ViMM – Vehicle Inertia Measuring Machine

Main application

- Determining the position of the center of gravity and moments of inertia of the entire vehicle or single components

Technical data

- Total length: 5730 mm
- Width: 5400 mm
- Height (without crane): approx. 1600 mm

Specimen

- Passenger vehicles
  - wheelbase: 1800 mm – 4350 mm
  - track width: 1200 mm – 2100 mm
  - ground clearance: min. 80 mm
- Max. weight: approx. 2600 kg (depending on the center of gravity height- please contact us for further information)

Characteristics

- maximum angle of inclination:
  - roll angle +/- 20 °
  - pitch angle +/- 6 °
  - yaw angle +/- 6 °
- maximum measurement frequency for sinusoidal movements:
  - 0,6 Hz

Location

Fahrzeugtechnisches Versuchszentrum (FVZ)
Chair of Automobile Engineering
August-Bebel-Straße 32
01219 Dresden

Measured values

- Mass of vehicle
- Center of gravity
- Moments of inertia around x-, y-, z-axis
- Position of vehicle on platform

Measurement devices

- Integrated Load cells
- Incremental Angle Sensors

Components of the test rig

- Base frame with hydraulic actuators
- Moving platform with either:
    - Ramps for vehicle measurements
    - Clamping plate for components
- Crane with lifting frame used for vehicles

Available supplies

- 230 V- supply and 400 V three-phase current supply
- Compressed Air
- Fresh Water
- Car Lift and tools

Reference projects

Multiple investigations for different OEM

Contact persons

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