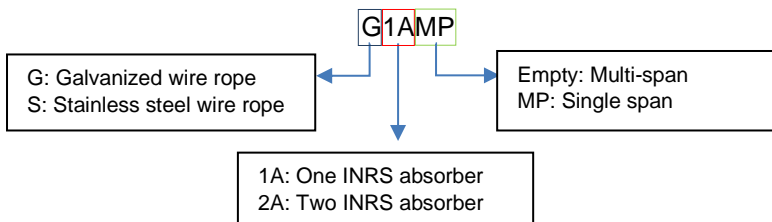


DESCRIPTION

The Travspring™ single-cable system is a proximity lifeline. It offers the possibility to manually cross intermediate anchors without disconnecting from the lifeline (except curves).

Versatile, the Travspring™ lifeline is available with galvanized or stainless-steel cable, and with one or two in-line energy absorbers.

The Travspring™ lifeline is available in different configurations and can be condensed using the subsequent abbreviation:



APPLICABLE STANDARDS

- EN 795:2012
- CEN/TS 16415:2013

ASSOCIATED AND COMPATIBLE PERSONAL PROTECTIVE EQUIPMENT (PPE)

- Full-body harness
 - Shock-absorbing lanyard, retractable fall arresters or guided type fall arresters including a flexible anchor line
- All Tractel® PPE certified EN 360 and EN 353-2 rated 150kg are tested with the Travspring™ lifeline.
All lanyards certified EN 355 can be used with the Travspring™ lifeline.

TECHNICAL INFORMATION

Wire rope available in stainless steel or galvanized steel.

Multi users certified:

- 3 users 150kg
- 5 users 100kg.

Intermediate anchors are made in Cupro Aluminium with similar mechanical and corrosion properties to stainless steel 316L.

Maximum inclination of 15°.

SPAN

Depending on the configuration and the number of absorbers, the Travspring™ lifeline has the following spans between anchors.

Configuration	Single span MP		Multi-span	
	Min	Max	Min	Max
G1A & S1A	1.8 m	30 m	1.8 m	28.5 m
G2A & S2A	5 m	30 m	5 m	15 m

SYSTEM LOADING AND DEFLECTION

If you design, install, and use one of a Travspring™ lifeline according to the manual, the maximum force on end anchor, intermediate and corner kit will not be greater than the following values:

Configuration	Nb.	Maximum effort in the direction of the cable (kN)					
		G1A	G2A	G1AMP	S1A	S2A	S1AMP
Intermediate anchor	1 user	6			6		
	5 users	6			6		
Extremity anchor	1 user	8	7	6	8	7	6
	5 users	16	12	16	16	12	16
Curve kit	1 user	11	9		11	9	
	5 users	21	16		21	16	

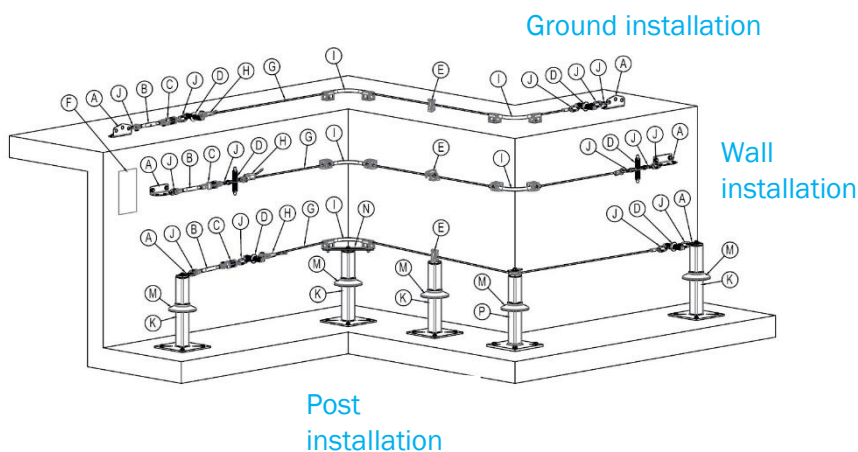
Efforts in every other direction are of 6 kN.

The maximum deflection will not exceed following values, according to span length:

Configuration	Length (m)	Nb.	Maximum deflection (m)					
			G1A	S1A	G2A	S2A	G1AMP	S1AMP
1 span for G1AMP and S1AMP	1.8	1 user	0.4				0.5	
		5 users	0.9				1.1	
	5	1 user	1.1		1.7		1.3	
		5 users	1.9		2.4		1.8	
Or 5 identical spans for other configurations	15	1 user	2.3		3.4		2.6	
		5 users	3.7		4.7		3.1	
	28.5	1 user	3.4				3.7	
		5 users	6.1				4.8	
	30	1 user					3.7	
		5 users					4.8	

Contact Tractel® for system deflection and site-specific loading.

MAIN COMPONENTS



Description	Code
A. End anchor for post	66698
End anchor for wall	66848
B. Tensioner	40742
C. Tension indicator	66858
D. INRS energy absorber	66688
E. Intermediate anchor	66868
F. Information plate	228745
G. Wire rope galva	238497
Wire rope stainless steel	277137
H. Wedge socket	193837
I. Corner kit	66878
J. Quick link connector	39822
K. Standard post	66888
L. Counter-plate for post	130995
M. Sealing membrane	129505
N. Corner plate	66998
P. Pulley post	68478

CONFIGURING A LIFELINE

Description	Code
Kit Travspring™ galva	276967
Kit Travspring™ stainless steel	276977
Start kit galva 5m	57252
Start kit stainless steel 5m	57262
Additional meter wire rope galva	238497
Additional meter wire rope stainless steel	277137
Additional information plate EN/FR/DE/NL/IT/SP	277127
Kit language EN/RU/PT/PL/DK	277227
Additional information plate EN/RU/PT/PL/DK	277237

When configuring a Travspring™ lifeline, the following components need to be selected:

- 1x Travspring™ kit, (includes tensioner, tension indicator, INRS absorber, information plate, wedge socket, quick links, instruction manual)
- 1x Start kit,
- 2x End anchors,
- The additional length of wire ropes (lifeline kit includes 5m of wire ropes),
- If applicable, the correct and compatible intermediate anchors,
- If applicable, the correct and compatible corner kits,
- If applicable, the corresponding posts,
- If applicable, 1 additional INRS absorber.

Example: Travspring™ with galvanized steel wire rope for wall application 45m with 1 INRS absorber (G1A).

Configuration:

1x	276967	Kit Travspring™ galvanized steel
1x	57252	Start kit galva 5m
2x	66848	Travspring™ end anchor for wall
40x	238497	Wire rope galvanized steel
1x	66868	Travspring™ intermediate anchor

The kits Travspring™ stainless steel and galva include the documentation and information plate in EN/FR/DE/NL/IT/SP.

KIT TRAVSPRING™ GALVANIZED 276967 / STAINLESS STEEL 276977

The Travspring™ kit includes all components required to create a lifeline and are listed below. Detailed information of each component can be found further in this technical sheet.

2 Travspring™ kits are existing: for galvanized or stainless steel wire rope.

The kits include:

- 1x 66688 INRS absorber (incl. quick link)
- 1x 40742 tensioner
- 1x 66858 tension indicator
- 1x 193837 wedge socket
- 1x 39822 quick link
- 1x 228745 information plate in EN/FR/DE/NL/IT/SP
- 1x 250025 installation manual in EN/FR/DE/NL/IT/SP

Travspring™ can be used with 1 or 2 INRS absorbers depending the need of the project:

- A configuration with 1 absorber reduces the deflection of the wire rope but increases the loading on the supporting structure in the event of a fall.
- A configuration with 2 absorbers increases the deflection of the wire rope but reduces the loadings on the supporting structure in the event of a fall.

If needed, the second INRS absorber can be ordered separately.

These kits are linked to the start kit galvanized and stainless steel.

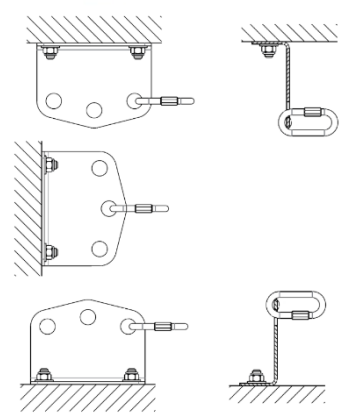
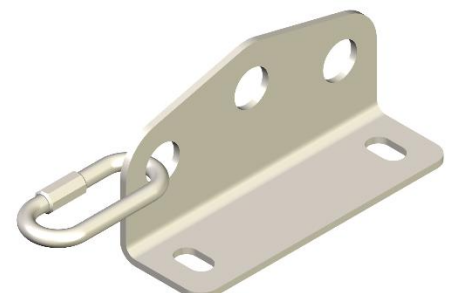
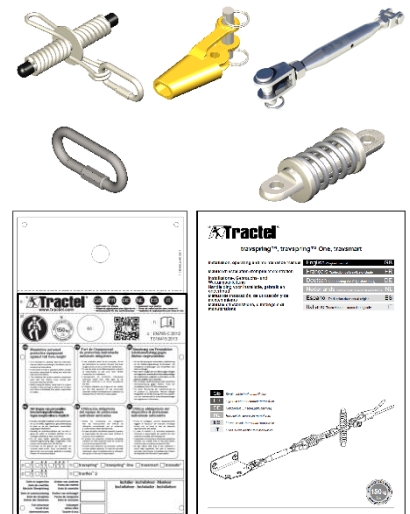
END ANCHOR – 66848

The end anchors are designed to be attached to the supporting structure on ground or wall application with two bolts (specifications to be set by prior study) through the holes shown on the adjoining drawing. The end anchor includes 1 quick link connector. The look is very similar to the travsmart end anchor, but dimensions are different.

- Torque M12 bolts: 20 ± 2 Nm
- Material: Stainless steel – AISI 316L
- Size (without quick link connector): 85 x 170 x 55 mm
- Minimum breaking strength: 30 kN
- Fixing holes distance: 130 mm
- Fixing holes diameter: Ø13 (for screw M12)
- Net weight: 580 g

Marking:	Description	Marking
	▪ Manual must be read	
	▪ Tractel® logo	
	▪ Serial number	YYWW
	▪ Minimum breaking load	30kN




The end anchor is tested by Tractel® for an installation all possible positions. Examples as following:



TURNBUCKLE TENSIONER – 40742

The tensioner enables adjustment of the wire rope tension to the required value. The tensioner must always be connected to the end anchor through a quick-link connector to ensure its free movement in the event of a fall. The quick-link connector is always supplied together with the end anchor.

- Material: Stainless steel – AISI 316L
- Minimum breaking strength: 30 kN
- Extends from 270 to 400 mm
- Net weight: 580 g
- Marking:



Description	Marking
▪ Component number	40742
▪ Standard	EN795-C:2012
▪ Manual must be read	
▪ Tractel® logo	
▪ Serial number	YYWW
▪ Lubricate before installation	



TENSION INDICATOR – 66858

The tension indicator enables to check that the wire rope pre-tension is at 100 daN by simply aligning a hole and a notch.

- Material: Stainless steel – AISI 316L
- Size: 144 x 50 mm
- Minimum breaking strength: 30 kN
- Net weight: 900 g
- Marking:



Description	Marking
▪ Standard	EN795:2012
▪ Manual must be read	
▪ Tractel® logo	
▪ Serial number	Date stamp

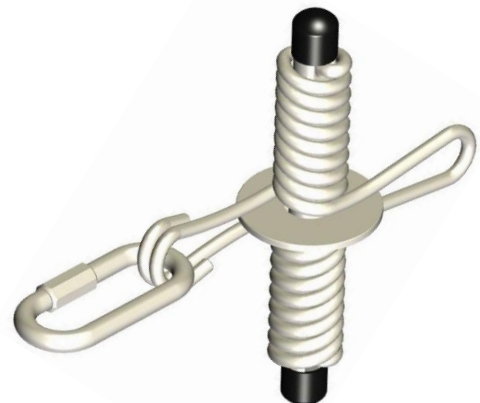


INRS ENERGY ABSORBER – 66688

The INRS energy absorber is designed to dissipate the energy transmitted to the supporting structure by the fall of a user connected to the system. It is disposable (once used). It does not negate the necessity of equipping every user with personal fall arrest equipment. Each INRS energy absorber is supplied with a quick-link connector. Patented by INRS.

- Material: Stainless steel – 304CU
- Size (without quick link connector): 190 x 164 mm
- Minimum breaking strength: 30 kN
- Net weight: 400 g
- Maximum arrest force: 600 daN
- Average dynamic pull-out: 500 daN
- Maximum deployment: 905 mm
- Quick-link connector: Stainless steel – AISI 304L
- Marking:

Description	Marking
▪ Component number	66688
▪ Standard	EN795:2012
▪ Manual must be read	
▪ Tractel® logo	
▪ Serial number	TSR YYxxxxxxx





WEDGE SOCKET – 193837

The wedge socket is used to secure the free end of the wire rope to the energy absorber. The wedge socket is formed by 5 parts:

- 1 casing
- 1 wedge
- 1 securing pin
- 2 split rings to lock the securing pin on the casing

- Material: copper-aluminium and stainless steel (hardware)
- Minimum breaking strength: 30 kN when used with Tractel® specified wire rope
- Net weight: 430 g



Marking:	Description	Marking
▪ Component number		193837
▪ Standard		EN795-C:2012
▪ Manual must be read		
▪ Tractel® logo		
▪ Production batch number		Date stamp



INTERMEDIARE ANCHOR – 66868

With its design, the Travspring™ intermediate anchor allows each user pass through without the need to disconnect from the system. The intermediate anchors must be set up so that the distance between anchors, from one end of the system to the other, is compliant with the lifelines specifications.

- Torque M12 bolts: 20 ± 2 Nm
- Material: copper-aluminium
- Minimum breaking strength: 12 kN
- Net weight of standard intermediate anchor: 510 g
- Marking:

Description	Marking
▪ Manual must be read	
▪ Tractel® logo	
▪ Production batch number	Date stamp



INFORMATION PLATE – 228745

The information plate is included in the Travspring™ kit and includes 6 languages: EN, FR, DE, SP, IT, NL

- Size: 170 x 300 mm
- Material: aluminium

At the top of the information plate, a unique QR code is printed. This unique number should be written on the technical documentation. When the QR code is scanned, it forwards to Tractel® traceability platform and the following documents will be available:

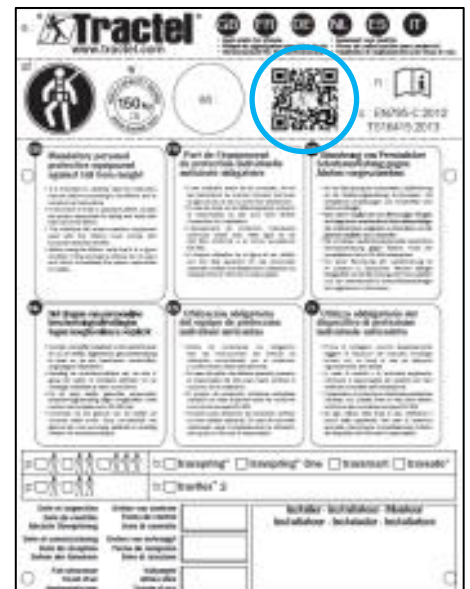
- Installation, user and maintenance manual
- Technical sheet
- Certificate of conformity

ADDITIONAL INFORMATION PLATE – 277127

Additional information plate can be ordered if the multiple accesses to the lifeline are possible.

A generic QR code is printed on the additional information plate. When scanned, it forwards to Tractel® traceability platform and the following documents will be available:

- Installation, user and maintenance manual
- Technical sheet
- Certificates of conformity



KIT LANGUAGE EN/RU/PT/PL/DK – 277227

This kit includes the installation, user and maintenance manual and the information plate in EN/RU/PT/PL/DK. The information plate contains a unique QR code as described above.

ADDITIONAL INFORMATION PLATE EN/RU/PT/PL/DK – 277237

Additional information plate can be ordered if the multiple accesses to the lifeline are possible. A generic QR is printed on the additional information plate as described above.

WIRE ROPE

- **START KIT GALVANIZED STEEL – 57252**
- **ADDITIONAL METER OF GALVANIZED STEEL – 238497**
- **START KIT STAINLESS STEEL – 57262**
- **ADDITIONAL METER OF STAINLESS STEEL – 277137**

The start kit includes 5m of wire ropes, a quick-link connector and additional wire rope length to ensure a shortage of wire rope never happen. The wire rope is sleeved, looped and fitted with a thimble at one end. The other end is brazed and ground smooth in the factory.


Material choice: a stainless steel wire rope is to be preferred in a sea-side environment while a traditional working environment the galvanized steel is preferred.

Only these 2 specific Tractel® wire ropes can be installed on the Travspring™ lifeline to be compliant with the certification performed.

Tractel® wire ropes are manufactured with an integrated traceability mean.

- Material: Galvanized steel
Stainless steel AISI 316
Net linear weight: 243g/m
- Diameter: 8 mm
- The marking is applied on the cable sleeve.



Description	Marking
<ul style="list-style-type: none"> ▪ Manual must be read ▪ Tractel® logo ▪ Cable diameter and construction <ul style="list-style-type: none"> ○ Galvanized steel ○ Stainless steel 	
	<ul style="list-style-type: none"> ○ Galvanized steel Ø8-5X19 ○ Stainless steel Ø8-7X19

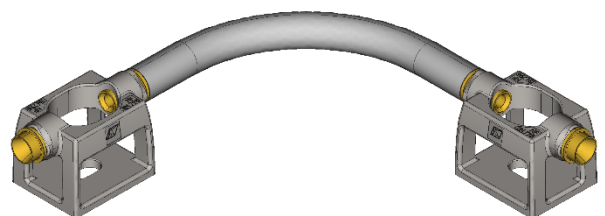
CORNER KIT – 66878


This sub-assembly is only used when the system has corners with a standard opening of 90°. Each corner kit acts as an intermediate anchor. The kits are supplied for assembly by the installer. For installation on post, a corner plate (66998) is needed to install the corner kit.

Corner kits are formed by 3 parts:

- 2 corner anchors
- 1 corner tube

- Torque M12 bolts: 20 ± 2 Nm
- Material: brass and stainless steel (hardware and tube)
- Net weight of corner kit: 1,300 g
- Marking



Description	Marking
<ul style="list-style-type: none"> ▪ Manual must be read ▪ Tractel® logo ▪ Serial number ▪ Production batch number 	 YYWW Date stamp

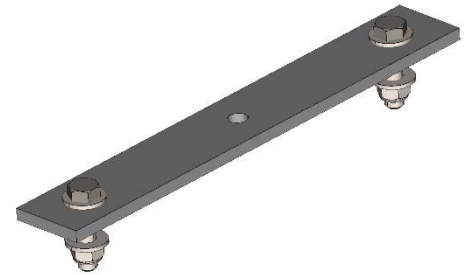
CORNER PLATE – 66998



The corner plate is used to suit the corner kit assembly which will be on a standard anchor post for a 90° angle. The corner plate is not part of the certification.

Each corner plate includes:

- 1 plate
- 2 HM12 x 45 mm bolts
- 4 washers Ø12
- 2 locknuts

- Torque M12 bolts: 20 ± 2 Nm
- Material: Stainless steel
- Size: 50 x 342 x 8 mm
- Net weight: 1200 g
- Marking



Description	Marking
▪ Manual must be read	
▪ Tractel® logo	
▪ Serial number	YYWW



TRAVSPRING™ END ANCHOR FOR POST – 66698

Comes with two holes for 12 mm fasteners. The Travspring™ end anchor for post is also used for the travsmart lifeline. It is supplied with a quick-link connector.

Torque M12 bolts: 20 ± 2 Nm

- Material: Stainless steel – AISI 316L
- Size: 100 x 30 x 6 mm
- Fixing holes distance: 65 mm
- Fixing holes diameter: Ø14.5 mm
- Net weight: 128 g
- Marking



Description	Marking
▪ Manual must be read	
▪ Tractel® logo	
▪ Serial number	YYWW
▪ Minimum breaking load	30 kN

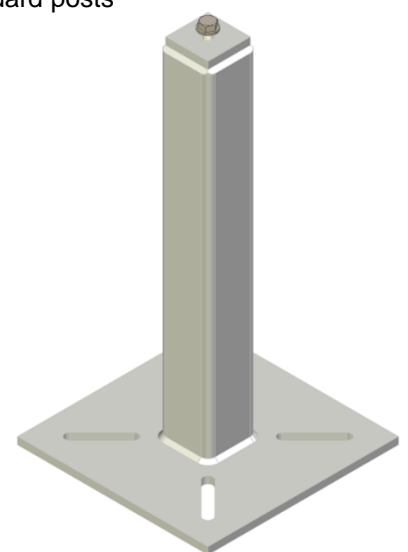
STANDARD ANCHOR POST

Anchor posts are designed to be installed on a concrete or metal support. The standard posts allow the end anchors, the intermediates and corner plates.

A wide range of Tractel® standard posts are existing and includes a mix of:



- 3 different height: 250mm, 500mm, 750mm
- 4 different base plate: square, rectangular, 20° inclined, for ridge pole
- 3 different material: galvanized steel, stainless steel or insulated

Standard anchor posts for lifeline interface are delivered with 1 HM12 x 30 mm bolts and 1 washer Ø12



Please refer to the relevant technical data sheet or contact Tractel®.

- Minimum breaking strength: 30 kN
- Marking

Description	Marking
▪ Component number	According to the product
▪ Manual must be read	
▪ Tractel® brand	
▪ Serial number	YYWW
▪ Minimum breaking load	30 kN



PULLEY POST – 68478

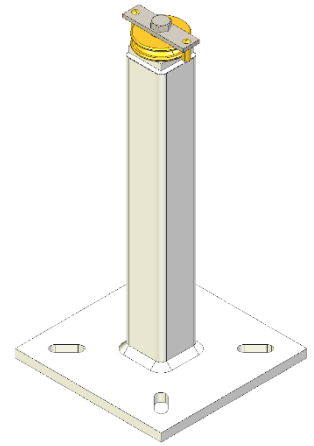
This pulley post is designed to replace the corner kit. It offers the possibility to do any angle between 10 and 120°. It is available only in galvanized steel, with a height of 500mm and square base plate.

The pulley post is delivered assembled with the pulley installed on the post.

A specific counter plate is designed for this post: 133295

- Minimum breaking strength: 60 kN
- Size: 270 x 270 x 500 mm
- Net weight: 17 kg
- Marking

Description	Marking
▪ Component number	68478
▪ Manual must be read	
▪ Tractel® logo	
▪ Tractel® brand	Tractel
▪ Serial number	YYWW
▪ Minimum breaking load	60 kN



Specifications are subject to change without notice. Images are for illustrative purposes only.