

**B**  
Actuator Products

# Actuator Products

## Tie Rod Cylinders

### 3MA Series - Economy NFPA Cylinder



- Bore sizes 1-1/2 through 5 inch
- 18 standard mounting styles
- Pressures up to 250 PSIG
- Temperatures -10°F to 165°F
- Aluminum body construction

B6

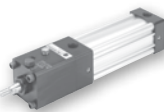
### 4MA / 4ML Series - Flexible NFPA Cylinder



- Bore sizes 1-1/2 through 8 inch
- 20 standard mounting styles
- Pressures up to 250 PSIG
- Temperatures -50°F to 250°F
- Aluminum body construction

B16

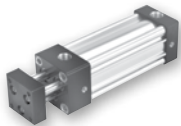
### 3MAJ / 4MAJ - Rodlock Cylinder



- Bore sizes 1-1/2 through 8 inch
- 17 standard mounting styles
- Pressures up to 100 PSIG
- Temperatures -10°F to 165°F
- Aluminum body construction

B40

### 4MNR Series - Non-Rotating Cylinder



- Bore sizes 1-1/8 through 4 inch
- 14 standard mounting styles
- Pressures up to 250 PSIG
- Temperatures -10°F to 165°F
- Aluminum body construction

B58

### P1D Series - ISO 15552 / ISO 6431



- 6 available for maximum flexibility
- Bore sizes 32mm through 200mm
- 10 standard mounting styles
- Pressures up to 145 PSIG
- Temperatures -10°F to 250°F
- Aluminum body construction

B65

## Round Body Cylinders

### SR / SRM / SRD / SRDM Series - Non-Repairable



- Bore sizes 5/16 through 3 inch
- 28 mounting styles
- Pressures up to 250 PSIG
- Temperatures -10°F to 165°F
- Stainless steel body construction

B83

### SRX Series - Position Feedback



- Bore sizes 1-1/16 through 3 inch
- Continuous position feedback
- Pressures up to 150 PSIG
- Temperatures 40°F to 165°F
- Stainless steel body construction

B109

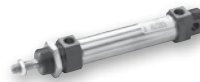
### P1L Series - Repairable



- Bore sizes 20mm through 100mm
- 9 mounting styles
- Pressures up to 145 PSIG
- Temperatures -10°F to 250°F
- Aluminum body construction

B117

### P1A Series - ISO Non-Repairable



- Bore sizes 10mm through 25mm
- 5 mounting styles
- Pressures up to 145 PSIG
- Temperatures -40°F to 302°F
- Stainless steel body construction

B132

### P Series - Repairable



- Bore sizes 1-1/8 through 4 inch
- 4 mounting styles
- Pressures up to 150 PSIG
- Temperatures -10°F to 250°F
- Aluminum body construction

B136

**B**

Pictorial Index  
Actuator Products

## Compact Cylinders

### P1Q Series - Economy Compact Cylinder



B143

- Bore sizes 12mm through 100mm
- 4 flexible mounting options
- Pressures up to 10 PSIG
- Temperatures 23°F to 158°F
- Aluminum body construction

## Guided Cylinders

### P5T Series - Compact Guided



B169

- Bore sizes 16mm through 100mm
- Pressures up to 145 PSIG
- Temperatures 0°F to 250°F
- Aluminum body construction
- Flexible porting: top, rear, side

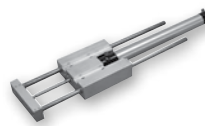
### P1M Series - Compact Cylinder



B151

- Bore sizes 12mm through 100mm
- 6 mounting options
- Pressures up to 145 PSIG
- Temperatures -4°F to 250°F
- Aluminum body construction

### P5L Series - Guided



B176

- Bore sizes 20mm through 100mm
- Direct mounting
- Pressures up to 145 PSIG
- Temperatures 0°F to 250°F
- Extruded aluminum body construction

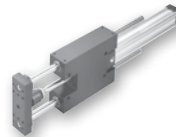
### LP / LPM Series - Compact Cylinder



B163

- Bore sizes 9/16 through 4 inch
- 6 mounting styles
- Pressures up to 150 PSIG
- Temperatures -10°F to 200°F
- Aluminum body construction

### HB Series - Heavy Duty Guided



B202

- Bore sizes 1-1/2 through 2-1/2 inch
- Thrust, reach and compact versions available
- Air service pressure up to 250 PSIG, hydraulic service up to 750 PSIG
- Temperatures 0°F to 250°F
- Aluminum body construction
- Rod lock version available

### P5E Series - P1D ISO Guided



B210

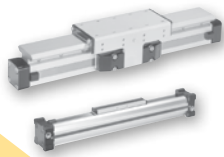
- Bore sizes 32mm through 100mm
- Pressures up to 145 PSIG
- Temperatures 14°F to 165°F
- Aluminum body construction
- Rod lock version available

**B**

Pictorial Index  
Actuator Products

## Rodless Cylinders

### OSP-P Series - Band Type Rodless



- Bore sizes 10mm through 80mm
- Pressures to max. 8 bar
- Temperatures -10°F to 80°F
- Aluminum body construction

B216

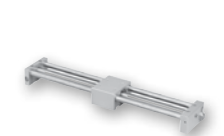
### P1X Series - Band Type Rodless



- 7 bore sizes 16mm through 63mm
- Integral sensor mounting rail
- Pressures 7 to 100 PSIG
- Temperatures 40°F to 140°F
- Aluminum body construction

B234

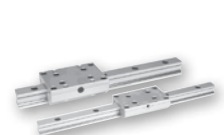
### P1Z Series - Magnetically Coupled Rodless



- 3 bore sizes 16mm, 20mm & 32mm
- Pressures 29 to 100 PSIG
- Temperatures 15°F to 140°F
- Stainless steel body construction

B246

### GDL Series - Rails & Cassettes



- 6 sizes available
- Speed up to 10m/s (33 ft/s)
- Temperatures -10°C to 80°C
- Aluminum alloy rail
- Aluminum body construction

B258

## Rotary Actuators

### PV Series - Vane Rotary



- 8 model sizes
- Single or double vane models
- Pressures to 150 PSIG
- Temperatures 30°F to 250°F
- 7 to 1800 lb-in output torque

B263

### PRN(A) Series - Vane Rotary



- 5 miniature and 4 standard models
- Temperatures -23°F to 176°F
- 1.33 to 2355 in-lb torque at 100 PSIG

B267

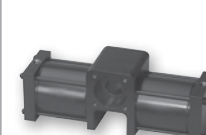
### PTR Series - Rack & Pinion Rotary



- Bore sizes 1 through 3-1/4 inch
- Pressures to 250 PSIG
- Temperatures 0°F to 250°F
- 39 to 2281 lb-in output torque

B272

### HP Series - Large Rack & Pinion Rotary



- 2 large bore models
- 3 standard rotations
- Pressures to 100 PSIG
- Temperatures 0°F to 250°F
- 4500 and 10,000 lb-in output at 100 PSIG

B275

### P1V-S Series - Air Motors



- Power from 20 through 1200 watts
- Speeds 5 to 24,000 RPM
- Pressures to max. 7 bar
- Temperatures -30°C to 100°C

B278

**B**

Pictorial Index  
Actuator Products

## Automation Products

### Grippers

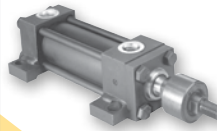


B281

- Grip forces to 44,000N
- Parallel or Angular
- 2 or 3 jaw
- Pneumatic or electric
- Temperature to 300°F
- Magnetic piston standard
- Clean room

## Actuator Accessories

### Linear Alignment Couplers



B335

- 12 standard thread sizes
- Maximum reliability for trouble-free operation, long life and lower operating costs
- Increased cylinder life by reducing wear on piston and rod bearings
- Stainless steel versions available

### Slide Tables



B314

- 6 bore sizes: 6mm to 25mm
- Strokes to 150mm
- Integration of linear rail and dual bore cylinder
- Available with adjustable stroke and shock absorbers
- Magnetic piston standard

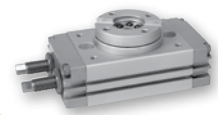
### 4TK Series - Air Oil Tanks



B336

- 6 standard bore sizes
- Lightweight aluminum / fiberglass design
- 2 fluid flow baffles reduce agitation and aeration
- 8 standard mounting styles

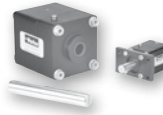
### Rotary Tables



B326

- 4 bore sizes: 16mm to 32mm
- Dual rack and pinion with integrated bearing
- Adjustable rotation standard 0 to 190 degrees
- Available with optional shock absorbers

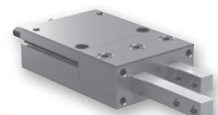
### PRL Series - Stand Alone Rodlock



B337

- 5 different sizes
- Large holding forces
- 2 different mounting styles
- Case-hardened rod material available

### Escapements



B328

- 3 bore sizes: 14mm to 27mm
- Locking key ensures part separation and eliminates jams
- Adjustable retract stops
- Sealed design repels contaminants
- Dowel holes in body for precision applications

## Electronic Sensors

### Sensors



B339

- Solid state
- Reed
- NAMUR
- Proximity

## Shock Absorbers

### Shock Absorbers



B361

- Miniature - self-compensating
- Heavyweight - soft contact and self-compensating
- Miniature - soft contact and self-compensating
- Magnum series - adjustable
- Heavy - self-compensating
- Heavy - adjustable

## P1Q Series

- Economical square body compact cylinder
- 10 bore sizes available 12mm - 100mm
- 4 flexible mounting options
- Female and male rod ends available
- Bumpers standard on all models
- Magnetic and non-magnetic construction available



### Operating information

Operating pressure:	10 bar (145 PSIG) maximum
Temperature range:	-5°C to 60°C (23°F to 140°F)
Filtration requirements:	40 micron, dry filtered air

### Metric Double Acting / Magnetic - Female Threaded Piston Rod

#### 12mm

Stroke (mm)	Order Code
5	P1QS012DC7G0005
10	P1QS012DC7G0010
15	P1QS012DC7G0015
25	P1QS012DC7G0025
30	P1QS012DC7G0030

#### 16mm

5	P1QS016DC7G0005
10	P1QS016DC7G0010
15	P1QS016DC7G0015
25	P1QS016DC7G0025
30	P1QS016DC7G0030

#### 20mm

10	P1QS020DC7G0010
15	P1QS020DC7G0015
25	P1QS020DC7G0025
30	P1QS020DC7G0030
40	P1QS020DC7G0040
50	P1QS020DC7G0050

#### 25mm

10	P1QS025DC7G0010
15	P1QS025DC7G0015
25	P1QS025DC7G0025
30	P1QS025DC7G0030
40	P1QS025DC7G0040
50	P1QS025DC7G0050

#### 32mm

10	P1QS032DC7N0010
15	P1QS032DC7N0015
25	P1QS032DC7N0025
30	P1QS032DC7N0030
40	P1QS032DC7N0040
50	P1QS032DC7N0050
75	P1QS032DC7N0075
100	P1QS032DC7N0100

#### 40mm

15	P1QS040DC7N0015
25	P1QS040DC7N0025
30	P1QS040DC7N0030
40	P1QS040DC7N0040
50	P1QS040DC7N0050
75	P1QS040DC7N0075
100	P1QS040DC7N0100

#### 50mm

15	P1QS050DC7N0015
25	P1QS050DC7N0025
30	P1QS050DC7N0030
40	P1QS050DC7N0040
50	P1QS050DC7N0050
75	P1QS050DC7N0075
100	P1QS050DC7N0100

#### 63mm

15	P1QS063DC7N0015
25	P1QS063DC7N0025
30	P1QS063DC7N0030
40	P1QS063DC7N0040
50	P1QS063DC7N0050
75	P1QS063DC7N0075

#### 80mm

15	P1QS080DC7N0015
25	P1QS080DC7N0025
30	P1QS080DC7N0030
40	P1QS080DC7N0040
50	P1QS080DC7N0050
75	P1QS080DC7N0075

#### 100mm

15	P1QS100DC7N0015
25	P1QS100DC7N0025
30	P1QS100DC7N0030
40	P1QS100DC7N0040
50	P1QS100DC7N0050
75	P1QS100DC7N0075

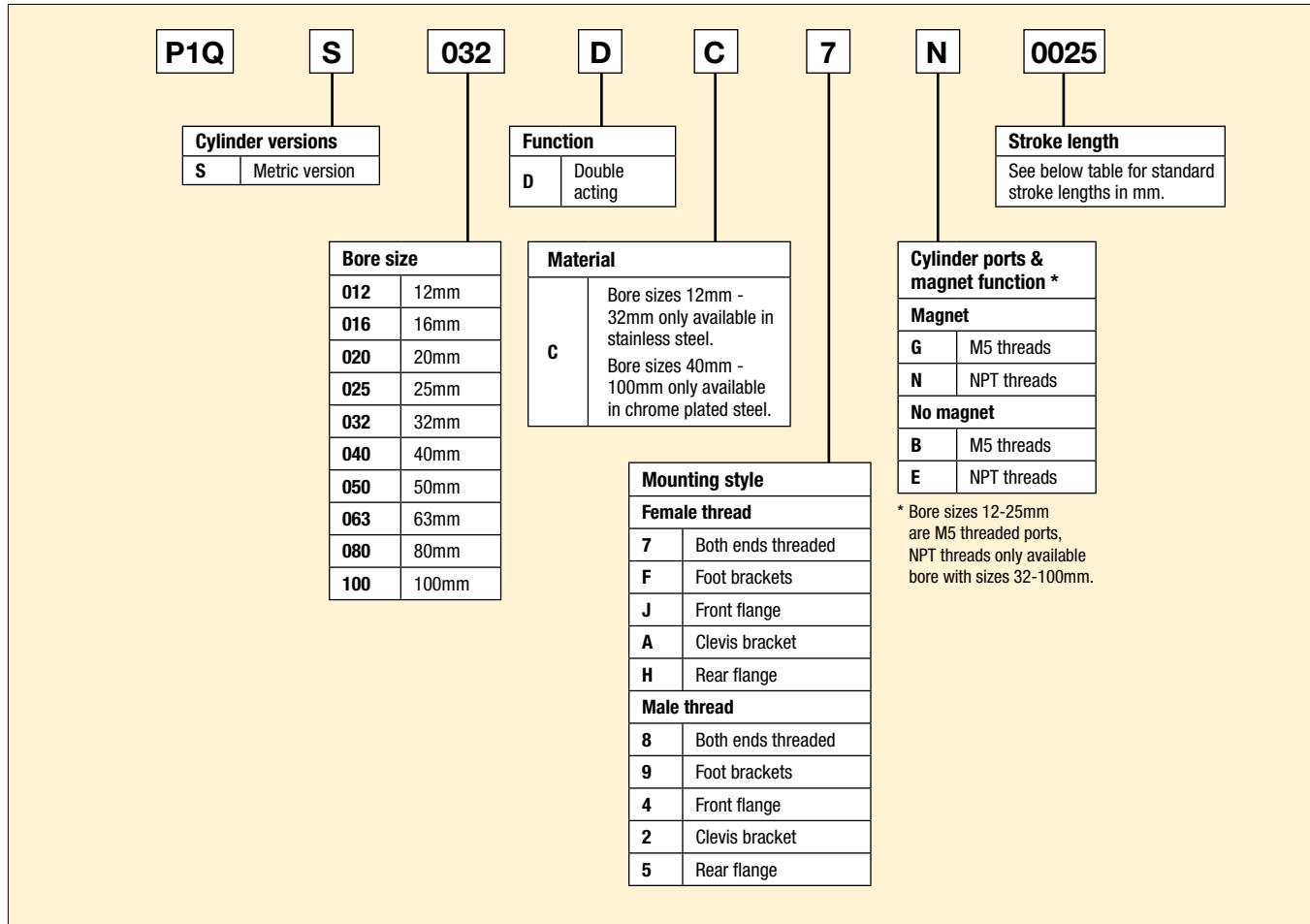
Most popular.

### Sensors

For sensors see page B339.



**Ordering information**



**B**  
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 P1M Series  
 LP/LPM Series

**Standard strokes**

Bore size	5	10	15	25	30	40	50	75	100
12 - 16	•	•	•	•	•				
20 - 25		•	•	•	•	•	•		
32		•	•	•	•	•	•	•	•
40 - 50			•	•	•	•	•	•	•
63 - 100			•	•	•	•	•	•	•

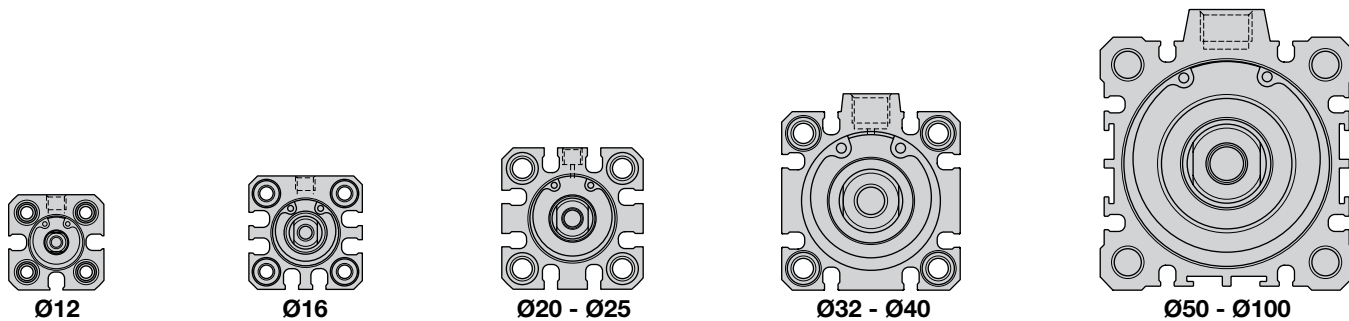
**Cylinder forces, double acting variants**

Cyl. bore/ pist. rod mm	Stroke piston area	cm <sup>2</sup>	Max theoretical force in N (bar)								
			1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
12/6	+	1.1	11	23	34	45	57	<b>68</b>	79	90	102
	-	0.8	8	17	25	34	42	<b>51</b>	59	68	76
16/8	+	2.0	20	40	60	80	101	<b>121</b>	141	161	181
	-	1.5	15	30	45	60	75	<b>90</b>	106	121	136
20/10	+	3.1	31	63	94	126	157	<b>188</b>	220	251	283
	-	2.4	24	47	71	94	118	<b>141</b>	165	188	212
25/12	+	4.9	49	98	147	196	245	<b>295</b>	344	393	442
	-	3.8	38	76	113	151	189	<b>227</b>	264	302	340
32/16	+	8.0	80	161	241	322	402	<b>483</b>	563	643	724
	-	6.0	60	121	181	241	302	<b>362</b>	422	483	543
40/16	+	12.6	126	251	377	503	628	<b>754</b>	880	1005	1131
	-	10.6	106	211	317	422	528	<b>633</b>	739	844	950
50/20	+	19.6	196	393	589	785	982	<b>1178</b>	1374	1571	1767
	-	16.5	165	330	495	660	825	<b>990</b>	1155	1319	1484
63/20	+	31.2	312	623	935	1247	1559	<b>1870</b>	2182	2494	2806
	-	28.0	280	561	841	1121	1402	<b>1682</b>	1962	2242	2523
80/25	+	50.3	503	1005	1508	2011	2513	<b>3016</b>	3519	4021	4524
	-	45.4	454	907	1361	1814	2268	<b>2721</b>	3175	3629	4082
100/32	+	78.5	785	1571	2356	3142	3927	<b>4712</b>	5498	6283	7069
	-	70.5	705	1410	2115	2820	3525	<b>4230</b>	4936	5640	6345

+ = Outward stroke  
 - = Return stroke

**Note:**  
 Select a theoretical force 50-100% larger than the force required

**Front profiles by bore size**

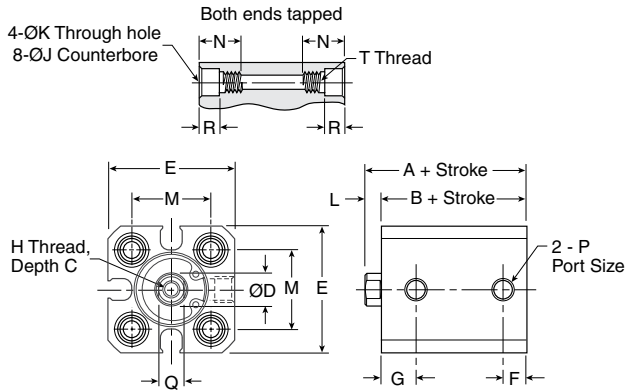


**B**  
 Compact Cylinders  
 Actuator Products  
 P1Q Series  
 P1M Series  
 LP/LPM Series

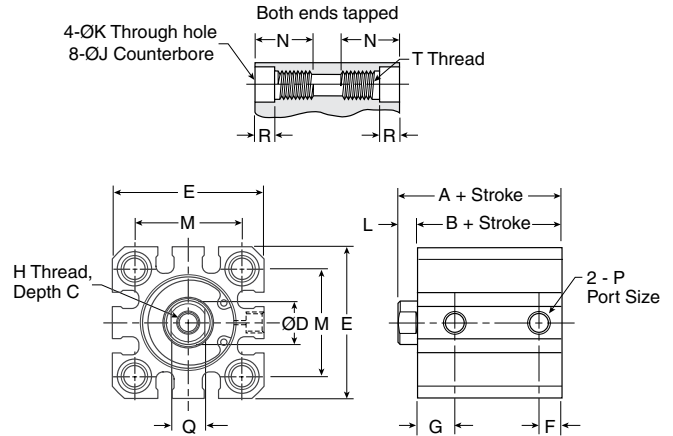


**Magnet Dimensions**

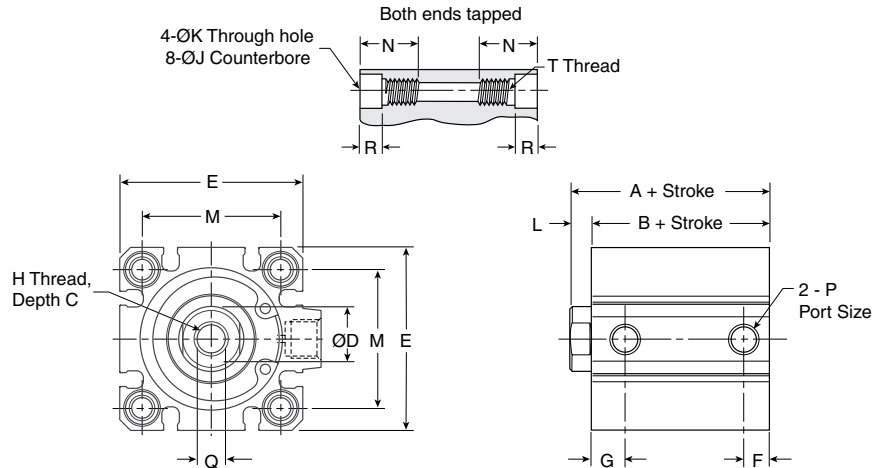
**Ø12 - Ø16**



**Ø20 - Ø25**



**Ø32 - Ø100**



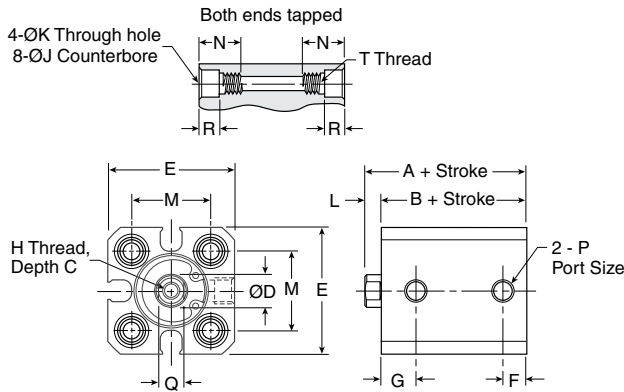
Bore size	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H	J mm	K mm	L mm	M mm	N mm	P	Q mm	R mm	T
12	25.5	22	6	6	25	5	7.5	M3x0.5	6.5	3.5	3.5	15.5	11	M5x0.8	5	4	M4x0.7
16	25.5	22	8	8	29	5	7.5	M4x0.7	6.5	3.5	3.5	20	11	M5x0.8	6	4	M4x0.7
20	34	29.5	7	10	36	5.5	9	M5x0.8	9	5.4	4.5	25.5	17	M5x0.8	8	7	M6x1.0
25	37.5	32.5	12	12	40	5.5	11	M6x1.0	9	5.4	5	28	17	M5x0.8	10	7	M6x1.0
32	40	33	13	16	45	7.5	10.5	M8x1.25	9	5.5	7	34	17	1/8"	14	7	M6x1.0
40	46.5	39.5	13	16	52	8	11	M8x1.25	9	5.5	7	40	17	1/8"	14	7	M6x1.0
50	48.5	40.5	15	20	64	10.5	10.5	M10x1.5	11	6.6	8	50	22	1/4"	17	8	M8x1.25
63	54	46	15	20	77	10.5	15	M10x1.5	14	9	8	60	28.5	1/4"	17	10.5	M10x1.5
80	63.5	53.5	21	25	98	12.5	16	M16x2.0	17.5	11	10	77	35.5	3/8"	22	13.5	M12x1.75
100	75	63	27	30	117	13	23	M20x2.5	17.5	11	12	94	35.5	3/8"	27	13.5	M12x1.75

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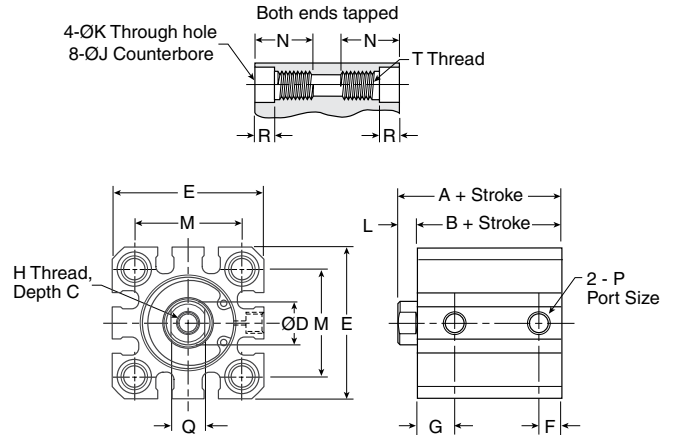


**Non-magnet Dimensions**

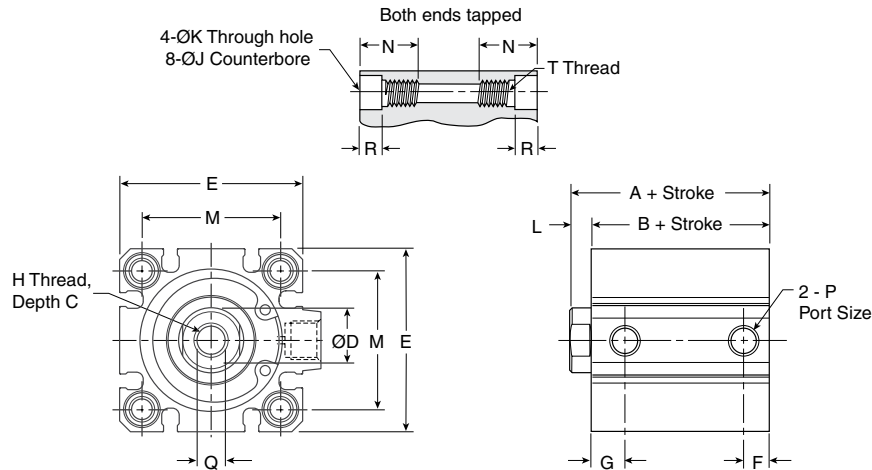
**Ø12 - Ø16**



**Ø20 - Ø25**



**Ø32 - Ø100**



Bore size	A		B		C mm	D mm	E mm	F mm	G mm	H	J mm	K mm	L mm	M mm	N mm	P	Q mm	R mm	T
	5 to 50mm	75 to 100mm	5 to 50mm	75 to 100mm															
12	20.5	-	17	-	6	6	25	5	7.5	M3x0.5	6.5	3.5	3.5	15.5	11	M5x0.8	5	4	M4x0.7
16	20.5	-	17	-	8	8	29	5	7.5	M4x0.7	6.5	3.5	3.5	20	11	M5x0.8	6	4	M4x0.7
20	24	-	19.5	-	7	10	36	5.5	9	M5x0.8	9	5.4	4.5	25.5	17	M5x0.8	8	7	M6x1.0
25	27.5	-	22.5	-	12	12	40	5.5	11	M6x1.0	9	5.4	5	28	17	M5x0.8	10	7	M6x1.0
32	30	40	23	33	13	16	45	7.5	10.5	M8x1.25	9	5.5	7	34	17	1/8"	14	7	M6x1.0
40	36.5	46.5	29.5	39.5	13	16	52	8	11	M8x1.25	9	5.5	7	40	17	1/8"	14	7	M6x1.0
50	38.5	48.5	30.5	40.5	15	20	64	10.5	10.5	M10x1.5	11	6.6	8	50	22	1/4"	17	8	M8x1.25
63	44	54	36	46	15	20	77	10.5	15	M10x1.5	14	9	8	60	28.5	1/4"	17	10.5	M10x1.5
80	53.5	63.5	43.5	53.5	21	25	98	12.5	16	M16x2.0	17.5	11	10	77	35.5	3/8"	22	13.5	M12x1.75
100	65	75	53	63	27	30	117	13	23	M20x2.5	17.5	11	12	94	35.5	3/8"	27	13.5	M12x1.75

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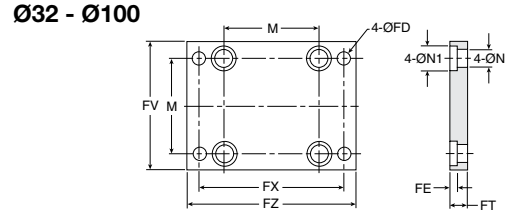
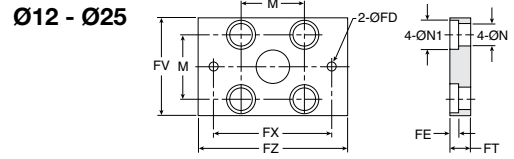


**Flange Mounting – Style J, H, 4, 5**



Intended for fixed mounting of cylinder.  
 Flange can be fitted to front or rear of cylinder.

**Material**  
 Flange: surface treated steel, black  
 Supplied complete with mounting screws for attachment to cylinder.



Bore size	FD mm	FT mm	FV mm	FX mm	FZ mm	M mm	N mm	N1 mm	Mass kg	Part number
12	4.5	5.5	25	45	55	15.5	4.5	7.5	0.08	<b>P1Q-4DMB</b>
16	4.5	5.5	30	45	55	20	4.5	7.5	0.10	<b>P1Q-4FMB</b>
20	6.5	8	39	48	60	25.5	6.5	10.5	0.16	<b>P1Q-4HMB</b>
25	6.5	8	42	52	64	28	6.5	10.5	0.20	<b>P1Q-4JMB</b>
32	5.5	8	48	56	65	34	6.5	10.5	0.23	<b>P1Q-4KMB</b>
40	5.5	8	54	62	72	40	6.5	10.5	0.28	<b>P1Q-4LMB</b>
50	6.5	9	67	76	89	50	8.5	13.5	0.53	<b>P1Q-4MMB</b>
63	9	9	80	92	108	60	10.5	16.5	0.71	<b>P1Q-4NMB</b>
80	11	11	99	116	134	77	12.5	18.5	1.59	<b>P1Q-4PMB</b>
100	11	11	117	136	154	94	12.5	18.5	2.19	<b>P1Q-4QMB</b>

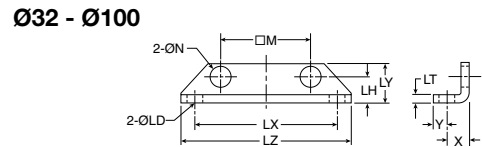
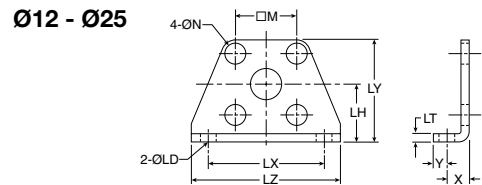
**Foot Mounting – Style F, 9**



Intended for fixed mounting of cylinder.  
 Angle bracket can be fitted to front and rear of cylinder.

**Material**  
 Angle bracket: surface treated steel, black  
 Supplied in pairs with mounting screws for attachment to cylinder.

\* Weight per item



Bore size	LD mm	LH mm	LT mm	LX mm	LY mm	LZ mm	X mm	Y mm	M mm	N mm	Mass kg	Part number
12	4.5	17	2	34	29.5	44	8	4.5	15.5	4.5	0.02*	<b>P1Q-4DMF</b>
16	4.5	19	2	38	33.5	48	8	5	20	4.5	0.02*	<b>P1Q-4FMF</b>
20	6.5	24	3.2	48	42	62	9.2	5.8	25.5	6.5	0.04*	<b>P1Q-4HMF</b>
25	6.5	26	3.2	52	46	66	10.7	5.8	28	6.5	0.05*	<b>P1Q-4JMF</b>
32	6.5	13	3.2	57	20	71	11.2	5.8	34	6.5	0.06*	<b>P1Q-4KMF</b>
40	6.5	13	3.2	64	20	78	11.2	7	40	6.5	0.08*	<b>P1Q-4LMF</b>
50	8.5	14	3.2	79	22	95	12.2	8	50	8.5	0.16*	<b>P1Q-4MMF</b>
63	10.5	16	3.2	95	26	113	13.7	9	60	10.5	0.25*	<b>P1Q-4NMF</b>
80	13	20.5	4.5	118	32	140	16.5	11	77	13	0.50*	<b>P1Q-4PMF</b>
100	13	24	6	137	36	162	23	11.5	94	13	0.85*	<b>P1Q-4QMF</b>

**B**  
 Compact Cylinders  
 Actuator Products  
 P1Q Series  
 P1M Series  
 LP/LPM Series



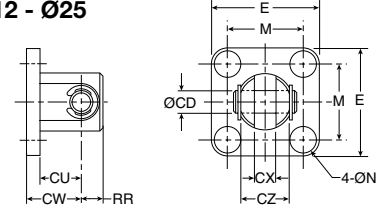
**Clevis Mounting – Style A, 2**



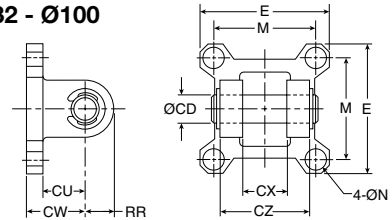
Intended for flexible mounting of cylinder. Clevis bracket can be fitted to the rear of cylinder.

**Material**  
 Clevis bracket: surface treated steel, black  
 Supplied complete with mounting screws for attachment to cylinder.

**Ø12 - Ø25**



**Ø32 - Ø100**



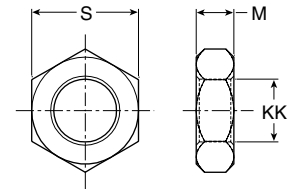
Bore size	CD mm	CU mm	CW mm	CX mm	CZ mm	N mm	RR mm	M mm	E mm	Mass kg	Part number
12	5	9.5	14	5.3	9.8	4.5	6	15.5	25	0.02	<b>P1Q-4DMT</b>
16	5	10.5	15	6.8	11.8	4.5	6	20	29	0.03	<b>P1Q-4FMT</b>
20	8	12.5	18	8.3	15.8	6.5	9	25.5	36	0.05	<b>P1Q-4HMT</b>
25	10	14.5	20	10.3	19.8	6.5	10	28	40	0.06	<b>P1Q-4JMT</b>
32	10	14.5	20	18.3	35.8	6.5	10	34	45.5	0.08	<b>P1Q-4KMT</b>
40	10	15	22	18.3	35.8	6.5	10	40	53.5	0.11	<b>P1Q-4LMT</b>
50	14	20	28	22.3	43.8	8.5	14	50	64.5	0.14	<b>P1Q-4MMT</b>
63	14	21	30	22.3	43.8	10.5	14	60	77.5	0.29	<b>P1Q-4NMT</b>
80	18	28	38	28.3	55.8	12.5	18	77	98.5	0.36	<b>P1Q-4PMT</b>
100	22	32	45	32.3	63.8	12.5	22	94	117.5	0.64	<b>P1Q-4QMT</b>

**Jam Nut**



Intended for fixed mounting of accessories to the piston rod.

**Materials**  
 Galvanized steel  
 Cylinders supplied with galvanized nut.



Bore size	KK	M	S	Mass kg	Part number
12	M5x0.8	2.7	18	0.002	<b>L075540005</b>
16	M6x1.0	3.2	10	0.002	<b>L075540006</b>
20	M8x1.25	4	13	0.005	<b>L075540008</b>
25	M10x1.25	5	17	0.007	<b>L075540010</b>
32	M14x1.5	7	22	0.010	<b>L075540014</b>
40	M14x1.5	7	22	0.010	<b>L075540014</b>
50	M18x1.5	8	27	0.021	<b>L075540018</b>
63	M18x1.5	8	27	0.021	<b>L075540018</b>
80	M22x1.5	11	32	0.040	<b>L075540022</b>
100	M26x1.5	16	41	0.040	<b>L075540026</b>

**B**

Compact Cylinders  
Actuator Products

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P1Q  
Series

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P1M  
Series

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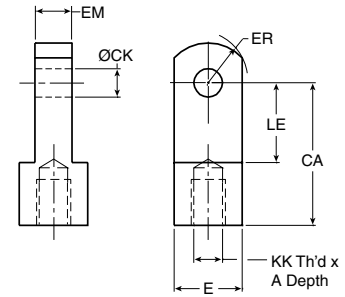
LP/LPM  
Series

## Rod Eye



Rod eye for articulated mounting of cylinder.  
 Rod eye can be combined with clevis bracket.  
 Maintenance-free.

**Material**  
 Rod eye, nut: galvanized steel



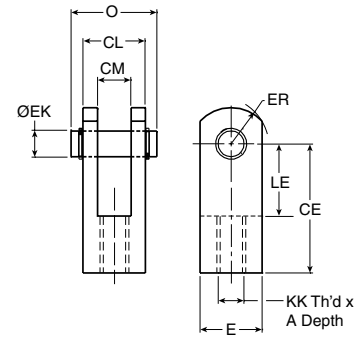
Bore size	A	E	CA	KK	ER	LE	CK	EM	Mass kg	Part number
12	7	9.5 Sq.	16	M5x0.8	6.5	7	5	5	0.03	<b>P1M-4DRE</b>
16	8	11 Sq.	25	M6x1.0	8	14	5	6.5	0.03	<b>P1M-4FRE</b>
20	8.5	16 Sq.	25	M8x1.25	10.5	11.5	8	8	0.05	<b>P1M-4HRE</b>
25	10.5	19 Sq.	30	M10x1.25	13	14	10	10	0.07	<b>P1M-4JRE</b>
32	14	22 Dia.	30	M14x1.5	12	14	10	18	0.08	<b>P1M-4LRE</b>
40	14	22 Dia.	30	M14x1.5	12	14	10	18	0.12	<b>P1M-4LRE</b>
50	18.5	28 Dia.	40	M18x1.5	16	20	14	22	0.25	<b>P1M-4MRE</b>
63	18.5	28 Dia.	40	M18x1.5	16	20	14	22	0.25	<b>P1M-4MRE</b>
80	22	38 Dia.	50	M22x1.5	21	27	18	28	0.25	<b>P1M-4PRE</b>

## Rod Clevis



Clevis for articulated mounting of cylinder.

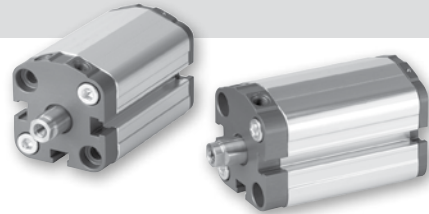
**Material**  
 Clevis, clip, nut: galvanized steel  
 Pin: hardened steel



Bore size	A	E	CE	KK	ER	LE	EK (h9)	CM	CL	O	Mass kg	Part number
12	7	9.5	16	M5x0.8	6.5	7	5	5	9.5	14.5	0.02	<b>P1M-4DRC</b>
16	11	11	21	M6x1.0	8	10	5	6.5	11	16.5	0.02	<b>P1M-4FRC</b>
20	8.5	16	25	M8x1.25	10.5	11.5	8	8	16	21	0.05	<b>P1M-4HRC</b>
25	10.5	19	30	M10x1.25	13	14	10	10	19	25.5	0.09	<b>P1M-4JRC</b>
32	16	22 Dia.	30	M14x1.25	12	14	10	18	36	41.5	0.09	<b>P1M-4LRC</b>
40	16	22 Dia.	30	M14x1.25	12	14	10	18	36	41.5	0.15	<b>P1M-4LRC</b>
50	20	28 Dia.	40	M18x1.5	16	20	14	22	44	50.5	0.35	<b>P1M-4MRC</b>
63	20	28 Dia.	40	M18x1.5	16	20	14	22	44	50.5	0.35	<b>P1M-4MRC</b>
80	23	38 Dia.	50	M22x1.5	21	27	18	28	56	64	0.75	<b>P1M-4PRC</b>

## P1M Series

- Versatile range of square body style compact cylinder
- Available in Low Profile Version or Long Bearing Version for enhanced rod bearing support
- 10 bore sizes: 12mm through 100mm
- Single and double acting versions available
- Four flexible port configurations available
- Recessed, flush position piston sensing available



### Operating information

Operating pressure:	145 PSIG (10 bar) maximum air
Temperature range:	Standard: -4°F to 176°F (-20°C to 80°C) High: 14°F to 250°F (-10°C to 121°C)
Filtration requirements:	40 micron, dry filtered air

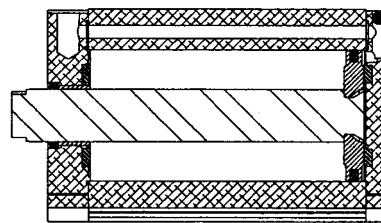
### Ordering information

<b>P1M</b>	<b>032</b>	<b>C</b>	<b>/</b>	<b>D</b>	<b>C</b>	<b>P</b>	<b>6</b>	<b>G</b>	<b>012</b>																																																																													
	<b>Bore size</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>012</td><td>12mm</td></tr> <tr><td>016</td><td>16mm</td></tr> <tr><td>020</td><td>20mm</td></tr> <tr><td>025</td><td>25mm</td></tr> <tr><td>032</td><td>32mm</td></tr> <tr><td>040</td><td>40mm</td></tr> <tr><td>050</td><td>50mm</td></tr> <tr><td>063</td><td>63mm</td></tr> <tr><td>080</td><td>80mm</td></tr> <tr><td>100</td><td>100mm</td></tr> </table>	012	12mm	016	16mm	020	20mm	025	25mm	032	32mm	040	40mm	050	50mm	063	63mm	080	80mm	100	100mm		Insert "/" to denote special	<b>Function</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>D</td><td>Double acting</td></tr> <tr><td>K</td><td>Double rod</td></tr> <tr><td>R</td><td>Single acting spring return <sup>6</sup></td></tr> <tr><td>E</td><td>Single acting spring extend <sup>4</sup></td></tr> </table>	D	Double acting	K	Double rod	R	Single acting spring return <sup>6</sup>	E	Single acting spring extend <sup>4</sup>		<b>Piston rod &amp; bearings</b> <b>Extra low profile rod bearing</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>P</td><td>Chrome plated steel rod not available on 12-25mm bores</td></tr> <tr><td>Y</td><td>Stainless steel rod standard on 12-25mm bores and spring extend models</td></tr> </table> <b>Long rod bearing <sup>2</sup></b> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>C</td><td>Chrome plated steel rod not available on 12-25mm bores</td></tr> <tr><td>A</td><td>Stainless steel rod standard on 12-25mm bores and spring extend models</td></tr> </table>	P	Chrome plated steel rod not available on 12-25mm bores	Y	Stainless steel rod standard on 12-25mm bores and spring extend models	C	Chrome plated steel rod not available on 12-25mm bores	A	Stainless steel rod standard on 12-25mm bores and spring extend models		<b>Stroke length</b> Specify stroke length required in mm.																																										
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80	3	150	23	500	10, 20, 25																																																																																	
100	3	150	18	500	10, 20, 25																																																																																	
<p><b>NOTES:</b></p> <ol style="list-style-type: none"> <li><sup>1</sup> Fitted with Mounting Accessory</li> <li><sup>2</sup> Magnetic Piston Option must be specified along with Long Rod Bearing option to achieve Long Bearing Version</li> <li><sup>3</sup> Porting Options 'K' and 'P' (Both ports cap face) not available with rear mountings</li> <li><sup>4</sup> Single Acting Spring Extend available with stainless steel rod only.</li> <li><sup>5</sup> For information regarding sensors, please refer to Electronic Sensors section.</li> <li><sup>6</sup> Spring return is short bearing version only.</li> <li><sup>7</sup> Bumper only available on head end for spring extend. Bumper only available on cap end for spring return.</li> </ol>																																																																																						
<p><b>Sensors</b>                  For sensors see page B339. </p>																																																																																						

For ordering purposes, when special options or common modifications are requested, the factory will assign a sequential part number in place of the model number.

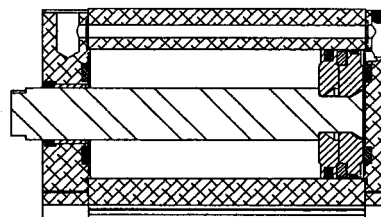
**Extra Low Profile Version**

The Extra Low Profile Bearing Version provides the most compact cylinder possible. This bearing version is recommended for applications that require shorter stroke lengths or that are light duty. It is available in stroke lengths up to 50mm in the smaller bore sizes and 150 mm in the larger bore sizes.

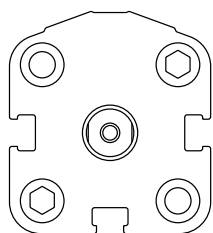


**Long Bearing Version**

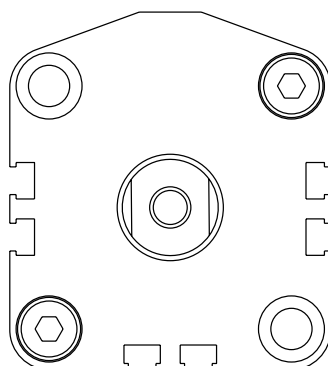
The Long Bearing Version provides additional rod bearing and piston bearing support and also includes a magnetic piston with bearing strip for greater piston bearing support. This Long Bearing version is required for stroke lengths beyond the Extra Low Profile maximum stroke length and is recommended for higher duty applications.



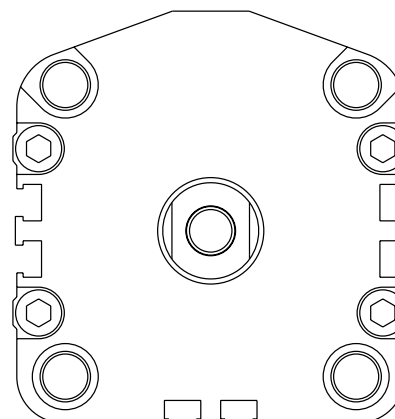
**Front profiles by bore size**



**Bores 12-25mm**



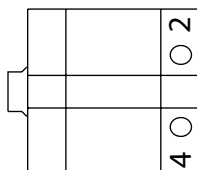
**Bores 32-50mm**



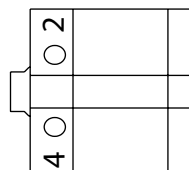
**Bores 63-100mm**

**Porting configurations**

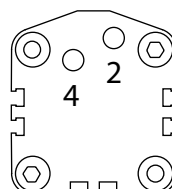
**Both Ports Cap**



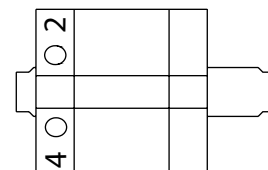
**Both Ports Head\***



**Both Ports Cap Face**



**Double Rod Both Ports One End**



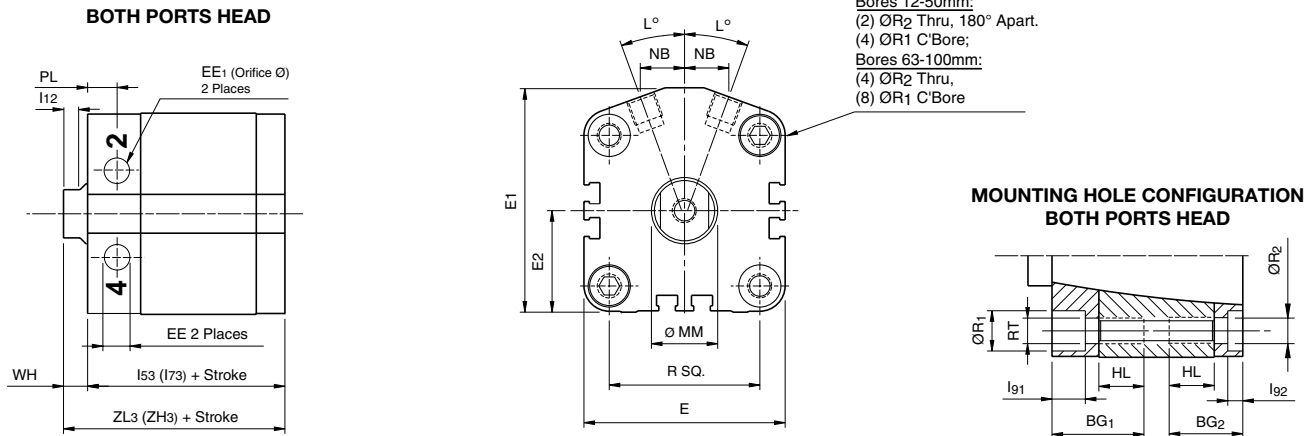
To retract cylinder apply air to port #2  
 To extend cylinder apply air to port #4

For a double rod cylinder, pressurize port #2 to retract the piston rod into the head containing the ports.

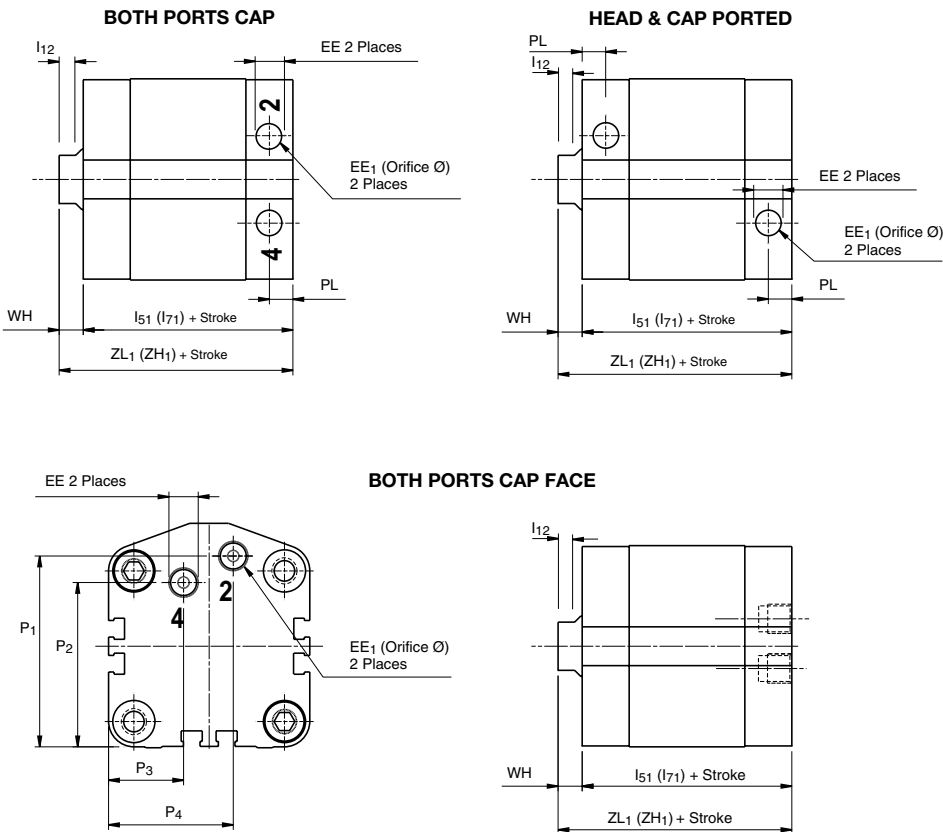
\* For 12mm to 16mm bores, although the location of ports #2 and #4 are reversed, porting functions shown above apply.

**B**  
Compact Cylinders  
Actuator Products  
P1Q Series  
P1M Series  
LP/LPM Series

**All porting configurations**



**Optional porting configurations**



Note: Magnetic Dimensions in Parentheses

<b>B</b>	Compact Cylinders Actuator Products
	P1Q Series
	P1M Series
LP/LPM Series	



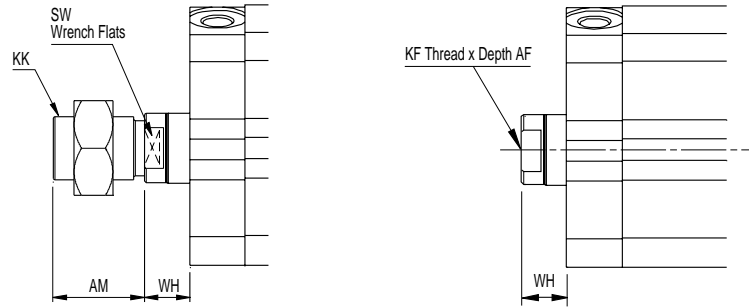


**Parker Pneumatic**

**P1M Series**

For special rod ends, specify “3” in model number and give desired WH, AM or AF and KK or KF (length dimensions in millimeters).

Jam nut is supplied when cylinder is ordered with Style 4 or Style 5 rod end.



Style 5 / Style 4

Style 6 / Style 9

Bore size	Rod	AF		AM		KF		KK		WH		I <sub>12</sub>	SW
		Style 6	Style 9	Style 5	Style 4	Style 6	Style 9	Style 5	Style 4	Style 4, 9 & 6	Style 5		
12	6	6	5.4	9	8	M3x0.5	#8-32	M5x0.8	#8-32	3.5	5	3	5
16	8	8	5.4	10	8	M4x0.7	#8-32	M6x1.0	#8-32	3.5	5.5	3	7
20	10	7	7	12	8	M5x0.8	#10-32	M8x1.25	#10-32	4.5	6.5	4	9
25	10	12	10	15	9.5	M6x1.0	1/4-28	M10x1.25	1/4-28	5	7.5	4	9
32	12	13	13.3	20.5	12.7	M8x1.25	5/16-24	M12x1.25	5/16-24	7	8	5	10
40	16	13	18.3	20.5	16	M8x1.25	3/8-24	M14x1.5	3/8-24	7	8	5.5	13
50	20	15	17.6	26	19.5	M10x1.5	1/2-20	M18x1.5	1/2-20	8	7.5	5.5	16
63	20	15	17.6	26	19.5	M10x1.5	1/2-20	M18x1.5	1/2-20	8	7.5	5.5	16
80	25	21	24.3	32.5	25.5	M16x2.0	5/8-18	M22x1.5	5/8-18	10	11	6	21
100	25	27	27	32.5	28.5	M20x2.5	3/4-16	M22x1.5	3/4-16	12	11	6	21

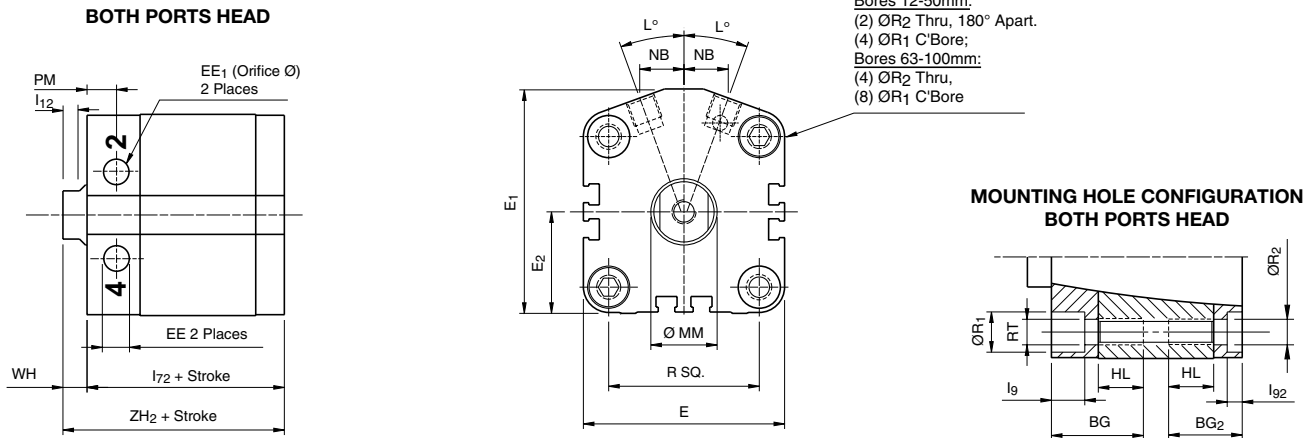
Bore size	BG <sub>1</sub>	BG <sub>2</sub>	E	E <sub>1</sub>	E <sub>2</sub>	EE		HL	I <sub>91</sub>	I <sub>92</sub>	L	NB	P <sub>1</sub>	P <sub>2</sub>	
						BSPP	NPTF								
12	16.5	11.5	27	31	14	M5	-	1	8	3.5	3.5	26	5.5	25	9.5
16	17	12	31.5	35	16	M5	-	1.2	8	4	4	20	7	29.5	9.5
20	19	14.5	38.5	42.5	19.5	M5	-	1.3	10	4.5	4.5	20	8	35	13.5
25	21	15	41.5	45.5	21	M5	-	1.8	10	5	5	20	8.5	38.5	14
32	25	17	48	56	24	G1/8	1/8	2.7	10	4	4	25	9.5	45.5	16.5
40	25.5	17.5	56	62.5	28	G1/8	1/8	3.4	10	4	4	20	11.5	51	12
50	29.5	23.5	67	74.5	33.5	G1/8	1/8	4	14	5	5	20	14.5	63	54.5
63	34	28	82	86	40.5	G1/8	1/8	5	18	6.5	8	20	17.5	73.5	64
80	43	34	98	106.5	48.5	G1/4	1/4	5.5	22	8.5	10	20	25.5	92	79.5
100	44	35.5	119	126.5	59.5	G1/4	1/4	6	22	8.5	10	20	31.5	111.5	97.5

Bore size	P <sub>3</sub>	P <sub>4</sub>	PL	PM	R	R <sub>1</sub>	R <sub>2</sub> *	RT	Non-magnetic				Magnetic				ELP Max stroke
									I <sub>51</sub>	I <sub>53</sub>	ZL <sub>1</sub>	ZL <sub>3</sub>	I <sub>71</sub>	I <sub>73</sub>	ZH <sub>1</sub>	ZH <sub>3</sub>	
12	13.5	13.5	5	8.5	15.5	5.8	3.5	M4	22	17	25.5	20.5	33	28	36.5	31.5	50
16	15.5	18	5	9	20	7.4	3.5	M4	23.5	18.5	27	22	34.5	29.5	38	33	50
20	24.5	21.5	5	9	25.5	9	5.5	M6	24	19.5	28.5	24	34	29.5	38.5	34	50
25	27.5	24.5	7	9	28	9	5.5	M6	28.5	22.5	33.5	27.5	38.5	32.5	43.5	37.5	50
32	31.5	28.5	8	10.5	34	10.5	5.5	M6	36.5	28.5	43.5	35.5	46	37.5	53	44.5	100
40	23	33	7.5	9.5	40	10.5	5.5	M6	38.5	29.5	44.5	36.5	47.5	39.5	54.5	46.5	100
50	25	41.5	8	10	50	13.5	7.5	M8	38.5	32.5	46.5	40.5	47.5	41.5	55.5	49.5	100
63	30	53	8	11	60	13.5	9.5	M10	39.5	34	47.5	42	51.5	46	59.5	54	100
80	33	69.5	11.5	11.5	77	16.5	11	M12	52	43	62	53	62.5	53.5	72.5	63.5	150
100	36.5	87.5	12	12	94	17	11	M12	57	48.5	69	60.5	71.5	63	83.5	75	150

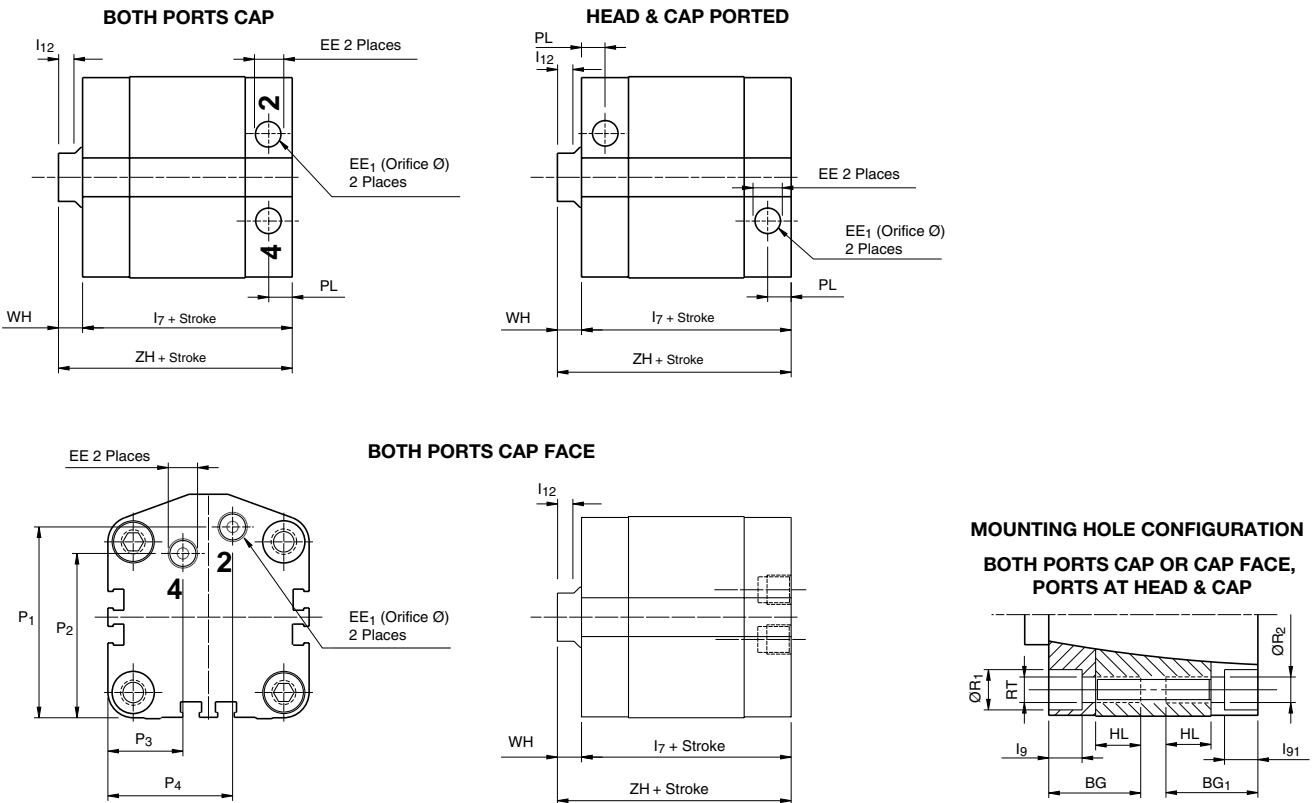
\*\*R2 thru” not available on 12mm and 16mm bores.



**All porting configurations**



**Optional porting configurations**



Note: Magnetic Dimensions in Parentheses



**B**

Compact Cylinders  
Actuator Products

P1Q Series

P1M Series

LP/LPM Series

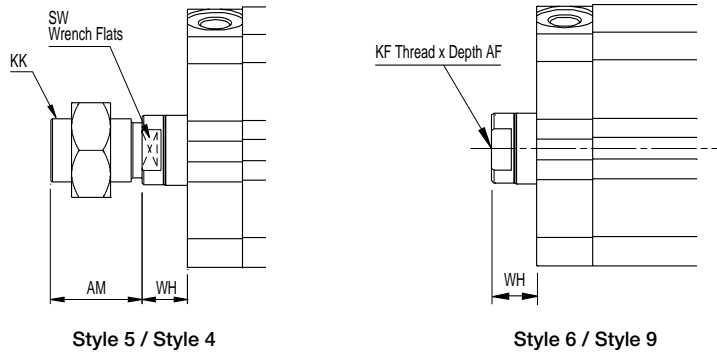
**Parker Pneumatic**

**P1M Series**

For special rod ends, specify “3” in model number and give desired WH, AM or AF and KK or KF (length dimensions in millimeters).

Jam nut is supplied when Style 4 or Style 5 rod end is specified.

**Note:** Magnetic piston and longer rod bearing are standard with Long Bearing Version.



**B**  
Compact Cylinders  
Actuator Products  
  
P1Q  
Series  
  
P1M  
Series  
  
LP/LPM  
Series

Bore size	Rod MM	AF		AM		KF		KK		WH		I12	SW
		Style 6	Style 9	Style 5	Style 4	Style 6	Style 9	Style 5	Style 4	Style 4, 9 & 6	Style 5		
12	6	6	5.4	9	8	M3x0.5	#8-32	M5x0.8	#8-32	3.5	5	3	5
16	8	8	5.4	10	8	M4x0.7	#8-32	M6x1.0	#8-32	3.5	5.5	3	7
20	10	7	7	12	8	M5x0.8	#10-32	M8x1.25	#10-32	4.5	6.5	4	9
25	10	12	10	15	9.5	M6x1.0	1/4-28	M10x1.25	1/4-28	5	7.5	4	9
32	12	13	13.3	20.5	12.7	M8x1.25	5/16-24	M12x1.25	5/16-24	7	8	5	10
40	16	13	18.3	20.5	16	M8x1.25	3/8-24	M14x1.5	3/8-24	7	8	5.5	13
50	20	15	17.6	26	19.5	M10x1.5	1/2-20	M18x1.5	1/2-20	8	7.5	5.5	16
63	20	15	17.6	26	19.5	M10x1.5	1/2-20	M18x1.5	1/2-20	8	7.5	5.5	16
80	25	21	24.3	32.5	25.5	M16x2.0	5/8-18	M22x1.5	5/8-18	10	11	6	21
100	25	27	27	32.5	28.5	M20x2.5	3/4-16	M22x1.5	3/4-16	12	11	6	21

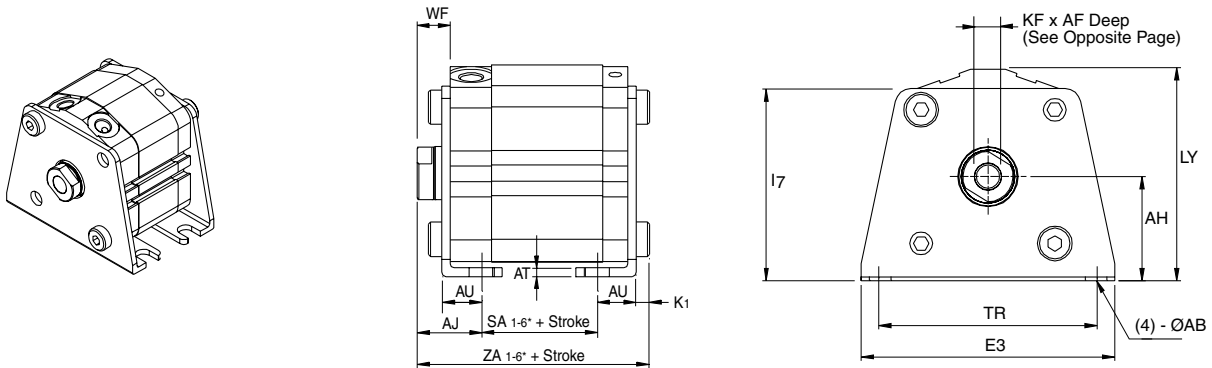
Bore size	EE															
	BG	BG1	BG2	E	E1	E2	BSPP	NPTF	EE1	HL	l7	l72	l9	l91	l92	L
12	21.5	16.5	11.5	27	31	14	M5	-	1	8	38.5	33.5	3.5	3.5	3.5	26
16	22	17	12	31.5	35	16	M5	-	1.2	8	40.5	35.5	5.5	4	4	20
20	24.5	19	14.5	38.5	42.5	19.5	M5	-	1.3	10	40	35.5	10.5	4.5	4.5	20
25	24.5	21	15	41.5	45.5	21	M5	-	1.8	10	42.5	36.5	10.5	5	5	20
32	27.5	25	17	48	56	24	G1/8	1/8	2.7	10	48	40	14	4	4	25
40	27.5	25.5	17.5	56	62.5	28	G1/8	1/8	3.4	10	49.5	41.5	14	4	4	20
50	31.5	29.5	23.5	67	74.5	33.5	G1/8	1/8	4	14	49.5	43.5	13	5	5	20
63	37	34	28	82	86	40.5	G1/8	1/8	5	18	54.5	49	6.5	6.5	8	20
80	43	43	34	98	106.5	48.5	G1/4	1/4	5.5	22	62.5	53.5	9.5	8.5	10	20
100	44	44	35.5	119	126.5	59.5	G1/4	1/4	6	22	71.5	63	9.5	8.5	10	20

Bore size	P												Min stroke	Max stroke
	NB	P1	P2	P3	P4	PM	R	R1	R2*	RT	ZH	ZH2		
12	5.5	25	9.5	13.5	13.5	8.5	15.5	5.8	3.5	M4	42	37	4	200
16	7	29.5	9.5	15.5	18	9	20	7.4	3.5	M4	44	39	4	200
20	8	35	13.5	24.5	21.5	9	25.5	9	5.5	M6	44.5	40	8	200
25	8.5	38.5	14	27.5	24.5	9	28	9	5.5	M6	47.5	41.5	8	200
32	9.5	45.5	16.5	31.5	28.5	10.5	34	10.5	5.5	M6	55	47	9	320
40	11.5	51	12	23	33	9.5	40	10.5	5.5	M6	56.5	48.5	7	320
50	14.5	63	54.5	25	41.5	10	50	13.5	7.5	M8	57.5	51.5	13	320
63	17.5	73.5	64	30	53	11	60	13.5	9.5	M10	62.5	57	18	500
80	25.5	92	79.5	33	69.5	11.5	77	16.5	11	M12	72.5	62.5	23	500
100	31.5	111.5	97.5	36.5	87.5	12	94	17	11	M12	83.5	75	18	500

\* "R2 thru" not available on 12mm and 16mm bores.



**Foot Mounting – Style F**



Please note bearing, piston and porting configuration for selecting proper dimensions.

Bore size	AB	AH	AJ	AT	AU	E3	l7	K1	LY	TR	Part number
12	4.5	17	19.5	2	8	44	29.5	2.8	34	35	<b>P1M-4DMF</b>
16	4.5	19	19.5	2	8	48	33.5	2.8	38	39	<b>P1M-4FMF</b>
20	6.5	24	20.5	3.2	9.2	62	42	4	47	50	<b>P1M-4HMF</b>
25	6.5	26	22.5	3.2	10.7	66	46	4	50.5	52	<b>P1M-4JMF</b>
32	6.5	30	25	3.2	11.2	71	54	4	62	60	<b>P1M-4KMF</b>
40	6.5	33	25	3.2	11.2	78	61	4	67.5	67	<b>P1M-4LMF</b>
50	9	39	29.5	3.2	14.7	95	72.5	5	80	82	<b>P1M-4MMF</b>
63	11	46	31	3.2	16.2	113	32	5	91.5	100	<b>P1M-4NMF</b>
80	13	59	35	4.5	19.5	140	42	7	117	118	<b>P1M-4PMF</b>
100	13	71	39	6	23	162	53	7	138	139	<b>P1M-4QMF</b>

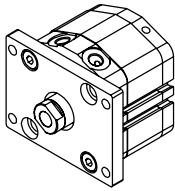
Bore size	ELP version non-magnetic					ELP version magnetic					Long bearing version					
	Both ports head		Optional porting		Min. ** stroke	Both ports head		Optional porting		Min.** stroke	Both ports head		Optional porting		Min.** stroke	Style 5 end length adjustment
	SA1	ZA1*	SA2*	ZA2*		SA3	ZA3*	SA4	ZA4*		SA5	ZA5*	SA6	ZA6*		
12	5	35.3	10	40.3	15	16	46.3	21	51.3	4	21.5	51.8	26.5	56.8	4	1.5
16	6.5	36.8	11.5	41.8	14	17.5	47.8	22.5	52.8	4	23.5	53.8	28.5	58.8	4	2
20	7.5	41.2	12	45.7	18	17.5	51.2	22	55.7	8	23.5	57.2	28	61.9	8	2
25	7.5	44.7	13.5	50.7	18	17.5	54.7	23.5	60.7	8	21.5	58.7	27.5	64.7	8	2.5
32	12.5	52.5	20.5	60.7	18	21.5	61.7	29.5	69.9	9	24	64	32	72.2	9	1
40	13.5	53.7	21.5	61.9	17	23.5	63.7	31.5	71.9	7	25.5	65.7	33.5	73.9	7	1
50	9.5	58.7	15.5	64.9	22	18.5	67.7	24.5	73.9	13	20.5	69.7	26.5	75.9	13	-0.5
63	8	60.2	13.5	65.7	30	20	72.2	25.5	77.7	18	23	75.2	28.5	80.7	18	-0.5
80	13	74.5	22	83.5	33	23.5	85	32.5	94	23	23.5	85	32.5	94	23	1
100	14.5	83.5	23	92	33	29	98	37.5	106.5	18	29	98	37.5	106.5	18	-1

\* For strokes less than 'min. stroke', only one bracket will be supplied at rod end.

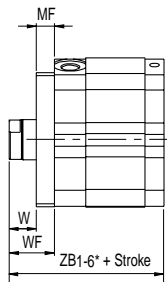
\*\* Dimensions shown apply only for rod end styles 4, 6 and 9. For rod end style 5, please include the above length adjustment.

**Note:** Foot bracket mounting is not available with cap face porting

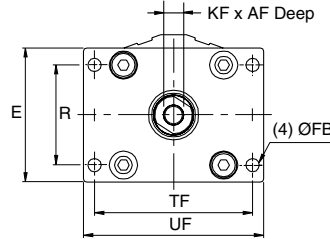
**Front Flange Mounting – Style J**



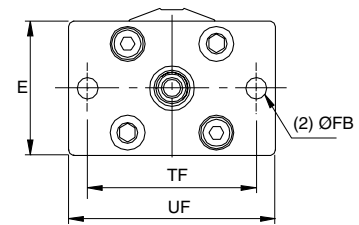
Please note bearing, piston and porting configuration for selecting proper dimensions.



**Bores 32-100mm**



**Bores 12-25mm**



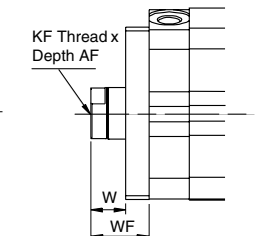
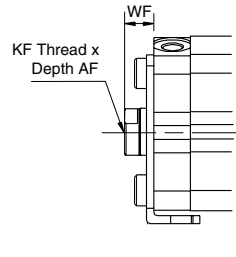
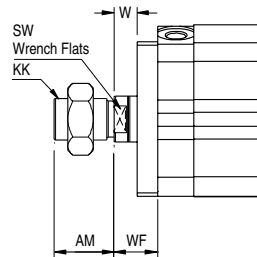
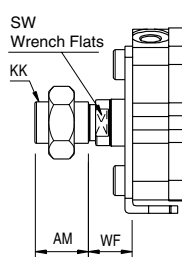
**B**  
 Compact Cylinders  
 Actuator Products  
 Series P1Q  
 Series P1M  
 Series LP/LPM

Bore size	ELP version Non-magnetic						ELP version Magnetic				Long bearing Version		Style 5 rod end length adjustment	Part number
	E	FB	MF	R	TF	UF	Both ports head	Optional Porting	Both ports head	Optional porting	Both ports head	Optional porting		
12	25	4.5	5.5	-	45	55	ZB1*	ZB2*	ZB3*	ZB4*	ZB5*	ZB6*	1.5	<b>P1M-4DMB</b>
16	30	4.5	5.5	-	45	55	32	37	43	48	49	54	2	<b>P1M-4FMB</b>
20	39	6.5	8	-	50.5	62	34	38.5	44	48.5	50	54.5	2	<b>P1M-4HMB</b>
25	42	6.5	8	-	53	65	37.5	43.5	47.5	53.5	51.5	57.5	2.5	<b>P1M-4JMB</b>
32	48	5.5	8	34	58	68	45.5	53.5	54.5	62.5	57	65	1	<b>P1M-4KMB</b>
40	54	5.5	8	40	66	76	46.5	54.5	56.5	64.5	58.5	66.5	1	<b>P1M-4LMB</b>
50	67	6.5	9	50	79	90	50.5	56.5	59.5	65.5	61.5	67.5	-0.5	<b>P1M-4MMB</b>
63	80	9	9	60	97	112	52	57.5	64	69.5	67	72.5	-0.5	<b>P1M-4NMB</b>
80	99	11	11	77	116	134	63	72	73.5	82.5	73.5	82.5	1	<b>P1M-4PMB</b>
100	117	11	11	94	137	154	70.5	79	85	93.5	85	93.5	-1	<b>P1M-4QMB</b>

\* Dimensions shown apply only for Rod End Styles 4, 6 and 9. For Rod End Style 5, please include the above length adjustment.

**Rod End Front Mounts F & J**

For special rod threads, specify "3" in model number and give desired AM or AF, WF and KK or KF.



**Foot Mounting - Style F**

**Foot Flange Mounting - Style J**

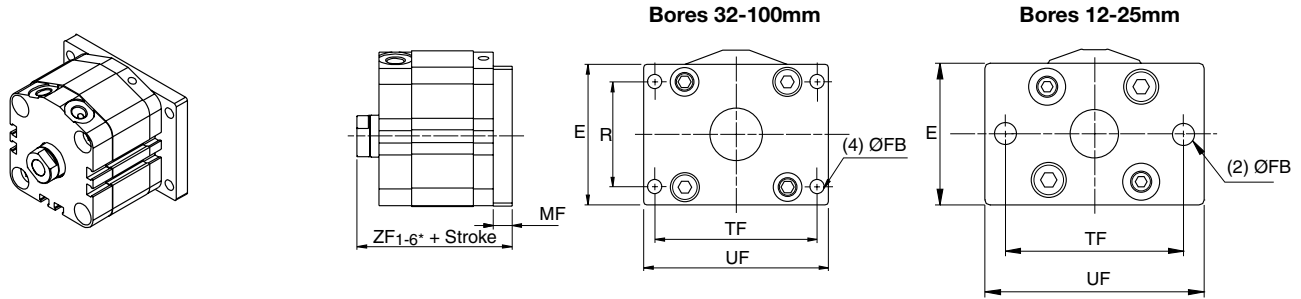
**Foot Mounting - Style F**

**Foot Flange Mounting - Style J**

Bore size	AF		AM		KF		KK		W		WF		SW
	Style 9	Style 6	Style 4	Style 5	Style 9	Style 6	Style 4	Style 5	Styles 9, 6, 4	Style 5	Styles 9, 6, 4	Style 5	
12	5.4	6	8	9	#8-32	M3X0.5	#8-32	M5X0.8	8	9.5	13.5	15	5
16	5.4	8	8	10	#8-32	M4x0.7	#8-32	M6x1.0	8	10	13.5	15.5	7
20	7	7	8	12	#10-32	M5x0.8	#10-32	M8x1.25	6.5	8.5	14.5	16.5	9
25	10	12	9.5	15	1/4-28	M6x1.0	1/4-28	M10x1.25	7	9.5	15	17.5	9
32	13.3	13	12.7	20.5	5/16-24	M8x1.25	5/16-24	M12x1.25	9	10	17	18	10
40	18.3	13	16	20.5	3/8-24	M8x1.25	3/8-24	M14x1.5	9	10	17	18	13
50	17.6	15	19.5	26	1/2-20	M10x1.5	1/2-20	M18x1.5	9	8.5	18	17.5	16
63	17.6	15	19.5	26	1/2-20	M10x1.5	1/2-20	M18x1.5	9	8.5	18	17.5	16
80	24.3	21	25.5	32.5	5/8-18	M16x2.0	5/8-18	M22x1.5	9	10	20	21	21
100	27	27	28.5	32.5	3/4-16	M20x2.5	3/4-16	M22x1.5	11	10	22	21	21



**Rear Flange Mounting – Style H**



Please note bearing, piston and porting configuration for selecting proper dimensions.

Bore size	E	FB	MF	R	TF	UF	Part number
12	25	4.5	5.5	–	45	55	<b>P1M-4DMB</b>
16	30	4.5	5.5	–	45	55	<b>P1M-4FMB</b>
20	39	6.5	8	–	50.5	62	<b>P1M-4HMB</b>
25	42	6.5	8	–	53	65	<b>P1M-4JMB</b>
32	48	5.5	8	34	58	68	<b>P1M-4KMB</b>
40	54	5.5	8	40	66	76	<b>P1M-4LMB</b>
50	67	6.5	9	50	79	90	<b>P1M-4MMB</b>
63	80	9	9	60	97	112	<b>P1M-4NMB</b>
80	99	11	11	77	116	134	<b>P1M-4PMB</b>
100	117	11	11	94	137	154	<b>P1M-4QMB</b>

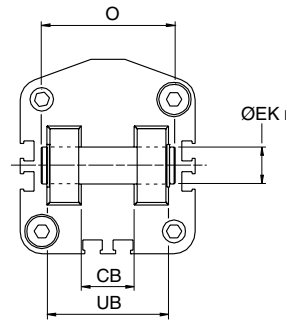
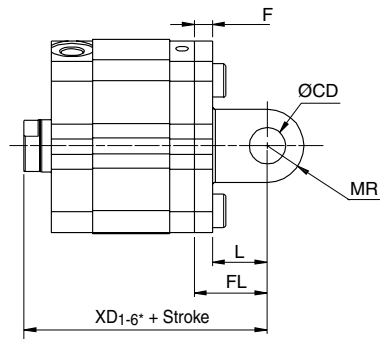
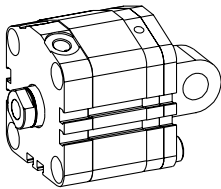
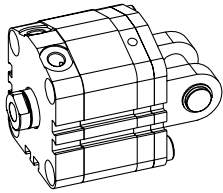
Bore size	ELP version non-magnetic		ELP version magnetic		Long bearing version		Style 5 rod end length adjustment
	Both ports head ZF1*	Optional porting ZF2*	Both ports head ZF3*	Optional porting ZF4*	Both ports head ZF5*	Optional porting ZF6*	
12	26	31	37	42	42.5	47.5	1.5
16	27.5	32.5	38.5	43.5	44.5	49.5	2
20	32	36.5	42	46.5	48	52.5	2
25	35.5	41.5	45.5	51.5	49.5	55.5	2.5
32	43.5	51.5	52.5	60.5	55	63	1
40	44.5	52.5	54.5	62.5	56.5	64.5	1
50	49.5	55.5	58.5	64.5	60.5	66.5	-0.5
63	51	57.5	63	68.5	66	71.5	-0.5
80	64	73	74.5	83.5	74.5	83.5	1
100	71.5	80	86	94.5	86	94.5	-1

**Note:** Rear Flange mounting is not available with cap face porting.

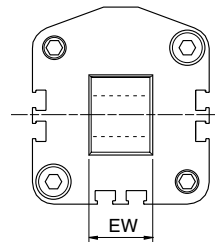
\* Dimensions shown apply only for Rod End Styles 4, 6 and 9.

For Rod End Style 5, please include the above length adjustment.

**Rear Clevis Mounts – Styles A & B**



**Style A**



**Style B**

Please note bearing, piston and porting configuration for selecting proper dimensions.

Bore size	CB	CD/EK	EW	F	FL	L	MR	O	UB	Double clevis kit part number	Single clevis kit part number**
12	5	5	5	4	14	10	6.5	14.5	10	<b>P1M-4DMT</b>	<b>P1M-4DME</b>
16	6.5	5	6.5	4	15	11	6.5	16.5	12	<b>P1M-4FMT</b>	<b>P1M-4FME</b>
20	8	8	8	5	18	13	10	21	16	<b>P1M-4HMT</b>	<b>P1M-4HME</b>
25	10	10	10	5	20	15	11	25.5	20	<b>P1M-4JMT</b>	<b>P1M-4JME</b>
32	18	10	18	5	20	15	10	41.5	36	<b>P1M-4KMT</b>	<b>P1M-4KME</b>
40	18	10	18	6	22	16	10	41.5	36	<b>P1M-4LMT</b>	<b>P1M-4LME</b>
50	22	14	22	7	28	21	14	50.5	44	<b>P1M-4MMT</b>	<b>P1M-4MME</b>
63	22	14	22	8	30	22	14	50.5	44	<b>P1M-4NMT</b>	<b>P1M-4NME</b>
80	28	18	28	10	38	28	18	64	56	<b>P1M-4PMT</b>	<b>P1M-4PME</b>
100	32	22	32	13	45	32	22	72	64	<b>P1M-4QMT</b>	<b>P1M-4QME</b>

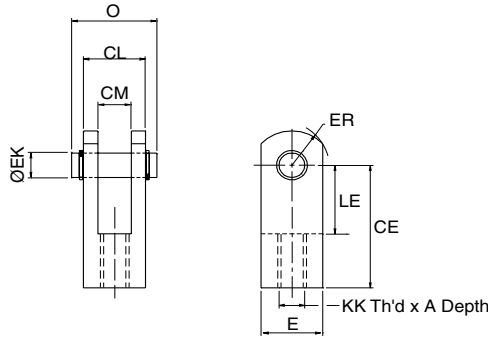
Bore size	ELP version non-magnetic		ELP version magnetic		Long bearing version		Style 5 rod end length adjustment
	Both ports head XD1*	Optional porting XD2*	Both ports head XD3*	Optional porting XD4*	Both ports head XD5*	Optional porting XD6*	
12	34.5	39.5	45.5	50.5	51	56	1.5
16	37	42	48	53	54	59	2
20	42	46.5	52	56.5	58	62.5	2
25	47.5	53.5	57.5	63.5	61.5	67.5	2.5
32	55.5	63.5	64.5	72.5	67	75	1
40	59.5	66.5	68.5	76.5	70.5	78.5	1
50	68.5	74.5	77.5	83.5	79.5	85.5	-0.5
63	72	78.5	84	89.5	87	92.5	-0.5
80	91	100	101.5	110.5	101.5	110.5	1
100	105.5	114	120	128.5	120	128.5	-1

\* Dimensions shown apply only for Rod End Styles 4, 6 and 9. For Rod End Style 5, please include the above length adjustment.

\*\* Single Clevis Kit can be used as mounting bracket for double clevis cylinders. Double Clevis Kit can be used as mounting kit for single clevis cylinders.

Note: Rear Clevis mounts are not available with cap face port.

**Rod Clevis**



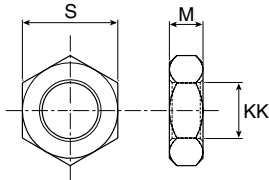
**Metric**

Bore size	A	E	CE	KK	ER	LE	EK (h9)	CM	CL	O	Part number
12	7	9.5	16	M5x0.8	6.5	7	5	5	9.5	14.5	<b>P1M-4DRC</b>
16	11	11	21	M6x1.0	8	10	5	6.5	11	16.5	<b>P1M-4FRC</b>
20	8.5	16	25	M8x1.25	10.5	11.5	8	8	16	21	<b>P1M-4HRC</b>
25	10.5	19	30	M10x1.25	13	14	10	10	19	25.5	<b>P1M-4JRC</b>
32	16	22 Dia.	30	M12x1.25	12	14	10	18	36	41.5	<b>P1M-4KRC</b>
40	16	22 Dia.	30	M14x1.5	12	14	10	18	36	41.5	<b>P1M-4LRC</b>
50/63	20	28 Dia.	40	M18x1.5	16	20	14	22	44	50.5	<b>P1M-4MRC</b>
80	23	38 Dia.	50	M22x1.5	21	27	18	28	56	64	<b>P1M-4PRC</b>
100	24	44 Dia.	55	M22x1.5	24	31	22	32	64	72	<b>P1M-4QRC</b>

**Inch**

Bore size	A	E	CE	KK	ER	LE	EK (inch) +0, -0.002	CM	CL (inch)	O (inch)	Part number
12	6	9.5	16	#8-32	6.5	7	3/16	5	0.375	0.563	<b>P1M-4DRC-T</b>
16	6	11	21	#8-32	8	10	3/16	6.5	0.437	0.625	<b>P1M-4FRC-T</b>
20	6	16	25	#10-32	10.5	11.5	5/16	8	0.625	0.875	<b>P1M-4HRC-T</b>
25	8	19	30	1/4-28	13	14	3/8	10	0.750	1.031	<b>P1M-4JRC-T</b>
32	16	22 Dia.	30	5/16-24	12	14	3/8	18	1.437	1.687	<b>P1M-4KRC-T</b>
40	16	22 Dia.	30	3/8-24	12	14	3/8	18	1.437	1.687	<b>P1M-4LRC-T</b>
50/63	20	28 Dia.	40	1/2-20	16	20	1/2	22	1.750	2.125	<b>P1M-4MRC-T</b>
80	23	38 Dia.	50	5/8-18	21	27	3/4	28	2.250	2.625	<b>P1M-4PRC-T</b>
100	24	44 Dia.	55	3/4-16	24	31	7/8	32	2.500	2.875	<b>P1M-4QRC-T</b>

**Jam Nuts**



**Style 4**

Bore size	KK	M	S	Part number
12	#8-32	1/8	11/32	<b>L073800080</b>
16	#8-32	1/8	11/32	<b>L073800080</b>
20	#10-32	1/8	3/8	<b>L073800100</b>
25	1/4-28	5/32	7/16	<b>L073800200</b>
32	5/16-24	3/16	1/2	<b>L073800300</b>
40	3/8-24	7/32	9/16	<b>L073800400</b>
50	1/2-20	5/16	3/4	<b>L073800600</b>
63	1/2-20	5/16	3/4	<b>L073800600</b>
80	5/8-18	3/8	15/16	<b>L073800800</b>
100	3/4-16	27/64	1-1/8	<b>L073800900</b>

Dimensions in inches

**Style 5**

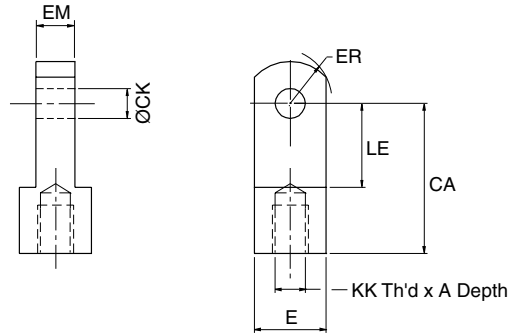
Bore size	KK	M	S	Part number
12	M5x0.8	2.7	18	<b>L075540005</b>
16	M6x1.0	3.2	10	<b>L075540006</b>
20	M8x1.25	4	13	<b>L075540008</b>
25	M10x1.25	5	17	<b>L075540010</b>
32	M12x1.25	6	19	<b>L075540012</b>
40	M14x1.5	7	22	<b>L075540014</b>
50	M18x1.5	8	27	<b>L075540018</b>
63	M18x1.5	8	27	<b>L075540018</b>
80	M22x1.5	11	32	<b>L075540022</b>
100	M22x1.5	11	32	<b>L075540022</b>

Dimensions in mm





**Rod Eye**



**Metric**

Bore size	A	E	CA	KK	ER	LE	CK	EM	Part number
12	7	9.5 Sq.	16	M5x0.8	6.5	7	5	5	<b>P1M-4DRE</b>
16	8	11 Sq.	25	M6x1.0	8	14	5	6.5	<b>P1M-4FRE</b>
20	8.5	16 Sq.	25	M8x1.25	10.5	11.5	8	8	<b>P1M-4HRE</b>
25	10.5	19 Sq.	30	M10x1.25	13	14	10	10	<b>P1M-4JRE</b>
32	15	22 Dia.	30	M12x1.25	12	14	10	18	<b>P1M-4KRE</b>
40	14	22 Dia.	30	M14x1.5	12	14	10	18	<b>P1M-4LRE</b>
50/63	18.5	28 Dia.	40	M18x1.5	16	20	14	22	<b>P1M-4MRE</b>
80	22	38 Dia.	50	M22x1.5	21	27	18	28	<b>P1M-4PRE</b>
100	22	44 Dia.	55	M22x1.5	24	31	22	32	<b>P1M-4QRE</b>

**Inch**

Bore size	A	E	CA	KK	ER	LE	CK (inch)	EM	Part number
12	6	9.5 Sq.	16	#8-32	6.5	7	3/16	5	<b>P1M-4DRE-T</b>
16	6	11 Sq.	25	#8-32	8	14	3/16	6.5	<b>P1M-4FRE-T</b>
20	6	16 Sq.	25	#10-32	10.5	11.5	5/16	8	<b>P1M-4HRE-T</b>
25	8	19 Sq.	30	1/4-28	13	14	3/8	10	<b>P1M-4JRE-T</b>
32	12	22 Dia.	30	5/16-24	12	14	3/8	18	<b>P1M-4KRE-T</b>
40	11	22 Dia.	30	3/8-24	12	14	3/8	18	<b>P1M-4LRE-T</b>
50/63	18	28 Dia.	40	1/2-20	16	20	1/2	22	<b>P1M-4MRE-T</b>
80	21	38 Dia.	50	5/8-18	21	27	3/4	28	<b>P1M-4PRE-T</b>
100	21	44 Dia.	55	3/4-16	24	31	7/8	32	<b>P1M-4QRE-T</b>

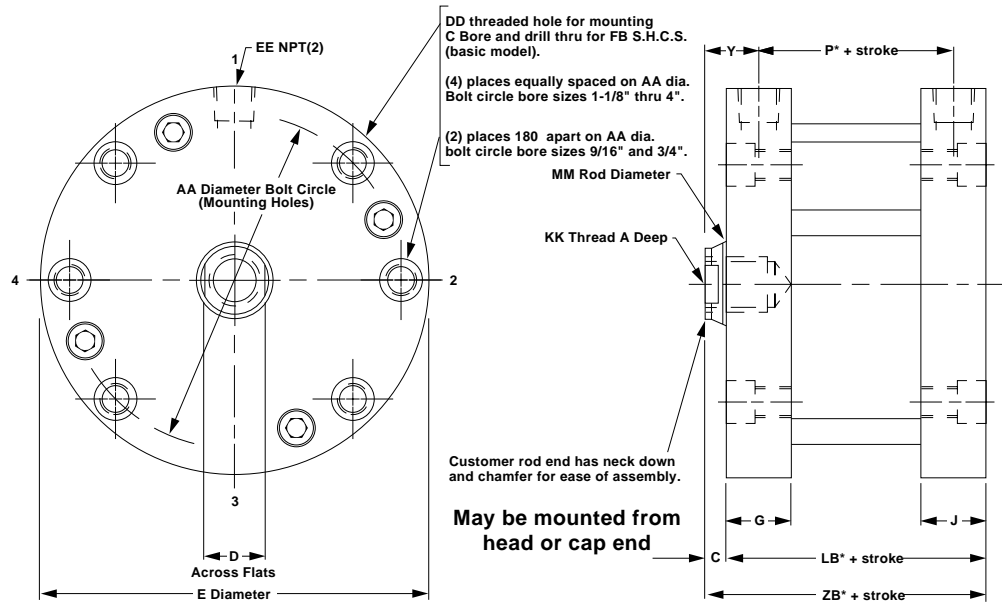
**B**  
Compact Cylinders  
Actuator Products  
  
P1Q  
Series  
  
P1M  
Series  
  
LP/LPM  
Series



**Mounting Style N**

Cylinder Dimensions  
 Double Acting  
 Single Rod End,  
 Female Rod Style No. 9

Temperature: -10°F to 200°F (optional Fluorocarbon seals).  
 All air cylinders are permanently lubricated.  
 LPM Series maximum temperature 140°F.



Bore size	A	C	D	E	G	J	P*	Y	AA	DD	EE	FB	KK	LB*	MM	ZB*
9/16	0.40	1/8	7/32	1-1/8	23/64	23/64	11/32	17/64	0.875	#8-32	#10-32	#4	#8-32	5/8	1/4	3/4
3/4	0.44	1/8	1/4	1-1/2	23/64	23/64	3/8	17/64	1.219	#10-32	#10-32	#6	#10-32	21/32	5/16	25/32
1-1/8	0.62	1/8	7/16	2	1/2	1/2	27/64	3/8	1.687	#10-32	1/8	#6	5/16-24	59/64	1/2	1-3/64
1-1/2	0.62	1/8	1/2	2-5/8	1/2	1/2	1/2	3/8	2.187	1/4-28	1/8	#10	3/8-24	1	5/8	1-1/8
2	0.70†	1/8	5/8	3-1/8	1/2	1/2	9/16	3/8	2.687	1/4-28	1/8	#10	1/2-20	1-1/16	3/4	1-3/16
2-1/2	0.70†	1/8	5/8	3-3/4	5/8	5/8	5/8	7/16	3.250	5/16-24	1/4	1/4	1/2-20	1-1/4	3/4	1-3/8
3	0.75†	1/8	3/4	4-1/4	43/64	43/64	21/32	7/16	3.781	5/16-24	1/4	1/4	5/8-18	1-9/32	7/8	1-13/32
4	0.75†	1/8	7/8	5-1/2	27/32	27/32	49/64	17/32	4.937	3/8-24	3/8	5/16	3/4-16	1-5/8	1	1-3/4

\* These dimensions are for the LP Series with standard piston.  
 † For strokes less than 0.25", A dimension = 0.66".

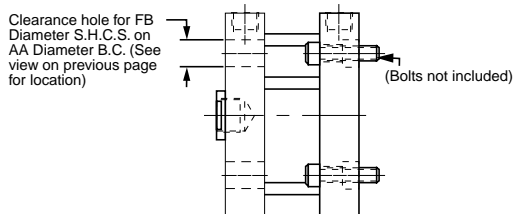
**Added length table for LPM or lipseal piston options**

Bore size	LPM option*						LP with lipseal piston option				
	P	LB	XD	XJ	ZB	Stroke	P	LB	XD	XJ	ZB
9/16†	15/16	1-7/32	2	-	1-11/32	1/2	5/8	29/32	1-11/16	-	1-1/32
3/4†	31/32	1-1/4	2-1/32	1-3/16	1-3/8	1/2	21/32	15/16	1-23/32	7/8	1-1/16
1-1/8†	63/64	1-31/64	2-3/8	1-23/64	1-39/64	9/16	43/64	1-11/64	2-1/16	1-3/64	1-19/64
1-1/2	1-1/8	1-5/8	2-13/16	1-1/2	1-3/4	7/16	13/16	1-5/16	2-1/2	1-3/16	1-7/16
2	1-9/32	1-25/32	3-1/32	1-21/32	1-29/32	7/16	61/64	1-29/64	2-45/64	1-21/64	1-37/64
2-1/2	1-21/64	1-61/64	3-21/64	1-3/4	2-5/64	1/2	1	1-5/8	3	1-27/64	1-3/4
3	1-27/64	2-3/64	3-53/64	1-53/64	2-11/64	1/2	1-3/32	1-23/32	3-1/2	1-1/2	1-27/32
4	1-1/2	2-23/64	4-11/64	2	2-31/64	1/2	1-11/64	2-1/32	3-27/32	1-43/64	2-5/32

Note minimum strokes for LPM option.  
 † These bore sizes not available for the LPM option with the hollow rod option.  
 \* The LPM option is only available with the standard quad seal.

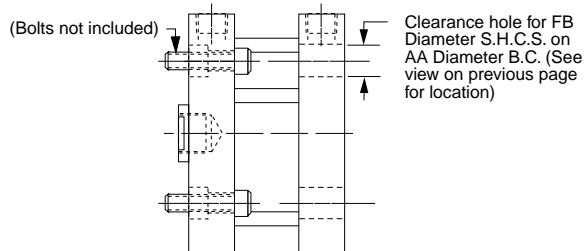
### Head Bolt Clearance Holes

Mounting Style 4F  
 Available Head End



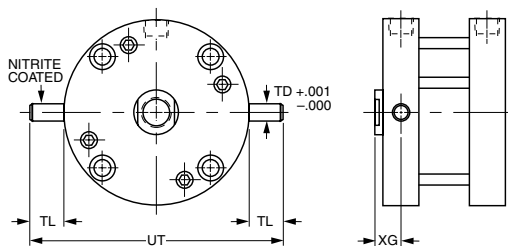
### Cap Bolt Clearance Holes

Mounting Style 4R  
 Available Cap End



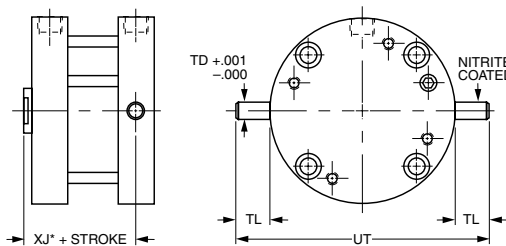
### Head Trunnion

Mounting Style 2F (9/16" bore not available)



### Cap Trunnion

Mounting Style 2R (9/16" bore not available)

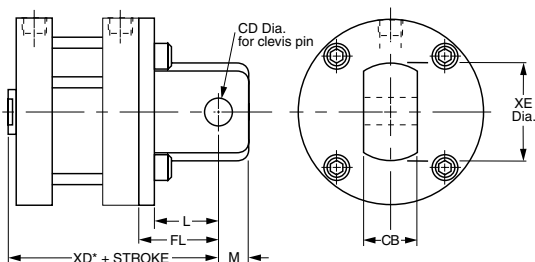


Bore size	TD	TL	UT	XG	XJ*
3/4	0.125	5/16	2-1/8	5/16	19/32
1-1/8	0.250	1/2	3	3/8	51/64
1-1/2	0.250	1/2	3-5/8	3/8	7/8
2	0.250	1/2	4-1/8	3/8	15/16
2-1/2	0.312	5/8	5	29/64	1-3/64
3	0.312	5/8	5-1/2	15/32	1-1/16
4	0.375	3/4	7	35/64	1-17/64

\* These dimensions are for the LP Series with standard piston.

### Cap Pivot Eye

Mounting Style 1



Bore size	L	M	CB	CD	FL	XD*	XE
9/16	1/2	1/4	3/8	3/16	21/32	1-13/32	19/32
3/4	1/2	1/4	3/8	3/16	21/32	1-7/16	3/4
1-1/8	1/2	1/4	3/8	3/16	49/64	1-13/16	3/4
1-1/2	13/16	7/16	3/4	3/8	1-1/16	2-3/16	1-3/8
2	13/16	7/16	3/4	3/8	1-1/8	2-5/16	1-3/8
2-1/2	13/16	7/16	3/4	3/8	1-1/4	2-5/8	1-3/8
3	1-9/32	9/16	1	5/8	1-21/32	3-1/16	1-7/8
4	1-9/32	9/16	1	5/8	1-11/16	3-7/16	1-7/8

Order clevis pin from accessories when required.

\* These dimensions are for the LP Series with standard piston.  
 See table on the previous page for dimensions for the lipseal piston or LPM options.



**B**

Compact Cylinders  
Actuator Products

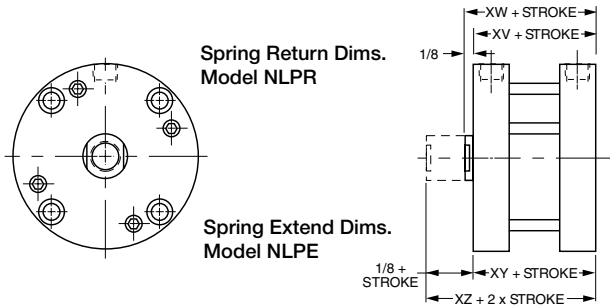
P1Q Series

P1M Series

LP/LPM Series

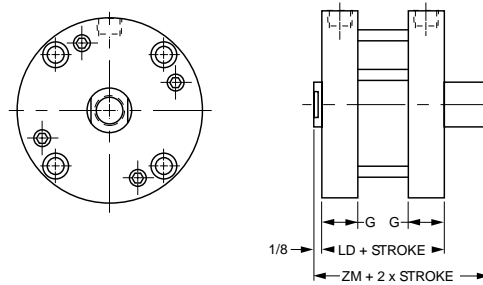
**Spring Extend & Spring Return Cylinders**

(Available through 2" stroke)



**Double Rod Spring Extend & Spring Return Cylinders**

(Available through 2" stroke)



**B**  
Compact Cylinders  
Actuator Products  
Series P1Q  
Series P1M  
Series LP/LPM

Bore size	1/8" to 1" stroke				Over 1" to 2" stroke				Add this length to XV, XW, XY, XZ for Lipseal Piston
	XV	XW	XY	XZ	XV	XW	XY	XZ	
9/16	1	1-1/8	57/64	1-1/64	1-11/16	1-13/16	1-37/64	1-45/64	9/32
3/4	1-1/64	1-9/64	59/64	1-3/64	1-45/64	1-53/64	1-39/64	1-47/64	9/32
1-1/8	1-23/64	1-31/64	1-9/32	1-13/32	1-63/64	2-7/64	1-29/32	2-1/32	1/4
1-1/2	1-25/64	1-33/64	1-11/32	1-15/32	2-1/64	2-9/64	1-31/32	2-3/32	5/16
2	1-11/64	1-19/64	1-13/32	1-17/32	1-51/64	1-59/64	2-1/32	2-5/32	25/64
2-1/2	1-3/8	1-1/2	1-23/32	1-27/32	2	2-1/8	2-11/32	2-15/64	3/8
3	1-1/2	1-5/8	1-55/64	1-63/64	2-1/8	2-1/4	2-31/64	2-39/64	7/16
4	1-27/32	1-31/32	2-13/64	2-21/64	2-15/32	2-19/32	2-53/64	2-61/64	13/32

Bore size	Spring return/extend – LP						Spring return/extend – LPM					
	≥ 1/8", ≤ 1"			<1", ≤ 2"			≥ 1/8", >1"			>1", ≤ 2"		
	G	LD	ZM	Min.* stroke	LD	ZM	LD	ZM	Min.* stroke	LD	ZM	
9/16	23/64	1-1/8	1-3/8	5/16	1-13/16	2-1/16	1-23/32	1-27/32	3/16	2-13/32	2-17/32	
3/4	23/64	1-11/64	1-27/64	1/8	1-55/64	2-7/64	1-49/64	1-57/64	3/16	2-29/64	2-37/64	
1-1/8	1/2	1-1/2	1-3/4	1/8	2-1/8	2-3/8	2-1/16	2-3/16	1/8	2-11/16	2-13/16	
1-1/2	1/2	1-11/16	1-15/16	1/8	2-5/16	2-9/16	2-5/16	2-7/16	1/4	2-15/16	3-1/16	
2	1/2	1-31/64	1-47/64	1/8	2-7/64	2-23/64	2-13/64	2-21/64	1/4	2-53/64	2-61/64	
2-1/2	5/8	1-3/4	2	1/8	2-3/8	2-5/8	2-29/64	2-37/64	3/16	3-5/64	3-13/64	
3	43/64	1-29/32	2-5/32	1/8	2-17/32	2-25/32	2-43/64	2-51/64	1/8	3-19/64	3-27/64	
4	27/32	2-1/4	2-1/2	1/8	2-7/8	3-1/8	2-63/64	3-7/64	1/8	3-39/64	3-47/64	

\* Note minimum strokes for LPM option.

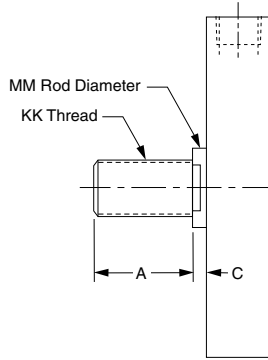
**Spring force data**

1/8" to 1" stroke			Over 1" to 2" stroke		
Bore size	Max. Spring force (lbs)	Spring rate (lb/in)	Bore dia.	Max. Spring force (lbs)	Spring rate (lb/in)
9/16	5.7	4.25	9/16	5.7	1.75
3/4	9	6	3/4	9	2.5
1-1/8	10	6	1-1/8	10	2.5
1-1/2	13	5.5	1-1/2	12	2.25
2	13	5.5	2	12	2.25
2-1/2	17.5	6	2-1/2	16	2.5
3 & 4	24	6.5	3 & 4	23	2.75



### Optional Male Rod End

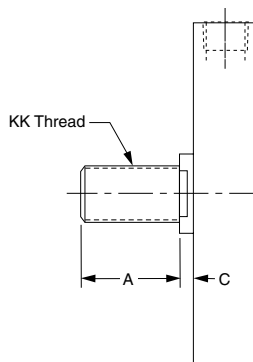
Specify #4



Bore size	A	C	KK	MM
9/16	0.38	1/8	#8-32	1/4
3/4	0.50	1/8	#10-32	5/16
1-1/8	0.50	1/8	5/16-24	1/2
1-1/2	0.50	1/8	3/8-24	5/8
2	0.62	1/8	1/2-20	3/4
2-1/2	0.62	1/8	1/2-20	3/4
3	0.75	1/8	5/8-18	7/8
4	0.75	1/8	3/4-16	1

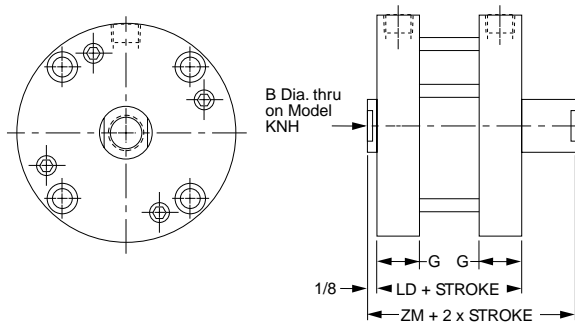
### Non-standard Rods

For non-standard rod ends, please specify rod thread style 3 and provide the KK, A, and C dimensions as needed.



### Double or Hollow Rod Cylinders

Note: Cylinders with hollow rod option should not be bottomed out during stroke.



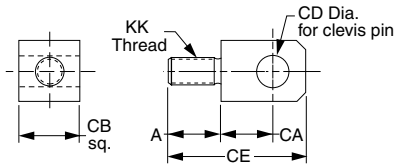
### LP double or hollow rod option, LPM, lipseal piston

Bore size	Standard double rod end or with hollow rod		LPM option		LP with lipseal piston option			
	B	G	LD	ZM	LD	ZM	LD	ZM
9/16	*	23/64	3/4	1	1-11/32	1-15/32	1-1/32	1-9/32
3/4	9/64	23/64	13/16	1-1/16	1-13/32	1-17/32	1-3/32	1-11/32
1-1/8	7/32	1/2	1-3/16	1-7/16	1-3/4	1-7/8	1-7/16	1-11/16
1-1/2	9/32	1/2	1-19/64	1-35/64	1-59/64	2-3/64	1-39/64	1-55/64
2	3/8	1/2	1-3/8	1-5/8	2-3/32	2-7/32	1-49/64	2-1/64
2-1/2	3/8	5/8	1-5/8	1-7/8	2-21/64	2-29/64	2	2-1/4
3	7/16	43/64	1-11/16	1-15/16	2-29/64	2-37/64	2-1/8	2-3/8
4	1/2	27/32	2-1/32	2-9/32	2-49/64	2-57/64	2-7/16	2-11/16

\*Hollow rod not available on 9/16" bore.



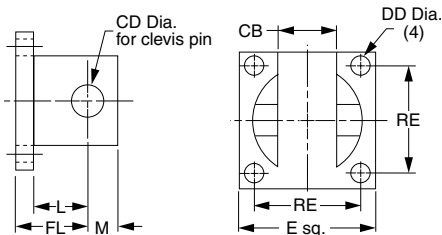
### Rod Eye



Bore size	A	CA	CB	CD	CE	KK	Part number
9/16	3/8	15/32	3/8	3/16	1-3/32	#8-32	<b>L073810008</b>
3/4	3/8	15/32	3/8	3/16	1-3/32	#10-32	<b>L073810010</b>
1-1/8	9/16	15/32	3/8	3/16	1-9/32	5/16-24	<b>L073810020</b>
1-1/2	5/8	23/32	3/4	3/8	1-25/32	3/8-24	<b>L073810024</b>
2-2-1/2	21/32	23/32	3/4	3/8	1-27/32	1/2-20	<b>L073810032</b>
3	21/32	1	1	5/8	2-3/8	5/8-18	<b>L073810040</b>
4	21/32	1	1	5/8	2-3/8	3/4-16	<b>L073810048</b>

### Clevis Bracket

(Supplied with Pin)



E	L	M	CB	CD	DD	FL	RE	Part number
1	13/32	7/32	25/64	3/16	9/64	9/16	3/4	<b>L073820012</b>
1-3/4	25/32	13/32	49/64	3/8	11/64	15/16	1-3/8	<b>L073820024</b>
2-1/2	1	9/16	1-1/64	5/8	17/64	1-1/4	2	<b>L073820040</b>

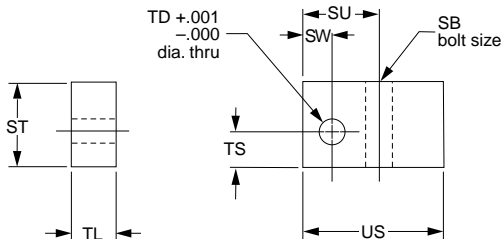
Use L073820012 on 9/16", 3/4" and 1-1/8" bore.

Use L073820024 on 1-1/2", 2" and 2-1/2" bore.

Use L073820040 on 3" and 4" bore.

**Note:** The Clevis Bracket is an accessory for the rod eye or the cap pivot eye and cannot be mounted directly to the cylinder.

### Trunnion Bracket



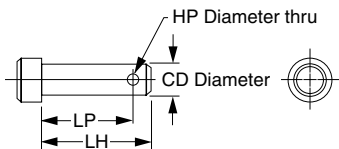
SB	ST	SU	SW	TD	TL	TS	US	Part number
1/4	7/8	13/16	5/16	.252	1/2	3/8	1-1/2	<b>L073840016</b>
5/16	1	15/16	3/8	.314	5/8	29/64	1-5/8	<b>L073840020</b>
3/8	1-1/4	1-1/16	7/16	.377	3/4	35/64	1-7/8	<b>L073840024</b>

Use L073840016 on 1-1/8", 1-1/2" and 2" bore.

Use L073840020 on 2-1/2" and 3" bore.

Use L073840024 on 4" bore.

### Clevis Pin



CD	HP	LH	LP	Part number
3/16	3/32	1	29/32	<b>L073830012</b>
3/8	5/32	1-5/8	1-15/32	<b>L073830024</b>
5/8	5/32	2	1-27/32	<b>L073830040</b>

### Service Kits

Bore size	Rod dia.	Standard piston, single rod cylinders		Lipseal piston, single rod cylinders	
		Class 1 seals part number	Class 5 seals part number	Class 1 seals part number	Class 5 seals part number
9/16	1/4"	<b>SKS05LP251</b>	<b>SKS05LP255</b>	<b>KS05LPL251</b>	<b>KS05LPL255</b>
3/4	5/16"	<b>SKS07LP311</b>	<b>SKS07LP315</b>	<b>KS07LPL311</b>	<b>KS07LPL315</b>
1-1/8	1/2"	<b>SKS12LP501</b>	<b>SKS12LP505</b>	<b>KS12LPL501</b>	<b>KS12LPL505</b>
1-1/2	5/8"	<b>SKS15LP621</b>	<b>SKS15LP625</b>	<b>KS15LPL621</b>	<b>KS15LPL625</b>
2	3/4"	<b>SKS20LP751</b>	<b>SKS20LP755</b>	<b>KS20LPL751</b>	<b>KS20LPL755</b>
2-1/2	3/4"	<b>SKS25LP751</b>	<b>SKS25LP755</b>	<b>KS25LPL751</b>	<b>KS25LPL755</b>
3	7/8"	<b>SKS30LP871</b>	<b>SKS30LP875</b>	<b>KS30LPL871</b>	<b>KS30LPL875</b>
4	1"	<b>SKS40LP101</b>	<b>SKS40LP105</b>	<b>KS40LPL101</b>	<b>KS40LPL105</b>