

COMPACT[®]
AUTOMATION PRODUCTS

Stainless Steel Cylinders

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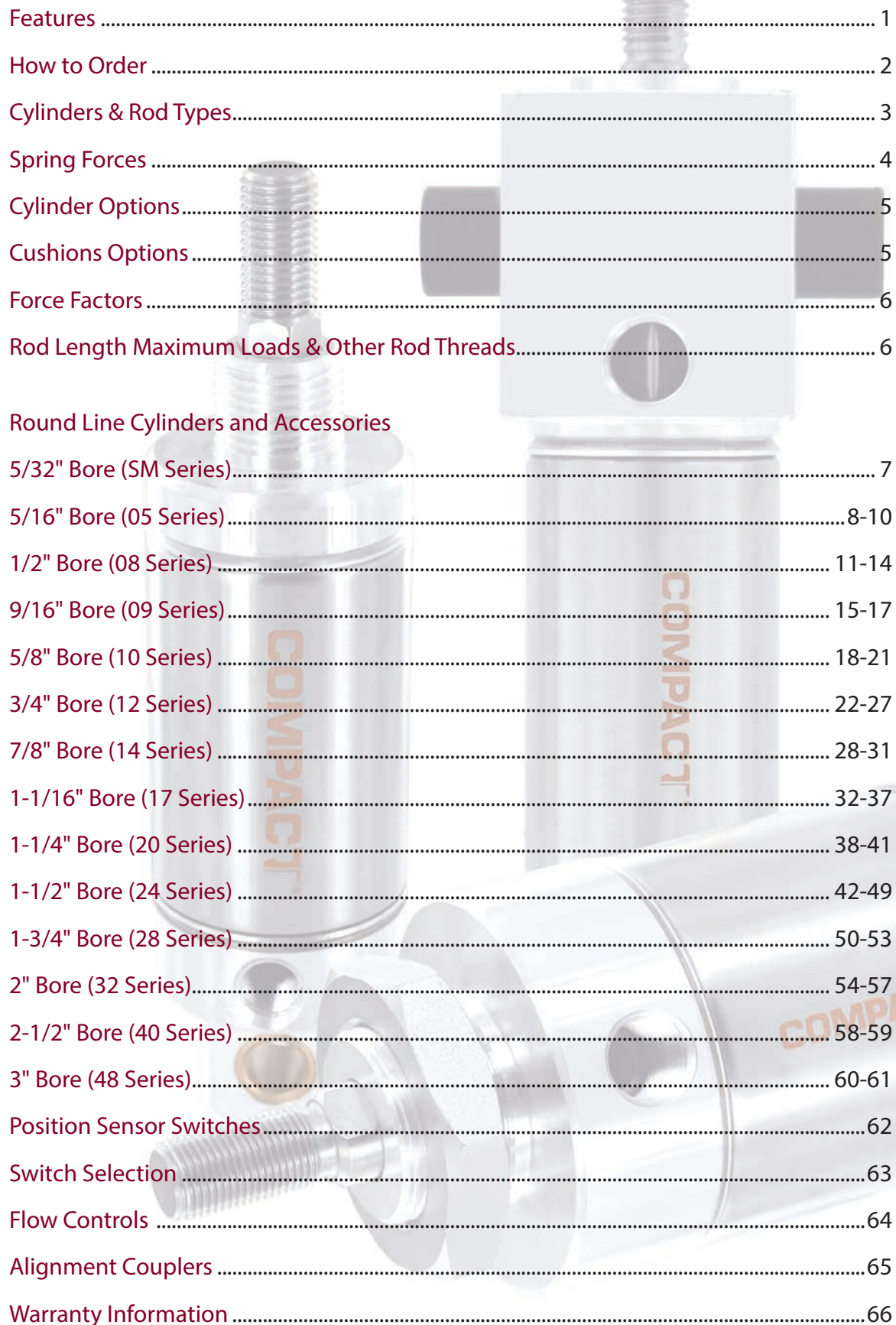
AUTOMATION SOLUTIONS

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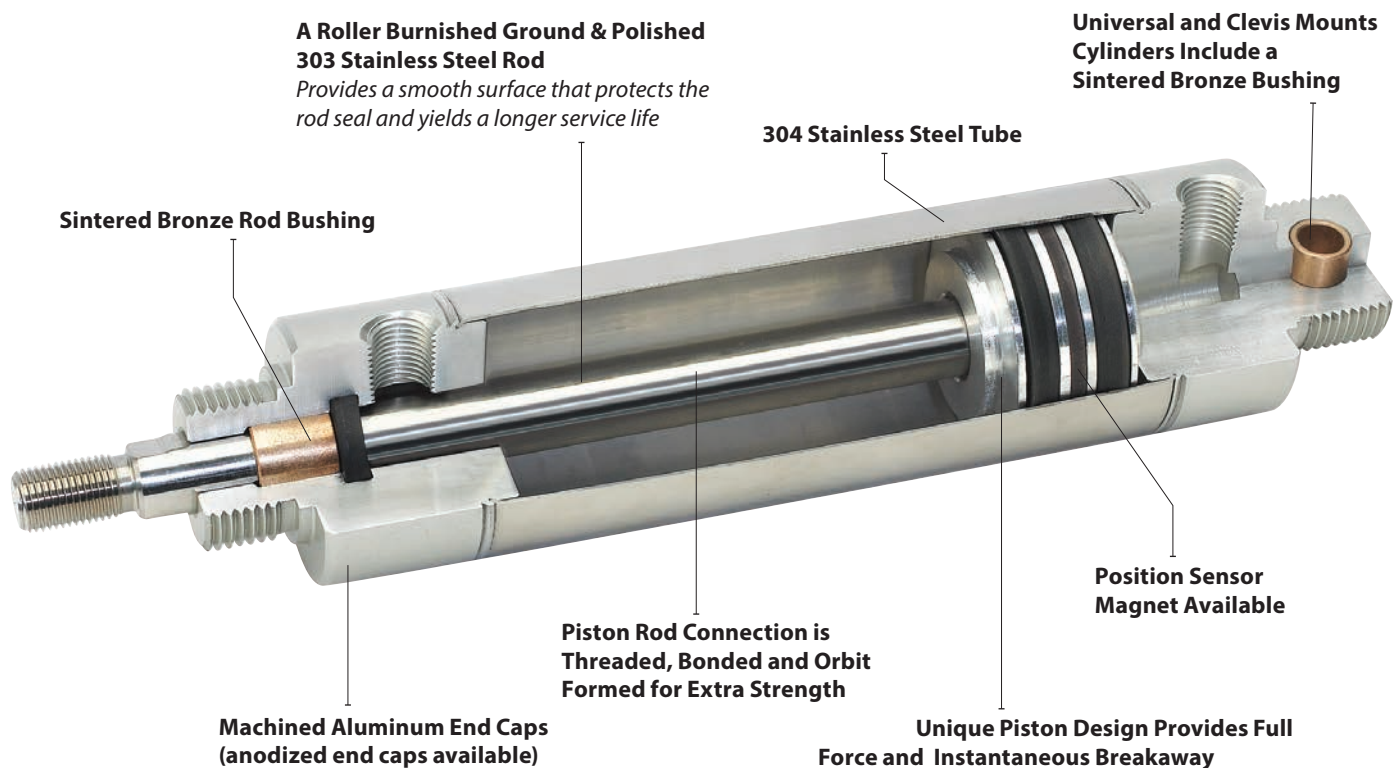
Stainless Steel Cylinders

Compact Automation's Stainless Steel Series cylinders feature a precision rolled body construction providing long life, low maintenance performance. With design flexibility, a wide range of bore sizes and mounting styles, the Stainless Steel Series will meet your actuation needs.

Features

- 130+ Configurable models
- Interchangeable with multiple competitors
- 2-5 day delivery
- Low breakaway forces & long life
- Magnetic piston & rod wipers available
- Bumpers & adjustable cushions
- Multiple switch options available
- RoHS Compliant

Bore Size	5/16" up to 3"
Cylinder Type	Single-Acting, Double-Acting, Reverse-Acting, or Spring Bias
Mounting Style	Universal, Clevis, End Stud, Front Block, Stud, Trunnion
Tube	303 Stainless Steel
End Caps	Aluminum
Rod	304 Stainless Steel
Bushing	Bronze
Seal Options	Nitrile standard, FKM available
Pressure, Max.	250 psig
Rod Type	Rotating, non-rotating, or double end
Temperature, Max.	230°F (400°F with FKM)
Temperature, Min.	32°F (-20°F with FKM)

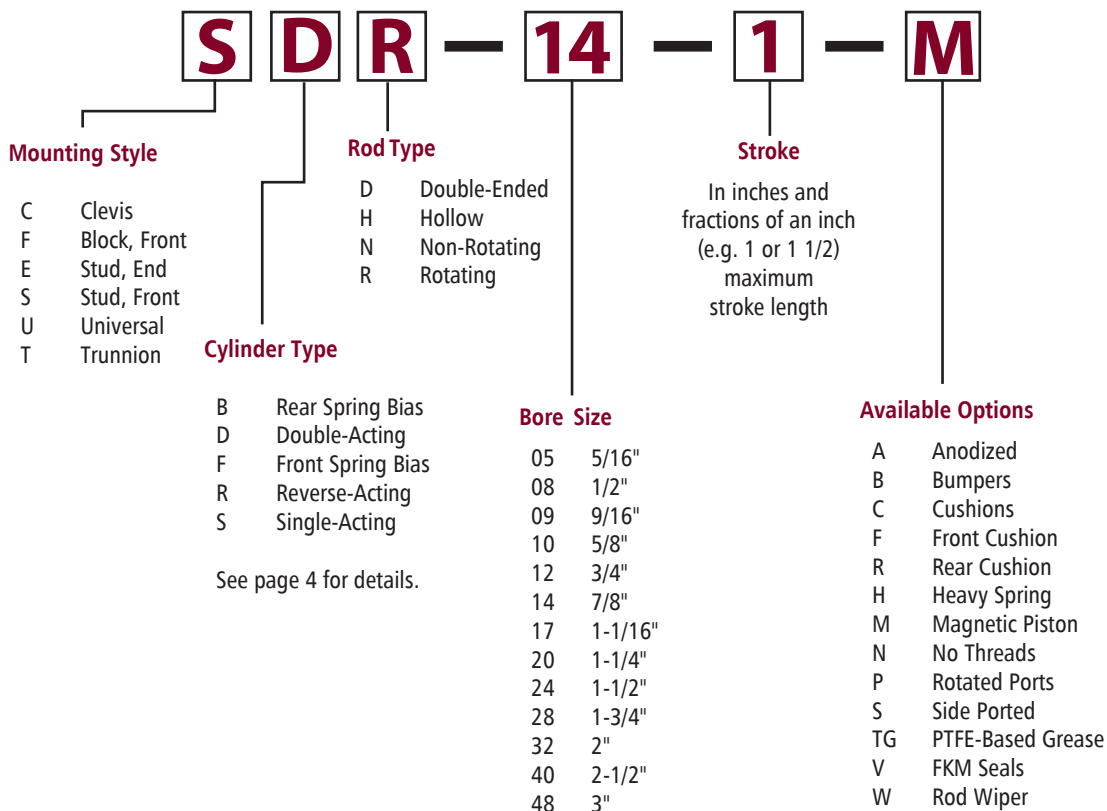


Round Line Cylinders

How to Order

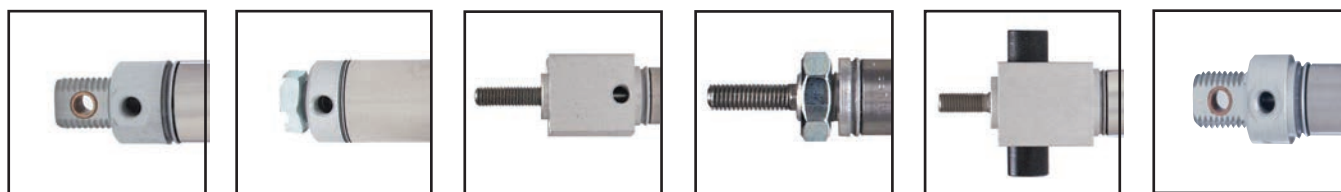
Some options shown below may not be available in all configurations. Please reference the charts on the following pages for complete details. Visit our online configurator at www.compactautomation.com

Part No. Example: SDN - 14 - 1 - M



Mounting Styles

See page 4 for details.



Clevis (C)

Stud, End (E)

Block, Front (F)

Stud, Front (S)

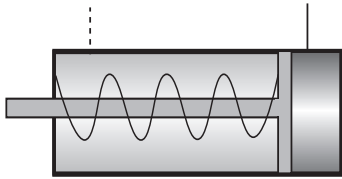
Trunnion (T)

Universal (U)



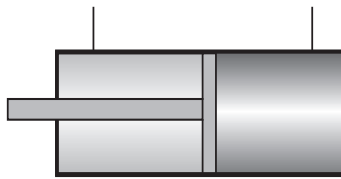
Stainless Steel Cylinder and Rod Types

"S" Single-Acting



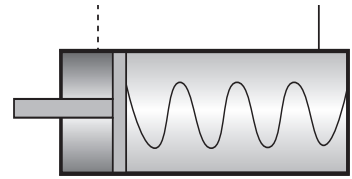
Single-acting cylinders use air pressure to extend the piston rod (push). An internal spring is used to retract the piston rod when air pressure is exhausted.

"D" Double-Acting



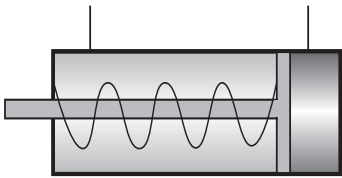
Double-acting cylinders requires alternating air pressure to both sides of the piston to extend(push) and retract (pull) the piston rod.

"R" Reverse-Acting



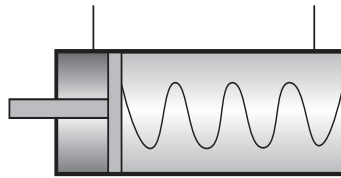
Reverse-acting cylinders contain a spring to extend (push) the piston rod. Air pressure is applied to the rod end of the cylinder to retract the piston rod. When the air is exhausted, the piston rod extends due to the spring force.

"F" Front Spring Bias



Front Spring Bias cylinders are double acting with a spring on the front (rod) side. When air pressure is removed the piston rod will be retracted due to the force of the spring.

"B" Rear Spring Bias



Rear Spring Bias cylinders are double-acting cylinders with a spring on the back end of the piston, When all air is removed from the cylinder, the piston rod will extend due to the force of the spring.

Rod Types

- Double-Ended* (D)
- Rotating (R)
- Non-Rotating (N)
- Hollow (H)

**Double-Acting cylinders only*

SPRING FORCES

STANDARD	5/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1-1/16"	1-1/4"	1-1/2"	1-3/4"	2"	2-1/2"
At Rest	0.5 lbs.	0.9 lbs	1.7 lbs.	1.3 lbs.	3.0 lbs.	3.0 lbs.	2.0 lbs.	4.5 lbs.	4.5 lbs.	11.0 lbs.	15.0 lbs.	15.0 lbs.
Compressed	1.0 lbs.	2.0 lbs.	4.0 lbs.	4.0 lbs.	6.0 lbs.	6.0 lbs.	7.0 lbs.	10.0 lbs.	10.0 lbs.	24.0 lbs.	30.0 lbs.	30.0 lbs.
HEAVY												
At Rest	—	2.0 lbs.	—	3.3 lbs.	5.0 lbs.	5.0 lbs.	5.5 lbs.	8.5 lbs.	8.5 lbs.	—	—	—
Compressed	—	4.0 lbs.	—	9.0 lbs.	10.0 lbs.	10.0 lbs.	13.0 lbs.	17.0 lbs.	17.0 lbs.	—	—	—

Stainless Steel Cylinder Options

The following options are available for selected Compact cylinders.

Please note that not all options are available for all cylinders.

CUSHIONS (C, F, R)

Adding Cushion(s) provides adjustments to slow the piston at the end of stroke, reducing impact and prolonging the life of the cylinder. Compact's Cushions feature a captive adjustment screw that can be adjusted to stop the piston 1/2" from the end of stroke or decelerate the piston's movement during the last 1/2". **More Details on Page 5.**

MAGNETIC PISTON (M)

Equipping the cylinder with an internal magnet on the piston allows the accurate sensing of the piston's position when it passes underneath the sensor. GMR or reed switches are sold separately.¹

More Details on Page 62-63

1. Use of this option may add to the overall length of the cylinder.

BUMPERS (B)

Reduce noise and shock to the load in applications where the cylinder is cycled with a light load and/or high speeds.¹

Max. Temperature: 200°F

1. Use of this option may add to the overall length of the cylinder.

WIPERS (W)

Rod Wipers are recommended for applications where cylinders exposed to liquid wash can dry out the pre-lubricated rod seals. FKM Rod Wipers are supplied when the "V" options is specified.

FKM SEALS (V)

The FKM (V) seals are used in higher temperature applications or for chemical compatibility requirements.

Temperature Range: -20 up to 400°F

HEAVY SPRING (H)

In single-acting, reverse-acting, or spring bias cylinders, this option provides a heavier spring to increase the standard spring force.

Standard and heavy spring forces are listed in Spring Forces Chart on page 3.

ROD THREADS (N)

Various rod thread sizes are available, refer to cylinder charts for specifications. Rods are also available with no threads (N).

See Chart on Page 6.

SIDE PORTED (S)

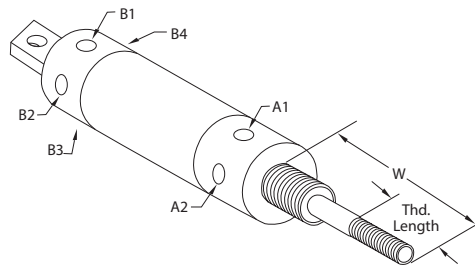
Side ported rear heads are sometimes needed when the standard cylinder has the rear port out the back. This option changes the design of the rear head so the rear port is located on the side of the cylinder.¹

1. Use of this option may add to the overall length of the cylinder.

ROTATED PORTS (P2-8)

For applications where ports need to be rotated to accommodate specific space requirements or specific port orientation for fittings and tube attachments.

See diagram and chart (right)



Option No.	Rear Port	Front Port
P2	B2	A2
P3	B1	A2
P4	B4	A2
P5	B3	A2
P6	B4	A1
P7	B3	A1
P8	B2	A1

PTFE GREASE (TG)

Seals lubricated with PTFE grease.

LARGE ROD (LR)

Available on 1-1/4" bore round body line only.

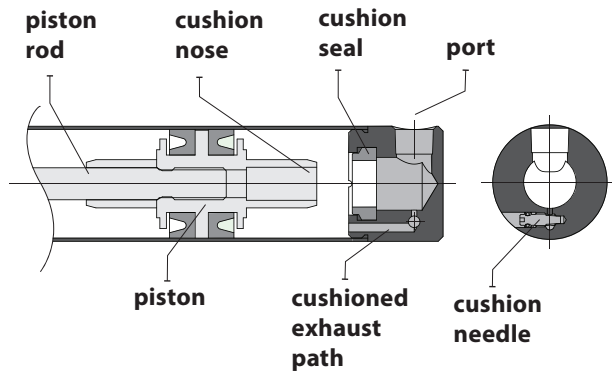
ROD EXTENSIONS

If a special rod extension is required, refer to drawing above. For extensions on single- or double-acting cylinders, indicate desired "W" when rod is at rest with no pressure to either port. For reverse-acting, indicate "W" when rod is at rest with no pressure to either port.

Stainless Steel Cylinder Cushions

Cushions decelerate the piston/rod assembly at the end of travel, reducing impact forces/noise while enabling faster piston speeds. Cushions will provide superior life and better machine function in fast cycling applications. Our adjustment needle are held captive to prevent the needle from blowing out.

- Cushions the last 1/2" of stroke
- Long-lasting nitrile cushion seal
- Easily accessible, stainless steel needle for fine adjustment of cushion
- Available at front, rear, or both ends of cylinder
- Available with magnetic pistons



CYLINDERS AVAILABLE WITH CUSHIONS

Bore Size	Part No.	Mounting	Both (C)	Front (F)	Rear (R)	Pg.
3/4"	SDD-12-	Stud	•	•		22
	SDH-12-	Stud	•	•	•	
	SDR-12-*	Stud	•	•	•	
	UDR-12-	Universal	•	•	•	
7/8"	SDD-14-	Stud	•	•		28
	SDH-14-	Stud	•	•		
	SDR-14-*	Stud	•	•	•	
	UDR-14-	Universal	•	•	•	
1-1/16"	SDD-17-	Stud	•	•		32
	SDH-17-	Stud	•	•	•	
	SDR-17-*	Stud	•	•	•	
	UDR-17-	Universal	•	•	•	
1-1/4"	SDD-20-	Stud	•	•		38
	SDR-20-*	Stud	•	•	•	
	UDR-20-	Universal	•	•	•	
1-1/2"	CDR-24-	Clevis	•	•	•	43
	EDR-24-	End Stud	•	•	•	
	SDD-24-	Stud	•	•		
	SDR-24-*	Stud	•	•	•	
1-3/4"	SDD-28-	Stud	•	•		50
	SDR-28-	Stud	•	•	•	
	UDR-28-	Universal	•	•	•	
2"	SDD-32-	Stud	•	•		54
	SDR-32-*	Stud	•	•	•	
	UDR-32-	Universal	•	•	•	
2-1/2"	SDD-40-	Stud	•	•		58
	SDR-40-*	Stud	•	•	•	
	UDR-40-	Universal	•	•	•	

1-1/16" and 1-1/2" bore cylinders with only one cushion include bumpers on the non-cushioned end

*SDR- models have side ported rear heads

Cushioned cylinders are not designed to decelerate machine members or take the place of shock absorbers in applications with high kinetic energy. Note also that bumpers cannot be used with cushions, but can be used opposite a cushion (as with the 1-1/16" and 1-1/2" bore cylinders).

Cushion seals are Buna. FKM Seals "-V" cushion seals are not available.

Stainless Steel Cylinders

FORCE FACTORS

The chart shown at right can be used to calculate cylinder force. The "force factors" listed indicate the nominal area for the bore and rod sizes shown. To calculate cylinder force, multiply the appropriate extend or retract force factor by the pressure being used. Compact also recommends adding a 25% safety factor for normal load movement.

FORCE FACTOR x **P** (Pressure) = **F** (Force)

F x **1.25** (25% Safety Factor) = **Normal Load Movement**

To calculate your own force factors:

A (Area) = **Radius**² x **π** (or Diameter² x 0.7854)

F = **P** x **A**

If using a double rod end cylinder, use the Retract Force Factor for both extend and retract.

BORE SIZE	ROD SIZE	EXTEND*	RETRACT*
5/16"	1/8"	0.07 in ²	0.06 in ²
1/2"		0.19 in ²	0.16 in ²
9/16"	3/16"	0.25 in ²	0.22 in ²
5/8"		0.31 in ²	0.28 in ²
3/4"	1/4"	0.44 in ²	0.39 in ²
7/8"		0.60 in ²	0.55 in ²
1-1/16"	5/16"	0.88 in ²	0.80 in ²
1-1/4"	3/8"	1.20 in ²	1.09 in ²
1-1/2"	7/16"	1.70 in ²	1.55 in ²
1-3/4"	1/2"	2.40 in ²	2.20 in ²
2"	5/8"	3.10 in ²	2.90 in ²
2-1/2"		4.90 in ²	4.59 in ²
3"	3/4"	7.00 in ²	6.56 in ²

Extend = Area of Bore Retract = Area of bore minus area of rod

MAXIMUM LOAD BY ROD LENGTH LBS.

BORE SIZE	ROD SIZE	1"	5"	10"	15"	20"	25"	30"	35"	40"
5/16"	1/8"	110	12	3	1.3					
1/2"										
9/16"	3/16"	262	59	15	6.6	3.7				
5/8"										
3/4"	1/4"	478	190	47	21	12	7.5			
7/8"										
1-1/16"	5/16"	756	451	116	52	29	19	13		
1-1/4"	3/8"	1,091	786	240	106	60	38	27	20	
1-1/2"	7/16"	1,490	1,184	444	197	111	71	49	36	28
1-3/4"	1/2"	1,950	1,645	757	336	189	120	84	62	47
2"	5/8"	3,055	2,750	1,795	821	462	295	205	150	115
2-1/2"										
3"	3/4"	4,405	4,100	3,140	1,700	950	613	425	312	240

OTHER ROD THREADS

Bore	Rod Dia.	Std Thrd	N1	N2	N3	N4
5/16"	1/8"	#5-40	-	-	-	-
1/2"						
9/16"	3/16"	#10-32	#10-24	M5x0.8	#8-32	-
5/8"						
3/4"	1/4"	1/4-28	1/4-20	M6x1.0	#10-32	-
7/8"						
1-1/16"	5/16"	5/16-24	5/16-18	M8x1.25	1/4-28	-
1-1/4"	3/8"	3/8-24	3/8-16	M8x1.25	5/16x24	-
1-1/2"	7/16"	7/16-20	7/16-14	M10x1.5	3/8-24	-
1-3/4"	1/2"	1/2-20	1/2-13	M12x1.5	7/16-20	-
2"	5/8"	1/2-20	1/2-13	M12x1.5	7/16-20	5/8-18
2-1/2"						
3"	3/4"	5/8-18	5/8-11	M16x1.5	1/2-20	3/4-16

Stainless Steel Cylinders - 5/32" Bore

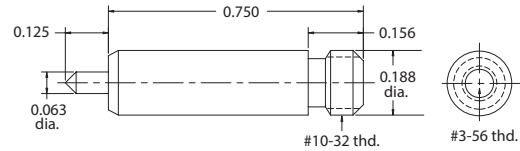
Standard Options		
B - Bumpers	M - Magnetic Piston for Sensing	S - Side Ports
C - Cushions Both Ends	N - No Rod Thread	V - Fluorocarbon Seals
F - Front Cushion Only	P* - Rotated Ports - See pg 4.	W - Rod Wiper
H - Heavy Spring Force	R - Rear Cushion Only	Rod Extensions - See pg 4.
		Other Rod Threads - See pg 6.

Single Acting Bore: 5/32" Mount: Rear Thread Type: Spring Return

SM-2



Did you know...
The tiny SM-2 cylinder gives 2 lbs. of force at 100 psig.



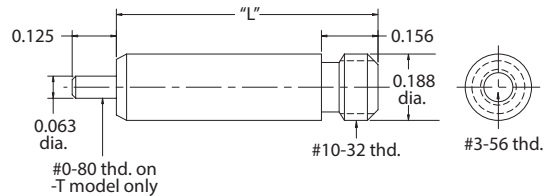
Available Stroke Length: 1/4"

Materials: Stainless steel body, piston & rod, Nitrile U-cup, Beryllium copper spring

Single Acting Bore: 5/32" Mount: Rear Thread Type: Spring Return

SM-3-

Materials: Stainless steel tube and rod, brass piston, Nitrile U-cup



Model	SM-3-1	SM-3-2	SM-3-3	SM-3-4
Stroke	1/4"	1/2"	3/4"	1"
Length "L"	0.740	1.171	1.593	2.000

To order: Add stroke length to the end of the part number

NEW Composite Cylinders

A Lightweight, Corrosion Resistant Solution from Compact®

The Compact® Composite Cylinder is your complete solution for medical and food grade applications or where lightweight, washdown or corrosion resistance is required. With a wide range of both imperial and metric sizes to choose from we can offer a completely configurable and repairable product to meet your motion control needs.

Experience the Compact Automation Difference!

Want to Learn More about our Composite Cylinder Products?
Visit the Inch Series configurator and choose the "CMP" option



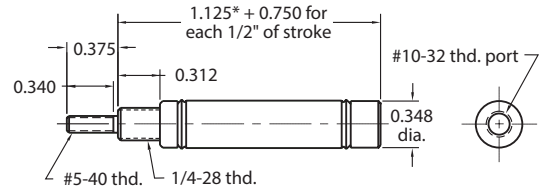
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Stainless Steel Cylinders - 5/16" Bore

Standard Options		
B - Bumpers	M - Magnetic Piston for Sensing	S - Side Ports
C - Cushions Both Ends	N - No Rod Thread	V - Fluorocarbon Seals
F - Front Cushion Only	P* - Rotated Ports - See pg 4.	W - Rod Wiper
H - Heavy Spring Force	R - Rear Cushion Only	Rod Extensions - See pg 4.
		Other Rod Threads - See pg 6.

Single Acting
SSR-05- -

Mount: Stud Type: Rotating Rod
 Options: B, V, N, S

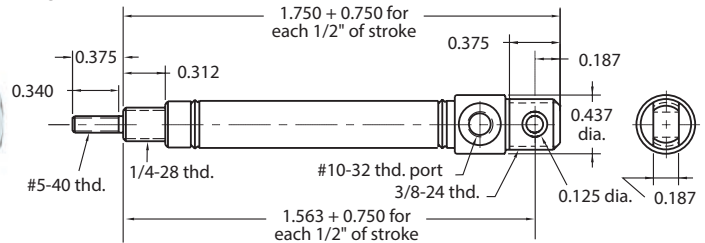


Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
 Spring Compressed: 1 lbs. Spring At Rest: 0.5 lbs.
 Maximum Stroke: 29"
 For B option add 0.250 For S option add 0.220

Nut included, but not shown on drawing

Single Acting
USR-05- -

Mount: Universal Type: Rotating Rod
 Options: B, V, N, P6

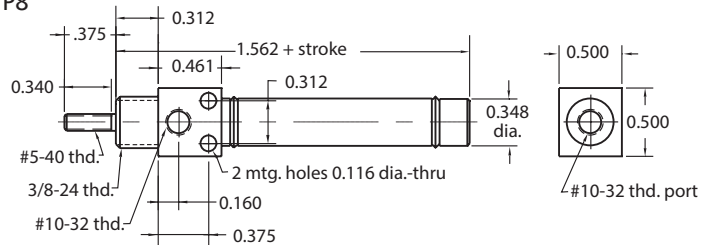


Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
 Spring Compressed: 1 lbs. Spring At Rest: 0.5 lbs.
 Maximum Stroke: 29"
 For B option add 0.250

Nuts included, but not shown on drawing

Double Acting
SDR-05- -

Mount: Stud Type: Rotating Rod
 Options: B, V, N, S, P6, P7, P8

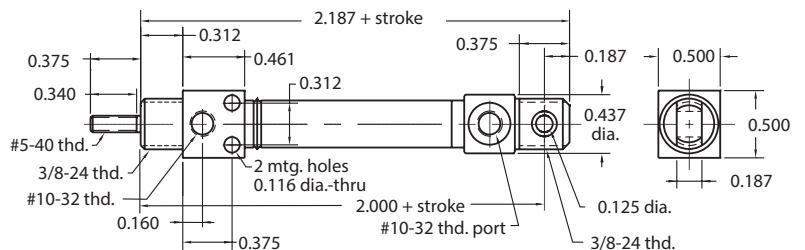


Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
 Maximum Stroke: 43"
 For B option add 0.250 For S option add 0.220

Nut included, but not shown on drawing

Double Acting
UDR-05- -

Mount: Universal Type: Rotating Rod
 Options: B, V, N, P2, P3, P4, P5, P6, P7, P8



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
 Maximum Stroke: 43"
 For B option add 0.250

Nuts included, but not shown on drawing

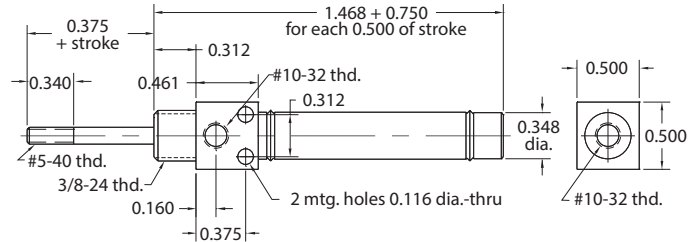
Stainless Steel Cylinders - 5/16" Bore

Standard Options		
B - Bumpers	M - Magnetic Piston for Sensing	S - Side Ports
C - Cushions Both Ends	N - No Rod Thread	V - Fluorocarbon Seals
F - Front Cushion Only	P* - Rotated Ports - See pg 4.	W - Rod Wiper
H - Heavy Spring Force	R - Rear Cushion Only	Rod Extensions - See pg 4.
		Other Rod Threads - See pg 6.

Reverse Acting

SRR-05--

Mount: Stud Type: Rotating Rod
Options: B, V, N



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

Spring Compressed: 1 lbs. Spring At Rest: 0.5 lbs.

Maximum Stroke: 17"

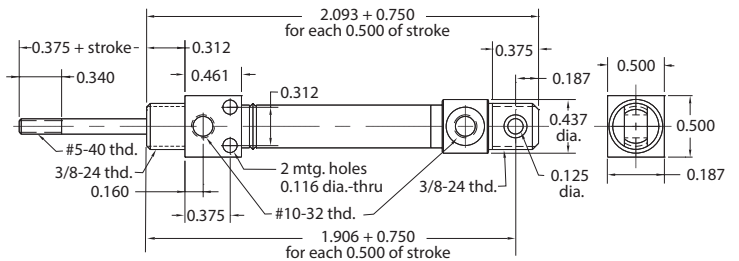
For B option add 0.250

Nuts included, but not shown on drawing

Reverse Acting

URR-05--

Mount: Universal Type: Rotating Rod
Options: B, V, N, P2, P3, P4, P5, P6, P7, P8



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

Spring Compressed: 1 lbs. Spring At Rest: 0.5 lbs.

Maximum Stroke: 17"

For B option add 0.250

Nuts included, but not shown on drawing

Need Flow Controls on Your Application?

Compact® Automation Flow Controls use a unique needle design to minimize turbulence and improve flow controllability. A **super fine pitch (up to 80 threads per inch)** provides the finest adjustment available.

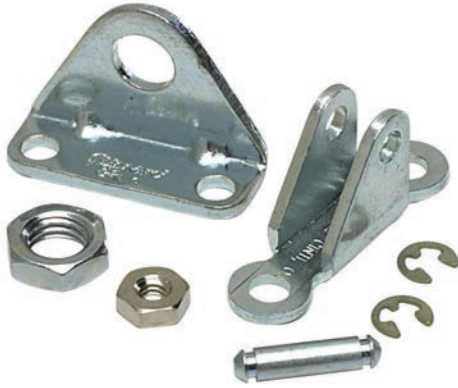
See Page 64 for more details.

Want to Learn More about our Cylinder Accessories?
Visit the Compact® website and select accessories from the main Configurator menu.



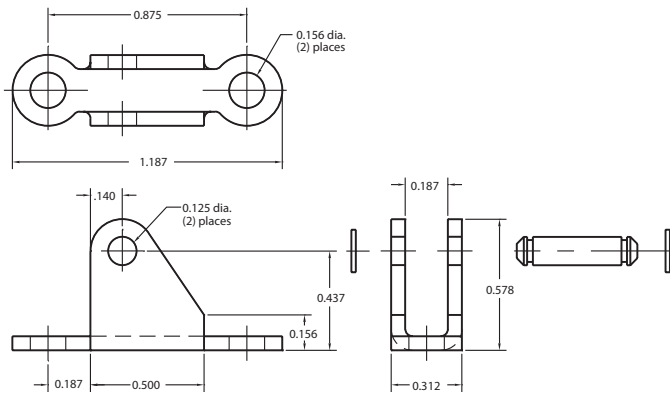
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www.compactautomation.com

Stainless Steel Cylinders - 5/16" Bore Accesories



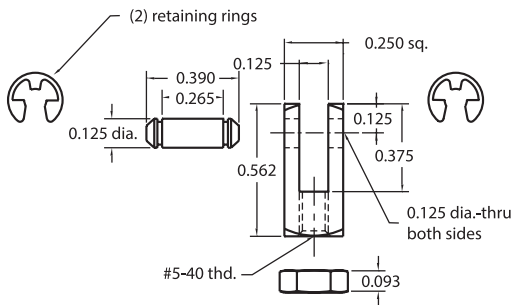
CB-0595

Clevis Bracket
Material: Steel, bright zinc plated



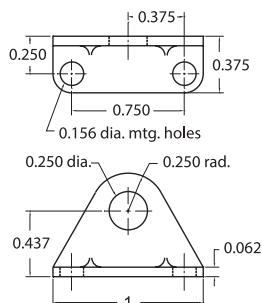
RC-0581

Rod Clevis
Material: Steel, electroless nickel plate



FB-0591

Foot Bracket
Material: Steel, bright zinc plated



MOUNTING NUTS

Stud Nut

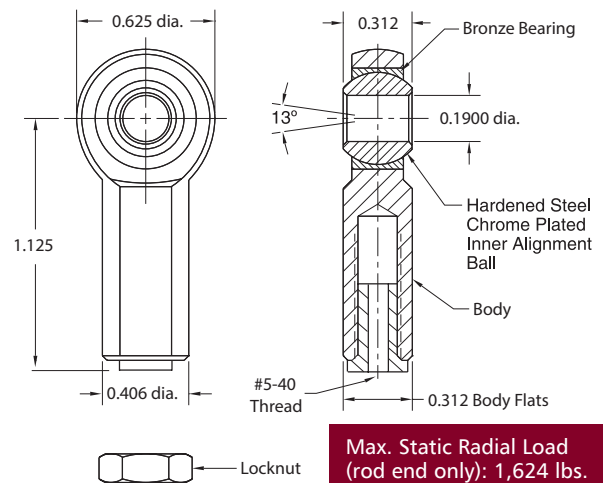
Part Number	Across Flats	Nut Thickness	Nut (Thread)
N04-28A	7/16"	5/32"	1/4-28
N04-28B	3/8"	1/8"	1/4-28
N06-24A	9/16"	7/32"	3/8-24
N06-24B	1/2"	3/32"	3/8-24

Rod Nut

Part Number	Across Flats	Nut Thickness	Nut (Thread)
N02-40	1/4"	3/32"	#5-40

RE-0585

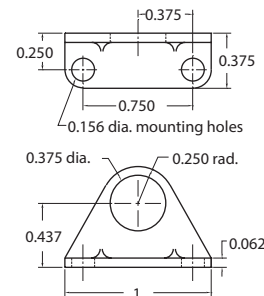
Rod End
Material: Steel, bright zinc plated body



Max. Static Radial Load (rod end only): 1,624 lbs.
Fits Rod Thread Size: #5-40

FB-0592

Foot Bracket
Material: Steel, bright zinc plated



Stainless Steel Cylinders - 1/2" Bore

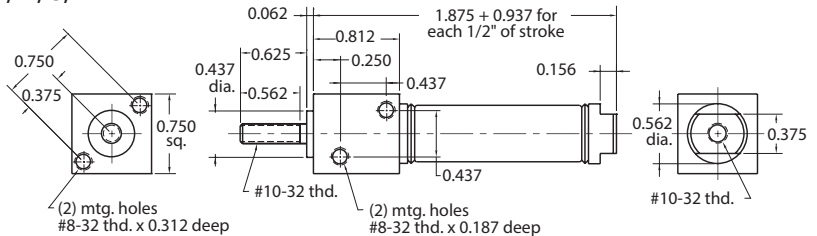
Standard Options		
B - Bumpers	M - Magnetic Piston for Sensing	S - Side Ports
C - Cushions Both Ends	N - No Rod Thread	V - Fluorocarbon Seals
F - Front Cushion Only	P* - Rotated Ports - See pg 4.	W - Rod Wiper
H - Heavy Spring Force	R - Rear Cushion Only	Rod Extensions - See pg 4.
		Other Rod Threads - See pg 6.

Single Acting

Mount: Front Type: Rotating Rod

FSR-08-□-□

Options: M, B, W, V, N, S, H



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
 Spring Compressed: 2 lbs. Spring At Rest: 0.9 lbs.
 Maximum Stroke: 23"

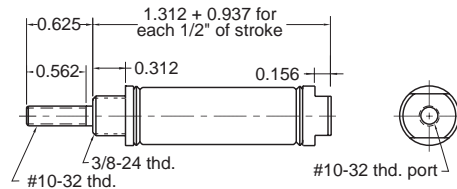
For B option add 0.375 For M option add 0.312 For S option add 0.187

Single Acting

Mount: Stud Type: Non-Rotating Rod

SSN-08-□-□

Options: M, B, V, N, S, H



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
 Spring Compressed: 2 lbs. Spring At Rest: 0.9 lbs.
 Maximum Stroke: 23"

For B option add 0.500 For M option add 0.312 For S option add 0.187

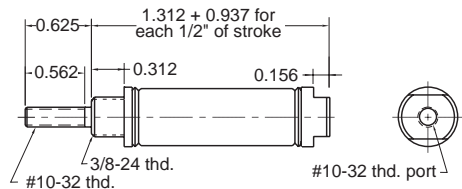
Nuts included, but not shown on drawing

Single Acting

Mount: Stud Type: Rotating Rod

SSR-08-□-□

Options: M, B, W, V, N, S, H



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
 Spring Compressed: 2 lbs. Spring At Rest: 0.9 lbs.
 Maximum Stroke: 23"

For B option add 0.500 For M option add 0.312 For S option add 0.187

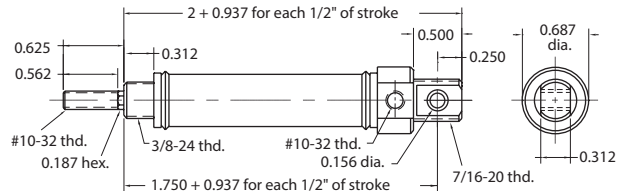
Nuts included, but not shown on drawing

Single Acting

Mount: Universal Type: Non-Rotating Rod

USN-08-□-□

Options: M, B, V, N, H, P6



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
 Spring Compressed: 2 lbs. Spring At Rest: 0.9 lbs.
 Maximum Stroke: 23"

For B option add 0.500 For M option add 0.312

Furnished without nut(s). See Chart on Page 14.

Stainless Steel Cylinders - 1/2" Bore

Standard Options

B - Bumpers
C - Cushions Both Ends
F - Front Cushion Only
H - Heavy Spring Force

M - Magnetic Piston for Sensing
N - No Rod Thread
P* - Rotated Ports - See pg 4.
R - Rear Cushion Only

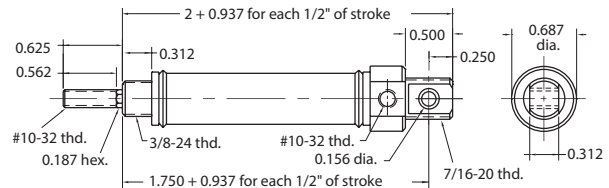
S - Side Ports
V - Fluorocarbon Seals
W - Rod Wiper
Rod Extensions - See pg 4.
Other Rod Threads - See pg 6.

Single Acting

Mount: Universal Type: Rotating Rod

USR-08-□-□

Options: M, B, W, V, N, H, P6



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

Spring Compressed: 2 lbs. Spring At Rest: 0.9 lbs.

Maximum Stroke: 23"

For B option add 0.500 For M option add 0.312

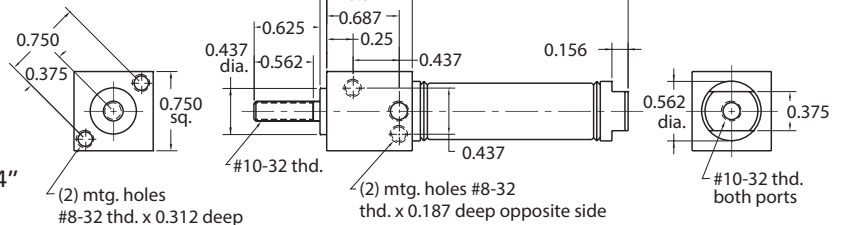
Furnished without nut(s). See Chart on Page 14.

Double Acting

Mount: Front Type: Rotating Rod

FDR-08-□-□

Options: M, B, W, V, N, S, P6, P7, P8



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

Maximum Stroke: 43"

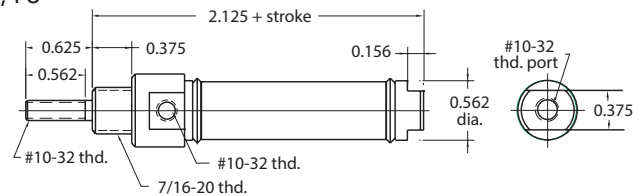
For B option add 0.375 For M option add 0.312 For S option add 0.187

Double Acting

Mount: Stud Type: Rotating Rod

SDR-08-□-□

Options: M, B, W, V, N, S, P6, P7, P8



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

Maximum Stroke: 43"

For B option add 0.375 For M option add 0.312 For S option add 0.187

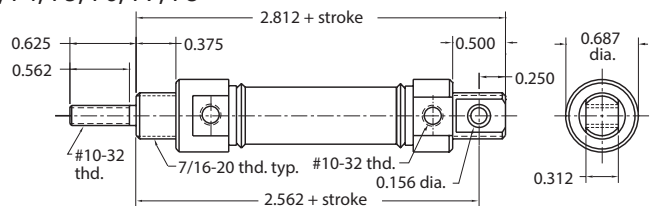
Nut included, but not shown on drawing

Double Acting

Mount: Universal Type: Rotating Rod

UDR-08-□-□

Options: M, B, W, V, N, P2, P3, P4, P5, P6, P7, P8



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

Maximum Stroke: 42"

For B option add 0.375 For M option add 0.312

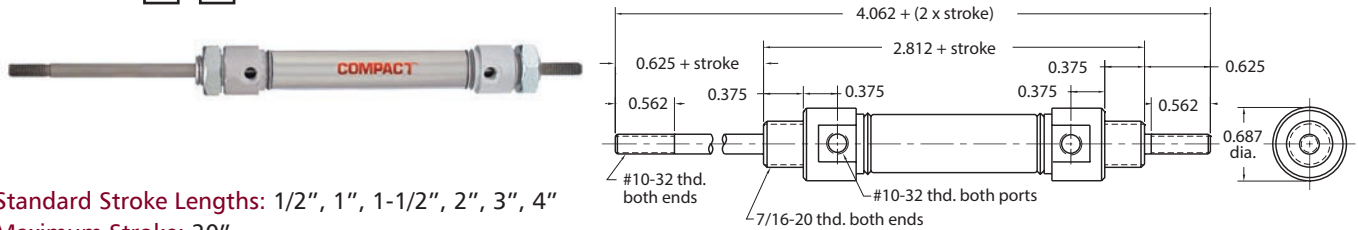
Furnished without nut(s). See Chart on Page 14.

Stainless Steel Cylinders - 1/2" Bore

Standard Options		
B - Bumpers	M - Magnetic Piston for Sensing	S - Side Ports
C - Cushions Both Ends	N - No Rod Thread	V - Fluorocarbon Seals
F - Front Cushion Only	P* - Rotated Ports - See pg 4.	W - Rod Wiper
H - Heavy Spring Force	R - Rear Cushion Only	Rod Extensions - See pg 4.
		Other Rod Threads - See pg 6.

Double Acting
SDD-08-□-□

Mount: Stud Type: Double Rod
 Options: M, B, W, V, N, P6, P7, P8



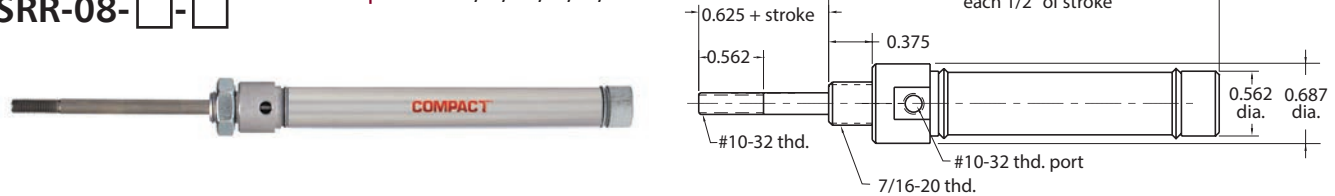
Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
 Maximum Stroke: 20"

For B option add 0.500 For M option add 0.312

Nuts included, but not shown on drawing

Reverse Acting
SRR-08-□-□

Mount: Stud Type: Rotating Rod
 Options: M, B, W, V, N, H



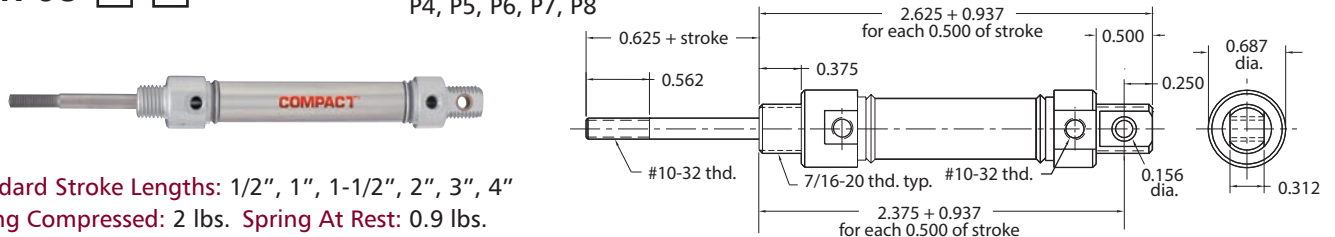
Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
 Spring Compressed: 2 lbs. Spring At Rest: 0.9 lbs.
 Maximum Stroke: 15"

For B option add 0.500 For M option add 0.312

Nuts included, but not shown on drawing

Reverse Acting
URR-08-□-□

Mount: Universal Type: Rotating Rod
 Options: M, B, W, V, N, H, P2, P3, P4, P5, P6, P7, P8



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
 Spring Compressed: 2 lbs. Spring At Rest: 0.9 lbs.
 Maximum Stroke: 15"

For B option add 0.500 For M option add 0.312

Furnished without nut(s). See Chart on Page 14.

Stainless Steel Cylinders - 1/2" Bore Accessories



MOUNTING NUTS

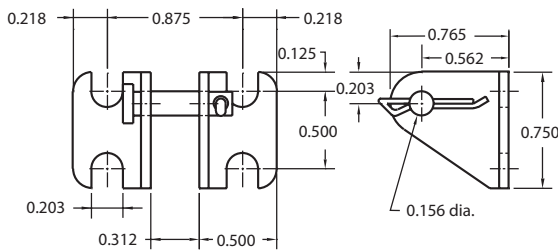
Stud Nut

Part Number	Across Flats	Nut Thickness	Nut (Thread)
N06-24A	9/16"	7/32"	3/8-24
N06-24B	1/2"	3/32"	3/8-24
N07-20	11/16"	1/4"	7/16-20

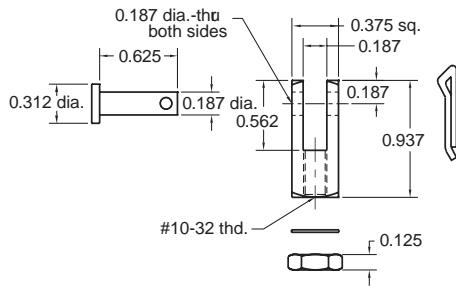
Rod Nut

Part Number	Across Flats	Nut Thickness	Nut (Thread)
N03-32	3/8"	1/8"	#10-32

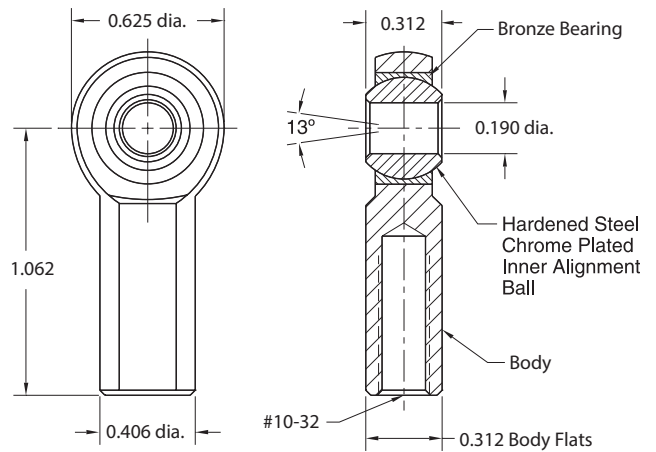
CB-0895 Clevis Bracket
Material: Steel, bright zinc plated



RC-0881 Rod Clevis
Material: Steel, electroless nickel plate



RE-0885 Rod End
Material: Steel, bright zinc plated body

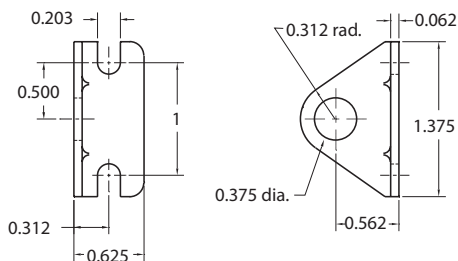


Lockwasher

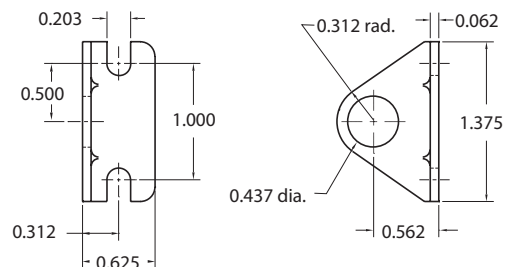
Locknut

Max. Static Radial Load (rod end only): 1,624 lbs.
Fits Rod Thread Size: #5-40

FB-0891 Foot Bracket
Material: Steel, bright zinc plated



FB-0892 Foot Bracket
Material: Steel, bright zinc plated



Stainless Steel Cylinders - 9/16" Bore

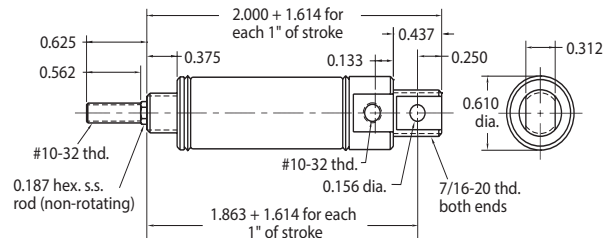
Standard Options		
B - Bumpers	M - Magnetic Piston for Sensing	S - Side Ports
C - Cushions Both Ends	N - No Rod Thread	V - Fluorocarbon Seals
F - Front Cushion Only	P* - Rotated Ports - See pg 4.	W - Rod Wiper
H - Heavy Spring Force	R - Rear Cushion Only	Rod Extensions - See pg 4.
		Other Rod Threads - See pg 6.

Single Acting **Mount:** Universal **Type:** Non-Rotating Rod
Options: M, B, V, N, P6

USN-09-□-□



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
 Maximum Stroke: 23"
 Spring Compressed: 4 lbs. Spring At Rest: 1.7 lbs.



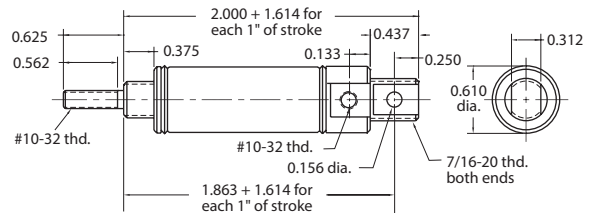
For B option add 0.063 For M option add 0.125 For MB combination add 0.125 **Furnished without nut(s). See Chart on Page 17.**

Single Acting **Mount:** Universal **Type:** Non-Rotating Rod
Options: M, B, V, N, P6

USR-09-□-□



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
 Maximum Stroke: 23"
 Spring Compressed: 4 lbs. Spring At Rest: 1.7 lbs.



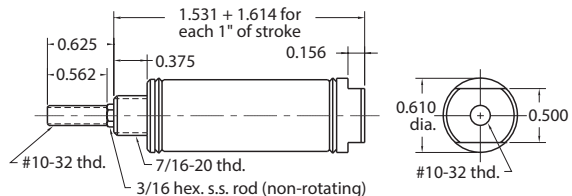
For B option add 0.063 For M option add 0.125 For MB combination add 0.125 **Furnished without nut(s). See Chart on Page 17.**

Single Acting **Mount:** Stud **Type:** Non-Rotating Rod
Options: M, B, V, N

SSN-09-□-□



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
 Maximum Stroke: 23"
 Spring Compressed: 4 lbs. Spring At Rest: 1.7 lbs.



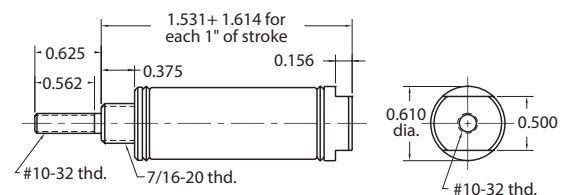
For B option add 0.063 For M option add 0.125 For MB combination add 0.125 **Nut included, but not shown on drawing**

Single Acting **Mount:** Stud **Type:** Non-Rotating Rod
Options: M, B, V, N

SSR-09-□-□



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
 Maximum Stroke: 23"
 Spring Compressed: 4 lbs. Spring At Rest: 1.7 lbs.



For B option add 0.063 For M option add 0.125 For MB combination add 0.125 **Nut included, but not shown on drawing**

Stainless Steel Cylinders - 9/16" Bore Accessories

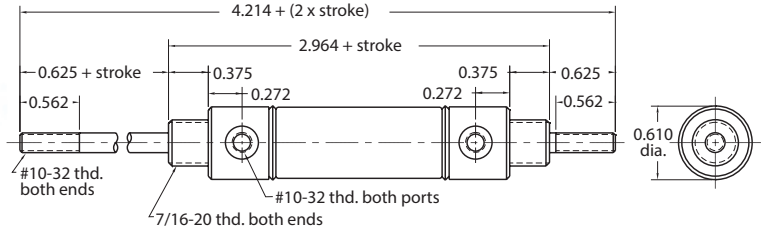
Standard Options		
B - Bumpers	M - Magnetic Piston for Sensing	S - Side Ports
C - Cushions Both Ends	N - No Rod Thread	V - Fluorocarbon Seals
F - Front Cushion Only	P* - Rotated Ports - See pg 4.	W - Rod Wiper
H - Heavy Spring Force	R - Rear Cushion Only	Rod Extensions - See pg 4.
		Other Rod Threads - See pg 6.

Double Acting

SDD-09- -

Mount: Stud Type: Double Rod

Options: M, B, V, N, P6, P7, P8



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

Maximum Stroke: 20"

For B option add 0.125

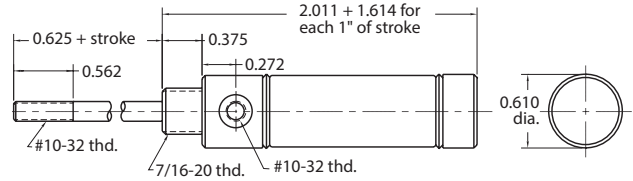
Nuts included, but not shown on drawing

Reverse Acting

SSR-09- -

Mount: Stud Type: Rotating Rod

Options: M, B, V, N



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

Maximum Stroke: 15"

Spring Compressed: 4 lbs. Spring At Rest: 1.7 lbs.

For B option add 0.063 For M option add 0.125 For MB combination add 0.125

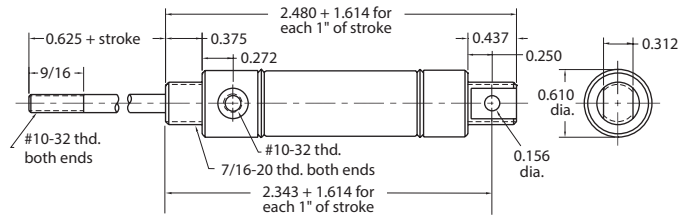
Nuts included, but not shown on drawing

Reverse Acting

URR-09- -

Mount: Universal Type: Rotating Rod

Options: M, B, V, N, P2



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

Maximum Stroke: 14"

Spring Compressed: 4 lbs. Spring At Rest: 1.7 lbs.

For B option add 0.063 For M option add 0.125 For MB combination add 0.125

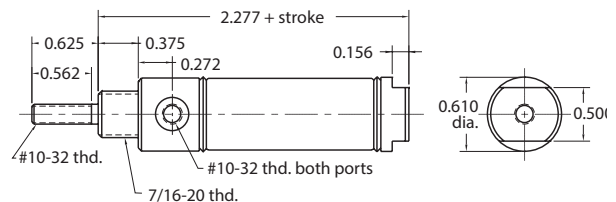
Furnished without nut(s). See Chart on Page 17.

Double Acting

SDR-09- -

Mount: Stud Type: Rotating Rod

Options: M, B, V, N, P6, P7, P8



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

Maximum Stroke: 43"

For B option add 0.063 For MB combination add 0.125

Nut included, but not shown on drawing

Stainless Steel Cylinders - 9/16" Bore Accessories

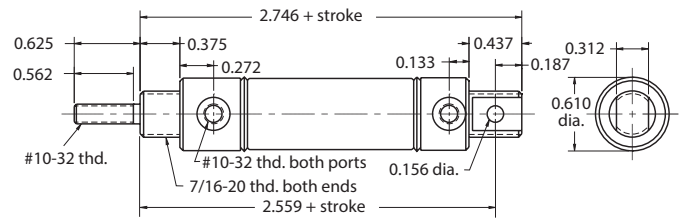
Double Acting

UDR-09-□-□



Mount: Universal Type: Rotating Rod

Options: M, B, V, N, P2, P3, P4, P5, P6, P7, P8



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

Maximum Stroke: 43"

For B option add 0.125

Furnished without nut(s). See Chart below.



MOUNTING NUTS

Stud Nut

Part Number	Across Flats	Nut Thickness	Nut (Thread)
N07-20	11/16"	1/4"	7/16-20

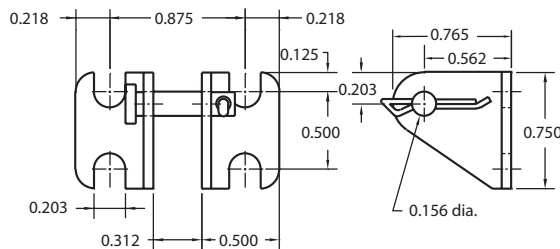
Rod Nut

Part Number	Across Flats	Nut Thickness	Nut (Thread)
N03-32	3/8"	1/8"	#10-32

CB-0895

Clevis Bracket

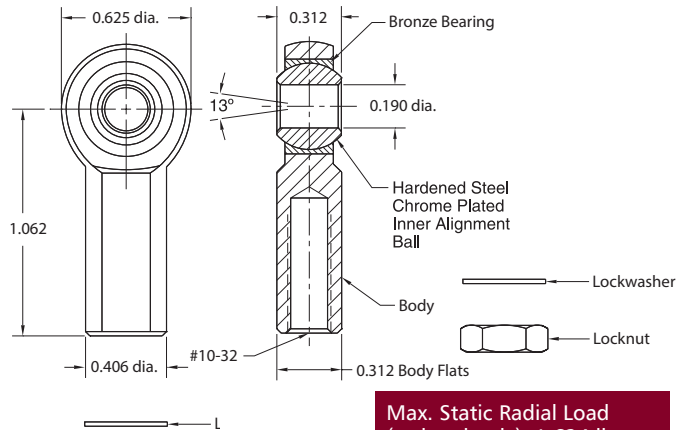
Material: Steel, bright zinc plated



RE-0885

Rod End

Material: Steel, bright zinc plated body

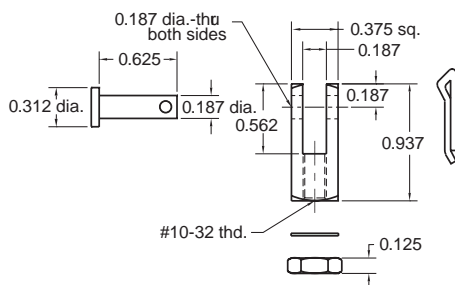


Max. Static Radial Load (rod end only): 1,624 lbs.
Fits Rod Thread Size: #10-32

RC-0881

Rod Clevis

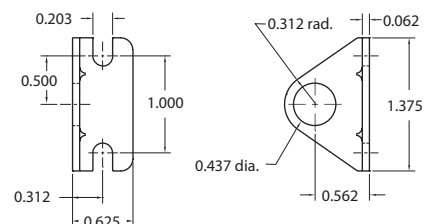
Material: Steel, electroless nickel plate



FB-0892

Foot Bracket

Material: Steel, bright zinc plated



Stainless Steel Cylinders - 5/8" Bore Accessories

Standard Options

B - Bumpers
 C - Cushions Both Ends
 F - Front Cushion Only
 H - Heavy Spring Force

M - Magnetic Piston for Sensing
 N - No Rod Thread
 P* - Rotated Ports - See pg 4.
 R - Rear Cushion Only

S - Side Ports
 V - Fluorocarbon Seals
 W - Rod Wiper
 Rod Extensions - See pg 4.
 Other Rod Threads - See pg 6.

Single Acting

USN-10-□-□



Mount: Universal Type: Non-Rotating Rod

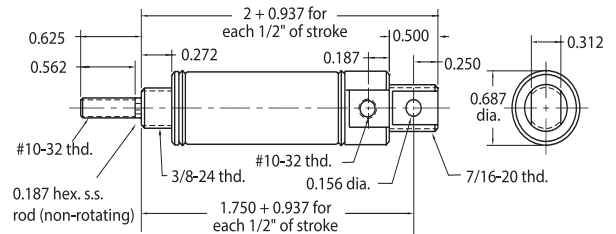
Options: M, B, V, N, H, P6

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

Maximum Stroke: 23"

Spring Compressed: 4 lbs. Spring At Rest: 1.3 lbs.

For B option add 0.500 For M option add 0.312



Furnished without nut(s). See Chart on Page 21.

Single Acting

USR-10-□-□



Mount: Universal Type: Rotating Rod

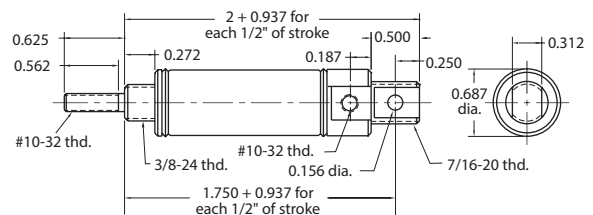
Options: M, B, V, N, H, P6

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

Maximum Stroke: 23"

Spring Compressed: 4 lbs. Spring At Rest: 1.3 lbs.

For B option add 0.500 For M option add 0.312



Furnished without nut(s). See Chart on Page 21.

Single Acting

SSN-10-□-□



Mount: Stud Type: Non-Rotating Rod

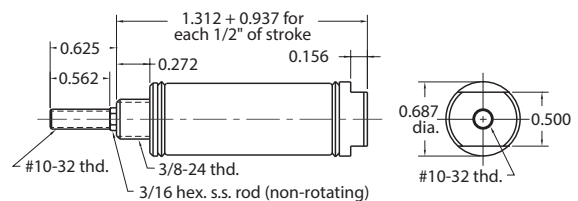
Options: M, B, V, N, S, H

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

Maximum Stroke: 23"

Spring Compressed: 4 lbs. Spring At Rest: 1.3 lbs.

For B option add 0.500 For M option add 0.312



Nut included, but not shown on drawing

Single Acting

SSR-10-□-□



Mount: Stud Type: Rotating Rod

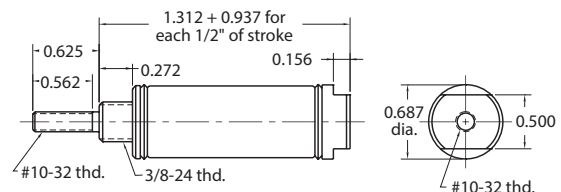
Options: M, B, V, N, S, H

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

Maximum Stroke: 23"

Spring Compressed: 4 lbs. Spring At Rest: 1.3 lbs.

For B option add 0.500 For M option add 0.312



Nut included, but not shown on drawing

Stainless Steel Cylinders - 5/8" Bore

Standard Options

B - Bumpers
 C - Cushions Both Ends
 F - Front Cushion Only
 H - Heavy Spring Force

M - Magnetic Piston for Sensing
 N - No Rod Thread
 P* - Rotated Ports - See pg 4.
 R - Rear Cushion Only

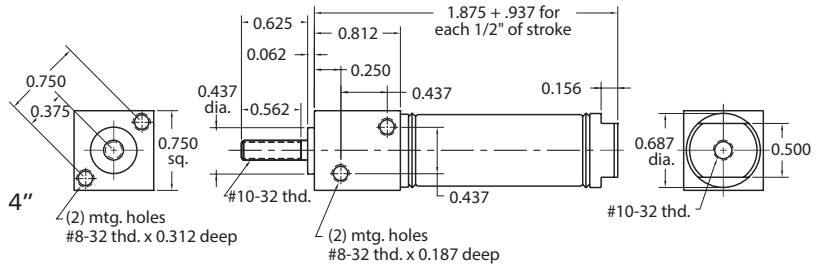
S - Side Ports
 V - Fluorocarbon Seals
 W - Rod Wiper
 Rod Extensions - See pg 4.
 Other Rod Threads - See pg 6.

Single Acting

FSR-10-□-□

Mount: Front Type: Rotating Rod

Options: M, B, W, V, N, S, H



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

Maximum Stroke: 13"

Spring Compressed: 4 lbs. Spring At Rest: 1.3 lbs.

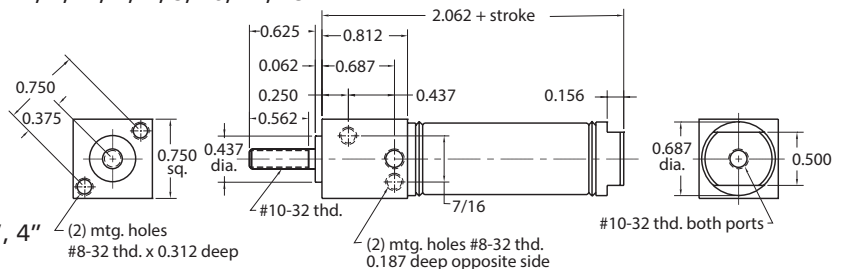
For B option add 0.375 For M option add 0.312 For S option add 0.187

Double Acting

FDR-10-□-□

Mount: Front Type: Rotating Rod

Options: M, B, W, V, N, S, P6, P7, P8



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

Maximum Stroke: 43"

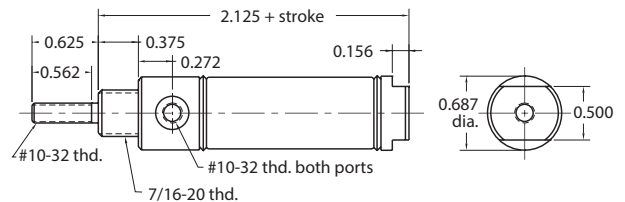
For B option add 0.375 For M option add 0.312 For S option add 0.187

Double Acting

SDR-10-□-□

Mount: Stud Type: Rotating Rod

Options: M, B, W, V, N, S, P6, P7, P8



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

Maximum Stroke: 43"

For B option add 0.375 For M option add 0.312 For S option add 0.187

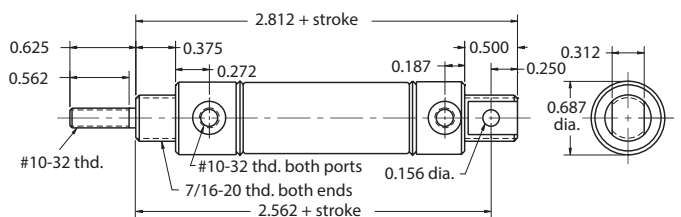
Nut included, but not shown on drawing

Double Acting

UDR-10-□-□

Mount: Universal Type: Rotating Rod

Options: M, B, W, V, N, P2, P3, P4, P5, P6, P7, P8



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

Maximum Stroke: 43"

For B option add 0.375 For M option add 0.312

Furnished without nut(s). See Chart on Page 21.

Stainless Steel Cylinders - 5/8" Bore

Standard Options

B - Bumpers
 C - Cushions Both Ends
 F - Front Cushion Only
 H - Heavy Spring Force

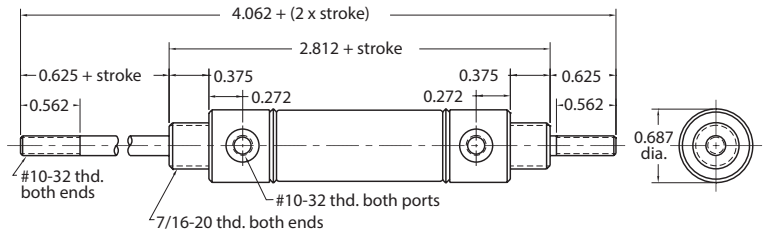
M - Magnetic Piston for Sensing
 N - No Rod Thread
 P* - Rotated Ports - See pg 4.
 R - Rear Cushion Only

S - Side Ports
 V - Fluorocarbon Seals
 W - Rod Wiper
 Rod Extensions - See pg 4.
 Other Rod Threads - See pg 6.

Double Acting

SDD-10--

Mount: Stud Type: Double Rod
 Options: M, B, W, V, N, P6, P7, P8



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
 Maximum Stroke: 20"

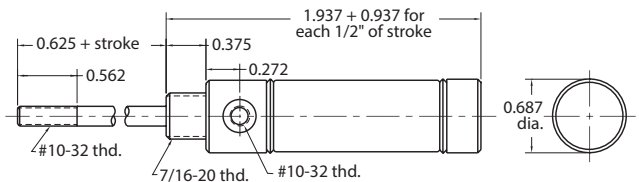
For B option add 0.500 For M option add 0.312

Nuts included, but not shown on drawing

Reverse Acting

SRR-10--

Mount: Front Type: Rotating Rod
 Options: M, B, W, V, N, H



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
 Maximum Stroke: 15"

Spring Compressed: 4 lbs. Spring At Rest: 1.3 lbs.

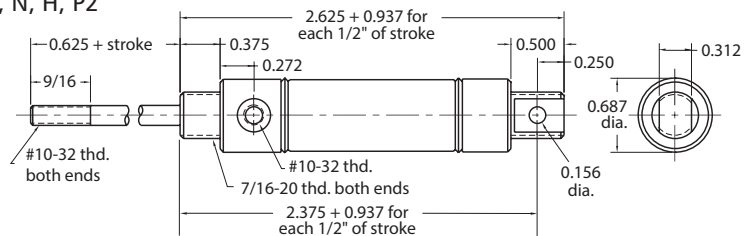
For B option add 0.500 For M option add 0.312

Nut included, but not shown on drawing

Reverse Acting

URR-10--

Mount: Universal Type: Rotating Rod
 Options: M, B, W, V, N, H, P2



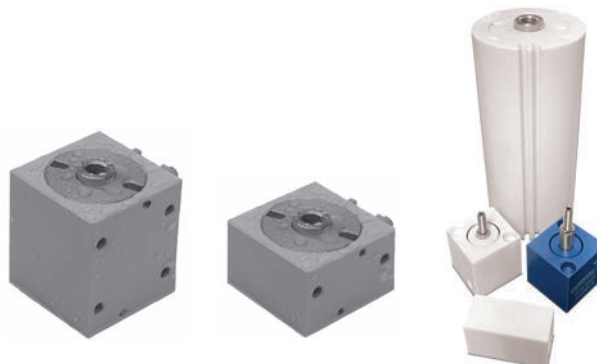
Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
 Maximum Stroke: 14"

Spring Compressed: 4 lbs. Spring At Rest: 1.3 lbs.

For B option add 0.375 For M option add 0.312

Furnished without nut(s). See Chart on Page 21.

For harsh environments, Compact Automation's Inch Series offers all Stainless Steel and Composite cylinders as standards.



Stainless Steel Cylinders - 5/8" Bore Accessories



MOUNTING NUTS

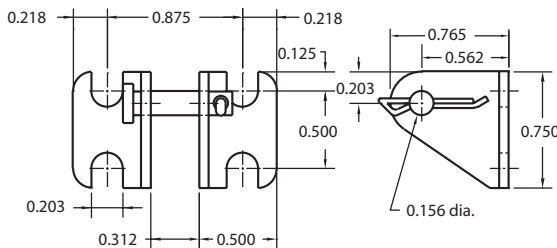
Stud Nut

Part Number	Across Flats	Nut Thickness	Nut (Thread)
N06-24A	9/16"	7/32"	3/8-24
N06-24B	1/2"	3/32"	3/8-24
N07-20	11/16"	1/4"	7/16-20

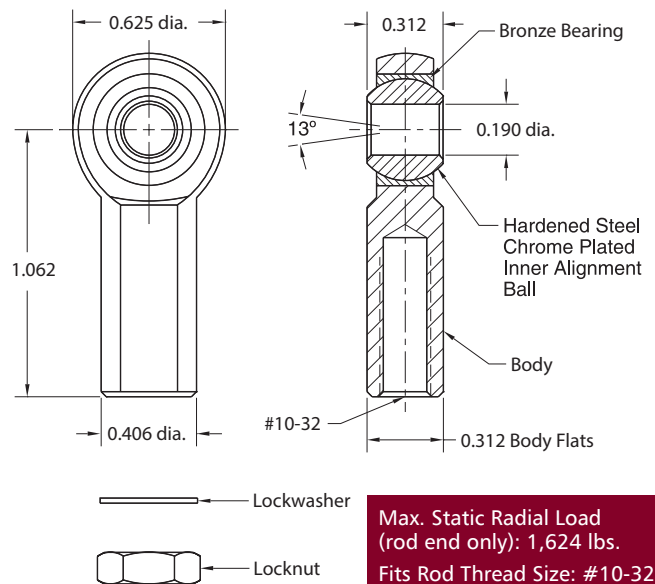
Rod Nut

Part Number	Across Flats	Nut Thickness	Nut (Thread)
N03-32	3/8"	1/8"	#10-32

CB-0895 Clevis Bracket
Material: Steel, bright zinc plated

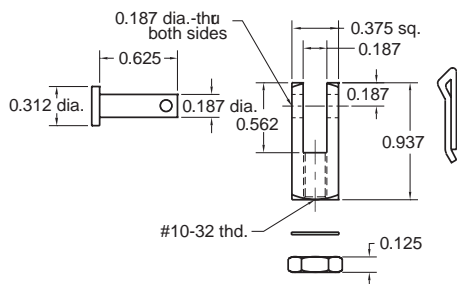


RE-0885 Rod End
Material: Steel, bright zinc plated body

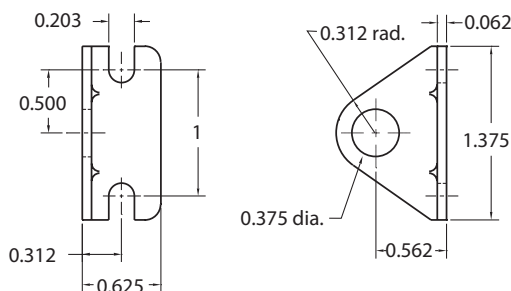


Max. Static Radial Load (rod end only): 1,624 lbs.
Fits Rod Thread Size: #10-32

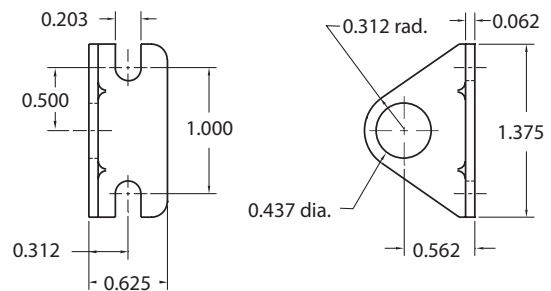
RC-0881 Rod Clevis
Material: Steel, electroless nickel plate



FB-0891 Foot Bracket
Material: Steel, bright zinc plated



FB-0892 Foot Bracket
Material: Steel, bright zinc plated



Stainless Steel Cylinders - 3/4" Bore

Standard Options

B - Bumpers
 C - Cushions Both Ends
 F - Front Cushion Only
 H - Heavy Spring Force

M - Magnetic Piston for Sensing
 N - No Rod Thread
 P* - Rotated Ports - See pg 4.
 R - Rear Cushion Only

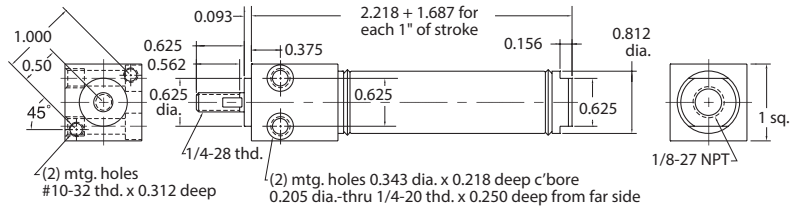
S - Side Ports
 V - Fluorocarbon Seals
 W - Rod Wiper
 Rod Extensions - See pg 4.
 Other Rod Threads - See pg 6.

Single Acting

FSR-12- -



Mount: Front Type: Rotating Rod
 Options: M, B, W, V, N, S, H



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

Maximum Stroke: 25"

Spring Compressed: 6 lbs. Spring At Rest: 3 lbs.

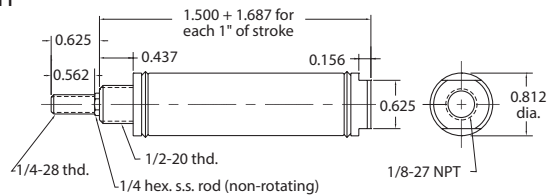
For B option add 0.375 For M option add 0.125 For S option add 0.437

Single Acting

SSN-12- -



Mount: Stud Type: Non-Rotating Rod
 Options: M, B, V, N, S, H



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

Maximum Stroke: 26"

Spring Compressed: 6 lbs. Spring At Rest: 3 lbs.

For B option add 0.375 For M option add 0.312 For S option add 0.437

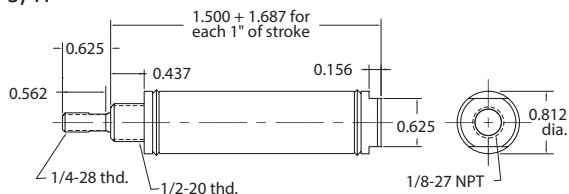
Nut included, but not shown on drawing

Single Acting

SSR-12- -



Mount: Stud Type: Rotating Rod
 Options: M, B, W, V, N, S, H



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

Maximum Stroke: 26"

Spring Compressed: 6 lbs. Spring At Rest: 3 lbs.

For B option add 0.375 For M option add 0.312 For S option add 0.437

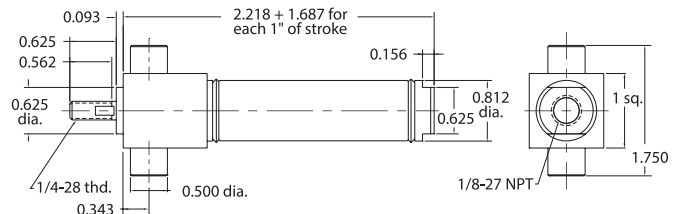
Nut included, but not shown on drawing

Single Acting

TSR-12- -



Mount: Stud Type: Rotating Rod
 Options: M, B, V, N, S, H



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

Maximum Stroke: 25"

Spring Compressed: 6 lbs. Spring At Rest: 3 lbs.

For B option add 0.375 For M option add 0.312 For S option add 0.437

Stainless Steel Cylinders - 3/4" Bore

Standard Options

B - Bumpers
C - Cushions Both Ends
F - Front Cushion Only
H - Heavy Spring Force

M - Magnetic Piston for Sensing
N - No Rod Thread
P* - Rotated Ports - See pg 4.
R - Rear Cushion Only

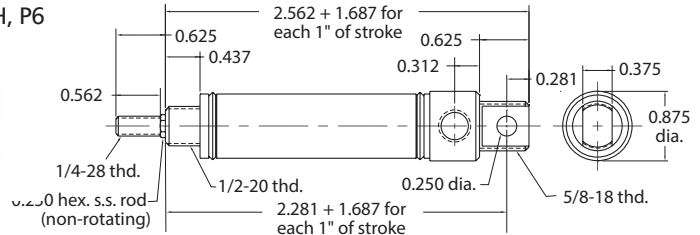
S - Side Ports
V - Fluorocarbon Seals
W - Rod Wiper
Rod Extensions - See pg 4.
Other Rod Threads - See pg 6.

Single Acting

USN-12-□-□



Mount: Universal Type: Non-Rotating Rod
Options: M, B, V, N, H, P6



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

Maximum Stroke: 25"

Spring Compressed: 6 lbs. Spring At Rest: 3 lbs.

For B option add 0.500 For M option add 0.125

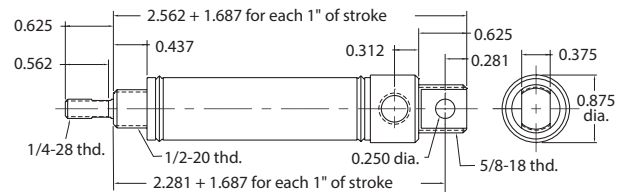
Furnished without nut(s). See Chart on Page 27.

Single Acting

USR-12-□-□



Mount: Universal Type: Rotating Rod
Options: M, B, W, V, N, H, P6



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

Maximum Stroke: 25"

Spring Compressed: 6 lbs. Spring At Rest: 3 lbs.

For B option add 0.500 For M option add 0.125

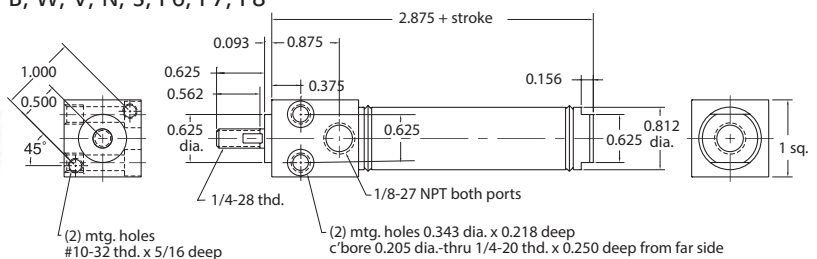
Furnished without nut(s). See Chart on Page 27.

Double Acting

FDR-12-□-□



Mount: Front Type: Rotating Rod
Options: M, B, W, V, N, S, P6, P7, P8



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

Maximum Stroke: 42"

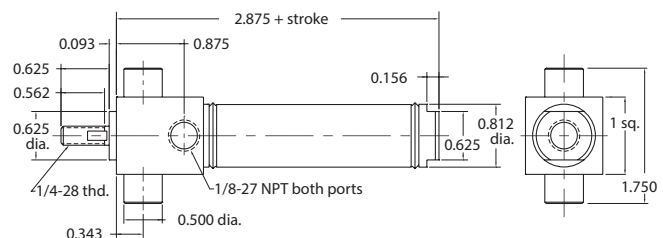
For B option add 0.500 For M option add 0.437

Double Acting

TDR-12-□-□



Mount: Trunnion Type: Rotating Rod
Options: M, B, W, V, N, S, P6, P7, P8



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

Maximum Stroke: 42"

For B option add 0.500 For M option add 0.437

Stainless Steel Cylinders - 3/4" Bore

Standard Options

B - Bumpers
 C - Cushions Both Ends
 F - Front Cushion Only
 H - Heavy Spring Force

M - Magnetic Piston for Sensing
 N - No Rod Thread
 P* - Rotated Ports - See pg 4.
 R - Rear Cushion Only

S - Side Ports
 V - Fluorocarbon Seals
 W - Rod Wiper
 Rod Extensions - See pg 4.
 Other Rod Threads - See pg 6.

Double Acting

UDR-12-□-□

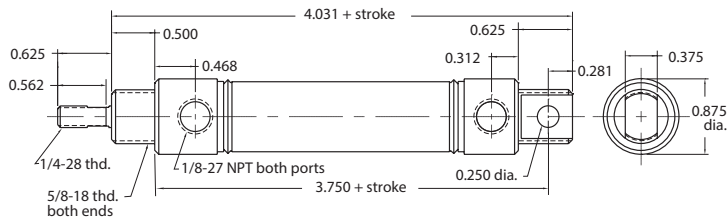
Mount: Universal Type: Rotating Rod
 Options: C, F, R, M, B, W, V, N, P2, P3, P4, P5, P6, P7, P8



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4", 5", 6", 8", 10", 12"

Maximum Stroke: 41"

For B option add 0.500



Furnished without nut(s). See Chart on Page 27.

Double Acting

SDR-12-□-□

Mount: Stud Type: Rotating Rod
 Options: C, F, R, M, B, W, V, N, S, P6, P7, P8

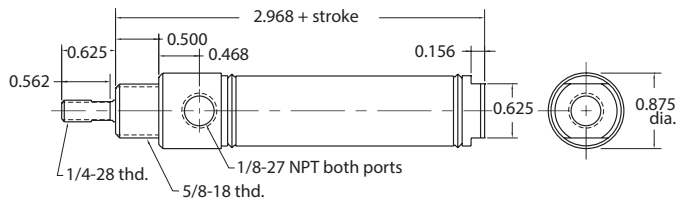


Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4", 5", 6"

Maximum Stroke: 42"

For B option add 0.500 For C, F, R & S options add 0.437

For harsh environments, refer to pages 64 through 69 for Stainless Steel 3/4" cylinders.



Nuts included, but not shown on drawing
 C, F, & R options use side ported rear head

Double Acting

SDD-12-□-□

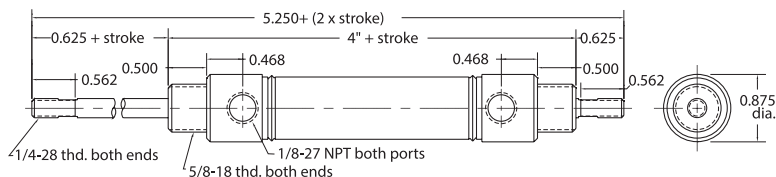
Mount: Stud Type: Double Rod
 Options: C, F, M, B, W, V, N, P6, P7, P8



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

Maximum Stroke: 20"

For B option add 0.500



Nuts included, but not shown on drawing

Double Acting

SDH-12-□-□

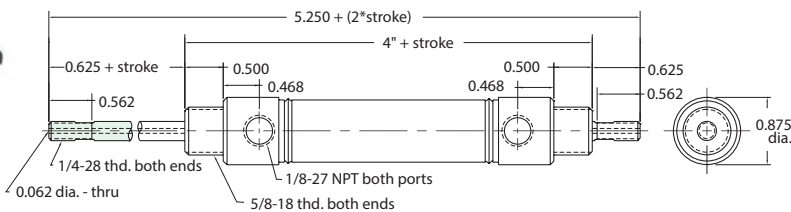
Mount: Stud Type: Hollow Rod
 Options: C, F, R, M, B, W, V, N, P6, P7, P8



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

Maximum Stroke: 20"

For B option add 0.500



Nuts included, but not shown on drawing

Stainless Steel Cylinders - 3/4" Bore

Standard Options

B - Bumpers
C - Cushions Both Ends
F - Front Cushion Only
H - Heavy Spring Force

M - Magnetic Piston for Sensing
N - No Rod Thread
P* - Rotated Ports - See pg 4.
R - Rear Cushion Only

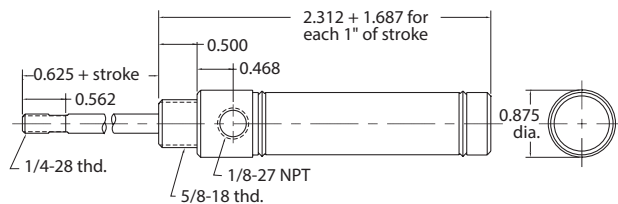
S - Side Ports
V - Fluorocarbon Seals
W - Rod Wiper
Rod Extensions - See pg 4.
Other Rod Threads - See pg 6.

Reverse Acting

SRR-12-□-□

Mount: Stud Type: Rotating Rod

Options: M, B, W, V, N, H



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

Maximum Stroke: 16"

Spring Compressed: 6 lbs. Spring At Rest: 3 lbs.

For B option add 0.375 For M option add 0.125

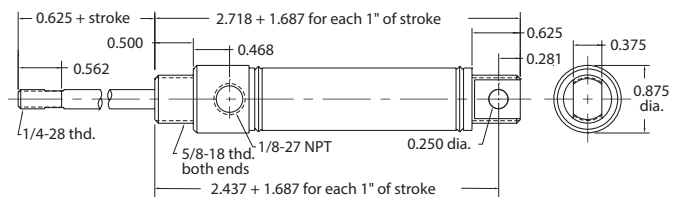
Nut included, but not shown on drawing

Reverse Acting

URR-12-□-□

Mount: Universal Type: Rotating Rod

Options: M, B, W, V, N, H, P2



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

Maximum Stroke: 15"

Spring Compressed: 6 lbs. Spring At Rest: 3 lbs.

For B option add 0.500 For M option add 0.125

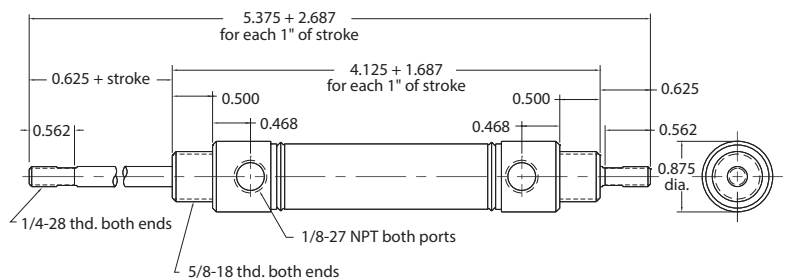
Furnished without nut(s). See Chart on Page 27.

Double Acting, Spring Bias

SFD-12-□-□

Mount: Stud Type: Double Rod

Options: M, B, W, V, N, H,
P6, P7, P8



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

Maximum Stroke: 15"

Spring Compressed: 6 lbs. Spring At Rest: 3 lbs.

For B option add 0.375

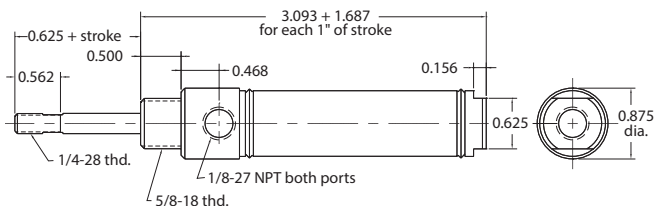
Nuts included, but not shown on drawing

Double Acting, Rear Spring Bias

SBR-12-□-□

Mount: Stud Type: Rotating Rod

Options: M, B, W, V, N, S, H,
P6, P7, P8



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

Maximum Stroke: 15"

Spring Compressed: 6 lbs. Spring At Rest: 3 lbs.

For B option add 0.375 For S option add 0.437

Nut included, but not shown on drawing

Stainless Steel Cylinders - 3/4" Bore

Standard Options		
B - Bumpers	M - Magnetic Piston for Sensing	S - Side Ports
C - Cushions Both Ends	N - No Rod Thread	V - Fluorocarbon Seals
F - Front Cushion Only	P* - Rotated Ports - See pg 4.	W - Rod Wiper
H - Heavy Spring Force	R - Rear Cushion Only	Rod Extensions - See pg 4.
		Other Rod Threads - See pg 6.

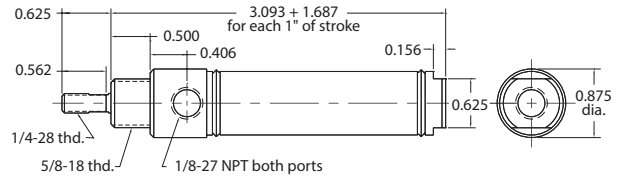
Double Acting, Front Spring Bias

SFR-12--



Mount: Stud Type: Rotating Rod

Options: M, B, W, V, N, S, H,
P6, P7, P8



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

Maximum Stroke: 25"

Spring Compressed: 6 lbs. Spring At Rest: 3 lbs.

For B option add 0.375 For M option add 0.437

Nut included, but not shown on drawing

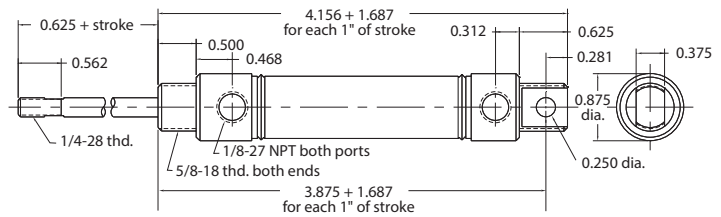
Double Acting, Rear Spring Bias

UBR-12--



Mount: Universal Type: Rotating Rod

Options: M, B, W, V, N, H, P2,
P3, P4, P5, P6, P7, P8



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

Maximum Stroke: 15"

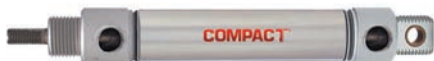
Spring Compressed: 6 lbs. Spring At Rest: 3 lbs.

For B option add 0.375

Furnished without nut(s). See Chart on Page 27..

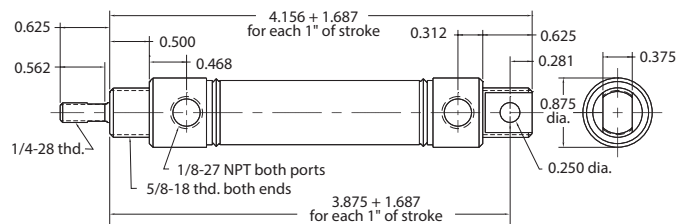
Double Acting, Front Spring Bias

UFR-12--



Mount: Universal Type: Rotating Rod

Options: M, B, W, V, N, H, P2,
P3, P4, P5, P6, P7, P8



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

Maximum Stroke: 24"

Spring Compressed: 6 lbs. Spring At Rest: 3 lbs.

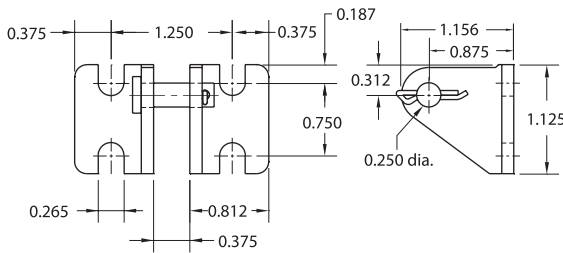
For B option add 0.375

Furnished without nut(s). See Chart on Page 27.

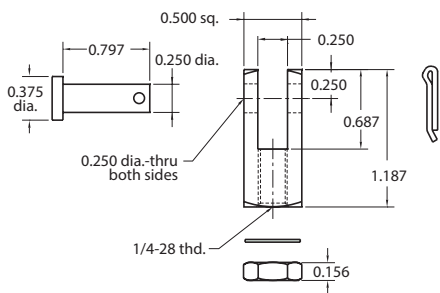
Stainless Steel Cylinders - 3/4" Bore Accessories



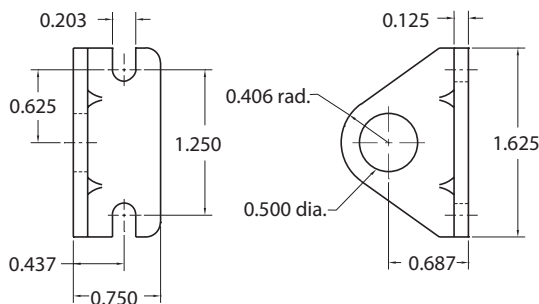
CB-1795 Clevis Bracket
Material: Steel, bright zinc plated



RC-1281 Rod Clevis
Material: Steel, electroless nickel plate



FB-1291 Foot Bracket
Material: Steel, bright zinc plated



MOUNTING NUTS

Stud Nut

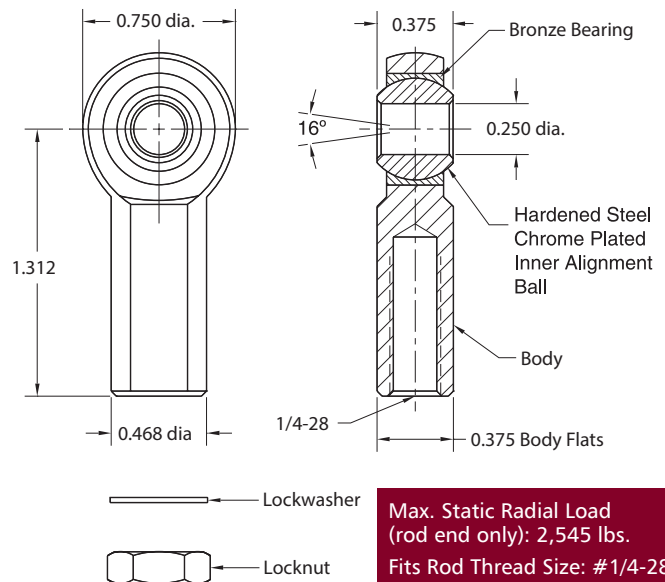
Part Number	Across Flats	Nut Thickness	Nut (Thread)
N08-20	3/4"	5/16"	1/2-20
N10-18	15/16"	3/8"	5/8-18

Rod Nut

Part Number	Across Flats	Nut Thickness	Nut (Thread)
N04-28A	7/16"	5/32"	1/4-28
N04-28B	3/8"	1/8"	1/4-28

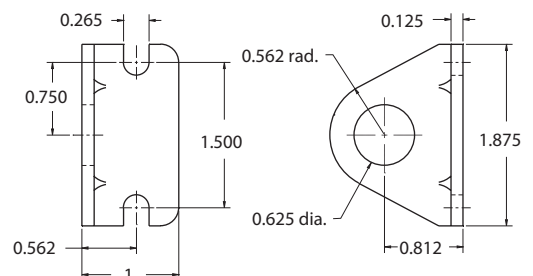
RE-1285

Rod End
Material: Steel, bright zinc plated body



FB-1791

Foot Bracket
Material: Steel, bright zinc plated



Stainless Steel Cylinders - 7/8" Bore

Standard Options

B - Bumpers
 C - Cushions Both Ends
 F - Front Cushion Only
 H - Heavy Spring Force

M - Magnetic Piston for Sensing
 N - No Rod Thread
 P* - Rotated Ports - See pg 4.
 R - Rear Cushion Only

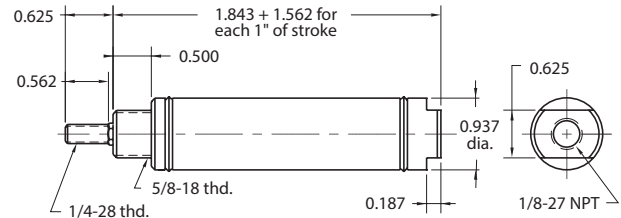
S - Side Ports
 V - Fluorocarbon Seals
 W - Rod Wiper
 Rod Extensions - See pg 4.
 Other Rod Threads - See pg 6.

Single Acting

SSN-14-□-□



Mount: Stud Type: Non-Rotating Rod
 Options: M, V, H, S, N



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

Maximum Stroke: 27"

Spring Compressed: 6 lbs. Spring At Rest: 3 lbs.

Bumpers are standard For M option add 0.125 For S option add 0.281

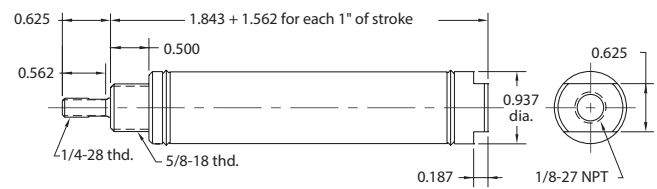
Nut included, but not shown on drawing

Single Acting

SSR-14-□-□



Mount: Stud Type: Rotating Rod
 Options: M, W, V, N, S, H



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

Maximum Stroke: 27"

Spring Compressed: 6 lbs. Spring At Rest: 3 lbs.

Bumpers are standard For M option add 0.125 For S option add 0.281

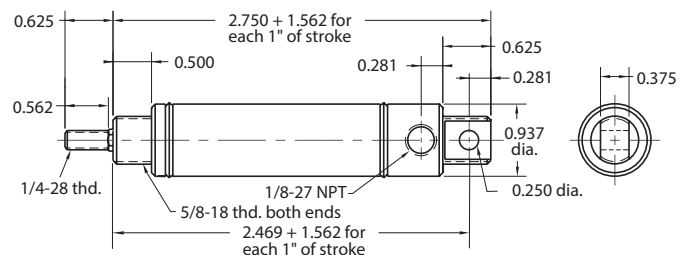
Nut included, but not shown on drawing

Single Acting

USN-14-□-□



Mount: Universal Type: Non-Rotating Rod
 Options: M, V, N, H, P6



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

Maximum Stroke: 27"

Spring Compressed: 6 lbs. Spring At Rest: 3 lbs.

Bumpers are standard For M option add 0.125

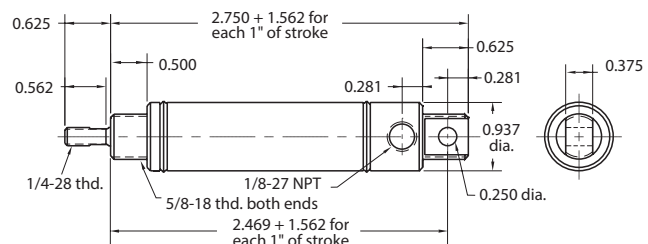
Furnished without nut(s). See Chart on Page 31.

Single Acting

USR-14-□-□



Mount: Universal Type: Rotating Rod
 Options: M, W, V, N, H, P6



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

Maximum Stroke: 27"

Spring Compressed: 6 lbs. Spring At Rest: 3 lbs.

Bumpers are standard For M option add 0.125

Furnished without nut(s). See Chart on Page 31.

Stainless Steel Cylinders - 7/8" Bore

Standard Options

B - Bumpers
 C - Cushions Both Ends
 F - Front Cushion Only
 H - Heavy Spring Force

M - Magnetic Piston for Sensing
 N - No Rod Thread
 P* - Rotated Ports - See pg 4.
 R - Rear Cushion Only

S - Side Ports
 V - Fluorocarbon Seals
 W - Rod Wiper
 Rod Extensions - See pg 4.
 Other Rod Threads - See pg 6.

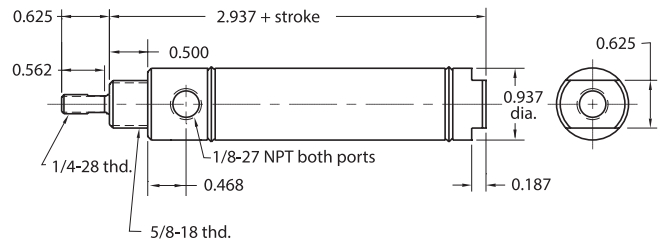
Double Acting

SDR-14-□-□



Mount: Stud Type: Rotating Rod

Options: C, F, R, M, W, V, N, S, P6, P7, P8



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

Maximum Stroke: 42"

Bumpers are standard For M option add 0.125
 For C, F, R and S option add 0.281 For CM, FM, RM and SM option add 0.593

Nut included, but not shown on drawing

C, F, & R options use side ported rear head

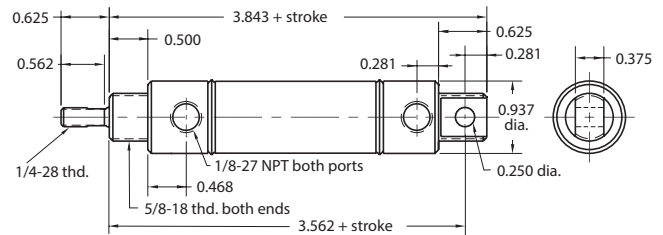
Double Acting

UDR-14-□-□



Mount: Universal Type: Rotating Rod

Options: C, F, R, M, W, V, N, P2, P3, P4, P5, P6, P7, P8



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

Maximum Stroke: 41"

Bumpers are standard For M option add 0.125

Furnished without nut(s). See Chart on Page 31.

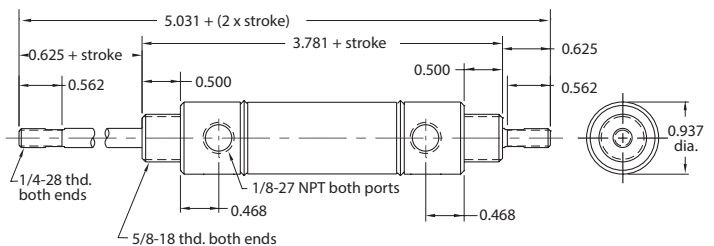
Double Acting

SDD-14-□-□



Mount: Stud Type: Double Rod

Options: C, F, M, W, V, N, P6, P7, P8



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

Maximum Stroke: 20"

Bumpers are standard For M option add 0.125
 For CM, FM and RM option add 0.312

Nuts included, but not shown on drawing

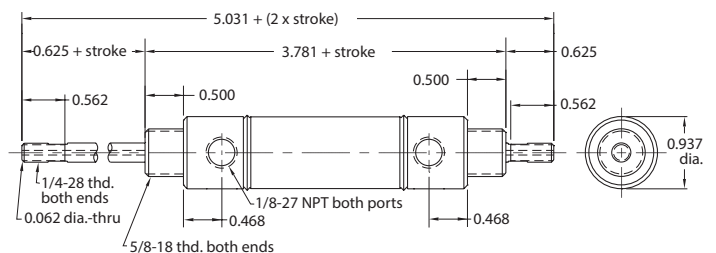
Double Acting

SDH-14-□-□



Mount: Stud Type: Hollow Rod

Options: C, F, M, W, V, N, P6, P7, P8



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

Maximum Stroke: 20"

Bumpers are standard For M option add 0.125
 For CM, FM and RM option add 0.312

Nuts included, but not shown on drawing

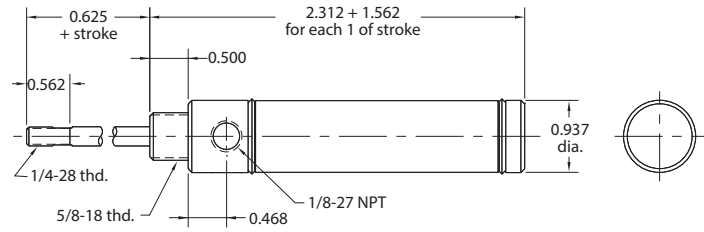
Stainless Steel Cylinders - 7/8" Bore

Reverse Acting

SRR-14-□-□

Mount: Stud Type: Rotating Rod

Options: M, W, V, N, H



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

Maximum Stroke: 42"

Spring Compressed: 6 lbs. Spring At Rest: 3 lbs.

Bumpers are standard For M option add 0.125

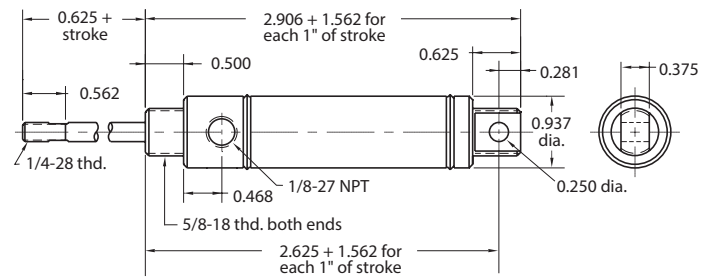
Nut included, but not shown on drawing

Reverse Acting

URR-14-□-□

Mount: Universal Type: Rotating Rod

Options: M, W, V, H, N, P2



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

Maximum Stroke: 42"

Spring Compressed: 6 lbs. Spring At Rest: 3 lbs.

Bumpers are standard For M option add 0.125

Furnished without nut(s). See Chart on Page 31.



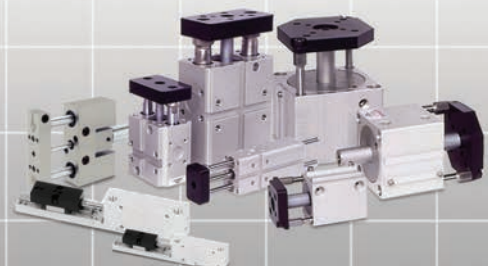
Trust Compact Workholding Products



The Power of the Compact Magnetic Grippers



Compact's Low Profile Air Springs



Compact's Broad Selection of Slides

Stainless Steel Cylinders - 7/8" Bore Accessories



MOUNTING NUTS

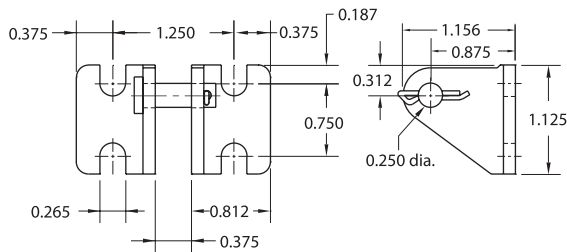
Stud Nut

Part Number	Across Flats	Nut Thickness	Nut (Thread)
N10-18	15/16"	3/8"	5/8-18

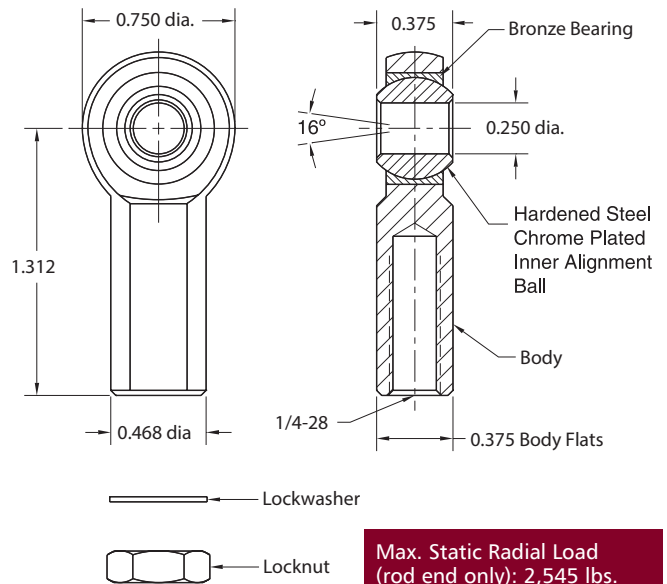
Rod Nut

Part Number	Across Flats	Nut Thickness	Nut (Thread)
N04-28A	7/16"	5/32"	1/4-28
N04-28B	3/8"	1/8"	1/4-28

CB-1795 Clevis Bracket
Material: Steel, bright zinc plated

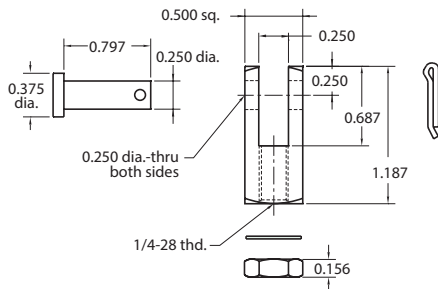


RE-1285 Rod End
Material: Steel, bright zinc plated body

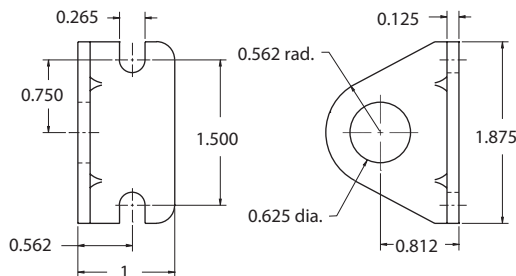


Max. Static Radial Load (rod end only): 2,545 lbs.
Fits Rod Thread Size: #1/4-28

RC-1281 Rod Clevis
Material: Steel, electroless nickel plate



FB-1791 Foot Bracket
Material: Steel, bright zinc plated



Stainless Steel Cylinders - 1-1/16" Bore

Standard Options

B - Bumpers
 C - Cushions Both Ends
 F - Front Cushion Only
 H - Heavy Spring Force

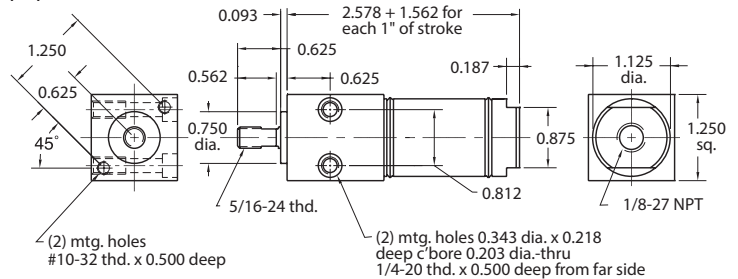
M - Magnetic Piston for Sensing
 N - No Rod Thread
 P* - Rotated Ports - See pg 4.
 R - Rear Cushion Only

S - Side Ports
 V - Fluorocarbon Seals
 W - Rod Wiper
 Rod Extensions - See pg 4.
 Other Rod Threads - See pg 6.

Single Acting

FSR-17-□-□

Mount: Front Type: Rotating Rod
 Options: M, B, W, V, N, S, H



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

Maximum Stroke: 27"

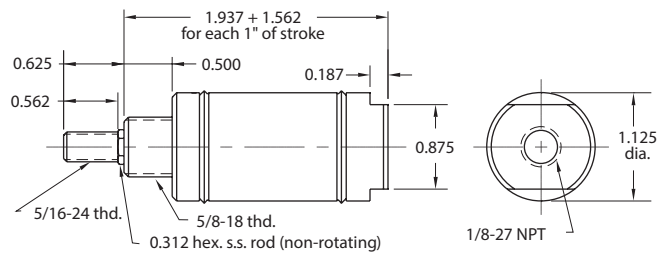
Spring Compressed: 7 lbs. Spring At Rest: 2 lbs.

For M option add 0.125 For S option add 0.250

Single Acting

SSN-17-□-□

Mount: Stud Type: Non-Rotating Rod
 Options: M, B, V, N, S, H



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

Maximum Stroke: 27"

Spring Compressed: 7 lbs. Spring At Rest: 2 lbs.

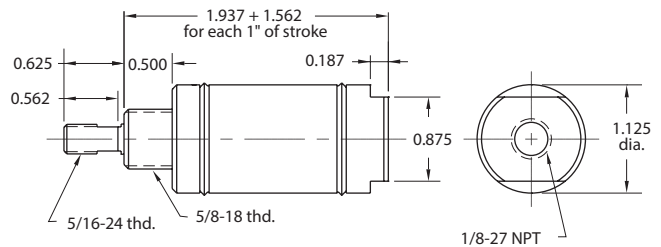
For M option add 0.125 For S option add 0.250

Nut included, but not shown on drawing

Single Acting

SSR-17-□-□

Mount: Stud Type: Rotating Rod
 Options: M, B, W, V, N, S, H



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

Maximum Stroke: 27"

Spring Compressed: 7 lbs. Spring At Rest: 2 lbs.

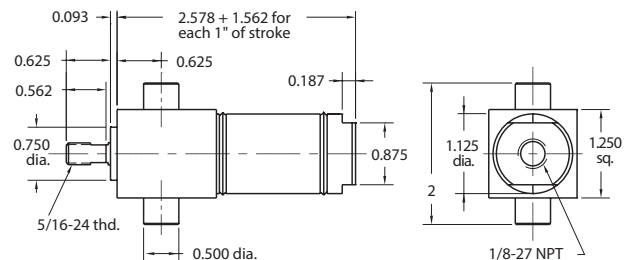
For M option add 0.125 For S option add 0.250

Nut included, but not shown on drawing

Single Acting

TSR-17-□-□

Mount: Trunnion Type: Rotating Rod
 Options: M, B, W, V, N, S, H



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

Maximum Stroke: 26"

Spring Compressed: 7 lbs. Spring At Rest: 2 lbs.

For M option add 0.125 For S option add 0.250

Stainless Steel Cylinders - 1-1/16" Bore

Standard Options

B - Bumpers
C - Cushions Both Ends
F - Front Cushion Only
H - Heavy Spring Force

M - Magnetic Piston for Sensing
N - No Rod Thread
P* - Rotated Ports - See pg 4.
R - Rear Cushion Only

S - Side Ports
V - Fluorocarbon Seals
W - Rod Wiper
Rod Extensions - See pg 4.
Other Rod Threads - See pg 6.

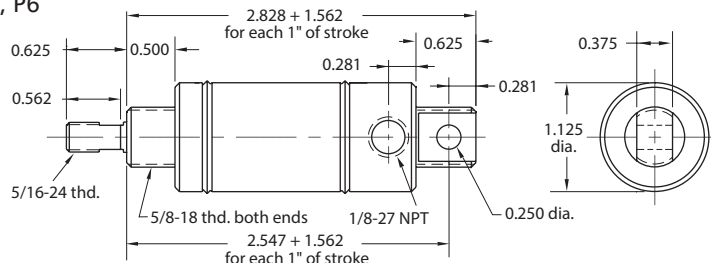
Single Acting

USN-17-□-□



Mount: Universal Type: Non-Rotating Rod

Options: M, B, V, N, H, P6



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

Maximum Stroke: 27"

Spring Compressed: 7 lbs. Spring At Rest: 2 lbs.

For M option add 0.125

Furnished without nut(s). See Chart on Page 37.

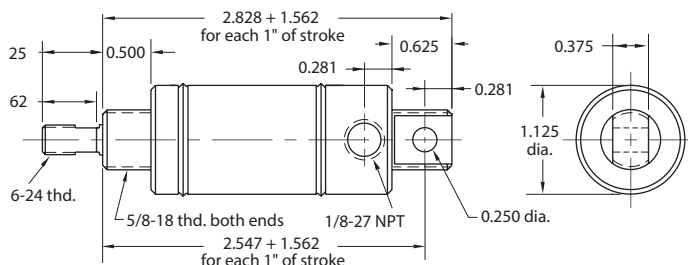
Single Acting

USR-17-□-□



Mount: Universal Type: Rotating Rod

Options: M, B, W, V, N, H, P6



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

Maximum Stroke: 27"

Spring Compressed: 7 lbs. Spring At Rest: 2 lbs.

For M option add 0.125

Furnished without nut(s). See Chart on Page 37.

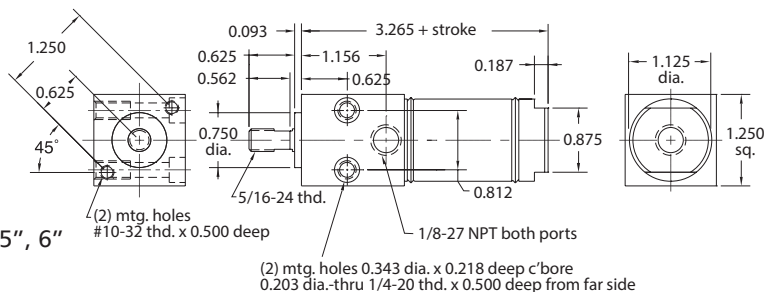
Double Acting

FDR-17-□-□



Mount: Front Type: Rotating Rod

Options: M, B, W, V, N, S, P6, P7, P8



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

Maximum Stroke: 42"

For S option add 0.250

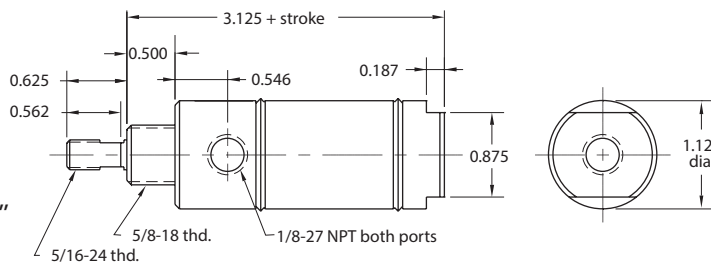
Double Acting

SDR-17-□-□



Mount: Stud Type: Rotating Rod

Options: C, F, R, M, B, W, V, N, S, P6, P7, P8



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

Maximum Stroke: 42"

For C, F, R or S option add 0.250

For CM, FM and RM add 0.562

Nut included, but not shown on drawing

C, F, & R options use side ported rear head

Stainless Steel Cylinders - 1-1/16" Bore

Standard Options

B - Bumpers
 C - Cushions Both Ends
 F - Front Cushion Only
 H - Heavy Spring Force

M - Magnetic Piston for Sensing
 N - No Rod Thread
 P* - Rotated Ports - See pg 4.
 R - Rear Cushion Only

S - Side Ports
 V - Fluorocarbon Seals
 W - Rod Wiper
 Rod Extensions - See pg 4.
 Other Rod Threads - See pg 6.

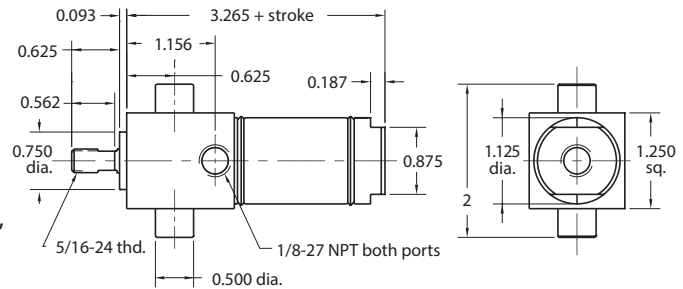
Double Acting

TDR-17-□-□



Mount: Trunnion Type: Rotating Rod

Options: M, B, W, V, N, S, P6, P7, P8



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

Maximum Stroke: 42"

For S option add 0.250

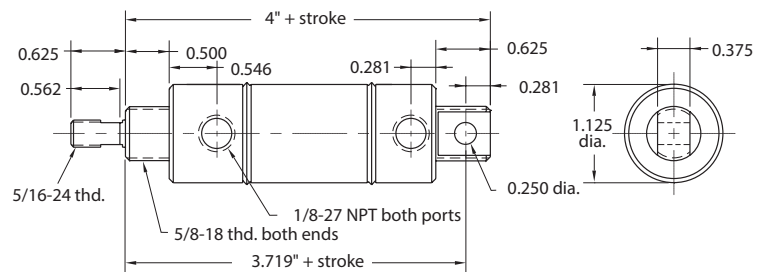
Double Acting

UDR-17-□-□



Mount: Universal Type: Rotating Rod

Options: C, F, R, M, B, W, V, N, P2, P3, P4, P5, P6, P7, P8



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4", 5", 6", 8", 10", 12"

Maximum Stroke: 41"

For CM, FM and RM add 0.312

Furnished without nut(s). See Chart on Page 37.

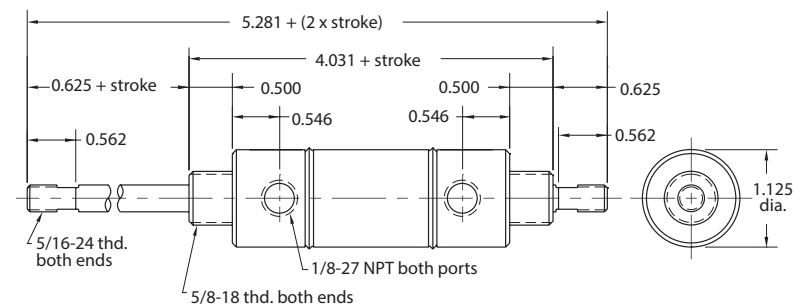
Double Acting

SDD-17-□-□



Mount: Stud Type: Double Rod

Options: C, F, M, B, W, V, N, P6, P7, P8



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

Maximum Stroke: 20"

For CM, FM and RM add 0.312

Nuts included, but not shown on drawing

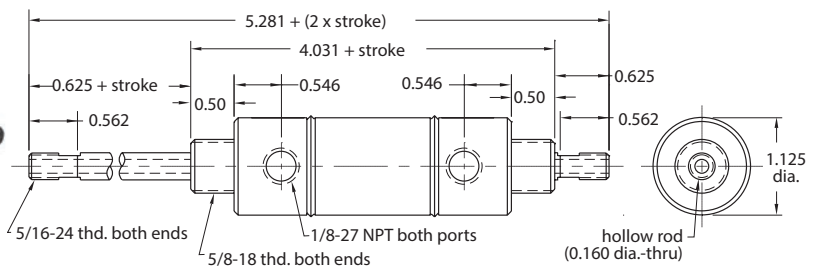
Double Acting

SDH-17-□-□



Mount: Stud Type: Hollow Rod

Options: C, F, R, M, B, W, V, N, P6, P7, P8



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

Maximum Stroke: 20"

For CM, FM and RM add 0.312

Nuts included, but not shown on drawing

Stainless Steel Cylinders - 1-1/16" Bore

Standard Options

B - Bumpers
C - Cushions Both Ends
F - Front Cushion Only
H - Heavy Spring Force

M - Magnetic Piston for Sensing
N - No Rod Thread
P* - Rotated Ports - See pg 4.
R - Rear Cushion Only

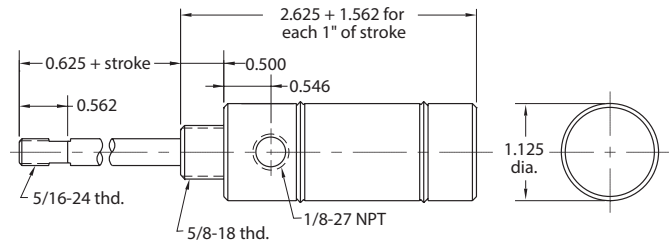
S - Side Ports
V - Fluorocarbon Seals
W - Rod Wiper
Rod Extensions - See pg 4.
Other Rod Threads - See pg 6.

Reverse Acting

SRR-17-□-□



Mount: Stud Type: Rotating Rod
Options: M, B, W, V, N, H



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
Maximum Stroke: 16"
Spring Compressed: 7 lbs. Spring At Rest: 2 lbs.
For M option add 0.125

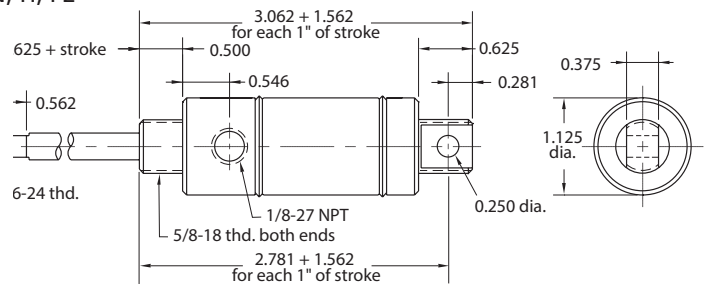
Nuts included, but not shown on drawing

Reverse Acting

URR-17-□-□



Mount: Universal Type: Rotating Rod
Options: M, B, W, V, N, H, P2



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
Maximum Stroke: 16"
Spring Compressed: 7 lbs. Spring At Rest: 2 lbs.
For M option add 0.125

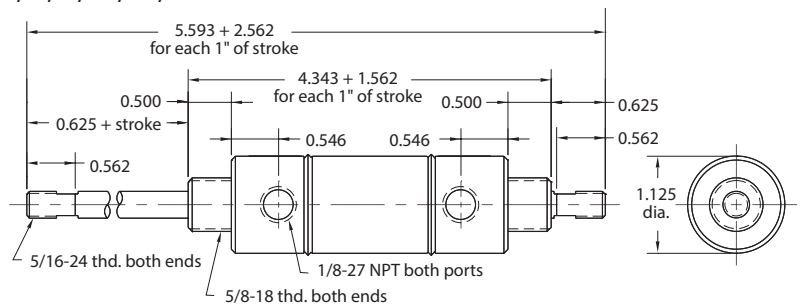
Furnished without nut(s). See Chart on Page 37.

Spring Bias

SFD-17-□-□



Mount: Stud Type: Double Rod
Options: M, B, W, V, N, H, P6, P7, P8



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
Maximum Stroke: 15"
Spring Compressed: 7 lbs. Spring At Rest: 2 lbs.
For M option add 0.125

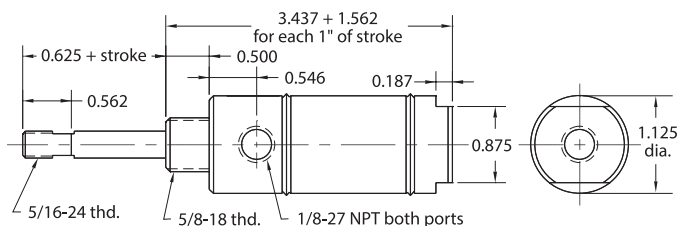
Nuts included, but not shown on drawing

Double Acting, Rear Spring Bias

SBR-17-□-□



Mount: Stud Type: Rotating Rod
Options: M, B, W, V, N, H, P6, P7, P8, S



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
Maximum Stroke: 16"
Spring Compressed: 7 lbs. Spring At Rest: 2 lbs.
For S option add 0.250

Nut included, but not shown on drawing

Stainless Steel Cylinders - 1-1/16" Bore

Standard Options

B - Bumpers
 C - Cushions Both Ends
 F - Front Cushion Only
 H - Heavy Spring Force

M - Magnetic Piston for Sensing
 N - No Rod Thread
 P* - Rotated Ports - See pg 4.
 R - Rear Cushion Only

S - Side Ports
 V - Fluorocarbon Seals
 W - Rod Wiper
 Rod Extensions - See pg 4.
 Other Rod Threads - See pg 6.

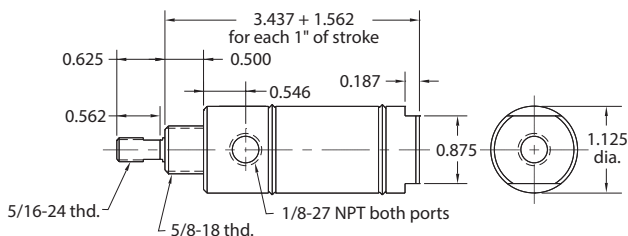
Double Acting, Spring Bias

SFR-17-**-**



Mount: Stud Type: Rotating Rod

Options: M, B, W, V, N, S, H,
 P6, P7, P8



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

Maximum Stroke: 26"

Spring Compressed: 7 lbs. Spring At Rest: 2 lbs.

For S option add 0.250

Nut included, but not shown on drawing

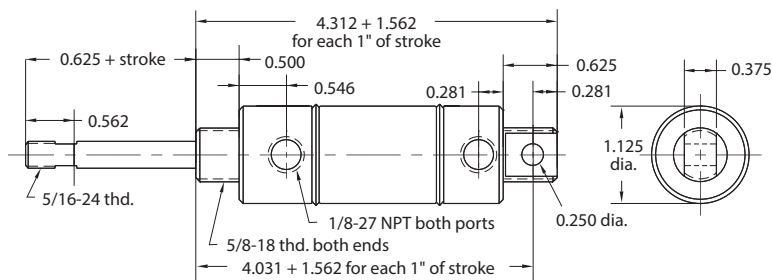
Double Acting, Rear Spring Bias

UBR-17-**-**



Mount: Universal Type: Rotating Rod

Options: M, B, W, V, N, H, P2,
 P3, P4, P5, P6, P7, P8



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

Maximum Stroke: 16"

Spring Compressed: 7 lbs. Spring At Rest: 2 lbs.

Furnished without nut(s). See Chart on Page 37.

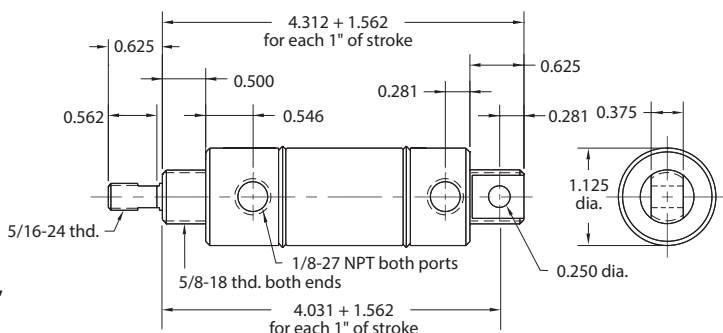
Double Acting Front Spring Bias

UFR-17-**-**



Mount: Universal Type: Rotating Rod

Options: M, B, W, V, N, H, P2,
 P3, P4, P5, P6, P7, P8



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

Maximum Stroke: 26"

Spring Compressed: 7 lbs. Spring At Rest: 2 lbs.

Furnished without nut(s). See Chart on Page 37.

Stainless Steel Cylinders - 1-1/16" Bore Accessories



MOUNTING NUTS

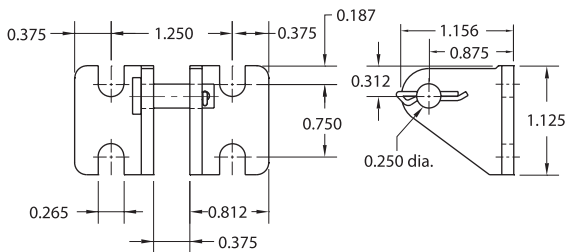
Stud Nut

Part Number	Across Flats	Nut Thickness	Nut (Thread)
N10-18	15/16"	3/8"	5/8-18

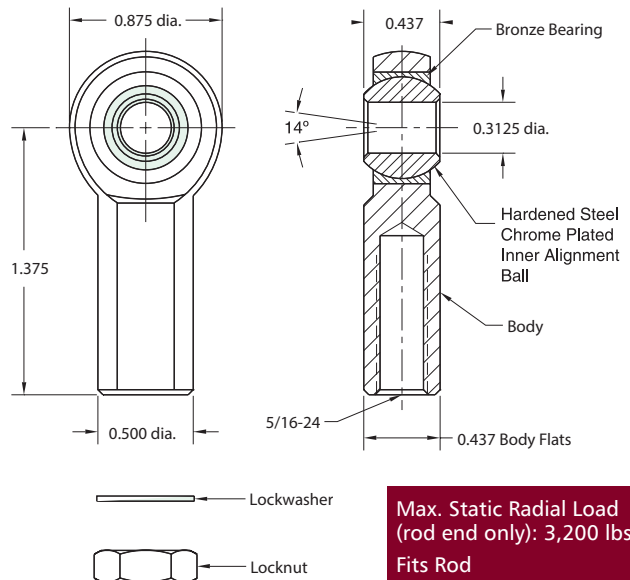
Rod Nut

Part Number	Across Flats	Nut Thickness	Nut (Thread)
N05-24	71/2"	3/16"	5/16-24

CB-1795 Clevis Bracket
Material: Steel, bright zinc plated

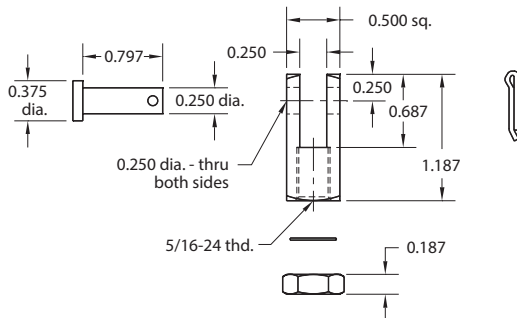


RE-1785 Rod End
Material: Steel, bright zinc plated body

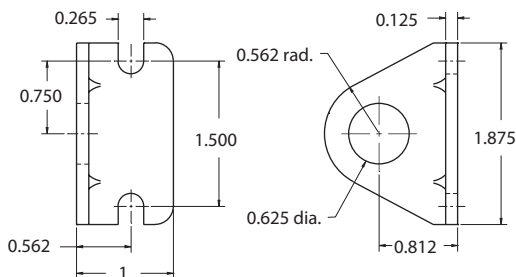


Max. Static Radial Load (rod end only): 3,200 lbs.
Fits Rod Thread Size: #5/16-24

RC-1781 Rod Clevis
Material: Steel, electroless nickel plate



FB-1791 Foot Bracket
Material: Steel, bright zinc plated



Stainless Steel Cylinders - 1-1/4" Bore

Standard Options

B - Bumpers
C - Cushions Both Ends
F - Front Cushion Only
H - Heavy Spring Force

M - Magnetic Piston for Sensing
N - No Rod Thread
P* - Rotated Ports - See pg 4.
R - Rear Cushion Only

S - Side Ports
V - Fluorocarbon Seals
W - Rod Wiper
Rod Extensions - See pg 4.
Other Rod Threads - See pg 6.

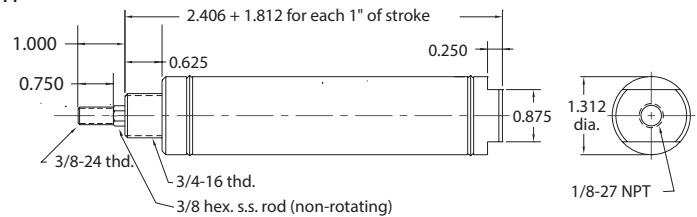
Note: The 1-1/4" bore is also available with a 7/16-20 threaded rod. Order -LR option.

Single Acting

SSN-20-□-□



Mount: Stud Type: Non-Rotating Rod
Options: M, B, V, N, S, H



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

Maximum Stroke: 23"

Spring Compressed: 10 lbs.

Spring At Rest: 4.5 lbs.

For M option add 0.125 For S option add 0.312

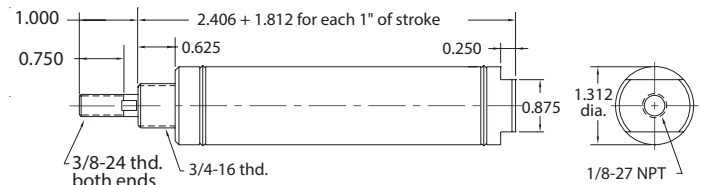
Nut included, but not shown on drawing

Single Acting

SSR-20-□-□



Mount: Stud Type: Rotating Rod
Options: M, B, V, N, S, H



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

Maximum Stroke: 23"

Spring Compressed: 10 lbs.

Spring At Rest: 4.5 lbs.

For M option add 0.125 For S option add 0.312

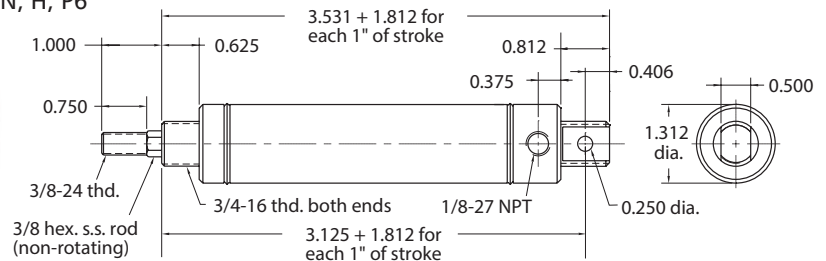
Nut included, but not shown on drawing

Single Acting

USN-20-□-□



Mount: Universal Type: Non-Rotating Rod
Options: M, B, V, N, H, P6



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

Maximum Stroke: 26"

Spring Compressed: 7 lbs. Spring At Rest: 2 lbs.

For M option add 0.125

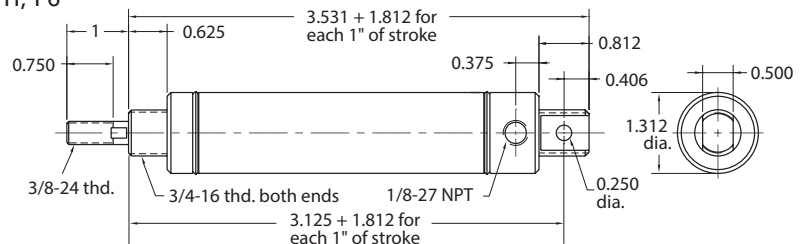
Furnished without nut(s). See Chart on Page 41.

Single Acting

USR-20-□-□



Mount: Universal Type: Rotating Rod
Options: M, B, V, N, H, P6



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

Maximum Stroke: 22"

Spring Compressed: 10 lbs.

Spring At Rest: 4.5 lbs.

For M option add 0.125

Furnished without nut(s). See Chart on Page 41.

Stainless Steel Cylinders - 1-1/4" Bore

Standard Options

B - Bumpers
 C - Cushions Both Ends
 F - Front Cushion Only
 H - Heavy Spring Force

M - Magnetic Piston for Sensing
 N - No Rod Thread
 P* - Rotated Ports - See pg 4.
 R - Rear Cushion Only

S - Side Ports
 V - Fluorocarbon Seals
 W - Rod Wiper
 Rod Extensions - See pg 4.
 Other Rod Threads - See pg 6.

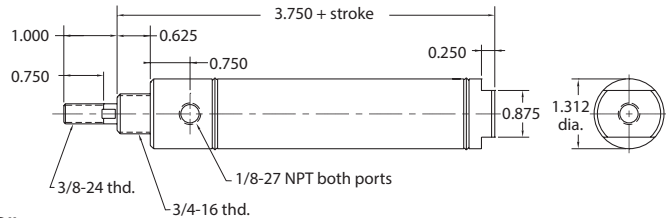
Note: The 1 1/4" bore is also available with a 7/16-20 threaded rod. Order -LR option.

Double Acting

SDR-20-□-□

Mount: Stud Type: Rotating Rod

Options: C, F, R, M, B, W, V, N, S, P6, P7, P8



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

Maximum Stroke: 41"

For M option add 0.125

Nut included, but not shown on drawing

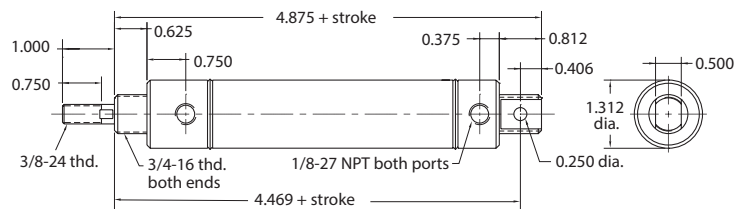
C, F, & R options use side ported rear head

Double Acting

UDR-20-□-□

Mount: Universal Type: Rotating Rod

Options: C, F, R, M, B, W, V, N, P2, P3, P4, P5, P6, P7, P8



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4", 6", 8", 10", 12"

Maximum Stroke: 40"

For CM, FM and RM options add 0.312

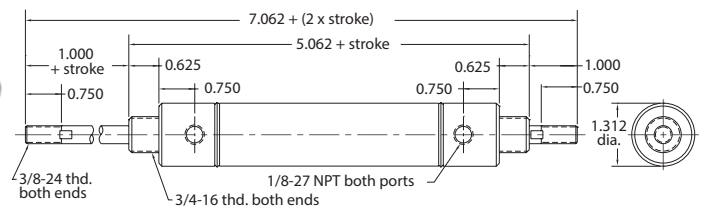
Furnished without nut(s). See Chart on Page 41.

Double Acting

SDD-20-□-□

Mount: Stud Type: Double Rod

Options: C, F, M, B, W, V, N, P6, P7, P8



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

Maximum Stroke: 19"

For M option add 0.125

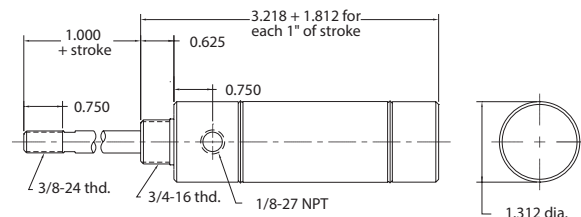
Nuts included, but not shown on drawing

Reverse Acting

SRR-20-□-□

Mount: Stud Type: Rotating Rod

Options: M, B, W, V, N, H



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

Maximum Stroke: 14"

Spring Compressed: 10 lbs. Spring At Rest: 4.5 lbs

For M option add 0.125

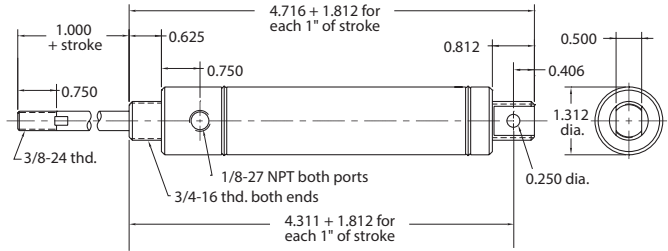
Stainless Steel Cylinders - 1-1/4" Bore

Standard Options		
B - Bumpers	M - Magnetic Piston for Sensing	S - Side Ports
C - Cushions Both Ends	N - No Rod Thread	V - Fluorocarbon Seals
F - Front Cushion Only	P* - Rotated Ports - See pg 4.	W - Rod Wiper
H - Heavy Spring Force	R - Rear Cushion Only	Rod Extensions - See pg 4.
		Other Rod Threads - See pg 6.

Note: The 1-1/4" bore is also available with a 7/16-20 threaded rod. Order -LR option.

Reverse Acting
URR-20-□-□

Mount: Universal Type: Rotating Rod
Options: M, B, W, V, N, H, P2

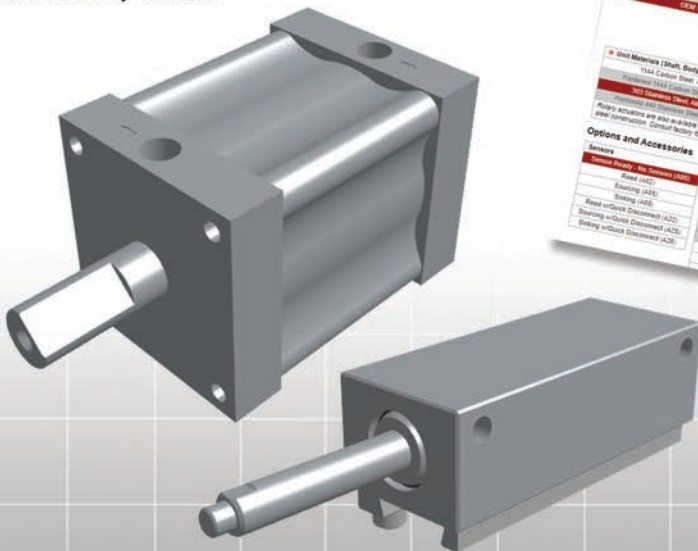


Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
Maximum Stroke: 14"
Spring Compressed: 10 lbs. Spring At Rest: 4.5 lbs.
For M option add 0.125

Furnished without nut(s). See Chart on Page 41.

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Stainless Steel Cylinders - 1-1/4" Bore



MOUNTING NUTS

Stud Nut

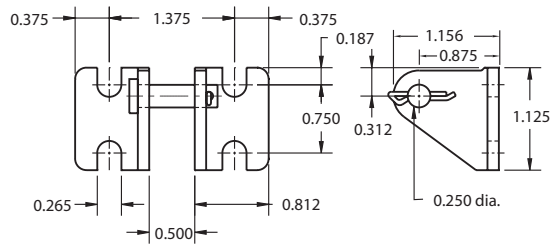
Part Number	Across Flats	Nut Thickness	Nut (Thread)
N12-16	1 3/32"	27/64"	3/4-16

Rod Nut

Part Number	Across Flats	Nut Thickness	Nut (Thread)
N06-24A	9/16"	7/32"	3/8-24
N06-24B	1/2"	3/32"	3/8-24

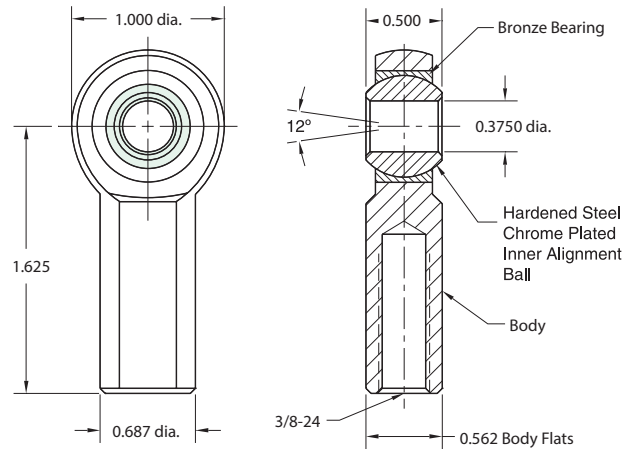
CB-2095

Clevis Bracket
Material: Steel, bright zinc plated



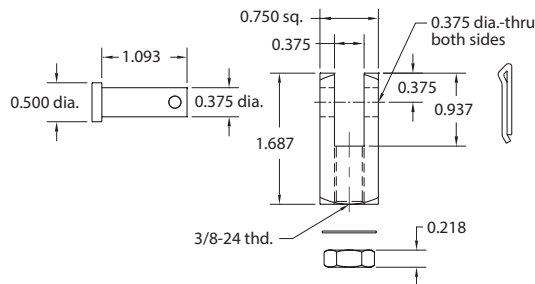
RE-2085

Rod End
Material: Steel, bright zinc plated body



RC-2081

Rod Clevis
Material: Steel, electroless nickel plate



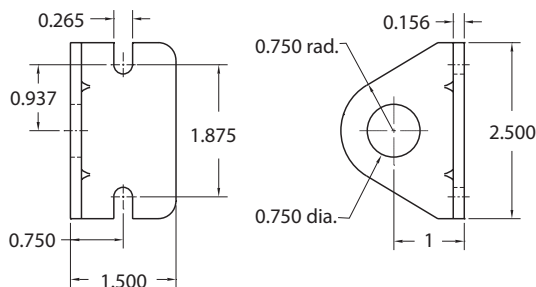
Lockwasher

Locknut

Max. Static Radial Load (rod end only): 3,200 lbs.
Fits Rod
Thread Size: #5/16-24

FB-2491

Foot Bracket
Material: Steel, bright zinc plated



Stainless Steel Cylinders - 1-1/2" Bore

Standard Options

B - Bumpers
C - Cushions Both Ends
F - Front Cushion Only
H - Heavy Spring Force

M - Magnetic Piston for Sensing
N - No Rod Thread
P* - Rotated Ports - See pg 4.
R - Rear Cushion Only

S - Side Ports
V - Fluorocarbon Seals
W - Rod Wiper
Rod Extensions - See pg 4.
Other Rod Threads - See pg 6.

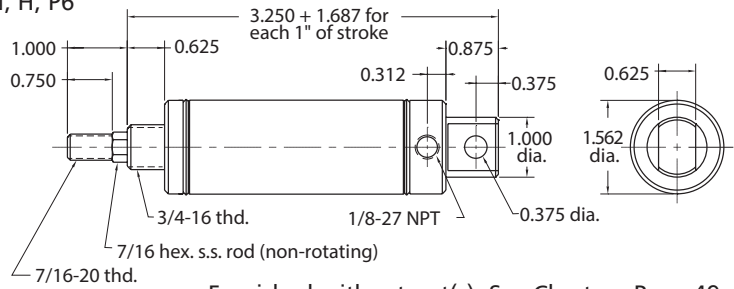
Single Acting

CSN-24-□-□



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
Maximum Stroke: 24"
Spring Compressed: 10 lbs. Spring At Rest: 4.5 lbs.
For M option add 0.125

Mount: Clevis Type: Non-Rotating Rod
Options: M, B, V, N, H, P6



Furnished without nut(s). See Chart on Page 49.

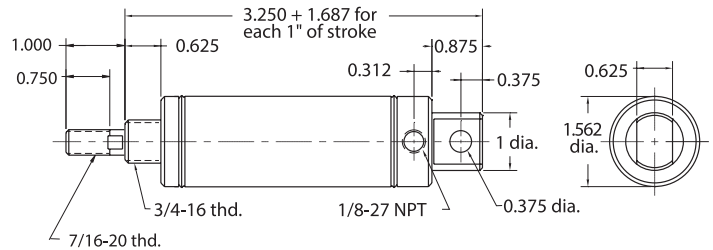
Single Acting

CSR-24-□-□



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
Maximum Stroke: 24"
Spring Compressed: 10 lbs. Spring At Rest: 4.5 lbs.
For M option add 0.125

Mount: Clevis Type: Rotating Rod
Options: M, B, W, V, N, H, P6



Furnished without nut(s). See Chart on Page 49.

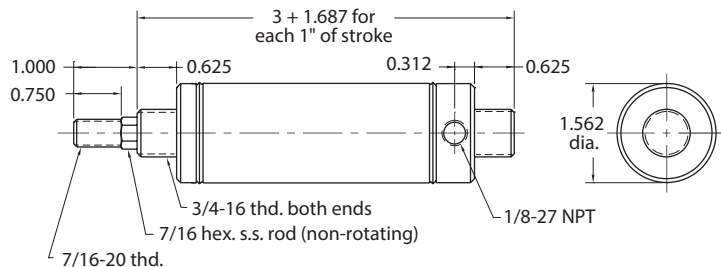
Single Acting

ESN-24-□-□



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
Maximum Stroke: 24"
Spring Compressed: 10 lbs. Spring At Rest: 4.5 lbs.
For M option add 0.125

Mount: End Type: Non-Rotating Rod
Options: M, B, V, N, H



Nuts included, but not shown on drawing

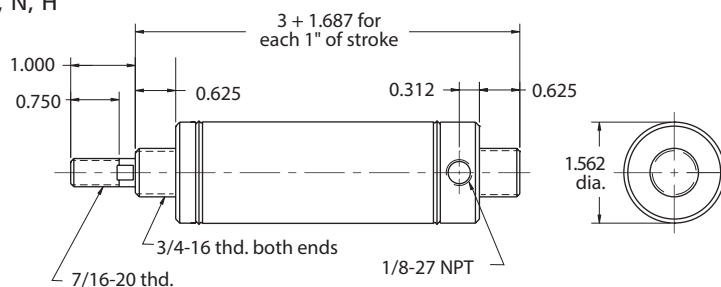
Single Acting

ESR-24-□-□



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
Maximum Stroke: 15"
Spring Compressed: 10 lbs. Spring At Rest: 4.5 lbs.
For M option add 0.125

Mount: End Type: Rotating Rod
Options: M, B, W, V, N, H



Nut included, but not shown on drawing

Stainless Steel Cylinders - 1-1/2" Bore

Standard Options

B - Bumpers
 C - Cushions Both Ends
 F - Front Cushion Only
 H - Heavy Spring Force

M - Magnetic Piston for Sensing
 N - No Rod Thread
 P* - Rotated Ports - See pg 4.
 R - Rear Cushion Only

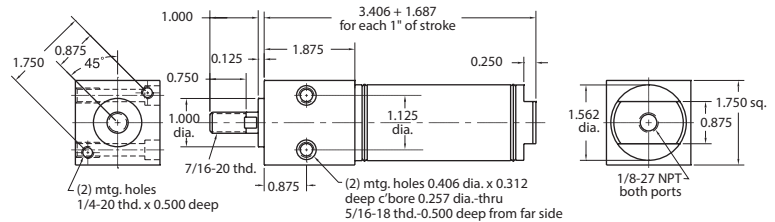
S - Side Ports
 V - Fluorocarbon Seals
 W - Rod Wiper
 Rod Extensions - See pg 4.
 Other Rod Threads - See pg 6.

Single Acting

FSR-24-□-□

Mount: Front Type: Rotating Rod

Options: M, B, W, V, N, S, H



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
 Maximum Stroke: 24"

Spring Compressed: 10 lbs. Spring At Rest: 4.5 lbs.

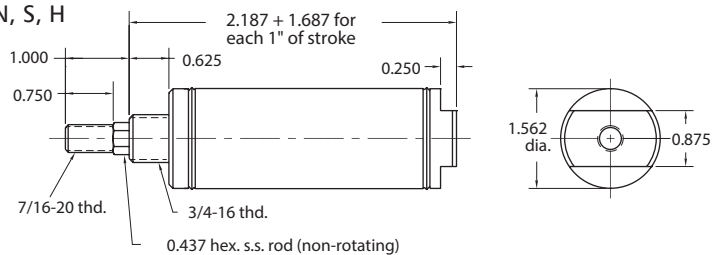
For M option add 0.125 For S option add 0.187

Single Acting

SSN-24-□-□

Mount: Stud Type: Non-Rotating Rod

Options: M, B, V, N, S, H



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
 Maximum Stroke: 24"

Spring Compressed: 10 lbs. Spring At Rest: 4.5 lbs.

For M option add 0.125 For S option add 0.187

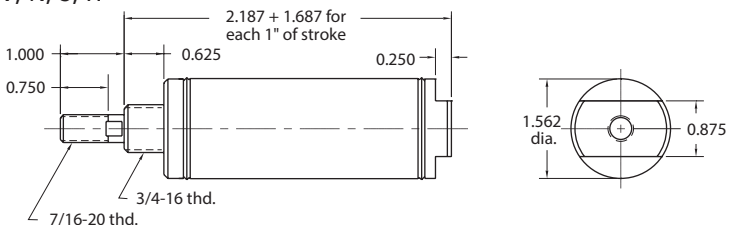
Nut included, but not shown on drawing

Single Acting

SSR-24-□-□

Mount: Stud Type: Rotating Rod

Options: M, B, W, V, N, S, H



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
 Maximum Stroke: 24"

Spring Compressed: 10 lbs. Spring At Rest: 4.5 lbs.

For M option add 0.125 For S option add 0.187

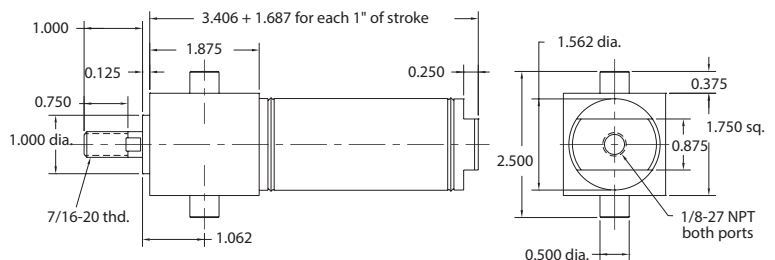
Nut included, but not shown on drawing

Single Acting

TSR-24-□-□

Mount: Trunnion Type: Rotating Rod

Options: M, B, W, V, N, S, H



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
 Maximum Stroke: 23"

Spring Compressed: 10 lbs. Spring At Rest: 4.5 lbs.

For M option add 0.125 For S option add 0.187

Stainless Steel Cylinders - 1-1/2" Bore

Standard Options

B - Bumpers
C - Cushions Both Ends
F - Front Cushion Only
H - Heavy Spring Force

M - Magnetic Piston for Sensing
N - No Rod Thread
P* - Rotated Ports - See pg 4.
R - Rear Cushion Only

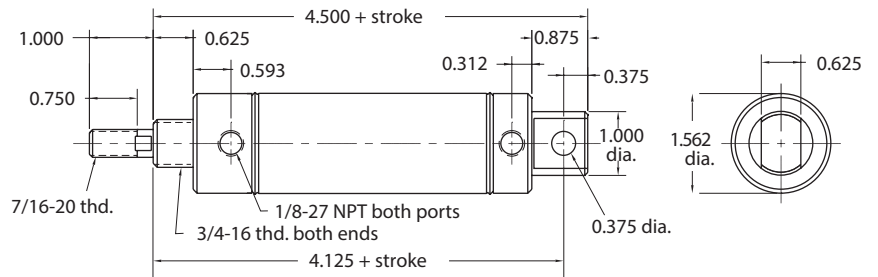
S - Side Ports
V - Fluorocarbon Seals
W - Rod Wiper
Rod Extensions - See pg 4.
Other Rod Threads - See pg 6.

Double Acting

CDR-24-□-□

Mount: Clevis Type: Rotating Rod

Options: C, F, R, M, B, W, V, N, P2, P3, P4, P5, P6, P7, P8



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4", 6", 8", 10", 12"

Maximum Stroke: 39"

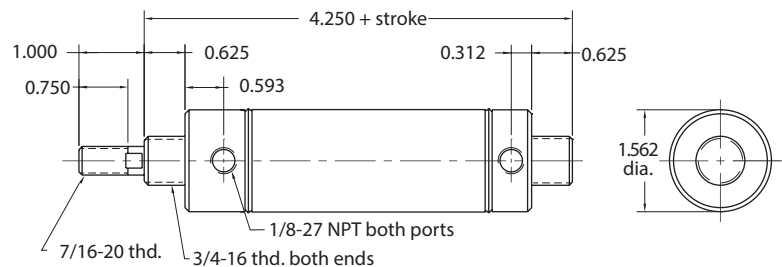
Nuts included, but not shown on drawing

Double Acting

EDR-24-□-□

Mount: End Type: Rotating Rod

Options: C, F, R, M, B, W, V, N, P6, P7, P8



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4", 6", 8", 10", 12"

Maximum Stroke: 39"

For M option add 0.125 For S option add 0.187

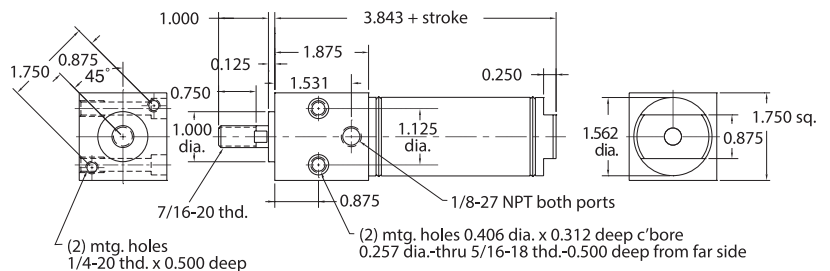
Nuts included, but not shown on drawing

Double Acting

FDR-24-□-□

Mount: Front Type: Rotating Rod

Options: M, B, W, V, N, S, P6, P7, P8



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

Maximum Stroke: 40"

For S option add 0.187

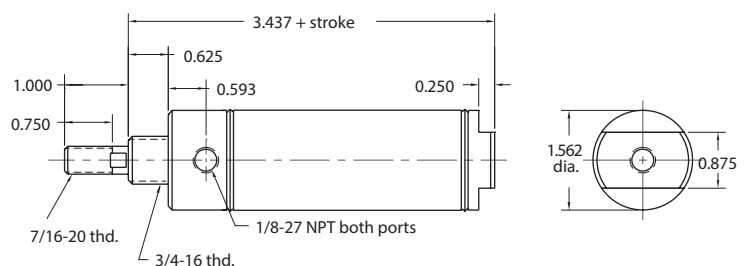
For "S" option, add 0.187 to length

Double Acting

SDR-24-□-□

Mount: Stud Type: Rotating Rod

Options: C, F, R, M, B, W, V, N, S, P6, P7, P8



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4", 6", 8", 10", 12"

Maximum Stroke: 40"

C, F, R and S option add 0.187

Nut included, but not shown on drawing

C, F, & R options use side ported rear head

Stainless Steel Cylinders - 1-1/2" Bore

Standard Options

B - Bumpers
 C - Cushions Both Ends
 F - Front Cushion Only
 H - Heavy Spring Force

M - Magnetic Piston for Sensing
 N - No Rod Thread
 P* - Rotated Ports - See pg 4.
 R - Rear Cushion Only

S - Side Ports
 V - Fluorocarbon Seals
 W - Rod Wiper
 Rod Extensions - See pg 4.
 Other Rod Threads - See pg 6.

Double Acting

TDR-24-□-□

Mount: Trunnion Type: Rotating Rod

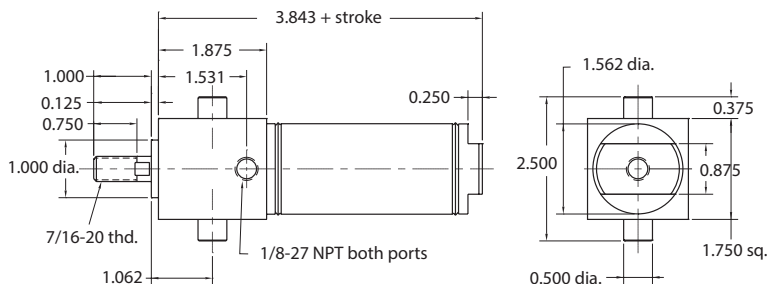
Options: M, B, W, V, N, D, P6, P7, P8



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

Maximum Stroke: 40"

For S option add 0.187



Double Acting

SDD-24-□-□

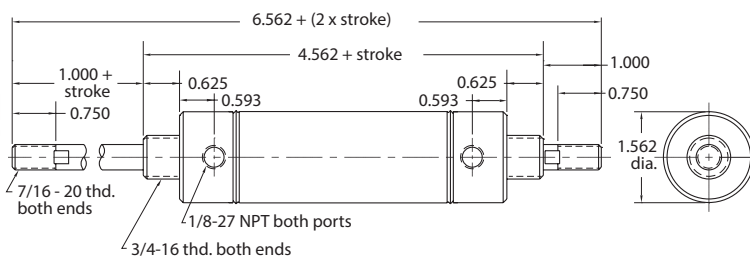
Mount: Stud Type: Double Rod

Options: C, F, M, B, W, V, N, P6, P7, P8



Standard Stroke Lengths: 1", 2", 3", 4", 5", 6", 8", 10", 12"

Maximum Stroke: 19"



Nuts included, but not shown on drawing

Reverse Acting

CRR-24-□-□

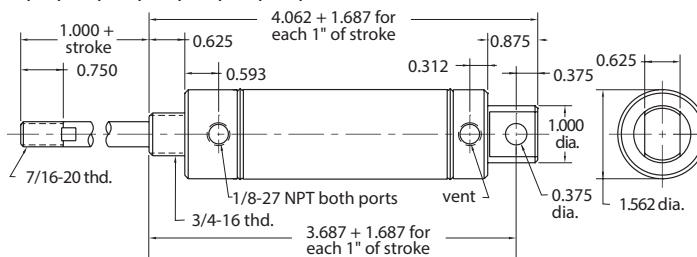
Mount: Clevis Type: Rotating Rod

Options: M, B, W, V, N, H, P2, P3, P4, P5, P6, P7, P8



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

Maximum Stroke: 14"



Furnished without nut(s). See Chart on Page 49.

Reverse Acting

ERR-24-□-□

Mount: End Type: Rotating Rod

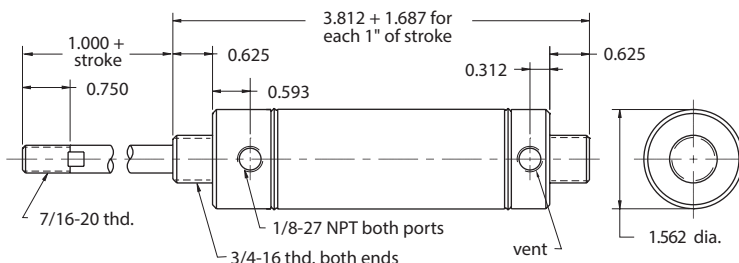
Options: M, B, W, V, N, H



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

Maximum Stroke: 23"

Spring Compressed: 10 lbs. Spring At Rest: 4.5 lbs.



Nuts included, but not shown on drawing

Stainless Steel Cylinders - 1-1/2" Bore

Standard Options

B - Bumpers
 C - Cushions Both Ends
 F - Front Cushion Only
 H - Heavy Spring Force

M - Magnetic Piston for Sensing
 N - No Rod Thread
 P* - Rotated Ports - See pg 4.
 R - Rear Cushion Only

S - Side Ports
 V - Fluorocarbon Seals
 W - Rod Wiper
 Rod Extensions - See pg 4.
 Other Rod Threads - See pg 6.

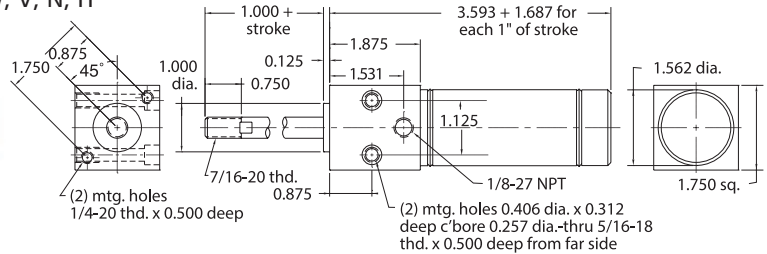
Reverse Acting

FRR-24-□-□



Mount: Front Type: Rotating Rod

Options: M, B, W, V, N, H



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

Maximum Stroke: 15"

Spring Compressed: 10 lbs. Spring At Rest: 4.5 lbs.

For S option add 0.187

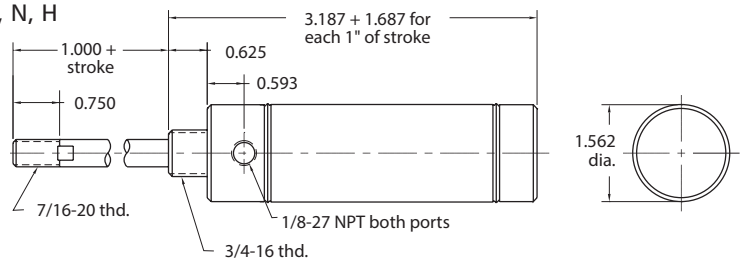
Reverse Acting

SRR-24-□-□



Mount: Stud Type: Rotating Rod

Options: M, B, W, V, N, H



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

Maximum Stroke: 15"

Spring Compressed: 10 lbs. Spring At Rest: 4.5 lbs.

Nut included, but not shown on drawing

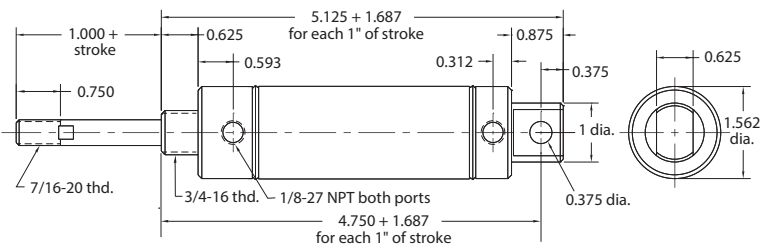
Double Acting, Spring Bias

CBR-24-□-□



Mount: Clevis Type: Rotating Rod

Options: M, B, W, V, N, H, P2, P3, P4, P5, P6, P7, P8



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

Maximum Stroke: 14"

Spring Compressed: 10 lbs. Spring At Rest: 4.5 lbs.

Furnished without nut(s). See Chart on Page 49.

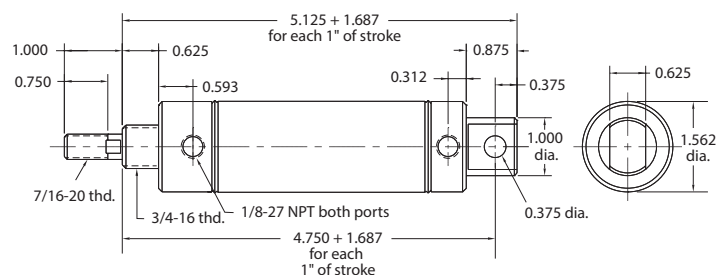
Double Acting, Front Spring Bias

CFR-24-□-□



Mount: Clevis Type: Rotating Rod

Options: M, B, W, V, N, H, P2, P3, P4, P5, P6, P7, P8



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

Maximum Stroke: 23"

Spring Compressed: 10 lbs. Spring At Rest: 4.5 lbs.

Furnished without nut(s). See Chart on Page 49.

Stainless Steel Cylinders - 1-1/2" Bore

Standard Options

B - Bumpers
C - Cushions Both Ends
F - Front Cushion Only
H - Heavy Spring Force

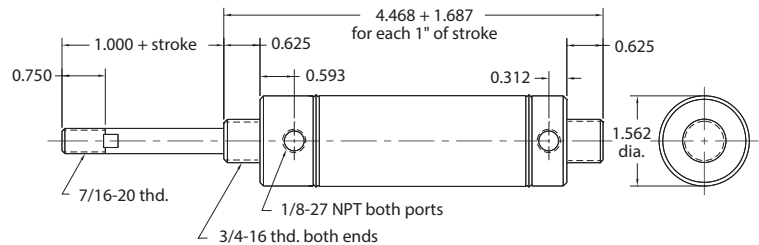
M - Magnetic Piston for Sensing
N - No Rod Thread
P* - Rotated Ports - See pg 4.
R - Rear Cushion Only

S - Side Ports
V - Fluorocarbon Seals
W - Rod Wiper
Rod Extensions - See pg 4.
Other Rod Threads - See pg 6.

Double Acting, Rear Spring Bias

Mount: End Type: Rotating Rod
Options: M, B, W, V, N, H, P6, P7, P8

EBR-24-□-□



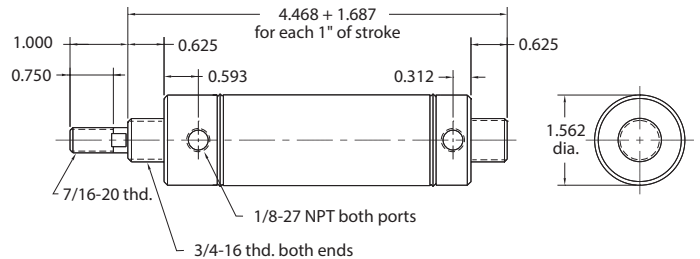
Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
Maximum Stroke: 14"
Spring Compressed: 10 lbs. Spring At Rest: 4.5 lbs.

Nuts included, but not shown on drawing

Double Acting, Front Spring Bias

Mount: End Type: Rotating Rod
Options: M, B, W, V, N, H, P6, P7, P8

EFR-24-□-□



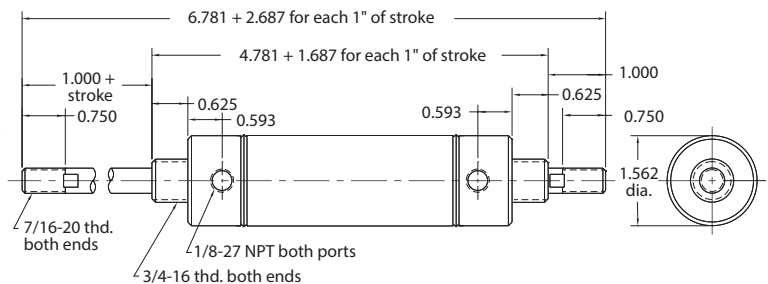
Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
Maximum Stroke: 23"
Spring Compressed: 10 lbs. Spring At Rest: 4.5 lbs.

Nuts included, but not shown on drawing

Double Acting, Front Spring Bias

Mount: Stud Type: Double Rod
Options: M, B, W, V, N, H, P6, P7, P8

SFD-24-□-□



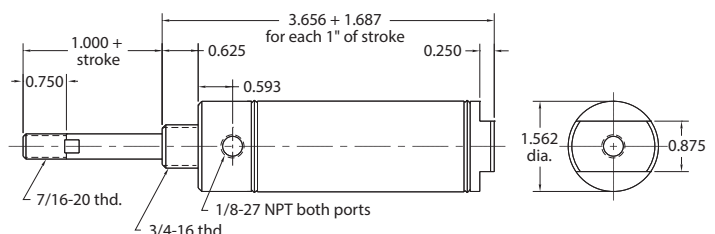
Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
Maximum Stroke: 14"
Spring Compressed: 10 lbs. Spring At Rest: 4.5 lbs.

Nuts included, but not shown on drawing

Double Acting, Rear Spring Bias

Mount: Stud Type: Rotating Rod
Options: M, B, W, V, S, N, H, P6, P7, P8

SBR-24-□-□



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
Maximum Stroke: 15"
Spring Compressed: 10 lbs. Spring At Rest: 4.5 lbs.
For S option add 0.187

Nut included, but not shown on drawing

Stainless Steel Cylinders - 1-1/2" Bore

Standard Options

B - Bumpers
 C - Cushions Both Ends
 F - Front Cushion Only
 H - Heavy Spring Force

M - Magnetic Piston for Sensing
 N - No Rod Thread
 P* - Rotated Ports - See pg 4.
 R - Rear Cushion Only

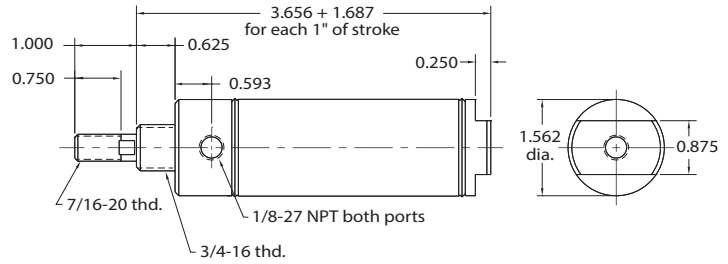
S - Side Ports
 V - Fluorocarbon Seals
 W - Rod Wiper
 Rod Extensions - See pg 4.
 Other Rod Threads - See pg 6.

Double Acting, Front Spring Bias

Mount: End Type: Rotating Rod

SFR-24-□-□

Options: M, B, W, V, N, S, H, P6, P7, P8



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

Maximum Stroke: 23"

Spring Compressed: 10 lbs. Spring At Rest: 4.5 lbs.

For S option add 0.187

Nut included, but not shown on drawing

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MOUNTING NUTS

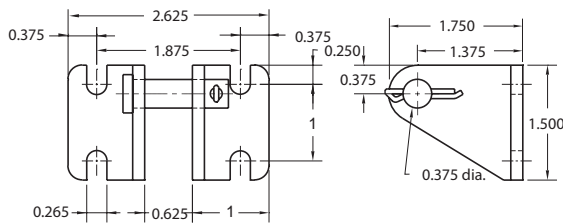
Stud Nut

Part Number	Across Flats	Nut Thickness	Nut (Thread)
N12-16	1 3/32"	27/64"	3/4-16

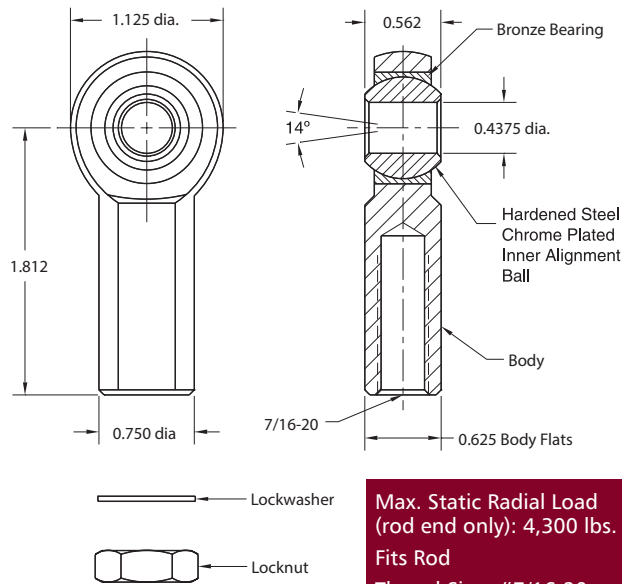
Rod Nut

Part Number	Across Flats	Nut Thickness	Nut (Thread)
N07-20	11/16"	1/4"	7/16-20

CB-2495 Clevis Bracket
Material: Steel, bright zinc plated

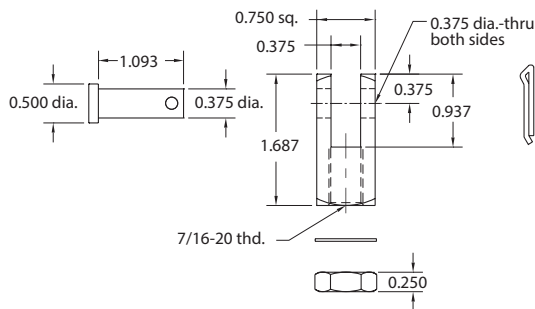


RE-2485 Rod End
Material: Steel, bright zinc plated body

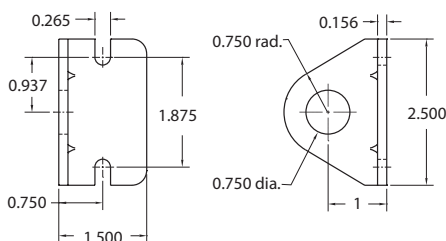


Max. Static Radial Load (rod end only): 4,300 lbs.
Fits Rod Thread Size: #7/16-20

RC-2481 Rod Clevis
Material: Steel, electroless nickel plate



FB-2491 Foot Bracket
Material: Steel, bright zinc plated



Stainless Steel Cylinders - 1-3/4" Bore

Standard Options

B - Bumpers
C - Cushions Both Ends
F - Front Cushion Only
H - Heavy Spring Force

M - Magnetic Piston for Sensing
N - No Rod Thread
P* - Rotated Ports - See pg 4.
R - Rear Cushion Only

S - Side Ports
V - Fluorocarbon Seals
W - Rod Wiper
Rod Extensions - See pg 4.
Other Rod Threads - See pg 6.

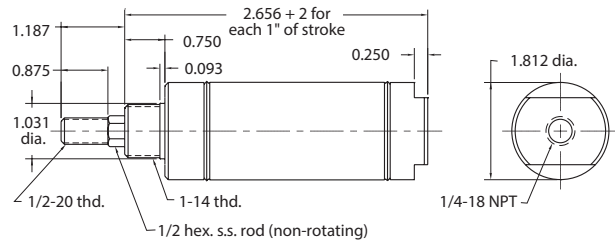
Single Acting

SSN-28-□-□



Mount: Stud Type: Non-Rotating Rod

Options: M, V, N, S



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

Maximum Stroke: 20"

Spring Compressed: 24 lbs. Spring At Rest: 11 lbs.

Bumpers are standard For M option add 0.125 For S option add 0.562

Nut included, but not shown on drawing

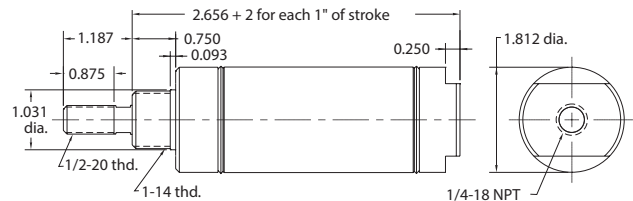
Single Acting

SSR-28-□-□



Mount: Stud Type: Rotating Rod

Options: M, W, V, N, S



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

Maximum Stroke: 20"

Spring Compressed: 24 lbs. Spring At Rest: 11 lbs.

Bumpers are standard For M option add 0.1255 For S option add 0.562

Nut included, but not shown on drawing

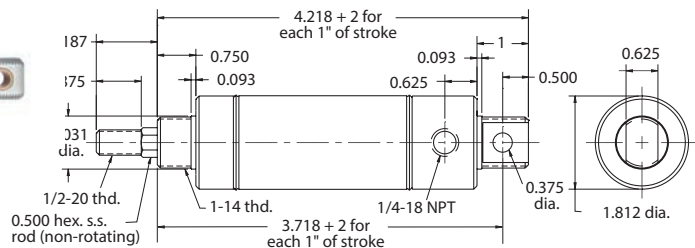
Single Acting

USN-28-□-□



Mount: Universal Type: Non-Rotating Rod

Options: M, V, N, P6



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

Maximum Stroke: 24"

Spring Compressed: 24 lbs. Spring At Rest: 11 lbs.

Bumpers are standard. For M option add 0.125

Furnished without nut(s). See Chart on Page 53.

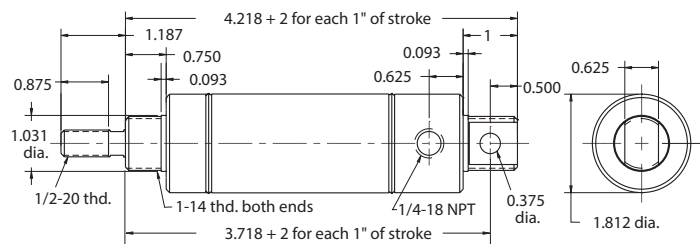
Single Acting

USR-28-□-□



Mount: Universal Type: Rotating Rod

Options: M, W, V, N, P6



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

Maximum Stroke: 23"

Spring Compressed: 24 lbs. Spring At Rest: 11 lbs.

Bumpers are standard. For M option add 0.125

Furnished without nut(s). See Chart on Page 53.

Stainless Steel Cylinders - 1-3/4" Bore

Standard Options

B - Bumpers
 C - Cushions Both Ends
 F - Front Cushion Only
 H - Heavy Spring Force

M - Magnetic Piston for Sensing
 N - No Rod Thread
 P* - Rotated Ports - See pg 4.
 R - Rear Cushion Only

S - Side Ports
 V - Fluorocarbon Seals
 W - Rod Wiper
 Rod Extensions - See pg 4.
 Other Rod Threads - See pg 6.

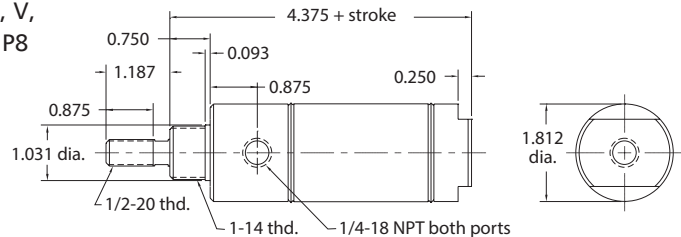
Double Acting

SDR-28- -



Mount: Stud Type: Rotating Rod

Options: C, F, R, M, W, V,
 N, S, P6, P7, P8



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

Maximum Stroke: 39"

Bumpers are standard. For C, F, R and S option add 0.562

Nut included, but not shown on drawing
 C, F, & R options use side ported rear head

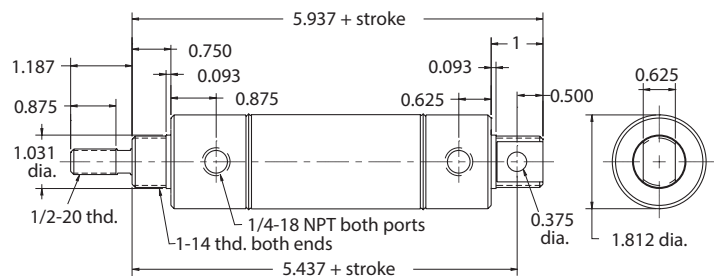
Double Acting

UDR-28- -



Mount: Universal Type: Rotating Rod

Options: C, F, R, M, W, V, N, P2, P3, P4, P5, P6, P7, P8



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3",
 4", 6", 8", 10", 12"

Maximum Stroke: 37"

Bumpers are standard.

Furnished without nut(s). See Chart on Page 53.

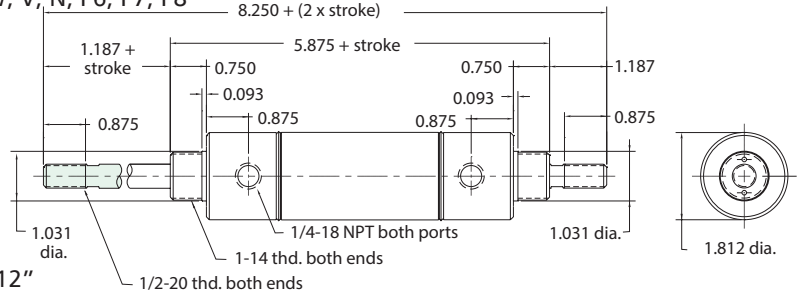
Double Acting

SDD-28- -



Mount: Stud Type: Double Rod

Options: C, F, M, W, V, N, P6, P7, P8



Standard Stroke Lengths: 1", 2", 3", 4", 5", 6", 8", 10", 12"

Maximum Stroke: 18"

Bumpers are standard. For C, F, R and S option add 0.562

Nuts included, but not shown on drawing

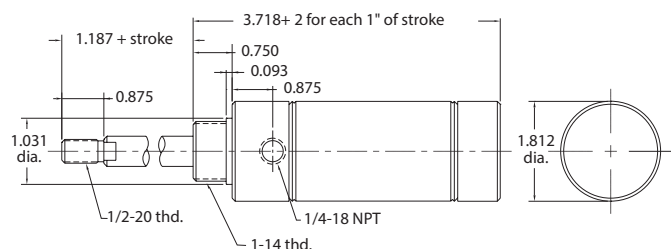
Reverse Acting

SRR-28- -



Mount: Stud Type: Rotating Rod

Options: M, W, V, N



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

Maximum Stroke: 13"

Bumpers are standard. For M option add 0.125

Nut included, but not shown on drawing

Stainless Steel Cylinders - 1-3/4" Bore

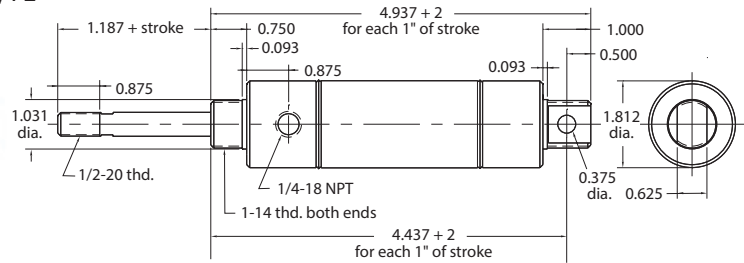
Standard Options		
B - Bumpers	M - Magnetic Piston for Sensing	S - Side Ports
C - Cushions Both Ends	N - No Rod Thread	V - Fluorocarbon Seals
F - Front Cushion Only	P* - Rotated Ports - See pg 4.	W - Rod Wiper
H - Heavy Spring Force	R - Rear Cushion Only	Rod Extensions - See pg 4.
		Other Rod Threads - See pg 6.

Reverse Acting

URR-28-□-□

Mount: Universal Type: Rotating Rod

Options: M, W, V, N, P2

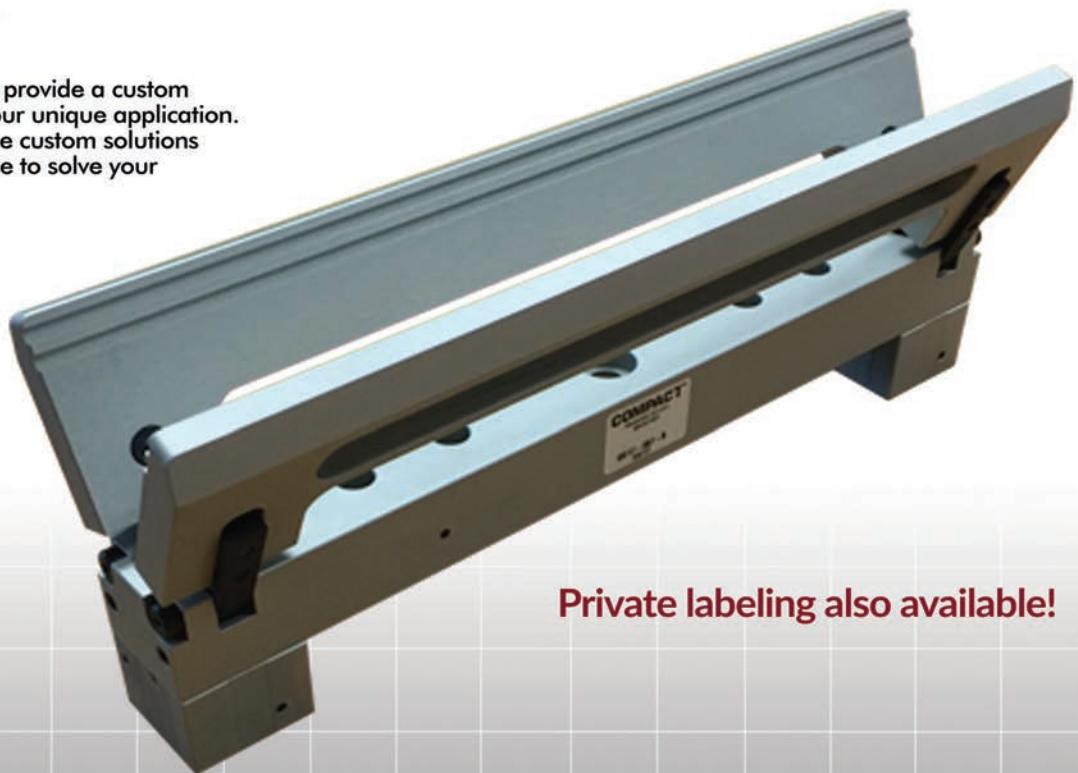


Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
 Maximum Stroke: 12"
 Spring Compressed: 24 lbs. Spring At Rest: 11 lbs.
 Bumpers are standard. For M option add 0.125

Furnished without nut(s). See Chart on Page 53.

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MOUNTING NUTS

Stud Nut

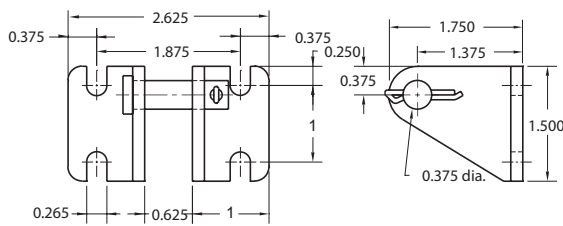
Part Number	Across Flats	Nut Thickness	Nut (Thread)
N16-14	1 1/2"	35/64"	1-14

Rod Nut

Part Number	Across Flats	Nut Thickness	Nut (Thread)
N08-20	3/4"	5/16"	1/2-20

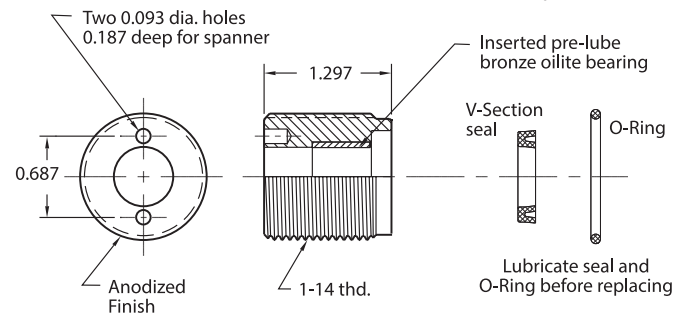
CB-2495

Clevis Bracket
Material: Steel, bright zinc plated



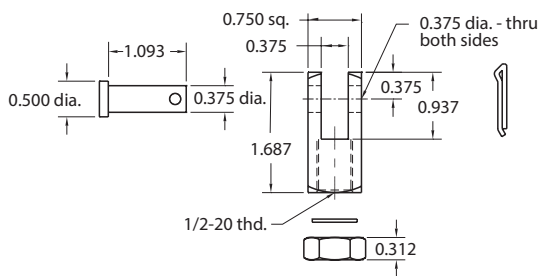
RK-2899

Replaceable Rod Seal
Material: Aluminum body



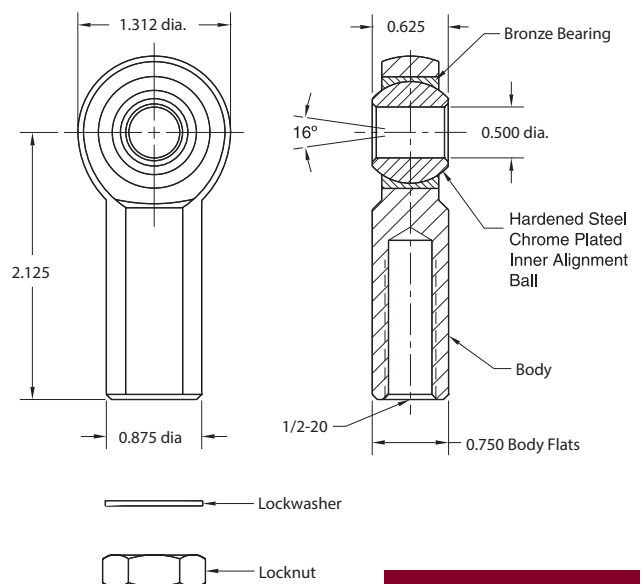
RC-3281

Rod Clevis
Material: Steel, electroless nickel plate



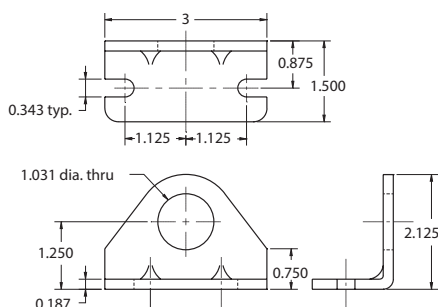
RE-3285

Rod End
Material: Steel, bright zinc plated body



FB-2891

Foot Bracket
Material: Steel, bright zinc plated



Max. Static Radial Load
(rod end only): 6,700 lbs.
Fits Rod
Thread Size: #1/2-20

Stainless Steel Cylinders - 2" Bore

Standard Options

B - Bumpers
C - Cushions Both Ends
F - Front Cushion Only
H - Heavy Spring Force

M - Magnetic Piston for Sensing
N - No Rod Thread
P* - Rotated Ports - See pg 4.
R - Rear Cushion Only

S - Side Ports
V - Fluorocarbon Seals
W - Rod Wiper
Rod Extensions - See pg 4.
Other Rod Threads - See pg 6.

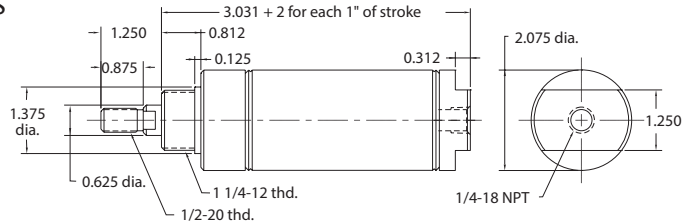
Single Acting

SSR-32-□-□



Mount: Stud Type: Rotating Rod

Options: M, B, W, V, N, S



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

Maximum Stroke: 20"

Spring Compressed: 30 lbs. Spring At Rest: 15 lbs.

For M option add 0.125 For S option add 0.375

Nut included, but not shown on drawing

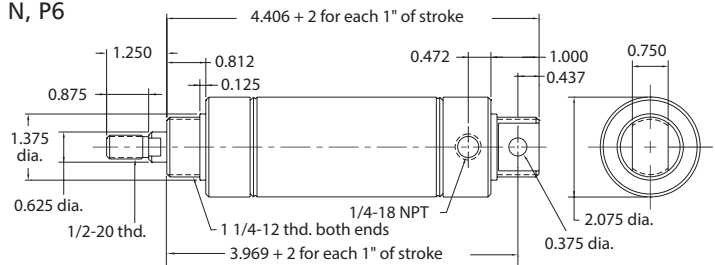
Single Acting

USR-32-□-□



Mount: Universal Type: Rotating Rod

Options: M, B, W, V, N, P6



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

Maximum Stroke: 19"

Spring Compressed: 30 lbs. Spring At Rest: 15 lbs.

For M option add 0.125

Furnished without nut(s). See Chart on Page 57.

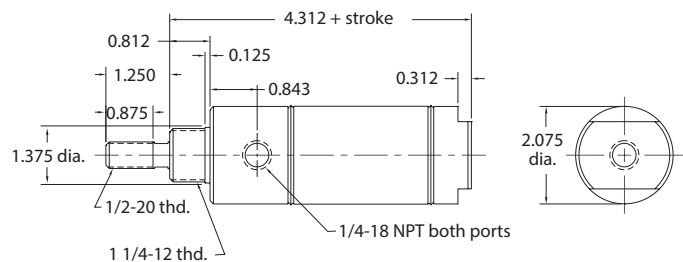
Double Acting

SDR-32-□-□



Mount: Stud Type: Rotating Rod

Options: C, F, R, M, B, W, V, N, S, P6, P7, P8



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

Maximum Stroke: 39"

For C, F, R and S options add 0.375

Nut included, but not shown on drawing
C, F, & R options use side ported rear head

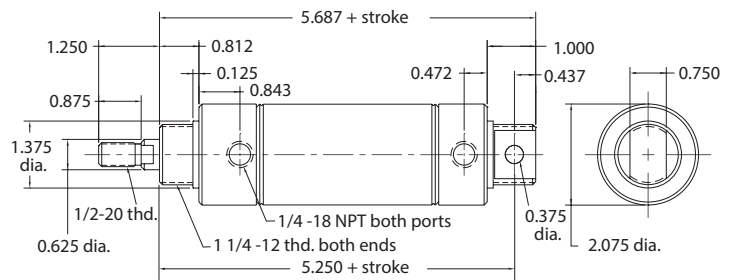
Double Acting

UDR-32-□-□



Mount: Universal Type: Rotating Rod

Options: C, F, R, M, B, W, V, N, P2, P3, P4, P5, P6, P7, P8



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4", 5", 6", 7", 8", 10", 12"

Maximum Stroke: 38"

Furnished without nut(s). See Chart on Page 57.

Stainless Steel Cylinders - 2" Bore

Standard Options

B - Bumpers
 C - Cushions Both Ends
 F - Front Cushion Only
 H - Heavy Spring Force

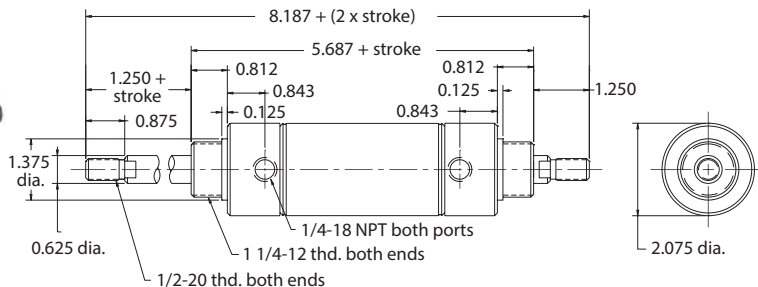
M - Magnetic Piston for Sensing
 N - No Rod Thread
 P* - Rotated Ports - See pg 4.
 R - Rear Cushion Only

S - Side Ports
 V - Fluorocarbon Seals
 W - Rod Wiper
 Rod Extensions - See pg 4.
 Other Rod Threads - See pg 6.

Double Acting

SDD-32--

Mount: Stud Type: Double Rod
 Options: C, F, M, B, W, V, N, P6, P7, P8



Standard Stroke Lengths: 1", 2", 3", 4", 5", 6", 8", 10", 12"

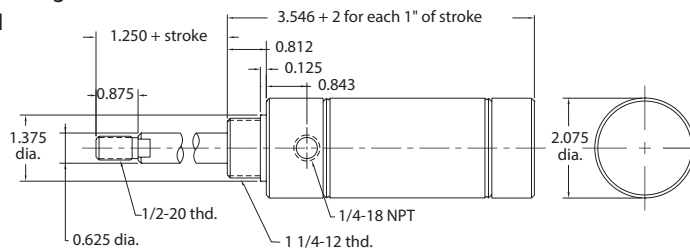
Maximum Stroke: 18"

Nuts included, but not shown on drawing

Reverse Acting

SRR-32--

Mount: Stud Type: Rotating Rod
 Options: M, B, W, V, N



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

Maximum Stroke: 12"

Spring Compressed: 30 lbs. Spring At Rest: 15 lbs.

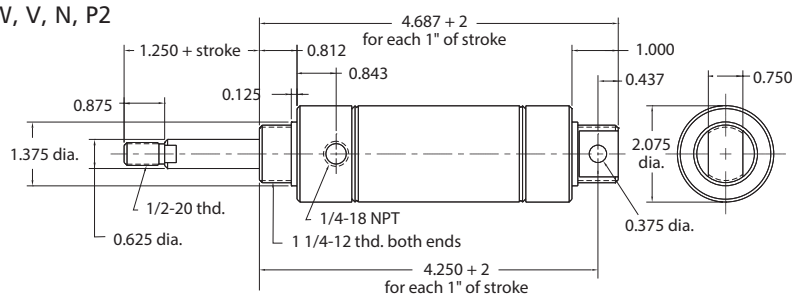
For M option add 0.125

Nut included, but not shown on drawing

Reverse Acting

URR-32--

Mount: Universal Type: Rotating Rod
 Options: M, B, W, V, N, P2



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

Maximum Stroke: 13"

Spring Compressed: 30 lbs. Spring At Rest: 15 lbs.

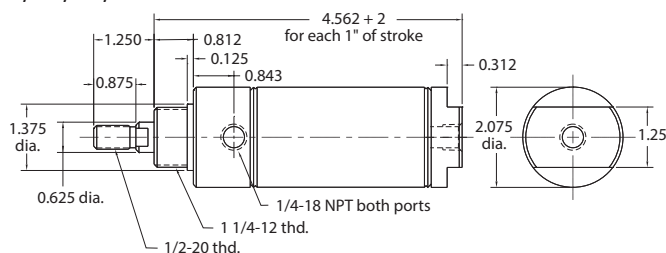
For M option add 0.125

Furnished without nut(s). See Chart on Page 57.

Spring Bias

SFR-32--

Mount: Stud Type: Rotating Rod
 Options: M, B, W, V, N, S, P6, P7, P8



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

Spring Compressed: 30 lbs. Spring At Rest: 15 lbs.

For M option add 0.125

Nut included, but not shown on drawing

Stainless Steel Cylinders - 2" Bore

Standard Options

B - Bumpers
 C - Cushions Both Ends
 F - Front Cushion Only
 H - Heavy Spring Force

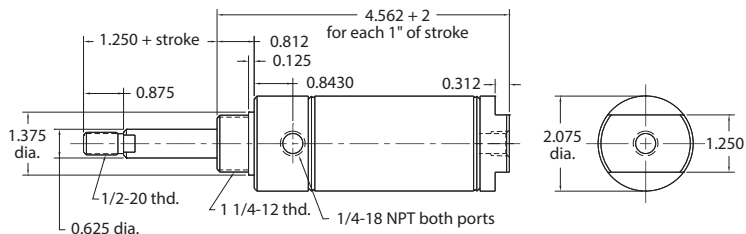
M - Magnetic Piston for Sensing
 N - No Rod Thread
 P* - Rotated Ports - See pg 4.
 R - Rear Cushion Only

S - Side Ports
 V - Fluorocarbon Seals
 W - Rod Wiper
 Rod Extensions - See pg 4.
 Other Rod Threads - See pg 6.

Spring Bias

SBR-32- -

Mount: Stud Type: Rotating Rod
 Options: M, B, W, V, N, S, P6, P7, P8



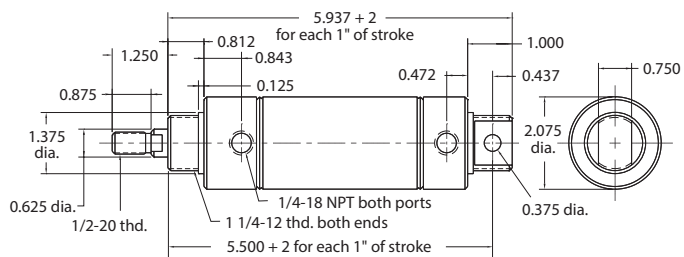
Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
 Spring Compressed: 30 lbs. Spring At Rest: 15 lbs.
 For S option add 0.375

Nut included, but not shown on drawing

Spring Bias

UFR-32- -

Mount: Universal Type: Rotating Rod
 Options: M, B, W, V, N, P2, P3, P4, P5, P6, P7, P8



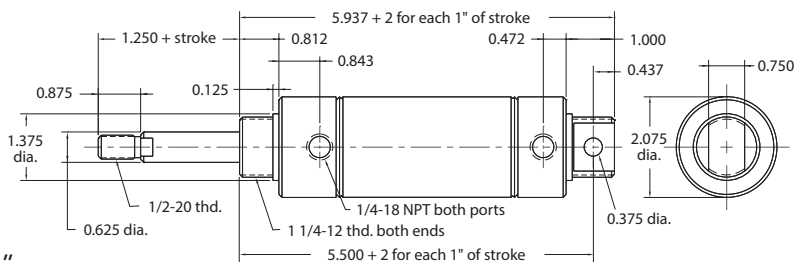
Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
 Spring Compressed: 30 lbs. Spring At Rest: 15 lbs.

Furnished without nut(s). See Chart on Page 57.

Spring Bias

UBR-32- -

Mount: Universal Type: Rotating Rod
 Options: M, B, W, V, N, P2, P3, P4, P5, P6, P7, P8



Standard Stroke Lengths: 1/2", 1", 1-1/2", 2", 3", 4"
 Spring Compressed: 30 lbs. Spring At Rest: 15 lbs.

Furnished without nut(s). See Chart on Page 57.

Stainless Steel Cylinders - 2" Bore



MOUNTING NUTS

Stud Nut

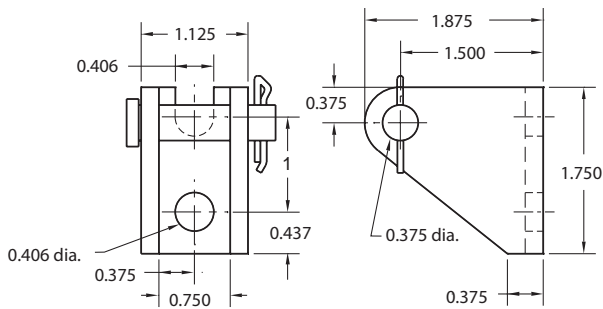
Part Number	Across Flats	Nut Thickness	Nut (Thread)
N20-12	1 3/4"	7/16"	1 1/4-12

Rod Nut

Part Number	Across Flats	Nut Thickness	Nut (Thread)
N08-20	3/4"	5/16"	1/2-20

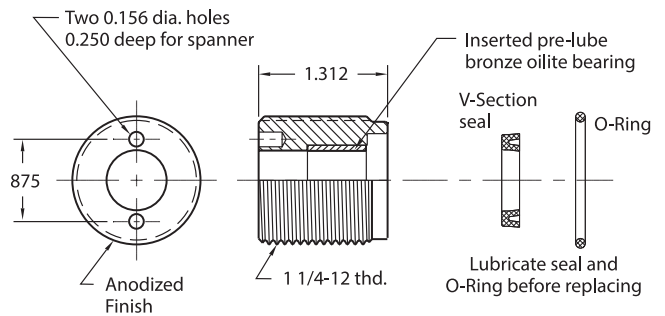
CB-3295

Clevis Bracket
Material: Steel, bright zinc plated



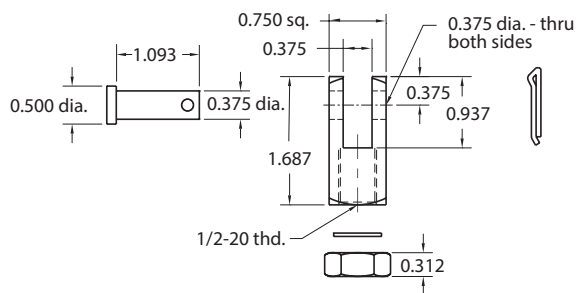
RK-3299

Replaceable Rod Seal
Material: Aluminum body



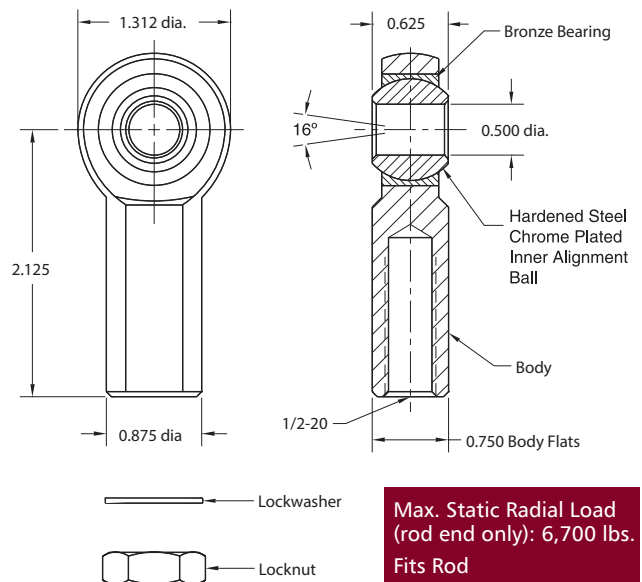
RC-3281

Rod Clevis
Material: Steel, electroless nickel plate



RE-3285

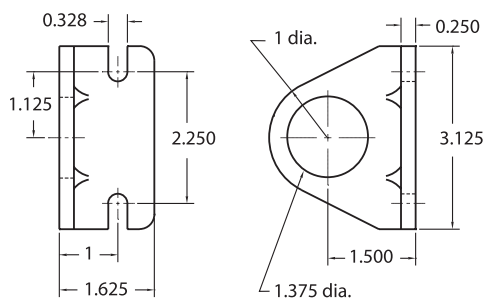
Rod End
Material: Steel, bright zinc plated body



Max. Static Radial Load (rod end only): 6,700 lbs.
Fits Rod
Thread Size: #1/2-20

FB-3291

Foot Bracket
Material: Steel, bright zinc plated



Stainless Steel Cylinders - 2-1/2" Bore

Standard Options

B - Bumpers
 C - Cushions Both Ends
 F - Front Cushion Only
 H - Heavy Spring Force

M - Magnetic Piston for Sensing
 N - No Rod Thread
 P* - Rotated Ports - See pg 4.
 R - Rear Cushion Only

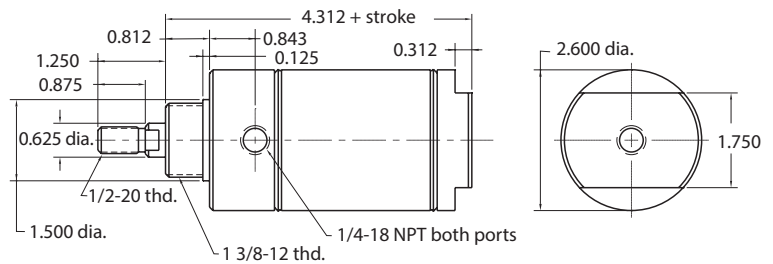
S - Side Ports
 V - Fluorocarbon Seals
 W - Rod Wiper
 Rod Extensions - See pg 4.
 Other Rod Threads - See pg 6.

Double Acting

SDR-40-□-□

Mount: Stud Type: Rotating Rod

Options: C, F, R, M, W, V, N, S, P6, P7, P8



Standard Stroke Lengths: 1", 2", 3", 4", 5", 6"
 Maximum Stroke: 39"

Bumpers are standard For M option add 0.312 For C, F, R and S option add 0.375

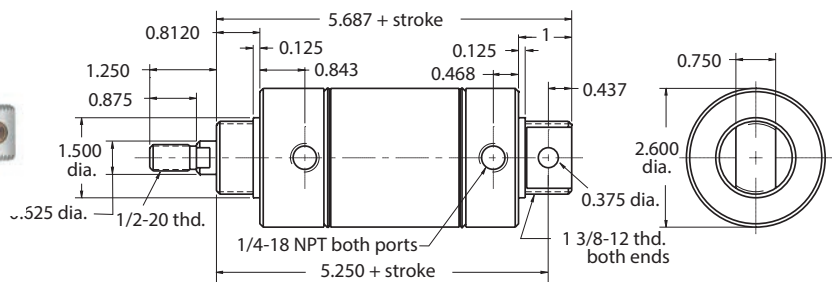
Nut included, but not shown on drawing

Double Acting

UDR-40-□-□

Mount: Universal Type: Rotating Rod

Options: C, F, R, M, W, V, N, P2, P3, P4, P5, P6, P7, P8



Standard Stroke Lengths: 1", 2", 3", 4", 5",
 6", 7", 8", 10", 12"

Maximum Stroke: 38"

Bumpers are standard For M option add 0.312

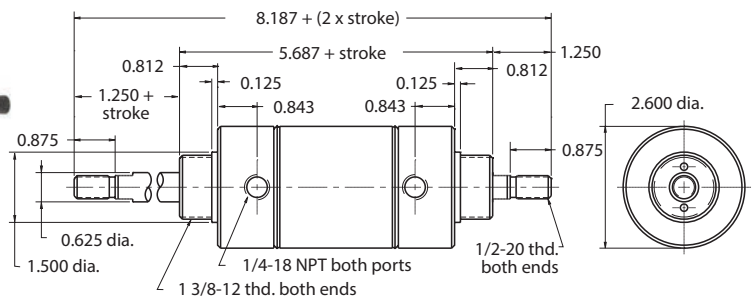
Furnished without nut(s). See Chart on Page 59.

Double Acting

SDD-40-□-□

Mount: Stud Type: Rotating Rod

Options: C, F, M, W, V, N, P6, P7, P8



Standard Stroke Lengths: 1", 2", 3", 4", 5",
 6", 7", 8", 10", 12"

Maximum Stroke: 18"

Bumpers are standard For M option add 0.312

Nut included, but not shown on drawing

Stainless Steel Cylinders - 2-1/2" Bore Accessories



MOUNTING NUTS

Stud Nut

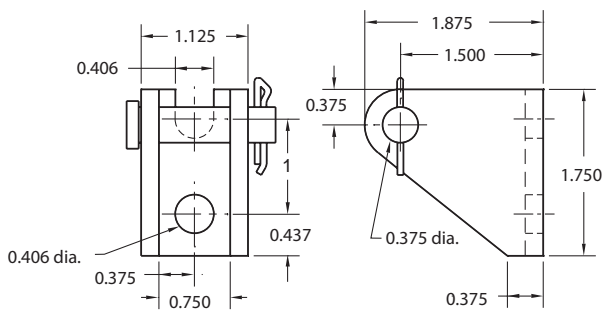
Part Number	Across Flats	Nut Thickness	Nut (Thread)
N22-12	1 7/8"	1/2"	1 3/8-12

Rod Nut

Part Number	Across Flats	Nut Thickness	Nut (Thread)
N08-20	3/4"	5/16"	1/2-20

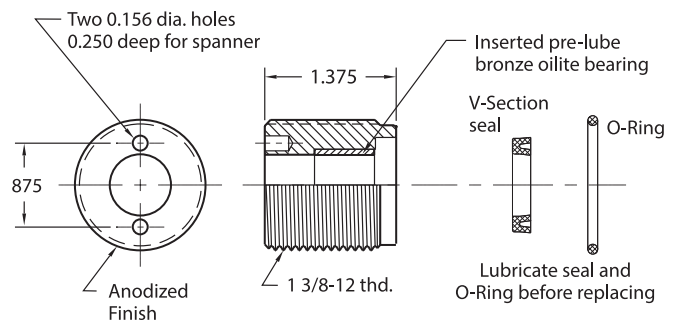
CB-3295

Clevis Bracket
Material: Steel, bright zinc plated



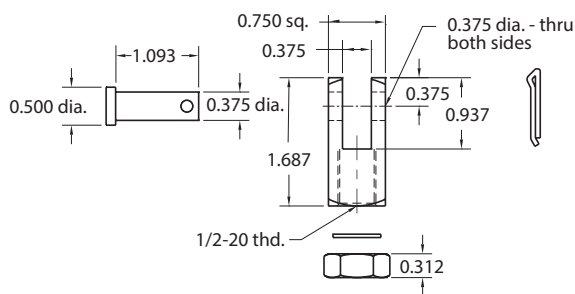
RK-4099

Replaceable Rod Seal
Material: Aluminum body



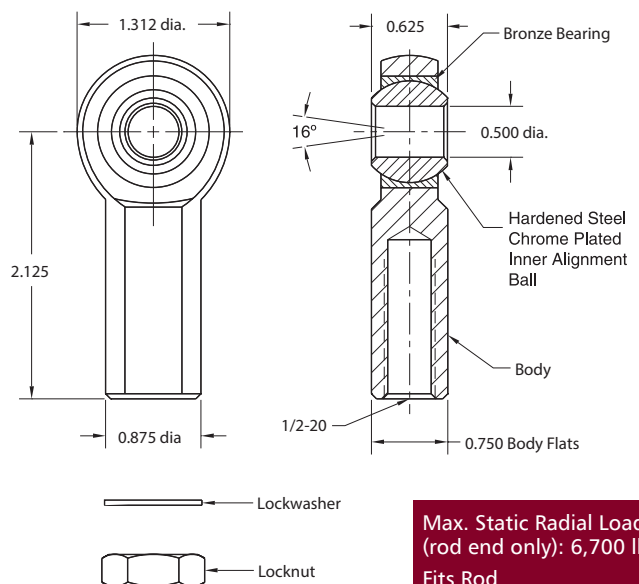
RC-3281

Rod Clevis
Material: Steel, electroless nickel plate



RE-3285

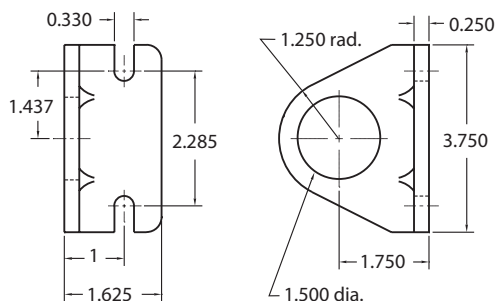
Rod End
Material: Steel, bright zinc plated body



Max. Static Radial Load (rod end only): 6,700 lbs.
Fits Rod
Thread Size: #1/2-20

FB-4091

Foot Bracket
Material: Steel, bright zinc plated



Stainless Steel Cylinders - 3" Bore

Standard Options

B - Bumpers
 C - Cushions Both Ends
 F - Front Cushion Only
 H - Heavy Spring Force

M - Magnetic Piston for Sensing
 N - No Rod Thread
 P* - Rotated Ports - See pg 4.
 R - Rear Cushion Only

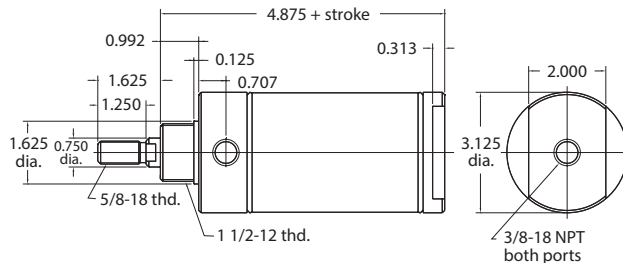
S - Side Ports
 V - Fluorocarbon Seals
 W - Rod Wiper
 Rod Extensions - See pg 4.
 Other Rod Threads - See pg 6.

Double Acting

SDR-48-□-□



Mount: Stud Type: Rotating Rod
 Options: M, W, V, N, S, P6, P7, P8



Standard Stroke Lengths: 1", 2", 3", 4", 5", 6"
 Maximum Stroke: 34"

Bumpers are standard No additional length for bumpers For S option add 0.437

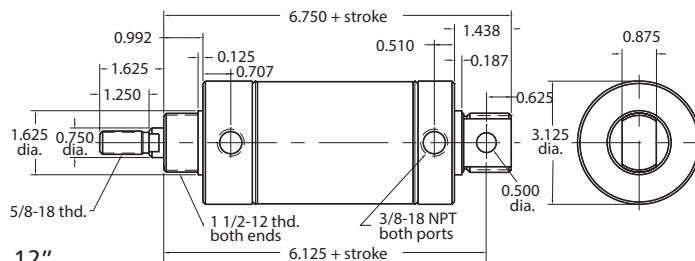
Nut included, but not shown on drawing

Double Acting

UDR-48-□-□



Mount: Universal Type: Rotating Rod
 Options: M, W, V, N, P2, P3, P4, P5, P6, P7, P8



Standard Stroke Lengths: 1", 2", 3", 4", 5", 6", 7", 8", 10", 12"
 Maximum Stroke: 32"

Bumpers are standard No additional length for bumpers For S option add 0.437

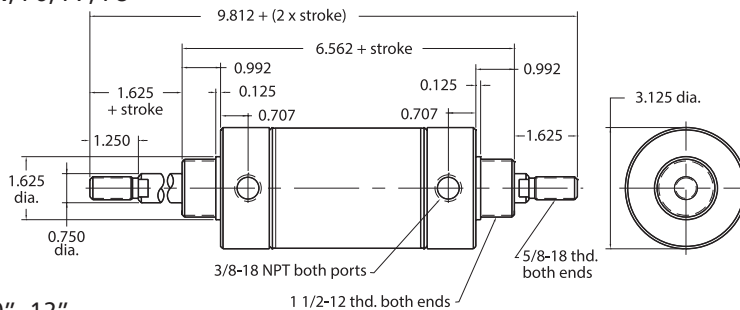
Furnished without nut(s). See Chart on Page 61.

Double Acting

SDD-48-□-□



Mount: Stud Type: Rotating Rod
 Options: M, W, V, N, P6, P7, P8



Standard Stroke Lengths: 1", 2", 3", 4", 5", 6", 7", 8", 10", 12"
 Maximum Stroke: 15"

Bumpers are standard No additional length for bumpers

Nuts included, but not shown on drawing

Stainless Steel Cylinders - 3" Bore Accessories



MOUNTING NUTS

Stud Nut

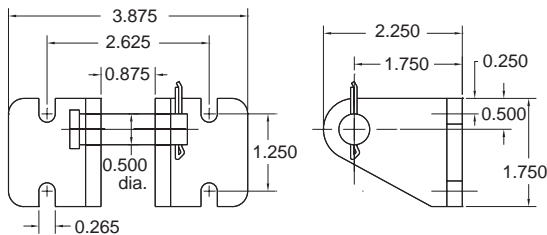
Part Number	Across Flats	Nut Thickness	Nut (Thread)
N24-12	2 1/4"	1/2"	1 1/2-12

Rod Nut

Part Number	Across Flats	Nut Thickness	Nut (Thread)
N10-18	15/16"	3/8"	5/8-18

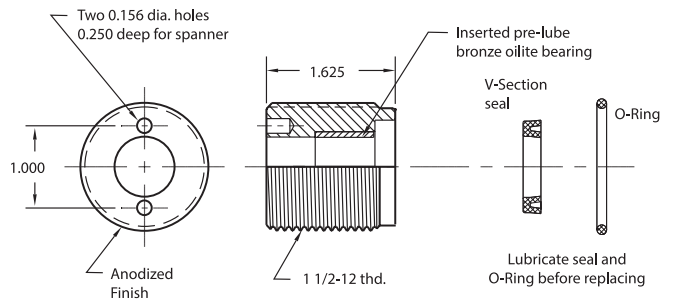
CB-4895

Clevis Bracket
Material: Steel, bright zinc plated



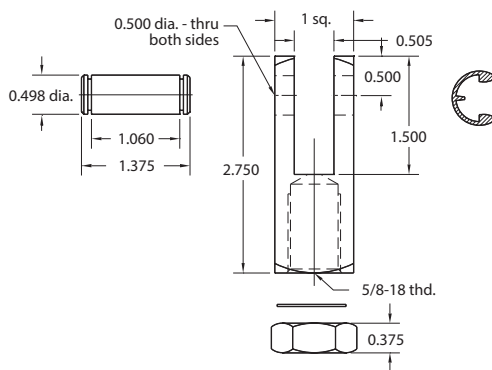
RK-4899

Replaceable Rod Seal
Material: aluminum body



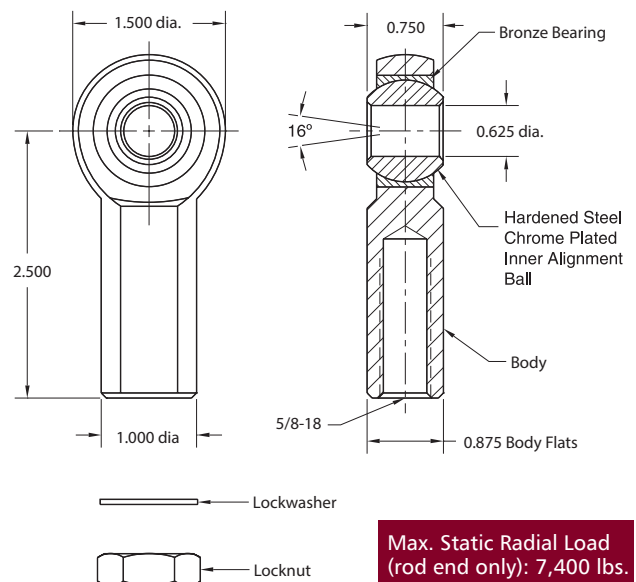
RC-4881

Rod Clevis
Material: Steel, electroless nickel plate



RE-4885

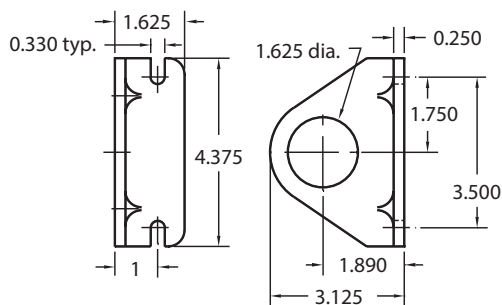
Rod End
Material: Steel, bright zinc plated body



Max. Static Radial Load (rod end only): 7,400 lbs.
Fits Rod Thread Size: #5/8-18

FB-4891

Foot Bracket
Material: Steel, bright zinc plated



Stainless Steel Cylinders - Position Sensors

Magnetic Piston -M

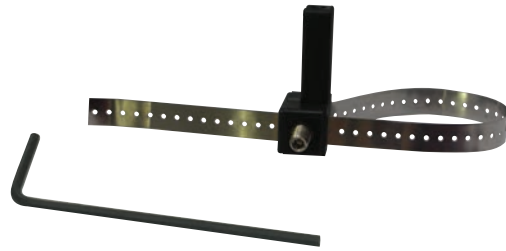
Compact's stainless steel cylinders that are equipped with a magnetic piston (M) can use either a solid-state device or a reed switch to sense the position of the piston. As the piston's magnet passes beneath the sensor, the magnetic field will trigger the switch creating an output signal. These small durable switches feature quick response times, low power consumption and offering reliable operation. Adding a magnet to the piston may increase the overall length of the cylinder. See the specific cylinder to determine if the length will increase with the magnetic piston (M).

Compact's GPS Sensor is a solid-state device that exhibits a change in electrical resistance when subjected to a magnetic field created by the magnet on the piston. This design offers a highly durable, sensitive switch with low power consumption and fast response times.

Compact's RPS Reed Switch is a single-pole, single throw (SPST) Normally Open electronic switch. When the magnet field of piston's magnet passes beneath the switch, a signal is sent indicating the location of the piston.

Accessories

Our Universal Mounting Bracket is designed for use with both a GPS or RPS Sensors on any bore cylinder equipped with a magnetic piston. Allen wrench is included.

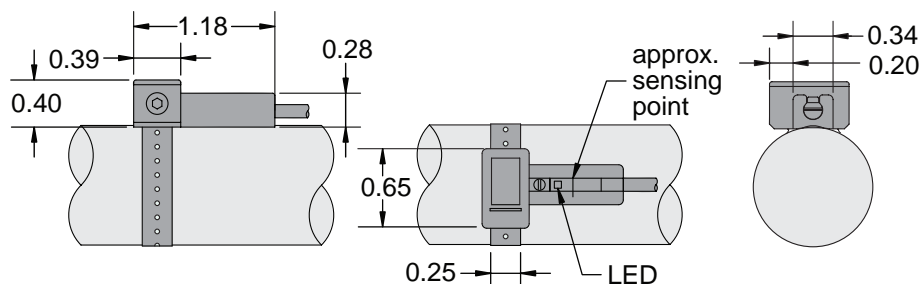


Universal Mounting Bracket UC-0848

Reed Switch	Part No.
RPS-P3	Sourcing Switch with 3 m Wire Leads
RPS-P8Q	Sourcing Switch with 8 mm Male QC 6" Pigtail
RPS-N3	Sinking Switch with 3 m Wire Leads
RPS-N8Q	Sinking Switch with 8 mm Male QC 6" Pigtail
RPS-S3	Simple Switch (2-Wire) with 3 m Wire Leads
RPS-S8Q	Simple Switch (2-Wire) with 8 mm Male QC 6" Pigtail
CPS-C8Q5	Mating Cable Assembly, 8 mm Female QC with 5 m Leads

GMR Switch	Part No.
GPS-P3	Sourcing Switch with 3 m Wire Leads
GPS-P8Q	Sourcing Switch with 8 mm Male QC 6" Pigtail
GPS-N3	Sinking Switch with 3 m Wire Leads
GPS-N8Q	Sinking Switch with 8 mm Male QC 6" Pigtail
CPS-C8Q5	Mating Cable Assembly, 8 mm Female QC with 5 m Leads

Dimensions
All GPS and RPS Position Sensors

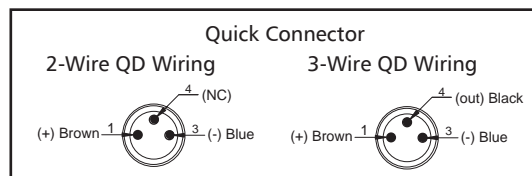
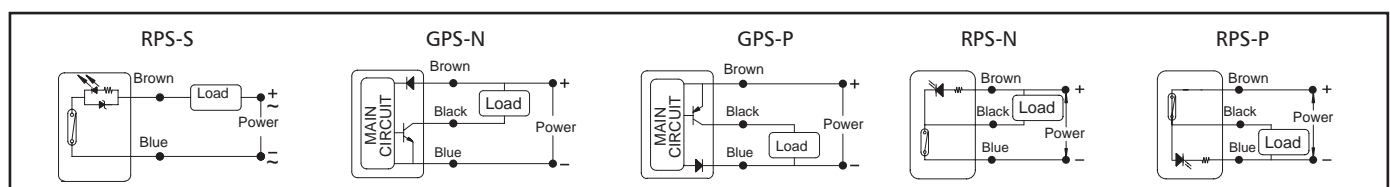


Round Line Cylinders - Switch Selection

The Compact stainless steel cylinders designated with an internal magnet on the piston can be used to trigger both the Reed or GMR sensors. The position of the piston can be accurately sensed by the sensors as the magnetic field of the magnet passes beneath the sensor, creating a feedback signal. The addition of the -M option may add overall length to the cylinder.

See the specific cylinder data for availability and details of the overall length adder.

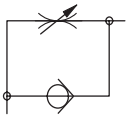
Characteristic/Type	RPS-S	GPS-N	GPS-P	RPS-N	RPS-P
Switching Logic	SPST Normally-Open	Solid State Output, Normally-Open	Solid State Output, Normally-Open	SPST Normally-Open	SPST Normally-Open
Sensor Type	Reed Switch	NPN Current Sinking	PNP Current Sourcing	Reed Switch NPN	Reed Switch PNP
Operating Voltage	RLRPS-S3: 5 to 120 VAC RLRPS-S8Q: 5 to 60 VAC/DC	5 to 28 VDC	5 to 28 VDC	5 to 30 VDC	5 to 30 VDC
Switching Current	100 mA max.	200 mA max.	200 mA max.	250 mA max.	250 mA max.
Switching Rating	10 W max.	6 W max.	6 W max.	10 W max.	10 W max.
Current Consumption	-	7.5 mA max. @ 24 V (Switch Active)	7.5 mA max. @ 24 V (Switch Active)	10 mA max. @ 24 V (Switch Active)	10 mA max. @ 24 V (Switch Active)
Voltage Drop	2.5 V max. @ 40 mA DC	0.5 V max. @ 200 mA (Resistive Load)	0.5 V max. @ 200 mA (Resistive Load)	0.5 V max. @ 550 mA (Resistive Load)	0.5 V max. @ 550 mA (Resistive Load)
Leakage Current	-	0.01 mA max.	0.01 mA max.	-	-
Indicator	Red LED	Red LED	Green LED	Red LED	Green LED
Cable	2.8\$, 2C, Oil-Resistant PVC	2.8\$, 3C, Oil-Resistant PVC	2.8\$, 3C, Oil-Resistant PVC	2.8\$, 3C, Oil-Resistant PVC	2.8\$, 3C, Oil-Resistant PVC
Sensitivity	60 G	40 ~ 750 G	40 ~ 750 G	60 G	60 G
Max. Switching Frequency	200 Hz	5,000 Hz	5,000 Hz	1,000 Hz	1,000 Hz
Temperature Range	14 to 158°F (-10 to 70°C)	14 to 158°F (-10 to 70°C)	14 to 158°F (-10 to 70°C)	14 to 158°F (-10 to 70°C)	14 to 158°F (-10 to 70°C)
Shock	30 G	50 G	50 G	30 G	30 G
Vibration	9 G	9 G	9 G	9 G	9 G
Enclosure Classification	IP 67 (NEMA 6)	IP 67 (NEMA 6)	IP 67 (NEMA 6)	IP 67 (NEMA 6)	IP 67 (NEMA 6)
Protection Circuit	-	Power Source Reverse Polarity; Surge Suppression	Power Source Reverse Polarity; Surge Suppression	-	-



Flow Controls - Unique Inch to Metric Combinations

3 Flow Paths

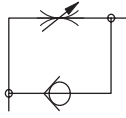
Style "MO" Meter OUT



- Metered Output
- Free Flow Input



Style "MI" Meter In



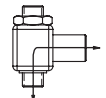
- Metered Input
- Free Flow Output



Style "NV" Needle Valve
Meter Both Ways



- Metered Input
- Metered Output



Precision Control

- A unique needle design minimizes turbulence and improves flow control ability.
- A super fine pitch needle thread provides the finest adjustment available.
- Captive needle cannot be adjusted out of the housing.

Sizes	Needle Pitch	Number of Turns
# 10-32	80 TPI	6
1/8NPTF	60 TPI	8
1/4NPTF	56 TPI	8

Model Numbers*

Port Thread	"MO" Color Code: Black			"MI" Color Code: Red			"NV" Color Code: Silver		
	Model #	Male Thread	Female Thread	Model #	Male Thread	Female Thread	Model #	Male Thread	Female Thread
# 10-32 M5	MO10	# 10-32	# 10-32	MI10	# 10-32	# 10-32	NV10	# 10-32	# 10-32
	MO10-5	# 10-32	M5	MI10-5	# 10-32	M5	NV10-5	# 10-32	M5
1/8-27NPTF G1/8	MO18	1/8NPTF	1/8NPTF	MI18	1/8NPTF	1/8NPTF	NV18	1/8NPTF	1/8NPTF
	MO18-G18	1/8NPTF	G1/8	MI18-G18	1/8NPTF	G1/8	NV18-G18	1/8NPTF	G1/8
1/4-18NPTF G1/4	MO14	1/4NPTF	1/4NPTF	MI14	1/4NPTF	1/4NPTF	NV14	1/4NPTF	1/4NPTF
	MOG14	G1/4	G1/4	MIG14	G1/4	G1/4	NVG14	G1/4	G1/4

Knob Option Available on Inch Versions: Add Suffix "K" Example: MO18K

Barb Fitting for #10-32 or M5 only: Add Suffix "B" Example: MO10B or MO10BK with Knob

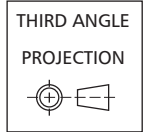
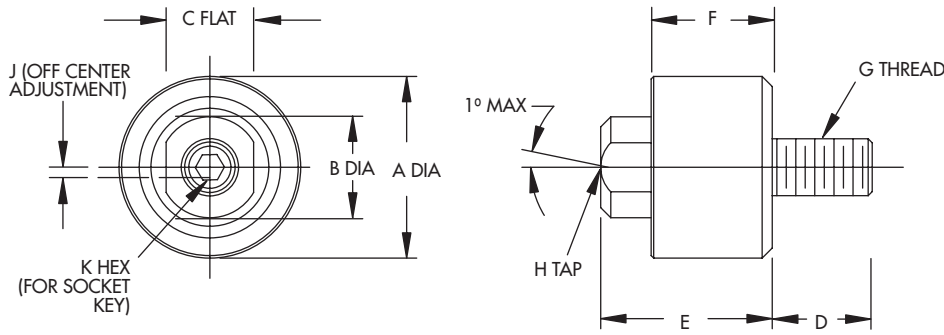
Materials and Technical Data

Size	Housing	Inner Housing	Needle	Seals	Pressure Ratings	Captive Needle	360° Swivel	Gasket Material
M5 # 10-32	Nickel Plated Brass	Nickel Plated Brass	Stainless Steel	Buna-N 0°F to 200°F -15°C to 90°C	0 to 175 PSI 0 to 12 BAR	Yes	Yes- Prior to tightening 1/8NPTF and 1/4NPTF swivel after mounting	Nylon 0°F to 200°F -15°C to 90°C
1/8 and 1/4	Anodized Aluminum							

Other available sizes of Flow Controls are available in our Compact Automation Inch Series catalog, Pg. 91-92 located at:

https://www.compactautomation.com/Inch_Catalog

Rod End Alignment Coupler Inch Sizes



Material: Hardened steel
Finish: Black Oxide Finish
Maximum Temperature Rating:
 200°F (93.3°C)

NOTE: Do not use alignment couplers on pivoting applications.

All dimensions are in inches.

Bore	Rod Thread	Part No.	Female Thread	Male Thread	H Female Thread x Depth	G Male Thread	A	B	C	D	E	F	J	K	Unit Weight (oz.)	Axial Load Ratings (lbs.)
1/2" 9/16" 5/8"	#10-32	ACFF10	FINE	FINE	#10-32 X 5/16	#10-32	9/16	5/16	1/4	11/32	9/16	13/32	1/64	3/32	0.5	180
		ACCF10	FINE	COARSE	#10-32 X 5/16	#10-24										
3/4" 7/8"	1/4-28	ACCF14	FINE	COARSE	1/4-28 X 1/2	1/4-20	15/16	1/2	7/16	13/32	13/16	9/16	1/32	1/8	1.6	180
		ACFF516	FINE	COARSE	5/16-24 X 5/8	5/16-18	15/16	1/2	7/16	11/16	13/16	9/16	1/64	5/32	1.6	580
1-1/16"	5/16-24	ACFF516	FINE		5/16-24 X 5/8	5/16-24										
		1-1/4" 1-1/2"	3/8-24	ACFF38	FINE		3/8-24 X 5/8	3/8-24	1-1/8	5/8	9/16	9/16	1-1/32	3/4	1/32	5/32
ACCF38	FINE			COARSE	3/8-24 X 5/8	3/8-16										
1-1/4" 1-1/2"	7/16-20	ACCF716	FINE	COARSE	7/16-20 X 13/16	1/2-12	1-9/16	3/4	11/16	3/4	1-3/8	1-1/8	1/16	1/4	8.8	1690
		ACFF716	FINE		7/16-20 X 13/16	1/2-20										
3"	5/8"-18	ACCF58	FINE	COARSE	5/8-18 X 1.0	5/8-11	2-1/4	1.0	15/16	15/16	1-3/4	1-1/2	1/16	5/16	24.0	3220
		ACCF58	FINE		5/8-18 X 1.0	5/8-18										

Combination Sizes (Inch & Metric)

All dimensions are in millimeters except where noted.

Rod Thread	Part No.	H Female Thread x Depth	G Male Thread	A	B	C	D	E	F	J	K mm (inch)	Unit Weight (oz.)	Axial Load Ratings (lbs.)
#10-32	WACM5-F10	#10-32 X 5/16	M5 X 0,8	14,0	7,9	6,35	8,0	15,2	11,0	0,4	3,0 (.118)	11,4	815
1/4-28	WACM6-F16	1/4-28 X 1/2	M6 X 1	24,0	12,7	11,1	9,7	21,5	15,0	0,8	4,0 (.157)	45,4	2045
5/16-24	WACM8-F516	5/16-24 X 5/8	M8 X 1,25	24,0	12,7	11,1	11,7	22,5	16,0	0,4	5,0 (.197)	45,4	2580
3/8-24	WACM10-F38	3/8-24 X 5/8	M10 X 1,5	28,0	15,9	14,3	16	26,5	20,0	0,8	7,0 (.276)	90,7	3700
7/16-20	WACM12-F716	7/16-20 X 13/16	M12 X 1,75	39,0	19,1	17,5	17,9	36,5	30,0	1,6	6,35 (1/4)	250,0	7540
1/2-20	WACM12-F12	1/2-20 X 13/16	M12 X 1,75	39,0	19,1	17,5	17,9	36,5	30,0	1,6	6,35 (1/4)	250,0	7540

Other available sizes of Flow Controls are available in our Compact Automation Inch Series catalog, Pg. 89-90 located at:

https://www.compactautomation.com/Inch_Catalog

Special Conditions and Limited Warranty

Determination of the suitability of any information or product for the application contemplated by any user or the manner of that use is the sole responsibility of the user.

Compact Automation Products, LLC reserves the right to improve or change designs without notice.

All orders are subject to acceptance by the factory sales department.

Compact Automation Products, LLC agrees to repair or replace to the original purchaser any standard parts or products for a period of 12 months from date of shipment which Compact Automation Products, LLC determines upon inspection to be defective in workmanship or material. Wear components including but not limited to seals and bearings are excluded from this warranty.

Under no circumstance may merchandise be returned without written authorization from the factory.

This warranty is void in the event the product has been tampered with, altered, or serviced by unauthorized personnel.

Compact Automation Products, LLC's total responsibility for any claims, damages, losses or liabilities related to the product covered thereunder shall not exceed the purchase price of such product. In no event shall Compact Automation Products, LLC be liable for any special, indirect, incidental or consequential damages of any character, including but not limited to loss of use of productive facilities or equipment, lost profit, property damage, transportation, installation or removal or lost production whether suffered by purchaser or third party. Compact Automation Products, LLC disclaims all liability for any and all cost, claims demands, charges, expenses, and other damages, either direct or indirect, incident to all property damage arising out of any cause of action based on strict liability. This warranty gives you specific legal rights and you may have other rights, which vary from state to state.

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