

How to Order - NFPA Interchangeable Cylinders (1-1/2" to 4" Bore)

NFPA SERIES	BORE	ROD SIZE	MOUNT TYPE	STROKE (INCHES)	CUSHION TYPE	PORT TYPE	ROD END STYLE	OPTIONS (if needed)	OPTIONS (if needed)
TAC	20	SS	MF1	1.25	CB26	PS15	1	MP	STS
1	2	3	4	5	6	7	8	9	9

1	TAC	NFPA Interchangeable
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2	15	1 1/2 Bore Cylinder
	20	2 Bore Cylinder
	25	2 1/2 Bore Cylinder
	32	3 1/4 Bore Cylinder
	40	4 Bore Cylinder

3	SS	Single End, Std Rod Size
	SO	Single End, Ovs Rod Size
	DS	Double End, Std Rod Size
	DO	Double End, Ovs Rod Size

See Rod Size and Thread Style Chart for description.

4	MF1	Front Flange Mount
	MF2	Rear Flange Mount
	MP1	Fixed Clevis Mount
	MP2	Detachable Clevis Mount
	MP4	Detachable Eye Mount
	MS1	Angle Mount
	MS2	Side Lug Mount
	MS4	Bottom Tap Mount
	MT1	Head Trunnion Mount
	MT2	Cap Trunnion Mount
	MX0	Basic No Mount
	MX1	Both Extended Tie Rod Mount
	MX2	Cap Extended Tie Rod Mount
	MX3	Head Extended Tie Rod Mount

5	Specify Stroke to Two Decimal Places*	
	Example	1 1/4" = 1.25
	Standard Stroke Tolerance	±.031

*For Strokes Exceeding 20 inches Consult Factory.

6	NC	No Cushion
	CB15	Cushion Both Ends 1 & 5
	CB26	Cushion Both Ends 2 & 6 (STD)
	CB37	Cushion Both Ends 3 & 7
	CB48	Cushion Both Ends 4 & 8
	CC5	Cushion Cap End 5
	CC6	Cushion Cap End 6
	CC7	Cushion Cap End 7
	CC8	Cushion Cap End 8
	CH1	Cushion Head End 1
	CH2	Cushion Head End 2
	CH3	Cushion Head End 3
	CH4	Cushion Head End 4

See Port and Cushion Position Location Diagram.

7	PS15	Standard Port Size 1 & 5 (STD)
	PS26	Standard Port Size 2 & 6
	PS37	Standard Port Size 3 & 7
	PS48	Standard Port Size 4 & 8

See Port and Cushion Position Location Diagram.

8	1	Style #1 Male Thread (STD)
	2	Style #2 Male Thread
	3	Style #3 Female Thread

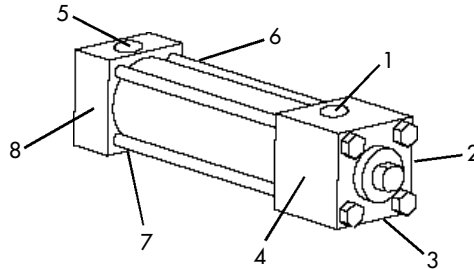
See Rod Size and Thread Style Chart for description.

9	AL	Aluminum Piston
	MP	Magnetic Piston
	STS	Stainless Steel Rod
	VS	High Temperature Viton Seals*
	DO2.00	Dual Piston (specify length)
	RO2.00	Rod Extension (specify length)
	TO2.00	Thread Extension (specify length)

* Includes Aluminum Piston

Port and Cushion Position Location

Standard Port Positions 1 & 5
Standard Cushion Positions 2 & 6



Rod Size and Thread Style Chart

Bore	Rod Size	*Style #1 Male Thread	*Style #2 Male Thread	Style #3 Female Thread
1 1/2	Standard (5/8")	7/16-20	1/2-20	7/16-20
	Oversize (1")	3/4-16	7/8-14	3/4-16
2	Standard (5/8")	7/16-20	1/2-20	7/16-20
	Oversize (1")	3/4-16	7/8-14	3/4-16
2 1/2	Standard (5/8")	7/16-20	1/2-20	7/16-20
	Oversize (1")	3/4-16	7/8-14	3/4-16
3 1/4	Standard (1")	3/4-16	7/8-14	3/4-16
	Oversize (1 3/8")	1-14	1 1/4-12	1-14
4	Standard (1")	3/4-16	7/8-14	3/4-16
	Oversize (1 3/8")	1-14	1 1/4-12	1-14

*Note: Male Rod Ends are threaded Rod Studs.

Force Charts

The charts below show maximum usable forces. Standard design practices should take factors such as stroke, speed and friction into account when sizing a cylinder.

Max Usable Cylinder Extend Force, (lbf)			
Bore	60 psi	80 psi	100 psi
1 1/2"	85	113	141
2"	150	201	251
2 1/2"	235	314	392
3 1/4"	398	530	663
4"	603	804	1005

Max Usable is 80% of Theoretical.

Max Usable Cylinder Retract Force, (lbf)				
Bore	Rod Dia.	60 psi	80 psi	100 psi
1 1/2"	5/8"	70	94	117
	1"	47	62	78
2"	5/8"	136	181	226
	1"	113	150	188
2 1/2"	5/8"	221	294	368
	1"	198	264	330
3 1/4"	1"	360	481	601
	1 3/8"	326	436	545
4"	1"	566	754	942
	1 3/8"	532	709	886