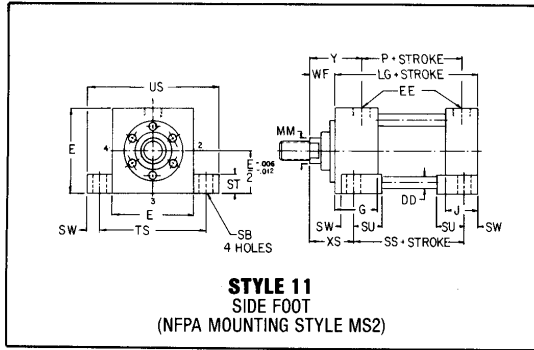


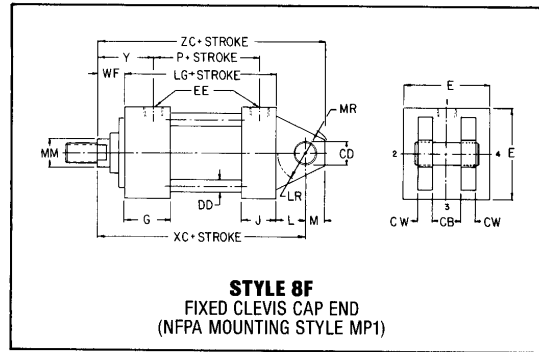


**SIDE FOOT, CLEVIS AND DOUBLE END CYLINDERS
10" & 12" BORE SERIES HP HIGH PRESSURE HYDRAULIC CYLINDERS**



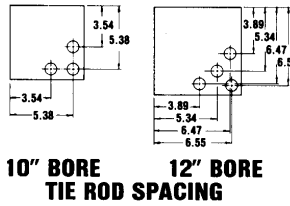
STYLE 11
SIDE FOOT
(NFPA MOUNTING STYLE MS2)

Standard Port location is Position 1.
Standard Cushion location is Position 2.

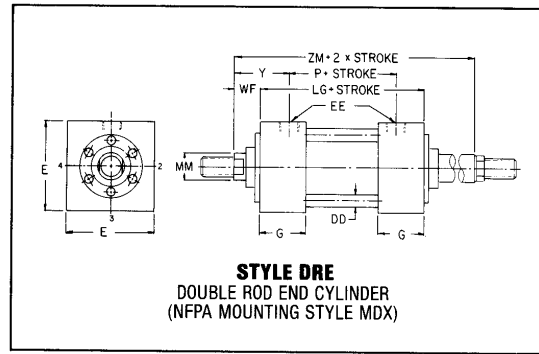


STYLE 8F
FIXED CLEVIS CAP END
(NFPA MOUNTING STYLE MP1)

Standard Port location is Position 1.
Standard Cushion location is Position 2.



10" BORE
12" BORE
TIE ROD SPACING



STYLE DRE
DOUBLE ROD END CYLINDER
(NFPA MOUNTING STYLE MDX)

Standard Port location is Position 1.
Standard Cushion location is Position 2.

ENVELOPE AND MOUNTING DIMENSIONS NOT AFFECTED BY ROD DIAMETER

BORE	CB	CD* +/- .001	CW	DD DIA.	E	EE		G	J	L	LR	M	MR	SB	ST	SU	SW	TS	US	ADD STROKE		
						NPTF	SAE													LG	P	SS
10	4	3.500	2	1	12 5/8	2-11 1/2	32	3 11/16	3 11/16	4	3 7/8	3 1/2	4 1/2	1 9/16	2 1/4	3 1/2	1 5/8	15 7/8	19 1/8	12 1/8	8 1/2	8 7/8
12	4 1/2	4.000	2 1/4	1	14 7/8	2 1/2-8	32	4 7/16	4 7/16	4 1/2	4 3/8	4	4 3/8	1 9/16	3	4 1/4	2	18 7/8	22 7/8	14 1/2	10 1/8	10 1/2

*CD = Pin Diameter

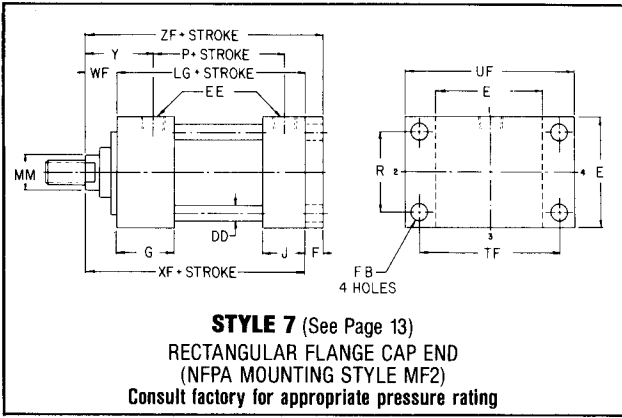
DIMENSIONS AFFECTED BY ROD DIAMETER

BORE	ROD DIA. MM	THREAD SIZE		A	B	C	D	LAH	NA	VH	WF	RD MAX.	Y	XS	ADD STROKE		ADD 2X STROKE
		KK	CC		+ .000										- .005	XC	
																ZM	
10	5	3 1/2-12	4 3/4-12	5	5.749	1	4 1/4	7 15/16	4 7/8	1	2 15/16	9 1/2	4 3/4	4 9/16	19 1/16	22 9/16	18
	7	4-12	4 3/4-12	5	7.749	1	6	8 3/16	6 7/8	1 1/8	3 3/16	10 3/4	5	4 13/16	19 5/16	22 13/16	18 1/2
12	5 1/2	4-12	5 1/4-12	5 1/2	6.249	1	4 5/8	8 11/16	5 3/8	1 5/16	3 3/16	10 1/8	5 3/8	5 3/16	22 3/16	26 3/16	20 7/8
	8 1/2	4 1/2-12	5 1/4-12	5 1/2	9.249	1	7 1/4	8 15/16	8 3/8	1 1/8	3 7/16	13 1/4	5 5/8	5 7/16	22 7/16	16 7/16	21 3/8

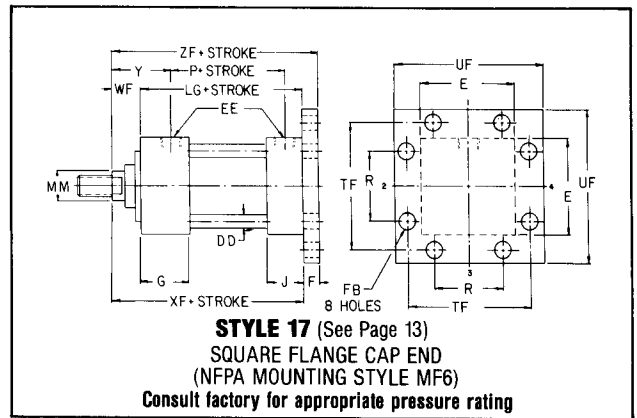
See Page 14 for Rod End Dimensions



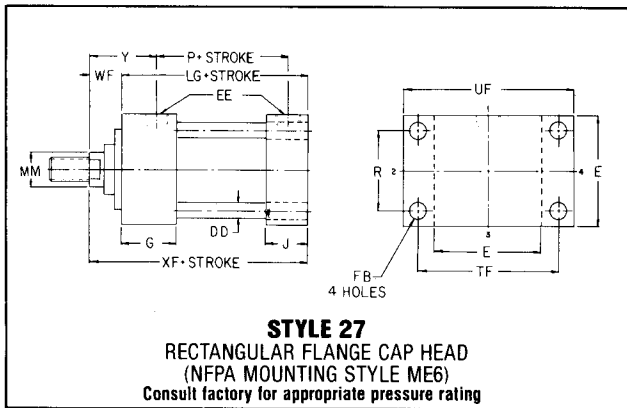
**CAP END FLANGE MOUNTED CYLINDERS
10" AND 12" BORE SERIES HP HIGH PRESSURE HYDRAULIC CYLINDERS**



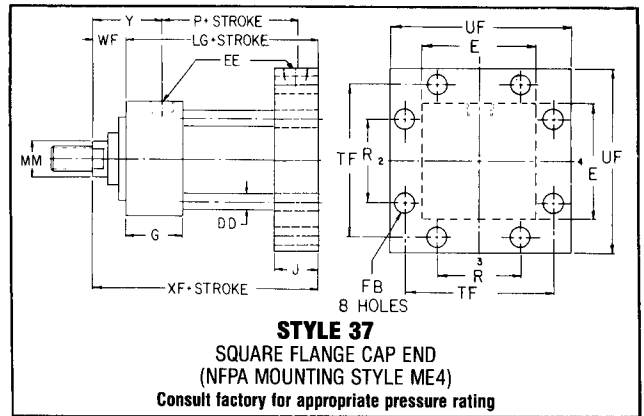
Standard Port location is Position 1.
Standard Cushion location is Position 2.



Standard Port location is Position 1.
Standard Cushion location is Position 2.



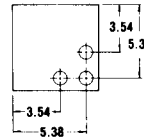
Standard Port location is Position 1.
Standard Cushion location is Position 2 Rod End and Position 3 Cap End.



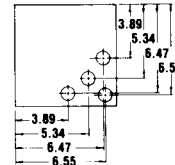
Standard Port location is Position 1.
Standard Cushion location is Position 2 Rod End and Position 3 Cap End.

TIE ROD SPACING—

10" BORE



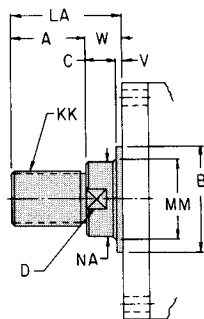
12" BORE



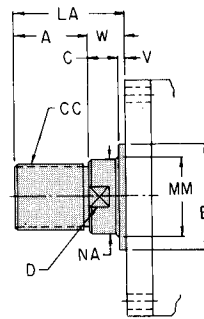
ROD END DIMENSIONS—

FOR MOUNTING STYLES 6, 16

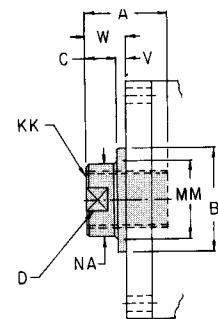
**TYPE A
STANDARD
MALE**



**TYPE D
INTERMEDIATE
MALE**

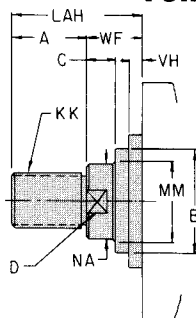


**TYPE B
FEMALE**

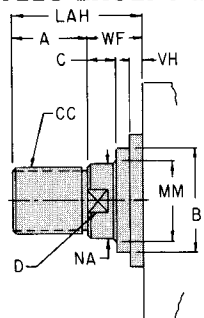


FOR ALL MOUNTING STYLES EXCEPT #6 & #16

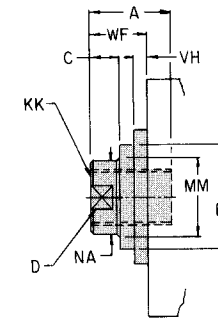
**TYPE A
STANDARD
MALE**



**TYPE D
INTERMEDIATE
MALE**



**TYPE B
FEMALE**

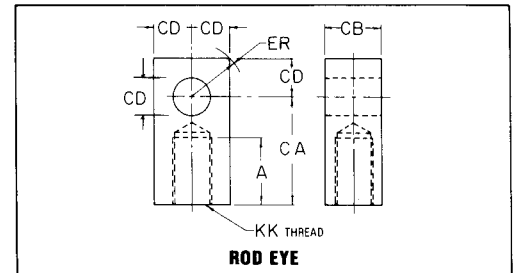
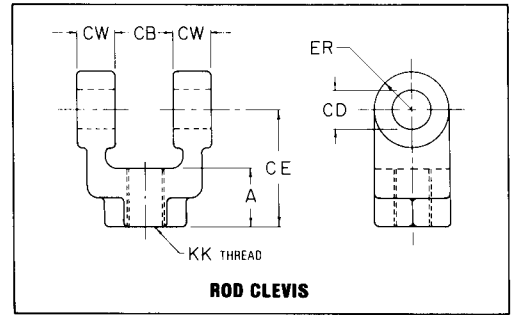




CYLINDER CAP AND ROD END MOUNTING ACCESSORIES 1½" to 12" BORE SERIES HP HIGH PRESSURE HYDRAULIC CYLINDERS

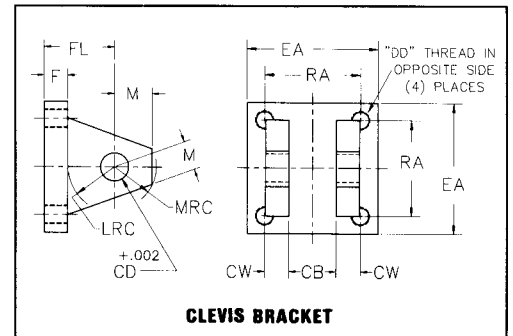
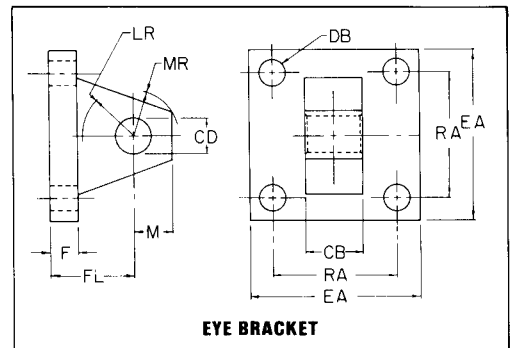
ROD END ACCESSORIES

ROD THREAD SIZE (KK)	ROD CLEVIS	ROD EYE	EYE BRACKET	PIVOT PIN	CLEVIS BRACKET
7/16"—20	MACCL01	MACRE01	MACEB01	MACPN01	MACCB01
3/4"—16	MACCL02	MACRE02	MACEB02	MACPN02	MACCB02
1"—14	MACCL03	MACRE03	MACEB03	MACPN03	MACCB03
1¼"—12	MACCL04	MACRE04	MACEB04	MACPN04	MACCB04
1½"—12	MACCL05	MACRE05	MACEB05	MACPN05	MACCB05
1¾"—12	MACCL06	MACRE06	MACEB06	MACPN06	MACCB06
2¼"—12	MACCL07	MACRE07	MACEB07	MACPN07	MACCB07
2½"—12	MACCL08	MACRE08	MACEB08	MACPN08	MACCB08
3¼"—12	MACCL09	MACRE09	MACEB09	MACPN09	MACCB09
4"—12	MACCL010	MACRE010	MACEB010	MACPN010	MACCB010



CAP END ACCESSORIES

CYLINDER BORE	EYE BRACKET	PIVOT PIN	CLEVIS BRACKET
1½"	MACEB01	MACPN01	MACCB01
2" & 2½"	MACEB02	MACPN02	MACCB02
3¼"	MACEB03	MACPN03	MACCB03
4"	MACEB04	MACPN04	MACCB04
5"	MACEB05	MACPN05	MACCB05
6"	MACEB06	MACPN06	MACCB06
7"	MACEB07	MACPN07	MACCB07
8"	MACEB08	MACPN08	MACCB08
10"	MACEB09	MACPN09	MACCB09
12"	MACEB010	MACPN010	MACCB010



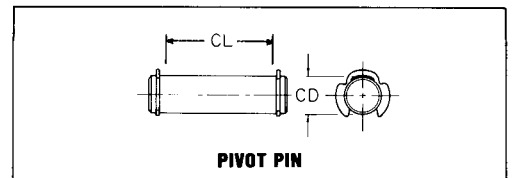
NOTES

ROD END ACCESSORIES

1. Rod Clevises and Rod Eyes are stocked to fit the standard KK thread (Small Male). The CC thread (Intermediate Male) can be supplied on special order, but should be avoided if possible.
2. Rod Clevises are supplied with Pivot Pin as standard. Pivot Pins are not supplied with Rod Eyes or Eye Brackets. They must be ordered as a separate item if desired.

CAP END ACCESSORIES

1. Pivot Pins are not supplied with Eye Brackets. They must be ordered as a separate item if desired.
2. Eye Brackets are designed to match with cylinder mounting Style 8F (NFPA MP1).
3. Clevis Brackets are designed to match with cylinder Rod Eyes.





**CYLINDER CAP AND ROD END MOUNTING ACCESSORIES
1-1/2" TO 12" BORE SERIES HP HIGH PRESSURE HYDRAULIC
CYLINDERS**

ROD CLEVIS PART NUMBER

	MACCL01	MACCL02	MACCL03	MACCL04	MACCL05	MACCL06	MACCL07	MACCL08	MACCL09	MACCL010
A	3/4	1 1/8	1 5/8	2	2 1/4	3	3 1/2	3 1/2	4 1/2	5 1/2
CB	3/4	1 1/4	1 1/2	2	2 1/2	2 1/2	3	3	4	4 1/2
CD	1/2	3/4	1	1 3/8	1 3/4	2	2 1/2	3	3 1/2	4
CE	1 1/2	2 3/8	3 1/8	4 1/8	4 1/2	5 1/2	6 1/2	6 3/4	8 1/2	10
CW	1/2	5/8	3/4	1	1 1/4	1 1/4	1 1/2	1 1/2	2	2 1/4
ER	1/2	3/4	1	1 3/8	1 3/4	2	2 1/2	3	3 1/2	4
K	7/16-20	3/4-16	1-14	1 1/4-12	1 1/2-12	1 7/8-12	2 1/4-12	2 1/2-12	3 1/4-12	4-12

ROD EYE PART NUMBER

	MACRE01	MACRE02	MACRE03	MACRE04	MACRE05	MACRE06	MACRE07	MACRE08	MACRE09	MACRE010
A	3/4	1 1/8	1 5/8	2	2 1/4	3	3 1/2	3 1/2	4 1/2	5 1/2
CA	1 1/2	2 1/16	2 13/16	3 7/16	4	5	5 13/16	6 1/8	7 5/8	9 1/8
CB	3/4	1 1/4	1 1/2	2	2 1/2	2 1/2	3	3	4	4 1/2
CD	1/2	3/4	1	1 3/8	1 3/4	2	2 1/2	3	3 1/2	4
ER	23/32	1 1/16	1 7/16	1 31/32	2 1/2	2 27/32	3 9/16	3 1/4	3 3/4	4 1/4
KK	7/16-20	3/4-16	1-14	1 1/4-12	1 1/2-12	1 7/8-12	2 1/4-12	2 1/2-12	3 1/4-12	4-12

EYE BRACKET PART NUMBER (MACEB) OR CLEVIS BRACKET PART NUMBER (MACCB)

	MACCB01	MACCB02	MACCB03	MACCB04	MACCB05	MACCB06	MACCB07	MACCB08	MACCB09	MACCB010
	MACEB01	MACEB02	MACEB03	MACEB04	MACEB05	MACEB06	MACEB07	MACEB08	MACEB09	MACEB010
CB	3/4	1 1/4	1 1/2	2	2 1/2	2 1/2	3	3	4	4 1/2
CD	1/2	3/4	1	1 3/8	1 3/4	2	2 1/2	3	3 1/2	4
CW	1/2	5/8	3/4	1	1 1/4	1 1/4	1 1/2	1 1/2	2	2 1/4
DB	13/32	17/32	21/32	21/32	29/32	1 1/16	1 3/16	1 5/16	1 13/16	2 1/16
DD	3/8-24	1/2-20	5/8-18	5/8-18	7/8-14	1-14	1 1/8-12	1 1/4-12	1 3/4-12	2-12
EA	2 1/2	3 1/2	4 1/2	5	6 1/2	7 1/2	8 1/2	9 1/2	12 5/8	14 7/8
F	3/8	5/8	3/4	7/8	7/8	1	1	1	1 11/16	1 15/16
FL	1 1/8	1 7/8	2 1/4	3	3 1/8	3 1/2	4	4 1/4	5 11/16	6 7/16
LR	3/4	1 1/4	1 1/2	2 1/8	2 1/4	2 1/2	3	3 1/4	4	4 1/2
LRC	1/2	1 1/16	1 1/4	1 7/8	2	2 1/8	2 5/8	2 7/8	3 5/8	4
M	1/2	3/4	1	1 3/8	1 3/4	2	2 1/2	3	3 1/2	4
MR	9/16	7/8	1 1/4	1 5/8	2 1/8	2 7/16	3	3 1/4	3 7/8	5 1/4
MRC	9/16	1 1/16	1 1/8	1 3/4	1 7/8	2 1/8	2 1/2	2 3/4	3 1/2	4
RA	1.63	2.55	3.25	3.82	4.95	5.73	6.58	7.50	9.62	11.45

PIVOT PIN PART NUMBER

	MACPN01	MACPN02	MACPN03	MACPN04	MACPN05	MACPN06	MACPN07	MACPN08	MACPN09	MACPN010
CD	1/2	3/4	1	1 3/8	1 3/4	2	2 1/2	3	3 1/2	4
CL	1 3/4	2 1/2	3	4	5	5	6	6	8	9