

# NEWSLETTER



## TOPICS:

### >01 LATEST NEWS

Current topics as well as past and future events.

### >02 NEW ARRIVALS IN THE WORKSHOP

Brief presentation of the components that arrived in the garage during the last month.

## UP-TO-DATE WITH RACETECH

Dear sponsors, friends and supporters,

the manufacturing of our RT14evo is in its final stage. In the current newsletter you can read about the manufacturing of the new main hoop. Additionally, we are training our drivers to prepare for the events.

We would like to inform you once again that our rollout will take place on June 3, 2022, where our new RT will be unveiled. A live stream will also be made available.

We hope you enjoy reading.  
Your Racetech Racing Team

# > 01 LATEST NEWS

## MANUFACTURING OF THE MAIN HOOP

To satisfy the new ruleset and to incorporate requirement of the sensor needed for autonomous driving into the RT14evo, there was a necessity to manufacture a new Main Hoop. We use this circumstance as an opportunity to improve the manufacturing process and to achieve a higher quality in the final component.

To begin with the Hoop and all the other components were bend to require shape and were prepared for welding in-house. After mounting the components to the welding jig, which was previously laser cut by Dr. Oette Blechbearbeitung, welding was carried out by ACTech GmbH. Thereafter, the entire Hoop was sanded to a fine surface finish. The last step before installing the Main Hoop in the car is nickel-plating, which creates an enduring and visually pleasing corrosion-resistant layer.

*Author: Philipp Geisler*



*CAD rendering of the main hoop*

# > 01 LATEST NEWS

## DRIVER TRAINING

On the Easter weekend we had a test day and were back on the grounds of the BGH and took a few trips with the RT13.

The motive of this testing was to select and train new event drivers for the upcoming events. Furthermore, new teammates also got to know how to handle the car and how a test day works.

However, the test day was a little shorter than planned because there were problems with the accumulator, which were solved thereafter. The RT13 is thus ready for the next use.

At this point we would also like to thank Eurocourier, who took care of the transport of the RT13 and our test equipment.



Author: Max Reichert



*The RT13 in Freital*

## > 02

# NEW ARRIVALS IN THE WORKSHOP

*A huge thanks to all our sponsors who make these components possible for us!*

## WHEEL CARRIER

As a further development in the RT14evo is that the front wheel carriers were newly developed and manufactured. Here, the objective also was to increase reliability by optimizing production. The wheel carrier has become one of the most complex parts in the all-wheel-drive concept because of the integration of the motors and transmissions in addition to the connections for wishbones, brakes, wheel hubs, and sensors. Due to the selected gear and bearing concept, very precise tolerances with low wall thicknesses of the raw part were required, especially during post-processing. We would like to thank ACTech for the advice and quick manufacturing of the wheel carrier.



*Wheel carrier*

*Author: Simon Karschner*

## INVERTER ENCLOSURE

Since the cooling of our inverter was one of the weakest points in the car last year, the further development of this cooling structure was one of the main development goals in the power electronics of the RT14evo. We replaced the old, milled cooling structure with a new additively manufactured cooling loop, which was welded into the existing investment cast housing. In addition to increasing reliability through more suitable manufacturing processes, we were also able to increase the cooling performance and reduce the weight of the inverter housing. We would like to thank AMMetals for the additive manufacturing of the cooling structure, Seidel toolmaking for the mechanical processing, LPT for the laser welding and ACTech for manufacturing of the cast housing.

*Author: Simon Karschner*



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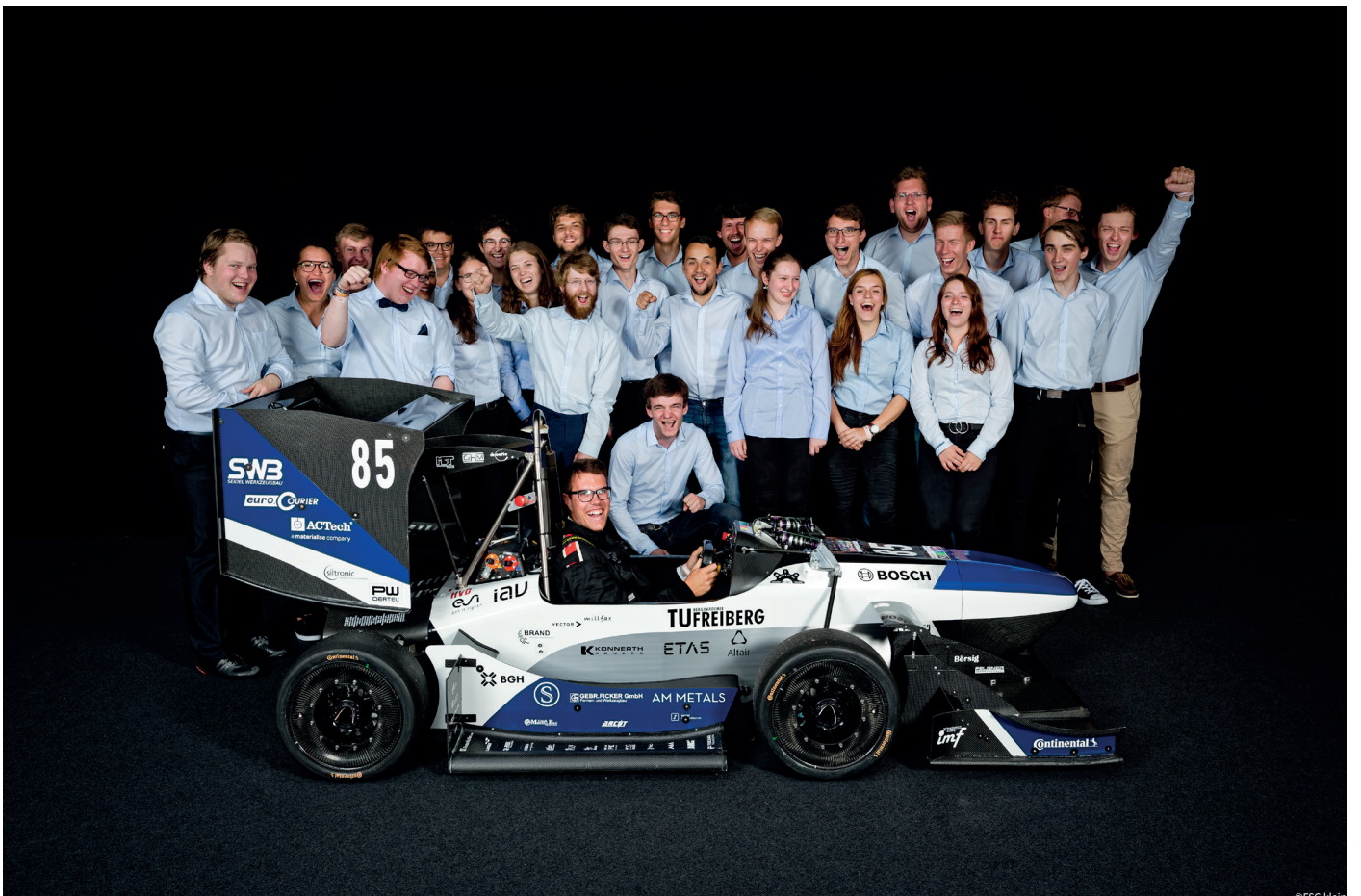
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