

milwaukee
Cylinder

Specials are Our Standard



End of Stroke Mechanical Locking Cylinders

Available for
Series A & LH
Models



- Available for A & LH Models
- Positive mechanical locking available for fully extended, fully retracted or both
- Options available for up to 2500 lbs of holding force
- Once locked — allows operating pressure to be removed

Perfect for:

- ▶ Presses
- ▶ Door openers
- ▶ Air hoists
- ▶ Long hold applications

i INSTALLATION DATA

- Shipment may have caused the locking ring to become uncocked. Before using this cylinder, pressurize the end of the cylinder containing the lock to 50 psi. This will cock the locking ring and prevent damage to the cylinder. This applies to the blind end only.
- A three position, four-way valve with an *open center* position must be used. A closed center position four-way valve will trap oil or air in the lock mechanism and prevent the cylinder locking
- For optimum life of the locking mechanism, always pressurize the opposite end first before releasing a load from the locked position. (Load will then be supported by cylinder pressure and not lock mechanism at the time load is released)
- The 1/8 NPT Port in the end cap containing the lock mechanism should be used as follows:
 - a) Attach breather on air operated cylinders
 - b) Connect to drain on hydraulic cylinders
- If back-pressure check valves are used in circuit, pressure is not to exceed 5 psi
- Cylinder must bottom out or travel full stroke to engage the Lock Mechanism on either end.

SETS "A" AND SERIES "LH**"

The load is locked into position by an *internal mechanical locking device* and remains locked until line pressure is applied.

It will also *remain locked* even in the event of piston seal failure or the absence of line pressure.

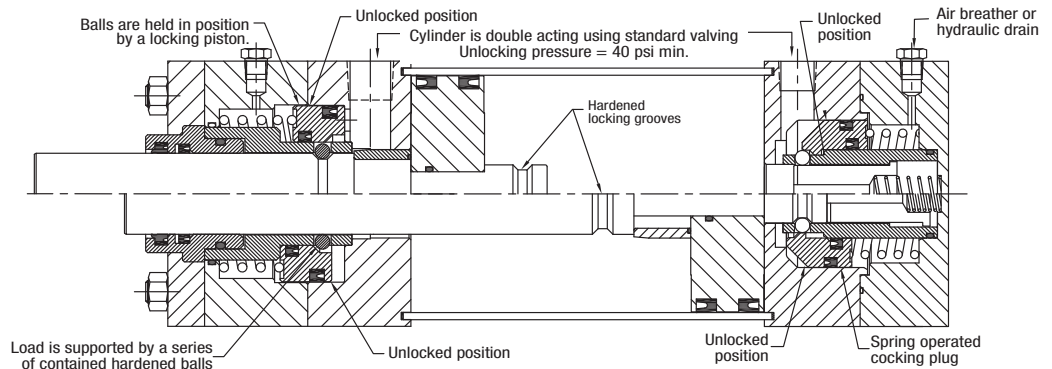
In applications that require loads to be held in position for long periods of time, the loads can be locked and line pressure removed.

These *Milwaukee* Cylinders are the answer to cylinder applications, such as presses,

door openers, air hoists and many others, whenever a positive lock is desired to prevent drifting, or for loads that are to be held for long periods of time, with an absence of line pressure.

The *Milwaukee* Mechanical Lock is available as locked in the retracted position or the extended position, or a combination of both. It is available on *Milwaukee* Series A-LH Cylinders in all mounting styles and in bore sizes from 1½" to 6" (A-LH).

***Consult factory for use with "H" Series**



MILWAUKEE MECHANICAL LOCK KEY FEATURES

Positive Locking—the *Milwaukee* Mechanical Lock mechanically locks the cylinder piston rod at either extreme of the stroke length.

Fail Safe Locking—Always locks automatically when rod reaches the end of its stroke. Locking action is positive, with no possibility of movement when the unit is operated within its rated capacity. Only applied hydraulic or pneumatic pressure will release lock mechanism.

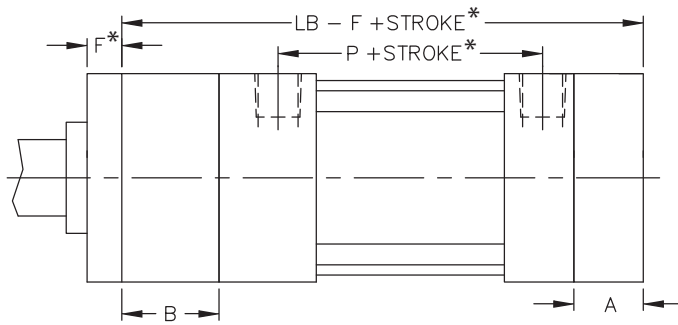
Functional Design—All parts are designed for maximum service life with trouble-free operation.

Easy Maintenance—All major seals can be easily replaced and are readily available from shelf stocks.

Versatility—*Milwaukee* Mechanical Lock is available in all NFPA standard cylinder mounting styles for adaptation to a wide variety of applications, including a choice of rod and styles and rod diameters.

Economy—*Milwaukee* Mechanical Lock's basic design simplicity and dependability, integrated with *Milwaukee*'s Series LH or Series "A" cylinders, eliminates more costly, separate actuating and lock components.

Series A & LH, Mechanical Locking Cylinders



* Consult the Milwaukee Cylinder Catalog for basic cylinder dimensions. Include the appropriate add on (A and/or B) for the locking feature to determine the overall length.

Maximum Holding Capacity:
100 - 2500 lbs.

Operating Temperature:
-20°F to +200°F

Operating Temperature for LH:
750 - 1500 psi

Operating Temperature for A:
Max. 750 psi

▼ Dimensional Data

Bore Dia.	Rod Dia. Rod End Lock	Min. Release Pressure (psi)	Max. Holding Capacity (lbs)	Operating Pressure LH (psi)	Operating Pressure Air (psi)	Series A & LH	
						A	B
1½ **	—	40	100	1500	250	1⅞	—
2	⅝		200	1500		1⅞	1½
2½	⅞		250	1000		1⅞	1½
¾	1		1000	1500		1⅞	1¾
	1⅜		1000	1500		1⅞	1¾
	1¾		1000	1500		1⅞	1¾
4	1		1500	1000		1⅞	1¾
	1⅜		1500	1000		1⅞	1¾
	1¾		1500	1000		1⅞	1¾
	2		1500	1000		1⅞	1¾
5	1		2500	750		2⅞	1¾
	1⅜		2500	1000		2⅞	1¾
	1¾		2500	1000		2⅞	1¾
	2		2500	1000		2⅞	1¾
6	1⅜	2500	750	2¼	2		
	1¾	2500	750	2¼	2		
	2	2500	750	2¼	2		

* Available in blind end lock only. Blind and lock available in all rod sizes. Rod end lock available in sizes listed.

** An exception to standard catalog dimensions: E = 2½" square both blind end caps for 1½" bore only.

THE SIMPLE OPERATING PRINCIPLE OF MILWAUKEE MECHANICAL LOCK CYINDER

The "Lock" section consists of a sleeve, locking piston and a cylinder rod. The sleeve holds a series of hardened steel balls in a radial pattern, that engages a groove in the cylinder piston rod, and the balls are locked in position by the locking piston. This provides a positive mechanical connection to lock the cylinder piston rod in the extreme stroke position. When hydraulic or pneumatic pressure is applied to the normal inlet port, the locking piston is moved off the balls, thus unlocking the piston rod, to travel the required stroke length. Cylinder piston rod is re-locked automatically by simply returning the rod back into the lock mechanism.



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MILWAUKEE CYLINDER offers:

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- **HYDRAULIC PNEUMATIC DEVICES**
 - **PRESSURE BOOSTERS**
 - **AIR OIL TANKS**
 - **ACCUMULATORS**
- **CYLINDER ACCESSORIES**
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 - **AMLOK® ROD CLAMP**
 - **SPHERICAL ROD ACCESSORIES**
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Contact Milwaukee Cylinder for your application needs.

Specials
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