

## Automotive components testing equipment

### Test benches / Special Development

#### Test benches

(for tests according to product requirement documents)  
Operating fluids: Glycol, Oil, AdBlue, Petrol, Air



Pressure fluctuation test benches  
Pressure pulse test benches  
Burst pressure test benches  
Perfusion test benches  
Thermoshock test benches

Air charge hose tester (with 3D-Moving unit)  
Surge tank test bench  
Solo 3D-Moving unit

Many other variants and types available

#### Special developments

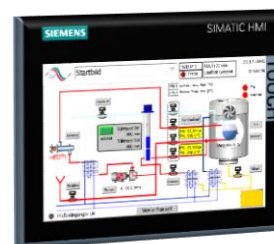
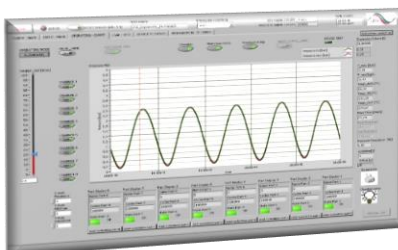
(designed and build for tests according to customers specifications)



Test bench for measurements on wipers  
Temperature chambers + integrated electrodynamic shaker  
Brake dust test bench

Test bench for under water leak tests  
Test bench for measurements of the gear backlash  
Mobile Impactor for the aviation and railway sector

#### Software



Control software based on windows or on PLC (with Visualization and recording of all states and values)

**Customers for test benches and special developments**  
of ID-Lindner



Products	Description
Pressure fluctuation test bench	For radiators, rubber hoses and surge tanks Pressure fluctuation from 0 ... 5 bar with an frequency up to 2 Hz
Vibration temperature module	For temperature test with an superimposed low frequency vibration profile Mountable in each temperature chamber
Perfusion test bench	For static long-term-tests with an flow rate up to 50000 l/h Static pressure up to 5 bar
Surge tank test bench	For simultaneous static tests on 6 surge tanks Adjustable flow rate and pressure
Surge tank misuse test bench	For misuse test / tests out of specification with surge tanks Pressure resistant test chamber up to 5 bar
Thermoshock and pressure fluctuation test bench	For pressure fluctuation tests with superimposed thermal shocks Master and slave system for test with two separated fluid circuits or a combined mode for Thermoshock tests
Thermoshock test bench	For thermal shock tests With adjustable pressure range and flow rate
Burst pressure test bench	For burst pressure tests Pressure range from 0 to max 250 bar
Pressure pulse test bench	For high dynamic pressure pulse tests Pressure range from 0 to max. 50 bar with max. frequencies up to 10 Hz
Air charge hose tester with robot	For high temperature pressure pulse tests with hot air With an integrated robot for a superimposed 3-D-moving
Air charge hose tester with 3-D moving unit	For high temperature pressure pulse tests with hot air With an integrated moving unit for a superimposed 3-D-moving

3-D moving unit solo	For motion tests inside various temperature chambers For motion frequencies up to 3 Hz and a max amplitude of $\pm 35\text{mm}$ , separately adjustable for each axis
Temperature test chamber with electrodynamic shaker	For tests with high frequency vibration profiles Possible frequencies from 5Hz up to 3000Hz and possible amplitude of $\pm 25\text{mm}$
Test bench for pressure retention valves	For tests on pressure retention valves
Test bench for measurements on wipers	Designed to determine the tolerance of the hinge of the wiper High resolution to determine smallest differences
Test bench for measurement of the gear backlash	Designed to determine the gear backlash in automotive back rest adjustments while the production process Strain gauge supported measurement system
Thermoshock test bench for water pumps	For long-term tests on water pumps with an superimposed thermoshock Pressure range from 0 to max 8 bar
Test bench for pedals	For tests on pedals with a defined load spectrum Adjustable pedal load from 0 to 2 kN
Pressure fluctuation test bench for AdBlue components	For pressure fluctuation tests on AdBlue components Pressure range from 0 to 30 bar
Test bench for under water leak tests	For under water leak tests with Air or CO <sub>2</sub> For max. pressure up to 185 bar to detect smallest leakages
Brake dust test bench	Designed to create a defined and reproducible brake dust contamination on wheel rims Many free settable parameters so as to reconstruct almost every possible situation
Mobile Impactor	Designed for material tests in the aviation and the railway sector Material tests by pneumatically generating an impact with an defined energy level from 3 to 140 Joule

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