

Operating Instructions, Janssen Cookie Former

F250 UL / F450 UL / F600 UL

(Translation of original operating instructions)



Janssen – Numerous international awards!

Niederrheinische Formenfabrik

Janssen GmbH has been manufacturing high-quality and robust machines since 1872. As with previous machine generations, our main goal was to base the design of the F-Series on the suggestions, wishes and needs of our customers collected over many years, thus creating a product to meet the requirements of the present and future as they become more demanding in so many respects.

We are proud and extremely happy that the presentation of the highest distinctions dealing with the most prestigious international innovation and design awards has confirmed our work.



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*"Congratulations on your
new Janssen cookie former.*

~

*We wish you great
enjoyment & pleasure
with your new machine!"*

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"Please read carefully before use!

*Keep for future reference!
These operating instructions are part of the machine."*

– Your Janssen team –

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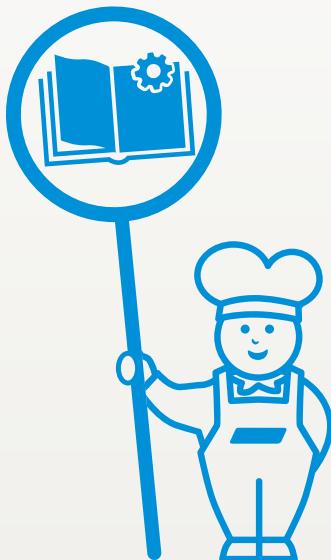
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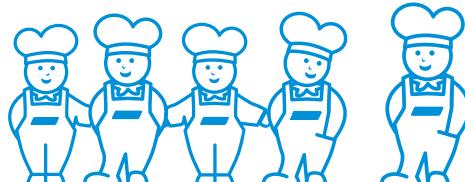
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1 Information on these operating instructions

1.1 Purpose

This documentation contains important information on the proper use and safe operation of the cookie moulding machine for the following life phases of the machine:

- Delivery, in-house transport, unpacking
- Connection conditions
- Storage conditions
- Installation conditions
- Assembly, installation and initial commissioning
- Operation, use
- Cleaning/ decommissioning
- Inspection and maintenance
- Disassembly
- Disposal

1.2 To whom is this manual addressed?

This manual is intended for:

- **Operating personnel:**
The operating personnel must have been instructed on the machine and have access to the manual.
- **Specialist personnel:**
The specialist personnel have appropriate technical training which enables them to correct faults and carry out maintenance. Instructions for maintenance can be requested separately.

1.3 Information for the operator

Please pay special attention to the safety-relevant sections!
You are also required to observe the relevant country-specific accident prevention regulations, safety regulations and occupational health rules.

1.4 Further applicable documents

In addition to these operating instructions, there are further instructions for the quick start, repairs, spare parts and similar.

1.5 Availability

The operating instructions are provided on delivery in printed form and, on request, also in digital form.

1.5.1 Storage

Please keep the operating instructions in a safe place and ensure that they are always available at the place of use. They must be read, understood and observed by the user.

1.5.2 Distribution

These operating instructions are part of the cookie moulding machine. Dealers, suppliers or resellers of our cookie moulding machines are required to ensure that the operating instructions are delivered with the machine and made available to the customer!

1.6 Typographical conventions

For easy and quick comprehension, various types of information in this manual are supplemented by clear illustrations and symbols.

1.6.1 Warnings

This warning sign  indicates hazards that must be observed.

1.6.2 Signs for procedures

These information signs  indicate the sequence of procedures:

1.6.3 Signs for references

This symbol  [section 6](#) refers to further sections and is supplemented with the section number.



2 Notes for the operator

2.1 Scope of delivery

The cookie moulding machines F250, F450 and F600 are configured according to the components and pattern rollers agreed in the order. The machine is therefore ready for operation. Baking sheets are usually not included in the scope of delivery. These operating instructions are part of the machine.

2.2 Responsibilities

Niederrheinische Formenfabrik Janssen GmbH is responsible for compliance with all relevant provisions of the machinery directive. See the manufacturer's EC Declaration of Conformity in the annex.

Janssen cookie formers are intended for professional use only.

The operator is responsible for the intended use of the cookie moulding machine and the avoidance of misuse.

2.3 Legal notice

These operating instructions are part of the cookie moulding machine. Dealers, suppliers or resellers of our cookie moulding machines are required to ensure that the operating instructions are delivered with the machine and made available to the customer!

2.4 Instruction of the operating personnel

The operator is obliged to ensure that instruction is given in the safe operation of the machine. Furthermore, the operating instructions must be accessible to the operating personnel at all times.

Please keep the operating instructions in a safe place and ensure that they are always available at the place of use. They must be read, understood and observed by the operating personnel.

Only qualified personnel may:

- Perform maintenance and repairs
- Perform work on electrical equipment

2.5 Liability

All information and notes in these operating instructions have been compiled in accordance with the applicable standards and regulations.

Niederrheinische Formenfabrik Janssen accepts no liability for damage due to:

- Improper use
- Unauthorized modifications to the machine
- Breakage and transport damage
- Disregard of the operating instructions
- Use of untrained personnel
- Use of spare parts not approved by Niederrheinische Formenfabrik Janssen

2.6 External interfaces

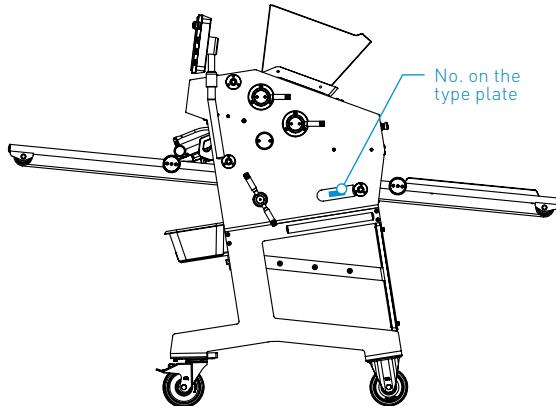
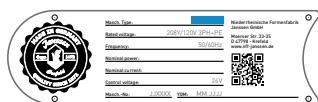
The Janssen Cookie Formers of the series F250, F450 and F600 require a »20 Amp 3ØY 120/208Vac 4 Pole, 5 Wire Receptacle (Mennekes Part No. ME 520R9W)« mains connection socket.

JANSSEN cookie formers are equipped with frequency converters.

Further important information on connecting the machine can be found in [\(👉 section "9. Initial commissioning/Start-up, p. 64\)](#)

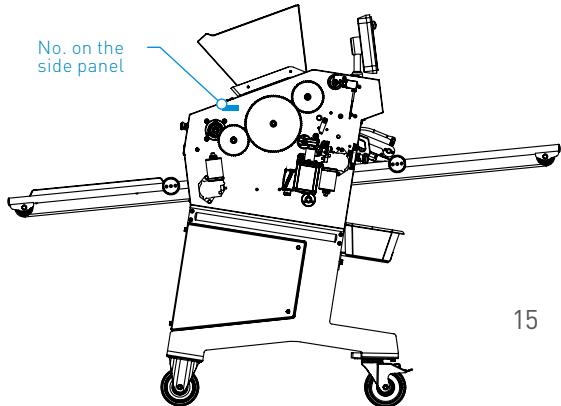
2.7 Marking of the machine

Each machine has an individual machine number from which the specifications and equipment of the machine can be identified. You will find the number on the type plate and on the side panel of the gear unit side of the machine (see following figures).



2.8 Spare parts

For spare parts enquiries, please quote the machine number and year of manufacture. Our spare parts list provides you with a list of the most important spare parts with photos and their designations.



2.9 Service address

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www.nff-janssen.de

Scan the following QR code with your smartphone or enter the following URL:



Link for cleaning:
www.nff-janssen.de/Info/cleaning



Link to the operating instructions:
www.nff-janssen.de/Info/user_manual



2.10 Service links for documentation

You can also view the following documentation online or download it as a PDF.

Link to recipes:
www.nff-janssen.de/Info/recipes

Link for spare parts list:
www.nff-janssen.de/Info/spareparts



Link to electrical circuit diagram:
www.nff-janssen.de/Info/circuit_diagram



Link for maintenance:
www.nff-janssen.de/Info/maintenance



3 Product description

3.1 Product benefits and overview

Janssen has shaped enjoyment since 1872!

Niederrheinische Formenfabrik Janssen GmbH is a family-run manufacturing business which has been producing high-quality cookie moulding machines for shortcrust products as well as for the efficient processing of marzipan, gingerbread and Printen doughs since 1872 in Krefeld am Niederrhein.



The three key basic principles of our Janssen cookie formers

1) Janssen cookie formers are extremely functional in design and are based on principles that have remained virtually unchanged for more than 60 years, have enjoyed great success and have proven themselves in practice. The combination of well thought-out **design** and intelligent function is one of three basic principles for our durable, robust and extremely efficient cookie moulding machines.



2) **Ergonomics** is the second basic principle of our Janssen cookie formers. Simple and easy handling are our central concerns. Self-explanatory and intuitive operation makes it easy to get started and assists you in your production processes, so that you can fully concentrate on the quality of your products.



3) **Hygiene** is the third basic principle of our Janssen cookie formers. All parts and components are extremely accessible and therefore are very easy to clean and maintain. This creates the ideal conditions for you to create flawless, high-quality products and to enjoy your machine for a long time to come.



3.2 Machine overview

Janssen cookie formers are specially designed for the individual and efficient shaping of cookies and endless bands and are available in three sizes with different features.

The machine sizes depend on the desired output quantity and the baking sheets used.

F600

Baking surface*: 145-215 m² / hour
Hopper volume: 60 kg of dough
Max. sheet width: 600 mm

*) Depends on machine equipment



F450

Baking surface*: 100-160 m² / hour
Hopper volume: 45 kg of dough
Max. sheet width: 450 mm

*) Depends on machine equipment



F250

Baking surface*: 60-90 m² / hour
Hopper volume: 25 kg of dough
Max. sheet width: 250 mm

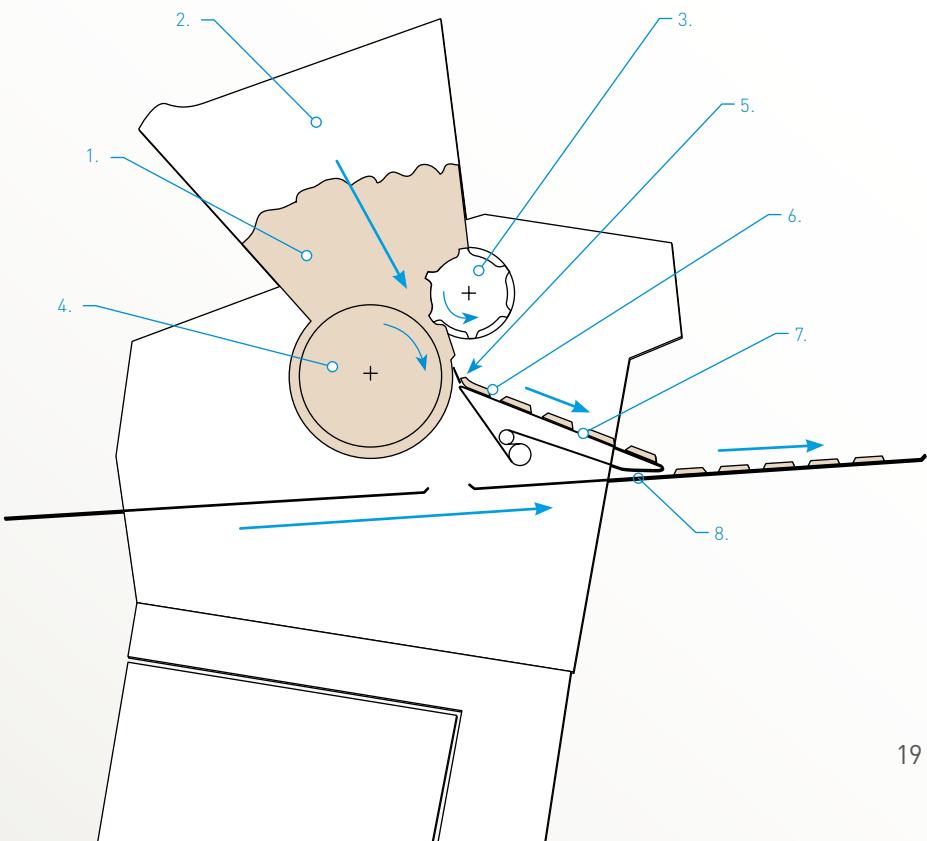
*) Depends on machine equipment



3.3 Basic operating principle

Janssen cookie formers employ an operating principle that has proven itself for decades and which Janssen has continued to develop on an ongoing basis:

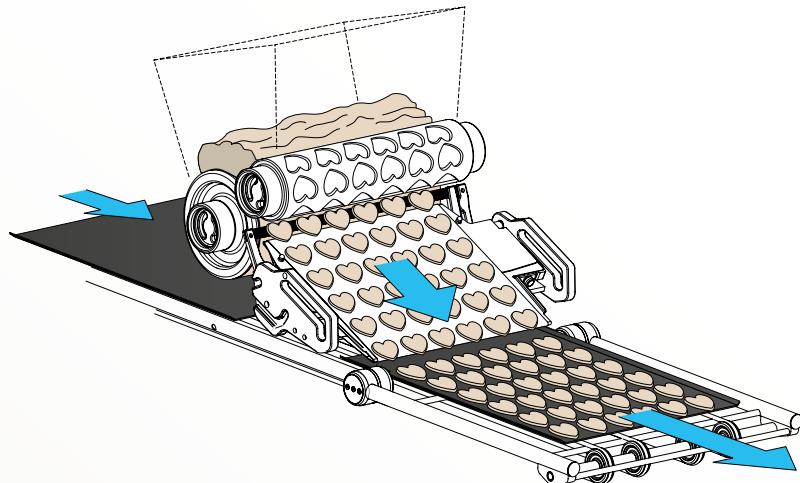
The dough (1.) is filled into the hopper (2.). The dough is drawn in by a pair of rollers – the kneading roller (4.) and the pattern roller (3.). A dough band forms around the outer surface of the kneading roller. The pattern roller (3.) (which can be heated and replaced from the outside) embosses raised shape geometries or patterns on the dough band. These are cut off the dough band on the kneading roller by an oscillating knife (5.) immediately after the embossing process and are transferred to a conveyor belt (7.). The conveyor belt feeds the resulting dough pieces (6.) to the baking sheet (8.).



3.3.1 Forming cookies

The Janssen cookie formers can be used to form individual cookies of different sizes and thicknesses with smooth or structured surfaces on flat baking sheets.

Changing the pattern rollers allows different products to be produced with the machine.



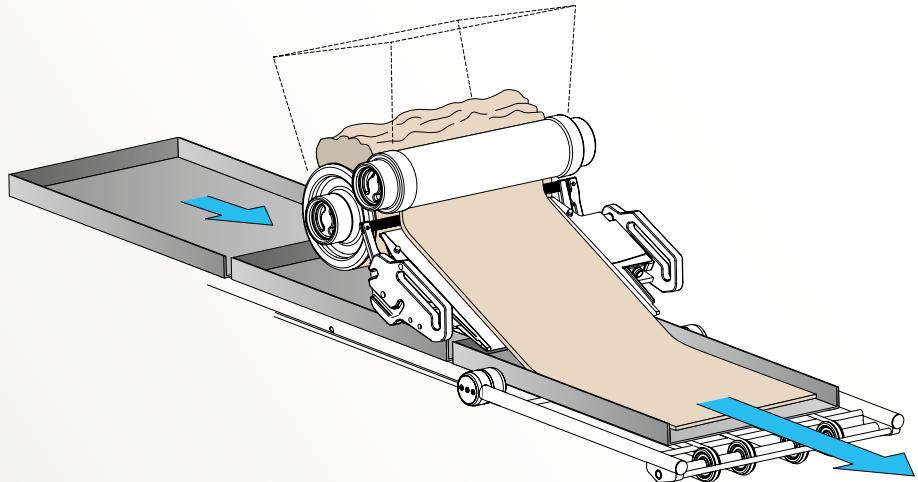
This figure shows the forming of cookies and exemplary design variants for logo cookies



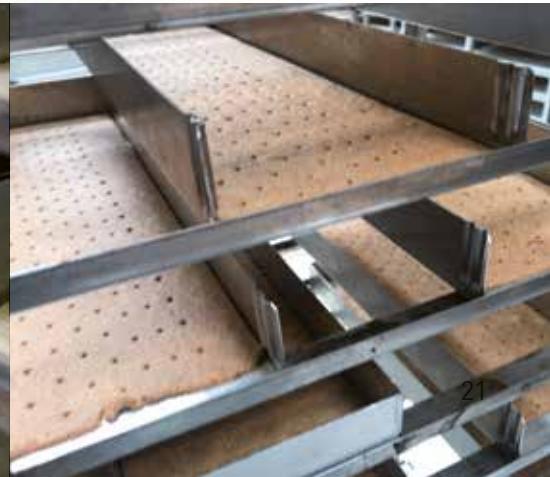
3.3.2 Forming dough bands

Janssen cookie formers can be used to form dough bands or lattice work of different dimensions and thicknesses with a smooth or structured surface into high cake trays.

Different dough bands can be formed using different dough band rollers.



This figure shows the forming of endless doughs for cake trays



3.4 Product types in the process

Janssen cookie formers process prefabricated doughs, such as shortcrust doughs, gingerbread doughs and marzipan. After the cookies have been formed on baking sheets, they are typically baked and then packaged for consumption or shipping (see figure on the next page).

Janssen cookie formers can also be integrated into production lines.

3.5 Characteristics of the doughs

Janssen cookie formers can process a wide range of doughs. The recipe as well as the preparation of the dough have a significant influence on processability and the quality of the finished product.

The processability of the doughs depends mainly on the following 7 factors:

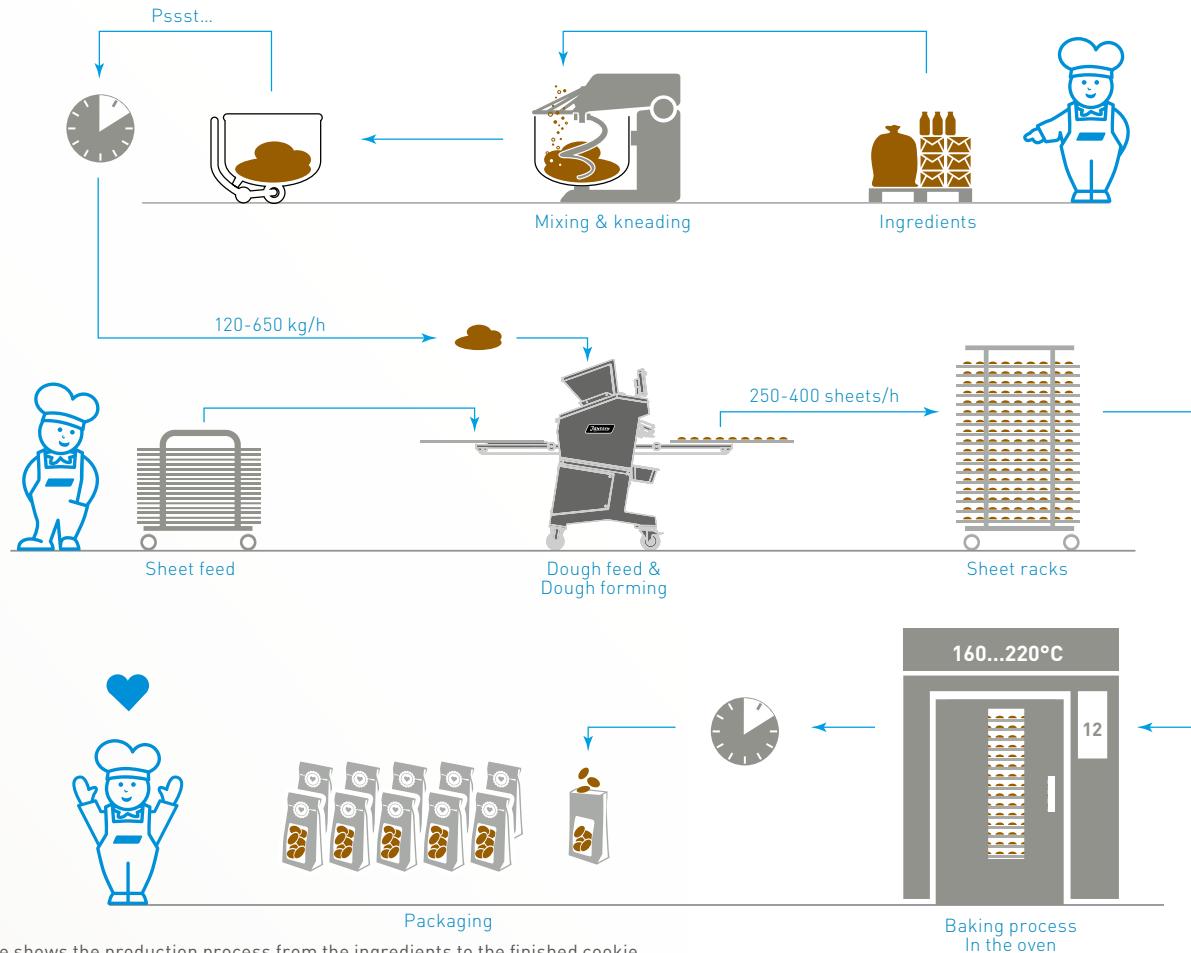
- Selection of ingredients
- Preparation procedure
- Processing temperature
- Ambient atmosphere
- Kneading time
- Resting period
- Processing parameters during forming

We would like to mention our recipe book as a reference. There you will find versatile recipes that can be processed with our Janssen cookie formers. You can use these recipes as a basis with reference to the recipes you desire.

(👉 see section 18, p. 181)

Examples:

- Dry shortcrusts (1-1-2)
- Sugar-rich shortcrusts (2-1-3)
- High-fat shortcrusts (1-2-3)
- Chocolate shortcrusts
- Vanilla crescents
- Marble cookies
- Speculaas biscuits
- Cake doughs
- Linzer biscuits
- Gingerbread doughs
- Printen doughs
- Cheese biscuits
- Marzipan
- Pet food
- Shortbread
- Almond-shaped cookies

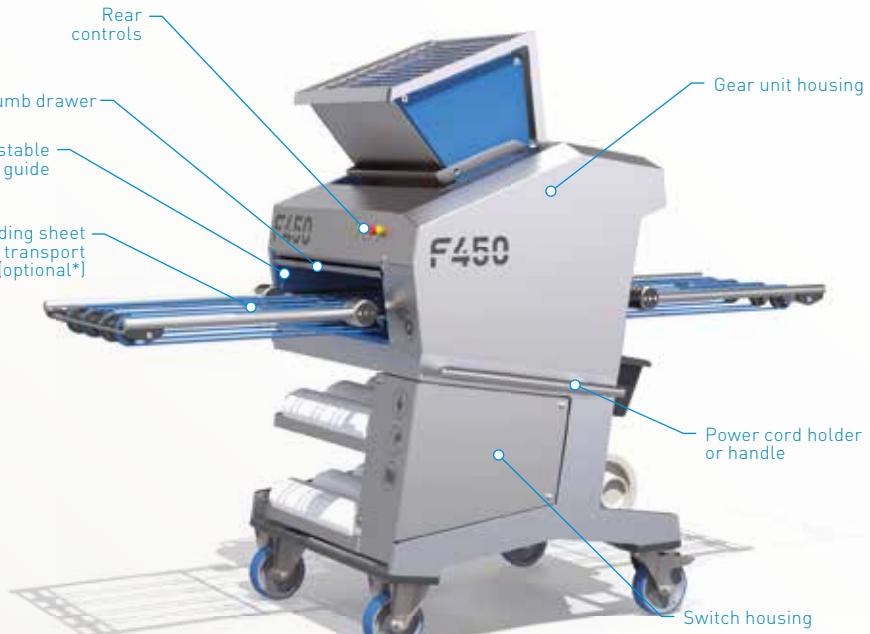


This figure shows the production process from the ingredients to the finished cookie

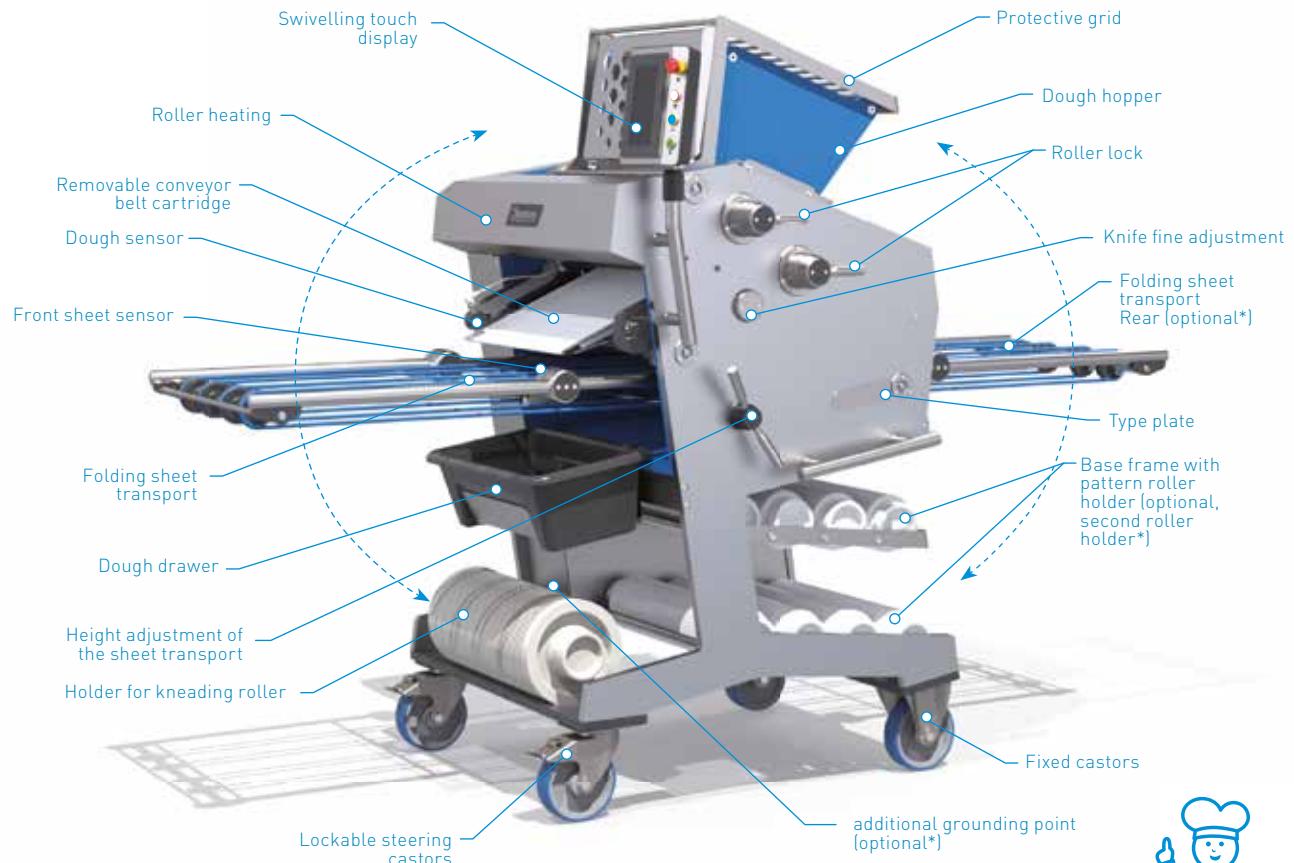
3.6 Design of the machine

3.6.1 Mechanical design

The Janssen cookie formers F250, F450 and F600 have the same modular design. This section provides a brief description of the important components. The subsequent sections provide information on the components with reference to "Setup", "Operation", "Maintenance" and "Cleaning".



This figure shows the F450 cookie former diagonally from the rear



This figure shows the F450 cookie former from the front and the operating side



3.6.1.1 Base frame/ roller holder

The base frame provides space for the pattern rollers and the kneading roller. The roller holder provides safe storage and perfect drying after roller cleaning with water. The switch box for the machine controller is also located in the base frame (☞ [Section "3.6.2 Controller design", p. 27](#)). The base frame is mobile and has two fixed castors and two lockable swivel castors (☞ [section "9.3 Releasing and locking the castors", p. 68](#)).

3.6.1.2 Machine body

The machine body consists of a solid aluminium chassis for the bearing and fastening elements. According to the "Hygienic Design" principle, the interior of the machine is predominantly classified as a "splash zone" and is therefore equipped with easy-to-clean plastic sheets and stainless steel sheets. The interior area contains the easily

exchangeable pattern and kneading rollers, the removable conveyor belt cartridge, the height-adjustable sheet transport, the knife unit and the roller heating.

Viewed in the direction of discharge, the roller locks and the operating terminal are located on the left-hand side, and the gear unit housing with the motors is on the right-hand side. The swivelling dough hopper is located on the top of the machine body along with the swivelling protective grid.

3.6.1.3 Dough hopper

The dough hopper is closed by the hopper protective grid during machine operation. The hopper grid must be swung forward to feed in dough and this switches the machine off automatically. The hopper must be swivelled completely forward for a roller change and cleaning. Here too, the machine switches off automatically.

(☞ [Section "9.11 Opening and closing the hopper", p. 73](#))

3.6.1.4 Pattern roller and kneading roller

The pattern and kneading rollers pull the dough in and form it into cookies. Both rollers are therefore in "direct contact with food". The materials of both rollers are suitable and approved for the processing of food doughs. Both the pattern and the kneading roller can be installed and removed very easily thanks to the quick-release locks. Positioning pin as a support facilitate the insertion of the rollers. (☞ [Section "9.12 Installation and removal of the rollers", p. 74](#)).

3.6.1.5 Conveyor belt cartridge

The conveyor belt cartridge transports the formed cookies from the knife onto the baking sheets. The conveyor belt is thus in "direct contact with food". The belt material is suitable and approved for the processing of food doughs.

The cartridge can be easily removed from the machine for cleaning and for

changing the belt in only two steps. ([Section "9.8 Installation and removal of the conveyor belt cartridge", p. 71](#) and [section "9.9 Adjusting the straight running of the upper conveyor belt", p. 72](#) and [section "9.10 Removal/ replacement of the upper conveyor belt", p. 73](#))

3.6.1.6 Knife

The oscillating knife (back and forth movement) cuts the formed cookies from the kneading roller in the desired thickness immediately after the forming process. The cutting thickness can be regulated by a thickness setting. The cutting thickness across the discharge width can be adjusted precisely during knife installation by means of a knife fine adjustment located on the side of the machine housing. This means that the knife can be adjusted and changed very easily. The knife is very sharp and is in "direct contact with food". The knife material is suitable and approved for the processing of food

doughs. When the hopper is open, the blade is covered by a movable knife guard which prevents cuts.

 *There is a residual danger during the cleaning of the knife, as in this case the knife guard must be raised to make the knife accessible.*

([Section "9.13 Knife setting for the cookie thickness", p. 76](#) and [section "9.14 Installation and removal of the knife", p. 77](#))

3.6.1.7 Sheet transport

The sheet transport system feeds the baking sheets under the conveyor belt cartridge via belts for loading with cookies and out via the sheet transport extension. The sheet transport is folded out when in readiness for operation and can be folded up or down for space-saving storage. In particular, folding it down facilitates access to the machine body for roller

changes or machine cleaning. Depending on the height of the baking sheets to be used, the height of the sheet transport unit can be adjusted optimally using a cam plate. An adjustable sheet guide positions the sheets optimally and can be adapted to suit the respective sheet widths.

([Section "9.4 Folding down the sheet transport unit", p. 68](#) and [section "9.5 Feeding and removing the baking sheets", p. 69](#) and [section "9.6 Adjusting the sheet guide", p. 70](#) and [section "9.7 Height adjustment of the sheet transport unit", p. 70](#))

3.6.1.8 Dough box

The dough box is located directly under the conveyor belt cartridge and catches falling cookies and dough crumbs. The dough box is very manageable and can be easily removed to return the dough to the dough hopper and then be subsequently replaced. The dough box is in "direct contact with food". The material is suitable and approved for contact with food doughs (☞ [section "9.19 Installation and removal of the dough box", p. 80](#)).

3.6.1.9 Roller heating

The roller heating can be activated optionally via the operating terminal if the dough sticks to the pattern roller. This must be determined individually depending on the dough recipe. If you notice the dough is sticking, the pattern roller must be cleaned and preheated without dough in the machine using the roller heating. If the

dough also sticks with roller heating, either a different roller material should be selected (e.g. PTFE) or the recipe or production parameters for the dough production should be modified.

For complete cleaning, the heater can be removed by a qualified specialist (☞ [section "11.7.1 Removal and installation of the heater", p. 144](#)).

3.6.1.10 Crumb tray

The crumb tray is located directly below the pair of rollers and above the sheet transport in the machine body and can be inserted and removed from the rear. The crumb tray prevents any dough residues that may result from dough forming from falling onto the baking sheets that have been fed in (☞ [section "9.18 Installation and removal of the crumb drawer", p. 79](#)).

3.6.1.11 Sensors

The cookie formers are equipped with sensors to facilitate working efficiency. Two capacitive sheet sensors under the sheet transport detect the metal baking sheets and, very practically, do not react to dough residues. The machine therefore only runs in "automatic mode" when the sheet sensors are activated or there are sheets in the machine. An optical dough sensor detects the cookies which are transferred from the conveyor belt cartridge to the baking sheets. This sensor can be used to influence the loading of the baking sheet. The dough sensor, which can be adjusted according to the cookies, is located directly at the transfer edge above the conveyor belt cartridge (☞ [section "9.15 Adjusting the sheet sensors", p. 77](#) and ☞ [section "9.16 Adjusting the dough sensor", p. 78](#)).

3.6.1.12 Gear unit housing

The gear unit housing contains the gear wheels, the drive motors and the mechanics of the knife adjustment. The gear unit housing must only be opened by trained specialist personnel.

([Section "9.13 Knife setting for the cookie thickness", p. 76](#) and [section "11.6 Gear unit", p. 142](#) and [section "11.6.1 Lubrication of the gear unit", p. 143](#))

3.6.1.13 Switch housing

The main switch of the machine and the supply cable are located on the front of the switch housing. The electrical controller of the machine is located in the switch housing. The housing must only be opened by instructed specialist personnel (electricians).

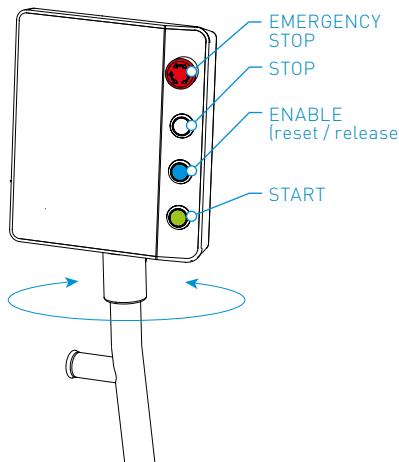
([Section "11.8 Controller", p. 145](#))

3.6.1.14 Operating terminal

Janssen cookie formers are operated via the operating terminal. The terminal can be swivelled about its vertical axis and locked in place with a clamping sleeve.

The operating terminal can be equipped either with analogue buttons and potentiometers (Compact) or a touch display (Performance) ([section 10](#)).

Both versions have a button bar on the side with the main functions:



3.6.1.15 Power cord holder

The supply cable and the power plug are properly connected by the manufacturer ([section "2.6 External interfaces", p. 13](#)). The cable can be wrapped around the cable holder or handle located on the gear unit side when the machine is taken out of operation.

3.6.2. Controller design

The Janssen cookie formers F250, F450 and F600 can be operated with a programmable "Performance" controller with touch display or manually with a non-programmable "Compact" controller. The "Compact" controller is considerably more limited in its range of functions than the "Performance" controller, but it is very easy to operate.

3.6.2.1 "Performance" controller with touch display/ programmable

The "Performance" controller is operated via a touch display and offers the following functions:

- Language selection
- Parameter setting for sheet loading
- Speed settings for all drives
- Saving programmes
- Different operating modes
- Information
- Operating hours display

( [Section "10.5 Operation/ "Performance" controller with touch display/ programmable", p. 88](#))

The following columns show the most important functions which are explained in more detail in [section 10.5](#).

The display always shows a function bar with the buttons "Back" and "Menu".

With "Back" you can go back one step.

3.6.2.1.1 "Main menu"

With "Menu" you can access the "Main menu".

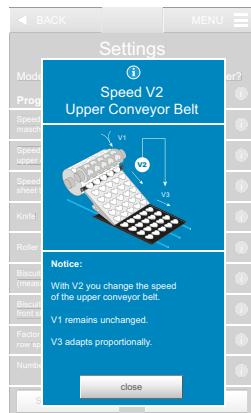
This figure shows the screen of the "Performance" controller in the main menu



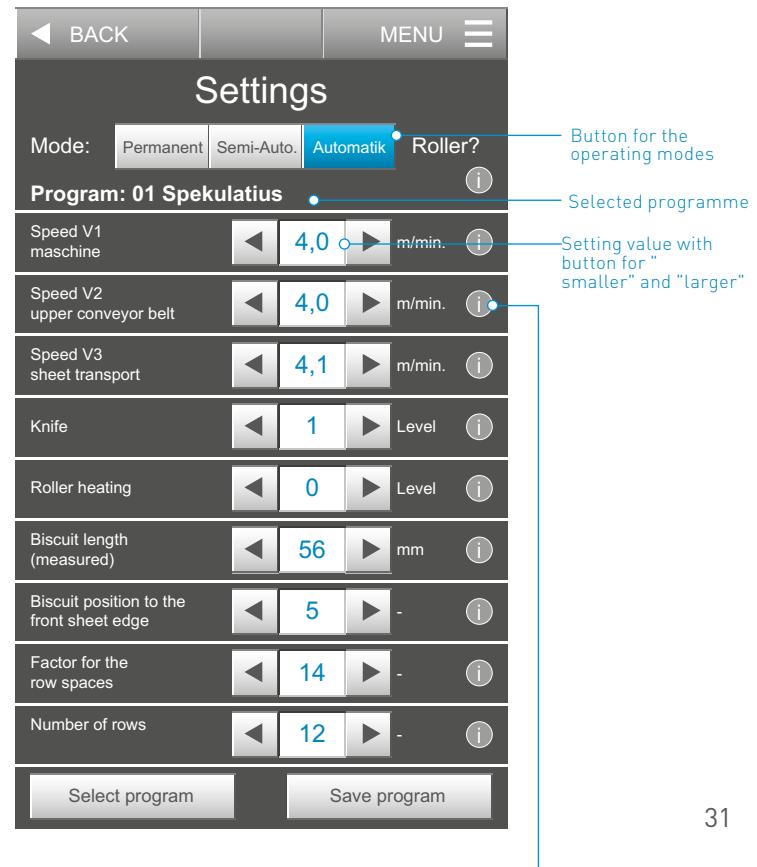
3.6.2.1.2 "Settings"

From the "Main Menu" you can access the "Settings". Here the three operating modes can be selected using the buttons "Permanent", "Semi-automatic" and "Automatic" and the respective function parameters can be set. Explanatory information is available for all functions via an "Info/Help" button (i).

( Section "10.5 Operation/ "Performance" controller with touch display/ programmable", p. 88)



This figure shows the "Settings" screen with the automatic mode selected



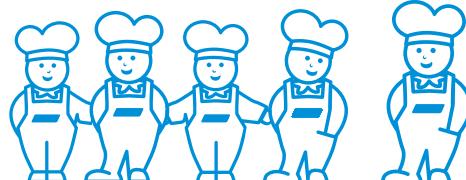
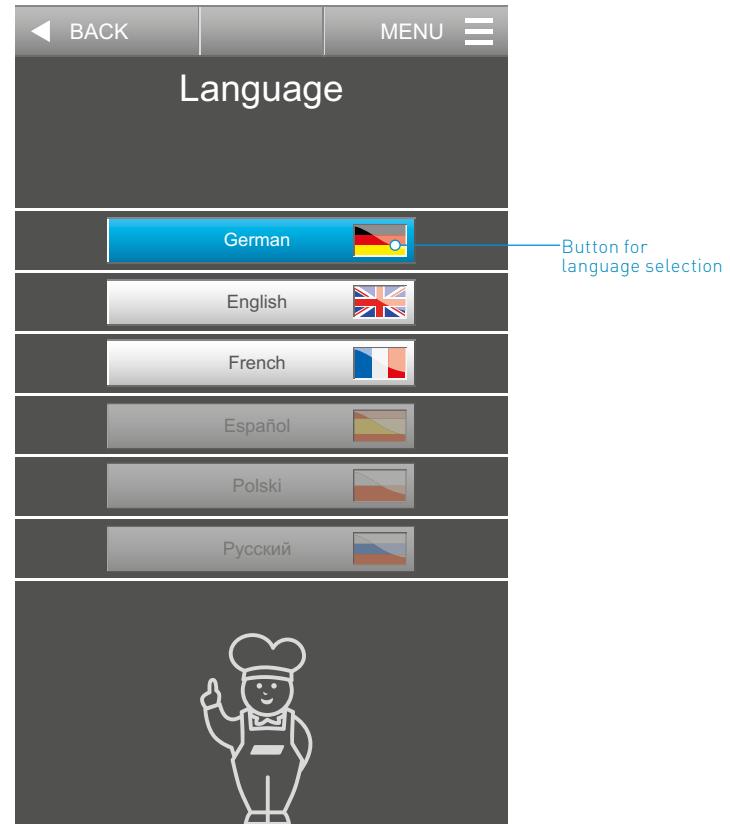
3.6.2.1.3 "Language"

From the "Main Menu" you can access the "Language selection".

Different languages can be selected here. The entire user interface is displayed in the selected language.

(👉 Section "10.5 Operation/ "Performance" controller with touch display/ programmable", p. 88)

This figure shows the "Language" screen



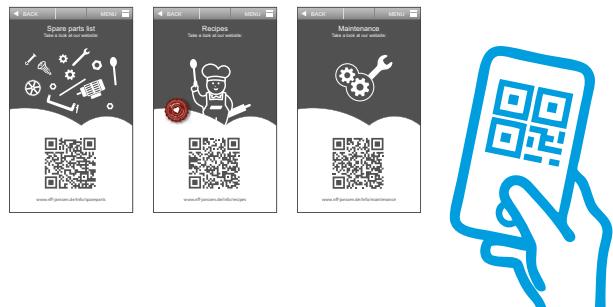
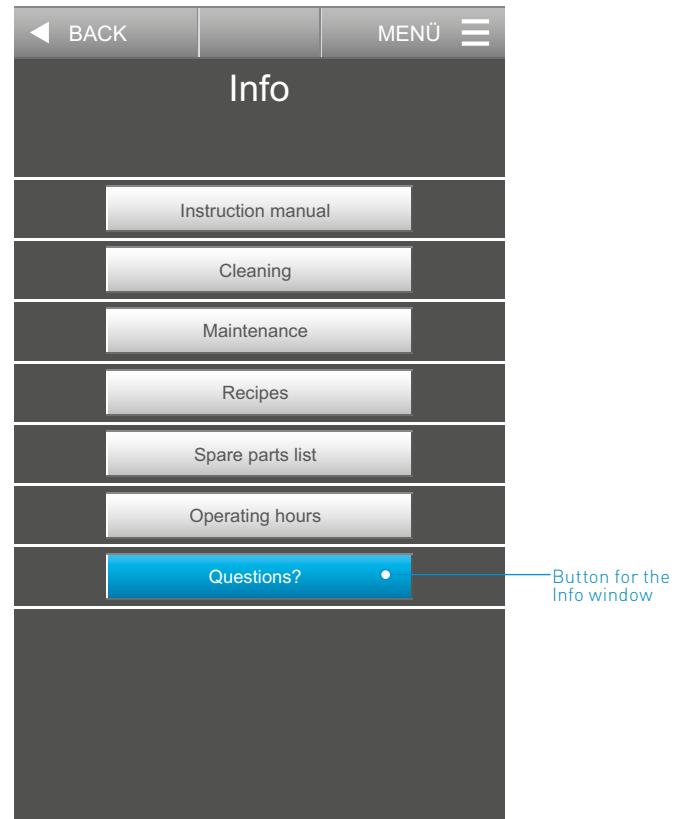
3.6.2.1.4 "Info"

From the "Main Menu" you can access the "Info" area. Here, useful information is provided on a wide range of categories (as shown on the right).

The information is available on our website and can be accessed via an app on your smartphone by scanning the QR code or entering the URL provided. The information is available for download in PDF format.

Note: This information is not stored in the memory of the controller located in the machine, but on our website, which is maintained and kept up to date on a continuous basis.

This figure shows the "Info" screen



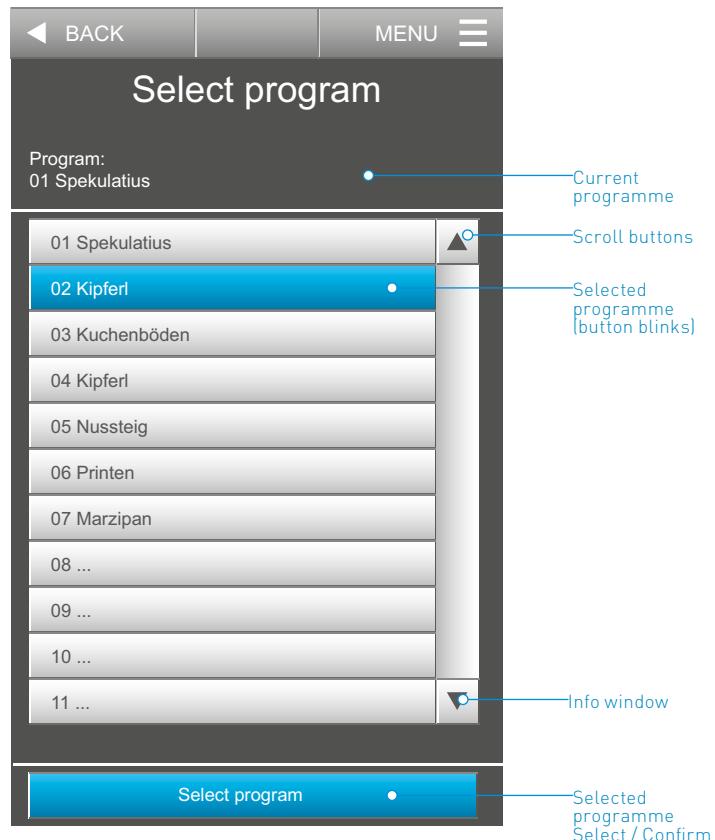
3.6.2.1.5 "Select programme"

You can access "Select programme" from the "Main menu".

Here you can select existing programmes and also create new programmes. You can create a total of up to 50 programmes.

([Section "10.5 Operation/ "Performance" controller with touch display/ programmable", p. 88](#))

"Select programme" screen



3.6.2.2 "Compact" controller, manually operated/ not programmable

The "Compact" controller is operated via an analogue display and offers simple yet convenient handling. Two operating modes can be selected with the "Permanent" and "Automatic" buttons and additional function parameters such as roller heating and the sheet transport speed can be set manually. The overall speed of the machine is constant at about 4 m/min.

( Section "10.5 Operation/ "Performance" controller with touch display/ programmable", p. 88)

This figure shows the analogue display of the "Compact" controller

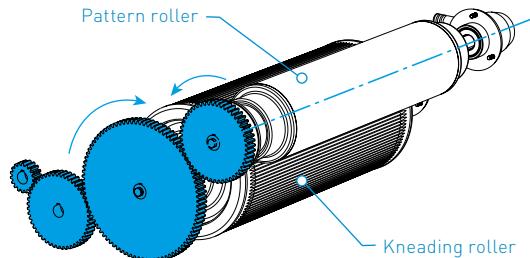


3.7 Drive scheme

3.7.1 Drive scheme of the roller pair

The Janssen F250, F450 and F600 cookie formers have a uniform drive scheme. The pair of rollers is driven by a main drive motor via a gear transmission.

This illustration shows the pair of rollers with the drive gears

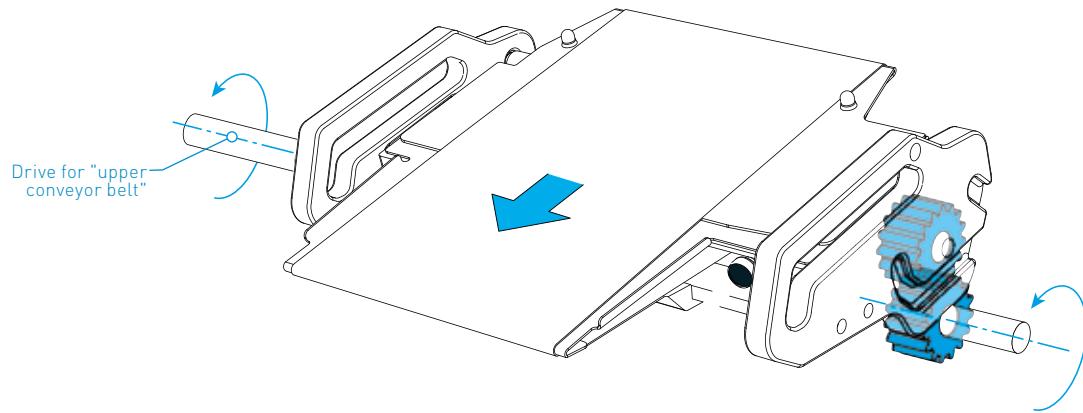
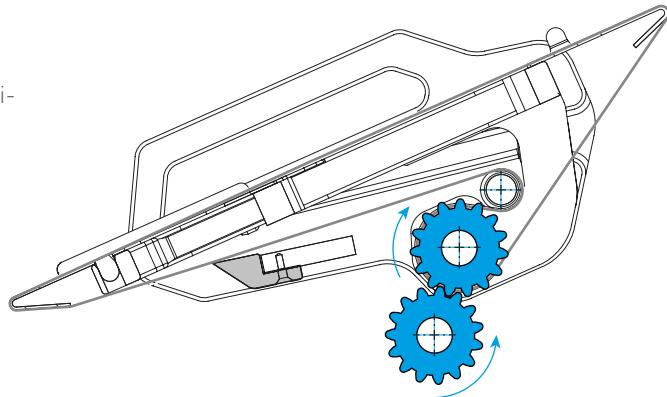


3.7.2 Drive of the upper conveyor belt

The upper conveyor belt is driven by a separate motor.

With the "Performance" controller, this motor offers infinitely variable speed control.

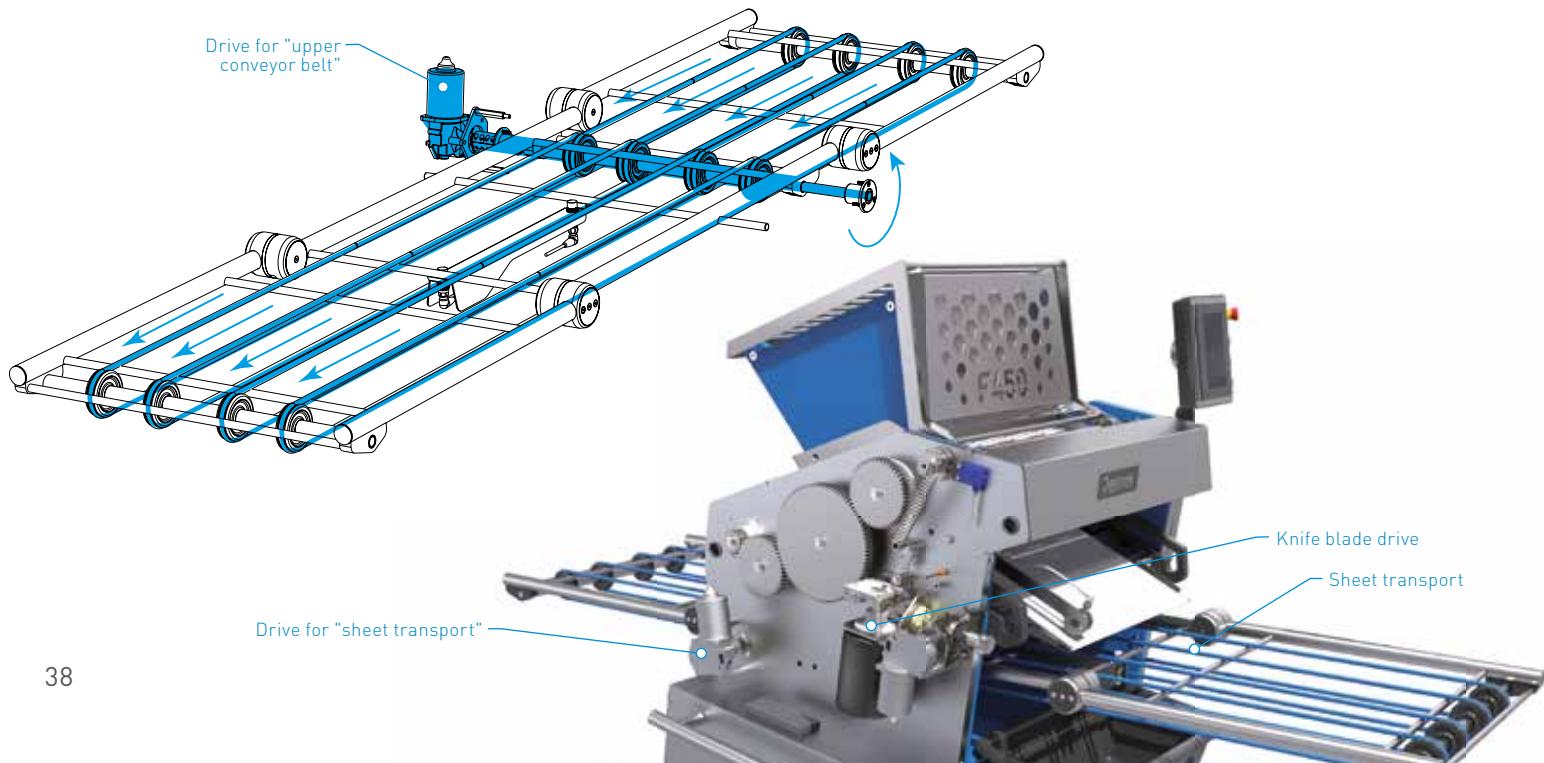
With the "Compact" controller, the speed is constant and cannot be changed.



3.7.3 Sheet transport drive

The lower conveyor belt is driven by a separate motor.

The speed of the sheet transport can be changed both with the "Performance" controller as well as with the "Compact" controller.



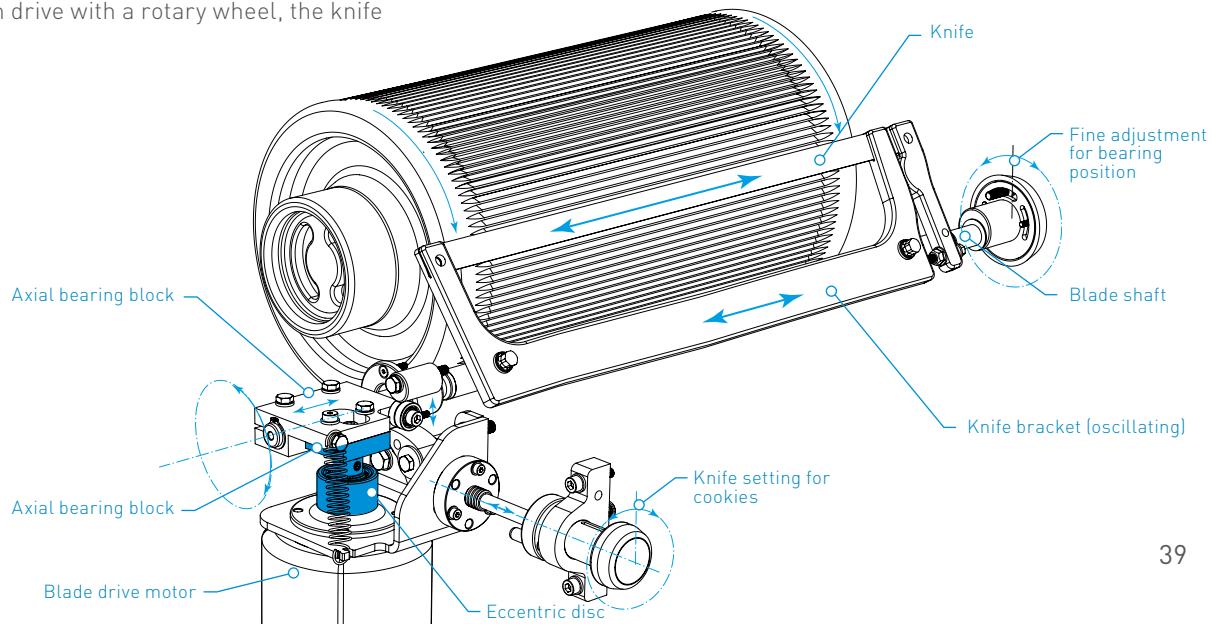
3.7.4 Knife drive

The blade shaft with the knife is moved in an oscillating pattern by a motor using a mechanical gear unit. An eccentric disc fitted frictionally onto the motor shaft is guided in an axial bearing block with a slotted hole that is connected to the blade shaft and thus converts the rotational motion into a translatory motion.

The inclination or the distance of the knife to the kneading roller and thus the cut-off thickness of the cookies can be adjusted by a cam drive with a rotary wheel, the knife setting.

3.8 Functional and process-engineering description

([Section "3.3. Basic operating principle", p. 17](#)).



4 Safety

4.1. Conventions for safety information

These operating instructions provide basic safety information for working with our cookie moulding machine. This information must be strictly observed and carried out to ensure proper and safe working.

The warning notices in these operating instructions and on the cookie moulding machine must also be observed (👉 [section "4.9 Arrangement and meaning of symbols on the machine", p. 47](#)).

4.2 Application range

As the name suggests, this machine is suitable exclusively for forming shortcrust products such as butter biscuits, tea cakes, speculaas biscuits, Milanese biscuits and shortcrust bases (for jam thumbprint biscuits, cream cakes and sheet cakes), dough lattice work (for fruit cakes), coconut biscuits, pretzels, Linzer biscuits, vanilla crescents, tartlets, etc. Special rollers can also be used to form white cakes, brown cakes, gingerbread and Printen doughs as well as marzipan.

The recipes may have to be adapted to the machine, as flours, fats and other natural ingredients may have seasonally varying properties and the nature of the dough and thereby the formability may be influenced.

4.3 Intended use

Janssen cookie formers are intended for professional use only.

The cookie moulding machines of the F250, F450 and F600 series are used for moulding food doughs, especially shortcrusts, honey and syrup doughs as well as marzipan according to Janssen recipes.

The forming thickness of the cookies should generally be between 3-7 mm, in special cases thinner or thicker, depending on the dough and the mould filling behaviour.



4.4 Use contrary to the intended purpose or prohibited use

Most important misapplications, which must be avoided at all costs: (not completely):

- ⚠️ Never use spray water or jet water (IP20) for cleaning the machine!**
- ⚠️ Misuse is possible due to using uninstructed and insufficiently qualified personnel.**
- ⚠️ The operating instructions must be observed, understood and followed.**
- ⚠️ Only approved food doughs and dough types must be fed into the machine for processing: Shortcrusts, honey and syrup doughs and marzipan. A processing temperature of between 12 °C and 20 °C must generally be maintained.**
- ⚠️ The machine is not suitable for hard doughs, such as very cold Printen doughs.**
- ⚠️ Solid components (diameter greater than approx. 0.5 mm) in the dough, e.g. nuts and whole almonds, are predominantly unsuitable for processing, as they can stick to the knife and prevent further continuous forming of the cookie (possibly usable when ground and after testing).**
- ⚠️ The machine is not suitable for liquid or free-flowing batters.**
- ⚠️ The machine is not suitable for yeast dough.**
- ⚠️ Furthermore, no unsuitable substrates must be fed into the input hopper (e.g. metal parts, wood chips, liquids, textiles).**

⚠️ The kneading roller must be cleaned immediately after use. Dough residues that have hardened on the kneading roller can destroy the knife and the kneading roller and possibly the bearings!

⚠️ The machine is not suitable for meat or fish products for hygienic reasons.

⚠️ Improper use of the machine which goes beyond its use as a cookie moulding machine must be avoided at all costs.



4.5 Tasks and qualifications of personnel

Personnel must be instructed in the operation of the machine and must observe, understand and implement the information and recommendations in the operating instructions.



Phase of life	Tasks (exemplary)	Person	Necessary qualification
Transport	<ul style="list-style-type: none">• External transport• In-house transport	<ul style="list-style-type: none">• Carrier (external transport)• Logistics specialist (in-house transport)	Training in transportation, Experience in the transport of machines
Installation	<ul style="list-style-type: none">• Electrical installation• Mechanical setup of the machine	<ul style="list-style-type: none">• Electrically qualified person• Fitter	Person with appropriate training, education and experience which enables them to identify risks and prevent hazards that may be caused by electricity or mechanical systems
Putting into operation and setting up	<ul style="list-style-type: none">• Functional test• Inspection of the safety devices• Parameter configuration	<ul style="list-style-type: none">• Start-up engineer	Person with appropriate training, instruction, education



Phase of life	Tasks (exemplary)	Person	Necessary qualification
Operation	<ul style="list-style-type: none">• Product-specific tasks	Operator	Instruction, training
Maintenance <ul style="list-style-type: none">• Maintenance• Inspection• Repair• Improvement• Troubleshooting and fault rectification	<ul style="list-style-type: none">• Replace wearing parts• Repair defective components• Visual inspection	<ul style="list-style-type: none">• Maintenance staff	Person with appropriate training, education and experience which enables them to identify risks and prevent hazards that may be caused by electricity or mechanical systems
Cleaning	<ul style="list-style-type: none">• Cleaning under consideration of the hygienic requirements in the food industry	<ul style="list-style-type: none">• Cleaning specialist• Operator	Instruction, training
Removal from service	<ul style="list-style-type: none">• Disconnection from the energy supply and energy dissipation	<ul style="list-style-type: none">• Fitter	Instruction, training
Dismantling	<ul style="list-style-type: none">• Disconnect assemblies• Disconnection from the energy supply and energy dissipation	<ul style="list-style-type: none">• Fitter	Person with appropriate training, education and experience which enables them to identify risks and prevent hazards that may be caused by electricity or mechanical systems

Phase of life	Tasks (exemplary)	Person	Necessary qualification
Disposal	<ul style="list-style-type: none"> • Scrapping 	<ul style="list-style-type: none"> • Specialist company 	Training and experience in handling hazardous substances, etc.

4.6 Safety-relevant information for certain life phases

- Delivery, in-house transport, unpacking ([section "6. Delivery, transport, unpacking", p. 54](#))
- Connection conditions ([section "7.7 Supply connections", p. 62](#))
- Storage conditions ([section "7.9 Storage conditions", p. 63](#) and ["15.5 Removing from service and storage of the machine", p. 177](#))
- Installation conditions ([section "7 Installation conditions", p. 59](#))
- Assembly and installation, initial start-up ([section "7 Installation conditions", p. 59](#) and ["8 Initial commissioning/ start-up", p. 64](#))
- Operation, use ([section "9 Setting up/equipping the machine", p. 68](#) and ["10 Operation", p. 82](#))
- Cleaning/ removal from service ([section "12 Cleaning after shutdown", p. 148](#) and ["15 Removing from service / storage", p. 176](#))
- Inspection and maintenance ([Section "11 Maintenance", p. 118](#))
- Dismantling and disposal ([section "16 Dismantling and disposal", p. 178](#))



4.7 Information for the operator and on industrial safety

These operating instructions are part of the cookie moulding machine. Dealers, suppliers or resellers of our cookie moulding machines are required to ensure that the operating instructions are delivered with the machine and made available to the customer!

Please keep the operating instructions in a safe place and ensure that they are always available at the place of use. They must be read, understood and observed by the user.

Please pay special attention to the safety-relevant sections! You are also required to observe the relevant accident prevention regulations, safety regulations and occupational health rules. The operator is responsible for the intended use of the cookie moulding machine.



Please ensure that safety-relevant labels on the machine are not covered over and are always clearly legible.



Never manipulate the constructive safety measures!

4.8 Protective equipment and safety functions

The Janssen cookie former has the following protective equipment:

4.8.1 Location and function of the main switch

The Janssen cookie former is connected to the mains with the power cord. The main switch is located on the front of the machine and turning the switch makes or breaks the power connection to the machine.



4.8.2 Location and function of the EMERGENCY STOP buttons

The Janssen cookie former has an EMERGENCY STOP button on the operating terminal and on the rear of the machine.



In an emergency, the EMERGENCY STOP button must be pressed and the machine must be disconnected from the power supply.

Pressing the EMERGENCY STOP button immediately brakes and stops all drives of the machine.

The machine can be restarted by unlocking the emergency stop buttons.

The button can be unlocked by either pulling or turning.



4.8.3 Circuit breaker for protective grid

The protective grid covers the dough hopper from above and prevents access to the hazard zone (danger of being pulled in) of the rollers.

The hopper grid, as well as the hopper itself, is mounted so that it can pivot on an axis and is connected to a mechanical safety switch.

When the protective grid and/or the hopper is opened, the protective device is activated and the drives are stopped.

Closing the protective grid and pressing the yellow "Enable" button, deactivates the protective device and the machine can be started again.

4.8.4 Circuit breaker for conveyor belt cartridge

The conveyor belt cartridge is protected by an inductive circuit breaker.

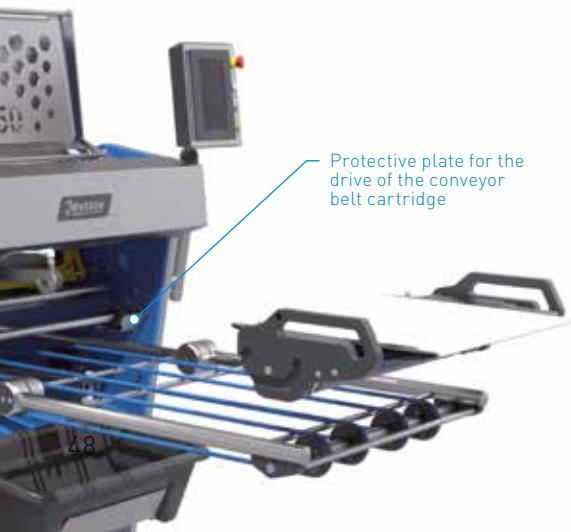
When the conveyor belt cartridge is removed, the protective device is activated and the drives are stopped.

Inserting the conveyor belt cartridge into the machine and pressing the yellow "Enable" button (release/reset) deactivates the protective device and the machine can be restarted.



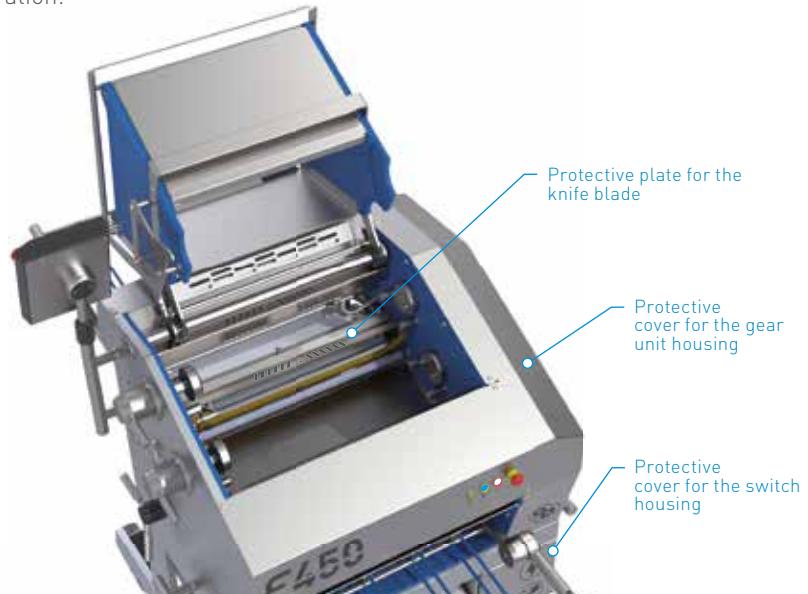
4.8.5 Protective plate for the drive of the conveyor belt cartridge

The conveyor belt cartridge is driven by a gear wheel. To protect against being pulled in, the gear unit is covered by a protective plate. When the conveyor belt cartridge is removed, the drives are stopped so that there is no danger.



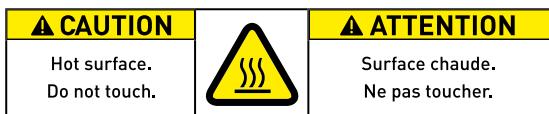
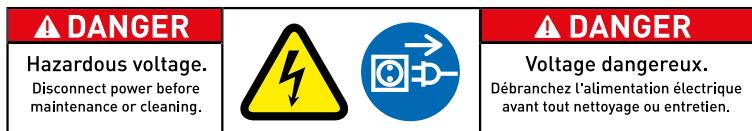
4.8.6 Protective plate for the knife blade

The knife in the machine is covered by a movable knife guard so that you cannot injure yourself when the hopper is open. The knife guard plate is lifted mechanically by a Bowden cable in the gear unit housing when the hopper is closed and this exposes the blade so it is ready for operation.



4.9 Location and meaning of symbols on the machine

The following safety signs are affixed to the machine and indicate danger points that have been minimized by design measures.



Compliance with this information is mandatory!



Make sure that these labels are not covered over and are always clearly legible.



Never manipulate the constructive safety measures!

4.10 Further information on the machine

There are further informational labels on the machine:

Assembly
Machine gear unit



Reference to
operating instructions



QR codes for information
on our website



4.11 Residual risks

Despite the protective equipment on Janssen cookie formers, there are still residual risks that cannot be avoided by design measures.

4.11.1 Sharp knife

The knife in the machine is covered by a mechanical knife protection device so that direct contact with the knife edge is avoided.

To clean the front and back of the knife, lift the cover with one hand and with the other hand clean the now exposed knife with a damp cloth.

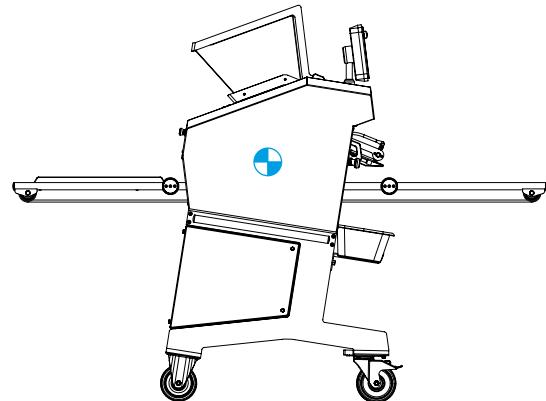
There is a risk of cuts when doing so! Consequently, we recommend using cut-resistant gloves for cleaning and possible assembly.

4.11.2 High machine centre of gravity

The machine's centre of gravity (⊕) is very high. When transporting the machine on a pallet, in a crate or with a forklift truck, it is essential to ensure that the machine is standing securely by locking or fastening it down so it cannot tip over.

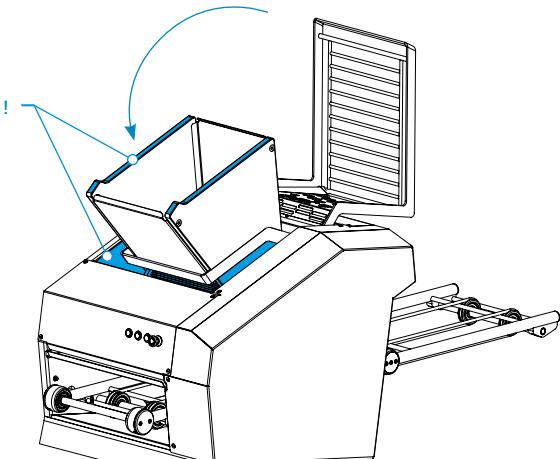


The figure shows cut protection gloves



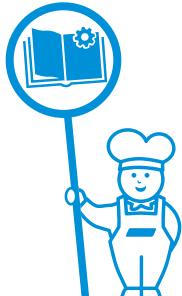
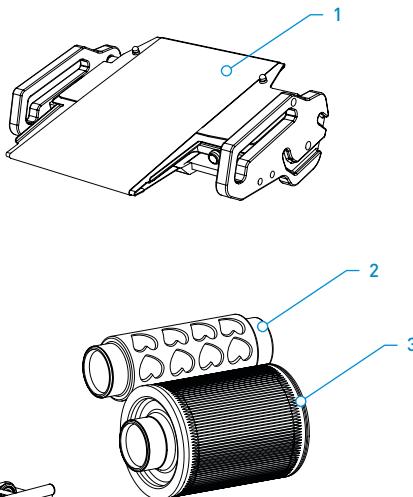
4.11.3 Closing range of the hopper

The hopper must be opened and closed for roller changing and cleaning. There is a possible danger of crushing the arms and hands when doing so. When closing the hopper, it is essential to ensure that you do not reach into the closing range (!).



4.11.4 Heavy machine components

Janssen cookie formers have removable machine components, such as the conveyor belt cartridge (1), pattern roller (2) and kneading roller (3) which can fall to the floor and be damaged if handled carelessly.



5 Technical data



5.1 Data sheet

Machine type	F250 UL	F450 UL	F600 UL
Hopper volume	≈ 25 l	≈ 45 l	≈ 60 l
Max. sheet width:	≤ 250 mm	≤ 450 mm	≤ 600 mm
Max. sheet height:	≤ 70 mm	≤ 70 mm	≤ 70 mm
Length (length folded up)	1,600 mm (980 mm)	2,200 mm (980 mm)	2,200 mm (980 mm)
Width	808 mm**	1 008 mm**	1 158 mm**
Height	1 620 mm	1 620 mm	1 620 mm
Weight	≈ 238 kg	≈ 281 kg	≈ 311 kg
Capacity*	up to 240 kg / hour*	up to 550 kg / hour*	up to 650 kg / hour*
Sheet speed	≈ 4 m / minute	≈ 1-6 m / minute	≈ 1-6 m / minute
Baking surface			
"Compact" controller or "Performance" controller	✓ ✓	✓ ✓	✓ ✓
Operating voltage	208Y/120 V 3 Ph.+ PE	208Y/120 V 3 Ph.+ PE	208Y/120 V 3 Ph.+ PE
Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Nominal power	1.5 kW	2.8 kW	3.7 kW
Rated current	5,2 A	9,7 A	13,0 A
Protection class	IP20*	IP20*	IP20*
Ambient conditions	Interior, 10-30 °C Air humidity ≈ 40-60%	Interior, 10-30 °C Air humidity ≈ 40-60%	Interior, 10-30 °C Air humidity ≈ 40-60%

*]) Depending on the volume of the products, the spacing of the shapes on the baking sheet and the utilization.

**) For the machine width, a safety margin of 20 mm should be taken into account due to tolerances.

5.2 Electrical circuit diagrams "Compact" and "Performance"

The electrical circuit diagrams for the Janssen cookie formers with the "Compact" and "Performance" controllers as well as the connection overviews can be found in the annex ( [section 18](#)) or under:

Link to electrical circuit diagram:
www.nff-janssen.de/Info/circuit_diagram



5.3 Declarations of conformity for materials used

The materials used are suitable for the processing of foods ( [section "3.3 Basic operating principle", p. 17](#)).

Niederrheinische Formenfabrik Janssen GmbH is responsible for compliance with the standards

- UL763:2018
- CAN/CSA-C22-2 No. 195

See the manufacturer's Declaration of Conformity in the annex ( [section "17 Declaration of Conformity", p. 180](#)).



6 Delivery, transport, unpacking

6.1 Qualifications of personnel

A carrier must be used for off-site transport and for in-house transport a logistics specialist with training in transport or experience in the transport of machinery must be used.

6.2 Requirements and safety

Please make sure that the machine is in perfect and roadworthy condition in order to avoid injury or damage.

6.3 In-house transport

For in-house transport, the machine must only be moved on level ground with the rollers provided for this purpose!

For in-house transport, the machine must be secured against falling over when moved with forklift trucks or lifting vehicles.

6.4 Off-site transport

For off-site transport, the machine should be transported on a pallet or in a transport crate.

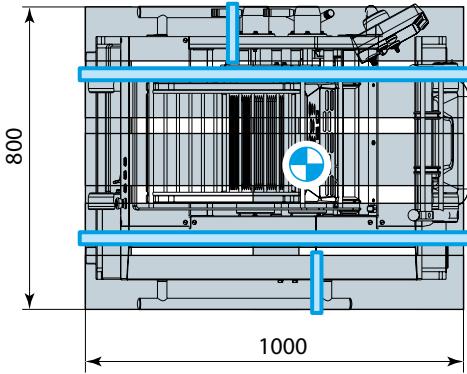
6.4.1 Transport restraint

For transport, the machine must be well fixed and secured against falling over due to its high centre of gravity (⊕). The machine can be fixed over the rollers by means of the crossbars of the base frame using lashing straps (⊖). In addition, the handles on the left and right side of the machine can be used for fixation. None of the other components of the machine are suitable for fixing the machine!



6.4.2 Example of transport securing of an F250 on a pallet

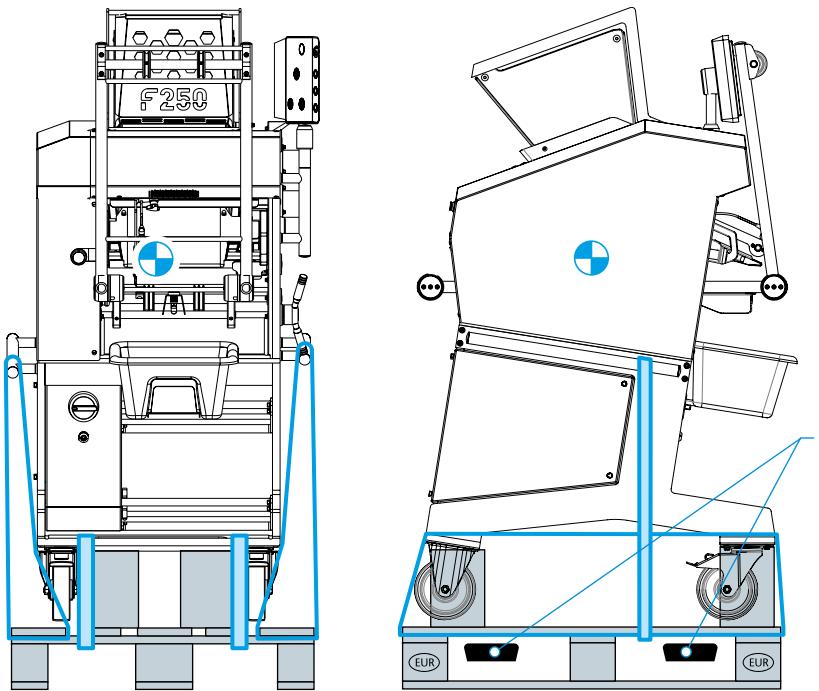
The F250 fits on a EUR 1 euro pallet with the dimensions 80 cm x 100 cm. With regard to tipping stability, a EUR 2 euro pallet measuring 100 cm x 120 cm is more advisable. We recommend placing wooden blocks under the crossbars of the machine frame so that the rollers are not unnecessarily loaded. In the views you can see possible means of fixation using lashing straps.



In addition, you can use stretch film for wrapping the machine to optimally secure the load and moving parts. The stretch film can be pre-stretched on the product and thus ideally secures the machine.



When transporting the pallet with a forklift truck, make sure that the pallet is moved very carefully! Ideally, the forks (1) of the forklift should pick up the pallet from the side.

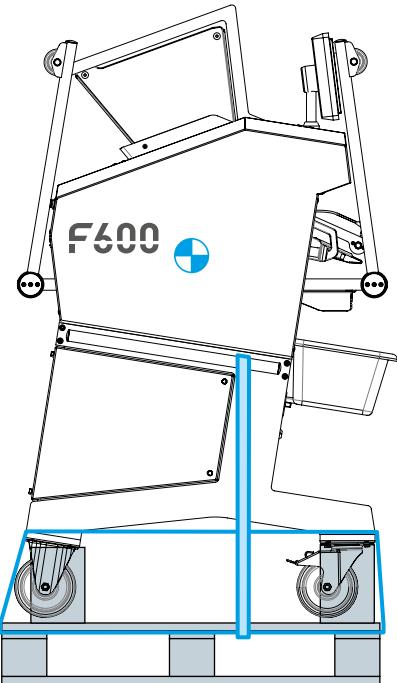
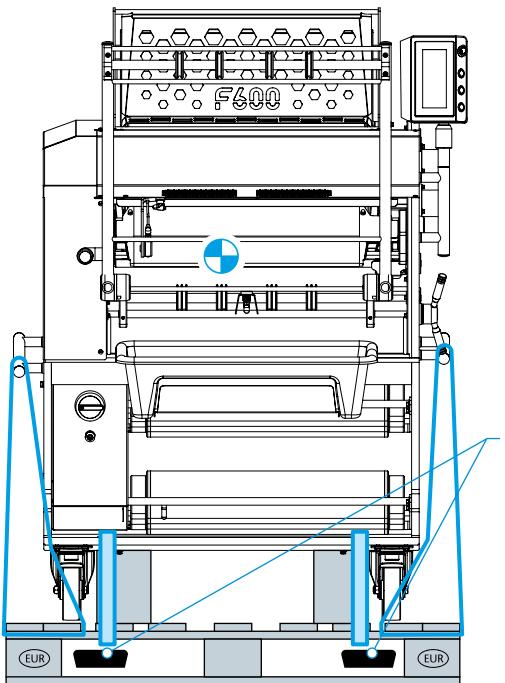
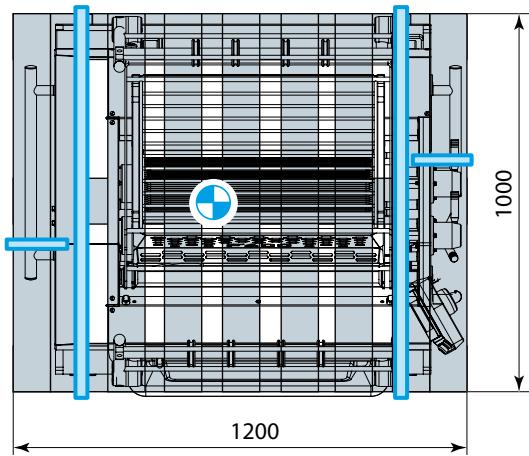


6.4.3 Example of transport securing of an F450 and F600 on a pallet

For the F450 and F600 we recommend a EUR 2 euro pallet with the dimensions 100 cm x 120 cm or larger.



When transporting the pallet with a forklift truck, make sure that the pallet is moved very carefully! Ideally, the forks (1) of the forklift should pick up the pallet from the side.



6.5 Delivery

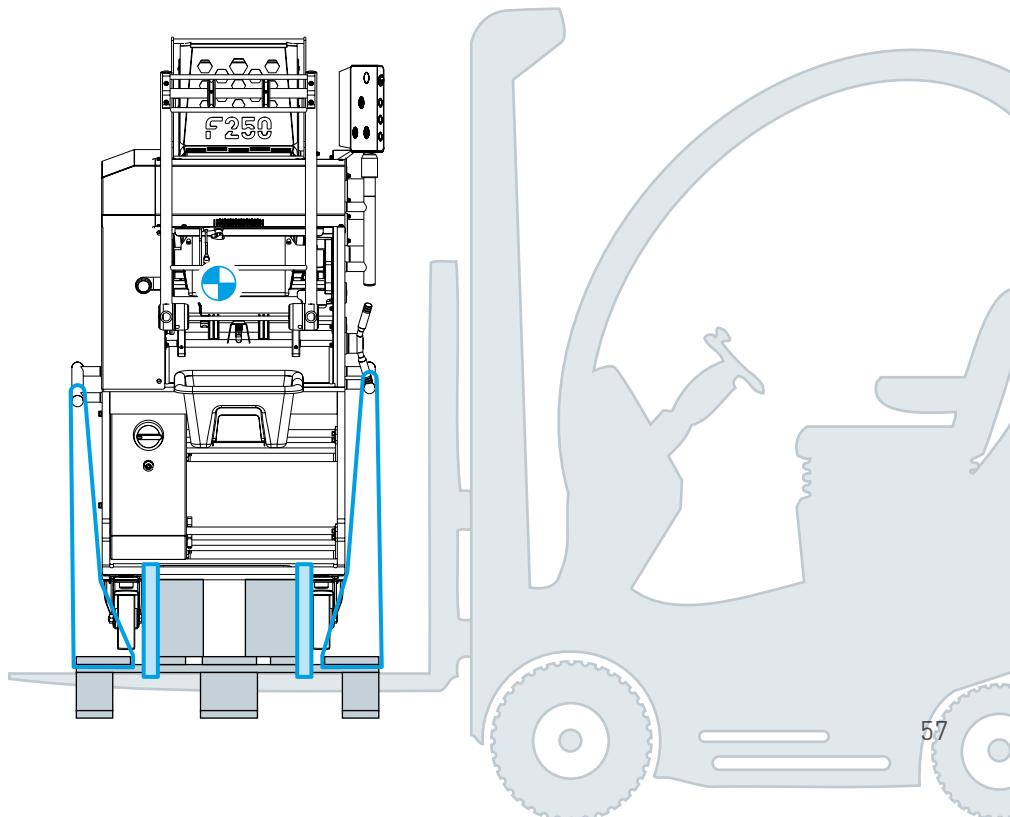
For in-house transport, the machine must be secured against falling over when moved with forklift trucks or lifting vehicles.

For transport, the machine must be well fixed and secured against falling over due to its high centre of gravity (⊕). The possible lashing points for fixing the machine can be found in section 6.4.1 (👉 section "6.4.1 Transport restraint", p. 54).



Before initial start-up of the machine, the locking levers of machine's castors must be fixed.

On loading ramps or inclined approach ramps, special care is required because the machine is heavy!



6.6 Unpacking

Note: The following information is enclosed with the delivery note and is only listed here as a supplement, as these operating instructions are generally only read after unpacking.

Important when accepting delivery of the goods!

When the machine is delivered, for example by a carrier, please check the delivery carefully for possible transport damage!



By accepting the delivery and confirming it with your signature, you confirm that the delivery is flawless and free of damage!

If you discover any damage when taking delivery/unpacking the machine, do not accept the goods from the carrier! Have the carrier confirm the damage with a signature.



According to current legislation, claims for damages can no longer be asserted after acceptance of the goods!



7 Installation conditions

7.1 Qualifications of personnel

A qualified electrician is required for the electrical installation, and for mechanical equipment, a fitter with appropriate training and experience which enables them to identify risks and prevent hazards that may be caused by electricity or mechanical systems.

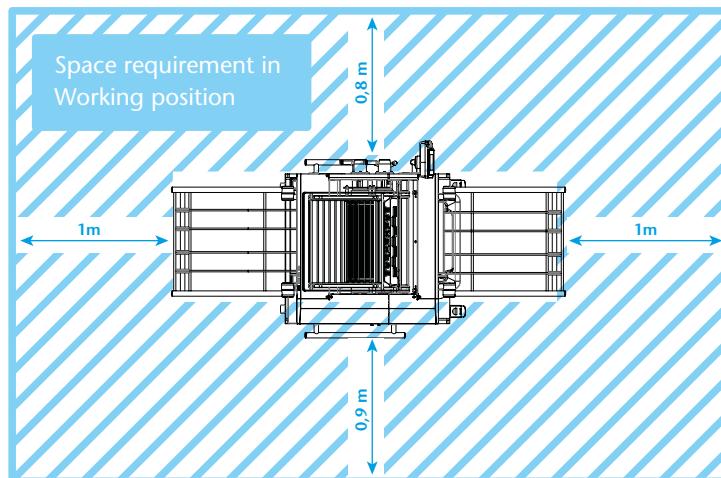
7.2 Requirements and safety

The operator is responsible for the intended use of the Janssen cookie moulding machine.

The machine must be properly connected to the power supply ( see section "2.6. External interfaces").

7.3 Total space requirement

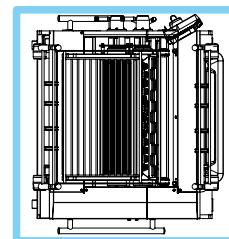
The machine requires at least 100 cm of space to the front and back and about 80 cm at the sides. There should be enough space around the machine to operate it smoothly. In rest positions the machine requires the dimensions indicated with the belt drive folded in.



7.4 Foundation and floor

The machine must be set up on a level surface and the castors with wheel locks must be secured against rolling away.

( See section "9.3 Releasing and locking the castors").



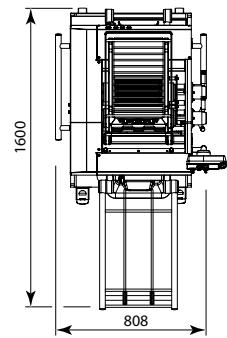
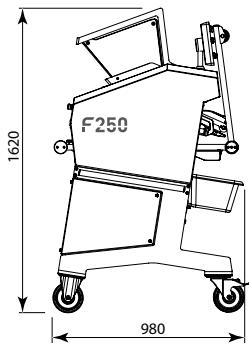
Storage space requirements (mm)

Type	F250	F450	F600
L	980	980	980
W	808	1008	1158
H	1620	1620	1620

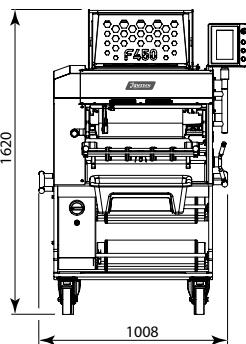
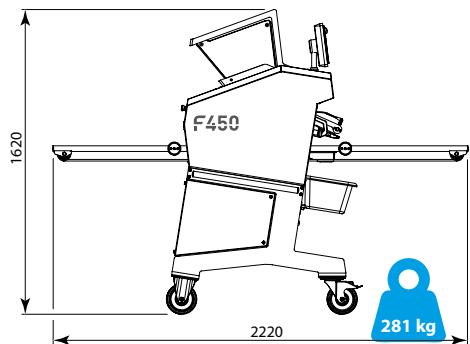
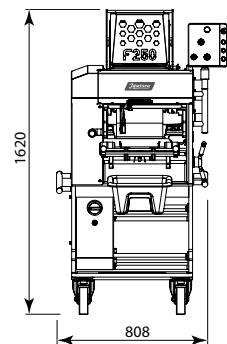
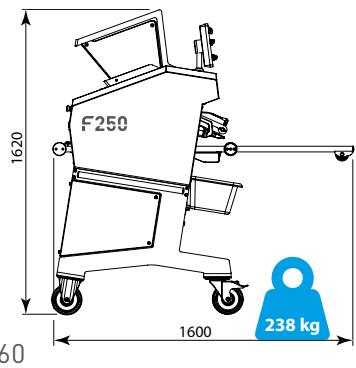
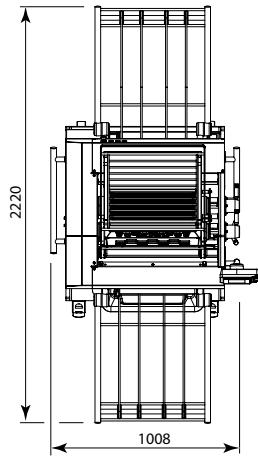
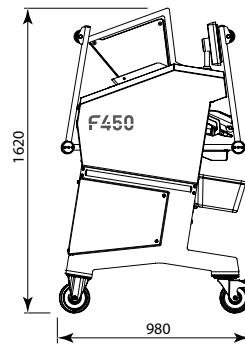


7.5 Dimensions and weights

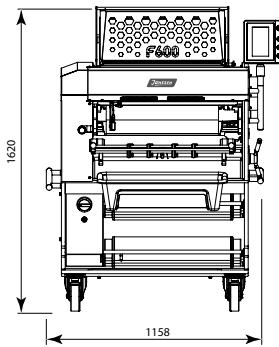
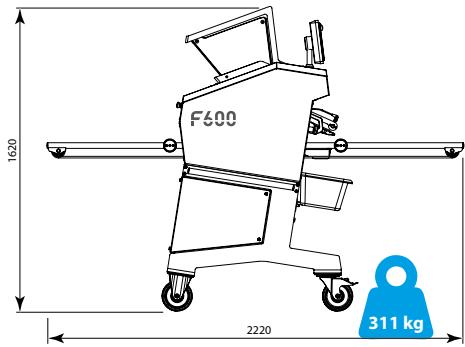
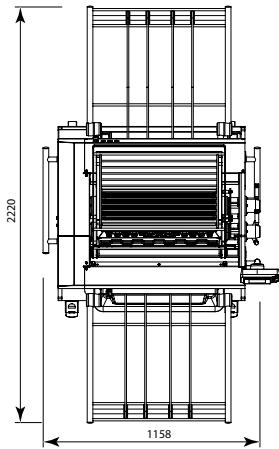
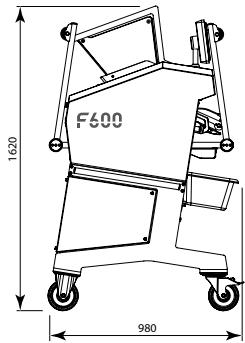
7.5.1 Dimensions/ Weight F250



7.5.2 Dimensions/ Weight F450



7.5.3 Dimensions/ Weight F600



7.6 Ambient conditions

The machine must be stored and operated in a dry room with the temperature between 10 °C and 30 °C. The air humidity should be approx. 40-60%.



The machine must not be operated in potentially explosive areas (EX zones)!

7.7 Supply connections

Before connecting the machine, make sure that your mains supply provides a voltage of 3Y 120/208V/AC, 4 pole, 5 wire.

Observe the type plate on your machine.



We recommend that type 2 and type 3 surge protection be provided by the customer!

If you have the correct voltage with the appropriate power socket, you can make a test run with the machine. If the machine starts to run in reverse, stop the machine immediately and unplug the power cord from the power socket. The machine is connected clockwise.

This clockwise rotating field connection must not be manipulated.



If necessary, have an authorized electrician connect your power socket correctly!

JANSSEN cookie formers are equipped with frequency converters. We recommend that the following measures be taken into account in the building:



We recommend a separate circuit supply line 5x, with fusing of 16A, 3-pole type B or C, as well as the use of a 4-pole universal current-sensitive residual current circuit breaker (RCCB) type B (IEC/EN 61008, IEC 62423 Edition 2.0)

[ [section "8. Initial commissioning/Start-up"](#)]



7.8 Customer supplied safety measures

Observe the warning notices attached to the machine
(👉 [section "4.9 Location and meaning of symbols on the machine"](#))

The cookie moulding machine must only be operated by trained operating personnel. Any maintenance and repair work must only be carried out by instructed or qualified personnel!

The machine must be cleaned mechanically after each use with food-grade cleaning agents, cloths and brushes. Janssen offers suitable products for this purpose.

(👉 [Section "12. Cleaning"](#))

7.9 Storage conditions

7.9.1 Storage of the machine

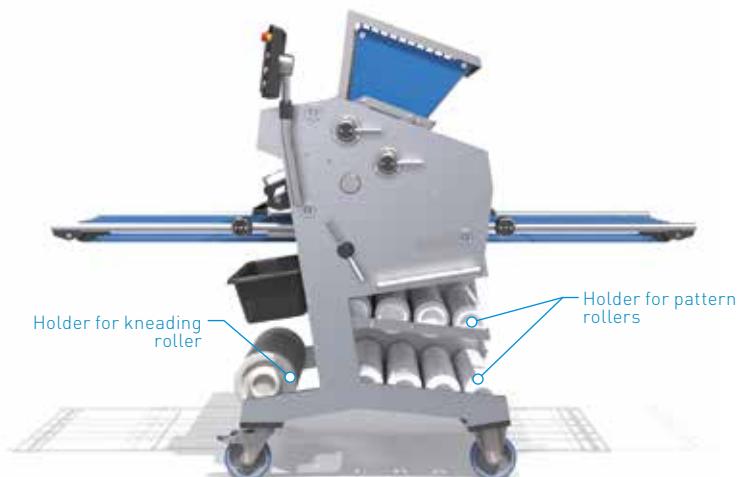
The cookie moulding machine should be stored in a dry environment. If necessary, the machine should be covered with a cotton or linen cloth.



Plastic films (stretch films) are unsuitable for the storage of machine, because due to their airtightness, any residual moisture in the machine can promote the formation of mould.

7.9.2 Storage of the rollers

The pattern rollers as well as the kneading roller must be stored in a cleaned condition in the roller rack in the machine frame. In the roller rack, the rollers can dry off well after cleaning.



8 Initial commissioning/ start-up

8.1 Qualifications of personnel

The work described in these operating instructions in connection with the electrical equipment of the Janssen cookie formers is intended exclusively for

- Instructed personnel.
- Qualified electricians or persons instructed by qualified electricians who, with appropriate training, education and experience, are able to identify risks and prevent hazards that may be caused by electricity.
- Qualified application programmers and software engineers who are familiar with the relevant safety concepts for automation technology and the applicable standards and other regulations.

8.2 Requirements and safety

The operator is responsible for the intended use of the Janssen cookie moulding machine. Manipulation (e.g. removal) of the existing protective devices (e.g. safety switches, protective grids, covers) is not permitted.

8.3 Electrical installation

Our machines of the F250, F450 and F600 series require a 20 Amp 3Y 120/208V/AC, 4 pole, 5 Wire receptacle (Mennekes part No. 520R9W) mains connection socket.

Before connecting the machine, make sure that your power grid provides a voltage of 3Y 120/208V/AC, 4 pole, 5 wire.

Observe the type platoon your machine.



We recommend that type 2 and type 3 surge protection be provided by the customer!

If you have the correct voltage with the appropriate power socket, you can make a test run with the machine. If the machine starts to run in reverse, stop the machine immediately and unplug the power cord from the power socket. The machine is connected clockwise. This clockwise rotating field connection must not be manipulated.



If necessary, have an authorized electrician connect your power socket correctly!



JANSSEN cookie formers are equipped with frequency converters. We recommend that the following measures be taken into account in the building:

⚠ We recommend a separate circuit supply line 5x, with fusing of 16A, 3-pole type B or C, as well as the use of a 4-pole universal current-sensitive residual current circuit breaker (RCCB) type B (IEC/EN 61008, IEC 62423 Edition 2.0)

8.4 Installation and initial start-up

Janssen cookie formers are ready for immediate use on initial start-up after a proper electrical connection.

The machines are tested at Janssen before delivery to ensure that they function perfectly. The prerequisites for proper initial start-up are correct electrical connection, general knowledge of the operating instructions and the intended use.

⚠ Always pull out the mains plug when carrying out maintenance and repair work on the machine.

Follow the five safety rules during initial start-up or when carrying out maintenance work. Generally speaking, the rules must be followed in the order given:

1. Disconnect
2. Secure against restarting
3. Verify absence of voltage
4. Earth and short circuit
5. Cover or block off adjacent live parts.

After completion of the work, reverse the measures taken in the reverse order.

⚠ Please note the country-specific installation instructions, safety and accident prevention regulations.

⚠ Make sure that switching on the input voltage cannot lead to unexpected dangerous situations. All work on the electrical equipment must only be performed by qualified personnel who are familiar with the necessary safety measures.

⚠ Secure the machine against unauthorized use by switching off the main switch and securing it with a lock when the machine is not in use.

8.5 Special tools, equipment, materials

The equipment and tools listed below should be available before the Janssen cookie formers are put into operation for the first time.

8.5.1. Special materials

All materials of the Janssen cookie formers are suitable for processing food in accordance with their intended use ( section "3.3 Basic operating principle", p. 17).

8.5.2. Special equipment

The gear unit and the bearings of the machine must only be lubricated with food-grade grease.

8.5.3. Special tools for assembly and maintenance

Normal machine operation:

No special tools are required for the normal operation of the machine.

Maintenance and servicing:

Depending on the situation, you will need various tools for maintenance work:

1) Slotted screwdriver
10-12 mm blade width,
1.5 mm blade thickness

2) Open-ended spanner or socket spanner
10 mm for M6
13 mm for M8
17 mm for M10

3) Allen key (also Inbus®):
Allen size 3 for M4
Allen size 4 for M5
Allen size 5 for M6
Allen size 6 for M8

4) Hexalobular internal key (Torx®)
T20 for M4 and M5 countersunk screws

5) Hexalobular internal key with internal pin (Torx®)
T40 for switch box door

6) Small electronics screwdriver for electrical terminals

7) Phillips screwdriver
PZ 2 for electronic terminals on the main switch

8) Plastic hammer

9) Pin punch
6 mm

10) Knife distance gauge*

11) Knife pin support*

*) The Janssen-specific special tools can be requested from the manufacturer.

8.5.4 Special tools for cleaning

Food hygiene with respect to the production and processing of food must be ensured by the operator. The operator is responsible for the effective implementation of the EU regulation on food hygiene in the HACCP concept.

The cleaning agents and disinfectants to be used must be suitable for the food industry and environmentally friendly. They should also have a low toxicity. Use "neutral cleaning agents" for cleaning the Janssen cookie formers and "alkaline cleaning agents" in the case of heavy soiling with fats and oils. When doing so, it is essential to observe the manufacturer's instructions (area of use, contact time, temperature, dry or wet cleaning, etc.).

For cleaning the machine we offer a special cleaning kit with a holder that can be mounted on the machine.

The cleaning kit consists of different aids:

- 1) A soft brush for dry cleaning (dough crumbs and dust)
- 2) A medium-hard universal brush for cleaning heavily soiled areas.
- 3) A hard detail brush for stubborn deposits, for example in the grooves of the kneading roller.

4) A medium-hard hand brush for cleaning the rollers.

5) A dough scraper for cleaning the rollers and sheets and surfaces.

6) A microfibre cloth to clean the surfaces with water.

Information on cleaning can be found in the section "Cleaning".

( [Section "12 Cleaning after shutdown, p. 148"](#)).



9 Setting up/ equipping the machine

9.1 Qualifications of personnel

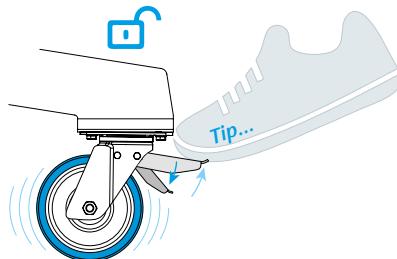
Setting up and equipping the machine requires a person with appropriate training, instruction and education.

9.2 Requirements and safety

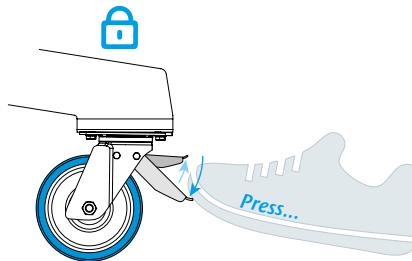
Janssen cookie formers are ready for immediate use on initial start-up. They must be placed in the desired location and connected to the power supply by means of a plug.

9.3 Releasing and locking the castors

The machine frame has two fixed castors and two lockable castors. The castors can be easily released by briefly pressing on the small lever (1) with your foot. The mechanism releases itself and the large lever (2) springs upwards.

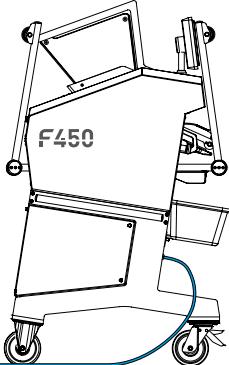
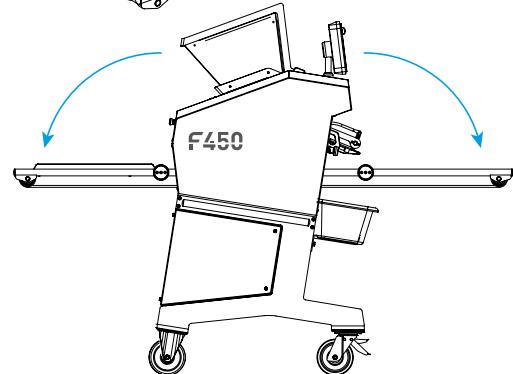
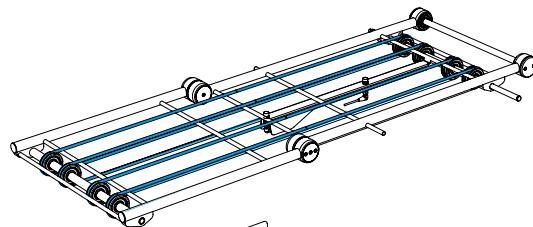


The castor can be locked by pushing the large lever (2) downwards.



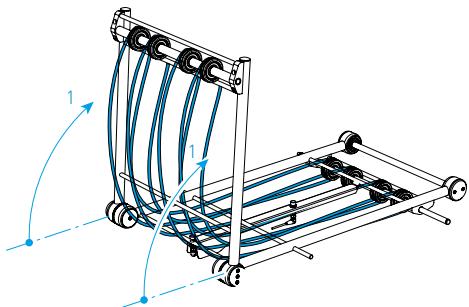
9.4 Folding down the sheet transport unit

The sheet transport unit can be folded upwards (1) for space-saving storage. The hygienic and injury-free joints also allow it to be folded downwards (2) by means of a special release, making it easier to access the machine for changing rollers or cartridges.

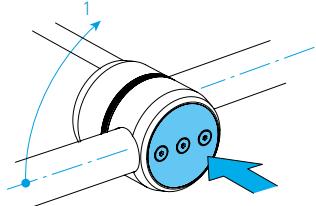


9.4.1 Folding the sheet transport unit up

When the joint lock is closed, the sheet transport can only be folded upwards.

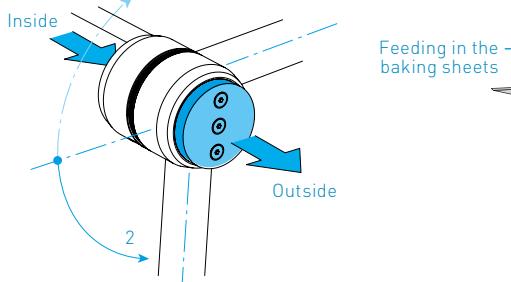


For the closed joint the cover cap must be flush with the joint housing.

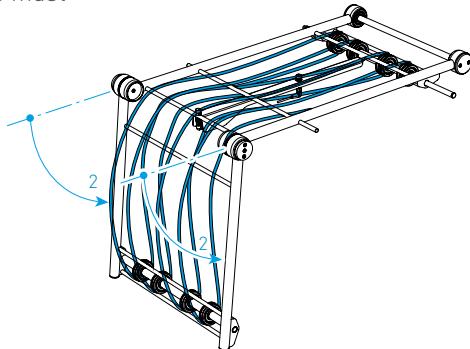


9.4.2 Folding the sheet transport unit down

For the unlocked joint, the cover cap must be pushed out of the joint housing.



This allows the sheet transport to be folded down as well.



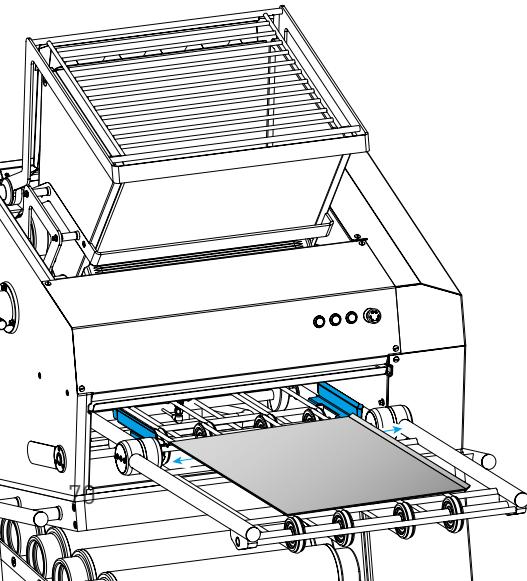
9.5 Feeding and removing the baking sheets

The baking sheets are inserted at the back and removed at the front.



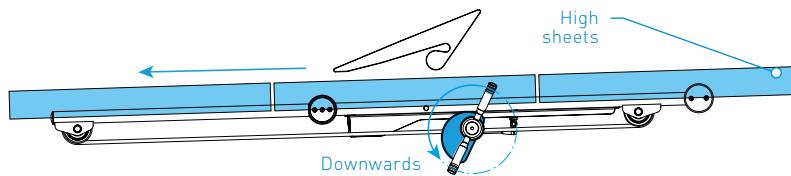
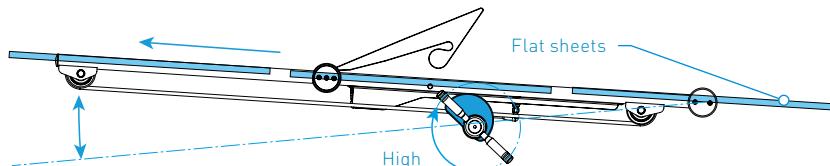
9.6 Adjusting the sheet guide

The sheet guides on the left and right can be installed and removed very easily on the side rails of the sheet transport by means of a clip mechanism. The wing screws can be used to adjust the guide plates with precision. (Section "11.4.1 Installation and removal of the sheet guide", p. 132).



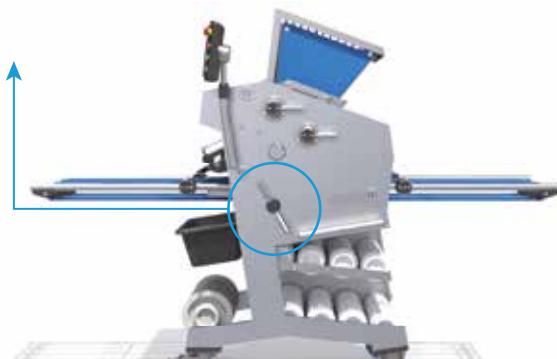
9.7 Height adjustment of the sheet transport unit

Depending on the height of the baking sheet, the sheet transport unit can be adjusted so that it can be transported under the cookie transfer point of the upper conveyor belt at the optimum height.



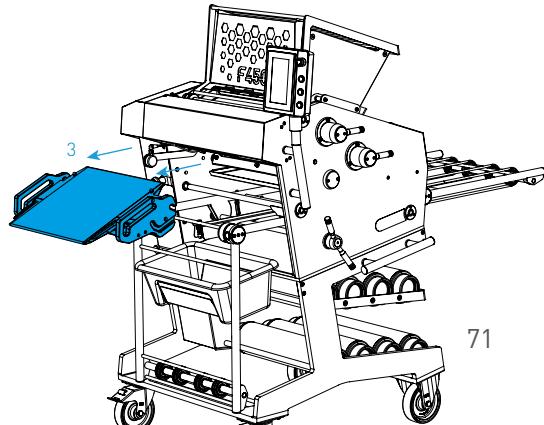
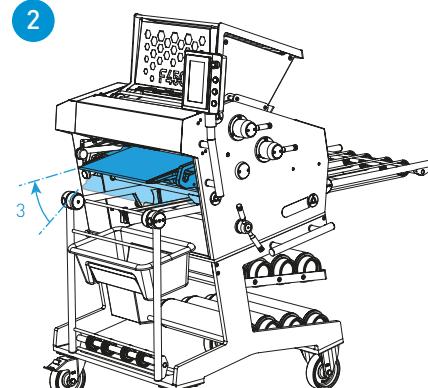
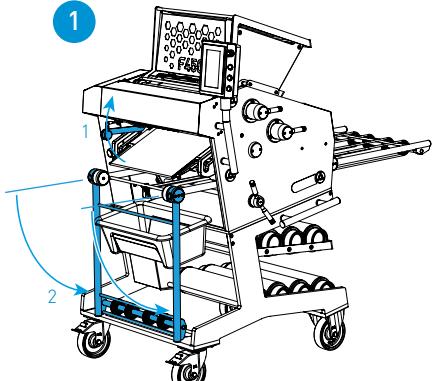
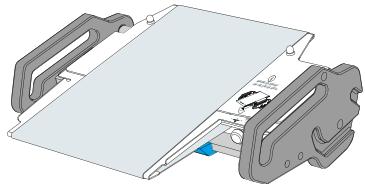
The handle must be pulled out axially and turned to the desired position.

The drop height of the cookies should be as low as possible so that the cookies do not tip over upside down.



9.8 Removal and installation of the conveyor belt cartridge

In only seconds, the upper conveyor belt cartridge can be removed or installed in two steps for cleaning or replacement of the conveyor belt. To do so, remove the rollers beforehand.



Removal:

To remove the conveyor belt cartridge, proceed in the following order.

Step 1:

Swivel the dough sensor (1) upwards and the sheet transport (2) downwards.

Step 2:

Pull the conveyor belt cartridge (3) upwards by the handles and then out of the machine.

Installation:

For installation, proceed in reverse order.

Note: During installation, you must press the handles in firmly to ensure that the gear wheels mesh correctly.

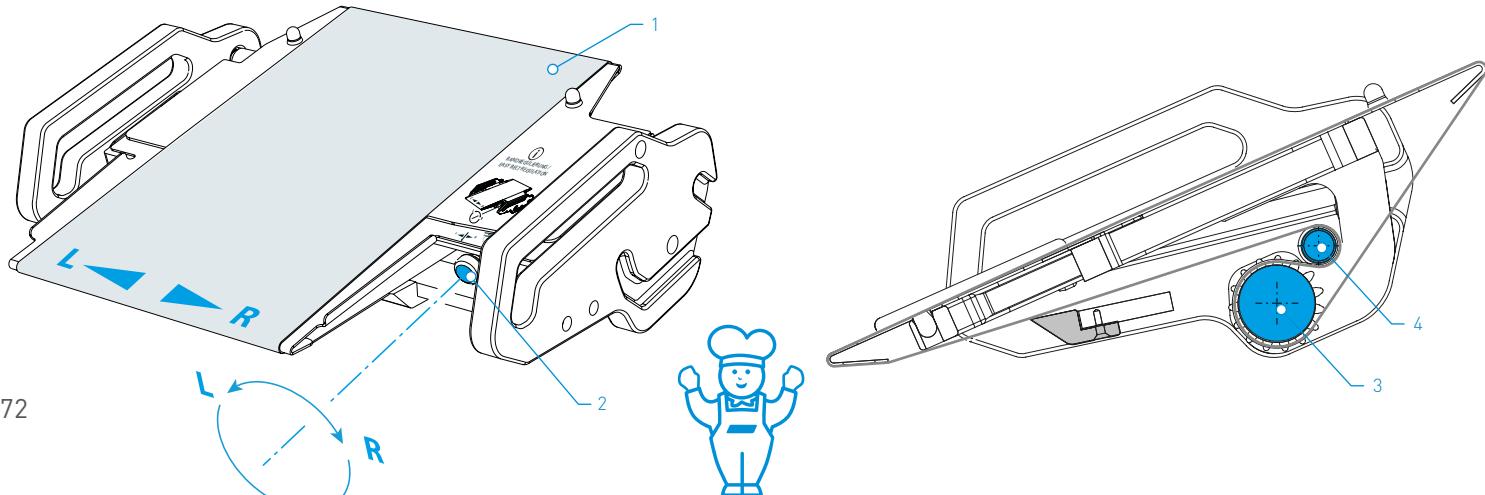
9.9 Adjusting the straight running of the upper conveyor belt

The straight running of the upper conveyor belt **[1]** can be adjusted with the adjusting wheel **[2: belt running adjustment]**. If the wheel is turned to the left, the belt also moves to the left. If the wheel is turned to the right, the belt also moves to the right. For fine adjustment, the wheel only needs to be turned in the range of a quarter turn.

If the belt cannot be adjusted, remove the belt and remove from the drive roller any dough residue that has settled on the drive shaft **[3]** and deflection axle **[4]**. After cleaning, the belt should be adjustable again.

The design of the tensioning mechanism prevents the belt from being over tightened* (* the use of Jannssen conveyor belts is a prerequisite for proper functioning!)

If the belt has damaged areas, please replace the belt promptly, as the damaged areas can cause hygienic defects.



9.10 Removal/replacement of the upper conveyor belt

The upper conveyor belt should be removed for regular cleaning. It is very easy to remove or change with a few simple steps.

(See section "11.2.2 Changing the conveyor belts of the conveyor belt cartridge", p. 122).

9.11 Opening and closing the hopper

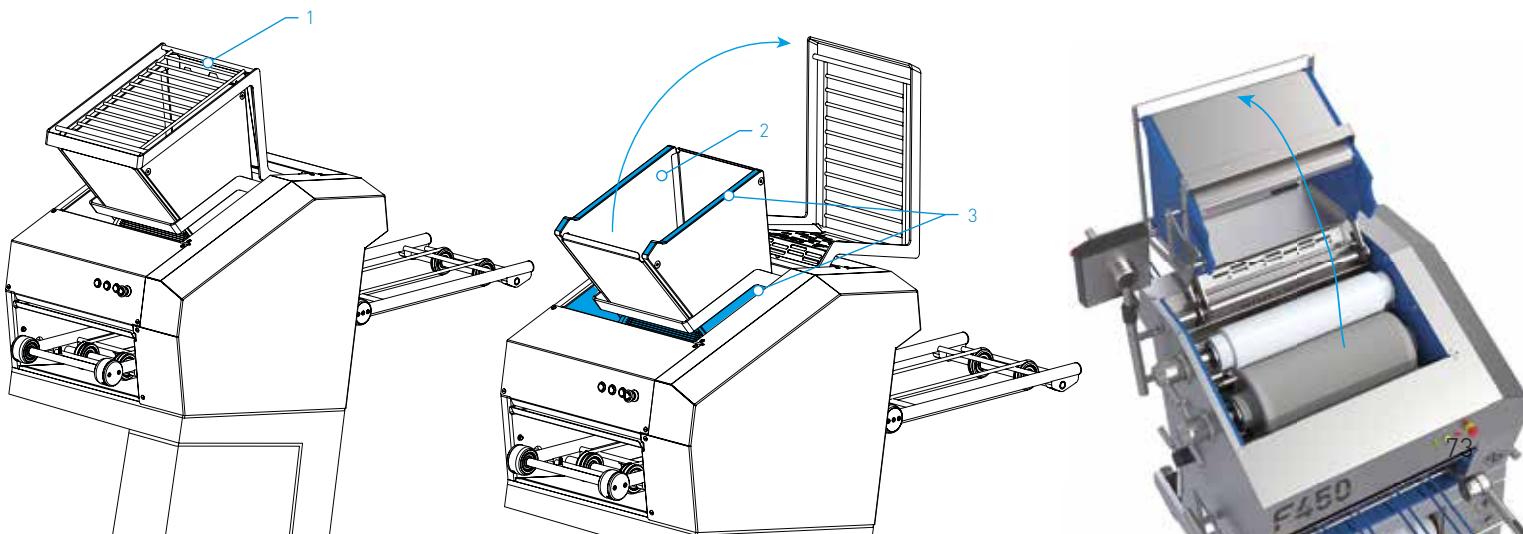
Open:

The hopper grid (1) can be folded forward very easily in order to fill the hopper with dough. The hopper (2) can also be folded forwards for a roller change.

As soon as the hopper grid or the hopper is opened, the machine stops.

Close:

The hopper is spring-mounted and can be easily closed as can the hopper grid. To prevent the risk of pinching or crushing, make sure that you do not reach into the closing range (3) during closing, despite the hopper spring action. After closing the hopper and the hopper grid, the yellow release button must be pressed to restart the machine.

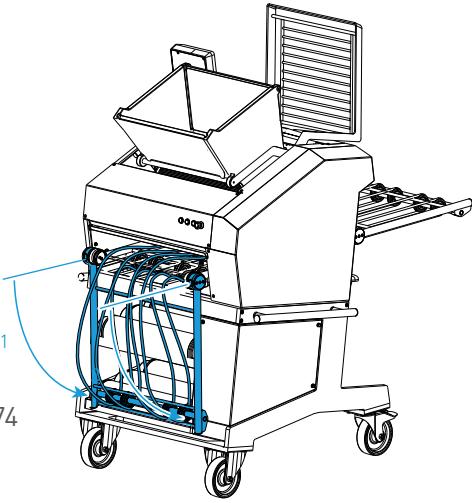
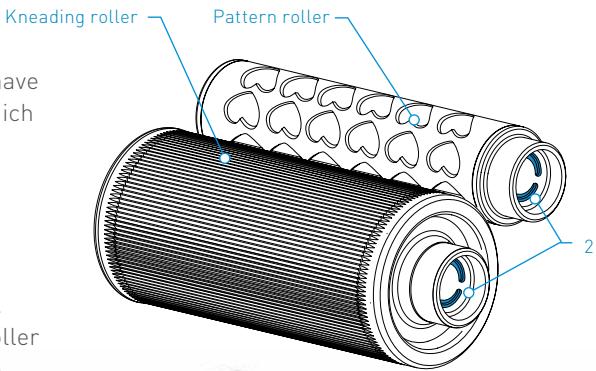


9.12 Installation and removal of the rollers

The rollers can be fitted and removed very easily and conveniently using a quick-release mechanism. For this purpose, we recommend that you fold the sheet transport (1) downwards to enable better access to the machine body. Incorrect installation of the rollers is not possible due to their design.

The pattern and kneading rollers have guide grooves (2) on one side in which the driving pins (3) of the drives engage on the gear side.

Under the roller flanges there are positioning pins (4) on which the rollers can be conveniently placed. The rollers can be fixed with the roller locking device with a quick release system (5).

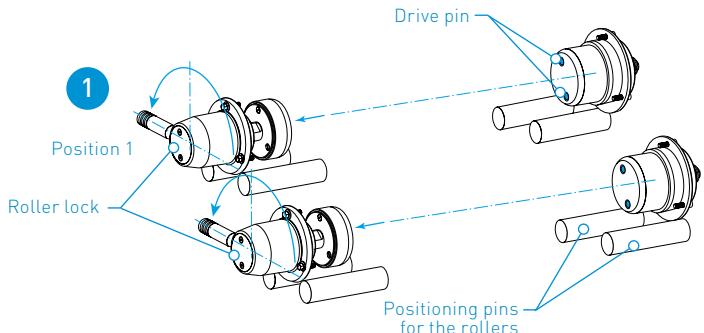


Roller installation:

Proceed in the following order for roller installation.

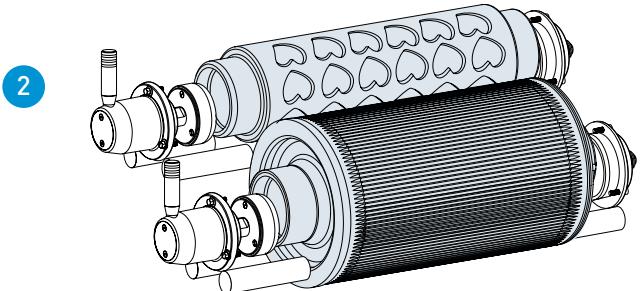
Step 1:

Open the roller lock by turning the levers forwards ([position 1](#)).



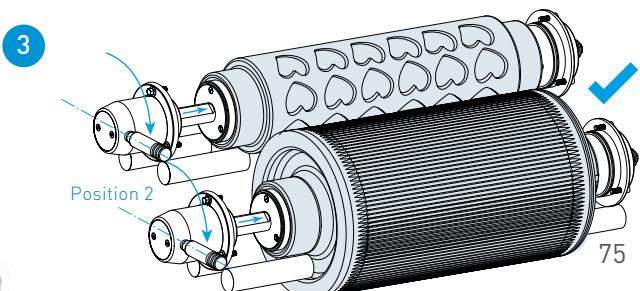
Step 2:

First place the kneading roller and then the pattern roller onto the positioning pins.



Step 3:

Now turn the roller lock with the quick release system 180° to the right ([position 2](#)). To allow the driving pins to engage in the guide grooves of the roller, turn the roller a bit while tensioning with the roller locks. Both rollers are fixed optimally if the locking lever is positioned exactly horizontal.



Roller removal:

To remove the rollers, proceed in reverse order.



9.13 Knife setting for the cookie thickness

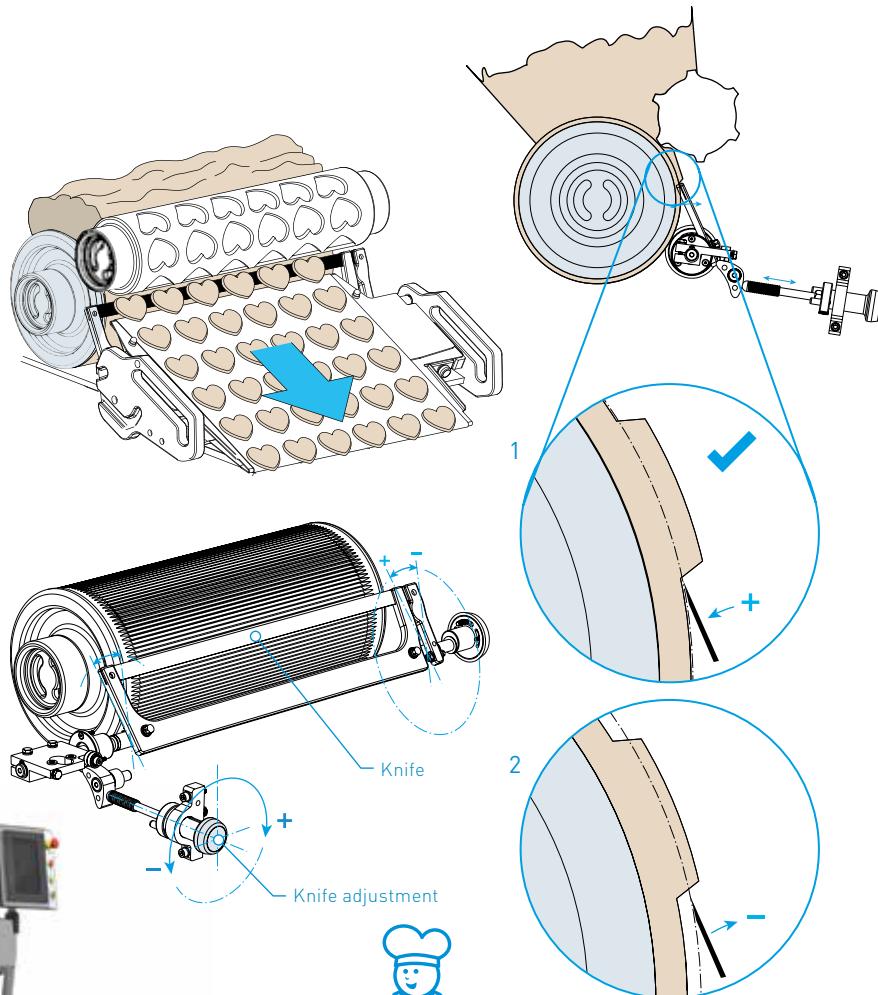
The thickness of the cookies can be adjusted with the knife setting.

The optimum (✓) is for the knife to cut directly at the dough band of the kneading roller (1). This gives you the cookie thickness which has been engraved on the roller according to your specifications. However, you can also form the cookies up to 3 mm thinner for a given engraving depth (2).



Attention:

If the dough is too firm, hard or cool, there is a risk that the blade will be destroyed or collide with the kneading roller! Therefore, before starting the machine with new dough, set the thickness of the pastry to a medium thickness and then adjust the desired thickness.



9.14 Installation and removal of the knife

The knife can be easily removed and installed for maintenance.

( [Section "11.5.1 Removal and installation of the knife", p. 134](#)).

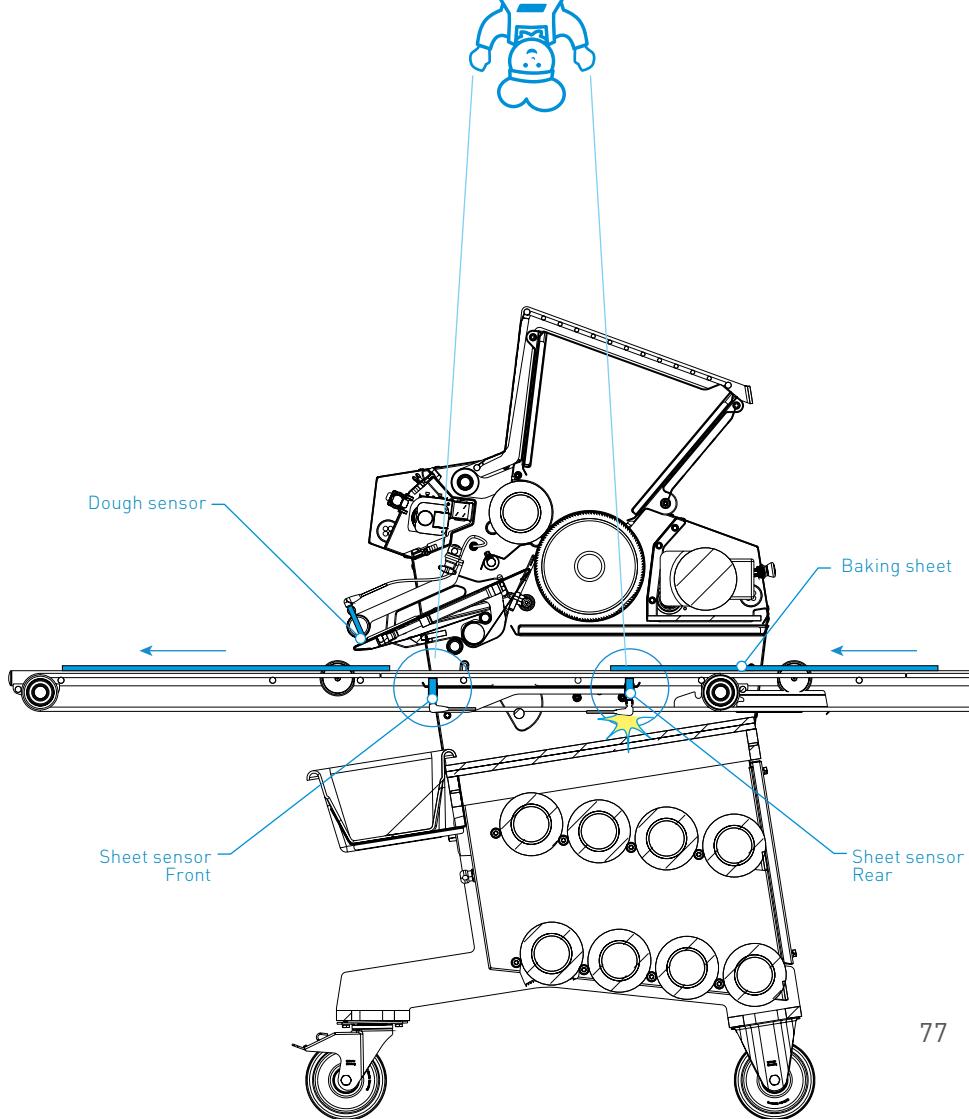
9.15 Adjusting the sheet sensors

The sheet sensors should be positioned approx. 3-5 mm below the baking sheets. The sensors can be easily adjusted in height manually using the fixing nuts.

If a sheet passes the sensor and it does not light up yellow, either:

- the distance to the sheet is too great,
- the baking sheet is very crooked or
- the sensor is defective.

To check the functionality of the sensors, you can place a metallic object on the sensor. The sensor should light up yellow when the metallic object is placed there



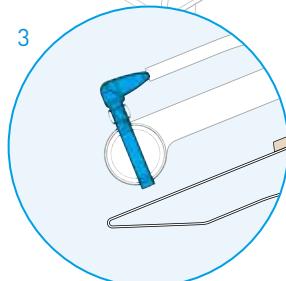
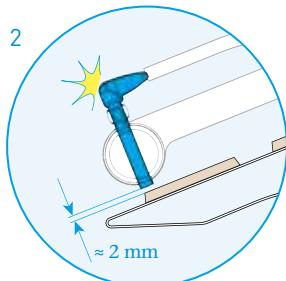
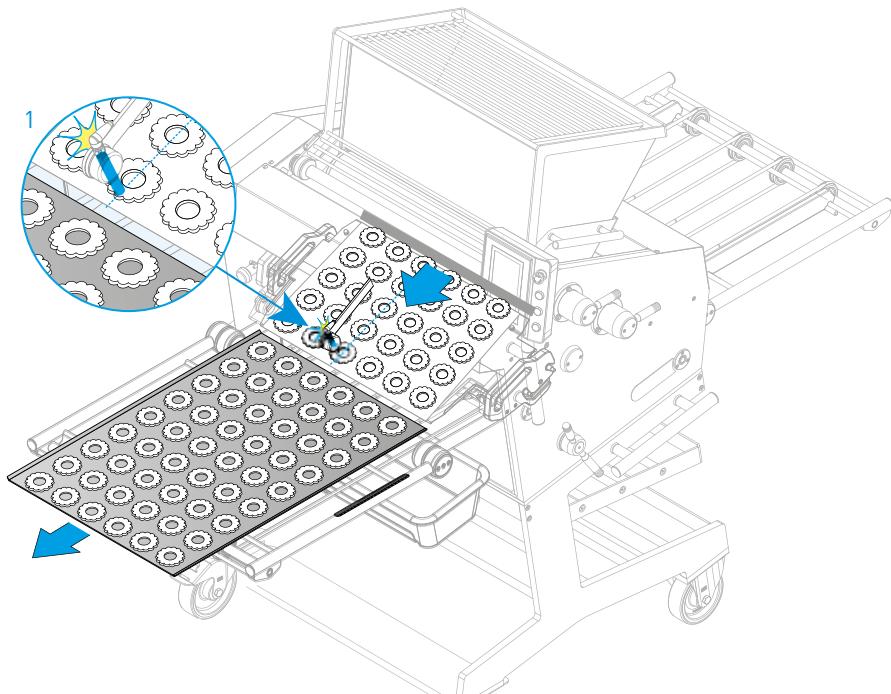
9.16 Adjusting the dough sensor

Position the dough sensor on the row of cookies:

The dough sensor should be positioned centrally over a row of cookies as viewed in the discharge direction with solid cookies.

Adjusting the distance from the dough sensor to the cookie:

The dough sensor should be positioned about 2 mm above the cookie. The sensor must light yellow when the cookie is under the sensor (2). When the cookie is pulled out from under the sensor, the sensor lights up green (3).



9.17 Adjusting the roller heating

The roller heating is located directly in front of the pattern roller.

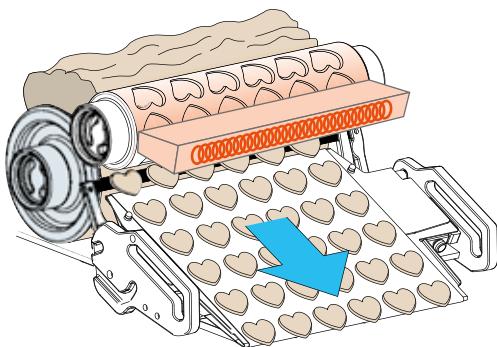
It is required for doughs that are particularly rich in fat and liquid. It heats the surface of the pattern roller with warm air at two possible heating levels so that the adhesion of the dough to the pattern roller is decreased.

The roller heating can be operated via the operating terminal with the "Performance" controller.

( See section "10.5.3.7 Roller heating", p. 98)

With the "Compact" controller, the heating can be activated in two levels by means of a rotary switch.

( See section "10.4.1.4 Roller heating", p. 86)



9.18 Installation and removal of the crumb drawer

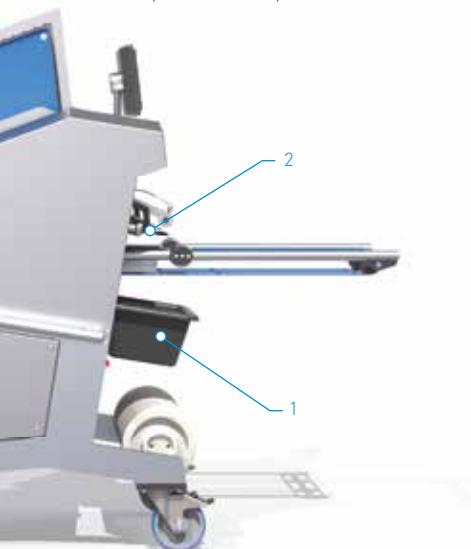
The crumb drawer (1) collects dough residues that fall down from the rollers and prevents them from falling onto the baking sheets. The crumb drawer is inserted and removed from the rear (2) of the machine via the guide grooves provided for it.



9.19 Installation and removal of the dough box

The practical, hygienic dough box [1] catches cookies that are not placed on the baking sheet from the upper conveyor belt [2]. The dough collected in the dough box can be fed back into the hopper for production.

The dough box can be easily removed from the dough box holder and then put back in place.



9.20 Use of the roller holder

The roller holder is the optimal way to store your rollers. They are protected and always ready to hand. Furthermore they can dry off well in the rack after cleaning. The pattern rollers are located in the storage area for the pattern rollers. Depending on the equipment selected, the machine has one or two racks. The kneading roller is placed under the dough box.



9.21 Connecting and disconnecting the power supply

The cookie moulding machine can be disconnected from or connected to the power supply via the plug.

! *Switch off the machine with the main switch and only then disconnect the machine from the power supply!*



9.22 Operating the controller

The operation of the cookie moulding machine and its controller is described in the following ([section 10](#)).

"Compact" controller



"Performance" controller



10 Operation

10.1 Qualifications of personnel

Operation of the cookie formers must only be carried out by instructed, trained personnel.



10.2 Requirements and safety

Safety functions:

In general, the machines stop immediately if safety-relevant devices are interrupted or disconnected, such as the hopper grid, the belt cartridge or the EMERGENCY STOP button.

Enable "Release":

After an interruption, the yellow illuminated "Enable" or "Release" button must be pressed. Only then can the machine be started again.

Main switch:

To operate the machine, the main switch (1) must be turned to the "ON" position.

10.3 Operating the machine

After you have set up the machine properly (☞ [Section "9 Setting up/equipping the machine", p. 68](#)), you can now operate the machine using the operating terminal (2) or the button bar on the back of the machine.



The machine is operated via the swivelling terminal ([2 on the previous page](#)) or the control panel on the rear of the machine ([3](#)).

The terminal can be conveniently swivelled about its vertical axis and locked in place with a rotating clamping sleeve.

The operating modes are set and the basic settings are made on the operating terminal.

The control panel on the back of the machine can only be used to stop, enable and start the machine.

This means that the machines can be operated from the front and rear.

The red "Stop" button is used to stop the machine.

The green "Start" button is used to start the machine.

After an interruption of the safety-relevant equipment, the yellow flashing enable button ("Release") must be pressed.

Equipment features:

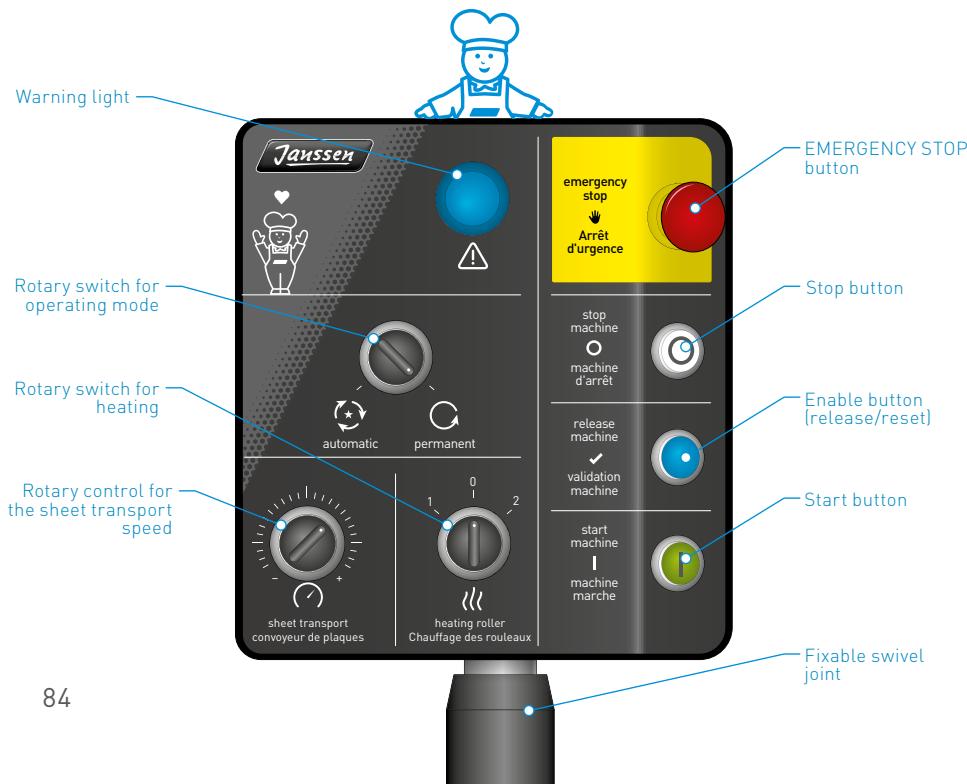
The Janssen cookie formers can be operated manually with a non-programmable "Compact" controller or with a programmable "Performance" controller with a touch display.

The "Compact" controller is considerably more limited in its range of functions than the "Performance" controller, but it is very easy to operate.



10.4 Operation of "Compact" controller; manual, not programmable

The "Compact" controller is operated via an analogue display and offers simple yet convenient handling.



10.4.1 Operating modes

With the "Compact" controller, you can select two operating modes with the rotary switch.

10.4.1.1 Permanent operation (continuous operation)

If the operating mode switch is turned to "Permanent" and the machine is started, the machine works continuously until it is stopped again. This mode is advisable when the machine is set up for production with dough.

10.4.1.2 Automatic mode (sensor operation)

If the operating mode switch is turned to "Automatic" and the machine is started using the start button, the machine will only begin operation when a baking sheet is inserted from behind onto the conveyor drive.

The rear [1] sheet sensor in the machine detects the baking sheet [2] and starts the conveyor drive. When the baking sheet passes the front sheet sensor [3] and arrives at the front transfer edge of the upper conveyor belt, the sheet transport stops and the upper conveyor belt transports the formed cookies to the baking sheet. When the first cookie has arrived at the dough sensor [4], both the conveyor belt and the sheet transport run and load the baking sheet until the sheet is completely covered with cookies and the machine stops.

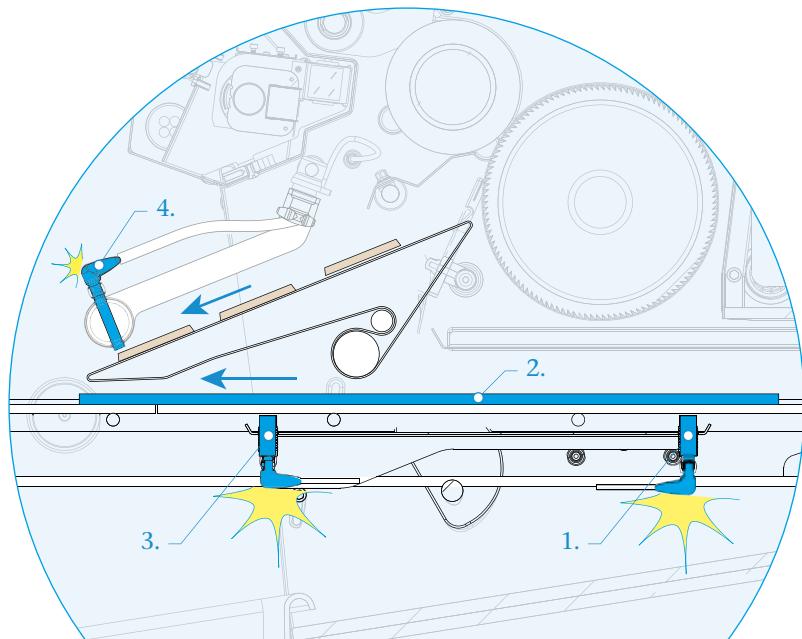
If another sheet is inserted at the back, the machine starts and the cycle begins again.

Your advantage:

This mode allows convenient operation of the machine with only one person.

 *Caution: The dough sensor must be correctly adjusted! It must be positioned about 2 mm above the dough.*

( [see section "9.15 Setting the sheet sensors", p. 77](#)).



10.4.1.3 Sheet transport speed

Use the "Sheet transport" rotary control to set the speed of the sheet transport. The speed should be set so that when the cookies are transferred to the baking sheets, they are discharged at the same speed as the speed of the upper conveyor belt. You can increase or decrease the distance between the rows of cookies on the baking sheet by a small change in the sheet transport speed.

A higher sheet transport speed increases the distance between the rows of cookies.

A lower sheet transport speed reduces the distance between the rows of cookies.

This allows optimal loading of the baking sheets.

10.4.1.4 Roller heating

For sticky doughs or those a higher fat content, you can heat the surface of the pattern rollers with a **roller heating** feature. This facilitates better release of the dough from the pattern roller (except for honey or syrup dough).

For these doughs, the roller should be preheated for about 5 minutes without dough in the machine with the roller heating. Depending on your requirements, you can switch on the heating at two power levels:

- 0 = no heating
- 1 = normal heat output
- 2 = high heat output

If the dough still sticks in the pattern roller, either the recipe must be adapted or the process parameters of the dough production must be changed.

Note:

Our recipe book contains many delicious basic recipes that run well in our cookie formers. These can provide an orientation and a basis for your recipes.

10.4.1.5 Warning light

The warning light lights up when:

- the hopper grid or the hopper is open
- the EMERGENCY STOP is activated
- the conveyor belt cartridge has been removed

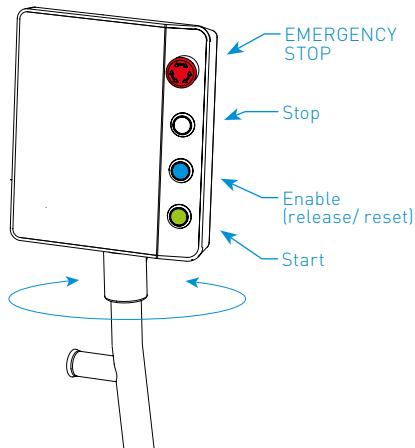


10.4.1.6 Further controls

After an interruption of the safety-relevant equipment, the yellow flashing enable button ("Release") must be pressed.

The red "Stop" button is used to stop the machine.

The green "Start" button is used to start the machine.



10.4.1.7 Restarting after an EMERGENCY STOP

In an emergency, the emergency stop switch is to be actuated and, if necessary, the machine must be disconnected from the power supply. After an activated EMERGENCY STOP, the red switch can be released again by pulling or turning (depending on the version).



10.4.1.8 Restarting after a longer standstill

After a longer standstill, two cases must be considered:

Case one:

The production was interrupted for a longer time and there is still dough in the machine:

As a rule, the dough must be removed, as the dough may have dried, become too hard, too soft or bad. For hygienic and technical reasons, the machine must be cleaned completely.

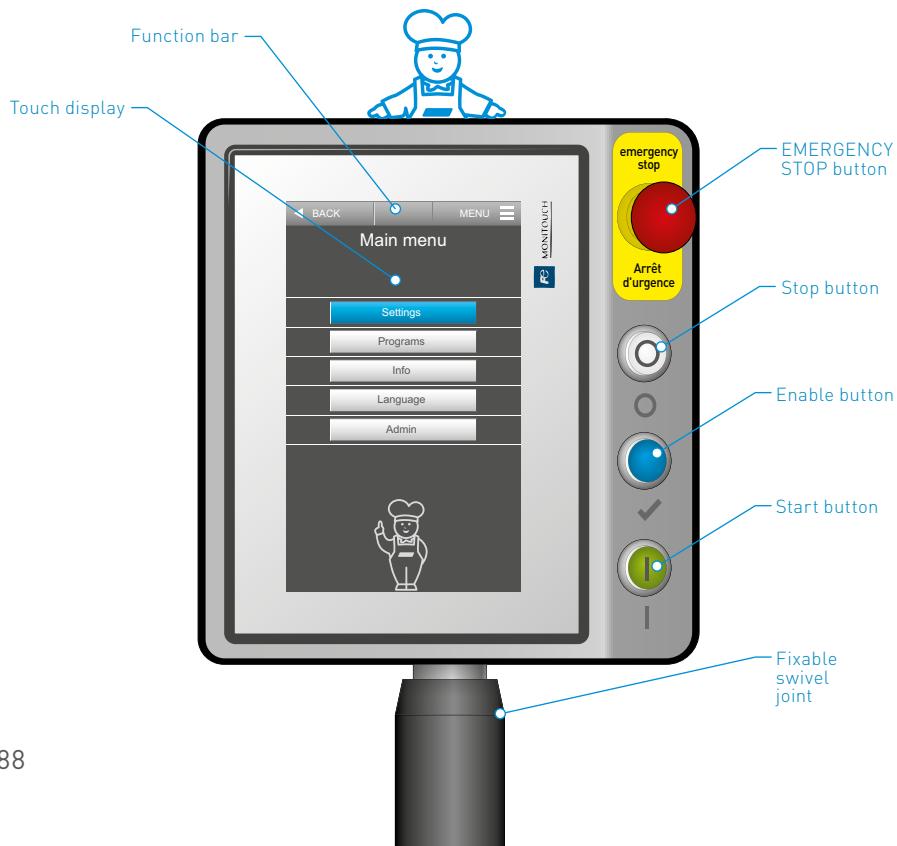
Case two:

The machine was taken out of operation and cleaned completely: A check must be made to ensure that the machine has not been soiled in the meantime due to impurities in the air or contamination. It may be necessary to clean the machine before putting it into operation.

Furthermore, the function of the machine should be checked briefly without dough.



10.5 Operation/ "Performance" controller with touch display/ programmable



The "Performance" controller is operated via a touch display and offers the following functions:

- Language selection
- Parameter setting for sheet loading
- Speed settings for all drives
- Saving programmes
- Different operating modes
- Information
- Operating hours display

The most important functions are shown in the following columns.

The button bar on the right next to the display is identical to that of the "Compact" controller.

The display always shows a "function bar" at the top with the buttons "Back" and "Menu". With "Back" you can go back one step.

10.5.1 Menu structure

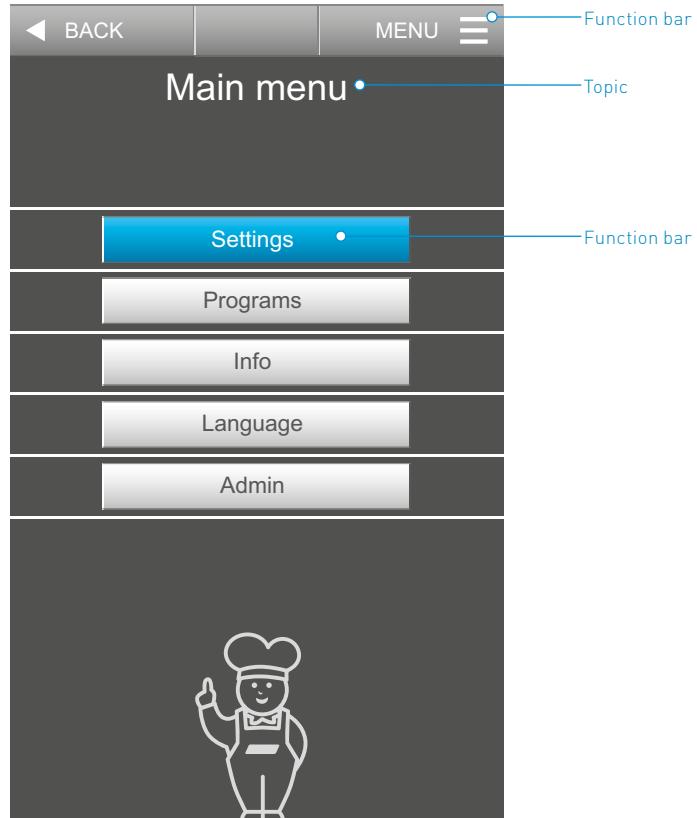
The menu has a simple information structure with only two hierarchy levels.

There is one main menu and only one submenu per item.

10.5.2 "Main Menu"

The "Menu" button in the function bar takes you to the "Main Menu". There you can choose from the following areas, which are explained separately on the following pages:

- Settings
- Programmes
- Info
- Language



10.5.3 "Settings"

10.5.3.1 Operating modes

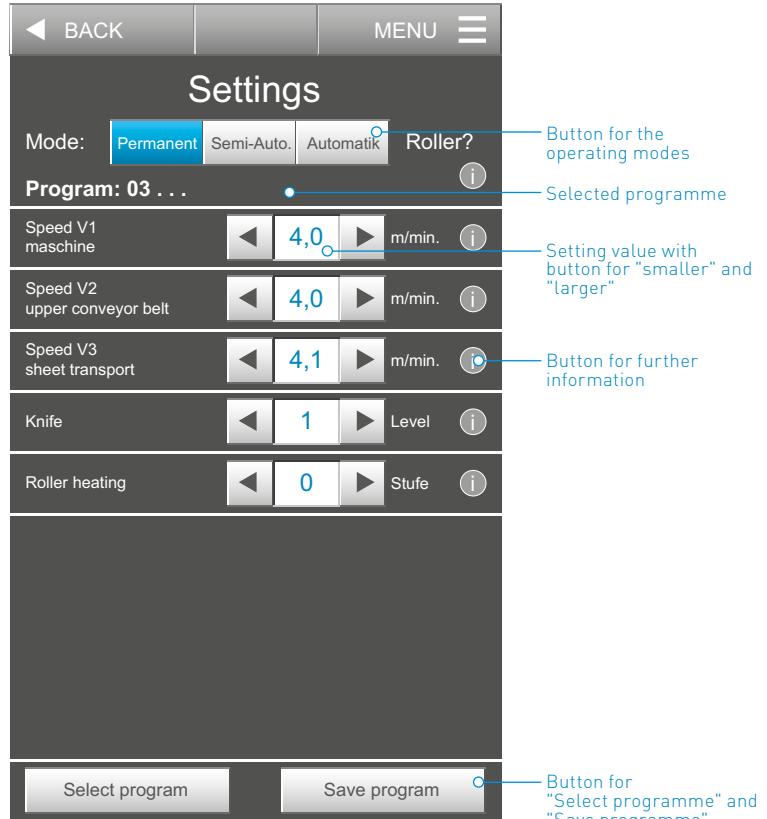
From the "Main Menu" you can access the "Settings".

Here the three operating modes can be selected using the buttons "Permanent", "Semi-automatic" and "Automatic":

In "Permanent" mode, the machine can be operated continuously and only stops when safety switches are activated. The figure on the right shows the user interface in "Permanent" mode.

The following settings can be made in this mode:

- Speed V1 of the entire machine
- Speed V2 of the upper conveyor belt
- Speed V3 of the sheet transport
- Knife speed
- Roller heating



In "Semi-automatic" mode, the machine operates when there is a sheet in the machine. The dough sensor detects the first cookie and the machine continuously loads the baking sheet until it is completely loaded and then stops. This mode is shown on the right.

The following settings can be made in this mode:

- Speed V1 of the entire machine
- Speed V2 of the upper conveyor belt
- Speed V3 of the sheet transport
- Knife speed
- Roller heating
- Cookie position relative to the front edge of the sheet



◀ BACK | MENU Ⓜ

Settings

Mode: Permanent Semi-Auto. Automatik Roller? ⓘ

Programm: 03 . . . ⓘ

Speed V1 maschine	◀ 4,0 ▶	m/min. ⓘ
Speed V2 upper conveyor belt	◀ 4,0 ▶	m/min. ⓘ
Speed V3 sheet transport	◀ 4,1 ▶	m/min. ⓘ
Knife	◀ 1 ▶	Level ⓘ
Roller heating	◀ 0 ▶	Level ⓘ
Biscuit position to the front sheet edge	◀ 15 ▶ -	ⓘ

Select program Save program

In "Automatic" mode, the machine operates when there is a sheet in the machine. Compared to the "Semi-Automatic" mode, this mode allows more settings for sheet loading to be made, for example the number of rows of cookies.

The following settings can be made in this mode:

- Speed V1 of the entire machine
- Speed V2 of the upper conveyor belt
- Speed V3 of the sheet transport
- Knife speed
- Roller heating
- Cookie position relative to the front edge of the sheet
- Factor for row spacing
- Number of rows of cookies

BACK | MENU

Settings

Mode: Permanent Semi-Auto. **Automatik** Roller?

Program: 03 . . .

Speed V1 maschine	◀ 4,0 ▶	m/min.	ⓘ
Speed V2 upper conveyor belt	◀ 4,0 ▶	m/min.	ⓘ
Speed V3 sheet transport	◀ 4,1 ▶	m/min.	ⓘ
Knife	◀ 1 ▶	Level	ⓘ
Roller heating	◀ 0 ▶	Level	ⓘ
Biscuit length (measured)	◀ 56 ▶	mm	ⓘ
Biscuit position to the front sheet edge	◀ 5 ▶	-	ⓘ
Factor for the row spaces	◀ 14 ▶	-	ⓘ
Number of rows	◀ 12 ▶	-	ⓘ

Select program | Save program

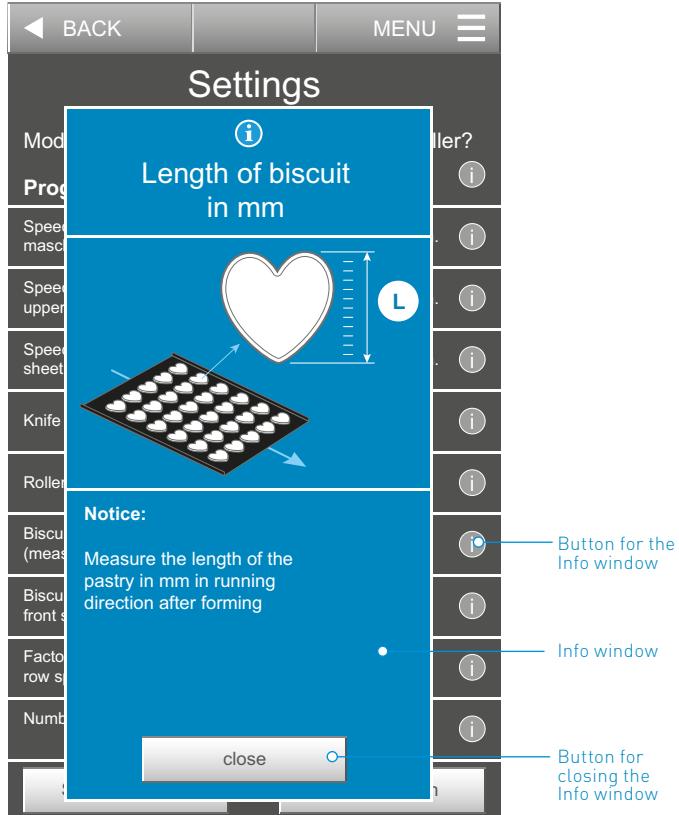


10.5.3.2 "Info" pop-up window

When the buttons for further information (ⓘ) are pressed, explanatory notes with an illustrative graphic are displayed in an extra window.

The functions of the machine are particularly easy to understand with the extra explanatory windows and allow smooth operation even if the operating instructions are not directly available at the moment.

The info windows can be hidden again with the "close" button.



10.5.3.3 Speed V1 of the entire machine

With the setting "Speed V1, machine" you can set the overall speed of the machine. As with all other settings, the values can be changed using the "arrow" buttons while the system is in operation.

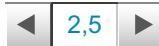
The speeds of the upper conveyor belt (V2) and the sheet transport (V3) are adapted proportionally.

We recommend:

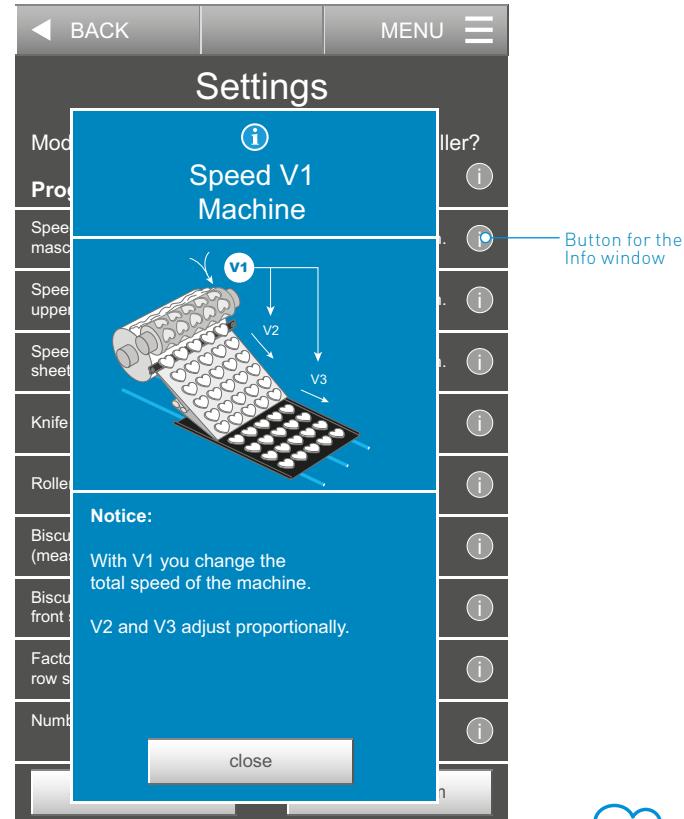
- A speed of 4 m/min. for the forming of small cookies.

Speed V1
Machine  m/min.

- A speed of 2-3 m/min. for production with cake trays or of endless doughs.

Speed V1
Machine  m/min.

The maximum speed is 6 m/min. In this case, it should be noted that the cookies may no longer be optimally shaped. This depends largely on the dough.

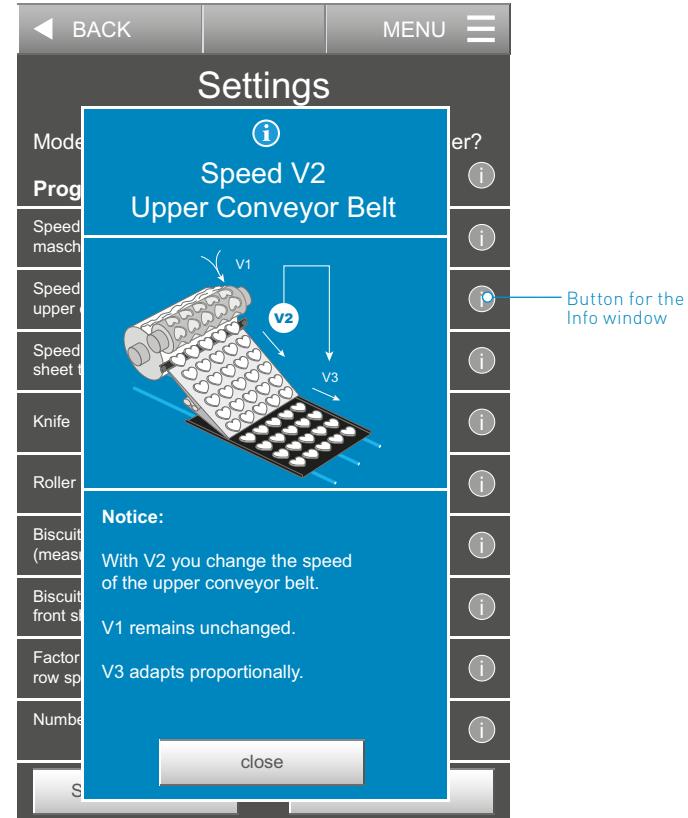


10.5.3.4 Speed V2 Upper conveyor belt

The setting "Speed V2, upper conveyor belt" allows the speed of the upper conveyor belt to be changed. The speed of the machine or rollers (V1) remains unchanged and the sheet transport (V3) is adapted proportionally.

Normally the speeds V2 and V1 should be the same.

The speed of the upper conveyor belt (V2) can be used to stretch or compress large baked goods a little, such as pastry cases. If the round pastry case is compressed by the knife, the pastry case which is now oval can be stretched again by increasing the speed of the belt (V2) slightly so that the pastry case is placed on the baking sheet with a geometrically round shape.



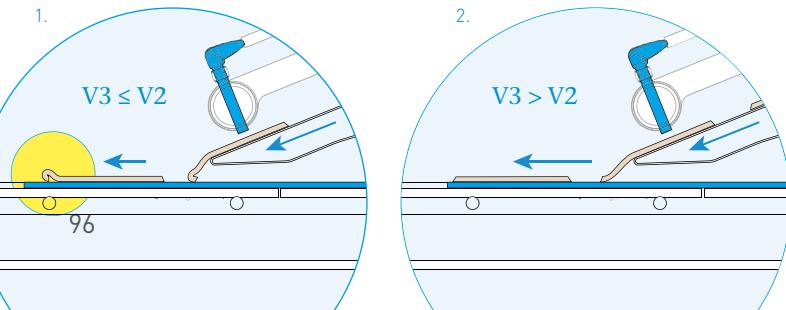
10.5.3.5 Speed V3 Sheet transport

The setting "Speed V3, sheet transport" allows you to change the speed of the sheet transport to optimize the placement of the cookies on the baking sheet. The speed of the machine or the rollers (V1) and the upper conveyor belt (V2) remain unchanged.

Normally the speeds V3 and V2 should be the same.

With V3 you can make the spacing between the rows of cookies slightly larger or smaller.

For very thin cookies, such as speculaas biscuits, it may be necessary for the sheet to run a little faster (2) so that the cookies do not fold over at the edge when transferred from the upper conveyor belt to the baking sheet (1).



Settings

Speed V3 Sheet Transport

Notice:

With V3 you change the speed of the sheet transport.

V1 and V2 remains unchanged.

close

Button for the Info window



10.5.3.6 Knife frequency

The "Knife frequency" setting allows you to change the speed of the knife's back and forth movement.

Level 1 corresponds to a frequency of about 23 Hz,
Level 2 corresponds to a frequency of about 33 Hz.*

We recommend **level 1**!

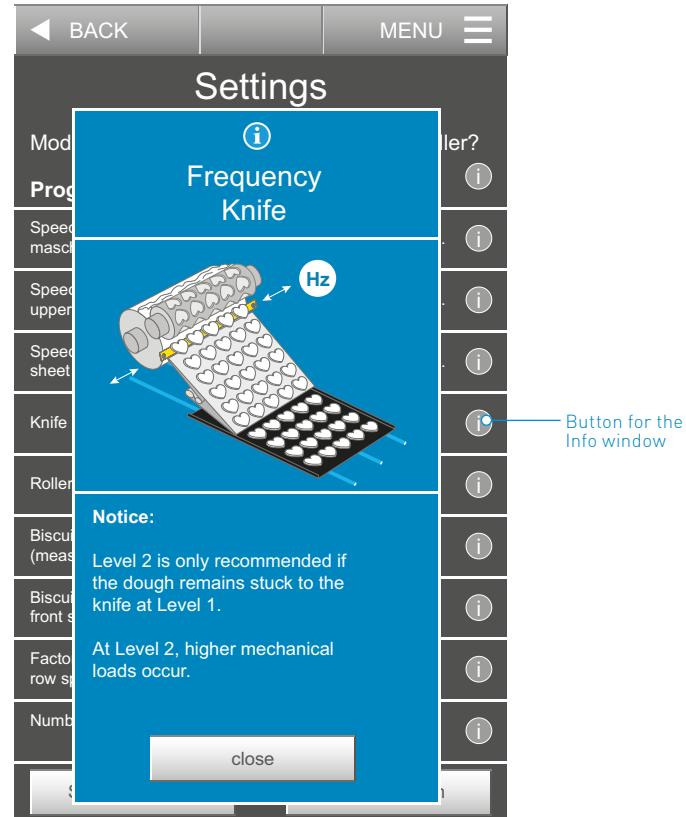
Level 2 can be chosen in exceptional cases, when the cookies are very soft and cannot no longer be formed because they stick to the knife and are compressed.

With level 2, there is the possibility that these soft doughs can still be cut and shaped well.

If the forming does not work even with level 2, the recipe must be changed or the dough temperature must be kept cooler.



**) Please note that at level 2 the mechanical loads are significantly higher and the mechanism wears out faster!*



10.5.3.7 Roller heating

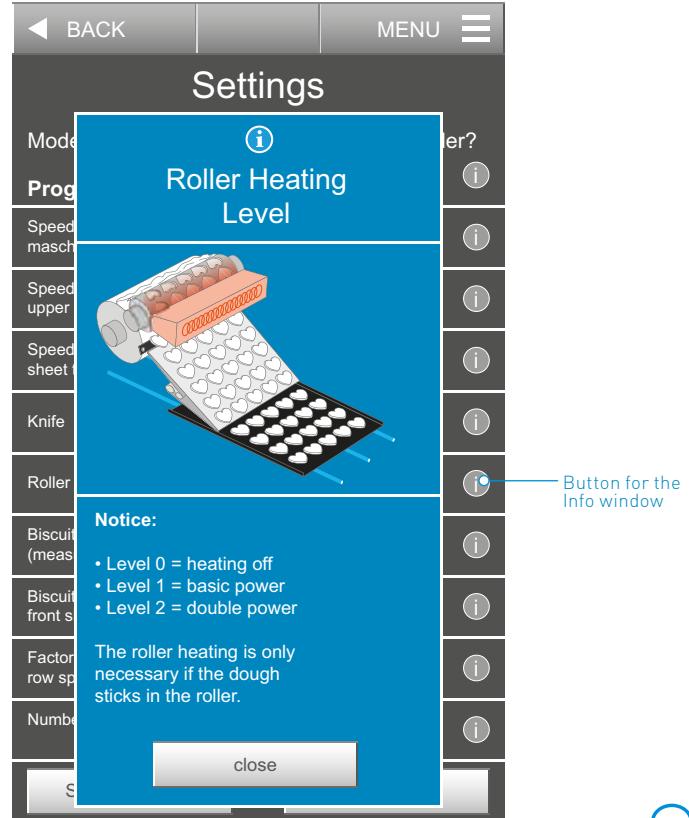
The "Roller heating" setting allows you to heat the surface of the pattern roller at two levels.

The roller heating is only necessary if the dough sticks on the pattern roller.

Depending on your requirements, you can switch on the heating at two power levels:

- 0 = no heating
- 1 = normal heat output
- 2 = high heat output

If the dough still sticks in the pattern roller, either the recipe must be adapted or the process parameters of the dough production must be changed.



10.5.3.8 Biscuit length in mm (measured)

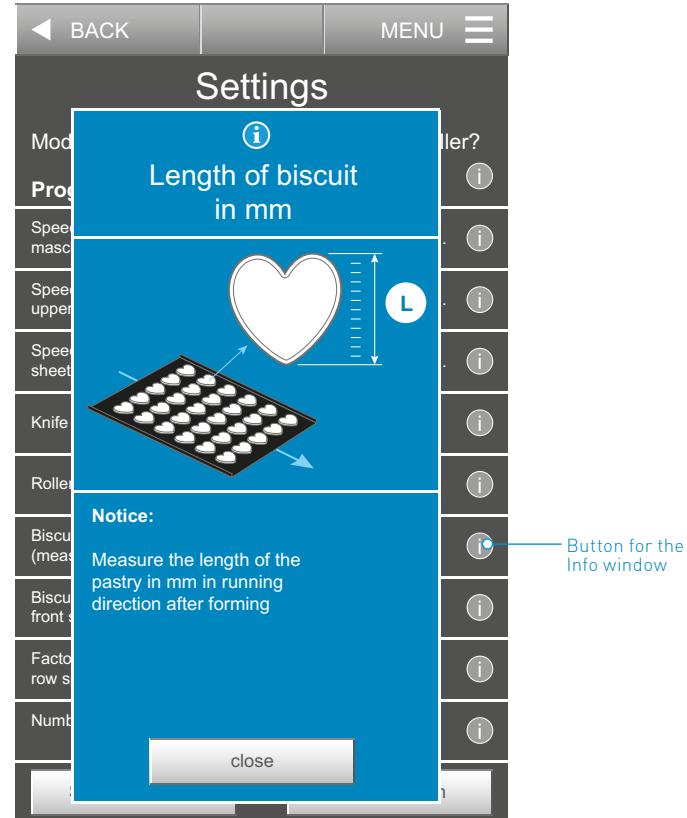
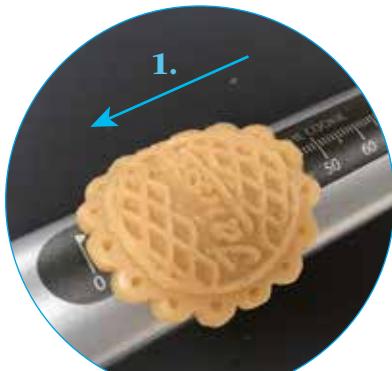
The setting "Biscuit length in mm" allows you to enter the measured length of the cookie after forming. Measure the cookies in the discharge direction (1) in mm.

This value is important for the controller so that the rows of cookies are placed on the baking sheet with the correct spacing.

On the right-hand rail of the sheet transport there is a measuring scale on which you can place the formed cookie.

Enter this value with an accuracy of about +/- 1 mm.

Biscuit length in mm
(measured)  mm



10.5.3.9 Biscuit position relative to the front edge of the sheet

The setting "Cookie position relative to front edge of baking sheet" allows you to set the relative distance between the front edge of the baking sheet and the first row of cookies.

The value can vary depending on the height of the baking sheet or the condition of the sheets. If the sheets are bent, for example, the sheet sensor might not detect the sheet correctly.

Usually it is around 10-20.

Biscuit position relative to front edge of sheet

10



If the baking sheet is very high, such as a cake tray, the value can even be negative.

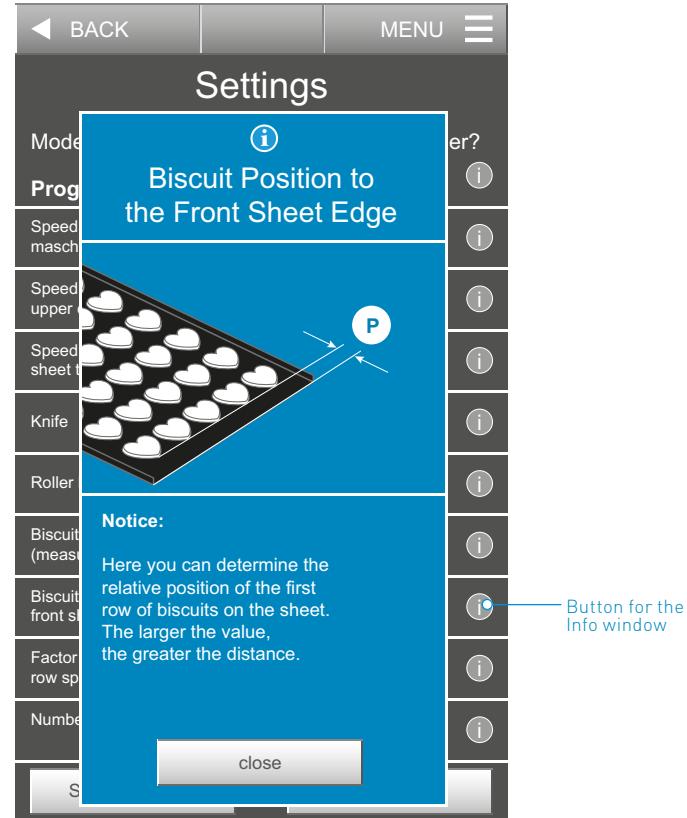
Biscuit position relative to front edge of sheet

-5



Note:

The higher the value, the greater the spacing.



10.5.3.10 Factor for the spacing between rows of cookies

The setting "Factor for the spacing between rows of cookies" allows you to specify the spacing between the individual rows of cookies. This allows you to load the baking sheet optimally.

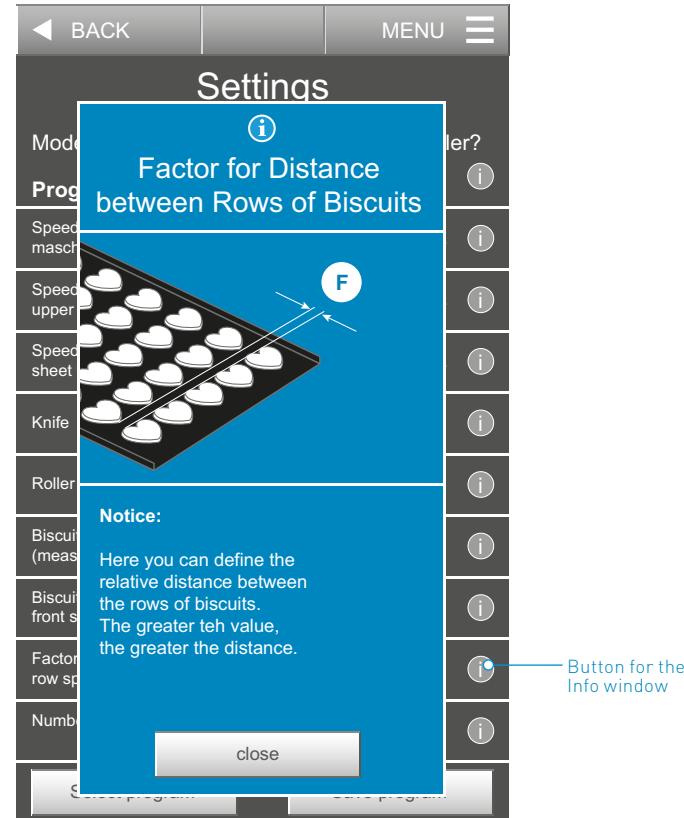
If the spacing is too large, you can reduce the distance, for example.

Pattern rollers for large cookies, for example, can have larger spacing for geometric reasons.

The value is relative and is usually around 5-10.

Factor for the spacing
between rows of biscuits

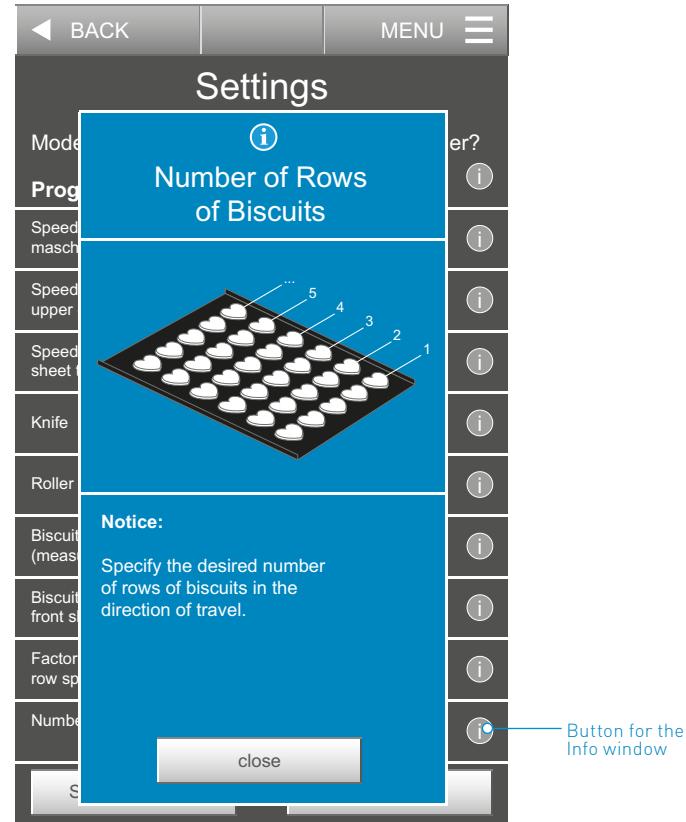
8



10.5.3.11 Number of rows of cookies

The setting "Number of rows of cookies" allows you to specify the possible rows of cookies on the baking sheet in the discharge direction.

Be sure to enter realistic values. Understandably, the machine can only deposit as many rows as will fit on the sheet.



10.5.3.12 Rollers?

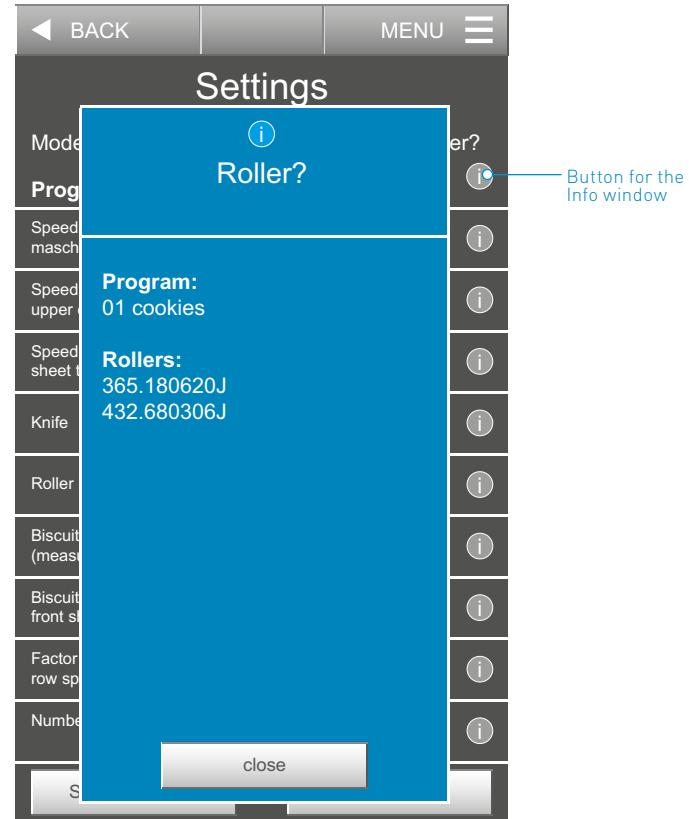
The information button "Rollers?" allows you to see which pattern rollers are intended for the respective programme or recipe.

All pattern rollers of the Janssen cookie formers have an individual roller number engraved on them.

You can enter these roller numbers under the respective dough recipes so that you can specify precisely which dough is produced with which pattern roller.

You can do this under "Select programme" or "Save programme".

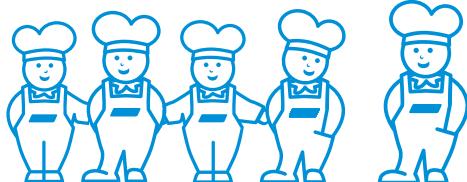
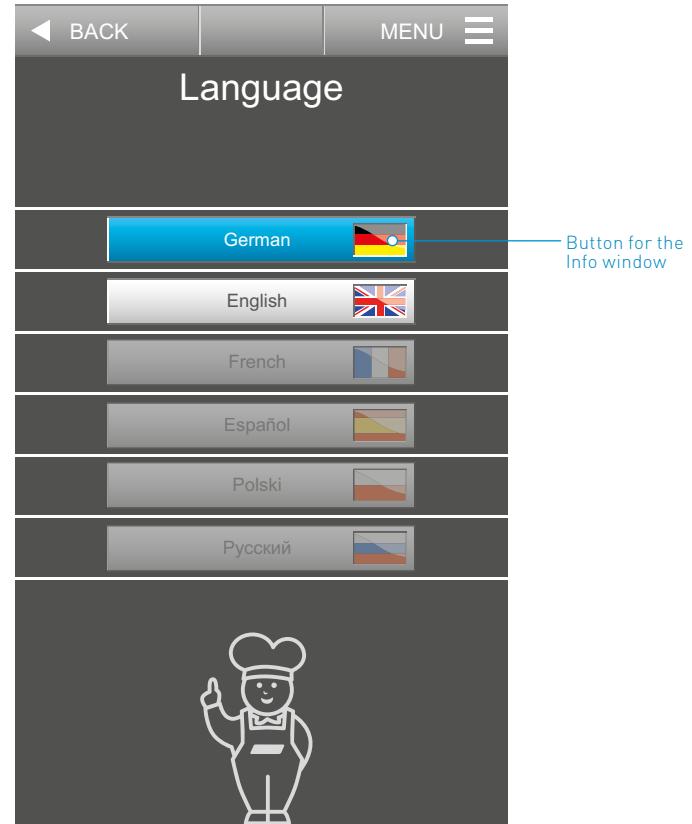
( Section "10.5.8 Create new programme using "Select programme" and overwrite").



10.5.4 "Language"

From the "Main Menu" [ see section "10.5.2 Main menu"] you can access the "Language selection".

Different languages can be selected here. The entire user interface is displayed in the selected language.



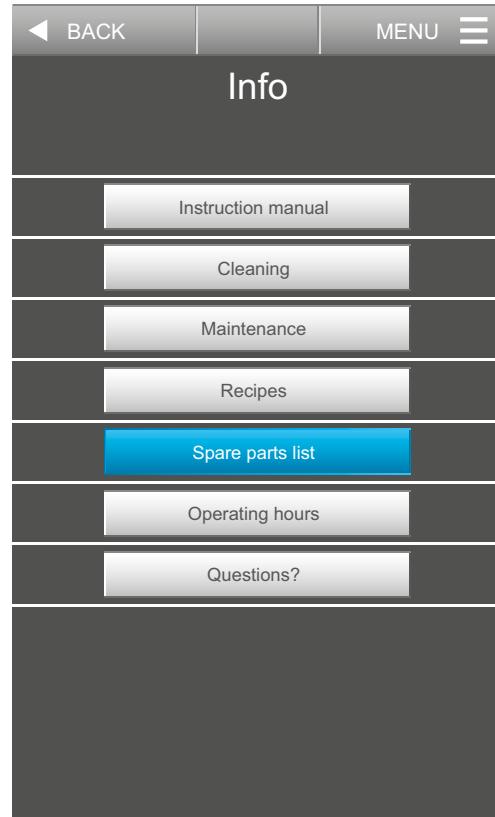
10.5.5. "Info"

The "Info" item can be accessed from the "Main menu" (see section "10.5.2 Main menu", p. 89).

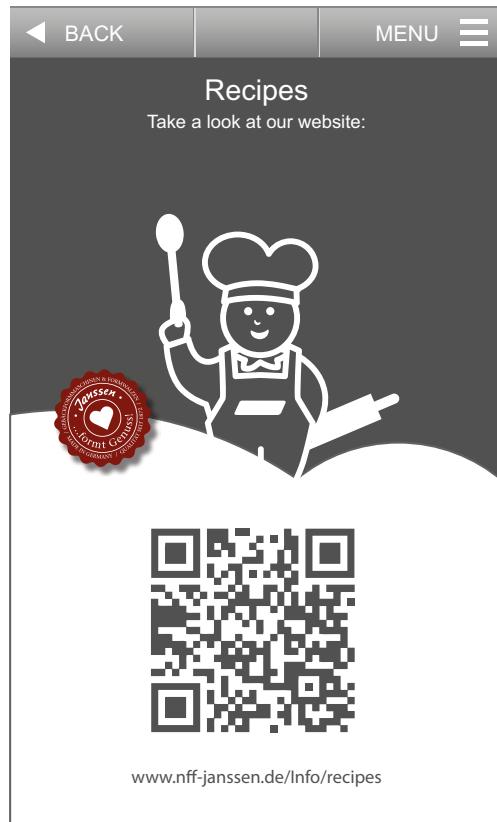
Here, useful information is provided on a wide range of categories (as shown on the right).

The information is available on our website and can be accessed via an app on your smartphone by scanning the QR code or entering the URL provided. The information is available for download in PDF format.

Note: This information is not stored in the memory of the controller located in the machine, but on our website, which is maintained and kept up to date on a continuous basis.



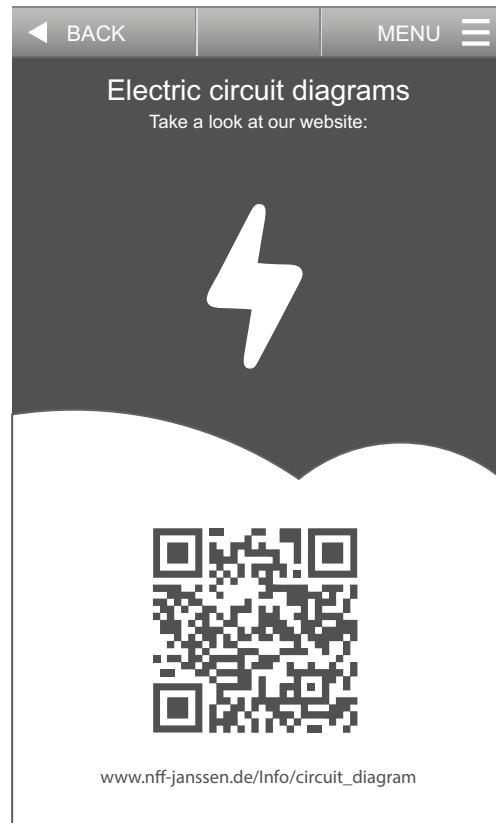
The QR code and the URL link to our website.



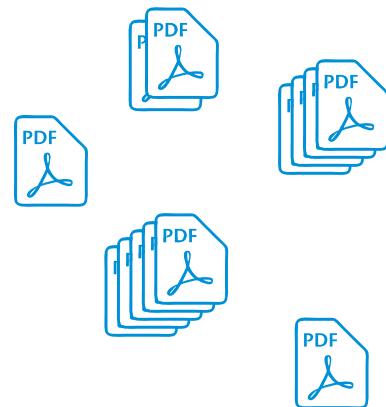
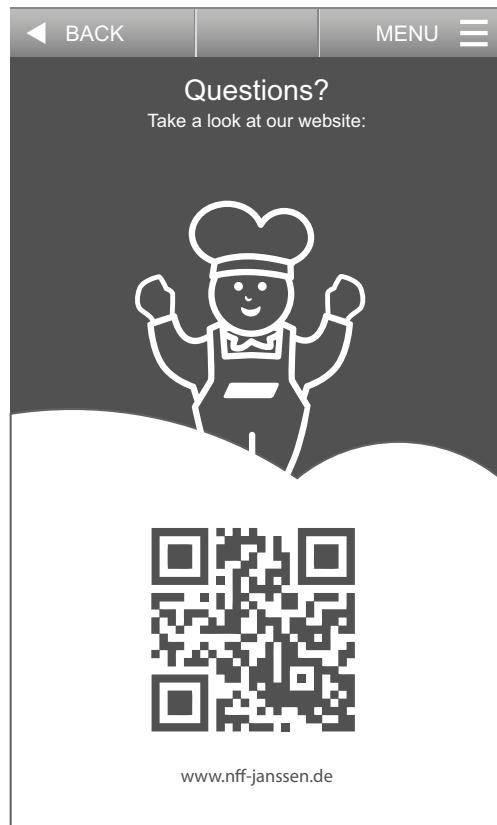
The QR code and the URL link to our website.



The QR code and the URL link to our website.



The QR code and the URL link to our website.



10.5.6 Selecting the programme

You can access "Select programme" from the "Main menu".

Here you can select existing programmes and create new programmes. You can create a total of up to 50 programmes.

Step 1:

The first step [1] is to select a programme, for example "02 Kipferl".

Step 2:

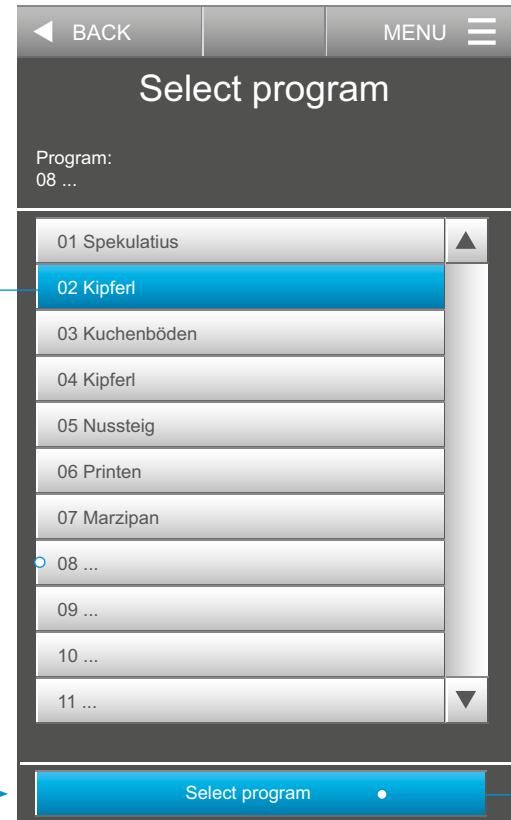
The selected button flashes and the programme must be confirmed with the "Select programme" button [2] at the bottom.

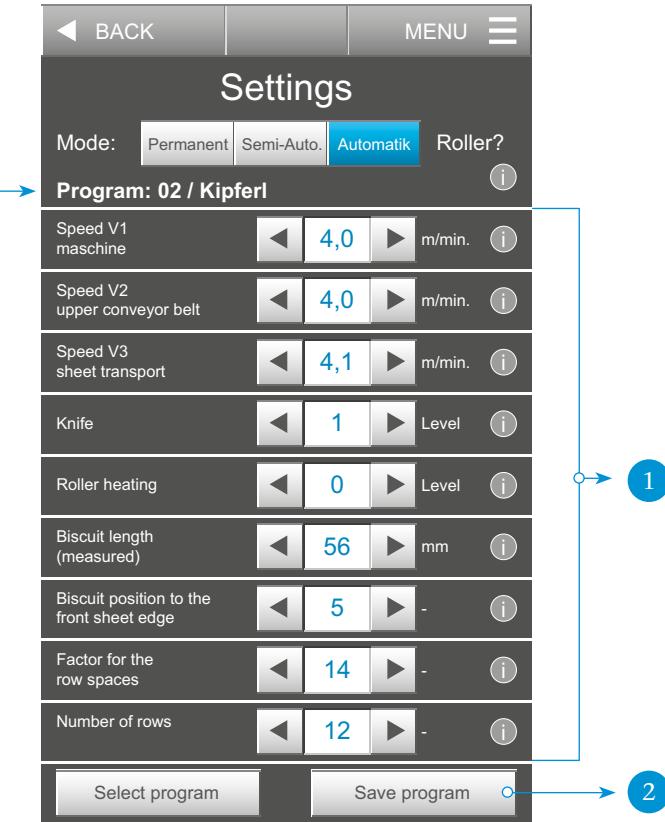
Step 3:

You are then taken back to the "Settings" level [3] for the selected programme with the settings stored there.

Step 4:

Now you can start the machine with the desired operating mode.





10.5.7 Modifying a programme

You can modify a selected programme (shown here on the left is the programme "02/ Crescents") in the settings and save it again.

Step 1:

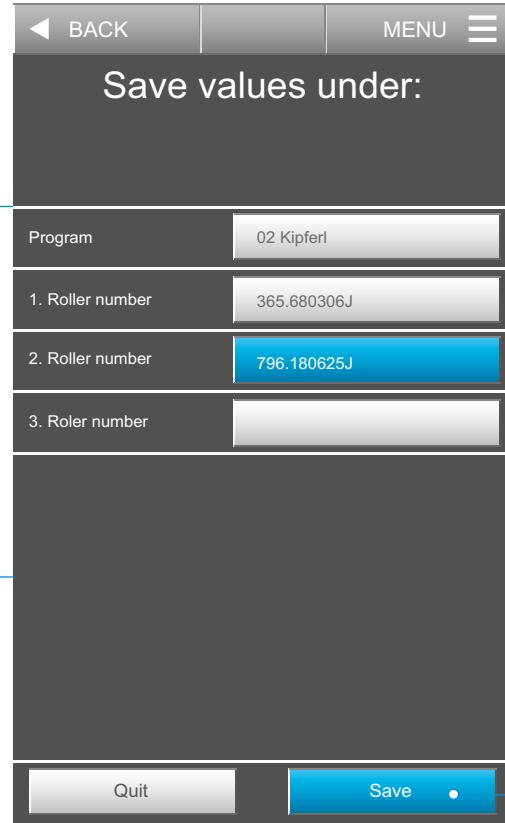
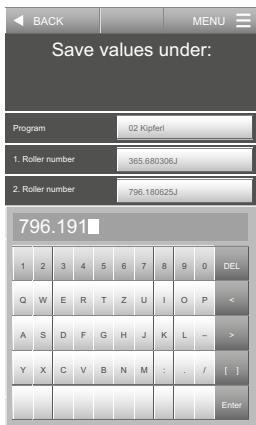
You can adjust the **individual parameters** separately until the forming results meet your expectations.

Step 2:

Selecting "**Save programme**" takes you to an input window for the programme information (step 3, see next page).

Step 3:

You can now edit the programme name or enter the roller numbers or make modifications that can be used for this programme. When you select a field to do so, a keyboard appears with which you can make the entries.



Step 4:

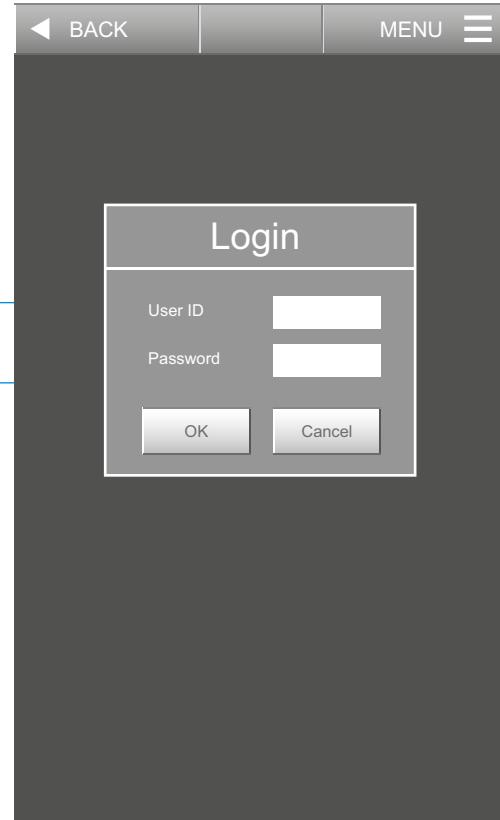
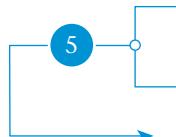
You can now "Save" the values or "Quit" the process.

Step 5:

If you want to save the values, please enter your user ID and password and confirm them with "OK".

You can obtain the user ID and the password from the "write-authorized person" in your team or the "write-authorized person" can enable your values by entering the access data.

With the enable, your modifications are now updated in the programme.



10.5.8 Create new programme using "Select programme" and overwrite

You can access "[Select programme](#)" from the "Main menu".

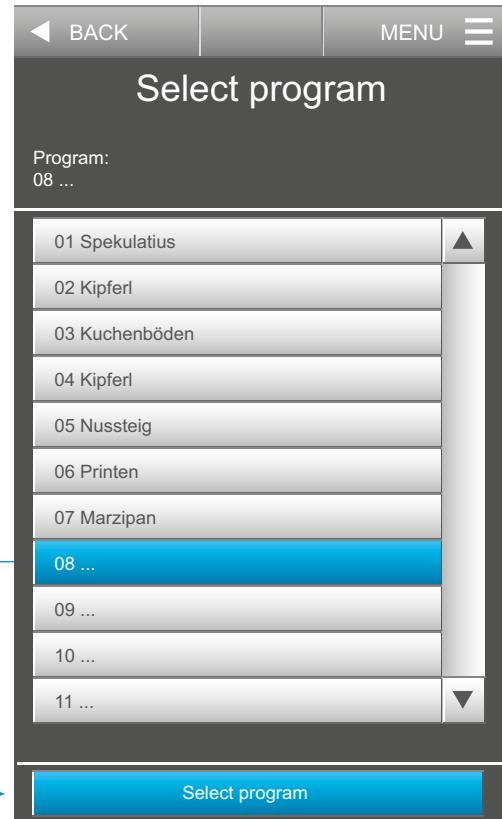
Fifty freely configurable programmes are stored under "[Select program](#)". These can be selected or modified. The first 2-5 programmes are created at the factory. All others are given consecutive numbers and can be configured and named individually.

Step 1:

To create a "[New programme](#)", select a programme number that is still free, e.g. No. 08... as shown on the right. The selected programme blinks.

Step 2:

Activate the selected programme by pressing the "[Select programme](#)" button.



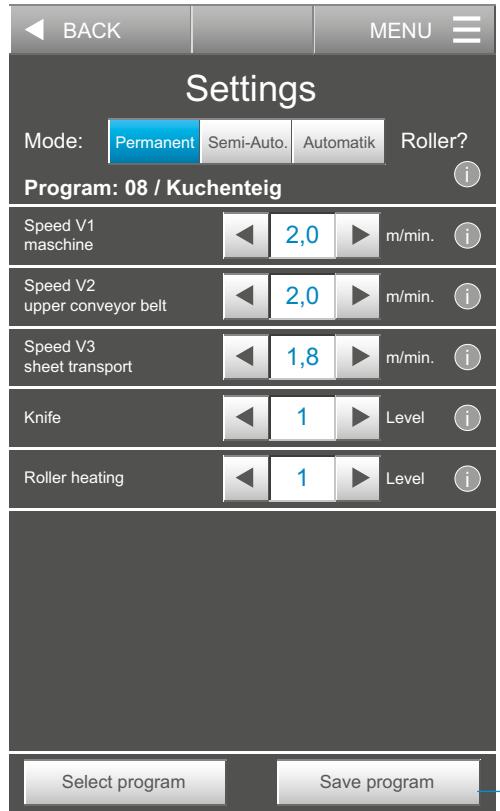
Step 3:

You can now set the parameters in the settings and save them as desired.

The example on the right shows the values for the forming of an endless belt for loading an endless belt. The "Permanent" mode is suitable for this application.

Step 4:

You can now save the values with "Save programme".



Step 5:

If you want to save the values, please enter your user ID and password and confirm them with "OK".

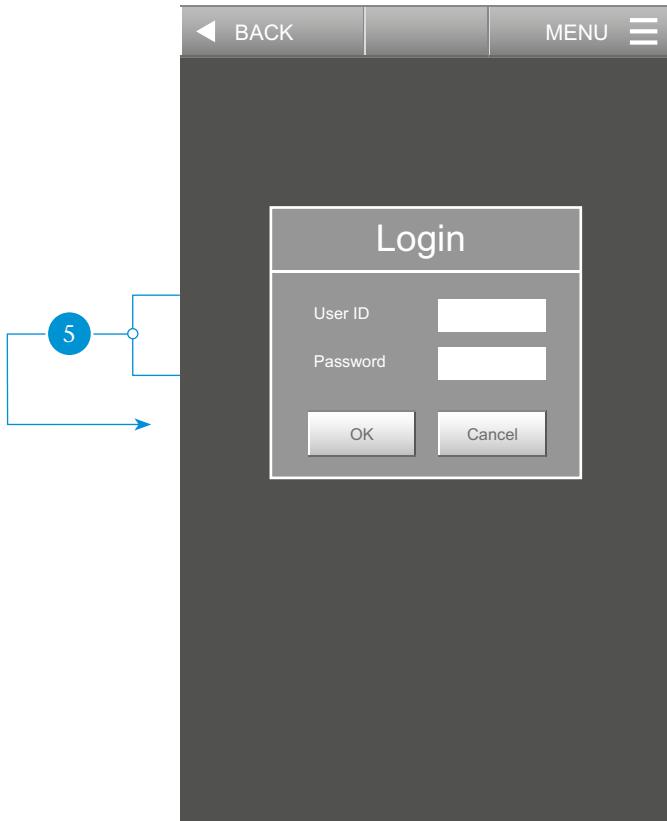
You can obtain the user ID and the password from the "write-authorized person" in your team or the "write-authorized person" can enable your values by entering the access data.

With the enable, your modifications are now updated in the programme.

Note:

You can overwrite and rename all programmes at any time.

We recommend that you leave the consecutive number and that you assign the other names in a meaningful or self-explanatory way.



10.5.9 Restarting after an emergency stop

A red warning window appears in the display, indicating which protective equipment is to be operated.



In addition to the EMERGENCY STOP, it can also be the removed conveyor belt cartridge, the open hopper grid or the yellow illuminated enable button.

After activation of an EMERGENCY STOP, the red switch can be unlocked again by turning or pulling it. The belt cartridge must be installed. The hopper grid must be closed. The yellow enable button must be pressed. Only then is the machine once again ready for operation.

10.5.10 Restarting after a longer standstill

After a longer standstill, two cases must be considered:

Case one:

The production was interrupted for a longer time and there is still dough in the machine:

As a rule, the dough must be removed, as the dough may have dried, become too hard, too soft or bad.

For hygienic and technical reasons, the machine must be cleaned completely.

Case two:

The machine was taken out of operation and cleaned completely: A check must be made to ensure that the machine has not been soiled in the meantime due to impurities in the air or contamination. It may be necessary to clean the machine before putting it into operation.

Furthermore, the function of the machine should be checked briefly without dough.



11 Maintenance

11.1 Safety

Inspections and maintenance must only be carried out by technically trained specialist personnel.



Improper manipulation of the machine which disables the protective equipment of the cookie moulding machine or which changes the principle of operation or performance, is not permitted.



For any maintenance work on the machine, the machine must be disconnected from the mains supply by pulling out the mains plug.

The following inspections and maintenance can be carried out by you if you observe these operating instructions:

- Installation and removal of the transport belt cartridge and belt change
- Replacement of the sheet transport drive belts
- Installation and removal of the sheet guide
- Installation and removal of the knife
- Basic setting for the spacing of the knife to the kneading roller
- Lubrication of the gear unit
- Installation and removal of the heater
- Installation and removal of electrical parts or the controller

11.1.1 Qualifications of personnel

Maintenance work, such as servicing, inspection, repair, improvement and troubleshooting must be carried out by a person with appropriate training, education and experience which enables them to identify risks and prevent hazards that may be caused by electricity or mechanical systems.

11.1.2 Intervals/ maintenance schedule

The following component service lives and maintenance intervals are based on an operating temperature range of 10-30 °C:

Assembly/ Component	Maintenance interval
Replace the upper conveyor belt	after visible damage has occurred
Replace the sheet transport drive belts	after visible damage has occurred
Replace the knife	after visible damage has occurred
Lubricate the gear unit	after 500 operating hours





Assembly/ Component	Maintenance interval
Hopper circuit breaker	≤ 20 years
Circuit breaker for cartridge monitoring	≤ 20 years
Controller PLC Controller logo	≤ 20 years
Heating relays	≤ 20 years
Periodic electrical testing	every 6 months

11.1.3 Checking and testing the safety systems

Check the electrical equipment and the safety sequence at regular intervals, with regular use every 6 months, but at least once a year. The maintenance interval also depends on the operating and ambient conditions.

Safety features:

- The two emergency stop buttons
- The hopper grid circuit breaker
- The inductive safety sensor for the belt cartridge

Procedure:

To do so, trigger each element of the safety sequence twice. The triggering of the safety sequence must lead to an immediate stop of all moving parts in the machine. It must not be possible to switch these components on again until the blue acknowledgement button (release/ reset) has been pressed. If this is not the case, the machine must be taken out of operation and checked and repaired by electrically qualified personnel. The hopper grid switch and the inductive safety sensor must be replaced after 20 years.

11.1.4 Inspecting the machine

Check the machine regularly before each use for visible damage, such as a damaged power cord, dull knife or dirt!

11.1.5 Required aids

We recommend using cut-resistant gloves for cleaning and assembly when installing and removing the knife.

11.1.6 Required tools

Normal machine operation:
No special tools are required for the normal operation of the machine.

Maintenance and servicing:
Depending on the situation, you will need various tools for maintenance work:

( [Section "8.5.3. Special tools for assembly and maintenance", p. 66](#))

11.2 Conveyor belt cartridge

The conveyor belt cartridge can be removed and installed very easily. Removal and installation is required for the following situations:

- The upper conveyor belt cartridge must be cleaned before each time the machine is taken out of or put into operation or after a working shift.
- If the conveyor belt cannot be adjusted in terms of straight running, it is very likely that the belt drive roller of the cartridge is very dirty and should be cleaned.
- If the conveyor belt cartridge is defective, it must be removed, repaired or replaced.

Furthermore, the conveyor belt must be checked for perfect condition before each start-up. If the conveyor belt has cracks or a damaged surface, the conveyor belt must be replaced immediately for hygienic reasons.



Only use transport belts from Niederrheinische Formenfabrik Janssen GmbH that are suitable for this cartridge:

- *Janssen plastic belts*
- *Janssen cotton belts*

We accept no liability for the use of other makes and any resulting damage to the gear unit!



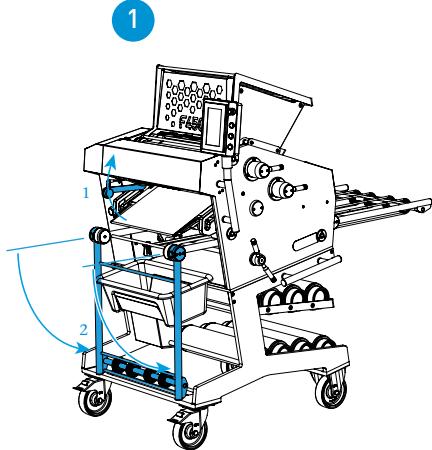
11.2.1. Removing and installing the conveyor belt cartridge

In only seconds, the upper conveyor belt cartridge can be removed or installed in two steps for cleaning or replacement of the conveyor belt.

Removal:

Step 1:

Swivel the dough sensor (1) upwards and the sheet transport (2) downwards.

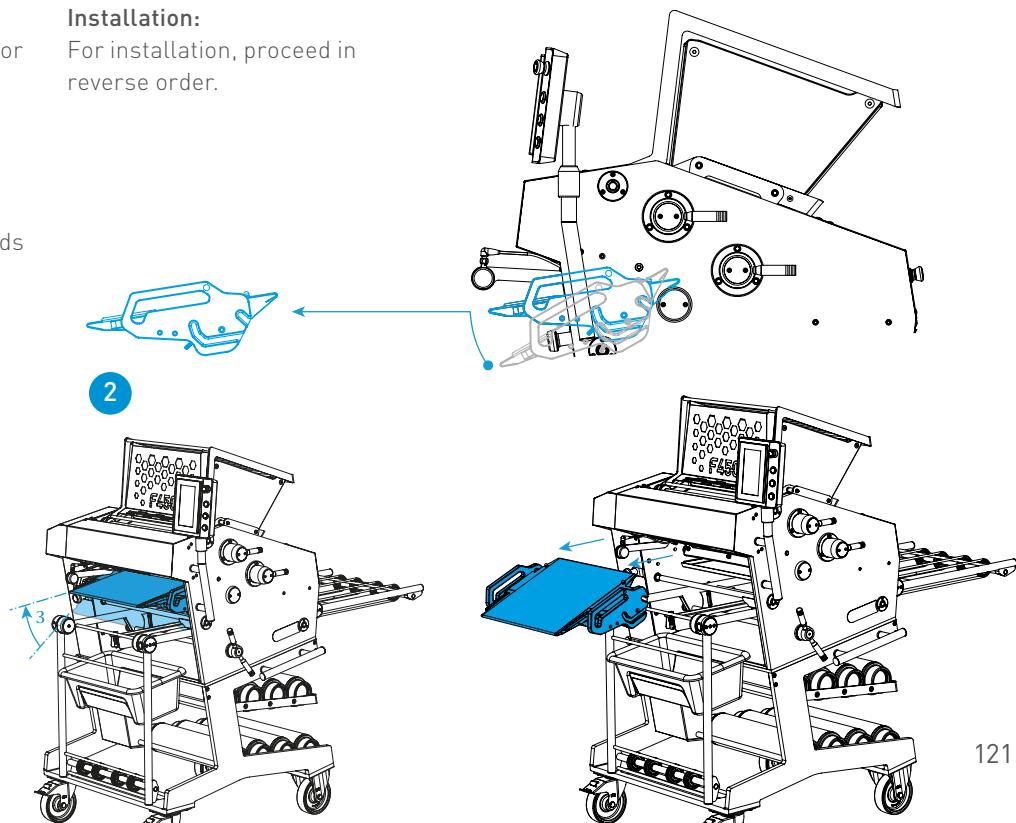


Step 2:

Pull the conveyor belt cartridge (3) upwards by the handles and then out of the machine.

Installation:

For installation, proceed in reverse order.



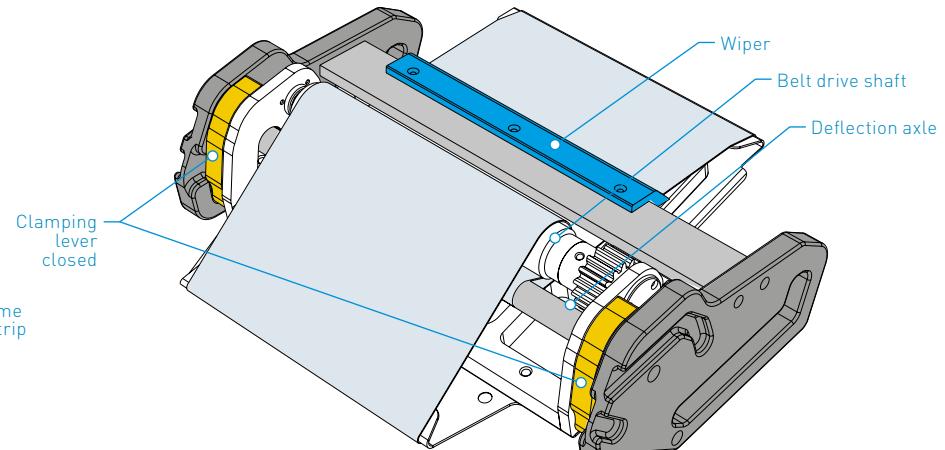
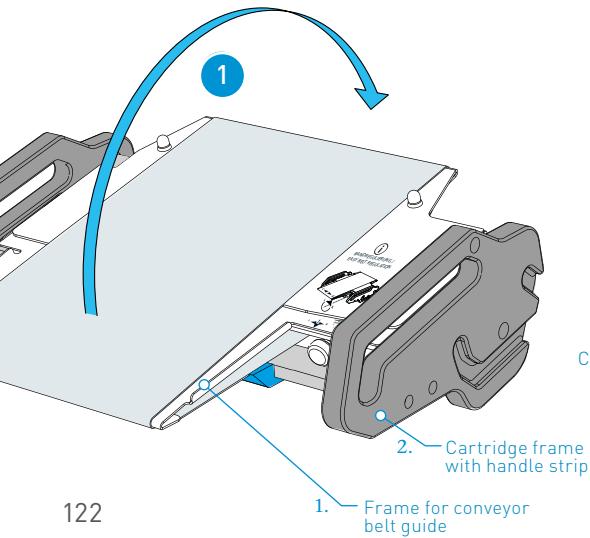
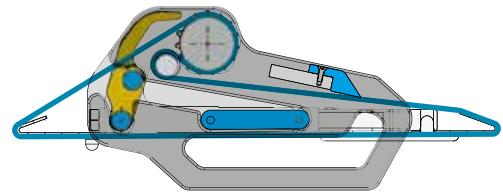
11.2.2 Changing the conveyor belts of the conveyor belt cartridge

Once you have removed the conveyor belt cartridge, you can remove or replace the conveyor belt. To do so, proceed as follows:

Removal:

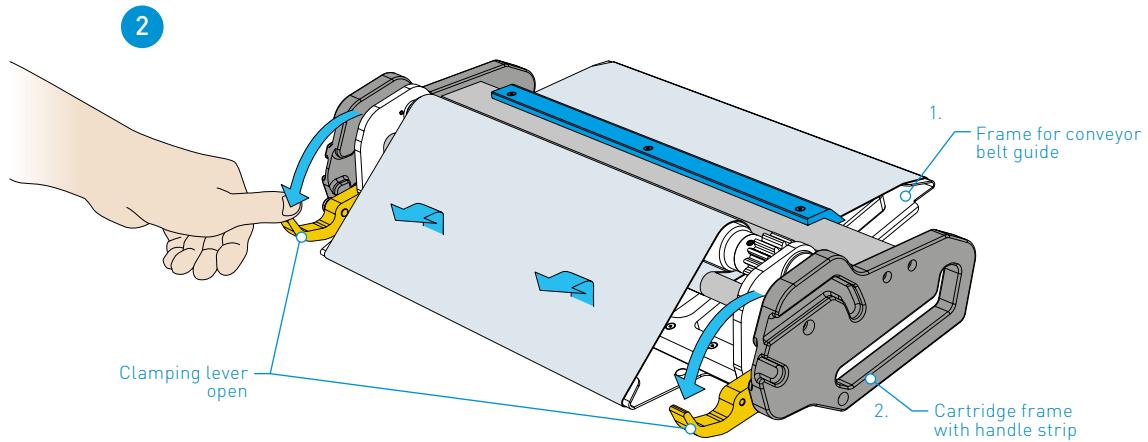
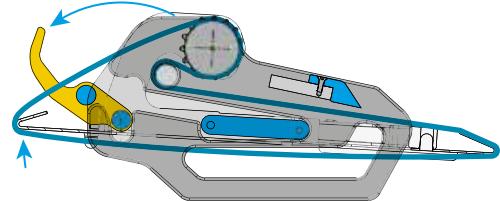
Step 1:

Turn the removed conveyor belt cartridge 180°, with the handles facing down – preferably on a table – and position the cartridge with the gold-coloured clamping levers facing your body.



Step 2:

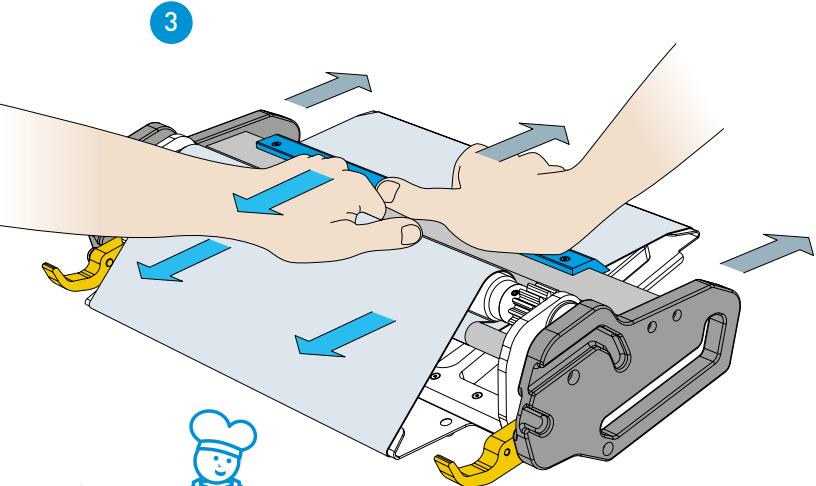
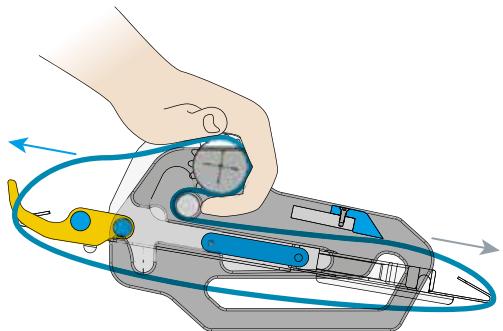
Swing the clamping levers towards your body. Doing so raises the "frame for the conveyor belt guide" (1) in the guide groove of the "cartridge frame" (2). This lever movement causes the belt to relax a little.



Step 3:

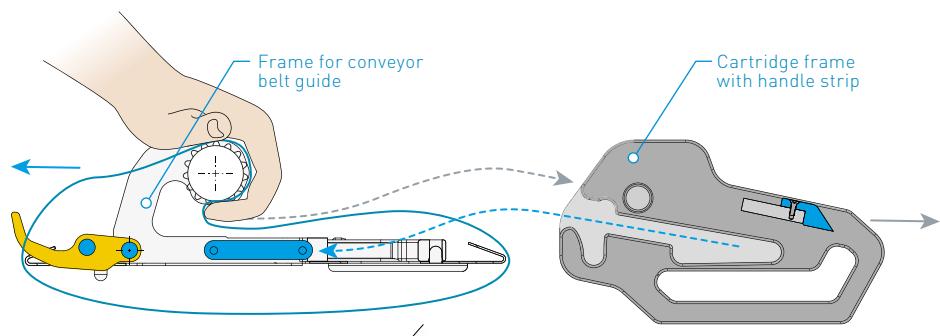
Pull apart the frame for the conveyor belt guide and the cartridge frame.

With your left hand, grasp and pull the belt drive shaft, and with your right hand, press the wiper on the cartridge frame cross member.

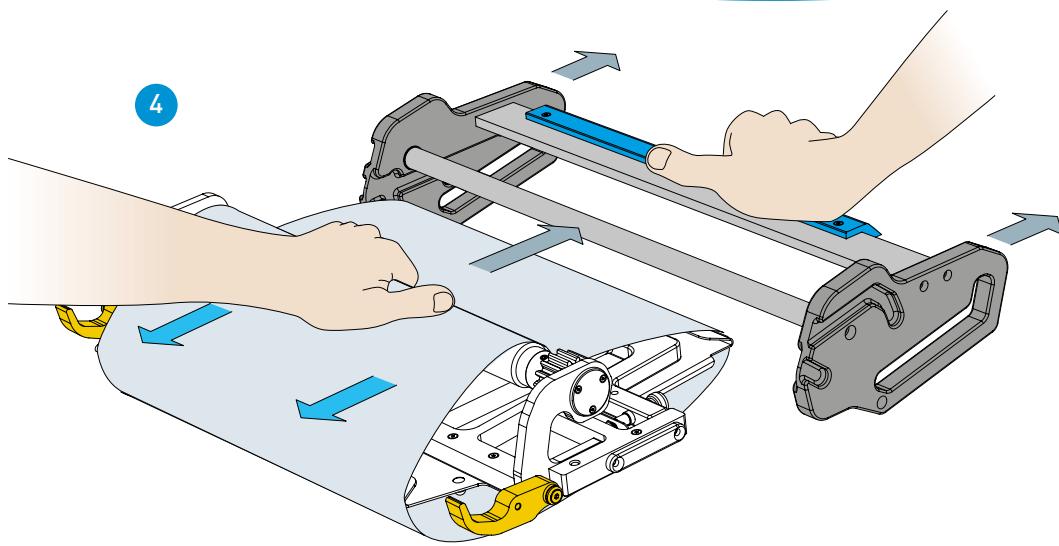


Step 4:

Now you have disassembled the belt drive cartridge into its two components.

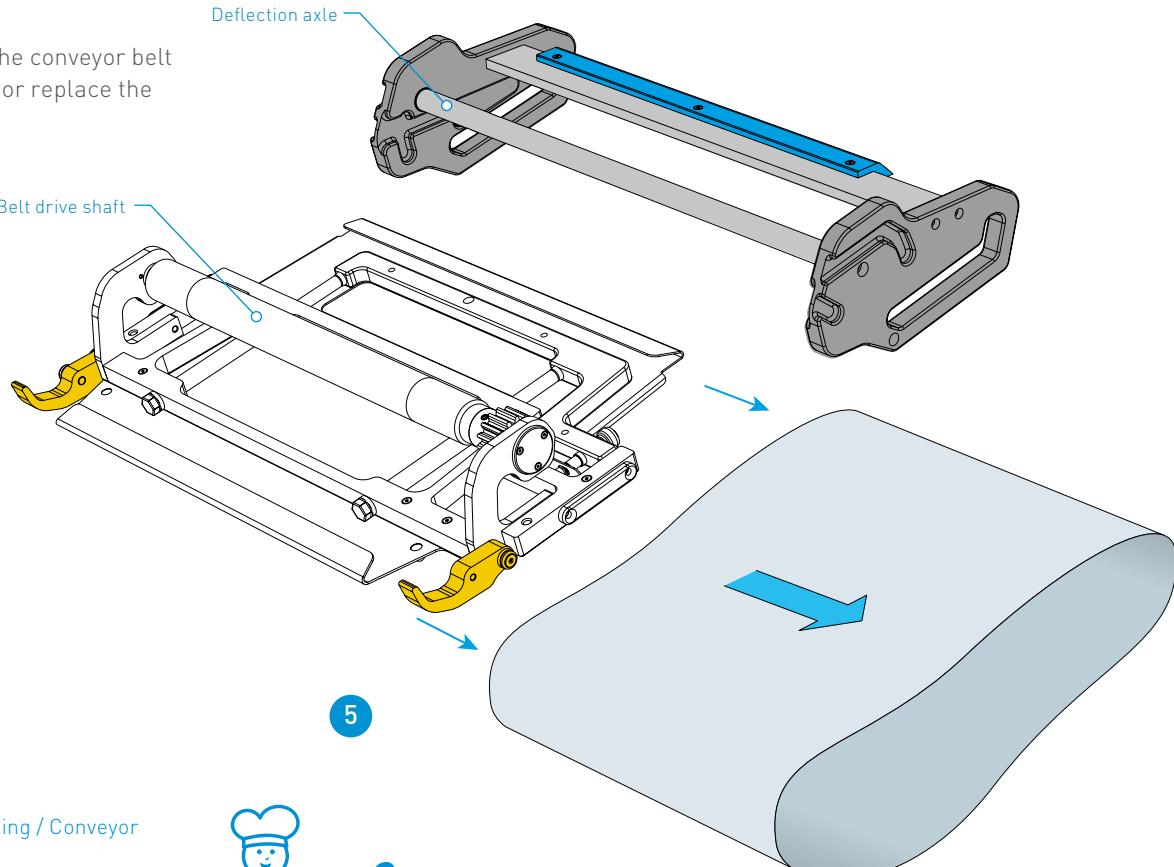


4



Step 5:

You can now remove the conveyor belt to clean the cartridge or replace the belt.



( Section "12.7.5 Cleaning / Conveyor belt cartridge", p. 154).

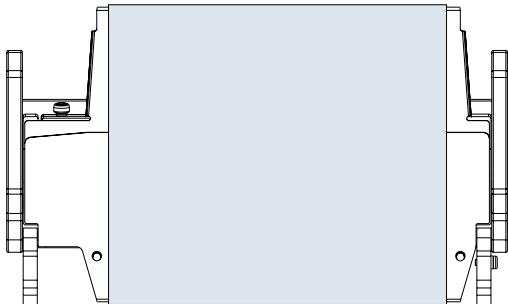


Installation/ assembly:

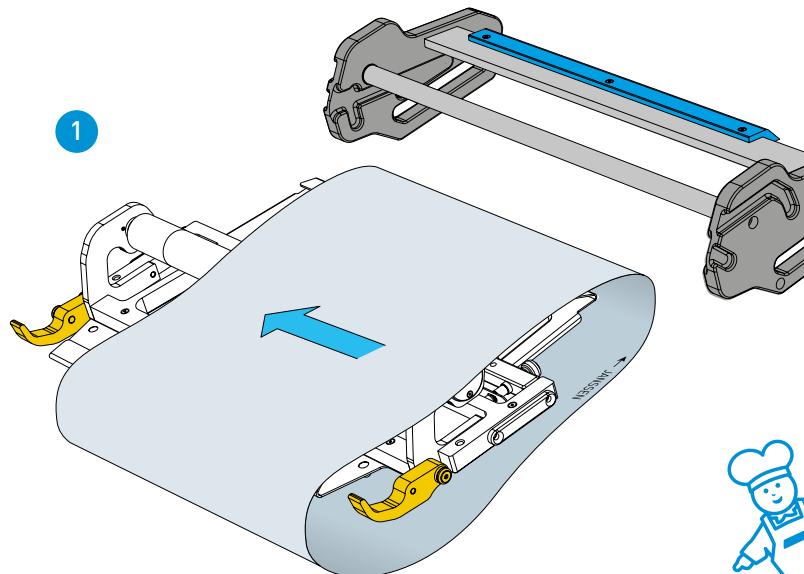
For assembly, proceed in reverse order.

Step 1:

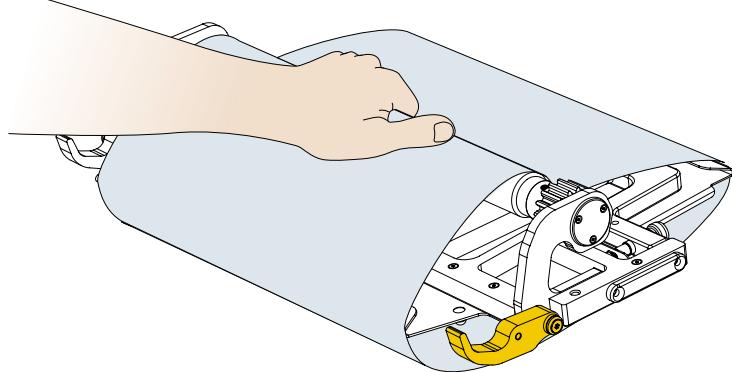
Slide the frame for the conveyor belt guide into the belt as shown. Centre the belt as shown below. Note the direction arrow printed on the inside of the belt!



1



2

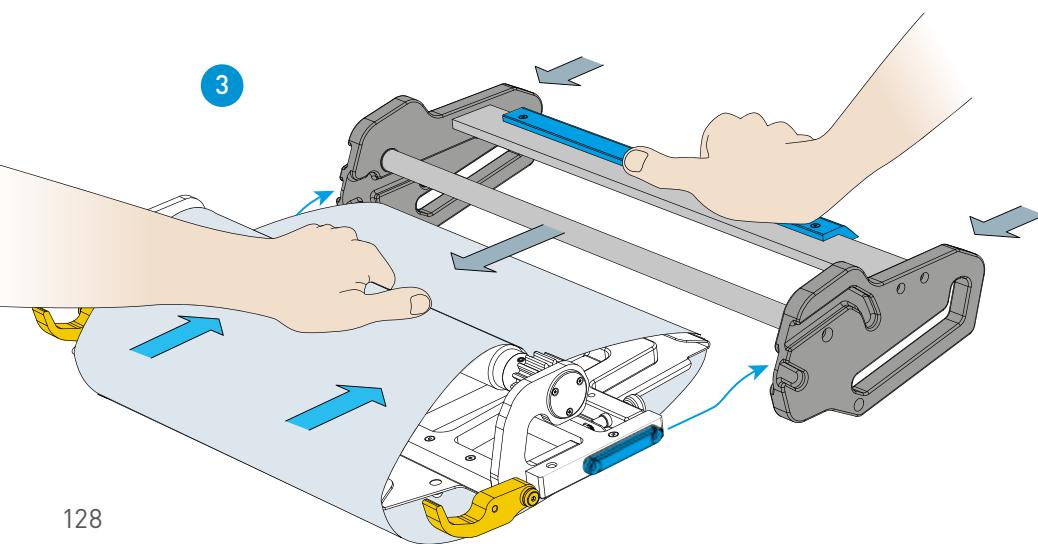
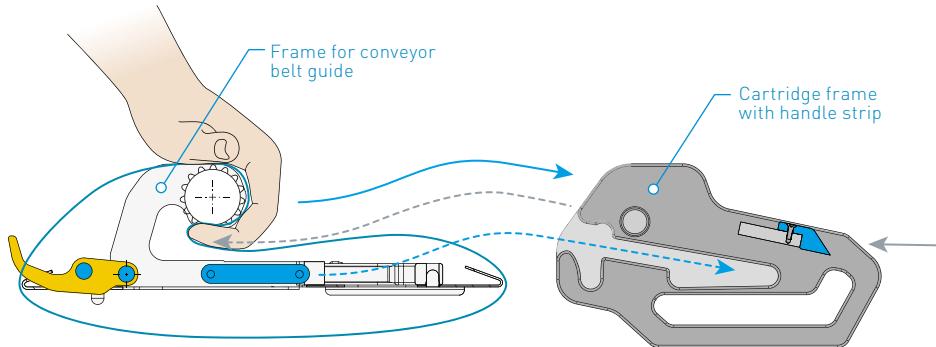


Step 2:

Wrap the belt around the belt drive shaft as shown on the right.

Step 3:

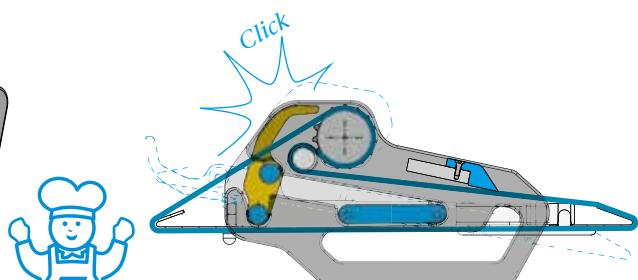
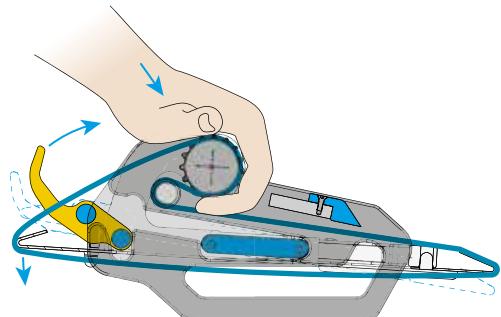
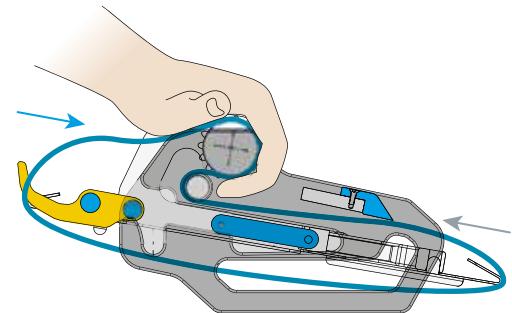
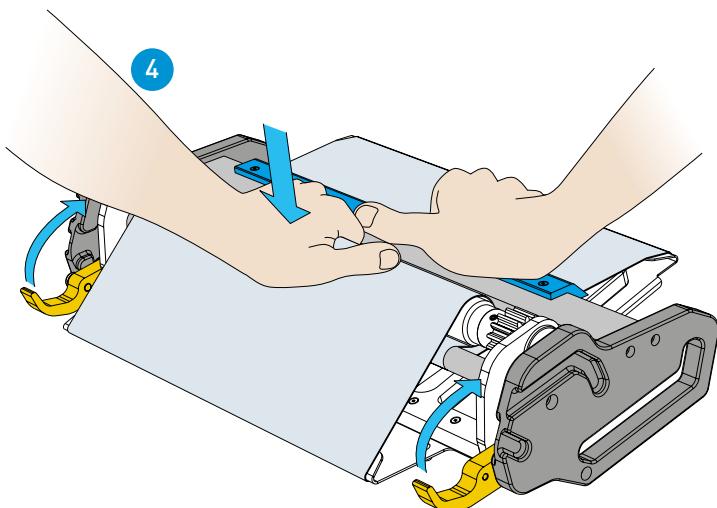
Insert the "belt guide frame" into the guide groove of the "cartridge frame" as shown on the right. Incorrect installation is virtually impossible due to the design of the guide system.



Step 4:

Once you have inserted the "belt guide frame" with the belt into the "cartridge frame", press on the belt drive shaft until the belt guide frame engages and the clamping levers move up.

Push the clamping levers into the cartridge frame until they are flush with it.



11.3 Sheet transport drive belts

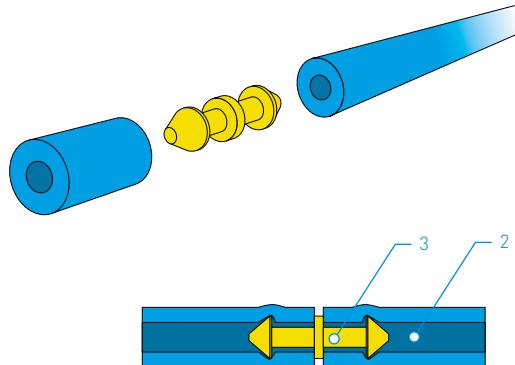
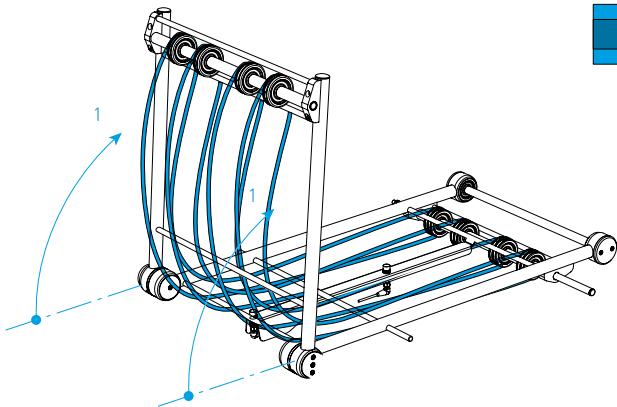
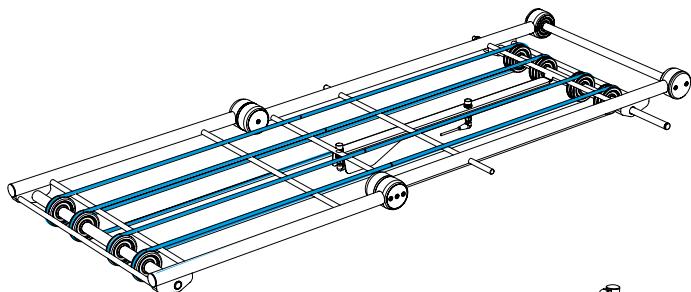
The transport drive belts of the sheet transport system can be replaced easily as needed. You can order the belts in the ideal length from us.

11.3.1 Removal and installation of the sheet transport drive belts

For easy removal and installation, fold the sheet transport upwards (1). This causes the belts to hang loosely around the belt rollers.

Remove the old belts and put the new ones in place.

The belts (2) are hollow and can be inserted into each other (using some force) with appropriate connectors (3).

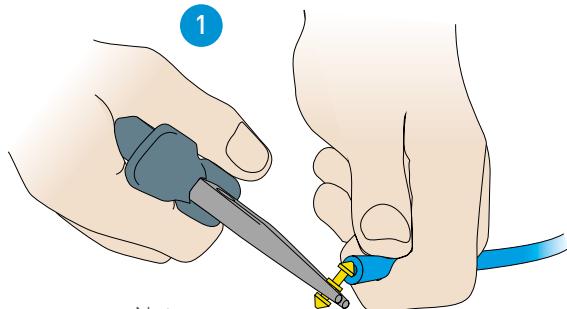


Step 1:

Before you press the connector into the hollow belt, use pliers to place the connector at an angle as shown.

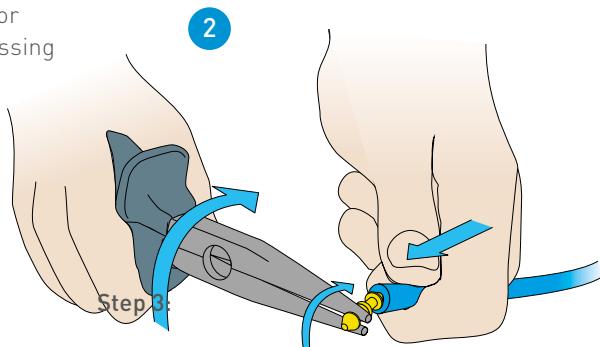
Now twist the connector from the angled position into the hollow belt while pressing it forcefully at the same time.

Press the other end of the belt onto the connector.

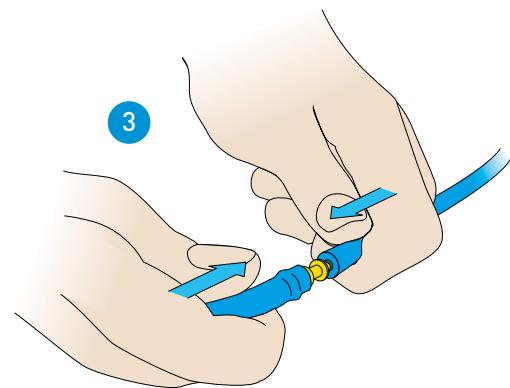


Note:

Grease the head of the connector somewhat beforehand. The pressing requires a bit of strength!



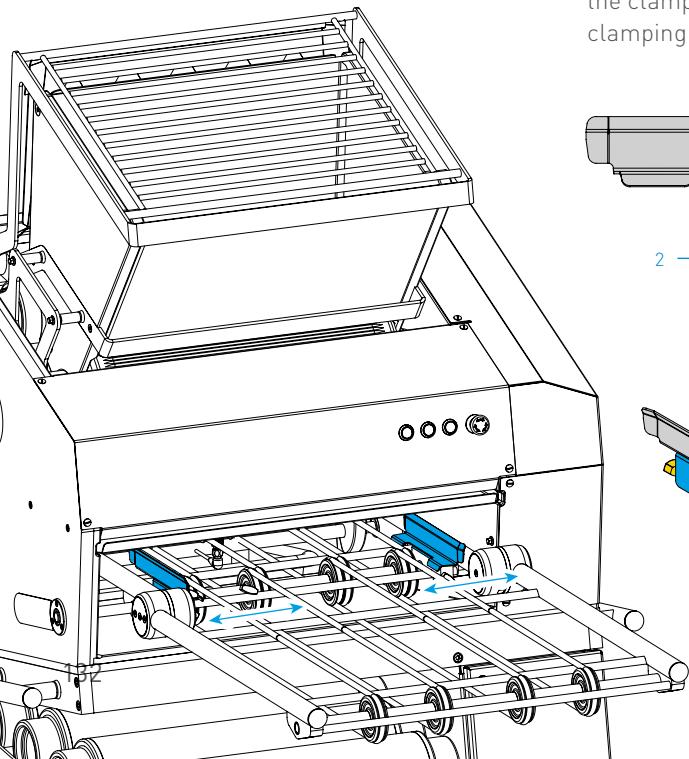
Step 3:



Step 2:

11.4 Sheet guide

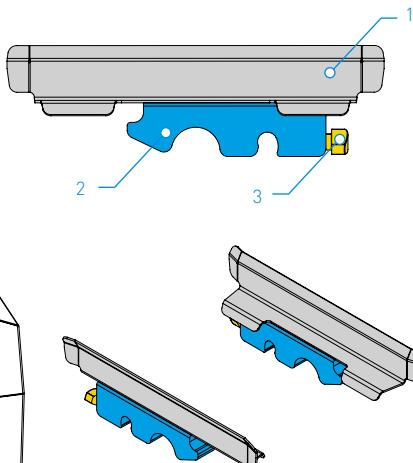
The adjustable sheet guide enables optimal guiding of your individual sheets into the machine



11.4.1 Installation and removal of the sheet guide

The sheet guide consists of a right and a left guide.

It consists of the sheet guide plate (1), the clamping piece (2) and the clamping screw (3).



The installation is explained in 3 steps on the next page.

Step 1:

The sheet guide must be inserted from the rear of the machine into the desired position and threaded diagonally to the thin cross member in front of the sheet transport drive shaft.

Step 2:

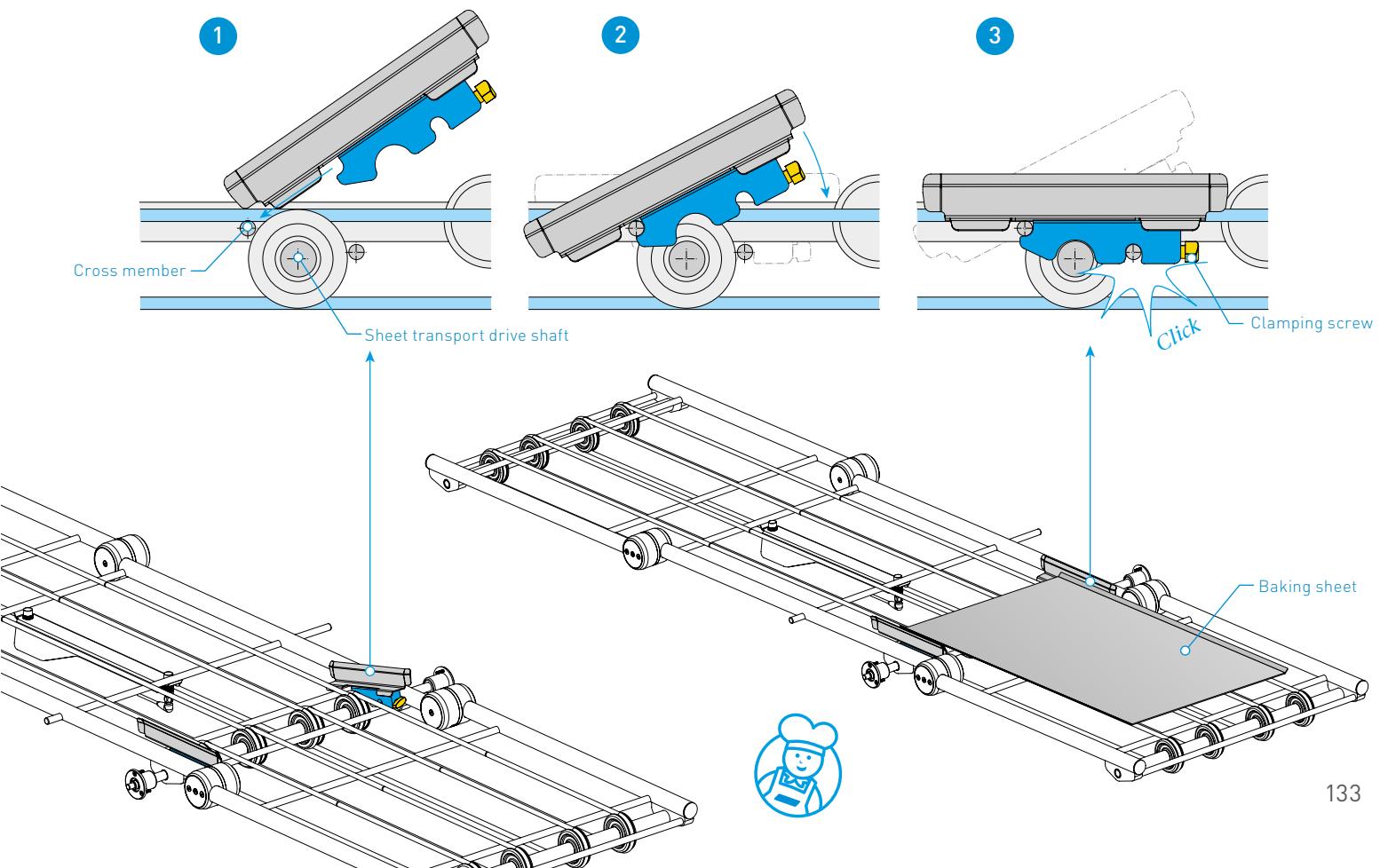
Once the sheet guide is resting on the cross member, the crossbar must be pressed horizontally until it locks into place.

Step 3:

Now a baking sheet can be inserted and the position determined exactly by pushing it back and forth. Once the position has been found, you can secure the sheet guide with the clamping screw (3).

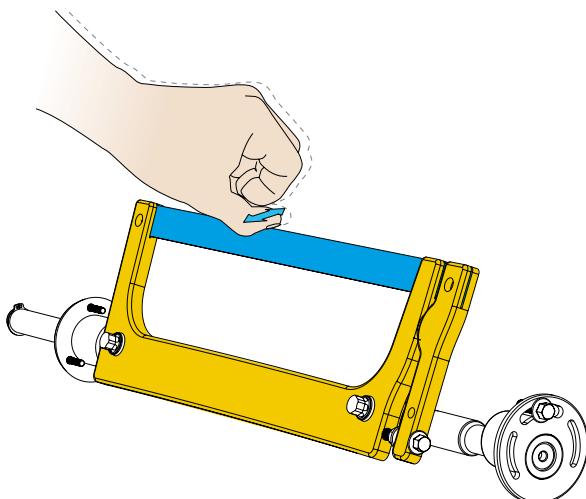
Removal

For disassembly, proceed in reverse order.



11.5 Knife

The knife can wear out and become dull faster or less fast depending on the strength of the dough or the solid dough ingredients. This becomes evident through poorer quality of the cookies, among other things. You can check the sharpness of the knife carefully with your thumbnail by scraping the nail lightly over the blade. The knife is blunt when the nail slides over the blade without scraping.



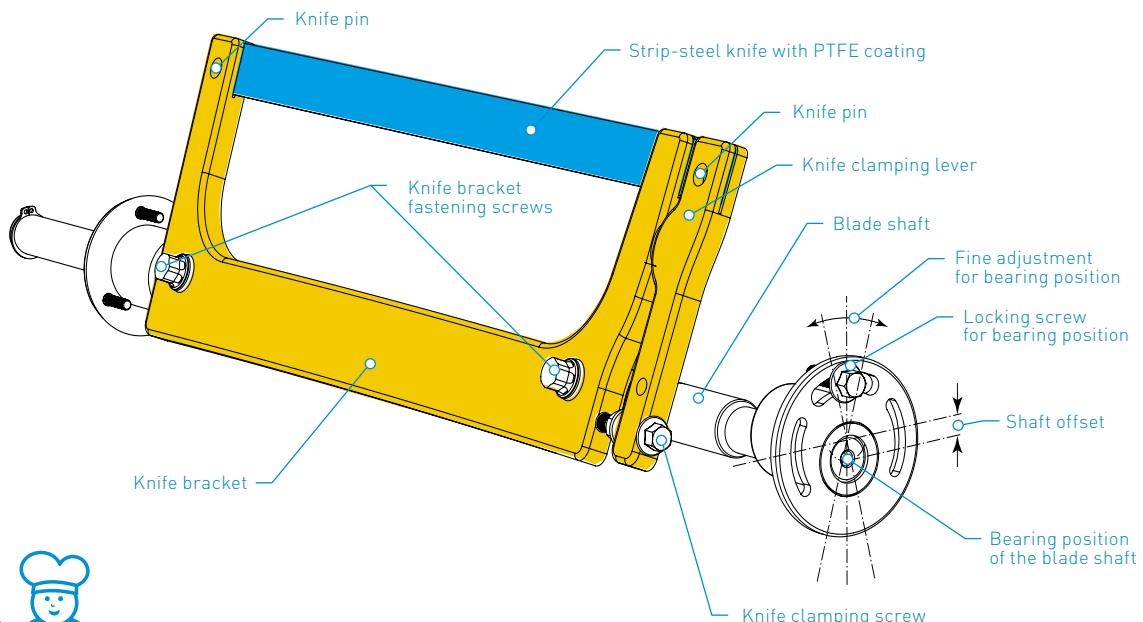
11.5.1 Removal and installation of the knife

The figure on the next page shows the basic setup:

- The knife blade is clamped in the knife bracket with two knife pins.
- The knife blade tension is provided via the knife clamping lever using the knife tensioning screw.
- The entire knife bracket with the knife blade is fixed to the blade shaft with two (or three) screws.
- The blade shaft oscillates back and forth in the direction of the shaft axis.
- The bearing position of the shaft can be finely adjusted on the roller flange side and thus the cut-off thickness of the cookies can be adjusted uniformly over the entire width of the knife.



The removal and installation of the knife is explained below.

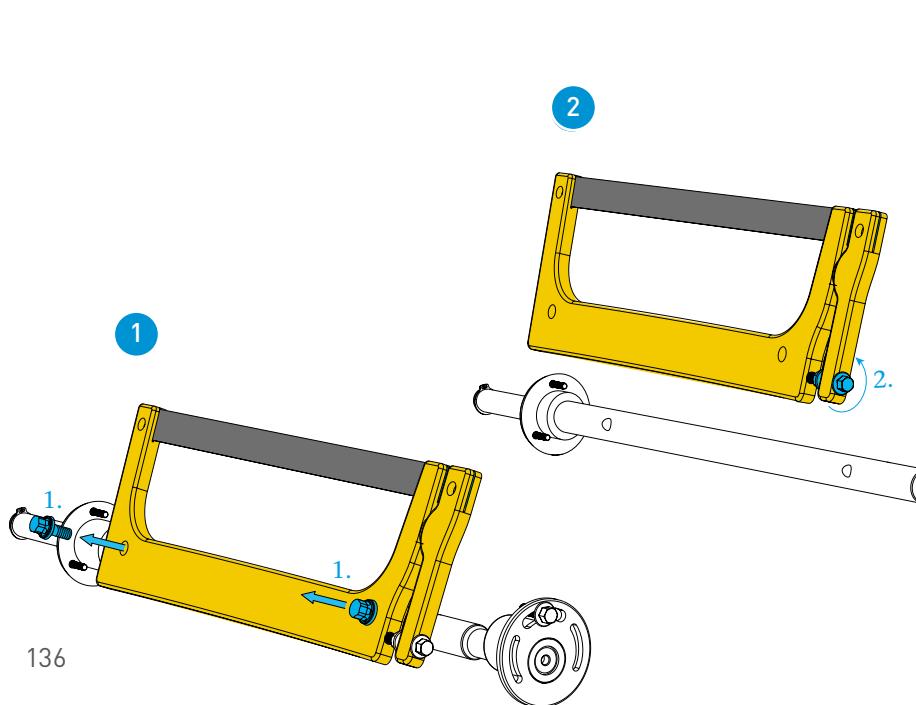


Removal

To remove the knife, please proceed as follows:

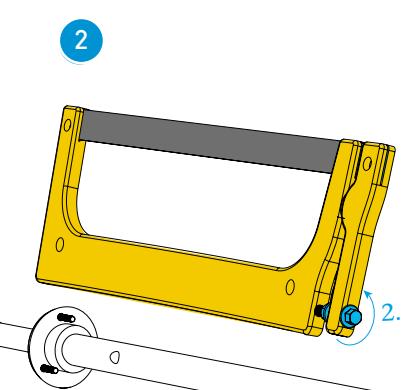
Step 1:

Loosen the two knife bracket fixing screws [1].



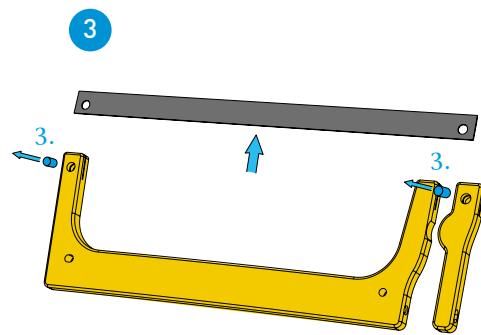
Step 2:

Remove the knife bracket for the removal of the knife and undo the knife blade clamping screw [2].



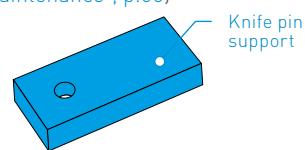
Step 3:

Once the knife clamping lever is completely relaxed, you can drive the two knife pins [3] out of the holes with a mandrel and remove the knife.



Note:

To drive out the pins, please use the "knife pin support".
( Section "8.5.3. Special tools for assembly and maintenance", p.66)



Installation

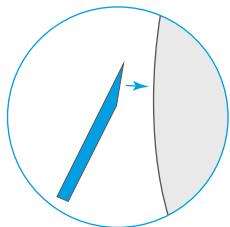
To install the new knife blade, please proceed as follows:

Step 1:

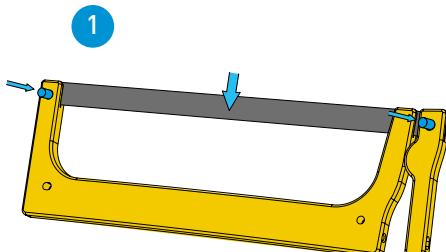
Insert the knife into the knife bracket.



Important: The ground side of the knife must face the kneading roller!



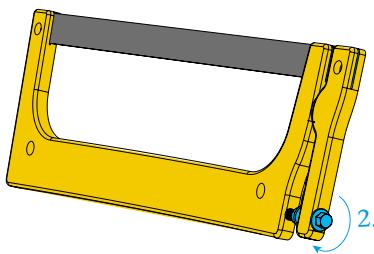
Secure the knife with the two knife pins.



Step 2:

Now you can tension the knife very easily, without a torque wrench. Use the knife blade clamping screw (2) to tension the knife blade. The knife is optimally tensioned when the bracket is absolutely straight at the bottom.

2



Relaxed

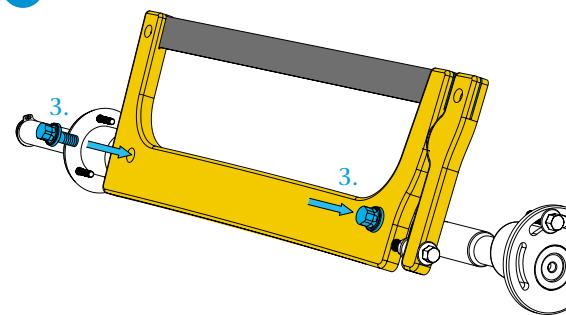


Taut

Step 3:

After tensioning, screw the knife bracket onto the blade shaft in the machine with the two knife bracket fixing screws (3).

3



3.

3.



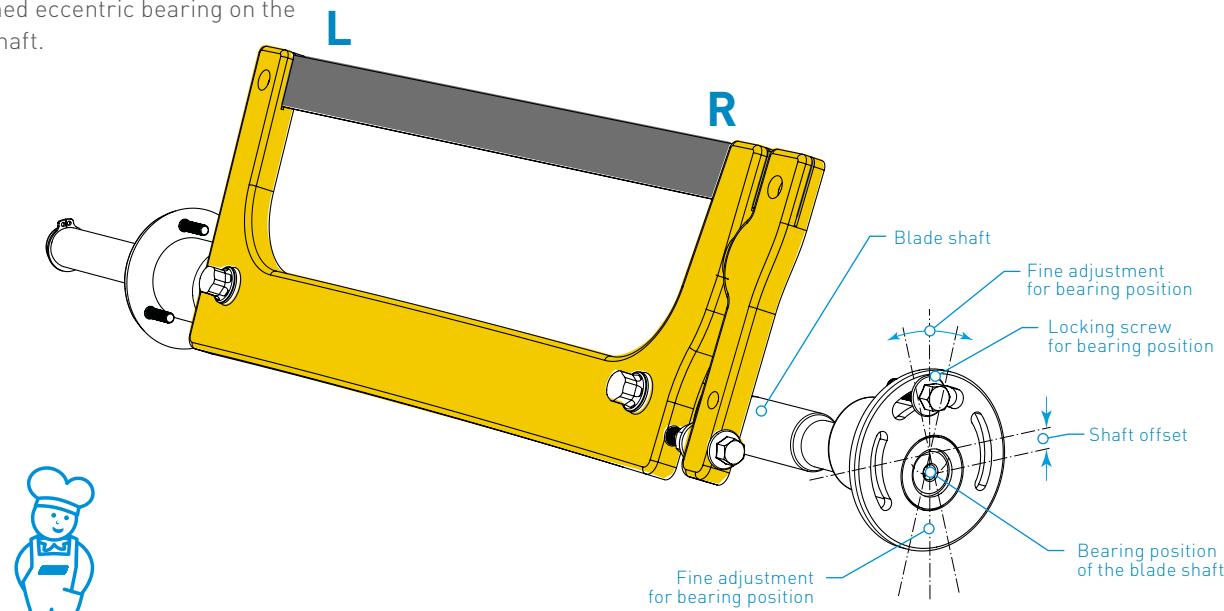
11.5.2 Fine adjustment of the knife perpendicular to the discharge direction for consistent cutting thickness

Adjustment of the uniform cut-off thickness of the cookies over the entire forming width can be precisely set with accuracy to a tenth of a millimetre by means of a laterally positioned eccentric bearing on the blade shaft.

When the "bearing position fine adjustment" is turned anti-clockwise, the cookies are cut off thicker on the right side [R]. Turn it clockwise and they will be cut off thinner.

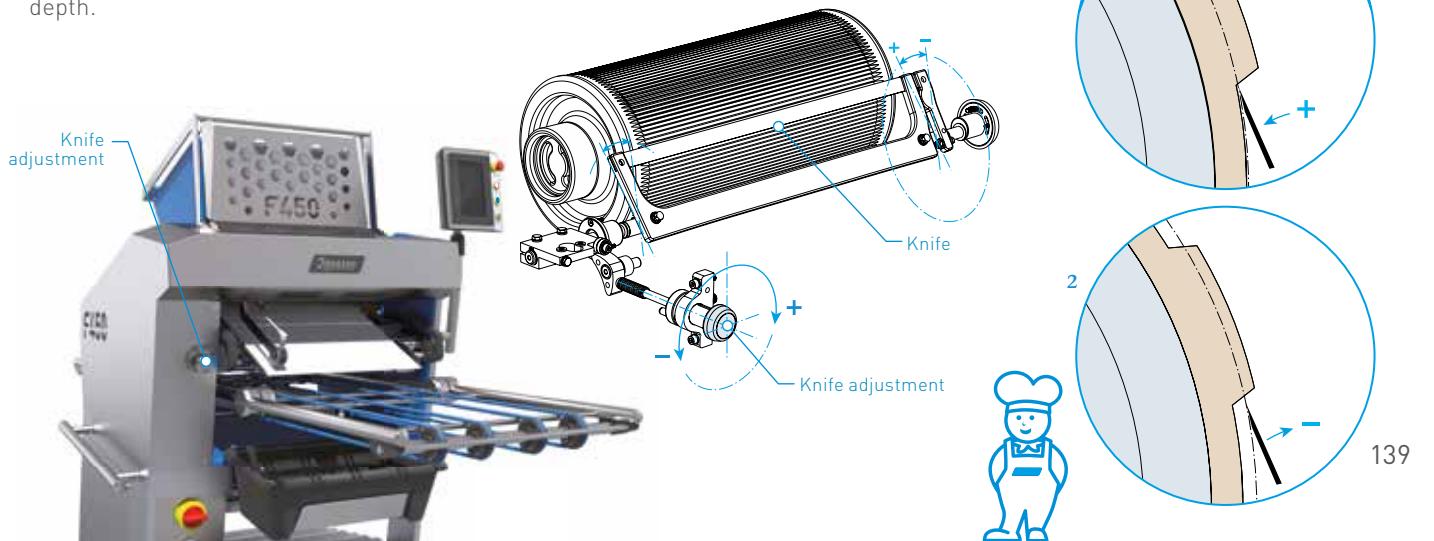
Ideally, the cookies should be cut off to the left [L] and right [R] in the same thickness so that they bake evenly.

Once the forming thickness is uniform across the cut-off width, you can fix this position with the "bearing position locking screw".



11.5.3 Knife setting for the cookie thickness

The thickness of the cookies can be adjusted with the knife setting. The optimum (✓) is for the knife to cut directly at the dough band of the kneading roller (1). This gives you the cookie thickness which has been engraved on the roller according to your specifications. However, you can also form the cookies up to 3 mm thinner (2) for a given engraving depth.



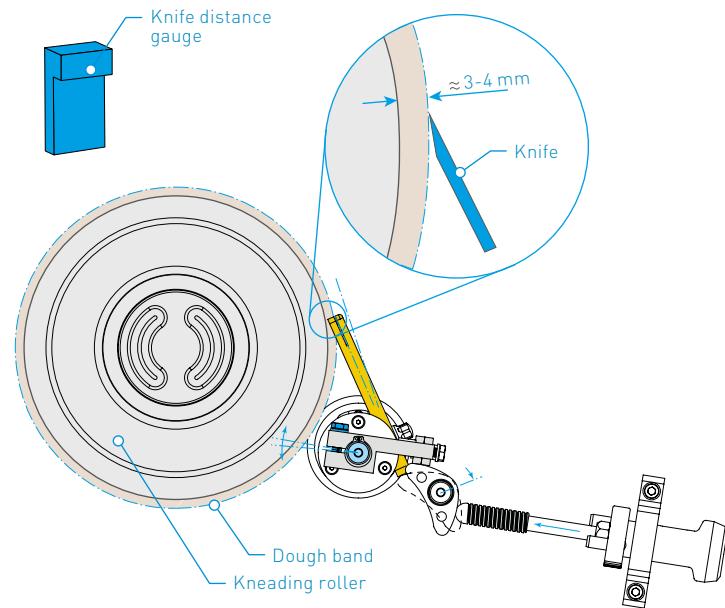
11.5.3.1 Knife setting for cookie thickness/ basic setting for blade shaft axial bearing block

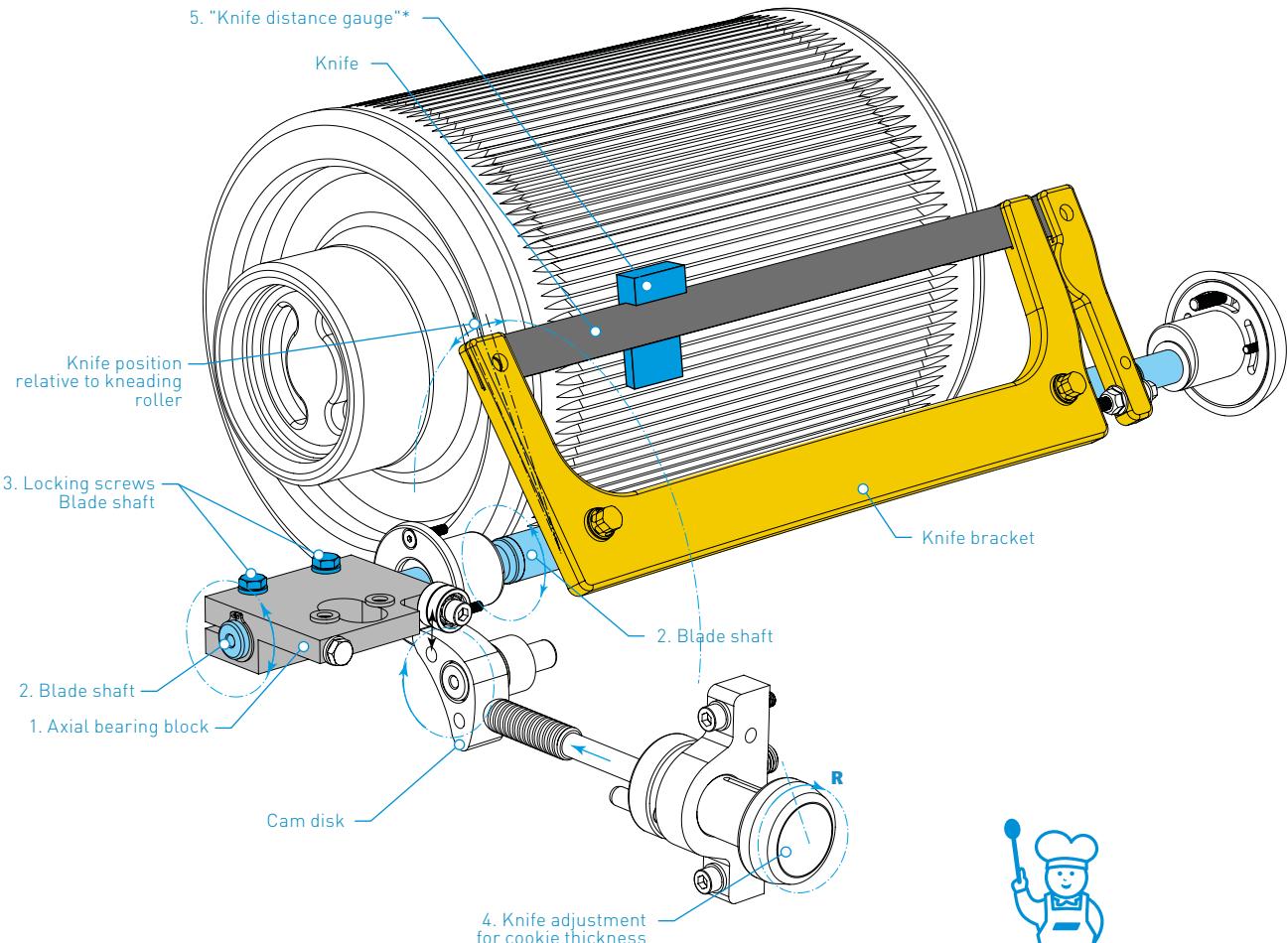
The knife bracket with the knife is firmly screwed to the blade shaft. The basic setting of the knife position relative to the kneading roller is determined by the frictional connection between the axial bearing block **[1]** and the blade shaft **[2]**. The axial bearing block is fixed on the blade shaft with the two locking screws **[3]** (see figure on next page).

When the knife setting for the cookie thickness or the rotary knob **[4]** is turned all the way to the right until it stops, the upper knife edge should have a distance of about 3 mm to the surface of the kneading roller and thus cut off the cookies with the maximum thickness, which is also engraved in the pattern roller. This means that the knife is located directly at the dough band. In this position, the knife should even cut off a little of the overall dough band.

Loosening the locking screws **[3]** allows you to freely swivel the blade shaft with the knife bracket about the cutter shaft axis and adjust its position precisely. Once the desired position (a distance of approx. 3-4 mm from the knife edge to the kneading roller surface) is set, retighten the two locking screws. We recommend using the "knife distance gauge" **[5]** for the adjustment.

([Section "8.5.3. Special tools for assembly and maintenance", p.66](#))





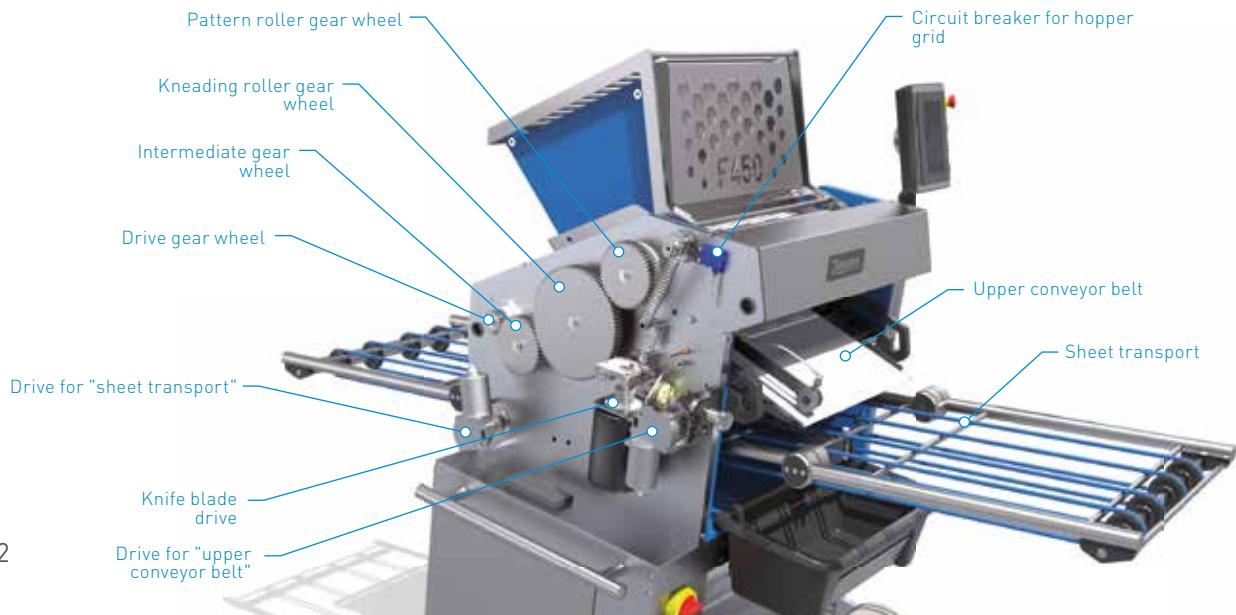
11.6 Gear unit

The gear unit is located under the gear unit cover of the machine body and is low maintenance.

It comprises the following components:

- The rollers are driven by an intermediate gear wheel with a main drive motor.

- The upper conveyor belt and the sheet transport are each driven by a separate motor.
- The knife is driven by a motor via a conversion gear unit.
- The hopper shaft is damped by a lever-spring system.
- The gear unit for the cookie thickness adjustment is also located in the gear unit housing.



The gear unit cover can be removed by loosening the slotted screws.

! *Always disconnect the power supply before opening the gear unit cover!*

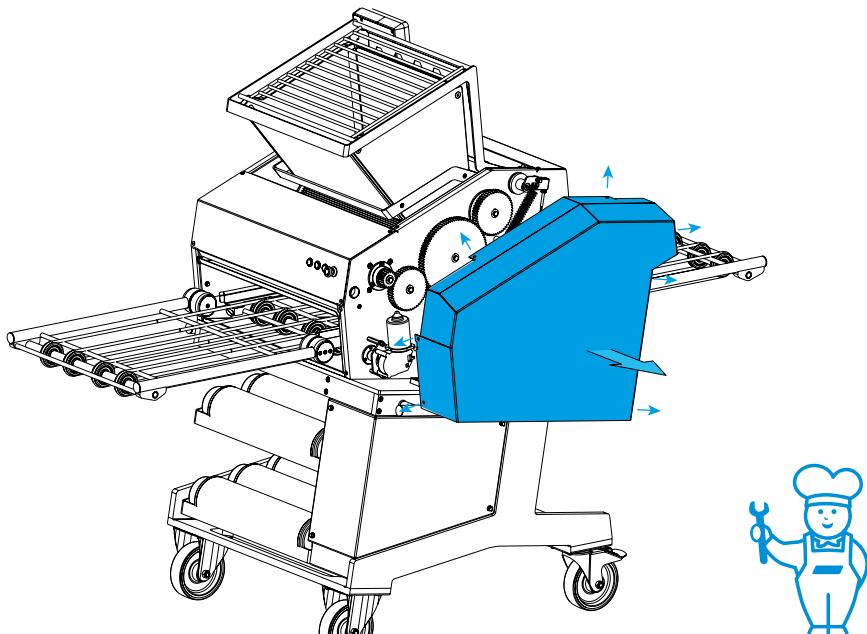
11.6.1 Lubrication of the gear unit

The gear unit should be regreased with a food-grade lubricant after every 500 operating hours or after 3 months in the case of daily use in 1-shift operation.

To do so, lightly brush the tooth flanks of all gears with grease.

Note:

The gears run in during the first 500 hours of operation (or after 3 months if used daily in 1-shift operation) and produce a slight amount of metallic debris. This is normal. After this period of time, clean the gear unit with a cloth and re-grease it. The abraded metallic debris is reduced after a running-in period of about 700 to 1000 operating hours.



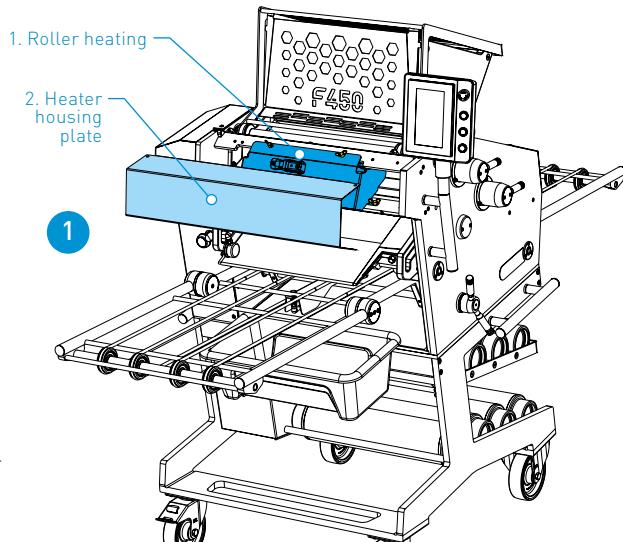
11.7 Heater

11.7.1 Removal and installation of the heater

Removal

The roller heating (1) can be removed easily. Loosening the screws allows you to remove the heater housing plate (2) by pulling the upper edge firmly (the plate is clamped under tension on the side parts).

The heating unit can be removed by disconnecting the two connection cables on the heater housing and loosening the fastening screws.



The heating element can be removed by disconnecting the power plug on the heater housing and unscrewing the wing screws.



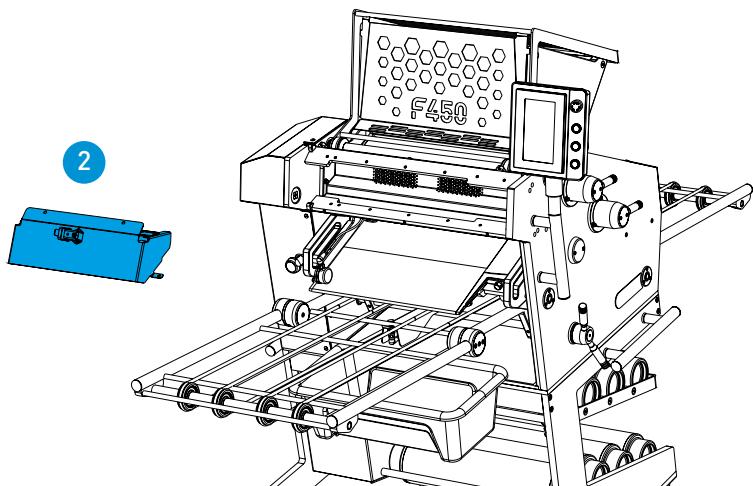
Always disconnect the power supply before opening the heating unit cover!



Make sure that all components have cooled down completely before removing the heater housing plate!

Installation

For installation, please proceed in reverse order.



Temperature monitoring

The heating unit has an additional temperature monitoring system to avoid hazards for the user and damage to technical components. If the temperature inside is too high over a defined period of time, the heating unit switches off automatically.

Temperatures that are too high occur, for example, when the outlet openings are closed or clogged or the cross-flow fan is blocked due to heavy contamination.

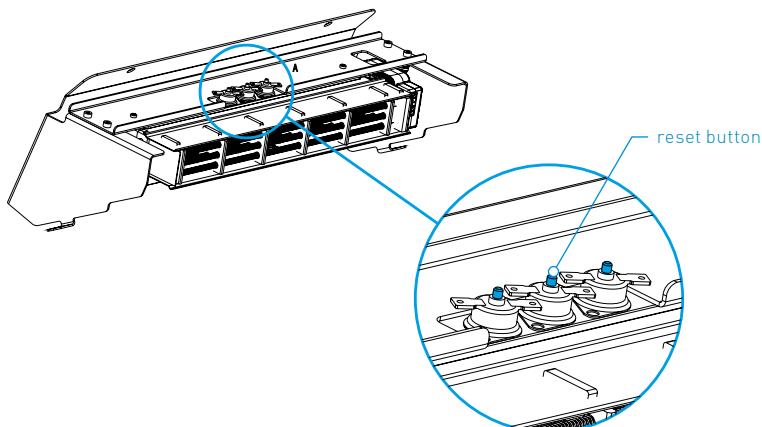
After the temperature switch-off has been triggered, the heating unit can be put back into operation manually. To do this, remove the unit as described in section 11.7.1.

The safety elements for temperature monitoring are located on the top of the heating unit.

Press the button on the top of all safety elements. You should feel a distinct click when these are reset. Before reinstalling, check the entire heating unit for any damage or soiling!



See next page...



! *All maintenance work must only be performed by qualified personnel who are familiar with the necessary safety measures.*

! *Before carrying out maintenance work in a de-energized state, observe the five basic safety rules*

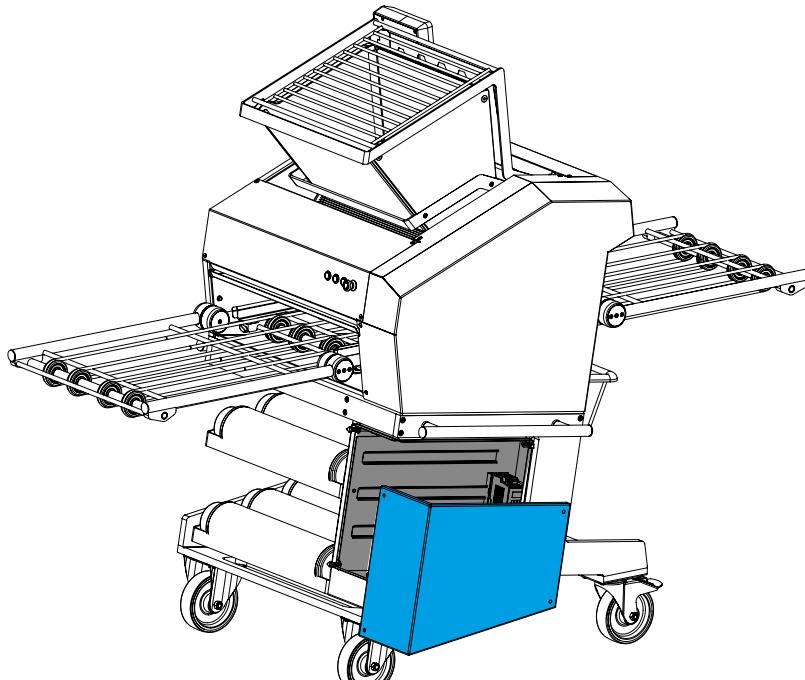
- 1. Disconnect*
- 2. Secure against restarting*
- 3. Verify absence of voltage*
- 4. Earth and short circuit*
- 5. Cover or block off adjacent live parts*



11.8 Controller

The controller is located in the controller box in the base frame of the machine.

You can open the screws of the controller box with a hexalobular internal key with an internal pin (Torx® T40).



Inspections and maintenance must only be carried out by technically trained specialist personnel.

Detailed information can be requested from the manufacturer.



All maintenance work must only be performed by qualified personnel who are familiar with the necessary safety measures.



Before carrying out maintenance work in a de-energized state, observe the five basic safety rules

1. *Disconnect*

2. *Secure against restarting*

3. *Verify absence of voltage*

4. *Earth and short circuit*

5. *Cover or block off adjacent live parts*



Observe the national requirements applicable at the place of use for the following topics:

- *Maintenance and cleaning*
- *Work on electrical systems and equipment*
- *Electrical safety*
- *Accident prevention*



The electrical equipment must be inspected and documented at regular intervals, but at least once a year.

11.8.1 In case of defects or faults

If defects or faults are discovered in the electrical equipment of your cookie former, these must be rectified immediately. If there is an immediate danger due to a defective electrical system, it must not be operated any longer. Take the cookie former out of operation immediately if there is a risk of damage to property or personal injury. Before restarting, it is essential to restore the electrical equipment to its proper condition.

11.8.2 Documenting maintenance

Document the maintenance steps carried out on your Janssen cookie former.



Examples of the information in the documentation:

- *Date, serial or device number*
- *Equipment identification*
- *Condition of the object of the inspection*
- *Activities carried out*

11.8.3 Space limits/ Safe installation/Place of use

Check the ambient conditions at the place of use (reference to section "7.6 Ambient conditions"). The required space limits for operation and maintenance must be complied with for safe use, and these must be restored if necessary.

11.8.4 Housing and seals

Check the housing for visible damage and corrosion.

Clean the outer surfaces of the housing with a damp cleaning cloth and remove any dirt with warm water and a cleaning agent if necessary.



Please use only cleaning agents that are permitted for use on food processing machines.

Do not use hard objects for cleaning that could damage the surface.
( [Section "12 Cleaning after shutdown", p. 148](#))

Check the leak tightness of the housing and make sure that there is no condensation inside.

11.8.5 Wiring and components

Regularly check all components, wiring, terminal points, conductor connections and markings and compare them with the circuit diagram and associated documentation.

Check the strain reliefs for the cables. Check that all cable glands are firmly seated and leak tight. Check the cable routing and the bending radiiuses. If cable ducts are available, make sure that the cables are routed through the cable ducts. To avoid damage to the cables, make sure that the cables are not bent to the point of kinking. Check all plug connections for a tight fit and proper function.

11.8.6 Protective earth

Check the earth connection/ the PE protective earth system and all earthing screws, bolts or rails. Check whether all conductors are still reliably connected and tighten them if necessary.



If a component is removed as part of a maintenance measure, the protective earth system of the components remaining in the assembly must not be affected.

12 Cleaning after shutdown

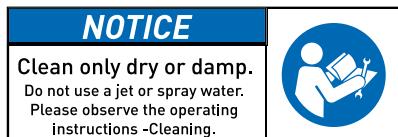
12.1 Qualifications of personnel

The cleaning of the machine must be carried out by a cleaning specialist or a person with appropriate instruction and training, taking into account the hygienic requirements in the food industry.

12.2 Requirements and safety

The food to be processed must be in flawless hygienic condition and free from undesirable residues of cleaning and disinfecting agents. Furthermore, the cleaning and disinfecting agents must be environmentally friendly.

⚠ Before cleaning, the machine must be disconnected from the power supply by pulling the mains plug!



In the baking industry, products are generally baked at high temperatures and are less susceptible to microbiological hazards. You should therefore focus on environmentally friendly processes and agents and reduce the use of cleaning and disinfecting agents as much as possible.

"Cleaning" and "disinfection" are defined as follows according to DIN 10516:

Cleaning:

Cleaning is the removal of unwanted substances (e.g. food residues, deposits) from rooms, systems and equipment in aesthetic, hygienic and sensory terms.

Disinfection:

Disinfection is the process of killing micro-organisms to a level that is neither injurious to health nor impairs the quality of the food.

According to Regulation (EC) 852/2004 Article 1 a) on food hygiene, the

responsibility for the production of safe food lies with the business conducting the production. The following basic principles should be followed:

⚠ Only disinfect where cleaning is not sufficient.

⚠ Solvents and cleaning agents must not come into contact with hot surfaces!

⚠ Avoid cleaning agents that unnecessarily pollute the environment and/or lead to residues in the food.

⚠ It is imperative that you observe the shelf life of the agents used!

⚠ Dedicate sufficient time to cleaning!

⚠ Ensure that the product is thoroughly dried after cleaning to prevent the formation of germs!

12.3 Required aids

Access to hot water is necessary for cleaning the machine. Furthermore, the use of compressed air for cleaning coarse dirt is helpful if this is permitted by the operator.

12.4 Cleaning kit

Food hygiene with respect to the production and processing of food must be ensured by the operator. The operator is responsible for the effective implementation of the EU regulation on food hygiene in the HACCP concept.

The cleaning agents and disinfectants to be used must be suitable for the food industry and environmentally friendly. They should also have a low toxicity. Use "neutral cleaning agents" for cleaning the Janssen cookie formers and "alkaline cleaning agents" in the case of heavy soiling with fats and oils.

When doing so, it is essential to observe the manufacturer's instructions (area of use, contact time, temperature, dry or wet cleaning, etc.).

For cleaning the machine we offer a special cleaning kit with a holder that can be mounted on the machine.



The cleaning kit consists of:

- 1) A soft brush for dry cleaning (dough crumbs and dust)
- 2) A medium-hard universal brush for cleaning heavily soiled areas.
- 3) A hard detail brush for stubborn deposits, for example in the grooves of the kneading roller.
- 4) A medium-hard hand brush for cleaning the rollers.
- 5) A dough scraper for cleaning the rollers and sheets and surfaces.
- 6) A microfibre cloth to clean the surfaces with water.



12.5 Cleaning steps

After disconnecting the machine from the power supply, please proceed in the following order to achieve effective cleaning:

No "hosing down" of the machine is permitted!

Step 1:

Before cleaning, remove all dough or food residues from within and on the machine.

Step 2:

Mechanically (with cloth, brush, broom) roughly pre-clean all dirty surfaces.

Step 3:

Clean all dirty surfaces with clean water and a cloth. For fatty substances please use hot water; for protein-containing substances (blood, protein) please use cold water.

Step 4:

Now clean all dirty surfaces thoroughly with neutral cleaning agents for normal soiling and with alkaline cleaning agents for heavy soiling (due to grease or oil) and remove deposits and residues.

Step 5:

Clean all surfaces with clean water and a cloth. This removes the dirt particles and detergent residues.

Step 6:

Dry all damp surfaces with a dry cloth. Good drying is very important to prevent germs from multiplying!

Step 7 (optional):

Disinfection is usually only necessary if microorganisms could not be sufficiently removed by the previous cleaning.

In the baking industry, products are generally baked at high temperatures and are less susceptible to microbiological hazards.

Should you nevertheless need to disinfect, a subsequent cleaning of all surfaces with clean water and a cleaning cloth with subsequent drying is necessary.

12.6 Frequency of cleaning

Janssen cookie formers should be thoroughly cleaned after each shutdown or after a shift or working day.

The cleaning procedure is described in detail in the following paragraph.



12.7 Cleaning procedure

Empty the dough hopper and remove the pattern and kneading rollers. Before cleaning, remove all dough or food residues in the hopper, inside the machine, on the outer housing covers, the sheet transport and the base frame.

Clean the machine components according to the cleaning steps

- Empty the machine
- Mechanical pre-cleaning
- Pre-cleaning with water and a cleaning cloth
- Cleaning with a cleaning agent
- Rinsing with water and a cleaning cloth
- Drying

([Section "12.5 Cleaning steps"](#)) in the following order:

12.7.1 Cleaning the hopper

Fold the hopper grid and the hopper forward and clean the inside and outside of the hopper with a microfiber cloth and for coarser dirt with a medium-hard plastic brush.

12.7.2 Cleaning the rollers

Remove the pattern and kneading rollers. ([Section "9.12 Installation and removal of the rollers"](#)).

You can clean the pattern and kneading rollers with a medium-hard hand brush with plastic bristles and hot water.



Under no circumstances should the rollers be cleaned in a dishwasher, as the roller materials are not designed for temperatures above 80 °C.

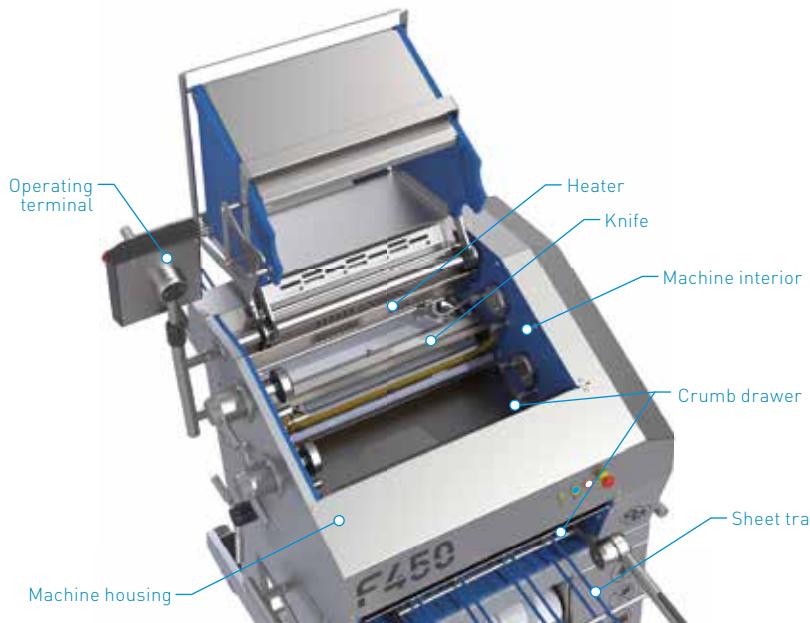
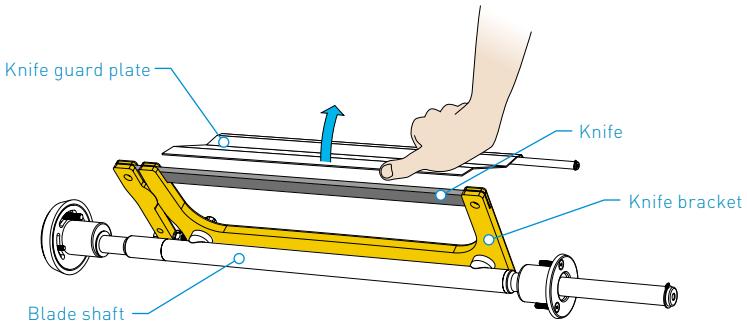
For rollers with adapters, the adapters must be separated from the rollers and cleaned separately.

After cleaning, place the rollers in the roller holder provided in the machine frame for proper drying.



12.7.3 Cleaning the knife

The knife in the machine is covered by a mechanical knife protection device so that direct contact with the knife edge is avoided.



To clean the front and back of the knife, lift the cover with one hand and with the other hand clean the now exposed knife with a damp cloth. There is a risk of cuts when doing so.



Caution:
The blade is very sharp!



Consequently, we recommend using cut-resistant gloves for cleaning and possible assembly.



The figure shows cut protection gloves

You can clean the knife bracket and the blade shaft with a medium-hard plastic brush or a cloth. After the knife and knife bracket are clean, clean the knife guard.

12.7.4 Cleaning the crumb tray

The crumb drawer (1) can be pulled out from the rear (2) of the machine via the guide grooves provided for this purpose.

Remove dough residues and dirt.
After cleaning, replace the crumb tray.



12.7.5 Cleaning the conveyor belt cartridge

To clean the upper conveyor belt cartridge, remove it. ([Section "11.2.2 Changing the conveyor belts of the conveyor belt cartridge"](#))



Once you have removed the conveyor belt cartridge and removed the conveyor belt, you can clean the cartridge frame, the conveyor belt guide frame, and the conveyor belt separately.

Cartridge frame

Dough residues can build up on the deflection axle. Please clean this axis thoroughly after each shutdown.

Frame for conveyor belt guide

You can clean the frame easily with rinse water and brushes. Please also clean the belt drive roller thoroughly with a medium-hard plastic brush, as dough residues can also be deposited here.

Conveyor belt (plastic)

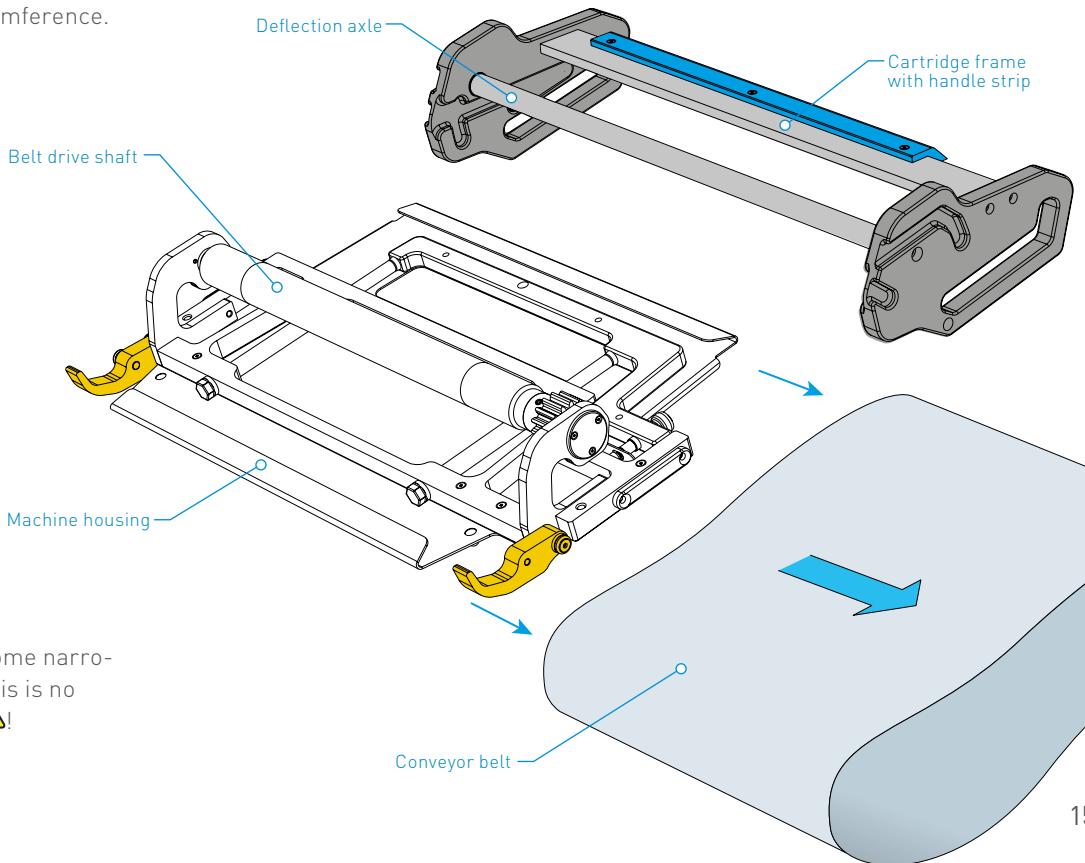
You can clean the plastic conveyor belt with rinse water. It is important that the belt be sufficiently dry before installation.

Conveyor belt (cotton)

The cotton conveyor belt can be cleaned with food-grade detergents at a maximum temperature of 30 °C. It is important that the detergent cleans effectively at this temperature. At higher temperatures the strip shrinks a good deal.



After cleaning, the damp cotton belt must be reinstalled right away so that it does not shrink in circumference.



12.7.6 Cleaning the sheet transport

The sheet transport transports the baking sheets via the sheet transport drive belts. These can become dirty during production and thus also the sheet transport rollers.

Transport drive belts

Clean the transport drive belts with a damp cloth while the machine is running.

Transport rollers

Then clean the grooves of the transport rollers with a damp cloth or a hard plastic brush.

Sheet sensors

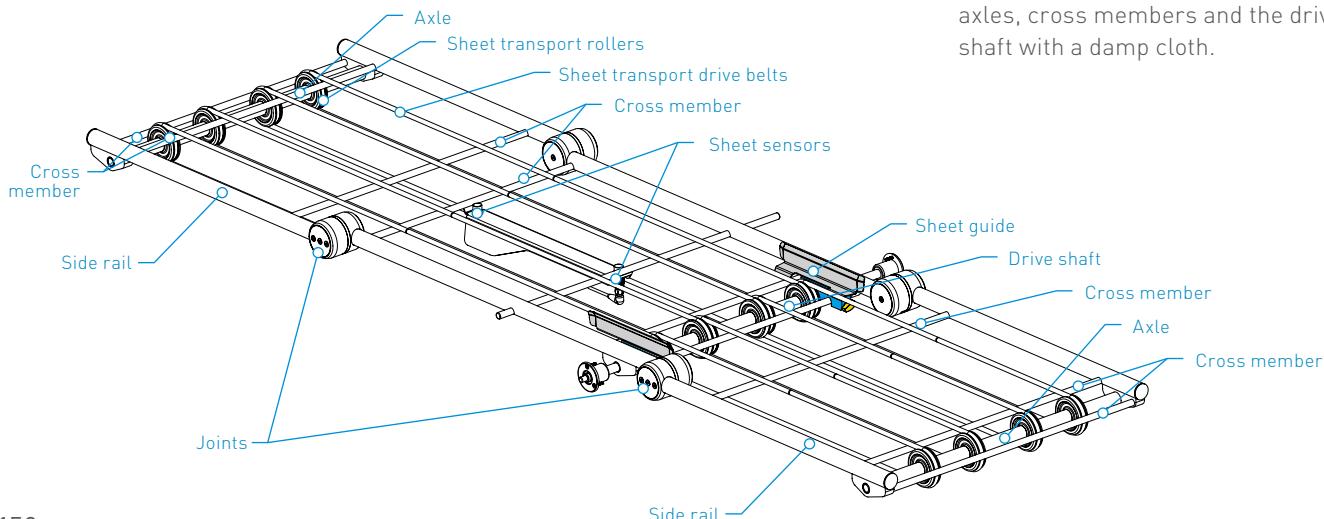
When you have opened the hopper and removed the crumb tray, you can also clean the sheet sensors from above.

Sheet guide

Remove the sheet guide for cleaning.

Joints/ side rails/ axles/ cross members/ drive shaft

Finally, clean the joints, side rails, axles, cross members and the drive shaft with a damp cloth.



12.7.7 Cleaning the machine interior

The entire interior of the machine can be easily cleaned with a damp cloth and a medium-hard plastic brush with the rollers, conveyor belt cartridge and crumb tray removed. All areas are easily accessible from above as well as from the back and front of the machine. You can clean the surfaces well with a cloth, the edges and corners with a plastic brush.

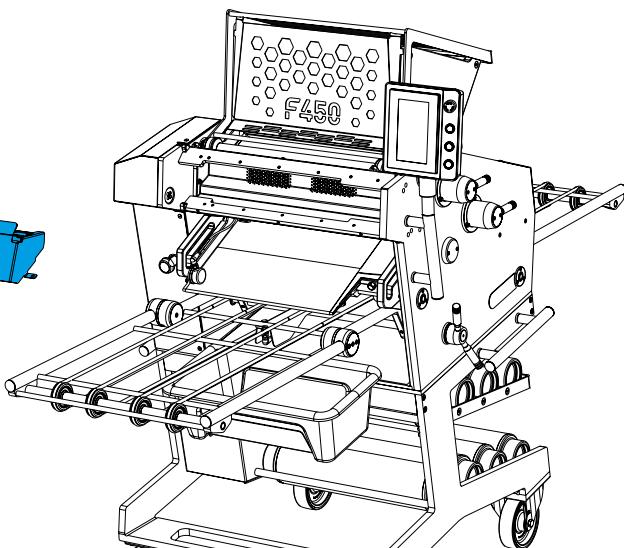
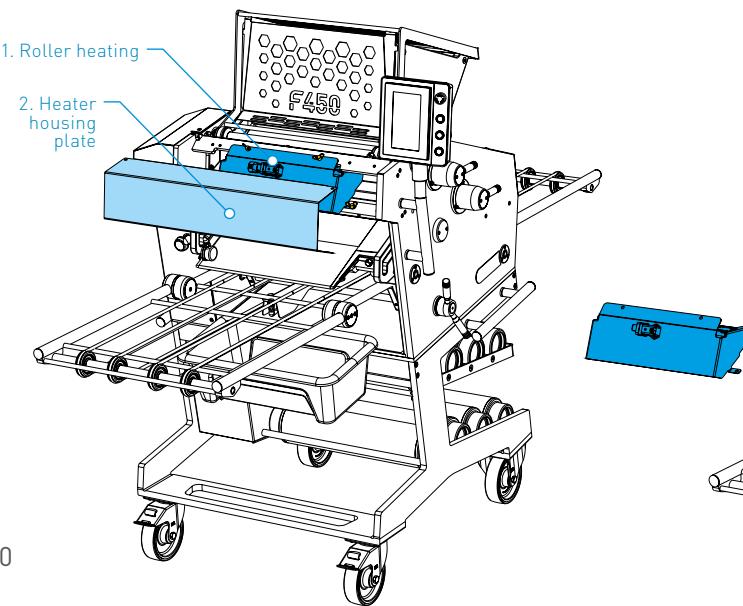


12.7.8 Cleaning the heater

The roller heating [1] is an air convection heater and not in contact with food. Therefore, you should remove the heater once a month and clean the interior of the heater housing and the heater housing plate [2] regularly.

You can disconnect the heating element from the power supply by the plug and remove it by loosening the wing screws.

Now you can clean the entire interior of the housing.



12.7.9 Cleaning the housing

Please clean the machine housing with a cloth and water. For corners and edges you can use a medium-hard plastic brush.

12.7.10 Cleaning the base frame

Clean the base frame with a cloth and water. For corners and edges you can use a medium-hard plastic brush.

12.7.11 Cleaning the operating terminal

Clean the operating terminal with a cleaning cloth and water.



13 Repairs

13.1 Qualifications of personnel

Repair work must be carried out by a person with appropriate training, education and experience which enables them to identify risks and prevent hazards that may be caused by electricity or mechanical systems.

13.2 Requirements and safety



Never pull the mains plug while the machine is still switched on.



Never manipulate the constructive safety measures!



Repairs must only be carried out using original components from the manufacturer.



Repair work must be documented!

13.3 Required aids

We recommend using cut-resistant gloves for cleaning and assembly when installing and removing the knife.



The figure shows cut protection gloves

13.4 Required tools

Normal machine operation:
No special tools are required for the normal operation of the machine.

Maintenance and servicing:

Depending on the situation, you will need various tools for maintenance work:

(see section "8.5.3. Special tools for assembly and maintenance")

13.5 Repairing the machine

Contact the manufacturer for repairs to the machine if you have any doubts.

Niederrheinische Formenfabrik Janssen GmbH can provide repair instructions.

Niederrheinische Formenfabrik Janssen GmbH

Moerser Strasse 33
47798 Krefeld

Phone +49 2151 24315

Fax +49 2151 29759

info@nff-janssen.de

www.nff-janssen.de



14 Troubleshooting and fault rectification

14.1 Qualifications of personnel

Maintenance work, such as servicing, inspection, repair, improvement and troubleshooting must be carried out by a person with appropriate training, education and experience which enables them to identify risks and prevent hazards that may be caused by electricity or mechanical systems.

14.2 Safety



Electronic components must only be serviced and replaced by an authorized electrician.



Safety-relevant machine components must not be manipulated or disabled!



If you cannot correct the fault yourself, contact your dealer or us.

Solid ingredients such as nuts, almonds, etc. cannot be processed in the machine. It may be possible to form cookies with these in ground form after a prior dough test.

The forming thickness of the cookies should generally be between 2.5-7 mm, in special cases thinner or thicker, depending on the dough and the mould filling behaviour.

14.3 Requirements for proper forming of cookies

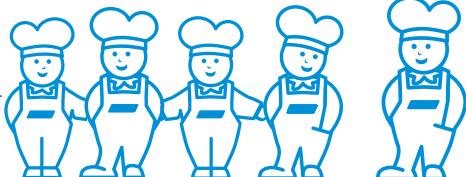
In accordance with the intended use, only food doughs may be formed in the Janssen F250, F450 and F600 series cookie moulding machines, especially shortcrust doughs, honey and syrup doughs as well as marzipan according to the Janssen recipes (see 14.3.1).

Most malfunctions are due to unsuitable doughs. For this reason, the following paragraphs contain basic information on dough preparation, followed by recommendations for exemplary cases of malfunction.

14.3.1 General information about dough preparation

Before you prepare a larger quantity of dough, please use a smaller quantity for a forming and baking trial run. Fats vary so widely today that it is hardly possible to give a general recommendation. Our recipes refer to the consistency of branded butter or a firm baking margarine.

 See the "Janssen recipe book")



Baking temperature

The baking temperature for cookies is usually 180 to 200 °C.

Baking time

The baking time is approx. 8 to 12 minutes, depending on the size and thickness of the cookies.

Dough temperature

The best dough temperature for doughs with a high fat content is between 14 and 18 °C. You can achieve this by freezing the flour and processing the other ingredients at room temperature.

Dough resting

In principle, however, it is still best to prepare the dough one day in advance so that the sugar can incorporate fully and the dough does not stick in the pattern roller (especially with regard to the sugar content). Store the dough overnight in a cool place (not in the freezer), covered with a linen cloth (not a plastic foil), so that the dough

does not sweat, become moist and stick to the pattern roller.

Before forming, it is recommended that the dough be kneaded once again briefly.

Dough feeding

Depending on the consistency of the dough, you can put the dough into the hopper in slices, as crumbs or clods or press it through the bars of the hopper grid.

Sequence for preparation

All doughs should be mixed in the following order:

First mix the fat, sugar and liquid together well and then add the flour with the raising agent and spice. The dough should be kneaded until all the ingredients have worked together well.

Note: In contrast to the general approach for preparation, for small quantities of dough you should mix the fat, liquid and flour in the spiral

kneader and then fold in the sugar. This makes the mixing go faster.

Fats

Branded butter or a firm baking margarine is particularly suitable as fat. When using clarified butter, an emulsifier should always be added so that an homogeneous mixing of the fat and liquid can be achieved. When substituting clarified butter in a recipe calling for butter, the missing liquid must be accounted for.

Guideline value:
1000 g of butter is equivalent to 800 g of butterfat and 200 g of water or milk.

Soft margarines are less suitable. The cookies are pushed together on the blade and also usually stick to the roller.

Dough test

If you take the finished dough in your hand, you should be able to rub it between two fingers without having it stick.

Do a test with a handful of dough: Press a piece of dough firmly into the roller and try to pull it out again. If this works, the nature of the dough suggests forming will be smooth and achievable without the use of heating. If the dough is difficult to remove from the roller and dough residues remain, at least use of the roller heating will be necessary or a change of dough may be called for.

Recipe modification

Often small modifications in the recipe or preparation are sufficient without changing the flavour: If, for example, a shortcrust with whole egg is too soft for processing, you can omit the egg white and thus significantly reduce the liquid content without changing the taste.

Another example would be the sticking of the shortcrust in the pattern roller caused by insufficient dough binding. The binding can be increased by a slightly longer kneading time (if necessary with the addition of a small amount of water).



"The machine must adapt to the dough recipe!" Not the other way around?

In contrast to batters, dough is kneaded during the processing of the raw materials and is then formable. In the case of batters, the ingredients are whipped or stirred and are not formable. They are usually poured or injected.

The recipes for batters and doughs differ fundamentally and also require different (suitable) processing methods.

The situation is comparatively similar when processing doughs with rolling or forming machines. Rolling machines can roll out dough into flat sheets. With our forming machines, not only flat sheets of dough can be formed, but also individual cookies with defined outer contours and with or without relief-like structures and patterns can be created.

The forming machine thus combines at least two work steps into one. This is why the recipes for "forming" as opposed to "rolling out" may be different or even require differences. This means there are natural limits to the desire for the machine to adapt to the recipe. With decades of experience in the development of cookie moulding machines, our highest goal has always been to achieve processing of the widest possible range of recipes.

Comparison of shortcrust doughs during processing in a rolling machine or Janssen cookie former

For doughs that you form conventionally with a rolling machine, an additional quantity of flour is added to the dough recipe during the forming process (this can amount to up to 5% of the dough quantity) to prevent sticking to the rollers. This means that the dough has a higher quantity of flour than specified in the recipe. If you want to process these doughs with our Janssen cookie formers, you must add the additional flour quantity to the basic recipe during preparation so that the dough does not stick in the pattern roller. Consequently, the same requirements apply as for the rolling machine, with the only difference being that the time at which flour is added is changed during the production process.



Dough variety and recipes

With our Janssen cookie formers, you can process a great variety of doughs and recipes: Shortcrust doughs, such as speculaas biscuits, brown and white biscuits, shortbread, vanilla crescents, Jimmy Dodgers, jam filled biscuits, Linzer biscuits, tea cakes, but also savoury, spicy shortcrust doughs are amongst the dough types with which our customers most typically work. With a few restrictions, ingredients such as chopped nuts, almonds or chocolate bits are also possible. Moreover, marzipan, fondant, sugar paste and gingerbread can also be shaped very nicely.

The production of cake bases and pastry cases calls for more elastic shortcrust doughs and offers an alternative that is both efficient and easy on the dough compared to the classic rolling out procedure.

Our recipe book shows you selected recipes that you can process very well with our Janssen cookie formers. Since doughs are generally made up of different natural ingredients, the dough properties can have different effects depending on the origin of the ingredients.

Consequently, the recipes presented serve as a basis which may have to be adapted depending on the forming results.

Basic recipes

We recommend the following as basic recipes:

Dry shortcrust (1-1-2):

1000 g sugar,
1000 g butter,
2000 g flour,
200 g milk (10% relative to flour quantity)
Spices and very little to no raising agent.

Soft shortcrust (1-2-3):

1000 g sugar,
2000 g butter
3000 g flour,
100 g egg yolk
Spices and very little to no raising agent.

Recipes with a higher or also a lower fat content can be used. For doughs with less fat, more liquid must be used; for doughs with more fat content, it may be necessary to completely omit the liquid.

You can find additional delicious recipes in our recipe book.

( See the "Janssen recipe book")

We wish you much pleasure with our Janssen cookie former.



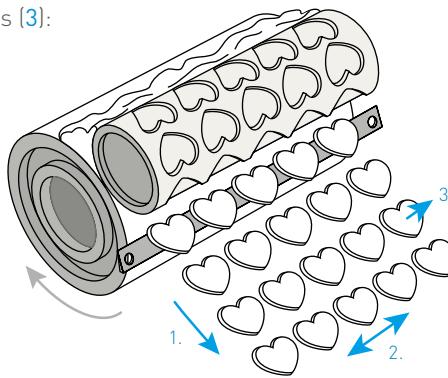
14.3.2 General information about dough preparation

In general, dimensional deviations can occur during the forming of cookies depending on the dough properties (ingredients, temperature, liquid content, sticking, rising and baking behaviour). These lie within a tolerance range depending on the dough properties:

In the direction of forming [1]:
about +5% / -20%

Perpendicular to the direction of forming [2]:
approximately +/-5%

Thickness of the cookies [3]:
about +/-7%



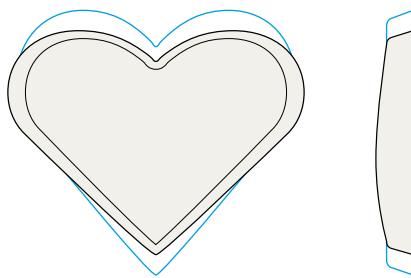
As JANSSEN has no influence on these dimensional deviations, they are outside our area of responsibility and are therefore **not** a reason for complaints.

The cookies are cut off after forming. This cutting process causes the cookies to be compressed slightly. We take this compression into account in the manufacture of the pattern roller and compensate this dimensional change with a scaled engraving.

If a high degree of dimensional accuracy is required, we strongly recommend that a test roller be ordered so its shape can be checked with the dough of the final product.

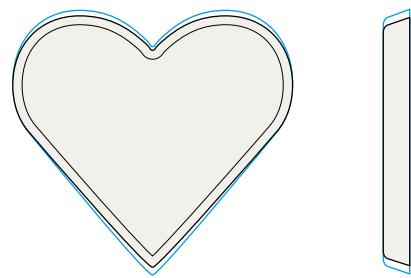
Rule 1:

The thinner/ warmer or softer the cookie, the more the cookie is compressed and becomes slightly thicker and wider in the middle.



Rule 2:

The thicker/ colder or harder the cookie, the less the cookie is compressed.



14.4 Troubleshooting and fault rectification



Problem	Cause	Remedy
1) The dough sticks in the pattern roller.	<ol style="list-style-type: none">1) The dough has too little binding because it has not been kneaded long enough.2) The dough has too little binding because it has just been freshly prepared.3) The dough has too little binding because the recipe is not suitable for the machine.	<ol style="list-style-type: none">1) It may be necessary to knead the dough a little longer.2) Let the dough rest for about 5-8 hours, cooled and covered with a linen cloth. Before processing, knead the dough once again briefly.3) Choose a recipe from our Janssen recipe book that is similar to your recipe. Prepare this recipe from the recipe book and 1-2 other recipes that are similar to your recipe in smaller quantities (approx. 10 kg) and test them in the machine.



Problem	Cause	Remedy
2) The dough does not stay on the kneading roller.	The dough is probably too dry and cannot adhere to the kneading roller, or there is another – usually softer – dough from the previous production on the kneading roller that will not bond with the new dough.	Keep the dough softer by adding fat or liquid.
3) The dough stays on the kneading roller, but accumulates on the knife.	1) The dough is probably too soft and cannot slide over the cutting blade. 2) The dough is probably too soft because the dough temperature is too high and it cannot slide over the cutting blade.	1) Keep the dough firmer by removing fat or liquid. 2) Process the dough slightly cooler. High-fat shortcrust doughs with a lot of egg, such as crescent doughs, are generally best processed at a dough temperature of 11-14 °C.



Problem	Cause	Remedy
4) The dough pieces are compressed in length by more than 10%.	The dough probably has too much fat or liquid or is too soft due to the dough temperature being too high and it cannot slide over the cutting blade.	<p>Make the dough a little firmer (by removing fat or liquid or keeping it cooler).</p> <p>Alternatively, you can try setting the knife speed to level 2. The knife oscillates (moves) back and forth faster and may be able to cut the soft dough pieces better.</p> <p>Caution: Level 2 for the knife speed causes higher mechanical loads in the knife drive gear unit and leads to faster wear.</p>
5) The shapes are now formed perfectly, but are too far apart on the baking sheet.	The lower sheet transport (speed V3) is set too fast.	Set the sheet transport speed (V3) slower.



Problem	Cause	Remedy
6) Cookies, especially small ones, or crescents, fall upside down when being placed on the baking sheet:	The drop height of the cookies is too great or the cookies are too small.	Place the height-adjustable sheet transport as close as possible beneath the transfer edge of the upper conveyor belt. If this is not sufficient, use our adaptable "tilt protection bracket".
7) The cookies have doughy edges or fringes around the edges.	The knife is too close to the kneading roller and is peeling the dough band off.	Adjust the knife setting a little thinner so that no dough is peeled off the dough band and the cookies are formed with clear contours without fringes at the edges.
8) The cookies break when placed on the baking sheet.	The dough is too dry or the drop height from the upper conveyor belt to the baking sheet is too high.	Add more fat or liquid to the dough or reduce the distance from the transfer edge of the upper conveyor belt to the sheet transport.

14.5 Sensor faults



Problem	Cause	Remedy
9) The sheet sensors do not detect the baking sheet.	<p>1) The distance between the sensor and the sheet is too great. Either the sensors are not optimally adjusted or your baking sheets are strongly deformed (crooked).</p> <p>2) The sensor is defective. You can check this by holding a metallic object against the sensor. The sensor should light up yellow when it comes into contact with metal. If this is not the case, the sensor is most likely defective and must be replaced.</p>	<p>1) Reduce the distance between the sheet sensor and the sheet. You can easily adjust the height of the sensor.</p> <p>2) Replace the defective sensor.</p>

14.6 Conveyor belt faults



Problem	Cause	Remedy
<p>10] The upper conveyor belt does not run straight, but moves to the left or right.</p>	<p>1) The belt run adjustment is not set correctly.</p> <p>2) Dough residues have built up on the drive roller. This increases the diameter of the drive roller and causes the strip to wander to the thinner diameter of the drive roller.</p>	<p>1) Straight running can be adjusted with the small adjusting wheel for the belt adjustment. If the wheel is turned to the left, the belt also moves to the left. If the wheel is turned to the right, the belt also moves to the right. The adjustment must be made in small steps and you can easily let the machine run for a few minutes to adjust the running of the belt step by step.</p> <p>2) If the belt cannot be adjusted, remove the belt and remove any dough residue that has settled on the drive shaft of the drive roller.</p>

14.7 Safety device faults



Problem	Cause	Remedy
11] The "Info-error" lamp lights up blue (Compact controller) or the red warning window appears ("Performance controller")	<p>1) The hopper grid and hopper are open.</p> <p>1.1) The safety switch of the hopper grid is defective or set incorrectly.</p> <p>2) An EMERGENCY STOP button is activated.</p> <p>2.1) An EMERGENCY STOP button is defective.</p> <p>3) The conveyor belt cartridge is not inserted or not inserted correctly.</p>	<p>1] Close the hopper grid and hopper and press the enable button.</p> <p>1.1] Replace or correctly adjust the safety switch on the hopper grid.</p> <p>2] Deactivate the EMERGENCY STOP button and press the enable button.</p> <p>2.1] Replace EMERGENCY STOP button.</p> <p>3] Insert the conveyor belt cartridge correctly and press the enable button.</p>

If you cannot correct the fault yourself, contact your dealer or us.



15 Removing from service / Storage

15.1 Qualifications of personnel

Repair work must be carried out by a person with appropriate training, education and experience which enables them to identify risks and prevent hazards that may be caused by electricity or mechanical systems.

15.2 Requirements and safety



After a longer period of stand-still, the machine should be taken out of service and stored correctly, otherwise there is a risk of contamination for the subsequent production of cookies.



Never pull the mains plug while the machine is still switched on.



Do not use a plastic cover or foil, as a humid climate can develop underneath which can lead to mould growth and pest infestation!

15.3 Required aids

We recommend using cut-resistant gloves for cleaning and assembly when installing and removing the knife.



The figure shows cut protection gloves

15.4 Required tools

Normal machine operation:

No special tools are required for the normal operation of the machine.

Maintenance and servicing:

Depending on the situation, you will need various tools for maintenance work:

( [Section "8.5.3. Special tools for assembly and maintenance"](#))

15.5 Removing from service and storage of the machine

Clean the machine carefully ( [Section "12 Cleaning after shutdown"](#)).

Switch off the main switch on the front of the machine before disconnecting the machine from the power supply by pulling the mains plug.

Fold the sheet transport up or down for space-saving storage.

Store the machine in a dry and dust-free environment. The ambient temperature should not be below 5 °C or above 30 °C on a continuous basis.

We recommend a linen or cotton cloth as a cover.

16 Dismantling and disposal

16.1 Qualifications of personnel

For dismantling (disconnecting assemblies, disconnecting from power supply and energy dissipation), only those persons are authorized who have appropriate training, education and experience which enables them to identify risks and prevent hazards that may emanate from electricity or mechanical systems.

Disposal must be carried out by a specialist company or by persons with training and experience in handling hazardous substances.

16.2 Requirements and safety

-  *Environmental hazards may arise if not disposed of properly and professionally!*
-  *The machine and replaced components must not be disposed of as household waste!*

16.3 Required aids

We recommend using cut-resistant gloves for cleaning and assembly when installing and removing the knife.



The figure shows cut protection gloves

16.4 Required tools

You will need various tools for the dismantling:

( [Section "8.5.3. Special tools for assembly and maintenance"](#))

16.5 Dismantling the machine

Disconnect the machine from the power supply before dismantling.

The components can be completely dismantled into their individual parts and materials. The machine consists of the following materials:

- Plastics for use in the food industry (PP, POM, PUR, silicone, PA, PTFE)
- Stainless steel for use in the food industry
- Anodized aluminium
- Bronze bearings
- Spring steel
- Electronic components and motors

16.5 Disposal of the machine

After complete dismantling, the machine's parts must be disposed of separately in accordance with the locally applicable regulations and guidelines and delivered to the authorized collection points provided for this purpose.

If in doubt about environmentally friendly disposal, please contact your local authorities or disposal companies for information.



17 Declaration of Conformity

The manufacturer / distributor:

Niederrheinische Formenfabrik Janssen GmbH
Moerser Strasse 33
47798 Krefeld
Germany

hereby declares that the following product

Product designation: Cookie former

F250 UL

F450 UL

F600 UL

Performance

Compact

Serial number/ machine number: _____

Year of manufacture: _____

complies with all relevant provisions of the legislation applied (listed below) including any amendments thereto in force at the time of the declaration. The manufacturer bears the sole responsibility for issuing this declaration of conformity.

The following directives were applied:

- UL763:2018
- CAN/CSA-C22-2 No. 195

Name and address of the person authorized to compile the technical documentation:

Niederrheinische Formenfabrik Janssen GmbH
Moerser Strasse 33
47798 Krefeld
Germany

Place: Krefeld

Date: _____

[Signature]

Dr. Petra Gersch, Managing Director



18 Supplementary documents

18.1 Recipe book

You can request the recipe book from us.

18.2 Spare parts list

You can request the spare parts list from us.

18.3 Electrical circuit diagrams

The electrical circuit diagrams are attached to these operating instructions in the annex.

Quick Start for Janssen Cookie Formers

F250 UL / F450 UL / F600 UL

(supplementary to the original operating instructions)



19 Quick start

19.1 Machine setup

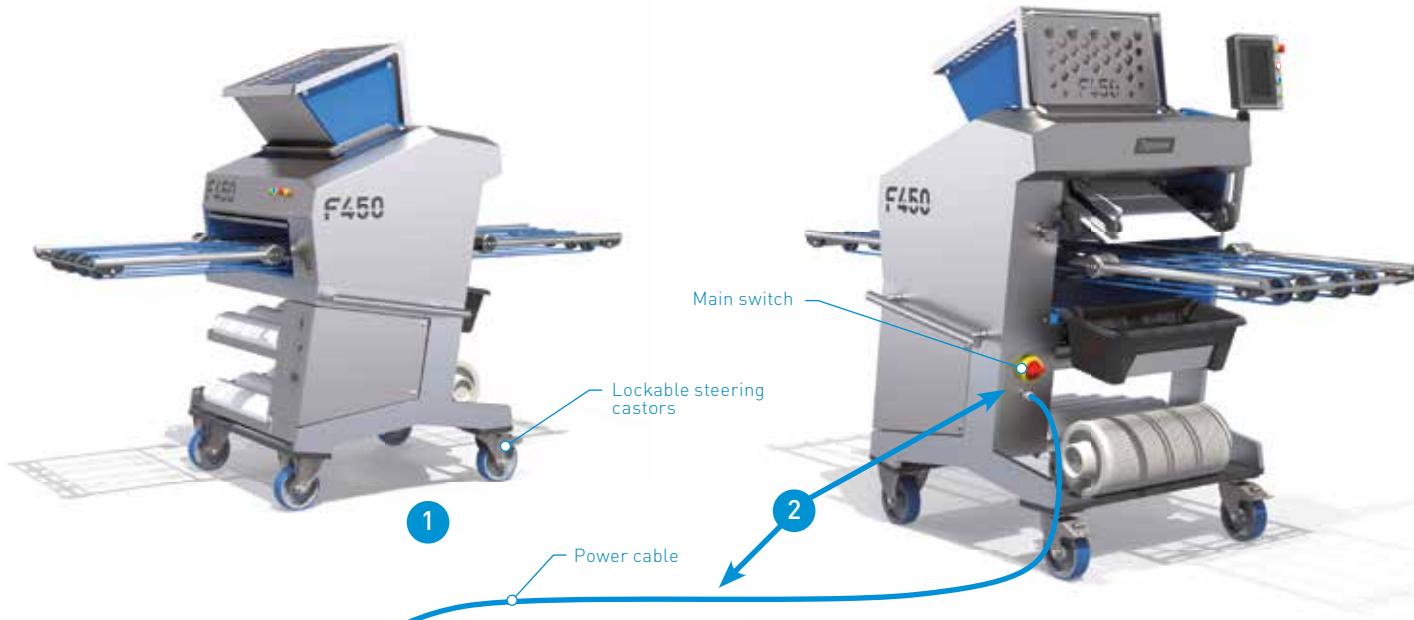
Step 1

Position the machine so that you have enough room to move around it.

Lock the **steering castors** of the machine.

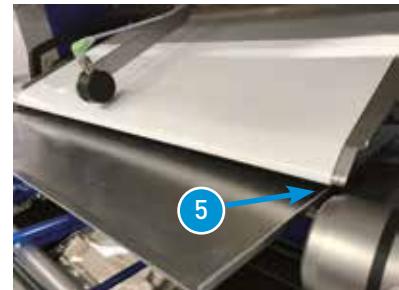
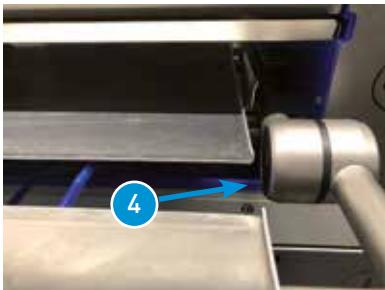
Step 2

Connect the machine to the power supply with the **power cable** and turn on the **main switch**.



Step 3

Fold out the sheet transport in the front and rear (optional).



Step 4

Check to be sure the sheet guide is adjusted optimally for the sheets.

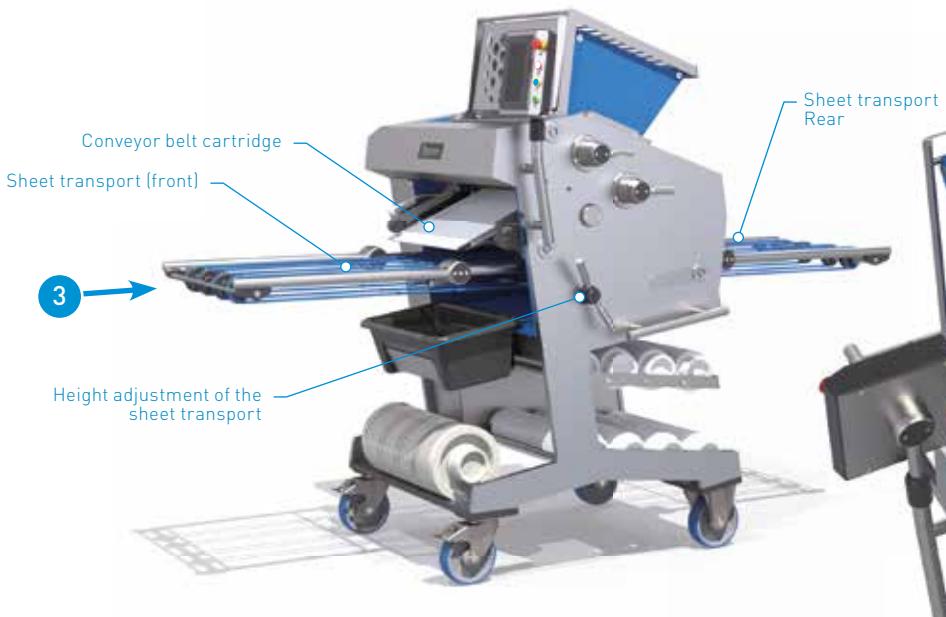
Step 5

Check to be sure the sheets can pass under the upper **conveyor belt cartridge**.

If the sheets should get stuck, you must set the **height adjustment of the sheet transport** downwards slightly.

Note:

If some of the sheets differ extremely from the other sheets due to severe deformation, please sort them out, as they may interfere too much with the production process.

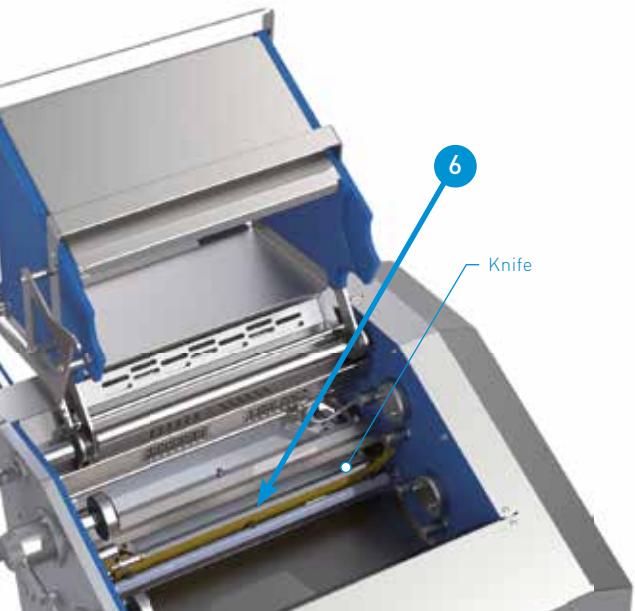


Step 6

Check to be sure the **knife** is perfectly clean and free of dough residue on both sides.

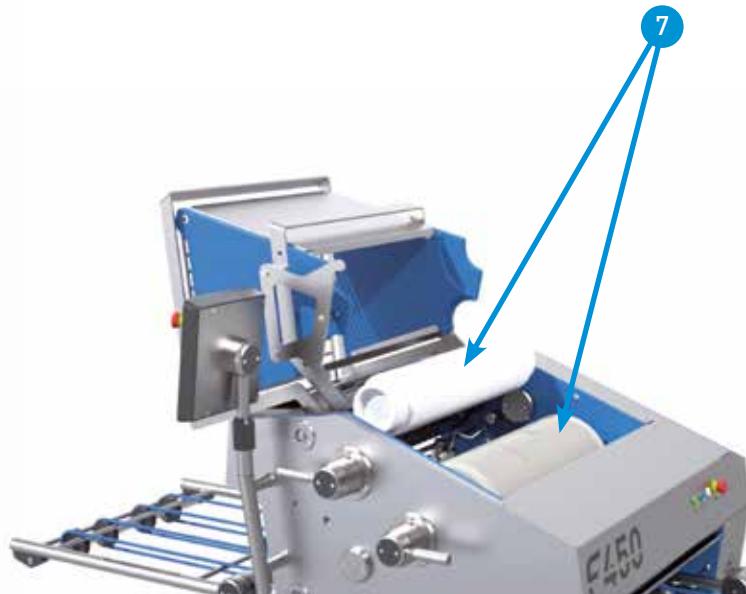
⚠ Note:

If the knife is not free of dough residues, the cookies cannot be formed properly!



Step 7

Install the **kneading roller** and the **pattern roller** that is suitable for the programme and close the hopper.



Step 8

Note: only applies for the "Performance" controller.

After the initial screen appears, select the "Programmes" section under "MENU" and choose the programmes you want to work with.

8



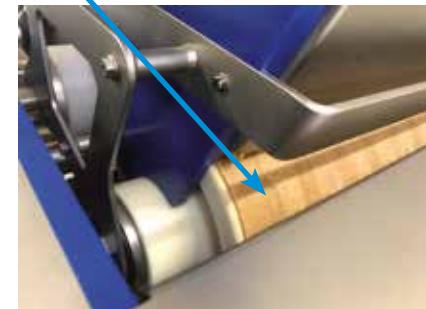
Step 9

In the first step, fill only a handful of dough into the hopper and switch the machine on in "Permanent" mode and make sure that the dough does not stick to the pattern roller.

⚠ Note:

If the dough sticks in the pattern roller, preheat the pattern roller without dough at heating level 2 for about 5 minutes. The roller should be at about body temperature. You can only start forming the dough once the roller is warm enough.

If the dough still sticks in the pattern roller, the dough must be modified (temperature, kneading time, recipe).



Step 10

If the dough does not stick to the pattern roller, fill the hopper with dough at most to half its capacity.

Start the machine in "Permanent" mode and let the machine run until the first rows of cookies are formed over the complete belt width and the kneading roller is completely covered with dough (this only takes a few seconds).

As this takes place, set the desired cookie thickness.

Step 11

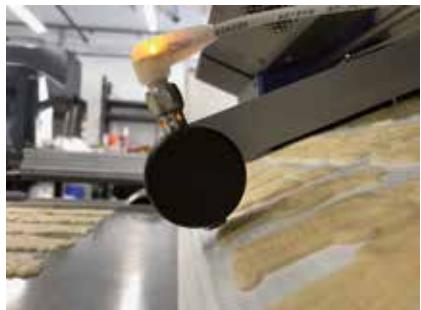
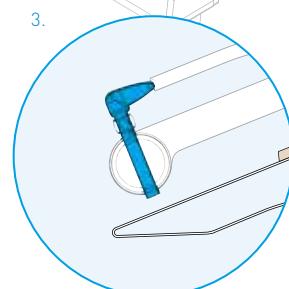
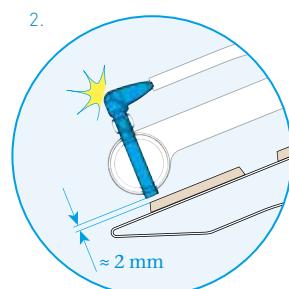
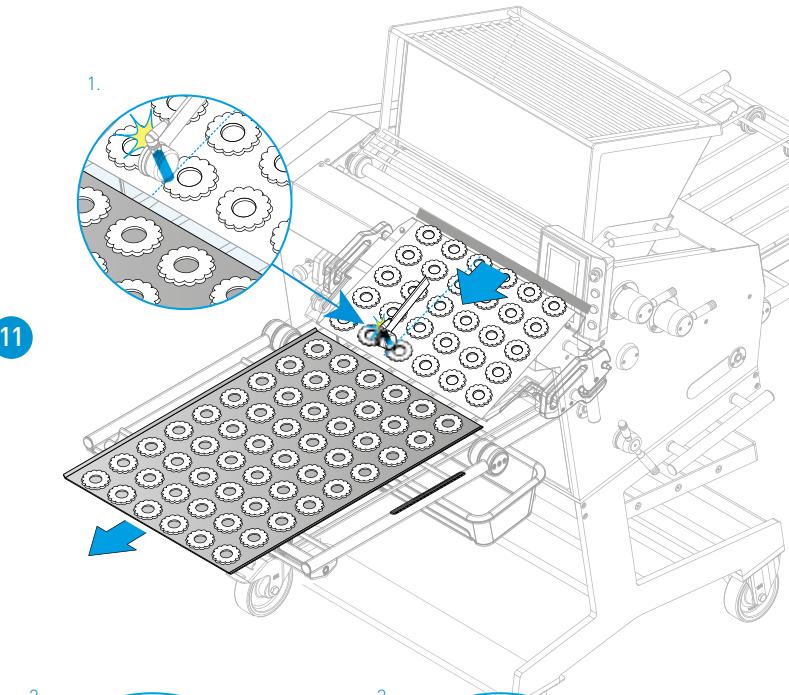
When the cookie rows are well formed over the entire width of the belt, position the dough sensor exactly over a row of cookies (1). You can loosen and fix the dough sensor holder with the adjusting wheel. The lower edge of the dough sensor should be located about 2 mm above the formed cookie.

⚠ Very important:

If the cookie is 2 mm below the sensor, the sensor lights up yellow (2).

When you pull the cookie away (3), the sensor must light up green. If it lights yellow, the sensor is too close to the conveyor belt.

If the dough sensor is set incorrectly, the controller cannot work in semi-automatic and automatic mode!

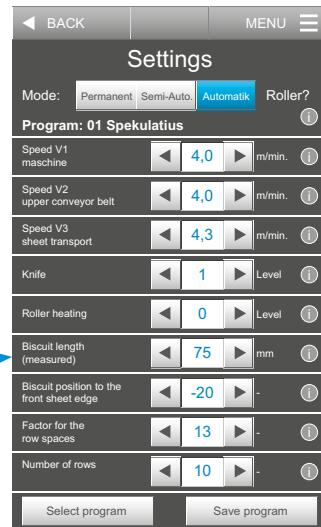


Step 12

Note: only applies for the "Performance" controller.

Check to be sure the formed length of the cookie matches the length of the cookie in the settings.

The real cookie length should not differ by more than about 10% from the length specified in the settings, otherwise the desired number of cookie rows cannot be achieved.



Step 13

Once you have set up the machine in "Permanent" mode and the rows of cookies are well formed,

you can then switch to "[Semi-automatic](#)" or "[Automatic](#)" mode.

When changing the mode, you must press the green "Start" button and, if necessary, the yellow "Enable" button beforehand.

Make absolutely sure that you insert the sheets into the back of the machine with a minimum spacing of approx. 50 mm between the sheets. The sheets must not touch each other, otherwise the machine will load the sheets incorrectly.

⚠ Note for thin cookies:

With thin cookies it is essential that the machine runs almost continuously and does not stop, otherwise a row will be incorrectly formed due to the short standstill. This cannot be prevented due to the process, as the dough is elastic and a damaged area is left when it restarts.



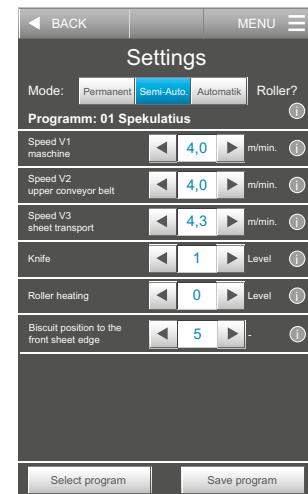
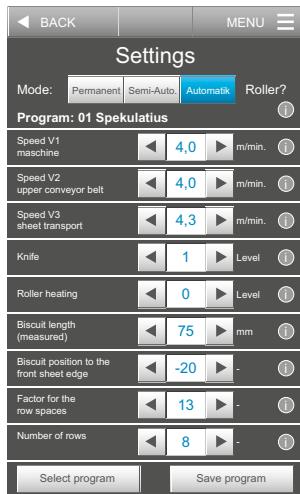
Step 14

Note: Only applies for the "Performance" controller.

In "Automatic" mode, the sheet transport stops after each row of cookies and deposits the following row of cookies at the desired distance.

With the "Automatic" mode, the rows of cookies are placed on the baking sheet with the desired spacing between them. Each row of cookies is registered and placed on the baking sheet at the desired spacing.

This mode is only recommended if the cookies are consistently formed perfectly.



With the "Semi-automatic" mode or the "Compact" controller, only the first row of cookies is detected and the tray is continuously loaded with cookies at a constant speed without the sheet stopping in between. As a result, the spacing between the rows of cookies may become larger.

You can also see that for this "Semi-automatic" mode, the lower (1) setting options are not available.

This "Semi-automatic" mode is more robust and process reliable.

Step 15

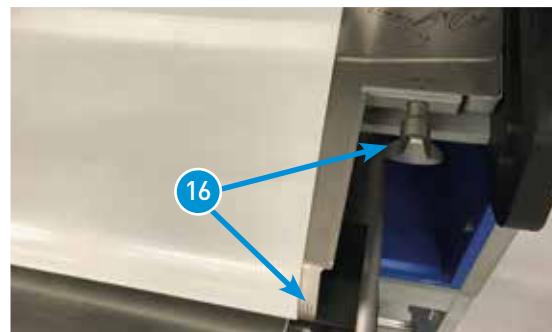
If the cookies should tip upside down during transfer to the baking sheet (for example, crescents), you can mount the tilt protection bracket on the cartridge. This prevents the cookies from tipping upside down.



Step 16

If the upper conveyor belt wanders to the left or right, turn the adjusting wheel very carefully in the direction in which the belt is to move. The adjustment is very sensitive, so turn the adjustment wheel only very slightly (about 10°) and wait for the belt to move. The markings on the left and right of the front deflection edge give you a good indication of the positioning.

If the belt cannot be adjusted at all, remove the belt and clean the cartridge drive shaft and the deflection roller.





*"We wish you much
joy & pleasure
with your new machine!"*

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Do you have any questions?

~

Contact us!





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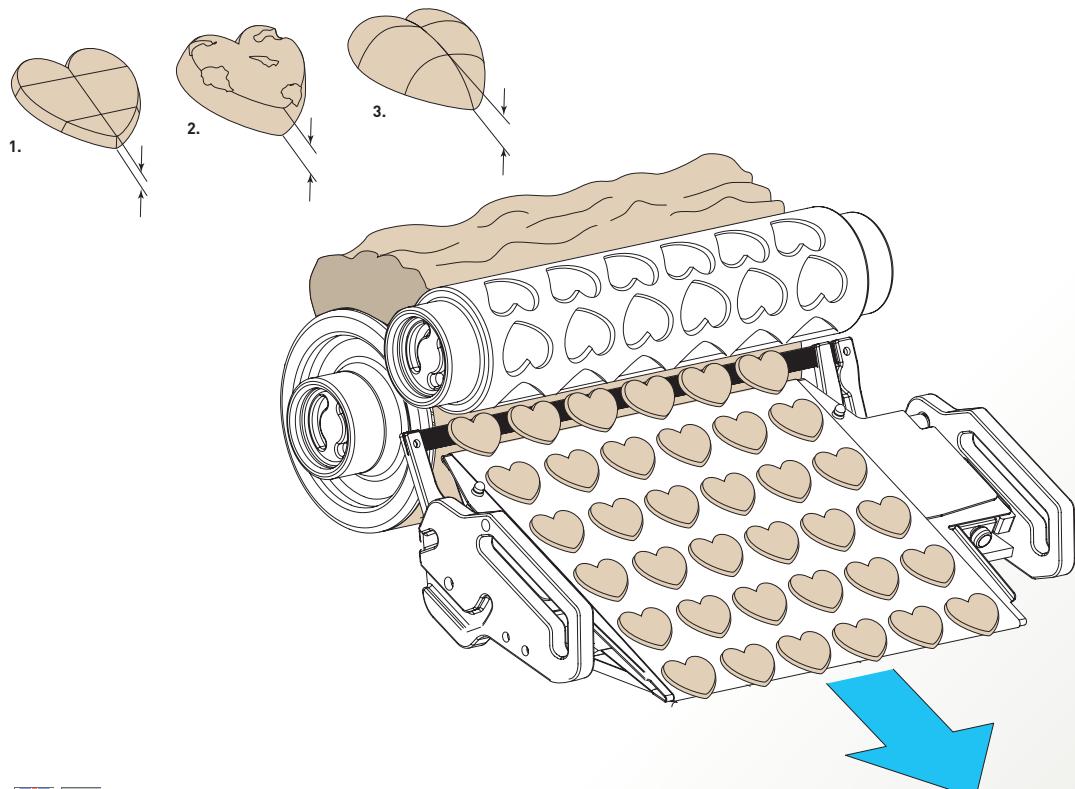
info@nff-janssen.de
www.nff-janssen.de



Instructions for dough texture/ correct forming for the Janssen Cookie Formers

F250 / F450 / F600

(Supplement to original operating instructions)



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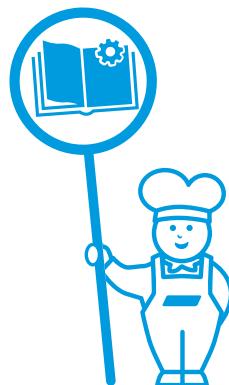
info@nff-janssen.de

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1.1 Requirements for the correct forming of biscuits and dough bands

The Janssen Cookie Formers are optimally set at the factory for perfect biscuit shaping and tested before delivery according to a standardised inspection routine. Faultless forming is carried out with a 1-1-2 shortcrust pastry, which has proven itself for decades for the basic setting of the machine.

The Janssen Cookie Formers can handle versatile doughs. The recipe as well as the preparation of the dough largely determine the workability and quality of the finished product.

The processability of the doughs essentially depends on the following 7 factors:

- Selection of ingredients
- Preparation procedure
- Processing temperature
- Ambient atmosphere
- Kneading time
- Resting time
- Processing parameters during forming

For reference, we would like to refer to our recipe book. There you will find versatile recipes that can be processed with our Janssen Cookie Formers. You can use these recipes as a reference to your desired recipes as a basis.
( [see chap. 18 of the operating instructions](#))

In the following, the essential criteria for a mechanically correct setting of the machine for forming are explained here.

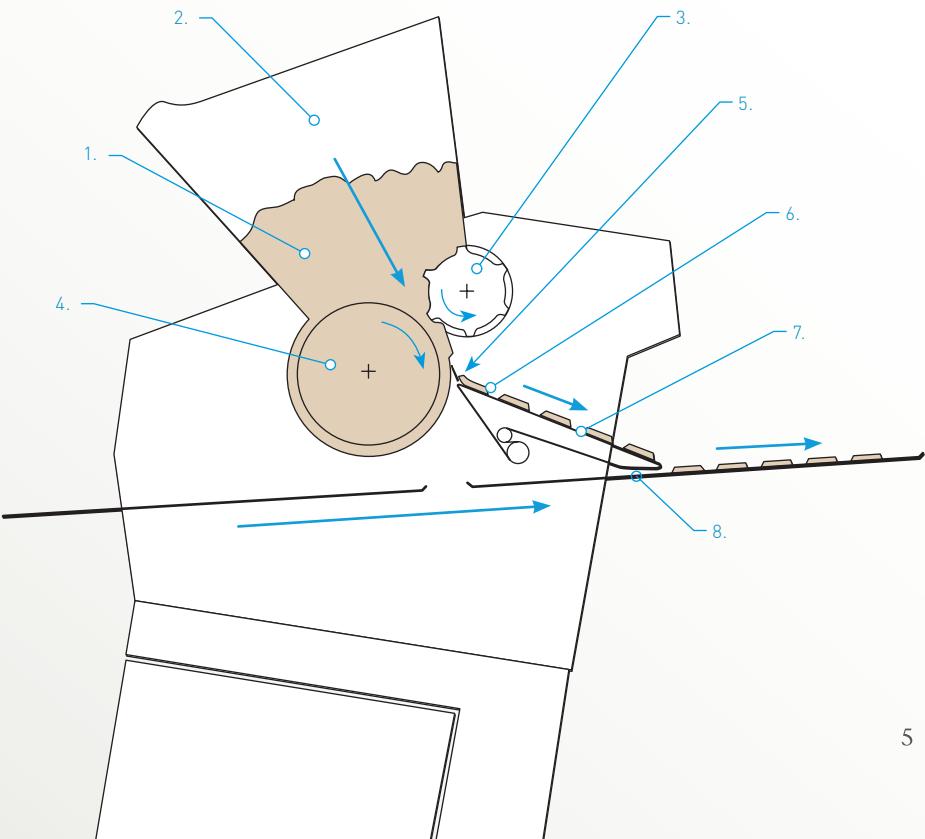
This is essentially defined by:

- 1) The correct mounting of the forming rollers (especially when using forming roller adapters for older Janssen forming rollers of the previous K-series).
- 2) The correct basic setting of the knife/knife shaft to the kneading roller.
- 3) The pastry thickness knife setting with the adjusting wheel, with which the fine adjustment of the pastry thickness can be made during operation..
( [see »jan_anl_F250_450_600_Forming_knife_setting_2022_EN.pdf«](#))

1.2 Moulding principle of the Janssen F-Series Cookie Formers

Janssen cookie formers employ an operating principle that has proven itself for decades and which Janssen has continued to develop on an ongoing basis:

The dough [1.] is filled into the hopper [2.]. The dough is drawn in by a pair of rollers – the kneading roller [4.] and the pattern roller [3.]. A dough band forms around the outer surface of the kneading roller. The pattern roller [3.] (which can be heated and replaced from the outside) embosses raised shape geometries or patterns on the dough band. These are cut off the dough band on the kneading roller by an oscillating knife [5.] immediately after the embossing process and are transferred to a conveyor belt [7.]. The conveyor belt feeds the resulting dough pieces [6.] to the baking sheet [8.].



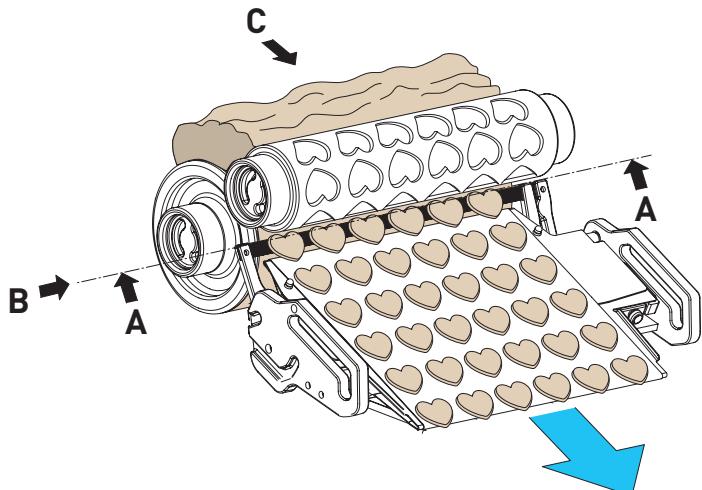
2 Biscuit thickness setting with the correct basic setting of the knife:

2.1 Correct shaping:

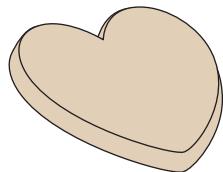
The biscuits are shaped with the maximum biscuit thickness as engraved in the forming roller.

The knife cuts off at the base of the biscuits directly at the dough mantle of the kneading roller (see view C, view B and cross-section view A-A).

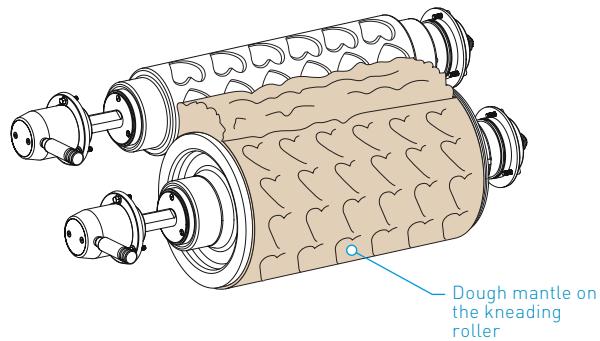
Very thin imprints of the biscuits are visible on the dough mantle of the kneading roller.



Biscuit:



View C:

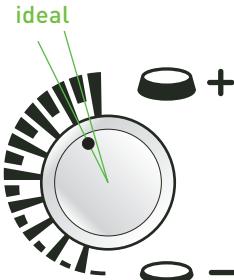


Ideal biscuit thickness setting:

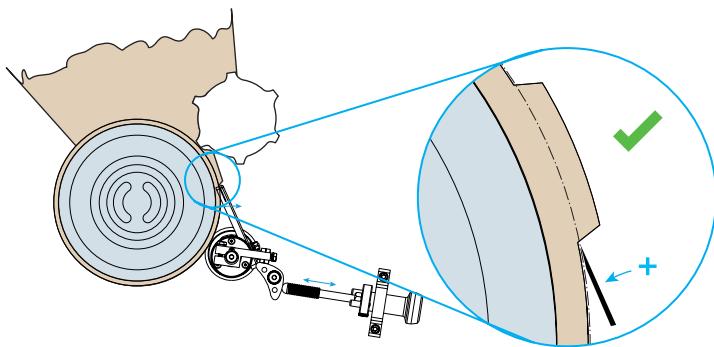
The ideal shaping thickness should be slightly below the maximum biscuit thickness setting (see illustration on the right).

Note:

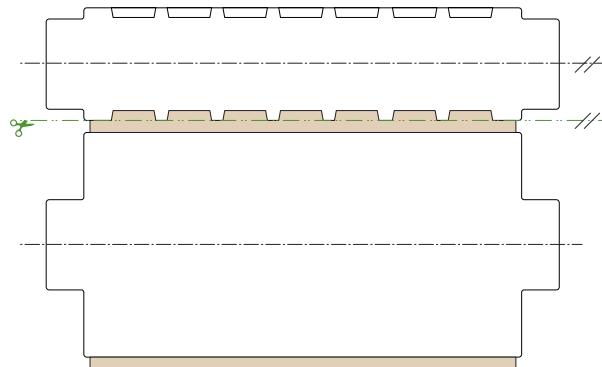
There is no exact value, as it depends largely on the elasticity of the dough.



View B:



Cross-section-view A-A:

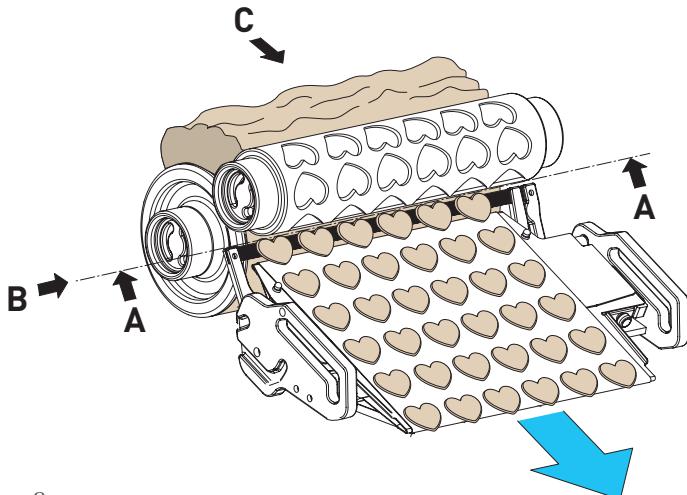


2.2 Forming too thin:

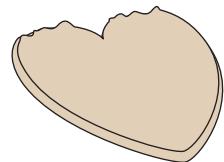
The biscuits are shaped with a thinner biscuit thickness than engraved in the forming roller.

The knife does not cut at the base of the biscuits, but at a greater distance from the dough mantle of the kneading roller (see **view C**, **view B** and **section view A-A**). Thicker imprints of the biscuits are visible on the dough mantle of the kneading roller.

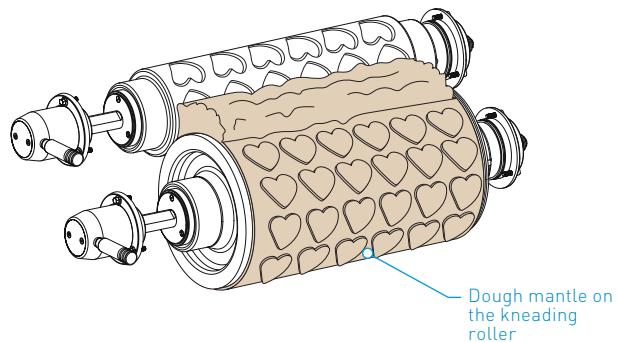
The shaped biscuits may fray at the upper edges!



Biscuit:

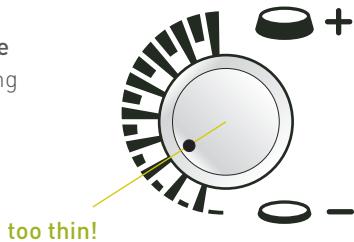


View C:

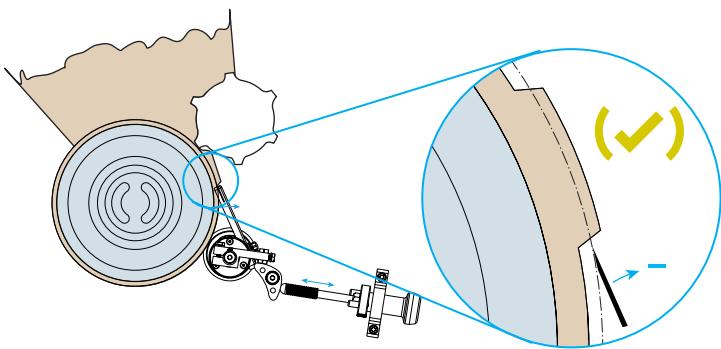


Too thin biscuit thickness setting

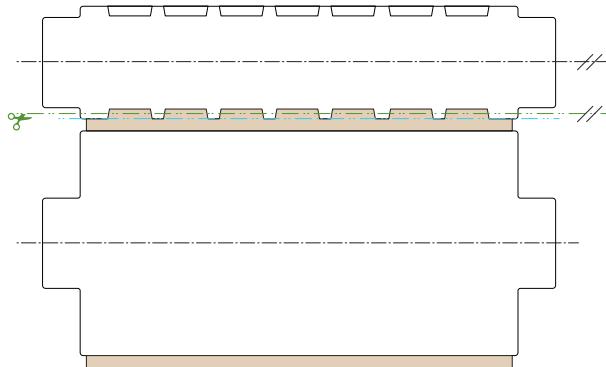
This biscuit thickness setting (see illustration on the right) is clearly too thin and can lead to faulty shaping results.



View B:



Cross-section-view A-A:



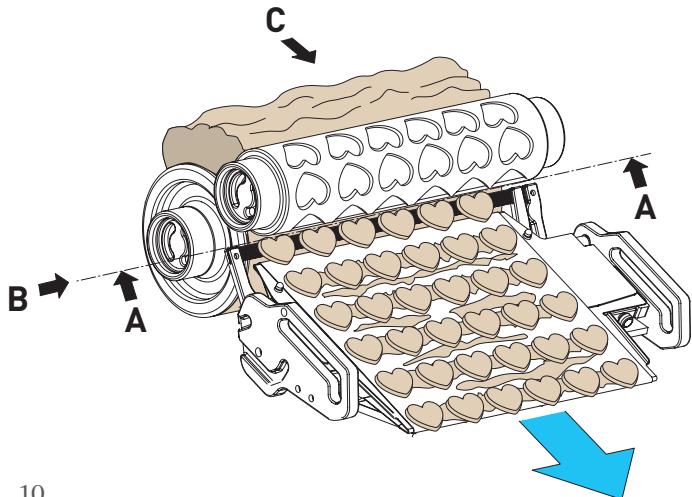
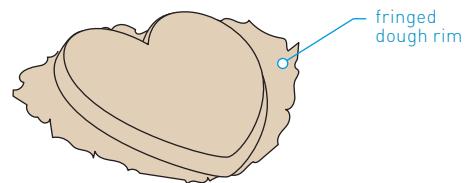
2.3 Forming too thick:

The biscuits are shaped with a greater thickness of biscuit than engraved in the forming roller.

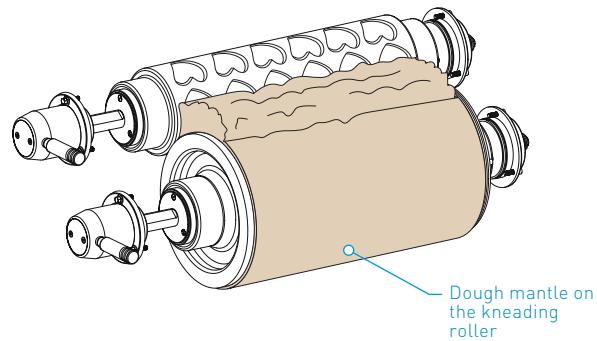
The knife does not cut at the base of the biscuits, but also cuts off layers of the dough mantle of the kneading roller (see **view C**, **view B** and **section view A-A**). No imprints of the biscuits are visible on the dough mantle of the kneading roller.

The biscuits have a fringed dough rim all around or are even shaped with a complete dough mantle.

Biscuit:

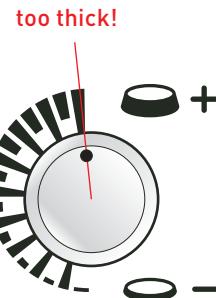


View C:

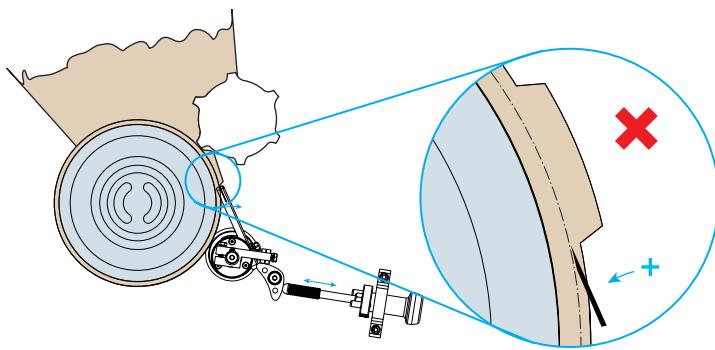


Too thick biscuit thickness setting

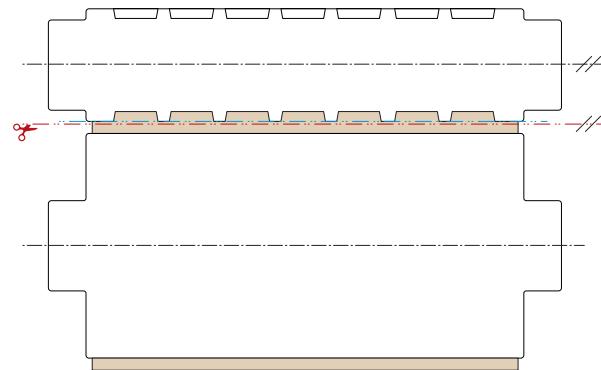
This biscuit thickness setting (see picture on the right) is clearly too thick. There is a fringed edge of dough around the biscuit.



View A-A:



Cross-section-view A-A:



3 Dimensional accuracy during forming

3.1 Tolerable dimensional deviations during shaping forming due to different doughs:

Our Janssen forming rollers are engraved precisely according to drawing.

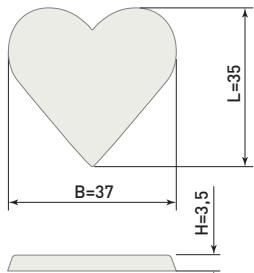


Fig. left: Dimensioned drawing corresponds to the of the customer

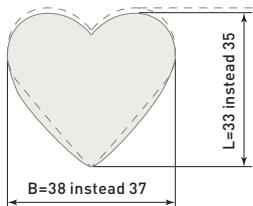


Fig. right: moulded biscuit

However, the biscuits produced with these Janssen forming rollers may show dimensional differences due to the individual dough properties (ingredients, temperature, liquid content, sticking, swelling and baking behaviour).

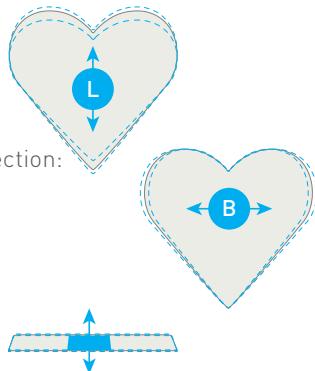


Since Janssen has no influence on these dimensional deviations, which can be caused by the dough properties, they are outside our area of responsibility and are therefore not the subject of complaints. subject of complaints.

3.2 Tolerance range

The biscuits are cut off after forming. This cutting process causes the biscuits to be slightly compressed. This compression is compensated for during the production of the roller by stretching the engraving in the forming roller. Nevertheless, **dimensional deviations** can still occur. Depending on the quality of the dough, they vary within a tolerance range.:

In forming direction:
approx. +5% / -20%

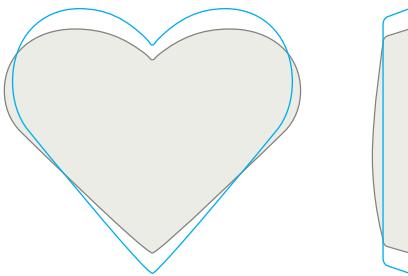


Transverse to the forming direction:
about +/-5%

Pastry thickness:
about +/-10%

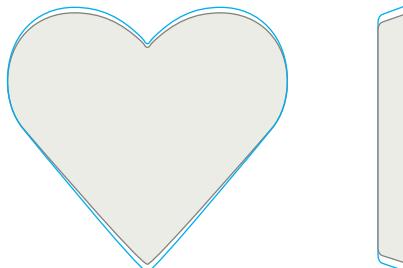
Rule 1:

The thinner/ warmer or softer the biscuit, the more the biscuits are compressed and become slightly thicker and wider in the middle.



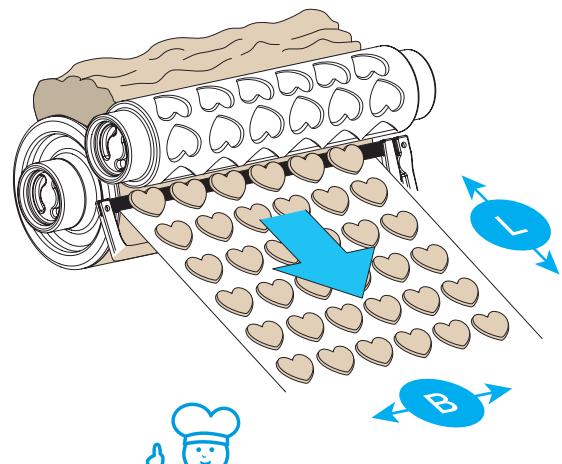
Rule 2:

The thicker/ colder or harder the biscuit, the less the biscuits are compressed.



3.3 Test roller

If a high tolerance fit is required, we strongly recommend that a test roller is ordered to check the forming with the dough for the final product before the forming roller is manufactured.

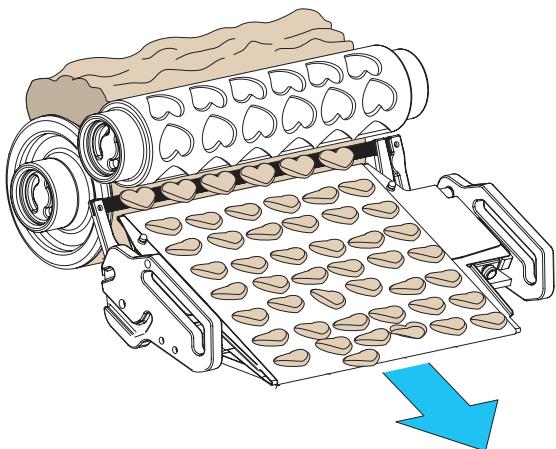


4 Faulty forming:

4.1 Uneven forming due to soft doughs:

The biscuits compress:

The biscuits are less or more compressed during forming. The pastry is too soft or elastic and pushes together on the knife.



Reason:

Too soft dough can have several causes:

- 1) the dough is too warm
- 2) it has too much liquid or fat
- 3) the butter/margarine is too soft or has unfavourable working properties
- 4) the dough has been kneaded too long
- 5) the dough is too tough and elastic

Biscuit:

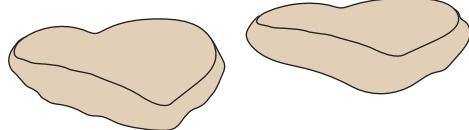


Fig. left and centre: Dough is too soft and pushes together or compresses on the knife.

Fig. right: Dough is perfect and is shaped exactly.

Possible activities:

If the dough should be too soft for forming, the following activities can help, the cause:

Note on 1) The dough is too warm:

Warm dough is usually softer than cold dough.

Cooling the ingredients before preparation or cooling the prepared dough can increase the firmness of the dough. For example, reducing the temperature of the dough from 20°C to 15°C can make a big difference.

Note on 2) The dough has too much liquid:

Liquid and fat make the dough soft. If the dough is too soft, check whether the amount of liquid or fat can be reduced. Alternatively, it may help to increase the amount of flour.

Note on 3) The dough has unsuitable fats:

We recommend hard butter or hard margarine. Soft, spreadable fats are unsuitable for forming with our machines. Clarified butter, vegetable fat or shortening can also be critical. As a rule, butter is less sticky than margarine.

Note on 4) The dough was kneaded too long:

Shortcrust dough, consisting of sugar, fat and flour, becomes more binding as the kneading time progresses. At the beginning, the dough is quite grippy, but still has very little binding. The longer you knead the dough, the more binding is created in the dough and it becomes more elastic. If the dough is kneaded too long, it loses its binding and becomes crumbly. The dough is then over-kneaded, has no more aroma and is tasteless after baking.

Note on 5) The dough is too tough and elastic:

In our Janssen recipe book, we give a rough guide to which recipes are suitable for processing in our Cookie Formers. Of course, infinite variations of recipes are possible and not every one is suitable. Other recipes, such as yeast dough, are not suitable because the dough is too tough and elastic.



4.2 Uneven forming due to sticky doughs:

The biscuits have a cracked surface:

The biscuits are formed, but have cracks or even holes on the surface and the dough sticks in the forming roller.



In general, no dough should stick to the surface of the forming roller!

Because what sticks in the forming roller is missing in the biscuit.

Reason:

Sticking of the dough in the forming roller can have many causes:

- 1) the dough has too little binding
- 2) the dough is too warm or too cold
- 3) the forming roller is not warm enough for doughs that need to be processed with roller heating
- 4) the dough is too sticky because of ingredients such as honey or soft margarine.



Possible activities:

Sticky dough can have different reasons. Sticking in the forming roller can be reduced by the following actions:

- Heating the forming roller by the forming roller heater.
- Using a Teflon forming roller (e.g. for honey dough (Gingerbread) or shortcrust pastry bands)
- Modification of the recipe (proportions or ingredients) or the preparation process (kneading time).

Which of the activities are effective must be checked in each individual case.

Note on 1) The dough has too little binding:

If the dough has too little binding, it will not release well from the forming roller. Doughs that are prepared too short or fresh generally have less binding. Longer kneading and a resting time of the shortcrust dough usually increase the binding.

Emulsifiers, such as egg yolk or lecithin, increase the binding, but small amounts of water also give the shortcrust pastry more elasticity.

However, the proportions of liquid due to egg or water must not be too high, as this generally makes the dough too soft. ( [see 4.1](#)).

1-1-2 and 1-2-4 shortcrust pastries usually have a little more binding than 1-2-3 shortcrust pastries.

Note on 2) The dough is too warm or cold:

Dough that is too warm or too cold tends to stick in the forming roller. Especially on cold dough, the water from the atmosphere condenses on the surface of the dough and results in a sticky, liquid layer with the sugar.

Note on 3) The forming roller is not warm enough:

Shortcrust doughs with a particularly high fat content tend to stick in the forming roller. By heating the forming roller with the forming roller heater beforehand, the release properties can be increased so that the dough no longer sticks so strongly in the roller. If this does not help, the recipe or the processing method must be modified.

Note on 4) The dough is too sticky because of the ingredients:

The ingredients of the doughs are significantly responsible for the correct forming in Janssen Cookie Formers. Soft fats are unsuitable in most cases

( [see »Janssen Recipe book«](#)).

Honey doughs and gluten-free doughs also tend to stick strongly in the forming roller and must be particularly well matched in the recipe. For critical doughs, we strongly recommend a dough test!



4.3 Uneven forming due to doughs that are too dry or too firm:

The biscuits are not shaped evenly:

The biscuits are incompletely shaped. The dough is too dry or too firm and is not evenly pulled in by the rollers. There are areas where the dough does not fill the forming roller completely.

Reason:

Dry or too firm doughs can have the following causes:

- 1) The liquid or fat content is too low and thus too dry, crumbly and without binding.
- 2) The dough is too cold and therefore too firm.
- 3) The dough has been kneaded too briefly and thus has no binding.
- 4) The proportion of emulsifiers (egg or lecithin) is too high (the dough does not bind), is too high (the dough binding is too strong) and does not no longer absorbs into the rollers



Dough is too dry and has no binding.



Dough is too firm and leads to incomplete filling of the forming roller

Possible activities:

If the dough should be too dry or firm, the following activities can help, depending on the cause:

Note on 1) The liquid or fat percentage is too low:

If the dough is too dry, the fat or liquid percentage should be increased. For reference, use the basic recipes in our Janssen recipe book ( [see »Janssen Recipe book«](#)).

Note on 2) The dough is too cold:

If the dough is too cold and therefore too firm, it cannot be pulled through the rollers and shaped evenly. 1-1-2 shortcrust pastry is usually at room temperature, 1-2-3 shortcrust pastry should be slightly cooler (13-17°C). Generally, the dough should feel grippy and smooth ( [see »Janssen Recipe book«](#)).

Note on 3) The dough is kneaded too short:

If the dough was kneaded too short, there was no binding in the dough. The sugar must bind with the butter and flour during kneading. For shortcrust pastry, we recommend making the dough one day before processing so that the dough can develop the necessary binding.

Note on 4) The percentage of emulsifiers is too high:

If the shortcrust pastry has too much binding (for example, due to too much egg), the dough will not be absorbed into the forming rollers. The emulsifier content should therefore be reduced somewhat.



4.4 Uneven forming due to doughs that are too tough:

The biscuits are not shaped and compress on the knife:

Tough doughs, such as yeast doughs, cannot be formed with the Janssen Cookie Former, as tough doughs are too elastic and stick to the knife.

Shortcrust pastry for wide dough bands to cover cake baking trays or large cake bases that have been kneaded too elastically (for too long) also push together on the knife and cannot be formed.

Possible activities:

Change recipe or prepare new dough.

(👉 see »Janssen Recipe book«)

4.5 Uneven forming due to too thick biscuits:

If the biscuits are too thick in relation to the outer dimensions, there is a risk that the forming roller will not be filled evenly with dough and the biscuits will have small to large holes. In the following chapter you will find helpful explanations on the correlation between pastry dimensions and different doughs.

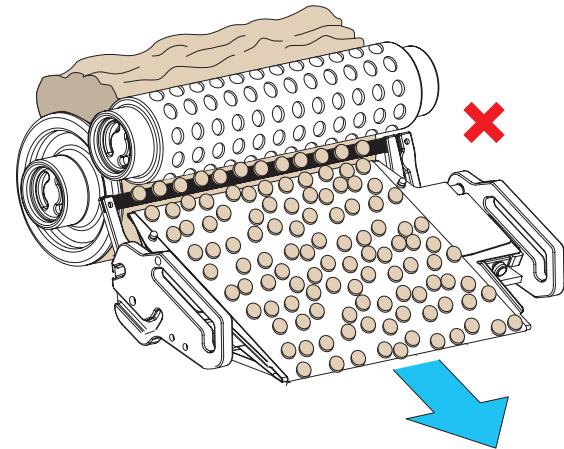


the forming roller is not filled evenly because the biscuits are too small and too thick.



4.6 Uneven forming due to too small biscuits:

If the biscuits are too small, the problem arises that the smaller and lighter the biscuits, the more difficult it is to form them evenly in a row. The small biscuits adhere differently to the knife, are deposited unevenly on the upper conveyor belt and, in the worst case, crumble onto the baking tray.



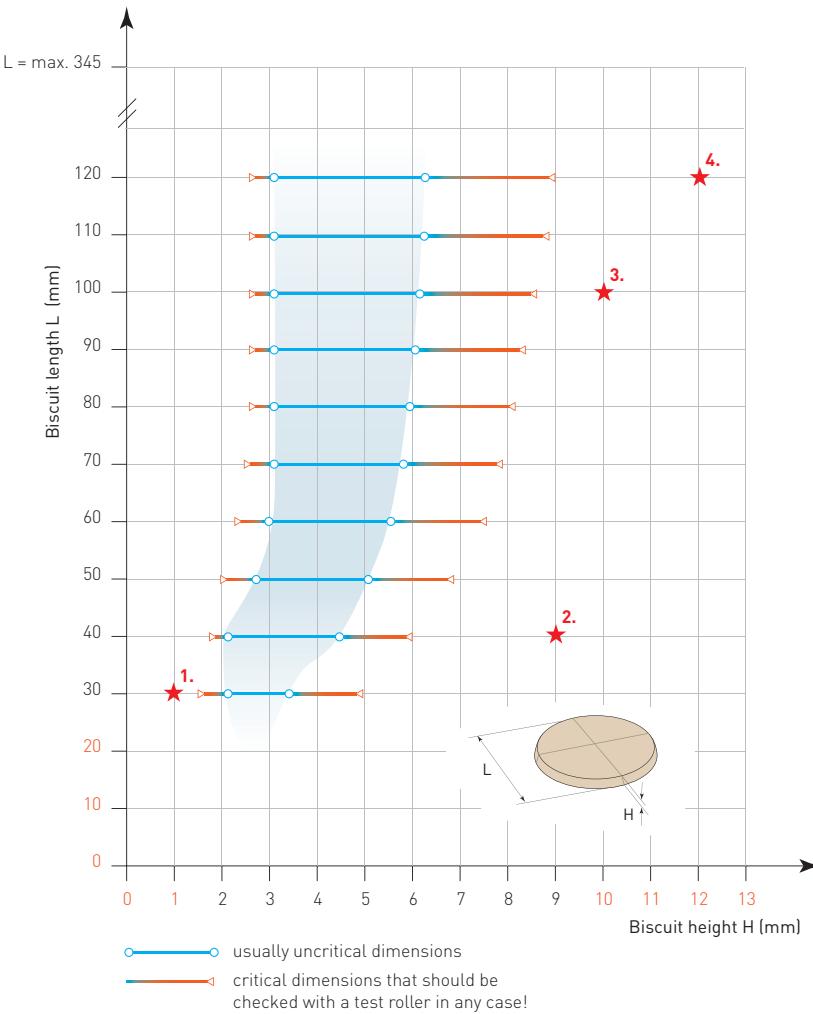
5 Optimal dimensions for good forming:

5.1 General information on pastry dimensions

The ideal dimensions of the biscuits for optimal forming are very dependent on the dough properties.

The illustration on the right shows the usually uncritical and critical dimensions, depending on the outer dimensions and the height of the biscuit. The blue areas are usually uncritical, the red ones should be checked in any case with an additional test with the actual dough!

Depending on the characteristics of the dough, this information can of course also be incorrect. Marzipan or soft gingerbread fills the forming roller for thick biscuits much better than a dry, tough shortcrust pastry.

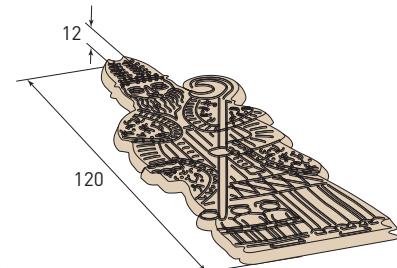


★ Exemplary exceptions (verification with test roller successful)

Exemplary exceptions ★:

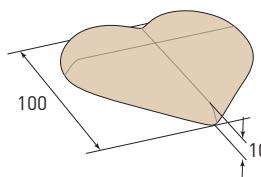
Exception 4:

Large speculoos made from very pliable speculoos dough that is easy to form.



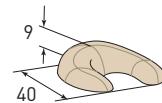
Exception 3:

Large heart made from soft gingerbread dough that is very easy to form.



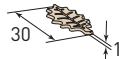
Exception 2:

»Kipferl« made from 1-2-3 shortcrust pastry (recipe from Janssen recipe book).



Exception 1:

Fine leaf made from fondant dough.

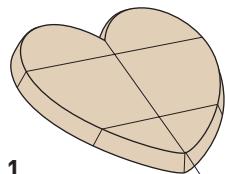


⚠ *All critical dimensions should be checked with the specific dough and a test roller! Janssen does not accept any warranty without prior dough test!*

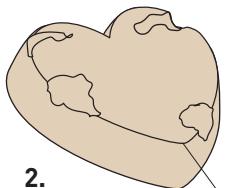
5.2 Flat and thick biscuits

Optimum forming depends largely on the dough and the design of the biscuit. Flat biscuits can usually be formed very well (see 1.). With thick biscuits, there is a risk that the dough does not fill the deep mould and the biscuits are not fully formed (see 2.).

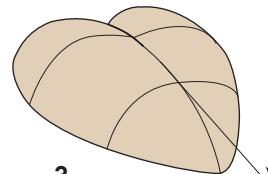
This effect occurs especially with sharp-edged biscuits. A strong rounding of the edges of high biscuits can significantly improve the shape (see 3.). Thicker biscuits can be formed better with larger outer dimensions than with smaller ones.



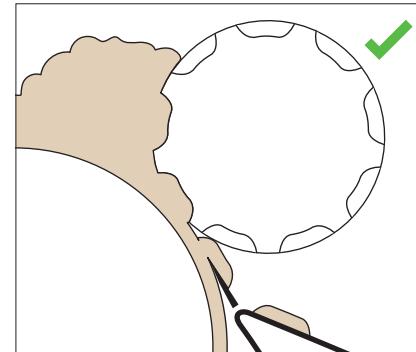
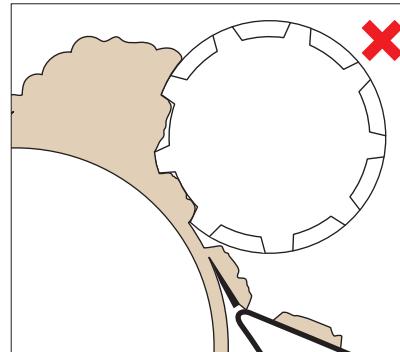
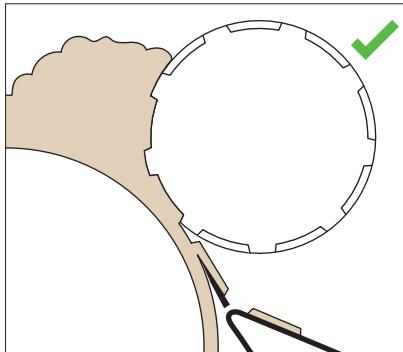
1.



2.



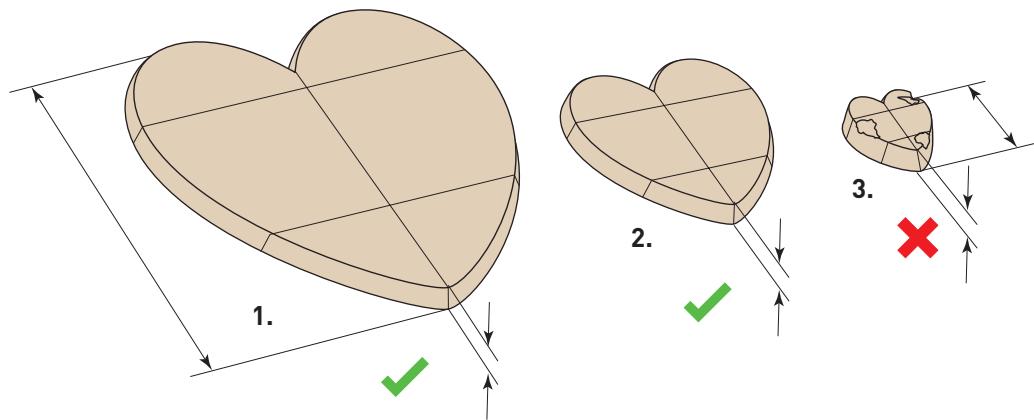
3.



5.2 Large and small biscuits

The outer dimensions in relation to the thickness of the pastry are just as important. If the outer dimensions are too small while the thickness remains the same (see 3.), there is a risk that the mould will no longer be filled optimally.

Small biscuits also have the problem that the smaller and lighter the biscuits become, the more difficult it is to form them evenly in a row (👉 see 4.6).



6 Forming and warranty

6.1 Requirements for correct forming of the biscuits

In accordance with the intended use, only food doughs may be formed in the Janssen pastry moulding machines of the F250, F450 and F600 series, especially shortcrust doughs, honey and syrup doughs and marzipan in accordance with the Janssen recipes. (👉 [see Instruction manual Chap. 14.3.1](#)).

Solid ingredients such as nuts, almonds etc. cannot be processed in the machine (or only to a limited extent) If necessary, forming in ground form is possible after a previous dough test.

The moulding thickness of the biscuits should generally be between 2.5-7 mm, in special cases less or more, depending on the dough and mould filling behaviour (👉 [see 5.1 General information on pastry dimensions](#)).

Most faulty formings are due to unsuitable doughs or improper preparation!

⚠ *Janssen guarantees the correct mechanical function of the function of the Cookie Formers.*

⚠ *Janssen does not provide any guarantee for dough recipes, as both the ingredients have very different regional and seasonal effects on the formability of the doughs, and the preparation process with the surrounding conditions..*

⚠ *Customised doughs should always be checked in advance with a dough test!*

⚠ *Critical shape geometries of the biscuits should always be checked in advance with a dough test using a test roller!*

Do you have any questions?

~

Contact us!





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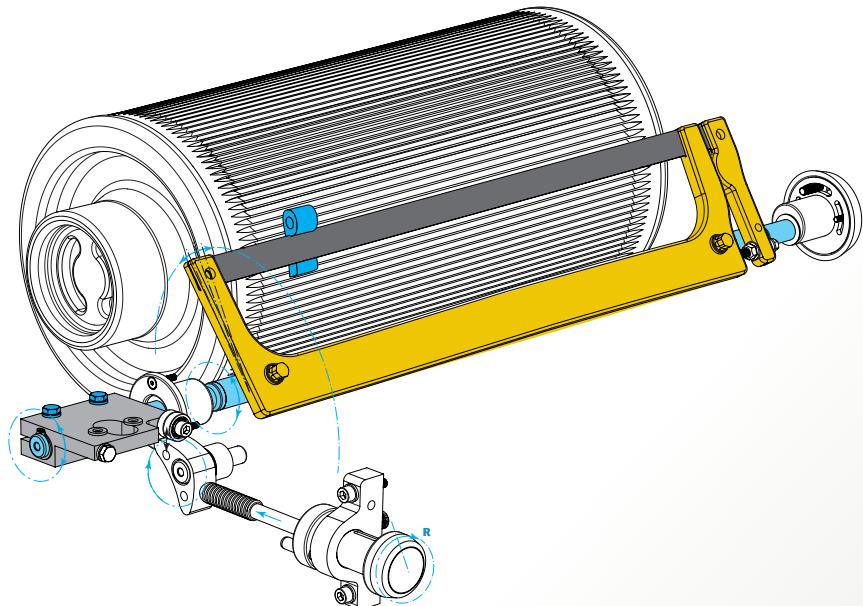
info@nff-janssen.de
www.nff-janssen.de



Instructions for knife setting/correct forming for the Janssen Cookie Formers

F250 / F450 / F600

(Supplement to original operating instructions)



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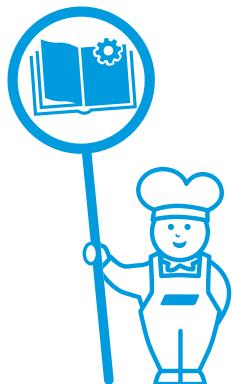
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1.1 Requirements for the correct forming of biscuits and dough bands

The Janssen biscuit formers are optimally set at the factory for correct moulding and tested before delivery according to a standardised acceptance routine. Correct forming is carried out with a 1-1-2 shortbread dough, which has proven itself for decades for the basic setting of the machine.

The Janssen biscuit formers can process a variety of doughs. The recipe as well as the preparation of the dough significantly determine the processability and quality of the finished product.

The workability of the doughs essentially depends on the following 7 factors:

- Selection of ingredients
- Preparation procedure
- Processing temperature
- Ambient atmosphere
- Kneading time
- Resting time
- Processing parameters during forming

For reference, we would like to refer to our recipe book. There you will find a variety of recipes that can be processed with our Janssen Cooky Formers. You can use these recipes as a reference to your desired recipes as a basis.

( [see chapter 18 of the operating instructions.](#))

In the following, the essential criteria for a mechanically correct setting of the machine for forming are explained here.

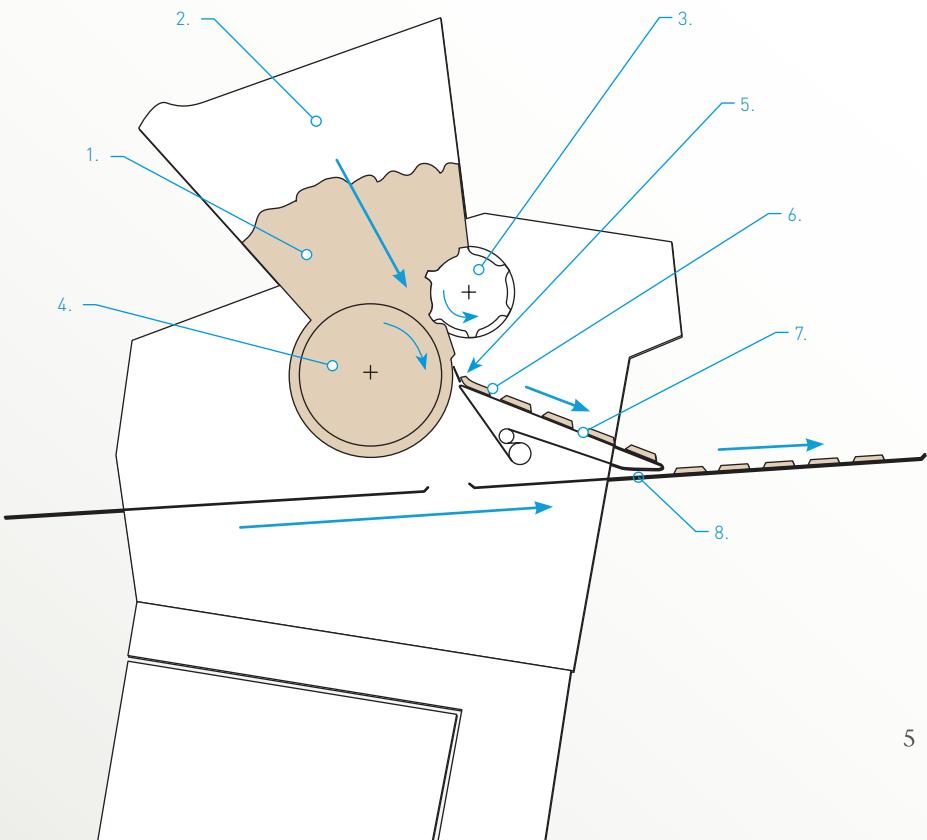
This is essentially defined by:

- 1) The correct bearing of the forming rollers (especially when using forming roller adapters for older Janssen forming rollers of the previous K-series).
- 2) The correct basic setting of the knife/knife shaft to the kneading roller.
- 3) The pastry thickness knife setting with the adjusting wheel, with which the fine adjustment of the pastry thickness can be made during operation.

1.2 Moulding principle of the Janssen Cooky Former

The F-series Janssen Cooky Former work according to a principle that has been tried and tested for decades and has been continuously developed by Janssen:

The dough (1.) is filled into the hopper (2.). The dough is drawn in by a pair of rollers – the kneading roller (4.) and the pattern roller (3.). A dough band forms around the outer surface of the kneading roller. The pattern roller (3.) (which can be heated and replaced from the outside) embosses raised shape geometries or patterns on the dough band. These are cut off the dough band on the kneading roller by an oscillating knife (5.) immediately after the embossing process and are transferred to a conveyor belt (7.). The conveyor belt feeds the resulting dough pieces (6.) to the baking sheet (8.).



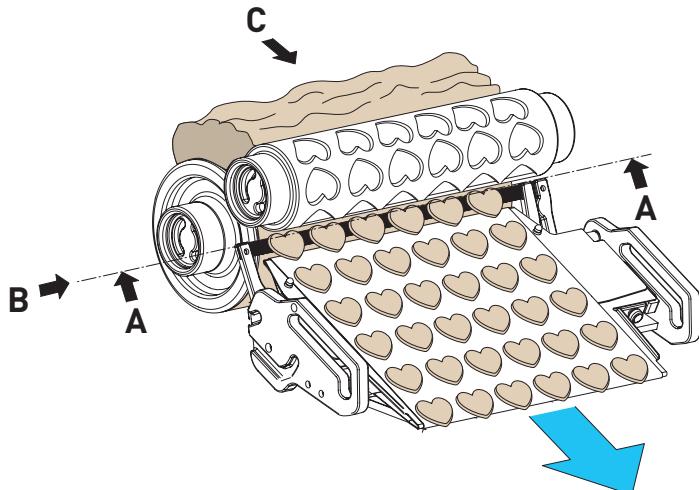
2 Setting the thickness of the pastry with the Basic setting of the knife:

2.1 Correct forming:

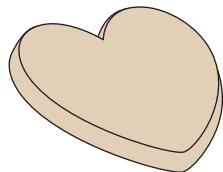
The biscuits are shaped with the maximum biscuit thickness engraved in the forming roller.

The knife cuts off at the base of the biscuits directly at the dough mantle of the kneading roller (see view C, view B and cross-section view A-A).

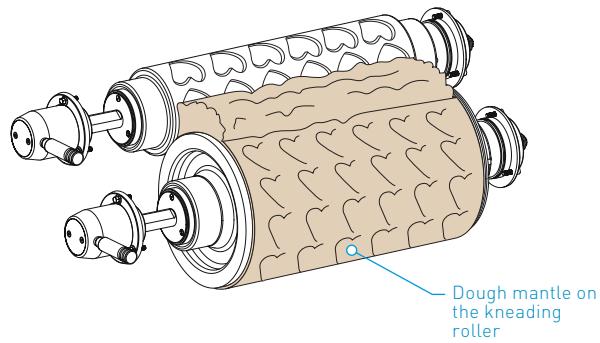
Wafer-thin imprints of the biscuits are visible on the dough mantle of the kneading roller.



Biscuit:



View C:

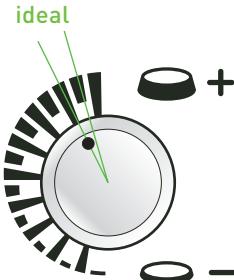


Ideal biscuit thickness setting:

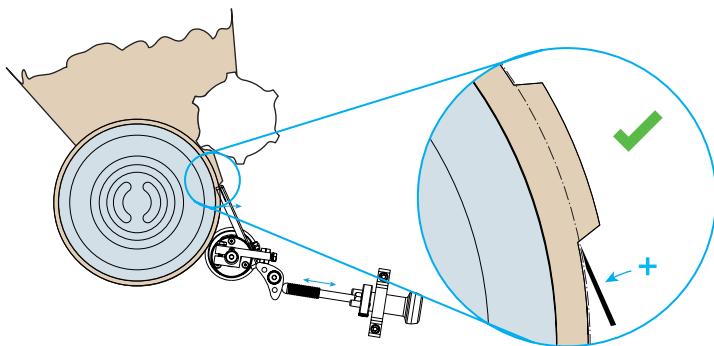
The ideal shaping thickness should be slightly below the maximum biscuit thickness setting (see illustration on the right).

Note:

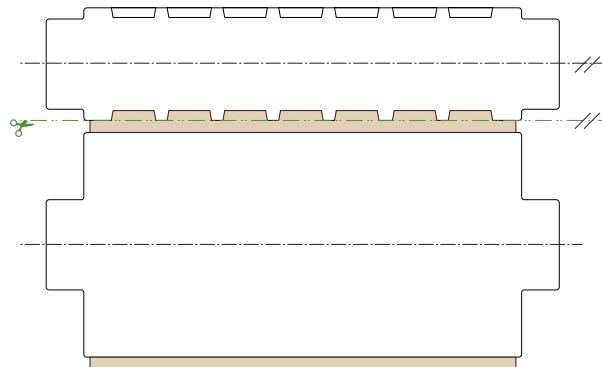
There is no exact value, as it depends largely on the elasticity of the dough.



View B:



Cross-section-view A-A:

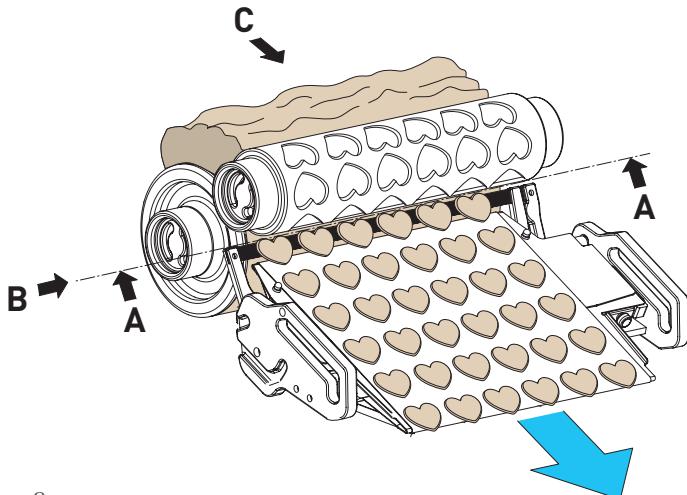


2.2 Forming too thin:

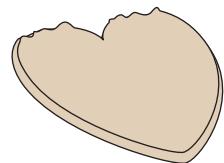
The biscuits are shaped with a thinner biscuit thickness than engraved in the forming roller.

The knife does not cut at the base of the biscuits, but at a greater distance from the dough mantle of the kneading roller (see **view C**, **view B** and **section view A-A**). Thicker imprints of the biscuits are visible on the dough mantle of the kneading roller.

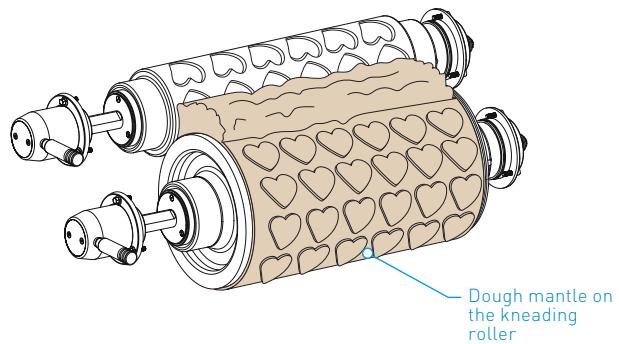
The shaped biscuits may fray at the upper edges!



Biscuit:

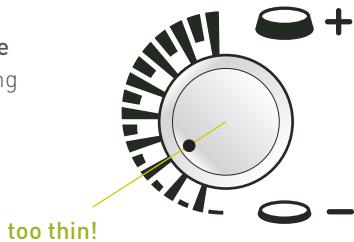


View C:

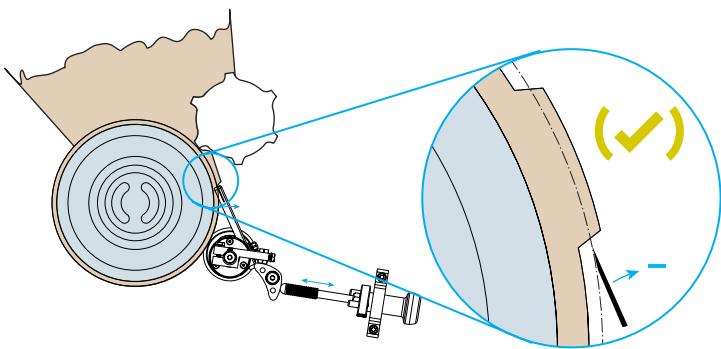


Too thin biscuit thickness setting

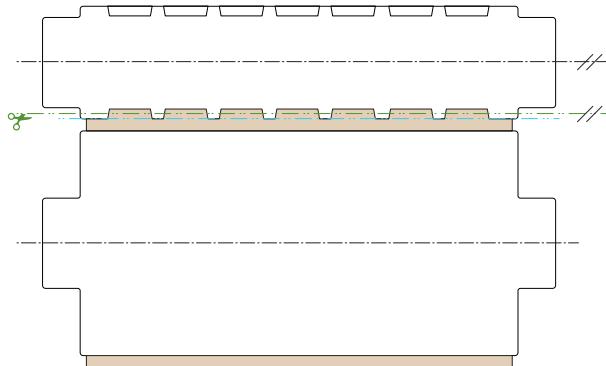
This biscuit thickness setting (see illustration on the right) is clearly too thin and can lead to faulty shaping results.



View B:



Cross-section-view A-A:



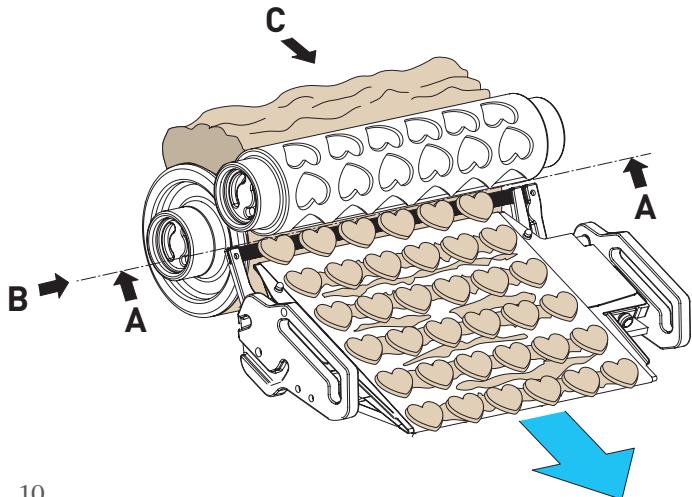
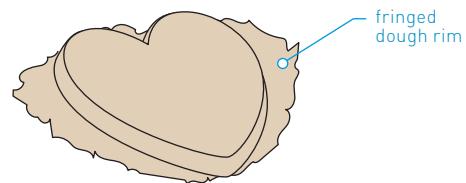
2.3 Forming too thick:

The biscuits are shaped with a greater thickness of biscuit than engraved in the forming roller.

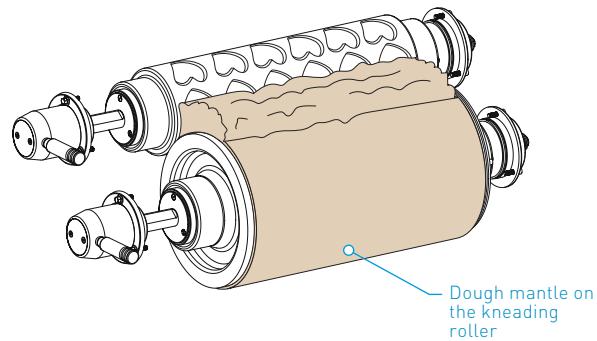
The knife does not cut at the base of the biscuits, but also cuts off layers of the dough mantle of the kneading roller (see **view C**, **view B** and **section view A-A**). No imprints of the biscuits are visible on the dough mantle of the kneading roller.

The biscuits have a fringed dough rim all around or are even shaped with a complete dough mantle.

Biscuit:

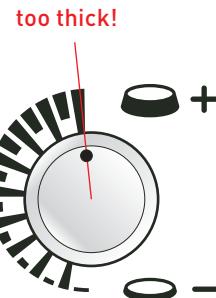


View C:

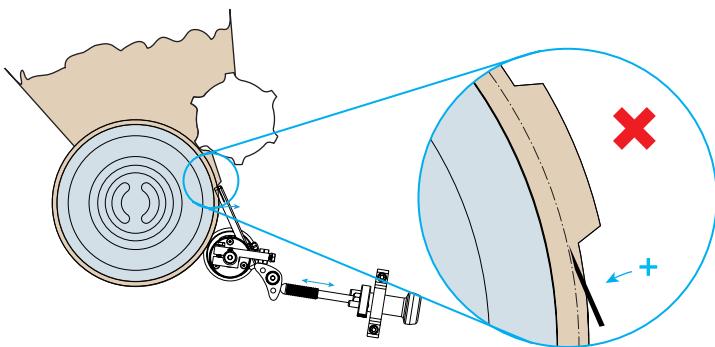


Too thick biscuit thickness setting

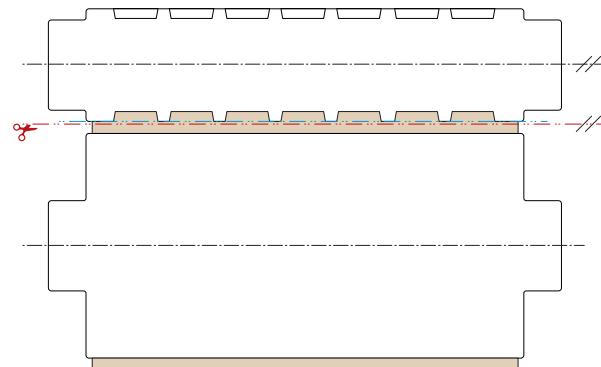
This biscuit thickness setting (see picture on the right) is clearly too thick. There is a fringed edge of dough around the biscuit.



View A-A:



Cross-section-view A-A:

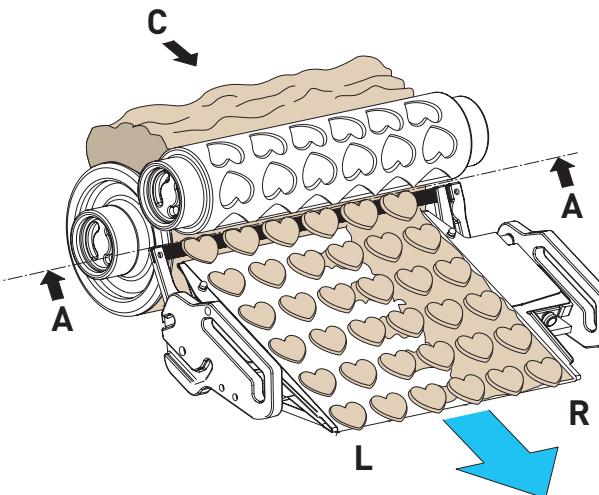


3 Incorrect basic setting of the knife:

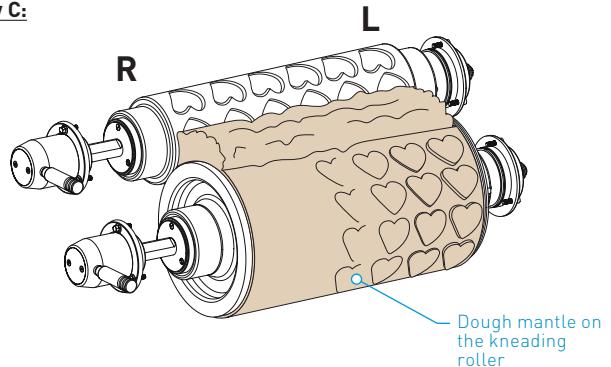
3.1 Uneven forming due to incorrectly adjusted knife shaft:

The biscuits are shaped transversely to the shaping direction with different biscuit thicknesses.

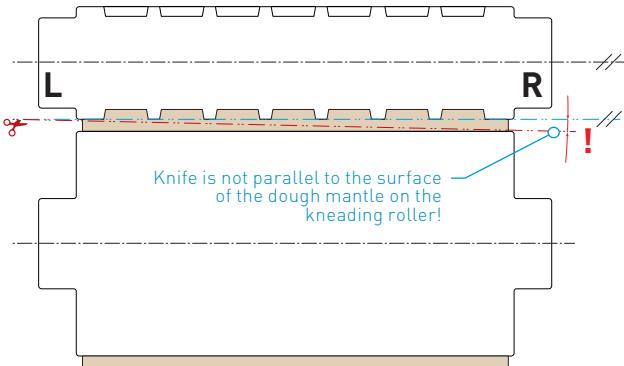
The knife does not cut parallel to the base of the biscuits (see view C and section view A-A).



View C:

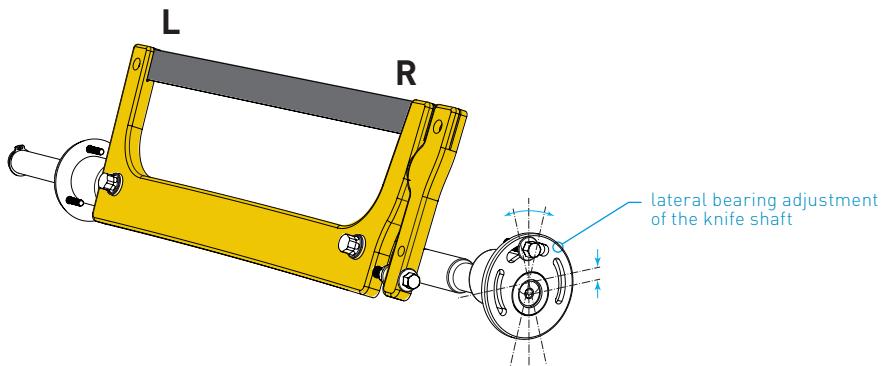
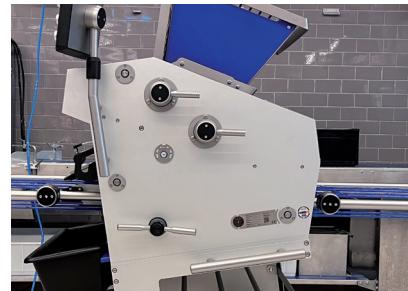


Cross-section-view A-A:



Mandatory activity:

The knife shaft of the knife must be adjusted by means of the lateral bearing adjustment so that the knife cuts parallel to the dough mantle of the kneading roller. The left bearing (**L**) of the knife shaft is fixed, the right bearing (**R**) of the knife shaft can be shifted in position to a small extent so that the knife shaft can be aligned parallel to the dough mantle of the kneading roller.



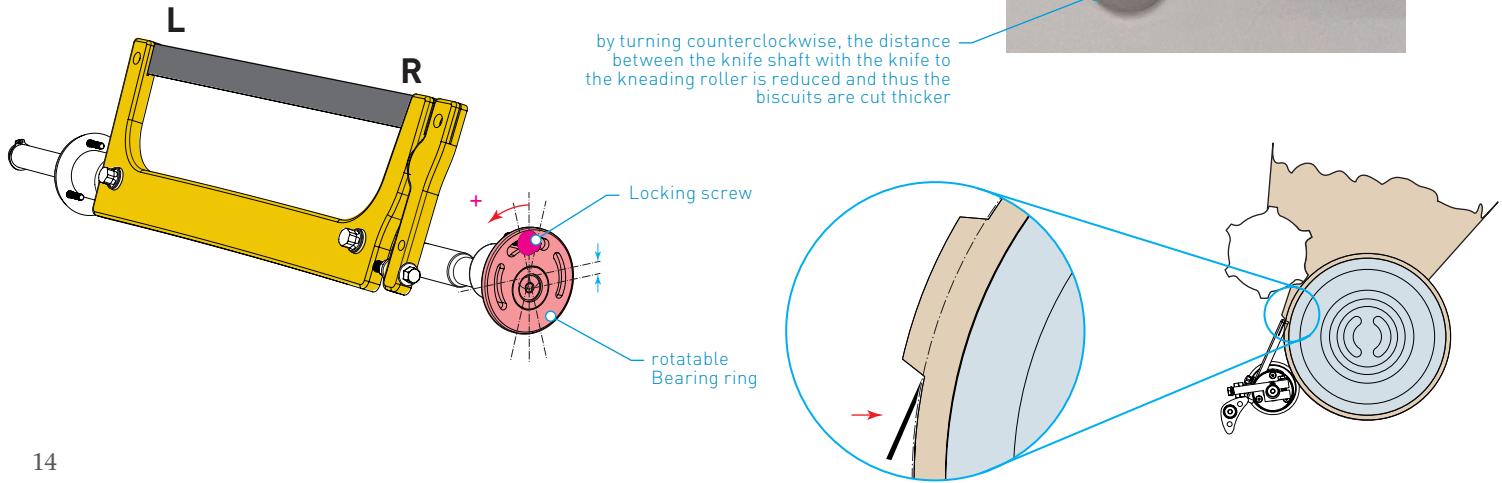
by removing the cover cap,
the lateral bearing
adjustment of the knife
shaft is located

3.1.1 Set biscuits thicker on the right side:

To set the biscuits thicker on the right side (**R**), the locking screw must be loosened and the bearing rim marked in red (see illustration below) turned a few angular degrees counterclockwise and fixed by means of the locking screw..

Goal:

The biscuits must be exactly the same thickness on the left (**L**) and on the right (**R**) in the direction of shaping.!

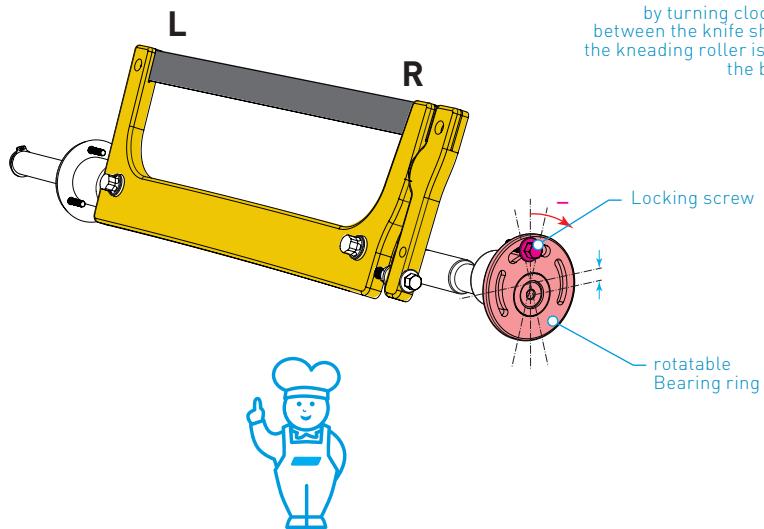


3.1.2 Set biscuits thinner on the right side:

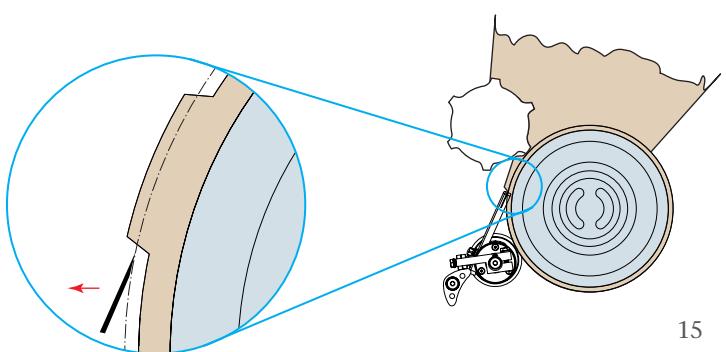
To set the biscuits thinner on the right side (**R**), loosen the locking screw and turn the bearing rim marked in red (see illustration below) clockwise by a few angular degrees and fix it by means of the locking screw..

Goal:

The biscuits must be exactly the same thickness on the left (**L**) and right (**R**) in the direction of shaping!



by turning clockwise, the distance between the knife shaft with the knife to the kneading roller is increased and thus the biscuit is cut thinner

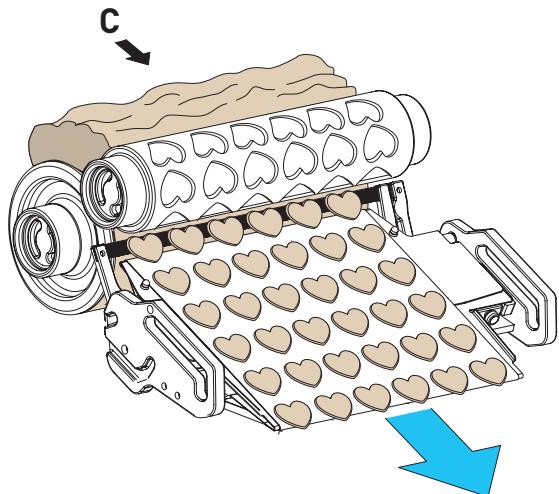
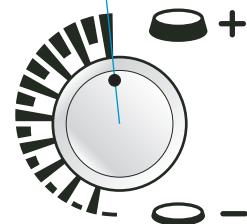


3.2 Forming too thin due to incorrectly adjusted knife shaft:

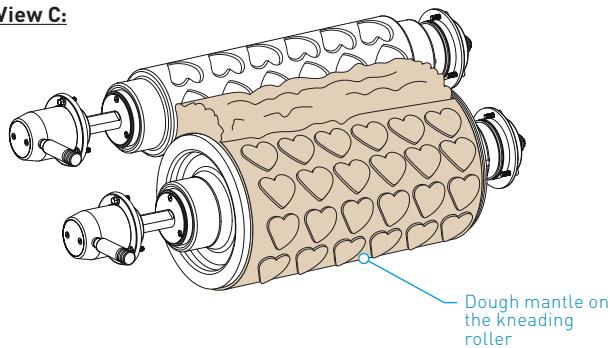
The biscuits are formed too thin at maximum biscuit thickness setting (see illustration on the right).

Thick imprints (>1mm, see view C) of the biscuits remain on the kneading roller mantle, which means that the biscuits cannot be cut to the desired thickness as engraved in the forming roller.

max.



View C:



3.2.1 Reduce distance between knife and kneading roller:

If the biscuits are generally shaped too thinly, the distance between the knife and the kneading roller must be reduced so that the biscuits are cut thicker.

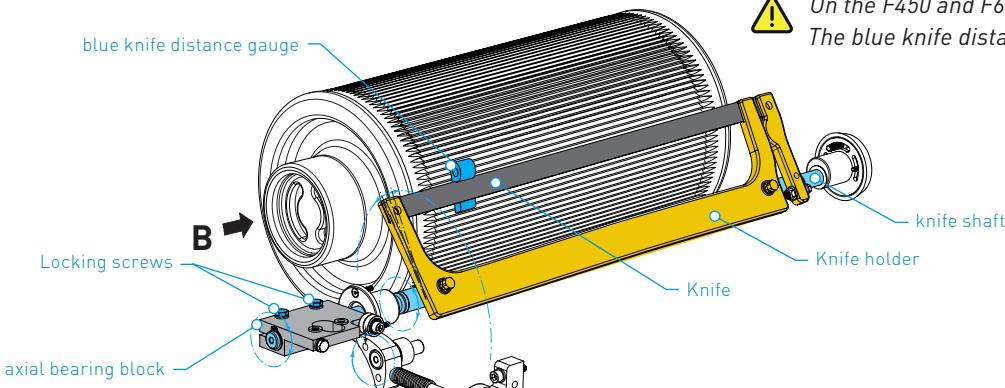
Absolutely necessary activity/procedure:

Step 1:

The dough must be removed from the kneading roller.

Step 2:

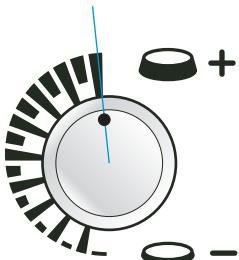
The locking screws on the axial bearing block must be loosened so that the knife shaft can be brought into the correct position in the axial bearing block.



Step 3:

The biscuit thickness setting of the knife must be set to the maximum thickness must be set.

max.



Step 4:

It is absolutely necessary to adjust the knife shaft of the knife by means of the blue knife distance gauge so that the knife has a defined distance to the kneading roller surface at maximum biscuit thickness setting:



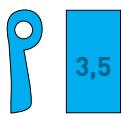
On the F250, the distance is 3.0 mm.

On the blue knife distance gauge is the number 3.0.



On the F450 and F600 the distance is 3.5 mm.

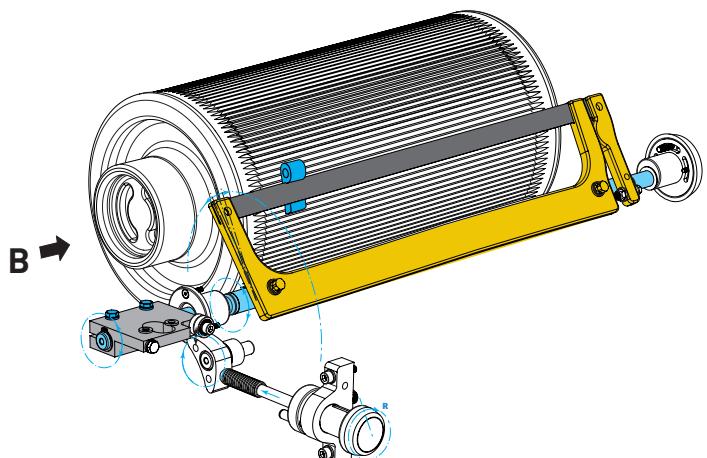
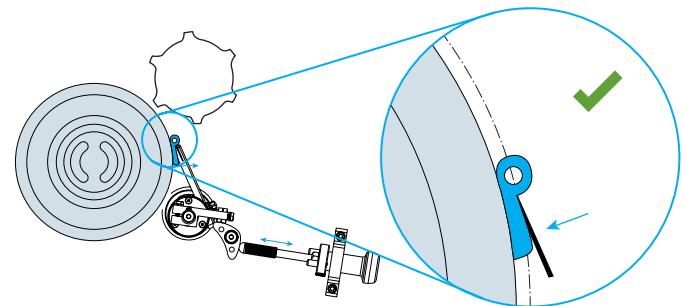
The blue knife distance gauge shows the number 3.5.



Clamp the correct distance gauge between the knife and the kneading roller mantle (see view B) and press the knife firmly against the distance gauge towards the kneading roller and tighten the locking screws on the axial bearing block.

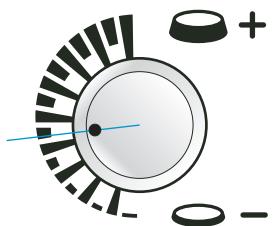
Check that the distance gauge is relatively tightly clamped between the knife and the kneading roller on both sides to the left and right of the knife.

View B:



Step 5:

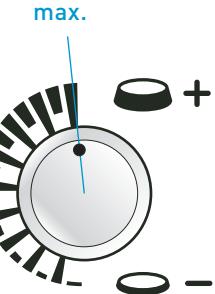
Turn the biscuit thickness setting approx. 90° to the left (thinner) so that you can remove the blue knife distance gauge.



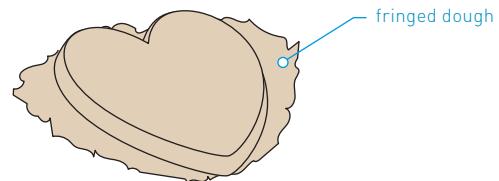
Step 6:

Now fill some pastry into the hopper and check the knife setting by means of the forming

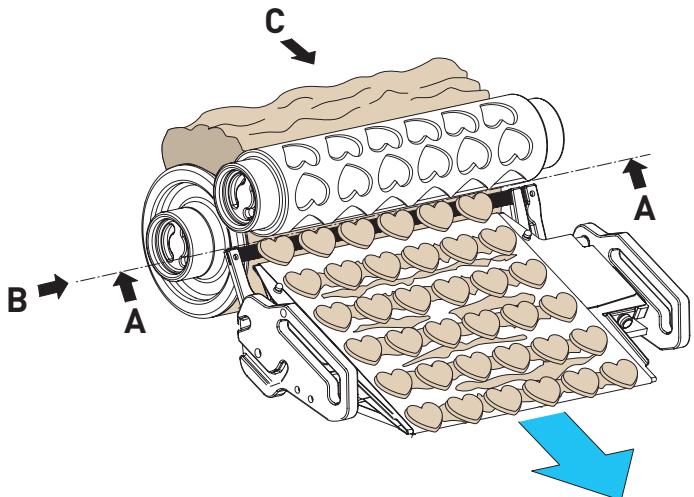
To do this, set the biscuit thickness setting to the maximum value again.



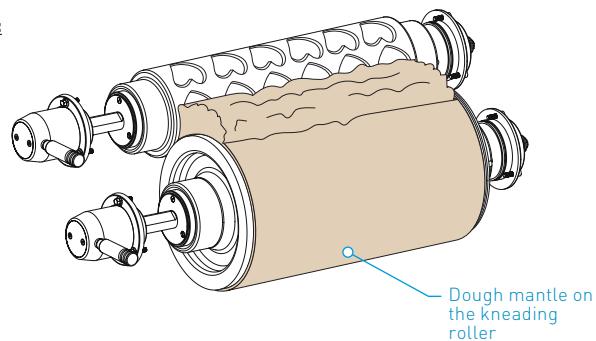
Biscuit:



At the maximum biscuit thickness setting, a very thin band of dough (<1mm) should now be formed around the biscuits (see illustration)..



View C:

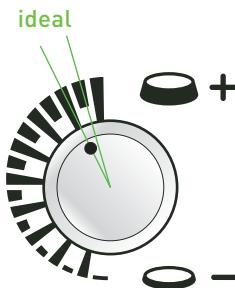


Ideal biscuit thickness setting:

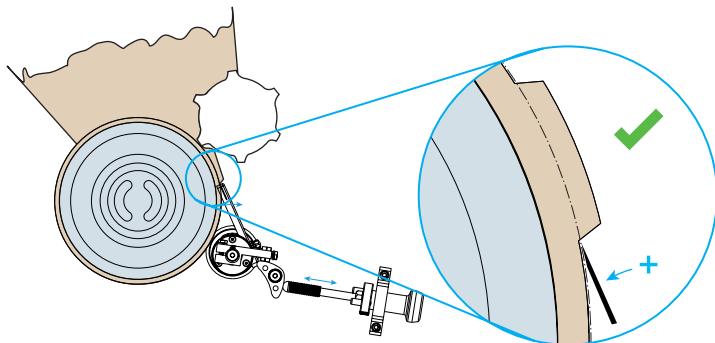
The ideal shaping thickness should be slightly below the maximum biscuit thickness setting (see illustration on the right).

Note:

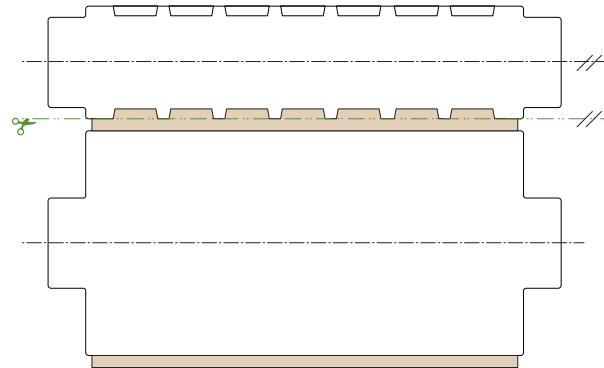
There is no exact value, as this depends largely on the elasticity of the dough.



View B:



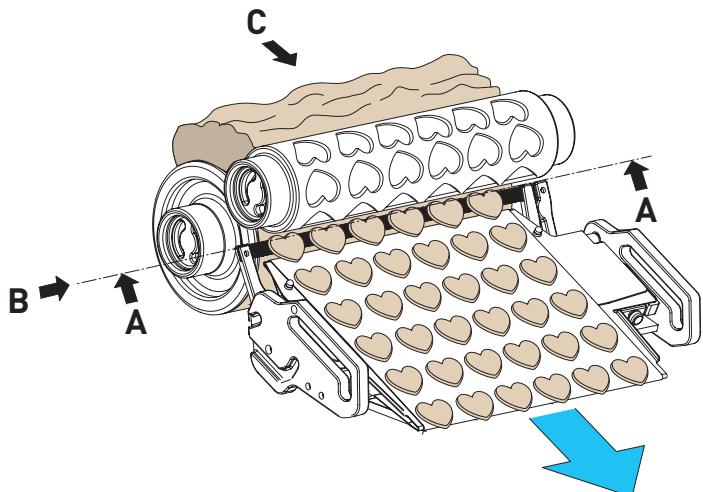
Cross-section-view A-A:



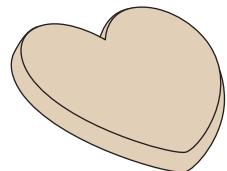
The biscuits are shaped with the maximum biscuit thickness engraved in the forming roller.

The knife cuts off at the base of the biscuits directly at the dough mantle of the kneading roller (see view C, view B and sectional view A-A).

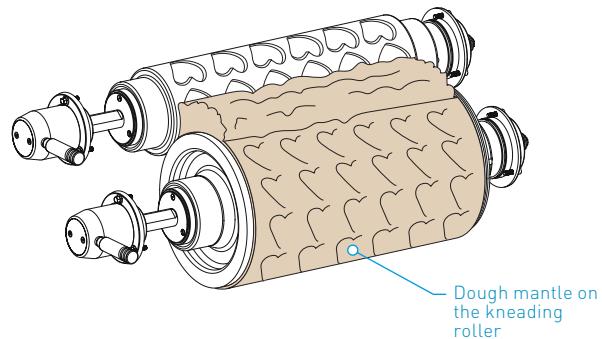
Wafer-thin imprints of the biscuits are visible on the dough mantle of the kneading roller.



Biscuit:



View C:

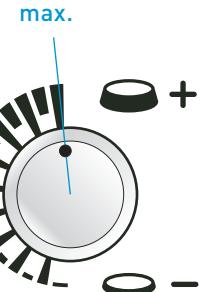
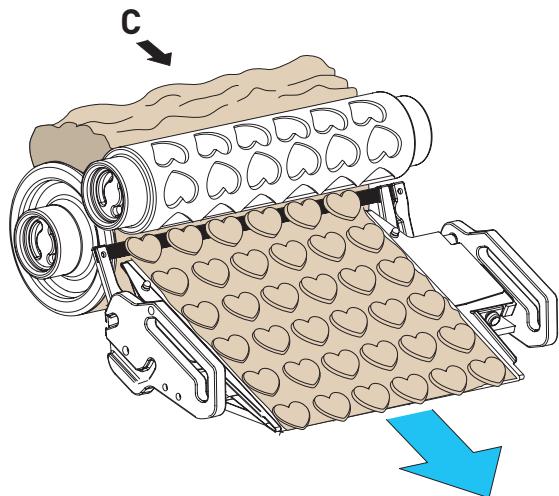


With this setting, the biscuits should be shaped to the same thickness over the entire width across the direction of shaping.... **done!**

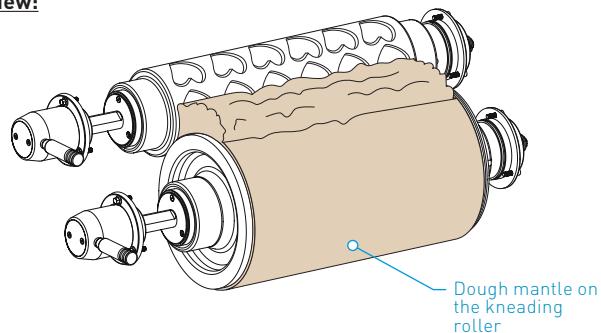


3.3 Forming too thick due to incorrectly adjusted knife shaft:

The biscuits are formed too thick at maximum biscuit thickness setting that even a thick dough mantle (>1 mm, see view C) of the kneading roller is cut off as well. No imprints of the biscuits remain on the kneading roller mantle.



View:



3.3.1 Increase the distance between the knife and the kneading roller:

If the biscuits are generally formed too thickly, the distance between the knife and the kneading roller must be increased so that the biscuits are cut thinner.

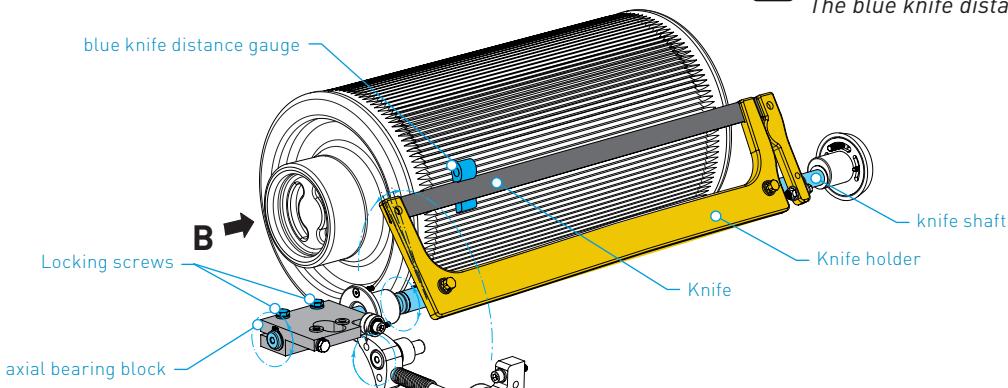
Absolutely necessary activity/procedure:

Step 1:

The dough must be removed from the kneading roller.

Step 2:

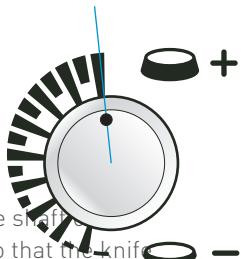
The locking screws on the axial bearing block must be loosened so that the knife shaft can be brought into the correct position in the axial bearing block.



Step 3:

The biscuit thickness setting of the
The knife must be set to the maximum
thickness.

max.



Step 4:

It is absolutely necessary to adjust the knife shaft
knife using the blue knife distance gauge so that the knife
is at a defined distance from the kneading roller surface
at maximum biscuit thickness setting:

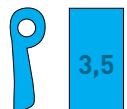
⚠ On the F250, the distance is 3.0 mm.

On the blue knife distance gauge is the number 3.0.



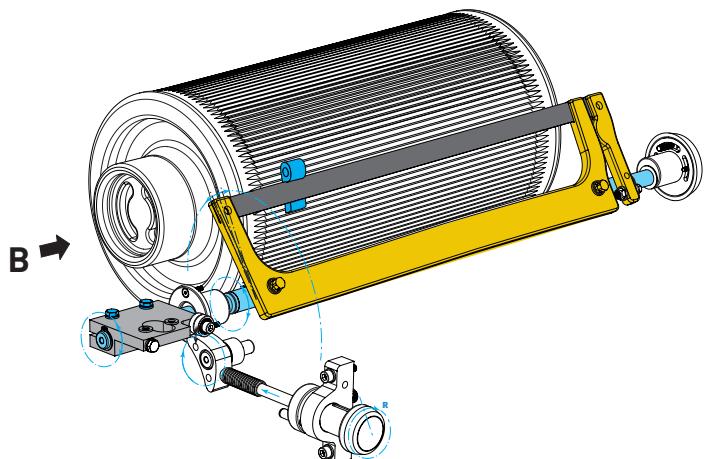
⚠ On the F450 and F600 the distance is 3.5 mm.

The blue knife distance gauge shows the number 3.5.

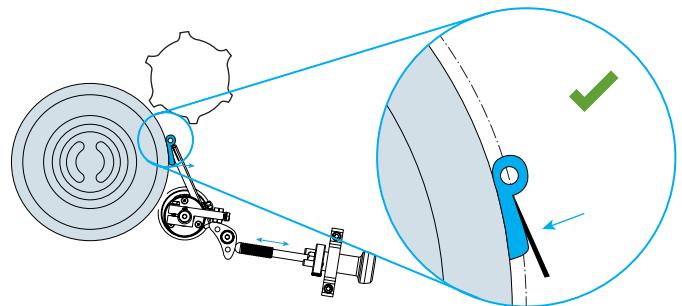


Clamp the correct knife distance gauge between the knife and the kneading roller mantle (see **view B**) and press the knife firmly against the knife distance gauge towards the kneading roller and tighten the locking screws on the axial bearing block.

Check that the knife distance gauge is relatively tightly clamped between the knife and the kneading roller on both sides to the left and right of the knife.

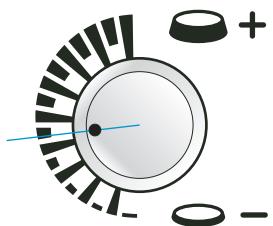


View B:



Step 5:

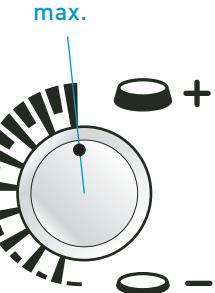
Turn the biscuit thickness setting approx. 90° to the left (thinner) so that you can remove the blue knife distance gauge.



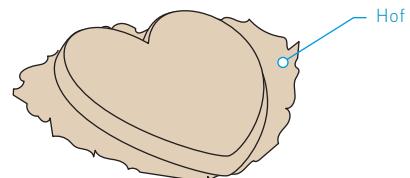
Step 6:

Now fill some pastry into the hopper and check the knife setting by means of the forming.

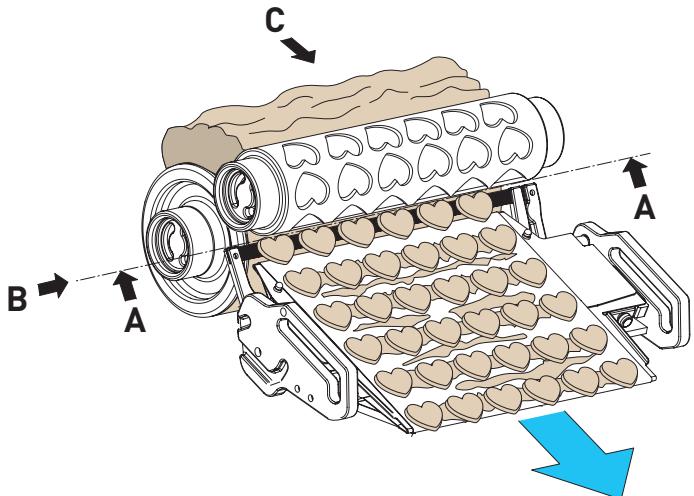
To do this, set the biscuit thickness setting to the maximum value again.



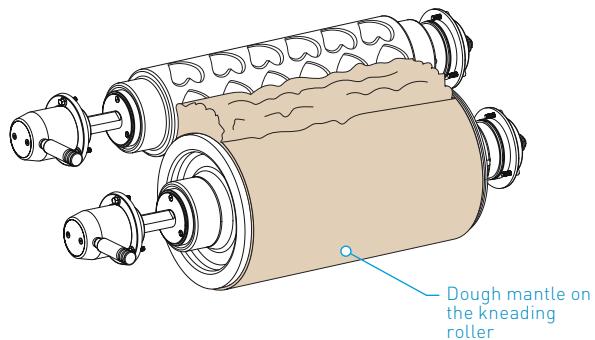
View:



Bei maximaler Gebäckdickeneinstellung sollte nun ein hauchdünnes Teigband (< 1mm) um die Gebäcke herum mit ausgeformt werden (siehe Abbildung).



View C:

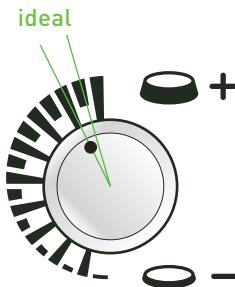


Ideal biscuit thickness setting:

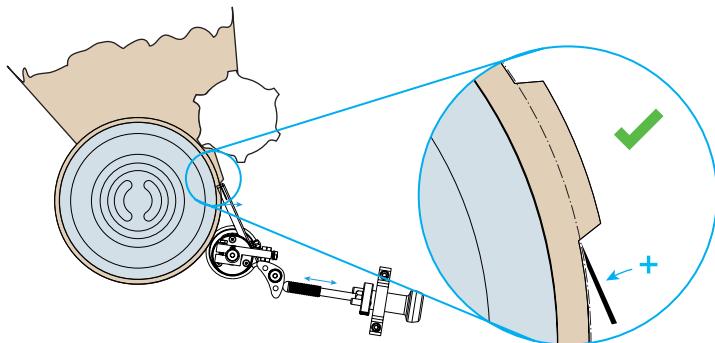
The ideal forming thickness should be slightly below the maximum biscuit thickness setting (see illustration on the right).

Note:

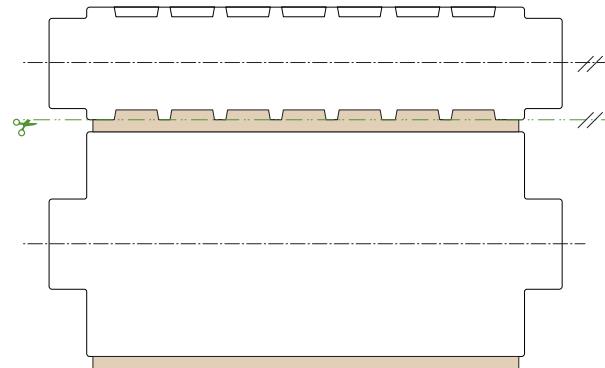
There is no exact value, as this depends largely on the elasticity of the dough.



View B:



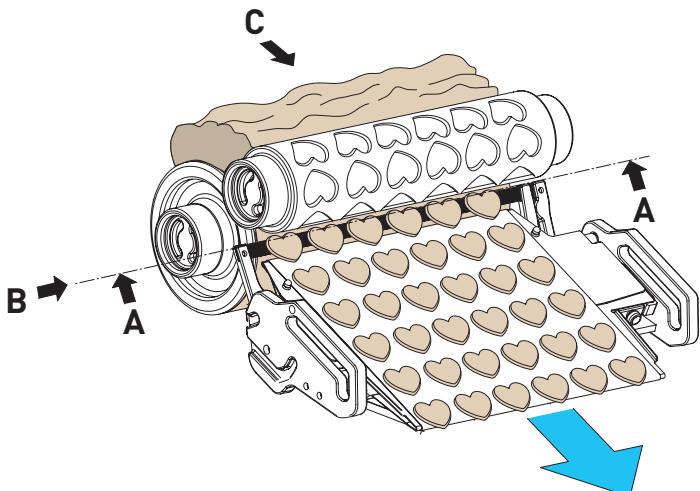
Cross-section-view A-A:



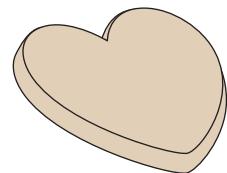
The biscuits are shaped with the maximum biscuit thickness engraved in the forming roller.

The knife cuts off at the base of the biscuits directly at the dough mantle of the kneading roller (see view C, view B and sectional view A-A).

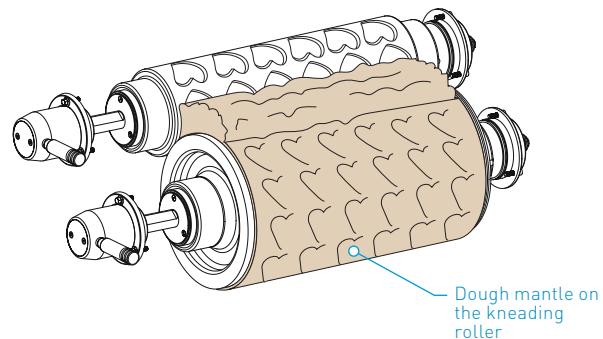
Wafer-thin imprints of the biscuits are visible on the dough mantle of the kneading roller.



View:



View C:



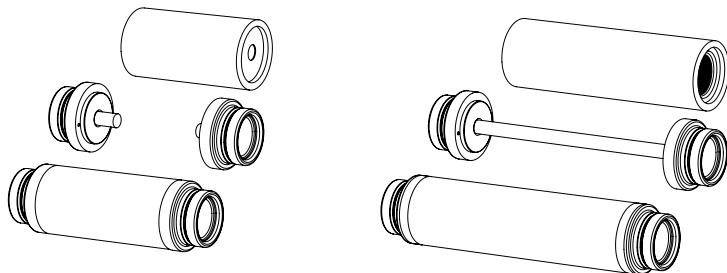
With this setting, the biscuits should be shaped to the same thickness over the entire width across the direction of shaping.... **done!**



4 Incorrect assembly of the forming roller adapters and resulting uneven forming:

You can use the rollers of older Janssen Cookie Formers of the K-series with the Janssen F-series Cookie Formers with forming roller adapters.

The requirement for use is an undamaged forming roller in good condition. (☞ [Chapter 4.2 „Exceptions for the use of forming roller adapters“](#)).



If the requirements are not fulfilled, this can lead to incorrect forming..

⚠ Janssen Cookie Formers may only be operated with original Janssen parts or parts recommended by Janssen. This applies to spare and wear parts such as **forming rollers, forming roller adapters, kneading rollers, upper conveyor belts and knives.**

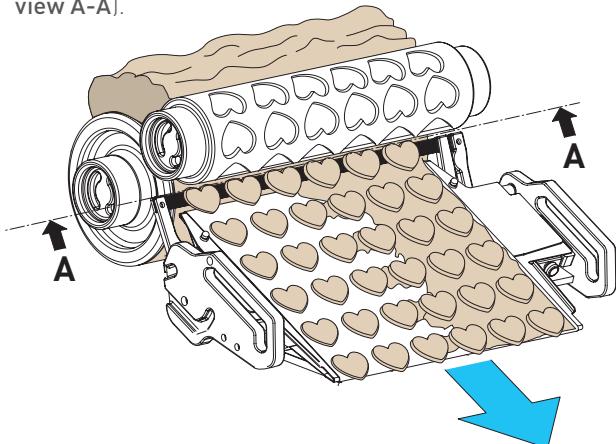
4.1 Uneven forming due to incorrect assembly of the forming roller adapters or non-matching forming rollers:

The biscuits are formed transversely to the forming direction with different biscuit thicknesses.

In addition, the thickness of the biscuits changes constantly. The biscuits are sometimes thicker and sometimes thinner.

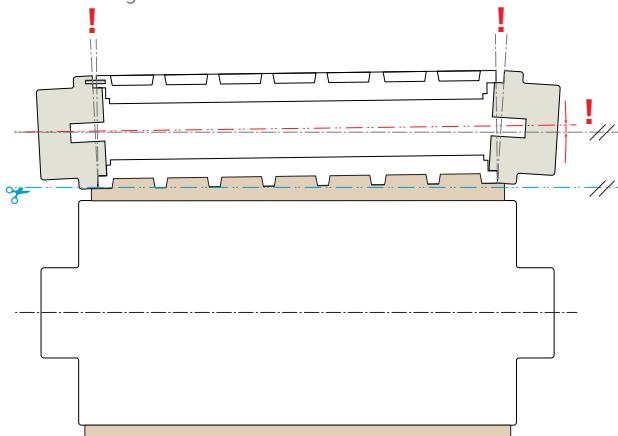
Explanation:

Incorrectly mounted forming roller adapters can cause the adapters to tilt away due to the high pressure between the roller gap, which means that the roller gap is no longer parallel and the dough band no longer has a constant thickness. This means that the knife cannot cut parallel to the base of the biscuits (see cross-section-view A-A).



Cross-section-view A-A:

The axis of the forming roller is not parallel to the axis of the kneading roller!



Absolutely necessary activity/procedure:

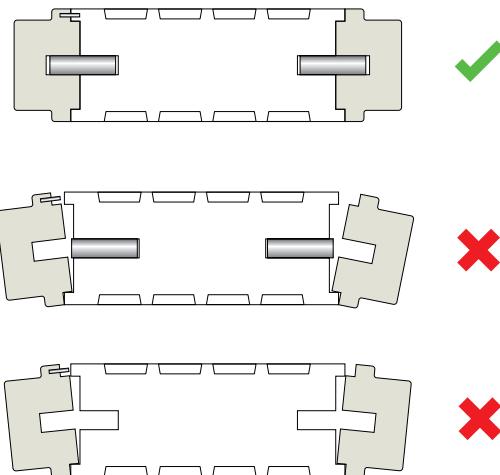
The forming roller adapters must be mounted as intended and must have an accurate form fit:

1) Forming roller adapters for K250 forming rollers of the K series have adapters with bolts on both sides.

The bolts must not be removed under any circumstances and must have a tight fit in both the forming roller adapter and the forming roller!

The holes ($\varnothing 25$ mm) in the K250 forming roller must not be too deep, otherwise there is a risk that the bolts will slip in too deep and there will no longer be a connection to the hole in the forming roller flange.

If this is not the case, a new F-series forming roller should be created.



2] Forming roller adapters for K400/K450/K580 forming rollers of the K series have adapters with a continuous stabilising rod on both sides.

This rod must not be removed under any circumstances and must have an accurate form fit in the forming roller adapters!

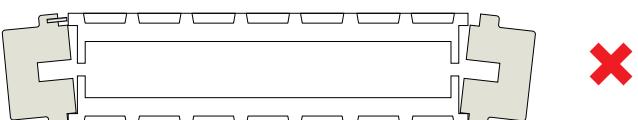
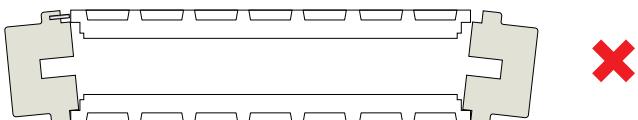
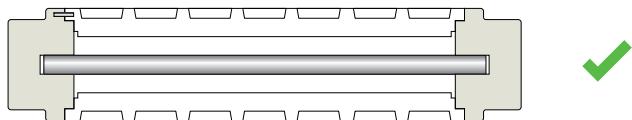
If this is not the case, a new F-series forming roller should be created.



Caution:

Under no circumstances should you try to readjust the knife shaft in this case! These extreme irregularities of the pastry shaping cannot be compensated by adjusting the knife shaft!

By adjusting the bearings of the knife shaft in the extreme range, the bearings can be extremely stressed and also destroyed (the machine produces very loud noises)

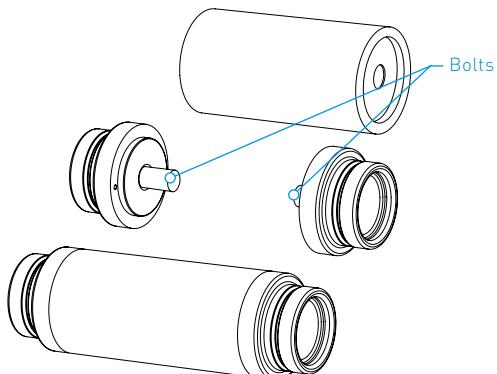


4.2 Exceptions for the use of Forming roller adapters:

The F-series forming roller adapters are suitable for K-series forming rollers under the following requirements:

Forming roller adapter for K250 forming rollers:

The K250 forming rollers are usually solid on the inside. The forming roller adapters are mounted exactly in their axial position on the left and right by means of two bolts.

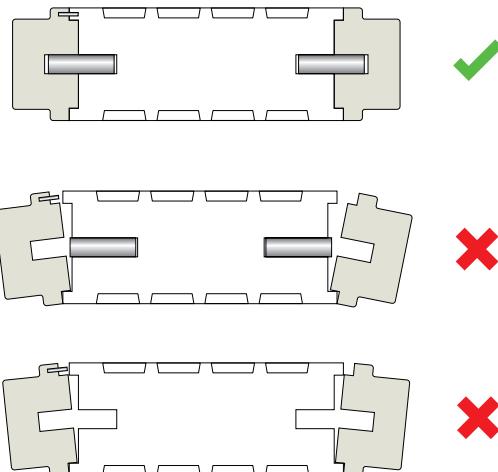


Requirements for the intended Use:

1) The forming roller adapters fit exactly in the inner ring ($\varnothing 94$ mm) of the forming roller.

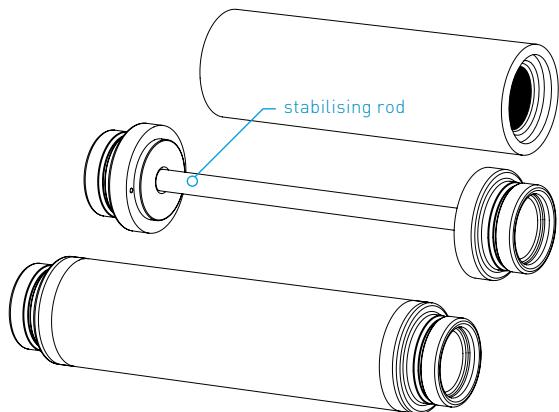
2) The bolts for K250 forming rollers ($\varnothing 25$ mm) must fit exactly into the bore of the K250 forming rollers without wobbling!

3) The holes ($\varnothing 25$ mm) in the K250 forming roller must not be too deep, otherwise there is a risk that the bolts will slip in too deep and there will no longer be a connection to the holes in the forming roller flanges..

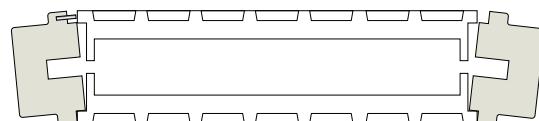
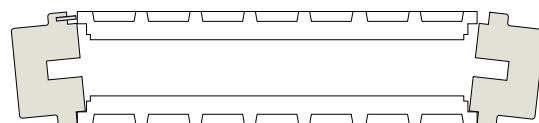
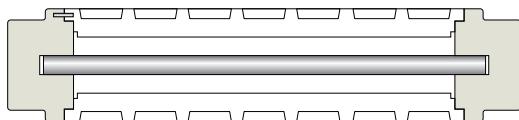


Forming roller adapter for K400/K450/K580 forming rollers:

The K400/K450/K580 forming rollers are usually hollow inside and have a metal tube core inside. The forming roller adapters are supported exactly in their axial position by means of a stabilising rod.



2) The stabilising rod for K400/K450/K580 forming rollers (Ø25 mm) must fit exactly into the hole of the forming roller adapters without wobbling and must fit through the cavity of the K400/K450/K580 forming rollers. Older forming rollers may have too small through holes on the side flanges so that the stabilising rod cannot be inserted through.



Requirements for the intended Use:

1) The forming roller adapters fit exactly in the inner ring (Ø94 mm) of the forming roller.

Summary:

Taking into account the intended use of the Janssen Cooky Formers of the F-series ([Janssen Cooky Formers operating instructions, chapter 4.3 »Intended use«](#)) the following criteria must be fulfilled for a mechanically correct setting of the machine for forming:

- 1) The correct bearing of the forming rollers (especially when using forming roller adapters for older Janssen forming rollers of the previous K-series).
- 2) Die korrekte Grundeinstellung des Messers/ Messerwelle zur Knetwalze.
- 3) The pastry thickness knife setting with the adjusting wheel, with which the fine adjustment of the pastry thickness can be made during operation.

Do you have any questions?

~
Contact us!





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Instructions Settings/ Controls for the Janssen cookie formers

F250 / F450 / F600

(Supplement to original instruction manual)



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Content

To understand the operation of the Janssen cookie former control system, you should refer to the explanations in the following sequence:

1 General information about the drive scheme

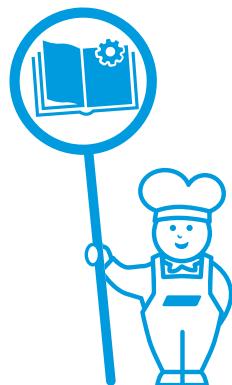
1.1 Drive units	4
1.2 Forming process	4
1.3 Speed V1, V2 unnd V3.....	5
1.4 Sensors	6
1.5 Controls	6

2 General information about the controls

2.1 Control »Compact« with examples.....	7
2.2 Control »Performance« with examples.....	10

3 Comparison of the controls

3.1 Advantages Control »Compact«	17
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3.3 Overview	19

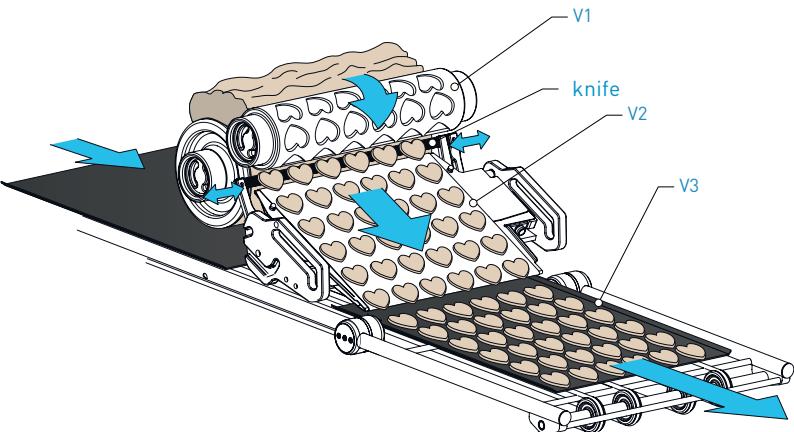


1 General information about the drive scheme

1.1 Drive units

Janssen cookie formers have four drives:

- Main drive of the rollers (**speed V1**)
- Knife drive
- Drive of the upper conveyor belt (**speed V2**)
- Drive of the baking tray transport (**speed V3**)



1.2 Forming process

Step 1:

To shape pastries with Janssen cookie formers, the dough is placed in the hopper and pulled in and shaped by the pair of rollers.

Step 2:

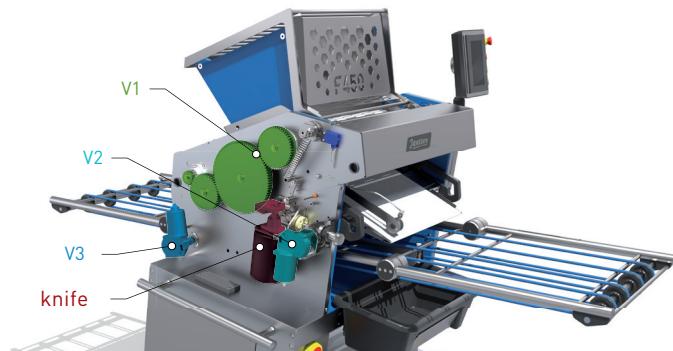
Immediately after forming, the knife cuts the embossed pastries from the kneading roller mantle.

Step 3:

The upper conveyor transports the cut pastries to the baking tray conveyor.

Step 4:

The pastries are deposited from the upper conveyor onto the baking trays moving through the baking tray conveyor.



1.3 Speed V1, V2 und V3

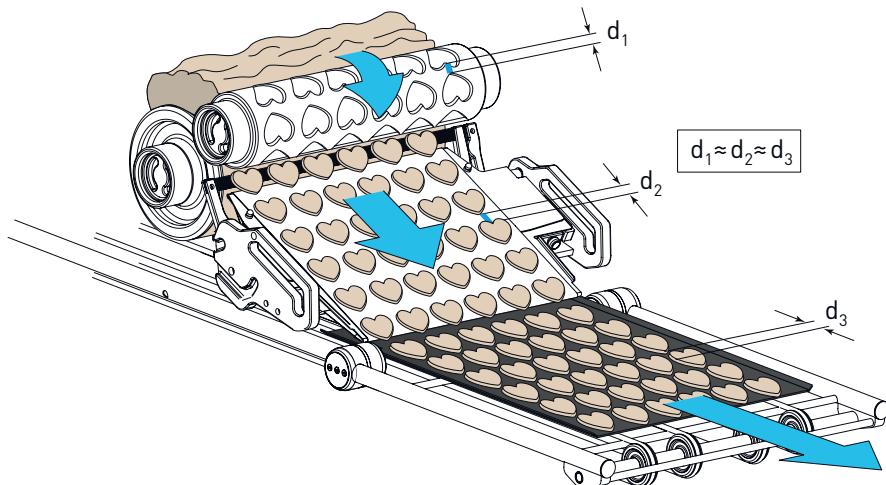
For good shaping of small pastries, the speeds of drives V1, V2 and V3 are usually approximately the same and are around 4 m/min.

The **speed V1** of the roller pair and the **speed V2** of the upper conveyor belt should run at the same speed. This can be seen very clearly from the fact that the distances between the cookies on the forming roller are approximately the same as the distances between the cookies of the formed cookies on the upper conveyor belt.

The **speed V3** of the baking tray transport can be used to adjust a little the distances between the rows of pastries in the forming direction. If the speed V3 is about as fast as V2, then the distances on the tray should be identical to those on the upper conveyor belt.

If you want the distances to be somewhat larger, set V3 somewhat faster.

If you want the distances to be somewhat smaller, set V3 somewhat slower.



1.4 Sensors

In addition to the drives, the Janssen cookie formers have sensors. With the sensors, processes in the machine can be automated.

Dough sensor (1.):

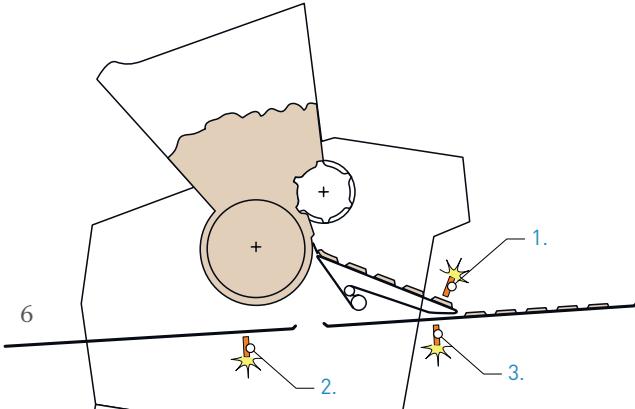
The dough sensor detects the incoming row of pastries shortly before transfer from the upper conveyor belt to the baking tray.

Rear sheet metal sensor (2.):

The rear sheet sensor detects the baking sheet loaded at the rear.

Front sheet metal sensor (3.):

The front sheet sensor detects the incoming baking tray.



1.5 Controls

Janssen cookie formers can be operated with two basic controls:

Control »Compact«

Control »Performance«

The advantages and functions of the different controllers are explained in the following chapter.

([see Chap.2](#)).



2 General information about the controls and comparison

Depending on the production focus, we offer two different control systems, the functional scope of which has crystallized out of the collected requirements of our customers over the last few years into two variants.

2.1 Control »Compact«

The »Compact« control is operated via a key display and offers simple and convenient handling.

The **speed V1** of the pair of rollers and the **speed V2** of the upper conveyor belt run at a standard speed of 4 m/min. and cannot be varied..

The **speed V3** of the baking tray transport can be set faster and slower for the regulation of the pastry distances on the baking tray.

The machine can be operated in permanent and automatic mode.

The forming rollers can be heated for somewhat sticky doughs.



Possible settings of the »Compact« control:

With the »Compact« control you can work only in »Permanent« or „Automatic“ mode and set the **speed V3** of the baking tray transport.

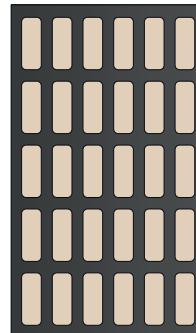
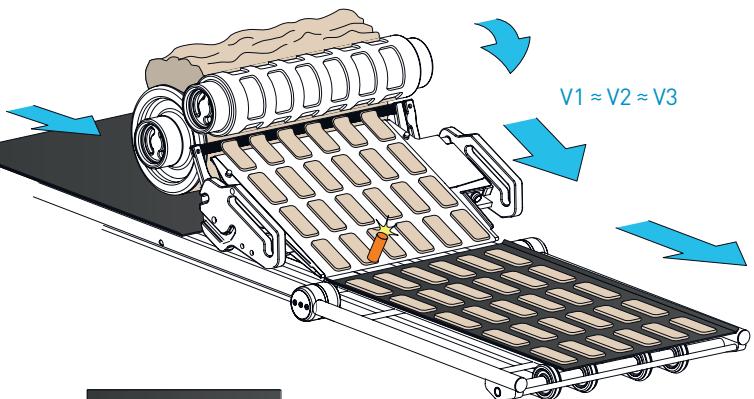
If necessary, it is possible to switch on the roller heating.

The **optimum setting** is achieved when the spacing between the rows of cookies is sufficient so that the cookies do not bake together and, if possible, no row of cookies overlaps the edge of the tray at the end (see illustration on the right)..



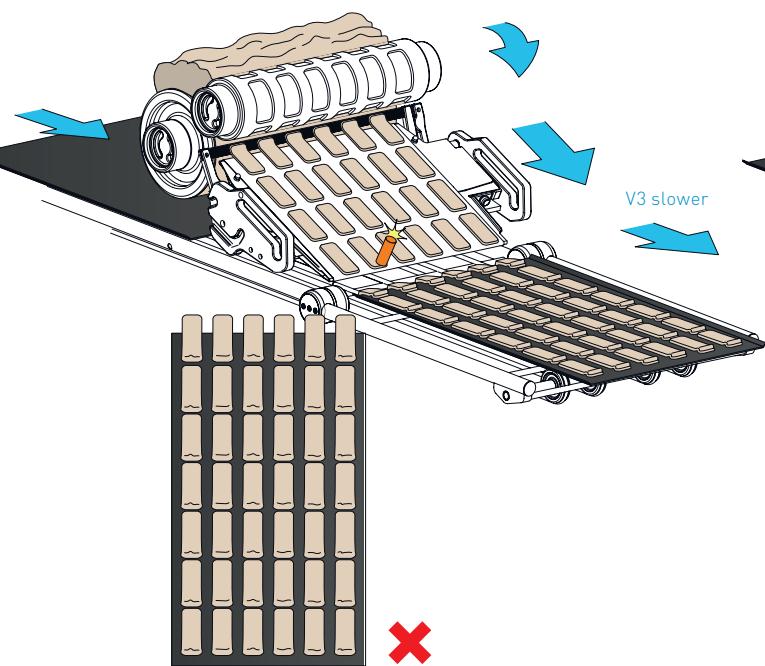
Example 1:

The speed V3 is usually about as fast as the speed of the upper conveyor belt.



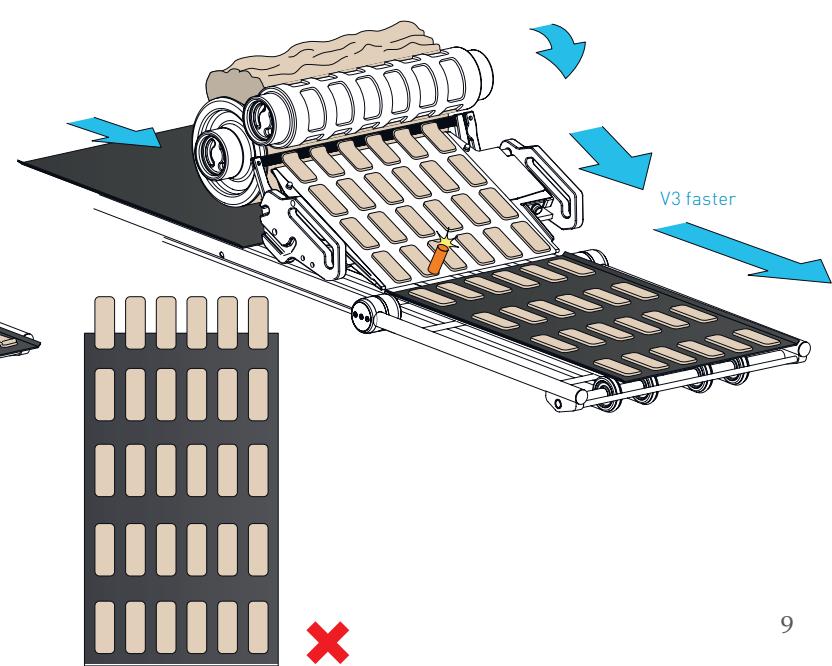
Example 2:

⚠ If the pastries push together on the baking tray or bend at the front edge, the speed V3 of the baking tray transport is too slow! (see Fig. below)



Example 3:

⚠ If the distances between the rows of baked goods are clearly too large, the speed V3 of the baking tray transport is too fast! (see Fig. below)



2.1 Control »Performance«

The »Performance« control is operated via a touch display and offers extensive, easily programmable functions:



The **speed V1** of the roller pair, the **speed V2** of the upper conveyor belt and the **speed V3** of the lower sheet transport run best at a speed of about 4 m/min. but can also be varied.

Speed V1:

The **speed V1** of the roller pair or the entire machine can be set slower up to approx. 1.5 m/min. or faster up to approx. 6 m/min.

A slower speed can be useful if the machine has to be adjusted in an overall process.

A faster speed can be useful if everything is running very well and you want to produce faster.

Speed V2:

The speed V1 of the roller pair or the machine and the **speed V2** of the upper conveyor belt should run at the same speed.

In special cases, longer pastries (very large figures or cake layers) can be stretched by a slightly faster speed V2 of the upper conveyor belt or compressed by a slightly slower speed V2 of the upper conveyor belt. Of course, this also increases or decreases the distances between the rows of pastries on the upper conveyor belt.

⚠ *The distances between the rows of pastries on the upper conveyor belt should not be smaller than approx. 10 mm, otherwise the dough sensor can no longer detect the rows of pastries!*

Speed V3:

The **speed V3** of the baking tray transport can be set faster and slower for the regulation of the pastry distances on the baking tray.

In contrast to the »Compact« control, the »Performance« control can also be used to stop the baking tray transport automatically for a short time in between.

The machine can be operated in »Permanent«, »Semi-Automatic« and »Automatic« mode.

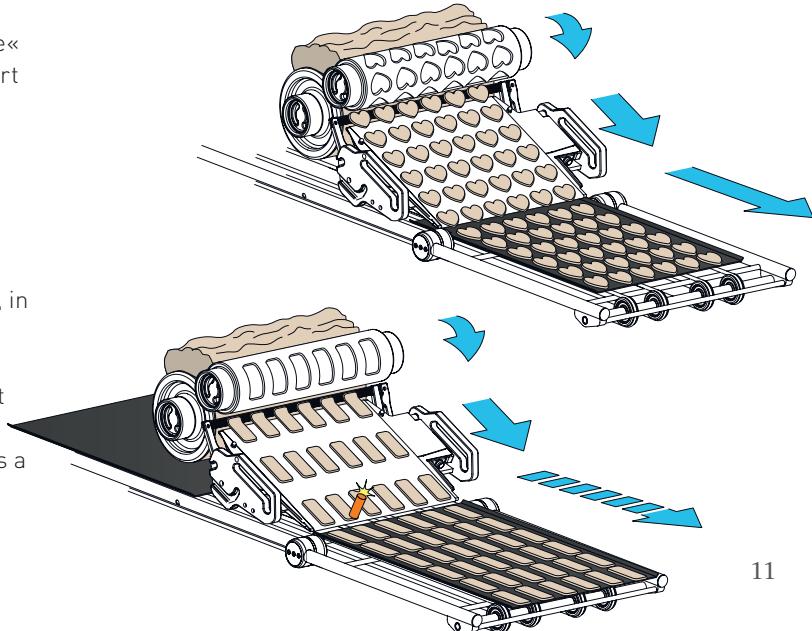
The »Semi-Automatic« mode is comparable to the »Automatic« mode of the »Compact« control. However, in contrast to the »Performance« control, the distance between the rows of pastries and the front edge of the baking tray is fixed in the »Compact« control and cannot be adjusted.

The settings for the respective products can be saved as a program.

Furthermore, information on operation, maintenance, cleaning and operating hours display can be called up.

Different languages of the control are possible via a language selection.

The entire control system has self-explanatory help functions that can be called up at any time via »Help« buttons.



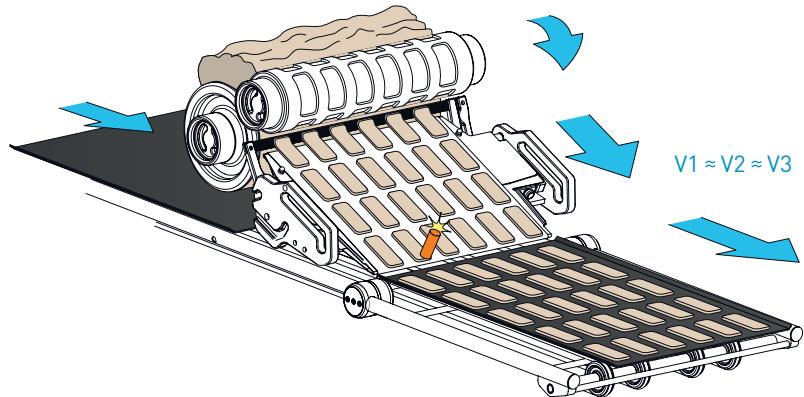
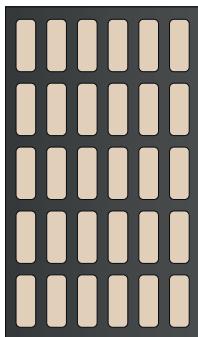
Possible settings of the »Performance« control:

The **optimum setting** is achieved when the distances between the pastry rows are sufficient so that the pastries do not bake together and, if possible, no pastry row overlaps the sheet edge at the end (see Fig. below).

The speed V3 is usually about as fast as the speed V2 of the upper conveyor belt and the speed V1 of the machine.

The forming roller shown below could be engraved with optimal pastry row distances due to the pastry geometry.

For smaller pastries (under 60 mm in length), the forming roller is usually engraved with optimum pastry row spacing.

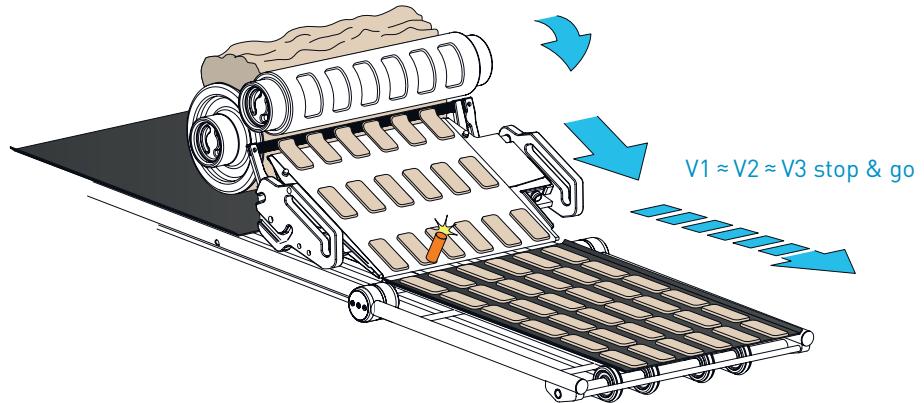
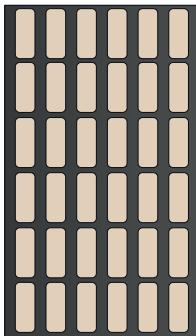


Im Gegensatz zu der »Compact«-Steuerung kann man mit der »Performance«-Steuerung den Backblechtransport zwischendurch kurz automatisch anhalten, damit man beispielsweise deutlich zu große Gebäckreihenabstände, die durch die Formwalze zwangsläufig vorgegeben sein können, auf dem Backblech reduzieren kann.

Dies kann man im »Automatic«-Modus mit der Parameterinstellung für die optimale Backblechbelegung mittels der Reihenzählung und dem Reihenabstand festlegen (siehe Abb. rechts).

Die unten abgebildete Formwalze konnte aufgrund der Gebäckgeometrie **nicht** mit optimalen Gebäckreihenabständen graviert werden. Die Lücken zwischen den Gebäckreihen sind sehr groß, wie man es auf dem oberen Transportband gut erkennen kann.

Durch das kurze Anhalten des Backblechtransports nach jeder abgelegten Gebäckreihe werden die großen Lücken geschlossen und das Backblech optimal belegt.



◀ BACK ▶ MENU

Settings

Mode: Permanent **Semi-Auto.** Automatik Roller? ⓘ

Programm: 03 ... ⓘ

Speed V1 maschine	◀ 4,0 ▶	m/min. ⓘ
Speed V2 upper conveyor belt	◀ 4,0 ▶	m/min. ⓘ
Speed V3 sheet transport	◀ 4,1 ▶	m/min. ⓘ
Knife	◀ 1 ▶	Level ⓘ
Roller heating	◀ 0 ▶	Level ⓘ
Biscuit position to the front sheet edge	◀ 15 ▶	- ⓘ

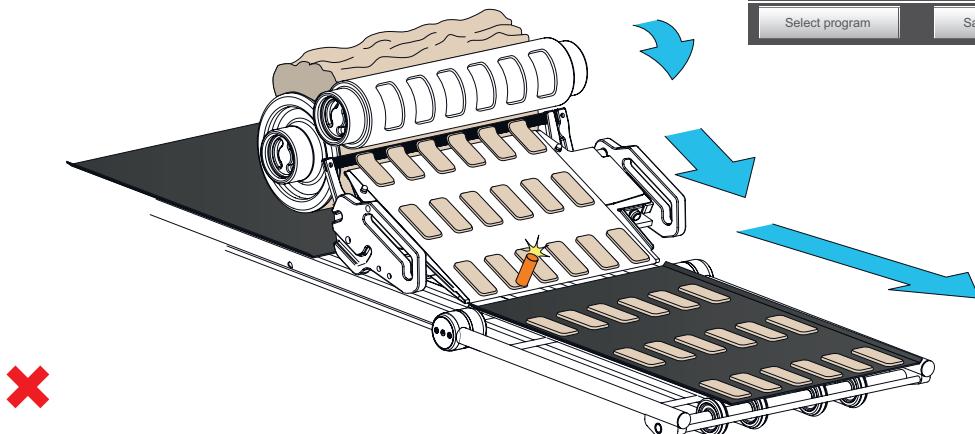
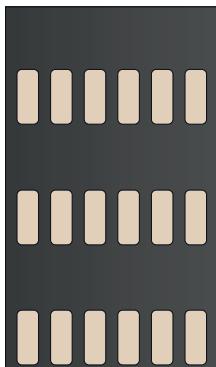
Select program Save program

Example 1:

»Semi-Automatic« mode:

In the »Semi-Automatic« mode, the upper conveyor belt and the lower tray transport run in parallel and the spacing between the rows of pastries on the upper conveyor belt is approximately the same as on the baking tray.

In this case, the placement on the baking tray is very unfavorable. Reducing the speed V3 of the lower baking tray transport would not be effective here, since the pastries would be very strongly compressed..

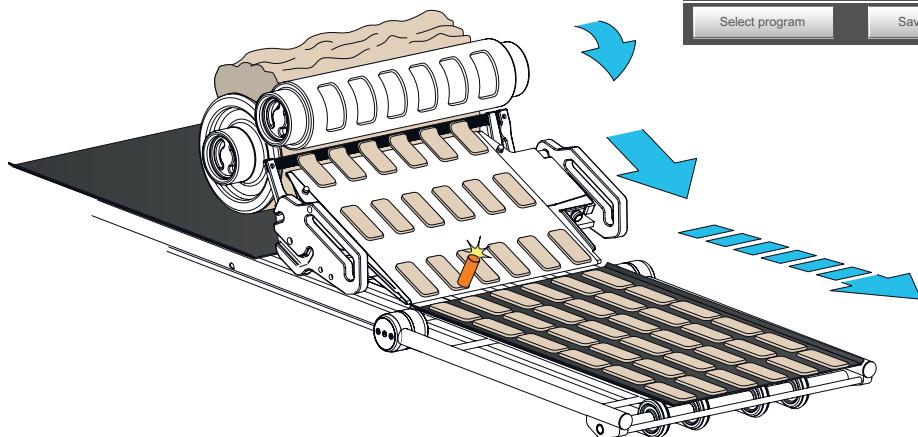
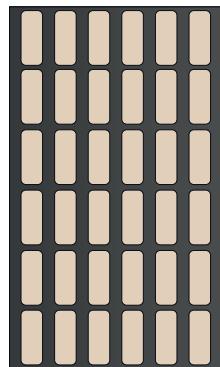


Example 2:

»Automatic« mode:

In the »Automatic« mode, the upper conveyor belt and the lower tray transport run in parallel, but the tray transport in this mode also stops shortly after each deposited row of pastries and reduces the large distances between the rows of pastries.

In this case, the placement of the baking tray is optimal.



◀ BACK MENU ⌂

Settings

Mode: Permanent Semi-Auto. **Automatik** Roller?

Program: 03 . . . ⓘ

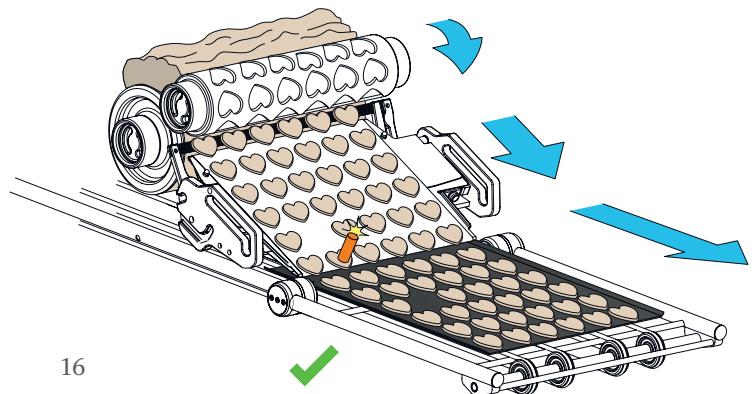
Speed V1 maschine	◀ 4.0 ▶	m/min. ⓘ
Speed V2 upper conveyor belt	◀ 4.0 ▶	m/min. ⓘ
Speed V3 sheet transport	◀ 4.1 ▶	m/min. ⓘ
Knife	◀ 1 ▶	Level ⓘ
Roller heating	◀ 0 ▶	Level ⓘ
Biscuit length (measured)	◀ 56 ▶	mm ⓘ
Biscuit position to the front sheet edge	◀ 5 ▶	- ⓘ
Factor for the row spaces	◀ 14 ▶	- ⓘ
Number of rows	◀ 12 ▶	- ⓘ

Select program Save program

Example 3:

»Semi-Automatic« mode:

Small pastries are usually formed with the »Semi-Automatic« mode, as this mode is somewhat less sensitive, for example, if the pastries are not formed so evenly due to doughs that do not work so perfectly. The sheet sensors detect the beginning and the end of the baking sheet and the machine runs continuously until the baking sheet is completely filled with pastries. The dough sensor is inactive during the placement of the baking tray, regardless of whether a cookie has been optimally or less optimally shaped under the sensor in between (see figure below).

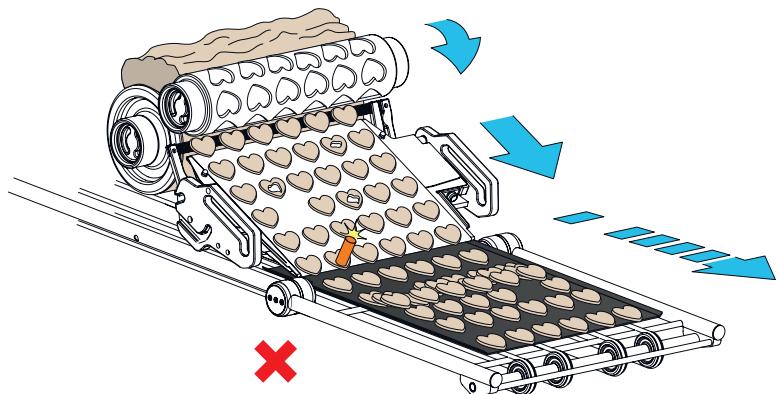


Example 4:

»Automatic« mode:

In the »Automatic« mode, irregular shapes would result in a whole row being placed on top of the previous one because a faulty pastry is under the pastry sensor and does not activate the pastry sensor. The baking tray would stop and deposit a complete row of pastries on top of the previous one.

The number of faulty pastries would be much higher in »Automatic« mode than in »Semi-Automatic« mode with uneven pastry shaping.



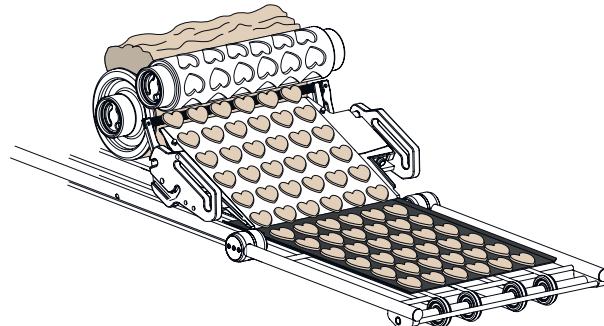
3 Comparison of the controls

The choice of control for your Janssen cookie former essentially depends on the range of functions you want to use.

3.1 Advantages of »Compact« control

The »Compact« control stands for robust and simple operation. It has only pushbuttons and rotary knobs and does not overload with extensive setting options.

It is particularly suitable if you only want to produce small pastries (smaller than 60 mm).

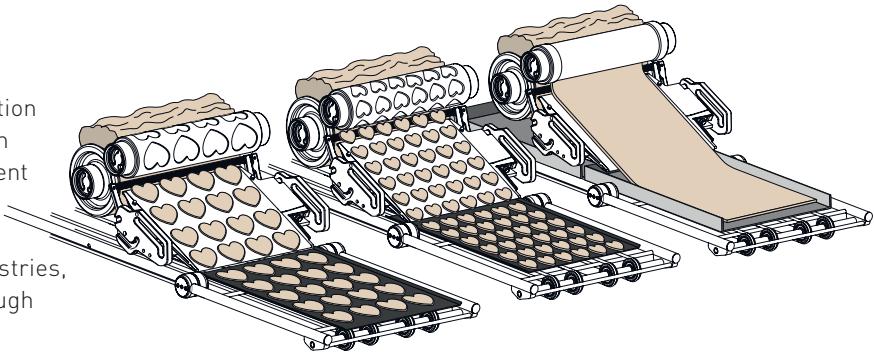


3.2 Advantages »Performance« control

The »Performance« control stands for simple operation with many helpful functions. It is operated via a touch display and different settings can be saved for different products.

It is particularly well suited if, in addition to small pastries, you also want to produce cake bases, continuous dough bands for cake trays or longer pastries (longer than approx. 70 mm).

The »Performance« control is also necessary for the adaptation of the Janssen cookie former with a band oven, so that the speed of the machine can be synchronized with that of the band oven.



3.3 Overview



Type of control	Compact	Performance
Speed V1 of the entire machine	constant: 4 m/min.	adjustable: 1,5 – 6 m/min.
Speed V2 of the upper conveyor belt	constant	adjustable
Speed V3 of the lower baking tray transport	adjustable	adjustable
Knife speed	normal	adjustable; normal / fast* *) nur für besondere Gebäcke, die sich stark stauchen
Heating	adjustable: 3 levels	adjustable: 3 levels
Operating modes	Permanent / Automatic* *) large distances between rows of cookies cannot be reduced	Permanent / Semi-Aut./ Automatic* *) large distances between rows of cookies can be reduced
Pastry row position to the front edge of the baking tray	not adjustable	adjustable
Pastry Row Count	no	yes
Pastry row distance	only conditionally adjustable* *) Distance only adjustable via speed V3	adjustable
Operation	Pushbuttons and rotary knobs	Touch display
Program memory	no	yes
Language selection	no	yes



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www.nff-janssen.de



Recipe book

for Janssen Cookie Former / F-Series and K-Series

Let yourself be inspired!



06_2022_EN_USA

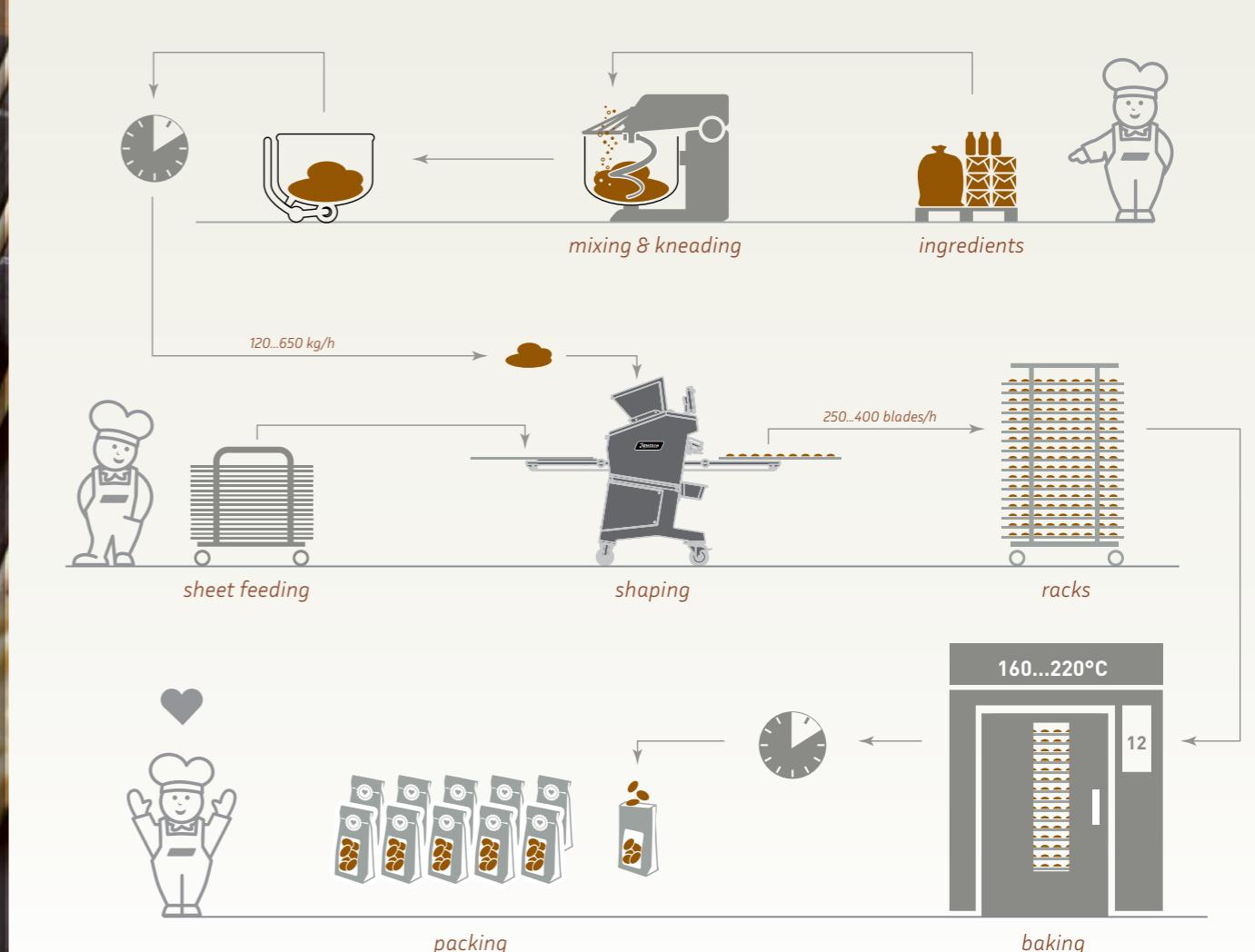


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»Recipes for Janssen Cookie Former«







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Dough variety & recipes

With our Janssen Cookie Formers you can process a large variety of doughs and recipes: Shortcrust pastries, such as Spekulatius, brown and white cakes, shortbread, tea biscuits, but also salty, spicy shortbread doughs are some of the common doughs that our customers process. With restrictions, ingredients such as chopped nuts, almonds or chocolate chips are also possible. In addition, marzipan, fondant, sugar paste, printen and gingerbread can be formed very well.

For the production of cake and cake bases, more elastic shortcrust dough is used and offers an efficient and dough-friendly alternative to the classic roll-out processes.

Our recipe book shows you selected recipes which you can process very well with our Janssen pastry moulding machines. Since doughs are generally composed of different natural ingredients, the dough properties can have different effects depending on the origin of the ingredients. Therefore, the recipes presented serve as a basis, which may have to be adapted depending on the moulding result.

We wish you a lot of joy with our Janssen Cookie Formers.



»Fat«

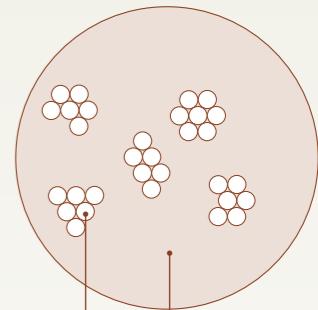
In the production of short crust dough, fat is the characteristic and „baking-critical“ ingredient, since the binding of the dough is based on the coating of the residual components by the fat. Fat has a decisive influence on dough consistency and flow properties. It also has a decisive effect on the loosening of the dough and the sensory properties of the end product. Here not only the quantity used in relation to the other recipe components is important, but also the type of fat. The use of butter and/or baking margarine with the following specifications is recommended for the production of short crust dough with Janssen Cookie Formers:

Butter

- » 80 to 90% fat in dry weight
- » maximum 16% water
- » processing temperature of approx. 10°C

Baking margarine

- » 80 % fat in dry weight
- » fatty acid ratio
 - 40% saturated FA
 - 30% mono-unsaturated FA
 - 10% poly-unsaturated FA
- » Composition
 - palm fat, coconut oil, rapeseed oil, water, emulsifier
- » Processing temerature of approx. 20°C





»Flour«

Although wheat flour is the most widely represented ingredient in terms of quantity, it plays a subordinate role in the production of short crust dough.

The formation of an adhesive network is usually undesirable, as this leads to undesired compression and thus to pastry defects. As a rule, shortcrust pastry should have a plastic consistency and be easy to roll out and form.

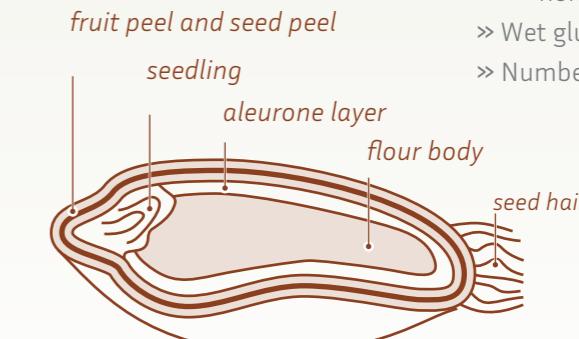
This usual production practice is recommended for the production of small baked goods with Janssen Cookie Formers.

In the production of dough bands or cake bands, on the other hand, a slightly elastic dough can have advantages with regard to the forming result.

As a rule, wheat flours with a grinding degree of between 0 and 65 % and a mineral content of up to 630 mg (based on 100 g dry matter) are used.

In addition, we recommend the use of low tack flours with medium flour ratios, which are listed in the following example of a Type 550 flour:

- » Degree of milling: 0 - 65 %
- » Mineral content 510 - 630 mg to 100 g dry matter
- » Moisture content: 13 - 15 %
- » Protein content:
 - biscuit flour 8 - 11.1 %
 - normal flour 11.2 - 13 %
- » Wet glue content: 25 - 30 %
- » Number of cases: 250 - 320 sec





»Sugar«

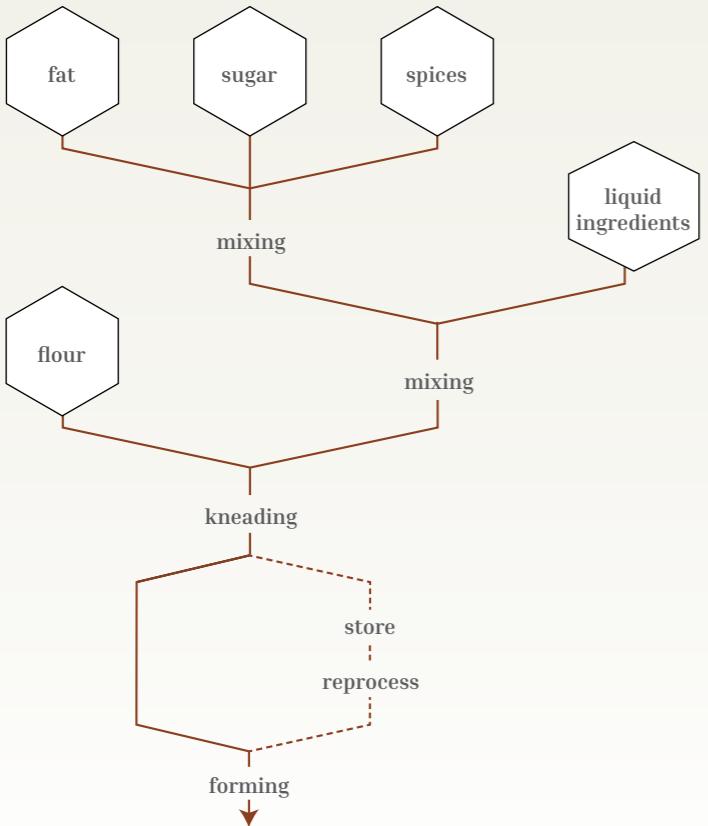
In addition to fat, sugar is responsible for the characteristic sensory properties of shortcrust pastries.

By using different types and quantities of sugar, the properties of the pastry can be significantly influenced.

As a rule, fine-grained sugars and icing sugar are used. The latter is particularly recommended if the dough is to be processed directly without storage. By adding larger amounts of sugar, baked goods with clearer structures can be produced, which, however, have a harder break.



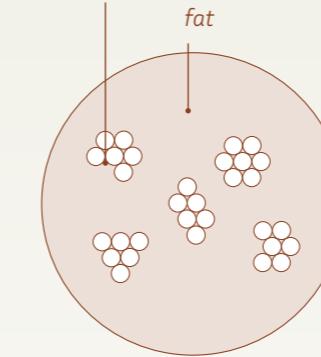
Production of »shortcrust pastry«



When processing shortcrust dough, it is recommended that the ingredients are processed chilled. The temperature is particularly important when butter is used as a source of fat. To prepare the dough, it should be processed at a temperature of 10°C. The temperature of the dough should be kept at a minimum of 10°C. Margarine can be processed up to 20°C. After adding the flour, the dough should not be kneaded for too long, otherwise it will be burnt.



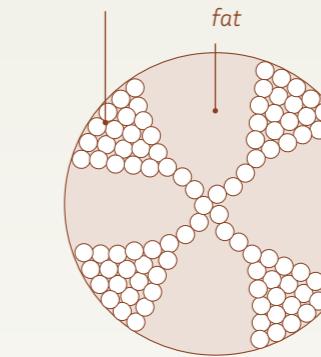
embedded flour components



Ideal shortcrust pastry:

A shortcrust pastry that is easy to process is characterised by the fact that the flour components are embedded in the fat structure.

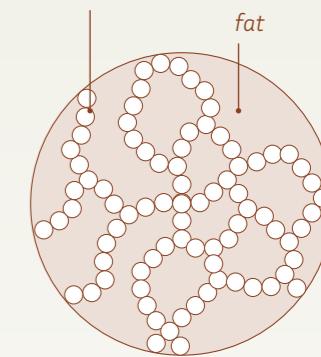
outsourced flour components



Burnt shortcrust pastry:

The flour particles are no longer embedded in the fat but have broken the fat bond. The dough crumbles heavily and can no longer be processed properly.

swollen flour components



Tough shortcrust pastry:

The adhesive proteins of the flour particles have formed an adhesive network with the existing dough liquid. In addition, the starch grains have swollen. Thus the fat is enclosed in the dough structure and the typical „crumbly“ consistency cannot be achieved. The dough is also very elastic and contracts during shaping and baking.



Recipes for fine, crispy and thin pastries

14



Crunchy butter biscuit	16
Almond biscuit	18
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Pretzels with chocolate	24

The baked goods listed below are characterised by a clear structure, a firm, crunchy break, which is usually accompanied by a thin thickness.

»Crunchy Butter Biscuit«

Ingredients

granulated sugar (fine)	1000 g
butter	1000 g
flour (type 405)	2000 g
egg yolk	40 g
milk	110 ml
vanilla flavor	10 ml
lemon flavor	10 ml
salt	a pinch

Dough production

Devices: In spiral kneader with centre bar

Step 1: Mix sugar, salt and butter for 3 min.

Step 2: Add egg yolk, flavors and milk and mix for 2 min.

Step 3: Add flour and knead for 5 minutes

Note: Times may vary depending on the amount of dough/ volume of the kneading vessel.



»Speculatius«

Ingredients

granulated sugar (fine)	1000 g
butter	1000 g
flour (type 405)	2000 g
egg yolk	40 g
milk	120 ml
speculatius spice	40 g
salt	10 g
baking powder	10 g

Dough production

Devices: In spiral kneader with centre bar

Step 1: Mix sugar, spices, salt and butter for 3 min.

Step 2: Add milk and egg yolk and mix for 2 min.

Step 3: Add flour and baking powder and knead it to a smooth dough.

Note: Times may vary depending on the amount of dough/volume of the kneading vessel.



»Speculatius II«

Ingredients

granulated sugar (fine).....	1000 g
butter.....	535 g
flour (type 405).....	1650 g
egg.....	328 g
spices.....	37 g
salt.....	6 g

Dough production

Devices: In spiral kneader with centre bar

Step 1: Mix sugar, spices, salt and butter for 3 min.

Step 2: Add egg and mix for 2 min.

Step 3: Add flour and knead it to a smooth dough

Note: Times may vary depending on the amount of dough/ volume of the kneading vessel.



»Pastries with nuts«

Ingredients

granulated sugar (fine).....	1000 g
butter.....	1000 g
flour (type 405).....	1705 g
egg.....	65 g
milk.....	110 ml
vanilla flavor.....	10 ml
lemon flavor.....	10 ml
grated hazelnuts.....	500 g

Dough production

Devices: In spiral kneader with centre bar

Step 1: Mix sugar and butter for 2 min.

Step 2: Add egg yolk, flavors and milk and mix for 2 min.

Step 3: Add flour and grated hazelnuts and knead for 3.5 minutes

Note: Times may vary depending on the amount of dough/volume of the kneading vessel.



»Pretzel with chocolate«

24

Ingredients

granulated sugar (fine).....	1000 g
butter.....	1000 g
flour (type 405).....	2000 g
egg yolk.....	40 g
milk.....	110 ml
vanilla flavor.....	10 ml
lemon flavor.....	10 ml
baking cocoa.....	125 g
grated dark chocolate coating	80 g
salt	a pinch



Dough production

Devices: In spiral kneader with centre bar

Step 1: Mix sugar, salt, cocoa, chocolate coating and butter for 2.5 min.

Step 2: Add egg yolk, flavors and milk and mix for 2 min.

Step 3: Add flour and knead for 5 minutes

Note: Times may vary depending on the amount of dough/ volume of the kneading vessel.



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Recipes for delicate shortcrust doughs

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Tea Biscuits

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Short-Bread

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Vanilla-Kipferl

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Linzer biscuits

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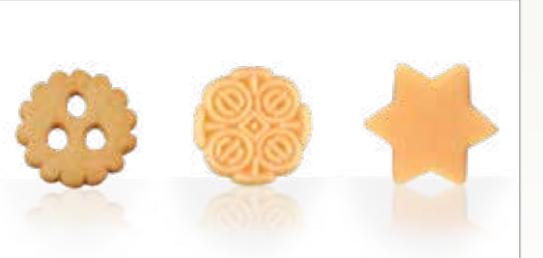
The pastries listed in the following
are characterised by a delicate crum-
bly consistency.

»Tea Biscuit«

28

Ingredients

granulated sugar (fine)	1000 g
butter	2000 g
flour (type 405)	2550 g
egg yolk	94 g
egg	125 g
vanilla flavor	60 g
starch	600 g
lecithin	12 g
salt	8 g



Dough production

Devices: In spiral kneader with centre bar

Step 1: Mix sugar, butter, lecithin and salt for ca. 1 min. at slow speed

Step 2: Add egg yolk, egg, flavors and mix at slow speed for 0.5 min. and at high speed for 0.5 min.

Step 3: Add starch and mix slowly for ca. 1 min.

Step 4: Add flour and mix for 3 min.

Step 5: Store dough in cool place

Step 6: Knead well before further processing

Note: Times may vary depending on the amount of dough/volume of the kneading vessel.



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»Short-Bread«

Ingredients

icing sugar.....	1000 g
butter.....	2050 g
biscuit flour	2307 g
corn starch	784 g
lecithin.....	29 g
salt.....	6 g

Dough production

Devices: In spiral kneader with centre bar

Step 1: Mix sugar, butter, starch, lecithin and salt at slow speed for 1 min. and at fast speed for 1 min.

Step 2: Add flour and mix slowly for ca. 2 min. then fast for 1 min. and slowly again for 0.5 min.

Step 3: Store dough in a cool place

Step 4: Knead well before further processing

Note: Times may vary depending on the amount of dough/ volume of the kneading vessel.



»Handcrafted Vanilla-Kipferl«

Ingredients

granulated sugar	1000 g
butter	2000 g
flour (type 405).....	3000 g
(roasted) nut semolina	1000 g
egg	50 g
egg yolk	20 g
salt	20 g
vanilla flavor.....	as required



Dough production

Devices: In spiral kneader with centre bar

- Step 1: Mix sugar and butter for ca. 2 min.
- Step 2: Add egg, egg yolk and flavors and mix for 1.5 min.
- Step 3: Add nut semolina and mix for ca. 1 min.
- Step 4: Add flour and knead for ca. 3.5 min.
- Step 5: Store dough in a cool place
- Step 6: Knead well before further processing

Note: Times may vary depending on the amount of dough/volume of the kneading vessel.



»Linzer biscuits«

Ingredients

powdered sugar	1000 g
butter	1750 g
flour (type 550).....	2 250 g
(roasted) hazelnut flour	1000 g
egg	100 g
salt	20 g
orange flavor.....	as required



Dough production

Devices: In spiral kneader with centre bar

Step 1: Mix sugar and butter for ca. 2 min.

Step 2: Add egg and flavors and mix for 1.5 min.

Step 3: Add hazelnut flour and mix for ca. 1 min.

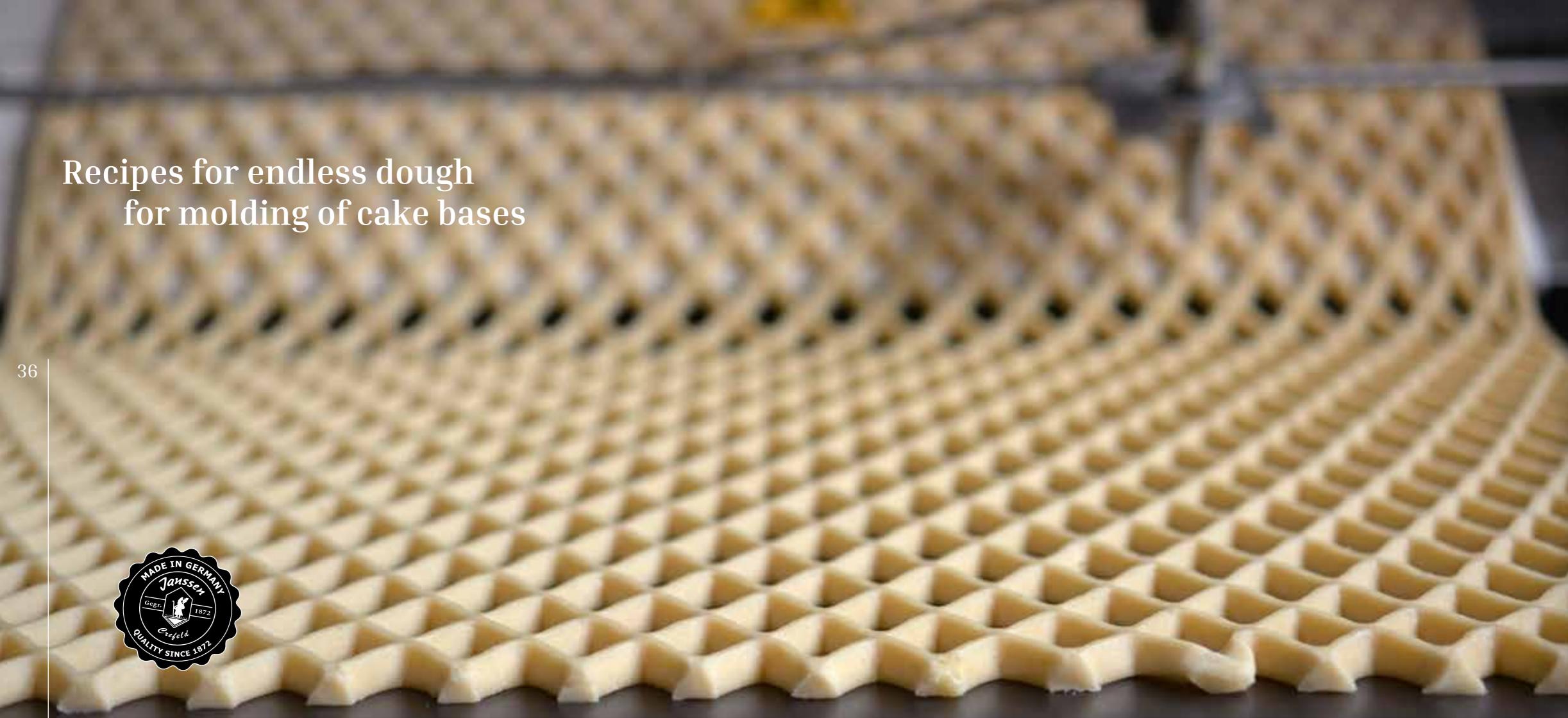
Step 4: Add flour and knead for ca. 3.5 min.

Step 5: Store dough in a cool place

Step 6: Knead well before further processing

Note: Times may vary depending on the amount of dough/volume of the kneading vessel.





Recipes for endless dough for molding of cake bases

36

Endless dough /
endless lattice

36

Perfect for production in cake lines.
From cake base to lattice, your cake
production is supported optimally.



»Endless dough / endless lattice«

Ingredients

granulated sugar.....	1000 g
baking margarine	1250 g
flour (type 550).....	2500 g
egg	300 g
lemon flavor.....	25 ml
vanilla flavor.....	25 ml
baking powder.....	50 g
salt	25 g
water	75 ml

Dough production

Step 1: Mix sugar, salt und margarine for 2 min.

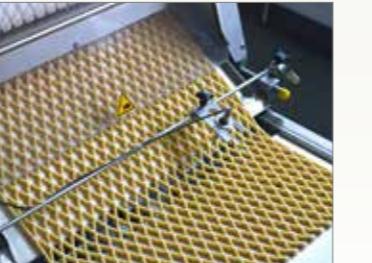
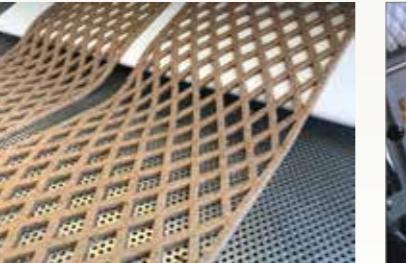
Step 2: Add flavors, egg and part of the water (ca. 50 % of total water quantity) and mix for 2 min.

Step 3: Add flour and baking powder and knead for ca. 5 min.

Step 4: Store dough in a cool place overnight

Step 5: Add remaining water and knead dough before starting production

Note: Times may vary depending on the amount of dough/ volume of the kneading vessel.



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Recipes for gluten-free doughs



Even special doughs run on Janssen machines, whether hearty, gluten-free or vegetarian, there is a wide variety of biscuit mixes to choose from.

»Gluten free«



Ingredients

granulated sugar (fine).....	1000 g
butter.....	1000 g
xanthan gum.....	4 g
lecithin.....	4 g
milk.....	110 ml
vanilla flavor.....	21 ml
lemon flavor.....	9 ml
egg yolk.....	60 ml
corn starch	907 g
rice flour.....	615 g
tapioca starch.....	500 g

Dough production

Devices: In spiral kneader with centre bar

Step 1: Mix granulated sugar, xanthan gum, lecithin and butter for 1 min at slow speed and 1 min at fast speed

Step 2: Add egg yolk, flavors and milk and mix for 1 min.

Step 3: Add corn starch, rice flour and tapioca starch and knead for 3 minutes

Note: Times may vary depending on the amount of dough/volume of the kneading vessel.



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Recipes for Printen dough and gingerbread dough

44



Gingerbread

44

Printen

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Even the traditional sweet,
strong and durable doughs can be
formed wonderfully in our machines.



»Gingerbread«

Ingredients

honey	1 000 g
wheat flour (type 1050)	875 g
rye flour (type 1150)	375 g
egg	104 g
sodium bicarbonate	13 g
potash	13 g
spices	45 g



Dough production

STORAGE DOUGH

Step 1: Heat the honey to approx. 70°C (»dissolving the crystals«) and then let it cool down again to approx. 35°C.

Step 2: Knead in flour (approx. 3 min.)
--> dough can now be stored for up to 4 months

MAIN DOUGH

Step 1: Add spices

Step 2: Dissolve sodium bicarbonate in half of the egg white and knead with the appropriate amount of egg yolk under the storage dough.

Step 3: Dissolve the remaining egg white in the potash and also knead in the egg yolk with the corresponding amount.

Step 4: Let the dough rest for at least 1 hour and process in a cool place, otherwise it will compress at the knife.

Note: Times may vary depending on the amount of dough/ volume of the kneading vessel.



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»Printen«

Ingredients

»Printen« syrup	6500 g
»Köln«-spice mix	375 g
flour (type 550).....	4500 g
flour (type 1050).....	2000 g
brown sugar.....	1500 g
rock candy.....	2000 g
potash	75 g
sodium bicarbonate.....	50 g

Dough production

Step 1: Heat printen syrup to a maximum of 80°C.

Step 2: Weigh and mix the flour

Step 3: Wait until the syrup has cooled down to approx. 36°C.

Step 4: Add syrup (in the spiral kneader at slow speed)

Step 5: Mix and add candy and icing sugar

Step 6: Stir in spices

Step 7: Dissolve the potash in water; also dissolve the sodium bicarbonate and let it run in separately.

Step 8: Knead well at slow speed

Step 9: Cover the dough and let it rest at room temperature for at least one day.

Step 10: Briefly knead the dough before processing and then pour into the machine. Work should be carried out quickly and standing times should be avoided, otherwise the dough will stick in the Forming roller.

Note: Times may vary depending on the amount of dough/ volume of the kneading vessel.





Marzipan
in any shape



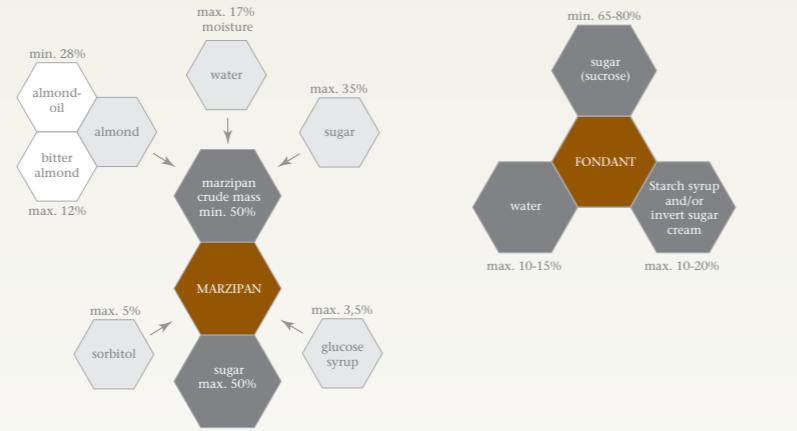
With our machines it is also possible
to form marzipan paste. For example
for the decoration of cakes.

»Marzipan / Sugarpaste / Fondant«

Dough production

Our Janssen Cookie Formers are particularly suitable for moulding marzipan, sugarpaste and fondant.

It is also possible to mix and shape shortcrust dough with marzipan.



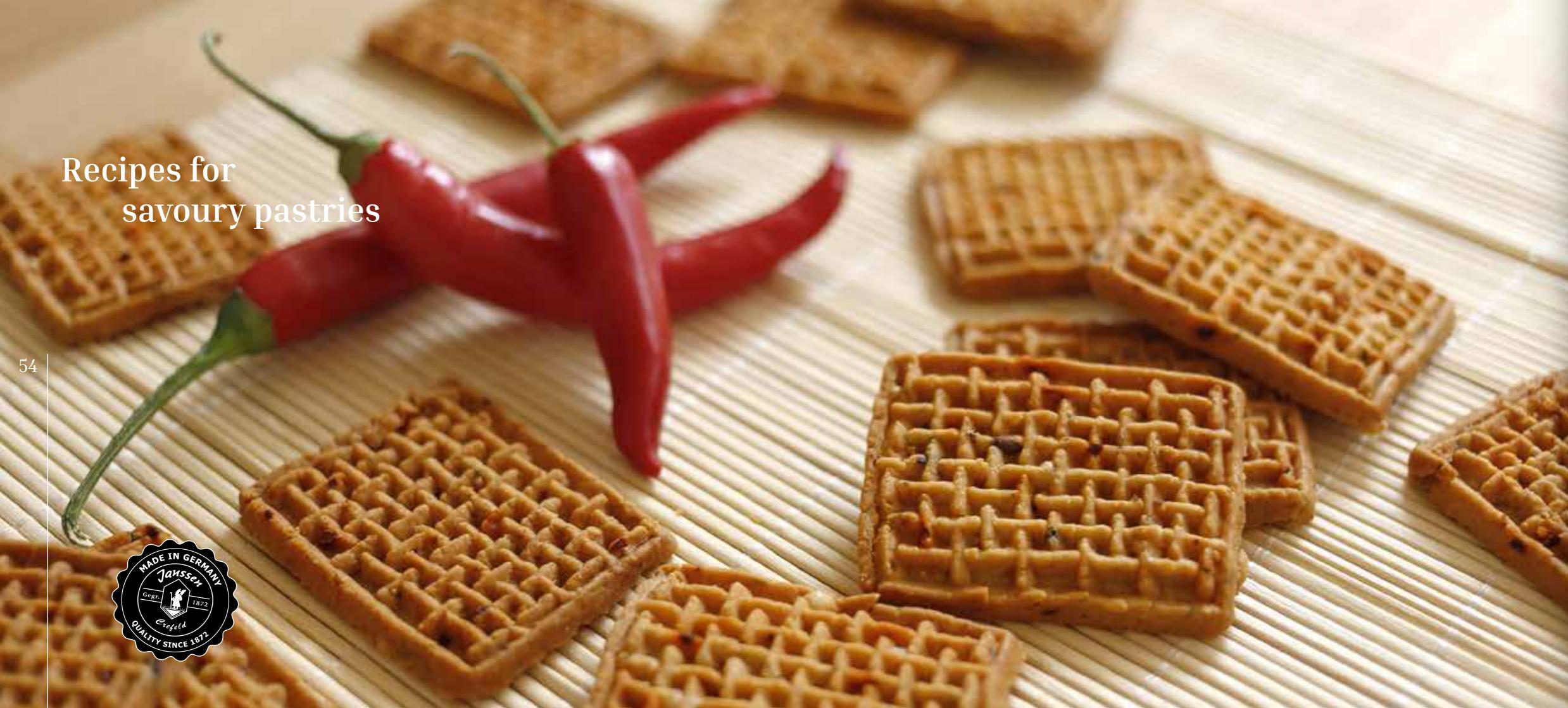
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Recipes for savoury pastries

54



Savoury pastries and crackers are a tasty starter with a meal or a side dish with a glass of wine.

»Savoury«

Ingredients

butter.....	1000 g
lecithin.....	20 g
salt.....	53 g
flour (type 405).....	2220 g
water.....	495 g

Dough production

Devices: In spiral kneader with centre bar

Step 1: Mix butter, lecithin and salt for 1 min.

Step 2: Add flour and knead for 1 min.

Step 3: Add water and knead for ca. 9 minutes

This basic recipe can be varied in many ways by adding hearty cheeses and spices such as chilli or thyme.

Note: Times may vary depending on the amount of dough/ volume of the kneading vessel.



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»Savoury cheese biscuits«

Ingredients

firm, spicy, grated cheese	1000 g
butter	1000 g
flour (type 550)	1300 g
egg yolk	200 ml
salt	15 g
water	495 g

for later brushing with egg yolk and spices

egg yolk	200 ml
spices	20 g



Dough production

Devices: In spiral kneader with centre bar

Step 1: Mix butter, cheese and egg for 1 min.

Step 2: Add flour and knead for 2 min.

Step 3: Add water and knead it to a smooth dough.

Step 4: Brush with egg yolk and garnish with spices.

Note: Times may vary depending on the amount of dough/ volume of the kneading vessel.



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Do you have any questions?
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