



POP-UP HANGAR pioneers

Since inventing and patenting the world's first precision fit, all-fabric inflatable aircraft hangar in 1999, JB Roche has continued to manufacture advanced inflatable shelters for the aviation sector. With its design and manufacturing expertise and use of leading-edge materials to create precision-fit inflatable enclosures, JB Roche is well equipped for the industry's move towards composite materials on new aircraft. Jack Salter spoke to CEO Ian Nagle about the importance of maintenance shelters in the MRO sector and the company's flexibility in enclosing any part of the aircraft.

Initially set up in the competitive haulage industry back in the mid-1980s, Cork-based JB Roche quickly separated from the pack to start manufacturing framed canvas goods for the marine industry. As it transpired, the company's investment in the required design and patterning software and automated cutting equipment ended up laying the foundations for JB Roche's move into the aviation sector. However, it wasn't until an encounter with a Line Maintenance Manager at Aer Lingus, that JB Roche made this move a reality.

"We were very lucky to be discovered by Aer Lingus which, at that point, had a team of engineers working on aircraft in all weathers and having to get the job done without any protection," explained JB Roche CEO, Ian Nagle.

"We proposed an inflatable tent solution and what grew out of that was the world's first inflatable aircraft maintenance shelter, part of which we now refer to as our IglooMX range."

Today, JB Roche manages every aspect of production in-house, from 3D CAD development through to engineering, fabrication and quality control.

Composite solutions

Composites in aircraft manufacturing have come of age with the introduction of Boeing's 787 and the Airbus A350 XWB.

Composite repairs by their very nature require greater downtime because of the curing period needed for advanced resins and adhesives, as well as absolute cleanliness and protection during the curing process.

JB Roche's unique, inflatable cleanrooms provide a simple, fast and cost-effective solution, enabling outdoor composite repairs when a hangar is not available, as well as a perfectly clean sub-environment within a busy hangar.

Mr Nagle noted that whilst composites are being used to a much greater extent on all new aircraft, JB Roche's fully patented CompShop portable cleanroom solution provides the optimum environment for repairing composite aircraft parts.

"The CompShop can be set up right next to an aircraft inside the hangar, so you can repair components that have been removed from the aircraft without having to take them to another facility," he said.

The IglooMX Fuselage shelter allows for repairs to panels on the aircraft.



"To be able to take something from a box, inflate, heat and air-condition it in all weather conditions and have it operational within minutes, is of massive benefit to airlines and their skilled engineers working with composites," Mr Nagle highlighted.

"We consider our inflatable cleanroom solution to be an essential element of composite repairs, when work needs to be done either directly on the fuselage or on components that have been removed from the aircraft," Mr Nagle added.

Innovation of aviation products

At the request of customers who continue to innovate in their own way, JB Roche has developed two new products which Mr Nagle believes will be of great interest to the aviation sector.

The first is an inflatable shelter which allows WiFi antennas to be fitted to the crown of an aircraft, either inside or outside the hangar. With many MROs and airlines rushing to provide WiFi on their aircraft and antennas continually being upgraded, it's a product the industry is showing a lot of interest in. JB Roche is currently working with providers such as STS Group, in support of narrow body aircraft WiFi modifications.

"Inserting a WiFi antenna involves major challenges with dust, humidity, temperature control and prevailing weather," explained Mr Nagle.

"The unit we have created not only provides additional safety and security for engineers working on top of the aircraft, but it also ensures the ideal conditions for the modification by providing a clean room on the crown of the aircraft," he revealed.

In conjunction with composite repairs specialist, Aeroform Composites, the second product JB Roche has introduced is an inflatable oven that can be heated up to 200°C. This can be mounted on any part of the fuselage or it can be used as a free-standing unit that can be set up next to the aircraft.

"You can take the component into the oven and basically work on it and heat it up to either cure something or do touch up work," Mr Nagle explained.

"JB Roche has moved a long way from conventional fabric tents, as we supply a complete system which includes controls for temperature, humidity and dust mitigation. These are high-tech, relocatable, easily portable systems that can be set up and secured anywhere, in a very short period of time."

As part of its marketing strategy, JB Roche is now a regular exhibitor at MRO shows globally and having worked with a large cross-section of aviation customers, has built up unparalleled knowledge and experience of fabric structures for use in aircraft maintenance.



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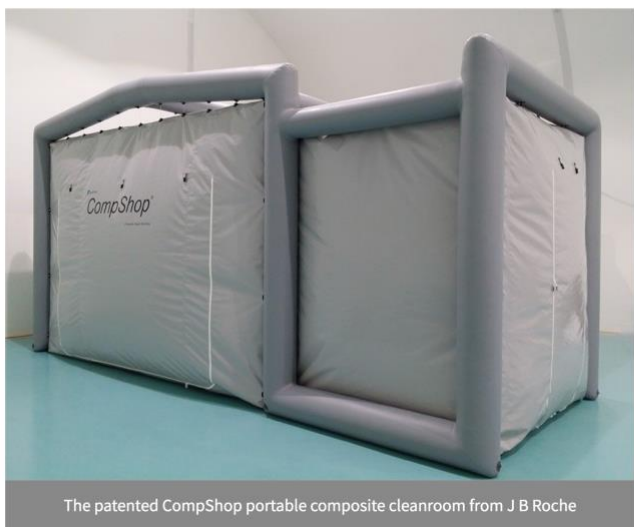


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Ensuring the protection of composite repairs on the line

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The patented CompShop portable composite cleanroom from J B Roche



ONLINE EXCLUSIVES



Protecting Engineers and Airframes on the Ramp

By Ian Nagle

In light of the current worldwide health crisis affecting global aviation, cost and time-efficiency for aircraft maintenance, repair and modifications will be absolutely critical elements in helping the sector to recover over the months and years ahead.

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