



# The Ouroboros

An alternative soft shackle

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approx. 880 words



As part of converting my Precision 21 from steel rigging to Dyneema fiber, I spent a lot of time learning to tie soft shackles. Now that I know how to make soft shackles, I find I don't use them often. I don't like the protruding blobby diamond stopper knots. I don't like picking at the cinch loops trying to pry them open. I wanted a continuous loop that I could girth hitch onto a closed ring or clip into with a carabiner. From a splicing standpoint the image that came to mind was the Ouroboros, the snake eating its tail.

I make my Ouroboros with 32 inches of 1/4-inch Samson Amsteel Blue, a 12-strand Dyneema single braid. That allows for two 8-inch tails that bury into each half of a 16-inch body. Begin by marking a point 8 inches from either end.



Insert a splicing fid into the mark and insert the non-marked tail into the fid. (Taping the ends makes the next few steps easier.)

Pull the end through until both tails are approximately the same length from the insertion mark.



Move about one line diameter around the center body from the first insertion and again pull the same tail through the line. Don't try to pull it tight—at this point you will just cinch the circle closed.



Do a third tuck, and now you should have enough friction to tug on the end of the line and on the body itself to pull the splice tight. Set the fid aside and untape the end of the tail. Take a splicing wand and insert it into the body a little farther around the circle than the length of the tail just untaped. Push the

wand up through the center of the braid and bring it out about one line diameter below the last tuck. Slide the end of the tail into the wand.



Drag the tail into the braid, gently twisting the wand and “milking” the line to get the end to slip inside the braid. When the end emerges from the body, pull out as much as you can, scrunching the surrounding braid to expose the tail.

We need to taper the splice so the Ouroboros won't have any sudden transitions that could hang up or concentrate loads on one part of the loop. Using the fid, tease out one of the tail's 12 strands where it emerges from the braid. Pull the strand all the way out of the tail and cut it off.



Unscrunch the braid enough so that the cut strand slips completely back inside the body. Repeat the procedure for each strand in the tail, pulling the braid over each cut in turn so that the surface of the Ouroboros is smooth. Ideally, the twelfth strand will slip under the cover just as you run out of braid to unscrunch. If you end up with a strand on the surface, just pull it out a little, cut it short, and smooth the braid over it.

Now go back to the other tail that is still outside the braid and repeat the whole procedure: three tucks into the braid, bury the end, and taper the end until all the strands are covered.

Here is the completed Ouroboros, posing with its tools and cut strands.



The 32 inches of Amsteel Blue I started with resulted in a stretched loop seven inches from end to end. A 24-inch length produced a 5-inch loop. Bear in mind that the Ouroboros will grow a bit as the braid and splice set under load, and a bit more as the fibers stretch over time with use.



And what use is that? The Ouroboros can be used in any application where the loop can be either shackled to an anchor or – better – cinched or looped without a shackle. My favorite application is a double girth hitch, where one relatively small fastener (sheet block, Barber hauler, etc.) is cinched to the Ouroboros, and then the fastener-plus-

Ouroboros is cinched to an anchor. (Think, shroud terminator and chainplate.) A reason for making the Ouroboros no shorter than seven or eight inches from line this size is that a smaller loop may not be long enough to create a second hitch.

Note the Ouroboros is fat where the tails first get swallowed by the body, tapering down to the original line diameter where the two tails meet inside the braid. The sleekest way to create the double girth hitch is to first cinch the narrow point of the Ouroboros through the smaller fastener before putting the thickest section through the larger anchor. That results in both sides of the connection being of approximately the same strength. It also means the thinnest part of the loop is pressed into the relatively soft sides of the Ouroboros rather than against the harder and sharper radius of the metal fastener. As with any rope, Dyneema needs to be regularly inspected if it has a critical load. It is resistant to abrasion and UV damage, but those are still its main enemies. If the Ouroboros or any soft fastener begins to bristle with broken fibers, it's time to replace. But then you know how to do that.

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Ouroboros image from:

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