Reef Rite

Marine Products

Available in the USA exclusively through:

Desktop Wings, Inc.
700 East Walnut Street
Perkasie, PA 18944
215-453-9312

DESKTOP WINGS

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Designed and Manufactured by REEF-RITE REEFING Co.,
Kerikeri, New Zealand

EXCLUSIVE FEATURES OF THE "REEF RITE" FURLERS

- **M**echanical ratchet pawl locks furling drum when reefed (removing usual loading on furling line; no chance of sail accidentally unfurling; pawl is easily unlocked when unfurling sail).
- **O**ptional Downloader & Kiwi slides (no more torn luff tapes; total control when hoisting and lowering sail).
- **K**iwi slides easily fitted (reducing cost of converting headsail).
- **F**orestay adjustment using heavy duty turnbuckle and twin groove Foil Extrusion (standard equipment).
- **T**op swage is three times longer than normal to fully support top foil bearing (increases forestay life).
- **L**ower unit has three highest quality industry standard bearings with two seals above, and two seals below the assembly (maintenance free).
- **A**ll plated parts are hard anodized or bright chromed (increased durability).
- **F**oil Extrusion section connectors machined from solid stock for exact fit and superior strength.
- **A**ll machined parts machined from solid stock (no castings).
- **Five year Warranty.**

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THE HEAD SAIL FURLER

The FURLING FOIL ASSEMBLY

The foil assembly is the aluminum extrusion that extends from the drum at the bottom of the forestay to the top of the forestay. The assembly must have sufficient torsional stiffness. In laymen's terms it should not twist. The assembly is fixed at the bottom by a reef line or in the case of a Reef-Rite furler, by a locking pawl.

Many of the problems associated with roller furlers can be attributed to the design of the foil assembly. Perhaps the worst situation is having the luff tape of the sail pull out of the luff groove and jam part way up. It is then very difficult to get the sail up or down. All Reef-Rite systems have twin oversize luff grooves designed to overcome this problem. An additional advantage of oversized grooves is easier sail hoisting.

Another problem associated with foil assemblies is the joints. Typically, at each joint there is some kind of aluminium sleeve inside the foil extending above and below the joint. The aluminium sleeves are usually fastened to the extrusion with set screws.

The main problem with those joints is that if the set screws work their way out or if there is any play in the joint because of a loose fitting sleeve, the two sections of extrusion will work back and forth damaging the sail. This scenario is often the cause of breakage during removal at annual haul out.

With the Reef-Rite systems, the extrusion joiners, or sleeves, are machined from solid stock. They fit very snugly in the extrusion and accurately align adjoining sections. This assembly is extremely strong, resisting twist during use and greatly lessening the chance of damage during removal at annual haul out

Finally, the joiners are fastened to the extrusion with monel rivets. This is the same type of rivet used on most masts and there is virtually no chance of the rivet coming loose or working its way out.

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The FORE-STAY

Over the years, yachtsmen have told about forestays breaking within a short time of having furling gear fitted. Our analysis on this is that there is so much combined weight in the forestay, sail and foil that, when sailing, it creates a big bending moment where the forestay wire exits at the top of the foil assembly. As a result of the continuous bending, the forestay wire finally breaks at that point.

To overcome this problem the Reef-Rite system includes a forestay top swage fitting approximately three times longer than a normal fitting. This brings the actual start of the forestay wire well down inside the foil. The bending moment now occurs on the swage, which is much stronger and capable of withstanding the bend. We believe this may extend forestay life by as much as threefold under roller furling conditions.

Secondly, because furling gear is often fitted on older boats, the age and condition of the rigging is unknown. When the Reef-Rite furling system is installed, the existing forestay is always replaced with a new one as part of the base price.

The HALYARD CAR

There are two ways to design the halyard car.

The first is with open type bearings that can be washed out after all the dirt (at marinas) or salt gets in.

The second is with fully protected bearings and seals. Reef-Rite elected to go with the fully sealed bearings for long term maintenance free operation. Our halyard car is constructed of stainless steel with acetal (a very sturdy plastic) foil guides.

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The LOWER FURLING UNIT

The most important aspect of the lower furling unit are the bearings.

For long term low friction operation, the bearings must be high quality and very well sealed. Most units have some type of sealed bearings.

The bearing assembly in the lower unit of Reef-Rite has three bearings with two seals at the top and bottom of the bearings assembly.

Many furler manufacturers use only one bearing and a single seal top and bottom. With this single narrow bearing, the assembly can twist on the vertical axis as the foil moves opening the seal joints.

Another innovation of the Reef-Rite system is the use of a mechanical pawl. This is similar to the primary winches. The pawl, when engaged, allows the furler to rotate in only one direction. As a result, when a sail is furled the load is on the pawl and not on the furling line. The solid locking action of the pawl means improved sailing performance under furled conditions.

A second benefit is improved safety. With normal furling systems there is a continuous, often heavy load on the furling line when the headsail is partially furled.

If the furling line becomes loose or breaks, the sail is suddenly released. This usually happens when you want it the least.

To disengage the pawl, the helmsperson/ sail trimmer simply flips a small conveniently mounted Hyfield lever. This lever controls a small wire led forward to the furler lower unit.

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THE HEAD SAIL FURLER

SAIL HANDLING

. As sails with luff tapes are lowered, the entire luff is free to catch the wind, blow overboard or simply flog the poor individual who has been talked into bringing the sail down. More often than not, the activity resembles a sumo wrestling competition staged on a pitching foredeck rather than the controlled exercise it should be. In fact it can be quite dangerous. On top of that, luff tapes are costly to install and to repair. On many types of foil the groove is so small that a damaged luff tape can't be repaired. It has to be replaced in its entirety.

With Reef-Rite furling systems we incorporate what we call the "**Kiwi Slide**" and "**Downloader**". The Kiwi Slide is a very strong plastic slug that is sewn onto the luff of the headsail at normal jib hank centers. The "Downloader" gate is a section of extrusion about as long as the width of your fist. It is situated about waist high on the foil assembly. This short section of extrusion can be unlocked from the adjoining sections and rotated 180 degrees, which opens the two parallel grooves. The sail is then loaded by sliding each of the "Kiwi Slides" attached to the headsail (starting with the bottom) downward into the section of foil below the gate.

When the sail is loaded, the gate is then closed and locked into place.

Attach the sail to the halyard car and you're ready to hoist.

Some of the advantages include:

Captive luff. Whether hoisting or lowering a sail, the captive luff makes the process simpler. The sail won't go overboard and you won't have to wrestle it to the deck. In short, it offers safe easy control.

Cost. It is cheaper to change your sails to Kiwi Slides than to change to luff tapes.

Repairs. Repairs can be made at sea. Kiwi Slides can either be sewn on by hand or tied on through eyelets in the sail (Kiwi Slides can be supplied with long webbing). Luff tapes usually can't be re-

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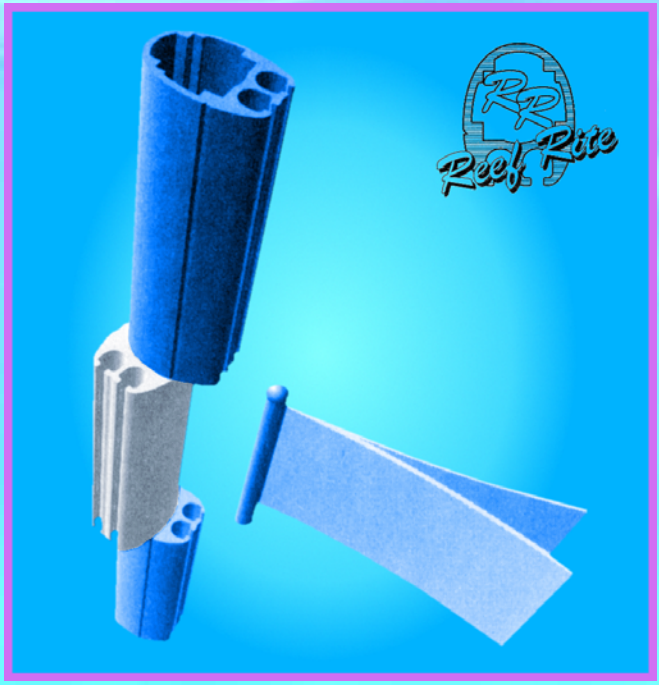
DOWNLOADER WITH KIWI SLIDES



Features

- Easy single, and twin sail handling
- Captive luff
- Sail conversion easier and cheaper than Luff Tapes
- Easy sail change mid ocean
- Used in conjunction with ***'REEF-RITE'*** furler
- Perfect for short-handed crew
- More than 3500 headsails fitted with ***KIWI SLIDES***

HEAD SAIL FURLER ASSEMBLY

1 SILENCE TUBE
There is a full length plastic silence tube between foil connectors. No metal to metal contact.

2 MONEL RIVETS
Are used to fasten foil connectors. Simple; rugged; strong; won‘t work loose.

3 TWIN GROOVES
The main foil has two large grooves to fit Kiwi Slides or luff tape sails. All models can incorporate the downloader.

4 FOIL CONNECTORS
Are machined from solid stock to give precision fit which provides maximum torsional strength.

STAINLESS STEEL
Halyard car

5 RYLOCK
Safe; strong; easy installation; impossible to have crossed wires on assembly due to the button.

6 BUTTON

MAINTENANCE
Bearings in main lower unit and halyard car are precision hardened and ground, protected by double neoprene seals ensuring a maintenance free system.

SPARES
Industry standard bearings and seals are available throughout the world.

POSITIVE LOCKING PAWL
Our system has a positive locking mechanical pawl. Like your primary winch. When you furl, the drum is locked at each revolution, giving maximum sailing performance. Other furling systems, when furled are continually moving due to stretch of the furling line. The Pawl is released by a simple lever (hyfield) at the helmsman‘s position. This feature is only available on "Reef-Rite". With a normal furling system, a broken or out of control furling line means you suddenly have full sail.

RADIAL ADJUSTMENT
360° micro-adjustment of lower unit provides accurate alignment of furling line to the first guide.

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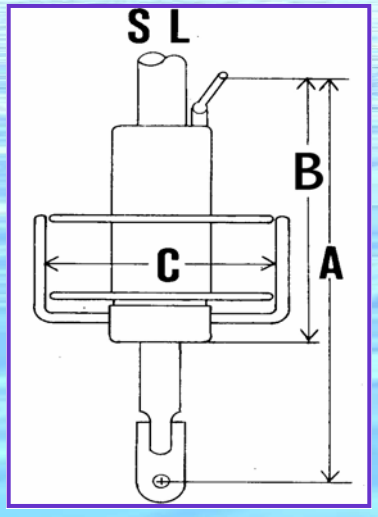
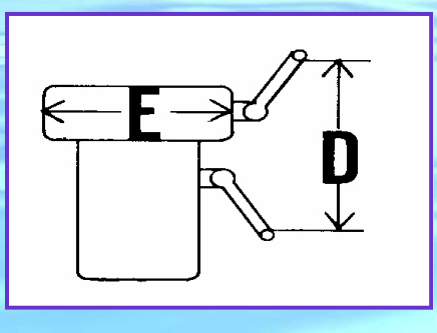
HEAD SAIL FURLER SPECS

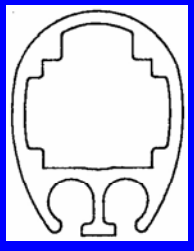


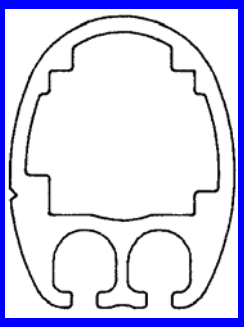


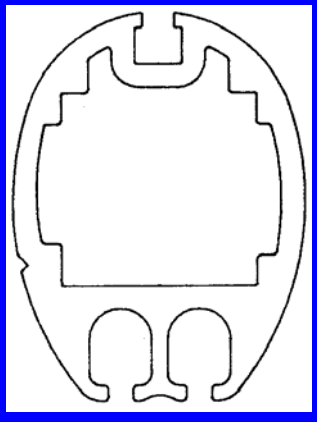
FORESTAY DIAMETER	1/4“	5/16“	3/8“	7/16“ and 1/2“
MAX SAIL AREA (sq. ft.)	350	500	700	900
MODEL NUMBER	6 / 40	8 / 60	9 / 70	12 / 90
A MAXIMUM (inch)	18 3/4	21 7/16	27	28 1/2
A MINIMUM (inch)	16 5/16	18 1/4	23	24 9/16
B (inch)	8 13/16	9 13/16	13	13
C (inch)	6 1/4	6 13/16	9 1/4	9 1/4
D (inch)	5 15/16	5 5/16	5 5/16	6 1/16
E (inch)	2 9/16	3 7/16	3 7/16	4 5/16
FOIL WEIGHT (lb per foot)	0.40	0.64	0.64	0.82

FURLING SYSTEMS DESERVE STRONG FOIL ASSEMBLIES

Foil Extrusions shown to scale







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Model Price Range

As of June 21, 2007

Forestay Diameter	Model No.	Price (U.S. Dollars) **
Light Air 1/4“ (6 mm)	6/40	$2,374
Normal 1/4“ (7 mm)	6/40	$2,518
5/16“ (8 mm)	8/60	$3,109
3/8“ * (10 mm)	9/70s	$3,716
3/8“ (10 mm)	9/70	$4,106
7/16“ - 1/2“ (12 mm)	12/90	$5,805

* Model 9/70s is a compact 3/8” system designed for headsails under 430sq feet on Cutter rigs, Multihulls etc.
** Prices subject to change with currency exchange rate variation.
NOTE: Call for pricing on systems ordered without the optional Downloader assembly and Kiwi Slides.

The Price Includes:

- Lower Furling Unit complete with Turnbuckle and Toggle.
- Stainless Steel Halyard Car.
- Main twin groove Foil Extrusion, full length supplied.
- Downloader assembly and Kiwi Slides (optional).
- Spar Connectors (with rivets).
- New Forestay, complete with “Rylock” fittings and Toggle.
- Furling line and Locking Pawl cable.
- Furling Line/Cable Guides.
- Full Installation Instructions.
- Five Year Warranty.
- FedEx delivery to your door.

A Complete Ready To Install Package, No Hidden Extras.