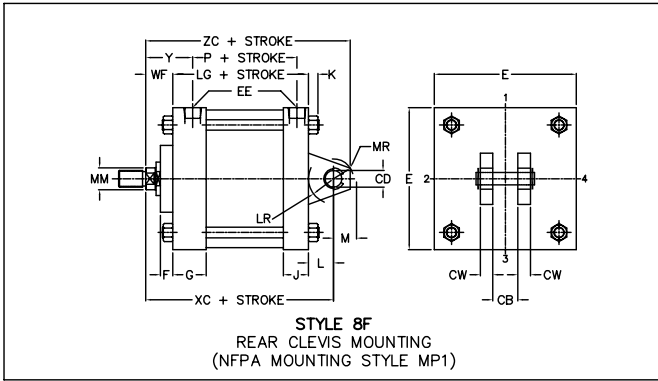




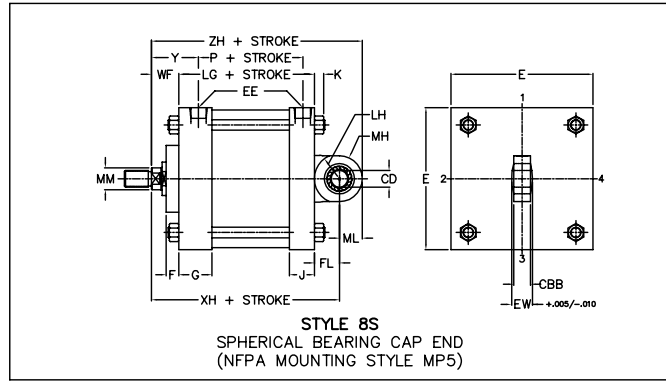
CLEVIS AND SPHERICAL BEARING MOUNTED CYLINDERS

8" TO 12" BORE SERIES JHD AND LSSL AIR CYLINDERS

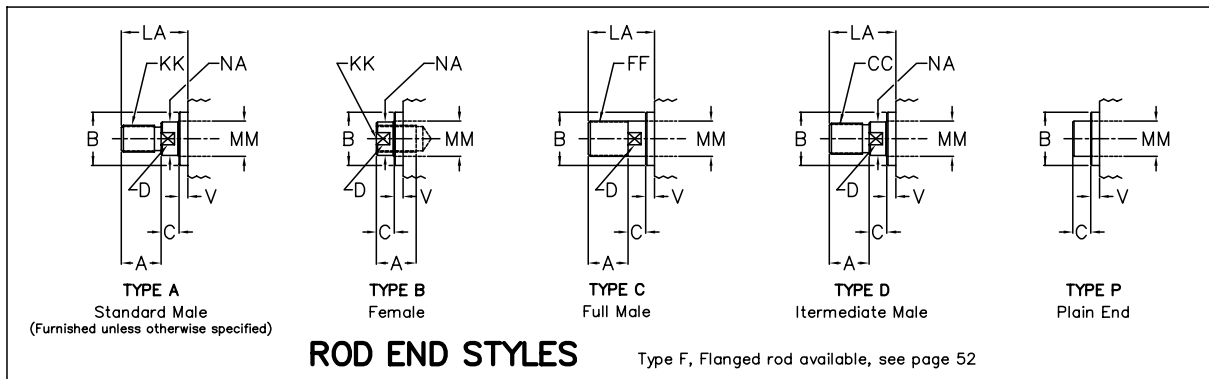
AVAILABLE IN STANDARD CONSTRUCTION AND ALL STAINLESS STEEL DESIGN!



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



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



ENVELOPE AND MOUNTING DIMENSIONS NOT AFFECTED BY ROD DIAMETER

BORE	CB	CBB	CD * +.000 -.002	CW	E	EE (NPTF)	EW	FL	G	J	K	L	LR	M	MH	ML	MR	ADD STROKE	
																		LG	P
8	1 1/2	3/4	1.000	3/4	8 1/2	3/4	7/8	1 1/2	2	1 1/2	9/16	1 1/2	1 1/4	1	1 1/2	1 1/2	1 3/16	5 1/8	3 1/4
10	1 1/2	1 1/32	1.375	1	10 5/8	1	1 3/16	2 1/8	2 1/4	2	11/16	2 1/8	1 3/4	1 3/8	2 1/4	1 5/8	6 3/8	4 1/8	
12	2 1/2	1 5/16	1.750	1 1/4	12 3/4	1	1 17/32	2 1/4	2 1/4	2	11/16	2 1/4	2	1 3/4	2 3/4	2 3/4	2 1/8	6 7/8	4 5/8

* CD IS PIN DIAMETER

DIMENSIONS AFFECTED BY ROD DIAMETER

BORE	ROD DIA. MM	THREAD SIZE			ROD AND PILOT DIMENSIONS								ENVELOPE DIMENSIONS							
		KK STD	CC	FF	A	B +.000 -.002	C	D	F	LA	NA	V	TT	WF	Y	XC	XH	ZC	ZH	
		ADD STROKE																		
8	1 3/8	1-14	1 1/4-12	1 3/8-12	1 5/8	1.999	5/8	1 1/8	3/4	2 1/2	1 5/16	1/4	4	1 5/8	2 13/16	8 1/4	8 1/4	9 1/4	9 3/4	
	1 3/4	1 1/4-12	1 1/2-12	1 3/4-12	2	2.374	3/4	1 1/2	3/4	3 1/8	1 11/16	3/8	4	1 7/8	3 1/16	8 1/2	8 1/2	9 1/2	10	
	2	1 1/2-12	1 3/4-12	2-12	2 1/4	2.624	7/8	1 11/16	3/4	3 1/2	1 15/16	3/8	4	2	3 3/16	8 5/8	8 5/8	9 5/8	10 1/8	
	2 1/2	1 7/8-12	2 1/4-12	2 1/2-12	3	3.124	1	2 1/16	3/4	4 1/2	2 3/8	1/2	4	2 1/4	3 7/16	8 7/8	8 7/8	9 7/8	10 3/8	
10	1 3/4	1 1/4-12	1 1/2-12	1 3/4-12	2	2.374	3/4	1 1/2	3/4	3 1/8	1 11/16	3/8	4	1 7/8	3 1/8	10 3/8	10 3/8	11 3/4	12 5/8	
	2	1 1/2-12	1 3/4-12	2-12	2 1/4	2.624	7/8	1 11/16	3/4	3 1/2	1 15/16	3/8	4	2	3 1/4	10 1/2	10 1/2	11 7/8	12 3/4	
	2 1/2	1 7/8-12	2 1/4-12	2 1/2-12	3	3.124	1	2 1/16	3/4	4 1/2	2 3/8	1/2	4	2 1/4	3 1/2	10 3/4	10 3/4	12 1/8	13	
	3	2 1/4-12	2 3/4-12	3-12	3 1/2	3.749	1	2 5/8	3/4	5	2 7/8	1/2	5 1/2	2 1/4	3 1/2	10 3/4	10 3/4	12 1/8	13	
12	2	1 1/2-12	1 3/4-12	2-12	2 1/4	2.624	7/8	1 11/16	3/4	3 1/2	1 15/16	3/8	4	2	3 1/4	11 1/8	11 1/8	12 7/8	13 7/8	
	2 1/2	1 7/8-12	2 1/4-12	2 1/2-12	3	3.124	1	2 1/16	3/4	4 1/2	2 3/8	1/2	4	2 1/4	3 1/2	11 3/8	11 3/8	13 1/8	14 1/8	
	3	2 1/4-12	2 3/4-12	3-12	3 1/2	3.749	1	2 5/8	3/4	5	2 7/8	1/2	5 1/2	2 1/4	3 1/2	11 3/8	11 3/8	13 1/8	14 1/8	
	3 1/2	2 1/2-12	3 1/4-12	3 1/2-12	3 1/2	4.249	1	3	3/4	5	3 3/8	1/2	5 1/2	2 1/4	3 1/2	11 3/8	11 3/8	13 1/8	14 1/8	

FIRST ROD SIZE SHOWN FOR EACH BORE SIZE IS STANDARD ROD

Notes: Clevis Pin comes standard with 8F and 8D Mounts

Type "B" rod end style is preferred on the 8S style mount cylinder due to the availability of mounting accessories.

See pages 54-57 for mounting accessories



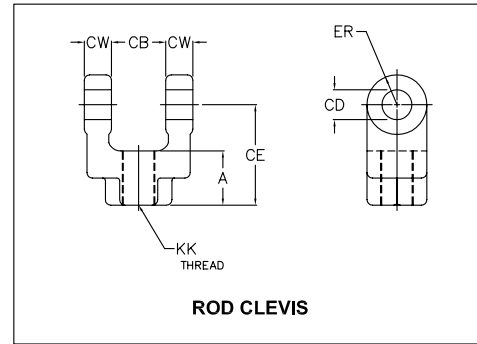
CAP AND ROD END MOUNTING ACCESSORIES

STANDARD AND STAINLESS STEEL

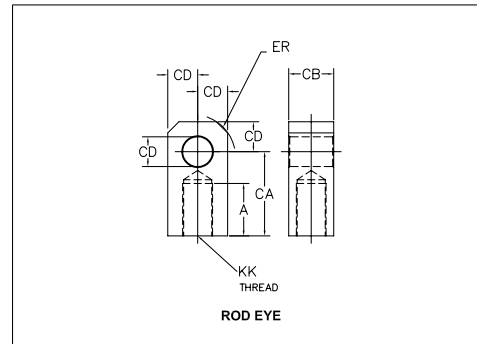
ROD END ACCESSORIES

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
1 1/4-12	MACCL04	MACRE04	MACEB04	MACPN04	MACCB04
1 1/2-12	MACCL05	MACRE05	MACEB05	MACPN05	MACCB05
1 7/8-12	MACCL06	MACRE06	MACEB06	MACPN06	MACCB06
2 1/4-12	MACCL07	MACRE07	MACEB07	MACPN07	MACCB07
2 1/2-12	MACCL08	MACRE08	MACEB08	MACPN08	MACCB08
3 1/4-12	MACCL09	MACRE09	MACEB09	MACPN09	MACCB09
4-12	MACCL10	MACRE10	MACEB10	MACPN10	MACCB10

1. Rod Clevises and Rod Eyes are stocked to fit the standard "KK" rod thread (style A, Small Male). The "CC" thread for Type D (Intermediate Male) can be supplied on special order.
2. Rod Clevises are supplied with Pivot Pins as standard. Pivot Pins are not supplied with Rod Eyes or Eye Brackets. They must be ordered as separate items if desired.



ROD CLEVIS



ROD EYE

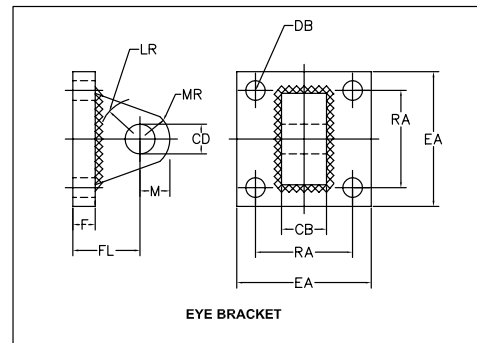
CAP END ACCESSORIES

CYLINDER BORE	EYE BRACKET	PIVOT PIN	CLEVIS BRACKET
1 1/2, 2, & 2 1/2	MACEB01	MACPN01	MACCB01
3 1/4, 4, & 5	MACEB02	MACPN02	MACCB02
6 & 8	MACEB03	MACPN03	MACCB03
10	MACEB04	MACPN04	MACCB04
12	MACEB05	MACPN05	MACCB05
14	MACEB06	MACPN06	MACCB06
16	MACEB07	MACPN07	MACCB07
18 & 20	MACEB08	MACPN08	MACCB08

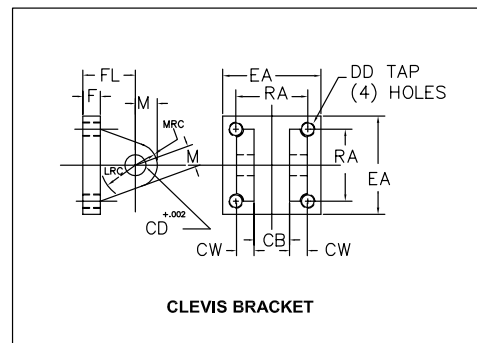
1. Pivot Pins are not supplied with Eye Brackets. They must be ordered as separate items if desired.
2. Eye Brackets are designed to mate with cylinder mounting Style 8F (NFPA MP1) and Style 8D (NFPA MP2).
3. Clevis Brackets are designed to mate with cylinder mounting Style 8M (NFPA MP3) and Rod Eyes.

NOTE: STAINLESS STEEL

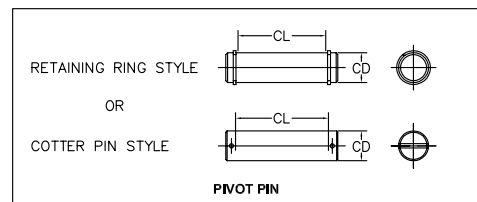
Part Numbers in the above charts are for standard Rod End and Cap End Accessories. All items are also available in **stainless steel**. For stainless steel accessories, add "S" to the end of the Part Number: e.g.; MACCL01 for standard Rod Clevis, MACCL01S for stainless steel Rod Clevis.



EYE BRACKET



CLEVIS BRACKET



PIVOT PIN

CAP AND ROD END MOUNTING ACCESSORIES (Cont.)
STANDARD AND STAINLESS STEEL

ROD CLEVIS PART NUMBER

	MACCLO1	MACCLO2	MACCLO3	MACCLO4	MACCLO5	MACCLO6	MACCLO7	MACCLO8	MACCLO9	MACCLO10
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
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

ROD EYE PART NUMBER

	MACRE01	MACRE02	MACRE03	MACRE04	MACRE05	MACRE06	MACRE07	MACRE08	MACRE09	MACRE10
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	5/8	7/8	1 3/16	1 9/16	2	2 1/2	2 13/16	3 1/4	3 7/8	4 7/16
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	MACCB10
	MACEB01	MACEB02	MACEB03	MACEB04	MACEB05	MACEB06	MACEB07	MACEB08	MACEB09	MACEB10
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

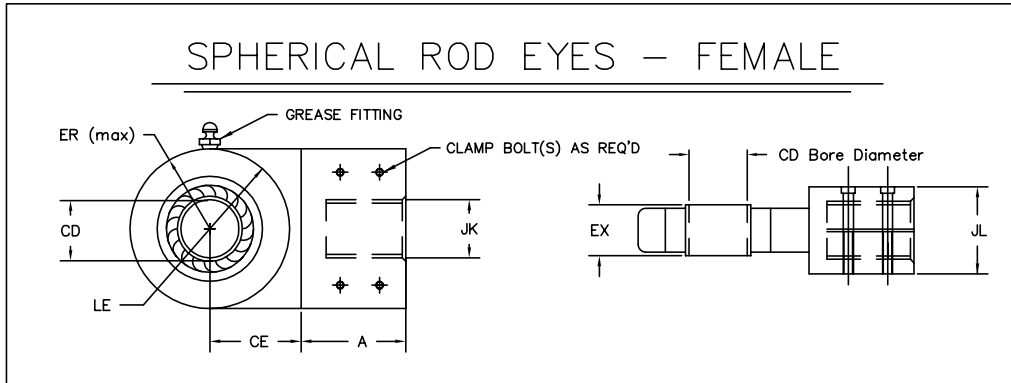
PIVOT PIN PART NUMBER

	MACPN01	MACPN02	MACPN03	MACPN04	MACPN05	MACPN06	MACPN07	MACPN08	MACPN09	MACPN10
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



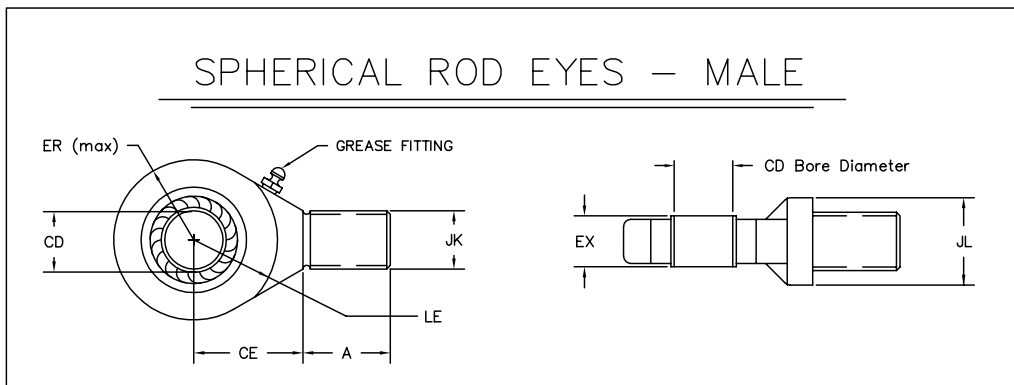
SPHERICAL CAP AND ROD END MOUNTING ACCESSORIES

STANDARD AND STAINLESS STEEL



MOUNTING DIMENSIONS

PART NO.	CD +.0000 -.0005	A	CE	EX	ER	LE	JK	JL	CLAMP BOLTS QUANTITY SIZE	MAX HYD. CYLINDER BORE & PSIG	MAX LOAD CAPACITY IN POUNDS
LSRE-05F	.5000	1 1/2	3/4	.437	1	5/8	7/16-20	1 1/4	(2) #10-32	1 1/2 @ 1,400	2,600
LSRE-07F	.7500	2	1 1/4	.656	1	1	7/16-20	1 1/4	(2) #10-32	1 1/2 @ 3,000	9,400
LSRE-08F	.7500	2	1 1/4	.656	1 1/4	1	3/4-16	2	(2) #10-32	2 @ 3,000	9,400
LSRE-10F	1.0000	2	1 1/2	.875	1 1/2	1 1/4	3/4-16	2	(2) #10-32	2 1/2 @ 3,000	16,800
LSRE-13F	1.3750	2 1/2	2 1/8	1.187	1 7/8	1 7/8	1.00-14	2	(2) #10-32	3 1/4 @ 3,000	28,600
LSRE-17F	1.7500	2 3/4	2 1/4	1.531	2 1/4	2	1 1/4-12	2 3/4	(2) 1/4-28	4 @ 3,000	43,000
LSRE-20F	2.0000	3	2 1/2	1.750	2 3/4	2 1/4	1 1/2-12	2 3/4	(2) 1/4-28	5 @ 3,000	70,000
LSRE-25F	2.5000	3 5/8	3	2.187	3 1/4	2 3/4	1 7/8-12	3	(2) 1/4-28	6 @ 3,000	85,000
LSRE-30F	3.0000	4 3/8	3 3/4	2.625	4	3 1/2	2 1/4-12	3 1/2	(4) 1/4-28	7 @ 3,000	87,700
LSRE-35F	3.5000	4 3/4	4 3/8	3.062	4 1/2	4 1/8	2 1/2-12	3 3/4	(4) 5/16-24	8 @ 3,000	119,200
LSRE-45F	4.5000	6 1/4	5 5/8	3.937	6	5 1/4	3 1/2-12	4 3/4	(4) 3/8-24	10 @ 3,000	210,500
LSRE-50F	5.0000	6 3/4	6 1/4	4.375	7	5 7/8	4.00-12	5 1/2	(4) 3/8-24	12 @ 3,000	245,500



MOUNTING DIMENSIONS

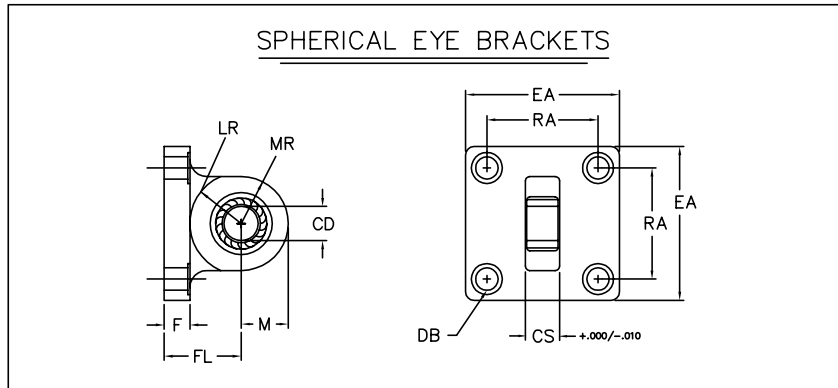
PART NO.	CD +.0000 -.0005	A	CE	EX	ER	LE	JK	JL	MAX HYD. CYLINDER BORE & PSIG	MAX LOAD CAPACITY IN POUNDS
LSRE-05M	.5000	11/16	7/8	.437	7/8	3/4	7/16-20	7/8	1 1/2 @ 1,200	2,600
LSRE-07M	.7500	1	1 1/4	.656	1 1/4	1 1/16	3/4-16	1 5/16	2 1/2 @ 1,400	9,400
LSRE-10M	1.0000	1 1/2	1 7/8	.875	1 3/8	1 7/16	1-14	1 1/2	3 1/4 @ 1,500	16,800
LSRE-13M	1.3750	2	2 1/8	1.187	1 13/16	1 7/8	1 1/4-12	2	4 @ 1,800	28,600
LSRE-17M	1.7500	2 1/8	2 1/2	1.531	2 3/16	2 1/8	1 1/2-12	2 1/4	5 @ 1,200	43,000
LSRE-20M	2.0000	2 7/8	2 3/4	1.750	2 5/8	2 1/2	1 7/8-12	2 3/4	6 @ 1,800	70,000

NOTE: STAINLESS STEEL

Part Numbers in the charts above and on page 57 are for standard Spherical Rod End and Cap End Accessories. All items are also available in **stainless steel**. For stainless steel accessories, add "S" to the end of the Part Number: e.g.; LSRE-05M for standard Male Spherical Rod Eye, LSRE-05MS for stainless steel Male Spherical Rod Eye.

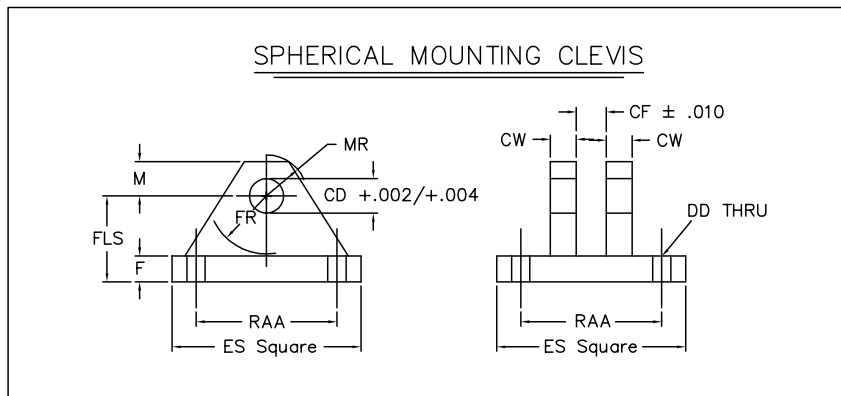
SPHERICAL CAP AND ROD END MOUNTING ACCESSORIES (Cont.)

STANDARD AND STAINLESS STEEL



MOUNTING DIMENSIONS

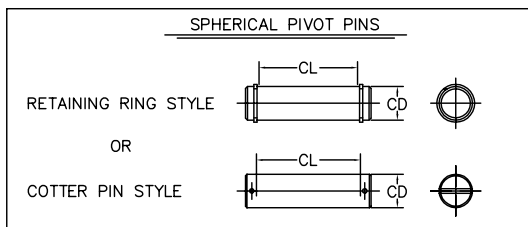
PART NO.	CD	CS	DB	EA	F	FL	LR	M	MR	RA
LSEB-05	.500	.50	13/32	2 1/2	3/8	1 1/8	3/4	11/16	11/16	1.62
LSEB-07	.750	.75	17/32	3 1/2	5/8	1 7/8	1 1/4	1 3/16	1 3/16	2.56
LSEB-10	1.000	1.00	21/32	4 1/2	3/4	2 1/4	1 1/2	1 3/8	1 3/8	3.25
LSEB-13	1.375	1.38	21/32	5	7/8	3	2 1/8	2	2	3.88
LSEB-17	1.750	1.50	29/32	6 1/2	7/8	3 1/8	2 1/4	2 1/8	2 1/8	4.94
LSEB-20	2.000	1.75	1 1/32	7 1/2	1	3 1/2	2 1/2	2 3/8	2 3/8	5.75



MOUNTING DIMENSIONS

PART NO.	CD	CF	CW	DD	ES	F	FLS	FR	M	MR	RAA
LCBS-05	.500	.44	1/2	13/32	3	1/2	1 1/2	15/16	1/2	5/8	2.05
LCBS-07	.750	.66	5/8	17/32	3 3/4	5/8	2	1 3/8	7/8	1	2.76
LCBS-10	1.000	.88	3/4	17/32	5 1/2	3/4	2 1/2	1 11/16	1	1 3/16	4.10
LCBS-13	1.375	1.19	1	21/32	6 1/2	7/8	3 1/2	2 7/16	1 3/8	1 5/8	4.95
LCBS-17	1.750	1.53	1 1/4	29/32	8 1/2	1 1/4	4 1/2	2 7/8	1 3/4	2 1/16	6.58
LCBS-20	2.000	1.75	1 1/2	29/32	10 5/8	1 1/2	5	3 5/16	2	2 3/8	7.92

Note: Spherical mounting clevises are designed to mate with spherical cylinder mounting style 8S and with spherical rod eyes.



Note: Pivot pin is not supplied with any spherical rod end or cap end mounting accessory. It must be ordered as separate item if required.

MOUNTING DIMENSIONS

PART NO.	CD	CL
LSP-05	.500	1 1/2
LSP-07	.750	2
LSP-10	1.000	2 7/16
LSP-13	1.375	3 1/4
LSP-17	1.750	4 3/32
LSP-20	2.000	4 13/16