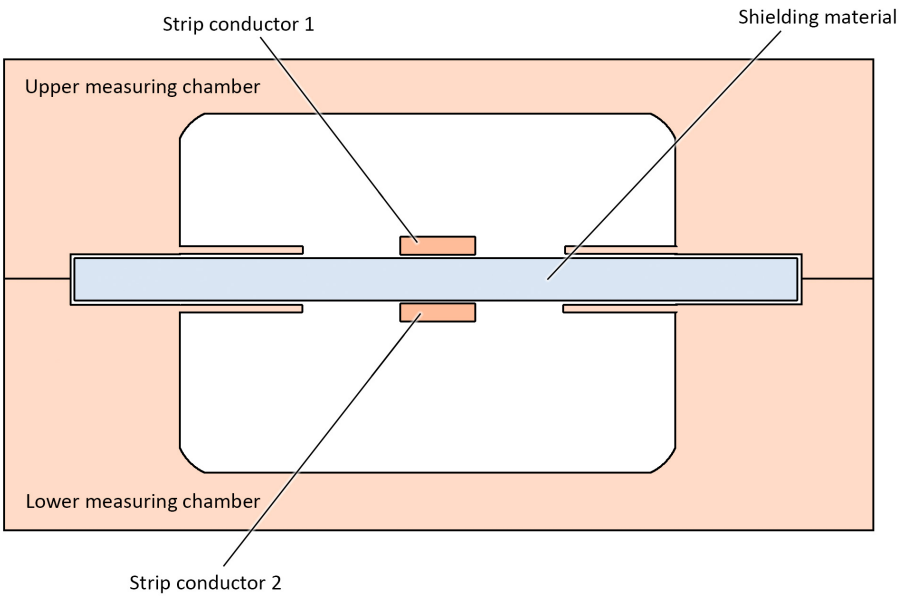
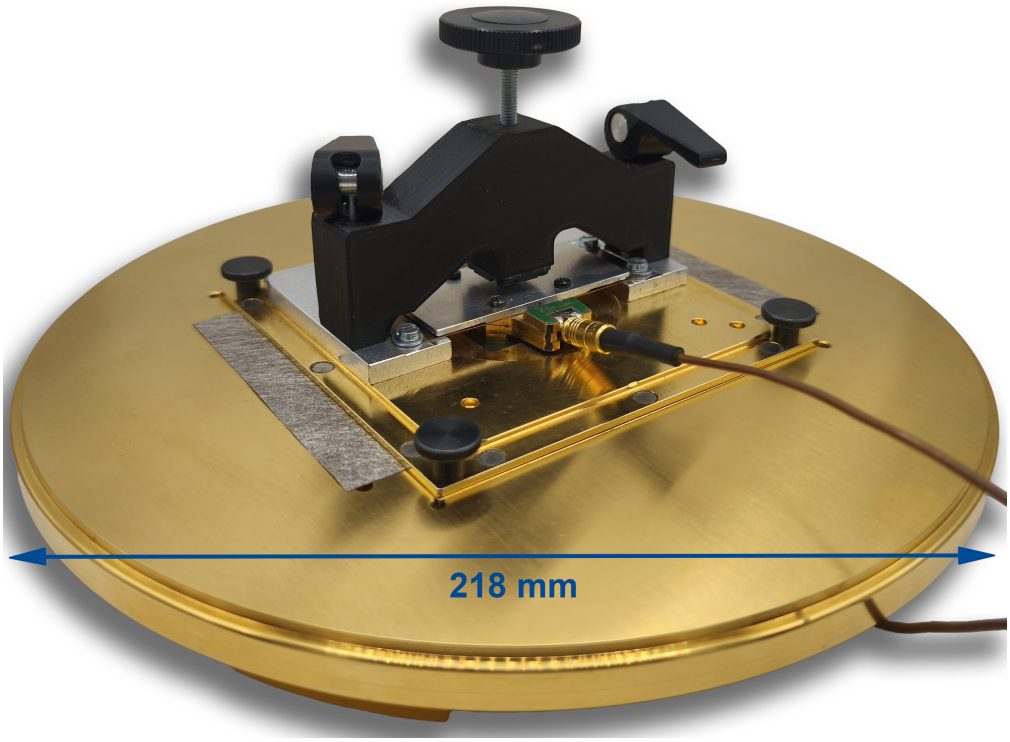
SDM Langer

Measurement of electromagnetic shielding according to the Langer method

Short description

The shielding effectiveness of a shielding material is defined by the attenuation of an electromagnetic wave that penetrates the material. However, in practice, this phenomenon relates to near-field effects, which are responsible for the penetration of the shielding material in the form of currents and voltages.
The Langer method aims to directly measure the shielding properties of the material for the electric and magnetic field in the near field. For this purpose, the material parameters R, L and C of the shielding material are determined. These parameters are decisive for how well electric and magnetic fields are prevented from penetrating the shielding material. This makes it possible to evaluate the electric and magnetic shielding properties separately.
The Langer method for measuring electromagnetic shielding can be carried out on all types of shielding material. It is particularly suitable for flexible shielding materials made of threads or fibers, which are mainly used for device shielding and cable shields. For these materials, additional insights into the geometric composition of the material structure can be gained.
In the context of simulations, it can also be advantageous to feed the models directly with the parameters R, L and C of a shielding material.
The measurement of shielding effectiveness using the Langer method provides useful insights for manufacturers and users of shielding materials as well as for research institutes and universities. On the one hand, the material properties can be analyzed in more detail, and on the other hand, it is possible to compare different materials regarding their shielding effectiveness in the near field.
For an offer, please contact the sales department of Langer EMV-Technik GmbH.

Shielding material Measuring device