

PREMIUM-QUALITY MINCED MEAT PRODUCTS

From filling and portioning through to packaging





MINCED MEAT PRODUCTION AT PREMIUM LEVEL

Product quality and automation in a single step

PERFECT INTERPLAY OF ALL COMPONENTS

Inline grinding technology integrated into the overall process

Handtmann production solutions for minced meat provide high evacuation, gentle grinding and highly accurate portioning. Characteristics that are key for the production of fresh, top-quality minced meat.

The Handtmann minced meat portioners, in conjunction with Handtmann vacuum filling and inline grinding system technology, make up the ideal production line that meets the stringent requirements for modern minced meat production. Hygiene and bacteriological aspects play a significant part in this. Since the Handtmann inline grinding technology does not generate any substantial product heating and the minced meat portioning lines can be directly integrated into downstream packaging units, the risk posed by heating or contamination through manual handling is practically eliminated.

Handtmann is therefore the right choice for those who value first-class minced meat quality. An automatic process without non-productive times or risk of contamination. From automatic feeding, through to the constant vacuum filler product flow and exact portioning using the minced meat portioner, to precise positioning of the product into the tray.

PRODUCT QUALITY

- Gentle cutting concept in the inline grinding system for clear particle definition and first-class product presentation
- Excellent product colour stability and shelf life due to outstanding evacuation

ECONOMIC EFFICIENCY

- Premium product quality with maximum productivity
- Reduced number of process steps due to integrated grinding optimises production costs
- Cost reduction due to excellent portioning accuracy

FLEXIBILITY

- Various final hole plates for a more compact or looser product appearance
- Wide variety of possible products, such as minced meat portions, rib burgers, cevapcici, meatloaves, etc.

PROCESS RELIABILITY

- Automatic separating system for gristle guarantees product and process reliability
- Perfect hygiene conditions due to hygienic design and a reduction in manual intervention

AUTOMATION

- Compatible with commercially available minced meat depositors and tray dispensers
- Simple integration into the complete solution with collating and depositing into thermo-forming and packaging machines

The requirements for an automatic portioning system for minced meat are demanding and varied. Handtmann therefore offers a modular system that adapts to the individual production circumstances. One component of the system is the integrated inline grinding technology. The minced meat portioning line from Handtmann therefore represents a technical and technological overall concept for increasing product quality and the economic efficiency of production.

The grinding process

The type of grinding is critical for the quality of the products. Key factors are as little mechanical handling as possible and very gentle cutting. With the Handtmann inline grinding system concept, the product is ground to its final grain size and simultaneously portioned in one process step. Independently controlled feed and cutting speeds facilitate flexible adjustment of the cut size. The tried-and-tested Handtmann vane cell feed system ensures a constant, positive flow of product. This results in a cleaner cut. The gentle separating system does not heat up the product. At the same time, air is removed efficiently from the vacuum filler feed system. The Handtmann inline grinding system concept also allows for a variety of preferences in terms of minced meat product presentation: "eye-shape" hole plates can be used for a looser minced meat portion presentation or "letterbox" hole plates for a compact product structure.

GD 451 inline grinding system for VF 800

The ratio between portioning speed and cutting speed can be optimally adapted to a variety of products by means of the separate drive. A powerful servo drive with extremely high speed guarantees top filling capacities.

- Processing of very cold products
- High filling capacity even with fine-grained end products
- Capacity reserves in the event of production peaks
- Low maintenance
- Service interval of 2,000 operating hours



GD 93-3 inline grinding system for VF 600

With the GD 93-6 minced meat attachment and GMD minced meat portioner, the GD 93-3 inline grinding system is the solution for reliable and economically efficient, high-quality minced meat production, which has been tried-and-tested over many years.

- Proven, gentle cutting technology
- Dependability and process reliability within the system
- Can be flexibly equipped with various cutting sets





MINCED MEAT LINE VF 800 WITH GMD 99-3

GD 451 inline grinding system and GD 452 minced meat attachment

A new minced meat portioner in combination with state-of-the-art inline grinding technology and state-of-the-art VF 800 vacuum filling technology meets all the demands placed on top production standards. The most modern and most state-of-the-art technology on the market. It is ideal for high-performance and reliable production of all types of minced meat products.

A special feature of the new line is the travelling, servo-driven separating principle during continuous filling machine operation. The 2-belt principle with independent drives makes it possible to set the speed difference between the outlet and inlet belt. The first belt (inlet belt) piles up the minced meat to the desired appearance (ripples) and the travelling blade separates the strand into individual portions. The second belt (outlet belt) runs faster than the first belt, which creates the desired gap between the portions. Separating the product via the blade edge at the inlet belt creates well-formed products with the specific ripples required on the product. Furthermore, the products are transferred to the downstream systems precisely, which is important for reliable depositing of the products into packaging.

PERFORMANCE PARAMETERS

- Production output up to 200 portions/min.
- Product height up to 80 mm

OPTIONS

- Separating with wire cutter (for products such as marzipan, cheese, etc.)
- Scraper for blade to prevent products from sticking



PRODUCTION AND

GD 451/GD 93-3 inline grinding system

- Product width 60 mm to 90 mm with letterbox-shape hole plate
- Product width 80 mm to 130 mm with eye-shape hole plate
- Pre-grinding to approx. 4 times the final grain size
- Use of a 3-part or 5-part cutting set
- Automatic separation

GD 451-30 VOLUME SEPARATOR IN CONJUNCTION WITH THE VF 800 S AND GD 451 INLINE GRINDING SYSTEM

With each separating cycle, the volume separator collects a defined quantity of gristle and discharges the separated product. When the separated product is ejected, the missing weight is automatically compensated for by the VF 800 control system. Accurate weight portioning is the result. Less lean meat but more gristle and sinew is therefore separated out. This results in product reliability coupled with cost savings.



MINCED MEAT LINE VF 600 WITH GMD 99-2

GD 93-3 inline grinding system and GD 93-6 minced meat attachment

The tried-and-tested combination of VF 600 vacuum filler, GD 93-3 inline grinding system with GD 93-6 minced meat grinding attachment and GMD 99-2 minced meat portioner is easy to operate via the VF 600's monitor control system. Only a handful of parameters need be set in order to operate the minced meat line reliably. Full production capacity with outstanding weight accuracy is available immediately. For minced meat production with maximum production hygiene.

Minced meat, a sensitive product, is efficiently evacuated in the VF 600 vacuum filler in order to substantially reduce the residual air content in the final product. The result of this is a far longer shelf life. The coarsely pre-ground product is only ground to its final grain size when it passes through the Handtmann VF 600 and the inline grinding system. Appealing product presentation and reliable colour stability are thus guaranteed. With a production capacity of up to 140 portions per minute, coupled with excellent portioning accuracy, it is the right solution for efficient production of a wide variety of minced meat products.

PRODUCT DATA

With GD 452/GD 93-6 grinding attachment

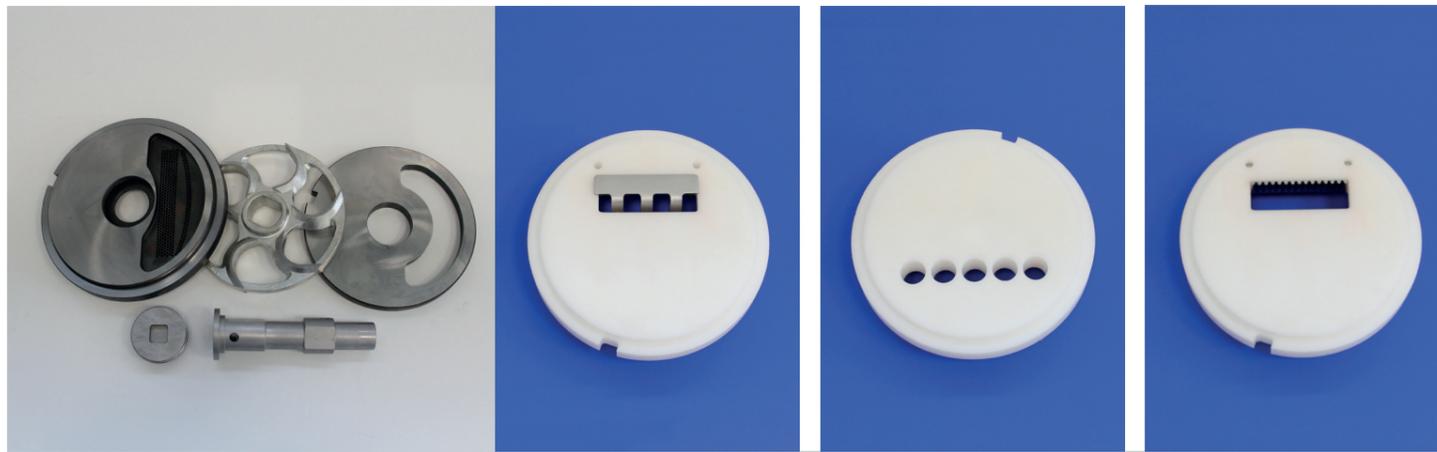
- Product width 80 mm to 160 mm with the letterbox-shape hole plate
- Product width 140 mm to 220 mm with eye-shape hole plate
- Pre-grinding to approx. 2 times the final grain size
- Use of a 3-part cutting set
- Automatic separation



PERFORMANCE PARAMETERS

- Production output up to 140 portions/min.
- Product height up to 75 mm





MINCED MEAT PRODUCTION IN AN INTEGRATED PROCESS

Increase in efficiency due to turnkey solutions

The minced meat portioning line from Handtmann is a flexible basic module for integrated processes for automatic minced meat production. Integration into compact process solutions through to packaging makes professional automation and rationalisation options possible.

The perfect interplay of the grinding and portioning process steps in conjunction with the tray feeding automation option or depositing into thermo-forming machines for extremely high production standards. The line's integration into downstream packaging processes and its compatibility with commercially available packaging machines facilitate a range of professional automation options for exacting production demands. Integration is easy and fast thanks to the flexible vacuum filler control technology.

Depositing into trays

Connecting the Handtmann minced meat line to compatible minced meat depositors and tray dispensers provides a maximum-efficiency turnkey solution for minced meat production. Simple synchronisation and a modular design provide flexibility in the choice of minced meat depositor and tray dispenser. Therefore, a diverse range of tray shapes, sizes and types can be used. The INTRAY EASY LOADER is the efficient turnkey solution with fast denesting and fully-automatic depositing of the products into trays.

Depositing into thermo-forming machines

The Handtmann minced meat line can be easily integrated into an automatic overall process with portioning, collating and depositing into thermo-forming machines or other similar packaging machines. For example, the GEA FlexLoader picks up minced meat portions up to a width of 250 mm and automatically loads them into a thermo-former.



Weighing system integration

The new WS 910 weighing system from Handtmann offers cost reduction through minced meat products with guaranteed accurate-to-the-gram weights in every packaging unit. It is particularly useful in the application areas of minced meat and in the production of formed products.

The WS 910 weighing system with the SB 912 sorting belt is always part of a turnkey solution, integrated into a production line for process monitoring. The main functions comprise production control, monitoring and weight control, as well as ejecting under- or overweight portions after the forming and portioning process.

The weighing system forms part of the Handtmann LineControl concept. This ensures user-friendliness, as product selection is carried out via the vacuum filler. The scales and the communication are automatically set on the line. This results in process reliability through line efficiency.

HCU
HANDTMANN COMMUNICATION UNIT
Software for planning, controlling and optimising the filling department

- + Production networking for planning, controlling and optimising the filling department
- + Significant cost reduction thanks to WS 910 weighing system
- + Reduction of give-away

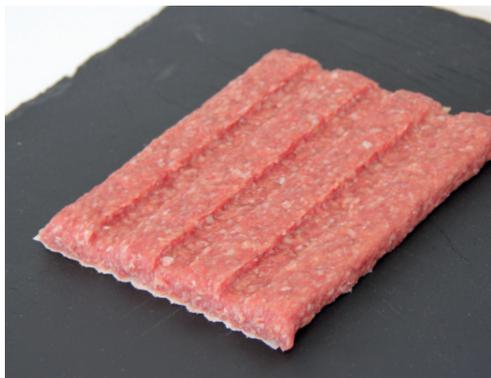
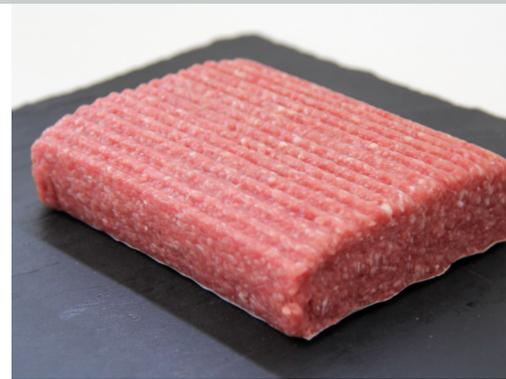
HMC
HANDTMANN MACHINE COCKPIT
Cloud integration of Handtmann machines to increase machine availability

- + Service support
- + Enhanced maintenance planning and troubleshooting
- + Increase of machine availability

HMF
HANDTMANN MONITORING FUNCTION
Automatic parameter monitoring to avoid misproduction

- + Definition of upper and lower limits for different parameters, e.g. vacuum, filling product temperature, pressure and other parameters
- + Automatic machine stop when parameters are exceeded or undercut





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