

EVAPORATIVE HUMIDIFICATION AND COOLING

- ✓ Low CO² footprint
- ✓ GREENGUARD Certified
- ✓ Certified as Legionella safe
- ✓ Fire rated to ISO 1180 standard

Cooling and humidification using nature's own way

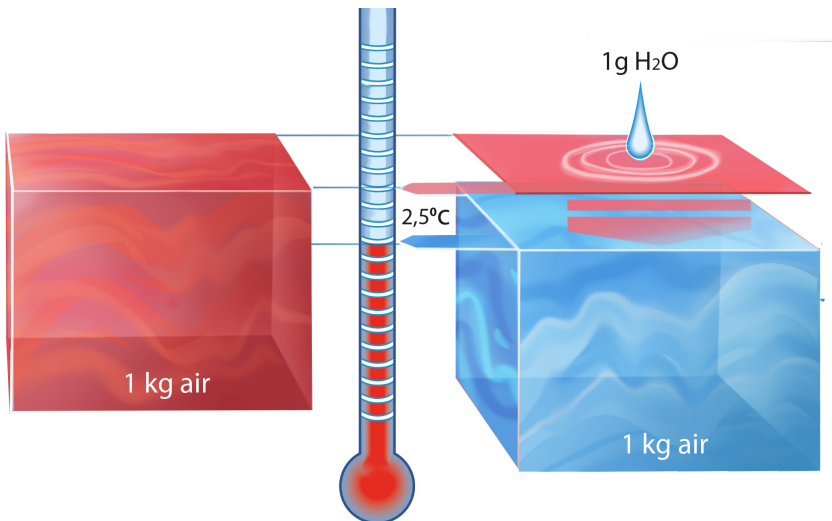
FA6 Evaporative Humidifier and Cooler

 **Munters**
Your Perfect Climate

Energy saving humidification and cooling

Munters FA6™ is an Evaporative Humidifier and Cooler specially designed for integration into air-handling systems within both residential and industrial buildings. It is a low energy solution harnessing nature's own way to cool and humidify.

No chemicals are used in this modern method of adiabatic cooling, pioneered by inventor and entrepreneur Carl Munters in the 1950's. The system just needs water and air. It's as simple as that.



Did you know?

1 gram of water in
1 kilogram of air
lowers the temperature
by 2.5 °C

Data centre cooling/humidification

FA6™ is ideal for use in Free Air Cooling systems, typically found in data centres, where a large volume of outside air is used to cool the server equipment by adiabatic cooling, extending the capacity of the data centre. Energy savings of upto 80% are not unusual. Munters have made over 400 such installations in UK & Ireland alone, working with some of the industry's largest companies.

It is possible to provide up to 20°C of cooling in a data centre environment providing up to 800 Kw of cooling using standard FA6 Humidifiers.



Industrial applications



Many sensitive manufacturing processes face problems with static related issues. By providing a climate with constant temperature and humidity, the problem can easily be eliminated. Manufacturing within automotive, electronics and plastic industries, are some examples of areas that benefit from humidification.

Regulated air humidity prevents static electricity and dust spread in the air. The result is a high quality end-product and no costly interruptions.

Human comfort

Indoor Air Quality is a growing concern. FA6 helps create the perfect climate for humans in commercial and industrial buildings. The design is modular and compact, fitting all typical air handling units (AHU). The FA6 can easily be installed into new or retrofitted AHUs.

Benefits are optimum health and improved productivity at substantially reduced energy costs. A comfortable climate at a comfortable cost.



FA6 Evaporative Cooler/Humidifier

Direct and Indirect Evaporative Cooling are extremely energy efficient, negating the need for compressors in the cooling cycle. The process works by evaporating water into air. Thanks to Munters patented technology with our GLASdek cassettes, this is done at molecular level without emitting water droplets. Munters have proven this technology with a leading European University study conducting over 20 tests to demonstrate the safety of this solution.

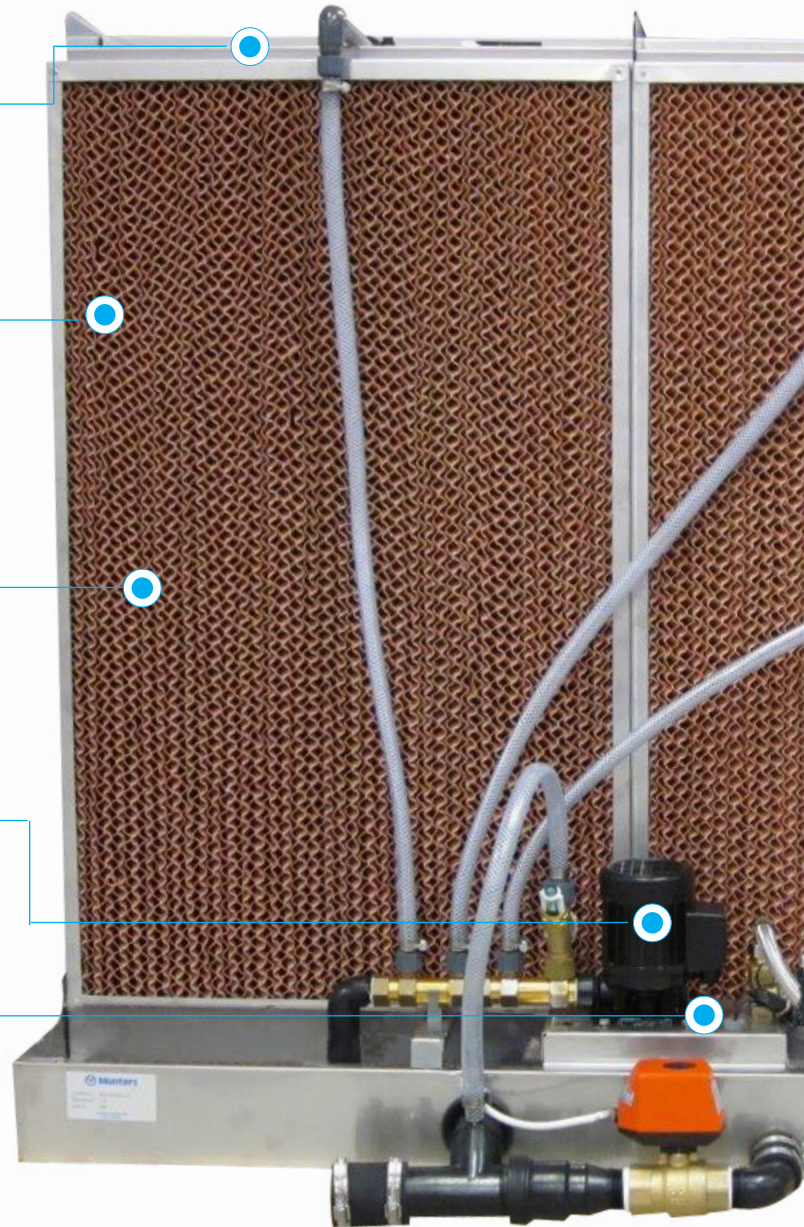
Clever water distribution assembly seals and fastens with one clip to ensure easy servicing and cassette removal.

Features Munters patented GLASdek GX 40™ high performance media in modular stainless steel framed cassettes. GLASdek GX 40™ has been awarded GREENGUARD Gold status certifying that it is completely free from harmful chemical emissions.

Munters unique droplet separator (DropSTOP) is specially designed to prevent water carryover at face velocities up to 4.5M³/s.

High quality immersion pumps in 4 sizes provide reliable service over time.

Motorized drain valve for optimum control.



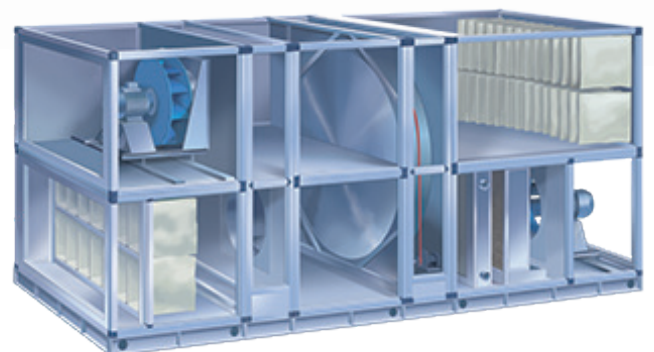
How it works

Direct Evaporative Cooling / Humidification

With direct evaporative cooling water is evaporated into an airstream which will cool down as a consequence of the evaporation. The consequence of this method is that the Humidity Ratio of the airstream will always rise as all evaporated water will end up in the airstream. In an adiabatic cooling process we know that the air temperature drop will be around 2.5°C for every gram of moisture being evaporated into every kilogram of air.

DEC is used when there is a need for both cooling and humidification. The FA6 is installed by the intake air inlet.

Application: during winter in cold and dry climates.



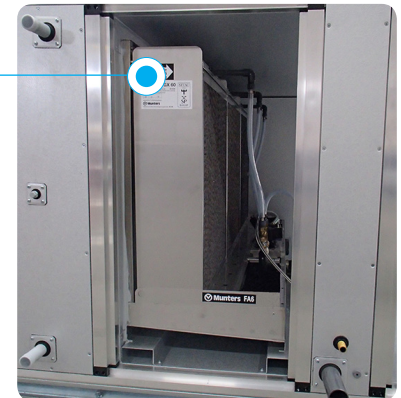
Munters Climatix controller enables BMS communication via ModBus.



Easily installed modular cassette design make servicing and replacement quick & efficient.



Example of an FA6 installation in a section of an air handling unit.



Soft close solenoid valves are used to eradicate water hammer.

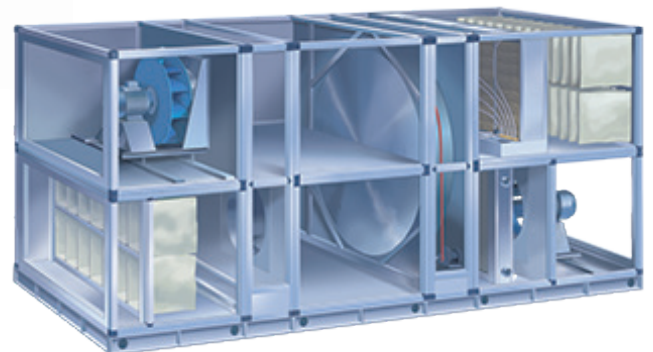
Specifically designed water tray guarantees total draining facility to avoid water residue or stagnation.

Indirect Evaporative Cooling

The name Indirect Evaporative Cooling is applied on two methods of cooling where a primary airstream is cooled using another airstream through a heat exchanger and evaporation of water. In both cases the two airstreams are completely separated and none of the evaporated water ends up in the primary airstream. The Humidity Ratio of the primary airstream therefore will not rise. The airstream in which the water is evaporated is sometimes called "Scavenger Air".

The FA6 is used as an indirect cooler in conjunction with a heat recovery rotor - cooling the supply air without adding any humidity.

Application: during summer.





Easy to select, easy to install

Selection of the right FA6 is easy with the FA6 Technical manual or the FA6 Dimensioning Program. Our dimensioning program can be connected to OEM's or AHU manufacturers own system.

All you need to know are the following parameters:

- Air volume
- Duct dimensions or the cross-section of the AHU
- Design conditions
- Required control accuracy
- Type of application
- Required air conditions

The FA6 is easy to install and easy to configure into both existing and new HVAC systems. Electricity (230/400 V, 50Hz), water supply (1-10 bar) and drainage are all that is needed. Due to its high performance and compact design, it is the ideal replacement for older, less efficient humidifiers/coolers.





Helping you fulfill your green promise

Munters GLASdek® is GREENGUARD Gold Certified

Today, people spend more than 90% of their time indoors, and the largest source of indoor air pollution has been found to be chemical emissions from building materials and furnishings. The heart in our FA6, GLASdek GX40®, has been tested by UL for emissions from over 360 individual chemicals of concern, guaranteeing them as having non-harmful emissions. GX40 has been awarded the highest certificate, GREENGUARD GOLD.

Certified as Legionella safe

The Munters FA6 evaporative humidification and cooling system has been rigorously tested by the Central Department for Hospital Hygiene at the Medical Faculty of the University of Aachen, Germany and it has been certified by this institute that 'no aerosols containing Legionella were identified nor were Legionella pneumophila passed any other way into the air' using these systems.





An international name, where the customer comes first.

Munters, listed on Nasdaq Stockholm, has offices in more than 30 countries and around 3,500 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

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