AEROMAT - overall solution

AEROMAT - the system

In order to produce a top-quality product with consistent quality in the shortest possible time, identical climate and flow conditions must prevail at every location in the chamber. This is achieved by using VEMAG's tried and tested circulating air system which circulates the volume of the chamber several times a minute at intervals adapted to suit the process. The air conditioned by the central air-conditioning unit is routed into the chamber by injection ducts located under the chamber ceiling. A continuously-operating air change flap constantly varies air outlet speed and air intensity at the nozzles of the injection ducts to generate specific flow conditions. A central return duct sucks air away at a uniform rate.

AEROMAT – the control system

Precise adherence to treatment times and climate conditions is a prerequisite for first-class product quality. In the VEMAG AEROMAT, this task is performed by the MICROMAT C7-100 installation control unit. Based on a freely-programmable SIEMENS PLC, all process sequences are continuously monitored, controlled and recorded by standard functions. The unit is operated by a convenient SIEMENS operator panel. Allow your complex processes to run fully automatically and without constant supervision at night and on weekends. The integrated fault reporting and limit value monitoring function guarantees that the installation will operate reliably.

Technical data

AEROMAT – the options

- Air-conditioning unit with directly gas-heated via heat exchanger
- Indirectly gas-heated via heat exchanger
- Electrically-heated via heat exchanger
- Hanging trolley system

- Transit door
- Lift ing door
- Intensive cooling device
- Baking device (electrically heated)
- Weighing device
- Automatic door-opener
- Pneumatic door drive
- Drains (if required)
- Narrow chamber design (width 1750 mm)

AEROMAT – the accessories

- VEMAG Smoke Generator
- VEMAG Exhaust Air Cleaning System
- LDS Advance (Central Management and Documentation System)
- VEMAG Steam Generator DE 49/56

Redden, dry, smoke, cook and boil in perfect combination

AEROMAT Combined installation for the thermal treatment of foodstuffs
Measuring climatic parameters in the return duct ensures that temperature and relative humidity are measured at the ideal point for the control system.

**AEROMAT – innovative technology**

The VEMAG AEROMAT uses its central air-conditioning unit to generate any desired climate in the chamber. In selecting and designing the components for this unit, VEMAG concentrated solely on advanced technologies. Using a flow-optimized flat-tube heat exchanger considerably reduces heating-up and treatment times and minimizes high-cost energy consumption.

The welding-on stainless steel nubs in the aisle area of the chamber where operators have to walk considerably reduce the risk of staff slipping, but do not impede the smoke trolleys as they are wheeled in and out.

The stainless steel radial fan for circulating air at two different speeds to adapt flow characteristics perfectly to different process conditions.

The injection ducts with specially-manufactured stainless steel nozzles ensure precise and uniform distribution of air in the chamber and prevent condensation getting onto the product.

The adjustable VEMAG air change flap system adapts the flow to the production conditions on an individual basis so that a perfect product always results.

The high-quality, solid VEMAG door latch can be operated from both the outside and the inside. Its adjustable three-point latch and special seal achieve a perfect seal between door and door-frame.

A silicone gasket (permitted for use in the foodstuffs industry) between the wall, floor and ceiling elements ensures the necessary seal in this extremely hygienic construction.

The cleaning system included in the scope of supply can either be connected to a customer’s foam cleaning unit or operated with cleaning fluid using the steam jet pump supplied.

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The base of the chamber is shaped like a tray and is inclined towards the door of the chamber. This hygienic design makes the whole of the chamber floor an area which is very easy to clean.

**AEROMAT – overall solution**

Regardless of the thermal treatment your product requires - with a VEMAG AEROMAT, you will soon be mastering even the most complicated process sequences with complete success. In addition to basic functions like reddening, drying, smoking, cooking and boiling, it is also perfectly straightforward to perform additional functions like baking, cooling and cold-smoking as options. In a nutshell: the VEMAG AEROMAT represents 100 % quality, reliability and economy.

**AEROMAT – the all-round talent**

To enable maximum product quality to be achieved with low weight loss and at minimum energy and operating outlay, VEMAG engineers incorporated the expertise and experience of many decades of company history when developing and designing the AEROMAT. The result is an installation whose primary attraction, besides its production reliability and high-quality processing, is its outstanding cost/benefit ratio.

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**AEROMAT – customized modular construction**

Developing a modular construction adapted to suit customers’ requirements has enabled us to realize a rapid, simple solution to any set-up variant. The VEMAG AEROMAT is fully assembled from the inside of the chamber, and its unique fastening system means that it can be dismantled at any time and set up again at a different location.

**AEROMAT – quality in every last detail**

In deciding to use only high-quality stainless steel (1.4031 - AISI 304L) for the wall and ceiling elements inside the chamber, VEMAG is setting completely new standards in terms of quality, well ahead of the field of comparable products.

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An extremely hygienic design of integrated flat-tube heat exchanger with outstanding heat transmission properties.

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