



VEMAG ANLAGENBAU

Quality. Safety. Profitability.



FOREWORD

Our innovative thinking and your expertise lead us together to success.

Our corporate culture as a medium-sized family business is marked by decades of experience and a feel for progress. Our claim is the manufacture of high-quality and lasting installation systems for the thermal treatment of foodstuff. So in collaboration with you, we develop innovative products ranging from smoking installations, intensive cooling and cooking installations to thawing and climatic installations which are in the matter of quality, safety and profitability leading worldwide.

We rely on moderns' production facilities as well as competent and motivated staff at our headquarters in Verden. Only with this philosophy relying on the best possible performance we can achieve our high company aims and we can work out individual solutions, which will lead us together to success.



Timo Krüger
President, VEMAG ANLAGENBAU GmbH

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You can only
SATISFY
expectations if you keep moving.

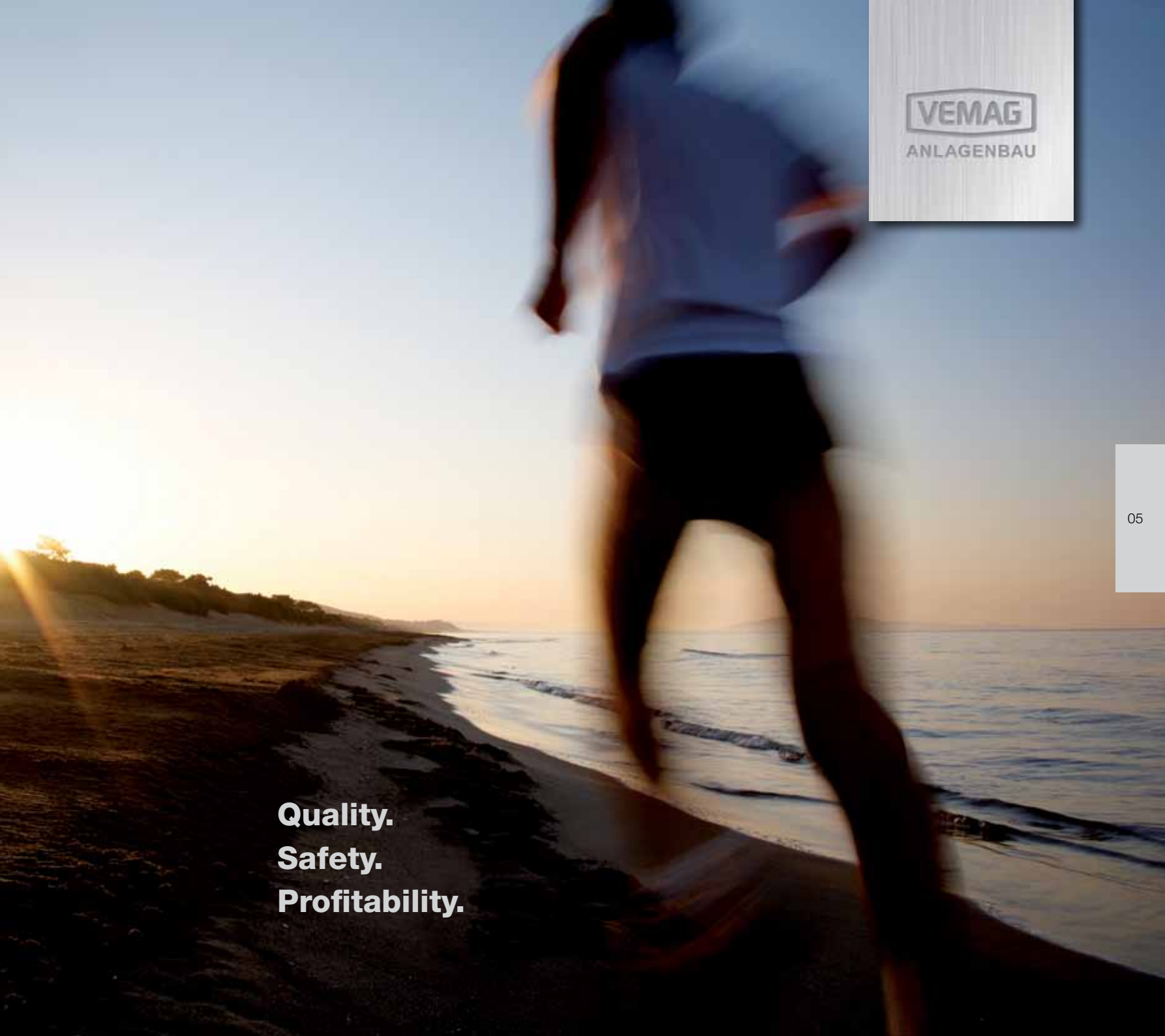
We offer you customized, state-of-the-art systems.

Only a continuously-developing company is in a position to increase its profitability in the long term.

According to this principle **VEMAG ANLAGENBAU** is working since their foundation. In order to reach the high expectations on our products, we focus our developments generally on the three core areas **Quality. Safety. Profitability.**

Based on this we develop for you individual installation systems for the thermal treatment of foodstuff. We consider our solutions to be processes which can be continuously expanded, always with the objective of deriving the best possible performance from the installations and optimizing processes. This assumes not only an entrepreneurial approach, but also places heavy demands on man and machine, as well as requiring the close interlinking of high-quality workmanship and innovative high-tech systems.

We aim to add performance and volume value for you.

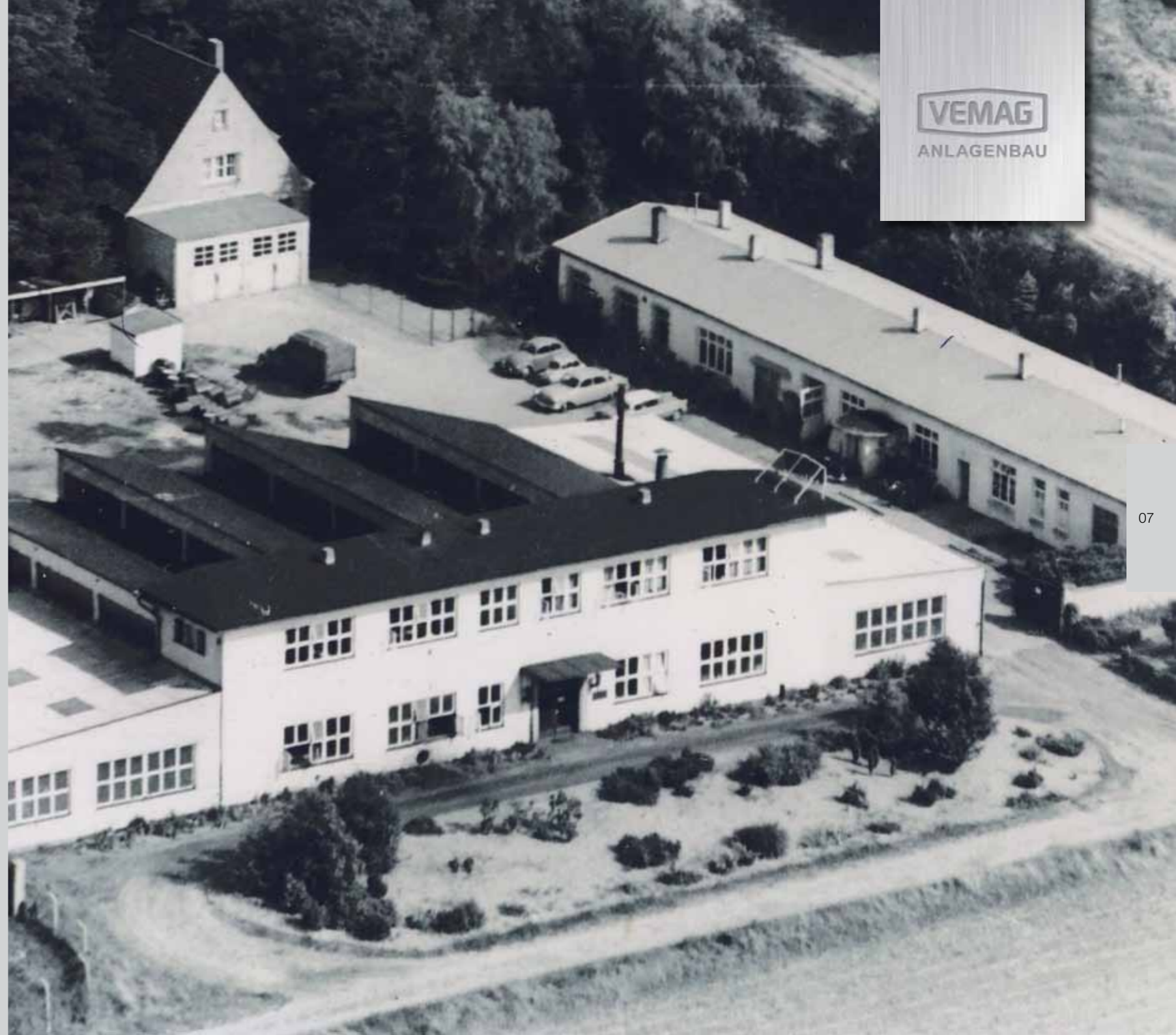


Quality.
Safety.
Profitability.

Our history stands for
DEVELOPMENT
and contemporary innovation.



- 1944 — Holz- und Gerätebaugesellschaft mbH set up in Verden to make a range of different products (clocks for church towers, ovens, honey extractors etc.)
- 1950 — Company renamed in VEMAG Verdener Maschinen- und Apparatebau GmbH with a focus on filling machines for meat-processing companies
- 1964 — Development and sale of the first combined hot-smoking and cooking installation
- 1979 — Construction of our own production facility for smoking installations
- 1983 — Development and sale of the first continuous installation
- 1984 — Development and sale of the first Thermo-Compound-Installation (combination of hot-smoking and intensive cooling installation)
- 1992 — Takeover and integration of ALPAS, adding cold-smoking installations to the product range
- 1998 — DIN EN ISO 9001 quality management system launched
- 2001 — Restructuring of shareholder arrangements and takeover of VEMAG ANLAGENBAU GMBH by the Krüger family
- 2002 — VEMAG Australia Pty Ltd. set up in Brisbane as a sales and service company for Australia and New Zealand
- 2004 — VEMAG Turkey Ltd. set up in Istanbul as a sales and service company for Turkey
- 2006 — Expertise relating to the "Baader" systems made by Heinen Systems GmbH acquired
- 2007 — Completion of extensive building works (warehouse and dispatch hall, technical centre, redesigned facade and expanded offices)
- 2008 — Development and sale of innovative air distribution systems for climatic maturing technology, with the CLIMAMAT® STAR TWIN and CLIMAMAT® LAGER hose system
- 2009 — Development and sale of the innovative AEROMAT® VARIO PF system for the continuous production of boiled sausage
- 2010 — Development and sale of the new H501/E Friction Smoke Generator and the new H 507/D Steam Smoke Generator
- 2012 — Entry in the bakery market with the CLIMAMAT® LAGER COOL for cooling down of bread



Experience and innovation –
SHAPE AND SECURE
the future

We have expertise in the flexible, economical and energy-saving creation of intelligent installations.

VEMAG ANLAGENBAU has the aim to create the future lasting. Therefore we collaborate in dialog with you to develop installations which can provide a maximum of efficiency and compatibility of environment. We combine technological requirements with newest process technology and ensure that your company gain in flexibility, profitability and effectiveness.

With behalf on innovative automation steps, a continuous controlling and documentation VEMAG ANLAGENBAU optimizes redundant operations and minimises enduring the energy costs. We always have the vision of giving you a permanent competitive advantage in the market and a well preparation for the future.



For us,
QUALITY & SERVICE
are more than just words.

We provide you with individual solutions
at the best price/benefit ratio.

The best quality is always our top priority in our day-to-day work. This quality can not only be found in the materials and components we work with, but also in all of our processes for the production of our products. For many years we work consequently according to the DIN EN ISO 9001:2008. We appoint only skilled personnel and demand this also from our suppliers. Only by doing so the high requirements on a premium product of the food production industry can be achieved ever-lasting.

To a high class product belongs also a perfect service. This is based at [VEMAG ANLAGENBAU](#) in the main features of our quality policy. We support you with an extensive supply of services. Beginning with the planning of your factory building, to energy and efficiency-calculations and up to the mechanical and technological realisation of your project we are at your side. We show you how your investment will amortize itself within a short time and we provide you also, if needed, with suitable financing solutions.



At a glance –
PRODUCTS
 for your requirements.

We will find the right solution, even to individual enquiries.

VEMAG ANLAGENBAU provides an extensive range of products.

Processes like drying, smoking, cooking, cooling, maturing, thawing, baking or pasteurizing are in the focus of our doing.

Whatever kind of foodstuff you want to treat thermally, we find the solution for it.

- Batch installations
- Semi-continuous installations
- Continuous installations
- Climatic maturing and post-maturing installations
- Thawing installations
- Smoke generators
- Control units & management systems

VEMAG PRODUCTS

Innovations for your individual requirements.

Batch installations



AEROMAT®
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Cooking installations
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Intensive cooling installations
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Thermo-Compound-Installation
Page 20



AEROMAT® VARIO
Page 22



AQUAMAT®TWIN
Page 24

Semi-continuous installations and continuous installation systems

Climatic maturing and post-maturing installations



CLIMAMAT® STAR series
CLIMAMAT® STAR Page 26
CLIMAMAT® STAR PLUS Page 28
CLIMAMAT® STAR TWIN Page 30



CLIMAMAT® LAGER series
CLIMAMAT® STAR LAGER Page 32
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Thawing installations



Thawing installation
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Smoke generators



Smoke generators
Friction Smoke Generator H 501/E Page 38
Steam Smoke Generator H 507/D Page 40

Glowing Smoke Generators
H 504/C und H 508/C Page 42

Control units & management systems

Installation control units/central management and documentation systems
Page 44

Product optimized:
The AEROMAT®
is the perfect complete solution

Performance features

- The **circulating air system** guarantees constant climatic and flow conditions within the chamber.
- The **central air-conditioning unit** conditions the air and reliably ensures an identical climate throughout the chamber.
- To optimize circulation of this conditioned air, the **air change flap** continuously varies air outlet speed and the intensity of the air at the nozzles on the injection ducts.

The **AEROMAT®** consequently generates consistent drying, shorter process times and minimal weight losses; this avoids colour differences in the product.

- Specially-made and **welded ducts** with conical nozzles ensure uniform distribution of air in the chamber and prevent condensation getting onto products.
- The return duct adapted to the flow conditions of the **AEROMAT®** guarantees even extraction throughout the whole of the chamber.



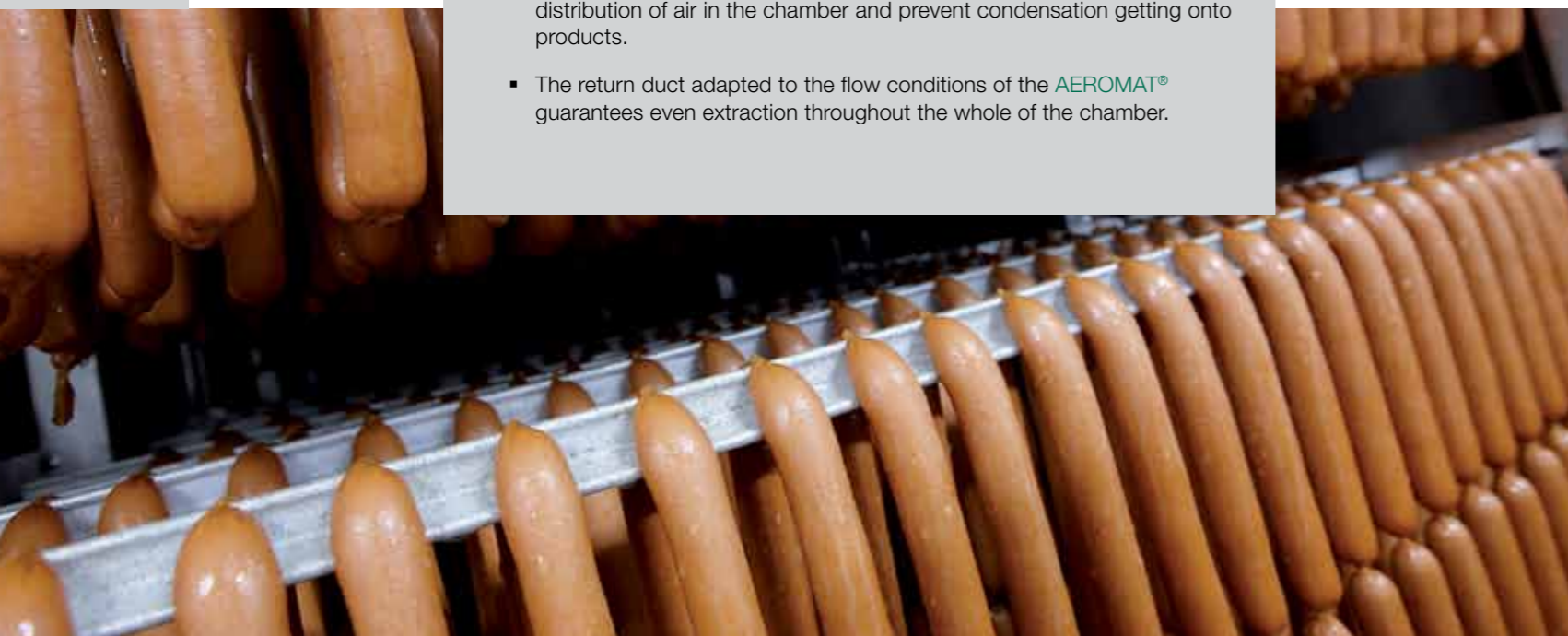
AEROMAT®

The AEROMAT® is the perfect complete solution for a huge range of treatment types:

The combined installation for reddening, drying, smoking, boiling and cooking - which can optionally be extended to cover baking and cold-smoking.

Options/variants

- Rising/falling door, transit door, automatic door opener
- Fully-automatic CIP cleaning system
- Shower and floor drain
- Types of heating available: steam, gas, electricity or thermal oil
- Baking facility up to 210 °C
- Cold-smoking unit



The high-performance:

COOKING INSTALLATION

hygienic and consistent

Performance features

- **Low-pressure steam** and additional **circulation of air** achieve optimum air distribution in the chamber and guarantee a consistent product core temperature - regardless of sausage calibre.
- **Solid design** for an extremely long service life and particularly good insulation against heat losses.
- Compact construction with ceiling fans and integrated shower reduces valuable production space required.
- **Integrated automatic off** once set core temperature has been reached.
- Integrated **core temperature sensor** and pre-programmed, user-friendly functions such as delta-T-cooking, F-value recording, interval shower or automatic switch-on allow **fully-automatic process management** and control.

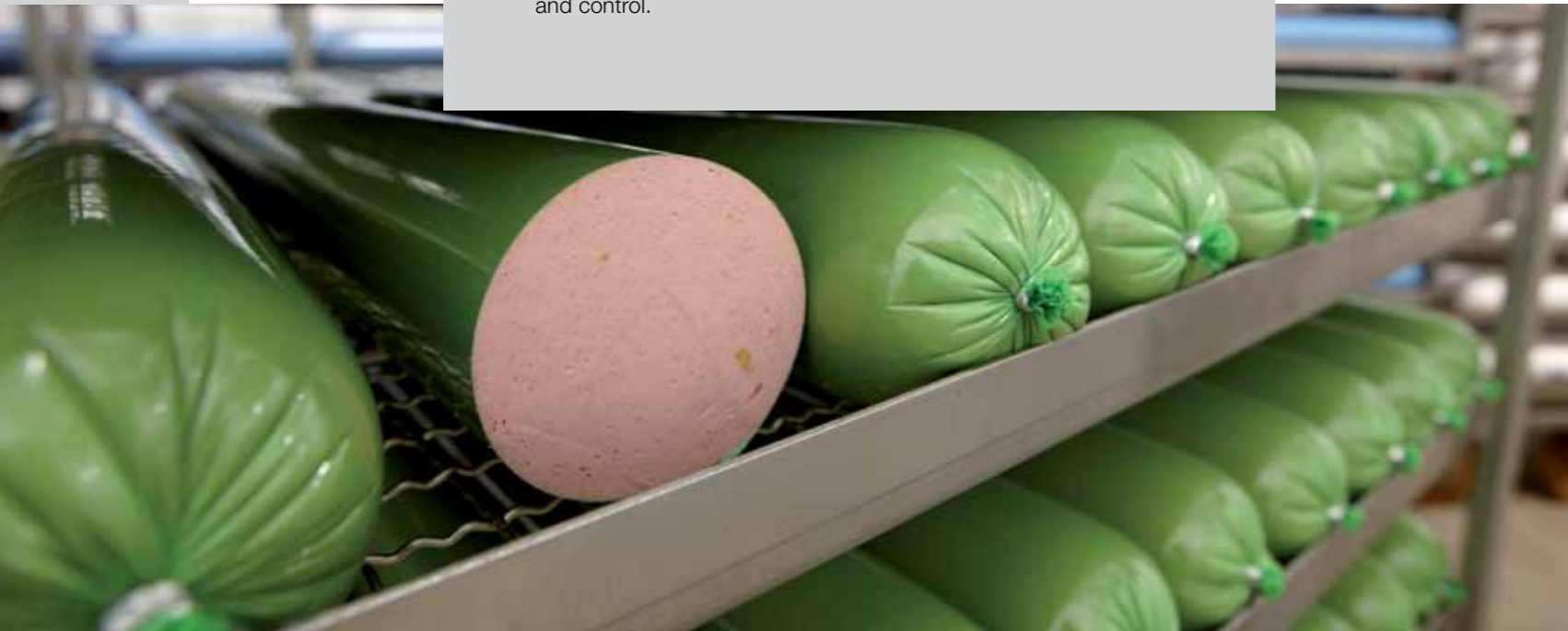


COOKING INSTALLATION

Our cooking installation is suitable for cooking boiled ham, products in aspic and boiled sausage in a steam-saturated atmosphere using circulating air and low-pressure steam.

Options/variants

- Door opener
- Transit door
- Rising/falling door



Controlled and even:

INTENSIVE COOLING INSTALLATION

cool rapidly

Performance features

- **Air circulation** with an energy-saving fan, air change flap and welded injection ducts ensure optimum flow through the trolleys.
- The critical cooling range between 40 °C and 15 °C is passed through particularly **quickly and evenly**.
- **Optimized nozzles** and **interval showers** reduce water consumption.
- A **solid design** made from foamed wall panels ensures particularly good insulation and prevents heat losses.
- Cooling rooms and storage areas are **no longer required**.
- **Integrated core temperature sensor** and pre-programmed, user-friendly functions such as shower cooling time, circulating air and core temperature, interval shower, automatic off and on, for example, guarantee perfect control of all cooling processes.

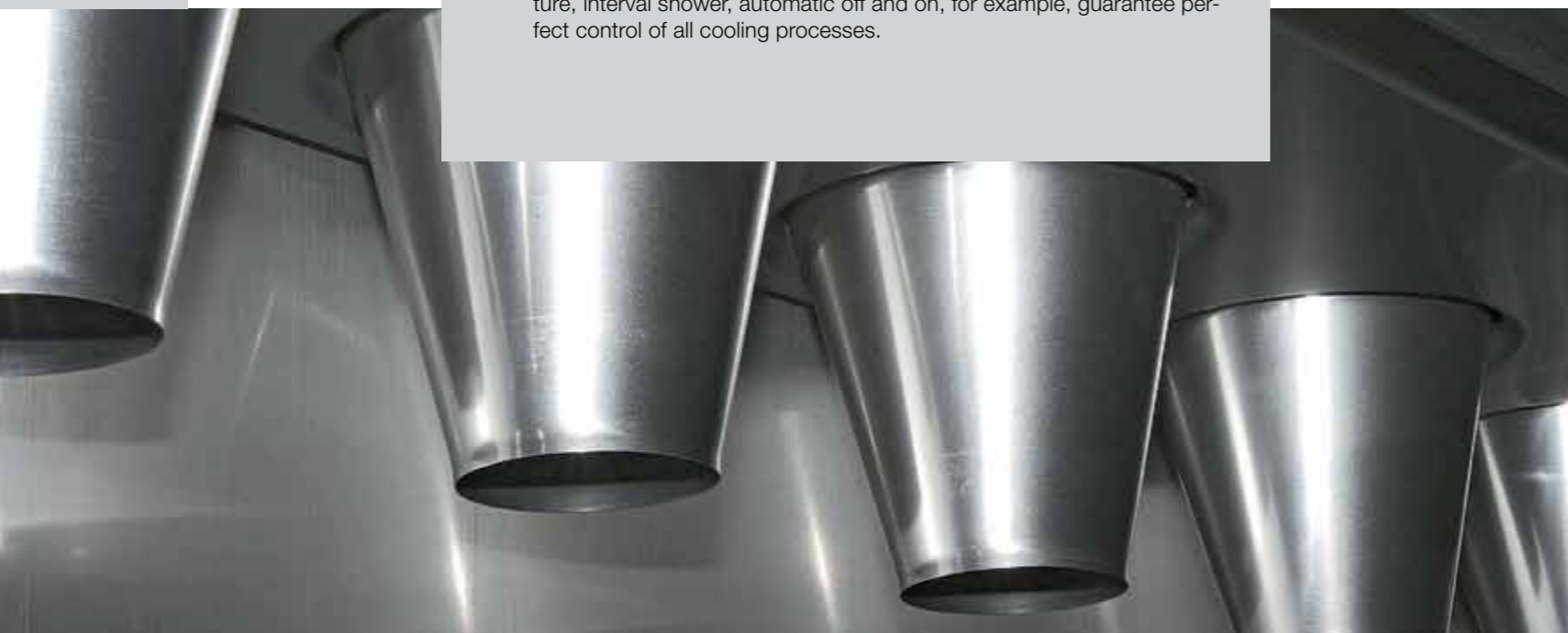


INTENSIVE COOLING INSTALLATION (IC)

The link between heat treatment and packing. Following treatment in our intensive cooling installation, your products can be packed immediately at a core temperature of 6 – 8 °C, for example. The rapid cooling process with its intensive air flow increases your turnover frequency, reduces weight loss and improves the freshness, aroma and shelf life of your products.

Options/variants

- Heat exchanger options for freon, ammonia or glycol
- Transit door, rising/falling door or rolling door; automatic door opener
- Cooking unit with steam (not with rolling door)
- Suspended track with folding rail
- Use of pre-cooled shower water
- Cold water circulation system for certain products



Fast and constantly:

THERMO-COMPOUND-INSTALLATION

semi-continuous installation system

Performance features

- **Automatic transport** from heat treatment to cold treatment guarantees consistent product quality and also reduces manual intervention in this critical area - this improves both hygiene (fewer germs) and working conditions for your production staff.
- **Limited time for attack** by bacteria, as the critical temperature range of +40 °C to +15 °C is passed through quickly.
- **Reduced total process** time generates minimal weight losses, thus significantly helps cutting costs and speeding up product turnover.
- Can be unloaded by **a single operator**.
- **No expensive cooling areas** for cooling down the product.
- **Minimal cleaning complexity** of cooling surfaces and of smoke trolleys and accessories.
- **Reduced provision** of smoke trolleys, accessories and staff.

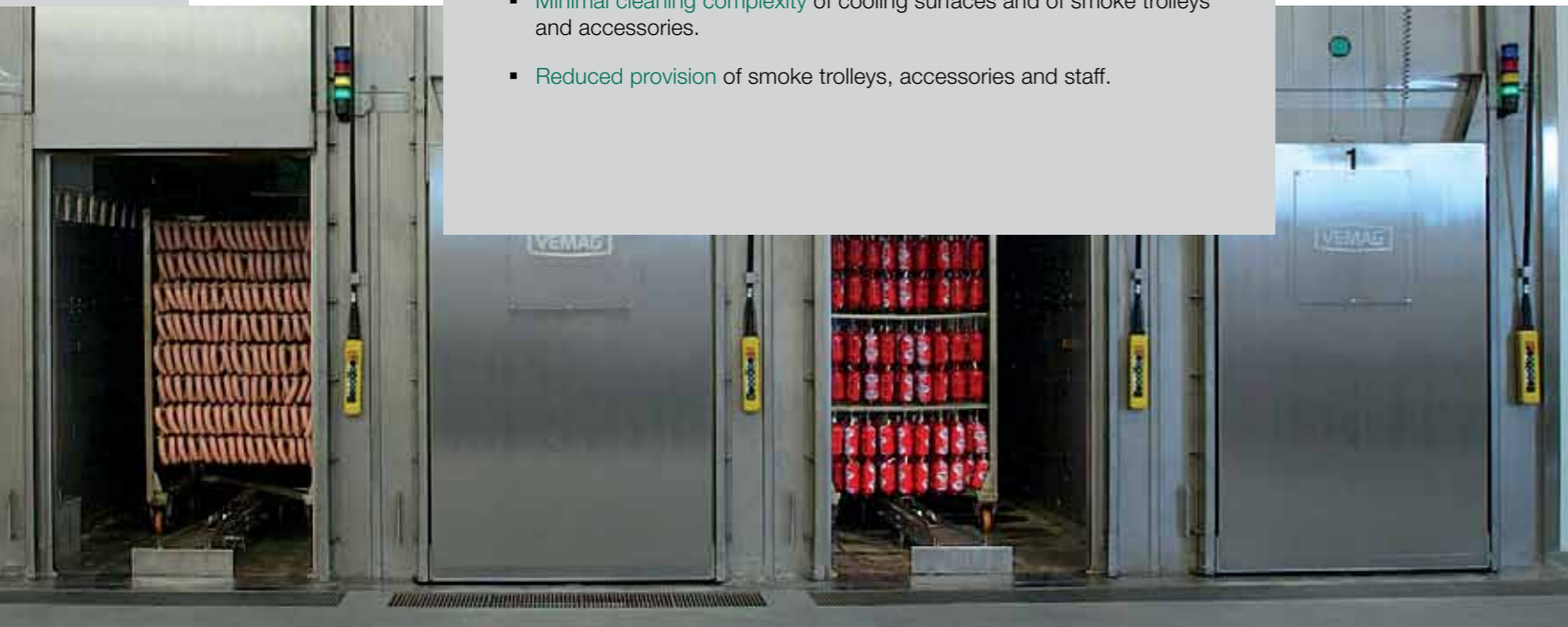


THERMO-COMPOUND-INSTALLATION (TCI)

The TCI combines the tried and tested technology of the AEROMAT® as a hot-smoking and cooking installation with that of an intensive cooling installation. The integrated conveyor system makes the TCI the flexible solution for automating your manufacture of meat products. The TCI is used in the production of cooked and boiled sausage.

Options/individual design variants

- Hydraulic drive
- Automatic leaf door, rising and falling door
- Rolling door and cooking unit optionally available for IC
- Suspended track
- Baking and cold-smoking units
- Cooling water recirculation



Flexible production:
AEROMAT® VARIO
automatic loading and unloading

Performance features

Continuous and reliable production with maximum flexibility and energy efficiency.

- Different numbers of AEROMAT® installations are used depending on process time and production capacity, which also allows for batch-wise thermal treatment or running just individual installations for part-capacity production.
- Complete separation of external and internal installation conveying operations.
- Reduced total process time generates minimal weight losses, thus significantly helps cutting costs and speeding up product turnover.
- Products can be changed easily and quickly.
- Cleaning times are incorporated directly in the production process and the detailed process documentation allows controlled and energy-optimized production.



AEROMAT® VARIO

The further development of the AEROMAT® allows fully-automatic production of hot-smoking products. A particular focus here is the automatic conveyor system which completely rules out manual intervention. The conveyor systems are supplied in the variants AEROMAT® VARIO PF (Power & Free system, product suspended) and AEROMAT® VARIO ST (stacking system, individual frames layered up with product).



Double efficient concept:
AQUAMAT® TWIN
Processes in the two-storey installation

Performance features

The installation operates on two levels, one above the other, products being heated on the upper level and cooled on the lower level.

- Cooking, pasteurizing and cooling in a water bath in **minimal space**.
- **Exact throughput time** ensured by linked belts with entrainers.
- Reliable achievement of core temperature as a result of **consistent exchange of heat** even for products floating on top.
- Split tracks allow **simultaneous processing** of up to 2 products with 2 process times.
- **Gentle treatment** without handling significantly reduces the reject quota.
- **Easy to clean and maintain** due to large lock-open covers throughout the whole length of the installation.
- **Increased profitability** due to the option of performing the cooking process and pasteurization immediately after one another.

The installation is also available in a single-storey form, the **AQUAMAT®**.

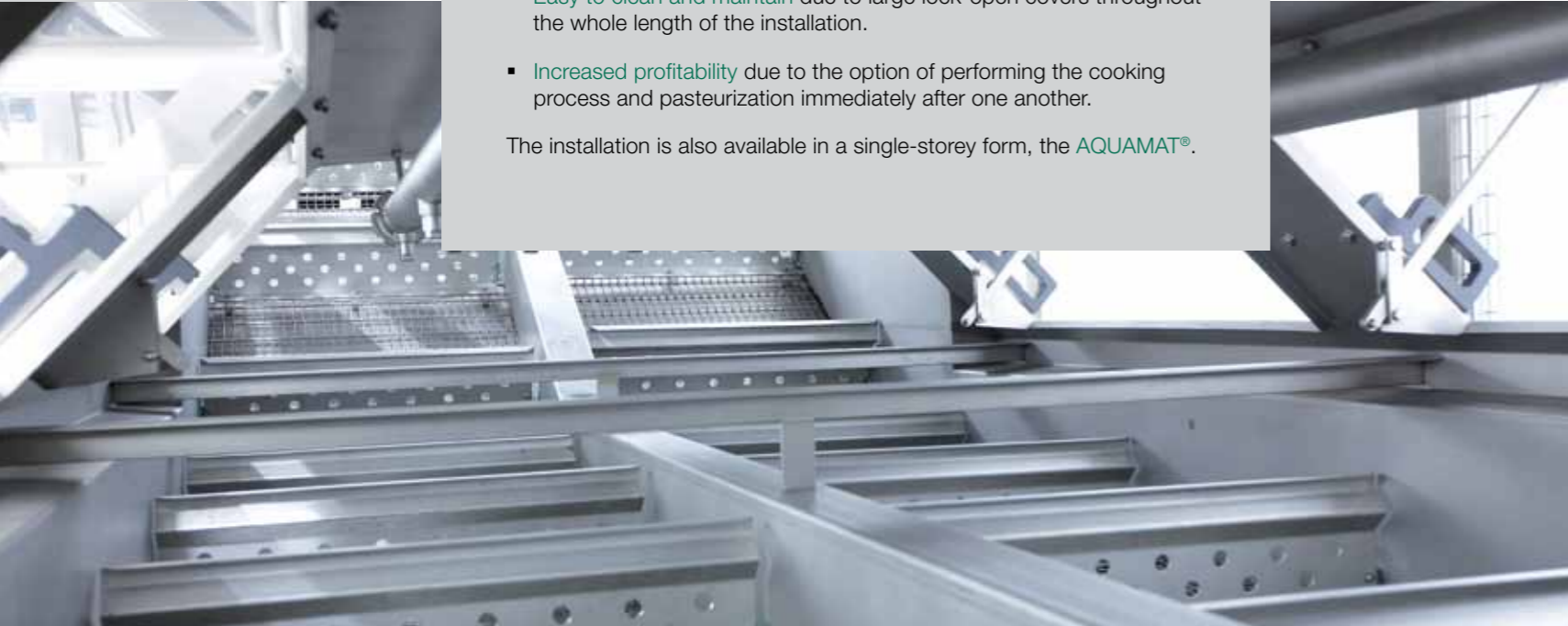


AQUAMAT® TWIN

The AQUAMAT® TWIN is a water bath installation designed to save space and is used both to pasteurize packed foods and to cook and cool foods.

Options/variants

- A blow-off unit allows direct connection to packing after cooling



Adjustable and sophisticated:
CLIMAMAT® STAR
perfect salami

Performance features

- Patented fresh air and automatic circulating air optimize humidity and the circulating air flow so that product **quality is improved** and operating costs are also considerably reduced.
- The **MICROMAT® control unit** measures the status of the incoming and outgoing air and the quantity of water given off by the products and automatically adapts the circulating air flow to suit.
- The installation adapts to suit the water given off by the products, with the result that **energy savings of up to 40 %** compared to conventional installations can be achieved.
- This feature also optimizes the maturing process and avoids potential maturing faults.
- A measuring device checks the drying potential of the fresh air and cooling is only switched on if it is required, thus **saving valuable cooling energy**.
- If automatic circulating air and fresh air are used simultaneously, humidification steam can usually be dispensed with altogether.

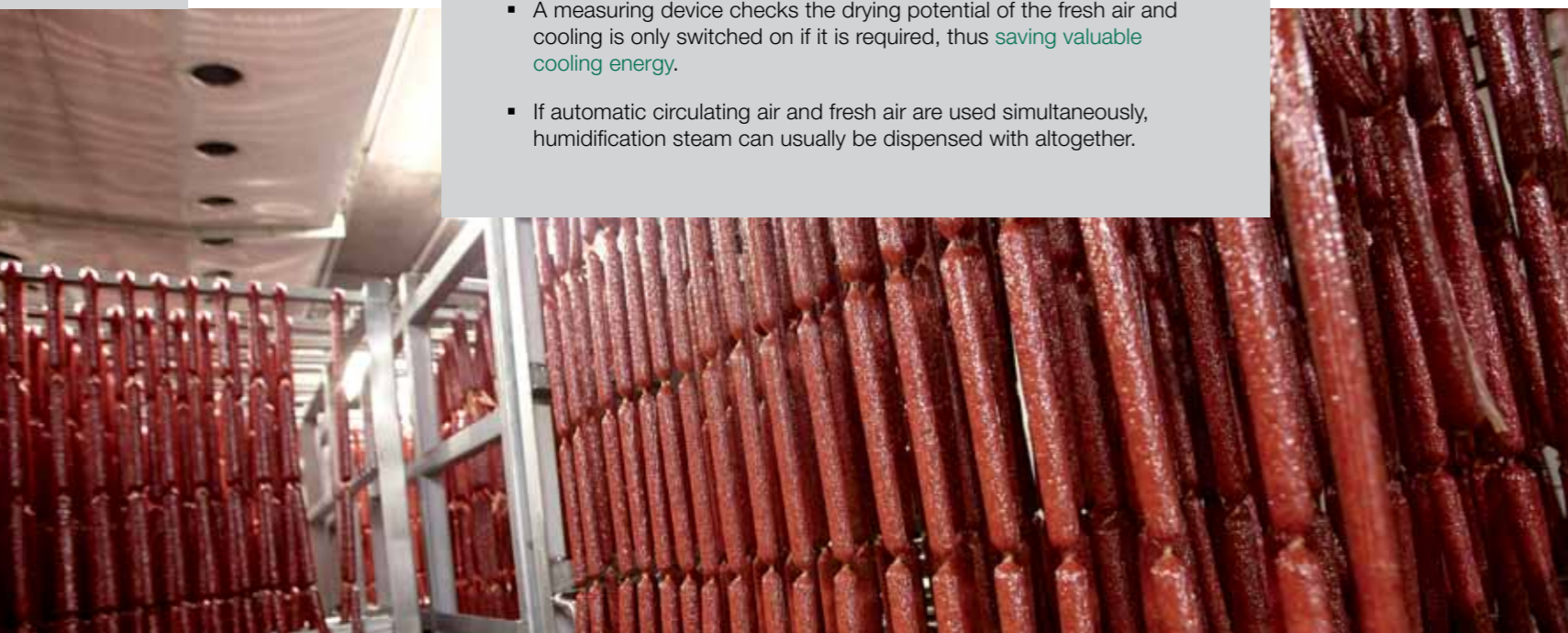


CLIMAMAT® STAR

The CLIMAMAT® STAR combines gentle treatment of your products with a reliable process at the pre-maturing stage. Every installation is designed exactly in accordance with customer requirements and product specification.

Options/variants

- Types of heating: electricity, steam, hot water or thermal oil
- Types of cooling: Freon, ammonia or glycol
- Cleaning: nozzles for manual or optional automatic foam and rinsing water distribution in the climatic element, connection to existing installations possible
- Additional duct cleaning



Visible economical:
**CLIMAMAT®
STAR PLUS**
energetically optimized maturing
of raw sausage

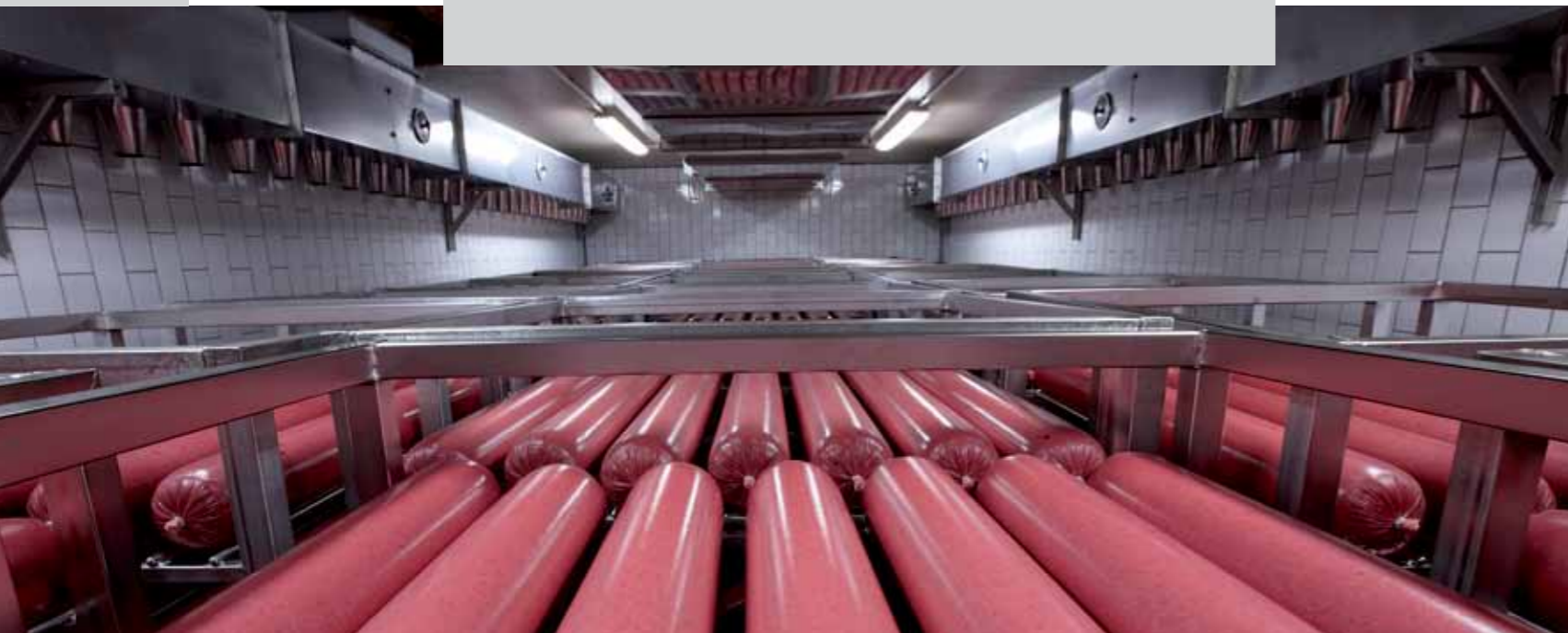
Performance features

- **Energy costs** for heating and cooling reduced by approx. 30 - 50 % by using a central air conditioning unit.
- Significant **reduction in investment costs** for cooling, humidification, steam and water, as the installations work exclusively with the inherent moisture in the products.
- The precondition for this is a **parallel operation** of at least 2 climatic maturing installations and an average usage of at least 80 %.



CLIMAMAT® STAR PLUS

The installation type CLIMAMAT® STAR PLUS is essentially identical to the CLIMAMAT® STAR maturing installation, but it has an additional patented central fresh air conditioning unit, in which the temperature and relative humidity of the fresh air taken in is preconditioned for several climatic maturing installations switched in parallel.



Exact results:
CLIMAMAT®
STAR TWIN
the reliable tool

Performance features

- **Switch between air directions** can be controlled automatically via the installation control unit or manually.
- The frequency of the changes can also be **adapted to suit product requirements**.
- This generates extremely **precise drying** across the entire trolley.
- There is no longer any need to move trolleys in a post-maturing installation - and above all, the **perfected consistency of drying** reduces the use of raw product to a minimum.



CLIMAMAT® STAR TWIN

In the patented CLIMAMAT® STAR TWIN, the process steps of pre-maturing and post-maturing for calibre products are combined in one installation - without any movement of trolleys.

In this case, the vertical air flow of a classic climatic maturing installation is combined with the horizontal air flow of a storage room. The TWIN installation furthermore has the same features as the CLIMAMAT® STAR installation.



Optimized individuality:
CLIMAMAT® LAGER
climatic storage and post-maturing rooms

Performance features

- Optimum post-maturing flow characteristics ensure flawless drying, a perfect aroma, consistent colour and microbial stability.
- Different air management systems adapted to suit the product are available - for example combined duct, horizontal or hose systems.
- Energy costs can be reduced by up to 40 % using patented automatic circulating air and fresh air.
- Individual design of installations based on product, drying, room size and trolley loading.



CLIMAMAT® LAGER

CLIMAMAT® LAGER installations are climatic storage and post-maturing rooms for the thermal treatment of salami. Depending on your product and conditions, VEMAG supplies a variety of solutions for your production.

Options/variants

- Air conditioning in the storage room is available in the form of a combined duct, horizontal or hose system



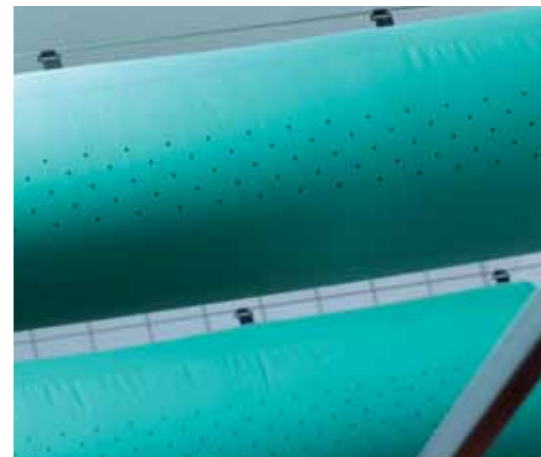
Perfect adjusted:

CLIMAMAT® LAGER COOL

Cooling and storage rooms
for loaves of bread

Performance features

- Optimum circulation of air within the room leads to an even product core temperature and to a considerable reduction in cooling time.
- An even and draught-free distribution of air prevents the outside of the bread from drying out; this also reduces total process time.
- Individually-controlled air humidity in the range from 75 - 90 % and a controlled ambient temperature which can likewise be adjusted guarantees economical and gentle air-cooling.
- Fluctuating climate conditions have no effect on the cooling process.
- Individual design of installations based on product, drying, room size and trolley loading.



CLIMAMAT® LAGER COOL

Controlled cooling of loaves of bread directly after the baking process ensures minimal weight losses and less product lost when the loaf is sliced.

Controlled processes:

THAWING INSTALLATIONS

thawing deep-frozen products

Performance features

Controlled process management using automatic intervals, temperature and circulating air as a function of surface temperature guarantees an optimum thawing result.

- Economical and gentle thawing with air.
- Minimal weight losses due to high air humidity.
- Use of air and steam means minimal microbiological cross-contamination.
- Gentle treatment of temperature-sensitive products with no dried-up edges and stable colour retention.



THAWING INSTALLATIONS

Deep-frozen products such as meat, fish and poultry - open or packed - are economically and reliably thawed by air in a thawing installation from VEMAG ANLAGENBAU. Humidification with steam instead of water prevents additional entrainment of germs.

Options/variants

- The installation can be used also as a cooling store
- Heating energy provided by steam, electricity or hot water
- Trolleys can run on the floor or use a suspended track system (provided by customer)



H 501/E FRICTION SMOKE GENERATOR

Smoking with wooden sticks

Performance features

All our smoke generators are equipped with a user-friendly compact control unit which allows both manual, completely independent operation as well as automatic connection as soon as the smoke generator is integrated in an installation control unit.

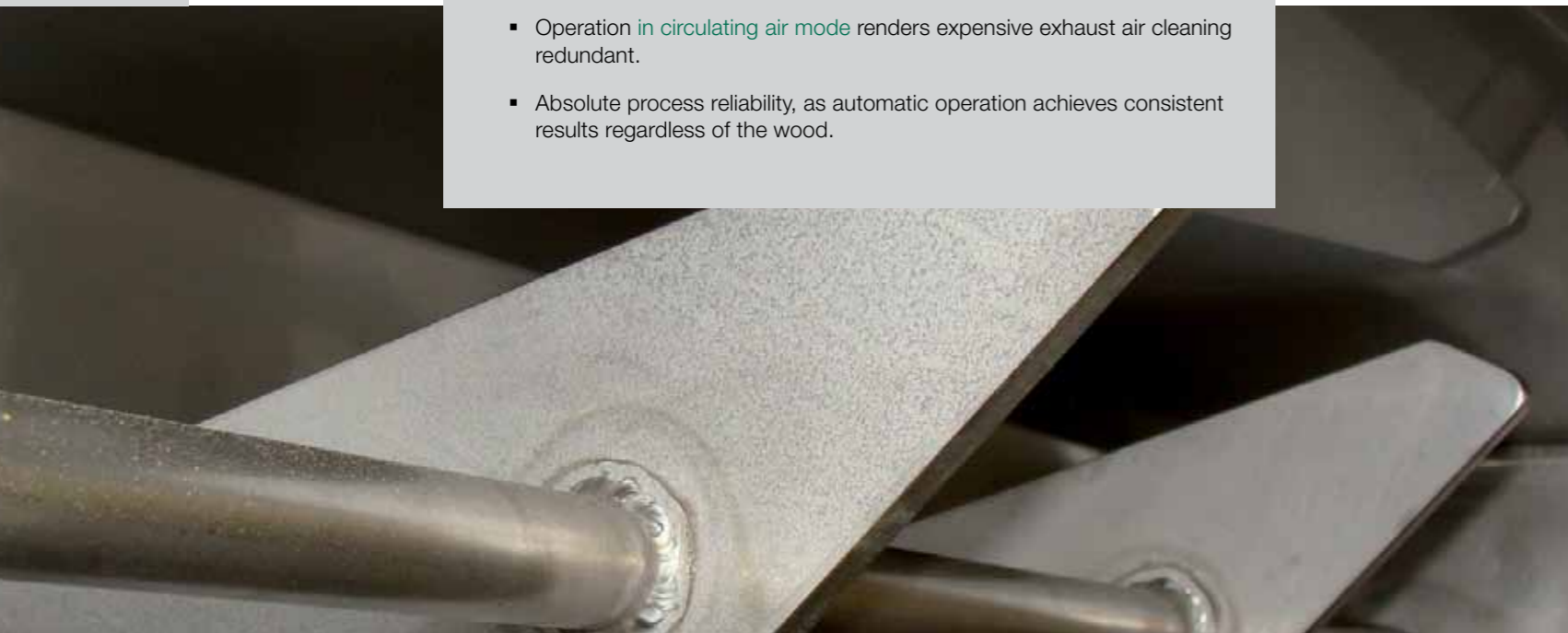
Every smoke generator furthermore complies with all the relevant safety regulations.

- The extra large wood store and automatic stick changer allow **continuous smoking for hours** without cleaning steps.
- The intensive and rapid generation of smoke facilitates **short smoking times**.
- Both **dry and fresh sawn wood** can be used.
- Operation **in circulating air mode** renders expensive exhaust air cleaning redundant.
- Absolute process reliability, as automatic operation achieves consistent results regardless of the wood.



FRICTION SMOKE GENERATOR – H 501/E Ideal for wooden sticks

For operation in combination with hot-smoking installations and a capacity of up to 4 trolleys as well as with climatic maturing installations and a capacity of up to 30 trolleys.



H 507/D STEAM SMOKE GENERATOR

Smoking with woodchips

Performance features

All our smoke generators are equipped with a user-friendly compact control unit which allows both manual, completely independent operation as well as automatic connection as soon as the smoke generator is integrated in an installation control unit.

Every smoke generator furthermore complies with all the relevant safety regulations.

- Super-heated steam generates mild, *individually adaptable smoke without bitter substances*.
- Steam smoke facilitates *minimal weight losses* and guarantees a high degree of consistency and stability of colour throughout all process steps.
- *Full smoke output* after just a few seconds.
- *Automatic process* guarantees consistent product results.



STEAM SMOKE GENERATOR – H 507/D

Designed for smoking chips and industrial production in combination with hot-smoking and climatic maturing installations.



H 504/C und H 508/C GLOWING SMOKE GENERATOR

Smoking with woodchips or sawdust

Performance features

All our smoke generators are equipped with a user-friendly compact control unit which allows both manual, completely independent operation as well as automatic connection as soon as the smoke generator is integrated in an installation control unit.

Every smoke generator furthermore complies with all the relevant safety regulations.

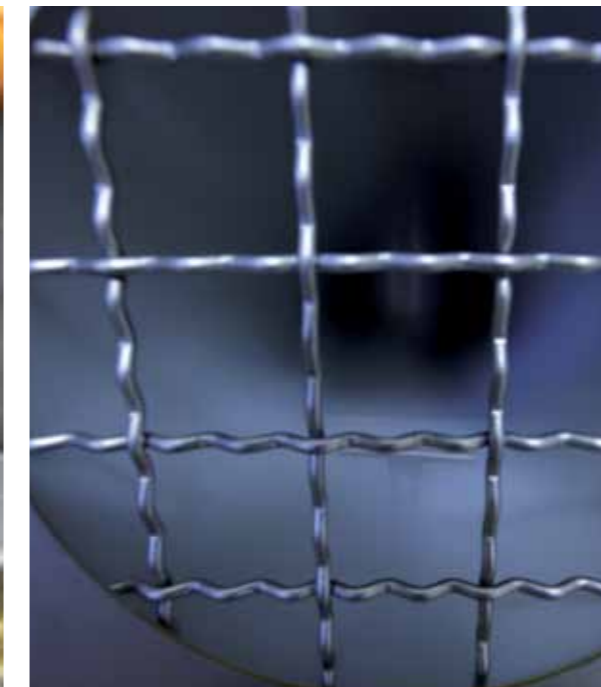
- **Maximum operational reliability** is guaranteed by temperature monitoring with an integrated extinguishing device and water pressure check and optional smoke/volume flow monitoring.
- This **tried and tested technology** allows continuous operation which can also be alternated between two connected installations.
- An **integrated smoke washing system** ensures clean smoke and a perfect product.
- The **well thought-out hygienic design** means that all parts of the smoke generator are convenient and straightforward to clean and service.



GLOWING SMOKE GENERATOR - H 504/C and H 508/C

Glowing smoke generator H 504/C is suitable for use with woodchips and coarse sawdust; the H 508/C can only be operated with woodchips.

Whilst the H 504/C is recommended for operation with medium-sized and large hot-smoking installations and a capacity of up to 12 trolleys as well as climatic maturing installations with up to 80 trolleys, the H 508/C is especially suitable for operation with medium-sized hot-smoking installations with a capacity of up to 6 trolleys and climatic maturing installations with a capacity of up to 30 trolleys.





MICROMAT® C7

INSTALLATION CONTROL UNITS

for thermal processes

VEMAG MICROMAT® C7 control units are freely programmable SPS control units based on the latest SIEMENS S7 technology.

Performance features

- User-friendly, simple menu guidance.
- Facilitates a fully automatic operation.
- Standard recording of all process and measured values, error messages and all energy consumption.
- Can be switched between 16 languages at any time, even with country specified characters such as e.g. cyrillic.
- Operator login with password and logbook or also with RFID chip.
- All components available world-wide at short notice.

Options/variants

- Connection to the LDS (Central Management and Documentation System) as well as to non-VEMAG installations
- 8 or 10-inch touch panel available



LDS –

MANAGEMENT AND DOCUMENTATION SYSTEM

Central documentation and controlling of installations and processes

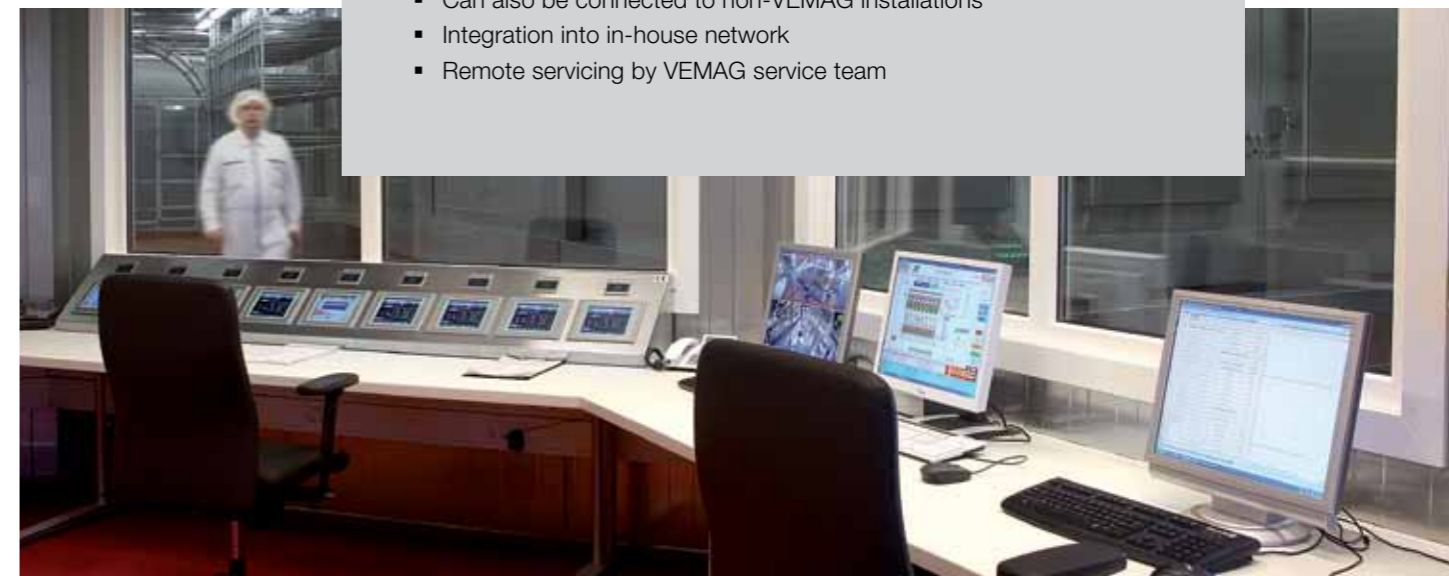
Reduce complex production processes and a wide-ranging distribution of installation components to a reliable and convenient general overview for the operator.

Performance features

- Clear batch assignment by installation, date and start time.
- Operator identification in batch protocol.
- Meaningful display and process visualization (trend graphs).
- Up to 30 independent control units can be monitored and documented simultaneously and fully automatically.
- Long-term archiving of all data and evaluations.

Options/variants

- Can also be connected to non-VEMAG installations
- Integration into in-house network
- Remote servicing by VEMAG service team



VEMAG ANLAGENBAU – GLOBAL

WE'RE CLOSE TO YOU TOO

On the road for you - all over the world.

International sales and service belong to the daily work of VEMAG ANLAGENBAU already for years. As the direct contact to you lies us very close to our heart, we have established a worldwide own sales and service force as well as about 50 long lasting sales and service partners in over 70 countries.

Only by doing so we can guarantee that we take care about your wishes and demands quickly, that we consult you as best as possible and that we finally offer an individual solution for you.

Feel free to contact us.

Presented by:





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