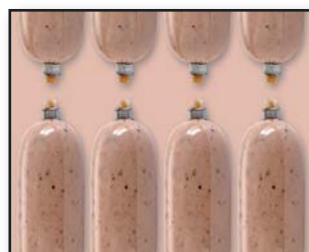




AQUAMAT®

AQUAMAT® TWIN

Continuous systems for
cooking, pasteurizing and
cooling in a water bath



VEMAG AQUAMAT® - cook and cool sensitive meat products

AQUAMAT® - gentle product treatment

The AQUAMAT® is a flat-belt installation to cook and cool your products especially gently using water. In this installation, your boiled and cooked sausage in natural or synthetic casings is guided in strings or individually through a cooking water bath and a cooling water bath by two belts. This ensures that the products always float completely in water and are heated and cooled for a defined amount of time.

As an option, your products can be coagulated in a short heated bath before the cooking process.

This process increases the stability of sensitive products in natural casings.

High performance and economy

You can put your products continuously into the cooking bath, either in strings or already separated, depending on your process requirements.

This renders superfluous hanging and trolley handling, as well as the standing and heating-up times associated with batch processes.

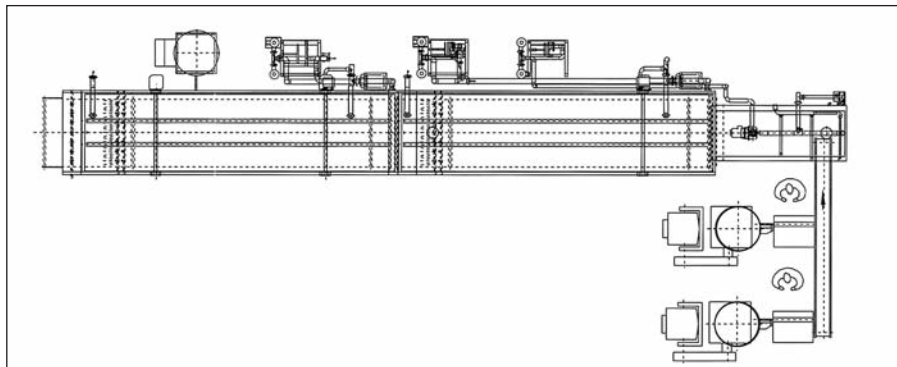
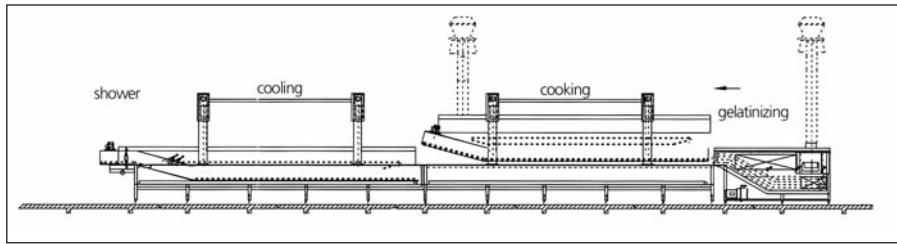
This saves considerable staff outlay and provides ideal conditions for consistent product quality.

The stainless steel conveyors in the installation convey your products evenly and reliably through the cooking bath then automatically transfer them into the cooling bath and finally to your conveyor for further processing.

This, too, is a continuous product flow without additional operating steps or intermediate stations.

Precise and continuous adherence to cooking and cooling times is the basis for a long shelf life for your products.

In the process, the largely sealed construction and water circuit of the AQUAMAT® means that it works



AQUAMAT®

at a high degree of efficiency, extremely energy-efficiently and thus economically.

Fully automatic process management

Adherence to all the process parameters you specify is monitored by a user-friendly SPC. Sensors in the water circuits guarantee absolutely constant temperatures and an even exchange of heat.

Warning signals if programmable limit values are overshoot allow this highly reliable installation to be operated with minimum supervision which can be covered by a member of staff from a previous or subsequent process stage.



Cleaning

Hygienic to the last detail

For cleaning and maintenance, motors move the covers and conveyors up over the cooking and cooling tanks as a unit. The tanks, conveyors and covers are then easily accessible all round for cleaning and servicing.

Filters retain particles from the water throughout the whole day. Their function is monitored continuously and they can be cleaned while the installation is running if necessary.

Intelligent switching in the pipework allows the heat exchanger, pipes, nozzles and tanks to be cleaned even on the cooling side using warm cleaning solution from the installation's own heat exchanger.

Adapted construction

Hourly output is adapted to suit your requirements by means of the length, width, speed and thermal concept of the installation. The modular concept allows tried and tested components to be precisely combined to suit your production. It goes without saying that all parts are made of stainless steel and materials safe for use with foodstuffs. The AQUAMAT® requires very little servicing.

VEMAG AQUAMAT® TWIN - Efficient processes in the double-deck installation



AQUAMAT® TWIN - Efficient processes in the double-deck installation

The AQUAMAT® TWIN is a water bath installation with a space-saving design which you can use both for pasteurizing packed foods and for cooking and cooling meat products in synthetic casings. It works on two levels, one above the other, products being heated on the upper level and cooled on the lower one. Stainless steel conveyors with drivers ensure a precise throughput time.

After cooling, the products can be prepared for packing straight away by an optional blow-off unit.

Concentrated performance can be used flexibly

The water baths arranged one above the other are each completely encapsulated to save energy. The water is routed in a circuit by heat exchangers and sprayed onto the products from above through nozzles. This achieves a steady exchange of heat, even for the products floating on top, so that the desired core temperatures are reached reliably. The installation can process up to four different products with two different treatment times simultaneously if the belts and drives are split.

Compared to batch installations, this continuous process dispenses with many operating steps and irregularities in the process, with the result that in addition to reducing

staff outlay, you can also reduce reject product and maintain product quality more reliably.

Assuming suitable product combinations, the AQUAMAT® TWIN can be used first for cooking and then for pasteurizing, even consecutively, for several shifts a day.

This bundled use allows economy to be increased even further.

Full control of the process

You store treatment times and temperatures in the user-friendly control unit as a function of product, in the form of production programs for your various products. The installation is equipped with temperature and pressure sensors which the control unit uses to monitor and control all process parameters. This guarantees that temperature management and heat exchange with the product is always at an optimum. The programmed monitoring and warning routines allow the installation to be operated without supervision for long periods.

Easy cleaning

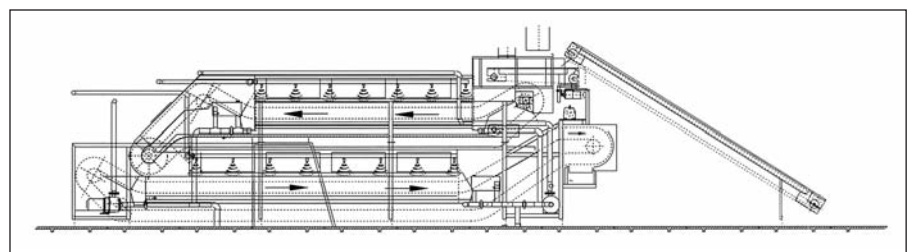
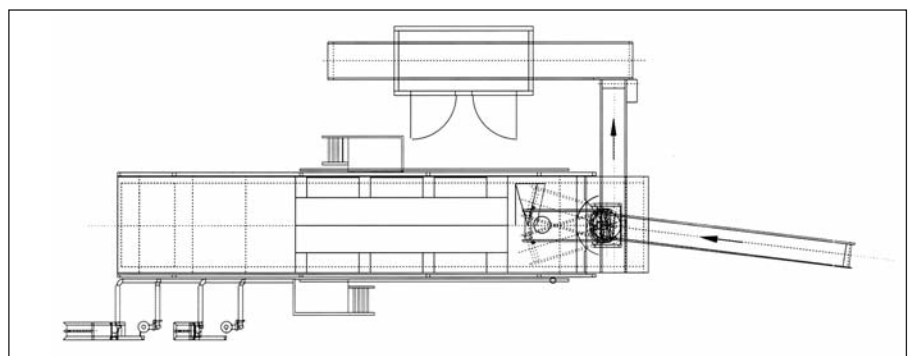
The particulate filters integrated in the circuit can be cleaned while the installation is running if required.

The entire length of the installation is accessible at any point through large lock-open covers. This makes both cleaning and servicing/maintenance simple.

A built-in switch for the water circuits allows the cleaning program to heat the cleaning solution for the cooling area as well. The cleaning sequence also includes a rinsing step using the water circuits and built-in nozzles.

Well thought-out design

The simple structure of the AQUAMAT® TWIN in a framework construction with few moving parts means it can be adapted perfectly to suit the requirements of your products. Width, length, speed and thermal concept are selected to suit the hourly output required. Maintenance and servicing are also considerably reduced.



AQUAMAT® / AQUAMAT® TWIN - Technical Data

AQUAMAT®

Treatment times:	infinitely adjustable	Product conveying:	stainless steel wire belts
Cooking temperature:	up to 95 °C	Belt widths:	1 m; 1.2 m; 1.5 m
Cooking/cooling medium:	water		

Example output, size and connections

Product:	veal grilling sausage calibre 32 in hog casings	Size:	L 20 m x W 2.25 m x H 2.75 m excl. heat exchanger
Throughput:	1500 kg/h	Current:	20 kW
Cooking time:	30 minutes	Steam:	165 kW, 4 bar
Cooling time:	40 minutes	Ethylene glycol:	178 kW, -5 °C, 3 bar, 30 %
Core temperatures:	filling 10 °C cooking 70 °C cooling 2 °C	Water filling quantities:	cooking 6.5 m ³ , cooling 8 m ³
		Water consumption:	0.3 m ³ /h loss compensation 6.4 m ³ per cleaning operation

AQUAMAT® TWIN

Treatment times:	infinitely adjustable	Product conveying:	stainless steel wire belts with drivers
Cooking temperature:	up to 95 °C	Belt widths:	1.5 m
Cooking/cooling medium:	water	Tracks:	1 - 4
		Speeds:	up to 2 different speeds

Example output, size and connections

Product:	grilling sausage calibre 20 packed in soft film in one layer	Size:	L 9.6 m x W 1.9 m x H 3.2 m excl. heat exchanger W 3.2 m incl. access platforms
Throughput:	2000 kg/h	Current:	30 kW
Pasteurizing time:	20 minutes	Steam:	260 kW, 4 bar
Cooling time:	27 minutes	Ethylene glycol:	260 kW, -5 °C, 3 bar, 30 %
Core temperature:	cooling 2 °C	Water filling quantities:	cooking 4 m ³ , cooling 6 m ³
		Water consumption:	0.1 m ³ /h loss compensation 6 m ³ per cleaning operation

Features of both systems

- Control unit: Siemens SPC with graphics screen
- Materials: stainless steel and plastics and materials approved for use with foodstuffs
- Heating: steam plate heat exchanger
- Cooling: glycol plate heat exchanger
- Circulating pumps
- Water circuit pipework
- Water circuit valves
- Steam control valve
- Condensate drain
- Glycol control valve
- Screen filter
- Cleaning switch
- Feed and discharge belts (optional)
- Drain station (optional for AQUAMAT® TWIN)



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