



# INSTALLATION MANUAL

## T-TRAP • 1"-4" TUBE & 3"-4" DUAL PLATE



**TOLL FREE: 888.582.0821**

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### WARNING - Read Immediately

**WARNING:** Rare Earth Magnets are dangerous. Do not unwrap this T-Trap without first reading and fully understanding these instructions. Your safety and the safety of others depend on it! *Rare Earth magnets are powerful. These warnings are for your safety.*

The magnetic element contains very powerful Rare Earth magnets. Keep it at least 24" away from all other magnetic items, otherwise they may magnetically jump together causing possible serious injury to fingers and other objects caught between them. Do not place the magnetic element on or near steel-topped benches or tables, near other magnets, steel tools, iron or steel items, computer disks, computer screens, credit card magnetic strips, mechanical watches and other sensitive equipment. People with pacemakers should not be near the magnetic element. Do not drop or hammer on the magnetic element. Do not weld on the magnetic element. Call the factory if you have any questions.

### T-Trap Hazards Are In Eight Categories

1. Magnetic Pinching or Trapping can occur when the powerful Rare Earth magnets overpower an operator. The result can be pinching, trapping or locking the operator's fingers, hands or other body parts. Do not allow the magnetic element within 24" of anything magnetic, especially other magnets.
2. Magnetic destruction whereby video screens can be destroyed, credit card magnetic strips and computer disks erased, mechanical watches magnetized (ruined), and other sensitive equipment (Pacemakers) made inoperable by being exposed to a powerful magnetic field. Do not allow the magnetic element to be close to any of the above sensitive equipment.
3. Liquid and chemical burn hazards are present depending upon the processing temperature and the products being processed or being used for cleaning. Hot products can spill on an operator when the T-Trap is taken apart for cleaning. Chemical burns can occur if offending chemicals are present. Similarly, offensive fumes could overpower an operator. Such accidents can occur if gaskets are not properly seated, defective gaskets are used, and the band retaining clamp is not properly seated, tightened, and locked, or if the clamp is accidentally opened while processing.
4. Slipping and falling hazards can be present if liquids are on the floor. Liquids can spill from the T-Trap when it is opened. Spilled liquids can make the floor slippery and cause people to fall. Anticipate this problem and prevent spills and drips from reaching the floor by using containers to catch the liquids. Personnel should wear non-skid footwear and non-skid mats should be properly located.
5. Total flow blockage or reduced flow due to trash build-up inside the T-Trap. Clean the T-Trap on a regular basis to prevent the accumulation of unwanted debris.
6. Gasket failure can cause product to leak from the system. Inspect the gaskets for cuts or abrasions that could cause leaks. Test gaskets by flexing them to ensure they are flexible and have not hardened. Be sure the gaskets fit smoothly in place and are not wrinkled or distorted.
7. Clamp failure can endanger personnel and damage equipment. Ensure the T-Trap parts fit together smoothly. The clamps must be properly seated in both grooves. The clamp's T-bolt must fully engage the pivoting yoke and it must be parallel with the body. The safety latch must engage the overthrow lever to assure that it is locked in the closed position.
8. Overpressure in the line can create leaks at the gaskets. Extreme overpressures can break clamps and send the magnet or lid flying. When a T-Trap is installed after a pump, never pressurize the line with all downstream valves closed.

### Tips For The Best T-Trap Location & Safety Tips

T-Traps have two primary purposes: to protect vital plant equipment (pumps, dicers, mills, screens, etc.) from metal damage, and to protect product purity. If equipment protection is paramount, install the T-Trap in front of the filler. If an electronic metal detector is in-line before the filler, place the T-Trap 18" or more ahead of the detector. The T-Trap will reduce rejects and capture particles smaller than the metal detector can sense. Install the T-Trap as far ahead of a pump's intake as possible. This allows product to minimize line pulsation by acting as a buffer.

It is not good practice to attach T-Traps to pump outlets. Some types of pumps generate significant pressure pulses that can destroy downstream T-Traps. In these instances, install a pressure snubber to minimize the pressure surges. Many positive displacement pumps generate instantaneous line pressures sufficient to rupture lines and line components. It takes only an instant of excessive pressure to destroy a line. There can be significant hazard to personnel and property if pumps are energized with all downstream valves closed. We recommend installing an appropriate pressure relief valve to eliminate pressure problems.

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**INDUSTRIAL MAGNETICS  
TRAMP METAL GROUP**

## Things To Think About Before Installing The T-Trap

T-Traps may be mounted in any position without affecting their magnetic separation abilities. For Clean-In-Place systems installing the T-Trap in vertical line installations the magnet openings will always be located side-by-side.

When T-Traps are mounted in horizontal or sloped lines a sump area will always be present. Be prepared for product spillage when opening T-Traps for cleaning. T-Trap bodies can be secured at any angle around a pipe's centerline that will allow best access for disassembly and cleaning. Adjacent plant features, accessibility, and the type of products being processed may dictate body orientation.

Generally, side-by-side openings are easier to service, but over-and-under mounting provides a bottom sump area better suited for trapping non-magnetic trash (rocks, stainless bolts, etc.). The T-Trap body is non-directional and cannot be installed backwards, unless non-similar line connections were ordered.

To make body installation easier, you can lighten the body's weight by removing the magnetic element and the blank closure plate. Remember not to place the magnetic element on a steel tabletop.

## Cleaning The T-Trap

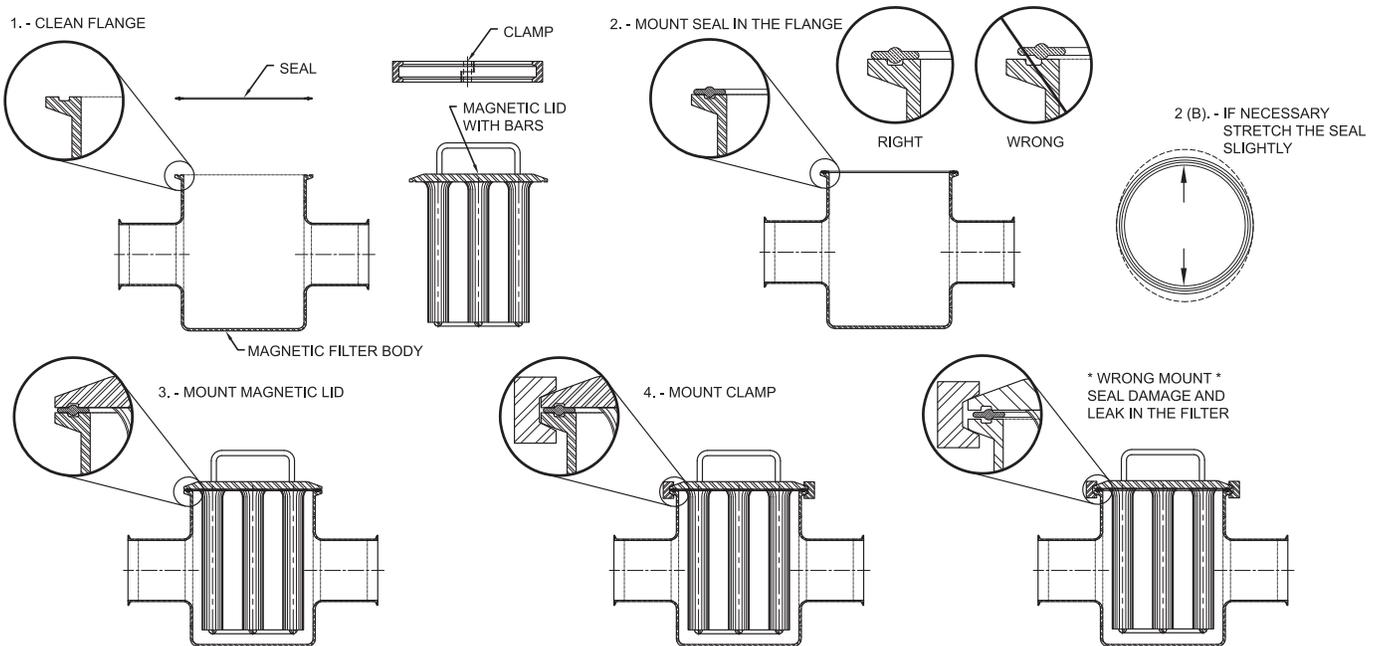
1. De-pressure the line and lock out the pump before opening the T-Trap.
2. Check the magnetic element for trash by gently washing away all product from the magnetic fingers to expose any collected debris. Have a piece of white plastic or paper handy. Proceed to transfer the collected trash from the magnetic fingers to the white plastic or paper for lab analysis.
3. After the trash has been removed, wash the magnetic tubes, the blank endcap, the gasket seal, the clamp, and the inside of the T-Trap body before reassembling the unit. Inspect the gaskets for surface damage. Bend the gaskets to check their flexibility, but do not stretch them. Replace any gasket if it has cuts or abrasions, or if it has hardened and is incapable of providing proper seal.

*NOTE: Downtime can be minimized if cleaning occurs at planned shutdowns or at product/batch changeover times. Cleaning frequently provides quicker identification of contaminants, and thus faster ability to prevent their entry into the system. If left too long between cleanings, captured trash can leave rust stains on the T-Trap's interior and on the magnetic element itself. The stains can be removed with scouring powder.*

## Reassembling The T-Trap

1. Insert the magnetic element into the T-Trap body with a twisting motion. Align the handle parallel with the product flow.
2. Check the clamp's T-bolt where it captures the pivoting yoke to be assured that it is parallel with (and not perpendicular to) the T-Trap body.

## Seal Assembly Sequence



## Comments or Concerns?

We believe Industrial Magnetics, Inc. offers the finest T-Traps available today. Great pride has gone into the design and manufacture of this unit. Any comments or concerns should be directed to our Customer Service Department at 1-888-582-0821. We appreciate the opportunity of serving you!

**INDUSTRIAL MAGNETICS, INC.**

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