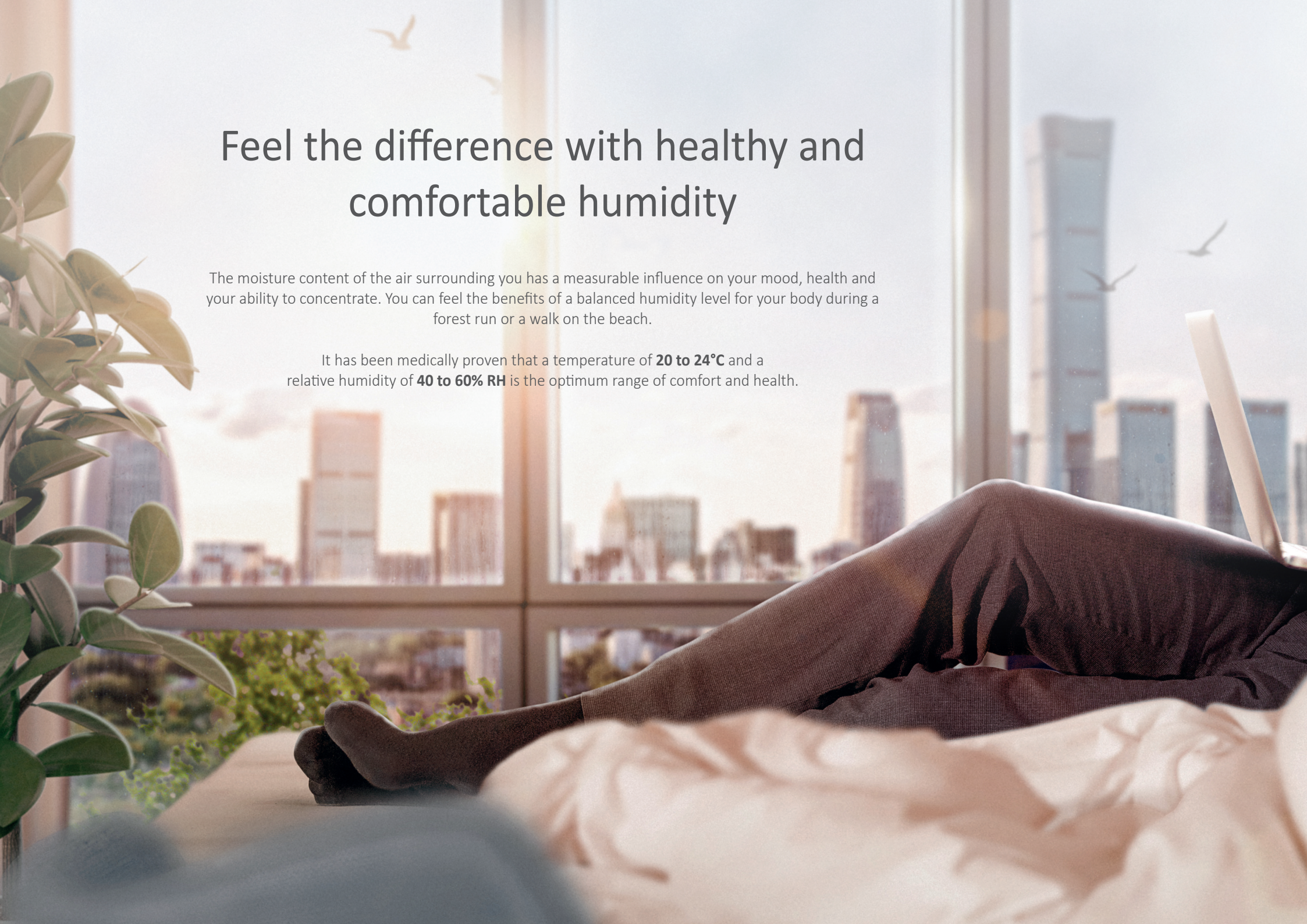
Satisfied guests thanks to healthy indoor air

Humidification and dehumidification for hotels, resorts, spas
gyms, hot yoga, steam baths and wellness

condair



Feel the difference with healthy and comfortable humidity

The moisture content of the air surrounding you has a measurable influence on your mood, health and your ability to concentrate. You can feel the benefits of a balanced humidity level for your body during a forest run or a walk on the beach.

It has been medically proven that a temperature of **20 to 24°C** and a relative humidity of **40 to 60% RH** is the optimum range of comfort and health.

Why does the air in a room become so dry in winter?

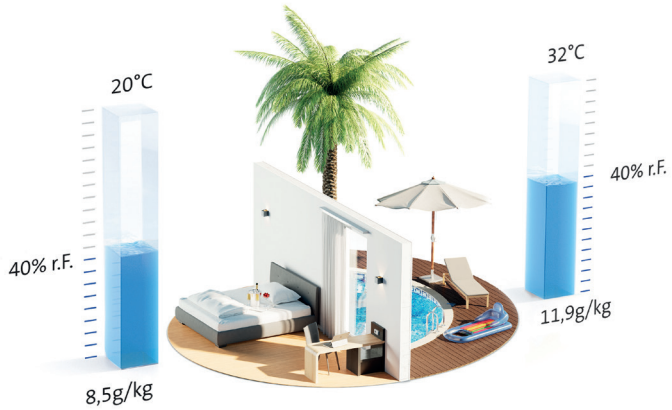
Cold air absorbs much less water than warm air. Therefore, in the summer it is much more humid and overall more comfortable. In winter, however, the air contains very little water and the air indoors becomes dry when heated.

The most meaningful indicator of the current humidity state of the air is the Relative Humidity [RH]. This value indicates in percent how far the humidity is from the maximum saturation (100%).

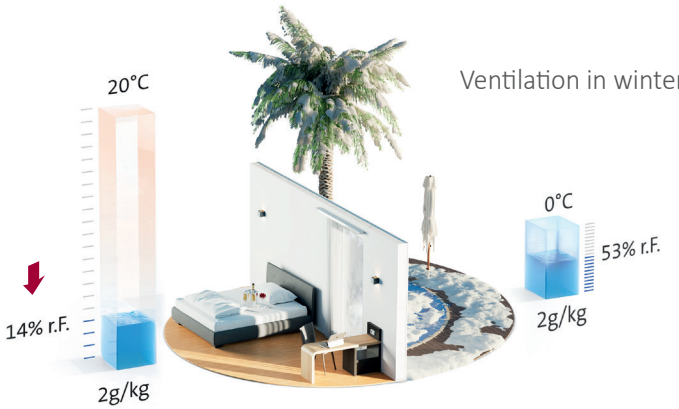
A value in the range of 40–60% RH is considered optimal both for human health and for hygroscopic materials (paper, wood, leather, etc.).

In the winter, cold dry air enters enters our houses through ventilation, where it is heated.

The value of relative humidity drops rapidly and the already dry air becomes even drier.



Ventilation in summer



Ventilation in winter


Relative humidity RH [%]
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
to dry
optimum humidity
to humid

Happy guests

Owners, managers and operators of hotels, spas and resorts are concerned about the well-being of their guests around the clock. Accordingly, they are always looking to expand and improve their range of services to make their stay as pleasant as possible.

This applies not only to the guest rooms but also to the hospitality, conference rooms and other common areas.

A consistent and comfortable pleasant air humidity is an important factor for the overall physical well-being and also for the mood of the guests during their stay.

Increase in ROI

Implementing proper humidity levels in your hotel will increase the comfort of your guests, which will keep your customers happy and give your business the potential of a return customer and positive word of mouth. This will increase a business‘s ROI by having positive reviews from guests through online ratings which will result in an increase in visibility and rankings in search engines and booking portals.

Potential guests see reviews as an indicator of trust and are more likely to choose a hotel with a higher rating.

Reduce absenteeism

Optimal humidity also helps reduce the spread of airborne viruses and boosts the immune system so that employees do not get sick or or reduces their chance of illness.

An actively regulated air humidity is therefore an important factor for employees, promoting health, reducing the risk of illness and increasing productivity in a pleasant working environment.

Hardwood flooring and furniture

Wood is a hygroscopic material that can absorb indoor humidity or release material humidity.

These processes cause the wood to contract or expand, which is popularly known as “movement”.

To ensure that wood flooring and furniture are not damaged, a balanced room air humidity of between 40-60% RH is required.

Healthy sleep

The body needs active rest at night. Being able to fully regenerate at night allows you to use your full mental and physical potential during the day.

With active air humidification, you can positively influence your sleep in order to be able to start the next day in an efficient manner. An optimal room humidity in the bedroom provides for a peaceful sleep without coughing or dry mucous membranes.

Dry eyes

An intact tear film has the task of protecting the surface of the eye from environmental influences. The particles present in the air can cause considerable itchiness or infections of the conjunctiva.

Dry air leads to the increased evaporation of tear fluid. If the humidity is constantly low, the tear film can thin out or even break down.

Increasing irritation, stinging eyes, inflammations and even serious eye damage are the consequences.

How allergies vanish into thin air

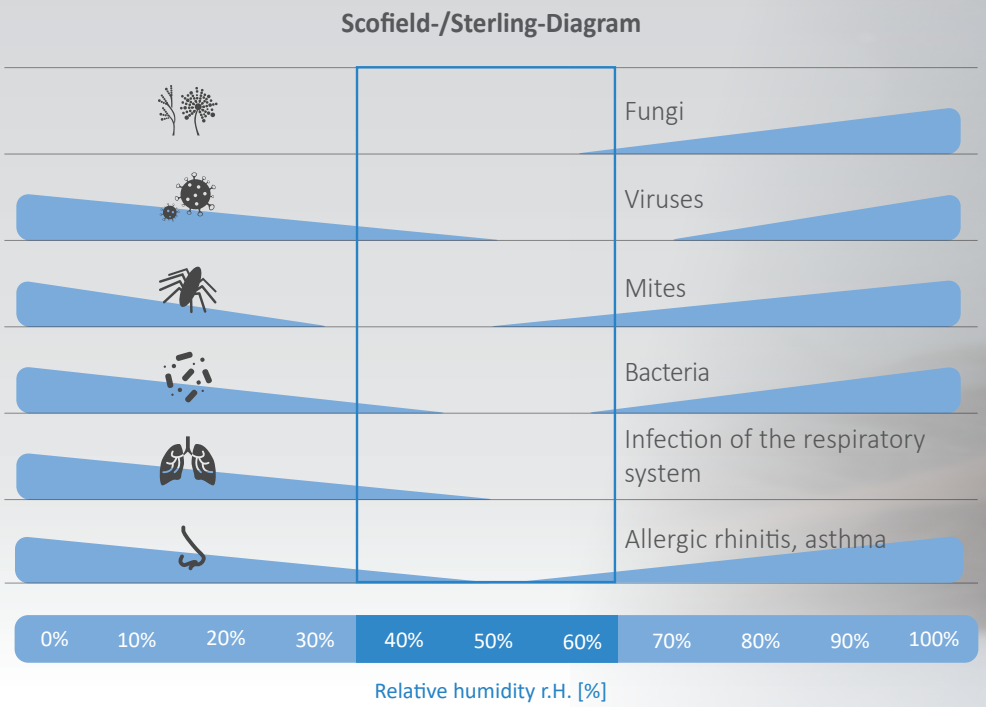
From a medical point of view, dust is the most common cause of an allergies.
Anyone who is allergic to dust reacts to either mite constituents or animal allergens with complaints such as sneezing, eye irritations or asthma.
Together with pollen, allergy sufferers, experience symptoms when exposed to air-borne, allergy-triggering substances, known as allergens.

Why does a balanced humidity level help against suspended particles?

Air humidity plays a major role in the extent of dust turbulence. . Experiments show that the adhesion of moistened dust to smooth floor surfaces increases dramatically above approximately 40% RH.
In this area, the weight of dust particles also increase drastically due to water condensation. The allergenic substances stick together, form clusters, and fall to the floor more quickly. On the other hand, the risks of mold problems increase above 60%.

The optimal humidity range for minimizing allergy complaints is therefore between 40 and 60% RH.

The Scofield/Sterling diagram illustrates very clearly that the contamination of the air by undesirable microorganisms is lowest in the range of 40–60% RH.

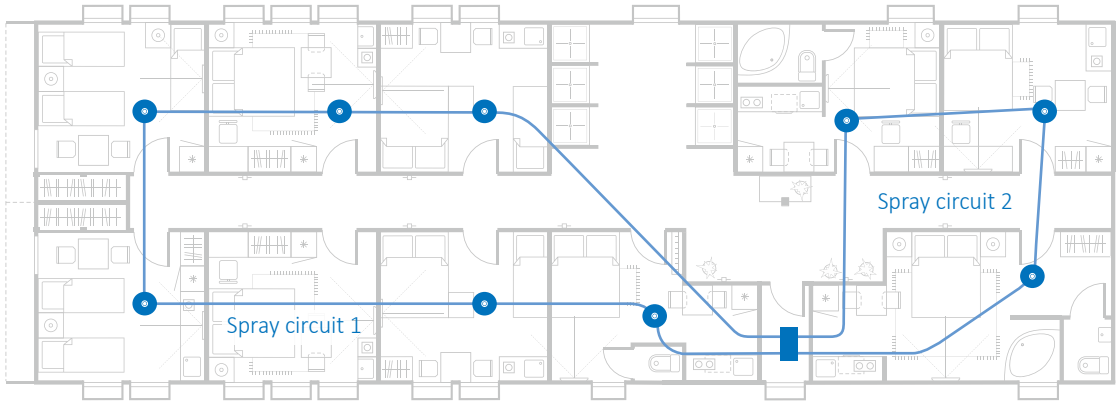


Optimal humidity for hotel guests

As a hotel owner or manager, you know that guest comfort is a top priority. However, one factor that is often overlooked is the indoor climate. Dry air can cause unpleasant symptoms for guests, including a scratchy throat and dry eyes, while stale air can make guests uncomfortable and create unpleasant odors. This can make it difficult for guests to sleep well, which can negatively impact their overall experience. In fact, 50% of all hotel reviews relate to poor indoor climate and poor reviews can lead to fewer bookings.
Fortunately, improving the indoor climate through actively controlled humidification can be a simple and effective solution.

Humidifier spot

HumiLife Nebulize, the flexible room solution



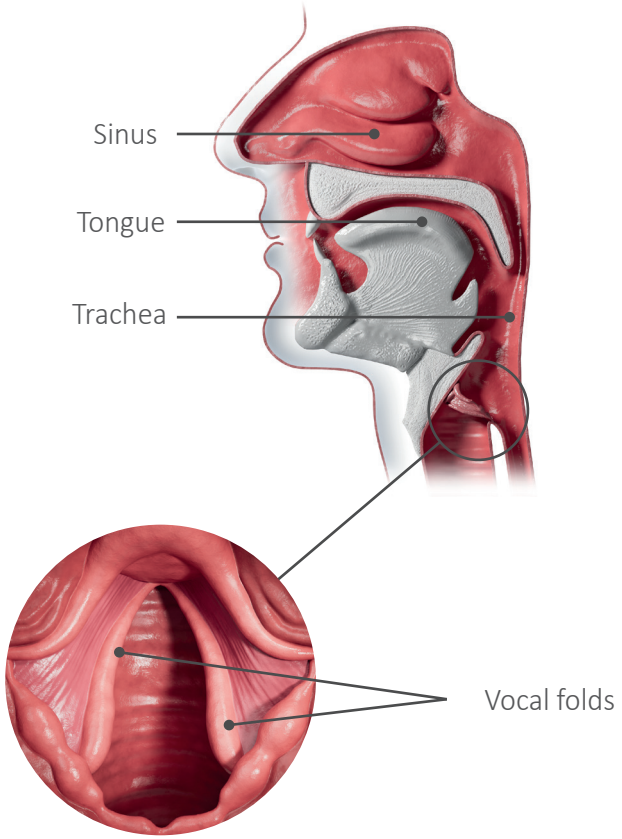
Best environment atmosphere for networking and conferences

A good room climate with actively controlled humidity is important for congress and meeting rooms. Especially for speakers or presenters, because if the humidity is too low, the throat becomes dry and the voice fails.

An adult human breathes in and out an average of 12 times a minute. Our airways are equipped with mucous membranes that filter and warm the air before it enters the lungs. But when the air is very dry, our mucous membranes release moisture into it so that it can enter the lungs moistened.

However, the moisture also escapes from our body when we exhale. So then, there is less and less moisture mucous membranes, which causes coughing and hoarseness is promoted.

For the well-being of the participants and a pleasant networking atmosphere, an optimal air humidity is the ideal prerequisite. Another advantage is that conference participants remain healthy even after several days in the same room with other participants. This is because healthy air humidity minimizes the transmission of viruses and strengthens the immune system in a natural way.



The feeling of fresh spring air for spa and wellness area

Spa guests expect temperature and humidity to be at a healthy and comfortable level. The right relative humidity during the heating season improves the well-being of your guests. Relative humidity between 40 and 60% means a healthy and comfortable indoor climate.

During the winter heating season, the relative humidity is often below 30%. However, low humidity affects the health and well-being of your guests. Without air humidification, the susceptibility to diseases is significantly increased. The reason: aerosols containing viruses remain in the air longer at low humidity, which significantly increases the risk of transmission. Dry nose, throat and skin reduce the body‘s natural resistance.

Temperature and humidity also play an important role in massage rooms, and beauty salons to ensure your customers are comfortable.

Heated, dry air draws moisture from human skin and hair like a sponge. The result: skin itches, eyes sting, headaches develop and guests are tired instead of relaxed.

In addition, optimal room humidity prevents damage to hardwood floors, wooden furniture, and paintings, and improves the well-being and performance of your employees.

Condair humidification systems offer intelligent control for optimal room humidity.

Relax and enjoy: The innovative steam bath systems from Condair

Many hotels and health clubs offer spa facilities for the well-being of their guests and members: A swimming pool, a sauna, and increasingly even a steam bath or steam shower. A steam room takes up hardly any more space than a shower, and Condair steam generators can be adapted to your exact needs in terms of power and equipment. In addition, Condair supplies a whole system of steam-generating components suitable for use in installations of all kinds, including full-scale spas.

At the push of a button, steam generation can be started and the cabin heated up. The steam can be seen and felt through the fresh air circulating in the room. The auto-sensitive control system adjusts the temperature to the set point entered, increasing or decreasing steam production accordingly without the bather being aware of it.

The Condair Spa Control is a flexibly designed touch display for the control of one, several or the parallel control of several cabins. It offers the possibility to control not only the steam bath generator but also various accessories such as light, fragrance, fan, seat heating and additional relays. The customer‘s logo can be individually uploaded to the display and an innovative "Keepwarm function" helps to to save energy.

Device control via Touch Display

Why is dehumidification for swimming pools so important?

A high degree of water evaporation in indoor pools and, especially in combination with the high ambient temperatures, leads to enormous humidities and an unpleasant feeling of being oppressively hot.
For those using the swimming pool, these climatic conditions not only detract from personal well-being, but also pose a serious risk to the health of visitors and swimming pool staff in the form of circulatory problems. The damp air provides germs and bacteria with the perfect breeding ground. Given the bathing guests' light clothing, these can very quickly get into contact with human skin and, in the worst case, cause infections or diseases.

Alongside the potential health hazards, warm humid air also has an impact on the structural elements of the building. In so-called "cold spots" in particular, such as glass surfaces, metallic components, or exterior walls, the evaporated water condenses and can lead to the formation of mold and corrosion over longer periods. The resulting damage leads to shorter maintenance and repair cycles of the building's infrastructure, entailing operating interuptions and therefore, and above all, higher costs. Operators of swimming pools should therefore insist on a contemporary dehumidification system being installed.

The simplest version is supposed to be intuitive ventilation of the indoor swimming pool using windows and doors or by means of ventilation. However, it is just as expensive as intuitive ventilation of living spaces during a heating period (e.g. in the form of a permanently open window). The dilemma is that significant energy is expended to bring the air fed from the outside to the temperature required inside.

Condair's dehumidification systems, developed especially for use in swimming pools, by comparison, work significantly more efficiently and sustainably.
Available in a variety of capacities and comfort levels, their technology is based on a cooling circuit, in which a compressor compresses the refrigerant within and is throttling espanded on a Valve.
The advantage is that with this technology, dehumidification and tempering operations are carried out up to 60 percent more economically compared with conventional systems working with outdoor and exhaust.

A comfortable ambient atmosphere instead of unpleasant sticky heat

Secure, dry running surfaces

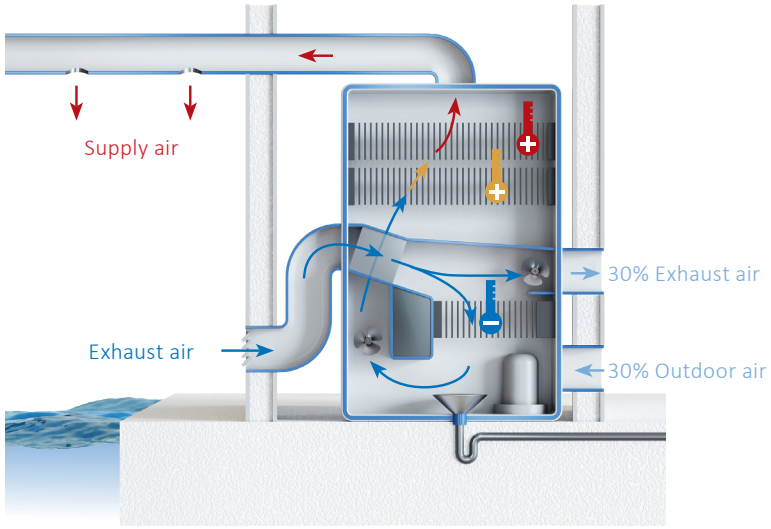
Preventing mold, rust or damage to the building

High efficiency dehumidifier Condair DP-HE

In large swimming pools, indoor aqua parks, saunas, and in hotels, sport and wellness facilities, the highly efficient dehumidifiers from the Condair DP-HE guarantee reliable temperature and humidity control, even under extreme climatic conditions. In addition to Condair's approoved-and-tested heat recovery principle via the refrigerant circuit, an additional plate heat exchanger is fitted into the DP-HE to keep the energy required to maintain the desired internal temperature as low as possible in indoor pools.

As up to 30% of fresh air can be added, it significantly improves the air quality. The fresh air also has a positive effect on dehumidification performance, as this generally has a lower humidity level than the air in the indoor pool. Less energy is therefore required for the dehumidification process via the refrigerant circuit. Compared with the usual dehumidifer models on the market, they have up to 30 percent greater dehumidifying capacity thanks to the dual-use cross-flow heat exchanger with a in total lower power consumtion.

The energy efficiency can be further optimized by using the separately available energy saving setback system which can be utilized while the pool is not in use. The flexible options allows that the maximum efficiency can be achieved at any given utilization rate during the day.



What are the benefits of optimal humidity in a gym?

Proper humidity can ease breathing and relieve symptoms of asthma and other respiratory diseases. Dry air can cause mucous membrane irritation and coughing. If the air is too dry, it can draw moisture from the body and cause dehydration and discomfort. This can cause muscles to fatigue more quickly and decrease performance in the gym.

With the optimal relative humidity (40-60%), you will provide your visitors with perfect training conditions, which will lead to faster fitness build-up and more satisfaction among your customers.

Lack of humidity is probably the most common cause of member complaints, yet many studios continue to use simple portable humidifiers that simply do not meet the needs of a workout room.

This is because dry air promotes the transmission of diseases, especially respiratory infections. It has been proven that the intensity of sports in the gym influences the risk of infection. The exercisers appreciate that, in addition to maintaining the highest standards of hygiene, active measures are taken to keep them not only fit but also healthy.

Create the optimal hot yoga experience!

After installing a Condair humidifier in your hot yoga studio, you will notice the difference almost immediately. Condair humidifiers are ideal for changing environments like yoga studios, where each student‘s body generates heat and humidity. They respond quickly to these changes while maintaining the relative humidity set point. This helps students break a sweat immediately so their muscles can relax and they can practice without injury.

For many Condair customers, just having a system they can rely on makes all the difference. They report fewer breakdowns and maintenance problems with Condair humidifiers, which are known for their outstanding quality and customer service.

And they love the fact that they can turn on the Condair unit just 30 minutes before class to get the room to the right humidity level.

Whether hundreds or thousands of customers come through your doors each month, optimal humidity is key to securing new and repeat business.

Healthy humidity for care centers

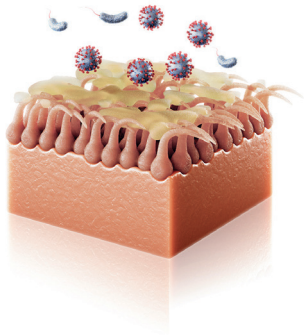
Nursing facilities of all types play a critical role in maintaining the health and well-being of patients. To ensure a faster recovery of patients and a safe and healthy working environment for staff, it is important to provide a comfortable and healthy indoor climate. Here, optimal humidity plays a crucial role, as it curbs the spread of germs and bacteria.

Improperly hydrated indoor air has serious effects on well-being and health. A 2018 study of indoor humidity in a geriatric care facility clearly showed that respiratory (bacterial and viral), gastrointestinal (e.g., norovirus), and eye infection rates were lowest when indoor relative humidity was 40-60%.

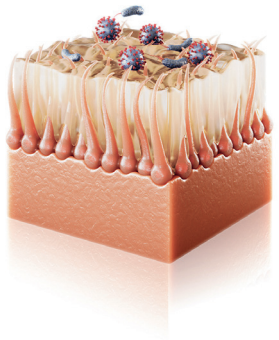
Classic effects of too high or too low humidity are: Fatigue, lack of concentration, headaches, burning eyes and irritation of the respiratory tract. Humidity is of particular importance for the functioning of the immune defense in the nasal mucous membranes, because the drier the nasal mucosa, the more susceptible the body becomes to bacteria, viruses and pathogens.

In summary, humidification is an essential part of maintaining a healthy and comfortable indoor environment and should be considered at the design stage of new buildings. By promoting wellness, speeding patient recovery, and providing a safe working environment for employees, humidification is an important investment for any healthcare center.

Dry cilia
allow germs to penetrate



Moist cilia
bind and filter
germs



Everything from a single source: from professional planning to carefree maintenance.

Leading hospitality companies around the world put their trusted in Condair to keep their facilities healthy and comfortable for guests and employees.

Condair will stand by you in all phases of your project from planning to installation and startup. With a broad product and service portfolio we can help you find a suitable solution.

How must the system be to meet the specific requirement profile on site? Which technologies make the most sense for this requirement profile for air humidification (adiabatic, isothermal) or for dehumidification (adsorption, condensation)? And how should the system be set up to keep operating costs as low as possible?

In order to get precise answers to questions about scope, technical equipment and cost-efficiency, appropriate experts should be consulted early in the planning process.

Our experts have extensive expertise in the areas of humidification and dehumidification, adiabatic cooling and water treatment. They support you in adapting the required systems precisely to the required conditions size and adjust.

Our employees always pay attention to identifying and demonstrating the most energy-efficient and therefore economically most sensible solution.

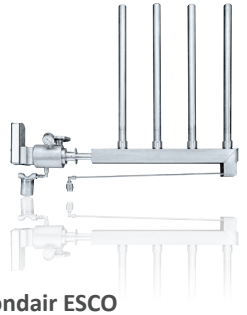
Our specialist consultants are always on site quickly and will be happy to help you as early as the planning phase, because professional planning is always the basis for flawless, safe and energy-efficient operation.

Isothermal Humidifier

Condair EL
Steam humidifier with
Electrode heating

Condair RS
Resistance steam humidifier
with lime management

Condair GS
Gas fired
Steam humidifier



Condair ESCO
Distribution system for existing pres-
surized steam

Condair Optisorp
Multiple steam distribution system

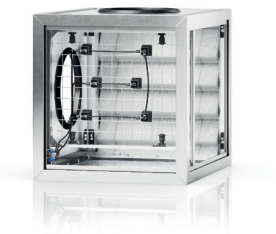
Condair AT4
Steam generator for steam baths
with integrated self cleaning

Condair Sigma
Steam generator for steam baths

Condair Delta Spa Control
Simultaneous control for
Steam generators

Condair Omega
Compact steam generator
for steam baths

Adiabatic humidifier



Condair DL
Hybrid humidifier

Condair ME
Evaporative cooler

DRAABE TurboFogNeo 1/2
High-pressure humidifier

DRAABE TurboFogNeo 8
High-pressure humidifier

DRAABE Nanofog
Compact high-pressure humidifier

ML Princess
Resistance steam humidifier
with lime management

ML Flex
Resistance steam humidifier
with lime management

Dehumidifier / Dryer

Condair DC 50 - 200 W
Condensation dehumidifier
for wall mounting

Condair DC 50 - 200 R
Condensation dehumidifier
for rear wall mounting

Condair DC 50 - 200 C
Condensation dehumidifier
for ceiling wall mounting

Condair DC 75 - 100
Powerful compact
Condensation dehumidifier

Condair DC - N
Condensation dehumidifier
with external heat dissipation

Condair DC - LT
Condensation dehumidifier
for low temperatures

Condair DA 210 - 450
Compact adsorption dryer
with AISI304 stainless steel housing

Condair DA 500 - 9400
Adsorption dryer for
high drying capacities

Condair DP
Condensation dehumidifier
for swimming pools

Condair DP-HE
High efficiency dehumidifier
for swimming pools

Condair HumiLife

Condair HumiLife Steam
The proven room solution

Condair HumiLife Diffuse
The efficient HRV-solutio,
compatible with heat pumps

Condair HumiLife Nebulize
The flexible room solution

Hygiene with certificate:
Germ-free and safe operation is guaranteed by the system's own water treatment and extensive hygiene functions.
The DGUV test mark „Optimized Air Humidification" documents the high standard.

Minimalism in Perfection

Elegant, silent spots humidify where you want them to.
Their design blends discretely into the architecture and the color palette of your rooms.

For each room, the optimal humidity is automatically controlled thanks to integrated automatically sensors.

The control of the desired humidity values, online monitoring and a remote operation is conveniently carried out via a smartphone app.
Everything smart under control- for the highest demands.

I want to know more:
E-mail: Hospitality@condair.com

Condair Group AG
Gwattstrasse 17, CH-8808 Pfäffikon SZ
Tel. +41 (0)55 416 61 11
www.condairgroup.com