

VACUUM FILLING TECHNOLOGY
VF 800

handtmann
Ideas for the future.

HANDTMANN VF 800 VACUUM FILLING HAS A NEW NAME



THE
ORIGINAL

FORWARD-THINKING IN EVERY RESPECT

Gentle feed principle

No-compromise premium processing quality

Less load on the products

Improved performance and

Long life of the feed system components

Reliable portioning under vacuum

Up to 20 % longer maintenance intervals

Compatible with many auxiliary machines
and automation solutions

Robust and low-maintenance vacuum pump

Hygienic, low-maintenance

Various hopper versions for a wide variety of applications

Automatically monitored product quality

High level of food safety

Variable grinder speed, regardless of the transport speed

Perfected, adjustable vane cell feed system
with weight compensation

Long-term stable weight accuracy

Improved performance available on demand

Precise feeding of difficult to transport and sensitive products

Specially-developed, high-end servo drives

External surfaces of the machine are easy to clean

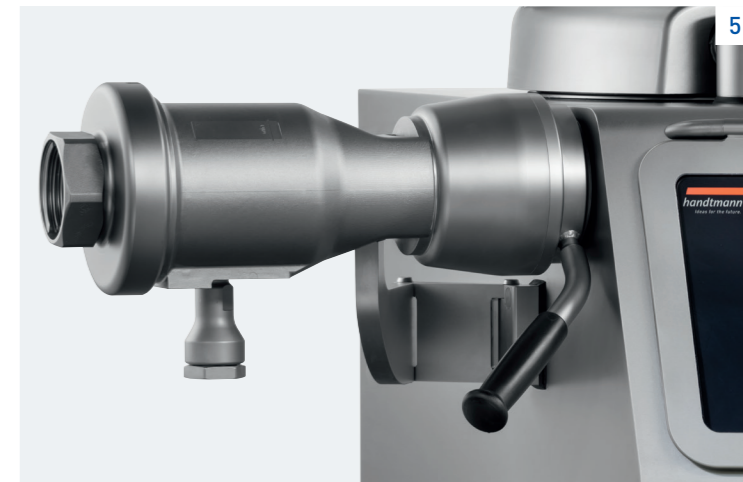
Cleaning quality can be easily controlled

Automatic pre and interim cleaning
of the feed system and hopper

Improved ergonomics for fatigue-free operation

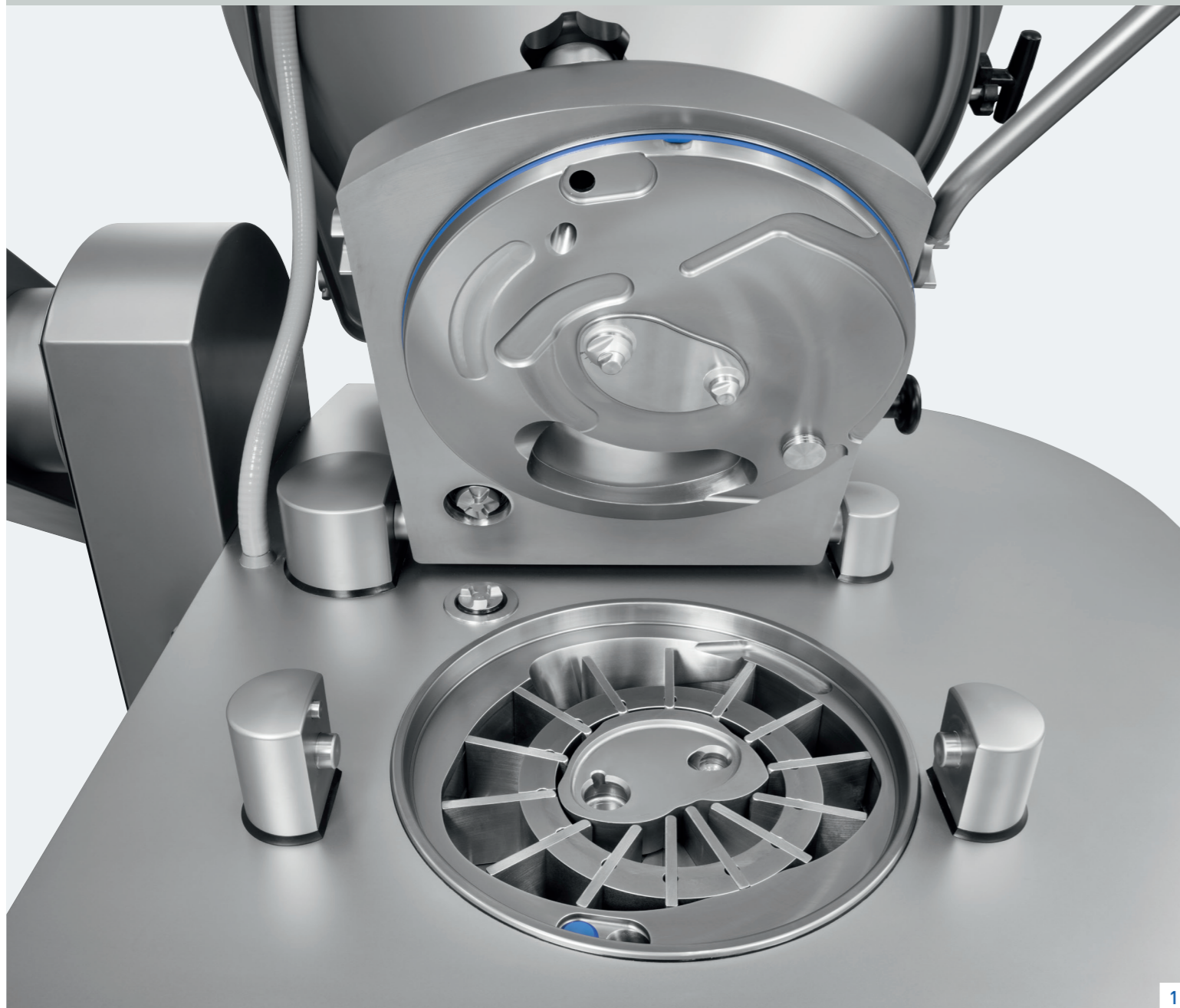
For the development of the new VF 800 series, Handtmann has taken a leap forwards in terms of innovation. It was not just about optimising and enhancing individual features or machine assemblies. It was about the machine in its entirety, about new standards in the field of Vacuum Fillers. Experience from more than 60 years of producing machines for the food processing industry was incorporated into the development, as were the findings from continual dialogue with customers from all over the world. Requirements and preferences voiced by managing directors, production managers, those responsible for technology and quality and, just as importantly, by machine operators were systematically recorded and taken into consideration.

And the impressive outcome – more than 100 new innovations. Including numerous developments patented by Handtmann which provide your company and your employees with added value in every respect.



QUALITY IS WHEN THE CUSTOMER WANTS MORE

The VF 800 creates perfect product appearance to the very core



Food must be pleasing to the eye. Therefore, it is not only long-term stable weight accuracy precise to the gram that is important but also the appearance of your products. Whether it be sausages, meat, cheese, dough, fish, fillings or delicatessen products – how they look in the packaging and on the plate is a key factor for initial purchases and for the rebuy rate.

THE 5 TOP QUALITY ADVANTAGES

- Gentle feed principle
- Reliable portioning under vacuum
- Automatically monitored product quality
- High level of food safety
- Variable grinder speed, regardless of the transport speed

Vane cell feed system: the ultimate for premium products | 1

Handtmann put its trust in the vane cell feed system principle as early as with the first Vacuum Filler series in the 1960s. Since then, the feeding technique has been constantly developed and has reached new heights in the VF 800 series. This process not only concentrated on perfecting the weight accuracy, the major focus was on systematically tailoring the feed channels in order to protect the product. And the result is virtually no stress on the product during the portioning process.

Reliable and gentle feeding as standard

The performance and robustness of the intelligent vacuum system have been enhanced and, in conjunction with the optimised intake geometry of the feed system, they guarantee reliable and gentle feeding, even with difficult products. In order to achieve this, the inflow hopper has also been optimised in terms of flow and the shape of the auger has been enhanced. As an option, it is not only possible to adjust the level of the vacuum within the 50-100 % range but also within the 0-50 % range, which ensures perfect product appearance when processing aerated and sensitive products.

Automatically monitored product quality | 2 | 3

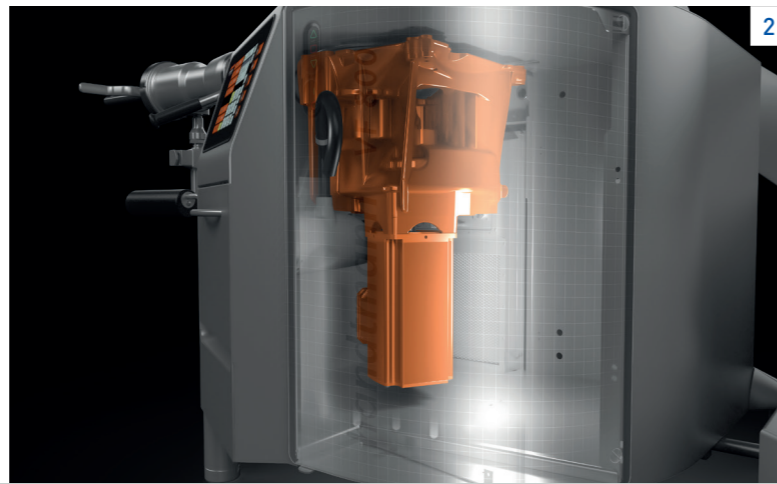
The dream of every quality manager has come true: on the basis of pressure, temperature, vacuum and drive load, the vacuum filling machine monitors the situation in the feed system and reports potential causes of impaired quality in good time via the control system and the optionally available signalling lights. The risk of expensive rejects is therefore significantly reduced.

Food safety is the priority | 4

All the non-metallic parts of the VF 800 in food contact areas can therefore not only be discovered by a metal detector and are FDA-compliant, they can also be easily detected visually thanks to their blue colour. Furthermore, the scrapers in the hopper are designed to ensure that they cannot be lost or break and all lubricants are suitable for food use (USDA H1 approval).

New GD 451 inline grinding system and GD 452 minced meat attachment | 5

The Handtmann inline grinding system has become indispensable for many minced meat and dry sausage product processes. Therefore, great importance was placed on the demands on the grinding technology during the development of the VF 800 machines. The newly-developed GD 451 inline grinding system was completely redesigned. A powerful servo drive with 45 % higher performance and 110 % higher speed guarantees top filling capacities even at low temperatures. Due to the separate drive, the ratio between the portioning speed and the cutting speed can be optimally adjusted in line with the various different products. Both parameters are stored in the product memory and thus ensure a high degree of process reliability and a constantly high product quality.



EVEN MORE PRECISE

The VF 800 sets new standards in terms of weight accuracy

Portioning accuracy and the name Handtmann are inseparably linked with one another. In the past, we have improved the portioning accuracy with every new vacuum filling machine series. And this has also been continually optimised within the series. With the new VF 800, the bar has been successfully raised even higher. All the factors which influence precise portioning were systematically taken into account during the development phase.

Reliable feeding and cell filling | 1

The starting point for accurate weight portioning is transportation to the feed system. Only if the cells of the vane cell feed system are filled completely can accurate weights be attained. With the new and particularly high-performance VF 800 series vacuum system, even glutinous, highly-viscous products are fed in reliably but also gently with a high output. Depending on the product consistency, the auger and the counter arm support this process. The patented Handtmann vacuum slider ensures a high degree of functional reliability and air-free filling of semi-viscous products without leakage into the water separator.

Mechanical switching accuracy and dynamic control of the servo drives

Handtmann servo technology ensures a powerful and also energy-efficient system, comprising individually programmable software, high-end amplifiers and high-performance servo motors. The precise positioning of the drives results in first-class portioning accuracy. The dynamic and individual configuration of acceleration and deceleration makes it possible, for example, to adapt product ejection to sensitive products and sausage casings.



Stable construction of the drive and feed unit | 2

A great job has been done. The construction of the drive unit has been designed for double the service life. The rigidity thus achieved ensures that there is no distortion, even with maximum filling pressures. The feed system's locking mechanism has also been optimised with this in mind and it has been fitted with a long lever that facilitates reliable locking with the minimum of force.

Perfected, adjustable feed system | 3

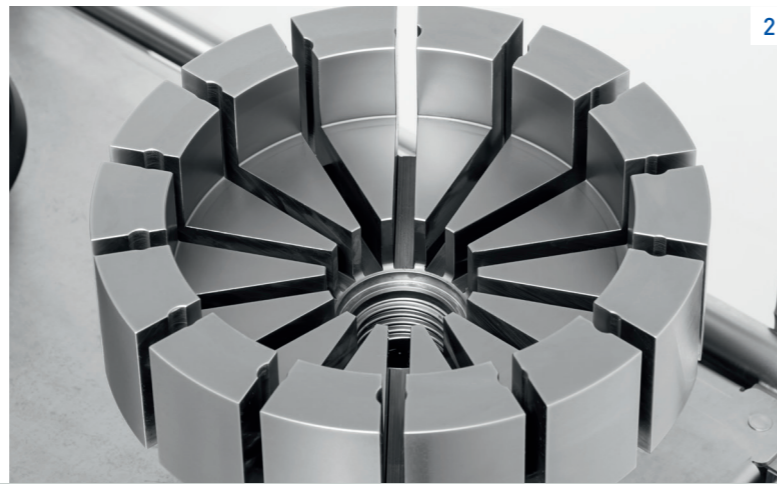
The new geometry of the vane cell feed system not only ensures extremely gentle feeding but also, above all, a leakage-free product flow without backflow. The Handtmann-patented weight compensation has been optimised in response to feedback and plays a significant part in weight improvements. The materials were chosen in line with high wear resistance standards, therefore the portioning accuracy remains stable for a long period of time. Naturally, the VF 800 feed system is adjustable, resulting in a considerably longer feed system component service life in comparison to other feed system principles.

Weight control with HCU

Most foods are natural products whose characteristics are not consistent, even with standardised production processes. For example, the relative density of a product can vary from batch to batch due to changes in temperature. This may result in differences in weight, despite highly-precise volumetric portioning. The solution is the Handtmann Communication Unit (HCU) which enables the Vacuum Filler and the checkweigher to be networked, thereby cancelling out weight differences caused by density. Portioning accuracy to the power of two.

THE 5 TOP ACCURACY ADVANTAGES

- Perfected, adjustable vane cell feed system with weight compensation
- Long-term stable weight accuracy
- Precise feeding of difficult to transport and sensitive products
- Specially-developed, high-end servo drives
- Automatic weight control with HCU



2



3



4

THE NEXT MAINTENANCE CAN WAIT

The VF 800 boasts impressively low wear and a long service life

Every unplanned machine downtime hurts as it wastes time and money. Therefore, regular maintenance is an absolute must to ensure that the machine works reliably. On the other hand, the lower the maintenance costs the better. The VF 800 maximises service life thanks to the robust, durable components which are also easy to clean. As less maintenance means higher productivity.

Premium level processing quality | 1

Quality does not involve compromises. This is what Handtmann is known for. With the development and production of the VF 800 Vacuum Fillers, a new chapter has been opened up in terms of the level of quality: no-compromise premium quality down to the last detail. For example, the drive components have been designed for double the service life. The product feeding components are also even more stable.

Wear-optimised, adjustable feed system | 2

The central component of the Handtmann vacuum filling technology has not only been reworked for the new machine series, but extensively changed and optimised. Top-quality material combinations which ensure low wear are used. Expensive components, such as the pump housing and the rotor, are specially tempered and wear significantly more slowly, thus lower maintenance costs are incurred during

the life cycle of the machine. Naturally, the VF 800 feed system is adjustable, resulting in a considerably longer service life of the feed system components in comparison to other feed system principles.

Up to 20 % longer maintenance intervals | 3

Thanks to intelligent sensor and control technology: the usage rate of the vacuum filling machine is constantly recorded; with low load, the maintenance cycle automatically lengthens to 2,400 instead of 2,000 operating hours. A Handtmann patent that pays dividends.

Vacuum system for extremely high loads

Everyday production at industrial producers places extremely high demands on the reliability of the vacuum system. The vacuum pump, developed specially for the VF 800 machines, is the impressive answer: the 40 m³/h unit has a 25 % larger oil volume and a massive 60 % larger filter.

Low-maintenance GD 451 inline grinding system | 4

Those responsible for maintenance place a great deal of importance on the inline grinding system, as cutting sets must be replaced and sharpened regularly in order for optimum product results to be achieved. With its defined tightening torque, the Handtmann torque wrench ensures that the cutting set is ideally mounted and therefore lasts longer. The construction of the GD 451 inline grinding system has also been completely redesigned and the outcome is impressive: the maintenance interval has doubled, despite a 45 % improvement in performance.

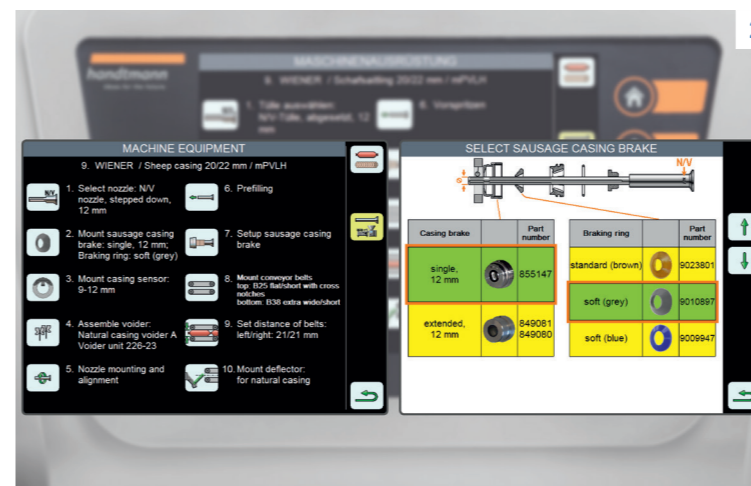
THE 5 TOP MAINTENANCE ADVANTAGES

- No-compromise premium processing quality
- Long life of the feed system components
- Up to 20 % longer maintenance intervals
- Robust and low-maintenance vacuum pump
- Hygienic, low-maintenance inline grinding system

1



1



2



3

IN NEXT TO NO TIME

The VF 800 has also been made with people in mind. Everything is easily accessible and simple to operate.

Ergonomics, easy-clean components and simple handling save an enormous amount of time and money. Of course, focussing on the operator when a machine is being engineered and designed takes up a great deal of time. But it is worth it. For your employees, for you and, at the end of the day, for the quality of your products.

Smart partner with excellent social skills

What is the ideal colleague like? He should be reliable and easy to get along with, he should think for himself and be supportive and he should speak your language. The control system of the VF 800 vacuum filling machine speaks 28 languages, does a great deal of set-up work for the operator and also boasts intelligent assistants who successfully instruct even untrained operators.

Levelling assistant for easy and fast alignment | 1

This Handtmann-patented feature makes aligning the machine as easy as ABC. An integrated position sensor records the exact position of the machine. The control system displays this graphically and gives advice on correct alignment: "Just unscrew the left, rear foot of the machine one more turn – perfect!"

The Machine Setup Assistant (MSA) makes setup easier | 2

With the wide variety of different products, it is easy to lose track of the right equipment and settings. At times like this, the MSA helps to select the correct parts and to start up the machine so that it runs reliably.

THE 5 TOP HANDLING ADVANTAGES

- Intuitive monitor control in 28 languages
- Intelligent assistance function for aligning and setting up the machine
- Ergonomic operating position
- Load-dependent step locking
- Practical storage solutions for parts and accessories



4

Ergonomics is more than just a motto

The control system and the step of the VF 800 Vacuum Fillers are turned towards the operator, the knee lever can be adjusted to numerous settings and is made of soft material. The operator is thus always sure to be able to find the ideal position.

Help for the operator due to improved step | 3

The step's safety switch is only triggered when the operator climbs onto the step. Therefore it can stay folded down while the machine is running. Constantly having to fold the step up and down is a thing of the past. Back protection and increased efficiency – patented by Handtmann.

Practical storage solutions for parts and accessories | 4 | 5

Always have the right equipment to hand with the storage solutions for the VF 800 series. The stainless steel depositing tray is simply attached to the hopper's swivel post, thus providing space for filling tubes, tools and other aids.



5

The particularly high-quality and hygienically designed parts trolleys are the perfect solution for the safe and organised storage of loose parts and accessories. Two sizes are available.

The smaller 449-04 model provides space for all the parts of one filling machine – optionally with or without the GD 451 inline grinding system. The large 449-05 version is ideally suited for two machines: either two Vacuum Fillers or a production line comprising a Vacuum Filler and an auxiliary device. The inserts can be divided individually and hold standard E1 and E2 Euro trays.



2



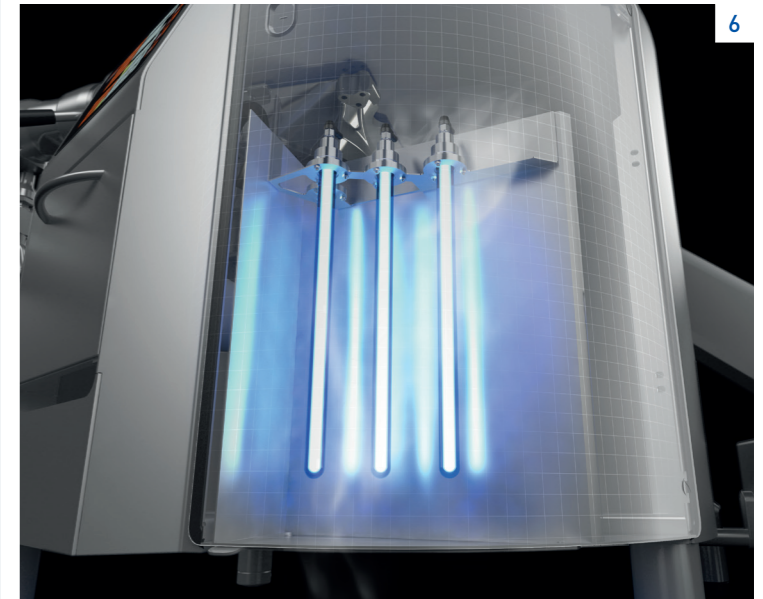
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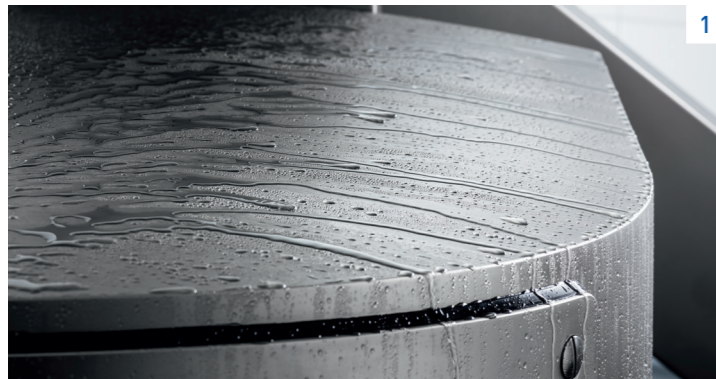


6

HYGIENE ISN'T EVERYTHING BUT WITHOUT HYGIENE THERE IS NOTHING

The VF 800 is designed for assured quality down to the very last detail

The responsibility for safe food lies with the company itself. In-house hygiene checks are therefore extremely important. However, it is even more important to rule out potential hygiene problems from the outset. Starting with hygienic design in accordance with DIN EN 1672-2:2005, through components that can be effortlessly cleaned, to sterilisation of the ambient air by means of short wave UV radiation, the VF 800 lays excellent foundations for hygiene at the highest level.



1

External surfaces of the machine are easy to clean | 1

The new machine design is based on smooth external planes and fast water drainage due to angled or curved surfaces – e.g. on the machine frame, the hopper's swivel post and the arm lifting device. Small gap widths, short seal lengths and few edges ensure that there are no dirt traps.

Cleaning quality can be controlled more effectively | 2

The optimised shape, lower penetration depth and the larger diameter of the water separator make the machine easier to see into and access for cleaning work. The additional lighting ensures that the cleaning results can be checked more easily.

Optimum vacuum slide cleaning reliability | 3

The hygienic vacuum slide is permanently attached, the vacuum seal can be removed and the vacuum channel can be cleaned from the outside without the hopper having to be opened. When the swivel-type hopper housing is opened, the vacuum channel and the vacuum tube are fully visible and the channels are even lit.

Minimised contamination risk from water dripping from the underside of the meat trolley | 4

Water dripping from the meat trolley is diverted by an anti-drip moulding affixed to the basket and it therefore does not drip into the hopper. A patented Handtmann solution for better food safety.

Reliable cleaning | 5

The VF 800 vacuum filling machines are equipped with a cleaning programme for the feed system as standard. This facilitates effective pre-cleaning with warm water up to 90 °C, without any damage to the machine. Optional, patented, automatic pre and interim cleaning of the hopper via a spray head provides additional benefits. In a programme-controlled process, this sprays every single point in the hopper with water, thus reducing the time needed for interim cleaning in the event of a product change or for final cleaning.

Patented UVC ambient air degermination | 6

As an option, the air taken in to cool the machine is guided through an integrated degermination unit. This ensures that airborne germs, such as listeria as well as spores from ageing chambers, are killed reliably and effectively by UVC radiation – totally automatically and "incidentally".

THE 5 TOP HYGIENE ADVANTAGES

- External surfaces of the machine are easy to clean
- Cleaning quality can be easily controlled
- Automatic pre and interim cleaning of the feed system and hopper
- Minimised contamination risk due to anti-drip moulding on the lifting cage
- Patented UVC ambient air degermination



THE VACUUM FILLER FOR ALL-ROUND USE

The VF 800 adapts to your requirements – irrespective of how often they may change

THE 5 TOP FLEXIBILITY ADVANTAGES

- Improved performance and additional functions on demand
- Compatible with many auxiliary machines and automation solutions
- Various hopper versions for a wide variety of applications
- Mobile heating unit for products that are filled when warm or hot
- Automation options for more efficient feeding

Planning reliability is a valuable commodity. Today, everything unfortunately seems less and less plannable. Markets and consumer behaviour are constantly changing, as are the demands placed on a food processing company. It is therefore a good thing that there are flexible production solutions such as the VF 800 vacuum filling machines.

Improved performance on demand

The VF 800 is the first and only Vacuum Filler that grows with your requirements. You choose a model that fits exactly to your capacity requirements. If you subsequently require greater filling capacity you can increase the capacity of your existing VF 800 "S" on demand. The unique and patented scalable machine concept ensures maximum adaptability and significant cost advantages compared with purchasing a new machine.

The suitable hopper solution – guaranteed

It is difficult to imagine how many functions are contained in the geometry and implementation of a hopper. Therefore, as an alternative to the standard single-piece hopper with a volume of 350 litres, the VF 800 vacuum filling machine also offers numerous different hopper versions that can also be combined with a mobile heating unit:

- For a mixed production plan, it is advisable to use the split hopper with a volume of either 160, 240 or 350 litres, of which 90 litres are taken up by the hopper lower part. The split hopper is based on a Handtmann patent and stands out due to fast and ergonomically improved handling in the event of product changes and cleaning.
- For processing semi-viscous products, the 350-litre hopper with rectangular upper part offers advantages. On the one hand, air is prevented from being incorporated when product is poured into the hopper and, on the other hand, completely full containers can be tipped in reliably and hygienically.
- A specially shaped hopper with a volume of up to 550 litres of firm product has been newly developed for larger buffers. 450 litres are available for semi-viscous products. The special feature of this hopper is that it can be loaded conveniently via the attached arm lifting device.

Compatible with many auxiliary devices and machines

The extensive range of Handtmann auxiliary devices facilitates a virtually endless diversity of traditional and modern products. Third-party devices, such as clippers, metal detectors, packaging machines and conveyor belts can also be connected to the Vacuum Filler via suitable sockets. Connectivity at its best. By the way, your new VF 800 Vacuum Filler is also compatible with most of your existing Handtmann auxiliary machines.

Optional hopper temperature control with mobile heating unit

As an option, all hopper versions can be kept at a constant temperature with the aid of a mobile heating unit. Heated water (up to 90 °C) is channelled through the double-wall hopper via a hose connection. A hot or warm product is therefore also kept at constant temperature during the filling and portioning process. The temperature is set on the Vacuum Filler's control system and is stored in the product memory. The temperatures can also be logged. The MH 465 mobile heating unit features two heating circuits, thus making it possible to connect several Vacuum Fillers – including in series. The closed water circuit, with integrated protection against excess pressure, overheating and running dry, facilitates extremely low water and energy consumption as well as very short heating times. Water replenishment, evacuation and pressure compensation are performed automatically, the hose couplings can be closed at both ends and have an anti-drip design in order to protect against scalding.

TE 426 transport unit for the mobility of the VF 800

A useful option for machines that are used in different rooms is the chassis frame for the VF 800 models. With the aid of the Transport Unit TE 426, the Vacuum Filler can be moved by just one person without too much effort – even with the arm lifting device attached.

Automation options for more efficient feeding

With industrial production, the hopper is often loaded more than a hundred times per shift. What could be more beneficial than saving time in this context and therefore improving productivity? Two new features of the VF 800 series make this possible:

- A filling level sensor integrated into the signalling column detects when there is room for another batch in the hopper. The meat trolley in waiting position is then automatically tipped into the hopper without the operator having to intervene.
- The quick-lowering mechanism of the 496 arm lifting device saves even more time. When the "down" button is pressed, the arm lowers at four times the speed.

Separately driven auger prevents the product from separating

With fluid products with chunky components, such as soups and stews, the challenge faced is to prevent the various ingredients from separating out. With the optionally integrated additional drive for the auger, the Vacuum Filler becomes a mixer: the mixing speed can be set and saved in the product memory independently of the portioning speed. This opens up a new range of applications for your VF 800 machine.

Mobile operating unit as an extension of the VF 800 control system

In addition to displaying important information and instructions, the optional mobile operating unit also makes it possible to set important filler control parameters from a distance. The 7-inch screen in tablet form can, for example, be installed at the end of the AL system length unit and it is then powered via the machine. As an option, the mobile operating unit can also be positioned flexibly at other locations, for example on downstream units such as packaging machines or conveyor belts. Signals are transmitted either by cable or via the optional WLAN transmitter unit in the hopper's signalling column.

THE CENTRAL CONTROL AND PORTIONING MODULE

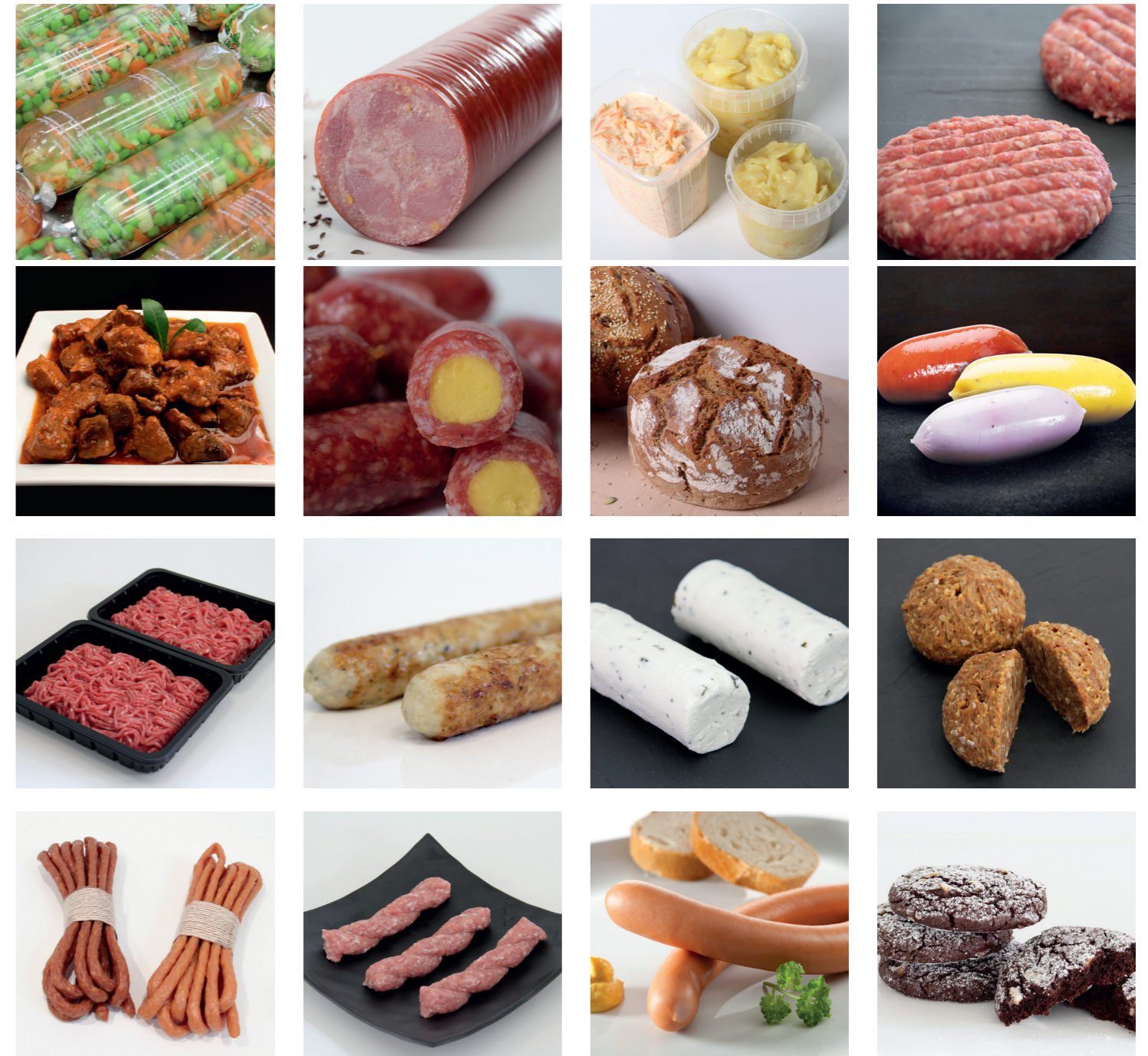
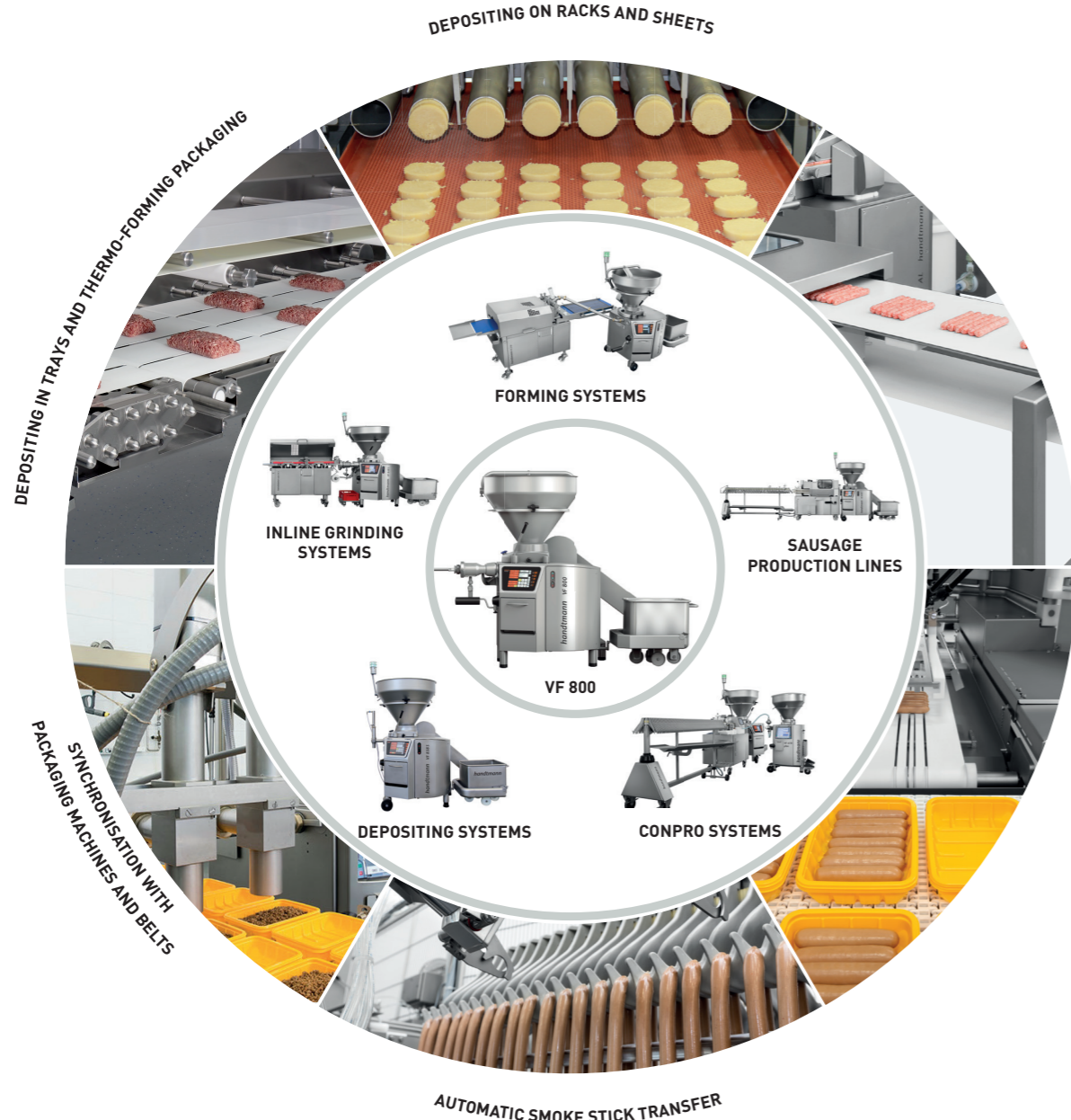
Easy synchronisation with auxiliary devices. Superior control system of overall processes.

The VF 800 vacuum filler is at the heart of the process: it efficiently feeds and controls auxiliary devices, such as an integrated inline grinding system or forming and depositing systems, AL sausage filling lines or ConPro systems. Product handling systems and automation options complete this turnkey solution: be it as individual process steps or fully automatic robot solutions for industrial producers. The process steps are collating, gripping, feeding and depositing. Product handling systems from Handtmann may be individual modules that are used in a wide variety of applications or that function reliably in complete line solutions, such as in combination with ConPro systems, packaging machines, thermo-forming machines or tray sealing units.

POWERFUL IN PROCESSING A WIDE RANGE OF MATERIALS

Chunky. Fibrous. Firm. Inhomogeneous. Cold. Hot. Fluid. Pasty...

The VF 800 provides all the options for a variable production in the areas of meat, baked goods, convenience, fish, vegetables/vegetarian, dairy and more. Optional additional functions moreover allow the suitable vacuum filler configuration for the respective products and production conditions. From soup through to minced meat. From delicatessen salad through to dry sausage snack. From bread dough through to cream cheese.



MEAT PROCESSING SIMPLY SMART



CUSTOMISED PERFORMANCE

The VF 800 is available in nine requirement-specific performance versions

VF 800. INTELLIGENT BASIS FOR DIGITAL SOLUTIONS (HDS)

Individual digital solutions. Networking solutions. Cloud-based solutions.

Handtmann offers a wide range of digital solutions for the processing procedure. Be it system-specific individual solutions, an integrative networking solution or a cloud-based online solution: the first step into a digitally networked food production should always be "simply smart". The reliable connection of production to Industry 4.0 and improved control, monitoring and optimisation of production provide an even higher level of safety and reliability.

- The **Handtmann Monitoring Function (HMF)**, for example, independently stops the filling and portioning line if quality-relevant parameters are exceeded or undercut. Misproduction is reduced or even avoided altogether.
- The **Handtmann Data Interface (HDI)** features a standardised interface for easy communication with data processing system for process optimisation.
- The **Handtmann Line Control (HLC)** allows status monitoring in real time, as well as automatic programme change for the entire production line via the VF 800 vacuum filler's control system.
- **Handtmann Communication Unit (HCU)** is the leading Industry 4.0 solution for the planning, control and optimisation of the filling department. For cost reduction and overall transparency in the processing procedure.

- **Handtmann Machine Cockpit (HMC)**: An online tool that stores defined data such as operating hours, pressure curves, error messages and machine status in the cloud. For effective service support and maintenance planning, thus reducing operating costs.
- **Machine Setup Assistant (MSA)**. Calculation of the machine's setting and equipment parameters (a plus for inexperienced operators). A safe machine start is guaranteed.
- **Handtmann Product Visualisation (HPV)** for easy setting and graphic representation of the desired product shape of formed products on the control system of the VF 800 vacuum filler.
- The **Intelligent Filler Clipper Interface (IFC)** ensures performance and process reliability through optimum synchronization of VF 800 vacuum filler and clipper.
- And much, much more.

	VF 830	VF 838 S3	VF 838 S6	VF 838 S9
Filling capacity in kg/h:	6,000	3,000	6,000	9,000
Filling pressure in bar:	25	70	70	30
Portioning capacity in portions/min.:	800	1000		
Connected load in kW:	6	20 (30 with grinding drive)		
Hopper:	350 litres, single-piece		350 litres, single-piece	

	VF 840	VF 842	VF 848 S9	VF 848 S12	VF 848 S15
Filling capacity in kg/h:	9,000	12,000	9,000	10,800	15,000
Filling pressure in bar:	25	25	45	40	25
Portioning capacity in portions/min.:	800	800	1,000		
Connected load in kW:	8	12	20 (30 with grinding drive)		
Hopper:	350 litres, single-piece	350 litres, single-piece	350 litres, single-piece		

As standard, all VF 800 models are equipped with monitor control and a 12.1 inch colour touchscreen and integrated HCU interface.



HANDTMANN VF 800


Meets your requirements now and in the future

The VF 800 performance pledge for high output:

- High effective portioning capacity
- Scalable filling capacity
- Excellent product quality
- Superior portioning accuracy
- Sophisticated automation solutions

The VF 800's contribution to less input and low costs:

- Reduced wear
- Patented, load-dependent maintenance interval
- Top-level hygienic design
- Unparalleled ergonomics
- TÜV-validated energy efficiency



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Patents (USA/Canada):

8,678,885; 8,899,117; 8,944,895; 9,282,754; 9,480,264; 9,560,856;
9,723,848; 9,675,087; 10,022,754; 7,628,345