

For a complete list of 4MA options, please see [pages 10 and 14](#).

How to Order 4MA Series Cylinders for 1½" to 5" Bore

4MA cylinders can be specified by model number by using the table below.

2.00		J	4MA		U			1	4		A		6.000
Bore Size	Double Rod Cylinder	Series	Ports	Seals	Piston Rod Number	Stroke Length	Cushion Head End	Piston Type²	Special Modification	Piston Rod Thread Style	Cushion Cap End	Piston Rod Thread Type	Rod Material and Gland Code
1.50 ¹ 2.00 2.50 3.25 4.00 5.00	Specify "K" only if double rod cylinder is required.	4MA Air service 4ML Hydraulic service ²	U NPTF R BSPP B BSPT T SAE	Blank Standard (nitrile seals) V Fluorocarbon seals ⁴ E Fluorocarbon rod wiper and rod seal only ⁵ 4 Low temperature seals ⁴ M Metallic rod wiper, nitrile seals ⁶	Specify rod code number for required diameter. ^{8, 2}	Specify stroke length required in inches. ¹¹	Blank Non-cushioned head end C Cushioned head end (not available for 4ML)	Blank Standard (lipseals and magnetic ring) 1 Lipseals, no magnetic ring 2 Lipseals, no magnetic ring (aluminum piston) 3 Lipseals and magnetic ring (aluminum piston) (standard for 4ML) 4 Bumper seals, no magnetic ring 6 Bumper seals and magnetic ring B Lipseals, 1/4" thick bumpers both ends ³ H Lipseals, 1/4" thick bumper head end ³ C Lipseals, 1/4" thick bumper cap end ³ D Lipseals and magnetic ring, 1/4" thick bumpers both ends ³ F Lipseals and magnetic ring, 1/4" thick bumper head end ³ R Lipseals and magnetic ring, 1/4" thick bumper cap end ³	Specify "S" only for special modification other than rod end, and then describe modification in item notes. (Includes 4MA with Linear Position Sensor Option) ⁷	4 Small male 8 Intermediate male 9 Short female 55 For use with Split Coupler ⁹ 3 Special (and specify all dimensions required)	Blank Non-cushioned cap end C Cushioned cap end (not available for 4ML)	A Standard (UNF Unified Thread) W BSF British Fine M Metric (see page 104)	Blank Standard rod and gland H Standard rod and HI LOAD gland Y 17-4 PH stainless steel rod and standard gland Z 17-4 PH stainless steel rod and HI LOAD gland J 303 stainless steel rod and standard gland ¹⁰ K 303 stainless steel rod and HI LOAD gland ¹⁰ S 316 stainless steel rod and standard gland ¹⁰ T 316 stainless steel rod and HI LOAD gland ¹⁰
	Mounting Style												
	Specify mounting style code (see table on following page).												

¹ Not available with Linear Position Sensor Option (LPSO).² Piston Types (blank), 1, 4 and 6 not available for 4ML. Piston Types (blank) and 1 not available for oversize rod numbers 2 and 3. Seals option V only available with Piston Types 2 and 4. Seals option 4 only available with Piston Types 2 and 3.³ Addition of ¼" bumper results in a ¼" stroke loss per bumper, per end. For example, a 6" stroke cylinder with ¼" bumpers at both ends (option B) has an effective stroke of 5½".⁴ Reed and solid-state sensors only available with standard seals or options E and M. See footnote 2.⁵ Used for external chemical compatibility applications, not high temperature.⁶ If fluorocarbon seals are required with this option, please place an "S" for special in the Special Modification field and specify the "fluorocarbon seals and metallic rod wiper" in the item notes.⁷ For Linear Position Sensor Option (LPSO), please include the following information for the Special Modification item notes:

- Sensor part number (see [pages 98-102](#))
- Sensor position
- Port position (if other than position 1)
- Length of stop tubing, gross stroke and net stroke (if required)

Also, Piston Type option (blank), 3, 6, D, F or R is required.

⁸ Review Piston Rod Selection Chart on [page 134](#) to determine proper piston rod diameter.⁹ For additional information regarding this style, refer to [page 103](#). If non-standard Rod Material and Gland Code is required with this option, please place an "S" for special in Special Modification field and specify Rod Material and Gland Code in the item notes.¹⁰ Not available for 4ML.¹¹ If a stop tube is required, specify gross stroke (net stroke + stop tube) in the model number, then place an "S" for special in the Special Modification field and specify the stop tube length in the item notes. Not available with Piston Types (blank) and 1.**How to order 4MA/4ML Series cylinders with sensors:**

Sensors must be ordered separately and are not mounted to the cylinder prior to shipment.

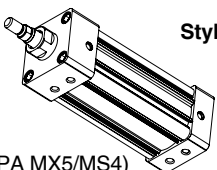
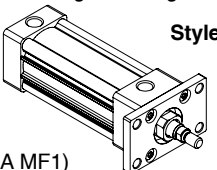
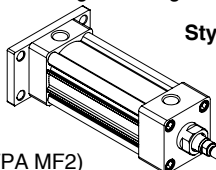
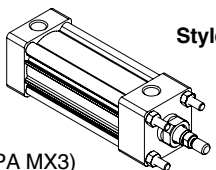
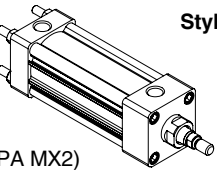
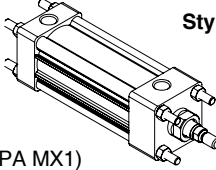
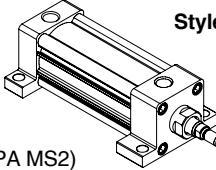
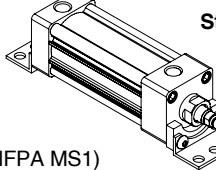
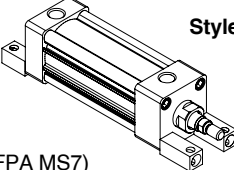
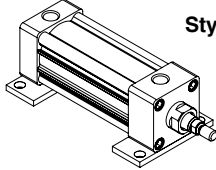
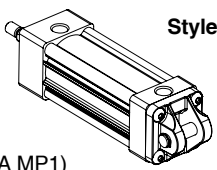
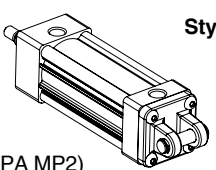
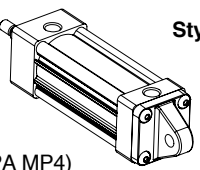
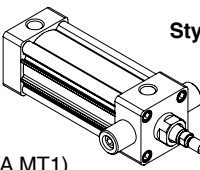
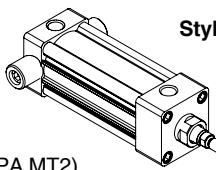
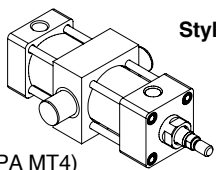
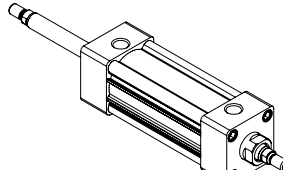
- Cylinder model number must have a Piston Type with a magnetic ring ((blank), 3, 6, D, F or R).
- Please refer to pages 111-118 for sensor part numbers and specifications. Global, Mini-Global, NAMUR and Weld Immune Sensors will fit the 4MA/4ML Series.
- Style DD mounts and tie rod versions with Global Sensors will require tie rod bracket P8S-TMA0X. Please refer to [page 115](#) for more information.

4MA Series Mounting Styles for 1½" to 5" Bore

Mounting Code	NFPA Mounting Style	Description	Available Bore Sizes		
			4MA/4ML	4MA/4ML-LPSO w/o Stop Tube	4MA/4ML-LPSO w/Stop Tube
TEF	MX5/MS4	Sleeve Nut with Side Tap (standard mount)	1-1/2 - 5	2 - 5	2 - 5
T	MX0	No Mount (same construction as TEF)	1-1/2 - 5	2 - 5	2 - 5
TE	MX5	Sleeve Nut (same construction as TEF)	1-1/2 - 5	2 - 5	2 - 5
F	MS4	Side Tap (same construction as TEF)	1-1/2 - 5	2 - 5	2 - 5
J	MF1	Head Rectangular Flange	1-1/2 - 5	2 - 5**	2 - 5
H	MF2	Cap Rectangular Flange	1-1/2 - 5	2 - 5**	2 - 5**
TB	MX3	Tie Rods Extended Head End	1-1/2 - 5	-	2 - 5
TC	MX2	Tie Rods Extended Cap End	1-1/2 - 5	-	-
TD	MX1	Tie Rods Extended Both Ends	1-1/2 - 5	-	-
C	MS2	Side Lug	1-1/2 - 5	2 - 5	2 - 5
CB	MS1	Side End Angle	1-1/2 - 5	2 - 5	2 - 5
G	MS7	Side End Lug	1-1/2 - 4	2 - 4	2 - 4
NB	N/A	Base Bar	1-1/2 - 4	2 - 4	2 - 4
BB	MP1	Cap Fixed Clevis	1-1/2 - 5	2 - 5**	2 - 5**
BC	MP2	Cap Detachable Clevis	1-1/2 - 5	2 - 5**	2 - 5**
BE	MP4	Cap Detachable Eye	1-1/2 - 5	2 - 5**	2 - 5**
D	MT1	Head Trunnion	1-1/2 - 5	2 - 5	2 - 5
DB	MT2	Cap Trunnion	1-1/2 - 5	2 - 5**	2 - 5**
DD	MT4	Intermediate Trunnion	1-1/2 - 5	-	-
KTEF***	MDX5/MDS4	Double Rod End, TEF Mount	1-1/2 - 5	2 - 5	2 - 5

*Standard mount for 1-1/2" bore with 1" rod is TE mount; TEF and F mount not available.

**May interfere with mounting. Please provide clearance for Linear Position Sensor overhang (see [page 99](#)).

<p>Standard Mount</p>  <p>Style TEF</p> <p>(NFPA MX5/MS4)</p>	<p>Head Rectangular Flange</p>  <p>Style J</p> <p>(NFPA MF1)</p>	<p>Cap Rectangular Flange</p>  <p>Style H</p> <p>(NFPA MF2)</p>	<p>Tie Rods Ext. Head End</p>  <p>Style TB</p> <p>(NFPA MX3)</p>
<p>Tie Rods Ext. Cap End</p>  <p>Style TC</p> <p>(NFPA MX2)</p>	<p>Tie Rods Ext. Both Ends</p>  <p>Style TD</p> <p>(NFPA MX1)</p>	<p>Side Lug</p>  <p>Style C</p> <p>(NFPA MS2)</p>	<p>Side End Angle</p>  <p>Style CB</p> <p>(NFPA MS1)</p>
<p>Side End Lug</p>  <p>Style G</p> <p>(NFPA MS7)</p>	<p>Base Bar Mount</p>  <p>Style NB</p>	<p>Cap Fixed Clevis</p>  <p>Style BB</p> <p>(NFPA MP1)</p>	<p>Cap Detachable Clevis</p>  <p>Style BC</p> <p>(NFPA MP2)</p>
<p>Cap Detachable Eye</p>  <p>Style BE</p> <p>(NFPA MP4)</p>	<p>Head Trunnion</p>  <p>Style D</p> <p>(NFPA MT1)</p>	<p>Cap Trunnion</p>  <p>Style DB</p> <p>(NFPA MT2)</p>	<p>Intermediate Trunnion</p>  <p>Style DD</p> <p>(NFPA MT4)</p>
<p>Double Rod End</p>  <p>Style KTEF</p> <p>(NFPA MDX0)</p>	<p>***Double rod end cylinders can be ordered with head mountings, i.e. KJ (see page 19).</p>		

General Specifications

- NFPA interchangeable
- Bore sizes – 1-1/2", 2", 2-1/2", 3-1/4", 4" and 5"
- Strokes – available in any practical stroke length
- Rod diameters – 5/8", 1" and 1-3/8"
- Rod end styles – 4 standard, specials available
- Single rod end or double rod ends
- Cushions – optional and adjustable at either end or both ends
(n/a for 4ML Hydraulic Version)
- Operating pressure – 4MA = 250 PSIG (17 Bar)
maximum air service
4ML = 400 PSIG (27 Bar)
maximum hydraulic service

- Media 4MA = dry, filtered air
4ML = filtered hydraulic oil
- Temperature range –
-10°F to +165°F (-23°C to +74°C)
with standard seals
-10°F to +250°F (-23°C to +121°C)
with fluorocarbon seals option
-50°F to +150°F (-46°C to +66°C)
with low temperature seals option
- Mounting styles – 20 standard styles
- RoHS compliant

For material options, including seals, piston rods and glands, please see Material Specifications on next page.

Cylinder Weights—4MA/4ML Cylinders

Bore (inch)	Rod (inch)	No Mount Single Rod 4MA/4ML		No Mount Double Rod	
		Base Wt. (lbs.)	Per Inch (lbs.)	Base Wt. (lbs.)	Per Inch (lbs.)
1 1/2	0.625	1.73	0.20	2.16	0.28
2	0.625	2.40	0.21	3.05	0.30
	1.00	2.99	0.35	4.34	0.58
2 1/2	0.625	3.25	0.23	3.96	0.31
	1.00	4.06	0.37	5.74	0.60
3 1/4	1.00	6.45	0.42	7.65	0.64
	1.375	7.93	0.62	11.46	1.05
4	1.00	8.80	0.49	10.32	0.71
	1.375	10.29	0.69	14.37	1.12
5	1.00	13.20	0.61	15.84	0.84
	1.375	14.72	0.81	18.89	1.24

Standard Cushion Position

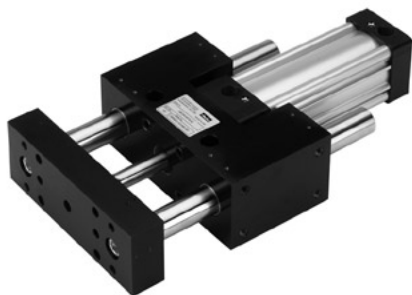
Mounting Code	Position
All except D, DB, DD	2
D, DB, DD	3

Standard Port Sizes

Bore	NPTF	BSPT	BSPP	SAE
1 1/2	3/8	Rc3/8	G3/8	6
2	3/8	Rc3/8	G3/8	6
2 1/2	3/8	Rc3/8	G3/8	6
3 1/4	1/2	Rc1/2	G1/2	10
4	1/2	Rc1/2	G1/2	10
5	1/2	Rc1/2	G1/2	10

Mounting Weight Adders

Bore (inch)	Weight (lbs) by Mounting Style							
	J, H	D, DB	BB	CB, G	DD	BE	C	BC
1 1/2	0.51	0.50	0.15	0.36	1.70	0.23	0.15	0.20
2	0.76	0.50	0.26	0.65	2.38	0.32	0.15	0.29
2 1/2	1.13	0.50	0.38	1.05	3.00	0.42	0.15	0.41
3 1/4	2.76	0.50	0.98	1.38	5.35	1.26	0.35	1.06
4	4.05	0.50	1.35	2.20	6.75	1.62	0.35	1.49
5	6.46	0.50	1.20	4.29	8.77	N/A	0.57	2.41



For a guided version of the 4MA or 4ML Series, please see the HB Series in Parker Pneumatic Actuator Products Catalog AU03-0900P-3/NA.

Material Specifications – Standard Temperatures and Applications

Head and cap	Black anodized aluminum alloy	Magnetic ring	Plastic-bound magnetic material
Head and cap screws	Zinc plated steel alloy	Piston fastener	Zinc plated steel alloy (for composite piston)
Cylinder body	Clear anodized aluminum alloy		Piston rod for aluminum piston
Piston rod	Case-hardened, chrome plated carbon steel	O-rings	Nitrile
Rod seal	Carboxylated nitrile (Nitroxile)	End seals	Nitrile
Rod wiper	Molythane	Cushion seals	Urethane
Rod bearing (gland)	Bronze alloy	Cushion needle valves	Stainless steel
Piston	Composite (standard)	Tie-rods/studs (some mounts)	Blackened carbon steel
	Aluminum alloy (optional)	Tie-rod nuts (some mounts)	Steel alloy, SAE J995 Grade 8
Piston seals	Carboxylated nitrile (Nitroxile)		
Piston bearing	Composite (for standard piston)		
	MolyGard™ (for aluminum piston)		

4MA Options – Material and Part Changes

High temperatures (-10°F to +250°F)	All seals and wiper are fluorocarbon Aluminum piston only (without magnetic ring)	Low temperatures (-50°F to +150°F)	Rod seal, piston seals, o-rings and end seals are low temperature-rated nitrile Aluminum piston only
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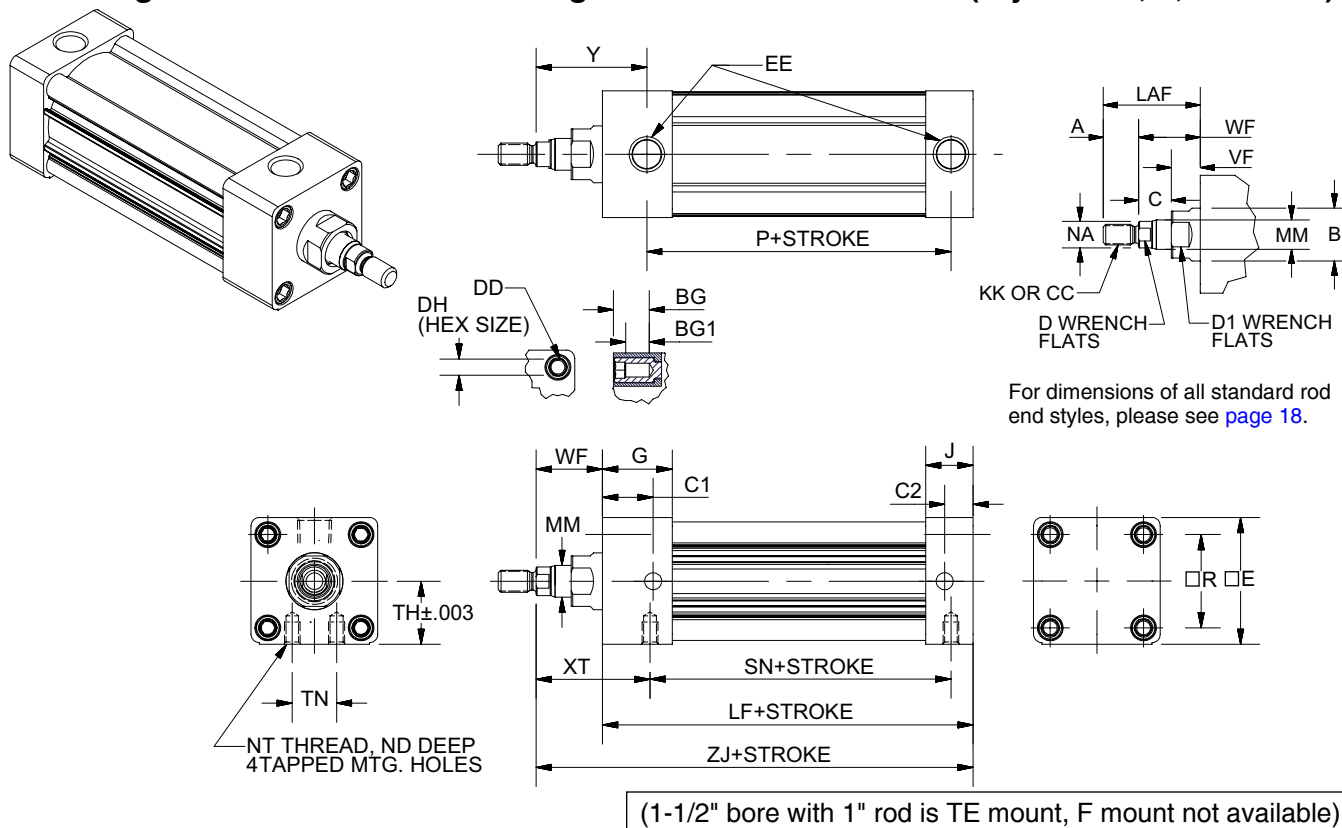
4ML Hydraulic Version – Material and Part Changes

Hydraulic service (general)	Aluminum piston only (all temperatures) Cushions and bumper piston seals not available	Hydraulic service (high temp)	Fluorocarbon TS-2000 rod seal; wiper and all seals are fluorocarbon (for hydraulic use)
Hydraulic service (std temp)	Polyurethane TS-2000 rod seal and nitrile piston seals (for hydraulic use)		

Other Standard Options – Material and Part Changes

Cylinder seal options	Fluorocarbon for high temperatures or chemical compatibility Other seal options available, please consult factory	Piston rod material options	Case-hardened, chrome plated carbon steel (standard) 17-4 PH stainless steel, chrome plated 303 stainless steel, chrome plated (n/a for 4ML) 316 stainless steel, chrome plated (n/a for 4ML) (for stainless steel without chrome plating, please consult factory)
Bumper piston seal options (4MA only, n/a for 4ML)	Carboxylated nitrile (Nitroxile) for standard temperatures Fluorocarbon for high temperatures or chemical compatibility Urethane	HI LOAD gland option Metallic rod scraper option	Composite bearing pressed into bronze alloy gland Dual high strength bronze wipers with PTFE (5/8" rod only) or fluorocarbon energizer
1/4" thick bumpers option			

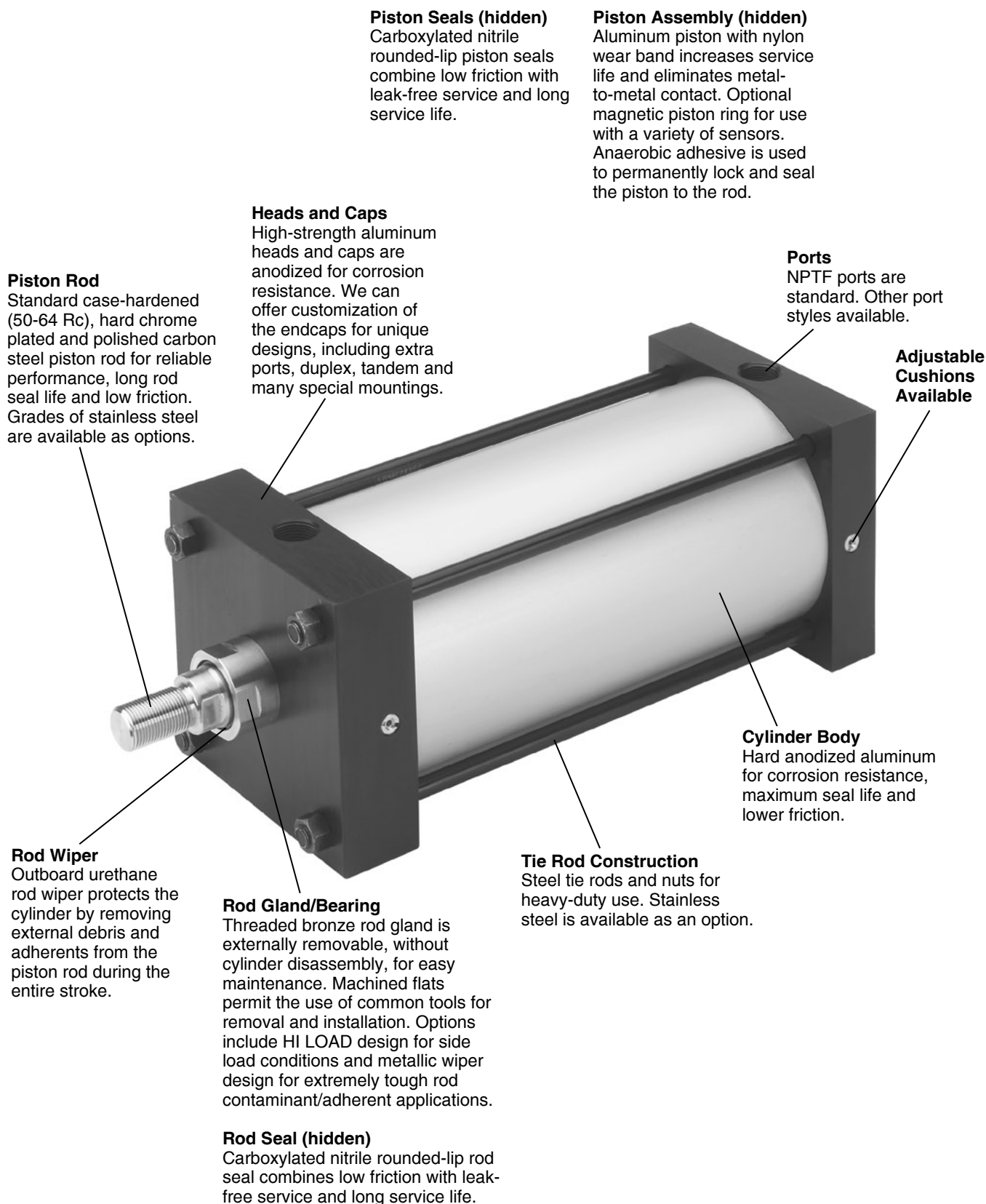
4MA Single Rod Dimensioned Drawings for 1 1/2" to 5" Bore Size (Styles TEF, T, TE and F)



4MA Cylinder Dimensions – Styles TEF, T, TE and F

Bore Size	Rod No.	Rod Dia. MM	Thread		A	AA	B	BG	BG1	C	C1	C2	D	D1	DD	DH	E	EE (NPTF)	G
			Style 8 CC	Style 4 & 9 KK															
1 1/2	1	5/8	1/2-20	7/16-20	0.750	2.020	1.124	0.562	0.374	0.385	1.000	0.500	1/2	1	1/4-28	1/4	2.000	3/8	1.438
	2	1	7/8-14	3/4-16	1.125	2.020	1.499	0.562	0.374	0.510	1.000	0.500	7/8	1-3/8	1/4-28	1/4	2.000	3/8	1.438
2	1	5/8	1/2-20	7/16-20	0.750	2.600	1.124	0.562	0.362	0.385	1.000	0.562	1/2	1	5/16-24	5/16	2.500	3/8	1.375
	3	1	7/8-14	3/4-16	1.125	2.600	1.499	0.562	0.362	0.510	1.000	0.562	7/8	1-3/8	5/16-24	5/16	2.500	3/8	1.375
2 1/2	1	5/8	1/2-20	7/16-20	0.750	3.100	1.124	0.562	0.362	0.385	1.000	0.594	1/2	1	5/16-24	5/16	3.000	3/8	1.344
	3	1	7/8-14	3/4-16	1.125	3.100	1.499	0.562	0.362	0.510	1.000	0.594	7/8	1-3/8	5/16-24	5/16	3.000	3/8	1.344
3 1/4	1	1	7/8-14	3/4-16	1.125	3.900	1.499	0.700	0.500	0.510	1.188	0.719	7/8	1-3/8	3/8-24	3/8	3.750	1/2	1.594
	3	1 3/8	1-1/4-12	1-14	1.625	3.900	1.999	0.700	0.500	0.635	1.188	0.719	1-1/8	1-7/8	3/8-24	3/8	3.750	1/2	1.594
4	1	1	7/8-14	3/4-16	1.125	4.700	1.499	0.700	0.500	0.510	1.188	0.719	7/8	1-3/8	3/8-24	3/8	4.500	1/2	1.594
	3	1 3/8	1-1/4-12	1-14	1.625	4.700	1.999	0.700	0.500	0.635	1.188	0.719	1-1/8	1-7/8	3/8-24	3/8	4.500	1/2	1.594
5	1	1	7/8-14	3/4-16	1.125	5.800	1.499	0.781	0.531	0.510	1.188	0.813	7/8	1-3/8	1/2-20	1/2	5.500	1/2	1.594
	3	1 3/8	1-1/4-12	1-14	1.625	5.800	1.999	0.781	0.531	0.635	1.188	0.813	1-1/8	1-7/8	1/2-20	1/2	5.500	1/2	1.594

Bore Size	Rod No.	Rod Dia. MM	J	LAF	NA	ND	NT	R	+0.003 -0.003 TH	TN	VF	WF	XT	Y	Add Stroke			
															LF	P	SN	ZJ
1 1/2	1	5/8	0.938	1.750	0.563	0.375	1/4-20	1.430	0.993	0.625	0.615	1.000	1.938	1.875	3.625	2.313	2.250	4.625
	2	1	0.938	2.500	0.938	-	-	1.430	0.993	-	0.865	1.375	-	2.250	3.625	2.313	-	5.000
2	1	5/8	0.937	1.750	0.563	0.438	5/16-18	1.840	1.243	0.875	0.615	1.000	1.938	1.875	3.625	2.313	2.250	4.625
	3	1	0.937	2.500	0.938	0.375	5/16-18	1.840	1.243	0.875	0.865	1.375	2.313	2.250	3.625	2.313	2.250	5.000
2 1/2	1	5/8	0.938	1.750	0.563	0.625	3/8-16	2.190	1.493	1.250	0.615	1.000	1.938	1.938	3.750	2.375	2.375	4.750
	3	1	0.938	2.500	0.938	0.625	3/8-16	2.190	1.493	1.250	0.865	1.375	2.313	2.313	3.750	2.375	2.375	5.125
3 1/4	1	1	1.125	2.500	0.938	0.750	1/2-13	2.760	1.868	1.500	0.865	1.375	2.438	2.438	4.250	2.625	2.625	5.625
	3	1 3/8	1.125	3.250	1.313	0.750	1/2-13	2.760	1.868	1.500	0.990	1.625	2.688	2.688	4.250	2.625	2.625	5.875
4	1	1	1.125	2.500	0.938	0.750	1/2-13	3.320	2.243	2.063	0.865	1.375	2.438	2.438	4.250	2.625	2.625	5.625
	3	1 3/8	1.125	3.250	1.313	0.750	1/2-13	3.320	2.243	2.063	0.990	1.625	2.688	2.688	4.250	2.625	2.625	5.875
5	1	1	1.219	2.500	0.938	0.938	5/8-11	4.100	2.743	2.688	0.865	1.375	2.438	2.438	4.500	2.875	2.875	5.875
	3	1 3/8	1.219	3.250	1.313	0.938	5/8-11	4.100	2.743	2.688	0.990	1.625	2.688	2.688	4.500	2.875	2.875	6.125



For a complete list of 4MA options, please see [pages 28 and 32](#).

How to Order 4MA Series Cylinders for 6" and 8" Bore

4MA cylinders can be specified by model number by using the table below.

6.00		J	4MA		U		1	4		A		12.000
Bore Size 6.00 8.00		Double Rod Cylinder Specify "K" only if double rod cylinder is required.	Series 4MA Air service 4ML Hydraulic service		Ports U NPTF R BSPP B BSPT T SAE		Piston Rod Number Specify rod code number for required diameter. ⁵					Stroke Length Specify stroke length required in inches. ⁸
		Mounting Style Specify mounting style code (see table on following page).			Seals Blank Standard (nitrile seals) V Fluorocarbon seals ¹ E Fluorocarbon rod wiper and rod seal only ² 4 Low temperature seals ¹ M Metallic rod wiper, nitrile seals ³					Cushion Cap End Blank Non-cushioned cap end C Cushioned cap end (not available for 4ML)		
		Cushion Head End Blank Non-cushioned head end C Cushioned head end (not available for 4ML)								Piston Rod Thread Type A Standard (UNF Unified Thread) W BSF British Fine M Metric (see page 104)		
		Piston Type Blank Standard (lipseals, no magnetic ring) 3 Lipseals and magnetic ring			Special Modification Specify "S" only for special modification other than rod end, and then describe modification in item notes. (Includes 4MA with Linear Position Sensor Option) ⁴					Rod Material and Gland Code Blank Standard rod and gland H Standard rod and HI LOAD gland Y 17-4 PH stainless steel rod and standard gland Z 17-4 PH stainless steel rod and HI LOAD gland J 303 stainless steel rod and standard gland ⁷ K 303 stainless steel rod and HI LOAD gland ⁷ S 316 stainless steel rod and standard gland ⁷ T 316 stainless steel rod and HI LOAD gland ⁷		
					Piston Rod Thread Style 4 Small male 8 Intermediate male 9 Short female 55 For use with Split Coupler ⁶ 3 Special (and specify all dimensions required)							

¹ Reed and solid-state sensors only available with standard seals or options E and M.

² Used for external chemical compatibility applications, not high temperature.

³ If fluorocarbon seals are required with this option, please place an "S" for special in the Special Modification field and specify the "fluorocarbon seals and metallic rod wiper" in the item notes.

⁴ For Linear Position Sensor Option (LPSO), please include the following information for the Special Modification item notes:

- Sensor part number (see [pages 98-102](#))
 - Sensor position
 - Port position (if other than position 1)
 - Length of stop tubing, gross stroke and net stroke (if required)
- Also, Piston Type 3 is required.

⁵ Review Piston Rod Selection Chart on [page 134](#) to determine proper piston rod diameter.

⁶ For additional information regarding this style, refer to [page 103](#).
If non-standard Rod Material and Gland Code is required with this option, please place an "S" for special in Special Modification field and specify Rod Material and Gland Code in the item notes.

⁷ Not available for 4ML.

⁸ If a stop tube is required, specify gross stroke (net stroke + stop tube) in the model number, then place an "S" for special in the Special Modification field and specify the stop tube length in the item notes.

How to order 6"-8" Bore 4MA/4ML Series cylinders with sensors:

Sensors must be ordered separately and are not mounted to the cylinder prior to shipment.

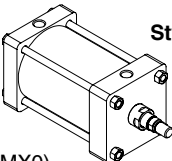
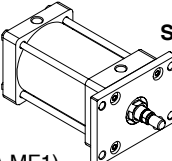
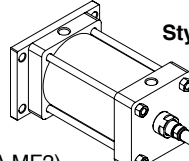
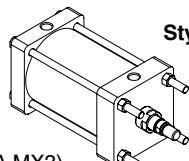
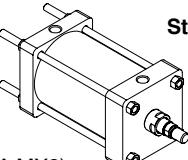
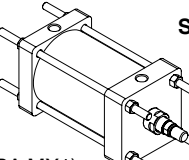
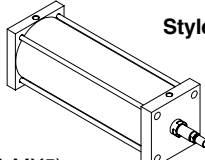
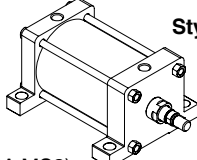
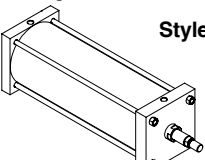
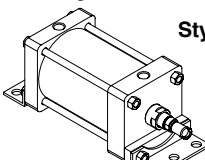
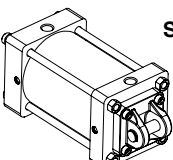
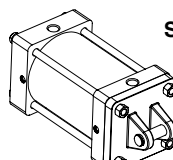
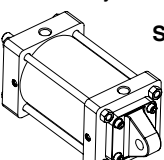
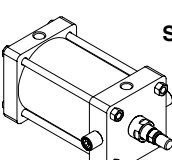
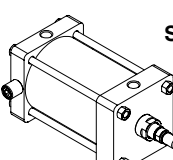
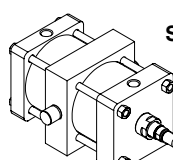
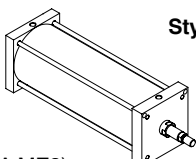
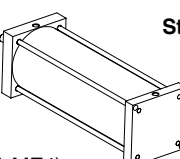
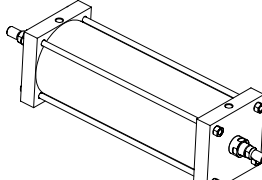
1. Cylinder model number must have Piston Type 3.
2. Please refer to [pages 111-118](#) for sensor part numbers and specifications. Global, NAMUR and Weld Immune Sensors will fit the 6"-8" Bore 4MA/4ML Series.
3. Tie rod bracket P8S-TMA0X will be required for Global Sensors. Please refer to [page 115](#) for more information.

4MA Series Mounting Styles – 6" and 8" Bore

Mounting Code	NFPA Mounting Style	Description	Available Bore Sizes		
			4MA/4ML	4MA/4ML-LPSO w/o Stop Tube	4MA/4ML-LPSO w/Stop Tube
T	MX0	No Mount	6 - 8	6 - 8	6 - 8
J	MF1	Head Rectangular Flange	6	6*	6
H	MF2	Cap Rectangular Flange	6	6*	6*
TB	MX3	Tie Rods Extended Head End	6 - 8	-	6 - 8
TC	MX2	Tie Rods Extended Cap End	6 - 8	-	-
TD	MX1	Tie Rods Extended Both Ends	6 - 8	-	-
TE	MX5	Sleeve Nut	6 - 8	6 - 8	6 - 8
TEF	MX5/MS4	Sleeve Nut with Side Tap	6 - 8	6 - 8	6 - 8
C	MS2	Side Lug	6 - 8	6 - 8	6 - 8
F	MS4	Side Tap	6 - 8	6 - 8	6 - 8
CB	MS1	Side End Angle	6 - 8	6 - 8	6 - 8
BB	MP1	Cap Fixed Clevis	6 - 8	6 - 8*	6 - 8*
BC	MP2	Cap Detachable Clevis	6 - 8	6 - 8*	6 - 8*
BE	MP4	Cap Detachable Eye	6	6*	6*
D	MT1	Head Trunnion	6 - 8	6 - 8	6 - 8
DB	MT2	Cap Trunnion	6 - 8	6 - 8*	6 - 8*
DD	MT4	Intermediate Trunnion	6 - 8	-	-
JB	ME3	Head Square	8	-	8
HB	ME4	Cap Square	8	-	-
KT**	MDX0	Double Rod End, No Mount	6 - 8	6 - 8	6 - 8

*May interfere with mounting. Please provide clearance for Linear Position Sensor overhang (see [page 99](#)).

**Double rod end cylinders can be ordered with head mountings, i.e. KJ (see [page 35](#)).

<p>No Mount</p>  <p>Style T</p> <p>(NFPA MX0)</p>	<p>Head Rectangular Flange</p>  <p>Style J</p> <p>(NFPA MF1)</p>	<p>Cap Rectangular Flange</p>  <p>Style H</p> <p>(NFPA MF2)</p>	<p>Tie Rods Ext. Head End</p>  <p>Style TB</p> <p>(NFPA MX3)</p>
<p>Tie Rods Ext. Cap End</p>  <p>Style TC</p> <p>(NFPA MX2)</p>	<p>Tie Rods Ext. Both Ends</p>  <p>Style TD</p> <p>(NFPA MX1)</p>	<p>Sleeve Nut</p>  <p>Style TE</p> <p>(NFPA MX5)</p>	<p>Side Lug</p>  <p>Style C</p> <p>(NFPA MS2)</p>
<p>Side End Lug</p>  <p>Style F</p> <p>(NFPA MS4)</p>	<p>Side End Angle</p>  <p>Style CB</p> <p>(NFPA MS1)</p>	<p>Cap Fixed Clevis</p>  <p>Style BB</p> <p>(NFPA MP1)</p>	<p>Cap Detachable Clevis</p>  <p>Style BC</p> <p>(NFPA MP2)</p>
<p>Cap Detachable Eye</p>  <p>Style BE</p> <p>(NFPA MP4)</p>	<p>Head Trunnion</p>  <p>Style D</p> <p>(NFPA MT1)</p>	<p>Cap Trunnion</p>  <p>Style DB</p> <p>(NFPA MT2)</p>	<p>Intermediate Trunnion</p>  <p>Style DD</p> <p>(NFPA MT4)</p>
<p>Head Square</p>  <p>Style JB</p> <p>(NFPA ME3)</p>	<p>Cap Square</p>  <p>Style HB</p> <p>(NFPA ME4)</p>	<p>Double Rod End</p>  <p>Style KT</p> <p>(NFPA MDX0)</p>	

General Specifications

- NFPA interchangeable
 - Bore sizes – 6" and 8"
 - Strokes – available in any practical stroke length
 - Rod diameters – 1-3/8" and 1-3/4"
 - Rod end styles – 4 standard, specials available
 - Single rod end or double rod ends
 - Cushions – optional and adjustable at either end or both ends
(n/a for 4ML Hydraulic Version)
 - Operating pressure –
4MA = 250 PSIG (17 Bar) maximum air service
4ML = 400 PSIG (27 Bar) maximum hydraulic service
 - Media – 4MA = dry, filtered air
4ML = filtered hydraulic oil
 - Temperature range –
-10°F to +165°F (-23°C to +74°C) with standard seals
-10°F to +250°F (-23°C to +121°C) with fluorocarbon seals option
-50°F to +150°F (-46°C to +66°C) with low temperature seals option
 - Mounting styles – 20 standard styles
 - RoHS compliant
- For material options, including seals, piston rods and glands, please see Material Specifications on [next page](#).

Cylinder Weights – 4MA/4ML Cylinders

Bore (inch)	Rod (inch)	No Mount Single Rod 4MA/4ML		No Mount Double Rod	
		Base Wt. (lbs.)	Per Inch (lbs.)	Base Wt. (lbs.)	Per Inch (lbs.)
6	1.375	20.50	0.87	25.65	1.30
	1.75	22.61	1.13	30.41	1.82
8	1.375	35.50	1.25	41.15	1.68
	1.75	37.63	1.51	45.90	2.20

Standard Cushion Position

Mounting Code	Position
All except D, DB, DD	2
D, DB, DD	3

Standard Port Sizes

Bore	NPTF	BSPT	BSPP	SAE
6	3/4	Rc3/4	G3/4	12
8	3/4	Rc3/4	G3/4	12

Mounting Weight Adders

Bore (inch)	Weight (lbs) by Mounting Style							
	J, H	D, DB	BB	CB	DD	BE	C	BC
6	10.74	1.22	2.91	5.88	15.52	2.91	0.69	11.38
8	N/A	1.22	2.91	7.84	25.01	N/A	0.67	17.31