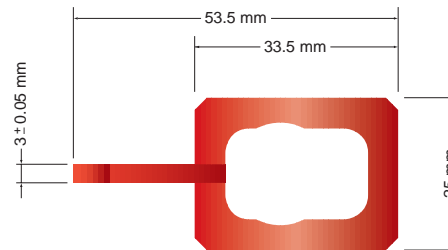
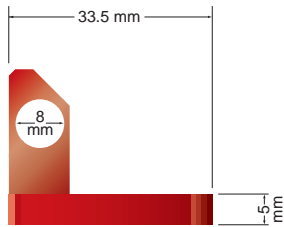


# FUJIKIN LOCK OUT/TAG OUT (LOTO) DEVICE



- Reliable
- Constructed of anodized aluminum
- Lightweight
- Easy to install and use
- Compact design to fit in tight spaces
- Available for Mega-One quarter-turn valves
- Can be used with a lock or a tag depending on customer requirements
- Will not fall off when the lock or tag is removed
- Cannot be locked in the open position



## Safety...Reliability...Fujikin!

Ensuring employee safety is a top priority in the semiconductor industry. To comply with OSHA regulations and other international guidelines, LOTO devices are used to prevent or warn against the opening of gas line valves closed for tool installation, maintenance or repair.

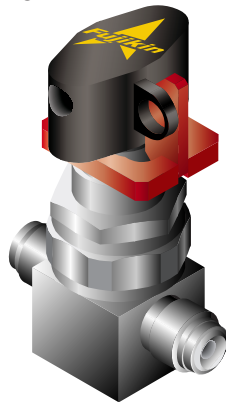
Fujikin has a proven record of superior quality valve technology providing reliable and durable products. We have applied our high level of design expertise to the development of a unique way to protect workers and prevent accidents in the fab.

## Compact Design

To create a LOTO device small and rugged enough to meet the demanding requirements of the semiconductor industry, Fujikin relied on its many years of experience in valve and fitting design and manufacturing.

The Fujikin LOTO device is small yet powerful. When installed and locked it can withstand up to 30kgf cm (26 in. lb.) of torque. And this design prevents the LOTO from falling off when the lock or tag is removed.

Decreasing tool footprint is forcing more gas panel components into a smaller area. The Fujikin LOTO valve can fit easily into these restricted spaces.

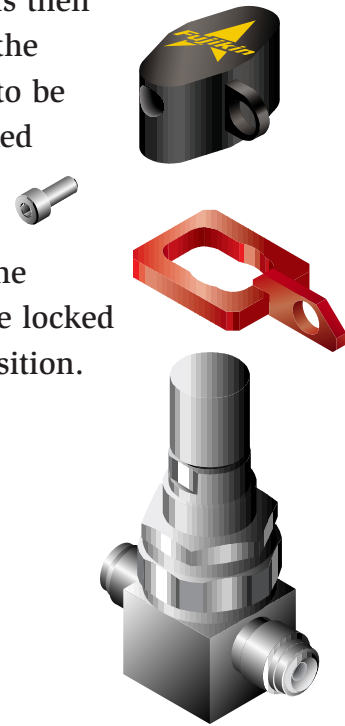


## Easy Installation

Ease of installation in the field was a driving force behind the design of Fujikin's LOTO device.

Once the valve is in the OFF position, a small hex screw can be loosened to remove the head of the valve for replacement with the LOTO device and new valve handle.

The set screw is then tightened and the valve is ready to be opened or locked into the OFF position. For added safety, the valve cannot be locked in the open position.



**Please contact your local Fujikin representative for more information on this innovative product.**

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# Fujikin Manual Valve and Lockout Device Benefits

## Perfect for:

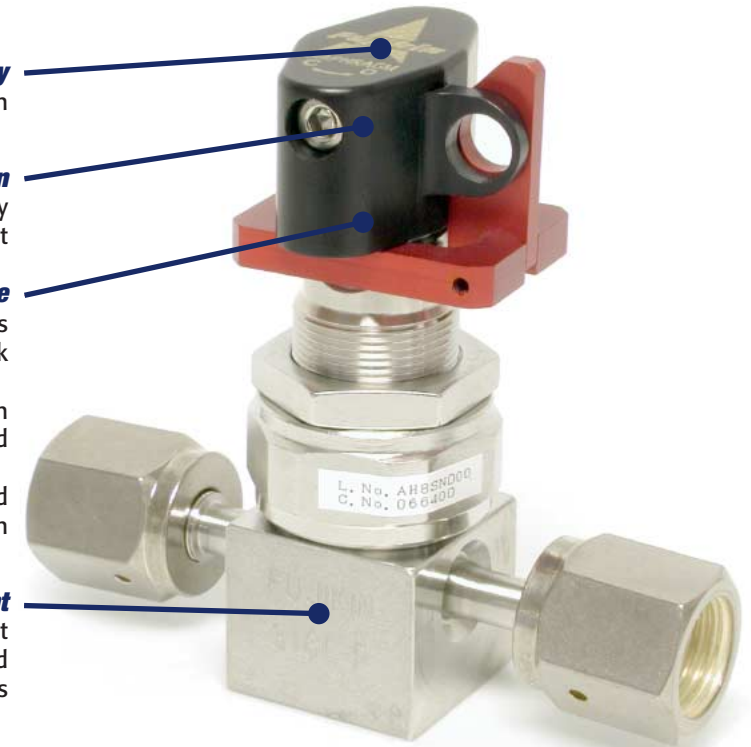
- tool gas boxes
- valve manifold boxes
- valve manifolds
- gas isolation boxes
- and wherever hazardous lines must be locked closed to ensure employee safety.

**High-Visibility**  
Easily identify the valve's position

**Quick Operation**  
Fujikin valves can be quickly operated with a flick of the wrist

- Cam-Action Handle**
- Snap-acting handle provides audible and tactile feedback
  - Cannot be left in any position other than open or closed
  - Cannot be accidentally nudged to open or closed position

**Drop-in Replacement**  
Mega-One valves are a direct replacement for most standard conventional valves

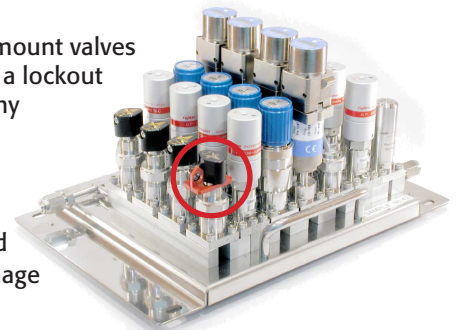


**Safety**  
Fujikin manual quarter-turn valves can never be locked in an open position

- Spring-Loaded Stem**
- Internal spring generates the same sealing force as an air-operated actuator
  - Constant spring force on soft seat assures it will never deform and/or leak over time
  - At 90° the valve shuts-off completely – handle can never overtravel

**Simple Retrofit**  
Mega-One and IGS surface-mount valves can easily be retrofitted with a lockout device and handle without any modifications to the valve

**Rugged Design**  
Lockout device can withstand 26 in.lbs torque without damage



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# Fujikin Manual Valve and Lockout Device Features

Ensuring employee safety and preventing equipment damage is top priority in any manufacturing facility. Manual valve lock-out / tag-out (LOTO) devices that secure valves in the closed and locked position are one of the many safety devices that help prevent injury or equipment loss. However, not all manual valves with lockouts are 100% safe and reliable!

## Quarter-turn valves will overtravel — and leak — over time

Seats in quarter turn soft-seated valves will deform after a certain amount of on/off cycles or after being in the closed position for an extended amount of time. This phenomenon is exacerbated if the valve is installed in a hazardous or critical service in which technicians tend to overtighten the valve to assure positive and complete shut-off. Seat deformation will require that the valve handle be tightened beyond 90° to an overtravel position, as seen below.



The installation or use of a LOTO device on a valve that has undergone seat deformation may prove to be extremely dangerous. With a lockout device in place, the valve can only be secured in a 90° position. However, leakage may occur if positive shutoff is achieved well beyond the 90° rotation, allowing for disastrous conditions.

Fujikin's solution to assuring positive leak-free shutoff, is to **spring-load** the valve stem with the same force as actuated valves. Positive shutoff is achieved at 90° regardless of how many times the valve has been actuated. The spring provides a constant force which is strong enough to positively seal the valve, yet gentle enough to prevent seat deformation.

The stem spring-loading also allows for an exclusive spring-assisted **dual-roller mechanism** found only on Fujikin valves.

The roller pathway prevents the valve from being left in any position other than open or closed, while the snap-action provides feedback to the operator — both during open stroke as well as during close stroke. The roller stops make it impossible to overtighten the valve, thereby assuring that the valve seat will never deform and will always be subjected to the correct sealing force.

Combining all of these advanced features into a manual valve assures the end-user that a Fujikin valve will not leak — even with a LOTO device installed.



## Lock only in the closed position!

Many valve LOTO devices allow the user to lock the valve handle in either the open or closed position. This may prove to be an extremely dangerous scenario if a valve is in an open and locked position, thereby preventing operators from shutting off the valve quickly in an emergency situation.

The "safety-first" design of a Fujikin valve makes it physically impossible to inadvertently lock a valve in an open position. The locking mechanism mates with the handle eye only when it is in the closed position.



## Quick position verification without compromising on space

Space-saving toggle valves are easy to operate, but quickly finding which valve is open simply cannot be done at a glance. The high contrast gold-on-black, shaped handles which are standard on Fujikin valves, makes visual position confirmation quick and easy — even from a distance. The ergonomic, space-saving handle and LOTO combination allows for quick and easy operation without compromising on compactness, especially on densely packed gas panels where space is minimal.



Poorly-designed LOTO devices may contain components that can fall off, or may require complete valve replacement to retrofit with a LOTO device. Fujikin LOTO devices are designed to mount onto Mega-One series and Fujikin surface mount valves without any modifications, and can be operated with one hand — regardless of valve orientation.

We invite you to compare any manual valve with LOTO device against Fujikin's. We guarantee the Fujikin design is the safest, most user-friendly design in the industry.



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