



## VALIDATION RF - TEST SITES

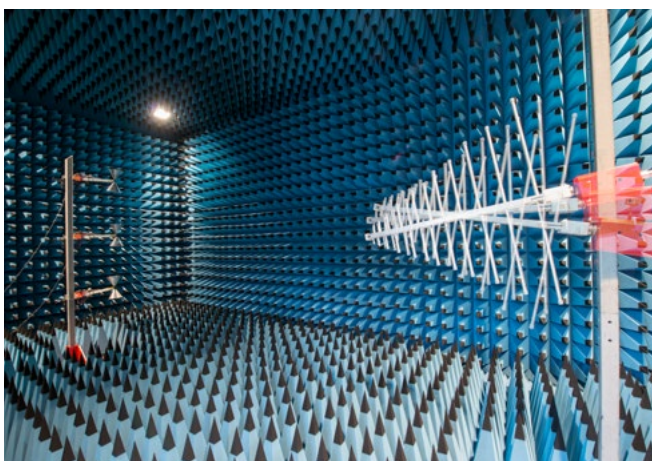
**NEW!**  
**REVERBERATION  
CHAMBER VALIDATION**

### VALIDATION SERVICE FOR:

- EMC TEST SITES
- ANTENNA TEST FACILITIES
- MICROWAVE TEST RANGES
- REVERBERATION CHAMBERS
- ANTENNA AND FIELD PROBE CALIBRATION SITES

Seibersdorf Laboratories is a market leader in manufacturer-independent, accredited validation of EMC test sites and offers validation services for antenna and microwave test ranges and reverberation chambers. Traceable validations are performed according to international standards and to customers requirements.

The validation service is offered for all kinds of EMC test sites, for antenna test sites and for calibration sites according to civil, military, automotive, telecom, medicine and customer specific requirements.

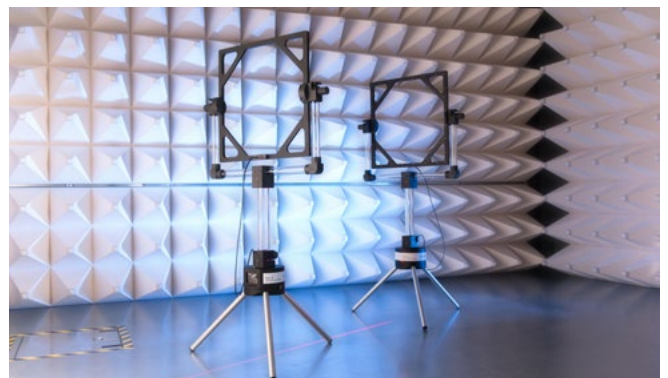


### RESEARCH

We are dedicated to scientific research work. Results are published at international conferences and implemented in CISPR and CENELEC standards.

### NEW: ADVANCED REVERBERATION CHAMBER VALIDATION

We perform Reverberation Chamber Validations in line with a broad range of international standards, including ISO 11452-11, ISO 11451-5, IEC 61000-4-21, MIL-STD-461F/G, RTCA DO-160G and DEF STAN 59-411. With equipment capable of testing up to 40 GHz, we offer both mode tuned and mode stirred validation procedures, ensuring full compliance with current requirements.



### READY FOR THE NEW STANDARD

CISPR 16-1-4 defines a new procedure for the validation of EMC test sites in the frequency range 9 kHz to 30 MHz. We offer the Normalized Site Insertion Loss (NSIL) measurements using our PLA (Precision Loop Antenna) system developed for this purpose: active transmit and receive loop antennas with integrated x-, y- and z-positioner and laser pointer for easy alignment.

### REFERENCES

Since 1992 we have validated more than 1400 sites all over the world. Our main activities are in Europe, with occasional projects in Asia, Australia, South and North America. Our customers are test labs and all major manufacturers of test sites. Validation reports are accepted world-wide in all ILAC countries through our accreditation.

# VALIDATION

## RF - TEST SITES

### STANDARD MEASUREMENTS

The following table lists the routine site validation measurements. If you need measurements that you do not find listed here, please do not hesitate to contact us.



ACCREDITED TESTING LABORATORY (Nr. 312)  
for Electromagnetic Compatibility.

TYPE OF MEASUREMENT	STANDARD	FREQUENCY RANGE
Shielding Effectiveness	EN 50147-1 IEEE 299 (reduced)	10 kHz - 40 GHz
Normalized Site Attenuation	CISPR 16-1-4 ANSI C63.4, ANSI C63.25.2 ETSI TS 102 321	30 MHz - 40 GHz
Normalized Site Insertion Loss	CISPR 16-1-4	9 kHz - 30 MHz
Site VSWR	CISPR 16-1-4	1 GHz - 18 GHz
Transmission Loss		18 GHz - 40 GHz
Field Uniformity	IEC 61000-4-3	26 MHz - 18 GHz
Automotive Component Test Site Validation	CISPR 25	150 kHz - 18 GHz
Ambient Noise	CISPR 32 and CISPR 25	10 kHz - 40 GHz
Table Influence	CISPR 16-1-4	200 MHz - 18 GHz
Antenna Calibration Test Site Validation	CISPR 16-1-5	30 MHz - 1 GHz
Absorber Return Loss		200 MHz - 18 GHz
Free Space VSWR	ANSI / IEEE Std. 149	170 MHz - 40 GHz
CTIA Ripple Test	CTIA Test Plan for Mobile Station over the Air Performance	722 MHz - 2132.5 MHz
Reverberation Chamber Validation	IEC 61000-4-21, Mil-Std. 461F/G, DO-160G ISO 11451-5, ISO 11452-11	80 MHz - 18 GHz
Site VSWR for Field Probe Calibration Chamber	IEEE 1309 and IEC 61000-4-3	200 MHz - 40 GHz
GTEM Cell Validation	IEC 61000-4-20	20 MHz - 3 GHz

Presented by:

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