

How to make custom line sets without using sleeve

Posted by kostaaa - 30 Nov 2012 00:41

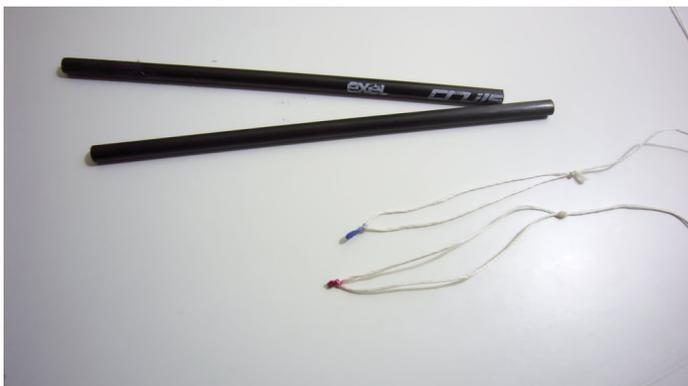
In this topic I'm gonna show you a simple method how to make custom line sets for stunt kites without using any sleeving line.

About 2 years ago I noted that the lines of Andonis Loumiotis doesn't have sleeves at the end. He explains me that is more simple and clean way and didn't have any problem with it. I was a bit skeptical at the begging, based on my previous tries to make short indoor lines without sleeving...

Anyway, here is the key. You have to make 2 separate overhand knots with some distance in between. The loop at the end helps you to loose the Lark's head knot. To see better I made picture with sleeved line:



Which applied to a normal Dyneema lines looks like this:



Now, If you need more detailed instructions keep reading below.

Here is a list of what do you need to make custom (in length and strength) lines:

- Dyneema on spool (usually 100m or 35m)

- Winder to wind the lines, when are ready
- Black, Red & Blue permanent markers
- 2 short tubes (or rods, Up/Lower Spreaders, pencils,..)
- last but not least -> someone to help you!!

When you get Dyneema usually is pre-stretched. This means that it will remain same length for a long period of time. In some very rear cases even after market line sets can make problem in the first 5-10min of flying! So, If you want to be sure that no random elongation will occur... you have to stretch it by yourself.

Make knots on one side of the lines first. Use simple overhand knot. To prevent any knot moving you can also use double overhand knot or 2 knots (one after another) but this is optional.

When the loops are ready mark the ends with red and blue colors (REMEMBER: RED ALWAYS GOES ON THE LEFT HAND). Give to your friend/helper one of the tubes and attach the loops that you just made. Go on the other side of the lines. For best results you have to choose day with "no wind" or if there is any... go parallel with the wind. Pull hard to tension the lines. Grab them with one hand (while remaining SAME tension) and with the other hand make a mark about 30-40cm from the end with a black marker. This mark is your reference point. Now, remove the tension and lay the lines on the ground. Make knots and check the distance from your reference point. When you insert tube between the knots the black marks should come together. Give some strong tugs to tighten the knots additionally. Tension the lines again. Make sure while holding the lines on the 2 tubes they have same amount of tension. They should be like guitar/bass strings! You can put your finger (move it left-right) between the lines to feel the tension...

If everything is fine -> Go Fly and have Fun!

If you feel any difference -> start again using the black mark.

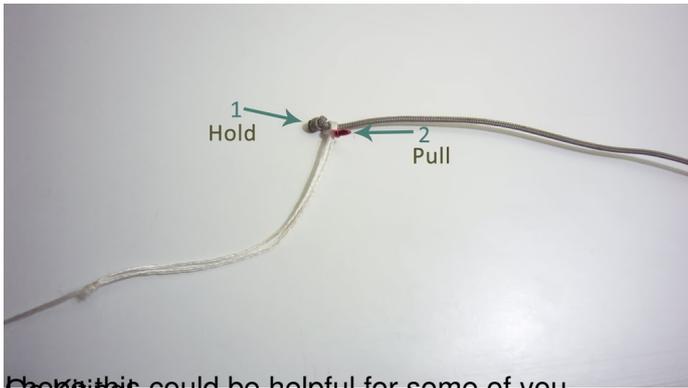
Good thing about this method is that you reduce the drag close the the kite and make it more simple with less chance to tangle.

Of course, there is some strength reduction (20-70%). But we all fly with much stronger lines than a strong tug can actually produce. Dyneema lines are rated 25, 40, 60kp,... but the real breaking strength points are higher than the rated ones. In other words Dyneema 60kp will take up to ~85kp load before break and elongate 2.5-3.0%. On 60kp load the elongation is 2% or more, which is unuseful for stunt kiting.

Anyway... till now, I break only ones 40kp Dyneema in strong wind (40km/h gusts) because of lack of sleeving lines (right on the knot).

There is super easy way to detach the lines from the pig tails of the kite.

Hold the knot on the pig tail than pull the red loop:



GoKiting could be helpful for some of you...

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