

REMOTE INSTALLATION OF A CAMBIUM SAVER

A Visual Guide



Both Doubled Rope Technique (Moving Rope Systems) and Single Rope Technique (Stationary Rope Systems) can make effective use of Cambium Savers (Friction Savers). While in DdRT/MRS reduce friction rope wear and friction felt by the climber in SRT/SRS systems they are great for use as a knot blocked canopy anchor when multiple natural redirects are used. When working with a hybrid Twin Rope system they have become common place in building stacked anchors.

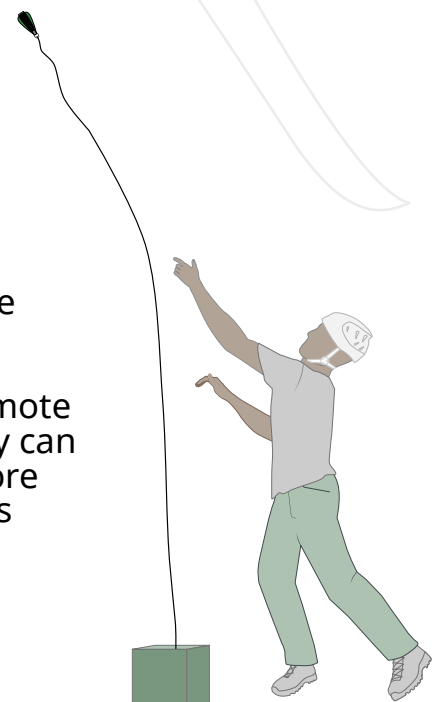
Suitability of the Technique

Usually Cambium Savers are installed at the Tie In Point (TiP) after the ascent. There are ways to install them remotely from the ground however. Even when climbing DdRT installing a cambium saver remotely is not a commonly used skill due to the time it takes to setup although there are some benefits to this that may not be obvious.

Ultimately each climber has their preferences for techniques and will naturally gravitate towards those. This is not an "every day" technique however in an industry where jobs can vary wildly in their scope it may be worth knowing.

Remote installs may be useful for:

- Long DdRT ascents
- Climbers who have shoulder issues and who don't have a pulley saver
- Trees with sappy, moss covered or delicate cambium layers
- The method is the same as installing a remote rigging point. Installing a rigging point remotely can save time and opens up options for building more complex rigging systems. Remote rigging points have more considerations however and are not covered in this document.



Equipment Required:



This method requires no more extra equipment than installing an access line normally. Having an additional throw bag can be helpful if one will pass through the large eye of the cambium saver but isn't necessary otherwise. Having a second throw line and bag is always useful regardless incase the first one gets stuck.

The older ring to ring style of cambium (i.i) saver is shown in these illustrations for simplicity however an adjustable cambium saver (i.ii) allows the size of the loop capturing the branch to be adjusted. They also help more readily facilitate the ability to switch between DdRT/MRS to SRT/SRS while away from the anchor due to their ability to work with a greater variety of knot blocking techniques.

Two Methods: Same Objective

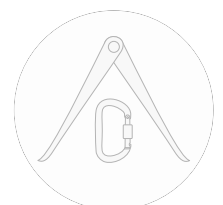
Modern splicing techniques have meant that some splices can easily fit through the smaller ring on a cambium saver. These splices were developed to use with mechanical devices that are not midline attachable but also make threading a cambium saver from the ground less troublesome. Not all manufacturers support this technique though and many ropes are still spliced in the traditional manner.

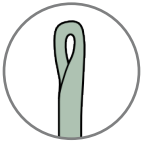
This document shows two different methods and it will depend on the climbers specific gear as to which method works best.

Slim Splice



Traditional Splice

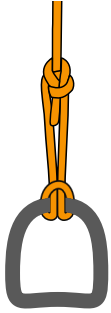




Front Threading a Cambium Saver (Easier with a Slim Splice)

Step 1: Tie the throw line onto the throw bag. Common methods include:

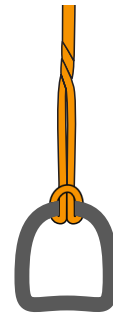
Girth Hitched Bowline



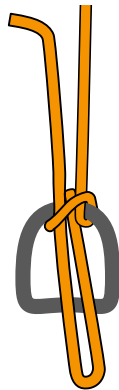
Clove Hitch



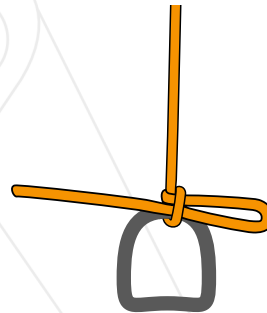
Girth Hitched Spliced Eye



Quick Hitch



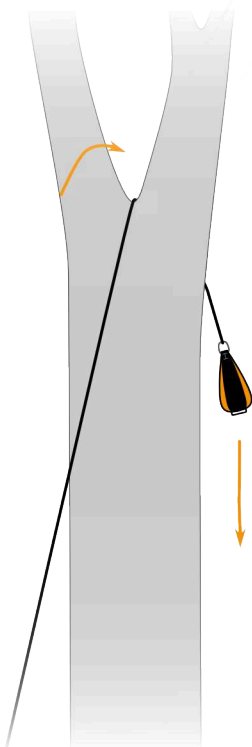
Slippery Hitch



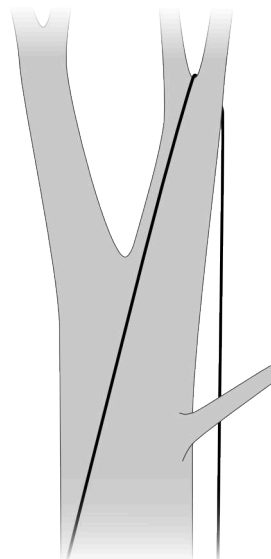
Step 2: Install the throw line and bag over the TiP branch and then isolate that limb.

Use of a powered access device such as a big shot or air cannon may be appropriate if needing a high anchor point.

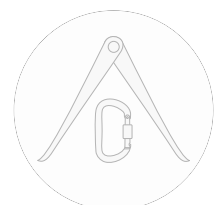
Isolating a branch

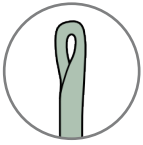


Isolating the branch (ii) refers to manipulating the throw line so that it follows an uninterrupted path from the ground up and over the branch and back down without crossing over any other branch or obstacle. It is not possible to remotely install a cambium saver if the line is not correctly isolated.

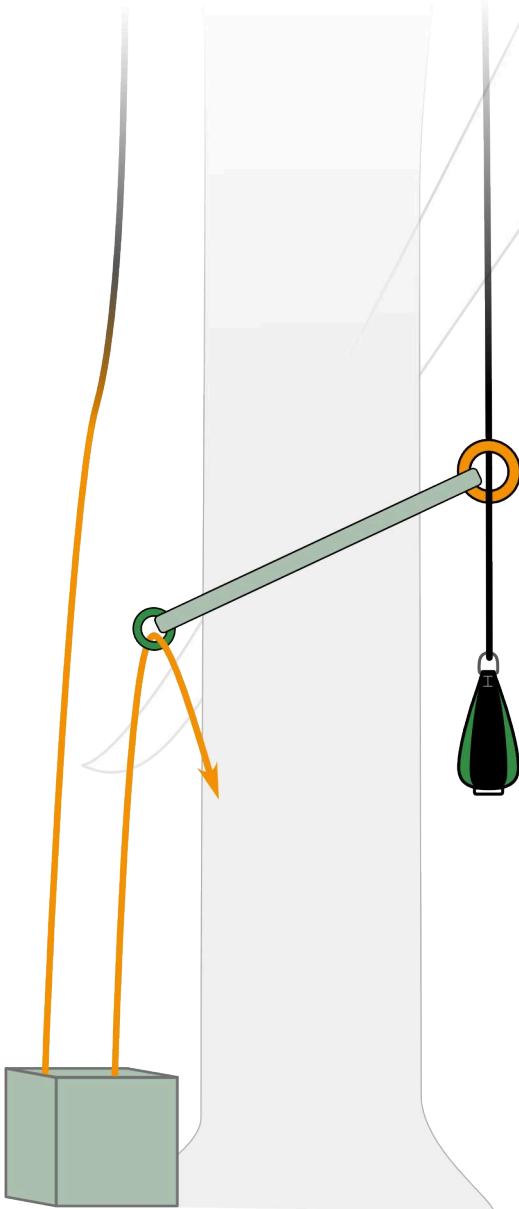
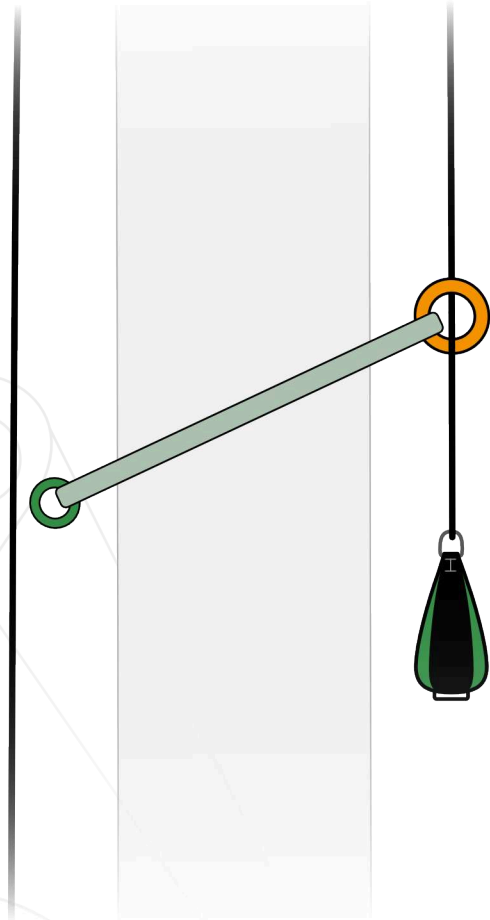


None Isolated



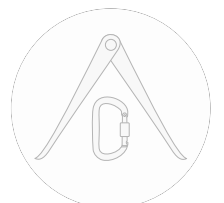


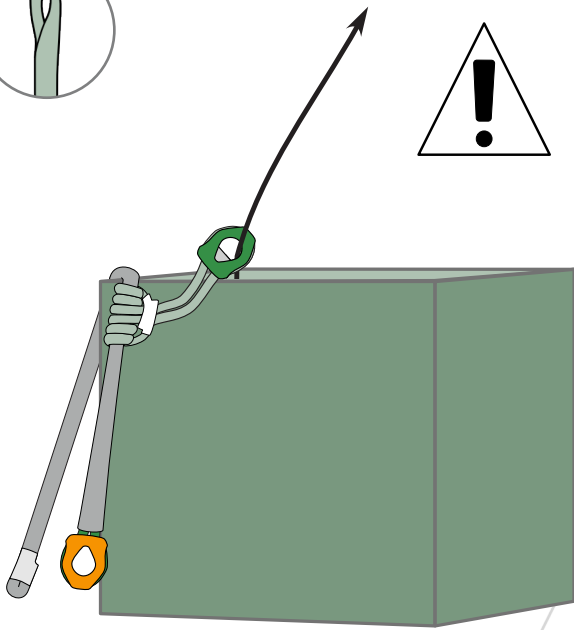
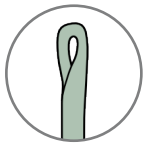
Step 3: Lower the throw line and bag to the ground. Remove the bag from the line and pass it through the **large eye** of the cambium saver (yellow in the image). Reattach the bag back onto the throw line below the yellow ring.



Step 4: Take the other end of the throw line and pass it through the small ring (green in the illustration). Commonly this will involve removing the throw line entirely from the cube, which while annoying however has the advantage of ensuring the line is tangle free.

Make sure that the throw line enters the small ring in a way that mirrors the way that it enters and leaves the large ring. On both sides the throw line should be threaded from the top (branch side) and exit on the bottom (ground side).

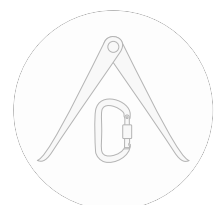
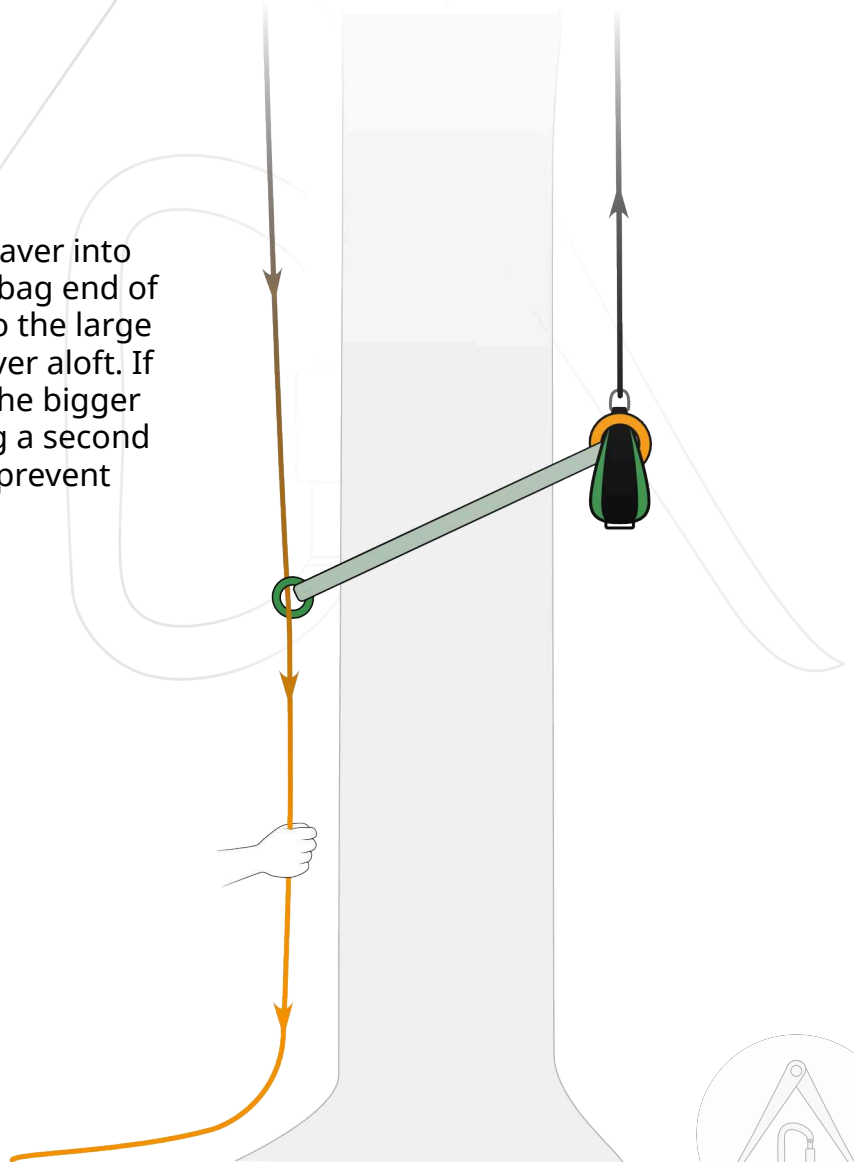
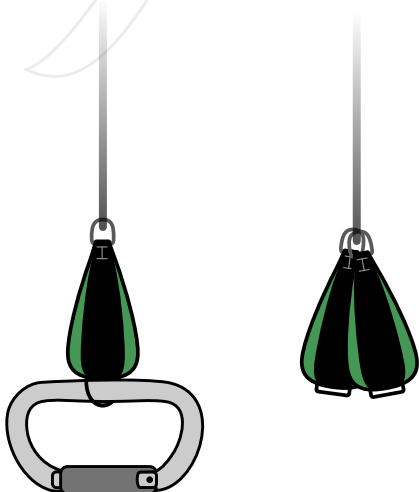


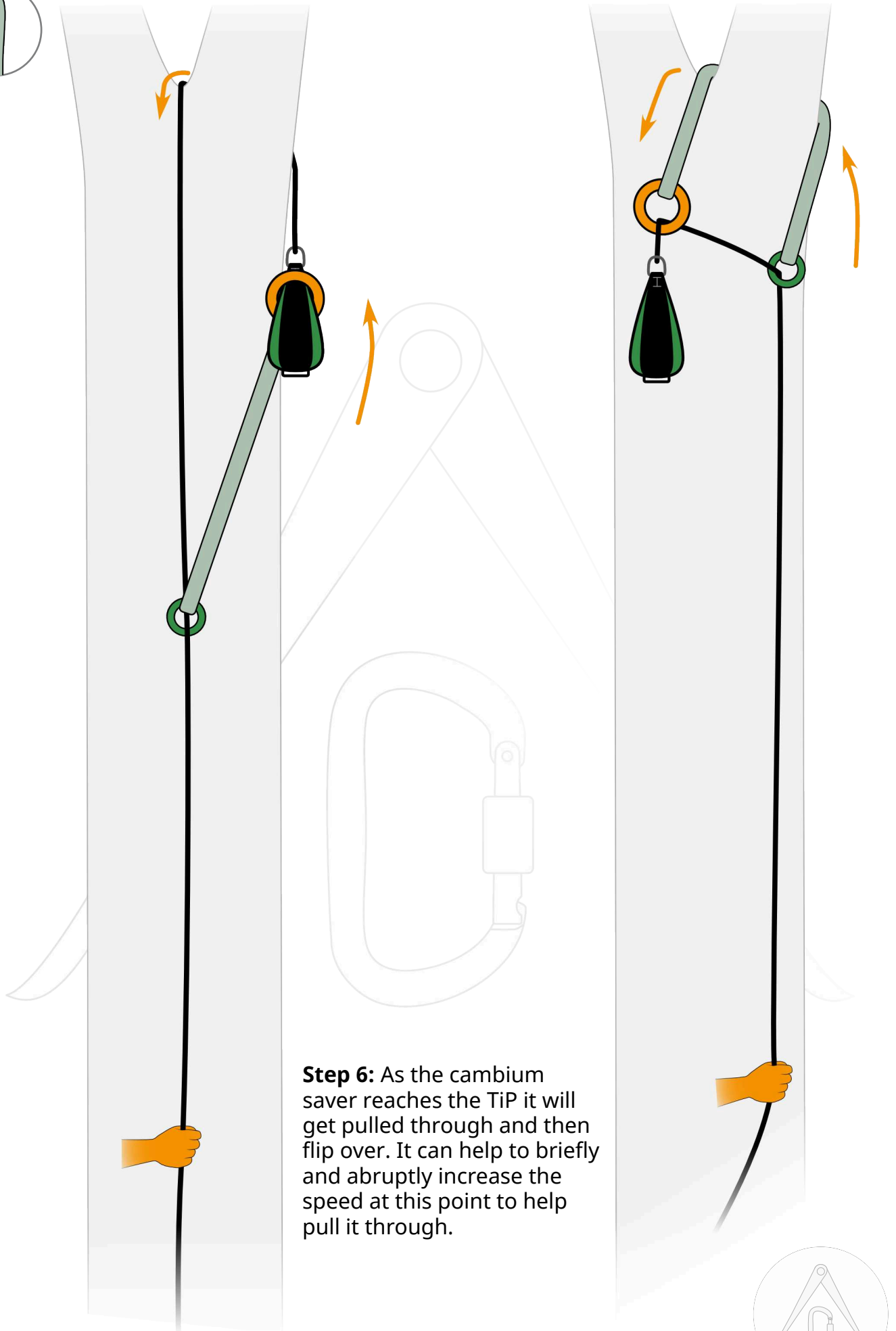
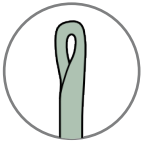


An alternative technique is to pre-thread the small ring of the cambium saver before throwing the throw line over the branch. This is easier to do with an adjustable cambium saver as draping it over the throw cube is more stable than balancing a ring to ring.

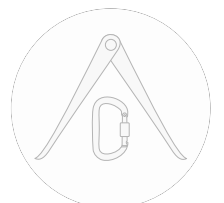
The risk with this technique however is that it increases the chances of the throw line getting snagged. If a tangle happens in the cube the throw bag can carry that tangle with it a short distance, often enough to still make the shot. However if a cambium saver is draped over the cube this tangle can catch and spoil the shot.

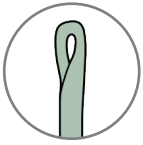
Step 5: To raise the cambium saver into the tree pull on the non throw bag end of the rope. This jams the ball into the large ring and pulls the cambium saver aloft. If the throw bag is smaller than the bigger ring and slides through, adding a second bag or adding a carabiner can prevent the bag sliding through.



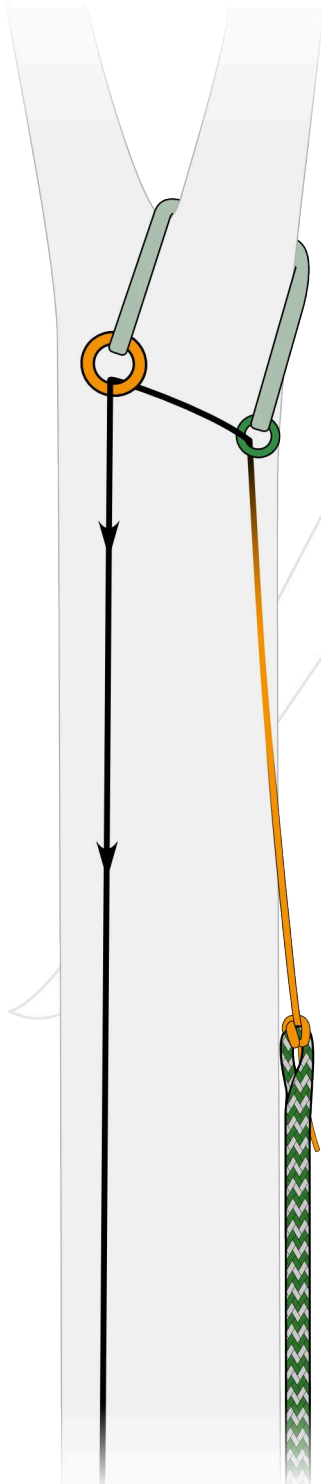
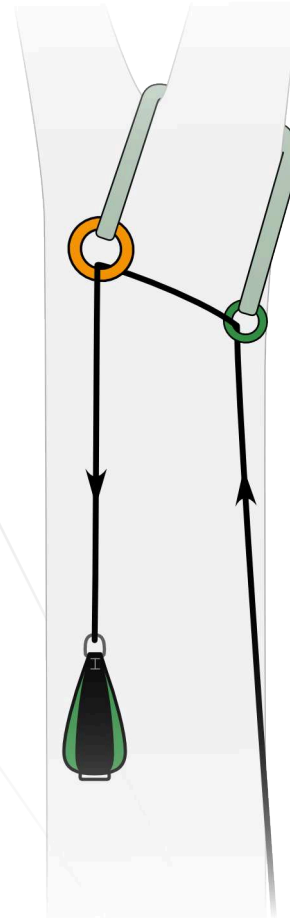


Step 6: As the cambium saver reaches the TIP it will get pulled through and then flip over. It can help to briefly and abruptly increase the speed at this point to help pull it through.





Step 7: Now that the cambium saver is installed you can lower the throw line and bag to the ground.



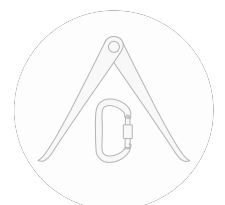
Step 8: From here the climbers access line can be tied on to the throw line and pulled through the cambium saver. It can either be attached to the tail (for example using a clove hitch) or midline (passing a bight through the eye and tying several half hitches).

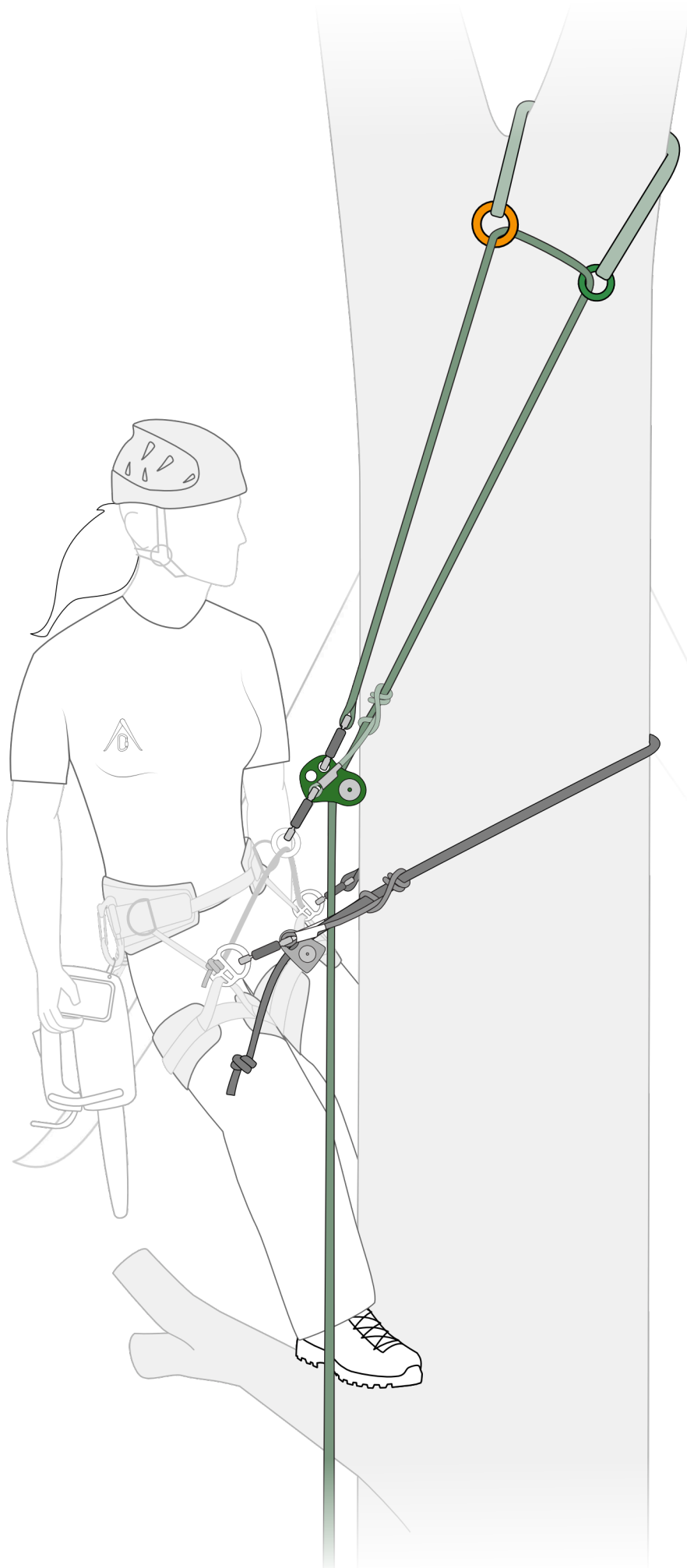


Clove Hitch



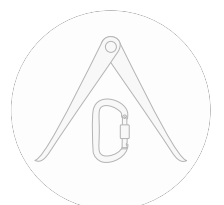
Bight and half hitches





Once the climber's line is pulled through and weighted to ensure the TiP is strong enough the system is safe to climb on.

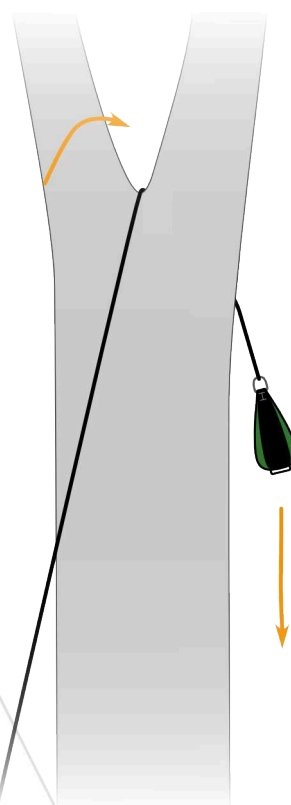
Once the climber is sure the TiP is strong they can clip into the system and ascend.





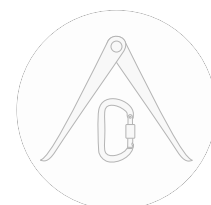
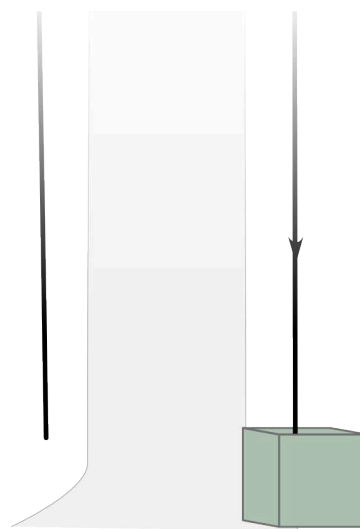
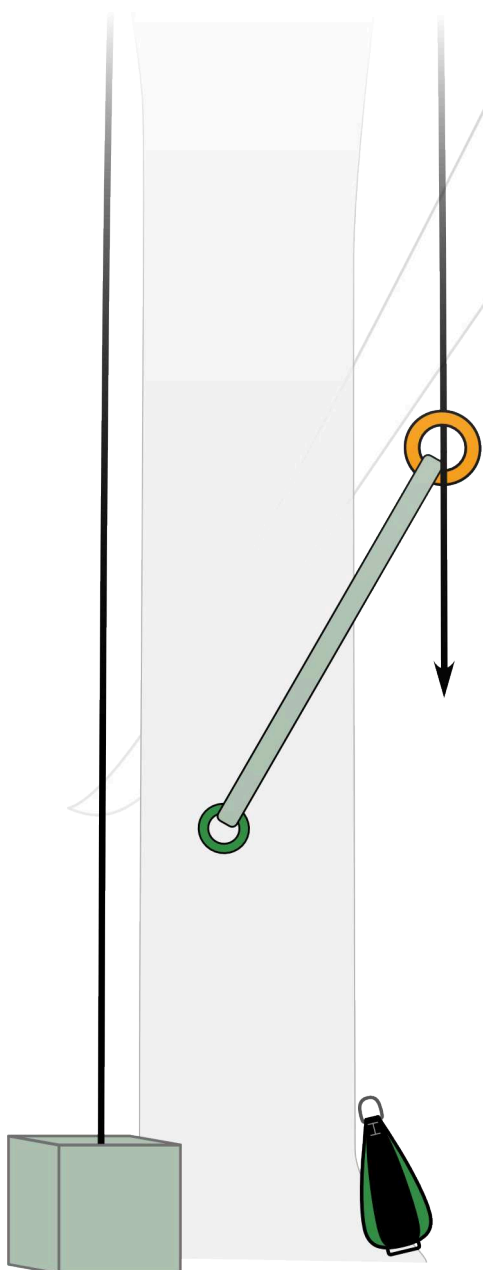
Back Threading a Cambium Saver (Better for a Traditional Splice)

Step 1/2: Tie the throw line onto the throw bag as previously described and install through desired TiP.



Step 3: Lower the throw line and bag to the ground. Remove the bag from the line and pass it through the **large** eye of the cambium saver (yellow in the image).

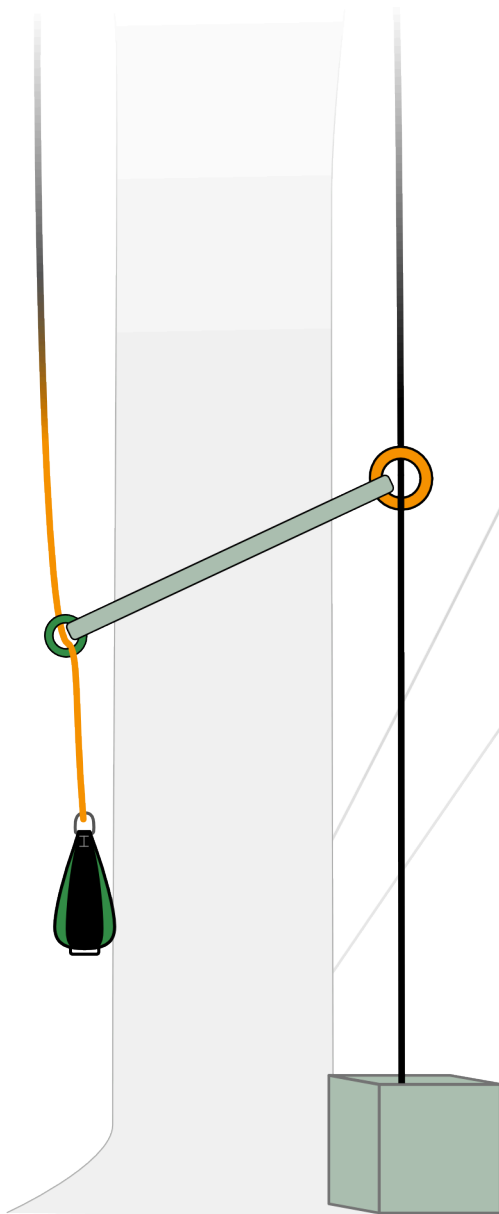
From here, pull the throw line through the crotch until the majority of the line is on the other side of the crotch having passed through the yellow ring.



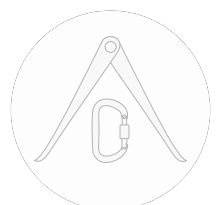
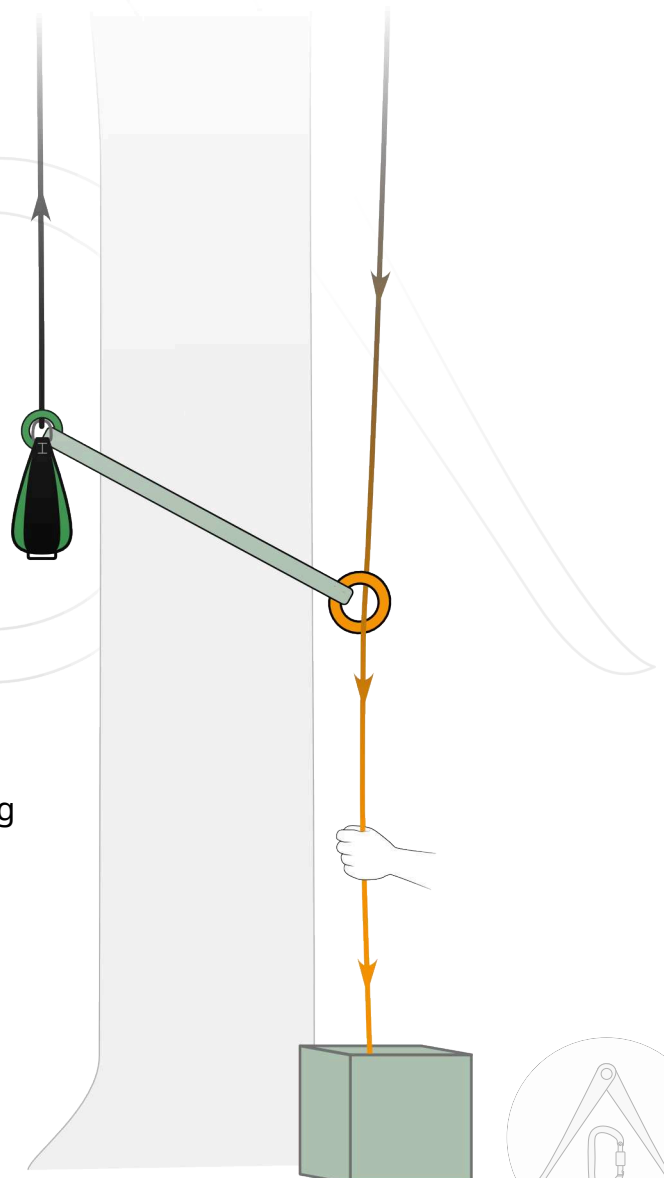


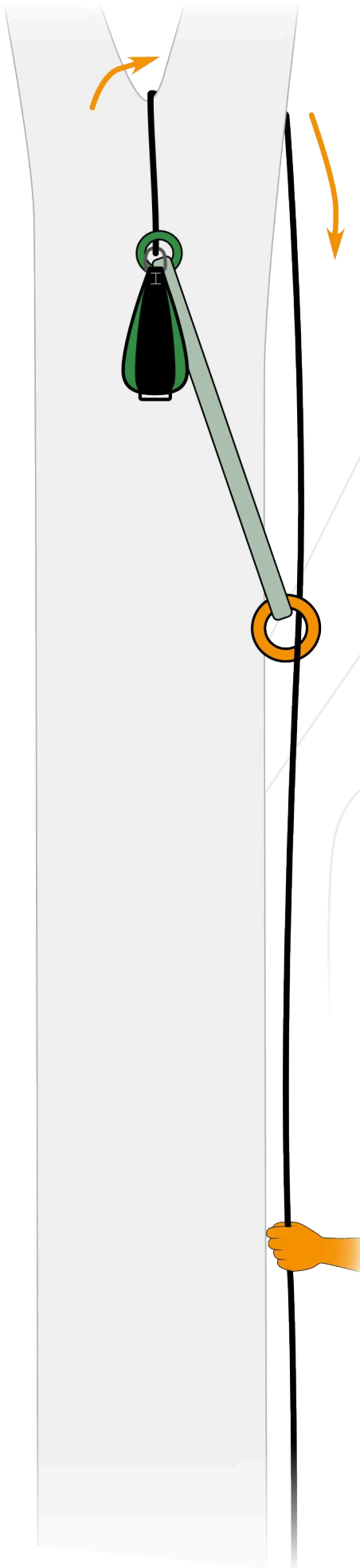
Step 4: Take the other end of the throw line (what was the tail) and pass it through the small ring (green in the illustration).

Make sure that the throw line enters the small ring in a way that mirrors the way that it enters and leaves the large ring. On both sides the throw line should be threaded from the top (branch side) and exit on the bottom (ground side).

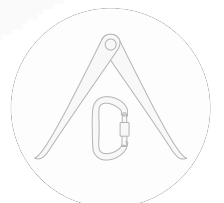
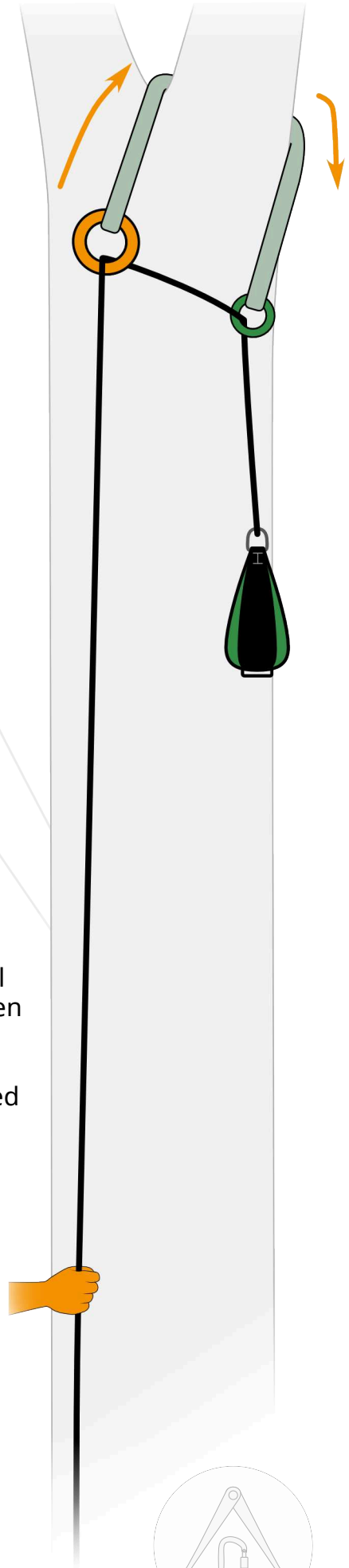


Step 5: To raise the cambium saver into the tree pull on the non bag end of the line. This jams the bag into the small ring and pulls the cambium saver aloft.



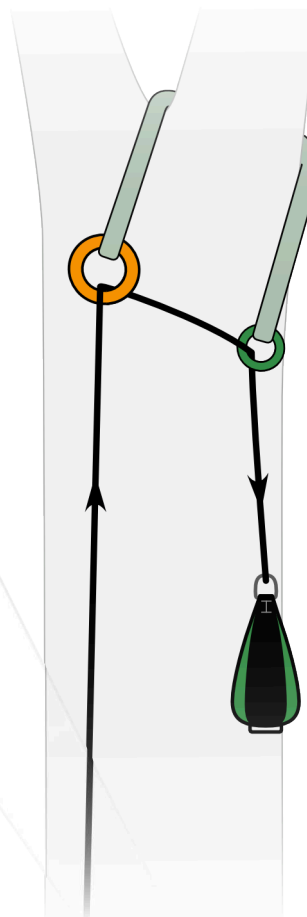
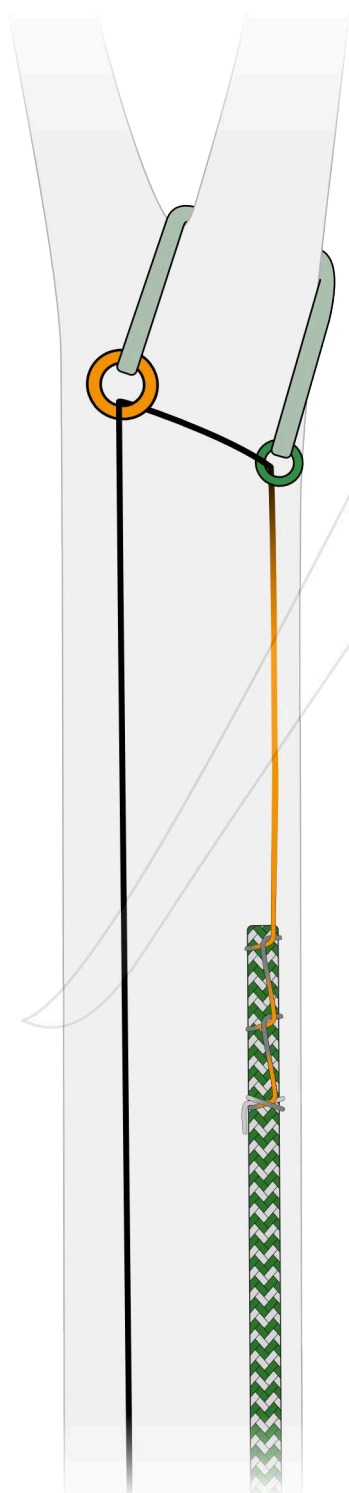


Step 6: As the cambium saver reaches the TiP it will get pulled through and then flip over. If the crotch is particularly tight it can be useful to increase the speed at this point to help pull it through.

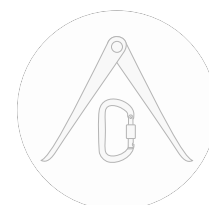


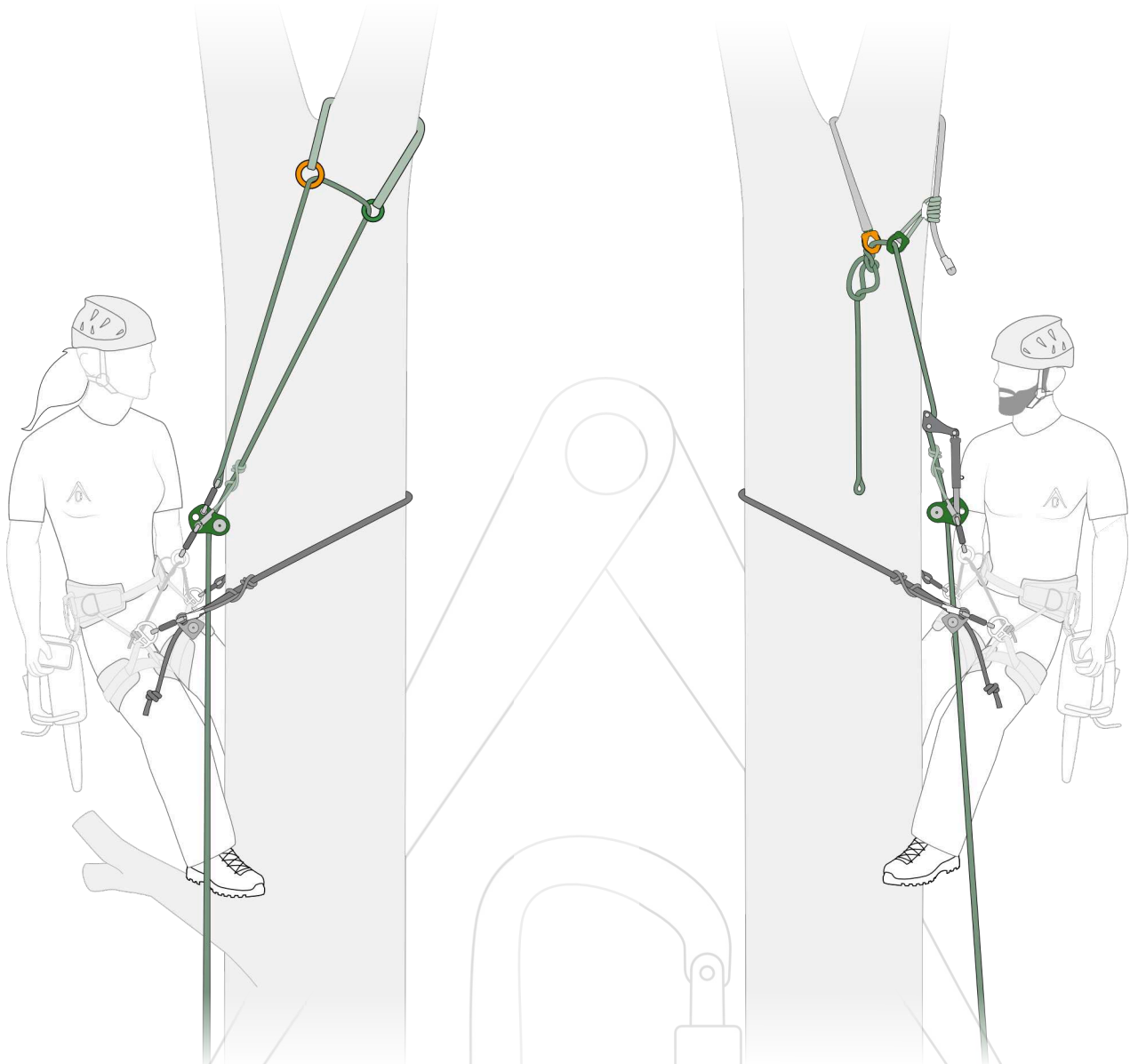


Step 7: Now that the cambium saver is installed you can lower the throw line and bag to the ground.



Step 8: The climber's access line can then be tied to the throw line and pulled through the cambium saver. Unlike the previous method the climber's line is tied on from the non eye end. A good method for this is several half hitches with a clove hitch to secure the tail. It is important to set these reasonably tight to ensure a secure connection.





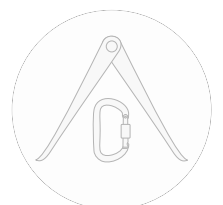
While setting up the cambium saver from the ground might take more time, the long term benefits to the tree, the climber and equipment may make it an attractive offer to some climbers and can increase productivity on long and gruelling ascents.

If you have found this information useful please feel free to share it with someone you think would also benefit and if you would like to support the creation of further documents like this please consider donating via the Climbing Technical website:

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