

## Product Review: A Roller Furler for Sails with Hanks

Revised 4/18/2022

For three summers, I cruised and raced my Ensign with the popular Harken MK III roller furler. It made sailing safer, easier and prolonged the life of my headsail. However, it was cumbersome to assemble, install, transport and store, required expensive repairs to replace damaged sections of foil. Also, I did not like the effects of the rigid foil on the genoa luff entry.

In 2019 I purchased a roller furler which allows me to furl a standard Ensign Genoa #1 or Genoa #2 that has hanks. I want to share with any interested Ensign sailors what I learned by comparing my personal experiences with the **Harken MKIII Furler** vs the **Bartels Endless Furler**.

See pictures of both systems on pages 4-8.

### *Mechanism of Action*

The Harken design is made for headsails which have a luff tape. The luff tape inserts into a rigid, slotted 24-foot aluminum extrusion through which the forestay runs. As the furling drum rotates, the rigid foil, head and tack rotate together as the sail rolls up. The forestay does not rotate.

The Bartels design is made for headsails which attach to the forestay with hanks. As the furling flywheel rotates, the forestay, head and tack rotate together as the sail rolls up.

### *Hardware and Installation*

Both systems require a new forestay. In the Harken, the forestay wire is passed through a channel in the rigid aluminum foil and then terminal fittings are swagged on. In the Bartels system, the forestay wire is passed through a headstay swivel and then terminal fittings are swagged on.

It is a bit tricky to maneuver a 24-foot-long foil into the Harken torque tube and two people are required to attach the assembled foil, torque tube and drum to the bow stem. The Bartels system is easily installed by one person.

### *Sails*

The Harken system requires a genoa with a luff sewn on. With the Bartels system you can use your genoa with hanks as is, no modification is necessary.

### *Transport and Storage*

The assembled Harken foil with forestay is 24 feet long, rigid, and unwieldy. It must be securely strapped to your mast for transport and storage. If not firmly supported and protected it can easily be bent and damaged. The torque tube and furling drum assembly is bulky and relatively heavy, being 6 inches in max diameter and 18 inches in length.

Travelling with the Bartels system is easy, the forestay rolls up tightly and can be stored safely in the cabin or bilge while travelling as you normally would. The furling flywheel is 3.4 inches in diameter and 2.5 inches in length and fits in your coat pocket!

### *Operation*

The Harken furling drum is rotated by a control line that can only be led to a fixed point on one side of the boat so that it can be cleated after furling. There is only one direction of rotation when furling. The control line can get foul wraps on the drum and bind.

The Bartels furling flywheel is rotated by an endless loop of control line which can be configured around the entire perimeter of the boat and furled in any direction of rotation. It does not have to be cleated after furling. You cannot get wraps that bind in the flywheel.

### *Sail Trim- effects on tell tales and adjusting luff tension*

With a rigid foil, I had to move the tell tales further aft to get useful information. Not sure if I ever got them in the right place. Also, for racing trim I never got the hang of how to fine tune the luff tension when it was in the foil. Maybe it's just me.

With hanks on the luff, trimming the luff of the headsail with a Bartels furler is the same as without a furler.

### *Sail Trim- the Foot*

Sails without furling hardware ride about 1.5" above the deck, this is the original Genoa sail plan.

Sails attached to the Bartels RF ride 3.5" above the deck or 2" higher than the original Genoa sail plan.

Sails attached to the Harken RF ride 7.5" off the deck or 6" higher than the original Genoa sail plan.

### *Reefing the Headsail*

With the Harken system you can partially deploy the sail to depower. While Ensign sailmakers cringe at this thought because their sail is not cut to be shaped this way, optimum shape is not an issue for cruisers or anyone when safety becomes a concern.

The Bartels system is either furled or unfurled, it cannot be partially deployed.

### *Furling in Strong Air Going Upwind*

My impression is that I could furl the Harken system under a heavier load going upwind than I can furl the Bartels. If memory serves me right, I could furl the Harken at 18-20 going upwind.

I could furl the Bartels without any problem going upwind at windspeeds up to 15 mph. At about 16+ mph it became difficult and at times sloppy.

Going downwind at 16+, I had no problem furling it. After rounding the windward mark, with the pressure off, it worked perfectly. So, from a practical point of view the Bartels can be furled in strong air if you bear off the wind to take some pressure off the sail first.

A flogging sail cannot be furled properly by either system. Both systems furl easily off the wind.

### *Availability*

The Harken furling system is made by a US manufacturer and widely distributed across the country.

The Bartels furling system is made by a German manufacturer [Welcome to bartels.eu](http://Welcome to bartels.eu).

The Bartels system is readily available from a sailboat rigger in Ontario, Canada. Check out their webpage at this link: [Headsail Furling | Masthead Spars & Rigging \(mastheadsparsandriggering.com\)](http://Headsail Furling | Masthead Spars & Rigging (mastheadsparsandriggering.com)). The person to talk to there is Jinnie Gordon. She will make you a new forestay with the halyard swivel installed on it. The forestay should be made so that the final total length including the furling drum, turnbuckle (optional), forestay, and forestay swivel does not exceed the Ensign Class Association rule of 26 feet 3 and  $\frac{3}{4}$  inches eye to eye.

In summary, both the Harken and Bartels systems prolong the life of your headsail and have the same safety advantages and operational convenience. While I do not feel there is any competitive racing advantage for the Bartels system, I do prefer it. Installation, transportation, and storage of the compact Bartels system is much easier, and it is less prone to damage. In addition, I find it easier to trim a headsail that is attached to the forestay with hanks as in the original Ensign sail plan.

Tips on the Bartels System.

#### **1. Halyard Guidance**

The luff on the Ensign genoa does not extend all the way up the forestay. I use a 12-inch lanyard to attach the head of the genoa to the halyard swivel. I do this so that there is very little halyard exposed coming off the halyard tang block before attaching to the halyard swivel. This will help prevent a dreaded halyard wrap which can seize up any furling system. If there is a long length of halyard exposed and it ever becomes loose it can flop around and seize on the forestay. Using a lanyard rather than installing a restrainer is preferred because a restrainer would change the direction of pull on the luff while using a lanyard keeps the force on the luff coming off the block at the proper angle.

#### **Thread Protectors**

The Bartels furler wraps the sail tightly around the hanks in the luff. My brass hanks have a knurled knob on them which can abrade the sail or even make a small cut at the point of contact. To prevent this problem, I installed thread protectors on the hanks. I bought them at Loews. See pictures on page 9.

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**HARKEN®**

**MKIII**  
**Jib Reefing & Furling**  
**Installation Manual**

**Unit 00AL**

*English • Deutsch • Français • Italiano*



**WARNING!** Strictly follow all instructions to avoid an accident, damage to your vessel, personal injury or death. See [www.harken.com](http://www.harken.com) for additional safety information.



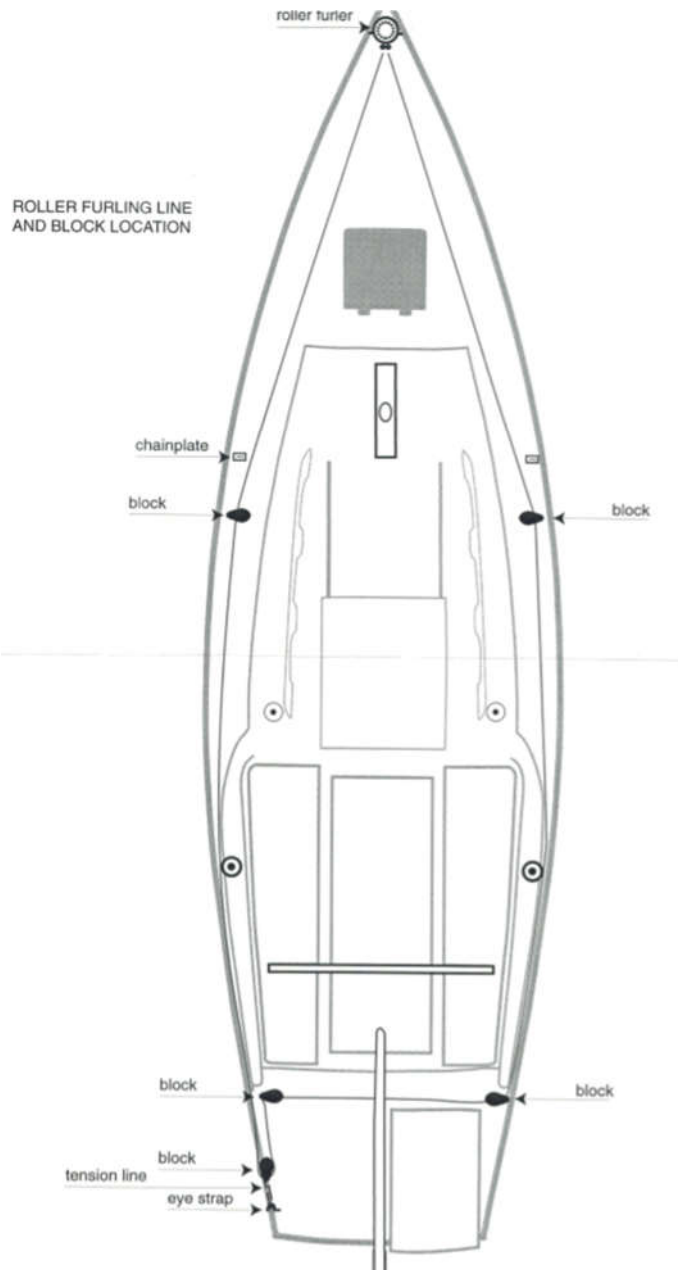
Bartels Endless Furler. View #1



Bartels Endless Furler. View #2



Bartels Forestay Swivel, Above and Headsail Swivel, Below







Hanks and Thread Protectors



Thread Protectors Installed on Hanks