1 Model Number Code

Prefix Options	Stroke		Bore		Action		Suffix Options
Leave blank if none desired	TE	–	5	–	X	–	MR

Metric M
See pages 1.7, 1.19 & 1.22

Bore	Code
1/2"	5
12.7mm	5

Standard Strokes

Original Series

Action	X XDR	O ODR	OP
Stroke			
1/16	A	A	A
1/8	B	B	B
1/4	C	C	C
3/8	D	D	D
1/2	E	E	E
5/8	F	F	–
3/4	G	G	–
1	H	H	–
1 1/4	I	I	–
1 1/2	J	J	–
2	K	K	–
3	L	–	–
4	M	–	–

"T" Series Includes PTFE piston bearing

Action	X	O	OP
Stroke			
1/8	TC	TC	TC
1/4	TD	TD	TD
3/8	TE	TE	TE
1/2	TF	TF	–
5/8	TG	TG	–
1	TH	TH	–
1 1/4	TI	TI	–
1 1/2	TJ	TJ	–
2	TK	TK	–
3	TL	–	–
4	TM	–	–

Grey shading indicates sensors are not available.

Strokes are NOT affected by magnetic piston Option "E"

Action

Single rod

Double acting	**-X**
Single acting, spring retracted	**-O**
Single acting, spring extended	**-OP**

Double rod

Double acting	**-XDR**
Single acting, spring retracted	**-ODR**

See pages 1.5 & 1.6 for Action Information.
See pages 1.18 & 1.21 for Standard Specifications

HOW TO ORDER

1. Under ***Stroke*** – select letter(s) for desired Series and Stroke.
2. Under ***Bore*** – select **5** for 1/2" bore.
   Seven Other Bore Sizes are Available

Bore	Bore Code	See page
3/4"	7	1.23
1 1/8"	121	1.29
1 5/8"	221	1.35
2"	321	1.41
2 1/2"	521	1.47
3"	721	1.53
4"	1221	1.59

3. Under ***Action*** – select letter(s) for desired action.
4. Under ***Prefix & Suffix Options***– select letter(s) for desired options and add to model number.

EXAMPLES

E-5-X
Original Series, 1/2" stroke - 1/2" Bore - Single Rod, Double Acting

TE-5-X-MR
"T" Series, 3/8" Stroke - 1/2" Bore - Single Rod, Double Acting - Male Rod Thread

Suffix Options

Male rod thread: Single rod			**-MR**
Double rod, rod end			**-MR**
Double rod, cap end			**-MR1**
Double rod, both ends			**-MR2**
Viton seals			**-V**
Quad seals			**-Q**
External nonrotating guide			**-K**
Hex rod nonrotating, single acting models to 2" stroke only			**-NR**
Hole thru double rod shaft : 1/16" hole 150 psi max			**-06**
Finish: **ProCoat™** (Electroless Nickel)			**-N**
Stroke collar:		1/8"	**-C1**
1/4"	**-C2**	3/8"	**-C3**
1/2"	**-C4**	5/8"	**-C5**
3/4"	**-C6**	7/8"	**-C7**
Rubber Bumpers:		Rod end	**-BF**
		Cap end	**-BR**
		Both ends	**-BFR**
Adjustable retract stroke (Over 1" adjustment add desired length, e.g. -RS2)			**-RS**
Clevis mount:		Ports in-line with slot	**-PM**
		Ports 90° to slot	**-SM**
Eye mount:		Ports in-line with tang	**-EPM**
		Ports 90° to tang	**-ESM**
Threaded nose mount: Single rod			**-F**
Double rod, rod end			**-F**
Double rod, cap end			**-F1**
Double rod, both ends			**-F2**
Magnetic piston & sensor mounting slot(s) Order sensors separately. See page 1.14 Stroke length determines number of mounting slots. See page 1.14, 1.20, 1.21.			**-E**

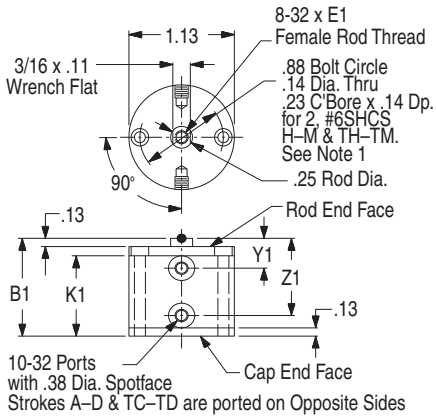
See pages 1.7 – 1.15 for general option information and pages 1.19, 1.20 & 1.22 for option specifications of 1/2" bore models.

A complete library of cylinder CAD drawings is available from your local Fabco-Air Distributor or from the Fabco-Air web site – http://www.fabco-air.com

Action –X
Double Acting

Note 1:
Strokes H–M & TH–TM have two #6-32 x .44 Tapped Mounting Holes on each end.

See page 1.16 for Mounting Bolts.
Push area = .20
Pull area = .15
Seal Kits for Series:
Original = 5-SK
"T" = 5-SKG



For
Single Rod, Double Acting, Nonrotating
See Option -K on page 1.20

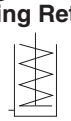
Original Series

Stroke, Inch	1/16	1/8	1/4	3/8	1/2	5/8	3/4	1	1 1/4	1 1/2	2	3	4
Stroke, Letter	A	B	C	D	E	F	G	H	I	J	K	L	M
Action –X Double Acting													
B1	.83	.83	.96	1.08	1.21	1.36	1.49	1.83	2.08	2.33	2.96	3.96	4.96
E1	.25	.25	.25	.38	.38	.38	.38	.38	.38	.38	.38	.38	.38
K1	.56	.56	.69	.81	.94	1.09	1.22	Note 1	Note 1	Note 1	Note 1	Note 1	Note 1
Y1	.46	.46	.46	.46	.46	.46	.46	.46	.46	.46	.55	.55	.55
Z1	.52	.52	.65	.77	.89	1.05	1.18	1.52	1.77	2.02	2.65	3.65	4.65
Weight, lb.	.08	.08	.08	.09	.11	.12	.13	.16	.19	.21	.27	.36	.46
Action –O Single Acting, Spring Retracted													
B3	.83	.96	1.08	1.36	1.49	1.83	2.33	2.96	2.96	3.96	3.96	NA*	NA*
E3	.25	.25	.38	.38	.38	.38	.38	.38	.38	.38	.38	"	"
K3	.56	.69	.81	1.09	1.22	Note 1	Note 1	Note 1	Note 1	Note 1	Note 1	"	"
Y3	.46	.46	.46	.46	.46	.46	.46	.55	.55	.55	.55	"	"
Z3	.52	.65	.77	1.05	1.18	1.52	2.02	2.65	2.65	3.65	3.65	"	"
Weight,. lb.	.08	.09	.10	.12	.13	.16	.22	.28	.28	.37	.37	"	"
Preload, lb.	2.0	2.0	.9	1.2	.7	1.9	1.2	1.0	1.7	1.3	1.3	"	"
End of Stroke, lb.	3.2	3.2	3.2	3.2	3.2	3.5	3.2	3.5	5.7	5.3	6.7	"	"
Action –OP Single Acting, Spring Extended													
B4	.95	1.16	1.39	1.80	2.05	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*
E4	.25	.25	.25	.38	.38	"	"	"	"	"	"	"	"
K4	.63	.77	.88	1.16	1.29	"	"	"	"	"	"	"	"
Y4	.52	.58	.71	.83	.96	"	"	"	"	"	"	"	"
Z4	.64	.85	1.08	1.49	1.74	"	"	"	"	"	"	"	"
Weight, lb.	.08	.09	.12	.13	.14	"	"	"	"	"	"	"	"
Preload, lb.	1.7	1.7	.7	1.2	.7	"	"	"	"	"	"	"	"
End of Stroke, lb.	3.0	3.0	3.0	3.2	3.2	"	"	"	"	"	"	"	"

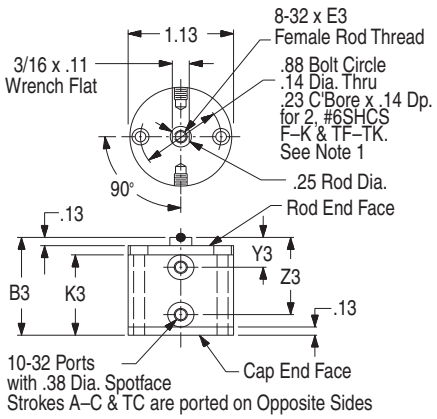
"T" Series

Stroke, Inch	1/8	1/4	3/8	1/2	5/8	1	1 1/4	1 1/2	2	3	4
Stroke, Letter	TC	TD	TE	TF	TG	TH	TI	TJ	TK	TL	TM
Action –X Double Acting											
B1	.96	1.08	1.21	1.36	1.49	1.83	2.08	2.33	2.96	3.96	4.96
E1	.25	.38	.38	.38	.38	.38	.38	.38	.38	.38	.38
K1	.69	.81	.94	1.09	1.22	Note 1	Note 1	Note 1	Note 1	Note 1	Note 1
Y1	.46	.46	.46	.46	.46	.46	.46	.46	.55	.55	.55
Z1	.65	.77	.89	1.05	1.18	1.52	1.77	2.02	2.65	3.65	4.65
Weight, lb.	.08	.09	.11	.12	.13	.16	.19	.21	.27	.36	.46
Action –O Single Acting, Spring Retracted											
B3	1.08	1.36	1.49	1.83	2.33	2.96	2.96	3.96	3.96	NA*	NA*
E3	.38	.38	.38	.38	.38	.38	.38	.38	.38	"	"
K3	.81	1.09	1.22	Note 1	Note 1	Note 1	Note 1	Note 1	Note 1	"	"
Y3	.46	.46	.46	.46	.46	.55	.55	.55	.55	"	"
Z3	.77	1.05	1.18	1.52	2.02	2.65	2.65	3.65	3.65	"	"
Weight,. lb.	.08	.09	.10	.12	.13	.16	.22	.28	.28	"	"
Preload, lb.	2.8	2.0	1.2	1.9	1.9	1.0	1.7	1.3	1.3	"	"
End of Stroke, lb.	3.2	3.2	3.2	3.5	3.5	3.5	5.7	5.3	5.3	"	"
Action –OP Single Acting, Spring Extended											
B4	1.26	1.67	1.92	NA*	NA*	NA*	NA*	NA*	NA*	NA*	NA*
E4	.25	.25	.38	"	"	"	"	"	"	"	"
K4	.88	1.16	1.29	"	"	"	"	"	"	"	"
Y4	.58	.70	.83	"	"	"	"	"	"	"	"
Z4	.95	1.36	1.61	"	"	"	"	"	"	"	"
Weight, lb.	.08	.09	.12	"	"	"	"	"	"	"	"
Preload, lb.	1.7	1.7	.7	"	"	"	"	"	"	"	"
End of Stroke, lb.	3.0	3.0	3.0	"	"	"	"	"	"	"	"

Action –O
Single Acting
Spring Retracted

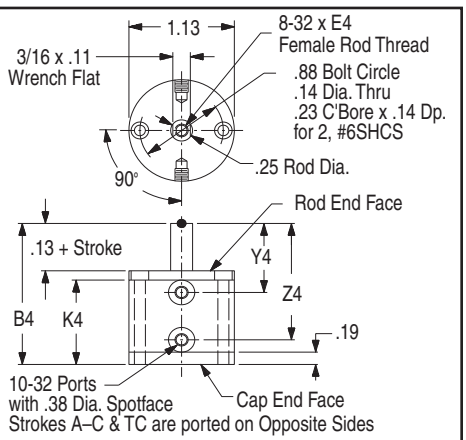


Note 1:
Strokes F–K & TF–TK have two #6-32 x .44 Tapped Mounting Holes on each end.
See page 1.16 for Mounting Bolts.
Push area = .20
See chart for Spring Forces: Preload and End of Stroke.
Seal Kits for Series:
Original = 5-SK
"T" = 5-SKG



Action –OP
Single Acting
Spring Extended

See page 1.16 for Mounting Bolts.
Pull area = .15
See Chart for Spring Forces: Preload & End of Stroke
Seal Kits for Series:
Original = 5-SK
"T" = 5-SKG



NA* = Not Available

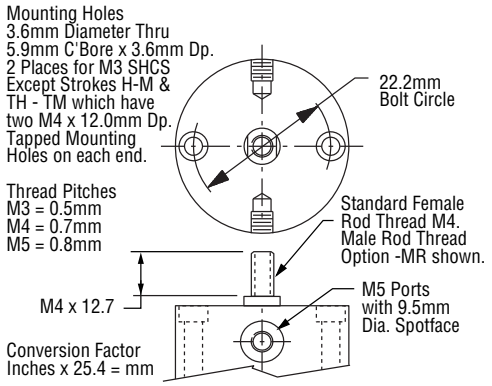
1

Prefix Option -M Metric Cylinder & Rod Thread, 12.7mm Bore

Available on Original and "T" Series with Actions: -X, -O, -OP
Also see *Option Information* on page 1.7.

Original Series													
Stroke mm	1.6	3.2	6.4	9.5	12.7	15.9	19.1	25.4	31.8	38.1	50.8	76.2	101.6
Stroke Letter	A	B	C	D	E	F	G	H	I	J	K	L	M

"T" Series											
Stroke mm	3.2	6.4	9.5	12.7	15.9	25.4	31.8	38.1	50.8	76.2	101.6
Stroke Letter	TC	TD	TE	TF	TG	TH	TI	TJ	TK	TL	TM

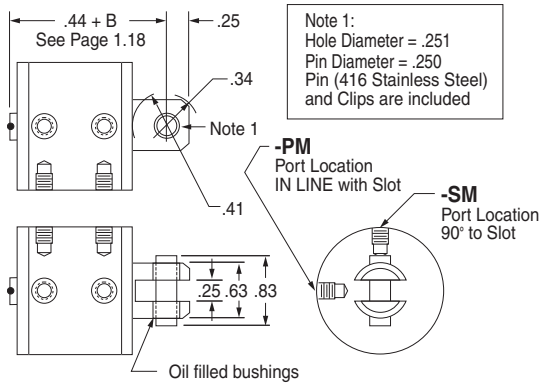


The **Suffix Options** charted on the right are available on Original & "T" Series with the Actions indicated (✓). They require no dimensional changes from the Standard Specifications on page 1.18. – *Also see Option Information on pages 1.7 thru 1.15.*

	V	Q	N	C1–C7	BF	BR	BFR
-X	✓	✓	✓	✓	✓	✓	✓
-O	✓	✓	✓	✓	NA	✓	NA
-OP	✓	✓	✓	✓	✓	NA	NA

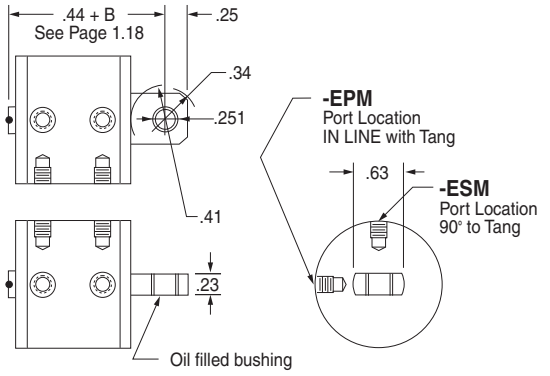
Suffix Options -PM & -SM Clevis Mount

Available on Original and "T" Series
with Actions: -X, -O, -OP
Also see *Option Information* on page 1.13.



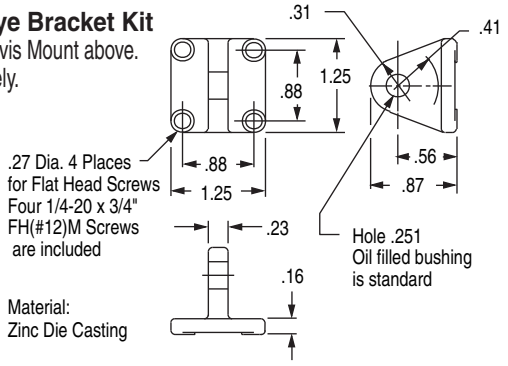
Suffix Options -EPM & -ESM Eye Mount

Available on Original and "T" Series
with Actions: -X, -O, -OP
Also see *Option Information* on page 1.13.



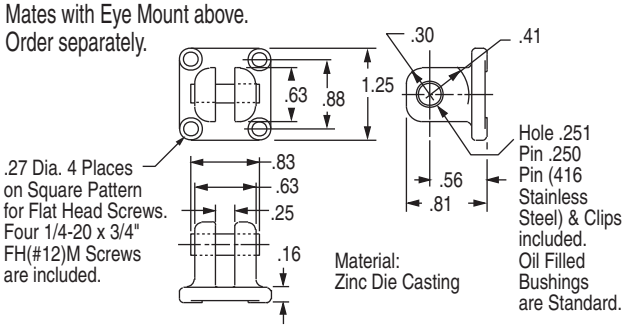
EM-04 Eye Bracket Kit

Mates with Clevis Mount above.
Order separately.



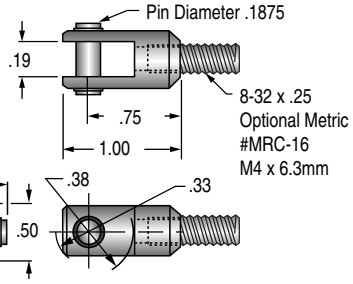
PM-04 Clevis Bracket Kit

Mates with Eye Mount above.
Order separately.



RC-16 Rod Clevis and Pin

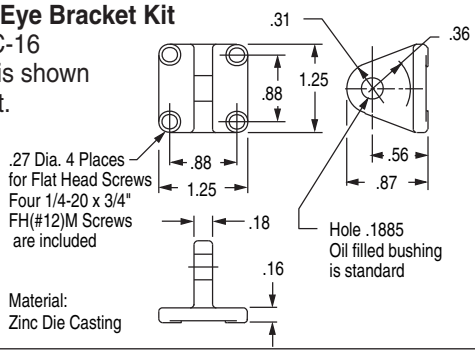
Threaded Stud mates with
Female Rod thread
in ***Pancake***® Cylinders.
Slot & Pin Mate with
EM-02 Eye Bracket
shown on the right.



Materials:
Clevis – Steel, Black Oxide
Stud – Steel
Pin – 416 Stainless Steel
Pin & Clips are included

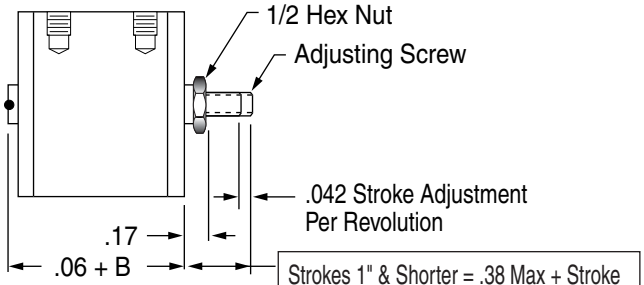
EM-02 Eye Bracket Kit

Mates RC-16
Rod Clevis shown
on the left.



Suffix Option -RS Adjustable Retract Stroke

Available on Original and "T" Series with Actions -X, -O, -OP.
Also see Option Information on page 1.11

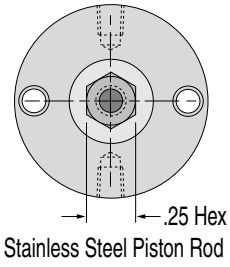


Strokes 1" & Shorter = .38 Max + Stroke
Strokes 1" & Longer = .38 + Adjustment
Standard Adjustment is 1".

-OP only use B4 as shown on page 1.18. No additional length is required

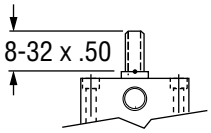
Suffix Option -NR Nonrotating, Single Acting

Available on Original and "T" Series with Action -O.
Also see Option Information on page 1.8



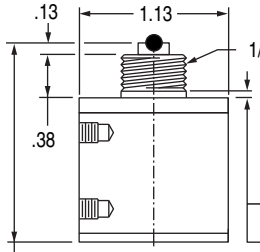
Suffix Option -MR Male Rod Thread

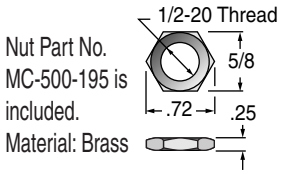
Available on Original and "T" Series with Actions -X, -O, -OP.
Also see Option Information on page 1.8



Suffix Option -F Threaded Nose Mount

Available on Original and "T" Series with Actions -X, -O, -OP.
Also see Option Information on page 1.13

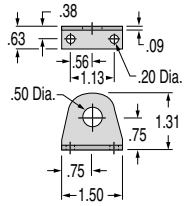




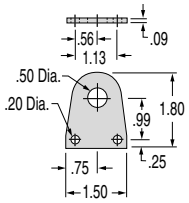
Nut Part No. MC-500-195 is included.
Material: Brass

Accessory – Plated steel nose mounting brackets
Must be ordered separately

Angled Part Number **BRK-201**



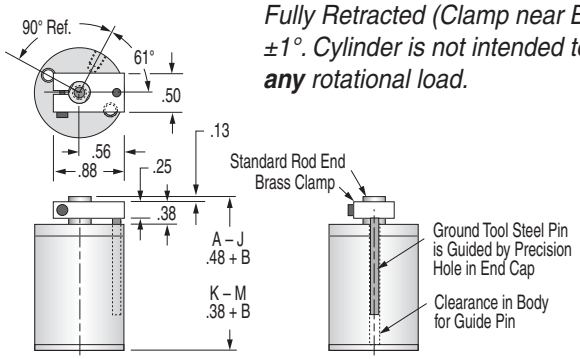
Flat Part Number **BRK-202**



Suffix Option -K Nonrotating, Double Acting

Available on Original and "T" Series with Action -X, -O, -OP.

*Rotational Tolerance with Piston Rod Fully Retracted (Clamp near Body) is ±1°. Cylinder is not intended to carry **any** rotational load.*



Suffix Option -E *Specifies Magnetic Piston and Dovetail Mounting Slot(s)*

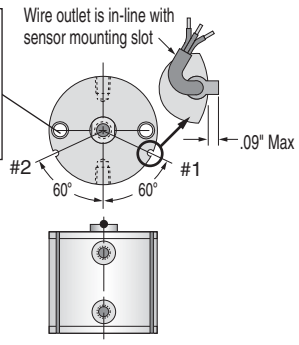
Strokes are NOT affected by Magnetic Piston Option

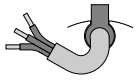
– Sensors Must be Ordered Separately
See Sensor Models Available page 1.14

1/2" (5) Bore

Sensors available for "D" & "TD" strokes and longer. Strokes D & TD are ported on opposite sides.

Note:
Alloy steel mounting bolts may effect sensing. Stainless steel or other nonmagnetic bolts are recommended.





Profile of Sensor & Keyway Slot. Wire is in line with slot.

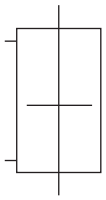
Quick Reference to Standard Strokes
Use the appropriate Stroke Letter in the Model Number

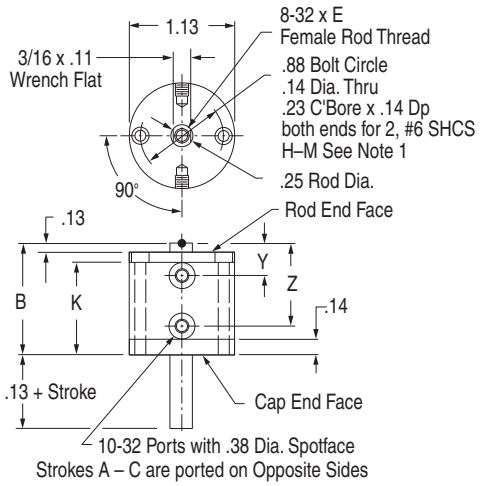
	Available on Original Series		*Available on "T" Series*	
	Stroke	Action X	Stroke	Action X
Sensor Slots at Positions #1 and #2	3/8	D	1/4	TD
	1/2	E	3/8	TE
	5/8	F	1/2	TF
	3/4	G	5/8	TG
	1	H	1	TH
	1 1/4	I	1 1/4	TI
	1 1/2	J	1 1/2	TJ
Sensor Slot at Position #1 only	2	K	2	TK
	3	L	3	TL
	4	M	4	TM

Action –XDR Original Series
Double Rod, Double Acting

Note 1:
Strokes H – M have two #6-32 x .44 Tapped Mounting Holes on each end.

See page 1.16 for
Mounting Bolts
Force Area = .15
Seal Kit = 5-SK



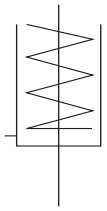


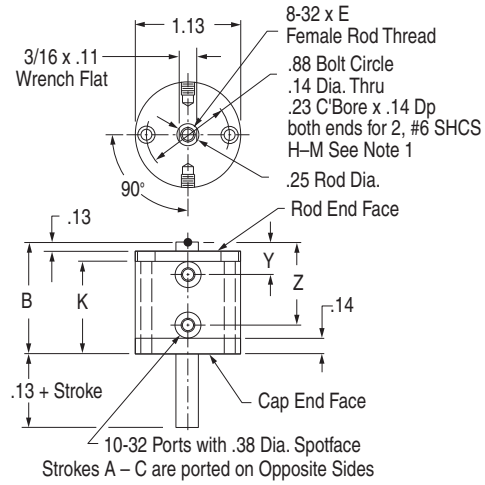
Stroke, Inches	1/16	1/8	1/4	3/8	1/2	5/8	3/4	1	1-1/4	1-1/2	2	3	4
Stroke, Letter	A	B	C	D	E	F	G	H	I	J	K	L	M
B	1.00	1.00	1.13	1.25	1.38	1.50	1.63	1.88	2.13	2.38	2.88	3.88	4.88
E	.25	.25	.25	.38	.38	.38	.38	.38	.38	.38	.38	.38	.38
K	.73	.73	.86	.98	1.11	1.23	1.36	Note 1	Note 1	Note 1	Note 1	Note 1	Note 1
Y	.46	.46	.46	.46	.46	.46	.46	.46	.46	.46	.46	.46	.46
Z	.67	.67	.80	.92	1.05	1.17	1.30	1.55	1.80	2.05	2.55	3.55	4.55
Weight, lb.	.09	.10	.11	.12	.13	.14	.16	.18	.21	.24	.31	.41	.52

Action –ODR Original Series
Double Rod, Single Acting, Spring Retracted

Note 1:
Strokes F – K have two #6-32 x .44 Tapped Mounting Holes on each end.

See page 1.16 for
Mounting Bolts
Force Area = .15
Seal Kit = 5-SK





Stroke, Inches	1/16	1/8	1/4	3/8	1/2	5/8	3/4	1	1 1/4	1 1/2	2
Stroke, Letter	A	B	C	D	E	F	G	H	I	J	K
B	1.00	1.13	1.25	1.55	1.67	1.88	2.38	2.88	2.88	3.88	3.88
E	.25	.25	.25	.38	.38	.38	.38	.38	.38	.38	.38
K	.73	.86	.98	1.28	1.40	Note 1	Note 1	Note 1	Note 1	Note 1	Note 1
Y	.46	.46	.46	.46	.46	.46	.46	.46	.46	.46	.46
Z	.67	.80	.92	1.22	1.34	1.55	2.05	2.55	2.55	3.55	3.55
Weight, lb.	.09	.10	.13	.15	.16	.19	.24	.30	.30	.40	.40
Spring Return											
Preload	2.0	2.0	0.9	1.2	0.7	1.9	1.2	1.0	1.7	1.3	1.3
End of Stroke	3.2	3.2	3.2	3.2	3.2	3.5	3.2	3.5	5.9	5.3	6.7

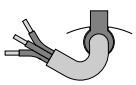
Suffix Option -E *Specifies Magnetic Piston and Dovetail Mounting Slot(s)*

Strokes are NOT affected by Magnetic Piston Option

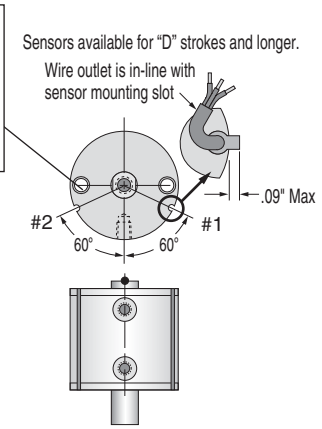
– Sensors Must be Ordered Separately
See Sensor Models Available page 1.14

1/2" (5) Bore

Note:
Alloy steel mounting bolts may effect sensing. Stainless steel or other non-magnetic bolts are recommended.



Profile of Sensor & Keyway Slot. Wire is in line with slot.



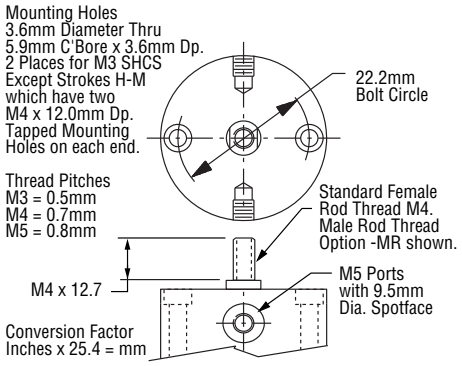
Quick Reference to Standard Strokes
Use the appropriate Stroke Letter in the Model Number

Available on Original Series

	Stroke	Action XDR
Sensor Slots at Positions #1 and #2	3/8	D
	1/2	E
	5/8	F
	3/4	G
	1	H
	1 1/4	I
	1 1/2	J
Sensor Slot at Position #1 only	2	K
	3	L
	4	M

Prefix Option -M Metric Cylinder & Rod Thread, 12.7mm Bore
Available on Original Series with Actions: -XDR, -ODR
Also see *Option Information* on page 1.7.

Stroke mm	1.6	3.2	6.4	9.5	12.7	15.9	19.1	25.4	31.8	38.1	50.8	76.2	101.6
Stroke Letter	A	B	C	D	E	F	G	H	I	J	K	L	M

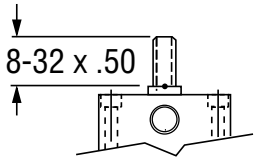


1

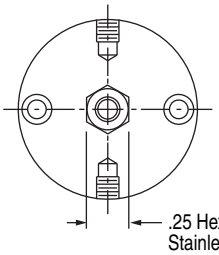
The **Suffix Options** charted on the right are available on Original Series with the Actions indicated (✓). They require no dimensional changes from the Standard Specifications on page 1.21. – *Also see Option Information on pages 1.7 thru 1.15.*

	V	Q	N	C1–C7	BF	BR	BFR	06
-XDR	✓	✓	✓	✓	✓	✓	✓	✓
-ODR	✓	✓	✓	✓	NA	✓	NA	✓

Suffix Option -MR, -MR1, -MR2
Male Rod Thread
Available on Original Series with Actions -XDR, -ODR.
For Rod End only use –MR
For Cap End only use –MR1
For Both Ends use –MR2
Also see Option Information on Page 1.8

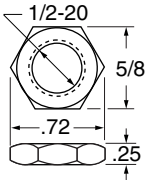


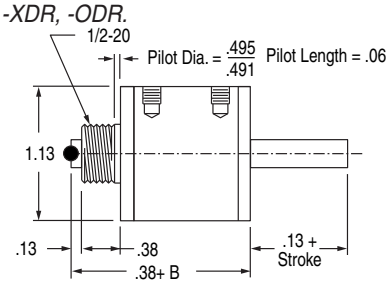
Suffix Option -NR Nonrotating, Single Acting
Available on Original Series with Action -ODR
Also see *Option Information* on page 1.8.



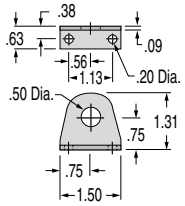
Suffix Option -F, -F1, -F2 Threaded Nose Mount (See info page 1.13)
Available on Original Series with Actions -XDR, -ODR.
*For Rod End only use **-F***
*For Cap End only use **-F1***
*For Both Ends use **-F2***

Nut.
Part No. MC-500-195
is included.
Material: Brass

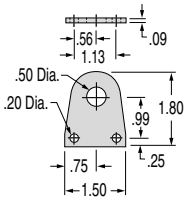




Accessory Nose Mounting Brackets
Order separately – Material Plated Steel



Part No: BRK-201



Part No: BRK-202

Suffix Option -K
Nonrotating, Double Acting
Available on Original Series with Actions: -XDR, -ODR.

Rotational Tolerance with Piston Rod Fully Retracted (Clamp near Body) is ±1°.

*Cylinder is not intended to carry **any** rotational load.*