

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

Stairway is "double end post" construction featuring two 2" x 1" tubular steel posts separated by 5/8"-diameter x 1"-long stainless steel spacers. The construction avoids a heavy look while providing for sufficient strength to accommodate the tension of the cables.



Adjust-A-Jaw® tensioners (page 11) are used on one end and Ultra-tec Fixed Jaws (page 17) are used on the other end of each cable run. Ultra-tec Fixed Tabs (page 20) are used to mount the hardware.

Outdoor deck posts are 4" x 6" end posts with 4" x 4" intermediate posts. Invisiware® Receivers (page 9) hidden inside one end post tension the cables. Pull-Lock™ fittings (pages 4-5) are concealed inside the other end post.

ISO 9001 Certified



LEED® Credit



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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.

Ultra-tec®
CABLE RAILING SYSTEMS



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SWAGELESS
FITTINGS

SWAGED FITTINGS — TENSIONERS



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NON-TENSIONING
FITTINGS

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PRE-MADE
ASSY.

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EQ., ACC.,
RAILING
COMP.

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Ultra-tec
CABLE RAILING SYSTEMS

Push-Lock™ Stop-End Fittings

NON-TENSIONING END

Field-installed Push-Lock fittings make cable railings easy to install on level runs or stairs.

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... but **when used with our swageless tensioners (pages 6-7) both ends can be put on the cable by hand** without any swaging or special tools.

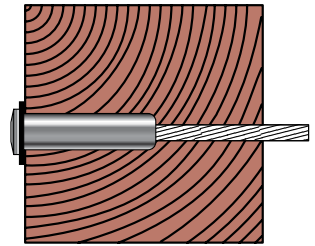
Easy to install

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!

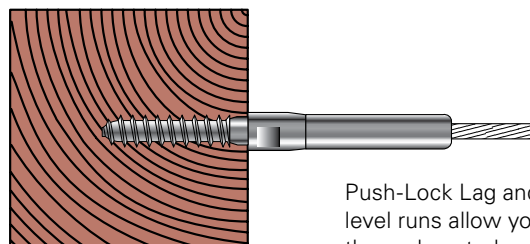
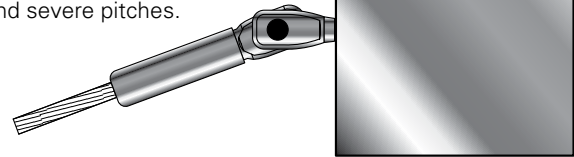


Four styles make your job easy – in metal or wood

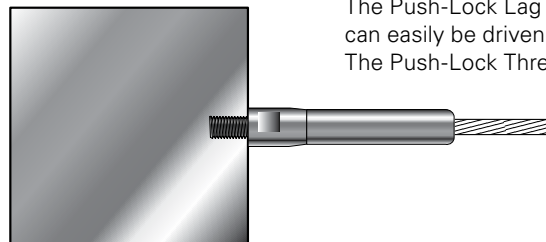
Push-Lock fittings with rounded cap ends rest inside your metal or wood end posts on level runs. The fitting is hidden inside the post, with only the head exposed on the outside of the post.



Push-Lock fittings with 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.



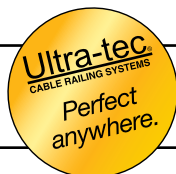
Push-Lock Lag and Threaded Bolt fittings for straight, level runs allow you to lag or thread into the inside of the end post, depending on post composition. The Push-Lock Lag fitting comes in two parts so the lag can easily be driven into the wood post. The Push-Lock Threaded Bolt operates as a single unit.



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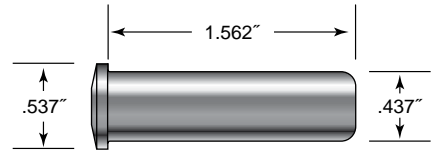
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For level runs where back side of end post is accessible

Push-Lock fittings (with rounded heads) are used on level runs. They rest in a hole in the end post. When used with an end post 1-1/2" or more in thickness, **the Push-Lock fitting with a rounded head 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.

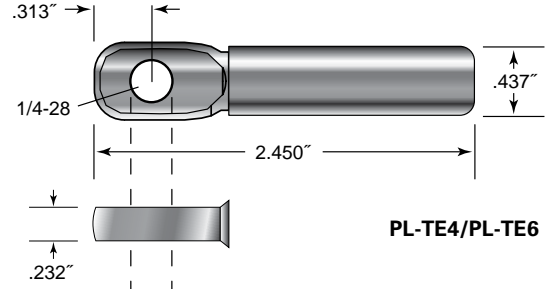
For wood applications, also order 7-16SAE Washer.



PL-4/PL-6

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 13). 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

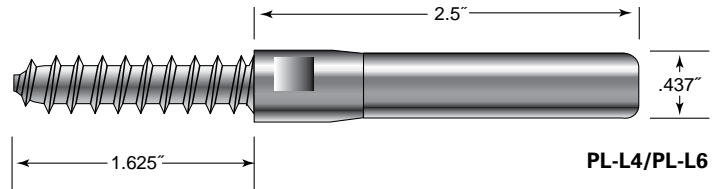
For level runs where cable must be terminated on the inside of the post

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) and the Push-Lock Threaded Bolt (for metal posts) address those needs.

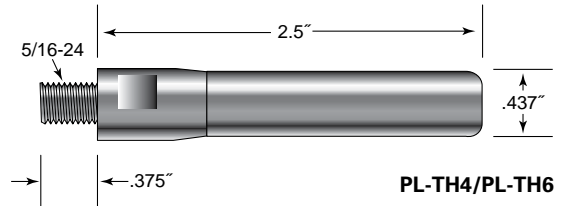
The Push-Lock Lag is actually two components that fit together: the lag and the Push-Lock coupler. The lag is slotted for an Allen wrench on one end to make it easy to screw into the post. Once installed, thread the Push-Lock coupler onto the lag and you're ready to insert the cable.

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 or Push-Lock Threaded Bolt are tensioning devices, so the other end of the cable run will require a tensioner.



PL-L4/PL-L6



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.



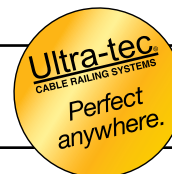
Push-Lock™ fittings are made of type 316 stainless steel with the exception of internal components that are made of other types of stainless steel. DESIGNED FOR USE WITH 1X19 L.H. LAY STRAND ONLY

CABLE DIA.		FRAME OPTIONS			USE WITH SCREW NO.	FOR WOOD, USE WITH		FOR METAL RAILINGS, USE WITH MOUNTING TAB NO.
		1-1/2" TUBE or 1-1/4" PIPE	OTHER FRAMES	WOOD		WASHER NO.	LAG EYE NO.	
1/8"	For straight, flat runs, outside of post	PL-4-12*	PL-4	PL-4	NA	7/16SAE	NA	NA
	For stair runs, inside of post	PL-TE4	PL-TE4	PL-TE4	SC-6	NA	LE-6	TT-6B
	For straight, flat runs, inside of post	PL-TH4	PL-TH4	PL-L4	NA	NA	NA	NA
3/16"	For straight, flat runs, outside of post	PL-6-12*	PL-6	PL-6	NA	7/16SAE	NA	NA
	For stair runs, inside of post	PL-TE6	PL-TE6	PL-TE6	SC-6	NA	LE-6	TT-6B
	For straight, flat runs, inside of post	PL-TH6	PL-TH6	PL-L6	NA	NA	NA	NA

*For appearance, ends are squared (rather than rounded) on PL-4-12 for use with 1-1/2" tubes and 1-1/4" pipe.

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Ultra-tec®
 CABLE RAILING SYSTEMS

Pull-Lock™ Stop-End Fittings

NON-TENSIONING END

Field installed Pull-Lock™ fittings make installing cables easy.

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...but **when used with our swageless tensioners (pages 6-7), both ends can be put on the cable by hand** without any swaging or special tools.

Easy to install

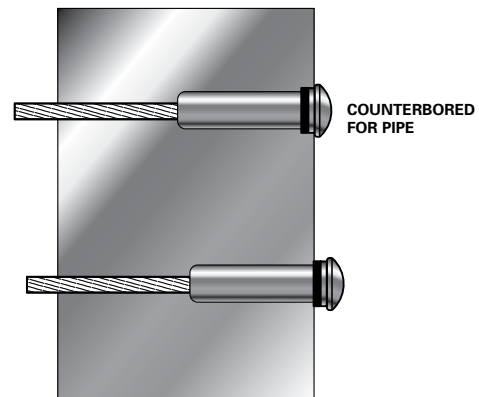
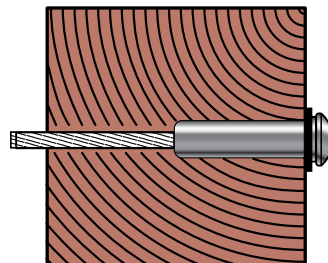
You can order your cables with a tensioner already on one end or you can install a tensioner on one end on site. Attach the tensioner on one end post, slip the Pull-Lock fitting into the other end post and pull the cable all the way through the Pull-Lock fitting. Tension the cables, then cut the excess cable off on the back side of the fitting with a 4" 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 are used with pipe and with round, square, or rectangular metal tubing. When used with an end post 1-1/2" 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).



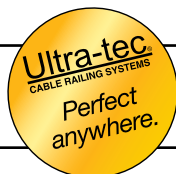
Illustrated with Receiver with Push-Lock Stud on other end.



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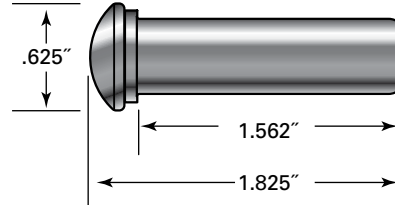
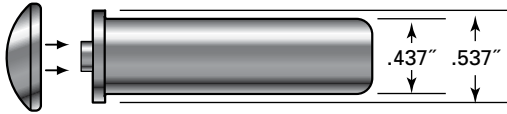
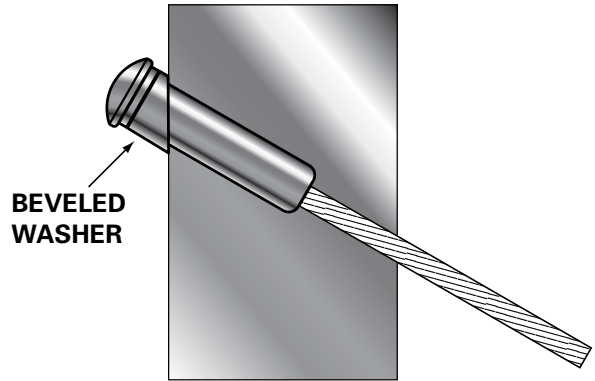
Use Pull-Lock stop-end fittings on stairs with special beveled washers.

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.)



STAINLESS STEEL BEVELED WASHERS

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



Pull-Lock™ stop-end 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

CABLE DIA.	FRAME OPTIONS		FOR WOOD, ALSO USE S.S. WASHER PART NO.
	1-1/2" TUBE or 1-1/4" PIPE	OTHER FRAMES	
1/8"	PUL-4-12*	PUL-4	7/16SAE
3/16"	PUL-6-12*	PUL-6	

*For appearance, ends are flat (rather than rounded) on PUL-4-12 or PUL-6-12 for use with 1-1/2" tubes and 1-1/4" pipe.



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 28).



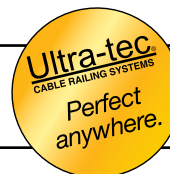
Cable Release
See page 26
in this catalog

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Ultra-tec®
CABLE RAILING SYSTEMS

Receivers with Push-Lock Stud

TENSIONER

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

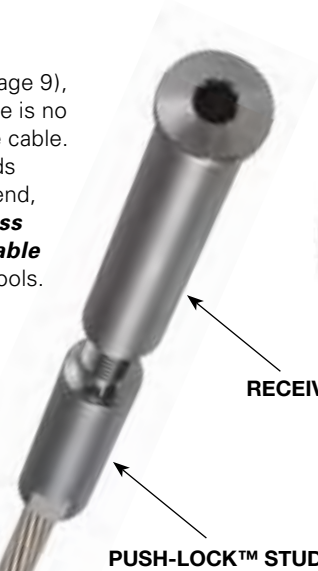


No field swaging

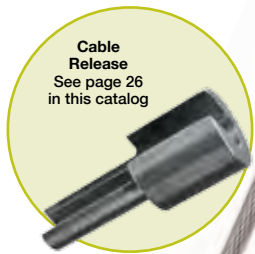
Similar to our Invisiware® receivers (see page 9), but when used with Push-Lock studs there is no need to swage the threaded stud onto the cable. Receivers with Push-Lock swageless studs can be used with any fitting on the other end, but **when used with our other swageless fittings, both ends can be 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.



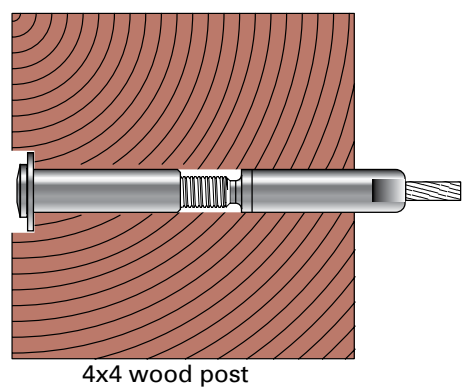
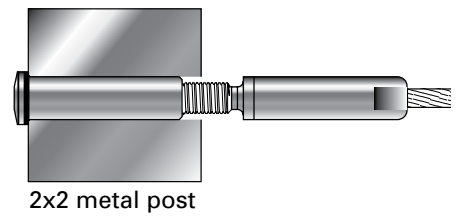
Swageless Fittings



Illustrated with Push-Lock stop-end (non-tensioning) fitting on other end.

Use with metal or wood posts

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

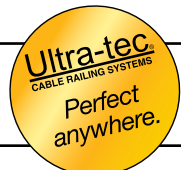


For use in wood, the fitting can rest against the outside of the end post or the post can be counterbored with the fitting recessed in the post. For wood applications, a larger diameter washer is needed to distribute the load over a wider surface. See 7/16 SAE stainless steel washer (page 21).

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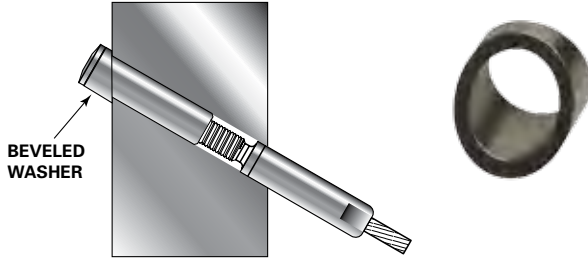
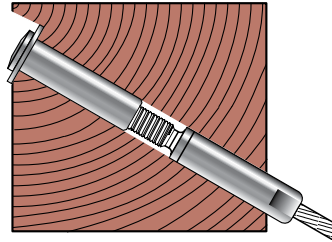


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For stairs or severe pitches

With wood posts, you need to counterbore a 1" diameter hole at an angle, to accept the over-sized stainless steel washer that distributes the load over a wider surface than is required with a metal post.

Special stainless steel beveled washers let you use Push-Lock tensioners on stairs or severe pitches with flat-sided metal posts. (Not offered for pipe or round tubing.)

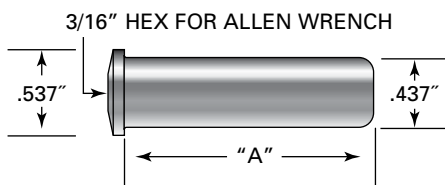
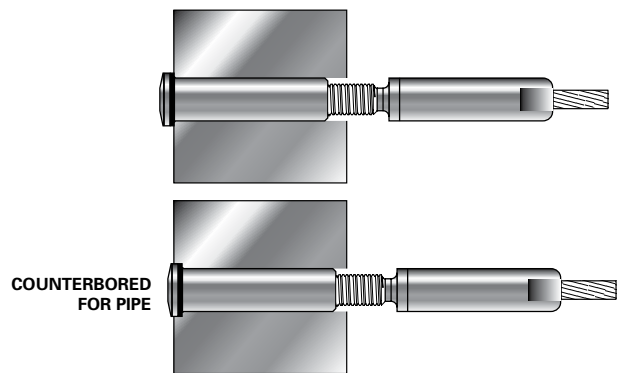


STAINLESS STEEL BEVELED WASHERS

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 part No. 7/16 SAE stainless steel washer.

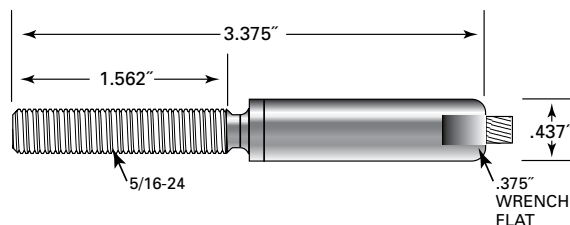


Invisiware® Receivers are made of type 316 stainless steel.
PART NUMBERS IN BOLD TYPE. ORDER SWAGELESS STUD SEPARATELY.

CABLE DIA.	USE WITH SWAGELESS STUD NO.	A = LENGTH OF RECEIVER BODY							
		1.582"	1.812"	2.030"	2.301"	2.375"	2.530"	3.030"	3.5625"
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

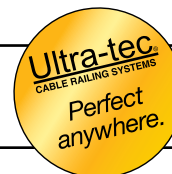
CABLE DIA.	PART NO.
1/8"	PLST-4
3/16"	PLST-6

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Ultra-tec
CABLE RAILING SYSTEMS

Push-Lock Turnbuckle

TENSIONER

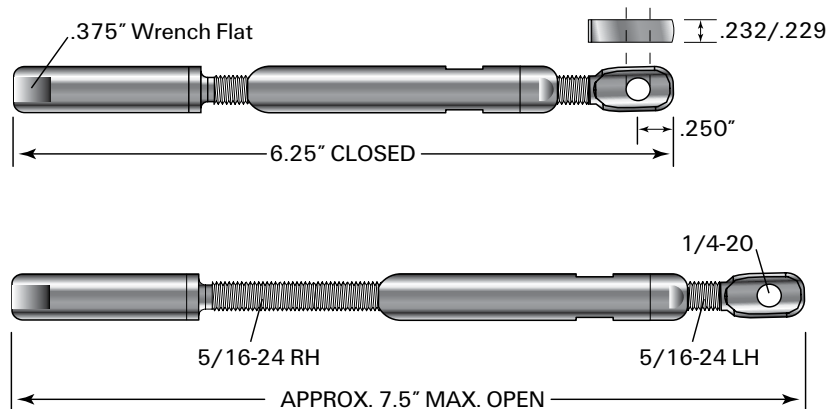
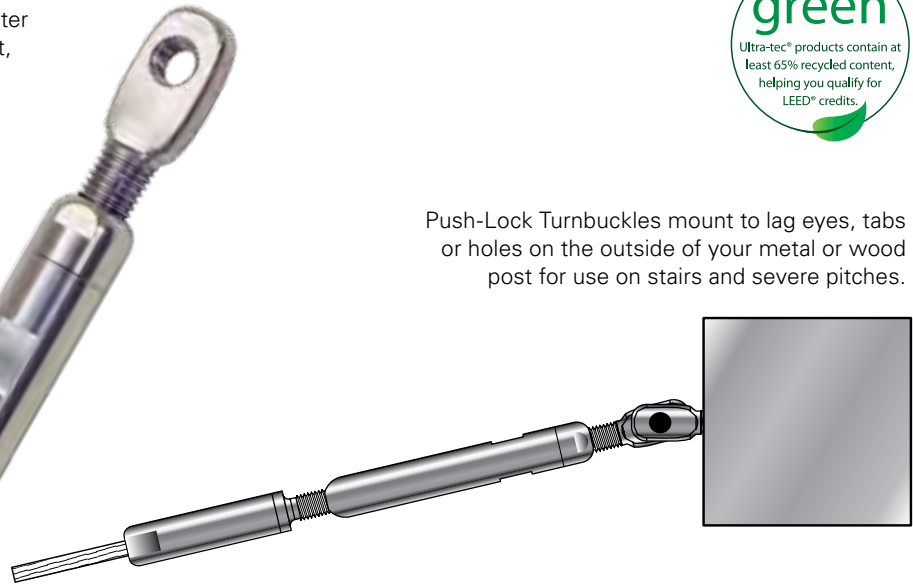
The Push-Lock tensioner for inside-of-post applications.

Easy to install

Push-Lock Turnbuckles are designed for use with 1x19 L.H. lay strand only. After the fitting is attached to your end post, push the cable into the opening in the Push-Lock Turnbuckle, where it will be securely held inside. To tension the cable, just hold the end with an open-end wrench to keep the cable from turning and tighten the body with a second open-end wrench. When the cable is tensioned, tighten the lock nut against the body.



Push-Lock Turnbuckles 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™ TURNBUCKLE

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

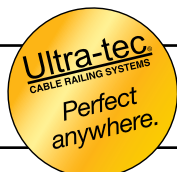
CABLE DIA.	PART NO.	USE WITH MOUNTING SCREW NO.*	OPTIONS FOR MOUNTING TO END POSTS	
			FOR METAL POSTS, USE WITH MOUNTING TAB NO.	FOR WOOD POSTS, USE WITH
1/8"	PL-TB4	SC-6	TT-6B	LE-6
3/16"	PL-TB6			

*Order SC-6 Screw Separately.

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3/1/12

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Ultra-tec
CABLE RAILING SYSTEMS



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Invisiware® Receivers

The tensioners that are hidden inside the post.

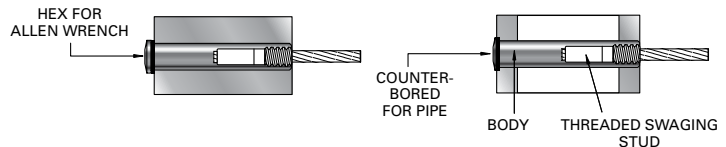
Easy to install

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).

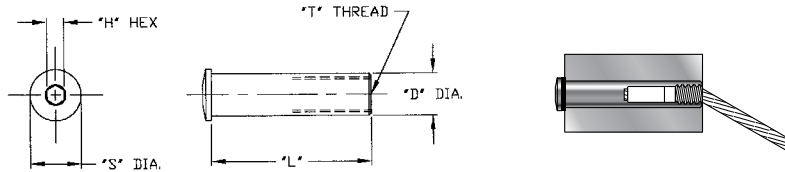
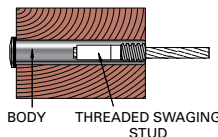
Use with metal or wood — on level runs or stairs

Invisiware® receivers are used with pipe and 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 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 7/16 SAE 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.



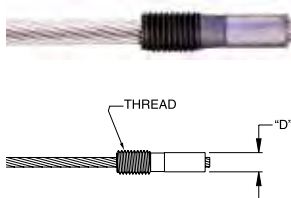
TYPE 316 STAINLESS STEEL — PART NUMBERS IN BOLD TYPE
ORDER SWAGING STUD SEPARATELY

CABLE DIA.	USE WITH SWAGING STUD NO.	"D"	"H"	"T"	"S"	FRAME OPTIONS							
						1-1/2" TUBE or 1-1/4" PIPE "L"=1.562"	1-1/2" PIPE "L"=1.812"	2"x2" TUBE "L"=2.030"	2" PIPE "L"=2.301"	2-3/8" TUBE "L"=2.375"	2-1/2" TUBE "L"=2.530"	3" TUBE* "L"=3.030"	4x4 WOOD POST or 3-1/2" TUBE "L"=3.5625"
1/8"	S-4	.437"	3/16"	5/16-24	.537"	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"	S-6	.437"	3/16"	5/16-24	.537"	R-6-12	R-6-22	R-6-32	R-6-42	R-6-72	R-6-82	R-6-52	R-6-62
1/4"	S-8	.531"	7/32"	7/16-20	.646"	N.A.	R-8-22	R-8-32	R-8-42	N.A.	N.A.	R-8-52	N.A.
5/16"	S-10	.687"	5/16"	9/16-18	.865"	N.A.	N.A.	R-12-32	R-12-42	N.A.	N.A.	R-12-52	N.A.
3/8"	S-12	.687"	5/16"	9/16-18	.865"	N.A.	N.A.	R-12-32	R-12-42	N.A.	N.A.	R-12-52	N.A.

*Use with 2"X1" and 3"X1" double end post construction illustrated in the Design & Fabrication Guide for Metal Railings.

ORDER RECEIVER AND 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

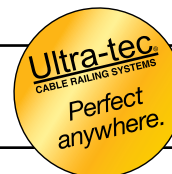
CABLE DIA.	PART NO.	THREAD	"D" DIAMETER AFTER SWAGED
1/8"	S-4	5/16-24	.250"
3/16"	S-6	5/16-24	.250"
1/4"	S-8	7/16-20	.375"
5/16"	S-10	9/16-18	.500"
3/8"	S-12	9/16-18	.500"

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Ultra-tec®
CABLE RAILING SYSTEMS

Adjust-A-Jaw[®] Tensioners

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



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.

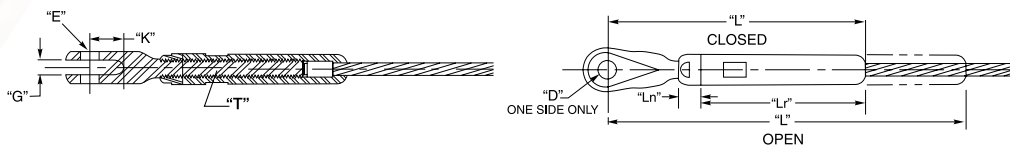
The clevis has a male thread that mates with the female thread within the body of the tensioner. The swaging ferrule is swaged onto the cable and holds the cable inside the body. The body rotates on the cable and provides a considerable amount of take-up during tensioning with an open-end wrench. After 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 9) 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.**



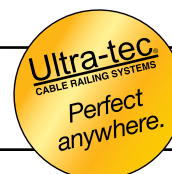
TYPE 316 STAINLESS STEEL

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"	¼-28	.260"	.56"	4.30"	5.99"	.375"	2.75"	5/16-24 LH
3/16"	A-J62	F-6	SC-6	.260"	¼-28	.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 RH
3/8"	A-J122	F-12	SC-8	.390"	3/8-24	.348"	.87"	6.74"	9.28"	.620"	4.50"	9/16-18 RH

*Order Ferrule and Screw Separately.

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Ultra-tec[®]
 CABLE RAILING SYSTEMS

Adjust-A-Body® Tensioners

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



Easy to install

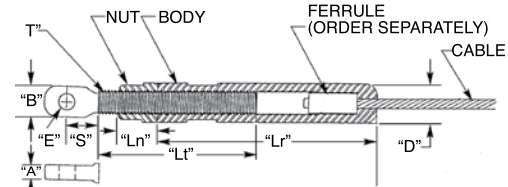
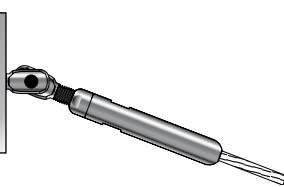
The mounting end on each of our Adjust-A-Body® tensioners has a male thread that mates with the female thread within the body of the tensioner. The swaging ferrule is swaged onto the cable and holds the cable inside the body. The body rotates on the cable and provides a considerable amount of take-up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

Tensioners Requiring Swaging



Adjust-A-Body® with Threaded Eye Tensioner

Used on straight runs or stairs like the Adjust-A-Jaw® tensioners (see page 11), **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 clevis. See the tabulated drawing and chart below to determine how this fitting interfaces with your end post.



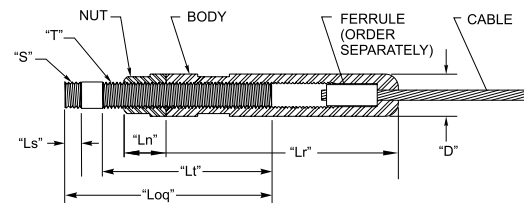
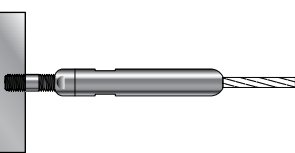
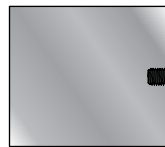
TYPE 316 STAINLESS STEEL

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

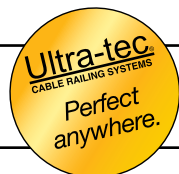
CABLE DIA.	PART NO.	*USE WITH FERRULE NO.	"S"	"T"	"Ls"	"Lt"	"Loq"	"Ln"	"Lr"	"D"
1/8"	A-JTB6	F-4	5/16-24	5/16-24 L.H.	.375"	2.00"	2.625"	.375"	2.75"	.500"
3/16"		F-6								
1/4"	A-JTB8	F-8	5/16-24	7/16-20 L.H.	.375"	2.50"	3.125"	.500"	3.00"	.625"
5/16"	A-JTB12	F-10	1/2-20	1/2-20 L.H.	.62"	3.00"	4.00"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

*Order Ferrule Separately.

12
3/1/12

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Ultra-tec
CABLE RAILING SYSTEMS

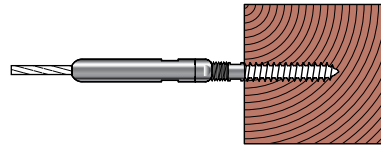
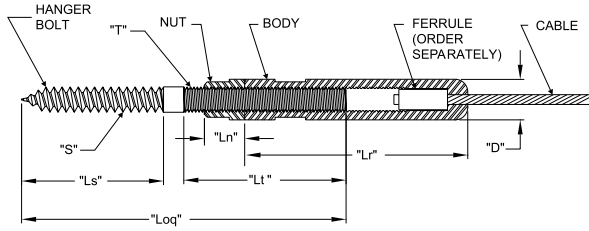


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E-mail: info@ultra-tec.com Website: www.ultra-tec.com

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"	15/64"	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"	15/64"	
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.

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"	15/64"	4 x 4
3/16"		F-6										

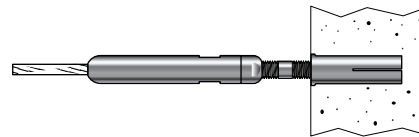
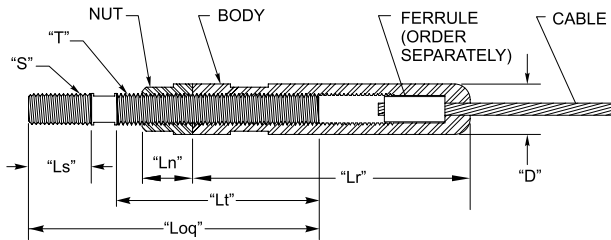
*Order Ferrule Separately.



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"	RL-38	SSRM-38
3/16"	A-JAB6	F-6									RL-12	SSRM-12
1/4"	A-JAB8	F-8	1/2-13	7/16-20 L.H.	1.125"	2.500"	3.938"	.500"	3.00"	.625"	RL-12	SSRM-12

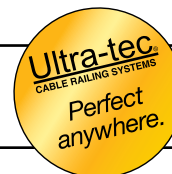
*Order Ferrule Separately.

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Ultra-tec®
CABLE RAILING SYSTEMS

Tensioners Requiring Swaging

Stop-End Non-Tensioning 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).

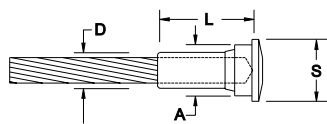


Invisiware® Radius Ferrule

Often used in combination with the Invisiware® receiver (page 9), **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

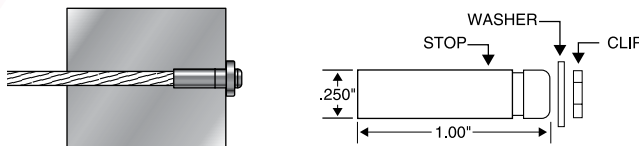
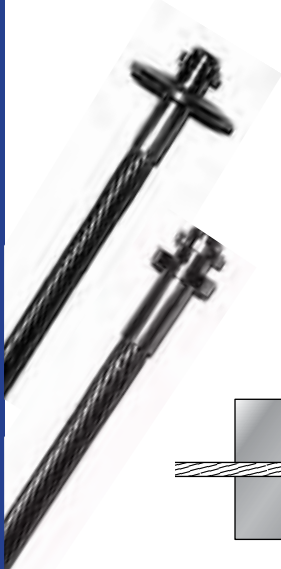
CABLE DIA.	PART NO.	"D" DIAMETER AFTER SWAGED	"L" LENGTH AFTER SWAGED	"S" HEAD DIAMETER	"A" SHOULDER DIAMETER
1/8"	RF-4	.250"	.750"	.537"	.437"
3/16"	RF-6	.250"	.750"	.537"	.437"
1/4"	RF-8	.375"	1.000"	.646"	.531"
5/16"	RF-10	.500"	1.000"	.865"	.687"
3/8"	RF-12	.500"	1.000"	.865"	.687"

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.

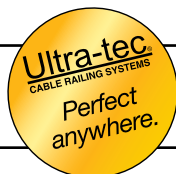
Pipe or round tubing end posts are counterbored so the full perimeter of the head of the stop rests on a flat surface in the pipe. The stop rests against the outside wall of a flat-sided post.

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	59/64" (.922")
1/8"	METAL POST	COS-4M	15/32" (.468")
3/16"	METAL POST	COS-6M	15/32" (.468")

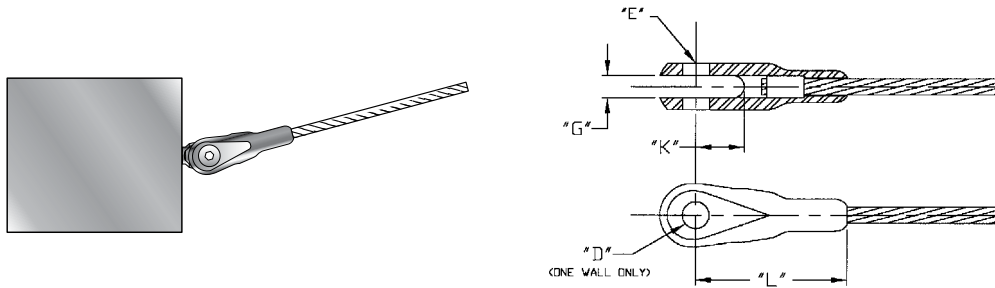


Ultra-tec® Fixed Jaw

Often used with our Adjust-A-Jaw® tensioner (page 11), 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

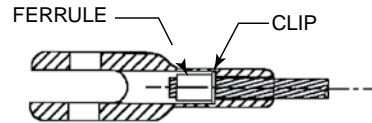
CABLE DIA.	PART NO.	*USE WITH FERRULE NO.	*USE WITH SCREW NO	"D" DIA.	"E" THREAD	"G"	"K"	"L"
1/8"	F-J62	F-4	SC-6	.260"	1/4-28	.260"	.56"	1.75"
3/16"	F-J62	F-6	SC-6	.260"	1/4-28	.260"	.56"	1.75"
1/4"	F-J82	F-8	SC-8	.390"	3/8-24	.313"	.75"	2.12"
5/16"	F-J122	F-10	SC-8	.390"	3/8-24	.348"	.87"	2.25"
3/8"	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 11).

TYPE 316 STAINLESS STEEL

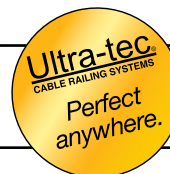
CABLE DIA.	PART NO.	*USE WITH FERRULE NO.	*USE WITH SCREW NO.	"D" DIA.	"E" THREAD	"G"	"K"	"L"
1/8"	F-JC2-4	F-4	SC-6	.260"	1/4-28	.260"	.56"	1.75"
3/16"	F-JC2-6	F-6	SC-6	.260"	1/4-28	.260"	.56"	1.75"

*Order Ferrule and Screw Separately.

See Fixed Jaw Drawing Above

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 52 Heppner Drive ■ Carson City, NV 89706
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Ultra-tec®
 CABLE RAILING SYSTEMS

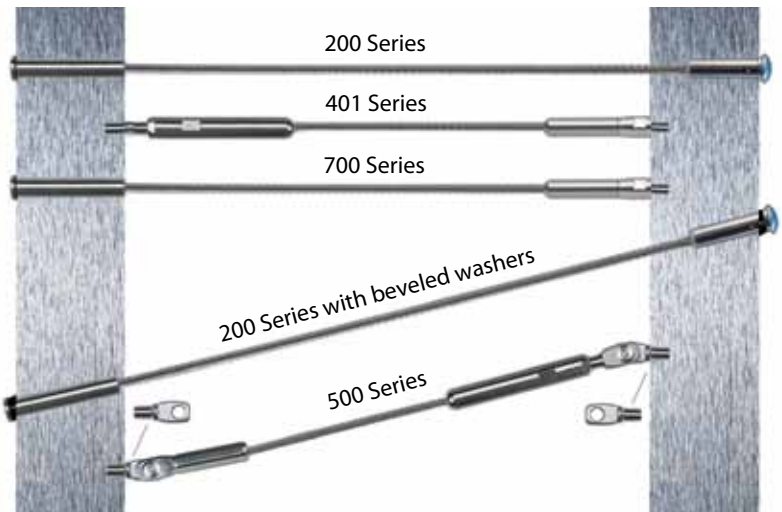


Pre-Made Cable Assemblies

Complete DIY stainless steel cable railing assembly kits.

Cables are ready-to-install in your deck, patio, balcony, stairs or other diy railing projects.

All stainless steel cable railing assemblies come with cable railing hardware fittings for both ends of your cable run, all washers and fasteners necessary, 1/8" or 3/16" diameter type 316 stainless steel cable, and instructions. Order the diy cable railing assemblies in cable lengths in increments of 5 feet (up to 25 feet — if you have a run longer than 25 feet or want to bend the cable, contact us directly) to provide sufficient cable for each of your cable runs. You will cut the cables to their proper lengths on site.



For outside-of-post to outside-of-post applications, use the 200 series:

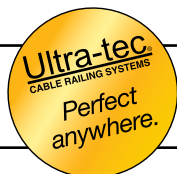
If wood posts, use the 262 series. The tensioning device is a 3½" long Invisiware Receiver, which installs flush through the wood post on one end. A Pull-Lock fitting is installed through the other end.

If 2" metal posts, use the 232 series; if 1½", use the 212 series. The tensioning device is a 2" (or 1½") long Invisiware Receiver, which installs flush through the metal post on one end. A Pull-Lock fitting is installed through the other end.

200 Series Railing Kits

Cable Length	1/8" cable			3/16" cable		
	wood post	2" metal post	1½" metal post	wood post	2" metal post	1½" metal post
5'	26205	23205	21205	26205-6	23205-6	21205-6
10'	26210	23210	21210	26210-6	23210-6	21210-6
15'	26215	23215	21215	26215-6	23215-6	21215-6
20'	26220	23220	21220	26220-6	23220-6	21220-6
25'	26225	23225	21225	26225-6	23225-6	21225-6

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For inside-of-post to inside-of-post applications, use the 300 or 400 series:

If wood posts, use the 300 series.

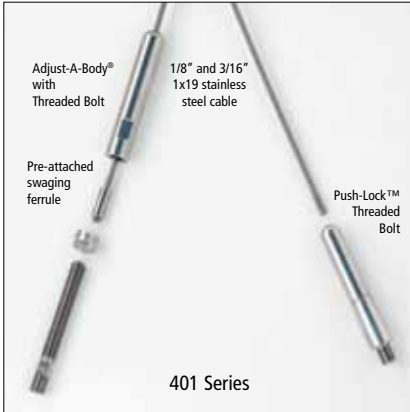
The tensioning device is an Adjust-a-Body® with Hanger Bolt, which lags into the wood post on one end. A Push-Lock Lag is lagged into the other end.

If metal posts, use the 401 series.

The tensioning device is an Adjust-a-Body with Threaded Bolt, which threads into the metal post on one end. A Push-Lock Threaded Bolt is threaded into the other end.

300 Series and 400 Series Railing Kits

Cable Length	1/8" cable		3/16" cable	
	wood post	any size metal post	wood post	any size metal post
	PART NO.	PART NO.	PART NO.	PART NO.
5'	30005	40105	30005-6	40105-6
10'	30010	40110	30010-6	40110-6
15'	30015	40115	30015-6	40115-6
20'	30020	40120	30020-6	40120-6
25'	30025	40125	30025-6	40125-6



For outside-of-post to inside-of-post applications, use the 600 or 700 series:

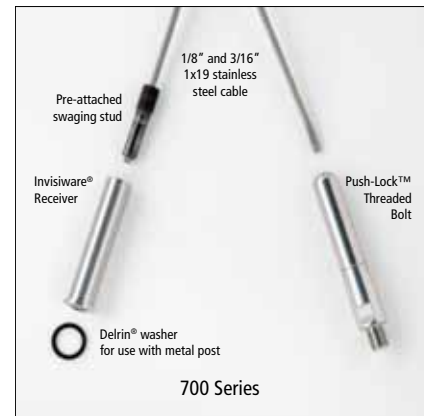
If wood posts, use the 601 series.

The tensioning device is a 3 1/2" long Invisiware Receiver, which installs flush through the wood post on one end. A Push-Lock Lag is lagged into the other end.

If 1 1/2" metal posts, use the 702 series; if 2", use the 703 series.

The tensioning device is a 1 1/2" (or 2") long Invisiware Receiver, which installs flush through the metal post on one end.

A Push-Lock Threaded Bolt is threaded into the other end.



600 Series and 700 Series Railing Kits

Cable Length	1/8" cable			3/16" cable		
	wood post	1 1/2" metal post	2" metal post	wood post	1 1/2" metal post	2" metal post
	PART NO.	PART NO.	PART NO.	PART NO.	PART NO.	PART NO.
5'	60105	70205	70305	60105-6	70205-6	70305-6
10'	60110	70210	70310	60110-6	70210-6	70310-6
15'	60115	70215	70315	60115-6	70215-6	70315-6
20'	60120	70220	70320	60120-6	70220-6	70320-6
25'	60125	70225	70325	60125-6	70225-6	70325-6



For stairs, use the 200 series (with beveled washers) or use the 500 series:

Use with LE-6 lag eye for wood posts or TT-6B threaded tab for metal posts.

The tensioning device is an Adjust-a-Body with Threaded Eye, which attaches via mounting screw to the lag eye or threaded tab.

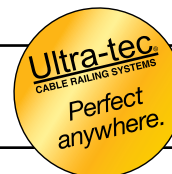
A Push-Lock with Threaded Eye attaches the same way to the other end.

Series 500 Railing Kits

Cable Length	1/8" cable	3/16" cable		
	any type post	any type post	wood post	metal post
	PART NO.	PART NO.	add:	add:
5'	50005	50005-6	2 LE-6 Lag Eyes per kit.	2 TT-6B Threaded Tabs per kit.
10'	50010	50010-6		
15'	50015	50015-6		
20'	50020	50020-6		
25'	50025	50025-6		

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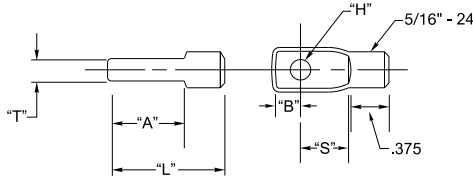
Ultra-tec
 CABLE RAILING SYSTEMS

Mounting Aids



Invisiware® Threaded Tab

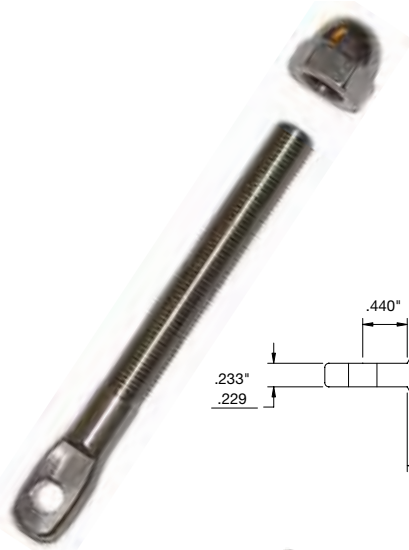
Here's a real time and money-saver. The Invisiware® threaded tab screws into a drilled and tapped hole on the inside wall of the end post for mounting an Adjust-A-Jaw® or Adjust-A-Body® tensioner, Ultra-tec® Fixed Jaw, or Push-Lock™ fitting with threaded eye. **You save the expense of welding tees or 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

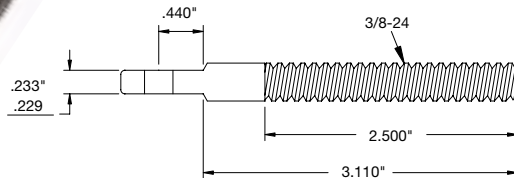
CABLE DIA.	PART NO.	"H"	"S"	"T"	"A"	"B"	"L"
1/8"	TT-6B	.265"	.500"	.233"/.229"	.813"	.313"	1.250"
3/16"	TT-6B	.265"	.500"	.233"/.229"	.813"	.313"	1.250"
1/4"	TT-8B	.390"	.625"	.295"/.285"	1.250"	.375"	1.625"
5/16"	TT-8B	.390"	.625"	.295"/.285"	1.250"	.375"	1.625"
3/8"	TT-8B	.390"	.625"	.295"/.285"	1.250"	.375"	1.625"

Mounting Aids



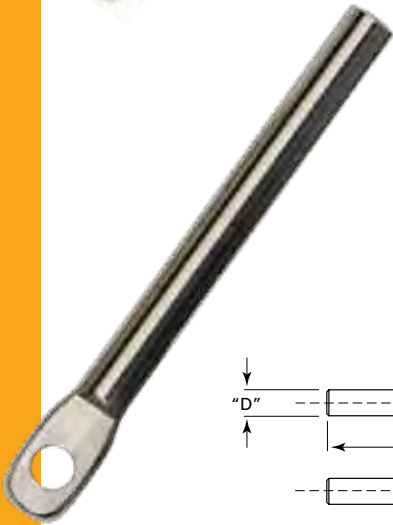
Invisiware® Extended Length Threaded Tab

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.



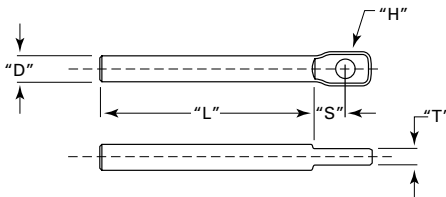
CABLE DIA.	PART NO.	Use with S.S. Acorn Nut*
1/8" & 3/16"	TT-6B-L	AN-3/8-24-S

*Order Acorn Nut separately (see page 21).



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® tensioner, Ultra-tec® Fixed Jaw, or Push-Lock™ fitting 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

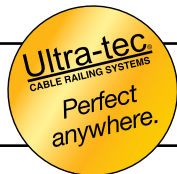
CABLE DIA.	PART NO.	"D"	"H"	"S"	"T"	"L"
1/8"	F-T6-5*	.375"	.265"	.44"	.233"/.229"	3.11"
3/16"	F-T6-5*	.375"	.265"	.44"	.233"/.229"	3.11"
1/4"	F-T8-5*	.562"	.390"	.68"	.295"/.285"	3.00"

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

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Ultra-tec®
CABLE RAILING SYSTEMS



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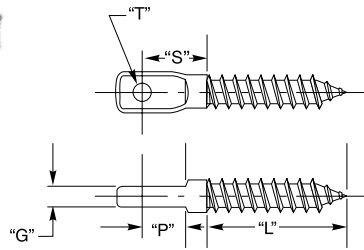
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E-mail: info@ultra-tec.com Website: www.ultra-tec.com



Ultra-tec® Lag Eye

A convenient, easy-to-install means for attaching an Adjust-A-Jaw® or Adjust-A-Body® tensioner, Ultra-tec® Fixed Jaw, or Push-Lock™ fitting with threaded eye to a wood post.



Post with an Ultra-tec® Fixed Jaw attached.

TYPE 316 STAINLESS STEEL

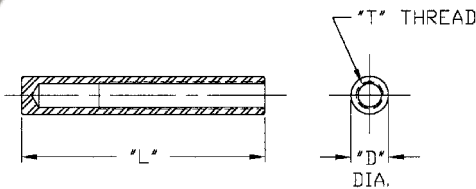
CABLE DIA.	PART NO.	"G"	"T"	"S"	"L"	"P"	DRILL SIZE REQUIRED	MIN. NOMINAL TIMBER SIZE
1/8"	LE-6	.232"/.228"	.256"	.420"	1.50"	.260"	17/64"	4 X 4
3/16"	LE-6	.232"/.228"	.256"	.420"	1.50"	.260"	17/64"	4 X 4
1/4"	LE-8	.255"/.265"	.385"	1.188"	2.00"	.688"	3/8"	4 X 4

EXTENDED LENGTH LAG EYE WITH 3" THREAD

1/8"	LE-6L	.232"/.228"	.256"	.420"	3.00"	.260"	17/64"	4 X 4
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 9)**. 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-R6-5*	S-4	.437"	5/16-24	2.82"
3/16"	W-R6-5*	S-6	.437"	5/16-24	2.82"
1/4"	W-R8-5*	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 Adjust-A-Jaw® and Adjust-A-Body® with Threaded Eye tensioners, Ultra-tec® Fixed Jaws, or Push-Lock™ fittings with threaded eye.



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"

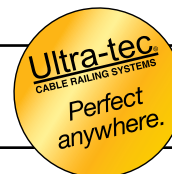
Stainless Steel Washers and Nuts



PART NO.		WASHER O.D.	WASHER I.D.	USED WITH HARDWARE FOR CABLE DIAMETERS
7/16SAE	WASHER	59/64"	15/32"	1/8" and 3/16"
1/2SAE	WASHER	1-1/16"	17/32"	1/4"
AN-3/8-24-S	ACORN NUT	Used with Extended Length Threaded Tab		

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E-mail: info@ultra-tec.com Website: www.ultra-tec.com

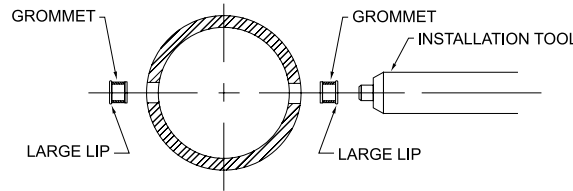


Ultra-tec®
CABLE RAILING SYSTEMS

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®.

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

CABLE DIA.	INTERMEDIATE POST MATERIAL (Not slotted for stairway)			END POST MATERIAL USING RADIUS FERRULE, PUSH-LOCK™ OR PULL-LOCK™ FITTINGS		INTERMEDIATE POST MATERIAL SLOTTED FOR STAIRWAY PITCH UP TO 37°		
	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	Schedule 80 1-1/4"* 1-1/2" 2" PIPE	SQ. OR RECT. TUBE WITH .250" WALL	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-C6-3	G-C6-4	GI-C6-1	GI-C6-2	GI-C6-4
1/4"	G-C8-1	G-C8-2	G-C8-4	G-C8-3	G-C8-4	GI-C8-1	GI-C8-2	GI-C8-4

* Cable grommets not required with Push-Lock™ or Pull-Lock™ fittings used in 1-1/4" Schedule 80 pipe if pipe is counterbored.

Cable Grommets are available in lots of 100 each.

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

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.

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.



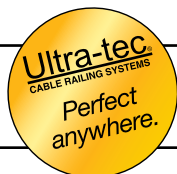
**MINIMUM BREAKING STRENGTHS
(in Lbs.) FOR TYPE 316 STAINLESS STEEL CABLE**

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	7,600	7,600
3/8"	14,800	11,700	11,000



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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 **No. C-7HIT** (not pictured)

To cut cable 1/4" diameter and under, order **No. C-9**

To cut cable up to 3/8" diameter, order **No. 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 Cutter and Pliers Kit

Kit includes cable cutter for up to 1/4" cable and cable gripping pliers.

Order **C-9/PLIERS KIT**



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.

Order **650 TOOL BOX**



Cable Release

Releases cable from Push-Lock™ and Pull-Lock™ type fittings before cables are tensioned.

Order **PL-KEY Cable Release**



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 **MODEL PT-CR TENSION GAUGE**

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



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**



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

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**

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.



Beveled Washers (for flat-sided frames only)

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



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°

Drill Guide

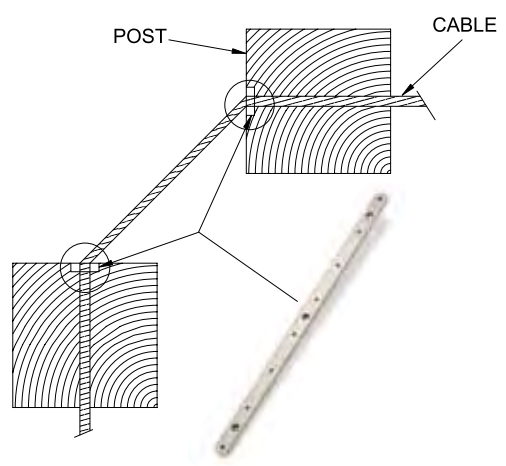
Drill straight holes through your wood posts with a steel drill guide. Use the drill guide to drill your pilot holes. Subsequent drills will follow pilot holes. Clamp the guide to post and drill. It is best to drill one side, then the other. When ordering, allow space for clamps. A 6" overall-length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



Contact factory for **DRILL GUIDE ORDER FORM**

Cable Support

1/4" x 1" flat bar cable supports are used to prevent the cable from biting into the wood post where the cable enters or exits a wooden post at an angle, when the cables are tensioned. Available in mill finish carbon steel or #4 finish stainless steel.



Contact factory for **CABLE SUPPORT ORDER FORM**

Cable Brace

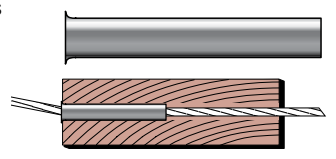
1/4" x 1" cable braces are used to support the cables between end or intermediate posts to keep the cable from flexing excessively when a load is applied. Cable braces are attached to the top rail and to the lower mounting surface, which can be a bottom rail or the deck. Available in mill finish carbon steel or #4 finish stainless steel.



Contact factory for **CABLE BRACE ORDER FORM**

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.



Order **CS-TUBE-6** for 1/8" and 3/16" dia. cable
Order **CS-TUBE-8** for 1/4" dia. cable

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

Cable Brace Floor Plates

For mounting cable braces to top or bottom rail or deck.



Order Part No.	Material	Dimensions
FLP-CB	Mill Finish Carbon Steel	2-1/4" x 1-1/4" x 1/4"
FLP-CBS	#4 Finish Stainless Steel	

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**

