



LABCO

WE SHAPE THE FUTURE OF TESTING

LABCO is an **independent** and
globally active test laboratory.

We are accredited according to
DIN EN ISO/IEC 17025.

Loxstedt-Stotel,

„Loxpark“



> 500
clients

LABCO
+
LABCO BTC

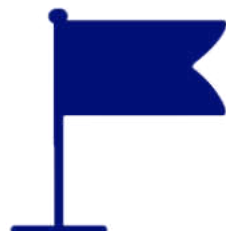
> 4700 m²



> 500
accredited
specifications

Founded in

2003



> 45
employees



> 60 %
university degree

1978

Established in Brake as a development laboratory for cables and wires.

2003

Laboratory manager Dipl.-Ing. Costakis Constantinou bought the laboratory and founded LABCO - with 5 employees.

2018

Laboratory and office area extended to 2700 m².

2021

Dr.-Ing. Marios Constantinou became also Managing Director.

2000

LEONI AG bought the laboratory from Siemens AG.

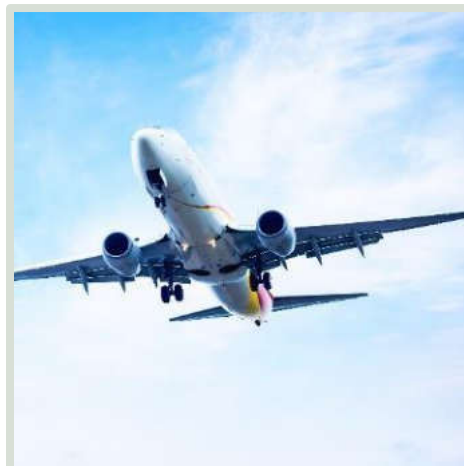
2014

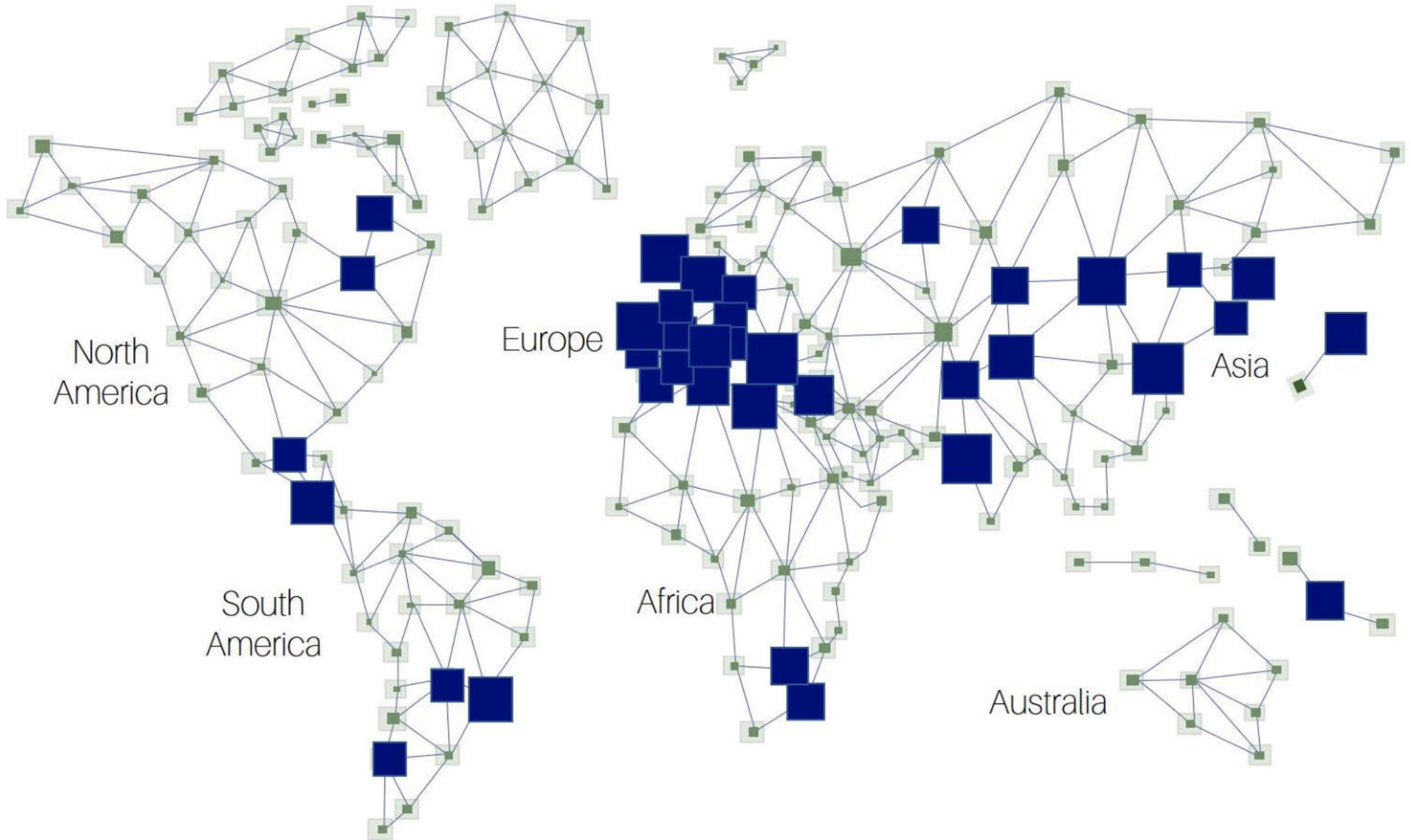
LABCO moved into their new building in Loxstedt-Stotel.

2020

The Battery Test Centre LABCO BTC was founded.

We are testing electrical and non-electrical components of
**e.g. vehicles, aviation, aerospace, agricultural machines,
building and domestic engineering, household devices**





ACOME

add solution

Aptiv

ASK

Audi

Auto-Kabel

Avery Dennison

BMW

certoplast

Changchun jetty automotive

parts corporation

COFICAB

Condumex

Coroplast

Daimler

DRÄXLMEIER

ERNI

Erwin Quarder

Federal mogul

FRÄNKISCHE Industrial Pipes

Fujikura

Gebauer & Griller

Gustav Klauke

HELLA

HEW-KABEL

Hirschmann

HUBER+SUHNER

INTERCABLE

iprotex

Joyson Safety Systems

Jiangsu Hengtong Wire &

Cable Technology

Leopold Kostal

Kromberg & Schubert

Kyungshin Cable

Lear

LEONI

MAHLE

Marquardt

Nexans

Ningbo KBE

ODW-ELEKTRIK

PFLITSCH

Rosenberger

Schulte

SEWS-E

Sumitomo Electric

Bordnetze

Shenzhen Jdd Tech

New Material

TE Connectivity

tesa

U. I. Lapp

VDE

Volkswagen

Yazaki

And many more...

- Accredited according to **DIN EN ISO/IEC 17025**
- Received in July 2000
- Includes > **500** specifications
- **Flexible** accreditation for many tests
- Tests without accreditation/specification also possible



The accreditation includes various types of specifications from major OEMs as well as national and international standards and regulations.

You can find details of our accreditation [certificate](#) and the [annex](#) on www.labco.de.



OEMs worldwide appreciate our service as

Independent | **Trustful** | **Highly-qualitative**

Re-testing in OEM internal laboratories is not necessary.

LABCO has direct contact with many OEM development departments.

In more than 40 years of experience, our test scope has been expanded to a wide variety of test samples.

In simple words, we test everything that can be found **on and around a cable harness** – from any individual component to **complete high- and low-voltage** cable harnesses.



Wires and Cables



High and low voltage single and multicore cables

RF cables:
e. g. coaxial, LVDS, CAN
Ethernet, Flexray

Twisted cables

Protection Systems



Adhesive tapes

Sleeves, hoses, tubes:
e. g. smooth, braided,
corrugated, heat-shrink

Longitudinal wrapping systems

Connection Systems



High and low voltage terminals, connectors and housings

RF terminals, connectors and housings

Sockets and plugs:
e. g. charging devices,
trailer couplings

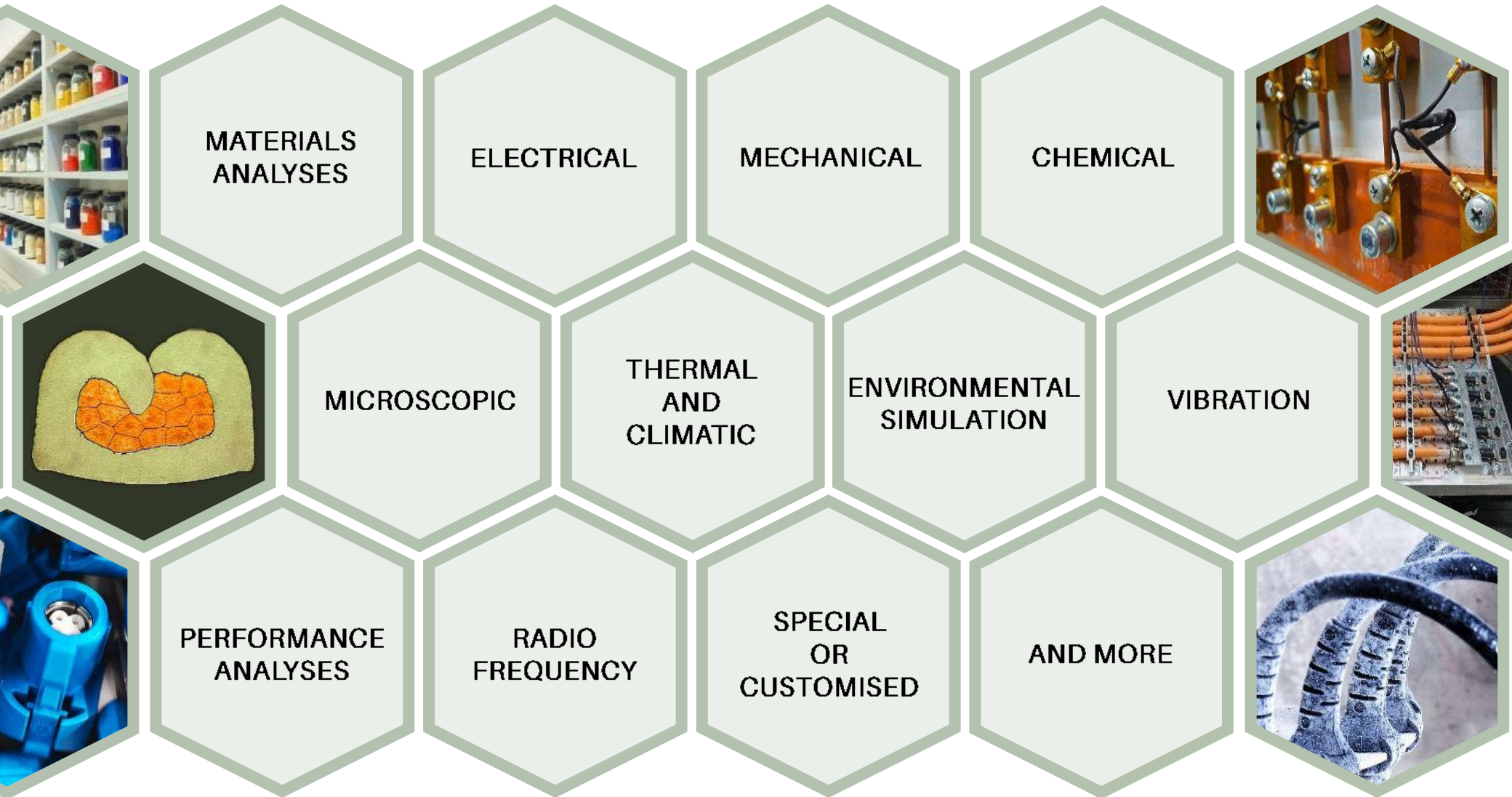
Batteries, Interfaces and Assemblies

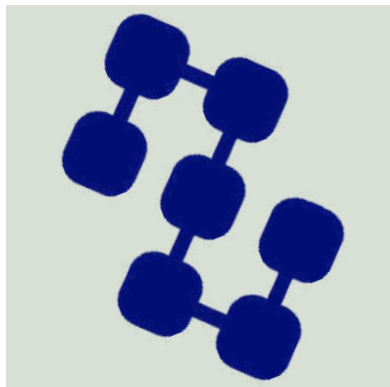


Batteries:
e. g. cells,
modules, packs

Interfaces:
e. g. fuse boxes,
controllers, relays

Assemblies:
e. g. mountings,
fixtures, fasteners

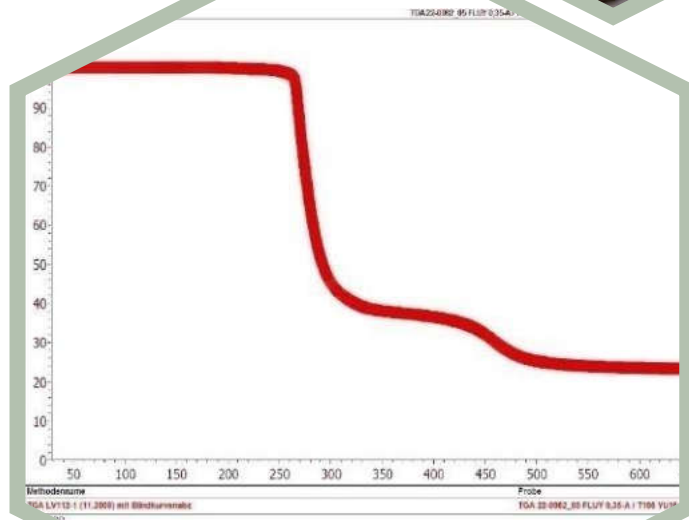




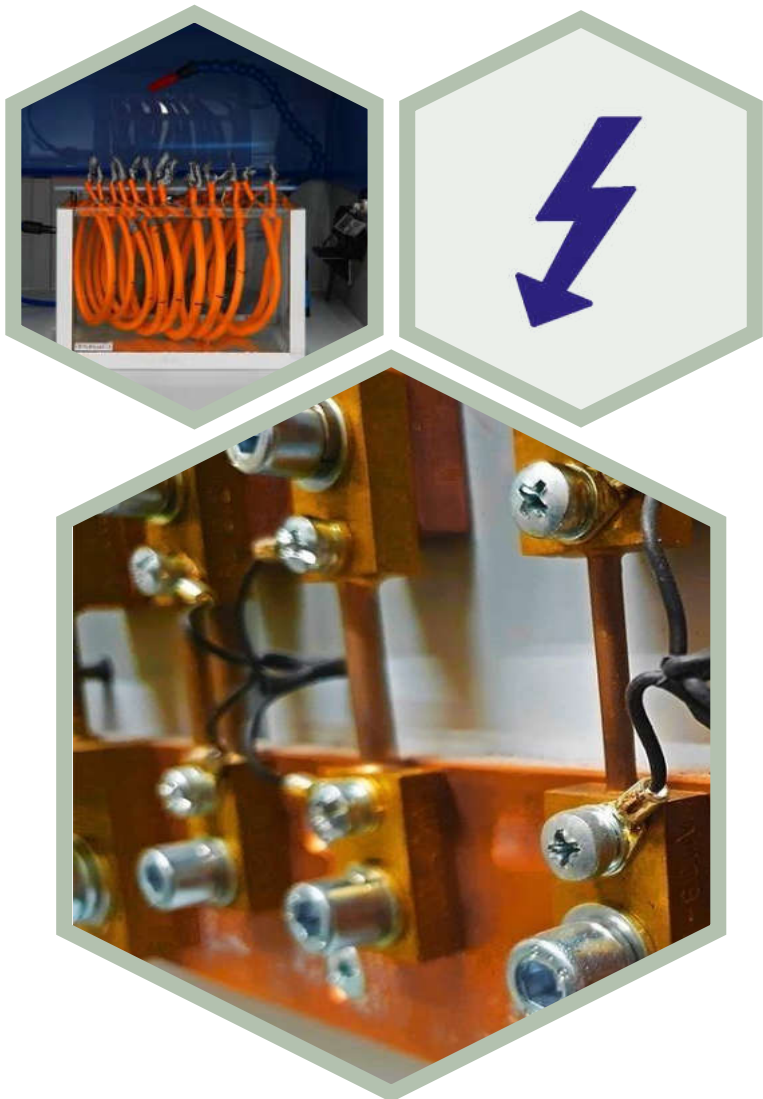
- Pre-development projects
- Competitive analysis
- Development of new tests
- Failure-cause analysis



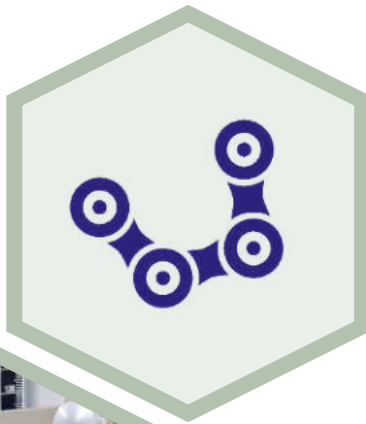
- 20 years participation in (inter-)national committees of specifications
- Represented in important work groups in the German automotive industry



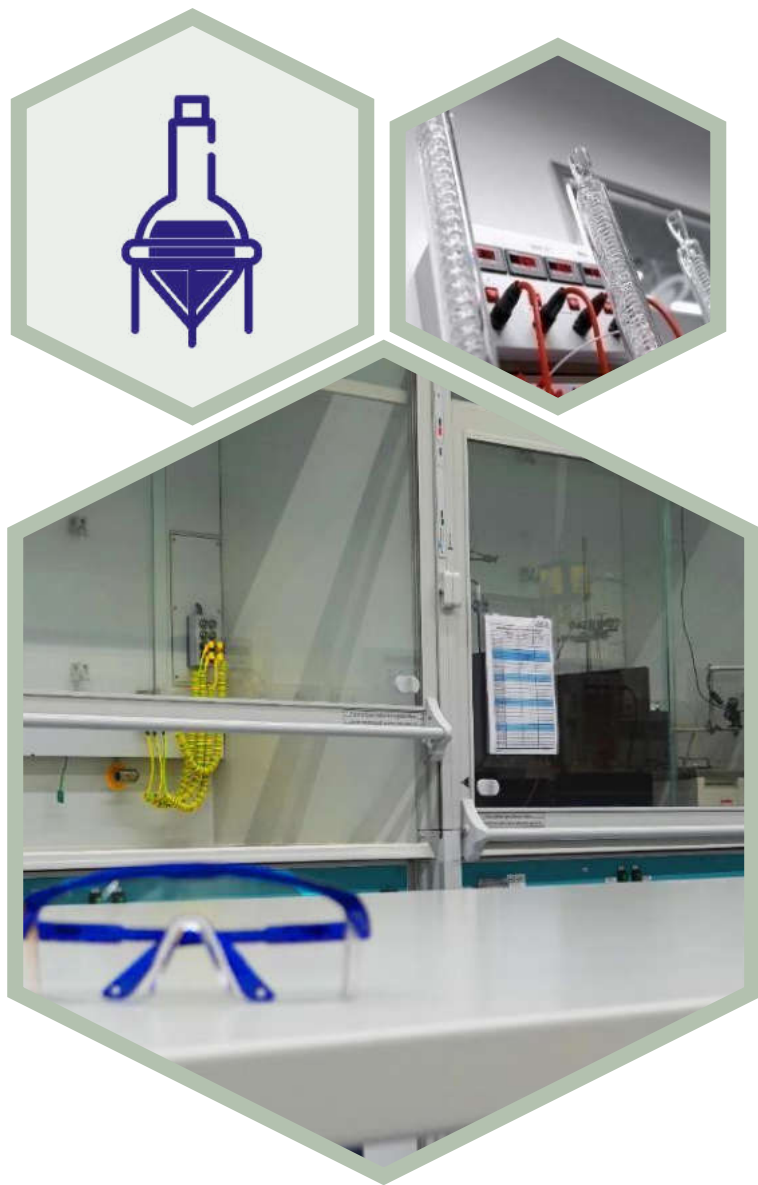
- DSC (Differential scanning calorimetry)
- TGA (Thermogravimetric analysis)
- FTIR (Fourier-transform infrared spectrometer)
- MFI / MVI test equipment (Mass flow index / Mass volume index)
- X-ray fluorescence spectroscopy



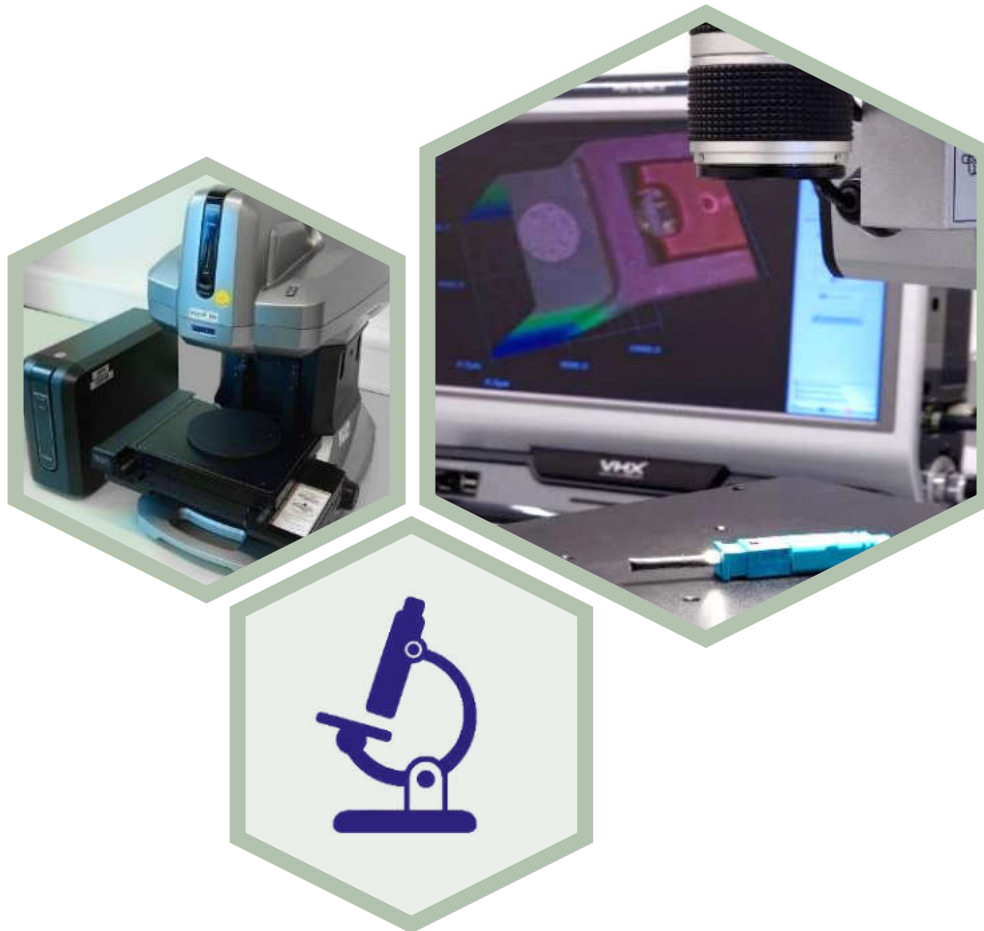
- Derating systems
- Power supplies up to ca. 3000 A for e. g. short-circuit tests
- Precision resistance measuring equipment into the μOhm range
- High resistance measuring equipment covering the T Ohm range
- High voltage testing equipment up to 50 kV



- Tensile testing machines
- Bending cycle testing apparatus
- Impact testing equipment
- Abrasion test devices
- Motorised mandrels for winding tests



- Extraction test equipment
- Equipment for different chemical tests, e. g. storage in
 - oil
 - fuels
 - battery acid
 - other fluids and chemicals



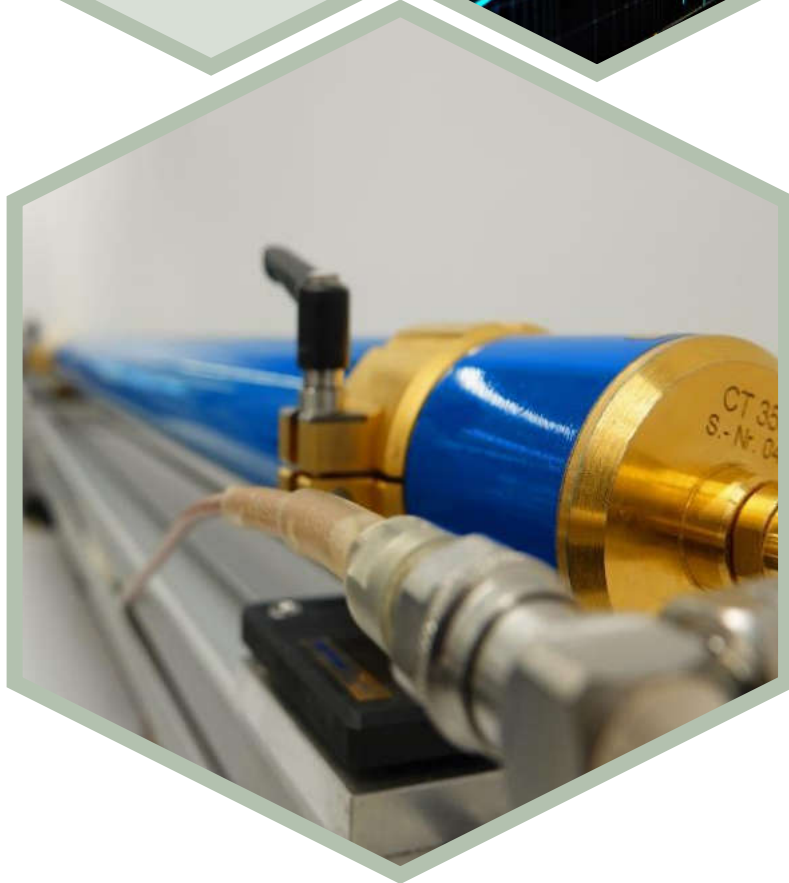
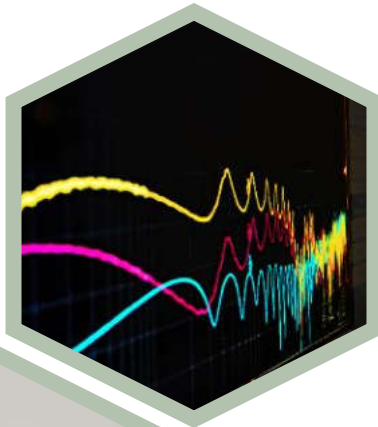
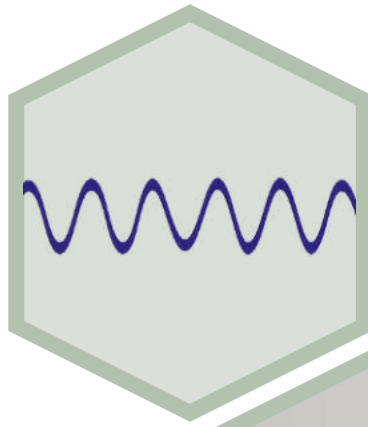
- Video microscope
- Stereo microscope
- Digital microscope with a magnification of 0 – 200x and a depth of focus of 4 cm
- Overhead-light microscope
- Fully automatic microscope equipment for cables and wires
- Micro-section laboratory for measuring crimp contacts
- 3D Optical Profilometer



- > 40 climatic/temperature test cabinets and chambers
 - incl. temperature shock chamber
- 3 walk-in temperature/climatic test chambers (11,5 m³ test space)
 - Temperature range: - 80 °C to + 250 °C
 - Humidity range: 10 % to 98 % RH
- Tests under thermal/climatic profiles are possible, e. g. vibration tests
- > 100 ovens for ageing tests (Up to 1200 °C)



- Test equipment for fogging tests
- Laboratory for storing in environmental fluids, e. g. storage in salty fluids
- Salt spray chamber for e. g. corrosion tests
- Ozone chamber
- Flame test apparatus
- IPX-chamber for e. g. water tightness tests
- Water storage apparatus for hydrolysis

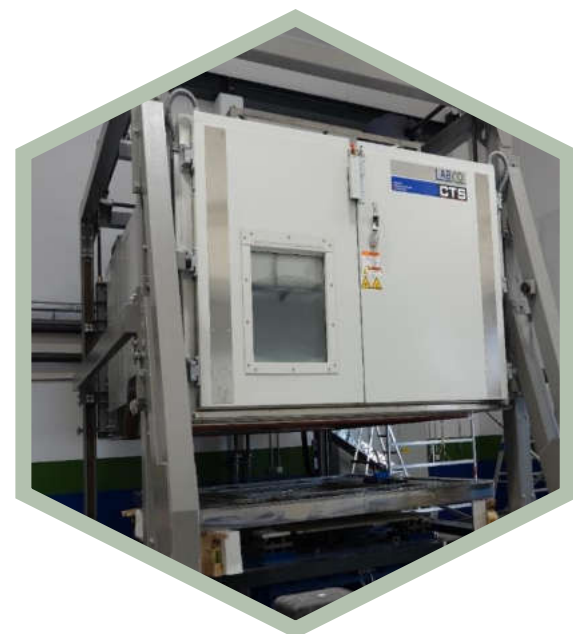


- Network analysers (5 Hz to 26,5 GHz)
- Triaxial-measurement tubes (40 and 90 mm diameter)
- Line injection measurement equipment

- Extract of the measurement possibilities:
 - Return and insertion loss
 - Characteristic impedance
 - Determination of shielding effectiveness
 - Line symmetry



| Parameters | Shaker 1 | Shaker 2 |
|---|----------------------------|----------------------------|
| Nominal force Sine / Random / Shock | 50 kN / 50 kN / 100 kN | 80 kN / 80 kN / 160 kN |
| Frequency Range | 5 Hz to 2700 Hz | 5 Hz to 2500 Hz |
| Smax (Peak to Peak: Sine / Random + Shock) | 36 mm / 50,8 mm | 50,8 mm / 76,2 mm |
| Dimensions slip table and head expander | 600 mm x 600 mm | 600 mm x 600 mm |
| Test space of the climatic chamber (W x D x H) | 1040 mm / 960 mm / 1080 mm | 1020 mm / 890 mm / 1120 mm |
| Temperature range | -70° to 180 °C | -70 °C to 180 °C |



Parameters

Nominal force Sine / Random / Shock

Frequency Range

S_{max} (Peak to Peak: Sine / Random / Shock)

Dimensions slip table and head expander

Test space of the climatic chamber (W x D x H)

Temperature range

Shaker 3 + Shaker 4

300 kN / 270 kN / 900 kN

5 Hz to 2000 Hz

63,5 mm / 63,5 mm / 76,2 mm

2100 mm x 2100 mm / 2100 mm x 1900 mm

2500 mm / 3115 mm / 1500 mm

- 45 °C to 150 °C



- Battery test systems for e. g.
 - Cyclic charging and -discharging
 - Over- and discharging
 - Cyclic deep discharge

| Test equipment | Max. number of test channels | Max. power simultaneous |
|--|------------------------------|-------------------------|
| Cell tester | 36 | 1,8 kW |
| Module tester | 2 | 64 kW |
| Pack tester | 6 | 1100 kW |
| Max. voltage per channel: 1200 V Max. current per channel: 1000 A | | |



- Door slam trial apparatus
- Micro- and shore-hardness test equipment
- ABS-Simulation test equipment
- Slow-motion-test apparatus (up to 260 °C)
- Flexural strength (from -40 °C to +180 °C)



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Please contact us
if you have any further questions!

Visit us also on



labco.de
labcobtc.de/



<https://www.youtube.com/channel/UCSCLVRllupFZROVS7g3ikw>



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