



Heart-Kite

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After three years of trials and testing and with support from dear friends, the idea of a flying heart has come about; a heart kite is born. The result has a certain appeal and I want to see more self-made kites in the sky, hence I share the design with those who are interested in it. In the following instructions, the essential steps are described as I built the heart, however there may well be improvements that you could find.

Read everything, think your own thoughts and then when you are ready, get to work.

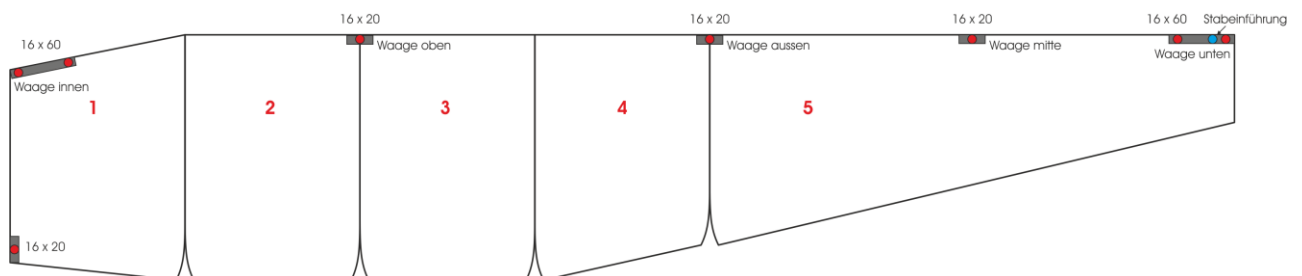
There are three requests I have:

- These instructions are not for commercial use.
By this I mean no form of financial gain for the maker. This means that if someone asks you to build a heart for them, say yes and make it as a gift.
- Don't make a single heart – build at least two.
We don't want to make a contribution to the lonely heart's club and you will always have one to give away.
- Let me know what you are doing.
At least send me a picture of your heart kites and your feedback on how the process of building went and what changes if any that you made.

Now to the actual instructions. Of materials you don't need much:

- approximately 1.3m fabric for 2 hearts – the best suitable is Skytex 27 because it's soft and light
- per heart 2 fibreglass rods each 1.2mm diameter and 2m length
- 12gram of curtain weight lead per heart, try a local haberdashers or search on Ebay for curtain weight 100g/m
- Adhesive Dacron for the reinforcements
- Bridle line – I use the 10daN Black-Line from Climax

Overview



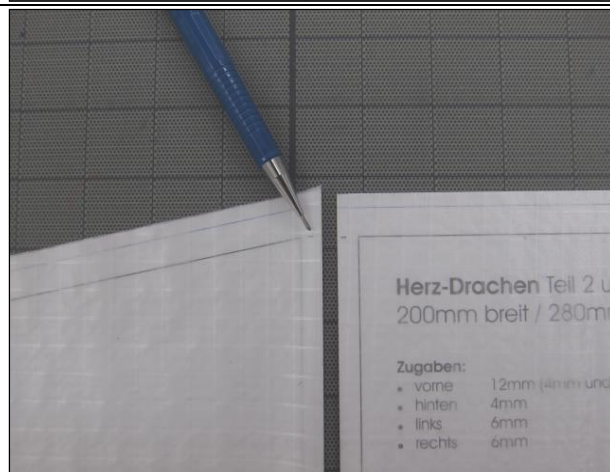
Individual steps



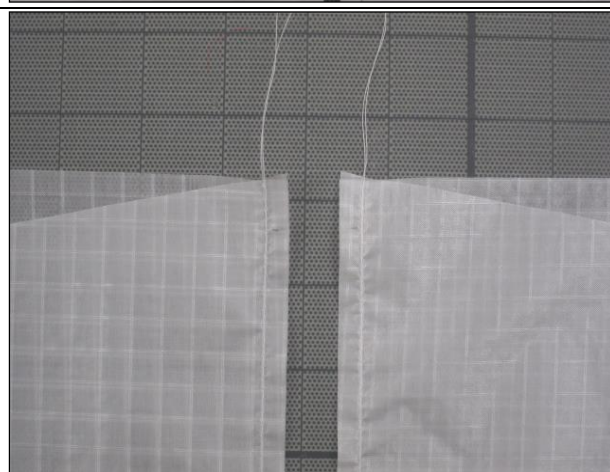
Download from the side <http://www.windhau.ch/Dra-chen/Herz-Drachen/> the current PDF-files and create the templates. Make sure that the prints are not reduced.

Use the letters for orientation, where the individual sheets are assembled. On each part are the individual additions specified.

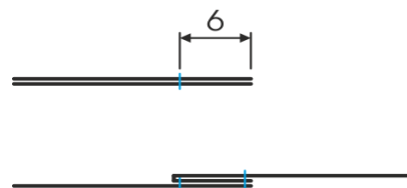
For each heart cut out all the parts twice. Parts 2 and 3 are identical. So you end up with 10 parts per heart.



Bring at the top (there where the 12mm addition is) to part 1 and 2 at the black line, a mark on.

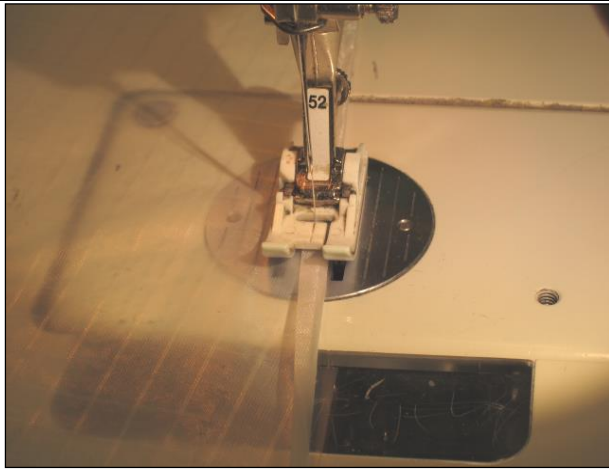


Put the two outer sides of part 1 and 2 together, teach them at the newly installed marking and sewing 6mm from the edge of the parts laterally



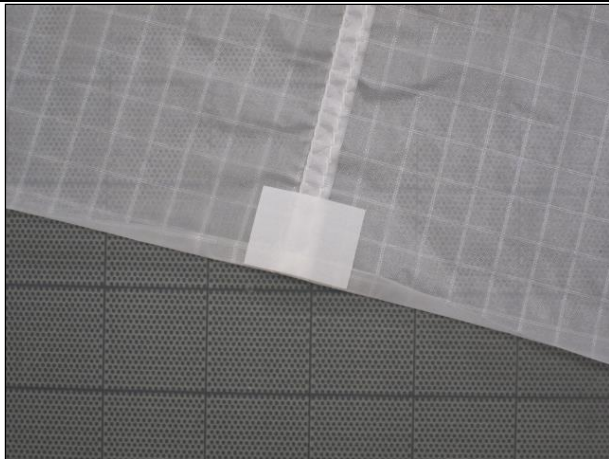
Fold the 2 pieces apart again, put the addition and sew it with a second seam. On which side you put the addition is up to you. I fold it to that side which is at the finished heard at the bottom.

Sew in the same way the remaining parts together laterally. The mark on the top you don't need - you can easily align the other parts on the front edge. Make sure that you create a right and a left side. That means, the additions are always on the inner side of the finished heart, and are allocated to the same page.



As next step cut on the rear side (there where the addition is 4mm) potential offsets.

Now fold the 4mm to the inner side of the finished heart and sew them.

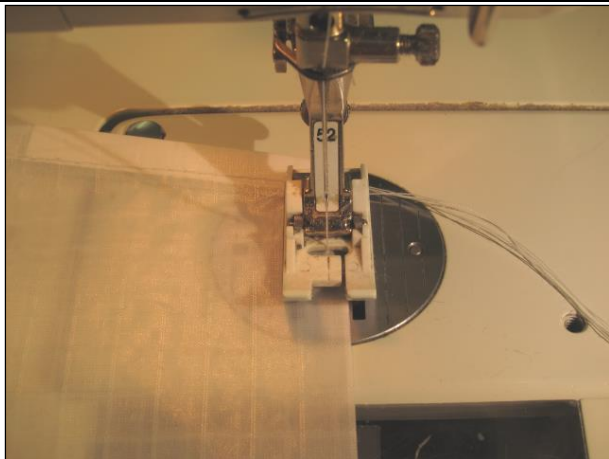
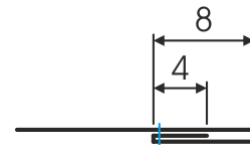


Continue with the front side (there where the addition is 12mm). Cut first from the Adhesive Dacron per heart 4 piece 16mm x 60mm and 8 piece 16mm x 20mm.

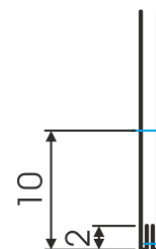
Now fold the front side 4mm (again on the inner side of the finished hearts) and put the reinforcements according to the chart on page 1. The middle piece in Part 5 (referred to 'Waage mitte') is in the middle of Part 5



Fold additional 8mm and sew about 1mm from the inner edge (that will be the rod bag).

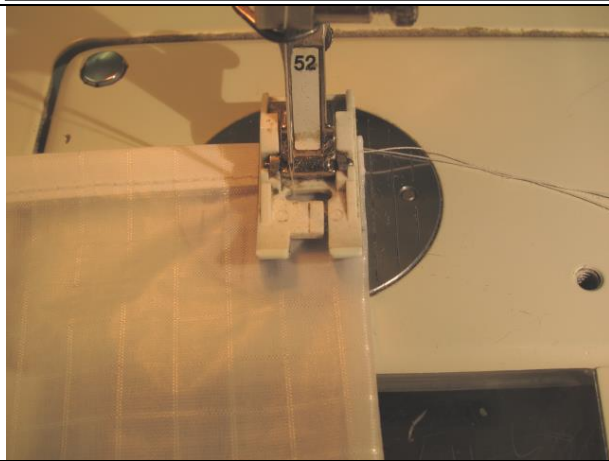
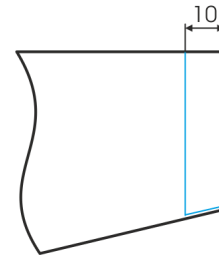


The two parts of the heart are now sewn together. Put therefore the two outer sides against each other and sew at the narrow end (at the bottom) 2mm from the edge.

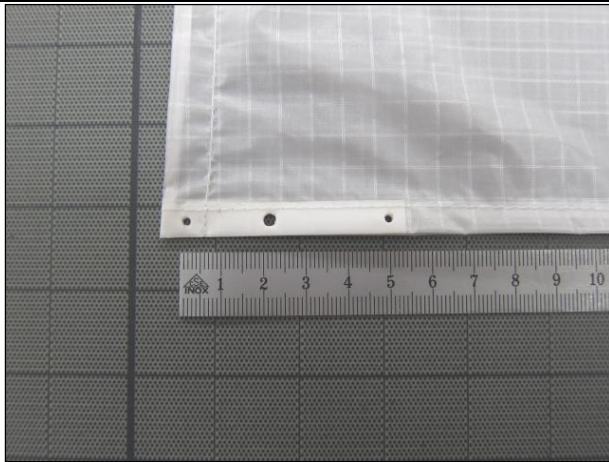
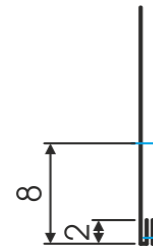




Turn the 2 pieces, so that the external sites are also outside and sew 10mm from the edge a second seam. Close also the resulting pocket on the back side. At the end that's the place for the weights.



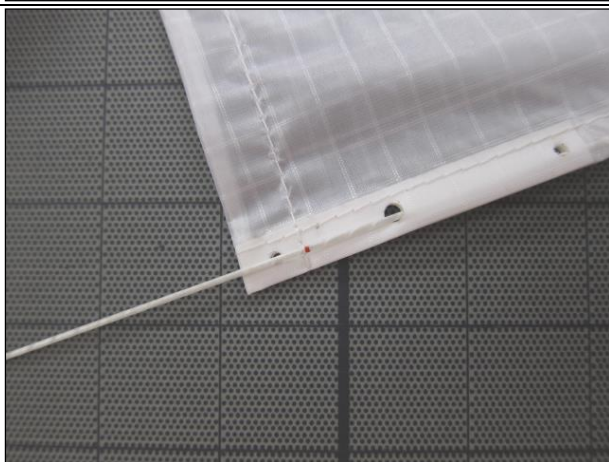
For the other side (top centre) put the two inner sides against each other and sew again 2mm from the edge of the two halves together. Turn the fabric again, 8mm from the edge sew a second seam and close the resulting pocket on the back.



The sewing are now complete - it goes on with the holes for the bridle and to insert the rod into the pocket. In the overview above, the individual points are registered.

For the bridles (the red dots) reaches the minimum diameter of the hole punch - the hole for the rod insertion (blue dot) may be slightly larger (~ 3mm).

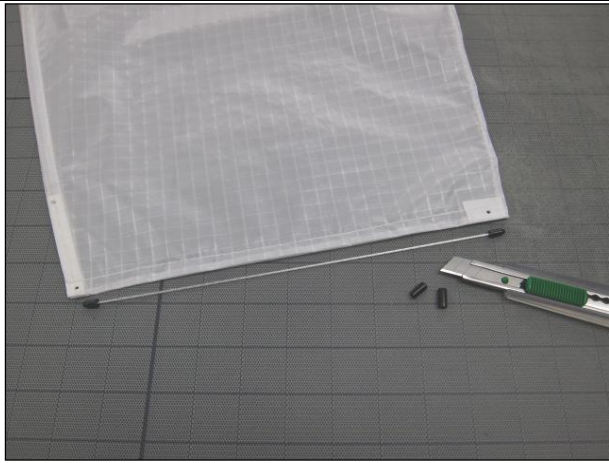
Up in the middle and at the bottom where it needs 2 bridle holes, they are ~ 50mm wide apart.



Raze the two fibre rods on one side around and bring them through the larger hole in the rod pocket.

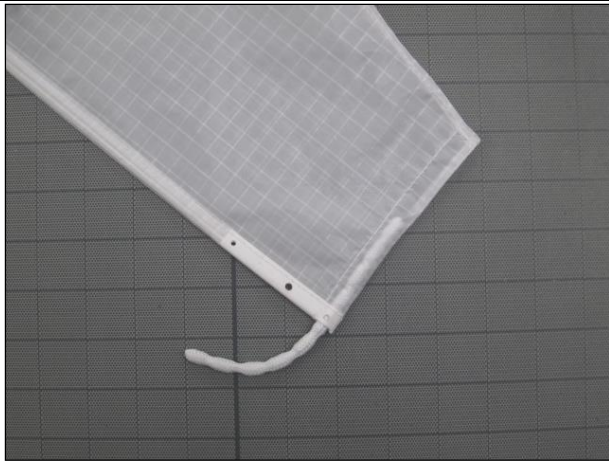
To determine the required length of the rods slide to the end of the rod pocket, mark without pressure on the rods the length and shorter it.

Raze the ends again and push the rod completely into the pocket, by stretching the fabric a little bit and until the rod disappears completely in the sail.

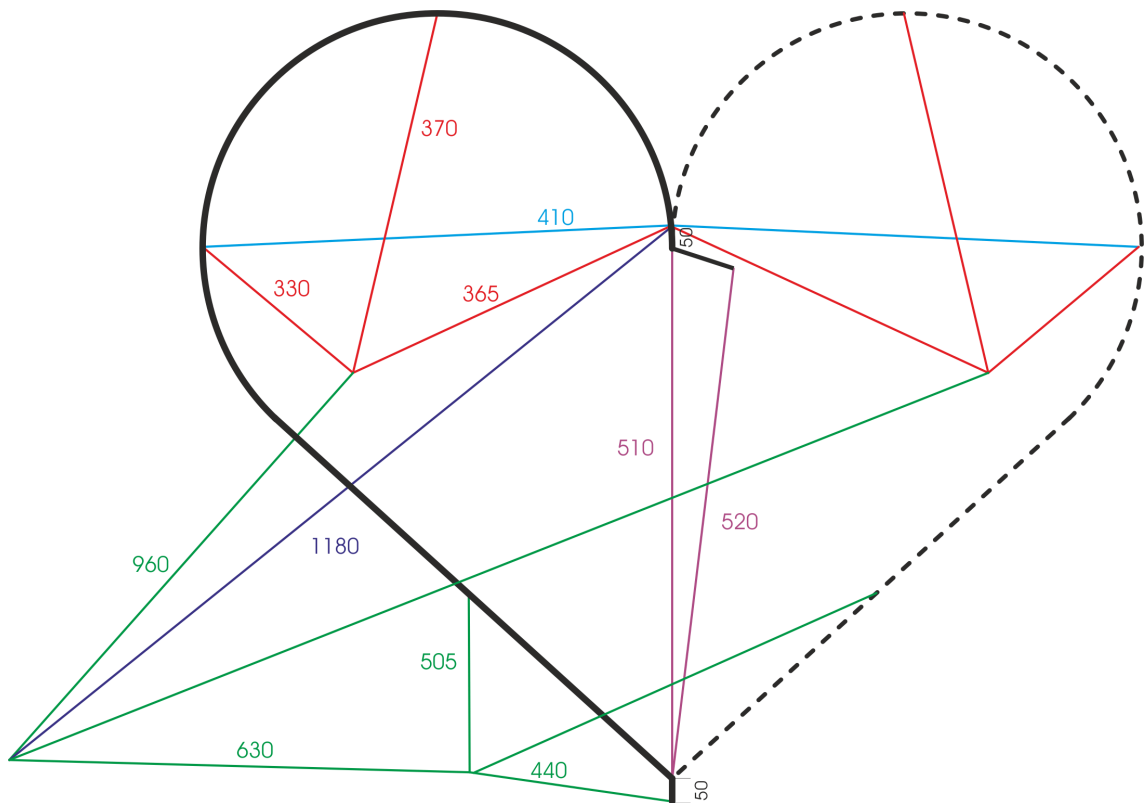


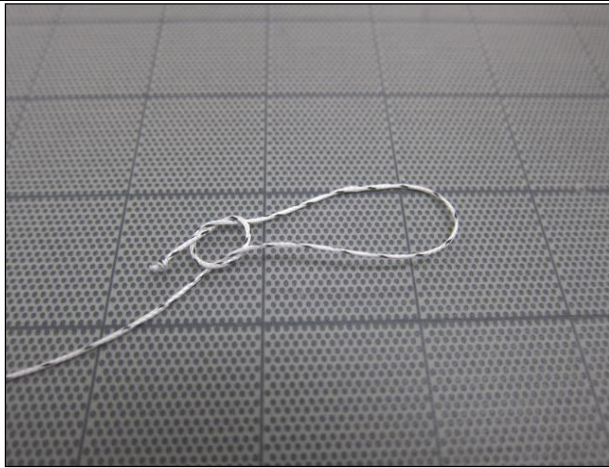
Cut out of the rod remains a piece for the short rod-pocket top in the middle.

In order to protect the fabric and the seams push on the ends short 2mm end caps. The length of the rod is given by the end of the pocket and the rod hole of the bridle.



For the heart to not fly on the head, it needs on the bottom ~ 12gr weight. For the 100gr/m lead cord, these are 10 segments. Merge the ends and push the string into the lower pocket.

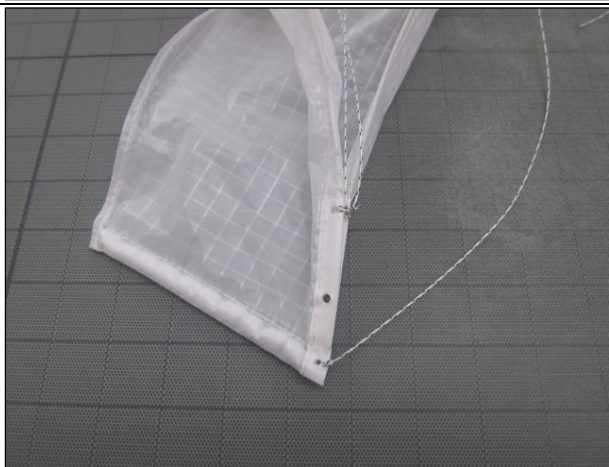




Finally you have to tie the bridle. In the graph above, the respective dimensions are given. Let us assume as an example, the horizontal line (light blue), which prevents the heart goes too far apart. First tie a knot directly to the end of the cord. Now take the string with the knot through the hole in the sail, knot a loop on the cord and pull these on the first knot. Where you now pull on the longer part, the knots slips smoothly to the sail. Measure now 410mm, do again the first knot directly onto the cord and do the same as on the first page of the cord.



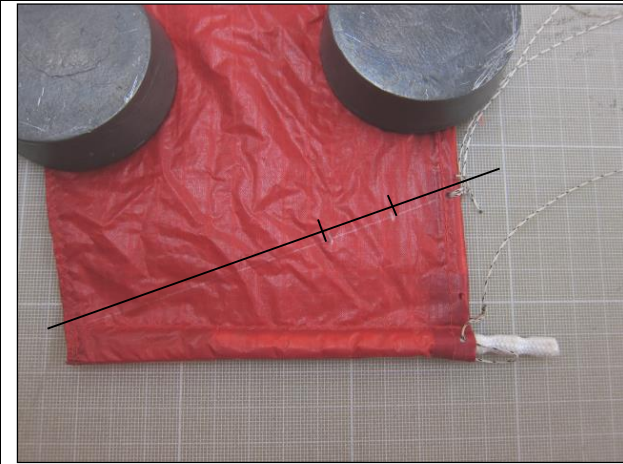
In the top centre, there it is may be a little tight, because here are 5 strings attached to the same point. Perhaps it helps to thread the cord without knots. In any case, bind the two pages of the heart at that point together so that the rods may differ only behind that point. Below it's the same where the 2 violet lines are knotted.



Knot on the green cords (630mm and 960mm) a small loop to summarize the individual bridle lines together. At the end of the bridle combine the 4 lines again together with a loop.

To fly the hearts I use a light cord with a children handle. That's easy to pull in the sand or to attach with a stone.

For storage I wrap the bridle directly to the handle. Then I put the two halves together, turn them into a circle and move all together in a bag (~ 40 x 40cm).



The heart kites fly best in low smooth wind. Since this is not always the case, it's possible to avoid the strong fluctuation and pumping with a little bit weight on the bottom.

Pull the existing weight slightly out and sew a seam from point 50mm to the end of the existing pocket. Make a break of about 20mm and don't close the new pocket at the end completely (so that you can clean out sand for example).



Cut now from lead tape or another material weights, which can be placed when needed in the pocketed.

A few more thoughts

- Those who want to leave out the closed edge on the backside can omit the 4mm cut therefore simple the seam on the back side of the templates
- Some kite builders may have difficulties with the 4mm addition on the front page this can be as well skipped (only 8mm instead of 12mm addition)
stick the reinforcements direct on the edge, fold the edge 8mm and sew it
- If you don't have adhesive Dacron, you can use as well 'normal' Dacron
make then the pocket for the weight a little bit larger (11 - 12mm instead of 10mm).
- You can fly the hearts very easy as a train
attach therefore the second heart to the middle of the first one and so on.
- The measurement on the template (width - Breite / depth - Tiefe) refer to the main cell. Part 5 is 3 cell width – don't be confused by the printed width.

So - now I wish you good luck and as written at the beginning: do your own thoughts and share your solutions with others. I look forward to your feedback and pictures.

René Maier

Version

Instruction:

- 1.3 additional pocket for weights for stronger / alternating wind
- 1.2 drawing of the bridle enlarged based on questions (measurements are still the same)
- 1.1 reform of the text and the pictures as well as textual enhancements for better understanding
- 1.0 first version of the instruction ready for publishing

Template:

- 1.0 new drawing of the templates for publishing