

In the works

After the successful 'raising' of wing no1 in Valencia, Persico Marine have already moved onto the moulds for wing no2 for Artemis Racing's Juan Kouyoumdjian-designed America's Cup challenger



ADAM MAY/ARTEMIS

With rather more rake (left) than when this first AC72 wing was stepped, the Artemis test-tri begins to get properly wound up off Valencia. Wing no1 is a three-element configuration which, when you allow for the six smaller 'flap-3' panels, means a huge amount of hydraulic action is going on inside that smooth external surface – and at least two crew winding non-stop to maintain oil pressure

The first wing has already hit the wind in Valencia... very tall, very large in surface area and all built in carbon moulds that were precision manufactured at Nembro in northern Italy.

From moulds to wing

Persico Marine stand for precision and so Persico are proud to have manufactured all the the infused carbon moulds for the Artemis AC72 wing components, which are far from run of the mill parts! In fact, the wing is assembled from several gigantic 20m-tall sections that together weigh around one ton. When assembled, the wing for an AC72 catamaran is 40m high and has a surface area of 260m² – as big as a standard tennis court.

After the initial moulding trials were completed successfully, the actual carbon components for the first wing were moulded in Valencia, Spain, at Future Fibres. Then, in late March, the giant wing was assembled and hoisted onto a modified Orma 60 trimaran used as a training boat in Valencia, where the Swedish Artemis team is currently based. Skipper Terry Hutchinson was impressed with initial trials under relatively calm conditions: 'In 12-13kt of breeze we were soon going twice that in boat speed... with just the wing... and on day one!'

Now that the first wing has been 'launched', Persico Marine in Nembro, Italy, have gone to work on the second model. 'We are using the most advanced technology in existence today, the same that you will find in the very finest aerospace facility. The big challenge for us now is to achieve the ultra high precision that we are targeting while working with carbon-infused tooling at extremely high temperatures,' said Marcello Persico, managing director of the Persico Marine Division.

A new-generation wing

According to Paul Cayard, Artemis Racing CEO, around 25,000

man-hours will be needed to construct a 'typical' AC72 wing. Unlike their Cup rivals, who have mostly opted to conduct their early wing experiments at a smaller scale – except of course for Oracle Racing who already have plentiful experience from their previous giant trimaran *USA 17* – Artemis Racing opted to build a full-size carbon AC72 wing right at the start. 'Building the wing early and sailing it on our trimaran platform has definitely given us a head start,' said Cayard.

Paul Cayard joined Artemis in 2009, but he has been a familiar name around Persico Marine since the 1992 America's Cup, when he was the skipper of *Il Moro di Venezia* for whom Persico manufactured bulbs and keels for the team's various ACC designs.

Racing – a niche market

Yacht racing is a niche within a niche for Persico, which in the past was widely involved in the more traditional sectors of the marine industry. But for a company that started its story making precision mould tooling using the finest hardwoods, things have been moving fast. Lately, for instance, Persico manufactured some very substantial high-temperature carbon moulds for Wally Yachts, as well as many large final components – including a complete carbon fibre hull – for a new 100ft yacht.

Today the Persico Marine Division accounts for almost 14 per cent of the company's total sales. Meanwhile, Persico's other divisions in engineering, automotive and rotomoulding – the heart of our company's production – all remain busy. Persico Engineering have also worked for many years in the aerospace sector, where the company has made a name for itself in the design, development and production of high-value-added components, using aluminium, titanium and carbon tools for both military and civilian use. Many of these skills are also now finding their way 'across the shopfloor' into the growing marine division. □

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