

... in practice



Formula Student: students build racing car

Every year, the BRS Motorsport e. V. team develops and builds a spectacular electric racing car as part of the international Formula Student competition.

Formula Student is an international engineering competition for students. To take part in the competition, each team designs, constructs and manufactures a small formula racing car and also participates in international competitions with

it. This gives students a chance to build on their theoretical knowledge from their studies with practical experience in construction and production as well as learn about the economical aspects of the industry.

The project

BRS Motorsport e. V. is a coalition of students that take part in the international Formula Student competition every year. From design and construction all the way to production – the team completed yet another spectacular electric racing car this year. Students are supported by a wide range of industry partners from across all different sectors in their quest to produce innovative vehicles.



Using EWM welding machines, students manufactured certain components such as the large steel roll bars and the small aluminium roll bars, for example.



Albert Reifenrath, Site Manager for EWM Pulheim, visits BRS Motorsport e. V. in 2021.

EWM's role

The chassis is a full carbon monocoque constructed using no steel or aluminium welded constructions. To protect the driver's body and legs in the event the car rolls over or is involved in an accident, the car has a "large" roll bar (main hoop) and a "small" roll bar (front hoop). These are welded constructions made from steel pipes and aluminium square pipes. The aluminium in particular poses a challenge when it comes to the welding procedure and can only be welded safely using high-quality welding machines and suitable welding processes.

The success

Following a training session by EWM application engineers, the students used both the Picomig 305 and Tetrix 230 AC/DC welding machines to weld the individual components on their own. This also included the battery container, a welded construction made from aluminium sheet.

Various victories in the electric vehicle class are testament to the club's high-quality and innovative work.



Multiple victories in the electric vehicle class are testament to the talent of the BRS Motorsport e. V. students.