rf/microwave instrumentation

We're with you all the way

Controlled **Electromagnetic** Environments

AR RF/Microwave Instrumentation (AR) is the exclusive distributor of anechoic chambers, RF shielded enclosures, and antenna test ranges from COMTEST Engineering for North America. AR offers custom-designed as well a wide variety of predefined chambers.

AR, as a single-source provider, has integrated solutions for all your EMC and RF testing needs: radiated and conducted immunity, radiated and conducted emissions and more. Your system is delivered as one complete unit, installed at your facility by our factory crew, and backed by AR's unparalleled customer service and support.

Semi anechoic chambers

Features of a predefined semi anechoic chamber:

- Full compliance radiated emission test site as per CISPR16-1-4
- Full compliance radiated immunity test site as per IEC/EN 61000-4-3
- Shielding effectiveness according to EN 50147-1
- EMI testing up to 40 GHz in accordance with FCC Part 15, subpart b, and MIL STD 461
- Full compliance to Mil-std 461 / 464 and RTCA-DO-160
- Full compliance to CISPR25 & ISO11452

AR can supply the following predefined semi anechoic chamber solutions for EMC testing:

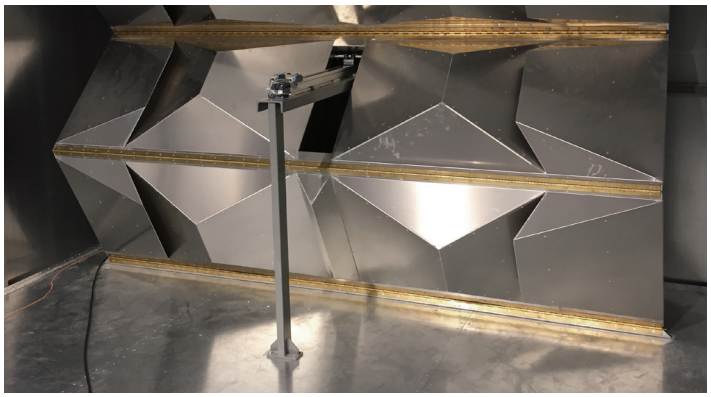
- 3m semi anechoic chamber
- 5m semi anechoic chamber
- 10m semi anechoic chamber
- Semi anechoic chamber for automotive testing (CISPR25 / CISPR12 / ISO11451 / ISO11452)
- Semi anechoic chamber for Mil-STD / DO-160 / DEF STAN / Tempest testing
- Full suite of pre-compliant chambers

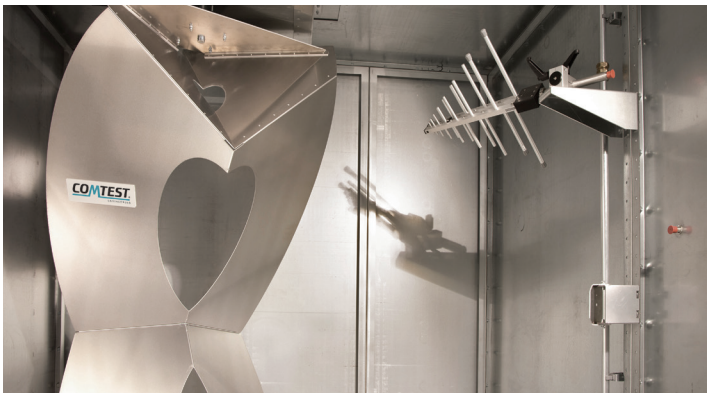
Reverberation chambers

The reverberation chamber creates a multi functional EMC test environment for commercial, military, avionics and automotive testing. Reverberation chambers comply with the IEC 61000-4-21, EUROCAE/ED-14, MIL-STD 461, RTCA/DO-160 standards as well as various specific automotive standards. The reverberation room can be used for radiated immunity and shielding effectiveness tests as well as for measuring total radiated power. Oscillating wall stirrers are also available in reverb chambers.

AR can supply the following predefined reverberation chamber solutions:

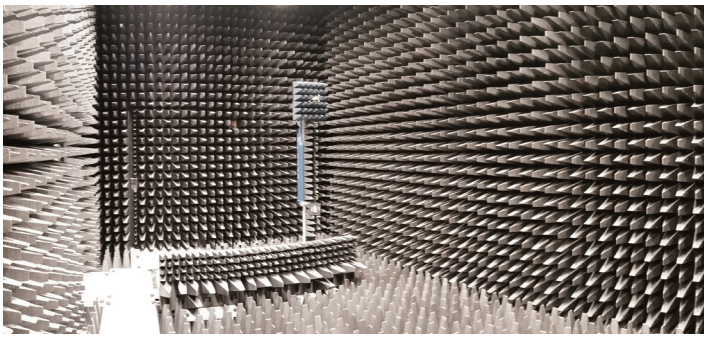
- Reverberation chamber model LUF 80Mhz
- Reverberation chamber model LUF 100Mhz
- Reverberation chamber model LUF 200Mhz
- Reverberation chamber model LUF 400Mhz
- Reverberation chamber model LUF 1000MHz





Microwave chambers

Microwave chambers are fully anechoic chambers used for testing in microwave frequencies. Typical equipment under test are mobile & telecom products as well as electronic products using wireless communication techniques. Larger microwave chambers (antenna test ranges) are built to test a wide range of antennas and antenna applications as well as radar systems or complete satellites. AR can provide (fully) anechoic chamber solutions for Over The Air (OTA) chambers and antenna test ranges to perform near field and far field measurements. Each microwave chamber is tailored to the specific requirements of the customer and its equipment under test.

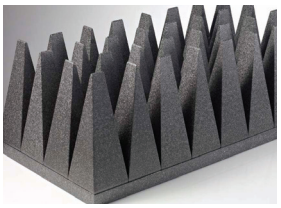


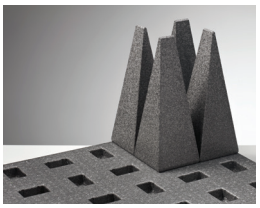
Hybrid and Microwave absorbers

Benefits

The benefits of Comtest closed cell polystyrene absorbers are:

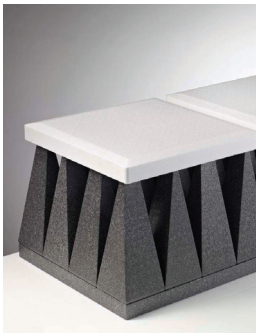
- Unique and enhanced product design:
  - Fully pyramidal design
  - Light weight
  - Removable tapers
- Hybrid absorbers are suitable for clean room class 4 as per ISO14644-1 / class 10 as per US Fed. Standard 209E
- Microwave absorbers are suitable for clean room class 2 as per ISO14644-1 / class 1 as per US Fed. Standard 209E
- Uniform carbon cell loading
- Compliant with fire retardancy ISO 11925-2 class E / DIN 4102 class B2 / UL94 HBF
- Rigidity and superior tensile strength (no drooping tips)
- Superior product lifetime with 25-year warranty
- Impervious to humidity





Green and sustainable

These closed cell polystyrene absorbers do not contain poisonous chemicals. The absorbers are sustainable, 100% environmental friendly and fully compliant with REACH and ROHS.



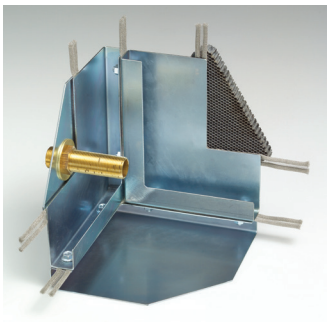
RF shielded rooms

Modular pan type system

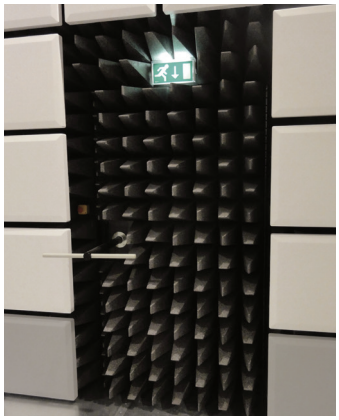
The shielding of RF shielded rooms is established by constructing the chambers from a 2mm pan-type galvanized panel system. The corners of the shielded panels are factory welded, spray galvanized and assembled with special M10 fasteners on a pitch of 150mm. These fasteners are installed upon a pre-defined torque to ensure a long-life RF shielding attenuation. Between the flanges of the RF shielded panels a high-performance gasket is installed and provides the highest RF shielding performance for both military and industrial applications. The modular construction of the shield room provides a flexible design which can be tailored to each customer's specific requirement.

Benefits

- Flexible design, ideal for relocations and expansions
- No welding, cutting or sawing during installation
- Through bolt connection (M10) using gasket
- ≥ 100dB from 10kHz - 40GHz
- Unaffected by humidity & temperature fluctations



RF shielded doors



Our RF shielded doors are designed for high performance shielded enclosures. The shielding characteristics of the RF shielded doors are achieved using a double knife edge, and matching quadruple beryllium copper finger contact strips. The RF shielded doors are equipped with a unique parallel closing mechanism and a patented locking and latching system ensuring longer life-time of the door components. The standard range of swing and sliding doors consists of many different models and can be designed with a 50mm low threshold. In EMC applications both ferrites and absorbers can be affixed to the door leaf.

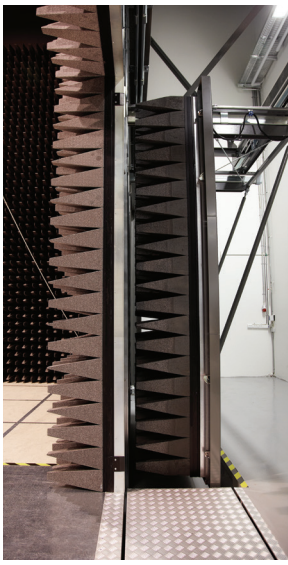
Benefits

The RF shielded doors are the most sophisticated doors available in the market today:

- Minimum threshold of 50mm
- User-friendly operation with automatic or low force manual operation
- Enhanced product life-time through lower friction parallel closing
- Dual knife edge technology
- High performance shielding effectiveness up to 40GHz
- Easy maintenance access from the outside of the shielded enclosure
- 100% electrical operation with battery back-up

Manual, semi- and full automatic operation

All the RF shielded doors can be delivered in manual, semi- and fully automatic operation. Semi- and full automatic RF shielded doors are 100% electrically operated. The benefit of electrical doors is that they are more reliable than pneumatic systems. In case of power loss, automatic doors are powered from the internal rechargeable battery system or using an emergency handle.



For over 50 years, AR has played a major role in the success of the aerospace, military, automotive, medical, and telecom industries. The company's products are used for a variety of critical applications, including EMC testing, in a multitude of industries, throughout the world.

AR provides Total RF Test Solutions, by offering customers RF test instrumentation, RF test systems, EMC test software, and Comtest chambers. More specifically, we manufacture and distribute:

- RF & Microwave Solid State Amplifiers ranging from: 1-100,000 watts, 10 Hz to 50 GHz
- Antennas to 15,000 watts input power, 10 kHz to 50 GHz
- EMC and Wireless Test Systems
- Multi-tone test systems
- Field measuring equipment
- EMC test software
- EMC & RF test accessories
- Positioning equipment
- Chambers and accessories

In addition to the complete array of product solutions also comes world class customer service and applications support. From calibration and regular maintenance, to troubleshooting and repairs, you can depend on AR's service and support teams.

AR now distributes Comtest Engineering products including EMC test chambers, shield rooms, antenna test ranges, absorbers and shielded doors. With these additions, customers can rely on AR RF/Microwave Instrumentation to provide a total EMC solution; Comtest chambers, instrumentation (including systems), as well as the highest level of service and technical support.

The partnership between AR and Comtest Engineering makes it possible to design, build, and service an EMC test facility using a single source provider.

QualityMasters GECERTIFICEERD ISO 45001 M
QualityMasters GECERTIFICEERD ISO 9001 M
QualityMasters GECERTIFICEERD ISO 14001 M

Empowered by COMTEST ENGINEERING

Controlled **Electromagnetic** Environments

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