

Traceability with JAVELIN is key for motorsport specialist Brick Kiln



Brick Kiln Composites

JAVELIN is a flexible, scalable and intelligent production planning and control system offering advanced functionality and value in the key areas of manufacturing and assembly. JAVELIN allows SME organisations to successfully compete in difficult economic and market conditions, through direct productivity improvements and lower IT infrastructure costs.

Specialist motorsport subcontractor Brick Kiln Composites uses the JAVELIN production control system from Hexagon to provide full traceability of components... ensuring compliance with strict ISO 9001: 2008 requirements.

As a long-established manufacturer of carbon fibre pre-preg components for Formula 1 and motor sports teams, many of the parts they manufacture can be found with several of the front running teams, ranging from electrical trays to aerodynamic aids directing air past the vehicle.

The Oxfordshire-based company currently produces thousands of different parts a year using three autoclaves, two 5-axis Haas machining centres and a Bridgeport 3-axis machine, along with a Hexagon CMM which is used for final dimensional checking of machined bores and surfaces.

"We take a pattern and manufacture a mould tool from it, we then mould the components and cure them in the autoclaves," says General Manager Ronnie Dean. "Afterwards, they're machined, trimmed and assembled."

The uncured pre-preg carbon fibre is perfect for the motorsport industry's lightweight components. It is easy to handle, and can be cut and laid precisely into detailed and accurate moulds, making the process ideal for the complex parts that are becoming increasingly more widespread. "The ease and accuracy with which the material can be templated and cut significantly reduces waste compared to other manufacturing methods."

While they recently delivered around 600 components in eight weeks, they rarely produce batches of more than five, and lead times are particularly demanding. "For example, we can schedule a component for our weekend shift because the client originally wanted it by Tuesday... then they can come to us on Thursday and say they need it by Saturday morning."

Some of the bigger components can have an average turnaround time of around 50 hours - but Ronnie Dean stresses that's not working hours, but total time. "And quite often, when modifications are going through, they're needed the following day."

JAVELIN fulfils a number of important functions for Brick Kiln, including full traceability, a snapshot of the business, and automatic error-free invoicing.

Their JAVELIN journey begins after a quote has been accepted, with Sales Order Processing. "Everything we make is placed on a Sales Order, which we also link to Crystal Reports giving me a snapshot of what the business is doing at any one time."





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> Ronnie Dean, General Manager

Works Orders are raised from the Sales Orders, and he says that as this is a core element of JAVELIN, it controls the progress of work through the entire process, with a full set of monitoring and tracking routines ensuring complete visibility of work in progress. "This gives full traceability on who manufactured what, and the materials used.

About the company:

Name: Brick Kiln Composites **Business:** Specialist motorsport subcontractor Website: brickkilncomposites.com

Key benefits achieved:

- Full traceability of components.
- Can create a snapshot of the business easily.
- Automatic error-free invoicing.
- Controls the progress of work through the entire process.
- · Raises invoices and delivery notices easily.
- Ensures they are meeting targets.
- Saves time and impossible to get an invoice or delivery note wrong.





"We've got the complete material history. Everything about every component is on the JAVELIN database, so we can go back and look at the date of manufacture, how it was manufactured, and what material went into it. This is then stored in the archives for five years."

When deliveries are booked into the stores, batch numbers of all certified material such as their pre-preg sheets, are recorded within the GRN through Materials Control.

Shop Floor Data Capture terminals operate in five areas – clean room, inspection, trim shop, machine shop and kit cutting room. "This is extremely important to our traceability. We make a number of Class A components, so we need to know who made it and when. As soon as we need to find something we can trace it extremely quickly with JAVELIN."

Another big advantage for them is the ease with which JAVELIN raises invoices and delivery notices. "Invoices are sent from the Group's head office in Wantage. They used to be typed out by hand. Now they're generated automatically in JAVELIN, which means they're error-free, and the operation is much faster.

"And imagine the amount of work required if we had to type manual delivery notices every time a consignment's despatched. But with JAVELIN it's just a mouse click. It saves so much time, and we know there are no mistakes. It's impossible to get an invoice or delivery note wrong, and if a customer queries a delivery, we can supply information showing exactly when they accepted it."

In conclusion he says the efficiencies made by JAVELIN's financial functionality are just as important to his role as General Manager, as the SFDC is to the manufacturing side. "I can ensure we're meeting targets, and it also gives me financial control by showing what we're invoicing now compared to previous years, and outstanding orders with values. I have full confidence that we're delivering what we say we will, on time, and invoicing correctly for it."



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Ronnie Dean, General Manager



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Our technologies are shaping production and people-related ecosystems to become increasingly connected and autonomous – ensuring a scalable, sustainable future.

Hexagon's Manufacturing Intelligence division provides solutions that use data from design and engineering, production and metrology to make manufacturing smarter.

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