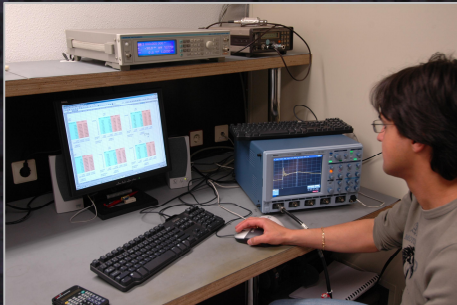
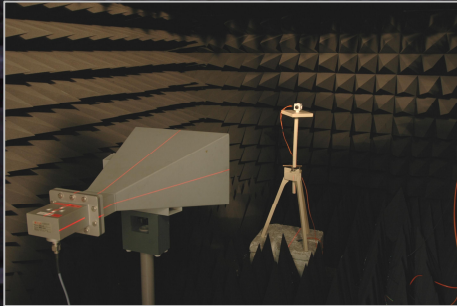


Calibrations

International EMC/RF Calibrations

One-stop-shop • Cost Effective • Accredited



Calibration: the basis for quality

Quality is the extent to which a product or service fulfils the demands made by the client. In order to determine whether a product fulfils certain requirements, most often measurements will need to be performed. To ascertain these measurements are accurate, the measurement equipment has to deliver traceable results. The only way to ensure these results is by using calibrated equipment. Therefore many quality system standards, like the ISO9000 series and the ISO17025 require test and measurement instruments to be calibrated periodically i.e. integrated in a calibration system.

Calibration System

However, a proper functioning calibration system encompasses much more than the periodical calibration of measurement equipment. It is from this perspective that D.A.R.E!! Calibrations offers a complete service package, which enables the optimal management of your valuable instruments.

EMC/RF Instrument Calibrations

Within an EMC test laboratory a wide range of test and measurement instruments is being used to determine the emission/immunity behaviour of electrical and electronic products. The results obtained using this EMC measurement equipment determines the rejection or approval of the product. It is therefore essential to determine the reproducibility and traceability of the measurement results. These results depend in large to the quality of the used measurement instruments. The only way to ensure quality and traceability of these instruments is through periodical calibration, using procedures and international standards that are optimised to the specific application of the instrument in question.

Facilities

All EMC/RF Calibrations are performed in our state-of-the-art calibration facilities located in Woerden (The Netherlands). Among these facilities we have a fully temperature/humidity controlled and shielded standards laboratory, a TEM-cell and two environmentally controlled fully-anechoic rooms at our disposal. We also operate an Open Area Test Site (OATS), a modern Outdoor Antenna Calibration Site and a Field probe calibration chamber.

International Accreditation

D.A.R.E!! Calibrations is accredited according ISO17025 (K063) by the Dutch Accreditation Council. The RvA resides under the European Accreditation (EA) and as such all our calibration results are internationally accepted in other worldwide countries, like Germany (DKD), United Kingdom (UKAS), France (Cofrac), USA (A2LA) and Finland (FINAS).

Traceability

Our reference standards used in calibration of EMC/RF are periodically calibrated by the national standards laboratory or an accredited laboratory, which guarantees a direct traceability to (inter)national standards.



Dijkstra Advies, Research & EMC Calibrations B.V.
Vijzelmolenlaan 7 – NL-3447 GX Woerden
The Netherlands
Tel: +31(0)348 43 18 07
Fax: +31 (0348) 43 06 45
Internet: www.dare.nl
E-mail: info@dare.nl

The Standard for EMC/RF Calibrations

DARE!!
Calibrations

Technical Competence

At D.A.R.E!! Calibrations we offer accredited calibrations with fully traceable results for:

EMC

- ESD Generators (contact and air discharge)
- EFT/Burst Generators
- Surge Generators
- Voltage Dips/Interrupt Generators
- EMI Measurement Receivers including CISPR16 detectors
- LISN's and Coupling-/Decoupling networks
- Antennae (methods ANSI C63.5, SAE-ARP958 or Free Space)
- E-field probes

RF

- RF Amplifiers
- RF Signal Generators
- RF Power Meters up
- Current probes (injection and sensing)
- Spectrum Analysers
- Clamps
- Current probes (injection and sensing)
- Attenuators

Antennae

Antenna calibrations are performed according to calibration methods of ANSI C63.5, SAE-ARP958 or Free Space. These methods apply to antennae that are used in "free space", like a full anechoic room or "reflecting ground plane" test environment, like an OATS or Semi anechoic room. After calibration we will provide the antenna characteristics that should be used as a correction factor during daily EMC testing. As an additional service we will deliver these antenna factors in an electronic format, to enable easy import into EMC test software, like RadiMation®.

Pulse generators

The calibration procedures of pulse generators (ESD, EFT/Burst, Surge, Voltage dips/interrupts) are based on the international EMC standards like IEC61000-4 series, ISO7637 series and ISO/TR10605. During calibration of these generators it will be determined if the generator still complies with the requirements of the applicable standard. D.A.R.E!! Calibrations continuously follows the international developments within the EMC field of study, in order to include possible structural changes in the calibration procedures in a timely manner.

EMI receivers

The calibration procedure of EMI receivers covers all functions that are used for EMC emission measurements. The procedure includes for example the input VSWR over the full frequency band, RBW filters and CISPR16 detectors.

E-field probes

D.A.R.E!! Calibrations is accredited for E-field probes calibration in a frequency range from 10 kHz up to 40 GHz. Our procedure includes the frequency response in all three probe orientations (X-Y-Z), anisotropy and linearity.

Certificates

The calibration certificates are ISO 17025 compliant and contain an extensive report of the measurement results and illustrations of the measured curves, where applicable. The certificates provide the technician with a direct answer, as to whether the calibrated instrument is complies with the specifications that are part of the international standard. The total measurement uncertainty on the calibration certificate is determined according to methods described in the EA document EA-4/02 (Dec. '99) "Expressions of the Uncertainty of Measurements in Calibration" (prev. EAL-R2).

More information

For more information contact:
D.A.R.E!! Calibrations at:
+ 31 (0)348 431 807 or info@dare.nl
Internet: www.dare.nl

Represented by: