

# FEATURES

## 1. Halyard Swivel Turns Freely

Strong, lightweight halyard swivel reduces windage and weight aloft to minimize pitching and heeling. Stacked bearing races evenly distribute loads so foils turn freely.

MKIV has independent halyard and tack swivels that furl sail center before head and tack for improved sail shape and upwind pointing.



## 2. Strong Foil Joints

Tough triple-interlock foil joints withstand years of torque loading.



## 3. Easy to Assemble Foils

C-shaped connectors slip over the headstay without feeding wire through the connector.



## 4. Drum Installs Over Existing Turnbuckle

Units are adaptable to a variety of rigging options for easy installation. Harken toggle assembly accepts standard turnbuckle using swage, rod, Norseman® or Sta-Lok® terminals. A single stainless steel clevis pin provides access to the turnbuckle for adjustment.



## 5. Stainless Steel Feeder

MKIV stainless steel feeder allows fast single-handed hoist and quick sail changes.



# FURLING

Details Make the Difference



## Easy Reefing and Furling

Multiple rows of large-diameter Torlon® ball bearings used in high-load areas to minimize friction for easy reefing and furling; bearings require no lubrication or isolating seals.

## More Furling Power

Large inner spool diameter increases mechanical advantage for powerful reefing and furling. Smaller outside dimension allows unit to fit narrow bows or below deck.

## Long-Lasting Protective Finish

Aluminum line guard, torque tube and swivels are deep-saturation Hardkote-anodized for no-fade UV-stabilization, strength, and durability. The line guard is urethane-coated for additional corrosion protection.

Specially formulated low-stretch black line is abrasion and UV resistant; standard on Units 0, 1 and 2.

# FURLING

Ultimate Sail Control



Tartan Yachts Photo

## Easy Shorthanded Cruising

Instead of changing sails, simply furl or unfurl to suit the conditions.

## Safe and Convenient

The ability to reef makes it easy to reduce speed and gain visibility off the bow—all from the safety of your cockpit.

# HARKEN®

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# HARKEN®

INNOVATIVE SAILING SOLUTIONS

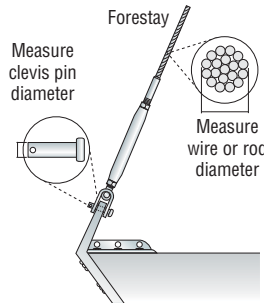
# FURLING Q&A

## JIB REEFING & FURLING SYSTEMS

### SAILS, SHAPE, SIZE & DESIGN

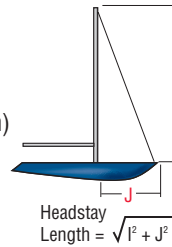
#### How do I select the right furling system for my boat?

The **Ordering Furling** guide available at [www.harken.com](http://www.harken.com) explains how to choose a furling unit and accessories for your boat. You will need to know the clevis pin diameter as well as your headstay length and diameter.



#### Furler Size Guidelines:

- Unit 00AL: 20 - 26 ft (6 - 8 m)
- Unit 0 MKIV: 22 - 30 ft (6.5 - 9.1 m)
- Unit 1 MKIV/Cruising: 28 - 36 ft (8.5 - 11 m)
- Unit 2 MKIV/Cruising: 35 - 46 ft (10 - 14.2 m)
- Unit 3 MKIV: 45 - 60 ft (13.7 - 18.3 m)
- Unit 4 MKIV: 65 - 80 ft (19.8 - 24.4 m)
- Unit 4 MKIII: 75 - 90 ft (22.9 - 27.4 m)
- Unit 4.5 MKIII: 85 - 110 ft (25.9 - 33.5 m)



#### What are the differences between Harken's MKIV and Cruising furlers?

Both are designed for longevity and ease of use, but the MKIV has additional features that make it more suitable for performance cruising and racing.

	MKIV	Cruising
<b>Foils</b>	 Aerodynamic profile. Double grooves for faster hoists, douses, and sail changes.	 Round profile for easy rolling. Single groove.
<b>Halyard and Tack Swivels</b>	 Independent swivels for improved sail shape.	 Fixed swivels
<b>Drum</b>	Split drum is removable for racing	Fixed drum

#### Are all Harken furlers capable of reefing a headsail?

Yes, as long as the furling system has aluminum extrusions covering the headstay.



#### Can I change sails with my Harken furling system?

Yes, changing headsails is simple. Just attach the head and tack to their shackles, pass the luff tape through the prefeeder and feeder, and hoist. The feeders smooth out wrinkles and minor twists in the sail, so you can easily raise sail while at the mast or in the cockpit. Choose the optional snap shackles if you plan to make a lot of sail changes.

#### Why do I need more than one jib if I can just reef?

Experienced seamen rarely sail without a heavy-air jib because even the best all-around reefing sails can fail. In a blow, you should change to a reefable heavy-air sail before leaving the harbor. A storm jib is vital for offshore passages because of the possibility of hurricane weather. In light air, having a large, lightweight genoa can make sailing a lot more fun.

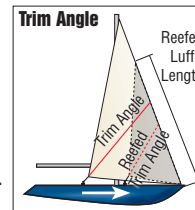
#### How can I reduce heel and get better control with a reefed sail?

Harken's MKIV furlers solve the inefficient shape of reefed sails with independent head and tack swivels. The independent swivels allow the middle to furl first, flattening the sail and reducing heel.



For the best results, use a sail designed specifically for reefing with your MKIV furler. Reefing sails should be designed to have good shape from about 5 to 40 knots.

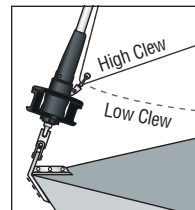
Additional sail shape adjustments can be made by increasing or decreasing halyard tension and by changing genoa lead car positions. After reefing, simply move the car forward so the sheet between the car and the clew points to the middle of the luff.



#### What is the proper luff tape for my Harken furler?

Units 00AL, 0, 1, 1.5, 2, 2.5, 3, 3.25, and 3.5 use #6 luff tape. Units 4 and 4.5 can use #6 or #7 luff tape. #6 luff tape is 0.1875" in diameter (about 5 mm) and #7 luff tape is .218875" (about 6 mm).

Most furling sails are designed with a high clew to give the lower part of the sail a better wrap around the foils, and to improve visibility under the sail. A sail with a moderately low clew has the greatest efficiency and it will maintain good visibility because the tack of the sail is raised off the deck.



#### Can I use my racing sails with a Harken furling system?

Yes. Most racers don't use a #1 genoa on the furler because the luff is usually too long and the construction too light. A #2 or smaller genoa should be strong enough to handle reefing and short enough to use with your furling system. Harken MKIV furlers feature an easily removable drum that allows you to use the dual groove extrusions as a twin-foil headstay—this means fast sail changes when you're racing.



### QUESTIONS FOR YOUR SAILMAKER

#### Can I use my cruising spinnaker with a Harken furler?

Yes. Most cruising spinnakers attach to the headstay with a snap shackle. Ask your sailmaker to replace the shackle with one that works with a furled sail—probably one with a padded strap or string of beads to hold the sail near the headstay.

#### What size genoa should I use as my primary reefing sail?

This depends on your boat and your normal sailing conditions. Most boats find a 150 percent genoa ideal. Light air and 125 percent genoas are also common in certain regions.

#### Can I use my old sails with my new furling system?

Yes. Ask your sailmaker to modify the sails you use regularly, including at least one genoa and one heavy-air sail. If you sail in an area that requires specialty sails like drifters, convert these as well.

#### How are sails modified for jib reefing and furling?

Your sailmaker will remove the hanks and add a luff tape so the sails slide into the foils. Larger sails may need to be shortened to make room for the halyard swivel. Adding a sun cover to the sails you store furled will protect them from ultraviolet damage.

#### What should I look for when I purchase a new sail?

Look for a sail designed for a range of wind conditions. The best sails to use with roller reefing and furling units are those built with shaping devices in the luff to improve sail efficiency. Adding a sun cover to the sails you store furled will protect them from ultraviolet damage.

#### What's the best way to protect my sail from the sun?

Your sailmaker can add UV-resistant material to the foot and leech panels. Alternatively, some sailors use a long sock-like bag to cover their furled sail. This design won't add weight to your genoa but you'll need a spare halyard to hoist it. Be aware these covers can flog in a breeze.