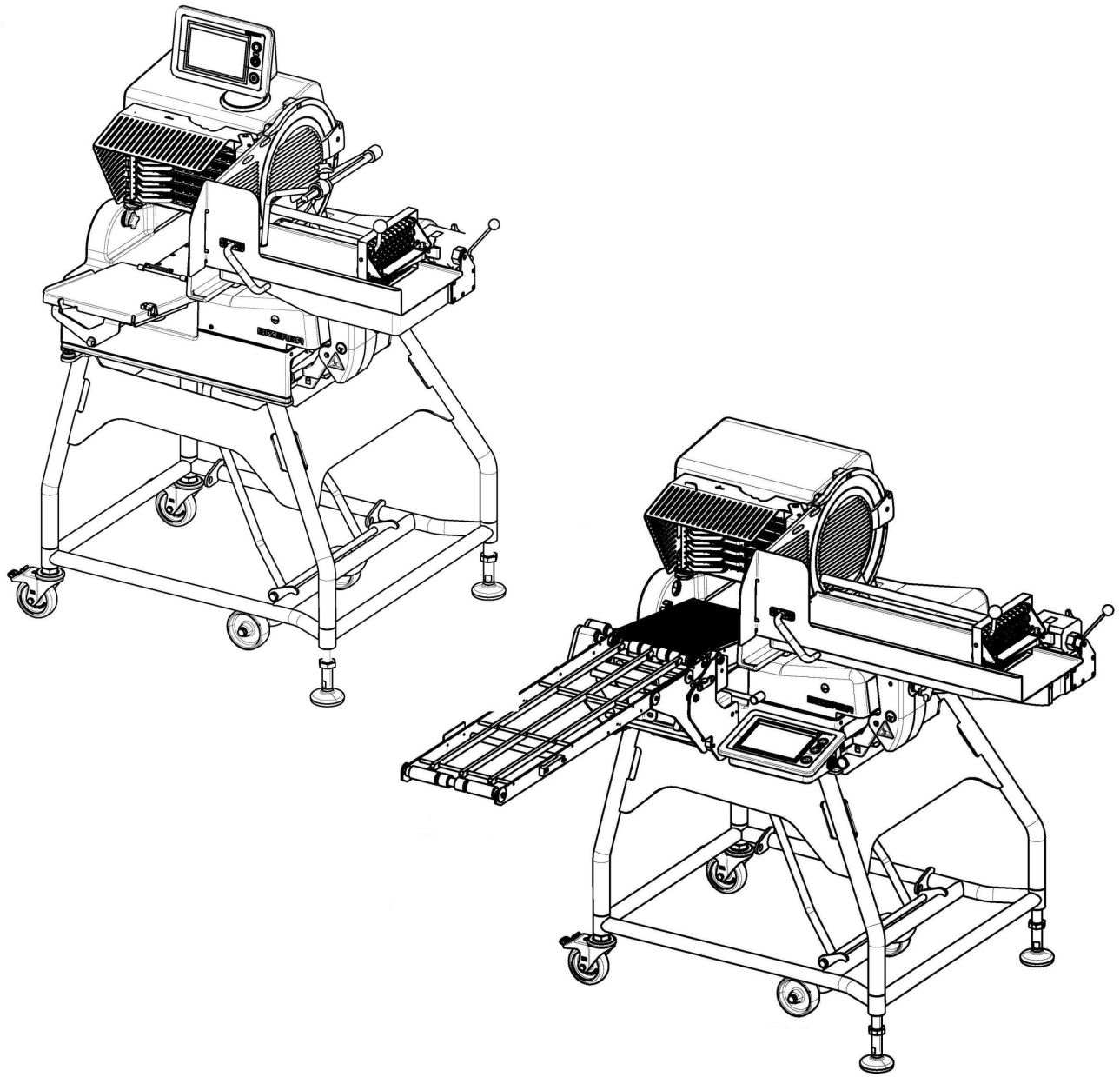
Slicer
VSI330 F / VSI330 F W
VSI330 F T / VSI330 F TW

Instruction manual NSF

38065447002 en-US



BIZERBA

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Table of Contents

1 About these instructions

Read the instruction manual very carefully before connecting and switching on the machine to ensure that you utilize the full quality and potential of this machine and avoid any potential risks.

This instruction manual covers the use, installation, operating, cleaning and maintenance of the machine.

Our products undergo continuous further development and are subject to different country-specific regulations. Examples of pictures and graphics included in these instructions may vary from the version you have received.

1.1 Safe-keeping

The owner's manual are an integral part of the machine and must be stored close to the machine to be easily accessible to others.

If the machine is sold, the owner's manual must be included in its entirety.

1.2 Target group

The machine may only be operated by trained personnel. This means that the operator has to be familiar with the contents of the instruction manual.

The minimum age of the operating personnel by German law is 14. Other age limits may apply according to the corresponding national regulations. Therefore the operating company must check the legislation at the place of machine installation.

Installation, maintenance and repair works must be performed by Bizerba authorized specialists only.

1.3 Symbols used

Various symbols are used in these instructions.

Icon	Description
⇨	Text with arrow prompts you to carry out an action.
①	Item number in figure.
<Key>	Text within <> refers to a key.
"Display"	Text within "" shows the display text.

Requirements are displayed with a gray background.

Instruction

☞ These instructions are mandatory for you.

Information

Additional information for better understanding.

1.4 Warnings

Warnings are divided into danger levels by the signal word above the warning symbol.

Structure of warnings and meaning of signal words are described in these instructions as follows.

⚠ DANGER

Source of danger with high risk of imminent danger to persons!
The consequences are:
life threatening injuries,
serious health damage
– Measurements for prevention of danger are specified.

⚠ WARNING

Source of danger with medium risk of possible danger to persons!
The consequences can be:
serious injuries,
damage to health,
serious damage to property
– Measurements for prevention of danger are specified.

⚠ CAUTION

Source of danger with low risk of possible danger to persons!
The consequences can be:
injuries,
damage to property.
– Measurements for prevention of danger are specified.

NOTICE

Source of danger, improper use!
Damage to property can result.
– Measurements for prevention of danger are specified.

2 About this machine

2.1 Intended use

Bizerba slicers are technical equipment exclusively intended for commercial use.

They may only be operated by instructed personnel over the age of 14. [▷ 5]

The fully automatic vertical slicers VSI slice the fed product and deposit the slices based on the program setting.

Permitted product

Approved sliced products, taking sizes into consideration

- All kinds of cold cuts, deli meat
- Ham, bacon
- Smoked ham with / without rind
- Roast meats, roast beef
- Meat, roulades
- Sliceable cheese
- Fruit, vegetables
- Bread

Note: If cheese is the main product being sliced, we recommend using a special cheese blade.

Slicing of other materials requires prior written approval by Bizerba product management.

Non-permitted product

The following may not be sliced due to risk of injury and damage:

- NON-FOOD articles
- Bone-in products
- Frozen products

Product sizes

With depositing system:

min. angular 50 x 50 mm = 2" x 2" or round 50 mm = 2" diameter

max. angular 240 x 180 mm = 9.5" x 7.1" or round 180 mm = 7.1" diameter

W/o depositing system:

max. angular 240 x 180 mm = 9.5" x 7.1" or round 225 mm = 8.8" diameter

Several sliced product pieces can be placed next to each other. Loading width max. 240 mm = 9.5".

Applications

The slicing machines are intended for installation in the sales area. The use in the preparation area is permitted taking into account cleaning procedures and protection class.

Permissible ambient temperatures from -10°C to 40°C (+14 to +104 degF).

Operating time

The slicers are designed for permanent operation.

2.2 Machine description

The fully automatic (F) vertical slicer (VS) for the industrial area (I) comes with a 330 mm blade.

Type designations or versions

VSI330 F = machine with depositing table, 400 mm or 600 mm carriage

VSI330 F W = machine with depositing table, scale (W), 400 mm or 600 mm carriage

VSI330 F T = machine with conveyor belt (T), 400 mm or 600 mm carriage

VSI330 F TW = machine with conveyor belt (T), scale (W), 400 mm or 600 mm carriage

All versions are available with a mobile bench.

Drive

Blade drive and carriage drive are operated with supply voltage, the drive for the depositing table, conveyor belts, depositing arm and chains are operated with low voltage.

The contractor control having a self-locking circuit prevents automatic restarting after a power cut.

ON/OFF switch and function keys are located on the display and operating unit.

Depositing system

The slicers are equipped with an automatic slice depositing system. The depositing system deposits slices with a max. slice thickness of 12 mm. A max. slice thickness of 22 mm can be reached without depositing system and with unlocked slice thickness limit.

The depositing system consists of a chain frame with transport chains, feed roller with guide cam and depositing arm.

The depositing system is controlled based on carriage speed and carriage stroke.

Product holder

The product holder with remnant holder is equipped with a movable gripper hook.

The remnant holder for the 400 mm carriage has its own clamping device which can be swiveled up and stopped in place in order to insert the product. This is not possible for the 600 mm carriage.

Carriage

The machines are fitted with a 400 mm or 600 mm carriage.

With the cleaning program activated and a slice thickness setting below "0" the tilting lock of the carriage is released. This allows the carriage to be tilted to the outside in any position.

Scale

The slicers VSI W / VSI TW are fitted with a scale which is not metrologically approved. Portions are sliced according to a pre-selected weight.

Materials

Machine housing, gauge plate and blade cover are made of anodized aluminum.

The carriage plate is made of stainless steel plate.

All components getting in direct contact with food and materials used in the working area comply with the food hygiene regulations. For bearings in visual range, food-grade lubricants are used.

Vibration

The total vibration of the items, which get into contact with hand and arm is below 2.5 m/s^2 and therefore below the required limited value.

2.2.1 Names of components VSI W

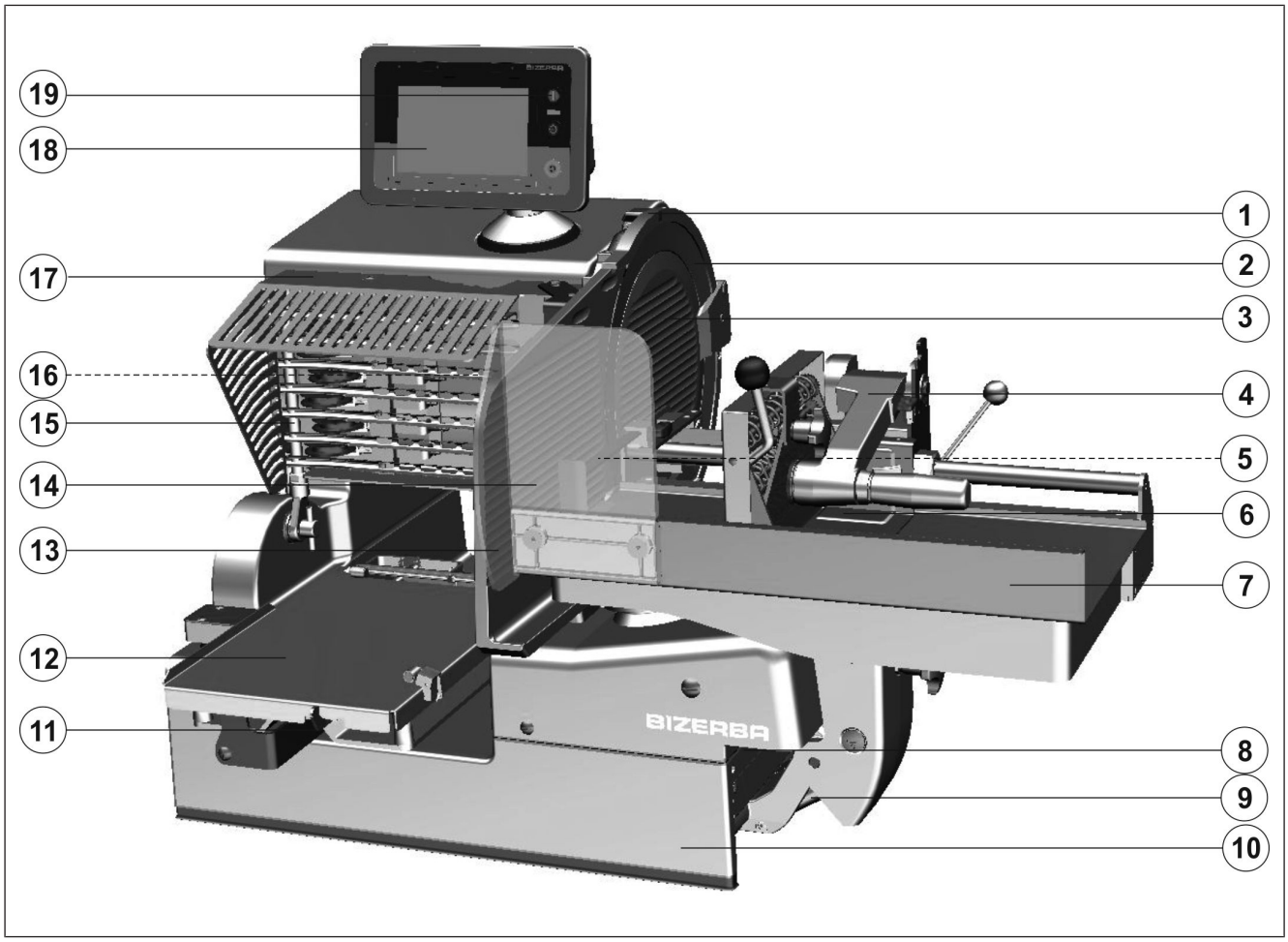

Fig. 1: Names of components VSI W

The machine is available in different versions. The figure shows an example:

① Blade guard ring
② Blade
③ Blade cover
④ Product holder complete with remnant holder
⑤ Product fixation device, horizontal
⑥ Feeding carriage
⑦ Carriage
⑧ Identification plate
⑨ Carriage guide
⑩ Machine housing
⑪ Scale
⑫ Depositing table
⑬ Gauge plate
⑭ Rear wall
⑮ Depositing arm
⑯ Feed roller with cam
⑰ Chain frame
⑱ Display and operating unit on top of machine housing (optionally at the bottom)
⑲ ON/OFF switch

2.2.2 Names of components VSI T

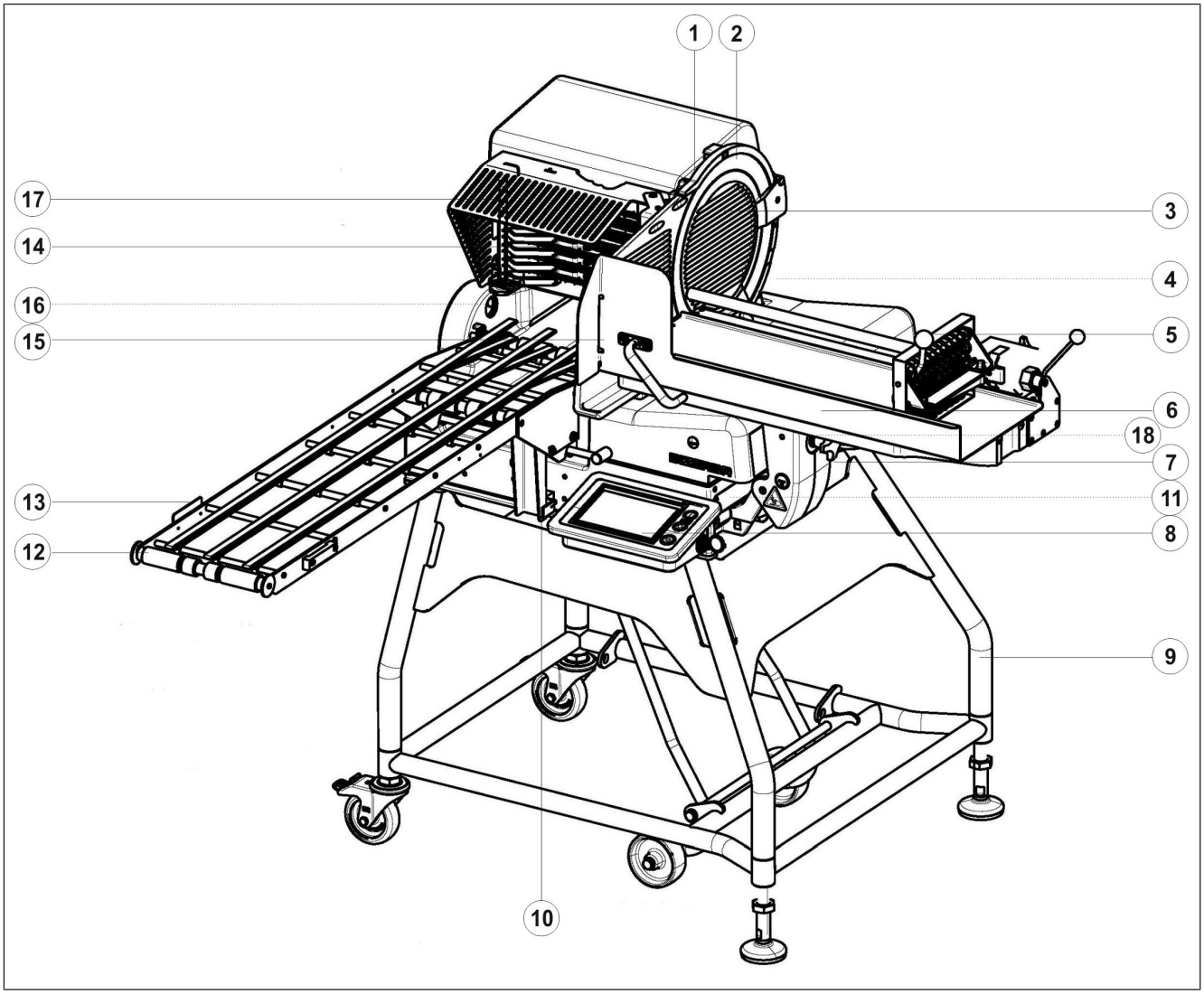

Fig. 2: Names of components VSI T

The machine is available in different versions. The figure shows an example:

① Blade guard ring
② Blade
③ Blade cover
④ Product fixation device, vertical
⑤ Product holder complete with remnant holder
⑥ Carriage
⑦ Carriage guide
⑧ Display and operating unit with ON/OFF switch at the bottom of the machine housing (optionally on top)
⑨ Stand, mobile
⑩ Lock at belt support
⑪ Identification plate
⑫ Conveyor
⑬ Light sensor
⑭ Gauge plate
⑮ Rear wall
⑯ Depositing arm
⑰ Chain frame with feed roller
⑱ Star knob screw on carriage foot

2.2.3 Names of components VSI TW

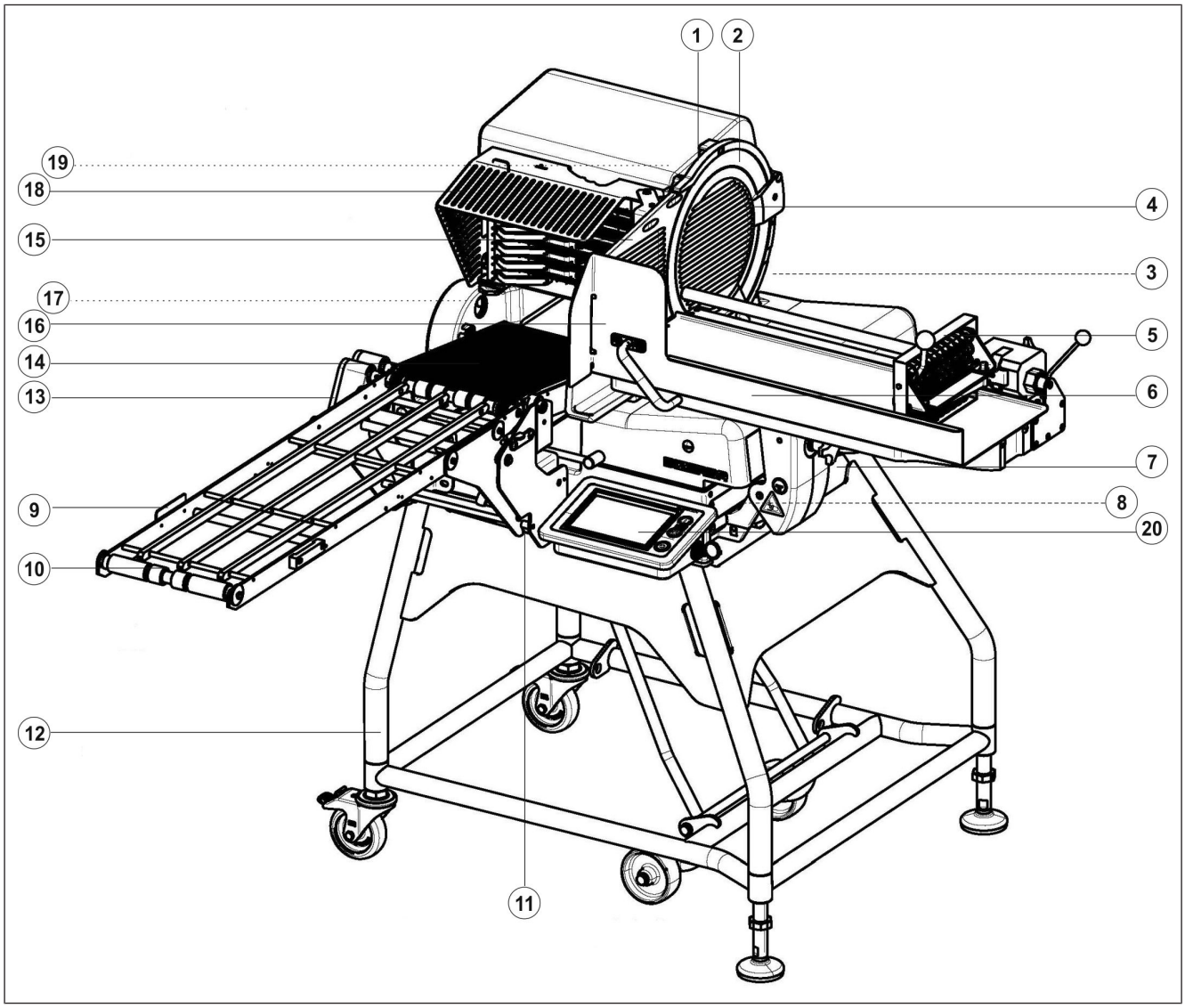

Fig. 3: Names of components VSI TW

The machine is available in different versions. The figure shows an example:

① Blade guard ring
② Blade
③ Product fixation device, vertical
④ Blade cover
⑤ Product holder complete with remnant holder
⑥ Carriage
⑦ Carriage guide
⑧ Identification plate
⑨ Light sensor
⑩ Conveyor
⑪ Lock at belt support
⑫ Stand, mobile
⑬ External drives for conveyor belts
⑭ Weighing conveyor with scale
⑮ Gauge plate
⑯ Rear wall
⑰ Depositing arm
⑱ Chain frame with feed roller
⑲ Deflector
⑳ Display and operating unit with ON/OFF switch at the bottom of the machine housing (optionally on top)

2.2.4 Accessories

☞ Only use the original Bizerba spare parts and accessories in order to ensure safe and trouble-free operations.

standard

– Instruction manual
– Accessories kit including sharpener, paper felt, cleaning cloth, scrubber and brush and service oil

optional

– Stand
– Blade available in various models
– Depositing arm for shaving
– Checkered plate for depositing table
– 4 handles for the machine

– Cover caps for the threaded holes of the handles

2.3 Warranty

We are not responsible for damages caused by:

– Non-compliance with the instruction manual
– or unauthorized and incorrect electrical installation by the customer
– incorrect operation, utilization contrary to terms and conditions
– structural modifications, removal of protective devices
– use of replacement parts and accessory components or third-party resources that are not Bizerba originals
– natural wear and tear

In such cases, the user is acting at his own risk and is responsible for any damage occurred.

2.4 Disposal of the machine / environmental protection

To ensure that the machine is recycled environmentally friendly, return the machine to the manufacturer or the dealer after intended use has expired.

Naturally, Bizerba and its dealers will take back free of charge old machines no longer in operation.

Please contact your specialist in this case.

The application of these disposal regulations are based upon legal regulations of the respective country.

3 Safety instructions

The safety instructions must be observed throughout the installation, operation, cleaning and maintenance procedures.

3.1 General notes on safety

⚠ DANGER

Damaged power supply cables or faulty protective devices!

danger to life due to electric current Acute risk of injury of operating personnel.

- Damaged supply lines must be replaced immediately with new cables and installed by a professional electrical company or by Bizerba Service.
- The mains cable must be routed in a way that it is no cause of risk.
- Protective devices must be checked every day with regards to function before start-up.
- Protective devices may not be removed, modified or bypassed.

⚠ DANGER

Open the electrical installation area!

danger to life due to electric current

- The electrical installation area may only be opened by Bizerba Service.
- Pull power plug before moving the machine.

⚠ WARNING

Unauthorized persons!

Serious injuries to fingers and hands and damage to health.

- Only trained personnel over 14 years may operate, clean and maintain the machine. [▷ 5] Subsequent training sessions should be repeated whenever necessary.
- Unauthorized persons, particularly children, may not stay in the work area of the machine.

3.2 Safety instructions for transport and installation

⚠ WARNING

Damaged handles, threaded holes!

Risk of injury if handles are not correctly fastened.

– Check handles and threaded holes for damage prior to use.
– Do not use damaged handles or threaded holes.
– Use handles only for lifting the machine.

⚠ CAUTION

Carriage might move due to its unladen weight.

Risk of hand injuries due to crushing!

– Be careful when unpacking.

⚠ DANGER

Tipping hazard when improperly installed!

This may result in serious injuries and damage to property.

– Installation requirements must be met.
– Operate machine on stand only if its weight rests on the feet and the casters are locked.
– The machine must only be moved on a level surface with a very low degree of roughness and unevenness of not more than 2 cm.
– Installation, moving and operation are not permitted on surface that are not level.

⚠ WARNING

Incorrect supply voltage!

Destruction of electric components, fire hazard.

– Do not connect the machine to the power supply if the power supply data does not correspond to the machine's connection values. **Mains data must be identical.**
– Inform Bizerba Customer Service.

3.3 Safety instructions during operation, slicing

⚠ WARNING

Rotating blade!

Cut injuries

– Do not allow yourself to become distracted. Concentrate on the task in hand and avoid time pressure.
– During operation, do not reach into the path of the carriage.
– **Never** push product ends towards blade by hand.

⚠ WARNING

Moving components!

Risk of entanglement, shearing, crushing and being hit.

– Do not wear loose clothing or wear hair down.
– Do not reach into paths of carriage, product holder, gauge plate, depositing system, conveyor and depositing table.
– Only clean machine when switched off and power plug is pulled.

⚠ CAUTION

There are spikes on the product holder!

Driver hooks on feed carriage, grip hooks!

Risk of injury.

– Use handle when working with product holder.
– Claws are lowered into a rest position.

3.4 Safety instructions for sharpening, cleaning

⚠ WARNING

Unprotected blade!

Coming in contact with the sharp blade can lead to serious injuries.

– Always wear cut-proof gloves during the cleaning and sharpening procedures and shoes with toe caps when the blades are replaced.
– Do not clean the blades when operating the machine.

⚠ WARNING

Chain spikes, driver spikes of feeding carriage, gripper hooks, deflector edge!

Stab and cut wounds.

Twisted guide cam or chain spikes can cause malfunctions.

– Always wear cut-proof gloves when cleaning.
– Avoid touching the chain spikes.
– Claws are lowered into a rest position.

⚠ WARNING

Missing components!

The operator can only be protected from injuries and the machine protected against damage if all the components of the machine are assembled properly.

– Check if the machine is complete before it is re-started.
– Check if components are positioned correctly and firmly.
– Only use original Bizerba spare parts and accessories.

3.5 Protective and safety devices

– Blade guard ring, stationary, cannot be removed
– Blade cover stationary, removable
– Gauge plate, covering carriage stroke area
– Rear wall, cannot be removed
– Stand casters
– Protective cover of chain frame and working area of depositing arm
– Automatic switch-off when drive system is overloaded
– Automatic switch-off of blade and carriage drive when in product loading position
– Cleaning program, locked machine setting
– Sharpening program, locked machine setting

Remaining risks that cannot be excluded by technical measures:

– Risk of tripping/slipping if the work area is not kept tidy.
– Risk of injury if the required personal protective clothing is not worn.

3.6 System design related residual hazards

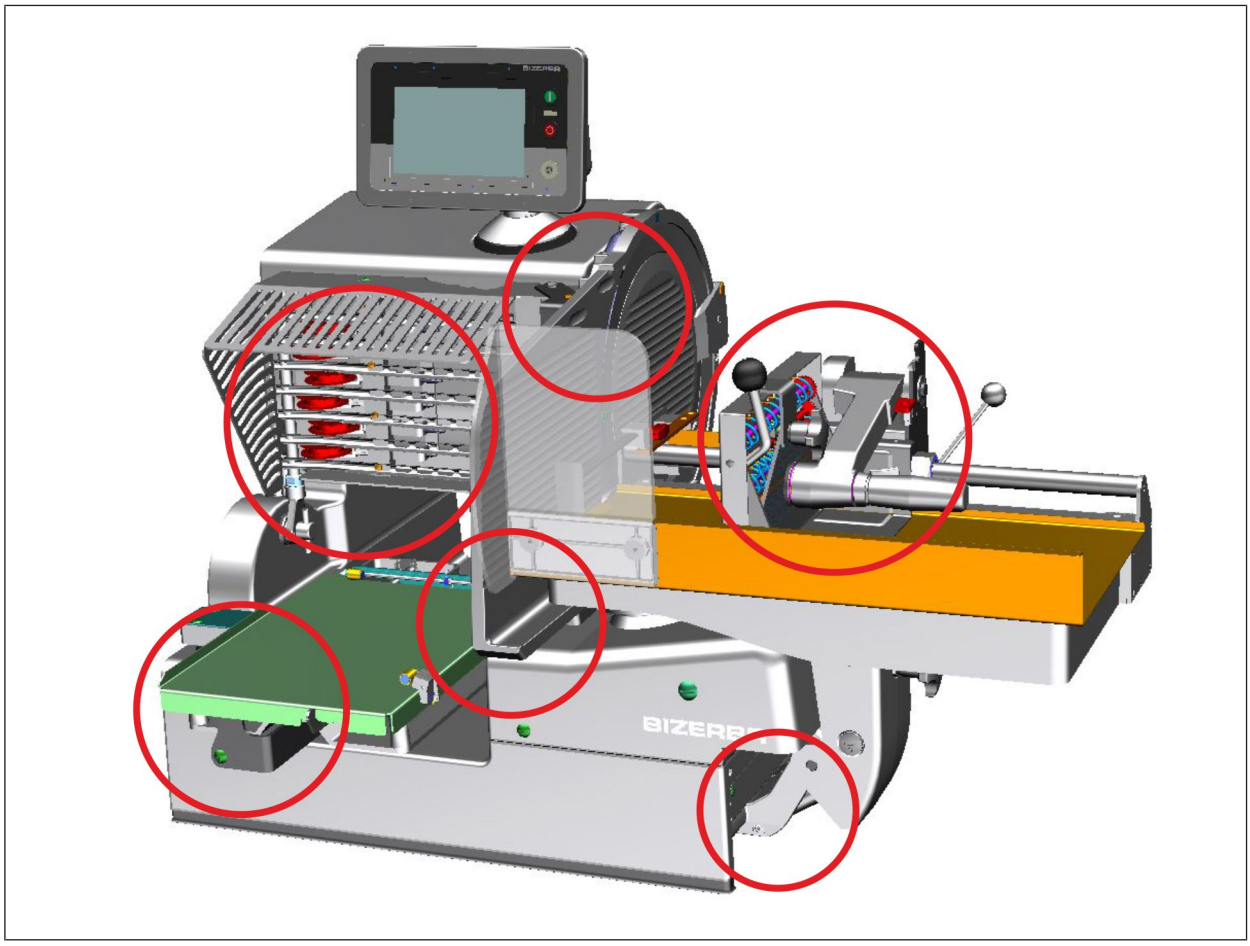

Fig. 4: VSI W

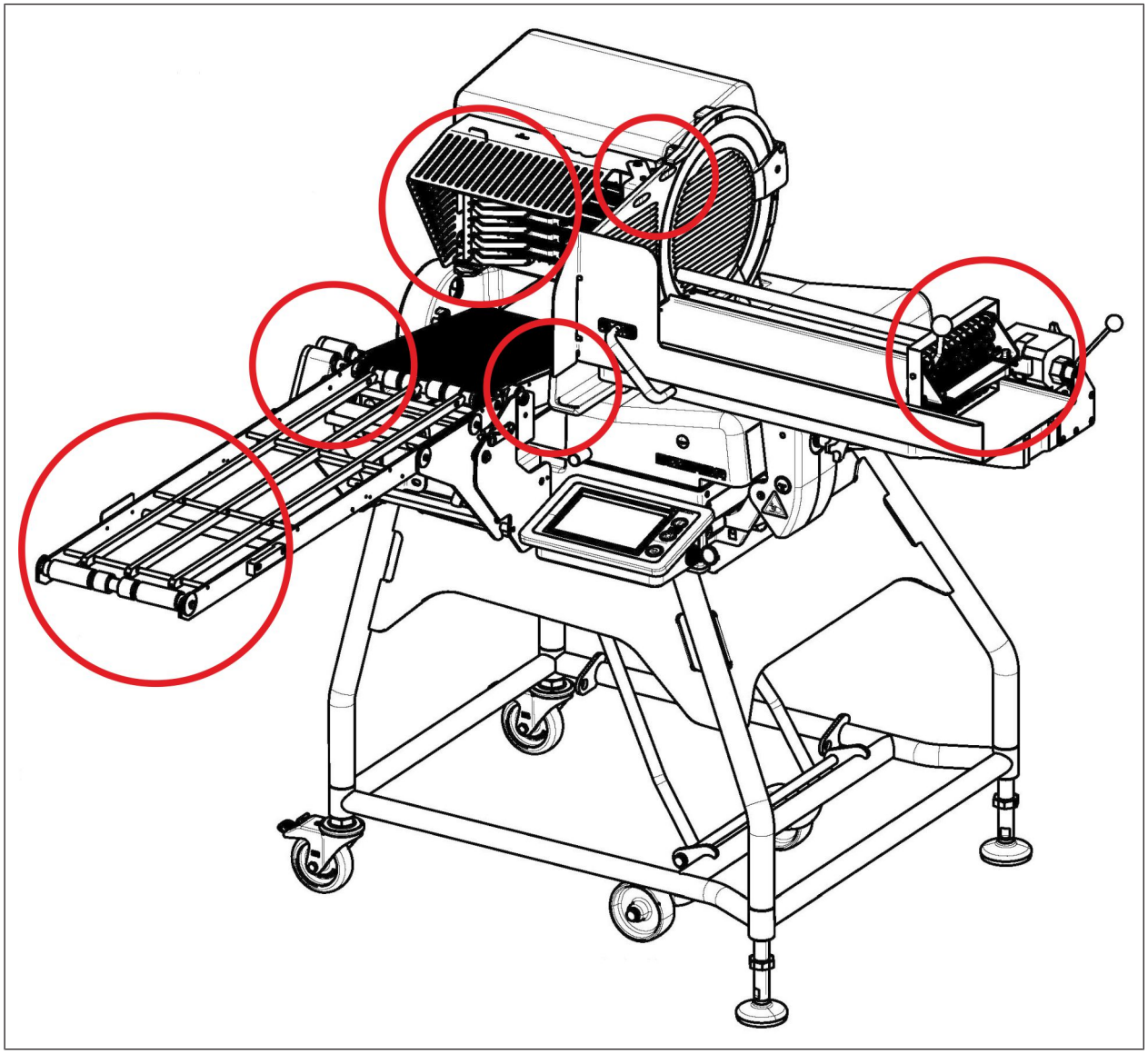

Fig. 5: VSI TW

4 Installation

4.1 Unpacking instructions

When transporting the machine, shoes with toe caps must be worn and suitable lifting devices must be used.

For moving the machine at least four people are required. Weight of machine is higher than 100 kg.

⚠ WARNING

Damaged handles, threaded holes!

Risk of injury if handles are not correctly fastened.

– Check handles and threaded holes for damage prior to use.

– Do not use damaged handles or threaded holes.

– Use handles only for lifting the machine.

- Machine is still in packaging.

➪ Insert the four handles [▸ 15] in the drill holes provided and finger tighten them manually.

➪ Four persons are needed to lift the machine out of its packaging and transport it to the installation site. Pay attention to the center of gravity of the machine.

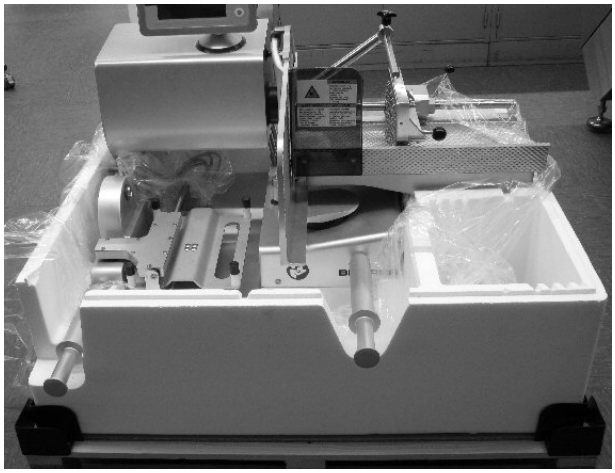

Fig. 6: Handles, front

- ➪ After positioning remove handles.
- ➪ Cover drill holes with the cover caps provided.

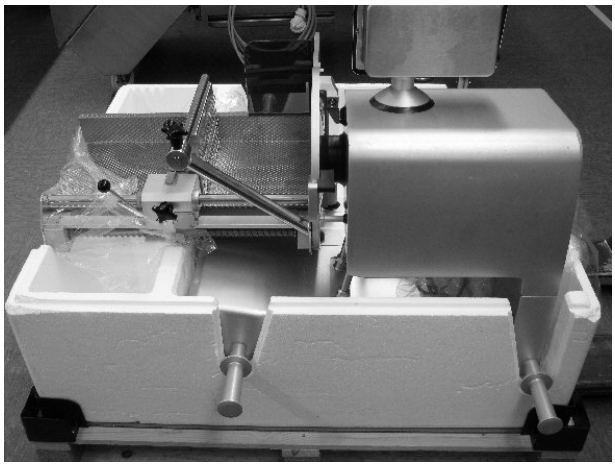

Fig. 7: Handles, rear

4.2 Transport and storage

The machine has to be transported and stored in accordance with the symbols on the packaging.

Before installation, store and transport the machine in the original packaging. We recommend keeping the original packaging.

WARNING! Tipping hazard.

The machine with stand must only be moved on level surfaces with a very low degree of roughness and unevenness of not more than 2 cm.

The machine must not be moved during operation.

Unplug power plug before moving the machine!

4.3 Installation and assembly

Installation, start-up, as well as instructions on how to operate, clean, maintain and service the device are provided for the first time by the relevant Bizerba customer services.

Only lift machine out of its packaging by using the handles [▸ 15]. Do not touch gauge plate, carriage, support for weighing conveyor and conveyor belt in order to set up the machine.

⚠ CAUTION

Risk of crushing!

Carriage might move due to its unladen weight.

– Be careful when unpacking.

4.3.1 Installation requirements

Safe operation of the slicer within the standards and guidelines is ensured on the Bizerba stand. Stand and slicer bear a CE mark (or UL/cUL mark within the area of application). The integrated scale can only be reliably used with the Bizerba stand.

Alternatively the slicer can be installed on torsion-resistant furniture which is suitable for the weight of the machine. In this case, the user is responsible for safe operation and reliable use of the integrated scale.

The installation surface must be:

- large enough [▷ 96]
- level and even (variation from horizontal max. 1 degree)
- slip-proof and tilt-proof
- stable and firm [▷ 96]

Recommended table height is approx. 800 mm.

Make sure there is a safety distance of 100 mm between the machine (max. work area) and the wall if machine is installed on a table, and of 500 mm if machine is installed on a stand.

4.3.2 Position on stand

Installation as well as instruction on how to operate the stand are initially provided by the Bizerba service.

⚠ DANGER

Tipping hazard when improperly installed!

This may result in serious injuries and damage to property.

- Installation requirements must be met.
- Operate machine on stand only if its weight rests on the feet and the casters are locked.
- The machine must only be moved on a level surface with a very low degree of roughness and unevenness of not more than 2 cm.
- Installation, moving and operation are not permitted on surface that are not level.

- Put weight on mobile stand's feet by lifting the wheels.
- Lock casters.

CAUTION! Crushing hazard when lowering the wheels.

- Use bracket to lift and lower wheels.

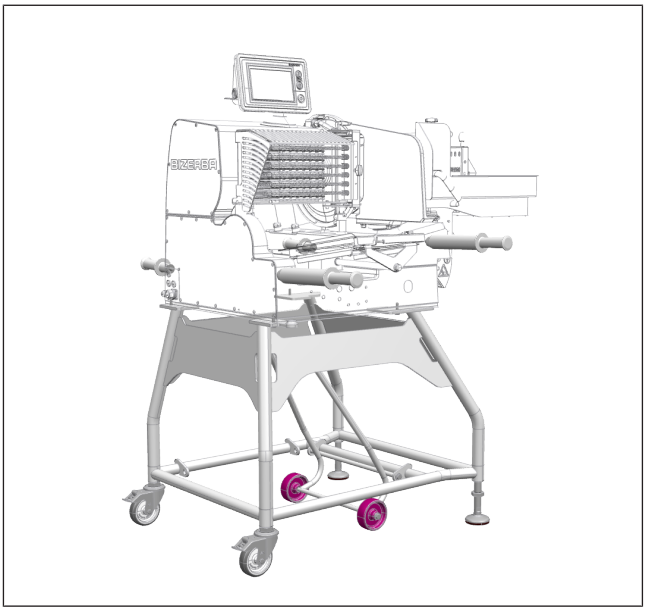

Fig. 8: VSI on mobile stand

4.3.3 Electrical connection

Information on identification plate

Bizerba logo	BIZERBA
Machine type	Model VSI330 F / VSI330 F W / VSI330 F T / VSI330 F TW
Machine description	Slicer
Machine number	...
Production code	X-..
Protection type	IP X5
Maximum load of scale	Max 2kg / Max 4,5lbs
Scale interval	d=0,001kg / d=0,002lbs
Electrical data	see identification plate
Manufacturer's address	Bizerba GmbH & Co. KG Wilhelm-Kraut-Str. 65 72336 Balingen, Germany

Check before mains connection

Before you connect the machine, check the electric data on the rating plate with the mains data about the power supply.

⚠ WARNING

Incorrect supply voltage!

Destruction of electric components, fire hazard.

– Do not connect the machine to the power supply if the power supply data does not correspond to the machine's connection values. **Mains data must be identical.**
– Inform Bizerba Customer Service.

Installation of power supply provided by customer

The installation of the power supply to connect our machines must be carried out in accordance with country-specific regulations and rules derived thereof. These essentially include the recommendations of at least one of the following commissions:

– International Electro-technical Commission (IEC)
– European Committee for Electro-technical Standardization (CENELEC)

The machine has been built according to Protection Type I and has to be connected to the protective conductor.

Measures for suppressing interference:

With severely contaminated mains supplies (e.g. when "thyristor-controlled systems" are used) measures must be taken on-site to suppress interferences, e.g.:

– A separate supply line must be planned for Bizerba machines
– In problem cases, install capacitive decoupled isolating transformers or other suppressors into the supply mains prior to Bizerba machines

4.4 Start-up

Initial start-up as well as instructions on how to operate, clean, maintain and service the machine are initially provided by the responsible Bizerba service department.

4.4.1 Switching the slicer on

➪ On the display and operating unit press the <ON switch>.

White lamp lights up, supply voltage is applied.

The display becomes active.

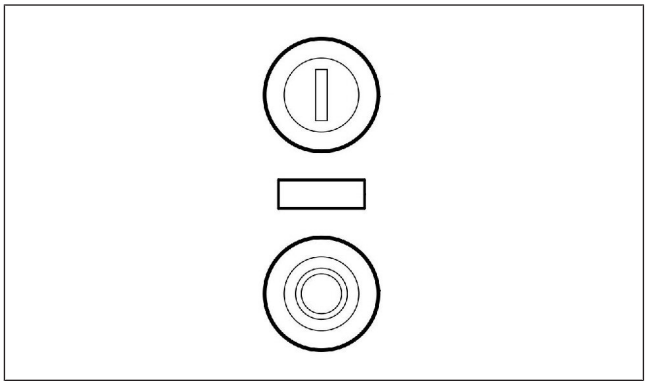

Fig. 9: ON/OFF switch

Machine carries out a system check. On the information bar the required steps are listed. Successfully completed steps receive a check mark.

➪ Press <Execute> on the display and operating unit after initialization.

Machine moves to zero position.

The individually configured operator page (main page) is loaded.

Machine comes to a standstill if not all check marks could be set.

➪ Switch off machine, wait 5 seconds and switch machine back on again.

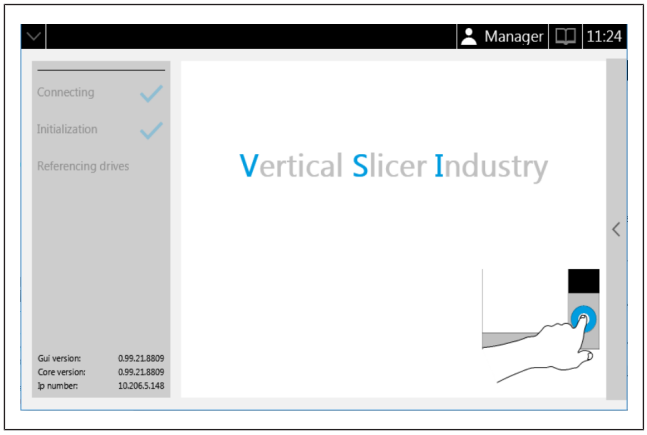

Fig. 10: Home page

4.4.2 Switching the machine off

➪ Press red key <**O**>. (reduced operating force)

The machine is switched off.

4.5 Decommissioning

If the machine is not going to be used for a longer period of time:

- ➪ Switch off machine.
- ➪ Pull out power plug.
- ➪ Clean machine as per cleaning instructions.

5 Machine and operating elements

5.1 Display and operating unit

The slicers are operated via a touch screen.

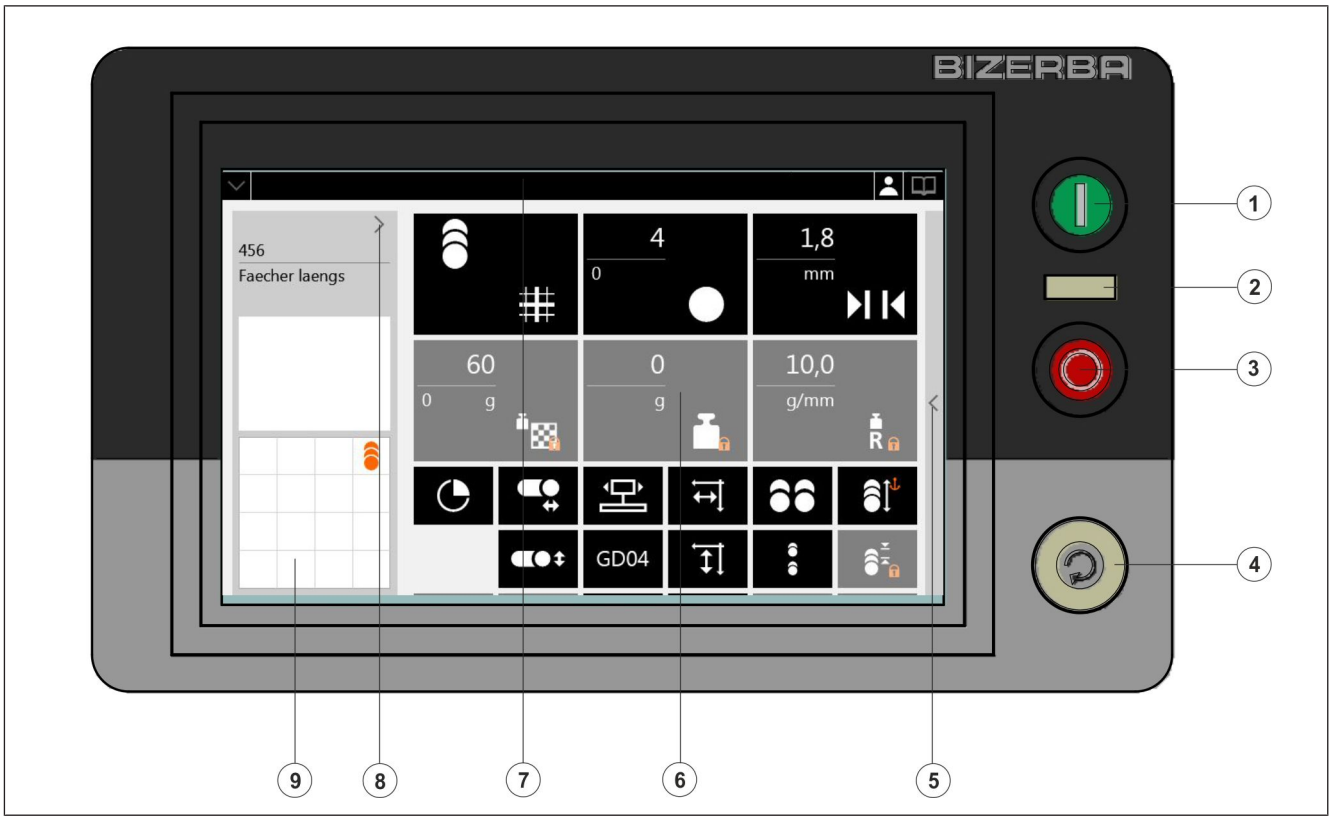

Fig. 11: Display and operating unit

① <ON switch> (green)

② LED (white) lights up when machine is switched on

③ <OFF switch> (red) reduced operating force

④ <Execute> selected action (e.g. slicing, cleaning, sharpening, start and stop respectively, pause)

⑤ To show the navigation bar, press the arrow or wipe in arrow direction

⑥ Touch screen

⑦ Status bar

⑧ To open the PLU menu, press the arrow or wipe in arrow direction

⑨ Information bar

5.2 Icons on the touchscreen

Navigation bar:

	Home After pressing the icon, the individually configured operator page (main page) comes up on the touch screen.

Parameter

After pressing the icon, the operator page with all parameters (parameter page) comes up on the touch screen.

Sharpening

After pressing the icon, notes on the further operating procedure appear on the touch screen.

Cleaning

After pressing the icon, notes on the further operating procedure appear on the touch screen.

Settings

After pressing the icon, the page for various settings comes up on the touch screen.

Settings:

Machine settings

Software settings

Operator settings

Setting of language for user guidance

Slicing program

Products

Depositing area or packaging, where the sliced product is to be deposited

Depositing type

Selectable are:

- Stacking
- Shingling lengthwise
- Shingling crosswise
- Circular pattern
- Shaving

Filter characteristic in the search mask.

PLU menu:


Save PLU


Save PLU as


Delete PLU


Search PLU


Load / open PLU


Enter / Next


Confirm / Accept


Cancel / Refuse


Empty all input fields of the search mask

5.2.1 Parameter symbols

Information on product


Product ID


Name of product


Product height

Specifies the product height in mm. Required for the calculation of the depositing pattern.


Product width

Specifies the product width in mm. Required for the calculation of the depositing pattern.

Product length

Specifies the product length in mm. This is required in order to calculate the reference weight and to determine the end position of the product holder.

Product profile

Describes the profile of the product. This is required in order to calculate the reference weight.

Calibrated product

Slightly uncalibrated product

Heavily uncalibrated product

Product weight

Specifies the product weight in kg. This is required in order to calculate the reference weight.

Reference weight

The reference weight represents the volume weight of the product to be sliced. This is specified in g/mm or lb/mm and is needed for slicing by target weight.

Information on depositing area

Depositing area width

Specifies the width of a package in mm.

Depositing area length

Specifies the length of a package in mm.

Depositing area height

Specifies the height of a package in mm.

Information on slicing program

PLU No.

Unique number of slicing program.

PLU name

Name of slicing program.

Depositing type Stacking

Depositing type Shingling crosswise

Depositing type Shingling lengthwise

Depositing type Circular pattern

Depositing type Shaving

Depositing offset crosswise

Specifies the start point for crosswise depositing.

Depositing offset lengthwise

Specifies the start point for lengthwise depositing.

Number of slices

Specifies the number of slices per portion.

Slice thickness

The slice thickness equals the thickness of the product slice.

Product feed offset

Current slice thickness is changed by this value.

Shingling distance, shingling lengthwise

The distance between slices within a shingle.

Shingling distance, shingling crosswise

The distance between slices within a shingle.

Number of layers

Specifies the number of shingles in layers on top of each other.

Shingling length, shingling crosswise

Specifies the length of the entire shingle.

Shingling length, shingling lengthwise

Specifies the length of the entire shingle.

Number of layers circular pattern

Specifies the number of repetitions of depositing pattern circular pattern. The result is a stack consisting of circles.

Circular diameter

Specifies the outer circle diameter for circular pattern.

Target weight

Specifies the target weight per portion in the selected SI unit (g or lb).

Target weight offset

Correction value for products whose cut portions are generally overweight or underweight.

The correction value can be used to compensate the deviation between the actual portion value and the entered target weight. These values are based on experience and depend on the specific product. They are stored in the PLU.

Number of rows crosswise

Specifies the number of shingle rows deposited crosswise to the running direction in a portion.

Row = stacking

Number of rows crosswise

Specifies the number of shingle rows deposited crosswise to the running direction in a portion.

Row = shingling lengthwise

Number of rows crosswise

Specifies the number of shingle rows deposited crosswise to the running direction in a portion.

Row = shingling crosswise

Number of rows lengthwise

Specifies the number of shingle rows deposited in running direction in a portion.

Row = stacking

Number of rows lengthwise

Specifies the number of shingle rows deposited in running direction in a portion.

Row = shingling lengthwise

Number of rows lengthwise

Specifies the number of shingle rows deposited in running direction in a portion.

Row = shingling crosswise

Row spacing crosswise, stacks

Specifies the distance between crosswise deposited stacks in the portion (if product dimensions are entered correctly).

Row spacing crosswise, shingles lengthwise

Specifies the distance between crosswise deposited shingles lengthwise in the portion (if product dimensions are entered correctly).

Row spacing crosswise, shingles crosswise

Specifies the distance between crosswise deposited shingles crosswise in the portion (if product dimensions are entered correctly).

Row spacing lengthwise, stacks

Specifies the distance between lengthwise deposited stacks in the portion (if product dimensions are entered correctly).

Row spacing lengthwise, shingles lengthwise

Specifies the distance between lengthwise deposited shingles lengthwise in the portion (if product dimensions are entered correctly).

Row spacing lengthwise, shingles crosswise

Specifies the distance between lengthwise deposited shingles crosswise in the portion (if product dimensions are entered correctly).

Number of portions

Specifies the number of portions per slicing program.

Other parameters

Automatically close gauge plate

On: Gauge plate closes automatically after machine stop.

Off: Gauge plate does not close automatically after machine stop (default).

Gauge plate offset

Clearance which is additionally needed for the gauge plate to open or close during slicing.

Light sensor

Activation switch for light sensor at conveyor belt.

Off/On

Blade speed

Specifies the speed of rotation of the blade in U/min.

First cut program

The first cut program serves to cut the first slices of a fed product and to keep them separate from subsequent regular portions.

First cut discharge

The first cut discharge serves to discharge the slices from the first cut program. (machine with conveyor belt)

Speed Discharge

Specified the speed at which the sliced product is transported.

Number of carriage strokes

Specifies the number of carriage strokes per minute.

Status of the parameter

Parameter is fixed and can not be changed by parameter validation or other processes of the machine control (e.g. slicing of target weight). The parameter can be changed by the operator (if all the other requirements are met).

The parameter of the currently loaded PLU has been edited.

Parameter is disabled. Input mask cannot be opened. Parameter cannot be changed.

Parameter is visible on the individually configured operator page (main page).

5.2.2 Anchor symbol

The small colored anchor  on the tiles of the parameters <Number of slices>, <Slice thickness>, <Shingling length> or <Shingling distance> means that the corresponding parameter is fixed.

For the parameters <Number of slices> and <Slice thickness> the anchor symbol is only visible for devices with scale. If the scale is switched off no anchor is displayed.

If the anchor is set to the number of slices, it will be set back automatically for the slice thickness and vice versa.

The number of slices is fixed.

In order to obtain the preset portion weight, the slice thickness is changed during slicing.

The slicing of the preset number of slices is carried out. Enter at least 4 slices for optimum weight control.

Portions can be cut precisely in accordance with the target weight with this technique.

If the anchor is set to the number of slices, then the slice thickness can not be changed. The numeric input field and the up-/ down keys are grayed out and disabled for operator entry.

The slices vary in thickness.

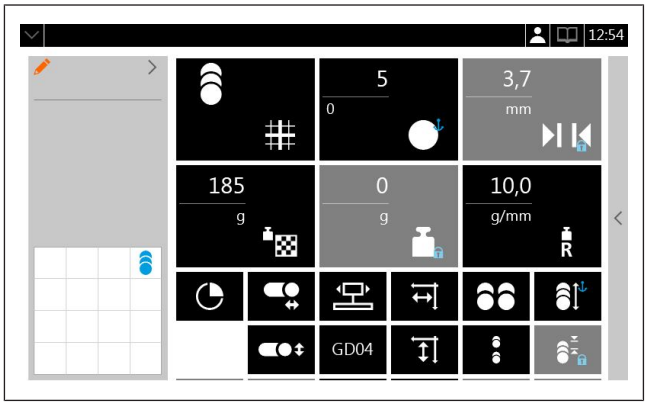

Fig. 12: Anchor set to number of slices

The slice thickness is fixed.

As many slices are cut as required to reach or exceed the target weight.

The slice thickness does not change which means that all slices are of equal thickness.

Less accurate procedure.

If the anchor is set to the slice thickness, then the number of slices can not be changed. The numeric input field and the up-/ down keys are grayed out and disabled for operator entry.

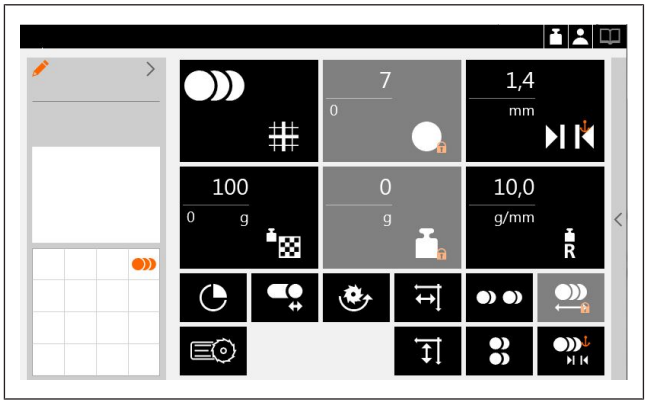

Fig. 13: Anchor set to slice thickness

Shingling length is fixed.

In order to obtain the preset shingling length, the shingling distance is reduced or increased.

If the anchor is set to shingling length, the shingling distance can not be changed. The numeric input field and the up-/ down keys are grayed out and disabled for operator entry.

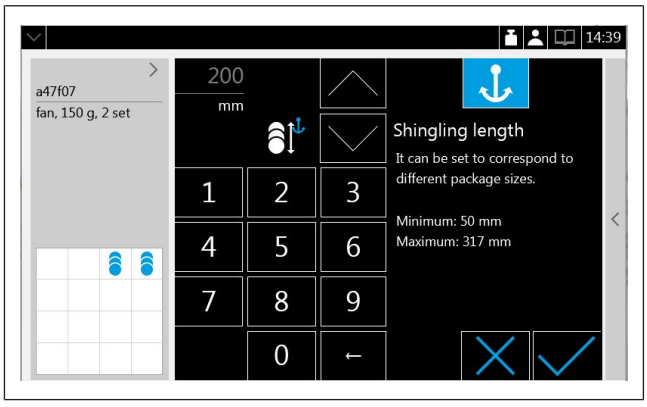

Fig. 14: Anchor is set to shingling length

The shingling distance is fixed.

In order to obtain the preset shingling distance, the shingling length is reduced or increased.

If the anchor is set to shingling distance, then the shingling length can not be changed. The numeric input field and the up-/ down keys are grayed out and disabled for operator entry.

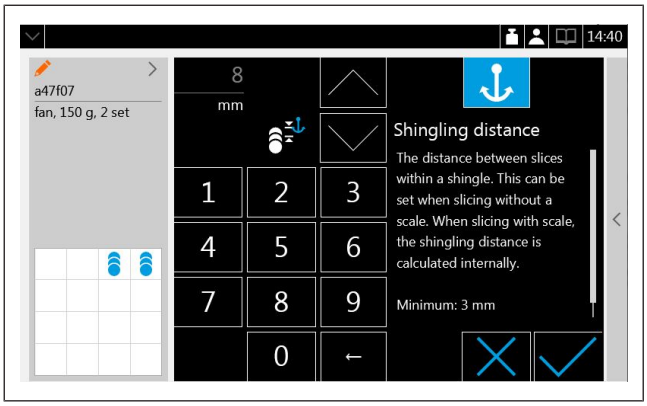

Fig. 15: Anchor set to shingling distance

If the anchor is set to shingling length, it will be set back automatically for the shingling distance and vice versa.

If the number of slices required to reach the target weight does not fit the depositing belt, the portion is discharged as Underweight.

5.2.3 Depositing patterns

Stacking

The sliced product is deposited on top of each other and forms one or more stacks.

The overall pattern may consist of several stacks and equals a portion. The depositing table has room for only one portion.

Several parameters influence the look of the depositing pattern:

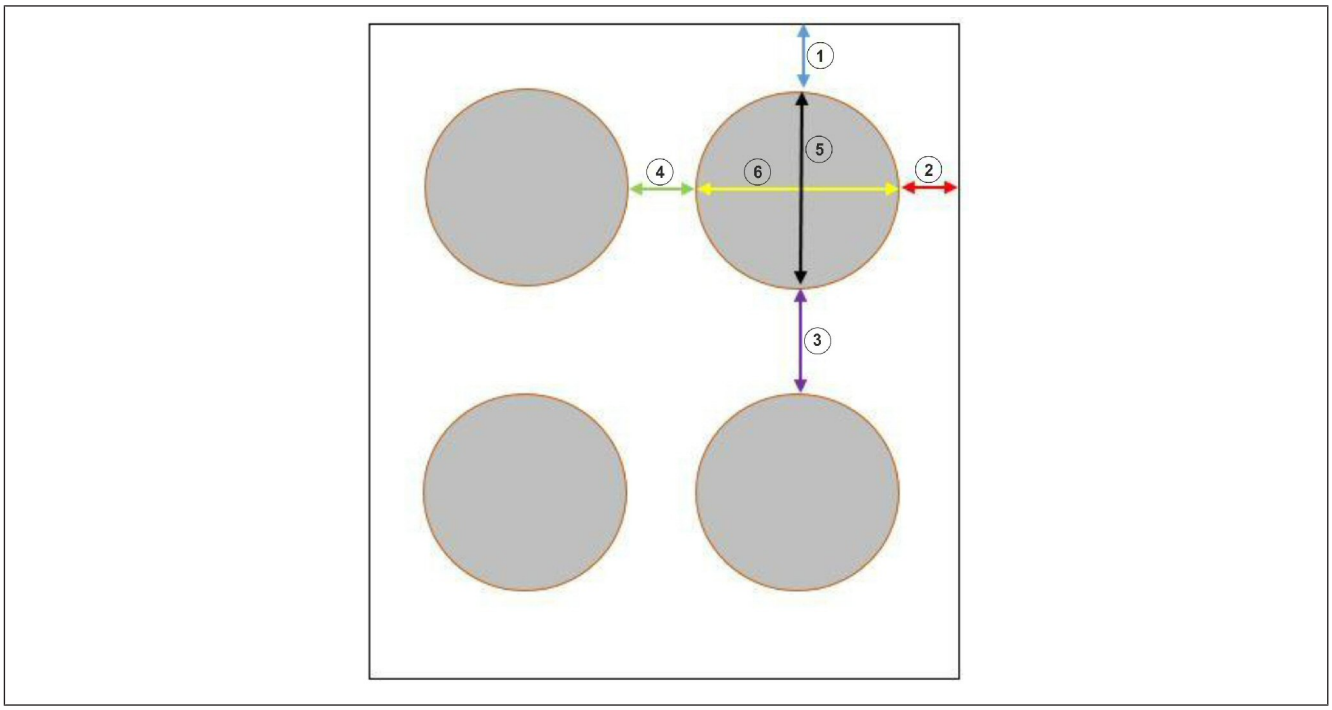

Fig. 16: Depositing pattern stack

①	Depositing offset lengthwise	
②	Depositing offset crosswise	
③	Row spacing lengthwise, stacks	
④	Row spacing crosswise, stacks	
⑤	Product height	
⑥	Product width	

Shingling lengthwise

The sliced product is offset on top of each other and forms one or more shingles parallel to the blade.

The overall pattern may consist of several shingles lengthwise and equals a portion. The depositing table has room for only one portion.

Several parameters influence the look of the depositing pattern:

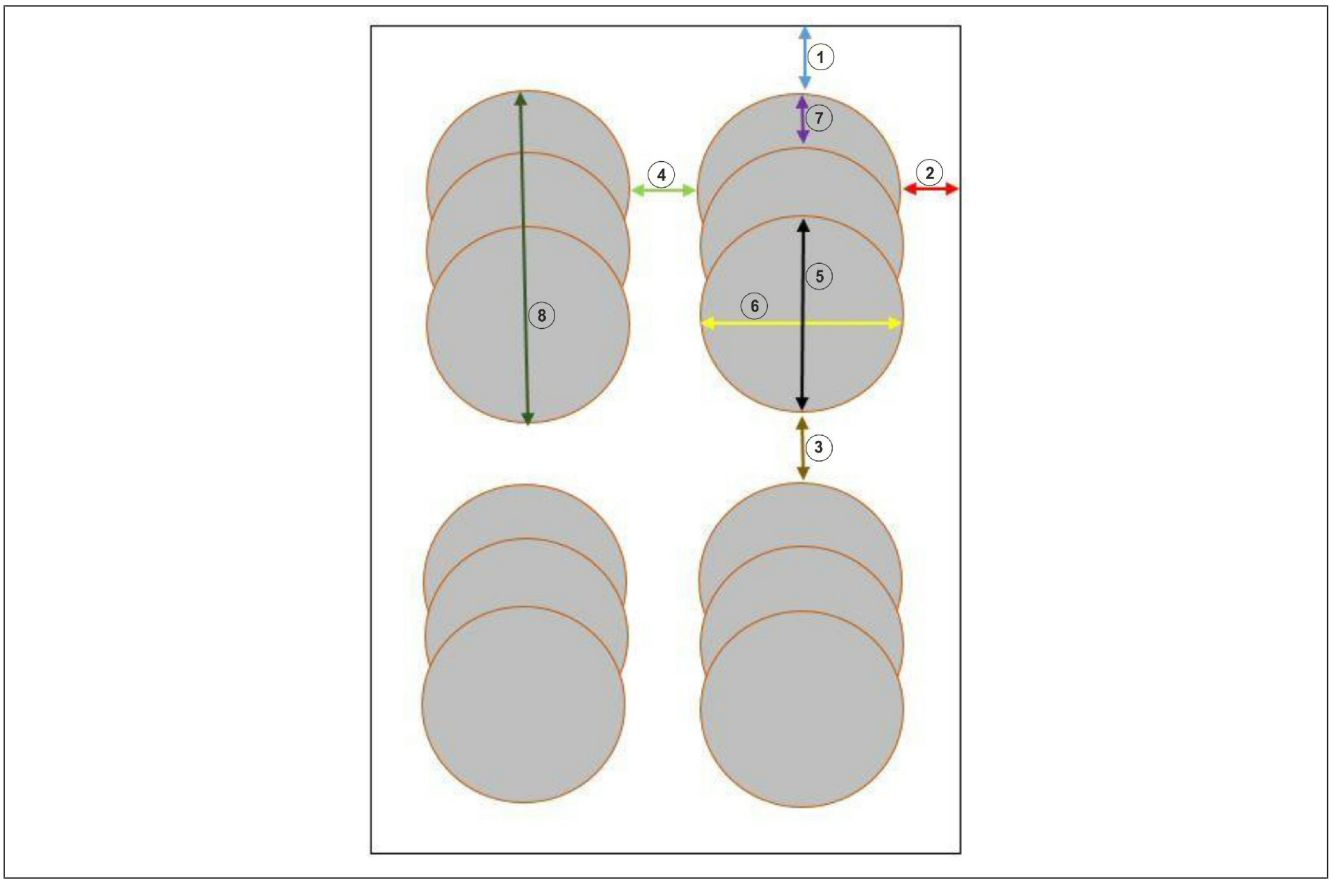

Fig. 17: Depositing pattern shingling lengthwise

①	Depositing offset lengthwise	
②	Depositing offset crosswise	
③	Row spacing lengthwise, shingles lengthwise	
④	Row spacing crosswise, shingles lengthwise	
⑤	Product height	
⑥	Product width	
⑦	Shingling distance	
⑧	Shingling length	

Shingling crosswise

The sliced product is offset on top of each other and forms one or more shingles parallel to the depositing system.

The overall pattern may consist of several shingles crosswise and equals a portion. The depositing table has room for only one portion.

Several parameters influence the look of the depositing pattern:

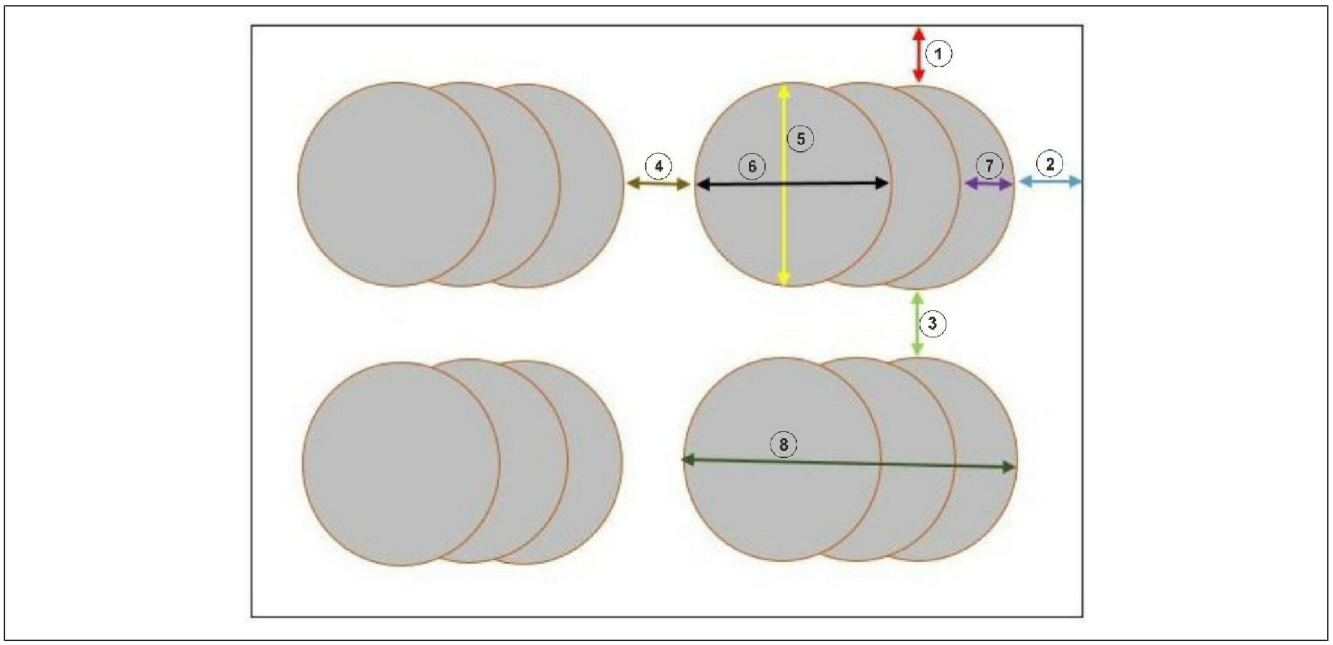

Fig. 18: Depositing pattern shingling crosswise

①	Depositing offset lengthwise	
②	Depositing offset crosswise	
③	Row spacing lengthwise, shingles crosswise	
④	Row spacing crosswise, shingles crosswise	
⑤	Product height	
⑥	Product width	
⑦	Shingling distance	
⑧	Shingling length	

Circular pattern

The sliced product is offset on top of each other and forms one or more circles.

The overall pattern consists of 1 - 3 circles with variable diameter. This pattern can form multiple layers and corresponds to one portion. The depositing table has room for only one portion.

In case of many layers, the max. stack height could be exceeded without the machine switching off. In this case, the number of layers has to be manually reduced.

Several parameters influence the look of the depositing pattern:

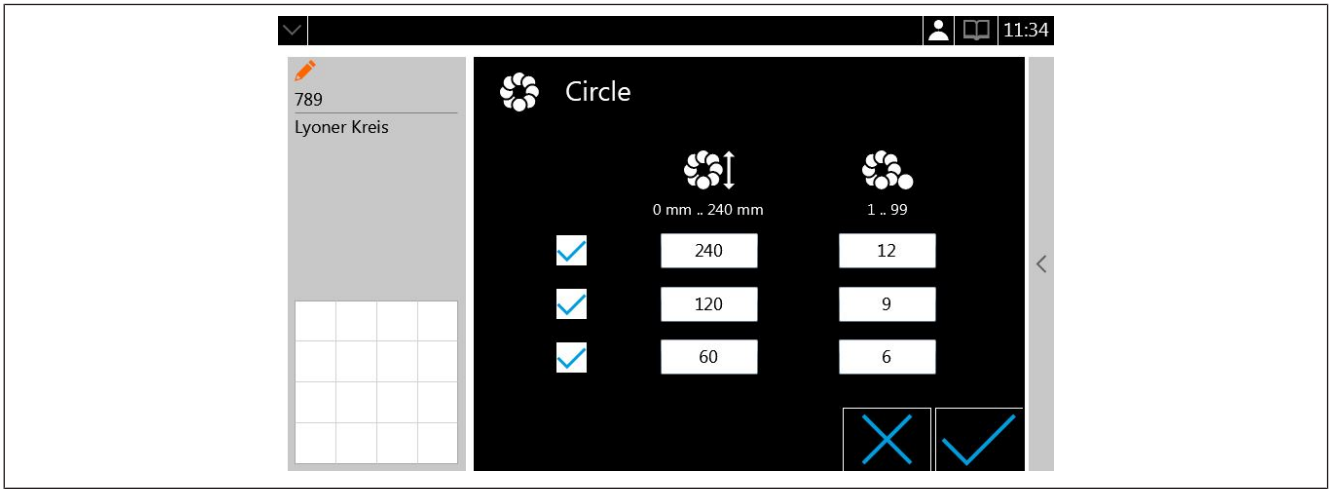

Fig. 19: Circular pattern default values

Depositing offset lengthwise

Depositing offset crosswise

Circular diameter

Number of slices in the circle

Number of layers circular pattern

Product height

Product width

By adjusting the distance of slices, the number of slices for each circle are distributed evenly.

Target weight:

The target weight refers always to one layer.

If circular pattern is active, the anchor must always be set to number of slices. The tile number of slices is grayed out and displayed with lock icon and anchor.

The tile slice thickness is grayed out and displayed with lock icon. The device automatically sets the slice thickness possible in order to reach the target weight.

Shaving

The sliced product forms a pile of loosely falling slices. For this purpose a depositing arm for shaving (optional accessories) is needed.

In order to mount the depositing arm for shaving to the chain frame the depositing arm must first be disassembled. [▷ 64]

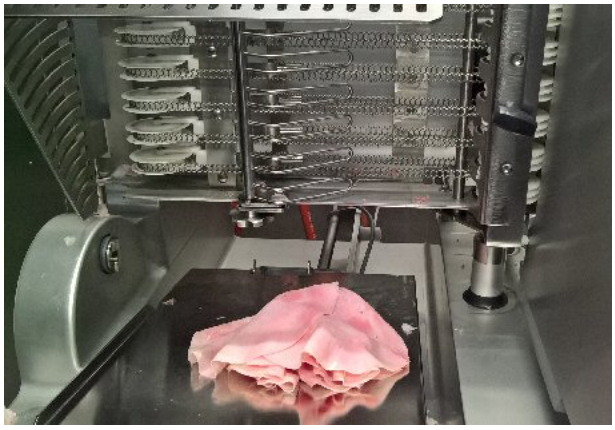

Fig. 20: Shaving

The depositing type shaving has the same functionality as the depositing type stacking.

The standard values for shaving correspond to the values for stacking.

Slicing to target weight is not possible with depositing type shaving!

	NOTICE
	Due to the uncontrolled depositing of slices during shaving, the max. stack height could be exceeded without the machine switching off. **In this case, the user has to reduce the number of slices manually.**

5.3 Paper holder

The paper holder is used when the sliced product has to be delivered straight on to paper or foil.

Positioning of several sheets of paper or film:

- ⇨ Using your thumb, press lever to the right against spring pressure until it clicks into place.
- ⇨ Push the stack underneath the open holder.
- ⇨ Release the lever by pressing the top of it lightly out of the locked position.

Fig. 21: Paper holder

Removing of deposited portions and paper:

- ➪ Using your thumb, press lever slightly to the right; at the same time pull top-most piece of paper with portion under the open holders.
- ➪ Release lever.

5.4 Product fixation device

The properly applied product fixation device holds the product in position during slicing preventing the product from deflecting and tipping over.

Product fixation device, vertical (carriage 400 mm and 600 mm)

The product fixation device is guided on a shaft and can be moved across the full width of the carriage. This way, it can be positioned on any product size.

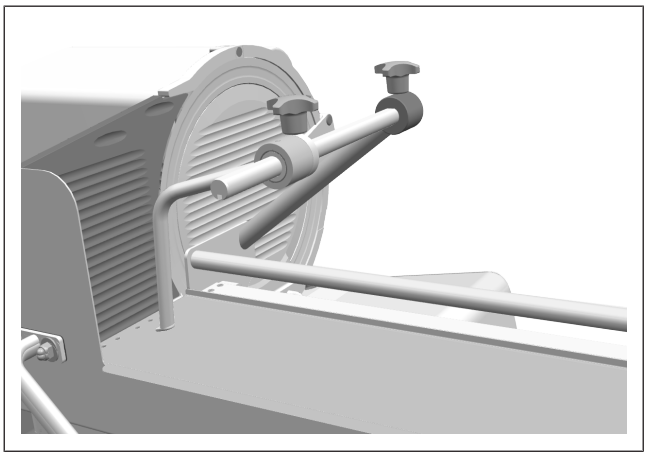

Fig. 22: Product fixation device, vertical

6 Operation

6.1 Log in operator

- Machine is switched on, system check was successful. [▶ 28]

➪ Click into the operator field.
The input keyboard is shown.
➪ Enter name of operator.
Regular operators can also select the name via <Touch-Down>.
➪ Click into the password field.
➪ Enter password and confirm.

or

➪ Press <Automatic login>.

The main page is loaded with the parameters which were saved last before the machine was switched off.

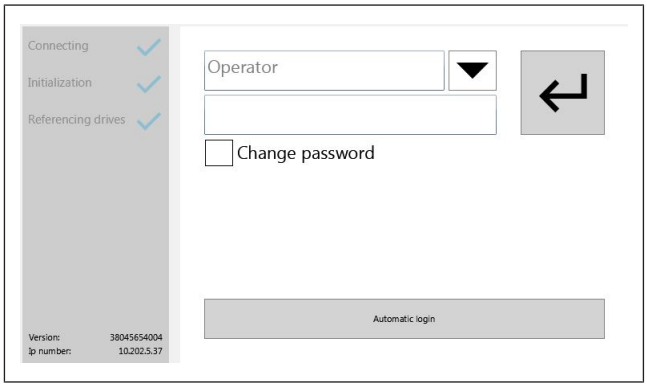

Fig. 23: Log in operator

6.2 Main page (individually configured operator page)

After successful system check and operator login the main page is loaded with the parameters which were saved last before the machine was switched off.

The status bar on top shows the progress of the slicing process, registered operators, warnings and pending orders.

The information bar on the left shows name and description of the current slicing program.

Definition of tapping:

Tap: < 1.5 seconds

Tap and hold: > 1.5 seconds

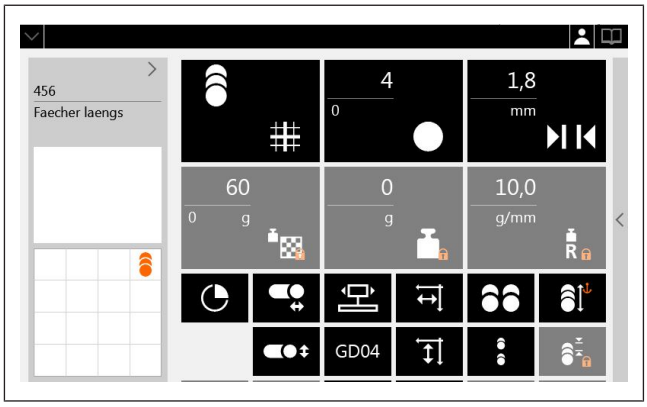

Fig. 24: Main page

➪ Tap a tile.

The value of the parameter may be changed.

➪ Enter value directly or change value step by step using the Up/Down keys.

➪ Tap <Confirm> to adopt the changes and to start the parameter validation.

If the validation was successful the main page is displayed.

or

➪ Tap <Cancel> to discard the change.

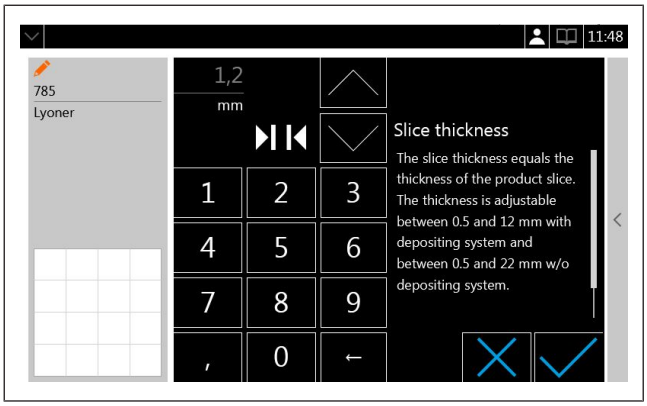

Fig. 25: Edit parameters

➪ Tap and hold tile for a while.

Opens the tile manager. The tiles may be changed in size, moved or removed.

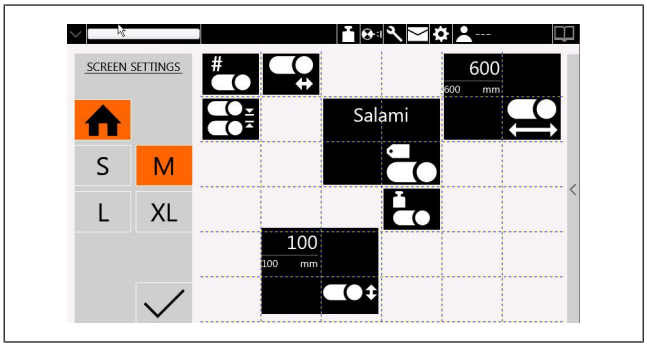

Fig. 26: Tile manager

6.3 Navigation between the pages

By tapping the icons of the navigation bar you may switch between the pages.

➪ Using your finger, wipe from right screen edge to center.

or

➪ Tap the arrow.

The background will be grayed out. The navigation bar will be shown.

The operator can access the individually configured operator page including all parameters, the menus for sharpening, cleaning and settings.

The active icon is white.

➪ Pressing the lock symbol locks the screen.

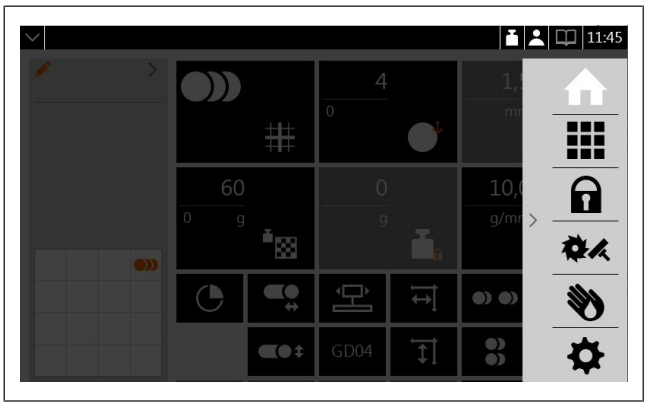

Fig. 27: Navigation bar

6.4 Parameter page

The parameter page can be called up from the navigation bar via the icon.

Here, the parameters shown on the main page can be defined.

The small colored symbols on the tile show the status of a parameter.

Grayed out parameters are not relevant for this PLU. Vertical scrolling possible.

Definition of tapping:

Tap: < 1.5 seconds

Tap and hold: > 1.5 seconds

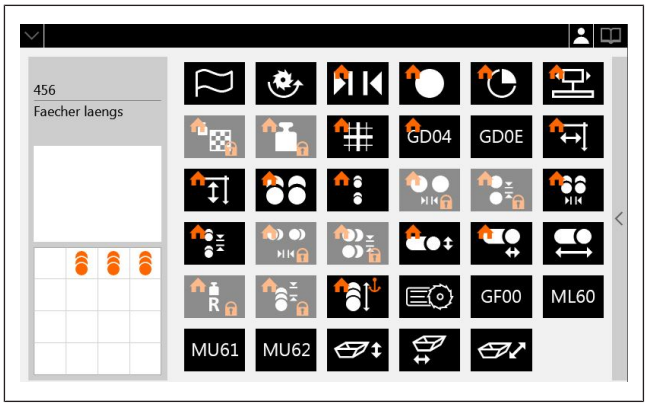

Fig. 28: Parameter page

➪ Tap a tile.

The value of the parameter may be changed. [▷ 46]

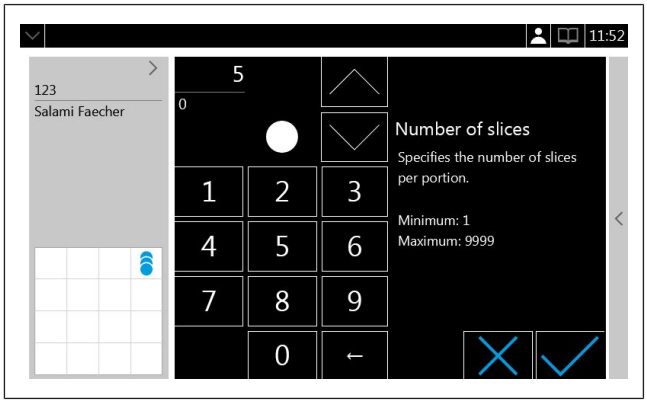

Fig. 29: Modify value

➪ Tap and hold tile for a while.

Tile has a colored frame. A selection window appears instead of the information bar.

➪ Tap the black house icon.

The parameter is displayed on the main page, if the background is colored.

The parameter is not displayed on the main page, if the background is grayed out.

➪ Tap <Confirm> to adopt the change.

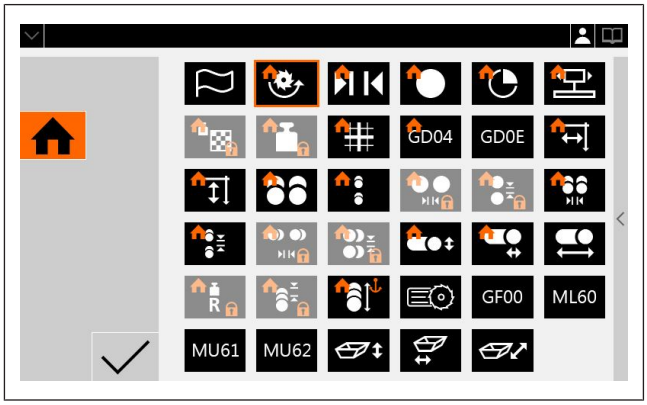

Fig. 30: Tile manager

6.5 Tile manager

The tile manager includes the tile settings. It opens by tapping and holding a tile.

On the parameter page, the parameters shown on the main page can be defined.

On the parameter page, the size of the tile may be changed.

Tile sizes S+M+L+XL may be selected for.

The tile is created around the symbol.

Parameters on top of the list displace the ones that are below.

The operator can freely place the tiles.

The settings must be confirmed.

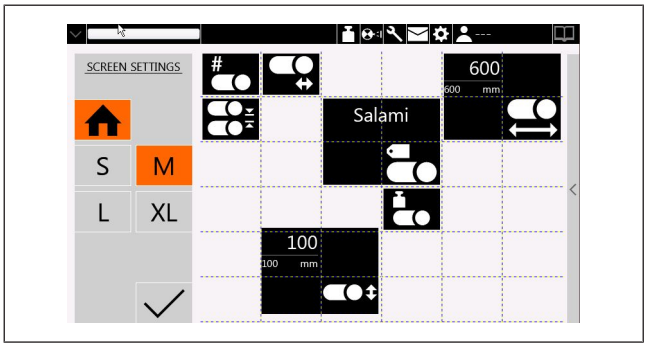

Fig. 31: Tile manager

6.6 Search mask

All PLUs stored can be searched if you want to call up a particular PLU.

Using the filters of the search mask the number of the selectable PLUs displayed can be limited.

➪ To open PLU menu tap the arrow on the information bar.

or

➪ Wipe in arrow direction.

➪ Tap

The search mask opens.

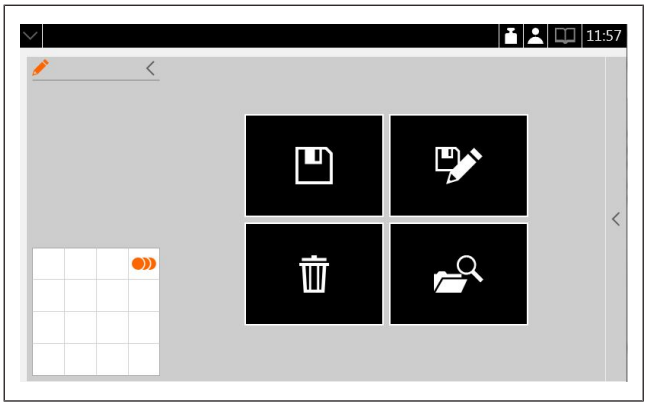

Fig. 32: PLU management

Saved PLUs can be filtered according to:

1. PLU No.
2. PLU name
3. Product width
4. Product height
5. Depositing type
6. Target weight

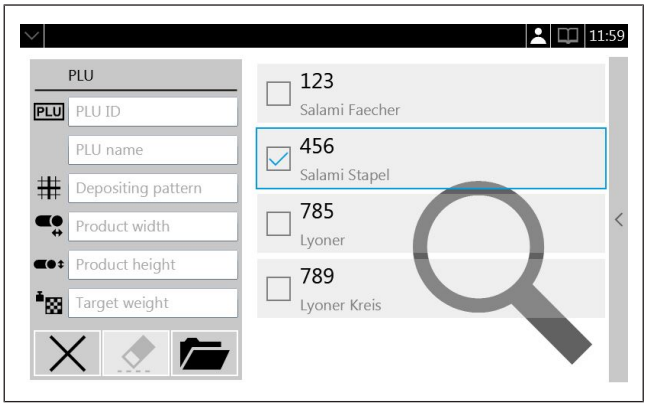

Fig. 33: Search mask

- By tapping the corresponding text field the suitable input keyboard opens at the lower screen edge.
- Enter search term or filter characteristic.
- By tapping the down arrow or Enter the window with the keyboard closes.

  The result is shown in form of a selection list.

Entries can be made in other fields.

Pressing the icon all fields of the search mask are cleared (emptied) and all PLUs are displayed.

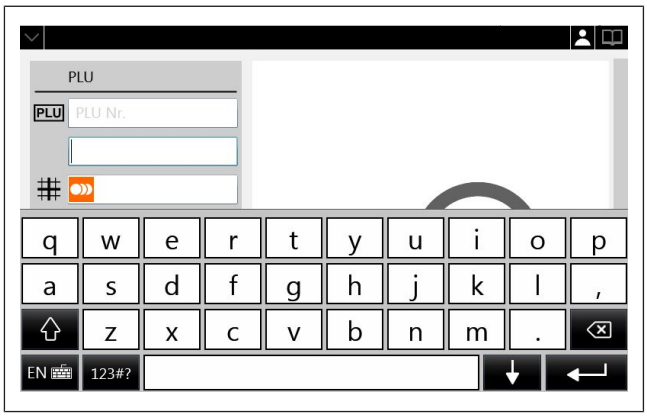

Fig. 34: Input keyboard

- Tap in the selection list.
- Tap <Open>

The selected PLU is loaded.

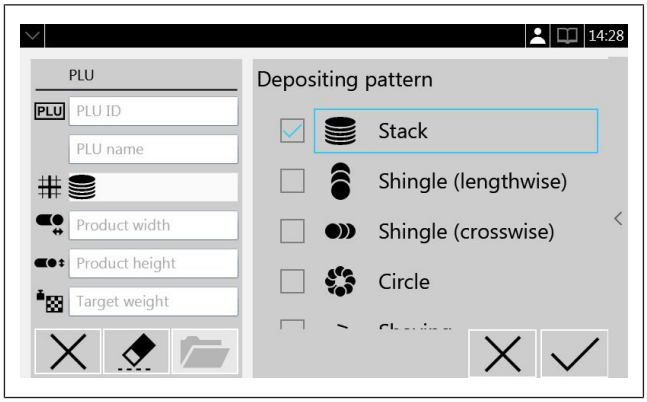

Fig. 35: Select PLU

6.7 Settings

The page for settings can be called up from the navigation bar via .

Settings concerning machine, software, operator and messages can be displayed and edited.

- Tap a tile.

  The relevant menu appears on the touch screen.

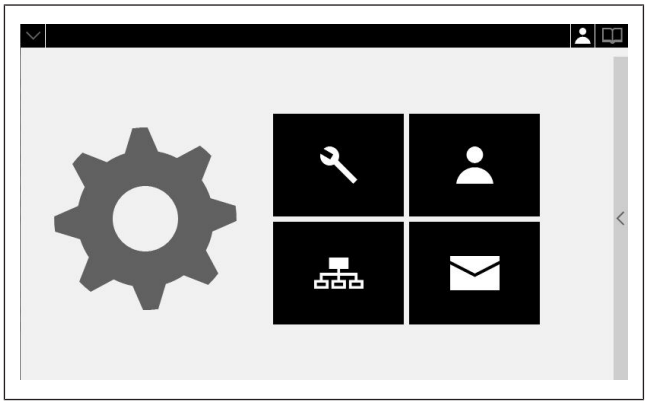

Fig. 36: Settings

6.7.1 User management

Call up via the setting ⚙ in the navigation bar.

➪ Tap 👤.

The user management menu opens.

Every user can change his password with the login. No password needs to be set until the production manager level.

Passwords of all lower levels can be set back to default by technicians or higher. This can be done for individual users.

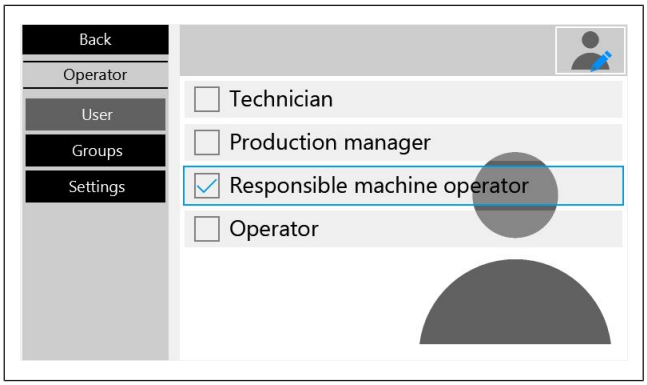

Fig. 37: User

User groups

➪ Tap <Groups>

Here, user groups can be created.

For each group one user is created as default value. Name corresponds to the level name.

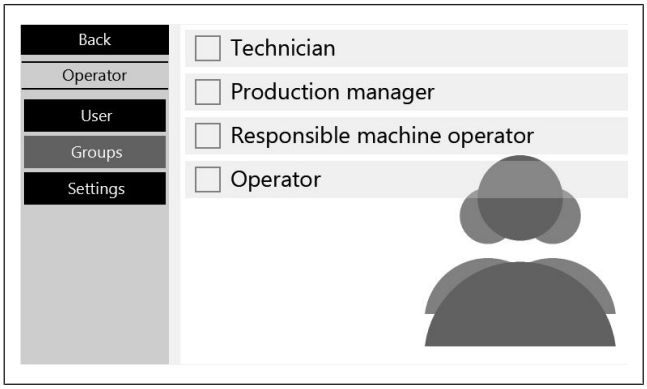

Fig. 38: Groups

Login settings

➪ Tap <Settings>

Checkmark: Login in case of restart Login with a password is required.

No checkmark: The <Automatic login> can be done without a password. The machine is started with level Production manager.

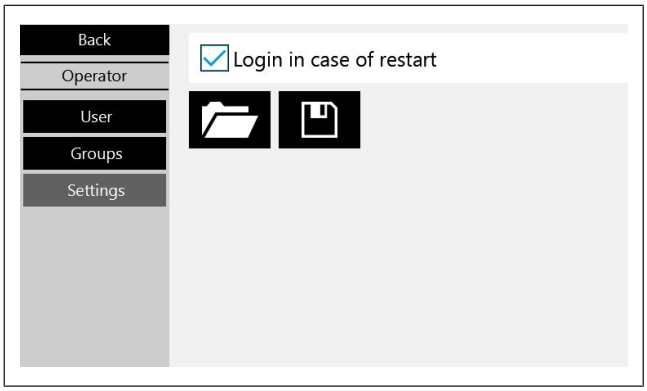

Fig. 39: Settings

Authorization levels:

Level	User rights

Operator	– Open PLU – Change language – Cleaning – Sharpening – Individual configuration of the operator page – Light sensor ON/OFF – Change parameter temporarily
Responsible machine operator	– All rights of level Operator – Change parameters – Save PLU
Production manager	– All rights of level Responsible machine operator – Software settings – E-mail server – User management
Technician	– All rights of level Production manager – Service access
Bizerba	– Full access

☞ The basic settings for the authorization levels can be changed by trained service personnel only.

6.7.2 Software settings

Call up via the setting ⚙ in the navigation bar.

➪ Tap 🖧.
Here, software settings may be performed with relevant authorization.

➪ Press <Network>.

- DHCP is switched off.

➪ Enter "IP", "Subnet", "Gateway" in format xxx.xxx.xxx.xxx.

➪ Adopt changes to the settings by saving.

If DHCP is activated (checked), the settings cannot be changed.

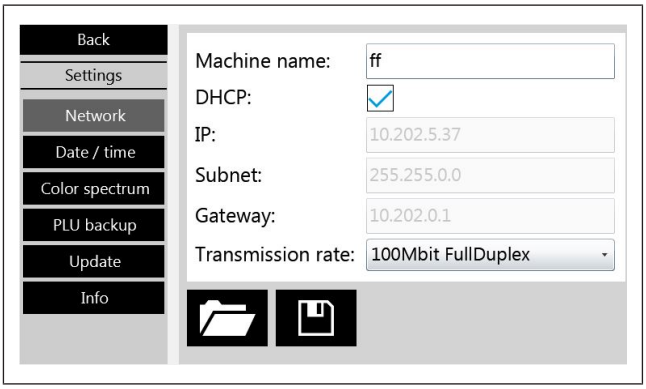

Fig. 40: Network settings

User Interface colors

➪ Press <Color spectrum>.

User interface colors may be changed.

If 2 equal colors are chosen, the modification is denied via error message. Distance of vector must be at least 50.

➪ Confirm color changes.

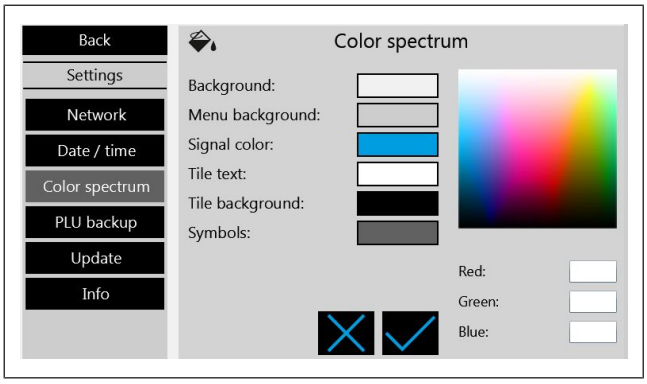

Fig. 41: User Interface colors

6.8 Inserting the product

⚠ CAUTION

There are spikes on the product holder!

Driver hooks on feed carriage, grip hooks!

Risk of injury.

– Use handle when working with product holder.

– Claws are lowered into a rest position.

The machine must not be operated without a depositing table or conveyor belt.

Any metal clips must be removed from the product.

To safely slice leftover pieces the end of the sliced product has to be cut off.

NOTICE

If the product is lower than the height of the carriage rear wall, fingers could get jammed between product holder and rear wall.

Carriage with swivel-mounted product holder, horizontal product fixation

- The machine is switched on, all functional parts are in a stop position, carriage is on the side of the operator.

➪ Take hold of product holder handle, loosen locking lever by using your index finger and lift up until snapped into place.

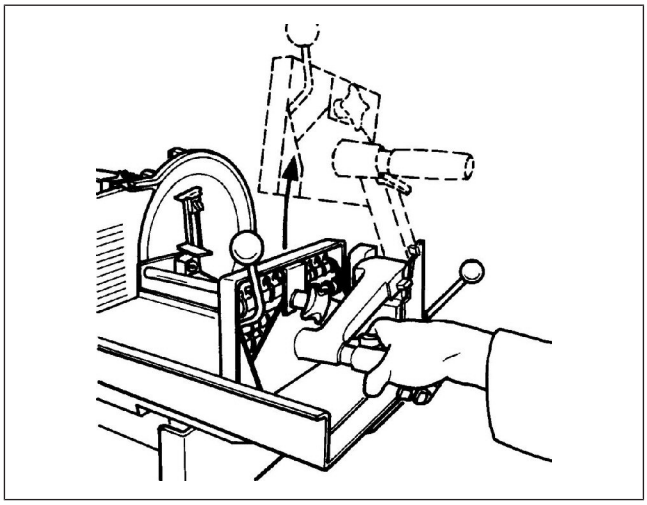

Fig. 42: 400 mm carriage

➪ Place product against rear wall and press into hooks of feeding carriage.

➪ Release the sliced product holder by means of the lock lever, place it on the sliced product and push down the spikes.

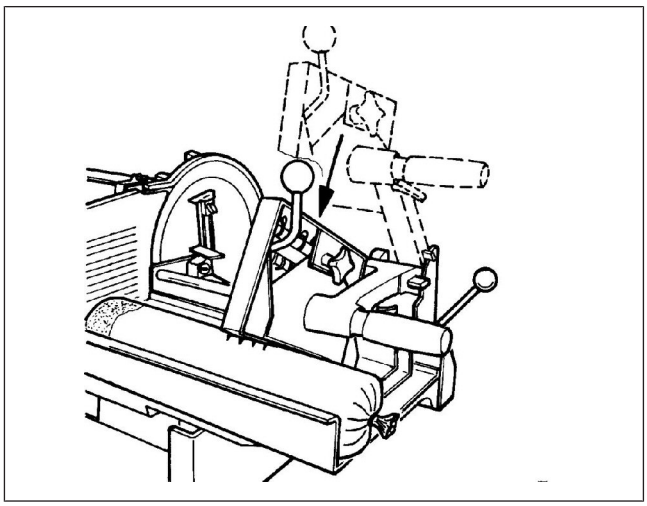

Fig. 43: Inserting the product

➪ Pull the lever towards the operator while at the same time pushing the guide manually up to the gauge plate.

➪ Position product fixation device.

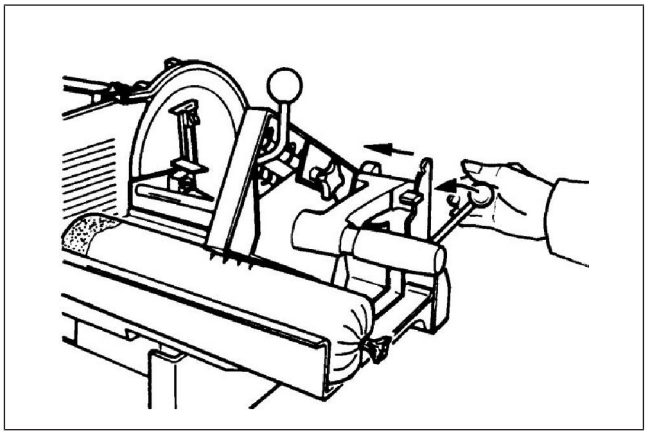

Fig. 44: Unlocking product feed

Carriage with product holder which cannot be swiveled, vertical product fixation

- The machine is switched on, all functional parts are in a stop position, carriage is on the side of the operator.

➪ Using the left hand, position product against rear wall and push against holder.

➪ Using your right hand, push lever of holder downwards allowing gripper hooks to enter the product ends thereby holding the product (if needed, make end piece bigger by cutting it).

➪ Push product towards gauge plate.

➪ Position product fixation device.

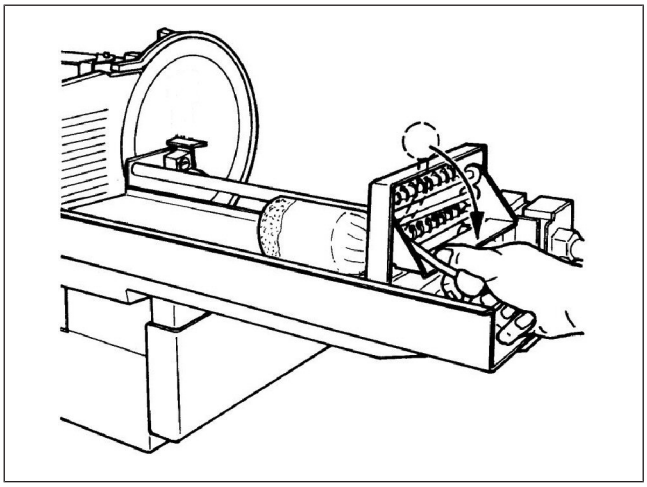

Fig. 45: Inserting the product

6.9 First cut function

The First cut function serves to cut the first slices of a fed product and to keep them separate from subsequent regular portions.

The first cut is done during portion start and after product change.

Slices will be put down separately in a pile and not be counted as portion. Slice thickness is the size currently set for slicing portions.

➪ Tap tile First cut .

A window appears where you can enable / disable the function and change the number of first cut slices.

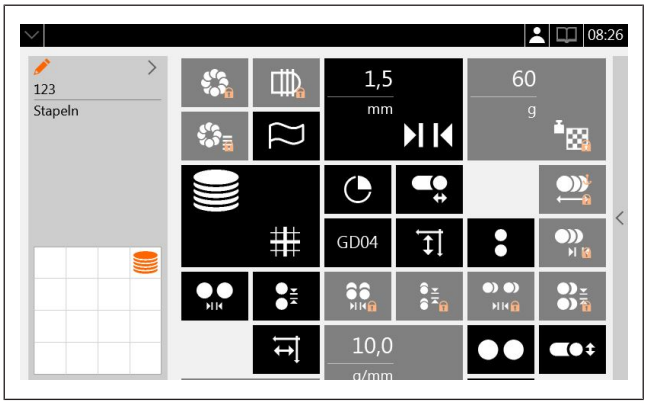

Fig. 46: Select tile First cut

➪ Tap First cut icon on the right.

First cut function is enabled. First cut icon is displayed in status bar. If this function is disabled, the tile First cut is grayed out.

➪ Enter number of First cut slices directly or change the value step by step using the Up/Down keys and confirm.

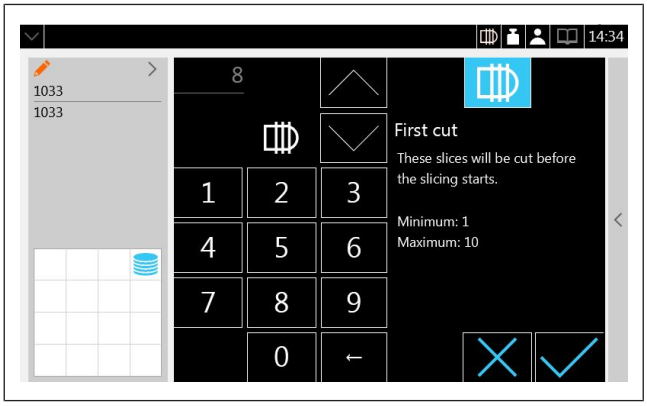

Fig. 47: First cut parameters

The first cut icon flashes in the status bar:

– before and during first cut slicing
– after resetting the portions counter to zero
– to show that the first cut is done after product change and again after restart.

First cut discharge function

This function is available for devices with conveyor belt.

It is always active when the function first cut is active.

The first cut slices are transported. It can be selected if the first cut is to be transported forwards or backwards.

6.10 Slicing product

⚠ WARNING

Rotating blade!

Cut injuries

– Do not allow yourself to become distracted. Concentrate on the task in hand and avoid time pressure.
– During operation, do not reach into the path of the carriage.
– **Never** push product ends towards blade by hand.

⚠ WARNING

Moving components!

Risk of entanglement, shearing, crushing and being hit.

– Do not wear loose clothing or wear hair down.
– Do not reach into paths of carriage, product holder, gauge plate, depositing system, conveyor and depositing table.
– Only clean machine when switched off and power plug is pulled.

- Product is loaded and fastened by means of product holder and product fixation device.
- Machine is switched on. The slicing program used last is shown on the touch screen.

Choose depositing type.

➪ On touch screen tap tile ⌗.

The selection window for the depositing type opens.

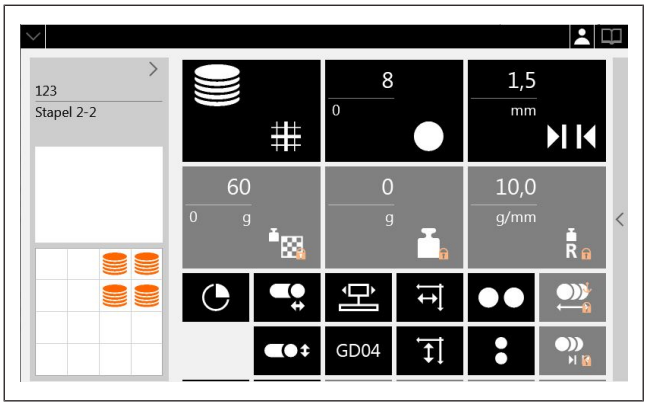

Fig. 48: Main page stacking

➪ Choose depositing type. (stacks, shingles lengthwise, shingles crosswise, circular pattern, shaving)

The selection will be shown via a check.

➪ Confirm selection.

The default values for the selected Depositing type will be loaded.

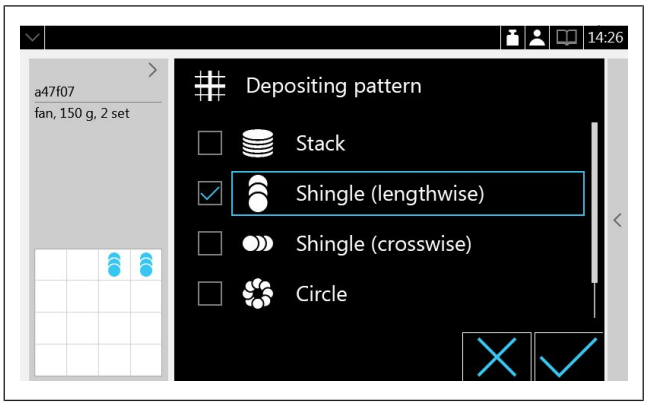

Fig. 49: Choose depositing type

Changing parameters.

➪ Tap tile of parameter to be changed.

The window to change the parameter opens. The value of the parameter may be changed.

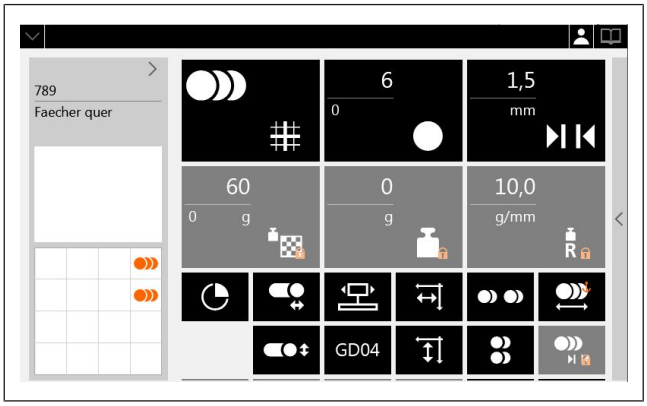

Fig. 50: Main page shingling crosswise

➪ Enter value directly or change value step by step using the Up/Down keys and confirm.

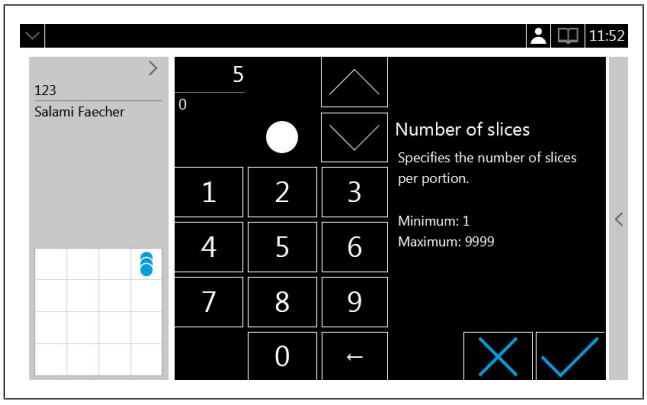

Fig. 51: Change parameters

Changing a parameter always results in a parameter validation.

In a dialog, the operator can except or discard the parameter change. The changes of validated parameters will be shown.

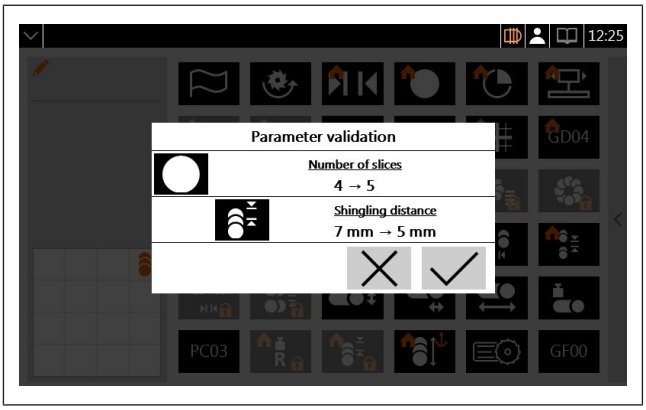

Fig. 52: Parameter validation

Saving changed parameters.

➪ To open PLU menu tap the arrow on the information bar.

or

➪ Use your finger and wipe in arrow direction.

➪ Tap .

A mask to enter PLU number and PLU name opens.

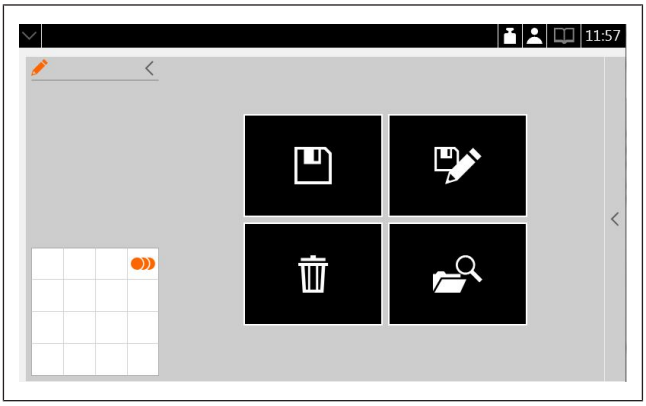

Fig. 53: PLU menu

➪ Tap the write field.

The input keyboard is shown.

➪ Enter and confirm PLU number and name.

A new PLU or an existing PLU under a new number was saved.

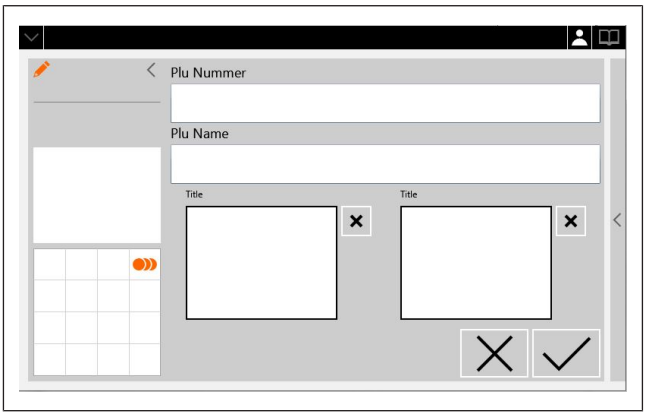

Fig. 54: Input mask

Opening a PLU.

➪ To open PLU menu tap the arrow on the information bar.

or

➪ Use your finger and wipe in arrow direction.

➪ Tap .

➪ Select desired PLU from the list and open it by tapping .

The PLU with the saved parameters will be displayed.

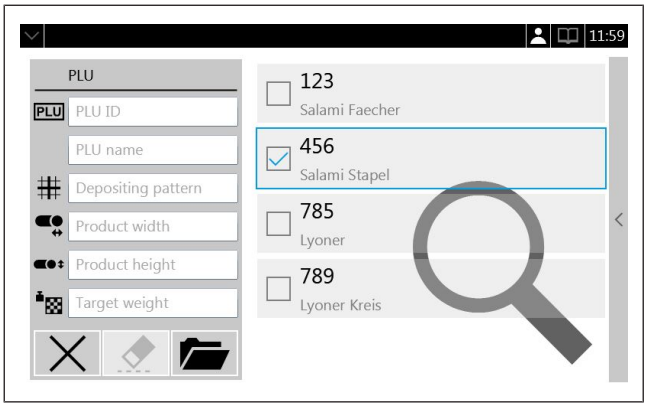

Fig. 55: Open PLU

➪ Tap <Execute> to start the slicing program.

The carriage starts moving and, based on the program, the product is sliced, weighed and placed on the depositing table or conveyor belt.

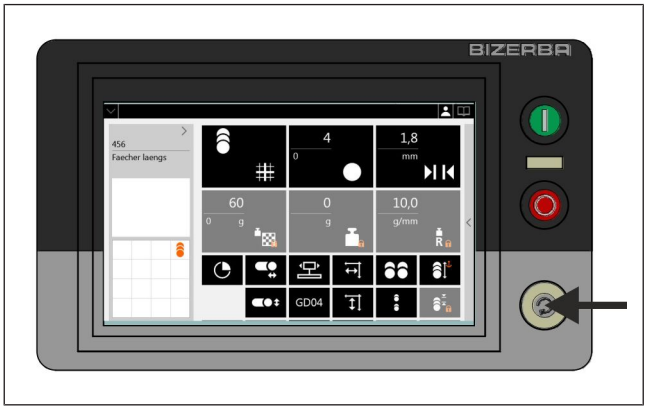

Fig. 56: Display and operating unit

6.11 Slicing of target weight

Switch scale function on/off

To switch the scale function on/off tap tile Target weight on the parameter page.

If the slicer is not fitted with a scale, the tile target weight is not available.

➪ Tap tile Target weight .

The window to switch the scale off/on and to change the target weight opens.

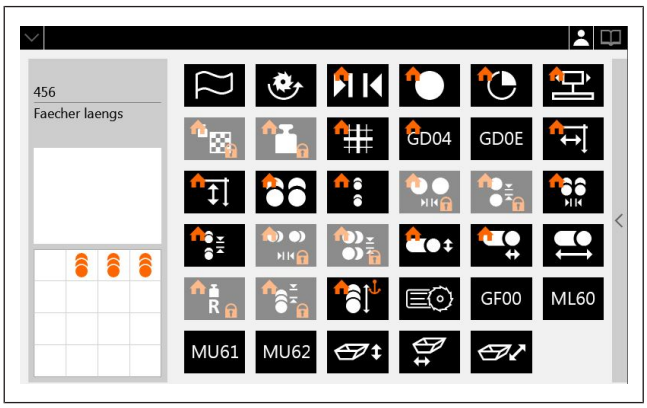

Fig. 57: Parameter page

➪ Press the scale icon on the right.

Scale function is activated. The scale icon is displayed in the status bar. If this function is deactivated, the tile target weight is grayed out.

➪ Enter target weight directly or change value step by step using the Up/Down keys and confirm.

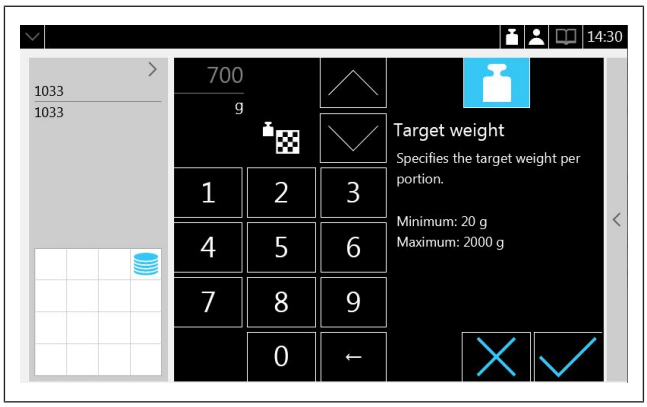

Fig. 58: Target weight parameter

Switching on the scale the following parameters are set:

– reference weight set to 8 g/mm
– anchor set to number of slices
– set target weight to the value that results from the current parameters

For machines with conveyor belt:

The shingling length currently set is longer than the weighing conveyor.

– Reduce shingling distance.

If it is not possible to reduce the shingling distance, a message is displayed.

Scale remains switched off.

Switching off the scale:

– The anchor set to number of slices or slice thickness will be deleted.

6.12 Ending slicing

To stop the slicing process, press <Execute>. Use the <OFF switch> only in an emergency to stop the slicing process.

⚠ WARNING

Gauge plate!

Risk of crushing when gauge plate moves to zero position.

– Do not reach into area between gauge plate and carriage rear wall.
– Do not reach into area between gauge plate, carriage and product holder.
– Do not reach into area between gauge plate and blade.

➪ On the display and operating unit press <Execute>.

The drives will be switched off.

The drives will be switched off automatically:

- if max. stacking height is reached
- at end of program
- at end of product
- in case of malfunctions, e.g. jam
- if a safety circuit is interrupted

The drives go into stand-by position:

- if the conveyor belt stops because the light sensor detected "full belt"

or

⇨ Manually remove product.
Operations are continued.

7 Troubleshooting

7.1 Procedure

Should there be a stoppage and the problem cannot be corrected right away, food products have to be removed for protection in compliance with the maximum limit of 30 minutes for products to remain on the machine.

- ➪ Switch off the machine immediately in case of unusual movements or noises or if there is a possible risk of injuries.
- ➪ Call the responsible Customer Service if you are unable to rectify the fault yourself.
- ➪ Please provide the Bizerba customer service with the following information:
  - – Machine type (see identification plate),
  - – Machine number (see identification plate),
  - – Error description.

This will facilitate preparations by customer service staff.

7.2 Fault description

If an interruption occurs during operation, this is displayed via an appropriate system message plus identification number.

- ➪ Switch off machine.
- ➪ Troubleshooting.
- ➪ Switch machine on again after about 2 minutes and start again.
- ➪ If the system message appears again, contact the relevant customer service and provide the displayed identification number [▸ 62].

Power failure

- ➪ If there are power failures during operation, the machine stops.

  The display is switched off.
- ➪ Switch on machine and start again.

8 Maintenance

8.1 Preparation for cleaning

Clean thoroughly:

- before putting into operation
- depending on use and application frequency
- if extremely soiled, several times a day
- after sharpening
- after a longer down time

⚠ WARNING

Unprotected blade!

Coming in contact with the sharp blade can lead to serious injuries.

- Always wear cut-proof gloves when cleaning.
- Do not clean the surfaces of the blade when operating the machine!

- The machine is switched on.
- The main page comes up on the touch screen.
- All machine parts are mounted.

➪ Press icon on the navigation bar.
Instructions on the further operating procedure appear on the touch screen.

Unlock carriage:

➪ Turn out star-grip screw on carriage foot.

➪ Open holding magnet by pressing the <Execute> button.

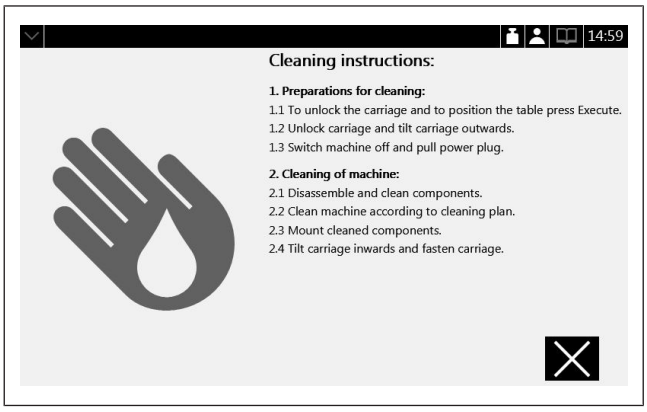

Fig. 59: Instructions on the further operating procedure

➪ Tilt carriage outward into cleaning position within 10 s.

If time was exceeded, press <Execute> again.

➪ Switch off machine.

➪ Remove the plug and protect against moisture.

Fig. 60: Tilt the carriage to the outside

8.2 Removing components

⚠ WARNING

Chain spikes, driver spikes of feeding carriage, gripper hooks, deflector edge!

Stab and cut wounds.

Twisted guide cam or chain spikes can cause malfunctions.

– Always wear cut-proof gloves when cleaning.
– Avoid touching the chain spikes.
– Claws are lowered into a rest position.

Do not place parts on top of each other to avoid mechanical damage.

Remove components as follows:

Depositing table VSI, VSI W

➪ Use both hands to lift table up a little on the operator side and pull it to the front.

Fig. 61: Remove depositing table

Light sensor

➪ Pull the light barrier upwards out of the holder and hang in to the holder of the machine.

Fig. 62: Remove light sensor

Conveyor VSI T

➪ Tilt the lock on the belt support backwards in the direction of the arrow.

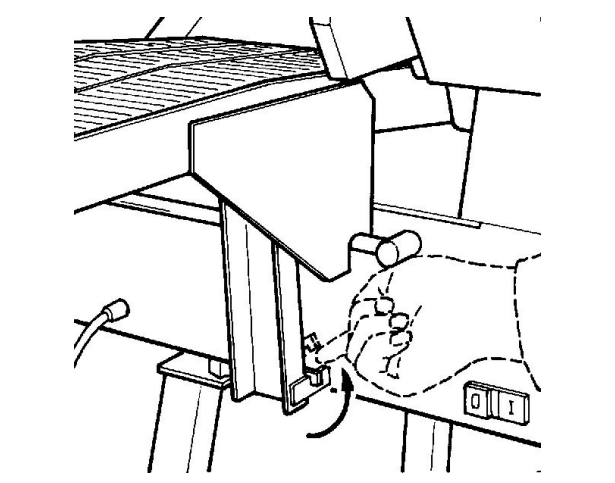

Fig. 63: Unlock conveyor belt VSI T

➪ Pull conveyor belt on support bar towards operator.

Conveyor belt has been decoupled from drive.

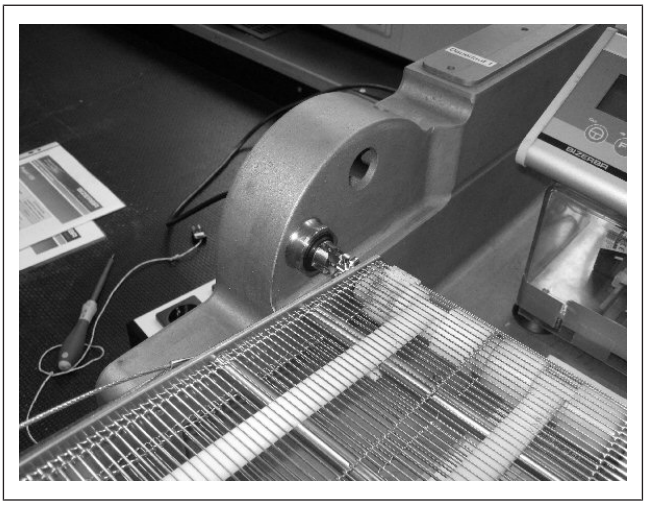

Fig. 64: Decouple conveyor belt VSI T

➪ Use both hands to hold on to the sides of the center of the conveyor and tilt it towards you and then lift it up.

➪ Carefully place conveyor on an even surface.

NOTICE! Damaged or twisted wire meshing causes functional errors.

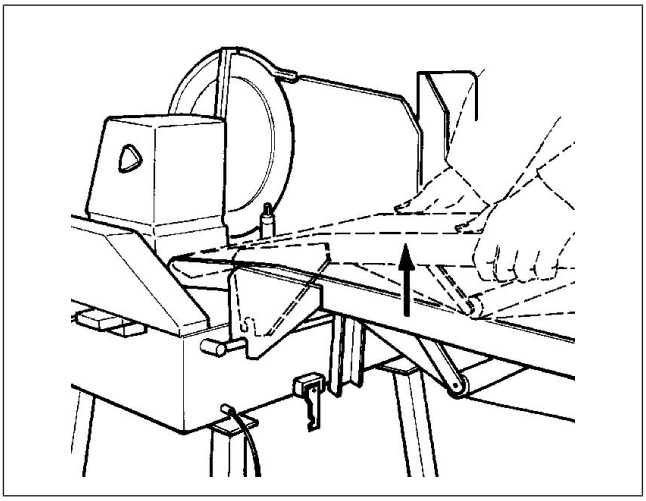

Fig. 65: Remove conveyor VSI T

Conveyor VSI TW

➪ Push lock at belt support upwards.

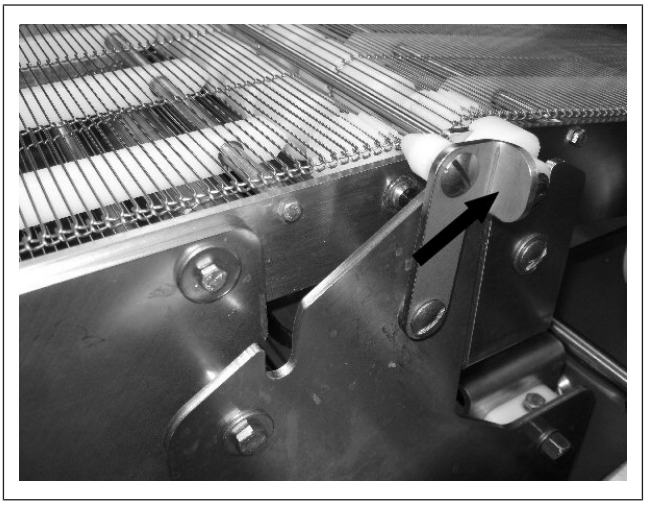

Fig. 66: Unlock conveyor belt VSI TW

- ➪ Pull conveyor belt on support bar to the right.

  Conveyor belt has been decoupled from drive.
- ➪ Use both hands to hold on to the sides of the center of the conveyor and remove it downwards.
- ➪ Carefully place conveyor on an even surface.

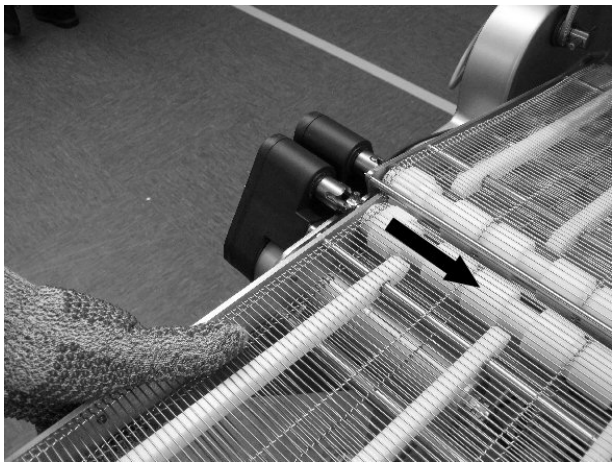

Fig. 67: Decouple conveyor belt VSI TW

Weighing conveyor VSI TW

- ➪ Lift weighing conveyor on the back, lift up right shaft end from the guidance.
- ➪ Remove weighing conveyor from the coupling to the right.

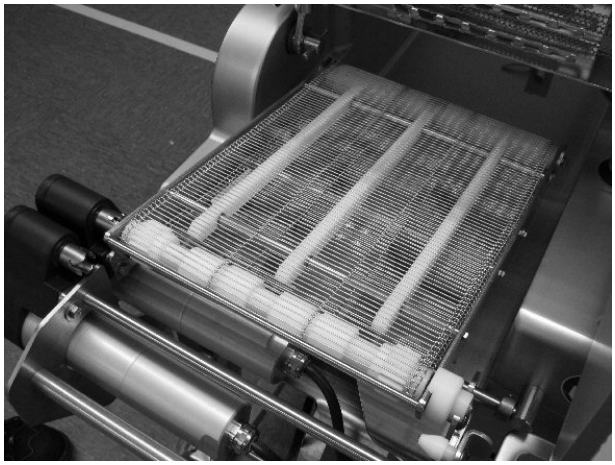

Fig. 68: Weighing conveyor

Depositing arm

- ➪ Loosen screw connection and remove hub of depositing arm from bearing to the right.

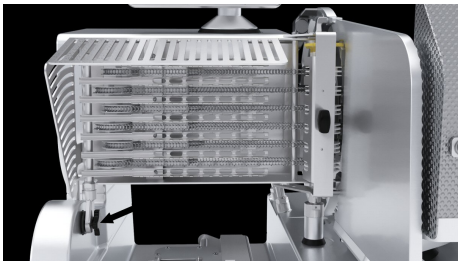

Fig. 69: Depositing arm

Shaving deflector

- ⇨ Loose screw.
- ⇨ Remove shaving deflector from chain-frame first to the operator side and then down.

Fig. 70: Shaving deflector

Chain frame

CAUTION! Risk of injury at chain spikes.

- ⇨ Using the right hand, swivel feed roller to the left and hold it firmly.
- ⇨ Using the left hand lift the complete chain frame out of the bearing in the upward direction.
- ⇨ Put chain frame aside with rear side downward.

Fig. 71: Chain frame

Guide cam

- ⇨ Loosen clamp handle on frame and remove guide cam from between the conveyor chains.

NOTICE! Twisted guide cam or chain spikes can cause malfunctions.

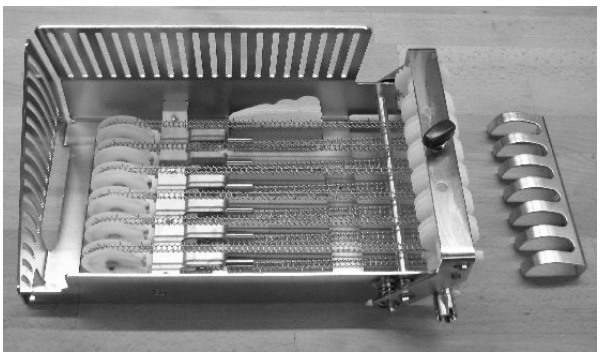

Fig. 72: Guide cam

Product holder, 400 mm carriage

- ➪ Loosen star knob.
- ➪ Remove product holder in upward direction.

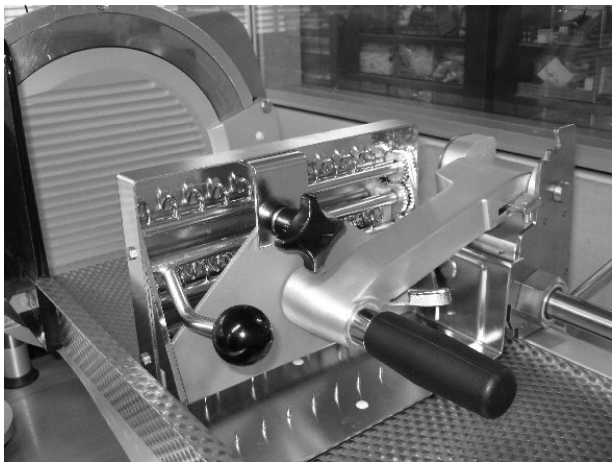

Fig. 73: Product holder

Feeding carriage, 400 mm carriage

CAUTION! Risk of injury at driver spikes.

- ➪ Take hold of product holder handle, loosen locking lever and swivel upwards until snapped into place.
- ➪ Loosen star grip screw on the product holder guide and remove product support plate.

Fig. 74: Feeding carriage

Product holder

- ➪ Loosen the star-grip handle on the product holder guide.
- ➪ Remove product holder in upward direction.

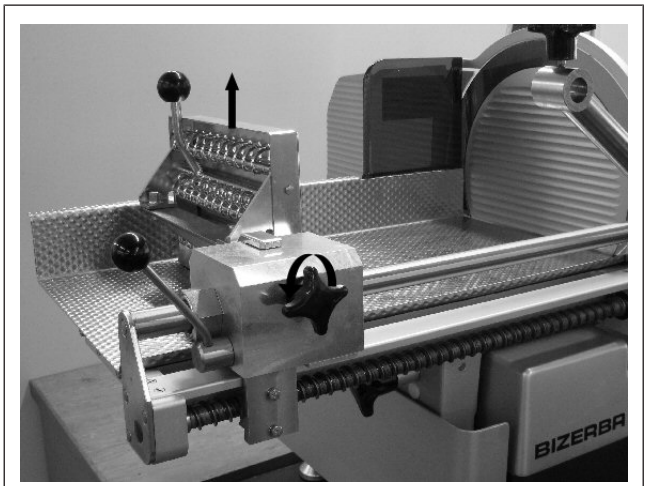

Fig. 75: Product holder

Product fixation device, vertical

- ➪ Loosen star knob on guide element.
- ➪ Remove product fixation device.

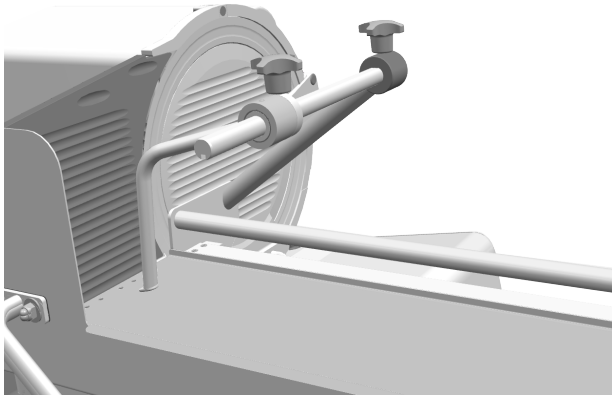

Fig. 76: Product fixation device, vertical

Product fixation device, horizontal

CAUTION! Do not reach into path of product fixation device.

- ➪ Swivel product fixation device up by pressing the lever.

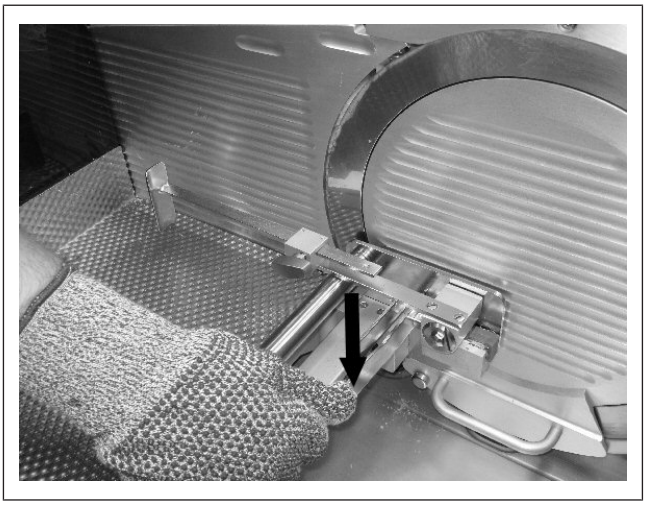

Fig. 77: Product fixation device, horizontal

- ➪ Release clamp handle on guidance.
- ➪ Remove fixation plate out of guidance upwards.

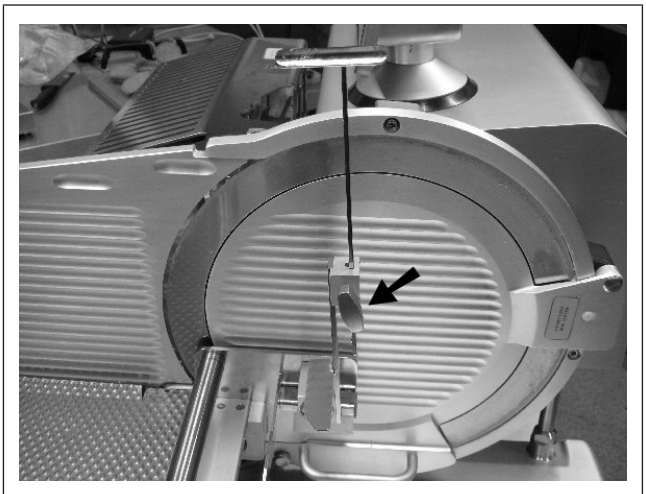

Fig. 78: Product fixation device, horizontal

Blade cover

- ➪ Hold blade cover at handle.
- ➪ Loosen lock behind the blade guard ring and remove blade cover.

Fig. 79: Blade cover

Deflector

CAUTION! Risk of injury on deflector edge.

- ➪ Loosen deflector from magnet lock and swivel it upwards.

Fig. 80: Deflector

Cover interface ports

- Cover the USB port of the display and operating unit using the captive cap.
- Cover the Ethernet port of the machine housing using the captive cap.

Fig. 81: Cover interface ports

Now the machine is ready for cleaning.

8.3 Cleaning

Remove the plug and protect against moisture before cleaning.

NOTICE

High-pressure cleaner!

If water gets into the machine it can damage electric components.

– Do not use high-pressure cleaner for cleaning purposes, rinse off machine with a water pipe.
– The USB / Ethernet ports must be covered using a protective cap if no cable is plugged in.
– Cover the machine when the surroundings are cleaned with spray and/or pressurized water.

Blade cleaning

- ⇨ Press a wet disposable cleaning cloth against the blade surface and slowly wipe away from the center.
- ⇨ Clean the back of the blade in the same manner.
- ⇨ After this process, repeat using a dry disposable cleaning cloth.

Fig. 82: Blade cleaning

- ⇨ Thread a moist disposable cleaning cloth into the front between blade and guard ring.
- ⇨ Use your hands to turn the blade and the disposable cleaning cloth; while you are doing so, press the cloth lightly against the inside of the guard ring.

Fig. 83: Blade guard ring

Fixed machine parts

➪ Clean, rinse and sanitize all surfaces including deflector as per cleaning plan.

Fig. 84: Machine housing

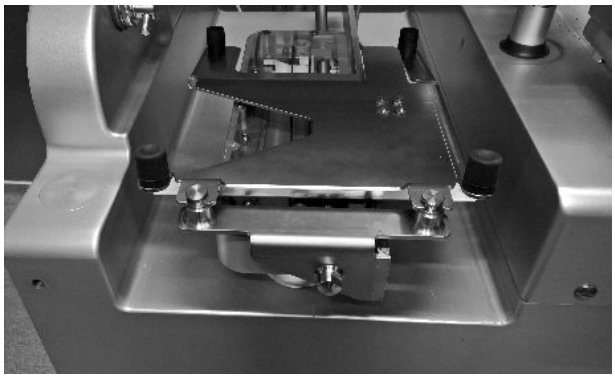

Fig. 85: VSI scale

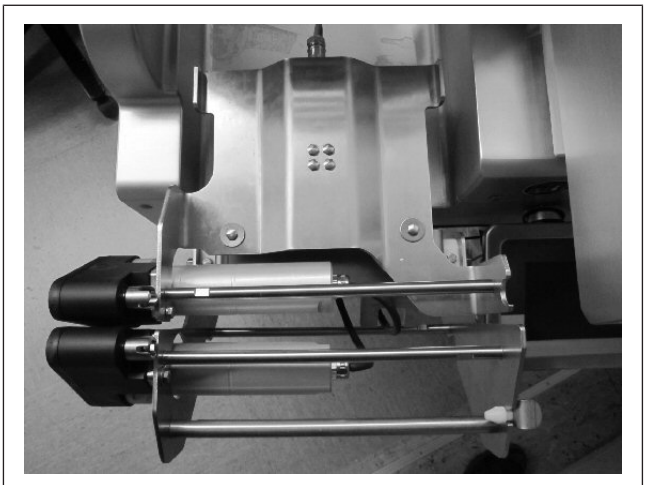

Fig. 86: VSI T scale

➪ Wipe gauge plate away from blade. Never wipe towards the blade.

Fig. 87: Gauge plate

➪ Wipe carriage.
➪ Clean carriage tray - side with a cloth, scrubber an brush.
➪ Leave surfaces dry in the air.

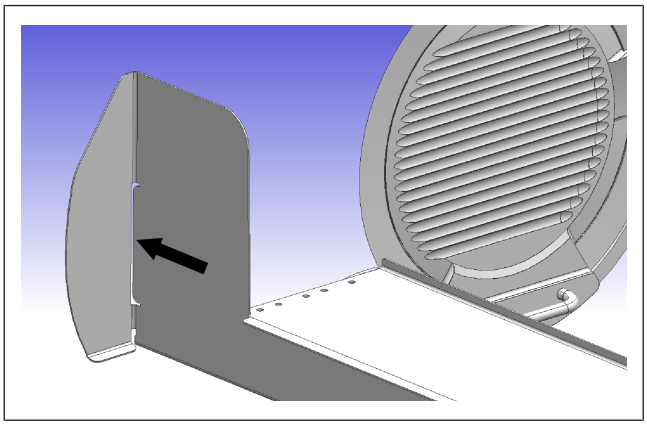

Fig. 88: Carriage

The scale must be dry to avoid a force shunt during operation.

Removed parts

➪ Clean removed parts in warm water using a soft cleaning agent. Leave to dry in the air.

Do not clean blade cover in the dishwasher.

8.4 Cleaning plan for slicing machines

Work steps	Recommended cleaning agents	Procedure	Cleaning devices	Notes
Preparatory measures		according to instruction manual [▷ 63]		
Disassemble all removable parts		according to instruction manual [▷ 64]		
Rough cleaning		Remove any product remnants manually	Plastic deflector, plastic spatula, brush	Start immediately after production has finished, if necessary, begin with the removed parts
Cleaning	1% P3-steril	after thorough pre-rinsing with water (max. 50°C, depend. on when grease can be easily removed)	manual, brush, tray, disposable cleaning cloth	all disassembled and permanent parts of machine
			Manual spray device	* see comment
			Dishwasher	removed parts except blade cover
Acid cleaning Additional measure	squirt some P3-riksan in the pail application time is max. 15 min.	manually, mechanically	Brush for removing lime residue	only if required for lime residue rinse directly after cleaning
		foam	Manual spray device	* see comment
Disinfection Additional measure	P3-alcodes use in concentrated form Application time according to product data sheet	Manual	Disposable cleaning cloth	should be completely wet
		spray	Manual spray device	* see comment Add. safety: distance to surface when spraying, 0.30 m
Rinse	Drinking water	Max. 50°C temperature depend. on when grease can be easily removed	Disposable cleaning cloth	other machine
			Water hose Manual spray device	removed parts

Work steps	Recommended cleaning agents	Procedure	Cleaning devices	Notes
Checking		visually on optical cleanliness		
Drying		rub dry or leave to dry	Disposable cleaning cloth	Leave dismantled parts apart from one another to dry
Care Additional measure	Bizerba H1-Service-Oil	apply to shaft and bearing according to instruction manual [▷ 85]	Disposable cleaning cloth	Product-parts that touch products must be rinsed before commencing operations
Mounting		in reverse order of disassembly, see instruction manual [▷ 78]		Personnel must have clean and disinfected hands
Precautionary measures	Cover the machine when the surroundings are cleaned with spray and/or pressurized water			

☞ * Comment: Appropriate precautionary measures have to be taken to ensure that no damage is done to the environment!

☞ The safety sheets and product sheets supplied with the cleaning and disinfectants must be read.

If cleaning agents are used that have not been recommended by the manufacturer, damage can be caused to the machine, which is no longer protected by guarantee.

☞ This machine must be cleaned and disinfected in regular time intervals in order to meet national, legal and/or local health regulations.

☞ If a chemical cleaning agent except chlorine, iodine or quaternary ammonium is used, it must be applied as per instructions of the approved EPA identification.

☞ Depending on the product, there could still be a risk from viruses and bacteria which cannot be completely eliminated despite regular cleaning.

The cleaning agent can be acquired from the BIZERBA customer services:

Designation	Order no.	Packaging unit
P3-steril	50003250000	5 liters
P3-riksan	50003270000	5 liters
P3-alcodes	50003260000	5 liters
H1-Service-Oil	94008900022	400 ml

8.5 Preparing the machine for operation

Attach the components as follows:

Deflector

CAUTION! Risk of injury on deflector edge.

- ⇨ Move deflector downward up to magnetic lock while observing exact positioning in recess of blade guard ring.

Fig. 89: Deflector

Blade cover

- ⇨ Hold blade cover at handle, tilt towards blade and fix into position with the stud.
- ⇨ Fasten lock behind blade guard ring.

NOTICE! Do not mix up with covers of other machines.

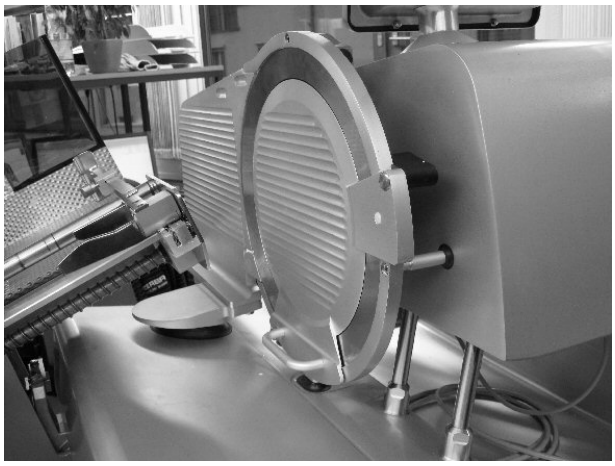

Fig. 90: Blade cover

Carriage

CAUTION! Risk of being crushed between carriage and housing.

- ⇨ Tilt the carriage in the direction of the arrow.
- ⇨ Using handle, screw into place on the carriage foot.

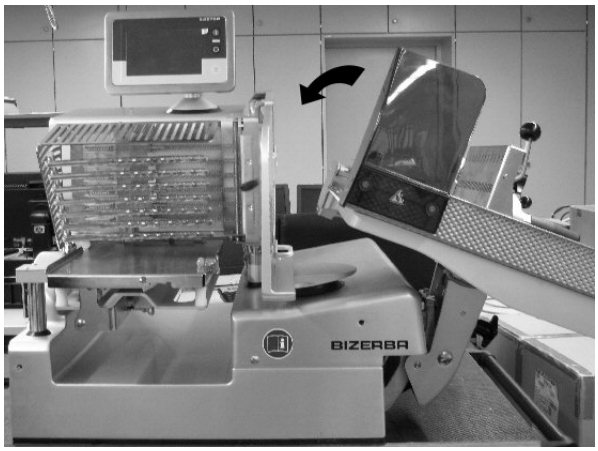

Fig. 91: Tilt in carriage

Feeding carriage, 400 mm carriage

CAUTION! Risk of injury at driver spikes.

- ⇨ Insert the product support plate into the channel along the sliced product holder guide and screw tight with the star grip screw.

Fig. 92: Feeding carriage

Product holder, 400 mm carriage

CAUTION! Risk of jamming between product holder and gauge plate.

- ⇨ Hold on to the handle on the product holder, loosen the clamping device using the lock lever and move it downwards.
- ⇨ Position the top of the product holder at the relevant fixtures and screw tight with the star grip screw.

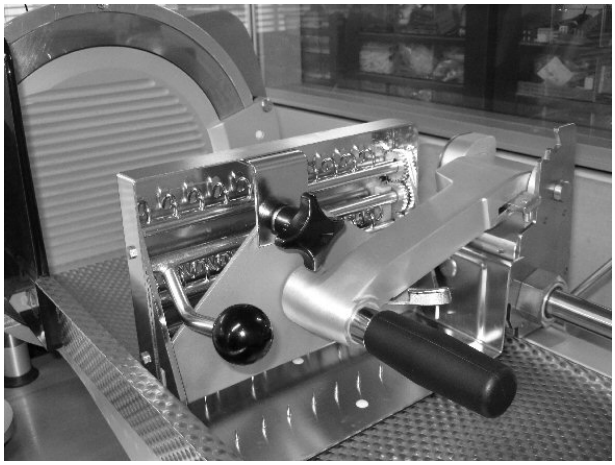

Fig. 93: Product holder

Product holder

- ⇨ Insert product holder in groove.
- ⇨ Screw tight using the star grip screw.

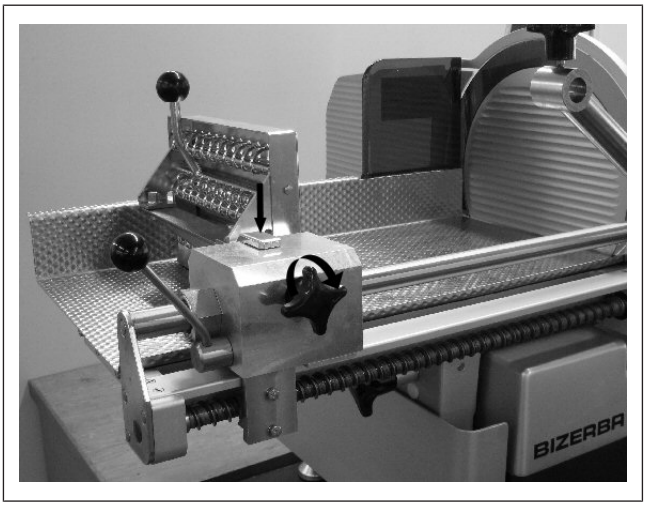

Fig. 94: Product holder

Product fixation device, vertical

- ⇨ Push product fixation device onto guide element, tighten star knob.

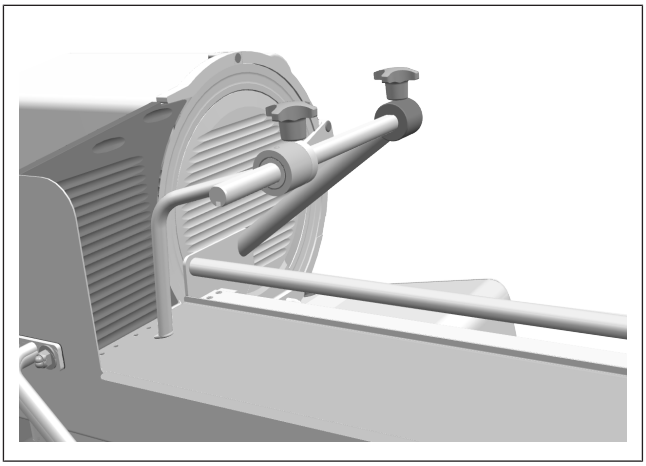

Fig. 95: Product fixation device, vertical

Product fixation device, horizontal

- ⇨ Push fixation plate in guidance from top and fasten clamp handle.

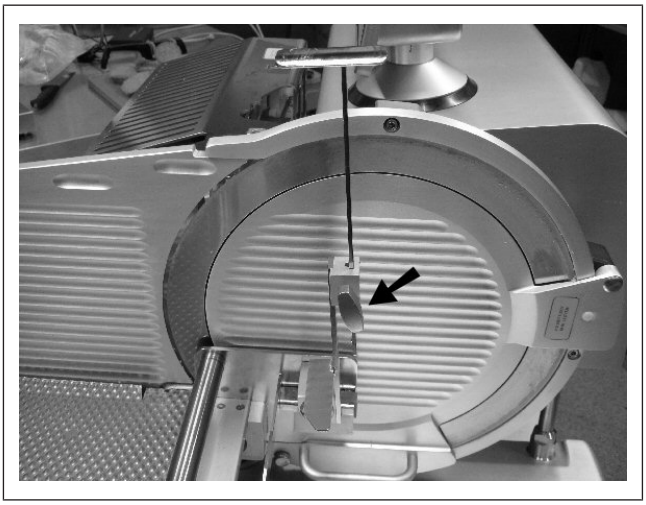

Fig. 96: Product fixation device, horizontal

Guide cam

- ➪ Insert guide cam between the transport chains and fasten it using the clamp handle.
- ➪ By turning the feed roller check if chains are mounted correctly.

NOTICE! Twisted guide cam or chain spikes can cause malfunctions.

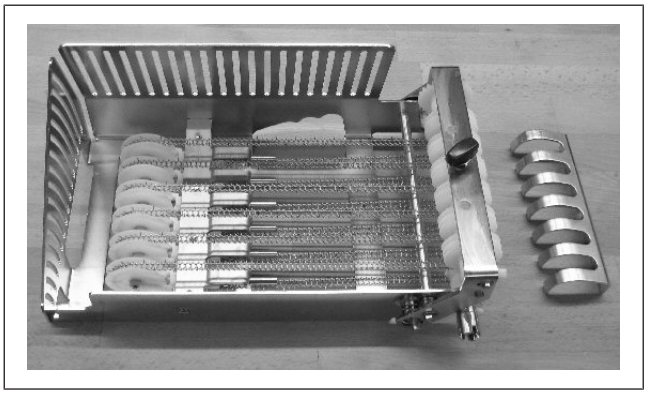

Fig. 97: Guide cam

Chain frame

CAUTION! Risk of injury at chain spikes.

- ➪ Install chain frame with swiveled in feed roller from the top in the holding fixtures and drive shaft.

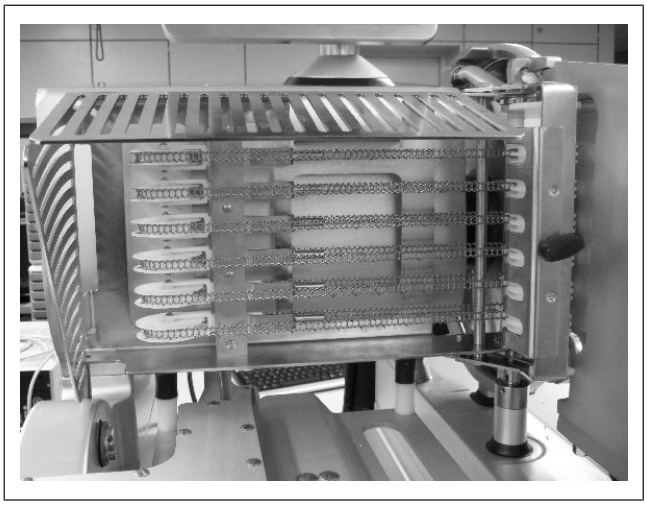

Fig. 98: Chain frame

Depositing arm

- ➪ Push depositing arm onto carriage shaft and turn until the hub catches the groove.
- ➪ Tighten.

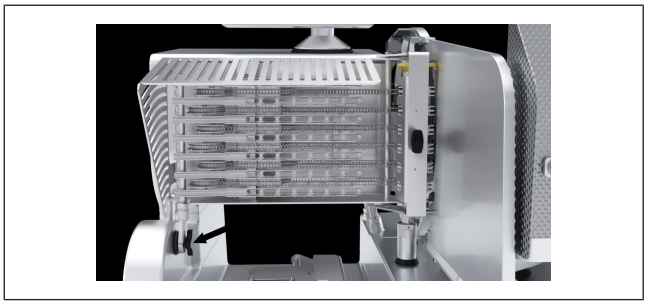

Fig. 99: Depositing arm

Shaving deflector

- ⇨ Push shaving deflector up to fit the sheet metal in the groove of the chainframe first, then push it away from the operator.
- ⇨ Tighten screw.

Fig. 100: Shaving deflector

Depositing table VSI, VSI W

- ⇨ Insert slightly tilted depositing table backwards in guidance and push it downwards.

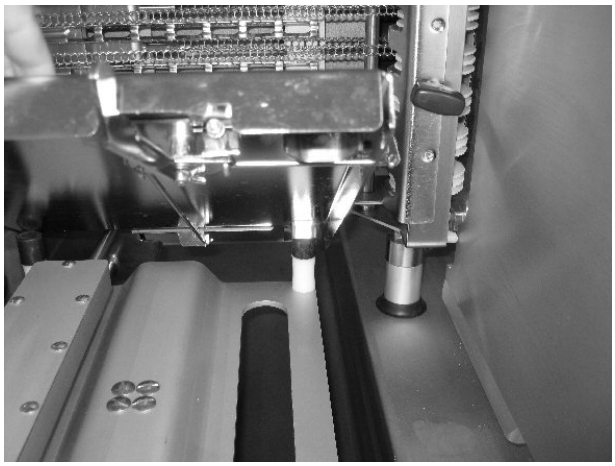

Fig. 101: Attaching the depositing table

Conveyor VSI T

- ⇨ Use both hands to hold on to the sides of the conveyor belt.
- ⇨ Put the belt bearing down onto the take-up pin, keeping it in a slight tilted position.

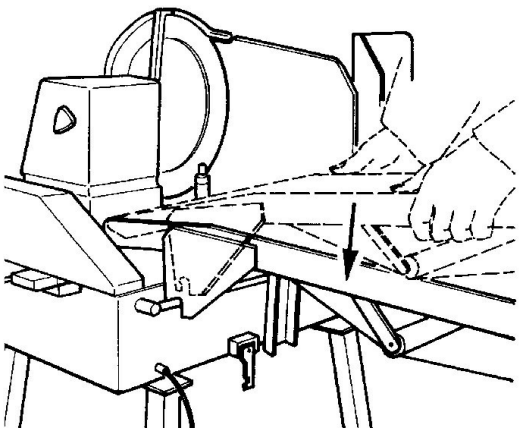

Fig. 102: Insert conveyor belt VSI T

➪ Push the conveyor as far as it will go towards the coupling, if necessary turn the drive shaft until it connects with the coupling bolts.

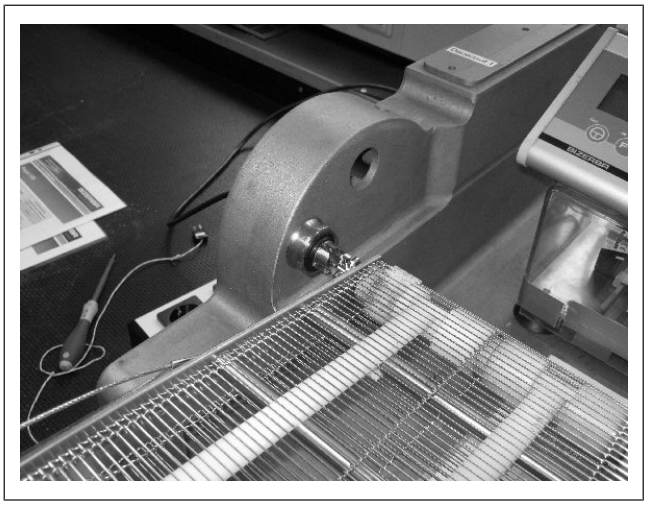

Fig. 103: Couple conveyor belt VSI T

➪ Secure the conveyor belt by setting the lock at the belt support.

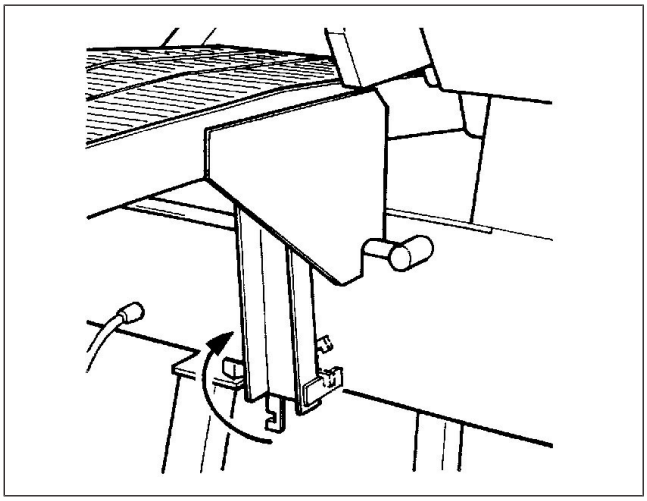

Fig. 104: Lock conveyor belt VSI T

Weighing conveyor VSI TW

➪ Bring the weighing conveyor in a slightly inclined position on the left into the coupling, if necessary turn the drive shaft until it connects with the coupling bolts.

➪ Place right shaft end into the guidance, lower weighing conveyor at the back.

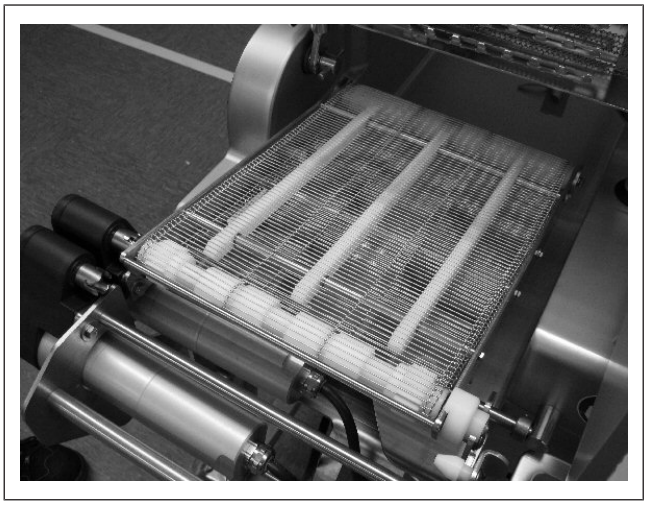

Fig. 105: Weighing conveyor

Conveyor VSI TW

- Use both hands to hold on to the sides of the conveyor belt, place onto support bar with the recesses and move to the right as far as it will go.

Fig. 106: Attach conveyor belt VSI TW

- Lift conveyor belt and push it to the left towards the coupling. If necessary turn the drive shaft until it connects with the coupling bolts.

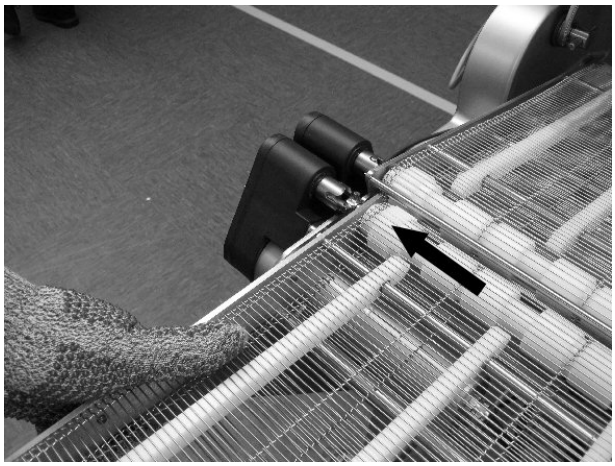

Fig. 107: Couple conveyor belt VSI TW

- Push lock at belt support towards the front.

  Conveyor belt is coupled and secured.

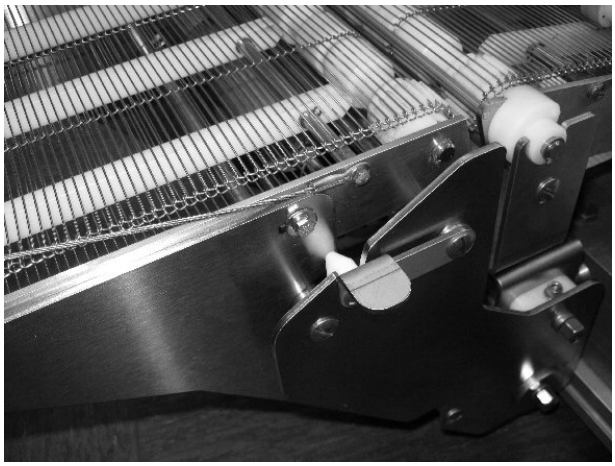

Fig. 108: Lock conveyor belt VSI TW

Light sensor

➪ Push the top of the light barrier into the holder.

Fig. 109: Light sensor

⚠ WARNING

Missing components!

The operator can only be protected from injuries and the machine protected against damage if all the components of the machine are assembled properly.

– Check if the machine is complete before it is re-started.
– Check if components are positioned correctly and firmly.
– Only use original Bizerba spare parts and accessories.

8.6 Service and maintenance

➪ The entire machine must be thoroughly cleaned based on usage, but at least twice a day.

① Product holder guide shaft
② Lift pipe and shaft on table guide
③ Ball bearing
④ Ball bearing
⑤ Guide roller (6 units)
⑥ Carriage shaft

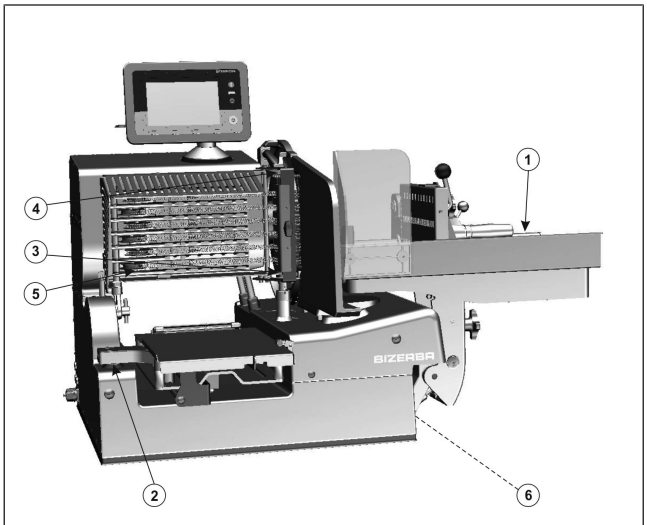

Fig. 110: Lubricate

➪ After every cleaning, lubricate positions 1 to 6 lightly with oil from the accessories kit.
➪ Re-sharpen blade if necessary.

➪ When necessary, clean or exchange the grinding discs. Caution. **Please, note! Left-handed thread!**

At an annular gap of more than 6 mm between blade and blade guard, the sharpener no longer has a sharpening effect and the blade has to be replaced by the Bizerba Service.

⚠ WARNING

Changing the blade!

Severe injuries and damage to property.

– For safety reasons, the blade may only be changed by Bizerba customer service.
– Wear cut-proof gloves and shoes with toe caps.

8.6.1 Blade sharpening

Re-sharpening of the blade is necessary if the slicing result is unsatisfactory.

The time intervals are dependent on the wear and tear of the blade and its operating usage as also the properties and conditions of the product.

Sharpener

The sharpener identified by the machine number has been adjusted for this machine.

The device is fitted with a coarse sharpening stone and a finely grained honing stone. Dirty or greasy sharpening stones do not sharpen well.

➪ Before sharpening, clean with brush and solving detergent.

➪ If sharpening stones are worn, replace stones.

Replacement parts are supplied by Bizerba customer services.

When replacing, do not confuse sharpening and honing stones.

Preparation for sharpening

⚠ WARNING

Unprotected blade!

Coming in contact with the sharp blade can lead to serious injuries.

– Wear cut-proof gloves when cleaning and sharpening.
– Do not clean the blades when operating the machine.

- The machine is cleaned. The blade is clean.
- The machine is switched on.
- The main page comes up on the touch screen.

- ➪ Press icon on the navigation bar.
  Instructions on the further operating procedure appear on the touch screen.
- ➪ Confirm removal of chain frame and blade cleaning by pressing <Confirm/Accept>.
- ➪ Confirm removal of blade from oil by pressing <Confirm/Accept>.

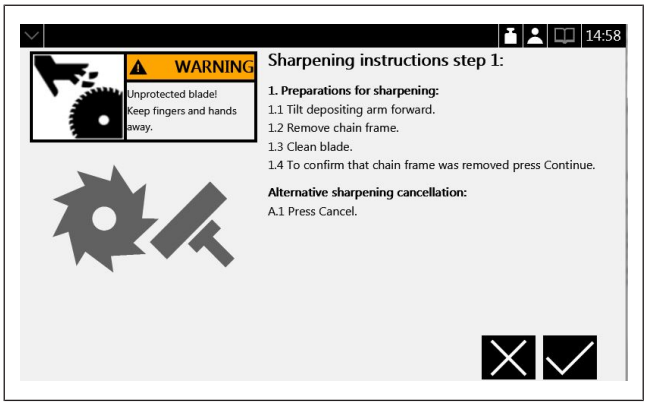

Fig. 111: Instructions on the further operating procedure

Attaching the sharpener

WARNING! Risk of injury on open blade.

- Blade is not running and gauge plate is open.
- Set handwheel marking on sharpener to "0".

- ➪ Move carriage to relevant position.
- ➪ Mount sharpener to gauge plate from the top.

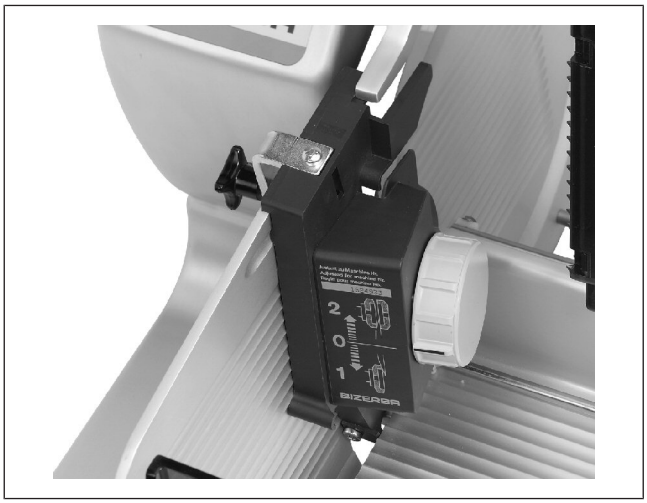

Fig. 112: Attaching the sharpener

- ➪ Push the sharpener and carriage towards the blade until the adapter contacts the front of the blade guard ring.
- ➪ Keep the sharpener in this position and use the star knob to screw it to the gauge plate.

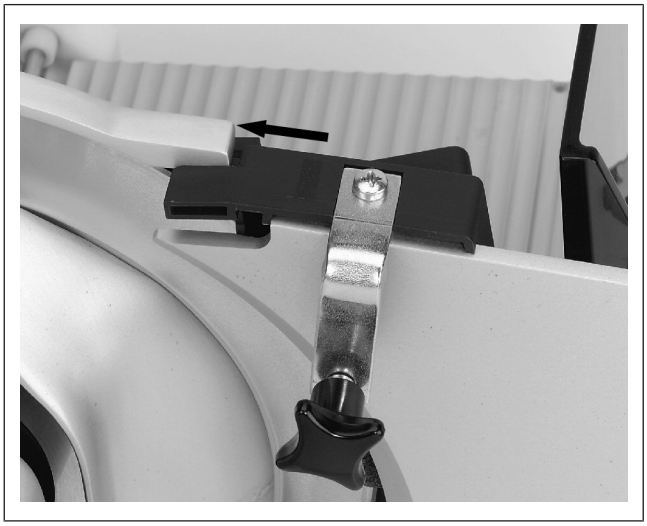

Fig. 113: Clamping the sharpener

8.6.2 Sharpening

➪ **Wear eye protection!**

Hearing protection is recommended.

➪ Start blade drive by pressing <Execute>.
➪ Set marking to "1".
The sharpening stone is engaged.
➪ Sharpen until right blade edge shows a burr.
➪ Set marking to "0".
➪ Stop blade drive by pressing <Execute>.
Wait until the blade finishes rotating.

Fig. 114: Marking set to "1"

Check the grinding device

➪ Using a pen or pencil, touch the right edge of the blade while moving the pen from inside to outside.

Burr must be noticeable, otherwise the sharpening procedure must be repeated.

8.6.3 Honing

➪ Start blade drive by pressing <Execute>.
➪ Set marking to "2".
The honing stone is engaged.
➪ Hone until right-hand blade edge shows a honing bevel (approx. 3 sec.).
➪ Set marking to "0".
➪ Stop blade drive by pressing <Execute>.
Wait until the blade finishes rotating.

Fig. 115: Marking set to "2"

Removing sharpener

- The blade is now sharpened.

➪ Pull sharpener back after loosening the star grip screw and remove to the top.
➪ Confirm removal of sharpener by pressing <Confirm/Accept>.

- On the display and operating unit press <Execute>.
  The gauge plate closes.
  CAUTION! Risk of crushing between gauge plate and rear wall, carriage, product holder, blade.
- Perform cleaning. [▷ 63]
- Prepare machine for operation. [▷ 78]

8.6.4 Checking seals and sealings

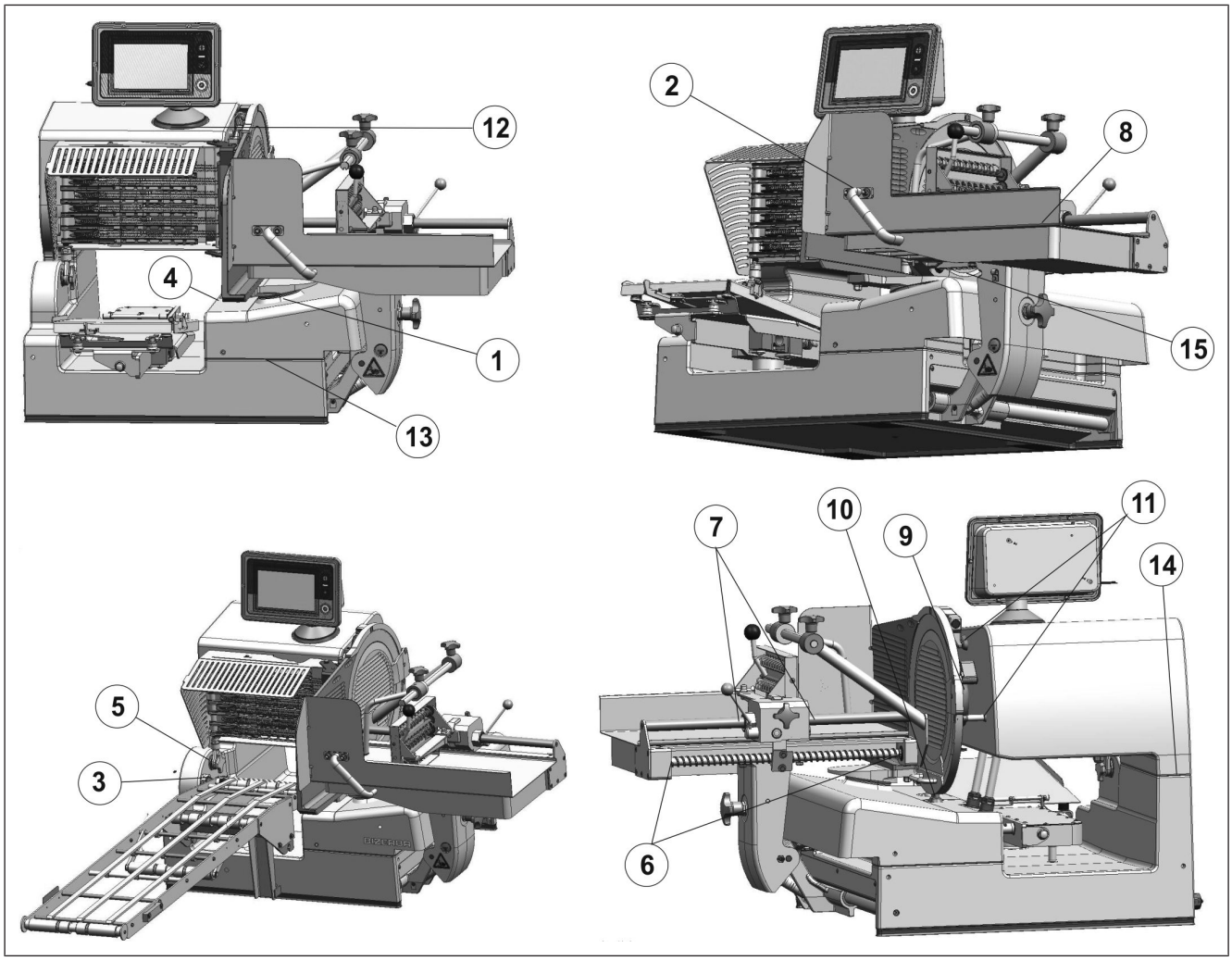

Fig. 116: Installation points for seals and sealings

Installation points for seals and sealings between the following parts:

① Gauge plate - machine housing
② Carriage plate - handle
③ Conveyor belt - machine housing
④ Chain frame - machine housing
⑤ Depositing arm - machine housing
⑥ Spindle - carriage 2x
⑦ Product holder guide shaft - Product holder guidance 2x
⑧ Carriage plate - carriage mounting
⑨ Blade - machine housing
⑩ Blade guard - machine housing
⑪ Blade guard - machine housing 2x
⑫ Display and operating unit - machine housing
⑬ Drive housing - machine housing
⑭ Drive housing - motor tower
⑮ Carriage mounting - carriage foot

➪ Seals and gaskets 1 to 15 used in food and splash water areas need to be checked.
➪ The time distance between the checks must be less than 12 months.
➪ The checks need to be done by the manufacturer or one of his service agents.

⚠ WARNING

Damaged or missing seals and sealings!

Damage to health, damage to objects.

– In case of missing or damaged sealings the slicer must no longer be operated until the damage is remedied.

9 Technical data

9.1 Dimensions of VSI / VSI W with carriage 400 mm

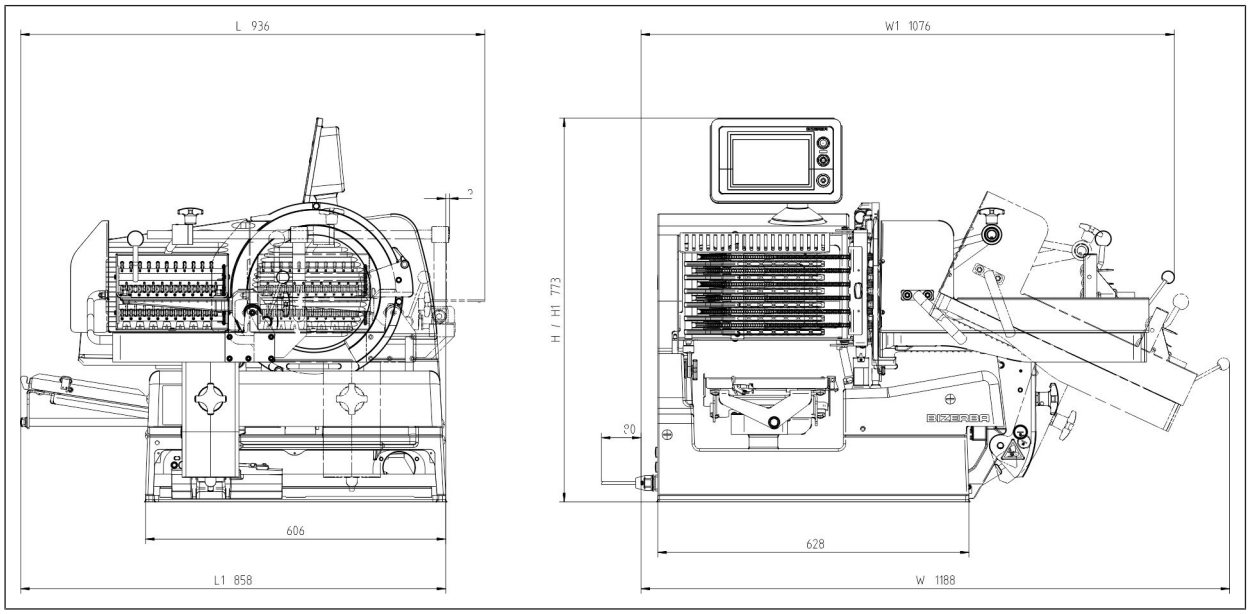

Fig. 117: Dimensions of VSI with carriage 400 mm

Outer dimensions:

Length	L1 = 858 mm = 33.8"
Width	W1 = 1076 mm = 42.4"
Height	H1 = 773 mm = 30.4"

Installation surface:

Length	L2 = 606 mm = 23.9"
Width	W2 = 628 mm = 27.7"

Work area:

Length	L = 936 mm = 36.9"
Width	W = 1188 mm = 46.8"
Blade diameter	330 mm = 13"
Depositing table	340 x 250 mm

9.2 Dimensions of VSI / VSI W with carriage 600 mm

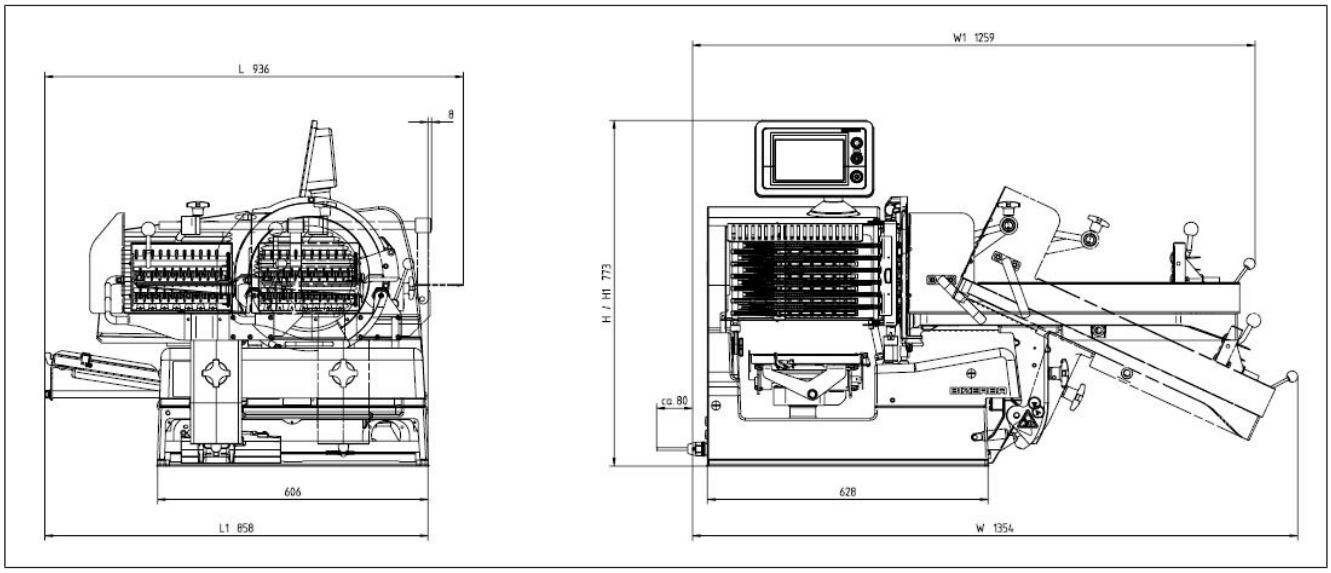

Fig. 118: Dimensions of VSI with carriage 600 mm

Outer dimensions:

Length	L1 = 858 mm = 33.8"
Width	W1 = 1259 mm = 49.6"
Height	H1 = 773 mm = 30.4"

Installation surface:

Length	L2 = 606 mm = 23.9"
Width	W2 = 628 mm = 24.7"

Work area:

Length	L = 936 mm = 36.9"
Width	W = 1354 mm = 53.3"
Blade diameter	330 mm = 13"
Depositing table	340 x 250 mm

9.3 Dimensions VSI T

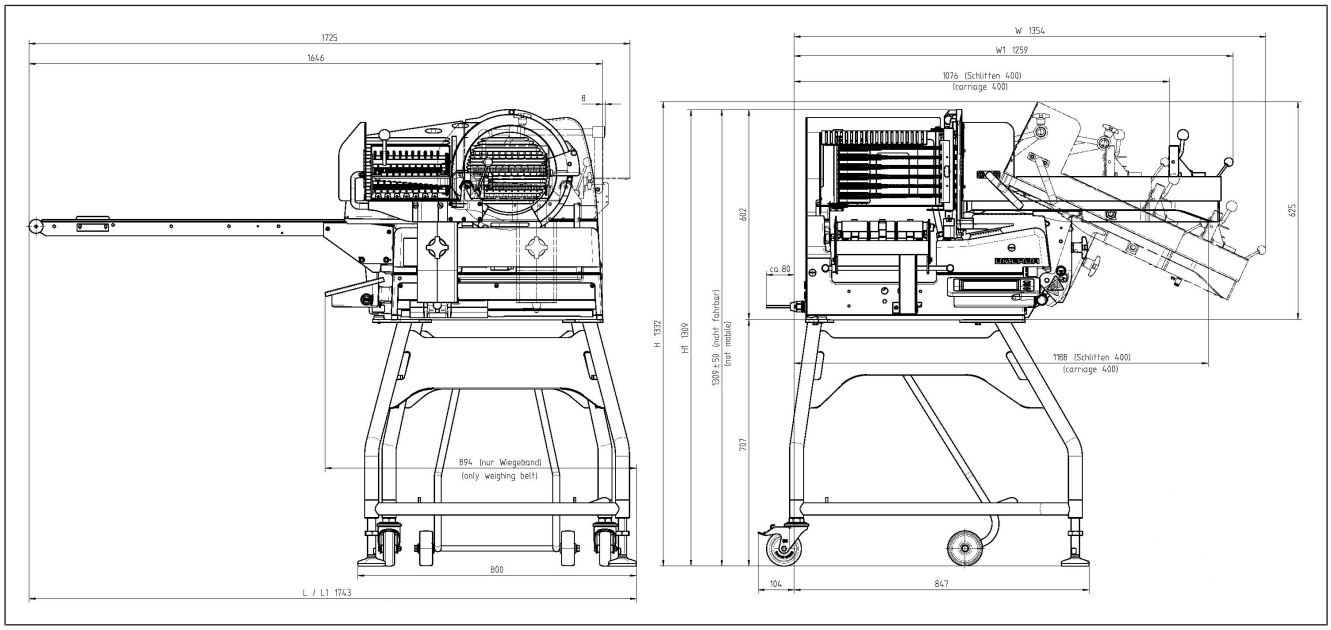

Fig. 119: Dimensions VSI T

Outer dimensions:

Length	L1 = 1727 mm = 68"
Width	W1 = 1259 mm = 49.6"
Height	H1 = 1302 mm = 51.3"

Installation surface:

Length	L2 = 769 mm = 30.3"
Width	W2 = 835 mm = 32.9"

Work area:

Length	L = 1727 mm = 68"
Width	W = 1354 mm = 53.3"
Blade diameter	330 mm = 13"
Conveyor belt, applicable length	850 mm
Conveyor belt, applicable width	250 mm

9.4 Dimensions VSI TW

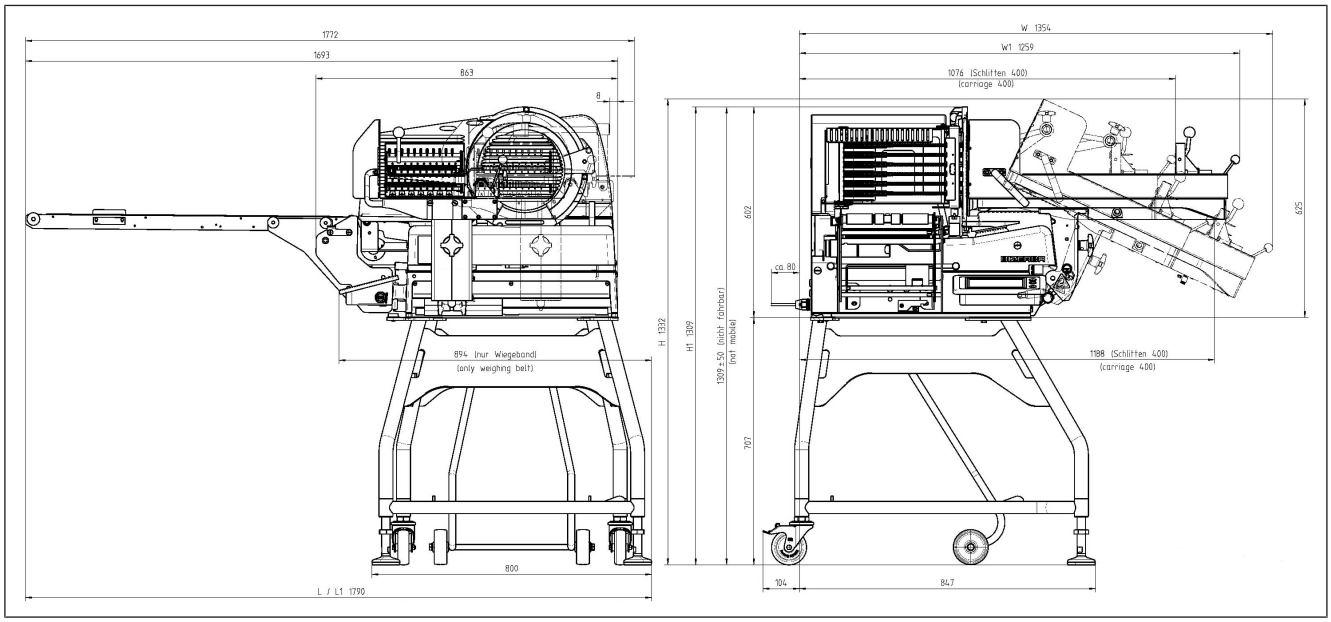

Fig. 120: Dimensions VSI TW

Outer dimensions:

Length	L1 = 1775 mm = 69.9"
Width	W1 = 1259 mm = 49.6"
Height	H1 = 1302 mm = 51.3"

Installation surface:

Length	L2 = 769 mm = 30.3"
Width	W2 = 835 mm = 32.9"

Work area:

Length	L = 1775 mm = 69.9"
Width	W = 1354 mm = 53.3"
Blade diameter	330 mm = 13"
Conveyor belt, applicable length	325 + 950 mm
Conveyor belt, applicable width	250 mm

9.5 Technical data

	VSI / VSI W	VSI T	VSI TW
Product size, round with depositing system	50 to 180 mm = 2" to 7.1"	50 to 180 mm = 2" to 7.1"	50 to 180 mm = 2" to 7.1"
Product size, rectangle	50 x 50 to 180 x 240 mm = 2" x 2" to 7.1" x 9.4"	50 x 50 to 180 x 240 mm = 2" x 2" to 7.1" x 9.5"	50 x 50 to 180 x 240 mm = 2" x 2" to 7.1" x 9.5"
Slice thickness adjustment with depositing system	0.3 to 12 mm	0.3 to 12 mm	0.3 to 12 mm
Number of carriage strokes	30 to 80 strokes/min depending on product sizes		
Blade speed	266 r/pm		
Weight machine	approx. 122 kg = 269 lb	approx. 137 kg = 302 lb	approx. 137 kg = 302 lb
Gross weight	approx. 154 kg = 340 lb	approx. 176 kg = 388 lb	approx. 176 kg = 388 lb
Weight, stand	approx. 70 kg = 154.3 lb		
Checkweigher Weighing range Digit interval	 50 - 2000 g = 0.1 - 4.5 lb 1 g = 0.002 lb	without scale	 50 - 2000 g = 0.1 - 4.5 lb 1 g = 0.002 lb
Noise level during normal operation	the noise emission value according to DIN EN 11202 at the workstation is lower than 70 dB(A), related to the entire machine		
Noise level during sharpening	the noise level reaches temporarily up to 82 dB(A)		
Types of current, voltages, power consumption	see identification plate		

9.6 Power supply

Technical data of power supply

– **Mains supply**
  Single-phase alternating current, see rating plate
– **Permissible mains voltage tolerance (static) normal**
  At 100 to 400 V: +6% to - 10% of nominal value
– **Mains frequency: 50 (60) Hz**
  Permissible tolerance of mains frequency: +2% to -2% of nominal value

Admissible distortion factor of mains voltage: less than or equal to 5 %

– Leakage current protective conductor max.: 3.5 mA

9.7 Ambient conditions

– **Ambient temperature**

  for operation and storage: -10 to +40°C (+14 to +104 degF)

– **Humidity**

  Protection type IP X5. High air humidity and the formation of condensation water can result in damage to the machine.

– **Relative humidity**

  for operation and storage: 90 % (condensation of the unit is not permissible)

– **Air convection**

  Free air convection must be able to form around the device in order to avoid overheating.

– **Required lighting**

  500 Lux

10 Attachment

10.1 Parameter defaults and input ranges

Parameter symbol	Parameter name	Default value	Minimum	Maximum
	Depositing type	 Stacking		
	Depositing offset crosswise	0 mm	0 mm	210 mm
	Depositing offset lengthwise	0 mm	0 mm	185 mm
	Depositing area width	240 mm	100 mm	500 mm
	Depositing area length	120 mm	100 mm	500 mm
	Depositing area height	90 mm	10 mm	90 mm
	Number of slices	75 slices per stack 5 slices per shingle or circle	1	9999
	Slice thickness	1.2 mm	0.3 mm	12.0 mm
	Shingling distance, shingling lengthwise	7 mm	3 mm	185 mm
	Shingling distance, shingling crosswise	7 mm	3 mm	210 mm
	Shingling length, shingling lengthwise	240 mm	30 mm	240 mm

Parameter symbol	Parameter name	Default value	Minimum	Maximum
	Shingling length, shingling crosswise	201 mm	50 mm	260 mm
	Number of portions	9999	1	9999
	Product width	240 mm	50 mm	240 mm
	Product height	180 mm	50 mm	180 mm
	Product length	600 mm	0 mm	600 mm
	Product weight	6 kg	0 kg	25 kg
	Target weight	60 g	20 g	2000 g
	Reference weight	10.0 g/mm	1.0 g/mm	100.0 g/mm
	Number of rows crosswise	1	1	4
	Row spacing crosswise	10 mm	0 mm	100 mm
	Row spacing crosswise, shingles lengthwise	10 mm	-100 mm	100 mm
	Number of rows lengthwise	1	1	4
	Row spacing lengthwise	10 mm	0 mm	100 mm
	Row spacing lengthwise, shingles crosswise	10 mm	-100 mm	100 mm

Parameter symbol	Parameter name	Default value	Minimum	Maximum
	Circular diameter	240 mm with 12 slices 120 mm with 9 slices 60 mm with 6 slices	Product height Product width	240 mm
	Number of layers circular pattern	1	1	20
	Automatically close gauge plate	On		
	Blade speed	250 min^{-1}	100 min^{-1}	400 min^{-1}
	First cut program	Conveyor belt: 3 Slices Table: deactivated	1 slice	10 slices
	First cut discharge	Discharge to the front		
	Speed Discharge			
	Number of carriage strokes	60 min^{-1}	30 min^{-1}	80 min^{-1}
GF00	Stack depositing correction step correction factor	0.66	0.00	1.00
	Product feed offset	0.1 mm	-0.5 mm	0.5 mm

Parameter symbol	Parameter name	Default value	Minimum	Maximum
	Gauge plate offset	0.0 mm	-0.5 mm	0.5 mm