

1

Model Number Code

Prefix Options

Leave blank if none desired

Stroke

D

Bore

1221

Action

X

Suffix Options

MR

Metric M
See pages 1.7, 1.61 & 1.64

Bore Code
4" 1221
101.6mm 1221

Standard Strokes	
Original Series	
Action	X XK XDR XDRK
Stroke	
1/8	AC
1/4	AB
1/2	AA
1	A
1 1/2	B
2	C
3	D
4	E
"T" Series Includes PTFE piston bearing	
Action	X XK
Stroke	
5/16	TAA
13/16	TA
1 5/16	TB
1 13/16	TC
2 13/16	TD
3 13/16	TE

Grey shading indicates sensors are not available.

Strokes are NOT affected by magnetic piston Option "E"

Action	
Single rod	
Double acting	-X
Double acting, Nonrotating Internal guide pins - 150 psi max	-XK
Double rod	
Double acting	-XDR
Double acting, Nonrotating Internal guide pins - 150 psi max	-XDRK

See pages 1.5 & 1.6 for Action Information.
See pages 1.60 & 1.63 for Standard Specifications

Suffix Options	
Male rod thread: Single rod	-MR
Double rod, rod end	-MR
Double rod, cap end	-MR1
Double rod, both ends	-MR2
PTFE seals	-T
Viton seals	-V
Quad seals	-Q
External guide, nonrotating for load guiding (See page 1.65)	-G
Hydraulic:	
Standard cover	-H
Thick cover	-HHC
Air service:	
Thick cover	-HC
1/4 NPT ports	-P14
Hole thru double rod shaft: 1/4" hole 150 psi max	-25
Finish: ProCoat™ (Electroless Nickel)	-N
Stroke collar:	
1/4"	1/8" -C1
1/2"	3/8" -C3
3/4"	5/8" -C5
	7/8" -C7
Sound limiters:	
Rod end	-LF
Cap end	-LR
Both ends	-LFR
Rubber Bumpers:	
Rod end	-BF
Cap end	-BR
Both ends	-BFR
Adjustable extend stroke (Full stroke adjustment is standard)	-AS
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
Magnetic piston & sensor mounting slot(s) Order sensors separately. See page 1.14. Stroke length determines number of mounting slots. See page 1.14, 1.62, 1.64	-E

See pages 1.3 – 1.15 for general option information and pages 1.61, 1.62 & 1.64 for option specifications of 4" bore models.

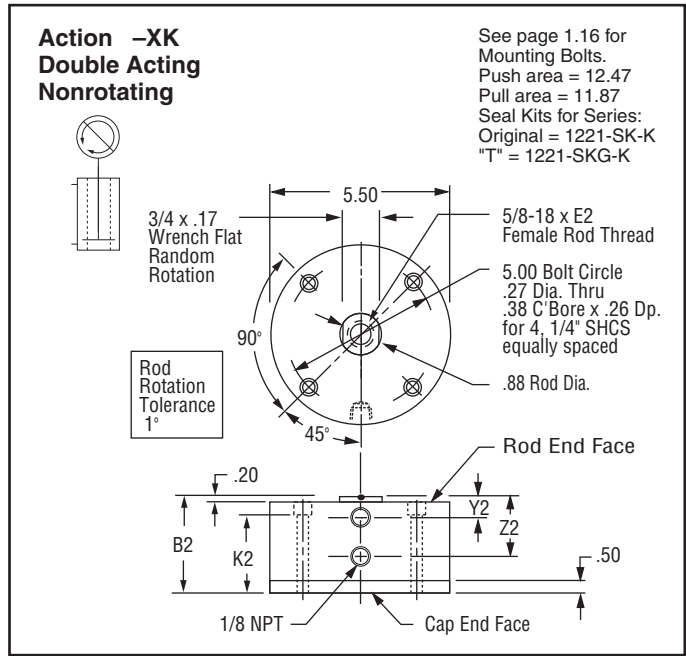
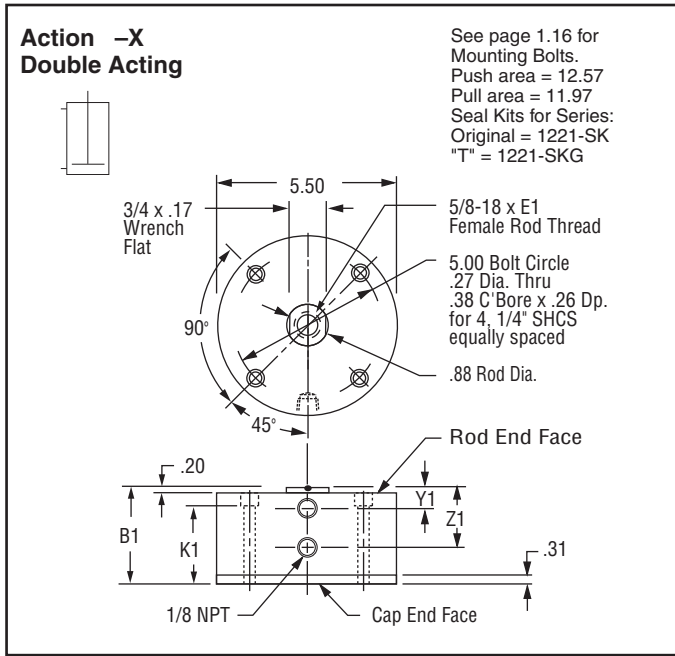
HOW TO ORDER

- Under **Stroke** – select letter(s) for desired Series and Stroke.
 - Under **Bore** – select **1221** for 4" bore.
Seven Other Bore Sizes are Available
- | Bore | Bore Code | See page |
|--------|-----------|----------|
| 1/4" | 5 | 1.17 |
| 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 |
- Under **Action** – select letter(s) for desired action.
 - Under **Prefix & Suffix Options** – select letter(s) for desired options and add to model number.

EXAMPLES

- D-1221-X**
Original Series, 3" stroke - 4" Bore - Single Rod, Double Acting
- TD-1221-X-MR**
"T" Series, 2 13/16" Stroke - 4" Bore - Single Rod, Double Acting - Male Rod Thread

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>



Original Series

"T" Series

Stroke, Inches	1/8	1/4	1/2	1	1 1/2	2	3	4	5/16	13/16	1 5/16	1 13/16	2 13/16	3 13/16
Stroke, Letter	AC	AB	AA	A	B	C	D	E	TAA	TA	TB	TC	TD	TE
	Action -X Double Acting								Action -X Double Acting					
B1	1.89	2.02	2.27	2.77	3.27	3.77	4.77	5.77	2.27	2.77	3.27	3.77	4.77	5.77
E1	.50	.50	.75	.88	.88	.88	.88	.88	.75	.88	.88	.88	.88	.88
K1	1.43	1.56	1.81	2.31	2.81	3.31	4.31	5.31	1.81	2.31	2.81	3.31	4.31	5.31
Y1	.58	.58	.70	.70	.70	.70	.70	.70	.70	.70	.70	.70	.70	.70
Z1	1.20	1.33	1.58	2.08	2.58	3.08	4.08	5.08	1.58	2.08	2.58	3.08	4.08	5.08
Weight, lb.	3.88	4.01	4.34	4.91	5.63	6.22	7.53	8.84	5.04	5.61	6.33	6.92	8.23	9.54
	Action -XK Double Acting, Nonrotating								Action -XK Double Acting, Nonrotating					
B2	2.08	2.21	2.46	2.96	3.46	3.96	4.96	5.96	2.46	2.96	3.46	3.96	4.96	5.96
E2	.50	.50	.75	.88	.88	.88	.88	.88	.75	.88	.88	.88	.88	.88
K2	1.62	1.75	2.00	2.50	3.00	3.50	4.50	5.50	2.00	2.50	3.00	3.50	4.50	5.50
Y2	.58	.58	.70	.70	.70	.70	.70	.70	.70	.70	.70	.70	.70	.70
Z2	1.20	1.33	1.58	2.08	2.58	3.08	4.08	5.08	1.58	2.08	2.58	3.08	4.08	5.08
Weight, lb.	4.31	4.44	4.78	5.36	6.10	6.70	8.04	9.38	5.48	6.06	6.80	7.50	8.74	10.08

Prefix Option -M Metric Cylinder & Rod Thread 101.6mm Bore

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

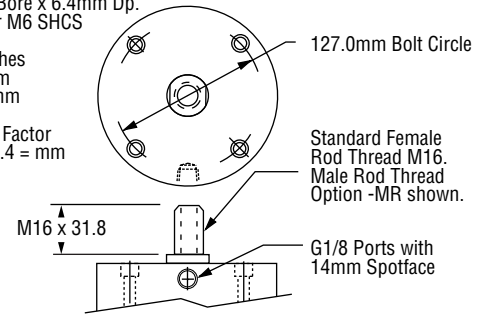
Original Series								
Stroke mm	3.2	6.4	12.7	25.4	38.1	50.8	76.2	101.6
Stroke Letter	AC	AB	AA	A	B	C	D	E

"T" Series						
Stroke mm	7.9	20.6	33.3	46.0	71.4	96.7
Stroke Letter	TAA	TA	TB	TC	TD	TE

Mounting Holes
6.7mm Diameter Thru
10.3mm C' Bore x 6.4mm Dp.
4 Places for M6 SHCS

Thread Pitches
M6 = 1.0mm
M16 = 2.0mm

Conversion Factor
Inches x 25.4 = mm



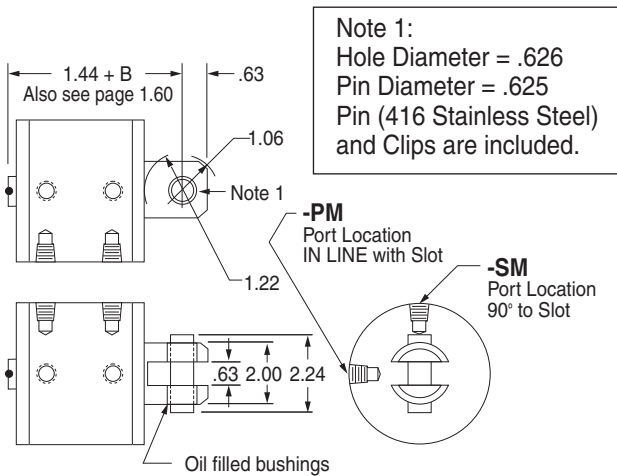
The **Suffix Options** charted on the right are available on Original and "T" Series with the Actions indicated (✓). They require no dimensional changes from the Standard Specifications on page 1.60.
- Also see *Option Information* on pages 1.7 thru 1.15.

	T	V	Q	H	N	C1-C7	LF	LR	LFR	BF	BR	BFR	P14
-X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
-XK	NA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Suffix Options -PM & -SM Clevis Mount

Available on Original and "T" Series
with Actions: -X, -XK

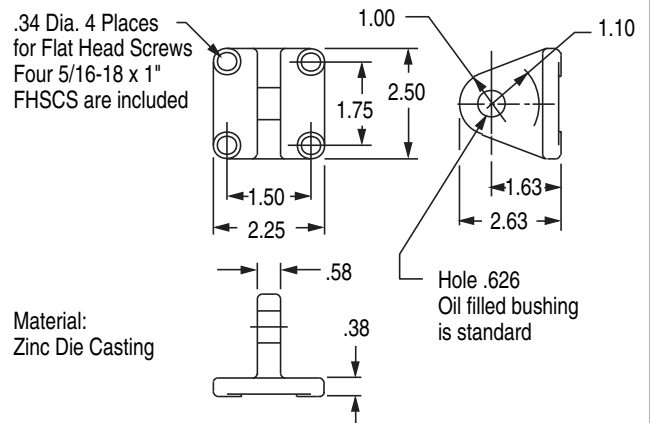
Also see *Option Information* on page 1.13.



EM-1221 Eye Bracket Kit

Mates with Clevis Mount shown on the left.

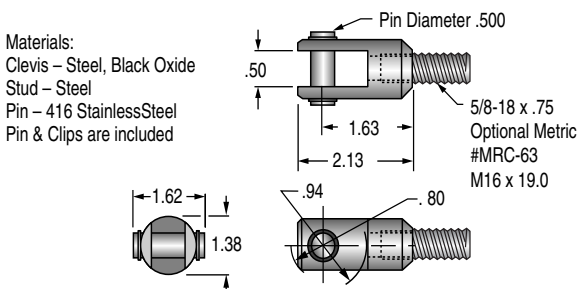
Order separately.



RC-63 Rod Clevis and Pin

Threaded Stud mates with Female Rod thread
in the **Pancake®** Cylinders.

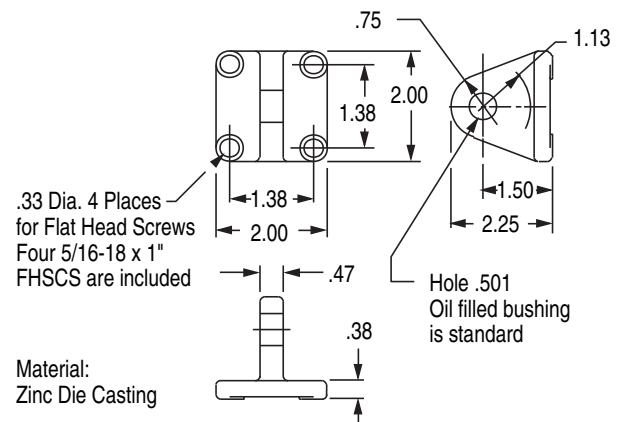
Slot and Pin Mate with EM-521 Eye Bracket
shown on the right.



EM-521 Eye Bracket Kit

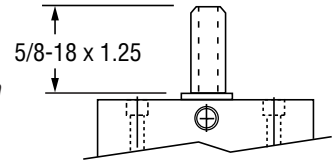
Mates with RC-63 Rod Clevis shown on the left.

Order separately.



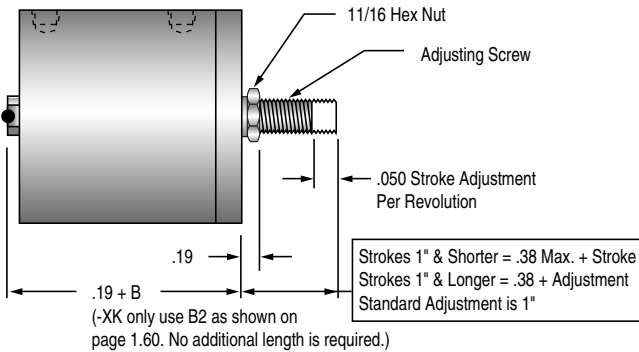
Suffix Option -MR Male Rod Thread

Available on Original and "T" Series with Actions: -X, -XK
Also see *Option Information* on page 1.8.



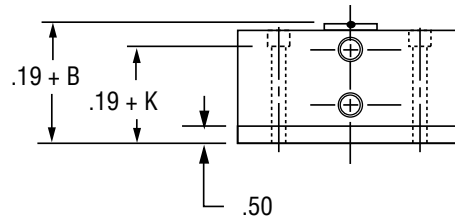
Suffix Option -RS Adjustable Retract Stroke

Available on Original and "T" Series with Actions: -X, -XK
Also see *Option Information* on page 1.11.



Suffix Option -HHC Hydraulic & -HC Air

Available on Original and "T" Series with Action -X.
Also see *Option Information* on page 1.9.



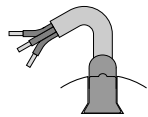
Suffix Option -E Specifies Magnetic Piston and Dovetail Mounting Slot(s)

Strokes are NOT affected by magnetic piston.

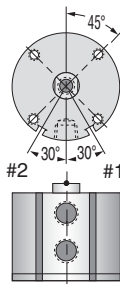
– Sensors Must be Ordered Separately
See Sensor Models Available page 1.14

4" (1221) Bore

Sensors available for "AB" & "TAA" strokes and longer.



1/4" 60° Dovetail Profile of Sensor & Mounting Slot.



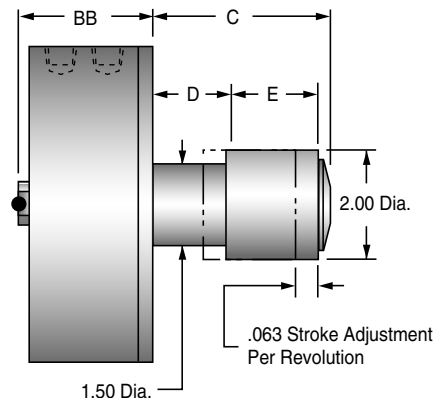
Quick Reference to Standard Strokes
Use the appropriate Stroke Letter in the Model Number

Available on Original Series		Available on "T" Series			
Stroke	Action X, XK	Stroke	Action X, XK		
Sensor Slots at Positions #1 and #2		1/4 -----	AB	5/16 -----	TAA
		1/2 -----	AA	13/16 -----	TA
		1 -----	A		
Sensor Slot at Position #1 only		1-1/2 -----	B	15/16 -----	TB
		2 -----	C	1-13/16 -----	TC
		3 -----	D	2-13/16 -----	TD
		4 -----	E	3-13/16 -----	TE

Suffix Option -AS Adjustable Extend Stroke

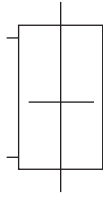
Available on Original Series with Actions: -X, -XK
Also see *Option Information* on page 1.11.

Stroke Inches	1/8	1/4	1/2	1	1-1/2	2	3	4
Stroke Letter	AC	AB	AA	A	B	C	D	E
BB	2.33	2.45	2.70	3.20	3.70	4.20	5.20	6.20
C	1.66	1.91	2.41	3.41	4.41	5.41	7.41	9.41
D	0.63	.75	1.00	1.50	2.00	2.50	3.50	4.50
E	0.88	1.00	1.25	1.75	2.25	2.75	3.75	4.75



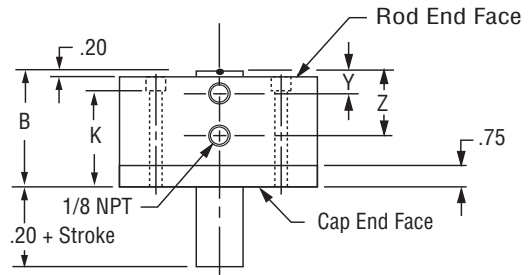
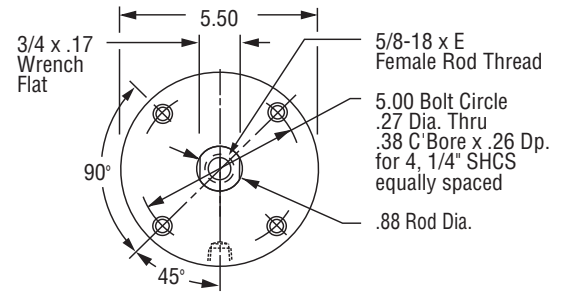
1

Action -XDR Original Series Double Rod, Double Acting

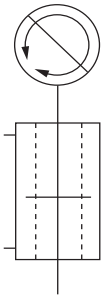


See page 1.16 for
Mounting Bolts.
Force area = 11.97
Seal Kit = 1221-SK

Stroke, Inches	1/8	1/4	1/2	1	1 1/2	2	3	4
Stroke, Letter	AC	AB	AA	A	B	C	D	E
B	2.33	2.45	2.70	3.20	3.70	4.20	5.20	6.20
E	.50	.50	.75	.88	.88	.88	.88	.88
K	1.87	2.00	2.25	2.75	3.25	3.75	4.75	5.75
Y	.58	.58	.70	.70	.70	.70	.70	.70
Z	1.20	1.33	1.58	2.08	2.58	3.08	4.08	5.08
Weight, lb.	5.22	5.38	5.75	6.44	7.16	7.72	9.19	10.31

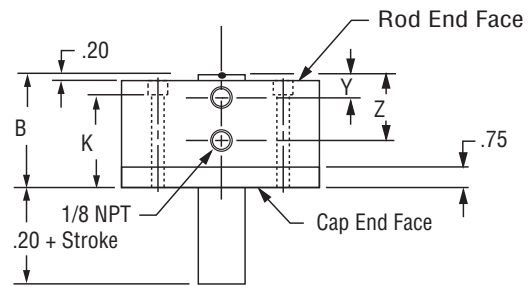
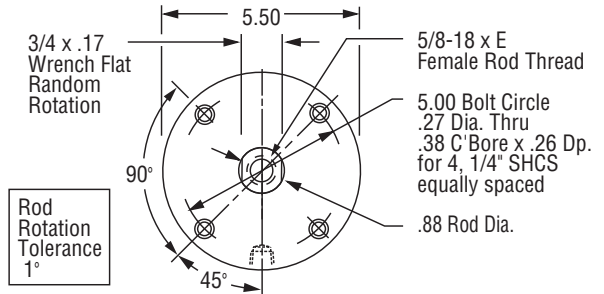


Action -XDRK Original Series Double Rod, Double Acting, Nonrotating



See page 1.16 for
Mounting Bolts.
Force area = 11.87
Seal Kit = 1221-SK-K

Stroke, Inches	1/8	1/4	1/2	1	1 1/2	2	3	4
Stroke, Letter	AC	AB	AA	A	B	C	D	E
B	2.33	2.45	2.70	3.20	3.70	4.20	5.20	6.20
E	.50	.50	.75	.88	.88	.88	.88	.88
K	1.87	2.00	2.25	2.75	3.25	3.75	4.75	5.75
Y	.58	.58	.70	.70	.70	.70	.70	.70
Z	1.20	1.33	1.58	2.08	2.58	3.08	4.08	5.08
Weight, lb.	5.65	5.81	6.19	6.89	7.63	8.23	9.70	10.85



**Prefix Option M
Metric Cylinder & Rod Thread
101.6mm Bore**

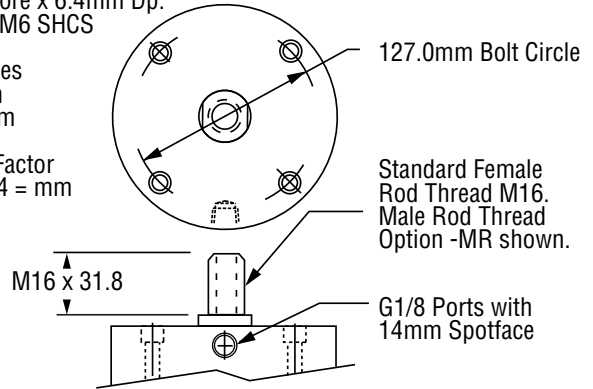
Available on Original Series with Actions -XDR, -XDRK.
Also see Option Information on Page 1.7

Stroke mm	3.2	6.4	12.7	25.4	38.1	50.8	76.2	101.6
Stroke Letter	AC	AB	AA	A	B	C	D	E

Mounting Holes
6.7mm Diameter Thru
10.3mm C Bore x 6.4mm Dp.
4 Places for M6 SHCS

Thread Pitches
M6 = 1.0mm
M16 = 2.0mm

Conversion Factor
Inches x 25.4 = mm



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 1.63. – Also see Option Information on pages 1.7 thru 1.15.

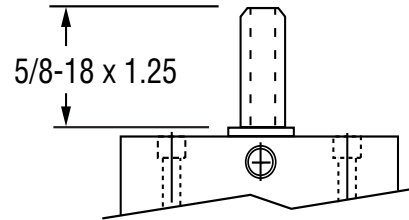
	T	V	Q	H	N	C1-C7	LF	LR	LFR	BF	BR	BFR	P14	25
-XDR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
-XDRK	NA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Suffix Options -MR, -MR1, -MR2 Male Rod Thread

Available on Original Series with Actions -XDR, -XDRK.

- 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



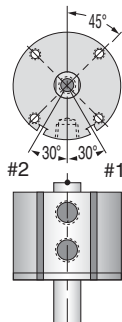
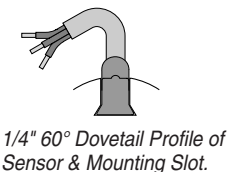
Suffix Option -E Specifies Magnetic Piston and Dovetail Mounting Slot(s)

Strokes are NOT affected by magnetic piston.

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

4" (1221) Bore

Sensors available for "AB" strokes and longer.



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

Available on Original Series

Sensor Slots at Positions #1 and # 2	Action	
	Stroke	XDR, XDRK
Sensor Slots at Position #1 only	1/4 -----	AB
	1/2 -----	AA
	1 -----	A
Sensor Slot at Position #1 only	1 1/2 -----	B
	2 -----	C
	3 -----	D
	4 -----	E