

# Accelerated EMC test

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You can achieve significant competitive advantages by testing your products at extra high levels of electromagnetic noise. In situations of using the product, electromagnetic noise is frequently at a level far above that which is tested as a standard today - simply because, in real-life situations there are many mobile telephones, routers, RF transmitters and other equipment in the environments where the hardware or software may be used.

Using an accelerated EMC test at FORCE Technology, the product to be tested is influenced by test levels far above the applicable EMC regulatory requirements and without being limited to conventional testing standards. An accelerated EMC test therefore shows you whether your product or equipment can fully interoperate with other equipment. Especially for devices that are central to the safety or your customers' operations, it is appropriate to test using these high levels. EMC stands for Electromagnetic Compatibility and expresses the product's ability to electromagnetically work with other electrical or electronic equipment without interference or breaking down.

At FORCE Technology, we can test your equipment's immunity to very high field strengths of up to 1000 V/m, while the market standard often just tests at 3-10 V/m, depending on the specific equipment. We also test your equipment's immunity to very fast, high or energy rich transients on the cables. If your equipment or installation is too large or immobile, we can also test it on-site. Thus we find the product's weakest link and identify its EMC robustness.

The accelerated EMC tests is carried out in FORCE Technology's Reverberation Chamber in Aarhus.

The test object in the test chamber should be configured with robust and simple auxiliary equipment, which allows the test object to run a typical operating program over several hours. There is no access to the chamber during the test, but it can be followed via a shielded camera.

Before initiating the test, you will be given more detailed specifications on the setup from FORCE Technology.

Advantages of cooperation with FORCE Technology on your accelerated EMC testing:

- Third-party test
- Clarification of the causes of failure in the field
- Safe operation of equipment
- Clarification of your product's weaknesses
- Expert advice about the test procedure
- The possibility to expand the testing to include other parameters, e.g. mechanical and climatic tests.

## SPECIFICATIONS

Fully reflective chamber equipped with an approx. 100 m<sup>2</sup> movable wall (stirrer), the chamber is normally called a Reverberation Chamber (RC).

### Facts about the Reverberation Chamber no. 1 (Room 2)

Field strength: > 350 V/m

Frequency range: 80 MHz - 40 GHz

Dimensions (LxWxH): 12.8 x 10.8 x 6.9 m

Port Dimension (WxH): 3 x 3 m

Test volume: 150 m<sup>2</sup>

Load capacity (floor): max. 10.000 kg/m<sup>2</sup>

Platform at the entrance to RC: Direct level access to the facility, load capacity max. 10.000 kg (distributed)

### Facts about the Reverberation Chamber no. 2 (Room 4)

Field strength: approx. 1000 V/m

Frequency range: 800 MHz - 40 GHz

Dimensions (LxWxH): 4.1 x 4.0 x 2.6 m

Door Dimension (WxH): 1.0 x 1.9 m

Test volume: 9 m<sup>2</sup>

Load capacity (floor): max. 2.000 kg/m<sup>2</sup>

### General conditions

Power supply options: 230 VAC / 50 Hz (phase + 0), 400 VAC / 50 Hz (3 phase + 0) max. 125 A

Signal Connections: Ethernet, D-sub, USB, HDMI, CAN, RS232, VDC, VAC etc.

Other: Air, water

## MORE INFORMATION

FORCE Technology can help you with a wide range of other types of environmental tests. We offer guidance and specialist knowledge throughout all phases, before, during and after testing, including during the concept and design development phase, as well as guidance in connection with troubleshooting on existing products.

Contact us to find out more: tel. +45 43 25 14 50.



### STRATEGIC ADVANTAGES

With an accelerated EMC test you will gain a variety of strategic advantages:

- More reliable operation of products and equipment
- Lower risk of complaints and repair costs
- Improved knowledge about EMC to improve your company's EMC design in future
- Clear documentation to authorities, certifying bodies and customers.




### SECTORS


FORCE Technology offers accelerated EMC testing for a variety of electronic products and has special expertise in the following sectors:

- Building & Construction
- Consumer electronics
- Industrial electronics
- Medical device and welfare
- Military and aerospace
- Marine and offshore
- Machinery and production equipment
- Technical audiology
- IT and telecom
- Automotive and transportation
- Wind and energy



### FACTS

 Aarhus

 EN/IEC 61000-4-21, DO160, MIL461, ISO 11452-11

## SIMILAR SERVICES

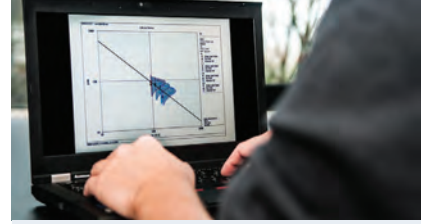
FORCE Technology offers a wide range of other test services, please see below. In addition, we can offer a customised solution where we perform tests across several parameters within a single process, according to your needs. Contact us to find out more: +45 43 25 14 50.



ACCELERATED EMC TEST



ACCELERATED ROBUSTNESS TEST



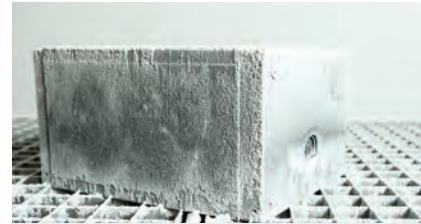
ACCELERATED RELIABILITY TEST



ACCREDITED CALIBRATION OF HUMIDITY SENSORS



ACCREDITED MECHANICAL TEST



ACCREDITED INGRESS PROTECTION (IP)



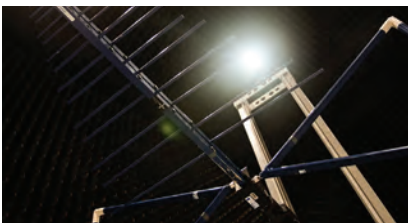
ACCREDITED CLIMATIC TEST



ACCREDITED EMC TEST



ADVICE ABOUT PRODUCT APPROVALS



WIRELESS APPROVAL AND PERFORMANCE TEST



ACCREDITED PACKAGING TEST



TENSILE AND FATIGUE TEST



GUIDANCE ABOUT MARKET ACCESS FOR MEDICAL DEVICES



EMC PRE-TEST: DO-IT-YOURSELF



ELECTRICAL SAFETY TEST

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