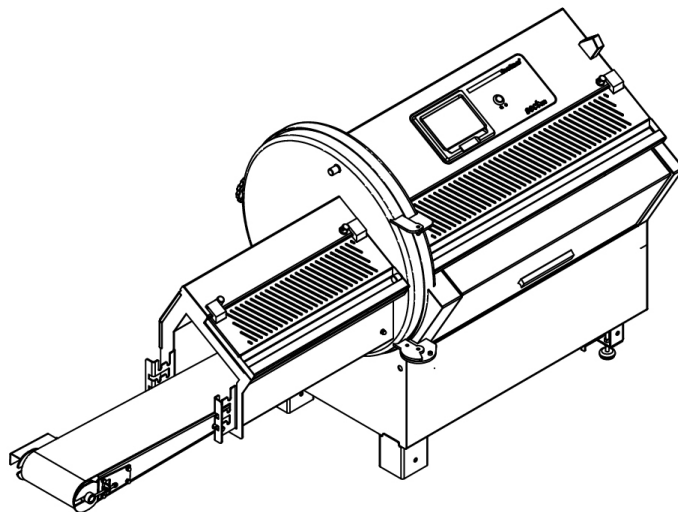


Operating manual

sect 230 TC

270-00-46



holac Maschinenbau GmbH
Nattheimer Straße 104 - 89520 Heidenheim - Germany
☎ 07321 9645-0 - Fax 07321 9645-50
E-Mail: info@holac.de - Internet: <http://www.holac.de>

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Introduction

We are pleased about your decision to purchase a **holac**

sect 230 TC
portion cutting machine

This machine is built to high quality standards, for efficient and long use.

But your attention is required to:

- pay attention to the safety-instructions and warnings
- install machine according to our recommendations
- study the operating instructions carefully
- ensure regular and correct service

If you follow these instructions carefully the machine will be in service for a long period of time.

Technical data and specifications in this manual are update.

Modifications of construction are possible because of current advancement.

We are always available to answer any queries which might arise or supply assistance if needed.

Write us or call us:

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Nattheimer Straße 104 - 89520 Heidenheim - Germany
☎ 07321 9645-0 - Fax 07321 9645-50
E-Mail: info@holac.de - Internet: <http://www.holac.de>

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Machine description

The machines of the **sectomat**, **sectron**, **sectronic**, **sect28CT** and **sect** series from **holac GmbH** are slicing and portioning cutting machines.

They are used in the food industry, in trade and in supermarkets for cutting slices and portions.

The machines are fed manually. Cutting is performed automatically, the products are cut evenly and rationally.

There are various cutting inserts and configuration variants for the individual applications and requirements.

holac GmbH designed these machines on the basis of the latest knowledge in safety and hygiene. The machines are produced with high-quality material, fulfilling the highest quality requirements possible.

All functions are controlled electro-hydraulically. The functions of the **sect** series are servo-mechanical.

The holac cutting machines can be the source of hazards. The machine may only be employed by trained staff for the intended use.

- Read the operating instructions before you start up the machine.
- Observe the safety instructions and warnings.
- The machine may only be used in the production area.

Please contact **holac GmbH** or your factory representative if you have any inquiries or if you need special configurations or spare parts.

Intended use

The **holac** slice cutters **sectomat**, **sectron**, **sectronic**, **sect28CT** and **sect** may only be used for cutting food such as meat, sausages, cheese, vegetable or fish.

The cutting material temperature must not be lower than -5 °C. Lower temperatures only on request.

Any other use of the machine is considered as not intended. The manufacturer will not assume any liability for resulting damage. The user bears the sole risk in this case.

Intended use also includes the compliance with the specified installation, startup and maintenance instructions.

The machine may only be used by trained persons for the intended use. Everybody involved in installation, startup, operation and maintenance must have read and understood the operating instructions.

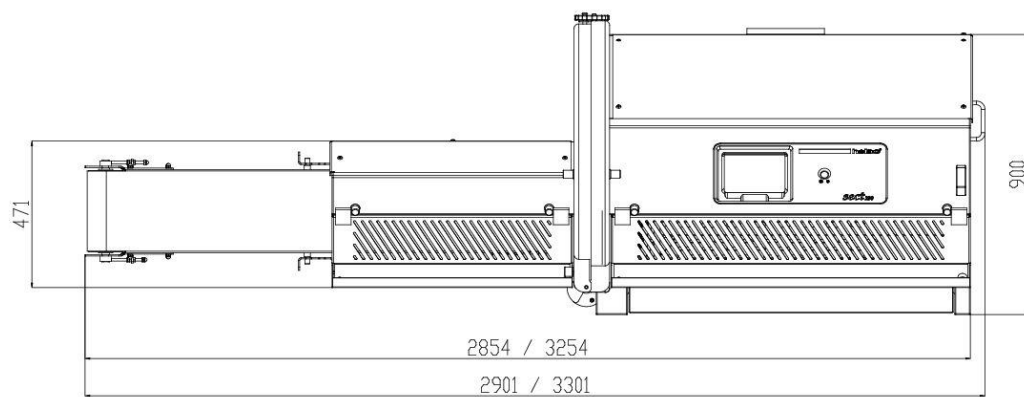
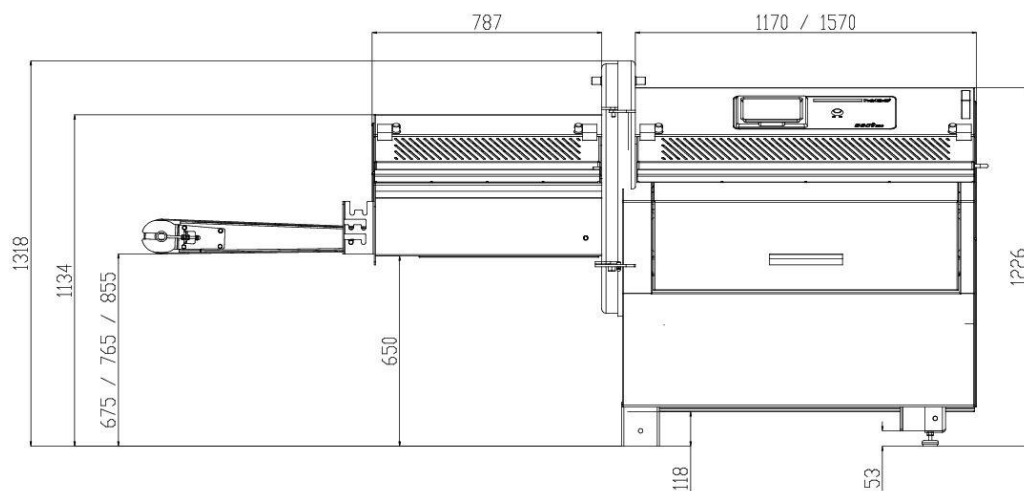
Warning! Do not use machine in hazardous areas.

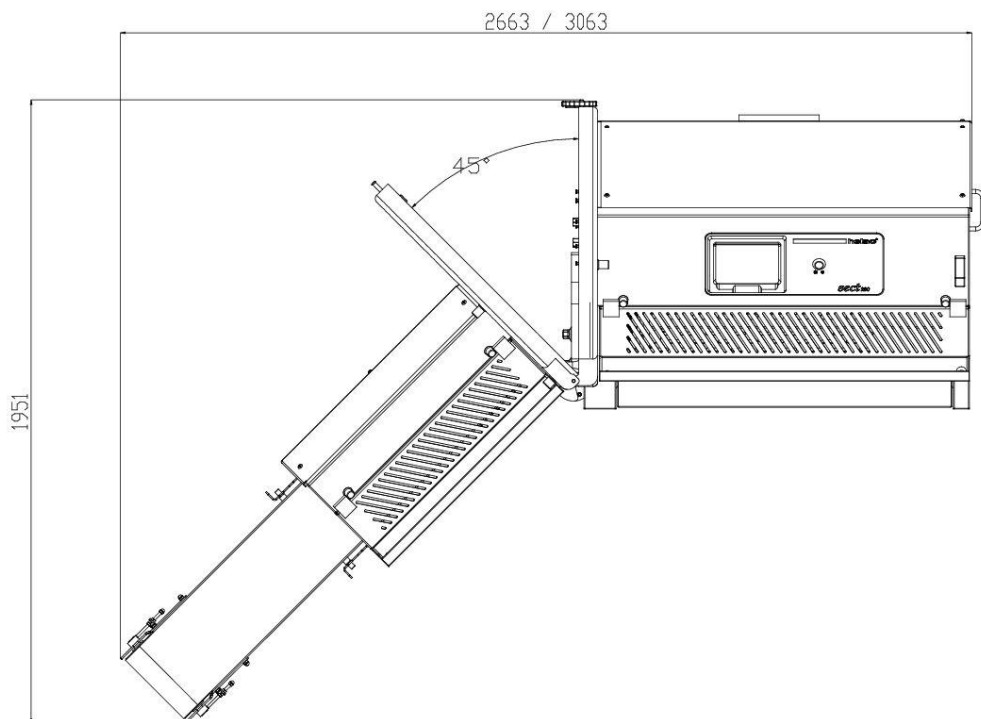
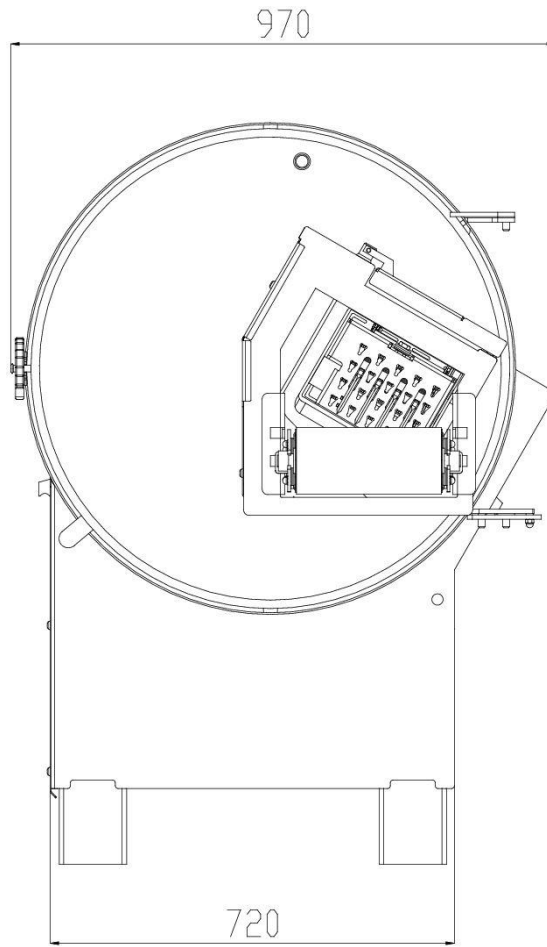
Technical Data

Maschinen-Typ type type de machine	sect 230 TC
Maschinen-Nummer serial-no. numéro de la série	270-00-46
Betriebsspannung / Frequenz operating voltage / frequency tension / fréquence	440 V / 60 Hz
Leistungsaufnahme power-input puissance installée	5 kW
Gewicht weight poids	ca. 400 kg
Geräuschpegel (ohne Produkt) noise level (devoid of product) niveau sonore (sans product)	72 ± 2 db(A) (DIN EN ISO 11204)
Abmessungen dimensions dimensions	siehe Maßblatt look at dimension sheet voir plan dimensions
Magazinquerschnitt magazine dimensions dimension de magasin	230 x 180 mm (B x H)
Einlegelänge loading length longueur de chargement	720 mm
Abschnittlänge (stufenlos) cut-off length (continuously) longueur de coupe	1 - 30 mm
Abschnitte pro Minute cuts per minute coupes par minute	210 / 420 (mit S-Messer)
Zulässige Umgebungstemperatur permissible ambient temperature température ambiante admissible	0 - 30°C

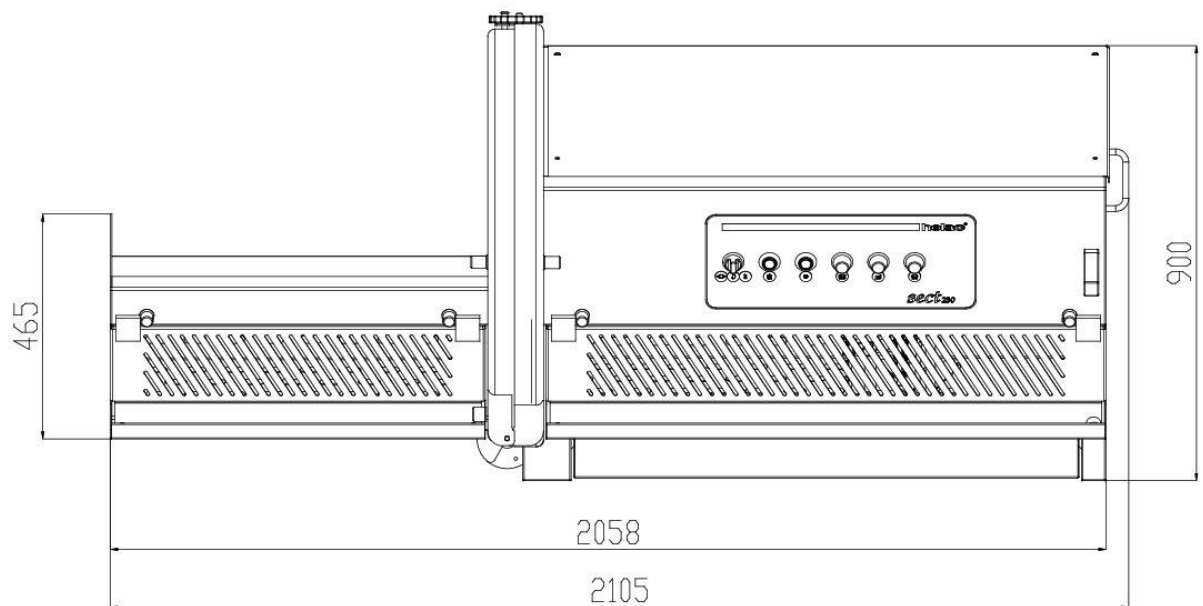
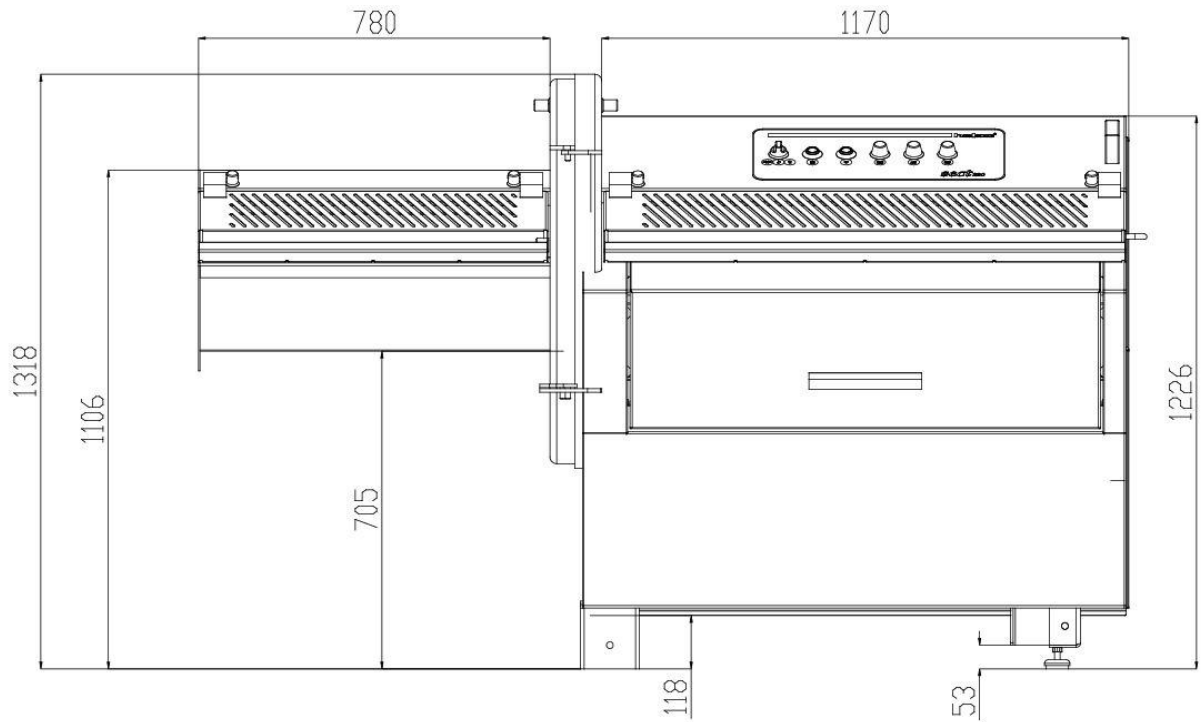
Dimensions

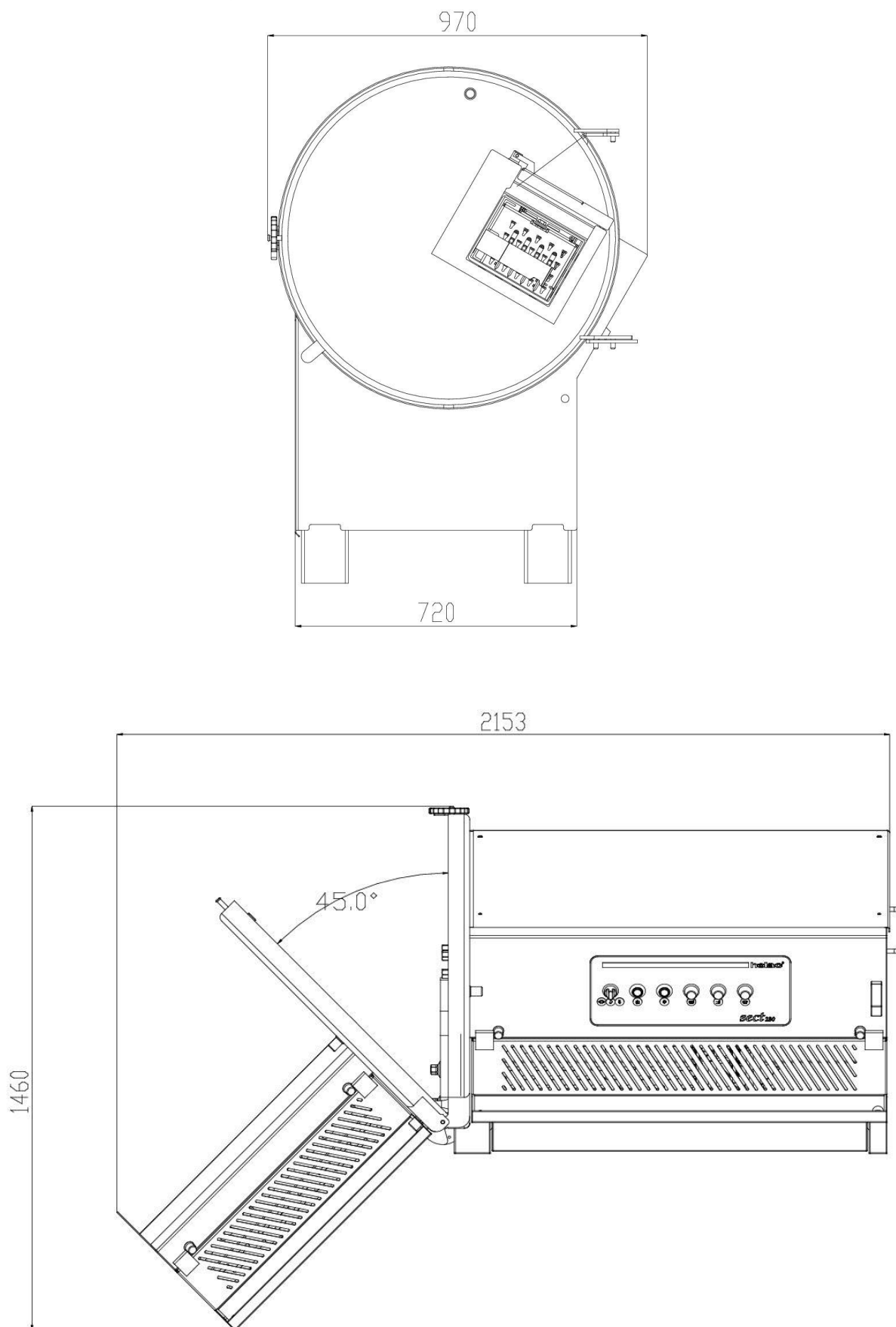
Maßangaben sect 230 mit Ausgabeband / Langversion





Maßangaben sect 230 ohne Ausgabeband





Safety instructions and warnings

Before starting the machine read the manual carefully regarding installation, usage and maintenance. In case the machine is transferred to an other user this manual must be given to the new user of the machine.

The producer or distributor of the machine is not liable for any damages, if the following instructions are not followed .

Please read the manual carefully before installing the machine. The manual includes important instructions of installing, use and maintenance. Therefore you should keep the manual near the machine.

- o If the machine is damaged, don't start the machine.
Please contact your distributor or **holac**.
- o Only skilled and trained staff is authorised to operate the machine for intended use. Any person who installs, operates or services this machine must have read and understood the manual.
- o Machine should be installed through your holac distributor. Your servicing staff has to be present.
- o The machine must not be unattended during operation !
The operator has to report any modification or changes which may influence the safety of the machine. If there is one magazine cover damaged, don't start the machine.
- o During all work in the cutting area, protective clothes and gloves have to be worn.
- o If the knife still keeps on running, although a cover or the blade chamber door is opened
 - main switch in position "0"
 - Unplug socket
 - Protect machine against switch on
 - Call for service
- o Machine may be connected to the electric mains by a skilled electrician only. For necessary connection data, please refer to the type plate. Installing must fully comply to UVV-, VDE-, VDI-, and DIN-standards. Customers in countries applying different standards must obey their regulations accordingly.
- o Only trained and skilled staff is authorised to repair or work at the machine. In case of repair, or if any parts have to be dismantled, ensure that the machine can not be started.
 - Lock main switch in OFF Position
 - Disconnect Machine from power supply
- o Machine has to be installed on the floor only.
Never remove, bridge or make any changes on safety devices provided.
- o Check sealing and scrapers daily to prevent contamination of the product with oil. Clean and maintenance the machine according to the recommendations in this manual.
- o If the machine is sold or tent to another user
 - hand over manual
 - draw to attention of the new operator to the safety features of the machine and to the instructions in the manual.
 - inform **holac** that machine has been sold.

- o All generally accepted and company-specific safety and accident prevention regulations apply in conjunction with the safety instructions contained in this document.
- o Any retrofits, additions or other modifications to the machine without the prior approval of holac are not permitted.

Declaration of signal words

The symbols listed below are used in this operating manual, and signify residual hazards during machine operation or draw attention to other important information.



DANGER

DANGER denotes a hazard which may result in severe injury or death if not avoided.



WARNING

WARNING denotes a hazard which may result in severe injury or death if not avoided.



CAUTION

CAUTION denotes a hazard which may result in injury if not avoided.

ATTENTION

ATTENTION denotes protective measures to avoid material damage.

i NOTE

NOTE refers to user tips and other useful information for safe and error-free machine operation.

EC Conformity Declaration

holac Multi-Purpose Cutting Machine

Machine type: **sect 230 TC**

Machine No. :**270-00-46**

Fulfils the following EC directives:

2006/42/EC	EC machine directive dated 17.05.2006 Appendix I, Section 2 Fundamental health requirements for certain machine types 2.1 Food processing machinery
2004/108/EC	Council directive from 3 rd May 1989 regarding harmonization of the legal regulations of the member states regarding electromagnetic compatibility 73/23EEC Council directive affecting electrical operating supplies for use within certain voltage limits of the EEC low voltage directive from 19 th February 1973
EN 55014-1 VDE 0875	Electromagnetic compatibility Requirements on household appliances, electrical tools and similar electrical devices Part 1 interference emission - product family norm. 05/2012 version
EN 55014-2 VDE 0875 version	Electromagnetic compatibility Requirements on household appliances, electrical tools and similar electrical devices Part 2 immunity to interference - product family norm. 1997/ A1:2001 version
EN 61000-3-2 VDE 0838-2	Electromagnetic compatibility (EMC). Part 3-2 Limits for harmonic current emissions (Equipment input current up to and including 16 A per conductor) 06/2009 version.
EN 61000-3-3 VDE 0838-3	Electromagnetic compatibility (EMC). Part 3-3 Limitations of voltage changes, voltage fluctuations and flickers in public low-voltage supply systems for equipment with a rated current of less than 16 A per conductor, which is not subject to any special conditions. 03/2010 version
DIN EN 13870	Food processing machinery Portion cutting machines Safety and hygiene requirements 2005+A1:2010
EN 60204-1 VDE 0113-1	Safety of machinery - Electrical equipment of industrial machinery - Part 1: General requirements. 06/2007+A1:10/2009 version
EN 1672-2	Food processing machinery Safety and hygiene requirements - General design principles Part 2: Hygiene requirements Status 07/2009

The spare parts lists and service instructions are components of the operating manual

Heidenheim, dated 09/10/2013



pp. H. C. Miess

holac Maschinenbau GmbH
Nattheimer Straße 104 - 89520 Heidenheim - Germany
☎ 07321 9645-0 - Fax 07321 9645-50
E-Mail: info@holac.de - Internet: <http://www.holac.de>

Declaration of Conformity

Valid for

**machine No. :270-00-46,
Machine type: sect 230 TC
year of manufacture 2013**

Company holac Maschinenbau GmbH, based in 89520 Heidenheim, Germany hereby certifies for materials and articles, which may come into contact with food when machine No. :270-00-46 is used as intended, the conformity according to the requirements of

Regulation (EC) No. 1935/2004 of 27 October 2004

Regulation (EC) No. 2023/2006

Regulation (EU) No. 10/2011

on materials and articles intended to come into contact with food.

The certificate is valid for the machine when shipped and for associated holac spare parts.

- List of materials and articles which are intended to come into contact with food when properly used according to the operation manual (machine dependent):

Name of article / Description	Material name	Material group
blade chamber	1.4301	high grade stainless steel
blade shaft / grid shaft	1.4301	high grade stainless steel
glide	PAS-LX	plastics
blade	1.4034 / 1.4310	high grade stainless steel
shredding-disc-segment	1.4301	high grade stainless steel
blade-holder S	1.4301	high grade stainless steel
grid	1.4308 / 1.4301	high grade stainless steel
magazine	1.4301	high grade stainless steel
magazine-closing	1.4301	high grade stainless steel
cutting board	HD-PE 1000	plastics
fill-up-board	HD-PE 500	plastics
rotary shaft seal	POM Polyoxymethylene	plastics
ram head	PU Polyurethane	plastics
scraper	HD-PE 1000	plastics
conveyor belt	HD-PE 1000	plastics
hopper	PU Polyurethane	plastics
	1.4301	high grade stainless steel

Heidenheim, dated 09/10/2013



pp. H. C. Miess

holac Maschinenbau GmbH
Nattheimer Straße 104 - 89520 Heidenheim - Germany
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E-Mail: info@holac.de - Internet: http://www.holac.de

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Test-Certificate

machine-type : **sect 230 TC**

serial-no.: **270-00-46**

The machine has been examined according to EN 60204 and to the **holac** inspection report.
The following tests have been examined:

- **Continuos connection of protective conductor-system**

(testing current minimum 10 A, 50 Hz, 10 s)

contact drop is smaller than maximal permissible valence

- **insulation resistance test**

(measuring voltage 500 V DC=)

resistance more than 1MΩ

- **voltage test**

(voltage test 1000 V, 50 Hz, 1 s)

test passed

- **performance check**

(safety switch and their switch distance, safety control-unit, brake position of blade)

no defective determined



Achim Holz

Transport and installing machine

Transport

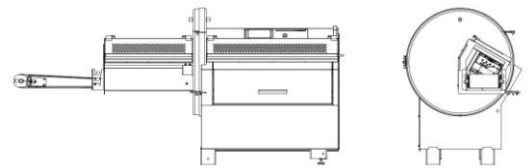


Machine can topple.

Severe crushing hazard.

- >Take note of centre of gravity marking on the machine. The centre of gravity must be marked on the crate with the following symbol: (\oplus)
- >Set up machine on sturdy surface
- >Use appropriate packaging materia

Transport the machine only horizontal!



Damage due transport

If the machine arrives damaged, the transport agent has to confirm the damage on the transport bill. Report the damage immediately to the transport company and inform your local holac distributor.

Installation

Machine should be installed through your local holac distributor. Your servicing staff has to be present.

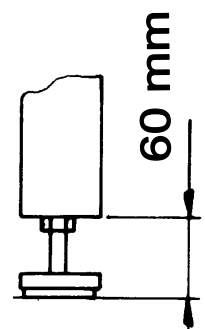
Machine may be installed on the floor only. Adjustable legs permit to fix the machine horizontal and stable. After having the machine properly adjusted, fix the legs by locknuts. It is not allowed to set-up the machine while producing.



Machine can topple

Severe crushing hazard

- >Unscrew support feet to max. setting (60mm)
- >Secure foot positions with counter nuts
- >Use appropriate lifting and transportation equipment.



When using machine-wheels (optional):



Risk of crushing by the machine wheels.

- >Carefully move the machine.
- >Wear suitable protective clothing

Spiral blade / S blade installation and removal, resharpening

Resharpening the blade

Resharpen only the oblique surface with the wet whetstone. With a larger damage, remove the blade. See "Replacing the blade". Use plenty of water for resharpening the blade on a belt sander or a slowly rotating sand stone. Do not overheat the blade.

i NOTE

The spiral shape of the blade is important for the structure of the cut. It must therefore be preserved when the blade is resharpened.



Sharp edges **Cutting hazard**

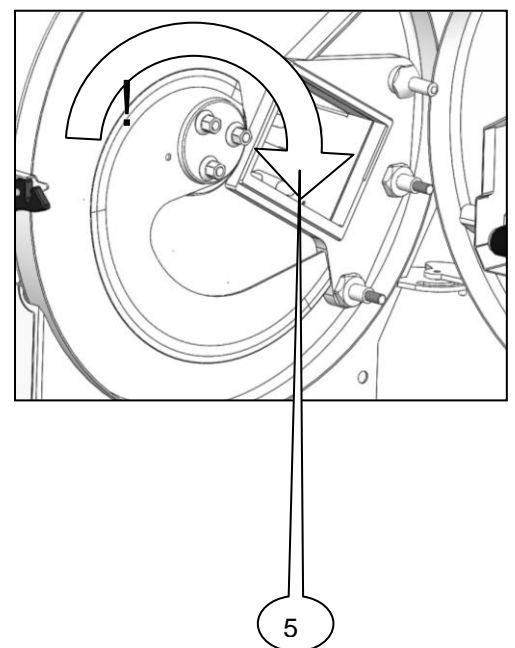
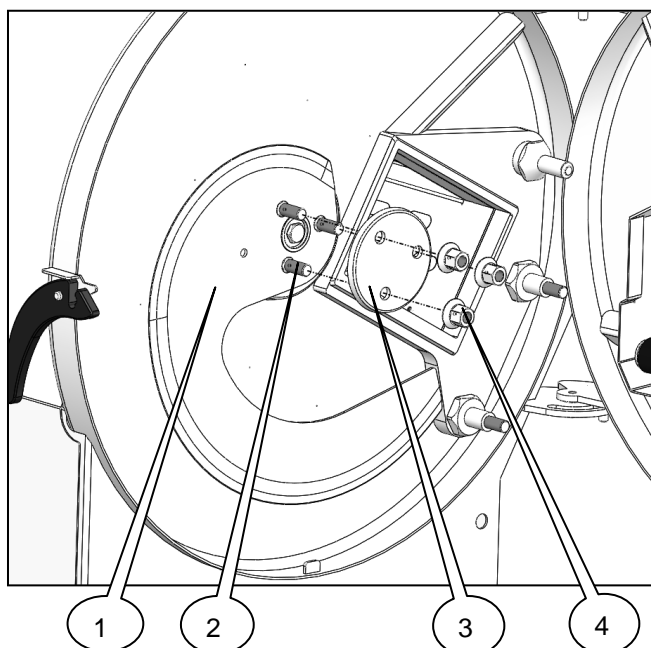
>Wear appropriate protective clothing/ gloves

Removing the blade

- Release the brake and rotate the blade to a suitable position. Releasing the brake is explained in „Releasing the brake“.
- Using the 24-mm ring spanner enclosed, release and remove the three hexagon nuts.
- Remove the clamping disk. You can now remove the blade.

Installing the blade

- Slip the blade (1) over the studs 82) and centre it on the hub. Note that the studs are staggered.
- Install the clamping disk (3). Note that the studs are staggered.
- Install the three hexagon nuts (4). Tighten them equally.
- Check the smooth movement (5) of the blade. Switch on the brake.



Safety

The proper functioning of the electrical protective equipment must be checked daily before work is started.

- Main switch in position „I“
- Press the „Cutting ON“ button

The machine must switch off immediately when the following protective devices are opened or removed:

- Stainless steel cover at the feeder side
- Stainless steel cover at the delivery side
- Blade chamber door
- Linear shaft cover

If the blade continues running, you must:

- Immediately switch off the machine at the main switch
- Secure the machine against being switched back on (pull the plug, hang up a note)
- Have the defect repaired by **holac** Customer Service



For your own safety never remove, bridge or change any safety devices provided.

The electrical protective equipment must be checked once a year by an expert.

Electrical Connection

ATTENTION

Please observe the circuit diagram in the operating instructions or in the machine's control cabinet.

Verify that the operating voltage on the machine's rating plate complies with the voltage of your mains supply.

Only deviations up to a maximum of +/- 5% are permitted.

The machine has to be connected and secured by a licensed electrician in accordance with the regulations applicable at the erection site.

The machine does not have / require a "neutral conductor".

If the machine has been equipped with a plug (Cekon 16/32 A) by the factory, this plug is connected for a "CLOCKWISE ROTATING FIELD" (3-phase current + protective conductor).

If your three-phase current socket has an "ANTI-CLOCKWISE ROTATING FIELD", a licensed electrician has to change two of the three socket phases.

The machine has to be connected via a plug connection or a lockable main switch.

Foreign customers have to observe the regulations applicable in their countries.

Important note !

After having followed the above-stated instructions, it is imperative to carry out a test run and check the protective equipment.

ATTENTION

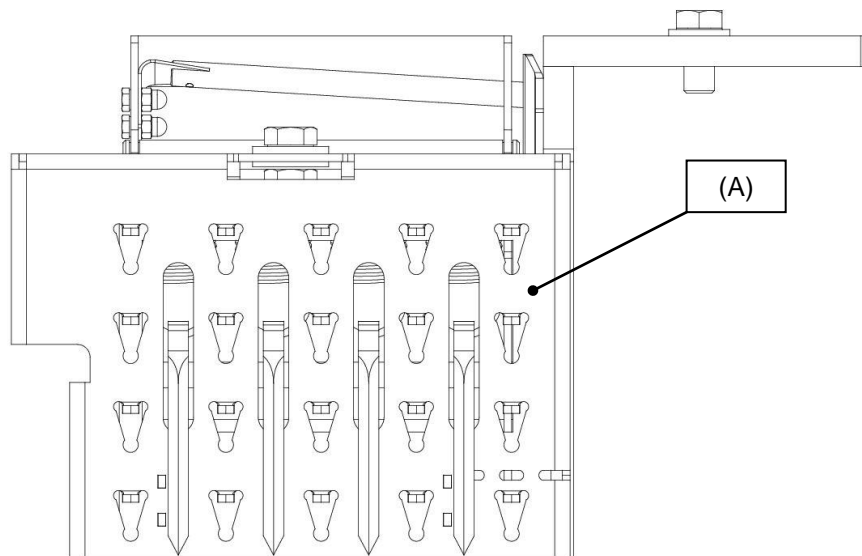
Corrosion hazard due to humidity and dirt ingress via the sockets.

>Cover unused sockets with protective caps.

Do not disconnect the machine from the mains after switch-off.

This may result in operating faults caused by humidity in the electric system.

Infeed gripper (standard general-purpose gripper)

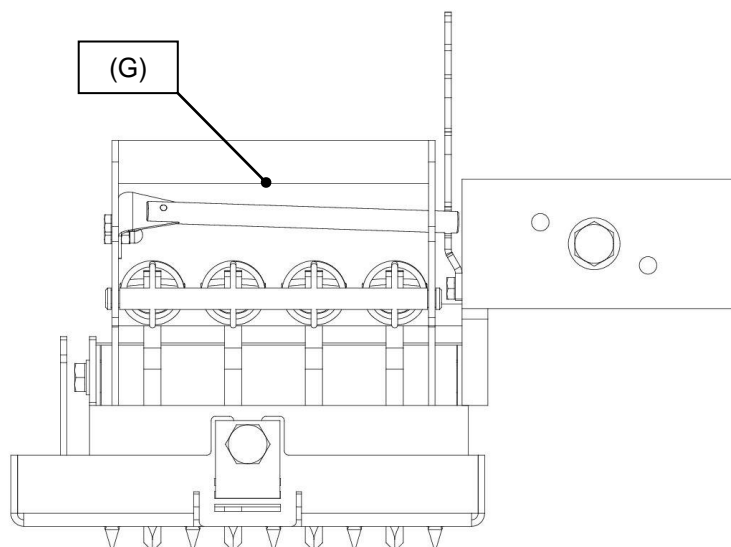


Holding the cutting material properly with the infeed gripper has significant influence on the cutting result and the uniform thickness of the slices.

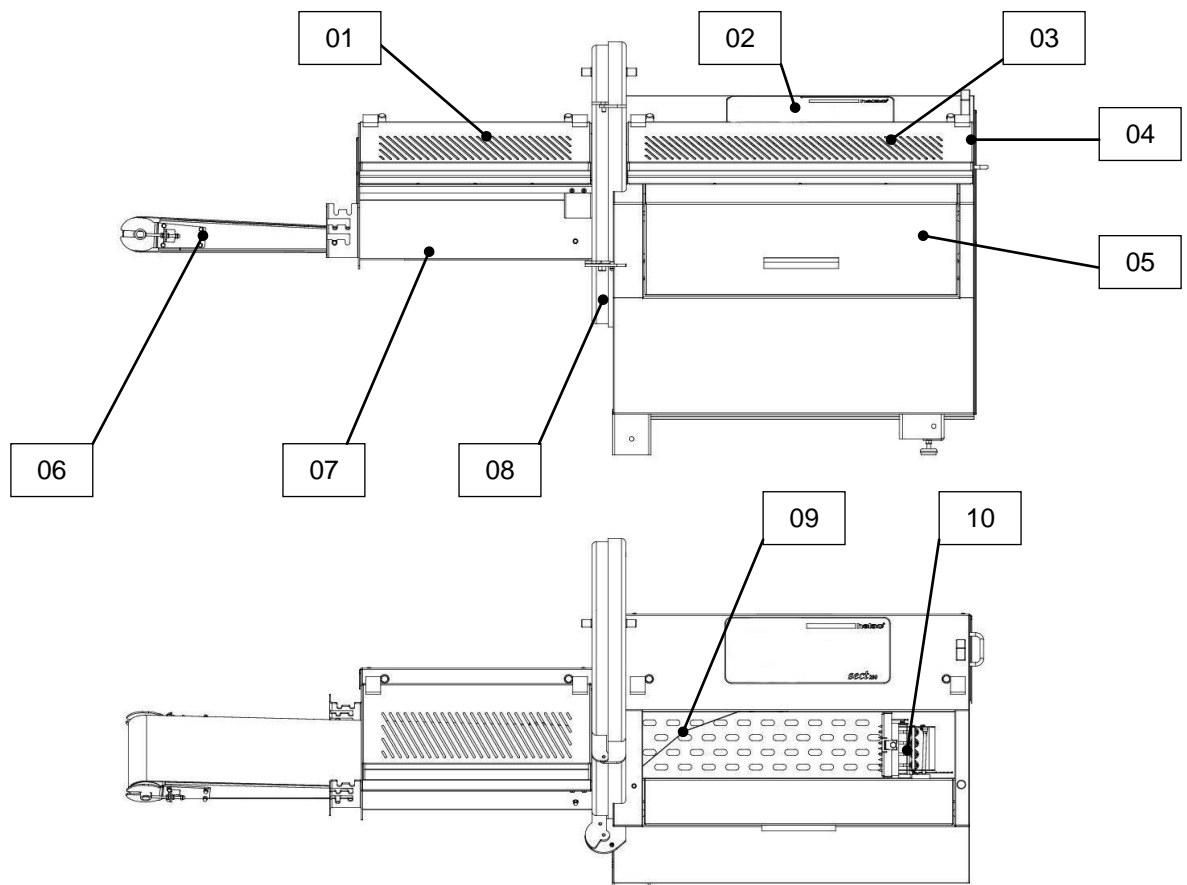
1. Push the cutting material towards the right until it hits the bearing surface (A), and press it against the bearing surface.
2. Fold the handle (G) forward until it hits the stop, and allow it to lock into place. The structure on the gripper recognizes bones and ensures that the product is held tight.
3. Pull at the cutting material from the left (towards the blade) to check whether the cutting material is held properly.



Sharp edges on the feed chamber
Risk of crushing and cutting when activating the feed chamber.
>Caution opening and closing
>Wear protective clothing

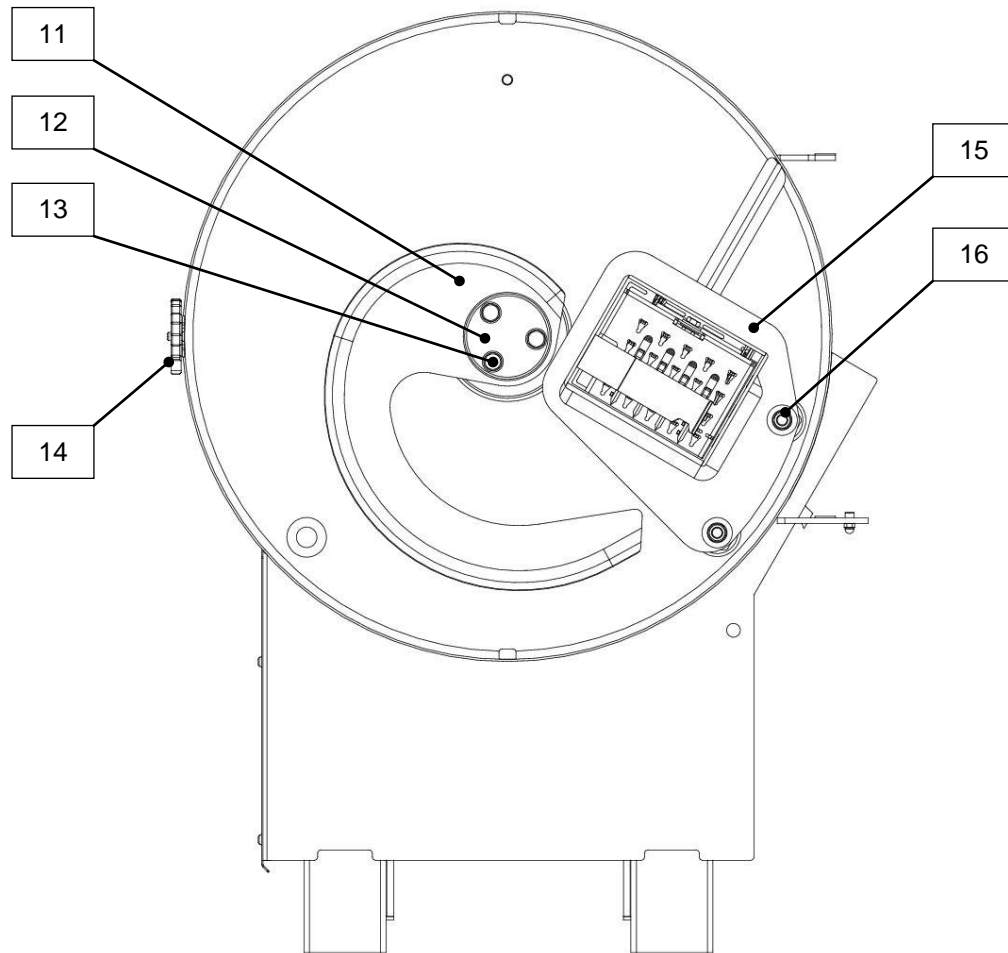


Control elements - figure



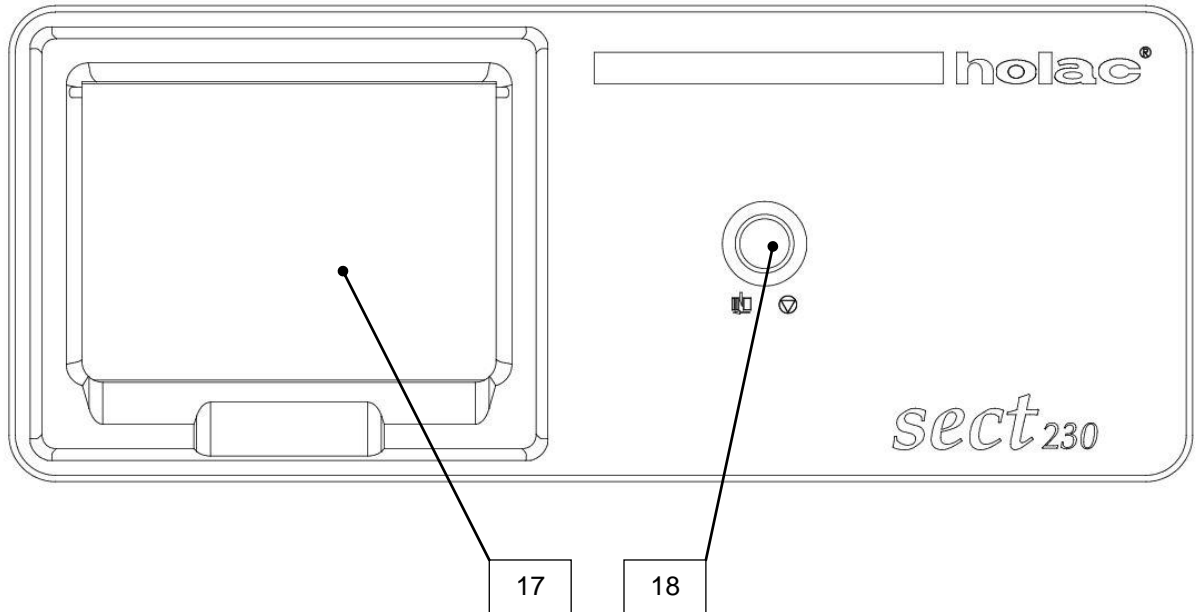
Control elements - description

- 01 Cover „delivery side“
- 02 Operator panel / control button
- 03 Cover „feeder side“
- 04 Main switch
- 05 Linear shaft cover
- 06 Delivery belt
- 07 Door with delivery chute
- 08 Blade chamber
- 09 Pressure spring
- 10 Infeed gripper



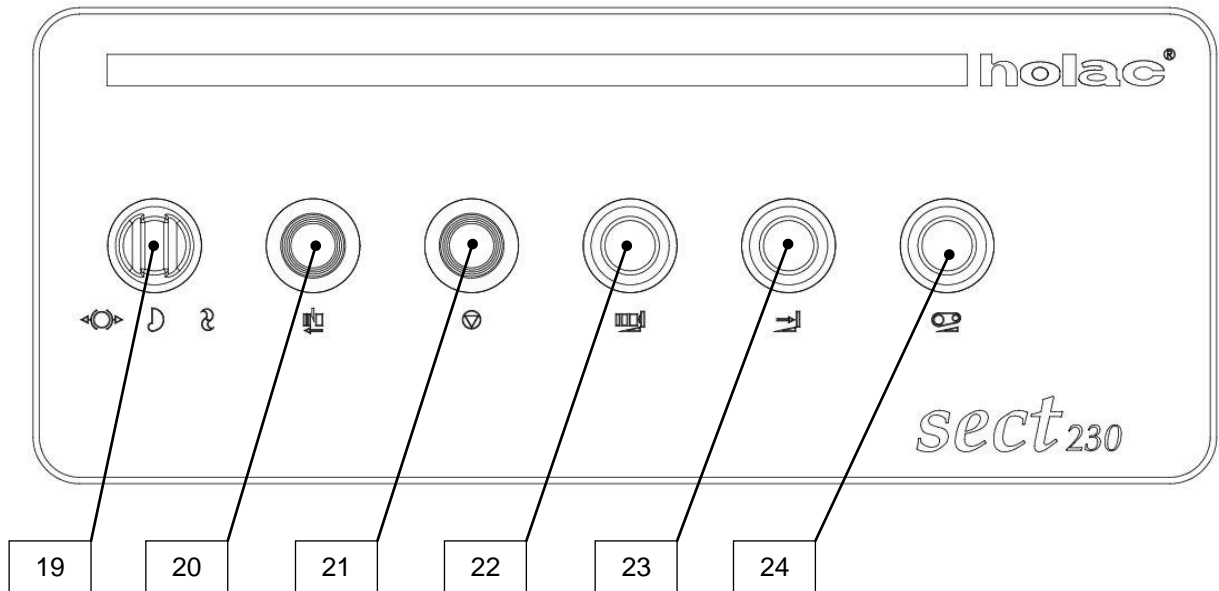
Control elements - description

- 11 Spiral blade / sickle blade
- 12 Clamping disk
- 13 Sickle blade nut
- 14 Lock on blade chamber
- 15 Counter bearing
- 16 Counter bearing nut



Control elements - description

- **17** **Control device touch panel**
- **18** **Start / stop button**



Control elements - description

- **19** 3-fold selector switch (release brake | spiral blade / sickle blade | S blade)
- **20** „Cutting ON“ pushbutton
- **21** „Cutting STOP“ pushbutton
- **22** „Cutting length“ rotary button
- **23** „Clamp return stroke“ rotary button
- **24** „Delivery belt speed“ rotary button

Operational sequence

- Close the blade chamber door (08)
- Close the cover at feeder and delivery side (01 & 03)



CAUTION

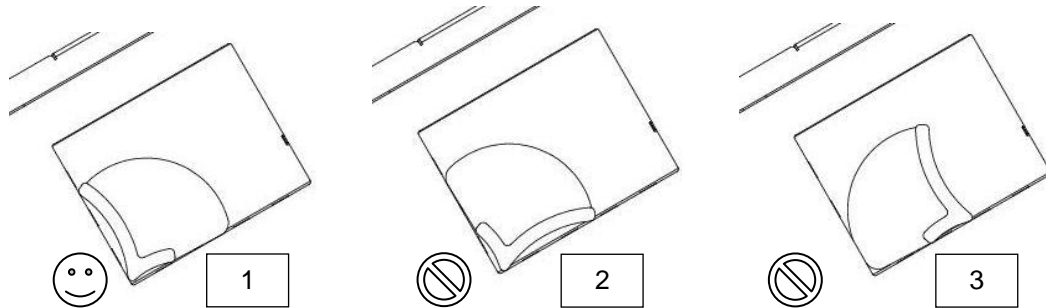
Risk of crushing when opening and closing the cover of the magazine.
>Caution opening and closing
>Wear protective clothing

- Main switch to position „I“ (04)
- Press the „Cutting ON“ button to move the system to the reference point (18/20)
- Adjust the Cutting length on the touch panel (17) or via the rotary button „Cutting length“ (22)
- Insert the product into the chamber and close the cover (03)
- Press the button (18) or the button (20) to start cutting.
- Open the delivery cover (01) and remove the product. The product is removed automatically when the delivery belt (06) is installed.

Cutting information

Clean the machine thoroughly before you start cutting.

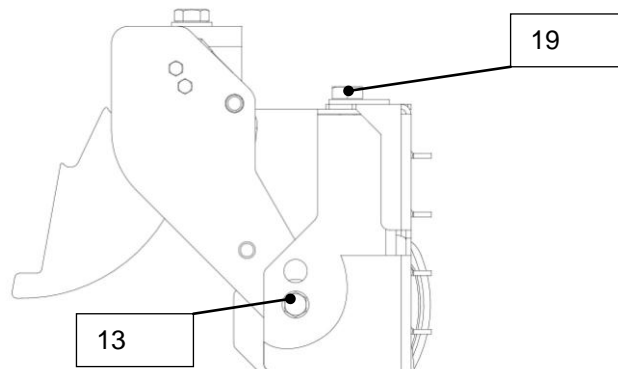
Bring the cutting material in contact with the front wall of the feeder chute. The bone spring of the chops must always be in contact with the front wall of the feeder chute (see Fig. 1). Feeding the product differently (Figs. 2 and 3) can lead to poor cutting results and damage the cutting tool. Clamping the product correctly with the infeed gripper has a significant influence on the cutting result.



The machine is equipped with an adjustable infeed gripper that permits the product to be gripped in an optimum way.

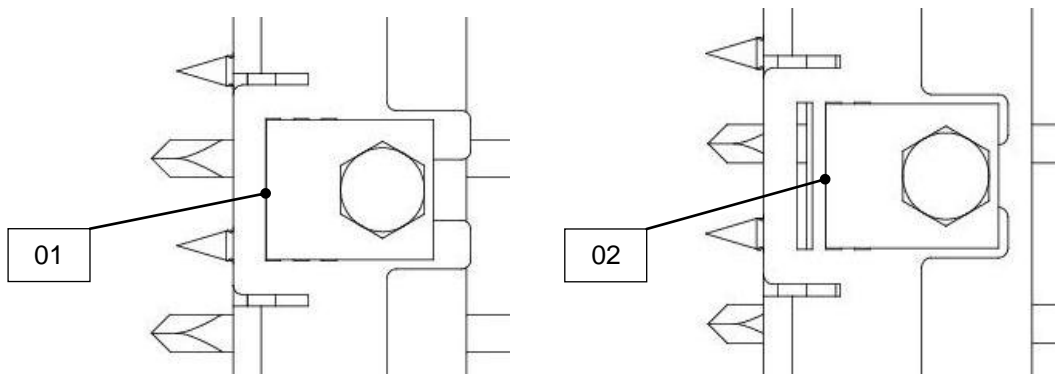
Adjustment possibilities

Claw level: Remove the complete claw from the machine. Remove the front panel (19 mm). To release the claw shaft, hold it at the flats (13 mm) and unscrew it. Pull out the shaft. Reinstall it in reverse sequence at the alternative position. Set the handle detent mechanism to the topmost installation position. Reinstall the front panel.



Distance between the claws and the product bearing surface: The front panel can be installed at two different locations. These locations define the distance between the claws and the front panel, and thus the position of the claws in the product.

Position 01 provides the maximum penetration of the claws into the product. In position 02, the front curve of the claw and the tips of the needles on the front plate are at the same level. Claw position 03 is not used.



Pressure spring: To be installed when narrow and firm products are cut. To be removed when soft, wide or frozen products are cut.



CAUTION

Sharp edges on the feed chamber

Risk of crushing and cutting when activating the feed chamber.

>Caution opening and closing

>Wear protective clothing

Inserting the product

- Fold back the handle claw
- Push the product to the right until it hits the bearing surface of the infeed gripper
- Fold the handle claw forward as far as possible, and let it lock into place
- Check whether the product is properly gripped
- Start the cutting cycle



CAUTION

Feed chamber moves at high speed.

Risk of crushing

>Wear protective clothing

Best cutting results can usually be achieved at a cutting material temperature of approximately 0° ... 2° Celsius.

A sharp blade significantly improves the cutting result. Resharpener a blunt blade. Observe the instructions for resharpening blades.

Please read the notes in the Chapter „How you can eliminate malfunctions yourself“ if you encounter any problems.

Cleaning

Cleaning notes

- Switch off the main switch.
- Deposit the removed parts at a safe place.
- Never allow removed blades to protrude from the table edge.
- Upright blades are dangerous too.



Sharp edges Cutting hazard

>Wear appropriate protective clothing/ gloves

- **Wear personal protective equipment and cut-proof gloves.**
- Check the seal of the blade shaft. Replace a damaged seal.
- Clean the machine daily after the end of the work.
- Cleaning with high-pressure cleaner
 - max. pressure 50 bars
 - 40 cm min. distance between nozzle and machine
 - never spray directly onto the operating elements
 - never spray into the machine from below

Work sequence

1. Put the machine to initial position
2. Switch off the main switch
3. Open the blade chamber door
4. Release the nuts on the counter bearings (24 mm), remove the counter bearing and clean it separately
5. Remove the blade. Wear **cut-proof gloves during this step. Risk of cutting!**
 - Release the nuts on the sickle blade (24 mm). Remove the clamping disk. The blade is free
 - Remove the blade from the hub and deposit it at a safe place
6. Open feeder and delivery cover
7. Remove the pressure spring and clean it separately
8. Remove the infeed gripper (19 mm) and clean it separately
9. Disconnect the electrical connection of the delivery belt (option). Install the caps on the male and female connectors to prevent humidity and dust from penetrating into the connection. Remove the delivery belt. Open the swivel body to relieve the belt, and remove the belt.



Discharge-conveyor is installed under tension and can bounce up. Risk of crushing during removal and installation of the discharge-conveyor.

>Carefully tension and release the tension of the discharge-conveyor
>Wear protective clothing

After cleaning:

Spray oil (USDA-H1 approval) on spiral blade and blade shaft (see lubricants).

Cleaning and disinfection schedule

Work step	Cleanser	Procedure	Tool	Comment
Coarse cleaning Removing the product residues	----	Manually mechanical	Scraper Spatula	After production end
Prerinsing Machine and removed parts	Drinking water	Low pressure < 30 bars Temperature 60° C, depending on fat softening temperature	Low-pressure unit Water hose	From top to bottom
Neutral cleaning Removed parts	Henkel Hygiene P3-topax 12 P3-steril 2-5% ----- Goldschmidt SOMPLEX F 2-5 %	Temperature approximately 40° C In trough manually with brush 15 min soaking time	Low-pressure unit Water hose Brush Trough	
Alkaline cleaning of machine	Henkel Hygiene P3-topax 19 P3-topax 66 2-5% ----- Goldschmidt SOMPLEX F 2-5%	Foaming 15 min soaking time	Low-pressure foam cleaning unit Hand-held spraying device	From bottom to top
Acidic cleaning of machine (as required, to remove protein and lime deposits)	Henkel Hygiene P3-topax 56 3-6% ----- Goldschmidt SOMPLEX Acidic foam 3-6%	foaming 15 min soaking time	Low-pressure foam cleaning unit Hand-held spraying device Brush	From bottom to top
Rinsing Machine and removed parts	Drinking water	Low pressure < 30 bars Temp. 50...60° C	Low-pressure unit Water hose	From top to bottom
Check for visual cleanliness		Visual		Blade chamber cutting chamber grid
Disinfection Machine and removed parts	Henkel Hygiene P3-topax 99 P3-topax 91 0.5-2% ----- Goldschmidt TEGO 2000 TEGO IMC 0.5-2%	Spraying, foaming Soaking time acc. to product data sheet	Low-pressure unit Spray gun	From bottom to top
Rinsing Machine and removed parts	Drinking water	Low pressure < 30 bars	Low-pressure unit Water hose	Observe FL HV Appendix 2., II, 4 (*)
Drying	-	-	-	-

(*) Excerpt from the Meat Hygiene Directive, Appendix 2, II, 4

Substances such as cleansers and disinfectants must be used such that they can not have a detrimental effect neither on furniture and working equipment, nor on the meat.
They must thoroughly be rinsed off after they have been used.

The percent values specified for the cleansers correspond to a solution in drinking water.

Use only disinfectants for the food area that have been approved and found effective according to the Directives of the DVG (Disinfection Committee of the German Veterinary Society).

The specifications in the cleaning schedule are based on one-shift operation.

Observe the personal hygiene when you install the removed parts.

Reinstall the cleaned parts and carry out two working sequences without product.



Puddled cleaner/ water on or around the machine.

Danger of slipping and falling

>Wear protective clothing

Daily checks

Seals

ATTENTION

Seals are subject to wear. Perform a daily visual check of the seals of the blade flange. If the seal is defective:

- Do not use the machine any further
- To replace the seal, call **holac** Customer Service or instruct expert staff.

Failure to do so can contaminate the product.

Electrical protective equipment

Check see „Safety“

Maintenance

Maintenance work	First time	Interval
Lubricate the bearing block	Factory lubrication; autom. lubrication for 6 months	6 months by replacement of the grease cartridge
Check the electrical safety equipment	Upon startup	Daily by operator; yearly by expert
Changing lubricant on blade motor	After 10,000 operating hours	After 8,000 operating hours
Replacing and sharpening the spiral blade	When blunt or damaged	When blunt or damaged

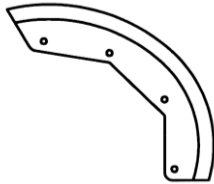
Replacing the lubricant cartridge of the bearing block

The lubricant cartridge on the gripper feeder works for 6 months. If feeds the system with grease during this interval. The cartridge must be replaced after this time. To replace the cartridge:

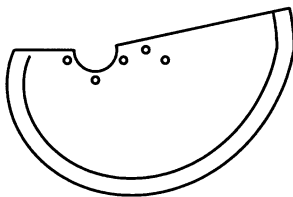
- Move the infeed gripper to the initial position
- Remove the cover of the machine housing
- Unscrew the cartridge from the hexagonal adapter, and remove is according to the applicable regulations. Due to the system structure, there is always a small remainder of grease in the cartridge. This is not a defect.
- Install the new cartridge, and screw in the red activation screw. The system will be greased for the next 6 months.

The recommended grease types are listed in "Lubricants".

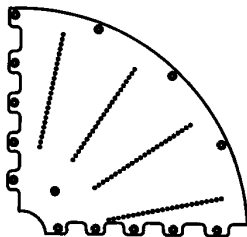
Maintenance of the cutting tools



S cutter



Spiral cutter /
wing cutter



Scraper disk segments

All cutters of the machine must be checked for sharpness every two weeks.

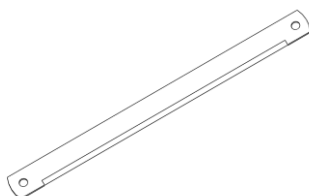
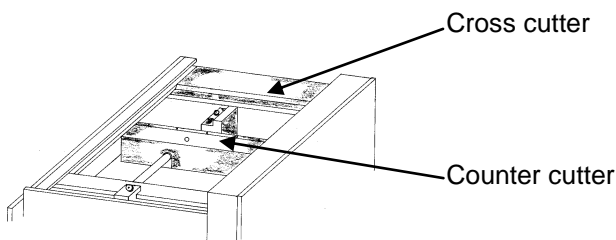
Make sure no undersize is created on the cutters.

If further sharpening is not possible, the tool should be replaced.



**Sharp edges
Cutting hazard**

**>Wear appropriate protective clothing/
gloves**



Reciprocating cutter

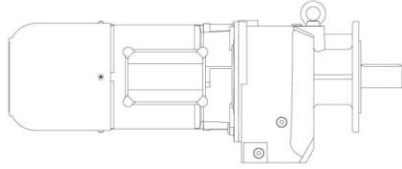
Lubricants

Lubricants

ident no.	supplier	sort	application	USDA-H1 admission
	Shell	SHELL FB 2	general lubrication points	-
	Texaco	Multifak 20	" "	-
	Mobil	Mobilux	" "	-
	Aral	Aralub HL 2	" "	-
	BP	Energrease LS 2	" "	-
81-1403-4	DEA	Orona 00	gearbox	-
81-1403-4	BP	Energrease LS 0	gearbox	
81-1405-0	Optimol	OBEEN UF2	general lubrication points	x
81-1405-0	Klüber Lubrication	Paraliq GA 343 Klübersynth UH1 14-222	general lubrication points	x
81-1408-1	Optimol	F+D Fluid Spray	blade shaft, grid shaft, grid bolt, bearing neck, spiral-blade, grid, angle-lever, shear blade, sealing bar	x
	ASEOL	Food A EPX 00	gearbox, general lubrication points	x
80-1138-1	perma	perma SF01, 6-month-cartridge	infeed gripper	-

Please pay attention to the supplier informations of storage, use and waste disposal!

Blade motor maintenance



Machine type	Filling volume
sect 230	1300 cm ³

When gearboxes and gear motors are delivered, they are ready for operation and filled with free-flowing grease or, optionally, with oil. This first filling corresponds to a lubricant from the column for the

ambient temperature (normal) of the lubricant table. For other ambient temperatures you can obtain the required lubricants at extra costs.

The lubricant should be changed every 10,000 operating hours, or after 2 years (whatever comes first). These intervals can be doubled for synthetic products. Shorter intervals are recommended for extreme operating conditions (such as high humidity, aggressive environment, or large temperature changes). Combining the lubricant change with a thorough cleaning of the gearbox is recommended.

The grease-filled rolling bearings must also be cleaned and filled with new grease every 10,000 operating hours. It must be ensured that approximately 1/3 of the bearing space is filled with grease.

Never mix synthetic and mineral lubricants.

Schmierstoffsorten:

Type of lubricant:

Type de lubrifiant:

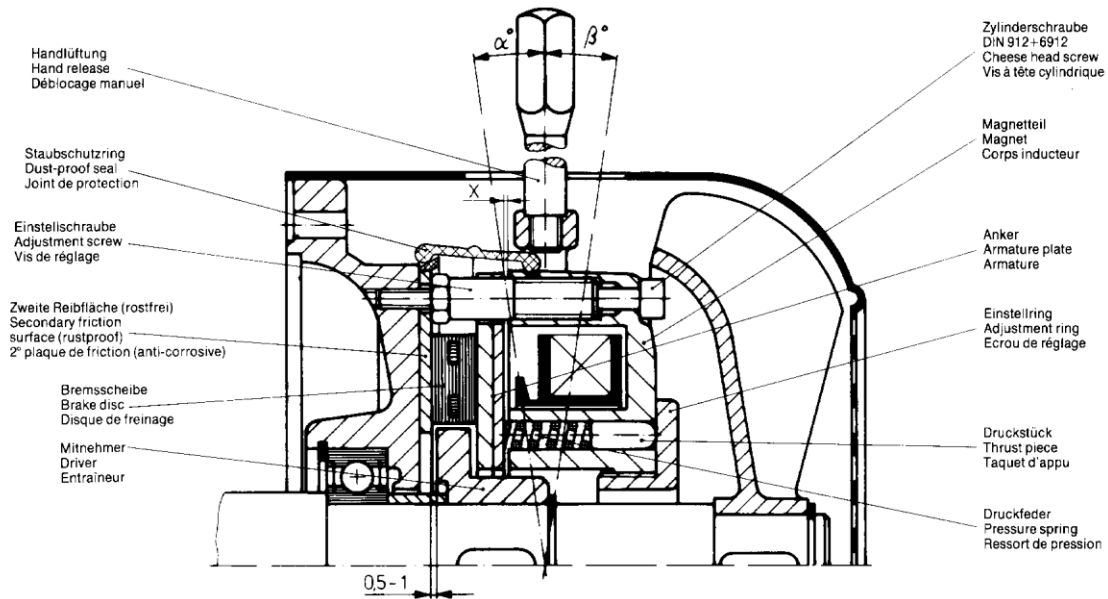
Getriebeart Type of gearbox Type de réducteur	Schmierstoffart Type of lubricant Type de graisse	Umgebungs- temp. °C Ambient tem- perature °C Température ambiante °C	Viskositäts- klasse ISO ISO viscosity class Classe de viscosité ISO								
Spiralgetriebe/ Helical Gearboxes/ Helical Shaft Mounting Gearboxes Réducteurs à engrenages cylindriques/ Réducteurs à arbres parallèles	Mineralöl Mineral oil Huile minérale	-5 ... +40 (normal) -15 ... +25 *-50 ... -15	ISO VG 220 ISO VG 100 ISO VG 15	Degol BG 220 Degol BG 100	BP Energol GR-XP 220 BP Energol GR-XP 100 BP Bartran HV 15	Gear Lubric. DX 90 od. Meropa 220 Gear Lubric. DX 80 od. Meropa 150 Aircraft Hydraulic Oil 15	Spartan EP 220 Spartan EP 100 Univis J 13	Lamora 220 Lamora 100 Isoflex MT 30 rot	Mobilgear 630 Mobilgear 629 Mobil D, T, E, 11	Shell Omala Öl 220 Shell Omala Öl 100 Shell Tellus Öl T 15	
	Synth. Öl Synthetic oil Huile synthétique	-25 ... +80 -35 ... +100	ISO VG 220 ISO VG 460	Degol GS 220 Degol GS 460	BP Energol SG-XP 220 BP Energol SG-XP 460	Synlube CLP 220	Umlauföl S 220 Umlauföl S 460	Syntheso HT 220 Syntheso HT 460	Mobil Glygoyle 30 Mobil Glygoyle 80	Shell Tivela Öl WB Shell Tivela Öl SD	
	Fließfett (Mineralölbasis) Fluid grease (mineral oil base) Graisse fluide (base huile minérale)	-20 ... +50 (normal)	—	—	Aralub FDP 00	BP Energ grease HT-00 EP FG 00-EP	Glissando GF 1464	Fibrax EP 370	Natosbin B 1600 EP	Mobilux 44	Shell Spezial- Getr.-Fett H Shell Grease S. 3655
	Synth. Fließfett Synth. fluid grease Graisse fluide synth.	-35 ... +60	—	—	—	BP Energ grease GSF	Multifak 283 EP 00	Fließfett S 420	Structovis P 00	Glygoyle Grease 00	Shell Tivela Compound A
Wälzlager Anti friction bearings Roulements à rouleaux	Fett (Mineralölbasis) Grease (mineral oil base)	-30 ... +60 (normal)	—	Aralub HL 3	BP Energ grease LS 3	Multifak 30 Glissando FT 3	Mehrzweck- fett Beacon 3	Centoplex 3	Mobilux 3	Shell Alvania Fett G 3 oder R 3	
	Graisse (huile minérale)	*-50 ... +110	—	—	—	—	Unirex Lotemp EP	Catenola CX 2PF	—	—	
	Synth. Fett Synth. Grease Graisse synth.	*-50 ... +110	—	—	—	—	Beacon 325	Isoflex Topas NB 52	Mobiltemp SHC 32	Aero Shell Grease 16 oder 7	

Blade brake

The blade drive motor is equipped with a brake.
The blade is stopped immediately when the cutting process is interrupted.

Notes

Ensure that grease and oil do not advance to the friction surfaces.
In dusty environments you should retrofit the brake with a dust-proof ring and a second friction disk.
The brake is delivered with a friction disk made from stainless material.



Brake moment adjustment

The brake moment is set to the nominal torque.
The setting must not be changed.

Brake size	Brake moment [Nm]	Solenoid rating [W]	Nominal air gap [mm]	Adjustment of air gap [mm]	Max. wear V[mm]	Min. lining thickness [mm]
BRE 40	40	42	0.3	0.9	3.0	9.5

Installation

Install the driver axially on the shaft, and secure it against rotating. Ensure that the driver can not hit the second friction surface. Distance to the 2nd friction surface 0.5...1 mm, taking the axial play of the shaft (Fig. 2) into account.

Slip the brake disk on the driver.

Secure the completely assembled magnet system with cheese-head screws on the end shield or intermediate flange

Adjusting and readjusting the air gap

Using a feeler gauge, adjust the air gap at the adjustment screws.

Tighten the cheese-head screws.

The gap should be the same all around (Fig. 1).

Replacing the brake disk

Release the magnet system and pull it back.

Replace the brake disk. Secure the magnet system and adjust the air gap.

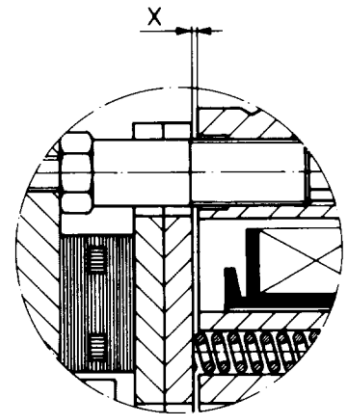


Fig. 1

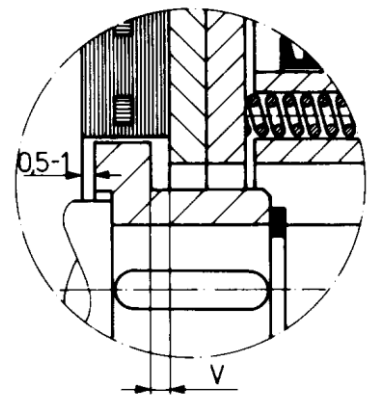
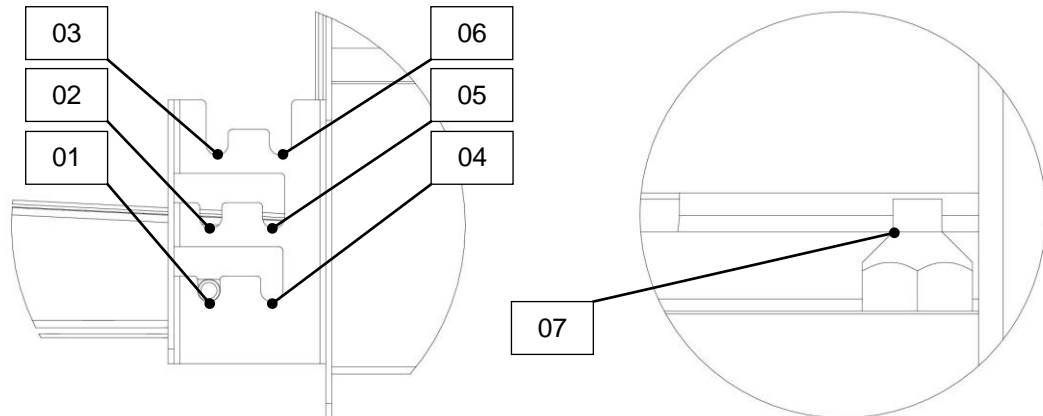


Fig. 2

Adjusting the belt position

The delivery belt can be set to 3 vertical levels and 2 horizontal levels. The belt is positioned without tools. Merely hang it to the defined positions. Adjustment is not necessary. The positions are always properly defined.



- Position 01: Height underneath the belt on the belt motor approximately 675 mm
- Position 02: Height underneath the belt on the belt motor approximately 765 mm
- Position 03: Height underneath the belt on the belt motor approximately 855 mm

Although the height specifications of positions 04 ... 06 correspond to positions 01 ... 03, they can only be used when the counter bearing is removed and the slicer blade is used.

Position 07 shows the correct installation position of the delivery belt in the door with delivery chute. The supports of the swivel body must at both sides be in contact with the tapered carrier pins.

Instruction Manual Touchpanel

1. Start screen

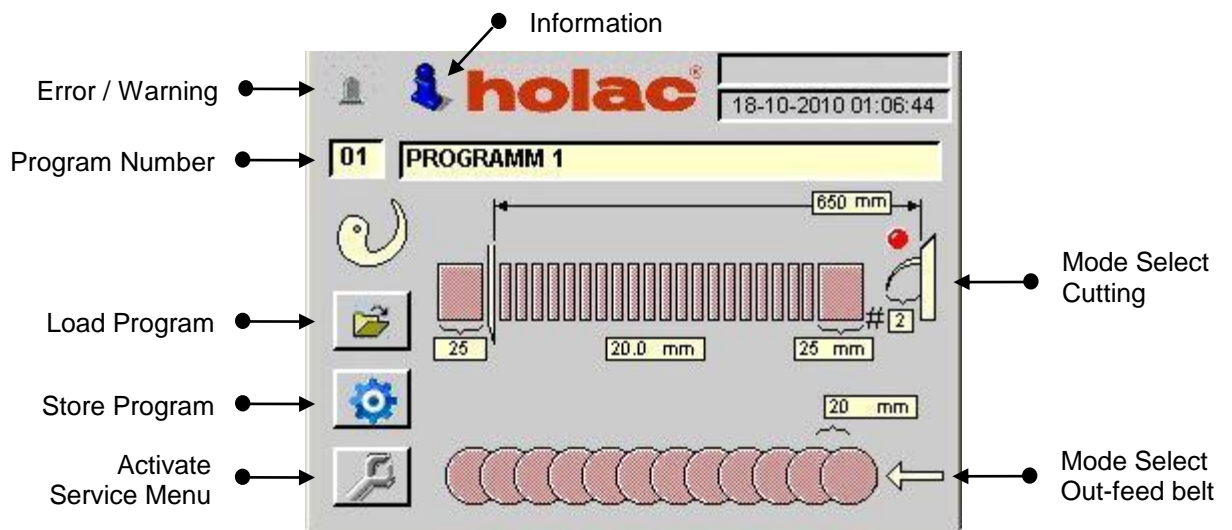
The start screen shows the machine type, and the machine number.



When touching the operator panel into the middle, the screen changes and displays the standard menu.

2. Standard screen

The standard screen is active, when the machine is not working.





Fault indication
red flashing: Active fault
yellow flashing: Active warning

Press the fault lamp button to display the screen with the active faults.



Information button
Press the button to display the screen with the holac contact address.



Load the cutting program



Edit the cutting program



Invoke the service screens



Single Blade active.

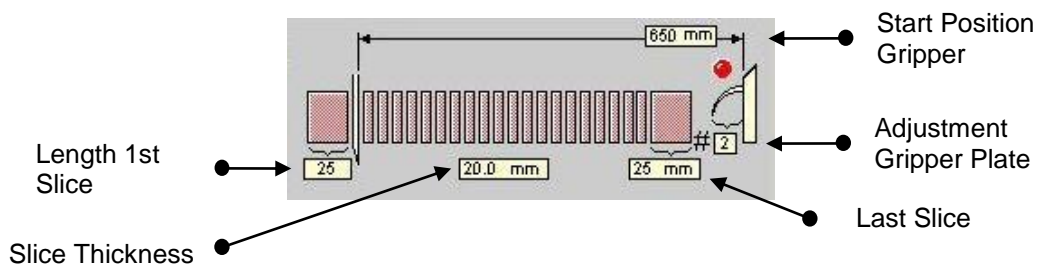


Wing Blade active.

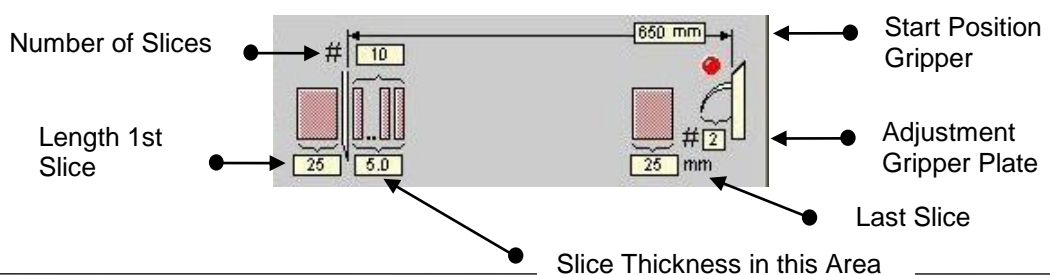


Deli-Blade active.

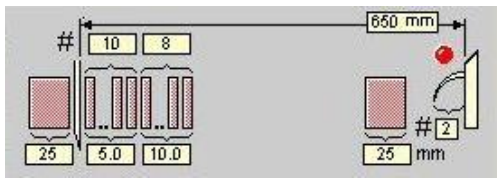
Start Screen – Mode Select Cutting Standard:



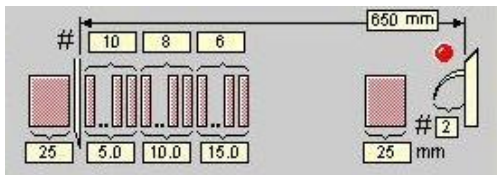
Start Screen – Mode Select Sectioning – One part selected:



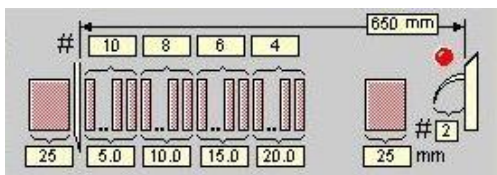
Start Screen – Mode Select Sectioning – Two parts selected:



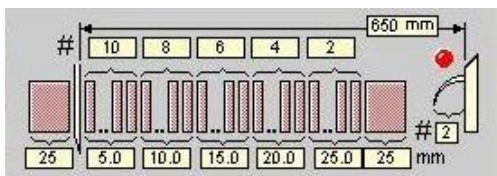
Start Screen – Mode Select Sectioning – Three parts selected:



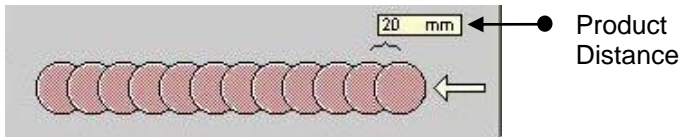
Start Screen – Mode Select Sectioning – Four parts selected:



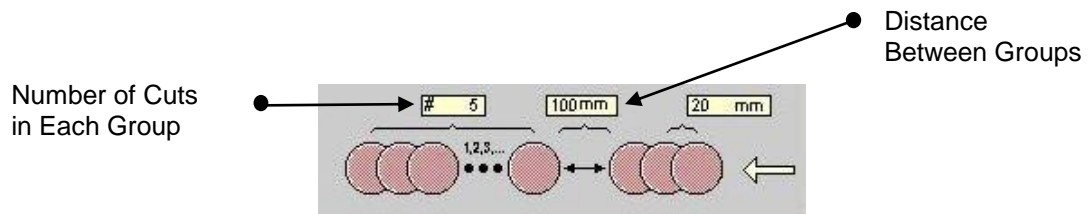
Start Screen – Mode Select Sectioning – Five parts selected:



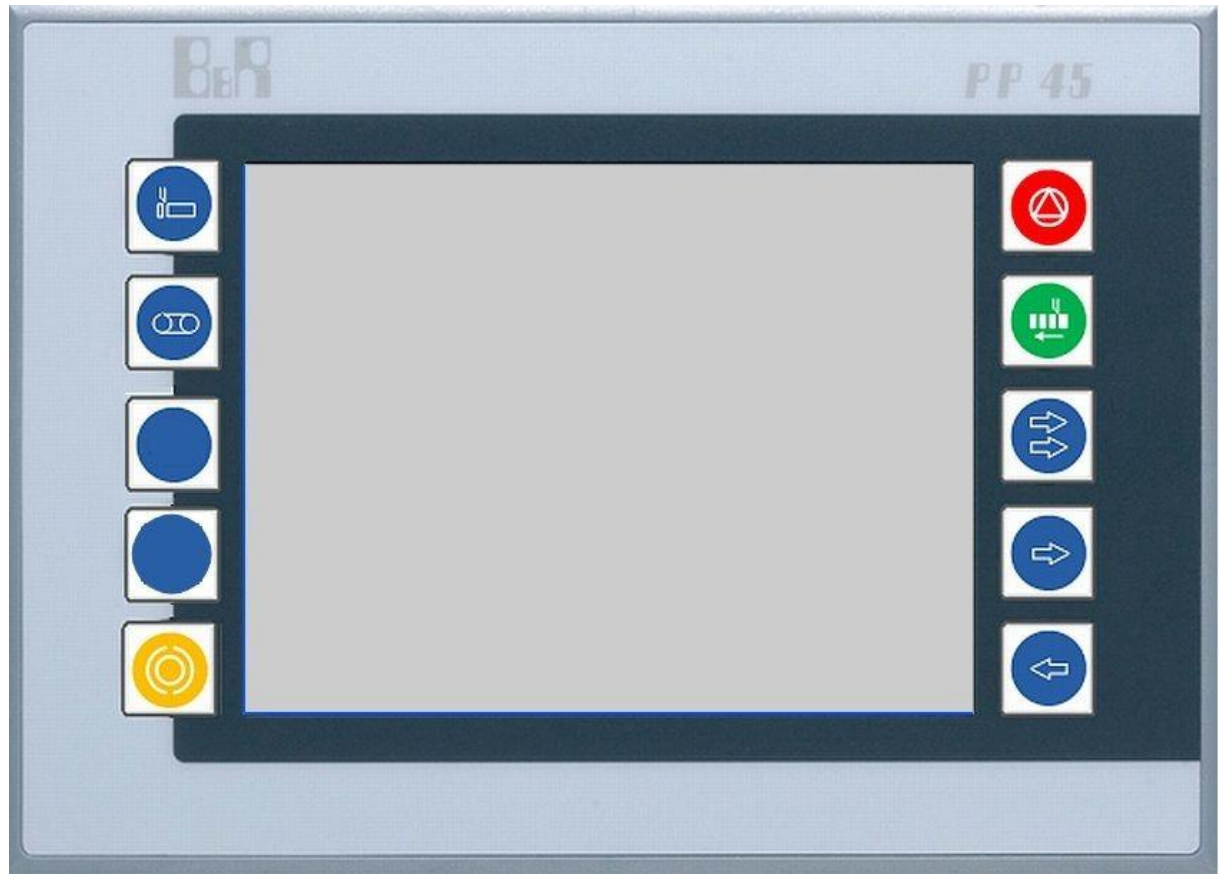
Start Screen – Mode Select Out-feed belt - Standard:



Start Screen – Mode Select Out-feed belt - Grouping:



2.1. Operating buttons



Machine stop



Machine start



Gripper reverse to adjusted backward position



Gripper reverse (only as long as the button is pressed)



Gripper advance (only as long as the button is pressed)



Single cut



Out-feed conveyor belt ON



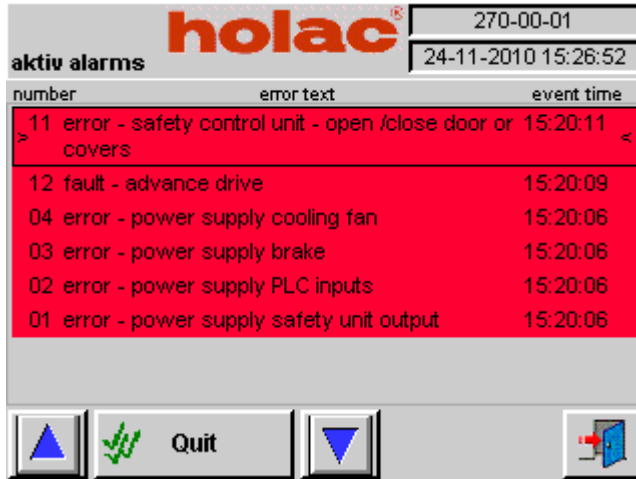
Release brake manually

3. Fault screen

The fault screen is displayed when you press this button while the fault is flashing:



indication



Cursor Position

- Red: Active fault (not acknowledgeable)
- Orange: Active fault (acknowledgeable)
- White-orange: Acknowledgeable fault
- Yellow: Warning (acknowledgeable)
- White-yellow: Acknowledged warning



Cursor up



Cursor down



Acknowledgement of the currently pending faults and warnings



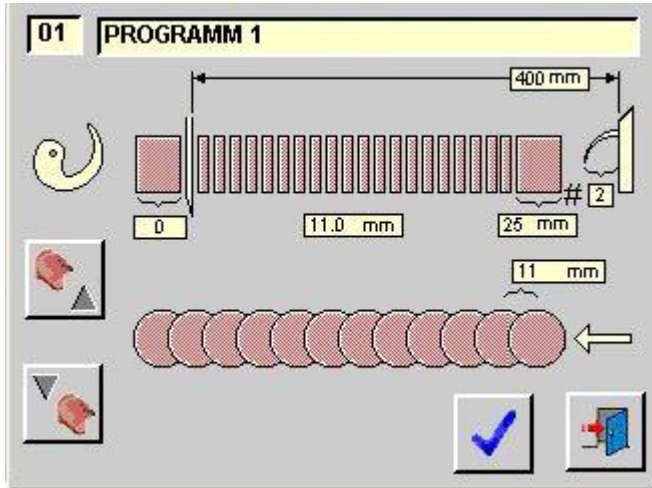
Close screen

4. Load Program

Pressing Button **Load program**



will open following screen:



Select next cutting program



Select previous cutting program

Depending on the selected cutting program, the different picture of mode select and the adjusted values will be shown.



When pressing **acknowledgement** button, the selected cutting program will be activated and loaded.
Screen will be closed and the standard screen shows up.



Pressing the **close window** button, the selected program will be abolished and the last program will be active again.
Screen will be closed and the standard screen shows up.

5. Change Actual Cutting Program

When pressing button

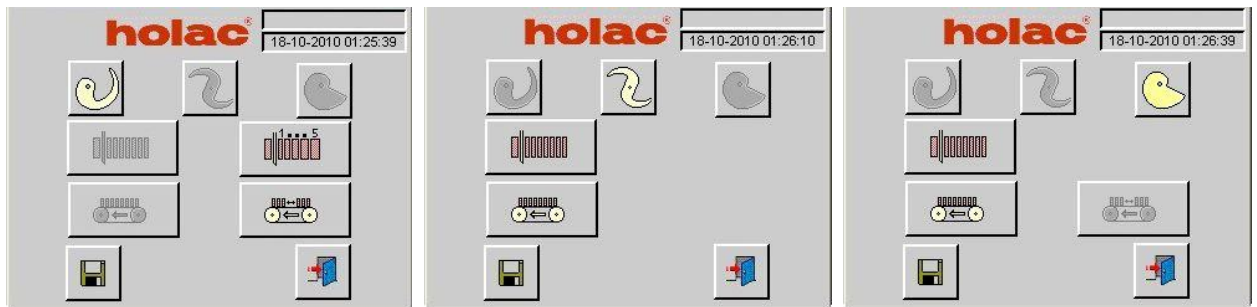


the code box will be opened.

Enter the customer code and confirm with the OK-Button.

The factory code is „0001“.

With the valid code the screen for adjustment of the cutting program opens.
Depending on the blade there are different operating modes possible.

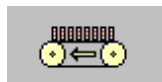


The active blade and active operating mode is coloured.

First select the blade and then the operating mode.

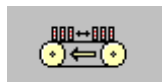
After pressing the button of an operating mode, the screen for entering the depending parameters will go up.

Possible Combinations of Operating Modes:



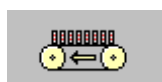
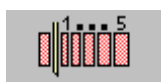
Cutting with an adjusted fix slice thickness.
The gripper movement is continuous.

Outlet belt is running continuous.



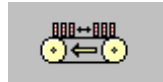
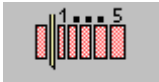
Cutting with an adjusted fix slice thickness.
The gripper movement is cycling.

Outlet belt is running depending on the adjusted parameters for grouping.



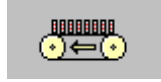
Sectioning with maximum 5 areas with different count of slices
and different slice thickness.

The gripper movement is cycling.
Outlet belt is running continuous.



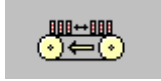
Sectioning with maximum 5 areas, different count of slices and different slice thickness.
The gripper movement is cycling.
Outlet belt is running depending on the adjusted parameters for grouping.

Slice thickness larger than 30mm, only with the single blade.



Cutting with fixed slice thickness.

The gripper movement is continuous and the blade makes single cuts.
Outlet belt is running continuous.



Cutting with fixed slice thickness.

The gripper movement is continuous and the blade makes single cuts.
Outlet belt is running depending on the adjusted parameters for grouping.



Save the settings.

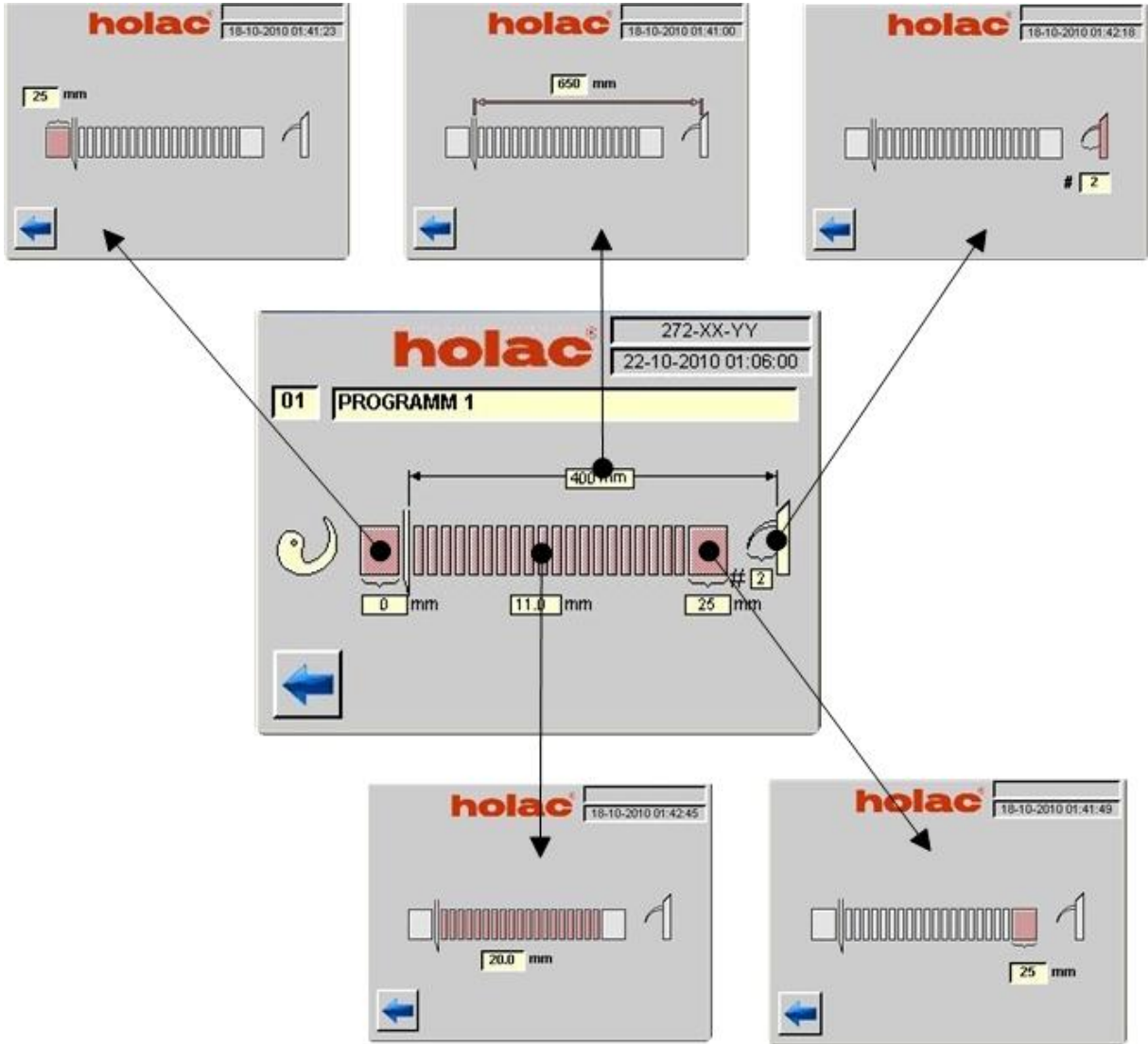



Close screen without saving

Adjust Settings Parameter for Cutting Standard:

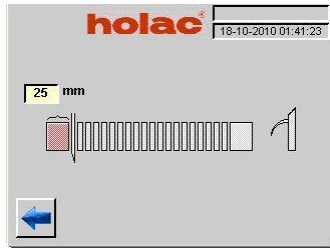
When pressing button  or  the screen of the slicing parameter shows up.

There are several buttons in the area of the shown parameters.
After pressing one button a screen goes up with the possibility to enter the selected parameter.



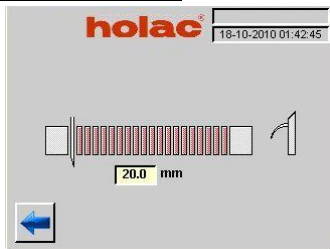
 Back to the previous screen

Length of first slice:



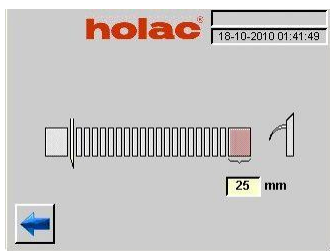
valuation: 0mm to 500mm.

Slice thickness:



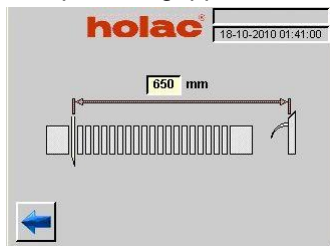
valuation single blade: 0.5mm to 300mm.
valuation wing blade: 0.5mm to 20mm.
valuation deli-blade: 0.5mm to 5mm

Last piece:



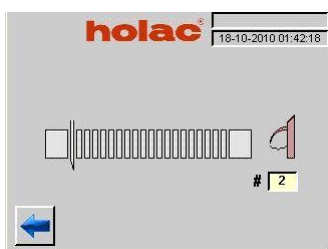
valuation when gripper position „1“: 18mm to 500mm.
valuation when gripper position „2“: 23mm to 500mm.

Start position gripper / backward distance:



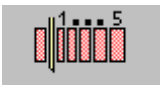

valuation: 350mm to maximum Value (depending of length of machine).

Gripper sheet adjustment (mechanical):

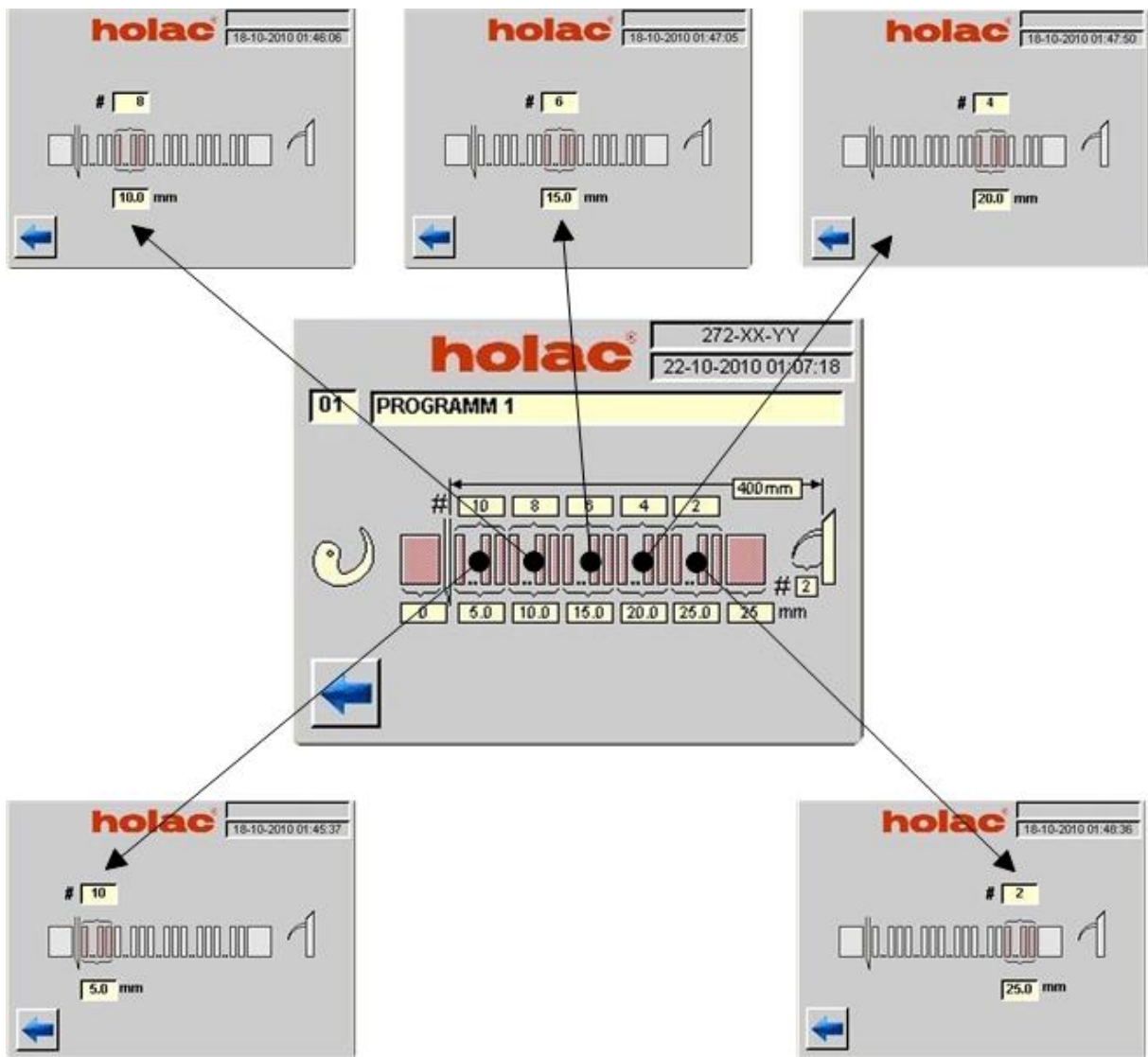


valuation: 1 or 2.

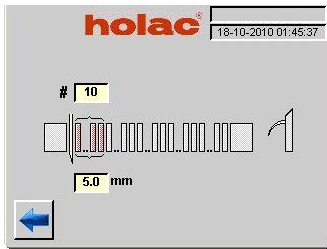
Adjust Settings Parameter for Sectioning:

When pressing button  or  the screen of the slicing parameter shows up.

There are several buttons in the area of the shown parameters. After pressing one button a screen goes up with the possibility to enter the selected parameter.

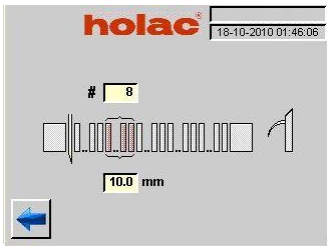


Slice thickness and number of slices in area 1:



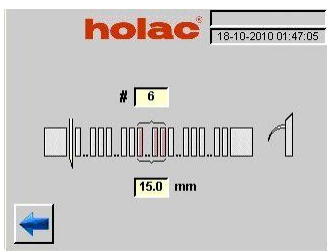
valuation slice thickness: 0.5mm to 30mm
Valuation amount of slices: 0 to 255.

Slice thickness and number of slices in area 2:



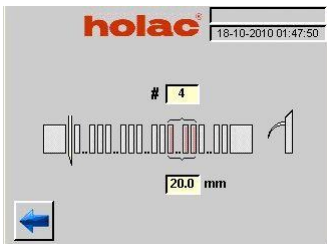
valuation slice thickness: 0.5mm to 30mm
Valuation amount of slices: 0 to 255.

Slice thickness and number of slices in area 3:



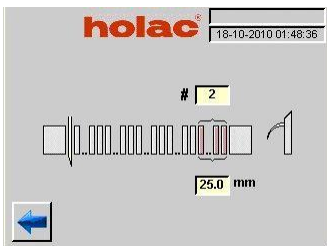
valuation slice thickness: 0.5mm to 30mm
Valuation amount of slices: 0 to 255.

Slice thickness and number of slices in area 4:



valuation slice thickness: 0.5mm to 30mm
Valuation amount of slices: 0 to 255.

Slice thickness and number of slices in area 5:

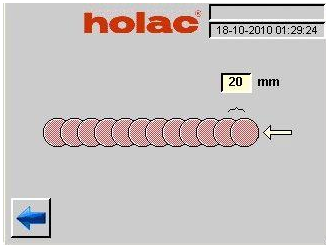


valuation slice thickness: 0.5mm to 30mm
Valuation amount of slices: 0 to 255.

Entering the parameters for first slice, last slice and the gripper distance is the same like in the standard cutting screen.

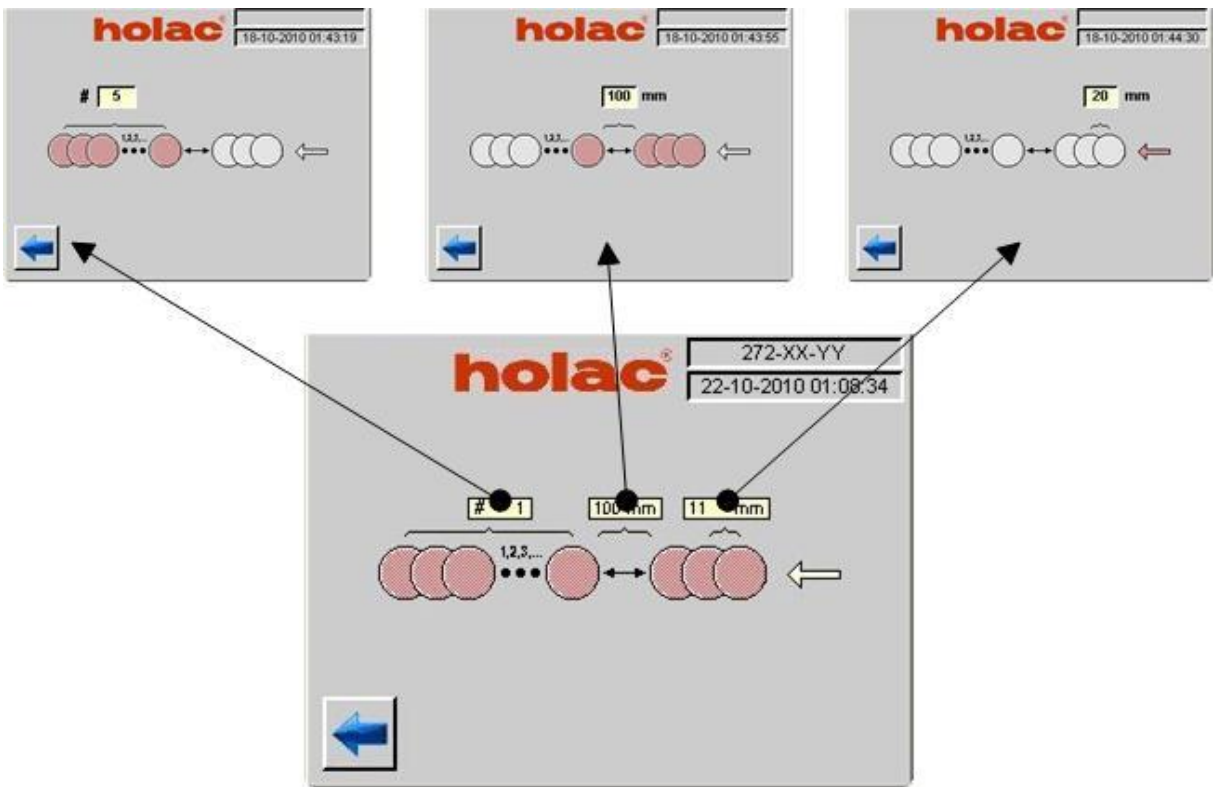
Parameter out-feed belt - standard mode:

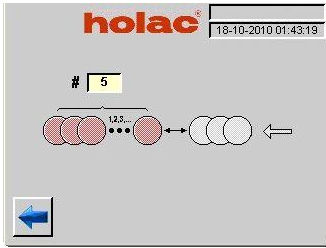
Product distance:



valuation: actual adjusted slice thickness up to 130mm.

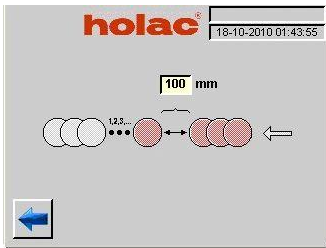
Parameter out-feed belt – product separation:





Number of slices each group:

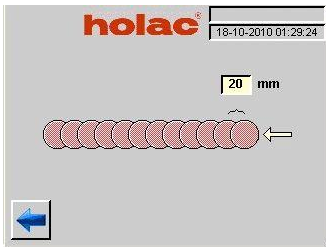
valuation: 0 to 2000



Distance between the groups:

valuation: actual adjusted slice thickness up to 500mm.

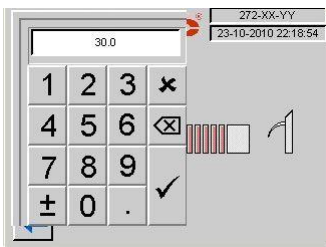
Distance between the product:



valuation: actual adjusted slice thickness up to 130mm.

General for inserting values:

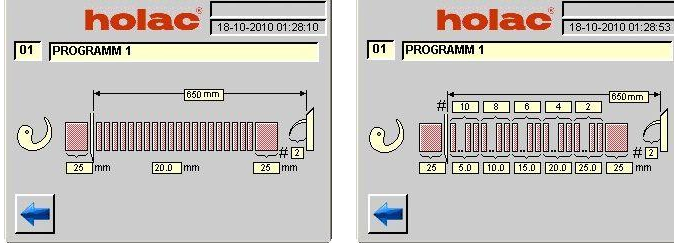
To enter a value, press in the area of the parameter. The numerical block comes up.



- Cancel entry
- Digit backward
- Confirm entry

Program name:

Press into the field of program name, to change the name.



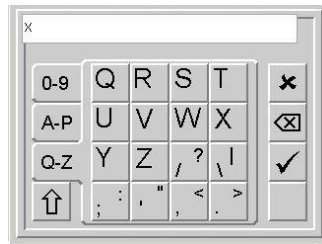
The screen to enter the program name shows up.






Editor for entering program name:

- Select keypad 0 - 9
- Select keypad A – P
- Select keypad Q - Z

Upper and lower case



-  Cancel entry
-  Digit backward
-  Confirm entry

1st Slice:

After starting the machine, the product will be positioned for the first slice.

When value for first slice is set to 0.0 mm, the beginning of product will be positioned to the cutting edge.

When value for first slice is set to 10.0 mm, the beginning of product will be positioned 10.0mm over the cutting edge.

After a short stop, the blade starts and the first slice will be cut.

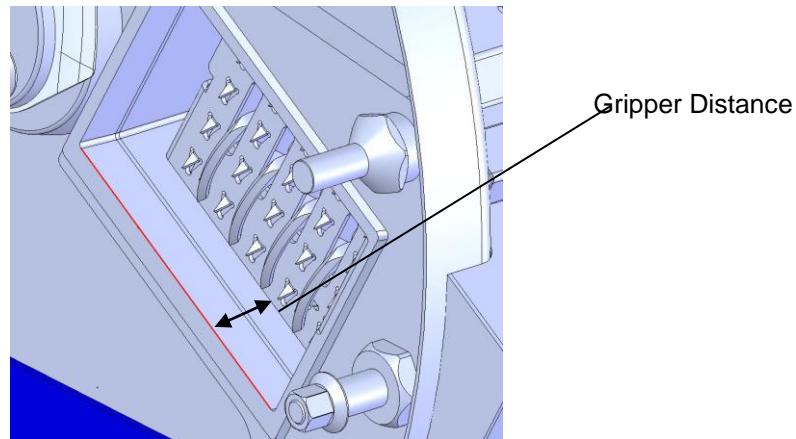
Then the machine will cut with the selected cutting mode.

Last piece:

Is the piece which will be left after cutting in the gripper.

Gripper distance (minimum of last slice):

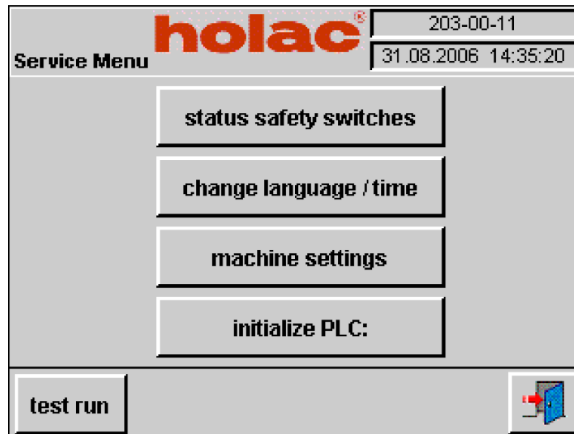
Distance between cutting edge and the gripper sheet.



6. Service Funktionen



Press the service button to open the following screen:

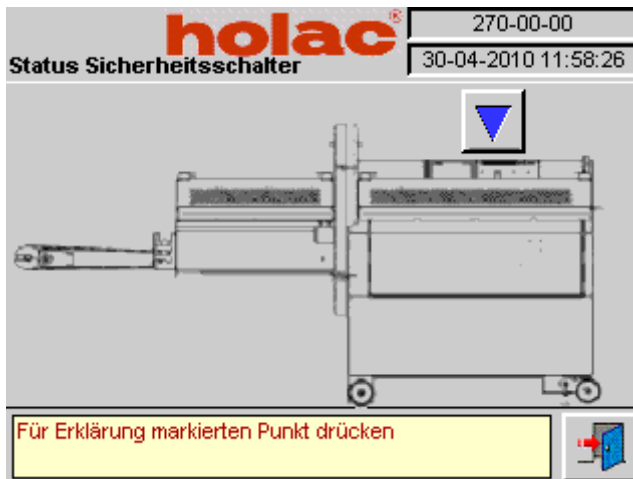


6.1. Safety switch status

Press the button

status safety switches

to open the machine overview image.



Changing to the machine top view image



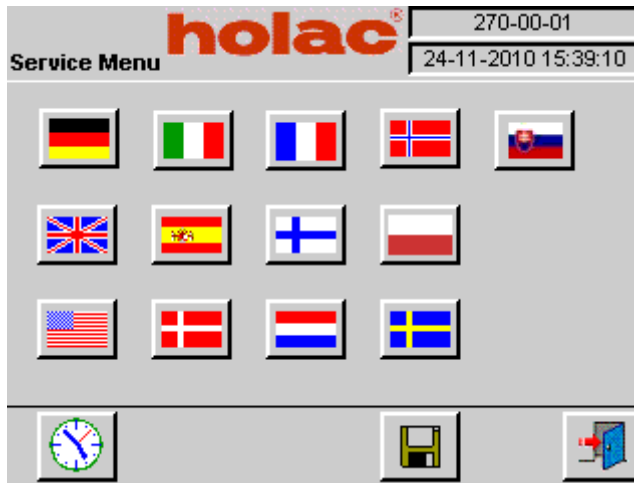
Closing the screen

6.2. Selecting the language / time/date setting

The following screen

change language / time

opens when you press



Selecting language:

Press the related country button to select the language.

Setting time / date:

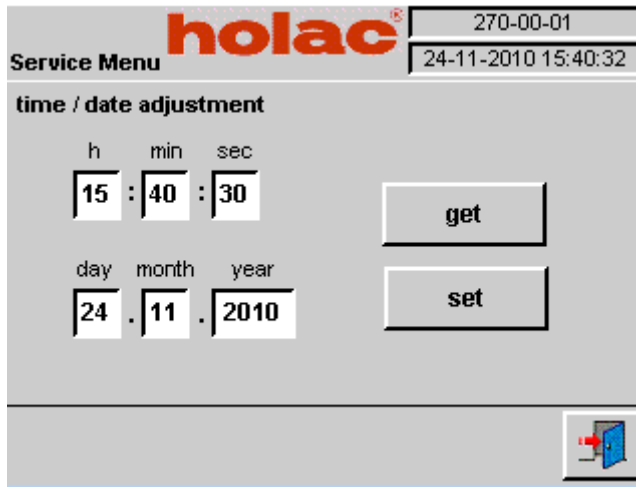


Pressing the time button takes you to the screen where you can set time and date.



Save the parameters

6.3. Setting date / time



To set the time, you must first download the current system

time.



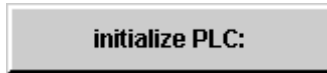
Next, touch the input boxes to set time and date.



Setting the system time of the touch panel to the entered values.

6.4. Initializing PLC

Press the



button to reset the PLC to the factory setting.

Caution!

Initializing clears all programs and settings!

6.5. Machine settings

Use this menu item [after consulting](#) the Holac service only.

7. Function of the start and stop button

7.1. Start / Stop button at the key pad

When touching the start button at key pad, first the machine is positioning the product to his first slice position.

Then the blade will start and the product will be cut.

When touching stop button at the key pad, the blade stops in brake position and the gripper goes back.

7.2. Start / Stop button at the machine

When the start/stop button is green illuminated, the function is like a start button.

By touching a short time, first the machine is positioning the product to his first slice position.

Then the blade will start and the product will be cut.

By touching a longer time, first the machine is positioning the product forward. When releasing the button, the gripper stops at this position, the blade will start and the product will be cut.

When the start/stop button is lighting red, the function is like a stop button.

By touching, the blade stops in brake position and the gripper moves back.

7.3. Start / Stop button at the machine orange illuminated.

After switching the main switch on, interrupting safety while cutting or an error of the drive, the machine has to move the gripper in his basic position.

Touch the start button to start the process.

Blade starts for one rotation and stops in brake position. Gripper is moving backward to reference position.

Error messages

PLC battery dead - please replace battery.

This message can be cleared with the acknowledgement button. You can then continue working with the machine.

The backup battery is almost discharged. It must be replaced soon. The saved user programs will be lost if the battery is not replaced.

The machine must be running when the battery is replaced. This requires the rear machine cover plate to be removed first. The battery sits behind the small black cover at the top of the control unit. The instructions of replacing the battery are enclosed in the delivery.

Malfunction - safety unit power supply output.

This message can not be cleared with the acknowledgement button. You can not continue working with the machine.

This message appears as long as the cause of the fault is not eliminated.

One of the contacts between the controller circuit-breaker F10 and the safety unit is not closed. Details can be found in the circuit diagram. Eliminating the fault requires the rear machine cover and the switchbox to be opened.

Malfunction - controller power supply.

This message can not be cleared with the acknowledgement button. You can not continue working with the machine.

This message appears as long as the cause of the fault is not eliminated.

The controller circuit-breaker F11 tripped. Eliminating the fault requires the rear machine cover and the switchbox to be opened.

Malfunction - blade drive brake power supply.

This message can not be cleared with the acknowledgement button. You can not continue working with the machine.

This message appears as long as the cause of the fault is not eliminated.

The controller circuit-breaker F12 tripped. Eliminating the fault requires the rear machine cover and the switchbox to be opened.

Malfunction - fan power supply.

This message can not be cleared with the acknowledgement button. You can not continue working with the machine.

This message appears as long as the cause of the fault is not eliminated.

The controller circuit-breaker F13 tripped. Eliminating the fault requires the rear machine cover and the switchbox to be opened.

Malfunction – motor protection.

This message can not be cleared with the acknowledgement button. You can not continue working with the machine.

This message appears as long as the cause of the fault is not eliminated.

One of the motor circuit-breaker tripped. Eliminating the fault requires the rear machine cover and the switchbox to be opened.

Malfunction - blade drive overcurrent.

This message can not be cleared with the acknowledgement button. You can not continue working with the machine.

This message appears as long as the cause of the fault is not eliminated.

The motor current monitoring function was activated.

- The blade is stiff or jammed.
- The blade drive is blocked.
- The electrical activation of the blade drive is defective.

Eliminating the fault does not require the rear machine cover and the switchbox to be opened. The monitoring unit automatically returns to the "OK" state.

Blade chamber door is open - please close it.

This message can not be cleared with the acknowledgement button. You can not continue working with the machine.

This message appears as long as the cause of the fault is not eliminated.
- The door is open or not properly closed. - The allocated safety switch is defective.

Malfunction - gripper drive cover is open - please close it.

This message can not be cleared with the acknowledgement button. You can not continue working with the machine.

This message appears as long as the cause of the fault is not eliminated.
- The cover of the mechanical gripper drive unit is open or not properly closed. - The allocated safety switch is defective.

Malfunction - feeder side cover is open - please close it.

This message can not be cleared with the acknowledgement button. You can not continue working with the machine.

This message appears as long as the cause of the fault is not eliminated.
- The cover of the feeder side is open or not properly closed.
- The allocated safety switch is defective.

Malfunction - delivery side cover is open - please close it.

This message can not be cleared with the acknowledgement button. You can not continue working with the machine.

This message appears as long as the cause of the fault is not eliminated.

- The cover of the delivery side is open or not properly closed.
- The allocated safety switch is defective.

Malfunction - safety unit - open door/covers

This message can not be cleared with the acknowledgement button. You can not continue working with the machine.

This message appears as long as the cause of the fault is not eliminated.

The door of the blade chamber, the cover of the gripper drive, the lid of the feeder door, and the lid of the delivery side are closed, but the safety unit did not switch.

Open and close the door and/or one of the lids to restart the safety inquiry.

The following causes are possible if the malfunction persists:

- Feedback contacts of switching elements to the safety unit are defective. Please refer to the circuit diagram for details.
- The safety unit is defective.

Malfunction – gripper feeder.

This message can not be cleared with the acknowledgement button. You can not continue working with the machine.

This message appears as long as the cause of the fault is not eliminated.

The gripper is advanced by a unit that consists of a stepper motor and a controller.

This message appears when the stepper motor drive is defective or when the enabling state of the unit was cancelled by a missing safety signal.

Open and close the lid at the feeder side to enable the unit and to clear the error message.

Switch off the main switch if the error message remains. Wait for approximately 30 seconds, and switch the main switch back on.

After startup, press the start button to start a homing cycle of the gripper feeder.

Please contact holac Service when the error message persists.

Brake released manually.

This message can not be cleared with the acknowledgement button. You can not continue working with the machine.

This message is displayed as long as the brake is released.
- Press the button with the brake icon to enable the brake.

Malfunction - proximity switch cycle defective.

This message can be cleared with the acknowledgement button. You can then restart the machine.

The following causes are possible if the error message remains:

- The position of the inductive proximity switch or of the encoder tab are misaligned or loose. - The proximity switch is defective.



Live parts

Electrocution hazard.

- >Repairs must be carried out by authorised and relevantly certified personnel only.
- >Deactivate main switch and secure against reactivation.
- >Disconnect machine from mains electricity.

Dismantling and disposal

The machine must be disassembled at the end of its service life and correctly disposed of in accordance with the national environmental regulations.

Drain all lubricants from the machine.

ATTENTION

Contact a relevant disposal provider for appropriate waste disposal.



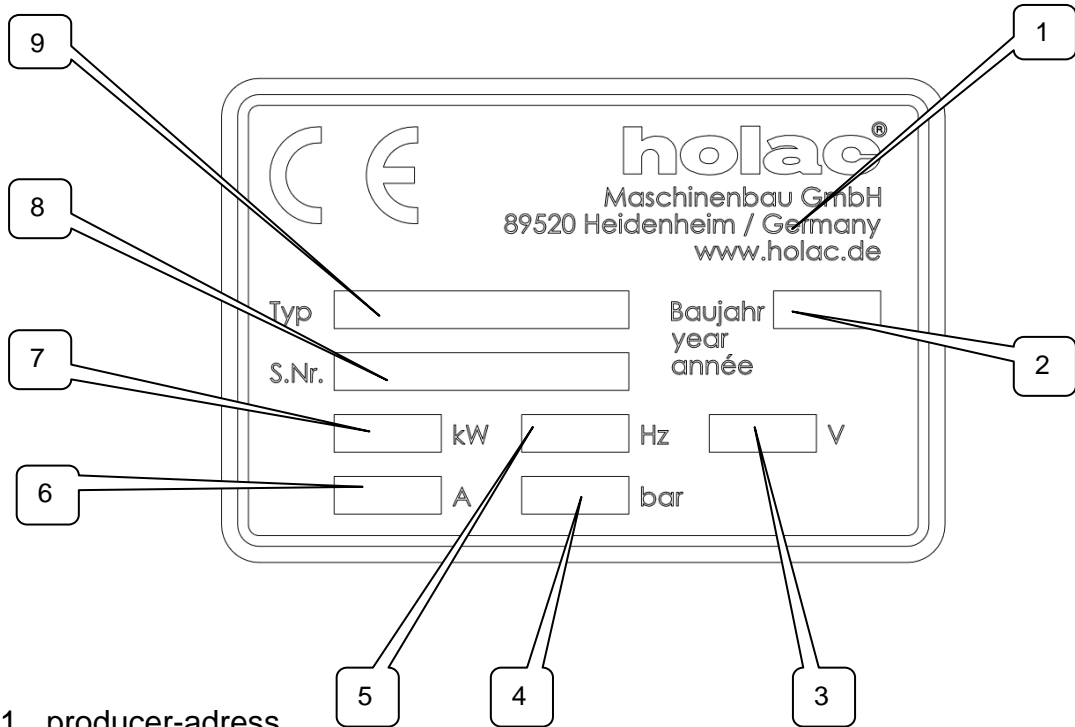
CAUTION

Injury hazard during disassembly and removal of the machine.

- >Proceed with care
- >Deactivate main switch and secure against reactivation.
- >Disconnect machine from mains electricity.

type label

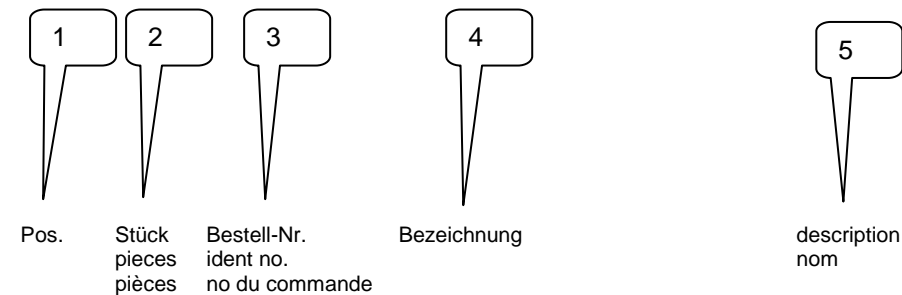
On the machine is a type label attached. The following machine-datas are located on it:



1. producer-adress
2. year of manufacture
3. control voltage
4. system pressure
5. frequency
6. power input
7. connection power
8. maschine-no.
9. machine-type

Use of the spare part list

For spare-part-orders you will find on the relevant page the following charts:



Declaration of the chart:

1. Position-number corresponding of the spare-part-graphic
2. Number of items of the spare-part
3. Purchase order number
4. Description in german language
5. Description in english and french language

Service

Before you call for service, please ensure if the machine is set up correctly, and the malfunction cannot be solved with the instructions given on page "trouble shooting".

ATTENTION

Only trained or skilled personal is allowed to repair the machine.
Incorrectly done repairs may arise heavy damages for the user.

If any technical malfunction occurs, please call for service.

Please use original holac spareparts only!

To guarantee a fast and correct service please quote the service-department always

- machine type
- machine number.



You can find this information on page „technical data“ or on the type-plate of the machine.



Service-phone

Please prove, whether the manual belongs to your machine.

The data on the machine plate should be in accordance to the following data:

machine type: **sect 230 TC**

serial-no: **270-00-46**

comments

holac Maschinenbau GmbH
Nattheimer Straße 104 - 89520 Heidenheim - Germany
☎ 07321 9645-0 - Fax 07321 9645-50
E-Mail: info@holac.de - Internet: http://www.holac.de