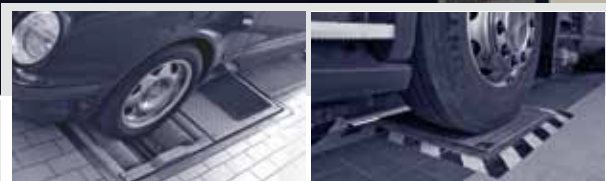




Accredited Laboratory in accordance with DIN EN ISO/IEC 17025:2005



Miscellaneous



Calibration Laboratory for the


- ▶ Calibration of calibration devices for CAR brake testers
- ▶ Calibration of calibration devices for TRUCK brake testers
- ▶ Calibration of weights
- ▶ Calibration of display units for the pressure measurement

Premium Workshop
Equipment

DIN EN ISO/IEC 17025:2005 (D)


The DIN EN ISO/IEC 17025:2005 sets down the general requirements for the expertise in conducting tests and/or calibrations in calibration laboratories.

The use of this international standard puts the laboratories in the position to develop their management system for quality control as well as for administrative and technical processes.

GAZ 

vertreten im

Deutschen Akkreditierungsrat



Akkreditierung

GAZ Gesellschaft für Akkreditierung und Zertifizierung mbH hereby certifies that the


Laboratories of
MAHA Maschinenbau Haldenwang GmbH & Co. KG
Hoyen 20, 87490 Haldenwang – Germany
AutomoTec GmbH
Maybachstraße 8, 87437 Kempten - Germany

at the location Hoyen 20, 87490 Haldenwang possess the competence according to DIN EN ISO/IEC 17025:2005 to carry out tests as follows:

- as a **calibration laboratory**,
- 1. Calibration of calibration device for car brake testing stands,
- 2. Calibration of calibration device for truck brake testing stands,
- 3. Calibration of weights,
- 4. Calibration of display devices for the measurement variable "pressure".

The laboratories have demonstrated that, in their capacity as providers of testing services and results, they also satisfy the requirements of the GAZ criteria for testing laboratories, issue 3.0, modules A, D and E.

The accreditation is valid until: 31.12.2014
DAR registration number: GAZ-PL-09-51-12-14-02
Assessment report no.: GAZ-PL-09-51-12-14-02
Düsseldorf, 29 December 2009
www.gaz-online.de


Dr. rer. nat. Bernd-Josef Schlothmann

Calibration Laboratory Services within the framework of the DIN EN ISO/IEC 17025:2005

With our future-oriented equipped laboratory we can examine and calibrate your calibration systems, weights and pneumatic pressure displays. Specimens which show the required accuracy receive a certificate in accordance with DIN EN ISO/IEC 17025:2005, certifying the required accuracy.

This allows you to document for yourself and your customers the use of reproducible and compliant test and calibration devices (e.g. for verification of ISO 9000 and related standards and guidelines).

The Individual Services offered

- ▶ Examination and calibration of calibration systems for:
 - Brake testers IW 2 series
 - Brake testers IW 4 series
 - Brake testers IW 7 series
 - Brake testers IW 10 series
 - Brake testers MBT series
 - Platform testers MPP series, PL series
 - Performance testers LPS 2000/3000 series
 - other calibration systems with systematically similar design as the system described above
- ▶ Examination and calibration of weights of all kinds:
 - Calibration weight for brake tester calibration device
 - all other kinds of weights
- ▶ Examination and calibration of pneumatic pressure display devices, e.g.:
 - mechanical pressure manometer
 - digital pressure manometer
 - brake tester pressure manometer
 - all other types of display systems for compressed air

Kalibrierschein Calibration certificate					
Die bei den Messungen verwendeten Normale sind auf die nationalen Normale bei der physikalisch-technischen Bundesanstalt rückgeführt. The standards used for measurements are traceable to the national standards at the physikalisch-technischen Bundesanstalt rückgeführt.					
Kalibriervorrichtung IW2/MBT 2100					
Antragsteller mit Adresse / Applicant with Address Möstermann Ringerstr. 2 12345 Kempten Prüfer: P. Modlmeier			Seriennummer / Serial No 890030.002		
Gegenstand / Object Kalibrierte IW2			Herstelldatum / Manufacturing Date 01.09.2009		
			Datum der letzten Kalibrierung / Date of last Calibration ...		
			Datum Zeit / Date Time 15.12.2009 08:31		
	Vor der Kalibrierung/ Before Calibration			Nach der Kalibrierung/ After Calibration	
	Wert/Value	Max. Toleranz/ Max. Tolerance	Nominal/Value	Wert/Value	Max. Toleranz/ Max. Tolerance
Kraft Wert/ Force Value	0,98	+ - 0,02 kN	1 kN	0,98	+ - 0,02 kN
Kraft Wert/ Force Value	1,97	+ - 0,04 kN	2 kN	1,97	+ - 0,04 kN
Kraft Wert/ Force Value	2,98	+ - 0,06 kN	3 kN	2,98	+ - 0,06 kN
Kraft Wert/ Force Value	3,98	+ - 0,08 kN	4 kN	3,98	+ - 0,08 kN
Kraft Wert/ Force Value	4,99	+ - 0,10 kN	5 kN	4,99	+ - 0,10 kN
Kraft Wert/ Force Value	6,03	+ - 0,12 kN	6 kN	6,03	+ - 0,12 kN
Dieser Kalibrierschein darf nur vollständig und unverändert weiterverbreitet werden. Auszüge bedürfen der Genehmigung des ausstellenden Kalibrierlaboratoriums. Kalibrierscheine ohne Unterschrift und Stempel haben keine Gültigkeit. This calibration certificate may not be reproduced other than full extent with the permission of issuing laboratory. Calibration certificates without signature and seal are not valid.					
Ort und Datum		Dienststempel		Unterschrift	
MAHA Maschinenbau Haldenwang Hoyen 20 · D-87490 Haldenwang		Telefon (08374)585-0 Telefax (08374)585-497		e-mail: maha@maha.de internet: www.maha.de	

Sample: Certificate in accordance with DIN EN ISO/IEC 17025:2005 for calibration device CAR brake testers

Examination with MAHA Laboratory Calibration Software



Calibration of the brake tester calibration weight



Calibration device installed on test stand

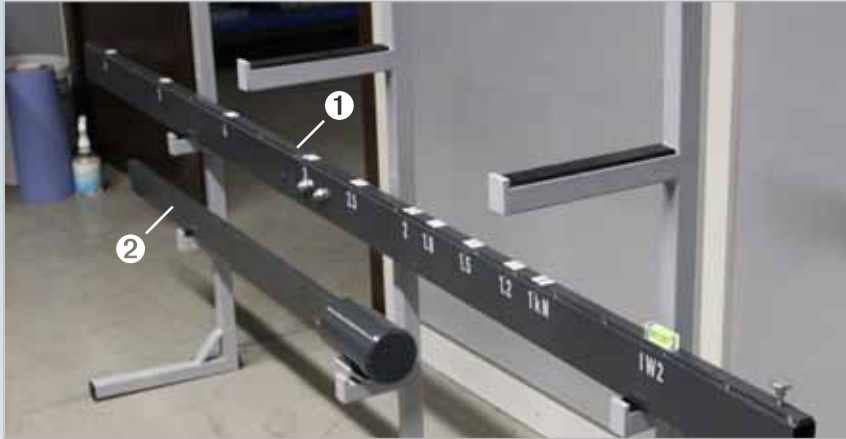


Calibration weight placed on calibration device

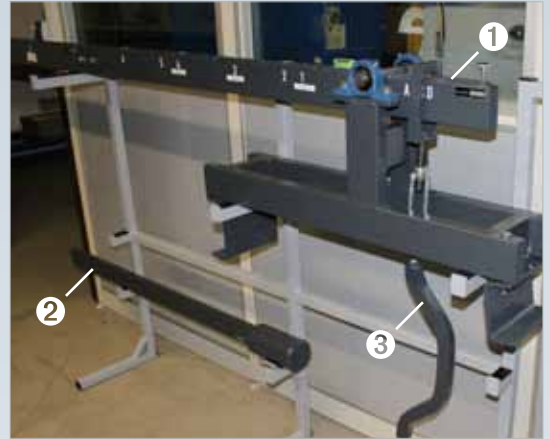


The control and evaluation is done with special laboratory software. If the measurement values are within the tolerance range the calibration certificate can be issued.

Test Components and Test Specimens (examples)



Calibration bar for car and motorcycle test stands (1) with counter weight (2)



Calibration bar for truck test stands (1) incl. steering lever for setting onto strain gauge (3), with counter weight (2)



Piston manometer for calibration of various test specimens.



Sample picture of object to be calibrated (service technician test case)



Calibration of pneumatic radio pressure converters with corresponding remote control.

Contact

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Production Program:

Testing Technology for Cars, Trucks, Motorcycles, Tractors, Forklifts, Aircraft · Roller Brake Testers · Platform Brake Testers · Shock Absorber and Suspension Testers · Side-Slip Testers · Play Detectors · Roller Dynamometers for Performance and Function Testing · Speedometer Testers · Tachograph and Taximeter Testers · Axle and Wheel Load Scales · Scissors Lifts · Two- and Four-Post Lifts · In-Ground Lifts · Pit Jacks · Axle and Transmission Jacks · Mobile Column Lifts · Headlight Testers · Diesel Smoke Meters · Emission Testers for Petrol and Gas Engines · Sound Level Meters · Air Conditioning Service Equipment · Decelerometers · Closing Force Meters · Brake Fluid Testers · Complete Test Lanes for Cars and Trucks · Mobile Test Containers · Wheel Alignment Analysers · Wheel Balancers · Tire Changers.

Additional Services: Workshop Design and Planning · Training Seminars for Users and Service Technicians



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