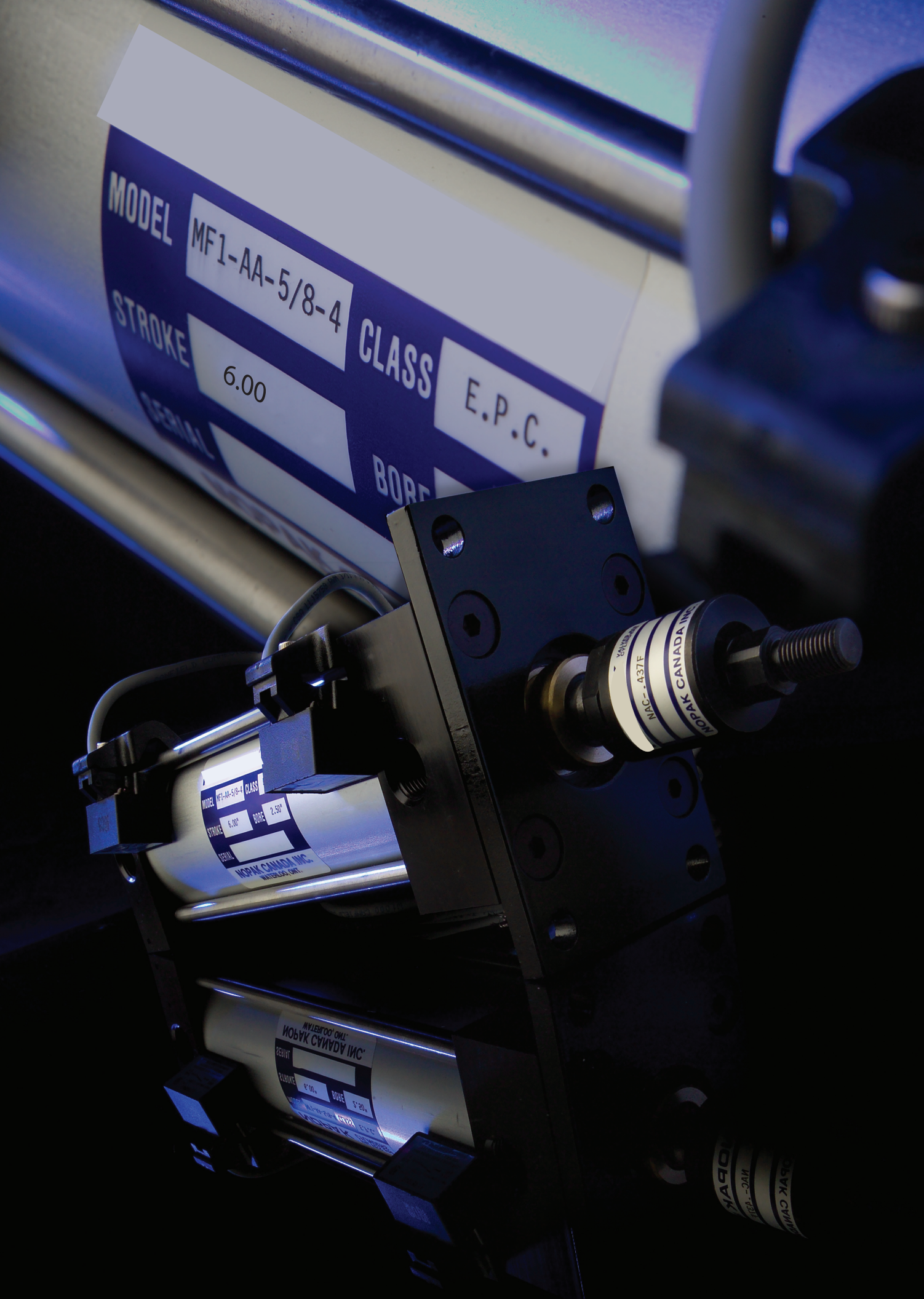
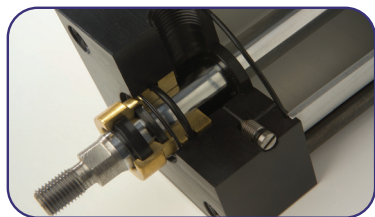
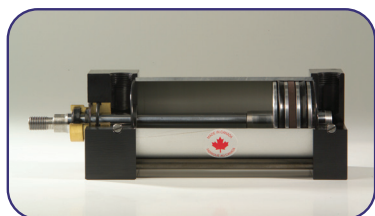






EPC Series Cylinders

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NOPAK CANADA INC

HEAD OFFICE:

220 FROBISHER DRIVE
WATERLOO ON CANADA N2V 2C7
t: 519 886 6900 / 905 452 8210
f: 519 886 9181
e: admin@nopakcanada.com
www.nopakcanada.com

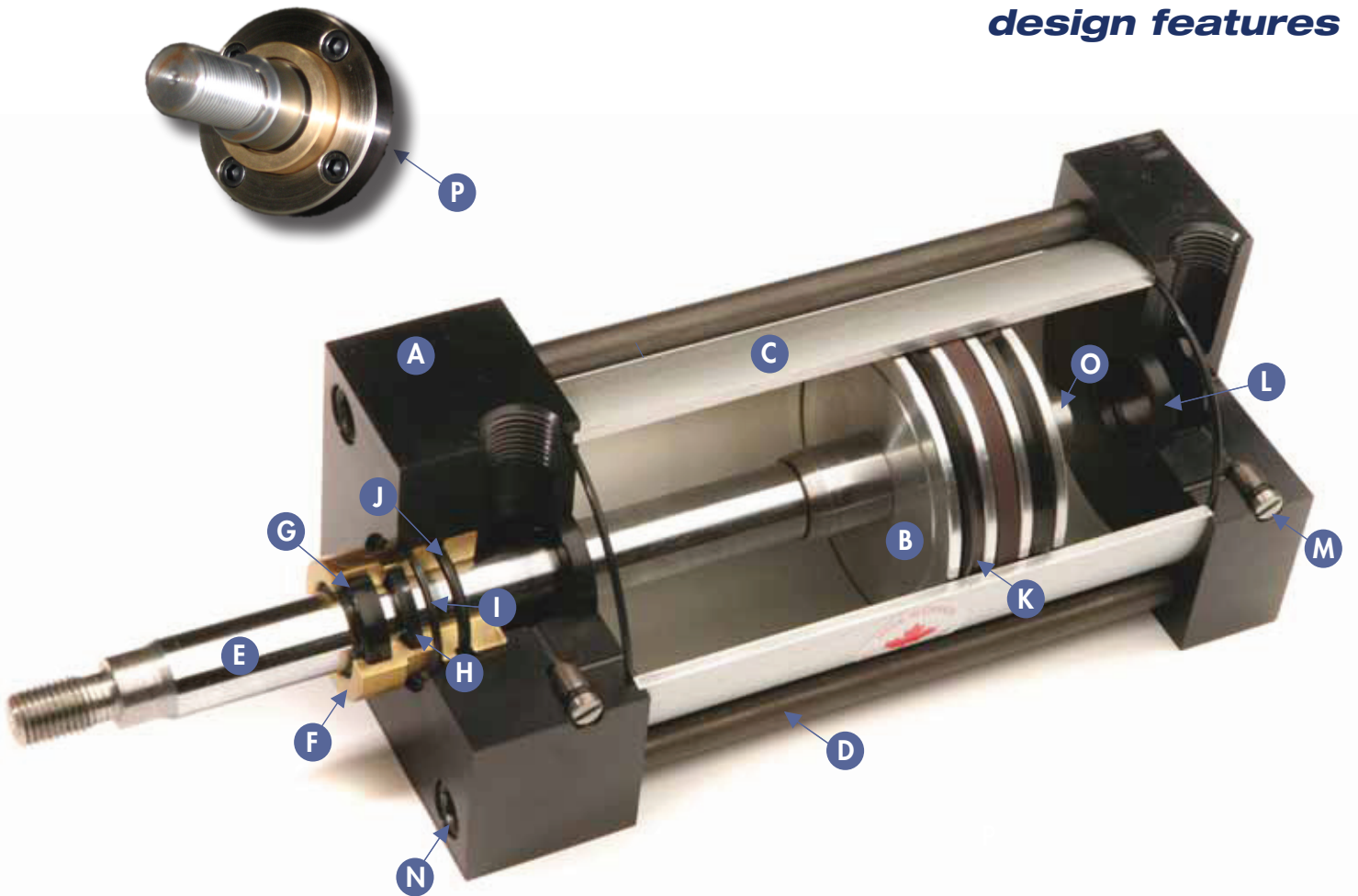
SUCCURSALE BRANCH OFFICE:

165 RUE DES CEDRES CHEMIN SAINT-FRANCOIS
LAVAL, QC CANADA H7A 1V9
t: 514 920 0220
f: 514 920 0222
e: ventes@nopakcanada.com
www.nopakcanada.com



EPC Series Cylinders

design features



A	HEAD & CAP: BLACK ANODIZED, PRECISION MACHINED (6061-T6) ALUMINUM	I	BEARING RETAINER: WAVE BAND CLIP ALLOWS FOR EASY REMOVAL
B	PISTON: PRECISION MACHINED (6061-T6) SOLID ALUMINUM WITH MAGNET - PERMANENT LUB. GROOVE	J	BEARING SEAL: STANDARD BUNA NITRILE
C	CYLINDER TUBE: ALUMINUM (6063-T6) PORT HOLE EXTRUDED, CLEAR COAT ANODIZED I.D.	K	PISTON SEALS: STANDARD BUNA NITRILE PRESSURE ENERGIZED WEAR COMPENSATING LOW FRICTION
D	TIE RODS: # 303 STAINLESS STEEL	L	CUSHION SEALS: HEAVY DUTY PRESS FIT EXTRA LONG LIFE
E	PISTON ROD: CHROME PLATED (1045) MATERIAL .005 PER SIDE, 50-55 ROCKWELL 75,000 P.S.I. YIELD	M	ADJUSTING SCREWS: ONE PIECE FULL THREAD NEEDLE
F	ROD BEARING: PRECISION MACHINED (93200) BEARING BRONZE, DOUBLE SEAL CAPABILITY	N	SOCKET NUT: (4) ROD END ONLY HEAT TREATED & BLACK OXIDIZED
G	ROD WIPER: STANDARD BUNA NITRILE, DUAL FUNCTION WIPER -SECONDARY ROD SEAL	O	END SLEEVE: CAPSCREW RETAINED PISTON ASSEMBLY EASILY REMOVED
H	ROD SEAL: STANDARD BUNA NITRILE PRIMARY SEAL PRESSURE ENERGIZED	P	RETAINER FOR 6" BORE OVERSIZED ROD AND 8" BORE ALL ROD SIZES

EPC Series Cylinders

how to order

STANDARD ROD EXAMPLE

EPC - 325 x 12.00" - MP2(E2) - ** - 1.00 - 4 - OPT.

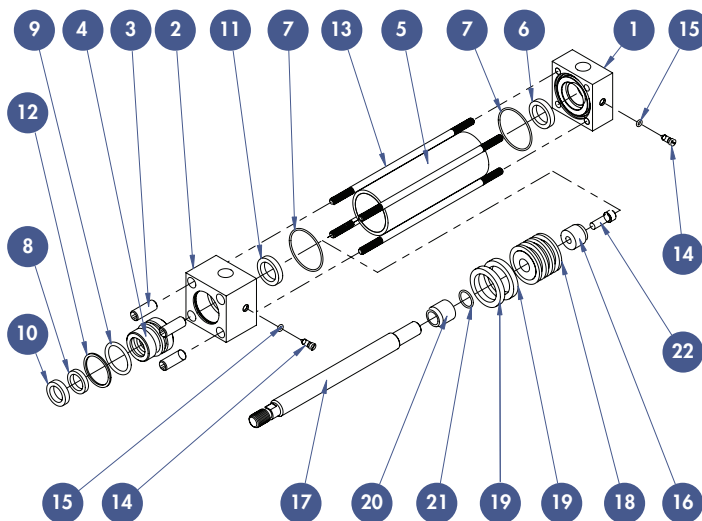
EPC: Series (EPC)
 325: Bore Size specified in inches
 x: Stroke Length specified in inches
 12.00": Stroke Length specified in inches
 MP2(E2): Model - Use Nopak letter code or NFPA codes
 **: Cushioning (see option codes) NN Code Supplied As Standard
 1.00: Rod Diameter (see page #4 and #9)
 4: Rod End Thread (see page #4 and #9)
 OPT.: Specify per option code

(OPT) CYLINDER OPTION CODES

AA	=	ADJUSTABLE CUSHIONING BOTH END
NA	=	NON-CUSHIONED ROD END - ADJUSTABLE CUSHIONING BLANK END
AN	=	ADJUSTABLE CUSHIONING ROD END - NON CUSHIONED BLANK END
BN	=	BUMPER ROD END ONLY
BB	=	BUMPER ROD END AND BLANK END
NB	=	BUMPER BLANK END ONLY
AO	=	AIR/OIL PISTON
AS	=	ADJUSTABLE STROKE
B	=	VITON SEALS (+204 _{DGR.C} +400 _{DGR.F}) WIDE RANGE OF CHEMICAL COMPATABILITY
CP	=	CADMIUM PLATED

ENP	=	ELECTROLESS NICKEL PLATED
LTS	=	LOW TEMPERATURE PISTON SEALS
MGP	=	MAGNETIC PISTON
MRS	=	METALIC ROD SCRAPER
NTR	=	NITRO-TEC PISTON ROD
SSR	=	STAINLESS STEEL ROD (303 _{STD})
SST	=	STAINLESS STEEL TIE RODS (303 _{STD})
ST	=	STOP TUBE (DUAL PISTON) SUPPLIED AS STANDARD SEE PAGE #13
WBP	=	WEAR BAND PISTON
X	=	DOUBLE ROD END (X INSERTED IN FRONT OF MODEL CODE)

EPC CYLINDER ASSEMBLY



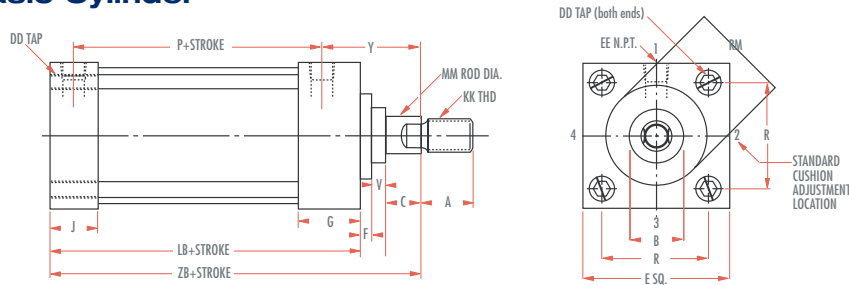
ITEM NUMBER	PART NUMBER	QTY.
1	BLIND HEAD	1
2	ROD HEAD	1
3	TIE ROD SOCKET NUT	4
4	BEARING	1
5	TUBE	1
6	BLIND CUSHION SEAL	1
7*	TUBE SEAL	2
8*	PRIMARY ROD SEAL	1
9*	BEARING O-RING SEAL	1
10*	ROD WIPER SEAL COMBO	1
11	ROD CUSHION SEAL	1
12	BEARING RETAINING RING	1
13	TIE ROD	4
14	CUSHION ADJUSTMENT SCREW	2
15	ADJUSTMENT SCREW O-RING	2
16	CUSHION END SLEEVE	1
17	PISTON ROD	1
18	PISTON	1
19*	PISTON SEAL	2
20	ROD END CUSHION SLEEVE	1
21*	PISTON O-RING	1
22	[945] 1/4-20 UNC x 3/4	1

*ITEMS INCLUDED IN REPAIR KIT

EPC Series Cylinders

standard rod diameters

Model H Basic Cylinder



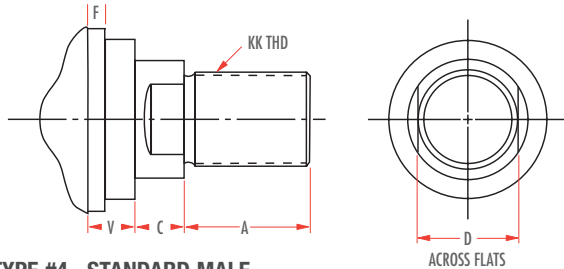
NOTE: Hex nuts apply to 8.00" only

Round Cartridge Retainer Plate (F+RM DIM) on 8.00" Bore

BORE	A	B	R	C	DD	E	EE*	F	G	J	KK	LB	MM	P	RM	V	Y	ZB
1 1/2	3/4	1 1/8	1.43	1/2	1/4 - 28	2	1/4	--	1 1/2	1	7/16-20	3 5/8	5/8	2 3/16	--	1/2	1 29/32	4 5/8
2	3/4	1 1/8	1.84	1/2	5/16-24	2 1/2	3/8	--	1 1/2	1	7/16-20	3 5/8	5/8	2 3/16	--	1/2	1 29/32	4 5/8
2 1/2	3/4	1 1/8	2.19	1/2	5/16-24	3	3/8	--	1 1/2	1	7/16-20	3 3/4	5/8	2 5/16	--	1/2	1 29/32	4 3/4
3 1/4	1 1/8	1 1/2	2.78	5/8	3/8 - 24	3 3/4	1/2	--	1 3/4	1 1/4	3/4-16	4 1/4	1	2 5/8	--	3/4	2 7/16	5 5/8
4	1 1/8	1 1/2	3.32	5/8	3/8 - 24	4 1/2	1/2	--	1 3/4	1 1/4	3/4-16	4 1/4	1	2 5/8	--	3/4	2 7/16	5 5/8
5	1 1/8	1 1/2	4.12	5/8	1/2 - 20	5 1/2	1/2	--	1 3/4	1 1/4	3/4-16	4 1/2	1	2 7/8	--	3/4	2 7/16	5 7/8
6	1 5/8	2	4.88	3/4	1/2 - 20	6 1/2	3/4	--	2	1 1/2	1-14	5	1 3/8	3 1/8	--	7/8	2 13/16	6 5/8
8	1 5/8	2	6.44	3/4	5/8-18	8 1/2	3/4	19/32	2	1 1/2	1-14	5 1/8	1 3/8	3 1/4	3.250	1	2 13/16	6 3/4

Rod End Type

Standard



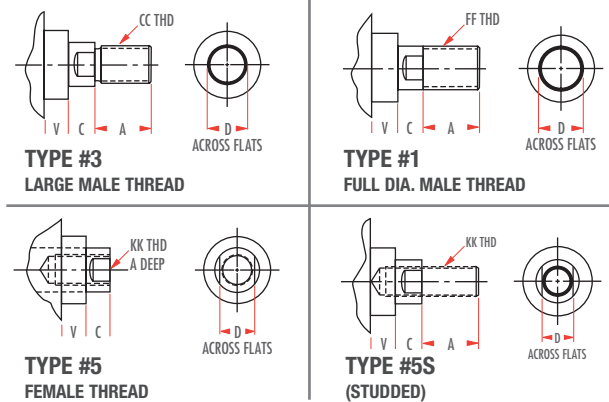
TYPE #4 STANDARD MALE

Note: #4 furnished as standard unless otherwise specified

ROD DIA	A	C	D	V	CC	FF	KK
5/8	3/4	1/2	1/2	1/2	1/2-20	5/8-18	7/16-20
1	1 1/8	5/8	7/8	3/4	7/8-14	1-14	3/4-16
1 3/8	1 5/8	3/4	1 3/16	7/8	1 1/4-12	1 3/8-12	1-14

8" BORE F + V = 1

Optional



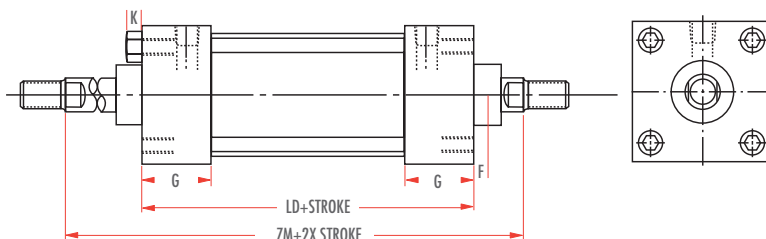
TYPE #3 LARGE MALE THREAD

TYPE #1 FULL DIA. MALE THREAD

TYPE #5 FEMALE THREAD

TYPE #5S (STUDDER)

Model XH Double Rod End



NOTE: Hex nuts apply to 8.00" only

BORE	F	G	LD	ZM	K
1 1/2	--	1 1/2	4 1/8	6 1/8	--
2	--	1 1/2	4 1/8	6 1/8	--
2 1/2	--	1 1/2	4 1/4	6 1/4	--
3 1/4	--	1 3/4	4 3/4	7 1/2	--
4	--	1 3/4	4 3/4	7 1/2	--
5	--	1 3/4	5	7 3/4	--
6	--	2	5 1/2	8 3/4	--
8	19/32	2	5 5/8	8 7/8	9/16

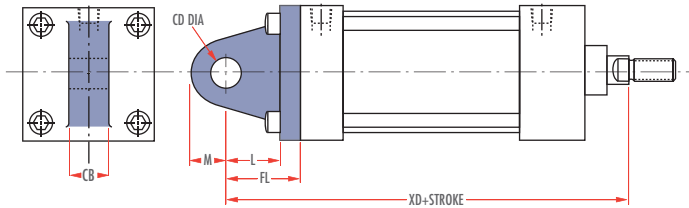
Note: 8.00" LD + Stroke + Fx2



EPC Series Cylinders

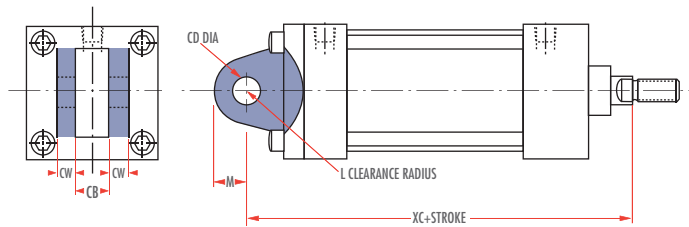
standard rod diameters

Model E (4) Detachable Eye Mount (NFA MP4) (supplied with pin)



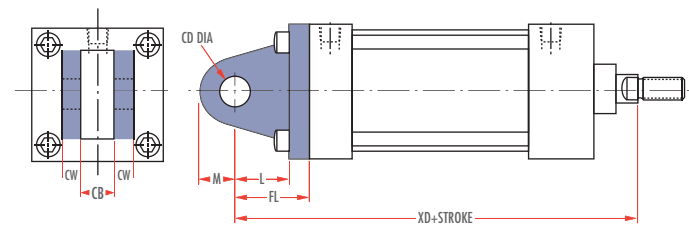
BORE	CB	CD	FL	L	M	XD
1 1/2	3/4	1/2	1 1/8	3/4	5/8	5 3/4
2	3/4	1/2	1 1/8	3/4	5/8	5 3/4
2 1/2	3/4	1/2	1 1/8	3/4	5/8	5 7/8
3 1/4	1 1/4	3/4	1 7/8	1 1/4	7/8	7 1/2
4	1 1/4	3/4	1 7/8	1 1/4	7/8	7 1/2

Model E (1) Clevis Mount (NFA MP1) (supplied with pin)



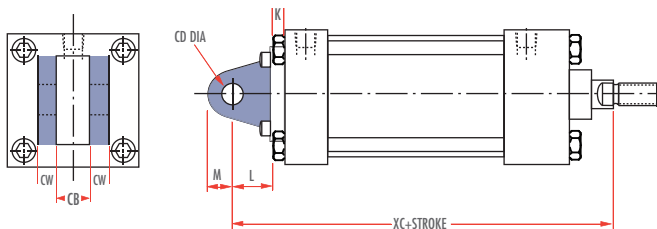
BORE	CB	CD	CW	L	M	XC
1 1/2	3/4	1/2	1/2	3/4	5/8	5 3/8
2	3/4	1/2	1/2	3/4	5/8	5 3/8
2 1/2	3/4	1/2	1/2	3/4	5/8	5 1/2
3 1/4	1 1/4	3/4	5/8	1 1/4	7/8	6 7/8
4	1 1/4	3/4	5/8	1 1/4	7/8	6 7/8
5	1 1/4	3/4	5/8	1 1/4	7/8	7 1/8
6	1 1/2	1	3/4	1 1/2	1 1/8	8 1/8

Model E (2) Detachable Clevis Mount (NFA MP2) (supplied with pin)



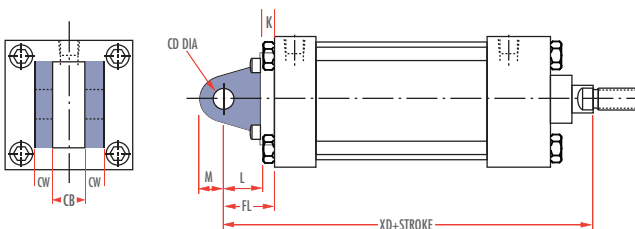
BORE	CB	CD	CW	FL	L	M	XD
1 1/2	3/4	1/2	1/2	1 1/8	3/4	5/8	5 3/4
2	3/4	1/2	1/2	1 1/8	3/4	5/8	5 3/4
2 1/2	3/4	1/2	1/2	1 1/8	3/4	5/8	5 7/8
3 1/4	1 1/4	3/4	5/8	1 7/8	1 1/4	7/8	7 1/2
4	1 1/4	3/4	5/8	1 7/8	1 1/4	7/8	7 1/2
5	1 1/4	3/4	5/8	1 7/8	1 1/4	7/8	7 3/4
6	1 1/2	1	3/4	2 1/4	1 1/2	1 1/8	8 7/8

Model E (1) Detachable Clevis Mount (NFA MP1) (supplied with pin)



BORE	CB	CD	CW	L	M	XC	K
8	1 1/2	1	3/4	1 1/2	1 1/8	8 1/4	9/16

Model E (2) Detachable Clevis Mount (NFA MP2) (supplied with pin)

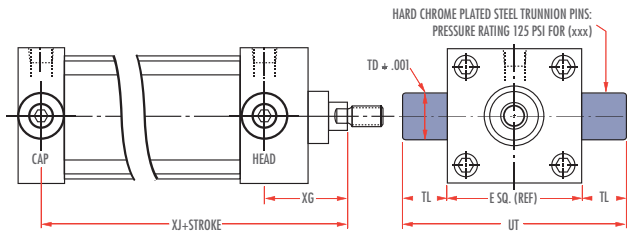


BORE	CB	CD	CW	L	M	XD	K	FL
8	1 1/2	1	3/4	1 1/2	1 1/2	9 1/4	9/16	2 1/4

EPC Series Cylinders

standard diameters

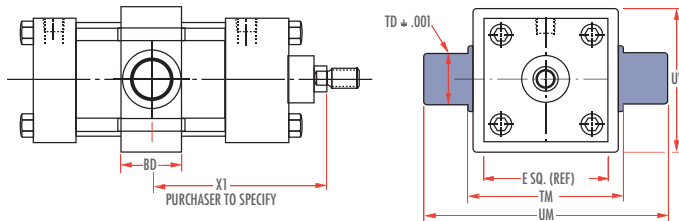
Model FR Head Trunnion Mount (NFPA MT1)



BORE	E	TD	TL	UT	FB	FR
					XJ	XG
1 1/2	2	1	1	4	4 1/8	1 3/4
2	2 1/2	1	1	4 1/2	4 1/8	1 3/4
2 1/2	3	1	1	5	4 1/4	1 3/4
3 1/4	3 1/4	1	1	5 3/4	5	2 1/4
4	4 1/2	1	1	6 1/2	5	2 1/4
5	5 1/2	1	1	7 1/2	5 1/4	2 1/4
6	6 1/2	1 3/8	1 3/8	9 1/4	5 7/8	2 5/8
8	8 1/2	2 1/2	1 3/8	11 1/4	6	2 5/8

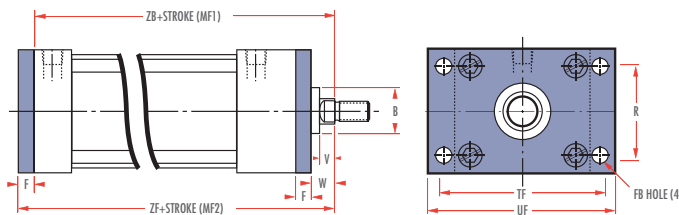
Model FB Cap Trunnion Mount (NFPA MT2)

Model F Intermediate Trunnion Mount (NFPA MT4)



BORE	E	BD	TD	TL	TM	UM	UV	X1
1 1/2	2	1 1/4	1	1	2 1/2	4 1/2	2 1/2	Purchaser to specify
2	2 1/2	1 1/2	1	1	3	5	3	
2 1/2	3	1 1/2	1	1	3 1/2	5 1/2	3 1/2	
3 1/4	3 3/4	2	1	1	4 1/2	6 1/2	4 1/4	
4	4 1/2	2	1	1	5 1/4	7 1/4	5	
5	5 1/2	2	1	1	6 1/4	8 1/4	6	
6	6 1/2	2 1/2	1 3/8	1 3/8	7 5/8	10 3/8	7	
8	8 1/2	2 1/2	1 3/8	1 3/8	9 3/4	12 1/2	9 1/2	

Model C Rear Flange Mount (NFPA MF2)

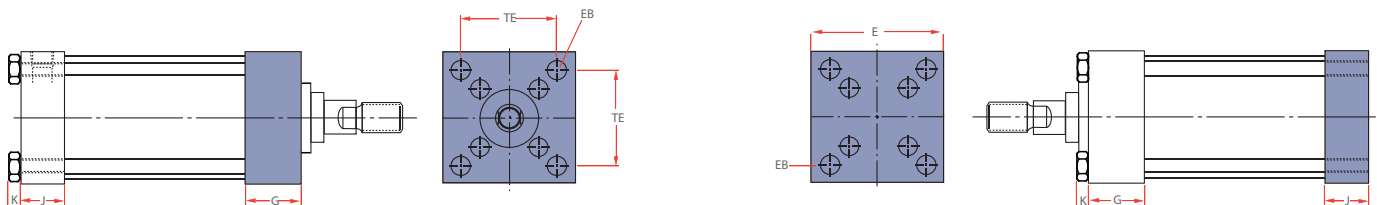


BORE	B	F	FB	R	TF	UF	V	W	ZF	ZB
1 1/2	1 1/8	3/8	5/16	1.43	2 3/4	3 3/8	1/4	5/8	5	4 5/8
2	1 1/8	3/8	3/8	1.84	3 3/8	4 1/8	1/4	5/8	5	4 5/8
2 1/2	1 1/8	3/8	3/8	2.19	3 7/8	4 5/8	1/4	5/8	5 1/8	4 3/4
3 1/4	1 1/2	5/8	7/16	2.76	4 11/16	5 1/2	1/4	3/4	6 1/4	5 5/8
4	1 1/2	5/8	7/16	3.32	5 7/8	6 1/4	1/4	3/4	6 1/4	5 5/8
5	1 1/2	5/8	9/16	4.10	6 5/8	7 5/8	1/4	3/4	6 1/2	5 7/8
6	2	3/4	9/16	4.88	7 5/8	8 5/8	1/4	7/8	7 3/8	6 5/8

Model D Front Flange Mount (NFPA MF1)

Model DG Integral Head Mount (NFPA ME3)

Model CJ Integral Head Mount (NFPA ME4)

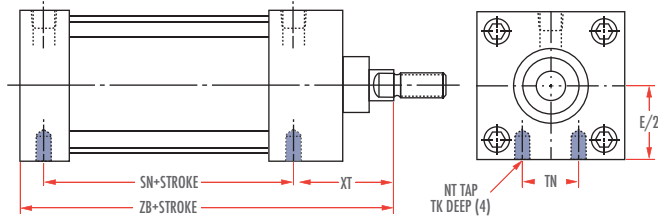


BORE	E	G	J	K	EB	TE
8	8.50	2.00	1.50	.625	.625	7.57

EPC Series Cylinders

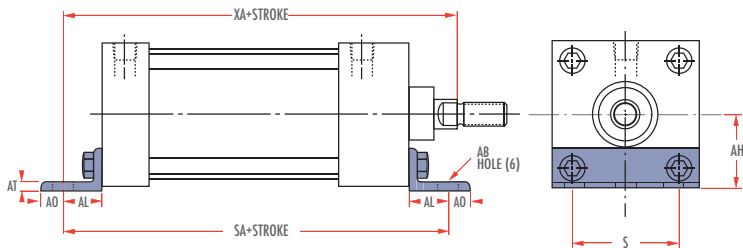
standard rod diameters

Model S Bottom Tap Mount (NFA MS4)



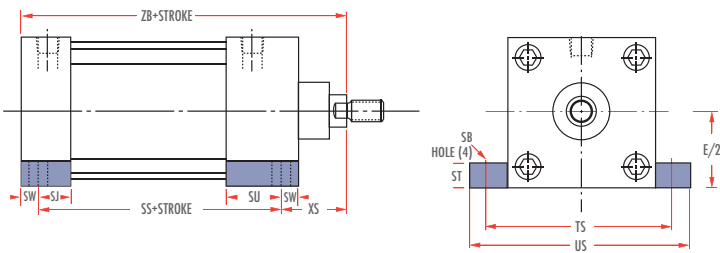
BORE	NT	TK	TN	SN	XT	ZB
1 1/2	1/4-20	3/8	5/8	2 1/4	1 15/16	4 5/8
2	5/16-18	1/2	7/8	2 1/4	1 15/16	4 5/8
2 1/2	3/8-16	5/8	1 1/4	2 3/8	1 15/16	4 3/4
3 1/4	1/2-13	3/4	1 1/2	2 5/8	2 7/16	5 5/8
4	1/2-13	3/4	2 1/16	2 5/8	2 7/16	5 5/8
5	5/8-11	1	2 11/16	2 7/8	2 7/16	5 7/8
6	3/4-10	1 1/8	3 1/4	3 1/8	2 13/16	6 5/8
8	3/4-10	1 1/8	4 1/2	3 1/4	2 13/16	6 3/4

Model AP Angle Mount (NFA MS1)



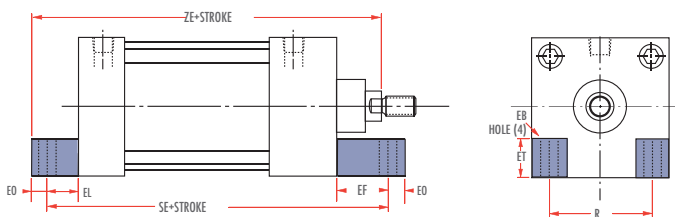
BORE	AB	AH	AL	AO	AT	S	SA	XA
1 1/2	7/16	1 3/16	1	3/8	1/8	1 1/4	6	5 5/8
2	7/16	1 7/16	1	3/8	1/8	1 3/4	6	5 5/8
2 1/2	7/16	1 5/8	1	3/8	1/8	2 1/4	6 1/8	5 3/4
3 1/4	9/16	1 15/16	1 1/4	1/2	3/16	2 3/4	7 3/8	6 3/4
4	9/16	2 1/4	1 1/4	1/2	3/16	3 1/2	7 3/8	6 3/4
5	11/16	2 3/4	1 3/8	5/8	3/16	4 1/4	7 7/8	7 1/4
6	13/16	3 1/4	1 3/8	5/8	1/4	5 1/4	8 1/2	7 3/4
8	13/16	4 1/4	1 13/16	11/16	1/4	7 1/8	8 3/4	8 1/2

Model A Side Lug Mount (NFA MS2)



BORE	SB	SJ	SS	ST	SU	SW	TS	US	ZB	XS
1 1/2	13/32	5/8	2 7/8	1/2	1 1/8	3/8	2 3/4	3 1/2	4 5/8	1 3/8
2	13/32	5/8	2 7/8	1/2	1 1/8	3/8	3 1/4	4	4 5/8	1 3/8
2 1/2	13/32	5/8	3	1/2	1 1/8	3/8	3 3/4	4 1/2	4 3/4	1 3/8
3 1/4	17/32	3/4	3 1/4	3/4	1 1/4	1/2	4 3/4	5 3/4	5 5/8	1 7/8
4	25/32	3/4	3 1/4	3/4	1 1/4	1/2	5 1/2	6 1/2	5 5/8	1 7/8
5	25/32	9/16	3 1/8	1	1 11/16	11/16	6 7/8	8 1/4	5 7/8	2 1/16
6	25/32	13/16	3 5/8	1	1 5/16	11/16	7 7/8	9 1/4	6 5/8	2 5/16
8	25/32	13/16	3 3/4	1	1 5/16	11/16	9 7/8	11 1/4	6 3/4	2 5/16

Model AL (NFA MS7)



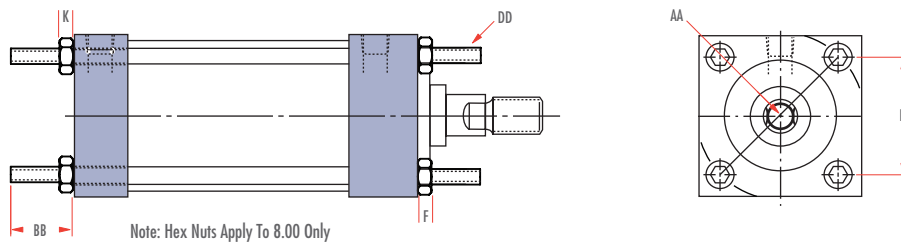
BORE	EB	EF	EL	EO	ET	R	SE	ZE
1 1/2	5/16	1 1/8	3/4	1/4	1/2	1.43	5 1/2	5 5/8
2	3/8	1 5/16	15/16	5/16	3/4	1.84	5 7/8	5 7/8
2 1/2	3/8	1 7/16	1 1/16	5/16	3/4	2.19	6 1/4	6 1/8
3 1/4	7/16	1 1/2	7/8	3/8	1	2.76	6 5/8	6 7/8
4	7/16	1 5/8	1	3/8	1 1/4	3.32	6 7/8	7
5	9/16	1 11/16	1 1/16	1/2	1 1/2	4.10	7 1/4	7 7/16
6	9/16	1 3/4	1 1/8	1/2	1 1/2	4.88	7 3/4	8 1/8
8	11/16	1 3/4	1 1/8	5/8	2 1/16	6.44	7 3/8	8 1/2



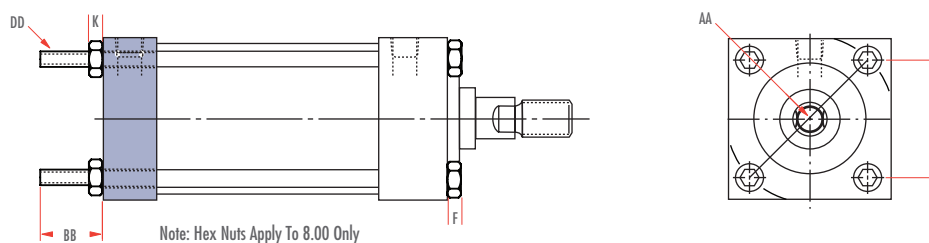
EPC Series Cylinders

standard rod diameters

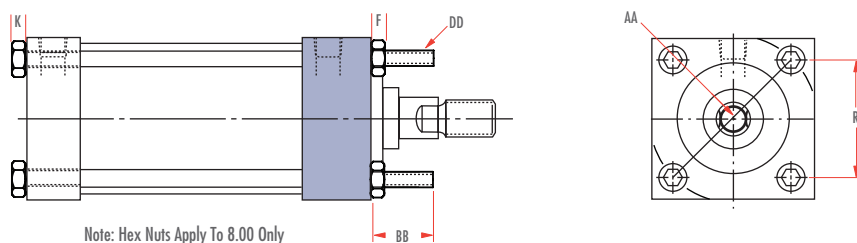
Model T (NFPA MX1)



Model TB (NFPA MX2)



Model TR (NFPA MX3)



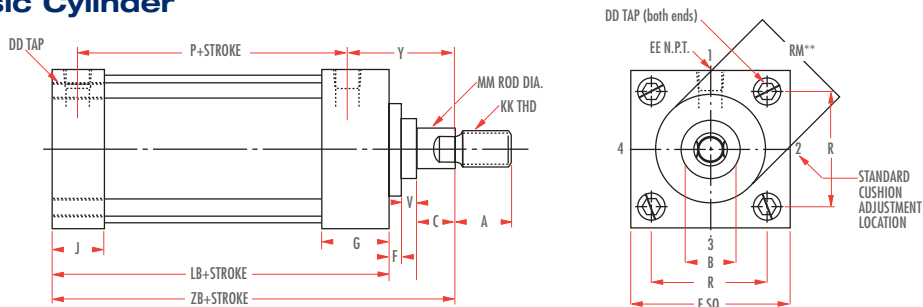
BORE	AA	BB	DD	F	K	R
1 1/2	2.02	1.00	1/4-28	--	7/32	1.428
2	2.60	1.125	5/16-24	--	17/64	1.838
2 1/2	3.10	1.125	5/16-24	--	17/64	2.192
3 1/4	4.00	1.375	3/8-24	--	5/16	2.758
4	4.75	1.375	3/8-24	--	5/16	3.323
5	5.80	1.750	1/2-20	--	7/16	4.101
6	6.90	1.750	1/2-20	--	7/16	4.879
8	9.10	2.250	5/8-18	19/32	9/16	6.435



EPC Series Cylinders

oversize rod diameters

Model H Basic Cylinder



CUSHION NOT AVAILABLE
HEAD END ON 1 1/2" BORE.

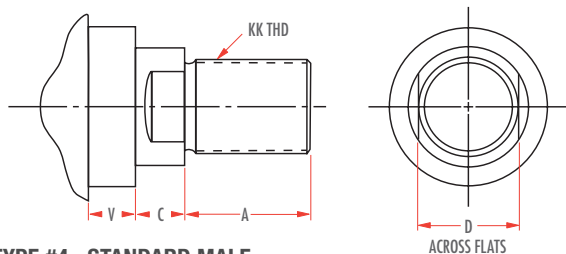
ROUND CARTRIDGE RETAINER PLATE

(RM DIM.) ON 6.00" OVERSIZE AND 8" BORE
ALL ROD DIAMETERS

NOTE: Hex nuts apply to 8.00" only

BORE	A	B	R	C	DD	E	EE*	F	G	J	K	KK	LB	MM	P	RM	V	Y	ZB
1 1/2	1 1/8	1 5/16	1.43	5/8	1/4 - 28	2	1/4	--	1 1/2	1	--	3/4-16	3 5/8	1	2 3/16	--	3/4	2 9/32	5
2	1 1/8	1 1/2	1.84	5/8	5/16-24	2 1/2	3/8	--	1 1/2	1	--	3/4-16	3 5/8	1	2 3/16	--	3/4	2 9/32	5
2 1/2	1 1/8	1 1/2	2.19	5/8	5/16-24	3	3/8	--	1 1/2	1	--	3/4-16	3 3/4	1	2 5/16	--	3/4	2 9/32	5 1/8
3 1/4	1 5/8	2	2.78	3/4	3/8 - 24	3 3/4	1/2	--	1 3/4	1 1/4	--	1-14	4 1/4	1 3/8	2 5/8	--	7/8	2 11/16	5 7/8
4	1 5/8	2	3.32	3/4	3/8 - 24	4 1/2	1/2	--	1 3/4	1 1/4	--	1-14	4 1/4	1 3/8	2 5/8	--	7/8	2 11/16	5 7/8
5	1 5/8	2	4.12	3/4	1/2 - 20	5 1/2	1/2	--	1 3/4	1 1/4	--	1-14	4 1/2	1 3/8	2 7/8	--	7/8	2 11/16	6 1/8
6	2	2 3/8	4.88	3/4	1/2 - 20	6 1/2	3/4	19/32	2	1 1/2	--	1 1/4-12	5	1 3/4	3 1/8	3.875	.5312	3 1/16	6 7/8
8	2	2 3/8	6.44	3/4	--	8 1/2	3/4	19/32	2	1 1/2	9/16	1 1/4-12	5 1/8	1 3/4	3 1/4	3.875	.5312	3 1/16	7

Rod End Type Standard



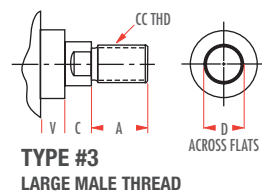
TYPE #4 STANDARD MALE

Note: #4 furnished as standard unless otherwise specified

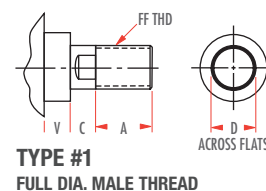
ROD DIA	A	C	D	V	CC	FF	KK
1	1 1/8	5/8	7/8	3/4	7/8-14	1-14	3/4-16
1 3/8	1 5/8	3/4	1 3/16	7/8	1 1/4-12	1 3/8-12	1-14
1 3/4	2	3/4	1 1/2	1.125	1 1/2-12	1 3/4-12	1 1/4-12

6" Bore and 8" Bore F + V = 1.125

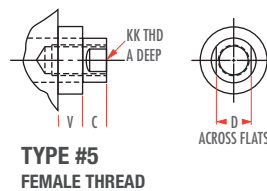
Optional



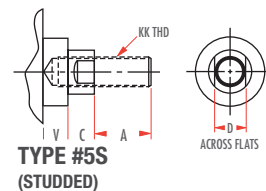
TYPE #3 LARGE MALE THREAD



TYPE #1 FULL DIA. MALE THREAD

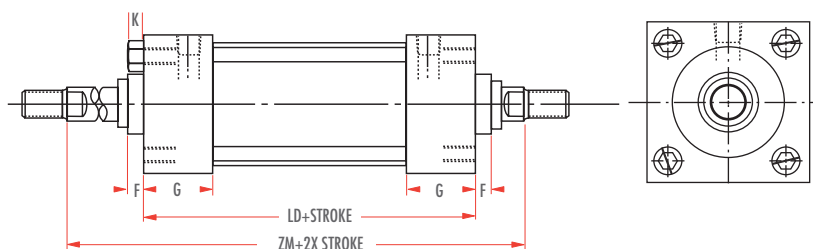


TYPE #5 FEMALE THREAD



TYPE #5S (STUDDER) 1" and 1 3/8 DIA. RODS ONLY

Model XH Double Rod End



BORE	F	G	LD	ZM	K
1 1/2	--	1 1/2	4 1/8	6 7/8	--
2	--	1 1/2	4 1/8	6 7/8	--
2 1/2	--	1 1/2	4 1/4	7	--
3 1/4	--	1 3/4	4 3/4	8	--
4	--	1 3/4	4 3/4	8	--
5	--	1 3/4	5.00	8 1/4	--
6	19/32	2	5 1/2	9 1/4	--
8	19/32	2	5 5/8	9 3/8	9/16

Note: 8.00" LD + Stroke + Fx2

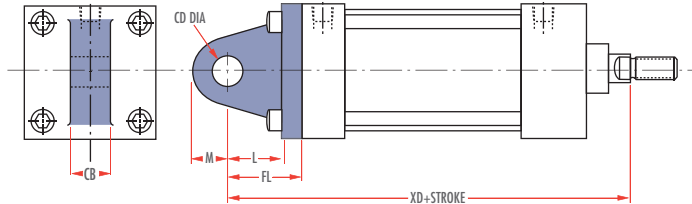
made in Canada



EPC Series Cylinders

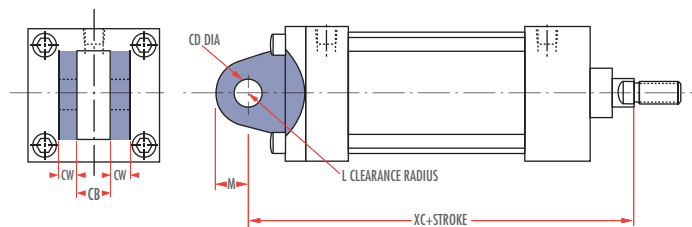
oversize rod diameters

Model E (4) Detachable Eye Mount (NFA MP4) (supplied with pin)



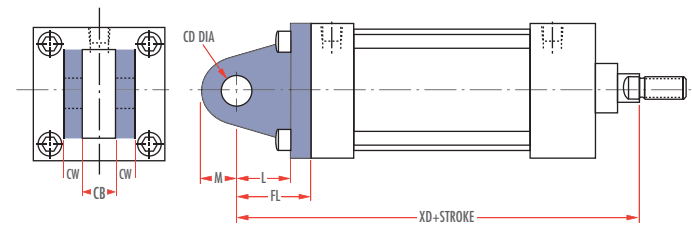
BORE	CB	CD	FL	L	M	XD
1 1/2	3/4	1/2	1 1/8	3/4	5/8	6 1/8
2	3/4	1/2	1 1/8	3/4	5/8	6 1/8
2 1/2	3/4	1/2	1 1/8	3/4	5/8	6 1/4
3 1/4	1 1/4	3/4	1 7/16	1 1/4	7/8	7 3/4
4	1 1/4	3/4	1 7/16	1 1/4	7/8	7 3/4

Model E (1) Clevis Mount (NFA MP1) (supplied with pin)



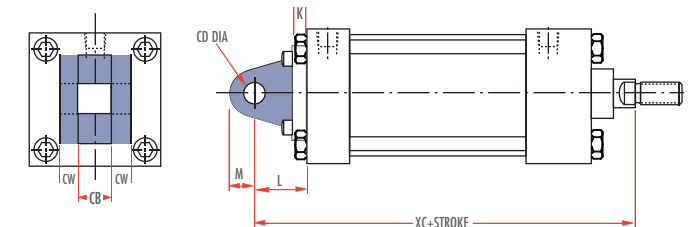
BORE	CB	CD	CW	L	M	XC
1 1/2	3/4	1/2	1/2	3/4	5/8	5 3/4
2	3/4	1/2	1/2	3/4	5/8	5 3/4
2 1/2	3/4	1/2	1/2	3/4	5/8	5 7/8
3 1/4	1 1/4	3/4	5/8	1 1/4	7/8	7 1/8
4	1 1/4	3/4	5/8	1 1/4	7/8	7 1/8
5	1 1/4	3/4	5/8	1 1/4	7/8	7 3/8
6	1 1/2	1	3/4	1 1/2	1 1/8	8 3/8

Model E (2) Detachable Clevis Mount (NFA MP2) (supplied with pin)



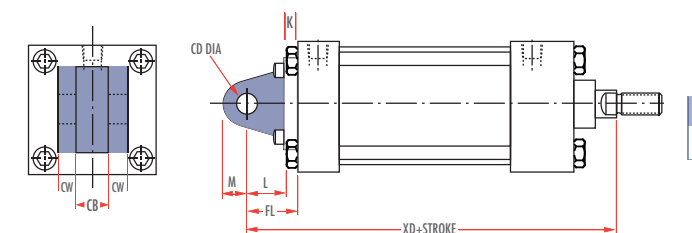
BORE	CB	CD	CW	FL	L	M	XD
1 1/2	3/4	1/2	1/2	1 1/8	3/4	5/8	6 1/8
2	3/4	1/2	1/2	1 1/8	5/8	5/8	6 1/8
2 1/2	3/4	1/2	1/2	1 1/8	3/4	5/8	6 1/4
3 1/4	1 1/4	3/4	5/8	1 7/8	1 1/4	7/8	7 3/4
4	1 1/4	3/4	5/8	1 7/8	1 1/4	7/8	7 3/4
5	1 1/4	3/4	5/8	1 7/8	1 1/4	7/8	8
6	1 1/2	1	3/4	2 1/4	1 1/2	1 1/8	9 1/8

Model E (1) Detachable Clevis Mount (NFA MP1) (supplied with pin)



BORE	CB	CD	CW	L	M	XC
8	1 1/2	1	3/4	1 1/2	1 1/8	8 1/4

Model E (2) Detachable Clevis Mount (NFA MP2) (supplied with pin)

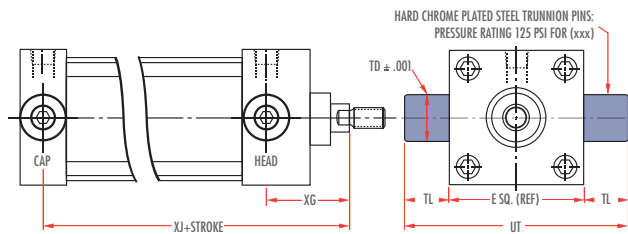


BORE	CB	CD	CW	L	M	XD	K	FL
8	1 1/2	1	3/4	1 1/2	1 1/2	9 1/4	9	2 1/4

EPC Series Cylinders

oversize rod diameters

Model FR Head Trunnion Mount (NFPA MT1)*

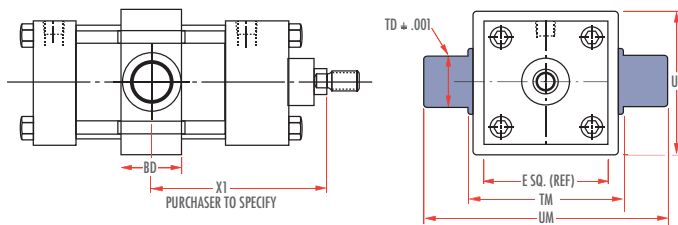


*MT1 NOT AVAILABLE IN 1 1/2" BORE

BORE	E	TD	TL	UT	FB	FR
					XJ	XG
1 1/2	2	1	1	4	4 1/2	--
2	2 1/2	1	1	4 1/2	4 1/2	2 1/8
2 1/2	3	1	1	5	4 5/8	2 1/8
3 1/4	3 1/4	1	1	5 3/4	5 1/4	2 1/2
4	4 1/2	1	1	6 1/2	5 1/4	2 1/2
5	5 1/2	1	1	7 1/2	6 1/2	2 1/2
6	6 1/2	1 3/8	1 3/8	9 1/4	6 1/8	2 7/8
8	8 1/2	2 1/2	1 3/8	11 1/4	6 1/4	2 7/8

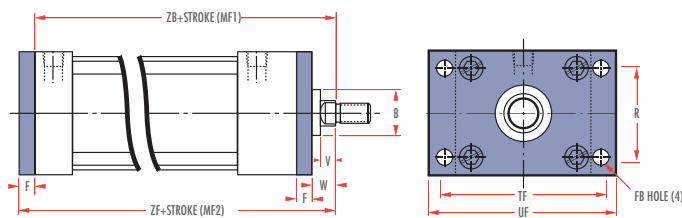
Model FB Cap Trunnion Mount (NFPA MT2)

Model F Intermediate Trunnion Mount (NFPA MT4)



BORE	E	BD	TD	TL	TM	UM	UV	X1
1 1/2	2	1 1/4	1	1	2 1/2	4 1/2	2 1/2	Purchaser to specify
2	2 1/2	1 1/2	1	1	3	5	3	
2 1/2	3	1 1/2	1	1	3 1/2	5 1/2	3 1/2	
3 1/4	3 3/4	2	1	1	4 1/2	6 1/2	4 1/4	
4	4 1/2	2	1	1	5 1/4	7 1/4	5	
5	5 1/2	2	1	1	6 1/4	8 1/4	6	
6	6 1/2	2 1/2	1 3/8	1 3/8	7 5/8	10 3/8	7	
8	8 1/2	2 1/2	1 3/8	1 3/8	9 3/4	12 1/2	9 1/2	

Model C Rear Flange Mount (NFPA MF2)



BORE	B	F	FB	R	TF	UF	V	W	ZF	ZB
1 1/2	1 5/16	3/8	5/16	1.43	2 3/4	3 3/8	1/2	1	5	5
2	1 1/2	3/8	3/8	1.84	3 3/8	4 1/8	1/2	1	5 3/8	5
2 1/2	1 1/2	3/8	3/8	2.19	3 7/8	4 5/8	1/2	1	5 1/2	5 1/8
3 1/4	2	5/8	7/16	2.76	4 11/16	5 1/2	3/8	1	6 1/2	5 7/8
4	2	5/8	7/16	3.32	5 7/8	6 1/4	3/8	1	6 1/2	5 7/8
5	2	5/8	9/16	4.10	6 5/8	7 5/8	3/8	1	6 3/4	6 1/8
6	2 3/8	3/4	9/16	4.88	7 5/8	8 5/8	3/8	1 1/8	7 5/8	6 7/8

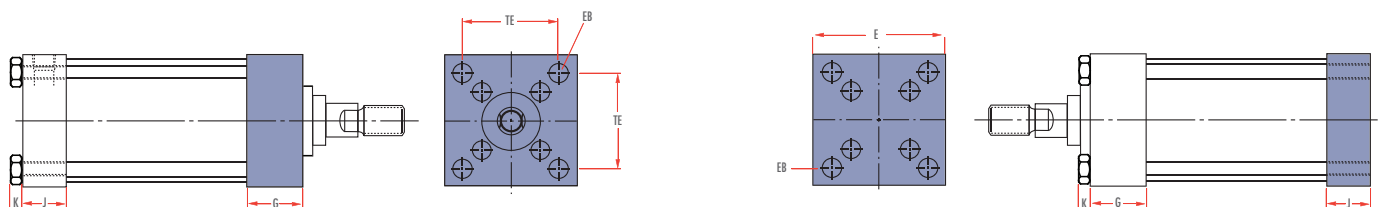
Model D Front Flange Mount (NFPA MF1)

ZF - APPLICABLE TO MODEL C

ZB - APPLICABLE TO MODEL D

Model DG Integral Head Mount (NFPA ME3)

Model CJ Integral Head Mount (NFPA ME4)



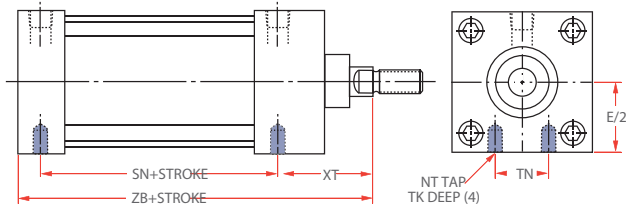
BORE	E	G	J	K	EB	TE
8	8.50	2.00	1.50	.625	.625	7.57



EPC Series Cylinders

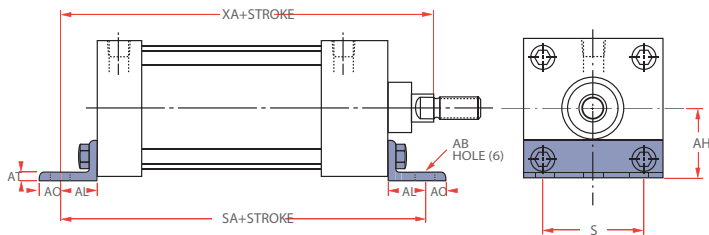
oversize rod diameters

Model S Bottom Tap Mount (NFPA MS4)



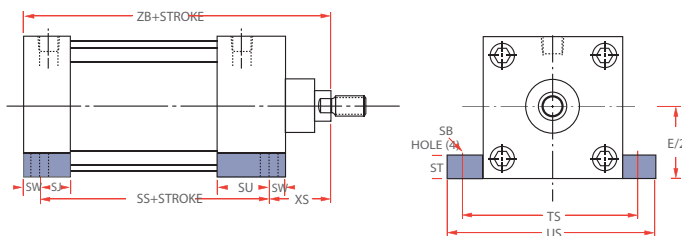
BORE	NT	TK	TN	SN	XT	ZB
1 1/2	1/4-20	3/8	5/8	2 1/4	1 15/16	4 5/8
2	5/16-18	1/2	7/8	2 1/4	2 5/16	4 5/8
2 1/2	3/8-16	5/8	1 1/4	2 3/8	2 15/16	4 3/4
3 1/4	1/2-13	3/4	1 1/2	2 5/8	2 7/16	5 5/8
4	1/2-13	3/4	2 1/16	2 5/8	2 7/16	5 5/8
5	5/8-11	1	2 11/16	2 7/8	2 7/16	5 7/8
6	3/4-10	1 1/8	3 1/4	3 1/8	2 13/16	6 5/8
8	3/4-10	1 1/8	4 1/2	3 1/2	3 1/16	7

Model AP Angle Mount (NFPA MS1)



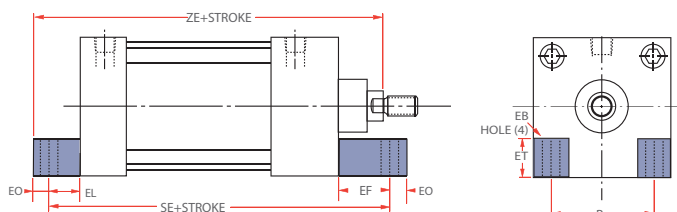
BORE	AB	AH	AL	AO	AT	S	SA	XA
1 1/2	7/16	1 3/16	1	3/8	1/8	1 1/4	5 5/8	5 5/8
2	7/16	1 7/16	1	3/8	1/8	1 3/4	5 5/8	5 5/8
2 1/2	7/16	1 5/8	1	3/8	1/8	2 1/4	5 3/4	5 3/4
3 1/4	9/16	1 15/16	1 1/4	1/2	3/16	2 3/4	6 3/4	6 3/4
4	9/16	2 1/4	1 1/4	1/2	3/16	3 1/2	6 3/4	6 3/4
5	11/16	2 3/4	1 3/8	5/8	3/16	4 1/4	7 1/4	7 1/4
6	13/16	3 1/4	1 3/8	5/8	1/4	5 1/4	7 3/4	7 3/4
8	13/16	4 1/4	1 13/16	11/16	1/4	7 1/8	8 3/4	8 13/16

Model A Side Lug Mount (NFPA MS2)



BORE	SB	SJ	SS	ST	SU	SW	TS	US	ZB	XS
1 1/2	13/32	5/8	2 7/8	1/2	1 1/8	3/8	2 3/4	3 1/2	4 5/8	1 3/4
2	13/32	5/8	2 7/8	1/2	1 1/8	3/8	3 1/4	4	4 5/8	1 3/4
2 1/2	13/32	5/8	3	1/2	1 1/8	3/8	3 3/4	4 1/2	5 1/8	1 3/4
3 1/4	17/32	3/4	3 1/4	3/4	1 1/4	1/2	4 3/4	5 3/4	5 7/8	2 1/8
4	25/32	3/4	3 1/4	3/4	1 1/4	1/2	5 1/2	6 1/2	5 7/8	2 1/8
5	25/32	9/16	3 1/8	1	1 11/16	11/16	6 7/8	8 1/4	6 1/8	2 5/16
6	25/32	13/16	3 5/8	1	1 5/16	11/16	7 7/8	9 1/4	6 7/8	2 9/16
8	25/32	13/16	3 5/8	1	1 5/16	11/16	9 7/8	11 1/4	7	2 9/16

Model AL (NFPA MS7)

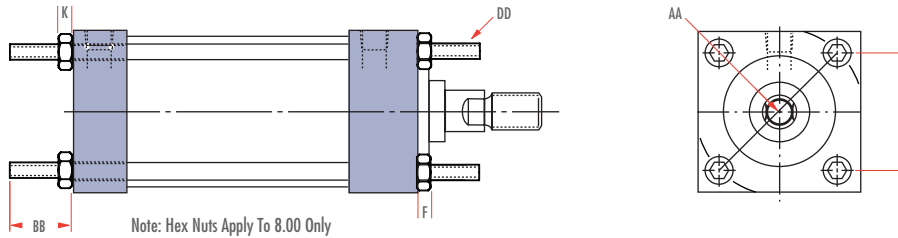


BORE	EB	EF	EL	EO	ET	R	SE	ZE
1 1/2	5/16	1 1/8	3/4	1/4	1/2	1.43	5 1/2	5 5/8
2	3/8	1 5/16	15/16	5/16	3/4	1.84	5 7/8	5 7/8
2 1/2	3/8	1 7/16	1 1/16	5/16	3/4	2.19	6 1/4	6 1/8
3 1/4	7/16	1 1/2	7/8	3/8	1	2.76	6 5/8	6 7/8
4	7/16	1 5/8	1	3/8	1 1/4	3.32	6 7/8	7
5	9/16	1 11/16	1 1/16	1/2	1 1/2	4.10	7 1/4	7 7/16
6	9/16	1 3/4	1 1/8	1/2	1 1/2	4.88	7 3/4	8 1/8
8	11/16	1 3/4	1 1/8	5/8	2 1/16	6.44	7 3/8	8 1/2

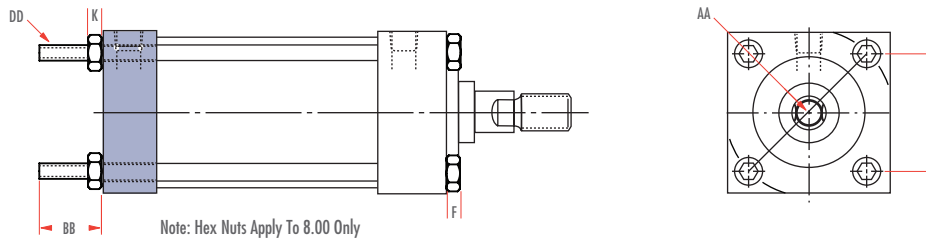
EPC Series Cylinders

oversize rod diameters

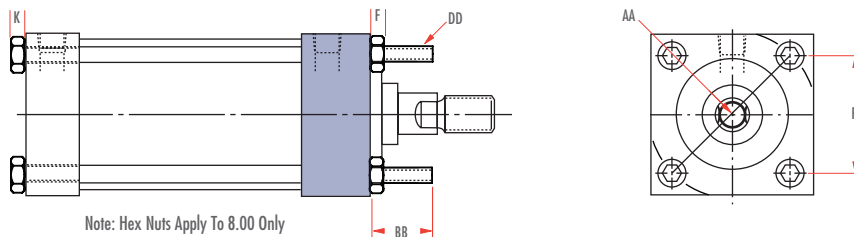
Model T (NFPA MX1)



Model TB (NFPA MX2)



Model TR (NFPA MX3)



BORE	AA	BB	DD	F	K	R
1 1/2	2.02	1.000	1/4-28	--	7/32	1.428
2	2.60	1.125	5/16-24	--	17/64	1.838
2 1/2	3.10	1.125	5/16-24	--	17/64	2.192
3 1/4	4.00	1.375	3/8-24	--	5/16	2.758
4	4.75	1.375	3/8-24	--	5/16	3.323
5	5.80	1.750	1/2-20	--	7/16	4.101
6	6.90	1.750	1/2-20	19/32	7/16	4.879
8	9.10	2.250	5/8-18	19/32	9/16	6.435

EPC Series Cylinders

air oil tanks - general information

NOPAK CANADA INC air-oil tanks are used as a simple economical method to supply a make up source of oil to any hydraulic circuit. Mounting the tank in a vertical position above the circuit that is being supplied, automatically bleeds the entire circuit system. The air supply to the air over oil tank is supplied by the same shop air source that provides low pressure power to the booster. In addition, air-oil tanks offer a means of smooth hydraulic speed control.

Design Features:

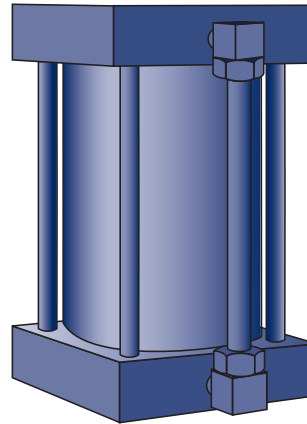
- ✳ Baffles on either end of the tank to reduce turbulence caused by rapid intake of air and discharge of oil causing aeration, whirlpooling and foaming.
- ✳ Replaceable sight gauge mounted in heads on the tank side. The transparent plastic sight tube clearly shows oil levels in the tank and is compatible with most hydraulic fluids.
- ✳ Large pipe ports enable the quick filling or draining of the tank. Aluminum heads are standard for tank diameters of 2 1/2" through 8" diameter.

Note:

Tanks are also available with glass wound filament fiberglass tubing. Because it is translucent, it provides a visual oil level indication. This eliminates the use of a sight gauge. Fiberglass tubing has the highest strength to weight ratio commercially available. It has a higher resistance for high impact and dents than brass or aluminum tubing. Corrosion resistant to a wide range of chemicals, acids, high moisture and other severe conditions make for a trouble-free operation in most environments. Nopak can economically supply you with either tank depending on your choice preference or specification.

How to select the correct sized air-oil tank:

- ✳ Determine the bore diameter and stroke of the work cylinder.
- ✳ Calculate the cubic inch oil displacement of work cylinder by multiplying the piston square inch area times the stroke in inches. (Use Table B Blind End Displacement for piston square inch area for ready reference.) Your determination will result in the cubic inch displacement volume requirement needed to select an air-oil tank.



Example: Work cylinder has a 4 inch diameter bore with 15 inch long stroke.

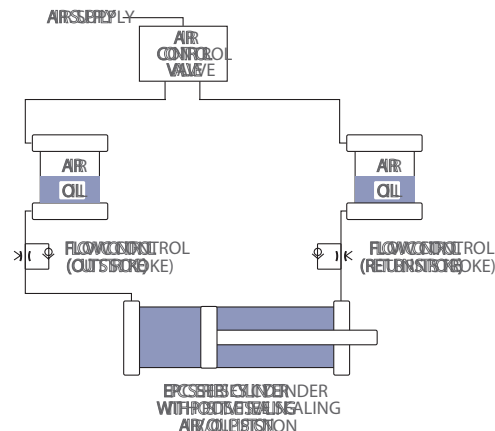
12.57 sq. in. area 4" bore
x 15 Stroke Length
188.55 Cubic inch displacement
volume needed.

See the tank selector chart below to select proper choice. Select a bore-height combination that has a capacity closest to, but larger than 188.55 cu". Your options are the 4 inch diameter bore with a 21 inch long tank length or the 5 inch bore with a 14 inch tank length or a 6 inch bore with an 11 inch tank length.

Economics recommends that your selection be the smaller 4 inch diameter bore with the 21 inch long tank length. This of course is predicated on available space. The smaller bore tanks are generally less costly than larger bores. Exceptions to this are the booster-tank combination which then makes your selection to be that the tank diameter be the same diameter as the booster. Next selection would be the type of mount applicable to your requirements. See the chart on opposite page for selection and dimensions. Nopak offers Models H, S, T, TB, and AP as a standard. However other mounting styles can be selected from Catalog 109CEPC. When boosters and air-oil tanks are ordered, specify whether air-oil tanks should be separate or integral. It is assumed that air-oil tanks are to be separate unless specified.

Please consult the Nopak Sales Office or your nearest Nopak representative for additional information.

Typical Air-Oil Circuit



EPC Series Cylinders

air oil tanks - dimensions

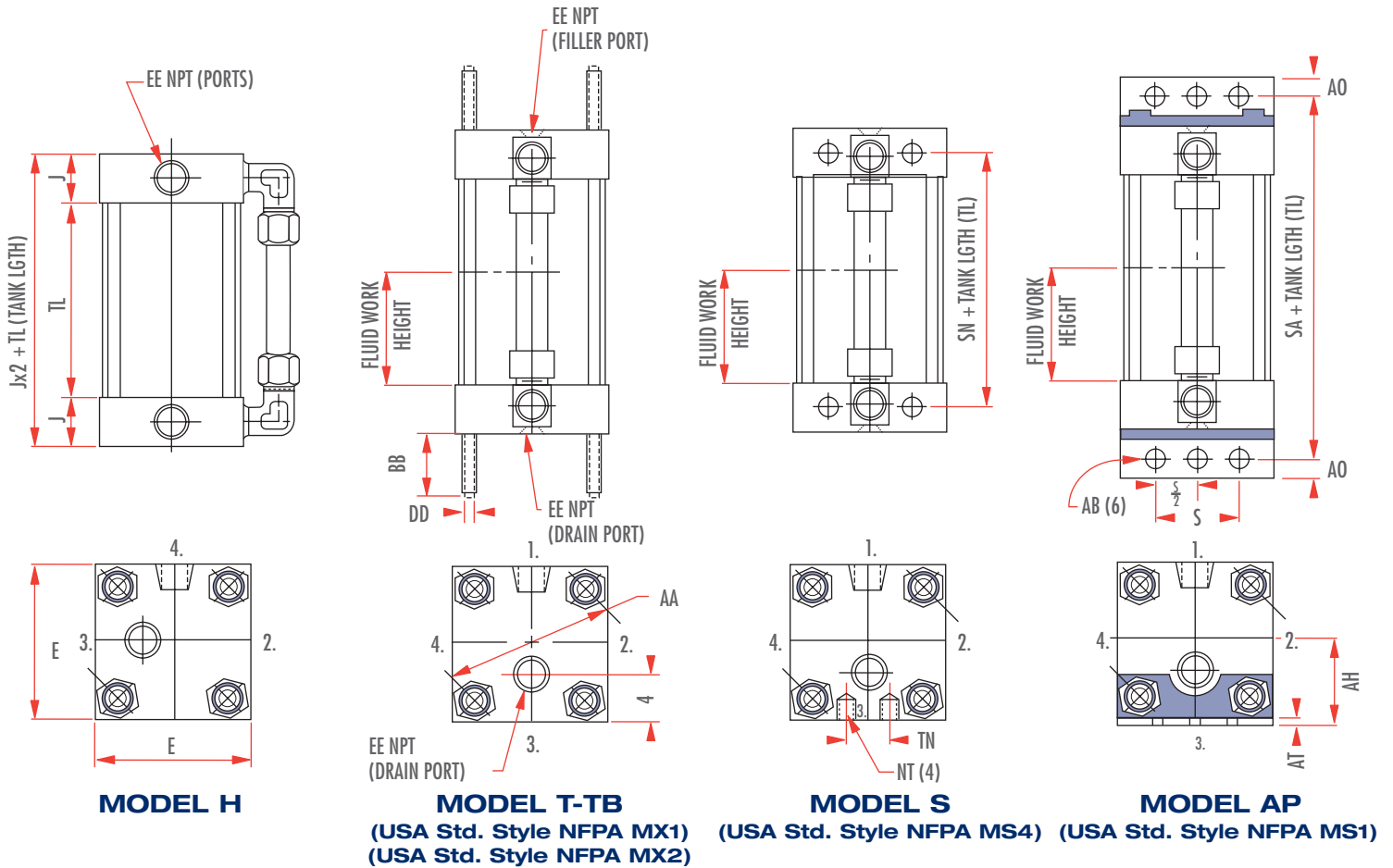


TABLE B - CYLINDER PISTON AREA

CYLINDER BORE (IN.)	PISTON AREA (SQ.IN.)
1 1/2	1.77
2	3.14
2 1/2	4.91
3 1/4	8.30
4	12.57
5	19.64
6	28.27
8	50.27

TABLE A - TANK DIMENSIONS (inches)

BORE	AB	AH	AT	AO	E	EE	H	J	S	SA	SN	NT	TN
2 1/2	7/16	1 5/8	1/8	3/8	3	3/8	2	1	2 1/4	4	1 1/8	3/8-16	1 1/4
3 1/4	9/16	1 15/16	3/16	1/2	3 3/4	1/2	2 1/2	1 1/4	2 3/4	5	1 3/8	1/2-13	1 1/2
4	9/16	2 1/4	3/16	1/2	4 1/2	1/2	2 1/2	1 1/4	3 1/2	5	1 3/8	1/2-13	2 1/16
5	11/16	2 3/4	3/16	5/8	5 1/2	1/2	3	1 1/4	4 1/4	5 3/4	1 3/8	5/8-11	2 11/16
6	13/16	3 1/4	1/4	5/8	6 1/2	3/4	3	1 1/2	5 1/4	5 3/4	1 5/8	3/4-10	3 1/4
8	13/16	4 1/4	1/4	11/16	8 1/2	3/4	3	1 1/2	7 1/8	6 5/8	1 5/8	3/4-10	4 1/4

TABLE C - USABLE TANK VOLUME (cubic inches)

BORE	AREA	5	6	7	8	9	10	12	14	16	18	20
2 1/2	4.91	12	16.6	21.6	25.5	30	34	43	52	61	70	78
3 1/4	8.30	19	26	34	41	49	56	74	86	101	116	131
4	12.57	28	40	51	62	74	85	107	129	153	175	195
5	19.64	39	57	75	92	110	128	163	199	234	269	305
6	28.27	62	86	111	137	161	186	232	284	333	386	432
8	50.27	109	146	195	239	280	324	414	504	592	684	774

EPC Series Cylinders

limit switches - features

NOPAK CANADA INC offers two sensing systems for the EPC Series cylinders. For cylinder bores 1-1/2" thru 2" choose the 810 Series, for cylinder bores of 2-1/2" thru 8" use the 710 Series. Both systems offer AC or DC service and Solid State Hall Effect. Adjustable mounting brackets are standard and allow the switches to be securely positioned anywhere along the range of piston travel. Both the 710 and 810 provide LED indicator lights to facilitate installation and troubleshooting. In applications that require control or initiation sequencing, the switches may be mounted in series. Proximity Switches are available. Please consult the factory.



FEATURES

- Quick connect versions available
- Extremely consistent repeatability
- Compact design
- Surge suppression available (standard on electronic)
- Reverse polarity protection
- Wide voltage range
- Compatible with IS (Intrinsically Safe) barriers
- High intensity light (LED) standard on most models
- Compatible with most corrosive and washdown applications
- High current capacity for small size (up to 10 times the competition)
- Both reed and electronic versions work with the same (reed) magnet
- Encapsulated circuit for wet environment (NEMA 6)
- Available for both tie-rod and round cylinder mounting
- 5-240 VAC or DC/Indicator light same brightness
- CSA approved versions

RECOMMENDATIONS AND PRECAUTIONS

All Nopak switches have been carefully engineered and tested. But with an unlimited variety of applications, under a great variety of work place conditions, the following recommendations should be followed closely to ensure maximum reliability.

- Stay within the specifications and power rating limitations of the installed unit.
- Because motors will produce high pulses that will be introduced into the control wiring, primary and control circuit wiring should not be mixed in the same conduit.
- Do not connect the switch without a load present. Failure to follow this instruction will result in destruction of the switch.
- Some electrical loads may be capacitive. Capacitive loading may also occur due to distributed capacity in cable runs over 25 feet. Use Switch Model 710-24 whenever capacitive loading may occur.
- Improper wiring may damage or destroy the switch. Carefully observe the wiring diagram, and listed power ratings before connecting power to the switch.
- In order to obtain optimum performance and long life, magnetically operated limit switches should not be subjected to:
 1. strong magnetic fields
 2. extreme temperatures
 3. excessive ferrous filing or chip buildup.
- Lower power switches are designed for signaling electronic circuits. Do not use relay loads or incandescent bulbs. Use resistive loads only.

TECHNICAL DATA

Temperature Range - operational from -20° to 80°C

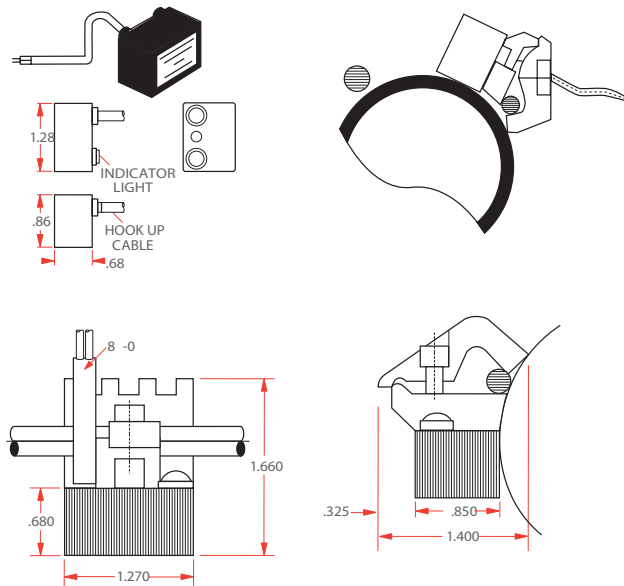
Shock - Operational up to 30G (11 msec.) reeds only. Not applicable for electronic.

Vibration - Operational up to 20G (10-55 Hz) reeds only. Not applicable for electronic.

Sensitivity and orientation - 85 gauss parallel (standard)

Most versions designed to meet NEMA 6 specifications

EPCRS710 Switch & Mounting Bracket Dimensions



EPCRS810 Switch & Mounting Bracket Dimensions



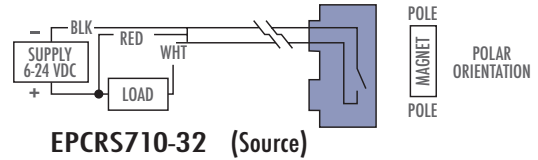
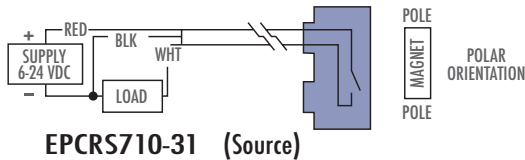
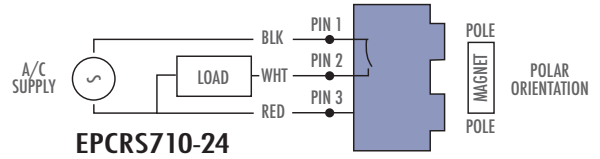
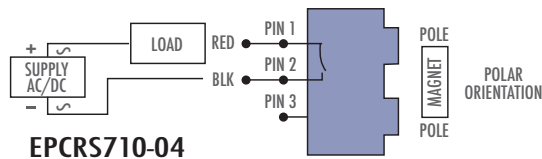
EPC Series Cylinders

limit switches - models and specifications

Model Number	Description	Function	Switching Voltage	Switching Current	Switching Power	Switching Speed	Voltage Drop
EPCRS710-04	REED SWITCH, MOV, LED, 2 WIRE	NORMALLY OPEN SPST	5-240 VDC/VAC 50/60 Hz	1 AMP MAX. .005 AMP MIN.	30 WATTS MAX	0.6 MS OPERATE 0.5 MS RELEASE	3 VOLTS
EPCRS710-24	REED SWITCH, MOV, LED, 3 WIRE	NORMALLY OPEN TRIAC OUTPUT NORMALLY OPEN	24-240 VAC 50/60 Hz	4 AMP MAX 50 AMP INRUSH .005 AMP/MIN	100 WATTS MAX	0.6 MS OPERATE 0.05 RELEASE	1 VOLT
EPRS710-31	ELECTRONIC SENSOR FOR REED MAGNETS, LED, SOURCING, 3 WIRE	NORMALLY OPEN PNP OUTPUT	6-24 VDC	1 AMP MAX	24 WATTS MAX	1.5 us OPERATE 0.5 us RELEASE	0.5 VOLTS
EPCRS710-32	ELECTRONIC SENSOR FOR REED MAGNETS, LED, SINKING, 3 WIRE	NORMALLY OPEN NPN OUTPUT	6-24 VDC	1 AMP MAX	24 WATTS MAX	1.5 us OPERATE 0.5 us RELEASE	0.5 VOLTS

NOTE: All EPCRS710 Switches are supplied with 9 ft.leads.Each switch supplied with clamp assembly

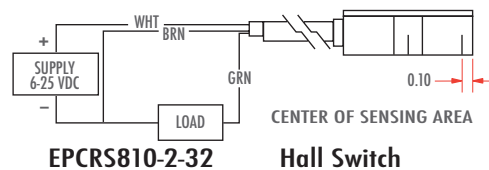
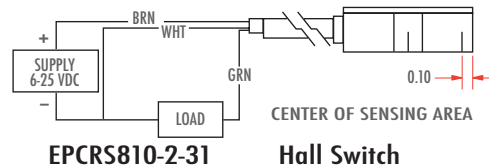
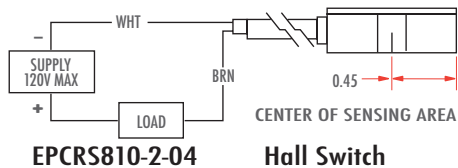
WIRING DIAGRAMS



Model Number	Description	Function	Switching Voltage	Switching Current	Switching Power	Switching Speed	Voltage Drop
EPCRS810-2-04	REED SWITCH, MOV, LED, 2 WIRE	NORMALLY OPEN SPST	5-1200 VDC/VAC 50/60 Hz	0.5 AMP MAX. .005 AMP MIN.	10 WATTS MAX	0.5 MS OPERATE 0.1 MS RELEASE	3.5 VOLTS
EPCRS810-2-31	ELECTRONIC SENSOR, LED, SOURCING	NORMALLY OPEN PNP OUTPUT	6-24 VDC	0.5 AMP MAX.	12 WATTS MAX	1.5 US OPERATE 0.05 US RELEASE	1.0 VOLT
EPCRS810-2-32	ELECTRONIC SENSOR, LED, SINKING	NORMALLY OPEN NPN OUTPUT	6-24 VDC	0.5 AMP MAX.	12 WATTS MAX	1.5 us OPERATE 0.5 us RELEASE	1.0 VOLTS

NOTE: All EPCRS810 Switches are supplied with 9 ft.leads.*Electronic sensors use reed switch magnet orientation

WIRING DIAGRAMS



rod & stop tube selection - technical data

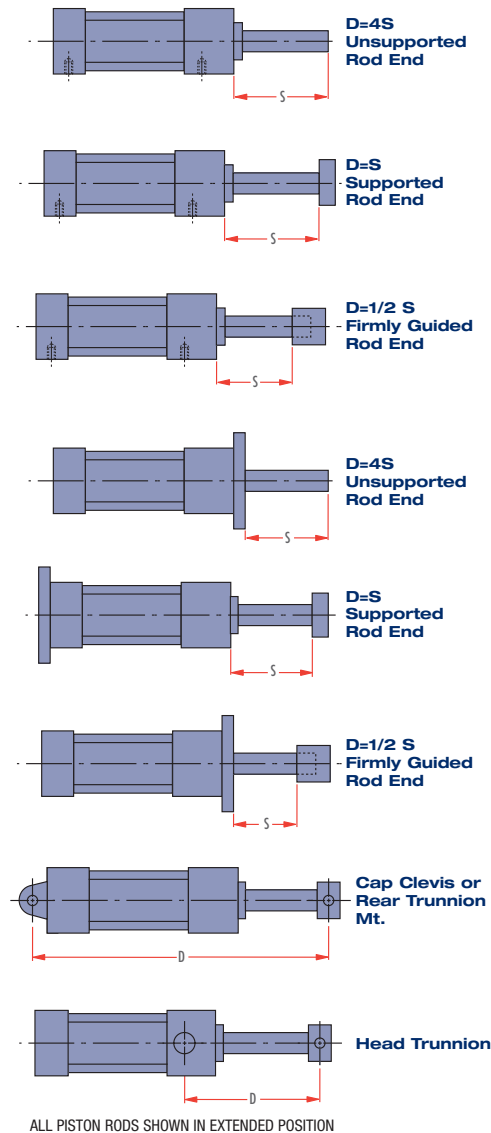
Piston Rod Diameter Selection

To determine the minimum recommended piston rod diameter for your application, first determine the cylinder thrust using the force volume chart. (Thrust equals bore area multiplied by the operating pressure.)

Next, select from the diagrams below the type of mounting you'll use. Then determine the length of "D" with the piston rod in the fully extended position.

Finally, find the value of "D" at the bottom of the selector chart. Follow its line upward until it intersects with the horizontal line representing the thrust. the stripe within which these lines intersect represents the minimum recommended piston rod diameter.

MOUNTINGS



Cylinder Force and Volume Chart

Extend Forces (in Pounds)

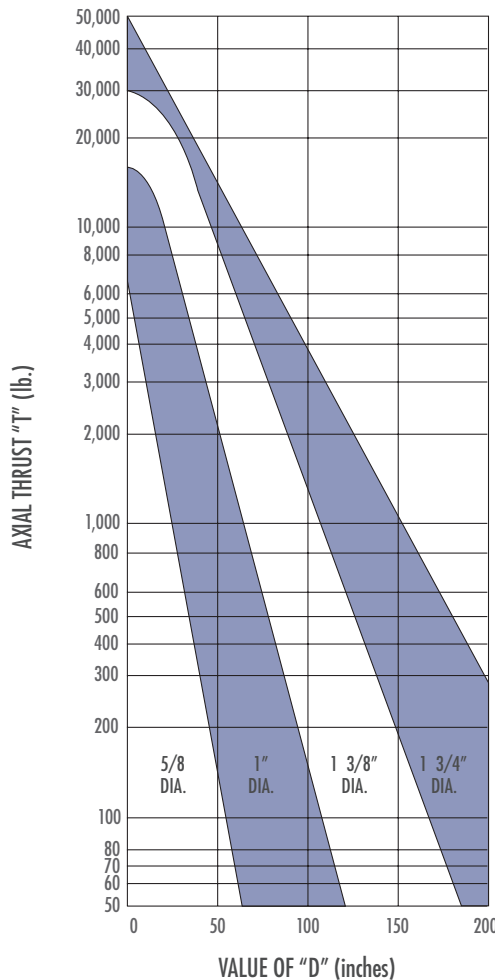
BORE	PISTON AREA	PSI										ROD* DISPLACEMENT
		40	50	60	80	100	125	150	175	200	250	
1 1/2	1.77	71	88	106	142	177	221	266	310	353	442	.00102
2	3.14	126	157	189	251	314	392	471	549	628	785	.00182
2 1/2	4.91	196	246	295	393	491	614	737	859	982	1227	.00284
3 1/4	8.30	322	415	498	664	830	1037	1245	1452	1659	2075	.00480
4	12.57	503	629	754	1005	1257	1571	1886	2200	2513	3142	.00727
5	19.64	785	982	1178	1571	1964	2455	2946	3437	3928	4910	.01137
6	28.27	1131	1414	1696	2262	2827	3534	4241	4947	5654	7068	.01636
8	50.27	2011	2514	3016	4022	5027	6284	7541	8797	10054	12567	.02909

Deduct these forces for retract strokes

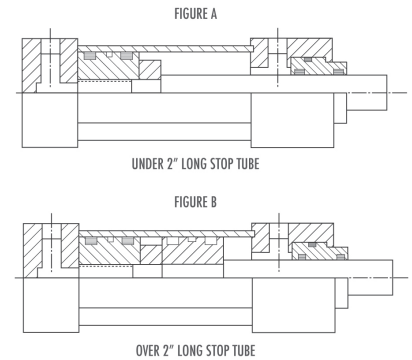
ROD DIA.	PISTON AREA	40	50	60	80	100	125	150	175	200	250	ROD* DISPLACEMENT
5/8	.307	12	15	18	25	31	38	46	54	61	77	.00018
1	.785	31	39	47	63	79	98	118	137	157	196	.00045
1 3/8	1.485	59	74	89	119	149	186	223	260	297	371	.00086
1 3/4	2.405	96	120	144	192	241	301	361	421	481	601	.00140

*cubic feet / inch of stroke

SELECTOR CHART



STOP TUBE CONFIGURATIONS



Stop Tube Selection

Stop tubes are installed between the piston and the head on long stroke cylinders to reduce the load on the bearing. That, in turn, reduces bearing wear and tendency to buckle.

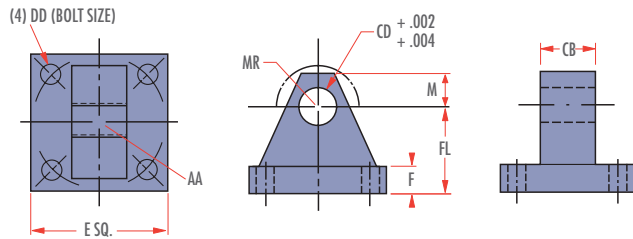
To determine if a stop tube is required and, if so, its length, first determine the value of "D" from the diagrams at left. If "D" is less than 40", no stop tube is needed. If "D" is over 40", a one inch stop tube is recommended for every 10" (or fraction thereof) over 40".

Nopak supplies two types of stop tubes for air cylinders. A cylinder with over two inches of stop tube, cushioned or non-cushioned, utilizes dual piston construction for added bearing surface as well as increasing distance between bearings (figure B). A cylinder requiring a stop tube under two inches uses a spacer only (figure A).

EPC Series Cylinders

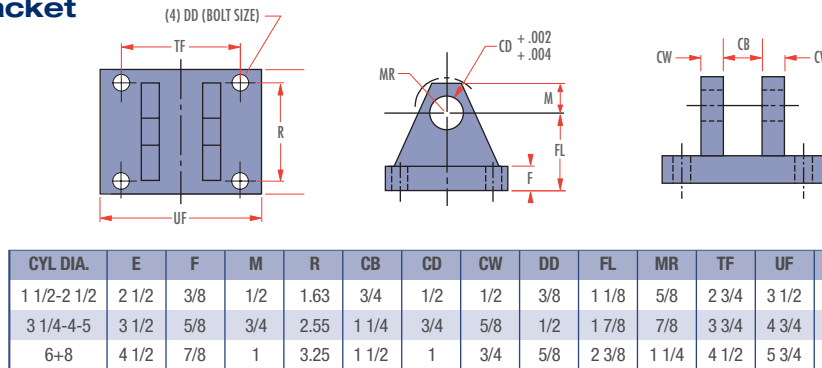
mounting accessories

Eye Bracket



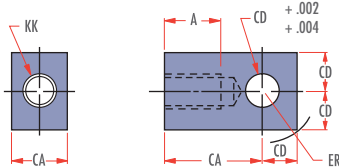
CYL DIA.	E	F	M	AA	CB	CD	DD	FL	MR	PART NO.
1 1/2-2 1/2	2 1/2	3/8	1/2	2.30	3/4	1/2	3/8	1 1/8	5/8	2716 L47
3 1/4-4-5	3 1/2	5/8	3/4	3.61	1 1/4	3/4	1/2	1 7/8	7/8	2719 L32
6+8	4 1/2	7/8	1	4.60	1 1/2	1	5/8	2 3/8	1 1/4	2720 L33

Mounting Bracket



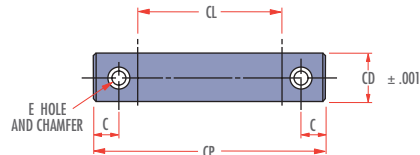
CYL DIA.	E	F	M	R	CB	CD	CW	DD	FL	MR	TF	UF	PART NO.
1 1/2-2 1/2	2 1/2	3/8	1/2	1.63	3/4	1/2	1/2	3/8	1 1/8	5/8	2 3/4	3 1/2	2683 L47
3 1/4-4-5	3 1/2	5/8	3/4	2.55	1 1/4	3/4	5/8	1/2	1 7/8	7/8	3 3/4	4 3/4	2684 L47
6+8	4 1/2	7/8	1	3.25	1 1/2	1	3/4	5/8	2 3/8	1 1/4	4 1/2	5 3/4	2685 L47

Rod Eye (Female)



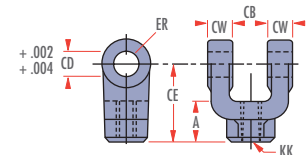
KK	A	CA	CB	CD	ER	PART NO.
7/16-20	3/4	1 1/2	3/4	1/2	5/8	1810 L59
3/4-16	1 1/8	2 1/16	1 1/4	3/4	1 1/16	1812 L59
1-14	1 5/8	2 13/16	1 1/2	1	1 7/16	1813 L59
1 1/4-12	2	3 7/16	2	1 3/8	2	1814 L59
1 1/2-12	2 1/4	4	2 1/2	1 3/4	2 1/16	1816 L59

Pivot-Pin



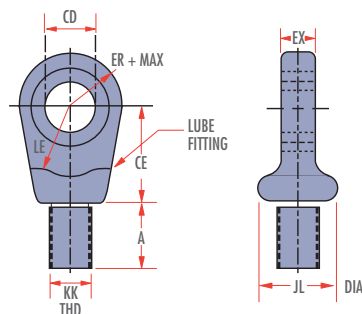
C	E	CD	CP	CL	PART NO.
3/16	1/8	1/2	2 3/8	1 3/4	3222 L47-1
1/4	3/16	3/4	3 1/8	2 1/2	3222 L47-2
1/4	3/16	1	3 5/8	3	3222 L47-3
1/4	3/16	1 3/8	4 3/4	4	3222 L47-4
1/4	3/16	1 3/4	5 13/16	5	3222 L47-5

Rod Clevis (Female)



KK	A	CB	CD	CE	CW	ER	PART NO.
7/16-20	3/4	3/4	1/2	1 1/2	12	1/2	2834 L59
3/4-16	1 1/8	1 1/4	3/4	2 3/8	5/8	3/4	2835 L59
1-14	2 5/8	1 1/2	1	3 1/8	3/4	1	2836 L59
1 1/4-12	2	2	1 3/8	4 1/8	1	1 3/8	2837 L59
1 1/2-12	2 1/4	2 1/2	1 3/4	4 1/2	1 1/4	1 3/4	2838 L59

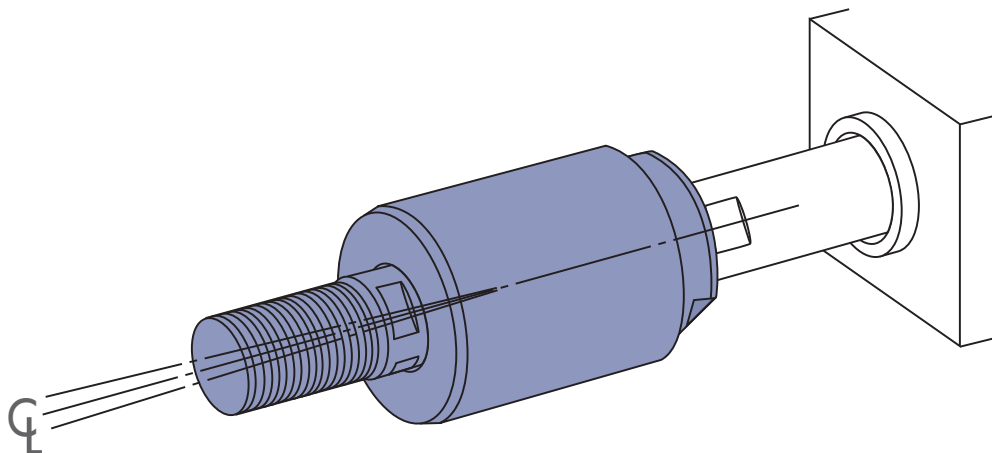
Spherical Rod Eye



A	CD	CE	EX	ER	KK	LE	JL	MAX PULL LOAD	PART NO.
.687	.500	.875	.437	.875	7/16-20	.750	0.875	2,644	NCRES - 05
1.000	.750	1.250	.656	1.250	3/4-16	1.062	1.312	9,441	NCRES - 07
1.500	1.000	1.875	.875	1.375	1-1/4	1.437	1.500	16,860	NCRES - 10
2.000	1.375	2.125	1.187	1.812	1 1/4-12	1.875	2.000	28,562	NCRES - 13
2.125	1.750	2.500	1.531	2.187	1 1/2-12	2.125	2.250	43,005	NCRES - 17

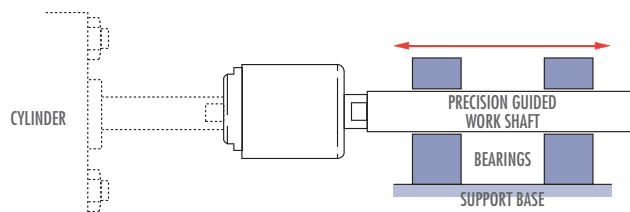
EPC Series Cylinders

"The Cylinder Saver" Self Aligning Rod Couplers



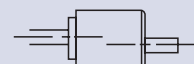
Self Aligning Rod Couplers

- Eliminates expensive precision machining for mounting fixed or rigid guide in cylinder for slide applications.
- Increases cylinder efficiency by eliminating friction caused by misalignment.
- Compensates for 2 angular error and 1/16 lateral misalignment on push and pull stroke.
- Greater reliability - Reduces cylinder and component wear.
- Simplifies alignment problems in the field.
- All components heat treated for improved corrosion and wear resistance, fatigue properties and black appearance.

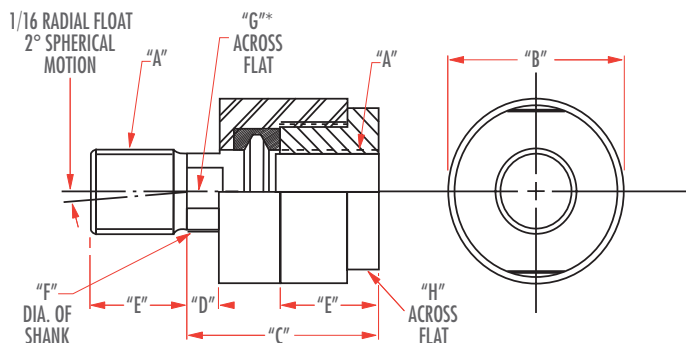
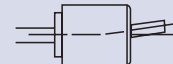


SELF-ADJUSTING

LATERAL



SPHERICAL (ANGULAR)



PART NO.	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	MAX PULL AT YIELD
NAC-250	1/4-28	7/8	1 1/4	1/4	5/8	5/16	3/16	3/4	6,000
NAC-312	5/16-24	7/8	1 1/4	1/4	5/8	5/16	1/4	3/4	8,300
NAC-375	3/8-24	7/8	1 1/4	1/4	5/8	5/16	5/16	3/4	8,300
NAC-375C	3/8-16	7/8	1 1/4	1/4	5/8	5/16	5/16	3/4	5,000
NAC-437	7/16-20	1 1/4	2	1/2	3/4	5/8	1/2	1	10,000
NAC-500	1/2-20	1 1/4	2	1/2	3/4	5/8	1/2	1	14,000
NAC-500C	1/2-13	1 1/4	2	1/2	3/4	5/8	1/2	1	14,000
NAC-625	5/8-18	1 1/4	2	1/2	3/4	5/8	1/2	1	19,000
NAC-750	3/4-16	1 3/4	2 5/16	1/2	1 1/8	31/32	13/16	1 1/2	34,000
NAC-750C	3/4-10	1 3/4	2 5/16	1/2	1 1/8	31/32	13/16	1 1/2	34,000
NAC-875	7/8-14	1 3/4	2 5/16	1/2	1 1/8	31/32	13/16	1 1/2	39,000
NAC-1.000	1-14	2 1/2	2 15/16	1/2	1 5/8	1 3/8	1 5/32	2 1/4	64,000
NAC-1.0000	1-8	2 1/2	2 15/16	1/2	1 5/8	1 3/8	1 5/32	2 1/4	64,000
NAC-1.250	1 1/4-12	2 1/2	2 15/16	1/2	1 5/8	1 3/8	1 5/32	2 1/4	78,000
NAC-1.375	1 3/8-12	2 1/2	2 15/16	1/2	1 5/8	1 3/8	1 5/32	2 1/4	78,000
NAC-1.500	1 1/2-12	3 1/4	4 3/8	13/16	2 1/4	1 3/4	1 1/2	3	134,000
NAC-1.750	1 3/4-12	3 1/4	4 3/8	13/16	2 1/4	1 3/4	1 1/2	3	134,000

EPC Series Cylinders

specifications

SPECIFICATIONS

OPERATING TEMPERATURES:

-40° to 200°F

Viton Seals: -20° to 400°F

OPERATING PRESSURES:

Pneumatic to 250 psig

Hydraulic 250 psig *maximum*

BORE DIAMETERS:

1-1/2", 2", 2-1/2", 3-1/4", 4",
5", 6", 8"

ROD DIAMETERS:

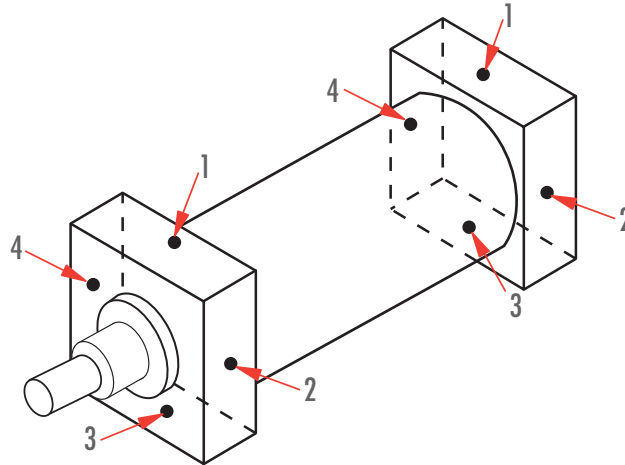
5/8", 1", 1-3/8", 1-3/4"

STROKE LENGTH:

9 feet maximum. For longer
stroke lengths, consult factory

FLUIDS:

Filtered compressed air,
lubricated or non-lubricated



PORTING

STANDARD LOCATIONS:

Ports: POSITION #1

Cushion Screw: POSITION #2

FR (MT1) POSITION #3

FB (MT2) POSITION #3

OPTIONAL LOCATIONS:

Per customer request, subject to
mounting limitations.

NOTE:

Rear cushioning only available
on the EPC 151 Bore Size

DIMENSIONS - MOUNTS

NFPA INTERCHANGEABLE

BREAKAWAY PRESSURES

Listed right are the average breakaway pressures in psi for all EPC Series Cylinder bore sizes. If your application requires a lower breakaway pressure than indicated for a particular bore size, consult factory.

Note: Breakaway pressures shown are for cylinders mounted horizontally and no load on the piston rod.

BREAKAWAY PRESSURES IN PSI

BORE	EXTEND	RETRACT
1-1/2", 2", 2 1/2"	5	6
3-1/4", 4"	4	5
5", 6"	3	4
8"	3	4

TIE ROD TORQUE CHART

BORE	TIE RODS	SIZE	TORQUE FT. LBS
1 1/2	4	1/4	2.1
2	4	5/16	3.2
2 1/2	4	5/16	4.3
3 1/4	4	3/8	9.2
4	4	3/8	12.1
5	4	1/2	17.8
6	4	1/2	29.7
8	4	5/8	43.5

WEIGHT CHART - BASIC CYLINDERS

BORE	H	MODEL						ADD PER IN. OF STROKE
		AP/GR FB	E1*	E2*	E4*	C/F	A	
1 1/2	1.6	2.0	2.1	2.2	2.2	2.2	2.5	.20
2	2.4	2.9	3.2	3.3	3.2	3.4	3.6	.25
2 1/2	3.3	3.9	4.3	4.5	4.5	4.6	4.7	.27
3 1/4	6.5	7.9	9.2	10.1	10.0	9.8	9.0	.51
4	8.8	10.5	12.1	13.3	13.2	13.3	11.1	.55
5	13.2	14.3	17.8	19.9	19.0	20.0	17.5	.59
6	21.5	25.2	29.7	32.2	32.2	32.2	27.2	.84
8	35.4	36.5	43.5	43.5	43.5	35.4	44.9	1.25

All weights in LBS. Oversize rod weight add 10%

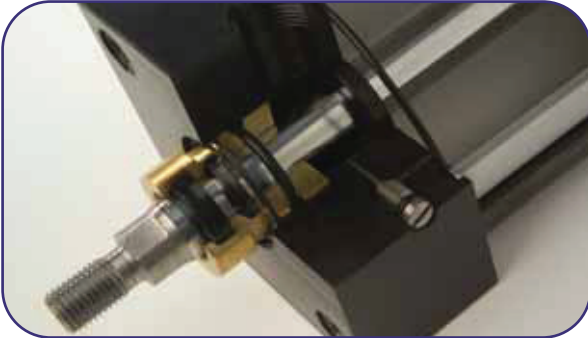
* Weight includes mounting pin

HEAD OFFICE:

220 FROBISHER DRIVE
WATERLOO ON CANADA N2V 2C7
t: 519 886 6900 / 905 452 8210
f: 519 886 9181
e: admin@nopakcanada.com
www.nopakcanada.com

SUCCURSALE BRANCH OFFICE:

165 RUE DES CEDRES CHEMIN SAINT-FRANCOIS
LAVAL, QC CANADA H7A 1V9
t: 514 920 0220
f: 514 920 0222
e: ventes@nopakcanada.com
www.nopakcanada.com



WARRANTY

NOPAK CANADA INC warrants that every product of it's manufacture to be of proper materials and first class workmanship. We agree to repair or replace, F.O.B. Factory, but not to remove or install in the field, any perishable "soft goods" such as seals, gaskets, etc., which fail within a six-month period after shipment, normal wear excepted. We warrant for one year from date of shipment, all other parts which fail because of defective materials or workmanship. NCI assumes no responsibility for work done or expenses incurred, in the field, pertaining to such repairs or replacements, except upon written authority from our home office. Components not produced by NCI are subject only to the warranty extended to NCI by their respective manufacturer.

When orders have been correctly filled, there shall be no returns without **NOPAK CANADA INC** approval. Such returns will be subject to a restocking charge.

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