MAKRA
ALPINE METAL TECH

BUP

Cornering fatigue test

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The cornering fatigue test serves for the continuous quality control of vehicle wheels.

BUP

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The cornering fatigue test is performed as part of prototype technical-release testing and the continuous monitoring of vehicle wheels.
The test parameters are determined by the applicable legal regulations and the required wheel loads of the wheel to be tested. Extended tests and special requirements of automobile manufacturers, wheel manufacturers and test organizations (e.g. TÜV) can be covered by the BUP of Alpine Metal Tech GmbH. The test serves for the continuous quality control of material and processing. Vehicle wheels are safety-relevant parts of automobiles and must therefore be subjected to regular testing.

YOUR ADVANTAGES

» Certified test machine manufacturer
The measuring machines are accepted and certified directly at AMT Makra by the renowned German automobile manufacturers (BMW, AUDI, Daimler, Volkswagen, Porsche etc.).

» Test software
Integrated BMW test modules with special switch-off conditions according to QV 36026 and the possibility of DAkkS calibration. Contains the switch-off criteria prescribed by TÜV for aluminum, magnesium and steel wheels.

» State-of-the-art software architecture
The software can be used with Windows 10 and contains an option for connecting to databases (optional).

» High level of flexibility
Nominal diameter of 10 to 38"; rim width of 3 to 26"; larger rim widths using special flanges available as an option.

» HMI
Intuitive software – operator interface can be set in local language.

» MAKRA quick clamping system
For a time-saving and easy change of wheels.

» Exhaust system (optional)
Exhaust system for the testing of carbon wheels.

BUP760

Cornering fatigue test for passenger cars

In corner fatigue test machines by AMT Makra, the force transmission is produced with a rotating centrifugal weight. There are several machine types available for a wide range of wheel loads. The analysis of test results is carried out via the control processor.

The test data required for documentation can be transmitted via networks or printed out. The design of the machine combines an ergonomic working height with a durable design. The choice of digital drive technology ensures low noise emission.

BUP1000

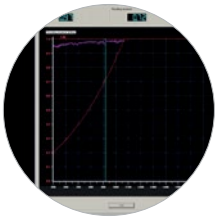
Corner fatigue test for trucks

The MAKRA test machine BUP1000 is used for stationary fatigue testing with a rotating centrifugal weight for truck wheels. The type BUP1000 is designed for maximum ease of operation. The size and shape of the clamping table allows the testing of wheels with a nominal diameter of 16 to 50" and a nominal width of 5 to 26". The bending moment can be individually selected in the range from 3 to 80 kNm.

FEATURES

Resonance curve

The resonance curve is used to determine the critical range of resonance oscillations during the test procedure.



Quick clamping system

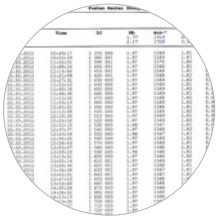
Diameter range from 10 to 28"; no change in the center of gravity of the centrifugal weight in the machine body.

Centrifugal compensation

According to the calculation of the bending moment by the software, the centrifugal weight is calculated and affixed at the corresponding position.

Test log

All wheel-specific parameters and the test results are recorded in the test log.



Tightening torque

The ergonomically correct working height ensures problem-free tightening of the wheel bolts with the torque wrench (with integrated data connection to the analyzing software).

Calibration unit

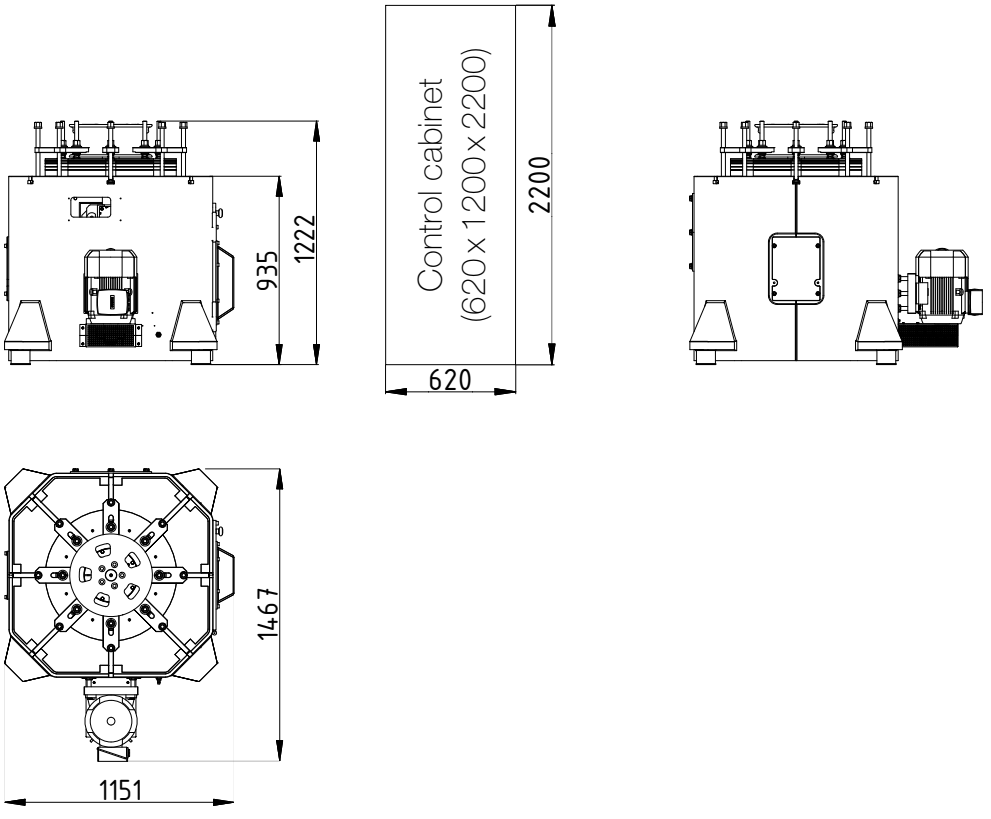
An electronic calibration device is available as an option.

Testing of carbon wheels (optional)

An optional exhaust system is available for testing carbon wheels.

TECHNICAL DATA

	BUP760 7.5 kNm	BUP760 12 kNm	BUP760 16/20 kNm	BUP1000 35 kNm	BUP1000 80 kNm
Test bending moment	0.5 – 7.5 kNm	0.5 – 12 kNm	0.5 – 16/20 kNm	1.5 – 35 kNm	3 – 80 kNm
Max. bending moment incl. threshold limit (10%)	0.5 – 8.25 kNm	0.5 – 13.2 kNm	0.5 – 17.6/22 kNm	1.5 – 38.5 kNm	3 – 88 kNm
Length of bending bar incl. wheel supporting flange	760 mm	760 mm	760 mm	1000 mm	1000 mm
Wheel, nominal Ø	10 – 28"	10 – 28"	10 – 28"	14 – 38"	16 – 38" (max. 50" with special clamping lever)
Rim width (others on request)	3 – 14"	3 – 14"	3 – 14"	5 – 26"	5 – 26"
MAKRA quick clamping system	12 – 24"	12 – 24"	14 – 32"	14 – 38"	16 – 38"
Rotary test	up to 2400 rpm	up to 2400 rpm	up to 2400 rpm	up to 2400 rpm	200 – 1500 rpm (others on request)
Clamping table size	1000 x 1000 mm octagonal	1000 x 1000 mm octagonal	1000 x 1000 mm octagonal	2100 x 2000 mm octagonal	2100 x 2000 mm octagonal
Clamping table height	935 mm	935 mm	935 mm	1550 mm	1550 mm
Total weight	1800 kg	1800 kg	1812 kg	4100 kg	4200 kg
Power AC motor	5.5 kW	5.5 kW	5.5 kW	15 kW	22 kW



AMT Makra GmbH
Werner-von-Siemens-Straße 15
76694 Forst (Baden), Germany
Tel.: +49 7251 9751-0
E-mail: makra@alpinemetaltech.com
Web: www.alpinemetaltech.com