

cylinders

M Series

Round Line, Non-Repairable Cylinder Line



numatics®

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NUMATICS®

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The **M Series** is a stainless steel body air cylinder line that is the perfect solution for tight design budgets. This cylinder is reliable and is designed and built to maximize performance. It will exceed all of your light-duty cylinder application requirements. The M Series comes standard with a multitude of value-added features such as stainless steel piston rods, roll-formed threads at both ends of the piston rod, and pre-lubed for non-lube added service. Furthermore, Numatics Actuator Group has the design capabilities to customize a product for your specific application. These are just a sample of things that make the M Series the *Superior Interchangeable* round body air cylinder line.

Piston Rod

The type 303 stainless steel **piston rod** is ground, polished, and roller burnished for a mirror finish to ensure corrosion-free longevity.

Rod Thread

Roll-formed **rod threads** (at both ends) ensure a durable customer-end connection as well as piston to rod connection.

Rod Bushing

Oil impregnated sintered bronze **rod bushing** provides excellent wear resistance and anti-friction qualities for smooth operation and long life.

End Caps

The **end caps** are made from a high strength aluminum alloy.

Ports

Unrestricted (full-flow) **ports** in conjunction with **rectangular slots** on the piston-mating surface (at both ends) enable the air to work on a larger piston area for effortless breakaway (even at low pressures).

Tube

The type 304 stainless steel **tube**, drawn and polished to a micro-inch finish on the I.D., enables low friction and longevity.

Crimp

The cylinder body is attached to the end caps using innovative assembly equipment that ensures a consistent and reliable double rolled-in **crimp**.

Piston

High strength aluminum alloy **piston** with blow-by flats (double acting only) ensure proper and rapid seal inflation. Piston rod connections are threaded (roll-formed threads), sealed with Loctite Threadlocker®, torqued, and staked for a solid, leak-proof connection.

Piston Seals

Low friction Buna N "U" cup **piston seals** (optional low and high temperature seals) are wear compensating for millions of maintenance free cycles.

Magnet

Magnetic band position indication is optional in 9/16" – 3" bore sizes. The **magnet** does not affect the overall length of the cylinder 3/4" – 3" (bore sizes - double acting only) but does add .250" to the overall length of the 9/16" bore cylinders.

Rod Seal

The low friction Buna N "U" cup **rod seal** (optional low and high temperature seals) is wear compensating to ensure longevity.

Pre-Lubricated

Pre-lubricated with our specially formulated oil based compound for extensive maintenance free performance.

Threadlocker® is a registered trademark to the Loctite Corporation.

Standard Specifications:

- 303 stainless steel piston rods are standard
- 304 stainless steel cylinder tube
- Aluminum head and caps
- Nominal pressure rating is 250 psi air
- Twelve bore sizes – 5/16" – 3"
- Standard temperature -10°F to +165°F
- Single and double acting
- Double rods

Optional Specifications:

- Magnetic pistons
- Adjustable cushions
- Delrin® end caps
- Double rods
- High and low temperature seals
- Rod wipers

Delrin® is a registered trade mark of Dupont. For detailed information regarding the properties of Delrin, please call 1-800-441-0573.



M Series Round Line

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How To Order – Base Models

1500 D01-02 A-01-1A01A

Bore Size

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

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 Through Rod
 D04 = Double Acting Double Nose
 D05 = Double Acting Front Block
 D13 = Interchange Option for 1-1/16" Bore
Double Acting, Through Rod
 DH3 = Double Acting Through Rod
Hollow Rod
 D06 = Double Acting Trunnion Mount
 DG1 = Double Acting Adjustable Cushion
Nose Mount
 DG2 = Double Acting Adjustable Cushion
Rear Pivot
 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 Through Rod
 V01 = Nose Mount Volume Chamber
 V02 = Rear Pivot Mount Volume Chamber
 DM1 = Nose Mount MRS Interchange
 DM2 = Rear Pivot Mount MRS Interchange

Rod and/or Thread Extension

Note: Leave blank if rod and/or thread extension is not required.

1A = Rod Extension (must specify extension)
Example: 1A01A (full and fractional length)
 2A = Thread Extension (must specify extension)
Example: 2A01A (full and fractional length)
 RT = Rod and Thread Extension (must specify extension)
Example: RT01A01A (full and fractional length)

Note: When applying the RT option, rod extension length must be specified first and the thread extension length must be specified last. Also, consult factory for double-rod cylinders.

Options

00 = No Options (or leave blank)
 01 = Bumpers*
 02 = Viton Seals
 03 = Magnet**
 04 = Bumpers with Magnet* (See notes below for details.)
 05 = Pivot Bushing***
 06 = Pivot Bushing with Bumpers* (See notes below for details.)
 07 = Pivot Bushing with Viton Seals
 08 = Pivot Bushing with Magnet* (See notes below for details.)
 09 = Pivot Bushing with Bumper
and Magnet* (See notes below for details.)

See page 5 for a comprehensive list of options.

Fractional Inch Stroke

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

Full Inch Stroke

00 = 0" Stroke
 01 = 1" Stroke
 02 = 2" Stroke
 03 = 3" Stroke

32 = 32" Stroke (maximum)

See specific cylinder drawing/section for maximum stroke.

* Bumpers available on 9/16" through 3" Bore Cylinders. See specific drawing/section and/or length adder charts on page X for length adder information. (N/A on DG1 and DG2 types).

** Magnet available on 9/16" Bore. See specific drawing/section and/or length adder charts on page X for length adder information.

*** Pivot Bushing standard on 5/16", 9/16", 2", 2-21/2", and 3" bore sizes. Optional on all other Rear Pivot cylinders.



How To Order – Standard M Series Options

Standard M Series Options

- 01 = Bumpers
- 02 = Viton® Seals
- 03 = Magnet
- 04 = Bumpers with Magnet
- 05 = Pivot Bushing
- 06 = Pivot Bushing with Bumpers
- 07 = Pivot Bushing with Viton Seals
- 08 = Pivot Bushing with Magnet
- 09 = Pivot Bushing with Bumper and Magnet
- 20 = Port Rotated with No Options
- 30 = Rod Wiper with No Options
- 31 = Rod Wiper with Bumpers
- 32* = Rod Wiper with Viton® Seals
- 33 = Rod Wiper with Magnet
- 34 = Rod Wiper with Bumpers and Magnet
- 35 = Rod Wiper with Pivot Bushing
- 36 = Rod Wiper with Bumpers and Pivot Bushing
- 37 = Rod Wiper with Viton® Seals and Pivot Bushing
- 38 = Rod Wiper with Magnet and Pivot Bushing
- 39 = Rod Wiper with Bumpers, Magnet and Pivot Bushing
- 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 = PolyPak Piston and Rod Seal

Available with these mounting styles:
D02, S02, R02, N02, DG2

See page 4 for
bore size availability.

Rod Wiper option available
on 3/4" Bore and Up.
Not available with these mount
styles: S01, S02, N01, N02

Low Temperature Seals option
available on 7/16" Bore and Up.

3/4" Bore and Up

* The rod wiper is Urethane except for 3/4", 1-1/16", 2" and 2-1/2" bores.

Note: Consult factory for additional options.

Viton® is a registered trade mark of Dupont.

How To Order – Examples

0438S01-01A

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

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

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

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



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Length Adders

01 Option (Bumpers)

BORE	SINGLE ACTING S01, S02, R01, R02 N01, N02	DOUBLE ACTING D01, D02	DELTRIN DC1, DC2
0.313	N/A	N/A	N/A
0.438	N/A	N/A	N/A
0.562	0.062	0.125	N/A
0.750	0.125	No Adder	0.281
0.875	No Adder	No Adder	N/A
1.062	0.125	0.125 (D03 = 0.250")	0.375
1.250	No Adder	No Adder	N/A
1.500	No Adder	0.125	0.375
1.750	No Adder	No Adder	N/A
2.000	No Adder	0.250	N/A
2.500	N/A	0.062	N/A
3.000	N/A	0.062	N/A

03 Option (Magnet)

BORE	SINGLE ACTING S01, S02, R01, R02 N01, N02	DOUBLE ACTING D01, D02, D03	DELTRIN DC1, DC2
0.313	N/A	N/A	N/A
0.438	N/A	N/A	N/A
0.562	0.531	0.250	N/A
0.750	0.688	No Adder	0.281
0.875	0.531	No Adder	N/A
1.062	0.562	No Adder	0.250
1.250	0.531	No Adder	N/A
1.500	0.437 (R01 = 0.500)	No Adder	0.250
1.750	0.656	No Adder	N/A
2.000	0.461 (R01 & R02 = 0.714)	No Adder	N/A
2.500	N/A	No Adder	N/A
3.000	N/A	No Adder	N/A

04 Option (Bumper and Magnet)

BORE	SINGLE ACTING S01, S02, R01, R02 N01, N02	DOUBLE ACTING D01, D02	DELTRIN DC1, DC2
0.313	N/A	N/A	N/A
0.438	N/A	N/A	N/A
0.562	0.713	0.375	N/A
0.750	0.890	0.125	0.406
0.875	0.733	0.125	N/A
1.062	0.765 (R01 = 0687)	0.125 (D03 = 0.250")	0.375
1.250	0.734	0.125	N/A
1.500	0.765 (R01 = 0827, N01 = 0.750)	0.250	0.500
1.750	0.735	0.000	N/A
2.000	0.789	0.250	N/A
2.500	N/A	0.062	N/A
3.000	N/A	0.062	N/A

M Series CAD drawings are available on CD-ROM or on our website at www.numaticsactuator.com



5/16" Bore Cylinder

Single Acting Spring Return – **0313S01-00A**
Front Nose Mount

Standard Stroke Lengths:

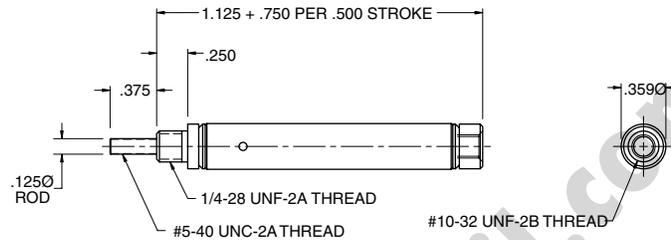
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 4"

Base Weight: .03 lbs., plus .02 lbs. per inch of stroke

*Optional Accessories:

- M117001 Mounting Bracket
- M127001 Rod Clevis



Single Acting Spring Return – **0313S02-00A**
Double Nose or Rear Pivot Mount

Standard Stroke Lengths:

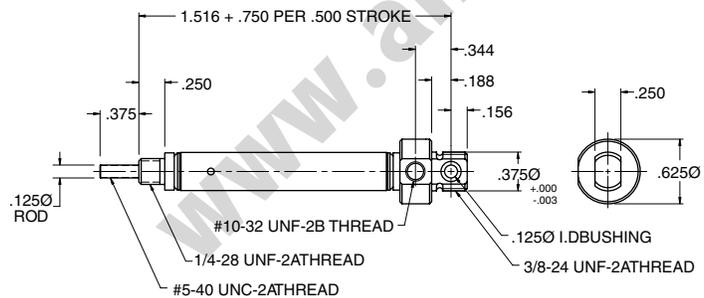
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 4"

Base Weight: .04 lbs., plus .02 lbs. per inch of stroke

*Optional Accessories:

- M117001 Mounting Bracket (with front nose mount)
- M117002 Mounting Bracket (with rear nose mount)
- M129001 Pivot Bracket
- M127002 Rod Clevis



Single Acting Spring Extend – **0313R01-00A**
Front Nose Mount

Standard Stroke Lengths:

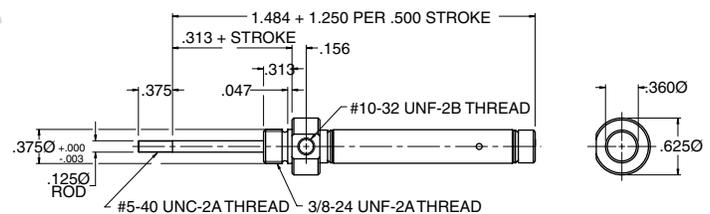
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 4"

Base Weight: .05 lbs., plus .03 lbs. per inch of stroke

*Optional Accessories:

- M117002 Mounting Bracket
- M127001 Rod Clevis



Single Acting Spring Extend – **0313R02-00A**
Double Nose or Rear Pivot Mount

Standard Stroke Lengths:

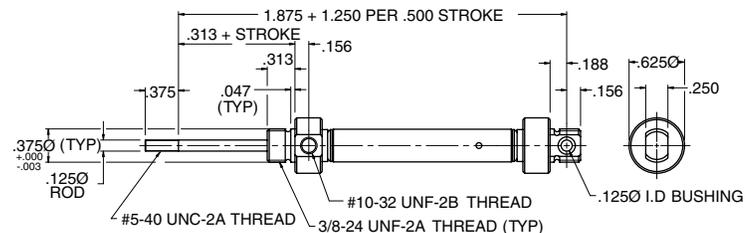
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 4"

Base Weight: .05 lbs., plus .03 lbs. per inch of stroke

*Optional Accessories:

- M117002 Mounting Bracket
- M129001 Pivot Bracket
- M127001 Rod Clevis





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5/16" Bore Cylinder

Double Acting – **0313D01-00A**
Front Nose Mount

Standard- Stroke Lengths:

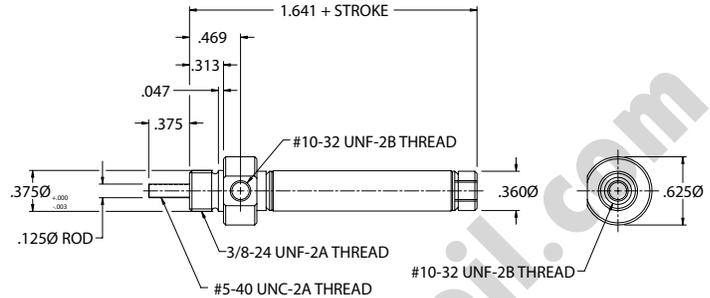
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 4"

Base Weight: .05 lbs., plus .01 lbs. per inch of stroke

*Optional Accessories:

- M117002 Mounting Bracket
- M127001 Rod Clevis



Double Acting – **0313D02-00A**

Double Nose or Rear Pivot Mount

Standard Stroke Lengths:

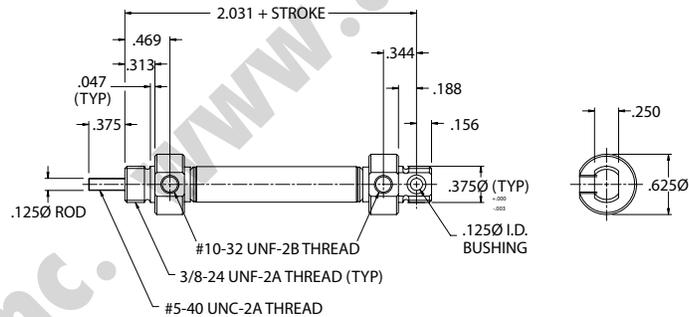
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 4"

Base Weight: .06 lbs., plus .01 lbs. per inch of stroke

*Optional Accessories:

- M117002 Mounting Bracket
- M129001 Pivot Bracket
- M127001 Rod Clevis



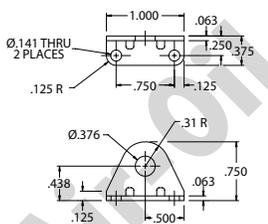
5/16" Bore Cylinder Specifications

- $(0.07) \times (\text{Air Line Pressure}) = \text{Approximate Force Exerted}$
- Enclosed spring force: .5 lbs. retracted, 1 lbs. extended.
- Mounting nuts are standard on all nose mount cylinders.
- Viton® seals are optional on all cylinders for 200° - 350°F applications.

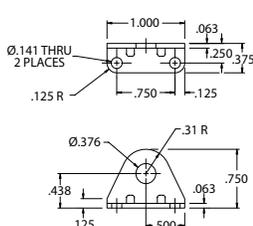
5/16" Bore Accessories

Nose Mounting Brackets

M117001

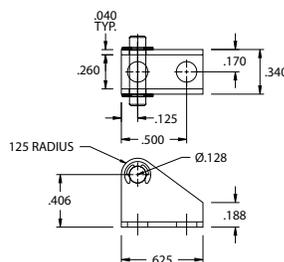


M117002



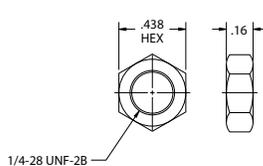
Pivot Mount Bracket

M129001

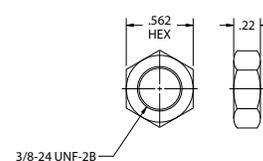


Mounting Nuts

M190001

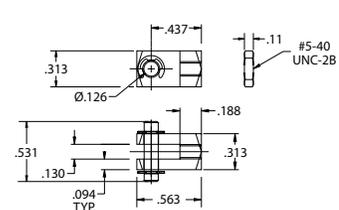


M190002



Rod Clevis

M127001





7/16" Bore Cylinder

Single Acting Spring Return – **0438S01-00A**
Front Nose Mount

Standard Stroke Lengths:

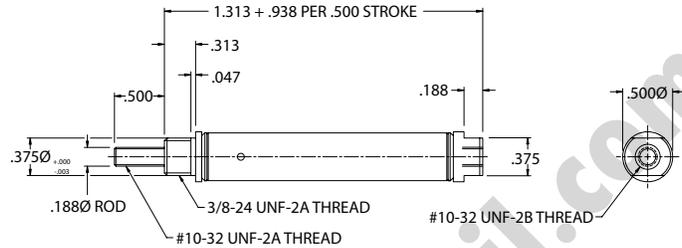
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 6"

Base Weight: .04 lbs., plus .04 lbs. per inch of stroke

*Optional Accessories:

- M117004 Mounting Bracket
- M127002 Rod Clevis



Single Acting Spring Return – **0438S02-00A**
Rear Pivot Mount

Standard Stroke Lengths:

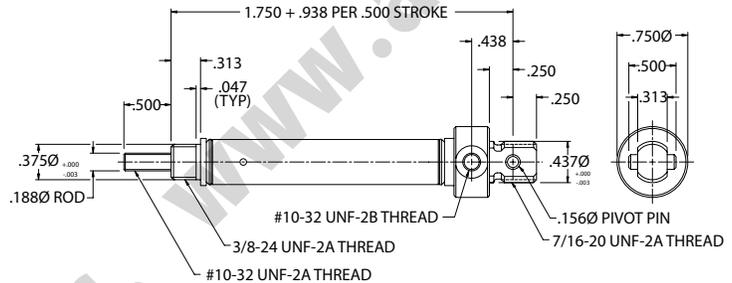
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 6"

Base Weight: .04 lbs., plus .04 lbs. per inch of stroke

*Optional Accessories:

- M029002 Pivot Bracket
- M127002 Rod Clevis



Single Acting Spring Extend – **0438R01-00A**
Front Nose Mount

Standard Stroke Lengths:

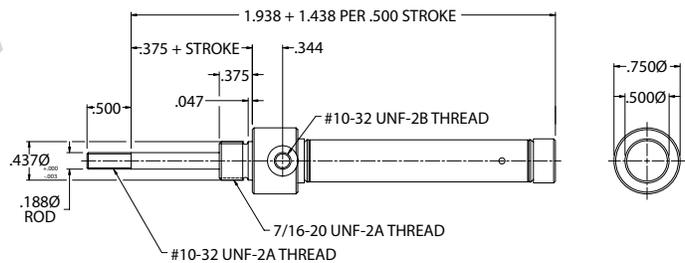
1/2", 1", 1-1/2", 2", 2-1/2", 3"

Maximum Stroke: 6"

Base Weight: .08 lbs., plus .03 lbs. per inch of stroke

*Optional Accessories:

- M117003 Mounting Bracket
- M127002 Rod Clevis



Single Acting Spring Extend – **0438R02-00A**
Rear Pivot Mount

Standard Stroke Lengths:

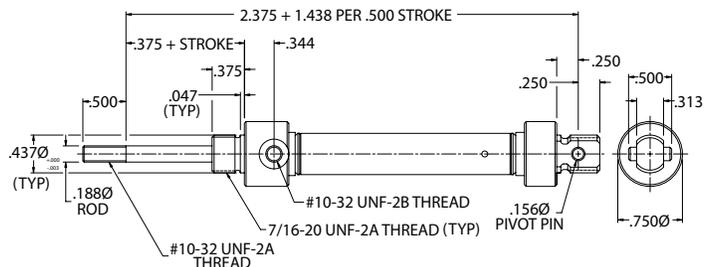
1/2", 1", 1-1/2", 2", 2-1/2", 3"

Maximum Stroke: 6"

Base Weight: .08 lbs., plus .03 lbs. per inch of stroke

*Optional Accessories:

- M029002 Pivot Bracket
- M127002 Rod Clevis





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7/16" Bore Cylinder

Double Acting – **0438D01-00A**
Front Nose Mount

Standard Stroke Lengths:

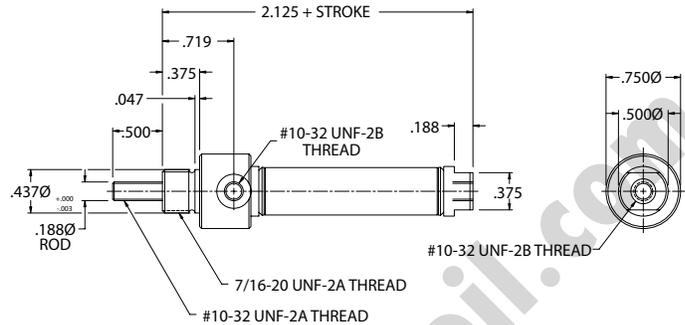
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 12"

Base Weight: .07 lbs., plus .02 lbs. per inch of stroke

*Optional Accessories:

- M117003 Mounting Bracket
- M127002 Rod Clevis



Double Acting – **0438D02-00A**
Rear Pivot Mount

Standard Stroke Lengths:

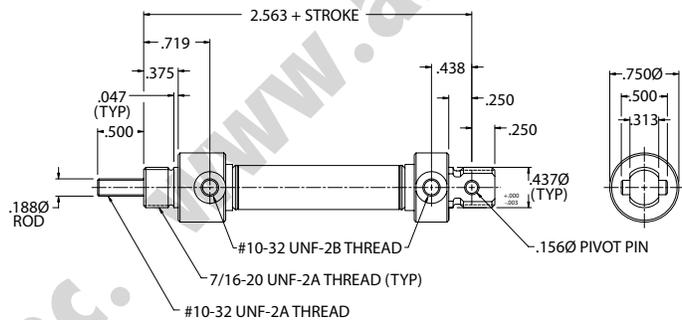
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 12"

Base Weight: .08 lbs., plus .02 lbs. per inch of stroke

*Optional Accessories:

- M029002 Pivot Bracket
- M127002 Rod Clevis



Single Acting Spring Return – **0438N01-00A**
Front Nose Mount **Non-Rotating**

Standard Stroke Lengths:

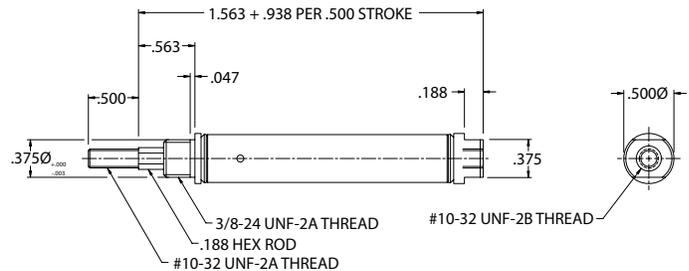
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 6"

Base Weight: .04 lbs., plus .04 lbs. per inch of stroke

*Optional Accessories:

- M117004 Mounting Bracket
- M127002 Rod Clevis



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

Standard Stroke Lengths:

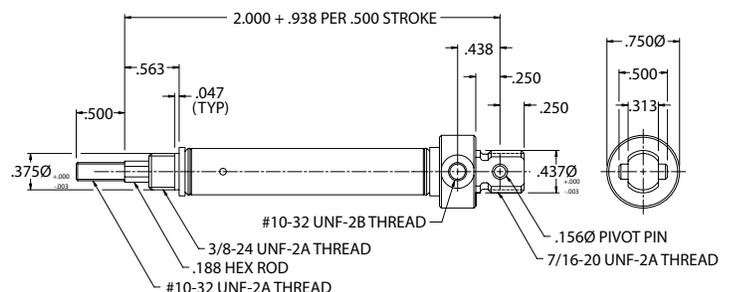
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 6"

Base Weight: .04 lbs., plus .04 lbs. per inch of stroke

*Optional Accessories:

- M029002 Pivot Bracket
- M127002 Rod Clevis





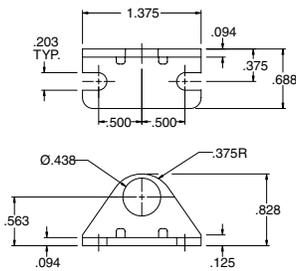
7/16" Bore Cylinder Specifications

- (0.15) X (Air Line Pressure) = Approximate Force Extended
- Enclosed spring force: 1 lbs. retracted, 2 lbs. extended.
- Mounting nuts are standard on all nose mount cylinders.
- Viton® seals are optional on all cylinders for 200° - 350°F applications.

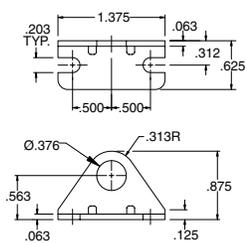
7/16" Bore Accessories

Nose Mounting Brackets

M117003

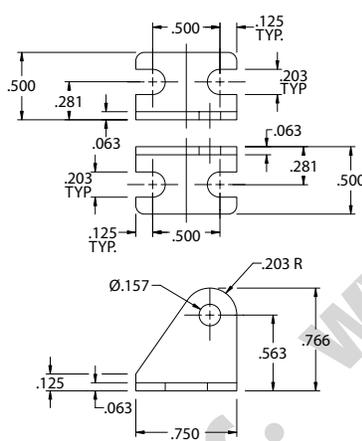


M117004



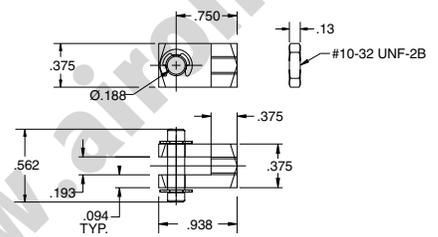
Pivot Mount Bracket

M029002



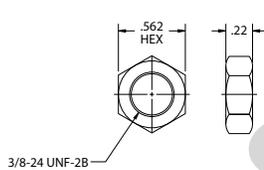
Rod Clevis

M127002

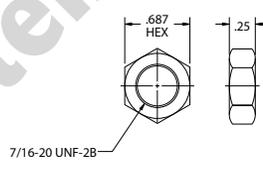


Mounting Nuts

M190002



M190003





M Series Round Line

NUMATICS®

9/16" Bore Cylinder

Single Acting Spring Return – **0563S01-00A**
Front Nose Mount

Standard Stroke Lengths:

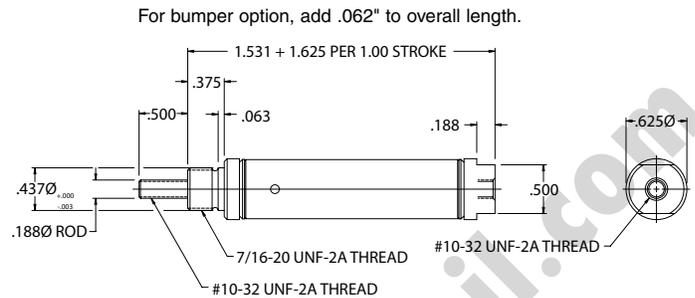
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 6"

Base Weight: .06 lbs., plus .05 lbs. per inch of stroke

*Optional Accessories:

- M117003 Mounting Bracket
- M127002 Rod Clevis



Single Acting Spring Return – **0563S02-00A**
Double Nose or Rear Pivot Mount

Standard Stroke Lengths:

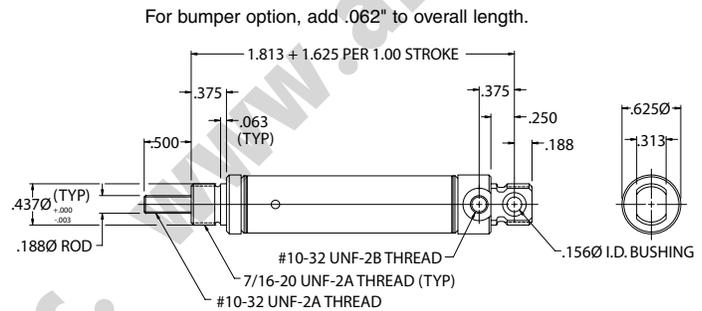
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 6"

Base Weight: .06 lbs., plus .05 lbs. per inch of stroke

*Optional Accessories:

- M117003 Mounting Bracket
- M129002 Pivot Bracket
- M127002 Rod Clevis



Single Acting Spring Extend – **0563R01-00A**
Front Nose Mount

Standard Stroke Lengths:

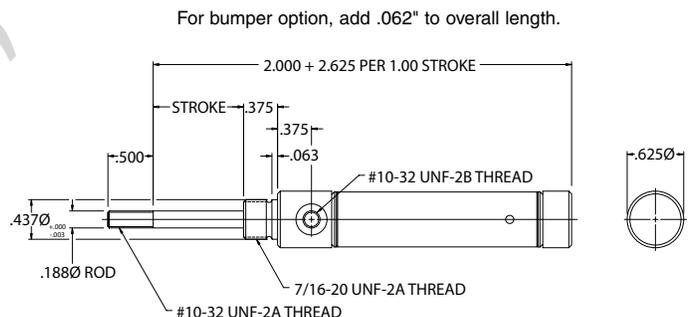
1/2", 1", 1-1/2", 2", 2-1/2", 3"

Maximum Stroke: 6"

Base Weight: .08 lbs., plus .04 lbs. per inch of stroke

*Optional Accessories:

- M117003 Mounting Bracket
- M127002 Rod Clevis



Single Acting Spring Extend – **0563R02-00A**
Double Nose or Rear Pivot Mount

Standard Stroke Lengths:

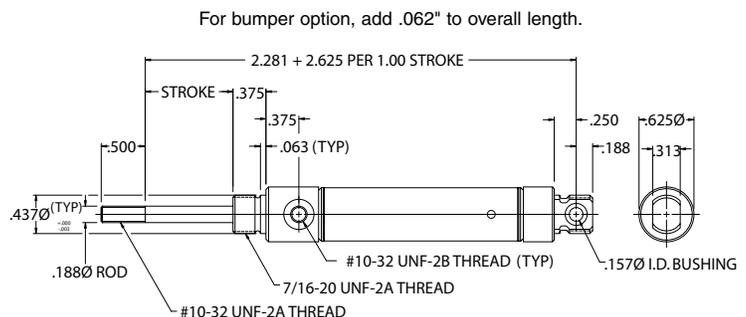
1/2", 1", 1-1/2", 2", 2-1/2", 3"

Maximum Stroke: 6"

Base Weight: .08 lbs., plus .04 lbs. per inch of stroke

*Optional Accessories:

- M117003 Mounting Bracket
- M129002 Pivot Bracket
- M127002 Rod Clevis





9/16" Bore Cylinder

Double Acting – **0563D01-00A**
Front Nose Mount

Standard Stroke Lengths:

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

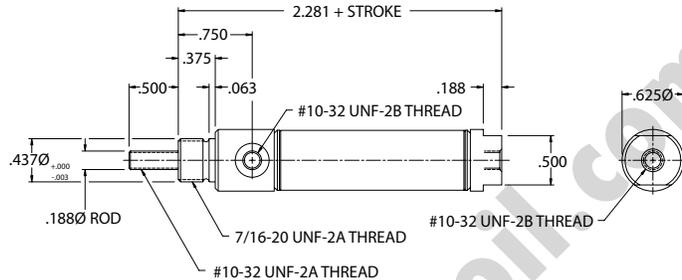
Maximum Stroke: 12"

Base Weight: .09 lbs., plus .02 lbs. per inch of stroke

*Optional Accessories:

- M117003 Mounting Bracket
- M127002 Rod Clevis

For bumper option, add .125" to overall length.
For magnetic band option, add .250" to overall length.



Double Acting – **0563D02-00A**

Double Nose or Rear Pivot Mount

Standard Stroke Lengths:

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

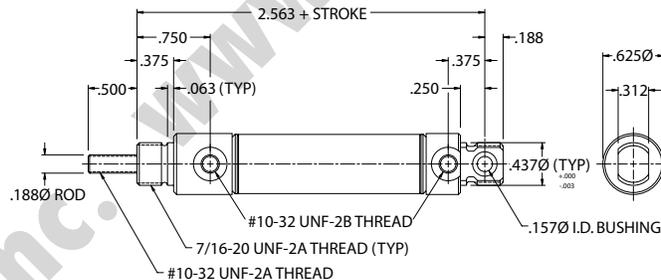
Maximum Stroke: 12"

Base Weight: .09 lbs., plus .02 lbs. per inch of stroke

*Optional Accessories:

- M117003 Mounting Bracket
- M129002 Pivot Bracket
- M127002 Rod Clevis

For bumper option, add .125" to overall length.
For magnetic band option, add .250" to overall length.



Single Acting Spring Return – **0563N01-00A** Front Nose Mount **Non-Rotating**

Standard Stroke Lengths:

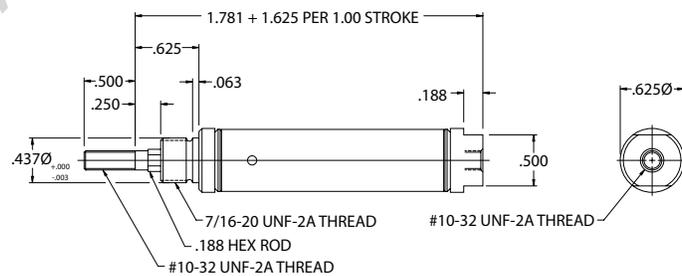
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 6"

Base Weight: .06 lbs., plus .05 lbs. per inch of stroke

*Optional Accessories:

- M117003 Mounting Bracket
- M127002 Rod Clevis



Single Acting Spring Return – **0563N02-00A** Rear Pivot Mount **Non-Rotating**

Standard Stroke Lengths:

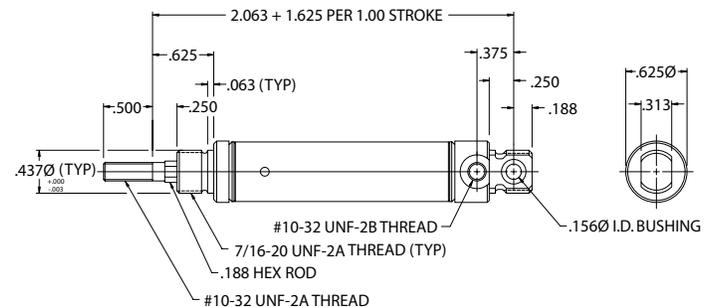
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 6"

Base Weight: .06 lbs., plus .05 lbs. per inch of stroke

*Optional Accessories:

- M117003 Mounting Bracket
- M129002 Pivot Bracket
- M127002 Rod Clevis





M Series Round Line

NUMATICS®

9/16" Bore Cylinder

Double Acting – 0563D03-00A Through Rod

Standard Stroke Lengths:

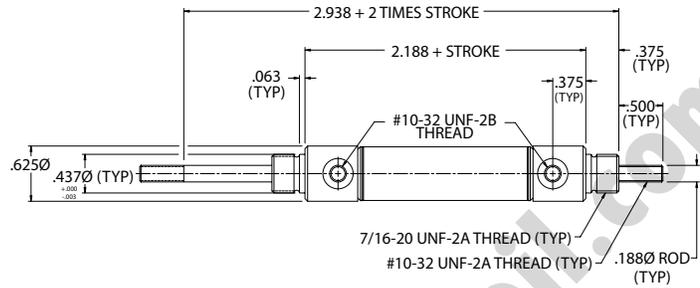
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"

Maximum Stroke: 12"

Base Weight: .16 lbs., plus .03 lbs. per inch of stroke

*Optional Accessories:

- M117003 Mounting Bracket
- M127002 Rod Clevis



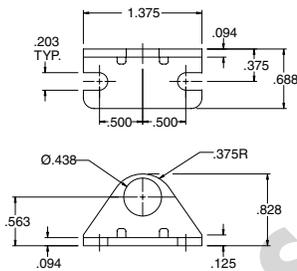
9/16" Bore Cylinder Specifications

- $(0.15) \times (\text{Air Line Pressure}) = \text{Approximate Force Extended}$
- Enclosed spring force: 2 lbs. retracted, 4 lbs. extended.
- Mounting nuts are standard on all nose mount cylinders.
- Viton® seals are optional on all cylinders for 200° - 350°F applications.
- Bumpers are optional on all 9/16" bore cylinders (except in combination with Viton® option).
- Bumper option on single acting cylinders adds .062" to overall length.
- Bumper option on double acting cylinders adds .125" to overall length.
- Magnetic band option on 9/16" bore double acting cylinders adds .250" to overall length.

9/16" Bore Accessories

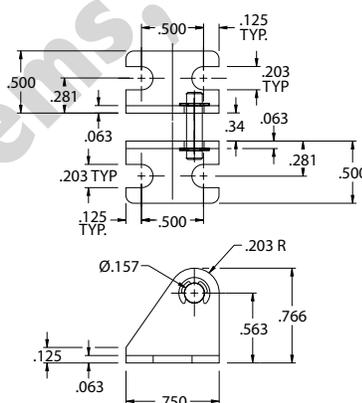
Nose Mounting Bracket

M117003



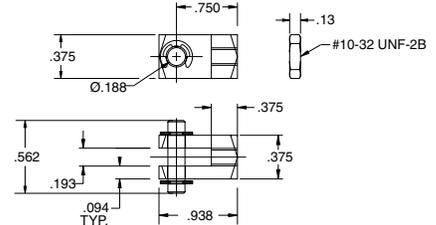
Pivot Mount Bracket

M129002



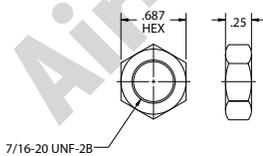
Rod Clevis

M127002



Mounting Nuts

M190003





3/4" Bore Cylinder

Single Acting Spring Return – **0750S01-00A**
Front Nose Mount

Standard Stroke Lengths:

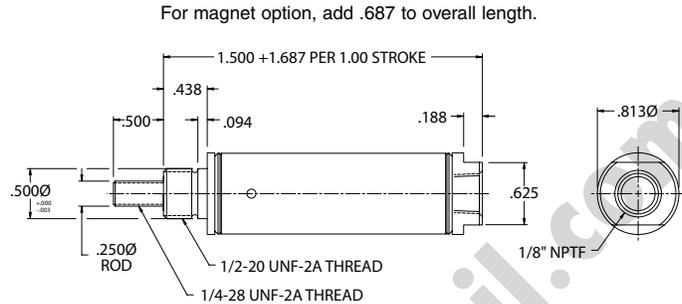
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 6"

Base Weight: .10 lbs., plus .08 lbs. per inch of stroke

*Optional Accessories:

- M117006 Mounting Bracket
- M127003 Rod Clevis



Single Acting Spring Return – **0750S02-00A**
Rear Pivot Mount

Standard Stroke Lengths:

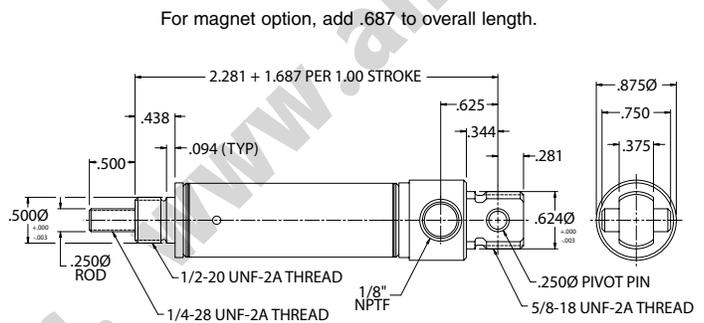
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 6"

Base Weight: .13 lbs., plus .08 lbs. per inch of stroke

*Optional Accessories:

- M029003 Pivot Bracket
- M127003 Rod Clevis



Single Acting Spring Extend – **0750R01-00A**
Front Nose Mount

Standard Stroke Lengths:

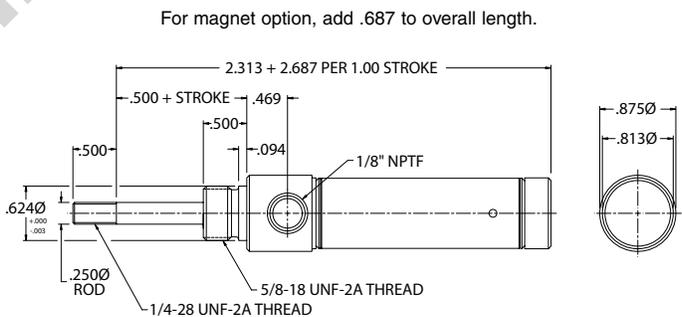
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 6"

Base Weight: .18 lbs., plus .07 lbs. per inch of stroke

*Optional Accessories:

- M117005 Mounting Bracket
- M127003 Rod Clevis



Single Acting Spring Extend – **0750R02-00A**
Rear Pivot Mount

Standard Stroke Lengths:

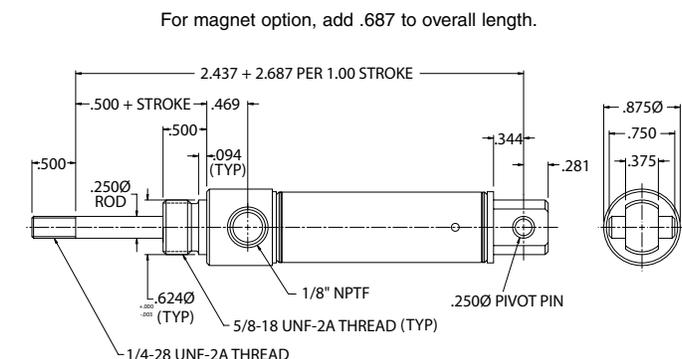
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 6"

Base Weight: .18 lbs., plus .07 lbs. per inch of stroke

*Optional Accessories:

- M029003 Pivot Bracket
- M127003 Rod Clevis





M Series Round Line

NUMATICS®

3/4" Bore Cylinder

Double Acting – **0750D01-00A**
Front Nose Mount

Standard Stroke Lengths:

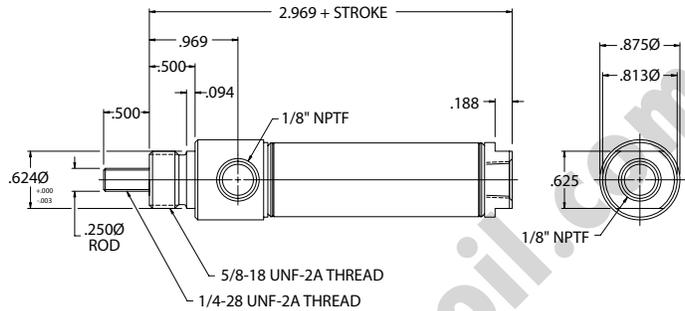
1/2", 1", 1-1/2" 2", 3", 4", 5", 6"

Maximum Stroke: 12"

Base Weight: .21 lbs., plus .03 lbs. per inch of stroke

*Optional Accessories:

- M117005 Mounting Bracket
- M127003 Rod Clevis



Double Acting – **0750D02-00A**
Rear Pivot Mount

Standard Stroke Lengths:

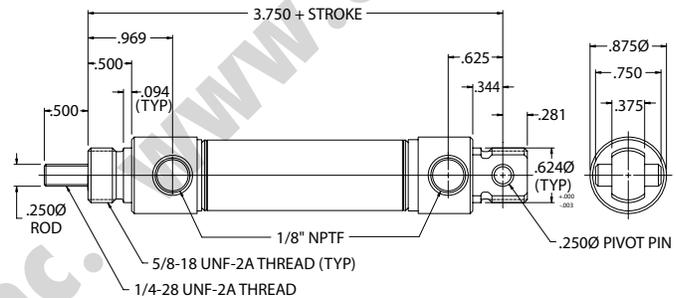
**1/2", 1", 1-1/2" 2", 2-1/2", 3", 4", 5", 6", 7",
8", 9" 10", 11", 12"**

Maximum Stroke: 32"

Base Weight: .21 lbs., plus .03 lbs. per inch of stroke

*Optional Accessories:

- M029003 Pivot Bracket
- M127003 Rod Clevis



Double Acting – **0750D04-00A**
Double Nose or Rear Pivot Mount

Standard Stroke Lengths:

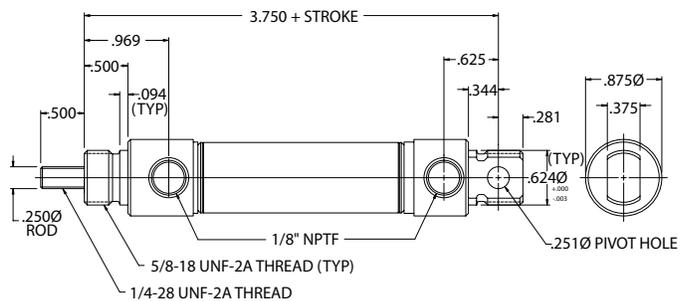
**1/2", 1", 1-1/2" 2", 2-1/2", 3", 4", 5", 6", 7",
8", 9", 10", 11", 12"**

Maximum Stroke: 32"

Base Weight: .29 lbs., plus .03 lbs. per inch of stroke

*Optional Accessories:

- M117005 Mounting Bracket
- M129003 Pivot Bracket
- M127003 Rod Clevis



Single Acting Spring Return – **0750N01-00A**
Front Nose Mount **Non-Rotating**

Standard Stroke Lengths:

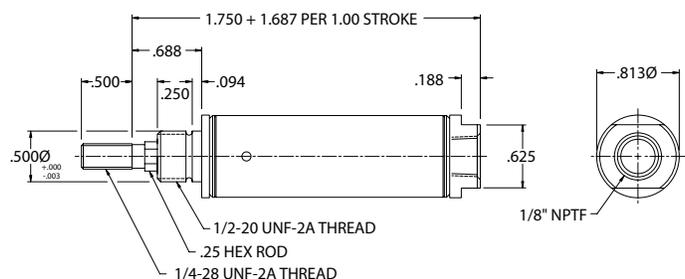
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 6"

Base Weight: .10 lbs., plus .08 lbs. per inch of stroke

*Optional Accessories:

- M117006 Mounting Bracket
- M127003 Rod Clevis





3/4" Bore Cylinder

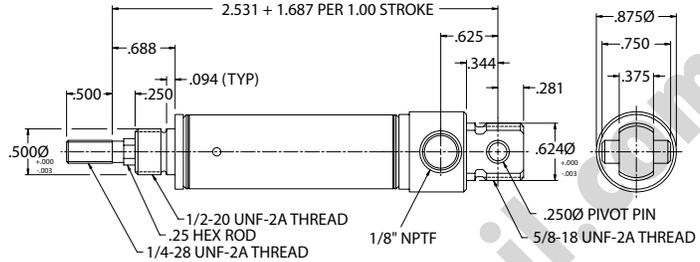
Single Acting Spring Return – **0750N02-00A**
Rear Pivot Mount **Non-Rotating**

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

Maximum Stroke: 6"

Base Weight: .12 lbs., plus .08 lbs. per inch of stroke

- *Optional Accessories:
- M029003 Pivot Bracket
 - M127003 Rod Clevis



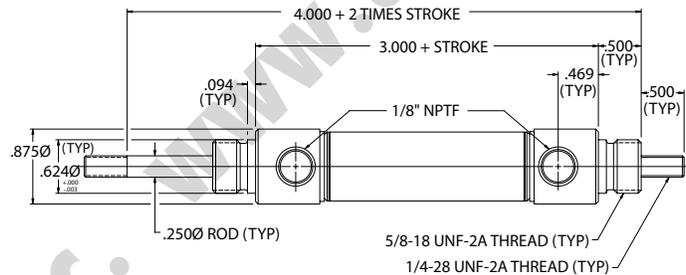
Double Acting – **0750D03-00A** Through Rod

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

Maximum Stroke: 12"

Base Weight: .37 lbs., plus .04 lbs. per inch of stroke

- *Optional Accessories:
- M117005 Mounting Bracket
 - M127003 Rod Clevis



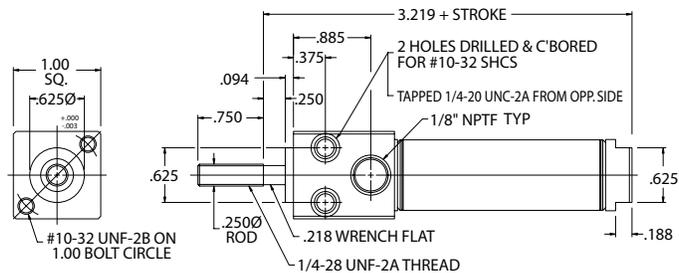
Double Acting – **0750D05-00A** Front Block Mount

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

Maximum Stroke: 12"

Base Weight: .22 lbs., plus .03 lbs. per inch of stroke

- *Optional Accessories:
- M127003 Rod Clevis



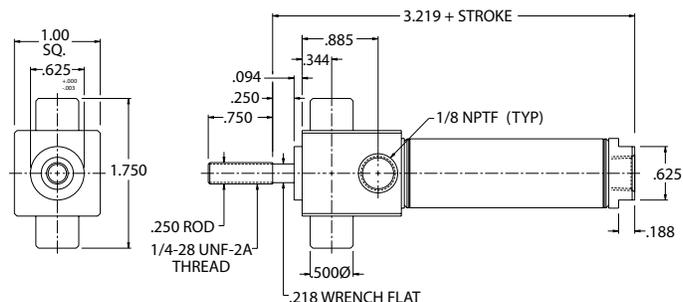
Double Acting – **0750D06-00A** Trunnion Mount

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

Maximum Stroke: 12"

Base Weight: .29 lbs., plus .03 lbs. per inch of stroke

- *Optional Accessories:
- M029003 Pivot Bracket
 - M127003 Rod Clevis





M Series Round Line

NUMATICS®

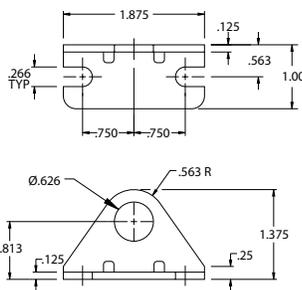
3/4" Bore Cylinder Specifications

- (0.4) X (Air Line Pressure) = Approximate Force Exerted
- Enclosed spring force: 3 lbs. retracted, 6 lbs. extended.
- Mounting nuts are standard on all nose mount cylinders.
- Viton® seals are optional on all cylinders for 200° - 350°F applications.
- Bumpers are optional on all 3/4" bore cylinders (except in combination with Viton® option).
- Magnetic piston optional on all double acting 3/4" bore cylinders (except in combination with Viton® option).
- Bumper option on 3/4" bore single acting cylinders adds .125" to overall length, but does not effect the overall length of double acting cylinders.

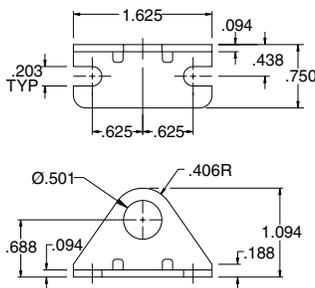
3/4" Bore Accessories

Nose Mounting Brackets

M117005

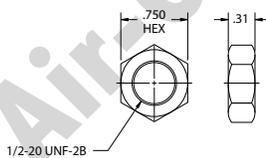


M117006

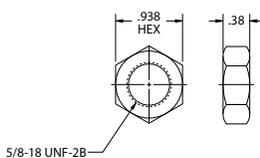


Mounting Nuts

M190004

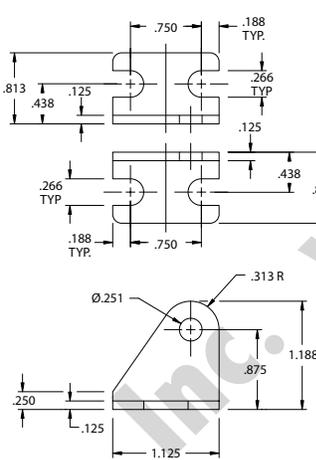


M190005

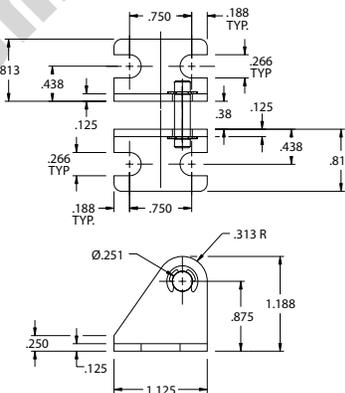


Pivot Mount Bracket

M029003

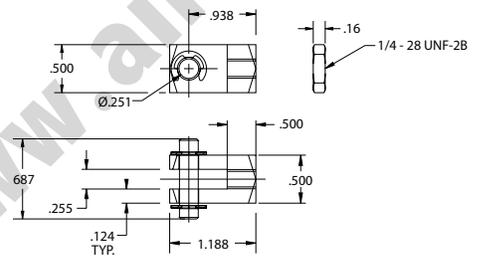


M129003



Rod Clevis

M127003





M Series Round Line

NUMATICS®

7/8" Bore Cylinder

Double Acting – **0875D01-00A**
Front Nose Mount

Standard Stroke Lengths:

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

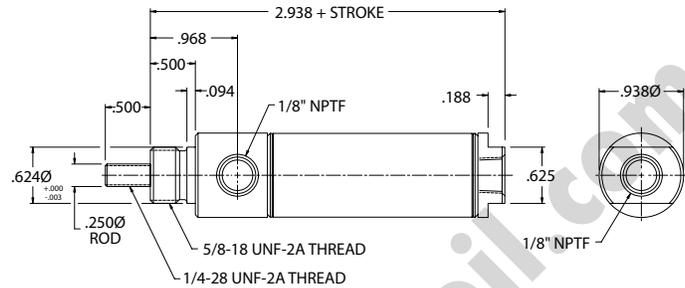
Maximum Stroke: 12"

Base Weight: .25 lbs., plus .03 lbs. per inch of stroke

*Optional Accessories:

- M117005 Mounting Bracket
- M127003 Rod Clevis

For bumper and magnet option on 7/8" bore double acting cylinders adds .125" to overall length.



Double Acting – **0875D02-00A**
Rear Pivot Mount

Standard Stroke Lengths:

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

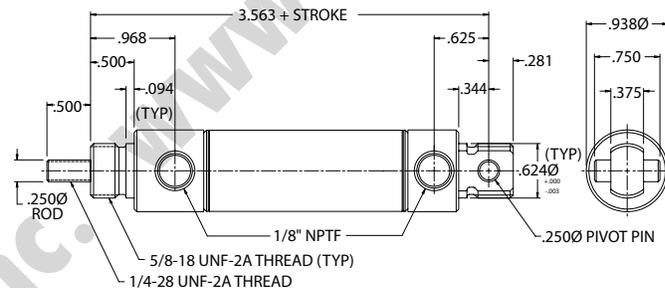
Maximum Stroke: 32"

Base Weight: .32 lbs., plus .03 lbs. per inch of stroke

*Optional Accessories:

- M029003 Pivot Bracket
- M127003 Rod Clevis

For bumper and magnet option on 7/8" bore double acting cylinders adds .125" to overall length.



Double Acting – **0875D04-00A**
Double Nose or Rear Pivot Mount

Standard Stroke Lengths:

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

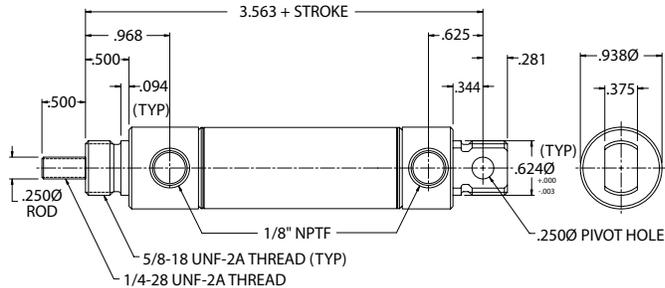
Maximum Stroke: 32"

Base Weight: .32 lbs., plus .03 lbs. per inch of stroke

*Optional Accessories:

- M117005 Mounting Bracket
- M129003 Pivot Bracket
- M127003 Rod Clevis

For bumper and magnet option on 7/8" bore double acting cylinders adds .125" to overall length.



Single Acting Spring Return – **0875N01-00A**
Front Nose Mount **Non-Rotating**

Standard Stroke Lengths:

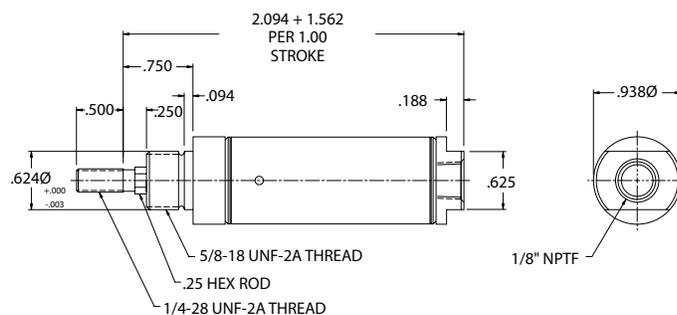
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 6"

Base Weight: .17 lbs., plus .09 lbs. per inch of stroke

*Optional Accessories:

- M117005 Mounting Bracket
- M127003 Rod Clevis





7/8" Bore Cylinder

Single Acting Spring Return – **0875N02-00A**
Rear Pivot Mount **Non-Rotating**

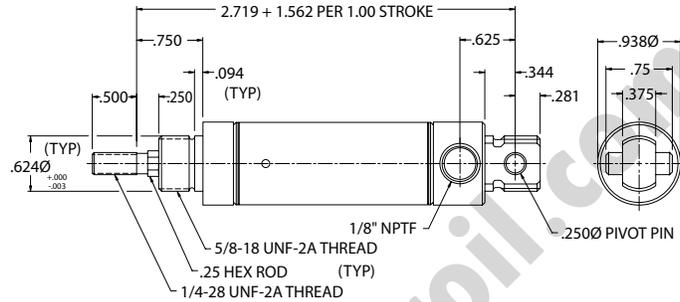
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 6"

Base Weight: .17 lbs., plus .09 lbs. per inch of stroke

*Optional Accessories:

- M029003 Pivot Bracket
- M127003 Rod Clevis



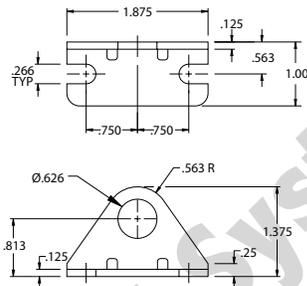
7/8" Bore Cylinder Specifications

- $(0.6) \times (\text{Air Line Pressure}) = \text{Approximate Force Exerted}$
- Enclosed spring force: 3 lbs. retracted, 6 lbs. extended.
- Mounting nuts are standard on all nose mount cylinders.
- Viton® seals are optional on all cylinders for 200° - 350°F applications.
- Bumpers are optional on all 7/8" bore cylinders (except in combination with Viton® option).
- Magnetic piston optional on all double acting 7/8" bore cylinders (except in combination with Viton® option).
- Bumper and magnet option on 7/8" bore double acting bore cylinders adds .125" to overall length.

7/8" Bore Accessories

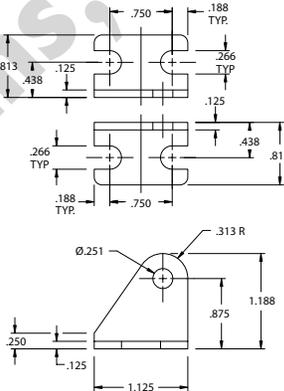
Nose Mounting Brackets

M117005



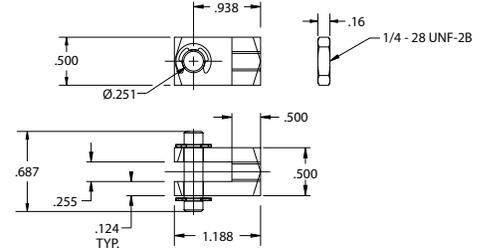
Pivot Mount Bracket

M029003



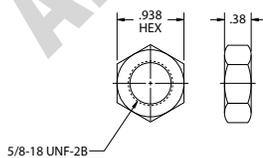
Rod Clevis

M127003

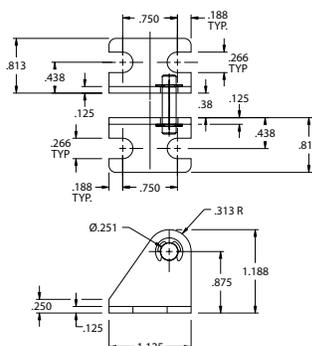


Mounting Nuts

M190005



M129003





M Series Round Line

NUMATICS®

1-1/16" Bore Cylinder

Single Acting Spring Return – **1062S01-00A**
Front Nose Mount

Standard Stroke Lengths:

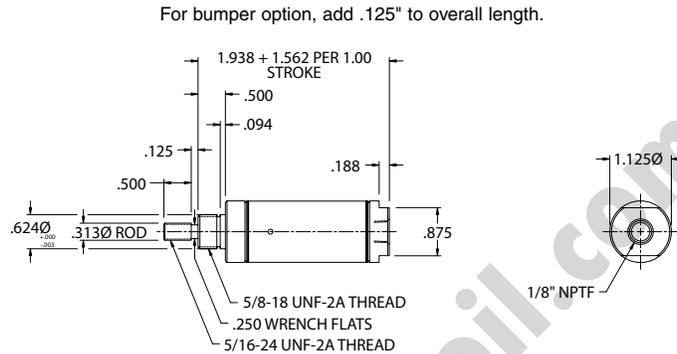
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"

Maximum Stroke: 6"

Base Weight: .23 lbs., plus .11 lbs. per inch of stroke

*Optional Accessories:

- M117005 Mounting Bracket
- M127004 Rod Clevis



Single Acting Spring Return – **1062S02-00A**
Rear Pivot Mount

Standard Stroke Lengths:

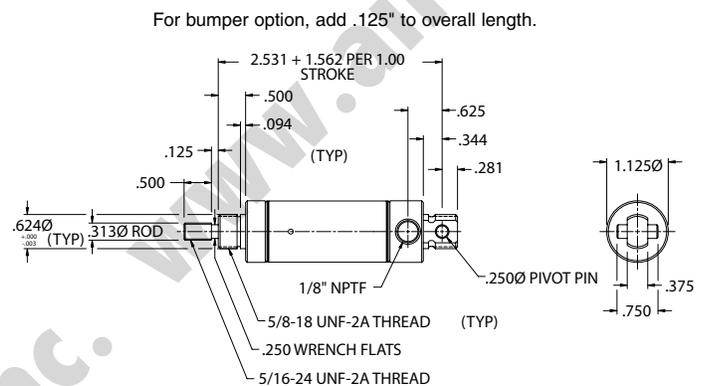
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 6"

Base Weight: .24 lbs., plus .11 lbs. per inch of stroke

*Optional Accessories:

- M029003 Pivot Bracket
- M127004 Rod Clevis



Single Acting Spring Extend – **1062R01-00A**
Front Nose Mount

Standard Stroke Lengths:

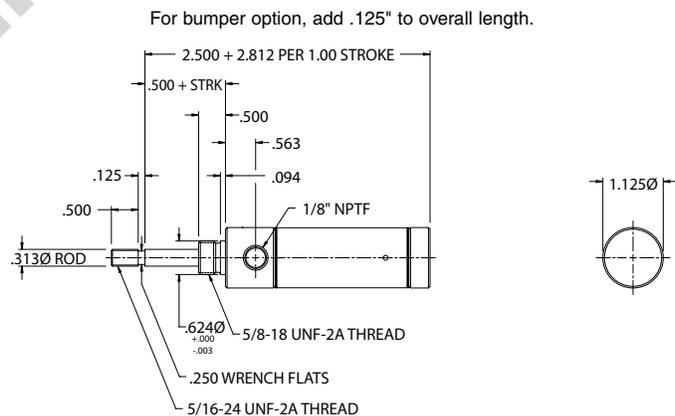
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 6"

Base Weight: .24 lbs., plus .16 lbs. per inch of stroke

*Optional Accessories:

- M117005 Mounting Bracket
- M127004 Rod Clevis



Single Acting Spring Extend – **1062R02-00A**
Rear Pivot Mount

Standard Stroke Lengths:

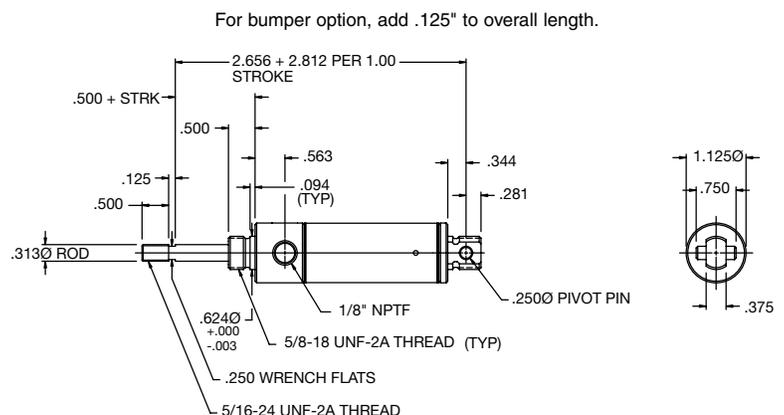
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 6"

Base Weight: .22 lbs., plus .16 lbs. per inch of stroke

*Optional Accessories:

- M029003 Pivot Bracket
- M127004 Rod Clevis





1-1/16" Bore Cylinder

Double Acting – **1062D01-00A**
Front Nose Mount

Standard Stroke Lengths:

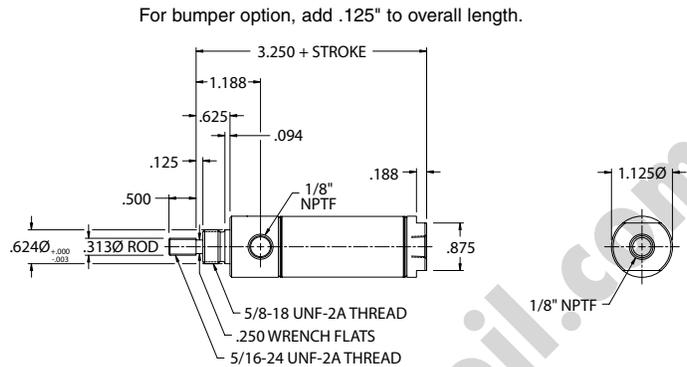
1/2", 1", 1-1/2" 2", 2-1/2", 3", 4", 5", 6"

Maximum Stroke: 12"

Base Weight: .33 lbs., plus .05 lbs. per inch of stroke

*Optional Accessories:

- M117005 Mounting Bracket
- M127004 Rod Clevis



Double Acting – **1062D02-00A**
Rear Pivot Mount

Standard Stroke Lengths:

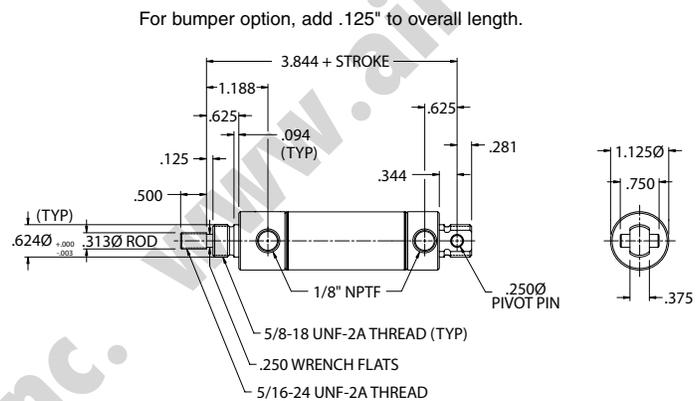
1/2", 1", 1-1/2" 2", 2-1/2", 3", 4", 5", 6", 7",
8", 9", 10", 11", 12"

Maximum Stroke: 32"

Base Weight: .33 lbs., plus .05 lbs. per inch of stroke

*Optional Accessories:

- * M117005 Mounting Bracket
- M029003 Pivot Bracket
- M127004 Rod Clevis



Double Acting – **1062D04-00A**
Double Nose or Rear Pivot Mount

Standard Stroke Lengths:

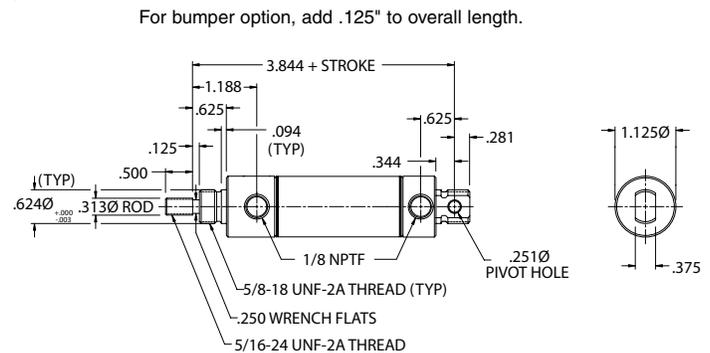
1/2", 1", 1-1/2" 2", 2-1/2", 3", 4", 5", 6", 7",
8", 9", 10", 11", 12"

Maximum Stroke: 32"

Base Weight: .33 lbs., plus .05 lbs. per inch of stroke

*Optional Accessories:

- M117005 Mounting Bracket
- M129003 Pivot Bracket
- M127004 Rod Clevis



Single Acting Spring Return – **1062N01-00A**
Front Nose Mount **Non-Rotating**

Standard Stroke Lengths:

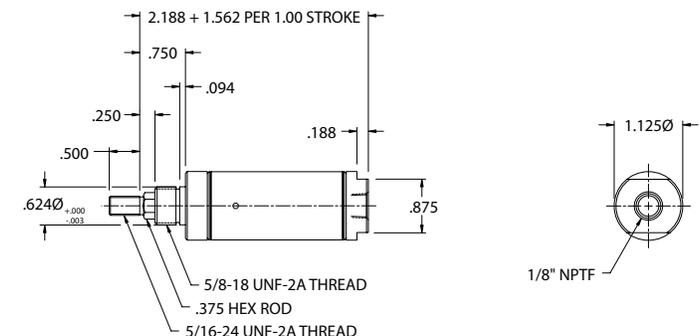
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 6"

Base Weight: .25 lbs., plus .12 lbs. per inch of stroke

*Optional Accessories:

- M117005 Mounting Bracket
- M127004 Rod Clevis





M Series Round Line

NUMATICS®

1-1/16" Bore Cylinder

Single Acting Spring Return – **1062N02-00A**
Rear Pivot Mount **Non-Rotating**

Standard Stroke Lengths:

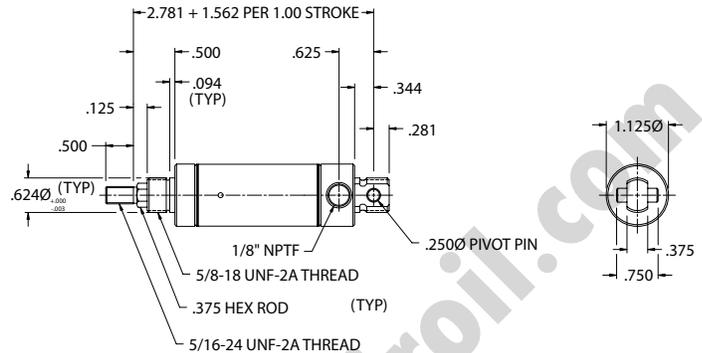
1/2", **1"**, 1-1/2", **2"**, 2-1/2", **3"**, **4"**

Maximum Stroke: 6"

Base Weight: .25 lbs.s., plus .12 lbs.s. per inch of stroke

*Optional Accessories:

- M029003 Pivot Bracket
- M127004 Rod Clevis



Double Acting – **1062D03-00A** Through Rod

Standard Stroke Lengths:

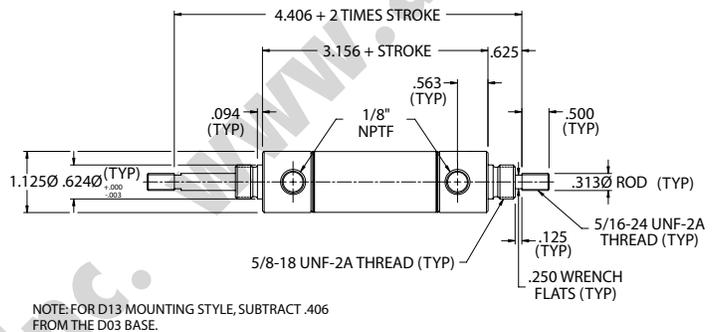
1/2", **1"**, 1-1/2", **2"**, 2-1/2", **3"**, **4"**, **5"**, **6"**

Maximum Stroke: 12"

Base Weight: .48 lbs.s., plus .07 lbs.s. per inch of stroke

*Optional Accessories:

- M117005 Mounting Bracket
- M127004 Rod Clevis



Double Acting – **1062DH3-00A** Through Rod Hollow Rod

Standard Stroke Lengths:

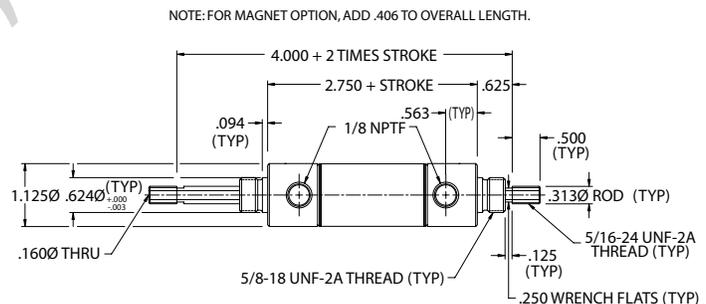
1/2", **1"**, 1-1/2", **2"**, 2-1/2", **3"**, **4"**, **5"**, **6"**

Maximum Stroke: 12"

Base Weight: .47 lbs., plus .07 lbs. per inch of stroke

*Optional Accessories:

- M117005 Mounting Bracket
- M127004 Rod Clevis



Double Acting – **1062D05-00A** Front Block Mount

Standard Stroke Lengths:

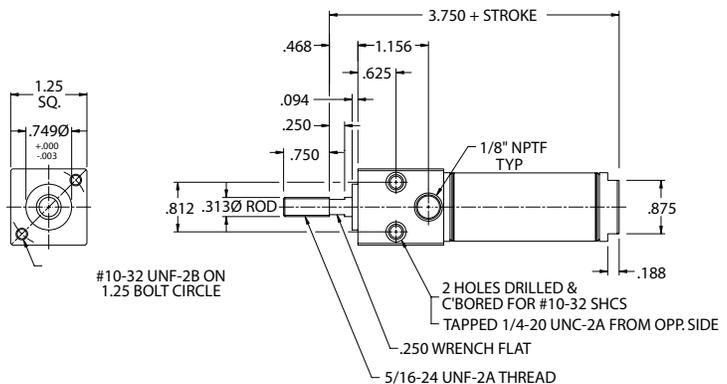
1/2", **1"**, 1-1/2", **2"**, 2-1/2", **3"**, **4"**, **5"**, **6"**

Maximum Stroke: 12"

Base Weight: .49 lbs., plus .05 lbs. per inch of stroke

*Optional Accessories:

- M127004 Rod Clevis





1-1/16" Bore Cylinder

Bore Double Acting – **1062D06-00A**
Trunnion Mount

Standard Stroke Lengths:

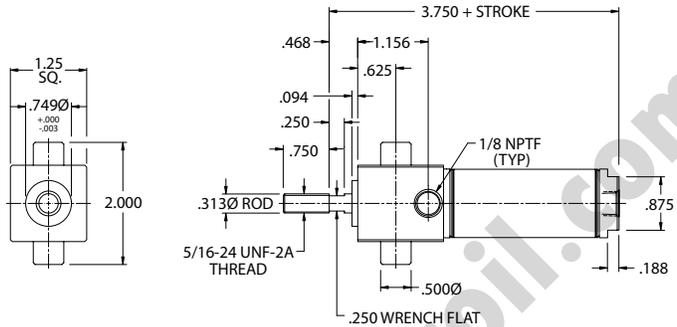
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"

Maximum Stroke: 12"

Base Weight: .49 lbs., plus .05 lbs. per inch of stroke

*Optional Accessories:

- M029006 Pivot Bracket
- M127004 Rod Clevis

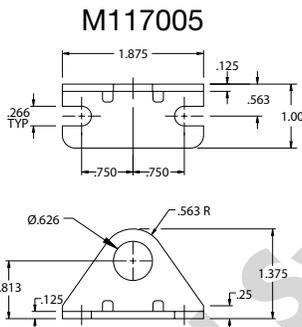


1-1/16" Bore Cylinder Specifications

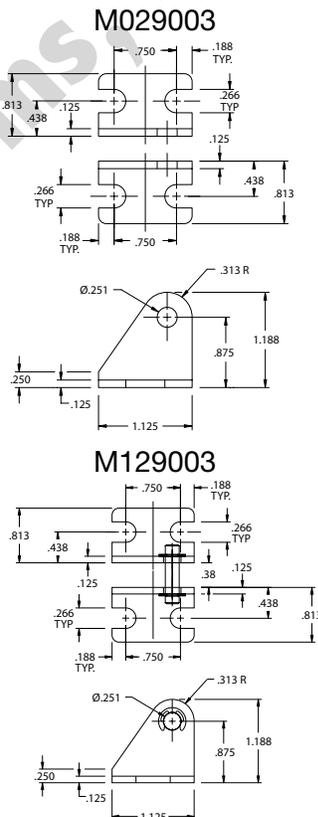
- (0.9) X (Air Line Pressure) = Approximate Force Exerted
- Enclosed spring force: 3 lbs. retracted, 6 lbs. extended. Note that R01 and R02 is 6 lbs. retracted, 12 lbs. extended.
- Mounting nuts are standard on all nose mount cylinders.
- Viton® seals are optional on all cylinders for 200° - 350°F applications.
- Bumpers are optional on all 1-1/16" bore cylinders (except in combination with Viton® option).
- Magnetic piston optional on all double acting 1-1/16" bore cylinders (except in combination with Viton® option).
- For bumper option, add .125" to overall length.
- Magnetic piston option on DH3 mount adds .406 to overall length. For D03 Mount, add 0.25" to overall length.

1-1/16" Bore Accessories

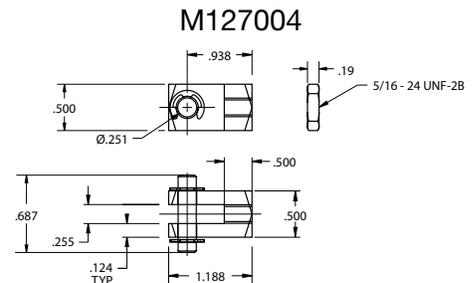
Nose Mounting Brackets



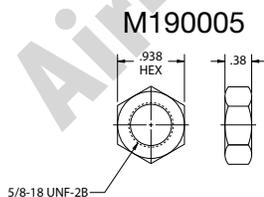
Pivot Mount Bracket



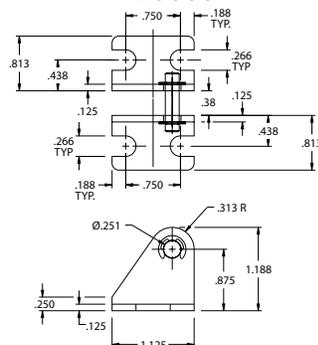
Rod Clevis



Mounting Nuts



M129003





M Series Round Line

NUMATICS®

1-1/4" Bore Cylinder

Single Acting Spring Return – **1250S01-00A**
Front Nose Mount

Standard Stroke Lengths:

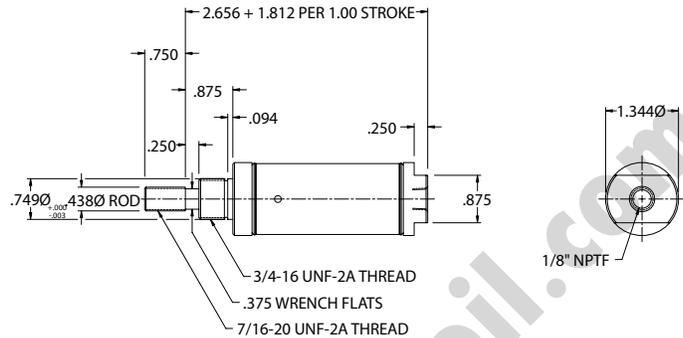
1/2", 1", 1-1/2" **2"**, 2-1/2", 3", 4"

Maximum Stroke: 6"

Base Weight: .39 lbs., plus .21 lbs. per inch of stroke

*Optional Accessories:

- M117007 Mounting Bracket
- M127005 Rod Clevis



Single Acting Spring Return – **1250S02-00A**
Double Nose or Rear Pivot Mount

Standard Stroke Lengths:

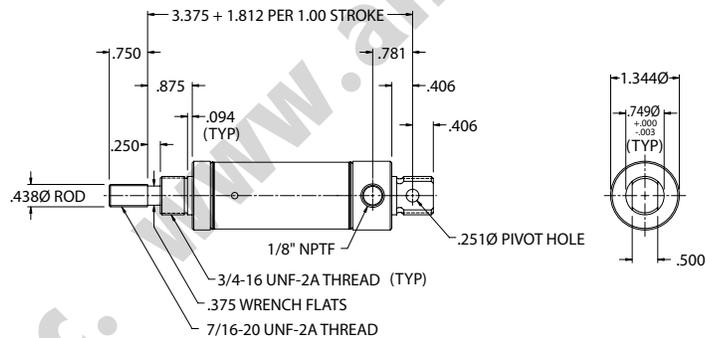
1/2", 1", 1-1/2" **2"**, 2-1/2", 3", 4"

Maximum Stroke: 6"

Base Weight: .53 lbs., plus .21 lbs. per inch of stroke

*Optional Accessories:

- M117007 Mounting Bracket
- M229003 Pivot Bracket
- M127005 Rod Clevis



Single Acting Spring Extend – **1250R01-00A**
Front Nose Mount

Standard Stroke Lengths:

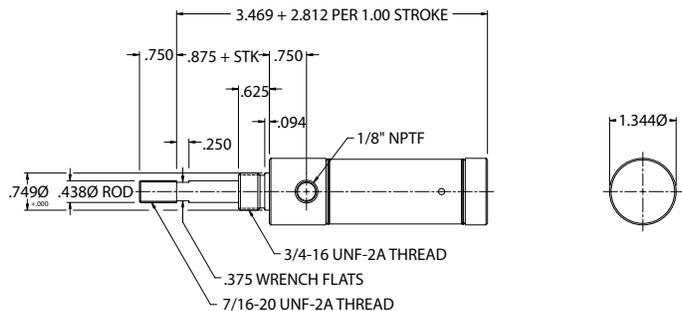
1/2", 1", 1-1/2" **2"**, 2-1/2", 3", 4"

Maximum Stroke: 6"

Base Weight: .50 lbs., plus .21 lbs. per inch of stroke

*Optional Accessories:

- M117007 Mounting Bracket
- M127005 Rod Clevis



Single Acting Spring Extend – **1250R02-00A**
Double Nose or Rear Pivot Mount

Standard Stroke Lengths:

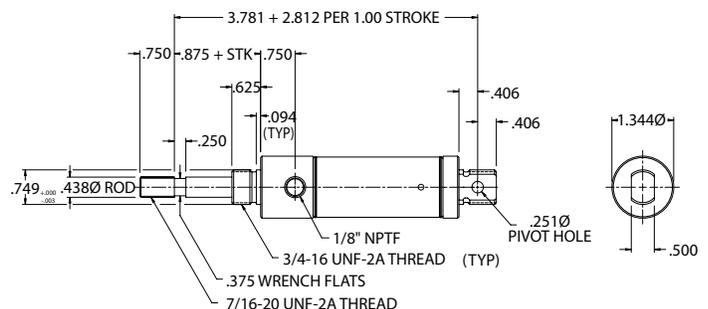
1/2", 1", 1-1/2" **2"**, 2-1/2", 3", 4"

Maximum Stroke: 6"

Base Weight: .57 lbs., plus .21 lbs. per inch of stroke

*Optional Accessories:

- M117007 Mounting Bracket
- M229003 Pivot Bracket
- M127005 Rod Clevis





M Series Round Line

NUMATICS®

1-1/4" Bore Cylinder

Double Acting – 1250D03-00A Through Rod

Standard Stroke Lengths:

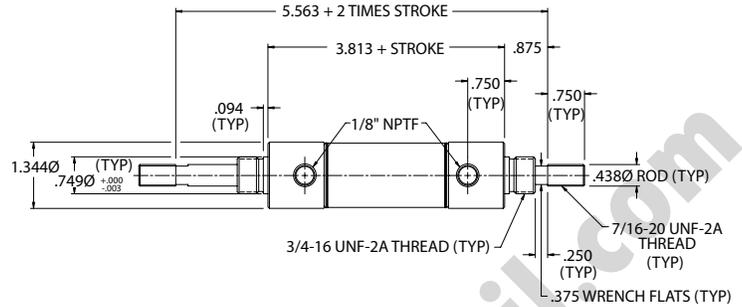
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"

Maximum Stroke: 12"

Base Weight: .98 lbs., plus .12 lbs. per inch of stroke

*Optional Accessories:

- M117007 Mounting Bracket
- M127005 Rod Clevis



Double Acting – 1250DH3-00A Through Rod Hollow Rod

Standard Stroke Lengths:

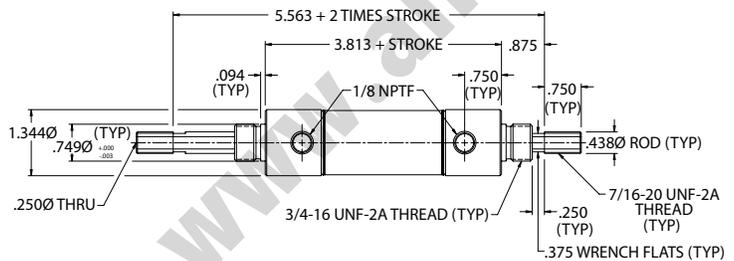
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"

Maximum Stroke: 12"

Base Weight: .97 lbs., plus .12 lbs. per inch of stroke

*Optional Accessories:

- M117007 Mounting Bracket
- M127005 Rod Clevis

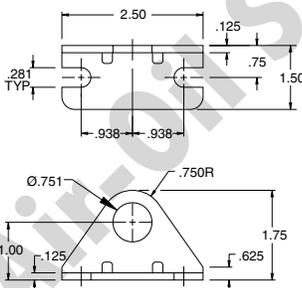


1-1/4" Bore Cylinder Specifications

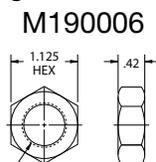
- (1.2) X (Air Line Pressure) = Approximate Force Exerted
- Enclosed spring force: 7.5 lbs. retracted, 15 lbs. extended.
- Mounting nuts are standard on all nose mount cylinders.
- Viton® seals are optional on all cylinders for 200° - 350°F applications.
- Bumpers are optional on all 1-1/4" bore cylinders (except in combination with Viton® option).
- Magnetic piston optional on all double acting 1-1/4" bore cylinders (except in combination with Viton® option).
- Bumper and magnet option on 1-1/4" bore double acting cylinders adds .125" to overall length.

1-1/4" Bore Accessories

Nose Mounting Brackets M117007

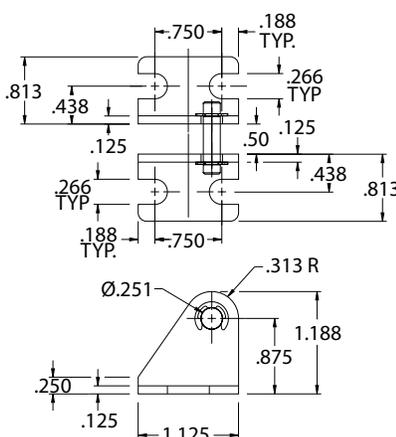


Mounting Nuts M190006

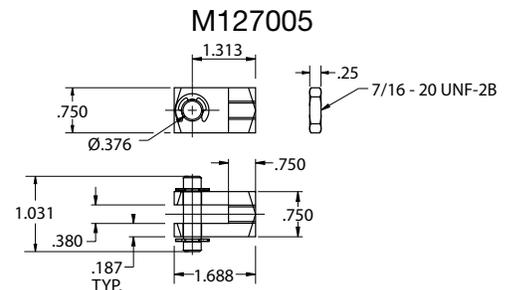


3/4-16 UNF-2B

Pivot Mount Bracket M229003



Rod Clevis M127005





1-1/2" Bore Cylinder

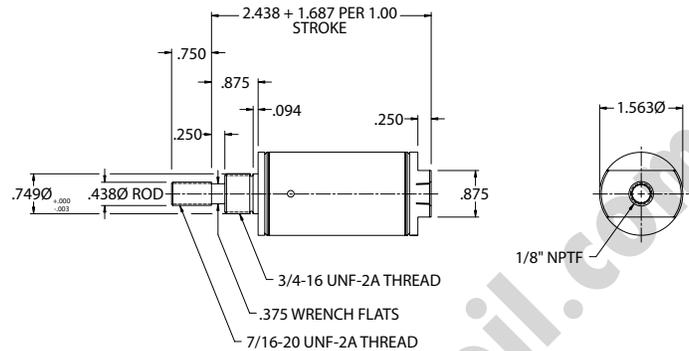
Single Acting Spring Return – **1500S01-00A**
Front Nose Mount

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

Maximum Stroke: 6"

Base Weight: .44 lbs., plus .22 lbs. per inch of stroke

- *Optional Accessories:
- M117007 Mounting Bracket
 - M127005 Rod Clevis



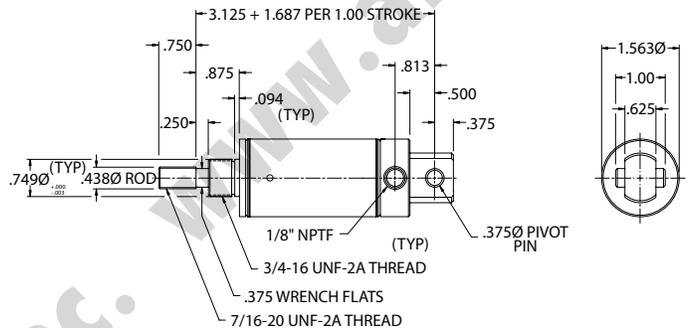
Single Acting Spring Return – **1500S02-00A**
Rear Pivot Mount

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

Maximum Stroke: 6"

Base Weight: .45 lbs., plus .22 lbs. per inch of stroke

- *Optional Accessories:
- M029004 Pivot Bracket
 - M127005 Rod Clevis



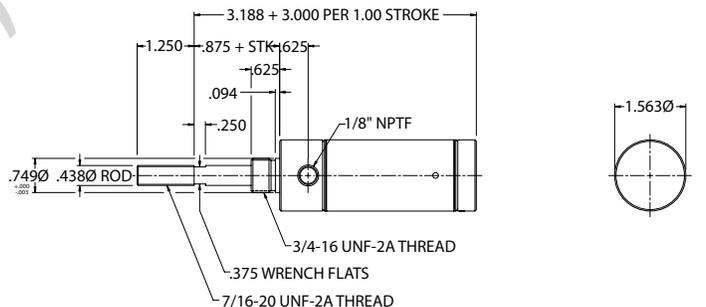
Single Acting Spring Extend – **1500R01-00A**
Front Nose Mount

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

Maximum Stroke: 6"

Base Weight: .44 lbs., plus .22 lbs. per inch of stroke

- *Optional Accessories:
- M117007 Mounting Bracket
 - M127005 Rod Clevis



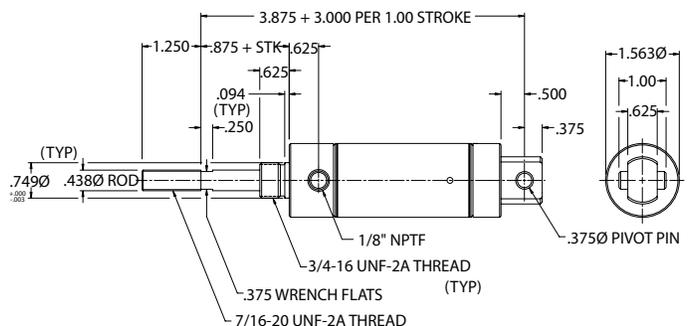
Single Acting Spring Extend – **1500R02-00A**
Rear Pivot Mount

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

Maximum Stroke: 6"

Base Weight: .45 lbs., plus .22 lbs. per inch of stroke

- *Optional Accessories:
- M029004 Pivot Bracket
 - M127005 Rod Clevis





1-1/2" Bore Cylinder

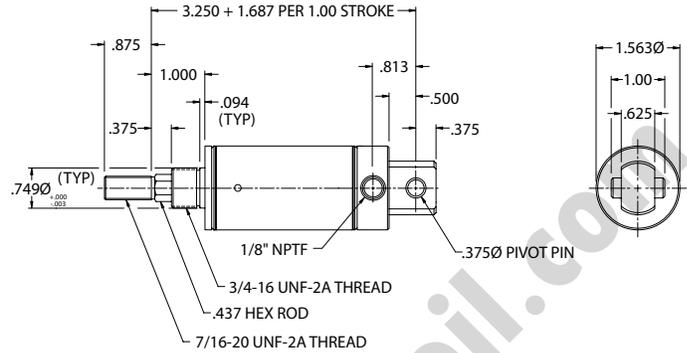
Single Acting Spring Return – **1500N02-00A**
Rear Pivot Mount **Non-Rotating**

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

Maximum Stroke: 6"

Base Weight: .46 lbs., plus .22 lbs. per inch of stroke

- *Optional Accessories:
- M029004 Pivot Bracket
 - M127005 Rod Clevis



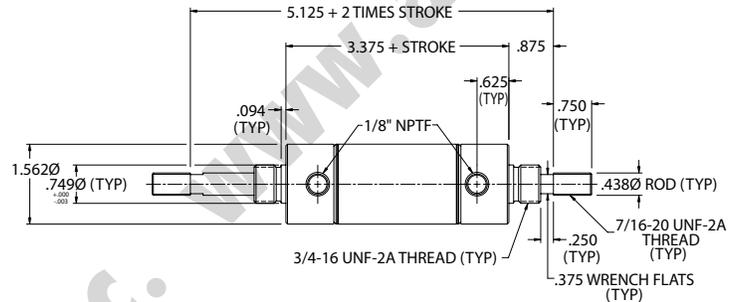
Double Acting – **1500D03-00A** Through Rod

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

Maximum Stroke: 12"

Base Weight: 1.17 lbs., plus .13 lbs. per inch of stroke

- *Optional Accessories:
- M117007 Mounting Bracket
 - M127005 Rod Clevis



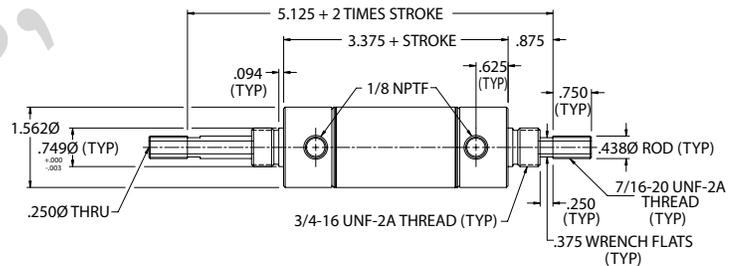
Double Acting – **1500DH3-00A** Through Rod Hollow Rod

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

Maximum Stroke: 12"

Base Weight: 1.16 lbs., plus .13 lbs. per inch of stroke

- *Optional Accessories:
- M117007 Mounting Bracket
 - M127005 Rod Clevis



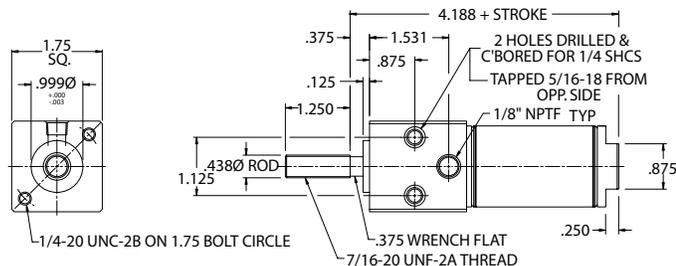
Double Acting – **1500D05-00A** Front Block Mount

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

Maximum Stroke: 12"

Base Weight: .99 lbs., plus .08 lbs. per inch of stroke

- *Optional Accessories:
- M127005 Rod Clevis





M Series Round Line

NUMATICS®

1-1/2" Bore Cylinder

Double Acting – 1500D06-00A

Trunnion Mount

Standard Stroke Lengths:

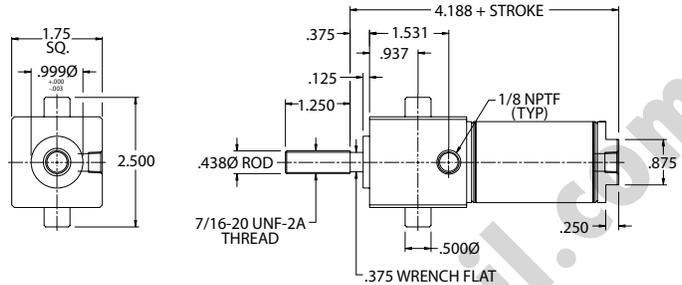
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"

Maximum Stroke: 12"

Base Weight: 1.06 lbs., plus .08 lbs. per inch of stroke

*Optional Accessories:

- M029006 Pivot Bracket
- M127005 Rod Clevis



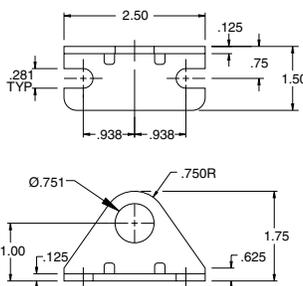
1-1/2" Bore Cylinder Specifications

- (1.7) X (Air Line Pressure) = Approximate Force Exerted
- Enclosed spring force: 7 lbs. retracted, 14 lbs. extended. Note that R01 and R02 is 9 lbs. retracted, 17 lbs. extended.
- Mounting nuts are standard on all nose mount cylinders.
- Viton® seals are optional on all cylinders for 200° - 350°F applications.
- Bumpers are optional on all 1-1/2" bore cylinders (except in combination with Viton® option).
- Magnetic piston optional on all double acting 1-1/2" bore cylinders (except in combination with Viton® option).
- Bumper and magnet option on 1-1/2" bore double acting cylinder adds .250" to overall length.

1-1/2" Bore Accessories

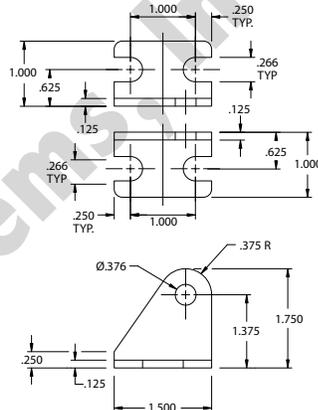
Nose Mounting Brackets

M117007



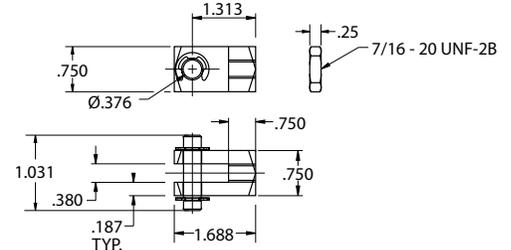
Pivot Mount Bracket

M029004



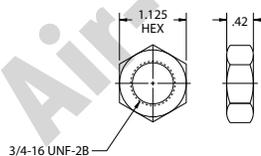
Rod Clevis

M127005

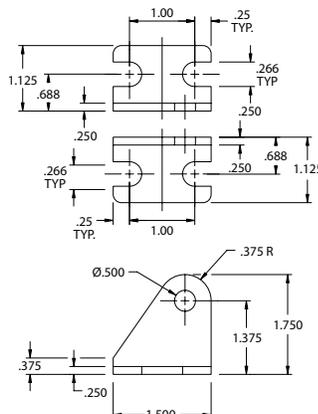


Mounting Nuts

M190006



M029006



M Series CAD drawings are available on CD-ROM or on our website at www.numaticsactuator.com



1-3/4" Bore Cylinder

Single Acting Spring Return – **1750S01-00A**
Front Nose Mount

Standard Stroke Lengths:

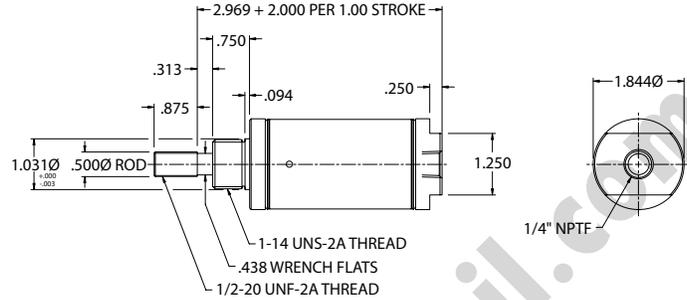
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 6"

Base Weight: .85 lbs., plus .36 lbs. per inch of stroke

*Optional Accessories:

- M117008 Mounting Bracket
- M127006 Rod Clevis



Single Acting Spring Return – **1750S02-00A**
Double Nose or Rear Pivot Mount

Standard Stroke Lengths:

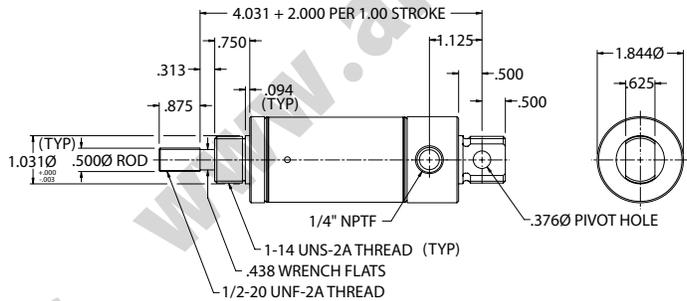
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 6"

Base Weight: .86 lbs., plus .36 lbs. per inch of stroke

*Optional Accessories:

- M117008 Mounting Bracket
- M129005 Pivot Bracket
- M127006 Rod Clevis



Single Acting Spring Extend – **1750R01-00A**
Front Nose Mount

Standard Stroke Lengths:

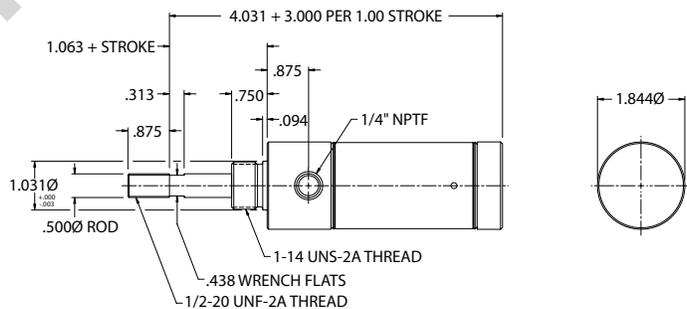
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 6"

Base Weight: 1.17 lbs., plus .31 lbs. per inch of stroke

*Optional Accessories:

- M117008 Mounting Bracket
- M127006 Rod Clevis





2" Bore Cylinder

Single Acting Spring Return – **2000S01-00A**
Front Nose Mount

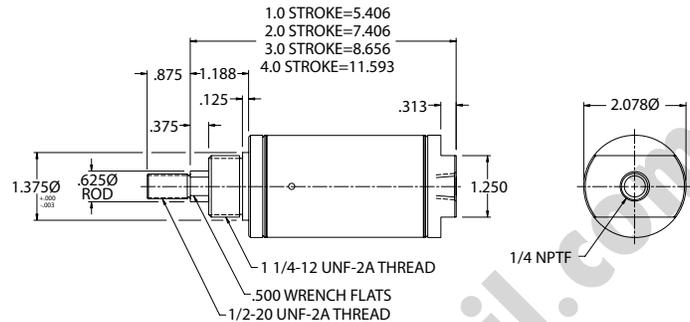
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 4"

Base Weight: 1.04 lbs., plus .43 lbs. per inch of stroke

*Optional Accessories:

- M117009 Mounting Bracket
- M127006 Rod Clevis



Single Acting Spring Return – **2000S02-00A**
Double Nose or Rear Pivot Mount

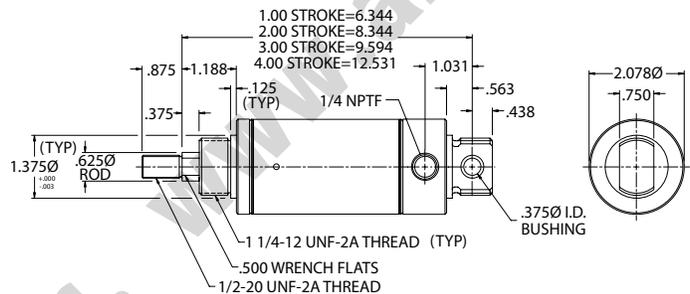
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 4"

Base Weight: 1.26 lbs., plus .43 lbs. per inch of stroke

*Optional Accessories:

- M117009 Mounting Bracket
- M229005 Pivot Bracket
- M127006 Rod Clevis



Single Acting Spring Extend – **2000R01-00A**
Front Nose Mount

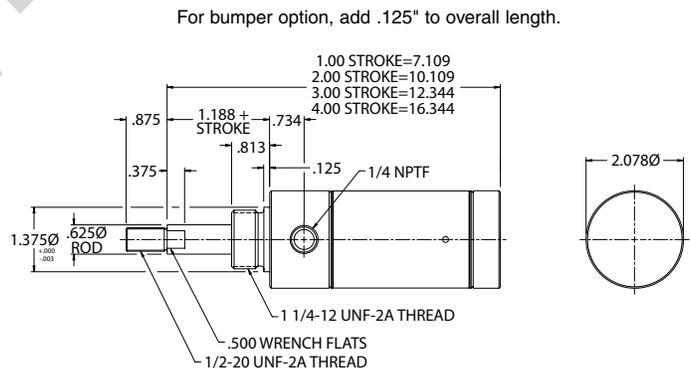
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 4"

Base Weight: 1.24 lbs., plus .43 lbs. per inch of stroke

*Optional Accessories:

- M117009 Mounting Bracket
- M127006 Rod Clevis



Single Acting Spring Extend – **2000R02-00A**
Double Nose or Rear Pivot Mount

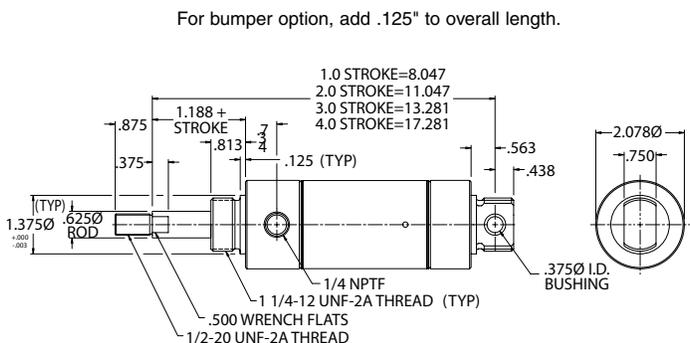
Standard Stroke Lengths:
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4"

Maximum Stroke: 4"

Base Weight: 1.46 lbs., plus .43 lbs. per inch of stroke

*Optional Accessories:

- M117009 Mounting Bracket
- M229005 Pivot Bracket
- M127006 Rod Clevis





M Series Round Line

NUMATICS®

2" Bore Cylinder

Double Acting – **2000D01-00A**
Front Nose Mount

Standard Stroke Lengths:

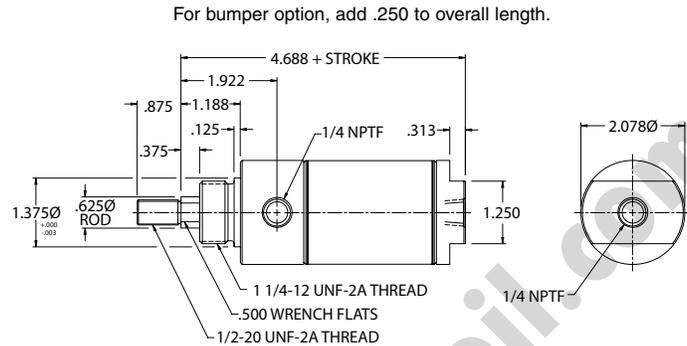
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6", 7", 8"

Maximum Stroke: 12"

Base Weight: 1.40 lbs., plus .15 lbs. per inch of stroke

*Optional Accessories:

- M117009 Mounting Bracket
- M127006 Rod Clevis



Double Acting – **2000D02-00A**

Double Nose or Rear Pivot Mount

Standard Stroke Lengths:

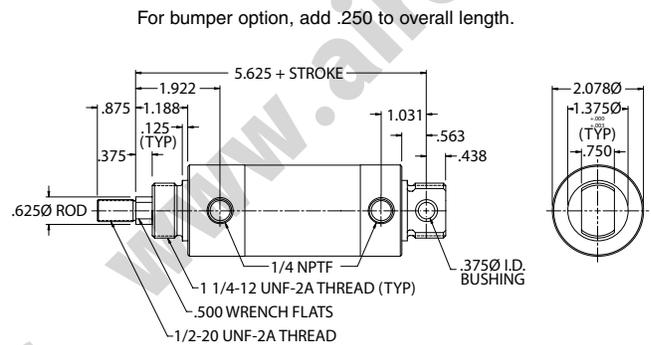
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6", 7", 8", 9", 10", 11", 12"

Maximum Stroke: 32"

Base Weight: 1.62 lbs., plus .15 lbs. per inch of stroke

*Optional Accessories:

- M117009 Mounting Bracket
- M229005 Pivot Bracket
- M127006 Rod Clevis



Double Acting – **2000D03-00A**

Through Rod

Standard Stroke Lengths:

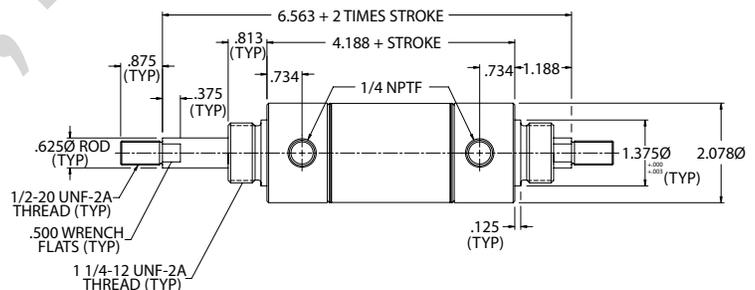
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"

Maximum Stroke: 12"

Base Weight: 1.97 lbs., plus .24 lbs. per inch of stroke

*Optional Accessories:

- M117009 Mounting Bracket
- M127006 Rod Clevis



2" Bore Cylinder Specifications

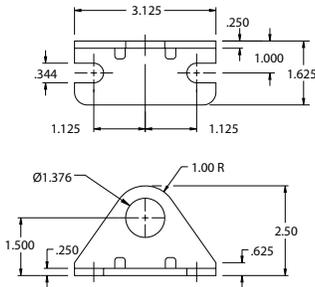
- $(3.1) \times (\text{Air Line Pressure}) = \text{Approximate Force Exerted}$
- Enclosed spring force: 15 lbs. retracted, 30 lbs. extended.
- Mounting nuts are standard on all nose mount cylinders.
- Viton® seals are optional on all cylinders for 200° - 350°F applications.
- Bumpers are optional on all 2" bore cylinders (except in combination with Viton® option).
- Magnetic piston optional on all double acting 2" bore cylinders (except in combination with Viton® option).
- Bumper option on single acting spring extend cylinders adds .125" to overall length.
- Bumper option on all double acting cylinders adds .250 to overall length.



2" Bore Accessories

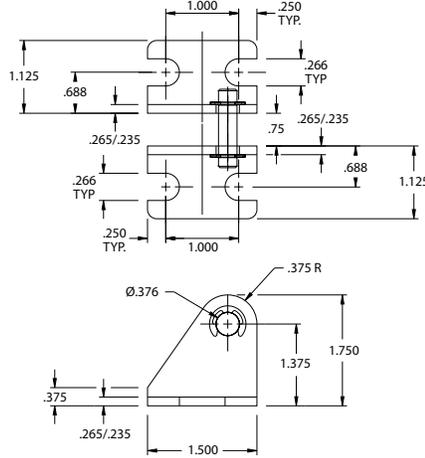
Nose Mounting Brackets

M117009



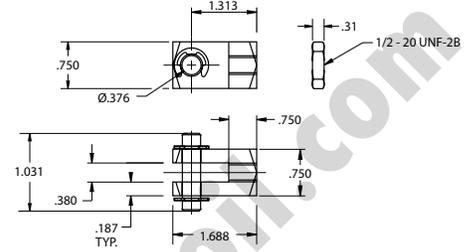
Pivot Mount Bracket

M229005



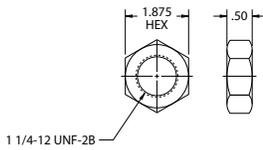
Rod Clevis

M127006



Mounting Nuts

M190009





M Series Round Line

NUMATICS®

2-1/2" Bore Cylinder

Double Acting – **2500D01-00A**
Front Nose Mount

Standard Stroke Lengths:

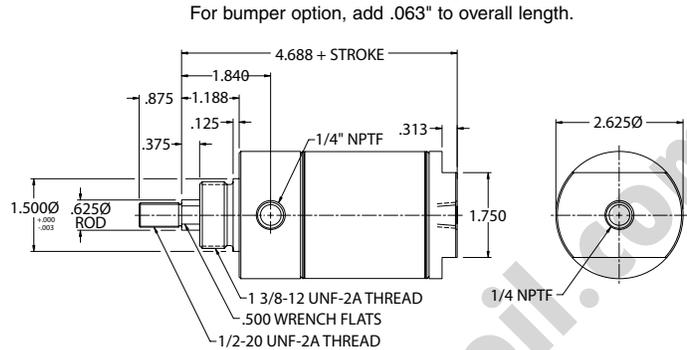
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6", 7",
8", 9", 10", 11", 12"

Maximum Stroke: 12"

Base Weight: 1.98 lbs., plus .17 lbs. per inch of stroke

*Optional Accessories:

- M127006 Rod Clevis



Double Acting – **2500D02-00A**

Rear Pivot Mount

Standard Stroke Lengths:

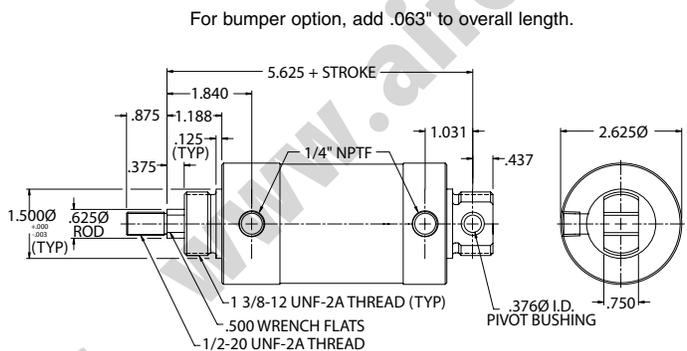
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6", 7",
8", 9", 10", 11", 12"

Maximum Stroke: 32"

Base Weight: 2.27 lbs., plus .17 lbs. per inch of stroke

*Optional Accessories:

- M229005 Pivot Bracket
- M127006 Rod Clevis



2-1/2" Bore Cylinder Specifications

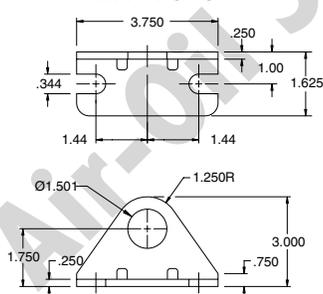
- (5.0) X (Air Line Pressure) = Approximate Force Exerted
- Type 303 stainless steel rod as standard.
- Viton® seals are optional on all cylinders for 200° - 350°F applications.
- Magnetic piston optional on all 2-1/2" bore cylinders.
- Bumper option on all 2-1/2" bore cylinders adds .063" to overall length.

NOTE: Consult factory for 2-1/2" bore D03 mount information.

2-1/2" Bore Accessories

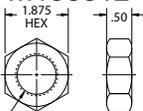
Nose Mounting Brackets

M117010



Mounting Nuts

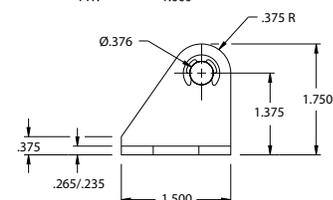
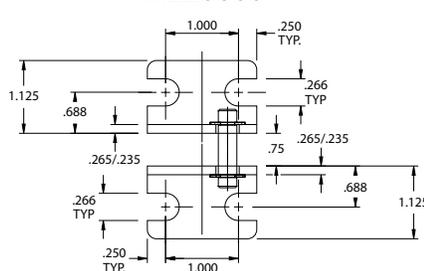
M190012



1/8-12 UNF-2B

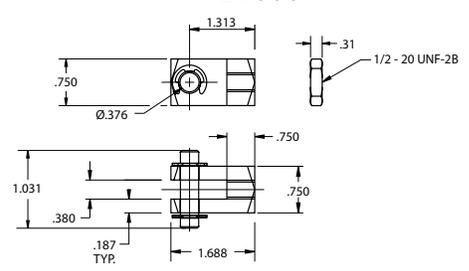
Pivot Mount Bracket

M229005



Rod Clevis

M127006





3" Bore Cylinder

Double Acting – **3000D01-00A**
Front Nose Mount

Standard Stroke Lengths:

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

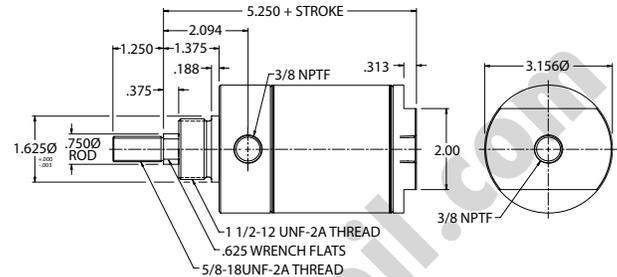
Maximum Stroke: 12"

Base Weight: 3.34 lbs., plus .26 lbs. per inch of stroke

*Optional Accessories:

- M117009 Mounting Bracket
- M127007 Rod Clevis

For bumper option, add .063" to overall length.



Double Acting – **3000D02-00A**

Double Nose or Rear Pivot Mount

Standard Stroke Lengths:

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

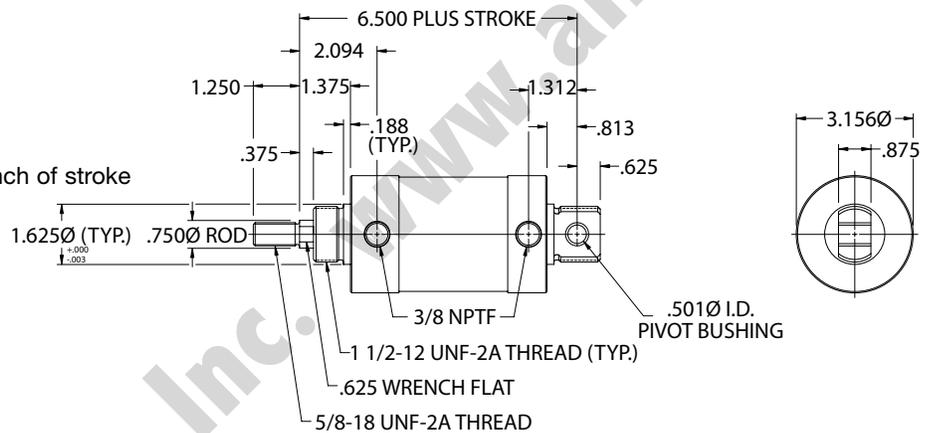
Maximum Stroke: 32"

Base Weight: 3.87 lbs., plus .26 lbs. per inch of stroke

*Optional Accessories:

- M117009 Mounting Bracket
- M229005 Pivot Bracket
- M127007 Rod Clevis

For bumper option, add .063" to overall length.



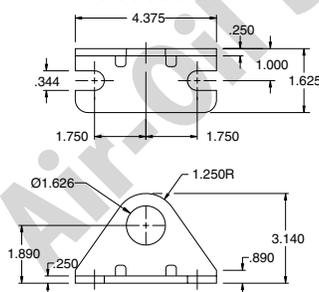
3" Bore Cylinder Specifications

- (7.0) X (Air Line Pressure) = Approximate Force Exerted
- Type 303 stainless steel rod as standard.
- Viton® seals are optional on all cylinders for 200° - 350°F applications.
- Magnetic piston optional on all 3" bore cylinders.
- Bumper option on all 3" bore cylinders adds .063" to overall length.

3" Bore Accessories

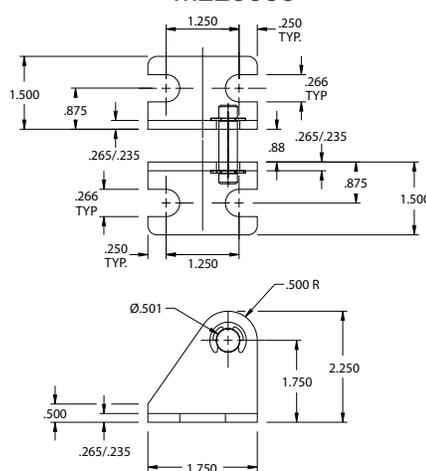
Nose Mounting Brackets

M117011



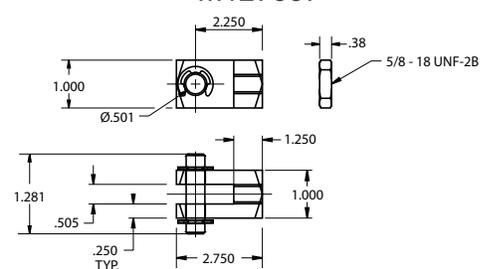
Pivot Mount Bracket

M229006



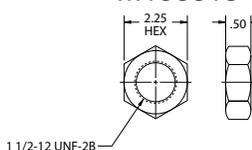
Rod Clevis

M127007



Mounting Nuts

M190013



M Series CAD drawings are available on CD-ROM or on our website at www.numaticsactuator.com

Information subject to change without notice. For ordering information or regarding your local sales office visit www.numatics.com.



M Series Round Line

NUMATICS®

Adjustable Cushion Cylinders

3/4" Bore Double Acting – 0750DG1-00A

Front Nose Mount with Cushions

Standard Stroke Lengths:

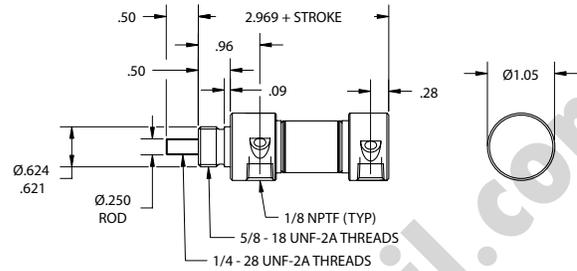
1/2", 1", 1-1/2", **2"**, 2-1/2", 3", 4", **5"**, 6"

Maximum Stroke: 12"

Base Weight: .24 lbs., plus .03 lbs. per inch of stroke

*Optional Accessories:

- M117005 Mounting Bracket
- M127003 Rod Clevis



3/4" Bore Double Acting – 0750DG2-00A

Rear Pivot Mount with Cushions

Standard Stroke Lengths:

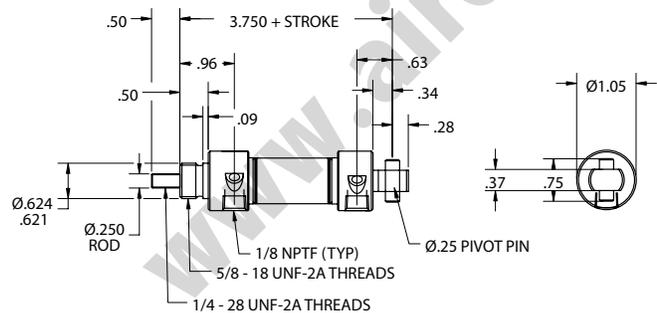
1/2", **1"**, 1-1/2", 2", 2-1/2", 3", 4", 5", 6"

Maximum Stroke: 12"

Base Weight: .29 lbs., plus .03 lbs. per inch of stroke

*Optional Accessories:

- M117005 Mounting Bracket
- M127003 Rod Clevis



1-1/16" Bore Double Acting – 1062DG1-00A

Front Nose Mount with Cushions

Standard Stroke Lengths:

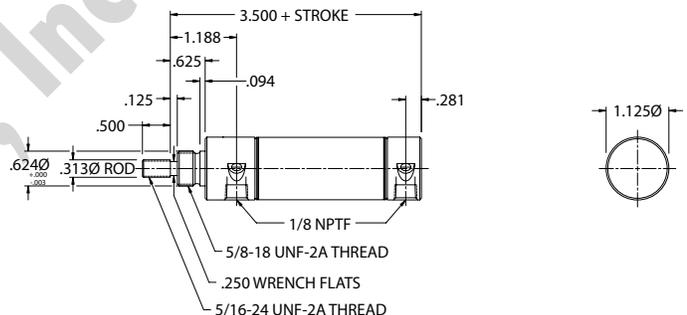
1/2", 1", 1-1/2", 2", 2-1/2", **3"**, 4", 5", 6"

Maximum Stroke: 12"

Base Weight: .38 lbs., plus .04 lbs. per inch of stroke

*Optional Accessories:

- M117005 Mounting Bracket
- M127003 Rod Clevis



1-1/16" Bore Double Acting – 1062DG2-00A

Rear Pivot Mount with Cushions

Standard Stroke Lengths:

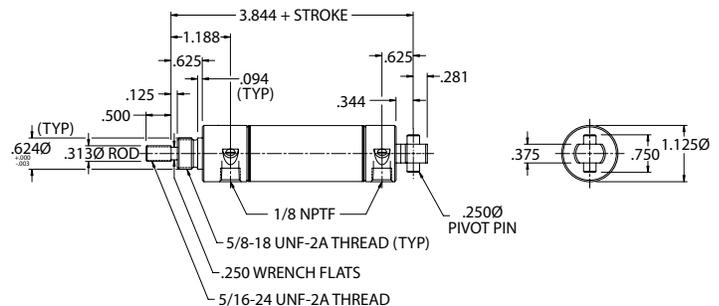
1/2", 1", 1-1/2", 2", 2-1/2", **3" with magnet**, 4", 5", 6", 7", 8", 9", **10"**, 11", 12"

Maximum Stroke: 32"

Base Weight: .44 lbs., plus .04 lbs. per inch of stroke

*Optional Accessories:

- M117005 Mounting Bracket
- M029003 Pivot Bracket
- M127004 Rod Clevis



Adjustable Cushion Cylinder Specifications

- Refer to specific bore size in standard cylinder section for specifications.

* See page 51-58 for accessory details.

M Series CAD drawings are available on CD-ROM or on our website at www.numaticsactuator.com



Adjustable Cushion Cylinders

1-1/2" Bore Double Acting – 1500DG1-00A Front Nose Mount with Cushions

Available Stroke Lengths:

1/2", 1", 1-1/2", 2", 2-1/2", *3", *4", *5", *6", *7", *8", *9", *10", *11", *12"

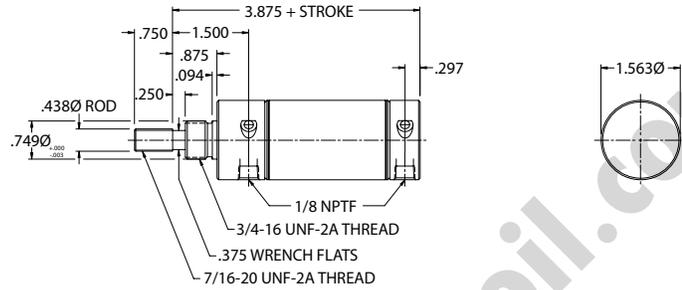
*with magnet

Maximum Stroke: 12"

Base Weight: .77 lbs., plus .09 lbs. per inch of stroke

*Optional Accessories:

- M117007 Mounting Bracket
- M127005 Rod Clevis



1-1/2" Bore Double Acting – 1500DG2-00A Rear Pivot Mount with Cushions

Standard Stroke Lengths:

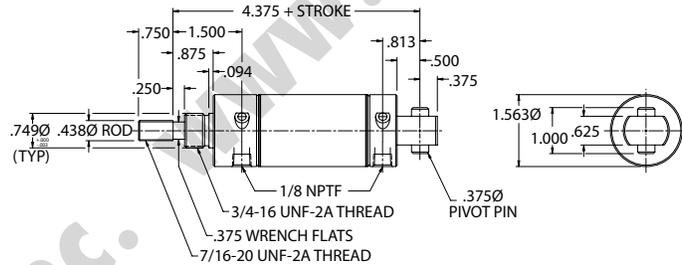
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6", 7", 8", 9", 10", 11", 12"

Maximum Stroke: 32"

Base Weight: .77 lbs., plus .09 lbs. per inch of stroke

*Optional Accessories:

- M029004 Pivot Bracket
- M127005 Rod Clevis



2" Bore Double Acting – 2000DG1-00A Front Nose Mount with Cushions

Standard Stroke Lengths:

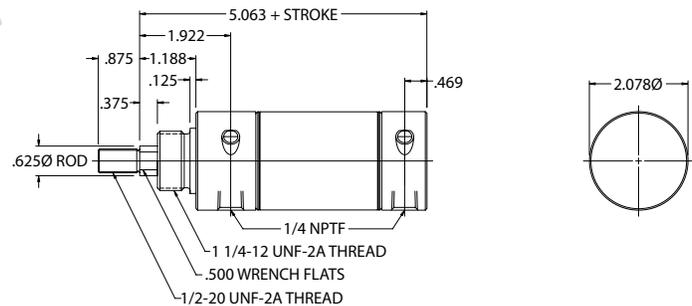
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"

Maximum Stroke: 12"

Base Weight: 1.64 lbs., plus .15 lbs. per inch of stroke

*Optional Accessories:

- M117009 Mounting Bracket
- M127006 Rod Clevis



2" Bore Double Acting – 2000DG2-00A Rear Pivot Mount with Cushions

Standard Stroke Lengths:

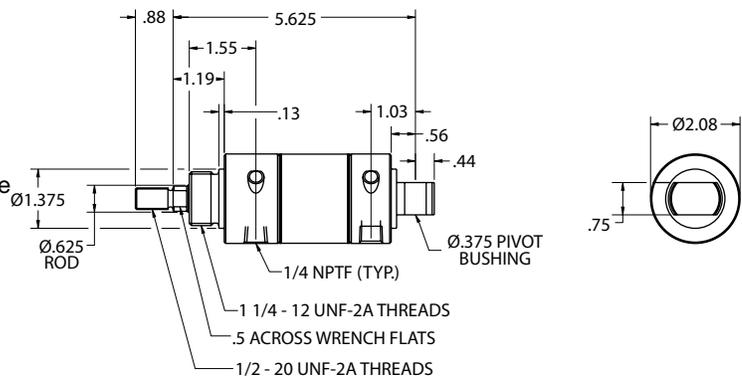
1/2", 1", 1-1/2", 2", 2-1/2", 3", 4", 5", 6"

Maximum Stroke: 32"

Base Weight: 1.68 lbs., plus .15 lbs. per inch of stroke

*Optional Accessories:

- M117009 Mounting Bracket
- M229005 Pivot Bracket
- M127006 Rod Clevis



* See page 51-58 for accessory details.

M Series CAD drawings are available on CD-ROM or on our website at www.numaticsactuator.com

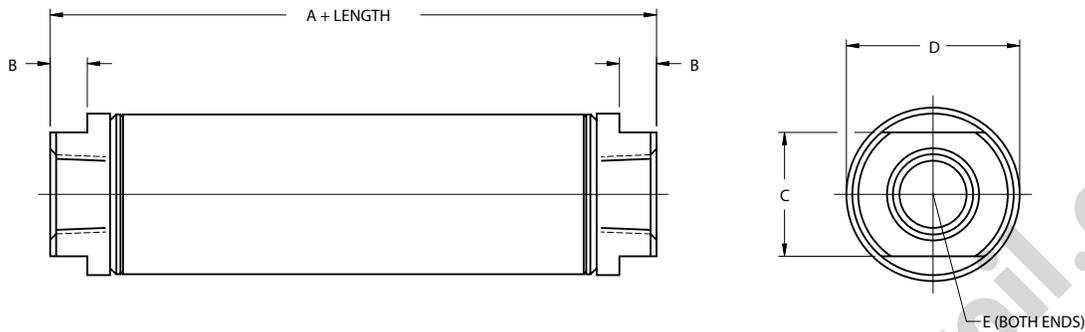
Information subject to change without notice. For ordering information or regarding your local sales office visit www.numatics.com.



M Series Volume Chambers

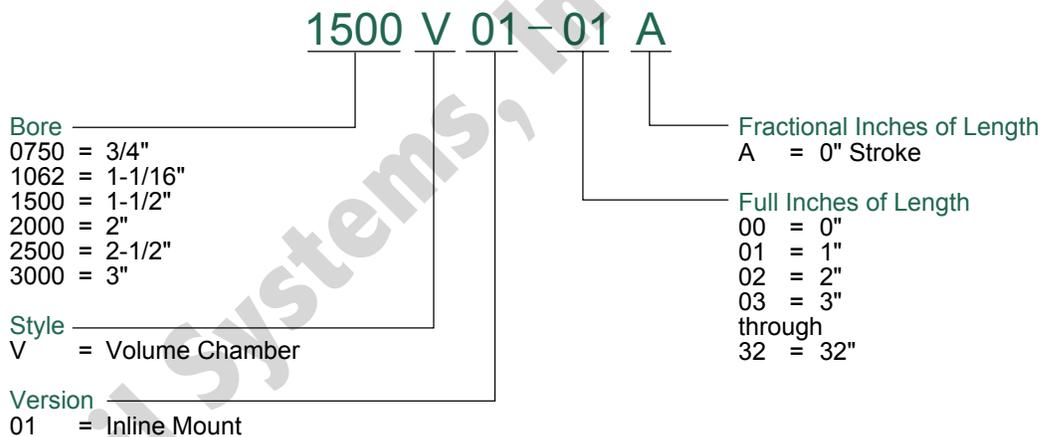
NUMATICS®

Volume Chambers



BORE	A	B	C	D	E	CUBIC INCHES PER INCH	STANDARD LENGTH	MAXIMUM LENGTH
3/4"	1.062	0.190	0.625	0.813	1/8"	0.440	1" Increments to 4"	32"
1-1/16"	1.188	0.190	0.875	1.125	1/8"	0.886	1" Increments to 8"	32"
1-1/2"	1.375	0.250	0.875	1.563	1/8"	1.767	1" Increments to 16"	32"
2"	1.767	0.310	1.250	2.078	1/4"	3.141	1" Increments to 16"	32"
2-1/2"	1.767	0.310	1.750	2.625	1/4"	4.908	1" Increments to 24"	32"
3"	2.000	0.310	2.00	3.156	3/8"	7.069	1" Increments to 24"	32"

How To Order



Volume Chamber Specifications

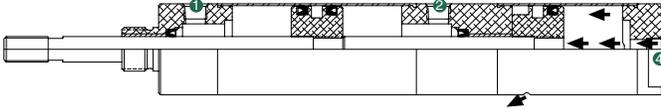
- Type 304 stainless steel body.
- Aluminum alloy end caps.
- Pressure rating: 250 psi.



Multi-Position Cylinders

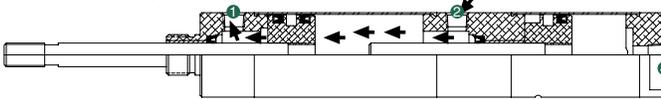
Step 1

The total stroke from full retract to the intermediate position is achieved by pressurizing port 4.



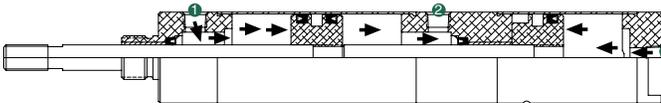
Step 2

The total stroke from the intermediate position to full extend is achieved by pressurizing port 2 with port 1 vented.



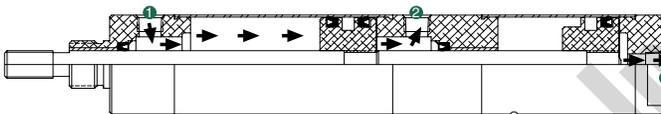
Step 3

The total stroke from full extend to the intermediate position is achieved by pressurizing ports 1 and 4 with port 2 vented.



Step 4

The total stroke from full extend to full retract is achieved by pressurizing port 1 with ports 2 and 4 vented.



Features

The M Series Multi-Position is a three-position stainless steel body cylinder with numerous application advantages. It provides three positions with a single cylinder.

How To Order

1500 D1-02A-01A-00

Bore

0750 = 3/4"
1062 = 1-1/16"
1500 = 1-1/2"
2000 = 2"

Mount

D1 = Nose Mount

Options

00 = No Options
12 = Magnetic Band (Both Ends)
(or leave blank)

Rear Stroke

Full Inches
00 = 0"
01 = 1"
02 = 2"

Fractional Inches

A = 0"
I = 1/2"

For rear strokes of over 8" and/or combined strokes over 24", consult factory.

Example: **1500D1-02A-01A-00**

When port 4 is pressurized, the cylinder will stroke 1". When port 2 is pressurized, the cylinder will stroke an additional 1" for a total stroke of 2".



M Series Multi-Position Cylinder

NUMATICS®

Multi-Position Cylinders

3/4" Bore Standard – **0750D1-00A-00A-00**

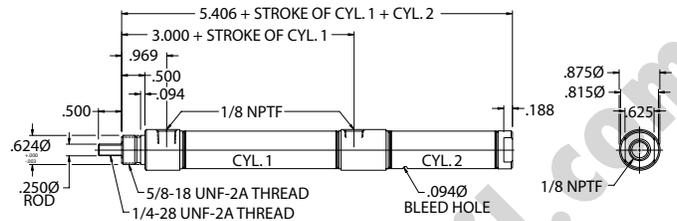
3/4" Bore Magnetic Band (both ends) – **0750D1-00A-00A-12**

Front Nose Mount

Maximum Stroke: 24"

*Optional Accessories:

- M117005 Mounting Bracket



1-1/16" Bore Standard – **1062D1-00A-00A-00**

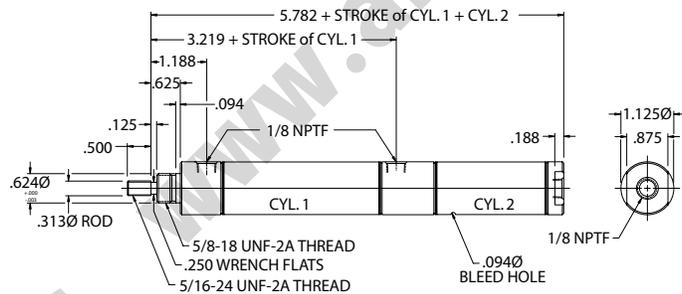
1-1/16" Bore Magnetic Band (both ends) – **1062D1-00A-00A-12**

Front Nose Mount

Maximum Stroke: 24"

*Optional Accessories:

- M117005 Mounting Bracket



1-1/2" Bore Standard – **1500D1-00A-00A-00**

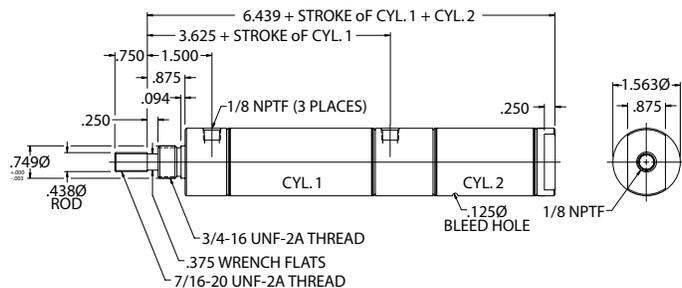
1-1/2" Bore Magnetic Band (both ends) – **1500D1-00A-00A-12**

Front Nose Mount

Maximum Stroke: 24"

*Optional Accessories:

- M117007 Mounting Bracket



2" Bore Standard – **2000D1-00A-00A-00**

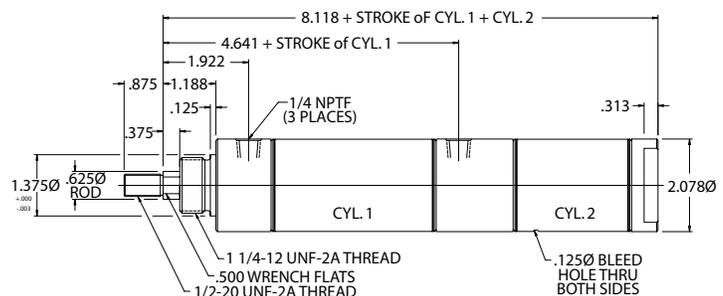
2" Bore Magnetic Band (both ends) – **2000D1-00A-00A-12**

Front Nose Mount

Maximum Stroke: 24"

*Optional Accessories:

- M117009 Mounting Bracket



* See page 51-58 for accessory details.

M Series CAD drawings are available on CD-ROM or on our website at www.numaticsactuator.com



Single Acting with Magnet Cylinders

Features

Single Acting M Series with a magnetic band on the piston for position sensing.



How To Order

0563 S01-00A-03

Bore

0563 = 9/16"
0750 = 3/4"
1062 = 1-1/16"
1500 = 1-1/2"
2000 = 2"

Mount

S01 = Front Nose Mount
S02 = Double Nose or Rear Pivot Mount

Options

03 = Magnetic Piston

Rear Stroke

Full Inches
00 = 0"
01 = 1"
02 = 2"

Fractional Inches

A = 0"
I = 1/2"



M Series Single Acting with Magnet

NUMATICS®

Single Acting with Magnet Cylinders

9/16" Bore Single Acting Spring Return – **0563S01-00A-03**

Front Nose Mount with Magnetic Band

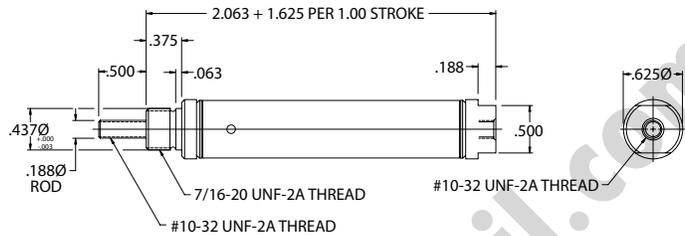
Standard Stroke Lengths:

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

Maximum Stroke: 6"

*Optional Accessories:

- M117003 Mounting Bracket
- M127002 Rod Clevis



9/16" Bore Single Acting Spring Return – **0563S02-00A-03**

Double Nose or Rear Pivot Mount with Magnetic Band

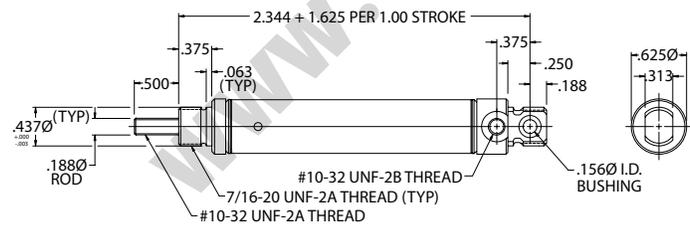
Standard Stroke Lengths:

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

Maximum Stroke: 6"

*Optional Accessories:

- M117003 Mounting Bracket
- M129002 Pivot Bracket
- M127002 Rod Clevis



3/4" Bore Single Acting Spring Return – **0750S01-00A-03**

Front Nose Mount with Magnetic Band

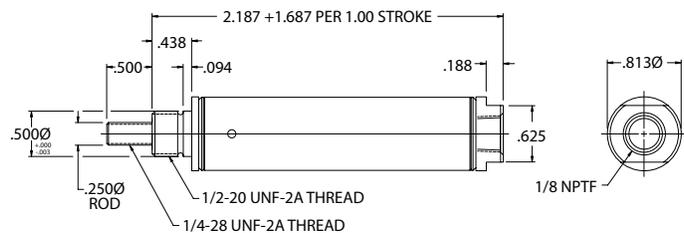
Standard Stroke Lengths:

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

Maximum Stroke: 6"

*Optional Accessories:

- M117006 Mounting Bracket
- M127003 Rod Clevis



3/4" Bore Single Acting Spring Return – **0750S02-00A-03**

Double Nose or Rear Pivot Mount with Magnetic Band

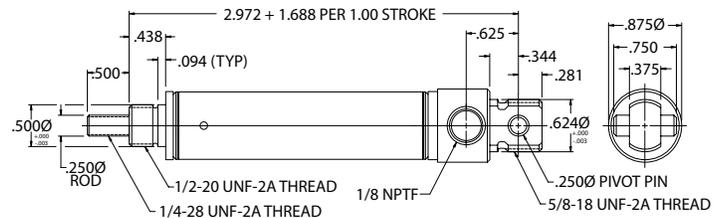
Standard Stroke Lengths:

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

Maximum Stroke: 6"

*Optional Accessories:

- M029003 Pivot Bracket
- M127002 Rod Clevis



* See page 51-58 for accessory details.

M Series CAD drawings are available on CD-ROM or on our website at www.numaticsactuator.com



Single Acting with Magnet Cylinders

1-1/16" Bore Single Acting Spring Return – 1062S01-00A-03 Front Nose Mount with Magnetic Band

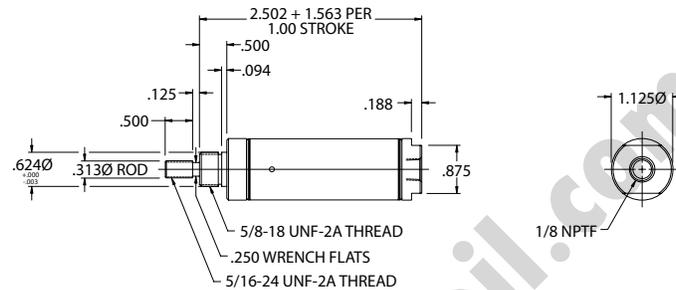
Standard Stroke Lengths:

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

Maximum Stroke: 6"

*Optional Accessories:

- M117003 Mounting Bracket
- M127002 Rod Clevis



1-1/16" Bore Single Acting Spring Return – 1062S02-00A-03 Double Nose or Rear Pivot Mount with Magnetic Band

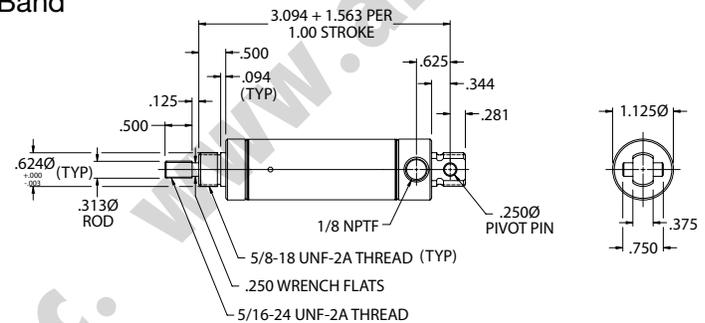
Standard Stroke Lengths:

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

Maximum Stroke: 6"

*Optional Accessories:

- M117003 Mounting Bracket
- M129002 Pivot Bracket
- M127002 Rod Clevis



1-1/2" Bore Single Acting Spring Return – 1500S01-00A-03 Front Nose Mount with Magnetic Band

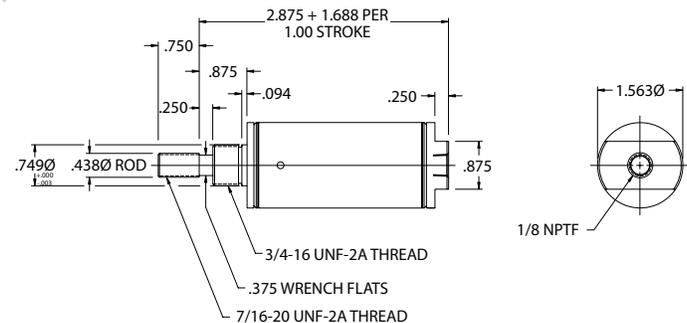
Standard Stroke Lengths:

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

Maximum Stroke: 6"

*Optional Accessories:

- M117007 Mounting Bracket
- M127005 Rod Clevis



1-1/2" Bore Single Acting Spring Return – 1500S02-00A-03 Double Nose or Rear Pivot Mount with Magnetic Band

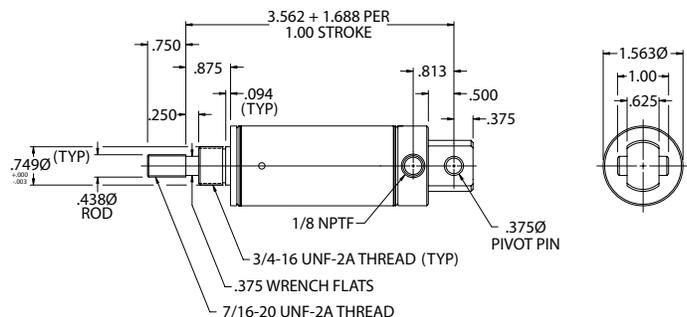
Standard Stroke Lengths:

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

Maximum Stroke: 6"

*Optional Accessories:

- M029004 Pivot Bracket
- M127005 Rod Clevis



* See page 51-58 for accessory details.

M Series CAD drawings are available on CD-ROM or on our website at www.numaticsactuator.com

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M Series Single Acting with Magnet

NUMATICS®

Single Acting with Magnet Cylinders

2" Bore Single Acting Spring Return – **2000S01-00A-03**

Front Nose Mount with Magnetic Band

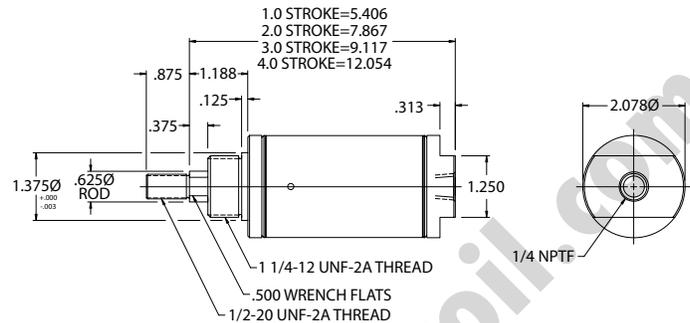
Standard Stroke Lengths:

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

Maximum Stroke: 4"

*Optional Accessories:

- M117009 Mounting Bracket
- M127006 Rod Clevis



2" Bore Single Acting Spring Return – **2000S02-00A-03**

Double Nose or Rear Pivot Mount with Magnetic Band

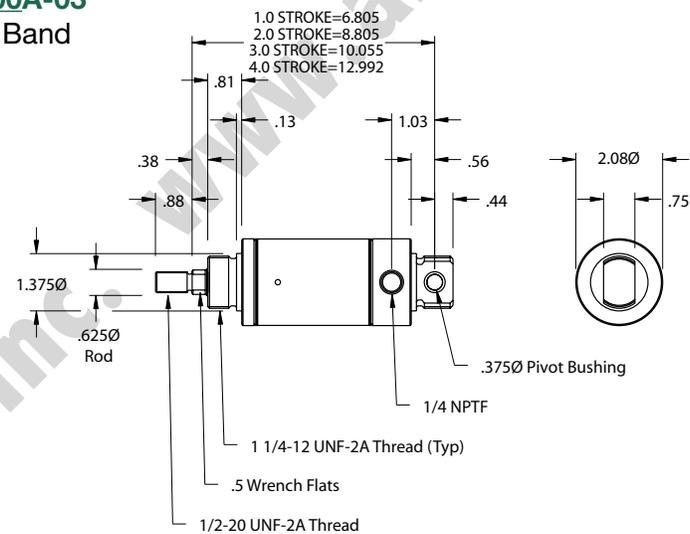
Standard Stroke Lengths:

1/2", 1", 1-1/2", 2", 2-1/2", **3"**, 4"

Maximum Stroke: 4"

*Optional Accessories:

- M117009 Mounting Bracket
- M129005 Pivot Bracket
- M127006 Rod Clevis



* See page 51-58 for accessory details.

M Series CAD drawings are available on CD-ROM or on our website at www.numaticsactuator.com



Hole Punch Cylinders

Features

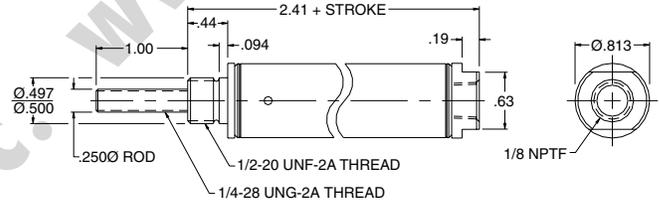
The durable design of our Hole Punch Cylinder enables you to punch millions of maintenance-free holes. The Numatics Hole Punch Cylinder is perfect for punching holes in LLDPE (Linear Low Density Polyethylene) film. The ability to replace the punch is an integral part of the design. The punches are replaceable without having to replace the cylinder. Our razor sharp plastic punches are self-sharpening and are able to significantly outlast conventional steel punches in most applications. We offer the option of an air ejector, foam ejector, and auto ejector. These ejectors discharge material slug from the center of the punch as well as prevent debris build-up. Our punches are available in eight different punch sizes from 1/8" to 3/4."

Our punches may be used with any of our M Series cylinders that have 1/4-28 UNF-2A male threads. For your convenience, configured three standard Hole Punch Cylinders designed specifically for hole punch applications. The standard Hole Punch Cylinder is 3/4" bore with 1" stroke, nose mount, spring return, stainless steel rod, 1/8" NPT port, and 1/2" of thread extension to allow for adjustment of the punch. It also includes elastomer bumpers to ensure quiet operation. The cylinder is rated for 250 psi. We offer three standard Hole Punch Cylinder types: spring return, spring return with non-rotating rod, and spring return with hollow rod version. The standard cylinder is offered with a 1" stroke, i.e., M12263-01A. Please note that 1/2" stroke Hole Punch Cylinders are available as standard i.e., 1/2" stroke = M12263-00I. However, strokes greater than 1" are available upon request. Mounting nuts come standard with all Hole Punch Cylinders. Note: For air ejector use, a hollow rod cylinder is required.

3/4" Bore Single Acting Spring Return – M12263-00I

1/2" Stroke

- Bumpers
- 1/2" Thread Extension



3/4" Bore Single Acting Spring Return – M12263-01A

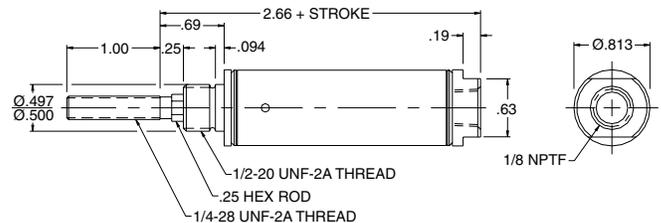
1" Stroke

- Bumpers
- 1/2" Thread Extension

3/4" Bore Single Acting Spring Return – M12264-00I

1/2" Stroke – Non-Rotating Rod

- Bumpers
- 1/2" Thread Extension



3/4" Bore Single Acting Spring Return – M12264-01A

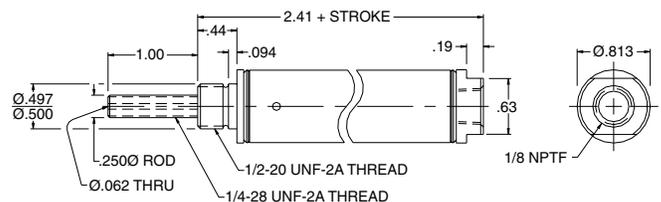
1" Stroke – Non-Rotating Rod

- Bumpers
- 1/2" Thread Extension

3/4" Bore Single Acting Spring Return – M12265-00I

1/2" Stroke – Hollow Rod

- Bumpers
- 1/2" Thread Extension



3/4" Bore Single Acting Spring Return – M12265-01A

1" Stroke – Hollow Rod

- Bumpers
- 1/2" Thread Extension



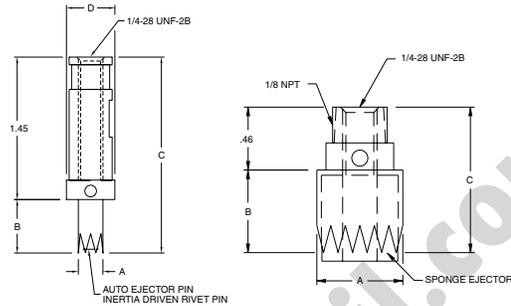
M Series Hole Punch Cylinders

NUMATICS®

Hole Punches

Benefits

- Punches are replaceable without replacing cylinder
- Self-sharpening – outlast steel punches 2-5 times (in most applications)
- Sponge “auto” ejector standard on sizes 3/8” thru 3/4” diameter
- Auto-ejector standard on sizes 1/8” and 1/4” diameter
- Adjustable position
- Excellent for use in LLDPE (Linear Low Density Polyethylene) Film
 - Polyethylene film up to 3 mil thickness
 - Polypropylene film up to 1 mil thickness



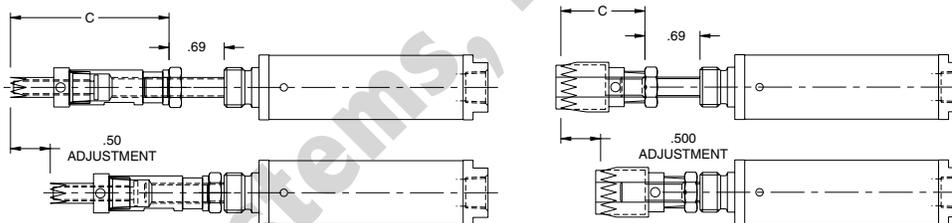
Hole Diameters 1/8"-1/4" Hole Diameters 3/8"-3/4"
Shown with AB-1A Adapter

Note

1. Punches come in packages of 5.
2. Adapters are sold individually and do not come with the punch.
3. Air ejection is available when used on hollow rod cylinder. (M12265)
4. Jam nuts come standard on “Hole Punch” cylinders.

PART #	HOLE DIAMETER	A	B	C	STANDARD EJECTOR TYPE	ADAPTER REQUIRED
PCN-18	1/8"	.125	.54	1.00	Auto Ejector Pin	AB-1A
PCN-14	1/4"	.250	.54	1.00	Auto Ejector Pin	AB-1A
PCN-38	3/8"	.375	.54	1.00	Auto Ejector Pin	None
PCN-716	7/16"	.437	.54	1.00	Auto Ejector Pin	None
PCN-12	1/2"	.500	.54	1.00	Auto Ejector Pin	None
PCN-916	9/16"	.562	.60	1.06	Auto Ejector Pin	None
PCN-58	5/8"	.625	.60	1.06	Auto Ejector Pin	None
PCN-34	3/4"	.750	.60	1.06	Auto Ejector Pin	None

Cylinder and Punch Assemblies



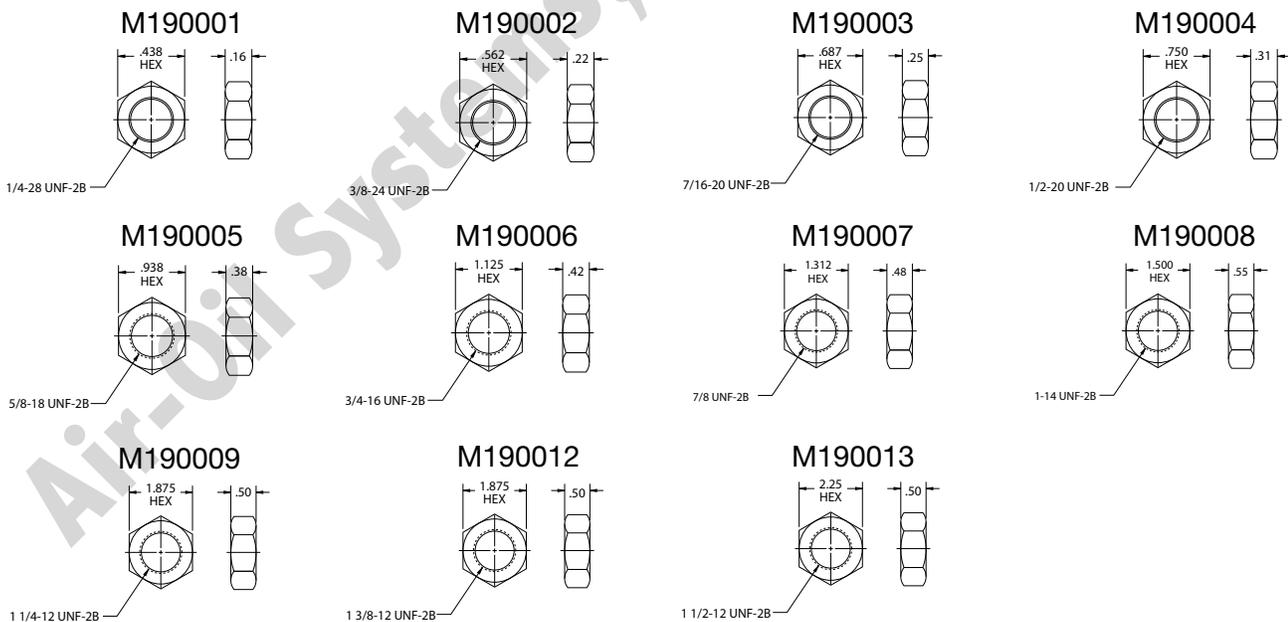


Mounting Nuts

Mounting Nuts Included on Cylinder

BORE	S01	S02	D01	D02	D03	D04	DG1	DG2	N01	N02	R01
0.313	Yes	No	Yes	No	Yes	Yes	N/A	N/A	N/A	N/A	Yes
0.438	Yes	No	Yes	No	Yes	Yes	N/A	N/A	Yes	No	Yes
0.563	Yes	No	Yes	No	Yes	Yes	N/A	N/A	Yes	No	Yes
0.750	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	No	Yes
0.875	Yes	No	Yes	No	Yes	Yes	N/A	N/A	Yes	No	Yes
1.062	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	No	Yes
1.250	Yes	No	Yes	No	Yes	Yes	N/A	N/A	Yes	No	Yes
1.500	Yes	No	Yes	No	Yes	Yes	Yes	No	Yes	No	Yes
1.750	Yes	No	Yes	No	Yes	Yes	N/A	N/A	N/A	N/A	Yes
2.000	Yes	No	Yes	No	Yes	Yes	Yes	N/A	N/A	N/A	Yes
2.500	N/A	N/A	No	No	No	No	N/A	N/A	N/A	N/A	N/A
3.000	N/A	N/A	No	No	No	No	N/A	N/A	N/A	N/A	N/A

BORE	R02	D05	D06	D13	DH3	DL1	DL2	DC1	DC2	DC3
0.313	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
0.438	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
0.563	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
0.750	No	No Thread	No Thread	N/A	N/A	N/A	N/A	No	No	No
0.875	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1.062	No	No Thread	No Thread	Yes	Yes	N/A	N/A	No	No	No
1.250	No	N/A	N/A	N/A	Yes	N/A	N/A	N/A	N/A	N/A
1.500	No	No Thread	No Thread	N/A	Yes	N/A	N/A	No	No	No
1.750	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2.000	No	N/A	N/A	N/A	N/A	No	No	N/A	N/A	N/A
2.500	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3.000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A





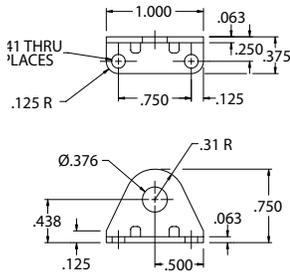
M Series Switches and Accessories

NUMATICS®

Nose Mounting Brackets

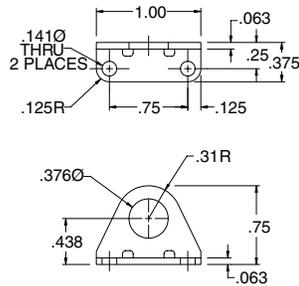
M117001

Single Acting 5/16" Bore



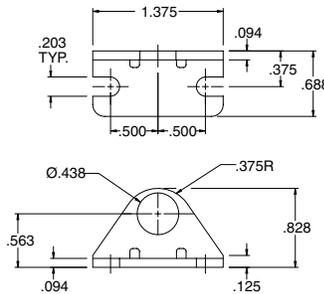
M117002

Double Acting 5/16" Bore



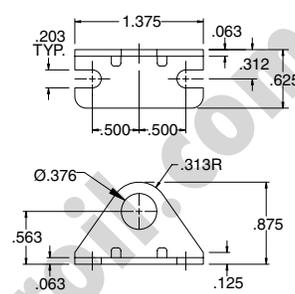
M117003

7/16" and 9/16" Bore



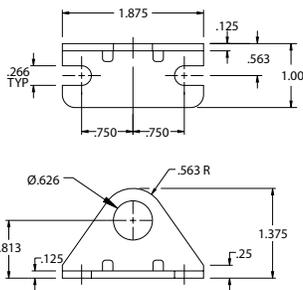
M117004

Single Acting 7/16" Bore



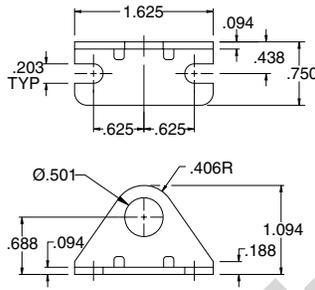
M117005

3/4", 7/8" and 1-1/16" Bore



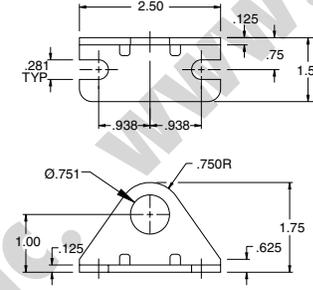
M117006

Single Acting 3/4" Bore



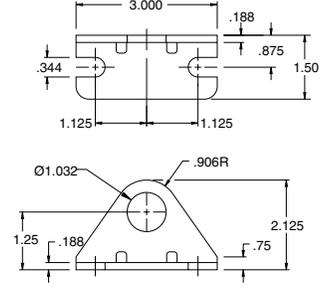
M117007

1-1/4" and 1-1/2" Bore



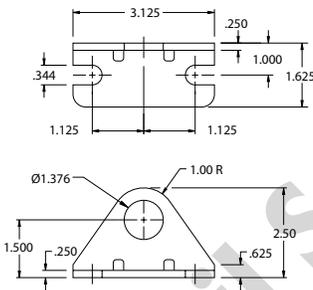
M117008

1-3/4" Bore



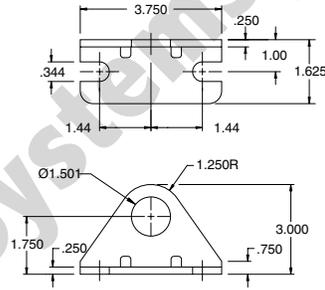
M117009

2" Bore



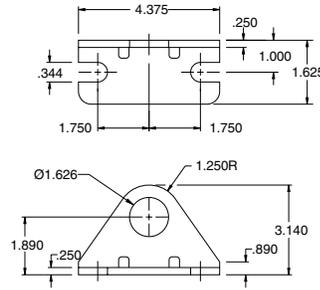
M117010

2-1/2" Bore



M117011

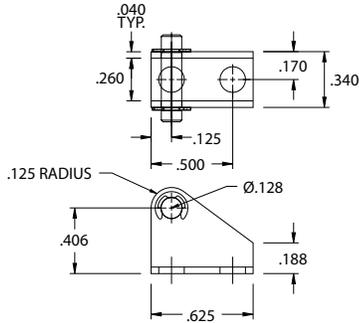
3" Bore



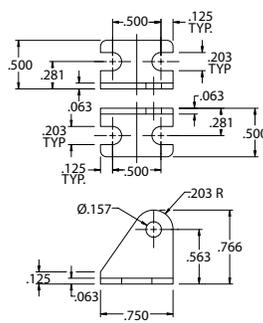


Pivot Mounting Brackets

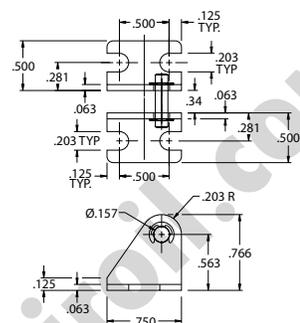
M129001
5/16" Bore



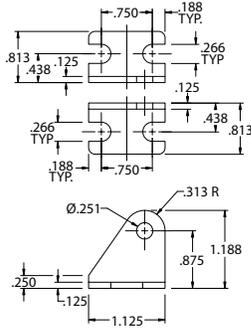
M029002
7/16" Bore



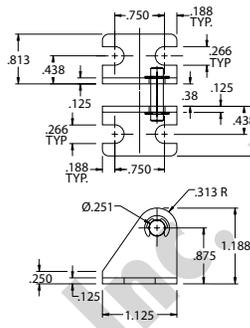
M129002
9/16" Bore



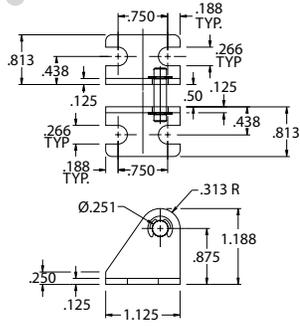
M029003
3/4", 7/8" and 1-1/16" Bore



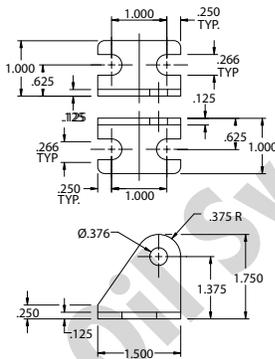
M129003
3/4", 7/8" and 1-1/16" Bore



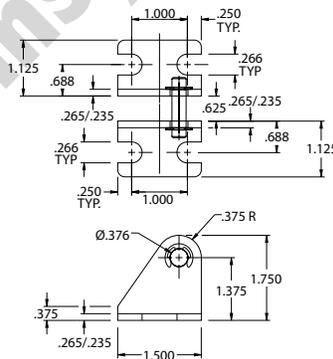
M229003
1-1/4" Bore



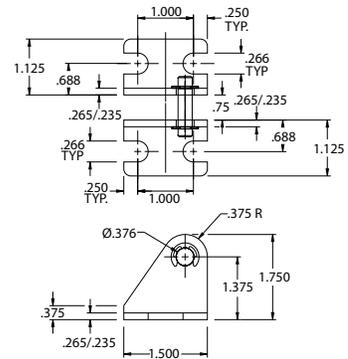
M029004
1-1/2" Bore



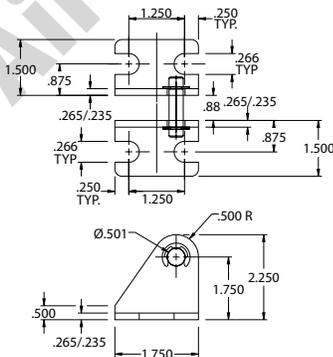
M129005
1-3/4" Bore



M229005
2 and 2-1/2" Bore



M229006
3" Bore



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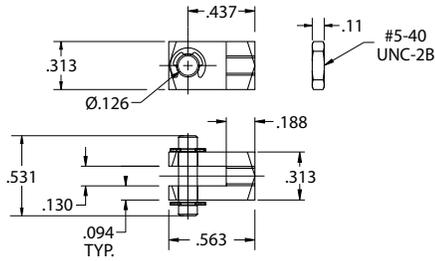


M Series Switches and Accessories

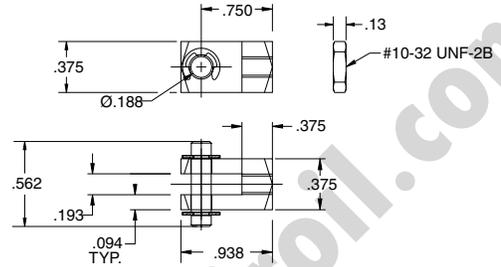
NUMATICS®

Rod Clevis

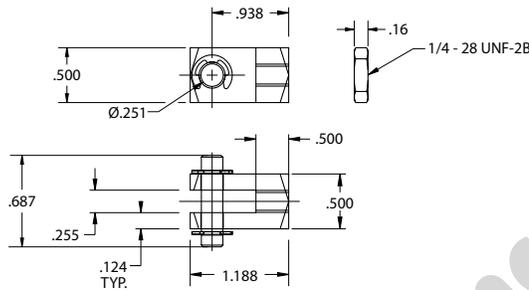
M127001
5/16" Bore



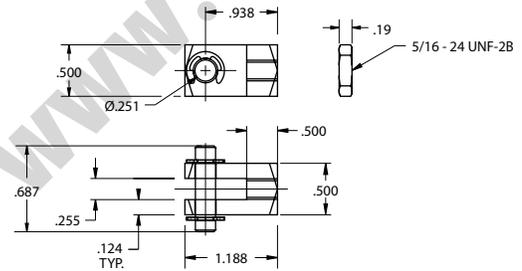
M127002
7/16" and 9/16" Bore



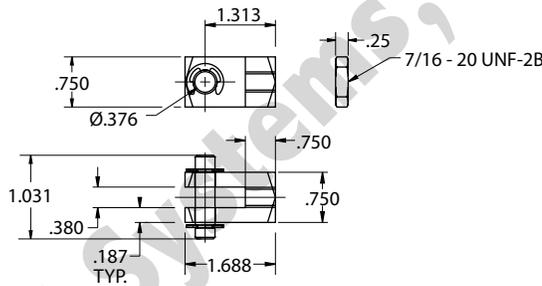
M127003
3/4" and 7/8" Bore



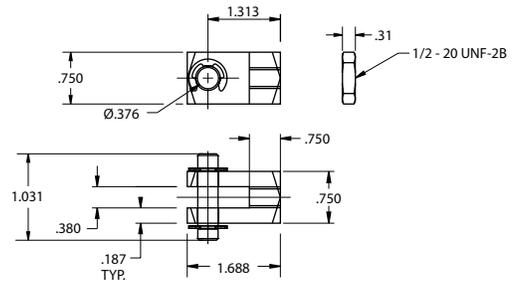
M127004
1-1/16" Bore



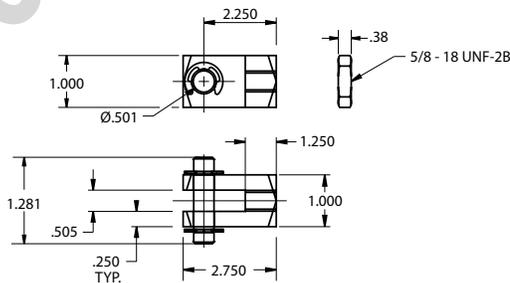
M127005
1-1/4" and 1-1/2" Bore



M127006
1-3/4", 2" and 2-1/2" Bore



M127007
3" Bore

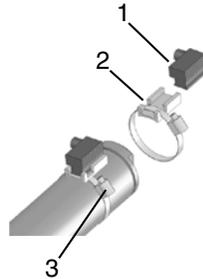




M Series World application Detail

Profile Tube Detail

1. World Switch
2. Band Clamp Kit
3. Adjustment Screw



M series World Switch

Cylinders	Bore	Part Number
M series Bracket Kit	9/16"	SBK056A
M series Bracket Kit	3/4"	SBK075
M series Bracket Kit	7/8"-1 1/4"	SBK106
M series Bracket Kit	1 1/2"	SBK150
M series Bracket Kit	1 3/4"-2"	SBK200
M series Bracket Kit	2.5"	SBK250A
M series Bracket Kit	3"	SBK300A

M series Switch Rails (W,X,Y,Z)

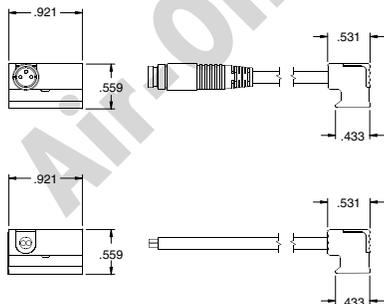
M series Global Switch

Cylinders	Bore	Part Number
M series	All	Direct Fit w/included adapter

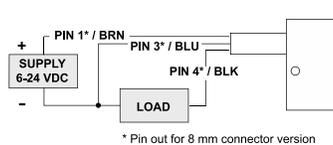
M series World Switch Hall Effect Part Numbers

P/N	Switch Style	Switch Type	Function	Switching Voltage	Switching Current	Switching Power	Voltage Drop
SH6-031	3m Wire Version	Hall Effect for Reed Magnet & Light Sourcing	Normally Open Sourcing (PNP)	6 -24 VDC	0.3 Amps Max.	7.2 Watts Max.	0.5 Volts
SH6-021	8m Connector Pigtail	Hall Effect for Reed Magnet & Light Sourcing	Normally Open Sourcing (PNP)	6 -24 VDC	0.3 Amps Max.	7.2 Watts Max.	0.5 Volts
SH6-032	3m Wire Version	Hall Effect for Reed Magnet & Light Sourcing	Normally Open Sourcing (NPN)	6 -24 VDC	0.3 Amps Max.	7.2 Watts Max.	0.5 Volts
SH6-022	8m Connector Pigtail	Hall Effect for Reed Magnet & Light Sourcing	Normally Open Sourcing (NPN)	6 -24 VDC	0.3 Amps Max.	7.2 Watts Max.	0.5 Volts

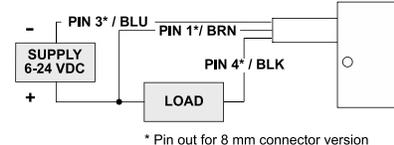
Hall Effect Switch



PNP Sourcing



NPN Sinking





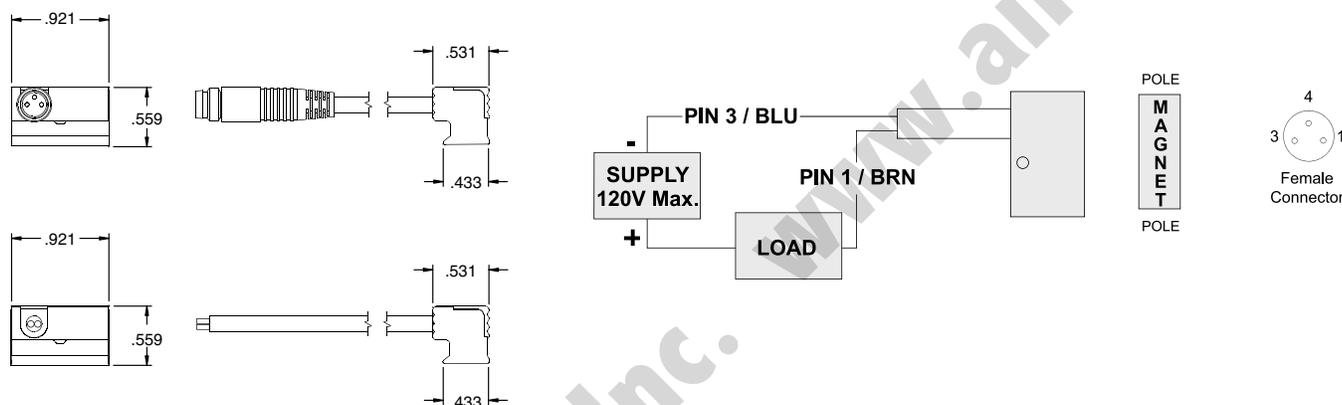
M Series Switches and Accessories

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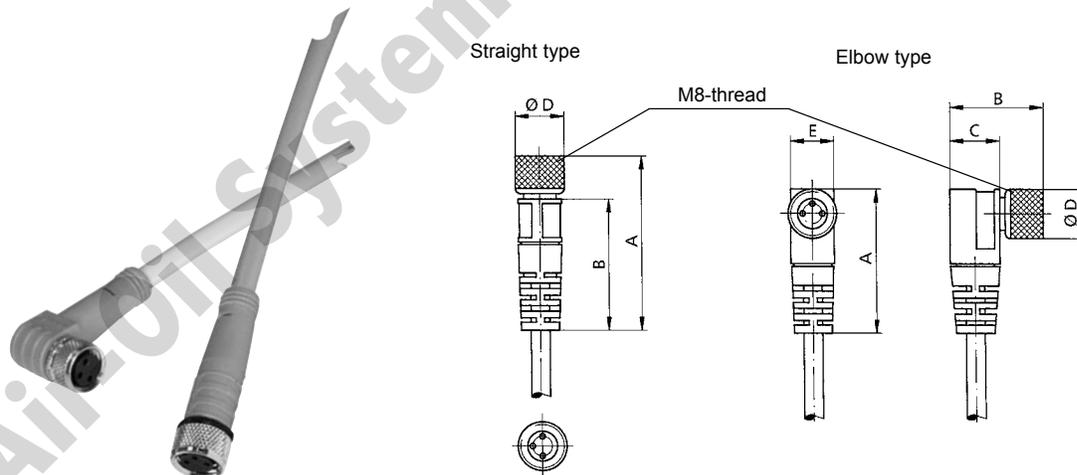
M Series World Switch Reed Switch Part Numbers

P/N	Switch Style	Switch Type	Function	Switching Voltage	Switching Current	Switching Power	Voltage Drop
SR6-002	3m Wire Version	Reed Switch, LED	SPST Normally Open	5 -120V AC/DC	0.025 Amps Max. 0.001 Amps Min.	3 Watts Max.	3.5 Volts
SR6-004	3m Wire Version	Reed Switch, LED & MOV	SPST Normally Open	5 -120V AC/DC	0.5 Amps Max. 0.005 Amps Min.	10 Watts Max.	3.0 Volts
SR6-021	8mm Pigtail	Reed Switch	SPST Normally Open	0 -120V AC/DC	0.5 Amps Max.	10 Watts Max.	0 Volts
SR6-022	8mm Pigtail	Reed Switch, LED	SPST Normally Open	5 -120V AC/DC	0.025 Amps Max. 0.001 Amps Min.	3 Watts Max.	3.5 Volts
SR6-024	8mm Pigtail	Reed Switch, LED & MOV	SPST Normally Open	5 -120V AC/DC	0.5 Amps Max. 0.005 Amps Min.	10 Watts Max.	3.0 Volts

Reed Switch - Normally Open Type SR6



Cords M8-thread for Switches and Sensors with Connector



Dimensions (mm)

Type		A	B	C	D	E	Weight (approx. kg)	Order Code
Straight with 5m-cable	(3x0.25 mm ²)	32.3	24.4	—	9.0	—	0.143	SC6-001
Elbow with 5m-cable	(3x0.25 mm ²)	26.3	17.1	9.2	9.0	8.0	0.145	SC6-002

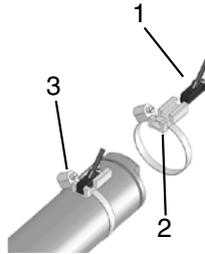
M Series CAD drawings are available on CD-ROM or on our website at www.numaticsactuator.com



M Series Global Detail

Profile Tube Detail

1. Global Switch
2. Band Clamp Kit
3. Adjustment Screw



M Series Global Switch Bracket

Cylinders	Bore	Part Number
M series Short Bracket Kit	9/16"	N199-1003
M series Short Bracket Kit	3/4"	N199-1004
M series Short Bracket Kit	7/8"-1 1/4"	N199-1005
M series Short Bracket Kit	1 1/2"	N199-1006
M series Short Bracket Kit	1 3/4"-2"	N199-1007
M series Short Bracket Kit	2.5"	N199-1008
M series Short Bracket Kit	3"	N199-1009
M series Long Bracket Kit	9/16"	N199-1010
M series Long Bracket Kit	3/4"	N199-1011
M series Long Bracket Kit	7/8"-1 1/4"	N199-1012
M series Long Bracket Kit	1 1/2"	N199-1013
M series Long Bracket Kit	1 3/4"-2"	N199-1014
M series Long Bracket Kit	2.5"	N199-1015
M series Long Bracket Kit	3"	N199-1016

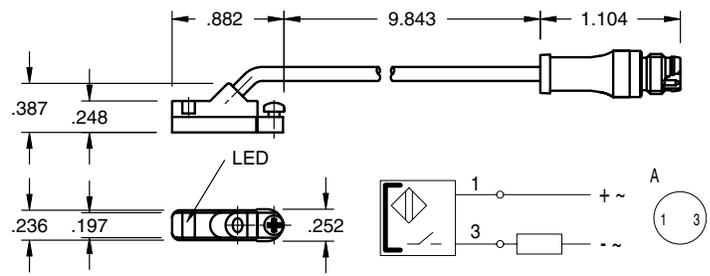
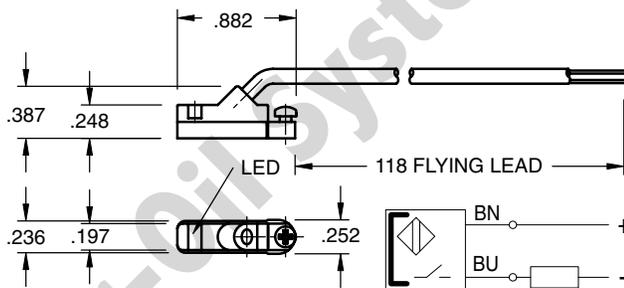
M series Switch Rails (W,X,Y,Z)

M series World Switch

Cylinders	Bore	Part Number
M series	All	Direct Fit w/included adapter

M Series Global Switches

Reed Switch (AC/DC NO), flying lead - RSS02, 8mm connector - RSQ02



Sensing Data

Ambient temperature range T_a	(°F/°C)	-4 to 176 (-20 to 80)
Frequency of operating cycles f at U_e	(kHz)	0.5
Turn on time t	(ms)	≤ 0.25
Turn off time t	(ms)	0.03
LED function indication		yes

Electrical Data

Rated operational voltage U_e	(V)	3...130 AC/DC
Supply voltage U_B	(V)	3...130 AC/DC
Voltage drop U_d at I_e Stat./dyn.	(V)	3.5
Rated insulation voltage U_i	(V)	2750 DC (EN 60335-1)
Rated supply frequency	(Hz)	AC/DC
Rated operational current I_e	(mA)	50 (10W max.)
No-load supply current I_0 at U_e d./und.	(mA)	0

Observe polarity for correct LED function

Mechanical Data

Housing material	Polyamide
Material of sensing face	Polyamide
Connection	PVC cable
Degree of Protection	IP 67
Rated shock: half-sinus, 50g, 11 ms	
Rated vibration environment: 10g, 10...2000 Hz, 90 min	

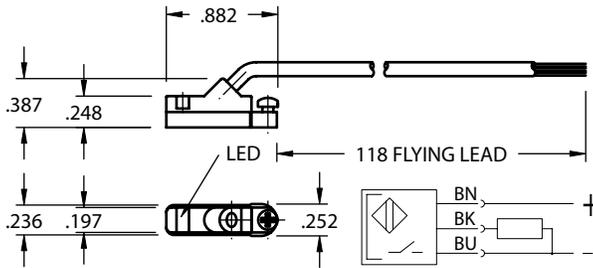




M Series Switches and Accessories

NUMATICS®

Electronic Switch (PNP NO), flying lead - HPNPS31, 8mm connector - HPNPQ31

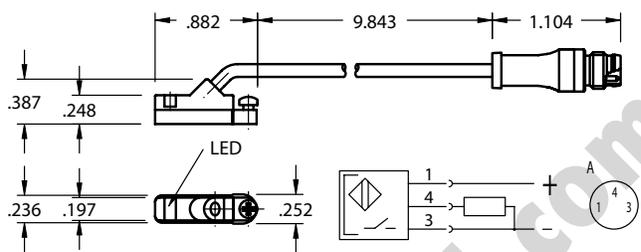


Sensing Data

Ambient temperature range t_d	(°F/°C)	-13 to +158 (-25 to +70)
Temperature drift	(% of)	$\leq 0.3\%/^{\circ}\text{C}$
Frequency of operating cycles f at U_e	(kHz)	10
Turn on time t	(ms)	.05
turn off time t	(ms)	.05
Utilization categories		DC13
Function-supply voltage indication		YES

Electrical Data

Rated operational voltage U_e	(V)	24 DC
Supply voltage U_B	(V)	10...30 DC
incl. ripple	(% of U_e)	15
Voltage drop U_d at I_e Stat./dyn.	(V)	1/-
Rated insulation voltage U_i	(V)	75 AC
Rated supply frequency	(Hz)	DC
Rated operational current I_e	(mA)	200
No-load supply current I_o at U_e d./und.	(mA)	25/13
Protected against polarity reversal		YES

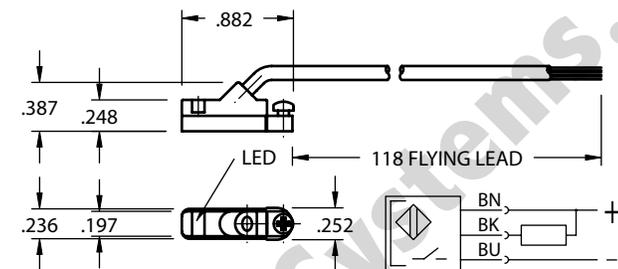


Mechanical Data

Housing material	Polyamide
Material of sensing face	Polyamide
Connection	PVC cable
Degree of Protection	IP 67
Rated shock: half-sinus, 30 g, 11 ms	
Rated vibration environment: 55 Hz, 1mm amplitude, 3 x 30	



Electronic Switch (NPN NO), flying lead - HNPNS32, 8mm connector - HNPNQ32

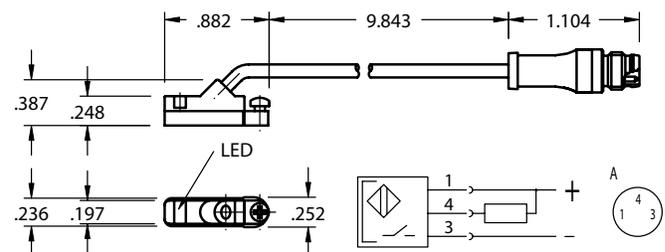


Sensing Data

Ambient temperature range t_d	(°F/°C)	-13 to +158 (-25 to +70)
Temperature drift	(% of S_p)	$\leq 0.3\%/^{\circ}\text{C}$
Frequency of operating cycles f at U_e	(kHz)	10
Turn on time t	(ms)	.05
turn off time t	(ms)	.05
Utilization categories		DC13
Function-supply voltage indication		YES

Electrical Data

Rated operational voltage U_e	(V)	24 DC
Supply voltage U_B	(V)	10...30 DC
incl. ripple	(% of U_e)	15
Voltage drop U_d at I_e Stat./dyn.	(V)	1/-
Rated insulation voltage U_i	(V)	75 AC
Rated supply frequency	(Hz)	DC
Rated operational current I_e	(mA)	200
No-load supply current I_o at U_e d./und.	(mA)	25/13
Protected against polarity reversal		YES



Mechanical Data

Housing material	Polyamide
Material of sensing face	Polyamide
Connection	PVC cable
Degree of Protection	IP 67
Rated shock: half-sinus, 30 g, 11 ms	
Rated vibration environment: 55 Hz, 1mm amplitude, 3 x 30	



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