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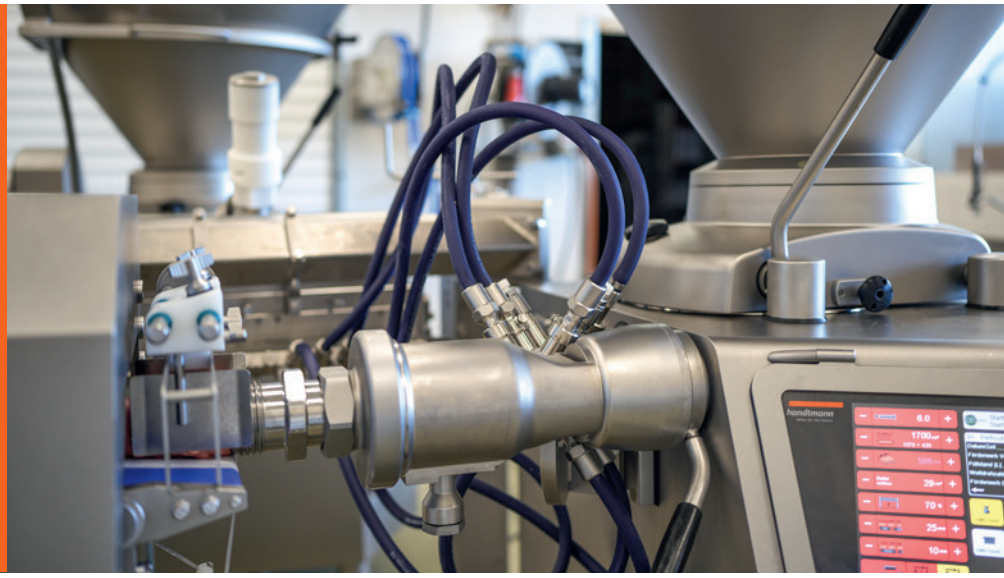
Ideas for the future.

FME 570 FORMING AND MARBLING UNIT

Process for the industrial production of steaks, fillets, bacon, or cooked ham based on alternative proteins.



The modular system solution offers the option of producing plant-based whole cuts such as steaks, fillets, or cooked ham. The design of product texture and realistic imitation of naturally grown pieces of meat can be flexibly customized, such as the ratio of fat and meat substitute product, coarse of fine structuring and marbling, or product shape and appearance.

ADVANTAGES

- Automated production of realistic alternatives to cuts of meat through co-extrusion with a high throughput
- Product diversity thanks to modular and flexible system solution
- Gentle feeding and co-extrusion process for first-class product quality and appearance
- Flexibility for upstream and downstream processes
- Sophisticated and optimally synchronized system technology for continuous processes and consistent production reliability

MODULAR PRODUCT SOLUTION FOR WHOLE CUTS

The system comprises two vacuum filling machines for the separate pumping of meat and fat substitute products, a FST 544 flow divider, the FME 570 forming and marbling unit, and a GMD 99-2 or GMD 99-3 portioning unit for the portioning of the co-extruded product strand.

The ratio of fat and meat substitute product is easily set on one of the two synchronized vacuum fillers. In a 2-step process, the FME 570 forming and marbling unit creates irregular fine marbling and well-defined coarse fat texturing.

Production output of 1,000 kilograms per hour is possible, depending on the product. The particularly gentle feeding and co-extrusion principle ensures gentle processing also when using chunky and fibrous initial products (meat phase) or initial products of varying viscosities. Individual product shapes and appearances, the definition of fat sections in the product, flexible setting of the desired coarse texturing, asymmetrical and adjustable fine marbling, as well as targeted agitation ensure consistent premium product appearance.

A variety of downstream processes, such as forming and cutting, clipping, cooking, smoking, and more is possible. The modules of the system solution can also be used for the fine marbling of fillets or cooked ham, the coarse texturing of bacon, or as a combination for steaks or vegan mince, all depending on the product.
For cooked ham, a clipper can be connected as an alternative to the marbling unit.

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BASIC EQUIPMENT

- Master: VF 828 S, Grinder drive required
- Slave: VF 818 S or VF 600 S with PCK3
- FST 544-24 S, FST 545-12 S, FST 546-8 S
- FME 570 forming and marbling unit

OPTIONS

- Forming unit for defined marbling patterns in the product
- GMD 99-3 or GMD 99-2
- Clipper (provided by the customer)

TECHNICAL DATA	
Lanes	Single-lane
Capacity	up to 1,000 kg/h
Technical prerequisite of the VF	Master: min. VF 828 S4 with grinding drive, X30, X54/V24, X72 (GMD 99-2) Slave: min. VF 818 S4/VF 600 with PCK3, X30, X54/V24, X71 (FST)
Servo-driven flow divider	FST 544-24 S, FST 545-12 S, FST 546-8 S
Machine dimensions	Length: 4,200 mm Width: 4,200 mm