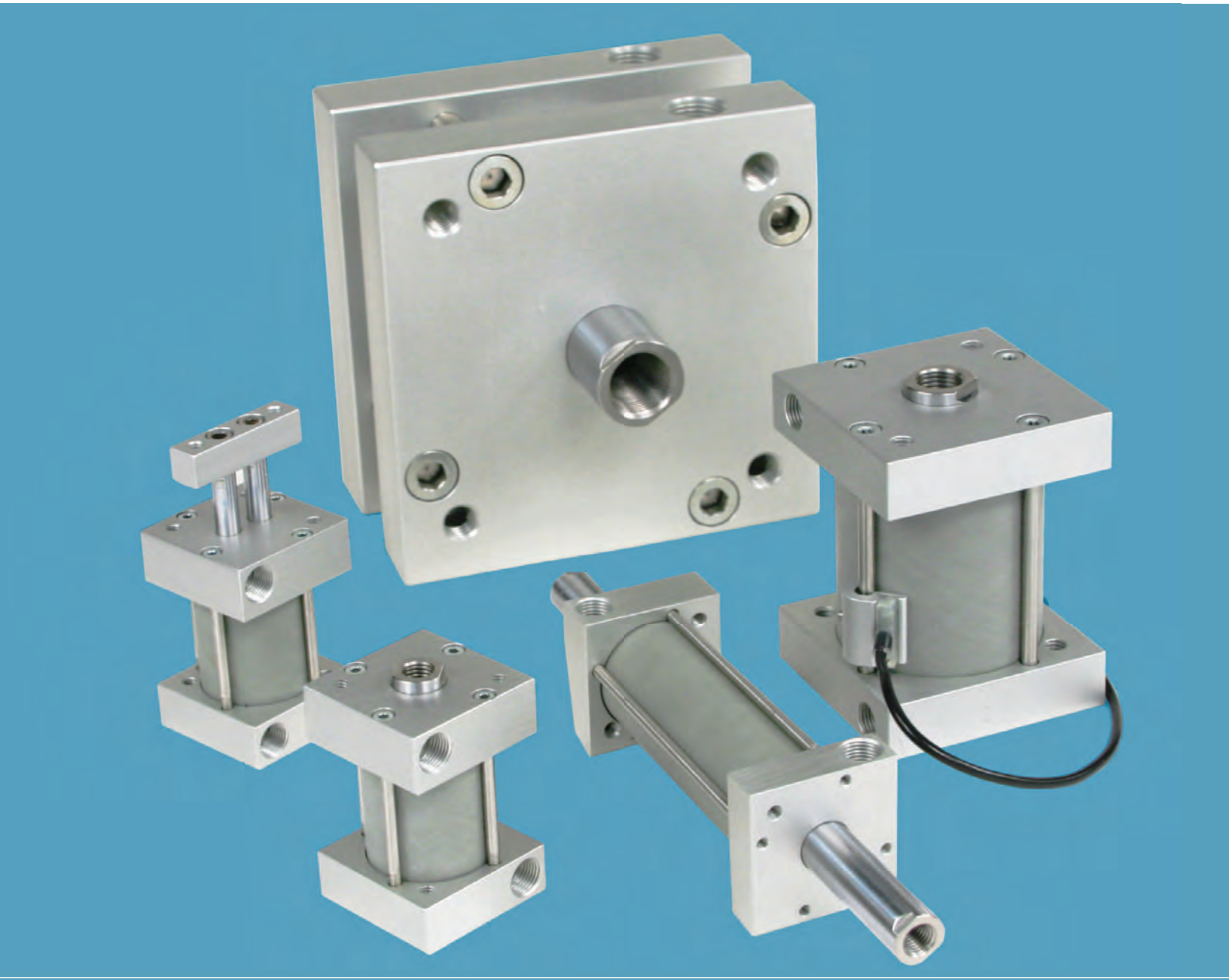
Catalog # SQ-PAN2

FABCO-AIR

Square Pancake® II Air Cylinders



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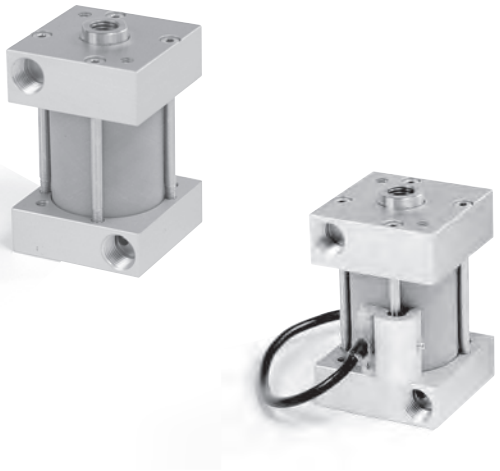
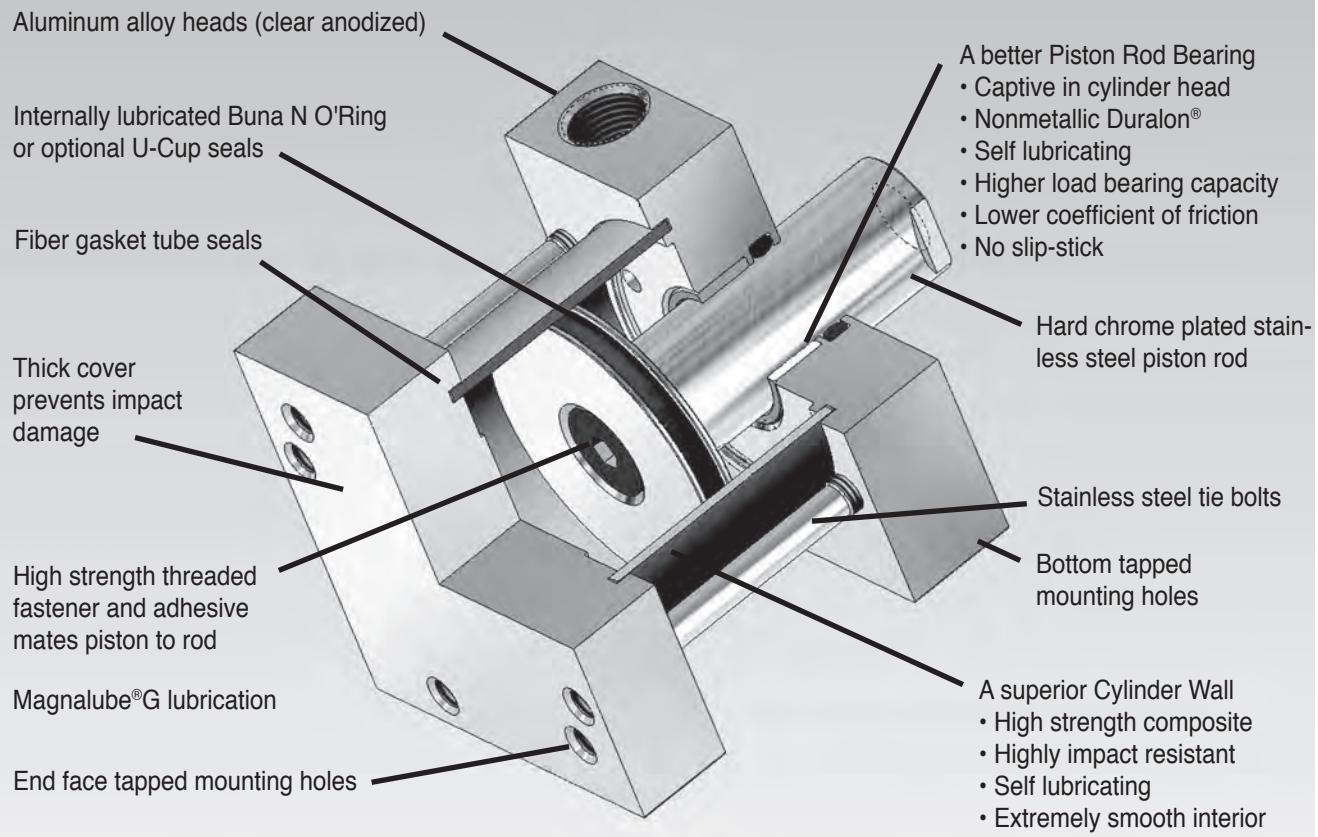


The Square Pancake® II Direct Interchange Air Cylinders



Superior Interchangeable Industrial Air Cylinders

Innovation – For over 40 years our famous Pancakes® have dominated as the world's first compact air cylinder line. Today, backed by decades of engineering and manufacturing innovation, our new ***Pancake® II*** composite body air cylinders continue in the Pancake® tradition with a wide selection of models and options.

Packed with value – Stainless steel tie bolts lock precision machined heads tightly around a unique, high strength, composite cylinder barrel. The barrel's extremely smooth, self-lubricating interior surface insures highly reliable performance and extended seal life. Its high impact resistance reduces chances of cylinder failure due to dings or dents. Zero slip-stick avoids problems that metal cylinders encounter when they sit in a static condition for extended periods of time. Combined with hard chrome plated stainless steel piston rods and a unique, nonmetallic rod bearing, the new Fabco-Air cylinder assembly assures optimal operation and longer product life.

Exceptional Piston Rod Bearing – The better the bearing, the more cycle life you can expect from your air cylinders. ***Pancake® II*** cylinders incorporate a truly superior rod bearing material - Duralon® with the same field-proven performance you have come to expect from the six other Fabco-Air cylinder families.

Duralon® Rod Bearings Excel

Load Capacity (psi) Machine Design 1972/73 Bearing Reference Issue	
Porous Bronze	4,500
Porous iron	8,000
Phenolics	6,000
Nylon®	1,000
TFE	500
Reinforced Telfon®	2,500
*TFE fabric	60,000
Polycarbonate	1,000
Acetal	1,000
Carbon-graphite	600

Friction Properties	Coefficient	Slip-stick
Steel-on-steel	.50	Yes
Bronze-on-steel	.35	Yes
Sintered Bronze-on-steel with mineral oil	.13	No
Bronze-on-steel with mineral oil	.16	No
Copper lead alloy-on-steel	22	Yes
Acetal-on-steel	.20	No
Nylon-on-steel	.32	Yes
Duralon-on-steel	.05 - .16	No

* Shows Duralon bearing classification. Not to be used for design purposes.

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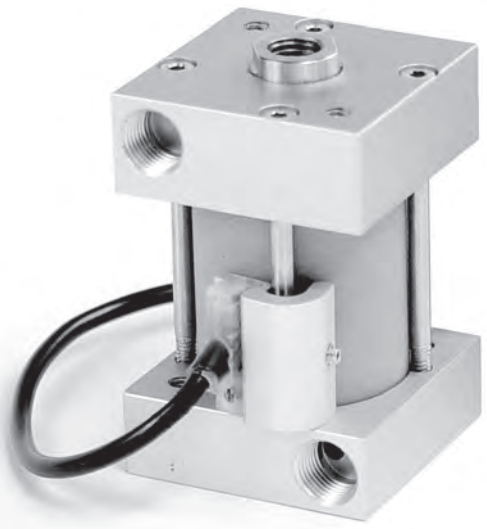
Duralon® is a composite of a Teflon®/Dacron® fabric liner bonded to a supporting filament-wound, high strength, fiberglass and epoxy resin shell. Resistant to corrosion, moisture and temperature to 325°F, the bearing is reliable in any environment. It has an extremely high load bearing capacity, very low friction, and will not gall or score the piston rod (see physical properties in the table above).



Available in 5 styles
7 Bore sizes 3/4" thru 4"
Strokes to 4" standard

- Double acting, single rod
- Double acting, double rod
- Double acting, hole thru double rod
- Single acting, spring retracted rod
- Single acting, spring extended rod

Ratings – Standard Units all Series

- Body ..... Self-lubricating composite
- Heads ..... Clear anodized aluminum alloy
- Tie Bolts ..... Stainless steel
- Rod ..... Chrome plated stainless steel
- Piston ..... Aluminum alloy
- Rod end ..... Female thread with wrench flats
- Ports ..... Position #1
- Seals ..... Internally lubricated Buna-N
- Lubrication ..... Magnalube®-G
- Rod bushing ..... PTFE composite bearing
- Stroke tolerance . . . . . ± 1/64"
- Media . . . . . Air
- Pressure rating, maximum . . . . . 200 psi
- Minimum recommended operating pressure . . . . . 15 psi
- Temperature rating Cylinder . . . . . –25° to +221°F (–32° to +105°C)
- Temperature rating Electronic sensors . . . . . –4° to +176°F (–20° to +80°C)

Approximate Spring Forces

Bore	Maximum Force (lbs)	Spring Rate (lbs/inch) for Stroke Range			
		0.12 to 1" Stroke	1.001 to 2" Stroke	2.001 to 3" Stroke	3.001 to 4" Stroke
3/4 (2)	10.00	6.00	3.00	2.00	1.50
1-1/16 (3)	13.00	6.50	3.25	2.17	1.63
1-1/2 (4)	13.00	6.50	3.25	2.17	1.63
2 (5)	13.00	6.50	3.25	2.17	1.63
2-1/2 (6)	25.00	12.50	6.25	4.17	3.13
3 (7)	25.00	12.50	6.25	4.17	3.13
4 (8)	25.00	12.50	6.25	4.17	3.13

Cylinder Sizing Guide

Bore Diameter (inch)	3/4	1-1/16	1-1/2	2	2 -1/2	3	4
Rod Diameter (inch)	0.31	0.50	0.63	0.75	0.75	0.88	1.00
Rod Area (in^2)	0.08	0.19	0.31	0.44	0.44	0.60	0.79
Push Area (Single Rod) (in^2)	0.44	0.88	1.76	3.14	4.91	7.07	12.57
Push Area (Double Rod) (in^2)	0.36	0.69	1.45	2.66	4.47	6.47	11.78
Pull Area (in^2)	0.36	0.69	1.45	2.66	4.47	6.47	11.78

How to Order

Series
S - ***Square Pancake® II***

Model
S - single rod
W - double rod
T - double rod, hole thru

Action
D - double acting
R - single acting, spring retract (Model S only)
X - single acting, spring extend (Model S only)

Bore
2 - 3/4"
3 - 1-1/16"
4 - 1-1/2"
5 - 2"
6 - 2-1/2"
7 - 3"
8 - 4"

Stroke
0.125 - 1/8"
0.250 - 1/4"
0.375 - 3/8"
0.500 - 1/2"
etc., thru
4.000 - 4"
(see pages 6 & 7 for standard strokes)

Note:
Special strokes are available on request. Contact Engineering or your local Fabco-Air Distributor.

Model Number ***Series*** ***Model*** ***Action*** ***Bore*** – ***Mounting*** ***Stroke*** – ***Options***

Mounting
Tapped mounting holes are standard in the basic model and need not be specified. For other mounting specify only one option code.
Leave Blank - Basic Model
PM - Pivot mount, pin 90° from port
SM - Pivot mount, pin in-line with port

Options ***Enter in alphabetical order***

B - Bumpers, both ends[1]
BF - Bumper, front only[1]
BR - Bumper, rear only[1]
E - Magnet on piston for position sensing (see sensors page 15; length adders page 8) 3/8" stroke minimum[2]
J - Failsafe operation (single acting, spring retract models)
L - Low friction seals (see length adders page 8)
M, M1, M4 - Magnet on piston and adhesive mounted dovetail extrusion to hold 1/4" dovetail sensors. (see sensors page 15; length adders page 8) 3/8" stroke min.[2]
Q - Low temperature operation (–40°F to +200°F)
TCF - Coarse female rod thread, dimension E (page 7)
TCM - Male rod end with coarse thread (page 8)
TFM - Male rod end with fine thread (page 8)
TN - Non-threaded rod
T1, T4 - Additional adhesive mounted dovetail extrusions located in position 1 or 4
V - Viton seals for media compatibility (–15°F to +225°F)
W - Rod wiper, Buna N only (page 8)
X - **EXTRA** Rod extension
Example: X0.5 = 1/2" **EXTRA** Rod Extension
X1 = 1" **EXTRA** Rod Extension

[1] Stroke is reduced by .03 per end; .06 for option B; Spring retracted, BR only; Spring extended, BF only.

[2] Not available with Viton seals or low temperature seals.

How to Order

1. Specify **S**, Model, Action, and Bore
2. Specify optional Mounting (if required) then Stroke
3. Specify the Options in alphabetical order

Ordering example #1: **SSD4-PM2.500-BFV**

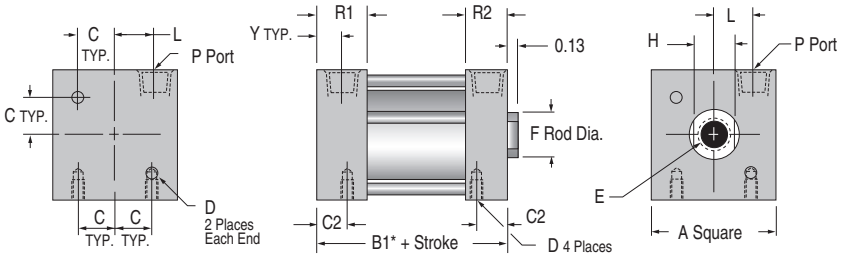
Square Pancake® II single rod, double acting, 1-1/2" bore, pivot mount (pin 90° from port), 2-1/2" stroke, front bumpers, and Viton seals.

Ordering example #2: **SSD3-1.000**

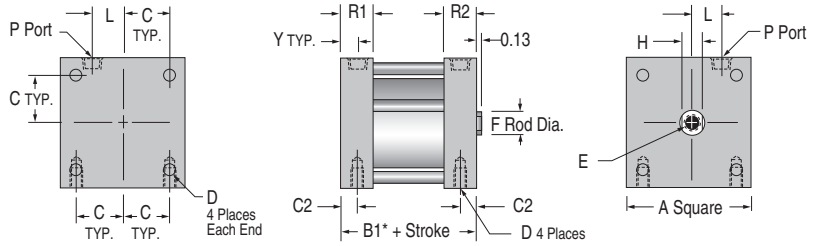
Square Pancake® II single rod, double acting, 1-1/16" bore, standard tapped mounting holes, and 1" stroke.

Model SSD Double Acting, Single Rod

Bore Sizes 3/4", 1-1/16", 1-1/2", 2"



Bore Sizes 2-1/2", 3", 4"



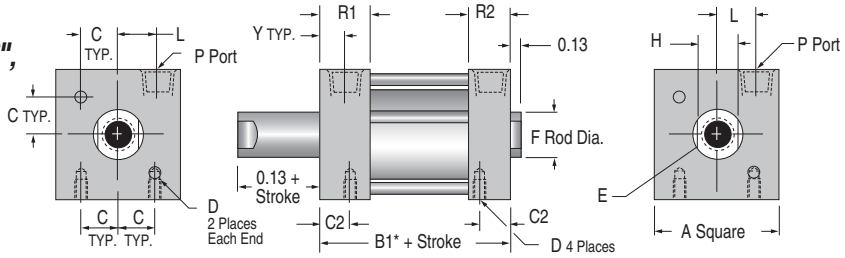
***Note: Some options effect cylinder length.**

Standard Strokes – All Models: • 1/8 • 1/4 • 3/8 • 1/2 • 5/8 • 3/4 • 7/8 • 1 • 1-1/4 • 1-1/2 • 1-3/4 • 2 • 2-1/2 • 3 • 3-1/2 • 4
Special strokes available on request. Contact Engineering or your local Fabco-Air Distributor

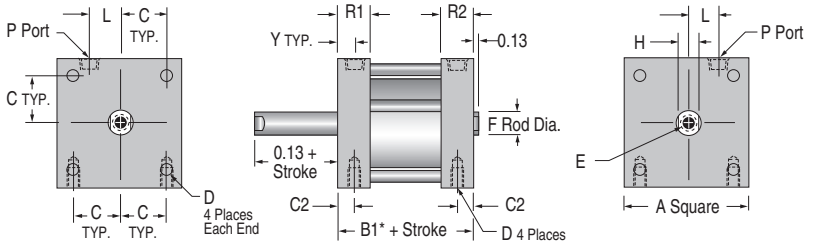
Model SWD Double Acting, Double Rod

Model STD Double Acting, Hole Thru Double Rod

Bore Sizes 3/4", 1-1/16", 1-1/2", 2"



Bore Sizes 2-1/2", 3", 4"



***Note: Some options effect cylinder length.**

Hole Thru Diameter (STD)		
Bore	Female Rod Thread	Male Rod Thread
3/4 (2)	0.14	0.09
1-1/16 (3)	0.22	0.16
1-1/2 (4)	0.28	0.19
2 (5)	0.38	0.25
2-1/2 (6)	0.38	0.25
3 (7)	0.44	0.31
4 (8)	0.50	0.38

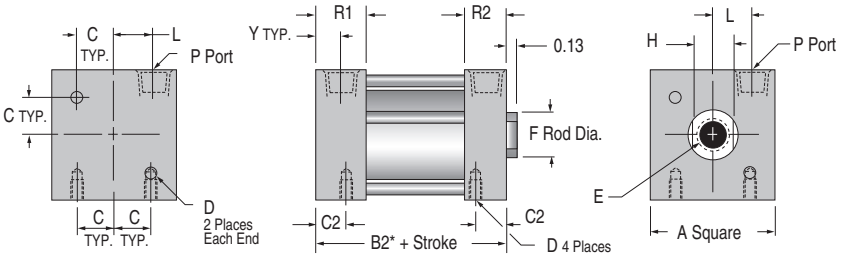
Dimensions (inches)

Bore	A	B1*	B2* for Stroke Range				B3* for Stroke Range				C	C2	D
			0-1	1.001-2	2.001-3	3.001-4	0-1	1.001-2	2.001-3	3.001-4			
3/4 (2)	1.25	0.75	1.00	1.56	2.13	2.69	1.25	1.81	2.38	2.94	0.38	0.28	#6-32 UNC
1-1/16 (3)	1.50	1.25	1.25	1.88	2.50	3.13	1.75	2.38	3.00	3.63	0.50	0.38	#8-32 UNC
1-1/2 (4)	2.00	1.25	1.25	1.88	2.50	3.13	1.75	2.38	3.00	3.63	0.69	0.31	#10-24 UNC
2 (5)	2.50	1.31	1.31	1.94	2.56	3.19	1.81	2.44	3.06	NA	0.88	0.38	1/4-20 UNC
2-1/2 (6)	3.25	1.66	1.66	2.54	3.41	4.29	2.39	3.27	3.29	NA	1.18	0.42	5/16-18 UNC
3 (7)	3.75	1.71	1.71	2.58	3.46	4.33	2.44	3.31	3.33	NA	1.44	0.44	5/16-18 UNC
4 (8)	5.00	2.00	2.00	2.88	3.75	4.63	2.75	3.62	3.63	NA	1.81	0.50	7/16-14 UNC

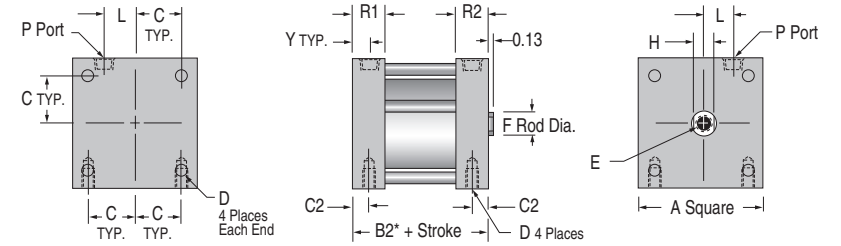
Model SSR Single Acting, Spring Retract

**Note: Some options effect cylinder length. See table on page 4 for spring forces.*

Bore Sizes 3/4", 1-1/16", 1-1/2", 2"



Bore Sizes 2-1/2", 3", 4"

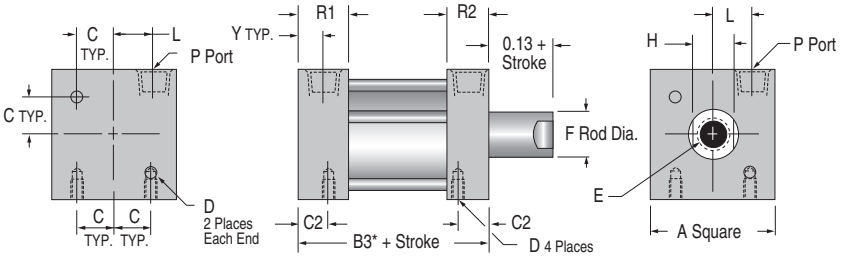


Standard Strokes – All Models: • 1/8 • 1/4 • 3/8 • 1/2 • 5/8 • 3/4 • 7/8 • 1 • 1-1/4 • 1-1/2 • 1-3/4 • 2 • 2-1/2 • 3 • 3-1/2 • 4*
*(*Note For SSX Models: 3" stroke max on 2" to 4" bores) Special strokes available on request. Contact Engineering or your local Fabco-Air Distributor*

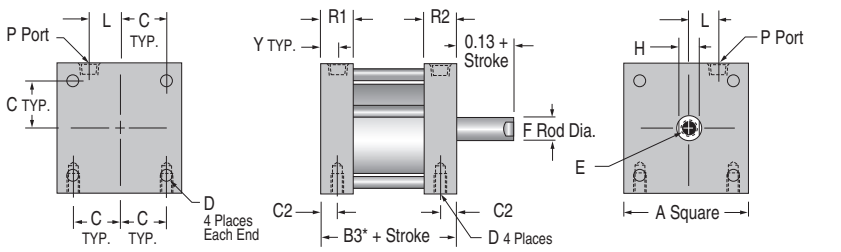
Model SSX Single Acting, Spring Extend

**Note: Some options effect cylinder length. See table on page 4 for spring forces.*

Bore Sizes 3/4", 1-1/16", 1-1/2", 2"



Bore Sizes 2-1/2", 3", 4"



Approximate Cylinder Weights (ounces) SSD, SSR, SWD, STD, SSX

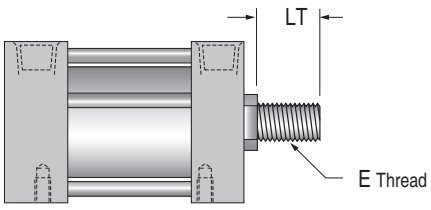
	SSD, SSR		SWD, STD			SSX	
Bore	Base	Adder per 1/8 of Stroke	Base	Adder per 1/8 of Stroke Model SWD	Adder per 1/8 of Stroke for Model STD	Base	Adder per 1/8 of Stroke
3/4 (2)	2.11	.08	2.50	.18	.13	2.11	.08
1-1/16 (3)	4.89	.24	5.47	.37	.25	5.28	.24
1-1/2 (4)	9.70	.32	10.08	.55	.42	9.98	.32
2 (5)	13.63	.40	15.36	.64	.50	14.40	.40
2-1/2 (6)	27.46	.48	32.83	.74	.59	29.95	.48
3 (7)	38.59	.64	47.33	1.01	.76	42.05	.64
4 (8)	68.74	.80	84.19	1.20	.92	74.59	.80

Dimensions (inches)

			E Depth for stroke range								
Bore	E Standard	E Coarse	1/8 - 1/2	5/8+	F	H	L	P Port	R1	R2	Y
3/4 (2)	#10-32 UNF	#10-24 UNC	0.30 - 0.46	0.46	0.31	0.25	0.30	#10-32	0.42	0.42	0.14
1-1/16 (3)	5/16-24 UNF	5/16-18 UNC	0.37 - 0.63	0.70	0.50	0.44	0.50	1/8 NPT	0.50	0.58	0.25
1-1/2 (4)	3/8-24 UNF	3/8-16 UNC	0.37 - 0.70	0.70	0.63	0.50	0.73	1/8 NPT	0.50	0.58	0.25
2 (5)	1/2-20 UNF	1/2-13 UNC	0.30 - 0.63	0.70	0.75	0.63	0.77	1/8 NPT	0.63	0.63	0.25
2-1/2 (6)	1/2-20 UNF	1/2-13 UNC	0.42 - 0.70	0.70	0.75	0.63	0.75	1/4 NPT	0.84	0.84	0.31
3 (7)	5/8-18 UNF	5/8-11 UNC	0.45 - 0.73	0.73	0.88	0.75	0.88	1/4 NPT	0.88	0.88	0.31
4 (8)	3/4-16 UNF	3/4-10 UNC	0.40 - 0.70	0.80	1.00	0.88	1.25	3/8 NPT	1.00	1.00	0.44

Model Options

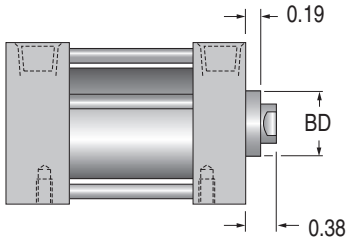
Male Rod Ends (Option TCM or TFM)



Thread Sizes

Bore	E Thread TCM (Coarse)	E Thread TFM (Fine)	LT
3/4 (2)	#10-24 UNC	#10-32 UNF	0.38
1-1/16 (3)	5/16-18 UNC	5/16-24 UNF	0.50
1-1/2 (4)	3/8-16 UNC	3/8-24 UNF	0.50
2 (5)	1/2-13 UNC	1/2-20 UNF	0.63
2-1/2 (6)	1/2-13 UNC	1/2-20 UNF	0.63
3 (7)	5/8-11 UNC	5/8-18 UNF	0.75
4 (8)	3/4-10 UNC	3/4-16 UNF	0.75

Rod Wiper (Option W) Buna-N only



Boss Dia.

Bore	BD
3/4 (2)	0.69
1-1/16 (3)	0.88
1-1/2 (4)	1.00
2 (5)	1.13
2-1/2 (6)	1.13
3 (7)	1.25
4 (8)	1.38

Deviations from Standard Dimensions (Options L, E, M)

† A minimum stroke of 3/8" is required to sense end-of-stroke positions.

Length Adder (inches)

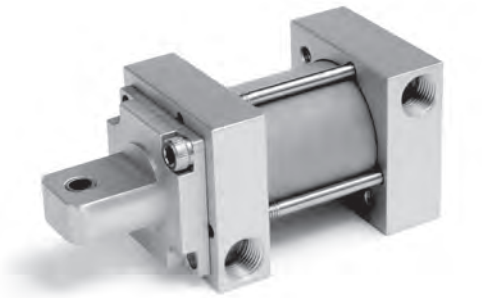
Bore	Low Friction Seals L	Magnetic Position Sensing† with and without Low Friction Seals E, M, EL or LM
3/4 (2)	0.25	0.75
1-1/16 (3)	0.38	0.50
1-1/2 (4)	0.38	0.63
2 (5)	0.38	0.63
2-1/2 (6)	0.38	0.88
3 (7)	0.50	0.88
4 (8)	0.50	0.88

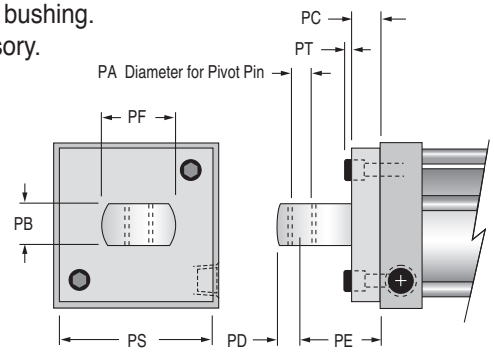
Mounting Options

PM Pivot Mount -

Pin 90° from Port

Complete with bronze pivot bushing.
Also available as an accessory.
See page 14.

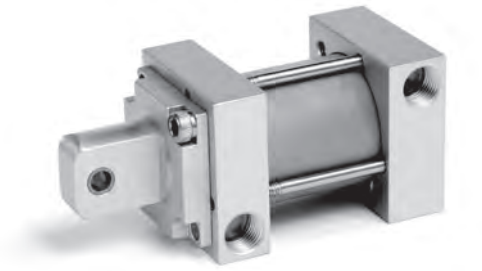


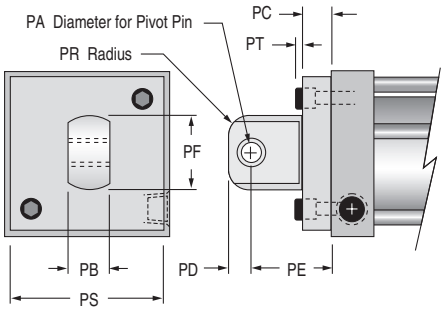


SM Pivot Mount -

Pin in line with Port

Complete with bronze pivot bushing.
Also available as an accessory.
See page 14.





Dimensions (inches)									
Bore	**PA**	**PB**	**PC**	**PD**	**PE**	**PF**	**PR**	**PS**	**PT**
3/4 (2)	0.19	0.38	0.19	0.25	0.75	0.75	0.19	1.13	0.02
1-1/16 (3)	0.19	0.38	0.25	0.25	0.81	0.75	0.19	1.25	0.02
1-1/2 (4)	0.38	0.75	0.25	0.44	1.19	1.38	0.38	1.75	0.03
2 (5)	0.38	0.75	0.31	0.44	1.38	1.38	0.38	2.25	0.08
2-1/2 (6)	0.38	0.75	0.38	0.44	1.31	1.38	0.38	3.00	0.05
3 (7)	0.63	1.00	0.38	0.56	1.69	1.88	0.38	3.50	0.05
4 (8)	0.63	1.00	0.44	0.56	1.75	1.88	0.38	4.50	0.12

Nonrotating, double acting
4 Bore sizes 3/4" thru 2"
Strokes to 4" standard

Twin piston rods are incorporated into the cylinder head to achieve NON-ROTATION. The rods are securely fastened to the piston and tied together externally by a rod end tool bar. The tool bar insures that the rods move in tandem and provides an ideal mounting surface for any attachments required by your application. The tool bar is furnished with threaded mounting holes or optional counterbored mounting holes.

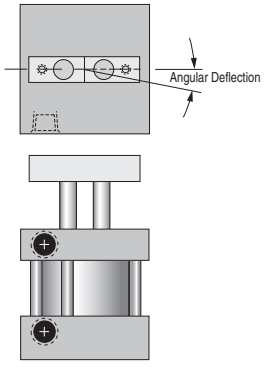
End face and bottom surface tapped mounting holes allow accurate and convenient vertical, horizontal and parallel alignment.

Ratings – Standard Units all Series

- Body . . . . . Self-lubricating composite
- Heads . . . . Clear anodized aluminum alloy
- Tie Bolts . . . . . Stainless steel
- Rod . . . . . Chrome plated stainless steel
- Piston . . . . . Stainless steel
- Rod end. . . . . .Tool bar
- Ports . . . . . Position #1
- Seals . . . . . .Internally lubricated Buna-N
- Lubrication. . . . . Magnalube®-G
- Rod bushing . . . . . Bronze
- Stroke tolerance . . . . . .± 1/64"
- Media . . . . . Air
- Pressure rating, maximum . . . . . 200 psi
- Minimum recommended operating pressure . . . . . 15 psi
- Temperature rating Cylinder . . –25° to +221°F (–32° to +105°C)
- Temperature rating Electronic sensors . . . . . –4° to +176°F (–20° to +80°C)

Allowable Torsion Load and Rotational Tolerance

Side loading should be avoided for any cylinder application. The smaller diameter twin rods will have more deflection due to side load than the one standard rod in a comparable ***Square Pancake® II*** cylinder. However, the SND Series is designed to work satisfactorily against pure torsional loads. Maximum torsional load per bore size is shown in the following table.



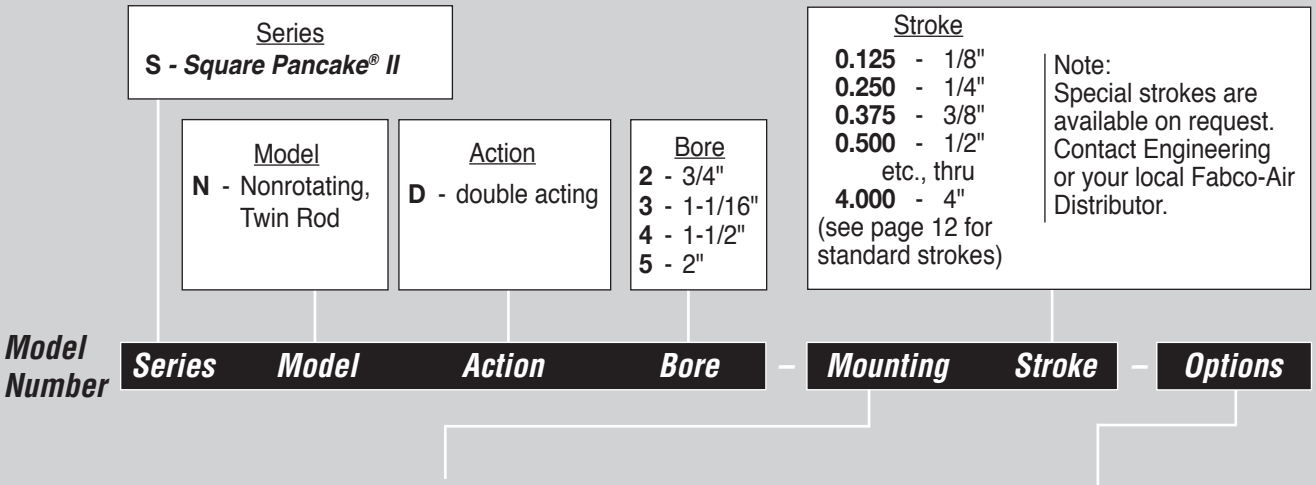
Approximate Angular Deflection (Degrees) due to max. torsional load							
	Torsional	Stroke					
Bore	Load Max.	0 to 1-1/2	2	2-1/2	3	3-1/2	4
3/4	0.3 in-lbs	less than 0.22	0.51	0.98	1.67	2.62	3.88
1-1/16	1.0 in-lbs	less than 0.15	0.33	0.64	1.09	1.71	2.53
1-1/2	5.0 in-lbs	less than 0.08	0.18	0.36	0.61	0.95	1.41
2	10.0 in-lbs	less than 0.03	0.07	0.13	0.22	0.34	0.50

Freeplay Rotational Tolerance				
Bore	3/4" (2)	1-1/16" (3)	1-1/2" (4)	2" (5)
Max. Rotation	+1°	+3/4°	+1/2°	+1/2°

Cylinder Sizing Guide

Bore Diameter (inch)	3/4	1-1/16	1-1/2	2
Rod Diameter (inch)	0.19	0.25	0.38	0.50
Rod Area (inch)	0.05	0.10	0.22	0.38
Push Area (inch)	0.44	0.88	1.76	3.14
Pull Area (inch)	0.39	0.78	1.54	2.76

How to Order



Mounting

Tapped mounting holes are standard in the basic model and need not be specified. For other mounting specify only one option code.

Leave Blank - Basic Model
PM - Pivot mount, pin 90° from port
SM - Pivot mount, pin in-line with port

Options ***Enter in alphabetical order***

CE - Counterbored rod end tool bar (page 12)
E - Magnet on piston for position sensing (See length adders pg. 13) 3/8" stroke minimum[1]
K - Rod end tool bar rotated 90°
M, M1, M4 - Magnet on piston and adhesive mounted dovetail extrusion to hold 1/4" dovetail sensors. (see sensors page 15) 3/8" stroke minimum[1]
Q - Low temperature operation (–40°F to +200°F)
T1, T4 - Additional adhesive mounted dovetail extrusions located in position 1 or 4
V - Viton seals for media compatibility (–15°F to +225°F)
X - **EXTRA** Rod extension
Example: X0.5 = 1/2" **EXTRA** Rod Extension
X1 = 1" **EXTRA** Rod Extension

[1]Not available with Viton seals or low temperature seals.

How to Order

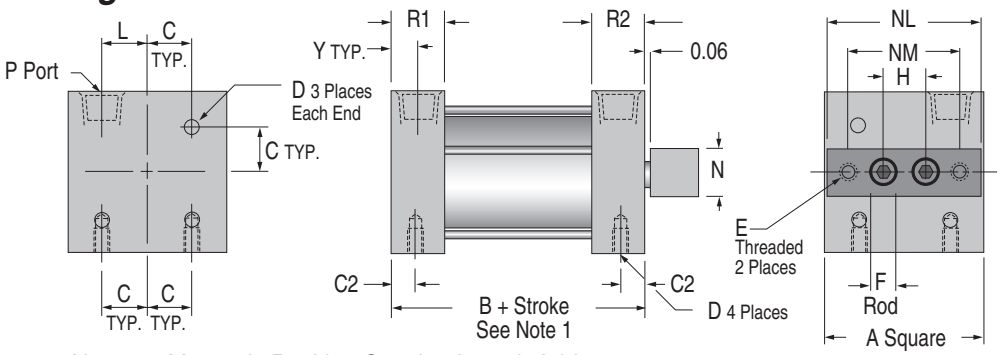
1. Specify **S**, Model, Action and Bore
2. Specify optional Mounting (if required), then Stroke
3. Specify the Options in alphabetical order

Ordering example #1: **SND3-PM0.375-V**
This model number specifies a Square® Pancake II nonrotating, double acting, cylinder with tool bar, 1-1/16" bore, pivot mounting, 3/8" stroke and Viton seals.

Ordering example #2: **SND5-2.000**
This model number specifies a Square® Pancake II nonrotating, double acting, cylinder with tool bar, 2" bore, standard tapped mounting holes, and 2" stroke.

Basic Model SND

Twin Rod, Nonrotating
Double Acting

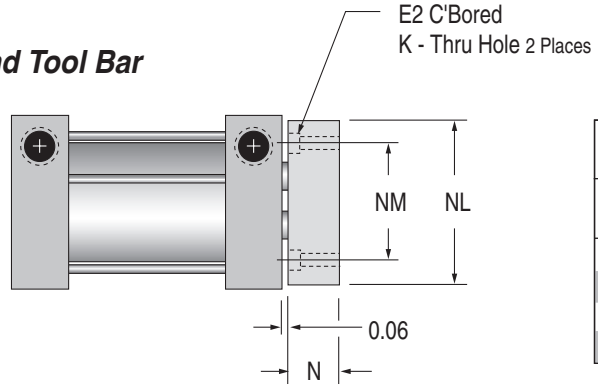


Note 1: Magnetic Position Sensing Length Adders see page 13.
A minimum stroke of 3/8" is required to sense end-of-stroke positions

Standard Strokes – All Models: • 1/8 • 1/4 • 3/8 • 1/2 • 5/8 • 3/4 • 7/8 • 1 • 1-1/4 • 1-1/2 • 1-3/4 • 2 • 2-1/2 • 3 • 3-1/2 • 4
Special strokes available. Contact Engineering or your local Fabco-Air distributor for information.

Model Options

Option CE
Counterbored Rod End Tool Bar



C'Bore Hole Dimensions (inches)			
Bore	E2 C'Bore	K	For SHCS
3/4 (2)	0.24 x 0.15 dp	0.15	#6
1-1/16 (3)	0.29 x 0.18 dp	0.18	#8
1-1/2 (4)	0.40 x 0.27 dp	0.26	1/4
2 (5)	0.49 x 0.33 dp	0.33	5/16

Approximate Cylinder Weights (ounces)		
Bore	Base	Adder per 1/8 of Stroke
3/4 (2)	3.39	0.1
1-1/16 (3)	7.59	0.5
1-1/2 (4)	14.78	0.7
2 (5)	22.65	0.9

Dimensions (inches)								
Bore	A	B	C	C2	D	E Thread	F	H
3/4 (2)	1.25	0.75	0.38	0.28	#6-32 UNC	#6-32 UNC	0.19	0.332
1-1/16 (3)	1.50	1.25	0.50	0.38	#8-32 UNC	#8-32 UNC	0.25	0.422
1-1/2 (4)	2.00	1.25	0.69	0.31	#10-24 UNC	1/4-20 UNC	0.38	0.562
2 (5)	2.50	1.31	0.88	0.38	1/4-20 UNC	5/16-18 UNC	0.50	0.750

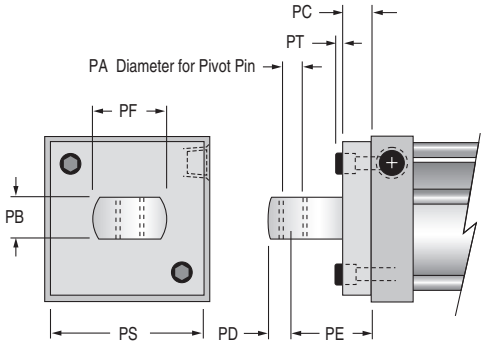
Bore	L	N	NL	NM	P	R1	R2	Y
3/4 (2)	0.35	0.38	1.25	0.88	#10-32 UNF	0.42	0.42	0.14
1-1/16 (3)	0.45	0.38	1.44	1.06	1/8 NPT	0.50	0.58	0.25
1-1/2 (4)	0.60	0.50	2.00	1.50	1/8 NPT	0.50	0.58	0.25
2 (5)	0.76	0.63	2.50	1.88	1/8 NPT	0.63	0.63	0.25

Mounting Options

PM Pivot Mount -

Pin 90° from Port

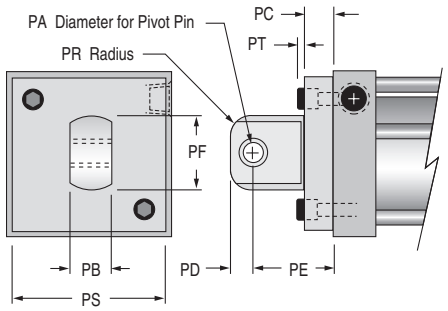
Complete with bronze pivot bushing.
Also available as an accessory.
See page 14.



SM Pivot Mount -

Pin in line with Port

Complete with bronze pivot bushing.
Also available as an accessory.
See page 14.



Dimensions (inches)									
Bore	PA	PB	PC	PD	PE	PF	PR	PS	PT
3/4 (2)	0.19	0.38	0.19	0.25	0.75	0.75	0.19	1.13	0.02
1-1/16 (3)	0.19	0.38	0.25	0.25	0.81	0.75	0.19	1.25	0.02
1-1/2 (4)	0.38	0.75	0.25	0.44	1.19	1.38	0.38	1.75	0.03
2 (5)	0.38	0.75	0.31	0.44	1.38	1.38	0.38	2.25	0.08

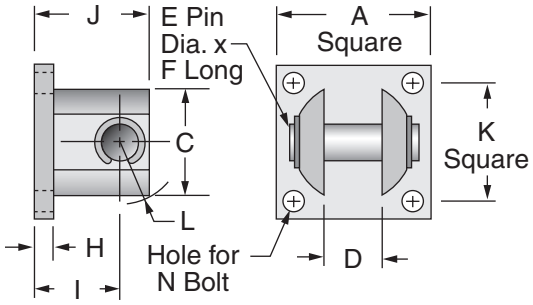
Deviations from Standard Dimensions (Options E or M)

† A minimum stroke of 3/8" is required to sense end-of-stroke positions.

Length Adder (inches)	
	Magnetic Position Sensing†
Bore	E or M
3/4 (2)	0.75
1-1/16 (3)	0.50
1-1/2 (4)	0.63
2 (5)	0.63

Clevis Bracket

Anodized aluminum alloy
Chrome plated steel pin included

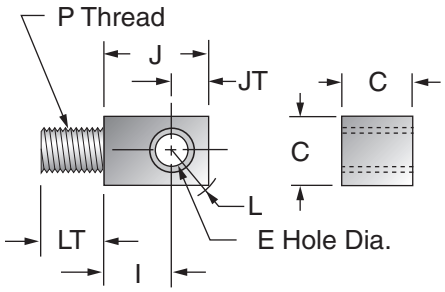


The bracket is intended for mounting with either a rod eye or pivot mount; it is not intended to mount directly with the rear cylinder head.

Dimensions (inches)												
Kit No.	Bore	A	C	D	E	F	H	I	J	K	L	N
CB-3	3/4 (2) 1-1/16 (3)	1.00	0.71	0.39	0.187	0.93	0.16	0.56	0.78	0.75	0.42	#6
CB-6	1-1/2 (4) 2 (5) 2-1/2 (6)	1.75	1.37	0.75	0.375	1.63	0.22	0.94	1.34	1.38	0.80	#10
CB-8	3 (7) 4 (8)	2.50	2.10	1.00	0.625	2.42	0.25	1.25	1.81	2.00	1.19	1/4

Rod Eye

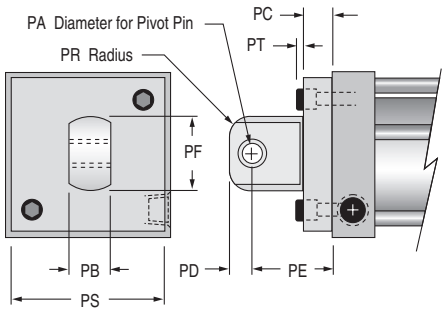
Steel with bronze pivot bushing and nut



Dimensions (inches)									
Kit No.	Bore	C	E	I	J	JT	L	LT	P
RE-2	3/4 (2)	0.38	0.187	0.47	0.72	0.25	0.32	0.38	#10-32 UNF
RE-3	1-1/16 (3)	0.38	0.187	0.47	0.72	0.25	0.32	0.63	5/16-24 UNF
RE-4	1-1/2 (4)	0.75	0.375	0.72	1.16	0.44	0.58	0.63	3/8-24 UNF
RE-6	2 (5) 2-1/2 (6)	0.75	0.375	0.72	1.16	0.44	0.58	0.75	1/2-20 UNF
RE-7	3 (7)	1.00	0.625	1.00	1.63	0.63	0.80	0.88	5/8-18 UNF
RE-8	4 (8)	1.00	0.625	1.00	1.63	0.63	0.80	0.88	3/4-16 UNF

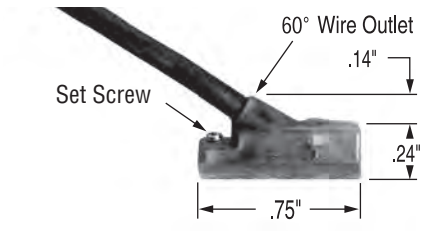
Pivot Mount Attachment with Mounting Screws

Anodized Aluminum Alloy

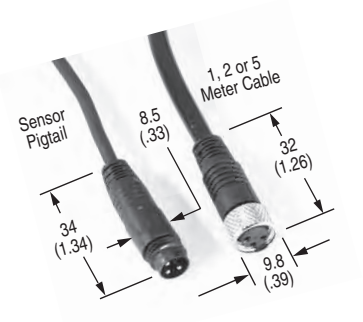


Dimensions (inches)										
Kit No.	Bore	PA	PB	PC	PD	PE	PF	PR	PS	PT
PA-2	3/4 (2)	0.19	0.38	0.19	0.25	0.75	0.75	0.19	1.13	0.02
PA-3	1-1/16 (3)	0.19	0.38	0.25	0.25	0.81	0.75	0.19	1.25	0.02
PA-4	1-1/2 (4)	0.38	0.75	0.25	0.44	1.19	1.38	0.38	1.75	0.03
PA-5	2 (5)	0.38	0.75	0.31	0.44	1.38	1.38	0.38	2.25	0.08
PA-6	2-1/2 (6)	0.38	0.75	0.38	0.44	1.31	1.38	0.38	3.00	0.05
PA-7	3 (7)	0.63	1.00	0.38	0.56	1.69	1.88	0.38	3.50	0.05
PA-8	4 (8)	0.63	1.00	0.44	0.56	1.75	1.88	0.38	4.50	0.12

Sensor Specifications & Ordering Information



- Encased in a plastic housing, dovetail style electronic sensors are corrosion resistant. 60° wire outlet allows close mounting.
- Two methods of mounting are available:
  1. Tie bolt mounted clamps (Option -E)
  2. Adhesive mounted dovetail extrusions (Option -M)
- ***Order sensors separately from the table below***



Ordering Guide – Dovetail Style Magnetic Sensor with LED

Sensor Temperature Range
-20° to +80° C (-4° to +176° F)

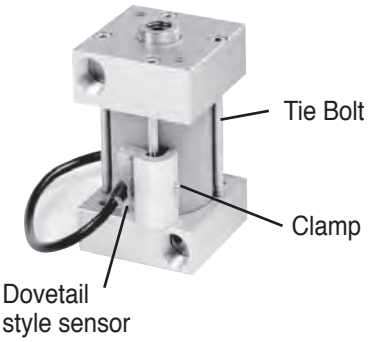
Sensor Type	Prewired 9 ft. Part No.	Quick Disconnect Part No.*	Wire Leads	Electrical Characteristics
Electronic	949-000-031	949-000-331	3	Sourcing PNP 6-24 VDC, 0.20 Amp Max current, 0.5 Voltage Drop
Electronic	949-000-032	949-000-332	3	Sinking NPN 6-24 VDC, 0.20 Amp Max current, 0.5 Voltage Drop

Note: Quick disconnect styles are supplied with 6 inch pigtail with male connector. Order female cordsets separately.*

Female Cordsets for Quick Disconnect

Length	Part No.
1 Meter	CFC-1M
2 Meters	CFC-2M
5 Meters	CFC-5M

Option -E *Magnet on piston – use tie bolt mounted clamps*



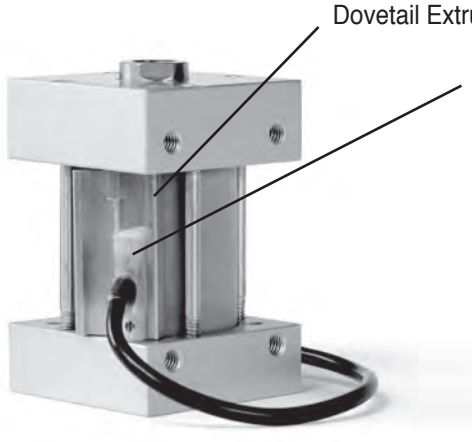
Order clamps and sensors separately

To apply dovetail style sensors first locate clamp in rough position on any of the tie bolts and lock it in place with the set screw.

Next, make fine adjustment by sliding the sensor within the clamp and lock in place with its set screw.

Clamp Selection Guide			
Kit No.	900-F00-000	900-G00-000	900-H00-000
To Fit Bore	3/4, 1-1/16, 1-1/2, 2	2-1/2, 3	4

Option -M *Magnet on piston and adhesive mounted dovetail extrusions*

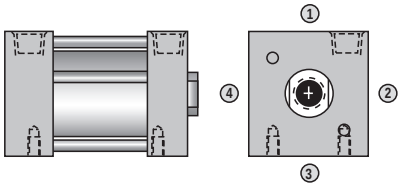


Order sensors separately

Standard Dovetail Rail Positions		
Bore	Stroke Range	Position
3/4"	3/8" to 1-1/4"	2 & 4‡
3/4"	1-1/2" & above	2
1-1/16" & up	3/8" & above	2

‡Note: When alternate positions are specified, the second of two required dovetail rails will be applied at position 2. (Contact factory for other combinations.)

Specify Option M for mounting rail(s) located in standard position(2).



Specify option M1 or M4 for mounting rail in alternate positions 1 or 4 respectively. Additional dovetail rails may be applied by specifying options T1 or T4.

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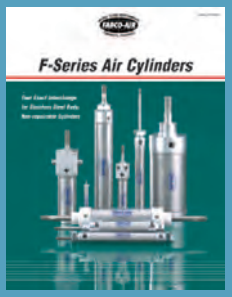
Fabco-Air Product Catalog Library

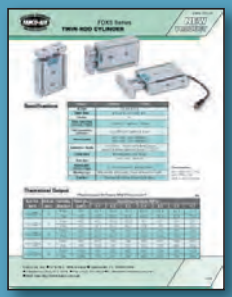
Cylinders, Valves and Accessories Catalog #CV9

Pancake® II Air Cylinders Catalog Pan2-2



Stainless Steel Body Air Cylinders Catalog SSB-03

ISO 6431 Cylinders Catalog # FAQR-09



Twin Rod, Non-Rotating Air Cylinders - Catalog # FDF-09 and Catalog # FDXS-09

Multi-Power® Air Presses Catalog # FP16

Linear Slides - 6 Families Catalog # LS-03

Pneumatic Grippers, Parallel Jaw and Angular Motion - Catalog # GR-8

Pneumatic Angular Grippers Catalog # FKA-09

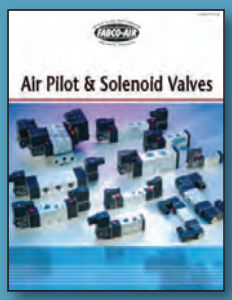
ISO 6432 Cylinders Catalog # FAE-09

NFPA Interchangeable Air Cylinders - Catalog # NF-6

Global Series™ Metric Air Cylinders - Catalog # GC-15

Swing Clamps Bulletin # SC-DB04

Manifold Solenoid Valves Catalog # FVS.Y-09



Air Pilot & Solenoid Valves Catalog # FVA.E-09

Modular Air Preparation System - FRLs Catalog # FRL-06

Stopper Cylinders Catalog # ST-SC

Swing Clamps, Pneumatic & Hydraulic Catalog # FML.H

Guided Motion Air Cylinders Catalog # FGM-10

Air Slide Tables Catalog # FGXS-10