

# How to Install My Hand Rail

## Do It Yourself Level



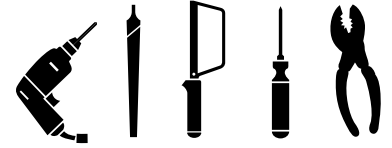
Easy

Moderate

Complex

### Necessary Tools

- Electric Drill/Electric Screwdriver
- Hack Saw/Cut Off Saw
- Phillips Screwdriver
- File
- Channel Lock Pliers



### Plan

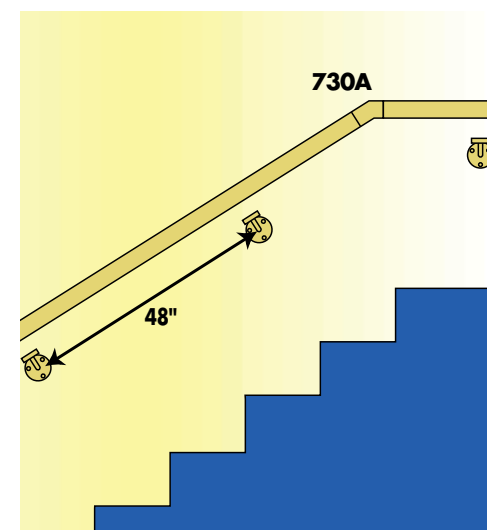
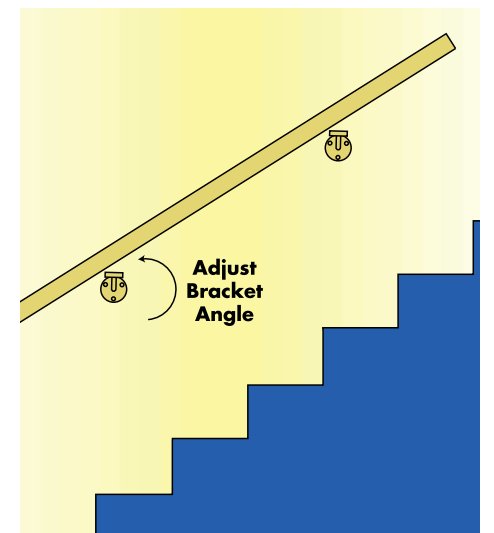
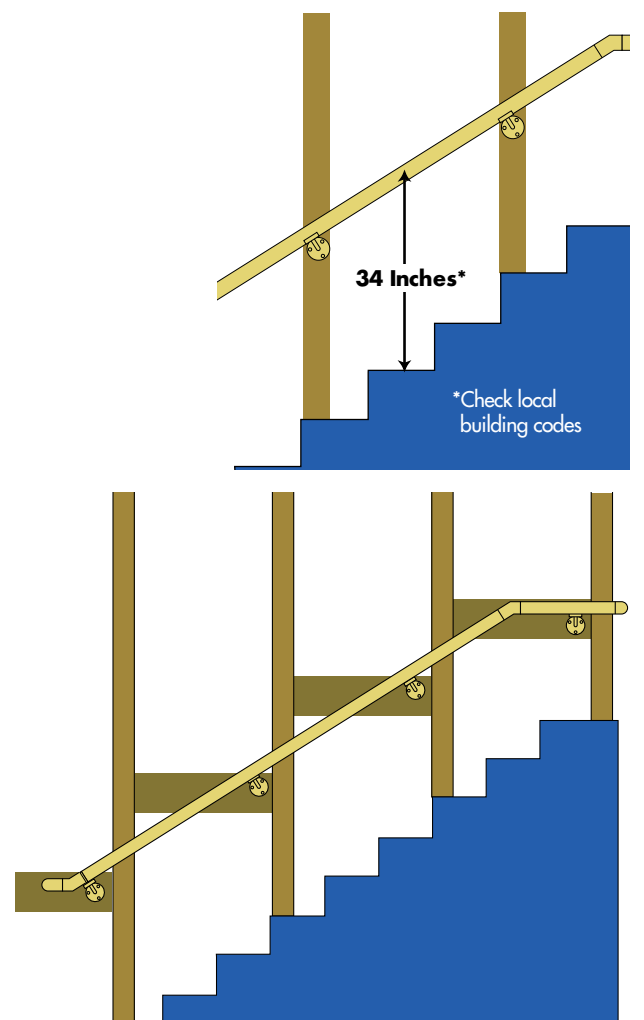
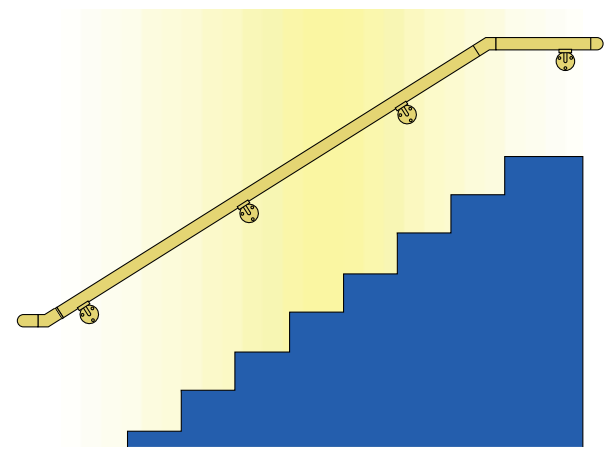
- Measure your staircase where you will be installing your handrail.
- Make a simple sketch of your handrail. The materials needed include tubing, handrail brackets, finials suited for handrails (606 and 608) and 730A angle. You may also need tube splices and elbows, depending on your specific project.
- Determine the length of the tubing and be sure to include the dimensions that the brackets and fittings may add or subtract from the overall length of the tubing.
- Create a detailed part list consisting of all parts and quantities required. When calculating quantities of brackets required, place a bracket 6" from the tube ending and either side of an elbow. Then space equally throughout the length of the rail. We recommend spacing the brackets 36" to 48" apart. In most cases, it is desirable to transition the handrail past the last stair, with a horizontal rail of 6" - 12" length. For each transition, use our 730A 147° angle.
- **Place your order!** (Our brackets include mounting screws for typical installations. (Your situation may require additional hardware.)

### Preparation

- Mark the tube for the appropriate length for cutting. Double-check all measurements before cutting. See "How To Cut Tubing" Instructions.
- Please note that LIDO tubing comes wrapped in a layer of plastic film that should be left in place as long as possible during the installation process to protect the finish of the metal.
- Mark the location of your brackets with a pencil. The bracket must be anchored to a wall stud or to a solid backing of at least 3/4".
- LIDO's 730A angle allows you to transition the rail to a horizontal direction, when the staircase has reached a landing or the next level. Proper termination of the rail should be with a horizontal direction of 6" - 12" when the situation allows for it.
- Carefully read the instructions for the LIDO Weld® and Setscrews prior to installation.

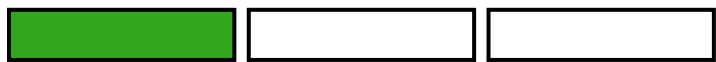
### Installation

- Once you have the right height and position of the bracket, begin to attach the brackets loosely to the wall with one screw.
- Place the tube on the brackets and adjust the brackets for proper angle before you securely tighten the brackets to the wall with the rest of the bracket screws (provided.)
- Securely tighten tube to brackets with Setscrews.
- To secure finials or wall returns, apply a continuous bead of LIDO Weld around the interior surface of one part and press and rotate it into its mate.
- Once installation is complete, remove the existing protective plastic film from the tubing.
- Maintain the rich finish of your rail with LIDO-Lustre® metal polish.



# How to Install My Foot Rail

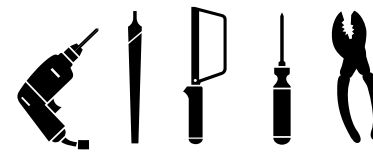
## Do It Yourself Level



**Easy**                      **Moderate**                      **Complex**

### Necessary Tools

- Electric Drill/Electric Screwdriver
- Hack Saw/Cut Off Saw
- Phillips Screwdriver
- File
- Channel Lock Pliers



### Plan

- Measure all sides of your bar or counter where you will be installing your foot rail.
- Make a simple sketch of your foot rail. The materials needed include tubing, foot rail brackets and finials. You may also need tube splices, elbows or wall flanges, depending on your specific project.
- Determine the length of the tubing and be sure to include the dimensions that the brackets and fittings may add or subtract from the overall length of the tubing.
- Create a detailed part list consisting of all parts and quantities required. When calculating quantities of brackets needed, place a bracket 6" from tube ending and either side of an elbow. Then space equally throughout the length of the rail. We recommend spacing the brackets 36" to 48" apart.
- Place your order! (Our brackets include mounting screws for typical installations. Your situation may require additional hardware.)

### Preparation

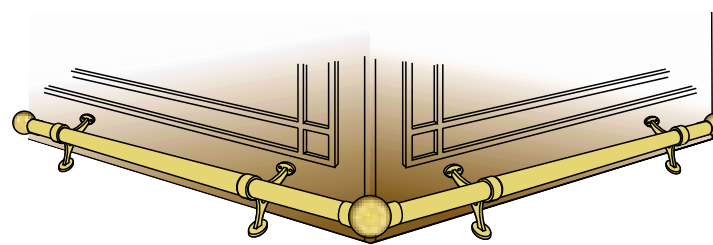
- Mark the tube for the appropriate length for cutting. When determining tube cut lengths, keep in mind that the splicing joints should be concealed within a bracket. Double-check all measurements before cutting. See "How To Cut Tubing" Instructions.
- Please note that LIDO tubing comes wrapped in a layer of plastic film that should be left in place as long as possible during the installation process to protect the finish of the metal.
- Loosely assemble the foot rail by sliding the tubing through the brackets without adding the setscrews.
- Mark the location of your brackets with a pencil. The bracket requires a solid backing at least 3/4".
- Carefully read the instructions for the LIDO Weld® and Setscrews prior to installation.

### Installation

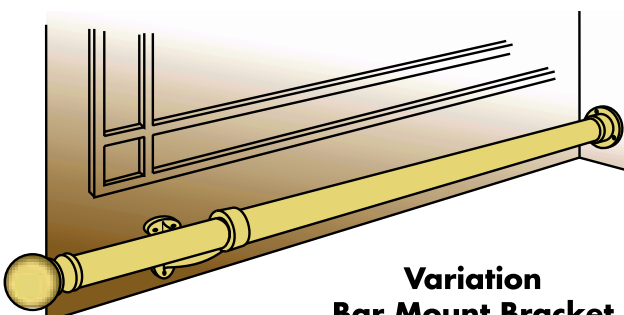
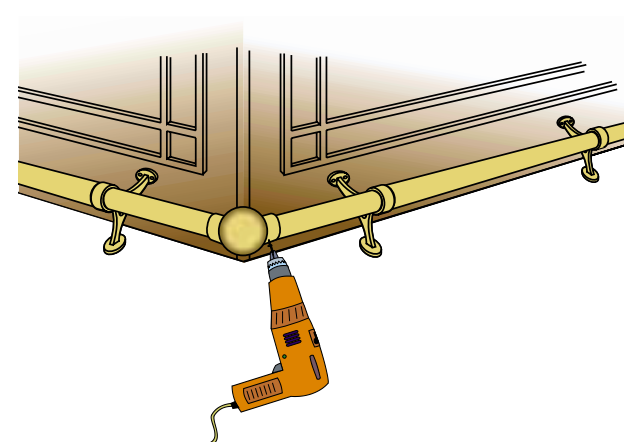
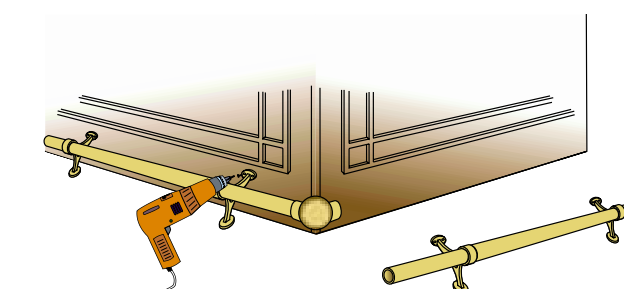
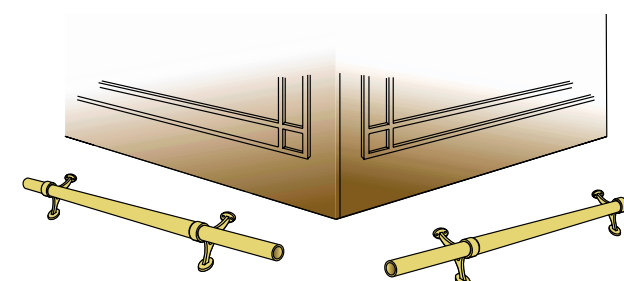
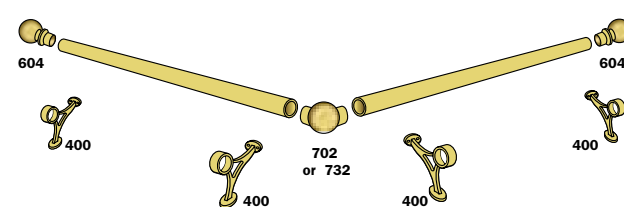
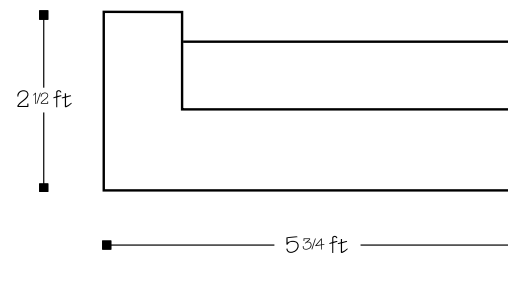
- Once you are satisfied with the "loose fit" assembly, begin to attach the brackets securely to the wall in the first straight section.
- If a corner occurs, first securely attach the elbow to the installed foot rail and then to the second loosely assembled foot rail section. Use LIDO Weld and Setscrews to attach the tubing to the elbow.
- The tubing will be attached to the brackets with setscrews. Elbows should be attached with LIDO Weld and/or Setscrews.
- To secure finials or end caps, apply a continuous bead of LIDO Weld around the interior surface of one part and press and rotate it into its mate.
- Once installation is complete, remove the existing protective plastic film from the tubing.
- Maintain the rich finish of your rail with LIDO-Lustre® metal polish.

### Variations

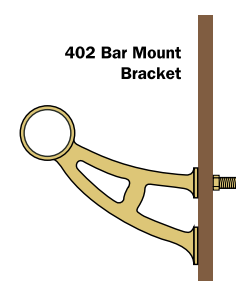
- In situations where you would prefer to mount a foot rail without the bracket resting on the floor, #402 bar mount bracket offers an excellent solution.
- When wall flange is used, slide the flange onto the tube before securing the section of foot rail to the bar. A flange may replace a support bracket if mounted to a solid backing.



Measurements for Foot Rail for the Bar



**Variation Bar Mount Bracket**



## How to Cut

## METAL TUBING



## Brass Tubing

1. Measure your project carefully before cutting to determine the length of tubing needed.
2. Leave the protective plastic on the tube during the cutting process. This minimizes scratching the surface of the tubing during cutting.
3. A Chop Saw is recommended to cut brass tubing. This ensures the cut will be square with a smooth finish and minimize burrs. A Hacksaw may be used but it will be more difficult to keep cuts square with a Hacksaw. Cleanup of burred edges will be necessary after using a Hacksaw to cut brass.

**NOTE:** Do not use a Pipe Cutter to cut brass tubing. This will crimp and distort the edges of the tubing.

4. Remove the protective plastic from the tubing prior to adhesion and/or welding.



## Stainless Steel Tubing

1. Measure your project carefully before cutting to determine the length of tubing needed.
2. Leave the protective plastic on the tube during the cutting process. This minimizes scratching the surface of the tubing during cutting.
3. A Cold Saw is recommended to cut stainless steel tubing. This ensures the cut will be square with a smooth finish, minimizing burrs. A Hacksaw may be used but because steel is a very hard, cutting will take time, patience and a bit of muscle. It is also more difficult to keep cuts square with a Hacksaw. Cleanup of burred edges will be necessary after using a Hacksaw to cut steel.
4. Remove the protective plastic from the tubing prior to adhesion and/or welding.

**BE SAFE!****Always wear Safety Goggles.**

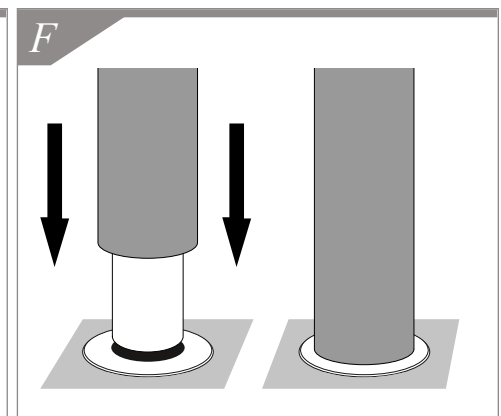
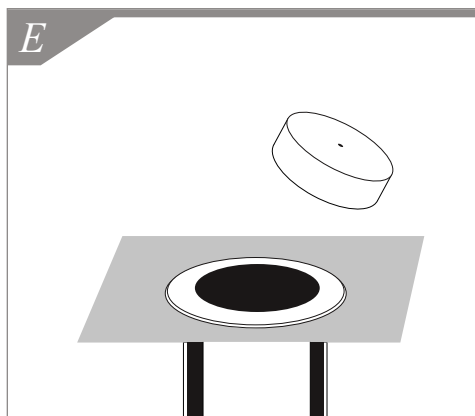
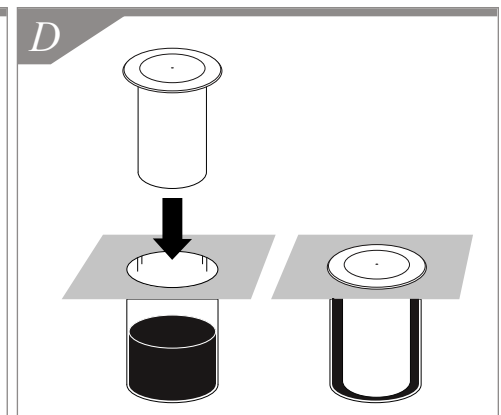
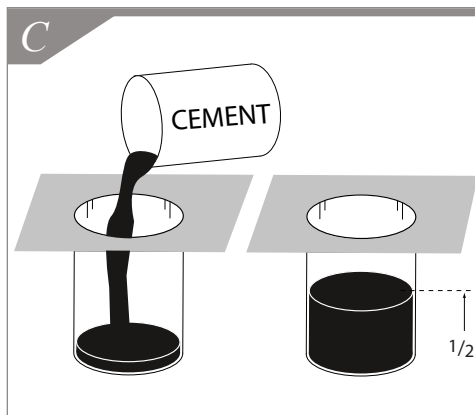
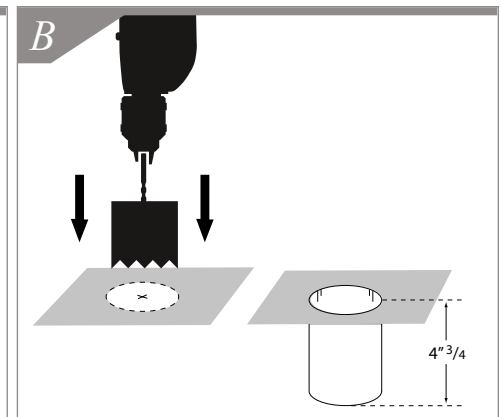
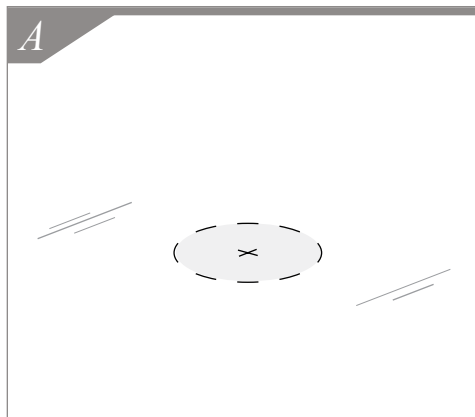
# Floor Socket 544

## Parts List:



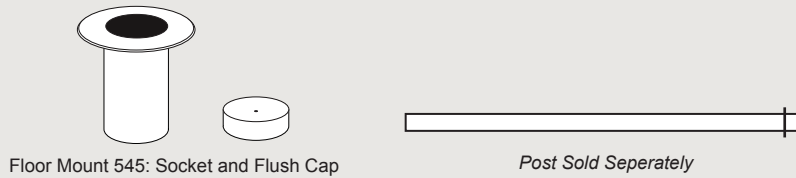
## Required Tools

1. Determine and mark post location on ground. See Figure A.
2. Use 3-3/4" Dia. Hole Saw and drill 4-3/4" deep to allow floor socket to fit inside hole. See Figure B.
3. Fill hole with cement halfway. See Figure C.
4. Insert Floor Socket. Wiggle Floor Socket down until the bottom of the top plate sits even with the ground. Quickly clean any overflow cement. See Figure D.
5. Remove Flush Cap from Floor Socket. See Figure E.
6. Allow cement to dry thoroughly before inserting post. See Figure F.



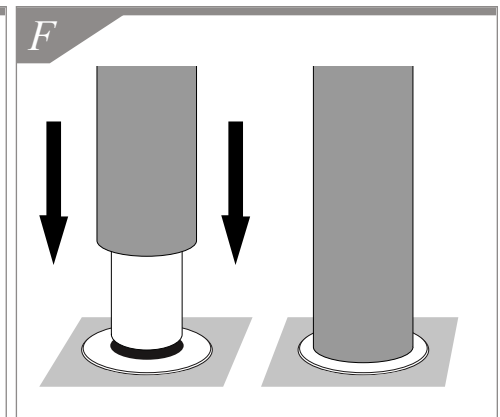
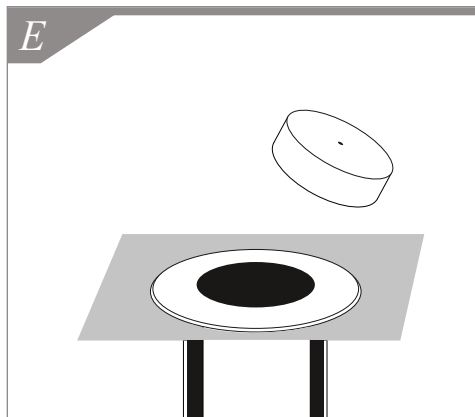
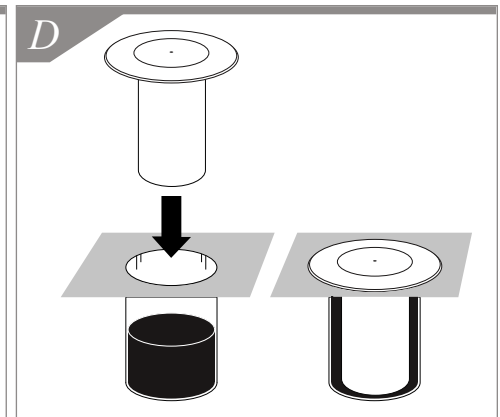
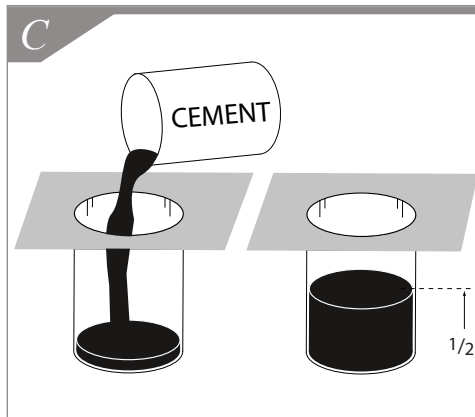
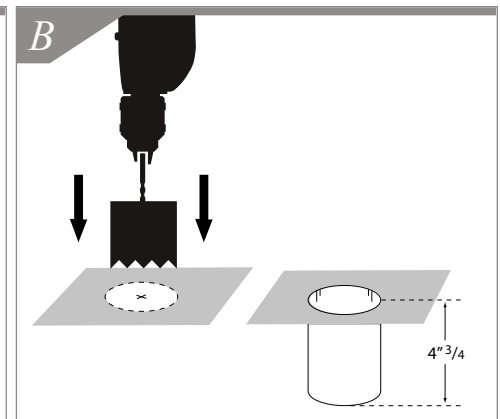
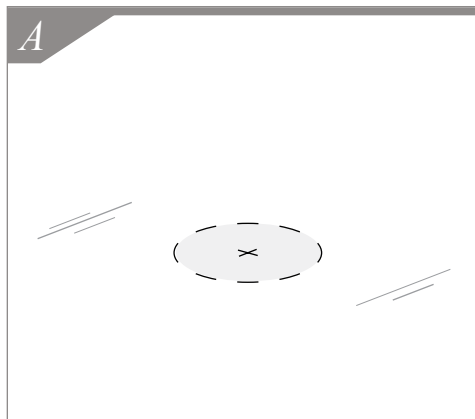
# Floor Socket 545

## Parts List:



## Required Tools

1. Determine and mark post location on ground. See Figure A.
2. Use 3-3/4" Dia. Hole Saw and drill 4-3/4" deep to allow floor socket to fit inside hole. See Figure B.
3. Fill hole with cement halfway. See Figure C.
4. Insert Floor Socket. Wiggle Floor Socket down until the bottom of the top plate sits even with the ground. Quickly clean any overflow cement. See Figure D.
5. Remove Flush Cap from Floor Socket. See Figure E.
6. Allow cement to dry thoroughly before inserting post. See Figure F.





# LIDO-Weld™ Adhesive and Primer

## Application Instructions



### Permanently Joins Brass or Steel Railing and Fittings.

1. Make sure all bond surfaces are clean and free from grease.
2. To ensure a fast and reliable cure for Stainless Steel, Aluminum, other passive metals\* or inert surfaces, LIDO-Weld PRIMER should be applied to one of the bond surfaces and the adhesive to the other surface. Parts should be assembled within 15 minutes. Please see LIDO-Weld PRIMER Instructions for application.
3. The recommended bondline gap is 0.1mm. Where bond gaps are large (up to a maximum of 0.5 mm), or faster cure speed is required, LIDO-Weld PRIMER should be applied to both surfaces. Parts should be assembled immediately (within 1 minute). Please see LIDO-Weld PRIMER Instructions for application.
4. Excess adhesive can be wiped away with organic solvent.
5. Bond should be held clamped until adhesive has fixtured.
6. Product should be allowed to develop full strength before subjecting to any service loads (typically 24 to 72 hours after assembly, depending on bond gap, materials and ambient conditions).

#### LIDO-WELD PRIMER INSTRUCTIONS

1. Spray or brush on the PRIMER on both mating surfaces to be bonded. For small gaps treatment of only one surface may be adequate. Contaminated surfaces may need repeated treatment or special degreasing prior to activation to remove any dissolvable contamination. Porous surfaces may need two treatments of PRIMER.
2. Allow the solvent time to evaporate under good ventilation until the surfaces are completely dry.

#### GENERAL INFORMATION

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials. For safe handling information on this product, consult the Material Safety Data Sheet (MSDS).

Where aqueous washing systems are used to clean the surfaces before bonding, it is important to check for compatibility of the washing solution with the adhesive. In some cases these aqueous washes can affect the cure and performance of the adhesive. This product is not normally recommended for use on plastics (particularly thermoplastic materials where stress cracking of the plastic could result). Users are recommended to confirm compatibility of the product with such substrates.

#### HANDLING INFORMATION

LIDO-Weld PRIMER must be handled in a manner applicable to highly flammable materials and in compliance with relevant local regulations. For example, special care must be taken to avoid contact of the PRIMER or its vapor with naked flame or any electrical equipment that is not flame proofed. The carrying solvent can affect certain plastics or coatings. It is recommended to check all surfaces for compatibility before use.

Avoid prolonged or repeated skin contact.

Use only in a well ventilated area.

No smoking in presence of PRIMER.

#### STORAGE

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Optimal Storage: 8 °C to 21 °C. Storage below 8 °C or greater than 28 °C can adversely affect product properties.

Material removed from containers may be contaminated during use. Do not return product to the original container.

**CAUTION: UNDER NO CIRCUMSTANCES SHOULD LIDO-WELD PRIMER AND LIDO WELD ADHESIVE BE MIXED DIRECTLY AS LIQUIDS.**

\* LIDO-Weld PRIMER is not necessary with Brass components.