



NIBE GROUP MEMBER

HVAC SYSTEMS FOR SANITARY FACILITIES

Comfort, hygiene and safety for the healthcare sector





A global organisation
with companies
and a presence
worldwide

NIBE Group is a global organisation that contributes to a smaller carbon footprint and better utilisation of energy. In its three business areas – Climate Solutions, Element and Stoves – we develop, manufacture and market a wide range of eco-friendly, energy-efficient solutions for indoor climate comfort in all types of property, plus components and solutions for intelligent heating and control in industry and infrastructure.

From its beginning in Markaryd, in the province Småland ***more than 60 years ago, NIBE has grown into an international company with more than 15,000 employees and a presence worldwide.*** From the very start, the company was driven by a strong culture of entrepreneurship and a passion for responsible business operation. Its success factors are long-term investments in sustainable product development and strategic acquisitions. Combined, these factors have brought about strong, targeted growth, which generated sales of just over SEK 20 billion (EUR 2 billion).





Be the change
you want to see
in the world



Our focus on world-class solutions in sustainable energy contributes to the global goal to reduce emissions of greenhouse gases into the atmosphere.

Our entire value chain, from vision to end customers, must be based on the principles of sustainability in our business principles.

We are responsible not only for the financial results of our operations but also for their social and environmental impact.

NIBE's responsibility forms the Group's framework for sustainability efforts in four different areas:



IN
BUSINESS



FOR THE
ENVIRONMENT



RESPONSIBILITY
FOR EMPLOYEES



LOCAL SOCIAL
RESPONSIBILITY

Change
your perspective!
Solutions
that look
to the future.



SPECIFIC SOLUTIONS FOR THE HIGH STANDARDS OF THE HEALTHCARE SECTOR

- Exclusive solutions for IAQ (Indoor Air Quality)
- Accurate temperature and humidity comfort
- Maximum attention to hygiene
- Reliability and redundancy
- Maximum efficiency
- Scalable solutions
- High reactivity to changing seasonal requirements
- Zero impact solutions

Rhoss system terminals, chillers, heat pumps, multi-purpose units and air handling units in sanitary facilities guarantee maximum energy savings.

They help to always maintain the highest level of health and wellbeing of the operators, patients and users of the facility.

They fulfil the requirements related to the medical activities, such as those in the operating theatres or intensive care areas.



CONTROL, HYGIENE & COMFORT

Maximum energy efficiency combined with controlled environmental conditions



When healthcare facilities need to optimise existing HVAC and air handling systems, we can provide complete equipment and systems to produce carrier fluids, control and move air and odours, while maintaining the temperature, humidity, air quality and noise at optimal comfort levels for patients and personnel.

Our HVAC equipment and systems are also designed to fulfil strict European hygiene-related standards and ensure simple routine and preventative maintenance so that healthcare facilities can operate continuously 24/7. We are committed to environmental improvement and operate in accordance with ISO 14001 and strive to include more and more recyclable material in our products.

TECHNICAL PRODUCTION
AREA OF CARRIER FLUIDS

AREAS WITH A MEDIUM-LOW
INFECTIOUS RISK

COMPLETE SYSTEM SOLUTION

Many combinations
in a single offer



**CRITICAL AREAS
WITH CONTROLLED
CONTAMINATION**



WATER AT THE SERVICE OF THE AIR

A choice with exceptional heat exchange properties with zero environmental impact: water is the natural solution par excellence and the best environmental assessment solution for equipment in a healthcare building. This is to ensure safer, cheaper and more hygienic solutions.



AIR DEDICATED TO VARIOUS NEEDS

Rhoss can provide air handling systems for healthcare facilities that fulfil the various requirements of the different areas served: from the most extremely hygienic ones in operating theatres, infectious wards and laboratories, to the more traditional air quality and comfort of entrances and offices.

Such complex buildings require specific solutions that are based on the evaluation of:

- type of occupants (patients, visitors, medical personnel);

- potential level of transmission;

- presence of specific medical equipment;

- presence of hazardous substances;

- level of comfort required by patients and/or medical personnel;

- level of flexibility and adaptability required;

- level of service and redundancy.



EXP TECHNOLOGY GUARANTEED MAXIMUM FLEXIBILITY

Multi-purpose units with EXP technology allow free recovery of condensation heat in a specific recovery heat exchanger during operation for the production of chilled water (typical operation during summer). If chilled water is not required or the load is temporarily satisfied, the unit will intelligently provide thermal load. This makes EXP technology unique: simultaneous or independent production of hot and cold water to fulfil the thermal loads throughout the year.

EFFICIENCY, VERSATILITY, RELIABILITY

At the service of
healthcare
facilities

- Versatility of use
- Absolutely reliable
- Tested quality
- Maximum efficiency
- Flexible installation
- Eco-friendly solution
- Free domestic hot water production
- 6-pipe system for hot water production



EXP MULTI-PURPOSE HEAT PUMP UNITS - THE OFFER

- EXP Systems is the intelligent solution for conditioning needs in healthcare systems where the demand for heating is combined in a simultaneous or independent manner with the demand for cooling. The units adapt to the different system types guaranteeing unique efficiency and versatility.
- Choosing the most suitable unit for your system is simple as you can rely on a full range of air/water cooling from 5 to 700 kW, with a TER index even higher than 8. Units with scroll technology and R410A refrigerants and low GWP refrigerants.

Multi-purpose systems
the evolution of energy savings

Download the complete document:
<http://www.rhoss.com/it/download/depliant>





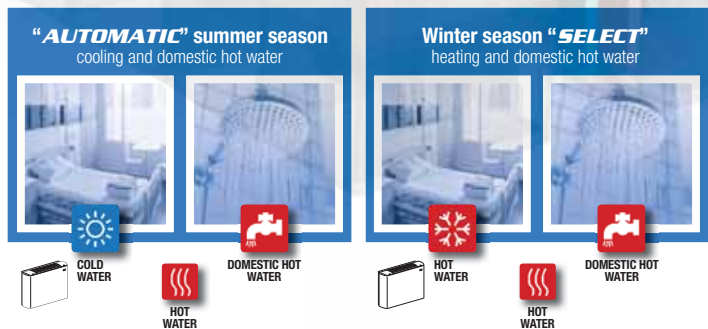
EXP Systems is the multi-purpose ecological system designed by RhoSS to meet cold and hot water demands simultaneously or independently with a single unit. It is designed for use in 2, 4 and 6-pipe systems, any time of the year.

Every RhoSS unit is subjected to rigorous operating tests before being launched on the market, simulating the most extreme operating conditions.

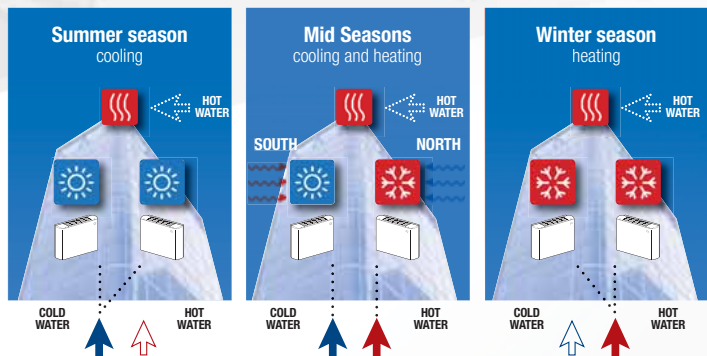
The assurance of a quality product is obtained through careful testing in the R&D Lab, one of the largest testing labs in Europe.

The offer includes new Class A models ensuring high efficiency with partial loads.

2 2-pipe systems
AUTOMATIC or **SELECT** mode



4 4 or 6-pipe systems **
AUTOMATIC mode throughout the year



** 6-pipe systems that can be set up with the WinPOWER EXP, WinPOWER ECO EXP, EasyPACK-I EXP ranges.

PARAMETERS UNDER CONTROL

Guaranteed stability
in the critical areas
of the hospital

- Precise control of the temperature and humidity values in the environment
- Contamination control
- Risk control
- Guaranteed uninterrupted work for healthcare workers
- Fast and safe sanitisation
- Maximum energy efficiency 24/7



ADV CUSTOM HYGIENIC AIR HANDLING UNITS

The range of **ADV Custom Hygienic** air handling units is designed according to high engineering standards and is ideal for applications where cleanliness and hygiene requirements are mandatory.

The units have obtained the **Hygiene and cleanliness certification** from TUV NORD.

In fact, the **VDI 6022 Guideline** contains the minimum hygiene requirements for design, manufacture, operation, management and maintenance aspects of HVAC systems.

It therefore also defines the **hygiene requirements of Air handling units** regarding: usable materials, components, manufacturing, mechanical features, accessibility and serviceability.

By complying with these requirements the CTA ADV Custom Hygienic units provide an excellent solution for critical areas with controlled contamination.

AIR'SUITE® FILTERS

Applying the Air'Suite® filter to a Rhoss air handling system of the ADV Custom or Next Air ranges assures decontamination from microbiological agents (bacteria, moulds, viruses, algae, etc.) of the air and filtration device as well.



The ADV Custom Hygienic range offers mechanical and aeraulic efficiency and hygienic suitability that are certified by third parties for full guarantee of performance.

The internal structure has no edges or protuberances and profiles have rounded corners to minimise the accumulation of dirt, bacterial proliferation and air friction on the surfaces inside the unit.

The materials used to produce profiles, panels and sheets guarantee excellent resistance to sanitising agents used in hospitals and hinder bacterial proliferation.

The drainage tanks under every section allow the units to be sanitised while preventing the stagnation of liquids or cleaning agents.



AREAS WITH A MEDIUM-LOW
INFECTIOUS RISK

HYGIENE & COMFORT

for the wellbeing
of users, personnel
and visitors

- Excellent performance
- Heat recovery in maximum safety
- Air'Suite® biocide filters
- Full savings with EC motors
- Total flexibility
- Sensational silence



'NEXT AIR' AIR HANDLING UNITS

Innovative ideas and cutting-edge technology are the winning combination that characterise this range.

The strength of the product lies in the use of latest generation engineering solutions, preserving the qualitative excellence and the reliability traits that have made Rhoss a well-known name and which are essential to service all hospital areas.

SYSTEM TERMINALS

The very vast range of fan coils for wall, floor, ceiling, recessed or duct installations, with multi-speed or brushless motors always guarantee the adequate and optimised solution for every area inside the hospital.

Rhoss fan coils
comfort in the air

Download the complete document:
<http://www.rhoss.com/it/download/depliant>





The Next Air range offers excellent mechanical efficiency (L1; T2; TB1), which strongly contributes to achieving optimal energy performance and uses corrosion resistant materials (such as PVC Rau and powder coated internal and external panelling) so that performance is guaranteed over time.

Heat recovery with super high efficiency of twin coil, cross or opposing flow, rotary, indirect adiabatic and regenerative type guarantees maximum energy savings in very energy-intensive facilities, such as hospitals, with maximum safety.

The ADV Next Air AHU, as well as many Rhoss system terminals, can be equipped with Air'Suite Filter technology to effectively control contamination from microbiological agents (bacteria, mould, virus, algae, etc.) in the air and the filtering device itself, reaching a new IAQ (Indoor Air Quality) standard for indoor comfort.

All fan coil ranges are available with an AC motor and EC brushless motor, which can reduce consumption up to 50% compared to a traditional motor, and can reach ideal silence levels for sensitive areas, such as inside wards.





EasyPACK-I EXP

64.4-133.2 kW
Scroll Inverter Compressors
Web code: EAX01



Y-Flow EXP

44.2-437.8 kW
Scroll compressors
Web code 245-2185: YFX21 - Web code 4180-4410: YFX31



WinPACK ECO EXP

135.7-333-6 kW
Scroll compressors
Web code: WKX15



Y-Pack EXP

80.7-332.9 kW
Scroll compressors
Web code: YKX11

new



WinPOWER ECO EXP

352.7-645.5 kW
Scroll compressors
Web code: WPX05



WinPOWER EXP

361.2-648.1 kW
Scroll compressors
Web code: WPX01

TECHNICAL
PRODUCTION
AREA
OF CARRIER
FLUIDS



AREAS WITH A MEDIUM-LOW



Modular air handling units

CTA ADV Next Air

800-41,000 m³/h



Terminal unit
UTNA Platinum

6.4-70 kW
Web code: UTAP1



Heat recovery unit
UTNR-A Platinum

Back-current recovery unit
400-4,050 m³/h
Web code: UTNR3



Heat recovery unit
UTNR-HE Platinum

Rotary recovery unit
310-4,250 m³/h
Web code: UTHE3



Custom air handling units
CTA ADV - Custom
850-104,970 m³/h
Web code: CTCT



Guaranteed performance

EUROVENT CERTIFICATION FOR AIR HANDLING UNITS

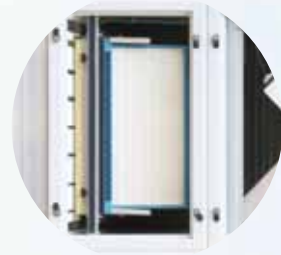


EUROVENT CERTIFICATION FOR CHILLERS, HEAT PUMPS AND FAN-COILS



CRITICAL AREAS WITH CONTROLLED CONTAMINATION

INFECTIOUS RISK



air'suite[®]

Biocidal filtration



VEHICLE TRAFFIC



PRODUCTION FACILITIES



BIOLOGICAL CONTAMINANTS



UNPLEASANT ODOURS



FAN COILS with Inverter Brushless or traditional motor for:

- wall installation
- floor, ceiling, recessed wall or false ceiling installation
- duct installation
- false ceiling box installation



new



2021

POLICLINICO UMBERTO I HOSPITAL (ROME) - ITALY

Total air flow rate:

5000 m³/h

Machines installed:

2 ADV NEXT AIR



2021

SAN LORENZO HOSPITAL (VICENZA) - ITALY

Total air flow rate:

3000 m³/h

Machines installed:

1 ADV NEXT AIR



2020

FIERA DEL LEVANTE COVID HOSPITAL (BARI) - ITALY

Total cooling capacity: **1530 kW**

Total air flow rate: **150000 m³/h**

Machines installed:

5 WinPACK SE, 1 EasyPACK-I EXP,
1 Y-PACK EXP, 12 ADV NEXT AIR,
10 UTNR-A Platinum, 2 Diva-I,
1 Yardy-I EV3 IXP



2020

OSPEDALE DEL MARE HOSPITAL (NAPLES) ITALY

Total cooling capacity: **450 kW**

Total air flow rate: **36000 m³/h**

Machines installed:

6 ADV Next Air,
1 WinPACK-R HE-A,
1 WinPACK SE



2020

SAN GIOVANNI AND RUGGI D'ARAGONA HOSPITAL (SALERNO) - ITALY

Total cooling capacity: **160 kW**

Total air flow rate: **15000 m³/h**

Machines installed:

2 ADV Next Air, 1 EasyPACK,
1 Compact-Y MD



2020

SAN SEBASTIANO HOSPITAL (CASERTA) ITALY

Total cooling capacity: **160 kW**

Total air flow rate: **21000 m³/h**

Machines installed:

2 ADV Next Air, 1 EasyPACK,
1 Compact-Y MD

SAFETY, EFFICIENCY & COMFORT

Optimal conditions are
guaranteed everywhere!



2020

ARETAEIO UNIVERSITY HOSPITAL
(ATHENS) - GREECE

Total cooling capacity: **340 kW**

Total air flow rate: **22000 m³/h**

Machines installed:

2 WinPACK HE-A, 7 ADV Next Air



2020

PADRE LAS CASAS HOSPITAL
(TEMUCO) - CHILE

Total cooling capacity:

3270 kW

Machines installed:

6 heat pumps



2020

PÔLE MEDICAL HOSPITAL

(NEUF BRISACH) - FRANCE

Total cooling capacity:

90 kW

Machines installed:

Y-FLOW EXP



2019

GERMAN ONCOLOGY CENTER
(AGIOS ATHANASIOS) - CYPRUS

Total cooling capacity: **370 kW**

Total air flow rate: **10000 m³/h**

Machines installed:

3 ADV Next Air, 2 WinPACK SE,
1 Compact-Y MD, Diva-I,
Yardy EV3, VTNC



2018

ZAN MITREV CLINIC
(SKOPJE) MACEDONIA

Total cooling capacity: **1700 kW**

Total air flow rate: **90000 m³/h**

Machines installed:

3 EXP units, Y-Flow,
11 ADV Custom, DIVA



2018

MAISON MÉDICALE DES DEUX RIVES MEDICAL CENTRE
(STRASBOURG) - FRANCE

Total cooling capacity:

600 kW

Machines installed:

2 WinPACK SE

It is essential to guarantee comfort and safety in healthcare facilities.

Adequate temperature and humidity conditions, filtration, continuous air exchange in the rooms and optimal conditions in every place: Rhoss offers various solutions that are suitable for all these requirements.

Every project has an optimised and customised combination to fulfil all the demands of the healthcare sector.



NIBE GROUP MEMBER



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