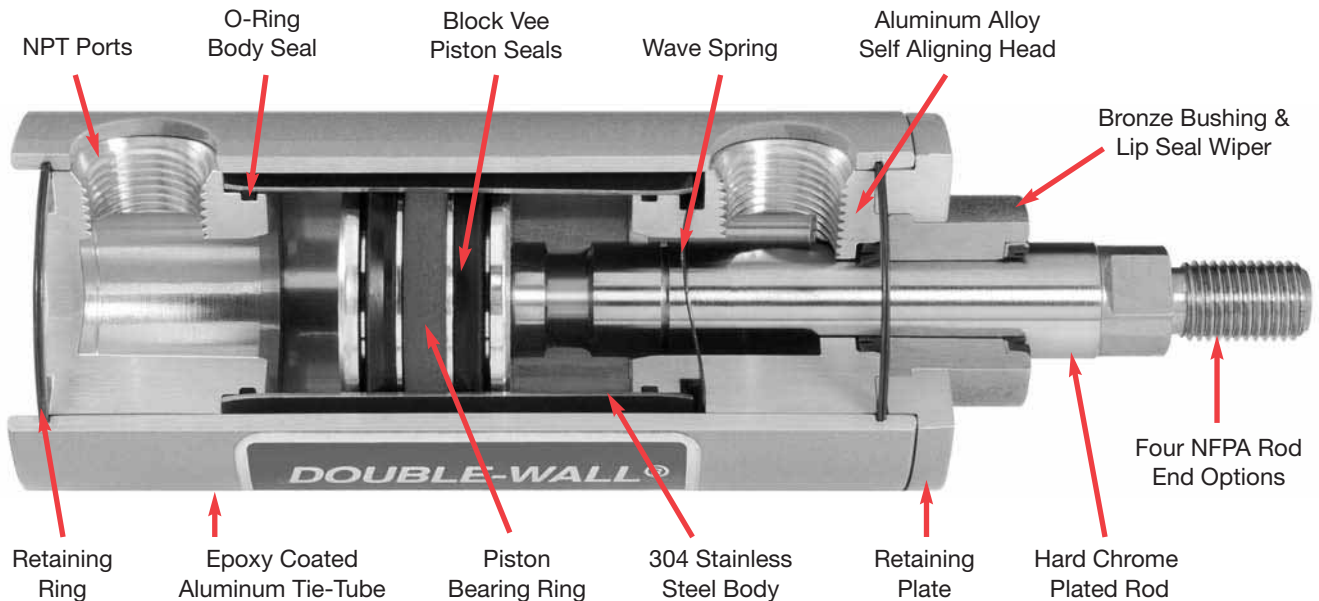
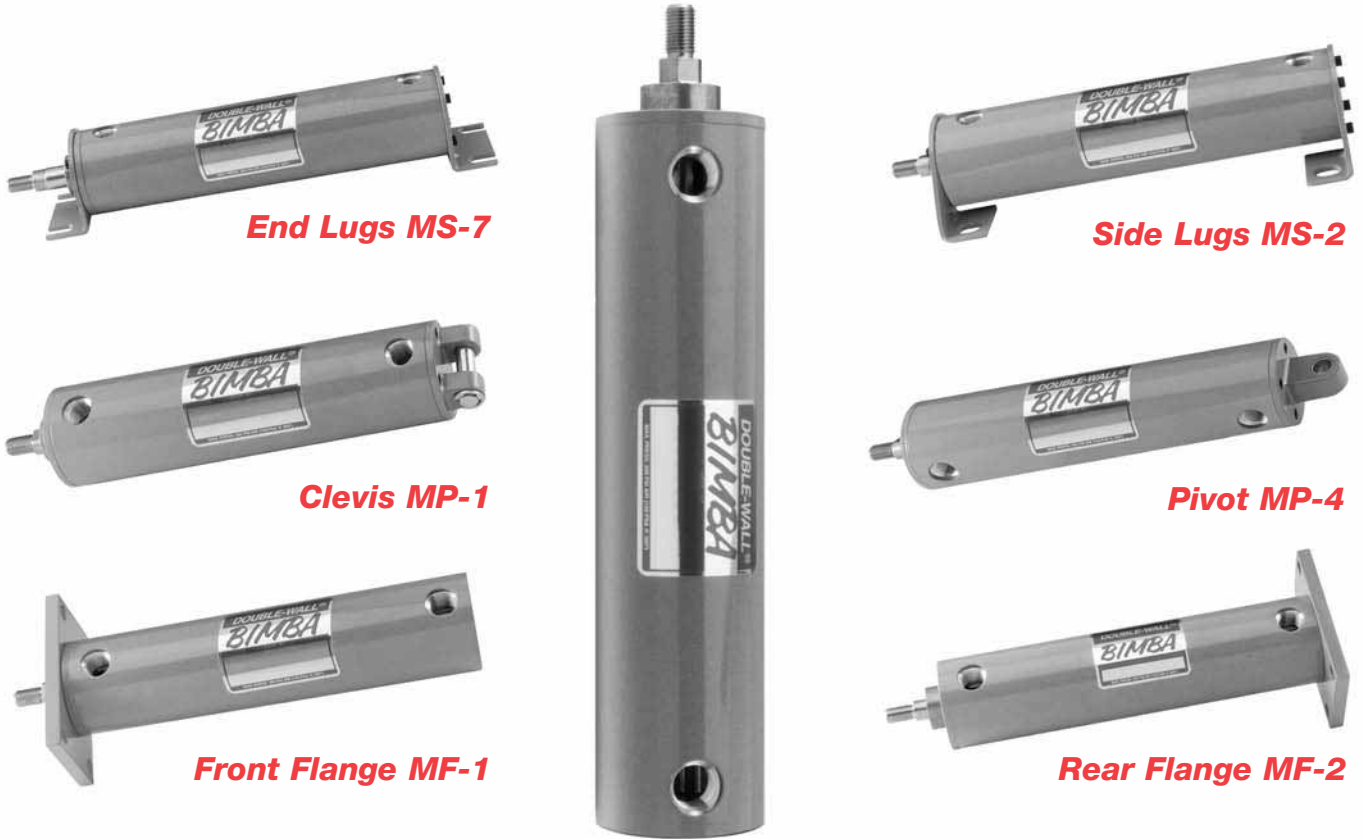


Bimba Double-Wall Cylinders

The Bimba Double-Wall® Cylinder Does It All!

One Basic cylinder converts into six NFPA mounting styles.



DW/RSS
Cylinders

Bimba Double-Wall® Cylinders

How to Order

The Model Number for Double-Wall® cylinders consists of three alphanumeric clusters. These designate product type, bore size and stroke length, and options (options are written in the following order: rod end options, and special options with extra extension last). Mounting kits must be ordered as a separate item, and are shown with their respective bore sizes starting on page 6.6. Please refer to the charts below for an example of model number DWC-1710-2V. This is a 1-1/2" bore, 10" stroke, Double-Wall cushioned cylinder with a small male one piece rod end and high temperature option.

DWC - 17 10 - 2 V

DOUBLE-WALL TYPE	
DW	- Double Acting
DWC	- Double Acting, Cushions 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 and Magnet Optional)
DWD(M)N (C, F, R)	- Nose Mount, Double Rod End, 1-1/2" and 3" Bores Only (Cushion and Magnet Optional)

BORE SIZE
17 - 1½"
31 - 2"
50 - 2½"
83 - 3¼"
125 - 4"

STROKE LENGTH
0.5 - ½"
1 - 1"
2 - 2"
2.5 - 2½"
Etc.

OPTIONS	
G	- Polymer Grease Lubrication
DPX.XX	- Dual Piston (see page 6.11 (specify stop length) for details)
V	- High Temperature Seals (300° F Maximum)
EEX.XX	- Extra Rod Extension (Add to end of model number)
AXX	- Alternate Cushion Screw Locations (Locations Available: 2 and 3 for head end, 6 and 7 for cap end) See dimensional drawing of cylinder for port locations.
SR	- Stainless Steel Rod

ROD END STYLE	
2	- Small Male, One Piece
2S	- Small Male Stud (Rolled Threads)
1	- Large Male, One Piece
4	- Female Threads
4C	- Small Male, One Piece, Coarse Thread (1½", 2" & 2½" Bores Only)
5C	- Large Male, One Piece, Coarse Thread (1½", 2" & 2½" Bores Only)
NT	- No Threads

(See page 6.5 for dimensions)

Bimba Double-Wall® Cylinders

List Prices

Basic Model	Base Price	Stroke Adder ¹ (per inch)	Mounting Options	Options						
			2S - Small Male Stud	C Per end (Prefix C)	DP ²	EE (each 1/2" each end)	M (Prefix M)	SR	V	V (with cushions per end) ³
1-1/2" Bore										
DW - 17	\$88.00	\$3.40	\$6.15	\$15.35	\$15.95	\$1.35	\$41.90	\$10.35	\$46.45	\$52.70
DWD - 17	111.15	5.15	12.15	15.35	N/A	2.60	41.90	15.60	62.25	52.70
DWN - 17	97.60	3.90	6.15	15.35	15.95	1.35	41.90	10.35	46.45	52.70
DWDN - 17	120.65	6.75	12.15	15.35	N/A	2.60	41.90	15.60	62.25	52.70
2" Bore										
DW-31	99.95	3.65	6.15	16.50	16.90	1.35	41.90	10.35	57.70	59.35
DWD-31	129.00	5.70	12.15	16.50	N/A	2.60	41.90	15.60	73.65	59.35
DWN-31	109.60	4.70	6.15	16.50	16.90	1.35	41.90	10.35	57.70	59.35
DWDN-31	138.05	7.65	12.15	16.50	N/A	2.60	41.90	15.60	73.65	59.35
2-1/2" Bore										
DW-50	113.10	4.05	6.15	17.65	18.45	1.35	41.90	10.35	58.10	60.70
DWD-50	141.50	7.15	12.15	17.65	N/A	2.60	41.90	15.60	74.50	60.70
3-1/4" Bore										
DW-83	155.40	5.85	13.45	23.60	32.25	1.80	47.15	19.45	62.65	69.80
DWD-83	191.70	8.70	26.75	23.60	N/A	3.50	47.15	29.10	78.15	69.80
4" Bore										
DW-125	187.95	6.80	13.45	25.05	38.00	1.80	47.15	19.45	84.25	81.80
DWD-125	242.55	11.05	26.75	25.05	N/A	3.50	47.15	29.10	97.45	81.80

No charge options - 2, 1, 4, 4C, 5C, NT, G, AXX.

¹ Consult factory for pricing on fractional strokes and strokes greater than 24".

² Pricing based on total stroke, see page 6.11 for details on total stroke.

³ Price includes cushion adder.

Mounting Kits

Model	1-1/2"	2"	2-1/2"	3-1/4"	4"
MSL -	\$20.20	\$25.05	\$30.20	\$37.60	\$48.20
MEL -	13.60	16.40	20.20	28.45	29.40
MC -	17.95	20.30	22.70	29.70	32.30
MP -	15.15	16.75	18.10	24.30	26.95
MFFA (Aluminum)	18.10	20.30	23.95	31.75	39.45
MFFS (Steel)	25.60	27.90	30.60	40.30	45.70
MFRA (Aluminum)	18.10	20.30	23.95	31.75	39.45
MFRS (Steel)	25.60	27.90	30.60	40.30	45.70

Repair Kits

Kit Number	Bore Size				
	1-1/2"	2"	2-1/2"	3-1/4"	4"
K-A	\$8.65	\$8.65	\$8.65	\$15.55	\$15.55
K-B	13.25	17.70	20.80	28.55	41.55
K-C	6.80	6.80	6.80	9.90	9.90
K-D	17.10	22.70	26.95	36.05	51.65
K-P-M	35.95	37.65	37.90	46.55	54.90
HT-99-7CC	4.05				
MAG-G-3CC	7.35				

See pages 6.13-6.14 for details.

Consult factory for pricing on individual repair parts.

Accessories

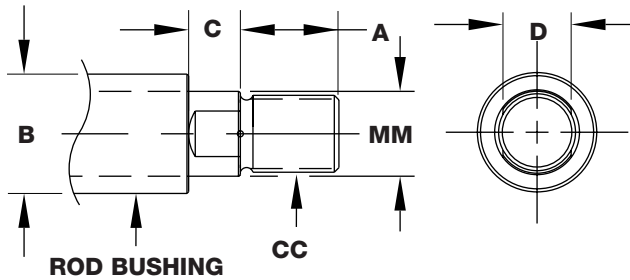
Models	Description	List Price
1-1/2", 2" and 2-1/2" bores		
ARE-1	Rod Eye	\$20.30
ARC-1	Rod Clevis	21.50
APB-1	Pivot Bracket	20.50
ACB-1	Clevis Bracket	22.15
ARS-1	Rod Stud	6.70
APP-1	Pivot Pin	6.75
D-154	Rod Nut	0.50
D-98	Rod Nut	0.60
D-17920	Nose mount foot bracket	11.20
D-1331	Nose mount mounting nut	2.55

Models	Description	List Price
3-1/4" and 4" bores		
ARE-2	Rod Eye	\$29.30
ARC-2	Rod Clevis	36.35
APB-2	Pivot Bracket	32.00
ACB-2	Clevis Bracket	40.10
ARS-2	Rod Stud	14.85
APP-2	Pivot Pin	10.80
D-3556	Rod Nut	0.90
D-2545	Rod Nut	1.30
D-17920	Nose mount foot bracket	11.20
D-1331	Nose mount mounting nut	2.55

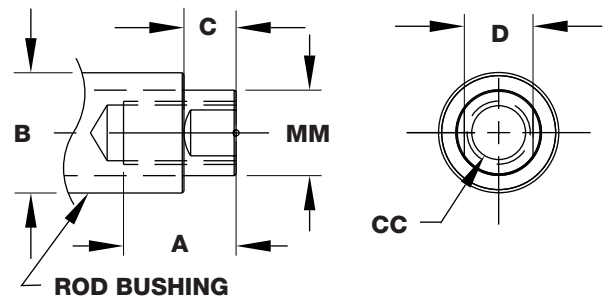
Bimba Double-Wall® Cylinders

Dimensions (in.)

Rod Thread – 2, 2S, 1, 4C, 5C



Rod Thread – 4



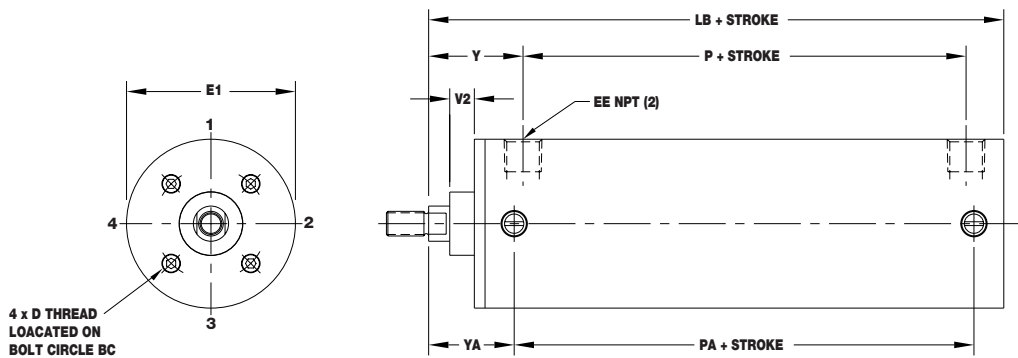
Rod End (1½", 2" and 2½" Bores)

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 (3¼", 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

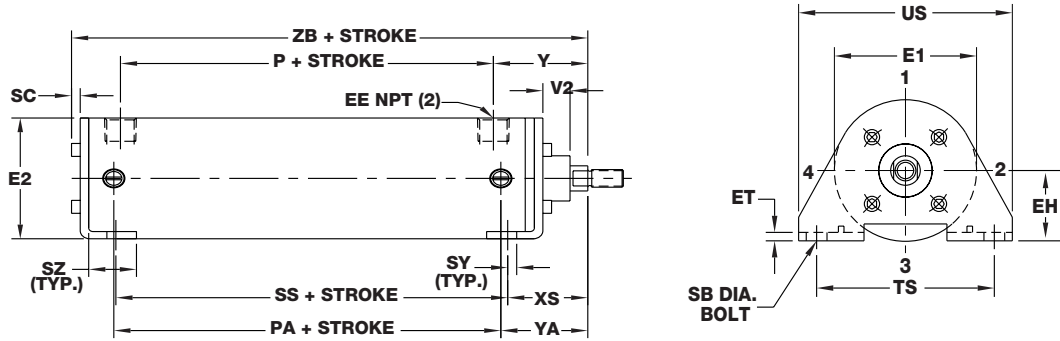
Double-Wall (no mounting)



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

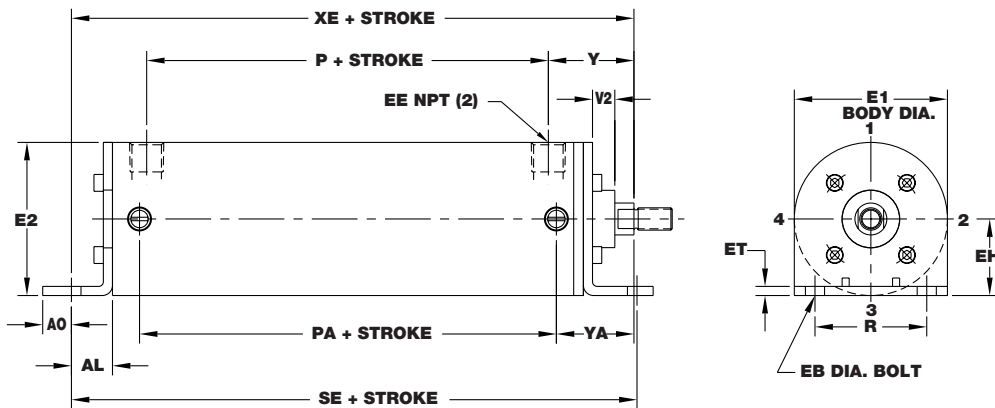
Bimba Double-Wall® Cylinders

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



Bore	Kit	ZB	P	SS	PA	V2	Y	EE	SY	XS	YA	SC	E2	SZ	US	E1	EH	ET	TS	SB
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	.14	2.00	1.00	3.51	2.00	1.00	.13	2.75	.38
2"	MSL-31	4.92	2.28	2.87	2.58	.31	1.67	3/8 NPT	0.19	1.38	1.52	.16	2.34	1.00	4.01	2.34	1.25	.13	3.25	.38
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	.19	3.00	1.00	4.51	2.94	1.49	.18	3.75	.38
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	.23	3.75	1.25	5.76	3.69	1.87	.25	4.75	.50
4"	MSL-125	6.17	2.62	3.25	3.00	.43	2.19	1/2 NPT	0.16	1.88	2.00	.23	4.50	1.25	6.51	4.44	2.24	.31	5.50	.50

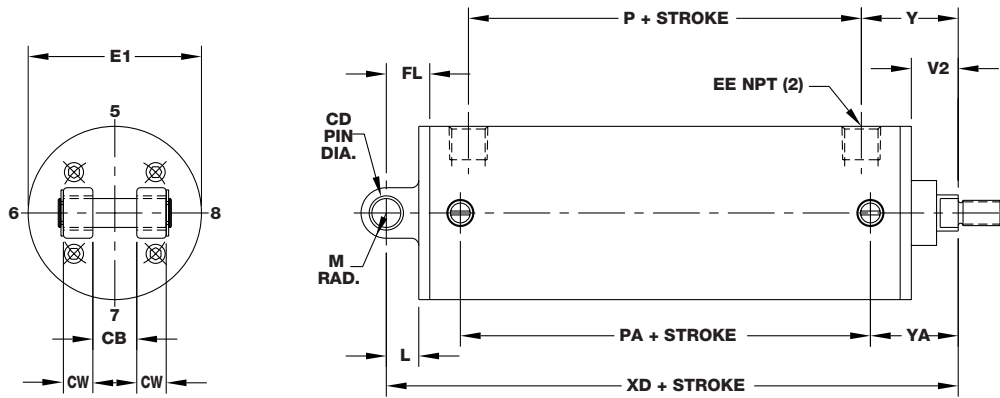
End Lug Mount (NFPA MS-7) (in.)



Bore	Kit	XE	P	PA	SE	V2	Y	EE	YA	A0	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

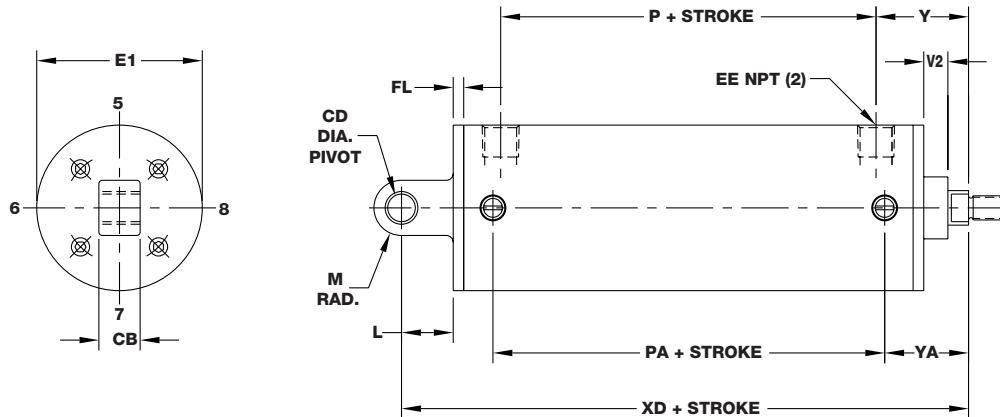
Bimba Double-Wall® Cylinders

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

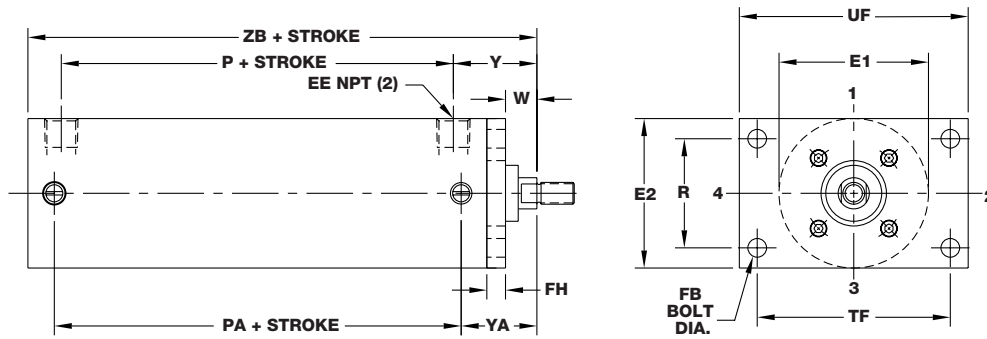
Pivot Mount (NFPA MP-4) (in.)



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

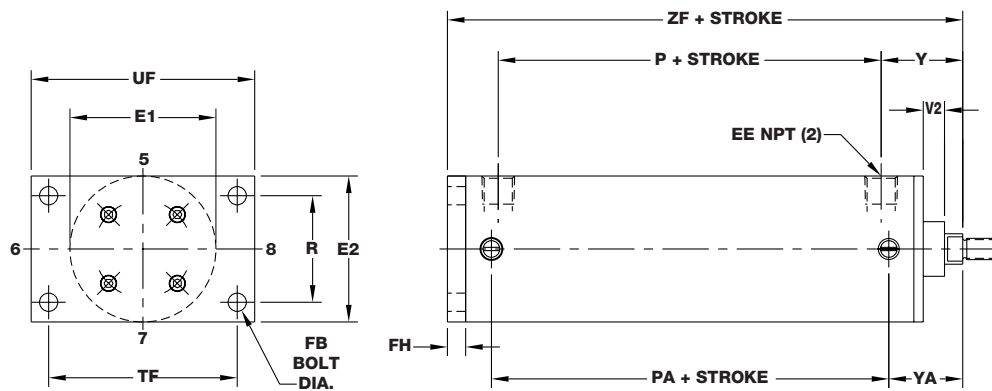
Bimba Double-Wall® Cylinders

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.)



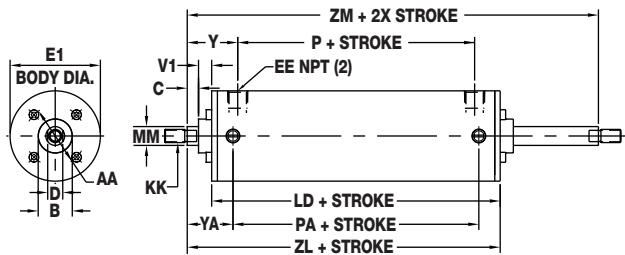
Bore	Kit	ZF	P	PA	Y	V2	EE	YA	FH	UF	E1	E2	R	TF	FB
1-1/2"	MFRA-17 MFRS-17	5.00	2.28	2.58	1.67	.44	3/8 NPT	1.52	.38	3.38	2.00	2.00	1.43	2.75	.25
2"	MFRA-31 MFRS-31	5.00	2.28	2.58	1.67	.44	3/8 NPT	1.52	.38	4.12	2.34	2.50	1.84	3.38	.31
2-1/2"	MFRA-50 MFRS-50	5.12	2.41	2.70	1.67	.44	3/8 NPT	1.52	.38	4.62	2.94	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

Bimba Double-Wall® Cylinders

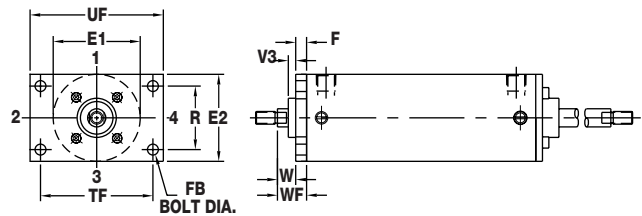
Double End Rod Cylinder Series DWD (in.)



Basic Double-End Rod Cylinder

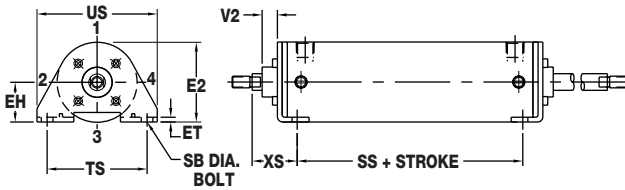


Flange Mount (NFPA MF-1)



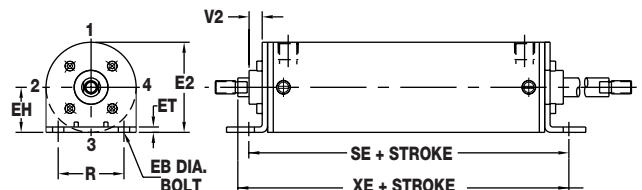
Mounting Kit # MFF (See page 6.4 for pricing)

Side Lug Mount (NFPA MS-2)



Mounting Kit # MSL (See page 6.4 for pricing)

End Lug Mounts (NFPA MS-7)



Mounting Kit # MEL (See page 6.4 for pricing)

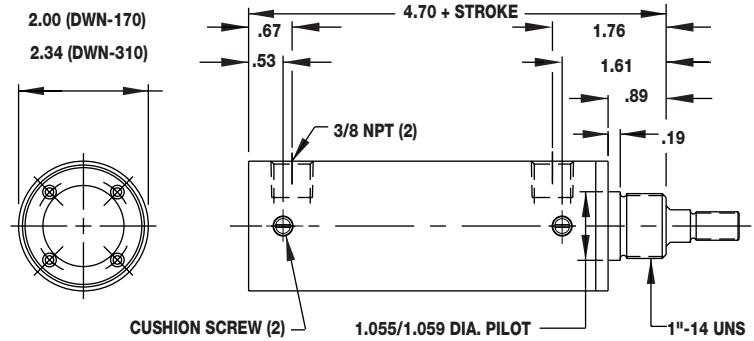
Bore	AA	B	C	D	EB	EE	EH	ET	E1	E2	F	FB	KK	LD	MM	P	PA	R
1-1/2"	1.48	1.124	.38	.56	.25	3/8	1.00	.13	2.00	2.00	.38	.25	7/16-20	4.16	.62	2.44	2.74	1.43
2"	1.75	1.124	.38	.56	.31	3/8	1.25	.13	2.34	2.50	.38	.31	7/16-20	4.16	.62	2.44	2.74	1.84
2-1/2"	2.00	1.124	.38	.56	.31	3/8	1.49	.18	2.94	3.00	.38	.31	7/16-20	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 6.3.
EE will provide extra extension on both ends.

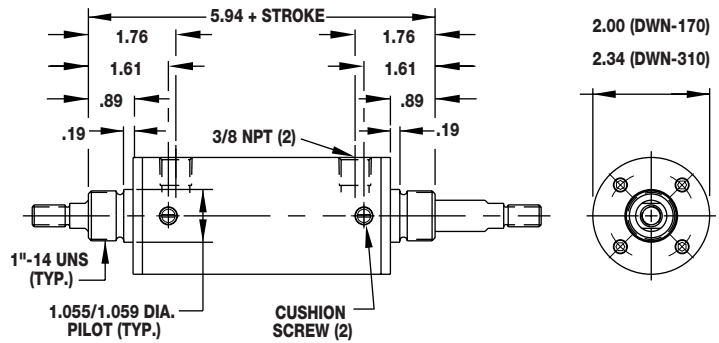
Bimba Double-Wall® Cylinders

Double-Wall® Front Nose Mounting (in.)

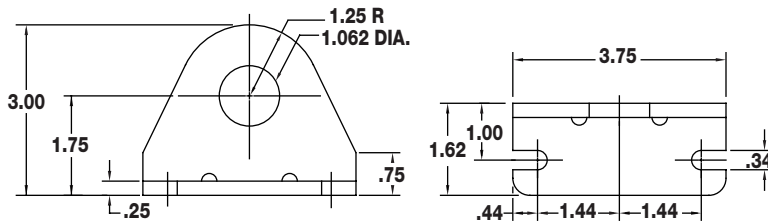
Single End Rod



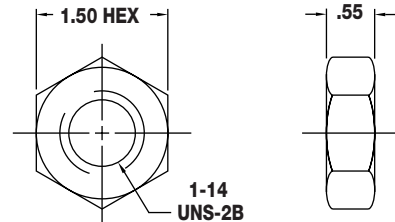
Double End Rod



Foot Bracket (D-17920) Accessory for Nose Mount



Mounting Nut (D-1331)



Double-Wall Engineering Specifications

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:	HT-99 standard; Polymer grease option
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)

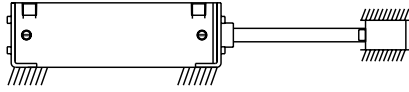
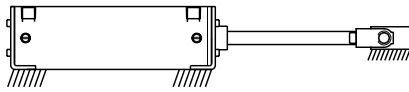
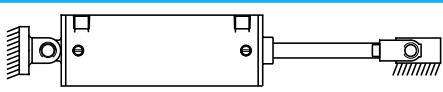
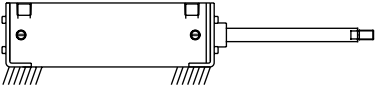
Bimba Double-Wall® Cylinders

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	110	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 values 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

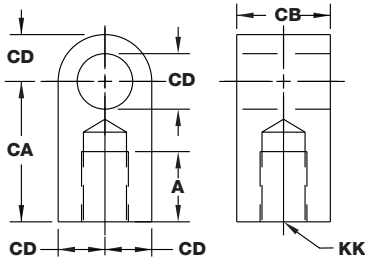
Bimba Double-Wall® Cylinders

Accessories

Rod Eye

Bore	Part #
1½ - 2½	ARE-1
3¼ - 4	ARE-2

(For -2 Rod End style only)



Rod Stud

(Rolled Threads)

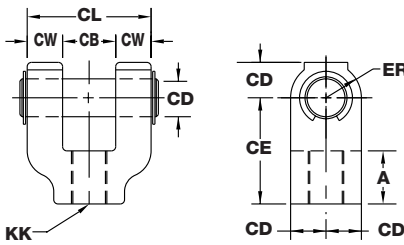
Bore	Part #
1½ - 2½	ARS-1
3¼ - 4	ARS-2



Rod Clevis

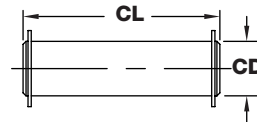
Bore	Part #
1½ - 2½	ARC-1
3¼ - 4	ARC-2

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



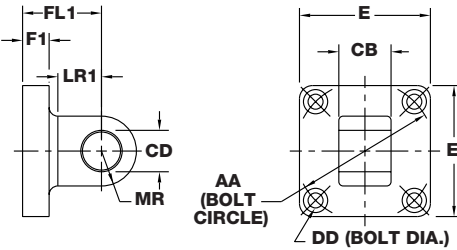
Case Hardened Pivot Pin with Rings

Bore	Part #
1½ - 2½	APP-1
3¼ - 4	APP-2



Pivot Bracket

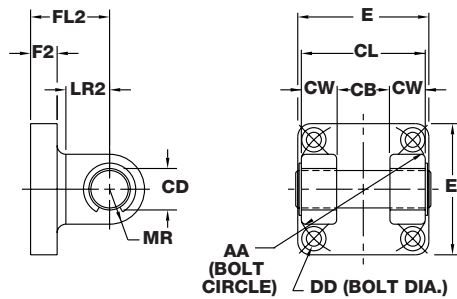
Bore	Part #
1½ - 2½	APB-1
3¼ - 4	APB-2



Clevis Bracket

Bore	Part #
1½ - 2½	ACB-1
3¼ - 4	ACB-2

(Includes Case Hardened Pin)



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

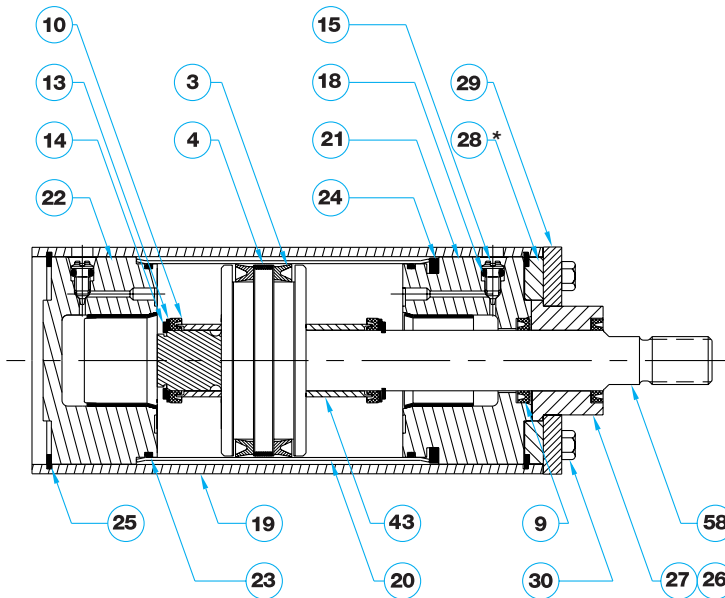
Accessories Dimensions (in.)

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	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	1.5
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	0.68	2.25

Bimba Double-Wall® Cylinders

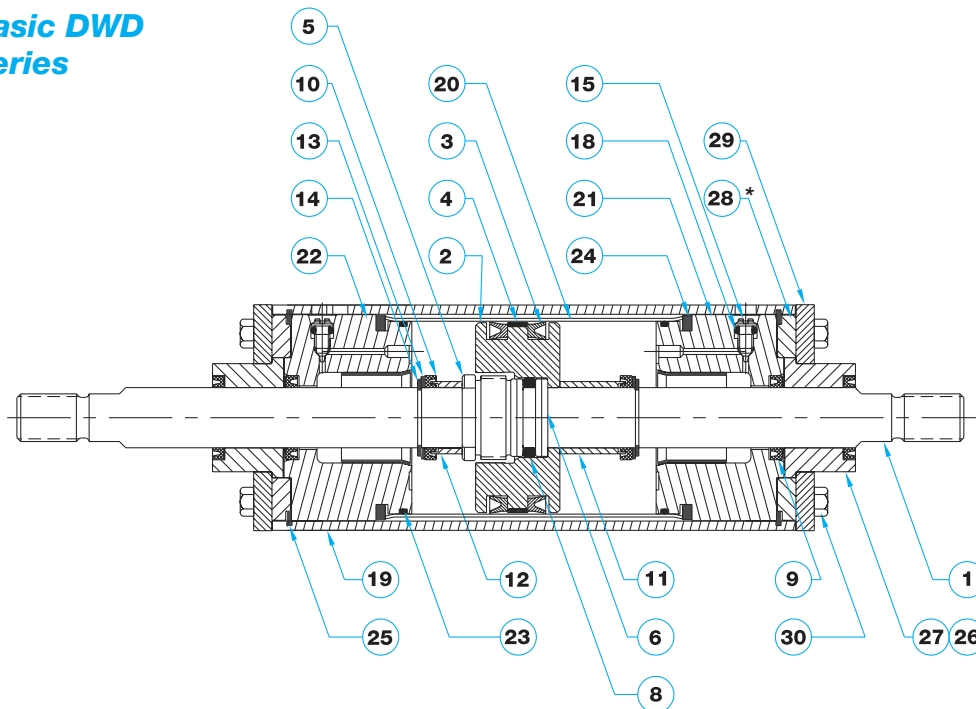
How to Order Repair Parts & Kits

Basic DW Series



* Used in most mounting kits and on all 3-1/4" 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 6.14 for Repair Parts and page 6.4 for Repair Kits Pricing.

Bimba Double-Wall® Cylinders

Repair Parts List

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

Important Double-Wall® Information

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 6.11 should be reviewed.

Material – Hard chrome plated rods are supplied as standard on all models 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 6.5). 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 P.S.I. min. 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.