

Salad and vegetable spin-dryer KS-7 ECO, KS-600 ECO & KS-900 ECO



Translation of the original instruction manual

Version: March 2020, English

Please read carefully the instruction manual before beginning any work. We will not assume any responsibility for damages and troubles to the machine resulting from disregarding the instructions.



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Identification

This instruction manual has been designed to help you to use the machine as intended. It contains important information about how to use the machine safely, properly and economically.

Compliance with the information it contains will help to avoid risks, to reduce repair costs and downtimes as well as to increase the machine's reliability and service life.

This instruction manual is valid only for the following machine:

Designation	Salad and vegetable spin-dryer KS-7 ECO, KS-600 ECO & KS-900 ECO (referred to hereinafter as "machine")
Article number	90007 = KS-7 ECO 90600 = KS-600 ECO 90900 = KS-900 ECO
Manufacturer	KRONEN GmbH Römerstraße 2a D-77694 Kehl am Rhein Tel.: +49 (0) 7854 9646-0 Fax: +49 (0) 7854 9646-500

List of valid pages

This instruction manual contains a total of 91 pages, including the cover page.

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Introductory notes

The instruction manual is part of the scope of supply and must be kept with the machine at all times.

We reserve the right to make technical changes for the purpose of improving the machine or increasing levels of safety.

In addition to compliance with the instruction manual and the accident prevention regulations in force at the place of use, observation of generally acknowledged practices for safe and proper working is also mandatory.

About this instruction manual

This instruction manual provides you with information about and instructions for

- Your safety when working on and with the machine,
- The design and structure of the machine,
- Operation,
- Set-up and
- Service and maintenance.

If your duties involve working on or with the machine, you must read the instruction manual carefully before starting work.

You need to pay particular attention to the safety instructions in each chapter.

The following table provides an overview of the content of the instruction manual:

Chapter		Target group	Content
1	Safety	All	Essential safety instructions
2	Transport, installation and connection	Service	Transport, installation and connection
3	Mechanical design	Service	Floor plan
4	Technical description	All	Technical data, product description
5	Operator control elements	All	Safety devices, operator control elements
6	Operation	Operators, machine setters	Operating instructions
7	Set-up	Operators, machine setters	Protective gloves
8	Cleaning	Service	Cleaning
9	Service and maintenance	Service	Inspection and maintenance table
10	Troubleshooting	Operators, Service	Causes and solutions for faults
11	Spare parts	Service	Spare parts and wear parts
12	Disposal	Operators, Service	Disposal
13	Appendix	All	Certificates, declaration of conformity

Table 1: Content of the instruction manual

Typography

The following conventions have been used in this instruction manual:

1. One or the first in a sequence of operator actions 2. Subsequent operator actions	Operator actions must be completed in a specific order
• Text	List of bullet points
☞ Chapter 1. Safety	Reference to a section in the instruction manual
ON/OFF rotary switch CONTROLLER ON button	Operator control and display elements

Glossary

Personal protection equipment (PPE)

PPE includes the following:

- Any equipment designed to be used or worn by an employee to protect against a risk or risks which could impair his or her safety or health when working,
- as well as any additional equipment used for the same purpose.

The PPE made available must bear the CE marking. Minimum requirements for the use of PPE are described in more detail elsewhere in these instructions.

Warranty and liability

Our „General conditions of sale and delivery“ always apply. The customer will have been provided with these at the latest when a contract is concluded.

We do not accept warranty or liability claims made for personal injury or damage to property if such injury or damage can be attributed to one or more of the following causes:

- Non-compliance with the instruction manual;
- Inappropriate use;
- Incorrect or improper installation, operation and maintenance;
- Non-compliance with the safety instructions and instructions in the instruction manual;
- Non-compliance with the warnings affixed to the machine;
- Operation with safety devices which have been incorrectly or improperly fitted or are out of order;
- Welding work on load-bearing machine parts, unauthorised modifications and conversions to the machine. This includes the installation and configuration of safety devices and valves,
- spare parts and add-on equipment causing damage to property (and resulting consequential damage) and not authorised in writing by the manufacturer.

Standards and directives

The machine is used exclusively for drying lettuce, vegetables and fruits. Products not cited must be approved by the manufacturer of the machine on a case-by-case basis.

The machine has been built in accordance with the state of the art and acknowledged safety engineering practice. The associated design and manufacturing processes are compliant with the following directives and standards:



- 2006/42/EC - Machine directive
- EN 1672-2:2005+A1:2009 - Food processing machinery - Basic concepts - Part 2: Hygiene requirements
- EN 60204-1:2018 - Safety of machinery - Electrical equipment of machines - Part 1: General requirements
- EN ISO 12100:2010 - Safety of machinery - General principles for design - Risk assessment and risk reduction
- EN ISO 13849-1:2015 - Safety of machinery - Safety-related parts of control systems - Part 1: General principles of design
- EN ISO 13857:2019 - Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs
- EN ISO 14120:2015 - Safety of machinery - Guards - General requirements for the design and construction of fixed and movable guards

1. Safety







1.1. Safety instructions and pictograms used

Each chapter starts with general safety instructions relating to the activities it describes. Special safety instructions about individual operations precede the description of the operation to which they apply.

We differentiate between two categories of safety instruction. The table provides an overview of the relationship between pictograms and signal words and the actual risk and possible consequences.

Symbol	Signal word	Damage for...	Definition	Consequence
	Danger	Personnel	Immediate and imminent risk	Death or very serious injuries will result
	Warning		Potentially dangerous situation	Death or very serious injuries could result
	Caution		Less dangerous situation	Minor or slight injuries
	Attention	Machine	Potential to cause material damage to the machine	Material damage to the machine and other equipment in its vicinity
	Note	Machine	Tips for users and other useful information	No dangerous consequences for personnel or material damage to machine

In the case of specific risks, the pictogram will be replaced

	with the following warnings as appropriate:					
		Risk of cuts	Caution slippery surface	Suspended loads	Danger harmful	Danger high voltage

1.1.1. Component parts of safety instructions

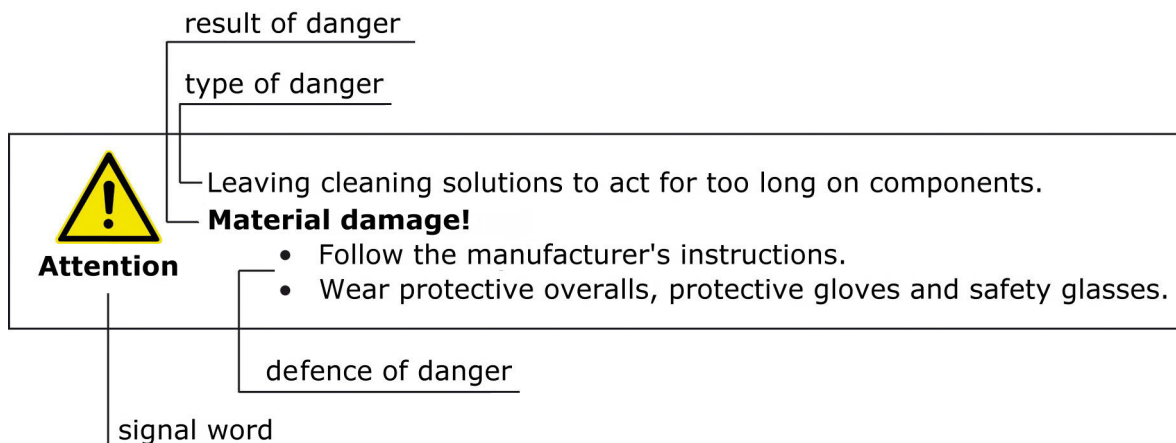


Figure 1: Component parts of safety instructions

1.2. Organisational issues

- The instruction manual must at all times be kept in a clearly legible condition in an accessible location (the tool compartment or a designated container) at the machine's place of use.
- In the event of heavy contamination or loss, the instruction manual must be replaced by an identical version (☞ see Chapter 13. Appendix).

Anyone intending to work on and with the machine must be able to:

- access the instruction manual at all times,
- use the machine only as intended and
- operate the machine only when in perfect working order and in particular check the function of safety devices regularly.
- Only sufficiently qualified and authorised personnel who have read and understood the instruction manual (in particular the safety instructions therein) are permitted to operate, maintain and repair the machine. These personnel must be given training and instruction in all relevant issues of occupational safety and the protection of the environment at regular intervals – this applies in particular to personnel who only work on or with the machine occasionally, e.g. setters and maintenance engineers;
- Make the necessary PPE available to operating, maintenance and service personnel.
- Carry out checks at regular intervals to ensure that personnel are following working practices which exhibit an awareness of safety and risks and are in compliance with the instruction manual.
- Whenever they are working on and with the machine, personnel must wear suitable protective overalls. They must also use additional PPE (e.g. protective gloves) as appropriate for the work being carried out.
- Protective overalls must not be worn loose (this is in order to avoid the risk of them getting caught in parts of the machine). Personnel must tie back hair and are forbidden to wear loose clothing and jewellery (including rings) whilst working. There is a risk of injury, for example due to being caught on the machine or pulled in by the machine.
- Supplementary to the information in the instruction manual, generally valid statutory and other binding regulations relating to accident prevention and the protection of the environment must also be observed.
- This instruction manual must be supplemented with operating instructions relating to occupational health and safety legislation and national industrial safety regulations.

1.3. Qualifications of personnel

- Operating personnel: Trained, instructed (safety instruction) – machine-specific.
- Maintenance personnel: Trained, instructed (safety instruction) – machine-specific, technical skills
- Cleaning personnel: Trained, instructed (safety instruction) – machine-specific.

1.4. Personal measures

All persons working on or with the machine must read the instruction manual in its entirety and sign to confirm that they have understood its content.

The machine may be operated only by persons who have completed appropriate training and instruction and have been authorised to do so.

The authority of each member of personnel must be clearly defined. Supervisors are permitted to overrule instructions from third parties that pose a risk to safety.

Responsibilities of personnel in respect of the operation, setting up and maintenance of the machine must be clearly defined.

Personnel requiring training, teaching or familiarisation or undergoing general vocational training must be supervised at all times by an authorised individual when working on or with the machine.

Only qualified electricians or persons with appropriate training working under the guidance and supervision of a qualified electrician are permitted to carry out work on the machine's electrical equipment; all work must be compliant with good electrical engineering practice.

1.5. Product safety

The machine has been designed and built in compliance with applicable safety regulations and the state of the art.

Despite this, there can be risks to persons and property if:

- The machine is not used as intended,
- The machine is operated by untrained personnel,
- The machine is modified or converted incorrectly or improperly,
- Safety instructions are not complied with and / or
- The instruction manual is not complied with.

The machine is supplied tested and in perfect technical order; it may be used only when in perfect technical order.

In addition to the instruction manual, compliance with the following is mandatory:

- Warnings affixed to the machine,
- Applicable legislation and
- Statutory and other binding accident prevention regulations.

1.6. Working area



Warning

Rotating basket holder and plastic basket.

Danger of injury!

- Do not reach into the rotating basket holder.
- Note the warnings affixed to the machine.

The working area of the operator is on the front side of the machine.

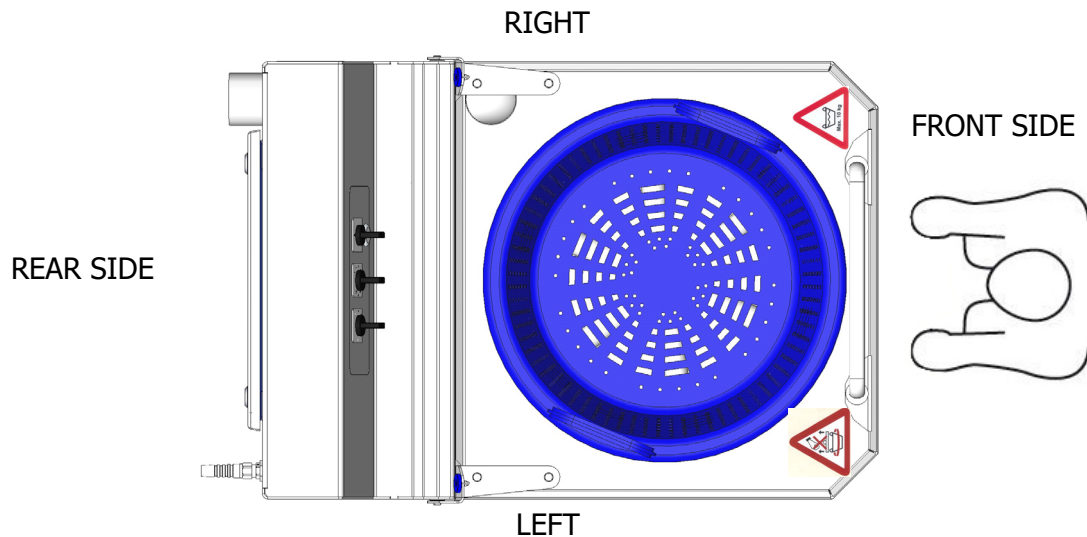


Figure 2: Working area

1.7. Safety and protective devices

The machine may be operated only with safety equipment and protective devices in proper working order.

It must be brought to a standstill immediately if a safety or protective device is found to be faulty or out of order.

Once a safety or protective device has been triggered, the machine may be put back into operation only if:

- The source or fault has been rectified and
- You are convinced that there is no risk to persons or property.

You are only permitted to disable, modify or restrict the function of safety equipment and protective devices for the purpose of transitory intervention (e.g. tests, troubleshooting, making good of damage, replacement of machine parts) if you have taken sufficient alternative measures to ensure safety.

1.7.1. Safety and protective devices on the machine

The KS-7 ECO is equipped with the following safety and protective devices:

- As soon as the protective casing is opened, the machine switches off automatically.

The KS-600 ECO and KS-900 ECO are equipped with the following safety and protective devices.

- An EMERGENCY STOP button.
- As soon as the protective casing is opened, the machine switches off automatically.

1.7.2. EMERGENCY STOP button on the KS-600 ECO and KS-900 ECO

The EMERGENCY STOP button is installed on the front side of the machine.

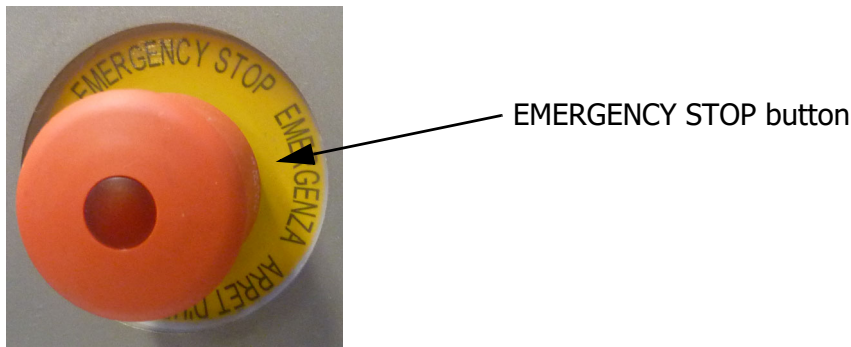


Figure 3: EMERGENCY STOP button

The EMERGENCY STOP button is used to stop the machine in order to avoid or avert impending or prevailing risks of personal injury or material damage. The EMERGENCY STOP button locks when pressed and has to be released manually.



Note

Releasing the EMERGENCY STOP button does not restart the machine automatically. Once the EMERGENCY STOP button has been reset, the machine has to be restarted (☞ see Chapter 6. Operation).

Before powering the machine, check that:

- there are no foreign bodies in the machine.
- the safety cover at the motor housing is closed.
- the EMERGENCY STOP button is unlocked (only for KS-600/900 ECO).

1.7.3. Protective casing

The machine is provided with a protective casing in the production area. You can see the production material through the protective casing.



Figure 4: Protective casing (illustration can vary depending on the machine type)

This protective casing prevents personnel from reaching into the machine during operation. Dangerous and life-threatening injuries can occur in this area. Opening the protective casing breaks the contact of the machine safety switch sensor. This triggers a signal and all machine movements are stopped.



Note

If this protective casing is opened during operation, the machine switches off. The machines switches on again automatically after the protective casing is closed.

1.7.4. Safety covers

The safety cover, that can be locked with a two-way key, secures the machine housing on the rear side of the machine. The safety cover below protects the machine on the bottom and can be removed with an 8mm open-end spanner. Both safety covers prevent contact with the dangerous movements of the belt drives and with electrically charged components, while enabling access for repair and maintenance work.

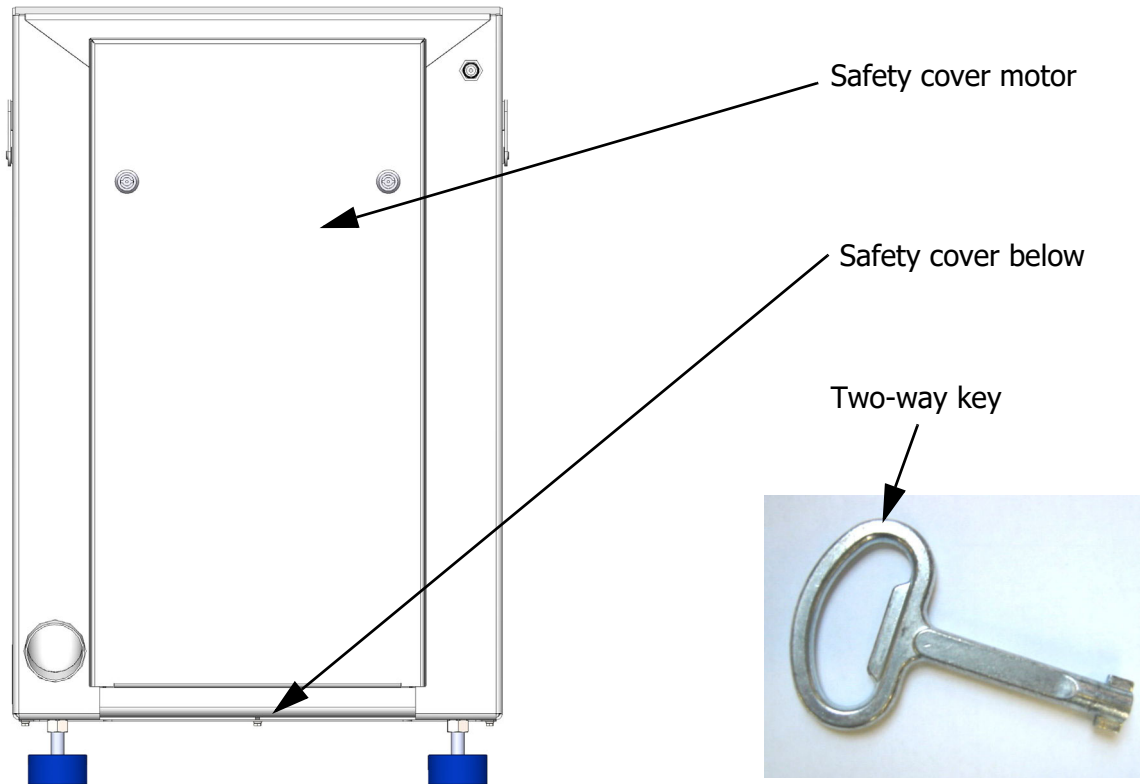


Figure 5: Safety covers

Use the included two-way key to lock and unlock the safety cover. To open and close the safety cover, you must lock and unlock two locks.

1.8. Warnings affixed to the machine

The warnings affixed to the machine must not be removed or obscured and must be clearly legible.

Check the warning signs regularly.

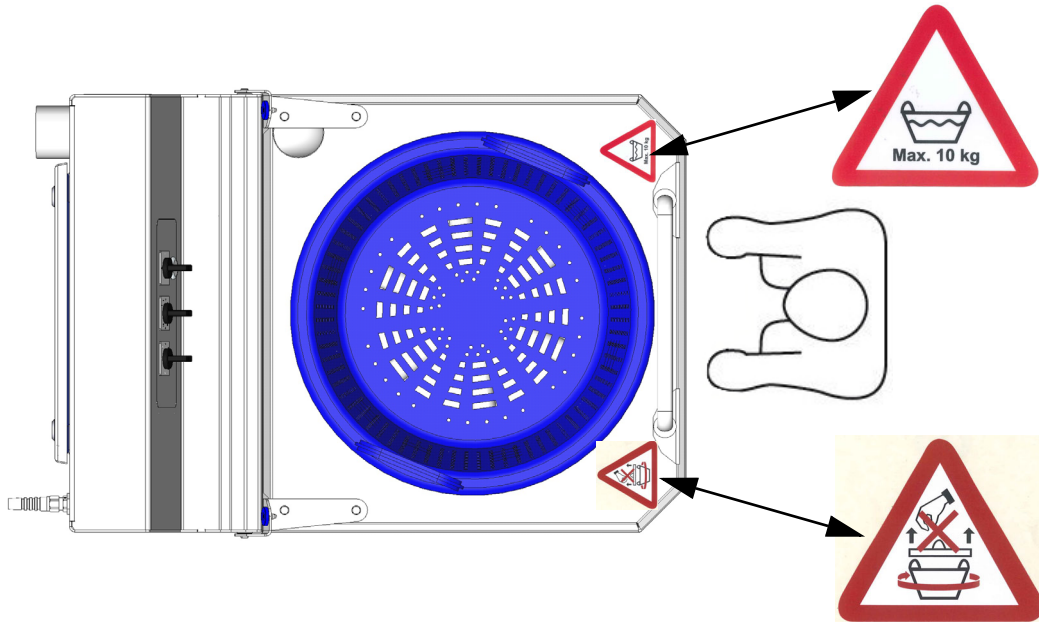


Figure 6: Warnings affixed to the machine

1.9. Safe operation

If you suspect that the safe operation of the machine is a risk, it must be shut down immediately.

To run the machine in safe operation:

- Check the machine at least once per shift for externally visible damage and
- report damage and defects as well as changes in operational performance immediately to a supervisor.

Check all safety devices:

- At least once a week in the case of continuous operation,
- At the start of every shift in the case of intermittent operation and
- Every time the machine is serviced and cleaned.

Every day, at the start of every shift, check that

- Safety devices are in proper working order.

1.10. Essential safety instructions for first use

Before the machine is put into operation for the first time, it must be installed in accordance with regulations and then acceptance-tested in accordance with the manufacturer's specifications.

Before starting up the machine, always make sure that:

- All safety equipment and protective devices are in full working order,
- The machine is used only as intended,
- All service and maintenance work is complete,
- All loose parts of rotating machine components have been removed and
- The machine's danger zone has been vacated.

Immediately after starting up the machine, check that the operator control and display elements, as well as the monitoring devices, are functioning correctly.

1.11. Basic safety instructions for operation

Only put the machine into operation if:

- All safety devices and safety-related equipment (e.g. removable safety devices, EMERGENCY STOP devices) are present and in full working order.
- The machine (e.g. trolley, accessories) has been secured to prevent it from rolling away accidentally; do not allow any working practices which could put the machine at risk of tipping.
- You have familiarised yourself with the site's working environment prior to starting work.
- You have familiarised yourself with all operational sequences (e.g. start-up and shutdown, operator control and display elements) associated with the machine.
- You are able to complete the operator actions described in the instruction manual and are aware of the consequences of every action you take.
- Prior to starting or restarting the machine, you have made sure that its operation will not put anyone at risk and
- You are aware of the emergency procedures.

In addition, the machine may be operated only with the included plastic basket (art. no. 119050).

Check the machine at least once per shift for externally visible damage and defects. Report any changes you notice (including those affecting operational performance) immediately to a supervisor.

Do not reach into the infeed or ejector chute during operation.

In the event of malfunctions during operation, you must shut down the machine immediately and disconnect it from the mains supply.

If you suspect that the safe operation of the machine is a risk, it must be shut down immediately.

1.12. Essential safety instructions for cleaning, service and maintenance

The machine may be cleaned, serviced and maintained only by persons who have completed appropriate training and instruction and have been authorised to do so.

Coordinate arrangements for all cleaning, service and maintenance work with all parties involved (e.g. operators).

Only commence cleaning, service and maintenance work if:

- You have read and understood this instruction manual,
- The machine has been de-energised (disconnected from the mains supply) and a notice has been affixed warning against restarting,
- The machine is standing on an even surface with a sufficient load-bearing capacity,
- The working area for all operations has been fenced off and secured (put up a sign) and there are no unauthorised persons in the area,
- All machine parts have cooled to room temperature,
- Suitable lifting gear and transport equipment compliant with regulations governing the site of use are available for replacing larger components,
- Suitable collecting trays are available for all substances which might pose a risk to groundwater (e.g. lubricants),
- All depressurised machine parts are secured against accidental restarting (e.g. water supply connection) and
- Ports and screwed joints for lubricants and care products have been cleaned.

During cleaning, service and maintenance work, you must:

- Check all machine parts removed during such work for damage and wear,
- Replace all bent or frayed cables, hoses and lines,
- Replace all self-locking screws and nuts and
- Remove all tools, materials and other equipment used from the machine.

Once cleaning, service and maintenance work is complete, you must check that:

- All screw connections loosened during such work have been tightened
- All safety equipment and protective devices removed have been restored to full working order
- All tools, materials and other equipment used have been removed from the machine's working area
- Any fluid leaks (e.g. cleaning solution, lubricant) have been removed from the working area
- All substances which could pose a risk to groundwater have been removed in compliance with the regulations governing the site of use

For additional information on cleaning, see Chapter 8. Cleaning.

1.13. Mechanical hazards



Warning

Rotating basket holder and plastic basket.

Danger of injury!

- Do not reach into the rotating basket holder.
- Note the warnings affixed to the machine.

Potential hazard	Action for avoidance
Malfunctions due to unauthorised conversions, repairs, tampering or modifications affecting the machine's design, electrical components or control components	Do not undertake any unauthorised conversions, repairs, tampering or modifications affecting the machine's design, electrical components or control components
Uncontrolled voltage rise on machine parts due to blockages and jams caused by foreign bodies (e.g. cutlery, containers)	Do not tamper with, bypass or disable safety and protective devices
	Disconnect the power supply and wait until the residual energy has dissipated
Crushing, shearing, cutting and severing of body parts due to unprotected moving and rotating machine parts	Do not tamper with, bypass or disable safety and protective devices
	Never reach into the infeed or ejector chute
	Do not put the machine into operation if safety equipment and protective devices have malfunctioned
	Shut the machine down immediately if safety equipment and protective devices malfunction
	Note the warnings affixed to the machine
	Wear protective overalls
Cutting and severing of body parts when setting up the machine	Wear suitable PPE (protective gloves)

1.14. Electrical hazards



Danger

Where electrical equipment is concerned, it is inevitable that certain components of this equipment will be charged with dangerous voltage.

Hazardous shock currents - risk of fatal injury!

- De-energise the machine (disconnect the power plug) prior to commencing any maintenance or cleaning work.
- Work on electrical equipment may be carried out only by qualified electricians.
- Note the warnings affixed to the machine.



Danger

Danger due to contact with electrical components, potential electric arcing in case of short circuit and potential electrical shock from live components.

Hazardous shock currents - risk of fatal injury!

- Work on electrical equipment may be carried out only by qualified electricians.
- Damaged wires and cables must be replaced without delay by an electrician.



Danger

Impairment due to electromagnetic compatibility.

Hazardous shock currents - risk of fatal injury!

- Persons who have pacemakers or similar implantations are not permitted in the vicinity of the machine.

Potential hazard	Action for avoidance
Hazardous shock currents	Note the warnings affixed to the machine
	The machine must be de-energised for cleaning (disconnected from the mains supply)
	The machine must be de-energised for cleaning (disconnected from the mains supply) when work is being carried out on electrical equipment
	Anyone undertaking work on electrical equipment must be accompanied by a second person able to assist in the event of an emergency
	Check electrical equipment, lines, cables and power plugs daily for damage
	Do not continue to use damaged electrical equipment, lines, cables and plugs; replace them immediately
	Refit any connections which come loose
	Only use electrical equipment, lines, cables, plugs and fuses in accordance with specification
	Never use water or other fluids to clean electrical equipment, lines, cables and plugs
	Do not insert objects into ventilation slots
	Wear suitable PPE
Direct contact with live parts which have become live due to errors	Note the warnings affixed to the machine
	Never use water or other fluids to clean electrical equipment, lines, cables and plugs
	Note error messages on the controller
	Disconnect the power supply and wait until the residual energy has dissipated
Impermissible voltage connection	Only use electrical equipment, lines, cables and plugs in accordance with specification
Live, bare/rotating parts	Note the warnings affixed to the machine
	Do not touch live, bare/rotating parts
	Disconnect the power supply and wait until the residual energy has dissipated
	Wear suitable PPE

1.15. Thermal hazards

Potential hazard	Action for avoidance
Hot surfaces of machine parts during and after operation	Note the warnings affixed to the machine
	Do not touch machine parts during operation
	Allow machine parts to cool to room temperature
Impermissible heating of machine parts	Only ever use machine parts in accordance with specification
	Lay lines and cables in such a way as to prevent the risk of impermissible heating

1.16. Hazards during production

Potential hazard	Action for avoidance
General machine soiling	Clean the machine thoroughly prior to every change in production (remove production residue)
	Clean the machine thoroughly on a regular basis
	Keep the area around the machine clean at all times
Contamination of production material	Remove all traces of detergent once cleaning is complete (rinse with water)
	Use test strips once the machine has been cleaned

1.17. Noise hazards

The sound pressure level on the machine is 57 db(A), so it is not absolutely necessary to wear hearing protection.

Depending on local conditions, this level may be higher, causing deafness, loss of balance or a reduction in attention span. In such cases personnel must be provided with suitable personal protective equipment.

1.18. Hazards due to unexpected malfunctions

The machine could malfunction unexpectedly due to:

- the failure of or a fault affecting the power supply.
- the restoration of the power supply following a temporary loss.
- external factors influencing the machine.
- operator errors (human error or activity).

1.19. Other hazards

Once the machine has been shut down or brought to a standstill, various forms of energy can still be present. These include hazardous electrical voltage in live power lines and electrical components.

1.20. Additional hazards

Potential hazard	Action for avoidance
Falling over, slipping, tripping	Make good uneven surfaces underfoot and damaged floor coverings
	Remove trip hazards (e.g. objects)
	Keep access routes clear
	Remove soiling (e.g. production material) from the floor of the working area
Malfunctions due to unauthorised conversions, repairs, tampering or modifications affecting the machine's design, electrical components or control components	Do not undertake any unauthorised conversions, repairs, tampering or modifications affecting the machine's design, electrical components or control components
Operating materials (e.g. lubricants, detergents)	Wear suitable PPE (e.g. protective gloves, aprons, safety glasses) during cleaning
	Wear suitable PPE (e.g. protective gloves) when topping up lubricants
	Observe the information in safety data sheets (MSDS), safety codes and operating instructions
	Use suitable transport and storage equipment
	Decant as per specifications
	If possible, use a less hazardous substance with an equivalent effect

1.21. Emergencies



Danger

Unsuitable extinguishing equipment.

Hazardous shock currents - risk of fatal injury!

- Never use water to extinguish electrical fires.
- Use CO₂ fire extinguishers only.



Warning

Unsuitable extinguishing equipment.

Toxic gases and vapours!

- Use CO₂ fire extinguishers only.



Note

Keep yourself updated of possible options and life-saving equipment available on site for first aid.

Make sure you always know:

- Where fire extinguishers are located and
- How best to fight fires.

1.21.1. What to do in an emergency

What has happened?	What to do
Material damage	<ul style="list-style-type: none"> • Do not panic • Shut down the machine, remove the mains plug and secure against accidental restarting • Inform a supervisor immediately
Personal injury	<ul style="list-style-type: none"> • Do not panic • Shut down the machine, remove the mains plug and secure against accidental restarting • Remove the person from the danger zone • Secure the accident zone • Administer first aid • Inform a safety officer or supervisor immediately
Fire (incipient fire)	<ul style="list-style-type: none"> • Do not panic • Shut down the machine, remove the mains plug and secure against accidental restarting • Use a suitable extinguisher to put out the incipient fire • Inform a safety officer or supervisor immediately
Catastrophic event (major fire, explosion)	<ul style="list-style-type: none"> • Do not panic • Evacuate everyone from the danger zone • Use only designated escape routes • Inform a safety officer or supervisor immediately • Rescue chain

Table 2: What to do in an emergency

1.22. Protecting the environment

Whenever you are working on and with the machine, ensure compliance with local regulations governing waste prevention and procedures for recycling and/or disposal.

When carrying out maintenance work in particular, you must take care to ensure that substances which could be harmful to groundwater (e.g. lubricants, detergents) do not pollute the soil or enter the sewer system.

You must use a suitable container to collect, store and transport such substances and you must dispose of them in accordance with regulations.

2. Transport, installation and connection

Usually, the machine is installed and put into operation by our authorised service engineers. These engineers issue the customer with an acceptance certificate (☞ see Chapter 13. Appendix).

For shipment, the machine is screwed to a pallet and covered with a plastic sheet or transport cover for protection.



Warning

Machine falling over on or off pallet or means of transport (e.g. lift truck or fork lift).

Heavy load - Risk of serious or even fatal injuries!

- Only qualified personnel are permitted to take part in transportation activities.
- Wear suitable PPE (e.g. protective gloves, work gloves).
- Transport and lifting equipment must be able to support the weight and dimensions of the machine.
- Transport and lifting equipment must be compliant with local regulations governing accident prevention.
- Loading and unloading area as well as the installation area must be dry, level and non-slip.
- Machine must be fastened carefully.



Warning

Between protective casing and housing welded part through falling protective casing.

Danger of injury!

- Secure the work area against access by unauthorised persons.
- The protective casing must be opened or closed using the attached bow-shaped handle.
- Wear suitable PPE (e.g. protective gloves, work gloves).



Caution

Installation material (packaging, tools) and connection cable.

Danger of injury!

- Lay out the connection line in such a manner that stumbling points do not occur.
- The electrical connection line must not be kept under constant tension.
- Remove packaging material from the movement area immediately.
- Remove tools from the movement area immediately.
- Always keep the work area clean.

2.1. Transport



Attention

Incorrect rigging points.

Material damage!

- Do not lift the machine via covers or handles.

The machine must be transported on the pallet. The safeguards fitted (strap links between the machine and the pallet) must not be removed until the machine reaches its final destination.

Make sure that the employees involved in transporting and installing the machine are wearing safety shoes (with steel toe caps) and suitable industrial gloves.

We recommend using a lift truck to transport the machine to its final destination. The lift trolley must be designed to support a maximum permissible carrying capacity of 600 kg.



Danger

There is an increased **risk of injury** especially during installation!

Hands and feet can be crushed, for example.

2.2. Installation and connection

The working area for operation, maintenance, cleaning and service must not be restricted.

We recommend an additional spatial requirement of 1.0 m around the machine so that the personnel can work at the machine with no problems.

Basic ambient conditions and set-up conditions:

- Operation exclusively indoors/in closed rooms,
- Installation elevation: max. 1000 meters above sea level,
- Environment must not contain salt or sulphur,
- Do not set up the machine in Ex areas.

1. The installation area should have a level, load-bearing, and non-slip surface.
2. Floor flatness must not exceed 2%.
3. Check the installation surface for maximum floor load: 0,2 N/mm².
4. Remove the packaging material and any transport locking devices (such as screws).
5. Use transport gear at the two attachment points, as illustrated below (length-wise or crosswise) to lift the machine from the pallet.
 - Take care not to damage sensitive components on the bottom during movement of the machine.
 - Be aware of the shifting weight of the machine when you remove it from the pallet.



6. Position the machine at the final destination using transport equipment.
7. Place a spirit level on a vertical part of the machine's base frame and use the rubber buffers to adjust the machine until it is horizontal and the load is distributed uniformly over all rubber buffers.
 - The rubber buffers must be screwed on firmly so they do not loosen. This will prevent the machine from moving as a result of vibrations.
8. Use the ready-to-connect mains plug to connect the machine to the power supply.
 - The mains voltage must match the information on the type plate.
 - The route taken by the mains cable must not pose a trip risk.
 - There must be some strain relief on the mains cable.

2.3. First use



Warning

First use.

Risk of injury and damage to property!

- Machine may only be put into operation by qualified personnel who has been authorized and instructed by the operator company.



Warning

Rotating basket holder and plastic basket.

Danger of injury!

- Do not reach into the rotating basket holder.
- Note the warnings affixed to the machine.



Warning

Between protective casing and housing welded part through falling protective casing.

Danger of injury!

- Secure the work area against access by unauthorised persons.
- The protective casing must be opened or closed using the attached bow-shaped handle.
- Wear suitable PPE (e.g. protective gloves, work gloves).



Caution

Liquids, product waste and product residues.

Risk of slipping!

- Wear suitable PPE (e.g. protective gloves, work gloves).
- Take up liquids from the floor without delay and ensure adequate protection against slipping.
- Product waste and product residue must be removed immediately and disposed of responsibly.

Prior to first use, all safety devices and safety-related equipment (e.g. removable safety devices, EMERGENCY STOP devices) must be in full working order.

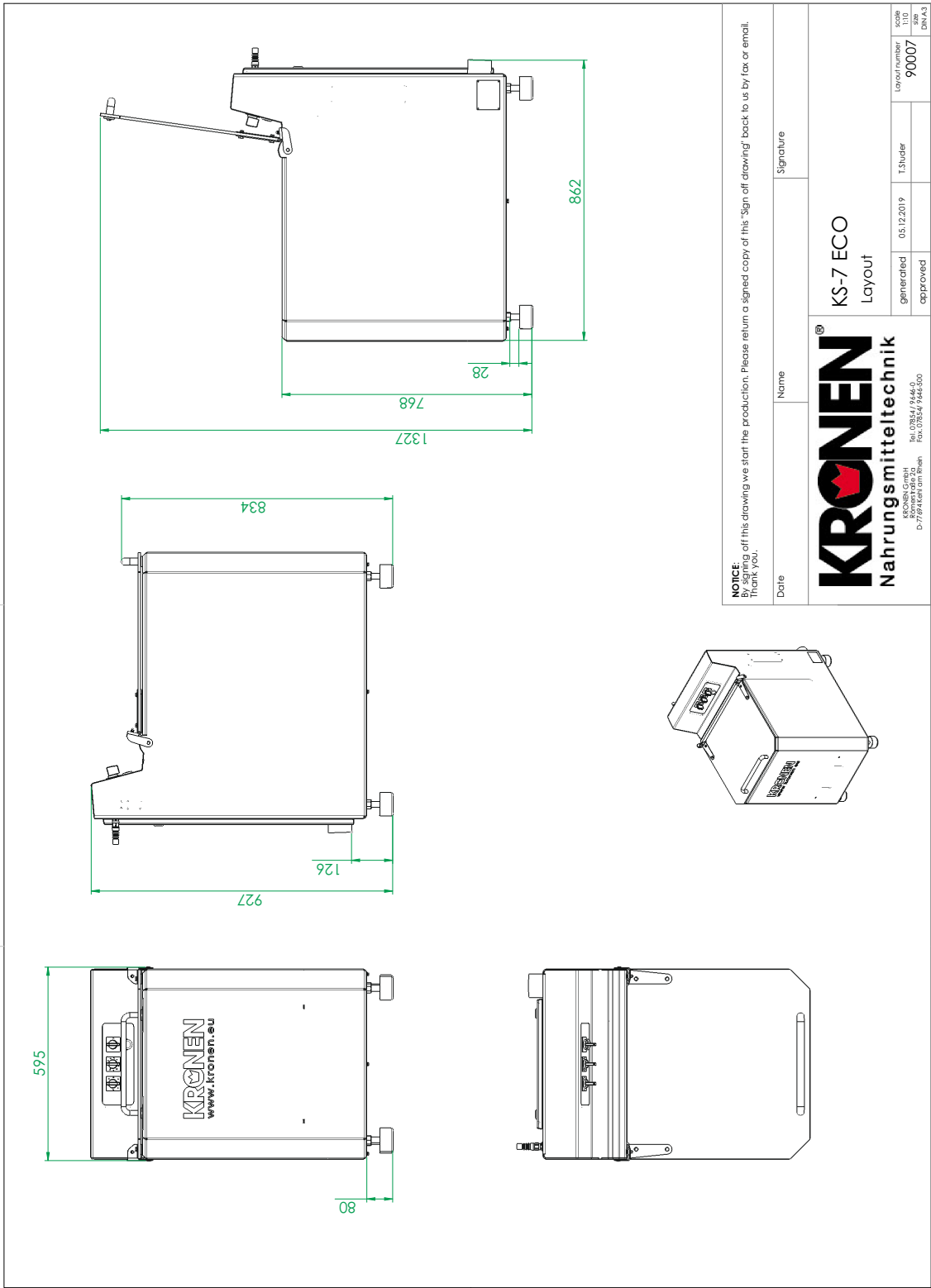
2.4. Moving the machine

The protective casing must be closed when moving the machine.

The mains plug must be disconnected before moving the machine.

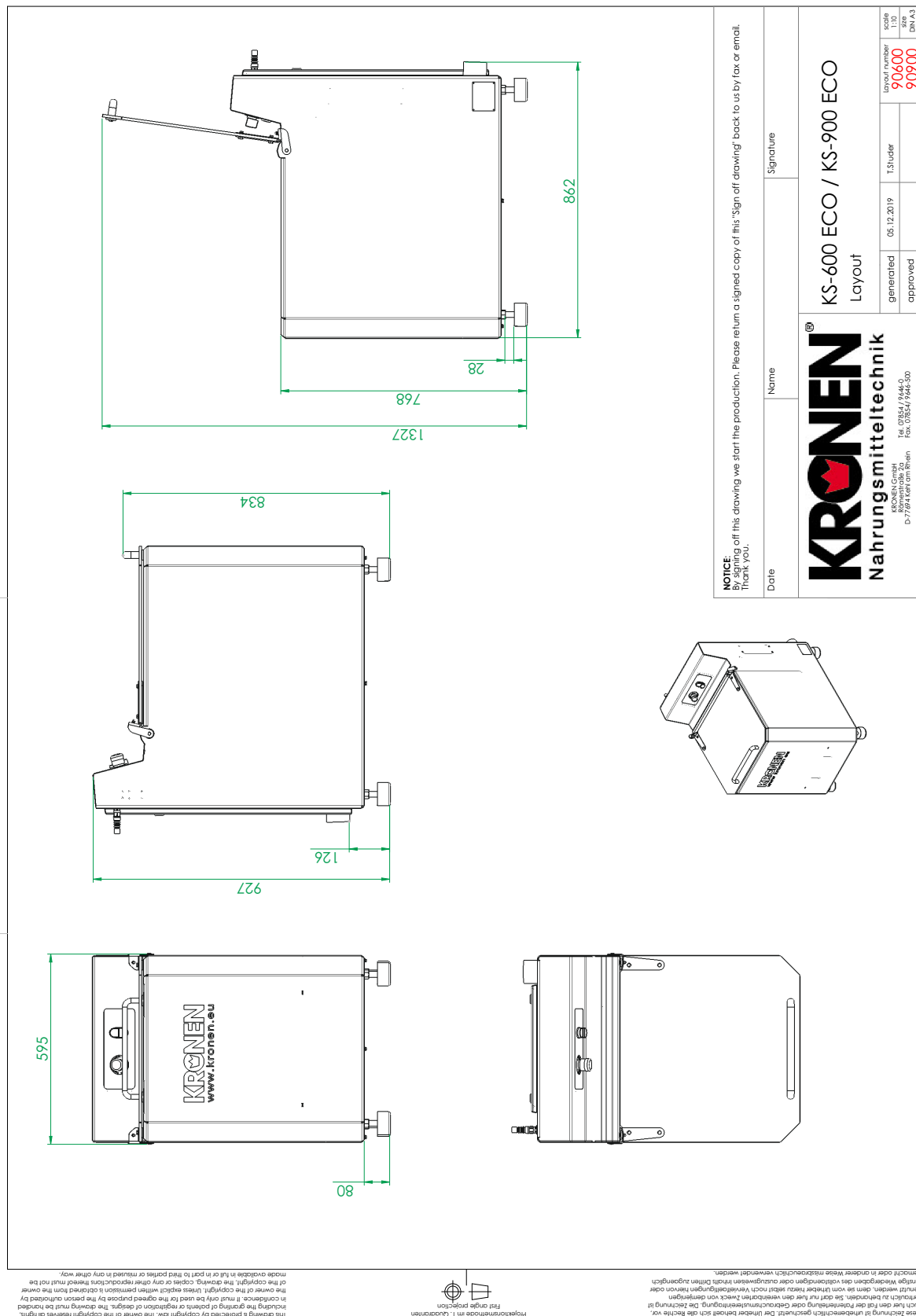
3. Mechanical design

3.1. Floor plan KS-7 ECO



Drawing 1: Floor plan KS-7 ECO

3.2. Floor plan KS-600 ECO & KS-900 ECO



Drawing 2: Floor plan KS-600 ECO & KS-900 ECO

4. Technical description

4.1. Intended use

The machine is used exclusively for drying lettuce, vegetables and fruits. Products not cited must be approved by the manufacturer of the machine on a case-by-case basis.

Charging and product discharge occur manually.

Max. product weight/fill quantity: 10kg

Fill level: The product fill level of the plastic basket must be such that the product cannot emerge from the basket while spinning.

Volume: The volume of the plastic basket must be filled evenly with the product.

The machine may be operated only with the included plastic basket (art. no. 119050).

Operating personnel: One person at the product entry.

Area of implementation: exclusively industrial; minimum age: Legal age for operation.

Applicable technical data is outlined in Chapter 4.5. Technical data.

The machine is compliant with the requirements of EC Machinery Directive 2006/42/EC in respect of the basic health and safety requirements of the harmonised standards derived from this directive.

The machine may be used only in perfect working order and as intended. Operators must demonstrate an awareness of safety and risks and comply with the information in the instruction manual. Faults which could impair safety in particular must be rectified immediately.

Intended use also includes observation of the information in the instruction manual, compliance with inspection and maintenance regulations and observation of operating instructions.

Use for an alternative purpose or a purpose beyond the scope defined above is deemed to be unintended. The operator, and not the manufacturer or supplier, shall be held responsible for any resulting damage.

4.2. Unintended use

Any use other than the use intended by the manufacturer is misuse.

- Unintended Ice or bone parts
- Rocks
- Fruits with a hard shell (e.g. nuts)
- Frozen products and products with a similar consistency and hardness
- Sinewy foodstuffs
- Foodstuffs that contain fish bones
- Crustaceans
- Bone parts
- Metal parts
- Brittle materials
- Glass
- Hazardous (toxic, caustic, flammable or explosive) substances
- Pasty materials
- Adhesives

The machine may be operated only as a complete unit. It is forbidden to run individual machine components for other purposes (using the motor to drive another machine, for example).

If the machine is not used as intended, for example, it is possible that machine components can be damaged.

4.3. Product description

The product is placed in a plastic basket. The plastic basket is inserted into the machine. Rotation of the plastic basket separates the water from the product.

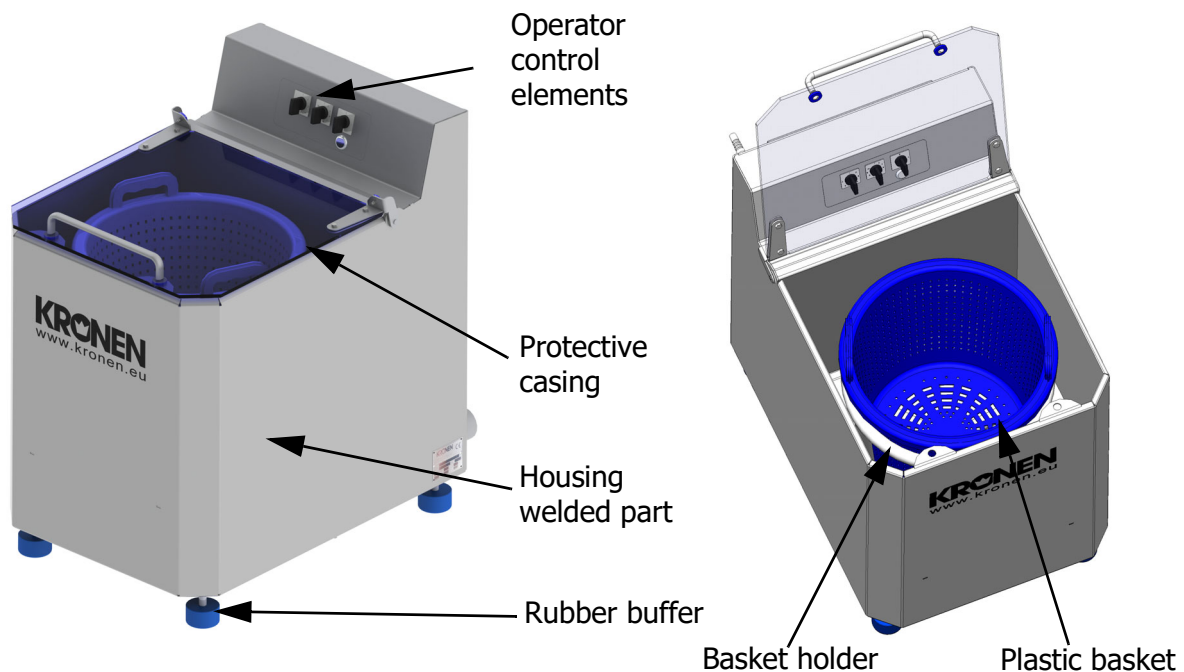


Figure 7: Product description (illustration can vary depending on the version)

4.4. Working area

The working area of the operator is on the front side of the machine.

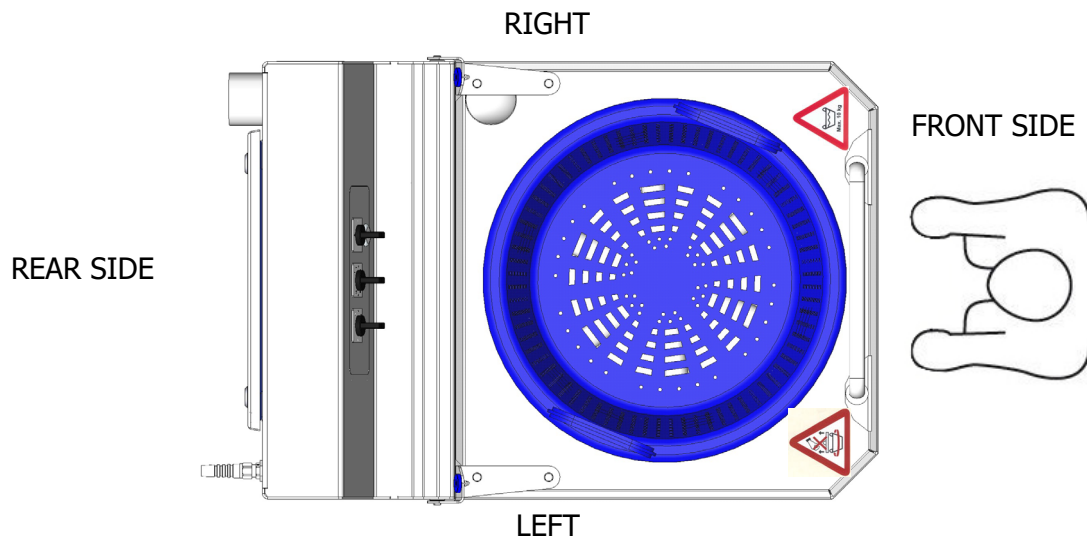


Figure 8: Working area

4.5. Technical data

Ambient temperature		°C	3-30
Relative air humidity	min/max	%	25-70
Length		mm	862
Width		mm	959
Height	closed	mm	927
	open	mm	1327
Fill level		mm	771
Weight		kg	ca. 140
Voltage		V	1~230; N,PE
Frequency		Hz	50/60
Total output		kW	0,75
Total current		A	5
Sound pressure level		db(A)	57

Table 3: Technical data

4.6. Type plate

The type plate is located on the right side of the machine.

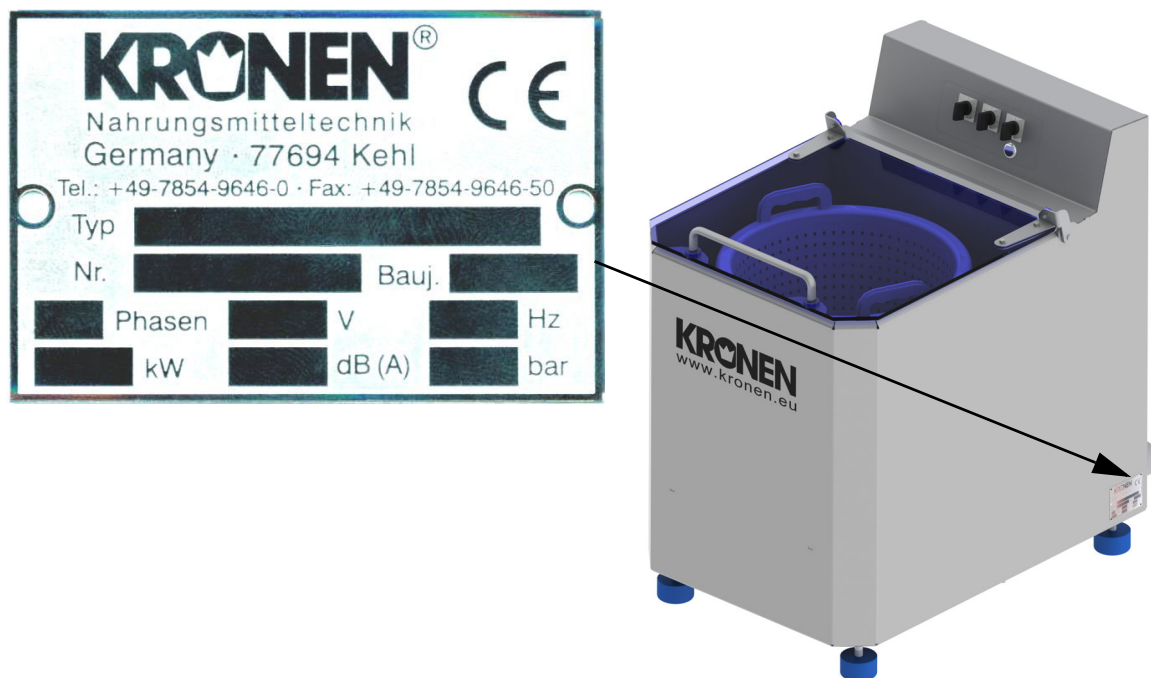


Figure 9: Type plate

5. Operator control elements

5.1. Operator control elements KS-7 ECO

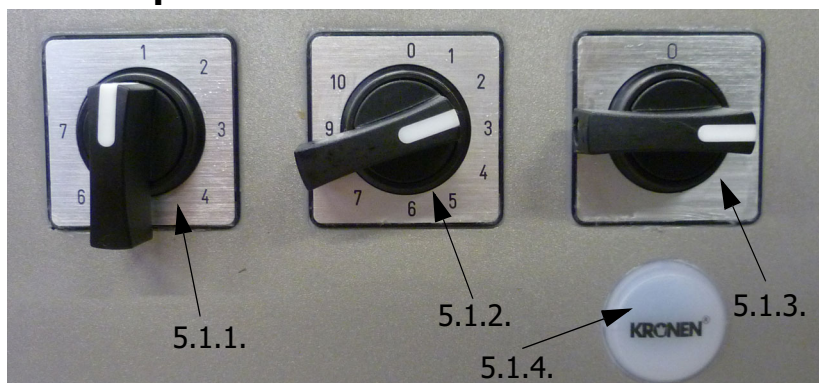


Figure 10: Operator control elements KS-7 ECO



Note

The machine is not designed for short-duration spinning! You should avoid starting more than two cycles per minute. Otherwise a safety switch can be triggered.

5.1.1. Selector switch SPEED



You can set speed (in levels) from level 1 to 7 with the selector switch.

Figure 11: Selector switch SPEED

Setting	Speed [rpm]
Level 1	250
Level 2	350
Level 3	450
Level 4	550
Level 5	650
Level 6	750
Level 7	850

5.1.2. Selector switch SPINNING TIME

You can set the spinning time from level 1 to level 10 with the selector switch.

Level 0 = Spinning OFF

Figure 12: Selector switch SPINNING TIME

Setting	Time [s]
Level 1	10
Level 2	20
Level 3	30
Level 4	40
Level 5	50
Level 6	60
Level 7	70
Level 8	80
Level 9	90
Level 10	100

5.1.3. Selector switch ON/OFF

As soon as the selector switch ON/OFF is set to "1" the machine is supplied with power.

0 = OFF

1 = ON

Figure 13: Selector switch ON/OFF

5.1.4. Indicator lamp POWER ON

When the selector switch is switched from "0" to "1" the indicator lamp is illuminated white to signal that the machine is being supplied with power.

Figure 14: Indicator lamp POWER ON

5.2. Operator control elements KS-600/900 ECO

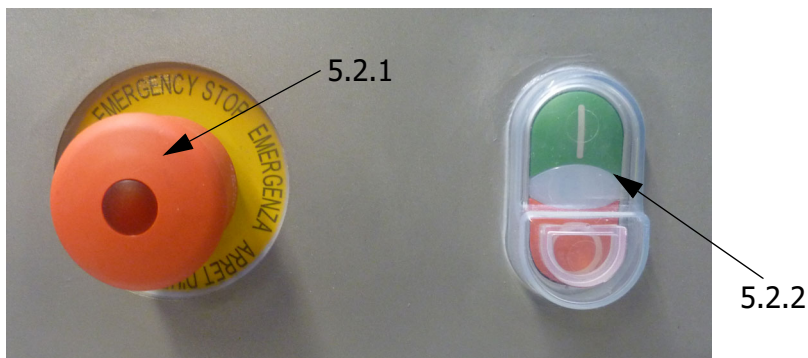


Figure 15: Operator control elements KS-600/900 ECO



Note

The machine is not designed for short-duration spinning! You should avoid starting more than two cycles per minute. Otherwise a safety switch can be triggered.

5.2.1. EMERGENCY STOP button

The EMERGENCY STOP button is installed on the front side of the machine.

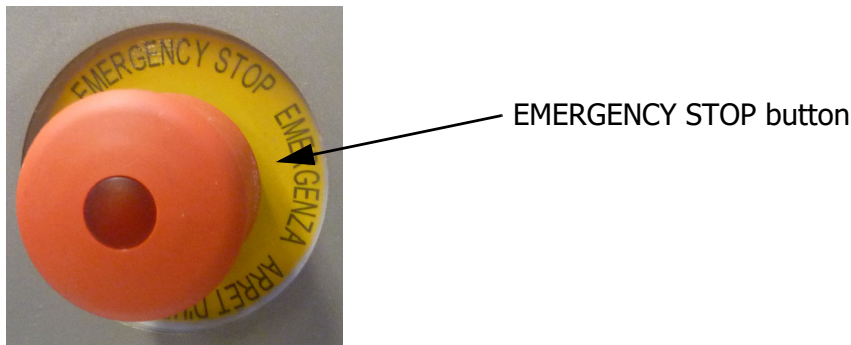


Figure 16: EMERGENCY STOP button

The EMERGENCY STOP button is used to stop the machine in order to avoid or avert impending or prevailing risks of personal injury or material damage. The EMERGENCY STOP button locks when pressed and has to be released manually.

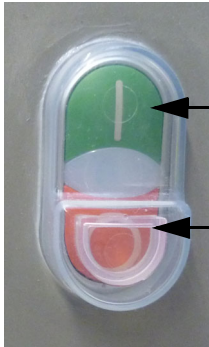


Note

Releasing the EMERGENCY STOP button does not restart the machine automatically. Once the EMERGENCY STOP button has been reset, the machine has to be restarted (☞ see Chapter 6. Operation).

Before powering the machine, check that:

- there are no foreign bodies in the machine.
- the safety cover at the motor housing is closed.
- the EMERGENCY STOP button is unlocked (only for KS-600/900 ECO).

5.2.2. Button START/STOP

The button START/STOP is installed at the front side of the machine.

START

There is a white light shining in the centre part as soon as the button has been pushed.

STOP

Machine stops immediately as soon as the button has been pushed.

Figure 17: Button START/STOP

**Note**

The machine is not designed for short-duration spinning! You should avoid starting more than two cycles per minute. Otherwise a safety switch can be triggered.

	KS-600 ECO	KS-900 ECO
Speed basket holder	550 rpm at 41,0 Hz	850 rpm at 64,0 Hz

6. Operation

6.1. General



Warning

Rotating basket holder and plastic basket.

Danger of injury!

- Do not reach into the rotating basket holder.
- Note the warnings affixed to the machine.



Warning

Between protective casing and housing welded part through falling protective casing.

Danger of injury!

- Secure the work area against access by unauthorised persons.
- The protective casing must be opened or closed using the attached bow-shaped handle.
- Wear suitable PPE (e.g. protective gloves, work gloves).



Caution

Loss of stability due to imbalance in the unevenly filled basket holder.

Danger of injury!

- Pay attention to the warnings affixed to the machine.
- The fill quantity of the plastic basket must not exceed 10kg.
- The volume of the plastic basket must be filled evenly with the product.



Caution

Liquids, product waste and product residues.

Risk of slipping!

- Wear suitable PPE (e.g. protective gloves, work gloves).
- Take up liquids from the floor without delay and ensure adequate protection against slipping.
- Product waste and product residue must be removed immediately and disposed of responsibly.



Note

The fill quantity of the plastic basket must not exceed 10kg.



Note

To minimise ergonomic risks to the operator, it is recommended to limit the working time to no more than 4 hours.

Before starting up the machine, check that:

- There are no foreign objects in the machine.
- The safety cover on the motor housing is closed.

6.2. Working with the plastic basket

6.2.1. Filling the plastic basket

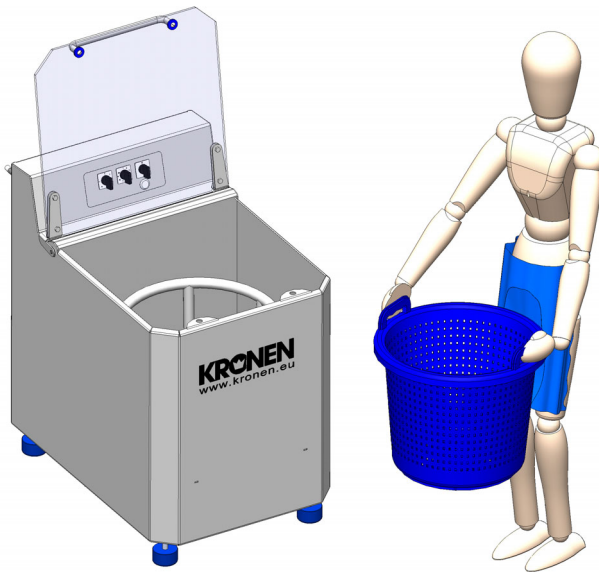


The fill quantity of the plastic basket must not exceed 10kg.

Figure 18: Filled plastic basket

6.2.2. Insertion of the plastic basket into the machine

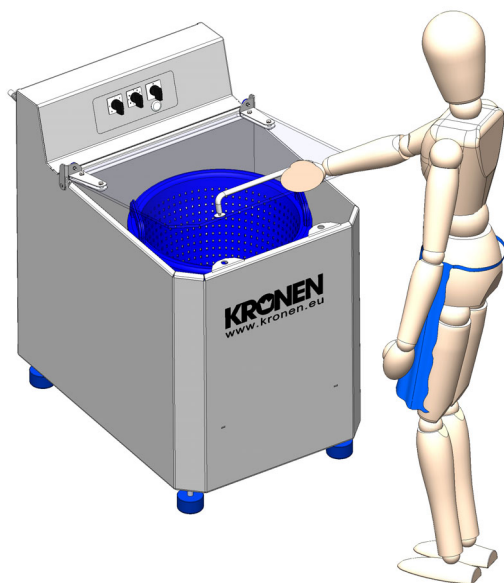
Step 1:



Step 2:



Step 3:



Fill the plastic basket with the desired product.

Step 1: Open the protective casing of the machine.

Step 2: Take the plastic basket and place it in the basket holder in the machine.

Step 3: Close the protective casing of the machine.

Now the machine is ready for use.

Figure 19: Insertion of the plastic basket into the machine

6.3. Starting up the KS-7 ECO



Caution

Liquids, product waste and product residues.

Risk of slipping!

- Wear suitable PPE (e.g. protective gloves, work gloves).
- Take up liquids from the floor without delay and ensure adequate protection against slipping.
- Product waste and product residue must be removed immediately and disposed of responsibly.



Note

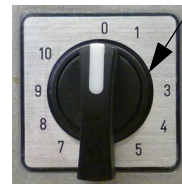
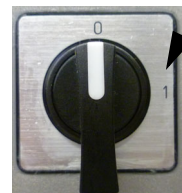
The machine is not designed for short-duration spinning! You should avoid starting more than two cycles per minute. Otherwise a safety switch can be triggered.



Note

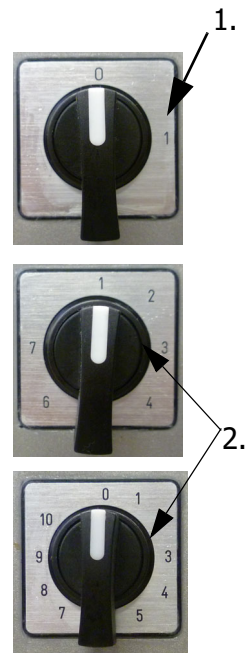
The soft stop at the end of the spinning cycle protects all elements of your machine. You should therefore avoid abruptly stopping the machine by prematurely unplugging the power plug or by opening the protective casing.

1. Switch on the machine by setting the selector switch ON/OFF to "1".
2. Use the selector switches to set both the speed and the spinning time. These settings must be adjusted individually for each product.
3. Open the protective casing.
4. Insert the plastic basket filled with product in the machine (☞ see Chapter 6.2.2. Insertion of the plastic basket into the machine).
 - Make sure that the plastic basket is level within the basket holder.
5. Close the protective casing.
6. The machine starts automatically.
7. Wait until the configured spinning time has expired.
8. Then open the protective casing.
9. Remove the plastic basket with the spin-dried product.
10. Insert the next plastic basket filled with product in the machine.
11. The work process (no. 3 to no. 10) can now be carried out continuously without having to completely shut down the machine.
12. Look through the protective casing to ensure that the plastic basket is inserted correctly.

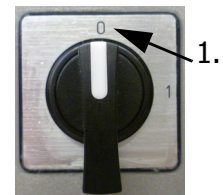


If this is not the case:

13. Open the protective casing.
14. Insert the plastic basket level into the basket holder.
15. Close the protective casing.
16. The machine restarts automatically. The work process can now be continued.
17. Do not leave the workplace during operation.
18. If you leave the working area, you must stop the machine and dissipate any prevailing residual energy.

**6.4. Shutting down the KS-7 ECO**

1. If you wish to stop operation of the machine for the present, wait until the spinning time has expired and then turn the selector switch ON/OFF to "0".
2. Unplug the mains plug.

**6.5. Product change**

3. Open the protective casing.
4. Rinse away any product residue with clear water, but not with high pressure.

6.6. End of production

5. Remove the plastic basket.
6. Thoroughly clean the single machine components, but do not use high pressure.

6.7. Starting up the KS-600/900 ECO



Caution

Liquids, product waste and product residues.

Risk of slipping!

- Wear suitable PPE (e.g. protective gloves, work gloves).
- Take up liquids from the floor without delay and ensure adequate protection against slipping.
- Product waste and product residue must be removed immediately and disposed of responsibly.



Note

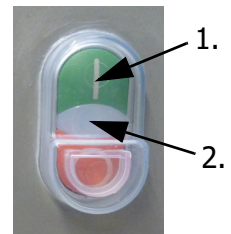
The machine is not designed for short-duration spinning! You should avoid starting more than two cycles per minute. Otherwise a safety switch can be triggered.



Note

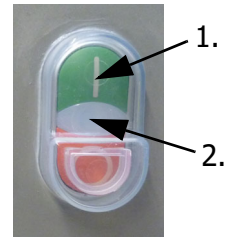
The soft stop at the end of the spinning cycle protects all elements of your machine. You should therefore avoid abruptly stopping the machine by prematurely unplugging the power plug or by opening the protective casing.

1. Press the button START on the button START/STOP to switch the machine on.
2. The centre part of the button lights up in white.
3. Open the protective casing.
4. Insert the plastic basket filled with product in the machine (see Chapter 6.2.2. Insertion of the plastic basket into the machine).
 - Make sure that the plastic basket is level within the basket holder.
5. Close the protective casing.
6. The machine starts automatically.
 - The spin time is 50 seconds.
7. Open the protective casing only after end of spinning operation.
8. Remove the plastic basket with the spin-dried product.
9. Insert the next plastic basket filled with product in the machine.
10. The work process (no. 3 to no. 10) can now be carried out continuously without having to completely shut down the machine.
11. Look through the protective casing to ensure that the plastic basket is inserted correctly.

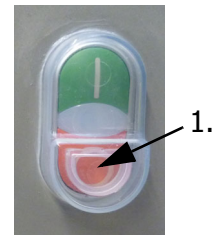


If this is not the case:

12. Open the protective casing.
13. Insert the plastic basket level into the basket holder.
14. Close the protective casing.
15. The machine restarts automatically. The work process can now be continued.
16. Do not leave the workplace during operation.
17. If you leave the working area, you must stop the machine and dissipate any prevailing residual energy.

**6.8. Shutting down KS-600/900 ECO**

1. If you wish to stop operation of the machine for the present, wait until the spinning time has expired and then press the button STOP on the button START/STOP.
2. Unplug the mains plug.

**6.9. Product change**

3. Open the protective casing.
4. Rinse away any product residue with clear water, but not with high pressure.

6.10. End of production

5. Remove the plastic basket.
6. Thoroughly clean the single machine components, but do not use high pressure.

7. Set-up

Before starting work, check that:

- the working area is locked and secured in order to prevent unauthorised access to the danger zone,
- there are no slip risks in the vicinity,
- there are no trip risks on any routes you might need to take.



Warning

Rotating basket holder and plastic basket.

Danger of injury!

- Do not reach into the rotating basket holder.
- Note the warnings affixed to the machine.



Warning

Between protective casing and housing welded part through falling protective casing.

Danger of injury!

- Secure the work area against access by unauthorised persons.
- The protective casing must be opened or closed using the attached bow-shaped handle.
- Wear suitable PPE (e.g. protective gloves, work gloves).



Warning

Between lever and holder machine safety switch sensor and between lever and housing welded part.

Danger of injury!

- Wear suitable PPE (e.g. protective gloves, work gloves).



Caution

Liquids, product waste and product residues.

Risk of slipping!

- Wear suitable PPE (e.g. protective gloves, work gloves).
- Take up liquids from the floor without delay and ensure adequate protection against slipping.
- Product waste and product residue must be removed immediately and disposed of responsibly.

7.1. Protective gloves

We recommend using the following protective gloves:

Designation:	Niroflex-group
Supplier:	FGS Fleischerei- und Gastronomie-Service Südbaden e. G. Wasserstraße 24 D-77652 Offenburg Tel.: +49 (0) 781 79 00-0 Fax: +49 (0) 781 23 34-5

These gloves have the following safety features:

- Grip dots
- Maximum anti-slip thanks to welded raised rubber pimples made from silicone
- Ideal for working with machine parts with smooth surfaces (e.g. glass, plastic, sheet steel, metal)
- Combined protection: Airtight, cut-resistant and anti-slip
- Available in 5 sizes



Note

Please contact the supplier for more information.

8. Cleaning

8.1. Detergent

For the cleaning of our machines, we recommend exclusively the following products made from natural renewable raw materials, completely biodegradable which can be ordered directly from us.

HACCP compliant support of production:

Designation:	Kronen Destain
Part number:	BIO1000
Effectiveness / concentration:	<p>Kronen Destain is powerful alkaline cleaner, especially for effort-less cleaning of conveyor belts:</p> <ul style="list-style-type: none"> • Non-foaming, phosphate-free • Free of aggressive and abrasive substances • High-yield, economical • Biodegradable <p>Application area: For conveyor belts that are soiled from cutting foods (lettuce, carrots, etc.).</p> <p>Application / dosing: Use Kronen Destain undiluted or 1:1, depending on the degree of soiling. Allow to work 24 - 48 hours, then rinse thoroughly with clear water. In case of extreme soiling, use a brush. Kronen Destain is sufficient for 6-10 applications, depending on the degree of soiling.</p> <p>Ingredients: Anionic and non-ionic tensides, additives.</p> <p>pH-value: In concentration 13</p>

Designation:	Kronen Destain PLUS
Part number:	BIO1006
Effectiveness / concentration:	<p>Kronen Destain PLUS is powerful alkaline cleaner, especially for effortless cleaning of washing machines:</p> <ul style="list-style-type: none"> • Sustainable reduction of accumulations / sediment • Non-foaming, phosphate-free • Free of aggressive and abrasive substances • High-yield, economical • Biodegradable <p>Application area: Washing machines with pipeline systems; in the water circuit.</p> <p>Application / dosing: After mechanical cleaning, pour Kronen Destain into the washing machine in a concentration of 5%. Allow machine to pump 1-2 hours in circulation. Then rinse thoroughly with clear water. Collect cleaning solution in a suitable container.</p> <p>Kronen Destain PLUS can be used for 6-10 applications, depending on the degree of soiling.</p> <p>Ingredients: Anionic and non-ionic tensides, additives.</p> <p>pH-value: In concentration 13</p>


Note

For further information please read the product description on the packaging. The manufacturer of the machine does not accept any liability resulting from misuse of the detergent used.

8.2. Cleaning the machine



Danger

Where electrical equipment is concerned, it is inevitable that certain components will be live.

Hazardous shock currents - risk of fatal injury!

- Before commencing, shut down and de-energise the machine (remove the mains plug) and secure against accidental restarting.
- Work on electrical equipment may be carried out only by qualified electricians.
- Note the warnings affixed to the machine.



Warning

Rotating basket holder and plastic basket.

Danger of injury!

- Before commencing, shut down and de-energise the machine (remove the mains plug) and secure against accidental restarting.
- Work may only be carried out by qualified personnel who has been authorized and instructed by the operator company.
- Do not reach into the rotating basket holder.
- Note the warnings affixed to the machine.



Warning

Between protective casing and housing welded part through falling protective casing.

Danger of injury!

- Secure the work area against access by unauthorised persons.
- The protective casing must be opened or closed using the attached bow-shaped handle.
- Wear suitable PPE (e.g. protective gloves, work gloves).



Warning

High-pressure cleaner.

Risk of injury and damage to property!

- Never use high-pressure cleaners to clean the machine.
- Water pressure must not exceed the maximum available from a conventional mains water supply.



Caution

Liquids, product waste and product residues.

Risk of slipping!

- Wear suitable PPE (e.g. protective gloves, work gloves).
- Take up liquids from the floor without delay and ensure adequate protection against slipping.
- Product waste and product residue must be removed immediately and disposed of responsibly.



Caution

Water.

Material damage!

- Never use water or other liquids to clean the control cabinet.
- Control cabinet should only ever be cleaned using a cleaning cloth.
- Water or other liquids should never be allowed to get into electrical component parts.



Caution

Leaving detergents/cleaning solutions to act for too long on components.

Material damage!

- Follow the manufacturer's instructions.
- Do not use detergents containing chlorine or salt (risk of contact corrosion).
- Cleaning solutions must not exceed a temperature of 60°C.
- Wear protective overalls, protective gloves and safety glasses/a face mask.
- Cleaning must always be followed by rinsing with zero-bacteria water.



Note

Clean and rinse the machine thoroughly at least once a day.

The machine must be cleaned and rinsed thoroughly prior to production start-up (see also the in-house production guide, HACCP legislation).

Shutting down the machine

1. Shut down the machine (☞ see Chapter 6.4. Shutting down the KS-7 ECO and Chapter 6.8. Shutting down KS-600/900 ECO).
2. Unplug the mains plug.
3. Cover or seal all openings which moisture must not be allowed to penetrate for reasons of safety and functional reasons.

Cleaning the machine

4. Apply the cleaning solution uniformly to the entire surface using a standard cleaning brush or spray it on with an atomiser.
 - Allow the cleaning solution to soak in for approx. 4 minutes.
5. Remove stubborn or tough stains by hand with a standard domestic cleaning brush.
 - Do not use steel wool or equipment with sharp edges.
 - Make sure that no food remains especially in the spinning chamber, since this can contaminate the machine with bacteria.
6. Clean the drain pipe.
7. Rinse away any traces of cleaning solution and product residue with warm water (at low pressure).
8. Equip the machine for the new production process (☞ see Chapter 7. Set-up).
 - Use test strips to check the cleanliness (hygiene status) of the machine.
 - If necessary, you can optimize the cleaning process to suit the needs of the application.
9. Allow the machine to dry before restarting.
10. Once cleaning is complete, remove all equipment and tools from the working area.
11. Remove all covers and seals from openings.

Starting up the machine

12. Start up the machine (☞ see Chapter 6.3. Starting up the KS-7 ECO and Chapter 6.7. Starting up the KS-600/900 ECO).

**Note**

Overalls which become soiled or soaked in cleaning solutions should be submitted for in-house recycling.

8.3. Cleaning interval

- After ending work, the machine should be thoroughly cleaned with water and the cleaning agents recommended above.
- Cleaning at shorter intervals is an advantage if the machine is soiled.
- A brief cleaning with water during a short break in production is advisable (duration approximately 2 minutes).

9. Service and maintenance

This chapter contains important information about the service and maintenance of your machine.

Regular service and maintenance carried out in compliance with specifications is vital for:

- operational reliability,
- Fault-free operation
- A long machine service life
- The quality of the products you are producing

Third-party equipment and devices must be kept in perfect condition.



Note

Please contact us regarding repairs that are covered by a service agreement.

Only spare parts included in our spare parts lists may be used (☞ see Chapter 11. Spare parts).

9.1. Safety



Danger

Where electrical equipment is concerned, it is inevitable that certain components will be live.

Hazardous shock currents - risk of fatal injury!

- Before commencing, shut down and de-energise the machine (remove the mains plug) and secure against accidental restarting.
- Work on electrical equipment may be carried out only by qualified electricians.
- Note the warnings affixed to the machine.



Warning

Failure to carry out service and maintenance correctly.

Risk of injury and damage to property!

- Work may only be carried out by qualified personnel who has been authorized and instructed by the operator company.



Warning

Rotating basket holder and plastic basket.

Danger of injury!

- Before commencing, shut down and de-energise the machine (remove the mains plug) and secure against accidental restarting.
- Work may only be carried out by qualified personnel who has been authorized and instructed by the operator company.
- Do not reach into the rotating basket holder.
- Note the warnings affixed to the machine.

**Warning**

Between the Poly-V belt and the pulley.

Danger of injury!

- Before commencing, shut down and de-energise the machine (remove the mains plug) and secure against accidental restarting.
- Work may only be carried out by qualified personnel who has been authorized and instructed by the operator company.
- Secure the work area against access by unauthorised persons.
- After completing the work, ensure that the safety covers are correctly mounted and locked.

**Warning**

Between protective casing and housing welded part through falling protective casing.

Danger of injury!

- Secure the work area against access by unauthorised persons.
- The protective casing must be opened or closed using the attached bow-shaped handle.
- Wear suitable PPE (e.g. protective gloves, work gloves).

**Warning**

Between lever and holder machine safety switch sensor and between lever and housing welded part.

Danger of injury!

- Before commencing, shut down and de-energise the machine (remove the mains plug) and secure against accidental restarting.
- Work may only be carried out by qualified personnel who has been authorized and instructed by the operator company.
- Secure the work area against access by unauthorised persons.
- Wear suitable PPE (e.g. protective gloves, work gloves).
- After completing the work, ensure that the safety covers are correctly mounted and locked.

**Caution**

Liquids, product waste and product residues.

Risk of slipping!

- Wear suitable PPE (e.g. protective gloves, work gloves).
- Take up liquids from the floor without delay and ensure adequate protection against slipping.
- Product waste and product residue must be removed immediately and disposed of responsibly.

**Attention**

Use of incorrect operating materials and spare parts.

Material damage!

- Only use approved operating materials and spare parts.

9.2. Protecting the environment

Whenever you are working on and with the machine, ensure compliance with local regulations governing waste prevention and procedures for recycling and/or disposal.

When carrying out maintenance work in particular, you must take care to ensure that substances which could be harmful to groundwater (e.g. lubricants, detergents) do not pollute the soil or enter the sewer system.

You must use a suitable container to collect, store and transport such substances and you must dispose of them in accordance with regulations.

9.3. Inspection and maintenance

The nature and extent of wear is largely dependent upon individual usage and operating conditions. All specified maintenance intervals assume optimum operating conditions (☞ see Chapter 4.1. Intended use).

If defects identified might:

- pose a risk to personal safety
- pose a risk of consequential damage to machine parts

You must

- stop the machine immediately (remove the mains plug),
- affix a warning to the machine clearly outlining the situation,
- Inform the responsible service and maintenance personnel.

If, in spite of a defect having been identified, the machine can continue to operate in the short term without posing a risk to personal safety or machine parts, you should:

- Stop the machine at the end of the current production process (remove the mains plug)
- Inform the responsible service and maintenance personnel.



Note

Enter all inspection and maintenance tasks in the table provided (☞ see Chapter 13. Appendix).

9.4. Repairs

Contact our service personnel whenever you need repairs.

We will assume no liability and provide no warranty for property damage and disruptions in operation as a result of failure to comply with this operating manual.

Only use:

- Suitable tools
- Spare parts approved by us

9.5. Restarting

Carry out a safety check prior to recommissioning (☞ see Chapter 1.10. Essential safety instructions for first use).

9.6. Inspection and maintenance table

Designation	Interval	Action	Description
Safety equipment and protective devices (e.g. EMERGENCY STOP button)	Daily	Check for function.	
Entire machine	Daily	Cleaning	☞ see Chapter 8. Cleaning
Entire machine	Daily	Check for damage.	
Electrical equipment	Daily	Check for function.	To be carried out only by qualified electricians.
Shaft sealing ring (part no. 28752)	If necessary	Replace the shaft sealing ring on the basket holder.	☞ see Chapter 9.8. Replace the shaft sealing ring on the basket holder
Poly-V belt (part no. 32850)	Prior to start of production	Check for damage and tension.	
	Every 3 months	Replace if necessary.	☞ see Chapter 9.9. Replace the poly-V belt
Motor (part no. 69449)	If necessary	Replace the motor with parking brake.	☞ see Chapter 9.10. Replace the motor with parking brake
Ball bearing (part no. 20760, 20768)	If necessary	Replace the ball bearings.	☞ see Chapter 9.11. Replace the ball bearings
Machine safety switch sensor (part no. 86733)	If necessary	Readjust the machine safety switch sensor.	☞ see Chapter 9.12. Readjust the machine safety switch sensor
Brake relay (part no. 86738)	Every 830 operating hours or at least every 2 years	Replace brake relay!	To be carried out only by qualified electricians.

Table 4: Inspection and maintenance table

9.7. Lubrication

9.7.1. Lubricant

We recommend the following lubricant:

Designation:	Renolit G7 FG1
Article number:	46985

Lubricating grease with zero mineral oil content for use in the foodstuffs industry and made from organic (plant oils) and inorganic (thickeners) natural materials.

**Note**

For more information, please contact the manufacturer of the machine.

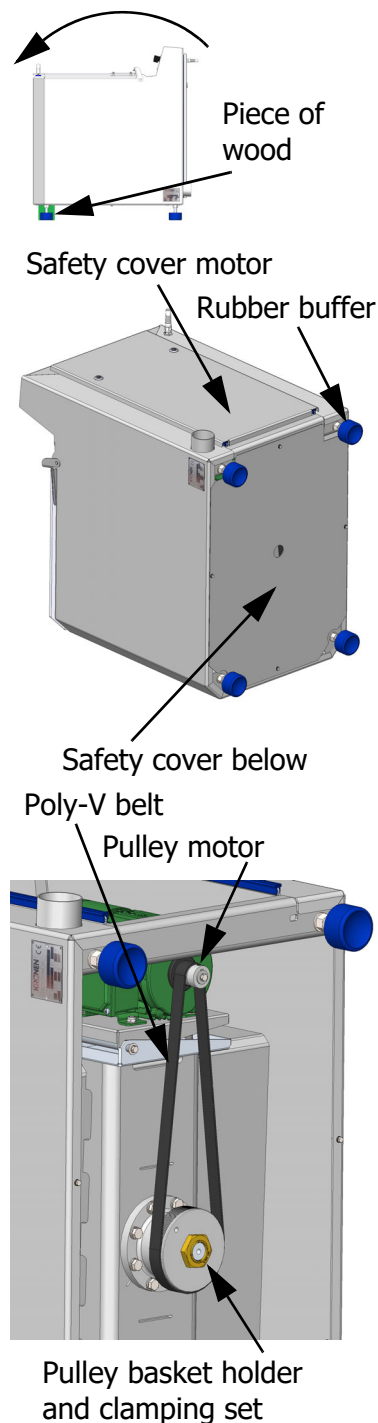
9.8. Replace the shaft sealing ring on the basket holder

Shutting down the machine

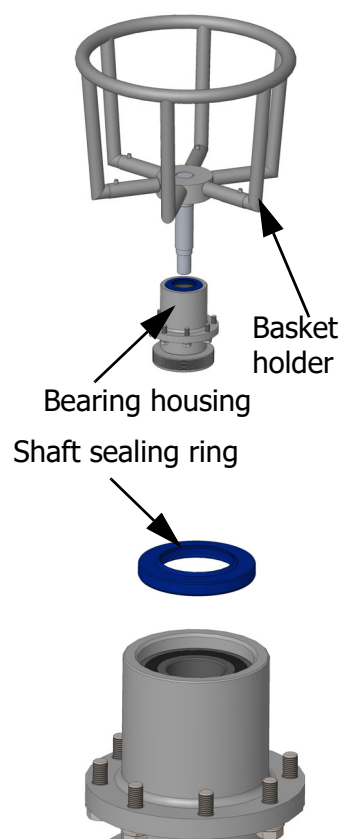
1. Shut down the machine (☞ see Chapter 6. Operation).
2. Unplug the machine's power plug.

Replace the shaft sealing ring

3. Place a piece of wood or similar item under the front of the machine.
4. Tilt the machine over the piece of wood so that the front rubber buffers are not loaded.
 - Failure to comply can result in damage to the rubber buffers.
5. Remove the safety cover below by loosening the screws with an open-end spanner size 8.
6. Remove the safety cover motor with a two-way key.
 - Raise the safety cover motor slightly to remove.
7. Release the tension of the poly-v belt by loosening the clamping screw at the motor mounting plate with an open-end spanner size 18.
8. Remove the poly-v belt from the pulley.
9. Loosen the clamping set with an open-end spanner size 50.
10. Remove the pulley basket holder.



11. Remove the basket holder by carefully pulling it up and out of the bearing housing.
12. Remove the shaft sealing ring by pulling it up and out of the bearing housing.
13. Place the new shaft sealing ring at the same position.
 - NOTE: Make sure that the sealing lip is not damaged during insertion of the shaft sealing ring.
14. Insert the basket holder back into the machine.
15. Reattach the pulley basket holder.
16. Tighten the clamping set again with an open-end spanner size 50.
17. Reattach the poly-v belt in reverse order and tension it by tightening the clamping screw on the motor mounting plate.
 - When reinserting the poly-v belt, a pre-tensioning force of 205N is necessary.
18. Reattach the safety cover motor and the safety cover below in reverse order.
19. Return the machine to its starting position.
20. The machine is now ready for operation again.



Starting up the machine

21. Start up the machine (☞ see Chapter 6. Operation).

9.9. Replace the poly-V belt



Note

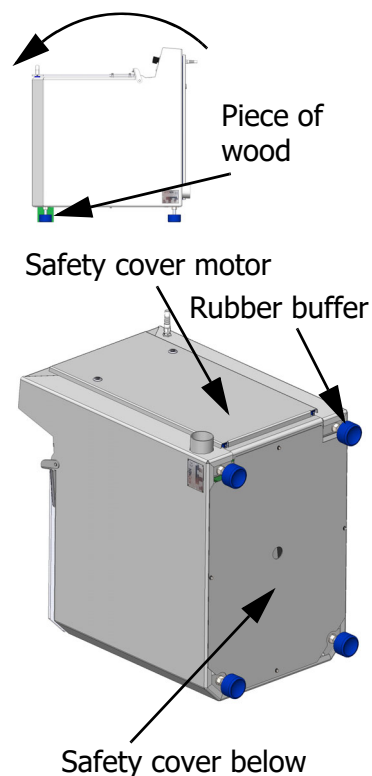
Loud squeaking during braking of the basket holder indicates that the poly-V belt is worn or has too much play.

Shutting down the machine

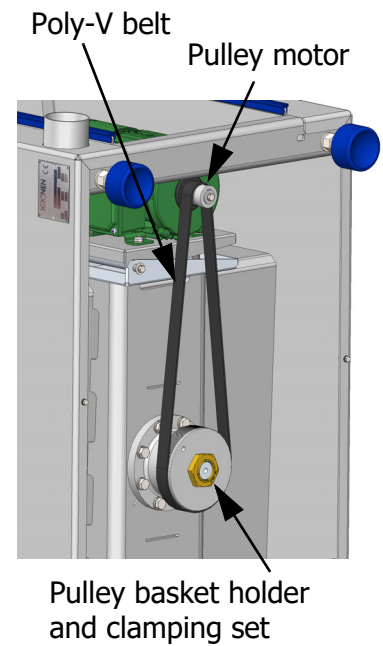
1. Shut down the machine (➞ see Chapter 6. Operation).
2. Unplug the machine's power plug.

Replace the poly-V belt

3. Place a piece of wood or similar item under the front of the machine.
4. Tilt the machine over the piece of wood so that the front rubber buffers are not loaded.
 - Failure to comply can result in damage to the rubber buffers.
5. Remove the safety cover below by loosening the screws with an open-end spanner size 8.
6. Remove the safety cover motor with a two-way key.
 - Raise the safety cover motor slightly to remove.
7. Release the tension of the poly-v belt by loosening the clamping screw at the motor mounting plate with an open-end spanner size 18.
8. Remove the poly-v belt from the pulley.



9. Reattach the new poly-v belt in reverse order and tension it by tightening the clamping screw on the motor mounting plate.
 - When reinserting the poly-v belt, a pre-tensioning force of 205N is necessary.
10. Reattach the safety cover motor and the safety cover below in reverse order.
11. Return the machine to its starting position.
12. The machine is now ready for operation again.



Starting up the machine

13. Start up the machine (☞ see Chapter 6. Operation).

9.10. Replace the motor with parking brake



Note

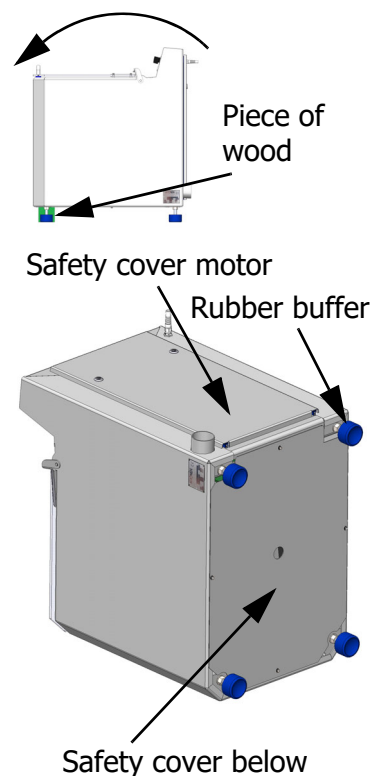
If the machine no longer functions and a fault in the inverter is indicated, this can be the result of wear of the parking brake.

Shutting down the machine

1. Shut down the machine (☞ see Chapter 6. Operation).
2. Unplug the machine's power plug.

Replace the motor with parking brake

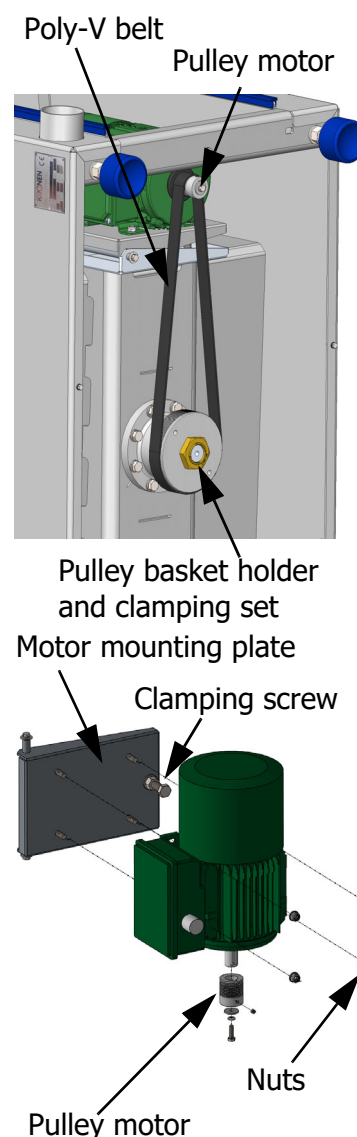
3. Place a piece of wood or similar item under the front of the machine.
4. Tilt the machine over the piece of wood so that the front rubber buffers are not loaded.
 - Failure to comply can result in damage to the rubber buffers.
5. Remove the safety cover below by loosening the screws with an open-end spanner size 8.
6. Remove the safety cover motor with a two-way key.
 - Raise the safety cover motor slightly to remove.
7. Release the tension of the poly-v belt by loosening the clamping screw at the motor mounting plate with an open-end spanner size 18.
8. Remove the poly-v belt from the pulley.



9. Remove the pulley motor on the motor shaft with an open-end spanner size 10 and an Allen key size 3.
10. Use a size 13 open-end spanner to loosen the four nuts on the base of the motor and remove the motor from the motor housing.
11. Open the terminal box on the motor and remove the power line.
12. Install a new power line and then close the terminal box on the motor.
13. Reinstall the motor in the motor housing in reverse sequence.
14. Reattach the drive pulley on the motor shaft in reverse sequence.
15. Reattach the poly-v belt in reverse order and tension it by tightening the clamping screw on the motor mounting plate.
 - When reinserting the poly-v belt, a pre-tensioning force of 205N is necessary.
16. Reattach the safety cover motor and the safety cover below in reverse order.
17. Return the machine to its starting position.
18. The machine is now ready for operation again.

Starting up the machine

19. Start up the machine (☞ see Chapter 6. Operation).



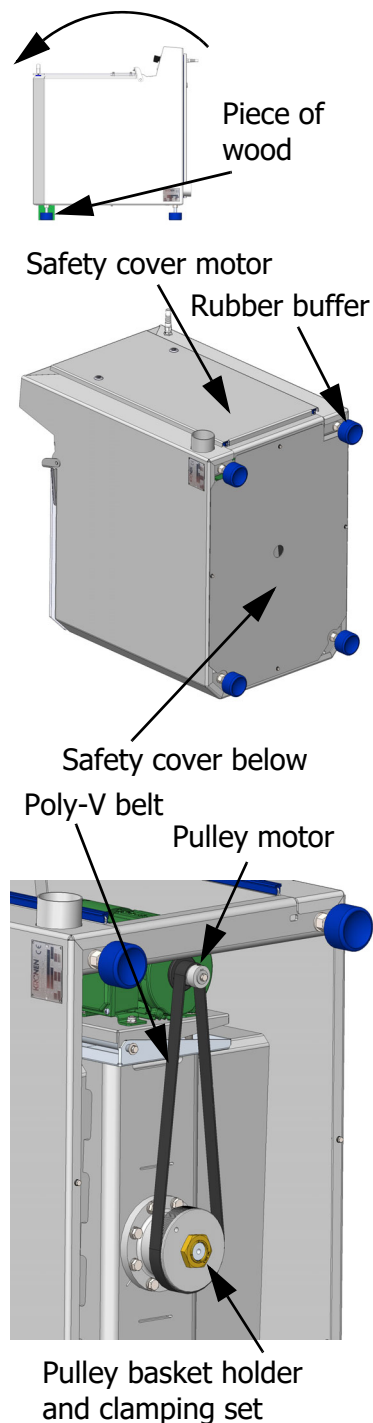
9.11. Replace the ball bearings

Shutting down the machine

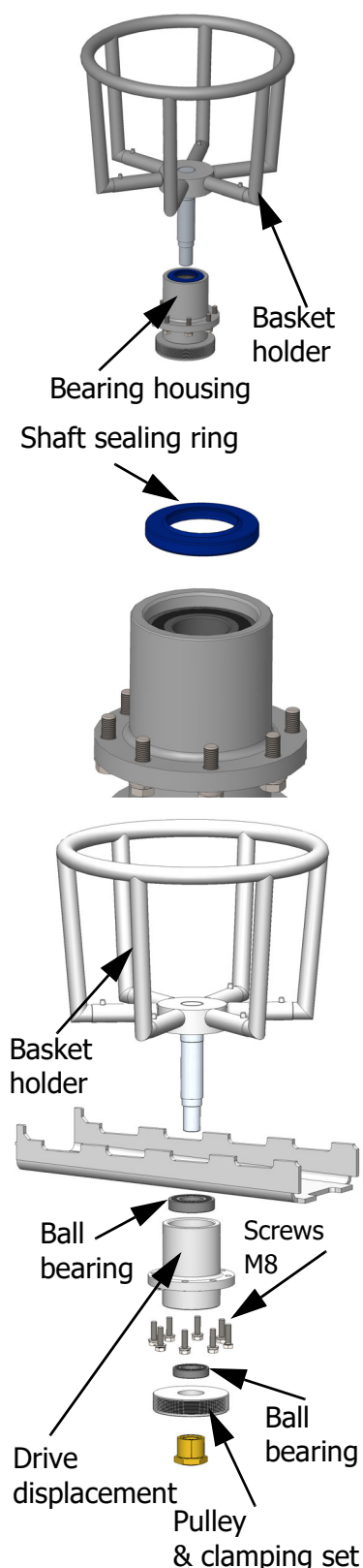
1. Shut down the machine (☞ see Chapter 6. Operation).
2. Unplug the machine's power plug.

Replace the ball bearings

3. Place a piece of wood or similar item under the front of the machine.
4. Tilt the machine over the piece of wood so that the front rubber buffers are not loaded.
 - Failure to comply can result in damage to the rubber buffers.
5. Remove the safety cover below by loosening the screws with an open-end spanner size 8.
6. Remove the safety cover motor with a two-way key.
 - Raise the safety cover motor slightly to remove.
7. Release the tension of the poly-v belt by loosening the clamping screw at the motor mounting plate with an open-end spanner size 18.
8. Remove the poly-v belt from the pulley.
9. Loosen the clamping set with an open-end spanner size 50.
10. Remove the pulley basket holder.



11. Remove the basket holder by carefully pulling it up and out of the bearing housing.
12. Remove the shaft sealing ring by pulling it up and out of the bearing housing.
13. Loosen the M8 screws on the bearing housing with an open-end spanner size 16.
14. Pull the bearing housing downward out of the machine housing.
15. Remove the ball bearings by means of thermal treatment of the bearing housing.
16. Replace the new ball bearings in reverse sequence.
17. Replace the bearing housing back into the machine and retighten the M8 screws
18. Place the new shaft sealing ring at the same position.
 - NOTE: Make sure that the sealing lip is not damaged during insertion of the shaft sealing ring.
19. Insert the basket holder back into the machine.
20. Reattach the pulley basket holder.
21. Tighten the clamping set again with an open-end spanner size 50.
22. Reattach the poly-v belt in reverse order and tension it by tightening the clamping screw on the motor mounting plate.
 - When reinserting the poly-v belt, a pre-tensioning force of 205N is necessary.
23. Reattach the safety cover motor and the safety cover below in reverse order.
24. Return the machine to its starting position.
25. The machine is now ready for operation again.



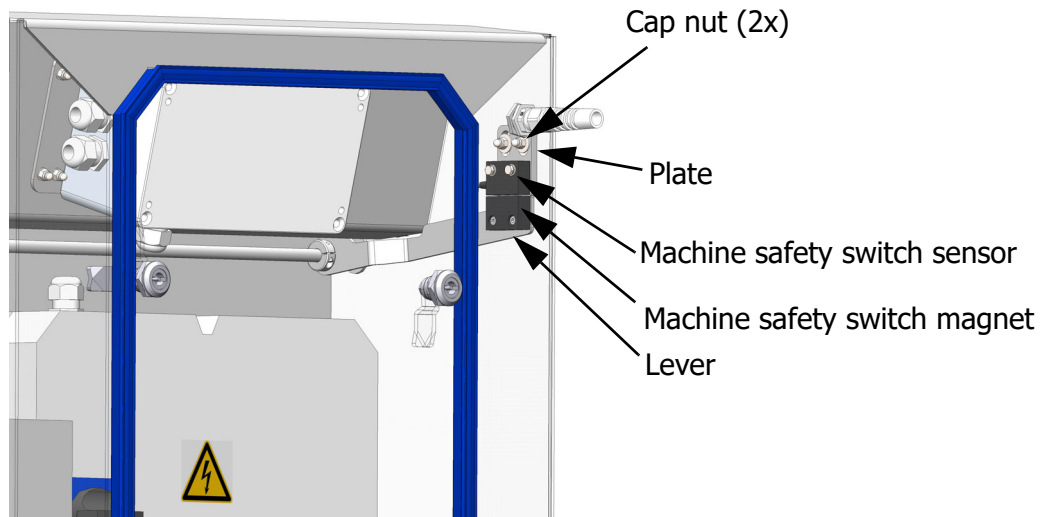
Starting up the machine

26. Start up the machine (☞ see Chapter 6. Operation).

9.12. Readjust the machine safety switch sensor

Shutting down the machine

1. Shut down the machine (☞ see Chapter 6. Operation).
2. Close the protective casing.
3. Unplug the machine's power plug.



Readjust the machine safety switch sensor

4. Remove the safety cover motor with a two-way key.
5. Loosen the two cap nuts with an open-end spanner size 8.
6. Move the plate with the machine safety switch sensor, so that the plate and the lever are in contact.
7. Tighten the cap nuts with an open-end spanner size 8 again.
8. Reattach the safety cover motor and close it with a two-way key.
9. The machine is now ready for operation again.

Starting up the machine

10. Start up the machine (☞ see Chapter 6. Operation).

10. Troubleshooting



Danger

Where electrical equipment is concerned, it is inevitable that certain components will be live.

Hazardous shock currents - risk of fatal injury!

- Before commencing, shut down and de-energise the machine (remove the mains plug) and secure against accidental restarting.
- Work on electrical equipment may be carried out only by qualified electricians.
- Note the warnings affixed to the machine.



Warning

Rotating basket holder and plastic basket.

Danger of injury!

- Before commencing, shut down and de-energise the machine (remove the mains plug) and secure against accidental restarting.
- Work may only be carried out by qualified personnel who has been authorized and instructed by the operator company.
- Do not reach into the rotating basket holder.
- Note the warnings affixed to the machine.



Warning

Between poly-V belt and pulley.

Danger of injury!

- Before commencing, shut down and de-energise the machine (remove the mains plug) and secure against accidental restarting.
- Work may only be carried out by qualified personnel who has been authorized and instructed by the operator company.
- Secure the work area against access by unauthorised persons.
- After completing the work, ensure that the safety covers are correctly mounted and locked.



Warning

Between protective casing and housing welded part through falling protective casing.

Danger of injury!

- Secure the work area against access by unauthorised persons.
- The protective casing must be opened or closed using the attached bow-shaped handle.
- Wear suitable PPE (e.g. protective gloves, work gloves).



Warning

Between lever and holder machine safety switch sensor and between lever and housing welded part.

Danger of injury!

- Before commencing, shut down and de-energise the machine (remove the mains plug) and secure against accidental restarting.
- Work may only be carried out by qualified personnel who has been authorized and instructed by the operator company.
- Secure the work area against access by unauthorised persons.
- Wear suitable PPE (e.g. protective gloves, work gloves).
- After completing the work, ensure that the safety covers are correctly mounted and locked.



Caution

Liquids, product waste and product residues.

Risk of slipping!

- Wear suitable PPE (e.g. protective gloves, work gloves).
- Take up liquids from the floor without delay and ensure adequate protection against slipping.
- Product waste and product residue must be removed immediately and disposed of responsibly.



Attention

All repairs to be carried out only by authorised workshops or skilled staff. Disconnect power plug before repair works.



Note

This chapter only describes faults and examples of mal-operation which operators are permitted to deal with. Other faults can only be dealt with by specialist personnel.

Start by checking if one of the safety devices has been triggered. For example, one of the protective casings might not have been closed properly.

Check the following:

- Is there any evidence of mechanical damage on the outside of the machine housing? If yes, where?
- Is there any evidence of external damage on the mains cable?
- Has there been a cable fire (smell of charred plastic)?
- Has water been sprayed into the control cabinet (open to check)?
- Has an attempt been made to process non-intended products (e.g. bones, frozen products)?
- Have foreign bodies (e.g. knives, forks, spoons) got into the working area of the machine?
- Is there evidence of visible damage to the protective casing (or in their immediate vicinity)?

10.1. Customer service

Should you need to contact our customer service team for assistance, please provide the following information:

- The data from your machine's type plate.
- The nature and extent of the fault.
- When the fault occurred and the prevailing circumstances at the time.
- A possible cause.



Note

Our spare parts sale team can be contacted Monday to Thursday between 8 a.m. and 5 p.m. and on Friday between 8 a.m. and 4 p.m. by calling +49 (0) 7854 9646-112.

11. Spare parts

11.1. Ordering spare parts and wearing parts

In addition to the spare parts and wearing parts listed, you can also order other components for your machine.

You must provide the following information when placing an order:

- Designation (type plate)
- Serial number (type plate)
- Number of parts required



Attention

Failure to carry out service and maintenance correctly.

Risk of injury and damage to property!

- Work may only be carried out by qualified personnel who has been authorized and instructed by the operator company.



Attention

Use of incorrect spare parts.

Material damage!

- Only use approved spare parts.

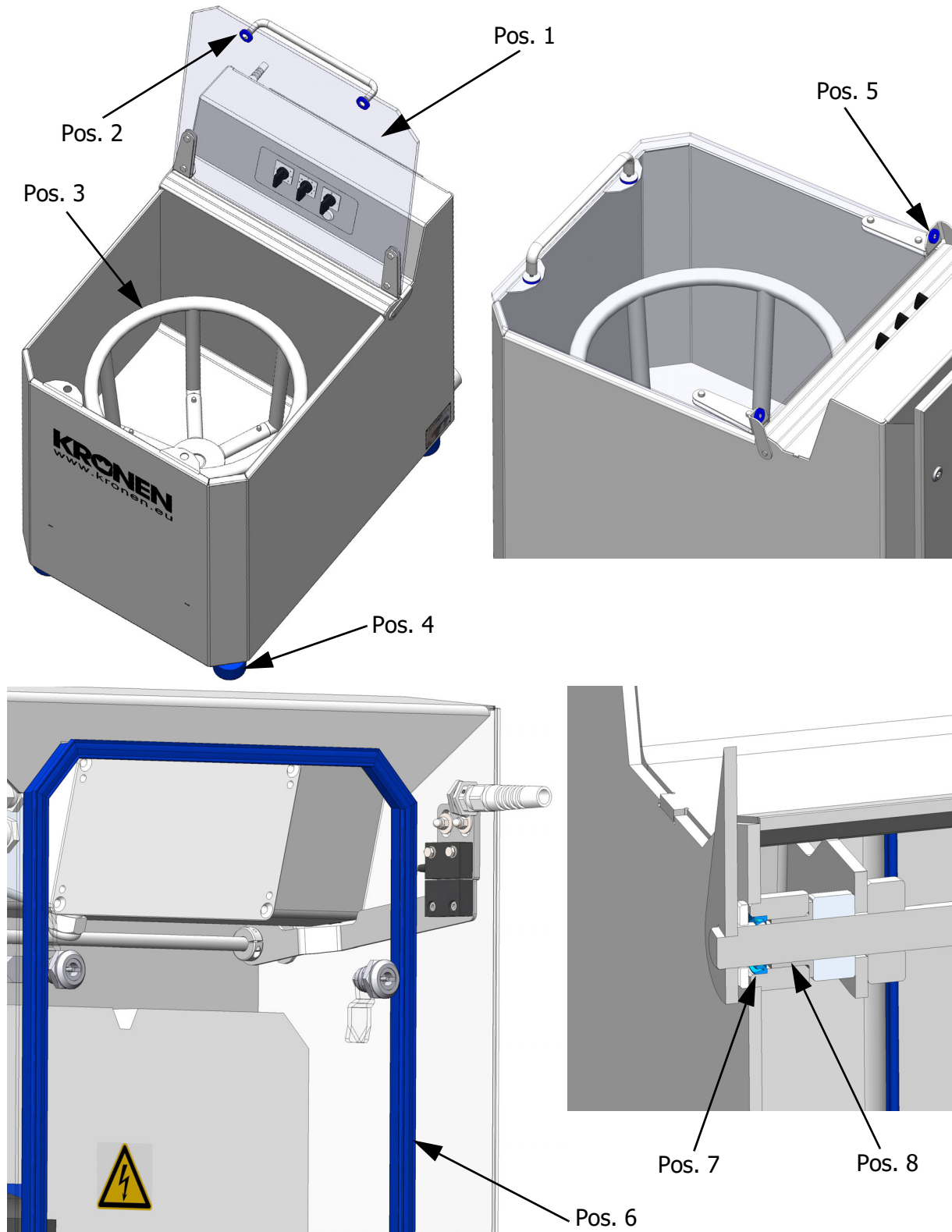


Note

Our spare parts sale team can be contacted monday to thursday between 8 a.m. and 5 p.m. and on friday between 8 a.m. and 4 p.m. by calling +49 (0) 7854 9646-112.

11.2. Mechanical spare parts

11.2.1. Position of mechanical spare parts - general



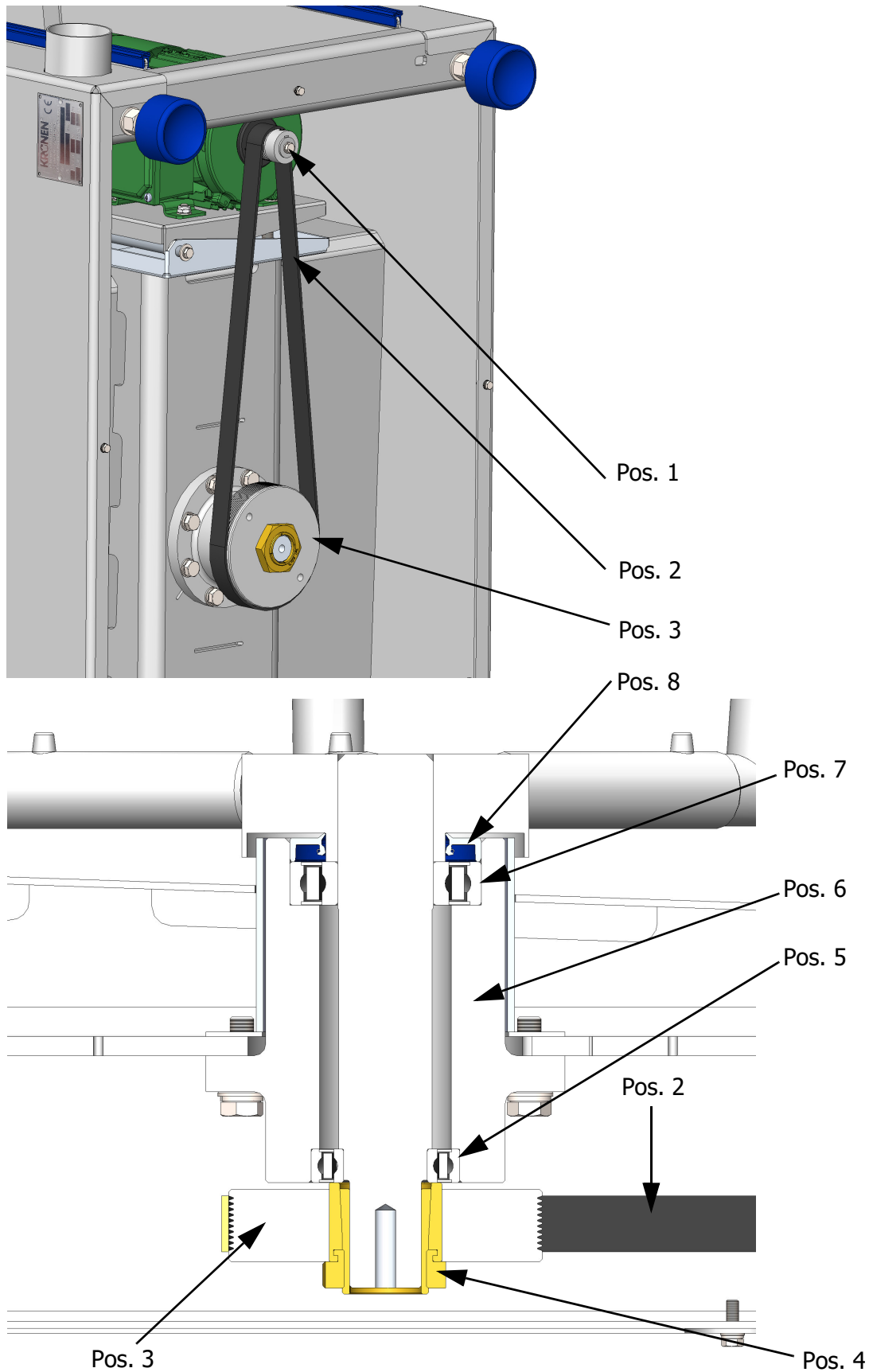
Drawing 3: Position of mechanical spare parts - general

11.2.2. Mechanical spare parts list - general

Pos.	Part no.	Designation	Quantity
1	751569	Protective casing	1
2	752765	Buffer disc	2
3	751101	Basket holder	1
4	983578	Rubber buffer	4
5	751457	Stop washer	2
6	49334	Sealing profile	1,84m
7	984112	Shaft sealing ring	2
8	84956	Plain bearing	2

Parts list 1: Mechanical spare parts list - general

11.2.3. Position of mechanical spare parts - drive



Drawing 4: Position of mechanical spare parts - drive

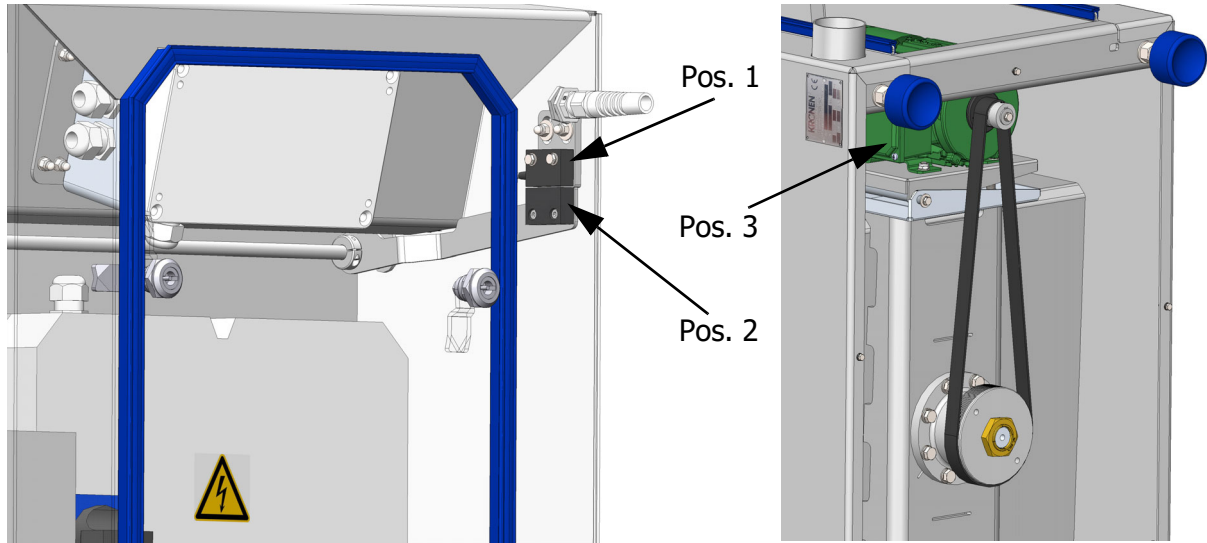
11.2.4. Mechanical spare parts list - drive

Pos.	Part no.	Designation	Quantity
1	3008	Pulley	1
2	32850	Poly-V belt	1
3	2952	Pulley	1
4	28744	Clamping set	1
5	20760	Ball bearing	1
6	47203	Bearing housing	1
7	20768	Ball bearing	1
8	28752	Shaft sealing ring	1

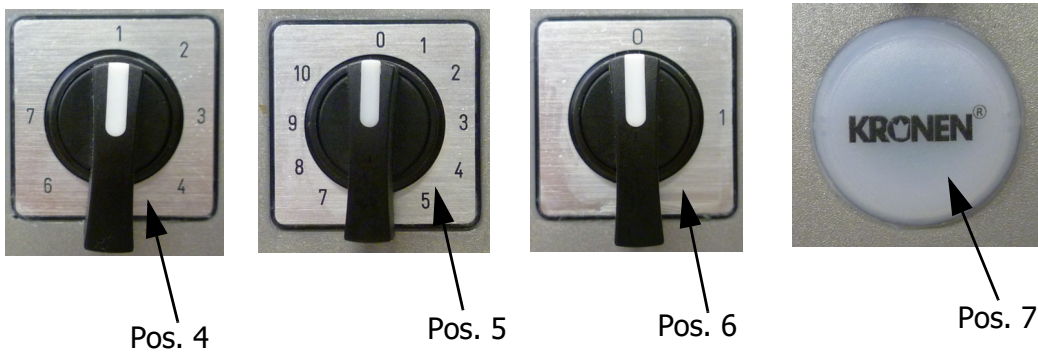
Parts list 2: Mechanical spare parts list - drive

11.3. Electrical spare parts

11.3.1. Position of electrical spare parts



Operator control elements KS-7 ECO



Operator control elements KS-600/900 ECO

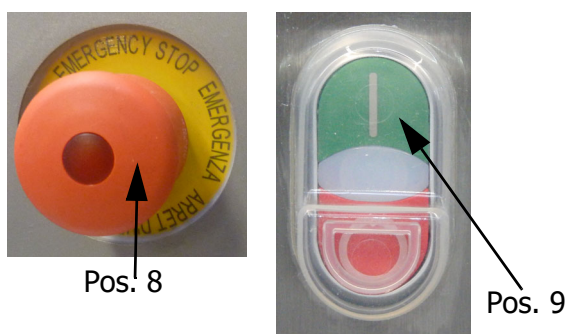


Figure 20: Position of electrical spare parts

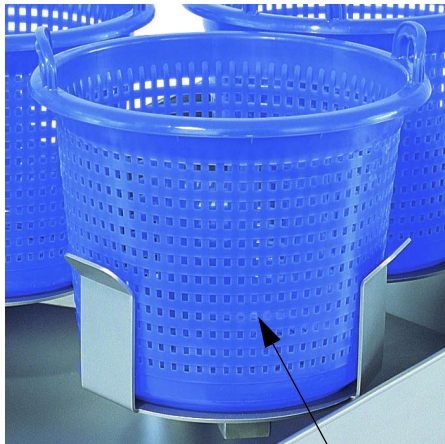
11.3.2. Electrical spare parts list

Pos.	Part no.	Designation	Quantity
1	86733	Machine safety switch sensor	1
2	944	Machine safety switch magnet	1
3	At KS-7 ECO		
	69449	Motor 230/400V 50/60Hz	1
	At KS-600/900 ECO		
	69449	Motor 230/400V 50/60Hz	1
	83885	Motor at 208V 60Hz (without frequency inverter)	1
4	9528	Actuating attachment	1
	47321	Cam switch 7-steps	1
	44645	Sign	1
5	65351	Potentiometer K50 1/7 /FU (assembly)	1
6	9528	Actuating attachment	1
	33616	Cam switch	1
	37904	Sign	1
7	66161	LED element white	1
	65728	Mounting adapter	1
	65822	Indicator lamp attachment white	1
8	65728	Mounting adapter	1
	65490	Actuating attachment EMERGENCY STOP illuminated	1
	65729	Contact element, make contact	1
	65730	Contact element, break contact	1
	65820	LED element red	1
9	65728	Mounting adapter	1
	65817	Actuating attachment	1
	65729	Contact element, make contact	1
	65730	Contact element, break contact	1
	65818	Membrane silicone colorless	1

Parts list 3: Electrical spare parts

**Note**

Additional electrical spare parts are specified in the circuit diagram of the machine.

11.4. Accessories

Pos. 1



Pos. 2

Figure 21: Accessories

11.4.1. List of accessories

Pos.	Part no.	Designation	Quantity
1	119050	Plastic basket blue	1
2	119055	Net insert blue	1

Parts list 4: List of accessories

12. Disposal



Warning

Between protective casing and housing welded part through falling protective casing.

Danger of injury!

- Secure the work area against access by unauthorised persons.
- The protective casing must be opened or closed using the attached bow-shaped handle.
- Wear suitable PPE (e.g. protective gloves, work gloves).



Caution

Manual movement of the machine, parts of the machine or tool.

Danger of injury!

- The machine must be transported to the final disposal point on a pallet with adequate fastening material. The fastening material must not be removed until the machine is at this point.
- Only qualified personnel are permitted to take part in transportation activities.
- Transport and sling gear must be able to support the weight and dimensions of the machine.
- Transport and sling gear must be compliant with local regulations governing accident prevention.
- The loading and unloading surface, as well as the final disposal point must be dry, level and non-slip.
- Wear suitable PPE (e.g. protective gloves, work gloves).
- Machine must be fastened carefully.



Caution

Installation material (packaging, tools) and connection cable.

Danger of injury!

- Remove the electrical connection line in such a manner that stumbling points do not occur.
- Remove tools from the movement area immediately.
- Always keep the working area clean.

12.1. Disposing of machine parts

We recommend that you have us disassemble and dispose of the machine properly.

We do not accept any responsibility for any personal injury or material damage caused by the re-use of individual machine parts.

If you wish to dispose of the machine yourself, it must be put into a condition in which it is no longer fit for the purpose for which it was designed.

Sort the component parts on the basis of:

- Electronic components
- Metals
- Plastics
- Fluids
- Special waste

13. Appendix

- Acceptance certificate
- Handover declaration for instruction manual
- Request for instruction manual
- Declaration of conformity
- Safety inspections
- Schedule of repairs completed

Acceptance certificate

The service personnel commissioned and/or authorised by the manufacturer issues a certificate to the operator indicating that the machine has been installed in compliance with the specifications outlined in the instruction manual and applicable safety regulations.

Before being declared fit for use, the machine was tested to ensure that all of its safety devices were in full working order.

A comprehensive test run was completed under the operating conditions prevailing on the site of use. The test run was completed successfully in compliance with all relevant information in the instruction manual.

Instructions compliant with the information contained in the instruction manual have been issued to the operator and/or an authorised employee in respect of familiarisation with the following points:

- The intended use of the machine.
- Prevailing residual risks.
- Reference to general safety regulations.
- Our recommendations as regards protective overalls for employees.
- Demonstration of the safety devices on the machine.
- Machine set-up.
- How to use the machine correctly.
- Faults, what causes them and how to deal with them.
- Machine cleaning and service/maintenance, along with recommended detergents.
- In his/her role as the supervising employee, the authorised employee was made aware of his/her obligations as regards the instruction and training of other employees (including in respect of the instruction manual, i.e. the fact that it must be made and kept available at all times to personnel charged with working on the machine).
- Duty to supplement the information from the instructions received by careful reading of the instruction manual.

The acceptance test was carried out on:

Date

Time of day

Signature
(manufacturer's authorised
representative)

Handover declaration for instruction manual

I hereby confirm receipt of the instruction manual for the following machine at the time of its handover and acceptance-testing.

Designation Salad and vegetable spin-dryer KS-7 ECO & KS-600/900 ECO

Machine number

Operator

Contact

Address

City, postcode

Country

Tel.

Fax

Date on delivery note

Date of handover

Signature
(operator or operator's
authorised representative)

Manufacturer Kronen GmbH
Römerstraße 2a
D-77694 Kehl am Rhein
Tel.: +49 (0) 7854 9646-0
Fax: +49 (0) 7854 9646-500

Dealer

Address

City, postcode

Country

Tel.

Fax

The machine and its accompanying instruction manual have been handed over to the operator.

Date

Signature
(manufacturer's authorised
representative)

Request for instruction manual

KRONEN GmbH
Römerstraße 2a
D-77694 Kehl am Rhein
Tel.: +49 (0) 7854 9646-0
Fax: +49 (0) 7854 9646-500

Dear Sir/Madam

Please send me a copy of the following instruction manual at your earliest convenience.

Designation: Salad and vegetable spin-dryer KS-7 ECO & KS-600/900 ECO

Machine number: _____

Version: _____

Number (units)

Required language (please
tick as appropriate):

German (D)

☐

English (GB)

☐

Français (F)

☐

A new manual is required for the following reason:

Illegibility, soiling

☐

Sale of machine

☐

Company stamp

Date

Signature
(operator or operator's authorised rep-
resentative)

EU Declaration of Conformity

In compliance with the Machinery Directive (2006/42/EC), Annex II A

In compliance with the Electromagnetic Compatibility Directive (2014/30/EU)

The manufacturer	KRONEN GmbH Römerstraße 2a D-77694 Kehl am Rhein Tel.: +49 (0) 7854 9646-0 Fax: +49 (0) 7854 9646-500
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hereby declares that the following machine:

Designation:	Salad and vegetable spin-dryer KS-7 ECO, KS-600 ECO & KS-900 ECO
Article number:	90007, 90600 & 90900
Machine number:	

meets the requirements of the Directives cited above.

The following harmonised standards have been applied:

- EN 1672-2:2005+A1:2009 - Food processing machinery - Basic concepts - Part 2: Hygiene requirements
- EN 60204-1:2018 - Safety of machinery - Electrical equipment of machines - Part 1: General requirements
- EN ISO 12100:2010 - Safety of machinery - General principles for design - Risk assessment and risk reduction
- EN ISO 13849-1:2015 - Safety of machinery - Safety-related parts of control systems - Part 1: General principles of design
- EN ISO 13857:2019 - Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs
- EN ISO 14120:2015 - Safety of machinery - Guards - General requirements for the design and construction of fixed and movable guards

The operating instructions for the machine as well as the technical documentation are available both in its original version.

The declaration of conformity will become invalid as soon as the machine has been modified without prior approval by us and the approval has been documented in writing.

Place:	Kehl am Rhein
Date:	25. March 2020
Signature:	
Position in company:	Eric Lefebvre, Technical manager of Kronen GmbH

Declaration of Conformity

for materials made of plastic that come into contact with foods.

The manufacturer	KRONEN GmbH Römerstrasse 2a 77694 Kehl am Rhein, Germany
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hereby confirms for the materials and objects of the machine

Designation:	Salad and vegetable spin-dryer KS-7 ECO, KS-600 ECO & KS-900 ECO, Plastic basket & net insert
Article number:	90007, 90600 & 90900 119050 & 119055



that can come into contact with foods during intended use, conformity with the general requirements

- of the Food and Feed Code,
- of Directive (EC) No. 1935/2004 of 27 October 2004 on materials and objects that are intended to come into contact with foods
- of Ordinance (EU) no. 2023/2006 of 22 December 2006 on good manufacturing practice
- of EU Directive (EC) 10/2011 of 14/01/2011 on materials and objects made of plastic that are intended to come into contact with foods, together with their current amendments.

The following materials in machines of KRONEN GmbH come into contact with foods:

polyethylene (PE)	polytetrafluorethylene (PTFE)
polyurethane (PU)	polycarbonate (PC)
polyoxymethylene (POM)	fluorocarbon elastomer (FKM)
polyamide (PA)	

Specification for intended use or limitations:

- see  chapter Intended use
- see  chapter Technical data

The total migration and the specific migrations are within the statutory limit when used in accordance with specifications. The inspection in accordance with art. 17 and 18 of Ordinance (EU) no. 10/2011 in conjunction with Annex V.

Place:	Kehl am Rhein
Date:	25. March 2020
Signature:	
Position in company:	Eric Lefebvre, Technical manager of KRONEN GmbH

Safety inspection

Date	Brief description of mechanical and electrical defects identified and rectified	Signature (operator or operator's authorised representative)

Schedule of repairs completed

Date	Brief description of mechanical and electrical work completed	Signature (operator or operator's authorised representative)

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