Munters

Create your perfect indoor climate

Munters humidification and cooling solutions



Why humidify your indoor environment?

Having the right indoor humidity is a necessity for both processes and people. It’s crucial for the performance of workplaces, factories, and commercial establishments. Munters specializes in industrial humidification solutions that enhance overall efficiency.

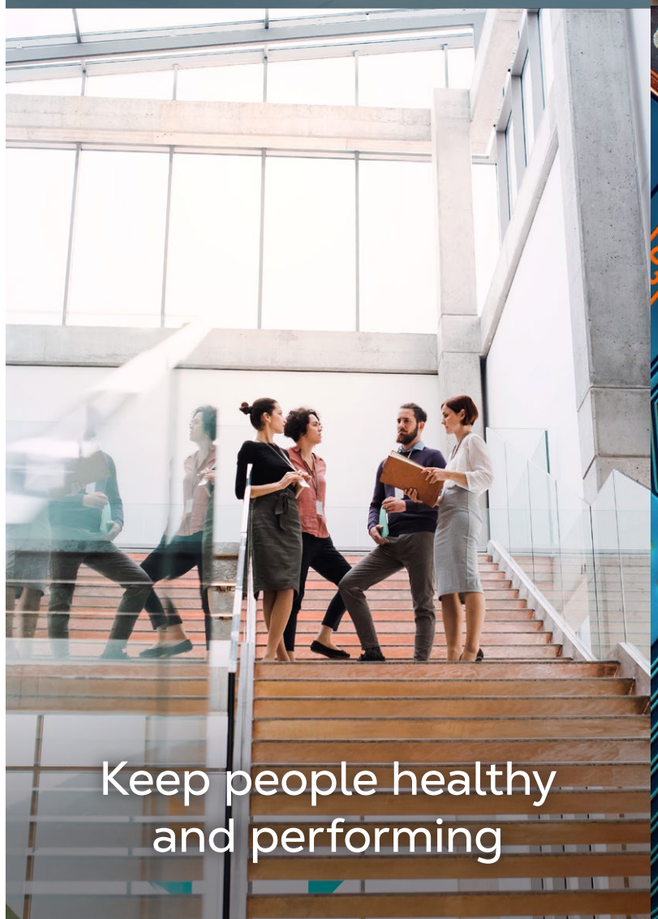
Maintaining optimal indoor humidity protects building occupants. This is especially critical in applications such as industrial processes, production facilities, post-finishing operations, surface treatment zones, and specialized environments like museums, art galleries, and server rooms. Achieving and sustaining the right humidity level isn't a choice; it's a necessity to facilitate seamless operations and safeguard valuable assets.

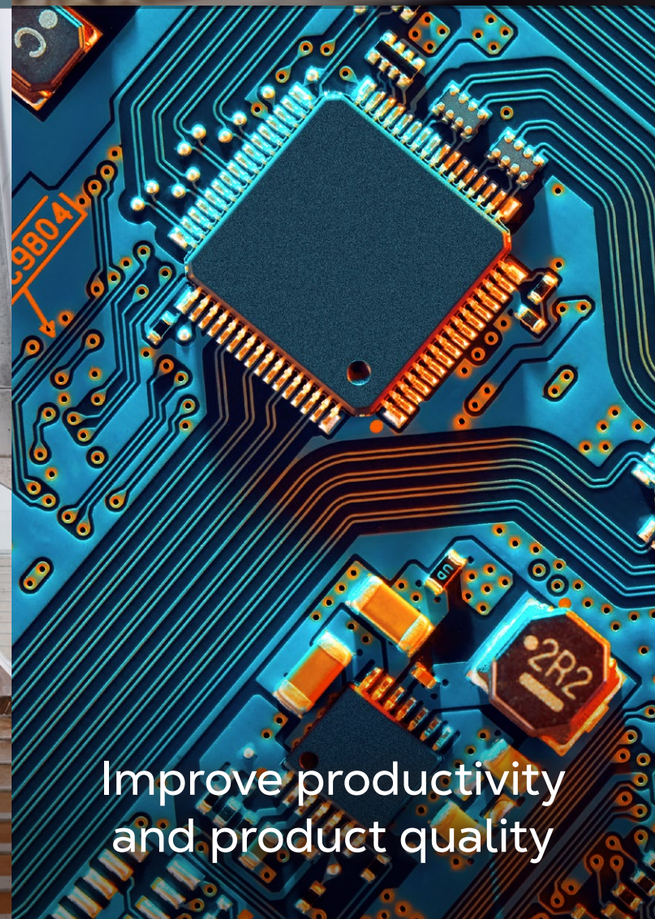
As a leader in industrial humidification, Munters is committed to exceeding industry standards with energy-efficient solutions that uphold our commitment to environmental responsibility.

Choosing Munters is more than acquiring a humidification system; it's about embracing a comprehensive approach to indoor climate control. Our solutions extend beyond immediate comfort, encompassing the preservation of health, enhancement of productivity, and a positive environmental impact. With Munters, you're not just selecting an industrial humidifier provider; you're partnering with climate control experts dedicated to setting new benchmarks in health, productivity, and environmental sustainability for indoor spaces.









Applications

Improving processes, performance and well-being with humidification

Munters humidification systems are highly effective in a wide range of applications. Find out more about how they help create the perfect indoor climate.

Commercial buildings/offices

Indoor environments with summer air-conditioning and winter heating suffer from low humidity and a dry atmosphere without correct humidification.

Hospitals

Munters climate control solutions prevent the growth of harmful bacteria and viruses, and improve doctor and patient comfort.

Industrial

Continuous regulation and monitoring of air humidity levels during all production processes, helps maintain optimum conditions all year round in these applications.

Pharma

Humidity control is an important factor for stable and predictable pharmaceutical as well as nutra-ceutical production.

Defense

Munters provides the right climate for defense customers' stored and active duty equipment, ensuring top quality and maximum performance.





Data centers

Reliable, energy-efficient cooling solutions that are optimized for each data center's unique conditions keep equipment operating in top condition – year after year.

Print shops

Humidification provides an optimal relative humidity of 50-60%. ESD-related problems are eliminated, and paper retains its strength.

Glass fiber boat manufacturing

Cost-effective air treatment systems allow manufacturers to control temperature and humidity independently.

Plastic manufacturing

Munters products are custom engineered to provide the optimal chemical processing climate control solution for your specific application.

Well-being

Maintaining optimum humidity reduces airborne transmissions and maintains occupant health and comfort in these applications.

Automotive

Munters provides specially engineered systems that allow the automotive industry to maintain indoor climate to the most precise specifications.

Museums and galleries

Munters climate control solutions help create and maintain a controlled and constant storage climate all year round.

Electronics manufacturing

Managing overall environmental control is essential for electronics manufacturing processes and operations as it eliminates ESD-problems..

Wood storage

Inconsistent temperatures and humidity levels affect the humidity quota in wood. Control of both air humidity and temperature is required.

Food and vegetable storage

The perfect indoor climate ensures a hygienic environment and high quality food.

Two targeted technologies for correct humidity levels

Evaporative humidification and cooling

Munters evaporative (adiabatic) humidification and cooling solutions help maintaining the correct relative humidity levels in indoor environments. These hygienic climate control solutions prevent static electricity and dust-related problems, ensuring the well-being of building occupants. Using an evaporative humidification and cooling system improves temperature and relative humidity control and reduces energy consumption.

How does it work?

Evaporative humidification and cooling systems use a process that adds water molecules to the air, increasing the relative humidity and lowering the temperature. Depending on your specific application, the desired objectives can include achieving higher humidity levels or reducing the temperature.

Benefits of evaporative humidification

- Increase production quality and minimize production rejects
- Create a healthier indoor climate
- Obtain precise temperature and relative humidity
- Lower operating costs in some applications

Steam humidification

Munters steam (Isothermal) humidification solutions help maintain healthy indoor environments by keeping relative humidity at desired levels. Ideal for all capacities and spaces, steam humidification can be precisely controlled. Free from harmful substances, steam generated from these systems is ultra-hygienic.

How does it work?

Steam humidification systems use boiling water to produce steam, which is dispersed into the environment, raising humidity levels and restoring optimal climate.

Benefits of steam humidification

- Create healthier workspaces
- Boost performance and well-being of building occupants
- Reduce dust pollution
- Protect sensitive electronics from electrostatic discharge
- Boost the energy efficiency of the building



Enjoy the perfect climate all year round

As the seasons change, so do the humidity levels. Humidity levels tend to drop in the winter, causing to dry skin, itchy eyes, and throat irritation if levels are not properly maintained. Humid summer air can cause bacteria and mold, disrupt production and spread airborne microbes and pollutants throughout the buildings, if not adequately treated.

Munters is the ideal climate control partner with solutions to meet all your needs, all year round. Munters climate control solutions provide the optimal indoor climate to ensure health, safety and maximum productivity.

Protecting against legionella



Legionella is a group of bacteria which thrives in aquatic environments, and can be a danger to humans if it is allowed to grow and spread through an atmosphere. There are more than 50 known species of legionella in existence today, and when inhaled the bacteria causes Legionnaires' disease.

It thrives in fresh water, and whilst it is not believed to be dangerous in its own habitat, it becomes a problem when it occurs in man-made environments. This means that any system which uses significant amounts of water could pose a threat.

Many cooling systems rely on fresh water to maintain cooling efficiency, and the air which is pushed into the building travels through media soaked in this water first.

Who is most at risk?

When the bacterium is inhaled, the signs of Legionnaires' disease can appear soon after. This means potentially anyone is at risk, and it is more about the environment than the individual. Some groups are more likely than others to react to legionella, like those over 65 years old or those with weaker immune systems, but it can affect anyone and can, in some cases, be fatal.

How can the industry prevent Legionnaires' disease?

In hot water systems it is more straightforward to avoid the growth of legionella bacteria, as the water just needs to be kept at temperatures higher than 60°C. With evaporative humidification and cooling, which are optimal systems for e.g. data centers, the water needs to be kept at lower temperatures. However, legionella is still prevented as the transfer of humidity occurs at molecular level, and these molecules are too small to carry legionella bacteria.

In other, non-evaporative humidification systems where spray nozzles or atomizers break water down into aerosols, the water if contaminated, can cause a health hazard.

Certified safety

Because of the potential dangers of legionella, and the fact that these concerns often come up in discussion, we decided to take action.

We took our FA6™ system to the Medical Faculty of RWTH in Aachen, Germany, to ensure that our products would not facilitate the spread of this harmful bacteria. As a result, we can present a certification which rules legionella out completely, proving that our FA6 system is completely safe from contributing to the transmission of legionella. As far as we know, we are the only company that can do this.

We invested in this testing process because we know how important data center safety is, especially for the people that work inside the data center, or in the surrounding area. We are proud to be able to say that our products are certified against legionella, as we want to contribute to ruling it out completely.

GREENGUARD certification

It's hard to control the outdoor pollution we encounter, but we certainly can do something about our indoor air. Choosing certified media and rotors from Munters is an easy action to take towards creating your own perfect climate.

Munters evaporative media and rotors are GREENGUARD Gold Certified

Indoor air quality is a top concern on the agenda of architects, building contractors and manufacturers worldwide, striving to reduce emissions.

Munters evaporative cooling and humidification pads, CELdek™ and GLASdek™ are GREENGUARD Gold Certified, by the global, independent organization UL.

What does GREENGUARD mean for Munters products?

Munters GLASdek™ and CELdek™ evaporative cooling and humidification pads and rotors have been tested for emissions from over 360 individual chemicals of concern, guaranteeing them as having non-harmful emissions. The tests have been performed according to one of the world's most stringent product emissions standards. An independent party has performed the tests. Yearly testing of the products is required to maintain the certification.

The benefits of healthier indoor air are many. It reduces the risk of:

- Asthma and allergies
- Headaches
- Respiratory disease
- Eye, nose & throat irritation
- Reproductive/developmental defects
- Neurological disease
- Some forms of cancer
- To remain healthy, people need healthy indoor air. It's as simple as that!

More about the testing

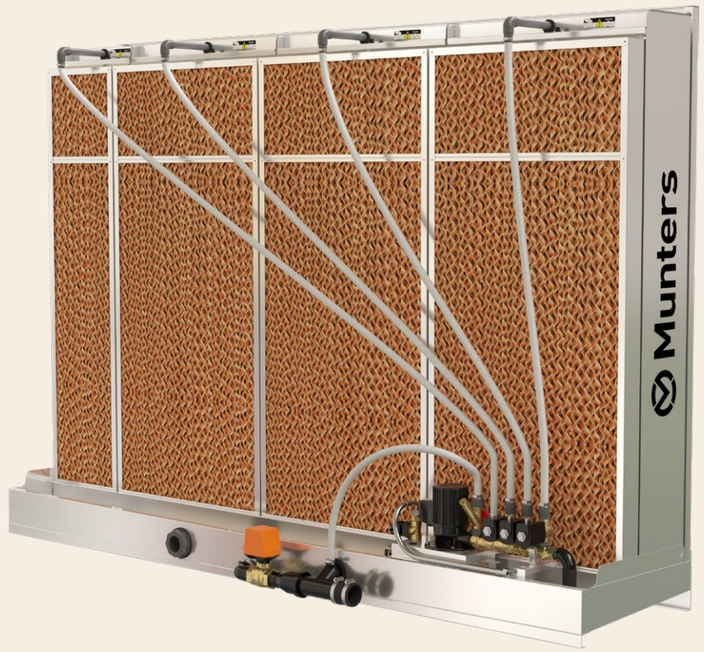
UL takes an extensive review of material, manufacturing processes and manufacturing locations. Testing is performed in state-of-the-art stainless steel environmental chambers, following global ISO standards. Products are certified to UL GREENGUARD Standards, based on comprehensive emission criterial from the EPA, Germany's Blue Angel Program, State of California and reputable public health expert agencies.

GREENGUARD Certification endorsed and accepted by established organisations such as LEED, ASHRAE Standard 189.1, Greenstar and more.



Product information

Our humidification and cooling systems offer best-in-class solutions across a wide range of applications. Whether you need a self-contained humidifier unit, a humidification system or a cooling solution, we have the right offering for you.



FA6™

Evaporative humidifier and cooler

Munters FA6 units have been designed to offer the best evaporative cooling and humidification solution for a wide range of industrial applications. At the heart of the solution is our unique, class leading GX40 media, which is ceramic coated, highly efficient and fireproof.

The media is housed in reinforced steel, making the solution robust and easy to install. The FA6 is a high performance, low operating cost solution that is available in a wide range of sizes designed for integration into air-handling systems within both residential and industrial buildings.

Key benefits

- Very low pressure drop and energy consumption
- Compact and flexible design saves money and space
- Low water consumption
- Wide range of sizes for every application
- Modular cassette design makes service and replacement quick and easy
- Superb controllability typically down to ± 3%
- Low maintenance requirements and running costs
- Can be cleaned in place to extend service life

Key facts

- High efficiency: 65%, 85% and 95%
- Includes GX40, the non-combustible cooling media
- No water treatment required, with tolerance of pH levels 3-10
- Reinforced steel frame for easy installation and optimal reliability
- Fire-rated according to UL®900, ULC-S111 Class 1
- Fire-rated according to EN13501-1, Class A1
- Certification VDI 6022
- GREENGUARD Gold certified



FA5™

Evaporative humidifier/cooler

The FA5 evaporative humidifier/cooler has been specially designed to maximize the cross section with the evaporative GX40 media. Thus minimizing the air velocity and pressure drop over the FA5 section.

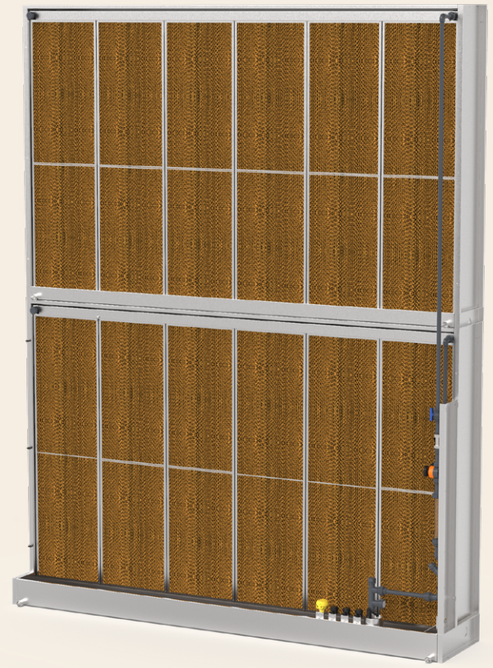
Its single-cassette design features a stainless-steel water tank. Excess water that is not used for evaporation cleans the cassette before being discharged. This compact system ensures optimal functionality with minimal energy consumption, making it ideal for most applications.

Key benefits

- Ultra-low energy humidifier/cooler (50–250 W)
- Superb controllability – typically down to ±3%
- Compact design offers space and cost savings
- No water treatment required
- Safe and hygienic
- Low running costs
- Trouble-free maintenance
- No oversaturation risk

Key facts

- High efficiency: 65% and 85%
- GX40 evaporative media made from inorganic, non-combustible material
- Nominal humidification accuracy of ±3%
- Covers air volumes up to 5.0 m^3/s (as standard)
- Superb controllability – typically down to ±3%
- ISO 9001 and ISO 14001-certified manufacturing



FP3™

Evaporative humidifier and cooling system

Munters FP3 transforms warm, dry air into cool, humidified air without aerosols. The energy needed for the evaporation process is taken from the air itself, which makes the FP3 a sustainable, energy-efficient solution.

The FP3 has been designed specifically to handle larger air volumes exceeding 25 cubic meters per second which are usually found in industrial applications. FP3 is heavy duty by design and can be easily stacked if you need to increase your humidification capability.

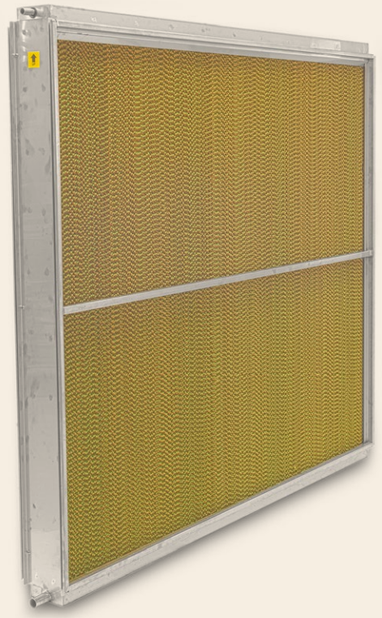
It's built from a stainless-steel frame along with evaporative cassettes and contact pads, which can be replaced after removing the top panel. Munters FP3 is a complete unit that is ready for mounting straight out of the box, and the cassettes and water distribution are easy to clean.

Key benefits

- Transforms dry air into humidified air without aerosols
- Compact design
- Easy to install
- Simple maintenance
- No droplets = no minerals or water escape into the airflow

Key facts

- Designed for larger air volumes
- Stackable units for twin or side-by-side assembly
- Comes in a wide range of size options for multistage control
- Integrated droplet separators
- Nominal humidification efficiencies of 65%, 85% and 95%



HP2™

Evaporative humidifier

Munters HP2 is engineered to be installed in ventilation systems for painting booths, but it's designed to be flexible and can work well in multiple applications. Painting in the automotive industry and in component manufacture can be challenging since there are such high expectations on both quality and productivity.

When external humidity is lower in winter this can cause problems in production, whether that's due to increased dust levels or issues with static electricity. HP2 units address these issues by humidifying the air to the optimum level, which ensures even color, smooth paint distribution and lower contaminant levels.

HP2 is housed in stainless steel and includes humidifier pads along with Munters moisture control system and customized control equipment. Part of the control system is a sensor, that can be fitted in a suitable place for accurate air humidity readings.

Key benefits

- → Robust and efficient
- → Customized control equipment
- → Low energy consumption
- → Compact and easy to install
- → Doesn't transmit minerals into the air
- → Reliable, and requires less service

Key facts

- → Available in several airflow sizes: from 0.7 m^3/s to 7.7 m^3/s
- → Housed in stainless steel
- → 2.3 m/s maximum air speed
- → Ensures even color and smooth paint distribution
- → Lower contaminant levels



Humimax™ HM3

Self-contained humidifier units

Humimax units provide excellent humidification as well as automatic control of humidity levels for a broad range of applications, such as print shops, wood & furniture storage, museums, computer rooms and vegetable and fruit storage.

Humimax is available in three different sizes to better match the application. Each unit is designed to optimize required humidification set points with very low energy consumption. Designed for smaller spaces, the HM3 series is designed to keep an optimum balance between required humidification efficiency and stability, as well as very low energy consumption. Easy installation (plug and play) and maintenance make the HM3 simple and straightforward to use.

Key benefits

- → Automatic humidity control
- → Modulating fan speed control
- → Quick and easy installation
- → Low energy consumption
- → Time scheduled operation
- → Easy maintenance

Key facts

- → Available in three different sizes 2,000, 5,000 and 10,000 m^3/h
- → ModBus Communication
- → Low noise levels
- → Auto drain function
- → Humidification/cooling mode
- → Maintenance alarm
- → Pre-filter for dust removal



FlexLine

Steam humidifier series

The Munters FlexLine is a new generation of adaptable steam humidifiers featuring a base unit that can be configured with manifold options to meet your project requirements. Made from stainless steel and with a recyclable steam cylinder as standard, all FlexLine units are equipped with a capacitive 3.5” touch display, powerful and responsive smart controls and comprehensive service functions. Designed for all applications, FlexLine systems can be installed in new or existing ventilation and process systems.

FlexLine humidifiers use boiling water to produce steam, which is dispersed into the environment, raising humidity levels and restoring optimal climate. These energy efficient Munters humidifiers create healthier room atmosphere, boost performance and well-being, reduce dust pollution and protect against electrostatic discharge.

Key benefits

- A series of units with a wide performance range for every area of application
- Individual configuration
- Easy installation
- Easy operation
- Highest quality
- Environmentally friendly, incorporating reusable components

Key facts

- 3.5” touch display with intuitive menu structure and real-time clock
- Smart control with integrated Modbus RTU or BACnet communication protocol
- Intelligent operations monitoring
- Resistor-type heater elements
- Replaceable stainless-steel electrodes
- Manifold options

Accessories



Munters EPCC™

EPCC™

Evaporative pre-cooler for condensers

Munters Evaporative Pre-Cooler for Condensers (EPCC) increases the cooling efficiency of a condenser system while lowering energy consumption. The EPCC fits onto conventional single, double stage condensers and rooftop units. It pre-cools the air entering the condenser system, which in most cases improves or at least equals condenser cooling per-formance with lower energy consumption.

Key benefits

- Higher cooling capacity
- Reduced carbon dioxide emissions
- Reduced energy
- Increased cooling capacity
- Enhanced compressor function
- Noise reduction
- Reduced maintenance



Munters GX40™

GX40™

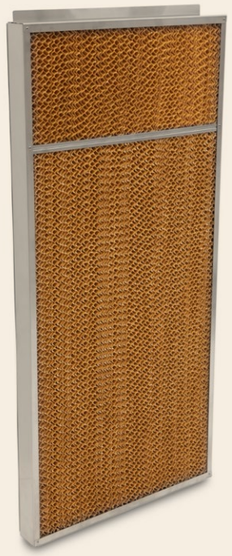
Ceramic-coated evaporative cooling and humidification media

Ceramic-coated evaporative cooling and humidification media GX40 high-performance evaporative media is engineered to provide maximum cooling and humidification, very low pressure drop and years of reliable service.

GX40 is made from inorganic, non-combustible material and impregnated with ceramic double coating. Tap water can be used and there is rarely a need for water treatment. GX40 is provided in cassettes.

Key benefits

- Very high evaporative efficiency
- Non-combustible
- Very low pressure drop
- Certified and tested against Legionella transfer
- No water treatment required
- Fire-rated UL ®900
- GREENGUARD Gold certified



Munters DropSTOP™

DropSTOP™

Droplet collection system

Munters DropSTOP is a highly effective and cost-efficient droplet separator developed to catch droplet carryover from coils, direct evaporative cooling media etc. The DropSTOP media is made in such a way that the airstream will always hit the media. DropSTOP media is framed in stainless steel casing to allow simple system integration and maintenance. Multiple panels can be combined to meet any requirements.

Key benefits

- Removes airstream water droplet carryover
- Very low pressure drop
- Utilizes GLASdek UL900 rated evaporative media
- Built from patented three-plane-fluted pad
- Works with air velocities up to 4.0 m/s
- Small installation size
- Requires little to no maintenance



Munters EC Cool

EC Cool

Evaporative cooling pad system

EC Cool is an evaporative cooling pad system that reduces rooftop condenser inlet temperatures by passing air through wetted CELdek® evaporative media. Lowering ambient air temperature before it reaches the condenser coil minimizes the risk of high-pressure alarms, boosting overall cooling system efficiency. This modular, flexible, and cost-effective solution can be retrofitted onto condensers up to two meters high.

Key benefits

- Higher cooling capacity
- Easy cleaning and pad replacement
- Easy and quick installation
- Stock standard product for short delivery time
- More reliable cooling installation in summertime
- No corrosion or mineral deposits on condenser
- More energy efficient cooling installation (COP)



Munters Service portfolio

At Munters, we are committed to offering a complete portfolio of service offerings to support you throughout the entire lifecycle of your Munters equipment.

Commissioning support

Our trained service technicians make sure your equipment is operating as designed so your investment gets the best possible start. We offer everything from basic unit start-up to extensive turnkey installations.

Maintenance

Keep your equipment running like new with on-site visits by factory-trained technicians and regular rotor performance checks.

Retrofit and upgrade

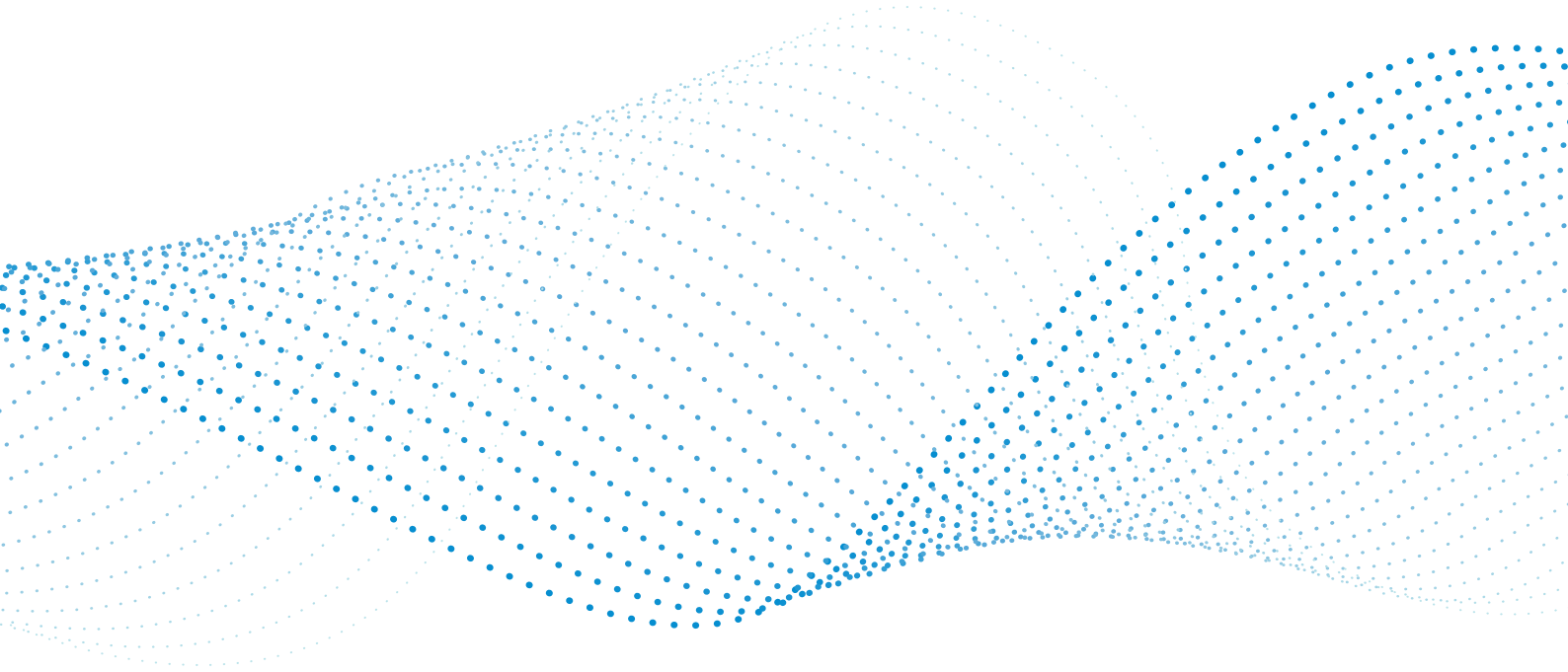
Boost energy efficiency and capacity with our retrofit solutions for equipment already in operation. Upgrade controls, replace your rotor or upgrade your fan to maximize performance, save money and energy. Munters also custom fabricates zeolite blocks for replacement of all zeolite and carbon rotor systems.

Munters Service Agreements

Ensure that your Munters equipment always performs according to specifications. Munters Service Agreements, tailored to your needs, offer industry-leading lifecycle care for your equipment – and peace of mind for yourself.

Munters Genuine Parts

We use only Munters Genuine Parts, which are designed, tested, and verified to ensure that each part meets or exceeds specifications. Convenient service kits are made to make maintenance simple.



About Munters

Founded in Sweden in 1955, Munters has grown into a global leader in humidity and temperature control, with 20 manufacturing facilities around the world and sales offices in more than 30 countries.

Backed by approximately 4,000 employees world-wide and nearly more than 15 BSEK in net sales, we have the expertise and resources to meet the most demanding defense requirements.

For more information, please visit www.munters.com

Humidification and Cooling-BR-EN-202507

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