PRODUCT QUALIFICATION

AT OUR TEST CENTER

WEBER
Technik pur

... so that technology works.

WEBER - Technik pur

Preparing your products for all challenges.

Since 1979 WEBER has stood for innovative solutions in future-oriented technology. We develop, design and produce these solutions for a large number of well-known customers, spanning the industries of mechanical engineering, medical technology, commercial vehicle and automotive technology, as well as many other industry branches.

We realize your projects from planning and design, through development and testing of electronics, to production, installation and on-site commissioning of manufacturing lines. We are your partner throughout all project phases.

Furthermore, we offer a unique technological consistency:
We optimize your products at our flexibly accredited WEBER Test Center. Here we run the most diverste environmental simulations, for example climatic tests, vibration and mechanical shock tests, corrosion tests, electrical tests and various system and functional tests.

By crosslinking of all of our business divisions we can offer a complete project handling from a single source: WEBER.

Environmental simulation for test and testing.

Accreditation

DAkkS
Deutsche Akkreditierungsstelle
D-PL-18720-01-00

Accredited test laboratory according to DIN EN ISO/IEC 17025. The accreditation only applies to the test methods listed in the document D-PL-18720-01-00.

Permissions

§7 SprengG

Approved according to $7 SprengG [German Explosives Act] for handling pyrotechnical actuators and safety equipment (e.g. airbags).

Memberships

GUS Gesellschaft für Umweltsimulation e.V.

VUP

Accredited according to DIN EN ISO/IEC 17025:2018.

Products put to the test

In addition to individual environmental simulation tests, the WEBER Test Center also offers the possibility of carrying out complete qualifications. This makes us a qualified partner for your validation projects.

We offer

- Tests according to general and customer test standards as well as indivudial specifications
- Planning, organization and execution of complete qualification tests
- Service: Developement and manufacture off necessary setups, fixtures and complete test rigs

Complete qualification

- Execution of complete qualification projects
- Complete project management
- Close contact with the customer
- Qualified failure analysis
- Regular status updates and error lists
- Set up and handling of your test rigs
- Possibility to design fitting test and monitoring setups
- Tests outside of our test scope can be performed by our accredited partner laboratories

Our test laboratory is flexibly accredited for the following types of testing:

- Temperature and climate tests
- Temperature shock air/air, splash water, immersion
- Vibration and mechanical shock tests
- Electrical tests
- Corrosion tests
- Chemical resistance tests
- Dust tests
- Water tests

Typical manufacturer instructions in our range of services

- MBN LV 124-1
- MBN LV 124-2
- MBN 10306
- BMW GS 95024-3-1
- VW 80000
- GMW3172
- FCA CS.00056
- FCA 9.90111/02
- etc.

„We convince with flexibility and quality“

Patrick Bott, Business Unit Manager Test Center

Whether single or complete qualification, from the draft of a test strategy to a professional report - with us you receive everything from a single source.

Temperature- and Climate tests

- Volume: 340 l to 1,100 l
- Temperature range: -70 °C to +180 °C
- Temperature change rate: max. 10 K/min
- Humidity range: 10 % to 98 % rH
- Humidity measurement below 10 °C using capacitive humidity sensor
- Quick change of humidity by compressed air dryer and steam humidifier
- Dimensions of test chamber: max. 1,100 x 950 x 950 mm (W x D x H)
- Condensation tests

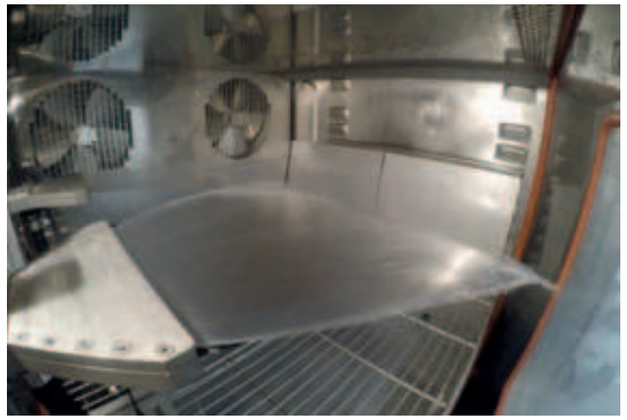
Exemplary standards or test procedures covered by accreditation certificate

ISO 16750-4
DIN EN 60068-2-1
DIN EN 60068-2-2
DIN EN 60068-2-14
DIN EN 60068-2-30
DIN EN 60068-2-38
DIN EN 60068-2-67
DIN EN 60068-2-78
BMW PR 303.4
VW PV 1200
BMW GS 95011-4

High Temperature Tests

- Volume: ca. 750 l
- Temperature range: +10 °C to +300 °C
- Max. weight of samples: 300 kg
- Dimension of test chamber:
  1,040 x 600 x 1, 200 mm (W x D x H)
- Further performance data can be found on page
  „Temperature and climate test“

Temperature Shock Tests



Temperature Shock Splash Water

- Volume: ca. 420 l
- Temperature range:
  - Air: +60 °C to +180 °C
  - Water: 0 °C to +90 °C
- Max. weight of samples: 500 kg
- Max. usable area:
  ca. 850 x 900 x 550 mm (W x D x H)
- Splash width 900 mm

Temperature Shock Air/Water

Upon request

Temperature Shock Air / Air

- Volume: ca. 660 l
- Temperature range: -80 °C to +220 °C
  - Hot chamber: +50 °C to +220 °C
  - Cold chamber: -80 °C to +70 °C
- Relocation time: < 10 s
- Max. weight of samples: ca. 300 kg
- Max. usable area:
  ca. 770 x 650 x 610 mm (W x D x H)
- Connection of samples with test rig possible through notch or tube port

Exemplary standards or test procedures covered by accreditation certificate

ISO 16750-4
LV124-2
DIN EN 60068-2-14
Prüfung Na

Performance Data

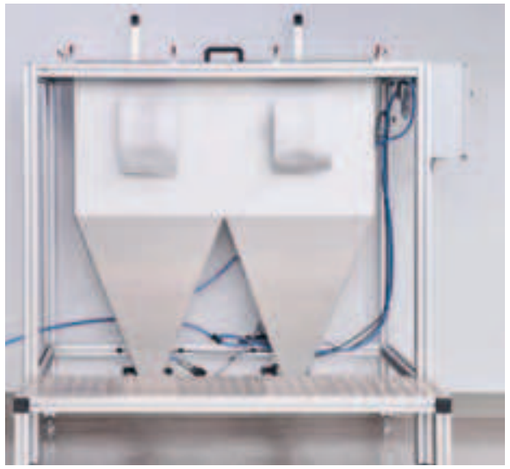
- Excitation types: sine, random, sine on random, multi sine, random on random, mechanical shock
- Sine/random: max. 80 kN
- Mechanical shock: max. 160 kN
- 100 g / 11 ms shock
- Frequency range: 5 to 2,500 Hz
- Resonance search using measurement sensor (strobe up to 416 Hz)
- Max. usable area: 940 x 940 mm (W x D) (M10 with 100 mm hole pattern)
- Temperature overlay:
  - Climatic chamber volume: max. 2,200 l
  - Temperature range: -70 °C to +180 °C
  - Temperature change: max. 15 K/min

Mechanical Vibration and Shock

To suit your individual needs we gladly design and manufacture the fitting fixture for your vibration tests.

Exemplary standards or test procedures covered by accreditation certificate

ISO 16750-3
DIN EN 60068-2-6
DIN EN 60068-2-27
DIN EN 60068-2-64
DIN EN 60068-2-80



Corrosion Tests

Performance Data

- Volume: ca. 1,000 l
- Temperature range: up to max. approx. 60 °C
- Humidity range: up to max. 100% rH
- Humidity storage possible (cyclic)
- Max. usable area: approx. 1,350 x 650 mm (W x D)
- Condensation tests

Exemplary standards or test procedures covered by accreditation certificate

DIN EN ISO 9227
DIN EN 60068-2-11
DIN EN 60068-2-52
ISO 16750-4

Dust Tests

Dust chamber according to ISO 20653

- Volume of the chamber: 2,000 l
- Filled with Arizona dust A2 (fine) according to ISO 12103-1
- Max. usable area: 850 x 1,150 mm (W x D)

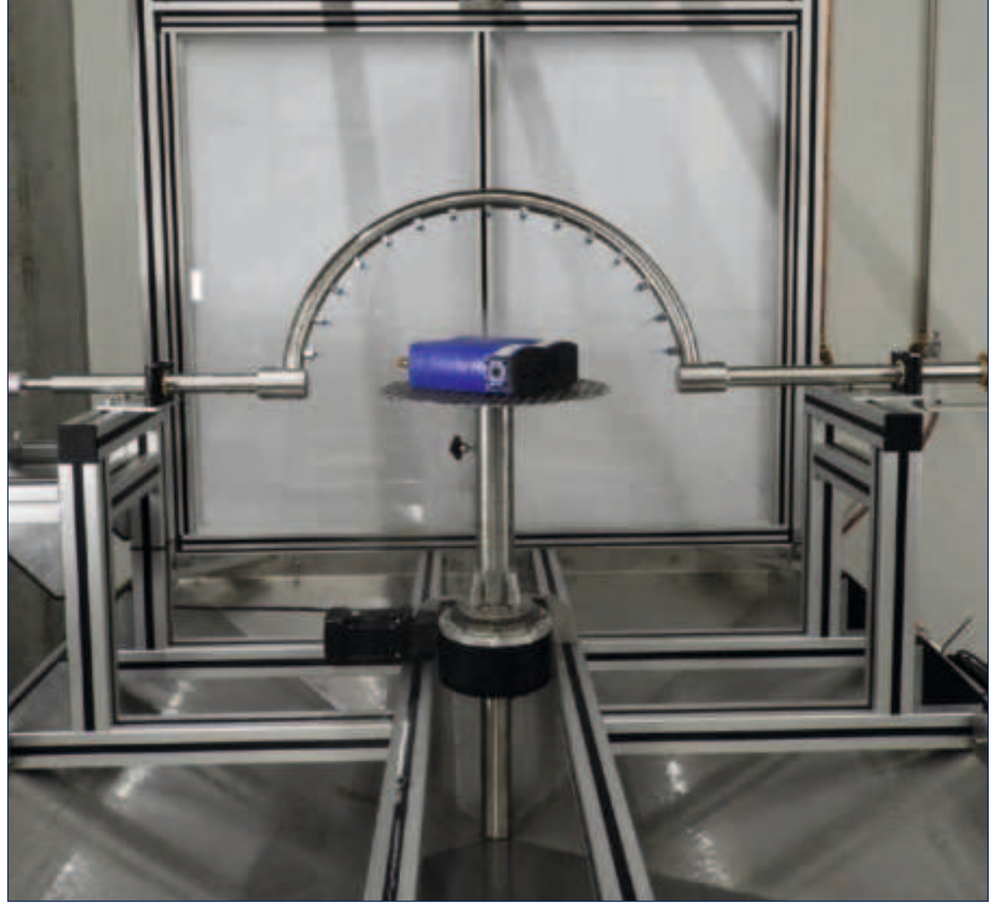
Dust chamber according to AKLV 01/07

- Chamber volume: 2 x 125 l
- Filled with Arizona dust A2 (coarse) according to SAE J726
- Max. usable area: approx. 950 x 480 mm (W x D)

Exemplary standards or test procedures covered by accreditation certificate

ISO 20653

Water Tests

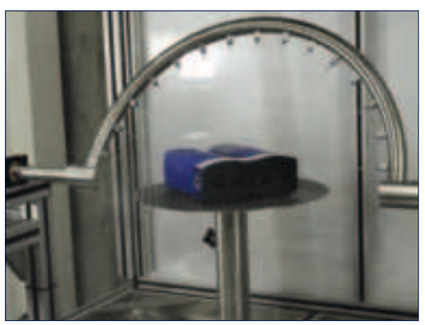


Performance Data

For example:

- IPX1 - Vertical water drips
- IPX2 - Water drips (15° inclination)
- IPX3 - Water spray
- IPX4 - Splash Water
- IPX5 - High-velocity water
- IPX6 - Strong high-velocity water
- IPX9K - High-pressure/steam-jet cleaning
- **IPX7, IPX8 - Submersion/immersion tests:**
  - Immersion tower diameter: 200 mm
  - Immersion tower height: 2 m

Upon request we offer IPX9K tests in cooperation with our accredited partner laboratories.



Exemplary standards or test procedures covered by accreditation certificate
ISO 20653

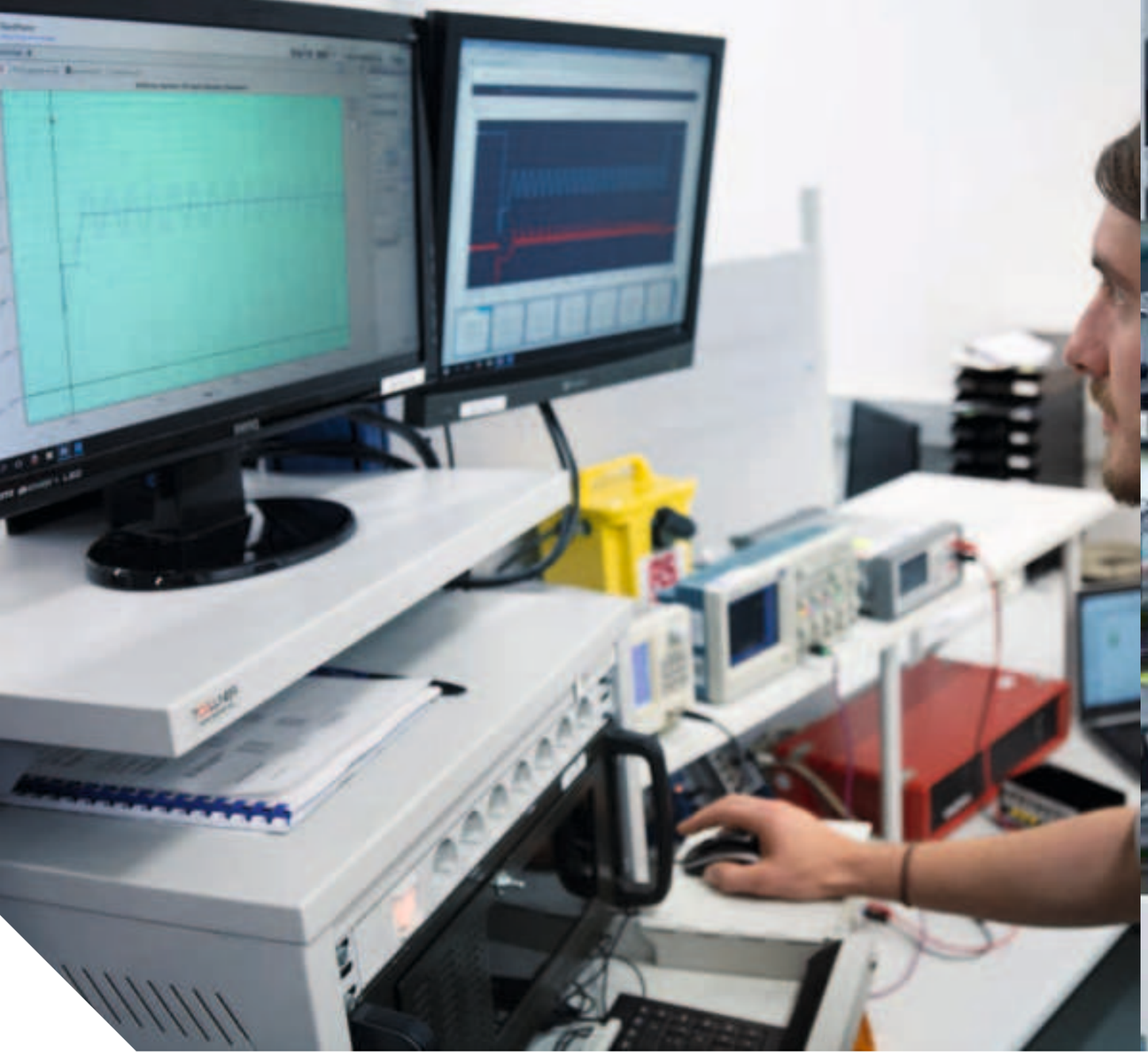
Exact chemicals upon request.

Chemical Resistance Tests

- Performance of chemical resistance tests

Exemplary standards or test procedures covered by accreditation certificate

ISO 16750-5



Electrical Tests

Vehicle electrical system simulation

- Testing of electronic automotive components
  - Voltage max.: -32 V to +140 V
  - Voltage max.: ±112 A (short term ±220 A)
  - Slew rate: up to 100 V/µs
  - Power max.: 4 kW
  - Frequencies: 0 – 200 kHz (up to 1 Mhz at -3 dB)
  - Continuous monitoring of current & voltage
- Insulation resistance and dielectric strength
  - Voltage AC: max. 2,5 kV
  - Voltage DC: max. 1 kV

Exemplary standards or test procedures covered by accreditation certificate

ISO 16750-2
MBN LV 124-1
VW 80000
GS 95024-2-1

Further Services

- Monitoring and control of active test samples: data acquisition and evaluation of current, voltage, resistance, temperature, CAN and LIN bus systems
- Test Management
- Findings, sample tests, failure analysis
- System- and function tests
- Design and manufacture of devices for vibration tests
- Measurement of mechanical quantities
- Flow tests
- Functional test benches
- Optical and noise testing
- Camera monitoring of test samples
- Remote access to your test rigs

Contact

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