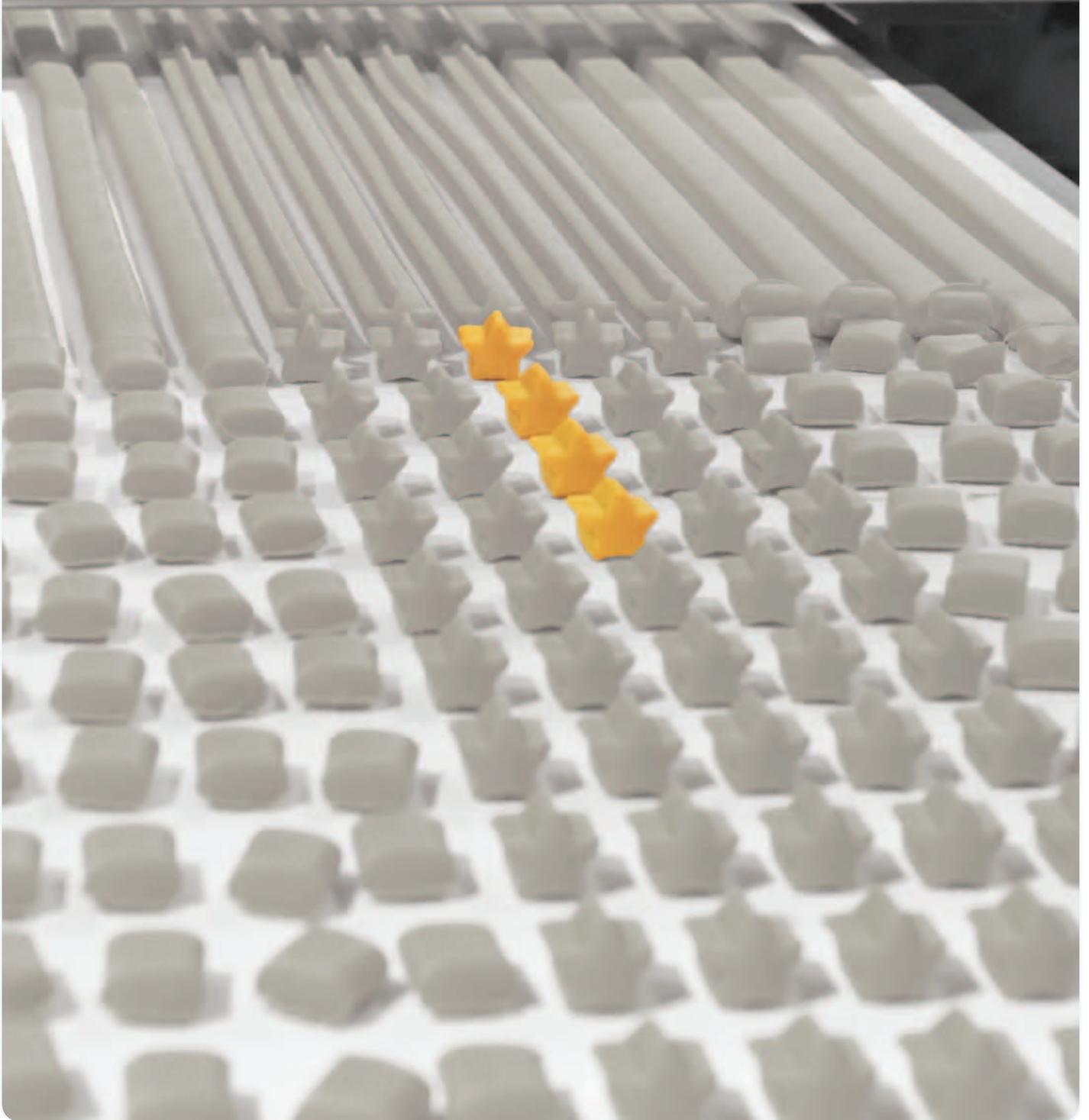


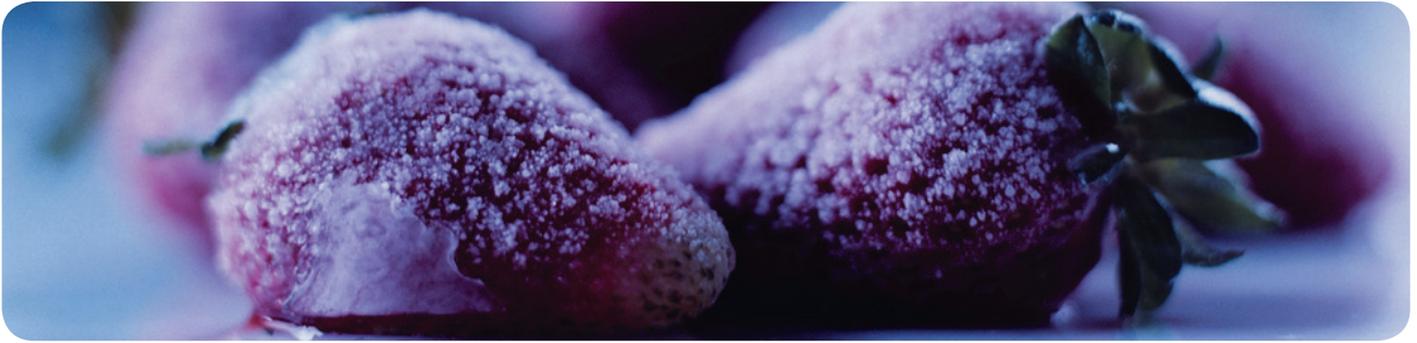
FOOD APPLICATIONS



High quality air for high quality food.
Climate control for food applications



Humidity control makes the difference



As the world's biggest supplier of desiccant dehumidifiers and air handling solutions, Munters has an extensive experience as to techniques to fully control climate conditions.

Munters air treatment solutions

- improve both product quality and production output while
- saving energy and
- lowering the cost per produced item.

Price and quality are two parameters of highest importance when it comes to food products.

Finding ways to increase production throughput and reduce energy consumption, thereby lowering the price per produced item, is a constant challenge.

So is the product quality which is highly affected by climate conditions. In particular by the consequences of an uncontrolled level of humidity.

Seeking winter production conditions all year round ?

Outdoor winter conditions with a low absolute humidity provide an ideal production climate for most processes within the food industry. In summer conditions however, many food processes are adversely affected by the increased humidity levels, creating multiple problems associated with condensation.

Leave it to Munters to create stable conditions all year round - your guarantee for reliable quality, less waste and longer shelf life.

Hygiene and workers safety

By controlling the relative humidity, condensation can be prevented and the growth of mould and fungus is greatly reduced. As part of a coordinated programme, this can help to satisfy the requirements of hygienic regulations such as HACCP and secure a comfortable, safer and healthy climate for employees.



Condensation control
Energy efficiency
Improved product quality and output
Improved workers safety



Certified for your safety

With a global network of production facilities certified to ISO9001 and ISO14001, Munters places the highest priority on environmental considerations, in a constant ongoing process, involving all employees.

All products leaving our premises are thoroughly tested to ensure smooth operation and minimum energy consumption. Furthermore some of our systems are available in special hygienic versions. With extra smooth surfaces, easy to clean - ask for Hygienus™



Rotor properties - independently certified

Health, Safety and Hygiene for customers is essential to Munters which is clearly reflected in the design of the rotors. Our rotors are continuously being tested independently and most recently our HPS and Quantum™ have been proven by The Swedish Institute for Food and Biotechnology to have both bactericidal and fungicidal properties.

The HPS rotor is the High Performance Silicagel rotor used in most of our desiccant dehumidifiers. For demanding drying processes the Munters Quantum™ rotor provides even higher levels of performance, offering a DeltaX as high as 12-15 g. This saves energy by eliminating the need for pre-cooling, whilst facilitating a hygienic process without any wet surfaces, thus providing a safe solution for food and pharma industry customers worldwide.

Munters environmentally friendly desiccant technology

Like most good ideas, Munters dehumidification principle is basically simple. As functioning without any cooling coils Munters desiccant dehumidifiers use no CFC's, HCFC's or gases linked with ozone depletion.

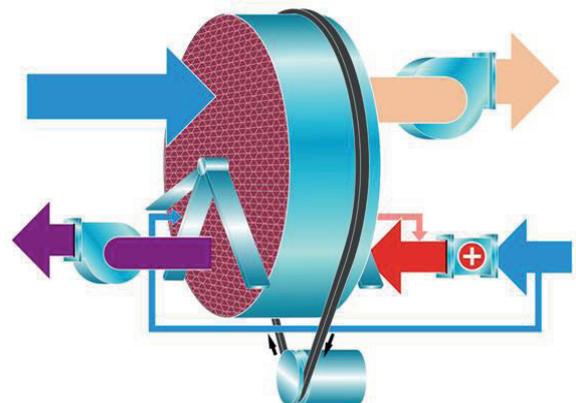
We provide you with a greener alternative to other dehumidification techniques while protecting our fragile environment.

Innovation and improved energy efficiency

The basic principle of desiccant dehumidification developed by Carl Munters more than 60 years back is still the most efficient drying technique known today.

By optimising rotor material and the control of the desiccant rotor, Munters is able to improve dehumidification capacity and reduce energy consumption.

The Quantum™ rotor and internal rotor heat recovery systems are examples of Munters' environmentally friendly thinking, resulting in higher production capacity and lower energy bills



Energy savings up to 35% with Munters Purge sectors and Quantum™ rotor.

Energy saving air treatment solutions for any application

Stand alone dehumidifiers

Munters stand alone dehumidifiers provide the dry air needed to optimise climate conditions in warehouses, cold stores, transport systems and production facilities.

Based on decades of experience Munters offers a global range of standard units, easy to install, easy to maintain, and offer a number of control options and product finishes to suit your operating or hygiene requirements.



versions available
Bacteriostatic rotor
Outdoor versions available



MOAS

Munters Outdoor Air Systems are providing comfortable climate conditions for both customers and products e.g. in supermarkets.

Attached to the premises existing ventilation system MOAS can be installed as a retro fit to treat the outdoor air in an energy efficient way. Gone are the days with the feeling of cold and drafting ventilation as MOAS ensures a fully controlled and comfortable humidity.

Systems for full climate control

System solutions for demanding process applications. Combining the desiccant technology with pre- and post treatment processes like cooling, heating, humidification and filtration Munters' system solutions offer full control of both temperature and humidity.

Munters' systems are built up by modules according to your specific needs.

A system solution reduces the foot print, requires only one supplier and After Sales partner and by means of the range of energy saving options you will always benefit from the best energy efficiency available.

The majority of Munters' system solutions are available for outdoor installation also.



We care. For your investment and for our environment

Munters service organisation

For Munters the job is not done when you sign the order. Doing business with Munters involves a long lasting relationship, with a global service organization dedicated to supporting your business, wherever and whenever needed.

Trust Munters to look after your critical processes.

Start/up and commissioning

To secure the maximum performance at the lowest possible energy consumption right from the beginning, our service engineers are on their toes.

Maintenance Agreements

Sign up for a Maintenance Agreement and we will see to it that your Munters equipment will be kept fit and maintained for many years of trouble free operation.

Warranty Options

By signing a Maintenance Agreement with us on delivery of your order, the warranty period is automatically extended with another year. Even longer warranty periods are available as options.



Energy optimisation

Thanks to the ongoing research and development in our world wide organisation, our products and solutions are continuously refined and optimised.

Having Munters as your service partner means that all measures are taken to optimise the energy efficiency of your air handling equipment.

Our service engineers are your speaking partners when it comes to conversion to alternative energy sources, for retro fit energy recovery sectors and advanced control solutions.



For even higher
energy efficiency



Happy customers around the Globe



“

The problems with the bread products becoming soggy during cooling down have been solved by installing Munters desiccant dehumidification. All our bread products now keep the high quality and remain crispy.

- Peter Smit, van Maanen Bakery, The Netherlands

“

After installation of Munters dehumidification in our fish slaughtery facilities we got rid of condensation problems. We fulfil the HACCP regulations and our employees appreciate the improved and healthier indoor climate conditions.

- Jens Paag, Facility Manager, Aquapri A/S, Denmark



Happy customers around the Globe

“

The condition of the cold store has greatly improved and we are now snow and ice free for the first time in many years. Keeping evaporators free of ice also means we have been able to reduce daily defrosts from three per day down to two per day.

- Andy Gordon, Kitchen Range Food, United Kingdom



“

Low humidity saves operating costs for display cases by reducing latent refrigeration load, defrost cycles and anti-sweat heater run-times. Having the desiccant system clearly provides benefits to our customers.

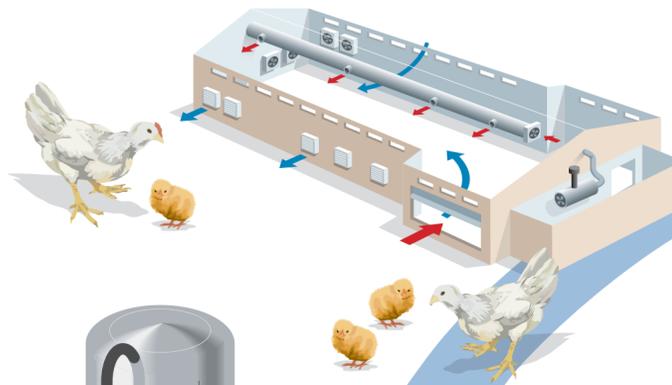
- Paul Joslyn, Energy Manager, P&C Foods, Canastota, New York



From farm to fork - Munters secures the optimal climate

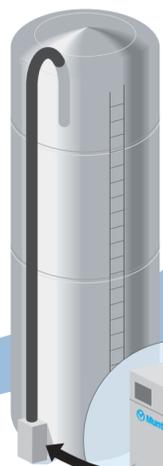
Climate Control Systems for pig and poultry production

- High efficiency evaporative cooling of live stock buildings and greenhouses
- Low running costs
- Quick and easy to install



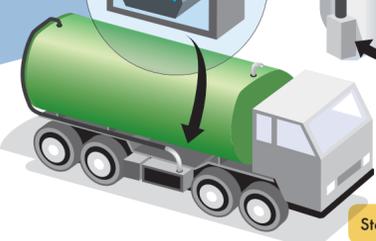
R&D, lab and clean rooms

- Stable and fully controlled climate throughout the year
- No unplanned shutdowns due to humid summer weather
- Consistent, predictable indoor climate conditions
- Supports GMP appliance



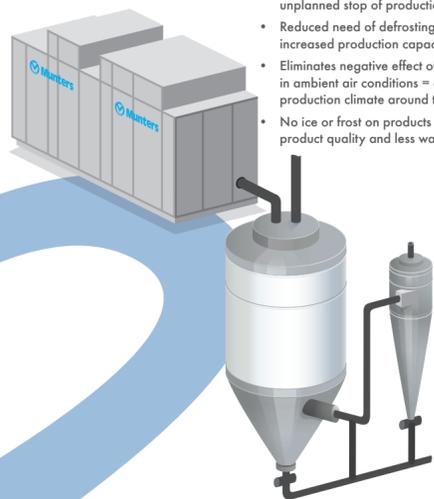
Storage (0°C+)

- No condensation, mould and fungus in bulk tankers, haulage, silos = improved hygienic conditions
- Dry and pourable products, no clogging or sticky products in pneumatic transport systems
- Reduced cleaning requirements
- No softening and collapsing of packing/card paper boxes
- No problems as to adhesion and readability of labels
- High product quality is maintained = longer shelf life



Freezing

- No ice build up in spiral freezers, plate freezers and cooling/freezing tunnels = no unplanned stop of production
- Reduced need of defrosting cycles = increased production capacity
- Eliminates negative effect of fluctuations in ambient air conditions = constant production climate around the year
- No ice or frost on products = improved product quality and less waste



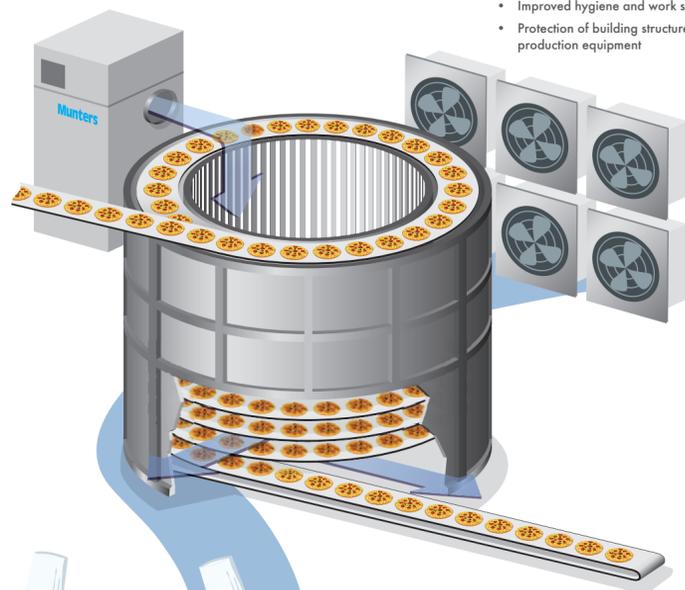
Drying

- Faster drying processes in spray towers, fluid-bed systems and during coating = increased production capacity
- Munters' special designed and bacteriacidal certified Quantum™ rotor with high DeltaX
- Energy savings up to 25% in spray tower drying thanks to elimination of precooling
- Improved hygiene since wet surfaces are eliminated



HACCP - Condensation Control

- Prevention of condensation on ceilings, walls and equipment
- Improved hygiene and work safety
- Protection of building structures and production equipment



Production rooms

- Faster drying after cleaning = increased production capacity
- Protection of electronic control panels = fewer interruptions
- Reduces risk of bacterial and mould growth
- Healthier working environments for staff



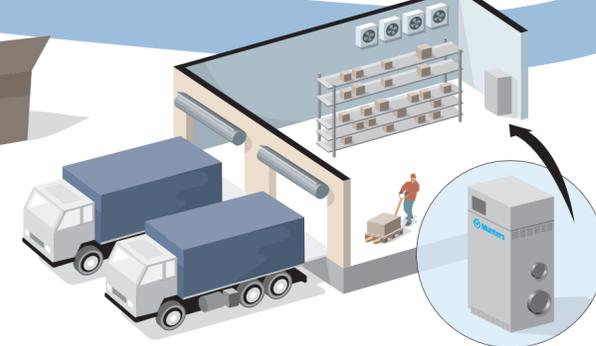
Coating

- Constant coating conditions, regardless of the weather
- Constant and better surface quality
- Up to 30% shorter coating cycle = increased production capacity



Packing/Labeling

- Optimal packing climate for hygroscopic products = optimal product quality, reduced waste and longer shelf life
- Trouble-free labelling process throughout the year
- Clean packing machines = improved hygienic conditions and less cleaning requirements



Air Conditioning/Comfort Cooling

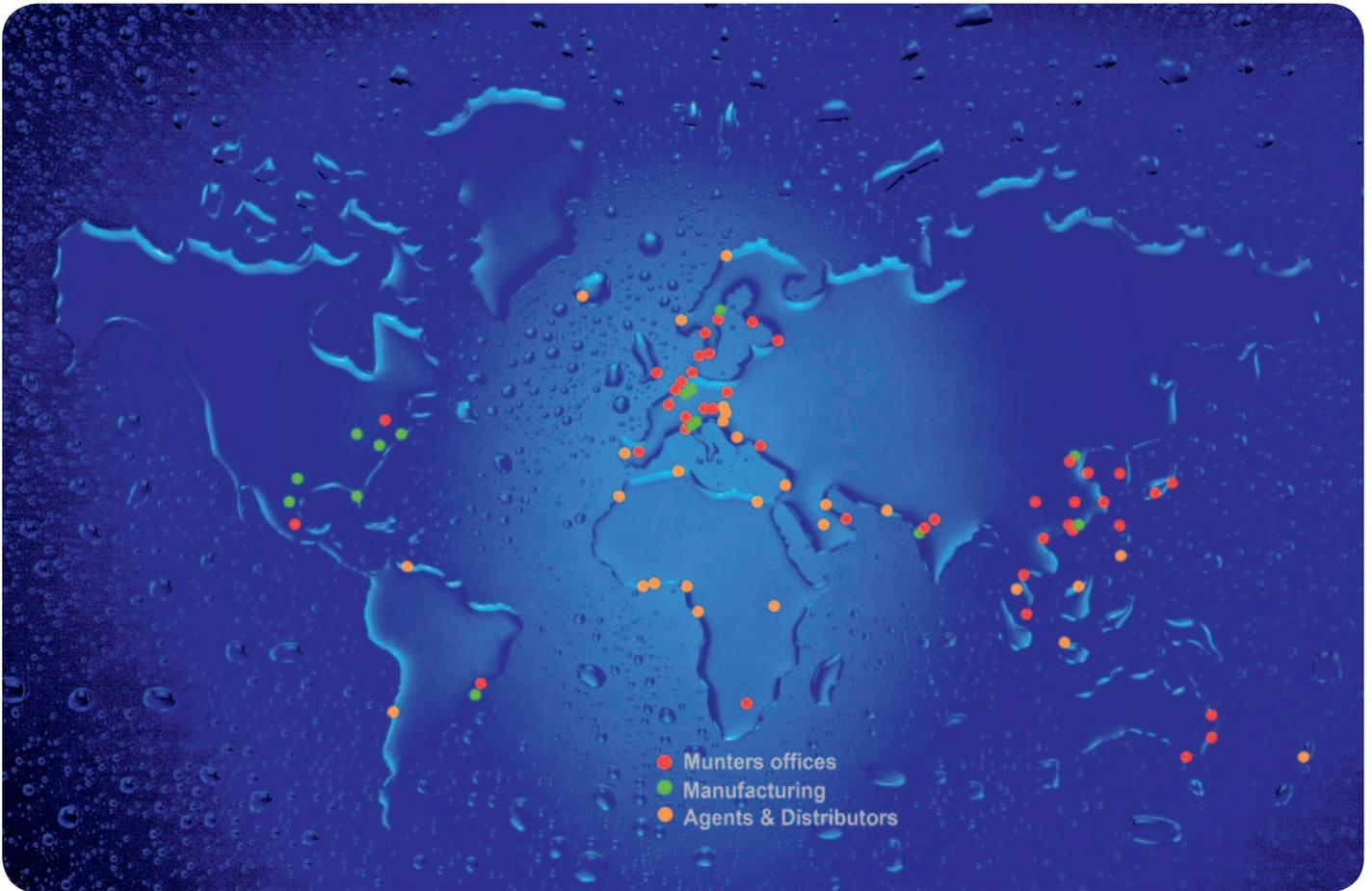
- Energy efficient climate control of commercial spaces
- Internal heat recovery and systems for indoor and outdoor installation. Stand alone or integrated in existing AHU
- Comfortable and healthy climate for employees, shoppers and guests with fully controlled temperature and humidity



Storage (below 0°C)

- Food Tech Award winning IceDry™ system for cold stores
- No fog, snow or ice built up
- No slippery floors and better visibility = improved workers safety
- Reduction of defrosting cycles needed
- Improved output of evaporator coils
- More smooth and faster handling at loading bays and airlocks





An international name, where the customer comes first.

Munters, part of Nordic Capital, has offices in 30 countries and over 3,000 employees in many branches around the world. We are global leaders in energy efficient air treatment for comfort, process and environmental protection.

Munters shares ideas within its international network, giving the Group an outstanding reputation as a reliable, fast-acting and customer-orientated expert in air conditioning. Munters philosophy of customer satisfaction is central to our decision-making. When developing and manufacturing our systems, we see happy customers as our number one target. And this is what our employees strive to ensure every day.

For more information on Munters, please visit www.munters.com

Australia Phone +61 2 8843 1588, dh.info@munters.com.au **Austria** Phone +43 1 6164298-0, luftentfeuchtung@munters.at
Belgium Phone +32 1528 5611, info@muntersbelgium.be **Brazil** Phone +55 41 3317 5050, munters@munters.com.br
Canada Phone +1 905 858 5894, dhinfo@munters.com **China** Phone +86 10 8041 8000, info@munters.com.cn **Czech Republic** Phone +420 544 211 434, info@munters-odvlhcovani.cz **Denmark** Phone +45 4495 3355, info@munters.dk
Finland Phone +358 20 776 8230, laitemyynti@munters.fi **France** Phone +33 1 3411 5757, dh@munters.fr **Germany** Phone +49 4087 96900, mgd@munters.de **India** Phone +91 20 668 18 900, info@munters.in **Italy** Phone +39 0183 52 11, marketing@munters.it **Japan** Phone +81 3 5970 0021, mkk@munters.co.jp **Korea** Phone +82 2761 8701, munters@munters.co.kr **Mexico** Phone +52 722 270 40 49, munters@munters.com.mx **Netherlands** Phone +31 172 433231, vocht-beheersing@munters.nl **Poland** Phone +48 58305 3517, dh@munters.pl **Singapore** Phone +65 6744 6828, info@munters.com.sg **South Africa** Phone +27 11 997 2000, info@munters.co.za **Spain** Phone +34 91 640 09 02, marketing@munters.es
Sweden Phone +46 8 626 63 00, avfuktning@munters.se **Switzerland** Phone +41 52 343 8886, info.dh@munters.ch **Thailand** Phone +66 2642 2670, info@munters.co.th **Turkey** Phone +90 216 548 1444, info@muntersform.com **UAE** +971 4880 9295, middle.east@munters.com **United Kingdom** Phone +44 8708 505 202, dryair@munters.co.uk **USA** Phone +1 978 241 1100, dhinfo@munters.com **Vietnam** Phone +84 8 8256 838, vietnam@muntersasia.com

Your closest office

www.munters.com/food

