38C | Lubricants













RATERMANN

Cryogenics

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VALVE LEAK CHECK









Vacuum Pump Oil & Cryo Pump Grease | Flash Point Oil & Grease

Premium Zero Flash Point Oil

Made with PFPE for Longer Pump Life

• Chemical Inert

100% Oxygen **Compatible**



Premium Zero Flash Point Krytox™ Oil **Light Weight Viscosity**

Part #	Description	Size Container	
KRY-VPF1506.5KG	Krytox™ 1506	1/2 kg	
KRY-VPF15061KG	Krytox™ 1506	1 kg	
KK1-VF113001KG	RIYLOX 1300	i kg	
Standard Weight Vi	,	i kg	
	,	5 kg	

Standard Industrial Grade Vacuum Pump Oil

Single and Two Stage Rotary Piston Vacuum Pumps and Rotary Vane Vacuum Pumps





For pumps in Oxygen service we recommend Zero Flash Point Krytox™ Oil.

Standard Industrial Vacuum Pump Oil

Part #	Description	Size Container
VP-PUMP1G	Vacuum Pump Oil	1 Gallon

General Purpose Grease for

100% Oxygen

Compatible

- Valves
- Fittings
- Regulators
- Truck Pallets
- Oxygen Dewars, Casters and Handles

Part # CGV-2-F12

Use on

Regulators

Use on

Valves



Krytox™ GPL-226 Grease 1/2 KG Jar Part # KRY-GPL2260.5KG



Krytox™ GPL-226 Grease 2 Oz. Tube Part # KRY-GPI 2262

Part #	Description	Size Container
KRY-GPL2262	226 Grease	2 Oz. Tube
KRY-GPL2268	226 Grease	8 Oz. Tube
KRY-GPL2260.5KG	226 Grease	1/2 KG Jar
KRY-GPL2261KG	226 Grease	1 KG Jar



Use on **Casters**

Oxygen Dewars and Fittings

▲ WARNING: Cancer and Reproductive Harm – www.P65Warnings.ca.gov. For further information on Proposition 65, please go to www.oehha.ca.gov/proposition-65

Cryo Pump Grease for Hot and Cold Ends of Pumps



Part # KRY-GPL226CART

Cryostar Pumps

- ACD Cryo Pumps
- Bearings
- Krytox[™] GPL-226

Cartridge 1.75 Pounds to a Cartridge

General Maintenance OXYGEN SAFE GREASE with Anti-Corrosion Additive

Part #	Description	Size Container
KRY-GPL226CART	Krytox™ GPL 226 Cartridge	1.75 Lb.
CART-GUN	Grease Gun H.D.	each

DuPont™ Krytox™, and Vydax® are registered trademarks or trademarks of E.I. duPont de Nemours and Company

PTFE and LOX-8™ Pastes and Grease

PTFE Paste and PTFE Tape





Oxygen Safe, **Chemically Inert,** and Odor Free

FORMULA-8® is used by thousands of welding and general supply companies and equipment manufacturers worldwide.

IDEAL APPLICATIONS FOR PTFE PASTE

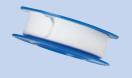
- Oxygen cylinders to eliminate leaks
- Fine instrument threads
- Oxygen systems below 125° C
- Valves on bottled gases

PTFE Paste

Part #	Description
OXY-PTFF-8	PTFF Pasto

Green **Oxygen PTFE Threaded Seal Tape**





PTFE Tape

Part #	Description	
TAPE-1	1/4" PTFE Tape	
TAPE-2	1/2" PTFE Tape	
TAPE-34	3/4" PTFE Tape	
TAPE-3	1" PTFE Tape	

Green PTFE Tape

Part # Description TAPE-2-GREEN 1/2" x 520" Green PTFE Tape TAPE-34-GREEN 3/4" x 520" Green PTFE Tape

See page 38A-12 for Nitrile Latex-Free Gloves

LOX-8™ Paste and Grease

LOX-8™ Paste & Grease has met the requirements for (BAM) testing. It is odorless, non-corrosive, green tinted, and hydrophobic (waterproof). It is totally non-migrating and remains where it is applied. LOX-8™ is ideal, even after long periods of time, where repetitive assembly and disassembly are required.



- Assembly lubricant
- Breathing apparatus
- Cryogenics
- Hospitals: oxygen and nitrous oxide systems
- Instruments
- Medical equipment
- Thread sealants
- Welding and Many other industrial uses

Grease

Part #	Description
OXY-8 LOX G3.5	3.5 oz. Grease
OXY-8 LOX G16	16 oz. Grease
OXY-8 LOX GP	Plunger 3.5 oz. Grease
OXY-8 LOX G25G	25 gram Grease

Paste

Part #	Description
OXY-8 PAST	3.5 oz. Paste
OXY-8 PAST 16	16 oz. Paste
OXY-8 P PAST	3.5 oz. Plunger
OXY-8 PAST G25G	25 gram Paste

Email: sales@rmicryo.com



Oxygen Safe Valve Leak Check **OUR PREMIERE Leak Check**

Ratermann's Valve Leak Check is ready to use! Formats available in 8 oz. bottles with 12" extension tube in each bottle, 1 gallon, 5 gallon and 55 gallon drums.



Ratermann's Valve Leak Check has passed the following corrosion tests:

10.1 Aluminum Alloy Alclad (2024)	Pass	No Corrosion
10.2 Aluminum Alloy (2024) ASTM B209-96	Pass	No Corrosion
10.3 Steel, conforming to SAE-AMS 5046 A-90	Pass	No Corrosion
10.4 Copper, conforming to ASTM B512	Pass	No Corrosion

Part #	Description	Size
LC-80Z	Leak Check Squeeze Bottle	8 oz.
LC-1GAL	Leak Check – 4 to a case	1 Gallon
LC-5GAL	Leak Check – Pail	5 Gallon
LC-55GAL	Leak Check – Drum	55 Gallon



SPECIFICATIONS

- Does not contain mineral oil, vegetable oil, animal oil, fats, ketones, aldehydes, or alcohols as components in the formulation. (Our latest formulation has also phased out flurosurfactants.)
- Does not contain any material that will act as primary skin irritants, skin sensitizers, or produce any other dermatosis.
- Does not possess or produce any objectionable odors. The threshold odor number will be a maximum of 1 with a maximum odor intensity index of 0.
- Has a pH between 6.5 and 7.5.
- Passes and surpasses Mil-Pref foam tests (minimum 130 mm foam height after 5 min
- Has a residue below .5% by mass.
- Will not support mold growth within the product shelf life (5 years from day of manufacture)
- The formula has also undergone and passed halogen testing (ASME section V, Article 6, T-641, ASTM).



Spray bottle option available

Pressure Test

It is very important to leak check hoses on a regular basis. Often, this test is conducted while the hose is attached to the fill manifold and under pressure. The best gas to use for a leak check (and most expensive) is helium. Helium works well because the helium molecule is very small. As a result, helium will find a leak better than most other gases. Keep in mind that this can get a little spendy, so other inert gases can be substituted. We do not recommend compressed air or any other gas that could contain impurities.



- Find leaks fast!
- Ratermann Leak Check is designed to quickly identify leaks on contact.
- Works well with small molecule gases Helium & Hydrogen
- Reduce product loss find those leaks fast...and eliminate them
- Designed to detect compressed gas leaks.

Checking cylinder valves for leaks.

8 oz. Squeeze Bottle comes with **Pull Out Adjustable Tube** to Deliver Leak Check Solution Where you Need it.



Leak check medical oxygen cylinders

Oxygen Compatible OC Five Paste & OC Seven Grease



OC Five Paste, OC Seven **Grease and OC Three PTFE** Paste Joint & Thread Sealer

are compatible with many aggresive chemicals including the following:

OC 3	OC 5&7	(Please see "X" to the left for compatibility check)
X	Х	Acetylene
Χ		Aluminum chloride
	Х	Ammonium hydroxide
Χ	Х	Ammonium nitrate
Χ	Х	Ammonium percholrate
Χ	Х	Antimony trichloride
	Х	Boron trifluoride
Χ	Х	Bromine
	Х	Bromine trifluoride (gaseous)
Χ	Χ	Calcium hypochlorite
Χ	Х	Carbon dioxide
	Χ	Chlorine trifluoride (gaseous)
Χ	Χ	Chlorosilanes
Χ	Χ	Chlorosulfonic acid
Χ	Х	Chromic acid
Χ	Х	Ethylene
Χ	Х	Fluorine (gaseous)
	Х	Fuming nitric oxide
Χ	Х	Helium
Χ	Х	Hydrogen
Χ	Χ	Hydrogen bromide
	Х	Hydrogen fluoride
Χ	Х	Hydrogen peroxide
		(all concentrations)
Χ	Х	Hydrogen sulfide
Χ	Х	Hydriodic acid
Χ	Х	lodine
Χ	Х	Muriatic acid
Χ	Х	Nitric acid
Χ		Nitrogen oxides
	Х	Nitrogen trifluoride
Χ	Х	Oleum
Χ	Х	Oxygen (liquid & gaseous)
Χ	Х	Phosphoric acid

Oxygen Compatible OC Five Paste & OC Seven Grease

Solutions for critical and demanding applications where no flammability, compatibility with oxygen and resistance to aggressive chemicals are essential.





OC Five Paste and OC Seven Grease are blended formulations consisting of PTFE particles and Halocarbon® oil, producing a superior sealant that is chemically inert and environmentally safe. Both products have been tested and certified by BAM for gaseous and liquid oxygen service.

OC Five and OC Seven can be used in High Vacuum 10-7 Torr applications where exposure to corrosive gases is probable. They are superior lubricants which provide leak tight sealing in a wide range of vacuum requirements. These offwhite homogenous grease and paste formulations provide unique sealing and lubricating solutions, as their properties remain unaltered over wide temperature ranges – from cryogenic through thermally stable to +450°F. Both are non-flammable, non-migrating, non-toxic, odorless and waterproof as well as anti-corrosive, anti-galling, anti-seize, dielectric and lubricating.

Cost effective for liquid oxygen, liquid nitrogen, cryogenic and vacuum applications to prevent

and reduce component and equipment failures, maintenance or downtime.

Available in 2 oz. (57 gram) and 16 oz. (454 gram) jars with resealable lid for ease of use and storage.

Not recommended for aluminum against aluminum applications. Do not use with concentrated alkalis, fluorine (liquid) or chlorine trifluoride (liquid).

9002 83 9	Polychlorotrifluoroethylene
9002 84 0	Polytetrafluoroethylene
68611 44 9	Silicon dioxide aerogel

OC Five Paste and OC Seven Grease

Part #	Description
OXY-0C5-20Z	OC Five Paste, 2 oz. Jar
OXY-0C5-160Z	OC Five Paste, 16 oz. Jar
OXY-0C7-20Z	OC Seven Grease, 2 oz. Jar
OXY-0C7-160Z	OC Seven Grease, 16 oz. Jar

Oxygen Compatible OC Three PTFE Paste Joint & Thread Sealer

OC Three PTFE Paste Joint and Thread Sealer is an aqueous based PTFE formulation. It is a homogenous white paste that penetrates thread convolutions more effectively, and more safely, than PTFE tape. Tested, approved and certified by BAM for gaseous and liquid oxygen service. Use in extreme temperatures (-400° F to +500° F) and Mid Vacuum specifications to 10-3 Torr. OC Three is especially capable for sealing oxygen and acetylene cylinder valves. Easy to apply from its 4 oz. (113.4 gram) squeeze tube with extended nipple and resealing cap. A superior PTFE thread sealant paste that contains these optimal properties:

Water Soluble / Anti-Galling / Anti-Corrosive

Anti-Seize / Chemically Inert / Non-Toxic

Non-Flammable / Non-Migrating / Odorless





9002 84 0	Polytetrafluoroethylene
13463 67 7	Titanium dioxide
9003 01 4	Carboxy vinyl polymer
7732185	H2O (water)



Part # OXY-OC3-650G

OC Three Joint and Thread Sealer

Part #	Description
OXY-0C3-40Z	OC Three PTFE Paste, 4 oz. Tube
OXY-0C3-650G	OC3 PTFE Paste, 650 Gram Jar

Email: sales@rmicryo.com

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Potassium perchlorate

Potassium persulfate

Silicone tetrachloride

Sodium hydroxide (all concentrations) Sodium hypochlorite

Sodium perchlorate

Titanium tetrachloride

Uranium hexafluoride

Sulfur dioxide

Sulfur trioxide

Sulfuric acid

Propylene oxide

Silane

Sodium

Krytox™ Grease and Oil Uses | Vertrel™ Specialty Fluids



Krytox™ GPL-102 Oil

For use in air tools or o-ring seals around oxygen.

• Packaged in a convenient 0.5 kg size container.

Part # KRY-GPL1020.5KG

Call **Customer Service** 1-800-264-7793

Larger sizes available upon request.



Krytox™ **GPL-226 Grease**

Can be used on such things as metal to metal surface in contact with liquid oxygen or compressed oxygen. Liquid cylinder casters, cylinder valve stems, for use where moisture might be present.

> Part # KRY-GPL2262 Part # KRY-GPL2268





Krytox™ GPL-226 Grease 1/2 KG Jar Part # KRY-GPL2260.5KG



Krytox™ GPL-226 Grease 2 Oz. Tube Part # KRY-GPL2262

Krytox™ **GPL-203 Grease**

For use on medical o-ring seals such as the QF-H870 fill connectors or the QFT-540 connectors. Can also be used on medical fill racks for general lubrication.

> Part # KRY-GPL20320Z Part # KRY-GPL20380Z

Vertrel™ MCA Specialty Fluid

Vertrel™ MCA specialty fluid is a proprietary azeotrope consisting of Vertrel™ XF and trans-1,2 dichloroethylene. Its enhanced solvency makes it very effective for precision and specialty cleaning jobs, especially with difficult soils. It is an ideal product for use in vapor degreasers.

Unique physical properties include a high density, low viscosity, and low surface tension. This combined with non-flammability, chemical and thermal stability, low toxicity, and ease of reclamation by distillation make Vertrel™ MCA ideal for a broad range of applications.

> Vertrel MCA -1 gallon Part # VER-MCA-1G

Vertrel™ MCA Specialty Fluid

Part #	Description
VER-MCA-1G	Vertrel MCA 1-Gallon
VER-MCA-5G	Vertrel MCA 5-Gallon
VER-MCA9751-SPRAY	Vertrel MCA 9751 Aerosol Spray Can

Vertrel™ Specialty Fluids

Vertrel[™] specialty fluids are a family of hydrofluorocarbon, oxygen-safe solvents with "zero" ozone depletion and low global warming potential; ideal for precision cleaning, rinsing, drying, and carrier-fluid applications.



Vertrel XF - 1 gallon Part # VER-XF-1G

VERTREL XF

Vertrel™ XF

Vertrel[™] XF is a proprietary hydrofluorocarbon fluid with zero ozone-depletion and a low global warming potential ideally suited for use in vapor degreasing equipment for cleaning, rinsing, and drying. It can replace current hydrochlorofluorocarbon (HCFC) and perfluorocarbon (PFC) fluids in most applications.

Unique physical properties include a high density, low viscosity, and low surface tension. This combined with non-flammability, chemical and thermal stability, low toxicity, and ease of recovery by distillation make Vertrel™ XF ideal for a broad range of applications. Solvency is selective, but can be enhanced by use of appropriate azeotropes and blends with alcohols, hydrocarbons, esters, etc.

Vertrel™ XF is ideally suited for cleaning fine particulate matter (submicron range) from metal and non-metal parts.

Vertrel™ XF

Part #	Description	
VER-XF-1G	Vertrel XF 1-Gallon	
VER-XF-5G	Vertrel XF 5-Gallon	

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39A | Lockouts











RATERMANN

Cryogenics

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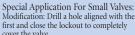


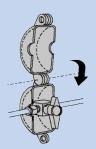
39A-1

Lock & Protect Your Valves

WITH "THE ORIGINAL" LOCKOUT • Safely • Efficiently • Inexpensively



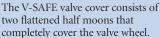












- · Made of strong "Polypropylene"
- Fully dielectric.
- · Highly resistant to cracking and abrasion.
- Resistant to extreme temperature changes from - 50° F (- 46° C) to 360° F (183° C).

V-Safe Wheel Valve Lockouts



RED LIQUID

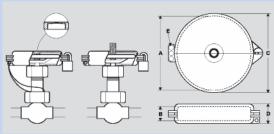
Color recommended in ANSI Z353.1





TECHNICAL DATA 5 different sizes to cover valve handles from 1" to 14" diameter

Part Numbers	Inside Diameter A	Inside Height B	Outside Diameter C	Outside Height D	Lock Hole E	Valve Handle Size
LOVS02R	2.75" 70 mm.	1.250" 32 mm.	3.000" 76 mm.	1.500" 38 mm.	0.312" 8 mm.	1" - 2 1/2"
LOVS04R	5" 130 mm.	1.250" 32 mm.	5.500" 140 mm.	1.750" 44 mm.	0.375" 9.5 mm.	2 1/2" - 5"
LOVS06R	6.5" 170 mm.	1.500" 38 mm.	7.000" 177 mm.	2.000" 50 mm.	0.375" 9.5 mm.	5" - 6 1/2"
LOVS09R	10" 257 mm.	2.000" 50 mm.	10.500" 267 mm.	2.500" 63 mm.	0.375" 9.5 mm.	6 1/2"-10"
LOVS13R	14" 355 mm.	2.500" 63 mm.	14.500" 368 mm.	3.000" 73.8 mm.	0.375" 9.5 mm.	10" - 14"



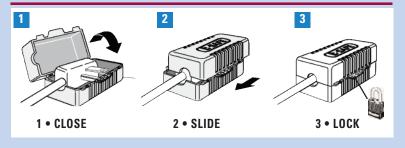
If needed, cut the recessed

section - the valve stem through into the open position.

Electrical Plug Lockouts Protect your Employees with the E-Safe Lock-A-Plug

The E-SAFE "LOCK-A-PLUG" completely encloses the plug from any accidental reconnection. The electrical cable is inserted through the opening and then closed. The single entry (LO-LP110) or multiple entry (LO-LP550) locking system avoids usage by unauthorized personnel during critical times. The E-SAFE is a practical and positive protection system. Made out of "Polypropylene" plastic, it is totally dielectric, resists cold or hot temperatures up to 300° F / 149° C, has a sliding closure and an integrated multiple lockout.

INSTALLATION INSTRUCTIONS



LO-LP110

Will accept 110 volts and certain models of the 220 volt plug up to 13/4" x 13/4" x 31/4" (44.5 mm. x 44.5 mm. x 82 mm.) in size with a maximum cable diameter of 0.500" (12mm.).





TECHNICAL DATA

Dimensions: E-SAFE LOCK-A-PLUG

I	Models	Inside Length A	Inside Height B	Inside Width C	Cable Hole D	Lock Hole E
ı	LO-LP110	3.250" 82 mm.	1.750" 44.5 mm.	1.750" 44.5 mm.	0.500" 12 mm.	0.312" dia 8 mm.
	LO-LP550	6.750" 170 mm.	3.000" 76 mm.	3.000" 76 mm.	1.000" 25 mm.	0.375" dia 9.5 mm.

LO-LP550 LO-LP110 (E-SAFE)

LO-LP550

Will accept 220 volts and 550 volt plugs up to 3" x 3" x 63/4" (76 mm. x 76 mm. x 170 mm.) in size with maximum cable diameter of 1.000" (25 mm.).



Ball Valve Lockouts | **Butterfly Valve Lockouts**

Ball Valve Lockouts • Safely • Efficiently • Inexpensively

Valves from 3/8" to $1^{1}/4$ " (9.5 mm. to 31.5 mm.) LOBS02 Valves from $1^{1/2}$ " to $2^{1/2}$ " (37.5 mm to 62.5 mm.) LOBS03 Valves from 2" to 8" (50 mm. to 200 mm.)

- Made of strong "Polypropylene" plastic.
- Fully dielectric.
- Highly resistant to solvents and other chemical products.
- Highly resistant to cracking and abrasion.
- Resistant to extreme temperature changes - 50° F (- 46° C) to 360° F (183° C).





The largest ball valve lockout available on the market.



RED, YELLOW, BLUE & GREEN (COLORS RECOMMENDED IN ANSI Z353.1)

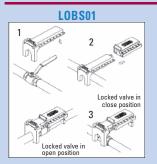


TECHNICAL DATA

Note: Only the LOBS01 can lock in the open position.

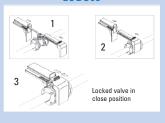
Models	Width A	Height B	Length of Handle C	Lock Hole D
LOBSO1-R LOBSO1-Y LOBSO1-B LOBSO1-G	3.100" 80 mm.	3.250" 82 mm.	5.375" to 7.500" 135 mm. to 190 mm.	0.312" dia. 8 mm.
LOBSO2-R LOBSO2-Y LOBSO2-B LOBSO2-G	3.750" 95 mm.	5.000" 125 mm.	7.500" to 10.000" 190 mm. to 250 mm.	0.312" dia. 8 mm.
LOBSO3-R LOBSO3-Y LOBSO3-B LOBSO3-G	4.000" 100 mm.	7.450" 186 mm.	12.000" to 17.500" 300 mm to 438 mm	0.312" dia. 8 mm.

ASSEMBLY INSTRUCTIONS





LOBS03





LOBS02

LOBS01/

Butterfly Valve Lockouts The Only Way to Secure your Butterfly

UNIVERSAL LOCKOUT FOR BUTTERFLY VALVES

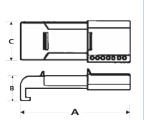
LO-BS04

Features:

- Made of strong "Polypropylene" plastic.
- Fully dielectric.
- Highly resistant to solvent and other chemical products.
- Highly resistant to cracking and abrasion.
- Resistant to extreme temperature changes -50° F (-46° C) to 360°F (183° C).

AVAILABLE IN 4 COLORS: RED, YELLOW, GREEN & BLUE (Colors recommended in ANSI Z353.1)







TECHNICAL DATA

Model	Length A	Height B	Width C	Lock Hole D
LO-BS04	12"	2.750"	4.000"	0.375"
	305 mm.	70 mm.	102 mm.	9.5 mm.

ASSEMBLY INSTRUCTIONS









Circuit Breaker Lockouts | Electrical Switch Lockout

Circuit Breaker Lockouts

Constructed of rigid plastic, the new C-SAFE circuit breaker lockouts are now available for either single or double pole circuit breaker lockout applications.



LO-CB01 A single pole lockout, CB01 requires a switch breaker with a recessed hole in it.



The LO-CB02, is a double pole lockout and requires the breakers to be connected with a cross bar for lockout application.

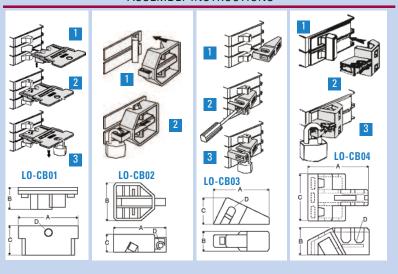


A single pole lockout, LO-CB03 does not require a switch breaker with a recessed hole in it.



Our double pole circuit breaker lockout LO-CB04 will fit most major brands of electrical circuit breakers. If this lockout does not fit, it may be returned.

ASSEMBLY INSTRUCTIONS









TECHNICAL DATA DIMENSIONS: C-SAFE CIRCUIT BREAKER LOCKOUTS

Models	Length A	Height B	Width C	Lock Hole D
LO-CB01	2.300"	0.850"	1.100"	0.300" dia
	58 mm.	22 mm.	28 mm.	7.5 mm.
LO-CB02	2.625"	1.875"	1.000"	0.300" dia
	66 mm.	48 mm.	25 mm.	7.5 mm.
LO-CB03	2.300"	0.750"	1.000"	0.340"
	58 mm.	19 mm.	25 mm.	8.5 mm.
LO-CB04	2.375"	1.000"	1.865"	0.375"
	60 mm.	25 mm.	47.5 mm.	9.5 mm.

- L0-CB01 Our single pole breaker lockout requires a single toggle with a recessed hole in it.
 1 · To install, simply open the lock by sliding the base of the lock backwards.
 2 · Place over the toggle, making sure that the small pole inside the lockout device is now inserted. into the hole of the toggle. Close the lockout by pushing the base foward after ensuring that the holes are aligned.
- 3 · You are now ready to install your lock. This model will accommodate breakers up to 9/16" (14mm.) in width. Remember, the breaker must be in the "off" position before installing.

L0-CB02 Our double pole breaker lockout requires that there be two toggles connected together with a cross bar.

- 1 To install, place over the toggles with the slotted side of the lockout covering the toggles.
- 2 Pull the slide bar out to attach your lock. This model will accommodate breakers with an overall width of 5/8" (45mm).

Remember, the breaker must be in the "off" position before installing.

LO-CB03 This model is our single breaker lockout for circuit breakers that do not have a recessed hole

- To install, the breaker must be in the "off" position. Place the breaker over the toggle.
- Insert your screwdriver (star type) into the hole, tighten the screws well.
 Insert your lock or tag and close. Make sure everything is tight.
- This model will accommodate circuit breakers with an overall width of 9/16" (14mm). Remember, the breaker must be in the "off" position before installing.

LO-CB04 Our double pole breaker lockout requires that there be two toggles connected together with a cross bar.

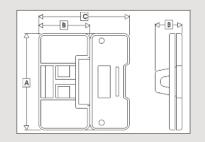
- 1 · Pull the slider bar and place the breaker lockout over the breakers.
- Push back the slider bar and put your lock on aligned holes. This model will accommodate double or triple breakers .

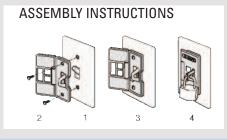
Remember, the breaker must be in the "off" position before installing.

Electrical Switch Lockout The Ultimate Protection with the E-SAFE Lock-A-Switch

E-SAFE "LOCK-A-SWITCH" This easy to install device can be used with most mounted switches. It can be used to lock the switch in either the "on" or "off" position. (Install using existing screws). Standard package: 6 devices.

- 1 Remove screws from switch plate.
- **2** Adjust "E-SAFE" locking device over the switch plate and install it on switch.
- **3** Position switch to desired position.
- 4 Close "E-SAFE" device and put on your padlock and tag.







Dimensions: E-SAFE LOCK-A-SWITCH

Model	Height A	Width Close B	Width Open C
LO-ES01	3.000"	1.625"	3.000"
	76 mm.	42 mm.	76 mm.

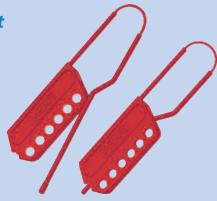


Safety Lockouts HASPS | Metal Lockout HASPS

Safety Lockout HASPS

The Totally Dielectric Lockout



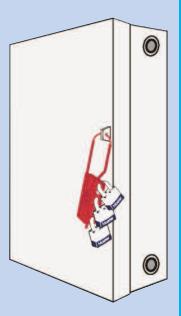




#LO-MS01

Features:

- Made of Heavy Duty Nylon
- Bright Red Color for Hi-Visibility
- Unbreakable
- Heat & Cold Resistant
- Highly Flexible
- · Holds 6 Padlocks
- Dielectric



• Inexpensive • Versatile • Dielectric

MORE THAN ONE EMPLOYEE CAN LOCKOUT THE SAME ENERGY SOURCE FOR ADDED SAFETY

Metal Lockout HASPS Four Models Available



LO-MS86

METAL LOCKOUT HASP

With 1" dia. jaw opening, 43/8" length, Single scissor type, Rubber dipped handle, Accommodates six padlocks, made of tempered steel, individually packed-72/box.



LO-666RD

METAL LOCKOUT HASP

Dual opening, 1 3/4" dia. and 3/4" dia. Dual scissor type 5 1/4" length. Painted red. Accommodates six padlocks, made of tempered steel, individually packed-60/box.



LO-R60ML

METAL LOCKOUT HASP

With 1" dia. jaw opening, 4 3/8" length. Single scissor type. Painted red. Accommodates six padlocks, made of tempered steel, bulk pack-96/box.



LO-666

METAL LOCKOUT HASP

Dual opening, 13/4" dia. & 3/4" dia. Dual scissor type 5 1/4" length, Plated steel to resist rust (clear). Accommodates six padlocks, made of tempered steel, bulk pack-96/box.

ALL THESE LOCKOUT HASPS WILL ACCEPT SIX PADLOCKS UP TO 3/8" DIAMETER SHACKLES WITH SIX LOCKOUT TAGS



Master Lock® Steel Padlocks and Xenoy Safety Padlocks

Steel Padlocks

Industrial-quality steel padlocks have superior strength and security

- These Master Lock padlocks have a steel case that features cadmium rust proofing for lasting strength
- The steel padlock body measures 1-1/2" wide and the shackle diameter is 9/32"
- The 4-pin cylinder is ideal for most lockout procedures
- Choose from 4 different shackle sizes: 3/4", 1-1/2", 2", and 5-3/4"
- Master Lock Steel Padlocks are available with Black, Blue, Green, Red, Yellow, or White bumpers (use color-coded locks to distinguish departments or work teams)
- Each high security padlock is keyed differently and includes 2 keys
- Lockout Hasp in picture sold separately

FEATURES CADMIUM RUST PROOFING



Ordering Information

Shackle Length	Keyed Differently	Keyed Differently w/ Master Key*	Keyed Alike	Keyed Alike w/ Master Key*
3/4"	PLS-34KDx-PK6	PLS-34KDMx-PK6	PLS-34KAx-PK6	PLS-34KAMx-PK6
1 1/2"	PLS-112KDx-PK6	PLS-112KDMx-PK6	PLS-112KAx-PK6	PLS-112KAMx-PK6
2"	PLS-2KDx-PK6	PLS-2KDMx-PK6	PLS-2KAx-PK6	PLS-2KAMx-PK6

Replace "x" in the part number with Color Bumper code:

BK – Black, BL – Blue, GR – Green, RD – Red, YW – Yellow, WH – White Includes 2 Keys per Padlock

Additional Master Keys available upon request (1 included with order) Other Package Quantities available upon request.

Xenoy Safety Padlocks

Color-coded safety padlocks and tags combined for easy identification

- These lightweight Xenoy plastic padlocks are virtually indestructible
- Each of these lockout padlocks features a steel shackle that is 1/4" in diameter and a "Danger" label instructing readers that equipment is locked out
- The back of each Master Lock keyed padlock has a label with space to write the user's name and department
- Safety padlocks have a 6-pin cylinder for added security
- These Master Lock padlocks are available in 8 colors: Black, Blue, Green, Orange, Purple, Red, Teal and Yellow
- Choose from 3 sizes: 1-3/4" high lock body with 1-1/2" or 3" shackle or 3" high lock body with 1-1/2" shackle
- Key retaining feature ensures the padlock is not left unlocked

XENOY PLASTIC SAFETY PADLOCKS ARE VIRTUALLY INDESTRUCTIBLE



Ordering Information

Lock Body	Shackle Length	Keyed Differently	Keyed Differently w/ Master Key*	Keyed Alike	Keyed Alike w/ Master Key*
1 3/4"H	1 1/2"	PLX-S112KDx-SPK6	PLX-S112KDMx-SPK6	PLX-S112KAx-SPK6	PLX-S112KAMx-SPK6
1 3/4"H	3"	PLX-S3KDx-SPK6	PLX-S3KDMx-SPK6	PLX-S3KAx-SPK6	PLX-S3KAMx-SPK6
3" H	1 1/2"	PLX-T112KDx-TPK6	PLX-T112KDMx-TPK6	PLX-T112KAx-TPK6	PLX-T112KAMx-TPK6

Replace "x" in the part number with Color Bumper code:

BK – Black, BL – Blue, GR – Green, OR – Orange, PR – Purple, RD – Red, TL – Teal, YW – Yellow Includes 1 Keys per Padlock

Additional Master Keys available upon request (1 included with order)

Other Package Quantities available upon request.



Accessories for Padlocks | Lock Labels | Magnetic Lockout Signs

Identification Tags and Collars





1/2" x 1-3/4" BRASS TAG WITH RING (PACK OF 12)

L071 SC9 COLLAR COMPLETE WITH RIVETS FOR TAG (PACK OF 12)

Padlock Eyes

L071 TAG

These padlock eyes will help you comply with OSHA standards, when the equipment has to be modified to accept locks and lockout devices. Two types of mounting eyes are available. Surface mount or inside



SURFACE MOUNT (FLAT) AVAILABLE IN PACK OF 12 PAIRS # L060R

INSIDE MOUNT (RIGHT ANGLED) AVAILABLE IN PACK OF 6 PAIRS



Chain Attachment

9" chain with chain holder for permanently attaching lockouts at pre-designated locations (control or valve sites).

#L071CS

9" chain attachment with chain holder. Available in pack of 12

Group Lock Box

To be used for work team lockout situations where there are multiple employees, energy sources, machines and processes to be locked out. All keys are stored in the lock box. The group leader or foreman then locks the box until the job is complete and all group members are cleared from work area. Heavy steel construction.



LOGLB01 Group lock box.

13 Lock Group Lock Box

Simplifies lockout of large equipment. After machine or process is locked out, the key or keys are placed in a lock box. Then, each authorized work team member places a personal lock or tagout device to the group lock box. Ensures that no one employee has access to the box unless all employees have removed their locks or tags. Accepts up to 13 individual locks. Heavy steel construction.



LOGLB02 Group lock box.

Self-Laminating Padlock Labels



3/4" x 5"

Self-laminating padlock labels are an easy way to identify employee's locks. These labels are made of aluminum foil with permanent pressure-sensitive adhesive backing. Write on decals with ballpoint pen or typewriter.

Available in: Red, Green, Blue, Yellow or White.

STANDARD PACKAGE (50 units)

TO ORDER SPECIFY # ITEM, MATERIAL AND COLOR



Magnetic Lockout Signs



DANGER

EQUIPMENT

BEING

SERVICED

DO NOT

OPERATE





LOLKA138

Magnetic signs stay put when placed on a metal surface and the magnetic material allows the signs to be moved to where employees attention is needed.

31/2" x 5" add suffix/3mg 7" x 5" add suffix/4mg

LOLKA140

Self-Sticking Vinyl





21/4" X 41/2"

21/4" X 41/2"



LOLKA122



REMOVE ALL DOUBT LOCK IT OUT

LOLKA126

LOLKA130

21/4" X 41/2"

21/4" X 41/2"



LOLKA128

STANDARD PACKAGE (10 units)

LOCKOUT BEFORE **SERVICING**



Lockout / Tagout Identification



LOCKOUT **FOR SAFETY**



7" x 10" - 10" x 14"

LO-LKA102



3 1/2" x 5" 7" x 10" - 10" x 14"

HERE

LO-LKA104



WHEN THROWING SWITCH **USE LEFT HAND** AND TURN FACE AWAY

3 1/2" x 5" 7" x 10" - 10" x 14"

LO-LKA106

CAUTION

BE SAFE LOCK IT OUT



7" x 10" - 10" x 14"

LO-LKA108

USE LOCKOUT DEVICE DURING MAINTENANCE OR ANY OPERATOR ADJUSTMENT

7" x 10" - 10" x 14"

LO-LKA110

THIS MACHINE **MUST BE LOCKED OUT** PRIOR TO SERVICING



3 1/2" x 5" 7" x 10" - 10" x 14" LO-LKA112

NOTICE

DO NOT FORGET TO REMOVE YOUR **LOCKS AND TAGS**

7" x 10" - 10" x 14"

LO-LKA116

1910.147, ALL EQUIPMENT, MACHINES AND PROCESSES SHALL BE LOCKED OUT PRIOR TO SERVICING.

LOCKOUT PROCEDURES ARE POSTED IN THE OPERATING AREA AND / OR BY THE MAIN ENERGY SOURCE OF EACH MACHINE.

IF YOU HAVE ANY QUESTIONS ABOUT THE LOCKOUT PROCEDURES, PLEASE SEE YOUR SUPERVISOR OR THE SAFETY DIRECTOR.

THE STANDARD WILL BE STRICTLY ENFORCED.

LO-LKA114/7ST

WARNING

LOCKOUT SWITCHES **BEFORE WORKING** ON EQUIPMENT

3 1/2" x 5" 7" x 10" - 10" x 14"

LO-LKA118



DO NOT **OPERATE**

NAME: DEPT:



3 1/2" x 5" Vinyl only

LO-LKA120

	DIMENSIONS	31/2 x 5	7 x 10	10 x 14	14 x 20
	• STYRENE		5ST	6ST	7ST
	• SELF-STICK VINYL	3VY	5VY	6VY	
₹.	• SELF-STICK Polycarbonate		EDA	CDA	
			5PA	6PA	
₹.	• POLYCARBONATE			CDM	
=	LAMINATED ON		5PM	6PM	
	ALUMINIUM				

TO ORDER SPECIFY ITEM #, SIZE AND MATERIAL

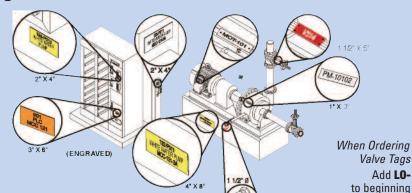
Marking Pens Used on Safety Tags

Fast drying permanent ink, Fine tip.

Models No.	Color	Description	Qty/Pkg
LO-PEN 1	Black	Color of cap indicates	12
LO-PEN 2	Red	color of ink	12



Lockout / Tagout Identification



EQUIPMENT TAGS

MODE	ELS	MAT.	SIZE	Up to	4 lines
IDA1X3/1	IDA1X3/2	ALUMINUM	1" X 3"	1	2
IDA2X4/1	IDA2X4/2	1/32"	2" X 4"	1	2
IDP1X3/2	IDP1X3/4		1" X 3"	1 or 2	3 or 4
IDP2X4/2	IDP2X4/4	LAMICOID	2" x 4"	1 or 2	3 or 4
IDP3X6/2	IDP3X6/4	PLASTIC	3" X 6"	1 or 2	3 or 4
IDP4X8/2	IDP4X8/4	1/16"	4" X 8"	1 or 2	3 or 4
IDS1X3/1	IDS1X3/2	STAINLESS	1" X 3"	1	2
IDS2X4/1	IDS2X4/2	STEEL 1/32"	2" X 4"	1	2

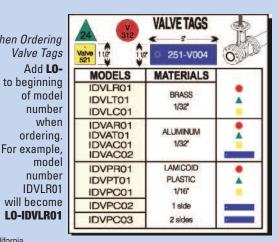
When Ordering **Equipment Tags**

Add LO- to beginning of model number when ordering. For example, model number IDA1X3/1 will become

LO-IDA1X3/1

Plastic Only





Lockout / Tagout Stations

Offering convenient and high visibility Lockout / Tagout centers that make your Locks, Tags, Lockout Hasps and Lockout devices (V-SAFE, B-SAFE, C-SAFE and E-SAFE and M-SAFE Hasps) easy to find and use. These Lockout / Tagout centers are built for the toughest conditions. They are made of double molded polystyrene with plastic or metal hanging hooks for locks and lockout hasps.

LO-LSE101 (Panel only) LO-LSE101 F (Panel complete w/fill)

LO LO	LIGHT (I dilet complete w/im/		
QTY.	CONTENTS		
1 ea.	LO-LSE101 Lockout Panel		
2 ea.	LO-VS02 V-SAFE lockout 2"		
1 ea.	LO-VS04 V-SAFE lockout 4"		
1 ea.	LO-VS06 V-SAFE lockout 6"		
1 ea.	LO-BS01 B-SAFE lockout		
2 ea.	LO-LP110 E-SAFE lockout		
	110-220 volts.		
1 ea.	LO-LP550 E-SAFE lockout		
	220-550 volts.		
1 ea.	LO-MS86 M-SAFE metal hasp.		
4 ea.	LO-MS01 M-SAFE nylon hasp.		
1 ea.	LO-ELA290		
1 ea.	DO NOT OPERATE TAGS/		
	25 LO-ELA255		
1 ea.	DO NOT OPEN TAGS/		
	25 LO-3D Master lock		

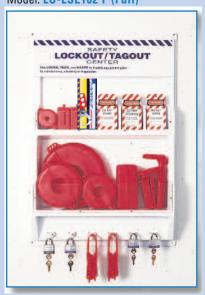
SMALL LOCKOUT STATIONS Model: LO-LSE101 F (Full)



LO-LSE102 (Panel only) LO-LSE102 F (Panel complete with fill)

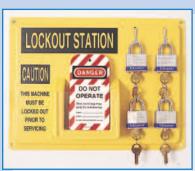
QTY.	CONTENTS
1 ea.	LO-LSE102 Lockout Panel
2 ea.	LO-VS02 V-SAFE lockout 2"
1 ea.	LO-VS04 V-SAFE lockout 4"
1 ea.	LO-VS06 V-SAFE lockout 6"
1 ea.	LO-VS09 V-SAFE lockout 9"
1 ea.	LO-BS01 B-SAFE lockout
1 ea.	LO-BS02 B-SAFE lockout
2 ea.	LO-LP110 E-SAFE lockout
	110-220 volts.
1 ea.	LO-LP550 E-SAFE lockout
	220-550 volts.
2 ea.	LO-MS86 M-SAFE metal hasp
6 ea.	LO-MS01 M-SAFE nylon hasp
1 ea.	LO-ELA290 DO NOT OPERATE TAGS / 25
1 ea.	LO-ELA250 DO NOT START TAGS / 25
1 ea.	LO-ELA255 DO NOT OPEN TAGS / 25
2 ea.	LO-3D Master lock
2 ea.	LO-3DLF Master lock
	24" x 35"

LARGE LOCKOUT STATIONS Model: LO-LSE102 F (Full)



Lockout Stations

18" x 24"



Contents:

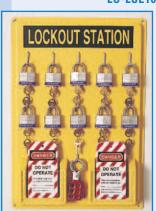
- 4 ea. 3D Master locks (Blue bumper padlock).
- 1 pk. ELA290 DO NOT OPERATE TAGS (Pack /25).



Contents:

- 4 ea. 3D Master locks (Blue bumper padlock).
- 1 pk. ELA290 DO NOT OPERATE TAGS (Pack /25).
- 3 R60 ML 1" SAFETY LOCKOUT HASPS.

PERSONAL LOCKOUT STATION (11" x 14") LO-LSE103 Station only. LO-LSE103F Station with fill.



Contents:

- 10 ea. 3D Master locks (Blue bumper padlock).
- 2 pk. ELA290 DO NOT OPERATE TAGS (Pack /25)
- 3 R60 ML 1" SAFETY LOCKOUT HASPS.

TEN LOCKOUT STATION (14" x 21") LO-LSE105 Station only. LO-LSE105F Station with fill.



4 LOCKOUT STATION

(11" x 14")

LO-LSE104 Station only.

LO-LSE104F Station with fill.



Contents:

- 20 ea. 3D Master locks (Blue bumper padlock).
- 4 pk. ELA290 DO NOT OPERATE TAGS (Pack /25).
- 6 R60 ML 1" SAFETY LOCKOUT HASPS.

Departmental Lockout Station (21" x 29") LO-LSE106 Station only.

LO-LSE106F Station with fill.

NOTICE: Each lock is keyed differently, unless advised otherwise.



Lockout Kits



LOLK107FE Lockout/Tagout Kit

It is imperative that workers properly lockout/tagout machinery and equipment to prevent serious injury. The lockout kit provides all items required to make lockout/tagout as convenient and easy as possible.

Includes:

(1) 16" tool box w/tray, (1) LO-VS02, (1) LO-BS01, (1) #3D, (1) #1DLJ, (1) LO-MS01, (5) LO-ELA290, (1) LO-CB04, (1) LO-CB03, (1) LO-ES01, (1) LO-LP110.

LOLK108FE Electrical Lockout/Tagout Kit

This kit provides all items to properly secure electrical machinery and equipment from causing serious injury while being serviced.

All items can be easily carried in lightweight carrying bag.

Includes

(1) Nylon carrying bag, (6) LO-CB03, (6) LO-CB01, (6) LO-CB04, (6) LO-ES01, (1) LO-LP110, (1) LO-LP550, (2) LO-MS01, (1) LO-666RD, (2) #3D, (2) #1DLJ, (10) LO-ELA290.



top cour on

LOLK109FE Valve Lockout/Tagout Kit

Original B-Safe ball and V-Safe gate valve lockouts. These make lockout/tagout of valves an easy procedure with an easy to transport lockout/tagout kit.

Includes:

(1) Nylon carrying bag, (2) LO-VS02, (2) LO-VS04, (2) LO-BS01, (2) LO-BS02, (1) LO-MS01, (2) LO-666RD, (2) #3D, (2) #1DLJ, (10) LO-ELA290.

LOLK110FE Combination Lockout Kit

Combined Electrical - Valves - Hasps - Tags - Locks into a convenient kit for employees to properly lockout/tagout most applications.

Includes

(2) Nylon carrying bags, (6) LO-CB01, (6) LO-CB03, (6) LO-CB04, (6) LO-ES01, (1) LO-LP110, (1) LO-LP550, (2) LO-VS02, (2) LO-VS04, (2) LO-BS01, (2) LO-MS01, (2) LO-666RD, (6) #3D, (6) #1DLJ, (25) LO-ELA290.



LOLK111FE Electrical Lockout Pouch

A convenient Electrical Lockout/Tagout zipper pouch has been created that can be easily carried on your belt with all the necessary products. This ensures you or your workers have their lockouts when they need them.

Includes:

(1) Double belt loop zippered pouch, (1) LO-LP110, (1) LO-MS01, (2) LO-CB03, (2) LO-CB04, (2) LO-ELA290, (1) #1DLJ.

LOLK112F Electrical Breaker Lockout Pouch

When regular lockout/tagout on electrical panels is required, this convenient pouch can be attached to a belt for easy use, including all products for proper lockout.

Includes:

(1) Double belt loop zippered pouch, (3) LO-ES01, (1) LO-LP110, (4) LO-CB04, (4) LO-CB03, (1) LO-CB02, (2) LO-CB01.





Padlocks & Key Storage Systems

A PADLOCK STORAGE MODULE

Made of melamine which have been adapted to an industrial environment, this module provides for the orderly storage and safekeeping of personal, serial numbered and borrowed padlocks used in safety lockout procedures.

Its transparent door provides continuous visibility of all padlocks presently stored.



ID001/151 15" X 15" X 3" 12 8 ID001/152 32 24 16 ID001/153 80 60 40 ID001/301 15" X 30" X 3" 36 28 20 ID001/302 56 40 ID001/303 160 120 ID001/241 24" X 30" X 3" 63 49 35 ID001/242 70 126 98 ID001/243 175

Number of Padlocks

Hook Type

and Capacity

Sizes

10 X 10 X 3"

10 X 20 X 3"

18 X 18 X 3"

10 X 10 X 6"

10 X 20 X 6"

18 X 18 X 6"

When Ordering above Padlock Storage Modules

Sizes

LxWxH

Models

Add LO- to beginning of model number when ordering. For example, model number ID001/151 will become LO-ID001/151

Models	Size of Sheet	Sizes
ID004	8.5" x 11" (21.5 cm. x 28 cm.)	12" X 15" X 3"
ID 005	8.5" x 14" (21.5 cm. x 28 cm.)	12" X 161/2" X 3"

Description

Module simple 32 keys

Module simple 72 keys

Module simple 128 keys

Module simple 64 keys

Module simple 144 keys

Module simple 256 keys

When Ordering above Tagout Sheet Module

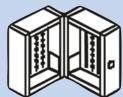
Add LO- to beginning of model number when ordering. For example, model number ID004 will become LO-ID004

B TAGOUT SHEET MODULE

This module's transparent door allows the safety Tagout / Lockout sheet to be clearly seen during the lockout process. Also, the keys for the serial numbered padlocks to be used during the lockout application are clearly visible eliminating any possibility of accidental machine start-up.

KEYS STORAGE MODULE

This module, which is very useful in padlock management, allows the person responsible for lockout to maintain the duplicates of all padlock keys (Personal, serial numbered, borrowed, etc.) up to date.



When Ordering Keys Storage Module

Models

ID 002/32

ID 002/72

ID 002/128

ID 003/64

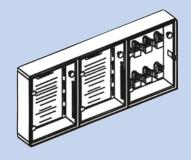
ID 003/144

ID 003/256

Add LO- to beginning of model number when ordering. For example, model number ID 002/32 will become LO-ID 002/32



Various combinations of the modules described above are possible. Shown here is the combination most frequently used in industry. It comprises a double visibility module combined with a padlock module to create a "Safety Lockout Station".





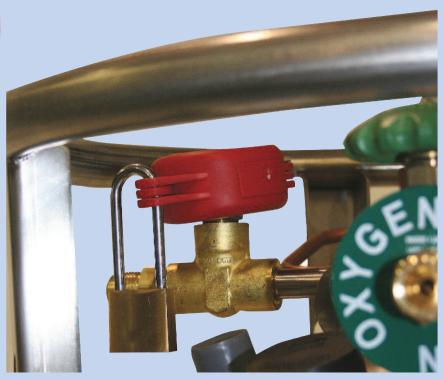


Valve Lockout

photo shown with

Part # LO-VS04

on a 4 5/8" diameter valve handwheel



Dewar Valve Lockout

JM B

Part # LOVS02R