Ultra-tec®

CABLE RAILING INFILL

Architectural
Cable Railing
Products

ISO Certified
U.S.A.
Manufacturer

April 1, 2015

Ultra-tec® Cable Railing Products

More choices than ever when designing a cable railing you and your clients will be proud of.

Advantages of Swageless Fittings

Swaging is the term used for attaching fittings to the cable. Swageless fittings are installed on the cables by hand at the job site and do not require special equipment. With swageless fittings, at least one cable end does not contain a fitting when delivered to the job site. Fittings are larger than the diameter of the cable, so, since only bare cable is fed through intermediate elements between terminating end posts, holes in the intermediate elements can be drilled close to the diameter of the cable. Hence, there is a tighter fit between cable and frame than there would be if the cables were supplied with fittings on both ends.

With swageless fittings, the cables can be installed at the same time the railing frames are installed. There is no waiting for exact measurements that would be required if the cables were supplied with fittings on both ends of the cable.

Swageless fittings are generally more costly than fittings that are swaged. However, on smaller projects, using swageless fittings often results in savings when the cost of renting or purchasing the equipment necessary to swage the fittings on site is considered.

Swageless fittings are offered for use with 1/8" and 3/16" diameter cable.

Advantages of Swaged Fittings

If fittings are swaged on site when the cables are installed, the intermediate elements between terminating end posts can be drilled close to the diameter of the cable, because there are no fittings to pass through the holes in the posts. There is a tighter fit of cable to frame than there would be with the larger holes required if fittings are swaged on both ends before the cables are strung through the posts.

An alternative to swaging on site (or using swageless fittings) is to have the fittings swaged on both ends of the cable by the factory or a distributor. The disadvantages, however, are that exact measurements must be supplied for the factory or distributor to swage the fittings onto the cable and, with fittings already attached to the cables, intermediate element holes need to be drilled oversize for the fittings to pass through for installation.

Swaging requires special equipment that can be purchased or rented from the factory or a distributor. Swaged fittings are generally less expensive than swageless fittings, so on larger projects the savings in using swaged fittings may more than offset the cost of the equipment.

Front Cover

This "imagine yourself here" deck overlooking Swan Lake, Montana, uses custom steel end posts and our Invisiware® "hidden-in-the-post" fittings on both ends of the cable runs. The two types of fittings used in this system are 1-1/2" long Receiver tensioners and Radius Ferrule stop-end fittings.

Inset photo – This stair system featuring post and rail by Keuka Studios employs a Push-Lock® Threaded Eye hinged to a threaded tab in the post at the bottom of the stair. The level run overlooking the stairwell below uses a Receiver tensioner in the visible end post.

ISO 9001 Certified

Certified System™
ISO 9001
QMI-SAI Global

LEED® Credit

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Ultra-tec® products contain at least 65% recycled content, helping you qualify for LEED® credits.

This emblem appears on the pages of Ultra-tec® products that contain at least 65% recycled content, helping you qualify for LEED credits.

Building Codes

When used in accordance with factory recommendations for constructing the railing frame, spacing, and supporting the cables, a railing using Ultra-tec® cable railing products will meet common infill loading requirements required by local building codes.

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Perfect anywhere.

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THREADED STUDS — page 19

MOUNTING AIDS AND CABLE

EQUIPMENT, ACCESSORIES, RAILING COMPONENTS

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Pull-Lock® Stop-End Fittings

NON-TENSIONING END

Field installed Pull-Lock® fittings — outside-of-post mount

No field swaging

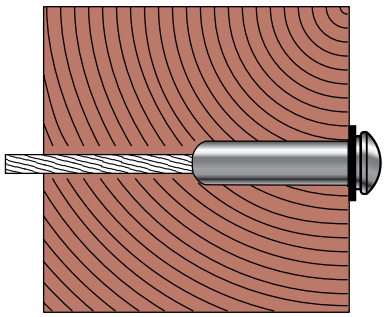
Pull-Lock® fittings are designed for use with 1x19 L.H. lay strand only. They can be used with any tensioning device on the other end, and when matched with an Invisiware® Receiver tensioner (page 11), gives you a cable railing system with no visible hardware between the end posts.

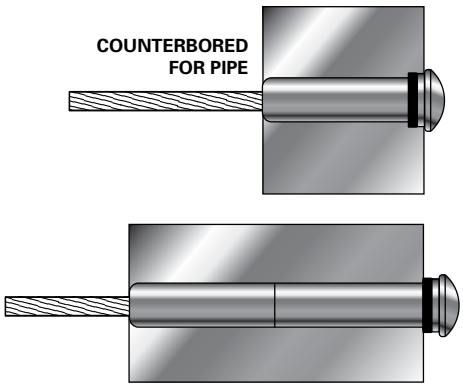
Easy to install

You can order your cables with a tensioner already on one end or you can install a tensioner on one end on site. Attach the tensioner on one end post, slip the Pull-Lock® fitting into the other end post and pull the cable all the way through the Pull-Lock® fitting. Tension the cables, then cut the excess cable off on the back side of the fitting with a 4-inch right angle grinder or a cutting wheel (available from the factory) that is used with your hand drill. Press on the stainless steel cap to cover the bare cable end, and you're done!

Use with metal or wood posts

Pull-Lock® fittings come in four lengths, so that when used with a matching length Invisiware Receiver, post-drilling is made uniform. Pull-Lock® fittings work with pipe and with round, square, or rectangular metal tubing. When used with an end post 1½" or more in thickness, the Pull-Lock® fitting is hidden inside the end post, with only the head exposed on the outside of the post. Pipe ends are counterbored, so the full perimeter of the screw cap head rests on a flat surface in the pipe. The head rests on the outside wall of a flat-sided metal post. A plastic washer is included and acts as a scratch-resistant barrier between the screw cap head and the metal post. For wood applications, also order 7/16SAE stainless steel washer (page 21).





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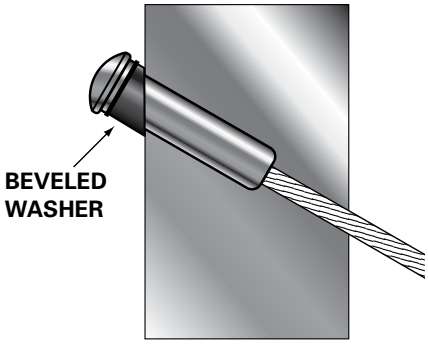
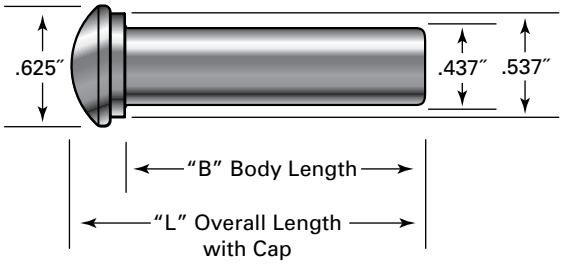
Use Pull-Lock® stop-end fittings on stairs with special beveled washers.

Special stainless steel beveled washers let you use Pull-Lock® fittings on stairs and severe pitches with flat-sided metal frames. Not offered for pipe or round tubing.

TYPE 316 STAINLESS STEEL BEVELED WASHERS

FOR PITCH OF	ORDER PART NO.
30° - 33°	BW32-6
34° - 36°	BW35-6
37° - 39°	BW38-6





PULL-LOCK® FITTINGS — OUTSIDE-OF-POST MOUNT

Pull-Lock® fittings are made entirely of stainless steel parts, primarily Type 316.

DESIGNED FOR USE WITH 1X19 L.H. LAY STRAND ONLY

DIMENSIONS AND FRAMING OPTIONS

FRAME OPTIONS	“B” Body Length	“L” Overall Length	1/8” cable PART NO.	3/16” cable PART NO.
Any Frame	1.562”	1.825”	PUL-4	PUL-6
1-1/2” Tube	1.562”	1.825”	PUL-4-12	PUL-6-12
2” Tube	2.030”	2.266”	PUL-4-2.030	PUL-6-2.030
2-3/8” Tube	2.405”	2.668”	PUL-4-2.375	PUL-6-2.375
3” Tube	3.030”	3.266”	PUL-4-3.030	PUL-6-3.030

NOTE: For wood posts, also use S.S. Washer Part No. 7/16SAE.

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Convenient cutting tool

To cut the cable flush with the end of the Pull-Lock® fitting, a 4-inch right angle grinder with a cut-off wheel is ideal. For those who do not have that type of hand tool, a cutting tool for use with a hand drill is available. Order part no. CUT-OFF KIT (page 25).

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Push-Lock® Stop-End Fittings

NON-TENSIONING END

Field-installed Push-Lock® fittings — outside-of-post mount

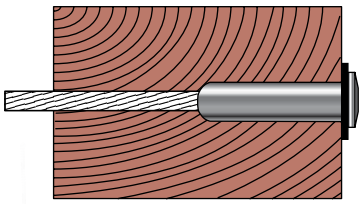
No field swaging

Push-Lock® fittings are designed for use with 1x19 L.H. lay strand only. They can be used with any tensioning device on the other end, and when matched with an Invisiware® Receiver tensioner (page 11), gives you a cable railing system with no visible hardware between the end posts.

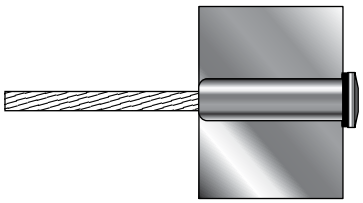
Easy to install

Attach the tensioner on one end post, slip the Push-Lock® fitting into the other end post and cut the cable to length per the instructions. Push the cable into the Push-Lock® fitting, tension the cable, and you're done!

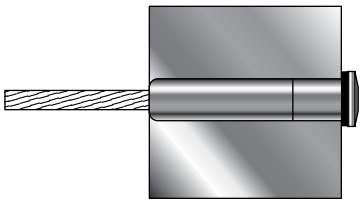
Four styles make your job easy — for any width post, wood or metal.

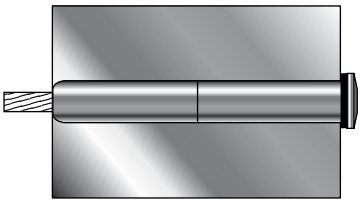


Push-Lock® fittings with rounded nose ends rest inside your metal or wood end posts on level runs. The fitting is hidden inside the post, with only the head exposed on the outside of the post.



Push-Lock® fittings with squared nose ends are available for 1½", 2", and 3" square (or rectangular) tube to create a uniform look when used opposite 1½", 2", or 3" Invisiware® Receivers (which also have squared ends).





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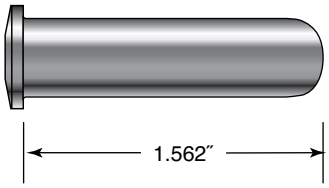
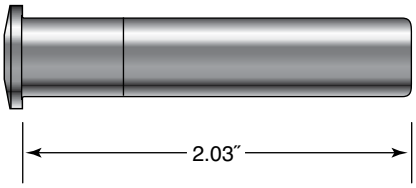
For level runs where back side of end post is accessible

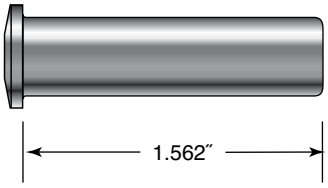
Push-Lock® fittings are used on level runs. They rest in a hole in the end post. When used with an end post 1½" or more in thickness, the Push-Lock® fitting is hidden inside the end post, with only the head exposed on the outside of the post. Pipe ends are counterbored, so the full perimeter of the head will rest on a flat surface in the pipe. A plastic washer is included and acts as a scratch resistant barrier between the Push-Lock® fitting and a metal post. The head rests on the outside wall of a flat-sided metal post or on a stainless steel washer on a wooden post. For wood applications, also order 7/16SAE stainless steel washer.



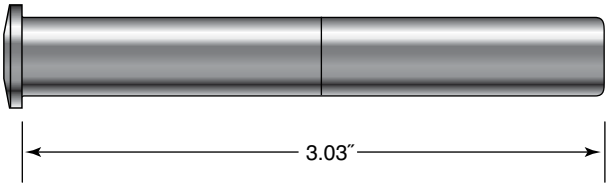
PL-4/PL-6



PL-4-2.030/PL-6-2.030



PL-4-12/PL-6-12



PL-4-3.030/PL-6-3.030

Easy to order, easy to install

Select the tensioners you wish to use. If the tensioners are swageless, order the quantity of tensioners, Push-Lock® fittings and cable you will need. If you need a tensioner swaged on one end by the factory or a distributor, provide the length of each of your cable runs and the tensioners you wish to use, and your cables will be shipped to you with tensioners on one end and bare cable on the other end. The cables will be a bit longer than you need, and you will cut them to a final length and push them into the Push-Lock® fittings when you install the cables in your posts.

green
Ultra-tec® products contain at least 65% recycled content, helping you qualify for LEED® credits.

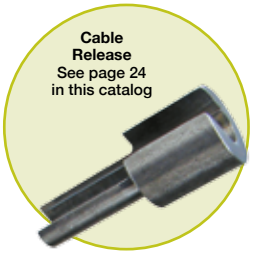
PUSH-LOCK® FITTINGS — OUTSIDE-OF-POST MOUNT

Push-Lock® fittings are made of type 316 stainless steel with the exception of internal components that are made of other types of stainless steel.

DESIGNED FOR USE WITH 1X19 L.H. LAY STRAND ONLY

	FRAME OPTIONS			
CABLE DIA.	ANY FRAME	1-1/2" TUBE or 1-1/4" PIPE	2" TUBE	3" TUBE
1/8"	PL-4	PL-4-12	PL-4-2.030	PL-4-3.030
3/16"	PL-6	PL-6-12	PL-6-2.030	PL-6-3.030

NOTE: For wood posts, also use S.S. Washer Part No. 7/16SAE.



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Push-Lock® Stop-End Fittings

NON-TENSIONING END

Field-installed Push-Lock® fittings — inside-of-post mount

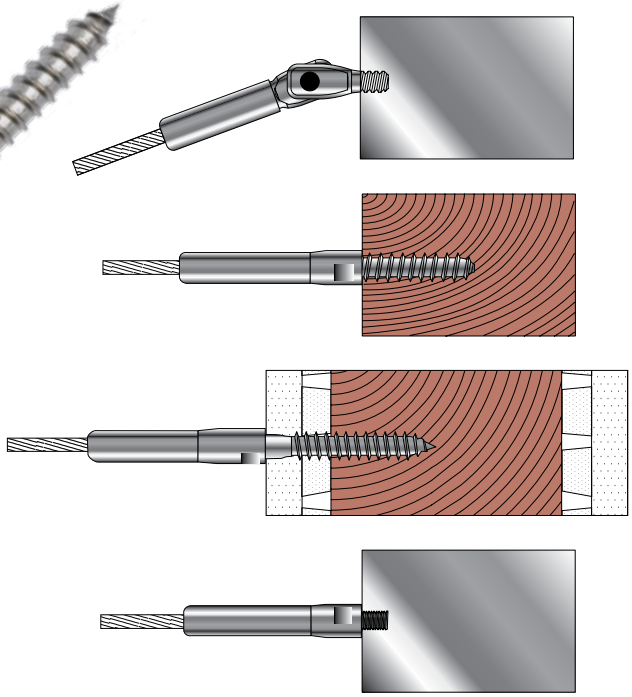
No field swaging

Push-Lock® fittings are designed for use with 1x19 L.H. lay strand only. They can be used with any tensioning device on the other end, and our inside-mount swageless fittings are the most economical inside solution we offer.

Easy to install

You can order your cables with a tensioner already on one end or you can install a tensioner on one end on site. Attach the tensioner on one end post, then cut the cable to length based on the Push-Lock® fitting being used for the job. Push the cable into the Push-Lock® fitting, tension the cable, and you're done!

Four styles make your job easy – in metal, wood, or composite sleeve



Push-Lock® fittings with threaded eyes mount to lag eyes, tabs or holes on the outside of your metal or wood post for use on stairs and severe pitches.

Push-Lock® Lag, Extended Lag, and Threaded Bolt fittings for straight, level runs allow you to lag or thread into the inside of the end post, depending on post composition.

The Push-Lock® Lag fittings come in two parts so the lag can easily be driven into the wood post.

The Push-Lock® Threaded Bolt operates as a single unit.

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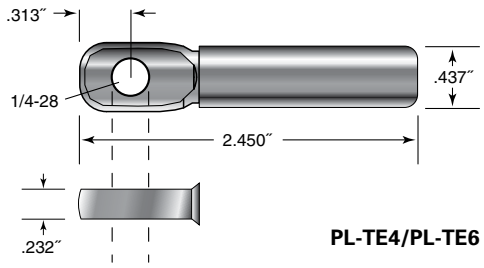
For stairs or severe pitches

Push-Lock® fittings with threaded eye ends are for use on stairs. They attach to a wood end post with a lag eye (page 21). See the drawing to determine how to interface this fitting with a metal end post or use our fixed tab or threaded tab (page 20). Mount with an SC-6 screw (page 21).



PL-TE4/PL-TE6

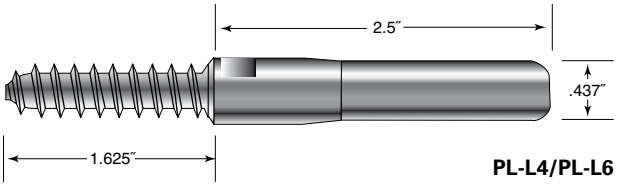
For level runs where cable must be terminated on the inside of the post

For level runs where the back side of the post is not accessible, so the cable must terminate in a fitting on the inside of the post, the Push-Lock® Lag (for wood posts), the Push-Lock® Extended Lag (for wood posts with composite sleeves), and the Push-Lock Threaded Bolt (for metal posts) address those needs.

The Push-Lock® Lag is actually two components that fit together: the lag and the Push-Lock® coupler. The lag is broached for an Allen wrench on one end to make it easy to screw into the post. Once installed, thread the Push-Lock® coupler onto the lag and you're ready to insert the cable.

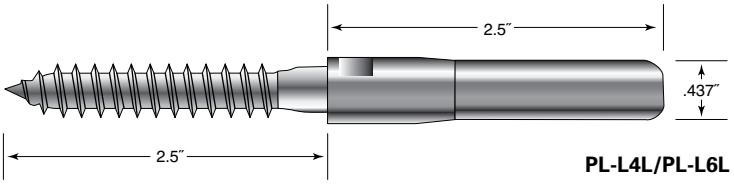
The Push-Lock® Threaded Bolt is a single unit which threads into a pre-drilled and tapped hole. Once securely tightened against the post, you're ready to insert the cable.

Neither the Push-Lock® Lag nor the Push-Lock® Threaded Bolt are tensioning devices, so the other end of the cable run will require a tensioner.

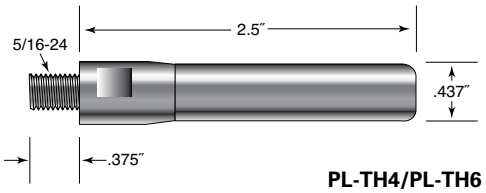


PL-L4/PL-L6

Drill 9/32" pilot hole for Push-Lock® lags



PL-L4L/PL-L6L



PL-TH4/PL-TH6

Easy to order, easy to install

Select the tensioners you wish to use. If the tensioners are swageless, order the quantity of tensioners, Push-Lock® fittings and cable you will need. If you need a tensioner swaged on one end by the factory or a distributor, provide the length of each of your cable runs and the tensioners you wish to use, and your cables will be shipped to you with tensioners on one end and bare cable on the other end. The cables will be a bit longer than you need, and you will cut them to a final length and push them into the Push-Lock® fittings when you install the cables in your posts.

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Ultra-tec® products contain at least 65% recycled content, helping you qualify for LEED® credits.

PUSH-LOCK® FITTINGS — INSIDE-OF-POST MOUNT

Push-Lock® fittings are made of type 316 stainless steel with the exception of internal components that are made of other types of stainless steel.

DESIGNED FOR USE WITH 1X19 L.H. LAY STRAND ONLY

		FRAME OPTIONS				USE WITH SCREW NO.	FOR WOOD, USE WITH LAG EYE NO.	FOR METAL, USE WITH TAB NO.
CABLE DIA.	LEVEL or STAIR RUN	1-1/2" TUBE or 1-1/4" PIPE	OTHER FRAMES	WOOD	WOOD WITH COMP. SLEEVE			
1/8"	For level runs	PL-TH4	PL-TH4	PL-L4	PL-L4L	NA	NA	NA
	For stair runs	PL-TE4	PL-TE4	PL-TE4	NA	SC-6	LE-6	TT-6B
3/16"	For level runs	PL-TH6	PL-TH6	PL-L6	PL-L6L	NA	NA	NA
	For stair runs	PL-TE6	PL-TE6	PL-TE6	NA	SC-6	LE-6	TT-6B

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Receivers with Push-Lock® Stud

TENSIONER

Field installed Push-Lock® studs require no swaging or special tools.

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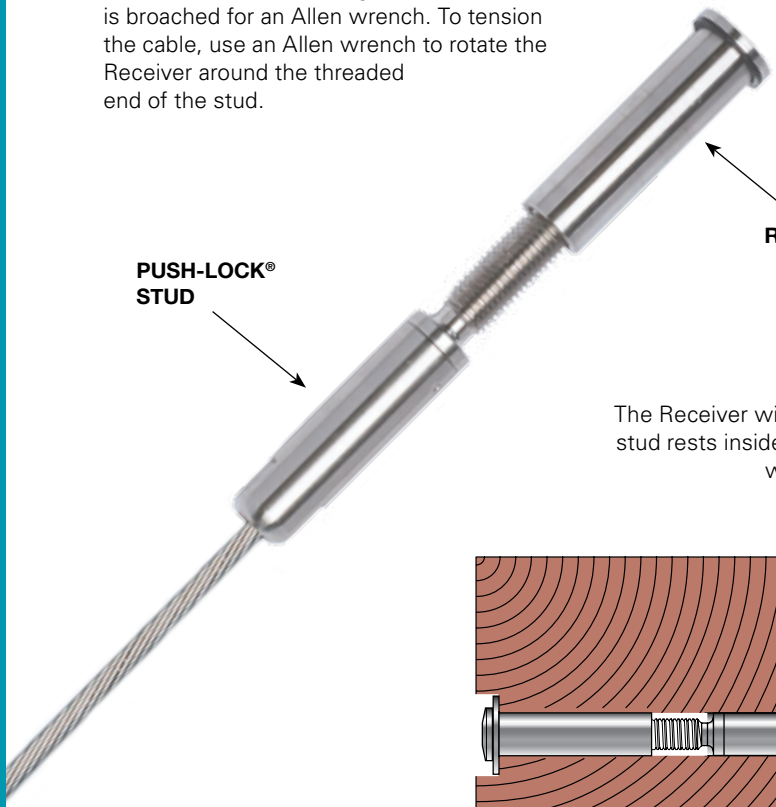
No field swaging

Similar to our Invisiware® Receivers (see page 11), but when used with Push-Lock® studs there is no need to swage the threaded stud onto the cable. Receivers with Push-Lock® swageless studs can be used with any fitting on the other end, but when used with our other swageless fittings, both ends can be put on the cable by hand without any swaging or special tools.

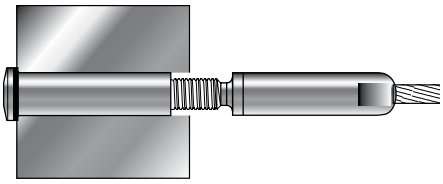
Easy to install

Push-Lock® studs are designed for use with 1x19 L.H. lay strand only. Push the cable into the Push-Lock® swageless stud, where it will be securely held inside the fitting. The Receiver is female-threaded to accept the male-threaded end of the fitting. The head of the Receiver is broached for an Allen wrench. To tension the cable, use an Allen wrench to rotate the Receiver around the threaded end of the stud.

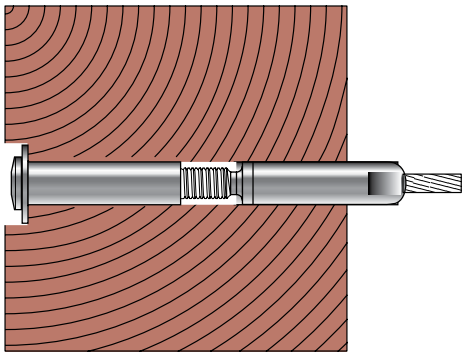


Use with metal or wood posts

The Receiver with Push-Lock® stud rests inside your metal or wood end post.



2x2 metal post



4x4 wood post

For use in wood, the fitting can rest against the outside of the end post or the post can be counterbored with the fitting recessed in the post. For wood applications, a larger diameter washer is needed to distribute the load over a wider surface. See 7/16SAE stainless steel washer (page 21).

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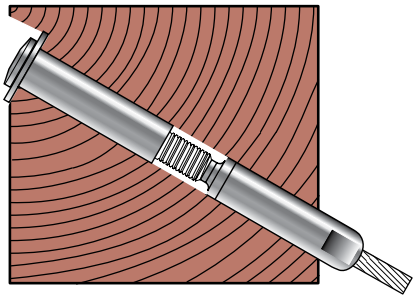
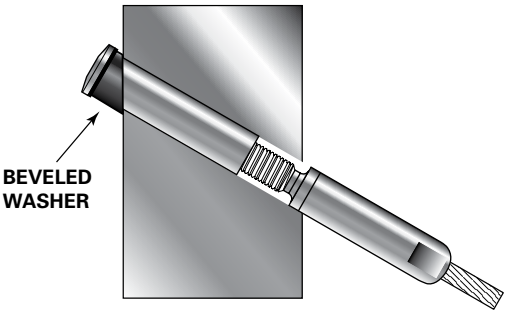
For stairs or severe pitches

Special stainless steel beveled washers let you use Push-Lock® tensioners on stairs or severe pitches with flat-sided metal and wood posts. (Not offered for pipe or round tubing.) For wood posts, also order 1/2SAE stainless steel washer (page 21).



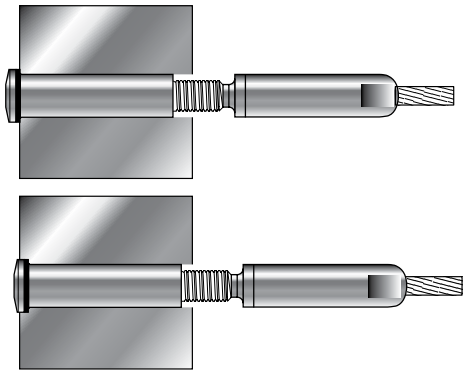
TYPE 316 STAINLESS STEEL BEVELED WASHERS

FOR PITCH OF	ORDER PART NO.
30° - 33°	BW32-6
34° - 36°	BW35-6
37° - 39°	BW38-6



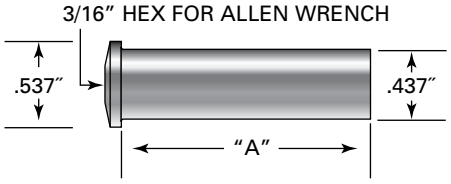
For level runs

Receivers with Push-Lock® studs rest in a hole inside the end post. Pipe ends are counterbored, so the full perimeter of the screw cap head rests on a flat surface in the pipe. The head rests on the outside wall of a flat-sided metal post. A plastic washer is included and acts as a scratch-resistant barrier between the screw cap head and the metal post. For wood applications, a larger diameter washer is needed to distribute the load over a wider surface. For wood, also order 7/16SAE stainless steel washer (page 21).



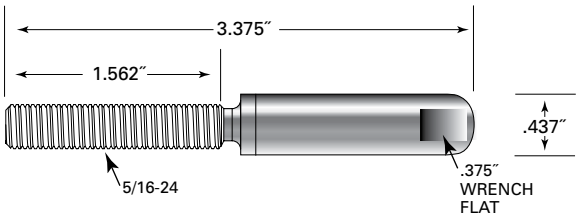
Invisiware® Receivers are made of type 316 stainless steel.
PART NUMBERS IN BOLD TYPE. ORDER SWAGELESS STUD SEPARATELY.

CABLE DIA.	USE WITH SWAGELESS STUD NO.	A = LENGTH OF RECEIVER BODY							
		1.56″	1.81″	2.03″	2.30″	2.40″	2.53″	3.03″	3.56″
1/8″	PLST-4	R-6-12	R-6-22	R-6-32	R-6-42	R-6-72	R-6-82	R-6-52	R-6-62
3/16″	PLST-6								



Push-Lock® Swageless Stud

The Push-Lock® swageless stud is installed onto the end of the cable by hand, by pushing the cable into the fitting where it is held securely inside. No swaging is required, and, other than a cable cutter, no special tools are needed.



Push-Lock® swageless studs are made of type 316 stainless steel with the exception of internal components that are made of other types of stainless steel.

DESIGNED FOR USE WITH 1X19 L.H. LAY STRAND ONLY

CABLE DIA.	PART NO.
1/8″	PLST-4
3/16″	PLST-6

1-800-851-2961 ▪ 775-885-1443 ▪ Fax 775-885-2734
52 Heppner Drive ▪ Carson City, NV 89706
E-mail: info@ultra-tec.com Website: www.ultra-tec.com

Push-Lock® Turnbuckle

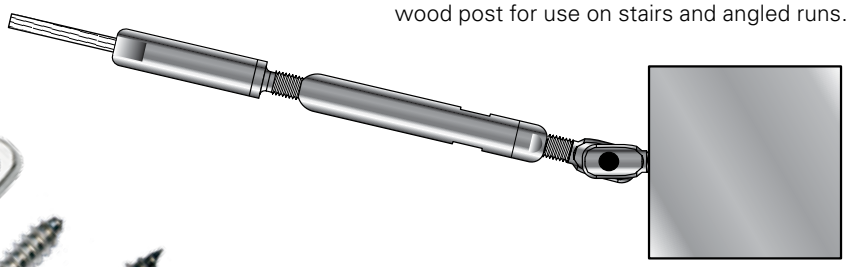
TENSIONER

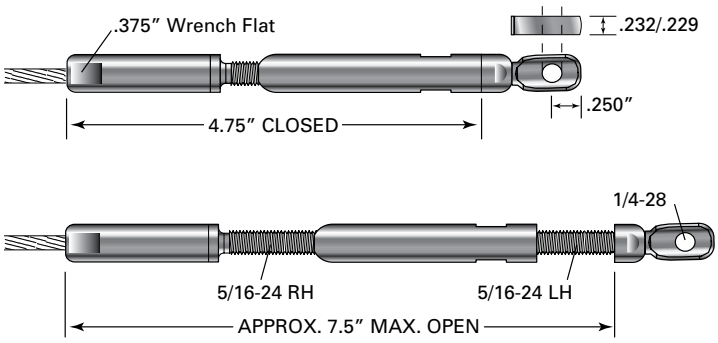
The Push-Lock® tensioner for inside-of-post applications.

Easy to install

Push-Lock® Turnbuckles are typically used as a second tensioning device on longer runs. They are a combination of our Adjust-a-Body® tensioners and Push-Lock® Studs, and are available with whatever connecting end is necessary. Whether wood posts, metal posts, sleeved posts, or even concrete; level runs or stairs, the Push-Lock® Turnbuckle is our most universal fitting.

Push-Lock® Turnbuckles with Threaded Eyes mount to lag eyes, tabs, or holes on the outside of your metal or wood post for use on stairs and angled runs.





PUSH-LOCK® TURNBUCKLE with THREADED EYE

CABLE DIA.	PART NO.	USE WITH MOUNTING SCREW NO.*	OPTIONS FOR MOUNTING TO END POSTS	
			FOR METAL POSTS, USE WITH MOUNTING TAB NO.	FOR WOOD POSTS, USE WITH
1/8"	PL-TB-TE-4	SC-6	TT-6B	LE-6
3/16"	PL-TB-TE-6			

**Order SC-6 Screw Separately.*

PUSH-LOCK® TURNBUCKLE
with HANGER BOLT, THREADED BOLT, EXTENDED LENGTH HANGER BOLT, or ANCHOR BOLT

1/8" cable				3/16" cable			
wood post	metal post	sleeved post (>4½" outside diameter)	concrete post	wood post	metal post	sleeved post (>4½" outside diameter)	concrete post
PART NO.	PART NO.	PART NO.	PART NO.	PART NO.	PART NO.	PART NO.	PART NO.
PL-TB-HB-4	PL-TB-TB-4	PL-TB-HBL-4	PL-TB-AB-4	PL-TB-HB-6	PL-TB-TB-6	PL-TB-HBL-6	PL-TB-AB-6

Push-Lock® fittings are made of type 316 stainless steel, with the exception of internal components that are made of other types of stainless steel.

DESIGNED FOR USE WITH 1X19 L.H. STRAND ONLY

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Ultra-tec® products contain at least 65% recycled content, helping you qualify for LEED® credits.

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Invisiware® Receivers

The tensioners that are hidden inside the post.

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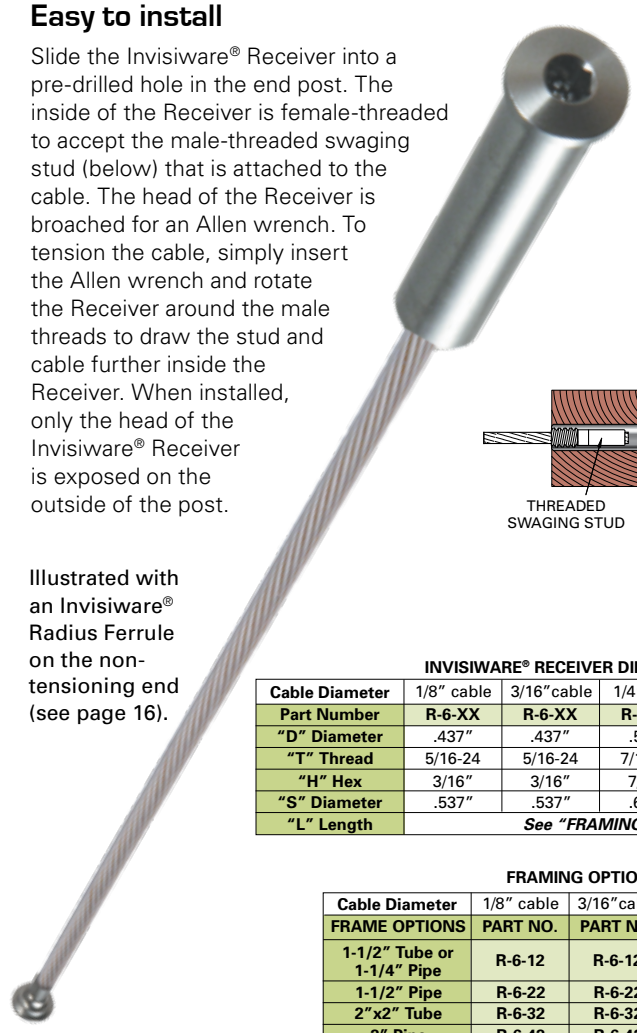
Ultra-tec® products contain at least 65% recycled content, helping you qualify for LEED® credits.

Easy to install

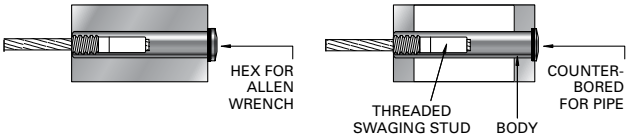
Slide the Invisiware® Receiver into a pre-drilled hole in the end post. The inside of the Receiver is female-threaded to accept the male-threaded swaging stud (below) that is attached to the cable. The head of the Receiver is broached for an Allen wrench. To tension the cable, simply insert the Allen wrench and rotate the Receiver around the male threads to draw the stud and cable further inside the Receiver. When installed, only the head of the Invisiware® Receiver is exposed on the outside of the post.

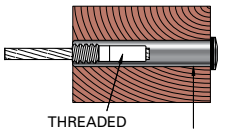


Illustrated with an Invisiware® Radius Ferrule on the non-tensioning end (see page 16).

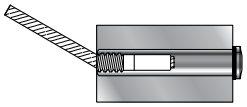
Use with metal or wood — on level runs or stairs

Invisiware® Receivers are used with pipe and metal tubing. Pipe ends are counterbored, so the full perimeter of the head rests on a flat surface in the pipe. The head rests on the outside wall of a flat-sided metal post. A plastic washer is included and acts as a scratch-resistant barrier between the head of the Receiver and the metal post.





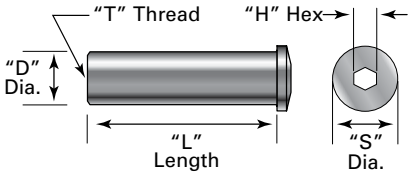
For use in wood, the Invisiware® Receiver can rest against the outside of the post or the post can be counterbored with the Receiver recessed in the post. For wood applications, also order 7/16SAE stainless steel washer (page 21).



You do not have to drill your holes at an angle to use Invisiware® Receivers on stairs or severe pitches up to 35 degrees.

INVISIWARE® RECEIVER DIMENSIONS

Cable Diameter	1/8" cable	3/16"cable	1/4"cable	5/16"cable	3/8"cable
Part Number	R-6-XX	R-6-XX	R-8-XX	R-12-XX	R-12-XX
"D" Diameter	.437"	.437"	.531"	.687"	.687"
"T" Thread	5/16-24	5/16-24	7/16-20	9/16-18	9/16-18
"H" Hex	3/16"	3/16"	7/32"	5/16"	5/16"
"S" Diameter	.537"	.537"	.646"	.865"	.865"
"L" Length	*See "FRAMING OPTIONS" Table*				



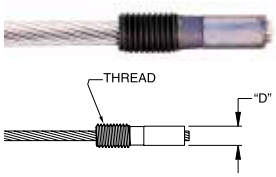
FRAMING OPTIONS FOR INVISIWARE® RECEIVER

Cable Diameter	1/8" cable	3/16"cable	1/4"cable	5/16"cable	3/8"cable	
FRAME OPTIONS	PART NO.	PART NO.	PART NO.	PART NO.	PART NO.	"L" Length
1-1/2" Tube or 1-1/4" Pipe	R-6-12	R-6-12	NA	NA	NA	1.562"
1-1/2" Pipe	R-6-22	R-6-22	R-8-22	NA	NA	1.812"
2"x2" Tube	R-6-32	R-6-32	R-8-32	R-12-32	R-12-32	2.030"
2" Pipe	R-6-42	R-6-42	R-8-42	R-12-42	R-12-42	2.301"
2-3/8" Tube	R-6-72	R-6-72	NA	NA	NA	2.375"
2-1/2" Tube	R-6-82	R-6-82	NA	NA	NA	2.530"
3" Tube*	R-6-52	R-6-52	R-8-52	R-12-52	R-12-52	3.030"
4x4 Wood Post or 3-1/2" Tube	R-6-62	R-6-62	NA	NA	NA	3.5625"

**Use with 2"x1" and 3"x1" double end post construction illustrated in the Design Guide for Metal Railings. Order Swaging Stud separately.*

Invisiware® Threaded Swaging Stud

This part is swaged onto the end of the cable and used with the Invisiware® Receiver (above). When used with the Invisiware® Welded Receiver (see page 21) in a metal end post it becomes a stop-end (non-tensioning end) fitting that is completely hidden inside the end post. The threaded surface is coated with a baked-on molybdenum-based dry film lubricant, to prevent the threads from binding when tensioned and in extreme environments.



TYPE 316 STAINLESS STEEL – MOLY COATED

CABLE DIA.	PART NO.	THREAD	"D" DIAMETER AFTER SWAGED
1/8"	S-4	5/16-24	.250"
3/16"	S-6	5/16-24	.250"
1/4"	S-8	7/16-20	.375"
5/16"	S-10	9/16-18	.500"
3/8"	S-12	9/16-18	.500"

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Photo courtesy of
Jack Blair Corporation

Adjust-A-Jaw® Tensioners

Sleek, stainless steel tensioners that mount on the outside of your post.

green
Ultra-tec® products contain at least 65% recycled content, helping you qualify for LEED® credits.

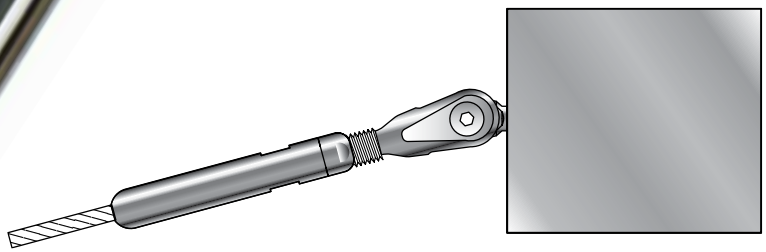
Easy to install

You can use our Invisiware® fixed tabs or threaded tabs (page 20) or lag eyes (page 21) to mount Adjust-A-Jaw® tensioners to your end posts. Or you can mount them using flat bar or angle iron welded to your post with holes drilled to accept the clevis. See the tabulated drawing and chart below to determine how this fitting interfaces with your end post.

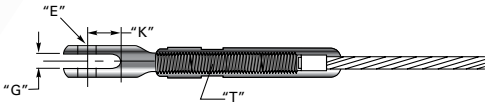
The clevis has a male thread that mates with the female thread within the body of the tensioner. The swaging ferrule is swaged onto the cable and holds the cable inside the body. The body rotates on the cable and provides a considerable amount of take-up during tensioning with an open-end wrench. After tensioning, the lock nut locks the assembly in place.

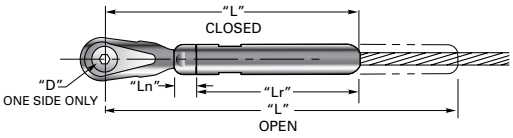
Use on level runs or stairs

Adjust-A-Jaw® tensioners are precision machined, streamlined devices that are used where a high-tech look is desired, where you may wish to see hardware on your railing, or where you are unable to use Invisiware® Receivers (page 11) because there is no access to the back of the end post.



Unlike many common turnbuckles, Adjust-A-Jaw® tensioners have no sharp edges, no crevices to collect dust and dirt, no unsightly nuts on the end, ugly swaged shanks or anything that will scratch or snag.





TYPE 316 STAINLESS STEEL

CABLE DIA.	PART NO.	*USE WITH FERRULE NO.	*USE WITH SCREW NO.	"D" DIA.	"E" THREAD	"G"	"K"	"L" CLOSED	"L" OPEN	"Ln"	"Lr"	"T"
1/8"	A-J62	F-4	SC-6	.260"	1/4-28	.260"	.56"	4.30"	5.99"	.375"	2.75"	5/16-24 LH
3/16"	A-J62	F-6	SC-6	.260"	1/4-28	.260"	.56"	4.30"	5.99"	.375"	2.75"	5/16-24 LH
1/4"	A-J82	F-8	SC-8	.390"	3/8-24	.313"	.75"	4.87"	6.43"	.500"	3.00"	7/16-20 LH
5/16"	A-J122	F-10	SC-8	.390"	3/8-24	.348"	.87"	6.74"	9.28"	.620"	4.50"	9/16-18
3/8"	A-J122	F-12	SC-8	.390"	3/8-24	.348"	.87"	6.74"	9.28"	.620"	4.50"	9/16-18

Order Ferrule and Screw separately.

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Adjust-A-Body® Tensioners

They all work the same, only the mounting ends are different.

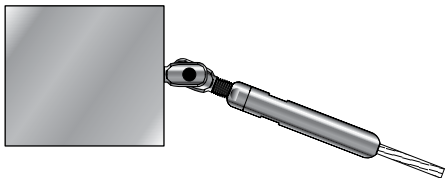
green
Ultra-tec® products contain at least 65% recycled content, helping you qualify for LEED® credits.

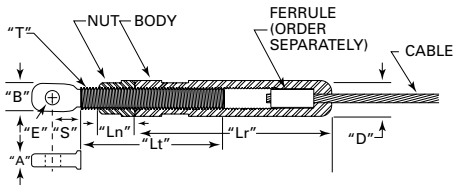
Easy to install

The mounting end on each of our Adjust-A-Body® tensioners has a male thread that mates with the female thread within the body of the tensioner. The swaging ferrule is swaged onto the cable and holds the cable inside the body. The body rotates on the cable and provides a considerable amount of take-up during tensioning with an open-end wrench. After tensioning, the lock nut locks the assembly in place.

Adjust-A-Body® with Threaded Eye Tensioner

Used on straight runs or stairs like the Adjust-A-Jaw® tensioners (see page 13), these fittings cost a lot less than the Adjust-A-Jaw® tensioners. You can use our Invisiware® fixed tabs or threaded tabs (page 20) or lag eyes (page 21), to mount this tensioner to your end posts. Or you can mount them using flat bar or angle iron welded to your post with holes drilled to accept the eye. See the tabulated drawing and chart below to determine how this fitting interfaces with your end post.





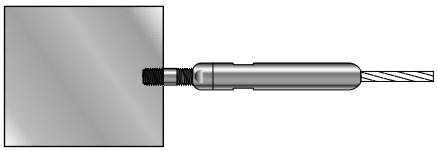
TYPE 316 STAINLESS STEEL

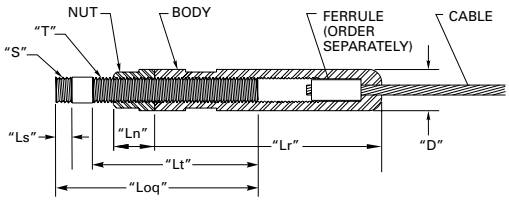
CABLE DIA.	PART NO.	*USE WITH FERRULE NO.	*USE WITH SCREW NO.	"E" THREAD	"A"	"B"	"S"	"T"	"Lt"	"Ln"	"Lr"	"D"
1/8"	A-JTE6	F-4	SC-6	¼-28	.233"/.229"	.500"	.44"	5/16-24 L.H.	2.00"	.375"	2.75"	.500"
3/16"	A-JTE6	F-6	SC-6	¼-28	.233"/.229"	.500"	.44"	5/16-24 L.H.	2.00"	.375"	2.75"	.500"
1/4"	A-JTE8	F-8	SC-8	3/8-24	.295"/.285"	.844"	.68"	7/16-20 L.H.	2.50"	.500"	3.00"	.625"

**Order Ferrule and Screw separately.*

Adjust-A-Body® with Threaded Bolt Tensioner

Used on straight runs, this tensioner screws into a drilled and tapped hole in your metal post. Here is a real money-saver, because there is no need for special tees with holes, welded tabs, or any other mounting device. Recommended for level runs using a minimum schedule 80 pipe or square or rectangular steel tubing with a minimum .250" wall.





TYPE 316 STAINLESS STEEL

CABLE DIA.	PART NO.	*USE WITH FERRULE NO.	"S"	"T"	"Ls"	"Lt"	"Loq"	"Ln"	"Lr"	"D"
1/8"	A-JTB6	F-4	5/16-24	5/16-24 L.H.	.375"	2.00"	2.625"	.375"	2.75"	.500"
3/16"		F-6								
1/4"	A-JTB8	F-8	5/16-24	7/16-20 L.H.	.375"	2.50"	3.125"	.500"	3.00"	.625"
5/16"	A-JTB12	F-10	1/2-20	9/16-18	.62"	3.00"	4.00"	.62"	4.50"	.744"
3/8"		F-12								

**Order Ferrule separately.*

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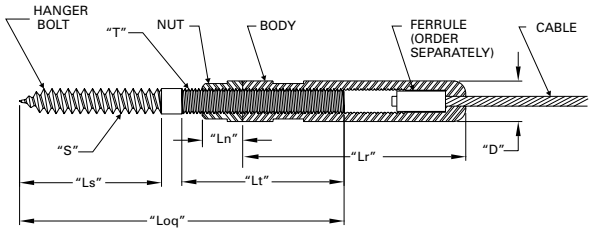
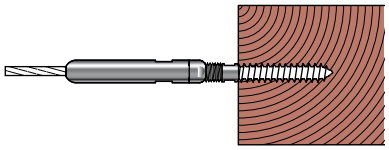
Adjust-A-Body® with Hanger Bolt Tensioner

This tensioner screws right into your wooden end post.
There is no need for special mounting hardware.





TYPE 316 STAINLESS STEEL

CABLE DIA.	PART NO.	*USE WITH FERRULE NO.	"S"	"T"	"Ls"	"Lt"	"Loq"	"Ln"	"Lr"	"D"	DRILL SIZE REQUIRED	MINIMUM NOMINAL TIMBER SIZE
1/8"	**A-JB6**	**F-4**	5/16"	5/16-24 L.H.	1.50"	2.00"	3.75"	.375"	2.75"	.500"	See **NOTE**	4 X 4
3/16"	**A-JB6**	**F-6**	5/16"	5/16-24 L.H.	1.50"	2.00"	3.75"	.375"	2.75"	.500"		
1/4"	**A-JB8**	**F-8**	7/16"	7/16-20 L.H.	2.00"	2.50"	4.75"	.500"	3.00"	.625"	5/16"	

Order Ferrule separately.* **NOTE: If soft wood (Common Redwood), 7/32" drill bit; if hard wood (Common Douglas Fir), 15/64" drill bit.

Adjust-A-Body® with Extended Length Hanger Bolt Tensioner

Same as the above tensioner, except the hanger bolt is 3" long, allowing you to penetrate deeper into the post or wall if necessary. Offered for use with 1/8" and 3/16" cable.

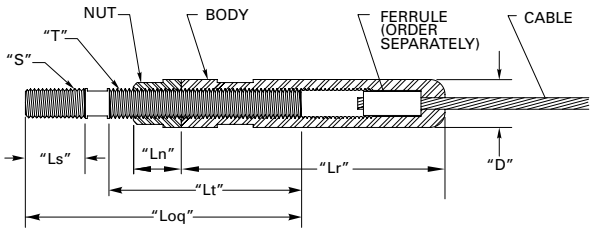
TYPE 316 STAINLESS STEEL

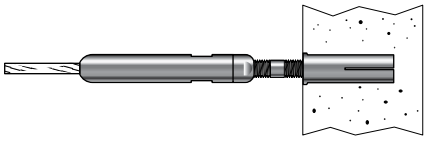
CABLE DIA.	PART NUMBER	*USE WITH FERRULE NO.	"S"	"T"	"Ls"	"Lt"	"Loq"	"Ln"	"Lr"	"D"	DRILL SIZE REQ.	MIN. NOMINAL TIMBER SIZE
1/8"	A-JB6-L	**F-4**	5/16"	5/16-24 L.H.	1.50"	2.00"	5.25"	.375"	2.75"	.500"	See **NOTE**	4 x 4
3/16"		**F-6**										

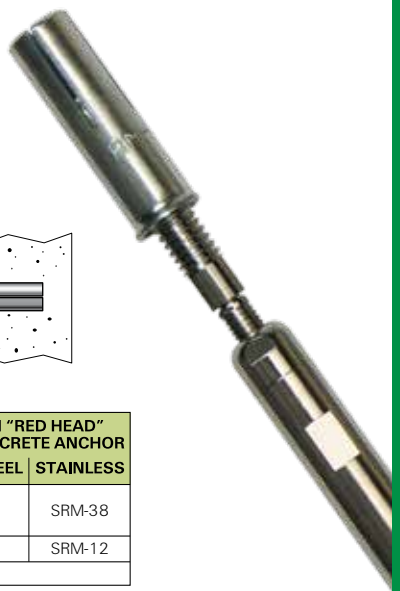
Order Ferrule separately.* **NOTE: If soft wood (Common Redwood), 7/32" drill bit; if hard wood (Common Douglas Fir), 15/64" drill bit.

Adjust-A-Body® with Concrete Anchor Bolt Tensioner

Here is an easy, practical way to attach your tensioner to a concrete wall.
The end screws into a commonly available concrete anchor (not included).
Order the concrete anchor separately from your local building supply outlet.







TYPE 316 STAINLESS STEEL

CABLE DIA.	PART NO.	*USE WITH FERRULE NO.	"S"	"T"	"Ls"	"Lt"	"Loq"	"Ln"	"Lr"	"D"	USE WITH "RED HEAD" BRAND CONCRETE ANCHOR	
											CARBON STEEL	STAINLESS
1/8"	**A-JAB6**	**F-4**	3/8-16	5/16-24 L.H.	.500"	2.313"	3.188"	.375"	2.75"	.500"	RM-38	SRM-38
3/16"	**A-JAB6**	**F-6**										
1/4"	**A-JAB8**	**F-8**	1/2-13	7/16-20 L.H.	1.125"	2.500"	3.938"	.500"	3.00"	.625"	RM-12	SRM-12

**Order Ferrule separately.*

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Non-Tensioning Stop-End Fittings

Save money by using these less expensive fittings where you do not need a tensioner on both ends of your cable run.

Where to use these fittings

Often you do not need a tensioning device on both ends of your cable. This applies where your run is relatively short or where you are cutting and swaging the cables on site (and can get more precise measurements than having the cables pre-cut by the factory or distributor).

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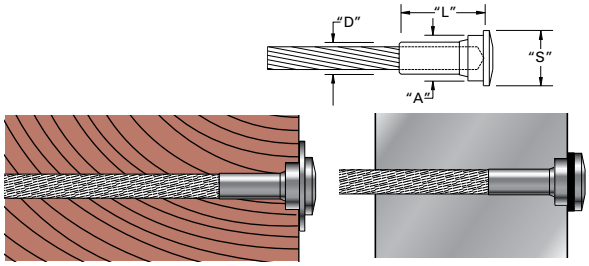
Ultra-tec® products contain at least 65% recycled content, helping you qualify for LEED® credits.

Invisiware® Radius Ferrule

Often used in combination with the Invisiware® Receiver (page 11), this fitting is also hidden inside the end post with only the head exposed on the outside of the post. When installed, it looks the same as the Invisiware Receiver except it costs much less.

Invisiware® Radius Ferrules are used with pipe and with round, square or rectangular metal tubing. Pipe ends are counterbored, so the full perimeter of the head rests on a flat surface in the pipe. The head rests on the outside wall of a flat-sided metal post. A plastic washer is included and acts as a scratch-resistant barrier between the head of the fitting and the metal post.

For use in wood, the Invisiware® Radius Ferrule can rest against the outside of the post or the post can be counterbored with the Radius Ferrule recessed in the post. For wood applications, also order stainless steel washer (page 21).



TYPE 316 STAINLESS STEEL

CABLE DIA.	PART NO.	"D" DIAMETER AFTER SWAGED	"L" LENGTH AFTER SWAGED	"S" HEAD DIAMETER	"A" SHOULDER DIAMETER
1/8"	**RF-4**	.250"	.750"	.537"	.437"
3/16"	**RF-6**	.250"	.750"	.537"	.437"
1/4"	**RF-8**	.375"	1.000"	.646"	.531"
5/16"	**RF-10**	.500"	1.000"	.865"	.687"
3/8"	**RF-12**	.500"	1.000"	.865"	.687"

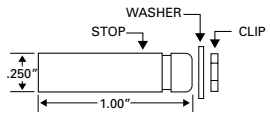
Ultra-tec® Clip-on Stop

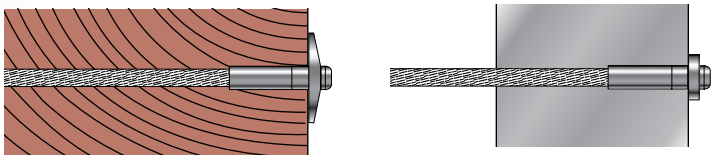
Ideal for use with cables that are cut and the fittings are attached at the factory or by the distributor. Intermediate posts can be drilled for the 1/4" stop to pass through. No field swaging is required. Or you can swage them in the field if you wish. A special clip and washer secure the stop to the end of the cable.

Pipe or round tubing end posts are counterbored so the full perimeter of the head of the stop rests on a flat surface in the pipe. The stop rests against the outside wall of a flat-sided post.

For swaging at the factory or by a distributor, determine the hardware to use on the tensioning end of the cable, then check with the factory or distributor to determine the cable lengths to be provided with the swaged fittings attached.

Stop, washer and clip are included.
Available for 1/8" and 3/16" cable.





TYPE 316 STAINLESS STEEL

CABLE DIA.	FOR USE WITH	PART NO.	WASHER DIA.
1/8"	WOOD POST	**COS-4**	59/64" (.922")
3/16"	WOOD POST	**COS-6**	
1/8"	METAL POST	**COS-4M**	15/32" (.468")
3/16"	METAL POST	**COS-6M**	

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Ultra-tec®
CABLE RAILING INFILL

Ultra-tec® CABLE RAILING INFILL Perfect anywhere.

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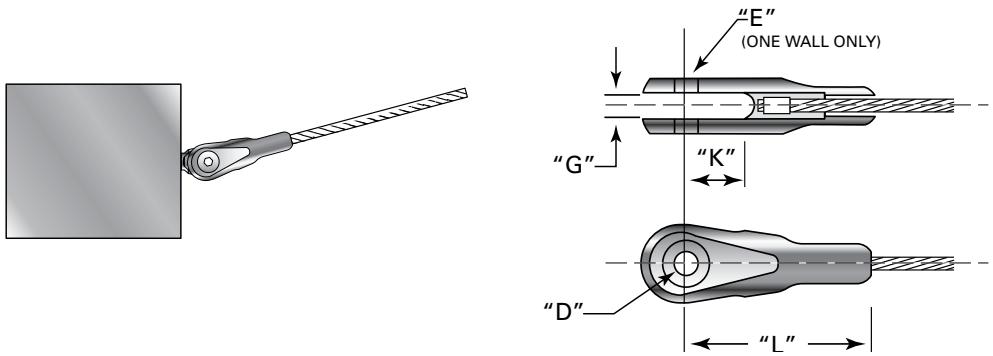
Ultra-tec® Fixed Jaw

Often used with our Adjust-A-Jaw® tensioner (page 13), because it is shaped to match the clevis end on the Adjust-A-Jaw® tensioner but costs considerably less. It can be used on level runs and on stairs and severe pitches.

The Ultra-tec® Fixed Jaw also makes an attractive fitting where a high-tech look is desired, where you may wish to see hardware on your railing, or if you are unable to use Invisiware® Radius Ferrules, Ultra-tec® Clip-on Stops, or Push-Lock® fittings because there is no access to the back of the end post.

You can use our Invisiware fixed tabs or threaded tabs (page 20) or lag eyes (page 21) to mount the Ultra-tec® Fixed Jaw fittings to your end posts. Or you can mount them using flat bar or angle iron welded to your post with holes drilled to accept the clevis. See the tabulated drawing and chart below to determine how this fitting interfaces with your end post.



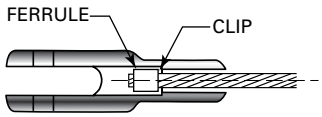
TYPE 316 STAINLESS STEEL

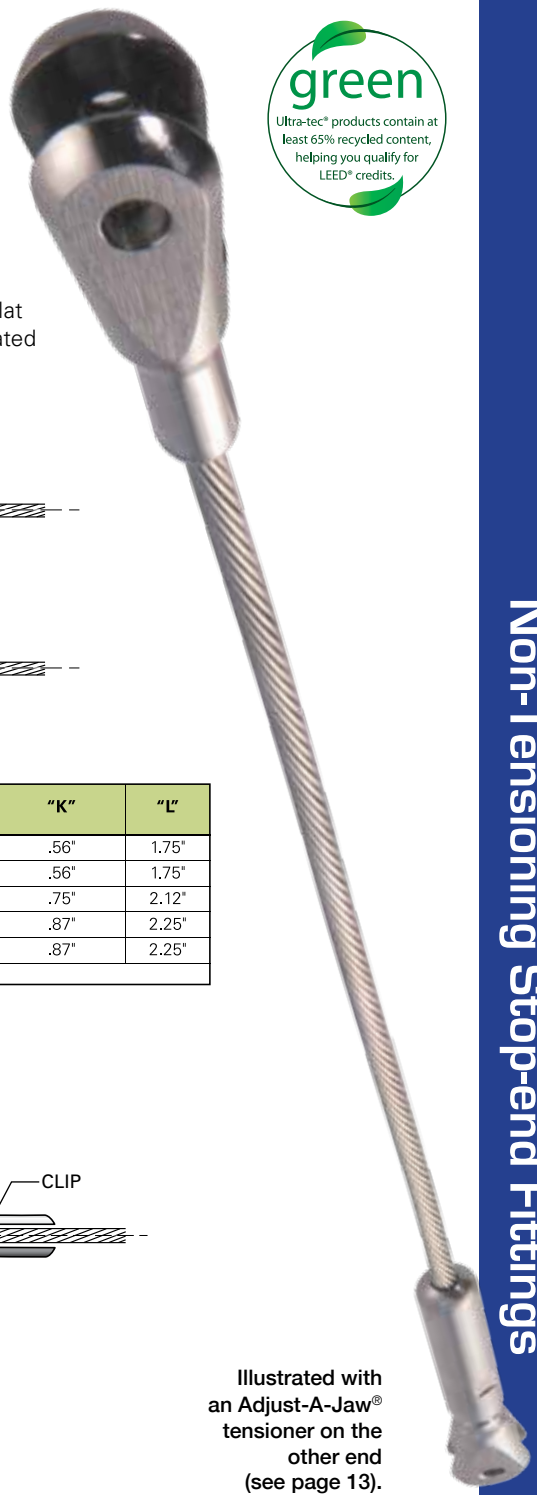
CABLE DIA.	PART NO.	*USE WITH FERRULE NO.	*USE WITH SCREW NO	"D" DIA.	"E" THREAD	"G"	"K"	"L"
1/8"	F-J62	F-4	SC-6	.260"	¼-28	.260"	.56"	1.75"
3/16"	F-J62	F-6	SC-6	.260"	¼-28	.260"	.56"	1.75"
1/4"	F-J82	F-8	SC-8	.390"	3/8-24	.313"	.75"	2.12"
5/16"	F-J122	F-10	SC-8	.390"	3/8-24	.348"	.87"	2.25"
3/8"	F-J122	F-12	SC-8	.390"	3/8-24	.348"	.87"	2.25"

**Order Ferrule and Screw separately.*

Ultra-tec® Clip-on Fixed Jaw

Same as our Ultra-tec® Fixed Jaw fittings, except the cable is attached to the fitting with a special clip that is installed on site by hand. The cable is supplied by the factory or distributor with a tensioner on one end and a ferrule on the other end. There is no field swaging. You simply slip the ferrule end of the cable through the body of the fixed jaw, slip on the special clip, then pull the cable back through the body to secure the cable inside. Check with the factory or distributor to determine cable lengths to be supplied with swaged fittings. Available for 1/8" and 3/16" cable only.





Illustrated with an Adjust-A-Jaw® tensioner on the other end (see page 13).

TYPE 316 STAINLESS STEEL

CABLE DIA.	PART NO.	*USE WITH FERRULE NO.	*USE WITH SCREW NO.	"D" DIA.	"E" THREAD	"G"	"K"	"L"
1/8"	F-JC2-4	F-4	SC-6	.260"	¼-28	.260"	.56"	1.75"
3/16"	F-JC2-6	F-6	SC-6	.260"	¼-28	.260"	.56"	1.75"

**Order Ferrule and Screw separately.* *See Fixed Jaw drawing above.*

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Stainless Steel Threaded Studs

An outside-of-post to outside-of-post configuration is the only scenario in which economical threaded studs may be used. The threaded studs are a basic, functional fitting, not a hide-in-the-post solution. Two jam nuts and some metal thread will extend beyond the back of the post on the ends. For 1/8" cable applications, an end cap covers this hardware. For 3/16" cable, an acorn nut finishes the assembly. (Jam nuts, acorn nuts, end caps, and washers ordered separately). Cable lines will need to be offset where perpendicular cable runs intersect in a shared corner post.

The longer studs are meant for use with wood posts, the shorter for metal. Threaded studs may be used on both ends of cable runs, which typically requires the fittings be swaged at the factory. They may also be used with swageless fittings, which allows for trimming to exact length in the field.

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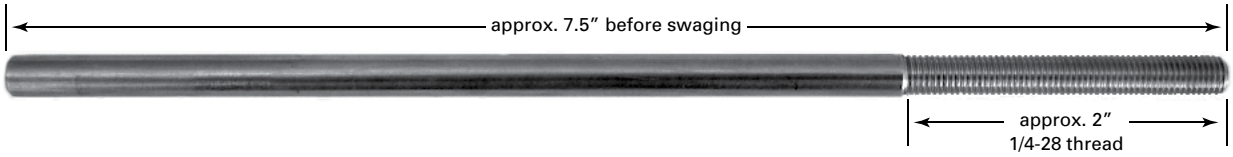
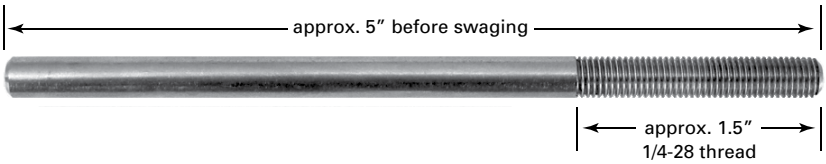
7.5" Stud for 1/8" cable

Order part no. **HS4-25F2.00C4-7.50**



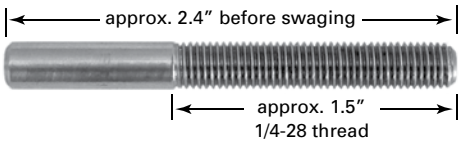
5" Stud for 1/8" cable

Order part no. **HS4-25F1.50C4-5.00**



2.5" Stud for 1/8" cable

Order part no. **HS4-25F1.50C2**

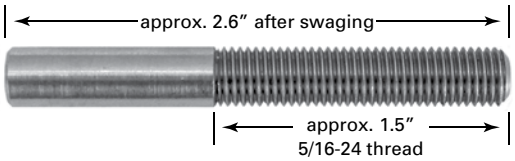


Stainless Steel Fasteners and Washers for Threaded Studs used with 1/8" cable

FASTENER	PART NO.	FLAT WASHER	PART NO.
1/4-28 END CAP	**NYL-1/4-28-C4-CAP**	5/8" OD for metal posts	**FW-1/4-625-050-S**
1/4-28 JAM NUT	**JN-1/4-28-S**	1" OD for wood posts	**FW-9/32-1.00-050-S**

2.5" Stud for 3/16" cable

Order part no. **HS6-31F1.5C2**



Stainless Steel Fasteners and Washers for Threaded Studs used with 3/16" cable

FASTENER	PART NO.	FLAT WASHER	PART NO.
5/16-24 ACORN NUT	**AN-5/16-24-S-R**	9/16" OD for metal posts	**FW-5/16-562-060-S**
5/16-24 JAM NUT	**JN-5/16-24-S-R**	1" OD for wood posts	**FW-5/16-1.00-050-S**

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Mounting Aids

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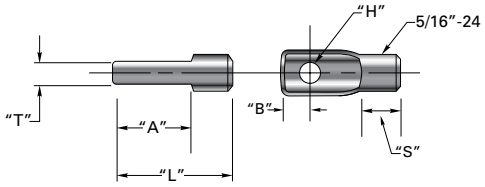
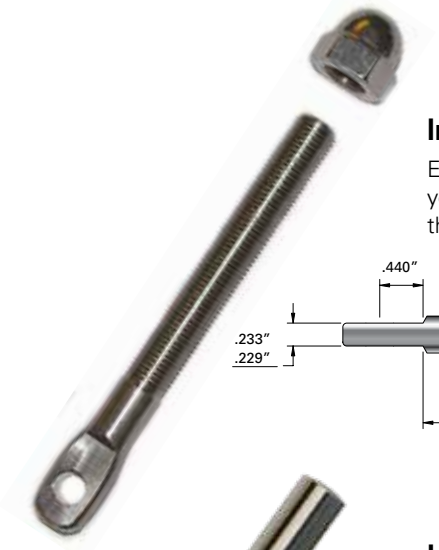
Invisiware® Threaded Tab

Here's a real time and money-saver. The Invisiware® threaded tab screws into a drilled and tapped hole on the inside wall of the end post for mounting an Adjust-A-Jaw® or Adjust-A-Body® with Threaded Eye, Ultra-tec® Fixed Jaw, or Push-Lock® with Threaded Eye. You save the expense of welding tees or tabs onto your end post. Recommended only when you are using a minimum schedule 80 pipe end post or a square or rectangular steel end post with a minimum .250" wall.



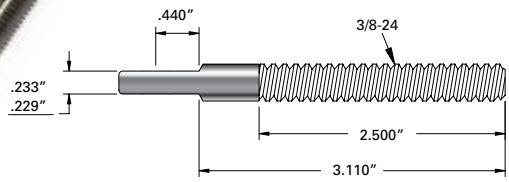
TYPE 316 STAINLESS STEEL

CABLE DIA.	PART NO.	"H"	"S"	"T"	"A"	"B"	"L"
1/8"	TT-6B	.256"	.500"	.232"	.780"	.330	1.30"
3/16"							
1/4"	TT-8B	.393"	.375"	.290"	1.10"	.410"	1.66"
5/16"							
3/8"							



Invisiware® Extended Length Threaded Tab

Extended length, same as above except there is no need to thread the hole in your end post. Cut to desired length and secure to end post with acorn nut and thread sealant.



STAINLESS STEEL

CABLE DIA.	PART NO.	Use with S.S. Acorn Nut
1/8" & 3/16"	TT-6B-L	AN-3/8-24-S

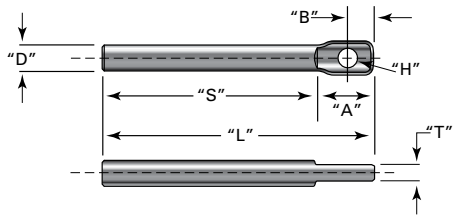
Invisiware® Fixed Tab

Welded into an end post to make a strong tab for use in mounting an Adjust-A-Jaw® or Adjust-A-Body® with Threaded Eye, Ultra-tec® Fixed Jaw, or Push-Lock® with Threaded Eye. The Invisiware® Fixed Tab is cut to length if necessary, inserted in a hole drilled through the post and welded to the outside wall. The welded surface is then ground to the original contour of the post, thus hiding the weld.

AVAILABLE IN CARBON STEEL AND STAINLESS STEEL

CABLE DIA.	PART NO.	"D"	"H"	"S"	"T"	"A"	"B"	"L"
1/8"	F-T6-5x*	.375"	.256"	3.11"	.232"	.780	.330"	3.875"
3/16"								
1/4"	F-T8-5x*	.562"	.394"	3.00"	.295"	1.11"	.420"	4.188"
5/16"								
3/8"								

Specify "A" for Carbon Steel or "B" for Type 304 Stainless Steel.



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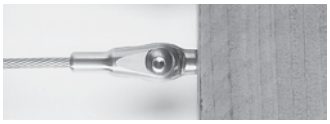
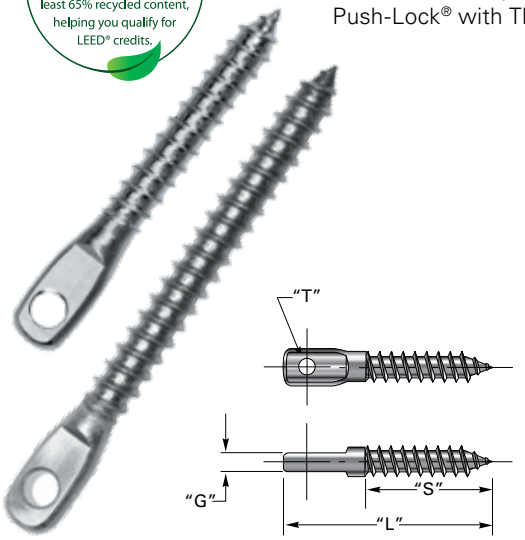
Ultra-tec® Lag Eye

A convenient, easy-to-install means for attaching an Adjust-A-Jaw® or Adjust-A-Body® with Threaded Eye, Ultra-tec® Fixed Jaw, or Push-Lock® with Threaded Eye to a wood post.



Post with an Ultra-tec® Fixed Jaw attached.



TYPE 316 STAINLESS STEEL

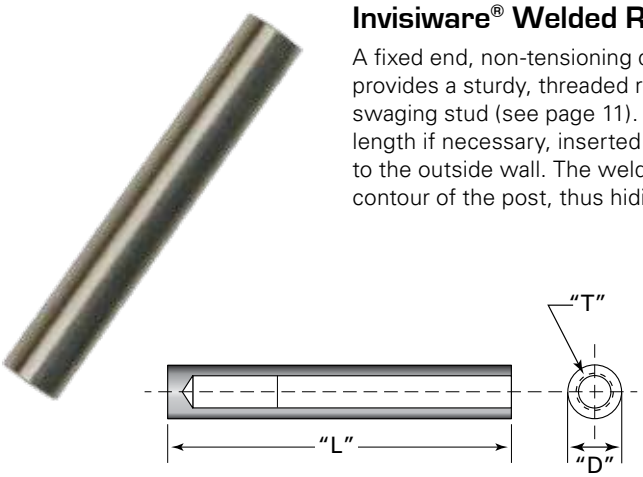
CABLE DIA.	PART NO.	"G"	"T"	"S"	"L"	DRILL SIZE REQUIRED	MIN. NOMINAL TIMBER SIZE
1/8"	LE-6	.232"	.256"	1.50"	2.23"	9/32"	4x4
3/16"							
1/4"	LE-8	.290"	.393"	2.00"	3.55"	3/8"	4x4
5/16"							
3/8"							

Extended Length Lag Eyes with 3-inch Thread
TYPE 316 STAINLESS STEEL

CABLE DIA.	PART NO.	"G"	"T"	"S"	"L"	DRILL SIZE REQUIRED	MIN. NOMINAL TIMBER SIZE
1/8"	LE-6L	.232"	.256"	3.00"	3.73"	9/32"	4x4
3/16"							

Invisiware® Welded Receiver

A fixed end, non-tensioning device, the Invisiware® Welded Receiver provides a sturdy, threaded receptacle in the end post for an Invisiware swaging stud (see page 11). The Invisiware® Welded Receiver is cut to length if necessary, inserted in a hole drilled through the post and welded to the outside wall. The welded surface is then ground to the original contour of the post, thus hiding the weld.



AVAILABLE IN CARBON STEEL AND STAINLESS STEEL

CABLE DIA.	PART NO.	USE WITH STUD NO.	"D"	"T"	"L"
1/8"	W-R6-5x*	S-4	.437"	5/16-24	2.82"
3/16"	W-R6-5x*	S-6	.437"	5/16-24	2.82"
1/4"	W-R8-5x*	S-8	.531"	7/16-20	2.82"

**Specify "A" for Carbon Steel or "B" for Type 304 Stainless Steel.*

Mounting Screws

Stainless steel socket-head screws for mounting an Adjust-A-Jaw®, Adjust-A-Body® with Threaded Eye, Ultra-tec® Fixed Jaw, or Push-Lock® with Threaded Eye.

TYPE 316 STAINLESS STEEL

PART NO.	THREAD	Used with Hardware for Cable Diameters
SC-6	1/4-28	1/8", 3/16"
SC-8	3/8-24	1/4", 5/16", 3/8"

Stainless Steel Washers

TYPE 316 STAINLESS STEEL

PART NO.	WASHER O.D.	WASHER I.D.	USED WITH HARDWARE FOR CABLE DIAMETERS
7/16SAE	59/64"	15/32"	1/8" and 3/16"
1/2SAE	1-1/16"	17/32"	1/4"

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Cable Grommets

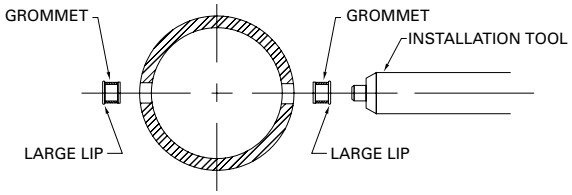
Cable grommets are offered for popular cable diameters of 1/8", 3/16" and 1/4". They help prevent rust in exterior applications or elsewhere where moisture is a factor, by providing a barrier between the cable and the painted or powder-coated surface through which the cable is drawn when being installed. Ultra-tec® cable grommets are installed (after the paint or powder coating is applied) into holes in intermediate posts, cable braces and, in the case of the Invisiware® Radius Ferrule, Push-Lock®, and Pull-Lock® fittings into the end post holes through which the cable exits. They are offered in black UV resistant Delrin®.

Delrin® is a registered trademark of E.I. DuPont de Nemours & Co.

Order cable grommets by diameter of cable and post through which the cable will be drawn.

	INTERMEDIATE POST MATERIAL (Not slotted for stairway)				INTERMEDIATE POST MATERIAL SLOTTED FOR STAIRWAY PITCH UP TO 37°		
CABLE DIA.	Schedule 40 1-1/4" 1-1/2" 2" PIPE	SQ. OR RECT. TUBE WITH .120" WALL	1/4" CABLE BRACE or SQ. OR RECT. TUBE WITH .250" WALL	1/2" FLAT BAR	Schedule 40 1-1/4" 1-1/2" 2" PIPE	SQ. OR RECT. TUBE WITH .120" WALL	1/4" CABLE BRACE or SQ. OR RECT. TUBE WITH .250" WALL
1/8" & 3/16"	G-C6-1	G-C6-2	G-C6-4	G-C6-.500	GI-C6-1	GI-C6-2	GI-C6-4
1/4"	G-C8-1	G-C8-2	G-C8-4	NA	GI-C8-1	GI-C8-2	GI-C8-4

Cable grommets are available in lots of 100 each.



	END POST MATERIAL USING RADIUS FERRULE, PUSH-LOCK® or PULL-LOCK® FITTINGS	
CABLE DIA.	Schedule 80 1-1/4"*, 1-1/2" or 2" PIPE	SQ. OR RECT. TUBE with .250" WALL*
1/8" & 3/16"	G-C6-3	G-C6-4
1/4"	G-C8-3	G-C8-4

*Cable grommets not required with 1-1/4" pipe counterbored for use with 1-1/2" Push-/Pull-Locks®, or with 2" or 3" tube if using like-length Push-/Pull-Locks®.

Cable

Sizes offered. Five sizes of cable are offered for the Ultra-tec® Cable Railing System: 1/8", 3/16", 1/4", 5/16" and 3/8".

Cable construction. For most applications, we recommend 1x19 construction, type 316 stainless steel cable. 1x19 construction cable is engineered to hold static loads without stretching, and it is relatively stiff. Other cable constructions can be used, such as 7x7 or 7x19, but they are rarely recommended because of their elevated levels of stretch and lower breaking strengths in comparison to 1x19 construction (see chart below).

Swaging — attaching fittings to cable. Our swageless fittings do not require swaging, since the hardware is attached to the cable by hand. Other Ultra-tec® hardware is swaged using hydraulic presses that apply up to 55 tons of pressure to swage the fittings. Ultra-tec® portable swagers are available for purchase or rent, or in many cases the factory can supply cable with fittings attached. It is worth noting that fittings cannot be successfully swaged onto 1x19 construction cable using hand swagers offered by others. In those instances, less desirable constructions must be used. That is never the case with Ultra-tec® hardware.

green
Ultra-tec® products contain at least 65% recycled content, helping you qualify for LEED® credits.

Cable coating. Cable can be special ordered with a PVC coating in any standard (PMS) color. PVC coated cable is not shown in our Design and Fabrication Guide for Metal Framed Railings, so special caution should be used if you are considering coated cable because hole specifications for frame components can change and, in some cases, special hardware may be required. If you are interested in using coated cable, please contact the factory for any necessary special hardware or design specifications.

MINIMUM BREAKING STRENGTHS (in Lbs.) FOR TYPE 316 STAINLESS STEEL CABLE

CABLE DIA.	1x19	7x7	7x19
1/8"	1,780	1,360	1,300
3/16"	4,000	3,300	2,900
1/4"	6,900	5,500	4,900
5/16"	10,600	8,090	7,600
3/8"	14,800	11,700	11,000

ISO 9001: 2008 Certified / U.S.A. Manufacturer

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Equipment, Accessories, Railing Components

Cable Cutter

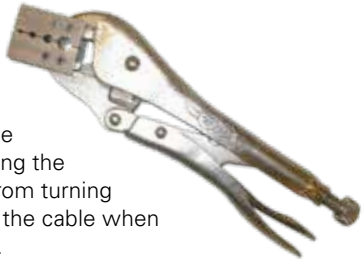
For burr-free cutting of cable.

For light-duty use to cut 1/8" cable, order **C-7HIT** (not pictured)

To cut cable 1/4" diameter and under, order **C-9**

To cut cable up to 3/8" diameter, order **C-12**

Cable Gripping Pliers



Locking pliers with machined jaws to grip the cable as you are tensioning the cable. Keeps the cable from turning and prevents damage to the cable when cable is being tensioned.

Order **PLIERS**

Cable Release

Releases cable from Push-Lock® and Pull-Lock® type fittings before cables are tensioned. For 1/8" cable only.
Order **PL-KEY**

Radius Ferrule/ Clip-on Stop Gauge

Use this gauge to confirm that the Radius Ferrules and clip-on stops have been properly swaged. The fitting is properly swaged if it fits into the appropriate slot.

Order **RF-GAUGE**

Grommet Installation Tool Set

Needed to properly install grommets. Place grommet on tool, align grommet over hole, and tap lightly with a hammer (hammer not provided with rental tools).

Order **GROMMET TOOL SET**

Model 610 Swager

Hand held. For swaging 1/8" and 3/16" diameter Ultra-tec® cable fittings. Use with Air Over or Electric Hydraulic Pump (see next page).

Order **610 SWAGER**

Shipping Container/ Tool Box

With compartments for cable cutting and installation tools.

Order
610 TOOL BOX

Model 650 Swager

For swaging 1/8" through 3/8" diameter Ultra-tec® cable fittings. Use with Air Over or Electric Hydraulic Pump (see next page).

Order **650 SWAGER**

Shipping Container/ Tool Box

With compartments for cable cutting and installation tools. Mounted to 4x4 risers for safer, easier loading/off-loading.

Order
650 TOOL BOX

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Cables can be provided pre-swaged with fittings attached ready to install, or you can cut the cables and swage the fittings in your shop or on the job site. Tools and equipment for cutting the cables and swaging the fittings can be rented or purchased from the factory.

Air Over Hydraulic Pump

Air driven. Powers Model 610 or 650 Swager. Requires an air compressor capable of delivering at least 5.8 c.f.m. at 90 p.s.i. and a minimum 20-gallon tank. Minimum 1/4" I.D. air hose with a 1/4" male pipe thread required (not included).

Order
HYD PUMP-AIR

Electric Hydraulic 120V Pump

Increases swaging speed versus the Air Over Hydraulic Pump.

Order
HYD PUMP-ELECTRIC

Cable Tension Gauges

Check the tension on your cables with these easy-to-use gauges.

For cable diameter of 1/8", 3/16" and 1/4", order **PT-CR**

For cable diameter of 1/4" through 3/8", order **PT-3**

Pre-Tensioner

A Pre-tensioner can be used when installing longer runs of cable. It allows you to tension the cable through the last intermediate post, making it easy to connect to the last (end) post.
When renting installation tools, Pre-tensioners must be requested.

Order **PT 250**

Pre-Tensioner Locking Pliers

Special Pre-tensioner Locking Pliers are used with the pre-tensioner. Each cable diameter requires individual pliers which must be ordered separately.

For 1/8" cable, order **VGJ-PT4C**
For 3/16" cable, order **VGJ-PT6C**
For 1/4" cable, order **VGJ-PT8C**
For 5/16" cable, order **VGJ-PT10C**
For 3/8" cable, order **VGJ-PT12C**

Cut-off Tool

Used to cut cable flush with the end of Pull-Lock® fittings, and to cut excess threads off stud-type tensioners. Includes mandrel and two cut-off wheels.

Order **CUT-OFF KIT**

Stainless Steel Cleaner and Protectant

Dissolves minor corrosion, then leaves a protective coating that lasts for months.
Includes an 8-oz. spray-on rust and stain remover and a 4-oz. bottle of protectant.

Order **E-Z CLEAN**

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Stainless Steel Cable Brace

1/4" x 1" in 2 lengths, for 36" and 42" high rails. Holes pre-drilled at 3-1/8" on center, 10 holes in short length, 12 in long. For use between structural posts to keep cables code compliant on level runs. Weld to metal frames; use cable brace floor plates for attaching to wood.
#4 Finish Stainless Steel.

Order **CB-34.5-SS-10** or **CB-40.5-SS-12**

Stainless Steel Cable Brace for Stairs

1/4" x 1" in 2 lengths, for 36" and 42" high rails. Slots pre-drilled at 3-1/8" on center, 10 slots in short length, 12 in long. For use between structural posts to keep cables code-compliant on stair runs. Weld to metal frames; use cable brace floor plates for attaching to wood. Must be field-chamfered to match stair angle.
#4 Finish Stainless Steel.

Order **CBS-34.5-SS-10** or **CBS-40.5-SS-12**

Anodized Aluminum Cable Brace

3/4" x 3/4" tube, 42" long for cutting down to any size rail height. Holes pre-drilled at 3-1/8" on center, 13 holes total. For use between structural posts to keep cables code compliant on level runs. Use cable brace plugs to attach to top and bottom rail or deck.

Order **CB-42-AN-AL-13**

Black Aluminum Cable Brace

Order **CB-42-BL-AL-13**

Anodized Aluminum Cable Brace for Stairs

3/4" x 3/4" tube, 42" long for cutting down to any size rail height. Comes undrilled so slots can be field-drilled to match cable array.

Order **CB-42-AN-AL**

Black Aluminum Cable Brace for Stairs

Order **CB-42-BL-AL**

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Cable Brace Connectors

Plastic plugs with screws for attaching to wood or aluminum frame and wood deck. Available in bags of 20.

Order **BRACE CONNECTOR**

Cable Brace Connectors for Stairs

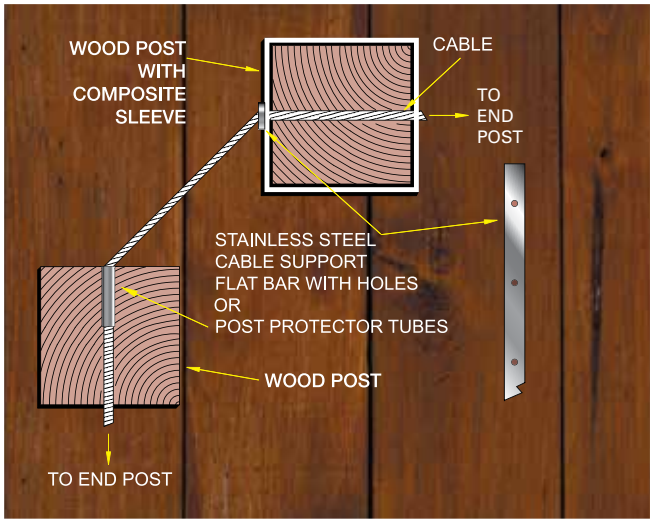
Plastic plugs with beveled bottoms for attaching to wood or aluminum frame on a stair rake. Available in bags of 20.

Order
BRACE CONNECTOR-STAIR

Stainless Steel Cable Brace Floor Plates

For mounting cable braces to top or bottom rail or deck.
2-1/4" x 1-1/4" x 1/4".
#4 Finish Stainless Steel.

Order **FLP-CBS**



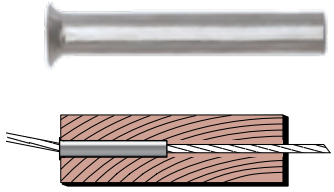
Stainless Steel Cable Support

1/4" x 1" in 2 lengths, for 36" and 42" high rails. Holes pre-drilled at 3-1/8" on center, 10 holes in short length, 12" long. Lags onto the outside of a wood post with composite sleeve to allow cable to exit post on an angle, protecting the sleeve from the cable.

Order **CS-34.5-SS-10** or **CS-40.5-SS-12**

Stainless Steel Post Protector Tube

The post protector tube is inserted into a wood post where the cable enters/exits the post at an angle to keep the cable from biting into the wood.



Type 316 Stainless Steel

Order **CS-TUBE-6** for 1/8" and 3/16" dia. cable

Order **CS-TUBE-8** for 1/4" dia. cable

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Drill Guide

Drill straight holes through your wood posts with a steel drill guide. Use the drill guide to drill your pilot holes. Subsequent drilling will follow pilot holes. Clamp the guide to post and drill. It is best to drill one side, then the other. When ordering, allow space for clamps. A 6"-long drill bit is included that can also be used to drill your cable through-holes.

Contact factory for **DRILL GUIDE ORDER FORM**

Hanger Bolt Driver

Use to install Adjust-A-Body® with Hanger Bolt tensioners. Makes driving hanger bolts fast and easy.

Order **DRIVER HB-6N** for 1/8" and 3/16" dia. cable

Heavy Duty Hanger Bolt Driver

Robust design intended for multiple installations, many jobs.

Order **HB-6 DRIVER** for 1/8" and 3/16" dia. cable

Beveled Washers (for flat-sided frames only)

Made of stainless steel for use with Invisiware® Receivers, Push-Lock® tensioners and Pull-Lock® fittings on stairways or slopes where you need to drill your end post holes at an angle.

TYPE 316 STAINLESS STEEL

Order Part No.	Use with Cable Dia.	Stair/Slope Pitch
BW32-6	1/8" or 3/16"	30˚ - 33˚
BW35-6	1/8" or 3/16"	34˚ - 36˚
BW38-6	1/8" or 3/16"	37˚ - 39˚
BW32-8	1/4"	30˚ - 33˚
BW35-8	1/4"	34˚ - 36˚
BW38-8	1/4"	37˚ - 39˚
BW32-12	5/16" or 3/8"	30˚ - 33˚
BW35-12	5/16" or 3/8"	34˚ - 36˚
BW38-12	5/16" or 3/8"	37˚ - 39˚

Corner Section Tubes

Available for 4" radius in carbon or stainless steel.

Order **CORNER SECTION TUBE** and specify carbon or stainless, and cable diameter being used.

Stainless Steel Spacers

Used between two structural steel posts or flat bars for a "double end post" type construction. .970" length.

Order Part No.	Outside Dia.	Wall Thickness	Use with Receivers & Welded Receivers:
SPC-R6	5/8"	.083"	1/8" and 3/16" diameter cable
SPC-R8	3/4"	.095"	1/4" diameter cable

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Photo courtesy of
Paramount Iron and Handrail

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Engineering data is available for Ultra-tec® cable railing products. For more information or to speak with a representative, please call 800-851-2961.

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