



Repairable Stainless Cylinders

Bimba's repairable stainless steel cylinders offer a corrosion resistant design that is ideal for washdown applications and is designed specifically to reduce sharp edges and corners and provide a smooth transition from end cap to cylinder body. Tapped holes are provided to allow easy mounting of USDA approved secondary wiper retainers as an option.



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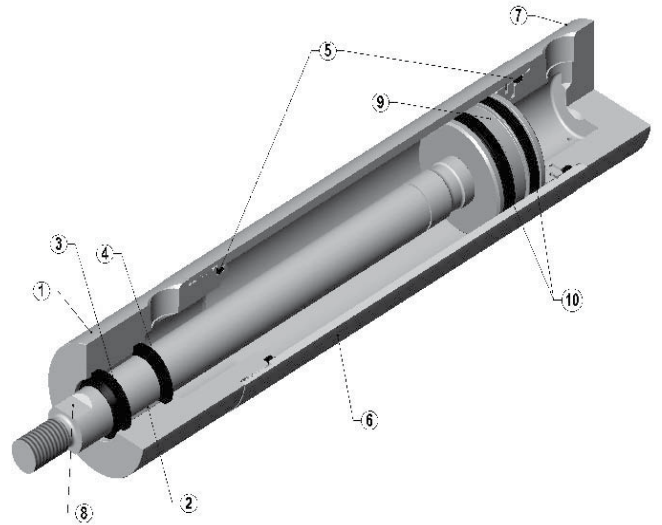
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Holes and Dowel Pins

1. Rod Guide: Corrosion resistant 303 stainless steel is ideal for washdown applications. Designed specifically to reduce sharp edges and corners and provide a smooth transition to the cylinder body eliminating catch points for contamination and to allow ease in cleaning. Tapped holes are provided to allow easy mounting of USDA approved secondary wiper retainer as an option.
2. Rod Bushing: Material is PTFE (Polytetrafluoroethylene) for extended life, larger bores (5", 6", 8") utilize an acetal bushing.
3. Rod Wiper: A Urethane rod wiper is standard (high temperature material is optional) and offers resistance to a wide variety of washdown chemicals. Larger bores offer a PTFE rod wiper as standard.
4. Rod Seal: Nitrile rod seal (high temperature material is optional) is pressure activated and wear compensating for long life.
5. Body Seal: Nitrile material is standard (high temperature material is optional).
6. Body: Thick walled 316 stainless steel offers superior corrosion resistance and is designed to minimize gaps with the mating end caps where contamination can build up.
7. Rear Head: Corrosion resistant 303 stainless steel is ideal for washdown applications. Designed specifically to reduce sharp edges and corners and provide a smooth transition to the cylinder body eliminating catch points for contamination and to allow ease in cleaning. Optional tapped holes allow for easy mounting of NFPA rear pivot or rear clevis mounting brackets.
8. Piston Rod: Ground and roller burnished 303 stainless steel for maximum corrosion resistance.
9. Piston: Precision machined from aluminum (optional bearing strip) may also be ordered in stainless steel for internal corrosion resistance when required.
10. Piston Seals: Nitrile material is standard, high temperature material is optional. Seals are pressure activated and wear compensating.
11. Lubricant: Food Grade (H1) Grease.



Operating Specifications

Temperature:	-20° to 200° F standard; 0° to 400° F with V option
Stroke Maximum:	24" (strokes beyond 24" require an application review)
Operating Pressure:	200 PSI maximum

USDA Accepted (Option U, see page X.XX and X.XX)

EQUIPMENT ACCEPTANCE CERTIFICATE

The issuance of this form is based on U.S. Department of Agriculture, Dairy Grading Branch, Equipment Design Review Section, evaluation of the equipment listed above for compliance with:

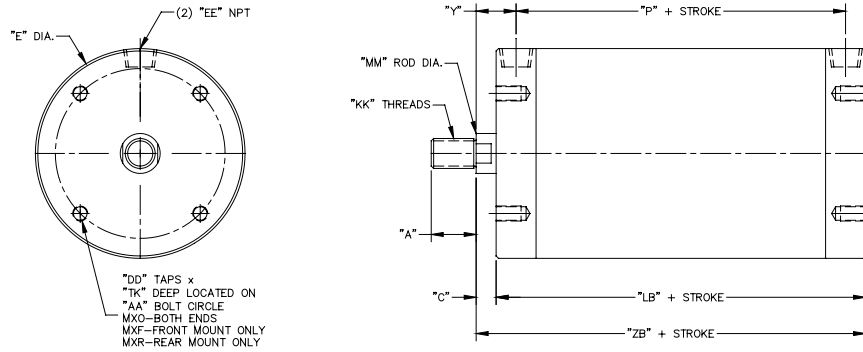
USDA Dairy Equipment Guidelines

How it Works

Materials of construction

Tie Tube:	Epoxy coated Aluminum
Cylinder Body:	Smooth 304 stainless steel
Piston Rod:	Hard Chrome Plated standard; 303 stainless optional
Seals:	Buna N Standard; High Temperature Fluoroelastomer optional
Lubrication:	Factory pre-lubed for non-lube service
Temperature:	-20° to 200° F standard; 0° to 300° F with high temperature option
Pressure Rating:	200 PSI; 150 PSI with high temperature option
Life:	1400 miles of travel when lubricated (Lubrication every 500 miles recommended)
Stroke Maximum:	72" (strokes beyond 72" require an application review)

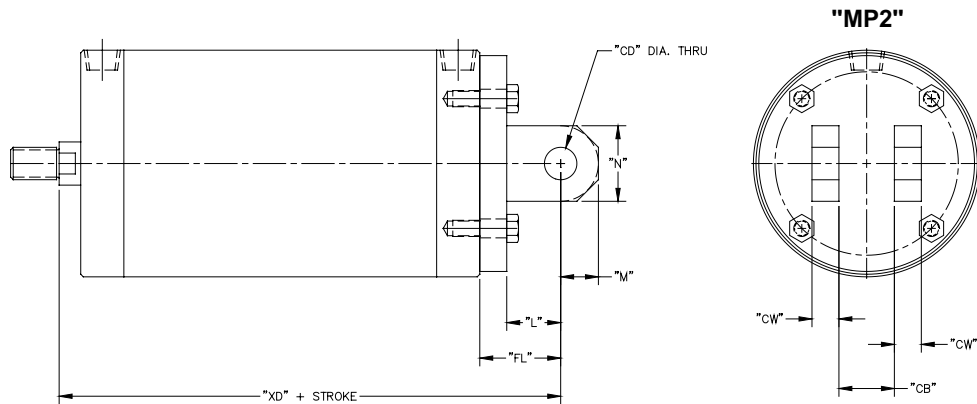
Dimensions (MXO, MXR, MXR) (in)



Bore	Rod Diameter	A	AA	C	DD	E Dia.	EE NPT	KK	LB	MM	TK	Y	P	ZB
1-1/2"	5/8"	3/4	1.45	.56	10-24	1.75	3/8	7/16-20	5.21	5/8	.33	1.99	3.16	5.77
2"	5/8"	3/4	1.85	.56	10-24	2.25	3/8	7/16-20	5.45	5/8	.38	1.94	3.15	6.01
2-1/2"	5/8"	3/4	2.15	.56	1/4-20	2.75	3/8	7/16-20	5.95	5/8	1/2	1.93	3.39	6.51
3-1/4"	1"	1-1/8"	2.62	.64	5/16-18	3.50	1/2	3/4-16	7.43	1	5/8	2.64	3.83	8.07
4"	1"	1-1/8"	3.25	.64	3/8-16	4.25	1/2	3/4-16	7.43	1	3/4	2.52	3.93	8.07
5"	1"	1-1/8"	4.25	.50	3/8-16	5.25	1/2	3/4-16	5.75	1	5/8	1.00	4.75	6.25
6"	1-3/8"	1-5/8"	5.00	.63	1/2-13	6.25	1/2	1-14	5.75	1-3/8	7/8	1.13	4.75	6.38
8"	1-3/8"	1-5/8"	6.50	.63	5/8-11	8.38	1/2	1-14	5.88	1-3/8	1	1.13	4.88	6.50

NOTE: Oversized rods are available in 5", 6", and 8" bore in each mounting style. Please contact distributor.

Dimensions (MP2) (in)

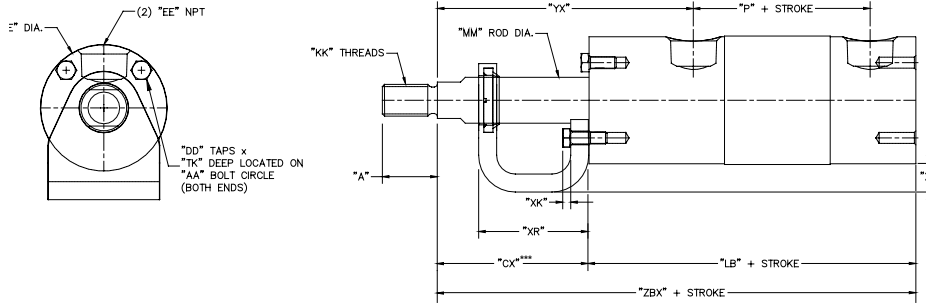


Bore	Rod Diameter	CB	CD	CW	FL	L	M	N	XD
1-1/2"	.63	.75	.50	.49	1.13	.75	.35	.70	6.90
2"	.63	.75	.50	.50	1.13	.75	.40	.80	7.14
2-1/2"	.63	.75	.50	.50	1.13	.75	.40	.80	7.64
3-1/4"	1.00	1.25	.75	.63	1.88	1.25	.60	1.00	9.94
4"	1.00	1.25	.75	.63	1.88	1.25	.75	1.40	9.94
5"	1.00	1.25	.75	.63	1.88	1.25	.88	1.75	8.13
6"	1.38	1.50	1.00	.75	2.25	1.50	1.00	2.00	8.63
8"	1.38	1.50	1.00	.75	2.25	1.50	1.00	3.50	8.75

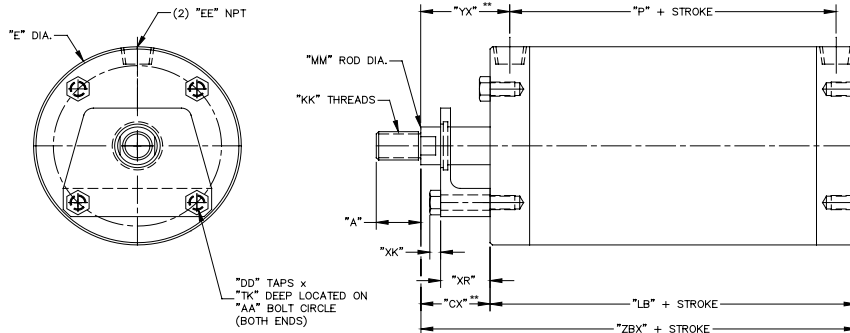
How To Specify

Dimensions (Option "U") (in)

1-1/2" to 4" Bores



5", 6", and 8" Bores



External Wiper (Option U) Dimensions

Bore	Rod Diameter	A	AA	CX	DD	E Dia.	EE NPT	KK	LB
1-1/2"	.63	3/4	1.45	2.06	8-32	1-3/4	3/8	7/16-20	5.21
2"	.63	3/4	1.85	2.06	10-24	2-1/4	3/8	7/16-20	5.45
2-1/2"	.63	3/4	2.15	2.06	1/4-20	2-3/4	3/8	7/16-20	5.95
3-1/4"	1.00	1-1/8	2.62	2.14	5/16-18	3-1/2	1/2	3/4-16	7.43
4"	1.00	1-1/8	3.25	2.14	3/8-16	4-1/4	1/2	3/4-16	7.43
5"	1.00	1-1/8	4.25	1.75	3/8-16	5-1/4	1/2	3/4-16	5.75
6"	1.38	1-5/8	5.00	1.88	1/2-13	6-1/4	1/2	1-14	5.75
8"	1.38	1-5/8	6.50	1.88	5/8-11	8-3/8	1/2	1-14	5.88

Bore	Rod Diameter	MM	TK	YX	P	XR	XK	ZBX	X
1-1/2"	.63	5/8	.33	3.49	3.16	1.50	.10	7.27	.38
2"	.63	5/8	.38	3.44	3.15	1.50	.12	7.51	.50
2-1/2"	.63	5/8	1/2	3.43	3.39	1.50	.17	8.01	.26
3-1/4"	1.00	1	5/8	4.14	3.83	1.50	.24	9.57	.25
4"	1.00	1	3/4	4.02	3.93	1.50	.27	9.57	.25
5"	1.00	1	5/8	2.25	4.75	1.25	.27	7.50	N/A
6"	1.38	1-3/8	7/8	2.38	4.75	1.25	.36	7.63	N/A
8"	1.38	1-3/8	1	2.38	4.88	1.25	.44	7.75	N/A

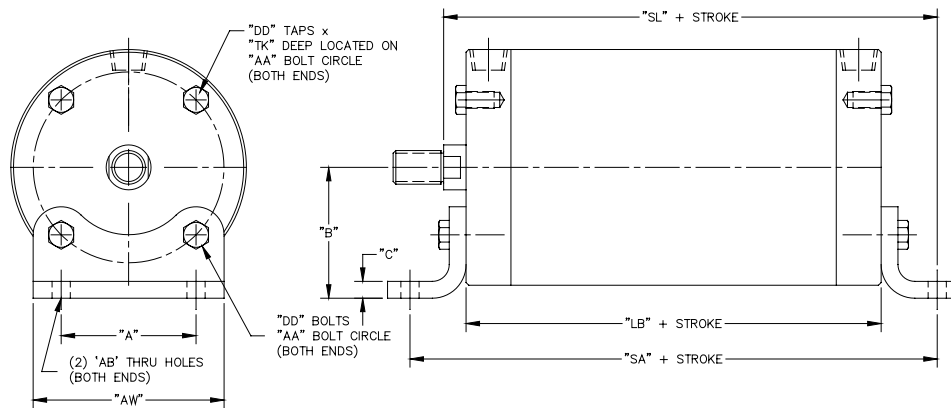
NOTE: The USDA-approved option "U" includes an external wiper as required by the USDA. Cylinder rod length is increased as shown. Oversized rods are available in 5", 6", and 8" bore in each mounting style. Please contact distributor.

Dimensions

Examples of "U" Option Mounting Bracket



Dimensions (Foot Bracket) (in)



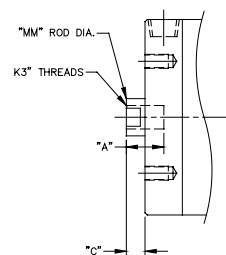
RS Series Foot Mounting Brackets

Bore	Foot Bracket Kit	A	AB	AW	B	C	DD	AA	LB	TK	SA	SL
1-1/2"	RS-FB150	1.03	3/16	1.52	1.25	1/4	8-32	1.45	5.21	.38	6.62	6.46
2"	RS-FB200	1.31	7/32	1.81	1.62	1/4	10-24	1.85	5.45	.38	7.58	7.07
2-1/2"	RS-FB250	1.55	9/32	2.30	1.64	1/4	1/4-20	2.15	5.95	1/2	7.90	7.48
3-1/4"	RS-FB325	1.86	11/32	2.86	2.00	1/4	5/16-18	2.62	7.43	5/8	9.74	9.23
4"	RS-FB400	2.30	13/32	3.50	2.38	1/4	3/8-16	3.25	7.43	3/4	10.05	9.39
5"	RS-FB500	3.00	11/16	4.50	2.88	3/16	3/8-16	4.25	5.75	5/8	8.50	7.63
6"	RS-FB600	4.00	13/16	5.50	3.38	3/16	1/2-13	5.00	5.75	7/8	8.50	7.75
8"	RS-FB800	5.00	13/16	7.00	4.44	1/4	5/8-11	6.50	5.88	1	9.50	8.31

NOTES: Foot bracket mounting kits include two brackets and eight stainless steel screws. Can only be applied to MXO mounting styles.

Dimensions (Option KK3) (in)

Bore	MM Rod Diameter	KK3	A (Thread Depth)	C
1-1/2", 2", 2-1/2"	5/8" Standard	7/16-20	3/4	.56
3-1/4", 4"	1" Standard	3/4-16	1-1/8	.64
5"	1" Standard	3/4-16	1-1/8	.50
6", 8"	1-3/8" Standard	1-14	1-5/8	.63



How To Specify

Dimensions (Stainless steel Accessories) (in)

REPAIRABLE STAINLESS CYLINDERS

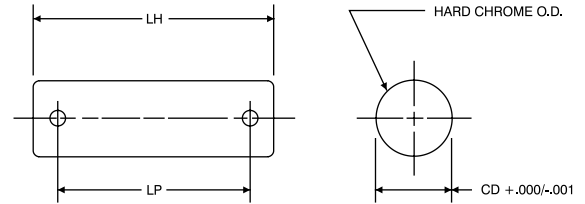
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Clevis Pin

Part No.	CD (+.000/- .001)	LH	LP
RS-CP500	1/2	2-1/4	1-15/16
RS-CP750	3/4	3	2-23/32
RS-CP1000	1	3-1/2	3-7/32
RS-CP1375	1-3/8	5	4-1/4

Clevis Pin sold with (2) S.S. Cotter Pins.

CLEVIS PIN (INCLUDES COTTER PINS)



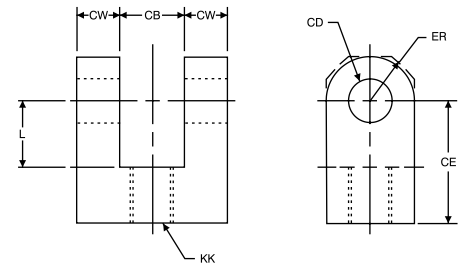
(Clevis Pins sold with (2) S.S. Cotter Pins)

Rod Clevis

Part No.	CB	CD	CE	CW	ER	KK	L
RS-RC437						7/16-20	
RS-RC500	3/4	1/2	1-1/2	1/2	1/2	1/2-20	3/4
RS-RC750	1-1/4	3/4	2-3/8	5/8	3/4	3/4-16	1-1/4
RS-RC1000	1-1/2	1	3-1/8	3/4	1	1-14	1-1/2

Clevis Pins sold separately.

ROD CLEVIS



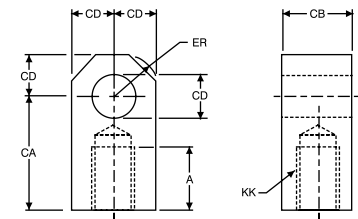
(Clevis Pins sold separately from Rod Clevis)

Rod Eye

Part No.	A	CA	CB	CD	ER	KK
RS-RE437						7/16-20
RS-RE500	3/4	1-1/2	3/4	1/2	5/8	1/2-20
RS-RE750	1-1/8	2-1/16	1-1/4	3/4	7/8	3/4-16
RS-RE1000	1-5/8	2-13/16	1-1/2	1	1-13/16	1-14

Clevis Pins sold separately.

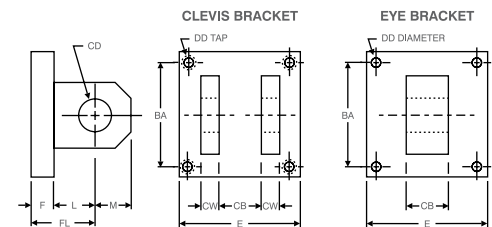
ROD EYE



(Clevis Pins sold separately from Rod Eyes)

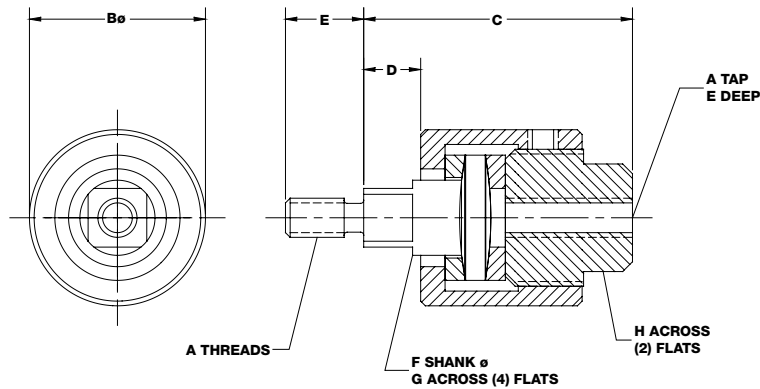
Clevis Brackets and Eye Brackets

Part No.	BA	CB	CD	CW	DD	E	F	FL	L	M
Clevis Brackets										
RS-CB500	1-5/8	3/4	1/2	1/2	3/8-24	2-1/2	3/8	1-1/8	3/4	5/8
RS-CB750	2-9/16	1-1/4	3/4	5/8	1/2-20	3-1/2	5/8	1-7/8	1-1/4	3/4
RS-CB1000	3-1/4	1-1/2	1	3/4	5/8-18	4-1/2	3/4	2-1/4	1-1/2	1
RS-CB1375	3-13/16	2	1-3/8	1	5/8-18	5	7/8	3	2-1/8	1-3/8
Eye Brackets										
RS-EB500	1-5/8	3/4	1/2		13/32	2-1/2	3/8	1-1/8	3/4	1/2
RS-EB750	2-9/16	1-1/4	3/4		17/32	3-1/2	5/8	1-7/8	1-1/4	3/4
RS-EB1000	3-1/4	1-1/2	1	N/A	21/32	4-1/2	3/4	2-1/4	1-1/2	1
RS-EB1375	3-13/16	2	1-3/8		21/32	5	7/8	3	2-1/8	1-3/8



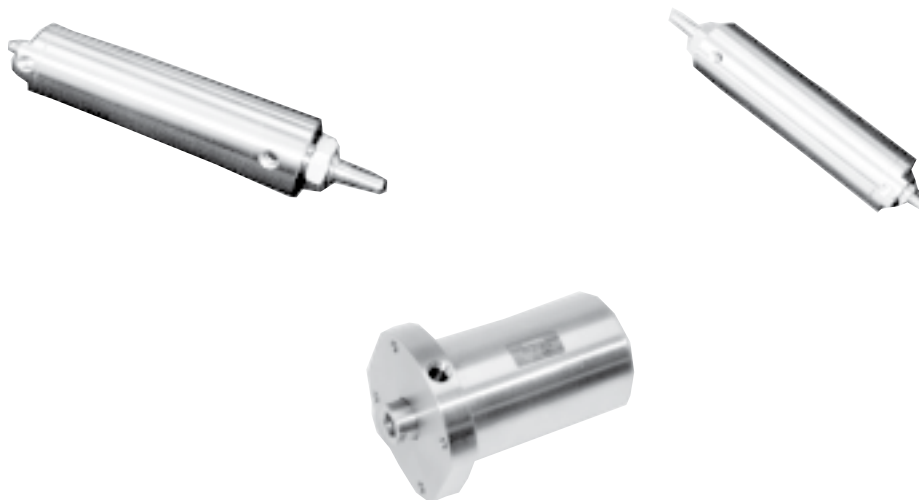
(Clevis Pins sold separately from Clevis & Eye Brackets)

Stainless Steel Alignment Couplers (in)



Part Number	A	B	C	D	E	F	G	H	Maximum Pull at Yield (lbs.)
AC250-SS	1/4-28	1-1/8	1-3/4	3/8	1/2	1/2	3/8	11/16	225
AC312-SS	5/16-24	1-1/8	1-3/4	3/8	1/2	1/2	3/8	11/16	375
AC375-SS	3/8-24	1-1/8	1-3/4	3/8	1/2	1/2	3/8	11/16	575
AC437-SS	7/16-20	1-1/4	2	7/16	3/4	5/8	1/2	13/16	800
AC500-SS	1/2-20	1-1/4	2	7/16	3/4	5/8	1/2	13/16	1100
AC625-SS	5/8-18	1-1/4	2	7/16	3/4	5/8	1/2	13/16	1750
AC750-SS	3/4-16	1-3/4	2-5/16	7/16	1-1/8	31/32	13/16	1-1/8	2600
AC875-SS	7/8-14	1-3/4	2-5/16	7/16	1-1/8	31/32	13/16	1-1/8	3550
AC1000-SS	1-14	2-1/2	2-15/16	7/16	1-5/8	1-11/32	1-5/32	1-5/8	4800
AC1250-SS	1-1/4-12	2-1/2	2-15/16	7/16	1-5/8	1-11/32	1-5/32	1-5/8	7600

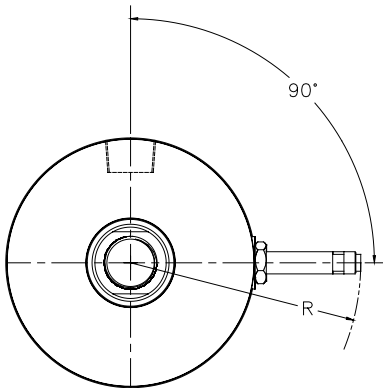
Examples of Specials Capability



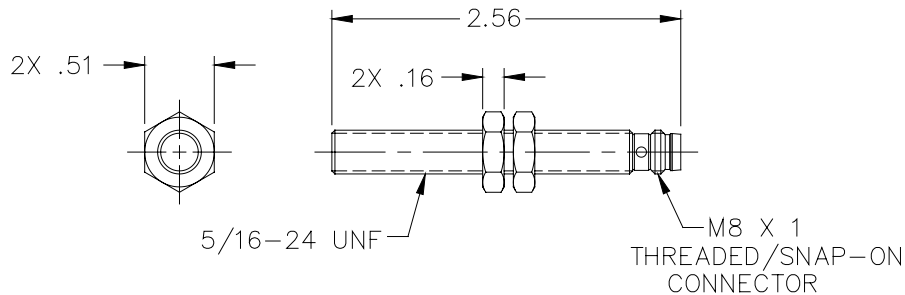
How to Accessorize

Dimensions

Proximity Switch (Option P)



Bore Size	Dimension R
1-1/2"	3.04"
2"	3.04"
2-1/2"	3.04"
3-1/4"	3.19"
4"	3.19"
5"	N/A
6"	N/A
8"	N/A



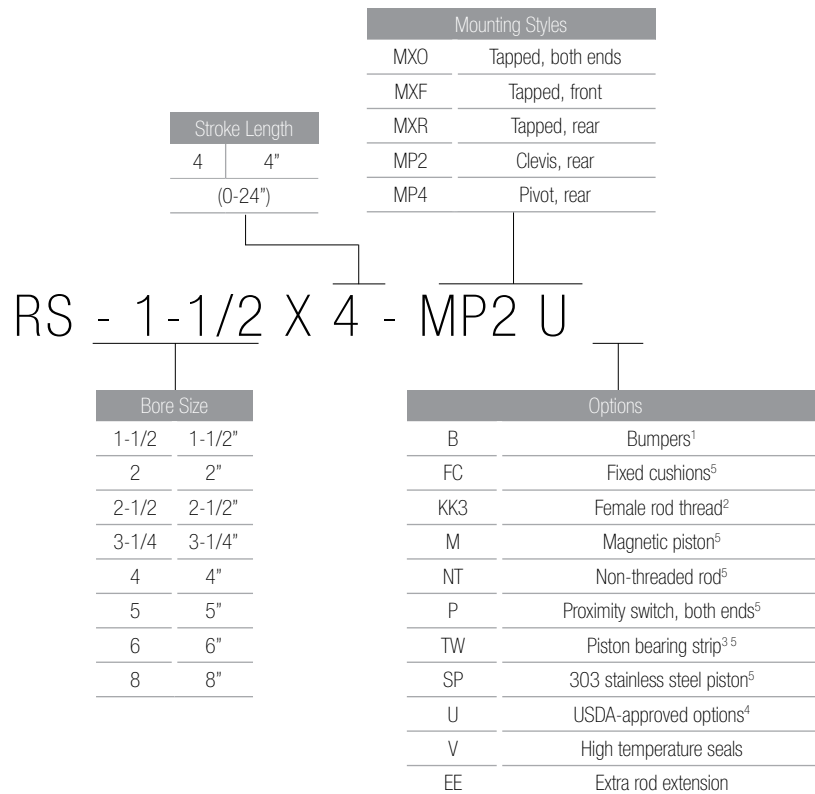
Specifications

Output:	PNP Sourcing Output, normally open
Load Current:	100mA max.
Leakage Current:	10uA max.
Voltage Drop:	2 VDC
Short Circuit and Overload Protection:	yes
Reverse Polarity Protection:	yes
Supply voltage:	10-30 VDC
LED:	yes
Current Consumption:	15mA
Repeatability:	0.010" (.25mm)
Hysteresis:	5%
Response Time:	330uS
Electromagnetic Compatibility Compliance:	NEMA ICS5-1996
Protection Class:	IP67
Ambient Temperature:	-14°F to 158°F (-25°C to 70°C)
Housing Material:	Stainless steel
Sensing Face:	Crastin
Approvals:	UL-General Purpose
	CSA-General Purpose
	FM-Non-incendive

How to Order

The model number of Repairable Stainless pneumatic actuators consists of an alphanumeric cluster designating bore size, stroke length, mounting styles, and other optional components that together make up the complete part number to use in ordering. Use the ordering information below to build a valid part number.

An example of a basic Repairable Stainless unit with 1-1/2" bore, 4" stroke, rear clevis mounting, and additional options is shown below.



¹ Bumper adds 1/4" to overall length in bores 1-1/2" to 4". Bumper adds 1/2" in bores 5" to 8".

² Other rod ends available upon request. See page 6.21.

³ Standard with Stainless Piston Option.

⁴ USDA Approved option includes an external wiper as required by the USDA. The cylinder rod length will automatically increase by the amount required to accommodate the seal retaining bracket. See page 6.20.

⁵ The following options do not affect length: Fixed Cushions (FC), Magnetic Piston (M), Non-threaded Rod (NT), Proximity Switches (P), Piston Bearing Strip (TW), and 303 Stainless Steel Piston (SP).

- Option (B) Bumpers and Option (FC) Cushions are not a valid combination.
- Option (B) Bumpers and Option (P) Proximity Switches are not a valid combination.
- If Option (B) and Option (M) are ordered in combination, the standard Bumper material will be used in bore sizes 5, 6, and 8".
- Option (M) Magnetic Piston and Option (V) High Temperature Seals should be specified for chemical compatibility requirements only. The piston magnet is nitrile based, hence the temperature rating remains at 200 degrees F.
- No Charge: (KK3) Female Rod Threads, (NT) Non-threaded Rod

How to Repair

Repair Parts

No.	Part Description	Quantity by Model Type						
		DW	DWF	DWR	DWC	DWD	DWDF	DWDC
P-1	Rod					1	1	1
P-2	Piston					1	1	1
P-3	Piston Seal	2	2	2	2	2	2	2
P-4	Piston Bearing Ring	1	1	1	1	1	1	1
P-5	Free Thread Nut*					1	1	1
P-6	Free Thread Ring*					4	4	4
P-8	O-Ring (Free Thread)*					1	1	1
P-9	Rod Seal*	1	1	1	1	2	2	2
P-10	Cushion Seal*		1	1	2		1	2
P-11	Cushion Sleeve (Head End)*						1	1
P-12	Cushion Sleeve (Cap End)*							1
P-13	Cushion B/U Washer*		1	1	2		1	2
P-14	Cushion Retaining Ring*		1	1	2		1	2
P-15	Cushion Adjusting Screw		1	1	2		1	2
P-18	O-Ring (Cushion Screws)*		1	1	2		1	2
P-19	Tie-Tube	1	1	1	1	1	1	1
P-20	Stainless Steel Body	1	1	1	1	1	1	1
P-21	Head	1	1	1	1	2	2	2
P-22	Cap	1	1	1	1			
P-23	O-Ring (Stainless Steel Body)	2	2	2	2	2	2	2
P-24	Wave Spring	1	1	1	1	2	2	2
P-25	Retaining Ring (Tie-Tube)	2	2	2	2	2	2	2
P-26	Rod Wiper (w/o Bushing)*	1	1	1	1	2	2	2
P-27	Rod Wiper Bushing Assembly*	1	1	1	1	2	2	2
P-28	Spacer	1	1	1	1	2	2	2
P-29	Retaining Plate	1	1	1	1	2	2	2
P-30	Screw (Ret. Plate)	4	4	4	4	8	8	8
P-43	Cushion Sleeve		1	1	2			
P-58	Piston/Rod Assembly	1	1	1	1			
HT-99-7CC	Lubrication	1	1	1	1	1	1	1
Mag-G-3CC	Polymer Grease Lubricant	1	1	1	1	1	1	1

* Parts and kits that are common to multiple bore sizes, which are available in two sizes: 1-1/2", 2", 2-1/2" bores are designated as -S. 3-1/4", 4" bores are designated as -L.

Repair Kits

Basic Repair Kit (K-B-_) Includes:		
P-25	Retaining Ring (Tie-Tube)	2
P-23	O-ring	2
P-24	Wave Spring	1
P-3	Piston Seal	2
P-4	Piston Bearing Ring	1
DWD Basic Repair Kit (K-D-_) Includes:		
P-25	Retaining Ring (Tie-Tube)	2
P-23	O-ring	2
P-24	Wave Spring	2
P-3	Piston Seal	2
P-4	Piston Bearing Ring	1

Cushion Repair Kit (K-C-_) Includes:		
P-10	Cushion Seal	1
P-13	Cushion B/U Washer	1
P-14	Cushion Retaining Ring	1
P-15	Cushion Adjusting Screw	1
P-18	O-Ring (Cushion Screws)	1
Rod Seal Repair Kit (K-A-_) Includes:		
P-27	Rod Wiper Bushing Assembly	1
P-9	Rod Seal	1
MRS Piston Repair Kit (K-P-M-_) Includes:		
P-33	Piston Seal Assembly	1
P-34	Magnet	1
P-4	Piston Bearing Ring	1