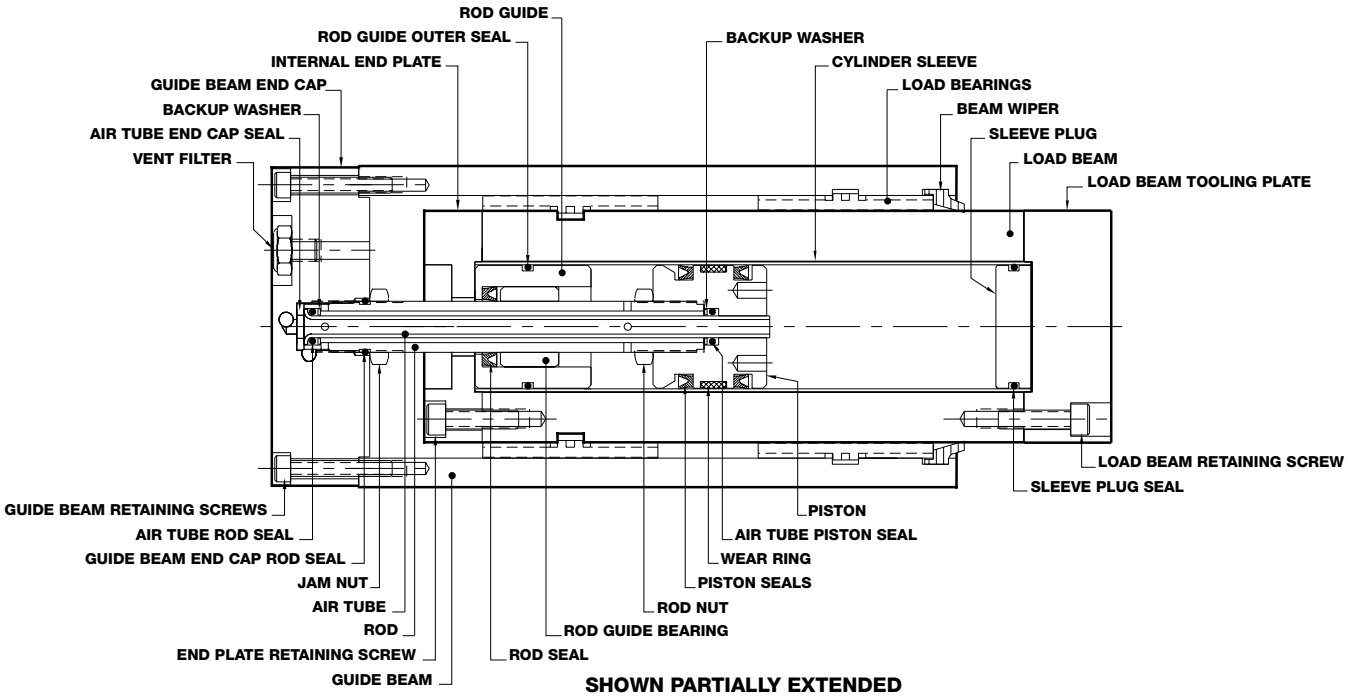
Double-Wall® Cylinders

Bimba Double-Wall® cylinders convert into six NFPA mounting styles and utilize easy to assemble “bolt on” mounting kits. An epoxy coated aluminum tie-tube outer shell protects the inner 304 stainless steel body tube from harsh environments. This design allows these cylinders to withstand dents and dings that would normally cause single wall cylinders to fail.

Contents



SHOWN PARTIALLY EXTENDED

FEATURES AND BENEFITS

- Carries high moment loads
- Compact design
- Long life
- Available in U.S. customary units (inches) or metric
- Non-lube bearings
- Built-in track for position sensing switches
- Corrosion-resistant, hard coat anodized aluminum load and guide beams with PTFE impregnation
- Guide beam end cap ports transmit air or vacuum through the actuator from the guide beam end cap to connect additional automation devices such as grippers.
- Standard vacuum port for clean room applications
- Standard side or end ports
- Base, front or rear flange mounting

OPTIONS

- Internal or external bumpers
- External shock absorbers for retract and extend strokes
- Internal stroke adjustment – full stroke, retract and extend (1-1/16” and 2” bores only)
- Magnetic Position Sensing
- Auxiliary ports to transmit air or vacuum through the actuator to operate automation devices.

How it Works

Piston Rod Diameter – 5/8" and 1" diameter rods are standard. These rods are made of high strength steel and are suitable for most applications. On long stroke, high thrust applications caution should be exercised and the column strength and stop length chart on page X.XX should be reviewed.

Material – Hard chrome plated rods are supplied as standard on all modelsw except 1-1/2" MRS, which are 303 stainless steel. Special materials such as 303 stainless steel are available on request.

Rod End Options – Bimba offers six popular NFPA rod end styles (see page X.XX). Bimba considers the one-piece male style #2, as the primary standard rod end. A small male rod stud, style #2S, is also offered as a standard option. The stud is made from 125,000 PSI minimum yield steel and is roll threaded for increased strength. Special rod ends with different thread lengths, pitch and class are available upon request.

Cushions – The Double-Wall® offers exclusive Stainless-Cushions®, type 304 stainless steel sleeves which enhance cushion performance and life. The cushion seal is contained on the piston rod for easy inspection and replacement when necessary. Air cushions may be specified on either or both ends without changing the cylinder's overall length.

The cushion design allows for a flush mounted adjustment screw even in the fully open setting. Unless otherwise specified, cushioned models are shipped with the adjustment screws located in positions 4 and 8 as shown on the cylinder dimensional drawings.

Adjustment screws may be ordered in other than standard positions at no additional charge. Simply add these designations as the last digits of the model number:

A2 – Head Adjustment Screw – Position 2

A3 – Head Adjustment Screw – Position 3

A6 – Cap Adjustment Screw – Position 6

A7 – Cap Adjustment Screw – Position 7

A26 – Adjustment Screws – Positions 2 and 6

A37 – Adjustment Screws – Positions 3 and 7

Mountings – Double-Wall cylinders utilize easy to assemble "bolt on" mounting kits. Basic cylinders (less mountings) and mounting kits are ordered and shipped as separate items. All necessary hardware is contained in the kit. The clevis mounting kit for example contains the clevis cap, pivot pin, retaining rings, and mounting cap screws.

The clevis and pivot caps are high strength aluminum die castings and have oil-filled bronze bushings. Side and end lug kits contain brackets which are stamped from high strength steel. Flange kits are offered in both steel and aluminum. All mountings are epoxy coated.

"Bolt on" Double-Wall mounting kits give your local BIMBA Distributor inventory versatility allowing him to stock Basic cylinders of various popular strokes and bores without committing them exclusively to one mounting style. This means greater "off the shelf" availability for you.

Delivery – Ordering standard cylinders with the primary standard style #2 rod end will allow you to take advantage of a substantial local Distributor stock of Double-Wall cylinders. A very large stock of cushioned (both ends) and non-cushioned finished cylinders is always maintained at our Monee, Illinois plant. In addition we maintain a vast inventory of finished heads, caps, rods, etc. for quick assembly of your optional feature or non-standard stroke requirement.

Specials – Bimba Manufacturing welcomes the opportunity to custom design a cylinder to meet your exact specifications and requirements. As a leading manufacturer of custom special cylinders, we can provide the engineering expertise to help you with whatever design problem you face. We also maintain a specials department within our manufacturing facilities to assure you of the most expedient delivery possible. Please contact your local Bimba Distributor or Customer Service Department with details of your special requirement.

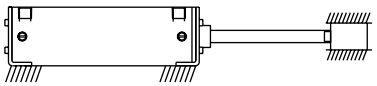
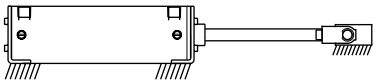
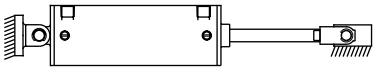
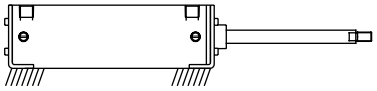
MATERIALS OF CONSTRUCTION

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:	-20º to 200º F standard; 0º to 300º 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)

How To Specify

DOUBLE-WALL® LONG STROKE CYLINDER SELECTION

Application of Long Stroke Cylinders are controlled by two factors: column strength of piston rod and mounting configuration. Dual Piston construction provides needed additional bearing surface through the cycle of the cylinder. Dual Pistons consist of mounting two pistons on the rod, separated a calculated distance to provide the required stop length. Available in one inch increments, required stop lengths are determined from mounting class and stroke information.

DETERMINING MOUNTING CLASS		MOUNTING STYLE	ROD END CONNECTION
Class 1		Side Lug End Lug Flange	Rigidly guided, pivoted
Class 2		Side Lug End Lug Flange	Pivoted, supported but not rigidly guided
Class 3		Pivot Clevis	Pivoted, supported
Class 4		Side Lug End Lug Flange	Free end unguided and unsupported

Dual Piston Stop Length Calculation

Select mounting class. Move over to the column showing a stroke length equal to or less than required. Figure at top of column is required Dual Piston stop length. Examples: Class 2, 62" stroke length = 2" stop length. Class 3, 62" - 5" stop length. All lengths shown here are in inches.

MOUNTING CLASS	DUAL PISTON – STOP LENGTH REQUIRED											
	1	2	3	4	5	6	7	8	9	10	11	12
1	64	88	1.10	130								
2	46	62	78	93	108	122	136					
3	25	34	43	51	59	67	74	81	88	95	101	108
4	16	22	28	28	40	46	51	56	61	66	70	74

Net (effective) stroke + stop length = Gross stroke of cylinder. Mounting dimensions are determined from gross stroke. Consult your local distributor for Dual Piston Pricing.

Column Strength Limitations

Select mounting class, rod diameter, and stroke length in inches: read maximum push force in pounds for that combination. Where no value is shown, the rod is safe for the maximum rated cylinder push force.

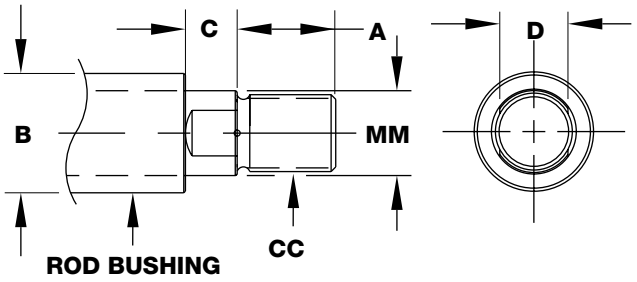
ROD DIAMETER/ INCHES STROKE	CLASS 1		CLASS 2		CLASS 3		CLASS 4	
	5/8"	1"	5/8"	1"	5/8"	1"	5/8"	1"
10							820	
15					820		360	2390
20					460		200	1340
25					290	1940	130	860
30			820		200	1340	90	600
40	820		460		110	750	50	330
50	540		290	1940	70	480	30	210
60	360	2390	200	1340	50	330	20	150

Weights

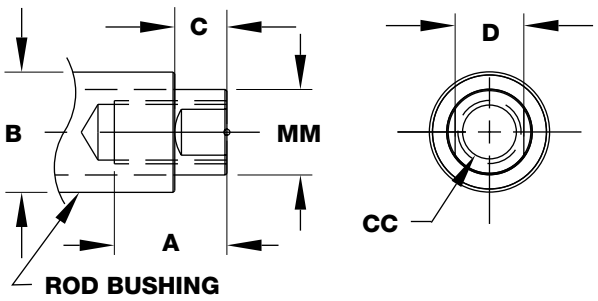
APPROXIMATE WEIGHTS (LBS)		
BORE	BASE WEIGHT	ADDER PER INCH OF STROKE
1-1/2" (17)	1.36	0.19
2" (31)	1.81	0.22
2-1/2" (50)	2.9	0.31
3-1/4" (83)	5.62	0.51
4" (125)	7.5	0.57

DIMENSIONS

Rod Thread – 2, 2S, 1, 4C, 5C



Rod Thread – 4



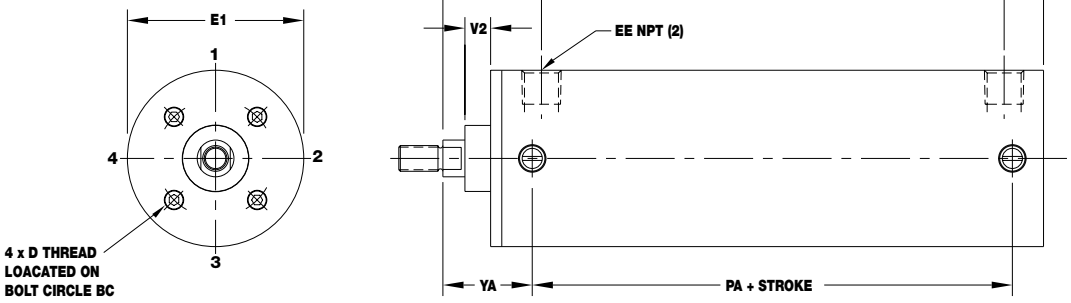
Rod End (1-1/2", 2" and 2-1/2" Bores)

ROD END STYLE	A	B	C	CC	D	MM
2	.75	1.12	.38	7/16-20 UNF	.5	.62
2S	.75	1.12	.38	7/16-20 UNF	.5	.62
1	.75	1.12	.38	1/2-20 UNF	.5	.62
4 (tapped)	.75	1.12	.38	7/16-20 UNF	.5	.62
4C	1.25	1.00	.19	1/2-13 UNC	.5	.62
5C	1.25	1.00	.19	5/8-11 UNC	.5	.62

Rod End (3-1/4", 4" Bores)

ROD END STYLE	A	B	C	CC	D	MM
2	1.12	1.5	.5	3/4-16 UNF	.88	1.00
2S	1.12	1.5	.5	3/4-16 UNF	.88	1.00
1	1.12	1.5	.5	7/8-14 UNF	.88	1.00
4 (tapped)	1.12	1.5	.5	3/4-16 UNF	.88	1.00

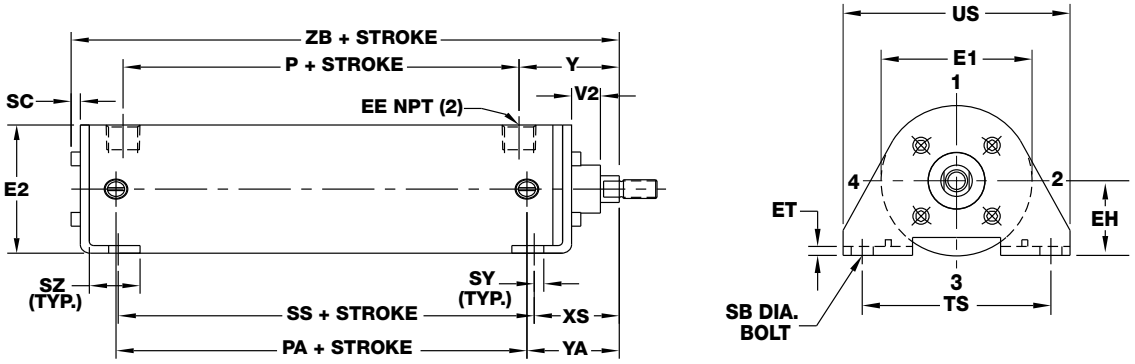
Double-Wall (no mounting)



BORE	LB	P	Y	V2	EE	YA	PA	E1	D	D DEPTH	BC
1-1/2"	4.62	2.28	1.67	.44	3/8 NPT	1.52	2.58	2.00	#6-32	0.51	1.48
2"	4.62	2.28	1.67	.44	3/8 NPT	1.52	2.58	2.34	#8-32	0.66	1.75
2-1/2"	4.75	2.41	1.67	.44	3/8 NPT	1.52	2.70	2.94	#10-24	0.69	2.00
3-1/4"	5.63	2.62	2.19	.74	1/2 NPT	2.00	3.00	3.69	5/16-18	0.75	2.83
4"	5.63	2.62	2.19	.74	1/2 NPT	2.00	3.00	4.44	5/16-18	0.75	2.83

DIMENSIONS

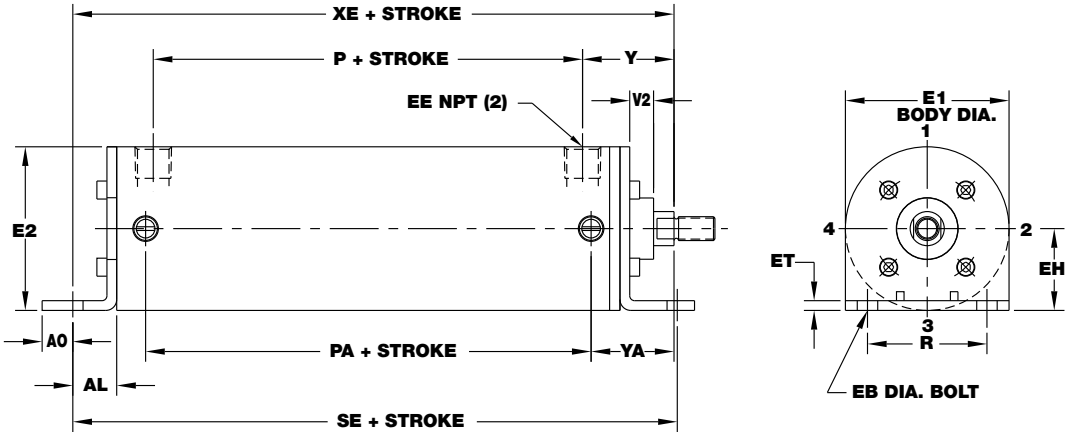
Side Lug Mount (NFPA MS-2) (in)



BORE	KIT	ZB	P	SS	PA	V2	Y	EE	SY	XS	YA
1-1/2"	MSL-17	4.90	2.28	2.87	2.58	.31	1.67	3/8 NPT	0.19	1.38	1.52
2"	MSL-31	4.92	2.28	2.87	2.58	.31	1.67	3/8 NPT	0.19	1.38	1.52
2-1/2"	MSL-50	5.12	2.41	3.00	2.70	.26	1.67	3/8 NPT	0.19	1.38	1.52
3-1/4"	MSL-83	6.11	2.62	3.25	3.00	.49	2.19	1/2 NPT	0.16	1.88	2.00
4"	MSL-125	6.17	2.62	3.25	3.00	.43	2.19	1/2 NPT	0.16	1.88	2.00

BORE	KIT	SC	E2	SZ	US	E1	EH	ET	TS	SB
1-1/2"	MSL-17	.14	2.00	1.00	3.51	2.00	1.00	.13	2.75	.38
2"	MSL-31	.16	2.34	1.00	4.01	2.34	1.25	.13	3.25	.38
2-1/2"	MSL-50	.19	3.00	1.00	4.51	2.94	1.49	.18	3.75	.38
3-1/4"	MSL-83	.23	3.75	1.25	5.76	3.69	1.87	.25	4.75	.50
4"	MSL-125	.23	4.50	1.25	6.51	4.44	2.24	.31	5.50	.50

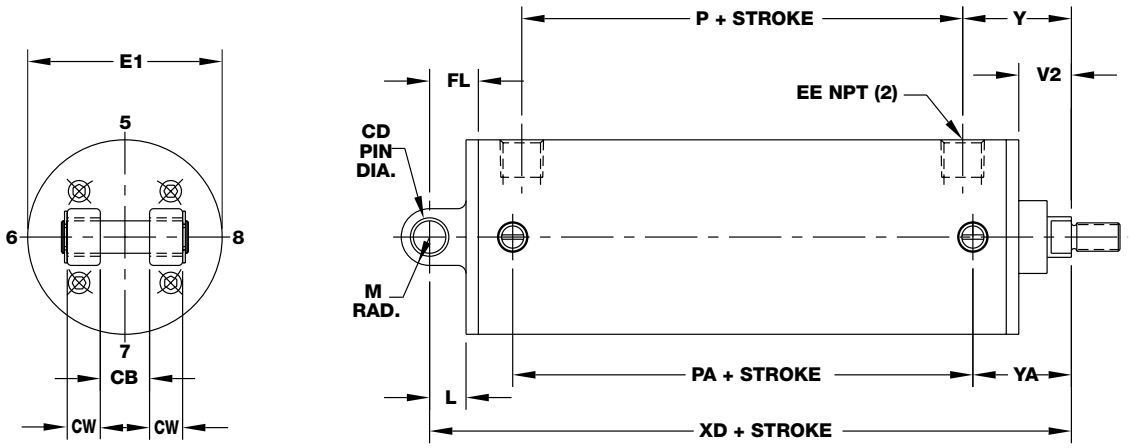
End Lug Mount (NFPA MS-7) (in)



BORE	KIT	XE	P	PA	SE	V2	Y	EE	YA	AO	AL	E2	E1	EH	ET	EB	R
1-1/2"	MEL-17	5.38	2.28	2.58	5.12	.31	1.67	3/8 NPT	1.52	.26	.75	2.00	2.00	1.00	.13	.25	1.43
2"	MEL-31	5.56	2.28	2.58	5.50	.31	1.67	3/8 NPT	1.52	.32	.94	2.34	2.34	1.25	.13	.31	1.84
2-1/2"	MEL-50	5.81	2.41	2.70	5.88	.26	1.67	3/8 NPT	1.52	.30	1.07	3.00	2.94	1.49	.18	.31	2.19
3-1/4"	MEL-83	6.50	2.62	3.00	6.00	.49	2.19	1/2 NPT	2.00	.38	1.18	3.75	3.69	1.87	.25	.38	2.76
4"	MEL-125	6.63	2.62	3.00	6.25	.43	2.19	1/2 NPT	2.00	.37	1.32	4.50	4.44	2.24	.31	.38	3.32

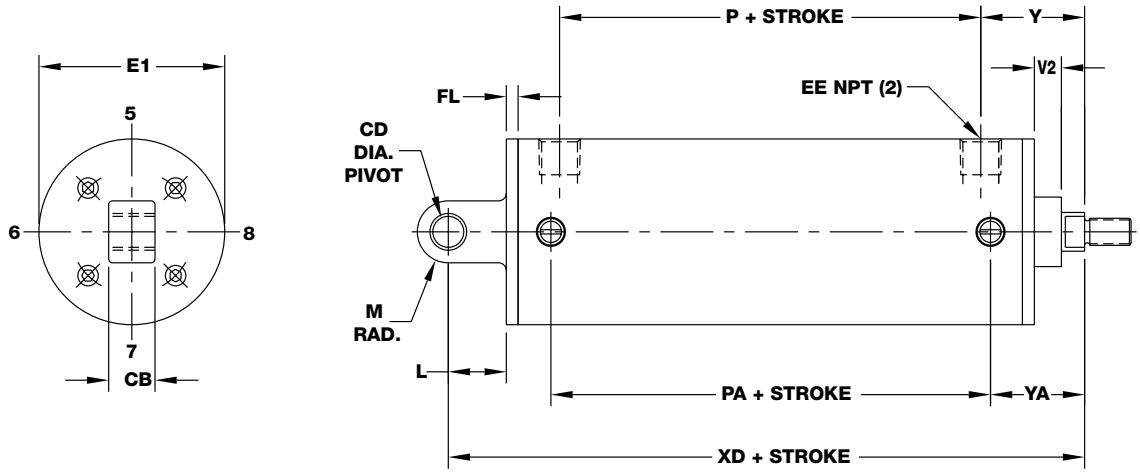
DIMENSIONS

Clevis Mount (NFPA MP-1) (in)



BORE	KIT	P	PA	XD	Y	V2	EE	YA	FL	CD	M	L	E1	CB	CW
1-1/2"	MC-17	2.28	2.58	5.38	1.67	.82	3/8 NPT	1.52	.75	.50	.44	.56	2.00	.76	.51
2"	MC-31	2.28	2.58	5.38	1.67	.82	3/8 NPT	1.52	.75	.50	.44	.56	2.34	.76	.51
2-1/2"	MC-50	2.41	2.70	5.50	1.67	.82	3/8 NPT	1.52	.75	.50	.50	.56	2.94	.76	.51
3-1/4"	MC-83	2.62	3.00	6.88	2.19	1.24	1/2 NPT	2.00	1.26	.75	.69	.88	3.69	1.26	.62
4"	MC-125	2.62	3.00	6.88	2.19	1.24	1/2 NPT	2.00	1.26	.75	.69	.88	4.44	1.26	.62

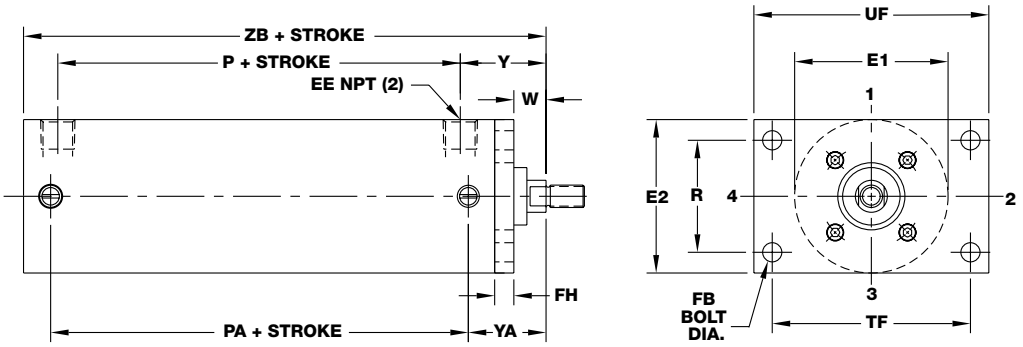
Pivot Mount (NFPA MP-4) (in)



BORE	KIT	P	PA	XD	Y	V2	EE	YA	FL	CD	M	L	E1	CB
1-1/2"	MP-17	2.28	2.58	5.75	1.67	.44	3/8 NPT	1.52	.19	.50	.50	.93	2.00	.75
2"	MP-31	2.28	2.58	5.75	1.67	.44	3/8 NPT	1.52	.19	.50	.50	.93	2.34	.75
2-1/2"	MP-50	2.41	2.70	5.87	1.67	.44	3/8 NPT	1.52	.19	.50	.50	.93	2.94	.75
3-1/4"	MP-83	2.62	3.00	7.50	2.19	.74	1/2 NPT	2.00	.50	.75	.69	1.38	3.69	1.25
4"	MP-125	2.62	3.00	7.50	2.19	.74	1/2 NPT	2.00	.50	.75	.69	1.38	4.44	1.25

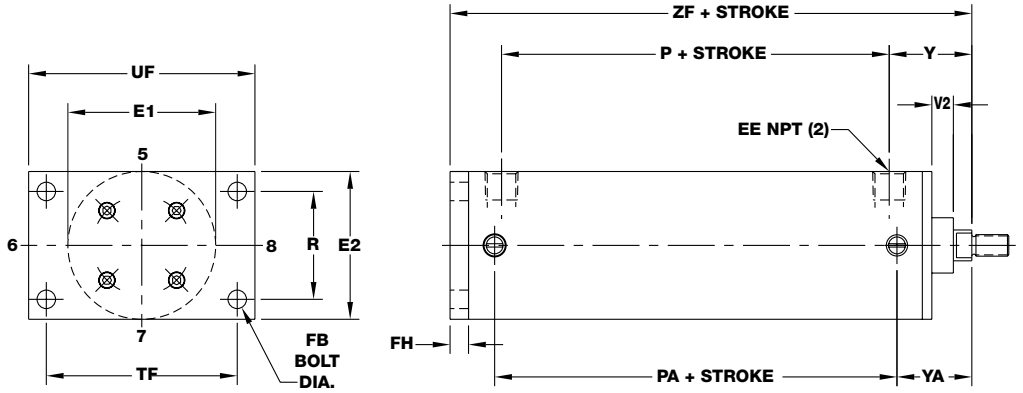
DIMENSIONS

Front Flange Mount (NFPA MF-1) (in)



BORE	KIT	ZB	P	PA	Y	W	EE	YA	FH	UF	E1	E2	R	TF	FB
1-1/2"	MFFA-17 MFFS-17	4.62	2.28	2.58	1.67	.63	3/8 NPT	1.52	.38	3.38	2.00	2.00	1.43	2.75	.25
2"	MFFA-31 MFFS-31	4.62	2.28	2.58	1.67	.63	3/8 NPT	1.52	.38	4.12	2.34	2.50	1.84	3.38	.31
2-1/2"	MFFA-50 MFFS-50	4.75	2.41	2.70	1.67	.63	3/8 NPT	1.52	.38	4.62	2.94	3.00	2.19	3.88	.31
3-1/4"	MFFA-83 MFFS-83	5.63	2.62	3.00	2.19	.75	1/2 NPT	2.00	.62	5.50	3.69	3.75	2.76	4.69	.38
4"	MFFA-125 MFFS-125	5.63	2.62	3.00	2.19	.75	1/2 NPT	2.00	.62	6.25	4.44	4.50	3.32	5.44	.38

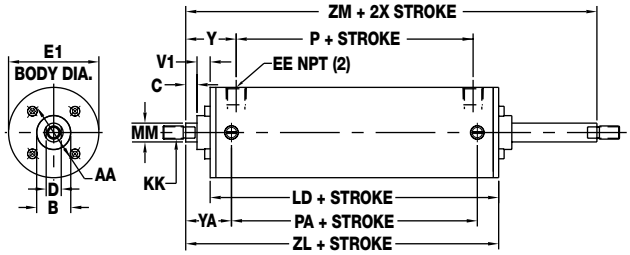
Rear Flange Mount (NFPA MF-2) (in)



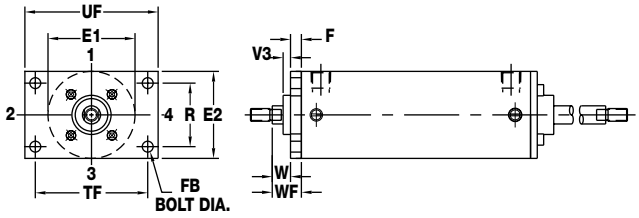
BORE	KIT	ZF	P	PA	Y	V2	EE	YA	FH	UF	E1	E2	R	TF	FB
1-1/2"	MFRA-17 MFRS-17	5.00	2.28	2.58	1.67	.44	3/8 NPT	1.52	.38	3.38	2.00	2.00	1.43	2.75	.25
2"	MFRA-31 MFRS-31	5.00	2.28	2.58	1.67	.44	3/8 NPT	1.52	.38	4.12	2.34	2.50	1.84	3.38	.31
2-1/2"	MFRA-50 MFRS-50	5.12	2.41	2.70	1.67	.44	3/8 NPT	1.52	.38	4.62	2.94	3.00	2.19	3.88	.31
3-1/4"	MFRA-83 MFRS-83	6.25	2.62	3.00	2.19	.74	1/2 NPT	2.00	.62	5.50	3.69	3.75	2.76	4.69	.38
4"	MFRA-125 MFRS-125	6.25	2.62	3.00	2.19	.74	1/2 NPT	2.00	.62	6.25	4.44	4.50	3.32	5.44	.38

DIMENSIONS (DOUBLE END ROD MODELS)

Basic Double-End Rod Cylinder

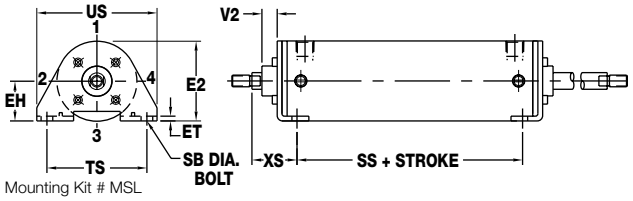


Flange Mount (NFPA MF-1)



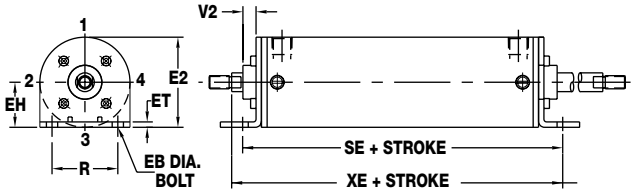
Mounting Kit # MFF

Side Lug Mount (NFPA MS-2)



Mounting Kit # MSL

End Lug Mounts (NFPA MS-7)



Mounting Kit # MEL

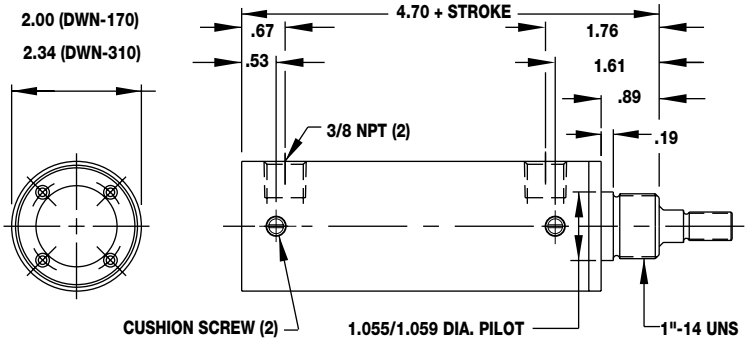
BORE	AA	B	C	D	EB	EE	EH	ET	E1	E2	F	FB	KK	LD	MM	P	PA	R
1-1/2"	1.48	1.124	.38	.56	.25	3/8	1.00	.13	2.00	2.00	.38	.25	7/16-20	4.16	.62	2.44	2.74	1.43
2"	1.75	1.124	.38	.56	.31	3/8	1.25	.13	2.34	2.50	.38	.31	7/16-20	4.16	.62	2.44	2.74	1.84
2-1/2"	2.00	1.124	.38	.56	.31	3/8	1.49	.18	2.94	3.00	.38	.31	7/16-20	4.16	.62	2.44	2.74	2.19
3-1/4"	2.83	1.499	.50	.88	.38	1/2	1.87	.25	3.69	3.75	.62	.38	3/4-16	4.64	1.00	2.75	3.12	2.76
4"	2.83	1.499	.50	.88	.38	1/2	2.24	.31	4.44	4.50	.62	.38	3/4-16	4.64	1.00	2.75	3.12	3.32

BORE	SB	SE	SS	TF	TS	UF	US	V1	V2	V3	W	WF	XE	XS	Y	YA	ZL	ZM
1-1/2"	.38	5.46	3.22	2.75	2.75	3.38	3.51	.44	.31	.25	.62	1.00	5.72	1.38	1.67	1.52	4.96	5.77
2"	.38	5.84	3.22	3.38	3.25	4.12	4.01	.44	.31	.25	.62	1.00	5.90	1.38	1.67	1.52	4.96	5.77
2-1/2"	.38	6.10	3.22	3.88	3.75	4.62	4.51	.44	.26	.25	.62	1.00	6.03	1.38	1.67	1.52	4.96	5.77
3-1/4"	.50	6.26	3.51	4.69	4.75	5.50	5.76	.74	.49	.25	.75	1.37	6.76	1.88	2.19	2.00	5.89	7.13
4"	.50	6.51	3.51	5.44	5.50	6.25	6.51	.74	.43	.25	.75	1.37	6.89	1.88	2.19	2.00	5.89	7.13

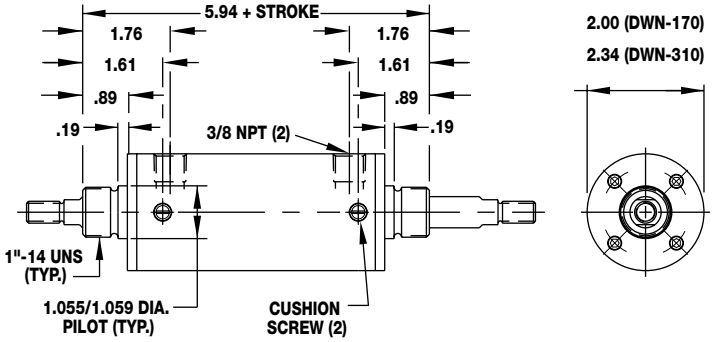
NOTE: When ordering Cushions Both Ends specify DWDC – One End DWDS, see page X.X. EE will provide extra extension on both ends.

DOUBLE-WALL® FRONT NOSE MOUNTING (IN)

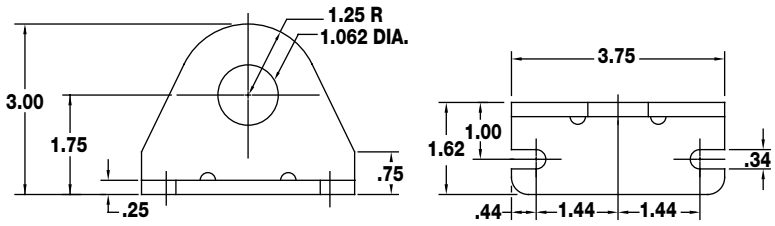
Single End Rod



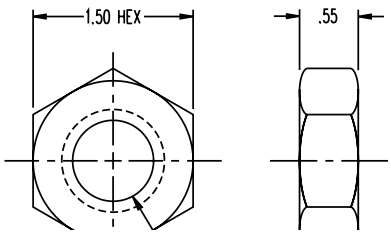
Double End Rod



Foot Bracket (D-17920) Accessory for Nose Mount



Mounting Nut (D-1331)

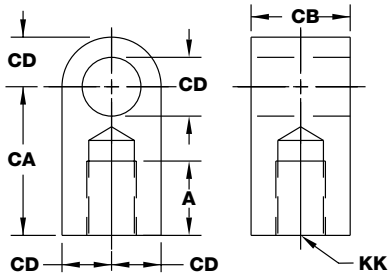


ACCESSORIES

Rod Eye

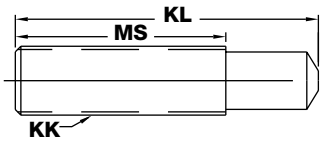
BORE	PART #
1-1/2 - 2-1/2	ARE-1
3-1/4 - 4	ARE-2

(For -2 Rod End style only)



Rod Stud (Rolled Threads)

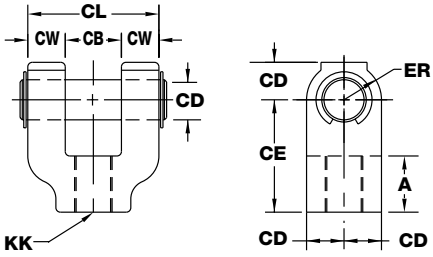
BORE	PART #
1-1/2 - 2-1/2	ARS-1
3-1/4 - 4	ARS-2



Rod Clevis

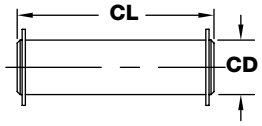
BORE	PART #
1-1/2 - 2-1/2	ARC-1
3-1/4 - 4	ARC-2

Nickel Steel includes Case Hardened Pin (For -2 Rod End style only)



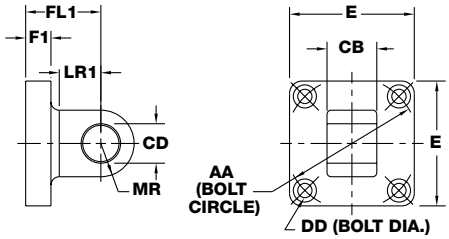
Case Hardened Pivot Pin with Rings

BORE	PART #
1-1/2 - 2-1/2	APP-1
3-1/4 - 4	APP-2



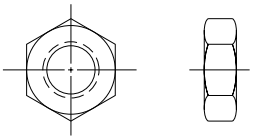
Pivot Bracket

BORE	PART #
1-1/2 - 2-1/2	APB-1
3-1/4 - 4	APB-2



Hex Nut (in)

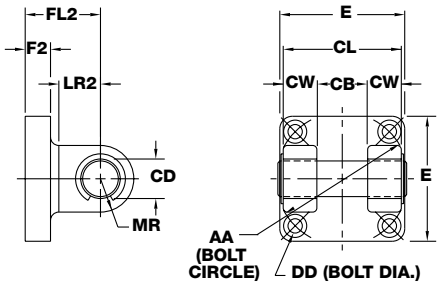
PART	HEX	THD	THK
D-154	0.69	7/16"-20	0.25
D-98	0.75	1/2"-20	0.31
D-3556	1.12	3/4"-16	0.42
D-2545	1.31	7/8"-14	0.48



Clevis Bracket

BORE	PART #
1-1/2 - 2-1/2	ACB-1
3-1/4 - 4	ACB-2

(Includes Case Hardened Pin)



Accessories Dimensions (in)

BORE	A	AA	CA	CB	CD	CE	CW	CL	DD		
1-1/2", 2", 2-1/2"	0.75	2	1.5	0.75	0.5	1.5	0.5	1.75	0.19		
3-1/4", 4"	1.12	2.83	2.06	1.25	0.75	2.38	0.62	2.5	0.312		
BORE	**E**	**ER**	**F1**	**F2**	**FL1**	**FL2**	**KK**	**KL**	**LR1**	**LR2**	**MR**
1-1/2", 2", 2-1/2"	1.88	0.59	0.38	0.38	1.12	1.12	7/16" -20	2.12	0.745	0.745	0.5
3-1/4", 4"	2.75	0.84	0.5	0.38	1.88	1.25	3/4" - 16	3.27	1.1	0.85	0.69

How to Order

The model number of Double-Wall® pneumatic actuators consists of an alphanumeric cluster designating product type, bore size, stroke length, and other optional components that together make up the complete part number to use in ordering. Options are written with rod end options first, followed by special options, and extra extensions last. Mounting kits must be ordered as a separate item, and are shown with their respective bore sizes starting on page X.XX. Use the ordering information below to build a valid part number.

An example of a basic Double-Wall® unit with 1-1/2” bore, 10” stroke, and additional options is shown below.

ROD END STYLE*	
1	Large male, one piece
2	Small male, one piece
2S	Small male stud (rolled threads)
4	Female threads
4C	Small male, one piece, coarse thread (1-1/2”, 2”, and 2-1/2” bores only)
5C	Large male, one piece coarse thread (1-1/2”, 2”, and 2-1/2” bores only)
NT	No threads

* See page X.XX for dimensions.

BORE SIZE	
17	1-1/2”
31	2”
50	2-1/2”
83	3-1/4”
125	4”

DWC - 17 10 - 2 V

MODEL	
DW	Double acting
DWC	Double acting, cushions on both ends
DWF	Double acting, front head cushion
DWR	Double acting, rear cushion
DWD	Double acting, double rod end
DWDC	Double acting, double rod end, cushions both ends
DWDS	Double acting, double rod end, cushion one end
DWM (C, F, R)	Double acting, magnetic position sensing (cushion optional)
DWDM (C, F, R)	Double rod end, magnetic position sensing (cushion optional)
DW(M)N (C, F, R)	Nose mount, 1-1/2” and 2” bores only (cushion mount optional)
DWD(M)N (C, F, R)	Nose mount, double rod end, 1-1/2” and 2” bores only (cushion and magnet optional)

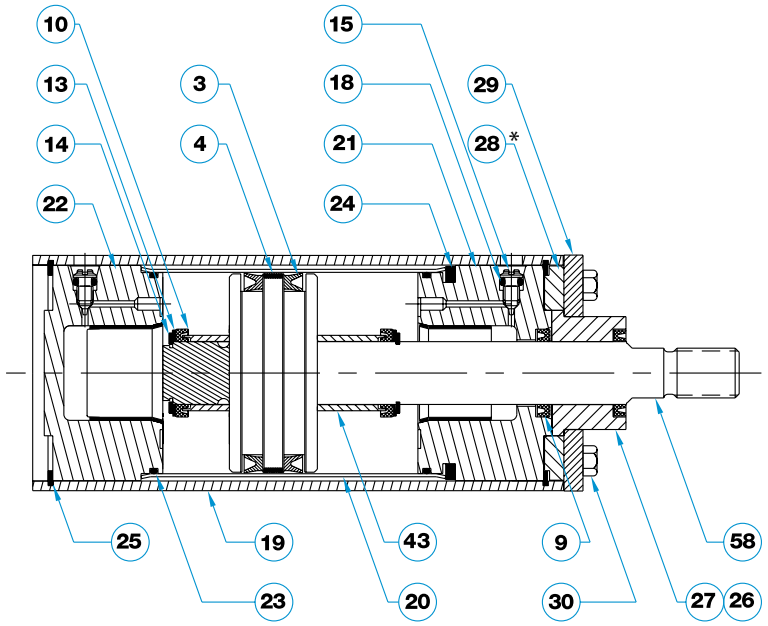
STROKE LENGTH	
0.5	1/2”
1	1”
2	2”
2.5	2-1/2”
etc.	

OPTIONS	
99	HT-99 oil pre-lube
DPX.XX	Dual piston[1]
V	High temperature seals (300° F maximum)
EEX.XX	Extra rod extension[2]
AXX	Alternate cushion screw locations[3]
SR	Stainless steel rod

1 See page X.XX for details.
2 Add to end of model number.
3 Locations available: 2 and 3 for head end, 6 and 7 for cap end. See dimensional drawing of cylinder for port locations.

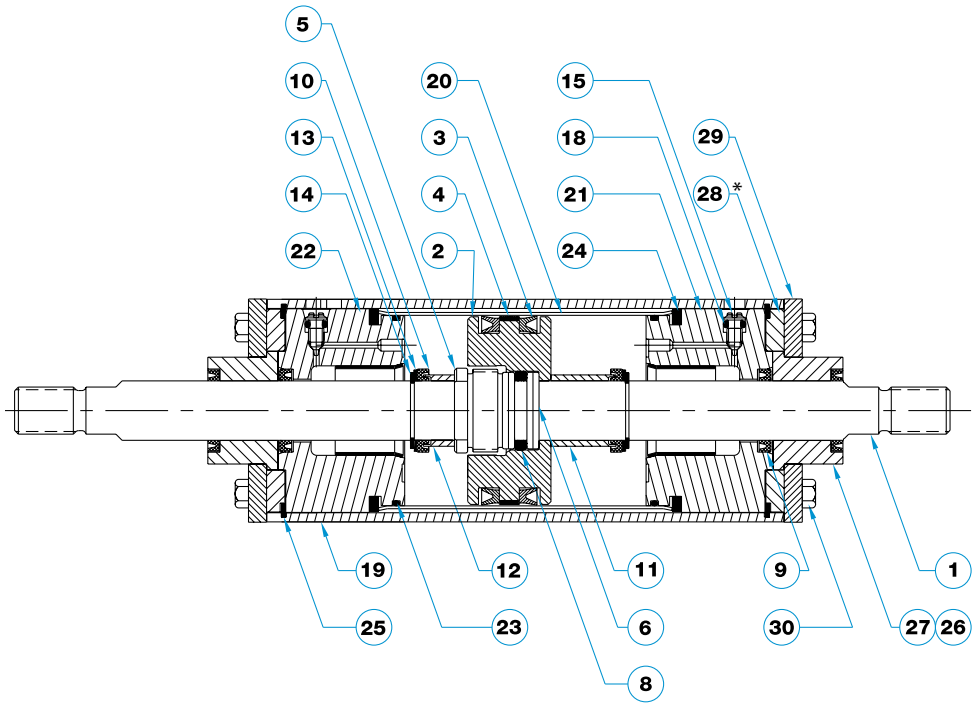
REPAIR INSTRUCTIONS

Basic DW Series



* Used in most mounting kits and on all 3¼" and 4" bore basic cylinders.

Basic DWD Series



* Used on all 3-1/4" and 4" bore basic cylinders.

Individual Repair Parts and Kits are listed on page 6.14. When ordering, indicate the quantity desired, the part number or kit designation, and the cylinder model number on which the part is to be used. For example, a Cushion Adjusting Screw for a 1-1/2" bore, 10" stroke, Double-Wall cylinder, Cushioned Both Ends, and a Small Male One Piece Rod End, would be ordered as follows:

	QUANTITY	PART OR KIT NUMBER	MODEL NUMBER
	1	P-15	DWC-1710-2
A Basic Repair Kit for the same cylinder would be:	1	K-B	DWC-1710-2

See page X.XX for Repair Parts.

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

SWITCHES

Switches add versatility to your electric motion application. They can be used to provide end of stroke limits, count strokes, or communicate positioning to an outside source. Switches can provide safety to applications as well, preventing undesirable situations like runaways to prevent damage.

To learn more about Bimba's available switch selection, refer to the Switches section in this catalog.

AIR/PURGE PORTS

Air and purge ports are essential for actuators that operate in dirty applications. In both belt- and screw-driven actuators, ports keep dust and grime from egressing, protecting the internals of the actuator. Air and purge ports are recommended for use with Bimba's air preparation products.

When using purge ports, supply dry filtered air to the actuators in order to achieve optimal protection.

PROTECTION

Bimba offers several protection options for our actuators. Our primary options are Armoloy® and stainless steel. Armoloy® offers additional protection against moisture and dirt. It is used to coat the steel linear rail and bearings in a Bimba actuator. Armoloy® coating can also be applied to the aluminum extrusion upon request. Stainless steel works in conjunction with Armoloy® coatings, providing additional protection to the end caps and carriage.

Additional coatings are available upon request.

MOTOR MOUNTING

Motor mounts allow you to mount any motor to any actuator (within the actuator's rating). They give end users the ability to use Bimba electric actuators with the motor of their choosing. Careful considerations regarding torque limitations must be made when mounting a motor the actuator is not rated for.

To request custom motor mounting options, please supply Bimba with the following information: shaft diameter, shaft length, pilot diameter, pilot depth, bolt circle, and hole size.

CUSTOMER-REQUESTED HOLES AND DOWEL PINS

Bimba can provide custom holes and dowel pins to accommodate the customer's specific tooling and mounting holes.

For further customization, contact the factory.

Notes