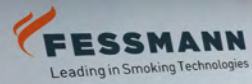




SMANN

Continuously offering
the best flavour.



Experience

FESSMANN was founded in Winnenden near Stuttgart in 1924. Since then, FESSMANN has stood for cutting-edge high-tech systems for the treatment of foodstuffs in the meat and fish processing industries.

Innovation

Since 1972 – when the first TF4000 continuous line was developed – we’ve always been one step ahead. We maintain our technological lead by means of constant innovation. The unbeatable advantages of the TF4000 are the yield and quality it provides for our customers.

The trust we place in our process engineering drives us to continuously find new, innovative solutions for our customers.

Quality

So far, FESSMANN has put 124 continuous plants on the market. Each day we strive to improve even further - not only the flavour aspect but also ecologically and economically. This is how we make the environment, you and your customers happy. It is not without reason that FESSMANN is an international leader in quality and service.

The better process for more quality and flexibility.

Unbeatable **uniformity** of sausages in colour and flavour thanks to the serpentine sausage conveyor technology of the TF4000.

Utmost **flexibility** to produce different types of sausage in one day thanks to process steps that can be flexibly combined. Each chamber section can be used to either dry, smoke or cook the goods. This allows you to tailor production to market demands.

Energy savings and **space savings** of up to 50 % greatly help the environment. No unnecessary energy losses due to process interruptions like in batch plants and oversized production halls.


TF4000 offers the highest level of **hygiene** thanks to unmanned production, thus avoiding possible contamination from staff. TF4000 is equipped with integrated, fully automatic CIP cleaning for the entire line.

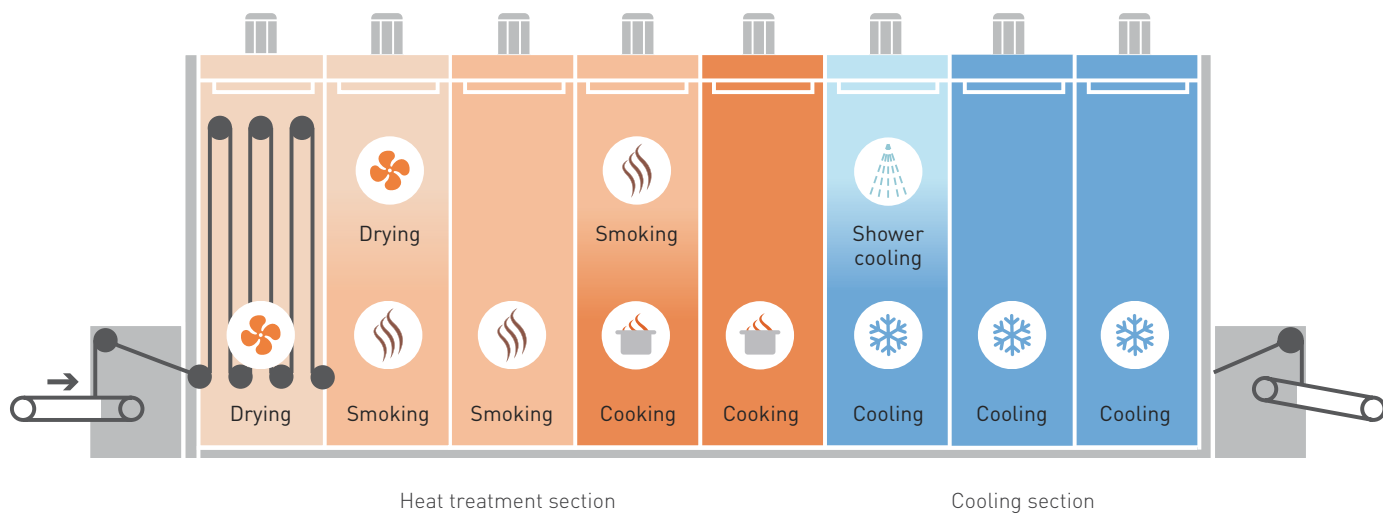
Process technology tailored to optimum sausage production. Short chamber sections that can be individually regulated in temperature and moisture level result in **weight savings** greater than those in comparable systems or batch plants. The yield from TF4000 significantly speeds up amortisation of the investment.

Automation for easier work processes and increased profitability. You yourself determine which degree of automation is most useful for you.

Continuous processes require a high level of **availability** and **ease of maintenance**. TF4000 makes fault analysis easy thanks to its modular system and quick maintenance of functional groups.

Production stages of a TF4000 (8 chamber section transfer)

 Temperature and moisture can be controlled separately in each chamber section.



All to your customers' liking.

We have a diverse customer base spread throughout the entire world. Just as diverse are the products we create using our plants. TF4000 meets the highest quality and yield standards. The product is unsurpassed in uniformity of colour and flavour.



HOT DOG:
Cellulose or collagen sausage



BACON:
Natural smoke or liquid smoke



BRATWURST:
Extrusion process



VIENNA SAUSAGES:
Sheep casing



CHICKEN HOT DOG:
Cellulose casing



PAPRIKA BOLOGNA:
Caliber 90



SLASKA:
Pork casing



COCKTAIL VIENNA:
Natural casing or collagen casing



Designed for unique sausage.

The multifunctional **TF4000** by FESSMANN combines the basic elements of meat production: drying, smoking, cooking, cooling. In the TF4000 continuous transfer plant, products pass through several heat treatment and cooling sections, more specifically the drying, smoking, shower cooling and cooling zones, and then exit the continuous line ready for packaging. As an option, the heat treatment elements can be equipped with any FESSMANN components for drying, smoking and cooking or can be combined for a multipurposed section for different products. The cooling elements can be equipped with showers, recirculating ice water or brine showers.

Automated processes increase production capacities and reduce operating costs to a minimum. Steps such as loading, unloading or transporting and cleaning the feed trolleys are no longer necessary. Technically, personnel is only needed for feeding and for monitoring the production processes.

- continuous production
- all types of casings can be used (cellulose, natural, collagen etc.)
- output of up to 8 tons per hour possible
- both natural smoke and liquid smoke can be used



Hygiene protection using a water shower to rinse off sausage particles.



Loading unit for TF4000.



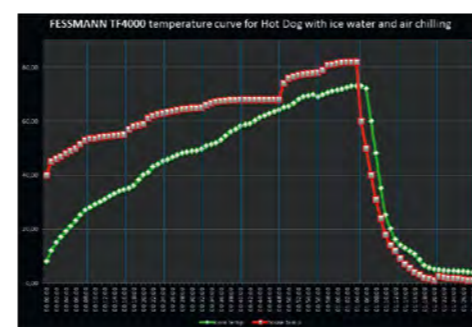
Automatic robot loading from filler to TF4000.



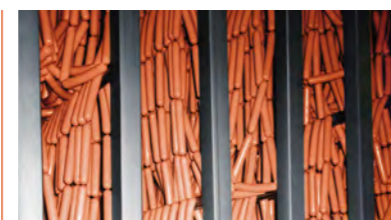
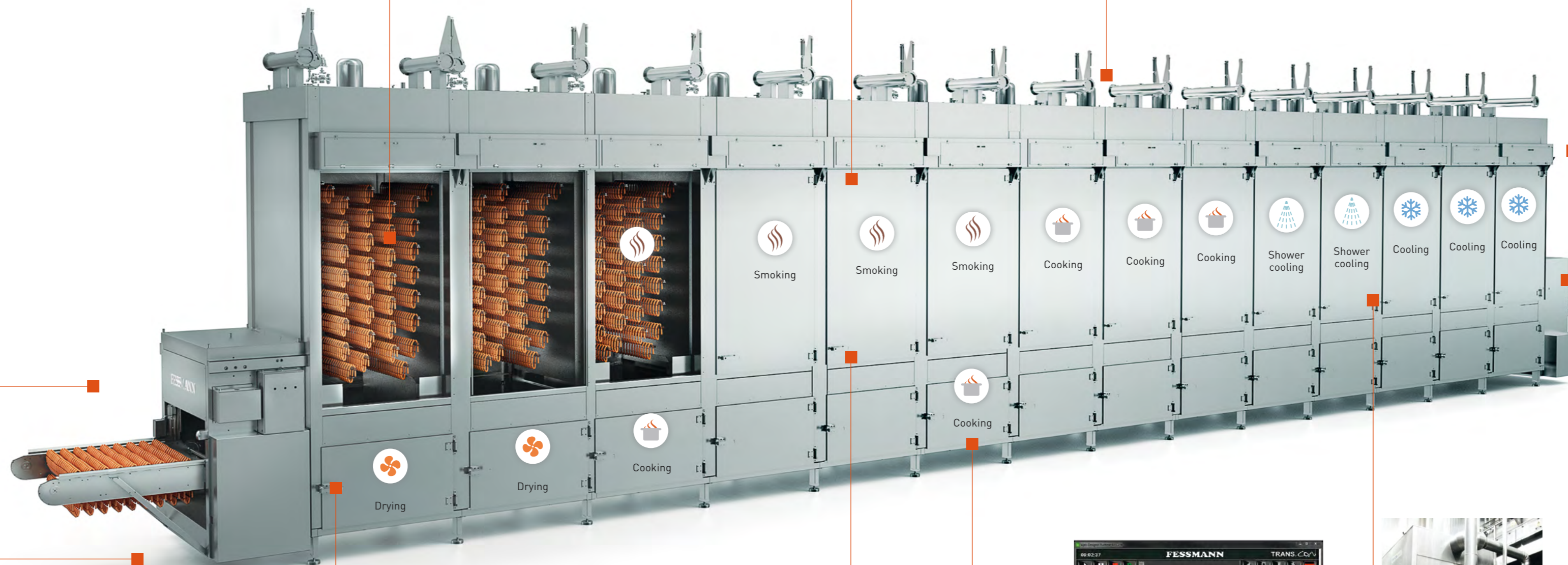
Liquid smoke unit with showers in circulating tank and storage tank as well as rotation filters and pumps.



Stick return belt with optional stick cleaning.



Temperature curve ideal for drying, smoking and cooking with a high level of quality and uniformity.



Excellent flexibility in usage thanks to sausages with cellulose casing, sheep, hog and collagen casings.



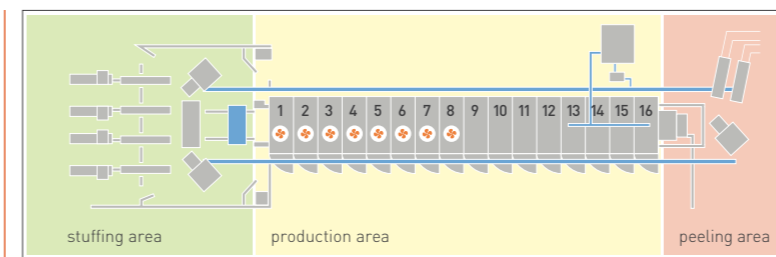
Example of sausages with hog casings.



Example of sausages lying flat in a basket for smoking.



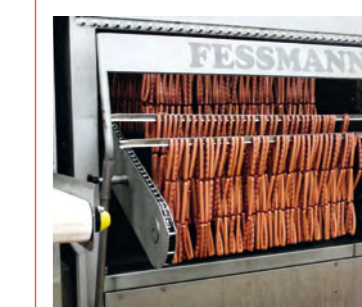
Natural smoke generators with wood chips that can be connected as needed to achieve the desired level of smokiness.



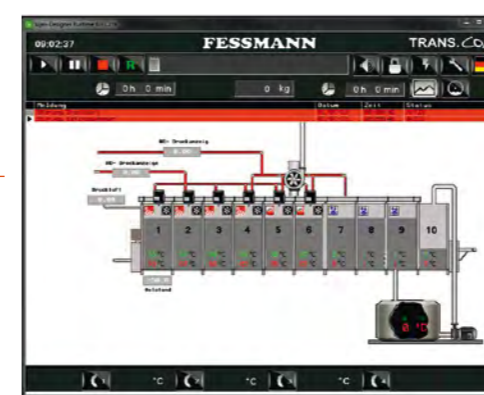
Optimal separation of "low risk" and "high risk" zones on minimal production area.



Modular construction system for rapid fault analysis and quick maintenance.



Exit section for further processing by hand.



Small treatment zones with individual temperature and moisture regulation for improved quality and yield. Easy-to-operate touch control for programming, documentation and clear visualisation.



Irrigation cooler for ice water and brine refrigeration cycle with filter systems.



Sausage output ready for direct transfer to packaging.

All benefits at a glance

- Significant savings in energy costs
- All smoke systems can be utilised
- Uses only 25 % of the space that batch systems use - for maximum yield on minimum space
- Fully automated control and monitoring of production processes
- Temperature and moisture can be controlled separately in each treatment zone
- Unrivalled hygiene, separation of infeed and output of goods (HACCP)
- Excellent quality in colour and flavour with less weight loss than other batch plants
- Option of automating the loading and unloading processes
- Consistently high product quality increases process and quality reliability
- Short installation and commissioning times

Our hygiene concept for your product and process safety.

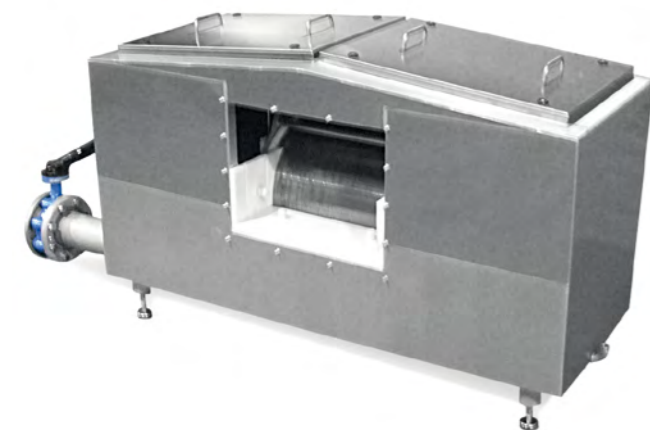
The reliability of TF4000 is rooted in preventive safety measures, such as transport chain monitoring and care as well as specific safety measures for the highest level of hygiene.



Cleaning of the entire line is a prerequisite for hygienic production. TF4000 offers automatic CIP with foaming and rinsing. It also integrates adjacent components, such as air ducts, cooling circuit, smoke tube etc.



The **reliability** of TF4000 is rooted in a **low-maintenance design** with easy access and simple fault analysis. This makes TF4000 a reliable partner in production.



The **ice water** and **brine circuit** feature a filtering system for coarse and fine dirt, thus reducing the formation of germs in the refrigeration circuit. In addition, the cooler is equipped with a skimmer to eliminate the layer of grease. These measures raise the hygienic conditions to the highest level.

Produce maximum quality on minimal space.

Examples of products, production capacity and line length. We will gladly create a design specifically tailored to your individual products.

CALIBER 19

- Capacity: 2,300 kg/h
- 10 hot chamber sections and 4 cooling sections
- Casing: sheep skin

CALIBER 22

- Capacity: 8,200 kg/h
- 13 hot chamber sections and 5 cooling sections
- Casing: cellulose
- ice water shower

CALIBER 20

- Capacity: 2,000 kg/h
- 6 hot chamber sections and 3 cooling sections
- Casing: cellulose
- Natural smoke with air cooling and shower

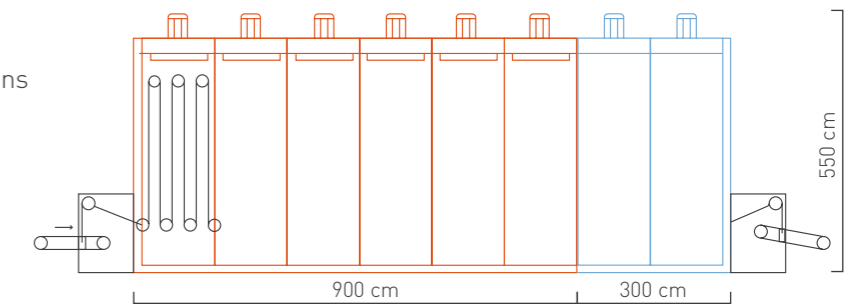
CALIBER 26

- Capacity: 5,000 kg/h
- 11 hot chamber sections and 4 cooling sections
- Casing: collagen with natural smoke and ice water shower

CALIBER 21

- Capacity: 3,700 kg/h
- 6 hot chamber sections and 2 cooling sections
- Casing: cellulose
- Liquid smoke and brine shower

Example TF4000 Caliber 21 (8 chamber section transfer)
H 550 x D 230 x W 1200



FESSMANN GmbH & Co KG

Herzog-Philipp-Straße 39, D-71364 Winnenden, Phone +49 (0) 7195 701-0,
Fax +49 (0) 7195 701-105, info@fessmann.de, www.fessmann.de

Subject to technical modifications, system photos may deviate from standard, version 09/2014