

Research & Development Laboratory.

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**We bring
climate solutions
at the top,
where the air
is pure.**



The Rhoss R&D laboratory, with its climatic rooms, **constitutes the engineering and technological peak of our company.** There we put our skills to the test each day to always push ourselves a little higher, where the air is pure. We wish to continuously refine the tools at our disposal to create that comfort born from the belief that the environment can only improve if we do so ourselves.

Our design philosophy is based on one basic fundamental concept: testing the behaviour of the machines manufactured in all environmental conditions in which they may be used, from the most critical environmental ones up to the maximum power loads.

This assumption makes us a **reliable partner** for designers who turn to us, to whom we provide **advice** and the certainty that each component and system will be optimised to deliver energy performance suitable to the geographical area, the building and its intended use.

Rhoss R&D Laboratory



A responsible manufacturer must in fact provide designers with correct data regarding its products under all operating conditions, because each air conditioning unit must deliver a specific energy performance that can vary depending on the geographical area, the characteristics of the building and its intended use.

One of the largest labs in Europe

1.000

square metres of research and development workshops

70

machines tested in the last year

1.500 kW

4 Testing Rooms suitable for testing units with A1, A2L, A3 refrigerants up to 1500 kW

Design awareness

thanks to reliable product performance data

Continuous training

for technical staff who can constantly innovate their know-how

Control room

Witness test in real time both in presence and remotely for the real simulation of the unit's performance in its final destination of use

The Rhoss R&D laboratory, with its climate rooms, provides its customers with the necessary guarantees for design awareness. This result can only be achieved in laboratories such as Rhoss' R&D Lab, i.e. in a complex and technologically advanced facility that positions Rhoss at the top of the industry.

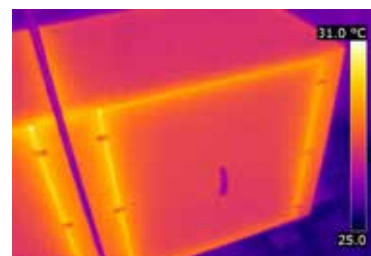


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Technical equipment and expertise

The lab is equipped with climatic rooms, high profile systems and equipment for the analysis and energy certification of the manufactured machines.





A-B Testing Rooms

The lab is equipped with climatic rooms, high profile systems and equipment for the analysis and energy certification of the manufactured machines.

C Testing Room

To be used for terminal units testing, fan coil and small chillers-heat pumps up to 12 kW of power.

D Testing Room

To be used for terminal units testing and small chillers-heat pumps up to 60 kW of power.

3 areas for noise level testing

Two internal for components and small machines, and a larger external one for measurements on medium/large units.



Areas for testing water-cooled chillers

Tests which can be performed inside climatic room A. If necessary, it is also possible to perform these tests in a position outside room A.



Prototype department

Dedicated to the manufacturing of prototypes, it is equipped with the tools required to apply quick modifications during the testing phase.

Customized assistance and consultancy

RHOSS

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From consulting to assistance,
Rhoss is there. Always.

From **design** to testing to **after-sales** support, we put our expertise at your service to enhance the performance of our products and systems, improve their resilience and prevent failures. Our aim is to **deliver** highly customisable, **turnkey projects to customers**, and to offer ongoing advice and support.

Our company philosophy is based on a fundamental concept: to guarantee a service offer of the **highest quality** and custom-designed to meet different user needs.

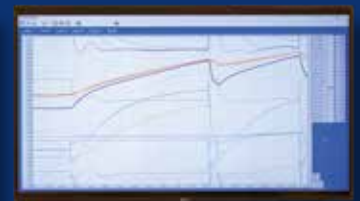
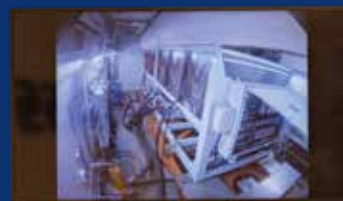
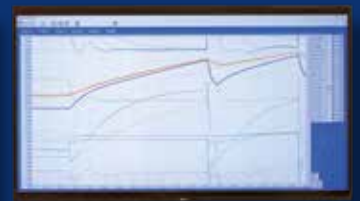
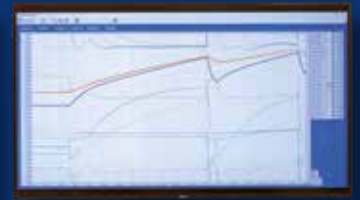


Rhoss R&D Control Room

A room in which to **monitor** the performance of Rhoss units in real time, **both in presence and remotely**.

Fitted with monitors that indicate the interiors of the climatic rooms and the external zone that is set up for the noise tests.

Rhoss offers its customers the opportunity to carry out Witness tests of the unit by adequately setting up the test in the R&D lab for the **actual simulation of the performance of the unit** in the final intended use.



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- ✓ 4 Test rooms for performance testing of water-cooled chillers/heat pumps up to 1500 kW, air-cooled chillers up to 1500 kW and air handling units
 - ✓ Operating limits from -20° to 55°
 - ✓ Thermo-insulated rooms
 - ✓ Outdoor/Indoor open field areas for sound measurements
 - ✓ Certification for Eurovent test
 - ✓ Outdoor/Indoor Video monitoring
 - ✓ Simultaneous testing
 - ✓ Remote witness tests
 - ✓ Thermal and leakage tests on air handling units in accordance with EN1886:2007





NIBE GROUP MEMBER

All our certifications

ISO 9001:2015 Certification

RHOSS Spa provides quality goods designed for environmental comfort, making them available and accessible thanks to the advanced technological and organisational level achieved, and, above all, to the committed, reliable and dedicated approach that RHOSS personnel take to their job every day. The organisation and operations of the business are based on a Quality Management System. The Quality System currently implemented with the new ISO 9001-2015 version has rules and practices established and agreed with the entire Organisation.

ISO 14001:2015 Certification

RHOSS Spa supplies quality goods designed for environmental comfort. With the same commitment, it pays attention to environmental issues, considering correct management and efficient control of its environmental aspects of prime importance, engaging in Environmental Protection and in full compliance with the standards in force and with specific requirements. For this reason, Management has decided to implement an environmental certification system, based on the requirements of the international standard UNI EN ISO 14001, applying it to all the activities carried out within the company and especially to its production activities.



EUROVENT Certification for CHILLERS, HEAT PUMPS and FAN COILS

Rhoss participates in Eurovent certification programs for chillers, heat pumps, polyvalent units and fan coils.

The performances of Rhoss products are guaranteed by tests carried out by a third party credited certification body.



EUROVENT Certification for AIR HANDLING UNITS

Rhoss participates in the certification programme for air handling units with the ADV, ADV-NEXTAIR and ADV-DNAIR range which includes performance certification according to standard EN 13053; the certification of mechanical features according to EN1886; and the energy classification of the machines.



USGBC
MEMBER

LEED certification - Leadership in Energy & Environmental Design

Rhoss participates in the LEED building certification protocol. The international system is based on the whole building's life cycle from design and construction, to management and maintenance.

A photograph of an industrial chiller plant. The scene is filled with large, dark-colored pipes and machinery. In the foreground, a large pipe with a blue valve is prominent. In the background, a technician wearing a dark shirt, jeans, and safety glasses stands near a piece of equipment. The lighting is bright, highlighting the metallic surfaces and the complex network of pipes.

Efficiency certification

The true strength of R&D Lab, that projects Rhoss into the future, lies in the possibility to obtain **special performance from chiller units** that make it possible to certify their average seasonal consumption (energy index):

IPLV - Integrated Part Load Value or ESEER (European Seasonal EER) which is the reference parameter for European markets.

In order to acquire its functional parameters, regardless of the power of the cooling unit, it is necessary to keep the air in the cabin and the temperature of the water produced at different load percentages stable.

R&D Lab is approved to test liquid chillers, heat pumps and multipurpose units according to Eurovent's LCP-HP certification programme.



Laboratory compliant for testing units with **A1, A2L** and **A3** refrigerant gases

Rhoss, always striving to innovate in a sustainable way, has chosen green refrigerants for its new projects.

In a changing global climate, the use of natural gases, such as R290 propane, is a zero-impact choice in harmony with the environment in which we live.





New air for the future.

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