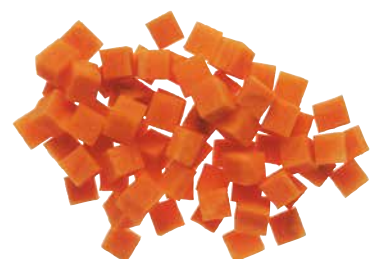




From preparation to packing – KRONEN does it all

Food processing solutions designed and built
for the fresh produce industry.



Innovations for the food processing industries

Our mission:
The true blend of precision,
reliability and innovation!



KRONEN GmbH is one of the leading suppliers for the catering, convenience, gourmet and food industry. Our strength is the fruit, vegetable and salad processing but we can also offer interesting solutions for meat, fish and poultry. We have obtained awards and prizes for our innovation at international trade shows. We develop and produce stand-alone and special machines as well as complete processing lines for preparing, peeling, cutting, washing, drying and packing of food. Our quality and our consulting competence is appreciated world-wide.

KRONEN was founded in 1978 as a trading company for hotel and restaurant equipment. The development and production of our own machines for the fruit, vegetable and salad industry was started in 1992. In the year 1998 KRONEN was taken over by the current Senior Managing Director, Rudolf Hans Zillgith, with the strategy of the further export orientation, which led to a considerable growth in sales and number of employees.

In 1999, with Stephan Zillgith as Technical Manager, graduate in engineering, the next generation entered the company. In 2004 he took co-responsibility as Junior Managing Director joining the management of the company.

Since 2004, KRONEN has been developing and producing its machines in a new production and administration building with own show room and training facilities in Kehl-Goldscheuer at the Rhine, close to the French border.

As an innovative and internationally operating enterprise KRONEN made further progress in establishing itself even more successfully on the international market, making it necessary to double the production area to 5000 sqm in total. In 2018 the company celebrated a double anniversary – 40 years of KRONEN and 20 years of Zillgith/KRONEN – with a special event for business partners and customers.

Today, KRONEN has 100 employees and is a globally operating supplier for the Fresh-cut, convenience, catering, gourmet and food industry with representations in over 80 countries and is selling its solutions in over 100 countries worldwide. Due to the close cooperation with our customers and international partners, we consider it our commitment to keep traditional values such as quality awareness but also to react creatively and actively to the challenges of the global market.



Rudolf Hans Zillgith
Senior Managing Director



Stephan Zillgith
Junior Managing Director

KRONEN

4



KRONEN Show room

Our modern show room gives visitors the opportunity to try out a wide variety of processing techniques for salad, vegetables and fruit with newly developed as well as proven KRONEN machines. Come and visit us!

Comprehensive advisory expertise

One strength of KRONEN lies in its ability to respond to customers' individual requirements, implementing further developments and appropriate adaptations. All components of a line of KRONEN machines are adapted perfectly in order to tap the full throughput potential of every machine and to maximize the total throughput of the line. Thus, bottlenecks in the production process as well as any overload of the machines are avoided. We will be happy to sit down with you and plan the solution that suits your needs in the best way. Our long-term experience and comprehensive know-how in planning, implementing and starting-up of complex and customer-specific lines for the food processing industry assures short project duration and smooth operation. Our customers benefit from the close collaboration with our cooperation partners which complement our product portfolio. Thereby emphasizing our claim of being a systems and solutions provider and partner for our customers, from the initial idea to the support for a sustainable operation and maintenance of the machines and lines. It goes without saying that the project engineering team of KRONEN considers existing buildings, conditions and lines and also integrates

machines of other suppliers – this in close cooperation with the customer. Customer-specific requirements as e.g. halal cutting of meat or kosher washing of salad are fulfilled on a high quality basis and a reasonable cost-performance-ratio. Customers around the world can witness that we work in partnership with our customers to oversee the design, construction, installation and commissioning of the equipment. In short KRONEN creates solutions that work.



Content

5

Continuous high-quality combined with technical know-how and optimal blend of precision, reliability and innovation guarantee a constructive cooperation.

| | | |
|--|-------|--|
| Cutting: GS 10-2, GS 10-2 TTS, GS 20 | 6-7 | |
| Cutting: KUJ V, KSM 100, TT 450 Cutting, coring: Multicorer | 8-9 | |
| Coring, cutting: KSB, CAP 68 Cutting: S 021, SPIRELLO 150 | 10-11 | |
| Cutting: S 195, S198, HGW, PGW, Tona grid cutting machines | 12-13 | |
| Germ reduction: Vortex-line, UVC-Lock Treating: KDB 120 Washing | 14-15 | |
| Washing: GEWA 3800B PLUS, GEWA 3800V PLUS, GEWA 5000V ECO | 16-17 | |
| Washing/De-watering: GEWA XL, FDS 5000 Drying: K series, Basket-Carousel | 18-19 | |
| Peeling: PL 25K, PL 25S, PL 40K, AS 2, AS 4, AMS 220 | 20-21 | |
| Peeling: Mango Peeler-de-cheeker, ORKI De-stemming: GDM 35 | 22-23 | |
| Packaging: MP 100, CP-Series, UP-Series, Flow | 24-25 | |
| Trimming, sorting, controlling, transporting & weighing | 26-27 | |
| Complete lines | 28-29 | |
| Our reference projects | 30-31 | |

Cutting

GS10-2, GS 20

6

For industrial cutting of salad, vegetable, fine herbs, fruits and many more products.



Belt Cutter
GS 10-2

The GS 10-2 belt cutter, tried and tested a thousand times, not only appears in a new look but also impresses with its high-performance technology and substantial functions. The GS 10-2 is the ultimate all-purpose belt cutting machine for leaf salad, vegetable, fruit, herbs, meat, fish, sausage, bread, cheese, nuts and many more. It is ideal for use in large kitchens, catering and industrial applications.

The GS 10-2 presents an attractive package of innovative features and enhancements such as:

- ▶ sloping surface
- ▶ modern hygienic design
- ▶ knife box with optimized ejection (products remain undamaged during unloading process)
- ▶ completely redesigned downholder
- ▶ new safety interlock system on knife box.

Various cutting accessories for a wide range of applications are available:

- ▶ slicing delicate leaf salad products and herbs like chives, dill, parsley, etc.,
- ▶ strip cutting / dicing / segmenting vegetables, fruit, etc.,
- ▶ grating / shredding raw vegetables, cheese, bread, nuts, etc.,
- ▶ tearing and slicing of chicken breast, meat, etc.



| Measures | | Products & capacity | |
|-------------------------------|----------------------|---------------------|-----------------|
| I x w x h | 1610 x 670 x 1275 mm | Lettuce | up to 1500 kg/h |
| Weight | 235 kg | Vegetables | up to 2500 kg/h |
| Belt width | 125 mm | Fruit | up to 2000 kg/h |
| Max. product height | 130 mm | Herbs | up to 80 kg/h |
| Conveyor speed | 2,2-16,4 m/min | Cabbage | up to 1200 kg/h |
| Knife rotation speed | 105-795 r/min | Field mushroom | up to 700 kg/h |
| Theoretical cutting thickness | 1-130 mm | Cheese | up to 300 kg/h |
| Power | | Meat + sausages | up to 1000 kg/h |
| Total power | 1.8 kW | Fish | up to 625 kg/h |



**Belt Cutter
GS 10-2 TTS**



**Belt Cutter
GS 20**

Based on the proven technique of the world wide most sold belt slicer GS 10-2 the GS 10-2 TTS belt cutting machine has been developed to be able to control the cut size and minimize the waste on product cut in combination with the horizontal out feed belt.

By measuring the product size, the GS 10-2 TTS is able to calculate the right number of cuts, eliminating or reducing waste to a minimum. This is given by a PLC and servo motors that allow the knife to make every cut exactly where we need it to be, following customer's specification. We can achieve minimum waste on applications like melon chunks, pineapple tid bits, chicken breast slices and many others.

The GS 10-2 TTS offers as well the possibility to top and tail (cut both ends) of the product, in addition to slice it (or not) to customer's specification.

If the special TTS feature is not needed, the machine will operate as a standard GS 10-2 belt slicer.

The solid industrial machine is completely made of stainless steel AISI 304 and can easily be cleaned and maintained.

The GS 20 belt cutting machine is equipped with a conveyor belt 250mm wide and a product down-holder to apply gentle pressure for product control. This key feature holds and controls the product until point of cutting. The GS 20 feeding belt is capable of conveying whole heads of lettuce or cabbage. Individually definable programs (up to 99) can be stored and selected by the simple use of control buttons and features digital cutting size adjustment from 1 to 50 mm when using a knife with 3 blades.

This new GS 20 joins our series of established GS belt cutting machines with the following improvements: newly designed knife door to optimized product outfeed allowing for gentle product handling; the down-holder assembly has been improved to reduce the number of parts; display lights now indicate the status of all safety sensors; a new locking system combined with a new belt cover creates additional safety in the area of the knife. As with all KRONEN machines, its excellent hygiene properties are a major advantage.

| Measures | | Products & capacity | |
|-------------------------------|----------------------|---------------------|-----------------|
| I x w x h | 3800 x 630 x 1300 mm | Lettuce | up to 1500 kg/h |
| Weight | 275 kg | Vegetables | up to 2500 kg/h |
| Belt width | 125 mm | Fruit | up to 2000 kg/h |
| Max. product height | 130 mm | Herbs | up to 80 kg/h |
| Conveyor speed | 1,7-15,7 m/min | Cabbage | up to 1200 kg/h |
| Knife rotation speed | 110-800 r/min | Field mushroom | up to 700 kg/h |
| Theoretical cutting thickness | 1-130 mm | Cheese | up to 300 kg/h |
| Power | | Meat + sausages | up to 1000 kg/h |
| Total power | 3 kW | Fish | up to 1500 kg/h |

| Measures | | Products & capacity | |
|-------------------------------|-----------------------|---------------------|-----------------|
| I x w x h | 2628 x 1059 x 1485 mm | Lettuce | up to 2500 kg/h |
| Weight | 530 kg | Vegetables | up to 4000 kg/h |
| Belt width | 250 mm | Fruit | up to 6500 kg/h |
| Max. product height | 210 mm | Herbs | up to 700 kg/h |
| Conveyor speed | 2,6-19 m/min | Cabbage | up to 2250 kg/h |
| Knife rotation speed | 130-590 r/min | Field mushroom | up to 1500 kg/h |
| Theoretical cutting thickness | 1-50 mm | Cheese | up to 625 kg/h |
| Power | | Meat + sausages | up to 1375 kg/h |
| Total power | 3 kW | Fish | up to 1375 kg/h |

Cutting

KUJ V, KSM 100



**Cube, strip & slice
cutting machine KUJ V**

The KRONEN high performance dicer KUJ V cuts slices from 2 up to 12 mm, strips from 2 up to 20 mm and cubes from 3 up to 20 mm in precise, perfect cutting quality. It can process up to 3.500 kg per hour. High quality accessories enable neat slicing without damaging the produce. Even delicate products (such as onions, peppers, mushrooms, tomatoes, zucchini or slightly frozen products) can be processed. A frequency inverter with 7 adjustable speeds allows the gentle cutting of very sensitive products like e.g. strawberries or beetroot, etc.

In addition to larger cubes cut from apples, melons, ham, cooked chilled meat and a variety of vegetables, tiny cubes as small as 3 x 3 x 3 mm (Brunoise) can be cut. The KUJ V can cut strips as small as 2 x 2 mm in section for dips, soups, sauces, salads and much more.

**Suitable for the production
of the vegetable rice!**



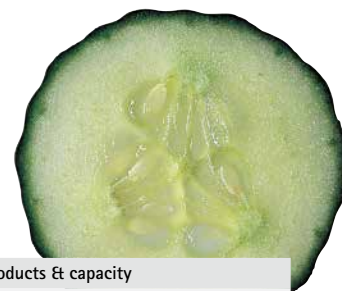
| Measures | | Products & capacity | |
|----------------------------|----------------------|---------------------|-----------------|
| I x w x h | 1105 x 978 x 1492 mm | Vegetables | up to 3500 kg/h |
| Weight | 260 kg | Fruit | up to 3500 kg/h |
| Infeed / feeding height | 1492 mm | Meat + sausages | up to 1500 kg/h |
| Discharge / outfeed height | 472 mm | Fish | up to 1200 kg/h |
| Power | | | |
| Total power | 1.1 kW | | |



**Vegetable cutter type
KSM 100**

The KSM 100 cutting machine is perfectly suited for cutting vegetables, salads as well as fruit. It is easy to handle with its big cutting door with two infeed openings for every requirement:

- Big opening for products like cabbage, leafy vegetable and broad leaf endive
- Small opening for long products such as cucumbers, courgettes, carrots, radishes, etc.



| Measures | | Products & capacity | |
|----------------------------|----------------------|---------------------|----------------|
| I x w x h | 1003 x 856 x 1235 mm | Lettuce | up to 200 kg/h |
| Weight | 80 kg | Vegetables | up to 375 kg/h |
| Infeed / feeding height | 1185 mm | Fruit | up to 187 kg/h |
| Discharge / outfeed height | 519 mm | Cabbage | up to 325 kg/h |
| Power | | Cheese shredding | up to 150 kg/h |
| Total power | 0.9 kW | | |

Cutting, dividing, coring

TT 450, Multicorer



**Top & Tail-Machine
TT 450**

The newly developed top & tail machine TT 450 is perfectly suited for removing the core of lettuce with flat stem (e.g. Frisee, Endive / Escarole, Romaine / Cos) and cutting leaf tips. It allows – with an at the same time improved yield of up to 6 % – a considerable increase in productivity by up to 110 % per person (Frisee and Endive/Escarole). The TT 450 is equipped with an automatic waste separation section which can be perfected by appropriate waste and out-feed belts. The solid industrial machine is completely made of stainless steel AISI 304 and can easily be cleaned and maintained due to hinged doors and removable covers.



Multicorer

The Multicorer cores salads and cabbage in a fast and neatly way and divides products into 2 or 4 segments, if required.

Highest throughput and minimal waste. Compared with conventional processes, the Multicorer allows an increase of productivity of up to 300% and reduces the waste rate considerably at the same time.

Decoring height can be adjusted according to product height in order to optimize the cycle times for the product to be processed, e.g. iceberg lettuce, endive, Salanova®, lollo, cabbage, radicchio etc.



| Measures | | Products & capacity | |
|--------------|-----------------------|---------------------|-----------------|
| I x w x h | 4000 x 1800 x 1800 mm | Lettuce | up to 4000 kg/h |
| Weight | 900 kg | | |
| Power | | | |
| Total power | 1.8 kW | | |

| Measures | | Products & capacity | |
|------------------------------|-----------------------|---------------------|------------------|
| I x w x h | 3568 x 2024 x 2447 mm | Cabbage | up to 2800 pcs/h |
| Weight | 1877 kg | Iceberg | up to 4800 pcs/h |
| Max. height of raw product | 240 mm | | |
| Max. diameter of raw product | 240 mm | | |
| Power | | | |
| Total power | 5.2 kW | | |

Coring, cutting

KSB, CAP 68



10



Cabbage Corer
KSB

Easy to operate, robust and hygienic. Cores up to 600 cabbage heads per hour. Due to the adjustable coring depth the machine is suitable for a wide range of cabbage sizes. A clean way of operation is guaranteed by a directed waste removal.



Cabbage Shredder
CAP 68

The CAP 68 cabbage shredder handles whole head cabbage without any need of pre-cutting. Highlights of this equipment are hygienic, stainless steel construction and easy to remove blade and funnel. CAP 68 can also be supplied with shred shorteners on the knives to control the length of the cabbage strips.



| Measures | | Products & capacity | |
|----------------------------|----------------------|---------------------|-----------------|
| I x w x h | 905 x 1045 x 1400 mm | White cabbage | up to 1800 kg/h |
| Weight | 230 kg | Red cabbage | up to 1600 kg/h |
| Infeed / feeding height | 960 mm | | |
| Discharge / outfeed height | 960 mm | | |
| Power | | | |
| Total power | 0.9 kW | | |

| Measures | | Products & capacity | |
|----------------------------|-----------------------|---------------------|-----------------|
| I x w x h | 1385 x 1010 x 1690 mm | White cabbage | up to 2500 kg/h |
| Weight | 450 kg | Red cabbage | up to 2500 kg/h |
| Infeed / feeding height | 1120 mm | | |
| Discharge / outfeed height | 545 mm | | |
| Power | | | |
| Total power | 1.5 kW | | |

Cutting

S 021, SPIRELLO 150



**Vegetable cutting machine
S021**

The vegetable cutting machine S021 is perfectly suited for cutting decorative spirals of vegetables (e.g. carrots, potatoes, pumpkins, radishes, celeriac, beetroots, zucchinis, etc.) very quickly and simply.

By means of variable tools a multitude of spiral thicknesses (e.g. 2 x 2 mm, 2 x 8 mm, 2 x 10 mm – other versions on request) can be produced with a max. product length of 250 mm.

The original result is enabling vegetable-processing companies to add a new touch to conventional product presentation in the market with very attractive, fine, springy strands similar to cooked spaghetti.



| Measures | | Products & capacity | |
|--------------------|---------------------|---------------------|---------------|
| I x w x h | 1050 x 270 x 500 mm | Carrot | up to 20 kg/h |
| Pneumatic | | Potato | up to 20 kg/h |
| Operating pressure | 6 bar | Radish | up to 20 kg/h |



**Vegetable spiral cutting machine
SPIRELLO 150**

With the SPIRELLO 150 you are able to cut large quantities of vegetables in decorative spirals in a quick and clean way.

With up to 680 revolutions per minute, the SPIRELLO 150 cuts vegetables within seconds into meter-long spirals, which optionally can be shortened with a length limit knife by interval switchings (7 levels).

The machine is equipped with removable magazines, one of which can be fitted with the raw product while the vegetable in the second magazine is processed. This means that the SPIRELLO 150 can be operated without interruption!

An optimal cutting result is achieved with a variable speed control in 7 steps depending on the nature of the product. The machine is featured with an automatic separation system between product and waste product. The SPIRELLO 150 scores with a very minimal amount of waste since the vegetable product is cut completely in spirals – except a small piece from the top.

| Measures | | Products & capacity | |
|----------------------------|---------------------|---------------------|----------------|
| I x w x h | 600 x 845 x 1700 mm | Carrot | up to 160 kg/h |
| Weight | 180 kg | Courgette | up to 80 kg/h |
| max. height of raw product | 300 mm | Cabbage turnip | up to 120 kg/h |
| Pneumatic | | Radish | up to 180 kg/h |
| Operating pressure | 9 bar | Beetroot | up to 50 kg/h |
| Power | | Sweet potato | up to 210 kg/h |
| Total power | 0.9 kW | Butternut | up to 340 kg/h |

Cutting

S 195, S 198, HGW, PGW



Table top grid cutter S 195
Sticks cutter S 198

You can use the manual S 195 to cut wedges, slices and figures out of vegetables and fruit. The sticks cutter S 198 makes it easy to cut vegetables into sticks. Another practical aspect is that the sticks can be removed by the bundle. The standard size is 8 x 8 mm, but many more sizes are available.



| Grid cutter S195 | | Products & capacity | |
|----------------------------|--------------------|---------------------|----------------|
| Measures | | Vegetables | up to 120 kg/h |
| I x w x h | 360 x 210 x 940 mm | | |
| Weight | 8.5 kg | | |
| Max. height of raw product | 105 mm | | |
| Sticks cutter S198 | | Products & capacity | |
| Measures | | Vegetables | up to 235 kg/h |
| I x w x h | 652 x 205 x 250 mm | Fruit | up to 370 kg/h |
| Weight | 25 kg | | |
| Max. height of raw product | 105 mm | | |



Pneumatical grid cutter PGW
Manual grid cutter HGW

The grid cutters HGW and PGW offer special cuts in a great variety of cutting forms of fruit, salad, vegetable and cheese, also pineapple peeling and/or dividing, cutting tomatoes into slices, cabbage coring & quartering (can only by applied to HGW & PGW „cabbage versions“) and much more. Whereas the HGW is a manually operated device the PGW operates pneumatically (up to 600 strokes/h). The PGW is also available as XL-model with larger lifting height (up to 400 mm) suitable for big products up to Ø 300 mm.

| Pneumatical grid cutter PGW | | Products & capacity | |
|-----------------------------|---------------------|---------------------|------------------|
| Measures | | Lettuce | up to 150 kg/h |
| I x w x h | 440 x 530 x 1100 mm | Vegetables | up to 1600 kg/h |
| Weight | 55 kg | Fruit | up to 2340 kg/h |
| Max. height of raw product | 250 mm | Cabbage | up to 1000 kg/h* |
| Pneumatic | | | |
| Operating pressure | 6 bar | | |
| Air consumption | 17 NI per cycle | | |
| | | | * special PGW |
| Manual grid cutter HGW | | Products & capacity | |
| Measures | | Vegetables | up to 550 kg/h |
| I x w x h | 483 x 950 x 900 mm | Cabbage | up to 700 kg/h |
| Weight | 36 kg | | |

Cutting

Tona grid cutting machines



**Tona rapid,
Tona rapid 3D, Tona rapid XL**

The Tona rapid provides a practical way to cut fruit and vegetables into segments, slices, sticks and other special shapes. As a special feature the Tona rapid 3D has the possibility to cut produce into slices before they are cut into segments, slices or sticks. This results in a three dimensional cut like small chunks from apples and many more possibilities. A continuous variable speed feed system ensures high capacity and high quality results. Tona rapid XL is best suited for cutting big fruit & vegetable (e.g. pineapples, eggplants, onions etc) in segments or slices. Pine-apples can even be peeled, cored and segmented. The product is inserted manually, kept in place by the product holders and pushed through the cutting tools. The cut product falls directly into a container or on a conveyor belt.

| | Tona rapid | Tona rapid 3D | Tona rapid XL |
|--------------------------------|-------------------|-------------------|-------------------|
| Measures | | | |
| I x w x h (mm) | 2000 x 945 x 1700 | 2000 x 950 x 1700 | 2000 x 945 x 1700 |
| Weight | 460 kg | 290 kg | 820 kg |
| Power | | | |
| Total power | 0.55 kW | 0.55 kW | 0.55 kW |
| Pneumatic | | | |
| Operating pressure | 6 bar | 6 bar | 6 bar |
| Air consumption | 34 NI per cycle | 34 NI per cycle | 36 NI per cycle |
| Processing data | | | |
| Strokes per hour | 1800 strokes/h | 1800 strokes/h | 1200 strokes/h |
| Max. height of raw product | 100 mm | 90 mm | 220 mm |
| Max. diameter of raw product | 85 mm | 75 mm | 130 mm |
| Products & capacity | | | |
| Vegetable & fruit | up to 3600 pcs/h | up to 3600 pcs/h | up to 2400 pcs/h |



Tona S180K

For precise cutting of fruit and vegetables like apples, tomatoes, carrots, onions, potatoes, kiwi fruits, pears, mushrooms, citrus fruit etc. in segments, slices, sticks and figurines. The Tona S180K is a smart combination of the proven machines Tona E (wegder) & Tona S (slicer). The Tona S180K is equipped with blue centring fingers (on 16 standard product holders), fruit and vegetables are gently fixed in the centre of the holder. Various cutting inserts assure to achieve the required cutting results. Optimal feed – With the Tona S180K it is possible to process product to a maximum diameter of 85 mm at a capacity of 20 pieces per minute (1200pcs/h). All cutting inserts used on the Tona Rapid can now be used as well on the Tona S180K. Simple operation – The clearly arranged push buttons on the machine switchboard are fast and simple to use. The cutting / wedging attachments are quick and easy to remove.

| Measures | | Products & capacity | |
|-------------------------|----------------------|---------------------|------------------|
| I x w x h | 800 x 1000 x 1400 mm | Vegetable | up to 1200 pcs/h |
| Infeed / feeding height | 800 mm | Fruit | up to 1200 pcs/h |
| Pneumatic | | | |
| Operating pressure | 6 bar | | |
| Air consumption | 17 NI per cycle | | |
| Processing data | | | |
| Strokes per hour | 1200 strokes/h | | |



Germ reduction

Vortex-line, UVC-Lock

14



VORTEX-line for germ reduction + prolongation of shelf life of fresh-cut products

The new Vortex-line from KRONEN has been developed for final treatment stage for vegetables (like e.g. various leaf salads, root products, etc.) but also fruit like apples and grapes achieving germ reduction and prolongation of shelf life and, consequently, increase of quality of products.

The product enters gently into a pipe system without passing through a pump. Chemicals and sanitizing products can be added at different stages of the product transportation through the machine. At the discharge, the product is rinsed with fresh water through special nozzles placed on top of the exit conveyor belt.

Flexible contact and dwell time of the produce is adjustable from 1 to 3 minutes. The modular and space-saving tubular system can easily be integrated into existing salad processing lines, various installation layouts for customer specific conditions are possible. For mechanical cleaning the pipelines can be disassembled easily and quickly by means of screw connections.

| Measures | | Products & capacity | |
|--------------|-------------------------------|---------------------|-----------------|
| I x w x h | variable x variable x 2100 mm | Iceberg | up to 1500 kg/h |
| Total volume | 1250 l | Spinach / rocket | up to 800 kg/h |
| Power | | | |
| Voltage | 3~400 V/N/PE/ 50 Hz | | |
| Total power | 5.9 kW | | |



**UVC-Lock
Disinfection lock**

The UVC Lock has been developed in close cooperation with sterilAir® (CH-Weinfelden) for surface disinfection of fruit and vegetable products* as well as of packaging materials such as boxes, crates and tools etc.

The UVC Lock is equipped with the latest UVC technology and is optimized in regards to hygiene, usability and easy maintenance. As a standard the UVC Lock includes 12 or 20 ET 2236-4H tubes. Optionally it is available with hybrid tubes and a configuration from 6 to 26 tubes.

An adequate sterility of products as well as of packaging materials and storage boxes is one major requirement for the shelf life and hygiene of food, especially in the salads, vegetables and fruit processing industry.

UVC treatment with sterilAir® components disinfects in a highly effective, safe and reliable way: without heat, undesirable additives and residues - and within very short times.

* Use with food depends on the legislation in the country of the user.

| Measures | | Products & capacity | |
|----------------------------|----------------------|-----------------------------|-------------------------------|
| I x w x h | 3044 x 960 x 1286 mm | Product size (lxwxh): | up to variable x 550 x 300 mm |
| Infeed / feeding height | 750 mm | Throughput capacity / hour: | approx. 400 pcs/h |
| Discharge / outfeed height | 750 mm | | |
| Power | | | |
| Total power | 0.8 kW | | |

Product treatment

Washing

15



Dipping bath KDB 120

The new KDB 120 dipping bath has been developed for final treatment of peeled or cut fruits or vegetables. By application of e.g. Nature Seal®, other liquids or water soluble powders a prolongation of shelf life and, increase of product quality will be achieved.

Working principle:

- ▶ The product will be transported through the filled tank and, additionally, sprayed from the top. The open and easy access construction guarantees a very gentle product treatment.
- ▶ The contact time of the product is adjustable from 30 to 120 seconds.
- ▶ The water level in the dipping bath is infinitely variable according to product quantity and size.
- ▶ With a minimum water filling of 24 l, corresponding to a water level of 10 mm, the function of the machine is fully guaranteed (up to max. 130 l content). The KDB dipping bath is the device with the smallest fill quantity on the market!
- ▶ At the end of the process, the product can be dried by an air knife (optional) and then will be discharged directly into a container or on a conveyor belt (optional) for further processing.

| Measures | | Products & capacity | |
|--------------------|-----------------------|---------------------|----------------|
| I x w x h | 2600 x 1500 x 1600 mm | Fruit | up to 650 kg/h |
| Power | | | |
| Total power | 2.2 kW | | |
| Water | | | |
| Total water volume | 24 - 130 l | | |

Efficient and gentle washing of lettuces, vegetables and fruit by means of adjustable water rotation.

GEWA ECO and GEWA PLUS range

Thoroughly washing salads and vegetables, herbs but also sliced products until they are completely clean – that's the job of the KRONEN GEWA ECO and GEWA PLUS range of continuous flume washing systems. All of the washers work continuously using a combination of water agitation for cleaning, and vibrator for dewatering and transportation. Other options include mesh belt outfeed for delicate products, instead of the vibrator system, and air agitation to work with, or in place of, the standard water agitation system. Valve control over the water flow, direction and pressure enables you to adjust the machine to the specific requirements of your product. For example delicate salad and babyleaf products require a more gentle wash than harder root vegetables. Water is recirculated through the system to keep operating costs low.

A series of filtration systems, including a dedicated system for the removal of floating debris such as flies and insects, ensure water quality in the washer is kept as clean as possible. The goal is always to achieve thoroughly washed products without damage – the GEWA ECO and GEWA PLUS range meet that goal. One of the major advantages offered by the KRONEN washing machines is its hygienic design. The ability to clean machines quickly and meticulously not only maintains the quality of the product but reduces costly production down-time. With the GEWA range pipework, nozzles, vibrator decks and filter plates can be removed for thorough cleaning. Seamless welding and the use of stainless steel throughout further enhance traditionally high KRONEN standards. The outfeed vibrator elements (springs are not used) are all stainless steel, they ensure reliable performance and prolong machine life.

All GEWA washing machines are available in PLUS or ECO versions, different sizes, with belt outfeed or vibration outfeed and a lot of useful accessories and options.

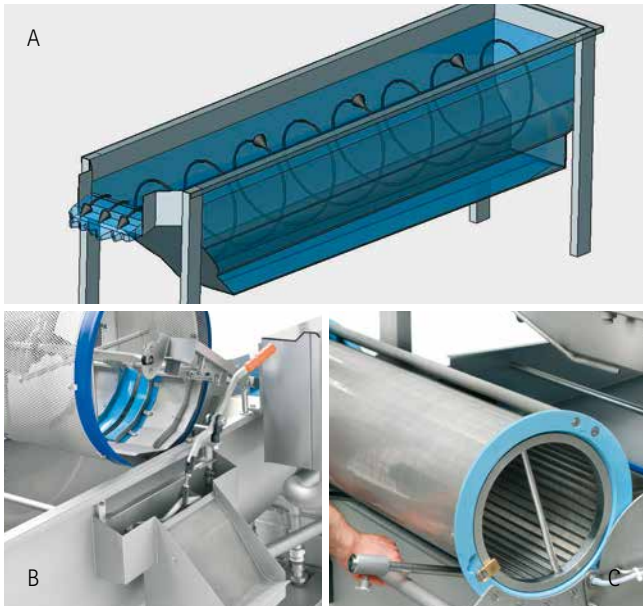
All models GEWA ECO and GEWA PLUS can be used separately or in combination dependant upon the product type and capacity processed – high quality salad and vegetable washing systems with a proven track record!



Washing GEWA 3800B PLUS

Highlights

16



A – Helical wash system

Based on the KRONEN helical wash system the foot print of the washers is only 2/3 than comparable flotation washers. The possibility to combine the KRONEN helical wash system and the air system of a normal flotation washer makes the KRONEN GEWA systems also much more flexible and allows to handle floating and non-floating products. Due to the spiral water movement the produce travels a path of 15 - 30 meters in the tanks of 2,4 - 3,6 m lengths depending on machine size.

B – Insect removal system

All floating debris rises through the submersion device to the surface of the tank. The insect removal system is available for most washers of the GEWA range in two versions.

C – Lateral fines removal drum

The lateral rotary wedge wire drum filter allows a continuous, non-stop filtration of the wash water. The KRONEN system allows to completely remove the wedge wire drum for cleaning and better access to the filter tank. This filtration system is optional and also easily retrofitable on all GEWA PLUS washers.

Options & accessories

Various other options are available such as WMS (water management system) WRS (water recycling system), air system, sand trap funnel, dipping belt for cascade utilisation, and many more.



Washing machine GEWA 3800 B PLUS

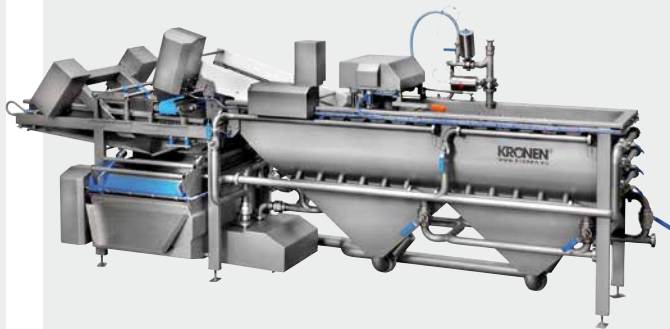
Washing machine GEWA 3800B PLUS with belt outfeed for medium capacities, for example approx. 200-1000 kg per hour, depending on product. Efficient and gentle washing of lettuces, vegetables and fruit by means of adjustable water rotation.

The removable belt can be offered with straight or inclined options and dipping belt, to allow connection between different washing machines at the same height. Furthermore, the conveyor belt is provided with a standard air scraper to allow smooth product discharge. As special options, the discharge belt can be provided with de-watering devices, just as knocking belt or air blowing/suction devices. Kronen Belt conveyor discharge are easy to clean and especially suited to run very delicate products, such as baby leaf and Salanova®.

| Measures | | Products & capacity | |
|----------------------------|-----------------------|---------------------|----------------|
| I x w x h | 4209 x 1388 x 1675 mm | Lettuce | up to 700 kg/h |
| Weight | 590 kg | Vegetables | up to 900 kg/h |
| Infeed / feeding height | 1232 mm | Fruit | up to 900 kg/h |
| Discharge / outfeed height | 759 mm | Aromatic herbs | up to 300 kg/h |
| Power | | Cabbage | up to 900 kg/h |
| Total power | 7.7 kW | Field mushroom | up to 400 kg/h |
| Water | | | |
| Total water volume | 814 l | | |

Washing

GEWA 3800V PLUS, GEWA 5000V ECO



**Washing & sorting machine
GEWA 3800V PLUS
for bell peppers**

This innovative GEWA 3800V PLUS has been specially designed for washing and sorting sliced bell pepper (completely cut with core and kernels). Due to the automatic special separation method different kinds of bell pepper (diced or sliced) can be processed.

By means of a sophisticated water streaming system the waste and good product are separated thus saving extensive costs. The machine can easily be adjusted, e.g. for various kinds of bell pepper. Furthermore, it can be used as a standard washing machine by easily lifting up the link conveyor.

A capacity of >800 kg (good product) can be achieved. The standard design of the GEWA 3800 V PLUS washing & sorting machine includes WMS and sand trap funnels and many more features.

We offer processing systems for washing & sorting up to 7 tons of raw goods.



**Washing machine
GEWA 5000V ECO**

Washing machine GEWA 5000V ECO with vibration outfeed (product outfeed over vibration screen) for bigger capacities, for example approx. 600-2500 kg per hour, depending on product.

Efficient and gentle washing of lettuces, vegetables and fruit by means of adjustable water rotation.



| Measures | | Products & capacity | |
|----------------------------|-----------------------|---------------------|----------------|
| I x w x h | 3815 x 1389 x 1675 mm | Lettuce | up to 700 kg/h |
| Weight | 560 kg | Vegetables | up to 900 kg/h |
| Infeed / feeding height | 1232 mm | Fruit | up to 900 kg/h |
| Discharge / outfeed height | 933 mm | Aromatic herbs | up to 300 kg/h |
| Power | | Cabbage | up to 900 kg/h |
| Total power | 6.4 kW | Field mushroom | up to 400 kg/h |
| Water | | | |
| Total water volume | 912 l | | |

| Measures | | Products & capacity | |
|----------------------------|-----------------------|---------------------|-----------------|
| I x w x h | 5145 x 1590 x 1600 mm | Lettuce | up to 1750 kg/h |
| Infeed / feeding height | 1073 mm | Vegetables | up to 2250 kg/h |
| Discharge / outfeed height | 825 mm | Fruit | up to 2250 kg/h |
| Power | | Aromatic herbs | up to 500 kg/h |
| Total power | 10.7 kW | Cabbage | up to 2250 kg/h |
| Water | | Field mushroom | up to 800 kg/h |
| Total water volume | 1400 l | | |

Washing GEWA XL

De-Watering FDS 5000

18



**Washing machine
GEWA XL**

The new GEWA XL washing machine offers optimal washing results for large quantities of salads and vegetables.

- ▶ Powerful and gentle washing using the continuous flow process
- ▶ Compact design for processing large quantities, e.g., iceberg 5 t / h or babyleaf 1.5 t / h.
- ▶ Dwell time of 45 seconds
- ▶ Optimal water flow in the piping and washing tub, thus increasing energy efficiency and avoiding/reducing biofilm forming
- ▶ Reduced water consumption during spraying and washing
- ▶ No organic residue on the product due to optimized spraying
- ▶ Extension of the product shelf life
- ▶ Low carryover of water due to belt suction
- ▶ Standard equipment with Sand trap, Insect removal system with increased surface contact, Filter screen, WMS (Water Management System), centrally controlled filling and draining.
- ▶ Individual discharge area
- ▶ Wide range of additional functions and useful accessories

| Measures | |
|--------------------|-----------------------|
| I x w x h | 6738 x 2417 x 1920 mm |
| Volume wash tank | 2 m ³ |
| Volume filter tank | max. 1 m ³ |
| Power | |
| Total power | 14 kW |



**Flow de-watering system
FDS 5000**

The new FDS 5000 Flow de-watering system is optimized for removing excessive surface moisture from products such as fruit (cut or whole), hard vegetables (cut or whole), cut lettuce and baby leaf etc. while keeping the product in perfect condition. With the possible adjustments the machine can be optimised on capacity, product quality and residual moisture.

The FDS 5000 is flexible and safe to operate:

- ▶ Blowing action and belt speed can be controlled via frequency inverter.
- ▶ The suction intensity is variable via adjustable air intake openings.
- ▶ The special air knives are height adjustable in several steps and can therefore be set for maximum surface water removal.
- ▶ Noise reduction boxes reduce the noise of the suction units and separate the water from the air coming from the suction units.
- ▶ Hygienic design is guaranteed due to open stainless steel construction, quick detension on the belt, easy opening and access of the pipe work.

There are different sizes of FDS systems available to suit the customers' specific needs.

| Measures | |
|--------------------------------------|-----------------------|
| I x w x h (incl. electrical cabinet) | 5050 x 2200 x 1870 mm |
| Infeed | 1150 mm |
| Outfeed | 925 mm |
| Power | |
| Total power | 32 kW |

Spin-drying

K series, Basket Carousel



Spin-dryers

K 50 ECO, KS-100 PLUS and KS-7 PLUS

K 50 ECO and KS PLUS series are ideal for salad, vegetable and various other applications. KRONEN ECO spin-dryers are available with one speed (600 or 900 rpm) or with 7 speeds (K 50-7 ECO) and a transparent cover. The infeed height is 850 mm.

The KS-100 PLUS is the TOP-seller of KRONEN spin-dryers for vegetables and salads. The robust construction, safety and function are based on the requirements of the centrifuge DIN EN 12547 standard and the salad spin-drying DIN EN 13621 standard.

It is particularly easy to clean and the individual adjustment options for spin speed and duration on 99 freely programmable memory locations ensure maximum comfort and optimal adaptation to the product to be processed. A mode with spinning in both directions is also available.

The model KS-7 PLUS offers 7 settings of individually adjustable spin speeds and freely adjustable spin times.

Basket-Carousel

This attachment works as an efficient link between washer and spin-dryer by ensuring continuous operation. It simplifies the change of the baskets and collects the overflowing product in the stainless steel base. Also available as an automatic version with weight control.



| Spin-dryer Turbo K50 ECO 600/900 rpm | | Products & capacity | |
|--------------------------------------|--------------------|---------------------|----------------------|
| I x w x h | 869 x 580 x 923 mm | Lettuce | up to 270 / 360 kg/h |
| Weight | 140 kg | Vegetables | up to 480 / 600 kg/h |
| Total power | 0.75 kW | Fruit | up to 390 / 520 kg/h |
| Basket volume | 44 l | Cabbage | up to 420 / 560 kg/h |
| Speed | 600 / 900 r/min | Aromatic herbs | up to 140 / 210 kg/h |
| Spin time | fixed | Spices | up to 200 / 300 kg/h |
| Spin-dryer Turbo K50-7 ECO | | Products & capacity | |
| I x w x h | 869 x 580 x 928 mm | Lettuce | up to 360 kg/h |
| Weight | 140 kg | Vegetables | up to 600 kg/h |
| Total power | 0.75 kW | Fruit | up to 520 kg/h |
| Basket volume | 44 l | Cabbage | up to 560 kg/h |
| Speed | 250 - 850 r/min | Aromatic herbs | up to 210 kg/h |
| Spin time | free adjustable | Spices | up to 300 kg/h |
| Spin-dryer Turbo KS-100 PLUS, K50-7S | | Products & capacity | |
| I x w x h | 954 x 644 x 985 mm | Lettuce | up to 575 kg/h |
| Weight | 160 kg | Vegetables | up to 1260 kg/h |
| Total power | 0.8 kW | Fruit | up to 750 kg/h |
| Basket volume | 44 l | Cabbage | up to 810 kg/h |
| Speed | 325 - 1050 r/min | Herbs | up to 440 kg/h |
| Spin time | free adjustable | Spices | up to 300 kg/h |

Peeling

PL 25K, PL 25S, PL 40K



PL 25K



PL 25S



PL 40K

Peelers

PL 25K, PL 25S, PL 40K

Peeler PL Series

The PL Series has two peeling systems and a washing system to choose from.

The abrasive system peels quick and price effective for further processing. The knife system peels the potatoes, carrots, beetroot, turnips and other hard vegetables like hand peeled and therefore is the ideal solution for whole peeled product with longer shelf life. The rubber knob system can be used for washing potatoes, carrots, etc. The rounded, easy-to-clean peeling chamber guarantees residue-free waste management that helps ensure a hygienic environment. The automatic top-down water sprinkler washes the product so it's ready to process. The pneumatic door opening (optional for PL 40K) allows trouble-free integration of the machine into automatic production process. Emptying via pneumatic door opening – followed by automatic closing of the door for next peeling.



| PL 25K | | Products & capacity | |
|----------------------------|---------------------|---------------------|----------------|
| Measures | | | |
| I x w x h | 815 x 705 x 1285 mm | Carrot | up to 250 kg/h |
| Power | | Cabbage turnip | up to 300 kg/h |
| Total power | 1.12 kW | Potato | up to 400 kg/h |
| Processing data | | Beetroot | up to 250 kg/h |
| Processing volume per hour | 400 kg/h | | |
| Kg per batch | 25 kg | | |
| PL 25S | | Products & capacity | |
| Measures | | | |
| I x w x h | 735 x 750 x 1195 mm | Cabbage turnip | up to 300 kg/h |
| Power | | Potato | up to 400 kg/h |
| Total power | 1.5 kW | Beetroot | up to 250 kg/h |
| Processing data | | | |
| Processing volume per hour | 400 kg/h | | |
| Kg per batch | 25 kg | | |
| PL 40K | | Products & capacity | |
| Measures | | | |
| I x w x h | 930 x 910 x 1395 mm | Carrot | up to 500 kg/h |
| Power | | Cabbage turnip | up to 400 kg/h |
| Total power | 1.52 kW | Potato | up to 600 kg/h |
| Processing data | | Beetroot | up to 600 kg/h |
| Processing volume per hour | 600 kg/h | | |
| Kg per batch | 40 kg | | |



Complete & continuous peeling line

Root processing line for washing, peeling, cutting / dicing up to 1.200 kg per hour. The loading and peeling process is central controlled.

Peeling

AS 2, AS 4, AMS 220



AS 2 + 4

Apple peelers AS 2, AS 4

Apple Peeler AS 2+4

The Apple Peeler AS 2 peels, cuts and cores up to 600 apples per hour. A spring-loaded knife adjusts automatically to provide a consistent result on uneven surfaces. The peeling thickness can be adjusted. The multifunctional AS 4 is a logical upgrade that provides the additional option to slice apples in rings or apple wedges in small pieces for apple pie for example.

| Apple Peeler AS 2 | | Products & capacity | |
|----------------------------|--------------------|---------------------|---------------|
| I x w x h | 600 x 300 x 400 mm | Apple | up to 90 kg/h |
| Weight | 30 kg | | |
| Total power | 0.15 kW | | |
| Processing date | | | |
| Processing volume per hour | 600 pc/h | | |
| Apple Peeler AS 4 | | Products & capacity | |
| I x w x h | 660 x 300 x 400 mm | Apple | up to 90 kg/h |
| Weight | 35 kg | | |
| Total power | 0.15 kW | | |
| Processing date | | | |
| Processing volume per hour | 600 pc/h | | |



Pineapple & melon peeler AMS 220

The AMS 220 pineapple & melon peeling machine is ideally suited to peel fruit in a great variety of different shapes and sizes:

- Many kind of fruit such as e.g. pineapples, melons of all kind, pumpkins with a smooth surface (e.g. butternut) can be peeled regardless of the products contours. The AMS 220 scores with this significant flexibility benefit!
- Pineapples can not only be peeled but also cored simultaneously (on/off switching function)
- The peeling depth is adjustable from 1,5 to 10 mm by changing the specially developed contour control system – without any tooling within seconds. An extremely smooth and almost score-free surface is achieved by this control unit following the shape of each (individual) fruit.

The clearly arranged push buttons on the machine switchboard are easy to use and emphasize the high user friendliness. The compact design of the AMS 220 and the combination as standard with a mobile frame ensures ease of use – anytime and anywhere.



| Measures | | Products & capacity | |
|-------------|---------------------|--------------------------------|--|
| I x w x h | 843 x 737 x 1390 mm | Capacity depending on product: | |
| Power | | up to 4 fruit / min. | |
| Total power | 0.7 kW | | |

Peeling

Mango Peeler-de-Cheeker, ORKI



22



Mango Peeler-de-Cheeker

The Mango Peeler-de-Cheeker peels the mango and removes the 'cheeks' in one cycle. Once the fruit has been positioned the machine takes the mango by the stone, releasing it only when the cheeks have been removed.

Unique processing method

The mango is a very tender fruit and so demands special care in processing. Conventional peeling methods fail to provide the desired result, as the fruit is often damaged. So the Mango Peeler-de-Cheeker holds the fruit not on the outside, but by the stone.

The starting point – longer shelf-life

The fruit is peeled naturally, comparable with hand-peeled fruit. In other words, along the length of the fruit. The result of this peeling method is a nice authentic, smooth cut. After peeling the mango 'cheeks' are sliced with two sharp, driven blades. This unique processing method increases the shelflife of your product.



| Measures | | Products & capacity | |
|------------------------------|---|---------------------------|----------------------------|
| I x w x h | 7285 (incl. infeed conveyor) x 1471 x 2450 mm | Maximum diameter of fruit | 140 mm |
| Processing data | | Length of fruit | min. 115 mm max. 160 mm |
| Processing volume per minute | 30-40 mangos | | |



**Citrus and kiwi peeler
ORKI**

The machine is a fully-automatic peeler, corer and 'top and tailer' and is suitable for processing oranges, kiwi fruit and grapefruit. After setting the fruit type, the desired peeling thickness and the peeling speed, each piece has its skin carefully removed. The machine can also core the fruit and 'top and tailer' it.

Altering the peeling thickness – The maximum yield can be obtained if the changing thickness of the fruit skin is taken into account. The ORKI Citrus Et Kiwi Peeler has a unique variable peeling thickness mechanism. The variable peeling thickness (thicker at the stem end than at the tip) can be pre-set. This prevents from peeling too thick a layer, which might mean loss of fruit.

Features of the ORKI Citrus Et Kiwi Peeler

- ▶ Careful treatment and processing improves the shelf life
- ▶ Simple to operate and to set (including peeling thickness) via touch screen
- ▶ Completely made of stainless steel AISI 304
- ▶ Easy to clean and to service. Meets European guidelines for the food-processing industry (hygiene and safety)
- ▶ Can operate as stand alone unit (capacity of max. 9 fruit per minute) or can be interlinked with a second machine to increase the capacity (max. 18 pieces per minute).

| Measures | | Products & capacity | |
|----------------------------|-----------------------|---------------------|----------------|
| I x w x h | 2000 x 1800 x 1840 mm | Orange | up to 110 kg/h |
| Weight | 625 kg | Kiwi fruit | up to 80 kg/h |
| Power | | Grapefruit | up to 150 kg/h |
| Total power | 2 kW | | |
| Processing data | | | |
| Processing volume per hour | 1080 pc/h | | |

De-stemming

GDM 35



**Grape de-stemmer
GDM 35**



De-stemming grapes no longer needs to be done by hand. The newly developed GDM 35 GRAPE DE-STEMMER is perfectly suited for automatic de-stemming of grapes. The machine ensures that the grapes are neatly loosened („unscrewed“) without damaging the grapes.

An integrated air knife prevents condensation. Furthermore, the machine is equipped with a gap width adjustment (for optimal adaption to grapes sizes). The de-stemmed grapes will then be gently put on a conveyor belt for further processing or end control.

Capacity:
up to 240 kg per hour
(depending on grapes sizes and varieties)

| Measures | | Products & capacity | |
|----------------------------|-----------------------|---------------------|----------------|
| I x w x h | 1635 x 1117 x 1805 mm | Grape | up to 240 kg/h |
| Weight | 500 kg | | |
| Power | | | |
| Total power | 2.5 kW | | |
| Processing date | | | |
| Processing volume per hour | 240 kg/h | | |

Packaging

MP, CP, UP, Flow



**Packaging machine
MP 150**

The MP 150 form, fill and seal machine is optimized to create bags from a flat film from the reel efficiently and automatically. The machine is suitable for packing many types of food as well as non-food products and applicable for small production areas as well as industrial environments. It can also be used for manual filling. In the standard configuration it produces pillow bags. Optionally the machine can also produce self standing bags. The machine is set on castors as a standard and thus, it can be placed under various dosing systems easily and quickly. Pneumatic opening and closing of the film pull belts guarantees effortless handling. The MP 150 is easy and safe to operate:

- ▶ Panasonic PLC control allows 99 programs to be stored
- ▶ Full color touchscreen for simple operation
- ▶ Machine safety according to CE regulations
- ▶ Compact, solid and hygienic design made of stainless steel
- ▶ Easy accessibility and cleaning thanks to open construction
- ▶ Easy maintenance as components can be retrofitted quickly

Technical specifications MP 150:

| | |
|--------------------------------|-------------------------------------|
| Bag width: | 40 mm - 150 mm |
| Bag length: | unlimited (175 mm per sealing step) |
| Film thickness: | 25 - 120 µ |
| Max. production speed: | 50 bags/min. |
| Max. film width: | 340 mm |
| Core diameter film roll: | 76 mm (3") |
| Max. outer diameter film roll: | 320 mm |
| Voltage: | 230 Volt, 50/60 Hz |
| Air consumption: | 6 bar, 150 ltr/min. |
| Machine dimensions (WxLxH): | 1165 x 680 x 998 mm |



**Packaging machine
CP 350 PLUS**

The CP 350 PLUS is very compact and suitable for packing various products. Being one of the smallest form, fill and seal machines in the world, it can transform film into a bag by using a specially developed former set.

Finally the machine fills and seals the bags representatively. The small, space-saving and completely self supportive packaging machine ensures an efficient, clean and hygienic operation. The CP 350 PLUS is suitable for all types of free-flow food (like vegetable, fruit, lettuce, pastries, raw vegetables, sweets) and non-food products. Besides standard pillow bags the CP350 is able to produce square bottom bags or gusset bags.

The CP 350 PLUS is being characterized by its flexibility and userfriendliness and it covers a high standard equipment. Various accessories are available, i.e. photocell for printed film, gasflushing, vibration unit, perforation systems, end of film detection and many more. Options and components can be retrofitted quickly.

Technical specifications CP 350 PLUS:

| | |
|-----------------------------------|------------------------|
| Bag width (pillow): | 75 - 350 mm |
| Max. bag length: | unlimited mm |
| Max. bag length per sealing step: | 230 mm |
| Max. production speed: | 40 bags/min |
| Film thickness: | 25 - 120 µ |
| Core diameter: | 76 mm (3") |
| Max. film width: | 750 mm |
| Max. outer diameter film roll: | 320 mm |
| Voltage: | 230 V, 50/60Hz |
| Machine dimensions (l x w x h): | 1.495 x 962 x 1.647 mm |

Vertical form-, fill- and sealing machines form a flat film into a tubular shape by means of a specially former set. The funnel can be filled with any type of free flowing product by hand or automatically via a weighing or dosing system. Finally the machine seals and cuts the bag with its contents and a perfectly formed bag is made. The packaging machines are suited for packing all free flowing products, food or non-food.



**Packaging machine
UP 350**

The GKS-Unipack UP 350 has a hygienic design and is constructed out of stainless steel. Through its open and accessible construction, the machine is easy to clean and to maintain. Therefore the machine is very suitable for free-flow food applications in the food industry. With its large range in packaging sizes (75 up to 350 mm bag width and endless bag length) this flexible machine can be used in a wide variety of packaging situations. The machine capacity is up to 50 bags per minute. In the standard configuration it produces pillow bags. Optionally the machine can produce self standing square bottom bags.

The machine covers a high standard equipment and is built in a modular way, so each individual function group (e.g. sealing mechanism or electrical cabinet) can be exchanged within minutes. This creates a reduction in downtime and costs during maintenance work. Various accessories are available – options and components can be retrofitted quickly.

Technical specifications UP 350:

| | |
|-----------------------------------|------------------------|
| Bag width (pillow): | 75 - 350 mm |
| Max. bag length: | unlimited mm |
| Max. bag length per sealing step: | 480 mm |
| Max. production speed: | 50 bags/min |
| Film thickness: | 25 - 120 µ |
| Core diameter: | 76 mm (3") |
| Max. film width: | 750 mm |
| Max. outer diameter film roll: | 320 mm |
| Voltage: | 230 V, 50/60Hz |
| Machine dimensions (l x w x h): | 1.495 x 962 x 1.999 mm |



**Packaging machine
Flow**

FLOW is the next generation vertical, form, fill and sealing machine. It is suitable for packing all kinds of bulk goods, both food as well as non-food products. FLOW distinguishes itself from other packaging machines by its hygienic design, full stainless steel construction (no aluminum parts), high packaging speeds and very user friendly interface. The machine is fully servo driven, both on the film transport as well as on the sealing system. FLOW is specially designed for packaging processes with a medium to high capacity, with a wide variety on products and film types. Especially processes in which hygiene and cleaning are highest priority FLOW is the machine to beat. The machine is available with various continuous heated sealing systems to process a wide variety of packaging materials, PP, PE, laminated and coextruded films. The bag length is determined by an encoder on the film which guarantees a high accuracy. For processing printed films an eye mark reader is installed. The intuitive touch screen provides the possibilities to create and store programs (up to 200). The user friendly interface which is divided into an operator and administrator level guarantees a trouble free operation in every situation. A lot of options are available.

Technical specifications Flow:

| | |
|---------------------------------|-----------------------------------|
| Bag width range: | 200 - 500 mm |
| Max. bag length: | 610 mm (longer in multiple steps) |
| Max. production speed: | 90 packs/min |
| Maximum film width: | 1.040 mm |
| Film thickness: | 25 - 130 micron |
| Core diameter: | 76 mm (3") |
| Outer diameter film roll: | 500 mm |
| Voltage: | 230 Volt / 50 Hz / 16 Amp |
| Machine dimensions (l x w x h): | 2.140 x 1.430 x 2.340 mm |

Trimming & sorting, transporting

Ergonomic trimming tables, conveying belts

26



Ergonomic trimming tables

We offer convenient and ergonomic trimming & sorting tables, automatic waste separation systems and automatic conveying equipment fully integrated in complete processing lines.

For example, our trimming & sorting stations – for 1 up to 16 and even more persons – are perfectly suited for adaption directly to the infeed belts of our cutting machines. These tables are equipped with stepless belt speed adjustment, product guides, removable cutting boards, waste chute, etc.

Various options and accessories are available such as hopper extensions, waste belts, crate supports, etc. – allowing improved yield and considerable increase in productivity!



Conveying belt systems

We offer various conveying belt systems for the efficient and smooth transport of your food products. Our product portfolio includes solutions for any given conveying demands from simple standard belt conveyors to complete conveying systems with electronic control.

Due to the compact and modular construction the belts and other parts are quickly removable without any tools for cleaning.

All parts that are in contact with food are made of stainless steel AISI 304 or FDA approved plastic.



Roller inspection tables

These tables can be placed before or after the peeling and/or cutting machines and are made for visual product control.

Poor quality products can easily be sorted out.

Different models and designs can be supplied.



Water tank for pre-cleaning

Products (e.g. potatoes) are filled into the robust water tank for temporary storage & pre-cleaning and are lifted with an effective conveyor to the next production line element.

The water tank fits together with the PL peelers and further production line elements.

Weighing & mixing, central controlling

Weighing systems, central control



Automatic weighing system

- To determine product weight
- Continuous dosing of various products allows thorough blending for e.g. salad mixtures

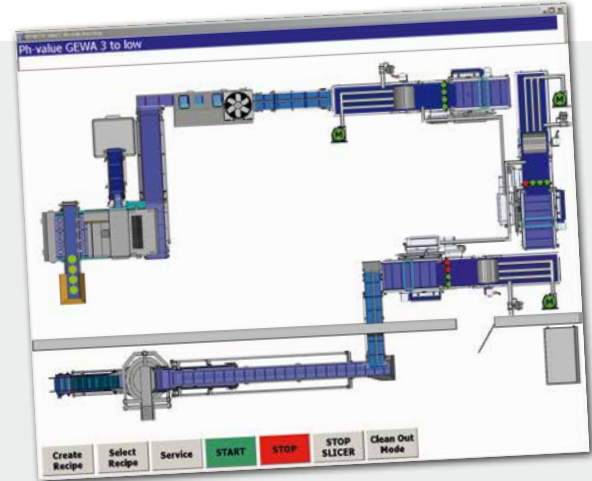
The innovative KRONEN washing and processing technique in combination with the proven automatic weighing belt system allows a precise, continuous and automatic dosing and mixing of different products, e.g. salad and cabbage. A thorough blending of the products takes place in a KRONEN GEWA washing machine, for example (other customized weighing systems are available).

Example:

Iceberg, Frisee, radicchio and other leaf lettuce with capacities of 1300 - 1400 kg per hour are processed adding a mixture of 5 - 45 % (depending on produce). Dosing sliced cabbage but also other products such as carrot sticks (julienne), shall be provided automatically always in the same mixture ratio.

The advantages are obvious:

Automatic operation and, thereby savings in personnel; continuous weighing process without belt stop on main product; storage of production data (statistics); control on raw material input; high accuracy of the finished mix achieving cost savings on expensive products, etc.



Process automation and visualisation for complete lines

For use in processing lines KRONEN has developed a standardized central control system offering an optimal cost-to-benefit ratio. The complete line can be controlled by means of an operator via touchscreen or PC. The control can be adapted individually to the production processes. This facilitates the adaption of the performance of the line in respect to varying capacities, products or product mixes.

Complex lines need an intelligent interaction which is assured by means of KRONEN process control components.

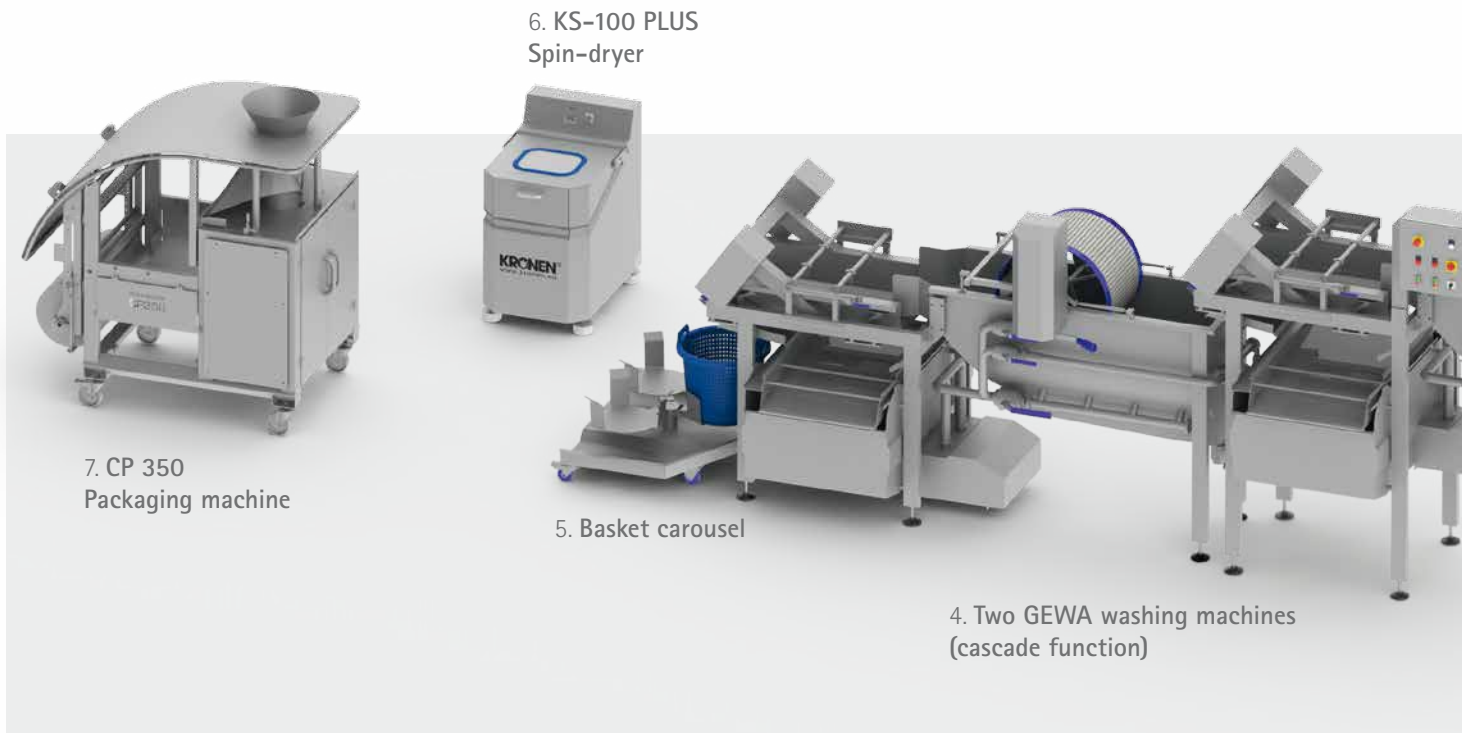
These process visualisation components, combined with the optional bus-system, allow to locate system messages, as e.g. maintenance messages or error messages and react without delay. For instance, in case of a machine stop in the production line, the system stops automatically upstream machines and avoids the waste of valuable raw material.

Advantages in detail:

- Quality
- Traceability
- Detailed process information
- Standardized process
- Easy handling on product changes
- Process control on the work floor
- Less downtime
- Remote Service access possible
- Maintenance / error messages can be promptly located
- Avoids waste of raw material

Concepts for complete production lines and processes.

28



7. CP 350
Packaging machine

6. KS-100 PLUS
Spin-dryer

5. Basket carousel

4. Two GEWA washing machines
(cascade function)

Planning

In addition to the standard range, KRONEN is always interested in discussing specific customer requirements. Thanks to the extensive range of machine accessories and our knowledge of the food processing industry, all machines can be enhanced to meet the customers individual needs. We will be happy to sit down with you and plan the solution that best suits your needs. Thanks to the skill and knowledge of our staff we are ideally qualified to advise you about all areas of salad, vegetable and fruit processing, from individual machines to complete purpose designed factory layouts. We pride ourselves on our ability to work in partnership with our customers to oversee the design, construction, installation and commissioning of the equipment. In short KRONEN create solutions that work.

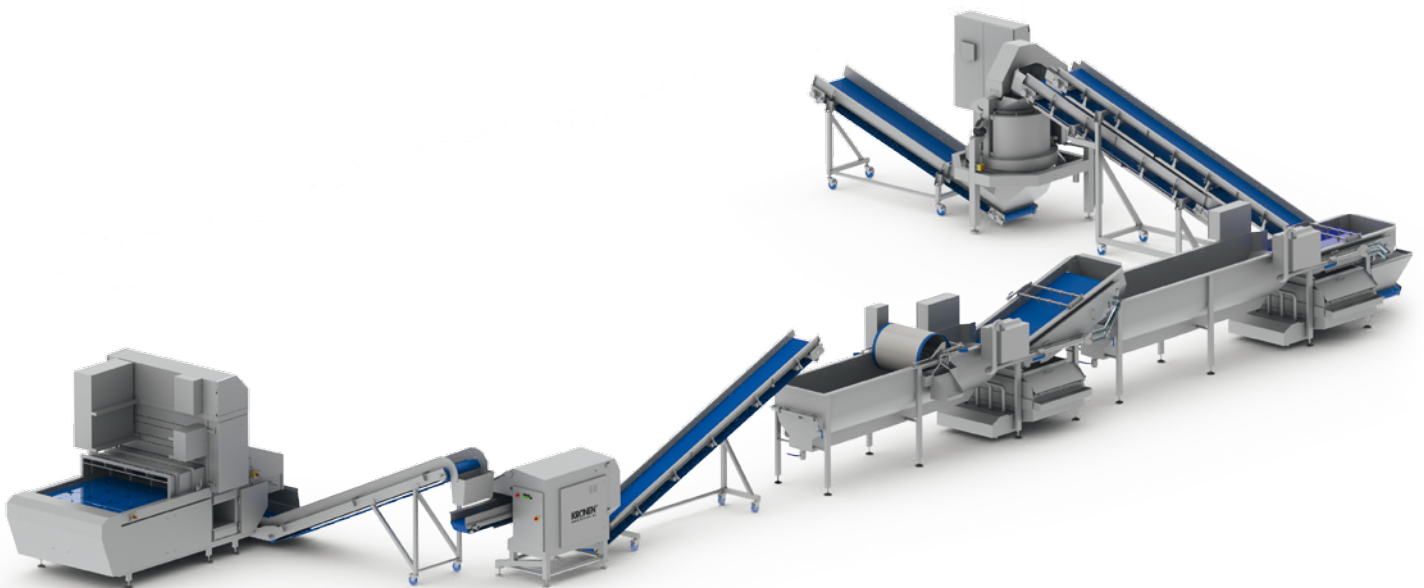
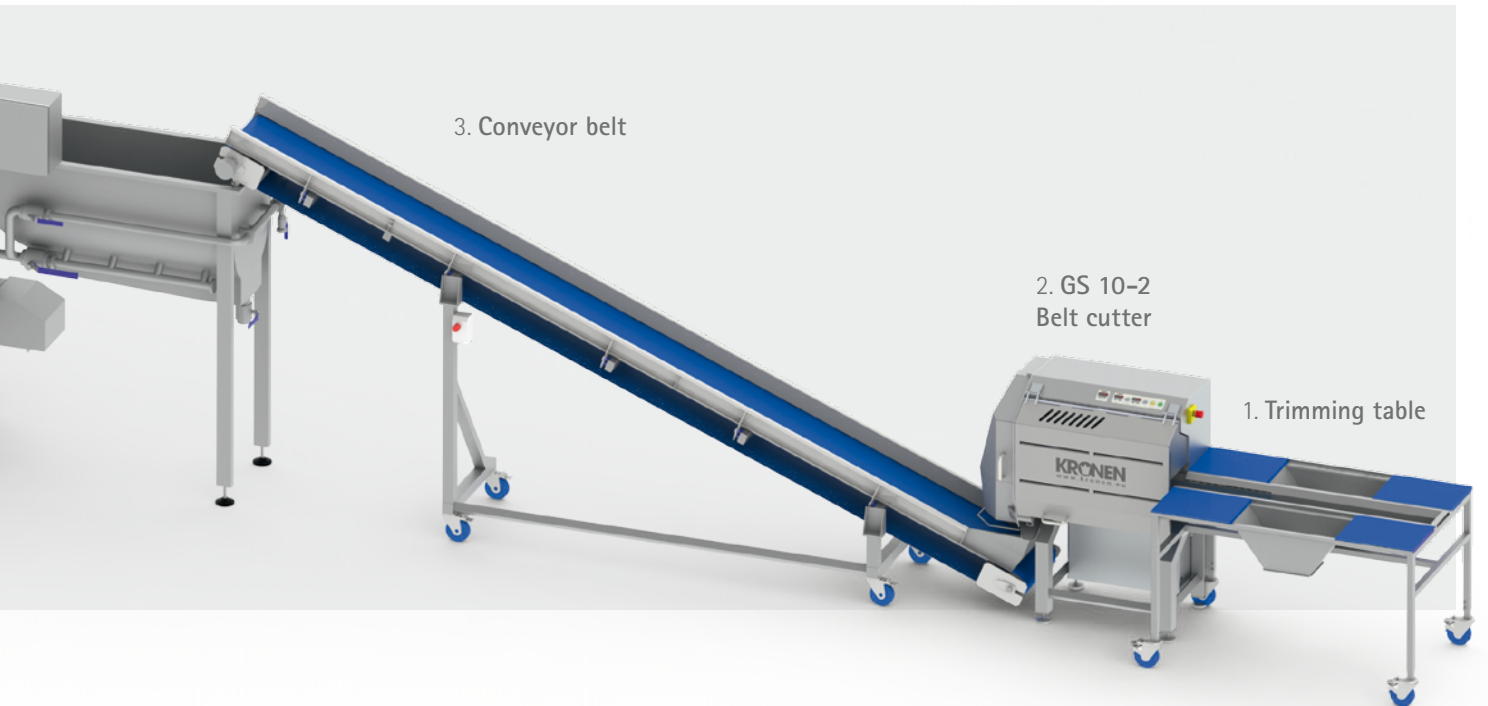
Manufacturing

The fact that KRONEN machines can be individually customised represents an important step towards building processing lines that provide real benefits to the user. Even existing customer machines can be modified to become part of a new line concept. Recently, for example, KRONEN modified a machine from its GS range to meet the unusual request of one of its customers. In doing this we took a machine that normally operates in a factory environment and modified it so that it was mounted onto a chive harvesting machine, slicing chives in the field. This development protected the delicate nature of the chives, by eliminating additional handling of the product prior to slicing, and delivered a superior finished product.

Proof that KRONEN really do create solutions that work. The layouts shown are just two examples of the ideas available from KRONEN, why not contact us to discuss how we can be of assistance to your business?

The integration of special-purpose machines.

29



Large processing line for various salads –
from preparation to spin-drying

Some of our many reference projects



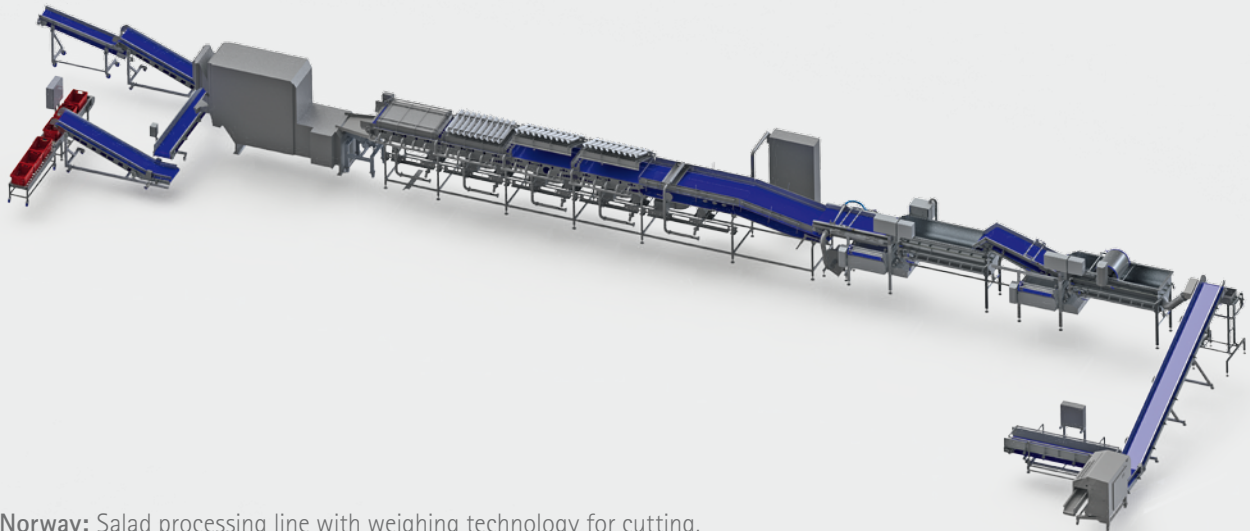
Portugal: Processing line for washing & sorting bell peppers – capacity up to 7 tons/h.



Sweden: Processing line for cutting, washing, drying and weighing lettuce and different vegetables – capacity up to 1000 kg/h



Austria: Processing line for trimming, slicing, washing, treating, spin-drying and mixing leaf salad – capacity up to 500 kg/h.



Norway: Salad processing line with weighing technology for cutting, washing, de-watering and mixing leaf salad – capacity up to 800 kg/h Iceberg lettuce and up to 400 kg/h Baby leaf.



United Kingdom: Large salad processing line – capacity up to 1.500 kg/h Iceberg lettuce and up to 800 kg/ Baby leaf.



Turkey: Large salad processing line – capacity up to 1.500 kg/h



Germany: Harvest & slice cut at chives field with 4 big KRONEN GS 20 belt cutting machines – capacity up to 1,8 tons/h



International Cruise liner: Economic cutting and washing technology – capacity up to 500 kg/h

Product Range:



- **Belt cutting machines** GS 10-2, GS 20
- **Slice and wedge cutter**
Tona S, Tona E, Tona S 180K
- **Special cutting and grid cutting machines**
Tona Rapid, Tona Rapid 3D, Tona Rapid XL, Multicorer, TT 450
- **Cube and strip cutting machine** KUJ V
- **Spiral cutting machines** SPIRELLO 150, S 021
- **Multi purpose cutting machine** KSM 100
- **Cabbage cutting machine** CAP 68
- **Cabbage corer** KSB
- **Dicing, wedging and shaping machine**
PGW, HGW
- **Vegetable and salad washing equipment**
- **Peeling machines**
for citrus fruit, melons, apples, pineapples, potatoes, carrots, turnips, beetroot, etc.
- **Spin-dryers and de-watering systems**
- **Packaging machines**
- **Special machines**
- **Complete production lines**

We develop and manufacture stand alone and special machines as well as complete processing lines for the food processing industry. We successfully implement production processes for you by effectively combining stand alone machines.

KRONEN - smart solutions and convincing technology for the food processing industry!



KRONEN GmbH

Römerstraße 2a
D-77964 Kehl am Rhein
Telephone: +49 (0) 7854/96 46-0
Telefax: +49 (0) 7854/96 46-500
info@kronen.eu

www.kronen.eu

An enterprise of
Zillgith Beteiligungs GmbH