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USE AND MAINTENANCE MANUAL

RAVIOLI MACHINE

mod. MT265

I N S T R U C T I O N M A N U A L
FOR THE
MACHINES MR265 - MR135

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MR265 - MR135

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USE AND MAINTENANCE INSTRUCTIONS
MR265 - MR135

IMPORTANT NOTE

Always cut out the electricity supply by switching off the main switch before effecting any cleaning, lubrication, adjustment or mold-change operation. Use the manual control handwheel if the machine must be turned in order to accomplish these operations. Only specially trained personnel should be allowed to use the machine or effect adjustment operations pertaining to production or mold-change. The machine has appropriate accident-prevention guards. These particularly consist of: full hopper protection grating, calibrator guard, protective screen for the shaping unit, safety limit switches on the hatches. The manufacturers decline all responsibility for damage caused by tampering, damage or removal of these protective devices. Machine maintenance operations should be carried out by qualified personnel. The machine should always be disconnected from the electricity source before such work commences.

INTRODUCTION

This handbook contains information pertaining to the installation, use, adjustment, set-up and maintenance of machine mod. MR265 - MR135 and will enable users to become more familiar with the various operations. The machine itself is only supplied after strict checks and tests have been carried out in order to guarantee long-life and efficiency. Please note that such conditions largely depend on correct use and maintenance of the machine. Before using the equipment it is, therefore, advisable to carefully consult this handbook and to comply with the following instructions.

INSTALLATION

To avoid faults, always check the following conditions when installing the machine:

- 1) Check that the electrical power supply voltage is that indicated on the data plate of the machine.
- 2) Check that all sliding parts are clean and lubricated with oil of the Spinesso, Circulating oil, Millcot K type, etc.
- 3) Start the machine manually using the handwheel (ref. 78 tab. 4) on the lower right-hand side. Turn in an anticlockwise direction and check that movement is smooth.

- 4) Disengage the lever (ref. 76/77 tab. 4) beside the handwheel by moving it downwards. (By turning the handwheel, only the calibrator will move while all other machine parts will remain at a standstill).
- 5) Insert the power plug into its socket.
- 6) Operate the main switch on the lower right-hand side of the machine.
- 7) Operate the black button on the upper front part of the machine.
- 8) Check that the rotation direction of the handwheel matches that indicated by the arrow (anti-clockwise direction).
- 9) Stop the machine by operating the red mushroom-shaped stop button.

MACHINE SET-UP

After having correctly installed the machine according to the relative instructions, it will be necessary to effect the set-up operations.

- 1) Start the machine and place the filling in the relative hopper (ref. 4 tab. 5). Allow the machine to operate until this filling starts to come out in the front ravioli shaping part.
- 2) Stop the machine when the punch (ref. 2/7 tab. 6) is in its maximum retracted position.
- 3) Lower the lever (ref. 76/77) so that only the calibrator is able to operate.
- 4) Restart the machine by means of the start button and place the dough in the calibrator. Check that when it exits from the calibrator, the dough drops freely passing through the cage (ref. 28 tab. 6) and proceeding between punch and template.
- 5) Stop the machine. Raise the lever (ref. 76/77 tab. 4). Restart the machine. It will start to produce ravioli. It is advisable to allow the machine to operate for a few strokes in order to achieve regular dough and filling feed. The following operations should be carried out in order to adjust the quantity of filling and dough thickness according to the requirements of the individual user.

A) How to vary the dough thickness :

Slacken the ring nuts of the adjuster handwheel (ref. 42 tab. 2). Choose the required thickness on the supplied thickness-gauge, operating alternately first on the right side and then on the left. Place the thickness-gauge between the cylinders and,

using the knobs (ref. 43), bring the movable cylinder near. Lock the respective ring nuts using the relative tool.

B) How to vary the amount of filling delivered per dose :

Use the adjustable throw on the control knob. By increasing or decreasing this throw (distance of the pin from the center), it is possible to proportionally vary the amount of filling supplied for each dose. The delivered quantity of filling is also influenced by the consistency and type of the filling itself.

DEFECTS IN THE PRODUCT DUE TO INCORRECT ADJUSTMENTS

This chapter describes the most common defects caused by the dough or filling in the production of ravioli-tortellini and also gives instructions on how to eliminate these defects.

IMPORTANT - Some corrective operations require particular attention and experience since it is easy to damage the distribution parts or the mold.

DOUGH

The upper edges of the ravioli are too wide

If this effect is excessive, the knurled units can be delayed by operating in a rotary direction (upper knurled unit: allow it to turn downwards; lower knurled unit: allow it to turn upwards). The delaying action can be obtained in the following way:

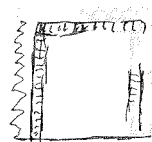
- a) Using a screwdriver, slacken the screws fixing the knurled unit to the shaft and then lightly retighten them. Repeat this operation for the other knurled unit.
- b) Slightly shift the knurled unit in the required direction.
- c) Fully tighten the slackened screws.
- d) These operations should also be effected on the coupling link.



Operate the handwheel (ref. 78 tab. 4) and allow the machine to turn checking that the rod corresponding to the shifted knurled unit or units does not touch it.

The upper edges of the ravioli are too narrow

Comply with the previous instructions in reverse.



FILLING

Empty, half-filled ravioli, filling crushed

between the edges

When an insufficient amount of filling is delivered, the rod drags the filling with it during its return stroke since a sort of intake action is created. The filling will be crushed between the dough edges as the ravioli are pressed shut. If the filling is too sticky, it will remain clinging to the distributor rods. The filling ingredients will need to be modified.



Ravioli excessively full and/or split

An excessive amount of filling may cause the excess quantity to be crushed between the dough edges as the ravioli are pressed shut. In other cases, the pasta dough may split open at the bottom according to the consistency of the dough itself.

Signs of splitting on the surface of the ravioli

Unless they are well adjusted, the filling rods will push the dough against the knurled units causing it to mark and split. It will be necessary to shorten the distributor rods, using the nuts and check nuts to correct their lengths. Also check whether the clips of the knurled units are bent or deformed. Each time the previous positions are modified, it is advisable to avoid operating the machine by means of the start button, but to allow the handwheel to make a complete hand turn in order to check that the action is smooth.



CHANGING THE MOLD

When it is necessary to change the supplied mold, it is advisable to comply with the below listed order of operations.

- 1) Switch off the electricity supply by turning off the main switch.
- 2) Slacken the draft pin (ref.47 tab.5) in order to prevent accidental movements of the coupling.
- 3) Slacken the rod (ref. 41 tab. 5) and release the left and right-hand blocks (ref.12 tab. 5). Unscrew the Knobs (ref. 42 tab. 5) and remove the bracket (ref.43 tab.5).
- 4) After having removed the hopper cover (ref. 4 tab. 5) by knocking it upwards, remove the baffle block, cylinder and hopper (ref. 8).
- 5) Using the handwheel (ref. 78 tab. 4), shift the filling distributor rod unit until it sets to the maximum retracted position.
- 6) Slacken the screws (ref. 1 tab. 6) and, lifting the straightedge (ref. 4 tab. 6) and package (ref. 7 tab. 6) together, remove them from their housings.
- 7) Proceeding manually, turn the handwheel (ref. 78 tab. 4) until the mold control coupling (ref. 29 tab. 6) presents the connection in a frontal position.
- 8) Slacken the 4 Allen screws (ref. 52 tab. 6) and remove the mold unit.
- 9) Slacken the Allen screws (ref. 22 tab. 6) which fix the punch plate (ref. 27 tab. 6) to the punch cross member (ref. 57 tab. 3).

Comply with the above instructions in reverse order when reassembling the machine and remember to follow the below listed indications:

- a) Check the number stamped on the rear of the plate when mounting a new punch plate (ref. 27 tab. 6). After the part has been mounted, this number must be on the lower side. Fully tighten the fixing screws (ref. 52 tab. 6).
- b) Mount the package (ref. 7) by matching the holes in its lower face with the plugs projecting from the support surface. These ensure the correct position of the part itself. At the end of the assembly operations and in order to avoid unnecessary accidents, it is

advisable to turn the handwheel (ref. 78 tab. 4) by hand and to check that movements are smooth.

NOTE: Often, by changing the mold, the dimensions of the ravioli/tortellini are also modified. The quantity of filling and the size of the cut dough will therefore also vary.

- To vary the amount of filling, comply with the instructions given in the MACHINE SET-UP chapter on page 3.

- Owing to the different dough shape, it will be necessary to modify the dough flow speed. If, in fact, the new shape is larger than the previous one, the cuts on the dough strip outlet from the machine will overlap each other and the shapes will no longer be separated from one another by a few millimeters; the resulting ravioli-tortellini will be defective. On the other hand, if the new shape is smaller, the space between one impression and the next will be excessive.

Dough flow speed is adjusted by modifying the adjustable eccentricity of the calibrator control rod (ref. 11 tab. 4) by means of the crank (ref. 17 tab. 4). Increase the speed by furthering the crank button away from the center, decrease the speed by nearing it to the center.

MAINTENANCE

Cleaning the machine

The machine must be cleaned daily. The materials used to make the ravioli easily become rancid and if left on the machine, would certainly create problems of a sanitary-health and functional nature. The most perishable part of ravioli is the filling. It must be cleaned off every day and/or at the end of the work shift. The cleaning operation must be extended to all parts of the machine through which filling is allowed to pass. Proceed in the following way (tab. 5) :

- A) Switch off the electricity supply by means of the main switch.
- B) Slacken the screws (ref. 5) and remove the hopper cover (ref. 4).
- C) Unscrew the rod (ref. 41) and remove the reel (ref. 38).
- D) Using the supplied 17 wrench, operate on the screw (ref. 39) in a clockwise direction and, after having unscrewed the knobs (ref.7) take out the continuous filling hopper (ref. 6).
- E) Having unscrewed the knobs (ref. 42), remove the bracket (ref. 43) and allow the blocks (ref. 12 and 59) to turn using the supplied awl. It will now be possible to remove the baffle cylinder (ref.8)
- F) Remove the distributor rods of the package (ref. 7 tab. 6). Each rod is numbered as is the corresponding housing on the package. Failure to daily clean both the ducts through which the filling passes and the parts in contact with the dough will cause the formation of lumps of dough and/or filling which, by sticking to the mechanical parts, can create rust and feed defects. Mount the clean parts by complying with the above instructions in reverse.

PERIODICAL CLEANING OPERATIONS

Periodically, it will also be necessary to more fully clean the machine. After having switched off the electricity supply by means of the main switch, clean the upper protective top (ref. 12 tab. 1), the transmission chains and the gears coated with filling. Grease the chains and gears and lubricate the shaft sliding bushes, pins, etc...

NOTE: Only small quantities of oil should be introduced in those parts of the machine where the ringspan chains are housed. The oil prevents the contact surfaces of the chain from rusting. An excessive amount of oil or use of dense oil could cause the chain to slip, thus hindering drive transmission. Use oil to lubricate the supports on the knurled unit shafts, the box studs (ref. 14 tab. 7) and use grease to lubricate the closing cams (ref. 34 tab. 7), the raising cams (ref. 49 tab.7), the tappet (ref. 11 tab. 7), roller (ref. 19 tab. 7) and pad (ref. 16 tab. 7).

DEFECTS, CAUSES AND REMEDIES DUE TO WEAR OR IMPROPER USE OF THE MACHINE

DEFECTS	CAUSES	REMEDIES
The machine fails to deliver filling	The pin (ref. 47 tab. 5) is not engaged on the draft hub (ref. 53 tab. 5)	Tighten the pin
	The screw (ref. 39 tab. 5) is not engaged on the continuous filling pin (ref. 9 tab. 5)	Engage the screw
	The rod (ref. 41 tab. 5) is not locked	Lock the rod
	Ball joint pin broken (ref. 30 tab. 5)	Order spare part
	Unit converting drive from straightline to rotary reciprocating, defective (from ref. 45 to 55 tab. 5)	Order entire unit
Filling between the plates (ref. 17-28)	Worn retaining ring (ref. 14 tab. 5)	Change retaining ring (ref. 14) and the Nilox-Ringe ring (ref. 60)
	Bearing (ref. 26 tab. 5) out of service	Check condition of bearing
The calibrators does not operate or operates badly	Worn calibrator cylinder connection gears (ref. 41 tab. 2)	Order spare parts
	Insufficient connecting rod shift (ref. 11 tab. 4) from center of calibrator control crank (ref. 17 tab. 4)	Vary eccentricity

	Unit converting drive straightline to rotary reciprocating is defective (from ref.5 to ref. 6)(an evident sound accompanies this defect)	Order entire unit
The tops of the ravioli are split	Rod excessively long and /or not locked by the nuts knurled unit excessively in advance	Reduce the length of the rod by a few millimeters. Modify the knurled unit.
The ravioli are not unloaded and remain sticking to the knurled unit	The clip on the upper or lower knurled unit (ref. 32 tab. 7) operates in an insufficient way. Excessively damp dough	Accentuate the curve of the clip Diminish the percentage of water in the dough
The ravioli are not closed	The dough is too thin as regards the space between the knurled units (between 0,6 and 0,75 mm). The timing between the knurled units (ref. 31 tab. 7) is incorrect and the "tracks" do not coincide. Filling between the edges prevents closing	Increase the thickness of the dough Turn one of the knurled units until the closing "tracks" match Bring the distributor rods forward a few millimeters.

The above mentioned defects can occur when either Ravioli or Tortellini are made. The following defects only affect Raviotortellini.

The grippers fail to close	Worn cam (ref. 34 tab. 7) and pad (ref. 19 and 16)	Turn the eccentric pin (ref.12 tab. 7) using a wrench. At their maximum closing point, the backs of the grippers must match with no play.
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The closing edges of the dough tend to break

The grippers rest on the white teflon top (ref. 53 tab. 7)

Adjust by using the screw (ref.48 tab. 7) and nut (ref. 47 tab. 7) and turning in a clockwise direction. Check that the grippers (ref. 36 and 37 tab. 7) and top (ref. 53 tab. 7) are about 0,2-0,3 mm away from each other.

The dough is torn from the leveller as the grippers close

The leveller projects from the work top (ref. 53 tab. 7) and enters into the field of action of the raviio-tortellini shaping unloading operation

Adjust the teflon screw under the leveller (ref.50 tab. 7). Tighten it so that when the grippers close, the leveller (ref. 72 tab. 7) remains at least 2 mm under the work top (ref.53)

Ravio-tortellino with unraised upper lip

Rubber tab (ref. 41 tab. 7) broken or partially split

Order spare part

NOTE: Please notify TORESANI of any other defects since specialized technical personnel will be required for repairs.

INFORMATIVE NOTES

This Spares Catalogues consists of 8 tables showing exploded drawings of ravioli maker MR265. The parts are identified by a position number which corresponds to the code, quantity and description in the chart enclosed with the table. Some parts have been partially represented by an outline in order to give a useful indication when reading the catalogue itself. These parts, hardly ever requested, are not usually supplied.

WARNING

The pages giving the code numbers, quantities and descriptions of parts shown in tables 6-7-8 give asterisks in place of codes or quantities for some of these parts. These parts and their quantities vary according to the customer's mold. When ordering spare parts, always give the code number, table showing the part and official description used in the TORESANI catalogue.