

SAUSAGE INDUSTRY





WE KNOW A THING OR TWO ABOUT SAUSAGES

As a producer of linked products, you are faced with new requirements and big challenges. In a highly competitive environment, you have to set yourself apart with your product range and ideas: it's all about the sausages you produce, and what makes them different from other products on the market.

It used to be enough to adapt existing products for more diversity, and customers would respond enthusiastically, whereas today, new, different product concepts are needed. Trending products and snacks, as well as alternative eating habits, influence expanding target groups among consumers.

Do you want to achieve long-term customer loyalty and extend your retail listing periods by offering convincing products?

To achieve all that, you need to use production equipment that offers a lot of flexibility and almost limitless upgradeability.

VEMAG sausage lines can produce an almost endless range of products. Easy to adjust and retool, they make your production lines true all-rounders. And if you ever need anything which the equipment you have installed does not cover, VEMAG Maschinenbau GmbH's modular machine range is sure to offer

you an attachment which is very easy to integrate: quick and easy to connect, it will offer the dependability you need to deliver your promises immediately and from the very outset. All of this is about satisfying your demanding customers.

We look forward to being able to solve your challenges with you, since we are sausage specialists through and through. And your products are what we live for.

CONTENTS

4	Endlessly Diverse Products
6	Efficiency And Precision
8	Filling
10	Grinding And Separating
12	Applying And Changing Casings
13	Portioning And Linking
14	Cutting And Depositing Sausages Grouping And Loading
16	Adjustable Hanging Of Sausage Loops
18	The VEMAG Modular Principle For Maximum Flexibility
20	Our Machines And Everything That Goes With Them
22	Strong Together For Your Success
26	Nothing Can Beat It: The VEMAG Double Screw
28	Machine Analysis And Production Planning With Smart Link 4.0
30	VEMAG: Your Reliable And Competent Partner

ENDLESSLY DIVERSE PRODUCTS

The global sausage industry produces a vast variety of sausages that differ in their production, composition, appearance and taste. New creations are always emerging as well.

VEMAG helps give you freedom in production. Our flexible, modular range of machines allows you to extend your product portfolio whenever you want to: from Viennas, to modern salami snacks, all the way to sausages in alginate casings. The possibilities of production offer you a fantastic choice.

Classic Sausage Products:

- Frankfurters
- Viennas
- Bockwurst
- Cocktail Sausages
- Veal Sausage
- Hot Dog Sausages
- Salami
- Fresh Pork Sausage, Pepperonis
- Fresh Brats





International Specialities

- Italian quality Products such as Salametti
- French fresh Sausage such as Chipolata and Merguez
- Polish Mini Kabanossi
- Russian Sosiski and Sardelki
- Chinese Rice Sausage and High-Temperature Sausage
- Spanish Chorizo Snacks and Fuet
- English Breakfast Sausage
- American and Italian Brats and much more



EFFICIENCY AND PRECISION

Opening up of opportunities in processing.

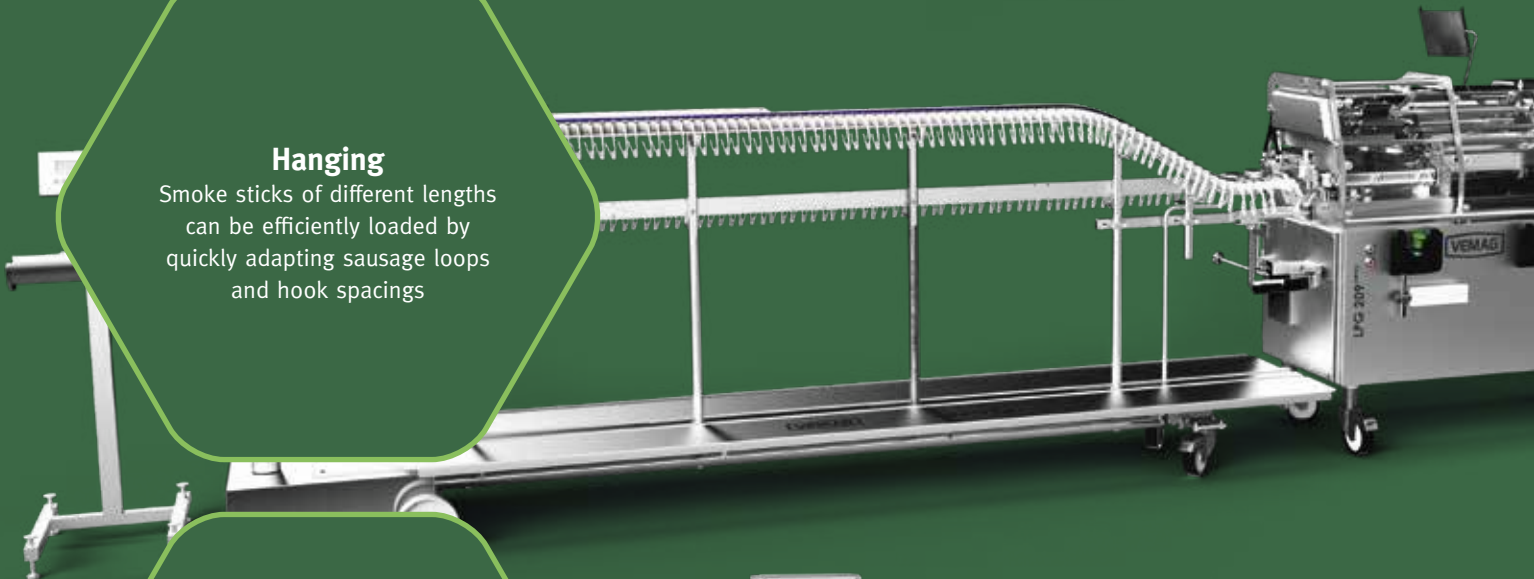
Loading

Efficiently depositing sausages in programmable quantities and groups, such as in trays and thermoformed pouches



Hanging

Smoke sticks of different lengths can be efficiently loaded by quickly adapting sausage loops and hook spacings



Cutting

Linked products can be safely cut and separated thanks to VEMAG's optimised cutting technology





Filling

Gentle handling of raw materials and a uniform feeding guarantee maximum product quality and a perfect downstream processing

Grinding and Separating

The market's most compact filler-grinder technology featuring direct, straight-line product flows for less smearing, and perfect long-term pressure control

Applying and Changing Casings

Semi- and fully automatic casing changing for optimised casing yield in the production process

Portioning and Linking

Results are highly reproducible, which means a uniform product profile thanks to VEMAG's leading linking technology (e.g. divider belts)



FILLING



FILLING

Infeed – inlet – feeding system – outlet: Each stage of filling individually adjustable to create a unique product.

The filling process plays an important part in the industrial production of sausage products. Different parameters such as geometry, component size and function, from the inlet to the outlet, all influence fundamental product characteristics. You decide which properties your product should have, and we adapt our machine fully to your requirements. This helps you achieve perfect weight accuracy in your products, a drastic reduction of giveaway and big savings on resources and costs. Continuous product infeed, constant,

powerful vacuum performance and gentle feeding of the filling material all ensure that the downstream attachments and automated line systems are perfectly supplied with top-quality product.

Our powerful vacuum fillers convey your products carefully and along the shortest possible feeding distance, with minimised dwell time: This prevents smearing, minimises leftovers and guarantees perfect hygiene.

The benefits:

- Excellent product quality
- Gentle processing
- Reduces giveaway and therefore saves money
- Adapt and improve your products perfectly

VEMAG filling technology for products the way you imagine them





GRINDING

Gentle grinding for the best possible product presentation.

VEMAG machines help you achieve a consistent particle size, excellent colouring and a clear texture for a perfect product presentation. The quality of your raw material is always our top priority. During the grinding process, the creation of heat is avoided and the grinder's diameter is adapted to the application, preventing a build-up of pressure which would cause changes to the product texture.

VEMAG filling-grinding technology features extremely short, direct product feeding without corners or turbulence, which guarantees hygienic products of the highest quality. It also means optimum temperature consistency. VEMAG filling-grinding technology can easily handle very cold, stiff mixtures when producing particularly challenging products.

The benefits:

- Straight product feeding without dead space, in which residue could accumulate. This guarantees outstanding hygiene, less pressure and better products
- Clear particle size and an attractively coloured end product
- High degree of standardisation

SEPARATING

Safely remove unwanted particles to achieve top quality.

When producing your products, unwanted components such as bone particles, gristle and sinews are separated out, so that you end up with a raw material in which you can be confident and which can be processed in line. This ensures that your product is safe and that it exhibits excellent qualities.

VEMAG separating technology features separate conveying equipment to facilitate perfect, reduced separating weights, which means less giveaway and a longer service life in your production facilities.

The benefits:

- Upgrades the raw material
- Efficient processing: simplified product preparation, shorter process steps
- Top quality products and dependable product safety
- Efficient processing enabled in continuous line solutions

More efficiency: Raw materials are processed over a short distance



APPLYING AND CHANGING CASINGS

Do you produce sausages and want to reduce casing change times? Do you want to increase your output and are looking for an economical solution that pays off? Quick, easy casing changing reduces downtime, which helps increase productivity.

Applying and changing casings is especially dependable and safe using VEMAG machines. The unique VEMAG gripper principle ensures that the casings are perfectly

positioned on the linking horn and stabilises them during loading. This prevents mis-loading and kinks in the casings. An integrated servo casing feed assists the linking function and ensures that the casing is gently and consistently advanced, for accurately linked sausages.

The benefits:

- Casings loaded very quickly and safely
- Casing change times dramatically reduced
- Effective output raised: noticeably increased net tonnage per hour

The VEMAG gripper principle helps stabilise while the casing is loaded



PORTIONING AND LINKING

Identical length, identical weight, identical calibre: our portioning and linking machines achieve very reproducible results for a consistent product profile and highly accurate weights – regardless of what kind of casing you are using.

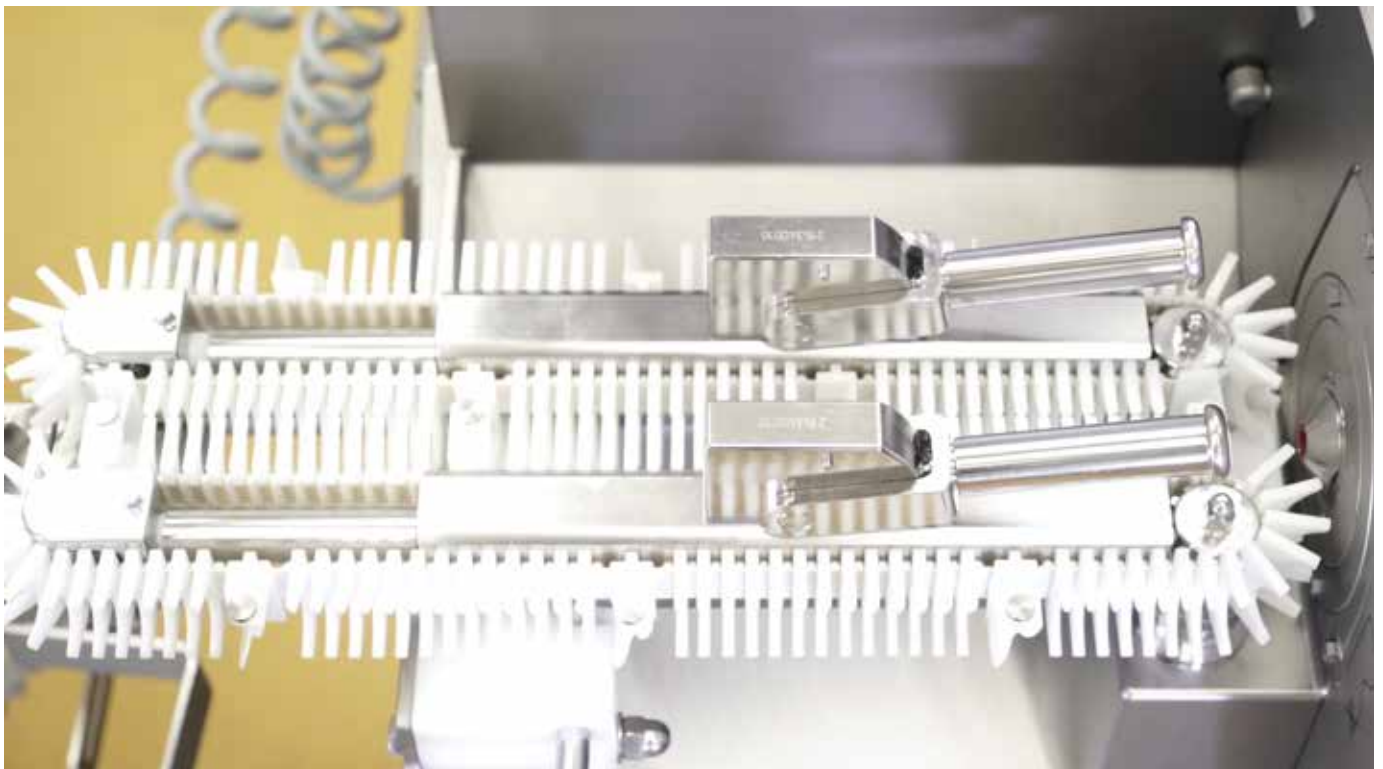
Intelligent sensors detect casing ends and breakages, and also enable perfect synchronisation between the linking unit and the filling process. This facilitates clean work at a very high speed.

The complete filling and linking process proceeds exceptionally quietly and evenly with extremely gentle handling of the casing. Even the most fragile casings can be linked without a hitch.

The benefits:

- Fully automated linking eliminates manual interventions
- Higher yield due to accurate lengths and gentle processing
- Rework is reduced by a linking technique that protects the casings
- Giveaway is reduced by very accurate weights and intelligent special features such as portion compensation

Sensor-controlled divider belts
treat casings extremely gently



CUTTING, PLACING AND HANGING SAUSAGES



CUTTING AND DEPOSITING SAUSAGES

The pathway to full automation for your traditional products.

VEMAG cutting machines cut with complete dependability thanks to their sophisticated technology. Our belt systems that stretch the twist point are perfectly synchronised, and this is combined with an absolutely dependable, slicing cut which always separates the twist point centrally thanks to sensor technology, achieving outstanding results. Separated portions are consequently under full position con-

trol, making them very easy to feed into downstream automation solutions in a perfectly synchronized manner. VEMAG machines offer maximum availability thanks to their robust, dependable technology.

The benefits:

- Portions separated under controlled conditions
- Precise discharging of broken portions
- Gentle, reliable alignment
- Accurate depositing onto conveyor belt
- Optimum utilisation of downstream process capacities

Versatile automation for depositing, grouping and inserting

Cut sausages can easily be separated, aligned and deposited on downstream

belts for thermal treatment. This optional solution is customised to your needs.

GROUPING AND LOADING

Cut fresh sausage is fed into a fully automated packing process by the LL335 link loader. This gives you the next dimension in highly productive, efficient production

lines. And then there is a quantum leap in hygiene. The days of manual intervention are numbered.



The benefits:

- Portions separated under controlled conditions
- Precise discharging of broken portions
- Gentle, reliable alignment of sausages, including ones with natural casings
- Groups of your choice can be formed without backing up
- Accurate and gentle depositing and loading into trays and thermoformed pouches
- Optimum utilisation of downstream process capacities
- Fully automated process without any manual handling all the way to packaging means perfect hygiene

ADJUSTABLE HANGING OF SAUSAGE LOOPS



ADJUSTABLE HANGING OF SAUSAGE LOOPS

Viennas and Bockwurst today, cocktails and party portions tomorrow. Flexible demand means changing portion sizes, changing casing calibre and adjusting casing types.

With VEMAG hanging technology as part of your linking line, the demands of flexibility will begin to feel like fun, since they are part of our modular machine concept and our philosophy. VEMAG hanging lines – now no one can make you lose your cool.



The benefits:

- Variable, adjustable unloading height, making for stress-free work when preparing and removing products – optimised for your application
- Any kind of hanging is possible – you choose the number of portions per group, and adjust loop spacings quickly, easily and variably to different smoke-stick lengths
- Intelligent hook geometry ensures that sausage loops are reliably caught
- Adjustable special functions to ensure casings are used optimally and productivity is increased: compensating first and last portion, last hook moves quickly, and much more
- Loop spacings can be flexibly and easily adjusted for a wide calibration range
- All casing lengths (sausage slugs up to 580 mm long with LPG218)



THE VEMAG MODULAR PRINCIPLE FOR MAXIMUM FLEXIBILITY



Modularity is what our machines are all about. And that means there are no limits to your product range.

VEMAG's big portfolio of machines, attachments and accessories is like a box of building blocks from which you can select the modules you want to assemble the solution for you.

For you as a user, it means that once you have purchased the core system, a VEMAG

filler, you can design your production the way you want using a combination of different attachments and suitable accessories. So you do not have to buy a new machine for new products: all you need is the right accessories or an attachment.

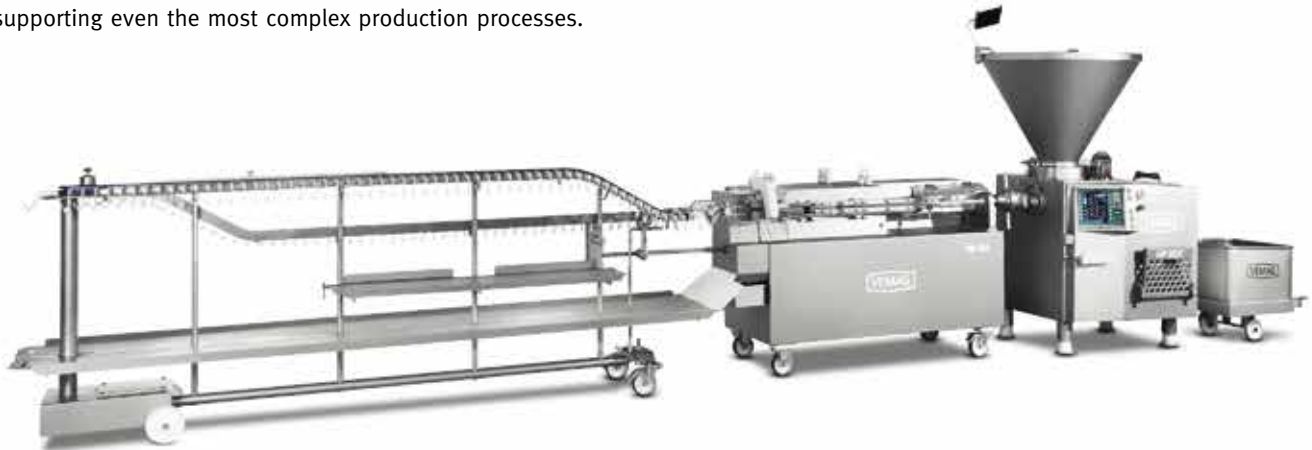
VEMAG attachments and accessories are

system components whose technology and operation are tailored exactly to our machines. That means you always have the perfect solution from a single source.



OUR MACHINES AND EVERYTHING THAT GOES WITH THEM

Our sausage filling lines provide you with powerful, flexible systems that can be combined with our attachments and accessories to enable a wide range of products, efficiently supporting even the most complex production processes.



HP20E - FSL210 - AH212



HP20E - FSL211 - AH212



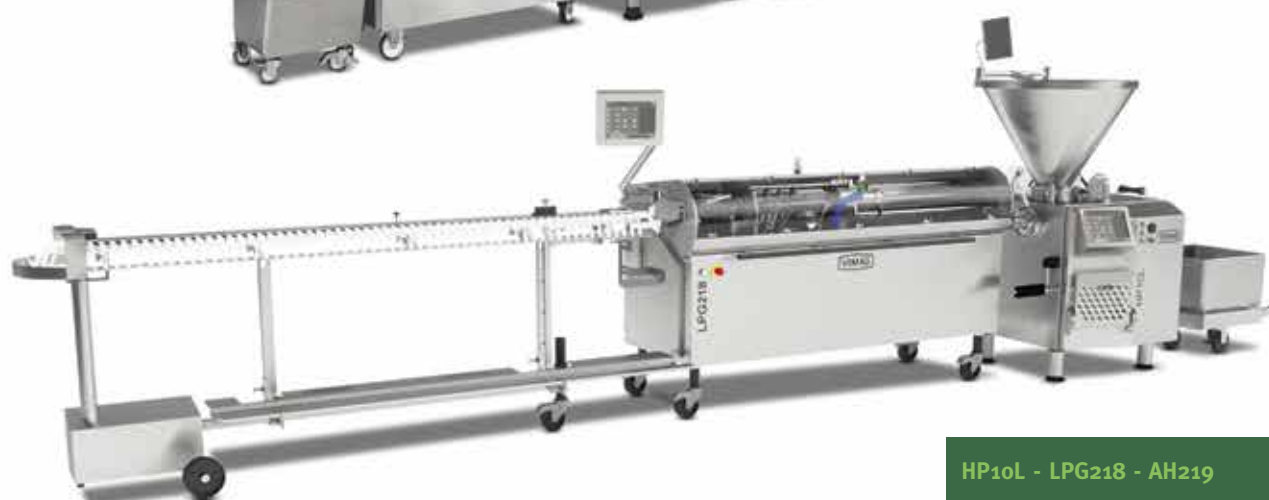
HP20E - LPG209 - AH212 - smoke stick scale



HP10E - LGP208 - AH212



HP20E - LPG208 - TM203



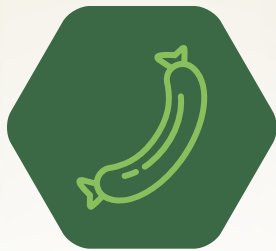
HP10L - LPG218 - AH219



HP20E - LPG208 - LL335 - PC706



**STRONG TOGETHER
FOR YOUR SUCCESS**



YOUR PRODUCT ...is Number One.

At VEMAG, our top priority every day is to be there for our customers in every way. We consider your product the most valuable asset, and we want to protect it, refine it, improve it and make it even more professional.

That will give you an edge and your customers as well. We develop, perfect and install every vacuum filler, every attachment and every complete line so that you can achieve your objectives with a wide range of functions:

- Excellent products, designed and produced exactly the way you want them
- VEMAG machine technology is highly flexible, enabling amended and newly developed products to be made easily on existing VEMAG lines to produce the best possible outcome
- Optimised standards that ensure guaranteed reproducibility and product safety for your end-customers

Our product managers and food technologists are there to assist you and are in constant dialogue with our development department in order to make your products even better using improved machine technology.



LESS RAW MATERIALS ...for more sales

Only once your product is as perfect as you want it can we think about improving yields. We understand that good food has to be competitive, which is why our own teams of experts are always using and developing their knowledge to allow you to get more of your high-grade raw materials into sellable products. That means more profit, and also less waste.

- Optimised weight accuracy and less giveaway allow you to deliver only what you are going to be paid for.
- Higher yield reduces your costs. For example, have you ever calculated what 1% less casing or raw material and ingredients could do for your profits, thanks to VEMAG's intelligent filling technology?
- Perfect product lengths and geometries reduce packaging problems and improve your packaging costs. They also eliminate high waste costs.

Together we can work out how your process combined with our technology can generate added value for you, precisely by using less raw material.



OUTSTANDING AVAILABILITY

...another aspect of VEMAG Service

What happens if your product is not ready to sell on time? No product often means no sales, which not only reduces turnover, it can annoy your customers a lot and even drive them into the arms of your competition. VEMAG Service includes lots of ways of avoiding that:

- VEMAG machine concepts include 'Function First'. From the drawing board onwards, we try to make functions as durable as possible. A good example is our vacuum fillers' box-in-box system, which doubly encapsulates electronic parts.
- Quick set-up times mean more time for production. VEMAG lines can often start producing a completely new product simply by replacing a small attachment or module, which is quick and easy.
- VEMAG trains agency and branch office technicians at its VEMAG Academy. This means our international service standards are always improving for your VEMAG solutions, and it means you receive, from installation onwards, the service that will secure your investment over the long term and make your product available to meet your customers' demands flexibly.



LESS RISK

...more customers

VEMAG fillers and VEMAG lines offer endless features, making them low-risk production systems that give you more time to concentrate on what is important. Every time we develop anything, we think about your safety and the hygiene standards you build your business on. We were leading the world in some areas while other companies hadn't even started there.

- VEMAG supplies the world's first vacuum filler with 3-A Sanitary Standards.
- VEMAG fillers allow you to remove stoppers and feed units hygienically, quickly and easily in the filling direction so you can clean them. This means you can clean seals properly because it is quick and easy to do, and practical for operators.
- The vacuum channel between the feeding system and vacuum pump is much shorter and easy to clean. VEMAG is at the top of the industry when it comes to hygiene standards.
- VEMAG feeding technology makes product distances shorter and with fewer corners in the product flow. Hygiene is outstanding, and the products are better.
- Fewer parts in the feeding system mean better hygiene. There are also fewer parts to lose.



NOTHING CAN BEAT IT: THE VEMAG DOUBLE SCREW



NOTHING CAN BEAT IT: THE VEMAG DOUBLE SCREW

At the heart of our fillers are VEMAG double screws. No other feeding technology is as flexible when it comes to adapting to your product.

Lots of options in terms of pitch, diameter, length, compression, profile and much more all mean one thing: your product is perfect.

Perfection in precise weights or whole pieces of muscle – specialist or compromise, or both?

Every cleaning process enables the double screw to be changed quickly. You might want to change the product quickly, or service parts of the pump. The feeding system consists of just two parts: the housing

and the double screw.

VEMAG technology enables you to use components such as double screw parts that are made entirely out of stainless steel. This makes it more durable, and also improves hygiene levels.

A major benefit of VEMAG double screw technology, one which protects your products, is the first-in-first-out principle: the filling material is continuously force-fed. A system such as rotary vanes can drag the product several times through the pump, whereas the mixture that arrives first at the double screw is what arrives first at the outlet.

The benefits:

- Ideal for adapting to your product
- Handles raw materials gently
- Flexibility for new product ideas
- Outstanding weight accuracy even at high outputs
- Optimised yield providing more sellable product
- Uniquely hygienic feeding system
- VEMAG filling- grinding technology: The ideal in-line extension and next step for sensitive products
- Easy to disassemble and clean
- Lower service costs

RELIABLE, EXPERT PARTNER



MACHINE ANALYSIS AND PRODUCTION PLANNING WITH SMART LINK 4.0

Evaluate machine data effectively and quickly – and remotely: so you can know what is happening on which line, and when. All this is possible with the latest VEMAG Smart Link 4.0.

VEMAG Smart Link 4.0 is an operating and product data collection system which allows you to evaluate your filling data at any given time and date. VEMAG Smart Link records internal machine parameters.

It means you can see exactly what is happening at a glance. Power consumption, pressure levels at the sausage grinder and other information can be viewed, compared and evaluated. This allows you to identify any weak points that may exist, as well as things you can improve and continue. It allows you to see what is actually

happening right now. Filling data is transferred and stored, in the filler as well if you want.

This means that machine data such as product filling weights, quantities achieved, machine running times and much more can be viewed centrally, such as at your central office. This improves planning quality.

The benefits:

- Be ready for IoT: Networking your machines improves your production
- Receive a constantly updated insight into your primary production figures. One of the things this enables is accurate product costing
- Optimise costs by reducing giveaway and using resources more effectively
- Achieve production security and constant quality by optimising your machine settings
- Achieve transparency and traceability by automatically documenting your production data



RELIABLE, EXPERT PARTNER



VEMAG: YOUR RELIABLE AND COMPETENT PARTNER

Service and maintenance: we are there for you worldwide.

At VEMAG we consider service part of our DNA: you, the customer, are always at the centre of our activities.

VEMAG service technicians, subsidiaries, agencies throughout the world: we will always provide you with outstanding service wherever you are, and we define manufacturer standards to keep it that way, including at our VEMAG Academy. VEMAG Service in Germany and our offices and agencies abroad will support you from the installation of your machine, throughout compre-

hensive training, and whenever repairs are needed.

You can rely on:

- Global support
- Service technicians trained worldwide by the VEMAG Academy
- Sound technological training
- Practice-based technician and user training



The VEMAG Customer Centre: Space for innovation.

Make your vision a reality with us and discover how you can improve your production. We can show you individual components and complete production lines at our VEMAG Customer Centre. We will show you, under realistic conditions, how you can make a wide range of foods.

Experience VEMAG up close and in action — our competent advisers are there for you.





VEMAG Maschinenbau GmbH
Weserstr. 32
27283 Verden, Germany

www.vemag.de