

## Exocet 2015 developments – designer's notes

The Exocet moth is at the forefront of moth design and construction. We have lead the way by developing small area, high lift, high span foils, skinny struts, small rudder foils, lowered rigs, fully in-flight adjustable gearing and aerodynamic hulls to name just a few innovations.

Like the moth class itself, we never stand still and are always looking for the next development to give Exocet sailors the edge on the water.

All development results from extensive mathematical and fluid dynamic modelling followed by rigorous on the water testing. You can be assured that these are real improvements and not just the latest fads.

Below are some of the new features that will be available as options on 2015 boats and as retrofit options to existing boats.

1) New wand system

The Exocet is renowned for its superior handling qualities and ease of use. You can't sail fast if you don't have control.

For 2015 we have improved the control even farther by adding a new design wand control system. This allows greater control with less gearing which gives more speed in choppy conditions.

2) Aerodynamic fairing

To augment the lowered rig, we have developed a fairing to clip over the wing compression struts. The fairing results in a small increase in sail drive force upwind. For optimal effect, the fairing should be used in conjunction with the new aero-mesh trampoline set.

The first fairing has been built and is being evaluated, while we see there are small gains so far we need to constantly balance these against cost/ weight/ usability and practicalities. So currently this is not available as a production item as its still in developmental stage. We will realise details when we know more.

3) Moth sails and spars

Exocet sailors Mike Lennon, Chris Rashley and myself have been working hard on developing Moth sails that are fast both upwind and down. The sails are the culmination of aerodynamic design, flying shape analysis, and expert sailmaking utilising the latest materials and construction techniques.

We are pleased to announce that 2 sails, based on these pre-production prototypes, will be available in early 2015 from Lennon Sails. The Xply has the advantage of uniform stretch in all directions which gives good gust response. The membrane sail is a little lighter and more should last longer, but the advanced construction comes at an increased price. The sails are available for lowered and standard rigged boats. The sails are designed to be used with CTech med 37mm masts, but are also compatible with the CST Elite 4 mast. Both of these sails can be ordered through Maguire Boats as part of the package.

*Kevin Ellway January 2015*

*Ellway Aero-Hydrodynamic Design*

