

# Mobile Measurement Chambers

- Pre-compliance EMC measurements
- Antenna measurements
- Fully automated product test
- End-of-line test



**Telemeter Electronic**

Thermal Management

Industrial Components

Test and Measurement

RF & Microwaves

Aviation

Engineering & Service



**... we provide solutions!**

# Models and variations

## Intelligent measurement chambers – always the right concept for your application

Mobile measurement chambers are currently used by many companies to support the product development of electronic components and systems. In that environment, they can be used for example for electromagnetic immunity and emission testing in EMC-pre-compliance measurements. Caused by increasing safety requirements for critical components and systems e.g. in the medical industry, a 100 % end-of-line test procedure is unavoidable. Telemeter Electronic designs and manufactures modular chamber solutions to address these demanding requirements from many customers. Using a very compact design, the measurement chambers can be used quite flexible and location-independent in product development, manufacturing, laboratories or quality control.

All measurement chambers are fully custom designed to meet a variety of applications and requirements. Integrated antennas, positioners as well as DUT fixtures and communication interfaces ensure a convenient and trouble-free measuring process. It is always our goal to provide our customers always fully integrated measurement solutions. Individual solutions for control, measurement concept as well as operating concept make shortest development time possible. Telemeter Electronic is a full service provider offering additional components like amplifiers, antennas, switch matrixes and measuring instruments from one single source.



# Models and variations





# Detailed structure

## Shielding effectiveness

A full-surface lining with copper foil and special sealing gaskets guarantee an average shielding effectiveness of 60 – 80 dB.

## Reinforcement

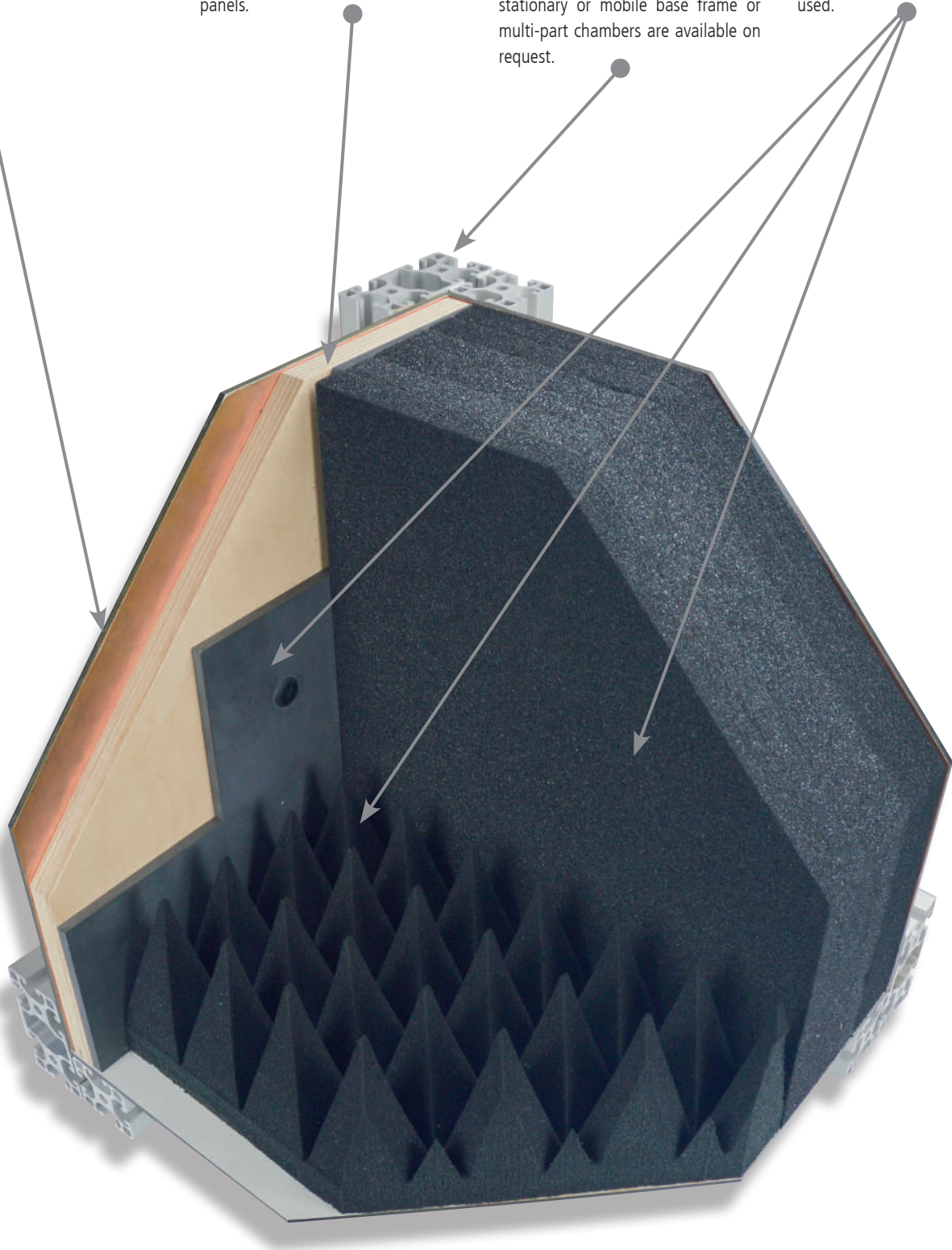
If necessary (for instance by lining the chamber with ferrite tiles to address low frequencies), we will add an additional reinforcement using multilayer panels.

## Solid structure

By using special lightweight aluminum profile system, we can easily realize a flexible design in horizontal or vertical orientation. Several options like a stationary or mobile base frame or multi-part chambers are available on request.

## Absorbers

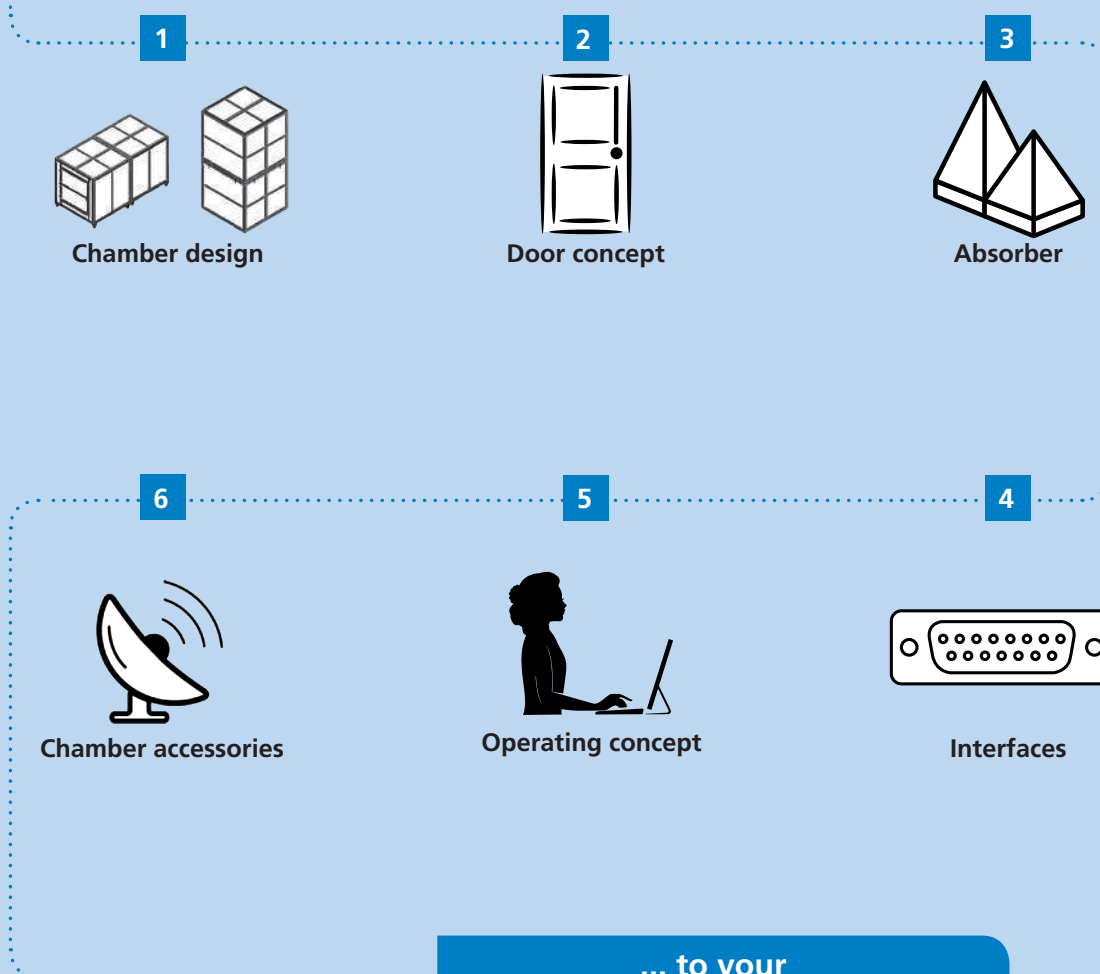
The measurement chambers can be used in a broad frequency range between 20 MHz and 110 GHz depending on the absorber material used.



# Flexible chamber structure



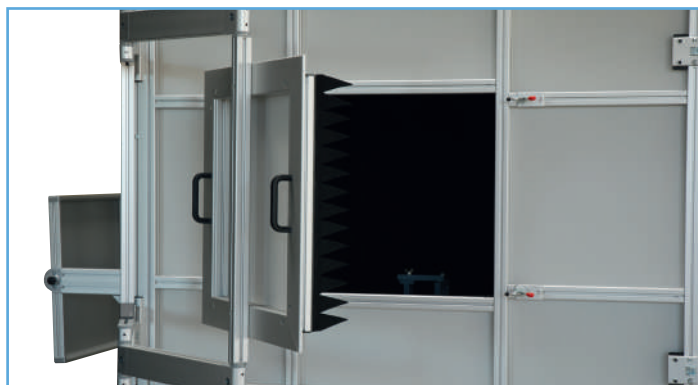
from your initial idea ...



... to your individual solution!



# Door concepts



Double hinge door



Manual door



Drawer feeding system



Hinged door



Sliding door



Flap feeding system



Lift mechanism



Individual solution



# Absorbers

The measurement chambers can be lined using different absorbing materials to cover a broad frequency range between 20 MHz and 110 GHz. Typical areas of application are e.g. RFID, mobile radio communication, Bluetooth, Wireless LAN, EMC-pre-compliance measurements, radar measurements, NFC, antenna measurements.

And we also provide a suitable solution for your application!

## Ferrite tiles

Very well suited in the low frequency range, typically between 20 MHz and 500 MHz. The higher weight typically requires a reinforced structure of the measurement chamber. By combining the ferrite tiles with duly adjusted absorbers, a very broadband frequency coverage can be guaranteed.

## ML-Multilayer absorbers

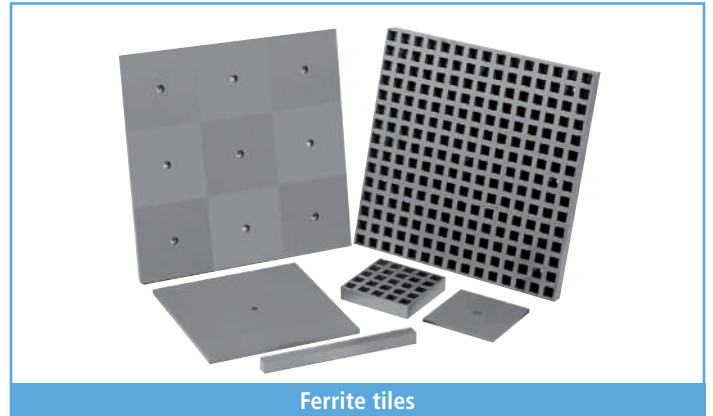
These absorbers are designed to cover a broad frequency range between 600 MHz and 40 GHz by using several selected layers of flat foam absorbers. Compared to pyramidal absorbers in the same frequency range, the ML-type save a significant amount of space and are very mechanically stable.

## Pyramidal absorbers

Pyramidal absorbers made of foam material typically cover a frequency range between 1 and 40 GHz. These absorbers are designed for a high power density up to 2000 W/m<sup>2</sup>. The absorbers can be painted in different colors on customers request. Depending on the required frequency range, different tip sizes between 28 and 115 mm are available.

## Polystyrene absorbers

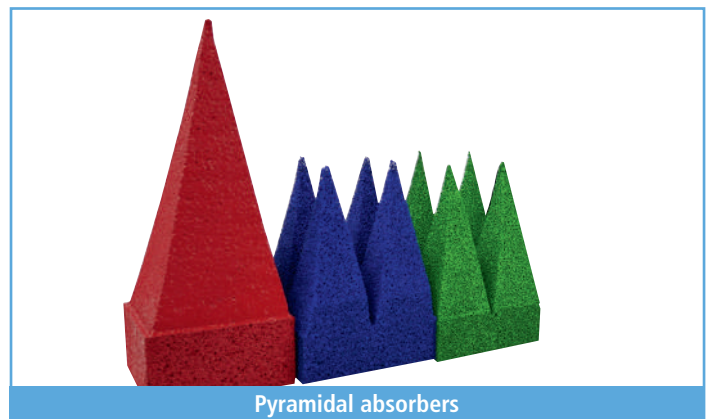
The modular polystyrene absorbers meet clean room requirements up to class 4 according to ISO 14644-1 and class 10 according to US Fed. Standard 209E without any additional treatment. These absorbers cover a broad frequency range between 20 MHz and 110 GHz at a tip size of only 250 mm. Polystyrene absorbers are designed to meet long lifetime requirements up to 40 years due to the nature of the material.



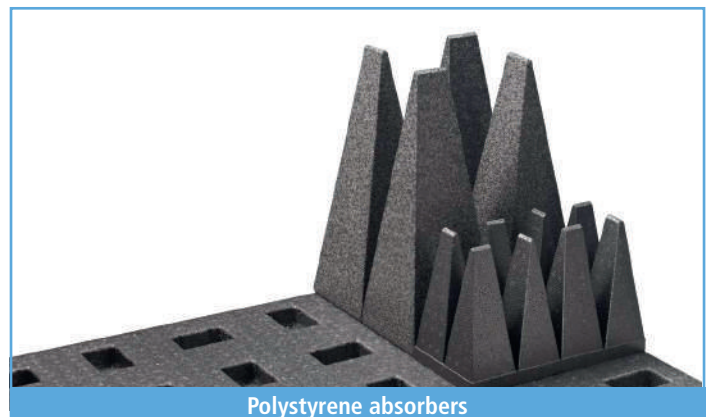
Ferrite tiles



ML-Multilayer absorbers

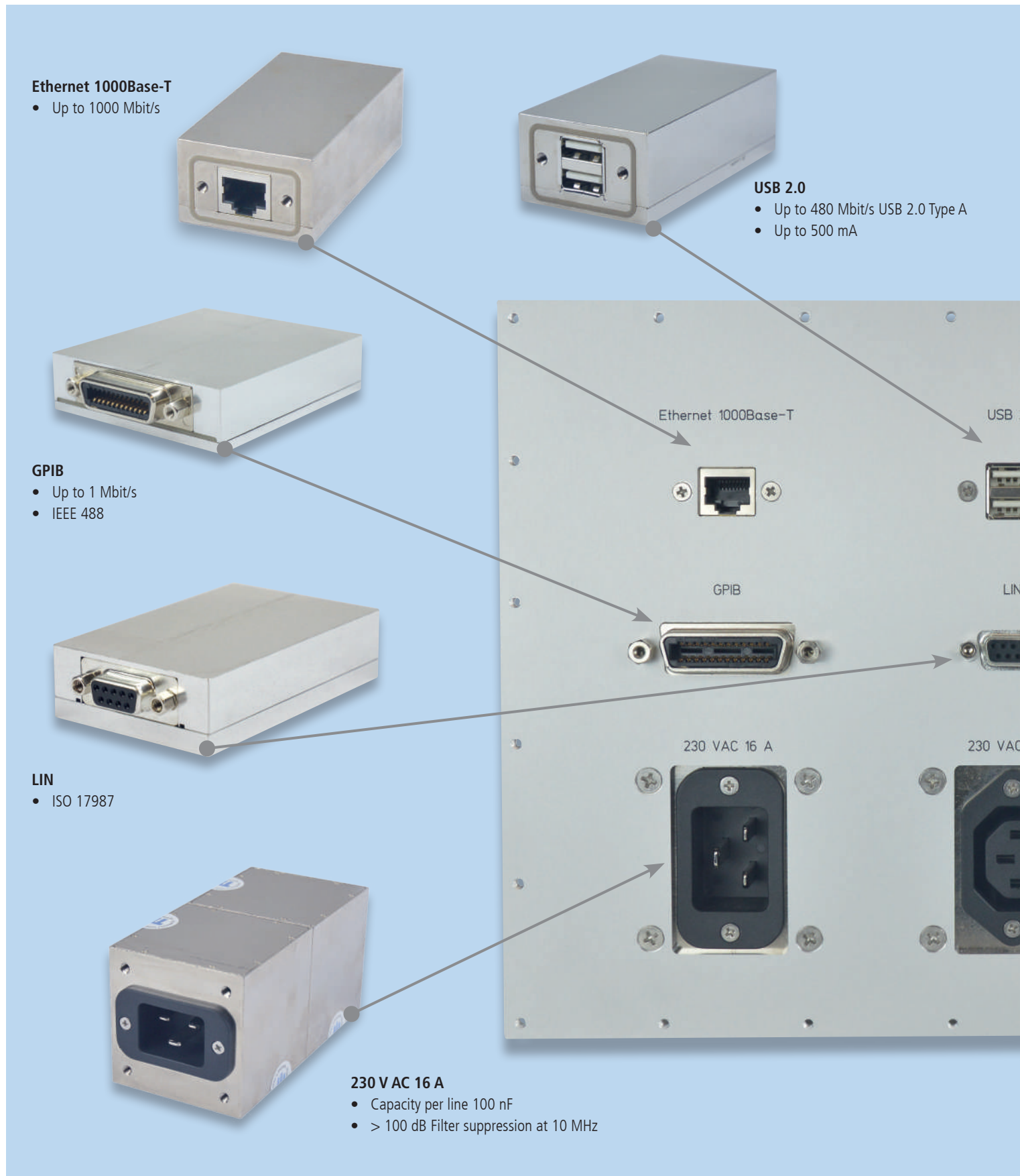


Pyramidal absorbers



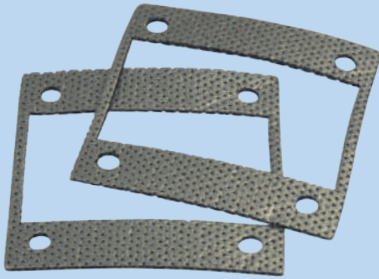
Polystyrene absorbers

# Feedthrough filters and panels





# Feedthrough filters and panels



## RF-sealing gaskets

All filters are supplied with perfectly fitting sealing gaskets.



## CAN FD

- High speed CAN, ISO-11898-2
- Up to 8 Mbit/s



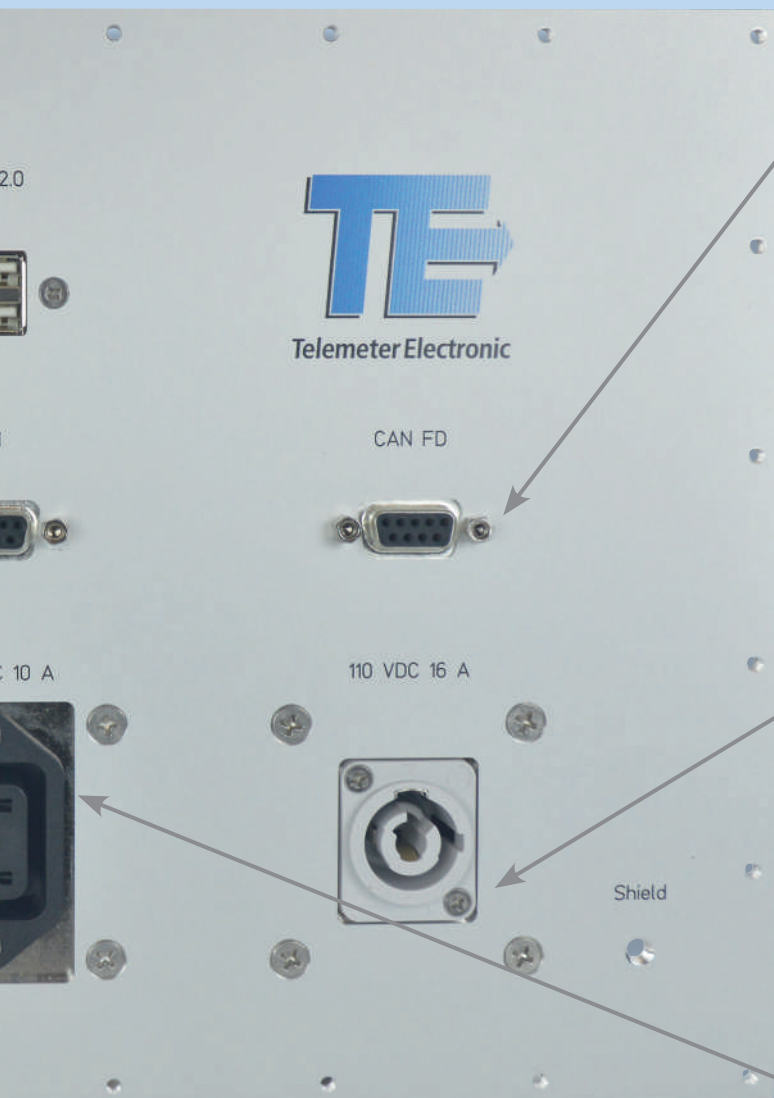
## 110 V DC 16 A

- Capacity per line 100 nF
- > 100 dB filter suppression at 10 MHz

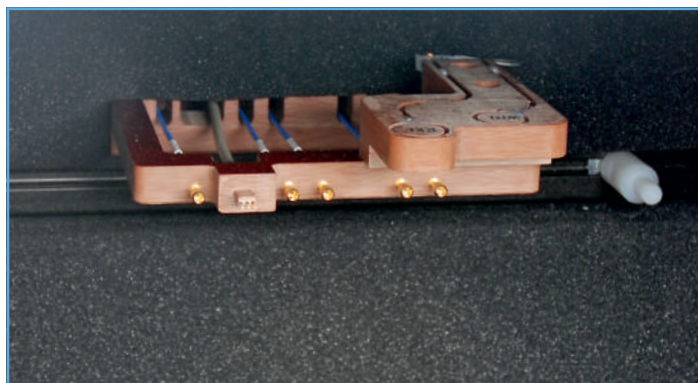


## 230 V AC 10 A

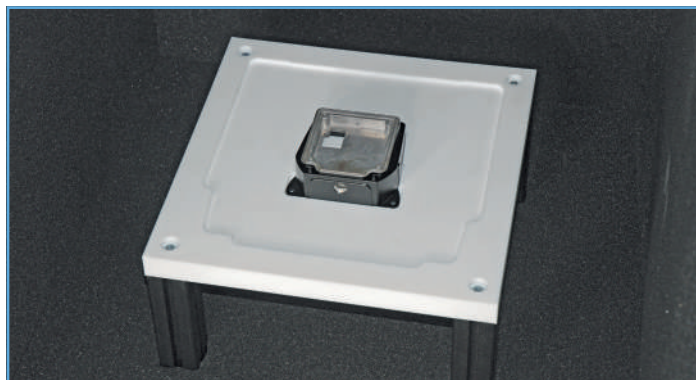
- Capacity per line 100 nF
- > 100 dB Filter suppression at 10 MHz



# Optional equipment



DUT-interface



DUT fixture



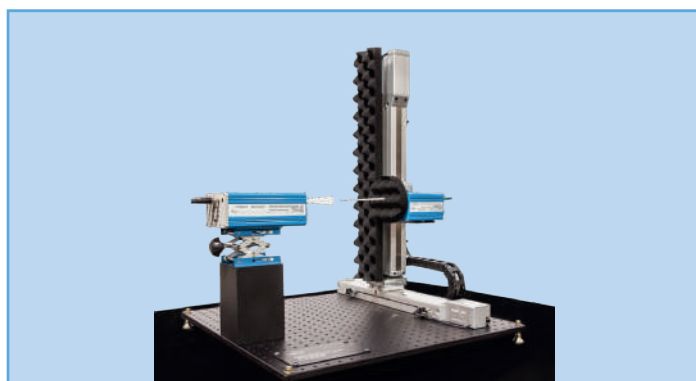
Lighting concept



Wave guide feedthrough



Automation concept



Positioner



Manual or automated slides



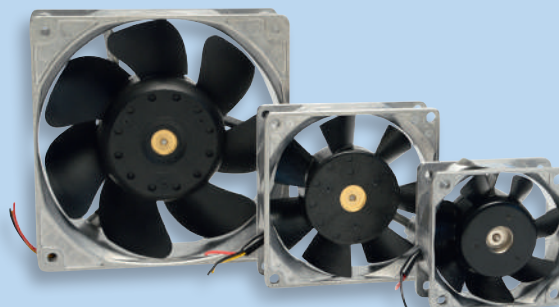
19" rack integration mounting option/storage space



# Optional equipment



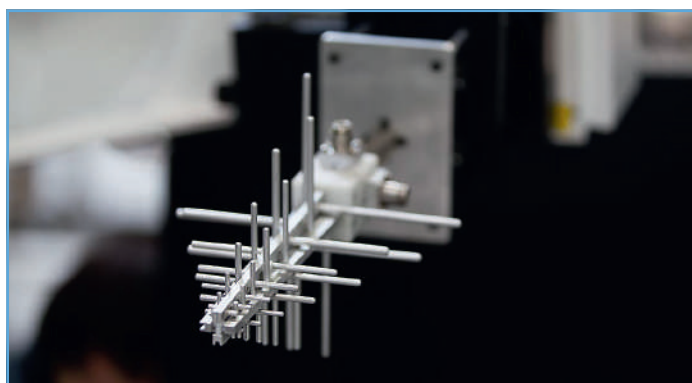
Temperature control



Ventilation concept



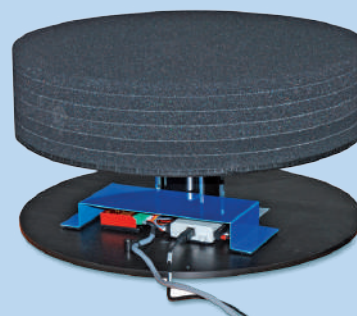
Switch matrix



Antenna integration



Antenna mount

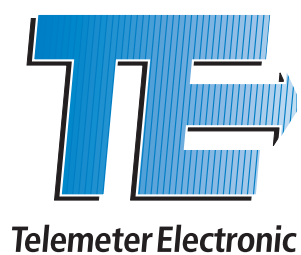


Turntable



Your individual solution!





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