

Munters air treatment systems

Our technology, experience and
people make the difference.



Your perfect climate

A world leading supplier of climate solutions for the future

Munters is a global leader in climate solutions for mission-critical processes. We offer innovative, efficient and sustainable solutions for customers in industries where controlling temperature and humidity is mission critical. Our solutions reduce customers' climate and environmental impact through efficient resource consumption. In this way our solutions contribute to better climate, higher efficiency, and reduced carbon emissions. Sustainability is an important part of Munters' business strategy and value creation.

Critical to customers' success

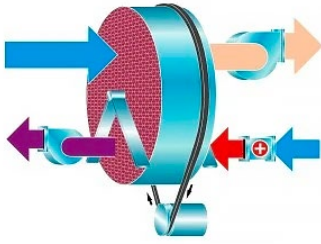
Munters' customers operate in complex, demanding environments. We provide the right connected products and the solutions that are critical to our customers' success. We make sure that our customers' industrial or agricultural applications are in line with production requirements while creating value and contributing to society at large.

Our strategy and vision

Our strategy is to grow a sustainable and profitable business. Our success is based on delivering on our strategic priorities as well as our ability to act sustainably with high ethics and respect for human rights, increased diversity, workplace safety and reduced environmental impact.

We offer solutions for mission-critical processes that require exact control of moisture and temperature, with a focus on energy efficiency and sustainable climate systems. Our climate systems also provide better indoor air quality and comfort, as well as increased production capacity.

Energy saving technologies



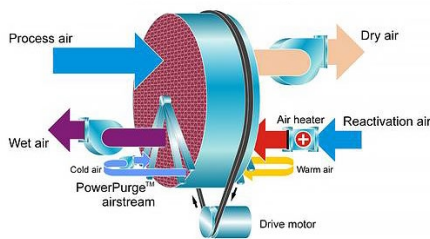
Our rotor principle

The simple yet ingenious principle of our desiccant wheel was invented more than 60 years ago by Carl Munters (Sweden). Two air streams pass simultaneously through the slowly rotating rotor that is treated with a highly effective desiccant. One air stream is dehumidified to provide the necessary dry air, the other dries the rotor, exhausting the accumulated moisture externally.



Quantum™ systems

One of the characteristics of our Quantum system is the large dehumidification capacity. The energy consumed for the sorption system can be obtained from primary energy sources such as natural gas, steam and/or combined with waste heat, in comparison with expensive electricity thus reducing yearly operational costs.



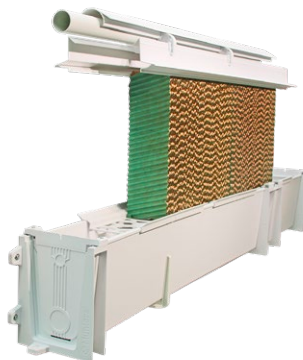
PowerPurge™

This patented technology significantly reduces the energy needed to reactivate the rotor. The PowerPurge system collects waste heat from the hottest section of the rotor and utilises this heat for reactivation – just like an energy recovery system. And the discharge temperature of the process air is reduced, which results in lower energy cost for post-cooling.



Munters FA6

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 GLASdek™ GX40 media, which is ceramic coated, highly efficient and fireproof. The FA6 is a high performance, low operating cost solution which is available in a wide range of sizes designed for integration into air-handling systems within both residential and industrial buildings.



Munters EC Cool

EC Cool is an evaporative cooling pad system that decreases inlet temperature for your rooftop condenser. By decreasing inlet conditions, you decrease the risk of high-pressure alarms and increase the efficiency of your cooling system. Munters delivers a trouble-free and easy-to-install condenser pre-cooling system, introducing a glue & adhesive-free solution, simplifying the installation process. This new revolutionary system guarantees long service life, as it does not suffer from cracks or water leakage due to thermal expansion or contraction. Inspection and cleaning procedures are easy.



Some of the industries we serve

Archives and Museums

Museums, libraries and archives can be climate controlled with Munters systems. The valuable artefacts are effectively protected against humidity-related damage like corrosion and mould and with low energy costs.

Chemical, food and pharma

We create energy-efficient climate conditions for food and pharmaceutical products during transportation, production and storage, securing consistent quality, cost savings and higher throughput. We can prevent cold storage ice build-up with our tailored dehumidification systems.

Defence, electronics & semi-conductors

A dry environment stops corrosion, reduces electronic failures, prevents mould, and maintains the right mechanical properties of stored materials. Secures high readiness and availability of aircraft, vehicles etc. VOC abatement for the world's leading semi-conductor manufacturers.

Offices/Commercial buildings

Munters systems create a more comfortable environment, reduce energy consumption and increase productivity and the quality of life in commercial buildings. Our systems provide a more efficient, high performance HVAC system that creates a better experience for customers and employees.



Power generation, water & wastewater

Dehumidification of waterworks eliminates condensation on cold surfaces and secures better hygiene and safety. Energy can be saved by replacing heating while protecting electronic equipment by controlled humidity. Boilers on power plants are effectively protected against corrosion during stand-by.

Recreation and leisure

Ice rinks, swimming pools and indoor sports halls are protected against condensation and deterioration with Munters dehumidification solutions, which also save energy. A better and healthier indoor climate for athletes, audience and employees thanks to Munters.

Shipbuilding and marine

Dehumidifiers are used for protection against corrosion during sandblasting and painting. On cargo ships, goods are protected from moisture absorption and tanks are dried after cleaning, speeding up new cargo loading.

Schools, universities and theatres

Good indoor air quality (IAQ) is essential for a productive learning environment. Our humidity controlled buildings ensure comfortable conditions in classrooms, auditoriums, theatre lobbies etc. even at peak occupancies. Munters solutions cut energy and operating costs while ensuring healthy, clean air.

Supermarkets and restaurants

Munters supplies air conditioning for supermarkets and restaurants for a comfortable, healthy environment to work, shop or dine. Utilising energy recovery and humidity control can cut energy costs, ensure food and customer safety and staff comfort, and provide the proper amount of fresh air.



How problems are solved

Energy payback of one year

At Controlled Therapeutics in Glasgow, Scotland, energy costs are an important issue. The company is a leading developer and manufacturer of pharmaceutical products. By installing our Energy Purge system to their existing dehumidifiers, the energy consumption for unit regeneration was cut dramatically, resulting in a payback time of only one year.

As the EnergyPurge is an integral fitting, the system only had to be shut down for twelve hours for installation and no additional duct work or other costly alterations or maintenance costs were necessary.

The optimal climate solution for clean rooms

Xellia Pharmaceuticals is a leading active pharmaceutical ingredients (APIs) producer, specialising in fermented antibiotics. For many years, Munters has been the trusted supplier of dehumidification systems for tableting and lab applications. Xellia's positive experience with previous Munters installations led them to contact Munters when their powder product clean rooms needed to be updated. Since Xellia's facilities are GMP compliant their Class-B clean rooms require strict temperature and humidity control. Munters was asked to design the optimal climate solution for these rooms. The selected ML Plus and MX Plus systems are designed to fit into environments with high demands on carbon footprint, energy efficiency and hygiene.



Jamarat pillar at Mina Makkah, Saudi Arabia

How problems are solved

Maximum cooling efficiency at Mecca

Millions of Muslims from across the world make the Hajj, their annual journey, to Mecca. There are different stops and rituals during the Hajj, and one stop is at the three pillars, Jamarat, in the tent city of Mina. An average summer day features hot and dry air, and temperatures that reach up to 50 degrees Celsius.

When Munters' Kingdom of Saudi Arabia distributor Alfaneyah Electromechanical Company Ltd. was contacted by Makkah Region Development Authority (MRDA), there was limited airflow in all the three Jamarah pillars due to blockages in the current pads, which could not handle the difficult conditions. To solve this issue Munters CELdek evaporative cooling pads were recommended since they provide maximum cooling efficiency. Now the pilgrims enjoy comfortable, cool conditions thanks to Munters.

Controlled humidity in the world's first Quran-inspired park

Located in Dubai, UAE, the Quranic Park is a unique attraction for visitors that opened in March 2018. The park spans over 60 hectares of land, and the main attraction is the Glass House. This indoor area is all air conditioned and houses up to 29 plants and trees that are mentioned in the Quran and the Sunnah such as olives, figs, cucumbers, garlic and more.

The temperature is regulated by cool air from vents hidden in imitation tree trunks. The Glass House is completely automated and requires specific temperature and humidity conditions to be maintained through day and night, season after season. Three Munters MX²40's and three MX²60's were installed to provide humidity control in the Glass House within its desired control range.

Product program



Munters MCS300

Broad product range for climate control solutions including dehumidifiers, humidifiers and complete climate control systems with airflows starting at 50 m³/h and up.

Portable dehumidifiers, M, ComDry, MG, MH, MCS

Small, low weight desiccant dehumidifiers suitable for both temporary and stationary applications. MCS300 available with a condenser.

Application areas: Storage, ice rinks, food, pharma and process industry.

Benefits

- Low weight
- High efficiency down to -20°C
- Robust
- Easy to service
- Energy efficient
- Communication via ModBus as option



Munters ML

Standalone dehumidifiers ML, MLT, MX², MCD

Dehumidifiers with multiple options available. Efficient dehumidification from -20°C to +40°C. Energy recovery solutions make them energy efficient. Options includes features such as integrated moisture control, air cooled condenser, gas or steam regeneration.

Application areas: Storage, ice rinks, process industry.

Benefits

- Efficient dehumidification from -20°C to +40°C.
- Energy efficient and integrated energy recovery.



Munters MX2

Climate system – DSS Pro

The Munters DSS Pro is an evolutionary leap forward from the market-leading DSS. Suitable for indoor or outdoor installation, the DSS Pro is equipped with our new AirPro casing. This new enclosure offers significantly improved durability, reduced air leakage, and lower energy consumption.

Application areas: Food, pharmaceutical battery, and more.

Benefits

- New AirPro casing increases durability, strength and energy efficiency
- Full humidity and temperature control
- Airflow range from 3,000 m³/h up to 140,000 m³/h
- Configurable fans on process circuit
- Choice of housing to ensure suitability
- Advanced controls and communication



The Munters DSS Pro



Humidifiers/coolers Humimax™ HM3-series

Standalone humidifiers provide excellent humidification while letting you automatically control humidity levels. Available in three sizes 2000, 5000 and 10 000 m³/h.

Application areas: print shops, storage of wood and furniture, museums, server rooms, storage of fruit and vegetables.

Benefits

- ModBus communication
- Modulating fan speed control
- Auto drain function
- Humidification/cooling mode
- Time scheduled operation
- Maintenance alarm
- Low noise level



FA6™ Evaporative Humidifier/Cooler

FA6 units are integrated into AHU (Air Handling units) and are used both as humidifiers and coolers for direct cooling and indirect cooling; applications are for industrial application production sites, comfort in commercial buildings, and data centres.

Munters FA6

Dehumidification systems ML Plus, MX² Plus climate control systems

Modular systems with integrated pre- and/or post treatment.

Application areas: Process industries as well as archives with the need of strict humidity and temperature control around the year.

Benefits

- Highly flexible system – pre-engineered modules to be combined
- Modulated control of reheat heater secures minimized energy consumption
- High quality casing for hygienic demands
- Compact design – small footprint – easy to locate
- Easy installation – plug & play
- Fits to ISO-standard ductworks
- Easy service access



Munters ML Plus



Munters MX² Plus

Technical data

Model	Airflow m ³ /h	Available static pressure Pa	Total power kW	Capacity kg/h +20°C 60% RH	Weight kg
Portable dehumidifiers					
MG50	50	100	0,44	0,20	10
MG90	90	100	0,74	0,35	10
M120	120	300	1,30	0,86	20
M160L	160	60	1,01	0,55	17
M170L	170	60	1,01	0,55	17
M190Y	190	100	0,95	0,62	11
M210X	210	100	1,01	0,68	15
MH270	270	190	1,96	1,43	22
MCS300	300	200	2,10	1,95	25
Standalone dehumidifiers					
ML180	180	200	2,10	1,35	
MLT350	350	200	2,10	1,50	
ML270	270	200	3,10	2,00	
ML420	420	200	4,55	3,25	
MLT800	800	200	5,00	3,70	
ML690	690	300	7,82	5,25	
MLT1400	1 400	300	8,40	6,00	
ML1100	1 100	300	12,75	8,40	
ML1350	1 350	300	15,15	10,00	
ML17	1 700	300	21,10	13,50	
MLT30	3 000	300	22,00	13,20	
ML23	2 300	300	28,90	17,80	
MX ² 30	2 700	300	33,4	22,50	
MX ² 35	3 500	300	40,60	24,30	
MX ² 40	4 000	300	46,80	32,30	
MX ² 55	5 500	300	40,10	27,10	
MX ² 60	6 000	300	73,30	50,70	
MX ² 80	8 000	300	94,80	64,10	
MX ² 95	9 500	300	69,30	46,60	
MCD100	10 000	300	119,00	80,00	
MCD120	12 000	300	149,00	100,00	
MCD140	14 000	300	167,00	113,00	
MCD155	15 300	300	117,00	80,30	



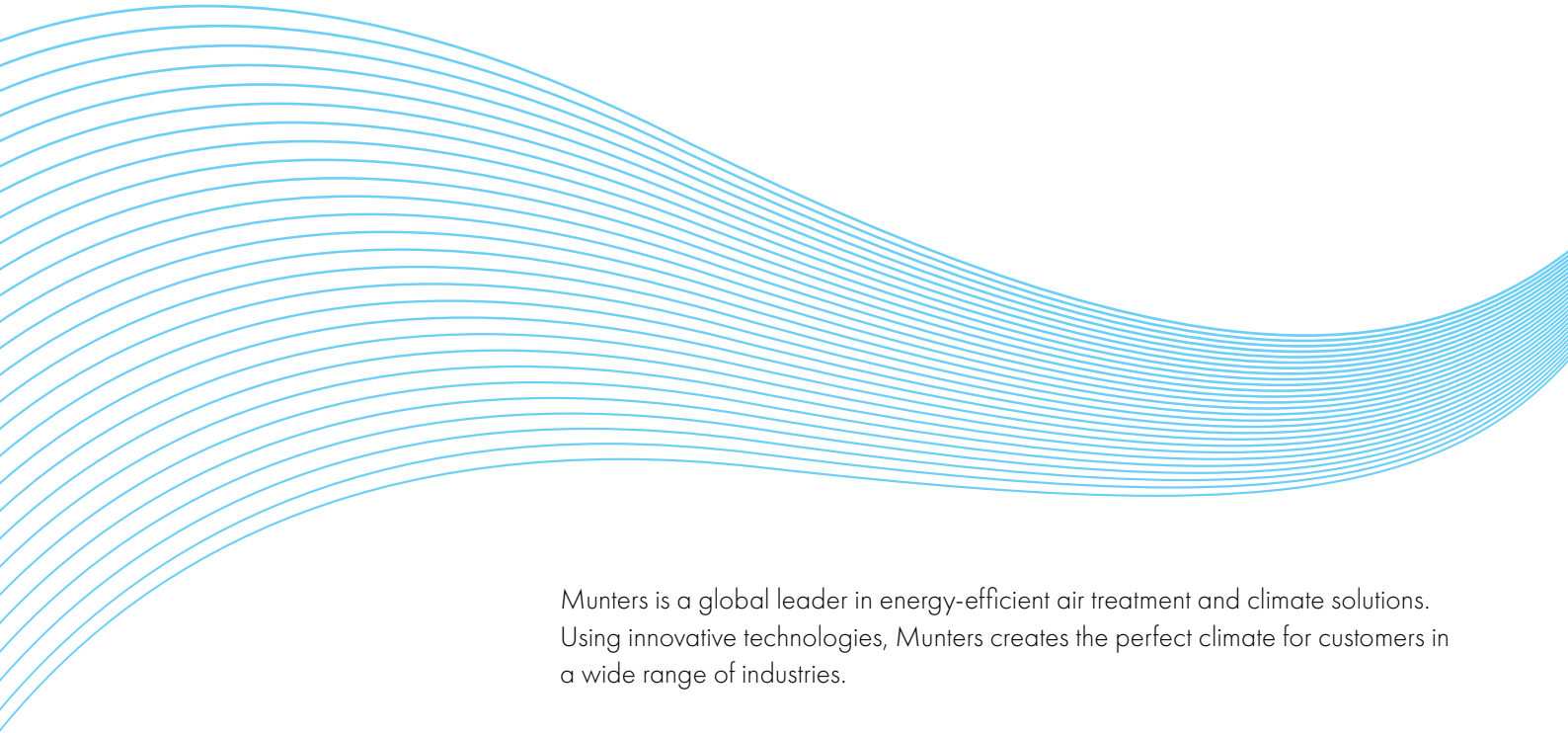
Michael Torres,
Service Engineer, UAE

Munters Service protects your investment

Munters Service is dedicated to helping our customers optimise the value of their equipment through planned maintenance programs. Drawing from over 60 years of experience, Munters has developed customisable service programs that extend the life of your equipment, optimise its performance, and ensure continuous operation while saving energy.

Our range of services available through our global network of Munters Services Engineers and Technicians include:

- Comprehensive installation and start-up services
- Flexible ServiceCaire™ maintenance agreements to fit your specific needs
- Performance checks and optimization
- Numerous upgrade options for substantial energy savings and improved performance



Munters is a global leader in energy-efficient air treatment and climate solutions. Using innovative technologies, Munters creates the perfect climate for customers in a wide range of industries.

Munters has been defining the future of air treatment since 1955. Today, around 3,350 employees carry out manufacturing and sales in more than 30 countries.

For more information, please visit www.munters.com