

Newsletter

High-Voltage Motorsports e.V.



Dear sponsors, dear friends of our club,

the season is drawing to a close, but as the saying goes: the best comes at the end - the events. After our rollout on 30 April, we spent many more hours in the workshop to get our FAUmax rho ready for its first rides as quickly as possible. All the greater was the joy of the first metres driven by our rho. In addition to the numerous deadlines for the events, there were also some joint activities on the agenda, such as a trip to the Erlanger "Bergkirchweih", karting together and our annual alumni barbecue. We are travelling to Austria at the end of July and preparations are already in full swing.

But for now, we would like to give you a brief insight into our time after the rollout.



JUNE 2024

VDI-RACEING-CAMP

From 20 to 23 June, ten of our members travelled to Selm for the VDI-Racing-Camp. There we had the opportunity to receive initial feedback on our new car in the Accumulator- and Mechanical scrutineering and to gain our first design experience. Once the most important requirements had been met, we were finally able to test our new FAUmax rho on the track. In doing so, we identified possible weak points that need to be rectified before the upcoming events and gained many valuable insights. Overall, we are very satisfied with the weekend.

A look into our Non- technical Subteams

Cost Report - As we approach the final stretch, it's time for one last push to complete our CRD documents. Our motivation is at its peak, and we eagerly anticipate the highlight of our season: the Formula Student events. Our focus remains on optimizing cost trade-offs and enhancing the dynamism of our Bills of Materials (BoMs). We will continue to do our best to achieve our goals with precision and excellence.

Businessplan - The business plan is in full swing. After filming and submitting our pitch videos, we are now in the final stages of developing our financial structure. The last thing left to do is to prepare the presentation.



Mechanical development

Chassis - After many months of production, the chassis is almost finished. The lamination of our monocoque and our firewall went very well. At the moment we are in the process of producing our backplate, just in time for testing. We have also made some improvements to the manufacturing process, which has resulted in a very good overall quality. In the meantime, we are also working on the add-on parts for some components on the car.

Powertrain - The new battery trainer was completed and the associated electronics installed. After a test scrutineering, we were able to connect the cells, close the container, install it in the car and test it successfully. Our inverter, which controls the motors, was sealed and connected to the cooling circuit. Some tests outside the car together with the remaining electronic components helped us to check the system for errors as early as possible and then install the drive components in the car.

Suspension - The final coatings have been applied and we are moving towards final assembly and preparation for the first drives. The new active chassis housings have also been assembled. Initial tests have also been started with the new EBS concept and it looks very promising. In the coming weeks, we will continue to test and adjust the chassis and prepare for the engineering design at the upcoming events.

Aerodynamics - After our rollout, the aerodynamics of the FAUmax rho will be further refined. This includes the finishing touches and adjustments to the existing aero devices as well as the implementation of some new elements to further improve our performance. To test the aerodynamics of our latest race car, we are preparing various validation methods to check whether our car behaves as the CFD simulations suggest.

Between circuit boards and soft- ware

Electronics - Once our wiring harness has been manufactured and the circuit boards have been loaded with software, it's time for testing. Many assemblies have already been individually tested, such as our high-voltage battery. We were able to successfully balance and monitor its cells with our BMS boards. An important step now is to ensure that the overall system is error-free and reliable. To make revisions easier, we will install the entire LV and HV electronics outside the car and check them for faults. Only then will we begin to install all the components in the chassis in order to subsequently film a successful VSV.

Final words..

We leave for Austria in less than three weeks. We will finally be able to put our months of work in the workshop to the test on the race track. Our alumni will also be there again this summer, taking part in the FSEast Alumni Cup with the FAUmax ny. We are excited to see how our team will perform in the competition and are looking forward to a great time together and seeing many familiar faces from other teams. Stay tuned - it's sure to be an exciting time!

