



# Air humidification

For commerce, education, leisure,  
industry, manufacturing processes,  
spa and wellness



Climate and process humidification

# WE HUMIDIFY THE AIR

Since 1970, HygroMatik has been developing, producing and distributing flexible energy efficient solutions for air humidification. Our products can be applied in many areas and are characterised by their sustainability credentials in terms of quality, maintenance and long service life.

## Innovation has a tradition

In 1970, Rolf Meier and Ullrich Hoehler founded the company „Lufttechnischer Apparatebau“. Their motivation at the time: They firmly believed that controlled air humidification brings great advantages to many areas of application. Based on that conviction, we at HygroMatik have been developing practical solutions for air humidification ever since.

## Responsibility for better sustainability

As a company, we are responsible for our employees, products, community and social environment. We regard sustainable thinking and action as a necessary consequence of our responsibility. HygroMatik's first guidelines regarding sustainability were developed in our formative years and these are still decisive when profile building for the entire company today:

**Every innovation and newly developed product must meet the requirements of a long service life, reducing operating costs and aid the managing of resources in an environmentally friendly manner.**



# OUR COMMITMENT TO QUALITY

We are an international company operating in the air humidification sector and cultivating the advantages of a medium-sized corporate culture. Responsible and sustainable practices are active in all parts of the company, forming the foundation of our quality promise, to which we are committed at all times.

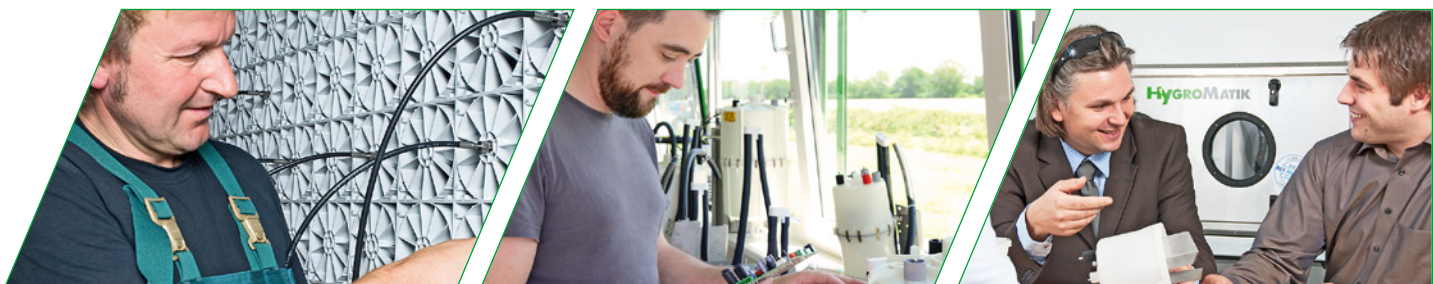


**Highest quality –  
so that you are 100% satisfied**

We believe that investing in quality pays off, which is confirmed not only by our customers, but also by independent bodies such as the Plus X Award.

This has positive effects both externally and internally:  
Not only our customers remain loyal to us, but also our employees remain with us for a long time.

**This is also what we understand by sustainability.**







### Personal and expert advice

---

We value close contact with our customers. You receive expert, specific information directly from the source. You can discuss difficult cases directly with our engineers.



### We help you quickly

---

Using our hotline, you can get in touch with the right member of our team to tackle any issues you may have. We prefer short, simple routes and accept every challenge.



### Together with respect and passion

---

What we do, we do with passion. We work in an atmosphere of mutual respect. Everyone is an important member of our team and our company.



### Service is our top priority

---

We combine the highest quality standards with a fast and comprehensive service, including reliable logistics and a long term spare parts supply even beyond the end of sale of a product.



### Product development is pragmatic product innovation

---

Innovation always closely reflects the practical needs of our customers and brings real added value with regard to function, long service life, processing quality and material quality.



### We always keep an eye on the environment

---

Our systems have been developed to last a very long time and are characterised by technology which reduces both maintenance and wear and tear on unit components. This approach protects our environment.



# HEALTHY INDOOR AIR

between 40 and 60% relative humidity (RH)

**10,000 l**  
air/day

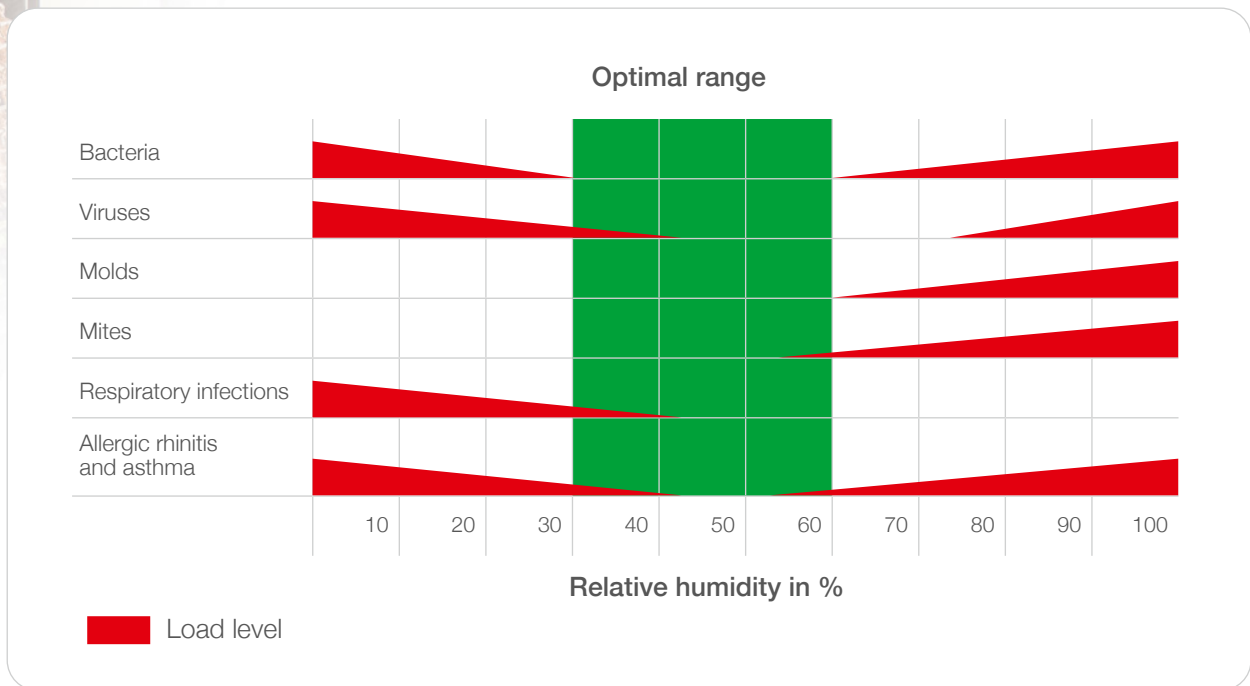
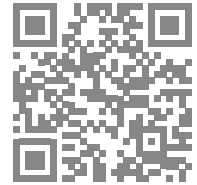
## The air we breathe – essence of our life

The air we breathe is the essence of life for us humans. A healthy adult breathes in and out at least 10,000 litres of air a day. Humans survive without oxygen-containing air for only a few minutes. Reason enough to take a closer look.

The air consists not only of oxygen and nitrogen, but is also enriched with gaseous water (steam). Humidity describes the amount of water vapour in the air surrounding us. The optimum ratio of the amount of water vapour to the amount of surrounding air has a great influence on our **health, well-being and performance**. Since our body does not have its own sensory organ to „measure“ the humidity of the air, we do not actively react to changes in humidity and therefore pay too little attention to this aspect.

Outdoors, nature takes over the regulation of the air humidity, e.g. through sun, wind and rain. **In closed rooms, the responsibility for a healthy indoor climate lies with the planners and ventilation system manufacturers.**

More information about humidity and its positive effect on health, well-being and performance you will find at [healthy-indoor-air.hygromatik.com](https://healthy-indoor-air.hygromatik.com)



### Our comfort zone 40-60% – optimal for humans, bad for viruses and bacteria

The comfort zone for humans lies **between 40 and 60% relative humidity (RH)**. Between these two values, the person feels comfortable, is efficient and remains healthy. At the same time, viruses and bacteria are slowed down in their spread and their ability to survive is reduced.



Health



Well-being



Performance





# THE OPTIMUM CLIMATE

for commerce, education and leisure

## The best air to feel good

Season-dependent, rooms should either be cooled or heated. These different temperatures have a direct impact on the relative air humidity, so precision control is needed. Without professional control of air humidity, the air in a room can quickly become too dry which has various consequences.

Optimising the level of air humidity in a room has a significant impact on the well-being and health of the people staying in it. Air that is too dry causes the eyes, skin and mucous membranes to dry out, particularly in the winter.

Materials such as paper, wood and fabrics can also be negatively affected and damaged when air humidity is too low. In addition, optimised air humidity has a positive effect on indoor cosiness and hygiene conditions, for example it is reducing the formation of dust.



## The benefits at a glance:

- Healthy, comfortable and work-friendly indoor climate
- Integration into operational hygiene concepts
- Increased performance of employees
- Reduced dust pollution for allergy and asthma sufferers
- Protection against electrostatic charge
- Increased property value and attractiveness for commercial tenants
- High energy efficiency when air conditioning



Offices and conference rooms



Hospitals and medical practices



Universities and educational institutions



Hotels and conference centres



Museums and galleries



Shopping centres and department stores



# CONSTANT HUMIDITY

for industry and manufacturing processes

## Highest quality due to regulated air humidity

A stable and controlled room climate is essential for most production processes. Fluctuations in air humidity, and more importantly, air that is too dry, can have a massive effect on the raw materials used, their processing possibilities and ultimately, on the quality of the end products.

Optimum air humidity also has a positive effect on the well-being and the health of the employees on the premises.

Using adiabatic humidification systems achieves an advanced, environmentally friendly method of indirect air cooling. It is used both to compensate the heat created during production and, especially in summer, to cool the premises and thus provide an optimal indoor climate.



## The benefits at a glance:

- Increased process efficiency by means of the reduction of failure rates and breakdowns
- Increased productivity and product quality
- Protection against dangerous electrostatic discharge
- Healthy, pleasant working climate for employees
- Reduction of operating costs due to energy efficient cooling performance



Automotive and aerospace industry



Agriculture industry



Food and luxury food industry



Plastics industry



Textile industry



Laboratory and clean rooms





# HYGIENIC STEAM

for spa and wellness

## Relax and unwind at full steam

Steam generators are the key element in steam baths, saunas and relaxation rooms found in spa and wellness facilities. With hygienically pure steam they ensure a relative humidity of up to 100%.

Producing the ideal humidity and temperature is essential for the users' well-being and relaxation.

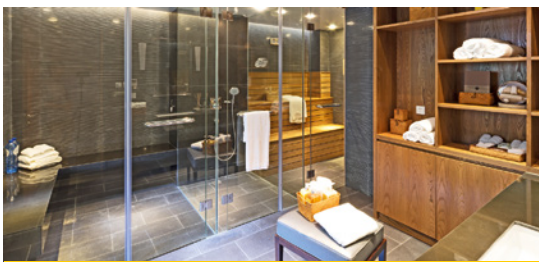
Our equipment can be used in a variety of applications: whether steam bath, steam shower, bio-sauna, healing earth steam bath, hamam, caldarium or hot yoga – we humidify the air.



The **HygroMatik SPA** product range offers reliable, hygienic and powerful steam generators to those working in public or private spa and wellness facilities.

## The benefits at a glance:

- Gentle stimulation of blood circulation and metabolism
- Body detoxification and purification by sweating out harmful substances
- Cleansing of the airways, mucosal moistening and thus protection against the entry of bacteria and viruses to prevent diseases
- Strengthening of the immune system and body's defences
- Relaxing effect on the nervous system



Wellness hotels



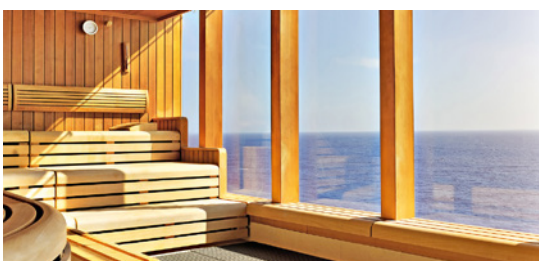
Spa resorts



Fitness clubs



Cruise ships



Offshore recreational areas



Sports studios

# THE RIGHT SOLUTION

for every area of application

## Pressure-free steam humidifiers

HygroMatik steam humidifiers provide pressure-free, hygienic steam for controlled climate and process humidification in all areas of application.

In the spa and wellness sector, HygroMatik steam generators ensure up to 100% relative humidity with steam produced by electrodes or heaters.



Spa and wellness

## Electrode steam humidifiers

for the evaporation of water  
by the use of electrodes



## Heater type steam humidifiers

for the evaporation of water  
by the use of heater elements







Commerce,  
education  
and leisure



Industry and  
manufacturing  
processes

## Water treatment

Hygienic water treatment ensures significantly lower maintenance intervals and a longer service life of your humidification and cooling systems.

Therefore, we recommend our customers suitable components for professional and effective water treatment - optimised and suitable for all HygroMatik air humidifiers and steam generators.

## Pressurised steam systems

for humidification with condensate-free pressurised steam

## Adiabatic systems

for humidification and cooling by atomising water

# WATER BECOMES STEAM

Hygienic and pure



## Electrode steam humidifiers

HygroMatik electrode steam humidifiers are especially suitable for use with normal tap water. These units always deliver the right solution when you need simple, reliable generation of air humidity or steam.

### The principle

Electrodes are arranged in a special steam cylinder. When water is introduced, the electrical circuit between the electrodes closes and the water heats up. Pure, odourless water vapour is produced.

### Sustainability

HygroMatik only uses solid full-surface electrodes in its units. Due to their solidity, they are durable and very well suited for the use of tap water.

The electrodes do not have to be replaced as frequently, keeping maintenance costs down.



Optimal in these application fields



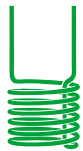
Commerce, education and leisure



Industry and manufacturing processes



Spa and wellness



## Heater type steam humidifiers

Humidification with HygroMatik heater type steam humidifiers is possible with all water types, whether from a tap, partially softened or demineralised. Operation with softened or fully demineralised water is particularly low-maintenance.

### The principle

They heat the water in a steam cylinder as in an immersion heater until it becomes pressure-free, hygienic steam.

### Sustainability

HygroMatik heater type steam units use heating elements made of highly corrosion resistant alloy. It is guaranteed to deliver precision control and a long service life as well as ensure a virtually interruption and maintenance free operation, when using softened or fully demineralised water.





# HUMIDIFYING AND COOLING

## Atomising humidification



### Adiabatic systems

HygroMatik adiabatic systems can be used to their full potential in applications where both humidification and cooling of the air is required. This humidification method is highly energy efficient and effective.

#### The principle

The humidified water is atomised into tiny droplets, or aerosols. The aerosols take the energy needed for conversion into a gas from the surrounding air in the form of heat. This means the atomisation has a cooling (adiabatic) effect on the temperature of the room.

#### Sustainability

HygroMatik atomisation humidifiers are characterised by low water and energy consumption and fulfil the strictest hygienic standards even without the use of chemical supplements. This saves money and protects our environment.



## Optimal in these application fields



Commerce, education and  
leisure



Industry and manufacturing  
processes



## Pressurised steam systems for condensate-free pressurised steam

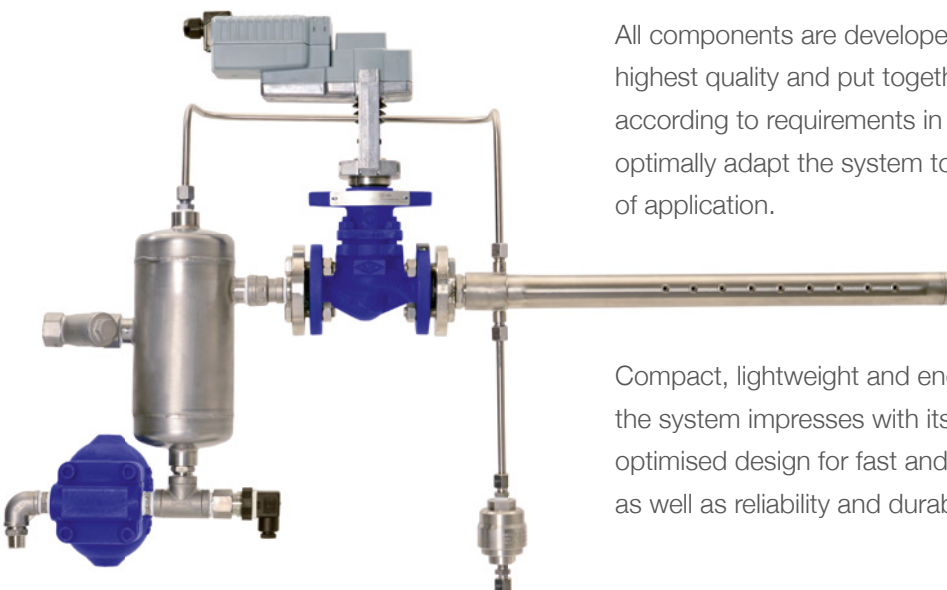
The HygroMatik SIH pressure steam system can be connected to an existing source of steam. The SIH ensures a precise, condensate-free humidification, for example in clean rooms and hospitals.

### The principle

The steam flows into the steam dryer through a strainer. Then the condensate is separated from the saturated steam and dissipated via the ball float condensate drain.

### Sustainability

All components are developed in Germany to the highest quality and put together for each project according to requirements in order to be able to optimally adapt the system to the respective area of application.



Compact, lightweight and energy-saving, the system impresses with its simple installation, optimised design for fast and precise control as well as reliability and durability.

# WATER TREATMENT

Effective protection for air humidification and cooling systems



## Hygienic water treatment

The HygroMatik WaterLine RO reverse osmosis systems for hygienic water treatment effectively protect your air humidification and cooling systems against harmful deposits as well as viruses and bacterial contamination.

### The principle

In the reverse osmosis process, the water to be treated is pressed under high pressure through a semi-permeable membrane with pores less than  $0.001\text{ }\mu\text{m}$  in diameter. This succeeds in separating unwanted components of the tap water such as viruses, bacteria, minerals, pesticides, hormones and heavy metals from the water molecules.

Result: permeate – water with an above-average degree of purity.

### Sustainability

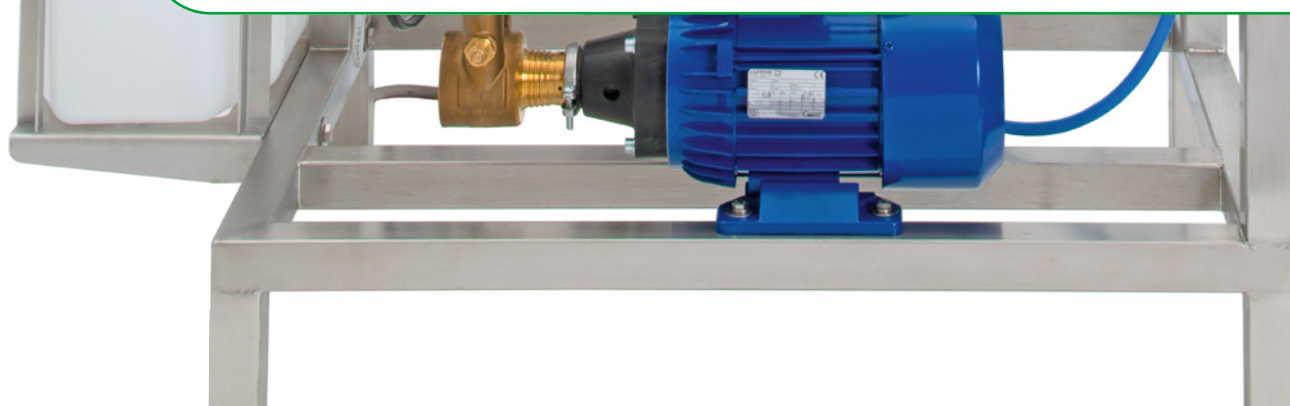
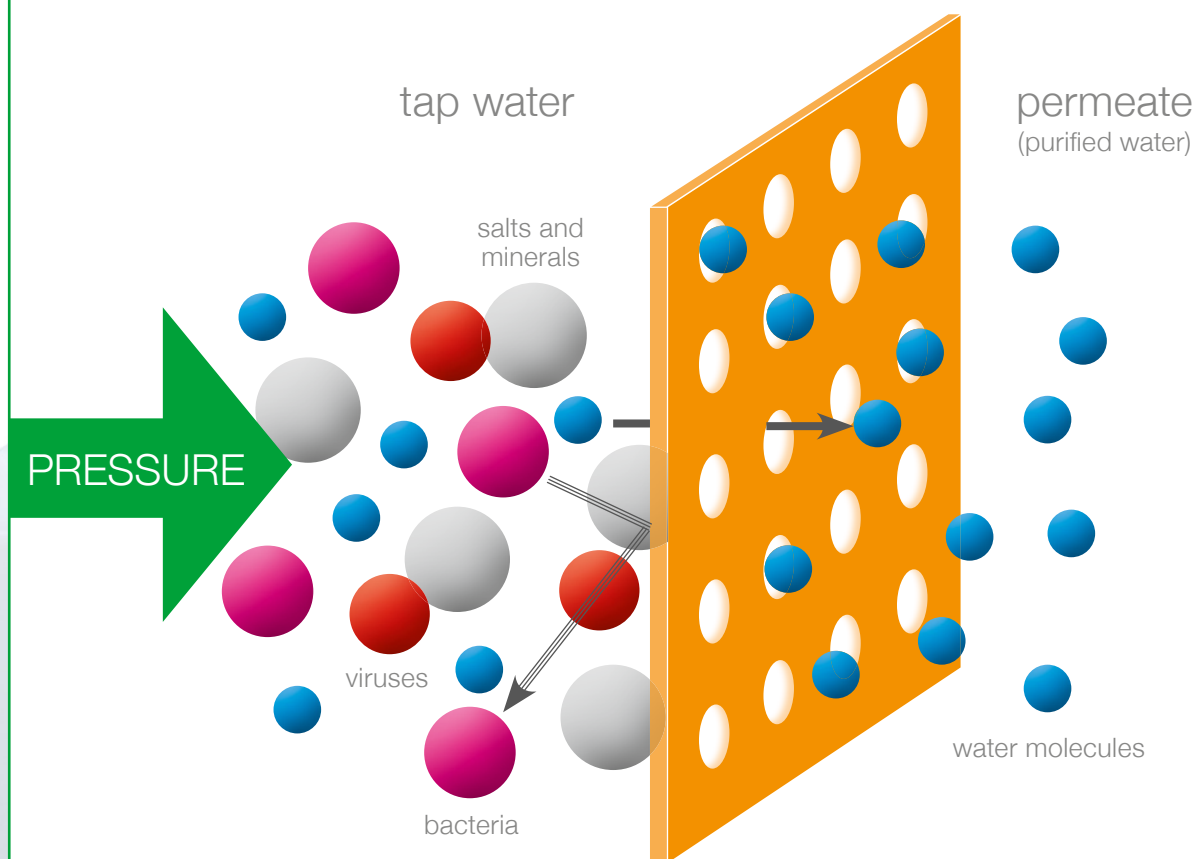
The maintenance effort and thus the operating costs of air humidification and cooling systems can be noticeably reduced by water treatment and the average operating time is significantly extended.







## FUNCTIONAL DIAGRAM OF REVERSE OSMOSIS PROCESS





# UNIQUE SERVICE Worldwide

„We are only satisfied  
if **you** are 100% satisfied.“

## Online service

- Available immediately
- Always up-to-date
- Environmentally friendly

Technical hotline  
hotline@hygromatik.de

+49 4193 895-293

## Extensive online service

On our website [www.hygromatik.com](http://www.hygromatik.com) we offer you help with calculating the required steam output, choosing the right unit and professional commissioning. Of course you will also find all product brochures, operating instructions, specifications and videos on the function and maintenance of our products - immediately available, always up-to-date, digitally and environmentally friendly. You are also welcome to visit our digital showroom or participate in our webinars.

## Quick help - technical hotline

You can communicate directly with our engineers for any technical questions or specific applications. This ensures that you are assisted quickly by the experts.

## Spare parts service

Our products are designed for a long service life, so we make sure spare parts are available in the long-term for quick and easy repair and maintenance. Spare parts for any HygroMatik units are available many years after production has been ceased. This service is part of our practised sustainability and in our understanding a responsible use of the available resources.





## HygroMatik service partners in your region

In order to provide you with a reliable service with consistent quality all over the world, we select our regional service partners carefully. In extensive seminars and workshops these are well trained by our employees.

A close-knit network of trained service partners which has increased over the years makes it possible for us to be there on site with you, with all our technical expertise.

### With many advantages:

- Fast response times in service cases
- Reliable, highly trained contacts
- Know-how of regional characteristics

Please do not hesitate to contact us if you have any questions or require further information. Our friendly staff at the head office will be pleased to receive your call and, if necessary, connect you with the right contact.



**Head office**  
hy@hygromatik.de

+49 4193 895-0





HygroMatik GmbH  
Lise-Meitner-Str. 3  
24558 Henstedt-Ulzburg  
Germany

T +49 4193 895-0  
F +49 4193 895-33  
hy@hygromatik.de  
www.hygromatik.com

member of **CAREL** group

