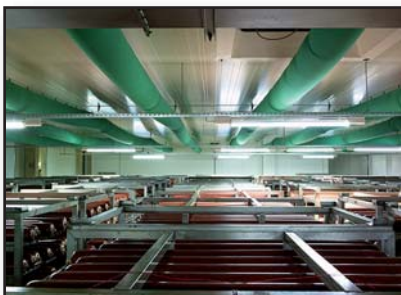


# CLIMAMAT LAGER®

## Climatic post-maturing and storage rooms



# CLIMAMAT LAGER® - Climatic po

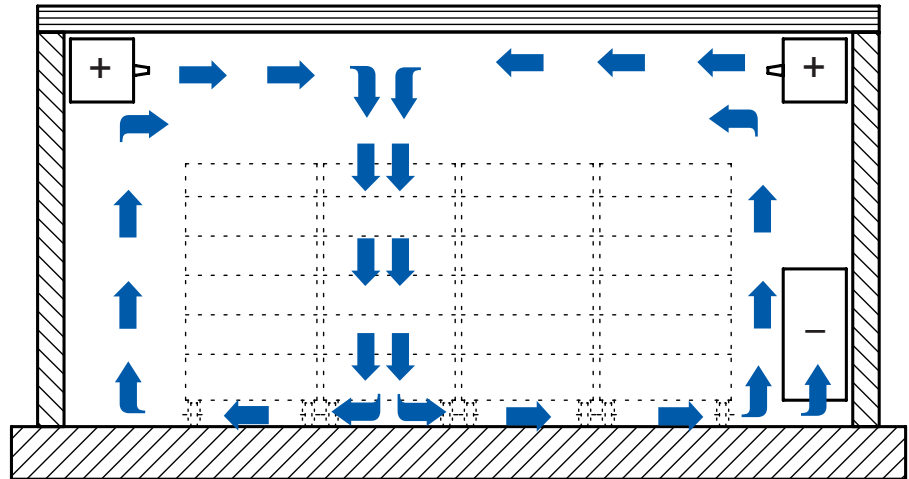
In the manufacture of long-life meat products, water is withdrawn from the product in a controlled drying process to achieve shelf life. The first phase of significant loss of water averaging 3 % per day is called pre-maturing, during which time smoking may also take place. Post-maturing and storage with reduced loss of water averaging 1 % per day make up the second phase with constant air conditions in the room. CLIMAMAT LAGER® installations are designed specifically for the reduced water activity of products in the second phase and are thus associated with lower investment costs.

The consistency of products is determined to a key extent by air flow conditions. CLIMAMAT LAGER® installations give you the right tool for controlling these processes reliably and reproducibly.

Product quality in terms of perfect drying, aroma, colour, colour consistency and microbial stability is achieved in the climatic post-maturing and storage rooms.

Depending on your product and its boundary conditions, VEMAG provides three different solutions for air flow in the room:

- combined duct system
- horizontal system
- hose system



CLIMAMAT LAGER®: Air flow with horizontal system

## Combined duct - the low-cost solution for many products

In this system, air is both blown in to right and left and extracted again through a common, partitioned duct. One or more ducts are used depending on the width of the room; their compact construction makes them highly economical. The air conditioned by the climate-control element is constantly moved to and fro in the room by a VEMAG air change flap to achieve even drying at all positions. By combining a climatic maturing installation of the CLIMAMAT STAR® family and the CLIMAMAT LAGER® post-maturing and storage room with a combined duct, you can manufacture a variety of top-quality traditional long-life meat products.

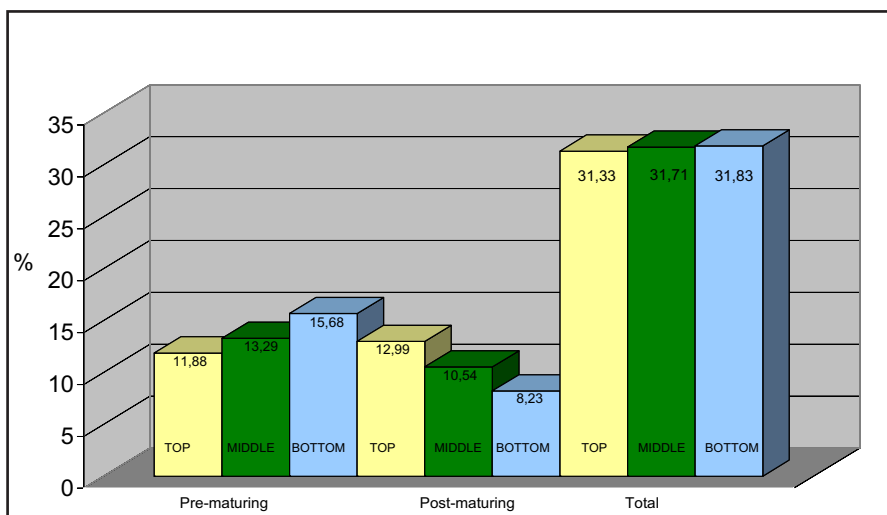
## Horizontal system - maximum consistency from above

The horizontal system is the right choice for the production of long-life meat products with particularly low drying deviation within a batch. The conditioned air is blown in horizontally above the trolley through two ducts on the right and left. The air flows meet each other and are routed downwards through the long-life meat products.

An air change flap moves the focus of the flow constantly to and fro. Whilst the air in the climatic maturing installation always flows from the bottom up, the direction is precisely reversed in a post-maturing and storage room with a horizontal system. This achieves a balanced drying rate within each trolley, and your products arrive in packing with virtually identical final weights.

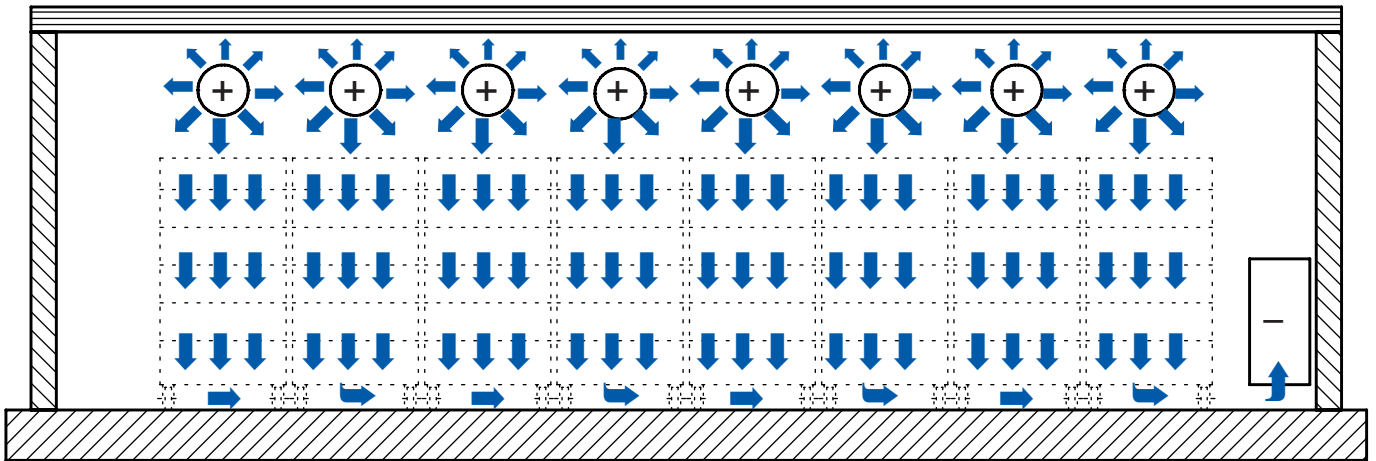
## Hose system - bafflingly simple

The hose system uses the same top-down air flow principle. In rooms which are particularly wide or fitted with built-in features, hoses for even distribution of air flow represent a solution with an economic benefit. As with draught-free ventilation, the textile hoses distribute the conditioned air in the room. They also have rows of holes to provide the necessary velocity of the air flow from top to bottom through the long-life

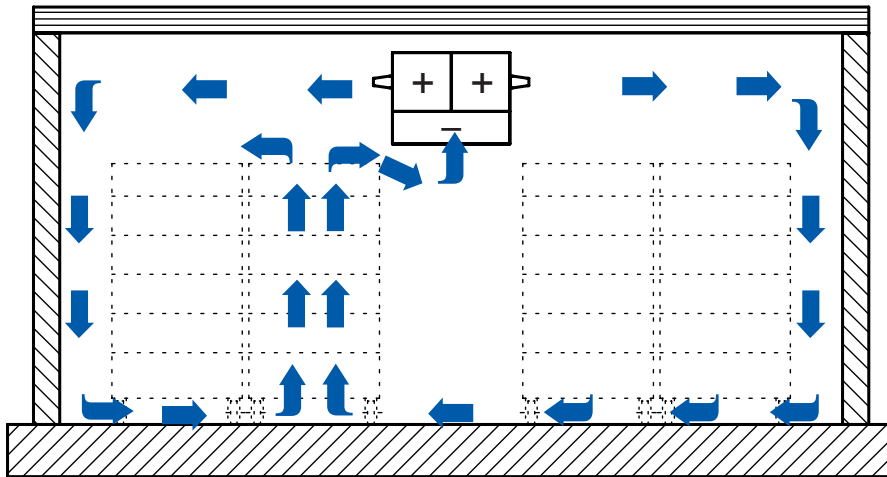


Horizontal system: Balancing weights on the trolley in post-maturing

# Post-maturing and storage rooms



CLIMAMAT LAGER®: Air flow with hose system  
arrows: air flow + = injection duct - = return duct



CLIMAMAT LAGER®: Air flow with combined duct

meat products. An air change flap is not necessary. Extraction, as with the horizontal system, is effected to the side through a duct near the floor. For cleaning, the hoses can simply be removed and machine-washed.

## Features for maximum economy

All CLIMAMAT LAGER® installations are equipped with automated circulating air and automatic fresh air.

During the maturing process, the control system determines the quantity of water given off by the product by measuring the state of the air injected and extracted and automatically adjusts the circulating air flow infinitely to suit this. In this way, the output of the installation is directly adjusted to suit the water activity of your products. The energy saving achieved as a result is as much as

40 % compared to standard installations. Adjusting the output of the installation to suit the condition of the products also optimizes the drying process and reduces the risk of dry edges or mould formation to a highly significant extent.

However it is not only the intensity, but also the humidity of the circulating air flow which is precisely controlled and set. The control unit uses the automatic fresh air system to optimize the humidity of the air circulating in the chamber. When required, humidity is reduced by the addition of a precisely-metered quantity of fresh air. A measuring device tracks the humidity and temperature of the fresh air and decides whether or not it can be used. Cooling and heating are only switched in when the drying potential of the fresh air is insufficient. This allows a large proportion of the expensive cooling and

heating energy which would otherwise be required to be saved.

If automated circulating air and the automatic fresh air system are operated in tandem, their effect is reinforced. It is thus usually possible to dispense completely with the addition of moisture.

## Master the process with the control unit

The Siemens SPC - based MICROMAT control unit with touchscreen summarizes all the installation functions and conditions for the user in a clear diagram. Both current functions and installation conditions as well as past processes can be visualized and called up. The control system controls all the processes in the CLIMAMAT LAGER®. Like all MICROMAT control units, it can be incorporated directly in the LDS Central Management and Documentation system.

## Optimum installation design

We design each installation specifically for you and your products. To do this, we need to know the type of products, maximum trolley load and the required maximum weight loss per day for the temperature/humidity curve of your products.

The moisture extraction performance required for your products and the temperature and humidity values of future production are of particular importance in determining the economic optimum between the installed and required performance of the installation.

# CLIMAMAT LAGER® - Climatic post-maturing and storage rooms

## Best technology

The installation is integrated in your premises and individually adapted. In the process, we will

customize outputs and quantity of circulating air, as well as flow conditions in the ducts, to suit your requirements perfectly.

It goes without saying that all parts of the installation are manufactu-

red from stainless steel in tried and tested rugged VEMAG quality.

They are easy to clean and maintain, and they comply with the relevant safety and hygiene regulations.

## Technical data

- Installation temperature: constantly controllable from 15 to 22 °C
- Relative humidity: constantly controllable from 65 to 85 % as a function of set temperature, trolley load and moisture removal
- Circulating air flow: constantly controllable from 40 to 100 %
- Fresh air: constantly controllable from 0 to 20 % of circulating air flow
- Moisture removal performance: 1 % in 24 h at 300 kg load per trolley 1 x 1 x 2 m at design point 17 °C and 78 % r. h., other outputs on request
- Electricity: to suit local supply
- Heating: steam, hot water or electricity
- Cooling: Freon, ammonia or brine



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