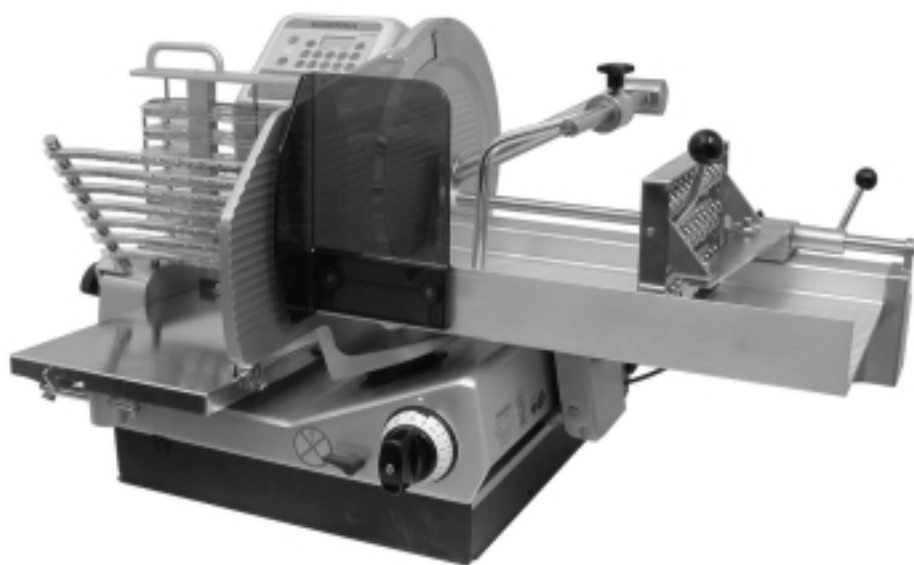


# OPERATING INSTRUCTIONS



MODEL

**VS 12 D-V**

VS 12 D-V/R

SLICER

**BIZERBA**

6.083.98.5.14.00

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## DECLARATION OF TYPE CONFORMITY

We declare herewith that the type of the machine described below

Definition: **Slicer**

Type: **VS 12 D-V, VS 12 D-V/R**

complies – in the version supplied by us – with the following regulations applying thereto:

EC machinery directive	98/37/EC
EC EMC directive	89/336/EEC
EC directive on electrical equipment designed for use within certain voltage limits	73/23/EEC

Applied harmonized standards and technical specifications:

Safety: DIN EN 1974	EMC: DIN EN 50081-2
DIN EN 60335-1/2-64	DIN EN 61000-6-2
DIN EN 60529	DIN EN 61000-3-2
	DIN EN 61000-3-3

Date: 2003/04/24

Any modification made to the machine described above without the prior permission of Bizerba will render this declaration invalid.

Notified body, verifying and certifying body  
'Fachausschuss  
Fleisch im BG-PRÜFCERT'

Notified body  
No. 0 391

Type examination  
certificate No. **03 004**

of 2003/03/27

Signature of manufacturer:

ppa.

Title of signatory:

Managing Director  
Dr. Wurster

**OPERATING INSTRUCTIONS**

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**VS 12 D-V**

VS 12 D-V/R

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Contact us or your local after-sales service, if any information is not properly understood.

**To provide operational assurance and to protect personnel from possible injuries, the requirements of these instructions must be met before the machine is set into operation and during operation.**

These instructions are subject to revision as further product development, experience and investigation may show is necessary or desirable. Graphics appearing in these instructions may differ slightly from the model supplied due to country-specific regulations. This does not affect the contents of these operating instructions.

- Equipment should only be transported and stored in its original packing.
  - Equipment should not be started up before the requirements of the Bizerba operating conditions are met.
  - The supporting area should be horizontal, level, stable and non-slippery. Equipment should be arranged in such a way as to facilitate operation, working procedures and service.
  - Initial installation, commissioning, introduction, cleaning, maintenance and servicing should only be carried out by the relevant BIZERBA after-sales service or by companies or personnel authorized by BIZERBA.
  - The use of hardware and software which may be necessary for a data dialog between BIZERBA and non-BIZERBA equipment is subject to written approval from BIZERBA.
  - Equipment should not be set into operation before supervisory and operating personnel have thoroughly read and understood these operating instructions.
- Only trained personnel should operate the equipment. Training should be repeated.
  - BIZERBA does not accept liability for damage arising as a result of installation by anyone other than BIZERBA-incorporated or designated representatives, faulty electrical connection by the user, improper operation, inappropriate use, modification of equipment in any way from its original form, removal of guards, the use of spare parts and accessories other than genuine BIZERBA parts or accessories.
  - The user will be responsible for any damage or injury arising as a result of failure to observe the BIZERBA instructions.
  - Therefore, it is strongly recommended to use only genuine BIZERBA spare parts and accessories.
  - Normal wear and tear are not covered by the guarantee.

## 1.2 Warning notice

- For the space required, see the technical data as per section 1.4.
- When operating the machine, pay special attention to all movable parts, especially to the blade and carriage.
- Prevent untrained personnel and especially children from operating the machine. Keep them away from the operating area of the machine.
- Persons with cardiac pacemaker implants are recommended to consult their doctor before operating the device (magnetic field).
- Do not tamper with any protective devices of the machine. Do not remove, change or bypass them. It may result in serious bodily injury.
- Operate concentrated.

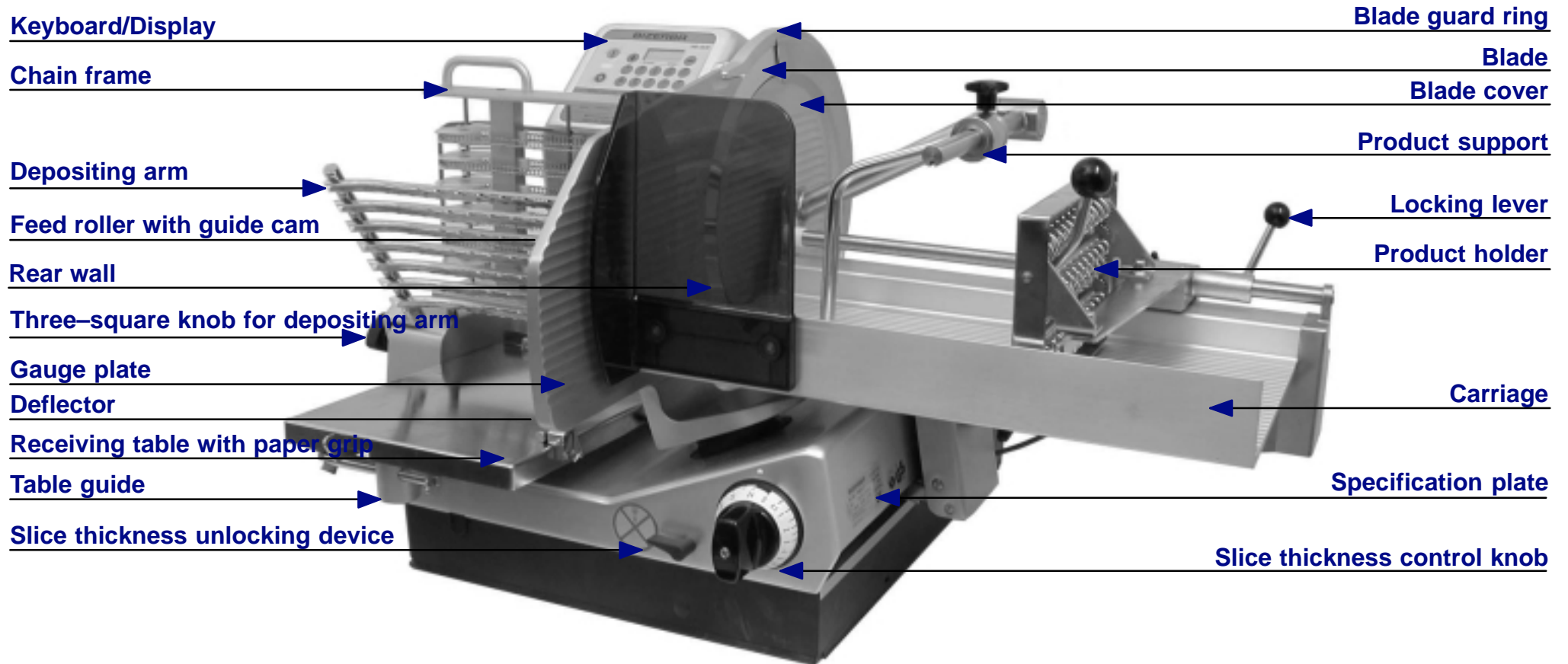
- Do not use the machine for products other than stated in the operating instructions.
- Do not cut frozen products.
- Have damaged power cables immediately replaced by a qualified and certified electrician or the relevant BIZERBA after-sales service.
- Keep the working place clean and dry. Provide a non-slippery supporting area.
- Keep the machine free of foreign objects.
- Before cleaning the machine, always disconnect the power cable from the mains.
- Immediately switch the machine off if there is any rough operation or obstruction.
- Contact the relevant BIZERBA after-sales service if you cannot eliminate occurring malfunctions yourself.

**The adjacent warning notice serves for your own safety and should be observed. Failure to comply with it could result in serious bodily injury.**



## 1.3 Overview/component description

### VS 12 D-V



Accessory kit (not illustrated), containing:  
 sharpener, special cardboard, cloth, handbrush  
 with special flat brush, BIZERBA oiler

## 1.4 Dimensional drawing/technical data

### VS 12 D-V

#### THE MOST IMPORTANT TECHNICAL DATA

Weight = ca. 72 kg  
 = ca. 158 lbs  
 Blade diameter = 330 mm = 13"  
 Number of blade revolutions = 266 r.p.m.  
 Number of carriage strokes = approx. 30 – 60 strokes/minute

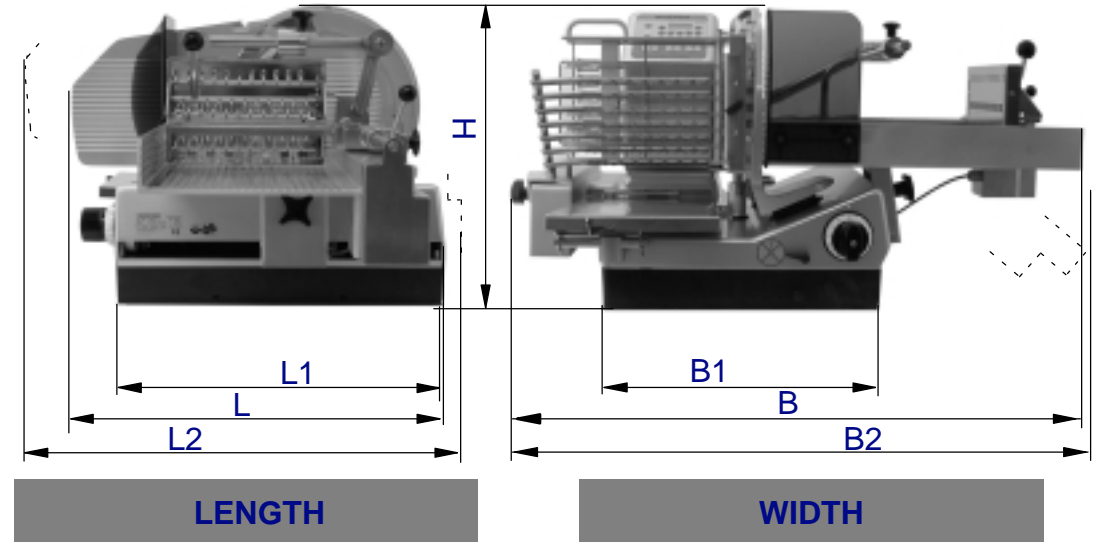
Product size with depositing arm  
 –round = min./max. 50/183 mm = 1.97/7.2"  
 –rectangular = min./max. 50x50/183x240 mm  
 = 1.97x1.97/7.2x9.4"

Product size without depositing arm  
 –round = 224 mm = 8.8"  
 –rectangular = 224x260 mm = 8.8x10.2"

Slice thickness control, infinitely variable  
 – with depositing arm = 0.5 to 8 mm = 0.02 to 0.31"  
 – without depositing arm = 0.5 to 24 mm = 0.02 to 0.94"

Type of current, voltage, power consumption = see specification plate

Receiving table = 254x346 mm = 10x13.6"  
 Paper size 1/8 sheets = 250x375 mm = 9.8x14.8"  
 Foil size = 240x360 mm = 9.4x14.2"  
 Table travel = 160 mm = 6.3"  
 Circular plate = 280 mm = 11"



	L	B	H
Outside dimensions	630 mm 24.8"	980 mm 38.57"	500 mm 19.68"
Supporting area	L1 510 mm 20.07"	B1 430 mm 16.92"	
Processing area	L2 800 mm 31.5"	B2 1000 mm 39.36"	

The VS 12 D–V can be operated in an **automatic mode** only.

This means carriage movement and product feed is motor driven.

An a. c. or a threephase motor drives the blade via a ribbed belt almost noiselessly.

The slicing machine is designed with an automatic slice depositing system which is capable of depositing slices having a thickness of up to 8 mm at maximum.

The depositing device is controlled via an encoder in relation to the carriage speed and the carriage stroke.

To insert the product, the **product holder** may be locked or unlocked.

Product holder can be removed during cleaning process.

The complete **machine housing**, the gauge plate, the blade cover and the carriage are made of anodized aluminium.

The **rear wall** consists of transparent, fracture-resistant and foodstuff-friendly plastics. All materials used in the food zone and processing area are designed in conformity with the applicable sanitation requirements. All bearings in the visual area are lubricated with lubricating agents permitted for use in food zones.

The depositing device consists of the following components:

the chain frame with transport rollers, the feed roller with the guide cam, the depositing arm and receiving table with the paper grip.

All function keys are integrated into the **operating and display foil**. The green ON and red OFF pushbuttons use a pilot lamp to control the start of the machine. The red pushbutton responds already at a slight touch (= EMERGENCY OFF).

A control contactor with a self-holding circuit prevents the machine from being automatically restarted after power failure.

A **slice thickness setting** of less than '0' unlocks the tilting safety device allowing the carriage to be tilted in any position.

### The machine is designed with the following guards and protective devices:

- EMERGENCY OFF
- blade guard ring, stationary, non-removable
- enclosed blade cover, stationary, removable
- gauge plate, covering the stroke area
- protective circuit to provide protection in the case of power failure
- sharpener with protective cover of the exposed blade area
- rear wall, non-removable

## 1.6 Products to be cut/application/environmental influences

Products permitted for cutting by taking into account the permitted sizes:

- all types of sausage
- ham/bacon
- smoked meat with/without rind
- roast/roast beef
- meat/meat rolls
- cheese
- bread
- fruit/vegetables

To prevent damage to the machine and risk bodily injury, do not cut:

- NON-FOOD products
- bone-in products
- frozen products

### Note

- If mainly cutting cheese, the use of a special cheese knife is recommended. See optional equipment.

### Application

- The slicer is designed for application in salerooms. It is also permitted for use under wet environmental conditions by taking into account the cleaning plan and protection type IP33.

### Operating time

- Designed for continuous operation.

### Noise level

- Below 55 dB(A)

### Humidity

- Protection type IP 33. High air humidity or moisture condensation occurring on the machine may result in machine damage.

### Temperature

- Permissible ambient temperatures:  $-10^{\circ}\text{C}$  to  $+40^{\circ}\text{C}$

### Safety

- The machine has been designed in conformity with the requirements of the European Standard EN 1974.

## 2.1 Installation



Pay attention to the required space (see section 1.4, page 7).  
Recommended height of working table: approximately 800 mm

### Requirements to be met by the supporting area:

- horizontal and level surface
- stable and non-slippery
- rigid (for the machine weight, see section 1.4, page 7).

Convey and store the machine according to the symbols indicated on the packaging.

## 2.2 Electrical connection



- Compare the voltage of outlet with that on the specification plate.
- Do not connect the machine in case of non-conformity. Contact BIZERBA after-sales service.
- The connector should meet the country-specific standards (see section 8.2, page 54).
- When setting up the machine in preparatory rooms (wet rooms), install the power cable in such a manner as to prevent it from being damaged by water or moving parts.

Even then the machine is **not** splash-proof.

## 2.3 Test run



Test run or checking the direction of rotation (in the case of three-phase current):

- Switch on the machine (see section 3.1, page 12).
- The pilot lamp lights up (startup control).
- The blade **must** rotate in the direction of arrow.
- Switch off the machine.



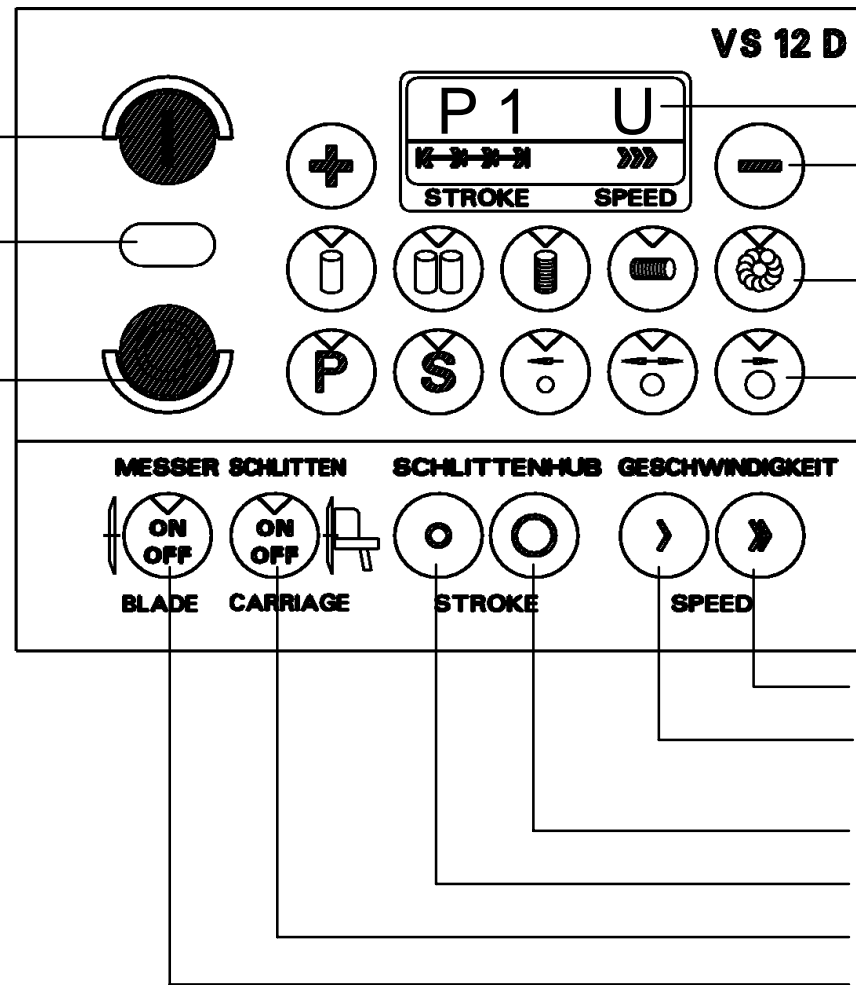
If the direction of rotation is incorrect, reverse the polarity of the phase converter on the three-phase plug of the machine.

Description of key functions:

**ON** (green)  
mains on

**LAMP** (white)  
Indicates the ON/OFF position  
of the machine

**OFF** (red)  
Deactivates the machine  
(reacts at a slight touch =  
EMERGENCY OFF)



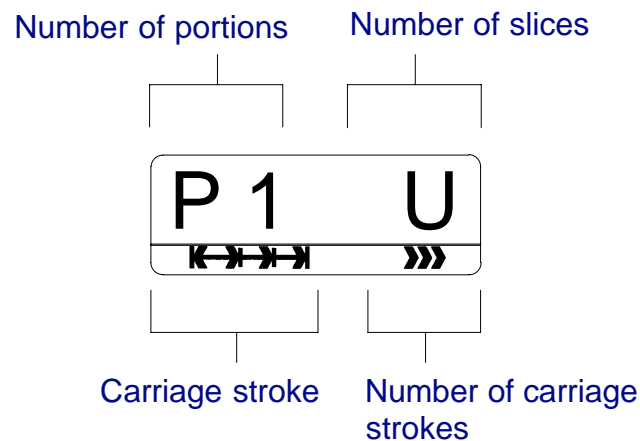
Display

Function keys

- Set the maximum **number of strokes**
- Reduce the **number of carriage strokes** step-by-step
- Set the **full stroke**
- Reduce the **carriage stroke** step-by-step
- Carriage drive ON/OFF**
- Blade drive ON/OFF**

Keyboard inputs may only be made when the machine is switched on. Selected keys are backlit, except for the '+' and '-' minus, carriage stroke and carriage speed keys.

## Display



### Display of number of slices

Display U = continuous operation without counting  
infinite number of slices

Display 1 – 99 = slices counted towards zero

### Display of number of portions

Display P 1 = 1 portion

Display P U = continuous operation without counting  
= infinite number of portions

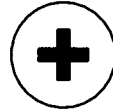
Display P 1 – 9 = portions counted towards zero

### Carriage stroke, number of carriage strokes

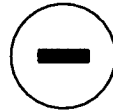
The correct carriage stroke and the correct number of strokes (carriage speed) are a matter of experience and depend on the size and nature of product to be cut.

The setting may be changed while the machine is in service.



**PLUS key**

Input key to increase the number of slices or portions.  
Overflow of number of slices from 99 to 1 (instead of 100)  
Overflow of number of portions from P9 to P1 (instead of 10)

**MINUS key**

Input key to reduce the number of slices or portions.  
Overflow of number of slices from 1 to 99 (instead of 0)  
Overflow of number of portions from P1 to P9 (instead of 0)

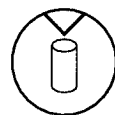
**PORTION key**

Activation key to enter the number of portions.  
Input by means of the '+/-' keys.

**SET key**

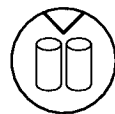
Activation key for the depositing programs. Both the receiving table and the depositing arm move to their initial position.  
**Exception:** in conjunction with the depositing programs 'shingling lengthwise' and 'shingling crosswise', the current values for the number of slices/slice spacing are stored by pressing the S-key.

## Depositing modes



### Depositing in '1 stack'

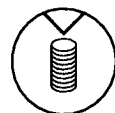
with the number of portions P 1, number of slices U (infinite) and the depositing position on the right of the receiving table. Stack height up to maximum 60 mm.



### Depositing in '2 stacks'

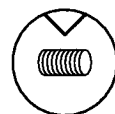
with the number of portions P 2, number of slices U (infinite) and the depositing position on the right of the receiving table. The product to be cut is deposited in 2 stacks one behind the other.

Stack height: up to maximum 60 mm  
Product size: up to maximum 105 mm



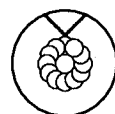
### Shingling lengthwise

with the number of portions P 1, 8 slices per row and the depositing position on the right of the receiving table.



### Shingling crosswise

with the number of portions P 1, 8 slices per row and the depositing position at the rear of the receiving table.



### Depositing in a circular pattern

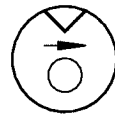
with 5 slices per circle,  
large product diameter (key on the right)

The number of slices for the selected depositing mode may be changed up to a maximum of 99 using the +/- keys. This number then remains stored until a new depositing program is selected.

When depositing in 1 stack or in 2 stacks, the number of slices is automatically limited to the maximum stack height depending on the slice thickness. The number of portions and slices of the depositing programs may be changed by means of the +/- keys.

When leaving the factory, the machines are provided with the above depositing programs.

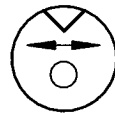
## Depositing modes



### Product depositing on the right

or large product diameter,  
deposition of product on the right of the receiving table.

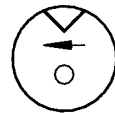
**Exception:** depositing program 'shingling crosswise'  
deposition at the rear of the receiving table  
depositing program 'circular pattern'  
5 slices/circle = small circle diameter



### Product depositing in the center

or medium product diameter,  
deposition of product in the center of the receiving table

**Exception:** depositing program 'circular pattern'  
9 slices/circles = medium circle diameter



### Product depositing on the left

or small product diameter,  
product deposition on the left of the receiving table

**Exception:** depositing program 'shingling crosswise'  
deposition of product at the front of the  
receiving table  
depositing program 'circular'  
12 slices/circles = large circle diameter

The above described depositing positions are recommendations only.

All positions may be simultaneously selected. This results in up to 3 rows or 4 stacks (product diameter limited to a maximum of 105 mm) of cut slices with the same number of slices which, in turn, corresponds to one portion.

**Exception:** for the three circle diameters in the 'circular' depositing mode, the number of slices may be different.

When the machine leaves the factory, it is set to 'depositing in 1 stack'. The receiving table and the depositing arm move to their initial position.

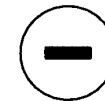
### 3.1.1 Individual setting of depositing programs

All depositing programs are normally set and stored with an individual number of slices and portions. This applies equally to their positioning.

Key combination for **storing**: hold



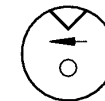
pressed and activate



Restoring the **delivery state**: hold



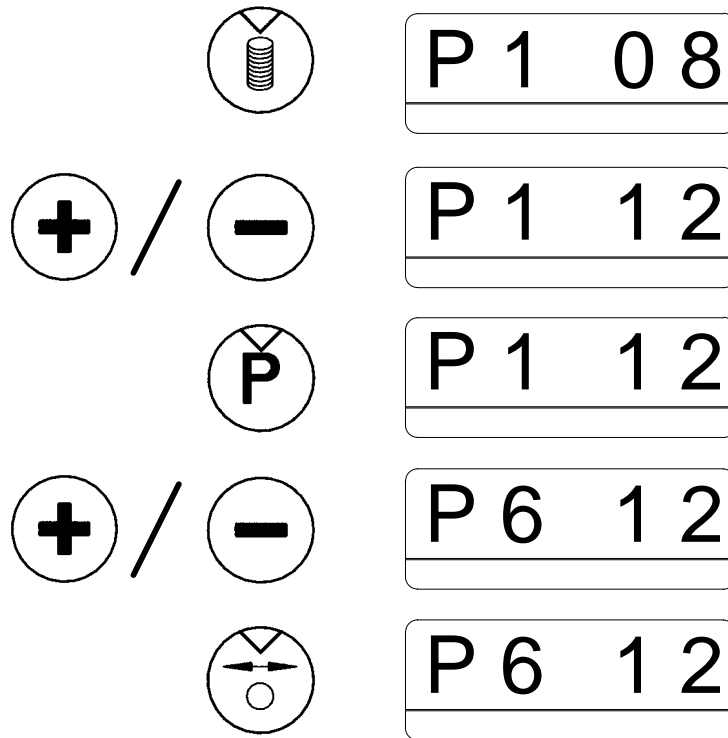
pressed and activate



The **program stored** last before the machine is switched off will **become active** (startup program) when restarting the machine.

After programming of the various depositing programs, the desired startup program must be called up and restored (last stored program = startup program).

## Example



Finally, hold  depressed and activate .

Every time the key '**Shingling lengthwise**' is pressed, the stored program will be called up.

The delivery state (number of portions P1, infinite number of slices, depositing position on the right) may be restored by pressing

 and  simultaneously, however, with the consequence that **all** individually changed and stored programs are reset.

## Example of a self-compiled program

### Operating or key sequence:

1. The depositing mode 'shingling lengthwise' is activated.
2. Number of slices – make the entry using the +/- keys, e. g. 12.
3. The portion key is activated.
4. Number of portions, – make the entry using the +/- keys, e. g. 6.
5. The depositing position 'center' is activated.
6. The program is now stored.

### 3.1.2 Setting of distance between slices

Using the depositing programs “Shingling lengthwise” and “Shingling crosswise” the distance between slices is set inevitably, depending on how many slices are required (see table, rounded values).

Number of slices	Distance between slices Shingling lengthwise	Distance between slices Shingling crosswise
Selection (1–99 possible)	max. length 160 mm	max. width 125 mm
5	40 mm	31 mm
6	32 mm	26 mm
8	23 mm	18 mm
10	18 mm	14 mm
12	15 mm	11 mm
15	11 mm	9 mm
17	10 mm	8 mm
24	7 mm	5 mm
33	5 mm	4 mm
41	4 mm	3 mm
54	3 mm	2 mm

**Example:** If you select program “Shingling lengthwise” and the number of slices 10, the 10 slices are deposited at a distance of 18 mm on a total length of 160 mm.

If you want to have 10 slices with a distance of 10 mm, please take the following steps:

1. Set number of slices **17**

2. Press **Set key** after the 10th slices was cut

This setting remains saved until you quit the depositing program.

If this individual setting of the depositing program is saved (see page 17), it remains.

## 3.2 Slice thickness setting



The setting is made by means of the slice thickness **control knob**.

Large fine setting range: between 0 and 3 mm.

A setting of less than '0' deactivates the tilting safety device (black marking). This is the only position in which the carriage can be tilted, an operation which may become necessary for cleaning purposes.

**Slice thickness setting up to 8 mm:**

setting range for **automatic** slice depositing.

The infinitely variable control knob setting range reaches up to 8 mm.

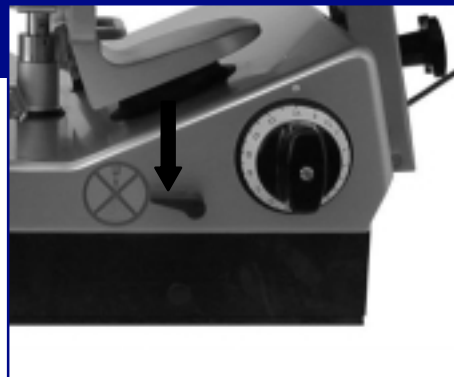
**Slice thickness setting over 8 mm:**

Before sharpening the blade, set the slice thickness control knob to position '24' or open it up to the stop (see section 6.3, page 47).

This is only possible when the depositing arm is detached.

This is only possible when the slice thickness control knob is unlocked (see section 3.3, page 20)

## 3.3 Unlocking of slice thickness control knob

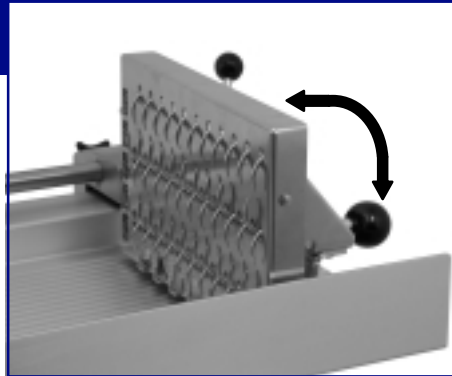


Remove the depositing arm and the chain frame (see section 5.1, page 30)

- Turn the switch lever downwards, holding it between thumb and forefinger. This releases the mechanical locking.
- Set the desired slice thickness. (Messer schleifen)
- Release the switch lever.

The control knob is automatically relocked when the slice thickness control knob is turned back to less than 8 mm.

### 3.4 Product holder



To insert the product, the product holder with moveable hooks (spikes) may be locked or unlocked.

Before the cutting procedure the product holder is positioned behind the product.

Product holder can be removed during cleaning process.

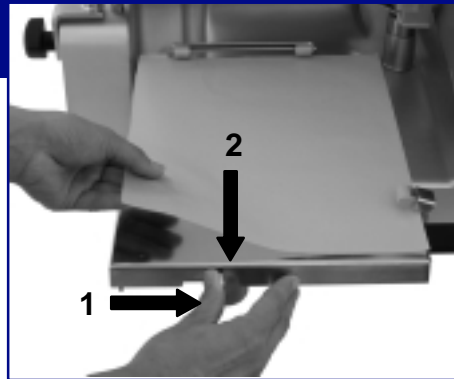
### 3.5 Product support



An additional product support on side avoids overbalance of the product.

The product support is guided on its shaft and is moveable over the full carriage width. It is thus adaptable to any product size.





The paper grip is used to deposit the cut product directly on the paper or the foil.

**To insert several paper sheets or foils:**

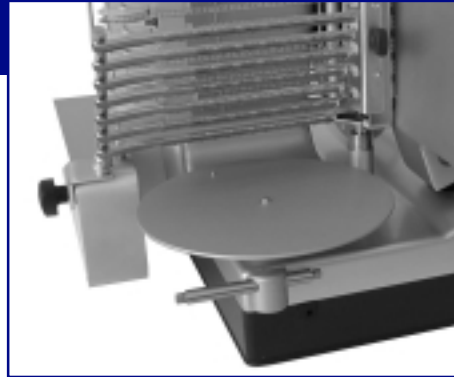
- Push the lever to the right against the pressure spring using your thumb until you feel it engage (1).
- Shift the stack so it rests underneath the opened holder.
- Disengage the lever by gently pushing it from above (2).

**To remove the paper with the deposited sliced product:**

- Gently push the lever to the right and simultaneously remove the upper paper sheet with the sliced product from underneath of the opened holders.
- Release the lever.

## 3.7 Circular plate

### Option



This machine permits a circular plate to be attached to the additional guide shaft (see section 4.2, page 28).

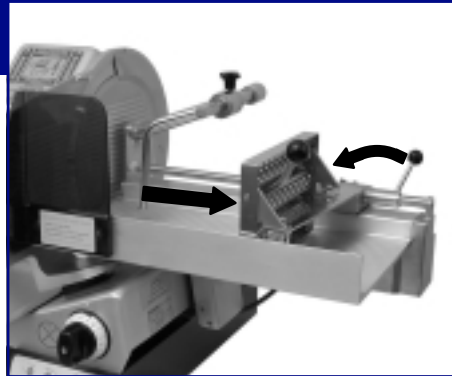
For an easy and fast handling the circular plate is fixed to the guiding shaft by means of a magnetic lock.

During the cutting procedure, the circular plate rotates in relation to the number of slices to be cut.

Rectangular products can only be deposited in a circular pattern with the aid of this circular plate.

**If the distance to the magnet is too short cardiac pace-makers may be disturbed. Affected persons are recommended to consult their doctor.**

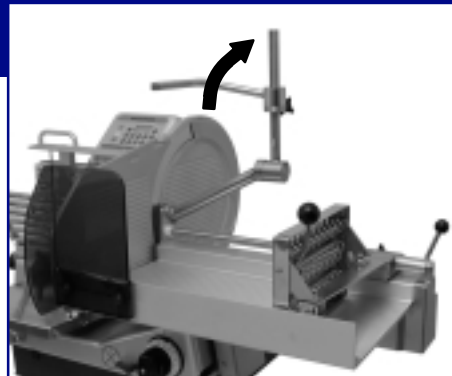
## 4.1 Positioning/slicing of product



- The machine is turned on, all function parts are in a stop position.
- Disengage the product holder using the locking lever, move it away from the blade.

24

## Positioning of product

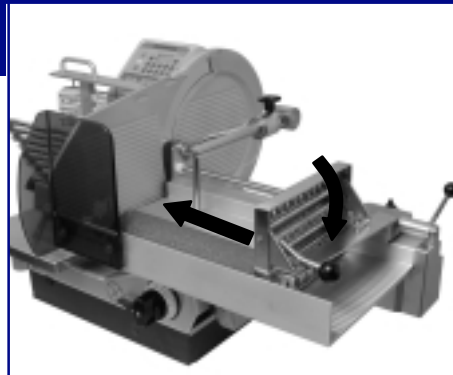


- The product support may be raised up in order to position the product.

**Caution**  
**Danger of injury!**

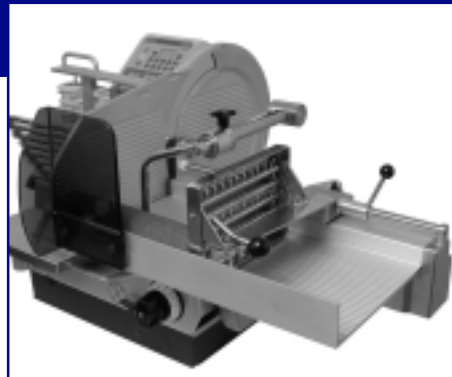
Operate concentrated.

### Positioning of product



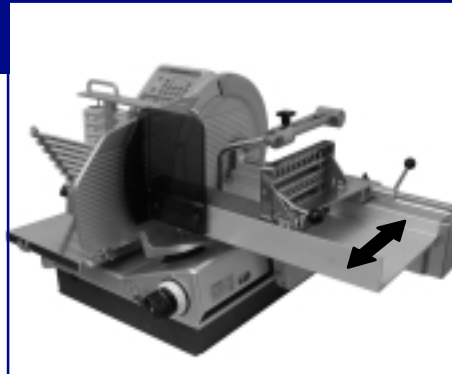
- Using your left hand position the product so that it rests on the carriage rear wall and push it against the holder.
- Using your right hand push down the lever on holder. Spikes/hooks go into the product and fix them.
- Move product towards the gauge plate.

### Positioning of product



- Position product support aside the product.
- Adjust the slice thickness.
- Switch on the machine. The 'stacking in 1 stack' program is set as standard. The receiving table and the depositing arm move to their initial position.
- Select the desired functions via the keyboard. The receiving table and the depositing arm move to their initial position.
- Set the carriage stroke and the number of carriage strokes (carriage speed) or change them after startup of machine.

## Slicing of product



**Caution!**  
Keep your hands  
out of the travelling  
area while the slicer  
is in operation.

- Start the carriage drive.
- The carriage starts moving.
- Depending on the program setting, the slices are deposited on the receiving table.

### **The drive is automatically turned off:**

- on EMERGENCY OFF
- when the maximum stack height or the number of slices is reached.
- on end of product (feed slicer with new product), Product holder moves approx. 100 mm to the right side, carriage stops.
- on end of program
- After completion of the slicing procedure, set the slice thickness control knob to '0' and switch off the machine.

GENERAL

INSTALLATION

OPERATING  
ELEMENTS

**OPERATION/  
SLICING**

CLEANING

BLADE  
SHARPENING

ACCESSORIES

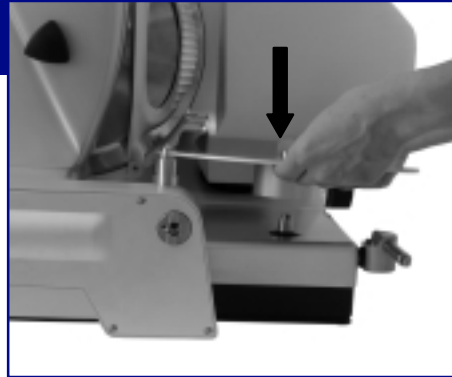
OPERATING  
CONDITIONS

## 4.2 Option: circular plate

This machine permits a circular plate to be easily installed.

**Rectangular products can only be deposited in a circular pattern with the aid of this circular plate.**

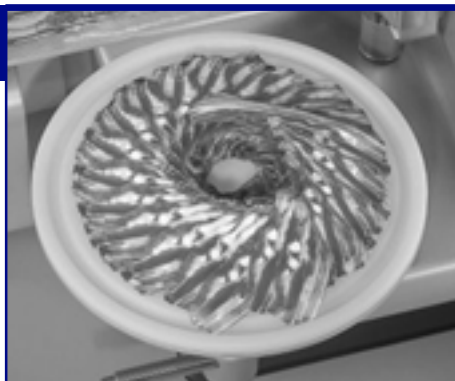
### Attaching of circular plate



- Move the receiving table up to the stop, raise it to a vertical position towards you and remove it in the upward direction.
- Insert the circular plate in the guide shaft from the top (see arrow).
- For an easy and fast handling the circular plate is fixed to the guiding shaft by means of a magnetic lock.
- If necessary, turn it until it engages.
- As soon as the circular plate is attached, the machine switches automatically to the depositing program 'circular' and the table moves to its initial position.
- Position the product and cut it. See sections 4, page 24

**If the distance to the magnet is too short cardiac pacemakers may be disturbed. Affected persons are recommended to consult their doctor.**

## Setting possibility



Standard presetting:  
depositing program 'circular' with 5 slices/circle and  
a large product diameter.

The number of slices may be changed up to a  
maximum of 99 slices per circle and circle diameter.  
To obtain the adjacent pattern, the number of slices  
must be increased accordingly.

**The program 'depositing in 2 stacks' and  
'shingling crosswise' cannot be selected with  
the circular plate attached.**

**Caution  
Danger of injury!**



## 5.1 Preparing for cleaning



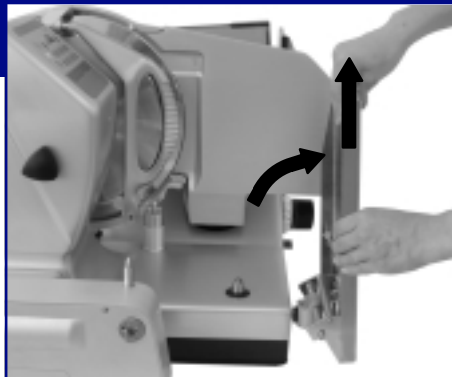
- Switch off the machine.
- **Disconnect the power plug.**
- Set the slice thickness control knob to less than '0' (black marking).

30

**Thoroughly clean the machine before initial operation and after each use. If necessary, clean it several times a day. Also clean, if the machine was not in operation over a longer period of time or after sharpening. Do not clean the machine with pressurized water or steam cleaning equipment.**

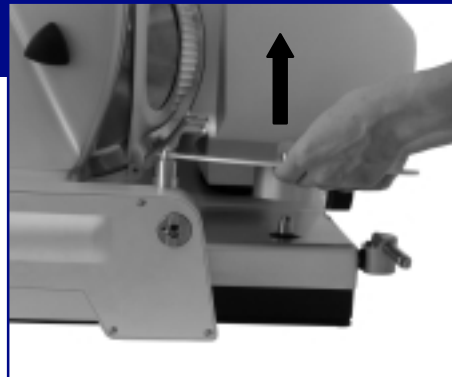
Remove the components in the following sequence:

### Receiving table



- Move the receiving table towards you.
- Raise the receiving table to a vertical position towards you and remove it vertically.

## Circular plate



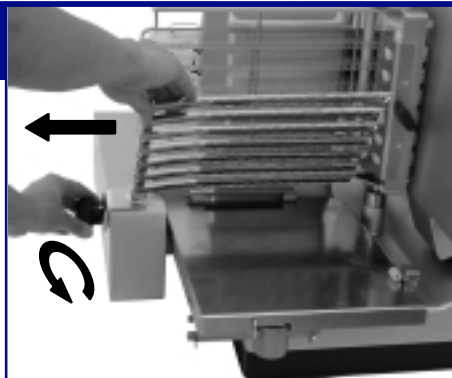
### Option

- Lift the circular plate out of the guide shaft and remove it in the upward direction.

For an easy and fast handling the circular plate is fixed to the guiding shaft by means of a magnetic lock.

If the distance to the magnet is too short cardiac pacemakers may be disturbed. Affected persons are recommended to consult their doctor.

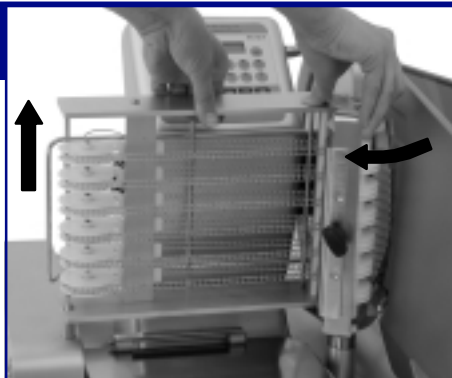
## Depositing arm



- Loosen the three-square knob and pull the hub of the depositing arm out of the bearing to the left.

**Caution**  
**Danger of injury by**  
**the chain spikes!**

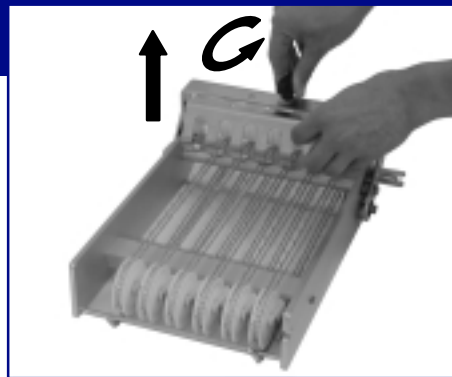
## Chain frame



- Using the right hand, turn the 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 the chain frame aside with the rear side downward.

**Caution**  
**Danger of injury by**  
**the chain spikes!**

## Guide cam



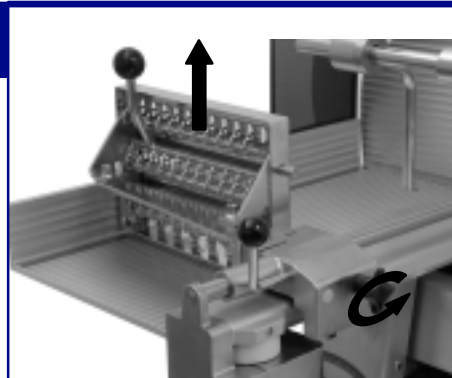
- Loosen the clamp handle on the frame and remove the guide cam from between the transport chains.

**Caution**  
 Danger of injury by  
 the chain spikes!



A bent cam or deformed chain pikes will give rise to operational disturbances.

## Product holder

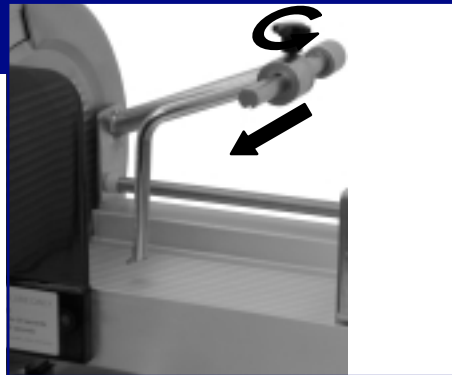


- Loosen the star knob and remove the complete product holder in the direction of arrow.

**Caution!**  
 Danger of injury on  
 product holder  
 (hooks/spikes)!

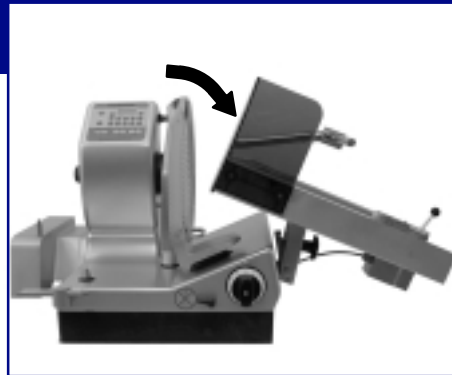


## Product support



- Remove the product support by loosening the star knob.

## Carriage



- Turn out the knob on the carriage foot.
- Tilt the carriage in the direction of arrow.

## Blade cover



- Grasp the bracket using the right hand.
- Using the left hand, loosen the fixing bolt by means of the three-square knob and push the blade cover out of centering.
- Using the left hand, remove the cover holding it on the top.

## Deflector



- Remove the deflector from the magnetic lock and move it away in the direction of arrow.

## 5.2 Cleaning

### Blade cleaning



**Do not attempt to clean blade surfaces while the machine is running.**

- Clean the front of blade by pressing a wet disposable cloth against the blade surface and slowly wiping from the center outward.
- Clean the back of blade in the same way.
- Rub dry the cleaned surface by repeating the procedure with a dry disposable cloth.

### VERY IMPORTANT

**Caution  
Danger of injury!**

## Blade guard ring



- Insert a damp disposable cloth between the blade and guard ring from the front.



- Turn the blade and disposable cloth with hands for one rotation by slightly pressing the cloth against the guard ring inner side.

Clean removable and non-removable parts according to the cleaning plan (section 5.3, page 38).

To prevent parts from being damaged, do not pile them up on one another.

**Caution**  
 Danger of injury by  
 the chain pikes and  
 gripper prongs!



## 5.3 Cleaning plan VS 12 D–V (the operating instructions should be observed)

(1)	Steps	Cleaning agents	Procedure	Cleaning equipment	Hints and tips
1	<b>Preparatory measures</b>		Set slice thickness below zero Switch off machine Disconnect power plug		
2	<b>Dismantling</b> of removable parts		According to the operating instructions		
3	<b>Rough cleaning</b>		Manual removal of product residue	Plastic scraper Plastic spatula Brush	Must be done immediately after use. This applies equally to the removed parts.
4	<b>Cleaning</b>	2% P3–steril	Pre–rinsing with water at max. 50° C in relation to the grease fusion point  Manual Induction period of approximately 15 minutes	Brush Tub Disposable cleaning cloth  Hand sprayer → Dish washing machine →	All removed and fixed machine parts  * See notes Removed parts
4.1	<b>Sanitizing</b> Additional measures	0,5 – 2% P3–alcodes Use concentrate undiluted	Manual Spraying  Induction period according to product data sheet	Disposable cleaning cloth  Hand sprayer →	Additional precautionary measure: spray at a distance of 0,30 m. Recommended quantity to be used: 40–50 ml/m2 * See notes
4.2	<b>Acidic cleaning</b> Additional measures	max. 3% P3–riksan	Manual/mechanical Foaming Induction period of approximately 15 minutes	Brush to remove calcareous deposits  Hand sprayer →	Only in case of need Calcareous deposits must be rinsed away immediately after cleaning. * See notes

(1)	Steps	Cleaning agents	Procedure	Cleaning equipment	Hints and tips
5	<b>Rinsing</b>	Tap water	Temperature of max. 50° C in relation to the grease fusion point	Disposable cleaning cloth Hose pipe → Hand sprayer →	Remaining machine Removed parts Removed parts
6	<b>Checking</b>		Visual cleanliness		
7	<b>Drying</b>		Wiping dry or air-drying	Disposable cleaning cloth	Removed parts should be dried separately and not piled up
8	<b>Maintaining</b> Additional measures	H1–Service–Oil	Applying	Disposable cleaning cloth	Parts coming into contact with the product should be rinsed before operations are started.
9	<b>Assembly</b>		In reverse order to disassembly See operating instructions		Personnel should have clean and sterilized hands.
10	<b>Precautions:</b>	Cover machine when the environs are being cleaned with water under pressure or likely to splash.			

The specifications of the cleaning plan are related to one-shift operation.

The safety data and product data sheets supplied with the cleaning and sanitizing agents must be observed.

The cleaning agents may be obtained from the BIZERBA after-sales service:

Name	Order number	VPE
P3–steril	50003250000	5 Liter
P3–riksan	50003270000	5 Liter
P3–alcodes	50003260000	5 Liter
Clean Station	50003280000	
H1–Service–Oil	94008900022	400 ml

\* Please note: Precautionary measures should be taken to ensure that the environment is not damaged by the use of any of the afore-mentioned products.

**Bizerba cannot accept liability for damage occurring as a result of the use of cleaning agents not approved by them.**

## 5.4 Making the machine ready to operate

(reassemble the components as follows)

### Deflector



- Swing the deflector down up to the magnetic lock by ensuring a proper seating in the recess of the blade guard ring.

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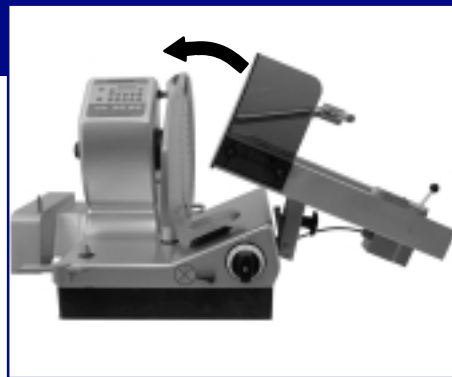
**Proceed carefully to avoid disturbances and injuries.**

### Blade cover



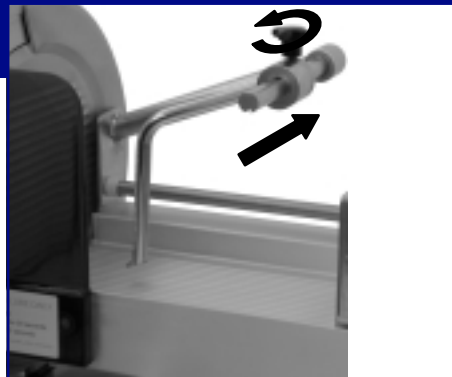
- Grasp the bracket with the right hand, tilt it towards the blade surface and fix it in the center by means of the square pilot.
- Screw on the clamping bolt up to the stop by means of the three-square knob.

## Carriage



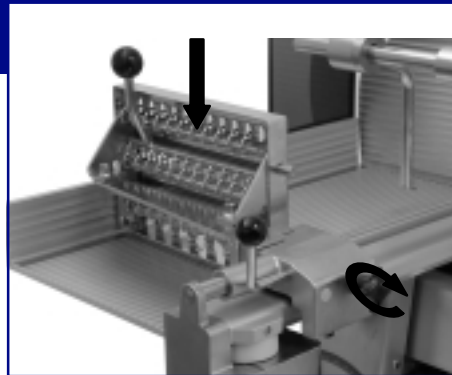
- Swing in the carriage in the direction of arrow.
- Fasten it to the carriage foot by means of the knob.

## Product support



- Move the product support to the guiding device
- and tighten it with the star knob.

## Product holder

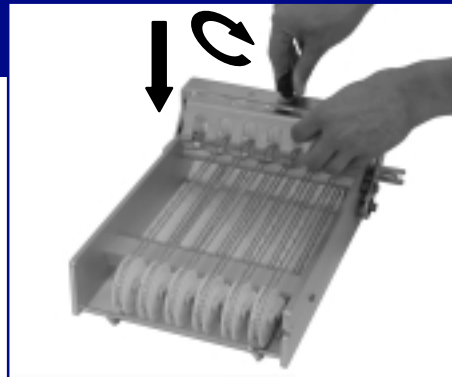


- Put the product holder in the direction of arrow on the fixation
- and tighten it with the star knob.

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**Caution!**  
Danger of injury on  
product holder  
(hooks/spikes)!

## Guide cam



- Insert the guide cam between the transport chains and fasten it by means of the clamp handle.

**Caution**  
 Danger of injury by  
 the chain spikes!



A bent cam or deformed chain pikes will give rise to operational disturbances.

## Chain frame

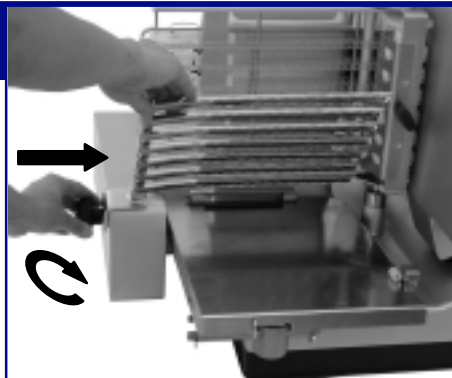


- Insert the chain frame with the feed roller turned in into the takeup fixtures and the drive pilot from the top.

**Caution**  
 Danger of injury by  
 the chain spikes!



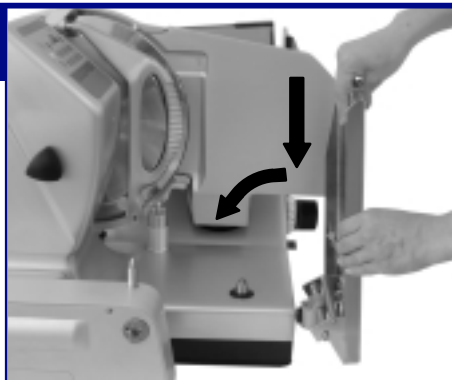
## Depositing arm



- Move the depositing arm on the drive shaft and turn it, so that the hub engages with the slot.
- Tighten it by means of the three-square knob.

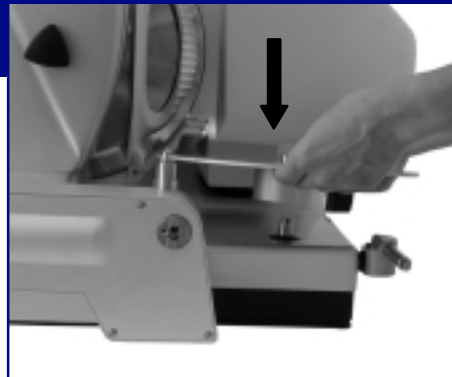
**Caution**  
Danger of injury by  
the chain spikes!

## Receiving table



- Move the table guide towards you. Bring the receiving table in vertical position to the supporting pin from the top and move it backwards.

## Circular plate



### Option

- Insert the circular plate in the guide shaft from the top.  
For an easy and fast handling the circular plate is fixed to the guiding shaft by means of a magnetic lock.
- If necessary, turn the circular plate until it engages in the tothing.

If the distance to the magnet is too short cardiac pacemakers may be disturbed. Affected persons are recommended to consult their doctor.

### VERY IMPORTANT

For safety reasons, the machine should only be operated fully assembled. Make absolutely sure that all parts are properly reinstalled and tightened before setting the machine into operation. Only then establish power connection.

At this point, the machine is ready to operate.



Sharpen the blade as soon as the slicing quality is unsatisfactory. The frequency of sharpening depends on the machine usage and the type of sliced products.

## Important

According to the requirements of the European Standard EN 1974 section 5.1.3.1, sharpening of blade is only permitted up to a ring gap of not greater than 6 mm. The blade must always be replaced by the BIZERBA after-sales service. This applies only to machines with CE marking.

## 6.1 Sharpener

The sharpener is marked with the relevant machine number, adjusted accordingly and must only be used for this specific machine. It consists of one coarse sharpening stone and one fine honing stone. Dirty sharpening stones do not have the abrasive quality necessary to sharpen.

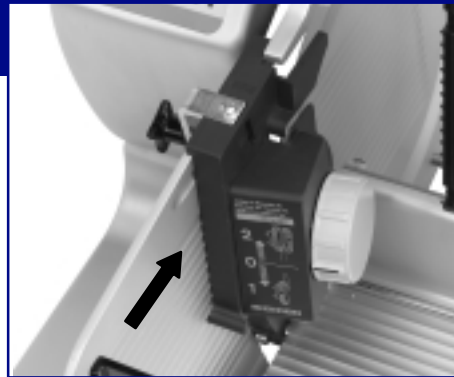
Before sharpening, always clean them with solvent and brush and replace them as soon as the sharpening rim is worn. New stones are to be obtained from the BIZERBA after sales service. Do not mix them up when replacing them.

## 6.2 Preparing for sharpening

- Remove the components and clean the machine (see sections 5.1 to 5.3, page 30 et al.)
- Tilt the carriage back and refasten it.
- Place a thin cardboard on the carriage and slowly cut off a few strips in order to remove the grease which might have deposited on the blade.

- Switch off the machine.
- Remove the cardboard.
- Move the deflector away from the blade.

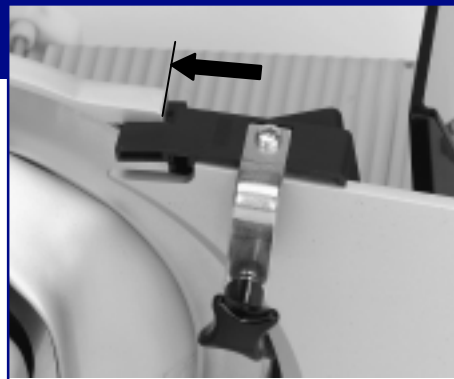
## 6.3 Attaching of sharpener



- Unlock the slice thickness limitation (see section 3.3, page 20)
- Set the slice thickness control knob to position '24' or open it up to the stop.
- Set the handwheel of sharpener to position '0'.
- Move the carriage to the relevant position.



**Caution**  
**Danger of injury by**  
**exposed blade!**



- Place the sharpener on the gauge plate from the top.
- Move the sharpener and carriage in the direction of blade so that the adapter rests on the blade guard ring.
- Hold the sharpener in this position and fasten it to the gauge plate by means of the knob.

## 6.4 Sharpening

### Checking of burr:

with the aid of a pen, or a ball-point pen, or similar check whether a burr has developed. The burr must be felt. If not, repeat the sharpening procedure.



- Switch on the machine.
- Set the handwheel of sharpener to position '1'.
- The sharpening stone engages.
- Sharpen until the right-hand blade edge shows a burr.
- Set the handwheel of sharpener to position '0'.
- Switch off the machine. Wait for the blade to stop rotating.

## 6.5 Honing



- Switch on the machine.
- Set the handwheel of sharpener to position '2'.
- The honing stone engages.
- Hone until the burr is completely removed (after approximately 3 to 4 seconds).
- Set the handwheel of sharpener to position '0'.
- Switch off the machine. Wait for the blade to stop rotating.

## 6.6 Removing of sharpener



- Loosen the knob and remove the sharpener in the upward direction.
- **Immediately turn the slice thickness control knob to '0'.**

**Caution**  
Danger of injury by  
exposed blade!

## 6.7 Removing of sharpening dust

### Blade



- Set the slice thickness control knob to '0'.
- Tilt the carriage.
- Clean the blade by pressing a dry disposable cloth against the blade surface and slowly wiping from center outward.

**Do not attempt to clean blade surfaces while the machine is running.**

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### VERY IMPORTANT

**Caution  
Danger of injury!**

### Blade guard ring



- Insert a dry disposable cloth between the blade and guard ring from the front.



- Turn the blade and the disposable cloth with the hand for one rotation by pressing the cloth against the inner side of guard ring.

## Machine housing

- Remove the sharpening dust from the surfaces with a dry disposable cloth or a brush.
- If necessary, clean the complete machine.
- Make the machine ready for operation.

**At this point, the machine is ready to operate.**

Clean the complete machine after use, but at least twice a day.  
Sharpen the blade whenever necessary.  
If necessary, clean or replace the sharpening stones. Attention! **Left-hand thread.**



If the gap between the blade and blade guard ring is greater than 6 mm, a replacement of blade becomes necessary.

**This applies only to machines with CE marking.**

For safety reasons, have the blade replaced only by BIZERBA after sales service. Slightly oil

- 1 the product holder guide and
- 2 the toothed rack on the table guide

once a week with the BIZERBA oil contained in the accessory kit.

## 7.2 Disturbances

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Immediately switch the machine off if there is any rough operation or obstruction. Contact the relevant BIZERBA after-sales service if you cannot eliminate occurring malfunctions yourself.

## 7.3 Optional equipment

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### Order number

Cheese knife, hard chromium-plated

60223507600

Non-stick coated knife

60223507700



## 8.1 EC directives/standards and recommendations

In relation to the national country regulations, the machines meet the requirements of the following publications:

EC machinery directive 98/37/EC  
EC EMC directive 89/336/EEC  
Directive on electrical equipment designed for use within certain voltage limits 73/23/EEC

Standard:  
Safety:

DIN EN 1974  
DIN EN 60335-1/2-64  
DIN EN 60529  
GS-FW-01/01

EMC:

DIN EN 50081-2  
DIN EN 61000-6-2  
DIN EN 61000-3-2  
DIN EN 61000-3-3

## 8.2 Power supply

### Customer-provided power supply

The installation of power supply for connection of BIZERBA equipment must be carried out in compliance with the national standards and the regulations applying thereto. They include the recommendations of at least one of the following commissions:

International Electrotechnical Commission (IEC)

European Committee for Electrotechnical Standardization (CENELEC)

Association of German Electrical Engineers (VDE)

Bizerba equipment is manufactured according to VDE protection class I and must be connected to a ground wire.

## Technical data of power supply

### Power connection:

Single-phase a.c. or three-phase current (see specification plate).

### Permitted tolerance of power supply (static):

At 100 to 400V

+ 6% to – 10% of nominal value

### Power frequency:

**50 (60) Hz**

Permitted tolerance of power frequency:

+ 2% to – 2% of nominal value

Permitted distortion factor of power supply:

≤ 5 %

Leakage current of protective ground wire  
max.:

3.5 mA

### Measures to eliminate interference:

To avoid heavy fluctuations (e. g. on the application of thyristor-controlled apparatus), the user may take the following precautions: Provide a separate power supply to BIZERBA equipment. Install a capacity-decoupled isolating transformer or similar device in the power supply lines to BIZERBA equipment.

## 8.3 Air convection

To avoid overheating, a free flow of air around all parts of the installed machine must be allowed.

## 8.4 Limiting values for protection type, temperature and air humidity

### Protection type:

IP 33

### Ambient temperature

for operation and storage:

–10 to +40°C (+14 to +104 degF)

### Relative air humidity

for operation and storage:

90 % (moisture condensation on the machine is not allowed to occur)