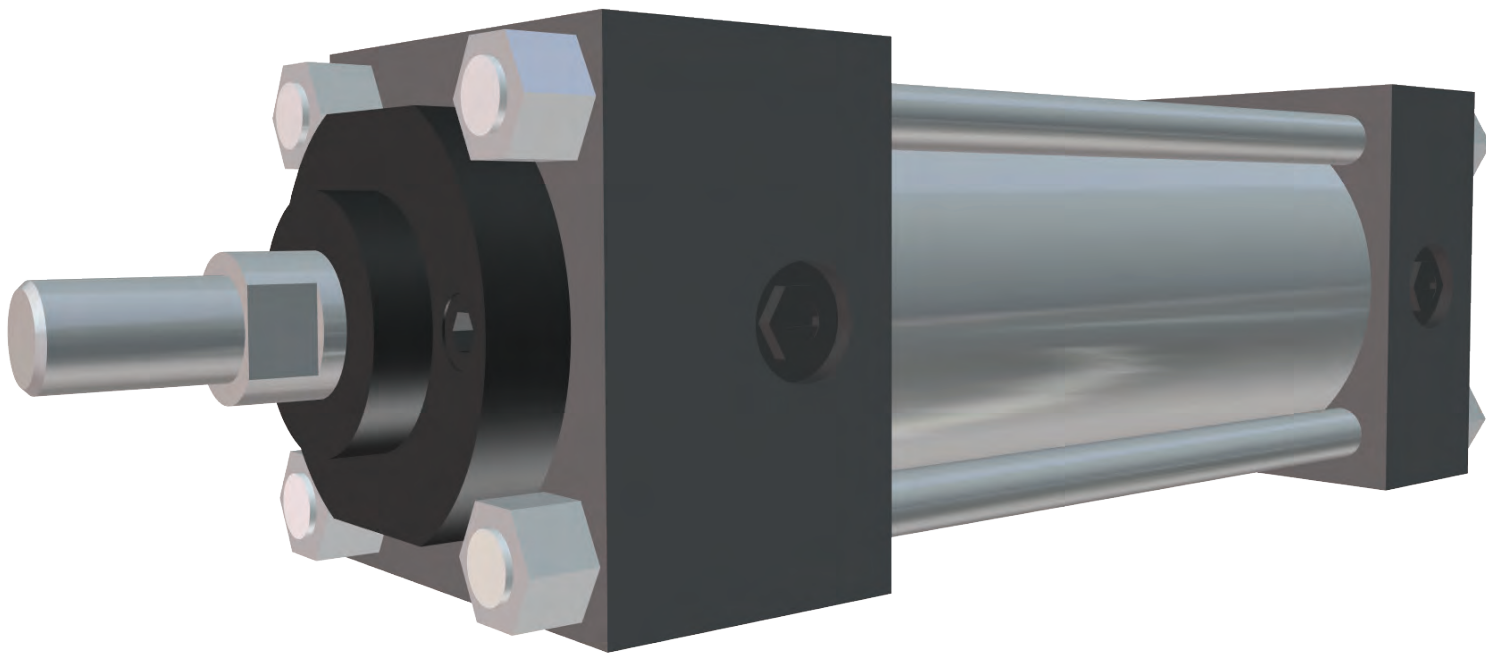


Class 5A

Low Pressure NFPA Aluminum Cylinders



NOPAK

First in Manufacturing. Engineered to Last.

ORDERING CODE EXAMPLE

CL5A - 4.00 x 12.00 - E* - AA - 1.00 - 4 - OPT

CLASS	
5A	250 PSI AIR ALUMINUM

Bore	
1.50	
2.00	
2.50	
3.25	
4.00	
5.00	
6.00	
8.00	
10.00	
12.00	

STROKE	
UP TO 120"	

MODEL	
D	MF1 - FRONT FLANGE
C	MF2 - REAR FLANGE
DG	ME3 - FRONT MOUNTING HOLES
CJ	ME4 - REAR MOUNTING HOLES
E	MP1 - FIXED REAR CLEVIS
HE	MP2 - DETACHABLE REAR CLEVIS
E4	MP4 - DETACHABLE REAR EYE
AP	MS1 - ANGLE PLATE
A	MS2 - FOOT MOUNT
S	MS4 - SIDE TAPPED HOLES
FR	MT1 - FRONT TRUNNION
FB	MT2 - REAR TRUNNION
F	MT4 - INTERMEDIATE TRUNNION
H	MX0 - NO MOUNT
T	MX1 - EXTENDED TIE RODS (BOTH ENDS)
TB	MX2 - EXTENDED TIE RODS (CAP END)
TR	MX3 - EXTENDED TIE RODS (ROD END)

ROD DIAMETER	
SEE CHART AT RESPECTIVE BORE SIZE FOR ROD SIZES AVAILABLE	

ROD END THREAD (SEE CHART PAGE 75)	
1	FULL MALE THREAD
3	INTERMEDIATE MALE
4	SMALL MALE (STANDARD)
5	FEMALE THREAD
6	PLAIN END (NO THREADS)
7	ROD COUPLER END
9	STUDDED

CUSHIONS	
NN	NO CUSHIONS
AA	CUSHIONED BOTH ENDS
NA	NO CUSHION ROD END CUSHIONED BLIND END
AN	CUSHIONED ROD END NO CUSHION BLIND END

OPTIONS (CALL OUT BELOW CYLINDER DESCRIPTION)	
TYPE B SEALS - FLUOROCARBON	
DIM. WF - ROD EXTENSION	
DIM. A - EXTENDED ROD THREAD	
EMS-201: ELECTROLESS NICKEL PLATING (SEE PAGE 92)	
MAGNETIC PISTON	
METALLIC ROD SCRAPER	
OPTIONAL PORT LOCATIONS	
STAINLESS STEEL PISTON ROD	
STAINLESS STEEL TIE RODS	
STAINLESS STEEL TIE ROD NUTS	
STAINLESS STEEL FASTENERS	
STAINLESS STEEL ALL: INCLUDES PISTON ROD, TIE RODS, TIE ROD NUTS AND FASTENERS	
STAINLESS STEEL CUSHION NEEDLES	
STOP TUBE - SPECIFY STOP TUBE LENGTH, EFFECTIVE STROKE AND TOTAL STROKE	

* FOR DOUBLE ROD END CYLINDERS, ADD AN "X" BEFORE THE MODEL IDENTIFICATION (EXAMPLE: XA, XD, XFR).

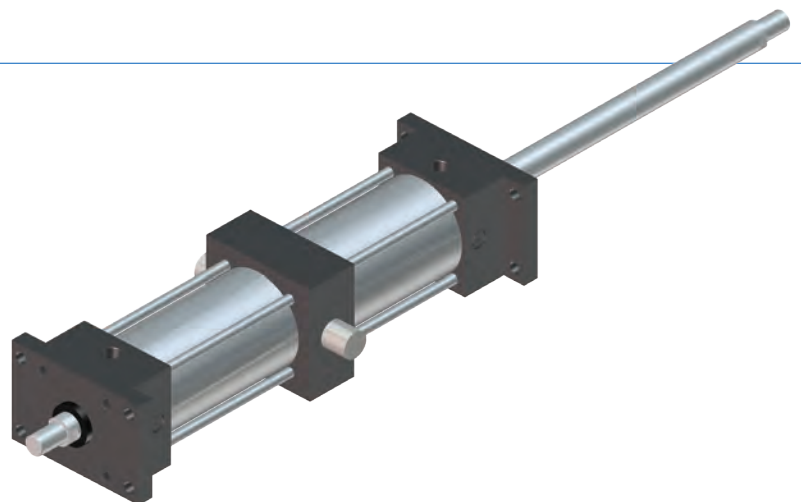
STANDARD PORT AND CUSHION ADJUSTMENT POSITIONS	
<ul style="list-style-type: none"> • PORTS - POSITION 1 • CUSHION ADJUSTMENT - POSITION 2 	
<p>NOTE: When optional port locations are ordered, specify both port locations, even if one port is in the standard location.</p>	

COMBINATION MOUNTS

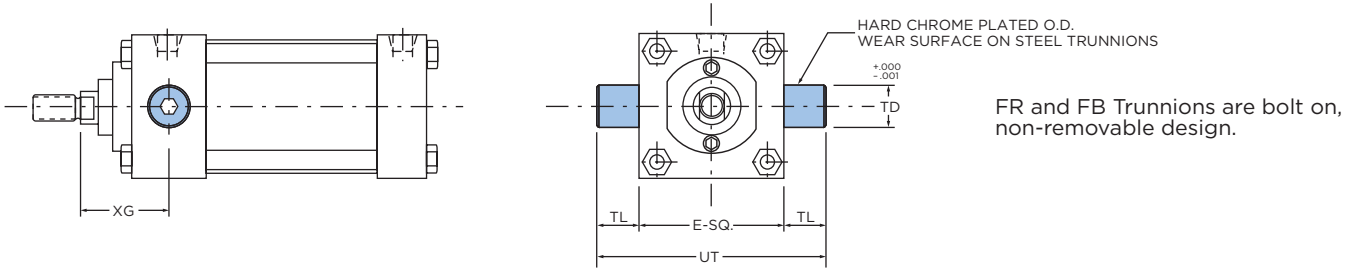
Cylinders can be ordered with a combination of mounts for added design flexibility.

HOW TO ORDER:

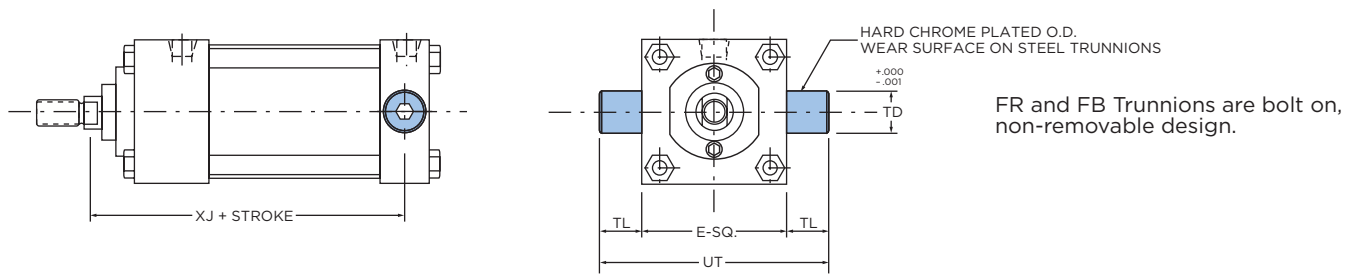
Combination mount part numbers can be constructed by adding a dash (-) in between the desired mounts in the part number. Consult factory for more information.



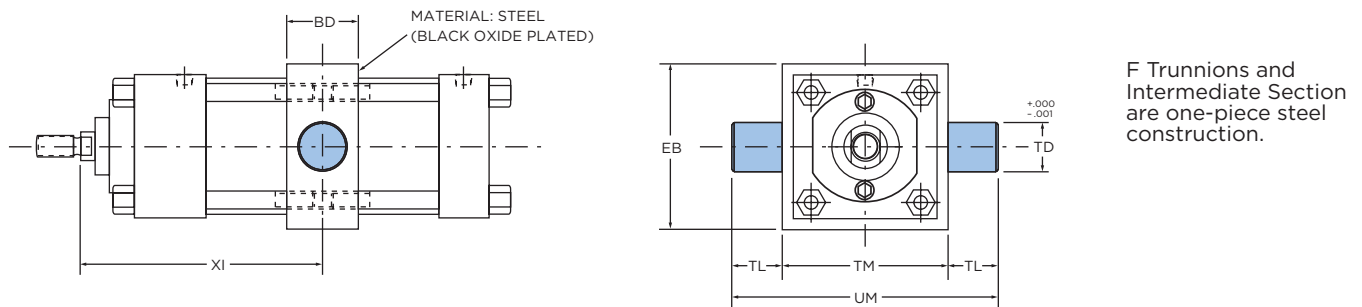
MODEL FR (NFPA MT1)



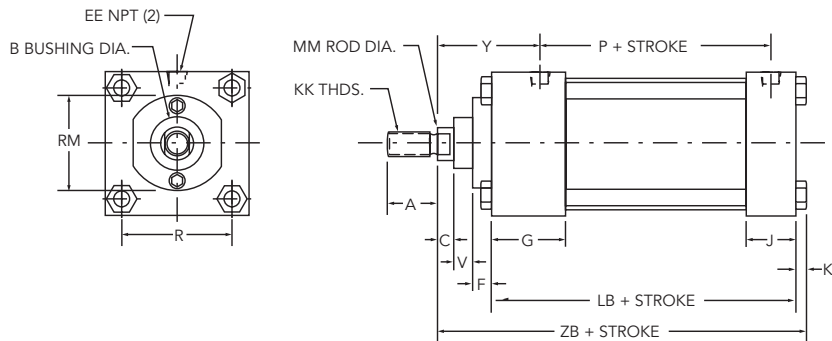
MODEL FB (NFPA MT2)



MODEL F (NFPA MT4)



BASIC DIMENSIONS



TRUNNION MOUNT CYLINDERS

1.50" THROUGH 8.00" BORE

Table 1 BASIC DIMENSIONS STANDARD & OVERSIZE RODS

BORE	ROD DIAMETER	A	B	C	EE	F	G	J	K	KK	LB	MM	P	R	RM	V	Y	ZB
1.50	0.63	0.750	1.125	0.375	0.375	0.375	1.500	1.000	0.250	7/16-20	3.625	0.625	2.375	1.438	2.00	0.250	1.875	4.875
	1.00	1.125	1.500	0.500	0.375	0.375	1.500	1.000	0.250	3/4-16	3.625	1.000	2.375	1.438	2.00	0.500	2.250	5.250
2.00	0.63	0.750	1.125	0.375	0.375	0.375	1.500	1.000	0.313	7/16-20	3.625	0.625	2.375	1.844	2.00	0.250	1.875	4.938
	1.00	1.125	1.500	0.500	0.375	0.375	1.500	1.000	0.313	3/4-16	3.625	1.000	2.375	1.844	2.50	0.500	2.250	5.313
2.50	0.63	0.750	1.125	0.375	0.375	0.375	1.500	1.000	0.313	7/16-20	3.750	0.625	2.500	2.188	2.00	0.250	1.875	5.063
	1.00	1.125	1.500	0.500	0.375	0.375	1.500	1.000	0.313	3/4-16	3.750	1.000	2.500	2.188	3.00	0.500	2.250	5.438
3.25	1.00	1.125	1.500	0.500	0.500	0.625	1.750	1.250	0.375	3/4-16	4.250	1.000	2.750	2.766	2.75	0.250	2.375	6.000
	1.38	1.625	2.000	0.625	0.500	0.625	1.750	1.250	0.375	1-14	4.250	1.000	1.375	2.766	3.75	0.375	2.625	6.250
4.00	1.00	1.125	1.500	0.500	0.500	0.625	1.750	1.250	0.375	3/4-16	4.250	1.000	2.750	3.320	2.75	0.250	2.375	6.000
	1.38	1.625	2.000	0.625	0.500	0.625	1.750	1.250	0.375	1-14	4.250	1.000	1.375	3.320	3.50	0.375	2.625	6.250
5.00	1.00	1.125	1.500	0.500	0.500	0.625	1.750	1.250	0.438	3/4-16	4.500	1.000	3.000	4.100	2.75	0.250	2.375	6.313
	1.38	1.625	2.000	0.625	0.500	0.625	1.750	1.250	0.438	1-14	4.500	1.000	1.375	4.100	3.50	0.375	2.625	6.563
6.00	1.38	1.625	2.000	0.625	0.750	0.625	2.000	1.500	0.438	1-14	5.000	1.375	3.250	4.875	3.50	0.375	2.750	7.063
	1.75	2.000	2.375	0.750	0.750	0.625	2.000	1.500	0.438	1-1/4-12	5.000	1.750	3.250	4.875	3.50	0.500	3.000	7.313
8.00	1.38	1.625	2.000	0.625	0.750	0.625	2.000	1.500	0.563	1-14	5.125	1.375	3.375	6.438	3.50	0.375	2.750	7.313
	1.75	2.000	2.375	0.750	0.750	0.625	2.000	1.500	0.563	1-1/4-12	5.125	1.750	3.375	6.438	3.50	0.500	3.000	7.563

Table 2 MODEL FR HEAD TRUNNION MOUNT AND MODEL FB CAP TRUNNION MOUNT DIMENSIONS

BORE	ROD DIAMETER	E	TD	TL	UT	XG	XJ ADD STROKE
1.50	0.63	2.000	1.000	1.000	4.000	1.750	4.125
	1.00	2.000	1.000	1.000	4.000	N/A*	4.500
2.00	0.63	2.500	1.000	1.000	4.500	1.750	4.125
	1.00	2.500	1.000	1.000	4.500	2.125	4.500
2.50	0.63	3.000	1.000	1.000	5.000	1.750	4.250
	1.00	3.000	1.000	1.000	5.000	2.125	4.625
3.25	1.00	3.750	1.000	1.000	5.750	2.250	5.000
	1.38	3.750	1.000	1.000	5.750	2.500	5.250
4.00	1.00	4.500	1.000	1.000	6.500	2.250	5.000
	1.38	4.500	1.000	1.000	6.500	2.500	5.250
5.00	1.00	5.500	1.000	1.000	7.500	2.250	5.250
	1.38	5.500	1.000	1.000	7.500	2.500	5.500
6.00	1.38	6.500	1.375	1.375	9.250	2.625	5.875
	1.75	6.500	1.375	1.375	9.250	2.875	6.125
8.00	1.38	8.500	1.375	1.375	11.250	2.625	6.000
	1.75	8.500	1.375	1.375	11.250	2.875	6.250

* No oversize rod available on 1.50" bore Model FR.

Table 3 MODEL F INTERMEDIATE TRUNNION MOUNT DIMENSIONS

BORE	BD	EB	TD	TL	TM	UM	XI
1.50	1.250	2.500	1.000	1.000	2.500	4.500	Customer to Specify
2.00	1.500	3.000	1.000	1.000	3.000	5.000	
2.50	1.500	3.500	1.000	1.000	3.500	5.500	
3.25	2.000	4.250	1.000	1.000	4.500	6.500	
4.00	2.000	5.000	1.000	1.000	5.250	7.250	
5.00	2.000	6.000	1.000	1.000	6.250	8.250	
6.00	2.000	7.000	1.375	1.375	7.625	10.375	
8.00	2.500	9.500	1.375	1.375	9.750	12.500	

Table 4 MODELS FR, FB AND F STANDARD CUSHION LOCATIONS

MOUNT	HEAD CUSHION	CAP CUSHION
FR	3	2
FB	2	3
F	2	2

Ports or cushions cannot be on same side as FR & FB Trunnions.