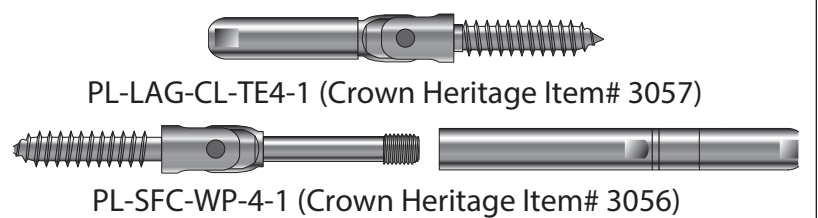


# Installation Instructions for Cable Runs on Stairs using a Combination of Ultra-tec ® Swageless Fittings Installed into a 4x4 Wood End Post Frame

Ultra-tec ® fittings are designed to be used for securing infill in a railing frame for pedestrian use with 1/8" 1x19 construction stainless steel (preferably Type 316 S/S) Left Hand Lay Strand ONLY.

NO OTHER APPLICATIONS OR CABLE CONSTRUCTIONS ARE RECOMMENDED, SUPPORTED, OR WARRANTED BY THE CABLE CONNECTION FOR ULTRA-TEC ® PRODUCTS.

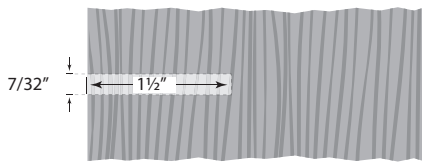


## Preparing the Posts

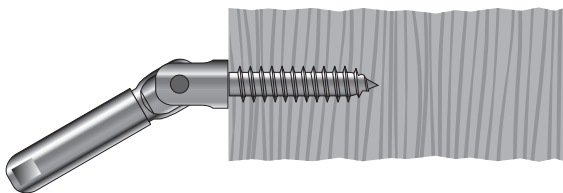
1. Mark the face of the post with a marking pen at each location where a piece of hardware will be installed or where a cable will pass through.
2. For all "intermediate" posts (posts that will have no hardware attached but will have cable passing through), drill a through hole at the mark that is .156" (5/32") diameter.

## Installing PL-LAG-CL-TE4-1

3. Drill 7/32" hole for lag thread (at the mark made in step one) into wood post at least 1 1/2" deep.



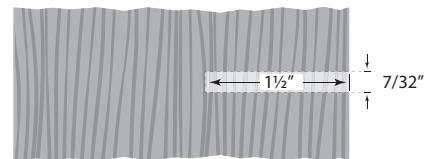
4. Place lag thread into the drilled hole and drive lag thread into wood post using the articulating portion of the fitting as a lever to rotate the lag end of fitting. Stop turning when shoulder on fitting between lag thread and clevis makes contact with the wood post face. You may continue to rotate fitting up to 1/4 turn to properly orient the fitting. If the wood is too hard to rotate 1/4 turn clockwise, it may be backed off 1/4 turn to achieve proper orientation.



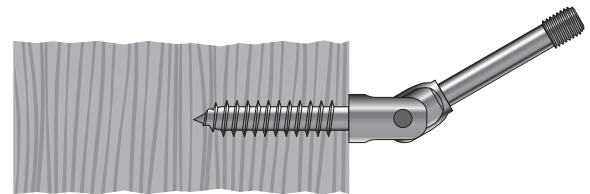
5. Repeat steps 3 and 4 for all remaining hardware locations on that post face.  
When finished, proceed to instructions for installing PL-SFC-WP-4-1.

## Installing PL-SFC-WP-4-1

6. Drill 7/32" hole for lag thread (at the mark made in step one) into wood post at least 1 1/2" deep.

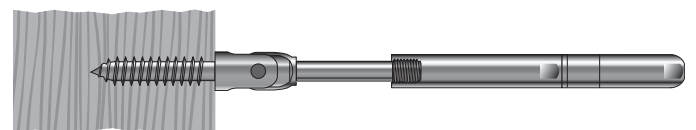


7. Place lag thread into drilled hole and drive lag thread into wood post using the articulating portion of the fitting as a lever to rotate the lag end of fitting. (NOTE: Female threaded rotating portion of fitting referred to in Step 9 MUST NOT BE attached for this step.) Stop turning when shoulder on fitting between lag thread and clevis makes contact with wood post face. You may continue to rotate fitting up to 1/4 turn to properly orient the fitting. If the wood is too hard to rotate 1/4 turn clockwise, it may be backed off 1/4 turn to achieve proper orientation.



8. Repeat steps 6 and 7 for all remaining hardware locations on that post face.

9. Assemble female threaded rotating portion of fitting onto male thread only so far as to cover male thread and no more.



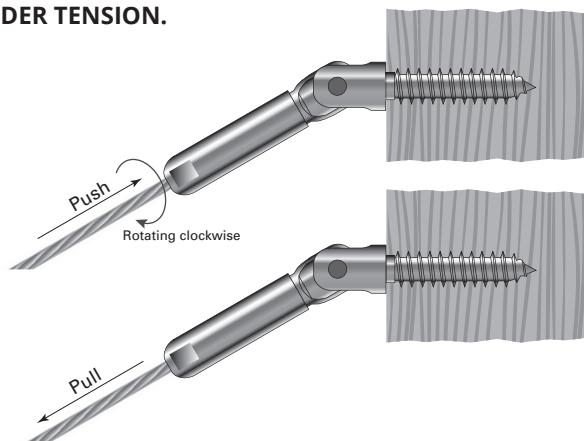
## General Guidelines for Installing Cable

All cable cut ends must be “clean” and burr free. We recommend using a Felco type cutter that encircles the cable as it cuts it. When inserting a cut end of cable into a Push-Lock® type fitting it is important to rotate the cable and/or fitting in a direction that is “with the lay” of the strand.

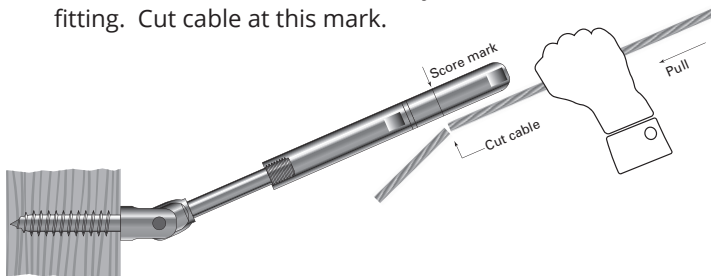
For L/H lay strand you would rotate the cable clockwise, or rotate the fitting clockwise. This will help to prevent the cable from fraying or “unlaying” while it is inserted into the fitting. Insert cut cables into Push-Lock® fittings approximately 1.062" until you feel it rest against a hard stop and then pull against the fitting to secure the wedges in the fitting.

*Note: If you have trouble inserting the cable into the fitting, it may be because the locking wedges have become stuck. This is not a defect! Here's what you can do to “free the wedges” — For Pull-Lock® or Push-Lock® fittings for 1/8" cable, using either a PL-KEY or 1/4" diameter bolt, insert the PL-KEY or bolt into the hole and press until the wedges move freely. Perform the same operation for a 3/16" Pull-Lock® or Push-Lock®, except use a 16d nail or another tool with 1/8" or smaller diameter. Anything larger than what is recommended can actually get stuck inside the fitting – NOT what you want!*

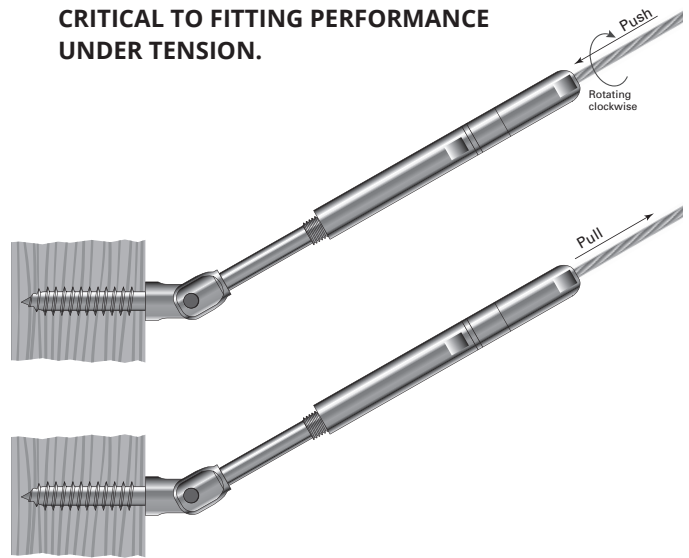
10. Begin by inserting the cut end of the cable into the non-tensioning end fitting as described above.  
**FULL INSERTION OF THE CABLE IS CRITICAL TO FITTING PERFORMANCE UNDER TENSION.**



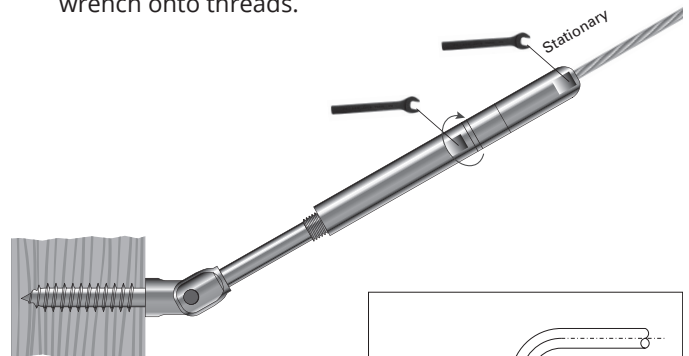
11. Feed bare end of cable through intermediate posts towards tensioning fitting on opposite end of frame, mark cable at score mark on body of Push-Lock® fitting. Cut cable at this mark.



12. Loosen tensioning fitting so that approximately 5 or 6 threads are showing and insert cable into fitting as described in preface of this section.  
**FULL INSERTION OF THE CABLE IS CRITICAL TO FITTING PERFORMANCE UNDER TENSION.**



13. Tension cable by holding Push-Lock® body at 3/8" wrench flat nearest cable (do not let this section rotate while cable is inserted) and rotating female threaded section of fitting with a 3/8" open-end wrench onto threads.



14. Tension all cables in sequence, beginning with the center cables, moving up and down toward the top and bottom. As you tension each cable, give it a sharp pull downward mid-span to help set the wedges, then re-tension as necessary in the same sequence.

