PRO-SET® NEWS

DINGHIES BUILT USING PRO-SET

The Vampire Foiling Catamaran

The Vampire Foiling catamaran

The Super Nova

Osprey

Flying 10

Whisper

Exocet

Blaze

HADRON 2

Merlin Rocket

Moth

ANOTHER FANTASTIC RYA SUZUKI DINGHY SHOW!

The event was a great opportunity to spend some quality time with our customers, from up-and-coming sailors doing repairs on their boats, to large boatyards adopting the latest epoxy infusion techniques.

Between meetings, we also got to see some of the best dinghies coming out of the UK right now and there were some real beauties on show.

Here's our 'ten of the best' line up for your reading and viewing pleasure.

1 | The Vampire foiling catamaran
This revolutionary catamaran is the result of a collaboration between sailor William Sunnucks and boat builder Graham Eeles. Based on the design of the hugely successful International Moth and built in Brightlingsea, it flies on underwater 'foils' and is capable of achieving speeds of more than 30 knots downwind. The boat's carbon fibre foils, which lift the twin hulls free of the water while sailing, are made using PRO-SET infusion epoxy and the port-side main foil is clearly visible in this picture taken at the show. Find out more and watch a video about The Vampire, at: **www.epoxycraft.com/the-vampire-project/**

2 | Super Nova by Hartley Boats
Designed for single-handed sailing without the complexity of wins or trapeze wires, the Super Nova dinghy class is extremely popular. This sleek, latest-generation dinghy from Hartley Boats is the fastest and best performing Super Nova ever. PRO-SET laminating epoxy ensures that it's up to the stresses and strains of competitive racing, while keeping its weight down to a svelte 50 kilograms. For more information, visit: **www.hartleyboats.com/index.php?id=16**

3 | Flying 10 by Tim Loftus
Built by Tim Loftus and Dan Johnson (Johnson & Loftus Boatbuilders in Ullapool), the Flying 10 won the Concours d'Elegance at the show this year. The singlehanded dinghy design from 1949 by Uffa Fox is built from double diagonal Utile veneers, cold-moulded with WEST SYSTEM epoxy for strength and longevity. You can see the proud builders and the trophy in the picture. You can also find out more at: **www.johnsonandloftus.co.uk/uffa-fox-flying-10/** and **www.epoxycraft.com/flying-10-lovable-dinghy-prize-winning-finish/**

4 | Osprey by Hartley Boats
The brand new Osprey was infused with PRO-SET INF Epoxy in the few days before the show this year, making it literally hot out of the mould. Designed by the legendary Ian Proctor, creator of the National 12 and the Merlin Rocket, this version of the Osprey (Mark IV) has been redesigned and updated by Phil Morrison. Hartley's blurb says, "If you like the idea of a Bentley Continental GT, this could be the dinghy for you." With exquisite quality laminates, a super-stable design and weighing in at just 140 kilograms, who are we to argue? Read more at: **www.hartleyboats.com/index.php?id=71.**

5 | Exocet by Simon Maguire
The design of Simon Maguire's Exocet International Moth is a World Championship winner. Having recently moved into a new production facility, Simon is now gearing up to produce more of these exquisitely finished "mothies". The Exocet is a monohull design that runs on T-Section foils, which means its super-fast and at 28 kilograms including sails and rig, it's even manageable out of the water. Our man at the show described the finish on some parts of the boat as being "like jewellery" in its detail and quality – a beautiful design, beautifully realised. Find out more about the Exocet International Moth at: **www.maguireboats.com/New_Designs.**

6 | Whisper by White Formula
The Whisper is a wonderful example of a world-class foiling catamaran built with first-rate materials (PRO-SET INF Epoxy), with excellent process control. The results are a lightweight, flawless composite boat that drew a lot of attention at this year's show. Find out more at: **www.whiteformula.com/WhiteFormula_UK/Whisper.html.**

"THERE WERE SOME REAL BEAUTIES ON SHOW."

7 | Blaze by Hartley Boats
Hand-laminated with PRO-SET LAM epoxy, the Hartley Blaze is a leader in its class. With great materials and process control, Hartley has delivered a flawless finish that will be the envy of every keen competitor in the Blaze Class. Find out more about the Hartley Blaze at: **www.hartleyboats.com/index.php?id=240.**

8 | Merlin Rocket by Winder Boats
Built 10 years ago using PRO SET epoxy the Winder Merlin Rocket is still looking a million dollars. At this years' show David Winder was showing two Merlin Rockets, plus his legendary Fireball dinghy. He continues to favour the quality and handling characteristics of PRO-SET epoxy, which features in most of his builds. Find out more at: **www.winderboats.com/about/.**

9 | HADRON H2 by Hadron Dinghies
Designed by Keith Callaghan and finished by Simon Hipkin, HADRON H2 is a delight for single-handed sailors who don't want the complexity of a trapeze. It's light, fast, strong and exciting to sail. Find out more at: **www.hadrondinghy.com/.**

10 | Moth by Mike Lennon
Based on a brand new design by Dave Hollom, the Moth was built by Mike Lennon and White Formula. It's another great example of the exquisite composite that can be achieved with PRO-SET epoxy and superb process control. Find out more at: **www.lennonsails.com/news/new-lennon-pp-international-moth.**

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THE INNOVATORS

The versatility of WEST SYSTEM epoxy allowed keen sailor Jaanus Tamme to create prototype pulley blocks from a back-pack 'factory' whilst attending regattas. Now he has a global distribution network.

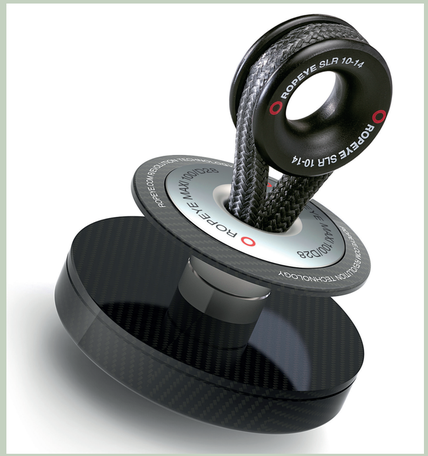
Based outside the city of Tallinn, the capital of Estonia, keen racing sailor Jaanus Tamme has developed a remarkable and award-winning range of pulley blocks based on a combination of WEST SYSTEM epoxy, Dyneema rope and carbon fibre laminates. Named Ropeye (with the second 'e' dropped to avoid search engines listing an eye complaint) the range has proved so strong and versatile that it has been adopted by many of the key racing yachts in the world. Teams from the America's Cup through to the Volvo Ocean Race are specifying the products, and they are also selling well to cruising enthusiasts and boat builders. Customers are increasingly drawn to the Ropeye brand as the deck hardware is so easy to fit, and also compliments the look of a boat thanks to the glossy carbon fibre finish.

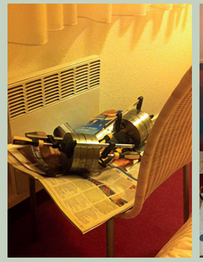
The idea first came to Jaanus as he competed in the Mini Transat series, a gruelling sailing event in which single-handed sailors race across the Atlantic in boats of no more than 21ft (7m) in length.

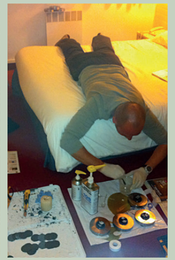
"I had spent 15 years racing offshore competitively, and own a Mini Transat yacht," Jaanus said. "This proved the ideal test bed, because Transat sailors rarely have much money. The boats are usually built in a garage by enthusiasts, and outfitted to a tight budget. They are constantly experimenting with systems that must be simple but effective."

Jaanus was concerned that a modern pulley block has too many potential failure points, and is also relatively heavy. He didn't like the fact that it needed several bolts to hold it to the deck, so began to experiment with carbon fibre and Dyneema rope as a way to increase the strength and flexibility of the anchor point.

His racing commitments involved a lot of traveling, so whilst away Jaanus booked himself into Air B&B apartments that had everything he needed to create his epoxy laminate prototypes. Key to the whole process was WEST SYSTEM epoxy, which proved highly transportable. The calibrated dispenser pumps made for very accurate mixing."I chose WEST SYSTEM products for several reasons and continue to use it for large scale production today" he explained. "It is a high quality and consistently dependable product, which is very stable after curing. It is also very easy to use, with a wide range of variations for different applications. But perhaps most important of all, it has a strong brand behind it, which shows me that the company really cares about its products."







Jaanus used his mobile factory right through the 2006-2007 race season and the products quickly came together."My first ideas were a little complicated, so I began a long process of continual refinement," he said. "I searched for Air B&B apartments with a big kitchen for mixing WEST SYSTEM epoxy, a big oven for curing, and good internet access. I was able to test the prototypes on the Transat yacht during races. I showed the products to other competitors, and orders started to come in."

Whilst his rucksack factory was able to cope with a few orders, as more arrived Jaanus knew he would need to invest in a proper factory, with production techniques for hand-finishing each unit. In 2012 he found a two-storey facility near Tallinn's airport, and began to recruit skilled assemblers.

Technical staff from Bang & Bonsomer, our local WEST SYSTEM Distributors, were invited to see the design and production process in full swing during a visit to Tallin earlier this year and noticed an efficient mix of hand-tools and resin injection techniques, with a constantly evolving programme of R&D.

A qualified designer, Jaanus still likes to sketch out his new ideas on paper, but thanks to advanced 3D printing techniques, a product can be bought from concept to working prototype in less than a week.

Apart from the high load bearing capacity of Ropeye products, it is the look of them and their simplicity, that has led to a healthy order book. "I'm crazy about aesthetics," Jaanus said. "However, an item can still look great if it has no apparent design, but is just naturally functional." One particularly interesting development has been the Spider block, created by running the sheave across an interlocking 'web' of Dyneema. 'A spider creates a web from a thread that for its diameter is stronger than steel, so we have taken the same principle. The sheave runs suspended on both sides of this web – no metal bearings, nothing to corrode.

> "THE SALES ARE GOOD AND STABLE..."

Dyneema is naturally slippery, so the result is a smooth-running sheave that can handle more tons than ball bearings, whatever the direction of loading."

Jaanus is keen to keep the company small and efficient, with just 7 people currently involved in the assembly and dispatch process. "The global market is 24-hours," he said. "It is always a sunny day somewhere, and people want to buy deck gear. I've had a lot of investors approach me wanting to greatly expand the business as the products also have a role outside marine. For example, they are being used in Australia for laying underwater pipelines, and also in the construction industry to replace the metal lifting eyes that are set into concrete blocks, and need grinding off afterwards. We are everywhere, from high profile racing yachts to production OEMs. The sales are good, and stable, and we've already received a DAME award nomination. But the creative process never stops. It is the feedback from our customers that keeps the ideas coming!"

For more information on the Ropeye brand, which has an interactive website, visit: www.ropeye.com

BLINK AND YOU'LL MISS IT!

Phil Oligario restored his first racing moth in his garage nearly a decade ago. Fast forward to now and Phil and his company, Atomik UK, build the Chris Allen-designed Voodoo Moth, which rides high on low-drag Macita foils.

After a 20-year career in IT working for blue chip companies, Phil Oligario decided to turn his hobby into a business, founding marine tech and moth-building company Atomik UK.

A Ninja in the garage

Phil built his first moth – Ninja – in his garage in 2010. "I got the mould for the Ninja from Mike Cooke at Aardvark Technologies and I also got lots of support from Adam May, who's on the Artemis Racing Team for the America's cup," says Phil. "The Ninja turned out really solid and I knew then that building moths was what I wanted to do, so I took the plunge, went full time and set up Atomik UK."

Shortly after completing the Ninja, Phil met Kevin Ellway, designer of the Exocet Moth. "Kevin very kindly gave me plans for a larger version of the Ninja and he and I worked on some custom elements to make the design work even better," says Phil.

Breakthrough boat: Voodoo Moth

With the two builds under his belt, Phil started working with moth designer Chris Allen. "Chris designed our latest boat, which is called the Voodoo Moth," says Phil.

Super-fast foils

As well as building Voodoo Moths, Atomik has exclusive rights to build and supply Macita Lift Foils in the UK. These foils were created by Luka Damic and Dave Lister in Australia.

Focus on innovation

Phil's work developing and building moths and Macita foils makes Atomik UK slightly different to traditional boat builders. "We see ourselves as a small technology company," says Phil.

One example of this culture of innovation is Atomik's use of high-density foam sandwich construction with ultra-high-modulus carbon components.

Bullet-proof epoxy

After experiencing catastrophic failures with a competing epoxy brands, Phil uses PRO-SET® epoxy from West System International® to build his Voodoo Moths and Macita foils.

"It's been absolutely bullet proof, with no breakages at all so far."

What's next?

In the last few months, Atomik manufactured a new Macita foil for Bora Gulari to use at the Moth World's in Lake Garda this year. Unfortunately Bora was unable to attend, however, we had a last minute call to build a rudder lift foil for Luka Damic. That was our biggest challenge to date, a brand new rudder design file from Luka, one brand new CNC machine that we had no idea how to configure and seven days in which to produce a pattern, mould and part. We did it with a day to spare and I was able to fly out and deliver the foil to Luka. He immediately scored two 3rd places in qualifying and ended up 21st overall in Gold Fleet with a best place of 7th.

Read full article at www.epoxycraft.com. Find out more about Atomik at www.atomikuk.com

HINTS & TIPS

PRO-SET epoxy is used to build some of the fastest boats on the water today; it's purpose-designed to construct high performance, lightweight composites. We've featured a number of them right here in epoxycraft – such as the Exocet Moth and the Bernico F3 Extreme.

TWO TOP TIPS FOR MIXING PRO-SET EPOXY:

1 | Be careful with mix ratio

PRO-SET products in the new 1.28kg pack mix together at a ratio of 3:1 by volume, or 100:28.6 by weight. Just like with WEST SYSTEM epoxy products, an accurate mix ratio is extremely important for the resin/hardener mix to cure.

When measuring PRO-SET resin or hardener, we don't recommend the WEST SYSTEM 301 Mini Pumps or the 303 Special Ratio Mini Pumps; these are designed for use with WEST SYSTEM products. Instead use digital scales to weigh your resin and hardener, or use accurate graduated mixing pots.

2 | An insider tip for mixing

As with WEST SYSTEM epoxy resin and hardener, a thorough mix is important to ensure that the PRO-SET blend cures correctly. Indeed, our very own Guru of the gooey stuff, David Johnson, has a special mixing technique that he recommends for PRO-SET epoxy.

If you have a pot of PRO-SET resin and hardener and you simply mix it by stirring with a stick – like you'd stir your milk into your coffee – you'll push the higher density product to the outside of the pot, leaving the lower density product in the middle. However, if you move your mixing stick to the edge of the pot – and stir in little circles clockwise around the edge of the pot – you'll bring the two products together more efficiently, for a better blend.

Read full article at www.epoxycraft.com.