

References

We are experienced in all major national and international racing series and in the development of production cars:

Motorsports:

- Formula 1
- Formula 3
- Formula 4
- GT Cars (GTE, GT3, GT4)
- Touring Cars (TCR)
- LMP (Le Mans Prototype)
- Rally Cars (Rally Cross)
- CUP Cars

Production Cars:

- High Performance Cars
- SUV's
- Damper development
- Benchmarking
- Basic research



Contact

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We are available for any kind of technical questions and price requests, do not hesitate to contact us!



VEHICLE
DYNAMICS

Focus: Setup optimisation and characterisation on our hydraulic 7-Post-Rig



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Benefits

- Optimisation and analysis of the vehicle setup without any additional costs for track rent and wear parts
- Up to 150 different vehicle setups can be tested per day
- Absolute reproducibility without any weather-, driver- or wear influences
- Automated analysis and evaluation with TRE's own software tool
- Support in terms of test planning and preparation, to get the best use of your rig test
- Problems and solutions in terms of vehicle setup and handling will be identified and discussed together
- Usage of TRE's sensor equipment (No additional sensors needed)
- Summary of the results in form of a final testing report



Basic Function 4- & 7-Post

- Vehicle will be exited vertically via hydraulic actuators
- Wheel excitation is done by 4 wheel actuators, additionally 3 chassis actuators can simulate aerodynamic effects as well as pitch and roll moments

Trackreplay (7-Poster)

- Track-Simulation on the rig
- Based on real recorded data
- Setup optimisation for a specific track

Optimisation

- Optimisation of mechanical grip
- Additional stabilisation of the aerodynamic platform, especially for modern GT and Formula cars
- Matrix-Tests to evaluate the complete range of setup adjustments and their effects. Results can be used as an on-track setup tool



Technical Specifications

4 & 7-Post Rig:

- Wheelbase 1600 – 4600 mm
- Track width 740 – 2600 mm
- ± 125 mm – travel wheel actuator
- ± 150 mm – travel aero loader
- Max. dyn. Force wheel actuator 36kN
- Max. dyn. Force aero loader 5kN in push- and 29kN in pull direction
- 72 analogue inputs for sensors

Hydraulic Damper Dyno:

- 6 m/s - max. piston speed
- ± 100 mm – travel
- Measurement and optimisation of basic damper characteristics
- Measurement of friction- and temperature influences
- Trackreplay based on real measured damper displacement signals

