F-Series Air Cylinders

Your Exact Interchange for Stainless Steel Body, Non-repairable Cylinders
F-Series Direct Interchange Air Cylinders
All the Models Bore-for-Bore!

F-Series Max Operating Pressure Ratings

F-Series Basic Cylinders .................. 250 psi
Adjustable Cushion Cylinders ............. 250 psi
Custom Cylinders 1" Diameter Rod, 2" Bore .... 250 psi
Volume Chambers .......................... 250 psi
Delrin® Series ................................ 100 psi
Magnetic Interchange Cylinders ............ 250 psi
Hole Punch Cylinders ....................... 250 psi
3-Position Cylinders ......................... 250 psi
Position Feedback Cylinders .............. 150 psi

Contents

F-Series Ordering Information .................. 2-5
F-Series Cylinders and Mounting Accessories
5/16" Bore ..................................... 6, 7
7/16" Bore ..................................... 8-10
9/16" Bore ..................................... 11-13
3/4" Bore ....................................... 14-17
7/8" Bore ....................................... 18-20
1-1/16" Bore .................................... 21-24
1-1/4" Bore ..................................... 25-27
1-1/2" Bore ..................................... 28-31
1-3/4" Bore ..................................... 32, 33
2" Bore ......................................... 34-37
2-1/2" Bore ..................................... 38
3" Bore ......................................... 39

Adjustable Cushion Cylinders
3/4" Bore ......................................... 16
1-1/16" Bore ....................................... 24
1-1/2" Bore ....................................... 30, 31
2" Bore .......................................... 36

Custom Cylinders
1" Diameter Rod, 2" Bore ....................... 36

Volume Chambers
Volume chambers, ordering information ......... 40

Delrin® Series – Corrosion Resistant Cylinders
3/4" Bore ......................................... 41
1-1/16" Bore ....................................... 42
1-1/2" Bore ....................................... 42, 43

Magnetic Interchange Cylinders
9/16" Bore ......................................... 44
3/4" Bore .......................................... 45
1-1/16" Bore ....................................... 46
1-1/4" Bore ....................................... 47
1-1/2" Bore ....................................... 48
1-3/4" Bore ....................................... 49
2" Bore .......................................... 50
2-1/2" Bore ....................................... 51

Hole Punch Cylinders
3/4" Bore cylinders .............................. 54
Punches and assemblies ...................... 55

3-Position Cylinders
Specifications and ordering information ....... 52
3-Position cylinders ........................... 53

PFA Series Position Feedback Cylinders
Cylinder specifications ....................... 56, 57

Port Mounted Flow Controls
Molded body ...................................... 58
Brass body ....................................... 59

Magnetic Position Sensing
Sensors ............................................ 60

Mounting Accessories – Summary
Dimensions and prices .......................... 61

Specifications and prices subject to change without notice or incurring obligation 4-20-16
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
- \( S1 \) = Stroke rounded up to the next increment (5/16" and 7/16" bores have 1/2" increments)

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.

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

Example:
- \( F-1062S01-02M \) (2-3/4" stroke)
  - \( F-1062S01 \) base length = 1.938
  - Plus 1.562 per inch of stroke = +4.686
  - \( F-1062S01-03A \) length = 6.624
  - Standard stroke increment = 3.000
  - Stroke difference = -2.750
  - Stroke difference = .250
  - \( F-1062S01-02M \) length = 8.127

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
  - \( F-0750D01-01E \) length = 4.219

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.

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

Example:
- \( F-0438R02-01K \) (1-5/8" stroke)
  - \( F-0438R02 \) base length = 2.375
  - Plus 1.438 per each 0.5" stroke = +7.572
  - 1.438 x 4.0 (number of standard increments required for the next longer increment)
  - \( F-0438R02-02A \) 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

Ports
Full-flow ports and cross-slots on the end caps allow 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 with double rolled-in crimp.

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
**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

**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"

**Options (2 or 3 digits)**
See opposite page

- **Rod and/or Thread Extension**
  - 1A = Rod Extension (Additional length)  
  - 2A = Thread Extension (Additional length)  
  - RT = Rod and Thread Extension (Additional length)

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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

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 = Additional 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 = Additional 2” Rod Extension and Additional 1-1/2” Thread Extension

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

**5/16" 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:** 4"
- **Optional Accessories:**
  - F-M117001 Mounting 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
  - F-M117002 Mounting Bracket
  - 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

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Specifications and prices subject to change without notice or incurring obligation.
5/16" Bore Cylinder Features – Options & Accessories

-10° to +165°F
- 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

Mounting Bracket
F-M117002

Mounting Nut
F-M190001

Mounting Nut
F-M190002

Pivot Bracket
F-M1290001

Rod Clevis
F-M1270001

OPTION

- Bumpers – Not available
- Viton® Seals –
  - Spring Return (-15°F to 300°F)
  - Double Acting (-15°F to 350°F)
  - Spring Extend (-15°F to 300°F)
- Magnetic Piston – Not available
- Pivot Bushing – Bronze sleeve standard
- Ports Rotated – 90° on S02, R02, or D02 (both)
- Rod Wipers – Not available
- Side Port – Cap end port on S01, D01
  - Add .20 to OAL
- Low Temperature Seals – Not available
- Rod Extension
- Rod Thread Extension

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

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

---

**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

---


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

12-1-19
F-0438N01-00A
**Single Acting** Spring Return
Front Nose Mount
**Non-Rotating**
Maximum Stroke: 6"
Optional Accessories:
- F-M117004 Mounting Bracket
- F-M127002 Rod Clevis
Base Weight: .04 lbs. Plus .04 lbs. per inch of stroke

F-0438N02-00A
**Single Acting** Spring Return
Rear Pivot Mount
**Non-Rotating**
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

F-0438D01-00A
**Double Acting**
Front Nose Mount
Maximum Stroke: 12"
Optional Accessories:
- F-M117003 Mounting Bracket
- F-M127002 Rod Clevis
Base Weight: .07 lbs. Plus .04 lbs. per inch of stroke

F-0438D02-00A
**Double Acting**
Rear Pivot Mount
Maximum Stroke: 12"
Optional Accessories:
- F-M117003 Mounting Bracket
- F-M029002 Pivot Bracket
- F-M127002 Rod Clevis
Base Weight: .08 lbs. Plus .02 lbs. per inch of stroke
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) x (Air Line PSI)
- Spring Force:
  - 1 lb. Relaxed – 2 lb. Compressed

<table>
<thead>
<tr>
<th>OPTION</th>
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</thead>
<tbody>
<tr>
<td>- Bumpers – Not available</td>
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<tr>
<td>- Viton® Seals –</td>
</tr>
<tr>
<td>- Spring Return (−15°F to 300°F)</td>
</tr>
<tr>
<td>- D01 – Double Acting (−15°F to 350°F)</td>
</tr>
<tr>
<td>- D02 – Double Acting (−15°F to 350°F)</td>
</tr>
<tr>
<td>- Spring Extend (−15°F to 300°F)</td>
</tr>
<tr>
<td>- Magnetic Piston – Not available</td>
</tr>
<tr>
<td>- Pivot Bushing – Bronze sleeve</td>
</tr>
<tr>
<td>- Ports Rotated – 90° on S02, R02, N02, or D02 (both)</td>
</tr>
<tr>
<td>- Rod Wiper – Not available</td>
</tr>
<tr>
<td>- Side Port – Cap end port on S01, N01, D01 Add . to OAL</td>
</tr>
<tr>
<td>- Low Temperature Seals – Applications to −40°F</td>
</tr>
<tr>
<td>- Spring Return Double Acting</td>
</tr>
<tr>
<td>- Spring Extend</td>
</tr>
<tr>
<td>- Rod Extension</td>
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<tr>
<td>- Rod Thread Extension</td>
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</tbody>
</table>

Mounting Bracket
F-M117003

Mounting Bracket
F-M117004

Mounting Nut
F-M190002

Rod Clevis
F-M127002

Pivot Bracket
F-M029002

Specifications and prices subject to change without notice or incurring obligation.
9/16" Bore Cylinders

**F-Series**

**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

**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-M117003 Mounting Bracket  
  - F-M129002 Pivot Bracket  
  - F-M127002 Rod Clevis  
- Base Weight: .06 lbs.  
  Plus .05 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 .04 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"
- 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

---

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

# F-Series

## 9/16" 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-M117003 Mounting Bracket
  - F-M127002 Rod Clevis
- Base Weight: .06 lbs.
- Plus .05 lbs. 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: 8"
- Optional Accessories:
  - F-M117003 Mounting Bracket
  - F-M127002 Rod Clevis
- Base Weight: .06 lbs.
- Plus .05 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-M117003 Mounting Bracket
  - F-M127002 Rod Clevis
- Base Weight: .09 lbs.
- Plus .02 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: 12"
- Optional Accessories:
  - F-M117003 Mounting Bracket
  - F-M127002 Rod Clevis
- Base Weight: .09 lbs.
- Plus .02 lbs. per inch of stroke

---


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

<table>
<thead>
<tr>
<th>OPTION</th>
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<tbody>
<tr>
<td>• Bumpers – Single Acting</td>
</tr>
<tr>
<td>• Double Acting</td>
</tr>
<tr>
<td>• Viton® Seals – Not available with bumpers</td>
</tr>
<tr>
<td>• Spring Return (~15°F to 300°F)</td>
</tr>
<tr>
<td>• Double Acting (~15°F to 350°F)</td>
</tr>
<tr>
<td>• Spring Extend (~15°F to 300°F)</td>
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<tr>
<td>• Magnetic Piston</td>
</tr>
<tr>
<td>• Pivot Bushing – Bronze sleeve standard</td>
</tr>
<tr>
<td>• Ports Rotated – 90° on S02, R02, N02, or D02 (both)</td>
</tr>
<tr>
<td>• Rod Wiper – Not available</td>
</tr>
<tr>
<td>• Side Port – Cap end port on S01, N01, or D01</td>
</tr>
<tr>
<td>• Add .03 to OAL</td>
</tr>
<tr>
<td>• Low Temperature Seals – Applications to –40°F</td>
</tr>
<tr>
<td>• Rod Extension</td>
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<tr>
<td>• Rod Thread Extension</td>
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</tbody>
</table>

Please visit http://portal.fabco-air.com/configure.php for current pricing. Specifications and prices subject to change without notice or incurring obligation.
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-M029003 Pivot 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**

**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.
F-Series

3/4" Bore Cylinders

**Single Acting Spring Return**
Rear Pivot Mount, Non-Rotating
Maximum Stroke: 6"
Optional Accessories:
- F-M117006 Mounting Bracket
- F-M029003 Pivot Bracket
- F-M127003 Rod Clevis
Base Weight: .12 lbs.
Plus .08 lbs. per inch of stroke

**Double Acting**
Front Nose Mount
Maximum Stroke: 12"
Optional Accessories:
- F-M117005 Mounting Bracket
- F-M127003 Rod Clevis
Base Weight: .21 lbs.
Plus .03 lbs. per inch of stroke

**Double Acting**
Rear Pivot Mount
Maximum Stroke: 32"
Optional Accessories:
- F-M117005 Mounting Bracket
- F-M029003 Pivot Bracket
- F-M127003 Rod Clevis
Base Weight: .21 lbs.
Plus .03 lbs. per inch of stroke

**Double Acting**
Double Nose or Rear Pivot Mount
Maximum Stroke: 32"
Optional Accessories:
- F-M117005 Mounting Bracket
- F-M127003 Rod Clevis
Base Weight: .29 lbs.
Plus .03 lbs. per inch of stroke

**Double Acting**
Double Rod
Maximum Stroke: 12"
Optional Accessories:
- F-M117005 Mounting Bracket
- F-M127003 Rod Clevis
Base Weight: .37 lbs.
Plus .04 lbs. per inch of stroke
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

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

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

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

Specifications and prices subject to change without notice or incurring obligation.
Cylinder Specifications – Options & Accessories

- -10° 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)
- Magnetic piston optional on all 3/4” bore cylinders (except in combination with Viton® option).

**OPTION**

- Bumpers
  - Viton® Seals – Not available with bumpers
    Spring Return (-15° F to 300° F)
    Double Acting (-15° F to 350° F)
    Spring Extend (-15° F to 300° F)
- Magnetic Piston
- Ports Rotated – 90°
  on S02, R02, N02, D02 (both), or D04 (both)
- Rod Wiper – Not available in spring return models
- Pivot Bushing – Bronze sleeve
- Side Port – Cap end port on S01, N01, D01, D05, or D06 (Add .44 to OAL)
- Low Temperature Seals – Applications to -40° F
- Rod Extension
- Rod Thread Extension

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Specifications and prices subject to change without notice or incurring obligation.
F-Series
7/8” Bore Cylinders

**Single Acting** Spring Return
Front Nose Mount
Maximum Stroke: 6"
Optional Accessories:
- F-M117005 Mounting Bracket
- F-M127003 Rod Clevis
Base Weight: .17 lbs.
Plus .09 lbs. per inch of stroke

**Single Acting** Spring Return
Rear Pivot Mount
Maximum Stroke: 6"
Optional Accessories:
- F-M117005 Mounting Bracket
- F-M127003 Rod Clevis
Base Weight: .17 lbs.
Plus .09 lbs. per inch of stroke

**Single Acting** Spring Extend
Front Nose Mount
Maximum Stroke: 6"
Optional Accessories:
- F-M117005 Mounting Bracket
- F-M127003 Rod Clevis
Base Weight: .20 lbs.
Plus .09 lbs. per inch of stroke

**Single Acting** Spring Extend
Rear Pivot Mount
Maximum Stroke: 6"
Optional Accessories:
- F-M117005 Mounting Bracket
- F-M127003 Rod Clevis
Base Weight: .20 lbs.
Plus .09 lbs. per inch of stroke

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

18
F-Series

7/8" Bore Cylinders

Single Acting

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

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

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

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

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

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).

MOUNTING NUTS INCLUDED

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

Pivot Mounting Bracket
F-M029003

Pivot Bracket
F-M1290003

Mounting Nut
F-M190005

Nose Mounting Bracket
F-M117005

Rod Clevis
F-M127003

Base Weight: .32 lbs. Plus .03 lbs. per inch of stroke

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**
  - Maximum Stroke: 6"
  - Optional Accessories:
    - F-M117005 Mounting Bracket
    - F-M127004 Rod Clevis
  - Base Weight: .23 lbs.
  - Plus .11 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-M117005 Mounting Bracket
    - F-M029003 Pivot Bracket
    - F-M127004 Rod Clevis
  - Base Weight: .24 lbs.
  - Plus .11 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-M127004 Rod Clevis
  - Base Weight: .22 lbs.
  - Plus .16 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-M127004 Rod Clevis
  - Base Weight: .24 lbs.
  - Plus .16 lbs. per inch of stroke

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**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

**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-M127004 Rod Clevis
Base Weight: .25 lbs.
Plus .12 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", 5", 6"
Maximum Stroke: 12"
Optional Accessories:
- F-M117005 Mounting Bracket
- F-M127004 Rod Clevis
Base Weight: .33 lbs.
Plus .05 lbs. per inch of stroke

**Double Acting**
Rear Pivot Mount
Standard Stroke Lengths:
Maximum Stroke: 32"
Optional Accessories:
- F-M117005 Mounting Bracket
- F-M127004 Rod Clevis
Base Weight: .33 lbs.
Plus .05 lbs. per inch of stroke

**Double Acting**
Double Nose or Rear Pivot Mount
Standard Stroke Lengths:
Maximum Stroke: 32"
Optional Accessories:
- F-M117005 Mounting Bracket
- F-M127004 Rod Clevis
Base Weight: .33 lbs.
Plus .05 lbs. per inch of stroke


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

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

Double Acting Front Nose Mount with Adjustable Cushions

Standard Stroke Lengths:

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

Standard Stroke Lengths:

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).
**F-Series**

**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

### 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-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

### 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: 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
**F-Series**

1-1/4" Bore Cylinders

**Single Acting** Spring Return Rear Pivot Mount

**Non-Rotating**

- 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

**Double Acting**

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

- Double Nose or Rear Pivot Mount
  - 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

**Double Acting**

- Double Rod
  - Maximum Stroke: 12"
  - Optional Accessories:
    - F-M117007 Mounting Bracket
    - F-M127005 Rod Clevis
  - Base Weight: .98 lbs.
  - Plus .12 lbs. per inch of stroke

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

Option

- Bumpers
- Viton® Seals – Not available with Bumpers
  - Spring Return (-15°F to 300°F)
  - Double Acting (-15°F to 350°F)
  - Spring Extend (-15°F to 300°F)
- Magnetic Piston
- Pivot Bushing – Bronze sleeve
- Ports Rotated – 90°
  on S02, R02, N02, or D02 (both)
- Rod Wiper – Not available in spring return models
- Side Port - Cap end port on S01, N01, or D01
  Add .31 to OAL
- Low Temperature Seals – Applications to -40°F
- Rod Extension
- Rod Thread Extension
**F-Series**

**1-1/2" 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-M29004 Pivot Bracket  
- F-M127005 Rod Clevis  
Base Weight: .44 lbs.  
Plus .22 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-M117007 Mounting Bracket  
- F-M29004 Pivot Bracket  
- F-M127005 Rod Clevis  
Base Weight: .45 lbs.  
Plus .22 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: .44 lbs.  
Plus .22 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-M117007 Mounting Bracket  
- F-M127005 Rod Clevis  
Base Weight: .45 lbs.  
Plus .22 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: .45 lbs.  
Plus .22 lbs. per inch of stroke

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

12-1-19
**F-Series\n1-1/2" 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-M029004 Pivot Bracket
  - F-M127005 Rod Clevis
  - Base Weight: .46 lbs.
  - Plus .22 lbs. 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: .69 lbs.
  - Plus .08 lbs. per inch of stroke

**Rear Pivot Mount**

- **Standard Stroke Lengths:**
- **Maximum Stroke:** 32"
- **Optional Accessories:**
  - F-M117007 Mounting Bracket
  - F-M127005 Rod Clevis
  - Base Weight: .73 lbs.
  - Plus .08 lbs. per inch of stroke

**Double Nose Mount**

- **Standard Stroke Lengths:**
- **Maximum Stroke:** 32"
- **Optional Accessories:**
  - F-M117007 Mounting Bracket
  - F-M127005 Rod Clevis
  - Base Weight: .82 lbs.
  - Plus .08 lbs. per inch of stroke

**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: 1.17 lbs.
  - Plus .13 lbs. per inch of stroke


Specifications and prices subject to change without notice or incurring obligation.
F-Series
1-1/2" Bore Cylinders

Double Acting
Hollow Double Rod
Maximum Stroke: 12"
Optional Accessories:
• F-M117007 Mounting Bracket
Base Weight: 1.16 lbs.
Plus .13 lbs. per inch of stroke

Double Acting
Front Block Mount
Maximum Stroke: 12"
Optional Accessories:
• F-M127005 Rod Clevis
Base Weight: .99 lbs.
Plus .08 lbs. per inch of stroke

Double Acting
Trunnion Mount
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

Double Acting Front Nose Mount
with Adjustable Cushions
Maximum Stroke: 12"
Optional Accessories:
• F-M117007 Mounting Bracket
• F-M127005 Rod Clevis
Base Weight: .76 lbs.
Plus .09 lbs. per inch of stroke
**1-1/2" 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 = \( (1.7) \times \) (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).

**OPTION**

- Bumpers
- Viton® Seals – Not available with bumpers
  - Spring Return (−15° F to 300° F)
  - Double Acting (−15° F to 350° F)
  - Spring Extend (−15° F to 300° F)
- Magnetic Piston
- Pivot Bushing – Bronze sleeve
- Ports Rotated – 90° on S02, R02, N02, or D02 (both)
- Rod Wiper – Not available in spring return models
- Side Port – Cap end port on S01, N01, D01, D05, or D06 (Add .19 to OAL)
- Low Temperature Seals – Applications to −40° F
- Rod Extension
- Rod Thread Extension
F-Series
1-3/4" Bore Cylinders

**Single Acting Spring Return**
Front Nose Mount
Maximum Stroke: 6"
Optional Accessories:
- F-M117008 Mounting Bracket
- F-M127006 Rod Clevis
Base Weight: .85 lbs.
Plus .36 lbs. per inch of stroke

**Single Acting Spring Return**
Double Nose or Rear Pivot Mount
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

**Single Acting Spring Extend**
Front Nose Mount
Maximum Stroke: 8"
Optional Accessories:
- F-M117008 Mounting Bracket
- F-M127006 Rod Clevis
Base Weight: 1.17 lbs.
Plus .31 lbs. per inch of stroke

**Double Acting**
Front Nose Mount
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


Specifications and prices subject to change without notice or incurring obligation.
1-3/4" 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 = (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**

- Bumpers
- Viton® Seals – Not available with bumpers
  - Spring Return (–15° F to 300° F)
  - Double Acting (–15° F to 350° F)
  - Spring Extend (–15° F to 300° F)
- Magnetic Piston
- Pivot Bushing – Bronze sleeve
- Ports Rotated – 90° on S02 or D02 models (both)
- Rod Wiper – Not available in spring return models
- Side Port - Cap end ports on S01 or D01 models
  - Add .56 to OAL
- Low Temperature Seals – Applications to –40° F
- Rod Extension
- Rod Thread Extension

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

Single Acting  Spring Return
Front Nose Mount
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

Single Acting  Spring Return
Double Nose or Rear Pivot Mount
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

Single Acting  Spring Extend
Front Nose Mount
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

Single Acting  Spring Extend
Double Nose or Rear Pivot Mount
Maximum Stroke: 4"
Optional Accessories:
- F-M117009 Mounting Bracket
- F-M229005 Pivot Bracket
- F-M127006 Rod Clevis
Base Weight: 1.46 lbs.
Plus .43 lbs. per inch of stroke

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

### F-Series

#### 2" Bore Cylinders

**F-2000D01-00A**

- **Double Acting**
- Front Nose Mount
- 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
- 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
- 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
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-M127006 Rod Clevis
Base Weight: 1.64 lbs.
Plus .15 lbs. per inch of stroke

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

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

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"
Optional Accessories:
• F-M229005 Pivot Bracket
• F-M127006 Rod Clevis
Base Weight: approximately 2.01 lbs.
Plus .15 lbs. per inch of stroke

Specifications and prices subject to change without notice or incurring obligation
Standard Cylinder Specifications – Options & Accessories

-10° 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.

- Bumpers
- Viton® Seals – Not available with bumpers or magnetic piston
  Spring Return (–15° F to 300° F)
  Double Acting (–15° F to 350° F)
  Spring Extend (–15° F to 300° F)
- Magnetic Piston
- Pivot Bushing – Bronze sleeve standard
- Ports Rotated – 90° on S02, R02, or D02 models (both).
- Rod Wiper – Not available in spring return models
- Side Port - Cap end port on S01 or D01 models
  Add .38 to OAL
- Low Temperature Seals – Applications to –40° F
- Rod Extension
- Rod Thread Extension

Mounting Bracket
F-M117009

Pivot Bracket
F-M229005

Rod Clevis
F-M127006

Mounting Nut
F-M190009

Specifications and prices subject to change without notice or incurring obligation.
F-Series
2-1/2” Bore Cylinders

Double Acting
Front Nose Mount
Standard Stroke Lengths:
1/2”, 1”, 1-1/2”, 2", 2-1/2”, 3", 4”, 5”, 6”, 7”, 8”, 9”, 10”, 11”, 12”
Maximum Stroke: 12”
Optional Accessories:
• F-M117010 Mounting Bracket
• F-M229005 Pivot Bracket
• F-M127006 Rod Clevis
• F-M190012 Mounting Nut
Base Weight 1.98 lbs.
Plus .17 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”, 6”, 7”, 8”, 9”, 10”, 11”, 12”
Maximum Stroke: 32”
Optional Accessories:
• F-M117010 Mounting Bracket
• F-M229005 Pivot Bracket
• F-M127006 Rod Clevis
• F-M190012 Mounting Nut
Base Weight: 2.27 lbs.
Plus .17 lbs. per inch of stroke

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).

<table>
<thead>
<tr>
<th>OPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Bumpers</td>
</tr>
<tr>
<td>• Viton® Seals – Not available with bumpers</td>
</tr>
<tr>
<td>• Magnetic Piston</td>
</tr>
<tr>
<td>• Pivot Bushing – Bronze sleeve standard</td>
</tr>
<tr>
<td>• Ports Rotated – 90° on D02 (both)</td>
</tr>
<tr>
<td>• Rod Wiper</td>
</tr>
<tr>
<td>• Side Port – Cap end on D01. Add .38 to overall length</td>
</tr>
<tr>
<td>• Low Temperature Seals – Applications to –40° F</td>
</tr>
<tr>
<td>• Rod Extension</td>
</tr>
<tr>
<td>• Rod Thread Extension</td>
</tr>
</tbody>
</table>

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

**OPTION**
- Bumpers
- Viton® Seals – Not available with bumpers
  Double Acting (-15° F to 350° F)
- Magnetic Piston
- Pivot Bushing – Bronze sleeve standard
- Ports Rotated – 90° on D02 model (both)
- Rod Wiper
- Side Port – Cap end on D01. Add .44 to OAL
- Low Temperature Seals – Applications to –40° F
- Rod Extension
- Rod Thread Extension
F-Series
Volume Chambers

How to Order

<table>
<thead>
<tr>
<th>Series</th>
<th>Bore Size (4 digits)</th>
<th>Fractional Inch Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-1500</td>
<td>0750 = 3/4&quot;</td>
<td>A = 0&quot;</td>
</tr>
<tr>
<td></td>
<td>1062 = 1-1/16&quot;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1500 = 1-1/2&quot;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2000 = 2&quot;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2500 = 2-1/2&quot;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3000 = 3&quot;</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Style</th>
<th>Version</th>
<th>In-line mount</th>
</tr>
</thead>
<tbody>
<tr>
<td>V</td>
<td>01</td>
<td></td>
</tr>
</tbody>
</table>

Volume Chamber Specifications

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

Specifications and prices subject to change without notice or incurring obligation

9-20-18
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 +/- .032

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

- Max Operating Pressure: 100 psi Air
- Temperature Range: 32°F to 160°F (0°C to 72°C)

7/8" 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

7/8" 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

7/8" 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

Call DuPont (800) 441-0575 for information regarding properties of this material.
**F-Series**

**Delrin® Corrosion Resistant Cylinders**

1-1/16" Bore Delrin® Series
Double Acting Front Nose Mount
Maximum Stroke: 12"
Optional Accessory:
• F-M19S005 Stainless Steel Mounting Nut
Base Weight: .21 lbs.
Plus .05 lbs. per inch of stroke

1-1/16" Bore Delrin® Series
Double Acting Rear Pivot Mount
Maximum Stroke: 12"
Optional Accessory:
• F-M19S005 Stainless Steel Mounting Nut
Base Weight: .25 lbs.
Plus .05 lbs. per inch of stroke

1-1/2" Bore Delrin® Series
Double Acting Double Rod
Maximum Stroke: 12"
Optional Accessory:
• F-M19S006 Stainless Steel Mounting Nut
Base Weight: .30 lbs.
Plus .07 lbs. per inch of stroke

1-1/2" Bore Delrin® Series
Double Acting
Front Nose Mount
Maximum Stroke: 12"
Optional Accessory:
• F-M19S006 Stainless Steel Mounting Nut
Base Weight: .46 lbs.
Plus .08 lbs. per inch of stroke

1-1/2" Bore Delrin® Series
Double Acting Rear Pivot Mount
Maximum Stroke: 32"
Optional Accessory:
• F-M19S006 Stainless Steel Mounting Nut
Base Weight: .48 lbs.
Plus .08 lbs. per inch of stroke

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

<table>
<thead>
<tr>
<th>OPTION</th>
<th>DC1</th>
<th>DC2</th>
<th>DC3</th>
<th>DC1</th>
<th>DC2</th>
<th>DC3</th>
<th>DC1</th>
<th>DC2</th>
<th>DC3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum stroke</td>
<td>1/2&quot;</td>
<td>1&quot;</td>
<td>1-1/2&quot;</td>
<td>2&quot;</td>
<td>2-1/2&quot;</td>
<td>3&quot;</td>
<td>4&quot;</td>
<td>5&quot;</td>
<td>6&quot;</td>
</tr>
<tr>
<td>Maximum stroke</td>
<td>12&quot;</td>
<td>12&quot;</td>
<td>12&quot;</td>
<td>12&quot;</td>
<td>12&quot;</td>
<td>12&quot;</td>
<td>12&quot;</td>
<td>12&quot;</td>
<td>12&quot;</td>
</tr>
</tbody>
</table>

Optional Accessories:
- F-M19S006 Stainless Steel Mounting Nut
- Base Weight: .60 lbs.
- Plus .13 lbs. per inch of stroke

Bumpers option – Add .250 to OAL & Body Length
Magnetic piston option – No change in OAL
Bumpers with magnetic piston – Add .250 to OAL & Body Length

F-1500DC3-00A
1-1/2" 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"

MOUNTING NUT NOT INCLUDED

Delrin® Corrosion Resistant Cylinders

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

**OPTION**

- Ports Rotated – 90° on DM2 (both)  
- Viton® Seals – (for media or environment compatibility only)  
  DM1 & DM2  
  DM3  
- Rod Wiper – Not available  
- Side Port – DM1 (Add .03 to OAL)  
- Rod Extension DM1, DM2  
- Rod Thread Extension

**Mounting Bracket**  
F-M117003

**Pivot Bracket**  
F-M129002

**Rod Clevis**  
F-M127002

**Mounting Nut**  
F-M190003

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

OPTION

• Ports Rotated – 90° on DM2 (both)
• Viton® Seals – (for media or environment compatibility only)
  DM1 & DM2
  DM3
• Rod Wiper
• Side Port – DM1 (Add .25 to OAL)
• Rod Extension DM1, DM2
• Rod Thread Extension

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

F-Series Magnetic Interchange
1-1/4" 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-M117013 Mounting Bracket
  Base Weight: .51 lbs.
  Plus .07 lbs. per inch of stroke

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

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

1-1/4" 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 1-1/4" bore cylinders
Approximate Force Exerted: (1.2) x (Supply psi)
Stroke tolerance ±.032
F-Series Magnetic Interchange
1-1/2" Bore Cylinders

Double Acting
Front Nose Mount
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
Maximum Stroke: 32"
Optional Accessories:
• F-M127005 Rod Clevis
Base Weight: .87 lbs.
Plus .10 lbs. per inch of stroke

Double Acting Double Rod
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

OPTION

• Ports Rotated – 90° on DM2 (both)
• Viton® Seals – (for media or environment compatibility only)
  DM1 & DM2
  DM3
• Rod Wiper –
• Side Port – DM1 (Add .25 to OAL)
• Rod Extension DM1, DM2
• Rod Thread Extension

Specifications and prices subject to change without notice or incurring obligation
F-Serie Magnetic Interchange
1-3/4" 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-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:
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

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 ±.032

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

2" Bore Cylinders

Double Acting
Front Nose Mount
Maximum Stroke: 12"
Optional Accessories:
• F-M127006 Rod Clevis
Base Weight: 1.55 lbs.
Plus .15 lbs. per inch of stroke

Double Acting
Double Nose or Rear Pivot Mount
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
Maximum Stroke: 12"
Optional Accessories:
• F-M127006 Rod Clevis
Base Weight: 1.90 lbs.
Plus .30 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

<table>
<thead>
<tr>
<th>OPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Ports Rotated – 90° on DM2 (both)</td>
</tr>
<tr>
<td>• Viton® Seals – (for media or environment compatibility only)</td>
</tr>
<tr>
<td>DM1 &amp; DM2</td>
</tr>
<tr>
<td>DM3</td>
</tr>
<tr>
<td>• Rod Wiper –</td>
</tr>
<tr>
<td>• Side Port – DM1 (Add .56 to OAL)</td>
</tr>
<tr>
<td>• Rod Extension DM1, DM2</td>
</tr>
<tr>
<td>• Rod Thread Extension</td>
</tr>
</tbody>
</table>

JAM NUT
F-M127006

Mounting Nut
F-M190009

Specifications and prices subject to change without notice or incurring obligation.
Specifications and prices subject to change without notice or incurring obligation
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 1 & 4 are open to atmosphere.

How to Order

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.

<table>
<thead>
<tr>
<th>Series</th>
<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></td>
<td>06A</td>
<td>04A</td>
<td>12</td>
</tr>
</tbody>
</table>

Options (2 digits)
12 = Magnetic Piston both ends
Leave blank if magnetic piston is not required

Cyl. 2 Stroke
Cyl. 1 Stroke

Stroke Tolerance

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

Full Inch Stroke (2 digits)

<table>
<thead>
<tr>
<th>Stroke 1</th>
<th>Stroke 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>0&quot;</td>
</tr>
<tr>
<td>01</td>
<td>1&quot;</td>
</tr>
<tr>
<td>02</td>
<td>2&quot;</td>
</tr>
<tr>
<td>03</td>
<td>3&quot;</td>
</tr>
<tr>
<td>08</td>
<td>8&quot; (max. cyl. 2 stroke)</td>
</tr>
</tbody>
</table>

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

Fractional Inch Stroke

<table>
<thead>
<tr>
<th>Stroke 1</th>
<th>Stroke 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0&quot;</td>
</tr>
<tr>
<td>l</td>
<td>1/2&quot;</td>
</tr>
</tbody>
</table>

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

F-Series

3-Position Cylinders

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:
•F-M117005 Mounting Bracket
See details page 61

1-1/16" 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:
•F-M117005 Mounting Bracket
See details page 61

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:
•F-M117007 Mounting Bracket
See details page 61

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:
•F-M117009 Mounting Bracket
See details page 61
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

3/4" Bore Single Acting Spring Return
1" Stroke
• Bumpers
• 1/2" Thread Extension
• Mounting Nut Included

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

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

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

3/4" Bore Single Acting Spring Return
1" Stroke – Hollow Rod
for air ejector applications
• Bumpers
• 1/2" Thread Extension
• Mounting Nut Included
Replaceable Hole Punches

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

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>

LRT Circuit Diagram

Connector Pin Assignments

How to Order Cylinder

<table>
<thead>
<tr>
<th>Basic Series</th>
<th>10 = 1-1/16”</th>
<th>15 = 1-1/2”</th>
<th>20 = 2”</th>
<th>25 = 2-1/2”</th>
<th>30 = 3”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cylinder Mounting</td>
<td>1 = Front Nose</td>
<td>2 = Rear Pivot</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>“Standard” Full Inches of Stroke</td>
<td>01 = 1” Stroke</td>
<td>02 = 2” Stroke</td>
<td>03 = 3” Stroke</td>
<td>04 = 4” Stroke</td>
<td>06 = 6” Stroke</td>
</tr>
</tbody>
</table>

Note: Non-standard stroke lengths will increase lead time.

PFA Series can integrate with some Fabco-Air slide products. Contact your local distributor or Fabco-Air engineering for details.
PFA Series
Position Feedback Cylinders

Front Nose Mount - 150 psi Max.
Cylinder Type AM1
Rod wiper is standard.
Mounting nut is not included.

See page 61 for accessory details.

Rear Pivot Mount - 150 psi Max.
Cylinder Type AM2
Rod wiper is standard.
Mounting nut is not included.
Pivot bushing NOT available.

Note:
Remove pivot mount attachment and rotate 90° to align pivot eye to ports.

See page 61 for accessory details.

PFA Cylinder Dimensions

<table>
<thead>
<tr>
<th></th>
<th>1-1/16&quot; Bore Bore Code 10</th>
<th>1-1/2&quot; Bore Bore Code 15</th>
<th>2&quot; Bore Bore Code 20</th>
<th>2-1/2&quot; Bore Bore Code 25</th>
<th>3&quot; Bore Bore Code 30</th>
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</thead>
<tbody>
<tr>
<td>A</td>
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<td>4.88</td>
<td>5.46</td>
<td>6.41</td>
<td>6.78</td>
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<tr>
<td>B</td>
<td>0.375</td>
<td>0.500</td>
<td>0.625</td>
<td>0.750</td>
<td>0.750</td>
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<tr>
<td>C</td>
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<td>0.88</td>
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<td>D</td>
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<tr>
<td>E</td>
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<td>1.72</td>
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<tr>
<td>F</td>
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<td>G</td>
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<td>0.38</td>
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<tr>
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<tr>
<td>I</td>
<td>5/16-24 UNF</td>
<td>7/16-20 UNF</td>
<td>1/2-20 UNF</td>
<td>5/8-18 UNF</td>
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<td>0.50</td>
<td>0.63</td>
<td>0.63</td>
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<tr>
<td>K</td>
<td>7/8-14 UNF</td>
<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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<tr>
<td>L</td>
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<td>1.125</td>
<td>1.375</td>
<td>1.500</td>
<td>1.625</td>
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<tr>
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<td>1.375</td>
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<td>0.375</td>
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<td>0.500</td>
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<td>1/8 NPTF</td>
<td>1/4 NPTF</td>
<td>1/4 NPTF</td>
<td>3/8 NPTF</td>
<td>3/8 NPTF</td>
</tr>
</tbody>
</table>
**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**

```
#10-32 male thread
Miniature Style
```

**FLOW CHARACTERISTICS OF FABCO-AIR VALVES**

```
FLOW AT 70 PSI

1/4 TUBE X 10-32
1/8 NPT & 1/4 NPT

• Super Fine control at low flow
• Fine control at high flow
• Highest Maximum Flow rate
• Widest control range
• All turns are fully active
```

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**

**Size 1**

10-32 Male Thread

- **Knob Adjustment**
  - Dim. 0.18
  - 5/16 Hex
  - 0.38 Lock Nut
  - 10-32 with O’Ring Seal

- **Screwdriver Adjustment**
  - Dim. 0.18
  - 5/16 Hex
  - 0.38 Lock Nut
  - 10-32 with O’Ring Seal

**Flow Characteristics**

Typical Free Flow Maximum

<table>
<thead>
<tr>
<th>Supply Pressure</th>
<th>Flow Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>60 psi</td>
<td>1.1 SCFM</td>
</tr>
<tr>
<td>100 psi</td>
<td>1.8 SCFM</td>
</tr>
</tbody>
</table>

**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>
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<td>10-32 Tap</td>
<td>PV1-A</td>
<td>-</td>
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<td>.63</td>
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<tr>
<td></td>
<td></td>
<td>5/32” Tube</td>
<td>PV1-C</td>
<td>-</td>
<td>PC1-C</td>
<td>-</td>
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<tr>
<td></td>
<td>Screwdriver</td>
<td>10-32 Tap</td>
<td>PV1-K</td>
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<td>PC1-K</td>
<td>-</td>
<td>.63</td>
</tr>
<tr>
<td></td>
<td></td>
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<td>PV1-M</td>
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<td>PC1-M</td>
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<td>PC2-C</td>
<td>-</td>
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<td></td>
<td>1/4” Tube</td>
<td>PV2-D</td>
<td>-</td>
<td>PC2-D</td>
<td>-</td>
<td>1.63</td>
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<tr>
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<td>PC2-K</td>
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<td>1.00</td>
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<td>PC2-M</td>
<td>-</td>
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<td></td>
<td>1/4” Tube</td>
<td>PV2-N</td>
<td>-</td>
<td>PC2-N</td>
<td>-</td>
<td>1.63</td>
</tr>
<tr>
<td>Size #4</td>
<td>Knob</td>
<td>1/4 NPT Tap</td>
<td>PV4-A</td>
<td>-</td>
<td>PC4-A</td>
<td>-</td>
<td>1.25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1/4” Tube</td>
<td>PV4-B</td>
<td>-</td>
<td>PC4-B</td>
<td>-</td>
<td>1.75</td>
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<tr>
<td></td>
<td></td>
<td>3/8” Tube</td>
<td>PV4-C</td>
<td>-</td>
<td>PC4-C</td>
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<td>1/4 NPT Tap</td>
<td>PV4-K</td>
<td>-</td>
<td>PC4-K</td>
<td>-</td>
<td>1.25</td>
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<td>1/4” Tube</td>
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<td>PC4-L</td>
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<td>PV4-M</td>
<td>-</td>
<td>PC4-M</td>
<td>-</td>
<td>2.00</td>
</tr>
</tbody>
</table>

**Size 2**

1/8 NPT Male Thread

- **Knob Adjustment**
  - Dim. 0.31
  - 9/16” Hex
  - 0.63 Lock Nut
  - 1/8 NPT with Preapplied Thread Sealant

- **Screwdriver Adjustment**
  - Dim. 0.31
  - 9/16” Hex
  - 0.63 Lock Nut
  - 1/8 NPT with Preapplied Thread Sealant

**Flow Characteristics**

Typical Free Flow Maximum

<table>
<thead>
<tr>
<th>Supply Pressure</th>
<th>Flow Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>60 psi</td>
<td>10.4 SCFM</td>
</tr>
<tr>
<td>100 psi</td>
<td>16.0 SCFM</td>
</tr>
</tbody>
</table>

**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 #2</td>
<td>Knob</td>
<td>1/8 NPT Tap</td>
<td>PV2-A</td>
<td>-</td>
<td>PC2-A</td>
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<tr>
<td></td>
<td></td>
<td>5/32” Tube</td>
<td>PV2-C</td>
<td>-</td>
<td>PC2-C</td>
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<td>1.65</td>
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<tr>
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<td>PC2-K</td>
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<td>PC2-M</td>
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<td>1.65</td>
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<td>1/4” Tube</td>
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<td>PC2-N</td>
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</tbody>
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**Size 3**

1/4 NPT Male Thread

- **Knob Adjustment**
  - Dim. 0.38
  - 11/16” Hex
  - 0.75 Lock Nut
  - 1/4 NPT with Preapplied Thread Sealant

- **Screwdriver Adjustment**
  - Dim. 0.38
  - 11/16” Hex
  - 0.75 Lock Nut
  - 1/4 NPT with Preapplied Thread Sealant

**Flow Characteristics**

Typical Free Flow Maximum

<table>
<thead>
<tr>
<th>Supply Pressure</th>
<th>Flow Rate</th>
</tr>
</thead>
<tbody>
<tr>
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**Model Number / Price**

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<th>Cylinder Mount Meter Out</th>
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Magnetically operated reed switches and electronic sensors can be mounted anywhere along the length and circumferance 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.

<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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<tr>
<td>Reed (No LED)</td>
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<td>949-000-331</td>
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</tbody>
</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.

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

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: $3.10 + $1.10 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.

Prewired style sensors are supplied with a 9 foot leadwire.

Female Cordsets for Quick Disconnect Sensors

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**Nose Mounting Brackets**

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**Pivot Mounting Brackets**

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**Mounting Nuts & Rod Thread Nuts**

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