



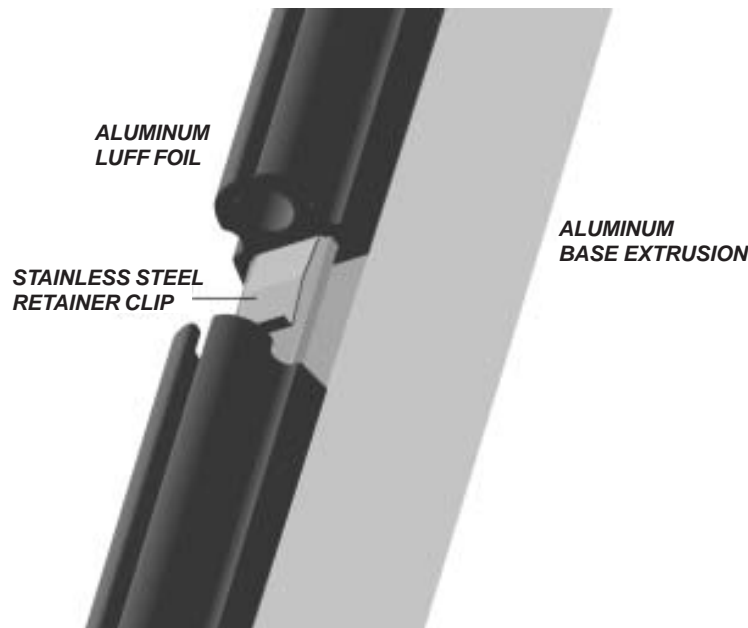
**ALUMINUM LUFF FOIL
S/S RETAINER CLIPS
FLEX FEEDER & LINER
HEADBOARD CARS**

DEALER & REPRESENTATIVE TECHNICAL SHEET

03.26.09

Due to the number of requests for a Leisure Furl headboard car to handle high leach loads on larger yachts, Forespar® designed a new aluminum luff foil system. Tracks in the sides of the luff foil extrusion accept the new headboard cars. The following information will explain the installation of the luff system, and provide dimensional information for the new headboard cars.

LUFF TRACK ASSEMBLY FOR 14/5, 18/6, 19/6, 20/7, 25/8 & 25/8 OS MODELS



Models 14/5, 18/6, 19/6, 20/7 & 25/8 & 25/8 OS use a two piece base and luff foil system. The luff foil consists of aluminum extrusions and a polymer flex feeder with aluminum liner. After mounting the aluminum base extrusion with a .020" gap between lengths, slide on the luff foil. The foil pieces are held in place during installation by a stainless steel retaining clip which is pushed into the bottom of each length of foil. **It is very important that the only field cut in the luff foil sections be at the top of the uppermost section.** This way, the luff tape will never come in contact with a raw cut end. It is critical for the installer to check both ends of every luff foil section to ensure that all edges are smooth and fair.

The aluminum luff foil system is 12" shorter than the base extrusion system. The "cut length" of foil is the piece which goes at the top, and the cut end must be at the very top of the foil system. This placement ensures that the sail will never be in contact with a cut end of foil. Slide the cut length of foil to the top of the base extrusion and push a stainless steel retainer clip into the bottom. Continue sliding 6' lengths of foil onto the base extrusion, placing a stainless steel retainer clip into the bottom of each length. These retainer clips help hold the foil lengths in place during installation and establish a .020 gap between each length of foil. **Ensure that the bottom end of the aluminum luff foil is 12" above the end of the base extrusion.**

This is an important dimension to allow sufficient of the flex feeder fastener and the base extrusion.

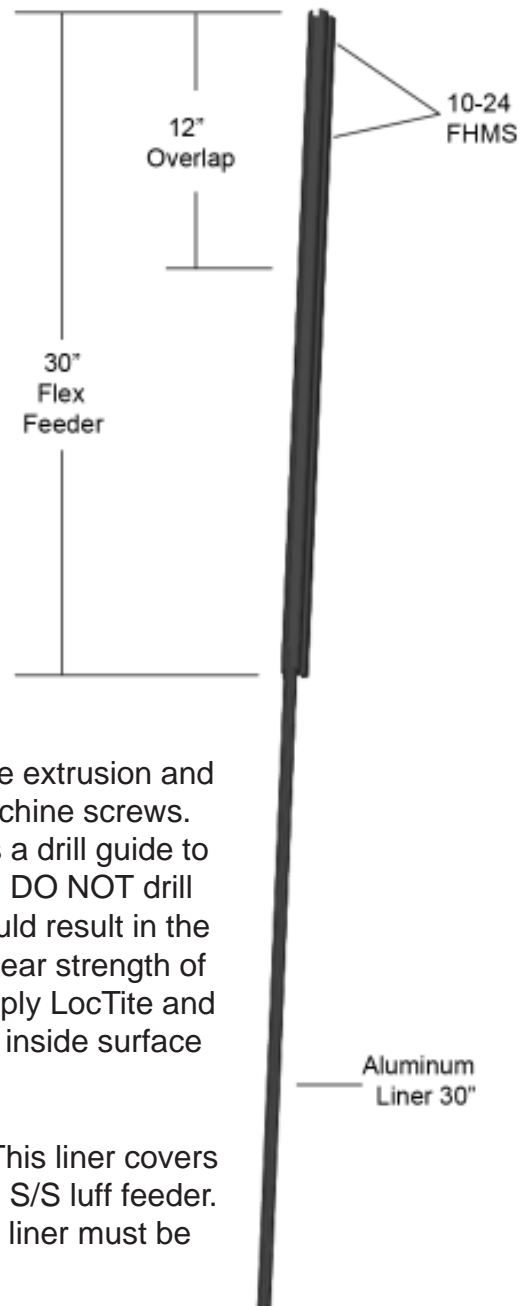
The .020 gaps in the base extrusion joints and luff foil joints allow for modest mast bend without crushing the ends of the extrusions.

EVERY END OF THE LUFF FOIL SECTIONS AND THE 30" FLEX FEEDER LINER MUST BE PERFECTLY FAIR

Any burrs or sharp edges on the ends of the foils will cause luff tape friction, wear and failure. This is why the only "field-cut" length of foil is at the very top of the luff foil assembly where the sail never reaches. Inspect all luff foil ends during installation and smooth as necessary using fine grit emery cloth. **When the luff foils are fully installed, the bottom must be 12" above the bottom of the base extrusion.**

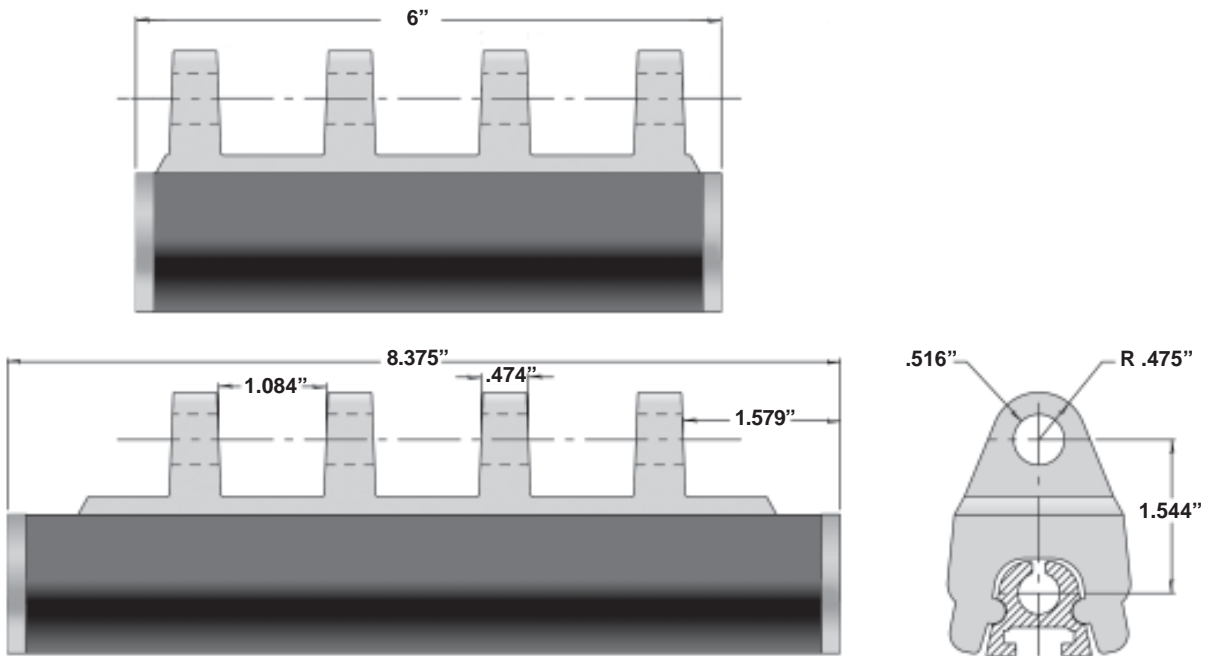
Now the 30" polymer flex feeder is slid onto the base extrusion and secured using the two 10-24 X 1/2" fillister head machine screws. Drill using 9/64" bit. Carefully use the flex feeder as a drill guide to locate the fastener locations on the base extrusion. DO NOT drill the base extrusion through the flex feeder which could result in the holes in the flex feeder being elongated. It is the shear strength of these screws that holds the flex feeder in place. Apply LocTite and tighten them making sure their heads are below the inside surface of the flex feeder.

Next, slide the aluminum liner into the flex feeder. This liner covers the two mounting screws and is held in place by the S/S luff feeder. As with the ends of the luff foils, the ends of the flex liner must be free of burrs or sharp edges.



While the Leisure Furl headboard car is designed to handle the high leach loads present on boats 50' LOA and above, it can be used on any offshore system fitted with the new aluminum luff foil. The car runs on Delrin® slide rods which provide ultra low friction and great strength. The drawing below has the dimensions necessary for adapting sail heads. A 1/2" diameter vertical pin (not shown) is provided for webbing head attachment. Two sizes, 6" and 8-3/8" cars, are available.

HBC-1	8-3/8" Headboard Car Forespar®	P/N 866076
HBC-2	6" Headboard Car Forespar®	P/N 866078



NOTE:

As this is a new option, sailmakers should check their orders with the Leisure Furl dealer to determine if a car is being used prior to building the sail. It would always be prudent to have the car in-hand to optimize the head design.