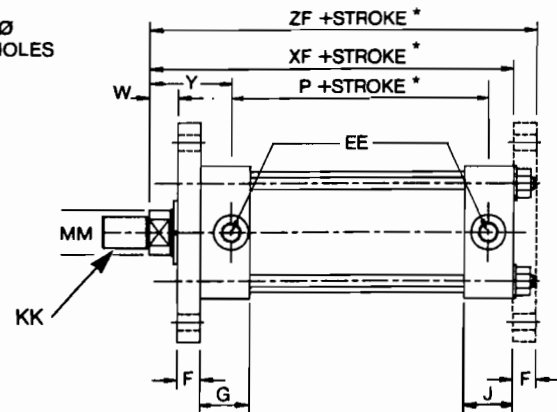
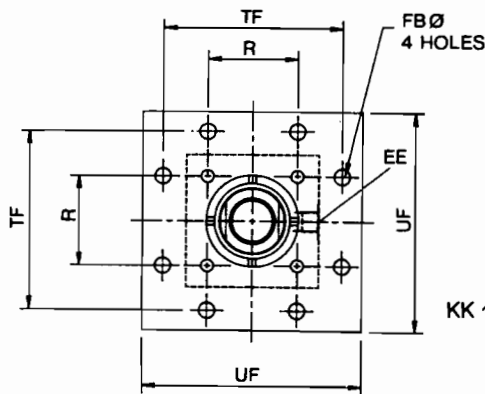
**SQUARE FLANGE – STYLE SFC and SFH**  
(N.F.P.A. style MF5 and MF6)



SFC



SFH



Refer Page 36 for Head End and Rod End detail.

\* Add stop tube if applicable.

# Rectangular and Square Flange Mountings

38.1 to 203.2mm bore sizes

Dim. BORE Ø	ROD Ø MM	D	DD	E	EE BSPP	F	FB	G	J	K	KK (INCH) Class 2	R
38.1 (1.50")	15.88 (0.625") Std.	12.70	.375"-24	64	.50"	9.5	11.1	46.0	42.9	8.4	0.4375-20	41.3
	25.40 (1.000")	22.23									0.750-16	
50.8 (2.00")	25.40 (1.000") Std.	22.23	.500"-20	77	.50"	15.9	14.3	49.3	42.9	11.2	0.750-16	52.1
	34.93 (1.375")	28.58									1.000-14	
63.5 (2.50")	25.40 (1.000") Std.	22.23	.500"-20	89	.50"	15.9	14.3	49.3	42.9	11.2	0.750-16	64.8
	34.93 (1.375")	28.70									1.000-14	
	44.45 (1.750")	38.10									1.250-12	
82.6 (3.25")	34.93 (1.375") Std.	28.58	.625"-18	115	.75"	19.1	17.5	45.5	45.5	14.0	1.000-14	82.6
	44.45 (1.750")	38.10									1.250-12	
	50.80 (2.000")	42.88									1.500-12	
101.6 (4.00")	44.45 (1.750") Std.	38.10	.625"-18	127	.75"	22.2	17.5	45.5	45.5	14.0	1.250-12	97.0
	50.80 (2.000")	42.88									1.500-12	
	63.50 (2.500")	52.37									1.875-12	
127.0 (5.00")	50.80 (2.000") Std.	42.88	.875"-14	166	.75"	22.2	23.8	46.7	46.7	22.5	1.500-12	125.7
	63.50 (2.500")	52.37									1.875-12	
	88.90 (3.500")	76.20									2.500-12	
152.4 (6.00")	63.50 (2.500") Std.	52.37	1.000"-14	191	1.00"	25.4	26.9	53.1	53.1	25.2	1.875-12	145.5
	76.20 (3.000")	66.68									2.250-12	
	101.60 (4.000")	85.73									3.000-12	
177.8 (7.00")	76.20 (3.000") Std.	66.68	1.125"-12	216	1.25"	25.4	30.1	65.8	65.8	28.8	2.250-12	167.1
	101.60 (4.000")	85.73									3.000-12	
203.2 (8.00")	88.90 (3.500") Std.	76.20	1.250"-12	242	1.50"	25.4	33.3	75.2	75.2	31.1	2.500-12	190.1
	101.60 (4.000")	85.73									3.000-12	

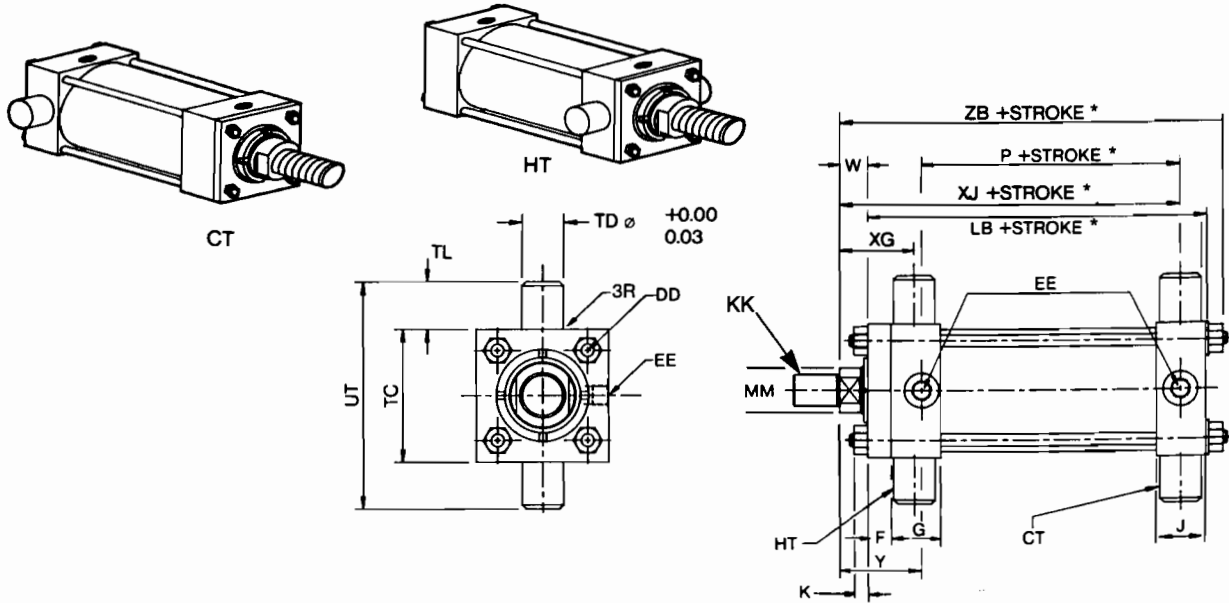
Dim. BORE Ø	ROD Ø MM	T	TF	UF	W	Y	ADD STOP TUBE TO THESE DIMENSIONS			MAXIMUM PRESSURES FOR MINIMUM FLANGE DEFLECTION		
							P	XF	ZF	MAX. PUSH MPa RFH - HEAD END	MAX. PULL MPa RFC - CAP END	
38.1 (1.50")	15.88 (0.625") Std.	14.2	87.3	108.0	15.9	50.8	73.0	142.9	152.4	10.3	10.3	
	25.40 (1.000")				25.4	60.3		152.4	161.9		20.7	
50.8 (2.00")	25.40 (1.000") Std.	19.1	104.8	130.2	19.1	60.3	73.0	152.4	168.3	13.8	17.9	
	34.93 (1.375")				25.4	66.7		158.8	174.6		20.68	
63.5 (2.50")	25.40 (1.000") Std.	19.1	117.5	142.9	19.1	60.3	76.2	155.6	171.5	11.0	11.0	
	34.93 (1.375")				25.4	66.7		161.9	177.8		13.8	20.68
	44.45 (1.750")				31.8	73.0		168.3	184.2			
82.6 (3.25")	34.93 (1.375") Std.	23.9	149.2	181.0	22.2	66.7	92.1	181.0	200.0	11.7	11.7	
	44.45 (1.750")				28.6	73.0		187.4	206.4		13.1	20.68
	50.80 (2.000")				31.8	76.2		190.5	209.6			
101.6 (4.00")	44.45 (1.750") Std.	23.9	161.9	193.7	25.4	73.0	98.4	193.7	215.9	13.1	13.1	
	50.80 (2.000")				28.6	76.3		196.9	219.1		13.8	20.68
	63.50 (2.500")				34.9	82.6		203.2	225.4			
127.0 (5.00")	50.80 (2.000") Std.	33.3	207.9	247.7	28.6	77.0	110.3	209.6	231.8	6.9	8.2	
	63.50 (2.500")				34.9	83.3		215.9	238.1		9.2	
	88.90 (3.500")				209.6	231.8		13.5				
152.4 (6.00")	63.50 (2.500") Std.	38.1	239.7	285.8	31.8	86.5	128.6	244.5	269.9	6.2	8.3	
	76.20 (3.000")				244.5	269.9		12.4				
	101.60 (4.000")				244.5	269.9		20.68				
177.8 (7.00")	76.20 (3.000") Std.	42.9	269.9	320.7	31.8	94.5	141.3	273.1	298.5	6.2	10.4	
	101.60 (4.000")				273.1	298.5		12.4				
203.2 (8.00")	88.90 (3.500") Std.	47.8	300.0	355.6	31.8	100.0	155.6	298.5	323.9	5.5	10.4	
	101.60 (4.000")				298.5	323.9		11.0				

# Trunnion Mountings

38.1 to 203.2mm bore sizes

## HEAD AND CAP TRUNNION – STYLE HT and CT (N.F.P.A. style MT1 and MT2)

MAXIMUM OPERATING PRESSURE  
13.79 MPa (2000 P.S.I.)

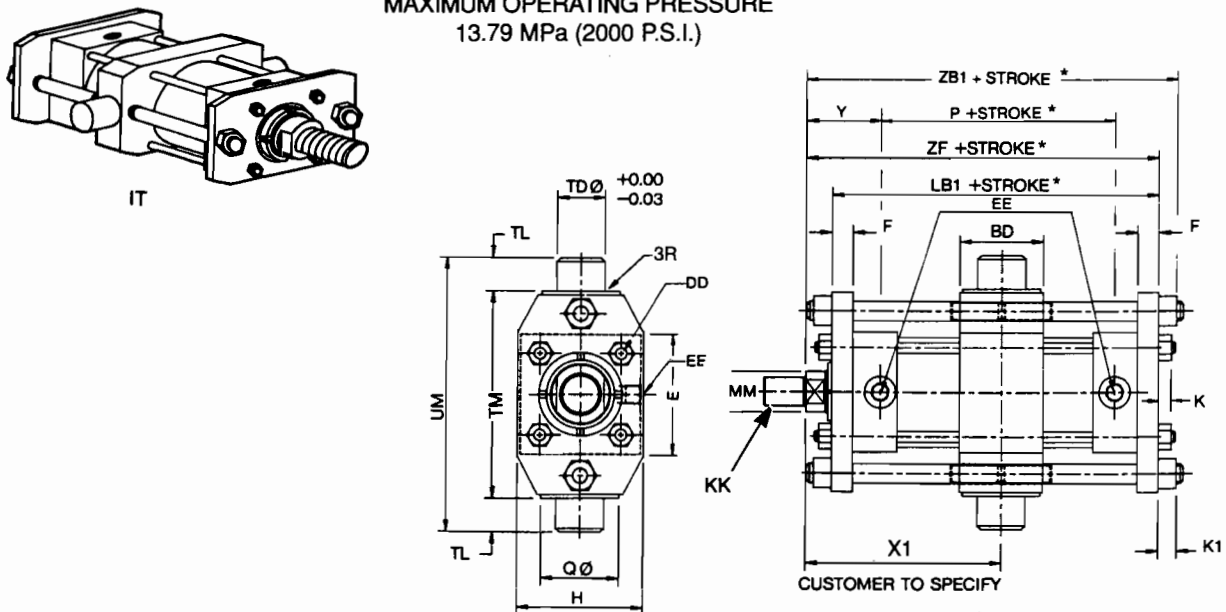


Refer Page 36 for Head End and Rod End detail.

\* Add stop tube if applicable.

## INTERMEDIATE TRUNNION – STYLE IT

MAXIMUM OPERATING PRESSURE  
13.79 MPa (2000 P.S.I.)



CUSTOMER TO SPECIFY

NOTE: X1 Dimension must be between  
X1 min and (X1 max + Stroke\*)

Minimum stroke of 25mm  
required for all cylinders.

Refer Page 36 for Head End and Rod End detail.

\* Add stop tube if applicable.

# Trunnion Mountings

## 38.1 TO 203.2MM BORE SIZES

DIM. BORE Ø		ROD Ø MM	BD	D	DD	P	EE BSPP	F	G	H	J	K	K1	KK (INCH) class 2	Q	R	T	TC
38.1 (1.50")	15.88 (0.625") Std.	41.3	12.70	.375"-24	73	.50"	9.5	46.0	69.9	42.9	8.4	14.0	0.4375-20	41.3	41.3	14.2	63.5	
	25.40 (1.000") Std.		22.23										0.750-16					
50.8 (2.00")	25.40 (1.000") Std.	50.8	22.23	.500"-20	73	.50"	15.9	49.3	82.6	42.9	11.2	16.3	0.750-16	50.8	52.1	19.1	76.2	
	34.93 (1.375")		28.58										1.000-14					
63.5 (2.50")	25.40 (1.000") Std.	50.8	22.23	.500"-20	76.2	.50"	15.9	49.3	96.5	42.9	11.2	16.3	0.750-16	50.8	64.8	19.1	88.9	
	34.93 (1.375")		28.70										1.000-14					
	44.45 (1.750")		38.10										1.250-12					
82.6 (3.25")	34.93 (1.375") Std.	60.3	28.58	.625"-18	92.1	.75"	19.1	55.5	127.0	55.5	14.0	19.1	1.000-14	63.5	82.6	23.9	114.3	
	44.45 (1.750")		38.10										1.250-12					
	50.8 (2.000")		42.88										1.500-12					
101.6 (4.00")	44.45 (1.750") Std.	60.3	38.10	.625"-18	98.4	.75"	22.2	55.5	147.3	55.5	14.0	19.1	1.250-12	66.7	97.0	23.9	127.0	
	50.80 (2.000")		42.88										1.500-12					
	63.50 (2.500")		52.57										1.875-12					
127.0 (5.00")	50.80 (2.000") Std.	66.7	42.88	.875"-14	110.3	.75"	22.2	56.7	184.2	56.7	22.5	26.9	1.500-12	69.9	125.7	33.3	165.1	
	63.50 (2.500")		52.37										1.875-12					
	88.90 (3.500")		76.20										2.500-12					
152.4 (6.00")	63.50 (2.500") Std.	76.2	52.37	1.000"-14	128.6	1.00"	25.4	63.0	228.6	63.0	25.2	32.5	1.875-12	82.6	145.5	38.1	190.5	
	76.20 (3.000")		66.68										2.250-12					
	101.60 (4.000")		85.73										3.000-12					
177.8 (7.00")	76.20 (3.000") Std.	87.4	66.68	1.125"-12	141.3	1.25"	25.4	75.7	265.1	75.7	28.8	32.5	2.250-12	98.4	167.1	42.9	215.9	
	101.60 (4.000")		85.73										3.000-12					
203.2 (8.00")	88.90 (3.500") Std.	95.3	76.20	1.250"-12	155.6	1.50"	25.4	85.3	304.8	85.3	31.1	43.4	2.500-12	101.6	190.4	47.8	241.3	
	101.60 (4.000")		85.73										3.000-12					

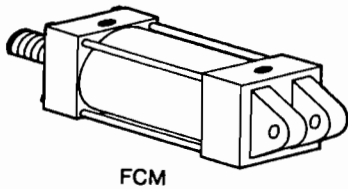
**ADD STOP TUBE TO THESE DIMENSIONS**

DIM. BORE Ø		ROD Ø MM	TD	TL	TM	UM	UT	W	XG	Y	X1 min.	ZF	X1 max.	LB	LB1	XJ	ZB	ZB1													
38.1 (1.50")	15.88 (0.625") Std.	25.4	25.4	114.3	165.1	114.3	15.9	47.7	50.8	92.0	152.4	79.4	127.0	136.5	123.9	150.5	166.4														
	25.40 (1.000") Std.																	25.4	57.2	60.3	102.0	161.9	88.9	133.4	160.1	175.9					
50.8 (2.00")	25.40 (1.000") Std.	34.93	34.9	127.1	196.9	146.1	19.1	57.2	60.3	110.0	168.3	84.2	133.4	149.3	133.4	163.7	184.7														
	34.93 (1.375")																	25.4	63.5	66.7	116.0	174.6	90.5	139.7	170.0	191.0					
63.5 (2.50")	25.40 (1.000") Std.	34.93	34.9	139.8	209.6	158.8	19.1	57.2	60.3	110.0	171.5	87.3	136.5	152.4	136.5	166.8	187.8														
	34.93 (1.375")																	25.4	63.5	66.7	116.0	177.8	93.6	142.8	173.1	194.1					
	44.45 (1.750")																	31.8	69.9	73.0	122.4	184.2	100.0	149.2	179.5	200.5					
82.6 (3.25")	34.93 (1.375") Std.	44.45	44.5	177.8	266.7	203.2	22.2	66.7	66.7	117.0	200.0	105.5	158.8	177.8	158.8	195.0	219.3														
	44.45 (1.750")																	28.6	73.9	73.0	123.0	206.4	111.8	165.1	201.4	225.6					
	50.80 (2.000")																	31.8	76.2	76.2	127.0	209.6	115.0	168.3	204.6	228.8					
101.6 (4.00")	44.45 (1.750") Std.	44.45	44.5	196.8	285.8	215.9	25.4	73.0	73.0	123.0	215.9	118.0	168.3	190.8	171.5	207.7	235.0														
	50.80 (2.000")																	28.6	76.3	76.3	126.5	219.1	121.3	174.1	210.9	238.1					
	63.50 (2.500")																	34.9	82.6	82.6	133.0	225.4	127.6	181.0	217.2	244.5					
127.0 (5.00")	50.80 (2.000") Std.	44.45	44.5	260.3	349.3	254.0	28.6	76.2	77.0	131.0	231.8	129.6	181.0	203.2	187.3	232.6	258.7														
	63.50 (2.500")																	34.9	82.6	83.3	137.0	238.1	135.9	193.7	238.9	265.0					
	88.90 (3.500")																														
152.4 (6.00")	63.50 (2.500") Std.	50.80	50.8	308.0	409.6	292.1	31.8	85.7	86.5	148.4	269.9	153.3	212.7	238.1	212.7	270.3	302.4														
	76.20 (3.000")																														
	101.60 (4.000")																														
177.8 (7.00")	76.20 (3.000") Std.	63.50	63.5	362.0	489.0	342.9	31.8	92.1	94.5	167.0	298.5	163.6	241.3	266.7	238.1	302.6	331.0														
	101.60 (4.000")																														
203.2 (8.00")	88.90 (3.500") Std.	76.20	63.5	425.5	552.5	393.7	31.8	95.3	100.0	180.0	323.9	175.7	266.7	292.1	260.4	330.4	367.3														
	101.60 (4.000")																														

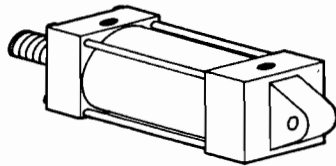
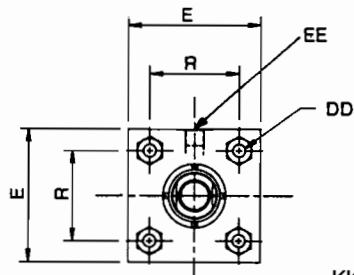
# Clevis Mountings

38.1 to 2302.mm bore sizes

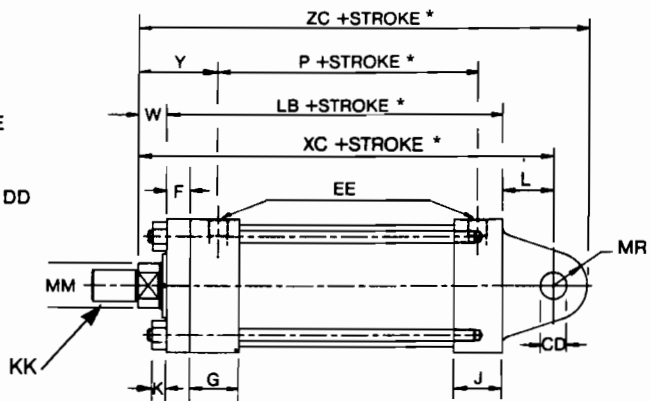
**FIXED CLEVIS MOUNTING – STYLE FCM and FEM  
(N.F.P.A. style MP1 and MP2)**



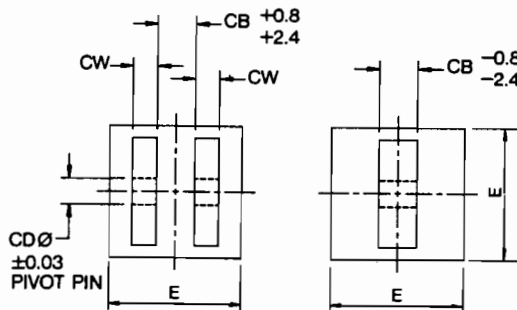
FCM



FEM



\* Add stop tube if applicable.



Refer Page 36 for Head End and Rod End detail.

# Clevis Mountings

## 38.1 to 203.2mm Bore Sizes

Dim. BORE Ø	ROD Ø MM	CB	CD	CW	DD	E	EE BSPP	F	G	J	K
38.1 (1.50")	15.88 (0.625") Std.	19.1	12.70	12.7	.375"-24	64	.50"	9.5	46.0	42.9	8.4
	25.40 (1.000")										
50.8 (2.00")	25.40 (1.000") Std.	31.8	19.05	15.9	.500"-20	77	.50"	15.9	49.3	42.9	11.2
	34.93 (1.375")										
63.5 (2.50")	25.40 (1.000") Std.	31.8	19.05	15.9	.500"-20	89	.50"	15.9	49.3	42.9	11.2
	34.93 (1.375")										
	44.45 (1.750")										
82.6 (3.25")	34.93 (1.375") Std.	38.1	25.40	19.1	.625"-18	115	.75"	19.1	45.5	45.5	14.0
	44.45 (1.750")										
	50.80 (2.000")										
101.6 (4.00")	44.45 (1.750") Std.	50.8	34.93	25.4	.625"-18	127	.75"	22.2	45.5	45.5	14.0
	50.80 (2.000")										
	63.50 (2.500")										
127.0 (5.00")	50.80 (2.000") Std.	63.5	44.45	31.8	.875"-14	166	.75"	22.2	46.7	46.7	22.5
	63.50 (2.500")										
	88.90 (3.500")										
152.4 (6.00")	63.50 (2.500") Std.	63.5	50.80	31.8	1.000"-14	191	1.00"	25.4	53.1	53.1	25.2
	76.20 (3.000")										
	101.60 (4.000")										
177.8 (7.00")	76.20 (3.000") Std.	76.2	63.50	38.1	1.125"-12	216	1.25"	25.4	65.8	65.8	28.8
	101.60 (4.000")										
203.2 (8.00")	88.90 (3.500") Std.	76.2	76.20	38.1	1.250"-12	242	1.50"	25.4	75.2	75.2	31.1
	101.60 (4.000")										

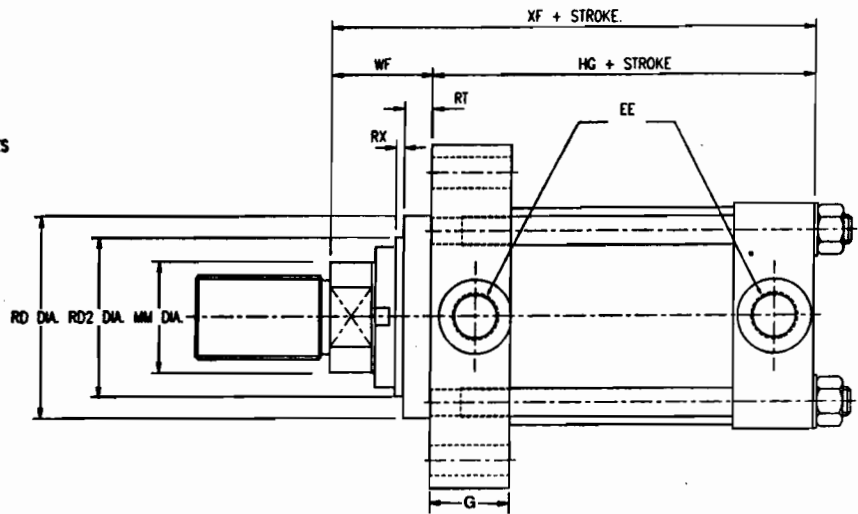
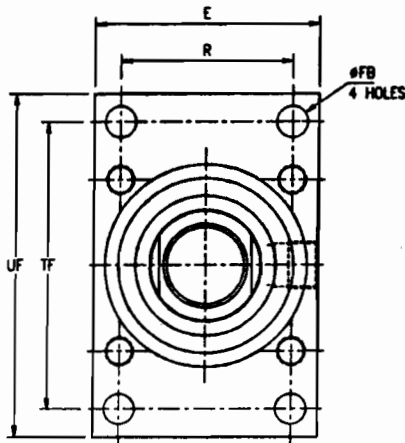
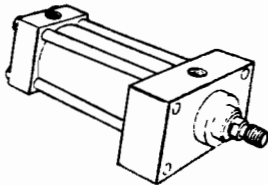
Dim. BORE Ø	ROD Ø MM	KK (INCH) class 2	L	MR	R	W	Y	ADD STOP TUBE TO THESE DIMENSIONS			
								LB	P	XC	ZC
38.1 (1.50")	15.88 (0.625") Std.	0.4375-20	19.1	12.7	41.3	15.9	50.8	127.0	73.0	162.0	174.7
	25.40 (1.000")	0.750-16				25.4	60.3			171.5	184.2
50.8 (2.00")	25.40 (1.000") Std.	0.750-16	31.8	19.1	52.1	19.1	60.3	133.4	73.0	184.2	203.3
	34.93 (1.375")	1.000-14				25.4	66.7			190.5	209.6
63.5 (2.50")	25.40 (1.000") Std.	0.750-16	31.8	19.1	64.8	19.1	60.3	136.5	76.2	187.3	206.4
	34.93 (1.375")	1.000-14				25.4	66.7			193.7	212.8
	44.45 (1.750")	1.250-12				31.8	73.0			200.0	219.1
82.6 (3.25")	34.93 (1.375") Std.	1.000-14	38.1	25.4	82.6	22.2	66.7	158.8	92.1	219.1	244.5
	44.45 (1.750")	1.250-12				28.6	73.0			225.2	250.6
	50.80 (2.000")	1.500-12				31.8	76.2			228.6	254.0
101.6 (4.00")	44.45 (1.750") Std.	1.250-12	54.0	34.9	97.0	25.4	73.0	168.3	98.4	247.7	282.6
	50.80 (2.000")	1.500-12				28.6	76.3			250.9	285.8
	63.50 (2.500")	1.875-12				34.9	82.6			257.2	292.1
127.0 (5.00")	50.80 (2.000") Std.	1.500-12	57.2	44.5	125.7	28.6	77.0	181.0	110.3	266.7	311.2
	63.50 (2.500")	1.875-12				34.9	83.3			273.1	317.6
	88.90 (3.500")	2.500-12									
152.4 (6.00")	63.50 (2.500") Std.	1.875-12	63.5	50.8	145.5	31.8	86.5	212.7	128.6	308.0	358.8
	76.20 (3.000")	2.250-12									
	101.60 (4.000")	3.000-12									
177.8 (7.00")	76.20 (3.000") Std.	2.250-12	76.2	63.5	167.1	31.8	94.5	241.3	141.3	349.3	412.8
	101.60 (4.000")	3.000-12									
203.2 (8.00")	88.90 (3.500") Std.	2.500-12	82.3	69.9	190.4	31.8	100.0	266.7	155.6	381.0	450.9
	101.60 (4.000")	3.000-12									

# Head Rectangular Mountings

38.1 to 203.2mm bore sizes

Head Rectangular Mounting – Style HR  
(N.F.P.A. style ME5)

\* Add stop tube if applicable.



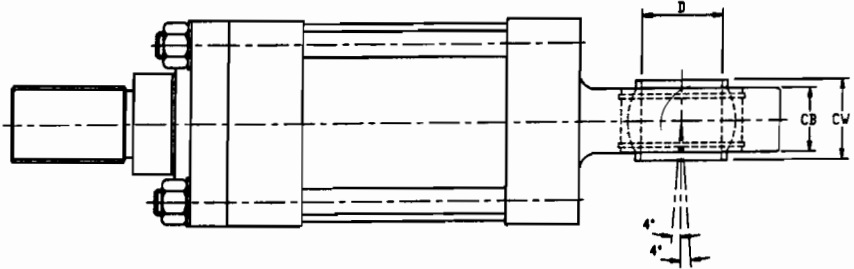
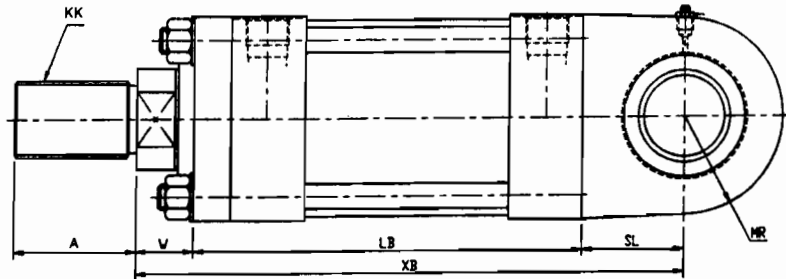
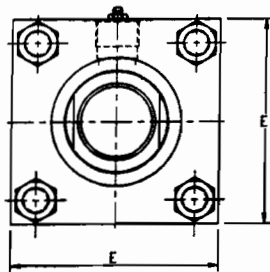
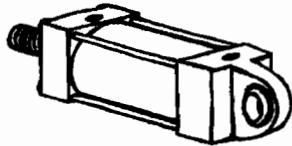
BORE Ø	ROD Ø MM	E	R	UF	TF	FB	EE BSP	RD	RT	RX	RD <sup>2</sup>	WF	HG	XF	G
38.1 (1.50")	15.88 (.625")	64	41.3	108.0	87.3	11.1	.50"	54.0	9.5	0	0	25.4	117.5	142.9	46.0
	63.5							9.5	34.9			152.4			
50.8 (2.00")	25.40 (1.00")	77	52.1	130.2	104.8	14.3"	.50"	63.5	9.5	0	0	34.9	117.5	152.4	49.3
	76.2							9.5	6.4			64.0		41.3	
63.5 (2.50")	25.40 (1.00")	89	64.8	142.9	117.5	14.3	.50"	63.5	15.9	0	0	34.9	120.7	155.6	49.3
	76.2							15.9	0			41.3		161.9	
	88.9							9.5	6.4			73.5		47.6	
82.6 (3.25")	34.93 (1.375")	115	82.6	181.0	149.2	17.5	.75"	76.2	15.9	0	0	41.3	139.7	181.0	45.5
	88.9							15.9	0			47.6		187.4	
	101.6							15.9	3.2			86.2		50.8	
101.6 (4.00")	44.45 (1.750")	127	97.0	193.7	161.9	17.5	.75"	88.9	15.9	0	0	47.6	146.0	193.7	45.5
	101.6							19.1	0			50.8		196.9	
	114.3							15.9	6.3			98.9		57.2	
127.0 (5.00")	50.8 (2.00")	166	125.7	247.7	207.9	23.8	.75"	101.6	19.1	0	0	50.8	158.7	209.6	46.7
	114.3							22.2	0			57.2		215.9	
	146.1							15.9	6.4			126.0		57.2	
152.4 (6.00")	63.5 (2.50")	191	145.5	285.8	239.7	26.9	1.00"	114.3	22.2	0	0	57.2	187.3	244.5	53.1
	133.4							22.2	0			57.2		215.9	
	165.1							25.4	0			57.2		215.9	
177.8 (7.00")	76.2 (3.00")	216	167.1	320.7	269.9	30.1	1.25"	133.4	22.2	0	0	57.2	215.9	273.1	65.8
	165.1							25.4	0			57.2		215.9	
	146.1							22.2	0			57.2		215.9	
203.2 (8.00")	88.9 (3.50")	242	190.1	355.6	300.0	33.3	1.50"	146.1	22.2	0	0	57.2	241.3	298.5	75.2
	165.1							25.4	0			57.2		241.3	

Refer Page 36 for Rod End detail.  
Other dimensions not shown as per "NM" mount page 14.

# Spherical Bearing Mounting

38.1 to 152.4mm bore sizes

**CAP END**  
Spherical bearing mounting style SB  
(ISO 6124/2)



BORE Ø mm inch	ROD Ø mm inch	CB	CW h12	D H7	E	LB	MR	SL	W	XB	KK + A Thread* to suit Spherical Bearing
38.1 (1.50")	25.40 (1.000")	18	20.00	20.00	64	127.0	25	30	25.4	182.5	M16 x 1.5 x 21
50.8 (2.00")	25.40 (1.000")	22	25.00	25.00	77	133.4	31	30	19.1	182.5	M20 x 1.5 x 27
	34.93 (1.375")	22	25.00	25.00	77	133.4	31	30	25.4	188.8	
63.5 (2.50")	34.93 (1.375")	28	32.00	32.00	89	136.5	38	49	25.4	210.8	M27 x 2 x 35
	44.45 (1.750")	28	32.00	32.00	89	136.5	38	49	31.8	217.2	
82.6 (3.25")	44.45 (1.750")	35	40.00	40.00	115	158.8	50	50	28.6	237.4	M33 x 2 x 45
	50.80 (2.000")	35	40.00	40.00	115	158.8	50	50	31.8	240.6	
101.6 (4.00")	50.80 (2.000")	40	50.00	50.00	127	168.3	61	63	28.6	259.9	M42 x 2 x 55
	63.50 (2.500")	40	50.00	50.00	127	168.3	61	63	34.9	266.2	
127.0 (5.00")	63.50 (2.500")	52	63.00	63.00	166	181.0	71	67	34.9	282.9	M48 x 2 x 62
	88.90 (3.500")	52	63.00	63.00	166	181.0	71	67	34.9	282.9	
152.4 (6.00")	101.60 (4.000")	66	80.00	80.00	191	212.7	90	92	31.8	358.3	M64 x 3 x 84

Refer Page 36 for Head End dimensions and Std. Rod End detail.

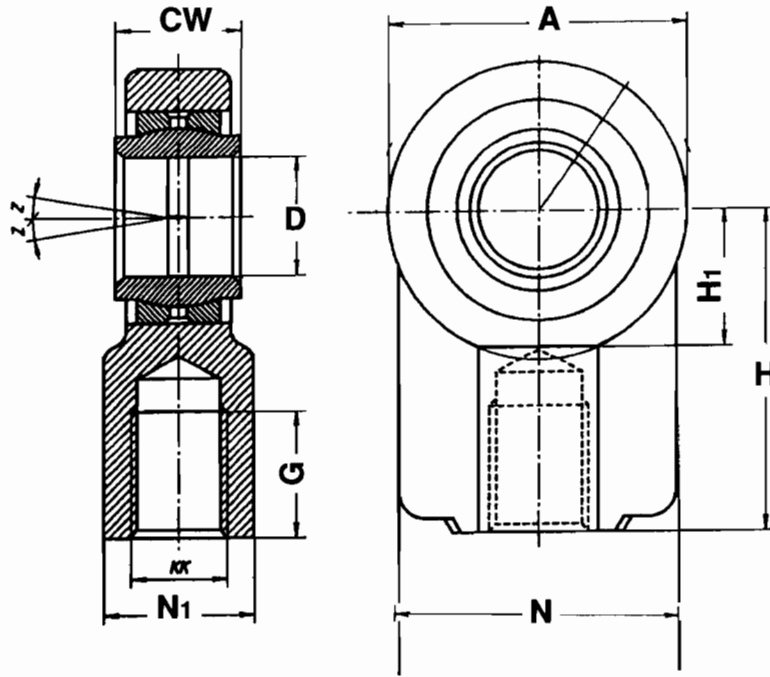
Other dimensions not shown as per "NM" mount page 14.

\* "F" in model code shown. Code "S" for standard thread as per page 36.

# Spherical Bearing – Rod End

38.1 to 152.4mm bore sizes

Spherical bearing – Rod End  
(ISO 6982)



Type	Basic load Rating Dynamic	D H7 <sup>2)</sup>	CW h12 <sup>2)</sup>	KK	G min.	H	H <sub>1</sub>	A max.	N	N <sub>1</sub>	Part No.
12	10 000	12	12	M12 x 1.25	17	38	14	32	32	16	02-327072
16	17 500	16	16	M14 x 1.5	19	44	18	40	40	21	02-327073
20	30 000	20	20	M16 x 1.5	23	52	22	50	47	25	02-327000
25	48 000	25	25	M20 x 1.5	29	65	27	62	54	30	02-327001
32	65 000	32	32	M27 x 2	37	80	32	76	66	38	02-327074
40	100 000	40	40	M33 x 2	46	97	41	97	80	47	02-327075
50	156 000	50	50	M42 x 2	57	120	50	118	96	58	02-327002
63	255 000	63	63	M48 x 2	64	140	64	142	114	70	02-327076
80	400 000	80	80	M64 x 3	86	180	78	180	148	90	02-327003

1. CETOP Recommendation RDSPH
2. See ISO 286-2.
3. Dimensions of the bearing and tilting angle Z are in accordance with ISO 6124-2.

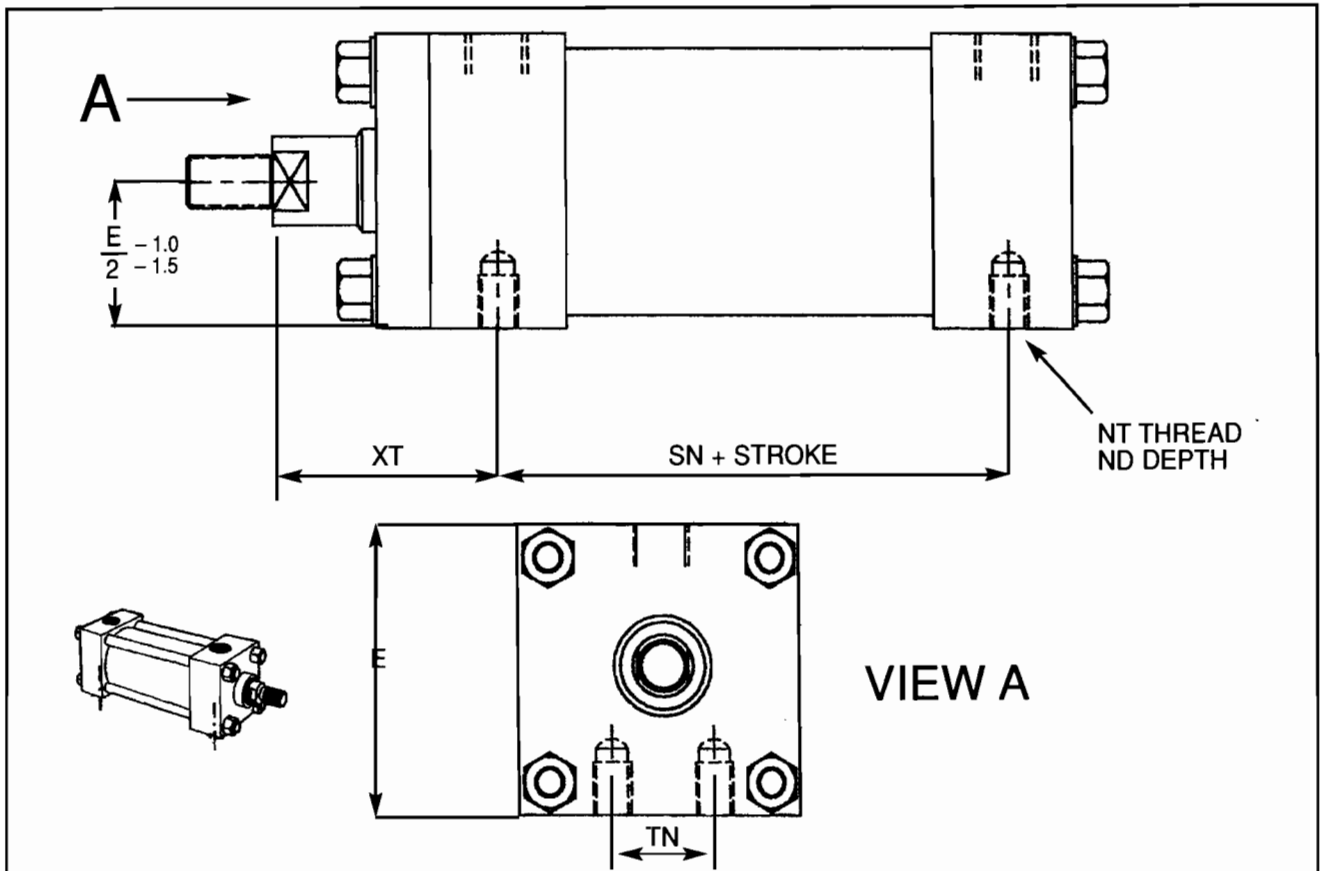
N = .2248Lbs

To achieve optimum cylinder performance and life spherical bearings have to be torqued against piston rod shoulder.

Metric diameter clevis pins are available on request.

# Tapped Mountings – Style NMT

(NFPA Style MS4)

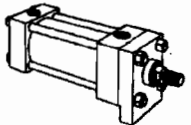


BORE Ø	DIM	ROD Ø MM	SN	TN	XT	NT UNF	ND	E	$\frac{E}{2}$
38.1 (1.50")		15.88 (0.625")	73.0	19.1	50.8	3/8"-24	10	63.5	31.75
		25.40 (1.000")	73.0	19.1	60.3	3/8"-24	10	63.5	31.75
50.8 (2.00")		25.40 (1.000")	73.0	23.8	60.3	1/2"-20	12	76.2	38.10
		34.93 (1.375")	73.0	23.8	66.7	1/2"-20	12	76.2	38.10
63.5 (2.50")		25.40 (1.000")	76.2	33.3	60.3	5/8"-18	13	88.9	44.45
		34.93 (1.375")	76.2	33.3	66.7	5/8"-18	13	88.9	44.45
		44.45 (1.750")	76.2	33.3	73.0	5/8"-18	13	88.9	44.45
82.6 (3.25")		34.93 (1.375")	88.9	38.1	69.9	3/4"-16	18	114.3	57.15
		44.45 (1.750")	88.9	38.1	76.2	3/4"-16	18	114.3	57.15
		50.80 (2.000")	88.9	38.1	79.4	3/4"-16	18	114.3	57.15
101.6 (4.00")		44.45 (1.750")	95.3	52.4	76.2	1"-12	19	127.0	63.50
		50.80 (2.000")	95.3	52.4	79.5	1"-12	19	127.0	63.50
		63.50 (2.500")	95.3	52.4	85.7	1"-12	19	127.0	63.50
127.0 (5.00")		50.80 (2.000")	108.0	74.6	79.4	1"-12	25	165.1	82.55
		63.50 (2.500")	108.0	74.6	85.7	1"-12	25	165.1	82.55
		88.90 (3.500")	108.0	74.6	85.7	1"-12	25	165.1	82.55
152.4 (6.00")		63.50 (2.500")	130.2	84.1	88.9	1 1/4"-12	32	190.5	95.25
		76.20 (3.000")	130.2	84.1	88.9	1 1/4"-12	32	190.5	95.25
		101.60 (4.000")	130.2	84.1	88.9	1 1/4"-12	32	190.5	95.25
177.8 (7.00")		76.20 (3.000")	149.2	95.3	96.8	1 1/2"-12	32	215.9	107.95
		101.60 (4.000")	149.2	95.3	96.8	1 1/2"-12	32	215.9	107.95
203.2 (8.00")		88.90 (3.500")	168.3	108.0	96.8	1 1/2"-12	40	241.3	120.65
		101.60 (4.000")	168.3	108.0	96.8	1 1/2"-12	40	241.3	120.65

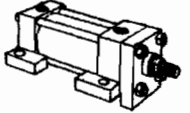
Refer Page 36 for Rod detail.

Other dimensions not shown as per "NM" mount page 14.  
Optional UNC ports available (Consult Eaton for details).

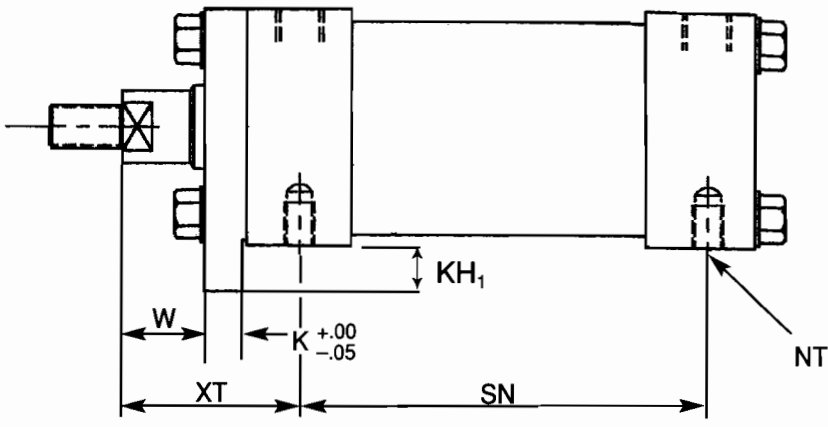
# Keyed Tapped Mounting – Style KT/KSL

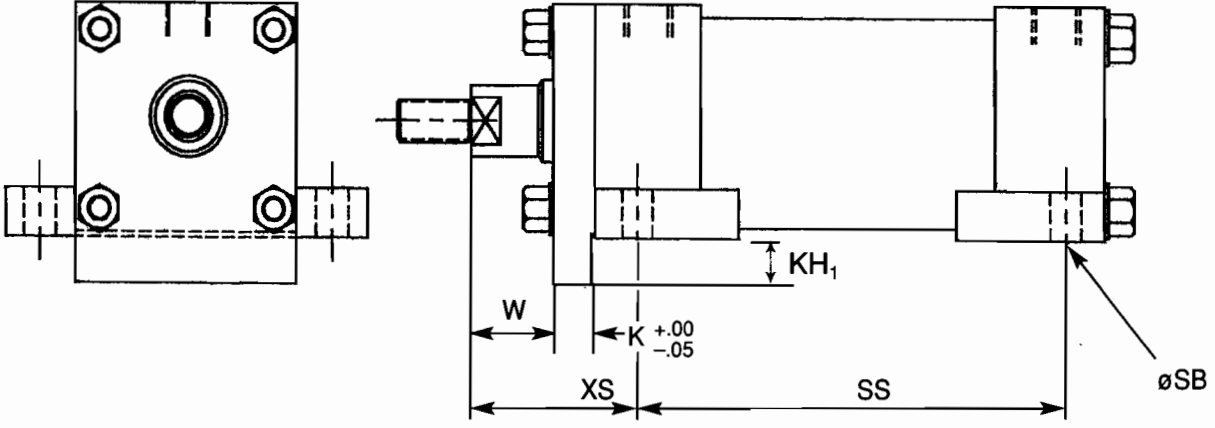


Keyed Tapped – Style KT



Keyed Side Lug – Style KSL





BORE Ø	DIM	ROD Ø MM	W	K	KH1	XT	SN	NT UNF	XS	SS	SB
38.1 (1.50")		15.88 (.625")	15.9	9.17	4.5	50.8	73.0	3/8"-24	35.0	98.4	11.1
		25.40 (1.000")	25.4	9.17	4.5	60.3	73.0	3/8"-24	44.5		
50.8 (2.00")		25.40 (1.000")	19.1	15.5	7.5	60.3	73.0	1/2"-20	47.6	92.1	14.3
		34.93 (1.375")	25.4	15.5	7.5	66.7	73.0	1/2"-20	54.0		
63.5 (2.50")		25.40 (1.000")	19.1	15.5	7.5	60.3	76.2	5/8"-18	52.4	85.7	20.6
		34.93 (1.375")	25.4	15.5	7.5	66.7	76.2	5/8"-18	58.7		
		44.45 (1.750")	31.8	15.5	7.5	73.0	76.2	5/8"-18	65.1		
82.6 (3.25")		34.93 (1.375")	22.2	18.7	9.5	69.9	88.9	3/4"-16	58.7	104.8	20.6
		44.45 (1.750")	28.6	18.7	9.5	76.2	88.9	3/4"-16	65.0		
		50.80 (2.000")	31.8	18.7	9.5	79.4	88.9	3/4"-16	68.2		
101.6 (4.00")		44.45 (1.750")	25.4	21.8	10.0	76.2	95.3	1"-12	69.9	101.6	27.0
		50.80 (2.000")	28.6	21.8	10.0	79.5	95.3	1"-12	73.1		
		63.50 (2.500")	34.9	21.8	10.0	85.7	95.3	1"-12	79.4		
127.0 (5.00")		50.80 (2.000")	28.6	21.8	10.0	79.4	108.0	1"-12	73.0	114.3	27.0
		63.50 (2.500")	34.9	21.8	10.0	85.7	108.0	1"-12	79.4		
		88.90 (3.500")	34.9	21.8	10.0		108.0	1"-12	79.4		
152.4 (6.00")		63.50 (2.500")	31.8	25.0	12.5	88.9	130.2	1 1/4"-12	85.7	130.2	33.3
		76.20 (3.000")	31.8	25.0	12.5		130.2	1 1/4"-12	85.7		
		101.60 (4.000")	31.8	25.0	12.5		130.2	1 1/4"-12	85.7		
177.8 (7.00")		76.20 (3.000")	31.8	25.0	12.5	96.8	149.2	1 1/2"-12	92.1	146.1	39.7
		101.60 (4.000")	31.8	25.0	12.5		149.2	1 1/2"-12	92.1		
203.2 (8.00")		88.90 (3.500")	31.8	25.0	12.5	96.8	168.3	1 1/2"-12	92.1	171.5	39.7
		101.60 (4.000")	31.8	25.0	12.5		168.3	1 1/2"-12	92.1		

Refer Page 36 for Rod detail.  
 Other dimensions not shown as per "NM" mount page 14.  
 Optional UNC parts available.

# Cylinder Accessories

## ACCESSORY LOAD CAPACITY

All accessories have been load rated for your convenience. The load capacity in kN shown on pages 26 and 27 is the recommended maximum load for the particular accessory based on a 4:1 design factor in tension. (Pivot pin is rated in shear).

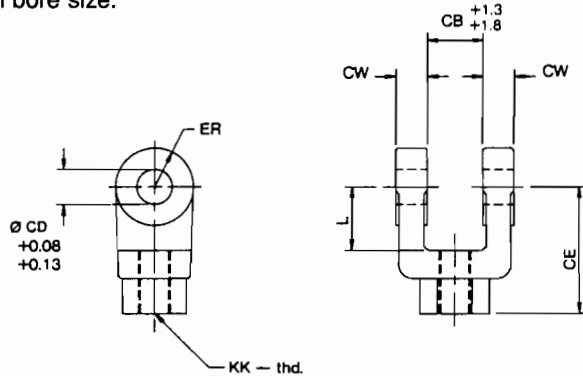
In all cases, prior to specifying an accessory, compare the actual load or the tension (pull) force at the maximum operating pressure of the cylinder with the load capacity of the accessory. Pin size of rod female clevis or female eye should be at least equal in diameter to the cap fixed clevis pin for any given bore size.

## Rod End Accessories

Accessories offered for the rod end of the cylinder include female clevis, eye bracket, female eye, clevis bracket and pivot pin.

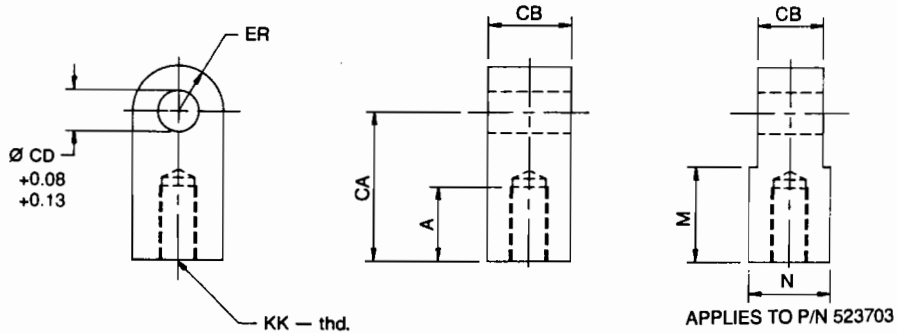
### FEMALE CLEVIS

To achieve optimum cylinder performance and life female clevises and eyes have to be torqued against piston rod shoulder.



PART No.	918126	980909	980910	980911	980912	980913	980914	980915	523702
Dim.									
CB	19.1	31.8	38.1	50.8	63.5	63.5	76.2	76.2	76.2
CDØ	12.7	19.05	25.4	34.93	44.45	50.8	63.5	76.2	76.2
CE	38.1	60.3	79.4	104.8	114.3	139.7	165.1	171.5	187.5
CW	12.7	15.9	19.1	25.4	31.8	31.8	38.1	38.1	38.1
ER	12.7	19.1	25.4	35.1	44.5	50.8	63.5	76.2	76.2
KKthd class 2	.4375"-20	.750"-16	1.000"-14	1.250"-12	1.500"-12	1.875"-12	2.250"-12	2.500"-12	3.000"-12
L	19.1	31.8	38.1	53.8	57.2	63.5	76.2	82.6	82.6
LOAD - kN max	19.3	43.39	87.94	137.29	188.18	315.7	452.78	504.42	581.06

### FEMALE EYE



PART No.	918127	980901	980902	980903	980904	980905	980906	980907	523703
Dim.									
A	19.1	30.0	42.7	51.0	57.2	76.2	90.4	89.7	104.9
CA	38.1	52.4	71.4	87.3	101.6	127.0	147.6	155.6	196.9
CB	19.1	31.8	38.1	50.8	63.5	63.5	76.2	76.2	76.2
CDØ	12.7	19.05	25.4	34.93	44.45	50.8	63.5	76.2	76.2
ER	12.7	19.0	25.4	34.9	44.4	50.8	63.5	76.2	69.9
KKthd class 2	.4375"-20	.750"-16	1.000"-14	1.250"-12	1.500"-12	1.875"-12	2.250"-12	2.500"-12	3.000"-12
M	---	---	---	---	---	---	---	---	123.8
N	---	---	---	---	---	---	---	---	108.0
LOAD - kN max.	22.73	43.39	87.94	137.29	188.18	315.70	452.78	504.42	581.06