**Sealing Technology for the GreenTeam**

Powering e-race cars at the University of Stuttgart

As an official sponsor of the University of Stuttgart's GreenTeam, Trelleborg Sealing Solutions provides prospective engineers with seals and sealing expertise for their e-powered race cars. During the course of one year, students in the GreenTeam construct their own race cars and participate in the international Formula Student competition.

**GreenTeam Success**

"In our GreenTeam project, over 60 students collaborate to build an e-powered race car, which is driven in international competitions," says Florian Froehlich, from GreenTeam Uni Stuttgart e.V. "We’ve had a very successful past. Every year, since 2010, our team has been a member of the top 10 teams in the [world ranking list of electric Formula Student racecars](https://www.greenteam-stuttgart.de/formula-student/world-ranking/).”

Florian continues, “but without sponsors and supporters these successes cannot be realized. We are dependent on the exchange of experience and knowledge with industry and business. These partnerships have given our future engineers, computer scientists and business economists enormous innovative strength. With Trelleborg Sealing Solutions, we have a strong partner at our side who supports us with know-how on sealing technology for e-mobility applications."

**Unique challenges of e-race cars**

Electrification of race cars presents unique challenges – GreenTeam students deal with topics including control engineering, power electronics and driving dynamics from the outset. The Stuttgart GreenTeam developed, designed and produced an electric motor, which was used in the race car for the first time this year. At the heart of the car is a unique oil cooling system for the batteries, in which every cell works in oil.

"Motor sport presents high technical demands, especially on seals," says Julian Feucht, Sales Engineer Automotive Hub Europe at Trelleborg Sealing Solutions Germany. "The seals have to withstand very specific requirements due to the oil used for thermal management in the battery. The Formula Student competition has strict guidelines here, which the prospective engineers must adhere to. Due to the 600 Volt technology used by the GreenTeam, a leakage in the drive train or the battery is very dangerous".

**A winning team**

This year the the GreenTeam did everything right! At the Formula Student competition at the Hockenheimring, their race car took first place in the Acceleration discipline.

"We are enthusiastic about the GreenTeam and very impressed by the students' performance and expertise," says Julian Feucht. "During our partnership, we found that the electric motor can reach critical temperature ranges due to high acceleration rates. Improved cooling can support significantly higher speeds. Our new HiSpin® seals for e-Mobility may help the team meet this challenge. We’re already looking forward to the next racing season.”

**Learn more**

* [HiSpin® for E-Mobility](https://www.tss.trelleborg.com/en/products-and-solutions/latest-innovations/hispin-for-e-mobility)
* [Sealing solutions for Automotive](https://www.tss.trelleborg.com/en/your-industry/automotive)