

**How to build a Mylar Circoflex:** By Mike Dallmer  
Designed by Helmut Schiefer and Ton Oostveen

## **Material List**

Mylar  
Fiberglass or carbon rods  
Connectors for above  
Seamstick (double sided tape)  
2 “ wide packing tape  
1 “ wide reinforced tape

## **Construction**

- 1) Decide on what size you want.
- 2) See below or contact me for measurements.
- 3) Cut Mylar to size, add 1“ to leading edge, 3/4“ to trailing edge, 1/2“ where the ring will be connected, draw a line where the 2 edge will be connected, 1/2” from edge.
- 4) Reinforce the leading edge on the good side of the Mylar with 2“ wide clear packing tape, this will make the leading edge more durable.
- 5) Join the two 1/2“ ends together to make a ring, the joint will now be referred to as the 6 o'clock mark. To do this place a length of Seamstick on the mark that is 1/2 “ from the edge, remove paper from Seamstick and line up the two 1/2 “ marks, press together. Place a layer of the 2 “ wide packing tape over both sides of this seam for strength.
- 6) Place a mark on the leading edge 2“ from the cut edge and the bridle points at the same time, also mark 1 1/2“ from the cut side of the trailing edge.
- 7) Place Seamstick along the very outside-edge of the leading edge, leave about 4“ of no tape where the 6 o'clock mark is, 2“ on each side of this mark.
- 8) Place 1 3/4“ strips of reinforced packing tape where each bridle point will be, place them so that they are perpendicular to the leading edge and on the bad side of the Mylar, this serves to reinforce the bridle points.
- 9) Lay as much sail as possible flat.
- 10) Remove enough of the paper from the Seamstick to work comfortably, about 2-3 feet at a time.
- 11) Fold over the cut side of the leading edge to the 2“ mark, press down.
- 12) Continue until you have went all the way around the leading edge of the kite, this finished the leading edge and created a pocket for the spar to be placed into.
- 13) Cut a 5“ piece of reinforced packing tape and place it on the trailing edge, centered on the 6 o'clock mark, 1/4“ from the cut edge.
- 14) Cut 2, 1“ pieces of reinforced packing tape and place these about 2“ from the 6 o'clock mark, perpendicular to the edge, this will reinforce where the trailing edge line comes out of it's pocket.
- 15) Cut 2, 1/2“ long slits in these last 2 pieces of tape.
- 16) Measure mark and cut the trailing edge line , leave about 10“ extra on each end. 50 # dacron line will work.
- 17) Thread this line through one of the slits in the trailing edge reinforcing tape.

- 18) Place Seamstick on the trailing edge just like you did for the leading edge and finish this pocket just like the leading edge except the tape goes all the way around, no gaps. Also make sure the trailing edge line is in the pocket and doesn't get stuck on the tape. When you get back to where you started thread the line through the other slit in the reinforcing tape and tie on marks.

NOTE: YOU HAVE NOW COMPLETED THE SAIL!!

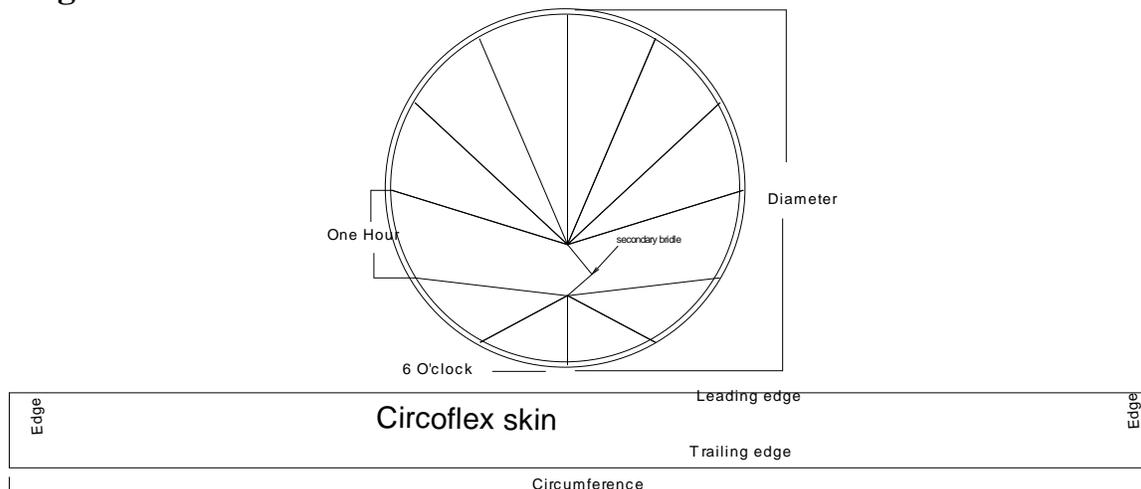
- 19) Glue connectors on spars, one connector per spar.  
 20) Place spars in leading edge pocket through the opening left at the 6 o'clock position  
 21) Close this opening with a piece of Seamstick.  
 22) Use a pointed soldering iron or hot nail to burn a hole through each of the bridle points, make sure these holes are as close to the spar as possible.  
 23) Tie each bridle line to the appropriate hole making sure the spar is tied in as well.  
 24) Tie the bridle lines from the 9, 10, 11, 12, 1, 2 and 3 o'clock positions together.  
 25) Tie the bridle lines from the 4, 5, 6, 7 and 8 o'clock positions together.  
 26) Tie the secondary bridle line into the bridle at each of the previous knots.  
 27) Use a larkshead to attach the flying ring, completing the bridle.  
 28) Tape weights, 1"x1"x 1/16" pieces of lead or pennies, along the leading edge between the 5 and 7 o'clock positions using 2" wide packing tape. For 5-8 foot diameter 6 are required, for 15 foot diameter 8 are required.

### Adjustments:

If the kite doesn't climb move the tow point lower on the secondary bridle, sometimes the tow point is only 1/4 of the way from the bottom.

If the kite dives to the right that means that the gathering along the trailing edge isn't evenly distributed and there is too much on the right side, slide the trailing edge around until it is even. The same is true for dives to the left except there will be too much gathering on the left side.

### Diagram:



Measurements for Making Circoflexes					
Diameter	6 Feet	7 Feet	8 Feet	9 Feet	10 Feet
Material Width	15 1/8"	17 5/8"	20 1/8"	22 5/8"	25 1/8"
Hour Meas.					
12	51 7/8	60 1/2"	69 1/8	77 3/4	86 3/8
1 & 11	50 3/8	58 3/4	67 1/8	75 1/2	83 7/8
2 & 10	46 1/8	53 7/8	61 1/2	69 1/4	78 7/8
3 & 9	40 1/8	46 3/4	53 1/2	60 1/8	66 7/8
4 & 8	32 5/8	38	43 3/8	48 7/8	54 1/4
5 & 7	22 5/8	26 3/8	30 1/8	33 7/8	37 3/4
6	17 1/2	20 3/8	23 3/8	26 1/4	29 1/8
Secondary Bridge	6	7	8	9	10
Circumference	226 1/8	263 7/8	301 1/2	339 1/4	376 7/8
Clear Opening	220 1/8	256 3/4	293 1/2	330 1/8	366 7/8
1 hour =	18 7/8	22	25 1/8	28 1/4	31 3/8
Rods	1/8" F.G	1/8" F.G	1/8" F.G	3/32" F.G	1/8" C.
All measurements are in inches unless otherwise noted					
F.G.= Fiberglass rods C.= Carbon rods					

**Note:** if you like you can make this kite out of Ripstop, it will still fly the same.

### *The Circoflex: Adjustments and Storage*

Recommended flying line: at least 75 # test

Recommended wind speed: 3 - 12 MPH

Replacement spars: 1/8 " solid fiberglass rods

Adjustments: If the Circoflex leans to one side or the other make sure that the trailing edge gather is even all the way around.

To replace any spars, loosen the larks head knot on the bottom of the kite, where the knot is on the trailing edge and open spar pocket, and then remove the short piece of tape . The spars can then be removed to get to the broken one.

Repairs to the Mylar sail can and should be made as soon as possible. Use packing tape, this lasts longer and sticks better than Scotch Tape.

Storage, it is a 2 person operation:

- 1:) each person goes to opposite sides of the kite.
- 2:) hold the kite by the leading edge, where the spar is.
- 3:) one person overturns his side, making the kite into a figure "8".

- 4:) bring the sides together and let one person hold them both.
- 5:) the person that is no longer holding the kite goes to the other side again.
- 6:) one person overturns his side, forming another figure "8".
- 7:) bring these two sides together.
- 8:) even the circles out.
- 9:) use straps, with Velcro on them, to hold kite in this shape.
- 10:) place in storage bag.

Note: the Circoflex does not like turbulent winds and has a tendency to collapse if they are encountered.

Good winds and happy flying....

Mike Dallmer  
306 Friendship St  
Phila., Pa. 19111

[mikedallmer@verizon.net](mailto:mikedallmer@verizon.net)