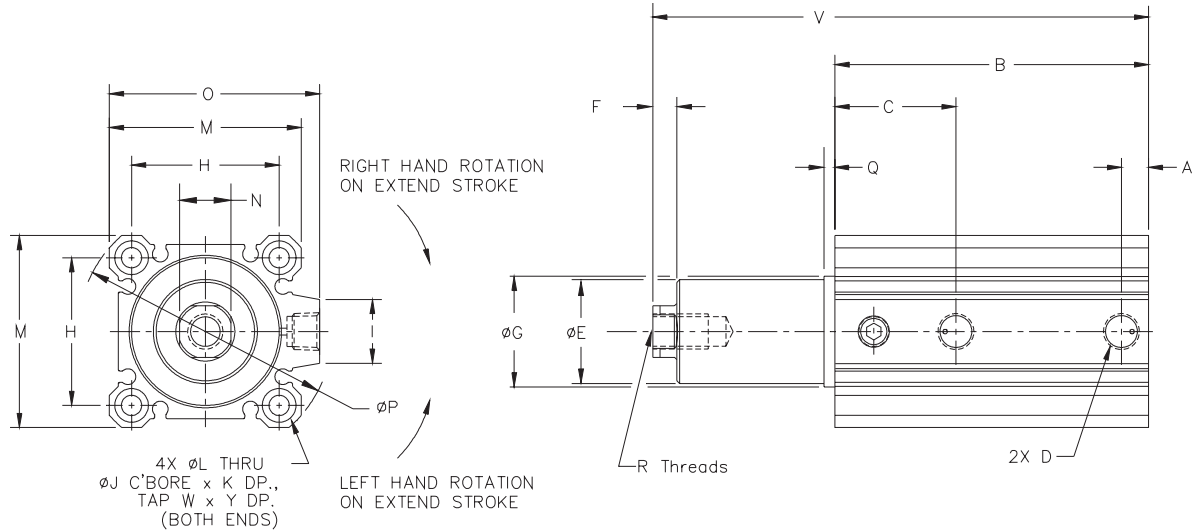


Bimba Twist Clamp Cylinders

Dimensions

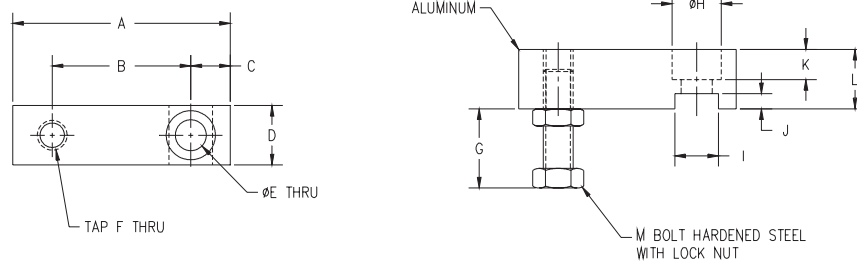


Bore	A	B	C	D	E	F	G	H	I	J
25mm	0.20	3.27	1.22	#10-32	0.90	0.16	0.905	1.10	0.41	0.35
40mm	0.29	3.34	1.29	1/8 NPT	0.88	0.26	1.180	1.57	0.68	0.35
50mm	0.37	4.98	1.29	1/4 NPT	1.39	0.30	1.456	1.97	0.79	0.44
63mm	0.38	5.12	1.37	1/4 NPT	1.82	0.30	1.888	2.36	0.79	0.56

Bore	K	L	M	N	Rod Dia.	O	P	Q	R	V	W	Y
25mm	0.28	0.22	1.57	0.39	0.47	1.57	2.05	0.16	5/16-24	4.47	1/4-20	0.67
40mm	0.28	0.22	2.05	0.54	0.63	2.24	2.72	0.11	3/8-24	5.30	1/4-20	0.67
50mm	0.31	0.27	2.52	0.66	0.79	2.80	3.39	0.14	1/2-20	8.35	5/16-18	0.86
63mm	0.41	0.35	3.03	0.66	0.79	3.31	4.06	0.16	1/2-20	8.47	7/16-14	1.12

Accessories

Clamp Arm Accessory	
Model Number	List Price
EFCA-25-E	\$31.50
EFCA-40-E	31.50
EFCA-50-E	47.25
EFCA-63-E	47.25



Bore	A	B	C	D	E	F	G	H	I	J	K	L	M
25mm	2.00	1.38	0.38	0.63	0.34	1/4-20	1.13	0.50	0.393	0.08	0.32	0.63	1/4-20
40mm	2.75	1.75	0.50	0.75	0.39	3/8-16	1.00	0.62	0.550	0.19	0.38	0.75	3/8-16
50mm	3.44	2.50	0.50	0.88	0.53	3/8-16	1.00	0.78	0.668	0.19	0.50	0.88	3/8-16
63mm	3.44	2.50	0.50	0.88	0.53	3/8-16	1.00	0.78	0.668	0.19	0.50	0.88	3/8-16

Bimba Twist Clamp Cylinders

How it Works/Materials of Construction



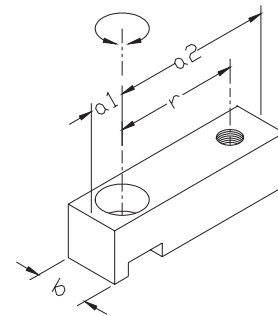
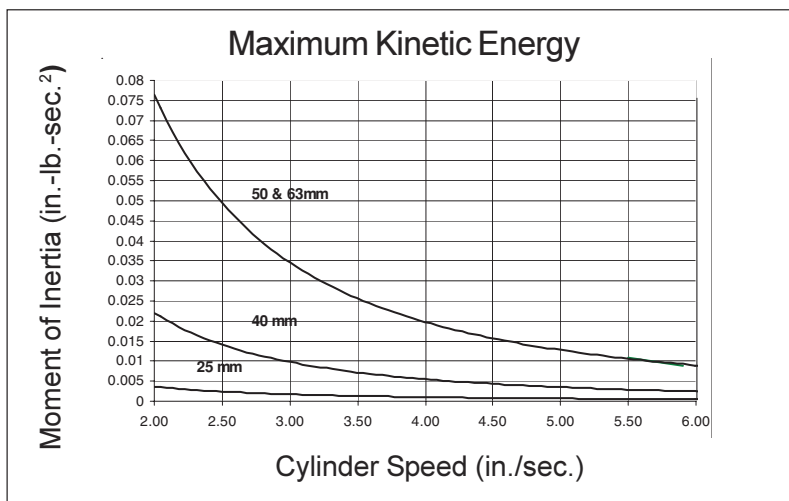
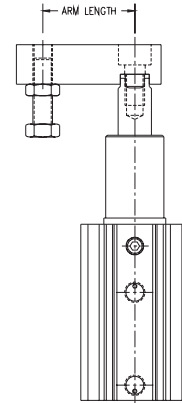
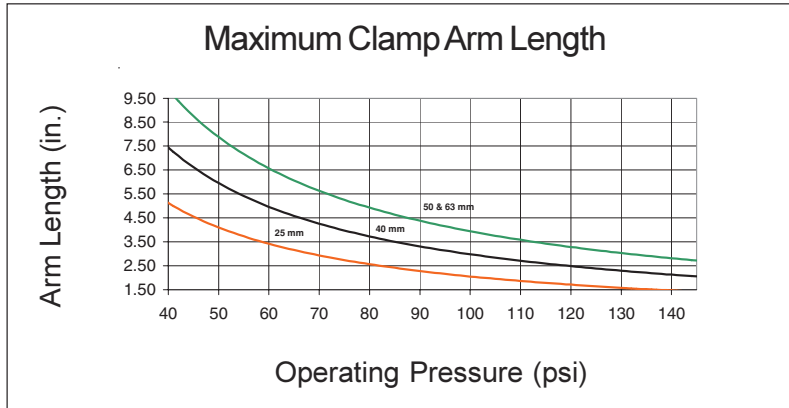
The Guide Pin rides in the Cam Bushing. The bottom portion of stroke is linear travel. As the cylinder extends, the pin follows the groove and creates 90 degrees of rotary motion.

Engineering Specifications

Operating Medium: Air
Maximum Operating Pressure: 140 psi
Ambient and Fluid Temperature: +15 to +160 degrees F
Lubrication: PTFE grease

Bimba Twist Clamp Cylinders

Engineering Specifications



$$I = \frac{W_{a1}}{g} * \frac{4(a_1)^2 + b^2}{12} + \frac{W_{a2}}{g} * \frac{4(a_2)^2 + b^2}{12}$$

Example, for standard EFCA-40-E

$a_1 = .50$ in. $W_{a1} = .028$ lbs.
 $a_2 = 2.25$ in. $W_{a2} = .127$ lbs.
 $b = .75$ in.
 $r = 1.75$ in.
 $g = 386$ in./sec.²
 clamp bolt and nut = .081 lbs.

$$I_{\text{arm}} = \frac{.028 \text{ lb.}}{386 \text{ in./sec.}^2} * \frac{4(.50 \text{ in.})^2 + (.75 \text{ in.})^2}{12} + \frac{.127 \text{ lb.}}{386 \text{ in./sec.}^2} * \frac{4(2.25 \text{ in.})^2 + (.75 \text{ in.})^2}{12}$$

$$I_{\text{arm}} = .000578 \text{ in.-lb.-sec.}^2$$

$$I_{\text{bolt/nut}} = \frac{.081 \text{ lbs.}}{386 \text{ in./sec.}^2} * (1.75 \text{ in.})^2 = .000642 \text{ in.-lb.-sec.}^2$$

$$I_{\text{total}} = .000578 + .000642 = 0.00122 \text{ in.-lb.-sec.}^2$$

Operating Precautions:

- Do not clamp during rotary portion of stroke.
- Cylinder should be mounted vertically.
- Any force applied to clamped part perpendicular to clamping direction should not exceed 5% of the clamp force.