



# TECNI® Tensor Cable Infill & Balustrading Catalogue

Vertical, horizontal and angled runs

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"Spec these fittings into any tension and suspension drawing with confidence. Certified for a known strength."

# **TECNI® Tensor Cable Balustrading**



Creating a sophisticated design statement with shiny stainless steel wires and fittings which glimmer in the sunshine and give that idea of space in a public area attracts people and business. In a world of safety first however, designs are often compromised for fear of not being strong enough and meeting safety regulations. This doesn't have to be the case!

The TECNI®Tensor System is extremely strong with certified breaking loads so perfect for those areas where known strength and safety is critical.

These premium quality, A4-316 marine grade stainless steel, quick tightening, swageless tension fittings are unique. They are simple and stylish, yet are as strong as the cable and offer the perfect cable railing solution for those areas where a high strength and tamper proof cable infill is required. Designed, patented and manufactured in Spain in keeping with the most advanced technology, these fittings have been extensively tested and certified by the University of Navarra. Having a known breaking load means that they can be used with complete confidence and specified into any drawing for suspension and tensioning applications.

The list of applications is endless and includes horizontal and vertical cable balustrading, infill wires, green wall systems, display and signage, architectural suspension and tensioning, lighting suspension and marine.



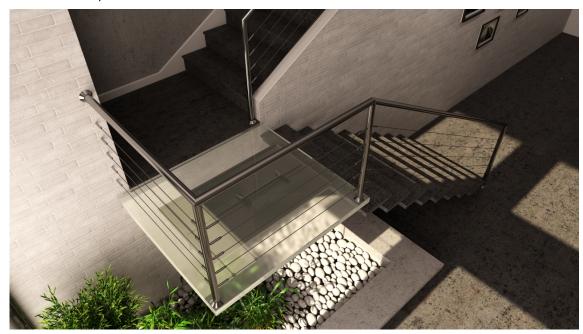
"Designed for maximum ease, installing these fittings on site could not be simpler. All you need is two spanners and an allen key!".



#### Features and Benefits of the TECNI® Tensor Balustrading System

This system is perfect for any commercial and domestic applications where a smart looking, extremely strong and completely secure, high tensile, horizontal, vertical and angled cable infill is required.

- Designed, patented and manufactured in Spain, these fittings have a known breaking load, having undergone extensive testing and certification at the University of Navarra in Spain. They are as strong as the cable.
- Suitable for numerous applications where a high tensile cable is required, these quick tightening fittings produce bow-like tension.
- Most efficient with 7 strand cable but can be used with 1x19.
- Available for use with 4, 5 and 6mm cable.
- Tamper proof so completely secure.
- ► The fittings are swageless so are easy to fit yourself on site. A couple of spanners and an allen key from your toolbox is all that is needed.
- Fittings are A4-AISI 316 marine grade stainless steel making them maintenance free and meaning they will last for years.
- Extremely versatile as can be used with a number of fittings to make them suitable for fixing into wood, brick and metal.







#### Watch the Videos to see the TECNI® Tensor Concept and How Simple it is to Install.

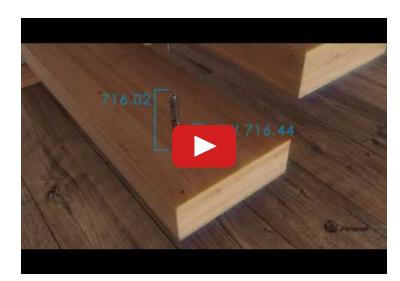
Designed for maximum ease, installing these fittings on site could not be simpler. All you need is two spanners and an allen key! See for yourself from the videos.

#### How to install the TECNI® Tensor system





Straight and angled runs





**Vertical Balustrade** 



#### FAQs Specific to TECNI® Tensor System\*

\* For general balustrading FAQs and best practice see separate Balustrading FAQs, Best Practice & Tips Catalogue.



# Q: What are the main differences between the TECNI® Standard and the TECNI® Tensor systems?

The Tensor system is much stronger and is certified with a known breaking load. For example the Standard system with a 4mm 1x19 cable will fail at about 250kgs but the Tensor system will fail at 750-1200kgs dependent on the end fixing.

The Standard M6 system can be used with 3 and 4mm cable, whereas the Tensor M6 fittings can only be used with 4mm cable.

Both systems are easy to install on site. The Tensor fittings are swageless whilst the TECNI® Standard fittings are not. The cable is held in with 3 grub screws. The swageless system may be considered more tamper proof.

#### Q: Which cable construction does the system work with?

A: It can be used with 1x19, 7x7 and 7x19, however it is easiest to install with 7 strand because the fittings grip a 7 strand wire more efficiently than strand.

**Q:** When fitting the cable into the tensioner, how much cable should be proud of the fitting? A: 1-2mm.

#### Q: How do I know how much tension is in the cable?

A: When the fitting is hand tightened as far as possible there is approx 10kgs of tension in the wire. When the fitting is tightened through 90 degrees using a spanner there is approximately 45 kgs of tension in the cable. At this point it will feel like a bow string with a slight amount of deflection.

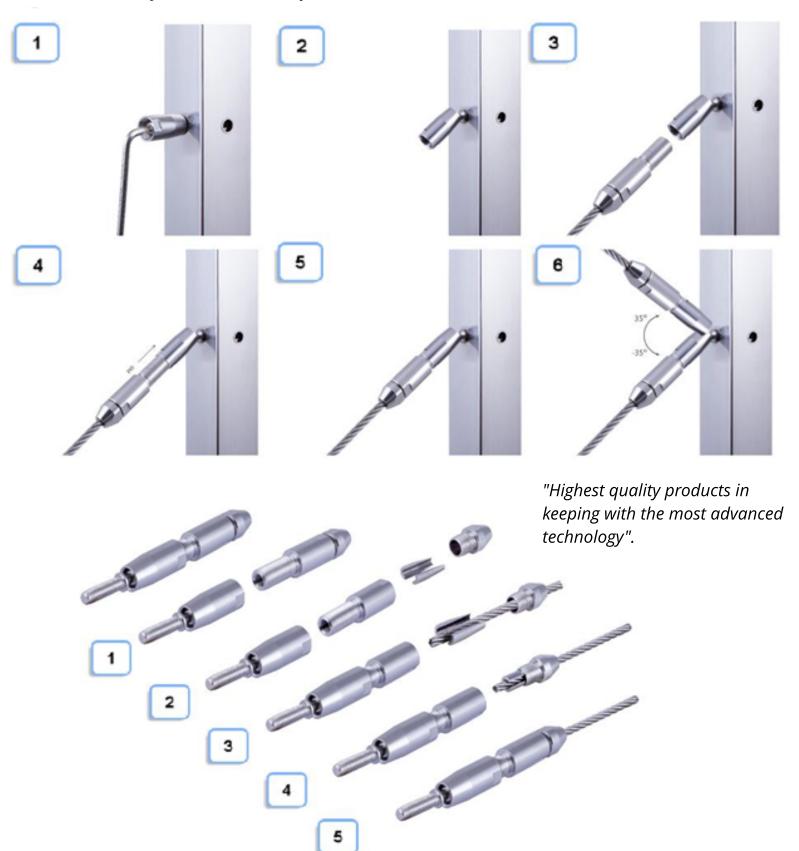
#### Q: Is there an optimum cable tension for each cable diameter?

A; We would suggest that 45kgs per cable is sufficient tension.



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# **TECNI® Tensor System. The Concept.**

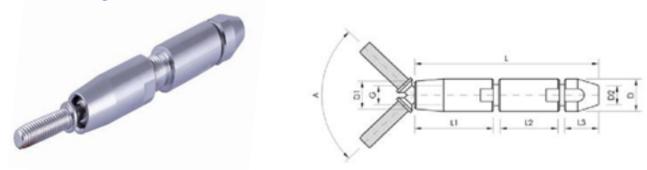




# Tensor Fittings for Horizontal and Angled Runs.



# **Tensor Fitting with Ball Attachment**



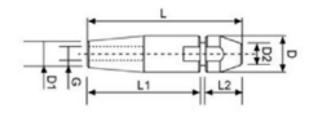
**Customer note**: Ball end attachments are available with metric and wooden thread.

Product Code	Ø	L	L1	L2	L3	D	D1	D2	G	Breaking Strength Kgs
160.003.040 Metric thread	4	66	30	23	13	13	9,5	4,5	M6x20	750
160.333.040 Wood screw	4	66	30	23	13	13	9,5	4,5	M6x20	750
160.003.050 Metric thread	5	68	30	25	13	15	10	6	M6x20	850
160.333.060 Metric thread	6	68	30	25	13	17	11	7,5	M8x20	950



#### **Swageless Internal Thread Tensor Left and Right Hand Fittings**





Product Code	Thread type	Ø	L	L1	L2	D	D1	D2	G	Breaking Strength Kgs
160.001.040	RH	4	53	40	13	13	9,6	7,6	M6	1200
160.001.050	RH	5	55	42	13	15	11,5	9	M6	1500
160.001.060	RH	6	57	44	13	17	13,5	11	M8	1900
160.002.040	LH	4	53	40	13	13	9,6	7,6	M6	1200
160.002.050	LH	5	55	42	13	15	11,5	9	M6	1500
160.002.060	LH	6	57	44	13	17	13,5	11	M8	1900

- Left and right hand female fittings makes these very versatile as can be used with a number of different fittings for different applications.
- Use with dual threaded screws for straight runs into wood and brick or with studding into metal posts.
- Use with bolts to go through a post or with jaws or an eye as illustrated below.
- Ideal for vertical and horizontal cable infill.
- Maintenance free and look great for years as all 316 marine grade.
- Quick tensioning and tighten like a bow string.
- Perfect for cable balustrade, cable railing, wire infill.





### **Planning your Balustrade with Swageless Tensor Fittings**

Component	Catalogue Code	Required per Run	Number of Runs	Totals
4mm RH Tensor Balustrade Fitting Straight Run into Wood	160.101.040	1		
4mm LH Tensor Balustrade Fitting Straight Run into Wood	160.102.040	1		
4mm RH Tensor Balustrade Fitting Straight Run into Metal	160.201.040	1		
4mm LH Tensor Balustrade Fitting Straight Run into Metal	160.202.040	1		
4mm Tensor Balustrade Fitting with ball attachment. Straight or angled run into metal.	160.003.040	2		
4mm Tensor Balustrade Fitting with Ball Attachment. Straight or angled run into Wood.	160.333.040	2		
Cable 4mm dia 1 x 19 SS	602.000.040	Mtrs		
Cable 4mm dia 7 x 7 SS	603.000.040	Mtrs		
Cable 4mm dia 7 x 19 SS	604.000.040	Mtrs		

#### How to plan your TECNI® Tensor balustrade system.

- 1. The type of posts you have dictates the end fixing. Metal needs a metric thread, whilst wood or masonry needs a wood thread. For masonry use fixings for wood with a rawl plug.
- 2. Do you want straight runs or angled runs?
- 3. If straight runs Use a RH and a LH fitting with the stud or wood screw or the Tensor fitting with the ball attachment.
- 4. If angled runs Use the Tensor fitting with the ball attachment or a LH and a RH fitting with a jaw attachment going into an eyebolt.
- 5. If you want a straight run going through a post rather than into a post, choose a Tensor balustrade fitting with a bolt.
- 6. Choose a 7 strand cable for ease, efficiency and extra strength.



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