

Gripple Ltd

The Old West Gun Works, Savile Street East, Sheffield, S4 7UQ, UK
Telephone: +44 (0) 114 275 2255, Facsimile: +44 (0) 114 275 1155
www.gripple.com



VIT-S Summary Report: July 2015

Components:

Housing: Pressure Die Cast
MTL: ZA2

Hook: Pressure Die Cast
MTL: ZA2

Roller: Sintered
MTL: Sintox FA

End Cap: Injection Moulded
UV Stabilised PP

Spring: BS 2056 302 S26 G2 Stainless Steel

Recommended Screws:

Wood: 4mm x 30mm long countersunk Phillips head
Galvanised, preferably with yellow passivate for
longevity.

Metal: 4.2 x 16 self tapping screw.
Pan head
Din 7504 N or equivalent

Performance Criteria:

Wire Range = 1.8mm – 3.00mm (Mild Steel and HT)
Load Rating = 400kg

Will be used on a range of wooden posts with the VIT-S hook

Will be used on a range of metal posts

Can be tensioned by hand or with the TORQ Tool (most fruiting wires do
not require high initial tension – hand tensioned is best practice)

Features and Benefits

Product Information

The Gripple VIT-S is the quick and easy way to manage vineyard fruiting wires.

VIT-S works directly with metal and wooden end posts and replaces difficult and unreliable chains. The innovative hook on design of the VIT-S enables the fruiting wires to be moved independently or as a pair and allows them to be easily dropped to the ground ready for pruning.

VIT-S can then be re-tensioned ahead of the new season.

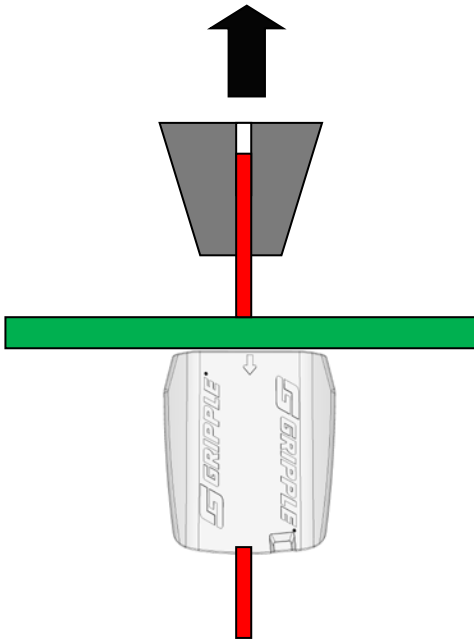
The Wire Guard accessory eliminates wire on wire contact with metal intermediate posts



Features and Benefits

Feature	Benefits
Uses Gripple technology	Terminates vineyard trellis wires, replacing cumbersome chains
Built in goal post feature	Easy to apply tension
	Can be easily attached to metal or wooden end posts
	Compatible with most models of metal end post that have punched tabs
Can be bought in kit form with a hook	Allows use on wooden posts
Easy to attach to end posts	Wires can be moved independently during the growing season
	Wires can be easily dropped to the ground for pruning

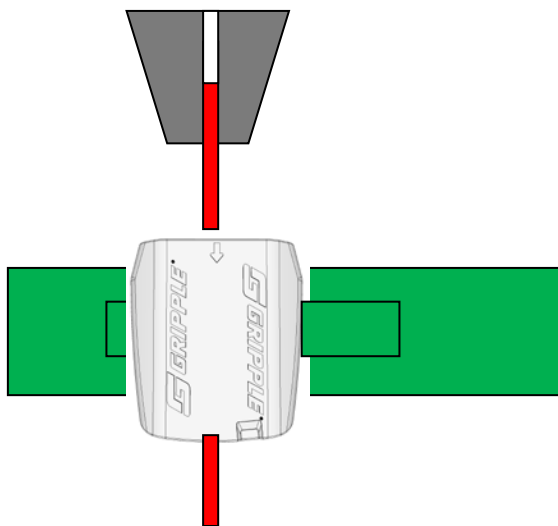
Instant Load: VIT-S



Result	Failure Mode
2mm Wire	Wire Break
448kg	
461kg	
458kg	
Ave: 456kg	
3mm (Spring) Wire	Roller Fracture
546kg	
538kg	
710kg	
Ave: 598kg	

Instant Load: Metal Post

The VIT-S was assembled onto a common metal post and pull tested in the tensometer in the normal way



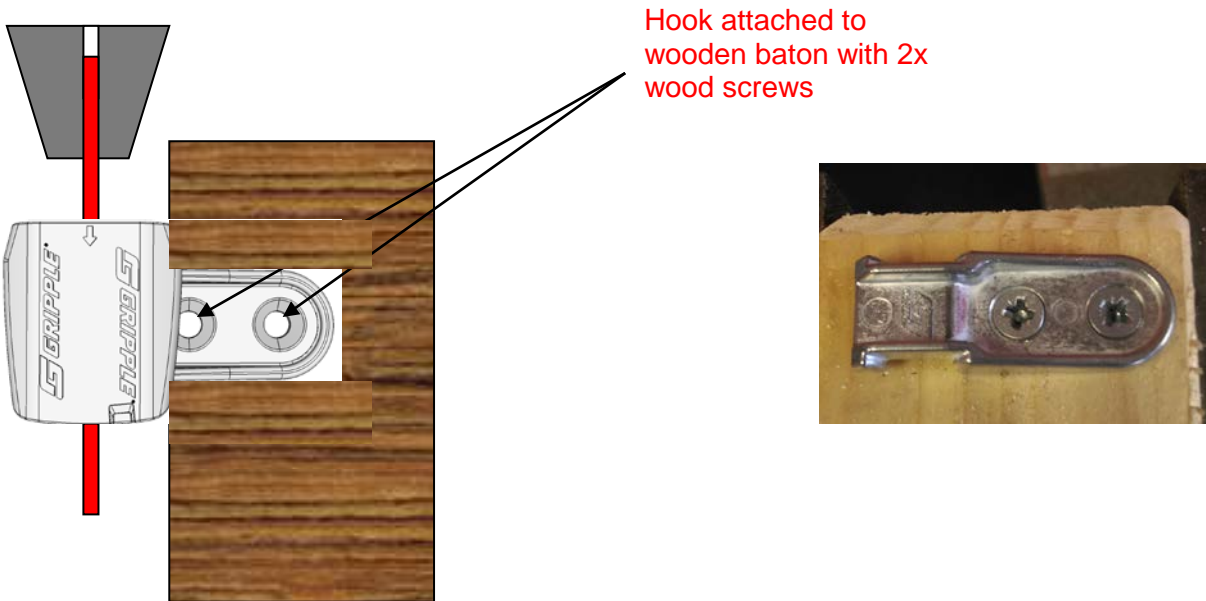
Result	Failure Mode
216kg (see image below)	



The metal tabs on the post were deformed to failure at just over 200kg. The Gripple is thus rated at a far higher load than the post is designed to encounter .

Instant Load: Screws on Wooden Post

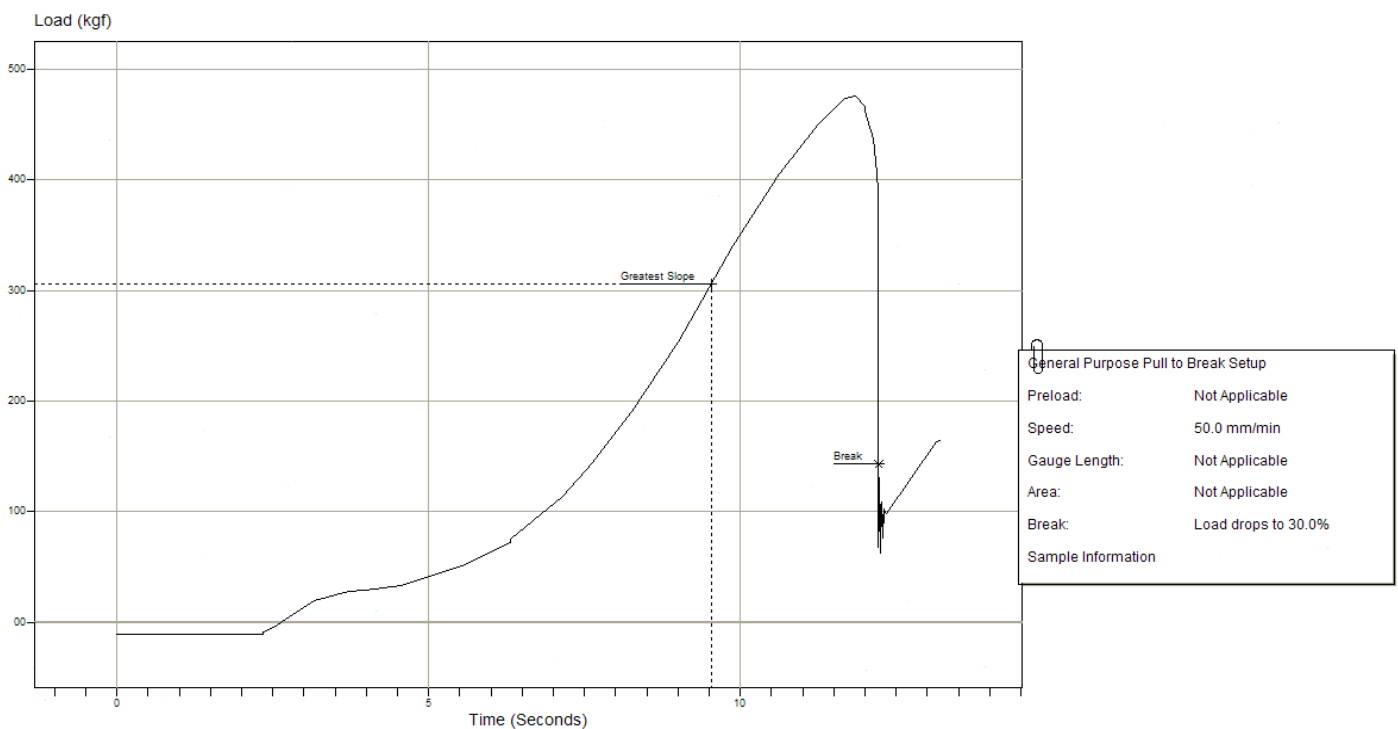
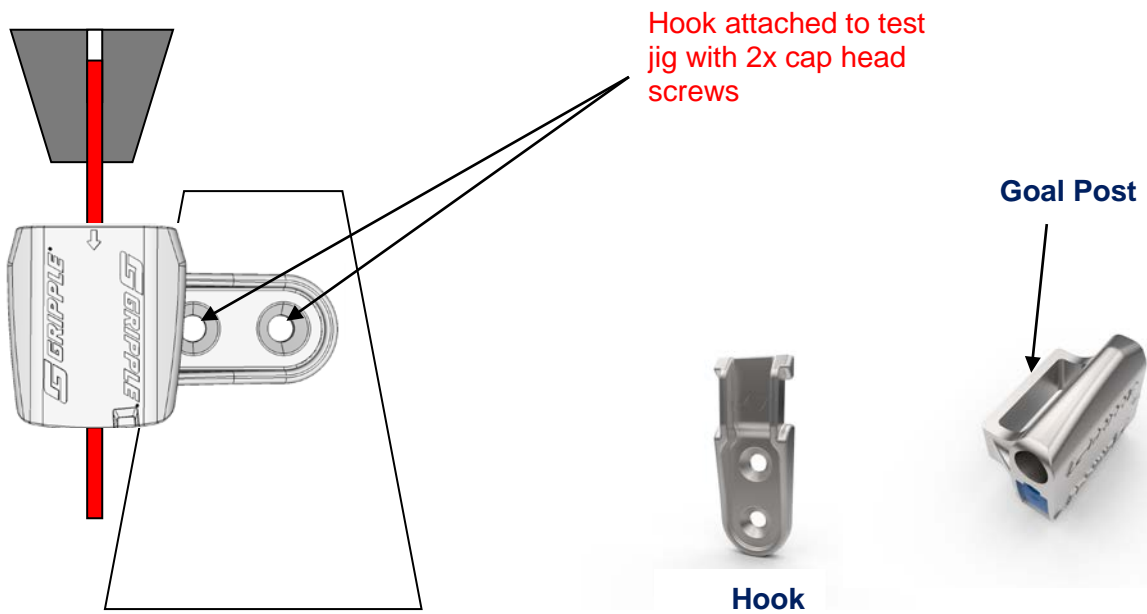
Result: 127kg (wood deformed and VIT-S came off Hook)



Note: VIT-S Hook is also designed to work directly with staples (see image)



Instant Load: Hook and Goal Post Test



Each time the bolts holding the hook to the test jig failed in a shear mode.

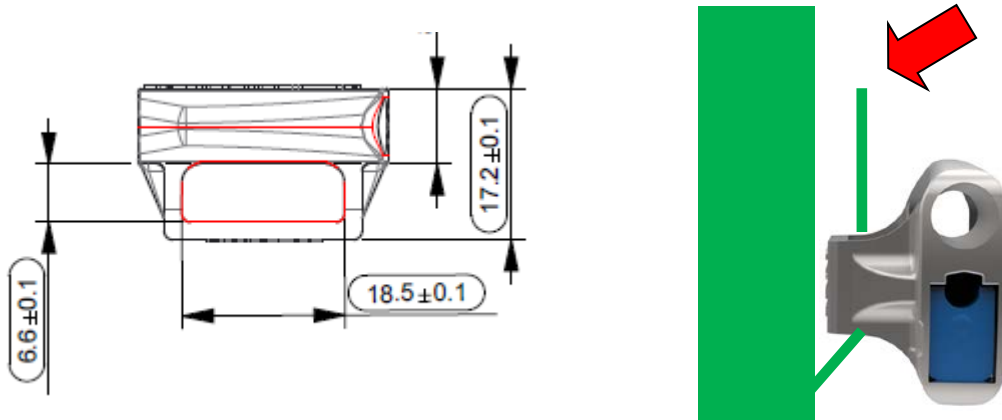
There was no failure of either the hook component or the bridge section of the VIT-S at these loads

The load rating for a VIT-S is 400kg which this test shows is achieved.
VIT-S on Metal Posts

The internal dimensions of the goal post feature have been designed to

maximise the potential number of different metal post tabs that the product will fit on.

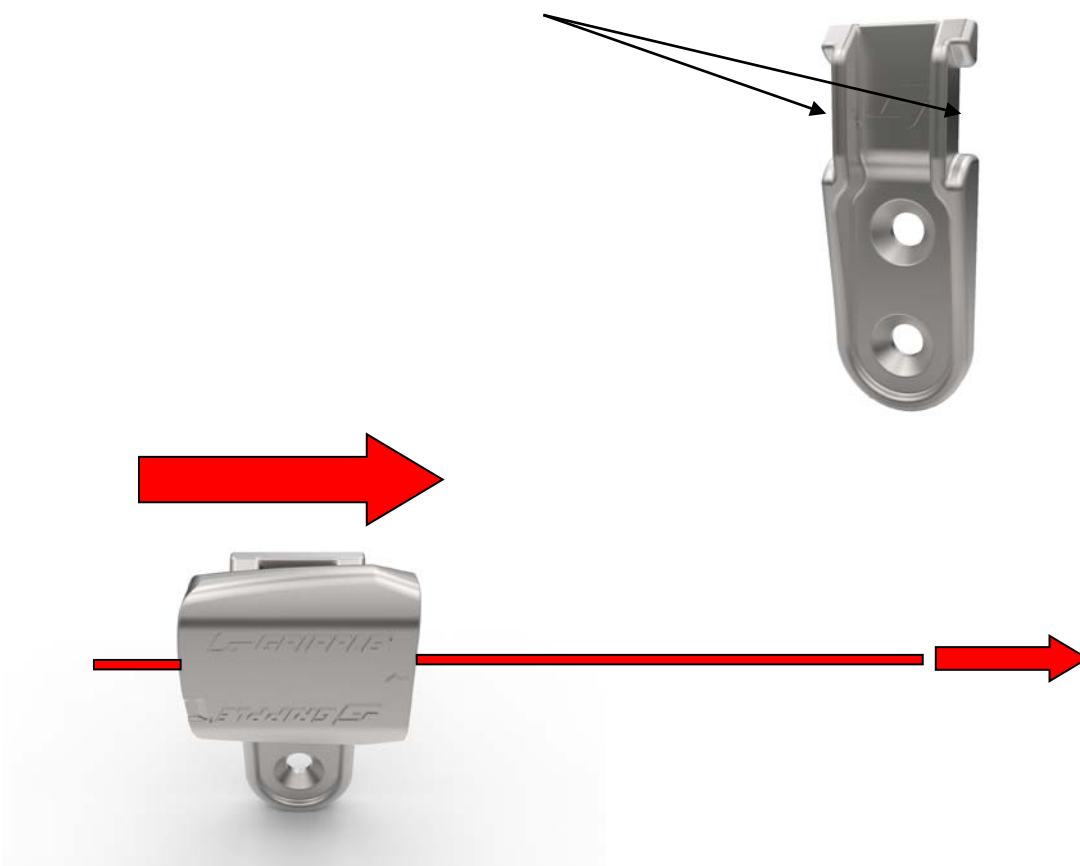
Maximum internal dimensions are 18.5mm wide x 6.6mm as shown below



This will of course mean a variable fit with different metal posts. When using chains etc many end users will “tap” the tab on the metal post to close up the gap. This can also be done when using a VIT-S if necessary

VIT-S with Hook Kit

The hook design incorporates a notch feature to receive the goal post. As soon as there is tension in the wire the goal post is pulled into the notch



Field Testing

25th – 26th June
Bordeaux / Gaillac

John Butterworth, Mathias Perret - Gripple
Fabrice Martinez, Simon Blain - Carmo

Field trials on three sites were conducted. This included the filming of the promotional video.(see links below)

The Vit-s was installed in a variety of ways on a number of different posts with success in every trial. These tests were carried out with the farmers and representatives from Carmo, all of which participated and gave positive feedback. There are plans in place to return to the sites at the end of August to see how the Vit-s has handled plant growth. In addition to this some dates have been arranged to return to installed Vit-S, from this trial, and test them with harvesting machinery during September.

The product was tested on a number of posts with different securing methods:

- Wooden posts – installations were made with both wood screws and staples.
 - Acacia
 - Carmo
 - Quartered post
- Metal posts with existing hooks
 - Brads of these will be added to the report later, however several different types were tested. Including Profil Alsace.
- Metal posts with no hooks
 - The Vit-s hook was installed using self tapping screws

As well as different securing methods, different wires were also tested including:

- Galvanized wire
- Plastic coated steel wire
- Plastic monofilament wire.

All of these trails were successful. Installation to hand tight and with a tool was tried. The wires in every case could also be released. The release-ability of the product was tested on every set-up, it was found that it behaved similarly to the

medium product. However it was found that because the product can be removed from the hook that the tension is reduced so it was actually easier. The tension applied to the product in every scenario was found to be acceptable.

It was noted before the visit that not all metal posts have the hook already built into them. This would therefore prevent the sale of the Vit-s in these applications.

However it was found that with the use of self tapping screws the hook could be attached to these posts with relative ease.

This provided a very secure fit to the post with no movement what so ever, the Vit-s could also be installed over the top with no obstruction.

Once installed the product was tightened by hand and by the tool. In each occasion this was positive.

The products were shaken by Gripple and Carmo reps, as well as the customers, to simulate extreme conditions the product may work in. Vibrations by a harvesting machine for example. This was applied in every direction on the wire and post and the product did not slip free and retained the wire. Everybody was satisfied that the product will survive. Once this was done removal from the hook was attempted as would occur in the field. This was also successful, allowing the farmer to drop the wire further down the line or to the floor if necessary. This could then easily be re-installed.

To conclude the installations proved to be easy and secure in every aspect of the testing. This gained positive feedback from customers and Carmo reps alike. This was repeated on two different posts with thicknesses of 2mm and 2.5mm.

The above test method was repeated on all of the scenarios already mentioned.

On pre-existing hooks on a few different shapes and sizes were trailed. All with success. Tension was of particular interest as there was a conception that it would become misshapen and potentially damage the product. However after tensioning with the tool as well as hand-tight it was found not to be a problem.

On wooden posts

The same test method was applied as with the other post types. Installation was done with both staples and with wood screws. All installation, tension, release and vibration tests were passed.

On the quartered posts concerns were raised as the product could not be installed parallel. This was of particular interest on the vineyards in the Bergerac regions where it was tested s 60% of the vineyards is said to use this style of post. However the trials were successful and the installed product have been left to allow long – term tests to be carried out, during plant growth and harvesting for example.

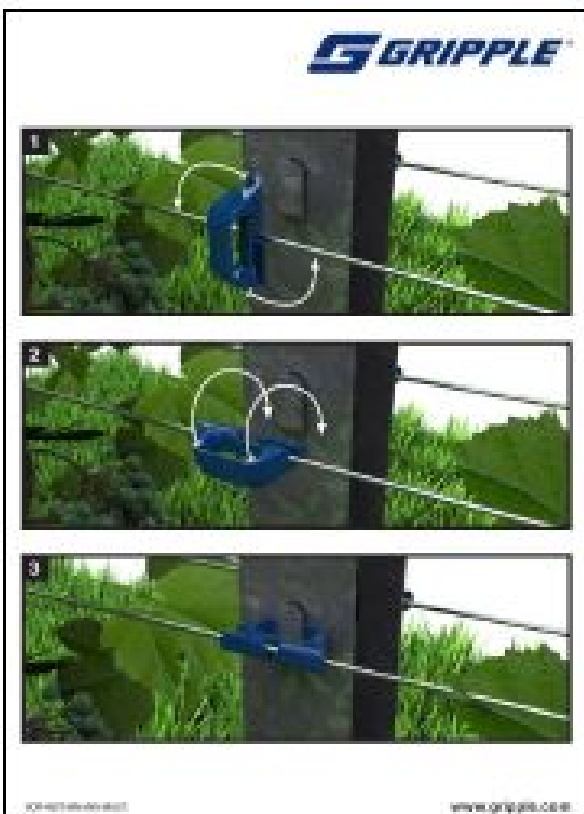
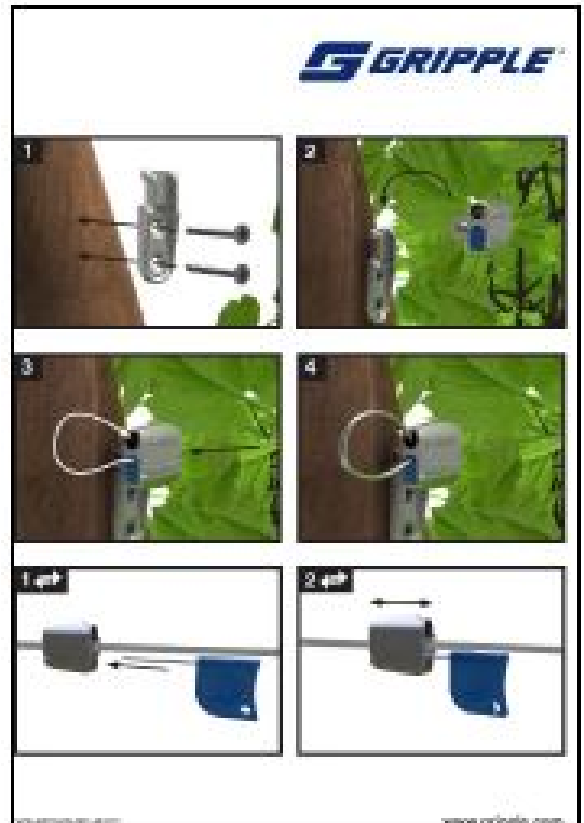
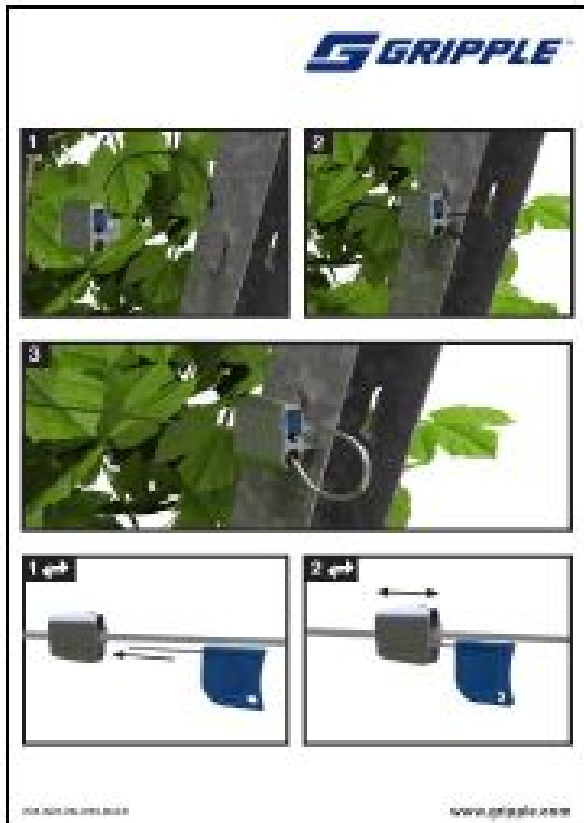
Suggestion was to supply screws with the hook. Distributors do no supply the screws and therefore would not be a one stop shop. It would also give reps confidence in the type of screws used. They would not try and use stainless steel for example.

One issue that was raised was with the wire guard product. There was worries that because it does not clip onto the wire and freely sits on it then it may drop off during its lifetime, especially when the wires are moving.

<https://www.youtube.com/watch?v=iypNykIzUkw> – ENGLISH

<https://www.youtube.com/watch?v=90SMd3eqImA&list=PLSsOeg667abcZihkoEj86il5JsgNdPd2Z&index=1> - FRENCH

Installation Guidelines



Pricing Recommendation

€			
Part number	Description	Prix distri	Prix viti
VIT-S-100BB	VIT-S	0,45	0,90
VIT-S-KH-100BB	VIT-S + HOOK	0,60	1,20
WIRE-GUARD-100BB	Wire guard	0,08	0,16
HOOK-VIT-S-50BB	Hook for VIT-S	0,15	0,30

In the mature Viticulture market, customers are already familiar with the pricing structures associated with GP Medium and GP#1 products

In replacing chains the product offers a better solution and advantages. The pricing also reflects the additional functionality that VIT-S offers when compared to the standard GP#1.

Consideration was also given to the additional cost that a vineyard owner will incur when installing VIT-S with Hooks and possibly additional hooks for multiple wire positions.