

Operating manual

Manomat / Automat 2000

| | |
|----------------|----------------|
| SSO675 | SSO685 |
| SSO675C | SSO685C |
| SSO677 | SSO687 |
| SSO677C | SSO687C |

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EC Declaration of conformity for machinery

(Machinery Directive 2006/42/EC, Annex II., sub. A)

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Herewith we declare that the dough processing machine: Dough sheeters

| | |
|-----------------|--------|
| Manomat | SSO67 |
| Automat | SSO68 |
| Manomat-Cutomat | SSO67C |
| Automat-Cutomat | SSO68C |

- is in conformity with the relevant provisions of the Machinery Directive (2006/42/EC)
- is in conformity with the provisions of the following other EC-Directives:
 - Directive EMC 2004/108/EC.

And furthermore, we declare that

- the following (parts/clauses of) European harmonised standards have been used:
 - EN 1674: Food processing machines – Safety and Hygiene requirements
 - 1935/2004: Materials, intended to come into contact with food
 - EU 10/2011: Plastic materials and articles intended to come into contact with food
 - EN 60204-1: Safety of machinery – Electrical equipment – Part 1
 - EN 12100-1: Safety of machinery – General principles – Part 1

Burgdorf, 29.01.2016

Werner Mathis
Manager R&D

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Hint for operating manual: The numbers of the illustrations (Ex. — 1) are numbered chapterwise.

1 Safety information

1.1 Explanation of symbols



All the sections in this Operating Manual containing safety instructions which absolutely must be observed are marked with this symbol and with a number.



All the sections in this Operating Manual containing information which absolutely must be observed are marked with this symbol.

1.2 Explanation of warning signs



Sign indicating prohibited activity

Reaching under the safety guard is prohibited!



Instruction and information signs

Make sure to disconnect the mains plug before opening!



Danger warning sign

Danger warning



High-voltage warning sign

Warning against electrical shock
Disconnect mains plug before opening.

1.3 Safety elements

1.3.1 Safety guard



Handling instructions

The safety guards fulfill a dual purpose:

1. They protect the operator from inadvertent contact with the rollers and the cutting rollers.
 2. The machine can be stopped immediately by lifting up the safety guard. Raising the safety guard even just slightly will stop the machine from continuing to operate.
- Lift safety guard
Machine stops
(In order to restart the machine, see 4.2 Starting / Stopping the machine)

1.4 Safety instructions and information which must be followed

Before putting the machine into operation the operating manual must be read!



The machine of RONDO is exclusively built for sheeting, booking, final sheeting and cutting of dough or marzipan sheets for the food industry.

However, the machine is not suitable for the processing of other products (e.g. modelling clay or other types of mouldable masses which are not dough products).

RONDO's flour duster was made exclusively for continuous dusting of dough sheets with flour.

Any other use of these units is not in accordance with the purpose for which they are built. Therefore, the manufacturer will not be liable for any accidents or damage resulting from unauthorized use; the risk in any such instance will be borne solely by the user.



Authorized use also means that the user must follow all instructions prescribed by the manufacturer in respect of operation, maintenance and service.



Any work on the electrical components of the machine, in particular the correct professional electrical connection, may only be carried out by qualified personnel who are familiar with the prescribed safety instructions.

The maximum permitted fuse of the mains is specified in the enclosed electro circuit diagram or on the sign "Electrical connected loads".

The machine may only be connected to the mains using the mains plug! No permanent electrical installation may be made using, for example, terminal screws. The mains plug is used as a disconnecting device, and must always be clearly visible and easily accessible.



Protective covers over the electrical controls and the mechanical moving parts may only be removed by professionally qualified personnel and must be remounted before the machine is put back into operation.



Any unauthorized changes made to the machine, and in particular, to the safety devices on the machine will automatically exclude any liability on the part of the manufacturer for accidents or damage sustained as a result of such changes.



Defective cables and mains plugs must be immediately replaced by qualified personnel.



The machine may only be connected to the mains using the mains plug and be operated once it has been fully assembled. In particular operation with removed machine tables is prohibited.



Before beginning any repair, service or cleaning work on the machine, the electricity supply to the machine must be disconnected (pull out mains plug).



Safety devices on the machine may not be adjusted, shorted-out or expanded.



Operation of the machine when any of the safety devices is out of order is prohibited.



Defective safety devices must be immediately replaced with new original parts from RONDO.



Machine parts located in the areas in which the dough is being processed, and whose surface coating becomes worn (e.g. chromium-plate worn off), must be replaced.



When transporting the machine, it may not be lifted on the machine base or support. The machine should be fastened on the pallet and transported without the table. Fasten the safety guard in the upper position.



Reaching under the closed safety guard is prohibited!



Never reach in the delivery roller of a moving flour duster with either hands or any other object!



After closing the safety guard, operation may be started up by pushing the green reset button.



Do not deposit any loose objects such as knives, tools or articles of clothing, etc. in the area where the dough is located.



In order to guard against respiratory tract difficulties and flour dust allergies, the machine should be equipped with an automatic flour duster. Limit the use of flour to a minimum.

The use of compressed air for cleaning the machine is not permissible.

The use of a dust extraction system in the bakehouse is recommended.



When changing the oil, ensure that no oil is able to reach the area where the dough is located.



Check the front section of the housing periodically against oil leakage.



Dispose of old oil in an environmentally safe manner.



Check periodically to ensure that there are no loose screws in the area where the dough is located.



Cutomat: The safety guard must always be closed when the cutting rollers are let down.



Cutomat: Due to the risk of injury at the sharp edges the replacement of the cutting rollers must be carried out carefully and professionally. To prevent injury, always wear suitable protective gloves. Cutting rollers located outside the cutting area must be placed in the holding device located underneath the machine table.



The machine may not be operated without the use of a scraper.



Any disposal of the installation must be carried out in accordance with environmentally-accepted practices. The operators are fully responsible for ensuring that such practices are followed.



Prior to the first starting-up, the complete machine must be thoroughly cleaned.



All still existing protective foils on the machine must be removed.



This machine is not designed to be used in explosive ambient.



Defective parts must be replaced with new original parts by RONDO.



After every use, the machine has to be cleaned thoroughly. Not thoroughly cleaned machines can be a health-hazard for the consumer.



The machine must never be cleaned using spray water, high-pressure cleaners or a steam-cleaning machine.



Non-ionising radiation is not intentionally produced but only given off for technical reasons by electric equipment (e.g by electric motors). In addition the machine has no strong permanent magnets. By keeping a safe distance (the distance from the source field to the implant) of 30 cm, interference with active implants (e.g. pacemakers, defibrillators) can be excluded with a high degree of probability.

RONDO will not accept liability when any of the above safety instructions / notes have not been complied with!

2 Transporting, setting up, connecting, dismantling and storing the machine

2.1 Machine delivery

The machine is delivered in its original packaging.

- Report any claims for damage caused as a result of transportation directly to the freight handlers (see the packaging: the delivery documentation is contained on the outside of the packaging)

2.2 Transportation

When transporting the machine must be packed in the original packaging or in accordance with the instructions of the manufacturer to guarantee stability.

The tables must be dismantled and the safety guards fixed in the upper position.

The machine must not be tipped over.

(Machine weight, see 9.1 Technical data Manomat / Automat 2000)

2.3 Unpacking the machine

The machine must be set up on a level, even floor surface.

For further information regarding the ambient conditions required for the machine, see 3.1 General information

- Unpack table and attachments
- Check all items received against the delivery slip for completeness

2.4 Setting up the machine

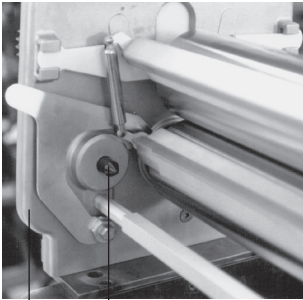


Two people are required to set up the machine.

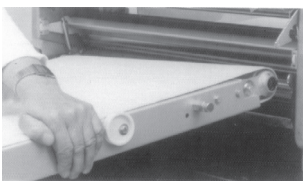
Caution when lifting by crane (danger of tipping)

2.4.1 Installation of the machine tables

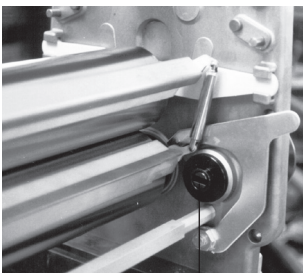
- Remove all protective foil on the stainless steel sections of the machine
- Lift the machine table with the aid of a second person
- Guide the center of the machine table's driving roller onto the spring bolts (1) at the rear housing (2)



2 1

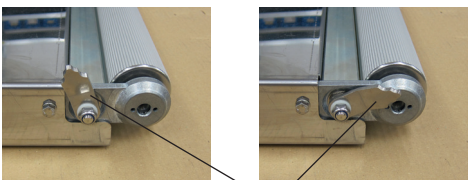


- Using heavy pressure, push the table towards the rear



3

- Center the catch of the machine table's driving roller in the receiver (3) in the front section of the housing



Pos. A

22

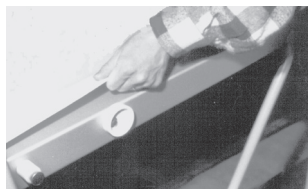
Pos. B

- Hinge down the table bolt (22) (it is used to prevent the unintentional unhinge of the table)

A: Position by mounting/dismounting

B: Position by operation

To snap the machine table into place, proceed as follows:



- Tug lightly on the conveyor belt until the catch snaps in place

- Lift the table

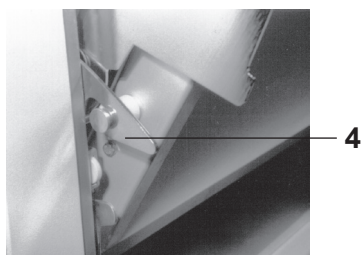


- To lift the table, slip in or remove the dough catch pan

(Lifting the table with cutting station, see 5.3.2 Types of cutting rollers).

- Attach table hooks (4)

The machine table is now secured.

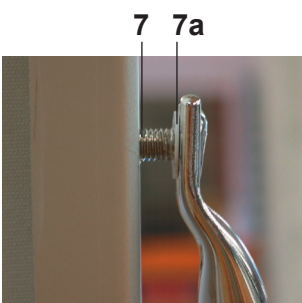


2.4.2 Mounting the forked supports



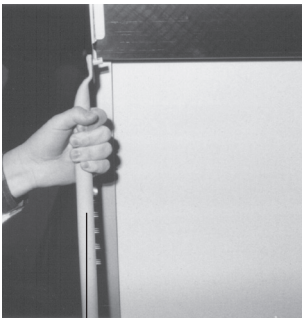
5 6

- Push forked support (5) into the support guide (6)



7 7a

- Insert catch plug (7) of the forked support, with fitted washer (7a), into one side of the table



5

- Bend up the forked support (5) and secure it to the opposite side of the table (washer fitted on the catch plug)

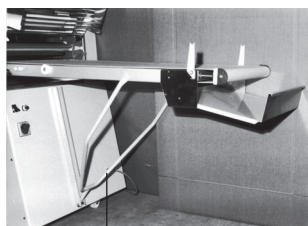


7b

- Fit the second washer on both sides on the inside, afterwards screw down the cap nut (7b)



Attention: The conveyor belt has to be placed below the cap nut.



5

Position of the forked supports (5) when the machine table is hinged down (working position).

What to watch out for when mounting the forked supports on machines equipped with the “Cutomat” cutting device:



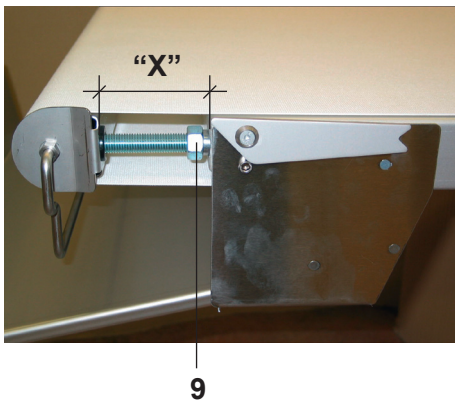
8

The foot (8) of the forked support must be set in such a manner that the table stands level. This is the only way to ensure optimal functioning of the safety guard.

2.4.3 Tensioning the conveyor belts

Tension the conveyor belts only enough that the heaviest pieces of dough (max. 12 kg) can still be moved without slipping of the conveyor.

Proceed as follows:



- Retighten the left and right tension nuts (9) evenly and parallel
- Remeasure Distance "X" on both sides using a millimetre measuring instrument
The distance on both sides must be identical.
- Switch on the machine (See 4 Starting the machine end 3.5.4 Main operating lever)
- Observe the left and right movement of the conveyor belt

If the belt runs off towards one side, proceed as follows:

- Retighten the side where it runs off with a tension nut
- or
- Loosen tension nut on the opposite side
 - Monitor the belt, and if necessary, correct it until it runs exactly in the middle of the table

If necessary, repeat this procedure several times. Routinely monitor the belt during the initial hours that the machine is operational and, if necessary, retighten again.

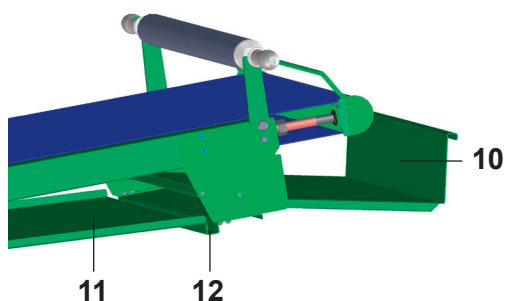
Tensioning and adjusting the conveyor belts demands patience!

Prior to carrying out each further correction, allow the machine to run for at least 30 seconds.



Before putting the machine into operation, the conveyor belts must be lightly rubbed with flour in order to prevent the dough from sticking to the belt.

2.4.4 Mounting the dough catch pan



- Remove the protective foil on the dough catch pan (10)
- Push in the dough catch pan on both sides

Option:

- Attach the flour catch pan (11) to the holder (12)

2.4.5 Mounting the automatic flour duster (option)



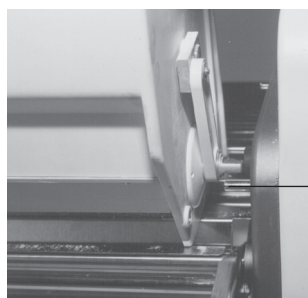
- Remove the protective foil on cover plate (13)
- Position flour duster (14) on the cover plate to which it belongs
- Guide the flour duster into both openings (15) in the cover plate

15 13

14



- Push the flour duster backwards

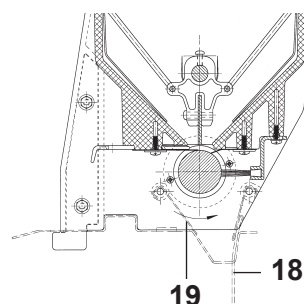


16



17

- Guide the catch (16) into the receiver and turn the delivery roller (17) by hand till the catch can be locked into place



19

18

- Insert the flour dust protection (18) and guard plate (19) into the proper position

2.5 Conditions for initial operation of the machine



Power supply and frequency at the mains circuit to which the machine is connected must be in accordance with specifications contained on the sign “Electrical connected loads” (This sign is found on the cable lead-through on the machine base).



Direct connection without a plug is prohibited!



Ensure that the connection is made professionally and in accordance with local regulations. (An electrical schematic is delivered with every machine. It is to be found next to the electrical control in the machine base).



- Connect the machine plug to the power supply system.

2.5.1 Ground fault interrupter is actuated when inverter is started (Cutomat)

Leakage current flows through the inverter.

The inverter performs internal switching. Therefore, a leakage current flows through the inverter. This leakage current may actuate the ground fault interrupter, shutting the power off.

Use a ground fault interrupter with a high leakage-current detection value (sensitivity amperage of 200 mA or more, operating time of 0,1 s or more) or one with high-frequency countermeasures for inverter use.

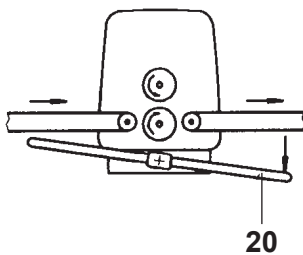
Reducing the carrier frequency value in n46 is also effective. In addition, remember that a leakage current increases in proportion to the cable length. Normally, approximately 5 mA of leakage current is generated for each meter of cable.

2.6 Moving direction test

(See 4 Starting the machine)

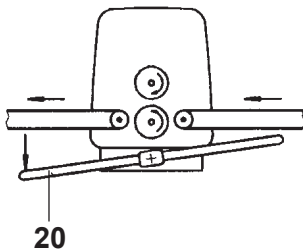
- Push the main operating lever (20) downwards to the right

The conveyor belts must move to the right.



- Push the main operating lever downwards to the left

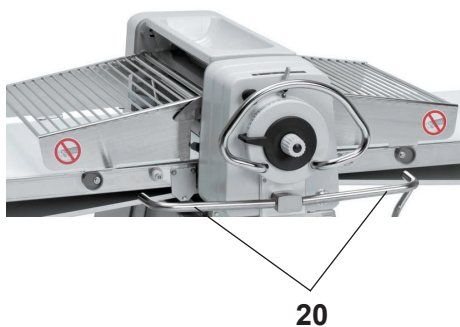
The conveyor belts must move to the left.



If the conveyor belts move in the wrong direction:

- Exchange two phases in the power plug

2.7 Moving the machine



- On the operator's side of the machine, lift up using main operating lever (20)
- Front transport caster will snap down.

Once the machine's permanent location is selected:



- Hold the main operating lever tightly using both hands
- Gently lift up the machine
- Using one foot, push the pedal (21) for the front transport castor
- Gently ease the machine back down to the ground, when so doing, do not let it "fall" back down

3 General data about the machines

3.1 General information

3.1.1 Authorized use of the machine



The machine of RONDO is exclusively built for sheeting, booking, final sheeting and cutting of dough or marzipan sheets for the food industry.

However, the machine is not suitable for the processing of other products (e.g. modelling clay or other types of mouldable masses which are not dough products).

This product is a technical working tool which is designated to be used exclusively for work.

Persons handling the product must be instructed accordingly and at least 16 years of age.

Booking

Booking in fat. Through sheeting to a thickness of approx. 6-11 mm, and subsequent folding of the dough, there is a resulting formation of layers of fat and dough. A repetition of this process yields many thin layers.

Final Sheeting

This entails sheeting the dough to the final thickness required for further processing.

Cutting

Cutting of the sheeted dough band by means of cutting rollers.

3.1.2 Authorized use of the flour duster



This is used to ensure that the dough sheets are automatically dusted with flour when necessary.

Recommended flour type: no. 550 (Use only clean flour!)

3.1.3 Noise values

The emission value at place of operation is less than "70 dB(A)".

The accuracy class of the acoustic emission measurement corresponds to class 2 (± 2.5 dB) according to:
DIN EN ISO 11201 / DIN EN ISO 11202 /
DIN EN ISO 11203 / DIN EN ISO 11204

3.1.4 Temperatures

The ambient temperatures permissible for the machine:
+ 5 °C to + 40 °C

Permissible temperatures for storage of the machine:
- 25 °C to + 55 °C, for brief periods up to + 70 °C

3.1.5 Ambient humidity

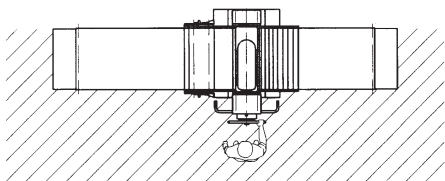
The admissible ambient humidity for the machine lies in the area of 30 % - 95 %, relative humidity, uncondensed (respectively max. 60 % for the dusting flour in the automatic flour duster).

3.1.6 Machine weight

Total weight = 225 - 285 kg, according model

(See 9.1 Technical data Manomat / Automat 2000)

3.1.7 Operating personnel work area



The hatched area shows the work area designated for the operating personnel.

3.2 Machine models

3.2.1 Manomat

The rollers on the Manomat must be manually closed



3.2.2 Automat

On the Automat, the rollers are closed semi-automatically.



3.2.3 Cutomat

Dough sheeter of the Manomat or Automat models with additional cutting device to cut dough pieces.



3.3 Prerequisites

In order to guarantee a perfect functioning of the machine, the following prerequisites must be met:

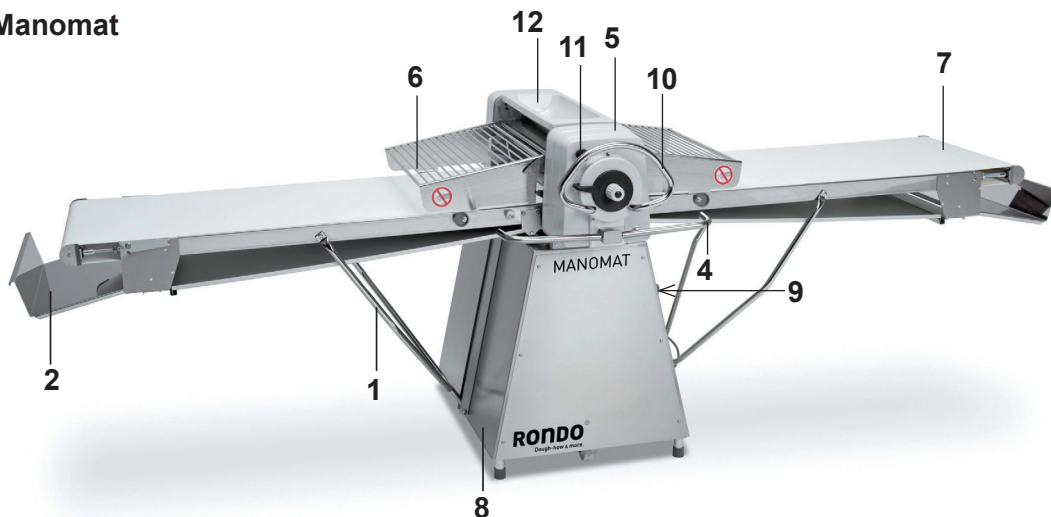
- Dough piece weight cannot exceed 12 kg
- Flour dough pieces
This will prevent the dough from sticking to the rollers and scraper.



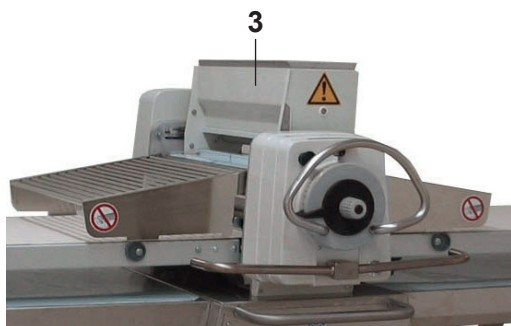
In order to avoid heavy flour dust build-up, it is preferable to equip the machine with an automatic flour duster.

3.4 Full view of the machine

Manomat



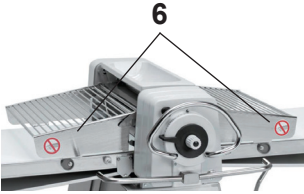
Cutomat



- 1 Forked support
- 2 Dough catch pan
- 3 Flour duster (option)
- 4 Main operating lever
- 5 Machine head
- 6 Safety guard
- 7 Machine table
- 8 Machine base
- 9 Main switch
- 10 Handle for roller adjustment
- 11 Reset button
- 12 Flour container
- 13 "Cutomat" cutting station

3.5 Operating elements

3.5.1 Safety guard

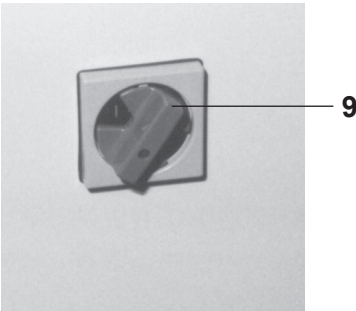


The safety guards (6) protect the operator from inadvertently coming into contact with the rollers and the cutting rollers.

When lifting the safety guard during the sheeting procedure, the machine stops immediately.

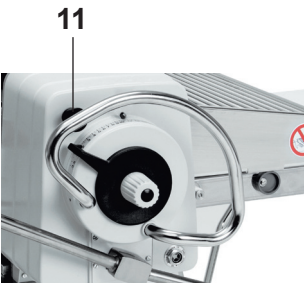
Cutomat: To make up the tiny cut pieces of dough, the machine can be stopped by raising the safety guard.

3.5.2 Main switch



The main switch (9) interrupts the supply of electrical current.

3.5.3 Reset button



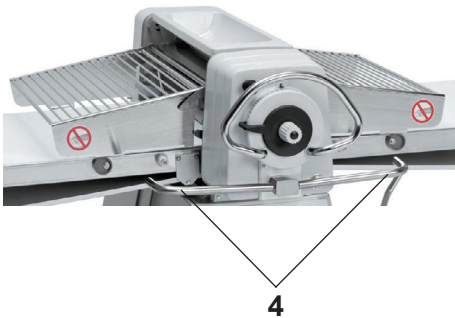
When the safety guards are closed the machine must not start.

- To start the machine, press reset button (11)

The reset button must always be pushed if:

- the machine was shut off by lifting the safety guard, by pressing of the main switch or by a power failure (interruption of electricity supply).
- to switch on the flour duster (see 3.5.9 Flour duster (option))

3.5.4 Main operating lever



The main operating lever (4) is used to start (and stop when not sheeting dough) the machine and to select the running direction, as well as to switch the synchro speed on and off.

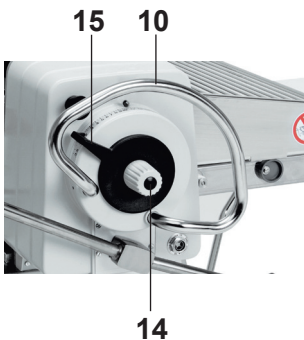
Procedure:
(see also 5.1.1 Sheeting)

- Push main operating lever down to the left
The conveyor belts move to the left.
- Push main operating lever down to the right
The conveyor belts move to the right.
- Bring the main operating lever into the horizontal position
The conveyor belts stop.

3.5.5 Roller gap adjusting mechanism

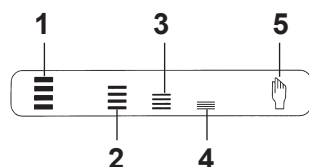
Using the roller gap adjusting mechanism, open the gap between the rollers to the maximum (45 mm).

Proceed as follows:



- Set the dough thickness control stop as follows:
 - Loosen the clamping handle (14) by turning it in a counter-clockwise direction
 - Set the Control Stop (15) to desired value on the control head scale (eg. final thickness 4.5)
 - Then retighten the clamping handle by turning it in a clockwise direction
- Select desired roller gap using the handle (10)

3.5.6 Program selection lever (Automat)



For sheeting on the Automat model, there are four roller reduction programs available to select from:

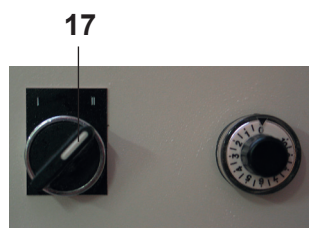
- 1 Coarse
- 2 Semi-coarse
- 3 Semi-fine
- 4 Fine
- 5 Manual

In the “Manual” position, the semi-automatic operation feature is turned off. Roller reduction may be carried out manually, just like on the Manomat.



- Set the program selection lever (16) to the desired program in accordance with the type of dough.

3.5.7 Selector switch (Cutomat)



Position I and II

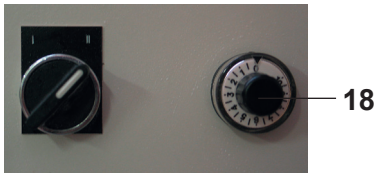
Procedure to follow for Sheeting:

- Turn the selector switch (17) to position I.

Procedure to follow for cutting:

- Turn the selector switch to position II.

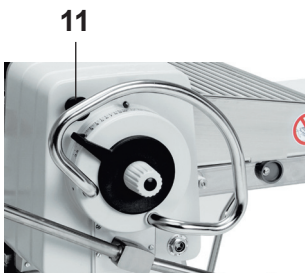
3.5.8 Potentiometer (Cutomat)



The potentiometer (18) is used to for continuous control of the conveyor belts speed (1,5 - 6,5 m/min.)

Position 0 = min. speed
Position 10 = max. speed

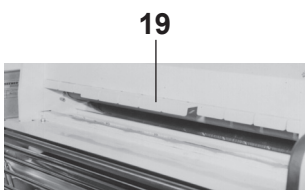
3.5.9 Flour duster (option)



Flour duster ON: With the machine in operation, briefly press reset button (11)

Flour duster OFF: The flour duster switches off automatically when the conveyor belts are switched off (e.g. when reversing)

3.5.10 Dosing slides (Flour duster)



The desired dusting width can be adjusted using the slides (19). The maximum dusting width is 630 mm.

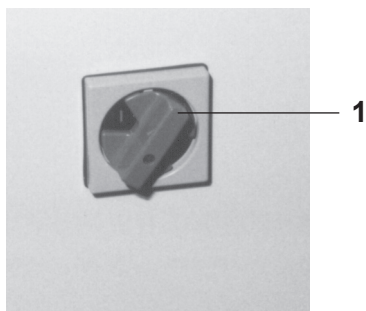
When adjusting this, proceed as follows:

- Insert or remove the slide

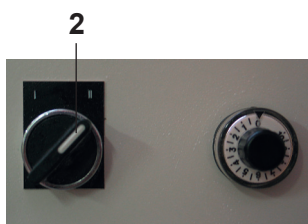
By using this adjustment to regulate the actual dusting width necessary, dusting flour consumption can be significantly reduced.

4 Starting the machine

4.1 Preparing for operational readiness

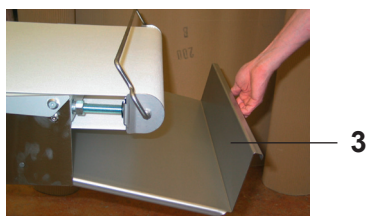


- Turn the main switch (1) on the machine to “ON”

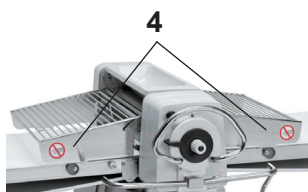


For sheeting on machines equipped with the “CUTOMAT” cutting station:

- Turn selector switch (2) to position “I”



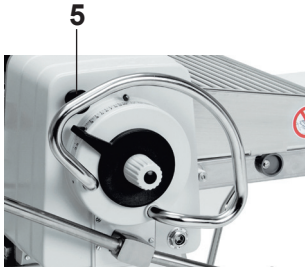
- Pull out the dough catch pan (3) on both sides



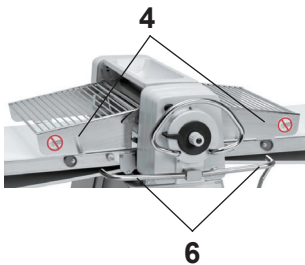
- Fold both safety guards (4) downwards

4.2 Starting / Stopping the machine

Starting



- Push reset button (5)
- Push main operating lever (6)



Stopping

- Lift safety guard (4)

or

Only when no dough is between the rollers:

- Main operating lever in position neutral
(see also 5.1.2 Synchro speed)

5 Operation

5.1 Operating instructions



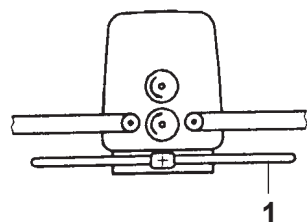
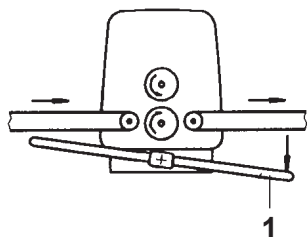
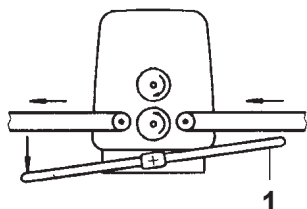
Do not reach in under the safety guard!

5.1.1 Sheeting

- Set dough thickness control stop (see 3.5.5 Roller gap adjusting mechanism)
- Lay the dough pieces on the left or right machine table (Do not throw the dough pieces on the table)

Automat

- Set the appropriate roller reduction program (only on the Automat model! See 3.5.6 Program selection lever (Automat))
- Press reset button
- Push main operating lever (1) to the side desired (Position "1" must positively be engaged! See 5.1.2 Synchro speed)



Once the dough piece has passed the rollers (rollers free):

- Put the main operating lever in the "neutral" position
The machine will stop.

or

- Lift safety guard
The machine will stop.
- Before starting another sheeting operation, the reset button must be pressed

On the Automat, the roller gap is adjusted automatically according the program which is set, by pushing down the main operating lever.

Manomat

- On the Manomat, adjust the roller gap manually depending on the sort of dough being processed (see 3.5.5 Roller gap adjusting mechanism)

The remaining process is the same as by Automat.

- Once again, reposition the main operating lever (into position “1”)
- Repeat this procedure until the final thickness has been attained

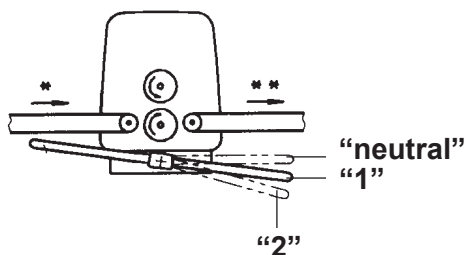


Do not deposit any loose objects such as knives, instruments, articles of clothing, etc. in the area where the dough is located.

5.1.2 Synchro speed

Manomat

The Manomat model is equipped with a synchro speed. This means that there are two infeed conveyor belt speeds.



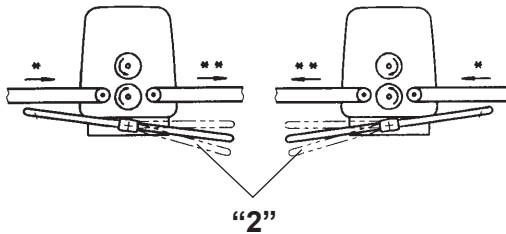
Position “1” means: normal infeed conveyor belt speed (see 5.5 Sources of mistakes in the sheeting process).

Position “2” means: decreased infeed conveyor belt speed, or synchro speed (see 5.5 Sources of mistakes in the sheeting process).

Provided that the dough is relatively thick:

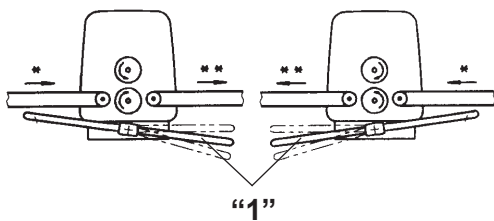
- Operate in position “1”
- Monitor the dough as it is being fed into the rollers

At a thickness of lower than approx. 8 mm, the sheets of dough have a tendency to pile up or even ripple. If this occurs, proceed as follows:



- Immediately shift the main operating lever to position “2”
The infeed conveyor belt speed will be reduced and the pile-up eliminated

As soon as the dough sheet is flattened:



- Shift the main operating lever back to position “1”
- Monitor the dough sheet on every pass on the infeed side
- If necessary, shift the main operating lever back to position “2”

* Infeed = slow
** Outfeed = fast

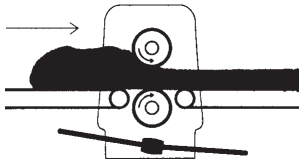


Do not shift to position “2” too soon, otherwise the dough sheet will be too tightly stretched.

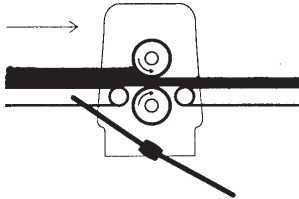
Automat

In addition to the synchro speed described in the section on the Manomat models, the Automat model also comes equipped with “ABS”, or in other words “automatic conveyor belt synchronization”.

ABS means that the lever can be pushed down to maximum right from the beginning. The synchro speed switches on in successive stages in accordance with the particular roller gap.



In the case of a wider roller gap, the synchro speed is set either not at all or only slightly.



When the roller gap is reduced, the synchro speed is switched to successively more.

The full reduction, i.e. the full position “2” is reached starting at 6 mm. Proceed as follows:

- Set roller reduction program in accordance with the type of dough being processed (see 3.5.5 Roller gap adjusting mechanism)
- Always push the lever downwards to maximum

The speed always remains optimal. This prevents both pile-ups and stretching of the dough sheets.



Never switch on the same side twice in a row, as this will cause the rollers to be set twice. This will in turn cause too much pressure on the dough sheet and cause it to tear.



Only smooth switching, i.e. with no jerkiness, and a positive engaging into position “1”, “2” (resp. ABS) will ensure proper roller reduction.

5.2 Particularities when sheeting dough using the Automat

5.2.1 Booking

As a rule, the “semi-coarse” program is used for booking puff pastry or croissant dough.

Example:

- Set the dough thickness limit stop to 8 mm
- Set the program selector lever to “semi-coarse”
- Set the initial roller gap to correspond to the thickness of the block of dough
The program selected will determine the number of passages
- Fold the sheeted piece of dough for continued processing

5.2.2 Final sheeting

As a rule, the following programs are used for final sheeting:

- Puff pastry = semi-coarse / semi-fine / fine
- Croissant dough = semi-coarse / semi-fine / fine
- Sugar dough = coarse

5.2.3 Idle passage

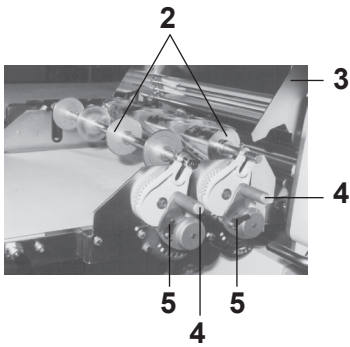
If a passage of dough pieces is desired without automatic roller reduction, proceed as follows:

- Push the main operating lever gently between “neutral” and switch position “1”

5.3 Cutomat model with cutting device

The "CUTOMAT" is equipped with a cutting device. This device is available on the "CUTOMAT", type "Manomat and Automat 2000".

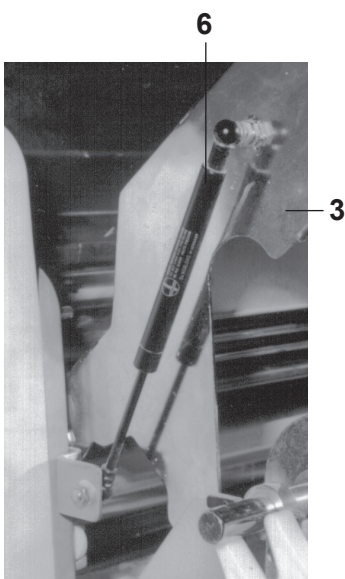
5.3.1 Cutting station



- 2 Cutting rollers
- 3 Safety guard
- 4 Tension lever
- 5 Locking lever

Safety guard

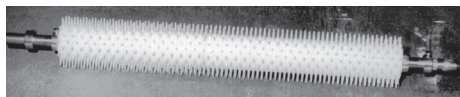
A safety guard is covering the cutting station



A defective pneumatic spring (6) on the safety guard (3) must always be replaced immediately!

Reason: In order to avoid danger of injury should the safety guard fall down!

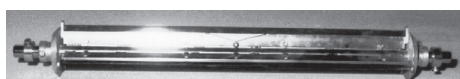
5.3.2 Types of cutting rollers



Docking Roller



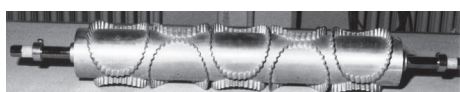
Length Cutter



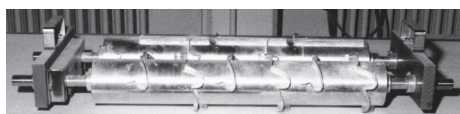
Cross Cutter



Zig-zag Cutter

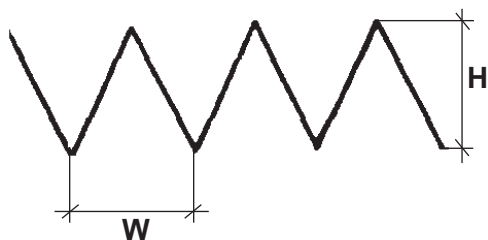


Form Cutting Roller



Tandem Cutter

Standard dimensions for zig-zag cutters in stainless steel version for triangles.



| W | H | Number of rows |
|----------|----------|-----------------------|
| 120 | 105 | 5 |
| 140 | 180 | 3 |
| 180 | 140 | 4 |
| 180 | 100 | 5 |

Lifting the table with cutting station



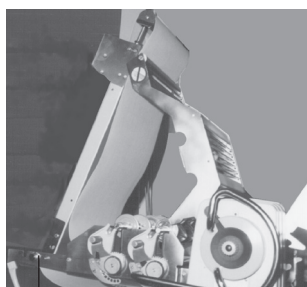
A defective stopping lever (7) must always be replaced immediately!

Reason: In order to avoid danger of injury should the table fall down!



7

- Lift the table by hand up till the stopping lever (7) blocks up



7

Table in set-up-position.

Letting down the table with cutting station

- Hold the table
- Push towards the rear the stopping lever (7) and let down the table at the same time

5.3.3 Inserting the cutting rollers

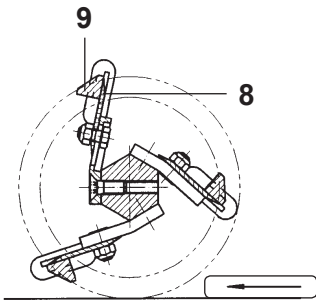


Danger of injury on the sharp cutting edges of the cutting rollers!

The cutting rollers must be inserted in the following sequence:

a) For squares/rectangles:

First Length cutter, than Cross cutter



In order to ensure uninterrupted operation of the cross cutter, the cutter must be positioned in the cutting direction in such a way that the dough sheet is first cut by the cutting knife (8) and then afterwards ejected by the ejector (9).

b) For triangles:

First Zig-zag Cutter, than Length Cutter

Cutting rollers not in use must be stored in the location provided for this purpose.

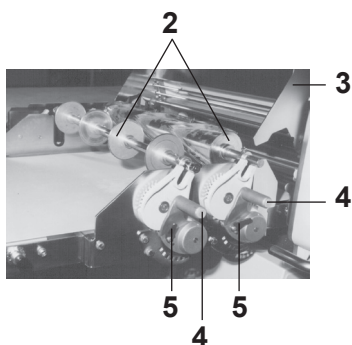


Reason:

In order to avoid damage to the cutting knives.

In order to avoid injury to operators.

5.3.4 Letting down the cutting rollers



- Close the safety guard (3)
- Lift up the tension lever (4) lightly and turn the locking lever (5) anti-clockwise up to the limit stop
- Let down the tension lever (4) at stages up till the Cutting Roller (2) is on the conveyor belt

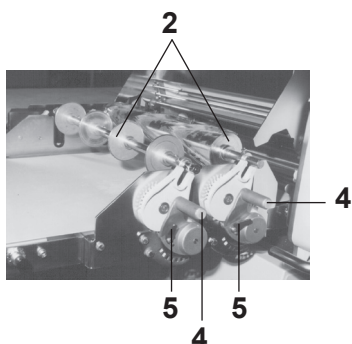
The deeper the tension lever (4) is let down, the more the cutting pressure is applied.

When using length cutters remark the following:



As soon as the Length Cutter touches the conveyor belt, let down the tension lever max. two stages, otherwise the conveyor belt can be cut.

5.3.5 Lifting up the cutting rollers



- Push the tension lever (4) lightly down
- Turn the locking lever (5) clockwise up to the limit stop
- Discharge tension lever (4) and lift it up to the limit stop

5.3.6 Cutting

The width of the dough sheet must correspond to the length of the cutting roller to be used plus approx. 1 - 2 cm on either side.

The sheeting rollers must be fully opened.
This will prevent the dough from piling up.

Running direction

Both conveyor belts move at the same speed. (Position the main operating lever in "neutral".)

Switching on the machine

- Put the selector switch on position **II**
(see 3.5.7 Selector switch (Cutomat))
- Main operating lever remains in "neutral" position (horizontal)
- Press reset button
Machine moves in the direction from the sheeting rollers to the location where the cutting takes place.
- Set the conveyor belt speed using the potentiometer
(1.5 - 6.5 m/min.)
(see 3.5.8 Potentiometer (Cutomat))

Switching off the machine

- Lift up the safety guard

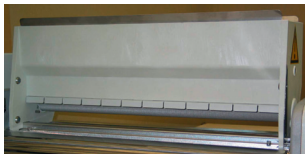
Switching the machine on again

- Fold the safety guard down again
- Leave the main operating lever in "neutral" position
- Press reset button

5.4 Flour duster (option)



5.4.1 Description of functioning



A delivery roller picks up the flour which is then scraped off by a brush. Moving side plates and the perforated plate in the flour container prevents the flour from bridging.

The low height at which dusting takes place and the installed flour dust curtain prevent the egress of flour dust into the atmosphere.

5.4.2 Using the flour duster

- Fill the flour duster with flour (see 3.1.2 Authorized use of the flour duster)
- Set the desired dusting width (see 3.5.10 Dosing slides (Flour duster))



Before beginning each new production run:

- Loosen the flour in the flour duster with a vibrating whisk

If the dusting appears irregular, proceed as follows:

- Empty flour
- Clean flour duster (see 6.1.1 General information)
- Fill with fresh flour (see 3.1.2 Authorized use of the flour duster)

5.5 Sources of mistakes in the sheeting process

| Fault finding | Cause / Defect | Remedy / to remove |
|--|---|---|
| 1. Dough piece sticks, tears underneath. | Dough too moist, rubs against scraper bar. | Better dusting, mount scraper properly (see 6.1.1 General information) |
| 2. Dough piece piles up (ripples). | Manomat Reduction steps too big. Main operation lever too late switched to position "2". | Select smaller reduction steps. Switch earlier to position "2". |
| | Automat Roller reduction programme too coarse. | Select smaller roller reduction programme. |
| 3. Dough sheet tapers. | Manomat Reduction steps too small. Main operation lever too early switched to position "2". | Select coarser reduction steps. Switch later to position "2". |
| | Automat Roller reduction programme too small. | Select coarser roller reduction programme. |
| Switch stages | Switch position "1" Reduction Speed of infeed belt is approx. 30 % slower than speed of outfeed belt. | Machine runs from the right to the left or vice - versa. The dough pieces can be reversed up to approx. 6 - 8 mm on position "1". Afterwards watch the dough sheet well. If necessary use position "2" until the dough sheet no longer ripples or tapers. |
| | Switch position "2" Reduction Speed of infeed belt is approx. 50 % slower than speed of outfeed belt. | Machine runs from the right to the left or vice - versa. Use position "2" only from approx. 6 - 8 mm down to endthickness, depending on the dough type. If the dough sheet is too much stretched, switch for a short time to position "1". Watch the dough sheet continually during the infeed. |

6 Cleaning

6.1 Cleaning

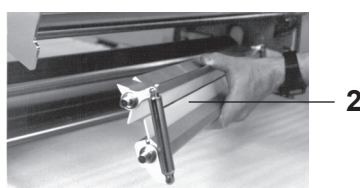
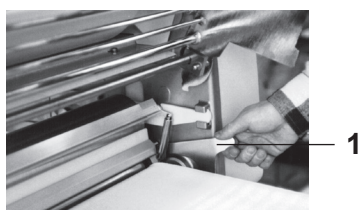


The machine must never be cleaned using spray water, high-pressure cleaners, steam-cleaning machine or any similar cleaning methods.

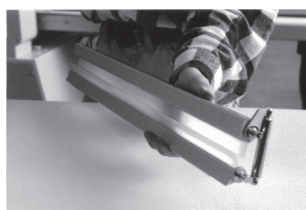
6.1.1 General information

Dismounting the scraper unit

- Close rollers fully
- Snap the safety guard into the upper position
- Using thumb, push the front and rear scraper lever (1) downwards

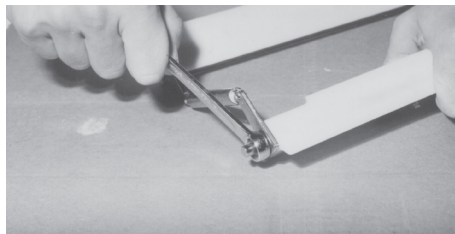


- Lift the scraper unit (2) out of the scraper mounting

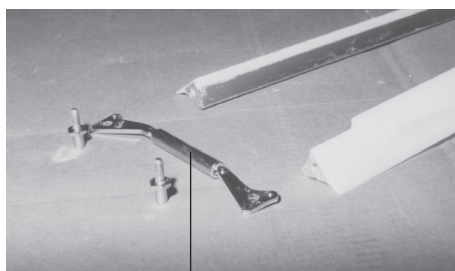


- Pull out the scraper unit
- Clean the scraper unit (see 6.1.2 Care)

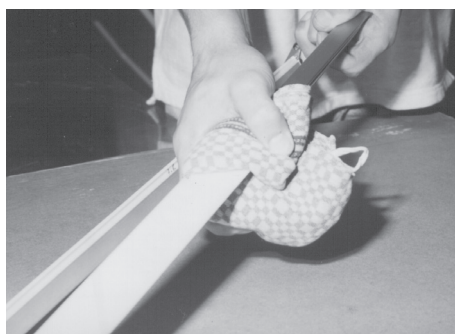
Exchange of scraper blades



- Dismantle with a key SW 13 the spring clamp (3) either on the left or the right hand side and carefully slide the scraper blade off



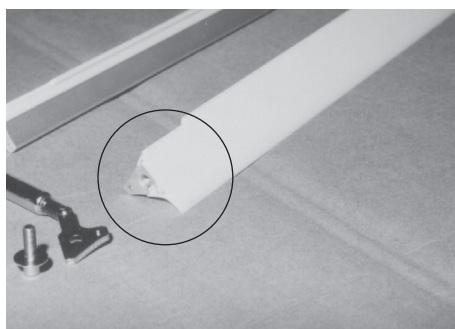
3



Attention

For protection of the fingers, please use a cloth. The edges of the blades are sharp and there is danger of cutting oneself.

- Assemble the new scraper blades in reverse order



Attention

The scraper blade with the milled counter at the sides, must be assembled on the lower, colourless anodised scraper blade holder

- Assemble the spring clamp in reverse order

Mounting the scraper unit

- To remount the scraper unit, carry out the dismounting instructions in reverse order

Disassembly of the machine table and conveyor belts



- Unhinge the machine table (see 2.4.1 Installation of the machine tables)
- Loosen both tension nuts on the idling side of the machine (see 2.4.3 Tensioning the conveyor belts)
- Loosen conveyor belt
- Place table sideways
- Remove conveyor belt
- Clean conveyor belt (see 6.1.2 Care)

Assembly of the machine tables and conveyor belts

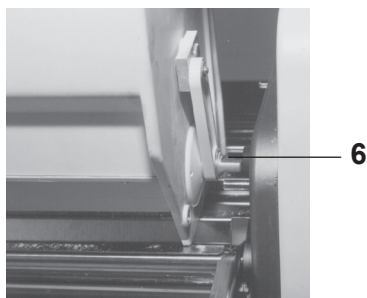
- To reassemble the machine tables and conveyor belts, follow the disassembly instructions in reverse order

Cleaning the flour duster

Dismount the flour duster as follows:

- Gently lift the flour duster (4) on side opposite to that on which it is driven





- Pull the flour duster over the cam (5) until the catch (6) has been guided out of the receiver



- Guide the flour duster out of the openings (7) and remove

Then clean flour duster as follows:

- Empty the flour duster by completely dumping out its contents
- Beat out any remaining flour in the flour duster
- Brush clean the delivery roller using a dry brush



There should be no flour between the flour container and the movable side plates.



Do not use any solvents!

- Remount the flour duster (see 2.4.5 Mounting the automatic flour duster (option))

6.1.2 Care

| Part | See | daily see legend | weekly see legend |
|---------------------------------|--|---------------------|----------------------|
| Roller head and Machine base | 3.4 Full view of the machine | B | A |
| Scraper | 6.1.1 General information | A | |
| Cotton conveyor belt | 6.1.1 General information | B | (E) |
| Synthetic conveyor belt | 6.1.1 General information | B | C |
| Dough catch pan | 2.4.4 Mounting the dough catch pan | B | |
| Flour catch pan | 2.4.4 Mounting the dough catch pan | B | |
| Driving roller | 2.4.1 Installation of the machine tables | | D |
| Idle roller | 2.4.3 Tensioning the conveyor belts | | D |
| Cutting roller | 5.3.2 Types of cutting rollers | A | |
| Flour container | 3.4 Full view of the machine | B | |
| Flour duster | 6.1.1 General information | B+D | |



Only use cleaning agents with a ph-value of 6 to 8! Only cleaning materials approved for use in the food industry may be used.

Legend

- A Damp clean using cloth and soapy water.
- B Dry clean using a brush.
- C Wet clean using a brush.
- D Remove excess dough using a brush and plastic scraper.
- E Wash the cotton conveyor belt monthly as follows:
 - Maximum washing temperature 40 °C
 - Hang the washed belt over a rod and weight it at the bottom with approx. 10 kg.

7 Maintenance

7.1 General information for maintenance of the machine

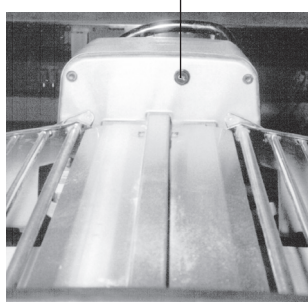


Any defects or damage on the machine must be repaired by an authorized customer service representative.

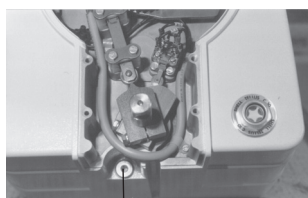
7.1.1 Oil change



When changing the oil, ensure that no oil is able to reach the area where the dough is located!



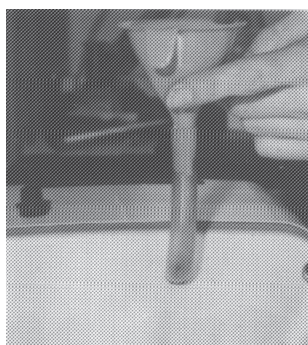
- Unscrew the plastic screw (1) in the oil filler neck



- Get the oil collector ready
- Unscrew the oil drainage screw (2)



- Drain the oil
- Screw the oil drainage screw back in again



- Fill with clean new oil (approx. 1,5 l)
- Shut the oil filler neck using the plastic screw

Acceptable oil

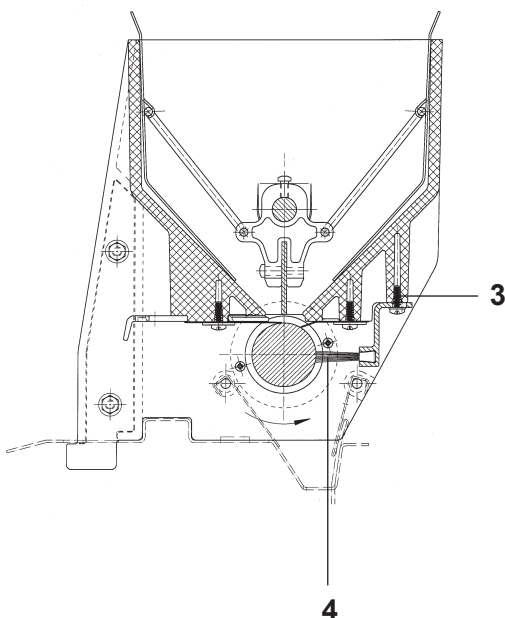
- Blaser Swisslube No. 154
- Shell Morlina 10
- Total Scandis 15
- Mobil Velocite Oil No. 6

Special oil for the food industry (USDA H1)

- Aseol Food HF 15
- Shell Cassida Fluid HF 15
- Blaser Swisslube Foodoil SH 46

7.2 General information for maintenance of the flour duster

7.2.1 Adjusting brush



- Loosen the screws (3)
- Readjust brush (4)
- Retighten the screws

7.3 Maintenance list

| What / Part | Activity | daily working time less than 4 h | daily working time 4 - 8 h | daily working time more than 8 h |
|-----------------------------------|---|---|---------------------------------------|---|
| Conveyor belts | check if necessary: replace | M | W | W |
| Brush (Flour duster) | check if necessary: adjust or replace | 1/2 J | M | M |
| Oil change | change | 3 J | 2 J | J |
| Scraper blade (Dough sheeter) | check If necessary: replace | 3 M | 2 W | W |
| Roller gap adjusting mechanism | general function control | 3 J | 2 J | J |

Legend

| | |
|-------|---------------|
| W | weekly |
| M | monthly |
| 1/2 J | semi-annually |
| J | annually |
| 2 J | every 2 years |
| 3 J | every 3 years |

7.4 Replacement parts list



The use of replacement parts not delivered by RONDO can lead to premature wear or to destruction of machine parts (coupling, drive rollers).

| Item no. | Description | Dimensions | Application |
|-----------|------------------------------------|---------------------------|------------------------------------|
| 122954T01 | Scraper complete | - | all types |
| 122954T02 | Scraper complete, blue | - | all types |
| 122775T03 | Lower scraper blade | - | all types |
| 133577T03 | Lower scraper blade, blue | - | all types |
| 122955 | Upper scraper blade | - | all types |
| 135597T01 | Upper scraper blade, blue | - | all types |
| 105467 | Synthetic conveyor belt | 3280 x 640 mm | SSO677, SSO677C, SSO687 |
| 135341 | Synthetic conveyor belt, blue | 3280 x 640 mm | SSO677, SSO677C, SSO687, SSO687C |
| 120750 | Cotton conveyor belt | 3210 x 635 mm | SSO677, SSO677C, SSO687, SSO687C |
| 120750T02 | Cotton conveyor belt | 2630 x 635 mm | SSO675, SSO675C, SSO685, SSO685C |
| 121342 | Synthetic conveyor belt | 3310 x 640 mm | SSO677, SSO677C, SSO687, SSO687C |
| 121344 | Synthetic conveyor belt | 3570 x 640 mm | SSO675C, SSO677C, SSO685C, SSO687C |
| 136947 | Synthetic conveyor belt, blue | 3570 x 640 mm | SSO675C, SSO677C, SSO685C, SSO687C |
| 121344T02 | Synthetic conveyor belt | 2680 x 640 mm | SSO675, SSO675C, SSO685 |
| 136949 | Synthetic conveyor belt, blue | 2680 x 640 mm | SSO675, SSO675C, SSO685, SSO685C |
| 121924T02 | Synthetic conveyor belt structured | 2660 x 640 mm | SSO675C, SSO685 |
| 8934 | Fuse 1AT | 1,0 A slow ø 5 x 20 mm | Manomat / Automat |
| 8935 | Fuse 2AT | 2,0 A slow ø 5 x 20 mm | Cutomat |

8 Trouble shooting

| Fault finding | Cause / Defect | Remedy / To remove |
|---|--|--|
| 1. Machine stands still after assembly. | Is the machine plugged in? | Connect the plug. |
| | Main switch switched on? | Switch on main switch. |
| | Fuse F1 o.k.? | Check fuse F1, if necessary replace. |
| 2. When the main operating lever is pressed down to the right the conveyor belt runs to the left. | Sense of rotation reverse (mains). | Moving direction test (see 2.6 Moving direction test). |
| 3. Machine runs intermittently, stops, rattles. | Safety guard limit switch incorrect? | Readjusting by an expert. |
| | Supporting eccentric on machine table (for safety guard) out of place. | Adjust supporting eccentric. |
| | Loose wires. | Secure all cables and wires. |
| 4. Synchronisation of the infeed belt conveyor does not work. | Electrical connection of the machine incorrect. | Electric (see point 2). |
| | Coupling defect. | Coupling - call in a specialist. |
| 5. Main drive motor runs, rollers and conveyor belts stand still. | V-belt drive (2-steps) faulty. | Remove rear cover of machine base and machine head, if necessary replace ribbed belt. These jobs may only be executed by an authorized customer service. |
| 6. Conveyor belts loop up, motor and rollers run. | Belt tension too weak. | Tighten conveyor belt equally (see 2.4.3 Tensioning the conveyor belts). |
| | Drive roller dirty. | Clean drive roller (see 6.1.2 Care). |
| 7. Rollers can not be reduced to the required dough thickness. | Dough thickness limit stop is set incorrectly. | Alter limit stop to the required position. |
| 8. Machine only runs on one side. | Contacteur defect. | Call in a specialist (electrician). |
| | Limit switch rocker defect. | Replace limit switch. |
| 9. Infeed conveyor belt stands still or pulls bad/not in. Rollers run properly. | Free wheels or friction discs don't work. | Inform the after-sales service. Repair defect or replace faulty part. |
| | Conveyor belt tension too weak. | Tighten conveyor belt equally (see 2.4.3 Tensioning the conveyor belts). |

| Fault finding | Cause / Defect | Remedy / To remove |
|--|---|---|
| 10. Outfeed conveyor belt stands still or jerks. | Free wheel slips on the clutch shaft. | Inform the after-sales service. Replace clutch shaft. |
| | Conveyor belt tension too weak. | Tighten conveyor belt equally (see 2.4.3 Tensioning the conveyor belts). |
| 11. Infeed and outfeed conveyor belts run at the same speed, i.e. no synchronisation on switch position "1" and "2". | Sense of rotation reverse (mains). | Moving direction test (see 2.6 Moving direction test). |
| | Free wheel on the clutch defect (left or right). | Inform the after-sales service. |
| 12. Dough piles up before the roller or passes under the roller between scraper and infeed conveyor. | Scrapers inserted incorrectly. | Close the scraper levers properly (see 6.1.1 General information). Check, and if necessary adjust scraper levers by means of eccentric (center of motion). |
| | Scraper blades worn out. | If necessary replace scraper blades or the complete scraper. |
| 13. Conveyor belt runs over to one side, tearing at the edges. | Incorrect conveyor belt tension. | Tighten conveyor belt (see 2.4.3 Tensioning the conveyor belts). |
| | Dirty driving rollers. | Clean driving roller (see 6.1.2 Care). |
| 14. Cotton conveyor belts too short after washing. | Washing temperature too high. | Washing temperature max. 40 °C. Hang washed conveyor belt over a rod and weigh down below with approx. 10 kg. |
| 15. When reversing (Automat only) no roller reduction is carried out. | Reversing operation too fast and jerky. Main operating lever not positively pressed into position "1" / "2". | Only a reversing operation without interruption i.e. without jerk guarantees a proper roller reduction. Press down fully into position "1" / "2". |
| 16. Flour duster doesn't dust any flour. | No flour in flour duster. | Fill in flour. |
| | Flour in flour duster is blocked. | Loosen the flour with a hand whisk. |
| | Impulse is not coupled. | Mount flour duster correctly (see 2.4.5 Mounting the automatic flour duster (option)). |
| 17. All other errors / failures. | | Inform nearest "RONDO" after-sales service giving as much information as possible. |

9 Technical data

9.1 Technical data Manomat / Automat 2000

| Technical data | SSO 675 / SSO 685 Manomat / Automat | SSO 677 / SSO 687 Manomat / Automat |
|---|--|--|
| Machine base | Socle | Socle |
| Automatic flour duster | option | option |
| Width of conveyor belts | 635 mm | 635 mm |
| Usable width | 600 mm | 600 mm |
| Table length overall | 2720 mm | 3320 mm |
| Option: longer tables | 3320 mm | - |
| Roller length | 660 mm | 660 mm |
| Roller gap | 0,5 - 45 mm | 0,5 - 45 mm |
| Speed of outfeed belt | 60 cm/s | 60 cm/s |
| Rated power | 1,5 kVA / 0,9 kW | 1,5 kVA / 0,9 kW |
| Supply voltage | 3 x 200 - 420 V, 50 / 60 Hz | 3 x 200 - 420 V, 50 / 60 Hz |
| Req. floor-space in working position, dough catch pans extended | 1215 x 3200 mm | 1215 x 3800 mm |
| Req. floor-space in resting position | 1215 x 1440 mm | 1215 x 1760 mm |
| Machine weight: | | |
| Manomat: | | |
| • without flour duster | 225 kg | 230 kg |
| • with flour duster | 245 kg | 250 kg |
| Automat: | | |
| • without flour duster | 230 kg | 235 kg |
| • with flour duster | 250 kg | 255 kg |

Technical specifications subject to change without notice.

| Technical data | SSO 675C Manomat | SSO 677C Manomat | SSO 685C Automat | SSO 687C Automat |
|---|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Machine base | Socle | Socle | Socle | Socle |
| Automatic flour duster | option | option | option | option |
| Width of conveyor belts | 635 mm | 635 mm | 635 mm | 635 mm |
| Usable width | 600 mm | 600 mm | 600 mm | 600 mm |
| Table length overall | 3170 mm | 3470 mm | 3170 mm | 3470 mm |
| Roller length | 660 mm | 660 mm | 660 mm | 660 mm |
| Roller gap | 0,5 - 45 mm | 0,5 - 45 mm | 0,5 - 45 mm | 0,5 - 45 mm |
| Speed of outfeed belt | 60 cm/s | 60 cm/s | 60 cm/s | 60 cm/s |
| Cutting speed variable | 2,5 - 11 cm/s | 2,5 - 11 cm/s | 2,5 - 11 cm/s | 2,5 - 11 cm/s |
| Rated power | 1,5 kVA / 0,9 kW | 1,5 kVA / 0,9 kW | 1,5 kVA / 0,9 kW | 1,5 kVA / 0,9 kW |
| Supply voltage | 3 x 200 - 420 V, 50 / 60 Hz | 3 x 200 - 420 V, 50 / 60 Hz | 3 x 200 - 420 V, 50 / 60 Hz | 3 x 200 - 420 V, 50 / 60 Hz |
| Req. floor-space in working position, dough catch pans extended | 1215 x 3650 mm | 1215 x 3950 mm | 1215 x 3650 mm | 1215 x 3950 mm |
| Req. floor-space in resting position, tables hinged-up | 1215 x 1650 mm | 1215 x 1800 mm | 1215 x 1650 mm | 1215 x 1800 mm |
| Cutting station: Adjustable pressure | spring pressure Option | spring pressure Option | spring pressure Option | spring pressure Option |
| Machine weight: | | | | |
| • without flour duster | 250 kg | 260 kg | 260 kg | 265 kg |
| • with flour duster | 270 kg | 280 kg | 280 kg | 285 kg |

Technical specifications subject to change without notice.

9.2 Additional information

All sheeters from RONDO have the following quality features:

- The conveyor belts made of plastic material:
All plastic coated conveyor belts used on our machines are approved for coming into contact with food stuff and correspond with the requirements of the directives EU 10/2011 as well as the FDA (Food and Drug Administration, USA).
- The conveyor belts made of cotton:
The fabric consists of 100 % cotton and has a non-toxic finish.
- The rollers are hard-chrome plated. This coating is approved for coming into contact with food stuff.
- The scraper blades are made of POM-C plastic material. This material is approved for coming into contact with food stuff and corresponds with the requirements of the directives EU 10/2011 as well as the FDA (Food and Drug Administration, USA).
- The dough catch pans are made of stainless steel (chromium nickel steel, DIN Mat. no. 1.4301, 1.4016). This material is approved for coming into contact with food stuff.
- The rollers of the manual and the automatic dough reeler that are touching the dough are made of aluminium, anodised colourless and are approved for coming into contact with food stuff.
- The knives of the cutting rollers that are touching the dough (Cuto-mat-types) are made of stainless steel (chromium nickel steel, DIN Mat. no. 1.4301). This material is approved for coming into contact with food stuff.
- Flour duster with Inox container:
The container is made of stainless steel (chromium nickel steel, DIN Mat. no. 1.4301, 1.4016), the delivery roller is made of aluminium, anodised colourless, the bristles of the brush are made of plastic material (PA). These materials are approved for coming into contact with food stuff.
- Flour duster with plastic container:
The container is made of plastic material (PS-TSG), the delivery roller is made of aluminium, anodised colourless, the bristles of the brush are made of plastic material (PA). These materials are approved for coming into contact with food stuff.
- Flour container:
The flour container is made of plastic material (ABS). This material is approved for coming into contact with food stuff.