

Washing machines Series GEWA PLUS & ECO

Designed and constructed for the food processing industry, food service and commercial kitchens



GEWA PLUS and GEWA ECO range



GEWA 5000V PLUS



GEWA 4000V PLUS



GEWA 3800V PLUS



GEWA 2600V PLUS

GEWA PLUS range with vibration outfeed (V-version)

Power washing for persistent dirt

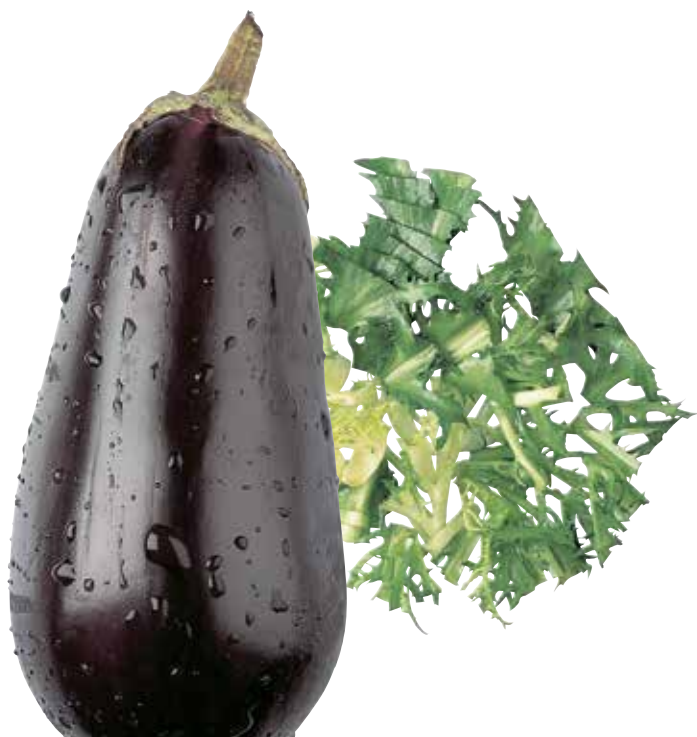
Thoroughly washing salads and vegetables, fruit, herbs but also sliced products until they are completely clean – that's the job of the KRONEN GEWA ECO and GEWA PLUS range of continuous flume washing systems. All of the washers work continuously using a combination of water agitation for cleaning, and vibrator for de-watering and transportation (V-version). Other options include mesh belt outfeed (B-version) 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.

Insects don't stand a chance

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.

Quality and hygiene

One of the major advantages offered by the KRONEN washing machines is its hygienic design. The ability to clean machines



Efficient and gentle washing by means of adjustable water rotation

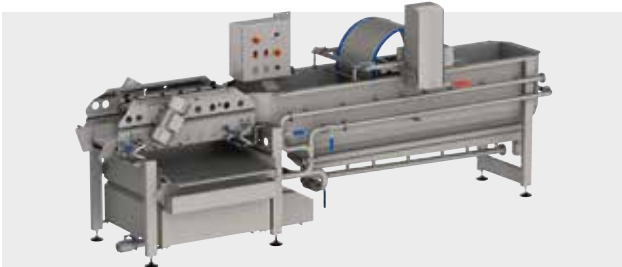


GEWA PLUS range with belt outfeed (B-version)

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.

Various options & large GEWA range: PLUS or ECO

Almost all GEWA PLUS washing machines can be provided as ECO versions. All GEWA washing machines are available in different sizes, with belt outfeed (straight or inclined version) or vibration outfeed and a lot of useful accessories and options. They can be used separately or in combination depending on the product type and capacity processed – high quality salad and vegetable washing systems with a proven track record!



ECO-Series

The compact GEWA ECO models can be provided in various sizes and with various options.

GEWA XL:

Excellent washing results for large quantities of salad

The GEWA XL washing machine is presented in an ergonomic, compact design. With its innovative and energy-efficient washing system, it is especially suitable for industrial applications for large processing capacities.

Salads, e.g. Iceberg up to 5 t / h or babyleaf up to 1.5 t / h, are washed efficiently and gently by an optimized helical wash system. This means that the rotary process has been designed for the first time for a high capacity KRONEN washing machine.

The new GEWA XL with its innovative washing process offers the best conditions for obtaining microbiologically safe ready-to-eat salads.



GEWA XL

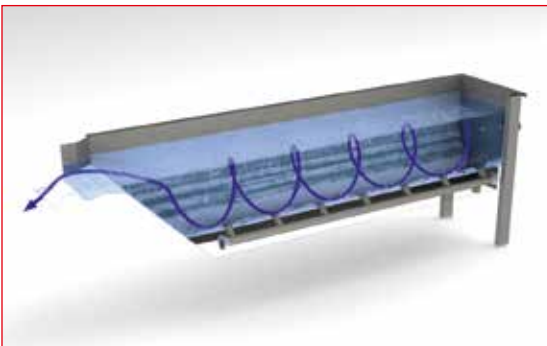


Highlights



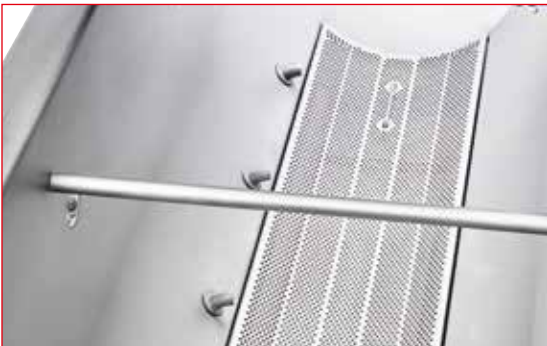
Compact and modular construction

The GEWA washing machines assembly is modular. This allows our machines to adapt to different production requirements and conditions, for example changing the discharge system from vibration to belt conveyor, or installing a new air bubble system on an existing machine. Mounting new optional devices to existing machines can be done by yourself or by our trained service team.



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.



Sand trap

Heavy dirt particles (like small stones) and sand are removed from the product flow and settled separately in the sand trap, at the bottom of the wash tank. Thus we avoid the sand particles to return to the product flow.



Cleaning and maintenance

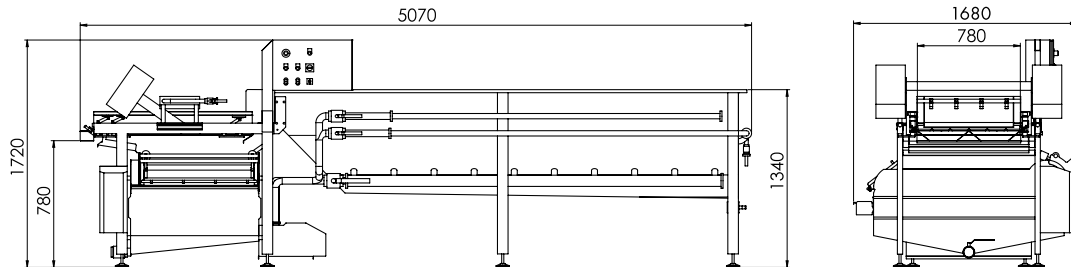
All pipes, pump cases, wash and pump tanks as well as covers and control panels are manufactured in AISI 304 stainless steel. Furthermore, KRONEN Machines have been conceived caring specially about:

- simple maintenance
- easy and efficient cleaning
- low operating costs



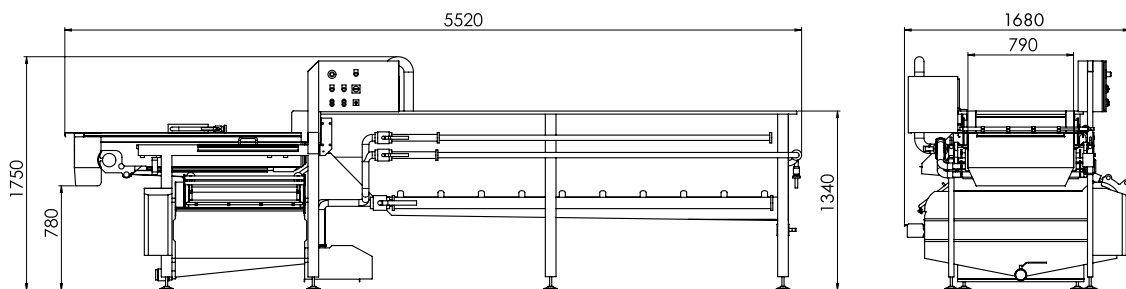
Technical specifications

GEWA 5000V PLUS



	GEWA 5000V PLUS	GEWA 4000V PLUS	GEWA 3800V PLUS	GEWA 2600V PLUS
Measures				
l x w x h	5070 x 1680 x 1720 mm	4070 x 1680 x 1720 mm	3870 x 1380 x 1680 mm	2870 x 1380 x 1680 mm
Weight	800 kg	650 kg	560 kg	450 kg
Infeed / feeding height	1293 mm	1293 mm	1232 mm	1232 mm
Discharge / outfeed height	956 mm	956 mm	933 mm	933 mm
Power				
Total power	12 kW	9.2 kW	6.4 kW	3.6 kW
Voltage	3~400 V N/PE	3~400 V N/PE	3~400 V N/PE	3~400 V N/PE
Frequency	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz
Water				
Total water volume	1700 l	1340 l	814 l	606 l
Specification washing machines				
Water outlet	2x 2"	2x 2"	2x 2"	2x 2"
Fresh water connection	2x 3/4" (GEKA)	2x 3/4" (GEKA)	2x 3/4" (GEKA)	2x 3/4" (GEKA)

GEWA 5000B PLUS



	GEWA 5000B PLUS	GEWA 4000B PLUS	GEWA 3800B PLUS	GEWA 2600B PLUS
Measures				
l x w x h	5520 x 1680 x 1750 mm	4520 x 1680 x 1750 mm	4270 x 1380 x 1690 mm	3270 x 1380 x 1690 mm
Weight	830 kg	680 kg	590 kg	480 kg
Infeed / feeding height	1293 mm	1293 mm	1232 mm	1232 mm
Discharge / outfeed height	783 mm	783 mm	759 mm	759 mm
Power				
Total power	13.3 kW	10.5 kW	7.7 kW	4.2 kW
Voltage	3~400 V N/PE	3~400 V N/PE	3~400 V N/PE	3~400 V N/PE
Frequency	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz
Water				
Total water volume	1700 l	1340 l	814 l	606 l
Specification washing machines				
Water outlet	2x 2"	2x 2"	2x 2"	2x 2"
Fresh water connection	2x 3/4" (GEKA)	2x 3/4" (GEKA)	2x 3/4" (GEKA)	2x 3/4" (GEKA)

Options and accessories at a glance



Insect and fines removal system

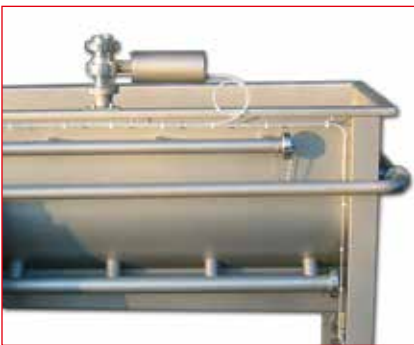
The insect removal system is available for most washers of the GEWA range in two versions:

- Insect & floating particle STATIC removal device for cut and non-sensitive products
- Insect + floating particle ROTARY removal device for more delicate products and leafy products



Lateral fines removal drum

The lateral fines removal drum allows continuous washing with GEWA Plus machines, without ever blocking the filters on top of the pump tank – even on foamy products and products with high quantity of fines. The fines drum has a 0.5 mm opening wedge wire and filters circulating washwater, protecting the GEWA water pumps from particles. Water flows through the filter drum back to the pump tank. A scraper removes all retained particles from the drums filter surface. This fines drum can be easily tilted over and taken out completely from its fixtures to allow cleaning. The device is driven by the same type of motor used on the insect removal drum, which simplifies spare parts inventory.



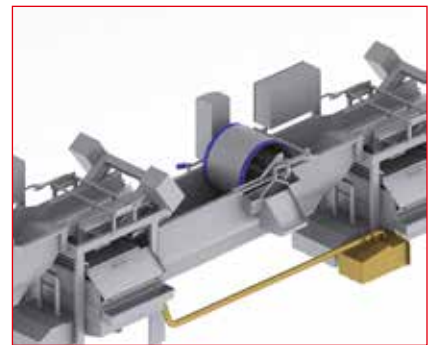
WMS (Water Management System)

The KRONEN WMS system enables centrally controlled filling and emptying of the washing machines. During operation, the water level in the washing machine is automatically controlled via an additional level sensor. If the water level drops too low, the pneumatic inlet valves are automatically opened for fresh water supply. The standard system has two valves each for filling and two for emptying the machine, as well as the necessary pipework. Special versions according to customer requirements can be offered.



Air system

The KRONEN air system allows taking advantage of the HELICAL washing system in combination with the advantages of the floatation washing systems. Air is blown through pipes with multiple perforations. The piping can easily be installed anytime into the wash tank, creating air bubbles in the water. This combination of minimum water flow intensity and the air bubbles system leads to better overall washing quality and product care.



Water recycling system

The KRONEN water recycling system is used in washing lines of at least two washing machines. Excess water from the second washing machine is supplied to the first washing machine and thus significantly reduces the total water consumption. In this case, the fact is used that the first washing machine generally carries the higher dirt and germ load and thus allows the cleaner water of the second washing machine a refreshment of this water cycle.



Combined suction/blowing unit

This accessory is best suited for de-watering sensitive products. First, the height-adjustable DRYING/BLOWING UNIT is de-watering the upperside of the products from a vertical position. The SUCTION UNIT removes all the water that is caught in the mesh belt and also reduces the water content from the lower surface of the products coming from the washer. This feature enables a significant reduction of water diversion to subsequent processing steps. An additional BLOWING UNIT installed below the belt removes residual small-parts. By means of this gentle washing & drying procedure the products are ideally prepared for further processing



UVC reactor

With the UVC water disinfection system, the wash water is permanently disinfected and returned to the water cycle as germ-free process water. For this purpose, the market-proven UV components of the KRONEN partner SterilAir® (CH-Weinfelden) are used. The UVC reactor serves in particular to

- prevent cross-contamination
- ensure higher process reliability
- reduce the amount of water used. The intensity of the UVC reactor is perfectly matched to the capacity of the pumps and thus the water cycle works continuously.



Dosing pump

Important additions (such as antioxidants, organic acids and solutions) for the cleaning cycle can be added continuously to the wash water with the dosing pump.



Sand trap funnel

The sand trap funnel is a useful supplement when washing heavily sand-containing products such as lamb's lettuce or sprouts (separation of non-germinated seeds). The sand trap funnel can be discharged either by the manual opening of a ball valve or can be discharged automatically by means of a pneumatic valve in combination with the WMS (water management system). Settings such as cycle of opening, opening period, etc. can be done at the switch box, thus an automatic and regular discharge takes place.



Dipping Belt

The dipping belt is specially designed for a **cascade utilisation**. The product to be washed will be gently passed from the first washing machine into the second washing machine. **A scraping and cleaning device is thus not necessary.** The dipping belt is equipped with a quick-release-assembly for optimal cleaning.

Special washing machines

UVC washing machine



GEWA Washing machines with integrated UVC water disinfection system – The subject of hygiene plays an important role in the production facilities of the food industry.

With this innovative Kronen GEWA washing line, salads and herbs, vegetables and fresh-cut products are washed thoroughly and carefully in a continuous flow process (without mechanical immersion) with UVC treated water.

The UVC reactor is integrated into the pipe system, while the GEWA washing performance remains constant. The UVC reactor serves in particular the prevention of cross-contamination, ensures higher process reliability and allows a reduction in the amount of water used.

VORTEX treatment & washing line



The Vortex-line has been developed for final treatment stage for vegetables but also fruit like apples and grapes achieving germ reduction and prolongation of shelf life and, consequently, increase of quality of products.

Soft inflowing of product:
Lateral nozzles gently rinse the product into a tube system (internal diameter 150 or 200 mm). Chemicals and sanitizing products can be added at various stages of product transport

through the machine. Thereafter, the product flows through the entire tube length and is conveyed in a water flow to the outlet. There, the product is rinsed off by fresh water nozzles. Flexible dwell time – product-friendly treatment step: Length of the piping system can be adjusted to the dwell time (eg. between 60 - 180 sec.) according to individual customer requirements.



GEWA 3850V PLUS
Washing & sorting machine
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.



GEWA 6000DD PLUS
Seed washing machine

The GEWA 6000 DD PLUS is a compact washing machine with upstream pre-washing unit for larger production quantities. It is ideal for washing seeds such as sesame, pumpkin seeds, but also salad, vegetables and fruits in large quantities.

The prewash unit can be placed in front of the actual washing machine or, for a more compact design, in opposite directions on top of the wash tank.

Effective and gentle washing through adjustable water rotation!



Concepts for complete production lines and processes.

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7. CP 350
Packaging machine

6. KS PLUS
Spin-dryer

5. Basket carousel

4. Two GEWA washing machines
(cascade function)

KRONEN has already carried out several successful projects showing our ability to handle even projects of large size or complexity.

Just one of our many reference projects (see picture on the right side) clearly shows the versatility of KRONEN: The manufacturing process has been designed with the proviso to ensure an extremely thorough and careful wash and treatment, largely to prevent damage to the product (such as babyleaf) and thus to improve the quality and durability of the products.

This had to take account of local and spatial conditions, i.e. piping systems, water supply pipes have been installed across the rooms. Details and functional description:

Weighing belts and sorting systems transport the salad products to be washed to a water flume (for immersion or pre-watering) in a GEWA 5000B PLUS washing machine. The machine is equipped with insect drum, WMS (water management) system, automatic filling and emptying system, lateral fines removal drum, and more. A specific feature is the specially developed stainless steel cover over the entire washing unit that can be raised pneumatically. The control of the entire production lines takes place in one control box via touchpad.

After the washing process the salad products will be transported over the outfeed belt and then gently be flushed via a flume in the large bore piping system for post-treatment. The piping system is built in a compact and modular design. The dwell time is flexibly adjustable across the full range. At 2 viewing windows, the product flow can be checked visually.

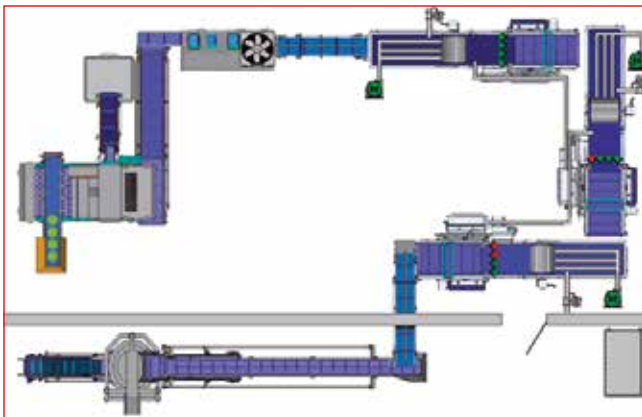
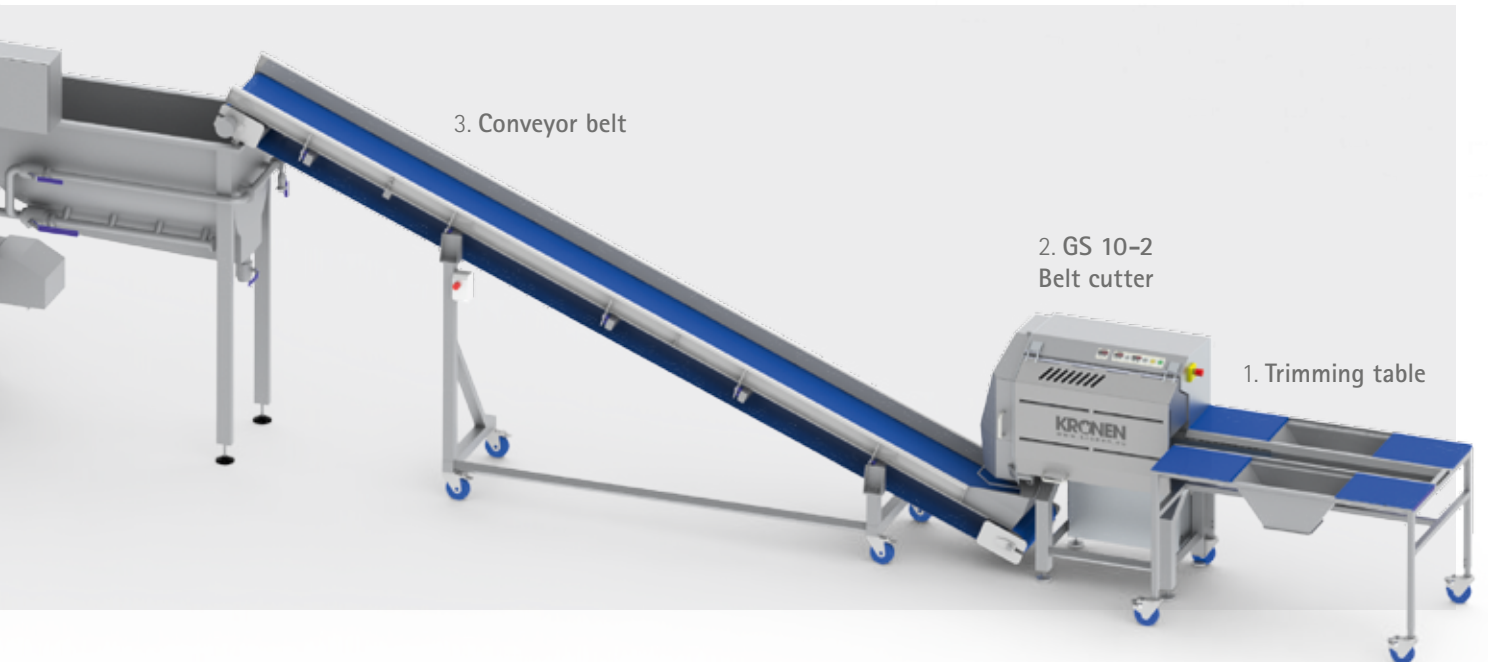
The washed, treated salad products are carried smooth and gently by an innovative outfeed belt system (equipped with suction fan



below the conveyor belt and 2 knocking units) for further processing and drying.

There, the products will be de-watered to remove excess water from the product after washing. In combination with the air knife system which is strategically placed on top and below the conveyor belt discharge, carried over water can be reduced by more than half.

The integration of special-purpose machines.



Process automation and visualisation

For complex systems, there is a need to intelligently network them. This is possible with the help of KRONEN's process visualisation components.

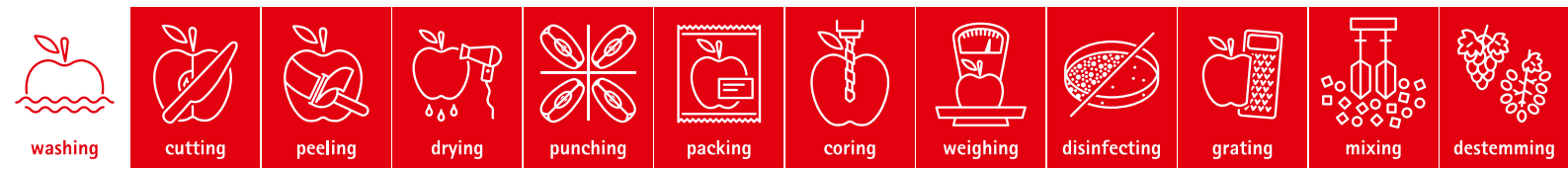
These process visualisation components, in conjunction with the optionally available bus system, allow immediate localisation and response of system messages such as maintenance messages or error messages. For example: In case of a product jam, the system automatically switches off upstream machines, thus preventing the waste of valuable raw products.

In addition, the system can be flexibly controlled by an operator center via touch screen or PC and adapted to the production processes. This facilitates the adaptation of the system performance to different capacities, products or product mixtures.

Know-how

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.

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!

An enterprise of Zillgith Beteiligungs GmbH



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