

## Facts and Features

**IronPro** is for **Open Tread** or **Kneewall** stairs of nearly any degree of ascent. Works with plowed or non-plowed handrail as well as kneewall plate or shoerail.

The **Level Kit** is used for open treads and level runs.

The **Kneewall Kit** is used for kneewalls and can also be used on level runs.

**Centering Plugs** are used when remodeling stairs from wood balusters to iron balusters. These plugs are used in the holes under the handrail and in the open tread that are left by the removed wood baluster. The plugs are necessary to center the attachment screws in the holes during installation of the IronPro hardware.

The **Rectangular Socket** is most often used for remodeled stairs in plowed handrail or shoerail. The socket should be turned to fill the width of the plow. Turn one direction for 1 ¼" plow and turn 90° for 1 ¾" plow.

The **Rectangular Socket** has teeth on the bottom to reduce the chance of it rotating while tightening either Ball Adaptor.

The **Round Socket** is used under non-plowed handrail or on a kneewall plate.

The **Sockets** used for a remodel project will likely be determined based on the existing stair features. (For example, plowed handrail or shoerail will require the **Rectangular Sockets**). However, for new construction one usually has the flexibility to chose either **Round Sockets** or **Rectangular Sockets**.

The **Threaded Base Collar** is identical in shape to our LI-3101/LI-ALM06 shoes.

The **Threaded Disc** for the **Threaded Base Collar** has teeth on the bottom and around the outer ring so it digs into the tread to reduce the chance of it spinning during installation, whether in new construction or remodeling.

The shoulder on the **Threaded Disc** is ¾" diameter so it isn't necessary to use the centering plug when placing the **Disc** into a ¾" hole.

The **Threaded Base Collar with Disc and Screw** is available separately as item **LI-PROCOL**

The **Attachment Screws** and the **Hanger Bolts** have an aggressive self-drilling tip and don't require a **pilot hole**, although drilling one will make installation easier.

Coating the **Attachment Screws** and **Hanger Bolts** with **paraffin wax** causes them to install easier.

Don't tighten the **Ball Adaptors** extremely tight in order to allow some movement when installing the iron balusters.

**Cover plates** are used for remodeling when the footprint of the removed wood baluster cannot be covered up by the Threaded Base Collar, Round Socket or Rectangular Socket, or when the replacement iron balusters will be in different locations.

**The Universal Cover Plate** is used on open treads and level sections under the Threaded Base Collar, or under the Round Socket on the plate of a kneewall stair.

**The Rectangular Socket Cover Plate** is used on the kneewall plate when the Rectangular Socket style is chosen.

When the spacing of the replacement iron balusters will change, **Wood Fillet** can be used under plowed or non-plowed handrail and shoerail to cover up the footprints from the removed wooden balusters. The IronPro hardware can then be installed following the "new construction" directions.

We recommend coating each Ball Adaptor with a **light oil** to prevent marring the finish during installation.

Because the handrail height on remodeled stairs may likely be lower than 34", it could be necessary to trim the top pin off of the iron balusters to align the baluster details between the handrail and treads/shoerail. To install the now "square top" iron balusters using IronPro, the attachment screw into the bottom of the handrail should not be completely tightened in order to allow the Ball Adaptor to rotate in the Socket while turning the baluster and bottom hardware onto the Threaded Disc or Hanger Bolt.

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**Here is a description of how to get the set screw of the Threaded Base Collar to align in the desired position on the tread or balcony landing.**

With the **Threaded Base Collar** slid onto the bottom of the baluster and in position on the tread, turn the set screw side of the **Threaded Base Collar** ¼ turn counter clockwise from where you want the set screw side to end up in the permanent position (Photo A). In this manner the **Threaded Base Collar** will become seated on the surface somewhere between your starting point (one quarter position back from permanent) and your ending (permanent) position. If it is short of your ending position you simply continue to turn it clockwise to the ending position. You may need to put a wrench on the baluster bar to turn it (Photos B & C)

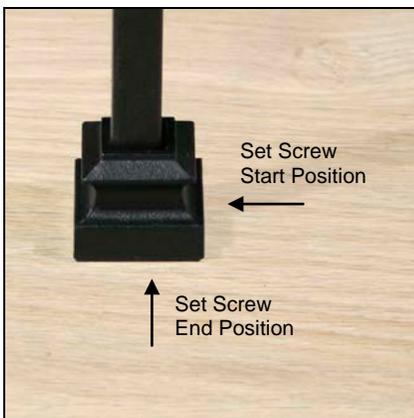


Photo A

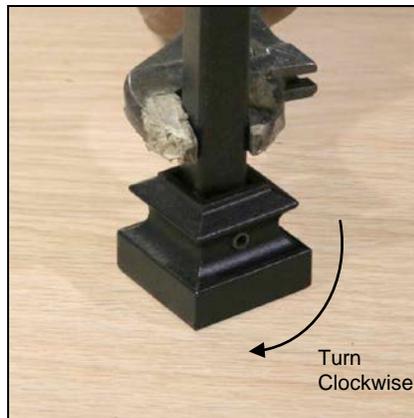


Photo B

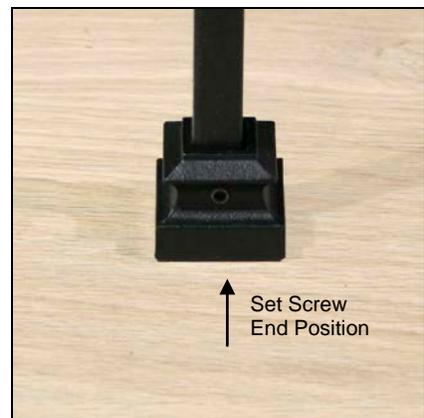


Photo C

If for any reason the **Threaded Base Collar** becomes seated on the surface and you have to move it more than ¼ turn, back off the **Threaded Base Collar**, loosen the screw and turn the **Threaded Disc** in the direction that you want the **Threaded Base Collar** to go to end up in the permanent position (Photo D). Tighten the screw and thread the **Threaded Base Collar** onto the **Threaded Disc** again.



Photo D