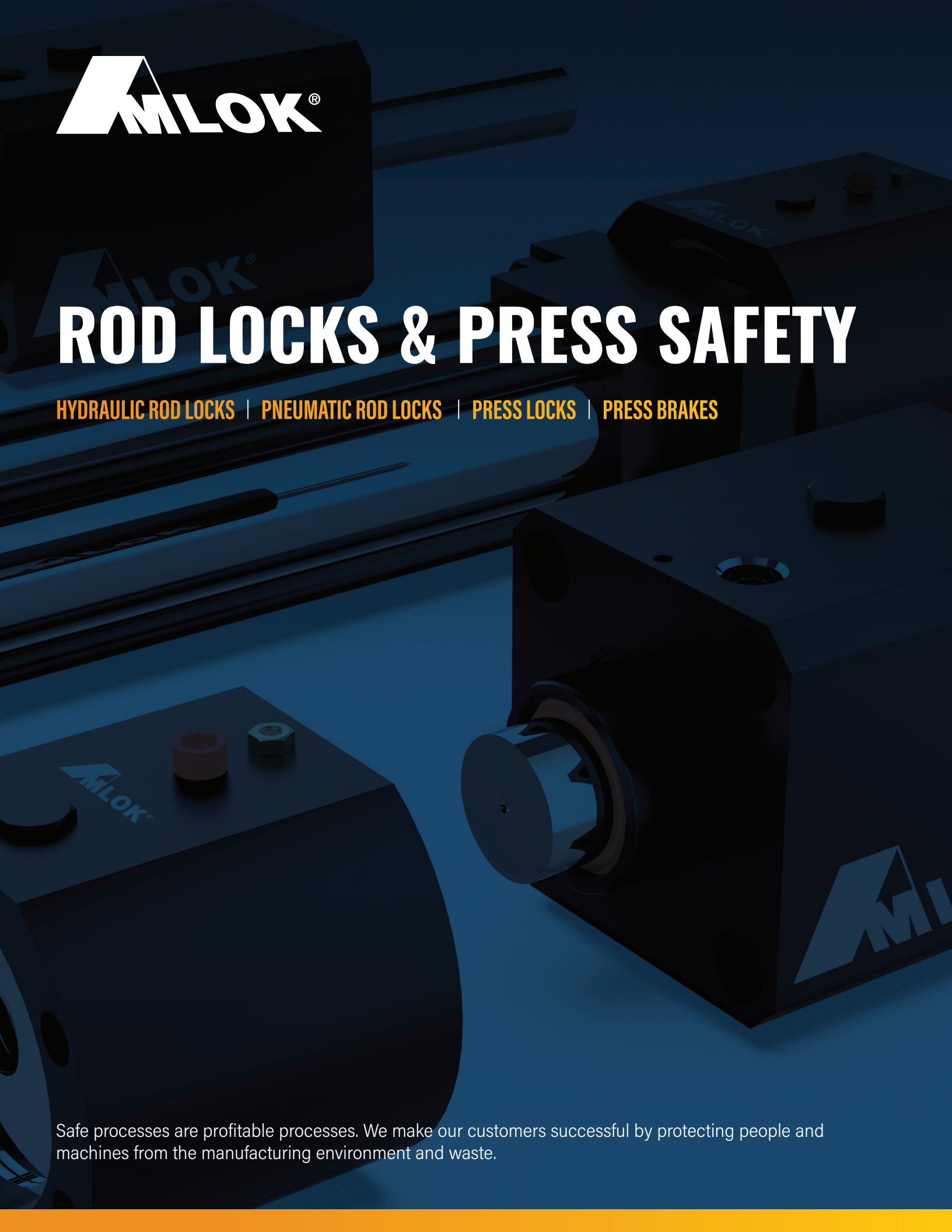


ROD LOCKS & PRESS SAFETY

HYDRAULIC ROD LOCKS | PNEUMATIC ROD LOCKS | PRESS LOCKS | PRESS BRAKES

Safe processes are profitable processes. We make our customers successful by protecting people and machines from the manufacturing environment and waste.

BE EFFICIENT. BE EFFECTIVE. BE ADVANCED.

Knowing your why is a secret weapon. Not only do you understand what motivates you and gets you up in the morning, you also understand your customers and what they need to succeed. At AME, we know there are missing pieces and unknowns in every project. We're here to help our customers in the machine tool industry balance the equation. Expect brilliant engineering and part-making, delivered honestly and on point.

Table of Contents

PRECISION POWER-OFF ROD LOCKS
Custom rod locks and press safety solutions for any application requiring position-holding, power-off locking devices using hydraulic or pneumatic power.

OSHA-BACKED PRESS SAFETY SOLUTIONS
AME is the exclusive partner for SITEMA products in North America, specializing in the development of clamping devices and linear brakes to secure, clamp, and fix loads in axial motion.

OVERVIEW

WHAT IS A HYDRAULIC ROD LOCK?

AMLOK's hydraulic rod locks (RCH, RCHX) have been developed to provide power-off clamping of rods and shafts. These rod clamps are designed to clamp components after the motion has stopped and to hold the position securely as long as the forces do not exceed the table values.

The hydraulic rod locks consist of an alloy steel housing that contains a special locking mechanism actuated by springs. When the clamp needs to be released, it is unclamped by actuating a piston via hydraulic pressure that compresses the springs to release the locking device.

The holding force of a rod lock depends upon the rod diameter and the amount of hydraulic pressure (PSI) available for unclamping. The rod locks are preset at the factory to release at the specified hydraulic pressure. The available holding forces are listed in the technical data charts on page 7-8 and can be multiplied by adding additional rod locks to the same rod.

The mountings for AMLOK hydraulic rod locks have been designed to apply to standard, heavy-duty NFPA-style cylinders. The standard housing can be mounted to any machine structure or be custom-designed to suit your application.

Note: Each AMLOK rod lock is tested by Advanced Machine & Engineering prior to delivery—test results are available upon request.

Note: For dynamic braking applications, contact the factory.

Note: AMLOK rod locks are designed for locking reciprocating motions only. Special units are also available for both rotating and reciprocating motions. For pneumatic applications, please refer to our RLN and RLI rod locks on pages 14 and 26.

When the potential for personal injury exists, or when life is in danger, SITEMA safety catchers can be provided to suit your needs—reference pages 44-45.

ANATOMY OF HYDRAULIC RCH ROD LOCKS

1. BODY
Solid steel that is precision-machined for accurate alignment. Black oxidized for appearance and corrosion resistance.

2. LOCKING MECHANISM
Over-sized, hardened, and ground-locking with anti-friction amplification.

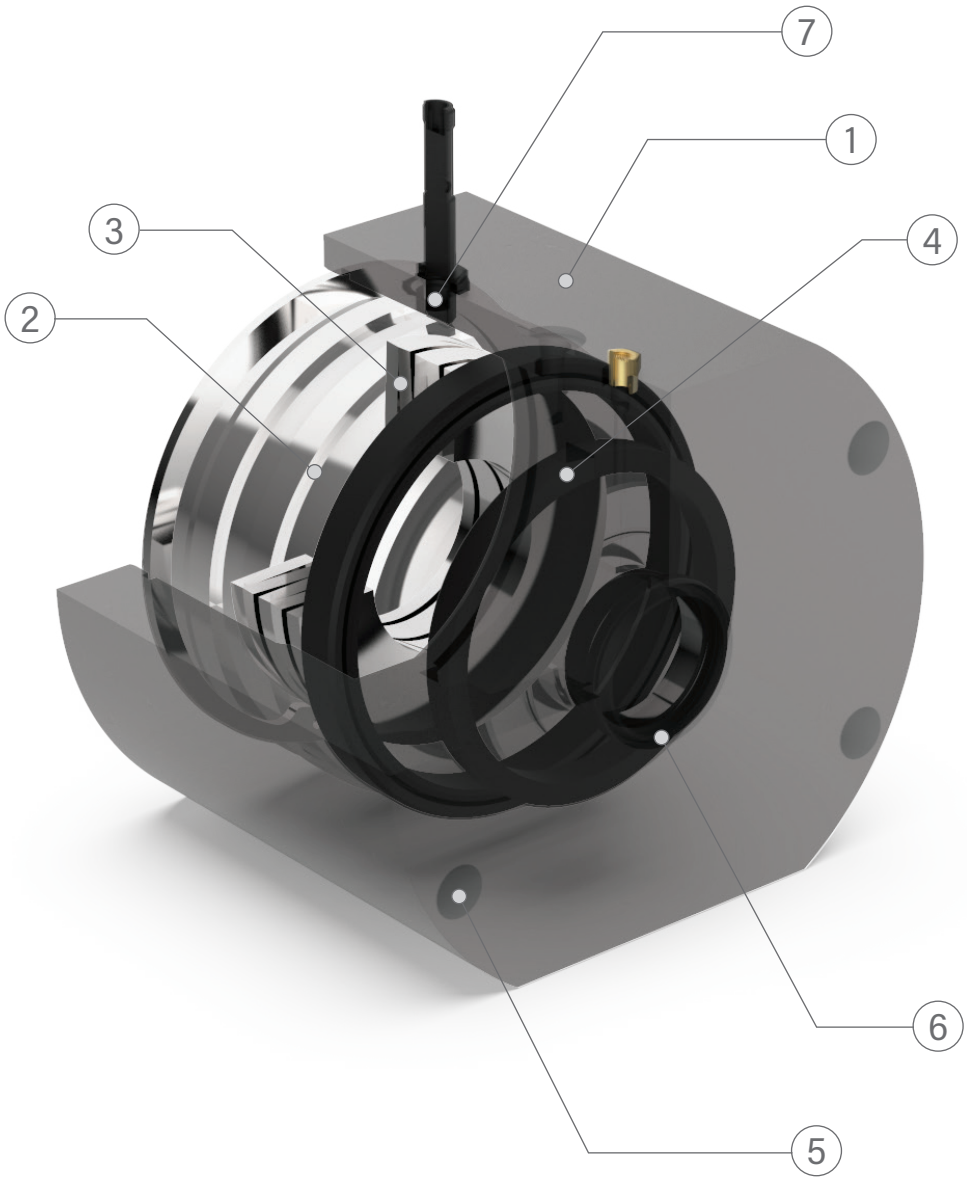
3. DISC SPRINGS
Heavy-duty springs designed for long life.

4. LIP-TYPE PISTON SEALS
Pressure-activated lip seal is wear-compensated for effective sealing at rated pressures. The seal is internally lubricated, reducing friction and extending life.

5. HOUSING DESIGN
Provides for direct mounting to cylinder or stand-alone design.

6. ROD-WIPER
The wiper is designed to wipe off abrasive dust and contamination on the retract stroke to ensure long-life for the seals, bearing, and piston rod. The standard wiper is polyurethane and is internally lubricated to reduce friction and extended life.

7. PROXIMITY SWITCH PORT
Proximity switch port for indication of unlock condition. Reference page 9 for more information on the proximity switch.



RCH SERIES

FEATURES

- Rugged, heavy-duty steel construction
- Through-hole construction profile for standard NFPA cylinder mounts
- Holds forces equally in either direction
- Can be mounted in a "stand-alone" configuration on a separate guide rod
- RCH units are designed for a machine tool-type market*
- High clamp force in a small package
- No rod displacement on engagement

**For extreme conditions, please consult factory*

OPTIONS

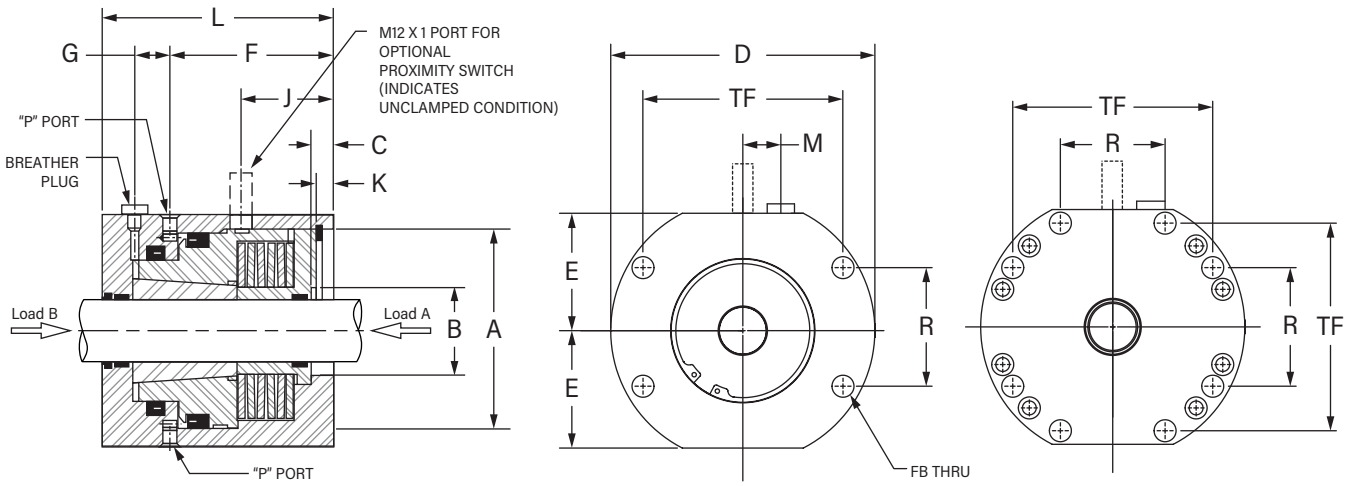
- Stainless steel construction
- Electroless nickel-plated housing
- Viton seals
- Wiper/Scrapers
- Tandem mount for high holding force

TECHNICAL SPECIFICATIONS (Off Volume)

Part Number	Volume to Cycle		Weight
	in^3	cm^3	
RCH-.062 X 1.50	0.4	6	11.5
RCH-1.00 X 1.50	0.4	6	10.5
RCH-1.00 X 2.00	1.0	16	20.8
RCH-1.00 X 2.50	1.0	16	31.0
RCH-1.37 X 2.00	0.6	10	20.0
RCH-1.37 X 2.50	1.0	16	30.2
RCH-1.37 X 3.25	1.8	30	66.0
RCH-1.75 X 2.50	0.7	11.5	31.0
RCH-1.75 X 3.25	1.8	30	65.1
RCH-1.75 X 4.00	2.4	39	75.5
RCH-2.00 X 3.25	1.8	29.5	76.0
RCH-2.00 X 5.00	2.4	39	114.0
RCH-2.50 x 4.00	2.4	39	77.0
RCH-2.50 x 6.00	7.9	129	270.0
RCH-3.00 X 6.00	5.5	90	240.0
RCH-3.00 X 7.00	8.8	145	380.0
RCH-3.50 X 8.00	11.0	181	550.0
RCH-4.00 X 8.00	14.0	230	530.0
RCH-5.00 X 10.00	27	442	1324.0

RCH SERIES

TECHNICAL SPECIFICATIONS



Part No.	Rod Dia.[2]	Rod Dia.	Cylinder Bore Dia.	Min. Release Pressure[1]	Max. Holding Force[4]	A	B	C	D	E	F	G	J	K	L	M	R	TF	FB	Port
						±.015	±.015	±.03	±.03	±.015	±.03	±.03	±.03	±.015	±.03	±.03	±.005	±.005	±.015	
RCH-	in	Tolerance[3]	in	PSI*		in	in	in	in	in	in	in	in	in	in	in	in	in	in	
062 150-075	0.625	+ .000 - .003	1.50	750	1100	2.48	1.25	.38	4.37	1.63	2.13	.75	.79	.23	3.55	.78	1.625	3.437	.44	SAE 4
062 150-100				1000	1800															
062 150-150				1500	2250															
100 150-075	1.000	+ .000 - .003	1.50	750	1200	2.76	1.63	.50	4.37	1.75	1.88	.87	.79	.23	3.45	.78	1.625	3.437	.44	SAE 4
100 150-100				1000	2000															
100 150-150				1500	2300															
100 200-075	1.000	+ .000 - .003	2.00	750	2900	3.74	1.63	.35	5.37	2.25	2.90	.85	1.00	.23	4.37	0	2.050	4.125	.56	SAE 4
100 200-100				1000	5200															
100 200-150				1500	5600															
100 250-075	1.000	+ .000 - .003	2.50	750	2900	4.13	1.63	.50	5.98	2.50	3.40	1.00	1.50	.23	5.12	0	2.550	4.625	.56	SAE 4
100 250-100				1000	5200															
100 250-150				1500	6000															
137 200-075	1.375	+ .000 - .003	2.00	750	2700	3.74	2.13	.50	5.37	2.25	3.00	1.00	1.50	.23	4.65	0	2.050	4.125	.56	SAE 4
137 200-100				1000	2700															
137 200-150				1500	5200															
137 250-075	1.375	+ .000 - .003	2.50	750	2700	4.13	2.13	.50	5.98	2.50	3.50	.90	1.50	.23	5.12	0	2.550	4.625	.56	SAE 4
137 250-100				1000	5200															
137 250-150				1500	6000															

RCH SERIES

TECHNICAL SPECIFICATIONS

Part No.	Rod Dia.[2]	Rod Dia.	Cylinder Bore Dia.	Min. Release Pressure[1]	Max. Holding Force[4]	A	B	C	D	E	F	G	J	K	L	M	R	TF	FB	Port
						±.015	±.015	±.03	±.03	±.015	±.03	±.03	±.03	±.015	±.03	±.03	±.005	±.005	±.015	
RCH-	in	Tolerance[3]	in	PSI*		in	in	in	in	in	in	in	in	in	in	in	in	in	in	
137 325-075	1.375	+ .000 - .003	3.25	750	8200	5.70	2.13	.45	7.75	3.25	4.50	1.10	2.60	.28	6.50	0	3.250	5.875	.69	SAE 4
137 325-100				1000	11500															
137 325-150				1500	16000															
175 250-075	1.750	+ .000 - .003	2.50	750	3500	4.33	2.38	.70	6.00	2.50	3.90	0.96	2.44	.32	5.91	.78	2.55	4.630	.56	SAE 4
175 250-120				1200	5200															
175 250-200				2000	7500															
175 325-075	1.750	+ .000 - .003	3.25	750	8200	5.70	2.50	.63	7.75	3.25	4.67	0.93	2.60	.30	6.50	0	3.250	5.875	.69	SAE 4
175 325-100				1000	11500															
175 325-150				1500	16000															
175 400-075	1.750	+ .000 - .003	4.00	750	8200	6.10	2.50	.50	8.38	3.50	4.38	1.23	2.20	.34	6.50	0	3.820	6.375	.69	SAE 4
175 400-100				1000	12000															
175 400-150				1500	17000															
200 325-075	2.000	+ .000 - .003	3.25	750	8200	5.70	2.68	.58	7.75	3.25	4.50	1.10	2.60	.29	6.50	0	3.250	5.875	.69	SAE 4
200 325-100				1000	11500															
200 325-150				1500	16000															
200 500-075	2.000	+ .000 - .003	5.00	750	8200	6.10	2.75	.50	11.25	3.50	4.38	1.23	2.20	.34	6.50	0	4.950	8.187	.94	SAE 4
200 500-100				1000	12000															
200 500-150				1500	17000															
250 400-075	2.500	+ .000 - .003	4.00	750	6000	6.10	3.14	.56	7.68	3.50	4.77	1.23	3.0	.35	7.10	.91	3.813	6.375	.69	SAE 4
250 400-100				1000	8000															
250 400-150				1500	15000															
250 600-075	2.500	+ .000 - .003	6.00	750	30000	8.85	3.25	.75	12.75	5.00	3.63	1.13	3.00	.38	9.00	0	5.730	9.437	1.06	SAE 4
250 600-100				1000	36000															
250 600-150				1500	50000															
300 600-075	3.000	+ .000 - .003	6.00	750	17000	-	3.88	.38	12.75	5.00	4.88	1.10	3.11	-	9.00	0	5.730	9.437	1.06	SAE 8
300 600-100				1000	22500															
-				-	-															
300 700-075	3.000	+ .000 - .003	7.00	750	30000	-	3.88	.75	14.75	6.50	7.33	1.38	4.73	-	10.00	0	6.580	10.625	1.19	SAE 8
300 700-100				1000	36000															
300 700-150				1500	50000															
350 800-075	3.500	+ .000 - .003	8.00	750	40000	-	4.38	.90	16.14	7.00	8.93	1.32	5.35	-	11.50	0	7.500	11.812	1.31	SAE 10
350 800-100				1000	55000															
350 800-150				1500	80000															
400 800-075	4.000	+ .000 - .005	8.00	750	40000	-	4.88	.90	16.14	7.00	8.88	1.37	5.35	-	11.50	0	7.500	11.812	1.31	SAE 10
400 800-100				1000	55000															
400 800-150				1500	80000															
500 1000-750	5.00	+ .000 - .005	10.00	750	50000	-	5.75	.90	21.65	9.38	12.44	2.15	7.85	-	16.39	0	9.620	15.880	1.81	SAE 10
500 1000-1000				1000	75000															
500 1000-1500				1500	103000															

RCH ACTUATION/CIRCUIT RECOMMENDATIONS

During every operational cycle, the three-way valve is actuated electronically and pressure releases the locking mechanism.

When power fails, emergency stop, etc. pressure is lost, or dropped, and the locking mechanism secures the rod and holds the load. In case the pressure fails, the load is secured in the same way.

To avoid possible problems, the shaft should not be moved unless the proximity switch indicates it is "unclamped."

If pressure is not sufficiently constant (e.g. "pressure drop" when lowering movement begins), we recommend installing a check valve in the "p" port as shown in the diagram.

Pressure spikes above rated pressure can sometimes be reduced by a snubber orifice upstream of the check valve.

To assure no air is trapped in hydraulic chamber, installation of the SIT-EMMA-4 Air Bleed must be installed as shown in sample circuit.

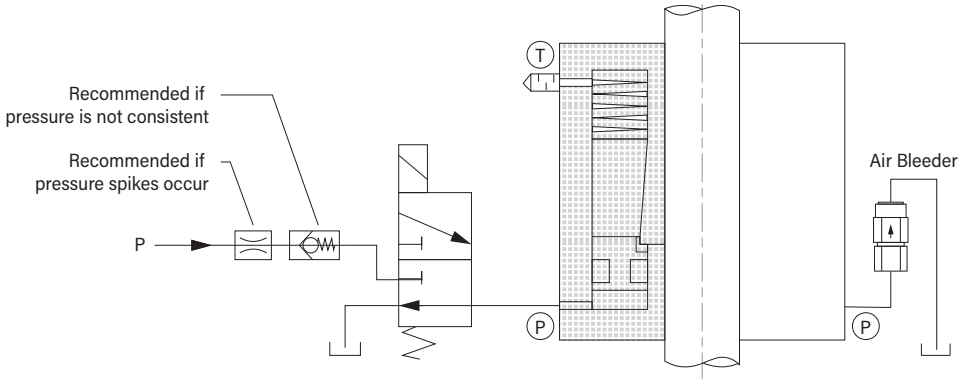


Figure 1

PROXIMITY SWITCH

Proximity Switch Setting Instructions

1. Set the rod lock to the unclamped, "pressure applied" position.
2. Screw the proximity switch (with jam nuts) into the designated M12x1 proximity switch hole, until it makes contact with the position flange.
3. Unscrew, or back off, the proximity switch approximately one turn. While holding the proximity switch in the set position, tighten the locking nut using 15 ft/lbs (20 Nm) of torque.
   Note: Final adjustment may be necessary to achieve desired results
4. With the electrical power in the off position, connect the electrical wiring per the wiring diagram supplied with the switch. After the electrical power has been turned on, the proximity switch should indicate that the rod lock is in the unclamped position.
   Note: Ensure that the electrical power has been turned off before making adjustments. The locking nut should be tightened to a maximum of 15 ft lbs (20 Nm) of torque to prevent damage to the internal components of the switch. If an application requires sealing for food, chemical, or washdown services, also include the optional sealing ring.Note: Ensure that the electrical power has been turned off before making adjustments. The locking nut should be tightened to a maximum of 15 ft/lbs (20 Nm) of torque to prevent damage to the internal components of the switch. If an application requires sealing for food, chemical, or washdown services, also include the optional sealing ring.

Proximity Switch Information

- Balluf
- BES 516-325-S4-C
- <200 mA
- BES0IC8
- 10-30 V DC
- sn = 2.0 mm

SIT-EMMA-4 AIR BLEED

It is important that all the air be bled from the rod lock's piston area. The rod lock is designed with a short piston travel to give it a fast response time. Trapped air, especially with fast acting short stroke pistons at high pressure can cause ignition of the air-oil mixture, causing mini explosions (dieseling) to occur which will cut and crack seals.

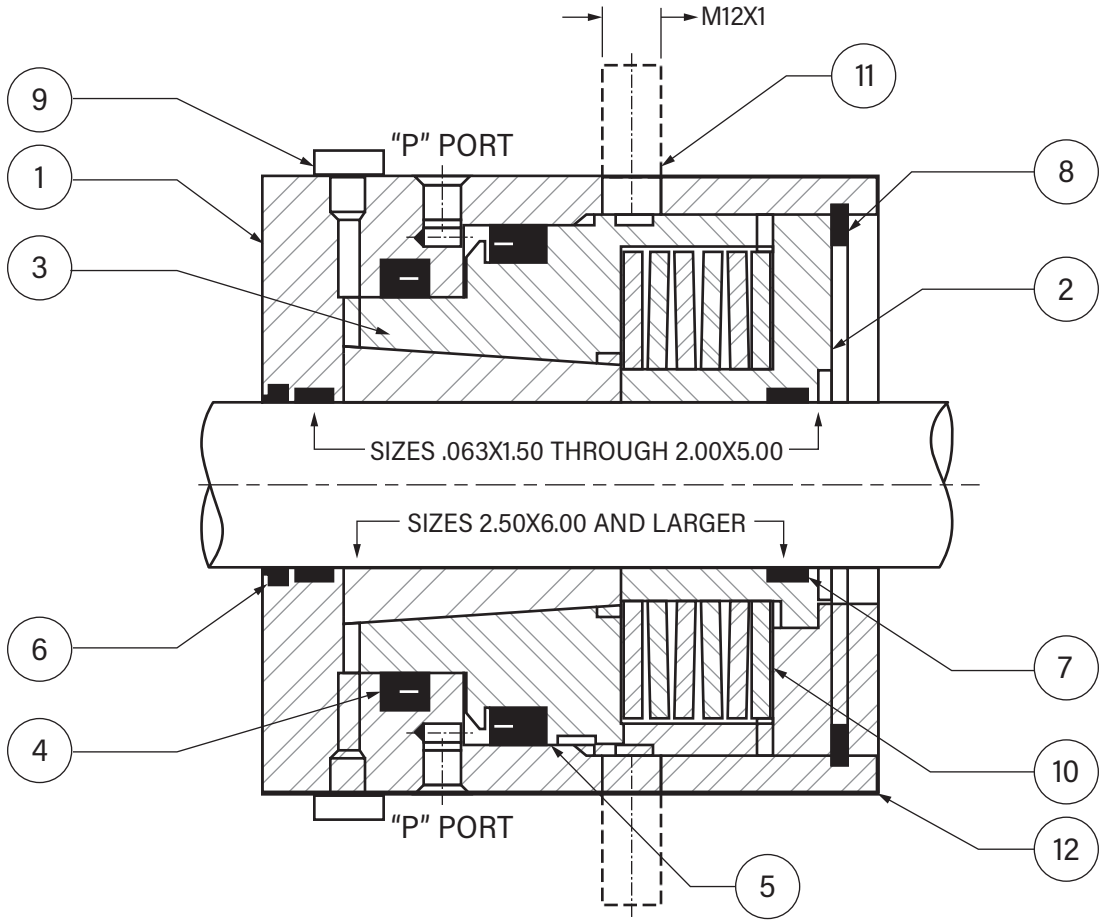
To avoid this occurrence, it is recommended to install an automatic air bleed valve (figure 1) between the rod lock and the oil reservoir. The automatic air bleed valve should be installed in either P port, whichever is the highest. The automatic air bleed valve opens slightly each time the rod lock is depressurized and allows air to escape to the reservoir.

It is important to install the air bleed valve as near as possible and above the piston chamber of the rod lock and that no back pressure over 30 PSI (2 bar) remains in the line while the rod lock is locked.

RCH ASSEMBLY INSTRUCTIONS

1. Temporarily connect a flexible hose to a release pressure port of the AMLOK rod lock and apply specified hydraulic release pressure.
2. Line up the counter-bored end-toward the mounting surface of the hydraulic cylinder or housing and slide the rod clamp over the rod to be clamped.
3. Align mounting holes, proximity switch, hydraulic pressure and breather plug to the proper locations.
4. Release with specified hydraulic pressure.
5. Bolt AMLOK rod lock to cylinder or other mounting surface.
6. Pressurize the rod lock to the specified release pressure. (Units must be completely bled of air prior to use unless hydraulic circuit includes a SIT-EMMA-4 air bleed. See page 10.)
7. Release and pressurize several times. With the specified release pressure, the rod should move freely through the AMLOK.
8. If the rod does not move freely, check the squareness of the housing the cylinder contact surface and correct if needed.

Note: When assembling the AMLOK rod lock, take precaution not to induce side loading.



#	Description	Quantity		#	Description	Quantity
1	Housing	1		7	Wear Ring	2
2	Retainer (sizes .063 x 1.50, 2.00 x 5.00)	1		8	Retainer Ring	1
3	Clamping Ring	1		9	Breather Plug - 1/8 NPT	1
4	Seal	1		10	Disc Springs	4-8
5	Seal	1		11	Proximity Switch (Optional)	1
6	Wiper	1		12	Retainer (sizes 2.50 x 6.00 & larger)	1

ANATOMY OF HYDRAULIC RCHX EXCLUSION ROD LOCKS

1. BODY
Solid steel that is precision-machined for accurate alignment. Black oxidized for appearance and corrosion resistance. Stainless steel and electroless nickel available upon request.

2. LOCKING MECHANISM
Over-sized, hardened, and ground-locking with anti-friction amplification.

3. DISC SPRINGS
Heavy-duty springs designed for long life.

4. LIP-TYPE PISTON SEALS
Pressure-activated lip seal is wear-compensated for effective sealing at rated pressures. The seal is internally lubricated, reducing friction and extending life.

5. HOUSING DESIGN - OIL FILLED (x2)
Provides for direct mounting to cylinder or stand-alone design. Sealed for harsh environmental conditions.

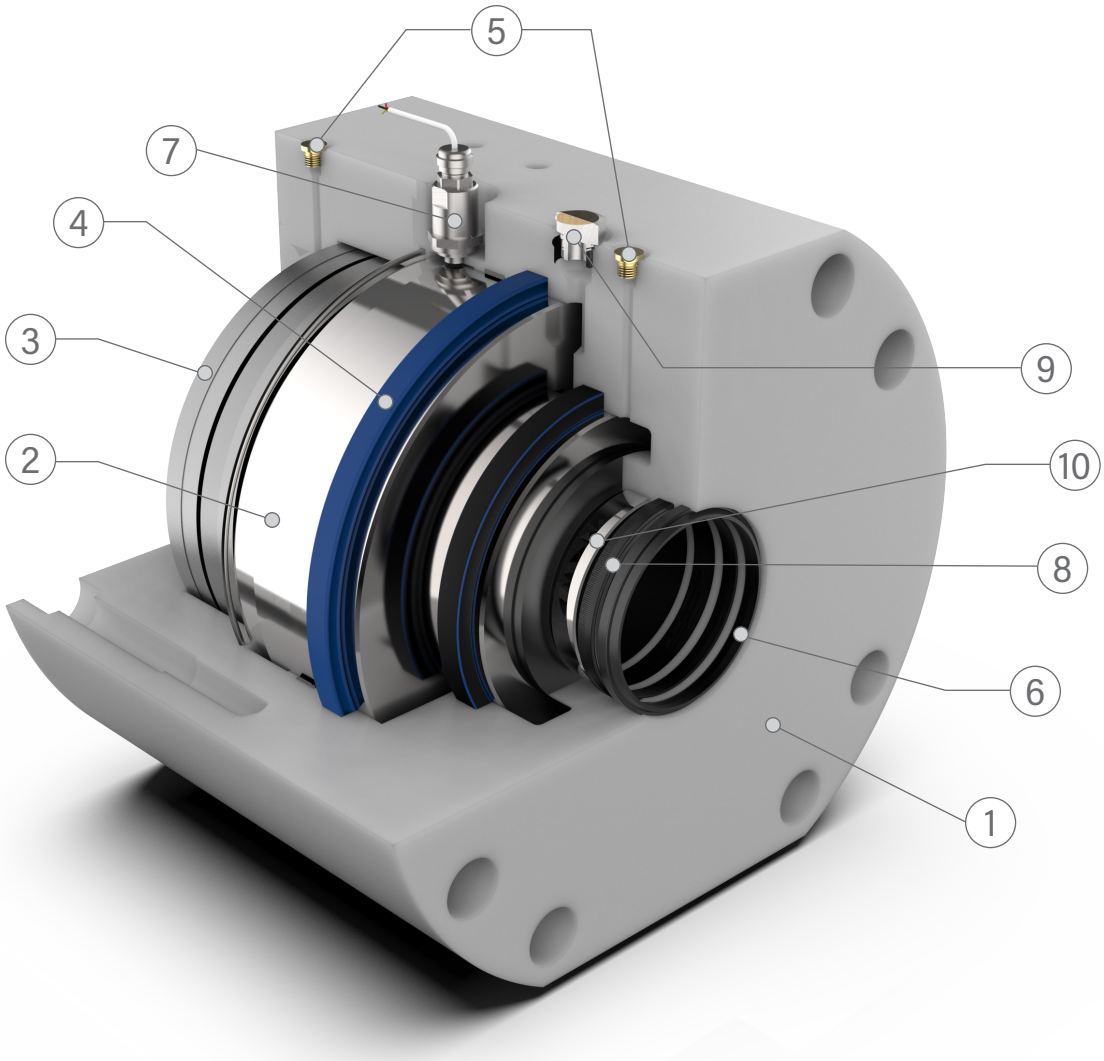
6. ROD-WIPER (x2)
The wiper is designed to wipe off abrasive dust and contamination on the retract stroke to ensure long-life for the seals, bearing, and piston rod. Options available.,

7. PROXIMITY SWITCH PORT
Proximity switch port for indication of unlock condition. Sealed proximity switch holder design.

8. ROD SEAL (x2)
Polypak design.

9. P-PRESSURE PORT (x2)
SAE4 - SAE10

10. ROD BEARING (x2)

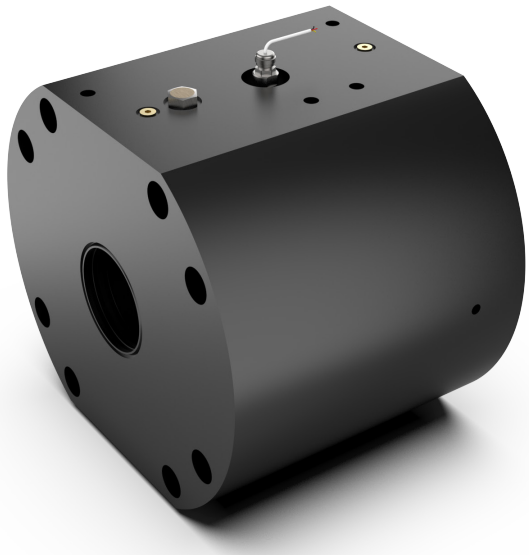


RCHX EXCLUSION SERIES

FEATURES

- Rugged, heavy-duty steel construction
- Through-hole construction profile for standard NFPA cylinder mounts
- Holds forces equally in either direction
- Can be mounted in a "stand-alone" configuration on a separate guide rod
- High clamp force in a small package
- No rod displacement on engagement
- Oil filled design

**For extreme conditions, please consult factory*



OPTIONS

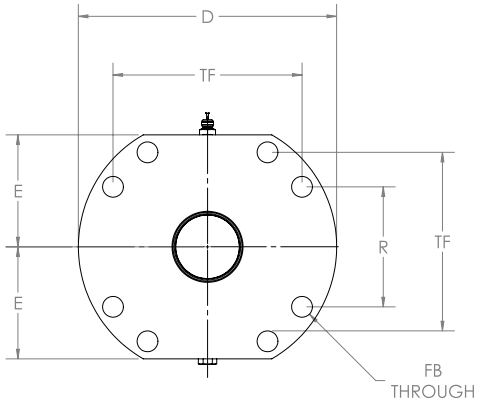
- Stainless steel construction
- Electroless nickel-plated housing
- Viton seals
- Sealed unit for severe environment
- Wiper/Scrapers
- Tandem mount for high holding force

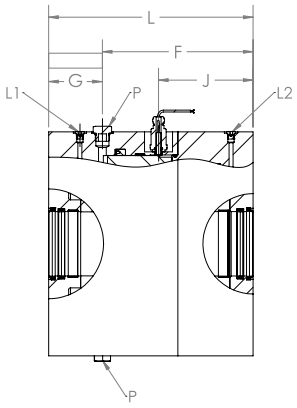
TECHNICAL SPECIFICATIONS (Off Volume)

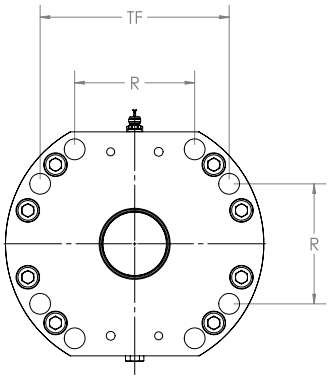
Part Number	Volume to Cycle		Volume of Oil		Weight
	in^3	cm^3	L1 (in^3)	L2 (in^3)	
RCHX-.062 X 1.50	0.4	6	.31	.61	11
RCHX-1.00 X 1.50	0.4	6	.45	.45	13
RCHX-1.00 X 2.00	1.0	16	.29	1.23	25
RCHX-1.00 X 2.50	1.0	16	.51	2.53	36
RCHX-1.37 X 2.00	0.6	10	.45	1.50	24
RCHX-1.37 X 2.50	1.0	16	.51	1.25	34
RCHX-1.37 X 3.25	1.8	30	0.25	0.25	53
RCHX-1.75 X 2.50	0.7	11.5	0.4	1.6	36
RCHX-1.75 X 3.25	1.8	30	1.4	2.63	69
RCHX-1.75 X 4.00	2.4	39	1.3	2.1	81
RCHX-2.00 X 3.25	1.8	29.5	1.3	2.7	77
RCHX-2.00 X 5.00	2.4	39	1.3	2.3	150
RCHX-2.50 x 4.00	2.4	39	1.2	3.6	102
RCHX-2.50 x 6.00	7.9	129	2	9	290
RCHX-3.00 X 6.00	5.5	90	2.1	9.7	219
RCHX-3.00 X 7.00	9.6	157	4.5	9.9	401
RCHX-3.50 X 8.00	11.0	182	5.2	29	550
RCHX-4.00 X 8.00	11.4	187	8.8	12.2	541
RCHX-5.00 X 10.00	27.0	442	15.9	See Print	1185

RCHX EXCLUSION SERIES

TECHNICAL SPECIFICATIONS







Part No.	Rod Dia.[2]	Rod Dia.	Cylinder Bore Dia.	Min. Release Pressure[1]	Max. Holding Force[4]	D	E	F	G	J	L	M	R	TF	FB	Port	Port
						±.03	±.015	±.03	±.03	±.03	±.03	±.03	±.005	±.005	±.015		
RCHX-	in	Tolerance[3]	in	PSI*		in	in	in	in	in	in	in	in	in	in	P	L
062 150-075	0.625	+ .000 - .003	1.50	750	1100	4.37	1.595	2.41	.75	1.09	4.00	.78	1.625	3.437	.44	SAE 4	SAE 2
062 150-100				1000	1800												
062 150-150				1500	2250												
100 150-075	1.000	+ .000 - .003	1.50	750	1200	4.37	1.75	2.24	1.00	1.12	4.12	.78	1.625	3.437	.44	SAE 4	SAE 2
100 150-100				1000	2000												
100 150-150				1500	2300												
100 200-075	1.000	+ .000 - .003	2.00	750	2900	5.37	2.25	3.21	.85	1.25	5.00	0	2.050	4.125	.56	SAE 4	SAE 2
100 200-100				1000	5200												
100 200-150				1500	5600												
100 250-075	1.000	+ .000 - .003	2.50	750	2900	5.98	2.50	3.69	.92	1.71	5.63	0	2.550	4.625	.56	SAE 4	SAE 2
100 250-100				1000	5200												
100 250-150				1500	6000												
137 200-075	1.375	+ .000 - .003	2.00	750	2700	5.37	2.25	3.29	1.06	1.66	5.30	0	2.050	4.125	.56	SAE 4	SAE 2
137 200-100				1000	2700												
137 200-150				1500	5200												
137 250-075	1.375	+ .000 - .003	2.50	750	2700	5.98	2.50	3.72	.99	1.36	5.69	0	2.550	4.625	.56	SAE 4	SAE 2
137 250-100				1000	5200												
137 250-150				1500	6000												

RCHX EXCLUSION SERIES

TECHNICAL SPECIFICATIONS

Part No.	Rod Dia.[2]	Rod Dia.	Cylinder Bore Dia.	Min. Release Pressure[1]	Max. Holding Force[4]	D	E	F	G	J	L	M	R	TF	FB	Port	Port
						±.03	±.015	±.03	±.03	±.03	±.03	±.03	±.005	±.005	±.015		
RCHX-	in	Tolerance[3]	in	PSI*		in	in	in	in	in	in	in	in	in	in	P	L
137 325-075	1.375	+ .000 - .003	3.25	750	8200	7.75	3.25	4.50	1.19	2.63	6.84	0	3.250	5.875	.69	SAE 4	SAE 2
137 325-100				1000	11500												
137 325-150				1500	16000												
175 250-075	1.750	+ .000 - .003	2.50	750	3500	6.00	2.50	4.29	1.08	2.83	6.75	0	2.550	4.630	.56	SAE 4	SAE 2
175 250-120				1200	5200												
175 250-200				2000	7500												
175 325-075	1.750	+ .000 - .003	3.25	750	8200	7.75	3.31	4.50	1.38	2.63	6.50	0	3.250	5.875	.69	SAE 4	SAE 4
175 325-100				1000	11500												
175 325-150				1500	16000												
175 400-075	1.750	+ .000 - .003	4.00	750	8200	8.38	3.50	4.50	1.38	2.27	7.25	0	3.820	6.375	.69	SAE 4	SAE 4
175 400-100				1000	12000												
175 400-150				1500	17000												
200 325-075	2.000	+ .000 - .003	3.25	750	8200	7.75	3.25	4.95	1.55	3.10	8.25	0	3.250	5.875	.69	SAE 4	SAE 4
200 325-100				1000	11500												
200 325-150				1500	16000												
200 500-075	2.000	+ .000 - .003	5.00	750	8200	11.25	3.50	4.88	1.75	2.69	8.25	0	4.950	8.187	.94	SAE 4	SAE 4
200 500-100				1000	12000												
200 500-150				1500	17000												
250 400-075	2.500	+ .000 - .003	4.00	750	6000	8.50	4.00	5.75	1.38	3.82	8.50	0	3.813	6.375	.69	SAE 4	SAE 4
250 400-100				1000	8000												
250 400-150				1500	15000												
250 600-075	2.500	+ .000 - .003	6.00	750	30000	12.75	5.00	7.50	1.38	4.13	10.50	0	5.730	9.437	1.06	SAE 4	SAE 4
250 600-100				1000	36000												
250 600-150				1500	50000												
300 600-075	3.000	+ .000 - .003	6.00	750	17000	12.75	5.00	4.62	1.88	3.11	9.00	0	5.730	9.437	1.06	SAE 4	SAE 4
300 600-100				1000	22500												
-				-	-												
300 700-075	3.000	+ .000 - .003	7.00	750	30000	14.75	6.50	7.69	1.99	5.20	11.09	0	6.580	10.625	1.19	SAE 4	SAE 4
300 700-100				1000	36000												
300 700-150				1500	50000												
350 800-075	3.500	+ .000 - .003	8.00	750	40000	16.14	7.00	9.39	1.63	5.98	12.68	0	7.500	11.812	1.31	SAE 10	SAE 4
350 800-100				1000	55000												
350 800-150				1500	80000												
400 800-075	4.000	+ .000 - .005	8.00	750	40000	16.14	7.00	9.42	1.41	5.91	12.78	0	7.500	11.812	1.31	SAE 10	SAE 4
400 800-100				1000	55000												
400 800-150				1500	80000												
500 1000-750	5.000	+ .000 - .005	10.00	750	50000	21.64	9.38	12.73	2.36	8.13	16.98	0	9.62	15.88	1.81	SAE 10	SAE 4
500 1000-1000				1000	75000												
500 1000-1500				1500	103000												

RCHX ACTUATION/CIRCUIT RECOMMENDATIONS

During every operational cycle, the three-way valve is actuated electronically and pressure releases the locking mechanism.

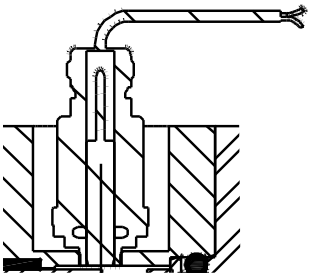
When power fails, emergency stop, etc. pressure is lost, or dropped, and the locking mechanism secures the rod and holds the load. In case the pressure fails, the load is secured in the same way.

To avoid possible problems, the shaft should not be moved unless the proximity switch indicates it is "unclamped."

If pressure is not sufficiently constant (e.g. "pressure drop" when lowering movement begins), we recommend installing a check valve in the "p" port as shown in the diagram.

Pressure spikes above rated pressure can sometimes be reduced by a snubber orifice upstream of the check valve.

To assure no air is trapped in hydraulic chamber, installation of the SIT-EMMA-4 Air Bleed must be installed as shown in sample circuit.



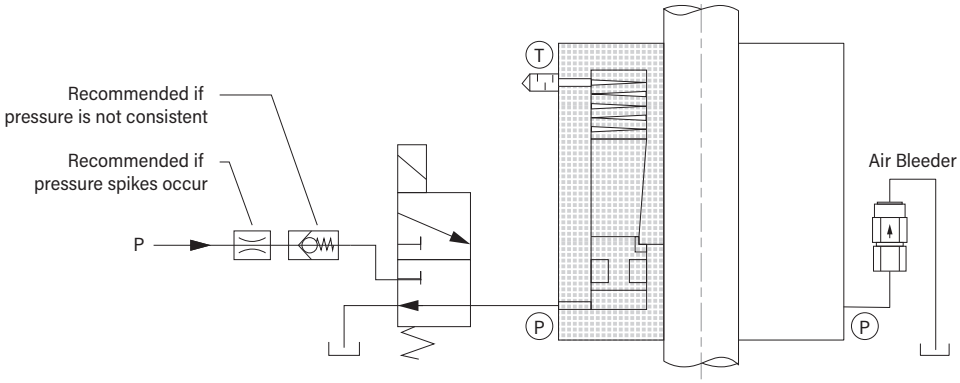


Figure 1

PROXIMITY SWITCH

1. RCHX utilizes a sealed proximity switch used for harsh conditions.
2. Sealed between housing and holder.
3. Switch setting retained when holder is removed.
4. Switch is factory set.
5. Please contact factory for procedure if setting is compromised.

Proximity Switch Information

- Balluf BES 516324-SA17-05 NHVT

SIT-EMMA-4 AIR BLEED

It is important that all the air be bled from the rod lock's piston area. The rod lock is designed with a short piston travel to give it a fast response time. Trapped air, especially with fast acting short stroke pistons at high pressure can cause ignition of the air-oil mixture, causing mini explosions (dieseling) to occur which will cut and crack seals.

To avoid this occurrence, it is recommended to install an automatic air bleed valve (figure 1) between the rod lock and the oil reservoir. The automatic air bleed valve should be installed in either P port, whichever is the highest. The automatic air bleed valve opens slightly each time the rod lock is depressurized and allows air to escape to the reservoir.

It is important to install the air bleed valve as near as possible and above the piston chamber of the rod lock and that no back pressure over 30 PSI (2 bar) remains in the line while the rod lock is locked.

RCHX ASSEMBLY INSTRUCTIONS

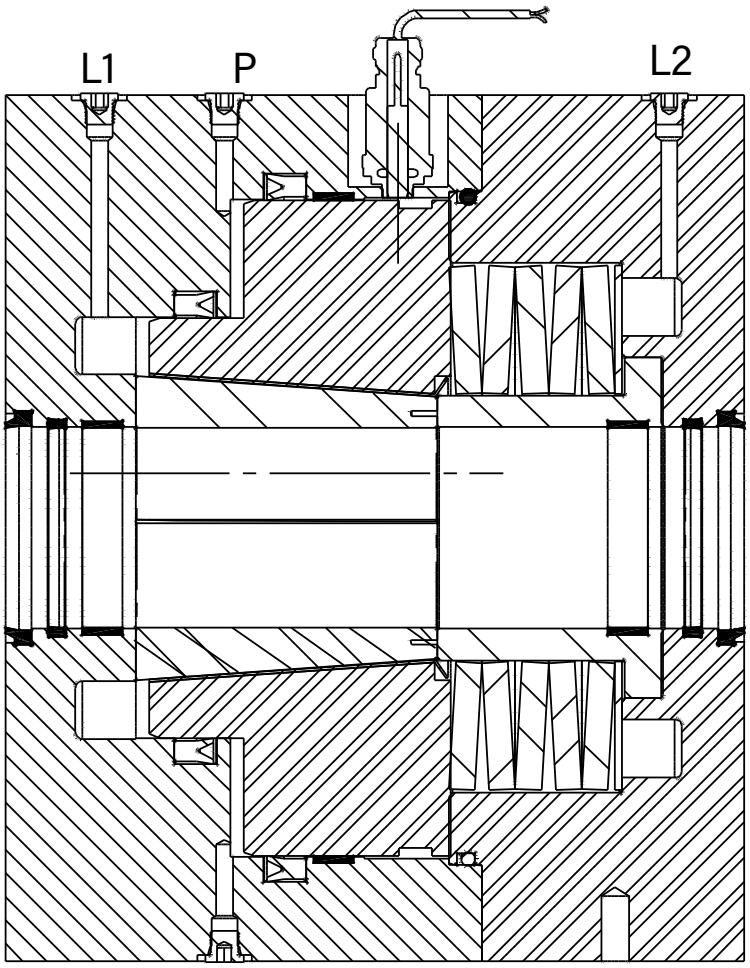
1. Temporarily connect a flexible hose to a release pressure port of the AMLOK rod lock and apply specified hydraulic release pressure.
2. Line up the Amlok to the mounting surface of the hydraulic cylinder or housing and slide the rod clamp over the rod to be clamped.
3. Align mounting holes, proximity switch, and hydraulic port to the proper locations.
4. Release with specified hydraulic pressure.
5. Bolt AMLOK rod lock to cylinder or other mounting surface.
6. Pressurize the rod lock to the specified release pressure. (Units must be completely bled of air prior to use unless hydraulic circuit includes a SIT-EMMA-4 air bleed. See page 10.)
7. Release and pressurize several times. With the specified release pressure, the rod should move freely through the AMLOK.
8. If the rod does not move freely, check the squareness of the housing the cylinder contact surface and correct if needed.

Note: When assembling the AMLOK rod lock, take precaution not to induce side loading.

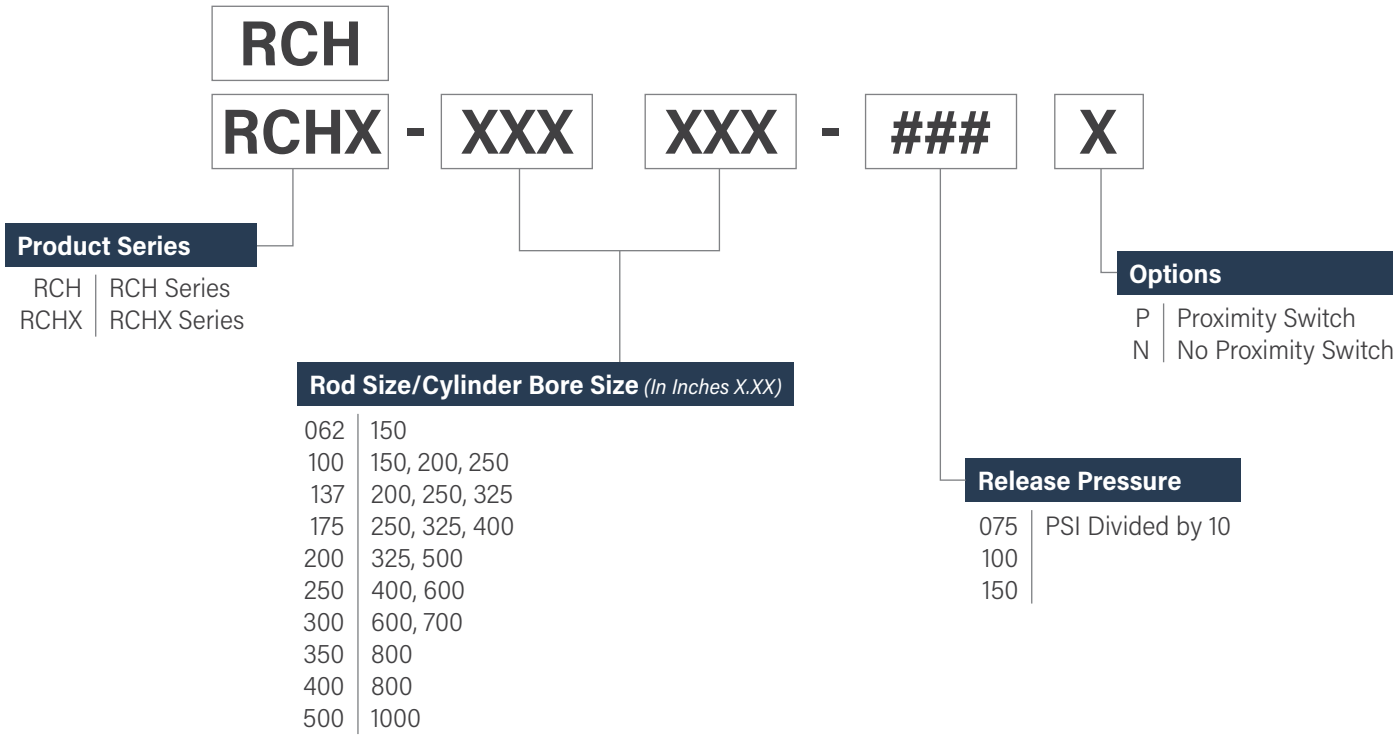
ROD LOCK FILL PROCEDURE

1. Energize Amlok with rod fully engaged into lock.
2. Add 4.5 fl. oz. (134 cc) to port 1 (L1).
3. Release/de-energize lock.
4. Add 9.9 fl. oz (293 cc) to port 2 (L2).
5. Cycle lock three times to ensure functionality.

Note: Removal of shaft will allow oil to leak.



RCH/RCHX ORDERING INSTRUCTIONS



Ordering Example:

RCH-100 250-150 N

1.00" Rod - 2.50" Cylinder Bore, 1500 PSI Release Pressure, No Proximity Switch.

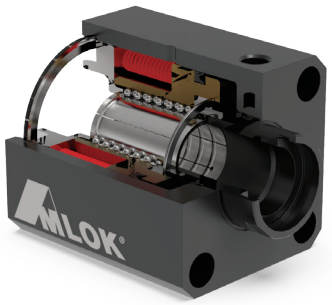
Movement in Load A direction is approximately 0.0007". Movement in Load B direction is 0.012" maximum when clamp is fully locked.

OVERVIEW

WHAT IS A PNEUMATIC ROD LOCK?

AMLOK rod locks have been developed as a solution to control problems inherent to pneumatics such as over-travel, drifting, bouncing, and reverse-traveling.

A significant design feature of the AMLOK rod locks includes the patented intensifier—a mechanically-operated mechanism that helps to guarantee quick and secure locking. The pneumatic series rod locks consist of an anodized aluminum housing with special piston and collet-locking mechanism actuated by a spring that mechanically locks the rod. The rod is then unlocked when air actuates the piston, compressing the spring and releasing the collet-locking mechanism. It is because of this design that the unit will lock in a situation presenting a loss of air pressure.



FEATURES

- No rod displacement on engagement; extremely low backlash
- Contact area of clamping collet is considerably greater than average, extending service life
- Fast response time, 100m/sec, optimized circuit
- Mechanical design with spring-engaged units
- One-piece, solid-body design
- 4 bar (60 PSI) release pressure

OPTIONS

- Stainless or electroless nickel-plated housing Viton seals
- Wiper/scraper
- Sealed units for food, chemical, washdown, or other applications

MOUNTING OPTIONS

- NFPA (RLN), pages 20-30
- ISO-6431 (RLI), pages 31-39

AMLOK has also designed rod locks with over-sized components to withstand the most severe applications—for example, the contact area of the clamping collet is considerably greater than represented on similar units. The increased contact area reduces the pressure per square inch on the rod, thereby extending service life.

The mountings for AMLOK pneumatic rod locks have been designed to be mounted to the NFPA (RLN) or ISO-6431 (RLI) cylinder of your choice, or as a stand-alone unit to be used with no cylinder at all.

Note: AMLOK rod locks are designed for locking reciprocating motions only—not for use on rotary motions. If these units are to be used as safety or braking devices, please consult the factory. For hydraulic applications, please refer to our RCH rod locks on page 4.

BENEFITS

- Consistent clamping force; holds loads during power or pressure loss
- High cycle rates and accuracy
- Compact unit, easy integration
- Works with a broad variety of applications
- Maximum operating pressure: 160 PSI Air (11 bar)
- Required release pressure: 60 PSI Air (4 bar)
- Operating media: clean, dry, filtered, compressed air
- Operating temperatures:
  Standard 10 deg F to 180 deg F (-12 deg C to 82 deg C
  Optional 10 deg F to 250 deg F (-12 deg C to 121 deg C)
- Holding Force: Axial holding forces were established after two million fatigue test cycles
- Minimum linear movement may occur after clamp is fully engaged (RLI: 0.05 mm - 0.08 mm; RLN: 0.002 in - 0.003 in)
- Holds with consistent force in both directions when rated values are not exceeded
- Can be mounted in any position
- Release pressure can range: 4-8 bar
  (60 PSI min - 120 PSI max)

Note: Consult factory for extreme applications.

ANATOMY OF PNEUMATIC ROD LOCKS

1. BODY
Solid aluminum that is precision-machined for accurate alignment. Black anodized for appearance and corrosion resistance.

2. LOCKING MECHANISM
Over-sized, hardened, and ground-locking with anti-friction amplification.

3. DISC SPRINGS
Heavy-duty springs designed for long life.

4. LIP-TYPE PISTON SEALS
Pressure-activated lip seal is wear-compensated for effective sealing at rated pressures. The seal is internally lubricated, reducing friction and extending life.

5. HOUSING DESIGN
Provides for direct mounting or allows attaching of a choice of NFPA-style (RLN) or ISO-6431 (RLI) detachable mounts.

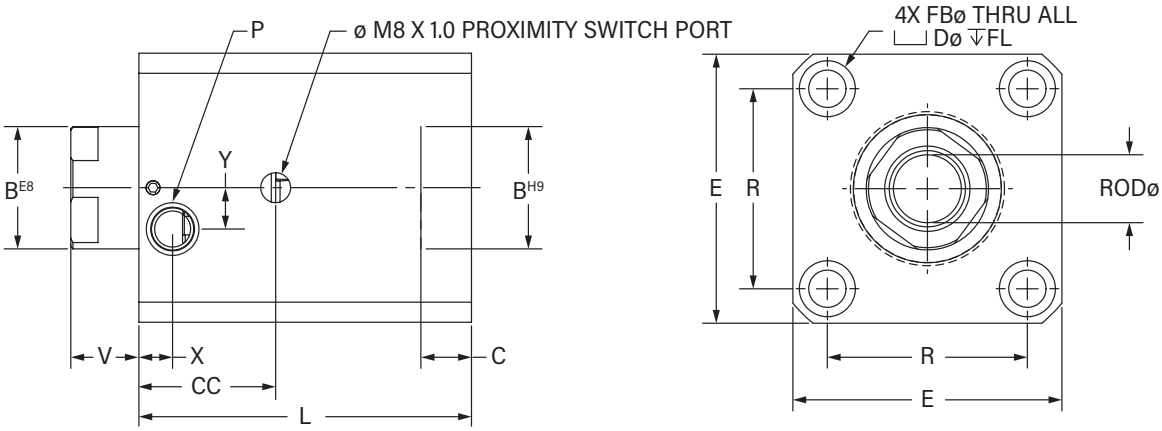
6. ROD-WIPER
The wiper is designed to wipe off abrasive dust and contamination on the retract stroke to ensure long-life for the seals, bearing, and piston rod. The standard wiper is carboxylated nitrile and is internally lubricated to reduce friction and extended life.

7. ROD BEARING
The phenolic bearing provides maximum piston rod support, reduces friction, and resists wear abrasion (galling and seizing). Factory preset for minimum backlash.

8. TIE RODS
[If Capable] Alloy steel, prestressed for maximum fatigue strength. Roll-threaded for added strength on 1 ½" - 6" bores.

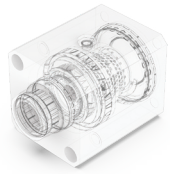
RLN | CYLINDER MOUNT SERIES

- Precision holding (0.002-0.003 in)
- Profile matches NFPA mounting styles
- Contains four through holes
- **Mounting options to suit your application**



Part No.	Rod Dia.	Cylinder Bore Dia.	Axial Holding Force	B	C	CC	E	L	P	R	V	X	Y	FB	D	FL	Weight
RLN-	in	in	lbf	in	in	in	in	in	in	in	in	in	in	in	in	in	lbs
063150MXO	0.625	1.500	200	1.125	0.375	0.422	1.980	3.05	1/8 NPT	1.430	0.63	0.60	0.25	0.281	.422	0.896	3.0
063200MXO	0.625	2.000	400	1.125	0.375	0.515	2.480	3.06	1/8 NPT	1.840	0.63	0.50	0.38	0.343	.515	1.031	4.0
063250MXO	0.625	2.500	650	1.125	0.375	0.515	2.980	3.18	1/8 NPT	2.190	0.63	0.50	0.50	0.343	.515	1.031	5.0
100200MXO	1.000	2.000	300	1.500	0.563	0.515	2.480	3.75	1/8 NPT	1.840	0.63	0.31	0.38	0.343	.515	1.031	3.5
100250MXO	1.000	2.500	450	1.500	0.563	0.515	2.980	3.65	1/8 NPT	2.190	0.63	0.38	0.50	0.343	.515	1.031	5.0
100325MXO	1.000	3.250	950	1.500	0.563	0.719	3.725	4.00	1/4 NPT	2.760	0.89	0.56	0.00	0.406	.719	1.281	8.0
100400MXO	1.000	4.000	1550	1.500	0.563	0.719	4.480	4.00	1/4 NPT	3.320	0.89	0.56	0.00	0.406	.719	1.281	13.5
100500MXO	1.000	5.000	2150	1.500	0.563	0.844	5.480	4.00	1/4 NPT	4.100	0.89	0.56	0.00	0.531	.844	1.500	17.5
138325MXO	1.375	3.250	950	2.000	0.625	0.719	3.725	4.00	1/4 NPT	2.760	0.89	0.56	0.00	0.406	.719	1.281	8.1
138400MXO	1.375	4.000	1550	2.000	0.625	0.719	4.480	4.00	1/4 NPT	3.320	0.89	0.56	0.00	0.406	.719	1.281	12.0
138500MXO	1.375	5.000	1950	2.000	0.625	0.844	5.480	4.00	1/4 NPT	4.100	0.89	0.56	0.00	0.531	.844	1.500	18.0
138600MXO	1.375	6.000	2650	2.000	0.625	0.844	6.480	4.50	1/4 NPT	4.880	1.00	0.56	0.00	0.531	.844	1.500	24.5
175600MXO	1.750	6.000	2450	2.375	0.750	0.844	6.480	4.50	1/4 NPT	4.880	1.00	0.56	0.00	0.531	.844	1.500	22.5

MOUNTING OPTIONS (MXO is rod lock/housing only. Does not include mounting hardware)



MXO
Page 20

CMXO
Page 21

CA
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CMF1
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CMF2
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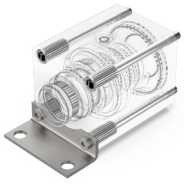
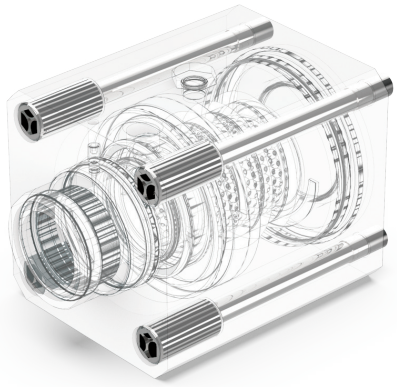


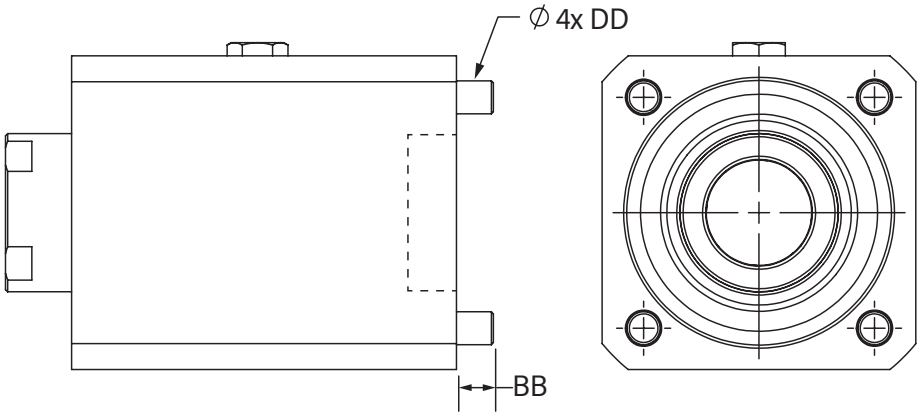
CMS1
Page 25

RLN CMXO (CYLINDER MOUNT)

MOUNTING SPECIFICATIONS

Kit Contains	
Quantity	Item
1	Rod Lock
4	Sleeve Nuts
4	Tie Rods





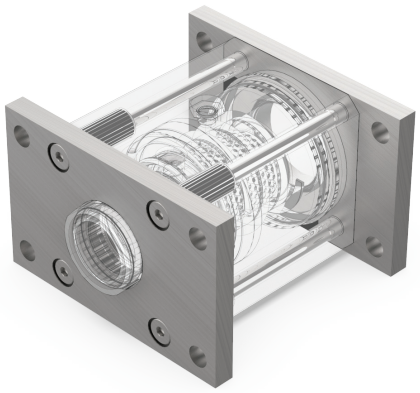
Part No.	Rod Dia.	Cylinder Bore Dia.	BB	DD Thread	Weight
RLN-	in	in	in	in	lbs
063150CMXO	0.625	1.500	0.35	1/4-28	1.24
063200CMXO	0.625	2.000	0.35	5/16-24	2.06
063250CMXO	0.625	2.500	0.35	5/16-24	2.98
100200CMXO	1.000	2.000	0.35	5/16-24	2.23
100250CMXO	1.000	2.500	0.35	5/16-24	3.20
100325CMXO	1.000	3.250	0.60	3/8-24	5.31
100400CMXO	1.000	4.000	0.60	3/8-24	8.47
100500CMXO	1.000	5.000	0.60	1/2-20	12.43
138325CMXO	1.375	3.250	0.60	3/8-24	5.62
138400CMXO	1.375	4.000	0.60	3/8-24	9.03
138500CMXO	1.375	5.000	0.60	1/2-20	12.78
138600CMXO	1.375	6.000	0.70	1/2-20	18.84
175600CMXO	1.750	6.000	0.70	1/2-20	19.55

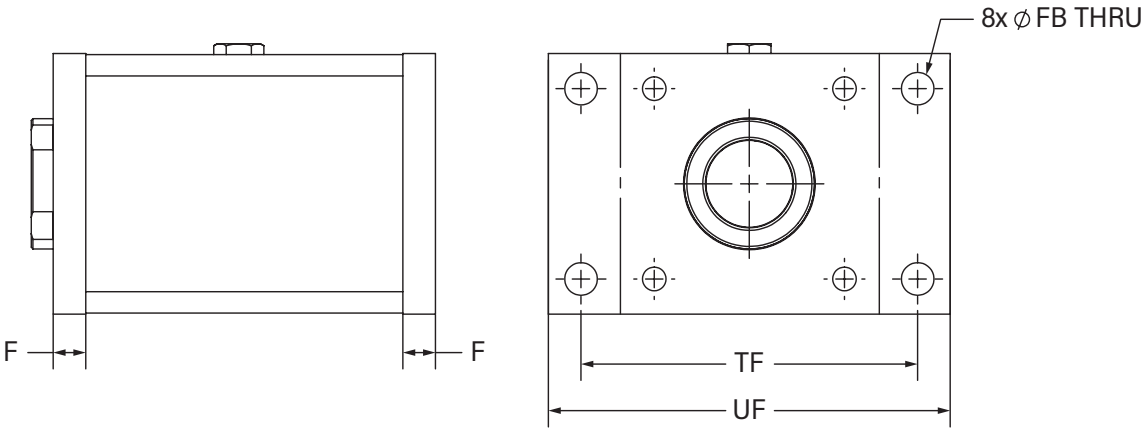
For rod lock & housing specs see page 20.

RLN CA (CYLINDER MOUNT)

MOUNTING SPECIFICATIONS

Assembly Contains	
Quantity	Item
1	Rod Lock
1	Front Flange
1	Rear Flange
4	Sleeve Nuts
4	Tie Rods
4	Socket Head Cap Screws (SHCS)





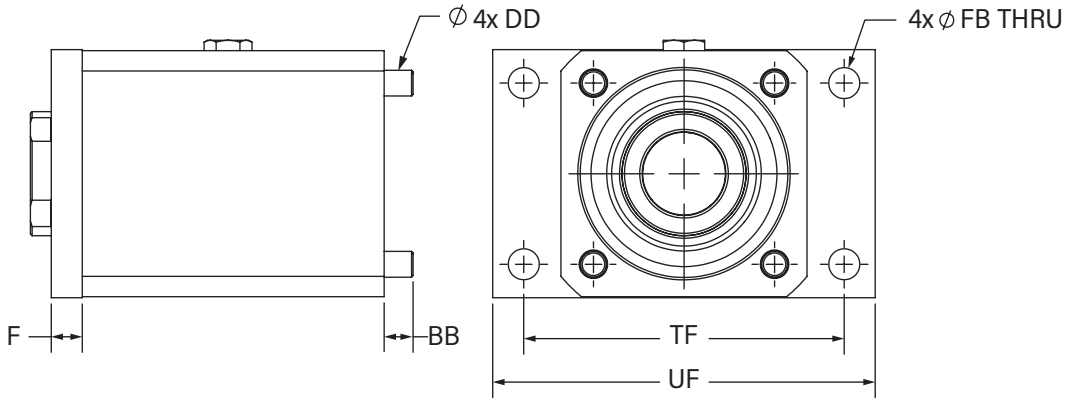
Part No.	Rod Dia.	Cylinder Bore Dia.	F	FB	TF	UF	Weight
RLN-	in	in	in	in	in	in	lbs
063150CA	0.625	1.500	0.375	0.312	2.750	3.375	2.53
063200CA	0.625	2.000	0.375	0.375	3.375	4.125	4.43
063250CA	0.625	2.500	0.375	0.375	3.875	4.625	5.96
100200CA	1.000	2.000	0.375	0.375	3.375	4.125	4.26
100250CA	1.000	2.500	0.375	0.375	3.875	4.625	6.01
100325CA	1.000	3.250	0.625	0.437	4.687	5.500	12.52
100400CA	1.000	4.000	0.625	0.437	5.437	6.250	18.35
100500CA	1.000	5.000	0.625	0.562	6.625	7.625	27.81
138325CA	1.375	3.250	0.625	0.437	4.687	3.725	12.23
138400CA	1.375	4.000	0.625	0.437	5.437	6.250	17.92
138500CA	1.375	5.000	0.625	0.562	6.625	7.625	26.97
138600CA	1.375	6.000	0.750	0.562	7.628	8.625	42.18
175600CA	1.750	6.000	0.750	0.562	7.625	8.625	42.24

For rod lock & housing specs see page 20.

RLN CMF1 (CYLINDER MOUNT)

MOUNTING SPECIFICATIONS

Kit Contains	
Quantity	Item
1	Rod Lock
1	Front Flange
4	Sleeve Nuts
4	Tie Rods
4	Socket Head Cap Screws (SHCS)
4	Hex Nuts



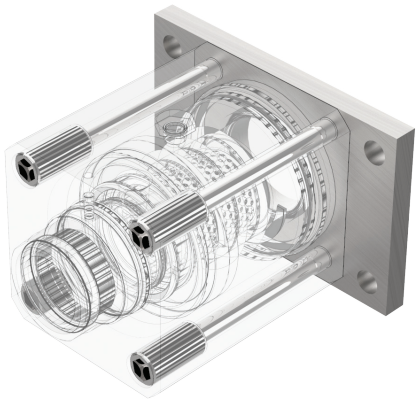
Part No.	Rod Dia.	Cylinder Bore Dia.	F	BB	FB	TF	UF	DD Thread	Weight
RLN-	in	in	in	in	in	in	in	in	lbs
063150CMF1	0.625	1.500	0.375	0.35	0.312	2.750	3.375	1/4-28	1.97
063200CMF1	0.625	2.000	0.375	0.35	0.375	3.375	4.125	5/16-24	3.51
063250CMF1	0.625	2.500	0.375	0.35	0.375	3.875	4.625	5/16-24	4.66
100200CMF1	1.000	2.000	0.375	0.35	0.375	3.375	4.125	5/16-24	3.45
100250CMF1	1.000	2.500	0.375	0.35	0.375	3.875	4.625	5/16-24	4.79
100325CMF1	1.000	3.250	0.625	0.60	0.437	4.687	5.500	3/8-24	9.33
100400CMF1	1.000	4.000	0.625	0.60	0.437	5.437	6.250	3/8-24	13.82
100500CMF1	1.000	5.000	0.625	0.60	0.562	6.625	7.625	1/2-20	20.94
138325CMF1	1.375	3.250	0.625	0.60	0.437	4.687	3.725	3/8-24	9.28
138400CMF1	1.375	4.000	0.625	0.60	0.437	5.437	6.250	3/8-24	13.65
138500CMF1	1.375	5.000	0.625	0.60	0.562	6.625	7.625	1/2-20	20.35
138600CMF1	1.375	6.000	0.750	0.70	0.562	7.628	8.625	1/2-20	31.22
175600CMF1	1.750	6.000	0.750	0.70	0.562	7.625	8.625	1/2-20	31.55

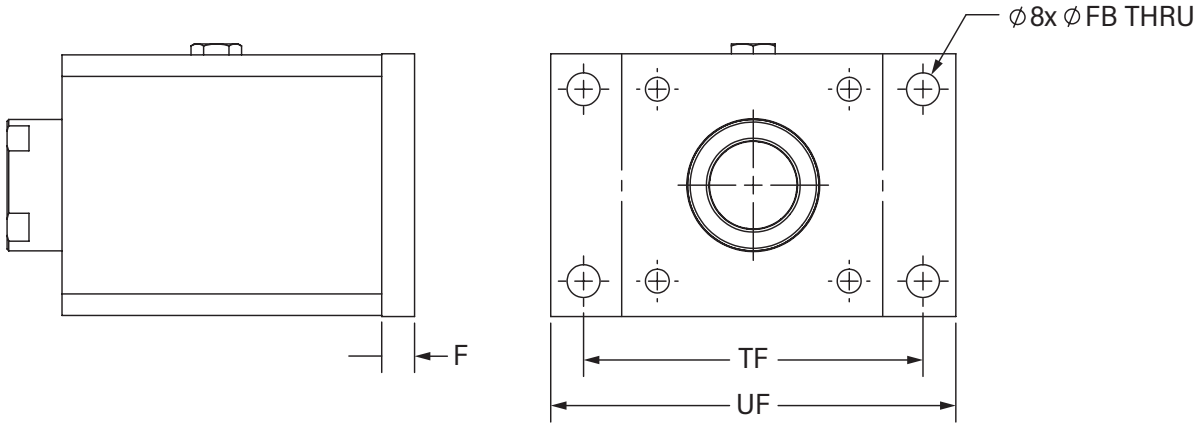
For rod lock & housing specs see page 20.

RLN CMF2 (CYLINDER MOUNT)

MOUNTING SPECIFICATIONS

Assembly Contains	
Quantity	Item
1	Rod Lock
1	Rear Flange
4	Sleeve Nuts
4	Tie Rods





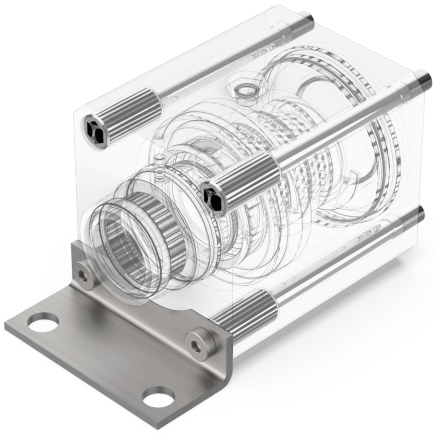
Part No.	Rod Dia.	Cylinder Bore Dia.	F	FB	TF	UF	Weight
RLN-	in	in	in	in	in	in	lbs
063150CMF2	0.625	1.500	0.375	0.312	2.750	3.375	1.97
063200CMF2	0.625	2.000	0.375	0.375	3.375	4.125	3.51
063250CMF2	0.625	2.500	0.375	0.375	3.875	4.625	4.66
100200CMF2	1.000	2.000	0.375	0.375	3.375	4.125	3.45
100250CMF2	1.000	2.500	0.375	0.375	3.875	4.625	4.79
100325CMF2	1.000	3.250	0.625	0.437	4.687	5.500	9.33
100400CMF2	1.000	4.000	0.625	0.437	5.437	6.250	13.82
100500CMF2	1.000	5.000	0.625	0.562	6.625	7.625	20.94
138325CMF2	1.375	3.250	0.625	0.437	4.687	3.725	9.28
138400CMF2	1.375	4.000	0.625	0.437	5.437	6.250	13.65
138500CMF2	1.375	5.000	0.625	0.562	6.625	7.625	20.35
138600CMF2	1.375	6.000	0.750	0.562	7.628	8.625	31.22
175600CMF2	1.750	6.000	0.750	0.562	7.625	8.625	31.55

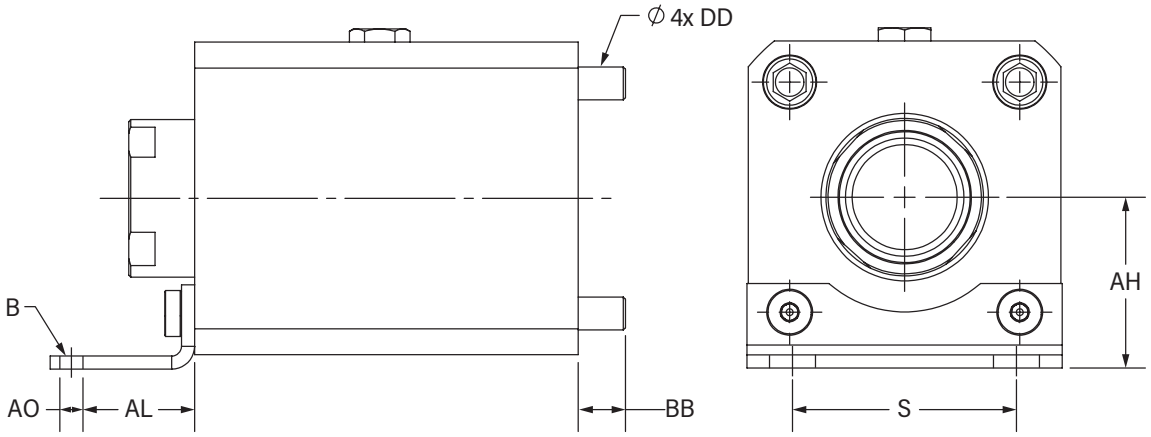
For rod lock & housing specs see page 20.

RLN CMS1 (CYLINDER MOUNT)

MOUNTING SPECIFICATIONS

Kit Contains	
Quantity	Item
1	Rod Lock
1	Angle Bracket
4	Sleeve Nuts
4	Tie Rods
4	Socket Head Cap Screws (SHCS)



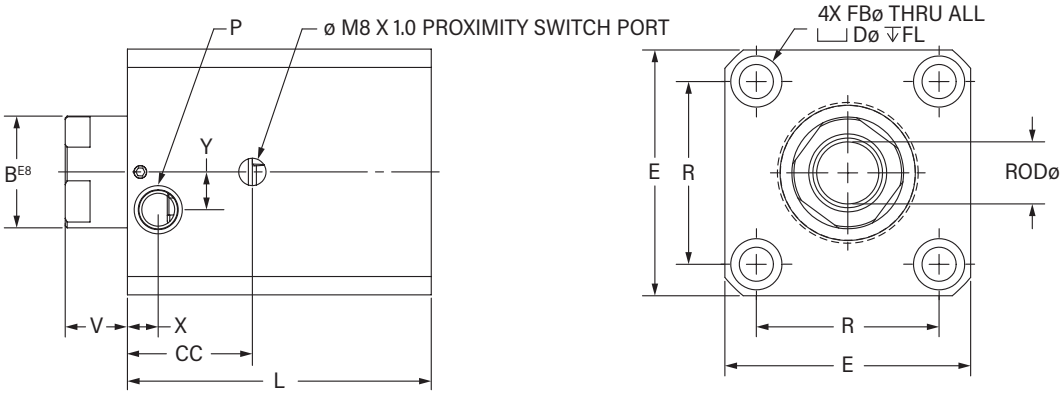


Part No.	Rod Dia.	Cylinder Bore Dia.	S	AH	AL	AO	BB	DD Thread	Weight
RLN-	in	in	in	in	in	in	in	in	lbs
063150CMS1	0.625	1.500	1.250	1.187	1.000	0.375	0.35	1/4-28	1.51
063200CMS1	0.625	2.000	1.750	1.437	1.000	0.375	0.35	5/16-24	2.72
063250CMS1	0.625	2.500	2.250	1.625	1.000	0.375	0.35	5/16-24	3.54
100200CMS1	1.000	2.000	1.750	1.437	1.000	0.375	0.35	5/16-24	2.74
100250CMS1	1.000	2.500	2.250	1.625	1.000	0.375	0.35	5/16-24	3.75
100325CMS1	1.000	3.250	2.750	1.937	1.250	0.500	0.60	3/8-24	6.42
100400CMS1	1.000	4.000	3.500	2.238	1.250	0.500	0.60	3/8-24	9.66
100500CMS1	1.000	5.000	4.250	2.738	1.375	0.625	0.60	1/2-20	14.89
138325CMS1	1.375	3.250	2.750	1.937	1.250	0.500	0.60	3/8-24	6.62
138400CMS1	1.375	4.000	3.500	2.238	1.279	0.500	0.60	3/8-24	9.75
138500CMS1	1.375	5.000	4.250	2.738	1.375	0.625	0.60	1/2-20	14.54
138600CMS1	1.375	6.000	5.250	3.235	1.375	0.625	0.70	1/2-20	21.24
175600CMS1	1.750	6.000	5.250	3.235	1.375	0.625	0.70	1/2-20	21.84

For rod lock & housing specs see page 20.

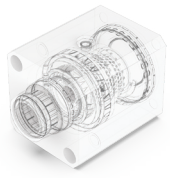
RLN | STAND ALONE MOUNT SERIES

- Precision holding (0.002-0.003 in)
- Profile matches NFPA mounting styles
- Contains four through holes
- SXXX = Stand-alone additional rod bearing and wiper supplied
- **Mounting options to suit your application**



Part No.	Rod Dia.	Cylinder Bore Dia.	Axial Holding Force	B	CC	E	L	P	R	V	X	Y	FB	D	FL	Weight
RLN-	in	in	lbf	in	in	in	in	in	in	in	in	in	in	in	in	lbs
063150SN	0.625	1.500	200	1.125	0.422	1.980	3.05	1/8 NPT	1.430	0.63	0.60	0.25	0.281	.422	0.896	3.0
063200SN	0.625	2.000	400	1.125	0.515	2.480	3.06	1/8 NPT	1.840	0.63	0.50	0.38	0.343	.515	1.031	4.0
063250SN	0.625	2.500	650	1.125	0.515	2.980	3.18	1/8 NPT	2.190	0.63	0.50	0.50	0.343	.515	1.031	5.0
100200SN	1.000	2.000	300	1.500	0.515	2.480	3.75	1/8 NPT	1.840	0.63	0.31	0.38	0.343	.515	1.031	3.5
100250SN	1.000	2.500	450	1.500	0.515	2.980	3.65	1/8 NPT	2.190	0.63	0.38	0.50	0.343	.515	1.031	5.0
100325SN	1.000	3.250	950	1.500	0.719	3.725	4.00	1/4 NPT	2.760	0.89	0.56	0.00	0.406	.719	1.281	8.0
100400SN	1.000	4.000	1550	1.500	0.719	4.480	4.00	1/4 NPT	3.320	0.89	0.56	0.00	0.406	.719	1.281	13.5
100500SN	1.000	5.000	2150	1.500	0.844	5.480	4.00	1/4 NPT	4.100	0.89	0.56	0.00	0.531	.844	1.500	17.5
138325SN	1.375	3.250	950	2.000	0.719	3.725	4.00	1/4 NPT	2.760	0.89	0.56	0.00	0.406	.719	1.281	8.1
138400SN	1.375	4.000	1550	2.000	0.719	4.480	4.00	1/4 NPT	3.320	0.89	0.56	0.00	0.406	.719	1.281	12.0
138500SN	1.375	5.000	1950	2.000	0.844	5.480	4.00	1/4 NPT	4.100	0.89	0.56	0.00	0.531	.844	1.500	18.0
138600SN	1.375	6.000	2650	2.000	0.844	6.480	4.50	1/4 NPT	4.880	1.00	0.56	0.00	0.531	.844	1.500	24.5
175600SN	1.750	6.000	2450	2.375	0.844	6.480	4.50	1/4 NPT	4.880	1.00	0.56	0.00	0.531	.844	1.500	22.5

MOUNTING OPTIONS (SN is rod lock/housing only. Does not include mounting hardware)



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SMS1
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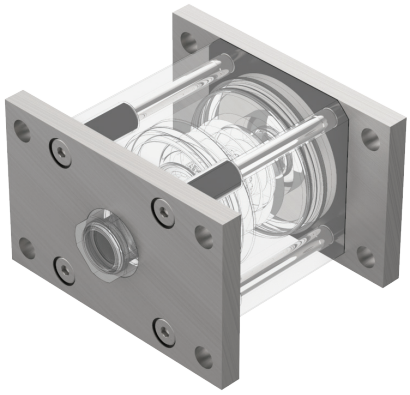
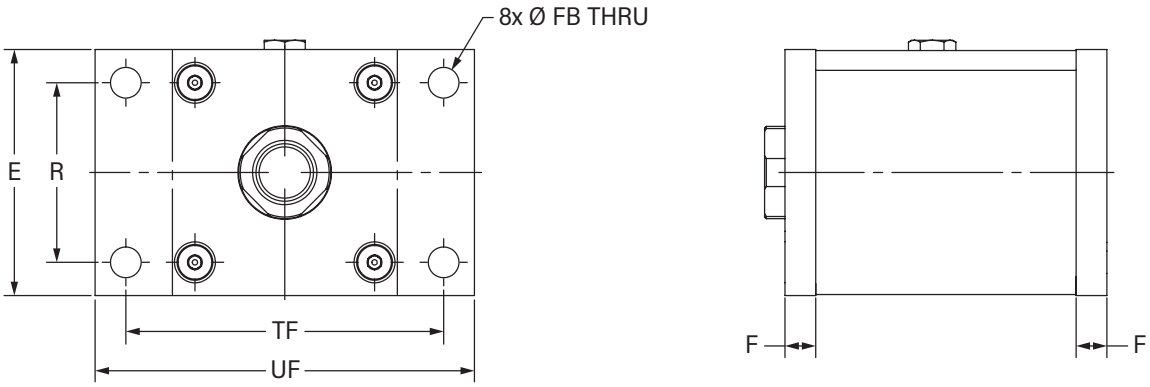
RLN SA (STAND ALONE MOUNT)

MOUNTING SPECIFICATIONS

Assembly Contains	
Quantity	Item
1	Rod Lock
1	Front Flange
1	Rear Flange
4	Sleeve Nuts
4	Tie Rods
4	Socket Head Cap Screws (SHCS)

SXXX: Stand-alone additional rod bearing and wiper supplied.





Part No.	Rod Dia.	Cylinder Bore Dia.	E	F	R	FB	TF	UF	Weight
RLN-	in	in	in	in	in	in	in	in	lbs
063150SA	0.625	1.500	1.980	0.375	1.430	0.312	2.750	3.375	2.62
063200SA	0.625	2.000	2.480	0.375	1.840	0.375	3.375	4.125	4.31
063250SA	0.625	2.500	2.980	0.375	2.190	0.375	3.875	4.625	6.02
100200SA	1.000	2.000	2.480	0.375	1.840	0.375	3.375	4.125	4.37
100250SA	1.000	2.500	2.980	0.375	2.190	0.375	3.875	4.625	6.10
100325SA	1.000	3.250	3.725	0.625	2.760	0.437	4.687	5.500	12.60
100400SA	1.000	4.000	4.480	0.625	3.320	0.437	5.437	6.250	18.46
100500SA	1.000	5.000	5.480	0.625	4.100	0.562	6.625	7.625	27.89
138325SA	1.375	3.250	3.725	0.625	2.760	0.437	.687	3.725	12.42
138400SA	1.375	4.000	4.480	0.625	3.320	0.437	5.437	6.250	18.54
138500SA	1.375	5.000	5.480	0.625	4.100	0.562	6.625	7.625	27.48
138600SA	1.375	6.000	6.480	0.750	4.880	0.562	7.628	8.625	42.18
175600SA	1.750	6.000	6.480	0.750	4.880	0.562	7.625	8.625	42.52

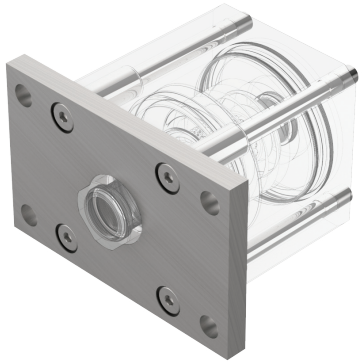
For rod lock & housing specs see page 26.

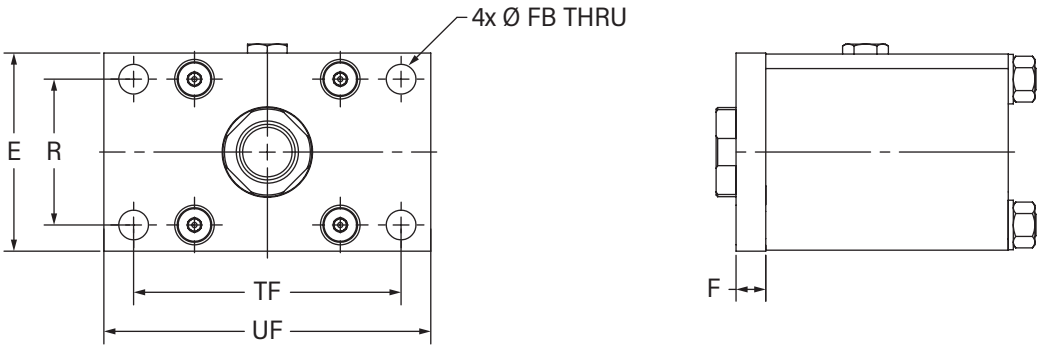
RLN SMF1 (STAND ALONE MOUNT)

MOUNTING SPECIFICATIONS

Assembly Contains	
Quantity	Item
1	Rod Lock
1	Front Flange
4	Sleeve Nuts
4	Tie Rods
4	Socket Head Cap Screws (SHCS)
4	Hex Nuts

SXXX: Stand-alone additional rod bearing and wiper supplied.





Part No.	Rod Dia.	Cylinder Bore Dia.	E	F	R	FB	TF	UF	Weight
RLN-	in	in	in	in	in	in	in	in	lbs
063150SMF1	0.625	1.500	1.980	0.375	1.430	0.312	2.750	3.375	2.11
063200SMF1	0.625	2.000	2.480	0.375	1.840	0.375	3.375	4.125	3.40
063250SMF1	0.625	2.500	2.980	0.375	2.190	0.375	3.875	4.625	4.72
100200SMF1	1.000	2.000	2.480	0.375	1.840	0.375	3.375	4.125	3.54
100250SMF1	1.000	2.500	2.980	0.375	2.190	0.375	3.875	4.625	4.88
100325SMF1	1.000	3.250	3.725	0.625	2.760	0.437	4.687	5.500	9.42
100400SMF1	1.000	4.000	4.480	0.625	3.320	0.437	5.437	6.250	13.97
100500SMF1	1.000	5.000	5.480	0.625	4.100	0.562	6.625	7.625	21.05
138325SMF1	1.375	3.250	3.725	0.625	2.760	0.437	4.687	3.725	9.51
138400SMF1	1.375	4.000	4.480	0.625	3.320	0.437	5.437	6.250	14.29
138500SMF1	1.375	5.000	5.480	0.625	4.100	0.562	6.625	7.625	20.89
138600SMF1	1.375	6.000	6.480	0.750	4.880	0.562	7.628	8.625	31.15
175600SMF1	1.750	6.000	6.480	0.750	4.880	0.562	7.625	8.625	31.86

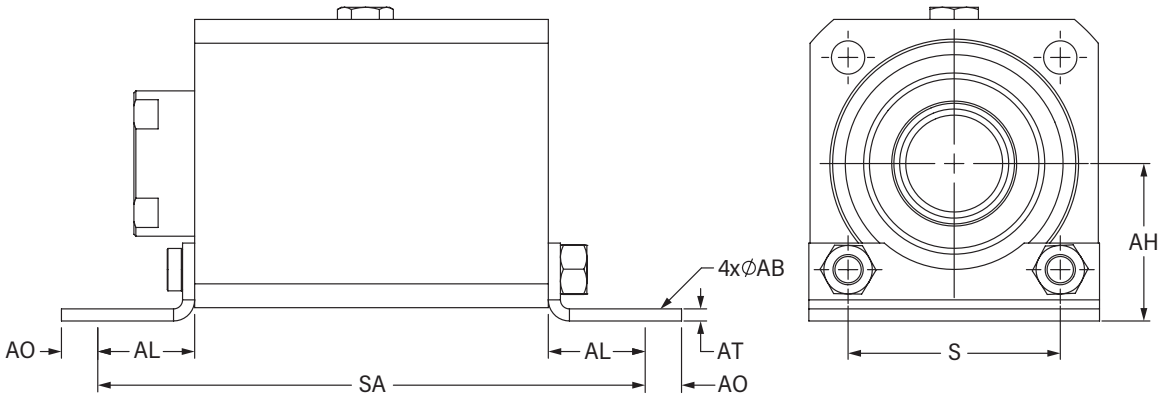
For rod lock & housing specs see page 26.

RLN SMS1 (STAND ALONE MOUNT)

MOUNTING SPECIFICATIONS

Assembly Contains	
Quantity	Item
1	Rod Lock
2	Angle Bracket
2	Sleeve Nuts
2	Tie Rods
2	Socket Head Cap Screws (SHCS)
2	Hex Nuts

**SXXX: Stand-alone additional rod bearing and wiper supplied.*



Part No.	Rod Dia.	Cylinder Bore Dia.	S	AB	AH	AL	AO	AT	SA	Weight
RLN-	in	in	in	in	in	in	in	in	in	lbs
063150SMS1	0.625	1.500	1.250	0.437	1.187	1.000	0.375	0.125	5.050	1.60
063200SMS1	0.625	2.000	1.750	0.437	1.437	1.000	0.375	0.125	5.060	2.59
063250SMS1	0.625	2.500	2.250	0.437	1.625	1.000	0.375	0.125	5.175	3.59
100200SMS1	1.000	2.000	1.750	0.437	1.437	1.000	0.375	0.125	5.750	2.76
100250SMS1	1.000	2.500	2.250	0.437	1.625	1.000	0.375	0.125	5.650	3.82
100325SMS1	1.000	3.250	2.750	0.562	1.937	1.250	0.500	0.125	6.500	6.42
100400SMS1	1.000	4.000	3.500	0.562	2.238	1.250	0.500	0.125	6.500	9.73
100500SMS1	1.000	5.000	4.250	0.687	2.738	1.375	0.625	0.188	6.750	15.23
138325SMS1	1.375	3.250	2.750	0.562	1.937	1.250	0.500	0.125	6.500	6.73
138400SMS1	1.375	4.000	3.500	0.562	2.238	1.279	0.500	0.125	6.500	10.31
138500SMS1	1.375	5.000	4.250	0.687	2.738	1.375	0.625	0.188	6.750	15.30
138600SMS1	1.375	6.000	5.250	0.812	3.235	1.375	0.625	0.188	7.250	21.77
175600SMS1	1.750	6.000	5.250	0.812	3.235	1.375	0.625	0.188	7.250	22.47

For rod lock & housing specs see page 26.

RLN ORDERING INSTRUCTIONS

RLN	XXX	XXX	X	XXX	X	XX

Product Series

RLN	RLN Series

Rod Size/Cylinder Bore Size *(In Inches X.XX)*

063	150, 200, 250
100	200, 250, 325, 400, 500
138	325, 400, 500, 600
175	600

Mounting Type

MXO/SN	No Hardware *(Skip Mounting Style)*
CMXO	Minimum Hardware *(Skip Mounting Style)*
C	Cylinder Mount
S	Stand Alone**

Mounting Style

A	Flange Mount—Front and Rear
MF1	Flange Mount—Front Only
MF2	Flange Mounts—Rear Only
MS1	Foot Mounts

- *Cylinder Mounting Type—Front Foot Only*
- *Stand-Alone Mounting Type—Front and Back*

Seal Material

Blank	Standard Nitrile*
V	Viton

Surface Coatings

Blank	Black Anodized*
EN	Electroless Nickel
SS	Stainless Steel

**Standard Option*
***Stand-alone unit contains wipers and rod bearings on each end.*

Note: *For direct replacement of RCN style rod lock, please consult factory.*

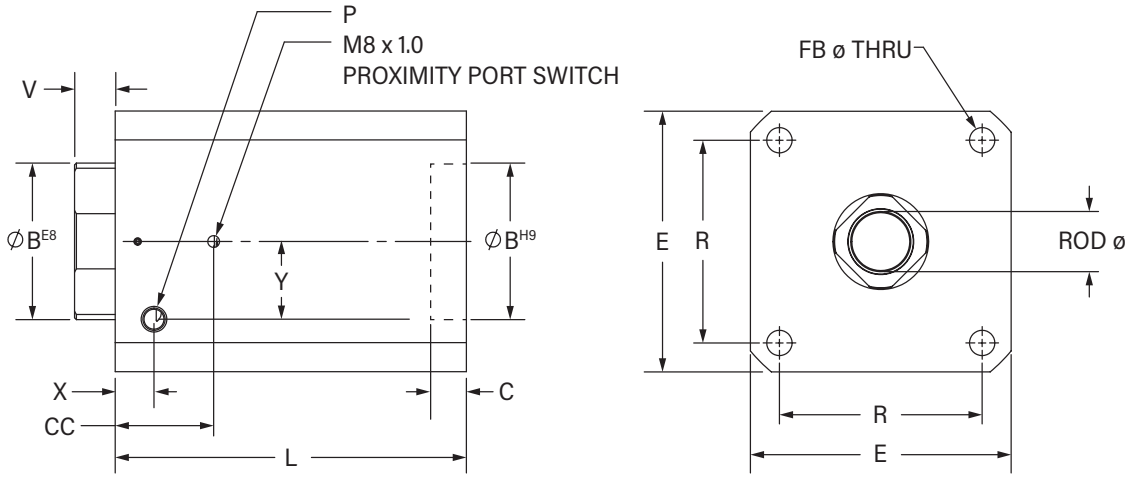
Ordering Example:

RLN 100 250 S MF1 V SS

1.00" Rod - 2.50" Cylinder Bore; Stand-Alone Mount with Front Flange Mount; Viton Seal; Stainless Steel Construction

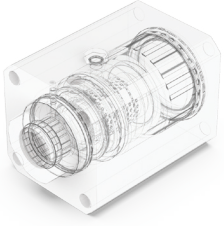
RLI | CYLINDER MOUNT SERIES

- Precision holding (0.05-0.08 mm)
- Profile matches ISO06431/15552 mounting styles
- **Mounting options to suit your application**



Part No.	Rod Dia.	Cylinder Bore Dia.	Axial Holding Force		B	C	CC	E	L	P	R	V	X	Y	CC	FB	Weight
RLI-	mm	mm	lbf	kN	mm	mm	mm	mm	mm	BSP	mm	mm		mm	mm	mm	lbs
040016MXO	16	40	200	0.9	35	22	31	54	80	G1/8	38	10	14.6	6	31	6.6	1.5
050020MXO	20	50	350	1.6	40	29	38	64	99	G1/8	46.5	12	14.6	12	38	9	2.8
063020MXO	20	63	500	2.2	40	29	37	75	101	G1/8	56.5	12	14.6	6	37	9	3.9
080025MXO	25	80	944	4.2	45	35	38	96	110	G1/8	72	16	14.6	6	38	M10 CLR	6
100025MXO	25	100	1550	6.9	55	38	38	115	115	G1/4	89	16	11.4	0	38	M10 CLR	10.9
125032MXO	32	125	1956	8.7	60	50	41	145	130	G1/4	110	16	14.2	0	41	13.5	20
160040MXO	40	160	2450	10.9	65	52	50	180	140	G1/4	140	20	14.2	0	50	17.5	32

MOUNTING OPTIONS (MXO is rod lock/housing only. Does not include mounting hardware)



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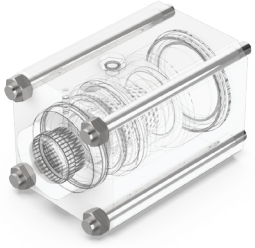

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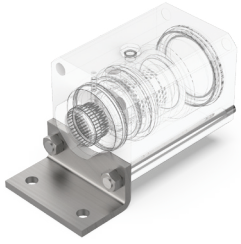

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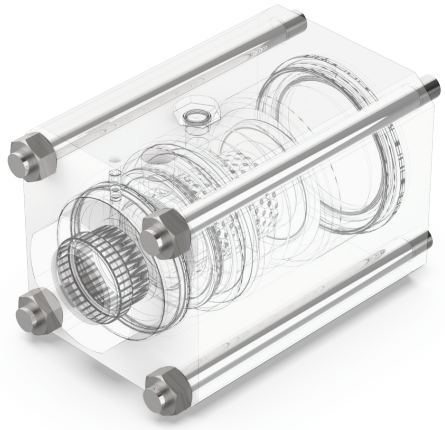
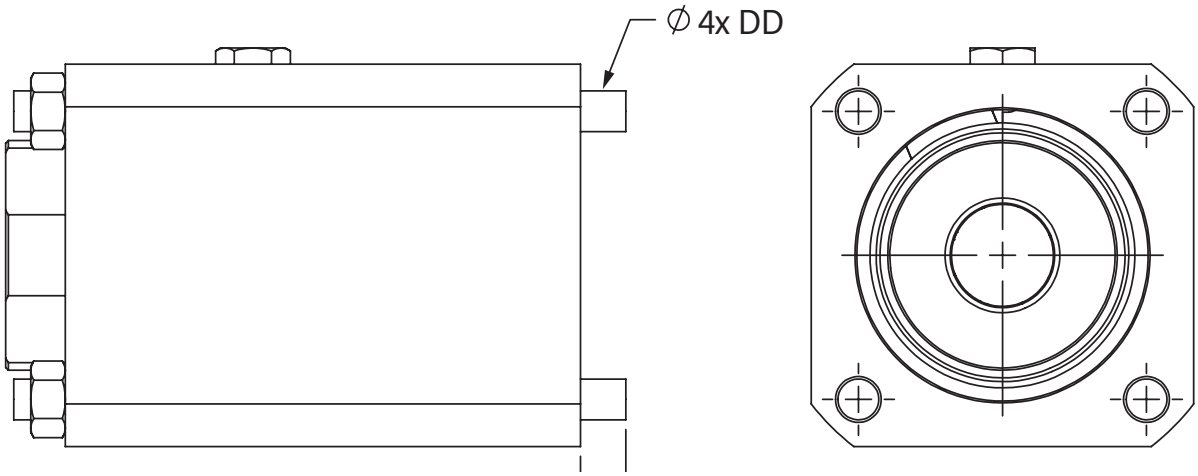
RLI CMXO (CYLINDER MOUNT)

MOUNTING SPECIFICATIONS

Kit Contains	
Quantity	Item
1	Rod Lock
4	Tie Rods
4	Hex Nuts





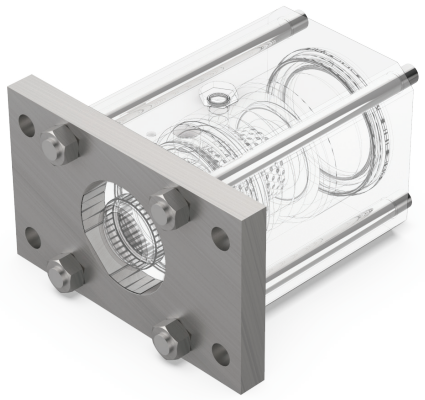
Part No.	Rod Dia.	Cylinder Bore Dia.	BB	DD Thread	Weight
RLI-	mm	mm	mm		lbs
040016CMXO	16	40	8.89	M6	2
050020CMXO	20	50	8.89	M8	3
063020CMXO	20	63	8.89	M8	4
080025CMXO	25	80	15.24	M10	6
100025CMXO	25	100	15.24	M10	11
125032CMXO	32	125	15.24	M12	20
160040CMXO	40	160	17.79	M16	33

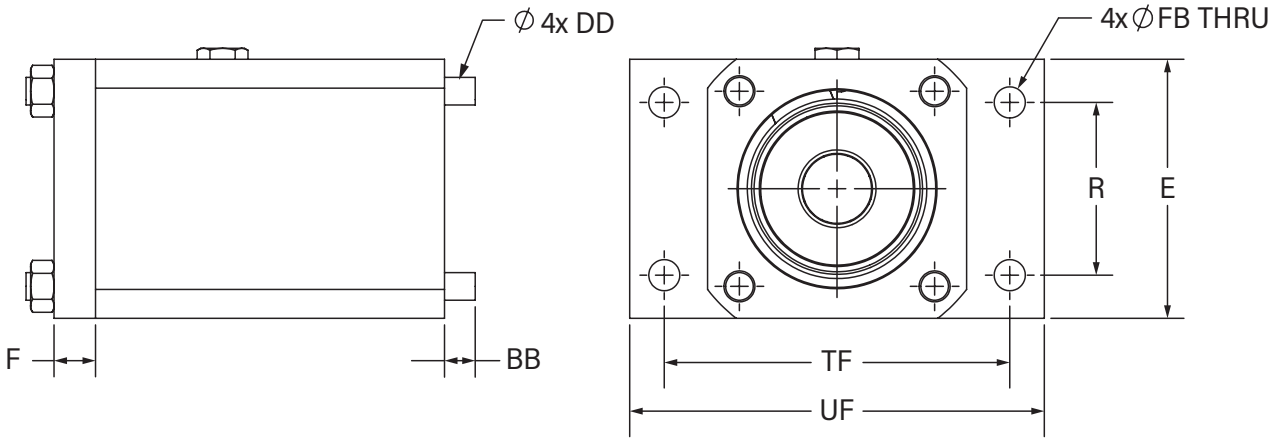
For rod lock & housing specs see page 31.

RLI CMF1 (CYLINDER MOUNT)

MOUNTING SPECIFICATIONS

Kit Contains	
Quantity	Item
1	Rod Lock
1	Front Flange
4	Tie Rods
8	Hex Nuts





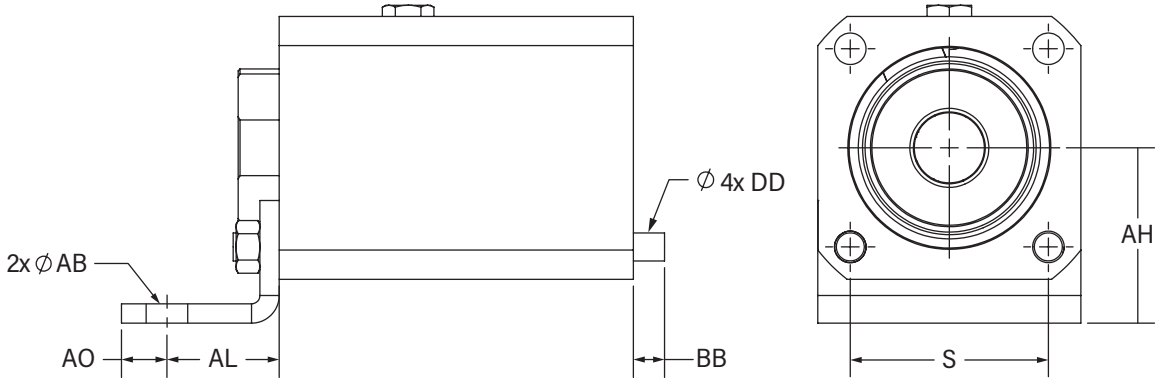
Part No.	Rod Dia.	Cylinder Bore Dia.	E	F	R	BB	DD Thread	FB Dia.	TF	UF	Weight
RLI-	mm	mm	mm	mm	mm	mm			mm	mm	lbs
040016CMF1	16	40	52	10	38	8.89	M6	9	72	90	2.2
050020CMF1	20	50	65	12	46.5	8.89	M8	9	90	110	4.0
063020CMF1	20	63	75	12	56.5	8.89	M8	9	100	120	5.3
080025CMF1	25	80	95	16	72	15.24	M10	12	126	150	9.7
100025CMF1	25	100	112	16	89	15.24	M10	14	150	185	15.4
125032CMF1	32	125	140	20	110	15.24	M12	16	180	220	28.0
160040CMF1	40	160	190	20	115	17.78	M16	18	230	279	35

For rod lock & housing specs see page 31.

RLI CMS1 (CYLINDER MOUNT)

MOUNTING SPECIFICATIONS

Kit Contains	
Quantity	Item
1	Rod Lock
1	Angle Bracket
4	Tie Rods
4	Hex Nuts

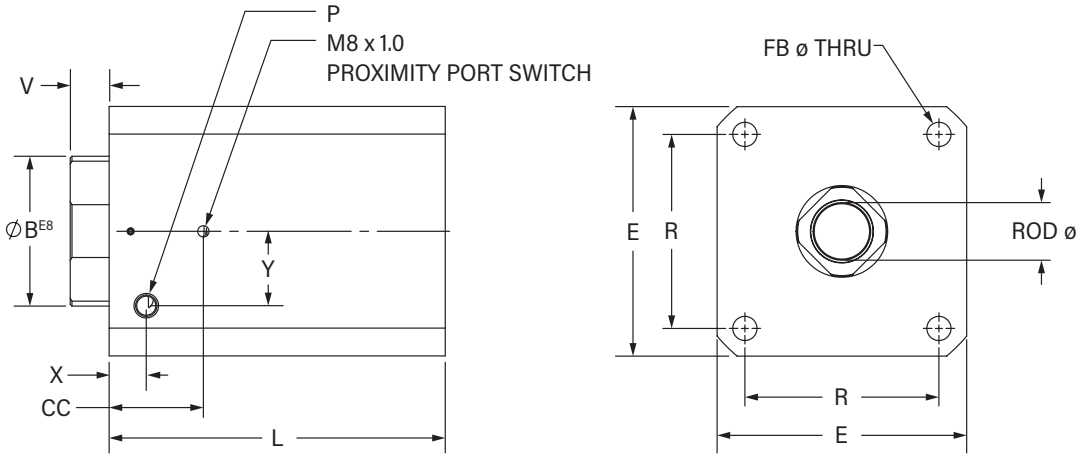


Part No.	Rod Dia.	Cylinder Bore Dia.	S	AB	AH	AL	AO	BB	DD	Weight
RLI-	mm	mm	mm	mm	mm	mm	mm	mm		lbs
040016CMS1	16	40	38.0	9	36	28	8	8.89	M6	2
050020CMS1	20	50	46.5	9	45	32	13	8.89	M8	3
063020CMS1	20	63	56.5	9	50	32	13	8.89	M8	4
080025CMS1	25	80	72.0	12	63	41	14	15.24	M10	7
100025CMS1	25	100	59.0	14	71	41	15	15.24	M10	12
125032CMS1	32	125	110.0	16	90	45	22	15.24	M12	22
160040CMS1	40	160	140.0	18	115	60	24	17.78	M16	33

For rod lock & housing specs see page 31.

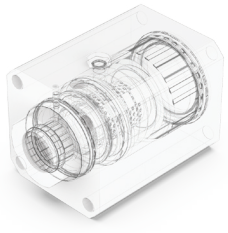
RLI | STAND ALONE MOUNT SERIES

- Profile matches ISO 06431/15552 mounting styles
- Contains four through holes
- **Mounting options to suit your application**



Part No.	Rod Dia.	Cylinder Bore Dia.	Axial Holding Force		B	E	L	P	R	V	X	Y	CC	FB	Weight
RLI-	mm	mm	lbf	kN	mm	mm	mm	BSP	mm	mm	mm	mm	mm	mm	lbs
040016SN	16	40	200	0.9	35	54	80	G1/8	38	10	14.6	6	31	6.6	1.5
050020SN	20	50	350	1.6	40	64	99	G1/8	46.5	12	14.6	12	38	9	2.8
063020SN	20	63	500	2.2	40	75	101	G1/8	56.5	12	14.6	6	37	9	3.9
080025SN	25	80	944	4.2	45	96	110	G1/8	72	16	14.6	6	38	M10 CLR	6
100025SN	25	100	1550	6.9	55	115	115	G1/4	89	16	11.4	0	38	M10 CLR	10.9
125032SN	32	125	1956	8.7	60	145	130	G1/4	110	15.7	14.2	0	41	13.5	20
160040SN	40	160	2450	10.9	65	180	140	G1/4	140	19.7	14.2	0	50	17.5	32

MOUNTING OPTIONS (SN is rod lock/housing only. Does not include mounting hardware)



SN
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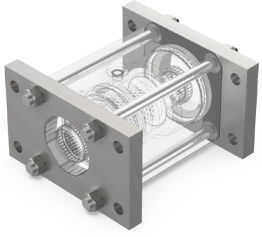

SA
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SMF1
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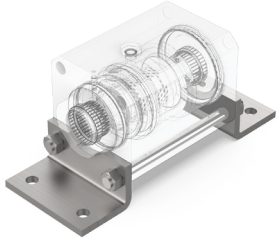

SMS1
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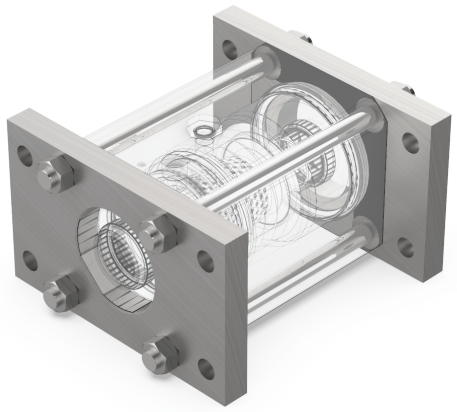
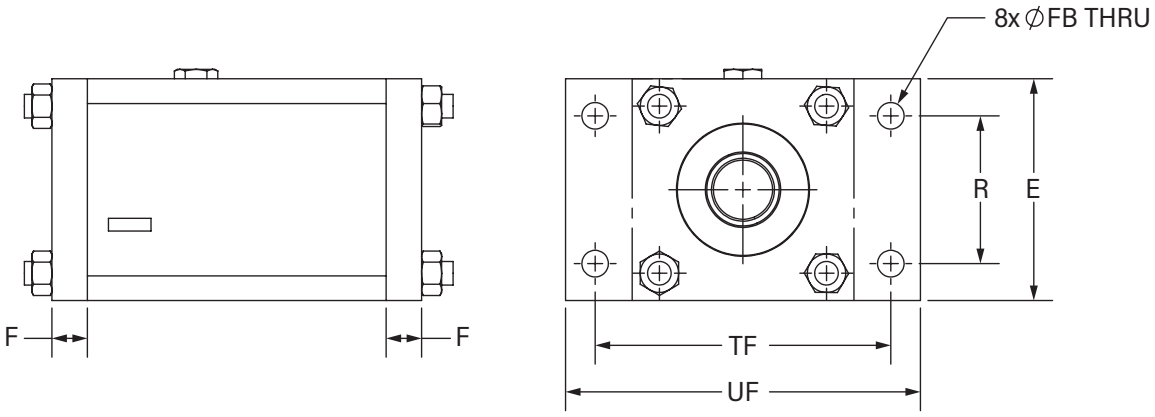
RLI SA (STAND ALONE MOUNT)

MOUNTING SPECIFICATIONS

Assembly Contains	
Quantity	Item
1	Rod Lock
1	Front Flange
1	Rear Flange
4	Tie Rods
8	Hex Nuts





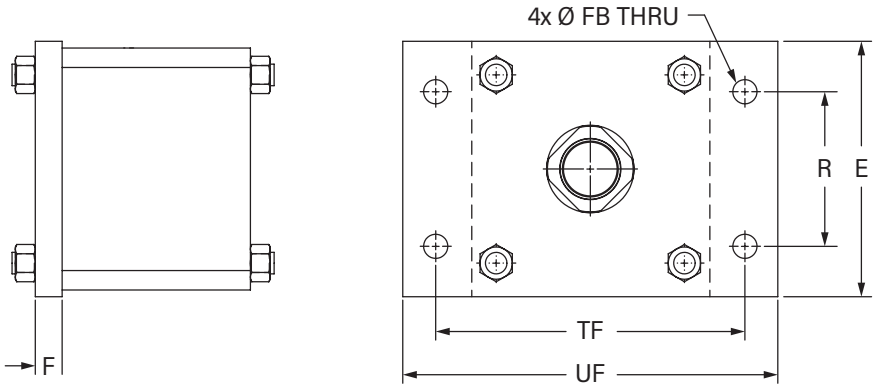
Part No.	Rod Dia.	Cylinder Bore Dia.	E	F	R	FB Dia.	TF	UF	Weight
RLI-	mm	mm	mm	mm	mm	mm	mm	mm	lbs
040016SA	16	40	52	10	38	9	72	90	3
050020SA	20	50	65	12	46.5	9	90	110	7
063020SA	20	63	75	12	56.5	9	100	120	8
080025SA	25	80	95	16	72	12	126	150	14
100025SA	25	100	112	16	89	14	150	185	22
125032SA	32	125	140	20	110	16	180	220	38
160040SA	40	160	190	20	140	18	230	279	40

For rod lock & housing specs see page 35.

RLI SMF1 (STAND ALONE MOUNT)

MOUNTING SPECIFICATIONS

Assembly Contains	
Quantity	Item
1	Rod Lock
1	Front Flange
4	Tie Rods
8	Hex Nuts



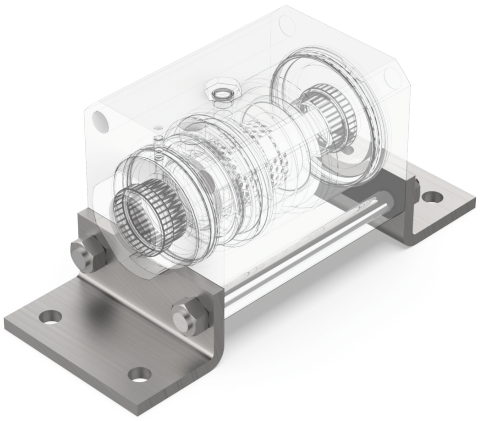
Part No.	Rod Dia.	Cylinder Bore Dia.	E	F	R	FB Dia.	TF	UF	Weight
RLI-	mm	mm	mm	mm	mm		mm	mm	lbs
040016SMF1	16	40	52	10	38	9	72	90	3
050020SMF1	20	50	65	12	46.5	9	90	110	5
063020SMF1	20	63	75	12	56.5	9	100	120	6
080025SMF1	25	80	95	16	72	12	126	150	11
100025SMF1	25	100	112	16	89	14	150	185	17
125032SMF1	32	125	140	20	110	16	180	220	30
160040SMF1	40	160	190	20	140	18	230	279	35

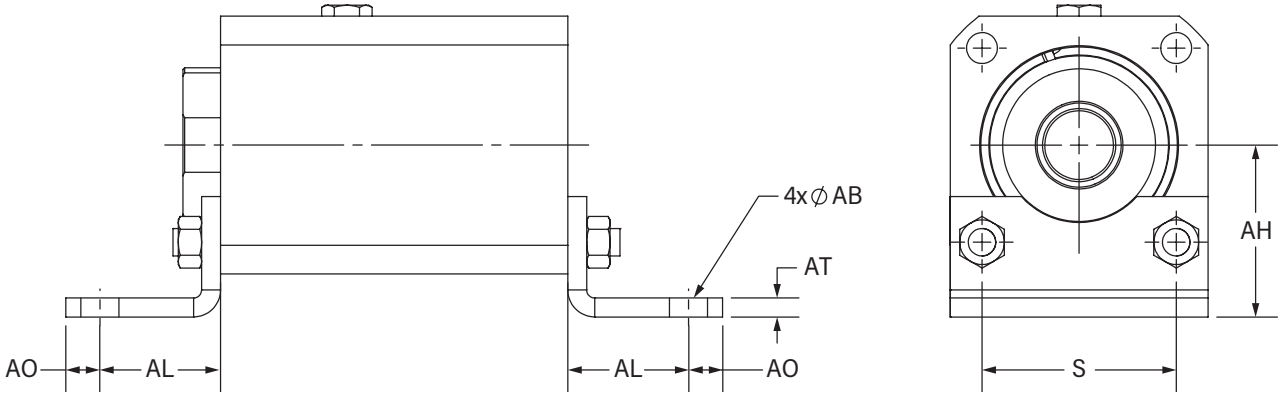
For rod lock & housing specs see page 35.

RLI SMS1 (STAND ALONE MOUNT)

MOUNTING SPECIFICATIONS

Assembly Contains	
Quantity	Item
1	Rod Lock
2	Angle Bracket
2	Tie Rods
4	Hex Nuts





Part No.	Rod Dia.	Cylinder Bore Dia.	S	AB	AH	AL	AO	AT	Weight
RLI-	mm	mm	mm	mm	mm	mm	mm	mm	lbs
040016SMS1	16	40	36	9	36	28	8	4.5	3
050020SMS1	20	50	45	9	45	32	13	5.5	4
063020SMS1	20	63	50	9	50	32	13	5.5	5
080025SMS1	25	80	63	12	63	41	14	6.5	9
100025SMS1	25	100	75	14	71	41	15	6.5	14
125032SMS1	32	125	90	16	90	45	22	8.0	25
160040SMS1	40	160	115	18	115	60	24	9.0	37

For rod lock & housing specs see page 35.

RLI ORDERING INSTRUCTIONS

RLI	XXX	XXX	X	XXX	X	XX

Product Series

RLI	RLI Series

Rod Size/Cylinder Bore Size *(In Millimeters XXX)*

040	016
050	020
063	020
080	025
100	025
125	032
160	040

Mounting Type

MXO/SN	No Hardware *(Skip Mounting Style)*
CMXO	Minimum Hardware *(Skip Mounting Style)*
C	Cylinder Mount
S	Stand Alone**

Mounting Style

A	Flange Mount—Front and Rear
MF1	Flange Mount—Front Only
MS1	Foot Mounts

- *Cylinder Mounting Type—Front Foot Only*
- *Stand-Alone Mounting Type—Front and Back*

Seal Material

Blank	Standard Nitrile*
V	Viton

Surface Coatings

Blank	Black Anodized*
EN	Electroless Nickel
SS	Stainless Steel

**Standard Option*
***Stand-alone unit contains wipers and rod bearings on each end.*

Ordering Example:

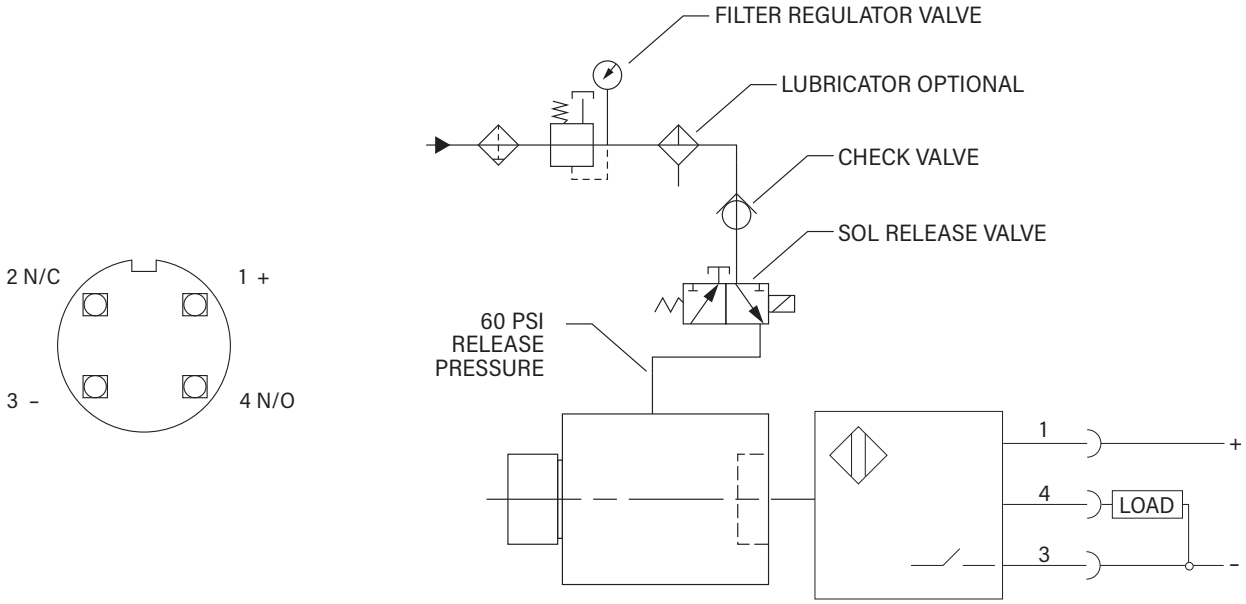
RLI 040 016 C MS1 V EN

40 mm Bore - 16 mm Cylinder Rod; Cylinder Mount with Front Foot Mount; Viton Seal; Electroless Nickel

ACTUATION/CIRCUIT RECOMMENDATIONS

In most applications, the circuit suggested in the drawing is used. It is important to consider that the AMLOK rod locks are power-off locking devices. During every operational cycle, the three-way valve is actuated electronically and pressure releases the locking mechanism.

When power fails, emergency stop, etc. pressure is lost, or dropped, and the locking mechanism secures the rod and holds the load. In a situation where pressure is not sufficiently constant, or drops below recommended release pressure, the spring-operated locking mechanism begins to engage the rod, or shaft, and develops full stated holding force at 0 PSI. It is therefore important to isolate the release circuit from inadvertent pressure drops via the check valve in the inlet to the release valve.



PROXIMITY SWITCH

AMLOK's pneumatic rod locks provide for optional proximity switches.

Specifications for optional proximity switch indicates the "unclamped" position.

Proximity Switch Setting Instructions

1. Set the rod lock to the unclamped, "pressure applied" position.
2. Screw the proximity switch (with jam nuts) into the designated M8x1 proximity switch hole, until it makes contact with the position flange.
3. Unscrew, or back off, the proximity switch approximately ¾ turn. While holding the proximity switch in the set position, tighten the locking nut using the following specifications:
   - RLI Rod Locks: 6 ft/lbs (8 Nm) of torque
   - RLN Rod Locks: 15 ft/lbs (20 Nm) of torque

Note: Final adjustment may be necessary to achieve desired results.

4. With the electrical power in the off position, connect the electrical wiring per the wiring diagram supplied with the switch. After the electrical power has been turned on, the proximity switch should indicate that the rod lock is in the unclamped position.

Note: Ensure that the electrical power has been turned off before making adjustments. The locking nut should be tightened to a maximum of 15 ft/lbs (20 Nm) of torque to prevent damage to the internal components of the switch. If an application requires sealing for food, chemical, or washdown services, also include the optional sealing ring.

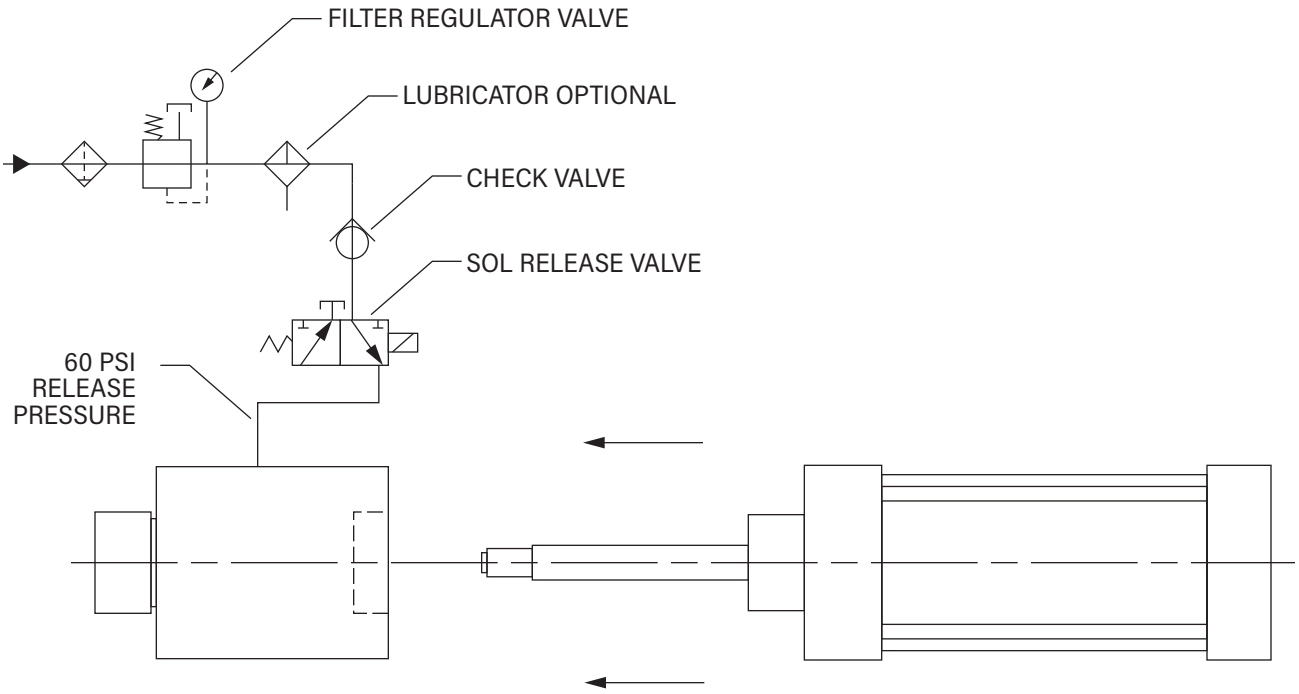
Proximity Switch Information

- Balluf
- BES01PF
- BES M08EH-PSC15B-
- S04G
- 10-30 V DC
- <200 mA
- sn = 1.5 mm

ASSEMBLY INSTRUCTIONS

1. Read assembly instructions and caution label on the unit.
2. Connect a flexible hose to the pressure port of the rod lock and apply pressure to release the clamping mechanism. Then, slide the rod lock over the rod to be clamped.
3. Align the mounting holes and release port to the proper location.
4. Release pressure to 60 PSI with clean, dry, and compressed air.
5. Bolt rod lock to cylinder or housing.
6. Pressurize the rod lock to the specified release pressure.
7. Release and pressurize several times. With the specified pressure the rod should move freely through the rod lock.
8. If the rod does not move freely, check the squareness of the housing and cylinder contact surface and correct if necessary.

Note: CAUTION! Minimum of 60 PSI must be maintained on the release port when there is no shaft in the unit.



CUSTOM MOUNTING CONFIGURATIONS AVAILABLE

Image: Close-up shows the AMLOK rod lock (far right) that mechanically locks the massive lift gate into position, in the event of a hydraulic pressure loss. The rod lock mechanically disengages on re-energizing of the system.

NOTE: Rod locks can be an integral part of your housing. AMLOK can provide mating components for your special applications. When side loads are acting on the cylinder rod, make sure that the rod is guided sufficiently in bearings to avoid excessive side loads on the locking mechanism. This is especially important at higher cylinder rod speeds.

For special mountings or higher holding forces, please consult the factory.

REQUIREMENTS FOR OPTIMAL PERFORMANCE

HYDRAULIC ROD LOCKS

AMLOK hydraulic rod locks must be used in an application that meets the following specifications:

- If the rod has to support extreme stresses—for example, frequent switching operations, breaking out of the movement, releasing under load or exposure to dirt, etc.—a hardened surface is necessary.
- When attached to cylinders, longer cylinder rods must be specified to allow for the length of the rod lock. The rod lock requires a full rod diameter for the entire length "L" of the clamp. Add a minimum of "L" length for a rod extension to allow for the length of the rod lock.
- AMLOK is designed for zero side loads—make sure the rod is guided sufficiently in bearings when side loads are acting on the cylinder rod to avoid side loads on the locking mechanism. This is especially important at higher cylinder rod speeds to avoid overheating the clamping device due to excessive friction with the rod.
- The contact surfaces and bores to which the rod lock is clamped must be square and concentric to each other to avoid binding of the rod or excess wear. The rod must fully engage the clamping device at all times.

ROD MATERIAL REQUIREMENTS:

- Commercial, hard chrome plated, polished rods (IHCP 1050) are recommended
- Rod diameter +0.000/-0.003"
- Avoid nicks and burrs which could damage the wiper and bearings

CLAMP/UNCLAMP RESPONSE TIME

The AMLOK hydraulic rod locks clamp in 100 msec, for a total cycle time of 200 msec. These response times were calculated with a fast response solenoid valve located at the lock port and zero back pressure.

PNEUMATIC ROD LOCKS

AMLOK pneumatic rod locks must be used in an application that meets the following specifications:

- Suitable for infrequent dynamic braking or emergency stops when used with hardened shaft material and proper cylinder and motion control circuits. Repeated dynamic stops may cause rod wear, reduce holding forces and life.
- Requires clean, dry, filtered, compressed air
- Rated holding force corresponds to static load conditions. Slipping may occur if the rated value is exceeded and may cause rod damage.
- When attached to cylinders, longer cylinder rods must be specified to allow for the length of the rod lock. The rod lock requires a full rod diameter for the entire length "L" of the clamp. Formulate "L" dimension + "V" dimension for minimum extra rod length.
- Rod must be clean and dry to maintain optimum holding force—rod locks do not require lubrication
- Cylinder pilot must mate properly with rod lock seal for food service washdown rating.
- The contact surfaces and bores to which the rod lock is clamped must be square and concentric to each other within 0.05 mm T.I.R. (RLI) or 0.002 in T.I.R. (RLN) to avoid binding of the rod or excess wear. The rod must fully engage the clamping device at all times.
- If a hollow rod must be clamped, contact Advanced Machine & Engineering's AMLOK Division for guidelines

ROD MATERIAL REQUIREMENTS:

- Standard ISO-6431 (RLI) or NFPA (RLN) cylinder rod
- Commercial, hard chrome plated, polished rods (IHCP 1050) are recommended
- Rod diameter f7 tolerance or +0.000 in / -0.003 in
- Avoid nicks and burrs which could damage the wiper and bearings

WARRANTY INFORMATION

When properly applied, the AMLOK rod lock units are warranted to be free from defects of materials and workmanship for a period of one (1) year from date of shipment or one (1) million cycles, whichever comes first.

YOUR SAFETY IN FOCUS

SITEMA
Expertise in Safety

SITEMA is the only company in the world specializing in the development and production of clamping devices and linear brakes, which made them a perfect match to partner with AMLOK. An internationally respected partner to machinery manufacturers, SITEMA's abilities in securing, clamping, and fixing loads in axial motion have put them on the map.

AUTHORIZED REPAIR CENTER FOR SITEMA SAFETY CATCHERS

As the exclusive partner for SITEMA in North America, Advanced Machine & Engineering's AMLOK Division offers the only authorized repair center in the United States for Sitema safety devices. Extensive repair services for both hydraulic and pneumatic AMLOK rod locks is also offered.

PRODUCT OVERVIEW

SAFETY CATCHERS

Series K, KR, KRP, KRP/T, K/T

- For medium-sized, large, and very large loads
- DGUV-approved
- One load direction

SAFETY BRAKES

Series KSP

- For small to medium-sized loads
- DGUV-approved
- One load direction

SAFETY LOCKS

Series KRG, KRGP

- For static or slow-moving masses
- Compact design
- One load direction

LOCKING UNITS

Series KFH, KFP, KB...

- Extensive standard range with numerous series for special applications, including outdoor, cylinders, and machine tools
- DGUV and Lloyd's approved series available
- Both load directions

POWER STROKE

Series FSK, FSKP

- Clamping head with additional integrated short stroke function
- Ideal for pressing, stamping, joining, riveting, clinching, forming, embossing, closing molds, etc.

APPLICATIONS

AMLOK ROD LOCKS

AMLOK rod locks can accommodate a large variety of applications, including food, chemical, and washdown applications when sealed designs are used.

HYDRAULIC ROD LOCKS

- Injection molding machines
- Hydraulic presses
- Amusement equipment
- Theatrical equipment (platforms)
- Paper handling equipment
- Machine tools; presses, vertical heads, rams, platforms
- Fixturing (machine tools)
- Automation equipment
- Anti-drift applications
- Scissors lift tables
- Printing equipment
- Heavy-duty earth-moving equipment
- Industrial processing equipment
- Mining applications
- Municipal vehicles and equipment
- Locking spherical valves in piston hydro power generating plants
- Positioning; height adjustment of winch installations and rollers; securing of adjusting drives; holding of solenoids, piston rods, and spacers

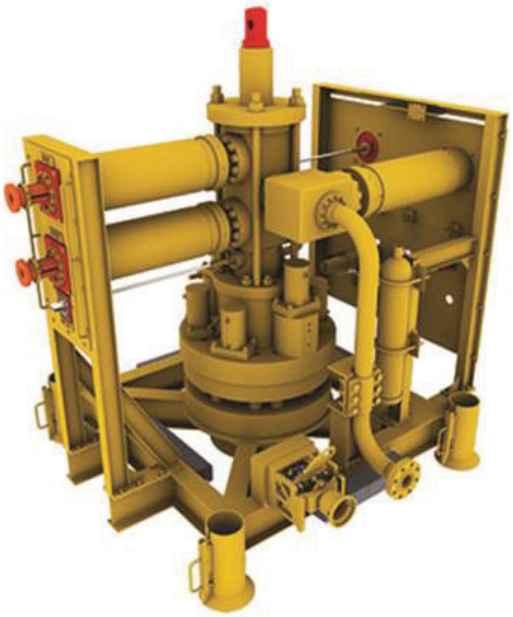
PNEUMATIC ROD LOCKS

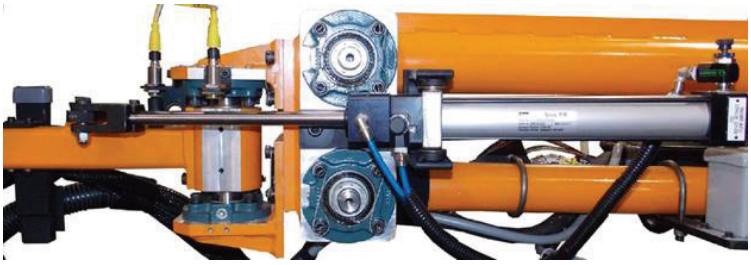
- Machine Tool Applications
- Scissor-lift Tables
- Test and Positioning Equipment
- Amusement Ride Equipment
- Printing and Paper-Handling Equipment
- Theatrical Equipment (Platforms)
- Assembly and Test Equipment

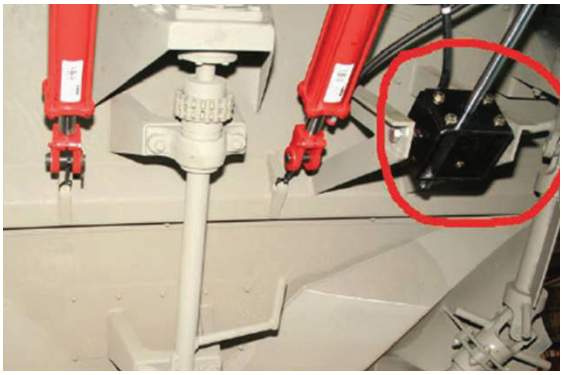
SITEMA SAFETY DEVICES

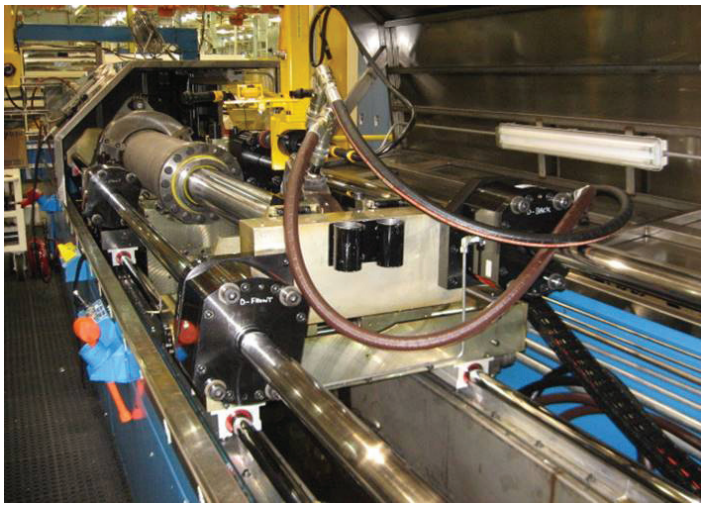
Sitema's safety devices can be implemented into a wide range of applications in the manufacturing industry that are similar to those of AMLOK.

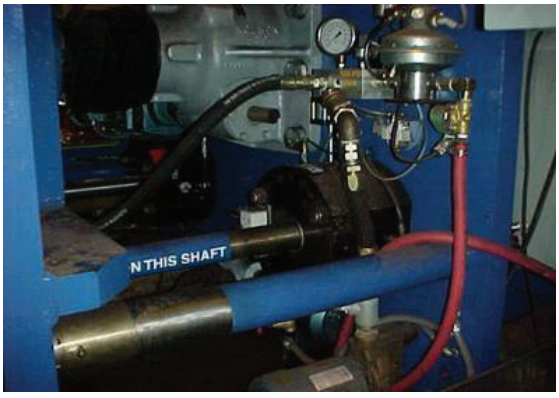
- Machine Tools: Presses, Vertical Heads, Rams, Platforms
- Scissor-Lift Tables
- Test and Positioning Equipment
- Amusement Ride Equipment
- Printing and Paper Handling Equipment
- Assembly Equipment
- Fixture Applications










N THIS SHAFT

DESIGN. BUILD. GROW.

Advanced Machine & Engineering® (AME) was founded in 1966 out of Rockford, Illinois (USA) by Willy Goellner. Originally known as Advanced Engineering Co., AME has developed into a global leader in machine tool components and metal cutting machines for over 50 years. With strong core values supporting STEM (Science, Technology, Engineering, and Math) education, AME's robust apprenticeship and community outreach programs ensure a secure, innovative environment that supports AME facilities and the development of the American manufacturing movement.

ISO 9001:2015
REGISTERED

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AMLOK_P0625