

Tire Test Bench



Main Application

- quasistatic and dynamic Lateral Force Characteristics
- high Load and high Speed Strength
- Simulation of Vehicle Dynamic Limit Loads
- Examination according to the TIME-Procedure
- Homologation Tests
- Uniformity-Tests
- Rolling Resistance
- Power Transmission with dynamic Change of Slip Angle
- quasistatic and dynamic Tire Deformation

Technical Data

static:

- Drum Diameter: 2 m
- Drum Width: 0,5 m
- max. Speed: 320 km/h
- max. Wheel Load: 30 kN
- max. Lateral Force: 20 kN
- max. Skew Angle: 90 °
- max. Camber Angle: 45 °
- Skew Angle Dynamics: till approx. 35 °/s
- Camber Angle Dynamics: till approx. 35 °/s

<p>Specimen</p> <ul style="list-style-type: none"> • Car Tires • Motorcycle Tires • light Truck Tires • max. Tire Diameter: 900 mm 	<p>Characteristics</p> <ul style="list-style-type: none"> • Different Road Surfaces possible
<p>Measured Values</p> <ul style="list-style-type: none"> • Force: Longitudinal Force Lateral Force Vertical Force • Torque: Camber Torque Restoring Torque • Displacement: Wheel and Drum Speed measuring Hub –Drum Distance • Tire Deformation • Tire Temperature • static Wheel Radius • Slip Angle • Camber • Tire Inflation Pressure 	<p>Measuring Devices</p> <ul style="list-style-type: none"> • Measuring Hub • Temperature Measuring Device • Tachometer • Thermal Camera • Tire Inflation Pressure Sensor • Filling Pressure Regulating System
<p>Equipment</p> <ul style="list-style-type: none"> • Test Bench • Measuring Hub • Shifting Plate • Tire Swing Device • Drum • electric Motor to drive the Drum: $U = 400V$, $I = 281A$, $P = 100\text{ kW}$, $n = 1250\text{ 1/min}$ • Filling Pressure Measuring and Control System: 0..6 bar, Measuring Accuracy 15mbar, Measuring Frequency 2 Hz 	
<p>Software for Control an Data Acquisition</p> <ul style="list-style-type: none"> • DIAdem 10.0 • LABView 2012 	
<p>Available Supplies</p> <ul style="list-style-type: none"> • electrical Connection 16 A, 32 A, 220V • compressed Air 6 bar 	