

- > **Integrated Rod Lock**
- > **Holding forces up to 700 lbs**
- > **Avoid drifting during machine shut down**



### Technical Data

#### Medium

Air only

#### Operating Pressure

50 PSI Minimum (to actuate lock Piston) 125 PSI Maximum for cylinder

#### Operating Temperature

-20° F to 200° F

#### Cylinder Diameters

3/4" - 3"

#### Strokes

1/2" - 32"

#### Lubrication

Semi-synthetic grease

#### Materials

Barrel: 304 stainless steel

Rod guide, rear head: Aluminum

Piston & Rod seal: Buna-N

Rod & Pivot Bushing: Sintered bronze

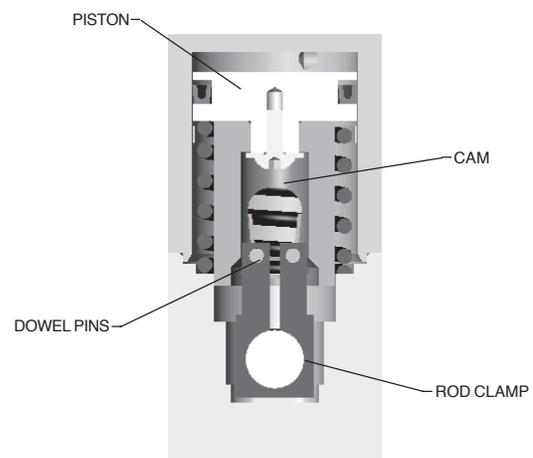
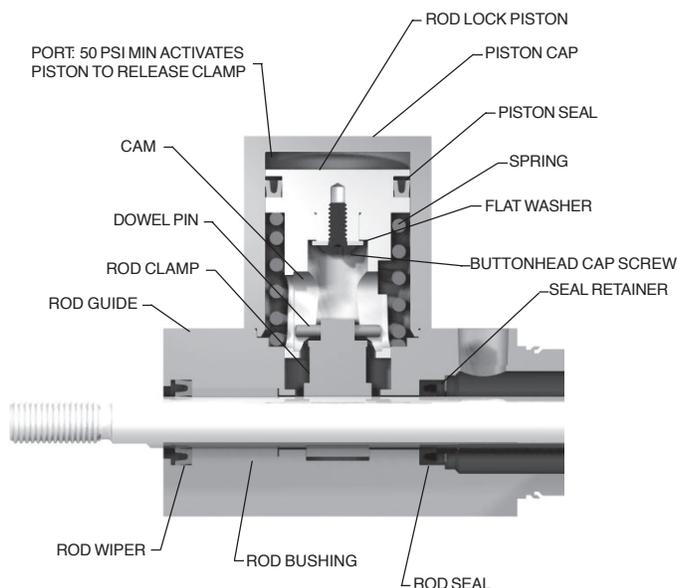
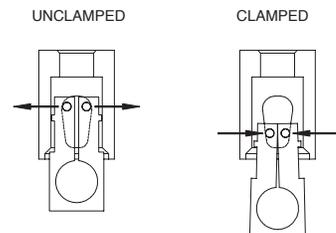
Piston Rod: Hard chrome plated stainless steel

#### Expected service life

3,000 miles; 1 million lock actuations

- > **Dowel pins ride in the cam groove**
- > **When air pressure is present, piston actuates and dowel pins follow cam to open piston allowing piston rod to travel freely through clamp**

- > **In absense of pressure, the spring actuates piston and dowels follow to closed position, activating the rod clamp.**



**Order**

**LR150X3.5-DNBW**

Type	
Integrated Rod Lock	LR

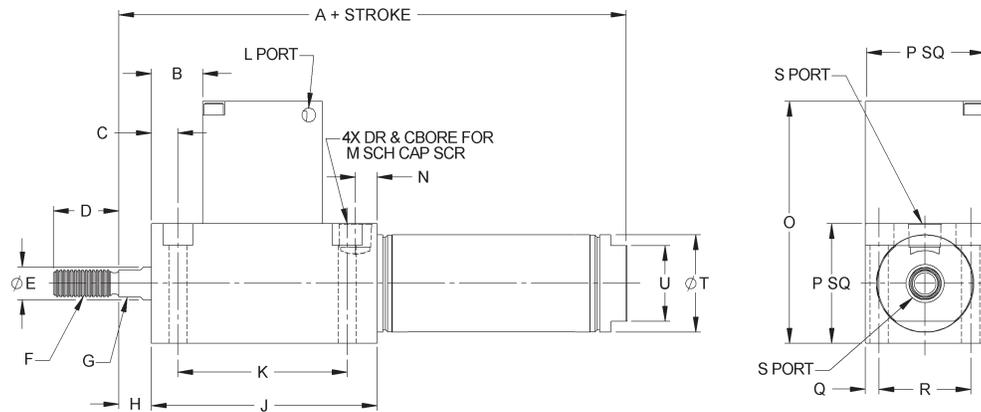
Bore	Substitute
3/4"	075
1-1/16"	106
1-1/2"	150
2"	200
2-1/12"	250
3"	300

Stroke	
In inches and decimal fractions	

Options	Substitute
Bumpers	B
Low temperature seals/lube (-40° F to 200° F)	LT
Side ported rear head	PC
Magnet (no track)	M
Magnet with track in position 2, 3 or 4. Include "M" only once and each track location after that. For example, a cylinder with track in position 2 and 3 would have option M23	M2, M3, M4
High temperature seals/lube (0° F to 400° F)	V
Wiper (standard on all models, include in part number)	W
Extra rod extension. Specify total additional rod extension in inches. For example, a cylinder with an extra extension of 1-1/2" would have option R1.5	RX.XX

\*Enter options in alphabetical order

Mounting	Substitute
Axial rear port	DN
Universal Mount	DP

**Dimensions (Rod Lock Cylinders) (in)**
**DN Mounting Style**


Bore	A	B	C	D	E	F	G	H	J	K	L
3/4" (075)	4.48	0.72	0.37	0.75	0.31	1/4-28 UNF-2A	0.25	0.25	2.48	1.83	#10-32 UNF-2B
1-1/16" (106)	4.84	0.61	0.31	0.75	0.38	5/16-24 UNF-2A	0.31	0.38	2.6	1.95	#10-32 UNF-2B
1-1/2" (150)	5.75	0.82	0.32	1.25	0.5	7/16-20 UNF-2A	0.43	0.38	3.37	2.75	1/8 NPT
2" (200)	6.84	0.88	0.44	1.25	0.62	1/2-20 UNF-2A	0.56	0.38	3.97	3.13	1/8 NPT
2-1/2" (250)	7.48	0.87	0.43	1.25	0.75	1/2-20 UNF-2A	0.62	0.38	4.61	3.62	1/4 NPT
3" (300)	8.22	0.92	0.46	1.25	0.75	5/8-18 UNF-2A	0.62	0.38	5.15	4.17	1/4 NPT

Bore	M	N	O	P	Q	R	S	T	U
3/4" (075)	#10	0.25	2.32	1.12	0.16	0.81	1/8 NPT	0.8	0.62
1-1/16" (106)	#10	0.25	2.78	1.38	0.16	1.06	1/8 NPT	1.12	0.87
1-1/2" (150)	1/4	0.32	3.38	1.75	0.25	1.25	1/4 NPT	1.56	0.88
2" (200)	3/8	0.39	4.45	2.25	0.31	1.62	1/4 NPT	2.06	1.24
2-1/2" (250)	7/16	0.42	5.67	2.75	0.44	1.88	1/4 NPT	2.58	1.74
3" (300)	1/2	0.42	6.28	3.25	0.5	2.25	3/8 NPT	3.13	1.99

**Weights (lbs)**

Bore	Base Weight	Adder per inch of stroke
3/4" (075)	0.46	0.03
1-1/16" (106)	1.03	0.05
1-1/2" (150)	1.97	0.08
2" (200)	4.08	0.15
2-1/2" (250)	7.13	0.17
3" (300)	10.55	0.28

**Option**
**Dimensional Deviations from Standard**

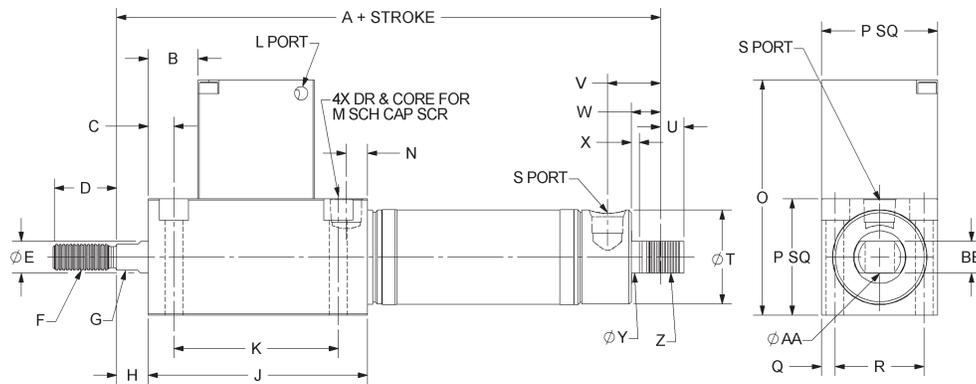
**Option**  
PC - Side Port  
Rear Head

B- Bumpers  
Add to overall length  
by bore size:

Dimensional Deviation	Use DP model, omit near pivot tang
3/4" (075)	No adder
1-1/16" (106)	0.13"
1-1/2" (150)	0.13"
2" (200)	0.25"
2-1/2" (250)	0.25"
3" (300)	0.25"

Dimensions (Rod Lock Cylinders) (in)

DP Mounting Style



Bore size	A	U	V	W	X	Y	Z	AA	BB
3/4" (075)	5.26	0.28	0.62	0.35	0.09	0.62	5/8-18 UNF-2A	0.25	0.37
1-1/16" (106)	5.44	0.28	0.62	0.34	0.09	0.62	5/8-18 UNF-2A	0.25	0.37
1-1/2" (150)	6.68	0.47	0.97	0.56	0.09	1.00	1-1/4 UNF-2A	0.38	0.68
2" (200)	7.78	0.44	1.03	0.56	0.13	1.37	1-1/4 - 12 UNF-2A	0.38	0.72
2-1/2" (250)	8.42	0.44	1.03	0.56	0.12	1.50	1-3/8 - 12 UNF-2A	0.38	0.72
3" (300)	9.47	0.63	1.34	0.81	0.19	1.62	1-1/2 - 12 UNF-2A	0.5	0.85

Rod lock holding forces

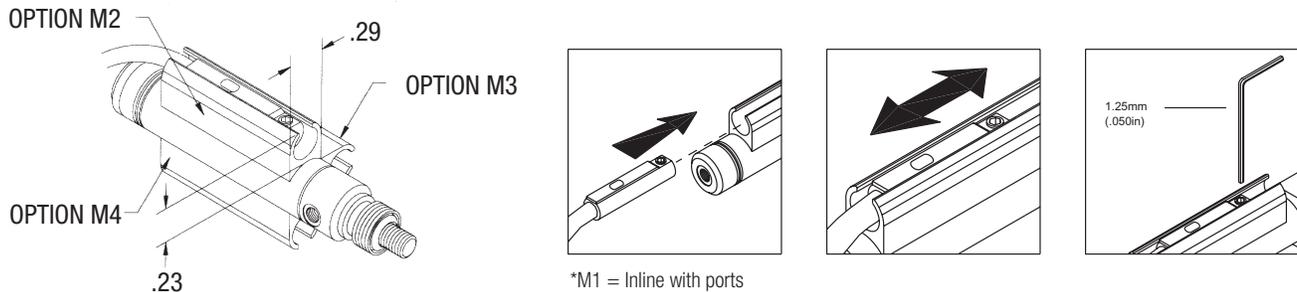
Bore	Holding Force (Lbs)
3/4" (075)	40
1-1/16" (106)	90
1-1/2" (150)	170
2" (200)	310
2-1/2" (250)	500
3" (300)	700

Operating Guidelines/Product Precautions

- The Rod Lock is not a safety device
- Do not use for intermediate stopping; the cylinder is designed to prevent drift from a stationary position.
- Load weight must not exceed the stated holding force for the cylinder.

## Accessories Switch Track Options

### For cylinders with M1, M2, M3 and M4 options



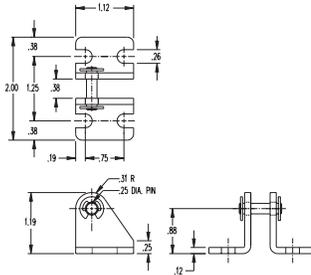
## Switches and Cables

The table below outlines the switches that are compatible with the switch track option.

Part Number	Description
NMR	Reed, 24" Leads
NMRX	Reed, 144" Leads
NMRQ	Reed, M8 Quick Connect
NMRQC	Reed, M8 Quick Connect, with 2m cable
NMRQCX	Reed, M8 Quick Connect, with 5m cable
NMS	Autoconfigure, 24" Leads
NMSX	Autoconfigure, 144" Leads
NMSQ	Autoconfigure, M8 Quick Connect
NMSQC	Autoconfigure, M8 Quick Connect, with 2m cable
NMSQCX	Autoconfigure, M8 Quick Connect, with 5m cable
NMHF-90	Mini Switch, 2-wire, Solid-State Type, LED, 10-28VDC, 50mA, 24" Pigtail Leads, 90° version
NMHFX-90	Mini Switch, 2-wire, Solid-State Type, LED, 10-28VDC, 50mA, 144" Pigtail Leads, 90° version
NMHFQS-90	Mini Switch, 2-wire, Solid-State Type, LED, 10-28VDC, 50mA, with M8 Male Swivel Connector, 90° version
NMHFQCS-90	Mini Switch, 2-wire, Solid-State Type, LED, 10-28VDC, 50mA, with M8 Male Swivel Connector and 2m Mating Cable, 90° version
NMHFQCSX-90	Mini Switch, 2-wire, Solid-State Type, LED, 10-28VDC, 50mA, with M8 Male Swivel Connector and 5m Mating Cable, 90° version
NMHC-90	Mini Switch Sourcing Switch (PNP), 3-wire, Solid-State Type, LED, 5-28VDC, 100mA, 24" Pigtail Leads, 90° version
NMHCX-90	Mini Switch Sourcing Switch (PNP), 3-wire, Solid-State Type, LED, 5-28VDC, 100mA, 144" Pigtail Leads, 90° version
NMHCQS-90	Mini Switch Sourcing Switch (PNP), 3-wire, Solid-State Type, LED, 5-28VDC, 100mA, with M8 Male Swivel Connector, 90° version
NMHCQCS-90	Mini Switch Sourcing Switch (PNP), 3-wire, Solid-State Type, LED, 5-28VDC, 100mA, with M8 Male Swivel Connector and 2m Mating Cable, 90° version
NMHCQCSX-90	Mini Switch Sourcing Switch (PNP), 3-wire, Solid-State Type, LED, 5-28VDC, 100mA, with M8 Male Swivel Connector and 5m Mating Cable, 90° version
NMHK-90	Mini Switch Sinking Switch (NPN), 3-wire, Solid-State Type, LED, 5-28VDC, 100mA, 24" Pigtail Leads, 90° version
NMHKX-90	Mini Switch Sinking Switch (NPN), 3-wire, Solid-State Type, LED, 5-28VDC, 100mA, 144" Pigtail Leads, 90° version
NMHKQS-90	Mini Switch Sinking Switch (NPN), 3-wire, Solid-State Type, LED, 5-28VDC, 100mA, with M8 Male Swivel Connector, 90° version
NMHKQCS-90	Mini Switch Sinking Switch (NPN), 3-wire, Solid-State Type, LED, 5-28VDC, 100mA, with M8 Male Swivel Connector and 2m Mating Cable, 90° version
NMHKQCSX-90	Mini Switch Sinking Switch (NPN), 3-wire, Solid-State Type, LED, 5-28VDC, 100mA, with M8 Male Swivel Connector and 5m Mating Cable, 90° version
NC4	Straight M8 Straight M8 Female Connector, Threaded Connection with 2 Meter Cable
NC4-S	Straight M8 Female Connector, Threaded Connection with 2 Meter Shielded Cable
NC4X	Straight M8 Female Connector, Threaded Connection with 5 Meter Cable
NC4X-S	Straight M8 Female Connector, Threaded Connection with 5 Meter Shielded Cable
NC5-S	Right Angle M8 Female Connector, Threaded Connection with 2 Meter Shielded Cable
NC5X-S	Right Angle M8 Female Connector, Threaded Connection with 5 Meter Shielded Cable

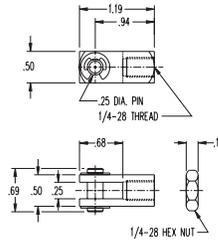
### 3/4" Bore Accessories

RE-PB2-075



Pivot Bracket

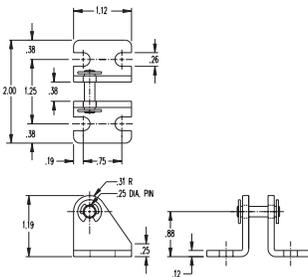
RE-RC-075



Piston Rod Clevis

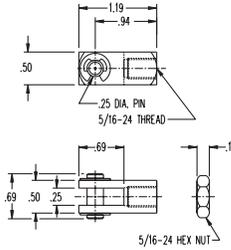
### 1-1/16" Bore Accessories

RE-PB2-075



Pivot Bracket

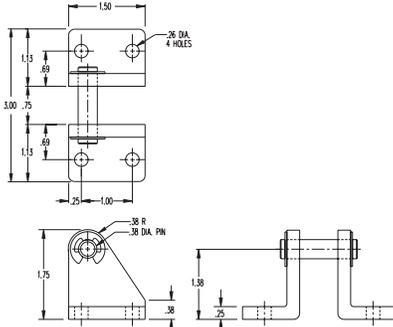
RE-RC-106



Piston Rod Clevis

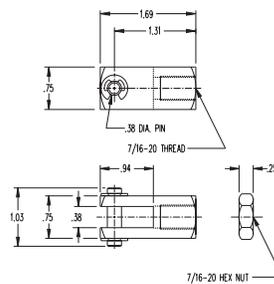
### 1-1/2" Bore Accessories

RE-PB2-200

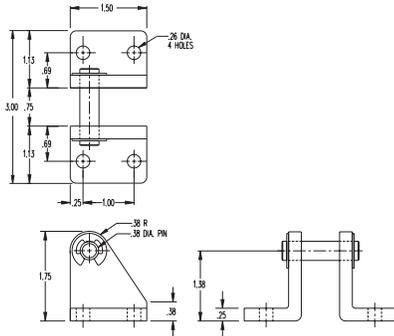
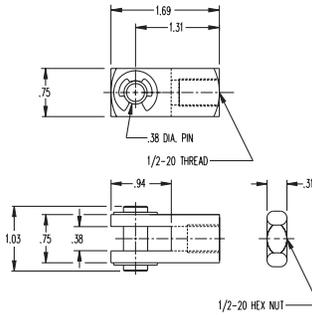
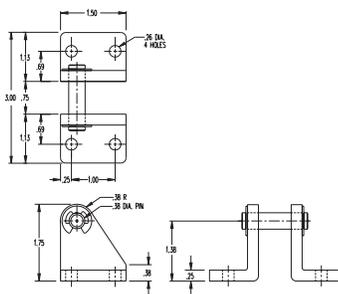
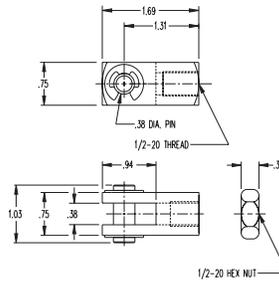
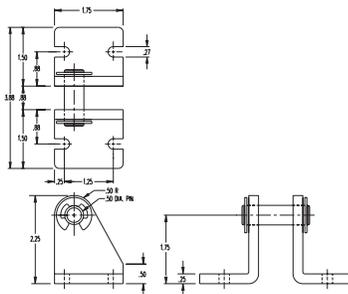
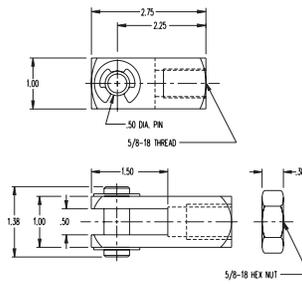


Pivot Brackets

RE-RC-125



Piston Rod Clevis

**2" Bore Accessories**
**RE-PB2-200**

**Pivot Brackets**
**RE-RC-175**

**Piston Rod Clevis**
**2-1/2" Bore Accessories**
**RE-PB2-200**

**Pivot Brackets**
**RE-RC-175**

**Piston Rod Clevis**
**3" Bore Accessories**
**RE-PB2-300**

**Pivot Bracket**
**RE-RC-300**

**Rod Clevis**
**Warning**

Improper selection, misuse, age or malfunction of components used in systems can cause failure in various modes. The system designer is warned to consider the failure modes of all component parts and to provide adequate safeguards to prevent personal injury or damage to equipment or property in the event of such failure modes. System designers and end users are cautioned to consult instruction sheets and specifications available from the factory. The system designer/end user is responsible for verifying that all requirements for the application are met.

**Warranty**

The products described herein are warranted subject to seller's Standard Terms and Condition of Sale, available at seller's website.

**⚠ WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer. For more information, go to [www.p65warnings.ca.gov](http://www.p65warnings.ca.gov).