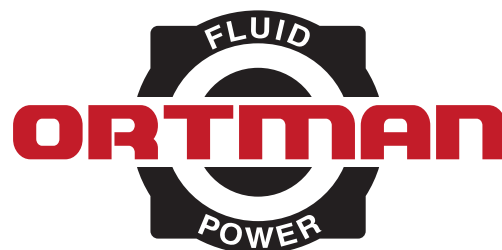
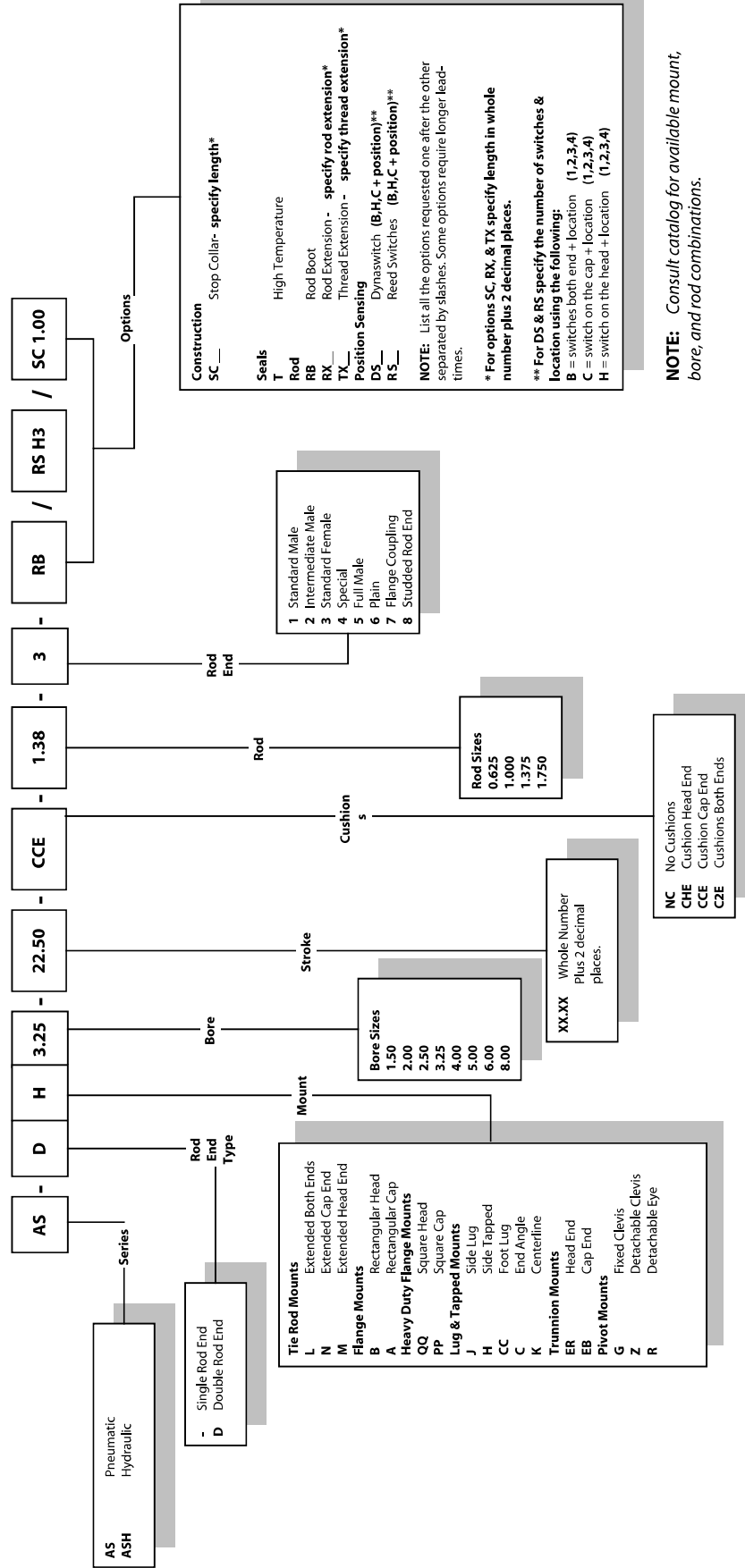


**AS/ASH SERIES ALUMINUM
PNEUMATIC AND HYDRAULIC CYLINDERS 6**



ORDERING INFORMATION



NOTE: Consult catalog for available mount, bore, and rod combinations.

AS-DH3.25-22.50-CCE-1.38-3-RB/RS H3/SC1.00

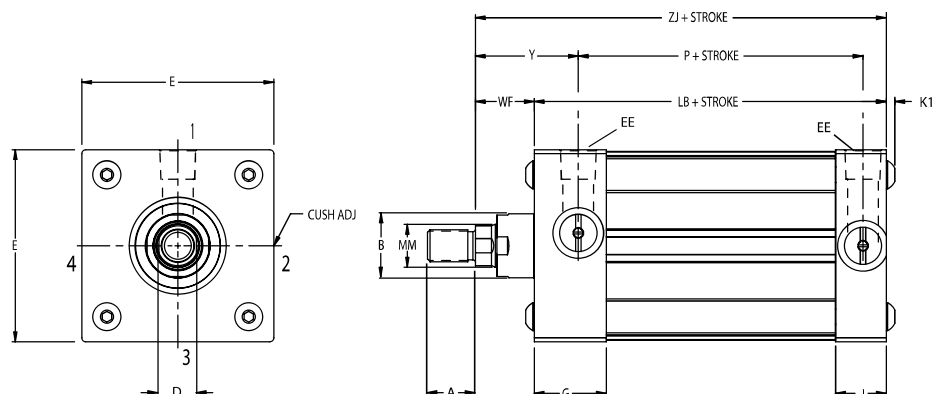
For Rod End Dimensions see back cover foldout...

Series AS

Basic Cylinder No Mount

1.50" to 4.00"

STYLE O—Basic Plain Mount
(No Mounting)



BORE	AA	E	EE		F	G	J	K1	R	ADD STROKE	
			NPTF	SAE						P	LB
1½	2.02	2	3/8	6	3/8	17/16	17/16	1/8	1.43	2¼	3⅝
2	2.60	2½	3/8	6	3/8	17/16	17/16	5/32	1.84	2¼	3⅝
2½	3.10	3	3/8	6	3/8	17/16	17/16	5/32	2.19	2⅜	3¾
3¼	3.90	3¾	1/2	10	5/8	111/16	13/16	3/16	2.76	2⅝	4¼
4	4.70	4½	1/2	10	5/8	111/16	13/16	3/16	3.32	2⅝	4¼

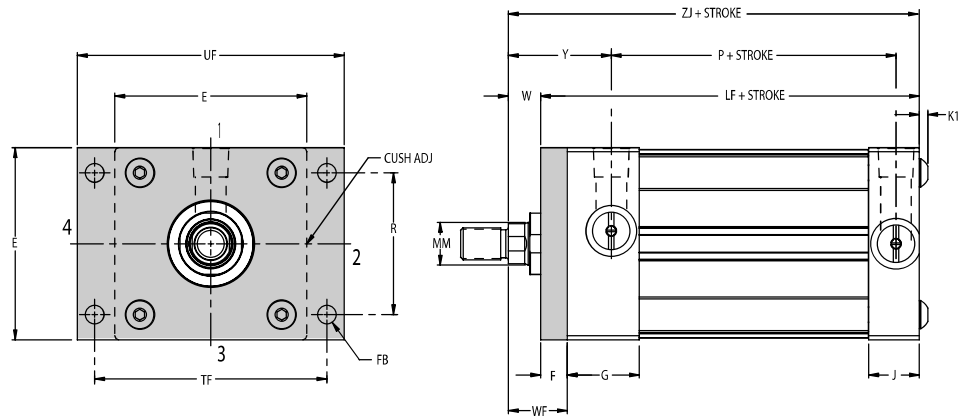
BORE	ROD DIA. MM	THREAD SIZE		ROD EXTENSIONS AND PILOT DIMENSIONS							WF	ADD STROKE	
		KK	FF	A	+000 -002 B	C	D	NA	FA	VB		Y	ZJ
1½	5/8	7/16-20	1/2-20	3/4	1.124	3/8	1/2	9/16	3/8	5/8	1	115/16	45/8
2	5/8	7/16-20	1/2-20	3/4	1.124	3/8	1/2	9/16	3/8	5/8	1	115/16	45/8
	1	3/4-16	7/8-14	11/8	1.499	1/2	7/8	15/16	3/8	7/8	13/8	25/16	5
2½	5/8	7/16-20	1/2-20	3/4	1.124	3/8	1/2	9/16	3/8	5/8	1	115/16	4¾
	1	3/4-16	7/8-14	11/8	1.499	1/2	7/8	15/16	3/8	7/8	13/8	25/16	51/8
3¼	1	3/4-16	7/8-14	11/8	1.499	1/2	7/8	15/16	3/8	7/8	13/8	27/16	55/8
	13/8	1-14	1¼-12	15/8	1.999	5/8	11/8	15/16	5/8	1	15/8	211/16	57/8
4	1	3/4-16	7/8-14	11/8	1.499	1/2	7/8	15/16	3/8	7/8	13/8	27/16	55/8
	13/8	1-14	1¼-12	15/8	1.999	5/8	11/8	15/16	5/8	1	15/8	211/16	57/8

Series AS

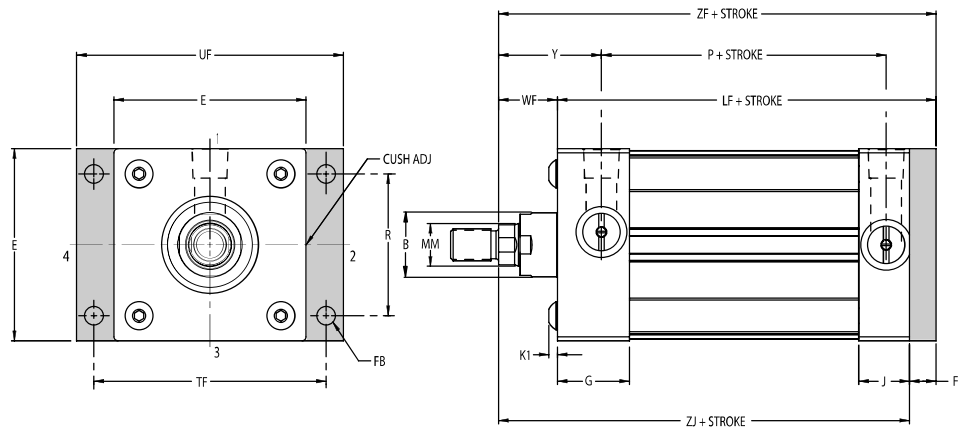
Flange Mounted Cylinders

1.50" to 4.00"

**STYLE B—Rectangular Flange
Mount Head End**
(NFPA Mounting Style MF1)



**STYLE A—Rectangular Flange
Mount Cap End**
(NFPA Mounting Style MF2)



BORE	AA	E	EE		F	G	J	K1	R	TF	UF	FB*	ADD STROKE		
			NPTF	SAE									P	LB	LF
1½	2.02	2	¾	6	¾	1⅞	1⅛	⅛	1.43	2¾	3⅜	¼	2¼	3⅝	4
2	2.60	2½	¾	6	¾	1⅞	1⅛	⅝	1.84	3⅜	4⅛	⅝	2¼	3⅝	4
2½	3.10	3	¾	6	¾	1⅞	1⅛	⅝	2.19	3⅞	4⅝	⅝	2⅝	3¾	4⅛
3¼	3.90	3¾	½	10	⅝	1⅞	1⅜	⅜	2.76	4⅞	5½	⅜	2⅝	4¼	4⅞
4	4.70	4½	½	10	⅝	1⅞	1⅜	⅜	3.32	5⅞	6¼	⅜	2⅝	4¼	4⅞

*Mounting holes are ⅛" larger than bolt size shown.

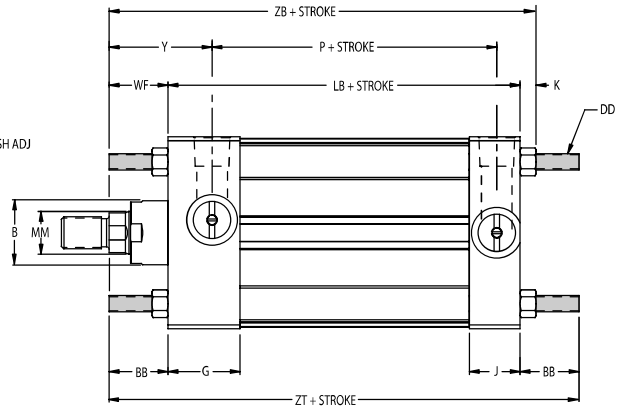
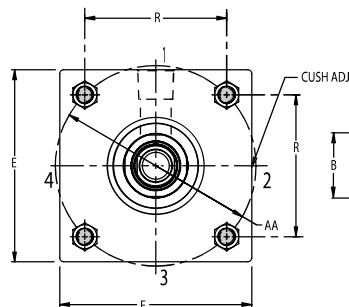
BORE	ROD DIA. MM	THREAD SIZE		ROD EXTENSIONS AND PILOT DIMENSIONS							W	WF	ADD STROKE		
		KK	FF	A	+000 -002 B	C	D	NA	FA	VB			Y	ZF	ZJ
1½	⅝	7/16-20	1/2-20	¾	1.124	¾	½	9/16	¾	⅝	⅝	1	1⅝	5	4⅝
2	⅝	7/16-20	1/2-20	¾	1.124	¾	½	9/16	¾	⅝	⅝	1	1⅝	5	4⅝
	1	¾-16	7/8-14	1⅛	1.499	½	7/8	15/16	¾	7/8	1	1⅜	2⅝	5⅜	5
2½	⅝	7/16-20	1/2-20	¾	1.124	¾	½	9/16	¾	⅝	⅝	1	1⅝	5⅛	4¾
	1	¾-16	7/8-14	1⅛	1.499	½	7/8	15/16	¾	7/8	1	1⅜	2⅝	5½	5⅛
3¼	1	¾-16	7/8-14	1⅛	1.499	½	7/8	15/16	¾	7/8	¾	1⅜	2⅞	6¼	5⅝
	1⅜	1-14	1¼-12	1⅝	1.999	⅝	1⅛	1⅝	⅝	1	1	1⅝	2⅞	6½	5⅝
4	1	¾-16	7/8-14	1⅛	1.499	½	7/8	15/16	¾	7/8	¾	1⅜	2⅞	6¼	5⅝
	1⅜	1-14	1¼-12	1⅝	1.999	⅝	1⅛	1⅝	⅝	1	1	1⅝	2⅞	6½	5⅝

Series AS

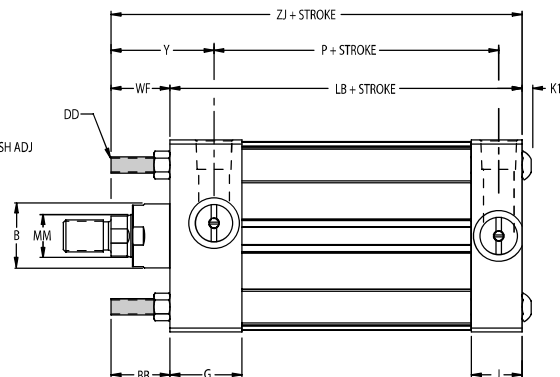
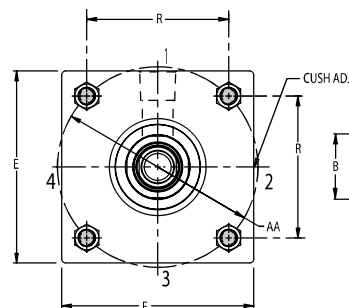
Tie Rod Mounted Cylinders

1.50" to 4.00"

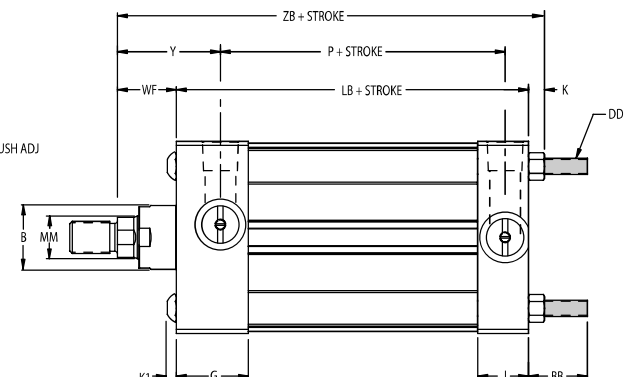
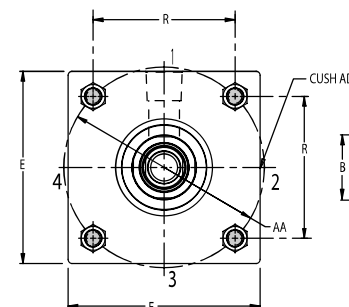
**STYLE L—Tie Rods
Extended Both Ends**
(NFA Mounting Style MX1)



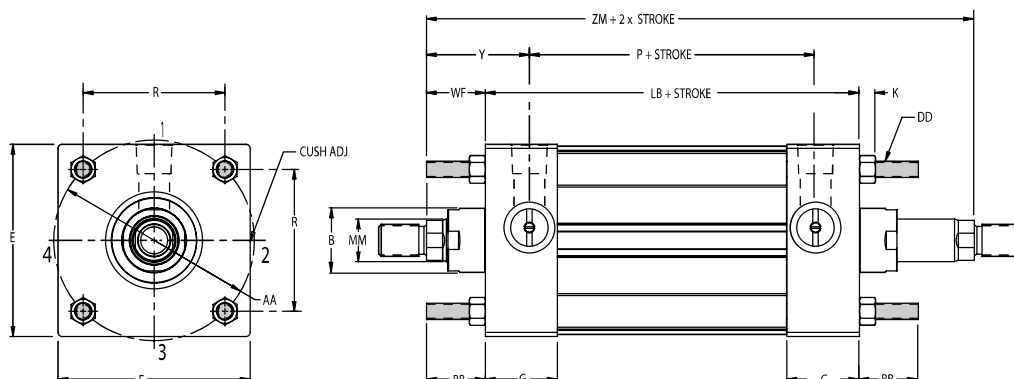
**STYLE M—Tie Rods
Extended Head End**
(NFA Mounting Style MX3)



**STYLE N—Tie Rods
Extended Cap End**
(NFA Mounting Style MX2)



STYLE DL—Tie Rods
Extended Both Ends Double
Rod End Cylinder
(NFPA Mounting Style MDX1)



BORE	AA	BB	DD	E	EE		F	G	J	K	K1	R	ADD STROKE	
					NPTF	SAE							P	LB
1½	2.02	1	¼-28	2	¾	6	¾	1⅞	1⅞	¼	⅛	1.43	2¼	3⅝
2	2.60	1⅛	⅝-24	2½	¾	6	¾	1⅞	1⅞	⅝	⅝	1.84	2¼	3⅝
2½	3.10	1⅛	⅝-24	3	¾	6	¾	1⅞	1⅞	⅝	⅝	2.19	2⅝	3¾
3¼	3.90	1⅜	⅜-24	3¾	½	10	⅝	1⅞	1⅞	⅜	⅜	2.76	2⅝	4¼
4	4.70	1⅜	⅜-24	4½	½	10	⅝	1⅞	1⅞	⅜	⅜	3.32	2⅝	4¼

BORE	ROD DIA. MM	THREAD SIZE		ROD EXTENSIONS AND PILOT DIMENSIONS							WF	Y	ADD STROKE			ADD 2X STK.
		KK	FF	A	+000 -002 B	C	D	NA	FA	VB			ZJ	ZB	ZT	
1½	⅝	7/16-20	1/2-20	¾	1.124	¾	1/2	9/16	¾	⅝	1	1⅞	4⅝	4⅞	5⅝	6⅞
2	⅝	7/16-20	1/2-20	¾	1.124	¾	1/2	9/16	¾	⅝	1	1⅞	4⅝	4⅞	5⅝	6⅞
	1	¾-16	7/8-14	1⅛	1.499	1/2	7/8	15/16	¾	7/8	1⅜	2⅞	5	5⅞	6⅞	6⅞
2½	⅝	7/16-20	1/2-20	¾	1.124	¾	1/2	9/16	¾	⅝	1	1⅞	4⅝	4⅞	5⅝	6⅞
	1	¾-16	7/8-14	1⅛	1.499	1/2	7/8	15/16	¾	7/8	1⅜	2⅞	5	5⅞	6⅞	6⅞
3¼	1	¾-16	7/8-14	1⅛	1.499	1/2	7/8	15/16	¾	7/8	1⅜	2⅞	5	6	7	7½
	1⅜	1-14	1¼-12	1⅝	1.999	⅝	1⅛	1⅞	⅝	1	1⅝	2⅞	5⅞	6¼	7¼	8
4	1	¾-16	7/8-14	1⅛	1.499	1/2	7/8	15/16	¾	7/8	1⅜	2⅞	5	6	7	7½
	1⅜	1-14	1¼-12	1⅝	1.999	⅝	1⅛	1⅞	⅝	1	1⅝	2⅞	5⅞	6¼	7¼	8

[illegible]

Technical drawings of the CUSH ADJ. component, showing front and side views with dimensions.

Front View Dimensions:

- E:** Total width.
- E/2:** Half width from center to side edge.
- TS:** Distance from center to side edge.
- US:** Total width from side edge to side edge.
- SW:** Width of the side flange.
- STI:** Thickness of the side flange.
- 4:** Distance from center to side edge.
- 2:** Distance from center to side edge.
- 3:** Distance from center to side edge.
- SB:** Distance from center to side edge.

Side View Dimensions:

- Z11 + STROKE:** Total length.
- P + STROKE:** Length of the main body.
- LB + STROKE:** Length of the main body.
- Y:** Distance from center to side edge.
- WF:** Width of the side flange.
- B:** Thickness of the side flange.
- MM:** Material thickness.
- SW:** Width of the side flange.
- SU1:** Distance from center to side edge.
- G:** Distance from center to side edge.
- XS:** Distance from center to side edge.
- SS + STROKE:** Total length.
- J:** Distance from center to side edge.
- K:** Thickness of the side flange.

BORE	AA	E	EE		F	G	J	K1	TN	NT	R	SB*	ST	ST1	SU	SU1	SW	TS	ADD STROKE			
			NPTF	SAE															P	LB	SN	SS
1½	2.02	2	⅜	6	⅜	1⅛	1⅛	⅞	⅜	⅞-20	1.43	⅜	½	0.18	15/16	0.75	⅜	2⅜	2¼	3⅜	2¼	2⅞
2	2.60	2½	⅜	6	⅜	1⅛	1⅛	⅞32	⅞	⅞-18	1.84	⅜	½	0.25	15/16	0.69	⅜	3¼	2¼	3⅜	2¼	2⅞
2½	3.10	3	⅜	6	⅜	1⅛	1⅛	⅞32	1¼	⅞-16	2.19	⅜	½	0.25	15/16	0.69	⅜	3¼	2⅞	3¼	2⅞	3
3¼	3.90	3¾	½	10	⅞	1⅞16	1⅞16	⅞16	1½	⅞-13	2.76	½	¾	0.25	1¼	0.88	½	4¾	2⅞	4¼	2⅞	3¼
4	4.70	4½	½	10	⅞	1⅞16	1⅞16	⅞16	2⅞16	⅞-13	3.32	½	¾	0.25	1¼	0.88	½	5½	2⅞	4¼	2⅞	3¼

BORE	ROD DIA. MM	THREAD SIZE		ROD EXTENSIONS AND PILOT DIMENSIONS							WF	Y	ND	XS	ADD STROKE		
		KK	FF	A	+000 -002 B	C	D	NA	FA	VB					XT	ZJ	ZJ1
1½	⅝	⅞-20	⅞-20	¾	1.124	⅜	½	⅝-16	⅜	⅝	1	1⅝-16	⅜	1⅜	1⅝-16	4⅝	5
2	⅝	⅞-20	⅞-20	¾	1.124	⅜	½	⅝-16	⅜	⅝	1	1⅝-16	⅞-16	1⅜	1⅝-16	4⅝	
	1	⅜-16	⅞-14	1⅞	1.499	½	⅞	1⅝-16	⅜	⅞	1⅜	2⅞-16	⅞-16	1⅜	2⅞-16	5	
2½	⅝	⅞-20	⅞-20	¾	1.124	⅜	½	⅝-16	⅜	⅝	1	1⅝-16	⅞-16	1⅜	1⅝-16	4⅝	
	1	⅜-16	⅞-14	1⅞	1.499	½	⅞	1⅝-16	⅜	⅞	1⅜	2⅞-16	⅞-16	1⅜	2⅞-16	5⅞	
3¼	1	⅜-16	⅞-14	1⅞	1.499	½	⅞	1⅝-16	⅜	⅞	1⅜	2⅞-16	¾	1⅞	2⅞-16	5⅞	6¼
	1⅞	1-14	1¼-12	1⅞	1.999	⅝	1⅞	1⅞-16	⅜	1	1⅞	2⅞-16	¾	2⅞	2⅞-16	5⅞	6½
4	1	⅜-16	⅞-14	1⅞	1.499	½	⅞	1⅝-16	⅜	⅞	1⅜	2⅞-16	¾	1⅞	2⅞-16	5⅞	6¼
	1⅞	1-14	1¼-12	1⅞	1.999	⅝	1⅞	1⅞-16	⅜	1	1⅞	2⅞-16	¾	2⅞	2⅞-16	5⅞	6½

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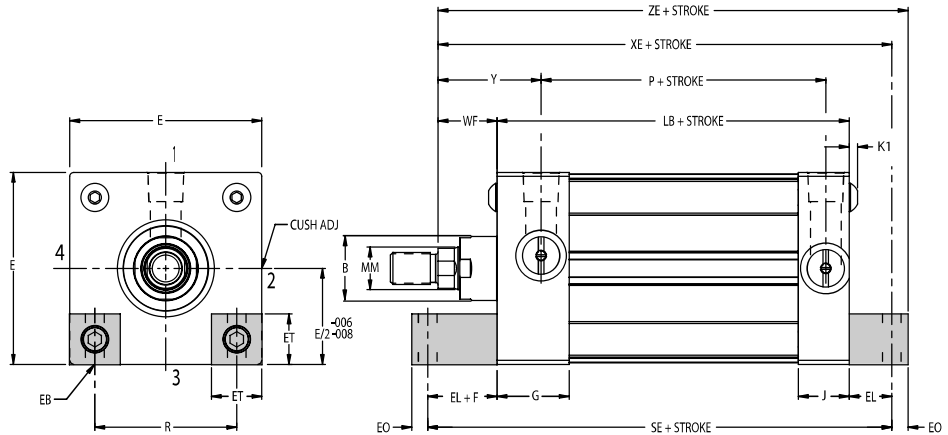
Series AS

Foot Mounted Cylinders

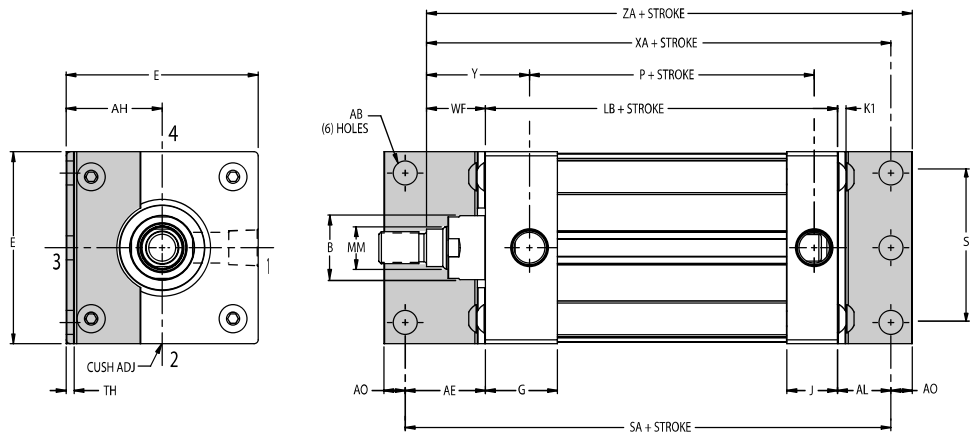
1.50" to 4.00"

For pressure rating refer to Page 9.

STYLE CC—Foot Mount
(NFA Mounting Style MS7)



STYLE C—End Angle Bracket
(NFA Mounting Style MS1)



BORE	AA	E	EE		F	G	J	K1	R	AB*	AE	AH	AL	AO	EB*	EF	EL	EO	ET	S	TH	ADD STROKE			
			NPTF	SAE																		P	LB	SA	SE
1½	2.02	2	3/8	6	3/8	17/16	11/16	1/8	1.43	7/16	13/8	1.19	1	3/8	1/4	11/8	3/4	1/4	9/16	1.25	.12	21/4	35/8	6	51/2
2	2.60	2½	3/8	6	3/8	17/16	11/16	5/32	1.84	7/16	13/8	1.44	1	3/8	5/16	13/16	15/16	5/16	11/16	1.75	.12	21/4	35/8	6	57/8
2½	3.10	3	3/8	6	3/8	17/16	11/16	5/32	2.19	7/16	13/8	1.63	1	3/8	5/16	17/16	11/16	5/16	13/16	2.25	.12	23/8	33/4	61/8	61/4
3¼	3.90	3¾	1/2	10	5/8	111/16	13/16	3/16	2.76	9/16	17/8	1.94	1¼	1/2	3/8	13/8	7/8	3/8	1	2.75	.12	25/8	41/4	73/8	65/8
4	4.70	4½	1/2	10	5/8	111/16	13/16	3/16	3.32	9/16	17/8	2.25	1¼	1/2	3/8	15/8	1	3/8	13/16	3.50	.12	25/8	41/4	73/8	67/8

*Mounting holes are 1/16" larger than bolt size shown.

BORE	ROD DIA. MM	THREAD SIZE		ROD EXTENSIONS AND PILOT DIMENSIONS							ADD STROKE						
		KK	FF	A	+000 -002 B	C	D	NA	FA	VB	WF	Y	XA	XE	ZA	ZE	ZJ
1½	5/8	7/16-20	1/2-20	3/4	1.124	3/8	1/2	9/16	3/8	5/8	1	115/16	55/8	53/8	6	55/8	43/8
2	5/8	7/16-20	1/2-20	3/4	1.124	3/8	1/2	9/16	3/8	5/8	1	115/16	55/8	59/16	6	57/8	43/8
	1	3/4-16	7/8-14	11/8	1.499	1/2	7/8	15/16	3/8	7/8	13/8	25/16	6	515/16	63/8	61/4	5
2½	5/8	7/16-20	1/2-20	3/4	1.124	3/8	1/2	9/16	3/8	5/8	1	115/16	53/4	513/16	61/8	61/8	43/4
	1	3/4-16	7/8-14	11/8	1.499	1/2	7/8	15/16	3/8	7/8	13/8	25/16	61/8	63/16	61/2	61/2	51/8
3¼	1	3/4-16	7/8-14	11/8	1.499	1/2	7/8	15/16	3/8	7/8	13/8	27/16	67/8	61/2	73/8	67/8	53/8
	13/8	1-14	1¼-12	15/8	1.999	5/8	11/8	15/16	5/8	1	15/8	211/16	71/8	63/4	75/8	71/8	57/8
4	1	3/4-16	7/8-14	11/8	1.499	1/2	7/8	15/16	3/8	7/8	13/8	27/16	67/8	65/8	73/8	7	53/8
	13/8	1-14	1¼-12	15/8	1.999	5/8	11/8	15/16	5/8	1	15/8	211/16	71/8	67/8	75/8	7¼	57/8

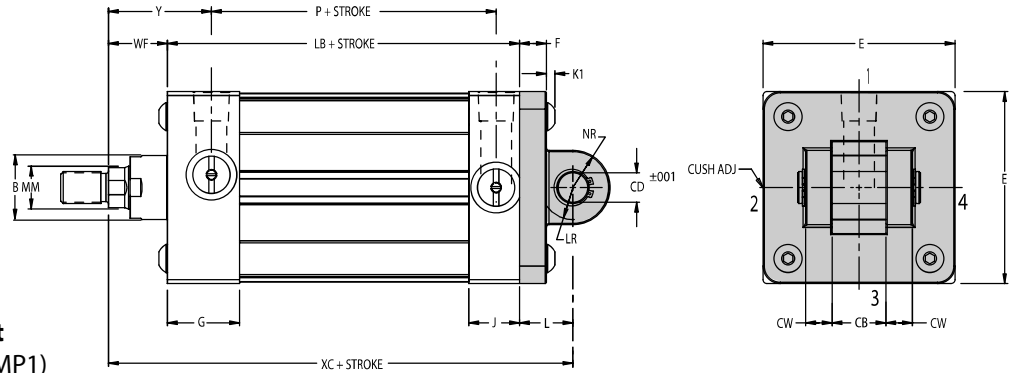
Series AS

Pivot Mounted Cylinders

1.50" to 4.00"

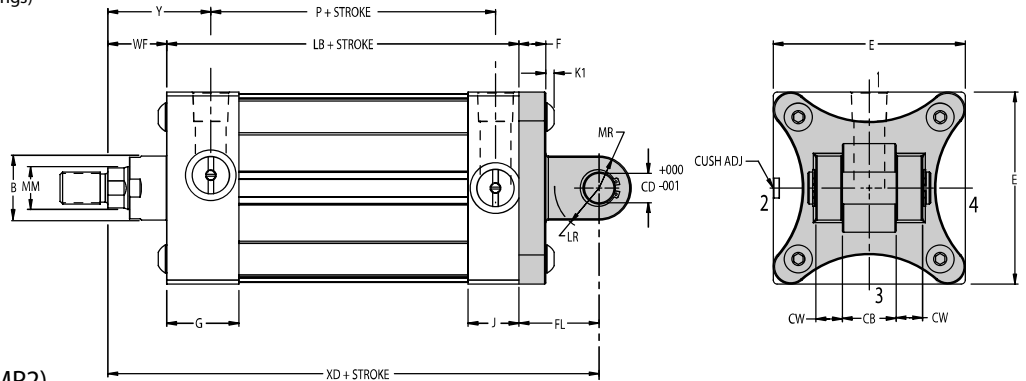
STYLE G—Clevis Mount (NFPA Mounting Style MP1)

Clevis pin assembly (with Snap Rings) is supplied with cylinder.

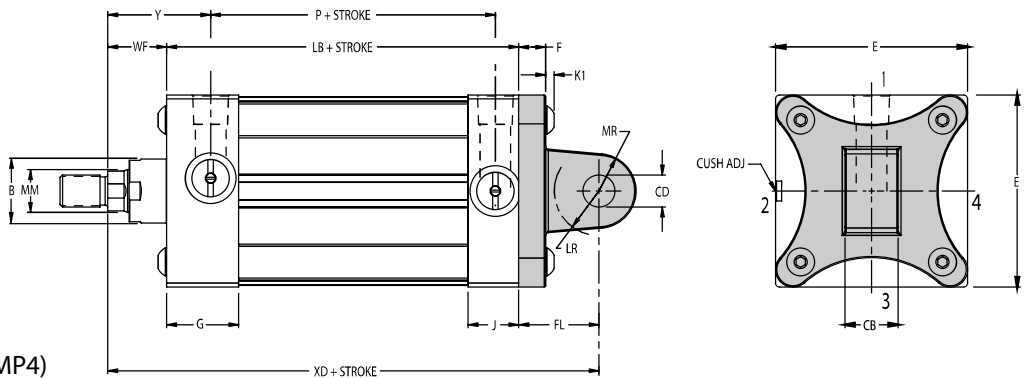


STYLE Z—Detachable Clevis Mount (NFPA Mounting Style MP2)

Clevis pin assembly (with Snap Rings) is supplied with cylinder.



STYLE R—Detachable Pivot Mount (NFPA Mounting Style MP4)



BORE	AA	E	EE		F	G	J	K1	R	CD	CB	CW	FL	L	LR	MR	NR	ADD STROKE	
			NPTF	SAE														P	LB
1½	2.02	2	¾	6	¾	1 ⁷ / ₁₆	1 ¹ / ₁₆	1/8	1.43	1/2	¾	1/2	1 ¹ / ₈	¾	5/8	1/2	5/8	2 ¹ / ₄	3 ⁵ / ₈
2	2.60	2½	¾	6	¾	1 ⁷ / ₁₆	1 ¹ / ₁₆	5/32	1.84	1/2	¾	1/2	1 ¹ / ₈	¾	5/8	1/2	5/8	2 ¹ / ₄	3 ⁵ / ₈
2½	3.10	3	¾	6	¾	1 ⁷ / ₁₆	1 ¹ / ₁₆	5/32	2.19	1/2	¾	1/2	1 ¹ / ₈	¾	5/8	1/2	5/8	2 ³ / ₈	3 ³ / ₄
3¼	3.90	3¾	1/2	10	5/8	1 ¹¹ / ₁₆	1 ³ / ₁₆	3/16	2.76	¾	1¼	5/8	1 ⁷ / ₈	1¼	15/16	¾	7/8	2 ⁵ / ₈	4¼
4	4.70	4½	1/2	10	5/8	1 ¹¹ / ₁₆	1 ³ / ₁₆	3/16	3.32	¾	1¼	5/8	1 ⁷ / ₈	1¼	15/16	¾	7/8	2 ⁵ / ₈	4¼

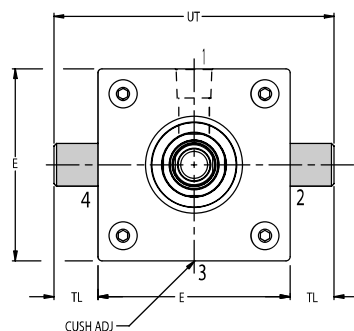
BORE	ROD DIA. MM	THREAD SIZE		ROD EXTENSIONS AND PILOT DIMENSIONS							WF	Y	ADD STROKE		
		KK	FF	A	+000 -002 B	C	D	NA	FA	VB			XC	XD	ZJ
1½	5/8	7/16-20	1/2-20	¾	1.124	¾	1/2	9/16	¾	5/8	1	1 ¹⁵ / ₁₆	5 ³ / ₈	5 ³ / ₄	4 ⁵ / ₈
2	5/8	7/16-20	1/2-20	¾	1.124	¾	1/2	9/16	¾	5/8	1	1 ¹⁵ / ₁₆	5 ³ / ₈	5 ³ / ₄	4 ⁵ / ₈
	1	¾-16	7/8-14	1 ¹ / ₈	1.499	1/2	7/8	15/16	¾	7/8	1 ³ / ₈	2 ⁵ / ₁₆	5 ³ / ₄	6 ¹ / ₈	5
2½	5/8	7/16-20	1/2-20	¾	1.124	¾	1/2	9/16	¾	5/8	1	1 ¹⁵ / ₁₆	5 ¹ / ₂	5 ⁷ / ₈	4 ³ / ₄
	1	¾-16	7/8-14	1 ¹ / ₈	1.499	1/2	7/8	15/16	¾	7/8	1 ³ / ₈	2 ⁵ / ₁₆	5 ⁷ / ₈	6 ¹ / ₄	5 ¹ / ₈
3¼	1	¾-16	7/8-14	1 ¹ / ₈	1.499	1/2	7/8	15/16	¾	7/8	1 ³ / ₈	2 ⁷ / ₁₆	6 ⁷ / ₈	7 ¹ / ₂	5 ⁵ / ₈
	1 ³ / ₈	1-14	1¼-12	1 ⁵ / ₈	1.999	5/8	1 ¹ / ₈	1 ⁵ / ₁₆	5/8	1	1 ⁵ / ₈	2 ¹¹ / ₁₆	7 ¹ / ₈	7 ³ / ₄	5 ⁷ / ₈
4	1	¾-16	7/8-14	1 ¹ / ₈	1.499	1/2	7/8	15/16	¾	7/8	1 ³ / ₈	2 ⁷ / ₁₆	6 ⁷ / ₈	7 ¹ / ₂	5 ⁵ / ₈
	1 ³ / ₈	1-14	1¼-12	1 ⁵ / ₈	1.999	5/8	1 ¹ / ₈	1 ⁵ / ₁₆	5/8	1	1 ⁵ / ₈	2 ¹¹ / ₁₆	7 ¹ / ₈	7 ³ / ₄	5 ⁷ / ₈

Series AS

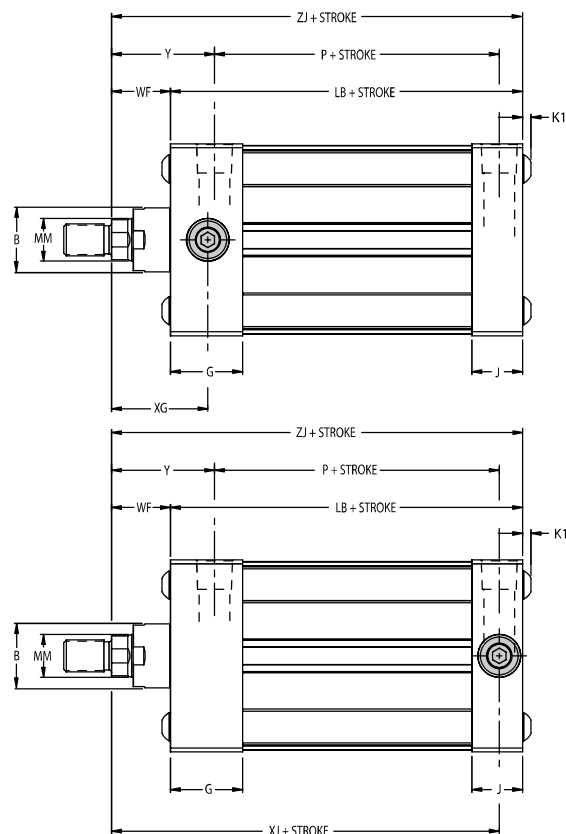
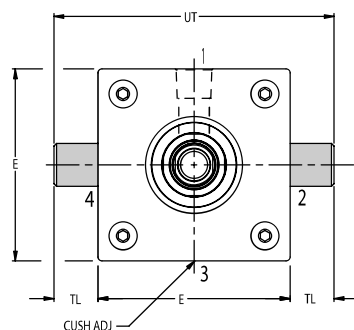
Trunnion Mounted Cylinders

1.50" to 4.00"

**STYLE ER—Trunnion
Mount Head End**
(NFPA Mounting Style MT1)



**STYLE EB—Trunnion
Mount Cap End**
(NFPA Mounting Style MT2)



Pintles on AS trunnion mounted cylinders are removable.

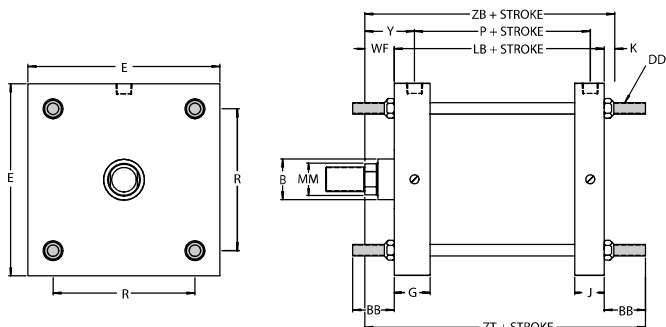
BORE	AA	E	EE		F	G	J	K1	R	TD	TL	TG	TM	TW	UM	ADD STROKE		
			NPTF	SAE												UT	P	LB
1½	2.02	2	¾	6	¾	1⅞	1⅞	⅞	1.43	1	1	2½	2½	1¼	4½	4	2¼	3⅝
2	2.60	2½	¾	6	¾	1⅞	1⅞	⅝	1.84	1	1	3	3	1½	5	4½	2¼	3⅝
2½	3.10	3	¾	6	¾	1⅞	1⅞	⅝	2.19	1	1	3½	3½	1½	5½	5	2⅝	3¾
3¼	3.90	3¾	½	10	⅝	1⅞	1⅞	⅜	2.76	1	1	4¼	4½	2	6½	5¾	2⅝	4¼
4	4.70	4½	½	10	⅝	1⅞	1⅞	⅜	3.32	1	1	5	5¼	2	7¼	6½	2⅝	4¼

BORE	ROD DIA.	THREAD SIZE		ROD EXTENSIONS AND PILOT DIMENSIONS							WF	Y	ADD STROKE		
	MM	KK	FF	A	+000 -002 B	C	D	NA	FA	VB			XG	XJ	ZJ
1½	⅝	7/16-20	1/2-20	¾	1.124	¾	½	9/16	¾	⅝	1	1 ¹⁵ /16	1¾	4⅞	4⅝
2	⅝	7/16-20	1/2-20	¾	1.124	¾	½	9/16	¾	⅝	1	1 ¹⁵ /16	1¾	4⅞	4⅝
	1	¾-16	7/8-14	1⅞	1.499	½	7/8	15/16	¾	7/8	1⅜	2 ⁵ /16	2⅞	4½	5
2½	⅝	7/16-20	1/2-20	¾	1.124	¾	½	9/16	¾	⅝	1	1 ¹⁵ /16	1¾	4¼	4¾
	1	¾-16	7/8-14	1⅞	1.499	½	7/8	15/16	¾	7/8	1⅜	2 ⁵ /16	2⅞	4⅝	5⅞
3¼	1	¾-16	7/8-14	1⅞	1.499	½	7/8	15/16	¾	7/8	1⅜	2 ⁷ /16	2¼	5	5⅝
	1⅜	1-14	1¼-12	1⅝	1.999	⅝	1⅞	15/16	⅝	1	1⅝	2 ¹¹ /16	2½	5¼	5⅞
4	1	¾-16	7/8-14	1⅞	1.499	½	7/8	15/16	¾	7/8	1⅜	2 ⁷ /16	2¼	5	5⅝
	1⅜	1-14	1¼-12	1⅝	1.999	⅝	1⅞	15/16	⅝	1	1⅝	2 ¹¹ /16	2½	5¼	5⅞

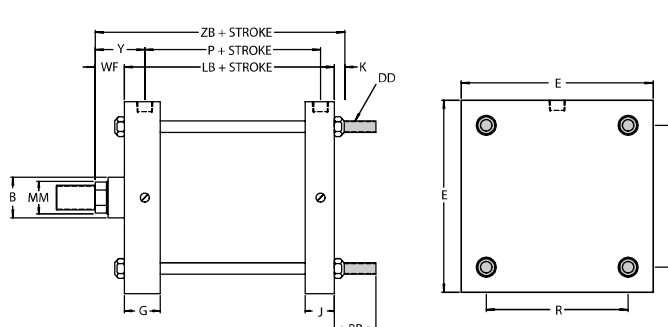
Series AS

Tie Rod Mounts

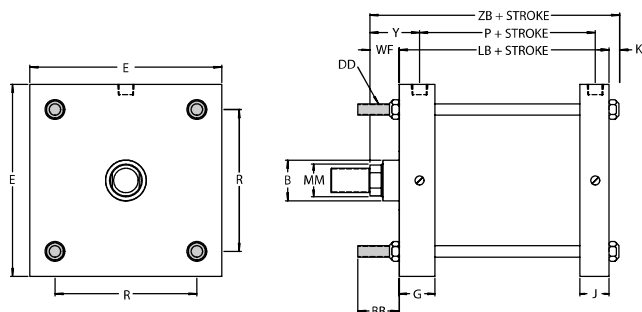
5.00" to 8.00"



Style L



Style N



Style M

OFP Mounting Style	NFPA Mounting Style	DESCRIPTION
L	MX1	Tie rods extended both ends (above left)
M	MX3	Tie rods extended head end (rod end)
N	MX2	Tie rods extended cap end (blind end)
DL	MDX1	Tie rods extended both ends (above right)
DM	MDX3	Tie rods extended one end

Double rod cylinders are available in all styles* except A, AA, EB, and G. Dimensions for other styles are the same as above with mounting added. Add prefix D to style when ordering. Example: DB AIR CYL.

BB is standard tie rod extension on Styles L, M, N, DL and DM, but will be increased or decreased when specified. To do this, specify BB to be (so many) inches. Extra nuts are available for tie rod ends.

*Consult factory on availability of Style DCC cylinder.

Series AS

Section 6

ENVELOPE AND MOUNTING DIMENSIONS

BORE	AA	BB	DD	E	EE NPTF	F	G	J	K	R	ADD STROKE		
											LB	LD	P
5	5.8	1 $\frac{1}{2}$ $\frac{1}{16}$	$\frac{1}{2}$ -20	5 $\frac{1}{2}$	$\frac{1}{2}$	$\frac{3}{8}$	1 $\frac{3}{4}$	1 $\frac{1}{4}$	$\frac{7}{16}$	4-10	4 $\frac{1}{2}$	5	2 $\frac{7}{8}$
6	6.9	1 $\frac{1}{2}$ $\frac{1}{16}$	$\frac{1}{2}$ -20	6 $\frac{1}{2}$	$\frac{3}{4}$	$\frac{3}{4}$	2	1 $\frac{1}{2}$	$\frac{7}{16}$	4.88	5	5 $\frac{1}{2}$	3 $\frac{1}{8}$
8	9.1	2 $\frac{1}{16}$	$\frac{3}{8}$ -18	8 $\frac{1}{2}$	$\frac{3}{4}$	—	2	1 $\frac{1}{2}$	$\frac{9}{16}$	6.4	5 $\frac{1}{8}$	5 $\frac{5}{8}$	3 $\frac{3}{4}$

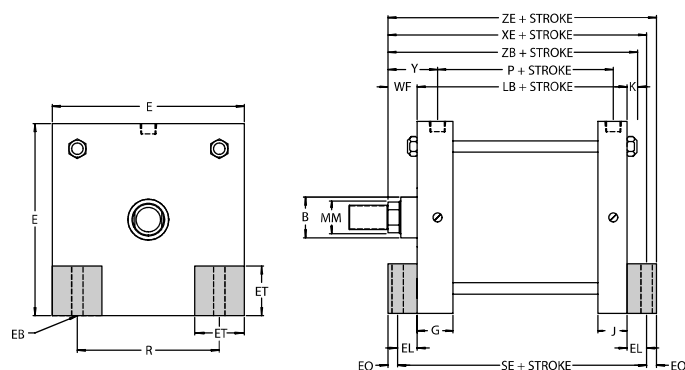
ROD END DIMENSIONS

BORE	ROD DIA. MM	THREAD SIZE		ROD EXTENSIONS AND PILOT DIMENSIONS						WF	Y	ADD STROKE		ADD 2X STK.
		KK	FF	A	+000 -002 B	C	D	NA	VB			ZB	ZT	ZM
5	1	$\frac{3}{4}$ -16	$\frac{7}{8}$ -14	1 $\frac{1}{8}$	1.499	$\frac{1}{2}$	$\frac{7}{8}$	1 $\frac{5}{16}$	$\frac{7}{8}$	1 $\frac{1}{8}$	2 $\frac{1}{16}$	6 $\frac{1}{16}$	7 $\frac{1}{16}$	7 $\frac{3}{4}$
	1 $\frac{3}{8}$	1-14	1 $\frac{1}{4}$ -12	1 $\frac{1}{8}$	1.999	$\frac{3}{8}$	1 $\frac{1}{8}$	1 $\frac{1}{16}$	1	1 $\frac{1}{8}$	2 $\frac{1}{16}$	6 $\frac{1}{16}$	7 $\frac{1}{16}$	8 $\frac{1}{4}$
6	1 $\frac{3}{8}$	1-14	1 $\frac{1}{4}$ -12	1 $\frac{1}{8}$	1.999	$\frac{3}{8}$	1 $\frac{1}{8}$	1 $\frac{1}{16}$	1	1 $\frac{1}{8}$	2 $\frac{1}{16}$	7 $\frac{1}{16}$	8 $\frac{1}{16}$	8 $\frac{3}{4}$
	1 $\frac{3}{4}$	1 $\frac{1}{4}$ -12	1 $\frac{1}{2}$ -12	2	2.374	$\frac{3}{4}$	1 $\frac{1}{2}$	1 $\frac{1}{16}$	1 $\frac{1}{8}$	1 $\frac{1}{8}$	3 $\frac{1}{16}$	7 $\frac{1}{16}$	8 $\frac{1}{16}$	9 $\frac{1}{4}$
8	1 $\frac{3}{8}$	1-14	1 $\frac{1}{4}$ -12	1 $\frac{1}{8}$	1.999	$\frac{3}{8}$	1 $\frac{1}{8}$	1 $\frac{1}{16}$	1	1 $\frac{1}{8}$	2 $\frac{1}{16}$	7 $\frac{1}{16}$	9 $\frac{1}{16}$	8 $\frac{3}{8}$
	1 $\frac{3}{4}$	1 $\frac{1}{4}$ -12	1 $\frac{1}{2}$ -12	2	2.374	$\frac{3}{4}$	1 $\frac{1}{2}$	1 $\frac{1}{16}$	1 $\frac{1}{8}$	1 $\frac{1}{8}$	3 $\frac{1}{16}$	7 $\frac{1}{16}$	9 $\frac{1}{16}$	9 $\frac{3}{4}$

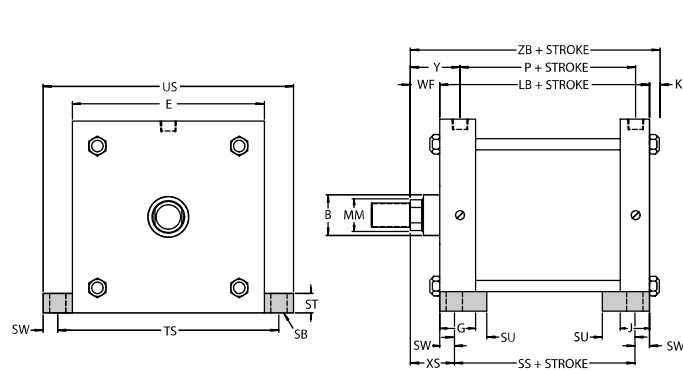
Series AS

Foot Mounted Cylinders

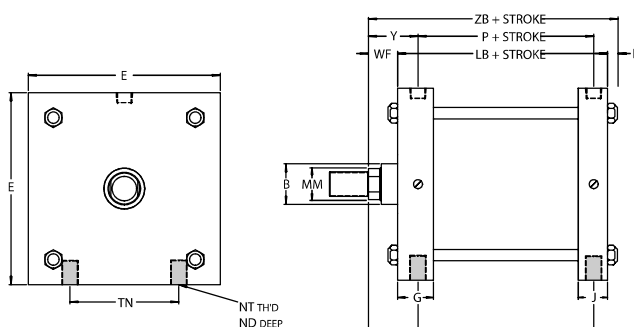
5.00" to 8.00"



Style CC



Style J



Style H

ENVELOPE AND MOUNTING DIMENSIONS

BORE	E	EB*	EE NPTF	EL	EO	ET	F	G	J	K	NT	R	SB*	ST	SU	SW	TN	TS	US	ADD STROKE				
																				LB	P	SE	SN	SS
5	5 1/2	1/2	1/2	1 1/16	1/2	1 3/8	5/8	1 3/4	1 1/4	7/16	5/8-11	4.10	3/4	1	1 9/16	11/16	2 11/16	6 7/8	8 1/4	4 1/2	2 7/8	7 1/4	2 7/8	3 1/8
6	6 1/2	1/2	3/4	1	1/2	1 5/8	3/4	2	1 1/2	7/16	3/4-10	4.88	3/4	1	1 9/16	11/16	3 1/4	7 7/8	9 1/4	5	3 1/8	7 3/4	3 1/8	3 5/8
8	8 1/2	5/8	3/4	1 1/8	5/8	2 1/16	—	2	1 1/2	9/16	3/4-10	6.44	3/4	1	1 9/16	11/16	4 1/2	9 7/8	11 1/4	5 1/8	3 1/4	7 3/8	3 1/4	3 3/4

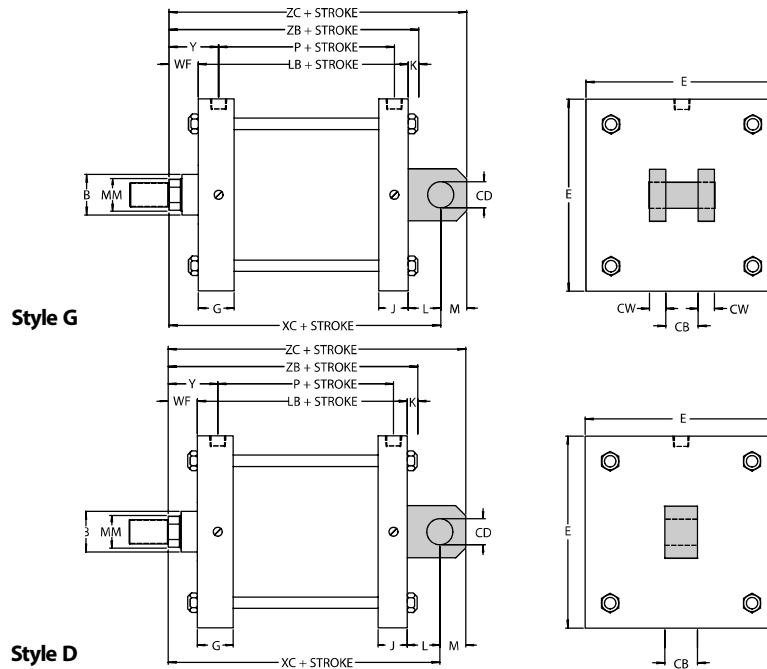
ROD END DIMENSIONS

BORE	ROD DIA. MM	THREAD SIZE		ROD EXTENSIONS AND PILOT DIMENSIONS						WF	Y	ND	XS	XT	ADD STROKE		
		KK	FF	A	+000 -002 B	C	D	NA	VB						XE	ZB	ZE
5	1	³ / ₄ -16	⁷ / ₈ -12	1 ¹ / ₈	1.499	¹ / ₂	⁷ / ₈	¹⁵ / ₁₆	⁷ / ₈	1 ³ / ₈	2 ⁷ / ₁₆	¹⁵ / ₁₆	2 ¹ / ₁₆	2 ¹ / ₁₆	6 ¹⁵ / ₁₆	6 ³ / ₁₆	7 ¹ / ₁₆
	1 ³ / ₈	1-14	1 ¹ / ₄ -12	1 ⁵ / ₈	1.999	⁵ / ₈	1 ¹ / ₈	1 ⁵ / ₁₆	1	1 ⁵ / ₈	2 ¹¹ / ₁₆	¹⁵ / ₁₆	2 ⁵ / ₁₆	2 ¹¹ / ₁₆	7 ³ / ₁₆	6 ⁹ / ₁₆	7 ¹¹ / ₁₆
6	1 ³ / ₈	1-14	1 ¹ / ₄ -12	1 ⁵ / ₈	1.999	⁵ / ₈	1 ¹ / ₈	1 ⁵ / ₁₆	1	1 ⁵ / ₈	2 ¹³ / ₁₆	1 ¹ / ₈	2 ⁵ / ₁₆	2 ¹³ / ₁₆	7 ⁵ / ₈	7 ¹ / ₁₆	8 ¹ / ₈
	1 ³ / ₄	1 ¹ / ₄ -12	1 ¹ / ₂ -12	2	2.374	³ / ₄	1 ¹ / ₂	1 ¹¹ / ₁₆	1 ¹ / ₈	1 ⁷ / ₈	3 ¹ / ₁₆	1 ¹ / ₈	2 ⁵ / ₁₆	3 ¹ / ₁₆	7 ⁷ / ₈	7 ³ / ₁₆	8 ³ / ₈
8	1 ³ / ₈	1-14	1 ¹ / ₄ -12	1 ⁵ / ₈	1.999	⁵ / ₈	1 ¹ / ₈	1 ⁵ / ₁₆	1	1 ⁵ / ₈	2 ¹³ / ₁₆	1 ¹ / ₈	2 ⁵ / ₁₆	2 ¹³ / ₁₆	7 ⁷ / ₈	7 ³ / ₁₆	8 ¹ / ₂
	1 ³ / ₄	1 ¹ / ₄ -12	1 ¹ / ₂ -12	2	2.374	³ / ₄	1 ¹ / ₂	1 ¹¹ / ₁₆	1 ¹ / ₈	1 ⁷ / ₈	3 ¹ / ₁₆	1 ¹ / ₈	2 ⁹ / ₁₆	3 ¹ / ₁₆	8 ³ / ₈	7 ⁹ / ₁₆	8 ³ / ₄

Series AS

Pivot Mounted Cylinders

5.00" to 8.00"



ENVELOPE AND MOUNTING DIMENSIONS

BORE	CB	CD	CW	E	EE NPTF	G	J	K	L	LR	M	N	NR	ADD STROKE	
														LB	P
5	1 1/4	3/4	5/8	5 1/2	1/2	1 3/4	1 1/4	7/16	1 1/4	1 5/16	3/4	1 1/4	27/32	4 1/2	2 7/8
6	1 1/2	1	3/4	6 1/2	3/4	2	1 1/2	7/16	1 1/2	1 9/16	1	1 1/2	1 1/8	5	3 3/8
8	1 1/2	1	3/4	8 1/2	3/4	2	1 1/2	9/16	1 1/2	1 9/16	1	1 1/2	1 1/8	5 5/8	3 3/4

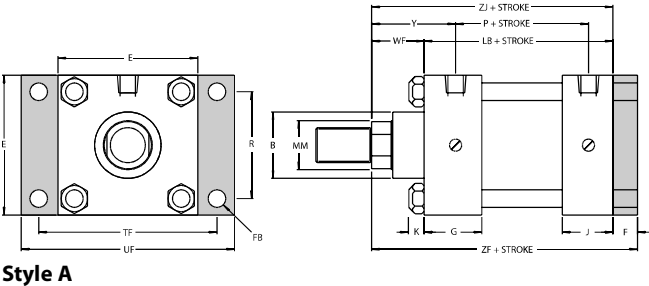
ROD END DIMENSIONS

BORE	ROD DIA. MM	THREAD SIZE		ROD EXTENSIONS AND PILOT DIMENSIONS							WF	Y	XG	ADD STROKE			
		KK	FF	A	+000 -002 B	C	D	NA	FA	VB				XC	ZC	XH	ZH
5	1	3/4-16	7/8-14	1 1/8	1.499	1/2	7/8	1 5/16	3/8	7/8	1 3/8	2 7/16	2 1/4	7 7/8	7 7/8	7 7/8	7 7/8
	1 3/8	1-14	1 1/4-12	1 5/8	1.999	3/8	1 1/8	1 9/16	5/8	1	1 5/8	2 11/16	2 1/2	7 7/8	8 7/8	7 7/8	8 7/8
6	1 3/8	1-14	1 1/4-12	1 5/8	1.999	3/8	1 1/8	1 9/16	5/8	1	1 5/8	2 13/16	2 5/8	8 7/8	9 7/8	8 7/8	9 7/8
	1 3/4	1 1/4-12	1 1/2-12	2	2.374	3/4	1 1/2	1 11/16	5/8	1 1/8	1 7/8	3 1/16	2 7/8	8 3/8	9 3/8	8 3/8	9 3/8
8	1 3/8	1-14	1 1/4-12	1 5/8	1.999	3/8	1 1/8	1 9/16	5/8	1	1 5/8	2 13/16	2 5/8	8 3/4	9 3/4	8 3/4	9 3/4
	1 3/4	1 1/4-12	1 1/2-12	2	2.374	3/4	1 1/2	1 11/16	5/8	1 1/8	1 7/8	3 1/16	2 7/8	8 1/2	9 1/2	8 1/2	9 1/4

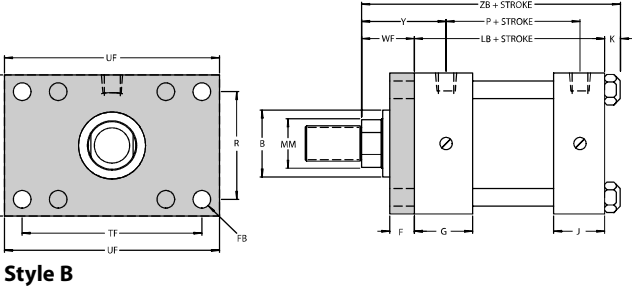
Series AS

Flange Mounted

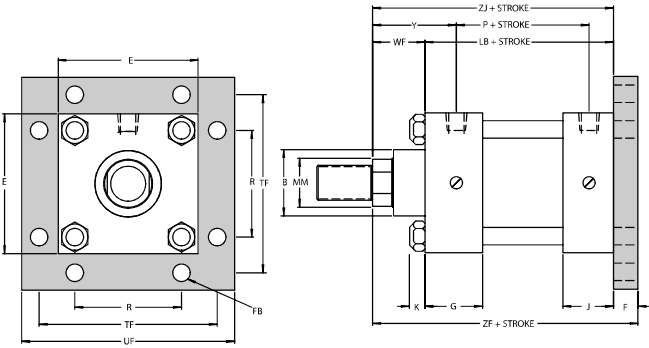
5.00" to 8.00"



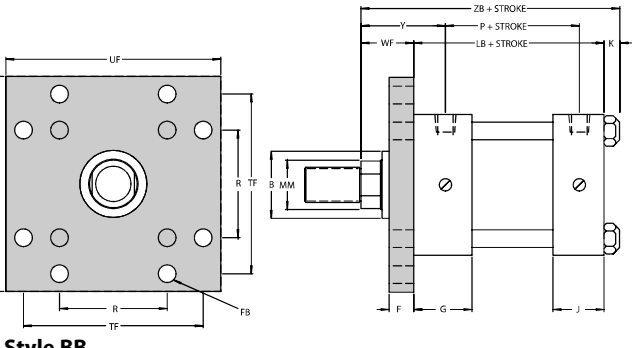
Style A



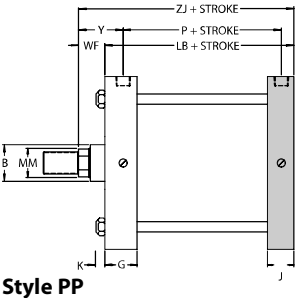
Style B



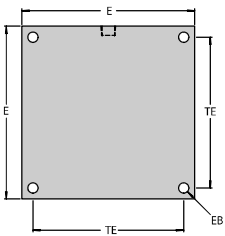
Style AA



Style BB



Style PP



Style QQ

ENVELOPE AND MOUNTING DIMENSIONS

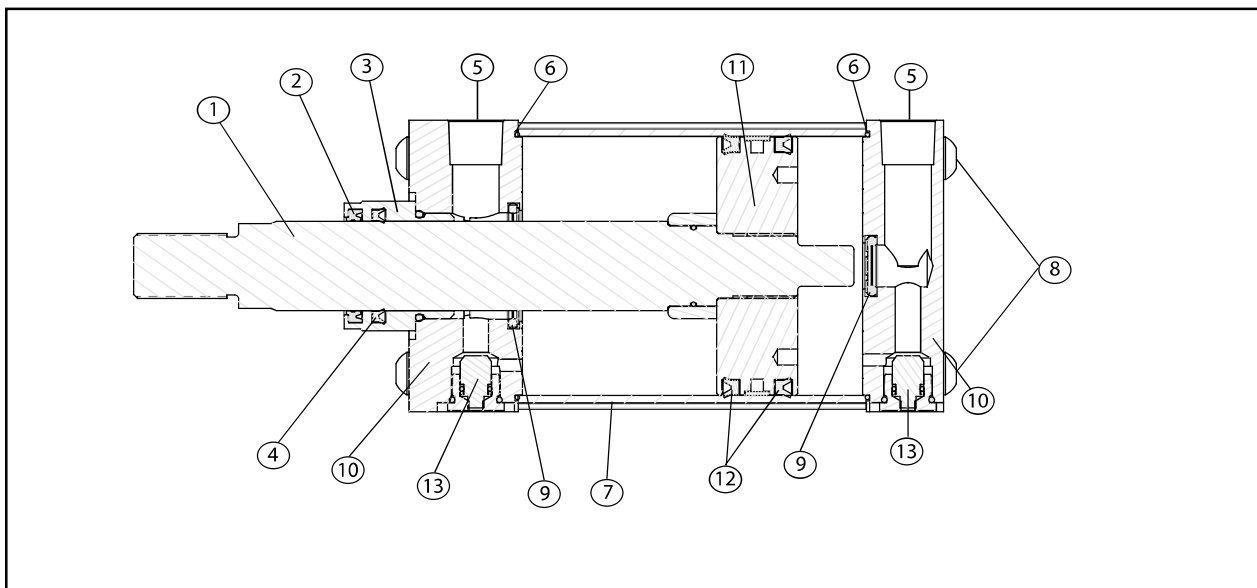
BORE	E	EE NPTF	F	FB*	G	J	K	R	TF	TE	UF	ADD STROKE		
												LF	P	LB
5	5 1/2	1/2	5/8	1 1/2	1 3/4	1 1/4	7/16	4.10	6 5/8	—	7 5/8	5 1/8	2 7/8	4 1/2
6	6 1/2	3/4	3/4	1 1/2	2	1 1/2	7/16	4.88	7 5/8	—	8 5/8	5 3/4	3 1/8	5
8	8 1/2	3/4	—	5/8	2	1 1/2	9/16	—	—	7.57	—	5 1/8	3 1/4	5 1/8

ROD END DIMENSIONS

BORE	ROD DIA. MM	THREAD SIZE		ROD EXTENSIONS AND PILOT DIMENSIONS						WF	Y	W	ADD STROKE		
		KK	FF	A	+000 -002 B	C	D	NA	VB				ZJ	ZB	ZF
5	1	3/4-16	7/8-14	1 1/8	1.499	1/2	7/8	15/16	7/8	1 3/8	2 7/16	3/4	5 7/8	6 1/16	6 1/2
	1 3/8	1-14	1 1/4-12	1 5/8	1.999	5/8	1 1/8	1 5/16	1	1 5/8	2 11/16	1	6 1/8	6 9/16	6 3/4
6	1 3/8	1-14	1 1/4-12	1 5/8	1.999	5/8	1 1/8	1 5/16	1	1 5/8	2 13/16	7/8	6 5/8	7 1/16	7 3/8
	1 3/4	1 1/4-12	1 1/2-12	2	2.374	3/4	1 1/2	1 11/16	1 1/8	1 7/8	3 1/16	1 1/8	6 7/8	7 5/16	7 5/8
8	1 3/8	1-14	1 1/4-12	1 5/8	1.999	5/8	1 1/8	1 5/16	1	1 5/8	2 13/16	—	6 3/4	7 5/16	—
	1 3/4	1 1/4-12	1 1/2-12	2	2.374	3/4	1 1/2	1 11/16	1 1/8	1 7/8	3 1/16	—	7	7 9/16	—

Series AS Air Cylinder

Features



1. Piston Rods — $\frac{3}{8}$ " thru 4" diameter are medium carbon steel with 100,000 psi minimum yield. Piston rods over 4" diameter have yield strengths between 50,000 and 90,000 psi. Sizes $\frac{3}{8}$ " thru $3\frac{1}{2}$ " diameter are induction case hardened to 54 Rockwell C. All piston rods are hardchrome plated and highly polished.

2. Rod Wiper — Polyurethane, double lip type wiper designed to protect the piston rod, bearing and rod seal, is standard for all rod sizes. Also metallic scrapers and Viton wipers are available for all rod sizes.

3. Rod Gland Cartridge — The cartridges can be removed without removing mounts or bolts. This eliminates the necessity of cylinder disassembly to replace the rod seals or rod bearing.

Rod Bearing — Aluminum bronze material insures low friction, high load capabilities and long life.

4. Rod Seal — Buna compound, flexible lip type rod seal has excellent break away. Inherent characteristics of the material and design assure leakproof performance and long life.

5. Ports — Large unrestricted ports permit maximum flow with minimum

pressure drop. Heads may be rotated independently at 90° intervals for convenient port location.

6. Tube Seals — Positive sealing synthetic rubber "O" ring.

7. Tube — Aluminum precision extrusion, anodized bore for light weight, high strength, with excellent corrosion-resisting characteristics. Dovetail grooves along all four sides of the tube extrusion allow for quick installation of switches.

8. Assembly Bolts — High strength steel bolts treated for corrosion resistance.

9. Cushions — Self-aligning, synthetic rubber type seals provide a positive leak-proof cushion. This, together with adjustable cushion needle valve, offers an extremely accurate means of obtaining most efficient cushion characteristics for a variety of loads and speeds.

10. Heads and Caps — Aluminum accurately machined to assure perfect alignment of piston rod bearing, piston rod, piston, and tube. Heads and caps pilot on tube O.D. to prevent "breathing" and provide additional insurance against leakage.

11. Piston — High grade aluminum, $1\frac{1}{2}$ " thru 4" bores. Pistons are one piece, pilot fitted to piston rod and locked.

12. Piston Seals — Flexible lip type piston seals provide positive sealing, low friction and long life.

13. Needle valves — Flush type needle valves are supplied. Large drilled passages provide maximum control of cushioning effect and assure rapid full power starts at beginning of stroke. Self contained, durable, high pressure design assures leak free operation.

Wrench Flats — Large wrench flats are chamfered to protect rod gland packing in installation. All standard piston rods through $5\frac{1}{2}$ " diameter are furnished with two wrench flats. Additional flats are available upon request.

Pre-lubricated — A specially compounded tenacious lubricant permits operation on non-lubricated air. This assures long life under normal operating conditions. This ecological feature eliminates exhausting oil mist into the atmosphere.

JIC — These cylinders are designed to conform to JIC standards.

NFPA — The dimensioning and identification of the cylinders in this catalog are in accordance with the NFPA recommended dimension code for fluid power cylinders.