Innovative New Dry Glaze Taper-Loc™ System* from C.R. Laurence Co., Inc. (CRL)

*Patent Pending

Installation video and complete instructions available at crlaurence.com or click here

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<th>Taper-Loc Taper Set for ⅛&quot; (12 mm) or ⅜&quot; (19 mm) glass</th>
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Drastically Reduce Installation Time with the CRL System that Includes the CRL Taper-Loc™ Taper Set and an Installation/Removal Tool with Integral Torque Wrench

Adhere Taper-Loc™ L-Pressure Blocks to the bottom edge of the glass panel and lower it into position.

Install Taper-Loc™ Tapers with CRL’s Installation/Removal Tool (Cat. No. TLK5) to lock the glass securely in place.

Roll in the Glazing Gasket and you’re done! The Taper-Loc™ System makes it quick, clean, and simple.

C.R. Laurence’s variety of glass railing and windscreen systems not only provides glass professionals with many choices, but also installation methods. CRL recently developed a proprietary glass installation system that is so simple that glass railing and windscreen installers can easily reduce installation time by 50%.
CRL’s Dry Glaze Taper-Loc™ System is designed to self-center the glass panels in the base shoe pocket, and to meet and exceed code standards. Intended for residential and commercial tempered glass railing applications, the system includes an Installation/Removal Tool and the CRL Taper-Loc™ Tapers for 1/2" (12 mm) or 3/4" (19 mm) tempered glass applications.

Installation consists of the following steps: substrate preparation, base shoe attachment, prepping the glass for installation, glass panel installation, securing the glass panels in the base shoe with Taper-Loc™, cladding and finishing the base shoe, attaching the cap rail, and glass panel adjustment.

**Substrate Preparation:**

1. Align the base shoe in the proper location and then drill the required holes in the concrete.
2. Install the required anchors.

**Base Shoe Attachment:**

The CRL Taper-Loc™ System supports all mounting methods, including surface mount, embed mount, and fascia mounting, and is designed for typical concrete and steel mounting substrates.

**Base Shoe Attachments to Concrete:**

The holes in the heavy aluminum base shoe are used as alignment fixtures for proper hole positioning. Holes are drilled using a rotary hammer with a masonry drill bit. Holes are then cleaned out with a blow-out pump. After this, heavy-duty sleeve expansion bolt anchors are installed.

**Base Shoe Attachments to Steel Angles, Channels and Weld Blocks:**

In these installations, the base shoe is again used as an alignment fixture. The holes are drilled in the steel and tapped, blown clean, and then the shoe is attached with socket head cap screws.

The mounted base should be adjusted to assure it is plumb to plus or minus 1/8" (3.2 mm) at an extended height of 42" (1066 mm). If shimming is required, aluminum shim strips, not wood shims, should be used before securing the fasteners.

**Prep the Glass for Installation:**

1. Install the L-Pressure Blocks onto the bottom of each glass panel.

* A minimum edge distance of 6" is recommended for most standard applications.
Before installing the glass panels, the L-Pressure Blocks are adhered onto the bottom edge of the glass panel. The installer removes the tape’s liner strip and sticks the L-Pressure Blocks onto the bottom edge of the glass, with the vertical surface making contact with the glass. These are spaced 14” (356 mm) on center maximum, and a minimum of four are used for a 48” (1219 mm) glass panel. Exact spacing is not necessary.

**Glass Panel Installation:**

After making sure the base shoe is free of debris, the glass panels are installed into the base shoe’s pocket, with the glass edge, on which the L-Pressure Blocks were placed, set on the bottom. Now is the time to install the high strength, Taper-Loc™ Tapers that will later be locked together with CRL’s exclusive Installation/Removal Tool. This tool mechanically slides the Tapers horizontally in the shoe, and, with a precision measured torque action wrench, compresses them together. When compressed together they expand in thickness and lock in place. CRL designed the Taper-Loc™ Tapers to incorporate tabs at either end. The Installation/Removal Tool cleverly “grabs” onto these tabs in order to move the Tapers together or apart.

At this time, one Taper-Loc™ Taper Set (consisting of two Tapers) is inserted at the edge of each glass panel. The right side of the right hand Taper must be aligned with the right vertical edge of the L-Pressure Block that was previously installed. One of the two Tapers has one side engraved with the words “Glass Side.” This side MUST face and touch the glass panel when inserted into the shoe. The other Taper has projecting rails along its length, which will hold the two in alignment with each other.

Squeeze the Tapers together “finger tight” and push the set half way down into the base shoe, as shown.

The Tapers don’t need to be pushed all the way down; the Installation/Removal Tool will remedy this. When the installer is satisfied with the spacing and top height alignment for a group of glass panels, the Taper-Loc™ securing operation begins.
Secure the Glass Panels in the Base Shoe with Taper-Loc™:

Use CRL’s Installation/Removal Tool (Cat. No. TLK5) to push the Tapers down into position, and then to lock them together.

| Place the Installation/Removal Tool into position onto the Tapers and push them down into the Base Shoe. | Crank the Torque Wrench until the wrench clicks and breaks for a few degrees, letting you know the Tapers are locked to the correct measured torque value requirement. |

The Installation/Removal Tool should now be able to drop down until it comes to rest on the base shoe. This will push the Tapers to the remaining depth. There’s an indication mark on top of the right side of the tool, which must be aligned with the right vertical edge of the L-Pressure Block. Sliding the tool left or right will move the Tapers at the same time to achieve alignment.

After proper alignment of the Tapers with the L-Pressure Blocks, the installer simply cranks the torque wrench with his right hand. This action slides the Tapers together horizontally. When the correct lock-up force is applied the wrench will make a single clicking sound, and will break for a few degrees of rotation, giving the Taper-Loc™ the exact measured torque requirement. More force than the factory preset should not be applied. Remove the tool and repeat the process for the remaining Tapers.
Cladding and Finishing the Base Shoe:

Although there are various methods of attaching cladding to the base shoe, a combination of cladding tape and neutral cure silicone offers the best of two worlds: the instant bond of the tape along with the speed of application of silicone and its flexible, durable adhesion. Once the cladding is applied, the roll-in glazing gasket is easily installed with one of CRL’s roll-in vinyl tools. A neutral cure silicone, such as CRL’s 95CBL, is required for exterior applications.

| To attach cladding, apply two rows of tape with a bead of silicone between the rows. | Finish off using silicone for exterior applications. Roll in vinyl is recommended for interior applications. |

Attach the Top Cap Rail:

A continuous bead of CRL’s 95CBL Neutral Cure Silicone is applied to the top glass edge and the protective vinyl is inserted onto the glass edge. Another bead of silicone is applied to the top edge of the vinyl insert and then the cap rail is installed over the vinyl insert until it is firmly seated. Shim as required, and caulk on both sides of the underside of the glass pocket for a clean finished look.

Glass Panel Adjustment and Removal:

Remember, the same Installation/Removal Tool will also loosen the Tapers for glass panel alignment or replacement by mechanically moving them apart from one another. The cladding is first protected with blue masking tape. Then the Installation/Removal Tool is inserted into position, the torque setting is reversed, and force is applied to open the Tapers. The Tapers are removed, and then the glass panel adjusted or replaced.

CRL has taken the same Glass Railing Taper-Loc™ technology and designed and engineered a low profile version for Glass Windscreen Base Shoe applications. Features include an Installation/Removal Tool and Torque Wrench, and the CRL Taper-Loc™ Set for 3/8” (10 mm) tempered glass applications.

Complete detailed installation instructions and an installation video of the CRL Dry Glaze Taper-Loc™ System are available at crlaurence.com. For additional information, e-mail railings@crlaurence.com or call for engineering and technical assistance. CRL’s Technical Sales Department can be reached at (800) 421-6144 in the United States, (877) 421-6144 from Canada, or (323) 588-1281 from outside the United States and Canada. Ask for Ext. 7730.