

 **NEWCOLD**

  
KILM  
LOGISTIK

EXPEDITION  
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Innovative solutions  
enable smooth operation  
in automated cold store

NewCold, Germany



Sales Manager  
André Meyer,  
Munters GmbH  
and Maintenance  
Manager Henry  
Verfürth, KLM  
in front of a  
dehumidifier in  
the air lock.



*In 2013 Germany's first fully automated cold store was built by KLM Logistic in the city of Rheine in north western Germany. Munters was able to provide the dehumidification systems required to secure optimal performance.*

The site holds a total of 68,000 pallets in the warehouse which contain frozen products such as ready-made-meals, ice cream, cakes and fish products. KLM distributes the products to retailers in Germany, Benelux, Southern Europe and England. Every day about 200 trucks leave KLM's facilities in Rheine.

In the summer season no fewer than 60 trucks are loaded every day exclusively with ice cream that KLM repacks into assorted boxes before redistributing. With a rapidly increasing demand, KLM has recently established distribution centres in the UK and Poland, and more facilities are planned for the future.

The large number of loadings every day means the doors to the cold stores are frequently opening. This allows moist and warm air to enter into the lock and further into the cold store where it will cause snow, frost and ice formations. Ice can then build up on the packed goods and disturb reading of barcodes, or even soften and damage the packing materials.

#### Case study:

- Troublefree operation of automated warehouse

#### Advantages:

- Fully automated cold store free of ice
- Smooth operation of conveyor belts
- No disturbing ice built-up on sensors
- No wet and slippery floors
- No dangerous fog formations
- Service Agreement and priority response



# Traditional problems in cold stores

Ice and frost on the walls, ceilings and floors is a well-known problem that leads to costly man hours for removal and defrosting, and it also causes dangerous conditions for fork lift drivers. The efficiency of freezing equipment including evaporators will be reduced due to ice build-ups, and time consuming defrosting cycles are needed to remove the ice.

## The solution at KLM

When KLM in 2013 opened the new facility they contacted Munters after receiving a recommendation from another logistics center. KLM was aware that the fully automated picking and loading system in the huge cold store that operates at a temperature of  $-24^{\circ}\text{C}$ , could not function without a solution that would effectively control the humidity. In the air locks at all loading docks, KLM decided to install Munters MLT800 desiccant dehumidifiers that are running in continuous operation.

Dehumidification tackles the root of the problem by removing moisture from the warmer, humid outside air that enters the loading dock. By reducing the humidity in the air in the loading docks, the water content in the air that penetrates further into the cold store is so low that condensation of the air is prevented. Thereby the formation of snow, ice and frost is no longer a risk. KLM's automated cold store would not be able to operate without using dehumidification.



# Service Agreement ensures optimal operation

The many sensors and conveyor bands for the automatic picking and loading of goods would be disturbed by ice build-ups, so the humidity has to be kept low and constant all year round. With Munters dehumidification, KLM avoids spending valuable man hours on manual removal of ice and frost, and the automated loading system runs continuously without unplanned stops.

KLM is entirely dependent on the continuous and smooth operation of the dehumidifiers. Immediately after commissioning KLM signed a Service Agreement with Munters. The agreement includes an annual service visit where all dehumidifiers are thoroughly checked. Filters are changed, wear-and-tear parts checked and replaced if necessary, to prevent accidental interruptions.

In addition to the annual service visit, KLM exchanges the filters on all dehumidifiers 3-4 times per year. The frequent filter changes necessitated because of particle pollution from the many trucks which every day enters the locks. To make the filter change easy and smooth, the ML-dehumidifiers are equipped with an external filter box from which the filter can simply be pulled out from a drawer and immediately replaced.

KLM is very happy with the Service Agreement, which ensures that there's no need to worry about the operation of the dehumidifiers, and should problems occur, the Service Agreement guarantees KLM prioritised response from Munters' Service Team.

Would you like to find out if Munters has a solution for your company too? If so, please visit our website, [www.munters.com/food](http://www.munters.com/food)

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