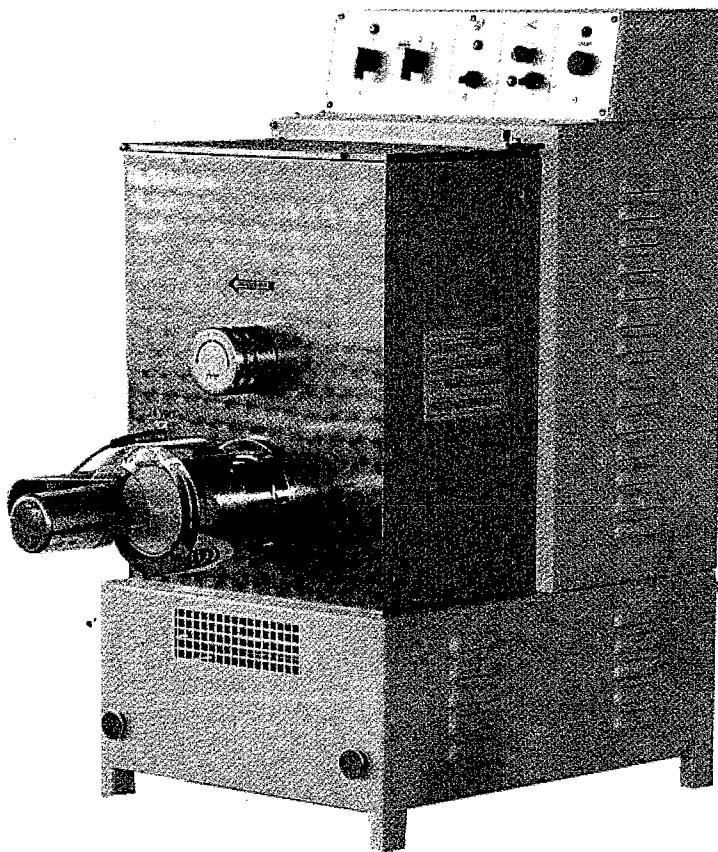


Rosito Bisani Imports

**PASTA EXTRUDER
OPERATING AND MAINTENANCE MANUAL**

MOD. TR 75 - TR 75/E - TR 95 - TR 110 - TRD 110 - TR 110 S



Thank you for choosing this machine. We are sure that its performance will meet your requirements.

It is in your interest to keep the machine in perfect running order. In this handbook you will find the necessary instructions on how to use and service it.

SAFETY STANDARDS

Throughout the manual this symbol indicates important information warning you of any hazardous operation. Always read the message that follows it.



GENERAL WARNINGS



This machine has been manufactured to make your work as safe as possible. Caution is, nevertheless, the golden rule to follow to prevent accidents.

KNOWING YOUR MACHINE

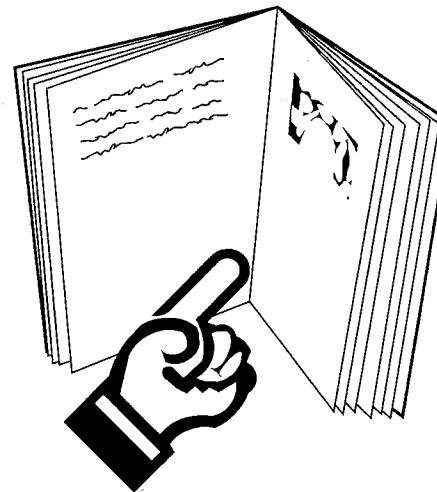


Caution: Store this manual in a safe place, near the machine, and disclose its storage location to all involved personnel.

Do not put this manual away without having first read it, regardless of any previous personal experience. A little time spent in reading will save time and extra work.

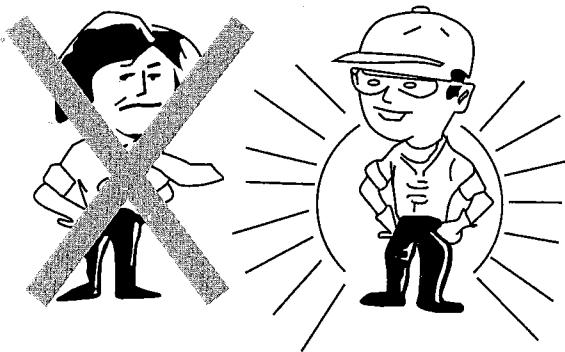
Read this handbook thoroughly before proceeding with start-up, use, maintenance and other operations. Read and rigorously follow the herein contained instructions and recommendations:

- read all **warning labels** applied to any part of the machine, and promptly replace them when they become worn or illegible;
- only trained and **authorised personnel** should operate the machine;
- if **any part jams or locks up**, before clearing make sure you first switch off the motor. **DO NOT clean, oil or grease** by hand any moving parts of the machine. In addition, **all repair and setting operations** of any moving parts with the motor running, are prohibited, unless the necessary precautions to prevent any accidents have been taken beforehand;
- **all moving parts are fitted with adequate guards and protections.** Always remount them after removal for servicing.



WEAR ADEQUATE CLOTHING

Be sure to wear tight-fitting clothing without any loose parts. Never wear open or unfastened jackets, shirts or overalls.



IMPORTANT

! To prevent accidents and ensure best performance **the machine must not be modified or altered** unless authorised by the manufacturer. Nor must it be used in conditions or for purposes other than those for which it has been expressly designed. Any arbitrary modification implemented in this machine will automatically **exempt the manufacturer from any liabilities** for ensuing damage or injury.

This machine has been designed and engineered in conformity to European directives 89/392 EC, 91/368 EC, 93/44 EC and 93/68 EC.

ENGLISH

BE SURE TO READ "IMPORTANT" MESSAGES

Information highlighted as “Important” in the Operator’s Manual and/or machine indicate specific **instructions about settings, maintenance** and so on. Failure to comply with these instructions may lead to damage to the machine.

ELECTRICAL SHOCK

For your own personal safety, before connecting the machine to mains:

- check that power mains leading to distribution socket is fitted with an appropriate multipolar switch protected against overloads and shortcircuits.
- carry out all phase connections, as well as any neutral and ground connections (compulsory) with a standard plug compatible with the above mentioned socket. The protection lead (ground) is the one with the yellow/green insulating sheath; make sure that the power supply cable is appropriate to its use, according to length, mains voltage and machine consumption.
- unless adequate protections against electrical shock are fitted, do not operate the machine in damp or wet environments.

Strictly do not start up the machine without the protective panelling. This may jeopardise personnel safety and machine serviceability.

INDEX

ENGLISH

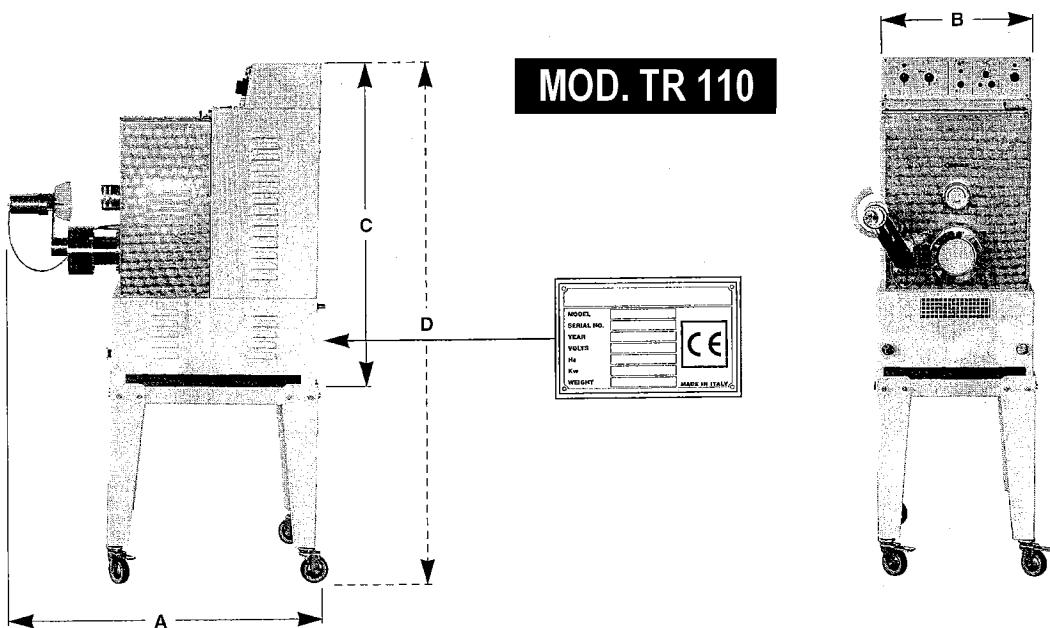
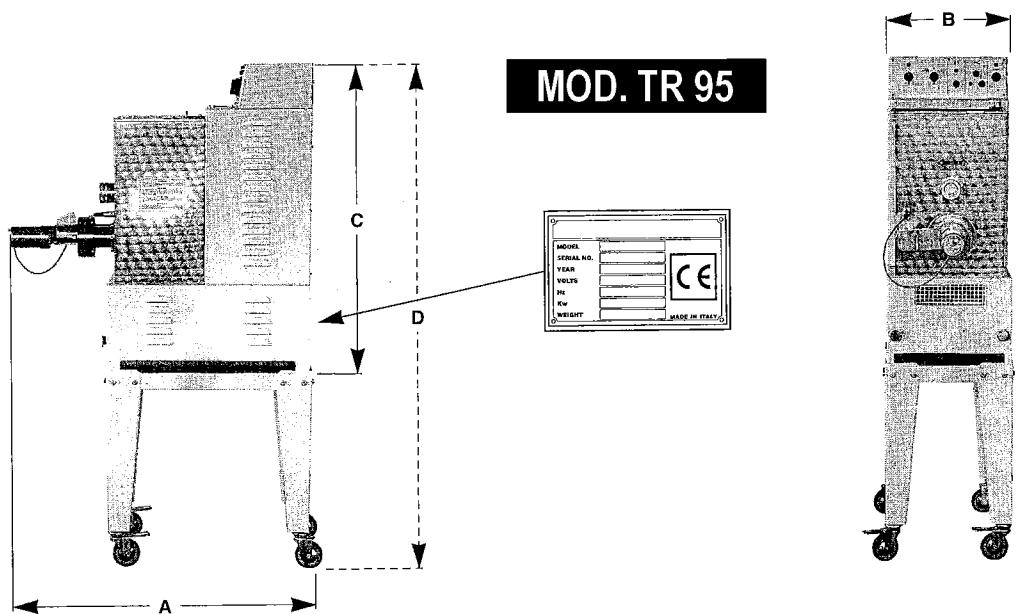
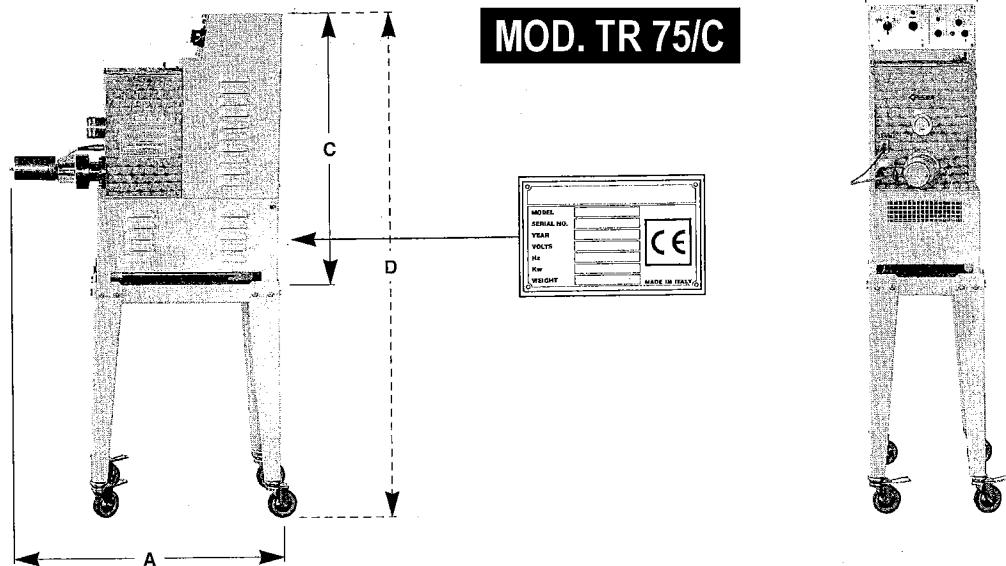
- SAFETY STANDARDS AND GENERAL WARNINGS	page 26-27
- TECHNICAL SPECIFICATIONS	page 30-31
- INSTRUCTIONS	page 32
- 1. PREPARING THE MACHINE	page 33
- 2. OPERATING PRINCIPLE	page 33
- 3. USE OF THE MACHINE	page 33
3.1 USEFUL ADVICE IN ORDER TO OBTAIN A GOOD DOUGH	page 35
3.2 QUANTITIES IN ORDER TO OBTAIN A GOOD DOUGH	page 36
3.3 INSTALLATION OF THE DRAWPLATE AND START-UP OF PRODUCTION	page 37-38
3.4 VARIANT FOR MOD. TR 110 S	page 38-39
3.5 VARIANT FOR MOD. TRD 110	page 39-40
- 4. TRANSPORTATION AND HANDLING	page 40-41
4.1 VARIANT FOR MOD. TR 110 S AND TRD 110	page 41
- 5. INSTALLATION, CONNECTION AND SET-UP	page 42
5.1 CUTTING UNIT ASSEMBLY	page 42-43
5.2 CONNECTION TO THE WATER SYSTEM	page 43
5.3 VARIANT FOR MOD. TR 110 S	page 43
5.4 CONTROL OF THE INSTALLATION	page 44
- 6. CLEANING	page 45
6.1 LID AND POOL CLEANING	page 46
6.2 CLEANING OF MIXER, ARCHIMEDEAN SCREW, METAL RING, FILTER, DRAWPLATE AND KNIFE	page 46
- 7. MAINTENANCE AND ADJUSTMENT	page 47
7.1 BELT TIGHTENING	page 47
- 8. MACHINE WHIRR	page 48
- 9. STRIPPING-DOWN AND DEMOLISHING THE MACHINE	page 48
- 10. PROBLEMS AND THEIR SOLUTIONS	page 48

ANNEX A: DECLARATION OF COMPLIANCE.

ANNEX B: WIRING SYSTEM DIAGRAM FOR MACHINE SUPPLIED.

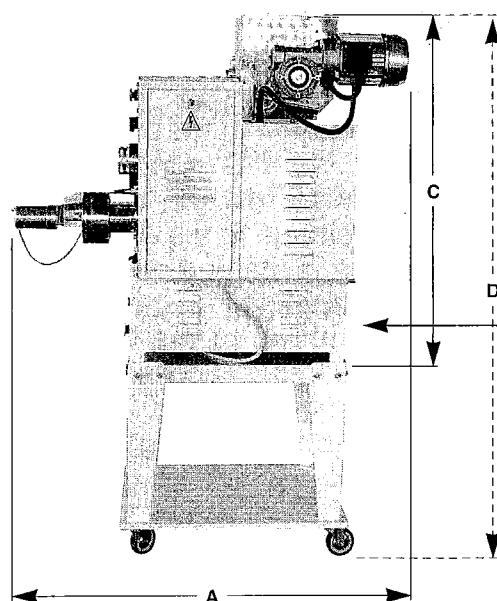
ANNEX C: (ONLY FOR MOD. TR 110 S) COOLING SYSTEM DIAGRAM.

TECHNICAL SPECIFICATION OF MODELS TR 75/C - TR 95 - TR 110

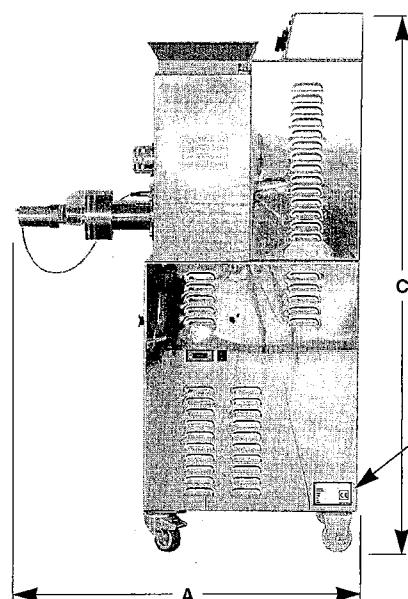
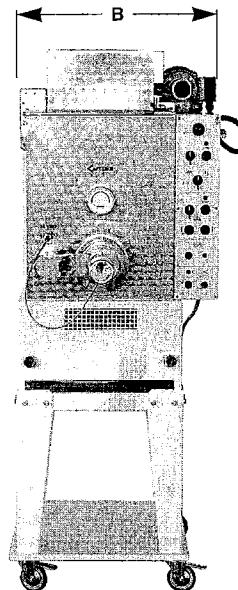


TECHNICAL SPECIFICATIONS OF MODELS TRD 110 - TR 110 S

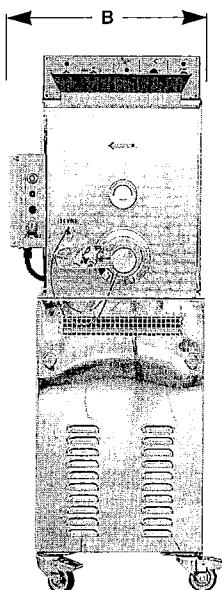
ENGLISH



MOD. TRD 110



MOD. TR 110 S



SPECIFICATIONS TABLE

Model	A Length mm.	B Width mm.	C Height mm.	D Height with trolley mm.	Kneading capacity daN ≈kg.	Mass daN ≈kg.	Motor power Kw	Maximum production per hour daN/h (based on the kind of drawplate used)
TR 75/C	750	320	725	1385	4	68	0.55	8
TR 95	900	380	880	1460	6	115	0.75	15
TR 110	930	460	895	1475	12	135	1.10	25
TRD 110	1050	560	950	1520	12 + 8	200	1.10 + 0.55	40
TR 110 S	980	460	1500	-	12	230	1.80 + 0.25	50
TR 75/E	510	310	570	-	4	48	0.55	8

NOODLES PRODUCING MACHINE

Produces different kinds of noodles and is basically made up of a kneading part and an extrusion unit in order to cut the finished product

- The elements in contact with the noodles are made of stainless steel or bronze for foodstuffs.
- Moving parts mounted on ball bearings with long-life sealing gaskets or with supports with greaser.
- Motor-powered; belt transmissions with maintenance-free reduction gear and mixer chain.
- Machine fitted with support toes with elastic caps and, on request, trolley with four wheels, 2 of which fitted with a brake and machine corner retaining rims.
- Connection by flameproof power cable according to the supply voltage required, standard length L = 3 m, without terminal plug.
- Accessories supplied:
 - pasta-collecting frame
 - metal ring blocking key
 - liquid measuring jar.
- Pasta cutting unit, fitted with a low voltage operated motor and cutter.
- Fan for drying the pasta surface, to prevent product from sticking.
- Working elements with the ability of turning in two directions: this enables the kneading of the initial dough, not yet ready, without any damage to the drawing group.
- Iron parts are protected with stove-enamelled epoxy coating.
- Easy disassembling of the working parts; the machine is freely accessible in order to carry out thorough cleaning.
- The possibility of obtaining different products thanks to the change of the relevant drawplate.
- Cooling unit with extrusion sleeve to ensure an ideal temperature and control of parts in contact with the product, for model TR 110, on request only for mod. TR 95.
- Mod. TRD 110: Machine with twin dough preparation tank for continuous production. Independent controls and inspection of the second tank. The product from the main tank is unloaded with its own motor unit.

• Power:

Model	3-phase standard power			1-phase optional power		
	220 50-60 Hz.	380 50-60 Hz.	415 50-60 Hz.	110 60 Hz.	220 50-60 Hz.	240 50 Hz.
TR 75/C	YES	YES	YES	YES	YES	YES
TR 95	YES	YES	YES	/	YES	YES
TR 110	YES	YES	YES	/	YES	YES
TRD 110	YES	YES	YES	/	/	/
TR 110 S	YES	YES	YES	/	/	/

INSTRUCTIONS

The machine has been foreseen only for the preparation of cereal-based flour noodles for noodle shops and catering facilities.

WARNING



For reasons of hygiene, health and warranty, it is strictly prohibited to use the machine for the processing of substances other than foodstuffs. Any other uses are contrary to the applications, as originally intended by the manufacturer, who shall as a consequence, not be held liable for any damage to the machine itself or to other objects, or for any injuries to persons that may arise thereof. In taking the risk of misuse, the user will be held responsible for any consequences.



Always keep children away from the machinery.

1. PREPARING THE MACHINE

Prepare the machine before every process cycle.

BE SURE that the machine, especially parts which come in contact with food products (extrusion sleeve, Archimedean screw, pool, mixer, drawplate and knife) **are perfectly clean** (see chapter 6 CLEANING on page 45).



Always clean with machine off.

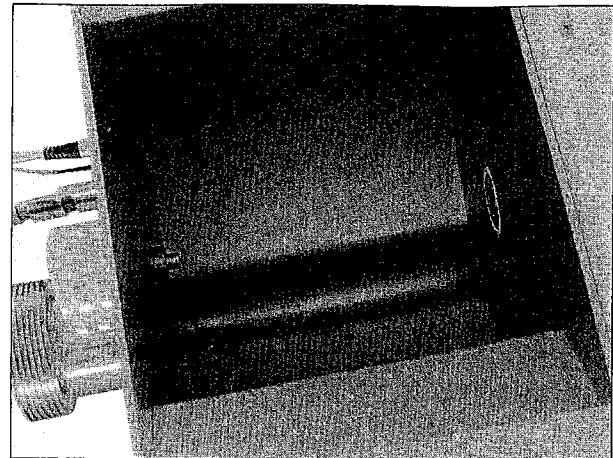


Fig. 1

2. OPERATING PRINCIPLE

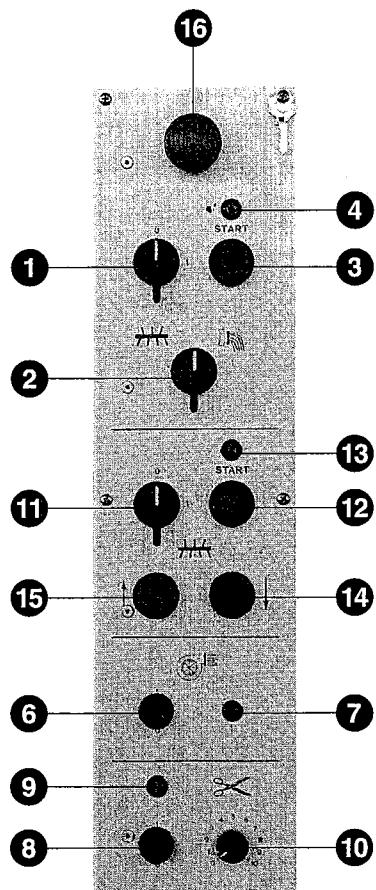
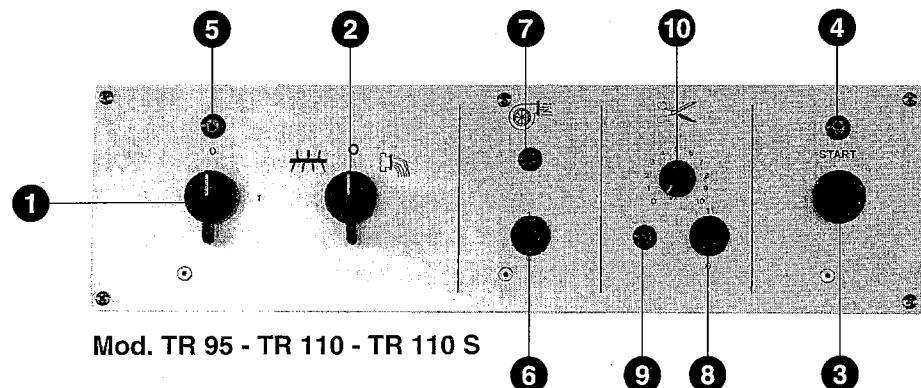
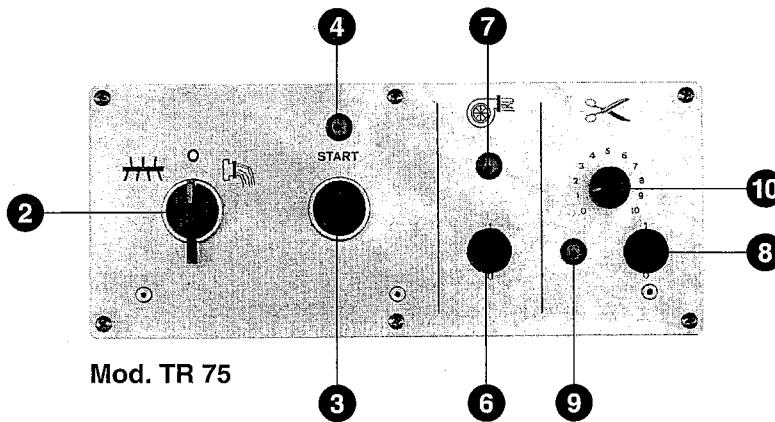
This machine kneads the different products desired and enables you to obtain different kinds of noodles with a different group of lengths because it draws the dough, thanks to different discs. This action is carried out thanks to a mixer linked to an Archimedean screw which obliges the product to assume the desired shape going through a drawplate.

3. USE OF THE MACHINE



***Only after making sure that the machine is completely clean, especially all the parts which are directly in contact with the product* (extrusion sleeve, Archimedean screw, pool, mixer, drawplate, knife, lid, control system; if it is necessary, use some warm water; see chapter 6 CLEANING page 45) you can carry out the requested operations in order to have the desired dough.**

CONTROL PANEL



CONTROL PANEL KEY

- 1 - Main on/off switch
- 2 - KNEAD÷DRAW selector
- 3 - Start button
- 4 - Start pilot lamp
- 5 - Power ON pilot lamp
- 6 - Fan switch
- 7 - Fan pilot lamp
- 8 - Cutter switch
- 9 - Cutter operation pilot lamp
- 10 - Cutter speed variation control
- 11 - Movement control switch for 2nd dough tank
- 12 - Mixer control button
- 13 - Mixer operation pilot lamp
- 14 - Tank lowering button
- 15 - Tank lifting button
- 16 - Emergency stop button

After having turned the machine off:

- position the main switch on "0" (Fig. 2 A) and check the correct set-up of the Archimedean screw, making sure that the cylinder part is sustained by the dragging shaft;
- then make sure that the plastic cap (Fig. 3 A) which replaces the drawplate is correctly positioned and the ring nut (Fig. 3 B) is well-screwed on;
- finally block the mixer in its place, thanks to the head-knob (Fig. 3 C).

Lift the tank lid by turning the coupling lever (Fig. 4 A) and **always** put in the pre-established ingredients in the following sequence: flour and then, after closing the cap, all the other liquid elements.

In order to obtain the right dough, you need to create the precise ratio between the weight of the flour and the weight of the liquid part; in order to obtain a very good product, the flour has to contain a humidity percentage of no more than 15%; this allows the addition of water equal to 33% or up to 35% of the flour's weight. If you are using flours with different humidity contents, please change the quantity of the liquid in the opposite ratio. Moreover, in order to better use the machine, the product inside the pool has to be higher than at a minimum level which coincides more or less with the position of the mixer axle.

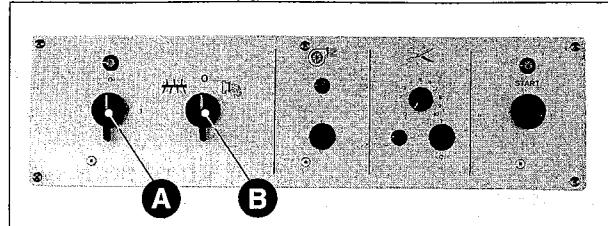


Fig. 2

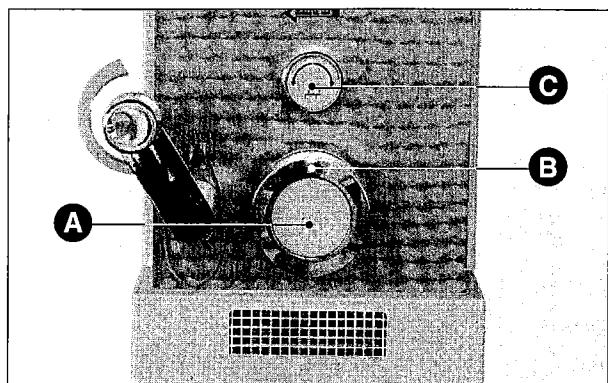


Fig. 3

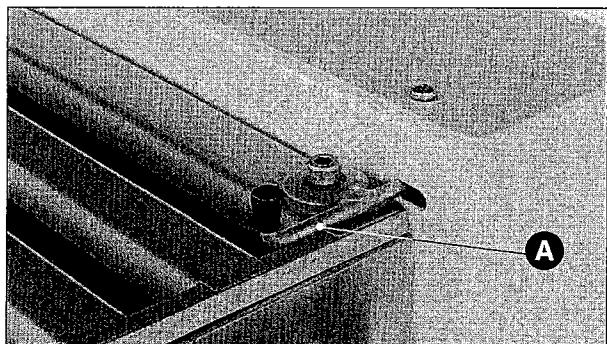


Fig. 4

3.1 USEFUL ADVICE IN ORDER TO OBTAIN A GOOD DOUGH

Any kind of flour can be used (bran or bran-flour). The dough can be kneaded **only** with eggs or with a mix of water and eggs. Water can be partially replaced by spinach or well-cut vegetables in order to obtain green noodles. Because the flour's humidity **changes** according to the kind used, the environment and the place where it is stocked, the quantities indicated have to be adapted to the kind of flour which is used, **lowering or increasing** the quantity of water. The dough is the right one when, at the end of kneading process, it is as big as coffee beans.

If the lumps form in the flour you have poured in too much liquid.

In this case, before turning the switch (Fig. 2 B) **FROM KNEAD TO DRAWPLATE** you will have to add some more flour and knead a little longer. If the flour does not form a ball and is too floury, add some more water.

For the dough for the sheet of pasta which is to be re-kneaded, use "00" flour and add two eggs per kilo of flour (maximum). With these quantities you will obtain a very stretchy dough which is easy to knead.

3.2 QUANTITIES IN ORDER TO OBTAIN A GOOD DOUGH

- Supposed weight of an egg: 50 grams.
- If you take 1 egg away you need to add 50 grams of water.
- To obtain a good dough: 1 kg of flour + 350 grams of humidity-liquid.

FLOUR-EGG MIXTURE			FLOUR-EGG-WATER MIXTURE			
Flour daN	Egg No.	Mixture daN	Flour daN	Egg No.	Water l	Mixture daN
1	7	1.35	1	4	0.15	1.35
2	14	2.70	2	8	0.30	2.70
3	21	4.05	3	12	0.45	4.05
4	28	5.40	4	16	0.60	5.40
5	35	6.75	5	20	0.75	6.75
6	42	8.10	6	24	0.90	8.10
7	49	9.45	7	28	1.05	9.45
8	56	10.80	8	32	1.20	10.80
9	63	12.15	9	36	1.35	12.15
10	70	13.50	10	40	1.50	13.50

Close the lid, set the main ON/OFF switch, if fitted, to "1" and put the selector on position . Push the start button.

Add the liquid part pouring it gradually but as quickly as possible through the small hole in the lid. At the end of the kneading operation, which should take around 10 minutes, make sure the product has the right thickness and should look like coffee beans (check through the small holes of the lid).

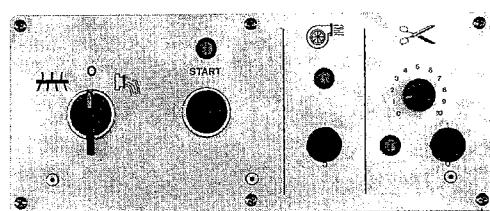
Turn the machine off by switching the selector to "0".

TABLE OF COMMANDS WITH VARIOUS CONSENTS

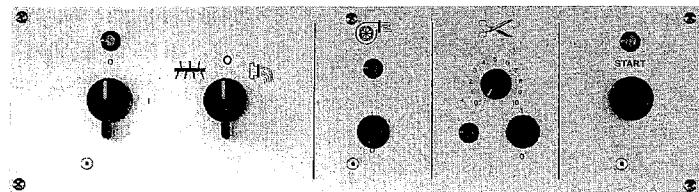
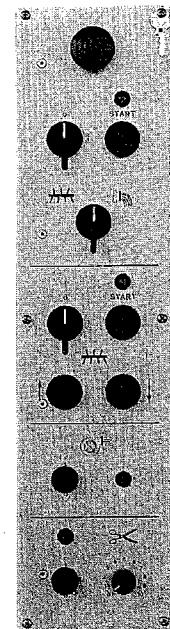
Consent Control	Main switch	Kneading & Drawing selector	Cutting group control	Fan control	Start switch
Mixing	1	mixing	/	/	1
Cutting group	1	mixing drawing	1	/	1
Drawing	1	drawing	/	/	1
Fan	1	mixing drawing	/	1	/

NOTE: Safety micro-switches must be switched off.

Mod. TRD 110



Mod. TR 75



Mod. TR 95
TR 110 - TR 110 S

3.3 INSTALLATION OF THE DRAWPLATE AND START-UP OF PRODUCTION

! Make sure the machine is switched off.

Withdraw the filter (**Fig. 5 A**) and the drawplate (**Fig. 5 B**) requested from the container filled with water where it was put after its last use. Thoroughly rinse with plenty of running, warm water, in order to have the piece at the right temperature (see chapter 6 CLEANING page 45).

Dry it with a soft cloth.

Unscrew the blocking ring nuts (**Fig. 5 C**) and carefully clean the internal part including the edging.

Take the plastic cap off (**Fig. 5 D**).

Set up the filter and the drawplate while taking good care of the Archimedean screw (**Fig. 5 E**) at the center of the disk.

Close the metal ring with the help of the wrench supplied (**Fig. 6 A**) and check that the various parts are in place and are not shifted axially because dough has added thickness (**Fig. 5 - point 1**).

In order to start production, position the selector (**Fig. 7 A**) on the position and push the start button (**Fig. 7 C**).

The initial product coming out of the machine has an unacceptable appearance; this is the reason why it has to be eliminated.

After a short time (a couple of minutes) the product coming out is acceptable, the colour goes from whitish to yellow and it has a greater consistency.

In order to cut the pasta to the desired length it is necessary to set up the cutting device (**Fig. 6 B**), made up of motor and knife, chosen from those available.

Set up the unit for this, by simply fitting the cutter (**Fig. 8 A**) on the drive shaft in the standby position. Placing the cutting unit opposite the drawplate, taking care that the cutter moves axially towards the motor and is fits neatly with the drawplate.

To complete this operation, facilitate the movement of the knife by helping yourself, with your hands, closing the knife tang between two fingers (**Fig. 8**).

Regulate the knife speed according to the desired pasta length, by turning the speed-

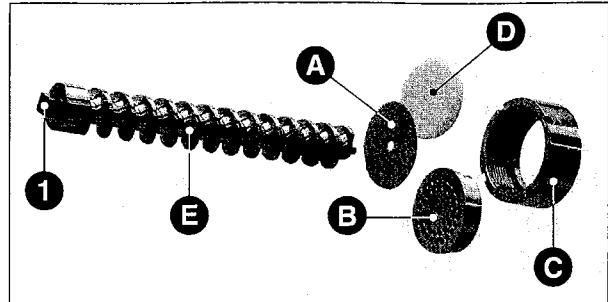


Fig. 5

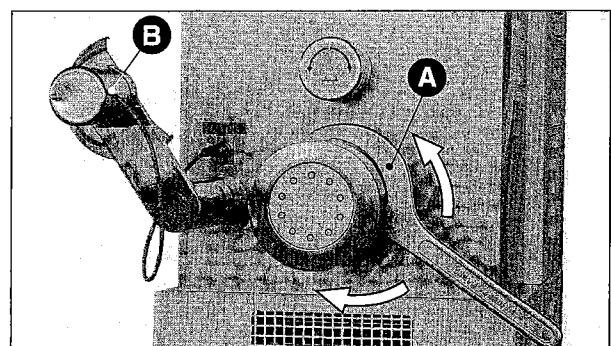


Fig. 6

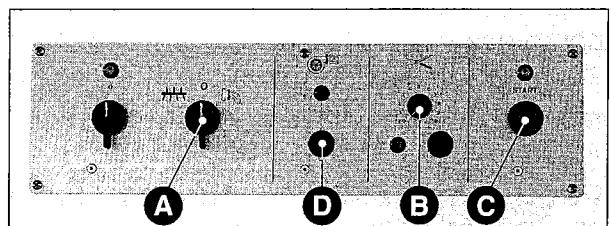


Fig. 7

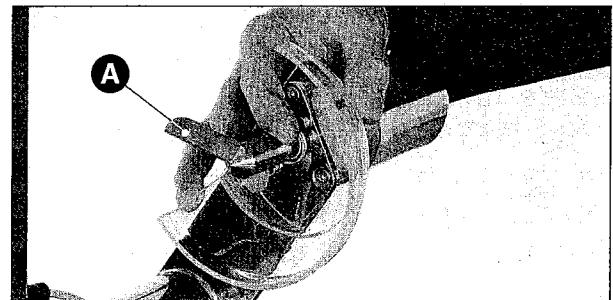


Fig. 8

control knob (**Fig. 7B**).

If the product is quite wet and tends to be sticky, it is best to dry the surface in any case, by switching on the fan (**Fig. 7D**).

The product is collected in drilled mesh frames (**Fig. 9A**), leaning on retractable rods (**Fig. 9B**) supplied with the machine.

For machines fitted with an extrusion sleeve cooling unit, switch on the system taking account of a few operating parameters of the dough and room temperature.

At any rate, with average dough, after 3 - 5 minutes, check the external temperature of the ring nut and if it seems too high, gradually open the regulating valve.

Frequently check the temperature and regulate water flow, tending to keep temperature constant.

NOTE: If the product is kneaded at an excessive temperature, it tends to change colour and/or blanch slightly.

3.4 VARIANT FOR MOD. TR 110 S

The TR 110 S model (**Fig. 10**) is provided with a complete cooling system fitted with a compressor, water tank and recycling pump. The system functions automatically and maintains the same temperature shown on the extrusion sleeve.

Functioning of the display control (**Fig. 10A**) and temperature setting:

When the machine is turned on, the display button flashes for a few seconds and, therefore, shows the momentary temperature on the extrusion sleeve. To see the last temperature selected, press button "SET" once (**Fig. 11A**).

If you want to vary the sleeve control temperature, press the button "SET" and at the same time button "UP" or "DOWN" (**Fig. 11B**) depending on whether you want to increase or decrease the controlled temperature, until you see the desired temperature appear on the display unit.

Release the pressed button; the system memorizes the new temperature, even if

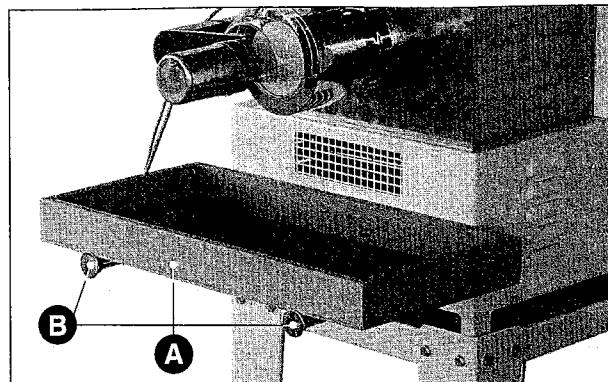
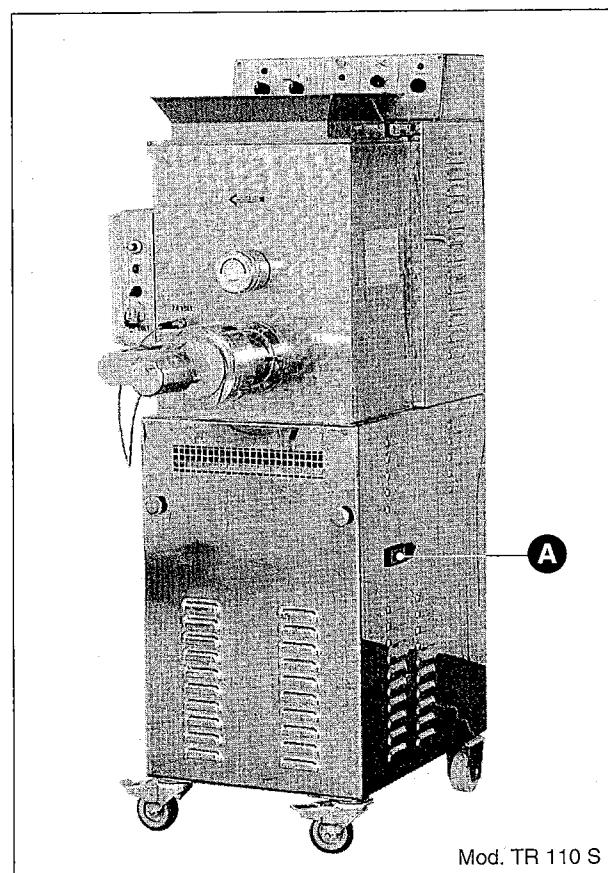


Fig. 9



Mod. TR 110 S

Fig. 10

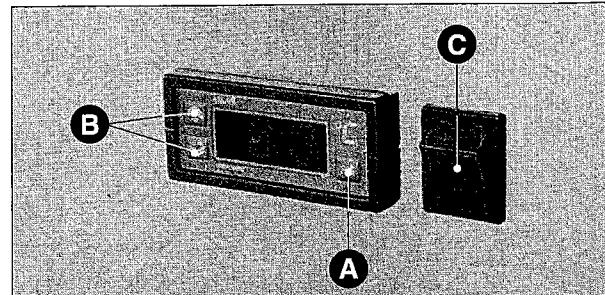


Fig. 11

the machine is turned off. After a few seconds, the temperature shown on the sleeve will appear on the display unit.

When the machine is switched on, the compressor is started automatically, until the tank water temperature falls below a value preset by the manufacturer.

Therefore, we suggest the pump not be operated for 3 - 5 minutes, until the sleeve begins to heat up, in order to obtain the required dough mixture. After this time, operate the pump by pressing the button provided (**Fig. 11 C**).

The pump can be operated only if the machine has been switched on from the main ON/OFF switch.

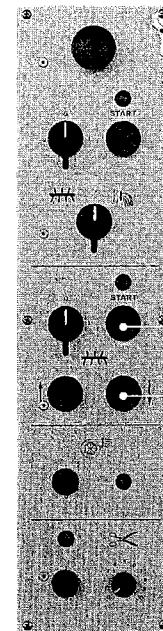


Fig. 12

3.5 VARIANT FOR MOD. TRD 110

The TRD 110 model uses the second tank (**Fig. 13 B**) to enable dough to be kneaded (press button **A** - **Fig. 12**) simultaneously with the worm screw extrusion stage. This allows output to be increased considerably. Knead the dough as seen for the main tank and then pour it in by turning the tank by means of the device provided (button **B** - **Fig. 12**).

To do this, first lift the lid of the bottom tank (**Fig. 13 A**) even if this causes the machine to stop. The new product must have the same consistency as the previous contents of the tank so as to achieve a homogeneous dough mixture.



DANGER: While the tank is lowered, make sure the area near the lift (**Fig. 14 A**) is vacated as the control protection guard (**Fig. 14 B**) may be dangerous in the final stage of the movement (squeezing or cutting dangers).

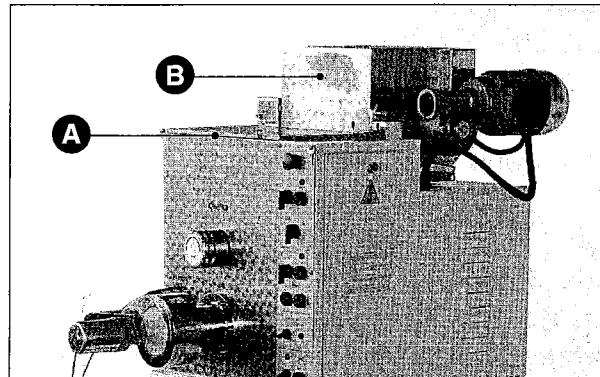


Fig. 13

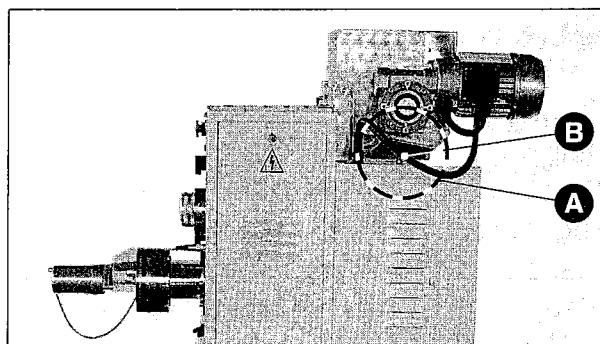


Fig. 14

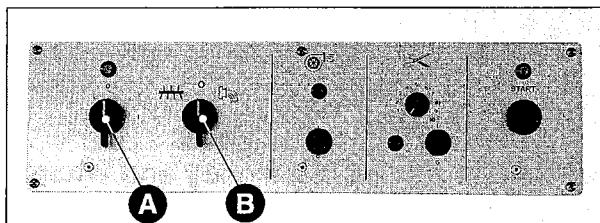


Fig. 15

After the operation:

- stop the machine, setting the ON/OFF switch (**Fig. 15 A**) and other switches as well to "0";
- rotate the cutting group to the stop position (**Fig. 16**);

- turn the selector (**Fig. 15 B** - previous page) to the kneading position  for 10-15 seconds so as to remove pressure from the die due to the dough;
- return the switch to "0";
- turn off the machine pressing the general switch (**Fig. 15 A** - previous page);
- disassemble and wash the movable parts (**Fig. 17 - 18**) and clean the machine (see Unit 6 CLEANING page 45);
- close the water tap, for machines fitted with a cooled extrusion sleeve.

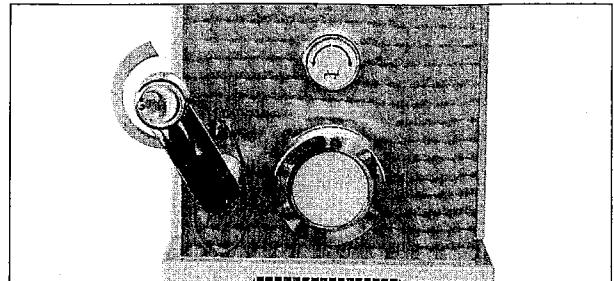


Fig. 16

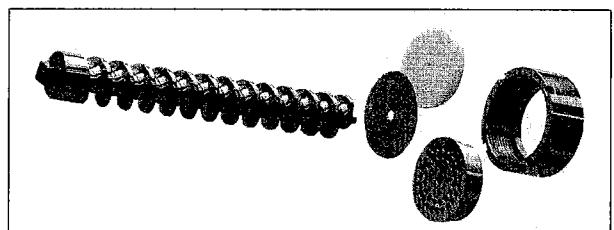


Fig. 17

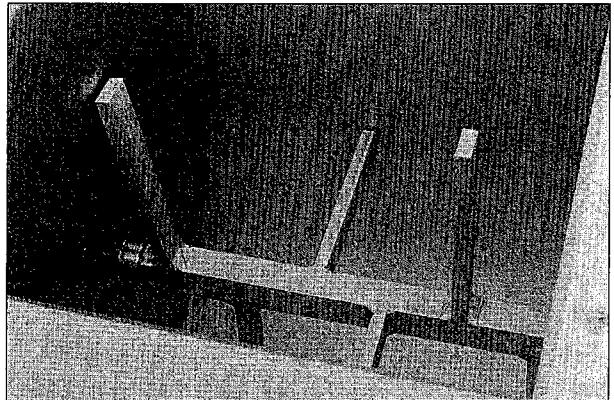


Fig. 18

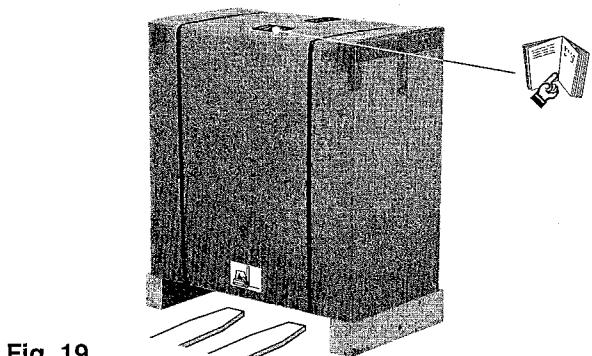


Fig. 19

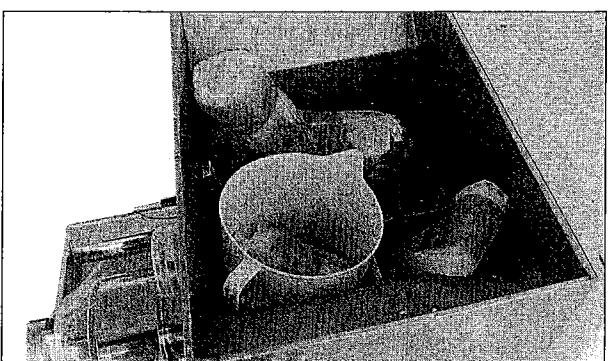


Fig. 20

4. TRANSPORTATION AND HANDLING

The machine is placed on a pallet and shipped enclosed in special package (**Fig. 19**) fastened to the wooden pallet with straps.

Besides the machine, the package includes: a disassembled trolley, when requested, with machine support wheels, operating instructions and a declaration of compliance with the EU 89/392 directive. The accessories supplied and cutting unit are placed inside the dough preparation tank (**Fig. 20**), adequately packaged and protected.

When unloading the machine from the transport vehicle, lift at the points marked on the packaging using suitable equipment.

Unless you need to check the contents, you are recommended not to open the packaging until the moment of installation.

Remove straps, packing and polystyrene strips.

Dispose of this material according to the regulations in force. Lift the machine and place on the installation site.

Remove the supporting pallet using straps of suitable carrying capacity (approx. 6 times the weight of the machine).

These will have to be positioned near the feet as indicated in **Fig. 21**.

The whole operation is to be controlled by adequate manual or power-driven lifting equipment.

Machine fitted with a trolley and wheels

Assemble the trolley, tightening right down the leg screws (**Fig. 22 A**) and the wheels

nuts (**Fig. 22 B**) (for the TRD 110 model the trolley is supplied with separate package and is pre-assembled).

Then lift the machine about 20-25 mm. above the height of the trolley, ensuring that the clamped wheels (**Fig. 22 C**) are in the front of the machine.

Then lower machine until it rests on trolley, perfectly retained by leg corners.

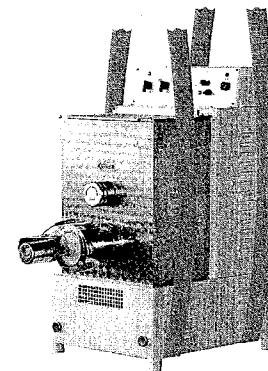


The machine must be lifted and placed on the trolley by two persons.

Make sure that the trolley support level is horizontal and compact.

The machine must be moved horizontally by carefully pushing the unit from the front or rear of the machine and not sideways. Make sure that along the planned route there are no objects hindering regular wheel rotation.

If these precautions are not followed, the machine may be overturned.



Mod. TR 75÷95÷110

Fig. 21

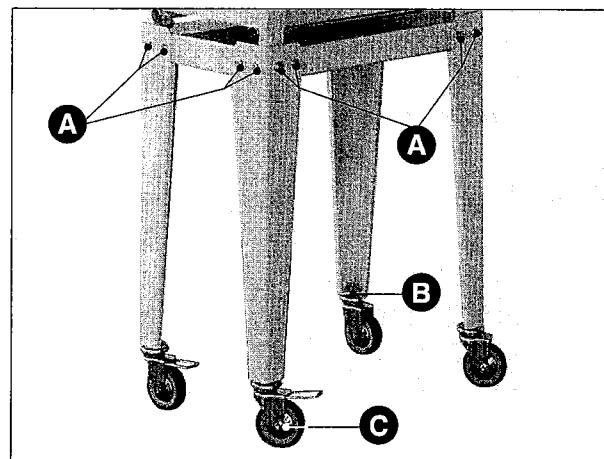


Fig. 22

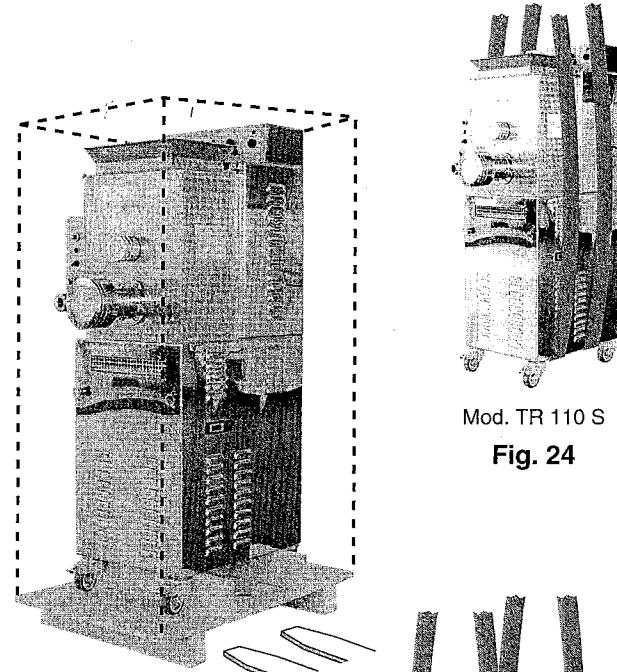
4.1 VARIANT FOR MOD. TR 110 S AND TRD 110

The machine shipped on a pallet **in wooden box** (**Fig. 23**), including accessories and a declaration of compliance.

Unpack the machine in its workplace, lift it with the belts (**Fig. 24**) and remove the wooden pallet. Place the TRD 110 model (**Fig. 25**) on the pre-assembled trolley supplied with the machine.

Push the trolley to the planned position, taking the precaution to handle it carefully since its top-heavy weight may make the machine unstable when being moved.

Make sure there are no objects hindering regular wheel rotation.

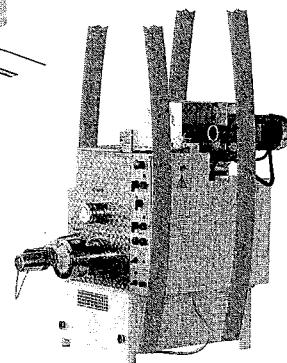


Mod. TR 110 S

Fig. 24

Mod. TR 110 S

Fig. 23



Mod. TRD 110

Fig. 25

5. INSTALLATION, CONNECTION AND SET-UP

Install and use the machine in a room that can be efficiently ventilated, and where the floor is smooth and compact and easy to clean.

! **WARNING:** While the machine is operating, in order to obtain a product with the right thickness and humidity, avoid air currents which will cause precocious drying of the product together with its deterioration.

To ensure the necessary stability of the machine, check that the wheels rest firmly on the floor, otherwise move the machine slightly until the four wheels have been steadily laid on the ground. Lastly, clamp the wheel with the brake (**Fig. 26 A**).

Position the machine in the desired place with a free back space of around 50 centimeters and a side space of 70-80 centimeters (**Fig. 27**) in order to guarantee easy use of the machine and its cleaning.

For machines fitted with a trolley, make sure that the brake provided is clamped by pulling the lever down (**Fig. 26 B**).

Check that the voltage of the machine which is written on the identification label, (**Fig. 28**) matches the one foreseen by the system on your premises.

Attach the right plug to the machine power cable in order to make the electrical connection to the system.

! **WARNING:** Have the plug fitted to the power supply **by qualified personnel**. Take the necessary precautions to prevent the cable from being crimped or damaged.

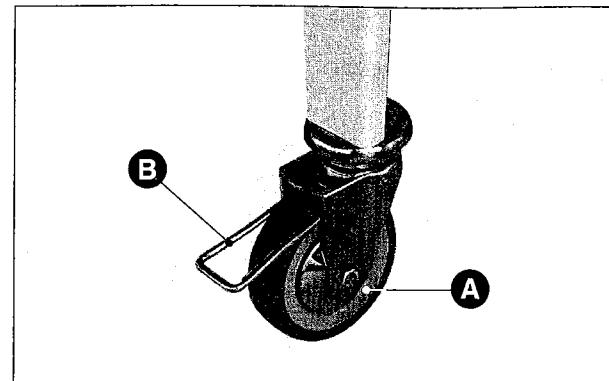


Fig. 26

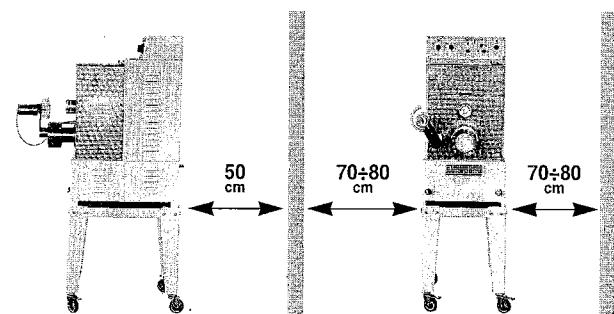


Fig. 27

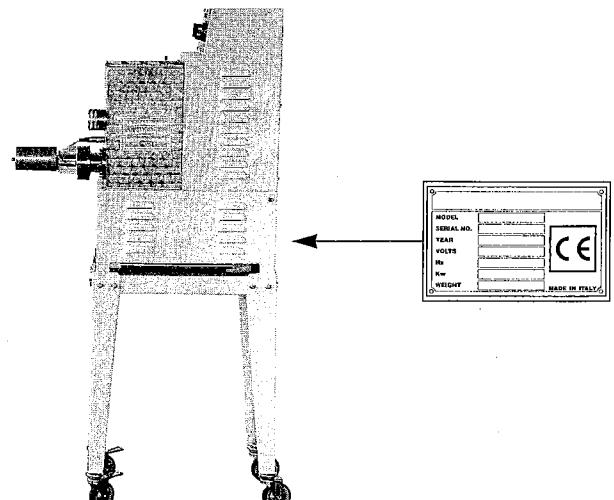


Fig. 28

5.1 CUTTING UNIT ASSEMBLY

Remove the components in the tank.

Assemble the cutting unit, after removing

the socket-head screw (**Fig. 29 A**) from the bearing. Then tighten the screws right down again (**Fig. 29**).

Plug the unit into the power supply socket (**Fig. 29 B**) of the machine; let the safety coupling click in.

5.2 CONNECTION TO THE WATER SYSTEM

For machines supplied with **an extrusion sleeve cooling system**, connect the machine to the water system, install the sending tube, (when it is non-existent: use a tap, possibly with screw-control) to the outer part of the machine, in order to regulate the water flow. The exit-flow tube must allow free water discharge. We recommend that the water pressure inside the machine, does not exceed the 1.0 - 1.5 bar.

To connect the external parts, use a flexible tube with an inside diameter of 13 mm, safely fixed by a metal band with a screw that can be closed with a screw-driver or key (**Fig. 30**).

5.3 VARIANT FOR MOD. TR 110 S

The machine is equipped with a water tank (**Fig. 31 A**), which can be reached by detaching the rear bottom panel (**Fig. 31**).

Take off the lid (**Fig. 31 B**) after removing the fastening screw. Fill up with water to about 1 cm. from the upper rim. Reclose and screw on the lid.

Check the water level when carrying out maintenance and, if necessary, top it up.

Once the machine has been plugged in to the power socket, it is ready for use, after first testing that all its parts and components work properly.

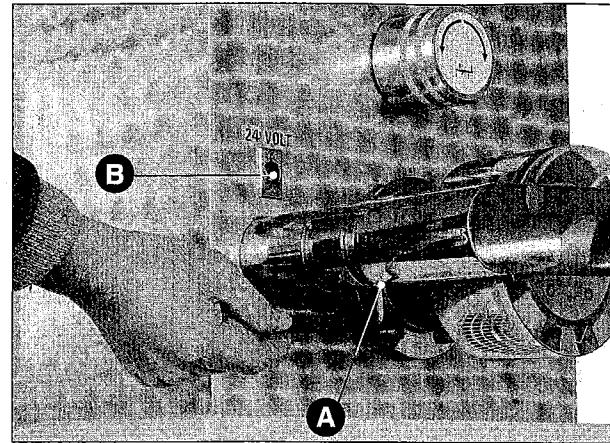


Fig. 29

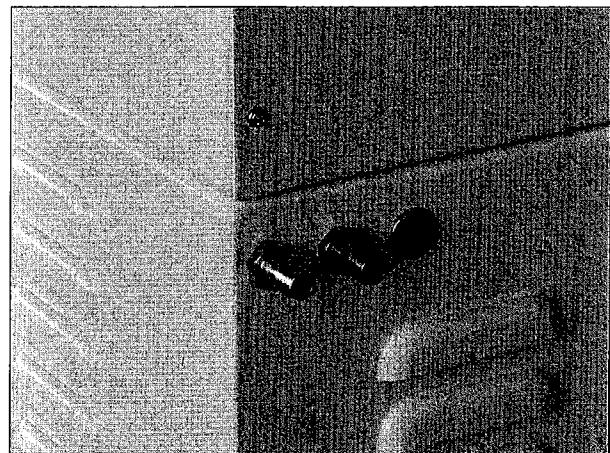


Fig. 30

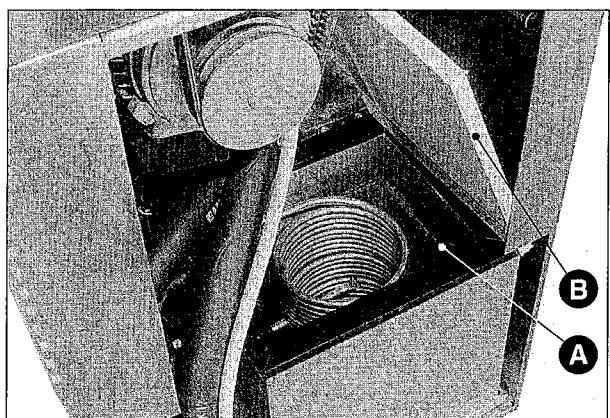


Fig. 31

5.4 CONTROL OF THE INSTALLATION

NOTE: Every drive is voluntarily run by the start button.

Turn the general switch to position "1" (Fig. 32 A) and check the following:

- Make sure that the mixer is rotating counter-clockwise, facing the front of the machine, when the switch (Fig. 32 B) is placed on the "mix" position  , (the Archimedean screw also turns counter-clockwise). In the "0" position all of the machine's elements should be still; in the drawplate position  , the mixer turns clockwise, the Archimedean screw should turn the same way (check from the lid slits).
 - Check the efficiency of the double safety device on the lid. The device sets off two micro-switches; one is controlled by the lid hook (Fig. 33 A), inside the stop slot; and the other from the lid itself.
- To check this, make sure that microswitch in the slot begins to be enabled when the hook has not yet gone out of the slot itself. The lid microswitch must be heard to click when the lid is lifted approx. 10 - 15 mm. (Fig. 33).
- Operation of the buttons and pilot lamps according to the signs given (Fig. 32).
 - The knife in its working position should be turning clockwise.
 - The correct connection of the water cooling system, should include checking for eventual water leaks.

 *If the machine or some of its parts breakdown, call your local authorised dealer or concessionaire for repairs.*

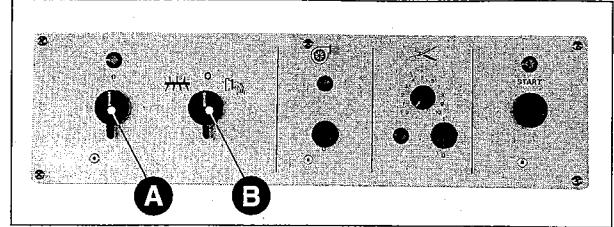


Fig. 32

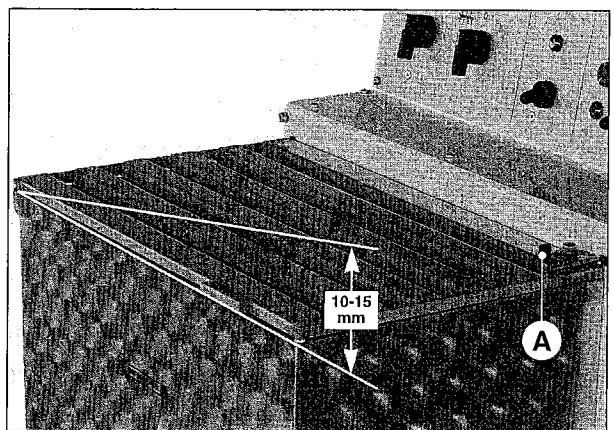


Fig. 33

6. CLEANING

⚠ Warning: For healthy and hygienic processing of food products, be sure to keep your machine and the surrounding environment clean.

⚠ DANGER: Always cut off the power supply before cleaning.

You have to properly clean all the elements which are in contact with the product (**Fig. 34 - 35**) protection lid, pool, mixer, Archimedean screw, drawplate, filter, ring nut and knife, when the product is still soft.

The moving parts have to be disassembled as follows:

- Mixer: make sure the external shovel (**Fig. 35 A**) is in the upper vertical position (only this position allows the disassembling of the piece) (**Fig. 35**).

Disassemble the mixer by unscrewing the external movable support (**Fig. 35 B**) until releasing the mixer; unthread the shaft from its place and at the same time, rotate the external pin towards the top.

If you want to assemble the piece follow these instructions vice versa. Line the central point of the shaft with the peg of the moving support; thereafter, screw the support, but without blocking it.

- Metal ring, drawplate and filter: unscrew the metal ring with the appropriate wrench (**Fig. 36 A**) being careful not to let any pieces fall, since the metal ring is moved from its place, the product and parts still weigh a few kilos and can easily slip from your hands, causing damage both to people or to the pieces themselves.
- Archimedean screw: after disassembling the ring nut, the drawplate (**Fig. 36 B**) and the filter, the Archimedean screw can easily be taken off the machine by pushing its spiral from the internal end.

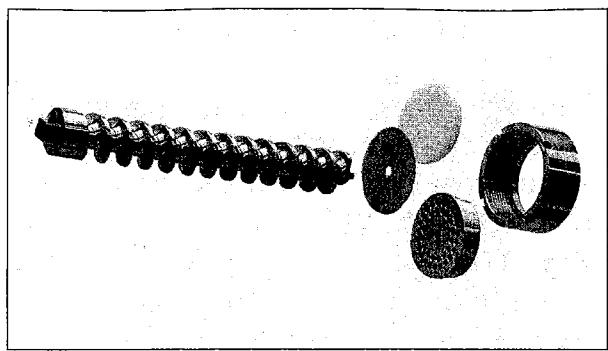


Fig. 34

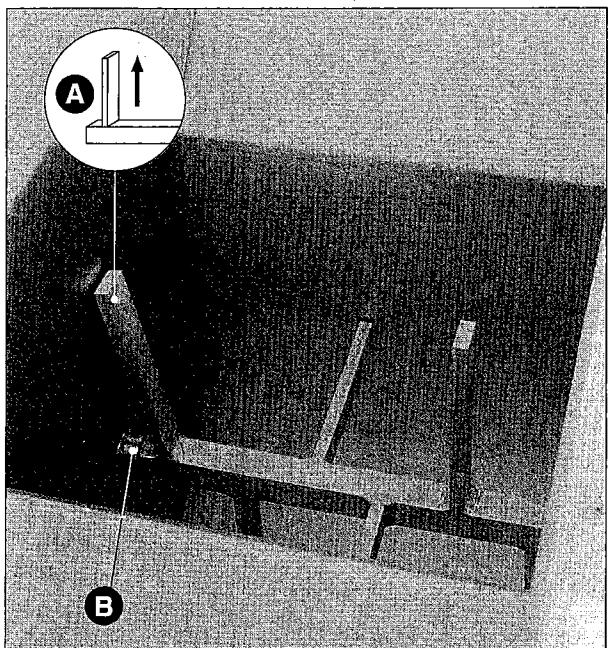


Fig. 35

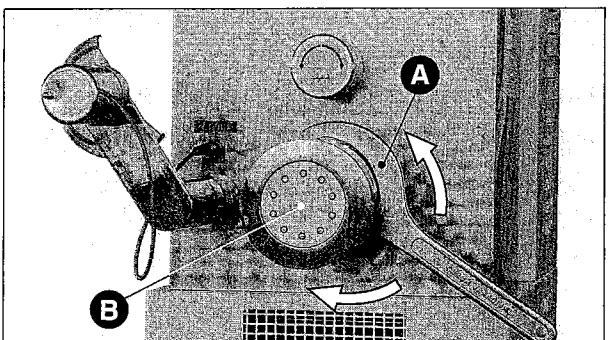


Fig. 36

6.1 LID AND POOL CLEANING

Eliminate the dough residue and be sure to thoroughly clean the most remote-access pieces: connections of the Archimedean screw (**Fig. 37 A**) and mixer movements (**Fig. 37 B**), extrusion sleeve (**Fig. 37 C**), pool internal parts and lid grille in the grille coupling points (**Fig. 37 D**).

Use some warm water in order to eliminate the residual product and then rinse; dry the surfaces with the help of blotting paper and disinfectant, with a soft cloth dipped in odourless disinfectant.



WARNING: Never use non-nutritional, abrasive or corrosive chemicals to clean. Also never use coarse or abrasive objects such as steel wool, abrasive sponges and so on.

To clean the internal and external parts of the machine:

- **remove power supply plug** from power mains socket;
- clean coated surfaces with soft cloth and disinfect with alcohol;
- for the inside parts of the machine, take off the back panel (**Fig. 38**) and carry out the cleaning of the machine, bearing in mind the grease and dust, that are sometimes present; lastly, fit the panels again.

6.2 CLEANING OF MIXER, ARCHIMEDEAN SCREW, METAL RING, FILTER, DRAWPLATE AND KNIFE

Eliminate the dough residue and wash the pieces with water; you may use a soft brush or a plastic pallet knife.

These elements can be thoroughly washed in a dishwasher.

Rinse and dry the mixer, the Archimedean screw, the metal ring and the knife and reassemble them on the machine. The drawplate and filter must be kept in a container placed in water for the entire period in which they are not being used.

For reasons of hygiene, please change the water every day.

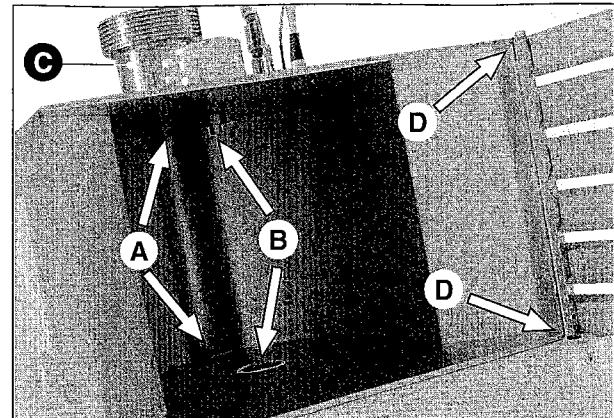


Fig. 37

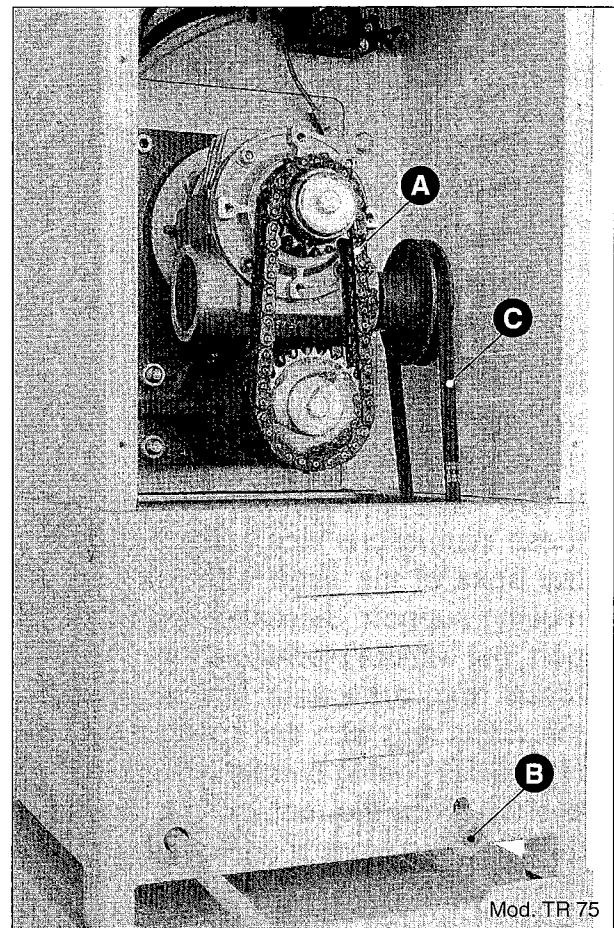


Fig. 38

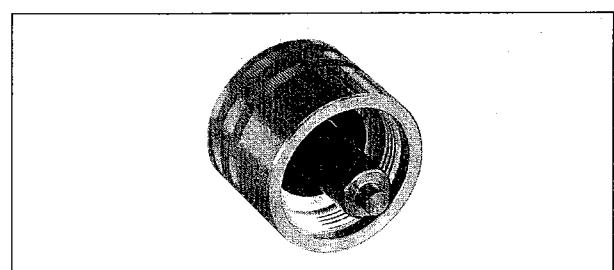


Fig. 39

7. MAINTENANCE AND ADJUSTMENT



WARNING: Remember that all maintenance operations are dangerous if you do not **first disconnect the power supply plug from the power mains.**

The machine parts requiring maintenance are the following: the upright push-bearing support (**Fig. 41 B**), the movable mixer support (**Fig. 39**) and the sliding chain (**Fig. 41 A**).

Carry out the first maintenance job after the first 100 hours of operation and subsequently every 500 hours.

Remove the rear panel to gain access to the chain (**Fig. 38 A**) and the bearing support (**Fig. 38 B**).

Use food-grade grease compliant with USDA-H1 regulations for the **mixer support** (**Fig. 39**); (if necessary, contact your local dealer). Use SAE MR3 type grease for the **thrust bearing support** (**Fig. 41 B**) and the **chain** (**Fig. 41 A**).

When doing a yearly check-up, lubricate the chain (**Fig. 41 A**) using smaller amounts of grease.

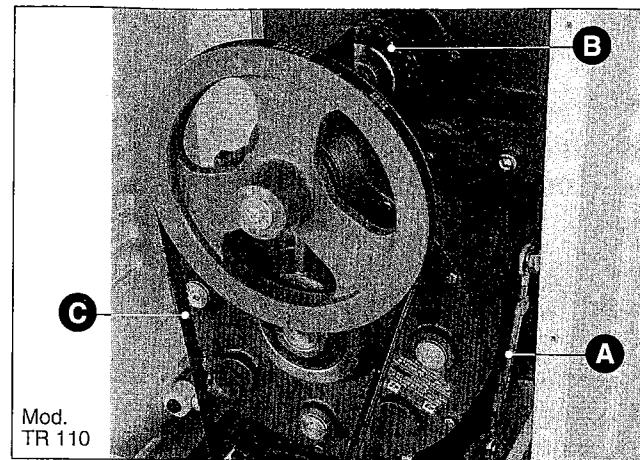


Fig. 40

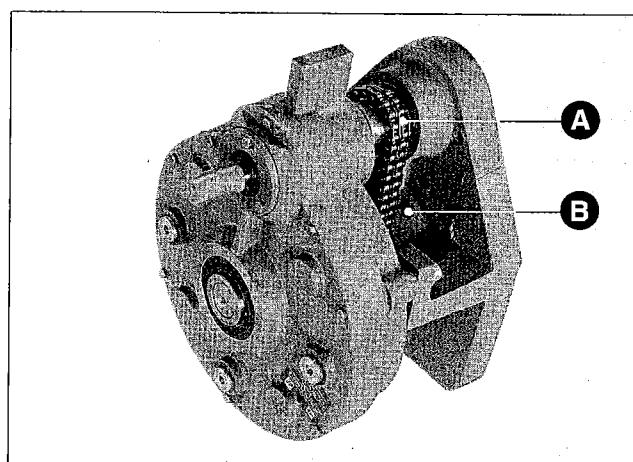


Fig. 41

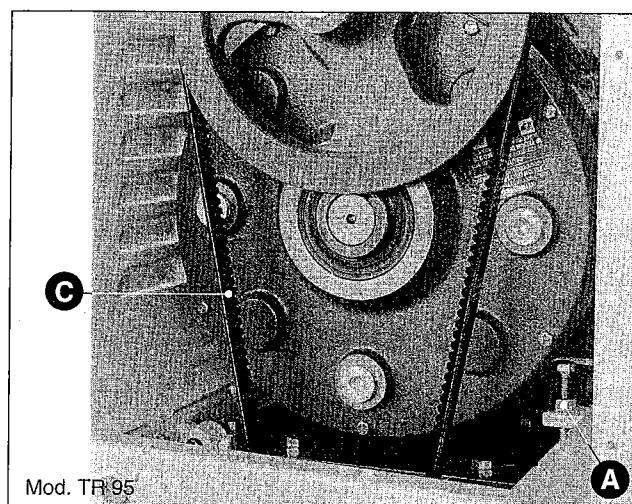


Fig. 42

7.1 BELT TIGHTENING

When performing the abovementioned maintenance or when the machine is not working properly, (loss of rounds) check the correct stretching of the transmission belt.

For this reason, disassemble the rear panel from the machine and make sure that the belt (**Fig. 38 - 40 - 42 C**) is tight enough.

If necessary, use the regulating system (**Fig. 38 B - 40 A - 42 A**), by moving the motor and therefore, tightening the belt, without of course exaggerating.

When finished, fit the panel back.



Never use the machine with any missing, disassembled or open guards and shields.



If servicing operations require repairs to the electrical system and/or replacement of bearings or mechanical components, call an expert technician or your local dealer.

8. MACHINE WHIRR

The whirring noise emitted by the machine has been measured on an identical sample machine in compliance with standard DIN 45635. A constant value not exceeding 70 dB(A) was measured as stated in the manufacturer's test report.

9. STRIPPING-DOWN AND DEMOLISHING THE MACHINE

If the machine needs to be stripped-down and/or demolished, its components do not entail a degree of danger that require any particular precaution.

Remember, however, that to facilitate material recycling operations, it is a good rule to remove electrical system components from the machine.

10. PROBLEMS AND THEIR SOLUTIONS

PROBLEMS

1) Machine operation failure

2) Problems on the product:
The product gets stuck when being poured out

The product looks unacceptable even after the initial minutes:
it breaks and loses flour

The product does not come out of the drawplate

The product crushed at an edge during cutting

CAUSES

- disconnected plug
- plug leads not correctly connected
- trip switch adjusted for insufficient values
- unsuitable trip switch
- fuses burnt out
- safety lever on pool lid not properly inserted

• too humid dough is used

- too short kneading time
- not enough water percentage

- the blocking of the drawplate because of dried dough
- cutting speed not adequate (too low)

SOLUTIONS

- connect plug
- check lead connections

- adjust trip switch accordingly
- replace trip switch
- replace fuse
- position the lever at end of stroke

• reduce the quantity of water used for the dough respecting the abovementioned percentage

- increase the kneading time
- increase the quantity of water in order to respect the aforementioned percentage

• disassemble and clean the drawplate

• increase cutting speed: remember that the length of the pasta cut, depends on the pasta and drawplate diameter