RollnAnchor Pulley

The Rollnanchor (RA pulley for short) Pulley is machined from a solid block of aircraft grade aluminum and was designed in partnership with 3 Strand Design, owned and led by a field arborist. Its beefy tensile strength and flat surface make it ideal for use as a cinched canopy anchor. The pulley makes retrieving redirected canopy-anchored lines easier and less gear-intensive than with other options. When incorporated with a friction saver, the RA pulley reduces friction, making for a smoother climb.

The high tensile strength makes rescuable systems possible, as well. While the axle's mbs is 8,000 lbs, any rope configuration that incorporates the plate benefits from the 10+k rating. The openings allow for a bight *(see note below) or two lines to pass through, which means an access line, whether separate or isolated by knots, can be incorporated into anchor systems using the RA pulley. Only properly trained professionals should build systems intended for possible rescue, to ensure all parts of the system are properly rated and installed.

Intended uses:

- Cinched canopy anchor
- MRS anchor
- Spar anchor
- Midline mechanical advantage on SRS limb walks

Attributes:

- Made to be cinched
- Rated to support rescuer
- Rated becket
- Both openings pass small retrieval balls
- Openings can pass a bight or two lines*

*Some rope constructions may be too stiff for passing a bight through the pulley openings.

While not intended for such purposes, the RA pulley was pulled at both ends over a bollard. The strength of that pull was #15,000 lbs

Size: 4.5" long x 1 3/4" wide

Weight: 5.6 ounces

Figure 1- Alpine Butterfly stopper, spiked with carabiner:

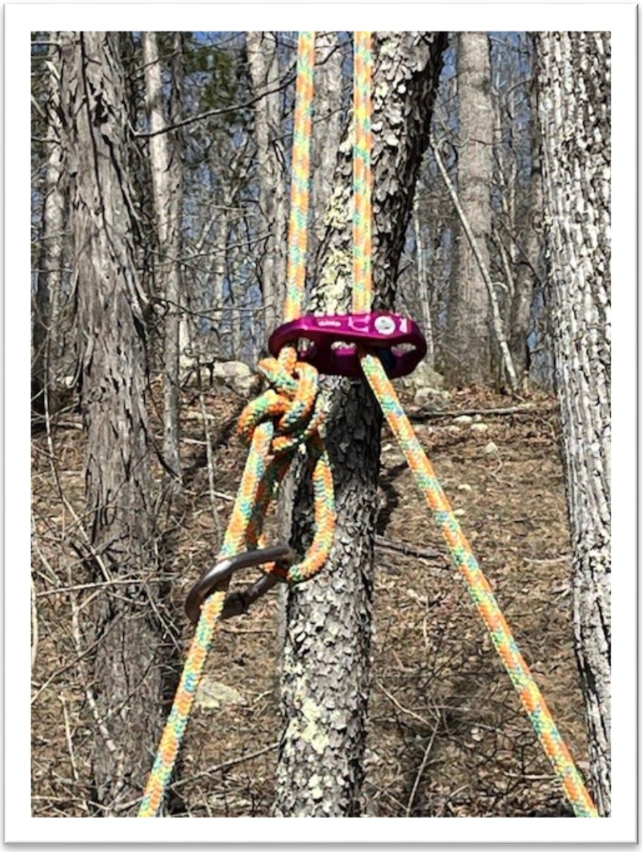

Figure 1

This SRS canopy anchor configuration can be set with an alpine butterfly or figure eight on a bight (not pictured). The knot must be spiked with a carabiner or other connector for safety. This configuration allows for multiple natural branch redirects to be used and the anchor still be retrievable. A throwline can be added to the rope tail for soft retrieval (recommended). How easily the anchor is retrieved is based on the number, orientation, and branch shape of redirects.

To install:

Once throwline is installed and isolated to a suitable union-

- Thread climbing line through pulley opening (largest opening, not between pulley and becket).
- Attach climb line to throwline and install in suitable union.
- Once the end of the climb line is pulled over and back down, untie throwline and thread the line through the top eye of the RA pulley.
- Tie stopper knot and add spike.
- Add retrieval line to the stopper knot side and cinch the RA pulley to the tie-in point.

To use the climb line as a retrieval line-

- When attaching the climb line to the throwline, first thread the line through the top eye of the RA pulley.
- Once the line is pulled over the suitable union and back down, thread the end through the pulley opening of the RA pulley.
- Tie a suitable midline stopper knot in the line below the top eye and spike it.

Figure 2- Girthed Alpine Butterfly:

Figure 2

This SRS anchor configuration allows the climb line to be used for retrieval, and doesn't require the line to be threaded through the RA pulley prior to being installed in the tree.

To install:

Once the climb line has been installed in a suitable union, with both ends on the ground-

- Tie an alpine butterfly in the standing part of the line, with enough line below to reach the ground once the anchor is cinched to the tie-in point.
- Girth the butterfly to the RA pulley by threading the loop through the top eye of the RA pulley and around the body.
- Thread the working end of the climb line through the pulley opening of the RA pulley and pull until the anchor is cinched to the tie-in point.

Figure 3- Prusik loop or eye-to-eye midline anchor:

Figure 3

A prusik loop (recommended) or eye-to-eye (pictured) can be used for a more easily adjusted midline RA pulley anchor. This configuration is good for using the retrieval side to measure spar lengths during removal operations.

To install prusik loop:

With line already isolated around a suitable tie-in point (spar or high stem)-

- Tie a three wrap (six coil) prusik with loop.
- Thread the remaining loop through the top eye of the RA pulley.
- Spike with a carabiner or girth around the RA pulley.
- Thread the rope tail through the pulley opening, ensuring that it is long enough to reach the ground.
- Adjust the retrieval side to desired length and spike with a suitable stopper knot.

If using an eye-to-eye-

- Tie a 3 wrap prusik, then thread the eyes through the top eye of the RA pulley
- Capture the eyes with a carabiner
- Follow the remaining steps detailed in the prusik loop section above.

Figure 4a & 4b- Friction Saver Add-on:

Figure 4a

Figure 4b

The RA pulley can be added to a friction saver to reduce friction in rope management while climbing. While only one method is pictured, there are several ways to incorporate the RA pulley into a moving rope anchor. ATTENTION: modifying established systems can introduce risk and is not recommended without proper training and approval by the manufacturer. The pictured anchor is a custom sling not representative of any marketed moving rope anchor system.

To install:

- Thread the RA pulley top eye onto a suitable sling (polyester or nylon cores only)
- Anchor both ends together with a suitable knot (anchor hitch to ring pictured).
- Leave enough tail on one end to hold a micro carabiner or shackle.
- Girth the sling around a suitable stem, tucking the RA pulley through the loop created by the terminated ends.
- Connect the micro carabiner or shackle to the running end of the climb line (above climbing hitch or climbing device).

To retrieve:

- Once descended and safely secured by other means, unclip spliced eye of climbing line, and install a small retrieval ball (large retrieval balls and micro carabiners/rings are too large).
- Pull working end of the line.
- The line will pass through the RA pulley jam in the retrieval carabiner/shackle, unhitching the anchor from the stem and allowing it to fall.
- Soft retrieval is possible if a separate access/retrieval line is installed nearby and connected prior to descent.

A word about our manufacturing: On some of the RA pulleys you may notice a small crack(s) along the edge of the axle as illustrated here. This is normal and does not affect the strength or the function of the pulley. This happens when we flare the end of the axle out in order to add another layer of safety so that the axle does not come loose. The crack develops as a result of the outward movement of the axle when flaring. We could have utilized a softer axle material that would have allowed the edges to roll over completely without any cracking but that would decrease the strength of the pulley. We chose to use a stronger axle material in order to keep the strength of the pulley up. Note that there may be more than one small crack along the edges. All is perfectly fine.

Small edge crack from flaring the axle.

! WARNING ! Activities involving the use of this equipment are inherently dangerous. You are responsible for your own actions and decisions. Before using this equipment you must: read and understand all instructions for use, get specific training for its proper use, become acquainted with its capabilities and limits, and understand and accept the risks involved. Failure to heed any of these warnings may result in severe injury or possible death.

338 Mill Road, PO Box 535

Franklin, WV 26807

cmigearusa.com