

Oxford Brookes Racing

Gear Barrel Partnership For Seco And Edgecam

Seco cutting tools were used in partnership with Edgecam software to produce a complex component for a university motor racing team.

Oxford Brookes Racing (OBR) is a dedicated project run by Oxford Brookes' University to develop young engineers through the challenge of designing, building, developing, marketing and competing as a team using their own single seater racing car.

The project was entered in the international Formula Student competition which judges the cars on a number of criteria: design, cost, presentation, technical and safety aspects, tilt test, brake and noise test, skid pan, 1km sprint, 75m acceleration, 22km endurance and fuel economy.

Since 1999, OBR has scored more points and returned faster laps than any other UK Formula Student team, and has been top UK team five times. The current team comprises students from all over the world, researching, designing, building and testing the car. Past members of the team have gone on to work for some of the most prestigious and respected engineering names such as Red Bull Racing, Renault F1, Virgin Racing, Force India, Lotus F1, Cosworth, and Audi Motorsport.

This year the team turned to Seco Tools UK to help them develop a complex sequential gearbox shifter barrel.

OBR provided Seco Applications Manager Spencer Adams and Business Development Manager David Magnall, with a drawing and solid model. Seco identified the tooling and geometries and drew up the tool list, then worked in partnership with Edgecam, from Vero Software, to create the toolpaths and manufacture the part.



About The Company:

Name: Oxford Brookes Racing

Business: University motor racing team

Web: www.facebook.com/OxfordBrookesRacing

Benefits Achieved:

- Confidence that the component would be right first time.
- Identify all issues before starting to cut metal.
- Simple development of a complex component.

Comments:

"This project uses the excitement and appeal of motorsport to open young minds to the enormous possibilities that a career in engineering involves, and gives them a wealth of real-life experience to help them be successful."

Wesley Tonks
Edgecam Strategic Partnership Manager

Edgecam

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Spencer Adams, who has undertaken extensive Edgecam training on a course created specially for Seco's Technical Centre customer project engineers, proved the program out on the carbide cutting tool manufacturer's Agie Charmilles Mikron HPM 600U 5-axis machine.

"This type of part required Edgecam to create the program and make efficient edits, ensuring the barrel was absolutely perfect, first time. The software's powerful simulation function was particularly important to the project, giving us the ability to identify any immediate issues before we started to cut metal. We liaised with Edgecam engineers on slight program amendments to the NC code and post processor."

Edgecam Strategic Partnership Manager Wesley Tonks says: "The Oxford Brookes enterprise demonstrates the value of the training course we developed for Seco. It was designed to provide Seco engineers with specific knowledge to program more efficiently and effectively using Edgecam for their in-house customer projects."

"It was particularly exciting to work on this project, as Formula Student uses the excitement and appeal of motorsport to open young minds to the enormous possibilities that a career in engineering involves, and gives them a wealth of real-life experience to help them be successful."

