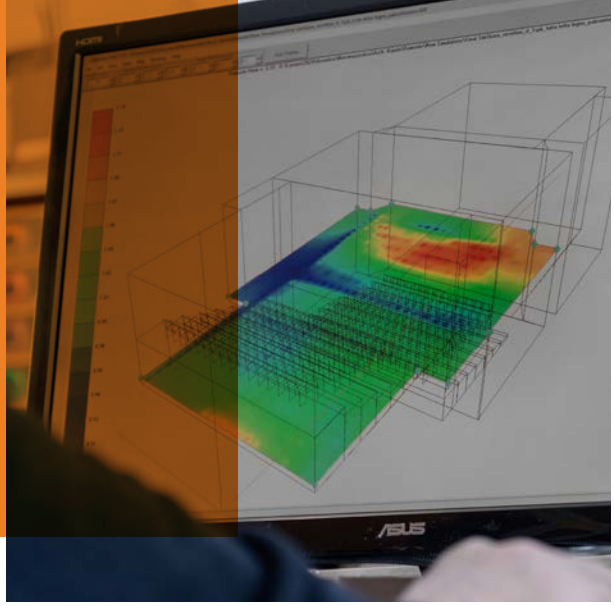
EN

Company Service

The Lab

An innovative 4.0 research hub by Marvinacustica

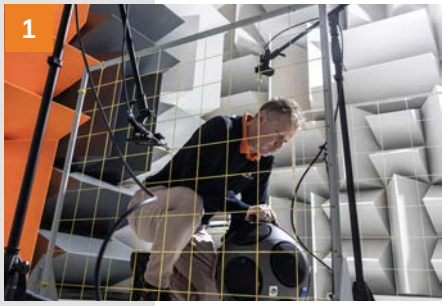


Marvinacustica's lab was established to conduct **insulation, sound absorption, and noise tests** on products and materials in an innovative 4.0 research hub.

All our products are first tested in our lab, and, upon request, we can provide **acoustic test reports**.

Technical specifications

1. Conduction of insulation, sound absorption, noise, and sound characterization tests on products and materials.
   - Acoustic test reports provided upon request.
   - Provision of testing services for third parties, using products or materials supplied by customers.
   - Tests for project validation, performance comparison, or compliance with regulatory standards.
2. Data collection and analysis through multi-channel instrumentation with up to 12 measurement channels.
   - Tests are carried out by our experts and technicians.
3. Tests can be conducted on: materials (fabrics, padding, rock wool, surface coatings), construction products (walls, barriers, doors, and windows), industrial products (compressors, fans, machines in general), and machine components and instrumentation.



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Testing Environments

The lab consists of **two reverberation chambers** to carry out tests according to UNI EN ISO 10140-2:2021; UNI EN ISO 3741:2010 and ISO 354:2003, **a semi-anechoic chamber** with electromagnetic shielding to carry out tests according to UNI EN ISO 3745:2017; UNI EN ISO 9614-1:2009 and UNI EN ISO 9614-2:1998, and **an impedance tube** to carry out tests according to UNI EN ISO 10534-2:2001 and UNI EN ISO 10534-1:2001.

2 Reverberation chambers

Volume 200 m³ and 50 m³

Tests are carried out in accordance with standards:

- **UNI EN ISO 10140-2:2021** - laboratory measurement of the sound insulation of buildings and building elements - measurement of airborne sound insulation.
- **UNI EN ISO 3741:2010** - determination of sound power levels and sound energy levels of noise sources by measurement of sound pressure - laboratory methods in reverberation chambers.
- **UNI EN ISO 354:2003** - measurement of sound absorption in a reverberation chamber.

1 Semi-anechoic chamber

dimensions 5×3,6×4,2 m

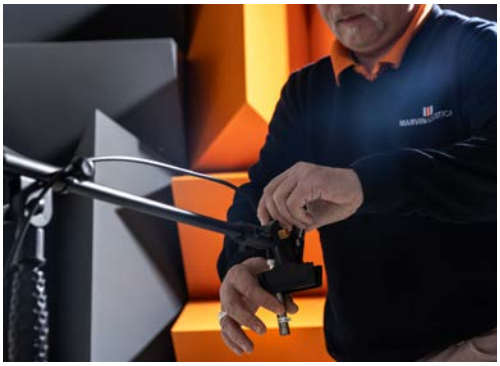
Chamber equipped with electromagnetic shielding to perform tests in accordance with standards:

- **UNI EN ISO 3745:2017** - determination of sound power levels and sound energy levels of noise sources by measuring sound pressure - laboratory methods in anechoic and semi-anechoic chambers.
- **UNI EN ISO 9614-1:2009** - determination of sound power levels of noise sources using the intensimetric method - measurement by discrete points.
- **UNI EN ISO 9614-2:1998** - determination of sound power levels of noise sources using the intensimetric method - measurement by scanning.

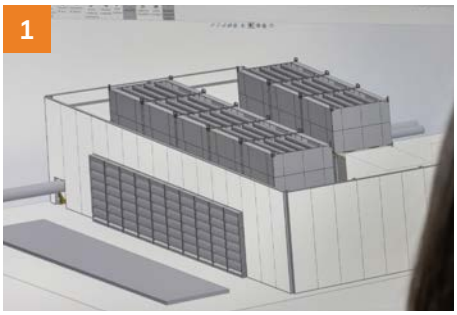
1 Impedance tube

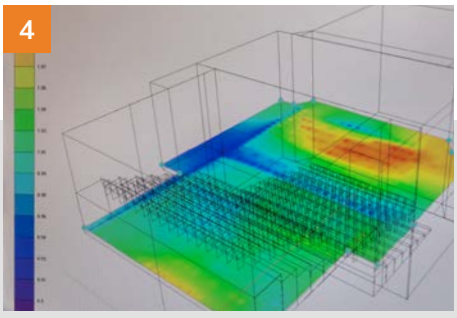
Tests are carried out in accordance with standards:

- **UNI EN ISO 10534-2:2001** - determination of the sound absorption coefficient and acoustic impedance in impedance tubes - transfer function method.
- **UNI EN ISO 10534-1:2001** - determination of sound absorption coefficient and acoustic impedance in impedance tubes - standing wave method.



Our acoustic consultancy services





- Phonometric - vibration analyses

1 3D design of soundproofing systems

2 Environmental acoustics

- Verification of passive acoustic requirements

3 Sound insulation and absorption tests on materials

4 Surveys, Intensimetric acoustic mapping and calculation of sound power