Bosch Rexroth Drives Productivity at Ford

**Ford's Challenge**
- Increase the speed of production of the Jaguar V8 engine, while reducing cost

**Rexroth's Added Value**
- Completed the project ahead of schedule and between 25-30 per cent less than nearest rival bid
- Enabled dramatic capital and operational cost savings, with significant efficiency gains
- Eliminated interoperability issues with Rexroth's unique 'one box per tool' system
- Project success led to new contracts and a closer ongoing relationship with Ford
Cost Reduction

Bosch Rexroth provides tightening hand tools and fixed-rise spindles to Ford for construction of the Jaguar v8 petrol engines that has slashed the car maker’s costs and dramatically improved productivity.

The Jaguar v8 engine project to provide 80 spindles and 50 hand-held tools, and manage their implementation, was delivered ahead of schedule and 25 to 30 per cent cheaper than the nearest bid — largely because of the savings achieved by using the same platform for both tools.

Building a Solution

Following detailed analysis of Ford’s existing process and technologies, the Rexroth’s team of engineers and consultants built a unique solution that was perfectly aligned to the business and technical objectives of the project. Its highly skilled engineers were on-site throughout the consultancy, build and deployment stages, working ‘hand-in-glove’ with Ford’s team to ensure seamless technical integration. Critically, Rexroth also invested time to fully train production operatives to eliminate downtime and enable Ford to realise the efficiency gains of the new solution as quickly as possible,

Production Innovation

The Bridgend plant deal is based around Rexroth’s new SP305 system box, which has the capacity to operate four tools at once. This departure from the ‘one box per tool’ industry norm, to a more complete solution, enables Ford to control both hand tools and spindles from the same platform for the first time.
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The SP305 solution also allows tool changes to take place in minutes rather than hours, providing flexibility when projects change. It eliminates the need for different sets of software for each tool, subsequent extra training and the space required for storage of extra equipment.

As part of the Jaguar v8 engine deal, Rexroth has also developed software that allows all critical fastenings carried out by hand tools to be recorded using Sciemetric’s QualityWorX software for collating production data. This allowed Rexroth to offer more functionality than competing solutions and to deliver additional competitive advantage for Ford.

The full integration of QualityWorX into the Rexroth system was also achieved at no extra cost to Ford. Qualityworx has now become standard in Rexroth equipment worldwide and is offered to all manufacturing customers.

Furthermore, the project has seen the introduction of self-threading bolts at Bridgend thanks to a Rexroth computer program that recognises threaded and unthreaded holes and fastens appropriately. The solution, again, was unique to Rexroth.

Preferred Selection
Rexroth secured the Jaguar v8 engine contract – despite not being a preferred supplier of Ford – following an earlier job with JW Froehlich to provide a limited number of spindles at Bridgend. After an initial enquiry from Ford at the end of 2006, an order was placed in 2007 and the project was delivered on time. Rexroth engineers have worked on site throughout in partnership with Ford, fostering an excellent working relationship.
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Ongoing Relationship
The project’s success has led to further orders including a deal at three plants with Puma. Ford has also ordered another 150 spindles for its Sigma project at Bridgend. Rexroth is now a trusted and valued supplier and the emerging relationship with Ford is expected to continue to flourish in the UK and abroad as the firms collaborate on new projects.

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Editor’s Notes:
Bosch Rexroth AG is one of the world’s leading specialists in the field of drive and control technologies. Under the brand name of Rexroth the company supplies more than 500,000 customers with tailored solutions for driving, controlling and moving. Bosch Rexroth is a partner for industrial applications and factory automation, mobile applications and using renewable energies. As The Drive & Control Company, Bosch Rexroth develops, produces and sells components and systems in more than 80 countries. In 2009 Bosch Rexroth part of the Bosch Group, achieved sales of around 4.1 billion Euro with 34,200 employees.

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