KARVER
sailing experience

INSTRUCTIONS FOR TOP DOWN FURLER KSF1, KSF2, KSF5

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1 IMPORTANT ACKNOWLEDGEMENTS

- KSF line of continuous furlers is designed to furl free flying sails on sailboats. Any other use shall not be guaranteed by Karver.
- The continuous line furler unlike conventional furlers shall not be used for reefing a sail. The sail is either completely unfurled or completely furled.
- The maximum working load given for continuous line furler refers to the load applicable between the two forks. Thus it is a load that applies to the same axis as the rotating system axis. If the furler is not working in this axis (hinge defect, for instance), the mechanism shall be damaged and shall not be covered by the warranty.
- The maximum working load applicable to the independent tack is lower than the working load of the continuous line furler. This load is shown in a chart at the end of this document.
- The tack point of the spinnaker attaches to the independent tack ring on the top of the drum. The tack point of other flying sails attaches to the lashing thimble of the anti torsion cable.
- Never use the top swivel to climb up the mast.
- If a distortion appears on a metallic part of the system, we advise you not to use the furler any longer. It should be returned for service.
- The new locking mechanism on the furler drum is designed to make furling from the cockpit much easier. It is essential to secure the continuous line when the sail is furled, if the weather conditions become bad, or if the system is not unfurled for a long period of time.
- The locking mechanism is equipped with a fuse, if it breaks, it is due it suffering from over tension, which is not guaranteed by Karver.
- In order to preserve the sails and enhance the ease the furling, it is recommended that you use high quality anti torsion cable.
- The continuous line KSF furler shall be attached to the deck (or the sprit) and to the mast on an attachment point designed to resist dynamic forces generated by the sail.

2 RECOMMENDATIONS

On the sail:

- Both new and used asymmetrical spinnakers may be installed and used with the KSF continuous line furler. The sail does not necessarily need to be retrofitted. Please contact us if you have any concerns.
- Installing a webbing loop on the head of the sail rather than an oring will help the head of the sail to start furling. A combination of 3 webbing loops is recommended for new sails.
- Spinnakers made of laminates or polyester cloths tend to make the furling more consistent. A stiff head patch may interfere with the furling at the beginning. The system will work better with time as the cloth softens.
- The spinnaker furler may be used on fractional or masthead rigs. It is important that there is enough clearance between the spinnaker halyard and the forestay to maximize the furling. A few stopper balls on the halyard may help to create enough clearance on masthead rigs.

On the cable:

- The use of a high quality anti torsion cable is essential to the system working well. It is important that one turn in the drum result into one turn at the top swivel to ensure good furling. A larger cable will possess greater anti torsion characteristics.
- It is important that the cable is finished at the right length to ensure good furling. It will be impossible to tension a cable that is too long. The cable must be tensioned while furling. A cable that is too short will result in wrapping problems when furling the sail.

3 ONBOARD INSTALLATION

In its standard version, the continuous line furler is delivered with a snap shackle on the drum and a HR “D” shackle on the top swivel.


When installing the pin of the D shackle, be sure to use pliers.

3.1 Using the drum lock mechanism from the cockpit

The locking drum comes standard on all of our furlers (except KF1eco and KF12). However, the piece that makes the drum locking is not delivered installed. Installation is simple and takes only a few moments to accomplish.

Steps to install the locking mechanism:

- Pull hard on the conical piston featuring the two flanges (the whole is assembled with a spring mechanism)

- Fit it into the groove on the bottom the spool and release it once it is deeply in.



- Check in by furling with your hand if the system works correctly (locks in and locks off when turning the drum in one way, then the other).

- To remove the lock, pull on the conical piston and slide it out of the drum. The unit will now work in either direction.

3.2- Adjustment of the spool

It may be necessary to adjust the orientation of the spool depending on the orientation of the pad eye that the drum is attached. This will ensure that the continuous furling line is lined up with the cockpit. This adjustment will only need to be done once (scheme)

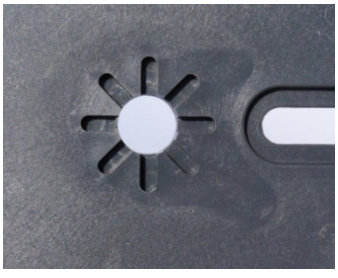
Steps:

- Remove the spool by unscrewing the 2 screws on the bottom of the spool with a 3 mm Allen key. Advice: avoid doing the operation on the dock!


- Remove the cotter pin that holds the spool.

- Remove the spool from the shaft.


- The adjustment of the spool shall be done by rotating the spool to a position where the stainless steel pin fits into the spool's groove.

- Put the spool and the cotter pin back in place.

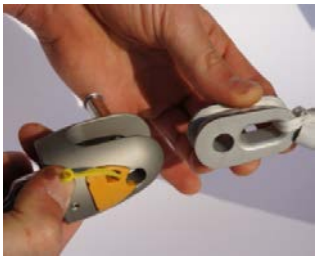
3.3- Installation of the cable and the sail:

Steps:

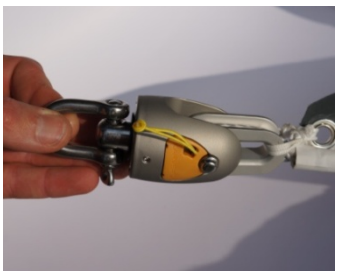
- Pull the yellow line down, push at the same time on the stainless steel pin to slide it open.


- Pull on the other end of the pin (already slightly out) to entirely open the fork.

- Install the tack thimble into the drum fork and the head thimble into the top swivel fork.



- Push the pin completely back in to lock the thimble in place.

- The head of the sail shall be attached to the thimble with a lashing. It is recommended to use a new generation of lines such as Dyneema® type.

- The tack of the spinnaker shall be attached to the independent swivel with a lashing. If the continuous line furler is not dedicated to one sail, a snap shackle may be used to link the two parts together. The height of the tack is determined by the lashing length.

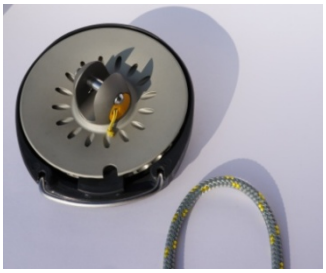
It is also possible to create an adjustable tack line. To do this, you need to attach a block to the independent swivel. We recommend using a soft shackle to attach the tack line. This will make sail changes easier, as well as making it easier to remove the tack line from the unit. When furling, it is important to pull the tack all the way down before furling (tension the luff as much as possible).

*If the thimbles being used are not the ones supplied by Karver, they must fit in the maximum width of the fork. If this is not the case, bending load will be applied on the pin and its mechanical resistance will be weakened. The continuous line furler safe working load is no longer guaranteed.

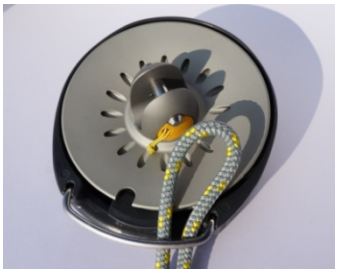
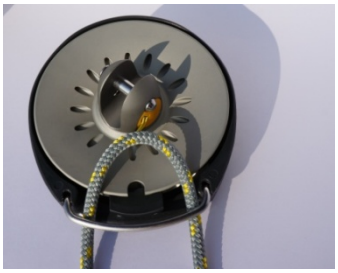
3.4- Engaging the continuous line:

Steps:

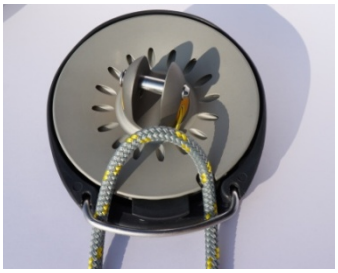
- Make a loop with the continuous line.



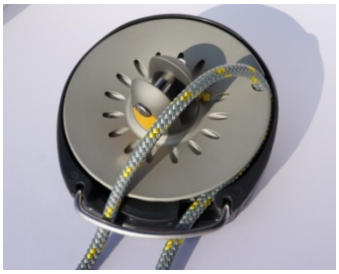
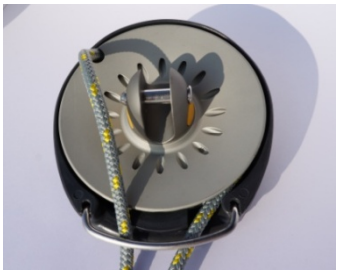
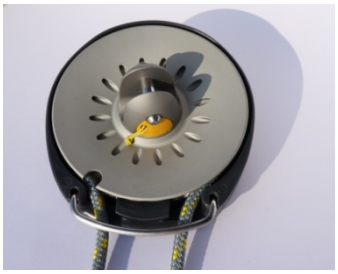
- Pass the loop under the stainless steel guide.

- Fit the line into the notch of the wheel on the right of the ejector.



- Rotate the wheel until the line goes under the guide and on the left side of the ejector.

4 OPERATION

4.1- Advice for furling and unfurling the sail:

- The tension of the anti torsion rope is critical. It needs to be very tight.
- Avoid furling the sail if it is luffing. It is best to sail as deep as possible without the sail collapsing into the fore triangle.
- Initially a big ease will unload the sail and enable the furl to begin. Then, pull back on the sheet maintaining slight tension as the sail furls. This will prevent too much cloth getting forward and sucked into the rope.
- If sailing with an adjustable tack, it is necessary to tension the tack before furling.
- You cannot do outside jibes with an adjustable tack line. However, you can do an inside jibe.
- The continuous line should be of high quality. The bigger the diameter, the better the grip will be. If you would like the line to "declutch" when unfurling, use a stiffer line.
- Don't keep the system in place when sailing in heavy conditions.

4.2- Locking the drum from the cockpit:

The new standard KF range is equipped with a removable mechanism for locking the drum.
The system is operated with the continuous line.

Sail unfurled

- Pull on the left line of the continuous line to furl (a marking "Furl" scribed on the spool indicates which side of the line to pull on). If one accidently releases the furling line, the mechanism will lock automatically.

- When the sail is entirely furled, release the continuous line, the drum automatically locks.

Sail furled

- To unlock the drum, pull a few inches on the left line of the continuous line (in the same direction as the sail was furled), then release and pull on the sheet, the sail will unfurl.

Note: If for any reason a load is too great, the lock is equipped with a fuse that will break and release the continuous line furler.
It will then be necessary to remove the lock (see INSTALLATION) and contact your retailer to obtain a new one.

5 TECHNICAL CHARACTERISTICS

Dimensions and weight are featured in the general catalog

MAXIMUM WORKING LOAD TO BE APPLIED ON THE INDEPENDENT SWIVEL

Model	Metric	Imperial
KSF1	400 Kg	880 lbs
KSF2	600 Kg	1320 lbs
KSF5	1T	2,200 lbs
KSF8	2T	4,400 lbs
KSF12	3T	6,600 lbs

CHOICE OF CONTINOUS LINE FURLER:

Boat length	Surface of the sail	Spinnaker	Spinnaker & Code 0
17 – 23 ft	375 sq. ft	KSF 1	KSF 1
23 – 33 ft	645 sq. ft	KSF 1	KSF 2
33 – 43 ft	860 sq. ft	KSF 2	KSF 2
43 – 53 ft	1,615 sq. ft	KSF 5	KSF 5
53 – 66 ft	2,690 sq. ft	KSF 8	KSF 8
66 – 83 ft	3,770 sq. ft	KSF 12	KSF 12

This guideline is only informational. The choice of a continuous line furler shall depend on the boat, the type of sail and the weather conditions of use. For more information or any questions, please contact your retailer or contact Ken Luczynski (Euro Marine Trading – Karver) by phone 401-849-0060 or by email ken@euromarinetrading.com

6 MAINTENANCE

Karver continuous line furlers are machined in high quality aluminum alloy and HR stainless steel.

It is possible that over time, oxidation marks may appear on stainless steel parts. These marks can be removed by applying stainless steel cleaner.

Rinse your system with soft water every time it is possible.

The Karver team is wishing you pleasant sailing!