F-Series Air Cylinders

Your Exact Interchange for Stainless Steel Body, Non-repairable Cylinders

Prices effective March 8, 2010
F Series Direct Interchange Air Cylinders
All the Models Bore-for-Bore!

Magnetic Interchange Cylinders
Double Nose or Rear Pivot Mount
Front Block Mount
Trunnion Mount
Adjustable Cushion Models
Delrin® Series – Corrosion Resistant Cylinders
Position Feedback Cylinders

F Series Max Operating Pressure Ratings

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Specifications and prices subject to change without notice or incurring obligation
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**Pre-Lubrication**
Factory tube is a special petroleum based oil formulated for long maintenance-free performance.

**Rod Bushing**
Oil impregnated sintered bronze for excellent wear and long life.

**Piston Rod**
303 stainless steel, ground, polished, and roll burnished for corrosion-free long life.

**Rod Thread**
Roll-formed rod threads at both ends provide strength for customer connections as well as the internal piston connection.

**Piston**
High strength aluminum in all units. Double acting units include air passage to the entire piston and seal area for quick response and full force performance.

**Crimp**
Cylinder body tube and end caps are attached in double rolled-in crimp.

**End Caps**
Anodized high strength aluminum.

**Rod Seal**
Low friction Buna N "U"-cup seal is inherently wear compensating for long, trouble-free cycle life.

**Piston Seals**
Low friction Buna N "U"-cups are inherently wear compensating for long, trouble-free cycle life.

**Magnet**
Piston position indication with reed or electronic sensors. See individual cylinder drawings for length adjustments. See page 62 for sensors.

**Temperature Ranges**
Standard Seals . . . . . . . . . –10° to +165°F (-23° to + 74°C)
Low Temperature Seals . . –40° to +225°F (-40° to + 107°C)
Viton® Seals . . . . . . . . . . . . –15° to +350°F (-26° to + 177°C)

**Stroke Tolerance** = +/- .032

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**Overall Length Calculations for F Series Cylinders**

Single acting F-Series cylinders have stop tubes added for every 1/2" or 1" depending on the bore size. Strokes with no fractional inch simplify the calculation of having a base length plus adder per inch of stroke. However, strokes with fractional inch require more in-depth calculation. The following equations help to calculate the OAL for fractional inch strokes.

**Variables:**

- **OAL** = Overall Length of Cylinder
- **S** = Actual Stroke
- **B** = Base Length
- **STA** = Stop Tube Adder per increment of stroke

**Note:** for 2" bores – use lengths shown on page 34 for whole inch strokes and subtract the difference between desired stroke and next longer standard increment. (Subtract twice for spring extend models.)

**Single Acting Spring Return Cylinders**

Calculate the length of next whole standard increment of stroke. Then subtract the difference between desired stroke and next longer standard increment of stroke.

**Formula:**

\[
\text{OAL} = \text{B} + (\text{STA} \times \text{S1}) - (\text{S1} - \text{S})
\]

**Example:**

- **F-1062S01-02M** (2-3/4" stroke)
  - F-1062S01 base length = 1.938
  - Plus 1.562 per inch of stroke = +4.686
  - 1.562 x 3.0 (next longer stroke increment) = +4.686
  - F-1062S01-03A length = 6.624
  - Standard stroke increment = 3.000
  - minus desired stroke = -2.750
  - Stroke difference = -2.250
  - F-1062S01-02M length = 6.374

**Double Acting Cylinders**

Add desired stroke length to base length of cylinder. **OAL = B + S**

**Example:**

- **F-0750D01-01E** (1-1/4" stroke)
  - F-0750D01 base length = 2.969
  - Plus 1.250 stroke = +1.250
  - F-0750D01-01E = 4.219

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**Single Acting Spring Extend Cylinders**

Calculate the length of next whole standard increment of stroke. Then subtract twice the difference between desired stroke and next longer standard increment of stroke.

**Formula:**

\[
\text{OAL} = \text{B} + (\text{STA} \times \text{S1}) - 2(\text{S1} - \text{S})
\]

**Example:**

- **F-0438R02-01K** (1-5/8" stroke)
  - F-0438R02 base length = 2.375
  - Plus 1.438 per each 0.5" stroke = +5.752
  - 1.438 x 4.0 (number of standard increments required for the next longer increment) = +5.752
  - F-0438R02-02A length = 8.127
  - Standard stroke increment = 2.000
  - minus desired stroke = -1.625
  - Stroke difference = .375
  - Twice stroke difference = .750
  - F-0438R02-01K length = 7.377
F Series

How to Order

Bore Size (4 digits)
0313 = 5/16"
0438 = 7/16"
0563 = 9/16"
0750 = 3/4"
0875 = 7/8"
1062 = 1-1/16"
1250 = 1-1/4"
1500 = 1-1/2"
1750 = 1-3/4"
2000 = 2"
2500 = 2-1/2"
3000 = 3"

Mounting Style (3 digits)
S01 = Single Acting Spring Return
Nose Mount
S02 = Single Acting Spring Return
Rear Pivot
R01 = Single Acting Spring Extend
Nose Mount
R02 = Single Acting Spring Extend
Rear Pivot
N01 = Single Acting Spring Return
Non-Rotating Nose Mount
N02 = Single Acting Spring Return
Non-Rotating Rear Pivot
D01 = Double Acting Nose Mount
D02 = Double Acting Rear Pivot
D03 = Double Acting Double Rod
D04 = Double Acting Double nose
D05 = Double Acting Front Block
D13 = Interchange Option for 1-1/16" Bore
DH3 = Double Acting Double Rod
Hollow Rod
D06 = Double Acting Trunnion Mount
DG1 = Double Acting Adjustable Cushion
Nose Mount
DG2 = Double Acting Adjustable Cushion
Rear Pivot
DG4 = Double Acting Adjustable Cushion
Double Nose
DL1 = Double Acting Nose Mount
2" Bore 1" Rod
DL2 = Double Acting Rear Pivot
2" Bore 1" Rod
DC1 = Double Acting Delrin® Nose Mount
DC2 = Double Acting Delrin® Rear Pivot
DC3 = Double Acting Delrin® Double Rod
DM1 = Magnetic Interchange, Nose Mount
DM2 = Mag. Interchange, Nose/Rear Pivot Mt.
DM3 = Magnetic Interchange, Double Rod

F-1500 D01 – 02 A – 01 – 1A00M

Fractional Inch Stroke
(1 digit)
A = 0"
B = 1/16"
C = 1/8"
D = 3/16"
E = 1/4"
F = 5/16"
G = 3/8"
H = 7/16"
I = 1/2"
J = 9/16"
K = 5/8"
L = 11/16"
M = 3/4"
N = 13/16"
O = 7/8"
P = 15/16"

Full Inch Stroke (2 digits)
00 = 0"
01 = 1"
02 = 2"
03 = 3"
. . .
32 = 32"

Note: See page 3 for information regarding cylinder length calculations.

Rod and/or Thread Extension
1A ________ = Rod Extension (Additional length)
(Example: 1A01A = 1" and no fractional inch extension.
2A ________ = Thread Extension (Additional length)
(Example: 2A01E = 1-1/4" extension.
RT ________ = Rod and Thread Extension (Additional length)
(Example: RT02A01M = 2" rod extension and
1-3/4" thread extension

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Call DuPont for general information (800) 441-0575 for
information regarding properties of these materials.
Standard F Series Options
01 = Bumpers
02 = Viton Seals
03 = Magnet
04 = Bumpers, and Magnet
05 = Pivot bushing
06 = Bumpers, and Pivot Bushing
07 = Viton Seals, and Pivot Bushing
08 = Magnet, and Pivot Bushing
09 = Bumpers, Magnet, and Pivot Bushing
20 = Port Rotated w/ No Options
30 = Rod Wiper w/ No Options
31 = Rod Wiper w/ Bumpers
32 = Rod Wiper w/ Viton Seals
33 = Rod Wiper w/ Magnet
34 = Rod Wiper w/ Bumpers, and Magnet
35 = Rod Wiper w/ Pivot bushing
36 = Rod Wiper w/ Bumpers, and Pivot Bushing
37 = Rod Wiper w/ Viton Seals, and Pivot Bushing
38 = Rod Wiper w/ Magnet, and Pivot Bushing
39 = Rod Wiper w/ Bumpers, Magnet, and Pivot Bushing
50 = Side Port w/ No Options
100 = Low Temp Seals
101 = Low Temp Seals and Bumpers
103 = Low Temp Seals and Magnet
104 = Low Temp Seals, Bumpers and Magnet
105 = Low Temp Seals and Pivot Bushing
106 = Low Temp Seals, Bumpers and Pivot Bushing
108 = Low Temp Seals, Magnet and Pivot Bushing
109 = Low Temp Seals, Bumpers, Magnet and Pivot Bushing
200 = Polypak rod seal
300 = Polypak piston seal
400 = Both Polypak rod and piston seal

Cylinder Pricing Notes
Standard Strokes
- Standard Strokes are those shown for each bore and mounting style.
- Cylinder prices shown are for standard listed strokes.
- Models that include a 1/2" stroke increment, add 50% of the per inch price (round up to the next $0.01) for the 1/2" of stroke.

Non-Standard Strokes
- Consult factory for price and delivery based on net stroke and quantity.

Rod and/or Thread Extension Pricing Notes
- Consult factory for rod or thread extension on Double Rod styles (D03, D13, DH3, DC3, DM3).
- For rod and/or thread extension increments of 1/2" or less, add 50% of the per inch price (round up to the next $0.01) for the increment of extension.
- For rod and/or thread extension increments of more than 1/2", use next full inch pricing.

HOW TO ORDER – EXAMPLES

F-0438S01-01A
0438 = 7/16" Bore
S01 = Single Acting, Spring Return, Nose Mount
01 = 1" Stroke
A = .00" Fractional Stroke

F-1062D02-03E-04
1062 = 1-1/16" Bore
D02 = Double Acting, Rear Pivot Mount
03 = 3" Stroke
E = .25" Fractional Stroke
04 = Bumpers and Magnet

F-1500D04-10I-01-1A02A
1500 = 1-1/2" Bore
D04 = Double Acting, Double Nose
10 = 10" Stroke
I = .50" Fractional Stroke
01 = Bumpers
1A02A = 2" Rod Extension

F-2000DG2-20H-03-RT02A01I
2000 = 2" Bore
DG2 = Double Acting, Adjustable Cushion, Rear Pivot Mount
20 = 20" Stroke
H = .4375 Fractional Stroke
03 = Magnet
RT02A01I = 2" Rod Extension and 1-1/2" Thread Extension
F Series
5/16" Bore Cylinders(80,127),(987,912)

**Single Acting** Spring Return
Front Nose Mount
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"
Maximum Stroke: 4"
Optional Accessories:
- F-M117001 Mounting Bracket
- F-M129001 Pivot Bracket
- F-M127001 Rod Clevis
Base Weight: .03 lbs.
Plus .02 lbs. per inch of stroke

**Single Acting** Spring Return
Double Nose or Rear Pivot Mount
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"
Maximum Stroke: 4"
Optional Accessories:
- F-M117001 Mounting Bracket (with front nose mount)
- F-M117002 Mounting Bracket (with rear nose mount)
- F-M129001 Pivot Bracket
- F-M127001 Rod Clevis
Base Weight: .04 lbs.
Plus .02 lbs. per inch of stroke

**Single Acting** Spring Extend
Front Nose Mount
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"
Maximum Stroke: 4"
Optional Accessories:
- F-M117002 Mounting Bracket
- F-M127001 Rod Clevis
Base Weight: .05 lbs.
Plus .03 lbs. per inch of stroke

**Single Acting** Spring Extend
Double Nose or Rear Pivot Mount
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"
Maximum Stroke: 4"
Optional Accessories:
- F-M117002 Mounting Bracket
- F-M129001 Pivot Bracket
- F-M127001 Rod Clevis
Base Weight: .05 lbs.
Plus .03 lbs. per inch of stroke

Specifications and prices subject to change without notice or incurring obligation
See pricing notes on Page 5

F-0313S01-00A
$11.41 Base Price
Add $1.97 per inch of stroke

F-0313S02-00A
$14.91 Base Price
Add $1.97 per inch of stroke

F-0313R01-00A
$17.39 Base Price
Add $1.97 per inch of stroke

F-0313R02-00A
$22.05 Base Price
Add $1.97 per inch of stroke

Mounting Nut Included
Mounting Nut Not Included
**Specifications and prices subject to change without notice or incurring obligation**

**5/16" Bore Cylinder Features – Options & Accessories**

- 
- Piston Rod: Ground and Polished 303 Stainless Steel
- Mounting nuts are standard on all nose mount cylinders
- Approximate Force Exerted: (0.07) x (Air Line Pressure)
- Spring Force: 0.5 lb. Relaxed – 1 lb. Compressed

**Mounting Bracket**

F-M117001
Price: $1.79

**Mounting Bracket**

F-M117002
Price: $1.79

**Viton® Seals –**

- Spring Return (-15° F to 300° F) ..................................... $4.01
- Double Acting (-15° F to 350° F) ................................... $10.74
- Spring Extend (-15° F to 300° F) ..................................... $7.53

- Ports Rotated – 90° on S02, R02, or D02 (both) ............... No charge
- Rod Wipers ................................................................................ $7.10
- Side Port ............................................................................. No charge
- Low Temperature Seals – Not available ......................................... NA
- Rod Extension ............................................................................ $0.63/inch
- Rod Thread Extension ............................................................... $1.69

**OPTION PRICE ADDER**

- JAM NUT

**Rod Clevis**

F-M127001
Price: $3.00

**Mounting Nut**

F-M190001
Price: $0.26

**Mounting Nut**

F-M190002
Price: $0.26

**Mounting Nut**

F-M127001
Price: $3.00

**Mounting Nut**

F-M127001
Price: $3.00
### F Series

#### 7/16" Bore Cylinders

**Single Acting Spring Return**
- **Front Nose Mount**
- Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 2-1/2", 3", 3-1/2""
- Maximum Stroke: 6"
- Optional Accessories:
  - F-M117004 Mounting Bracket
  - F-M127002 Rod Clevis
- Base Weight: .04 lbs.
- Plus .04 lbs. per inch of stroke

**Single Acting Spring Return**
- **Rear Pivot Mount**
- Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 2-1/2", 3", 3-1/2"
- Maximum Stroke: 6"
- Optional Accessories:
  - F-M117004 Front Mounting Bracket
  - F-M117003 Rear Mounting Bracket
  - F-M029002 Pivot Bracket
  - F-M127002 Rod Clevis
- Base Weight: .04 lbs.
- Plus .04 lbs. per inch of stroke

**Single Acting Spring Extend**
- **Front Nose Mount**
- Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 2-1/2", 3""
- Maximum Stroke: 6"
- Optional Accessories:
  - F-M117003 Mounting Bracket
  - F-M127002 Rod Clevis
- Base Weight: .08 lbs.
- Plus .03 lbs. per inch of stroke

**Single Acting Spring Extend**
- **Rear Pivot Mount**
- Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 2-1/2", 3""
- Maximum Stroke: 6"
- Optional Accessories:
  - F-M117003 Mounting Bracket
  - F-M029002 Pivot Bracket
  - F-M127002 Rod Clevis
- Base Weight: .08 lbs.
- Plus .03 lbs. per inch of stroke

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*See pricing notes on Page 5*
F Series

7/16" Bore Cylinders

**Single Acting** Spring Return
Front Nose Mount

**Non-Rotating**
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"
Maximum Stroke: 6"
Optional Accessories:
- F-M117004 Mounting Bracket
- F-M127002 Rod Clevis
Base Weight: .04 lbs.
Plus .04 lbs. per inch of stroke

**Single Acting** Spring Return
Rear Pivot Mount

**Non-Rotating**
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"
Maximum Stroke: 6"
Optional Accessories:
- F-M117004 Front Mounting Bracket
- F-M117003 Rear Mounting Bracket
- F-M029002 Pivot Bracket
- F-M127002 Rod Clevis
Base Weight: .04 lbs.
Plus .04 lbs. per inch of stroke

**Double Acting**
Front Nose Mount
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"
Maximum Stroke: 12"
Optional Accessories:
- F-M117004 Mounting Bracket
- F-M127002 Rod Clevis
Base Weight: .07 lbs.
Plus .04 lbs. per inch of stroke

**Double Acting**
Rear Pivot Mount
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5"
Maximum Stroke: 12"
Optional Accessories:
- F-M117004 Mounting Bracket
- F-M029002 Pivot Bracket
- F-M127002 Rod Clevis
Base Weight: .08 lbs.
Plus .04 lbs. per inch of stroke

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See pricing notes on Page 5
## F Series

### 7/16" Bore Cylinders

## Cylinder Features – Options & Accessories

- **−10° to +165°F**
- **Piston Rod:**
  - Round – Ground and Polished 303 Stainless Steel
  - Hex – Ground 303 Stainless Steel
- **Mounting nuts standard on all nose mount cylinders**
- **Approximate Force Exerted:**
  
  \[(0.15) \times \text{(Air Line PSI)}\]

- **Spring Force:**
  - 1 lb. Relaxed – 2 lb. Compressed

### Option | Price Adder
--- | ---
- **Viton® Seals** –
  - Spring Return (−15° F to 300° F) $4.20
  - D01 – Double Acting (−15° F to 350° F) $10.96
  - D02 – Double Acting (−15° F to 350° F) $10.84
  - D03 – Double Acting (−15° F to 350° F) $10.36
  - Spring Extend (−15° F to 300° F) $7.71
- **Ports Rotated – 90° on S02, R02, N02, or D02 (both)** No charge
- **Rod Wiper** $7.10
- **Side Port** No charge
- **Low Temperature Seals – Applications to −40° F** $7.18
- **Rod Extension** $0.74/inch
- **Rod Thread Extension** $1.79/inch

### Mounting Bracket
- **F-M117003**
  - Price: $1.92

### Mounting Bracket
- **F-M117004**
  - Price: $1.92

### Mounting Nut
- **F-M190002**
  - Price: $0.26

### Pivot Bracket
- **F-M029002**
  - Price: $3.05

### Rod Clevis
- **F-M127002**
  - Price: $3.05
9/16" Bore Cylinders

**Single Acting Spring Return**
Front Nose Mount

Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 6"

Optional Accessories:
- F-M117003 Mounting Bracket
- F-M127002 Rod Clevis

Base Weight: .06 lbs.
Plus .05 lbs. per inch of stroke

**Double Nose or Rear Pivot Mount**

Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 6"

Optional Accessories:
- F-M117003 Mounting Bracket
- F-M129002 Pivot Bracket
- F-M127002 Rod Clevis

Base Weight: .08 lbs.
Plus .04 lbs. per inch of stroke

**Single Acting Spring Return**

Front Nose Mount

Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3"

Maximum Stroke: 6"

Optional Accessories:
- F-M117003 Mounting Bracket
- F-M127002 Rod Clevis

Base Weight: .06 lbs.
Plus .05 lbs. per inch of stroke

**Double Nose or Rear Pivot Mount**

Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3"

Maximum Stroke: 6"

Optional Accessories:
- F-M117003 Mounting Bracket
- F-M129002 Pivot Bracket
- F-M127002 Rod Clevis

Base Weight: .08 lbs.
Plus .04 lbs. per inch of stroke

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See pricing notes on Page 5
F Series
9/16" Bore Cylinders

**Single Acting Spring Return**
Front Nose Mount

**Non-Rotating**
Maximum Stroke: 6"
Optional Accessories:
• F-M117003 Mounting Bracket
• F-M129002 Pivot Bracket
• F-M127002 Rod Clevis
Base Weight: .06 lbs.
Plus .05 lbs. per inch of stroke

**Specifications and prices subject to change without notice or incurring obligation**

**F-0563N01-00A**

- 1.781 + (1.625 PER 1.00 STROKE)
- MOUNTING NUT INCLUDED
- $15.77 Base Price
Add $2.23 per inch of stroke

**Single Acting Spring Return**
Rear Pivot Mount

**Non-Rotating**
Maximum Stroke: 6"
Optional Accessories:
• F-M117003 Mounting Bracket
• F-M129002 Pivot Bracket
• F-M127002 Rod Clevis
Base Weight: .06 lbs.
Plus .05 lbs. per inch of stroke

**F-0563N02-00A**

- 2.063 + (1.625 PER 1.00 STROKE)
- MOUNTING NUT NOT INCLUDED
- $19.79 Base Price
Add $2.23 per inch of stroke

**Double Acting**
Front Nose Mount

**Standard Stroke Lengths:**
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"
**Maximum Stroke:** 12"
Optional Accessories:
• F-M117003 Mounting Bracket
• F-M127002 Rod Clevis
Base Weight: .09 lbs.
Plus .02 lbs. per inch of stroke

**F-0563D01-00A**

- 2.281 + STROKE
- MOUNTING NUT INCLUDED
- $17.02 Base Price
Add $1.60 per inch of stroke

**Double Acting**
Double Nose or Rear Pivot Mount

**Standard Stroke Lengths:**
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"
**Maximum Stroke:** 12"
Optional Accessories:
• F-M117003 Mounting Bracket
• F-M129002 Pivot Bracket
• F-M127002 Rod Clevis
Base Weight: .09 lbs.
Plus .02 lbs. per inch of stroke

**F-0563D02-00A or F-0563D04-00A**

- 2.563 + STROKE
- MOUNTING NUT NOT INCLUDED - D02
- MOUNTING NUTS INCLUDED - D04
- $20.77 Base Price - D02
- $20.45 Base Price - D04
Includes mounting nuts
Add $1.60 per inch of stroke

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See pricing notes on Page 5
9/16" Bore Cylinder Specifications – Options & Accessories

-10° to +165°F
Piston Rod: Hex - Ground 303 Stainless Steel
Round - Ground and Polished 303 Stainless Steel
Mounting nuts are standard on all nose mount cylinders
Bumpers are OPTIONAL on all 9/16" bore cylinders (except in combination with Viton® option)
Approximate Force Exerted: (0.25) x (Air Line Pressure)
Spring Force: 2 lb. Relaxed – 4 lb. Compressed
Magnetic piston optional on all 9/16" bore cylinders (except in combination with Viton® option).

**OPTION**  
**PRICE ADDER**

- Viton® Seals – Not available with bumpers or magnetic piston  
  Spring Return (~15° F to 300° F) ........................................ $4.20  
  N01 & N02 Spring Return (~15° F to 300° F) ....... $10.96  
  Double Acting (~15° F to 350° F) ................................ $10.96  
  Spring Extend (~15° F to 300° F) ........................... $7.71  
  Double Rod (~15° F to 350° F) ............................... $15.47
- Ports Rotated – 90° on S02, R02, N02, or D02 (both)......No charge  
  Rod Wiper ................................................................. $7.10
  Side Port – Cap end port on S01, N01, or D01...........No charge  
  Add .03 to OAL
- Low Temperature Seals – Applications to ~40° F ............ $10.88
  Rod Extension ......................................................... $0.74/inch  
  Rod Extension ......................................................... $1.79/inch

**Mounting Bracket**  
F-M117003  
Price: $1.92

**Rod Clevis**  
F-M127002  
Price: $3.05

**Pivot Bracket**  
F-M129002  
Price: $5.85

**Mounting Nut**  
F-M190003  
Price: $0.26
F Series

3/4" Bore Cylinders

**Single Acting Spring Return**
Front Nose Mount
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"
Maximum Stroke: 6"
Optional Accessories:
• F-M117006 Mounting Bracket
• F-M029003 Pivot Bracket
• F-M127003 Rod Clevis
Base Weight: .10 lbs.
Plus .08 lbs. per inch of stroke

**Single Acting Spring Return**
Rear Pivot Mount
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"
Maximum Stroke: 6"
Optional Accessories:
• F-M117006 Mounting Bracket
• F-M029003 Pivot Bracket
• F-M127003 Rod Clevis
Base Weight: .13 lbs.
Plus .08 lbs. per inch of stroke

**Single Acting Spring Extend**
Front Nose Mount
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"
Maximum Stroke: 6"
Optional Accessories:
• F-M117005 Mounting Bracket
• F-M127003 Rod Clevis
Base Weight: .18 lbs.
Plus .07 lbs. per inch of stroke

**Single Acting Spring Extend**
Rear Pivot Mount
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"
Maximum Stroke: 6"
Optional Accessories:
• F-M117005 Mounting Bracket
• F-M029003 Pivot Bracket
• F-M127003 Rod Clevis
Base Weight: .18 lbs.
Plus .07 lbs. per inch of stroke

**Single Acting Spring Return**
Front Nose Mount
Non-Rotating
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"
Maximum Stroke: 6"
Optional Accessories:
• F-M117006 Mounting Bracket
• F-M127003 Rod Clevis
Base Weight: .10 lbs.
Plus .08 lbs. per inch of stroke

**Specifications and prices subject to change without notice or incurring obligation.**

See pricing notes on Page 5
Specifications and prices subject to change without notice or incurring obligation. See pricing notes on Page 5.
F Series
3/4" Bore Cylinders

Double Acting
Front Block Mount
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"
Maximum Stroke: 12"
Optional Accessories:
• F-M127003 Rod Clevis
Base Weight: .22 lbs.
Plus .03 lbs. per inch of stroke

F-0750D05-00A
$27.55 Base Price
Add $1.60 per inch of stroke

Double Acting
Trunnion Mount
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"
Maximum Stroke: 12"
Optional Accessories:
• F-M029006 Trunnion Bracket
• F-M127003 Rod Clevis
Base Weight: .29 lbs.
Plus .03 lbs. per inch of stroke

F-0750D06-00A
$35.74 Base Price
Add $1.60 per inch of stroke

Double Acting
Front Nose Mount with Adjustable Cushions
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"
Maximum Stroke: 12"
Optional Accessories:
• F-M117005 Mounting Bracket
• F-M127003 Rod Clevis
Base Weight: .24 lbs.
Plus .03 lbs. per inch of stroke

F-0750DG1-00A
$35.07 Base Price
Add $1.60 per inch of stroke
Viton® seals - Consult Factory

Double Acting
Rear Pivot Mount with Adjustable Cushions
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"
Maximum Stroke: 12"
Optional Accessories:
• F-M117005 Mounting Bracket
• F-M029003 Pivot Bracket
• F-M127003 Rod Clevis
Base Weight: .29 lbs.
Plus .03 lbs. per inch of stroke

F-0750DG2-00A or F-0750DG4-00A
$41.97 Base Price – DG2
$41.97 Base Price – DG4 includes mounting nuts, no pin
Add $1.69 per inch of stroke
Viton® seals – Consult Factory

Specifications and prices subject to change without notice or incurring obligation
See pricing notes on Page 5
Cylinder Specifications – Options & Accessories

-10°F to +165°F
- Piston Rod:
  Round - Ground, Polished, 303 Stainless Steel
  Hex - Ground 303 Stainless Steel
- Mounting nuts are standard on all nose mount cylinders
- Bronze Rod Guide Bushing is Standard
- Approximate Force Exerted: (0.4) x (Air Line Pressure)
- Spring Force: 3 lb. Relaxed – 6 lb. Compressed
- Magnetic piston optional on all 3/4" bore cylinders (except in combination with Viton® option).

Viton® Seals – Not available with bumpers or magnetic piston
  Spring Return (~15°F to 300°F) ........................................ $4.20
  Double Acting (~15°F to 350°F) ...................................... $10.96
  Spring Extend (~15°F to 300°F) ..................................... $7.71
  Double Rod (~15°F to 350°F) ... $15.41
- Ports Rotated – 90°
  on S02, R02, N02, D02 (both), or D04 (both) ........... No charge
- Rod Wiper – Not available in spring return models ................. $7.10
- Side Port – Cap end port on S01, N01, D01, D05, or D06 (Add .44 to OAL) .......... No Charge
- Low Temperature Seals – Applications to ~40°F ................... $4.83
- Rod Extension ................................................................. $0.74/inch
- Rod Thread Extension ...................................................... $1.79/inch

Mounting Bracket
F-M117005
Price: $2.55

Pivot Bracket
F-M029003
$3.05

Trunnion Bracket
F-M029006
Price: $13.37

Rod Clevis
F-M127003
Price: $3.51

Pivot Bracket
F-M129003
Price: $5.55

Mounting Nut
F-M190004
Price: $0.39

Mounting Nut
F-M190005
Price: $0.39

Specifications and prices subject to change without notice or incurring obligation
See pricing notes on Page 5
F Series
7/8" Bore Cylinders

**Single Acting** Spring Return
Front Nose Mount

- Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"
- Maximum Stroke: 6"
- Optional Accessories:
  - F-M117005 Mounting Bracket
  - F-M029003 Pivot Bracket
  - F-M127003 Rod Clevis
- Base Weight: .17 lbs.
- Plus .09 lbs. per inch of stroke

**F-0875S01-00A**
- $13.74 Base Price
- Add $2.46 per inch of stroke

**Single Acting** Spring Return
Rear Pivot Mount

- Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"
- Maximum Stroke: 6"
- Optional Accessories:
  - F-M117005 Mounting Bracket
  - F-M029003 Pivot Bracket
  - F-M127003 Rod Clevis
- Base Weight: .17 lbs.
- Plus .09 lbs. per inch of stroke

**F-0875S02-00A**
- $17.49 Base Price
- Add $2.46 per inch of stroke

**Single Acting** Spring Extend
Front Nose Mount

- Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"
- Maximum Stroke: 6"
- Optional Accessories:
  - F-M117005 Mounting Bracket
  - F-M127003 Rod Clevis
- Base Weight: .20 lbs.
- Plus .09 lbs. per inch of stroke

**F-0875R01-00A**
- $20.22 Base Price
- Add $2.46 per inch of stroke

**Single Acting** Spring Extend
Rear Pivot Mount

- Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"
- Maximum Stroke: 6"
- Optional Accessories:
  - F-M117005 Mounting Bracket
  - F-M029003 Pivot Bracket
  - F-M127003 Rod Clevis
- Base Weight: .20 lbs.
- Plus .09 lbs. per inch of stroke

**F-0875R02-00A**
- $23.97 Base Price
- Add $2.46 per inch of stroke

Specifications and prices subject to change without notice or incurring obligation

See pricing notes on Page 5

1-11-10
F Series
7/8" Bore Cylinders

F-0875N01-00A
Single Acting Spring Return
Front Nose Mount Non-Rotating
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"
Maximum Stroke: 6"
Optional Accessories:
• F-M117005 Mounting Bracket
• F-M127003 Rod Clevis
Base Weight: .17 lbs.
Plus .09 lbs. per inch of stroke

MOUNTING NUT INCLUDED

BUMPER OPTION (AVAILABLE CAP END ONLY) - NO CHANGE IN OAL... $3.02
MAGNETIC PISTON OPTION - ADD .531 TO OAL.......................... $2.37
BOTH BUMPER & MAGNETIC PISTON OPTIONS - ADD .733 TO OAL

$16.37 Base Price
Add $2.46 per inch of stroke

MOUNTING NUT NOT INCLUDED

BUMPER OPTION (AVAILABLE CAP END ONLY) - NO CHANGE IN OAL... $4.01
MAGNETIC PISTON OPTION - ADD .531 TO OAL.......................... $2.50
BOTH BUMPER & MAGNETIC PISTON OPTIONS - ADD .733 TO OAL

$19.53 Base Price
Add $2.46 per inch of stroke

F-0875D01-00A
Double Acting
Front Nose Mount
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"
Maximum Stroke: 12"
Optional Accessories:
• F-M117005 Mounting Bracket
• F-M127003 Rod Clevis
Base Weight: .25 lbs.
Plus .03 lbs. per inch of stroke

MOUNTING NUT INCLUDED

BUMPER OPTION - NO CHANGE IN OAL........................................... $3.02
MAGNETIC PISTON OPTION - NO CHANGE IN OAL....................... $6.09
BOTH BUMPER & MAGNETIC PISTON OPTIONS - ADD .125 TO OAL

$19.27 Base Price
Add $1.60 per inch of stroke

MOUNTING NUT NOT INCLUDED

BUMPER OPTION - NO CHANGE IN OAL........................................... $4.01
MAGNETIC PISTON OPTION - NO CHANGE IN OAL....................... $6.09
BOTH BUMPER & MAGNETIC PISTON OPTIONS - ADD .125 TO OAL

$24.09 Base Price
Add $1.60 per inch of stroke

F-0875N02-00A
Single Acting Spring Return
Rear Pivot Mount Non-Rotating
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"
Maximum Stroke: 6"
Optional Accessories:
• F-M117005 Mounting Bracket
• F-M029003 Pivot Bracket
• F-M127003 Rod Clevis
Base Weight: .17 lbs.
Plus .09 lbs. per inch of stroke

MOUNTING NUT INCLUDED

BUMPER OPTION (AVAILABLE CAP END ONLY) - NO CHANGE IN OAL... $3.02
MAGNETIC PISTON OPTION - ADD .531 TO OAL.......................... $2.37
BOTH BUMPER & MAGNETIC PISTON OPTIONS - ADD .733 TO OAL

$16.37 Base Price
Add $2.46 per inch of stroke

MOUNTING NUT NOT INCLUDED

BUMPER OPTION (AVAILABLE CAP END ONLY) - NO CHANGE IN OAL... $4.01
MAGNETIC PISTON OPTION - ADD .531 TO OAL.......................... $2.50
BOTH BUMPER & MAGNETIC PISTON OPTIONS - ADD .733 TO OAL

$19.53 Base Price
Add $2.46 per inch of stroke

F-0875D02-00A
Double Acting
Rear Pivot Mount
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"
Maximum Stroke: 32"
Optional Accessories:
• F-M117005 Mounting Bracket
• F-M029003 Pivot Bracket
• F-M127003 Rod Clevis
Base Weight: .32 lbs.
Plus .03 lbs. per inch of stroke

MOUNTING NUT INCLUDED

BUMPER OPTION - NO CHANGE IN OAL........................................... $3.02
MAGNETIC PISTON OPTION - NO CHANGE IN OAL....................... $6.09
BOTH BUMPER & MAGNETIC PISTON OPTIONS - ADD .125 TO OAL

$19.27 Base Price
Add $1.60 per inch of stroke

MOUNTING NUT NOT INCLUDED

BUMPER OPTION - NO CHANGE IN OAL........................................... $4.01
MAGNETIC PISTON OPTION - NO CHANGE IN OAL....................... $6.09
BOTH BUMPER & MAGNETIC PISTON OPTIONS - ADD .125 TO OAL

$24.09 Base Price
Add $1.60 per inch of stroke
F Series

7/8" Bore Cylinders

Double Acting
Double Nose or Rear Pivot Mount
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"
Maximum Stroke: 32"
Optional Accessories:
- F-M117005 Mounting Bracket
- F-M129003 Pivot Bracket
- F-M127003 Rod Clevis
Base Weight: .32 lbs.
Plus .03 lbs. per inch of stroke

7/8" Bore Cylinder Specifications – Options & Accessories

- –10° to +165°F
- Piston Rod:
  Round - Ground and Polished, 303 Stainless Steel
  Hex - Ground 303 Stainless Steel
- Mounting nuts are standard on all nose mount cylinders
- Bronze Rod Guide Bushing is Standard
- Approximate Force Exerted: (0.6) x (Air Line Pressure)
- Spring Force: 3 lb. Relaxed – 6 lb. Compressed
- Magnetic piston optional on all 7/8" bore cylinders (except in combination with Viton® option).

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F-0875D04-00A

MOUNTING NUTS INCLUDED

$25.37 Base Price
Add $1.60 per inch of stroke

OPTION PRICE ADDER

- Viton® Seals – Not available with bumpers or magnetic piston
  S01 – Spring Return (–15° F to 300° F) ........................................ $4.75
  S02 – Spring Return (–15° F to 300° F) ........................................ $4.70
  N01 – Spring Return (–15° F to 300° F) ........................................ $11.16
  N02 – Spring Return (–15° F to 300° F) ........................................ $12.14
  D01 – Double Acting (–15° F to 350° F) ........................................ $11.16
  D02 – Double Acting (–15° F to 350° F) ........................................ $12.14
  D03 – Double Acting (–15° F to 350° F) ........................................ $11.96
  D04 – Double Acting (–15° F to 350° F) ........................................ $12.14
  Spring Extend (–15° F to 300° F) .............................................. $8.14
- Ports Rotated – 90°
  on S02, R02, N02, D02 (both), or D04 (both)........................... No charge
- Rod Wiper – Not available in spring return models .................... $7.10
- Side Port – Cap end port on S01, N01, or D01 .......................... No charge
  Add .28 to OAL
- Low Temperature Seals – Applications to –40° F ....................... $4.83
- Rod Extension ................................................................. $0.74/inch
- Rod Thread Extension ...................................................... $1.79/inch

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Rod Clevis
F-M127003
Price: $3.51

Pivot Bracket
F-M129003
Price: $5.55

Mounting Nut
F-M190005
Price: $0.39

Specifications and prices subject to change without notice or incurring obligation

See pricing notes on Page 5
Specifications and prices subject to change without notice or incurring obligation.

See pricing notes on Page 5.
Specifications and prices subject to change without notice or incurring obligation.

**F Series**

**1-1/16" Bore Cylinders**

**Single Acting** Spring Return
- **Front Nose Mount Non-Rotating**
  - Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"
  - Maximum Stroke: 6"
  - Optional Accessories:
    - F-M117005 Mounting Bracket
    - F-M127004 Rod Clevis
  - Base Weight: .25 lbs.
  - Plus .12 lbs. per inch of stroke
  - **F-1062N01-00A**
  - $17.76 Base Price
  - Add $2.78 per inch of stroke

- **Rear Pivot Mount Non-Rotating**
  - Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"
  - Maximum Stroke: 6"
  - Optional Accessories:
    - F-M117005 Mounting Bracket
    - F-M127004 Rod Clevis
  - Base Weight: .25 lbs.
  - Plus .12 lbs. per inch of stroke
  - **F-1062N02-00A**
  - $21.82 Base Price
  - Add $2.78 per inch of stroke

**Double Acting**
- **Front Nose Mount**
  - Maximum Stroke: 12"
  - Optional Accessories:
    - F-M117005 Mounting Bracket
    - F-M127004 Rod Clevis
  - Base Weight: .33 lbs.
  - Plus .05 lbs. per inch of stroke
  - **F-1062D01-00A**
  - $19.90 Base Price
  - Add $1.60 per inch of stroke

- **Rear Pivot Mount**
  - Maximum Stroke: 32"
  - Optional Accessories:
    - F-M117005 Mounting Bracket
    - F-M127004 Rod Clevis
  - Base Weight: .33 lbs.
  - Plus .05 lbs. per inch of stroke
  - **F-1062D02-00A**
  - $23.90 Base Price
  - Add $1.60 per inch of stroke

- **Double Nose or Rear Pivot Mount**
  - Maximum Stroke: 32"
  - Optional Accessories:
    - F-M117005 Mounting Bracket
    - F-M129003 Pivot Bracket
    - F-M127004 Rod Clevis
  - Base Weight: .33 lbs.
  - Plus .05 lbs. per inch of stroke
  - **F-1062D04-00A**
  - $26.18 Base Price
  - Add $1.60 per inch of stroke

See pricing notes on Page 5.
1-1/16" Bore Cylinders

**Double Acting**

**Double Rod**
Maximum Stroke: 12"
Optional Accessories:
- F-M117005 Mounting Bracket
- F-M127004 Rod Clevis
Base Weight: .48 lbs.
Plus .07 lbs. per inch of stroke

**Hollow Double Rod**
Maximum Stroke: 12"
Optional Accessories:
- F-M117005 Mounting Bracket
- F-M127004 Rod Clevis
Base Weight: .47 lbs.
Plus .07 lbs. per inch of stroke

**Front Block Mount**
Maximum Stroke: 12"
Optional Accessories:
- F-M127004 Rod Clevis
Base Weight: .49 lbs.
Plus .05 lbs. per inch of stroke

**Trunnion Mount**
Maximum Stroke: 12"
Optional Accessories:
- F-M029006 Trunnion Bracket
- F-M127004 Rod Clevis
Base Weight: .49 lbs.
Plus .05 lbs. per inch of stroke

Specifications and prices subject to change without notice or incurring obligation
1-1/16" Bore Cylinders

Double Acting Front Nose Mount with Adjustable Cushions
Maximum Stroke: 12"
Optional Accessories:
- F-M117005 Mounting Bracket
- F-M127004 Rod Clevis
Base Weight: .38 lbs.
Plus .04 lbs. per inch of stroke

Double Acting Rear Pivot Mount with Adjustable Cushions
Maximum Stroke: 32"
Optional Accessories:
- F-M117005 Mounting Bracket
- F-M029003 Pivot Bracket
- F-M127004 Rod Clevis
Base Weight: .44 lbs.
Plus .04 lbs. per inch of stroke

1-1/16" Bore Cylinder Specifications – Options & Accessories

- –10° to +165°F
- Piston Rod: Hex - Ground 303 Stainless Steel
  Round - Ground and Polished, 303 Stainless Steel
- Bronze rod guide bushing is standard.
- Approximate force exerted = (0.9) x (air line pressure).
- Spring force: 3 lbs. relaxed, 6 lbs. compressed.
- Mounting nuts are standard on all nose mount cylinders.
- Bumpers are optional on all 1-1/16" bore cylinders (except in combination with Viton® option).
- Magnetic piston optional on all 1-1/16" bore cylinders (except in combination with Viton® option).
1-1/4" Bore Cylinders

**Single Acting Spring Return**

**Front Nose Mount**
- Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"
- Maximum Stroke: 6"
- Optional Accessories:
  - F-M117007 Mounting Bracket
  - F-M127005 Rod Clevis
- Base Weight: .39 lbs.
  - Plus .21 lbs. per inch of stroke

**Double Nose or Rear Pivot Mount**
- Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"
- Maximum Stroke: 6"
- Optional Accessories:
  - F-M117007 Mounting Bracket
  - F-M229003 Pivot Bracket
  - F-M127005 Rod Clevis
- Base Weight: .53 lbs.
  - Plus .21 lbs. per inch of stroke

**Single Acting Spring Extend**

**Front Nose Mount**
- Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"
- Maximum Stroke: 6"
- Optional Accessories:
  - F-M117007 Mounting Bracket
  - F-M127005 Rod Clevis
- Base Weight: .50 lbs.
  - Plus .21 lbs. per inch of stroke

**Double Nose or Rear Pivot Mount**
- Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"
- Maximum Stroke: 6"
- Optional Accessories:
  - F-M117007 Mounting Bracket
  - F-M229003 Pivot Bracket
  - F-M127005 Rod Clevis
- Base Weight: .57 lbs.
  - Plus .21 lbs. per inch of stroke

**Single Acting Spring Return**

**Front Nose Mount Non-Rotating**
- Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"
- Maximum Stroke: 6"
- Optional Accessories:
  - F-M117007 Mounting Bracket
  - F-M127005 Rod Clevis
- Base Weight: .41 lbs.
  - Plus .20 lbs. per inch of stroke

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Specifications and prices subject to change without notice or incurring obligation.
F Series
1-1/4" Bore Cylinders

Single Acting Spring Return Rear Pivot Mount
Non-Rotating
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"
Maximum Stroke: 6"
Optional Accessories:
• F-M117007 Mounting Bracket
• F-M229003 Pivot Bracket
• F-M127005 Rod Clevis
Base Weight: .41 lbs.
Plus .20 lbs. per inch of stroke

F-1250N02-00A
$32.17 Base Price
Add $3.64 per inch of stroke

Double Acting Front Nose Mount
Standard Stroke Lengths:
Maximum Stroke: 12"
Optional Accessories:
• F-M117007 Mounting Bracket
• F-M127005 Rod Clevis
Base Weight: .58 lbs.
Plus .08 lbs. per inch of stroke

F-1250D01-00A
$30.68 Base Price
Add $2.11 per inch of stroke

Double Acting Double Nose or Rear Pivot Mount
Standard Stroke Lengths:
Maximum Stroke: 32"
Optional Accessories:
• F-M117007 Mounting Bracket
• F-M229003 Pivot Bracket
• F-M127005 Rod Clevis
Base Weight: .71 lbs.
Plus .08 lbs. per inch of stroke

F-1250D02-00A or F-1250D04-00A
$36.60 Base Price – D02
$36.10 Base Price – D04 includes mounting nuts
Add $2.11 per inch of stroke

Double Acting Double Rod
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"
Maximum Stroke: 12"
Optional Accessories:
• F-M117007 Mounting Bracket
• F-M127005 Rod Clevis
Base Weight: .98 lbs.
Plus .12 lbs. per inch of stroke

F-1250D03-00A
$52.80 Base Price
Add $3.14 per inch of stroke

Specifications and prices subject to change without notice or incurring obligation
See pricing notes on Page 5
**1-1/4" Bore Cylinder Specifications – Options & Accessories**

- **–10° to +165°F**
- **Piston Rod:**
  - Round – Ground and Polished, 303 Stainless Steel.
  - Hex – Ground 303 Stainless Steel.
- **Bronze rod guide bushing is standard.**
- **Approximate force exerted = (1.2) x (air line pressure).**
- **Spring force:** 7.5 lbs. relaxed, 15 lbs. compressed.
- **Mounting nuts are standard on all nose mount cylinders.**
- **Bumpers are optional on all 1-1/4" bore cylinders (except in combination with Viton® option).**
- **Magnetic piston optional on all 1-1/4" bore cylinders (except in combination with Viton® option).**
Specifications and prices subject to change without notice or incurring obligation

See pricing notes on Page 5
**Specifications and prices subject to change without notice or incurring obligation.**

See pricing notes on Page 5.
F Series
1-1/2" Bore Cylinders

Double Acting
Hollow Double Rod
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"
Maximum Stroke: 12"
Optional Accessories:
• F-M117007 Mounting Bracket
• F-M127005 Rod Clevis
Base Weight: 1.16 lbs.
Plus .13 lbs. per inch of stroke

F-1500DH3-00A

$61.85 Base Price
Add $4.32 per inch of stroke

Double Acting
Front Block Mount
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"
Maximum Stroke: 12"
Optional Accessories:
• F-M127005 Rod Clevis
Base Weight: .99 lbs.
Plus .08 lbs. per inch of stroke

F-1500D05-00A

$52.12 Base Price
Add $2.46 per inch of stroke

Double Acting
Trunnion Mount
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"
Maximum Stroke: 12"
Optional Accessories:
• F-M029006 Trunnion Bracket
• F-M127005 Rod Clevis
Base Weight: 1.06 lbs.
Plus .08 lbs. per inch of stroke

F-1500D06-00A

$64.44 Base Price
Add $2.60 per inch of stroke

Double Acting Front Nose Mount
with Adjustable Cushions
Standard Stroke Lengths:
Maximum Stroke: 12"
Optional Accessories:
• F-M117007 Mounting Bracket
• F-M127005 Rod Clevis
Base Weight: .76 lbs.
Plus .09 lbs. per inch of stroke

F-1500DG1-00A

$62.72 Base Price
Add $2.46 per inch of stroke
Viton® Seals – Consult Factory

Specifications and prices subject to change without notice or incurring obligation

See pricing notes on Page 5
1-1/2" Bore Cylinder Specifications – Options & Accessories

-10° to +165°F
Bronze rod guide bushing is standard.
Approximate force exerted = (1.7) x (air line pressure).
Spring force: 7 lbs. relaxed, 14 lbs. compressed.
Mounting nuts are standard on all nose mount cylinders.
Bumpers are optional on all 1-1/2" bore cylinders (except in combination with Viton® option).
Magnetic piston optional on all 1-1/2" bore cylinders (except in combination with Viton® option).

**F Series**

**1-1/2" Bore Cylinders**

**Double Acting**
Rear Pivot Mount with Adjustable Cushions
Standard Stroke Lengths:
Maximum Stroke: 32"
Optional Accessories:
- F-M117007 Mounting Bracket
- F-M029004 Pivot Bracket
- F-M127005 Rod Clevis
Base Weight: .77 lbs.
Plus .09 lbs. per inch of stroke

**OPTION** | **PRICE ADDER**
--- | ---
- Viton® Seals – Not available with bumpers or magnetic piston
  S01 & N01 – Spring Return (–15° F to 300° F) | $7.27
  S02 – Spring Return (–15° F to 300° F) | $7.32
  N02 – Spring Return (–15° F to 300° F) | $18.11
  Double Acting (–15° F to 350° F) | $18.11
  D06 – Double Acting (–15° F to 350° F) | $13.49
  R01 – Spring Extend (–15° F to 300° F) | $13.56
  R02 – Spring Extend (–15° F to 300° F) | $13.63
  Double Rod (–15° F to 350° F) | $19.22
  Ports Rotated – 90° on S02, R02, N02, or D02 (both) | No charge
  Rod Wiper – Not available in spring return models | $7.10
  Side Port – Cap end port on S01, N01, D01, D05, or D06 (Add .19 to OAL) | No charge
  Low Temperature Seals – Applications to –40° F | $8.07
  Rod Extension | $1.17/inch
  Rod Thread Extension | $2.23/inch

MOUNTING NUT NOT INCLUDED

**MAGNETIC PISTON OPTION - NO CHANGE IN OAL** | **$7.71**

$68.57 Base Price
Add $2.46 per inch of stroke
Viton® Seals – Consult Factory

**Mounting Bracket**
F-M117007
Price: $3.57

**Rod Clevis**
F-M127005
Price: $5.80

**Pivot Bracket**
F-M029004
Price: $5.24

**Trunnion Bracket**
F-M029006
Price: $13.37

**Mounting Nut**
F-M190006
Price: $0.51

Specifications and prices subject to change without notice or incurring obligation

See pricing notes on Page 5
F Series
1-3/4" Bore Cylinders

Single Acting Spring Return
Front Nose Mount
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"
Maximum Stroke: 6"
Optional Accessories:
• F-M117008 Mounting Bracket
• F-M127006 Rod Clevis
Base Weight: .85 lbs.
Plus .36 lbs. per inch of stroke

F-1750S01-00A
$41.97 Base Price
Add $5.49 per inch of stroke
BUMPER AVAILABLE CAP END ONLY - NO CHANGE IN OAL .................. $4.01
MAGNETIC PISTON OPTION - ADD .656 TO OAL ................................ $26.25
BOTH BUMPER & MAGNETIC PISTON OPTIONS - ADD .735 TO OAL

Single Acting Spring Return
Double Nose or Rear Pivot Mount
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"
Maximum Stroke: 6"
Optional Accessories:
• F-M117008 Mounting Bracket
• F-M129005 Pivot Bracket
• F-M127006 Rod Clevis
Base Weight: .86 lbs.
Plus .36 lbs. per inch of stroke

F-1750S02-00A
$43.92 Base Price
Add $5.49 per inch of stroke
BUMPER AVAILABLE CAP END ONLY - NO CHANGE IN OAL .................. $4.01
MAGNETIC PISTON OPTION - ADD .656 TO OAL ................................ $26.43
BOTH BUMPER & MAGNETIC PISTON OPTIONS - ADD .735 TO OAL

Single Acting Spring Extend
Front Nose Mount
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"
Maximum Stroke: 6"
Optional Accessories:
• F-M117008 Mounting Bracket
• F-M127006 Rod Clevis
Base Weight: 1.17 lbs.
Plus .31 lbs. per inch of stroke

F-1750R01-00A
$50.71 Base Price
Add $5.49 per inch of stroke
BUMPER AVAILABLE ROD END ONLY - NO CHANGE IN OAL .................. $4.07
MAGNETIC PISTON OPTION - ADD .656 TO OAL ................................ $27.17
BOTH BUMPER & MAGNETIC PISTON OPTIONS - ADD .735 TO OAL

Double Acting
Front Nose Mount
Standard Stroke Lengths:
Maximum Stroke: 12"
Optional Accessories:
• F-M117008 Mounting Bracket
• F-M127006 Rod Clevis
Base Weight: 1.29 lbs.
Plus .11 lbs. per inch of stroke

F-1750D01-00A
$51.02 Base Price
Add $2.46 per inch of stroke
BUMPER OPTION - NO CHANGE IN OAL ........................................... $6.36
MAGNETIC PISTON OPTION - NO CHANGE IN OAL ......................... $11.70
BOTH BUMPER & MAGNETIC PISTON OPTIONS - NO CHANGE IN OAL

Specifications and prices subject to change without notice or incurring obligation

See pricing notes on Page 5
**1-3/4" Bore Cylinder Specifications – Options & Accessories**

- 
- Piston Rod: Ground and Polished, 303 Stainless Steel.
- Bronze rod guide bushing is standard.
- Approximate force exerted = (2.4) x (air line pressure).
- Spring force: 11 lbs. relaxed, 24 lbs. compressed.
- Mounting nuts are standard on all nose mount cylinders.
- Bumpers are optional on all 1-3/4" bore cylinders (except in combination with Viton® option).
- Magnetic piston optional on all 1-3/4" bore cylinders (except in combination with Viton® option).

### Option & Price Adder

<table>
<thead>
<tr>
<th>OPTION</th>
<th>PRICE ADDER</th>
</tr>
</thead>
</table>
| Viton® Seals – Not available with bumpers or magnetic piston  
Spring Return (–15° F to 300° F) | $7.64 |
| Double Acting (–15° F to 350° F) | $18.86 |
| Spring Extend (–15° F to 300° F) | $14.05 |
| Ports Rotated – 90° on S02 or D02 models (both) | No charge |
| Rod Wiper – Not available in spring return models | $7.10 |
| Side Port - Cap end ports on S01 or D01 models | Add .56 to OAL | No charge |
| Low Temperature Seals – Applications to –40° F | $4.83 |
| Rod Extension | $1.17/inch |
| Rod Thread Extension | $2.23/inch |
F Series

2" Bore Cylinders

Section Acting Spring Return

Front Nose Mount

Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 4"

Optional Accessories:
- F-M117009 Mounting Bracket
- F-M229005 Pivot Bracket
- F-M127006 Rod Clevis

Base Weight: 1.04 lbs.
Plus .43 lbs. per inch of stroke

$55.44 Base Price
Add $5.86 per inch of stroke

Section Acting Spring Return

Double Nose or Rear Pivot Mount

Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 4"

Optional Accessories:
- F-M117009 Mounting Bracket
- F-M229005 Pivot Bracket
- F-M127006 Rod Clevis

Base Weight: 1.26 lbs.
Plus .43 lbs. per inch of stroke

$67.76 Base Price
Add $6.09 per inch of stroke

Section Acting Spring Extend

Front Nose Mount

Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 4"

Optional Accessories:
- F-M117009 Mounting Bracket
- F-M127006 Rod Clevis

Base Weight: 1.24 lbs.
Plus .43 lbs. per inch of stroke

$64.38 Base Price
Add $5.86 per inch of stroke

Section Acting Spring Extend

Double Nose or Rear Pivot Mount

Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 4"

Optional Accessories:
- F-M117009 Mounting Bracket
- F-M127006 Rod Clevis

Base Weight: 1.46 lbs.
Plus .43 lbs. per inch of stroke

$70.36 Base Price
Add $5.86 per inch of stroke

Specifications and prices subject to change without notice or incurring obligation

See pricing notes on Page 5
F Series

2" Bore Cylinders

**F-2000D01-00A**

Double Acting

Front Nose Mount

Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6", 7", 8"

Maximum Stroke: 12"

Optional Accessories:
- F-M117009 Mounting Bracket
- F-M127006 Rod Clevis

Base Weight: 1.40 lbs.
Plus .15 lbs. per inch of stroke

---

**F-2000D02-00A**

Double Acting

Double Nose or Rear Pivot Mount

Standard Stroke Lengths:

Maximum Stroke: 32"

Optional Accessories:
- F-M117009 Mounting Bracket
- F-M229005 Pivot Bracket
- F-M127006 Rod Clevis

Base Weight: 1.62 lbs.
Plus .15 lbs. per inch of stroke

---

**F-2000D03-00A**

Double Acting

Double Rod

Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"

Maximum Stroke: 12"

*Optional Accessories:
- F-M117009 Mounting Bracket
- F-M127006 Rod Clevis

Base Weight: 1.97 lbs.
Plus .24 lbs. per inch of stroke

---

**Base Price**

$53.43

Add $2.78 per inch of stroke

$54.21

Add $2.91 per inch of stroke

$79.53

Add $4.20 per inch of stroke
F Series

2" Bore Cylinders

Double Acting
Front Nose Mount
with Adjustable Cushions
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"
Maximum Stroke: 12"
Optional Accessories:
• F-M117009 Mounting Bracket
• F-M229005 Pivot Bracket
• F-M127006 Rod Clevis
Base Weight: 1.64 lbs.
Plus .15 lbs. per inch of stroke

F-2000DG1-00A
MOUNTING NUT INCLUDED

$82.79 Base Price
Add $2.78 per inch of stroke
Viton® Seals – Consult Factory

MAGNETIC PISTON OPTION – NO CHANGE IN OAL $11.79

Double Acting
Rear Pivot Mount
with Adjustable Cushions
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"
Maximum Stroke: 32"
Optional Accessories:
• F-M117009 Mounting Bracket
• F-M229005 Pivot Bracket
• F-M127006 Rod Clevis
Base Weight: 1.68 lbs.
Plus .15 lbs. per inch of stroke

F-2000DG2-00A
MOUNTING NUT NOT INCLUDED

$99.55 Base Price
Add $2.91 per inch of stroke
Viton® Seals – Consult Factory

MAGNETIC PISTON OPTION – NO CHANGE IN OAL $11.79

Double Acting
Front Nose Mount
1" Diameter Rod
with Wear Band Piston
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"
Maximum Stroke: 12"
Base Weight: approximately 1.79 lbs.
Plus .28 lbs. per inch of stroke

F-2000DL1-00A
MOUNTING NUT NOT INCLUDED

$174.90 Base Price
Add $5.18 per inch of stroke
BUMPERS NOT AVAILABLE
MAGNETIC PISTON OPTION – ADD .299 TO OAL $11.79

Double Acting
Rear Pivot Mount
1" Diameter Rod
with Wear Band Piston
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"
Maximum Stroke: 32"
Base Weight: approximately 2.01 lbs.
Plus .28 lbs. per inch of stroke

F-2000DL2-00A
MOUNTING NUT NOT INCLUDED

$185.37 Base Price
Add $5.18 per inch of stroke
BUMPERS NOT AVAILABLE
MAGNETIC PISTON OPTION – ADD .299 TO OAL $11.79

Specifications and prices subject to change without notice or incurring obligation

See pricing notes on Page 5

2-23-10
Standard Cylinder Specifications – Options & Accessories

-10°F to +165°F
- Piston Rod: Ground and Polished, 303 Stainless Steel (Except for 1" Rod Models. See below).
- Bronze rod guide bushing is standard.
- Approximate force exerted = (3.1) x (air line pressure).
- Spring force: 15 lbs. relaxed, 30 lbs. compressed.
- Mounting nuts are standard on all nose mount cylinders except 1" rod models.
- Bumpers are optional on all 2" bore cylinders (except in combination with Viton® option).
- Magnetic piston optional on all 2" bore cylinders (except in combination with Viton® option).

1" Rod Cylinder Specifications

- 1" chrome rod is standard.
- Magnetic piston optional.
- Viton® seals optional.

<table>
<thead>
<tr>
<th>OPTION</th>
<th>PRICE ADDER</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Viton® Seals – Not available with bumpers or magnetic piston</td>
<td>$7.64</td>
</tr>
<tr>
<td>Spring Return (–15°F to 300°F)</td>
<td>$18.62</td>
</tr>
<tr>
<td>Double Acting (–15°F to 300°F)</td>
<td>$18.56</td>
</tr>
<tr>
<td>D02 – Double Acting (–15°F to 350°F)</td>
<td>$14.00</td>
</tr>
<tr>
<td>R01 – Spring Extend (–15°F to 300°F)</td>
<td>$14.05</td>
</tr>
<tr>
<td>R02 – Spring Extend (–15°F to 300°F)</td>
<td>$26.18</td>
</tr>
<tr>
<td>Double Rod (–15°F to 350°F)</td>
<td>$26.18</td>
</tr>
<tr>
<td>• Ports Rotated – 90° on S02, R02, or D02 models (both)</td>
<td>No charge</td>
</tr>
<tr>
<td>• Rod Wiper – Not available in spring return models</td>
<td>$7.10</td>
</tr>
<tr>
<td>• Side Port - Cap end port on S01 or D01 models</td>
<td>$1.54/inch</td>
</tr>
<tr>
<td>Add .38 to OAL</td>
<td>No charge</td>
</tr>
<tr>
<td>• Low Temperature Seals – Applications to –40°F</td>
<td>$10.88</td>
</tr>
<tr>
<td>• Rod Extension - Single, reverse and double acting</td>
<td>$2.60/inch</td>
</tr>
<tr>
<td>• Rod Thread Extension</td>
<td>$1.54/inch</td>
</tr>
</tbody>
</table>

Specifications and prices subject to change without notice or incurring obligation
See pricing notes on Page 5
F Series
2-1/2" Bore Cylinders

Double Acting
Front Nose Mount
Standard Stroke Lengths:
Maximum Stroke: 12"
Optional Accessories:
• F-M117010 Mounting Bracket
• F-M127006 Rod Clevis
• F-M190012 Mounting Nut
Base Weight 1.98 lbs.
Plus .17 lbs. per inch of stroke

Specifications and prices subject to change without notice or incurring obligation

2-1/2" Bore Cylinder Specifications – Options & Accessories

-10° to +165°F
Piston Rod: Ground and Polished, 303 Stainless Steel.
Bronze rod guide bushing is standard.
Approximate force exerted = (5.0) x (air line pressure).
Magnetic piston optional on all 2-1/2" bore cylinders (except in combination with Viton option).

OPTION | PRICE ADDER
--- | ---
Viton® Seals – Not available with bumpers or magnetic piston
D01 – Double Acting (–15° F to 350° F) | $22.68
D02 – Double Acting (–15° F to 350° F) | $22.63
Ports Rotated – 90° on D02 (both) | No charge
Rod Wiper | $7.10
Side Port – Cap end on D01. Add .38 to overall length | No charge
Low Temperature Seals – Applications to –40° F | $8.07
Rod Extension | $1.54/inch
Rod Thread Extension | $2.60/inch

Mounting Bracket
F-M117010
Price: $20.46

Pivot Bracket
F-M229005
Price: $10.70

Rod Clevis
F-M127006
Price: $5.80

Mounting Nut
F-M190012
Price: $5.74

Option Price Adder
Bumper Option – Add .062 to OAL
Magnetic Piston Option – No Change in OAL
Both Bumper & Magnetic Piston Options – Add .062 to OAL

MOUNTING NUT NOT INCLUDED

MOUNTING NUT NOT INCLUDED
3" Bore Cylinder Specifications – Options & Accessories

-10° to +165°F
- Piston Rod
  Ground and Polished, 303 Stainless Steel is standard.
  Bronze rod guide bushing is standard.
  Approximate force exerted = (7.0) x (air line pressure).
- Magnetic piston optional on all 3" bore cylinders (except in combination with Viton option).

**F Series**

3" Bore Cylinders

**F-3000D01-00A**

Double Acting
Front Nose Mount
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"
Maximum Stroke: 12"
*Optional Accessories:
- F-M117011 Mounting Bracket
- F-M127007 Rod Clevis
- F-M190013 Mounting Nut
Base Weight: 3.34 lbs.
Plus .26 lbs. per inch of stroke

**F-3000D02-00A**

Double Acting
Double Nose or Rear Pivot Mount
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"
Maximum Stroke: 32"
*Optional Accessories:
- F-M117011 Mounting Bracket
- F-M229006 Pivot Bracket
- F-M127007 Rod Clevis
- F-M190013 Mounting Nut
Base Weight: 3.87 lbs.
Plus .26 lbs. per inch of stroke

**3" Bore Cylinders – Options & Accessories**

**OPTION** | **PRICE ADDER**
---|---
Viton® Seals – Not available with bumpers or magnetic piston
Double Acting (−15°F to 350°F) | $24.59
Ports Rotated – 90° on D02 model (both) | No charge
Rod Wiper | $7.10
Side Port – Cap end on D01. Add .44 to OAL | No charge
Low Temperature Seals – Applications to −40°F | $10.88
Rod Extension | $1.74/inch
Rod Thread Extension | $2.78/inch
F Series
Volume Chambers

How to Order

Series

Bore Size (4 digits)
0750 = 3/4"
1062 = 1-1/16"
1500 = 1-1/2"
2000 = 2"
2500 = 2-1/2"
3000 = 3"

Style
V = Volume chamber

Version
01 = In-line mount

Fractional Inch Length
(1 digit)
A = 0"

Full Inch Length (2 digits)
00 = 0"
01 = 1"
02 = 2"
03 = 3"
32 = 32"

Volume Chamber Specifications

-40° to +350°F
303 stainless steel body.
Aluminum alloy end caps.
Pressure rating: 250 psi.
Features

• Delrin® head, Delrin® cap and aluminum piston provide excellent corrosion resistance in wash down environments where cylinders are exposed to moisture and certain solvents.*
• Stainless steel rod and tube complete the corrosion resistance package and provide long life.
• Corrosion resistant cylinders are offered in three standard bore sizes: 3/4", 1-1/16" and 1-1/2" with both nose and rear pivot mounts.
• Stroke tolerance +/-0.032

Delrin® is a registered trademark of DuPont.
★ Call DuPont (800) 441-0575 for information regarding properties of this material.

3/4" Bore Delrin® Series
Double Acting Front Nose Mount
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"
Maximum Stroke: 12"
*Optional Accessories:
• F-M19S005 Stainless Steel Mounting Nut
Base Weight: .13 lbs.
Plus .03 lbs. per inch of stroke

3/4" Bore Delrin® Series
Double Acting Rear Pivot Mount
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"
Maximum Stroke: 32"
*Optional Accessories:
• F-M19S005 Stainless Steel Mounting Nut
Base Weight: .15 lbs.
Plus .03 lbs. per inch of stroke

3/4" Bore Delrin® Series
Double Acting Double Rod
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"
Maximum Stroke: 12"
*Optional Accessories:
• F-M19S005 Stainless Steel Mounting Nut
Base Weight: .18 lbs.
Plus .05 lbs. per inch of stroke
### F Series

**Delrin® Corrosion Resistant Cylinders**

#### 1-1/16" Bore Delrin® Series

**Double Acting Front Nose Mount**
- Maximum Stroke: 12"
- Optional Accessories: F-M19S005 Stainless Steel Mounting Nut
- Base Weight: .21 lbs.
- Plus .05 lbs. per inch of stroke

**F-1062DC1-00A**
- $36.23 Base Price
- Add $1.60 per inch of stroke

#### 1-1/16" Bore Delrin® Series

**Double Acting Rear Pivot Mount**
- Maximum Stroke: 32"
- Optional Accessories: F-M19S005 Stainless Steel Mounting Nut
- Base Weight: .25 lbs.
- Plus .05 lbs. per inch of stroke

**F-1062DC2-00A**
- $39.49 Base Price
- Add $1.60 per inch of stroke

#### 1-1/2" Bore Delrin® Series

**Double Acting Double Rod**
- Maximum Stroke: 12"
- Optional Accessories: F-M19S006 Stainless Steel Mounting Nut
- Base Weight: .30 lbs.
- Plus .07 lbs. per inch of stroke

**F-1062DC3-00A**
- $47.06 Base Price
- Add $2.11 per inch of stroke

#### 1-1/2" Bore Delrin® Series

**Double Acting Front Nose Mount**
- Maximum Stroke: 12"
- Optional Accessories: F-M19S006 Stainless Steel Mounting Nut
- Base Weight: .46 lbs.
- Plus .08 lbs. per inch of stroke

**F-1500DC1-00A**
- $46.58 Base Price
- Add $2.46 per inch of stroke

#### 1-1/2" Bore Delrin® Series

**Double Acting Rear Pivot Mount**
- Maximum Stroke: 32"
- Optional Accessories: F-M19S006 Stainless Steel Mounting Nut
- Base Weight: .48 lbs.
- Plus .08 lbs. per inch of stroke

**F-1500DC2-00A**
- $51.12 Base Price
- Add $2.46 per inch of stroke

Specifications and prices subject to change without notice or incurring obligation.

See pricing notes on Page 5
**Delrin® Cylinder Specifications – Options & Accessories**

- Maximum operating pressure 100psi Air.
- Temperature range +32° to +160°F.
- Piston Rod
  - Ground and polished, 303 stainless steel is standard.
- Magnetic piston optional on all bore cylinders (except in combination with Viton option).

### OPTION PRICE ADDER

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<thead>
<tr>
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<tbody>
<tr>
<td>Viton® Seals – Not available with bumpers or magnetic piston (for media or environment compatibility only)</td>
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<tr>
<td>DC1 – 3/4 Bore</td>
<td>$11.10</td>
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<tr>
<td>DC2 – 3/4 Bore</td>
<td>$11.04</td>
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<tr>
<td>1-1/16 Bore</td>
<td>$13.37</td>
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<tr>
<td>1-1/2 Bore</td>
<td>$14.23</td>
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<tr>
<td>Pivot Bushing –</td>
<td>Not Available</td>
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<tr>
<td>Ports Rotated –</td>
<td>Not Available</td>
</tr>
<tr>
<td>Rod Wiper –</td>
<td>Not Available</td>
</tr>
<tr>
<td>Side Port –</td>
<td>Not Available</td>
</tr>
<tr>
<td>Low Temp. Seals</td>
<td>Not Available</td>
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<tr>
<td>Rod Extension –</td>
<td>$0.74/inch</td>
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<td>3/4 Bore</td>
<td>$0.74/inch</td>
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<td>1-1/16 Bore</td>
<td>$0.74/inch</td>
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<tr>
<td>1-1/2 Bore</td>
<td>$1.17/inch</td>
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<tr>
<td>Rod Thread Extension –</td>
<td>$1.79/inch</td>
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<tr>
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<td>$1.79/inch</td>
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<tr>
<td>1-1/2 Bore</td>
<td>$2.23/inch</td>
</tr>
</tbody>
</table>

**Specifications and prices subject to change without notice or incurring obligation**

See pricing notes on Page 5
F Series Magnetic Interchange

9/16" Bore Cylinders

Double Acting
Front Nose Mount
Maximum Stroke: 12"
Optional Accessories:
• F-M117003 Mounting Bracket
• F-M127002 Rod Clevis
Base Weight: .10 lbs.
Plus .01 lbs. per inch of stroke

Double Acting
Double Nose or Rear Pivot Mount
Maximum Stroke: 12"
Optional Accessories:
• F-M117003 Mounting Bracket
• F-M129002 Pivot Bracket
• F-M127002 Rod Clevis
Base Weight: .10 lbs.
Plus .01 lbs. per inch of stroke

Double Acting
Double Rod
Maximum Stroke: 12"
Optional Accessories:
• F-M117003 Mounting Bracket
• F-M127002 Rod Clevis
Base Weight: .14 lbs.
Plus .02 lbs. per inch of stroke

9/16" Bore Cylinder Specifications – Options & Accessories

-10° to +165°F
Piston Rod: Ground/Polished 303 Stainless Steel
Mounting nuts are not included
Bumpers are optional on all 9/16" bore cylinders
Approximate Force Exerted: (0.25) x (Supply psi)
Stroke tolerance ±.032

F-M117003
Price: $1.92

F-M129002
Price: $5.85

F-M190003
Price: $0.26

Specifications and prices subject to change without notice or incurring obligation
### F Series Magnetic Interchange

#### 3/4" Bore Cylinders

**F-0750DM1-00A**

**Double Acting**

Front Nose Mount

**Standard Stroke Lengths:**

- 1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"

**Maximum Stroke:** 12"

**Optional Accessories:**

- F-M117005 Mounting Bracket
- Base Weight: .24 lbs.
- Plus .04 lbs. per inch of stroke

**$27.79 Base Price**

Add $1.54 per inch of stroke

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**Bumper Option – Add .250 to OAL** ...........................................................

$4.20

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**F-0750DM2-00A**

**Double Acting**

Double Nose or Rear Pivot Mount

**Standard Stroke Lengths:**


**Maximum Stroke:** 32"

**Optional Accessories:**

- F-M117005 Mounting Bracket
- Base Weight: .30 lbs.
- Plus .04 lbs. per inch of stroke

**$30.95 Base Price**

Add $1.54 per inch of stroke

---

**Bumper Option – Add .250 to OAL** ...........................................................

$4.20

---

**F-0750DM3-00A**

**Double Acting**

Double Rod

**Standard Stroke Lengths:**

- 1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"

**Maximum Stroke:** 12"

**Optional Accessories:**

- F-M117005 Mounting Bracket
- Base Weight: .41 lbs.
- Plus .06 lbs. per inch of stroke

**$41.22 Base Price**

Add $2.11 per inch of stroke

---

**Bumper Option – Add .250 to OAL** ...........................................................

$4.20

---

### 3/4" Bore Cylinder Specifications – Options & Accessories

- -10° to +165°F
- Piston Rod: Ground/Polished 303 Stainless Steel
- **Mounting nuts are not included**
- Bumpers are optional on all 3/4" bore cylinders
- Approximate Force Exerted: (0.4) x (Supply psi)
- Stroke tolerance ±.032

#### OPTION

<table>
<thead>
<tr>
<th>OPTION</th>
<th>PRICE ADDER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ports Rotated – 90° on DM2 (both)</td>
<td>No charge</td>
</tr>
<tr>
<td>Viton® Seals – (for media or environment compatibility only)</td>
<td>$10.96</td>
</tr>
<tr>
<td>DM1 &amp; DM2</td>
<td>$15.41</td>
</tr>
<tr>
<td>DM3</td>
<td>$7.10</td>
</tr>
<tr>
<td>Rod Wiper</td>
<td>No charge</td>
</tr>
<tr>
<td>Side Port – DM1 (Add .44 to OAL)</td>
<td>No charge</td>
</tr>
<tr>
<td>Rod Extension DM1, DM2</td>
<td>$0.74/inch</td>
</tr>
<tr>
<td>Rod Thread Extension</td>
<td>$1.79/inch</td>
</tr>
</tbody>
</table>

---

Specifications and prices subject to change without notice or incurring obligation

See pricing notes on Page 5
**F Series Magnetic Interchange**

**1-1/16" Bore Cylinders**

**Double Acting**

**Front Nose Mount**

Maximum Stroke: 12"  
Optional Accessories:  
- F-M127004 Rod Clevis  
Base Weight: .37 lbs.  
Plus .05 lbs. per inch of stroke

**Double Acting**

**Double Nose or Rear Pivot Mount**

Maximum Stroke: 32"  
Optional Accessories:  
- F-M127004 Rod Clevis  
Base Weight: .42 lbs.  
Plus .05 lbs. per inch of stroke

**Double Acting**

**Double Rod**

Maximum Stroke: 12"  
Optional Accessories:  
- F-M127004 Rod Clevis  
Base Weight: .60 lbs.  
Plus .08 lbs. per inch of stroke

---

**1-1/16" Bore Cylinder Specifications – Options & Accessories**

- -10° to +165°F  
- Piston Rod: Ground/Polished 303 Stainless Steel  
- **Mounting nuts are not included**  
- Bumpers are optional on all 1-1/16" bore cylinders  
- Approximate Force Exerted: (0.9) x (Supply psi)  
- Stroke tolerance ±.032

<table>
<thead>
<tr>
<th>OPTION</th>
<th>PRICE ADDER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ports Rotated – 90° on DM2 (both)</td>
<td>No charge</td>
</tr>
<tr>
<td>Viton® Seals – (for media or environment compatibility only)</td>
<td></td>
</tr>
</tbody>
</table>
DM1 & DM2 | $13.26  
DM3 | $17.76  
| Rod Wiper | $7.10  
| Side Port – DM1 (Add .25 to OAL) | No charge  
| Rod Extension DM1, DM2 | $0.74/inch  
| Rod Thread Extension | $1.79/inch/end  

---

**Specifications and prices subject to change without notice or incurring obligation**

See pricing notes on Page 5
F Series Magnetic Interchange
1-1/4" Bore Cylinders

**F-1250DM1-00A**

Double Acting
Front Nose Mount
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"
Maximum Stroke: 12"
Optional Accessories:
• F-M117013 Mounting Bracket
Base Weight: .51 lbs.
Plus .07 lbs. per inch of stroke

$41.72 Base Price
Add $2.11 per inch of stroke

**F-1250DM2-00A**

Double Acting
Double Nose or Rear Pivot Mount
Standard Stroke Lengths:
Maximum Stroke: 32"
Optional Accessories:
• F-M117013 Mounting Bracket
Base Weight: .61 lbs.
Plus .07 lbs. per inch of stroke

$46.39 Base Price
Add $2.11 per inch of stroke

**F-1250DM3-00A**

Double Acting
Double Rod
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"
Maximum Stroke: 12"
Optional Accessories:
• F-M117013 Mounting Bracket
Base Weight: .70 lbs.
Plus .14 lbs. per inch of stroke

$58.65 Base Price
Add $3.09 per inch of stroke

### 1-1/4" Bore Cylinder Specifications – Options & Accessories

<table>
<thead>
<tr>
<th>OPTION</th>
<th>PRICE ADDER</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Ports Rotated – 90° on DM2 (both)...............................No charge</td>
<td></td>
</tr>
<tr>
<td>• Viton® Seals – (for media or environment compatibility only)</td>
<td></td>
</tr>
<tr>
<td>DM1 &amp; DM2 ................................................ $13.37</td>
<td></td>
</tr>
<tr>
<td>DM3 ................................................ $19.84</td>
<td></td>
</tr>
<tr>
<td>• Rod Wiper – .......................................................$7.10</td>
<td></td>
</tr>
<tr>
<td>• Side Port – DM1 (Add .25 to OAL).................................No charge</td>
<td></td>
</tr>
<tr>
<td>• Rod Extension DM1, DM2 ...........................................$0.99/inch</td>
<td></td>
</tr>
<tr>
<td>• Rod Thread Extension...............................................$2.03/inch/end</td>
<td></td>
</tr>
</tbody>
</table>

-10° to +165°F
Piston Rod: Ground/Polished 303 Stainless Steel
Mounting nuts are not included
Bumpers are optional on all 1-1/4" bore cylinders
Approximate Force Exerted: (1.2) x (Supply psi)
Stroke tolerance ±.032

Specifications and prices subject to change without notice or incurring obligation
See pricing notes on Page 5
F Series Magnetic Interchange

1-1/2" Bore Cylinders

Double Acting
Front Nose Mount
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"
Maximum Stroke: 12"
Optional Accessories:
• F-M127005 Rod Clevis
Base Weight: .74 lbs.
Plus .10 lbs. per inch of stroke

Double Acting
Double Nose or Rear Pivot Mount
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"
Maximum Stroke: 32"
Optional Accessories:
• F-M127005 Rod Clevis
Base Weight: .87 lbs.
Plus .10 lbs. per inch of stroke

Double Acting Double Rod
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"
Maximum Stroke: 12"
Optional Accessories:
• F-M127005 Rod Clevis
Base Weight: .94 lbs.
Plus .20 lbs. per inch of stroke

1-1/2" Bore Cylinder Specifications – Options & Accessories

• –10° to +165°F
• Piston Rod: Ground/Polished 303 Stainless Steel
• Mounting nuts are not included
• Bumpers are optional on all 1-1/2" bore cylinders
• Approximate Force Exerted: (1.7) x (Supply psi)
• Stroke tolerance ±.032

<table>
<thead>
<tr>
<th>OPTION</th>
<th>PRICE ADDER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ports Rotated – 90° on DM2 (both)</td>
<td>No charge</td>
</tr>
<tr>
<td>Viton® Seals – (for media or environment compatibility only)</td>
<td></td>
</tr>
<tr>
<td>DM1 &amp; DM2</td>
<td>$18.11</td>
</tr>
<tr>
<td>DM3</td>
<td>$19.22</td>
</tr>
<tr>
<td>Rod Wiper</td>
<td>$7.10</td>
</tr>
<tr>
<td>Side Port – DM1 (Add .25 to OAL)</td>
<td>No charge</td>
</tr>
<tr>
<td>Rod Extension DM1, DM2</td>
<td>$1.17/inch</td>
</tr>
<tr>
<td>Rod Thread Extension</td>
<td>$2.23/inch/end</td>
</tr>
</tbody>
</table>

Specifications and prices subject to change without notice or incurring obligation.

See pricing notes on Page 5
Specifications and prices subject to change without notice or incurring obligation

See pricing notes on Page 5

1-3/4" Bore Cylinder Specifications – Options & Accessories

-10° to +165°F
Piston Rod: Ground/Polished 303 Stainless Steel
Mounting nuts are not included
Bumpers are optional on all 1-3/4" bore cylinders
Approximate Force Exerted: (2.4) x (Supply psi)
Stroke tolerance ±0.032

OPTON

<table>
<thead>
<tr>
<th>OPTION</th>
<th>PRICE ADDER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ports Rotated – 90° on DM2 (both)</td>
<td>No charge</td>
</tr>
<tr>
<td>Viton® Seals – (for media or environment compatibility only)</td>
<td>$18.86</td>
</tr>
<tr>
<td>DM1 &amp; DM2</td>
<td>$18.24</td>
</tr>
<tr>
<td>Rod Wiper</td>
<td>$7.10</td>
</tr>
<tr>
<td>Side Port – DM1 (Add .56 to OAL)</td>
<td>No charge</td>
</tr>
<tr>
<td>Rod Extension DM1, DM2</td>
<td>$1.17/inch</td>
</tr>
<tr>
<td>Rod Thread Extension</td>
<td>$2.23/inch/end</td>
</tr>
</tbody>
</table>

F-1750DM1-00A

Bumper Option – Add .250 to OAL

$6.36

$57.24 Base Price
Add $2.46 per inch of stroke

F-1750DM2-00A

Bumper Option – Add .250 to OAL

$6.36

$62.96 Base Price
Add $2.46 per inch of stroke

F-1750DM3-00A

Bumper Option – Add .250 to OAL

$6.23

$78.80 Base Price
Add $4.01 per inch of stroke

Double Acting
Front Nose Mount
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"
Maximum Stroke: 12"
Optional Accessories:
- F-M117012 Mounting Bracket
- F-M127006 Rod Clevis
Base Weight: 1.14 lbs.
Plus .13 lbs. per inch of stroke

Double Acting
Double Nose or Rear Pivot Mount
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"
Maximum Stroke: 32"
Optional Accessories:
- F-M117012 Mounting Bracket
- F-M127006 Rod Clevis
Base Weight: 1.30 lbs.
Plus .13 lbs. per inch of stroke

Double Acting
Double Rod
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"
Maximum Stroke: 12"
Optional Accessories:
- F-M117012 Mounting Bracket
- F-M127006 Rod Clevis
Base Weight: 1.40 lbs.
Plus .26 lbs. per inch of stroke

Bearing Option – Add .250 to OAL

1/2-20 UNF-2A THD (.562 Ø Rod)
.50 WRENCH FLATS

1/2-20 UNF-2A THD (TYP)
.50 WRENCH FLATS (TYP)

1/2-20 UNF-2A THD (TYP)
.50 WRENCH FLATS (TYP)

1/2-20 UNF-2A THD (.562 Ø Rod)
.50 WRENCH FLATS

Mounting Bracket
F-M117012
Price: $18.60

Rod Clevis
F-M127006
Price: $5.60

Mounting Nut
F-M190015
Price: $4.45

See pricing notes on Page 5
F Series Magnetic Interchange

2" Bore Cylinders

Double Acting
Front Nose Mount
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"
Maximum Stroke: 12"
Optional Accessories:
• F-M127006 Rod Clevis
  Base Weight: 1.90 lbs.
  Plus .30 lbs. per inch of stroke

Double Acting
Double Nose or Rear Pivot Mount
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"
Maximum Stroke: 32"
Optional Accessories:
• F-M127006 Rod Clevis
  Base Weight: 1.80 lbs.
  Plus .15 lbs. per inch of stroke

Double Acting
Double Rod
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"
Maximum Stroke: 12"
Optional Accessories:
• F-M127006 Rod Clevis
  Base Weight: 1.55 lbs.
  Plus .15 lbs. per inch of stroke

2" Bore Cylinder Specifications – Options & Accessories

-10° to +165°F
Piston Rod: Ground/Polished 303 Stainless Steel
Mounting nuts are not included
Bumpers are optional on all 2" bore cylinders
Approximate Force Exerted: (3.1) x (Supply psi)
Stroke tolerance ±.032

F-2000DM1-00A
$64.64 Base Price
Add $2.84 per inch of stroke

F-2000DM2-00A
$71.04 Base Price
Add $2.84 per inch of stroke

F-2000DM3-00A
$84.57 Base Price
Add $4.13 per inch of stroke

<table>
<thead>
<tr>
<th>OPTION</th>
<th>PRICE ADDER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ports Rotated – 90° on DM2 (both)</td>
<td>No charge</td>
</tr>
</tbody>
</table>
| Viton® Seals – (for media or environment compatibility only) | $18.62
  DM1 & DM2 | $26.18
  DM3 |
| Rod Wiper – | $7.10
  DM1 & DM2 |
| Side Port – DM1 (Add .56 to OAL) | No charge |
| Rod Extension DM1 | $1.54/inch
  DM2 |
| Rod Thread Extension | $2.60/inch/end

Specifications and prices subject to change without notice or incurring obligation

See pricing notes on Page 5
Specifications and prices subject to change without notice or incurring obligation

See pricing notes on Page 5
F Series

3-Position (Tandem) Cylinders

Tandem cylinders are generally used when three distinct rod positions are required from a single cylinder body. Two cylinders are assembled tip-to-tail with a common center head. Using cylinders with two different lengths (the shorter located on the rear cylinder), enables the front rod to be extended from “home” to a positive mid-position or to full extension.

How they work

Exposed rod is in retracted “home” position when port 1 is pressurized and ports 2 & 4 are open to atmosphere.

Rod is extended to mid position when port 4 is pressurized and ports 1 & 2 are open to atmosphere.

Rod is fully extended when port 2 is pressurized and ports 2 & 4 are open to atmosphere.

How to Order

<table>
<thead>
<tr>
<th>Bore</th>
<th>Mounting</th>
<th>Stroke 1</th>
<th>Stroke 2</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-1500</td>
<td>D1</td>
<td>06A</td>
<td>04A</td>
<td>12</td>
</tr>
</tbody>
</table>

Bore Size (4 digits)
- 0750 = 3/4"
- 1062 = 1-1/16"
- 1500 = 1-1/2"
- 2000 = 2"

Mounting Style (2 digits)
- D1 = Double Acting Nose Mount

In the order example above, when port 4 is pressurized, the cylinder will stroke 4". When port 2 is pressurized, the cylinder will stroke an additional 2" for a total of 6".

For cylinder 2 strokes over 8" and/or combined strokes over 24", consult factory.

Stroke Tolerance

<table>
<thead>
<tr>
<th>Stroke Tolerance</th>
<th>3/4&quot; thru 1-1/2&quot; bore</th>
<th>+.075 / −.040</th>
</tr>
</thead>
<tbody>
<tr>
<td>2&quot; bore</td>
<td>+.095 / −.060</td>
<td></td>
</tr>
</tbody>
</table>

Full Inch Stroke (2 digits)
- 00 = 0" 
- 01 = 1" 
- 02 = 2" 
- 03 = 3" 
- 08 = 8" (max. cyl. 2 stroke)

Note:
Total Stroke 1 + Stroke 2 not to exceed 24"

Fractional Inch Stroke

(1 digit)
- A = 0"
- I = 1/2"

Specifications and prices subject to change without notice or incurring obligation

See pricing notes on Page 5
### F Series

#### 3-Position Cylinders

**F-0750D1-00A-00A-00**

3/4" Bore

- **Front Nose Mount**

  **Available Stroke Lengths:**
  - Cyl. 2: 1/2" increments to 8"
  - Cyl. 1: 1/2" increments
  - Total stroke 1 + stroke 2 not to exceed 24"

- **Optional Accessories:**
  - M117005 Mounting Bracket

  See details page 63

**$37.62 Base Price**

Add $1.61 per inch of stroke (Total stroke 1 + stroke 2)

Add $11.85 for Magnetic Band Option (–12)

---

**F-1062D1-00A-00A-00**

1-1/16"

- **Front Nose Mount**

  **Available Stroke Lengths:**
  - Cyl. 2: 1/2" increments to 8"
  - Cyl. 1: 1/2" increments
  - Total stroke 1 + stroke 2 not to exceed 24"

- **Optional Accessories:**
  - M117005 Mounting Bracket

  See details page 63

**$43.43 Base Price**

Add $1.61 per inch of stroke (Total stroke 1 + stroke 2)

Add $13.40 for Magnetic Band Option (–12)

---

**F-1500D1-00A-00A-00**

1-1/2" Bore

- **Front Nose Mount**

  **Available Stroke Lengths:**
  - Cyl. 2: 1/2" increments to 8"
  - Cyl. 1: 1/2" increments
  - Total stroke 1 + stroke 2 not to exceed 24"

- **Optional Accessories:**
  - M117007 Mounting Bracket

  See details page 63

**$58.91 Base Price**

Add $2.51 per inch of stroke (Total stroke 1 + stroke 2)

Add $14.96 for Magnetic Band Option (–12)

---

**F-2000D1-00A-00A-00**

2" Bore Standard

- **Front Nose Mount**

  **Available Stroke Lengths:**
  - Cyl. 2: 1/2" increments to 8"
  - Cyl. 1: 1/2" increments
  - Total stroke 1 + stroke 2 not to exceed 24"

- **Optional Accessories:**
  - M117009 Mounting Bracket

  See details page 63

**$81.58 Base Price**

Add $2.88 per inch of stroke (Total stroke 1 + stroke 2)

Add $22.84 for Magnetic Band Option (–12)
F Series
Hole Punch Cylinders

Fabco-Air's rugged Hole Punch Cylinder enables trouble-free punching of millions of holes in plastic film; ideally suited for LLDPE (linear low density polyethylene). A major feature allows punch replacement without having to replace the cylinder. Available in eight different hole punch sizes from 1/8” to 3/4”, razor sharp plastic punches are self-sharpening and significantly outlast conventional steel punches in most applications.

An air ejector, foam ejector, and auto ejector are offered as options. These ejectors discharge material slugs from the center of the punch and prevent debris build-up.

Punches may be used with any F Series cylinder that has 1/4-28 UNF-2A male threads. For your convenience, Fabco-Air has configured three standard cylinders designed specifically for hole punch applications. A thread extension of 1/2” aids punch position adjustment. Elastomer bumpers are included to ensure quiet operation. The cylinders are rated for 250 psi. A mounting nut is included.

### 3/4” Bore Single Acting Spring Return
1/2” Stroke
- Bumpers
- 1/2” Thread Extension
- Mounting Nut Included

<table>
<thead>
<tr>
<th>Model</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>FM12263-001</td>
<td>$21.96</td>
</tr>
</tbody>
</table>

### 3/4” Bore Single Acting Spring Return
1” Stroke
- Bumpers
- 1/2” Thread Extension
- Mounting Nut Included

<table>
<thead>
<tr>
<th>Model</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>FM12263-01A</td>
<td>$21.96</td>
</tr>
</tbody>
</table>

### 3/4” Bore Single Acting Spring Return
1/2” Stroke – Non-Rotating Rod
- Bumpers
- 1/2” Thread Extension
- Mounting Nut Included

<table>
<thead>
<tr>
<th>Model</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>FM12264-001</td>
<td>$27.79</td>
</tr>
</tbody>
</table>

### 3/4” Bore Single Acting Spring Return
1” Stroke – Non-Rotating Rod
- Bumpers
- 1/2” Thread Extension
- Mounting Nut Included

<table>
<thead>
<tr>
<th>Model</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>FM12264-01A</td>
<td>$27.79</td>
</tr>
</tbody>
</table>

### 3/4” Bore Single Acting Spring Return
1/2” Stroke – Hollow Rod
for air ejector applications
- Bumpers
- 1/2” Thread Extension
- Mounting Nut Included

<table>
<thead>
<tr>
<th>Model</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>FM12265-001</td>
<td>$34.42</td>
</tr>
</tbody>
</table>

### 3/4” Bore Single Acting Spring Return
1” Stroke – Hollow Rod
for air ejector applications
- Bumpers
- 1/2” Thread Extension
- Mounting Nut Included

<table>
<thead>
<tr>
<th>Model</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>FM12265-01A</td>
<td>$34.42</td>
</tr>
</tbody>
</table>
Specifications and prices subject to change without notice or incurring obligation

**Benefits**

- Punches are replaceable without replacing cylinder.
- Punches are self sharpening, light weight plastic.
- Made from specially formulated material, these punches regularly outlast steel punches in most applications.
- Auto-Ejector is standard on 1/8" and 1/4" diameters.
- Foam ejector is standard on 3/8" to 3/4" diameters.
- Punch locations are adjustable along cylinder rod.
- Excellent for use in:
  - Linear Low Density Polyethylene Film (LLDPE)
  - Polyethylene film up to 3 mil thickness
  - Polypropylene film up to 1 mil thickness

---

**Cylinder and Punch Assemblies**

Note:
1. Punch standard package quantity is 5 pieces.
2. Adapters are available individually, and are not supplied with the punch.
3. For air ejection applications, use hollow rod cylinders type FM12265.
4. Jam nuts are included with all "Hole Punch" cylinders.
**PFA Series**

**Position Feedback Cylinders**

**General Technical Data**

The PFA Series is an economical pneumatic linear actuator that contains an internal Linear Resistive Transducer (LRT). It is ideal for applications where traditional magnetic position sensing is not acceptable. Additionally, the PFA Series is conducive where variations in cylinder stroke and speed are required or where an application calls for continuous position monitoring.

- Operating pressure: 150 psi max.
- Recommended Media: Filtered, clean, dry “non-condensing” compressed air. Do not apply any fluids that may be electrically conductive. Water-based fluids should not be used.

**Electrical Specifications**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical Resistance</td>
<td>1000 ohms (± 20%) per inch of stroke</td>
</tr>
<tr>
<td>Resolution</td>
<td>Infinite (limited by interfacing electronics)</td>
</tr>
<tr>
<td>Temperature Range</td>
<td>0° F to 160° F</td>
</tr>
<tr>
<td>Life Rating</td>
<td>500 million inches of travel on transducer</td>
</tr>
<tr>
<td>Linearity</td>
<td>±1% of stroke (or better)</td>
</tr>
<tr>
<td>Interface</td>
<td>6” cable with M8x1 Quick Connect</td>
</tr>
<tr>
<td>Signal Input</td>
<td>Typically 10 VDC</td>
</tr>
<tr>
<td>Maximum Speed</td>
<td>50 in/sec</td>
</tr>
<tr>
<td>Maximum Standard Stroke</td>
<td>18 inches (longer strokes available upon request)</td>
</tr>
<tr>
<td>Maximum Current</td>
<td>1 microamp required from the transducer</td>
</tr>
</tbody>
</table>

Note: Control Module Units sold separately can have scalable output of 4-20 mA or 0-10 VDC and input of 120 VAC or 12-24 VDC. See pages 58 and 59.

**How to Order Cylinder**

- **Basic Series**
  - **Cylinder Bore**
    - 10 = 1-1/16"  
    - 15 = 1-1/2"  
    - 20 = 2"  
    - 25 = 2-1/2"  
    - 30 = 3"
  - **Cylinder Type**
    - AM = PFA Series
  - **Cylinder Mounting**
    - 1 = Front Nose  
    - 2 = Rear Pivot

- **Fractional Inches of Stroke**
  - 01 = 1" Stroke  
  - 02 = 2" Stroke  
  - 03 = 3" Stroke  
  - 04 = 4" Stroke
  - 06 = 6" Stroke
  - 08 = 8" Stroke
  - 12 = 12" Stroke
  - 18 = 18" Stroke (Max. Available)

- **Standard” Full Inches of Stroke**
  - 01 = 1" Stroke  
  - 06 = 6" Stroke

- **Options**
  - 00 = No Options (or leave blank)
  - 01 = Bumpers

- **Rod and/or Thread Extension**
  - 1A_ _ _ _ = Rod Extension (Code is 1A plus 3 digits)
  - Example: 1A01A = 1" + no fractional inch ext’n.
  - 2A_ _ _ _ = Thread Extension (Code is 2A plus 3 digits)
  - Example: 2A01E = 1-1/4" extension.
  - RT _ _ _ _ _ _ = Rod and Thread Extension
  - (Code is RT plus 6 digits; specify rod extension first)
  - Example: RT02A01M = 2" rod & 1-3/4" thread ext’n.

**Note**

Note that the PFA Series can integrate with some Fabco-Air slide products. Contact your local distributor or Fabco-Air engineering for details.
PFA Cylinder Dimensions

<table>
<thead>
<tr>
<th>Bore Code</th>
<th>1-1/16&quot; Bore</th>
<th>1-1/2&quot; Bore</th>
<th>2&quot; Bore</th>
<th>2-1/2&quot; Bore</th>
<th>3&quot; Bore</th>
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<tbody>
<tr>
<td>A</td>
<td>4.59</td>
<td>4.88</td>
<td>5.46</td>
<td>6.41</td>
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<tr>
<td>B</td>
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<td>0.625</td>
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<td>1 1/8-12 UNF</td>
<td>1 1/4-12 UNF</td>
<td>1 3/8-12 UNF</td>
<td>1 1/2-12 UNF</td>
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<td>L</td>
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<td>1.375</td>
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<td>1.625</td>
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<td>O</td>
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<td>P</td>
<td>0.84</td>
<td>0.83</td>
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<td>0.75</td>
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<td>T</td>
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<td>1/4 NPTF</td>
<td>1/4 NPTF</td>
<td>3/8 NPTF</td>
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PFA Cylinder Pricing

<table>
<thead>
<tr>
<th>Bore Code</th>
<th>Bore Size</th>
<th>Base Price AM1</th>
<th>Base Price AM2</th>
<th>Stroke Adder per Inch</th>
<th>Bumpers</th>
<th>Rod Extension per Inch</th>
<th>Thread Extension per Inch</th>
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</thead>
<tbody>
<tr>
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<td>1.062</td>
<td>$326.32</td>
<td>$331.18</td>
<td>$15.17</td>
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<td>25</td>
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<td>13.10</td>
<td>26.21</td>
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</tbody>
</table>

Specifications and prices subject to change without notice or incurring obligation.
F-TDRO-40 Panel Meter
4 Digit 0.56" in a 1/8 DIN Case
An economical smart programmable meter with optional relay with isolated 4 to 20 mA and 0-10 VDC retransmission or control loop output capability for measurement and control applications.

Specifications
Input Specs: IR03 Input Module
A/D Converter: 14 bit single slope
Accuracy: ±(0.05% of reading + 2 counts)
Temp. Coeff.: 100 ppm/°C (Typical)
Warm Up Time: 2 minutes
Conversion Rate: 10 conversions per second (Typical)
Display: 4 digit 0.56" Red LED display
(Range – 1999 to 9999 counts)
Polarity: Assumed positive. Displays – negative
Decimal Selection: Front panel button selectable, X•X•X•X•
Positive Overrange: Top segments of digital display flash
Negative Overrange: Bottom segments of digital display flash
Analog Output: Isolated 16 bit user scalable mA or V
AIC (mA out) (opt) 4-20 mA @ 0 to 500 Ω max loop resistance
AIV (volts out) (opt) 0-10 DC @ 500 Ω or higher resistance
Power Supply: AC/DC Auto sensing wide range supply
1–PS1 (std) 85-265 VAC/95-370 VDC @ 2.5W max 3.5W
2–PS2 (opt) 15-48 VAC/10-72 VDC @ 2.5W max 3.5W
Operating Temp.: 0 to 60°C
Storage Temp.: -20 to 70°C
Relative Humidity: 95% (non-condensing)
Case Dimensions: 1/8 DIN, Bezel: 96x48mm (3.78"x1.89")
Depth behind bezel: 117mm (4.61")
Plus 11.8mm (0.47") for Right-angled connectors, or plus 20 mm (0.79") for straight-thru connector.
Weight: 6.5 oz., 8.5 oz. when packed

Software Features
F-TDRO-40
• Three-button programming from the front panel (UP, DOWN and PROGRAM buttons).
• Three front panel selectable ranges.
• Front panel selectable four-level brightness control of digital display, and setpoint LEDs.
• Up to four programmable setpoints.
• Relay activation can be selected to occur above (HI) or below (LO) each setpoint.
• Hysteresis setting for all four setpoints. Delay on make and delay on break for SP1 and SP2.
• Peak and Valley. View and Reset.

F-TDBRO-40-101 Segment Bargraph
4 Digit 0.31" in a 9/64 DIN Case
Smart Tricolor digital bargraph with four fully programmable setpoints and optional relay with isolated 4 to 20 mA and 0-10 VDC retransmission or control loop output for monitoring measurement and control applications.

Specifications
Input Specs: IR03 Input Module
A/D Converter: 14 bit single slope
Accuracy: ±(0.05% of reading + 2 counts)
Temp. Coeff.: 100 ppm/°C (Typical)
Warm Up Time: 2 minutes
Conversion Rate: 10 conversions per second (Typical)
Digital Display: 4 digit 0.31" LED red
(Range – 1999 to 9999 counts)
Bargraph Display: 101 segment 4" tri-color vertical
Polarity: Assumed positive. Displays – negative
Decimal Selection: Front panel button selectable, X•X•X•X•
Positive Overrange: Bargraph and Top segments of digital display flash
Negative Overrange: First segment of Bargraph and Bottom segments of digital display flash
Analog Output: Available combinations shown in "How to Order" page 59:  5Amp Form A is solid state;
10Amp Form C is mechanical.
AIC (mA out) (opt) 4-20 mA @ 0 to 500 max loop resistance
AIV (volts out) (opt) 0-10 DC @ 500 or higher resistance
Power Supply: AC/DC Auto sensing wide range supply
1–PS1 (std) 85-265 VAC/95-370 VDC @ 2.5W max 4.2W
2–PS2 (opt) 15-48 VAC/10-72 VDC @ 2.5W max 4.2W
Operating Temp.: 0 to 60°C
Storage Temp.: -20 to 70°C
Relative Humidity: 95% (non-condensing)
Case Dimensions: 9/64 DIN, Bezel: 36Wx144Hmm
Depth behind bezel: 148mm (5.83")
Plus 18mm (0.7") connectors.
Weight: 9.5 oz., 12 oz. when packed
How to Order Display

F-TDRO 40 - 1 - C R2

Series
Type
TDRO = 4 Digit Panel Meter
TDBRO = 4 Digit w/Segmented Tricolor Bargraph
Display Digits
40 = 4 Digits
Power Input
1 = 120 VAC (Standard)
2 = 24 VDC (Optional)

Relay Outputs
F-TDRO-40
R0 = None
R1 = Single 5 A (Form A)
R2 = Dual 5 A (Form A)
R4 = Four 5 A (Form A)
F-TDBRO-40
R0 = None
R11 = Single 10 A (Form C)
R12 = Dual 10 A (Form C)
R13 = Dual 10 A and Single 5 A
R14 = Dual 10 A and Dual 5 A
Output
O = No Output (Standard)
C = 4-20 mA
V = 0-10 VDC

PFA Digital Display Pricing

Base:
F-TDRO-40 $219.35
F-TDBRO-40 411.90
Adders:
Power
1 16.90
2 65.85
Output
O Standard
C 92.90
V 92.90
Relays
R0 No Charge
R1 47.30
R2 92.90
R4 167.15
R11 65.85
R12 121.55
R13 167.15
R14 206.00
Port Mounted Flow Controls
Swivel, Brass Body Flow Controls
• Full 360° Swivel • Compact Size • Pre-applied thread sealant

SPECIFICATIONS
• Male sizes:
  #10-32, 1/8 NPT, 1/4 NPT
• Female NPT or instant tube connections:
  10-32, 1/8 NPT, 1/4 NPT, 5/32" T, 1/4" T, 3/8" T
• Choice of controlled flow direction
  • Valve mount – Meter in
  • Cylinder mount – Meter out
• Operating pressure to 150 PSI (10 bar)
• Operating temperature: -25° to 250°F

Swivel, Molded Body Flow Controls
• Full 360° Swivel • Compact Size • Pre-applied thread sealant

SPECIFICATIONS
• Male sizes:
  #10-32, 1/8 NPT, 1/4 NPT, 3/8 NPT
• Female instant tube connections:
  5/32" T, 1/4" T, 3/8" T
• Operating pressure to 150 PSI (10 bar)
• Operating temperature:
  0 to 160°F (-18°C to 70°C)
• High flow rates (see chart at right)
• Use with air or other inert gas only
• Not recommended for use with liquids
• Meter out only

How to Order
Model Numbers & Dimensions

FLOW CHARACTERISTICS OF FABCO-AIR VALVES

EASY DISASSEMBLY FOR MAINTENANCE

Specifications and prices subject to change without notice or incurring obligation

See dimensions and flow information on next page.
Specifications and prices subject to change without notice or incurring obligation.

**F Series**

**Port Mounted Flow Controls**

### Flow Characteristics

**Typical Free Flow Maximum**

**Supply Pressure**  
- 60 psi . . . . . . . . . . 1.1 SCFM  
- 100 psi . . . . . . . . . . 1.8 SCFM

### Model Number / Price

<table>
<thead>
<tr>
<th>Male Thread</th>
<th>Adjustment</th>
<th>Connection</th>
<th>Valve Mount Meter In</th>
<th>Price</th>
<th>Cylinder Mount Meter Out</th>
<th>Price</th>
<th>Dim.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size #1</td>
<td>Knob</td>
<td>10-32 Tap</td>
<td>PV1-A</td>
<td>$13.05</td>
<td>PC1-A</td>
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<td>5/32&quot; Tube</td>
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<td>Screwdriver</td>
<td>10-32 Tap</td>
<td>PV1-K</td>
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<td>PC1-K</td>
<td>10.80</td>
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<td></td>
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<td>PV2-K</td>
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<td>PC4-M</td>
<td>18.00</td>
<td>2.00</td>
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</tbody>
</table>
Cylinder Accessories

Magnetic Position Sensors

Temperature range: –4°F to +176°F (–20°F to +80°C)

Magnetically operated reed switches and electronic sensors can be mounted anywhere along the length and circumference of the cylinder. A magnetic piston is required and is standard on Magnetic Interchange cylinders. Specify Magnetic Piston Option “–03” for other F-Series models or “–12” for 3-position models.

### Dovetail Style Sensors

<table>
<thead>
<tr>
<th>Sensor Type</th>
<th>Electrical Characteristics</th>
<th>Prewired 9 ft. Leadwire</th>
<th>Quick Disconnect*</th>
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</thead>
<tbody>
<tr>
<td>Reed (No LED)</td>
<td>0-120 VDC/VAC, 0.5 Amp Max current, 5 Watt Max, 0 Voltage Drop</td>
<td>Part No. 949-000-001 . . . $18.05</td>
<td>Part No. 949-000-301 . . . $25.65</td>
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<tr>
<td>Reed (LED)</td>
<td>5-120 VDC/VAC, 0.03 Amp Max current, 4 Watt Max, 2.0 Voltage Drop</td>
<td>Part No. 949-000-002 . . . $18.85</td>
<td>Part No. 949-000-302 . . . $26.30</td>
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<tr>
<td>Electronic (LED)</td>
<td>Sourcing PNP 6-24 VDC, 0.20 Amp Max current, 0.5 Voltage Drop</td>
<td>Part No. 949-000-031 . . . $23.80</td>
<td>Part No. 949-000-331 . . . $31.30</td>
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<tr>
<td>Electronic (LED)</td>
<td>Sinking NPN 6-24 VDC, 0.20 Amp Max current, 0.5 Voltage Drop</td>
<td>Part No. 949-000-032 . . . $23.80</td>
<td>Part No. 949-000-332 . . . $31.30</td>
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</table>

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

- Encased in a plastic housing, dovetail style sensors are corrosion resistant. 60° wire outlet allows close mounting.
- Two methods of mounting are available: one is fastened to the cylinder barrel with a band clamp (not included with sensor – must be ordered separately); the second is an adhesive-backed mounting rail with twin dovetail slots.

### Mounting Options

- Band Clamp Adapter for Dovetail Sensors (Must be ordered separately)
  - Part No. 900-300-000
  - Price: $8.15

- Dovetail Rail as shown above (must be ordered separately).
  - Order by Part No. “ER – length” where the length is known, or by “ER – cylinder model no.”
  - Example: “ER-F-1062D02-04A-03”
  - Model no. of cylinder allows factory to determine the length needed.
  - Estimated length for pricing purposes is “stroke + 1”
  - Price: $2.95 + $1.05 per inch length
  - Supplied with double sided tape affixed.

  **Application recommendations:**
  a) Clean cylinder body O.D. with acetone. Remove all oil from surface.
  b) Do not apply the rail over the crimped body edge.
  c) Double check positioning of the rail.
  d) High performance double sided tape offers convenient “peel and stick” but is very aggressive, giving you only one chance. Be careful!
  e) Remove protective film from tape and place rail in desired position.
  f) Firmly press the rail to cylinder body.

  Alternatively, the extruded aluminum rail can be fastened using Loctite® U-05FL urethane adhesive or similar. Follow product manufacturer’s recommendations for application.

- Band Clamp for Clamp On Sensors (must be ordered separately)
  - Part No. 800-A00-000
  - Price: $7.70

- Clamp on Style Sensors

<table>
<thead>
<tr>
<th>Sensor Type</th>
<th>Electrical Characteristics</th>
<th>Prewired 9 ft. Leadwire</th>
<th>Quick Disconnect*</th>
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</thead>
<tbody>
<tr>
<td>Reed (LED)</td>
<td>5-120 VAC/VDC, 0.5 AMP Max, 10 Watt Max, SPST N.O. 3.5 voltage drop</td>
<td>Part No. 9-2A197-1003 . . . $29.90</td>
<td>Part No. 9-2A197-1303 . . . $38.50</td>
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<tr>
<td>Electronic (LED)</td>
<td>Sourcing, PNP, 6-24 VDC, 0.5 AMP Max, 1.0 voltage drop</td>
<td>Part No. 9-2A197-1031 . . . $32.05</td>
<td>Part No. 9-2A197-1331 . . . $41.10</td>
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<tr>
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Prewired style sensors are supplied with a 9 foot leadwire.

- Band Clamp for Clamp On Sensors (must be ordered separately)
  - Part No. 800-A00-000
  - Price: $7.70

- Female Cordsets for Quick Disconnect Sensors

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*Quick disconnect style sensors are supplied with male connector as shown in this photo. Order female cordsets separately from the chart below.

Specifications and prices subject to change without notice or incurring obligation

12-23-09
### Nose Mounting Brackets

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  Air Cylinders
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  Catalog # FAE-09

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  Angular Grippers
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  Catalog # ST-SC

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  Pneumatic & Hydraulic
  Catalog # FML.H

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  Catalog # FGM-10

- Air Slide Tables
  Catalog # FGXS-10