

Cookie former

FM128 K250...K600

Operating instruction SELECTRONIC

(Translation of Original Operating Instruction)



Version:
07_2012_en

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»Congratulations to your new cookie machine.«



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Safety regulations and security precautions

**Machine is ready to use, as it is supplied.
Disconnect plug when attendance or repair machine.
Before you begin, read operating instructions!**

The machines of type FM 128 K 250, 300, 400, 450, 580 and 600, are fitted with the following safety equipment:

Security precaution of rollers

In front of the roller is mounted a Plexiglas cover in front of the funnel with a hinge. The Plexiglas cover is held laterally by guide rails.

Security precaution of knife

The machine has a knife guard, which automatically lays down on the knife when you open the dough hopper and thus excludes an injury.

Security precaution of hopper

The hopper is equipped with a safety switch that shuts off all the movements while lifting. It is impossible to manipulate the safety switch.

Security precaution of lift grid

The machine stops immediately when you open the grid above the hopper.

Security precaution of transport belt guard

The transport belt for the back plate is provided with an inlet protection.

All protective covers and panels are bolted and can only be opened with tool!

Proper use

As the name molding machine already says, the machine is suitable for forming short-bread like biscuits, spekulatius, milanese and cakebases (for cream cakes and other cakes, lattice of dough (for tarts), tartelettes, brezel, linzer, kipferl, etc. White cakes, brown cakes, gingerbread, and marzipan can be formed by special rollers.

Food hygiene

The machine should be stored in a dry place. As a cover, we recommend a linen tape. Please do not use a plastic cover, because it may arise a humid climate under the cover, which can lead to mold and vermin infestation. The linen tape should be cleaned or exchanged as required (dry cleaning).

After use, it is important to clean the machine. Clean all interior and exterior surfaces, corners and edges which are accessible with a lint-free cloth. Intermediate the lint-free cloth in warm soap water, before further wipe.

Do not steam clean or use a jet of water.

The machine has to be isolated from mains supply before carrying out any cleaning!

Operating instruction

Congratulations to your new cookie machine.

1. Unpacking the machine

If you find a damage on the unpacked machine, call your agent and let him see the damage, so that the damaged machine can be replaced.

2. Connect the machine

Before plugging the machine, get sure, that electricity network has a voltage of 3 x 400V + MP + protective conductor. the machine is set by this specification.

With 3 x 230 + MP + protection manager, the engine of the machine is reversed accordingly. If you have the correct voltage with the appropriate socket, you can let the machine run on trial basis. If the machine is running backward, stop the engine immediately and disconnect the power plug from the can. The machine is wired clockwise. It is banned to manipulate the clockwise rotation of connection.

Let, if necessary, your socket change by a licensed electrician!

If the machine is permanently connected without a firm plug, the machine needs an additional main switch.

3.1. Beltregulation / upper transport belt

The upper transportbelt, wich takes the figures from the knife, can be adjusted by hex nut M18 on spindle thread on both sides. Please regulate only few and do not tighten the belt too fast, because the belt takes some minutes to regulate.

If possible take always just one side to regulate, because otherwise the tension of the belt greatly increases unnecessarily. The belt gets narrow and snatches in extreme rase.

3.2. Beltregulation / lower tranport belt

The lower transport belt must not be adjusted.

They are connected by connectors and can be exchanged easily.

4.1. Speed regulation of transport belt

The speed of the lower transport belt can be in connection with the speed of the machine, regulated by Selectroniccontrol.

4.2. In the automatic version, the speed of the lower transport belt can be adjusted with a vario-adjusting disc.

Turn right makes the bond quicker to the left makes it slower.

5. Changing of pattern roller

Flip the hopper gently to the front. After removal of the pattern roller plug or lock pin out of flange axis draw the left flange from the pattern roller, and pull the roller now out of the right flange.

Now you can take off the roller from the uppon. The installation is done in reverse order.



6. Removing and cleaning of the roller

By developed rollers, access - standing behind the machine - with the right hand into the left Griffuge the kneading rollers.

Drag with the left hand, the retention pin from the flange axis and pull the flange, as far as possible, outwardly.

Now access to the kneading rollers, that is, the left hand into the left Griffuge and the right hand into the right handle groove. While the kneading rollers lay in the sheet metal engine cover, you can slowly lift the rollers out of the machine. For cleaning put the roller on the side of the drive holes (red mark) and pull the dough from the roller with a scraper. Subsequently, the roller in the dishwasher (not more than 60°C), cleaned with high pressure cleaner or with the scrubbing brush with warm water by hand.



7. Knife position

The knife is driven by an eccentric and moves very fast on the strip of dough along the kneading roller. The position of the knife to the dough sheet, remove closer (thicker) or further (thinner), can be adjusted with the lever on the front of the machine. The best position is directly above the strip of dough, but very deeply engraved figures can be cutted quite a bit thinner (see also 8, the Cut-off).

The basic setting is: 3. line from above.

8. The cut-off knife

The knife of the cookie machine is special coated to prevent sticking of the figures, especially when the dough is sticky. Please avoid using sharp or hard objects to clean the knife. A woolen cloth, soaked in comestible oil should be taken for that. The position of the knife should be in the middle position at the start.

Thicker: The cookies will be thicker, when the distance between the knife and the belt of dough on the kneading roller is lower.

Thinner: The cookies will be thinner, when the distance between the knife and the belt of dough on the kneading roller is larger.

The basic setting is: 3. line from above.

The knife can be terminated with levers placed on the left side of the Plexiglas plate - Thick - Thin - on the optimal character strength.

The knife is very thin and very narrow, in order to provide optimal results.

Therefore the thickness adjustment must be undertaken with caution to not jeopardize the knife. The standard setting is about the 6th Line from below.

When dough with swelling factor, like already risen dough with a leavening agent, it may be that the optimal setting of the knife position is below.

The optimum thickness of figures is chosen when the figures are formed without any irregularities at the edges.

Is the lever switched upwards, (thick) thus forming one additional doughfilm next to the figure, which is undesirable.

By abrasion of the cutter drive, the lever require slight adjustment after some time, because on the eccentric the slide pin and the slide ring are going to wear out.

You can see that from the figures, wich get thinner.

By rotating the two parts, the original condition can be restored.

If you have your dough kneading roller, including a coat of dough, and passed a long time has left, it is required to switch the knife adjustment on thin and reset very slowly and carefully on the right position while the machine is running.

Never set the lever in the lowest position while the machine is filled with dough.

Don't use the lever in any case to peel the dough. The knife could be drawn into the feeding roller and break!

Never set the lever with a jerk at the upper position, because it is forced, in this case, the knife in a position that can cause a breakage of the blade, or the knife can draw into the feeding roller.

9. Warming up the machine (pre-heating of the rollers)

If you are unsure whether you need the heater to warm up the roller, you should always take the pattern roller and warm up a bit.

For this just turn the main switch on (ON), the mode switch on (PERMANENT) and the heater switch on (I). In this position, let the machine run about 5 minutes, with high-fat dough with heater switch on (II) some minutes longer.

When the roller is warm enough, you can start with the filling of the dough.

Teflon rollers are usually not heated!

For Sticky dough with honey or syrup the heater may be turned off!

In honey / syrupdoughs with fat, it may be necessary to turn the heater on!



10. Filling of the hopper with dough

Dough can be pushed from the top of the hopper, either in slices, which fit through the bars, or it can be pushed through the bars into the hopper directly.

You can also open the bars and enter the dough into smaller pieces or slices.

First, the rear kneading rollers (checker, filling, feeding roller) must be covered with one coat of dough. Only when the roller is completely covered with dough, the machine forms perfect figures. Now, push the lever for the knife as far as setting of, until the figure is truncated at full strength. So the knife cuts the pieces of the dough kneading roller and passes them onto the upper transport belt.

11. Bring the figures on tray

Now turn the switch from (PERMANENT) to (CAR) and the machine back on (ON).

The machine is now controlled by the metal contact switch, located under the front edge of the upper transport belt.

The baking sheets are introduced exclusively from the back of the machine.

The machine turns on by reaching the sensor at the front edge of the upper transport belt. The figures are now automatically transferred from the upper band to the baking sheet.

(The following applies only two mechanical switches: If you need to adjust this one, because, for example, your baking sheets are a little narrow, be sure to hold on the posterior part of the smooth switching lax a finger against the switch before you turn the switching lax!)

12. One-man operation

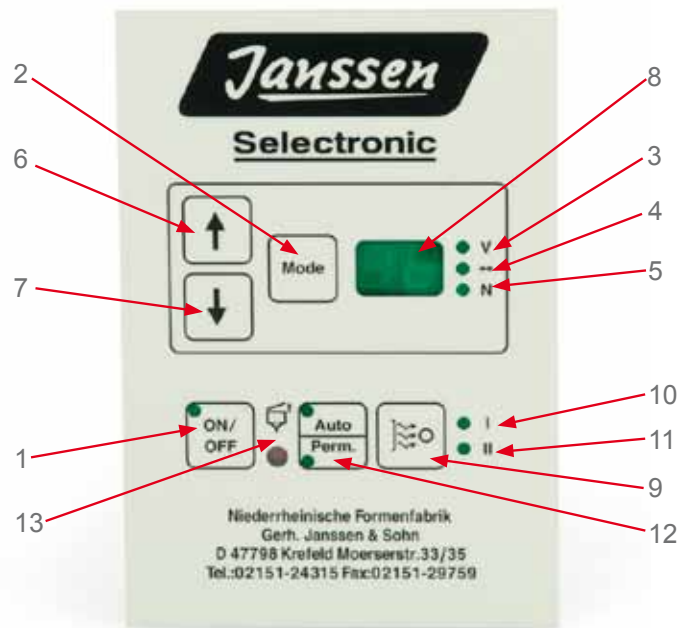
If the tray is full, the machine is switched off with the switch contact plate. This gives you a chance to remove the sheet and to introduce a new sheet into the machine without needing an extra person. If you are working with several people at the machine, it may be useful to switch the machine on (PERMANENT). Don't forget to refill dough in time. There should always be dough for only 2 to 3 sheets in the hopper, that means, the space between the kneading roller and the grid should be half full.

13. Distances on the baking sheet

For very soft dough, it is possible that the figures push together on the knife. Nevertheless, to achieve an optimal assignment sheet, change the speed of the lower transport belt and proceed as described in 4.

SELECTRONIC-control console

In addition to the standard/automatic controls, FM 128 K-series machines also feature a Selectronic control console.



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Console description:

- 1... ON/OFF button
- 2... The Mode button (2) allows you to select from 3 menu items.
The individual selected menu items (3, 4, 5) light up
- 3... When LED light (3) is glowing, the adjoining display (8) shows the current tray speed, which can be adjusted by using the arrow buttons (6, 7)
- 4... When LED light (4) is glowing, the adjoining display (8) shows the current spacing between the figures on the tray. This spacing distance can be adjusted by using the arrow buttons (6, 7)
- 5... When LED light (5) is glowing, the adjoining display (8) shows the current number of figure rows on the baking tray. This number can be adjusted by using the arrow buttons (6, 7)
- 6... Pressing arrow button (6) increases the numerical value shown in the display
- 7... Pressing arrow button (7) decreases the numerical value shown in the display
- 8... Display (8) for the Menu
- 9... Button (9) regulates the heating – repeatedly tapping this button allows you to switch heating Level I (10) and/or Level II (11) on and off
- 10... LED light (10) glows when heating Level I is activated
- 11... LED light (11) glows when heating Level II is activated. Heating is switched off when neither of the two LED lights is glowing
- 12... Button for Automatic and/or Permanent (i.e. continuous) operation (12)
- 13... The hopper symbol and corresponding LED light (13) indicate whether the hopper is closed correctly

You can work in three different ways with the Selectronic:

Continuous (i.e. Permanent setting)

You can insert trays into the machine continually without interruption – this is also the mode for preheating the roller. Please optimize the tray speed during the first tray throughput cycle (see p.13 “Adjusting tray speed”).

Now press the Permanent 'button (12) (the button's lower LED light will glow). Choose one or both heating level settings (9) as needed, then turn on the machine (1). The machine will continue to run until you repress the ON/OFF button (1).

Automatic

This is useful when only one person is operating the machine. The machine switches off automatically when the tray is fully covered with pastries.

Here there are two different modes (described in more detail below):

- A) normal automatic tray loading ('--' mode)**
- B) automatic tray loading with option to specify the number of pastry rows**

The dough sensor must be positioned at the right height (approx. 2 mm above the pastry) and in the middle of a row. Positioning the tray sensor under the front edge of the upper conveyor belt allows you to correctly calibrate tray entry and thereby control the proper placement of the first pastry on the tray.

Choose one or both heating level settings (9) as needed, then turn on the machine (1). Lay the baking tray in the machine. The sensor recognizes the tray and the machine runs until the tray is completely covered with rows of pastries or until you repress the ON/OFF button (1).

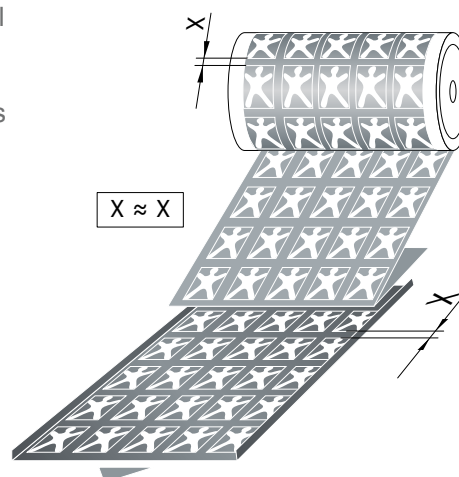
Note: The machine will not stop if you immediately insert the next tray – instead it will begin to fill the next tray. You should therefore punctually remove the filled tray from the machine to ensure that it does not fall from the front of the tray conveyor belt unit.

Automatic (A) – normal automatic tray loading ('- -' mode)

You should select this function especially when you want the distances between the rows of pastries to approximate the distances between the rows of figures on the forming roller.

1) To activate this function, tap the Mode button (2) repeatedly until the LED light (5) to the right of the display (8) glows. Then tap the arrow button (7) until two hyphens ('--') can be seen in the display (8).

2) Now press the Automatic button (12) (the button's upper LED light will glow). Inserting the baking tray starts the machine.



Automatic (B): automatic tray loading with option to specify the number of pastry rows

You should select this function especially when you want to prevent the distances between the pastry rows from being too large, i.e. when said distances should be smaller than the distances between the rows of figures engraved on the forming roller.

This can be the case with special figures which cannot be optimally engraved on the circumferential area of the roller for technical reasons, e.g. a large St. Nicholas figure with a length of more than 14 cm. Only two of such engraved figures can fit on the roller circumference (393 mm) and there would be a continually large space between the rows of figures on the tray.

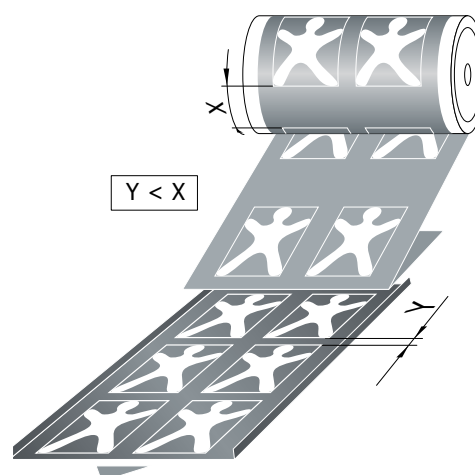
Here the Automatic function allows you to reduce spaces between figures on the tray in order to better utilize the given baking surface (see Figure).

In Automatic mode you can now enter the desired number of tray figure rows and the spaces between them (depending on tray speed and length, you can experiment as you like!).

1) Set the number N of pastry rows on the tray by tapping the Mode button (2) repeatedly until the LED light (5) to the right of the display (8) glows. Then tap the arrow buttons (6, 7) repeatedly until the desired number of pastry rows on the tray is shown in the display (8).

2) Set the space \leftrightarrow between the pastry rows on the tray by tapping the Mode button (2) repeatedly until the LED light (4) to the right of the display (8) glows. Then tap the arrow buttons (6, 7) repeatedly until the desired distance between the pastry rows on the tray is shown in the display (8). You will need to use trial and error to determine the distance.

3) Now press the Automatic button (12) (the button's upper LED light will glow). Inserting the baking tray starts the machine.



Adjusting tray speed

You can set the tray speed (i.e. velocity) V higher or lower in relation to the upper conveyor belt speed.

To do so, tap the Mode button (2) repeatedly until the LED light (3) to the right of the display (8) glows. Then tap the arrow buttons (6, 7) repeatedly until the desired tray conveyor belt speed is shown in the display (8). The normal setting is about 59.

After work is completed, switch off the machine first by using the main switch on the side of the machine and then unplugging the electric cord!

General for dough

(Take a look into the recipes)

General comments about our recipes

Before you prepare a large quantity of dough, please make a Moulding and baking test with a smaller quantity. The fats are so different now that a general recommendation hardly can be given. Our recipes are related to the consistency of brand butter or solid margarine. The baking temperature for cookies usually is 180 to 200 ° C and the baking time depending on the size and thickness of about 8 to 12 minutes.

The best temperature for fat dough is between 14 and 18 ° C.

You can reach them by freezing the flour and process the other ingredients at room temperature.

Basically, it is still the best, to prepare the dough a day before, so it can „unlock the sugar“ and sticking of the dough on the pattern roller is avoided (as far as the sugar is concerned).

Store the dough overnight in a cool place (not the freezer), covered with a towel (no plastic) so the dough does not sweat and will stick in the roller.

Before working with the dough, it is advisable to knead the dough briefly. On machines with dough hook please make the dough in a conventional way.

Small quantities in large spiral mixers it is advisable to knead the flour with the fat and liquid, and finally add sugar. The dough can be sliced and cut in pieces or as a whole just press by plates. Please ensure that you fill one third of the hopper.

All dough should be mixed in the following order:

First, fat, sugar and liquid mix well together. Then knead flour with leavening and spices until the mixture is homogeneous. For small quantities of dough or the spiral you should mix the fat, the liquid and the flour and the sugar afterwards. In this way mixing goes faster.

As a fat butter or a fixed baking margarine is suitable. At butter fat should always be added to an emulsifier, to return to a homogeneous combination of fat and fluid.

By converting a recipe from butter to butter fat, the lack of fluid must be taken into account.

1000 grams of butter correspond to 800 grams of butter fat +200 g
water (milk)

Soft margarine is not suitable. The pastries push together on the knife and also stick usually in the roller. When you take the finished dough in hand, it must be possible to rub it between two fingers without sticking.

Make a test with a handful of dough: Press a piece of dough firmly into the roll in and try to pull it back again. If this is done without any residue in the roller, you will have no problems and will likely need no heating. If the dough dissolves difficult from the roller and dough residues leave behind, you need at least the heater or have to change the dough.

Recipes

As a basic recipe, we recommend the following recipe:

1000 g flour,
500 g butter,
500 g sugar,
100 grams of milk (10% of flour),
Spice and very little or no baking powder.

You may use recipes with a higher or a lower quantity of fat.
When the dough has little fat, more liquid must be taken, a fat dough eventually needs no fluid at all.

We hope you will enjoy your new Cookie machine and are at your disposal by telephone at any time to give you any information or advice.
Service Hotline: 0049 (0) 2151 24315

Defects and their repairs

If the dough does not hold on the kneading roller:
Make the dough softer by adding fat or liquid.

If the dough holds on to the kneading roller, but accumulates on the knife.
Make the dough more firm by reducing fat or liquid.

If the figures shrink more than 10%:
Make dough a little firmer.

If round figures get oval:
Circulating direction: dough a little too firm.

If the figures are now properly formed, but are located on the Baking tray too far from each other:
*Rotate the lower transportbelt (sheet transportbelt) slower.
Upper and lower conveyor belt run to each other properly if with a 80 cm long brass the roller circumference fits in exactly 2x or at a 100 cm sheet of the roll size is 2.5 x on a baking sheet.*

Figures (particularly small, or croissant) move around by falling on the baking sheet:
Move the front knife of the upper conveyor belt as deep as possible to the sheet, or Crescents bow frame is requested.

Recipes

- 14-1 ***Butterspeculates*** K/M
1000 g good butter
1000 g powder sugar
2000 g flour
one Pinch Speklatiusspices
some vanilla and lemon
+/- 2 bis 3 egg yolks
+/- 150 bis 180 g milk
salt
a little or no baking powder
- For this recipe we offer these rollers:
- | | |
|---------|-------------------------------------|
| 0028 | rheinisch motives
normal size |
| 4114 | very small men |
| 4113 | dutch motifs |
| 4111 | animals |
| 4109/12 | rheinisch motives,
tall and wide |
| 4118 | north german motives |
| 4110 | men and animals |
- 14-2 ***Spicespeculates*** K
1000 bis 1200 g hard firm margarine, f.e.
MM-Goldback or Vortella feste Back
1000 g powder sugar
2000 g flour
30 bis 40 g speklatiusspices
+/- 2 bis 4 egg yolks
120 bis 150 g milk
salt
baking powder
- 14-3 ***Butterspeculates II*** K/M
1000 butter fat + Emulgator, f.e. Trix v.
Döhler
1600 g powder sugar
2400 g flour
+/- 3 eggs
+/- 320 g milk
40 g milkpowder
15 g baking powder ABC + spices
- 14-4 ***Butterspeculates III*** K/M
3120 g butter (hard)
4000 g powder sugar
6000 g flour
+/- 4 egg yolks
+/- 600 g milk
40 g baking powder ABC + spices

Recipes

- 15-1 **Butterspeculates IV (with almonds)** K
1500 g butter (hard)
600 g sugar
800 g fine grated almonds
2500 g flour
+/- 8 eggs
spice
For almond biscuits spread before mating of the plates thin almond leaves by hand.
- 15-2 **Good butter cookies I** K
1800 g butter (hard)
950 g powder sugar
3000 g flour
+/- 6 egg yolks
vanilla, lemon, salt
Heat the roller well!
- 15-3 **Good butter cookies II** K
1000 g butter (hard)
2000 g powder sugar
3000 g flour
+/- 4 egg yolks
vanilla, lemon, salt
- 15-4 **Butter cookies** K/M
3000 g butter (hard)
4800 g powder sugar
12000 g flour
300 g baking powder
+/- 2610 g eggs
+/- 500 g milk
vanilla, lemon
The dough can be processed immediately.
at 210 to 220 ° C until golden brown.
- 15-5 **Variations:** Before baking, spray or paint milk or egg yolks and sprinkle sugar, sesame or poppy seed. To avoid, that egg sticks on to the tray surface, we recommend to use baking paper.
Special cookies can also be filled with jam, such as filled hearts and fruit rings.
Last but not least an almond or pistachio can be decorated.

Recipes

- 16-1 **Milan teacookies** K
2000 g butter (hard)
1000 g powder sugar
3200 g flour
+/- 3 bis 4 egg yolks
salt and spice
- For those recipe we have various rollers available:
Milan square with smooth or serrated edges, any diameter.
Mixed milan roller with round, oval and rectangular designs of your choice.
Specialrollers
- Instruction for dough preparation:
Mix butter, sugar, eggs. Put flour into the mix, salt, spices and make a short pastry. Let it rest overnight and process the next day. Heat the roller well.
Baking temperature ca. 200 - 210 °.
Before baking possibly place one almond on each cookie and spread yolks on it.
Then bake on parchment paper, if possible.
- 16-2 **Pretzel - and Christmas cookies** K
1400 g butter (hard)
800 g powder sugar
2100 g flour
+/- 3 bis 4 eggs yolks
salt, vanilla, oil of almonds
- For this recipe we offer pretzels in various designs and sizes, just like the roller No. 4125 and 4126.
- 16-3 **Chocolate Pretzel** K
1400 g butter (hard)
800 g powder sugar
2000 g flour
400 g kakaopowder
+/- 3 bis 4 egg yolks
salt, vanilla
- 16-4 **Grandma's Cookies or Injection pastry** K
700 g butter
500 g powder sugar
1000 g flour
+/- 2 egg yolks
salt, lemon, vanilla
- Heat the roller well!
- For these cookies we offer the following rollers:
Long queencookies like made by hand (like the meat grender), such as stars, Shortbread round as the Depositor, bear paws, spray rings, or rollers you desire.

Recipes

- 17-1 **Grandma's Cookies II**
 2000 g butter (hard)
 1000 g sugar
 3300 g flour
 1 egg yolks
 200 g fine grated orangeade or lemon
- 17-2 **Grandma's Cookies and Crescents III** K
 2000 g butter (hard) Mix butter and sugar, add yolk, than flour.
 1000 g sugar Then, add fine granted hazelnuts with
 3000 g flour skin. Finally add one whole egg and mix,
 1000 g finde grated hazelnuts till egg is completly disappeared.
 1 egg yolk Now The dough is ready and can be pro-
 1 egg cessed immediately.
 salt, lemon, vanilla Heat the roller well!
 Crescents after baking soak in hot butter
 and roll in sugar vaniliertem
- 17-3 **Caraway - Cheese Cookies** K
 1000 g firm margarine Make the dough, as usual, one day befo-
 600 g fine grated cheese re and make it smooth the next day in the
 1400 g flour kneading machine.
 20 g baking powder After having formed, put poppy seed, salt,
 +/- 3 egg yolks caraway, cheese on the cookies.
 20 g salt Bake in baking paper.
- 17-4 **Cheese Cookies** K/M
 1000 g flour
 200 g lard
 300 g fine grated Emmentaler
 15 g syrup
 30 g salt
 7 g natron
 2 g paprika
 5 g ammonium
 +/- 50 g water
- 17-5 **Brown Cake I** K/M
 2000 g brown syrup Mix well, can become hot, boil and then
 500 g sugar cool down.
 250 g margerine
 The next day, 40 g milk added in dissol-
 ved ammonium and kneaded.
- Knead with this approach:
 3000 g flour
 300 g fine ground orange peel
 300 g fine ground almonds
 50 g gingerbread spice

Recipes

- 18-1 ***Ginger bread II***
 3000 g wheat flour
 800 g rye flour
 1200 g sugar
 1900 g syrup
 1000 g firm margarine
 20 bis 40 g baking powder
 +/- 180 bis 200 g water
 10 bis 20 g ginger bread spice
- For ginger bread we fabricate Teflon rollers as per your specifications. We also recommend our rollers 4125 and 4126th.
- K
 Make the dough one day before, keep it cool and next day quantities briefly and immediately processed in the form by the machine.
- round- and endles sheeds
- 18-2 ***Recipe with Meylip-Margerine:***
 5000 g margerine Meylip BLV
 4000 g sugar
 10000 g flour
 1200 g egg
 160 g baking powder
 60 g salt
 (20420 g weight all over)
- Be/bi/Te
 Work without heater!
 Mix dough one day before and keep it cool.
 Before working, mix the dough shortly through.
- 18-3 ***Recipe with Vortella-Margerine:***
 18700 g firm margarine
 Vortella-einfach-fest
 13500 g powder sugar
 300 g salt
 1125 g egg yolks
 30000 g flour Typ 550
 750 g baking powder
- Eell/Lo/Os
 Work without heater!
 Mix dough one day before and keep it cool.
 Before working, mix the dough shortly through.
- 18-4 ***Recipe with Vortella-Margerine:***
 20000 g Tafelback-einfach-fest
 20000 g powder sugar
 40000 flour Typ 550
 2000 g egg
 200 g baking powder ABC
 200 g vegetable oil (to prevent the stickiness of the dough, it the margarine sticks)
- Work without heater!
 Mix dough one day before and keep it cool.
 Before working, mix the dough shortly through.
- 18-5 ***Recipe with Industriemargerine Sima:***
 3000 g sand sugar
 6000 g Sima SM
 10000 g flour
 30 g oil
 salt, baking powder
- Work without heater!

For big dough

- 19-1 **Recipe with Sima SM and Sima Hefeteigmargerine:**
 20000 g sugar
 19500 g Sima Hefeteigmargerine
 19500 g Sima SM
 62000 g flour
 3000 g egg
 1000 g oil
 salt, baking powder
- Work without heater!
 Mix dough one day before and keep it cool. Before working, mix the dough shortly through.
- 19-2 **Recipe with Sima Flex-Mürb:**
 25000 g Flex-Mürb (Sima)
 5000 g oil
 15000 g sugar
 600 g salt
 1000 g baking powder
 12500 g water
 50000 g flour
- Mü/Br/Nü
 Work without heater!
 Mix dough one day before and keep it cool. Before working, mix the dough shortly through.
- 19-3 **Recipe with N36:**
 10000 g Margerine N36
 4500 g sugar
 20 g spice (vanilla, lemon)
 200 g salt
 1000 g egg
 20000 g flour Typ 550
- Work without heater!
 Mix dough one day before and keep it cool. Before working, mix the dough shortly through.
- 19-4 **Recipe with Butterfett (Uniferm):**
 5000 g sugar
 4200 g butterfat
 2000 g water or milk
 50 g Emulgator (Trix, TBM, etc.)
 10000 g flour
 salt
- Work without heater!
 Mix dough one day before and keep it cool.
- 19-5 **more recipes:**
 10000 g sugar
 10000 g Wiema Margarine by Vortella
 20000 g flour
 400 ml egg yolks
 1500 ml water
- with endless plates + 400 ml egg yolks
 + water
- 19-6 10000 g sugar
 10000 g Goldback by good brands
 20000 g flour
 400 ml egg yolks
 200 ml Emulgator (Delipan oder TRix)
 1500 ml water
 100 – 200 ml vegetable oil, if needed
- with endless plates + 400 ml egg yolks
 + water
- 19-7 10 kg Ireks MTK 40
 10 kg margarine (hard)
 20 kg flour
 400 ml egg yolks
 1,5 l water
 100 – 200 ml vegetable oil, if needed
- with endless plates + 400 ml egg yolks
 + water



Treatment recommendation for shiny blue sheets

Please wash new baking trays form thoroughly before first use. The plates are then quickly dried in the oven.

Now the sheets are inside and out evenly, not too thick, greased with cooking oil or release wax and baked at about 280 ° at least 3 hours. Please make sure that the sheets are placed with the back side down in the oven, ie conversely, so the excess fat can drain. The treatment forms a glaze, which reduces the susceptibility to corrosion and prevents sticking to the figures. By using metal spatula or knife, the glaze is however often very quickly damaged. Therefore, it is important to clean the sheets or forms immediately after use and re greased.

The pastry should not be left to sweat on the plate and. Moreover, blue luster plate not suitable for use in freezers and refrigerators. For health bread and sour dough, you should only use stainless chrome sheet steel, as blue plates are not suitable.

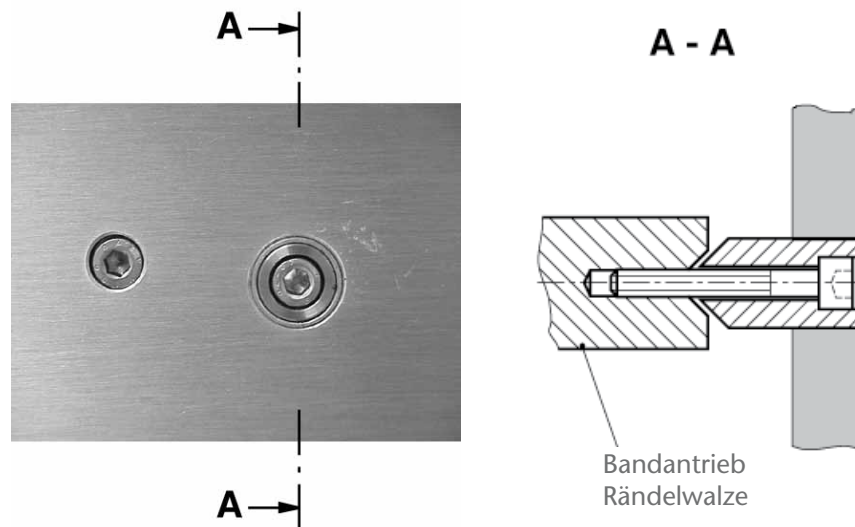
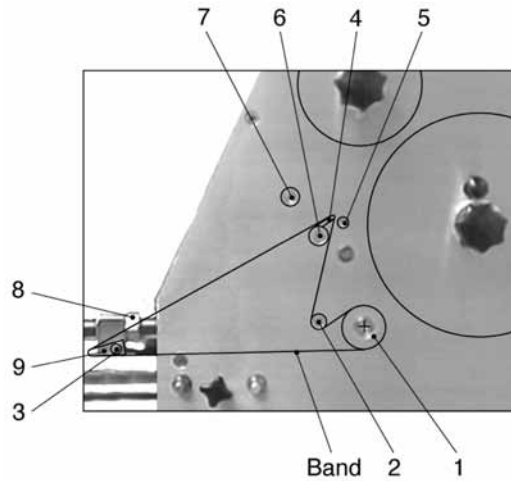
**Blue glossy sheet is a steel plate with coated, blue shiny surface.
When the surface is damage by sharp objects you get rust immediately.
It is therefore important that the sheets or forms are greased after work.**

Servicing and small repairs

Changing the belts

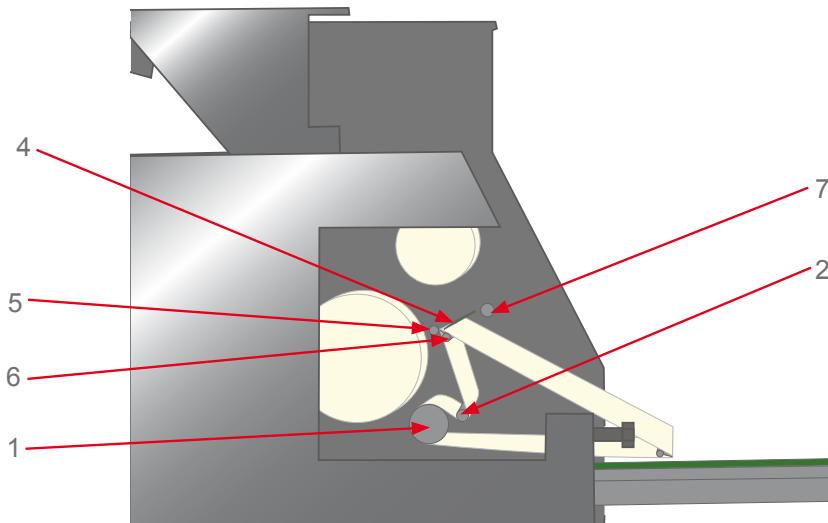
Top belt:

- 1... Knurling roller with bearing pin
- 2... guide roller
- 3... Hexagon screw M8
- 4... Upper cloth knife
- 5... Inner hexagon screw M-6
- 6... Inner hexagon screw M-8
- 7... Inner hexagon screw M-8 traverse for blade protection
- 8... Hexagon nut M-18
- 9... Lower cloth knife



You need hexagon in sizes 5 and 6, a screwdriver, 12mm, 13mm and 10-foot-ring or key. First remove the plexiglas cover in front of the machine and tight it in a upright position along the front side of the hopper with tape. Remove the blade protection and square wheel

**Pay attention! Now the knife is unprotected!
Be carefully not to hurt your fingers.**



Then unwind the tape by turning back the hex nuts (8) on the front cloth knife stock (9) and then build this by unscrewing the mounting screws (3) off. Screw the top of guiding plate from cloth knife (4) and remove the two screws (5 and 6) in the machine side.

Now you can remove the upper cloth knife (4).

Right below the screws of the cloth knife is a hexagon (1), which holds one bearing pin in the knurling roller (1). These must be resolved and removed. Thus you get a free space between the drive roller and the machine side panel through which you can pull the tape from the roll. After the edge of the drive roller has been cleaned, the new tape can be inserted. Please make sure that it runs below the pulleys to the front and top. The further assembly in reverse order of removal.

Lower transport belt:

Slacken the band by solving the knurled nuts. Take off the protection hood. Apart as the case of a automatic machine with a screwdriver, the two discs of the lower pulley and draw the belt to the bottom. Remove on the back of the machine, the lower plate, which sits beneath the sheet metal insertion aid. Then resolve the adjusting ring on the axis of the belt drive roller and move then to the wheels down box. Through the resulting gap on the left, the tape or strap can be unthreaded. Any band supports, for example knife under the front edge, need to be removed.

Green belt:

If your machine is equipped with green belts and mushroom connectors, this work stays away. Here just insert the new belt and press the fungal connection with 2 clamps into the space of the belt.

Exchange knife

After lifting the Plexiglas plate and remove the blade guard plate, you can exchange a possibly become dull knife.

Pay attention! Be careful with the sharp knife, so you do not cut!

For more repairs you need the machine number, which can be found on the plate and on the side panel under the hopper and the year of construction, which is listed on the label.

Technical data

Designation Table machine	K 250	K 320	K 400	K 450	K 580	K 800
Tray-/ rollerwidth (mm)	250	320	400	450	580	780
Occupancy width	ca. 205	ca. 295	ca. 370	ca. 405	ca. 560	760
Capacity in normal operation (m ² /min)	ca. 1	ca. 1,3	ca. 1,6	ca. 1,8	ca. 2,3	ca. 3,0
Power (KW)	2,3	2,3	4,5	4,5	4,5	6,5
Motor 230/400 V	0,37	0,37	0,37	0,37	0,37	0,37
Variomotor	possible	possible	possible	possible	possible	possible
Heater (W)	2 x 1000	2 x 1000	1 x 2000	1 x 2000	2 x 2000 (An- schluß-	3 x 2000
Emergency stop	yes	yes	yes	yes	yes	yes
Addotional start	no	no	yes	yes	yes	yes
Dimensions of table machine in working position (mm)						
lenght	1265	1265	1450	1450	1450/2350	variable
wide	580	640	805	805	955	1165
height	630	630	670	670	670	variable
Dimensions of open base, short and long version (mm)						
lenght	590/930	1140	900	900	900	variable
wide	565	570	815	815	965	1175
height	635/641	640	645	645	645	variable

The noise of the machine is under 70 db (A).

Technical amendments reserved - Stand 2008

EC declaration of conformity

(in terms of the EC directive machines 89/392/EWG, Annex II A)

We hereby declare that the construction of cookie machine

FM 128 K

Nr.:

is according to the following relevant provisions:

Machinery directive 89/392 EWG with 91/368 EWG + 93/44 EWG

Low voltage directive 73/23 EWG + 89/336 EWG

applied harmonised standards, in particular DIN EN 294, DIN EN 349,
DIN EN 60204

applied national technical specifications, in particular
DIN 45635 Teil 1 + 29, DIN V 8418.

This CE Declaration goes out and lose their validity when the machine have been used for other than the intended purposes or the manufacturer have not been agreed modifications to the machine.

Niederrheinische Formenfabrik
Gerh. Janssen & Sohn GmbH & Co. KG

.....
Dr. Petra Gersch
(Geschäftsführerin)

Frontside



Backside



Spare parts



4001



v.l.n.r.: 4021•4027•4002•4025



4003



4007/4008



4009



v.l.n.r.: 4017•4010



n.a.n.i.: 3015-3026•4011•4012



v.o.n.u.: 4014•4013•4015••4019



4016



v.l.n.r.: 4020•4022



4023



4024



v.l.n.r.: 4026•4018



4028



4029

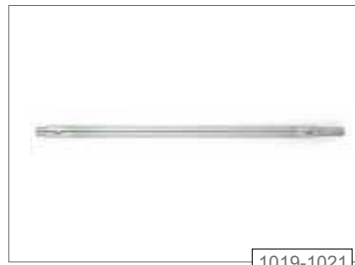
Spare parts



Spare parts



1018



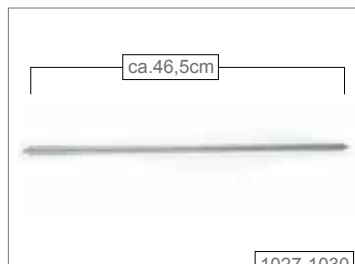
1019-1021



v.l.n.r.: 7001-7002•1022



v.l.n.r.: 1024-1026•1023



1027-1030



1031



v.l.n.r.: 1034-1037•1032-1033



1043-1044



1045



v.o.n.u.: 1046•1047



1052-1054



v.o.n.u.: 1138-1141•1055-1059



1060-1062

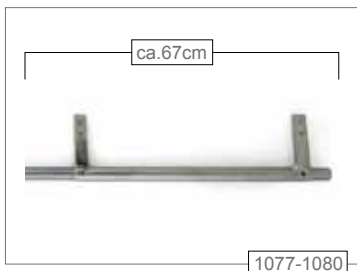


1063



1065-1068

Spare parts



Spare parts



v.l.n.r.: 1125-1128•1113-1116•1117-1120



1130-1133



1134-1137



1145



1146-1149



1152



1153



1154



1155



v.l.n.r.: 2008•2001



v.l.n.r.: 2002-2004•2013-2014•2012



v.l.n.r.: 2011•2018-2019•2005-2007



v.l.n.r.: 2009•2010



2015-2017



v.l.n.r.: 3001•3002

Spare parts



3003



3009-3011



3012-314



3027-3030



3031-3034



3035-3038



3039



3040-3042



3043



3044



3046-3048



3049



3050-3052



3053



v.l.n.r.: 3054-3055•3056-3057•3091-3092

Spare parts



3058



v.l.n.r.: 3061-3060



3068-3071



3086-3089



3090



v.l.n.r.: 3094-3097-3005-3008



7003



7004



ca. 44,5cm

7005



v.l.n.r.: 7006-7008-7009-7011



7012



7013



7014-7017



v.o.n.u.: 7018-7021-1098-1101



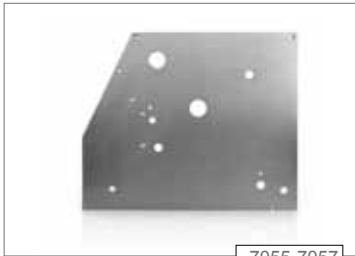
ca. 3,7cm

7022

Spare parts



Spare parts



Legende:
v.l.n.r.: von Links nach Rechts
v.o.n.u.: von Oben nach Unten
v.i.n.a.: von Innen nach Außen

List of mechanical spare parts - machined parts

No.	Component	Remarque
4001	Keyboard Selectronic	
4002	Bush for sensor connection	
4003	Fuse 5x20 0,5A MT	
4004	Fuse 5x20 10A MT	
4005	Fuse 5x20 5A MT	
4006	Fuse 5x20 6,3A MT	
4007	Gearmotor 0,25 kW ABM	
4008	Gearmotor 0,37 kW ABM	
4009	GS-motor 24V	
4010	Main switch Moeller	P1-25/V/SVB
4011	Heater left	Heidolph
4012	Heater right	Heidolph
4013	Inductive proximity switch Telemecanic	XS-P18PA340
4014	Inductive proximity switch Turck	Ni12U-S18-AP6X
4015	Capacitive proximity switch Omron	E2K-X4MF-1
4016	Electrical cable	
4017	Plug	
4018	Emergency Stop-button Moeller	
4019	Optical proximity switch Datalogic	S5-5-L2-92
4020	Main board Selectronic	
4021	Relay Selectronic 24V Hengstler	
4022	Keyboard Selectronic	
4023	Security switch movable Guardmaster	Ensing 3
4024	Security switch hopper Guardmaster	Trojan 5
4025	Security holder heater	
4026	Start button Moeller	
4027	Plug for sensor connection	
4028	Drive motor knife drive	
4029	Selectric transformer 18V	
4030	Frequency inverter	
4031	Luster clamp	
4032	Relay for frequency inverter	
4033	Potentiometer 5K	
4034	Scale for potentiometer	
4035	Emergency Stop plate	
4036	Tension Release for electrical cable	

List of mechanical spare parts - machined parts

No.	Component
1001	Eye bolt K250
1002	Belt roller K250
1003	Belt roller K450
1004	Belt roller K800
1006	Fixing bolt for GS – motor K250 – K800
1007	Fixing bolt for cover fixing K250 – K800
1008	Bolt for V-belt pulley K800
1009	Bolt to centering flange K250 – K600
1010	Bolt to centering flange K800
1011	Bolt to articulated bush for hopper K250 – K800
1012	Distance shell for regulation K800
1013	Endpiece motor pinion K250 – K600
1014	Endpiece motor pinion K800
1015	Eccentric bolt K250
1016	Eccentric bolt K450 – K600
1017	Eccentric bolt K800
1018	Eccentric cam plate K450 – K800
1019	Eccentric shaft lifting table K450
1020	Eccentric shaft lifting table K600
1021	Eccentric shaft lifting table K800
1022	Eccentric cam plate K250 – K800
1023	Spring bolt K450 – K800
1024	Spring bar 18" K450
1025	Spring bar K600
1026	Spring bar K800
1027	Finger guard front transport shaft 18" K450
1028	Finger guard front transport shaft K250
1029	Finger guard front transport shaft K600
1030	Finger guard front transport shaft K800
1031	Fixing bolt for kneading - and pattern roller K250 – K800

List of mechanical spare parts - machined parts

No.	Component
1032	Flange K250 – K600
1033	Flange K800
1034	Flange to gearside pattern roller K800
1035	Flange to gear side K250
1036	Flange to gear side K450 – K600
1037	Flange to gear side kneading roller K800
1038	Articulated bush for hopper K250
1039	Articulated bush for hopper with stop K450 – K600
1040	Articulated bush for hopper with stop K800
1041	Articulated bush for hopper with boring K250 – K600
1042	Articulated bush for hopper with boring K800
1043	Screwed bolt for gripping power K250 – K600
1044	Screwed bolt for gripping power K800
1045	Threaded bar K250
1046	Sliding ring K250 – K800
1047	Sliding pin K250 – K600
1048	Holder for upper cloth knife K250
1049	Holder for upper cloth knife K450
1050	Holder for upper cloth knife K600
1051	Holder for upper cloth knife K800
1052	Hebomatik articulated bolt 18" K450
1053	Hebomatik articulated bolt K600
1054	Hebomatik articulated bolt K800
1055	Rear transport shaft K250
1056	Rear transport shaft K450
1057	Rear transport shaft K600
1058	Rear transport shaft K800
1059	Rear transport shaft mesh belt automatic K800
1060	V- belt pully for lateral knife - drive K250
1061	V- belt pully for lateral knife - drive K450 – K600

List of mechanical spare parts - machined parts

No.	Component
1062	V-belt pulley for lateral knife-drive K800
1063	V-belt pulley K800
1064	V-belt pulley for regulation K800
1065	Kneading roller K250
1066	Kneading roller K450
1067	Kneading roller K600
1068	Kneading roller K800
1069	Bearing bolt for regulation K800
1070	Bearing bolt for intermediate wheel K250
1071	Bearing bolt for intermediate wheel K450 – K600
1072	Bearing bolt for intermediate wheel K800
1073	Bearing bolt for knurling roller K250
1074	Bearing bolt for knurling roller K450 – K600
1075	Bearing bolt for knurling roller K800
1076	Regulating bolt knife holder K450 – K800
1077	Knife shaft K250
1078	Knife shaft K450
1079	Knife shaft K600
1080	Knife shaft K800
1081	Driving flange pattern roller K250
1082	Driving flange pattern roller K450 – K600
1083	Driving flange pattern roller K800
1084	Driving flange kneading roller K250
1085	Driving flange kneading roller K450 – K600
1086	Driving flange kneading roller K800
1087	Knurling roller K250
1088	Knurling roller K450
1089	Knurling roller K600
1090	Knurling roller K800
1091	Reducing bloc K450 – K800
1092	Pulley for rear transport shaft 2 groovin K450 – K800
1093	Pulley for rear transport shaft K250 – K800
1094	Pulley for front transport shaft K250 – K800

List of mechanical spare parts - machined parts

No.	Component
1095	Disc K250 – K600
1096	Disc K800
1097	Bolt K250 – K800
1098	Pivoting shaft K250
1099	Pivoting shaft K450
1100	Pivoting shaft K600
1101	Pivoting shaft K800
1102	Oscillating crank for regulation K800
1103	Sensor clamp disc gg K250 – K800
1104	Sensor clamp disc kg K250
1105	Shift for knife adjustment K250 – K800
1106	Stop for movable grid K250 – K800
1107	Carrying handle 160 K250 – K800
1108	Carrying handle 260 K250 – K800
1109	Crosshead for belt roller K250
1110	Crosshead for belt roller K450
1111	Crosshead for belt roller K600
1112	Crosshead for belt roller K800
1113	Crosshead for knife guard K250
1114	Crosshead for knife guard K450
1115	Crosshead for knife guard K600
1116	Crosshead for knife guard K800
1117	Crosshead for motor coverplate K250
1118	Crosshead for motor coverplate K450
1119	Crosshead for motor coverplate K600
1120	Crosshead for motor coverplate K800
1121	Crosshead for lower cloth knife K250
1122	Crosshead for lower cloth knife K450
1123	Crosshead for lower cloth knife K600

List of mechanical spare parts - machined parts

No.	Component
1124	Crosshead for lower cloth knife K800
1125	Crosshead for behind K250
1126	Crosshead for behind K450
1127	Crosshead for behind K600
1128	Crosshead for behind K800
1129	Crosshead selectronic K250
1130	Crosshead front K250
1131	Crosshead front K450
1132	Crosshead front K600
1133	Crosshead front K800
1134	Hopper role for movable grid K250
1135	Hopper role for movable grid K450
1136	Hopper role for movable grid K600
1137	Hopper role for movable grid K800
1138	Front transportshaft K250
1139	Front transportshaft 18" K450
1140	Front transportshaft K600
1141	Front transportshaft K800
1142	Cenering flange K250 – K600
1143	Cenering flange K800
1144	Tension bolt for adjustment K800
1145	Lever for knife guard K250 – K800
1146	Intermediate shaft K250
1147	Intermediate shaft K450
1148	Intermediate shaft K600
1149	Intermediate shaft K800
1150	Sensor clamp disc gg opposite K250-K800
1151	Sensor clamp disc kg opposite K250-K800
1152	Eccentric shaft short DM
1153	V-belt oulley for lower transport belt
1154	Vario-regulation spindle with stargrip
1155	Vario-adjusting disc

List of mechanical spare parts - gears

No.	Component
2001	Bevel gear K250 – K800
2002	Gear wheel kneading roller K250
2003	Gear wheel kneading roller K450 – K600
2004	Gear wheel kneading roller K800
2005	Pinion gear K250
2006	Pinion gear K450 – K600
2007	Pinion gear K800
2008	Pinion K250 – K800
2009	Gear transport drive K250 – K800
2010	Gear GS-motor drive K250 – K800
2011	Gear for transport belt drive K250 – K800
2012	Gear for pattern roller drive K250 – K800
2013	Gear for knife drive K250 – K600
2014	Gear for knife drive K800
2015	Gear for intermediate drive V2 K250
2016	Gear for intermediate drive K450 – K600
2017	Gear for intermediate drive K800
2018	Intermediate gear for knife drive K250 – K600
2019	Intermediate gear for knife drive K800
2020	Intermediate gear for knurling rollers K250 – K800

List of mechanical spare parts - metal plates

No.	Component
3001	Guiding plate left for belt K250 – K800
3002	Guiding plate right for belt K250 – K800
3003	Metal plate for label holder K450 – K800
3004	Metal plate for dough sensor holder K250 – K800
3005	Metal plate for lower cloth knife K250
3006	Metal plate for lower cloth knife K450
3007	Metal plate for lower cloth knife K600
3008	Metal plate for lower cloth knife K800
3009	Cover sheet K450
3010	Cover sheet K600
3011	Cover sheet K800
3012	Cover K250S
3013	Cover K450S – K600S
3014	Cover K800
3015	Cover sheet heater K250
3016	Cover sheet heater K450
3017	Cover sheet heater K600
3018	Cover sheet heater K800
3019	Clamping plate heater K250
3020	Clamping plate heater K450
3021	Clamping plate heater K600
3022	Clamping plate heater K800
3023	Heater air baffle K250
3024	Heater air baffle K450
3025	Heater air baffle K600
3026	Heater air baffle K800

List of mechanical spare parts - metal plates

No.	Component
3027	Crumbs sheet K250
3028	Crumbs sheet K450
3029	Crumbs sheet K600
3030	Crumbs sheet K800
3031	Crumb tray K250
3032	Crumb tray K450
3033	Crumb tray K600
3034	Crumb tray K800
3035	Knife guard K250
3036	Knife guard K450
3037	Knife guard K600
3038	Knife guard K800
3039	Cover sheet motor K250
3040	Cover sheet motor K450
3041	Cover sheet motor K600
3042	Cover sheet motor K800
3043	Casing left for heater with fuse K250 – K800
3044	Casing right for heater K450
3046	Rear pannel / middle K450
3047	Rear pannel / middle K600
3048	Rear pannel / middle K800
3049	Rear pannel / top K250
3050	Rear pannel / top K450
3051	Rear pannel / top K600

List of mechanical spare parts - metal plates

No.	Component
3052	rear panel / top K800
3053	rear panel / below K250
3054	side plate left with slot K250 – K600
3055	side plate left with slot K800
3056	side plate right K250 – K600
3057	side plate right K800
3058	sensor holder, large version K250 – K800
3059	sensor holder France K250 – K800
3060	sensor holder rear K250
3061	sensor holder rear V2 K450 – K800
3068	hopper K250 welded
3069	hopper K450 welded
3070	hopper K600 welded
3071	hopper K800 welded
3078	hopper plate rear K250
3086	hopper insertion plate K250
3087	hopper insertion plate K450
3088	hopper insertion plate K600
3089	hopper insertion plate K800
3090	lower belt support plate K250
3091	slotted base K250 – K600
3092	slotted base K800
3094	lower cloth knife K250
3095	lower cloth knife K450
3096	lower cloth knife K600
3097	lower cloth knife K800

List of mechanical spare parts - bearings

No.	Component	Remark
5001	bearing DIN 1494 – BK1 16x15	
5002	bearing DIN 1494 – BK1 16x20	
5003	bearing DIN 1494 – BKF1 20215	
5004	bearing DIN 1494 – BKF1 20165	
5005	needle roller bearing DIN 617 – K – 12x15x13 – TK	belt roller
5006	needle roller bearing DIN 617 – K – 18x24x20	Intermediate gear for transportbelt
5007	deep groove ball bearing CBF 4204 B-TVH	pinion
5008	deep groove ball bearing DIN 625 – 6004 – ZZ	K250 Intermediate shaft
5009	deep groove ball bearing DIN 625 – 6005 – ZZ	K800
5010	deep groove ball bearing DIN 625 – 6204 – ZZ	standard
5011	deep groove ball bearing DIN625 – 6001 ZZ	pedestal
5012	deep groove ball bearing KSK 626 Z	knife drive
5013	bearing DIN 1494 BK2-1615	
5014	bearing DIN 1494 BK2-1620	

List of mechanical spare parts - drilling and milling parts

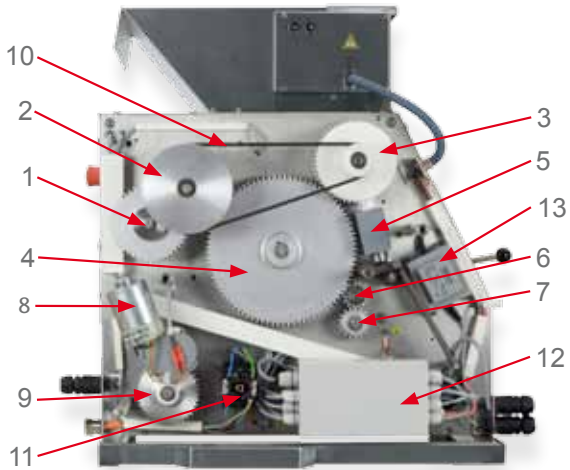
No.	Component
7001	axiul transporter K250 – K600
7002	axiul transporter K800
7003	axiul transporter angle K800
7004	baking tray holder K250
7005	belt extension K250
7006	tray guide left K450
7007	tray guide left K600
7008	tray guide left K800
7009	tray guide right K450
7010	tray guide right K600
7011	tray guide right K800
7012	tray guide K250
7013	distance block for main switch K450 – K800
7014	base plate K250
7015	base plate K450
7016	base plate K600
7017	base plate K800
7018	movable grid K250
7019	movable grid K450
7020	movable grid K600
7021	movable grid K800
7022	hebeomatic sensor guard K450 – K800
7023	top chat rail K450 – K800
7024	pedestal K250 – K800
7025	pedestal, simple front left K250
7026	pedestal, simple front right K250
7027	pedestal for lower cloth knife K250 – K800
7028	pedestal hebomatic rear left K450 – K800
7029	pedestal hebomatic rear right K450 – K800
7030	pedestal hebomatic left K450 – K800
7031	pedestal hebomatic right K450 – K800
7032	knife holder counter part K450 – K800
7033	knife holder counter part K450 – K800
7034	knife protection system K450
7035	knife protection system K600
7036	knife protection system K800
7037	knife protection system with slot K450

List of mechanical spare parts - drilling and milling parts

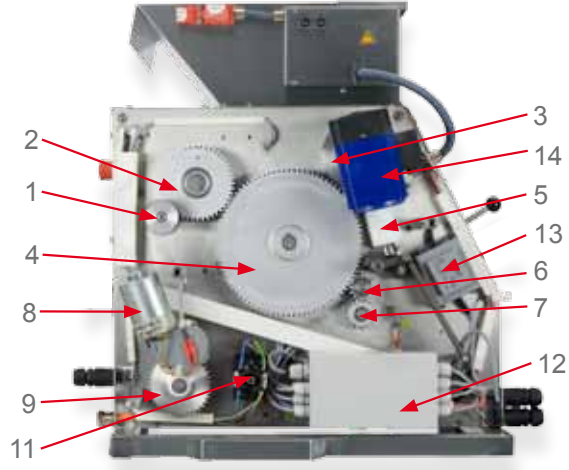
No.	Component
7038	knife protection system with slot K600
7039	knife protection system with slot K800
7040	upper cloth knife K250
7041	upper cloth knife K450
7042	upper cloth knife K600
7043	upper cloth knife K800
7044	plexiglas pane K250
7045	plexiglas pane K450
7046	plexiglas pane K600
7047	plexiglas pane K800
7048	hinge K250
7049	hinge K450
7050	hinge K600
7051	hinge K800
7052	side panel drive side K250
7053	side panel drive side K450 – K600
7054	side panel drive side K800
7055	side panel operating side K250
7056	side panel operating side K450 – K600
7057	side panel operating side K800
7058	stabilizer 18" K450
7059	stabilizer K600
7060	stabilizer K800
7061	bur for dough sensor holder K250
7062	bur for dough sensor holder K450
7063	bur for dough sensor holder K600
7064	bur for dough sensor holder K800
7065	carrier angular K450 – K800
7066	angle closure K800
7067	angle for hose couplin K250 – K800
7068	angle for plug K450 – K800
7069	angle for plug K800
7070	angle for tension relief K250
7071	angle for tension relief K450 – K800
7072	mainspring for knife adjustment
7073	mainspring for knife guard

Drive scheme FM 128 K

Selectronic without motor for the knife



Selectronic with motor for the knife



- 1... motorshaft: gear/small = 15 teeth, gear/big = 45 teeth
- 2... intermediate shaft: gear/small = 15 teeth, gear/big = 45 teeth
* V-belt/pulley / knife drive
- 3... pattern roller: gear = 50 teeth + knife drive/pinion
- 4... kneading roller: gear = 88 teeth
- 5... knife drive with bevel gear
- 6... upper transport belt drive: intermediate gear = 15 teeth
- 7... upper transport belt drive: intermediate gear = 17 teeth
- 8... direct current motor for tray transportation + gear 14 teeth
- 9... gear for drive rear transport shaft 38 teeth
- 10... drive belt for knife drive: 8 x 775
- 11... mainswitch
- 12... selectronic mainboard
- 13... transformer 18 V
- 14... motor for knife drive

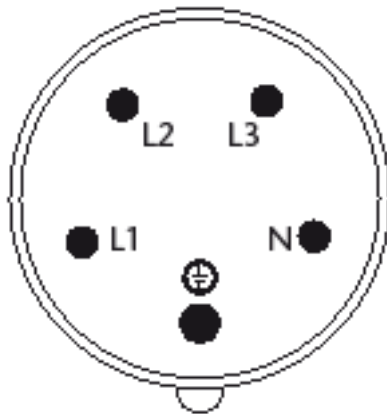
Connection and assignment of a 5-pin 230/400 volts CEE plug or outlet


Our machines of the series M250, 320, 400, 450, 580 and K250, 320, 400, 450, 580 require a 16 amp. socket.

All machines require both the 230/400 and the 230 volts function.

Our machines are connected at the factory to run right.

The drawing shows a top view at outlet in cap raised, or a plug from the wiring side.



	protective conductor	color of cable: yellow/green
N	Neutral	color of cable: blue
L1	Phase 1	color of cable at plug: brown
L2	Phase 2	color of cable at plug: black
L3	Phase 3	color of cable at plug: black or gray

Between the phases L1 + L2, L2 + L3 and L1 + L3 must be a voltage of 380 - 440 volts present, between the phases L1 + N, L2 + N and L3 + N a voltage of 220 – 240 volts.

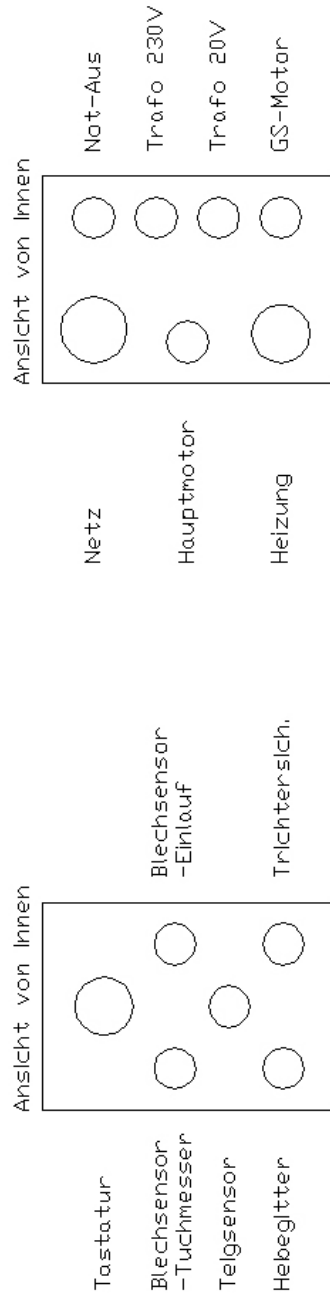
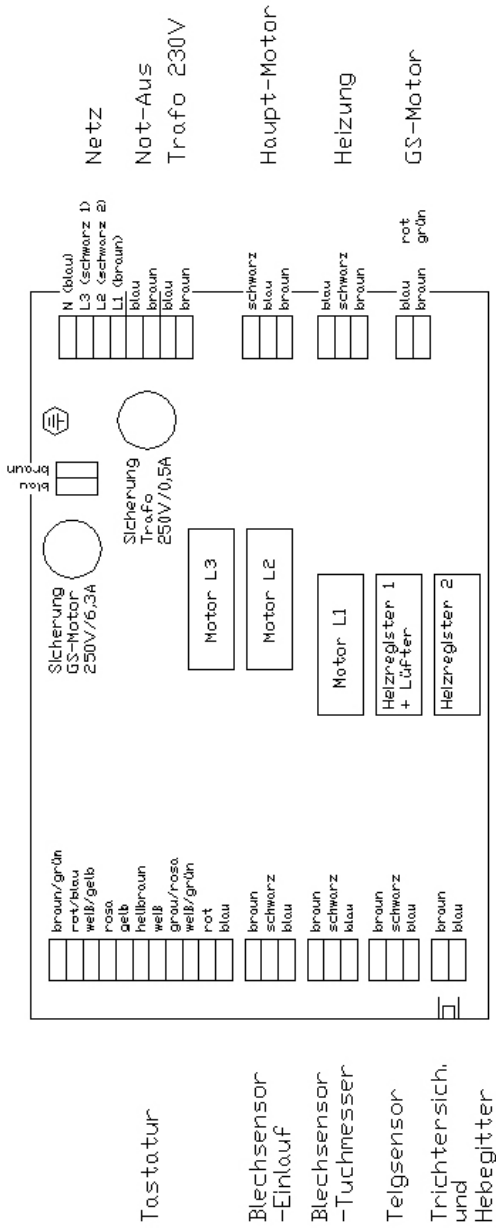
Let these measurements prior to connecting the machine by a professional.

The change of direction of rotation are only by changing the phases L2 + L3 against each other.

For damage to relay, roller heating, motor and electronics by a faulty electrical outlet or by improper changing of the phases of the machine, we accept no liability.

The machine must be connected only to a properly connected and accepted building systems, which also has a FI (fault current protection) are secured.

Test in a six-monthly periodic the electrical equipment of the machine to perform BGV A3.



Bei Betrieb mit einem Frequenzumrichter wird der Hauptmotor nicht direkt angeschlossen. In diesem Fall wird ein externes Relais angesteuert, das an schwarz (Haupt-Motor) und zusätzlich mit dem Netzkabel an blau (Netz) angeschlossen wird.

