

HIGH LIGHT

GRUNWALD® 
Dosing · Filling · Packing

GRUNWALD's customer magazine
special edition



**GRUNWALD's milestones
for the food industry**

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Exciting technologies and precise filling techniques



The consumer's request for healthy food, "light" salads and new taste experiences is more than just a trend in the delicatessen industry. As well as mayonnaise-based, pumpable salads, consumers can now find the following products in the chiller cabinet:

- couscous salad
- bulgur salad
- flaked tuna salad
- carrot salad
- pasta salads
- or regional products, such as e. g.
- ox-muzzle salad

The "light" salads from the delicatessen industry are well-received by the final consumers. They promise exciting new ultimate taste experiences and are an attractive alternative to mayonnaise-based salads.

In addition, consumers increasingly favour more natural foods. Delicatessen producers are producing more products without preservatives to meet that demand.

GRUNWALD's milestones for the food industry

In the past few years, Grunwald development engineers have worked hard to develop suitable technical solutions to meet the increased demands of the food industry. Due to increased demands for smaller filling volumes and batches the following technical solutions were developed in order to

- reduce downtime of the filling machines, even in the case of frequent product changes,



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New development

It works without evacuation

- achieve allergen-free filling in 3 - 5 minutes and
- fill pumpable and non-pumpable salads in a weight-accurate way using the same filling machine.

The use of re-closable and environmentally friendly packaging continues gaining more importance. An outstanding example is the **re-closable film** which allows for no longer having to use snap-on lids. This considerably contributes to reducing plastic consumption and avoiding packaging material. As these packages can be safely re-closed after they have been opened for the first time, the consumers do not have to repack the products into their own, re-closable packaging. Taking out portions and re-closing the packages offers convenience.

It is yet another demonstration of Grunwald and its customers commitment to sustainability with our machines capable of handling both re-closable film and other environmentally friendly packaging in fully automatic operation for quite some time.

Residual oxygen content < 0,5 %

An important factor here is the sealing of the filled cups with the lowest possible residual oxygen content, without affecting the freshness and quality of the products. It is also important to prevent unwanted product discoloration.

Therefore, it will always be necessary to seal the filled cups with the lowest possible remaining oxygen content. This will be especially mandatory with products with a reduced percentage of preservatives.



- **Extended product shelf life**
New recipes with less or no preservatives are feasible as only a minimum percentage of oxygen remains in the cup.



- **Reduction of operating costs**
Without evacuation, a vacuum pump is no longer required. As a result, operating costs are reduced.



- **Machine availability and flexibility**
Cup filling machines with mobile fillers are unique machine concepts when frequent product and format changes in daily production are required.



- **Increase in production**
Unique machine concept for achieving short change-over times when producing small batches of pumpable and non-pumpable products at full cycle speed (up to 40 cycles/minute).



- **Guaranteed filling free of allergen**
Cup fillers using two mobile fillers alternately allow for a product change within three to five minutes and guarantee production free of allergen.

Significant advantages

The new GRUNWALD gas flushing system offers significant advantages compared to the system used for evacuation / gas flushing (MAP procedure) so far. The previous technology could achieve a remaining oxygen content of < 1 % but it reduced the machine speed considerably.

The GRUNWALD development engineers have now found a solution **to remove the negative effect of the reduced performance while achieving a residual oxygen content < 0.5 % in the cup.**

High performance

On the basis of key performance indicators and data received from our customers' production with GRUNWALD-ROTARY cup filling

machines the following production speeds can be confirmed:

- up to 5,000 cups/hour for 2-lane cup fillers and
- up to 10,000 cups/hour for 4-lane cup fillers.

At the same time, a consistently low residual oxygen content of <0.5% is achieved in the cups.

With the development of the **new gas flushing system**, Grunwald has once again created an important milestone for an optimised and economic production.

Being able to guarantee an extended shelf life of the products without affecting the freshness and quality of the products and preventing product discoloration is ultimately a challenge that already begins in mechanical engineering.



Facts and figures:

GRUNWALD-ROTARY 12.000

- Dimensions: 2.000 x 2.000 mm
- 2 - 6 lanes
- Up to 18,000 cups/h, depending on product, packaging materials and fill weight



Photos at the top: Rotary-type cup filling machine GRUNWALD-ROTARY 12.000 with connected mobile fillers GRUNWALD-FLEXODOS and GRUNWALD-SEMIDOS (in the background) for filling non-pumpable salads

Photo on the left: GRUNWALD's gas flushing system allows for production without restriction in output, i.e. at full cycle speed of up to 40 cycles/min., while achieving a remaining oxygen content of < 0.5 % in the cup

On the factory floor

GRUNWALD cup filling machine offers premium, organic quality for delicatessen

It is always exciting for us to accompany our customers on their GRUNWALD journey - from their initial enquiry and then to receiving their first machine. It is wonderful to experience how the customer's company develops. With each investment, the aim is to supply the appropriate machine with ideal technology for the customers' present applications and to support them with advice. An example of this partnership is Hanke Wisch, owner of delicatessen producer Grünleben Feinkost, who GRUNWALD has supported from the very beginning.

Hanke Wisch was trained as a food technologist with a large producer of delicatessen salads in Northern Germany. To realise his own ideas and goals in the field of food production, he knew that he would have to start his own business. In 2016, he founded Grünleben Feinkost.

Starting with a second-hand machine
When purchasing his first filling machine, Hanke Wisch's focus was production reliability. There is a wide range of filling and packaging machines on the market in terms of price and quality and it is sometimes quite difficult for small and medium-sized companies to find the appropriate machine.

However, this was not an issue for Hanke Wisch. He became familiar with GRUNWALD machines and their reliability and flexibility during his training. Based on these positive experiences, he decided to purchase a second-hand GRUNWALD filling machine to start his business.

Innovative and with a strong growth
After a few years, Hanke Wisch had the opportunity to develop and produce a vegan type spread for one of the biggest German producers of cheese and sell it through the sales channels of this large producer.

Special attention for these kinds of products is set on achieving minimal remaining oxygen in the cups during the sealing process to guarantee a longer shelf life. Another investment was necessary. This time, Grünleben Feinkost decided on a new 2-lane, fully-automatic cup filling and closing machine - the GRUNWALD-HITTPAC AKH-019SE.

Remaining oxygen values of less than 0.5 %

At the beginning they requested a remaining oxygen content of 2 - 3%. During the project, it turned out that a remaining oxygen content of less than 0.5% was more favourable for the products. Due to the Grunwald technology used, evacuation is no longer necessary to achieve these values at full machine speed (up to 42 cycles/min.!) The results from several months' production show that the remaining oxygen content is consistently $\leq 0.5\%$.

Six years after the company's foundation, Grünleben Feinkost employs more than 20 people at their production plant in the fishing harbour of Bremerhaven. They produce a wide range of premium, organic delicatessen products, including delicatessen salads, spreads in different variations, purely vegan salads, as well as new and innovative products.

We were pleased to carry out these orders for Grünleben Feinkost and will be happy to continue being their reliable partner in terms of dosing, filling and packaging.



Product photos:
www.gruenleben-feinkost.de

On the factory floor

Filling of delicatessen salads in a very flexible way guaranteeing allergen-free filling

The cup filler GRUNWALD-ROTARY has been a success story from the very beginning. With each development innovative idea and technical know-how, this story is continued and the rotary-type filling machine is developed further.

These rotary-type filling machines can be individualised to meet the needs to our customers with many technical features on offer.

The 2-lane GRUNWALD-ROTARY 6.000 shown in the picture is specially tailored to meet the special packaging requirements of our customer „Neue MAYO Feinkost GmbH“.

Equipped with two of the proven mobile dosing systems "GRUNWALD-MOBIFILL", as well as a specially designed and shaped hopper, this rotary-type filling machine is ideally suited for frequent product changes and for filling very small volumes of approx. 30 kg.

Guaranteed allergen-free filling

This two dosing systems are used in combination or alternately. Equipped with a quick-change system for mobile dosing systems, the product change can comfortably be carried out in three to five minutes. At the same time allergen-free filling is guaranteed as all parts in contact with the product are replaced when the dosing systems are exchanged. Production continues without interruption.

All product-specific setting values of the dosing systems are stored in the filling machine. If several dosing systems are used rotationally, time-consuming re-adjustments or setting of the values are no longer necessary. This is extremely important for

frequent product changes and when filling small batches. The handling can even be optimised by purchasing additional format-related parts so that this rotary-type cup filling machine can be operated by one machine operator.

Due to this special equipment, this cup filling machine offers our customers flexibility for handling small batches of pumpable delicatessen salads.

It is a future-proof and important investment for optimising production processes.



Facts and figures:

GRUNWALD-ROTARY 6.000

- Dimensions: 1.500 x 1.500 mm
- Up to 4 lanes
- Up to 12,000 cups/h, depending on product, packaging materials and fill weight



„One for all“

GRUNWALD makes your products shine



GRUNWALD-FLEXODOS for non-pumpable products, connected to the dock-in station of a cup filling machine type GRUNWALD-ROTARY 12.000. Another mobile filler (e. g. MOBIFILL - left in the picture - for pumpable products) can be connected alternately at the same position.

Mobile GRUNWALD fillers for pumpable products – from left to the right: chickpea filler, vibratory filler, SEMIDOS

Advantages of the mobile GRUNWALD dosing systems

Compact design of the cup filling machine and variety of different, mobile fillers

- **MOBIFILL**
(for pumpable products)
- **FLEXODOS**
(for non-pumpable products)
- **SEMIDOS**
(for brine and sauces)
- **Chamber filler**
(product decoration with tuna, prawns, pieces of pepper etc.)
- **Vibratory filler**
(product decoration with products such as herbs, chive etc.)
- **Chickpea filler**
(precise dosing of chickpeas)

Grunwald offer a high-performance and flexible machine with a small footprint. These dosing systems can be used as main filling stations, pre-fillers (for cereals, fruit preparations) and also as post fillers. In addition, during each filling process a multitude of decoration images can be created.

The combination of cup filling machine and dosing system allows a very simple changeover on the cup filling machine and a product change in less than five minutes, e. g. when changing from filling pumpable products to non-pumpable products.

If two dosing systems are used, the filling machine will be free of allergen and ready for production in less than five minutes by exchanging the

complete filler. A format changeover can be carried out just as quickly. One person needs just 10 - 15 minutes.

With its small footprint, modular structure and very attractive price, the GRUNWALD-ROTARY impresses with its unbeatable "one for all" solution, offering reliability, maximum flexibility and enormous performance. Everything is possible on a footprint of only 3 x 2.2 m.

With this unique GRUNWALD machine solution, we have created the maximum possible format flexibility for the delicatessen and the food industry. Thus, the daily production planning can take place with an infinite number of options.

