











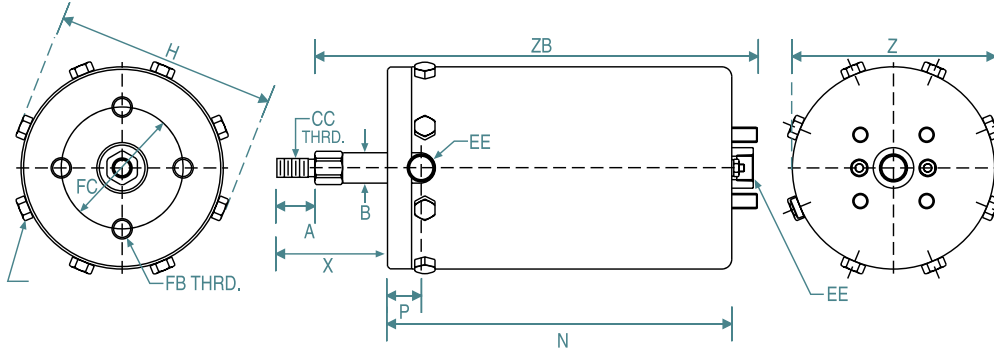








## Super Cylinder



### Standard Cylinders with Foot Mount Dimensions - Inches

Size	Series	Z	H	N	EE	FC	FB	B	P	X	BP Rod End*			SM Rod End†		
											A	ZB	CC	A	ZB	CC
4	F	2.71	3.02	4.34	1/4 NPT	2.00	1/4 - 20	1/2	.50	3.10	.75	7.09	3/8-24	1.00	6.85	7/16-20
6	F	3.27	3.58	5.28	1/4 NPT	2.00	1/4 - 20	1/2	.51	2.16	.75	7.09	3/8-24	1.00	6.85	7/16-20
9	F	3.84	4.25	6.34	1/4 NPT	3.00	7/16-14	3/4	.75	3.50	1.00	9.25	1/2-20	1.12	9.13	3/4-16
12	F	4.38	4.79	7.28	3/8 NPT	3.00	7/16-14	3/4	.75	2.57	1.00	9.38	1/2-20	1.12	9.26	3/4-16
16	F	4.99	5.40	8.38	3/8 NPT	3.00	1/2-13	3/4	.87	3.78	1.00	11.69	1/2-20	1.12	11.57	3/4-16
24	F	6.16	6.57	10.22	3/8 NPT	4.75	5/8-11	3/4	1.00	2.00	1.00	11.75	1/2-20	1.12	11.75	3/4-16
30	F	6.88	7.29	11.44	3/8 NPT	4.75	5/8-11	1	1.00	3.05	1.50	13.52	1-12	1.50	13.52	1-14
36	F	7.38	7.79	11.47	3/8 NPT	4.75	5/8-11	1	1.00	3.05	1.50	13.55	1-12	1.50	13.55	1-14

### Standard Cylinders with Foot Mount Dimensions - Millimeters

Size	Series	Z	H	N	FC	B	P	X	BP Rod End*		SM Rod End†	
									A	ZB	A	ZB
4	F	68.83	76.71	110.24	50.80	12.70	12.70	78.74	19.05	180.09	25.40	173.99
6	F	83.06	90.93	134.11	50.80	12.70	12.95	54.86	19.05	180.09	25.40	173.99
9	F	97.54	107.95	161.04	76.20	19.05	19.05	88.90	25.40	234.95	28.45	231.90
12	F	111.25	121.67	184.91	76.20	19.05	19.05	65.28	25.40	238.25	28.45	235.20
16	F	126.75	137.16	212.85	76.20	19.05	22.10	96.01	25.40	296.93	28.45	293.88
24	F	156.46	166.88	259.59	120.65	19.05	25.40	50.80	25.40	298.45	28.45	298.45
30	F	174.75	185.17	290.58	120.65	25.40	25.40	77.47	38.10	343.41	38.10	343.41
36	F	187.45	197.80	195.33	120.65	25.40	25.40	77.47	38.10	344.17	38.10	344.17

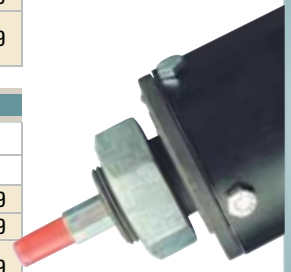
**Super Cylinders are equipped with linear ball bearings and hardened steel rods.**

### Nose Mount Dimensions - Inches

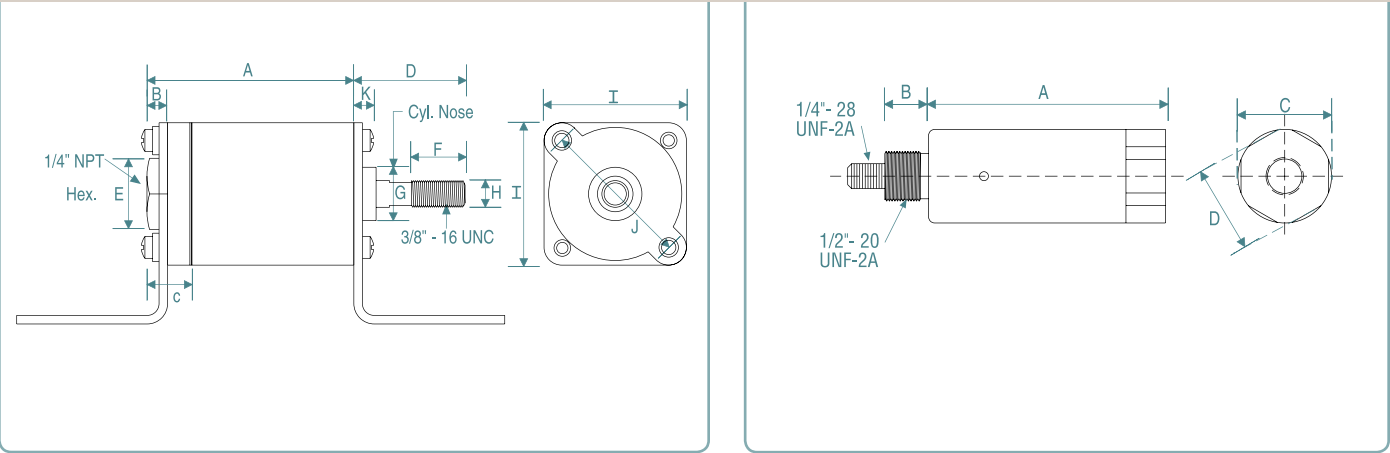
Size	Series	Z	H	N	EE	F	RM	B	X	BP Rod End*			SM Rod End†			AF	K	P
										A	ZB	CC	A	ZB	CC			
4	F	2.71	3.02	4.34	1/4 NPT	1.25	1-3/8 - 12	1/2	1.48	.75	6.72	3/8 - 24	1.00	6.47	7/16 - 20	2.06	.78	.59
6	F	3.27	3.58	5.28	1/4 NPT	1.25	1-3/8 - 12	1/2	1.44	.75	7.63	3/8 - 24	1.00	7.06	7/16 - 20	2.06	.78	.59
9	E	3.84	4.15	5.16	1/4 NPT	1.25	1-5/8 - 12	3/4	1.83	1.00	7.65	1/2 - 20	1.12	7.53	3/4-16	2.44	.91	.59
	F			6.19					1.61		8.45			8.33				

### Nose Mount Dimensions - Millimeters

Size	Series	Z	H	N	F	B	X	BP Rod End*		SM Rod End†		AF	K	P
								A	ZB	A	ZB			
4	F	68.83	76.71	110.24	31.75	12.70	37.59	19.05	170.69	25.40	164.34	52.32	19.81	14.99
6	F	83.06	91.93	134.11	31.75	12.70	36.58	19.05	193.80	25.40	179.32	52.32	19.81	14.99
9	E	97.54	105.41	131.06	31.75	19.05	46.48	25.40	194.31	28.45	191.26	61.98	23.11	14.99
	F			157.23			40.89		214.63		211.58			



### Small Bore Cylinder



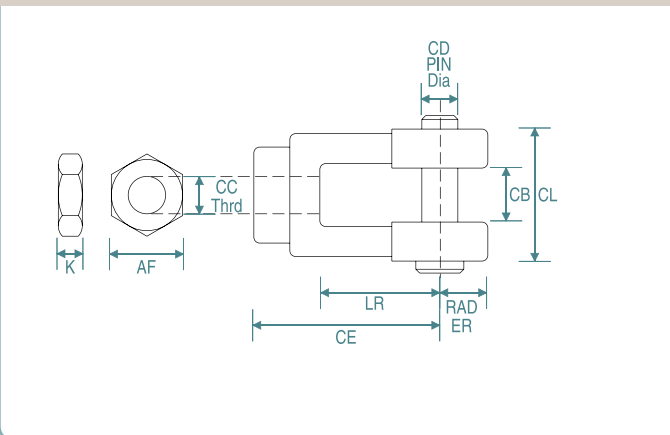
### Small Bore Cylinder Dimensions - Inches

Part Number	A	B	C	D	E	F	G	H	I	J	K	Part Number	A	B	C	D
980-008-000	2-29/32	13/64	5/8	19/16	13/16	3/4	3/4	3/8	2	2-1/8	5/16	908-013-000	2.81	0.438	15/16	7/8
980-077-000	3-21/32	13/64	5/8	19/16	13/16	3/4	3/4	3/8	2	2-1/8	5/16	908-034-000				
												908-014-000	1.95	0.244	15/16	7/8
												908-035-000				

### Small Bore Cylinder Dimensions - Millimeters

Part Number	A	B	C	D	E	F	G	H	I	J	K	Part Number	A	B	C	D
980-008-000	73.8	5.2	15.9	39.6	20.6	19.1	19.1	9.5	50.8	54.0	7.9	908-013-000	71.4	11.1	23.8	22.2
980-077-000	92.9	5.2	15.9	39.6	20.6	19.1	19.1	9.5	50.8	54.0	7.9	908-034-000				
												908-014-000	49.5	6.2	23.8	22.2
												908-035-000				

### Rod Clevis and Jam Nut



### Rod Clevis and Jam Nut Ordering Information

↑	↑	↑	↑		
					Size
<b>04</b>					Area in Square Inches: 04, 06, 09, 16, 24, 30, or 36
					Series
<b>E</b>					Determines Stroke: Make a selection from Operating Data Table on pg. 47
<b>F</b>					Rod
	<b>BP</b>				Bellofram Product Standard
	<b>SM</b>				National Fluid Power Assoc. Standard
					Make a selection from dimensional data table on pgs. 51-54
					Rod Clevis
					<b>RC</b> Rod Clevis
Example: 36-F-BP-RC is a Rod Clevis for a size 36 sq. in. cylinder with a 1-12 rod thread.					

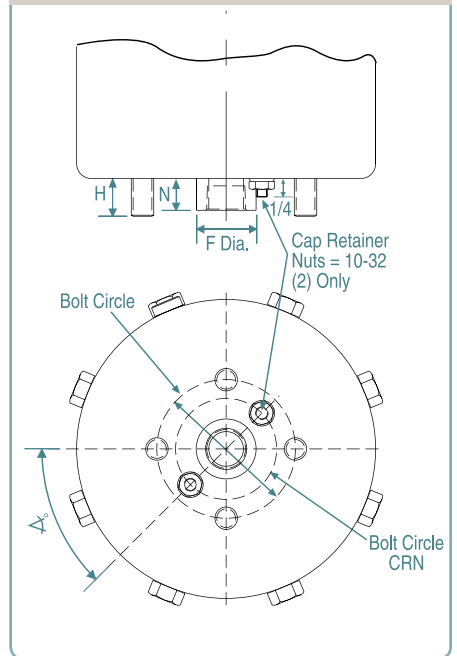
### Rod Clevis and Jam Nut Dimensions - Inches

Size	Rod End	Rod End CC Thrd.	Series	CB	CD Pin Dia.	CE	CL	Rad. ER	LR	AF	K
4	BP	3/8-24	F	.56	3/8	1-7/8	1.38	.53	1.25	9/16	7/32
	SM	7/16-20			7/16					11/16	1/4
6	BP	3/8-24	F	.56	3/8	1-7/8	1.38	.53	1.25	9/16	7/32
	SM	7/16-20			7/16					11/16	1/4
9	BP	1/2-20	E or F	.56	1/2	1-7/8	1.38	.53	1.25	3/4	5/16
	SM	3/4-16		.88	3/4	2-3/8	2.12	.75		1-1/8	27/64
12	BP	1/2-20	E or F	.56	1/2	1-7/8	1.38	.53	1.25	3/4	5/16
	SM	3/4-16		.88	3/4	2-3/8	2.12	.75		1-1/8	27/64
16	BP	1/2-20	E or F	.56	1/2	1-7/8	1.38	.53	1.25	3/4	5/16
	SM	3/4-16		.88	3/4	2-3/8	2.12	.75		1-1/8	27/64
24	BP	1/2-20	E or F	.56	1/2	1-7/8	1.38	.53	1.25	3/4	5/16
	SM	3/4-16		.88	3/4	2-3/8	2.12	.75		1-1/8	27/64
30 and 36	BP	5/8-18	E	.56	9/16	1-7/8	1.38	.53	1.25	1-15/16	3/8
	BP	1-12	F	1.50	1	3-1/2	3.50	1.00	1.50	1-1/2	35/64
	SM	3/4-16									
	SM	1-14	E or F	1.50	1	3-1/2	3.50	1.00	1.50	1-1/2	35/64

BP Rod End – Bellofram Products Co. Standard, SM Rod End – National Fluid Power Assoc. Standards



### Cylinder Cap End Mounting Studs



### Rod Clevis and Jam Nut Dimensions - Millimeters

Size	Rod End	Series	CB	CD Pin Dia.	CE	CL	Rad. ER	LR	AF	K
4	BP	F	14.22	9.53	47.63	35.05	13.46	31.75	14.29	5.56
	SM			11.11					17.46	6.36
6	BP	F	14.22	9.53	47.63	35.05	13.56	31.75	14.29	5.56
	SM			11.11					17.46	6.35
9	BP	E or F	14.22	12.70	47.63	35.05	13.56	31.75	19.05	7.94
	SM		22.35	19.05	60.33	53.85	19.05		18.58	10.72
12	BP	E or F	14.22	12.70	47.63	35.05	13.56	31.75	19.05	7.94
	SM		22.35	19.05	60.33	53.85	19.05		28.58	10.72
16	BP	E or F	14.22	12.70	47.63	35.05	13.56	31.75	19.05	7.94
	SM		22.35	19.05	60.33	53.85	19.05		28.59	10.72
24	BP	E or F	14.22	12.70	47.63	35.05	13.56	31.75	19.05	7.94
	SM		22.35	19.05	60.33	53.85	19.05		28.59	13.89
30 and 36	BP	E	14.22	14.29	47.63	35.05	13.46	31.75	33.34	9.53
	BP	F	38.1	25.4	88.90	88.90	25.4	38.1	38.1	13.89
	SM									
	SM	E or F	38.1	25.4	88.90	88.90	25.4	38.1	38.1	13.89

### Cylinder Cap End Mounting Studs Dimensions - Inches

Size	Number of Studs	Size of Stud	H (Approx.)	Bolt Circle	F (Boss)	N	Bolt Circle CRN	<°
4	2	1/4-20	5/8	1-5/16	11/16	13/32	1-3/8	90
6	2	1/4-20	5/8	1-1/2	11/16	13/32	1-3/8	90
9	4	1/4-20	5/8	2	11/16	13/32	1-3/8	45
12	4	1/4-20	5/8	2-5/16	1	17/32	1-11/16	45
16	4	3/8-16	5/8	2-5/16	1	17/32	1-11/16	45
24	4	3/8-16	9/16	3-1/8	1	17/32	1-11/16	45
30	4	1/2-13	11/16	4	1	17/32	1-11/16	45
36	4	1/2-13	11/16	4	1	17/32	1-11/16	45

**All Diaphragm Cylinders feature Bellofram Rolling Diaphragms for low friction and increased sensitivity!**

## Diaphragm Cylinders Part Numbers

### Type S (Spring Return)

Series		E				F			
Rod		BP		SM		BP		SM	
Mount		UM	N	ZB	N	UM	N	UM	N
Size (sq. in.)	4					900-002-000	900-006-000	900-004-000	900-008-000
	6					900-010-000	900-014-000	900-012-000	900-016-000
	9	900-018-000	900-022-000	900-020-000	900-024-000	900-026-000	900-030-000	900-028-000	900-032-000
	12	900-034-000		900-036-000		900-038-000		900-040-000	
	16	900-042-000		900-044-000		900-046-000		900-048-000	
	24	900-050-000		900-052-000		900-054-000		900-056-000	
	30	900-058-000		900-060-000		900-062-000		900-064-000	
	36	900-066-000		900-068-000		900-070-000		900-072-000	

All cylinders are supplied with cap mounting studs. Consult factory for cylinders required without cap mounting studs. Select part numbers from non-shaded areas only.

### Type D Cylinders (Double Acting)

Series		E		F			
Rod		BP	SM	BP		SM	
Mount		UM	UM	UM	N	UM	N
Size (sq. in.)	4			902-002-000	902-006-000	902-004-000	902-008-000
	6			902-010-000	902-014-000	902-012-000	902-016-000
	9			902-018-000	902-022-000	902-020-000	902-024-000
	12	902-026-000	902-028-000	902-030-000		902-032-000	
	16	902-034-000	902-036-000	902-038-000		902-040-000	
	24	902-042-000	902-044-000	902-046-000		902-048-000	
	30	902-050-000	902-052-000	902-054-000		902-056-000	
	36	902-058-000	902-060-000	902-062-000		902-064-000	

All cylinders are supplied with cap mounting studs. Consult factory for cylinders required without cap mounting studs. Select part numbers from non-shaded areas only.

### Type SS (Super Cylinders)

Series		F	
Rod		BP	SM
Mount		UM	UM
Size (sq. in.)	4	903-074-000	903-001-000
	6	903-076-000	903-011-000
	9	903-078-000	903-021-000
	12	903-080-000	903-031-000
	16	903-082-000	903-041-000
	24	903-084-000	903-051-000
	30	903-086-000	903-061-000
	36	903-088-000	903-071-000

### Repair Kits

Spring Return Cylinders				Double Acting Cylinders				Super Cylinders	
Diaphragm Kits		Bearing Kits		Diaphragm Kits		Bearing Kits		Bearing Kits	
Kit No.	Part No.	Kit No.	Part No.	Kit No.	Part No.	Kit No.	Part No.	Kit No.	Part No.
S4FN	970-041-000	SB46S	970-058-000	D4S	970-014-000	DB46S	970-064-000	SSB46S	970-134-000
S6FN	970-042-000	SB924S	970-060-000	D6S	970-018-000	DB924S	970-066-000	SSB924S	970-133-000
S9EN	970-043-000	SB36FB	970-062-000	D9S	970-020-000	DB36FB	970-068-000	SSB36FB	970-135-000
S9FN	970-044-000			D12ES	970-022-000				
S12E	970-045-000			D12FS	970-024-000				
S12F	970-046-000			D16ES	970-026-000				
S16E	970-047-000			D16FS	970-028-000				
S16F	970-048-000			D24ES	970-030-000				
S24E	970-049-000			D24FS	970-032-000				
S24F	970-050-000			D30ES	970-034-000				
S30E	970-051-000			D30FS	970-036-000				
S30F	970-052-000			D36ES	970-038-000				
S36E	970-053-000			D36FS	970-040-000				
S36F	970-054-000								

### Mounting Kits

Size	FM	CFM	HFM	CBM	CBS
4	904-001-000	904-012-000	904-008-000	904-026-000	904-019-000
6	904-002-000	904-013-000	904-008-000	904-027-000	904-020-000
9	904-003-000	904-014-000	904-009-000	904-028-000	904-021-000
12	904-004-000	904-015-000	904-009-000	904-029-000	904-022-000
16	904-005-000	904-016-000	904-010-000	904-030-000	904-023-000
24	904-006-000	904-017-000	904-010-000	904-031-000	904-024-000
30	904-007-000	904-018-000	904-011-000	904-032-000	904-025-000
36	904-007-000	904-018-000	904-011-000	904-032-000	904-025-000

### Rod Clevis Mounts

Rod		BP	SM
Size (sq. in.)	4	904-033-000	904-037-000
	6	904-033-000	904-037-000
	9	904-034-000	904-038-000
	12	904-034-000	904-038-000
	16	904-034-000	904-038-000
	24	904-034-000	904-038-000
	30 and 36 (E stroke)		904-039-000
	30 and 36 (F stroke)	904-036-000	904-039-000