AUTOMATIC DOUGH SHEETER

AUTOSMART – SMART
INDISMART - ECOSMART

THIS MANUAL CONTAINS THE GUARANTEE COUPON

20.07.2006

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1- GENERAL

1.1. GUARANTEE

The manufacturer guarantees the good working and the quality of this sheeter for a period of 6 months from the shipping date, in the case ONLY of mailing the underneath filled and signed coupon within 15 days from receipt of the machine.

The guarantee will be valid only with the correct use and maintenance of the machine as per enclosed instructions.
The guarantee won't be any more valid in in the following cases:
- non-authorised modifications or work on the machine;
- use of non-original spare parts or parts not specific for the model;
- failure to follow the instructions, even partially.
- normal wear of the concerned parts.

The guarantee is limited to the substitution of the defected part only. All the other claims such as indemnities for interruption of the production or similar are not considered in the guarantee.

If necessary, the supplier can ask the machine to be returned for repair during the guarantee period.

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to be copied and rendered to the supplier

This coupon has to be mailed back to the supplier before starting working with the machine

GUARANTEE COUPON
THE MANUFACTURER GUARANTEE FOR:

MODEL _____

SERIAL NUMBER _____

DATE OF INSTALLATION _____

NAME AND COMPLETE ADDRESS_____

1.2 GENERAL WARNINGS AND APPLICATION

The aim of this manual is:

- To facilitate understanding and operation of the machine and enable the system to be used to its full technical potential.
- To provide instructions for the most effective and rational maintenance and help the operator to understand any faults and how to remedy them.
- To warn against risks inherent in use of the machine due to failure to observe the safety regulations.
- To indicate working limits for maintaining hygiene and environmental conditions and to ensure health at work.

These pages must be read carefully before starting the machine.

This manual forms an integral part of the product; it must be kept near the machine for prompt easy consultation and must also be kept for future reference until the machine is scrapped.

The manufacturer does not guarantee the technical-legal suitability of the installation premises and machine supporting services but provides all instructions for correct installation in the relevant section of this manual.

For the above, the user is advised to contact an expert professional technician, also for compliance with any local laws or regulations.

- The machine is designed for the food industry.
  It is a machine designed for sheeting of dough obtained with different types of ingredients like flour, water, sugar, fat, butter, salt, yeast, etc. and of medium consistency for cake-making in general.
- The machine must be used only for the purpose for which it has been designed. All other uses are considered inappropriate and therefore unreasonable.

The manufacturer cannot be held liable for incorrect use, inappropriate and/or unreasonable acts.

The manufacturer cannot be held liable for any damage caused by inappropriate, incorrect or unreasonable use, for example:

- inappropriate use by non-trained personnel;

- non-authorised modifications or work on the machine;

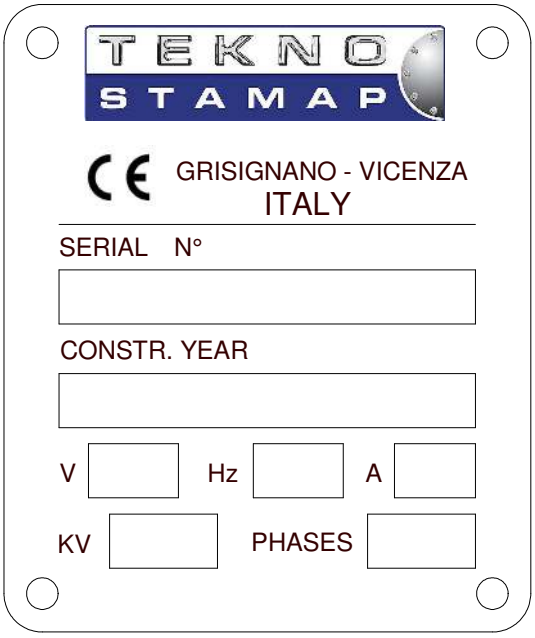
- use of non-original spare parts or parts not specific for the model;

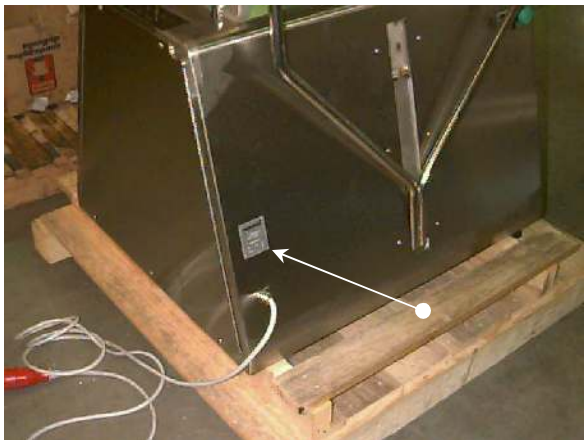
- failure to follow the instructions, even partially.

1.3 RATING PLATE DATA

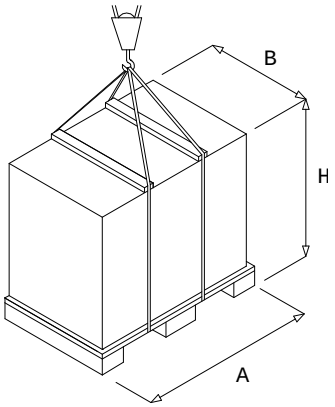
the picture 0A shows exactly the registration plate applied on the machine. On picture 2 an arrow indicates the position where this plate is fixed on the basement of the machine. The plate is realised in serigraphed aluminium and all the registration datas are wirtten with permanent ink, to last as long as possible.
It is forbidden to remove of replace the plate "**CE MARKING".** If the plate is damaged or removed please inform TeknoStamap immediately

picture 0A





1.4 TRANSPORT INSTRUCTIONS



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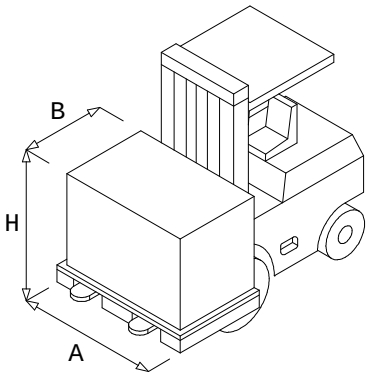


B

PACKAGING DATA

- The machine is supplied on a pallet, in a strapped triple-layer corrugated cardboard box.

Mod.	packaging	weight KG.	A mm	B mm	H mm
ECO SMART 6514	Pallet and wooden crate		1490	1440	1900
ECO SMART 6516	Pallet and wooden crate		1490	1440	1900
SMART 6514	Pallet and wooden crate		1490	1440	1900
SMART 6516	Pallet and wooden crate		1490	1440	1900
AUTO SMART 6514	Pallet and wooden crate		1490	1440	1400
	Pallet and wooden crate		940	2040	700
AUTO SMART	Pallet and wooden crate		1490	1440	1400
	Pallet and wooden crate		940	2040	700

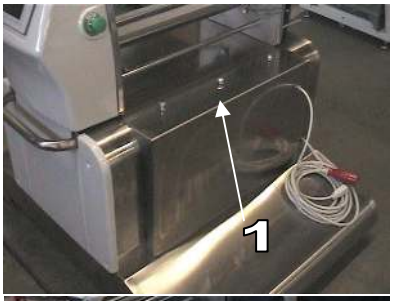
INSTRUCTIONS FOR TRANSPORT AND UNLOADING

- Loading and unloading from the vehicle can be performed:
  - by means of crane, see figure “A”
  - by means of forklift truck, see figure “B”.
- The machine must be transported adopting all precautions to prevent damage to the machine.
- In particular the machine must not be placed on top of other materials and vice versa either during transport or storage.
- During transport the machine must be positioned so that it cannot be knocked by other materials loaded on the same vehicle.
- Before unloading from the vehicle, check that the packaging is intact and that there is no risk of tipping over.
- During unloading, place the machine carefully on the ground to prevent it being knocked.

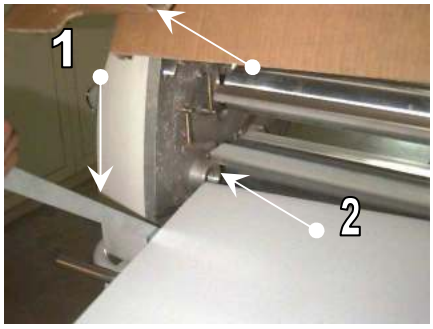
⚠ **CAUTION** When handling, pay attention to all the indications on the packaging. The capacity of the belts must be adequate for the weight of the packages. Do not use metal belts.

1.5 ASSEMBLY

The machine is delivered on a pallet and wrapped with plastic and protected by a wooden crate.. In order to assure a safe transportation, the working tables are diassembled and packed separately.
It is necessary to take off the plastic carefully in order to avoid the tables or other compounds to fall down.
Unpack the machine from the crate rendering free all the components.



Release the screws (1)
Before proceeding with assembly of the flour recovers and worktops see item *1.7 instructions for inside handling.* Lay the flour recovering sheet as per picture and proceed with screwing (1). The worktops are assembled through a baionnet coupling. Use a rigid lever of 50 cm to work easily. The rotation pin has to be inserted on the rear side of the machine first as per side picture.



By using the lever (1) push the worktop unitl the grooved shaft will go inside the proper seat (2). To facilitate this operation a porthole has been done on the side panel for the grooved shaft passage. Once the link is done, pull the belt on order to make the shaft rotating (motorised cylinder); in this way the coupling is perfectly done. A plug located near to the flour duster will be connected to the Mains.

1.7 INSTRUCTIONS FOR INDOOR HANDLING

mod. AUTOSMART. The most easy way to move this automatic sheeter is to position it meanwhile the worktops and flour recovering sheets are not assembled. The machine is provided with 2 rear wheels, 2 front wheels and 2 levelling feet (which have to be adjusted in a second time to ensure a correct stability). The 2 front wheels are operated by 2 small pedals. Locate the sheeter on the suitable place with enough room for the worktop assembly. The front wheels can be moved lifting the basement for a few cm by means of the front handle. Once the sheeter is positionned the wheels are stopped through the pedals. Once the worktops are assembled it is possible to make some small adjustments acting always on the front wheels. To give more stability just act on the levelling feet located close to the front wheels.

Modello SMART

Modello ECOSMART

The sheeter mod. SMART is provided with three wheels, two rear wheels(*) and one front wheel, and two stabiliser feet located at the side of the front wheel. The front wheel is operated by a mechanical pedal located at the front of the machine just above floor level. The stabiliser feet are designed to ensure correct machine stability with respect to the floor. The machine must be positioned in its place of work using the wheels. As soon as you have found the ideal work position, press the pedal: the machine will be lowered slightly and the two feet will rest on the floor. To move the machine again, raise it four centimetres by means of the handle and release the weight. The front wheel is now ready for operation.
If you need to clean the floor or other, the two side worktops can be raised. This operation must be performed raising one worktop at a time. Once maximum lifting position has been reached, a mechanical stop will cut in consisting of a pin in the worktop engaging in a slot in the protection grid.

Once the machine is positionned on the other place, stabilise it through the pedal located on the bottom of the basement.

⚠ **CAUTION** Indoor handling must be performed by adopting all the precautions necessary to prevent damage to the machine components.

(*) The front or rear position is defined with respect to an operator standing in front of the calibration thickness adjustment handle.

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1.8 DECOMMISSIONING

1.7.1 SETTING ASIDE

- If the machine has to be stored, it must be protected against dust and stored in a covered place.
- If the machine is not going to be used for a long time, it must be protected against dust and atmospheric agents by means of appropriate covering.
- No special precautions are required for the motor and electrical system; simply follow the above instructions.

1.7.2 DISMANTLING

- To dismantle the machine, proceed as follows:
  1. Eliminate the electricity supply cable.
  2. Remove all moving parts that could be a hazard.
  3. Dispose of the majority of parts as scrap metal and take to authorised scrapyards.
  4. The other parts, plastic for example, must be disposed of according to current regulations, via specialist firms if necessary.

Norm CEE 75/442 concerning dismantling of general waste materials
Norm CEE 78/319 concerning dismantling of toxic and noxious substances
Norm CE 75/439 concerning the elimination of used oils

2- TECHNICAL SPECIFICATION

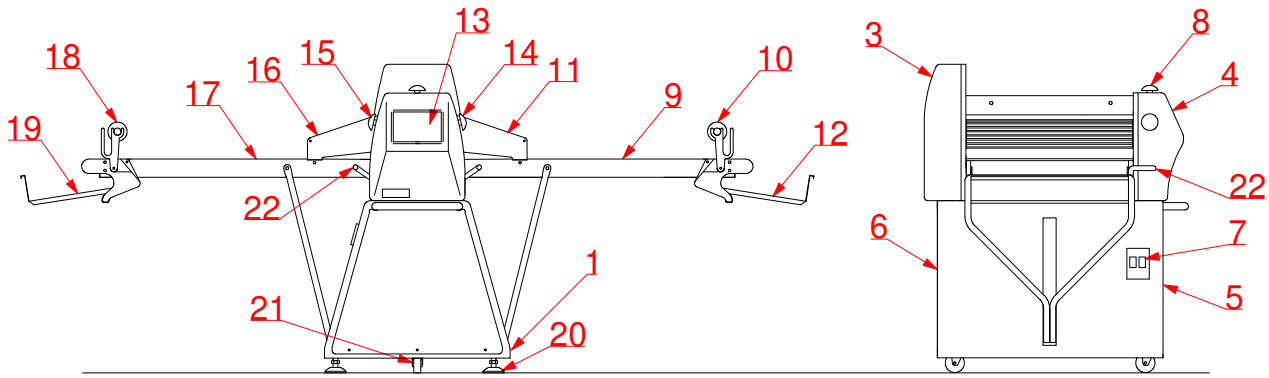
2.1 TECHNICAL DESCRIPTION

APPLICATION

- The machine is designed for the food industry.
  It is a machine designed for sheeting of dough obtained with different types of ingredients like flour, water, sugar, fat, butter, salt, yeast, etc. and of medium consistency for cake-making in general.
- The machine must be used only for the purpose for which it has been designed. All other uses are considered inappropriate and therefore unreasonable.

COMPOSITION OF THE MACHINE

Model ECOSMART

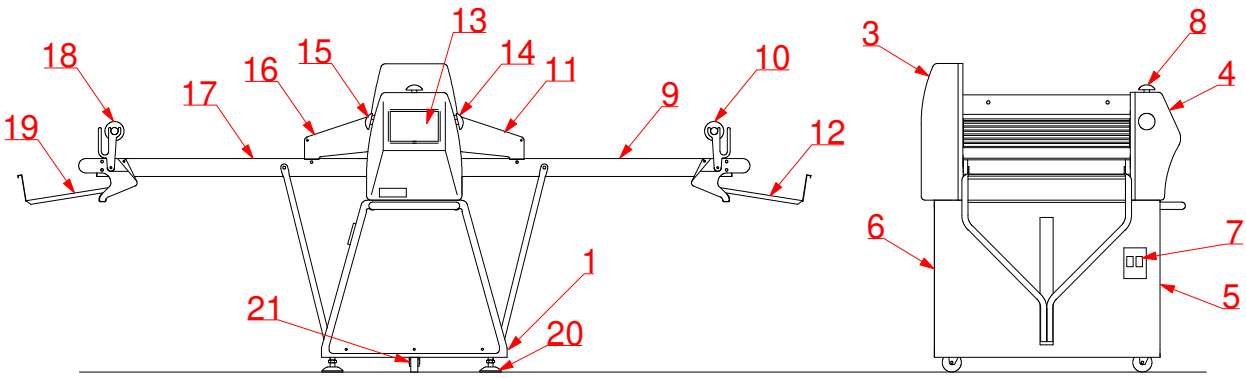


Modello: ECOSMART

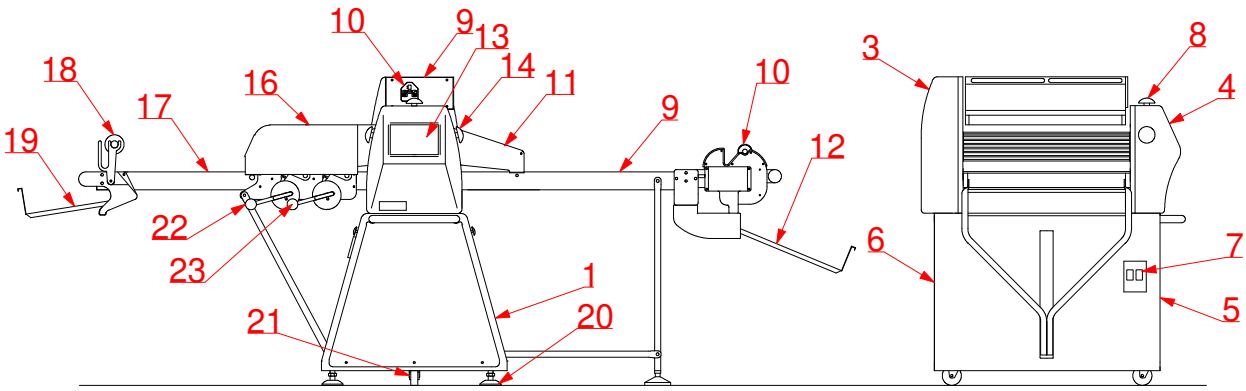
- The dough sheeter consists mainly of a supporting structure (1) two plastic covering panels (3) - (4) and two side structure covering panels (5) – (6).
- The supporting structure (1) consists of a shaped welded metal sheet made of painted steel with two sides (in aluminium) fitted above it and screwed together by means of metal spacers.
- Cover (3) houses the belt drive unit. Cover (6) houses the electric motor and cover (4) the drive unit, called clutch unit, for reversing the movement of the machine.
- The basement is provided with levelling system (20) to ensure machine stability.

Optionals: automatic dough winder, automatic flour duster, cutting device, all the items are in stainless steel.

Model : SMART



Modello: SMART

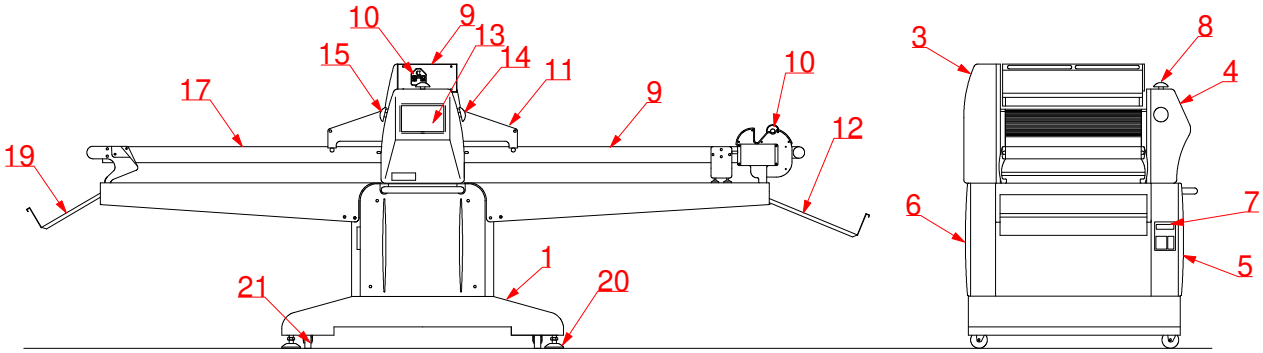


Modello: SMART Optionals: Arrotolatore, Sfarinatore, Dispositivo di taglio

This model is similar to ECOSMART except for the lever 22 which has not been foreseen on the SMART version.

Optionals: automatic dough winder as per AUTOSMART version (10), automatic flour duster as per AUTOSMART version (9), cutting device (16) with command levers (22 and 23), all the items are in stainless steel

Model: AUTOSMART



Modello: AUTOSMART

The floor standing basement (1) is entirely made of stainless steel, inside is located the electric installation and the motor. 2 side panels (5,6) can be easily removed for local inspections and mechanical or electrical repairs.
The upper part of the machine consists of 2 sides in aluminium screwed together by means of steel spacers. All the machine components are assembled on these sides and protected by 2 plastic covers (3 and 4). Inside the larger panel (the back one 3) is located the pulleys group and all the devices for the automatic moving system of cylinders. Inside the front panel (4) is located the clutch group.
The basement is provided with levelling system (20) to ensure machine stability.
An automatic dough winder (10) with its dough pin allows to wind automatically the dough.
The automatic flour duster (9) with digital touch-screen for automatic settings allows the uniform distribution of a light voile of flour during the working phase

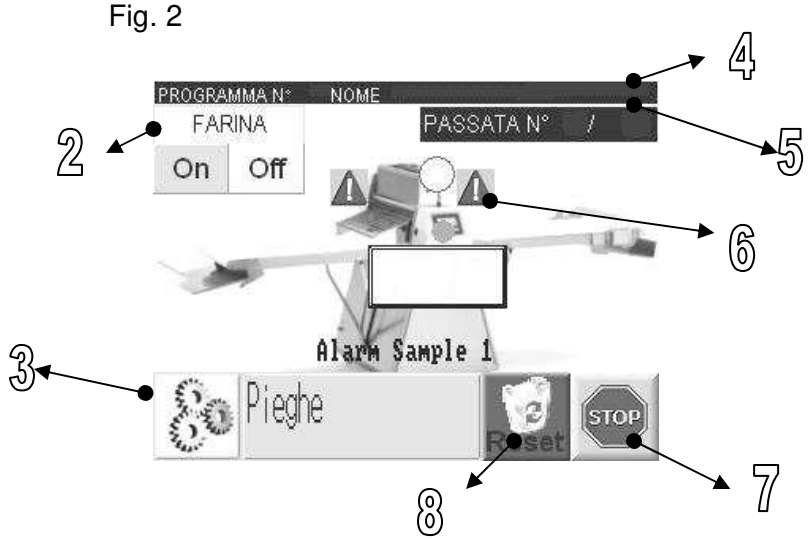
WORKING

1. **START:** once everything has been carefully checked it is possible to start the machine by pressing the general switch (7) (see illustrated drwg on chap.2.1 – technical description). The Touch-screen will inform the operator that the sheeter is poceeding with a general automatic control in order to verify all the inside processors; a few minutes later the load-program will start. Once the program loading is over, an automatic PCMCA files scanning will start to reset the touch-screen. The fig. 1 will appears on the touch-screen. (AVVIO= START – premere pulsante sx o dx= press right or left key-button)

Fig. 1

Once the fig. 1 is appeared, under the word "START" the writing (1)*"press on right or left keybutton"* appears ; it means it will be necessary to press on green keybuttons (14,15) (see illustrated drwg chap.2.1 technical description) after having been ensured that the emergency push-button is unlocked

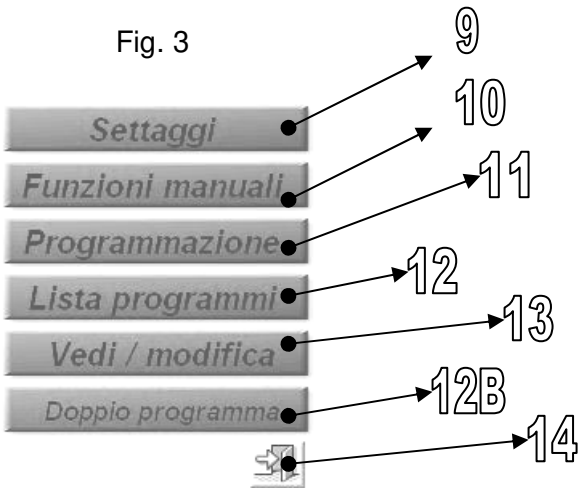
Fig. 2



Before starting any manoeuvre be sure that red push-button is unlocked and the safety grids are down. Fig.2 will appear on the screen as working screen; before starting the programation we advise to cancel all the alarm information (6).

The key-button (8) will reset the machine and the calibrating cylinders will be at maximum opening. The starting of flour duster is activated by a simple push-button ON/OFF. On upper side of the screen it is possible to read the name and program number (4,5) in case of started program acting on key-button STOP (7) it is possible to stop correctly the working phase. By pressing on left green key-button (15 – see illustrated drwg chap.2.1 technical description) as indicated on picture, it is possible to operate without any problem. To start a new program, the operator has only to touch the screen on the picture located on the left button side (3) in order to enter in datas.

Fig. 3

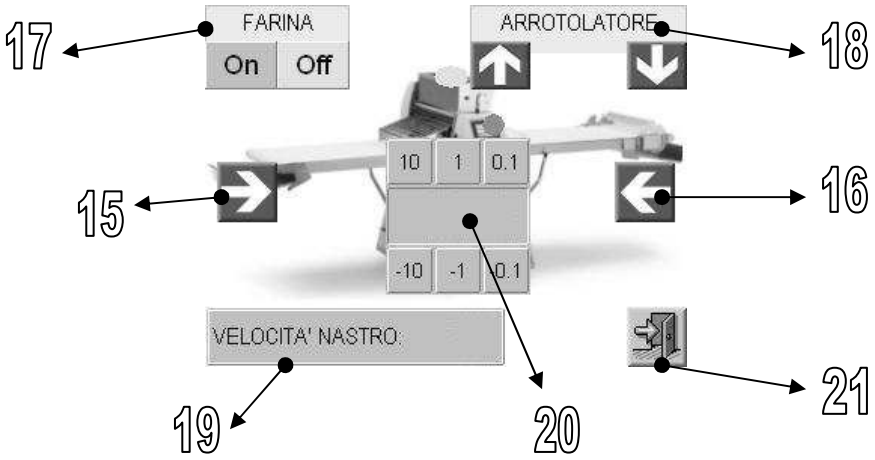


In this section (fig.3) the operator can find various functions: SETTINGS (9), MANUAL FUNCTIONS (10), in this case it is possible to operate manually, PROGRAMMING (11) (which can be quick or slow), PROGRAMS LIST (12) (where the operator will find the preset user's programs) VISUALISE/MODIFY (13), DOUBLE PROGRAM (12B), EXIT (14) to return back at first screening.

2. **WORKING METHOD:** it is possible to select the way of working desired on the automatic sheeter SMART: it can be manual or automatic.

3. **MANUAL WORKING:** the sheeter can work in manual version, meaning the operator can act directly on the machine.

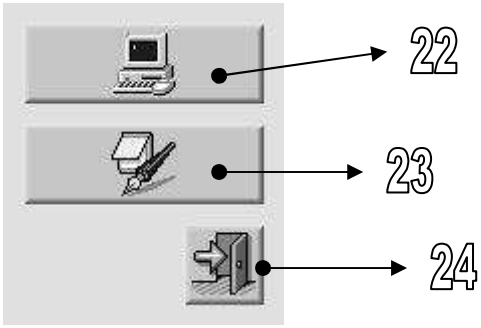
Fig. 4



On the side part of screenning (fig.4) there are 2 arrows → ← (15,16) . By pressing them it is possible to make the belts revolving on one side or the other or alternatively to move them through the 2 green key-buttons (14,15 illustrated drwg chap.2.1. technical description). Pressing the flour duster button on left upper side (17) it is possible to make it working or not; but it is necessary to verify the position of the key-button on the flour duster. Anyway, the flour duster working is coordinated with belts movement.
on the upper right side the key-buttons with arrows ↑ ↓ (18) make the dough winder working up or down (all these movements are done in actual time. On the bottom left side (19) it is possible to adjust the belt speed from 100mm/sec to 10mm/sec.
At last, the data on centre of screenning (20) indicates the thickness of the dough (height of cylinders) which can be varied by imputing of dough thickness in mm; the machine will automatically adjust the height.
To return back to the main screenning, it is necessary only to act on th right bottom key-button. (21)

4. AUTOMATIC WORKING

Fig. 5



The automatic programation allows to proceed with 2 types of programs: quick programation (22) and manual programation (23) Before selecting one of these 2 options, the operator has to make sure that the machine has been reset, meaning that cylinders are fully opened. To do this, it is necessary to go back to initial window per to press reset key-button.
Once this check is over, it is possible to select in the SETTINGS window the programation window (11) (fig.13) which will open the window to select the type au automatic programation (fig.5)

- Quick programation

Fig. 6

Selecting the ***quick programation*** the following window (fig.6) will be opened. Here it is possible to select a set of parameters inside the machine without necessity of inserting them manually, but having the possibilty to modify them at any moment. First of all it is

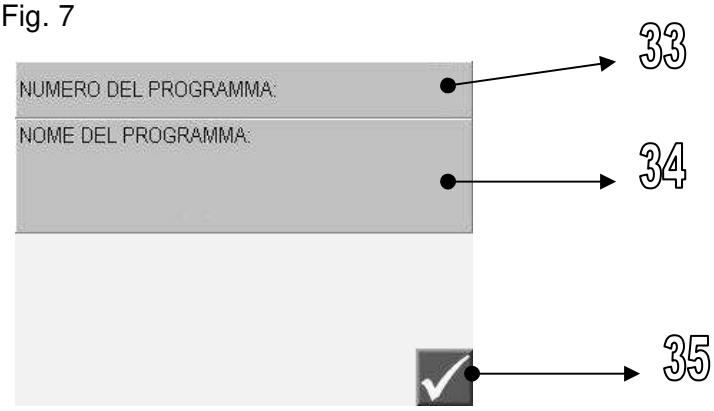
necessary to insert the parameters in the column n.1: height of the dough to be sheeted (25) and the height to be reached at the end of the processus (26), indicating how many passages the operator wants to do (27). These numbers can be inserted just touching the value on the screen, and digiting the desired numbers. The running speed of the belt can be adjusted from 10 to 100mm/sec. (28). The belt speed is set for complete working cycles.

Under the speed setting button it is possible to see a small window to choose the closing working phase (29).

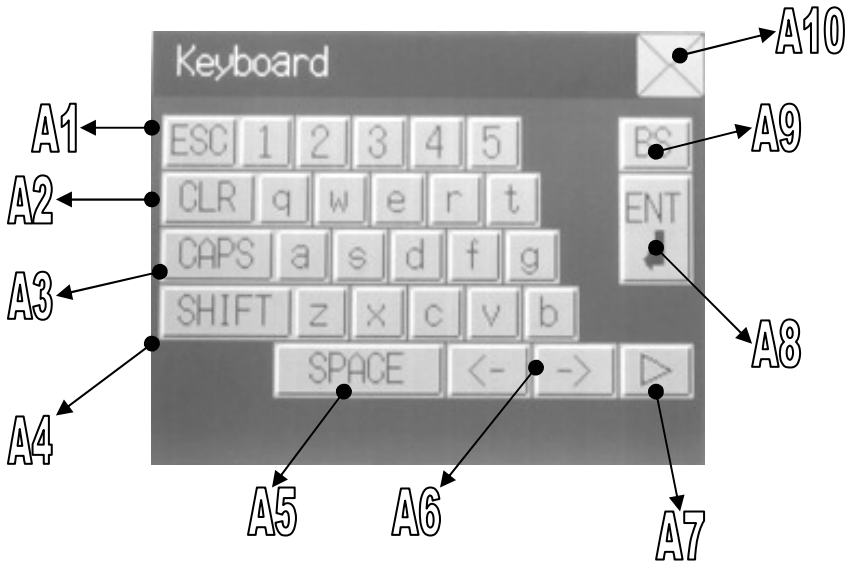
- *FOLDINGS:* the machine starts to laminate the dough. During this option the sheeterstops automatically at the end of the sheeting cycle, allowing the operator to fold the dough, to turn it on the belt and to start again the working cycle by pressing on green key-button (14,15 illustrated drwg chap.2.1. technical description). This cycle is usually used to prepare general puff pastry.
- *WINDING:* the machine is able to feel the height of the dough through a sensor and once it feels the final thickness the dough is conveyed to the automatic winder with the roll pin. The winder moves automatically to dough pin on its supports, the dough follows the belt till it meet the winder which hoists the belt in order to roll the dough on the pin automatically.
- *CUTTING-WINDING:* this option allows the possibility to save the rejects. At the end of sheeting phase, the machine stops the belts running before the dough arrives to the rolling pin, allowing the operator to cut the dough head. To start again the belt running and the winding cycle it is necessary only to press the green key-button (14,15 illustrated drwg chap.2.1 technical description).
-
- *HEAD-TAIL CUTTING:* this phase is pratically the same than previous one, further to the first stop for head cutting, the machine will stop a second time after the dough is out of the safety grids for the tail cut. This operation allows to save more rejects
- *DOUGH CUTTING WITH CUTTING DEVICE:* this operation can be done only with the machine provided with the cutting device. When desired dough height is reached, the belt running stops, allowing the operator to activate the cutting device. Then to start again running the operator has only to press the green key-button (14,15 illustrated drwg chap.2.1 technical description).
- *STOP LAST SHEETING:* the machine works on the dough on selected cycle with all the programmed sheetings, and this cycle will end on one of the two belts following the number of sheetings selected and the start position of the dough.
- *MANUAL WINDING:* This operation is done when the machine is not supplied with the automatic dough winder or when working on very special doughs requiring the operator hands manipulation.

Concerning the position of the dough at the end of cycle in case of manual working, the machine will work the programmed sheetings and will position the dough consequently. In case of automatic cycle, with automatic winder or cutting device located on a precise side of the machine, the machine will work following the preset sheetings, but if the last sheeting stops on the wrong side, the machine will add automatically a passage with cylinders fully opened at the beginning of the new working so the dough will be positioned on the correct side.

Fig. 7



Once the data are confirmed in the machine (24), the program saving window will be opened. The machine will inform about the first free program starting from nr 1 upto 50. **VERY IMPORTANT:** if a new program is saved upon another one, the sheeter will write it down without informino about the matter.In this case the previous program wil be erased. With the key-button 34 it is possible to write the name of the program in order to identify it with a small keyboard divided in 2 parts because of problems of room.



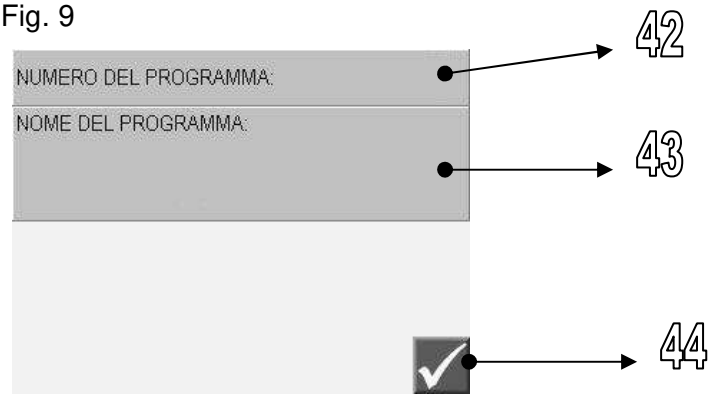
With keys A1 and A10 it is possibile to close the window without saving the text. With key A2 it is possibile to erase digited letter. The key A3 writes in small or big size letters.with key A4 it is possible to change some symbols on the keyboard. Key A5 allows a space. The 2 arrows A6 allows to move inside the word one letter at a time. With key A7 it is possible to go on the 2 part of the keyboard. Key A8 will confirm the text and return to the previous window. Key A9 will erase the letters one at a time. If the information are correct it is necessary to confirm (35 fig.7) to go on.

Fig. 8

Now the screen will show the working page with the list of the whole sheetings to be done and the various thickness for each passage (38).
From this window it is possible to decide from which sheeting the operator wants to start (37). Even from this situation it is possible to modify the name of the program just by touching the screen near the name.
The key 36 allows to return back to the menu of programation selection (fig 5) and to do eventual modification (see following chapter fig.10). The window will show all the previous parameters (39,40) which cannot be varied from here, only through selection menu (36).
In case of correct program, it is possible to start the working pressing one green key-button (14,15 chap.2.1.technical description). The key 41 allows to start the cycle of initial window.

- Normal programation

Fig. 9



When using the normal programmation (23 fig.5) the first information to insert are the number to save the cycle (42), the reference name (43) reminding not to use a number already existing unless to overwriting the program. Once it is confirmed (44), the window as per fig. 8 will appears. To modify something it is necessary to press the selection key-button (36) opening thus a window as per fig.7: the option to select quick or slow

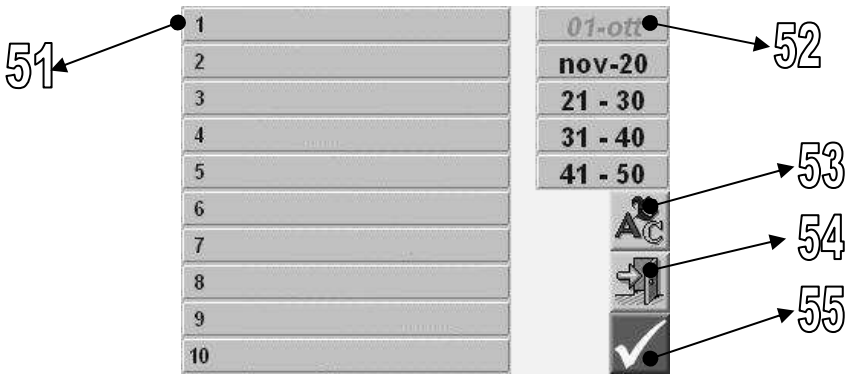
programation will be required. In case of quick program the situation as per fig.6 will be opened. The function of slow program is indicated on window 10.

Fig. 10

Now it is possibile to start the settings. It is necessari to introduce all the values for each single phase. In order to choose the sheeting to insert the new datas it is possibile to use two keysi +/- (45), and inside each single sheeting it is necessari to specify also the other parameters. To adjust the running speed of the belt it is necessary to press the screen (49) and to digit the desired value inside the window. To adjust the sheeting dough thickness it is necessary to vary the value on up right side setting thus the starting thickness to the finishing one. It is possible to act on key-buttons located above or under the dimensions expressed in mm. With this type of programation it is possible to decide the use of flour duster (47) and the sheeter will give automatically the impulse just during the preset passage (45). It is possible to decide the end of cycle by using the small window located in the left bottom (50) and the move the arrows ↑↓ on desired option.
When programation is ended it is possible to go back to initial program through key 48 and restart the working through key (14,15 illustrate drwg chap.2.1 Technical Description). The activation of flour duster is highlighted on the side.

5. PROGRAM LOADING

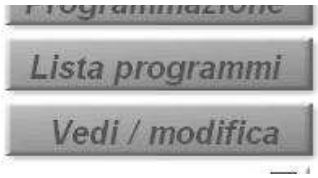
Fig. 11



Inside the loading of existing programs (12 fig.3) a dialog window will appear (fig.11). the cells to be saved (51) are divided in 5 pages which can be visited through keys 52 on right top side of the creen, and it is possble to save almost 50 different programs.

Through key 53 it is possibkle to activate the function “text modify” to modify the names and it I necessary to press the key to highlight the name to be modified. To unhighlight the name press once again on the same key.
In case the operator wants to come out the section it is necessary to press key 54; otherwise it is possible to go on loading the selected program (55).
The video which will appear is always the working one (fig.8) and from here it is possible to decide about the variations inside the working cycle.

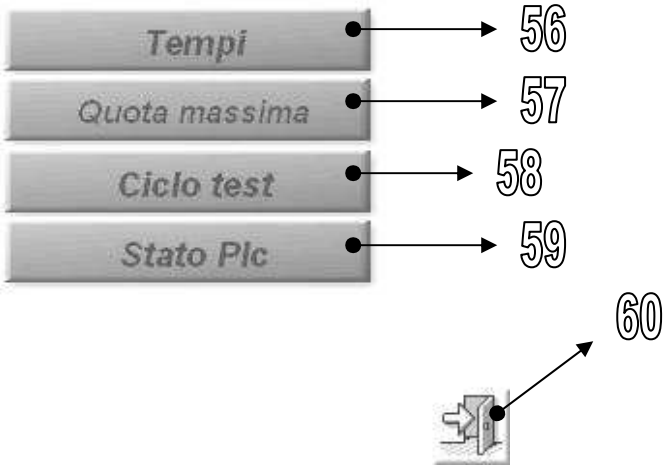
In order to intervene quickly and directly on loaded program to is necessary to open the window fig.8 with key 13 fig.13 and to proceed with all the modification listed at priori



7. SETTINGS

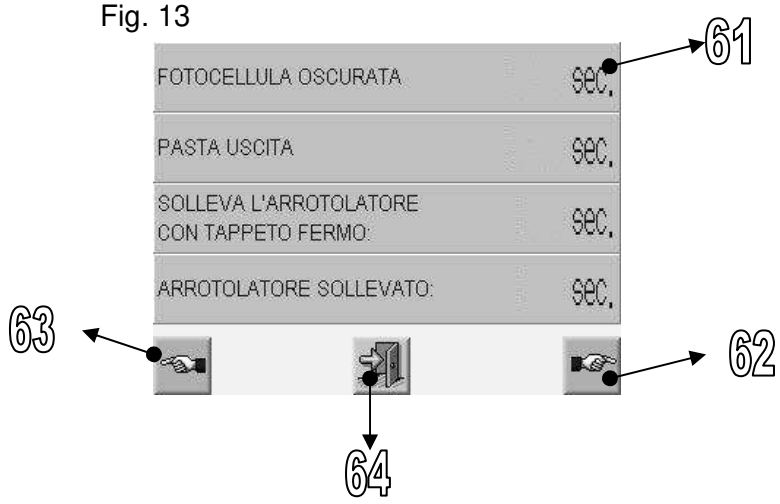
From this window it is possibile to enter in a whole programation and to choose more specific functions on the sheeter. As those values modify directly the machine settings they are protected with a password avoiding the modification by the user. But through this window it is possible to do some modifications in case of necessities

Fig. 12



First of all, to enter in the section it is necessari to enter in machine settings on page of selection (9 fig.3). the first number (56) allows the time settings of few operations done by the sheeter. Pressing on each option it is possible to enter in a cell and to insert the desired value. It is possible to visualise all the pages by using the indications on the screen edge (62,63). To come out of settingspress on key 64.

Fig. 13



It is possibile to modify the following values:

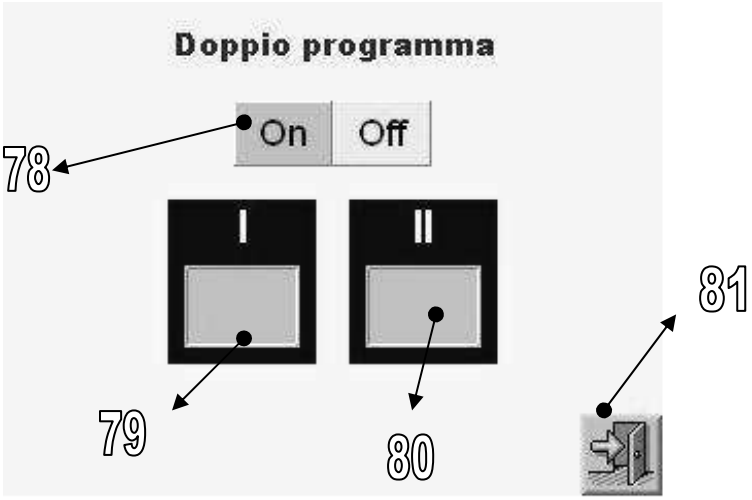
- *OBSCURED PHOTOCELL* : it is possibile to ad just the min.time of photocel darkening in order to avoid that sheeter read as beginning or end of the dough some remaining of dough on the belt.
- *DOUGH EXIT*: to set out the dough length on the exit of the grids at the end of the last sheeting.
- *WINDER HOISTING WITH BELT STOP:* gives the hoisting degree of the winder and consequently the inclination compared to the belt
- *DOUGH WINDER UP:* :
- *SLOW DOWN THE BELT TO WIND THE DOUGH:* indicates the time between the exit of the beginning of dough from the safety grid (photocell) and the moment when the dough slow down to allow a correct winding on rolling pin. The last sheeting is concerned by this adjustment
- *FIRST DOUGH WINDING DONE, LOWERS:* gives time used by the winder to start lowering after the dough has done the first rolling on the pin.
- *DURATION OF WINDER LOWERING*: allows to adjust the opening movement of dough winder durino lowering phase.
- *DOUGH FULLY ROLLED:* time used to roll the dough completely on the rolling pin.

- *DOUGH POSITION TO CUT DOUGH HEAD:* allows to adjust manually the dough cut on the head. Working on this time it is possible to decide how long time it is necessary to stop the belt after the dough started to pass in front of the photocell, allowing the user to cut the dough on the most comfortable position.
- *DOUGH POSITION TO CUT DOUGH TAIL:* the same as above, with difference on belt stop signal activated when the dough tail is passing in front of the photocell.
- *END CUTTING CYCLE SLOW RETARD*: This option concerns all the models with cutting device. It is possible to adjust the time necessary to ch'ange from an usual sheeting speed to a very defined cutting speed.

- *END CUTTING CYCLE SLOW TIME:* always concerning the sheeters with cutting device and allows to decide the quantity of dough coming our of cutting rollers.
- *END FINE CUTTING CYCLE:* allows to adjust the complete dough exit time from cutting rollers at the end of cycle.
- *WINDING END CYCLE IN MANUAL-DOUGH POSITIONNING*: adjusts the quantity of dough coming out of the safety grid at the end of last sheeting. This time is necessary to user to lay on the dough the rolling pin and start rolling. To make the belt restart it is necessary to press back the START BUTTON
- *WINDING END CYCLE IN MANUAL IN DELAY:*it is the same processus as previously described, the difference is that after START, the belts don't begin immediately to run, giving the user time to position the dough and to wind it.
- *END CYCLE WINDING DOUGH:* as a matter of fact the position of rolling pin is upto the user on manual winding, for a complete winding it is possible to decide how long the belts have to run after the dough is come out of the grids.

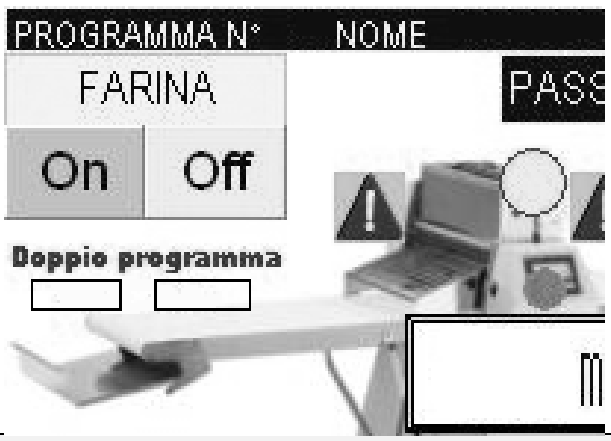
DOUBLE PROGRAM:
with this double program (12B fig.3) it is possible to link 2 different programs in cascade. The first video is as per fig. 17

Fig. 17



The first step requires insertion of 2 programs 79 and 80 through a dialog window aloowing to digit the number of a program even not existing; it is necessary to know previously the programs to be inserted. The key 78 allows the activation for option of double program which remains actived until the comand is unactivated. The key 81 allows to return back to the main video loading the 2 programs. It is possible to see that under the indication of flour presence, the numbers of the 2 programs will appear as confirmation of the oepration. Now it is possible to start working pressing on 1 of the two green buttons (14,15, illustrated drwg chap.2.1 Technical descrition).
If it is necessary to modify the program, it is possible to enter in settings through menu of selection and to modify the paramters.

To close the option of double program, it is necessary to come back to selction video (fig.17 and disactivate the comand through button OFF

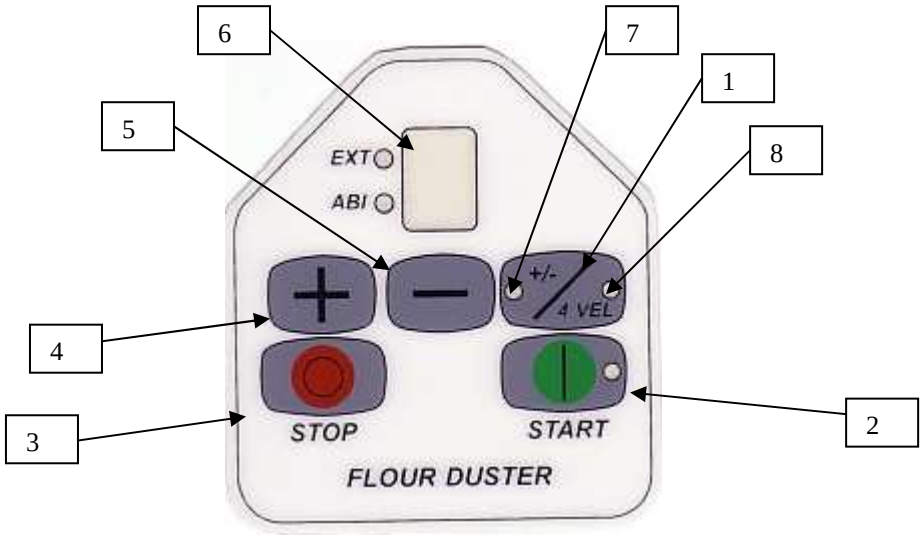


AUTOMATIC FLOUR DUSTER

Fig. 17

The working of the automatic flour duster is simply controlled by a two positions switch and by the control panel. It is important to keep in mind that this function works only if the button of flour distribution is on START position. Moreover, its working has to be driven through the control panel, both for the manual and the automatic operation. In case one of the two switches is not inserted the flour distribution will not work.

OPTIONAL FLOUR DUSTER :



The flour duster is operated directly through the key 1 which allow to pass from automatic working to manual working. In order to know if the key 1 is set on +/- or on 4VEL section it is necessary only to check which red light is on corresponding to one of these functions. If light 7 is ON that means the flour duster is in +/- function; if light 8 is ON that means 4VEL device is activated; to change from one function to the other it is necessary only to press once on the key 1.

To know if the machine is working on automatic or manual version press on the screen 1 to lighten the right light 8 (4VEL function); check the display 6, if number 0 will appear that means the machine is in “Manual working”, if number 1 will appear the machine is in “Automatic working”. To change from one version to the other it is necessary only to press on key 4 or 5 (+ or -) to make the number 1 or 0 appearing.

To START the flour duster:

The flour duster will start when safety grids are down and when all the alarms are disconnected. To make the duster running it is necessary to press the switch 2 of START. When the duster starts running the display 6 will lighten for some seconds then it will be possible to visualise the programmed speed from 1 to 9. Now the flour duster is ready to work following the required necessities. automatically when working with automatic program. It is necessary to fill it from upside with dry flour and the duster must be perfectly dry in order to avoid any problem during the working phases.

MANUAL WORKING

Once the 4VEL is selected on key 1, 0 (manual working) should appear by pressing key 5. Now it is possible to vary the speed by pressing once again the key 1 to go on +/- working. It is possible to vary the speed with keys 4/5 to increase or decrease the duster speed with range from 1 to 9. the keys 2/3 activate or not the manual flour dusting through START/STOP. This function is necessary for the following jobs: to empty totally the duster or the automatic cleaning: in this case it is advisable to use the maximum speed range.

AUTOMATIC WORKING

Once the 4VEL function is selected through key 4, it is possible to select value 1 on display 6 indicating the automatic working. In this case the flour duster will work only when the program chosen previously will require it (in this case the keys START/STOP are excluded. To vary the speed it is necessary only to press on key 1 to enter in function +/-; the keys 4/5 will allow to increase or decrease the speed meanwhile the duster is working

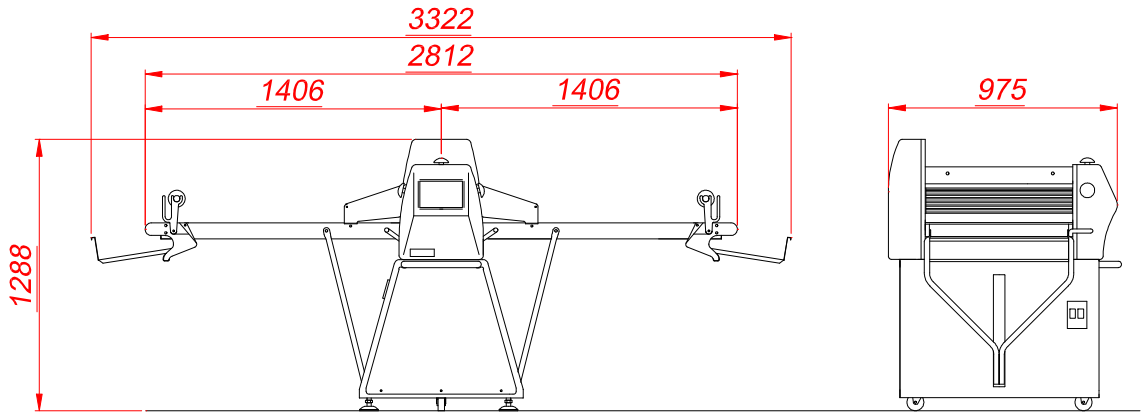
PROTECTIONS

- The central area consisting of the two calibrating cylinders, considered the most dangerous area for the operator, is completely covered and protected by two side protection grids (10). They are made entirely of stainless steel. If one of the two grids is raised, even by a few millimetres, a microswitch will cut in, immediately stopping the machine.
- The conveyor surfaces, on which the conveyor belts rotate, are designed so that the operator cannot insert his fingers between the surface and the belt.

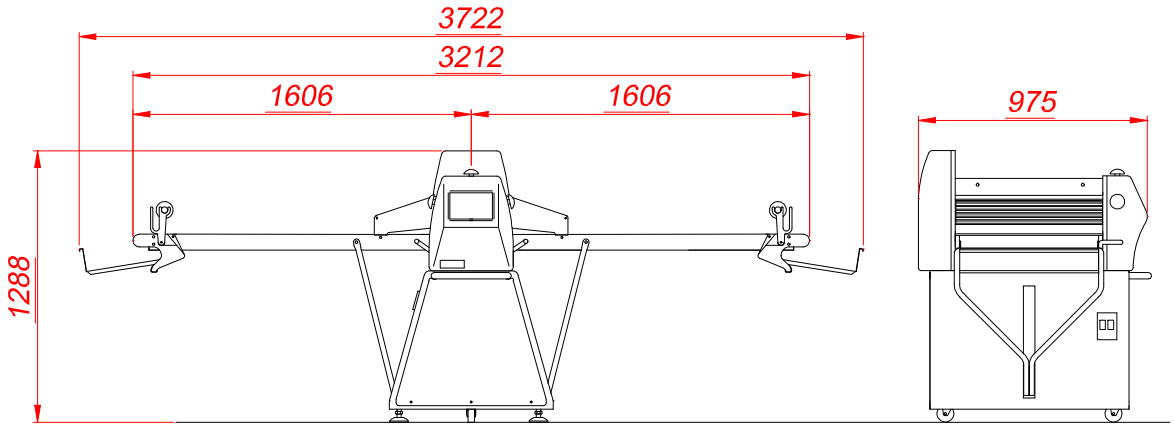
ELECTRICAL SYSTEM

All the electrical components subject to rated voltage and the electric motors are enclosed in a casing with IP 54 protection rating. The control elements, push-buttons and selectors operate at low voltage (24V) and are enclosed in casing with IP 54 protection rating.
The machine is designed for earth connection to protect against indirect contact risks (Chap. 10).
The electrical power and control circuit is provided with its own protection devices against short circuits and overloads.
On the front of the machine, just in front of the operator’s normal working position, is the stop/emergency button (see chap. 4.2). This button disables the start buttons, thus preventing the machine from being started. Reset, which is obtained by pulling the button cap, does not automatically restart the machine.

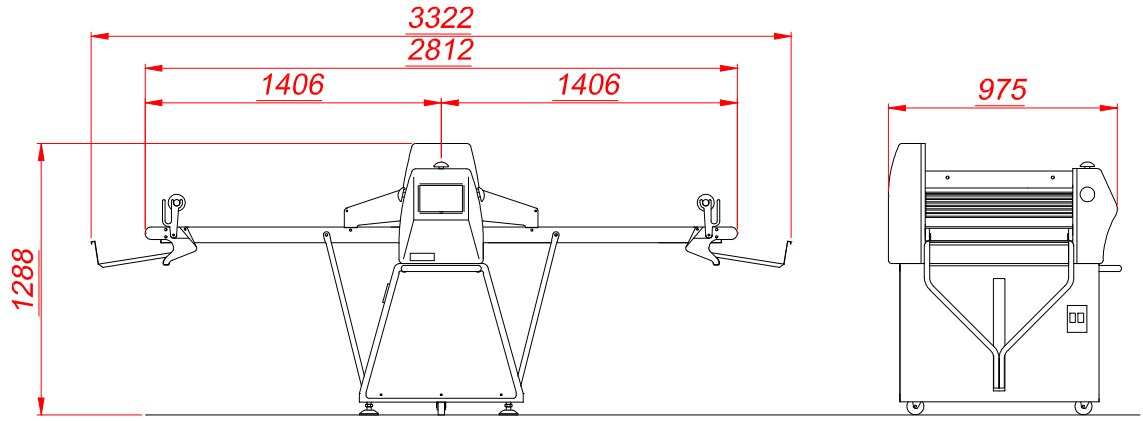
2.2 TECHNICAL SPECIFICATIONS



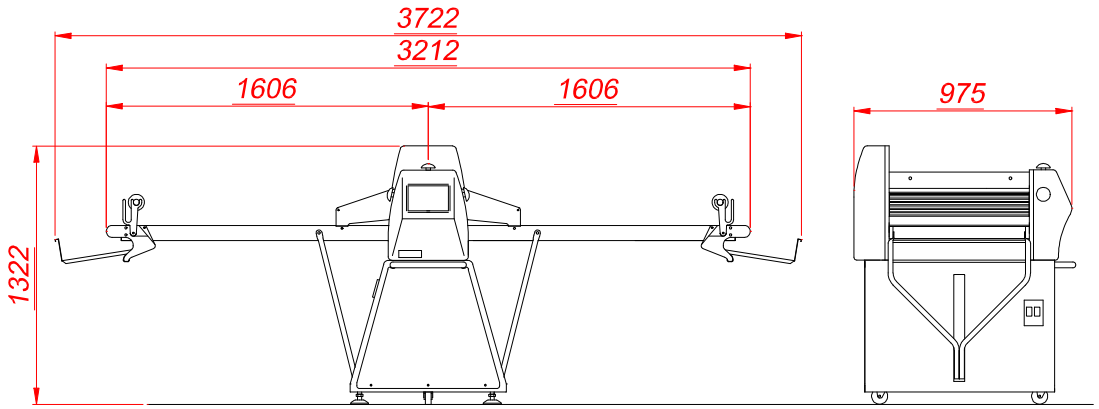
Modello: ECOSMART 6514



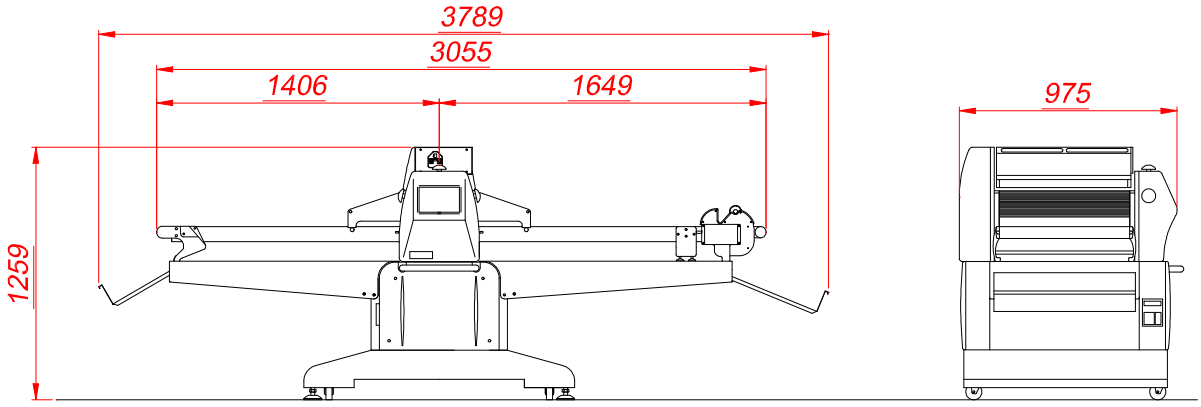
Modello: ECOSMART 6516



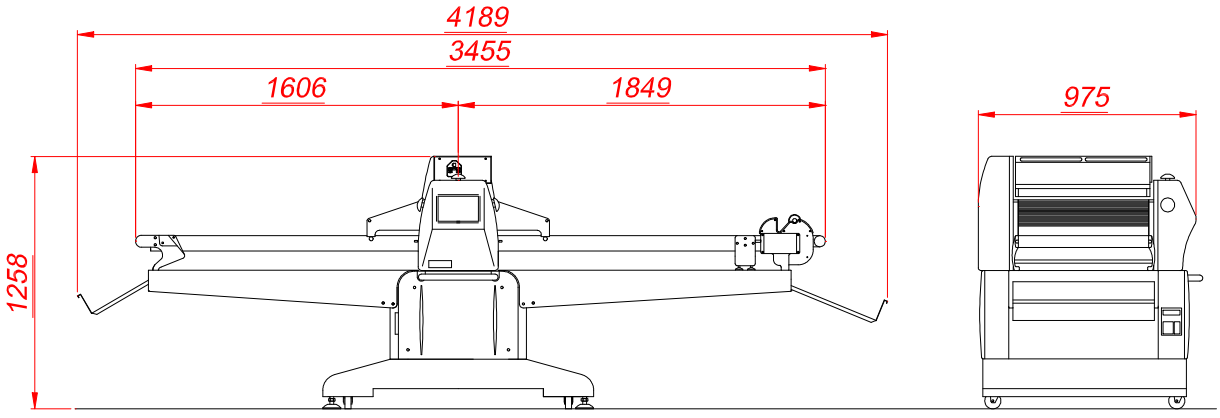
Modello: SMART 6514



Modello: SMART 6516



Modello: AUTOSMART 6514

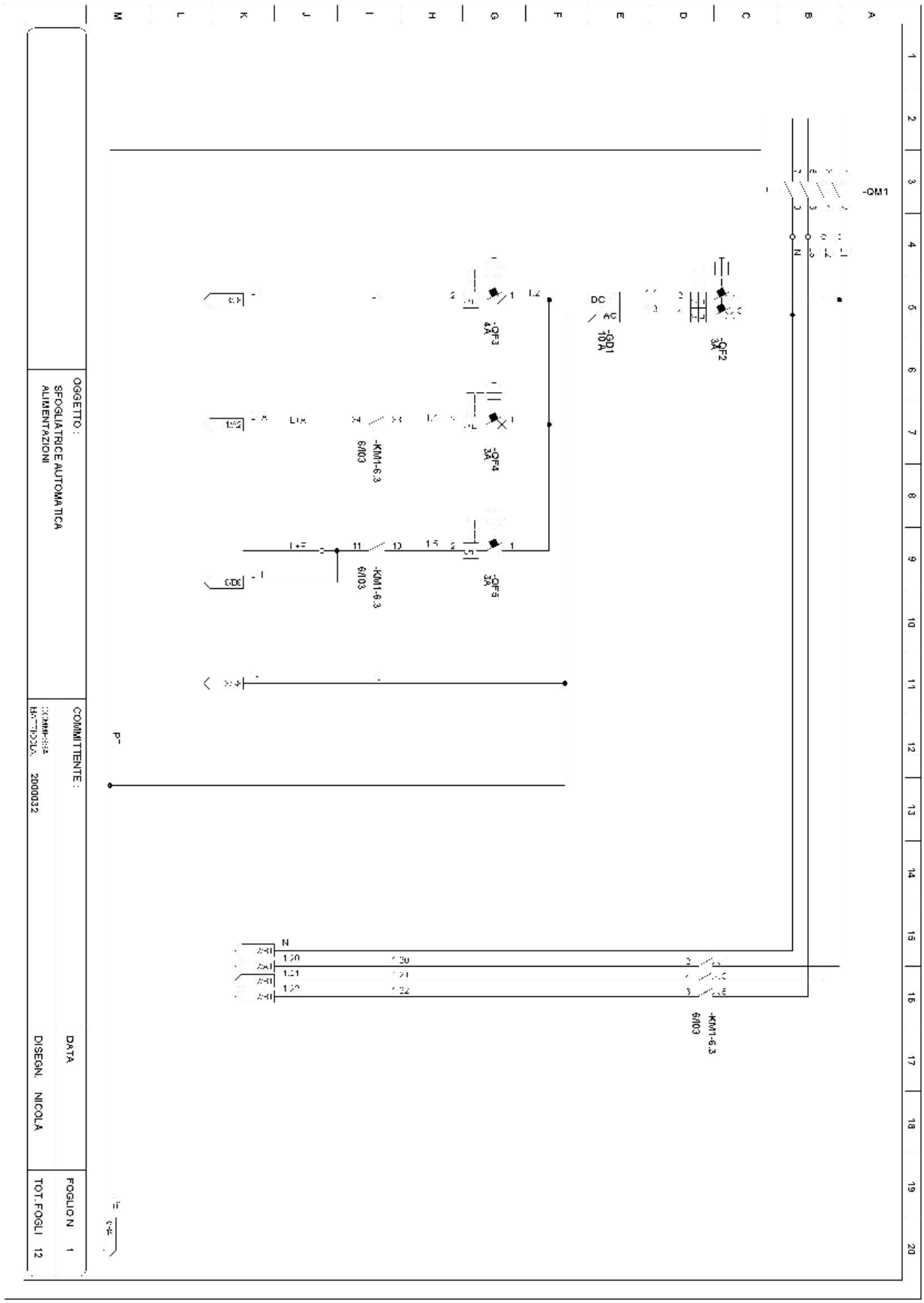


Modello: AUTOSMART 6516

MOD.	Diameter cylinders	Cylinder gap	Exit belt speed	Belt width	Belt length	Motor power Kw	weigh t
ECOSMART-6514	84 mm	0,1-50 mm.	60 cm/sec	650	1400	1.5	250
ECOSMART-6516	84 mm	0,1-50 mm.	60 cm/sec	650	1600	1.5	260
ECOSMART-6514 cutting device	84 mm	0,1-50 mm.	20-60 cm/sec	650	1400	1.5	265
ECOSMART-65 cutting device	84 mm	0,1-50 mm.	20-60 cm/sec	650	1600	1.5	275
SMART-6514	84 mm	0,1-50 mm.	85 cm/sec.	650	1400	1.5	270
SMART-6516	84 mm	0,1-50 mm.	85 cm/sec	650	1600	1.5	290
SMART-6514 cutting device	84 mm	0,1-50 mm.	20-85 cm/sec.	650	1400	1.5	285
SMART-6516 cutting device	84 mm	0,1-50 mm.	20-85 cm/sec	650	1600	1.5	305
AUTOSMART-6514	84 mm	0,1-55 mm.	20-100 cm/sec	650	1400	2.0	370
AUTOSMART-6516	84 mm	0,1-55 mm.	20-100 cm/sec	650	1600	2.0	400

NOISE: below 70 dB.

2.3 ELECTRIC DIAGRAMS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SFOGLIATRICE AUTOMATICA
ALIMENTAZIONI
COMMITTENTE :
2000032
DISEGN. NICOLA
DATA
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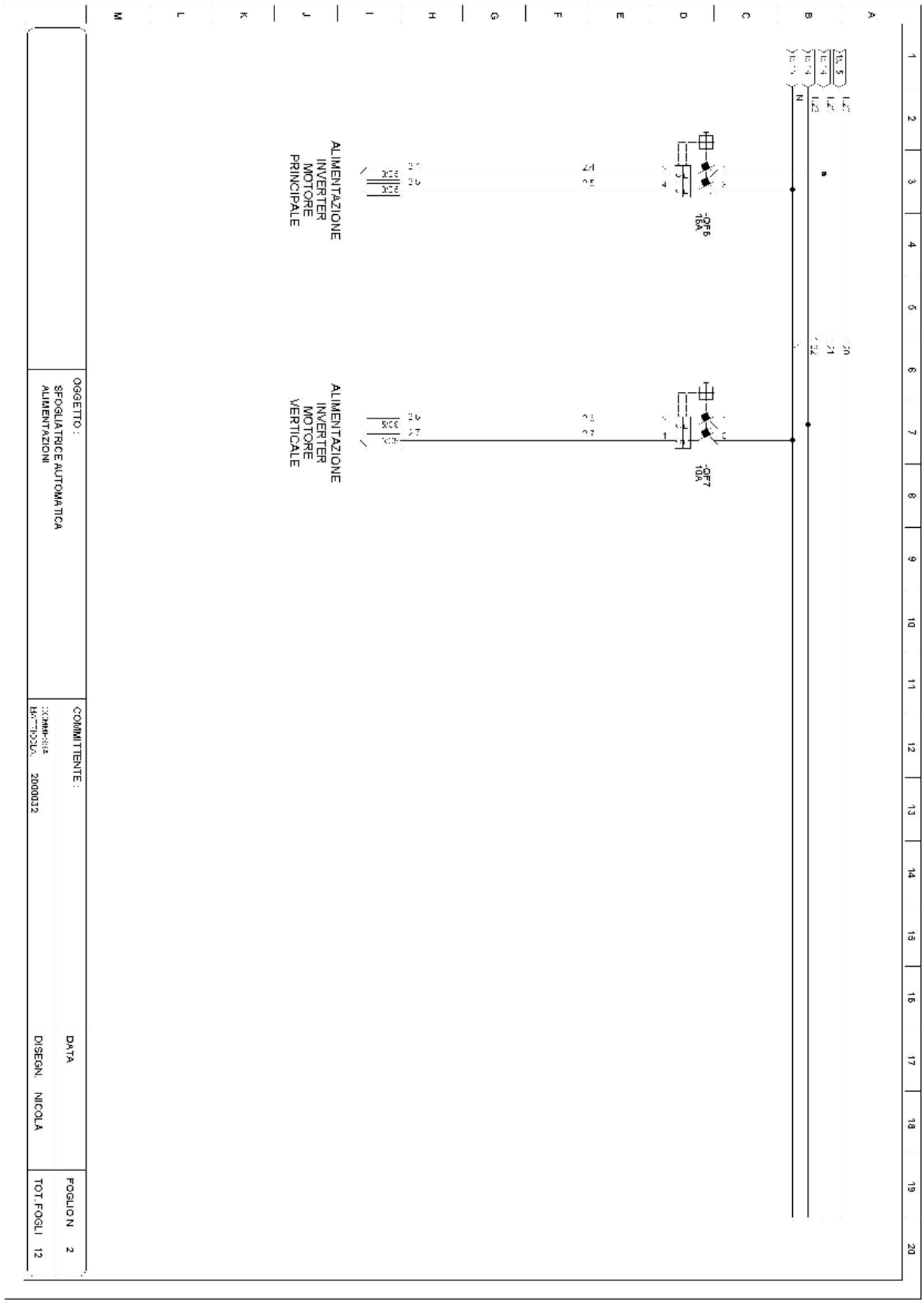
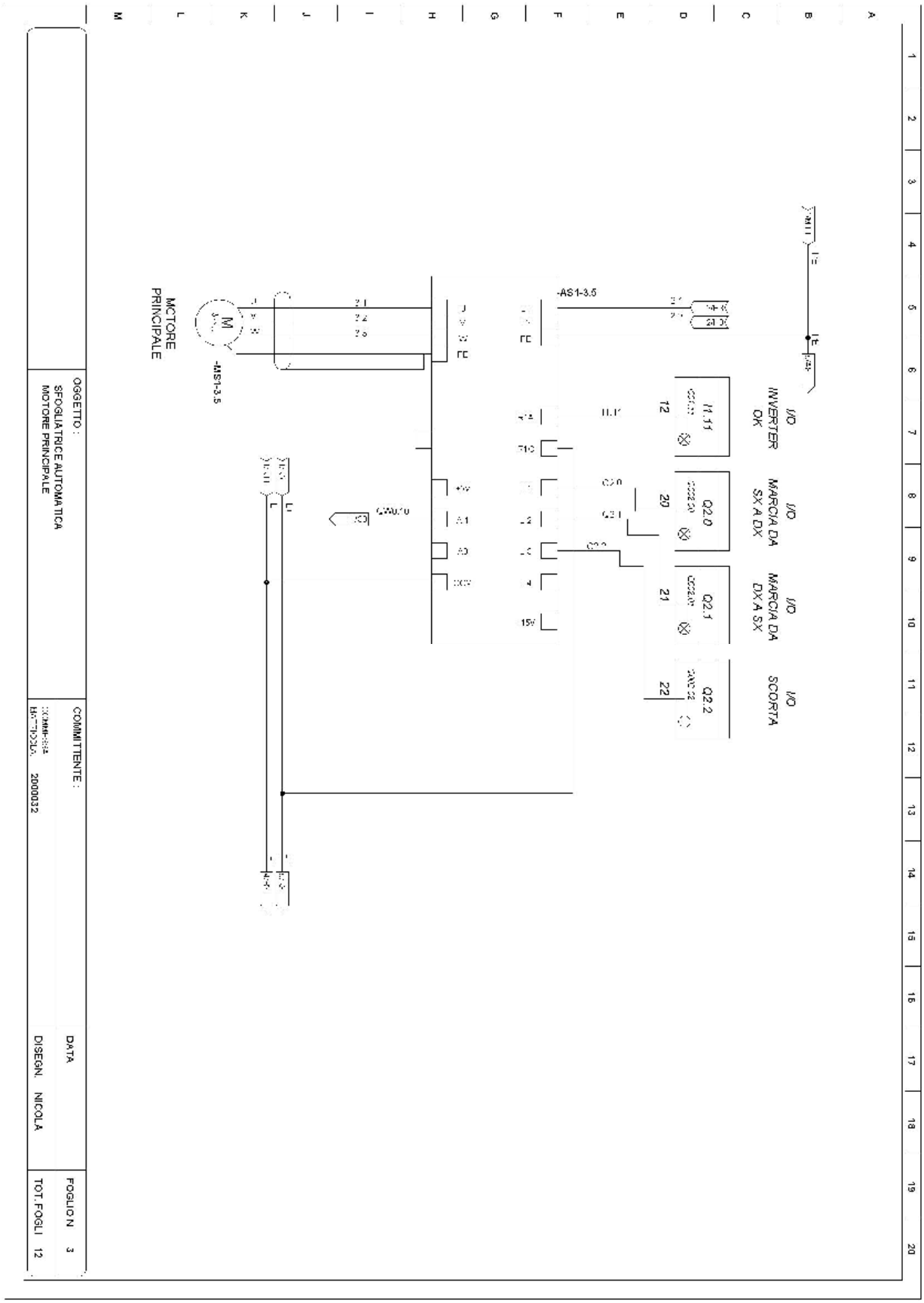
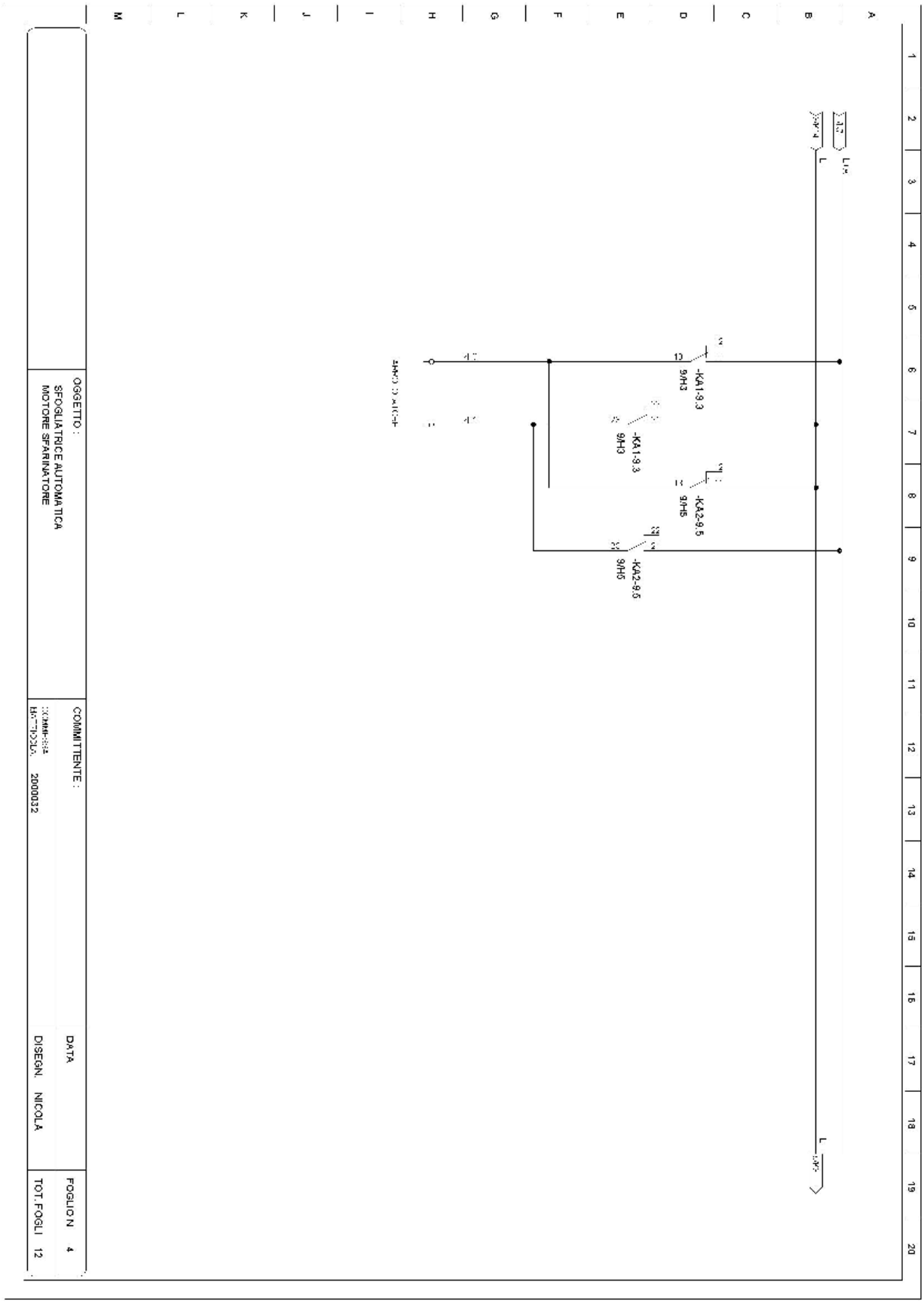
TOT.FOGLI 12
-QM1
-QF3
4A
-QF4
3A
-QF5
3A
-QD1
10A
-QF2
3A
-KM1-6.3
6/03
-KM1-6.3
6/03
-KM1-6.3
6/03
DC
AC
N


ALIMENTAZIONE INVERTER MOTORE PRINCIPALE
ALIMENTAZIONE INVERTER MOTORE VERTICALE
-QF5 16A
-QF7 10A
OGGETTO :
SFOGLIATRICE AUTOMATICA
ALIMENTAZIONI
COMMITTENTE :
2000032
DISEGN. NICOLA
DATA
FOGLIO N 2
TOT.FOGLI 12


MOTORE PRINCIPALE
-MS1-3.5
-AS1-3.5
I/O INVERTER OK
I/O MARCIA DA SX A DX
I/O MARCIA DA DX A SX
I/O SCORTA
Q2.0
Q2.1
Q2.2
OGGETTO :
SFOGLIATRICE AUTOMATICA
MOTORE PRINCIPALE
COMMITTENTE :
2000032
DISEGN. NICOLA
DATA
FOGLIO N 3
TOT.FOGLI 12


-KA1-9.3
9/H3
-KA1-9.3
9/H3
-KA2-9.5
9/H5
-KA2-9.5
9/H5
OGGETTO :
SFOGLIATRICE AUTOMATICA
MOTORE SFARINATORE
COMMITTENTE :
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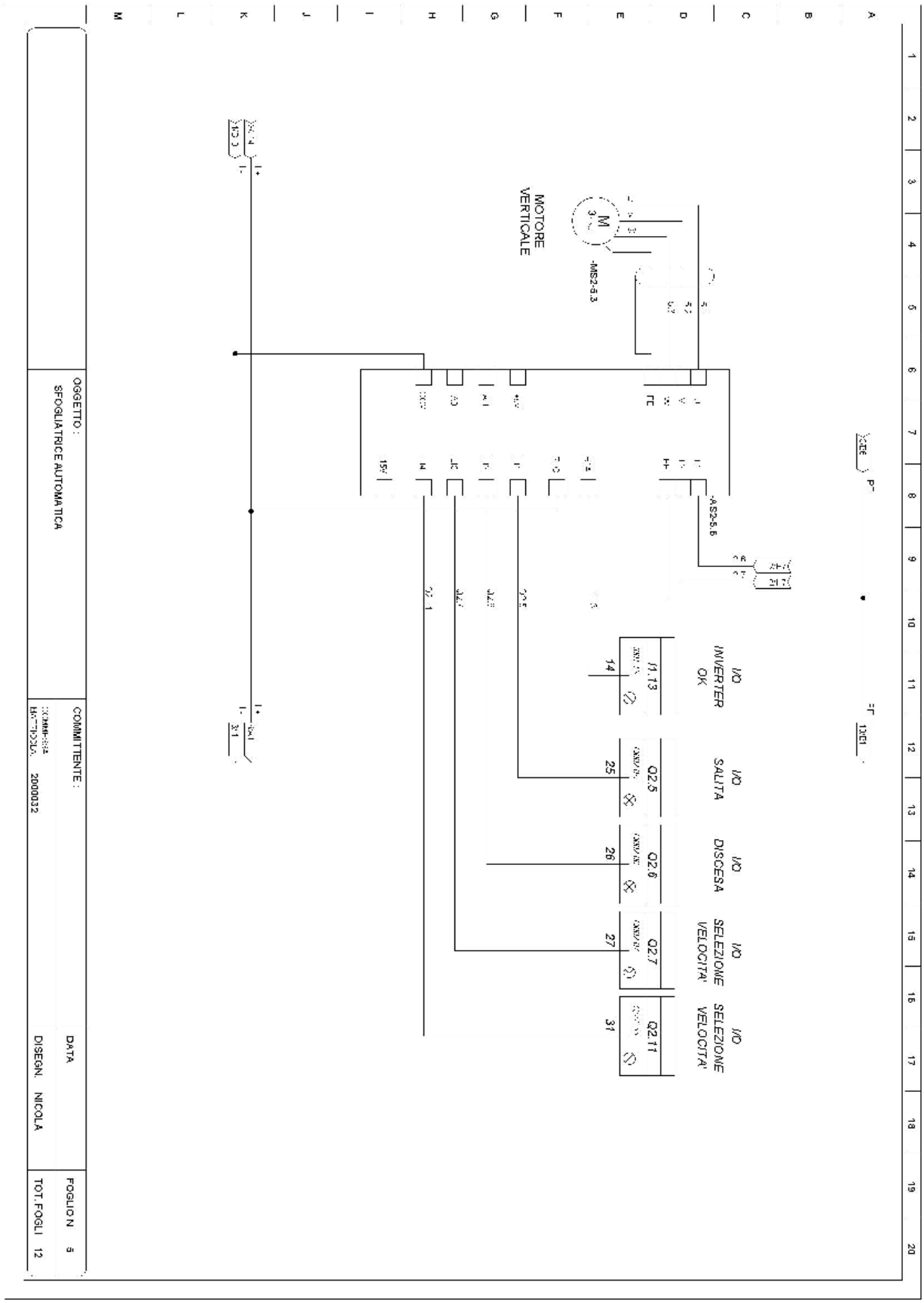
TOT.FOGLI 12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-AS2-5.6
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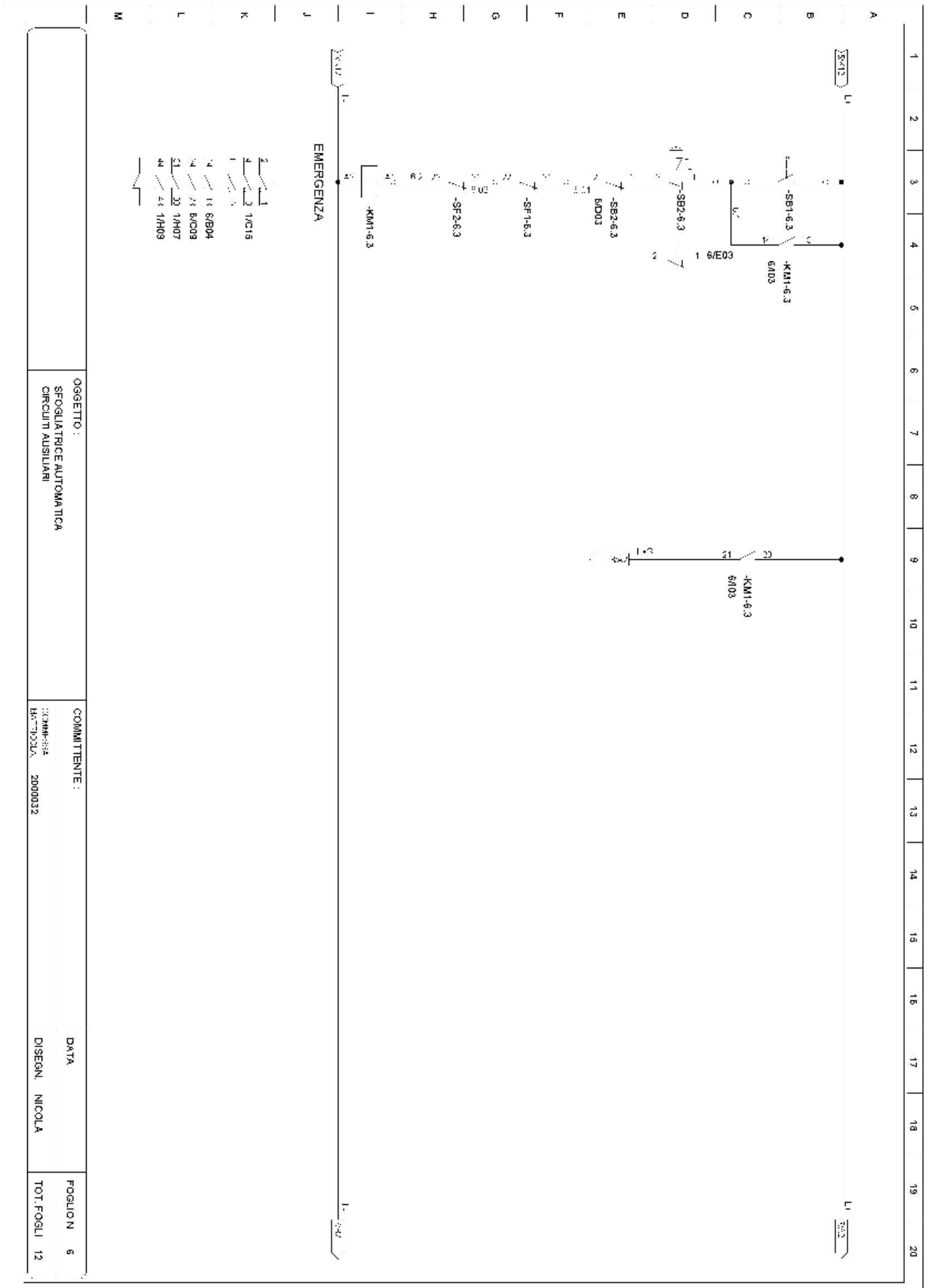
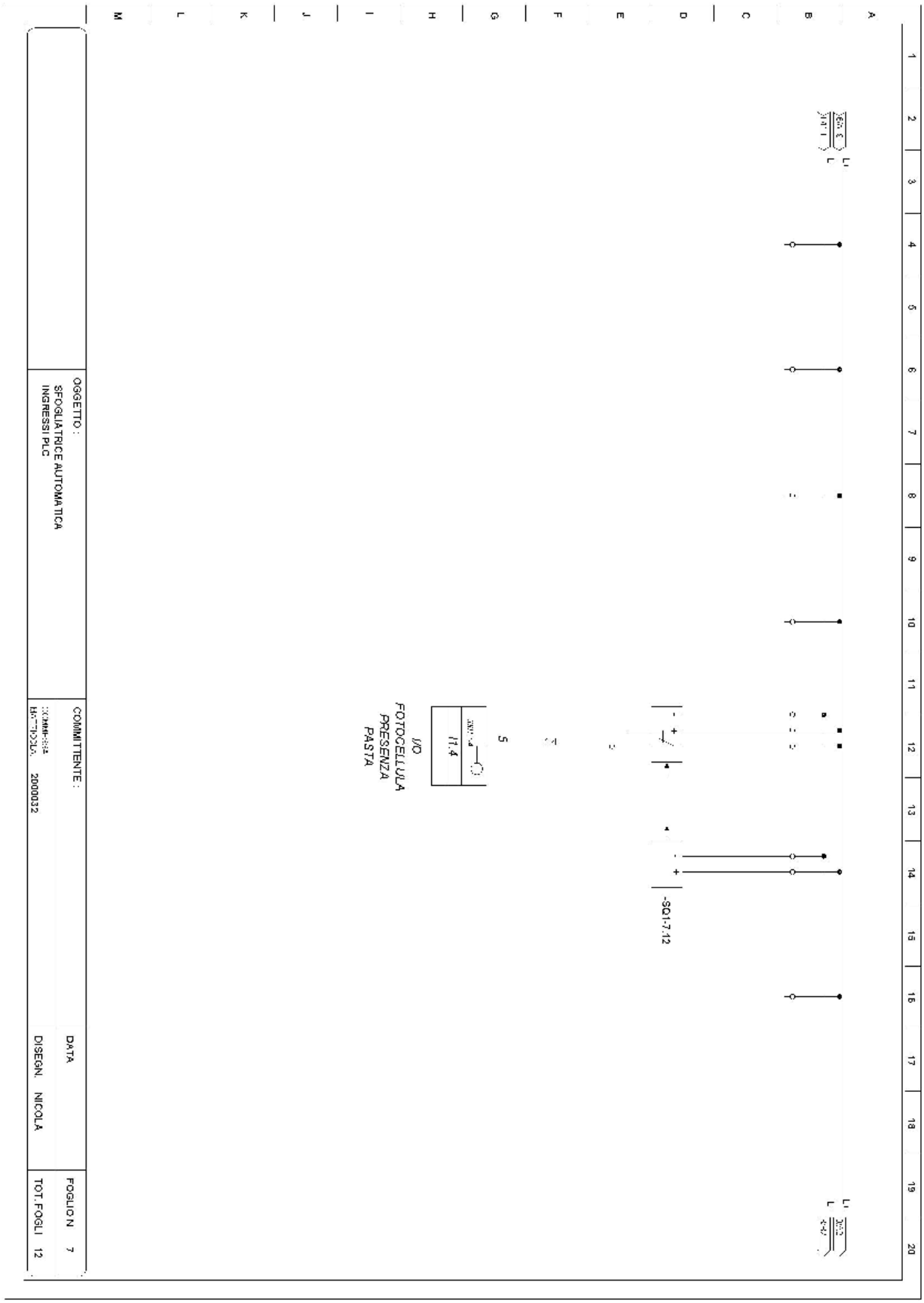
I/O SALITA
I/O DISCESA
I/O SELEZIONE VELOCITA'
I/O SELEZIONE VELOCITA'
I1.13
Q2.5
Q2.6
Q2.7
Q2.11
14
25
26
27
31
OGGETTO :
SFOGLIATRICE AUTOMATICA
COMMITTENTE :
2000032
DISEGN. NICOLA
DATA
FOGLIO N 5
TOT.FOGLI 12


-SB1-6.3
6/D03
-KM1-6.3
6/D03
1 6/E03
-SB2-6.3
-SB2-6.3
6/D03
-SF1-6.3
-SF2-6.3
EMERGENZA
-KM1-6.3
1/C15
6/B04
6/C09
1/H07
1/H09
-KM1-6.3
6/D03
OGGETTO :
SFOGLIATRICE AUTOMATICA
CIRCUITI AUSILIARI
COMMITTENTE :
DATA
DISEGN. NICOLA
FOGLIO N 6
TOT.FOGLI 12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INGRESSI PLC
COMMITTENTE :
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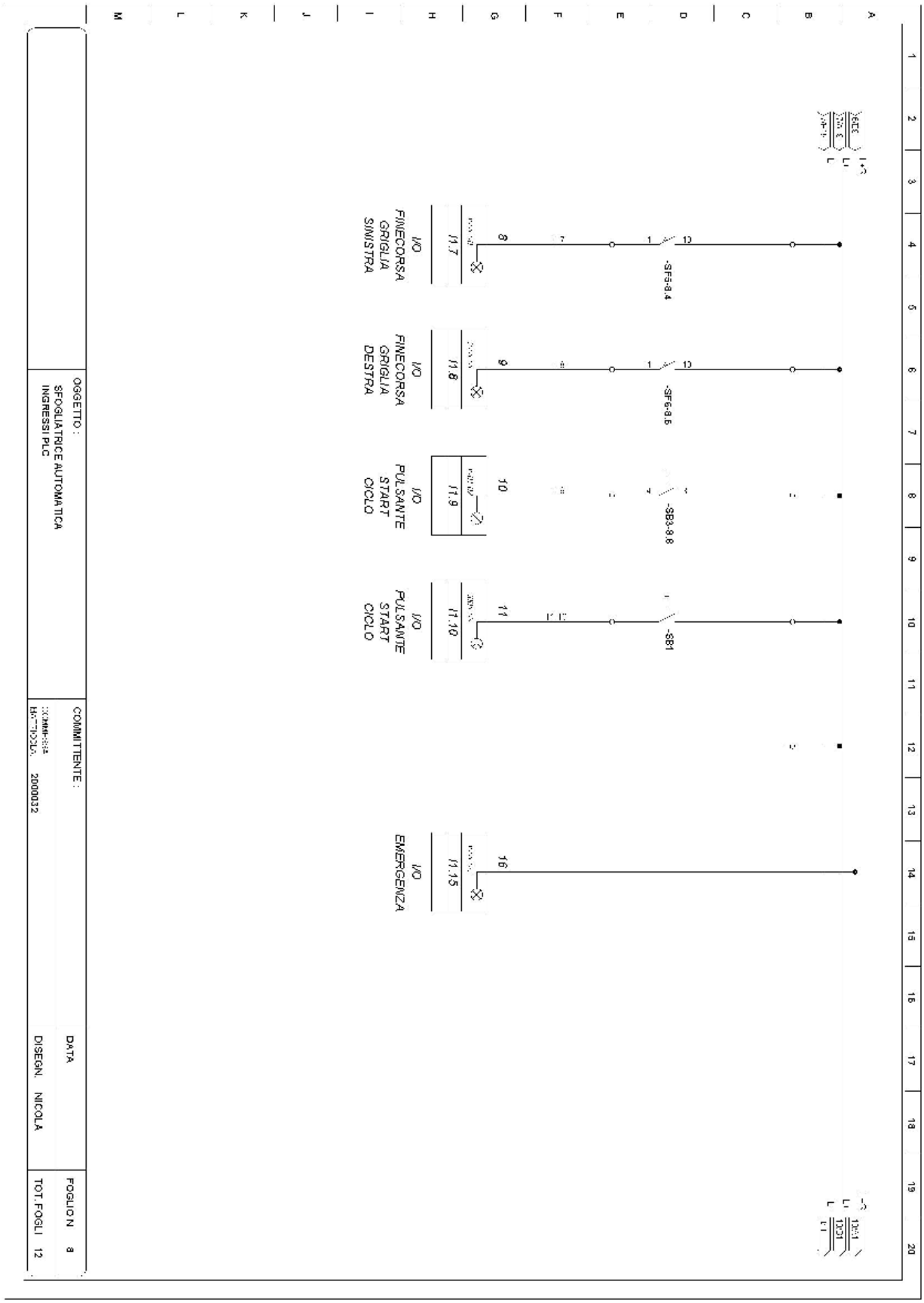
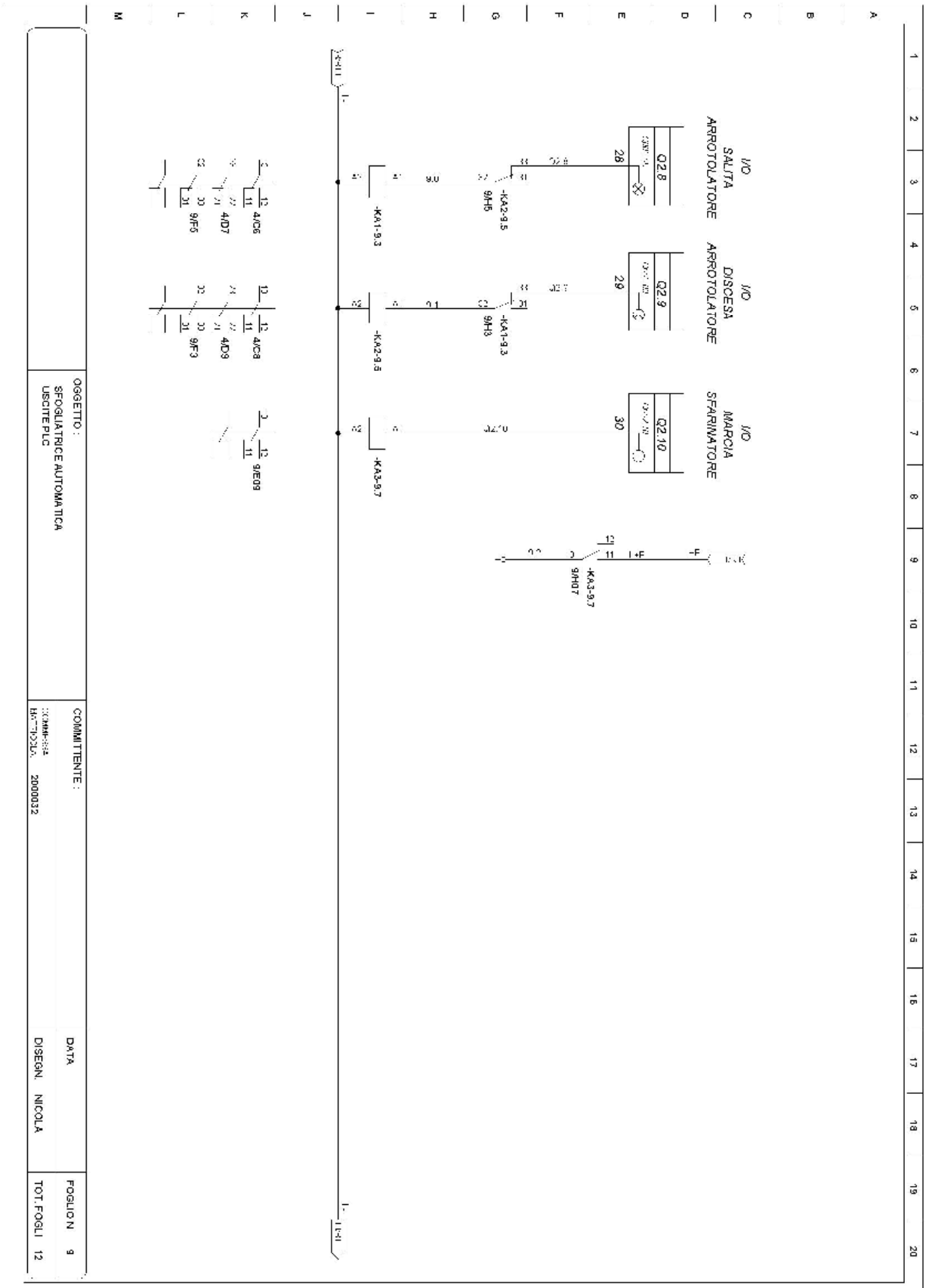
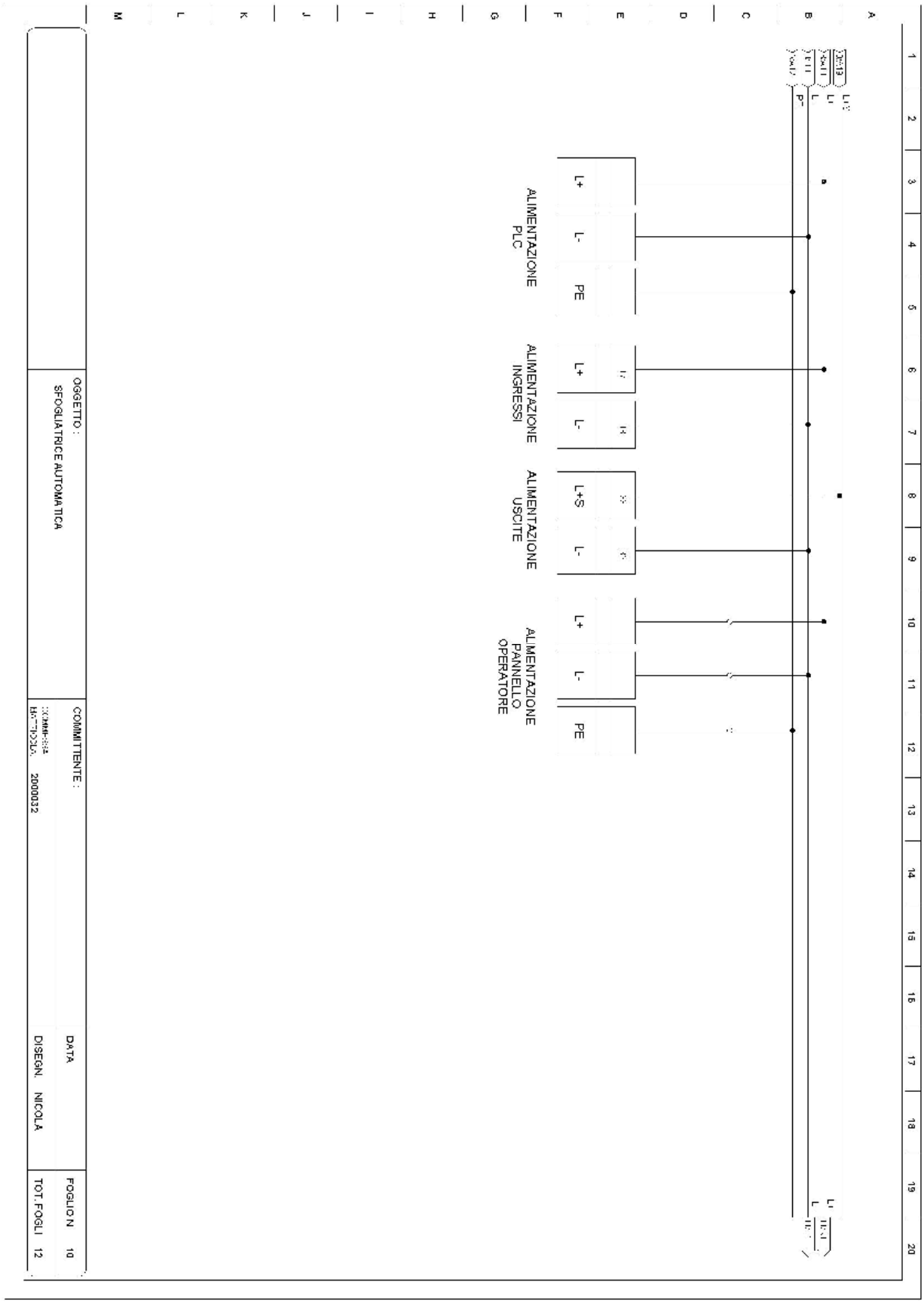
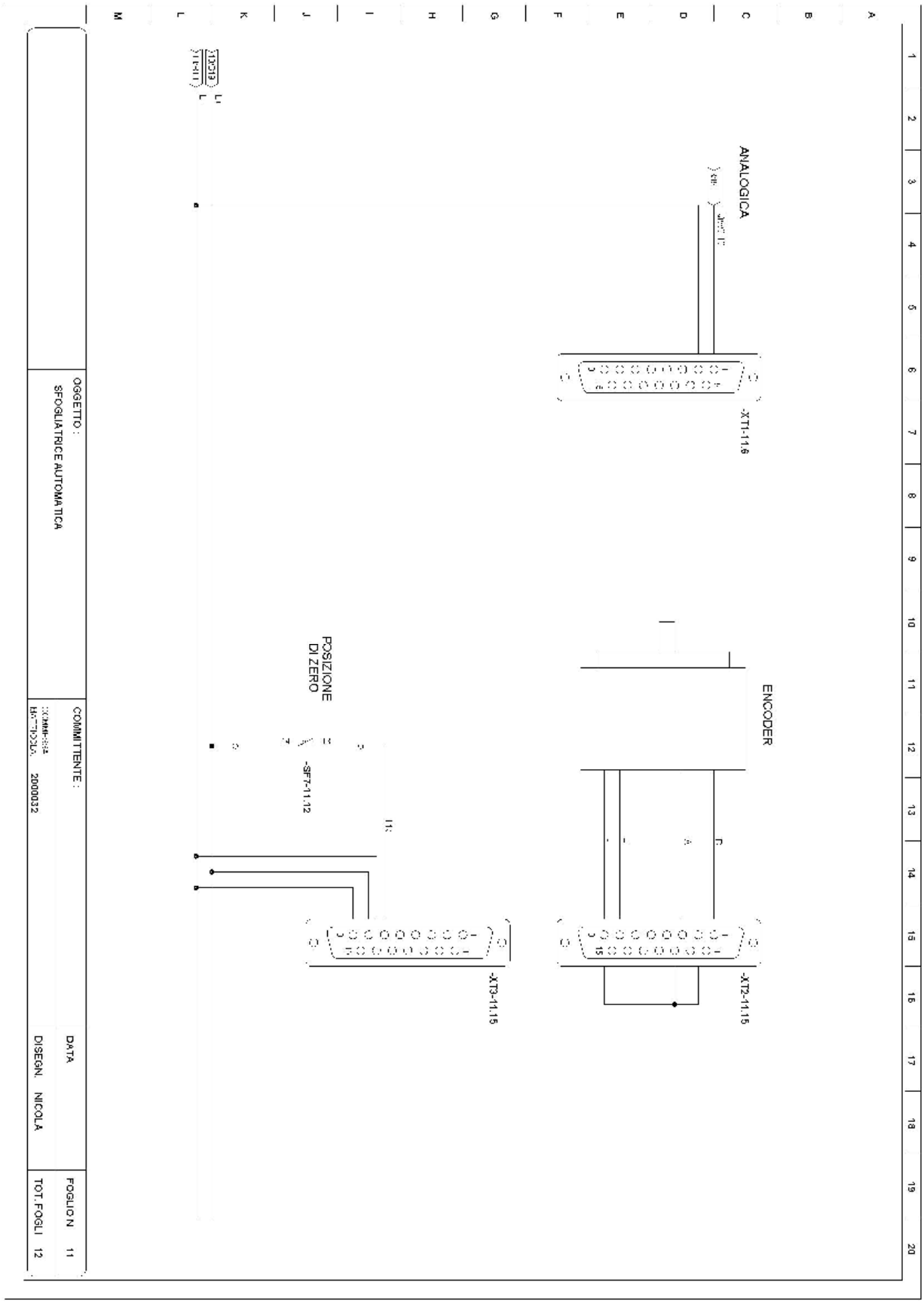
I/O
FOTOCELLULA
PRESENZA
PASTA
11.4
5
-SQ1-7.12


I/O FINECORSA GRIGLIA SINISTRA
I1.7
-SF5-8.4
I/O FINECORSA GRIGLIA DESTRA
I1.8
-SF6-8.5
I/O PULSANTE START CICLO
I1.9
-SB3-8.8
I/O PULSANTE START CICLO
I1.10
-SB1
I/O EMERGENZA
I1.15
OGGETTO :
SFOGLIATRICE AUTOMATICA
INGRESSI PLC
COMMITTENTE :
DISEGN. NICOLA
DATA
FOGLIO N 8
TOT.FOGLI 12


I/O
SALITA
ARROTOLATORE
Q2.8
28
-KA2-9.5
9/H5
I/O
DISCESA
ARROTOLATORE
Q2.9
29
-KA1-9.3
9/H3
I/O
MARCIA
SFARINATORE
Q2.10
30
-KA3-9.7
9/H7
-KA1-9.3
-KA2-9.5
-KA3-9.7
4/C6
9/F5
4/D7
4/C8
9/F3
4/D9
9/E9
OGGETTO :
SFOGLIATRICE AUTOMATICA
USCITE PLC
COMMITTENTE :
DISEGN. NICOLA
DATA
FOGLIO N 9
TOT.FOGLI 12

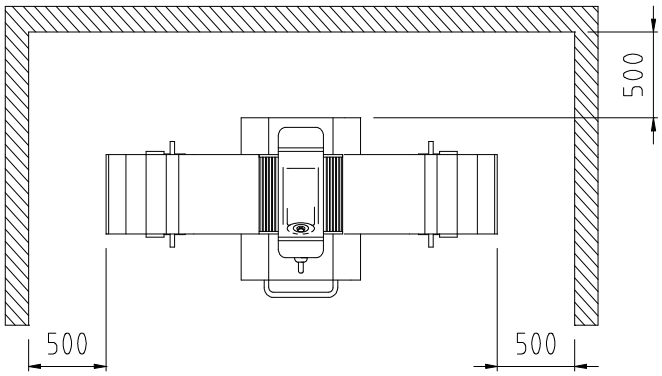

ALIMENTAZIONE PLC
L+
L-
PE
ALIMENTAZIONE INGRESSI
L+
L-
ALIMENTAZIONE USCITE
L+
L-
ALIMENTAZIONE PANNELLO OPERATORE
L+
L-
PE
OGGETTO :
SFOGLIATRICE AUTOMATICA
COMMITTENTE :
2000032
DISEGN. NICOLA
DATA
FOGLIO N 10
TOT.FOGLI 12


ANALOGICA
-XT1-11.6
ENCODER
POSIZIONE DI ZERO
-SF7-11.12
-XT3-11.15
-XT2-11.15
OGGETTO :
SFOGLIATRICE AUTOMATICA
COMMITTENTE :
2000032
DISEGN. NICOLA
DATA
FOGLIO N 11
TOT.FOGLI 12

3- STARTING UP

3.1 INSTALLATION

- Choose a suitable place for installing the machine, observing the minimum distances from the walls as shown in the figure at the side. These spaces are necessary for cleaning and routine maintenance operations and also ensure safe operating conditions without the danger of dragging in and/or crushing.
- The room must be provided with adequate lighting and ventilation.

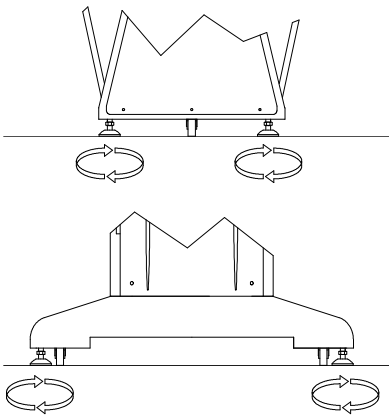


- Check that connections have been made as per specification in this manual (electricity).
- After unpacked, ensure the machine is in perfect conditions, checking there are no visibly damaged parts. If in doubt, contact professionally qualified personnel (your dealer) and do not use the machine.
- The packaging elements (plastic, nails, screws, wood etc.) must not be left within the reach of children as they are potential hazards; they must be appropriately disposed of, especially if they are polluting.

⚠ **CAUTION** For ambient lighting you are advised to follow the specifications of the laws in force.

Position the sheeter and ensure its stability on the floor:

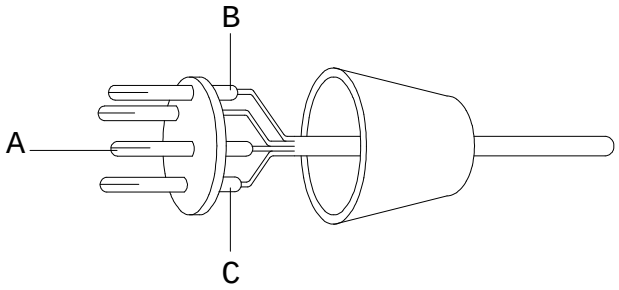
Ajust the height of the feet by loosening or tightening them until the sheeter results stable. Once the machine has been levelled it will remain stable and does not require any anchoring to the floor.
N.B. the 4 feet are adjustable



3.2 CONNECTION TO THE MAINS

- The machine is provided with one single electrical connection with connection cable at the rear.
- Check that the rating plate voltage corresponds to the mains voltage.
- The machine must be connected to a manual control voltage disconnection device fitted in an easily accessible position so that the machine electrical equipment can be separated from the mains when necessary (e.g. during maintenance or cleaning).
- For sizing of the cable and disconnection device, see wiring diagram data.
- If not supplied, fit a retention plug to the machine connection cable suitable for the disconnecting device installed and connect to the socket.
- Following the operating instructions (Chap. 4), with the machine empty, start and run a few right and left rolling tests, adjusting the rolling thickness.
- To connect the plug to the supply cable (when not provided) refer to figure –a1-; this operation must be performed in compliance with the "CAUTION" note at the foot of the page.

Fig. –a1-



NOTE: REGULATIONS FOR SAFETY OF ELECTRICAL SYSTEMS

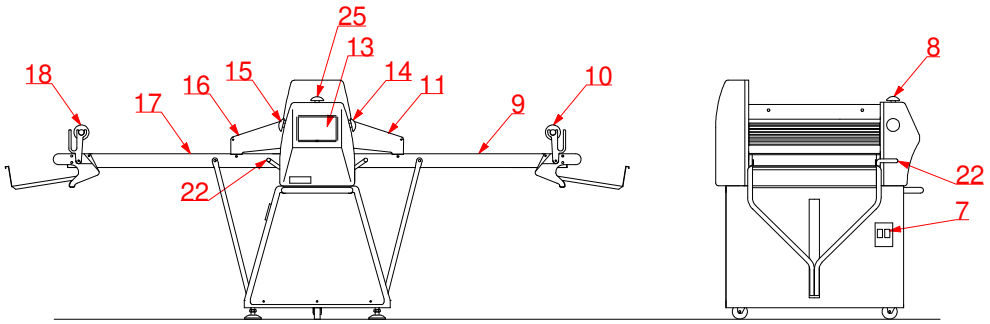
In Italy electrical equipment must meet the requirements not only of the CEI technical specifications but also the provisions of the law of 5.3.1990, no. 46, and related Implementation Regulation, DPR 6.12.1991, no. 47.
In particular, the system must be installed by a technically and professionally qualified electrician listed in the appropriate register. The installer is obliged to provide the customer with a declaration of conformity.
Old systems should be checked in order to adapt them to the latest safety regulations and state-of-the-art.

⚠ **CAUTION** Operations on the electrical part of the machine, even if minor, must be performed by professionally qualified personnel.

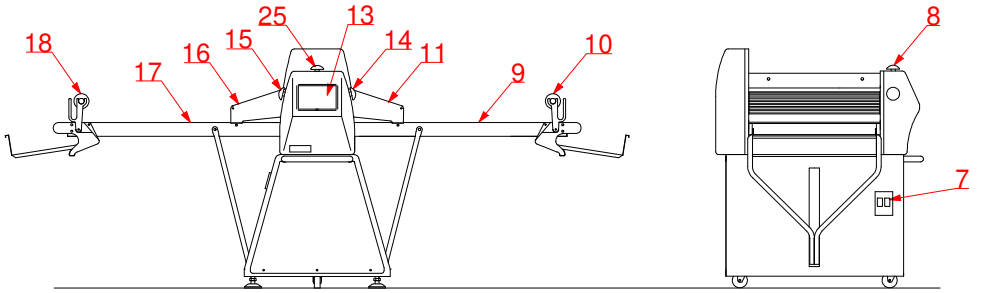
4 - INSTRUCTIONS FOR USE

4.1 GENERAL INFORMATION

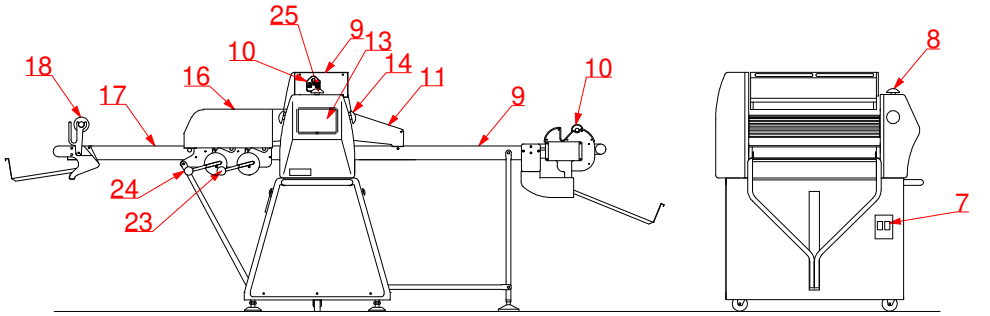
DO NOT use the machine with frozen products.
DO NOT perform maintenance operations with the machine powered.
DO NOT open the electrical board unless specifically authorised to do so.
CONNECT the machine electrically in compliance with current regulations.
CONNECT the machine to earth.



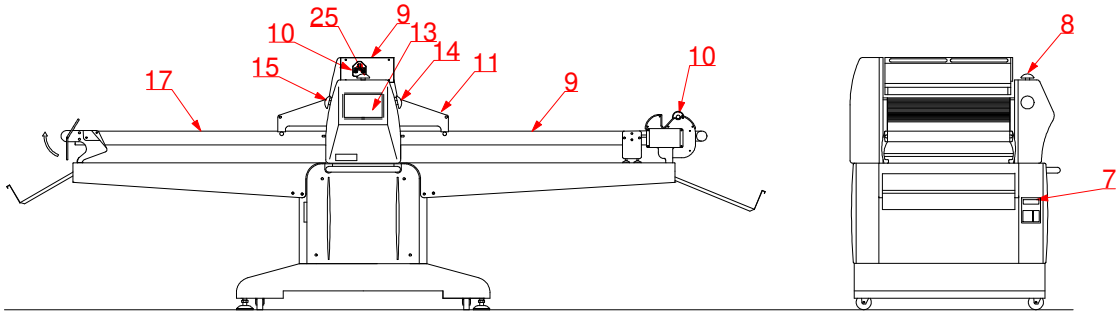
Modello: ECOSMART



Modello: SMART



Modello: SMART Optionals: Arrotolatore, Sfarinatore, Dispositivo di taglio

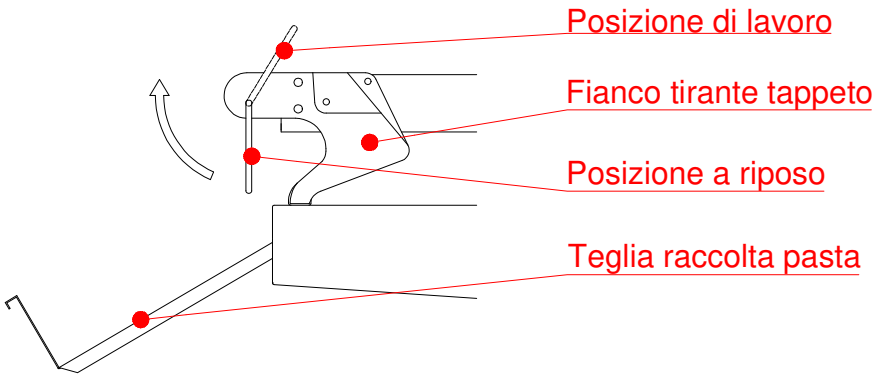


Modello: AUTOSMART

– The conveyor belts (9,17) convey the dough to be rolled through the calibration cylinders from right to left and vice versa. This right-left direction variation is determined by the control lever

(22) if the type of sheeter is the semi-automatic one. SMART or AUTOSMART sheeter are without lever 22 and it is necessary to use the touch-screen (13) and the 2 keys START (14,15) to work on it. To ease the job a grid can be opened (11,16) to stop the machine, this to verify the dough thickness. Once the grid is down press the key START located in the dough side to make the machine run once again.

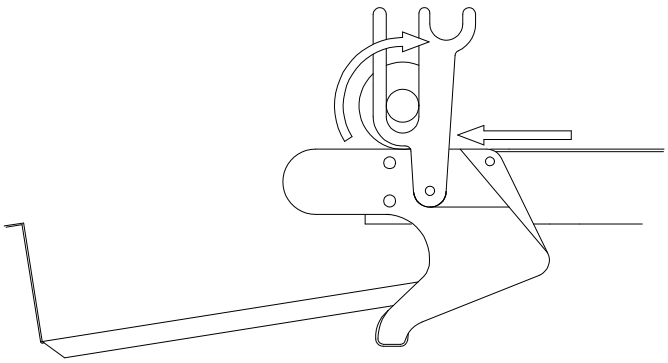
– - At each end of the worktops some stainless steel round devices are fixed to on the side of the tie-rod belt and are used to avoid strange wrinkles during the sheeting phase (especially when the dough is very thin) this round device as to be positioned just like on the picture in order to work properly.



4.2 USE OF THE MACHINE

- Rest the dough to be sheeted in the middle of the right-hand conveyor surface. Using the rolling pin provided, roll the dough in right-left and forward-back movements to reduce the thickness until you obtain a thickness of approximately 40/50 mm.
- Set the desired program or program a new one
- Ensure that the the net voltage is comptabile with the machine voltage. Switch the master switch (7) from position “0” to position “1”. Ensure that the emergency push-button is disengaged.
- It is necessary to start from the side where is located the dough, and it is necessary to keep in mind during the program setting phase the rule of pair passages and odd passages.
- As soon as you finish the ultimate sheeting operation there are three possibilities: 1) the machine wrap the dough sheet obtained around the rolling pin – 2) the machine wrap only partially the dough sheet, leaving a layer of dough free to be cut, in this case after cutting press the start button (14) – 3) the dough sheet is not winded and remains on the worktop. In this case it means that the dough has to be folded for new sheeting. It is necessary to select one of these operations during the setting; if you are working in manual condition, this will be decided at the end.
- During the sheeting operation, the operator may need to lift one safety grid (10) to inspect the product or for flour dusting. When the safety grids are lifted, as described previously in the point “protections” on p.12, the machine will stop. Once the oepration is over, simply lower the grid and press the start button (8).

Pict –a2-



(*) The lever can be easily adjusted to different positions as it engages in a self-locating machined groove, thus making intermediate settings impossible.

4.3 COMMANDS ON THE SHEETER

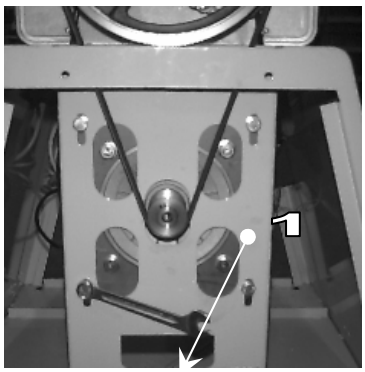
Touchscreen: the “touch-screen” (13) is the most important and most sensitive component. This screen is an interactive monitor without any keyboard; the sheeter can be programmed only through this “touch screen” The working is guaranteed in room temperature between 0 °C… +45 °C (32°F… +113 °F)and humidity (without condensatio n) 0 … 85%. It is absolutely forbidden to use free flames near to the machine or to hit it even with light knockings

5- MAINTENANCE AND CLEANING

5.1 MAINTENANCE

Unplug the machine before proceeding with any maintenance or cleaning operation.

Mechanical maintenance



- Motor belt tension. Once a month check correct tension and condition of the belt.

follow thes instructions: remove the side cover (15) of the machine. Unscrew the motor fixing screws using 13mm wrench. Under the portole (1) it is possibile to see a bolt which allow the belt adjustment by screwing or unscrewing it. Once the adjustment is done, screw the motor back again.

Electrical maintenance:

- Visually check the power supply cable and plug once a week or whenever it has been rubbed, knocked or trodden on.
- Check correct operation of the safety grids microswitches by opening and closing them during movement.
- In the event of electrical faults, contact qualified personnel.

5.2 CLEANING

⚠ **BE CAREFUL**

all the operations are to be carried when the machine is switched off and with the plug off having lend particular attention to the residual ones of tension especially in the condensers.

In order to have the optimal working of the machine, it is necessary to follow periodcally a few hygienic rules concerning the cleaning and the maintenance such as:

- *DAILY* : cleaning the knives, taking apart them from the machine and cleaning up them with a wet cloth simply from warm water, without using any type of detergent or water jet. The cleaning of the photoelectric lense must be always made with a wet cloth. It is moreover advisable to carry out the cleaning after the end of daily working cycle, in order to avoid the formation of incrustations.

- *WEEKLY :* are carried out all the previous cleanings plus the complete emptying of the flour from the duster and cleaning of the conveyor belts. The cleaning of these last ones it is strongly advisable to use a hoover and to avoid compressed air which do not assure the removal of the soil from the machine (could return back on the belts and consequently inside the dough) and can carry to an infiltration of residual in the mechanical organs, provoking a malfunctioning of the machine. The cleaning of the belts must be carried out with means of a plastic brush f and warm water without using any type of detergent or

water jet (it is advisable moreover the uses it of colorful brushes in order to allow the customer to notice eventual detachments and its easy removal).

- *MONTHLY* : beyond to the previous ones carrying out with a hoover the total cleaning of the machine eliminating the residual flour, crumbs and eventual incrustations. To verify the correct state and tension of the transmission belts and the groups chain-clutch and transmission (for the chains it is advised moreover to verify the correct lubrication in order to avoid faulty operation). Make sure of the correct operation of all the bearings on the machine by controlling the integrity and endured silence and signaling any anomaly. To inspect the conveyor belts and to verify eventual presences of bugs which must be removed immediately.

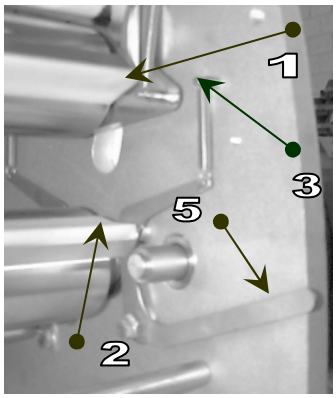
- *YEARLY:* adding a general cleaning of the basement of the machine with a cloth and warm water to all the operations already listed.

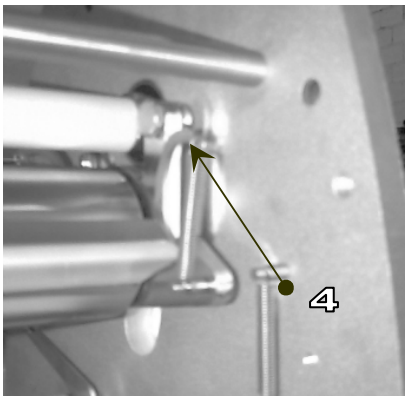
To prevent that during work the dust generated by the flour harms health (causing phenomena of rhinitides, whimperings, asthmas professional) the flour duster is placed nearest possible to the belts, thus avoiding raising the flour unnecessarily. The user will have to also pay attention at the time of pouring the flour in the basin, which it does not fall on the belt and possibly to clean it immediately.

N.B: the lack of observation of these hygienic standards can cause modifications of the foodstuff itself and represent a risk for the public health with physical, chemical and microbiotic contaminations

⚠ **ATTENTION**

Important: dust of flour is harmful for the health of the operator because it can generate rhinitides, whimperings, asthmas professional; moreover dispersion in the air can give them particularly dangerous explosive properties. we thus renew the precaution to avoid compressed air for cleaning by rather using a vacuum cleaner or a wet rag.



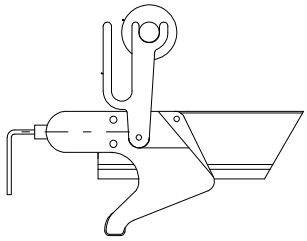


To clean the 4 scrapers "1,2" these should be dismounted: to remove the higher scrapers "1" it is necessary to take down the spring "4" on each side and to extract the complete support; to take away the 2 lower scrapers it is necessary to take down the springs "3", to extract the complete support by raising the 2 mechanical stops "5" corresponding with the springs.

.

6- OPERATING FAULTS

6.1 TROUBLE SHOOTING

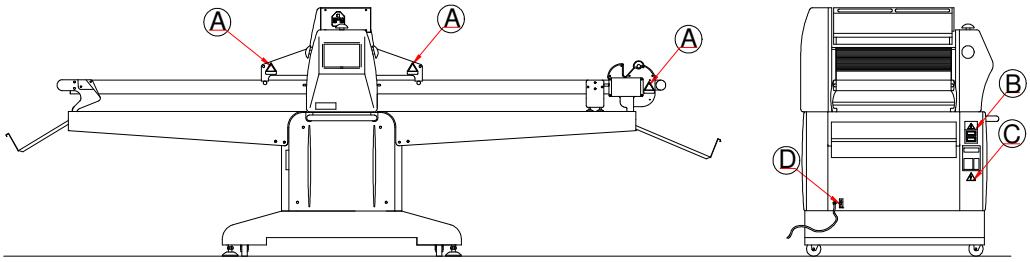
PROBLEM	CAUSE	SOLUTION
With the main switch on (Pos.13 Chap.4.3) and the movement control lever (Pos.7 Chap.4.3) operated, the machine does not work.	– The safety grid is open. – The emergency button (Pos.9 Chap.4.3) is on.	– Lower the grid – Release the emergency button.
The conveyor belts veer to one side during movement.	– The conveyor belt traction registers are not correctly positioned. Using an Allen key, tighten the adjustment screw at the end of the surface on the side towards which the belts veer.	
Irregular rotation of conveyor belts with signs of slipping.	– Drive belt loose or worn.	– Tighten or replace the belts (see chap. 5.1).

7- SAFETY WARNINGS

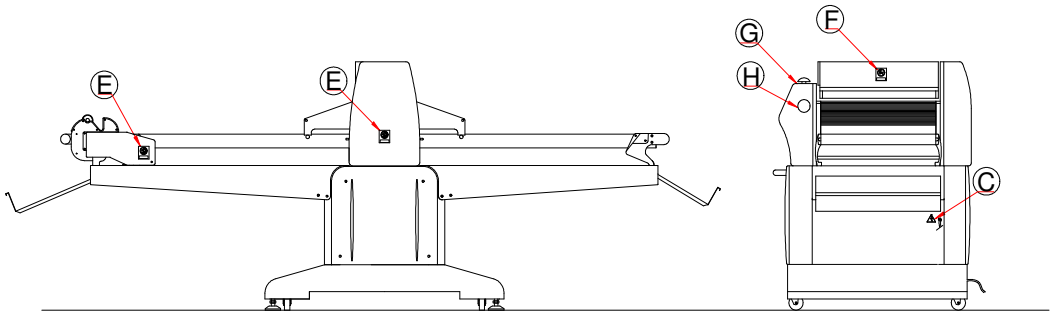
7.1 SAFETY DEVICES

The function of the safety devices is to prevent the operator accidentally inserting his hand in the calibration cylinders during movement, resulting in crushing.
It is entirely made of stainless steel with two metal sheets shaped at the side to prevent access and a set of electrowelded stainless steel rods at the top which prevent the operator inserting his hand but allow him to view the sheeting operation. It is surface-treated to facilitate cleaning.
Near the protection rotation fulcrum inside the machine, there is a microswitch which prevents operation of the machine with the protection open or stops the machine immediately if the movable protection is opened with the machine running.
A microswitch is connected to each protection.

7.2 SAFETY AND IDENTIFICATION PLATES



Modello: AUTOSMART



A: **CAUTION TO HANDS**
(yellow background, black drawing and edges)

B: **READ CAREFULLY THE MANUAL**
(white background, black letters, yellow ranger signal)

C: ELECTROCUTION DANGER!
(yellow background, black drawing and edges)

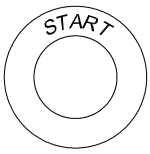
D: ELECTROCUTION DANGER!
(yellow background, black drawing and edges)

E: DO NOT REMOVE THE SAFETY DEVICES:
(white background, black letters, red prohibition)

F: SMOKING FORBIDDEN
(white background, black letters, red prohibition)

G: EMERGENCY
(yellow background, black letters)

H: Start!
(green background black letters)



Check that colours and letters are always perfectly readable. As soon as the labels start wearing it is necessary to remove and replace with new ones.

7.3 PROHIBITIONS AND OBLIGATIONS FOR PREVENTION OF ACCIDENTS

Carefully read the warnings below; they provide important information on safety.

- Do not tamper with the safety devices.
- Do not sheet frozen products or products other than those described in chap. 1.2.
- Periodically inspect the safety and control devices and keep them in efficient working order.
- Do not install accessories that do not comply with the safety standards.
- In the event of dangerous situations occurring, stop the machine functions through the emergency device and disconnect the power supply through the line selector.

⚠ **CAUTION** The panels giving access to the internal parts of the machine must not be tampered with, removed and/or opened unless strictly necessary and only by professionally qualified and/or technical support personnel.

⚠ **CAUTION:** The sheeter works in room subject to deflagration because or presence of organic dust. Smoking is highly forbidden.

8- SPARE PARTS

8.1 INSTRUCTIONS FOR ORDERING

To order spare parts, simply photocopy or copy the form below, fill in and send to us or to your nearest dealer.
Specify reference and description from the lists below.
For electrical components not given in the spare parts lists, specify the code and description provided in the parts list in the electrical documentation.
For large quantities, we will request your authorisation before dispatching the spare parts.
If you wish to order spare parts by telephone, you are advised to fill in the form and dictate it to our customer service department.

SPARE PARTS ORDER FORM

Messrs.
TEKNO STAMAP S.r.l.
Via Vittorio Veneto, 131
36040 Grisignano di Zocco Vicenza Italy _____ __ / __ / __

The machine is provided with an identification plate containing the following information:
Model: _____ Serial N°. _____ Volts: _____ Hz_____
and was purchased in the year: _____
Please send us the following spare parts:

POS.	PAGE	DESCRIPTION	QUANTITY

If the order amounts to a large sum, please obtain prior authorisation from us.

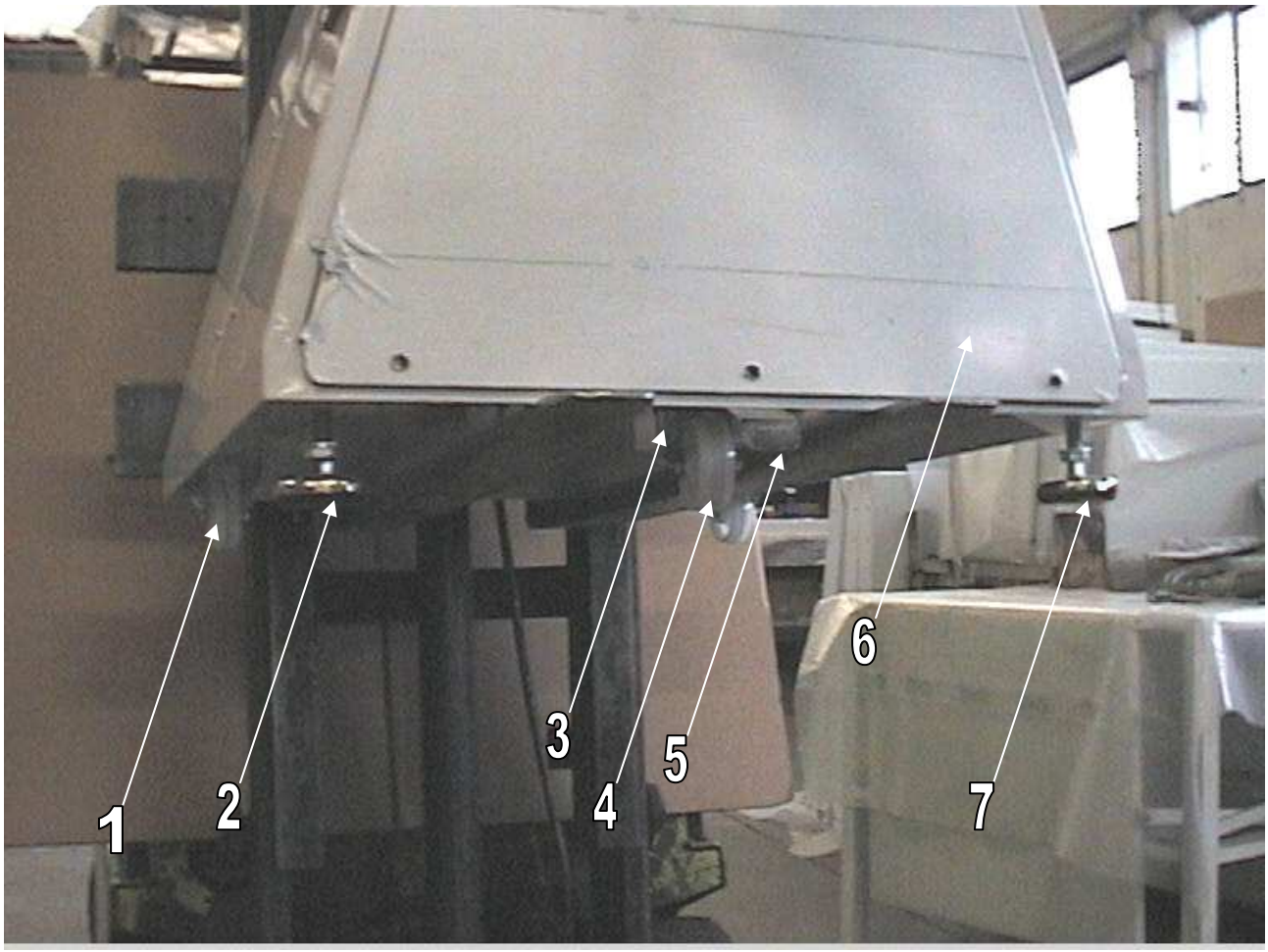
NAME _____

ADDRESS _____

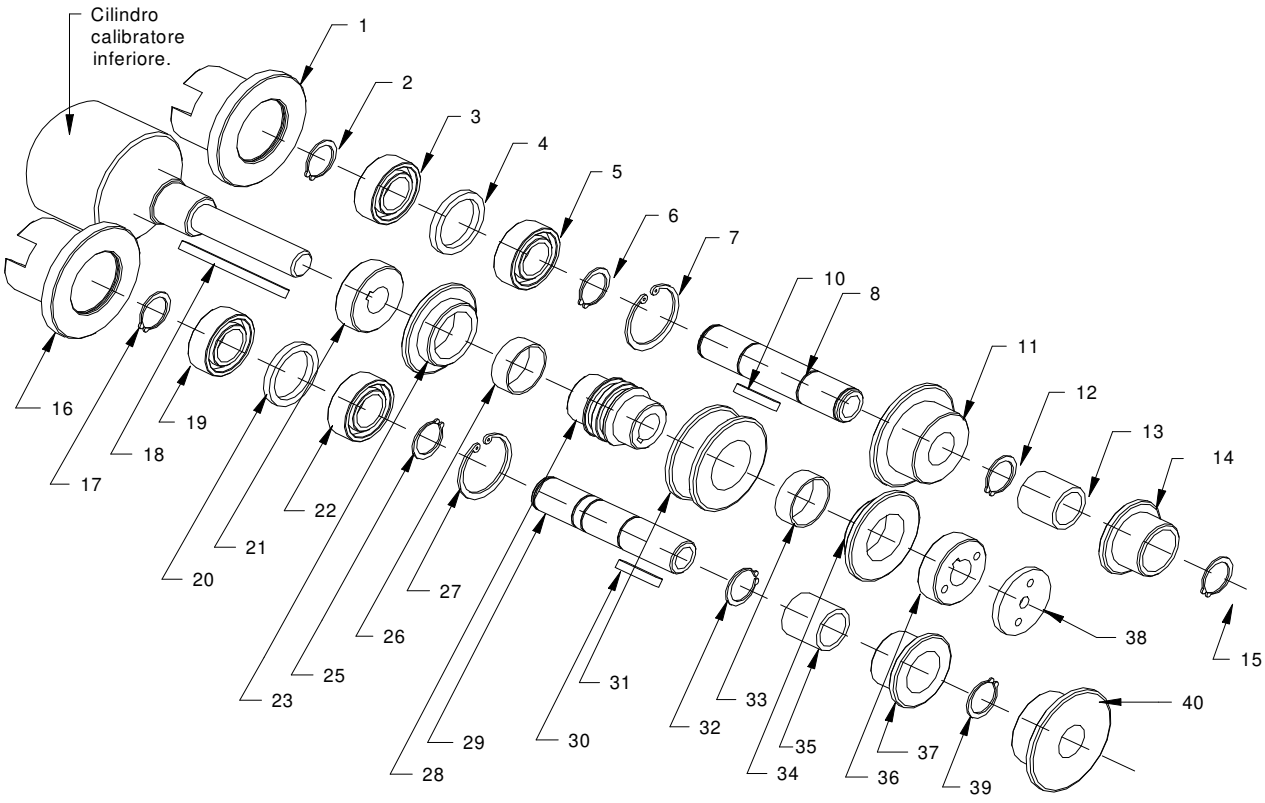
TEL._____ TAX CODE_____

SIGNATURE _____

8.2 TAV. N°1 - - STRUCTURE AND COMPONENTS



REF.	CODE	DESCRIPTION	REF.	CODE	DESCRIPTION
1	0103124	FIXED WHEEL			
2	0103160	ADJUSTABLE FOOT			
3	VE1906055	PEDAL SUPPORT			
4	0103123	PIVOTING WHEEL			
5	1906064	PEDAL			
6	1912118	BASEMENT CLOSING PANEL			
7	0103160	LEVELLING FOOT			

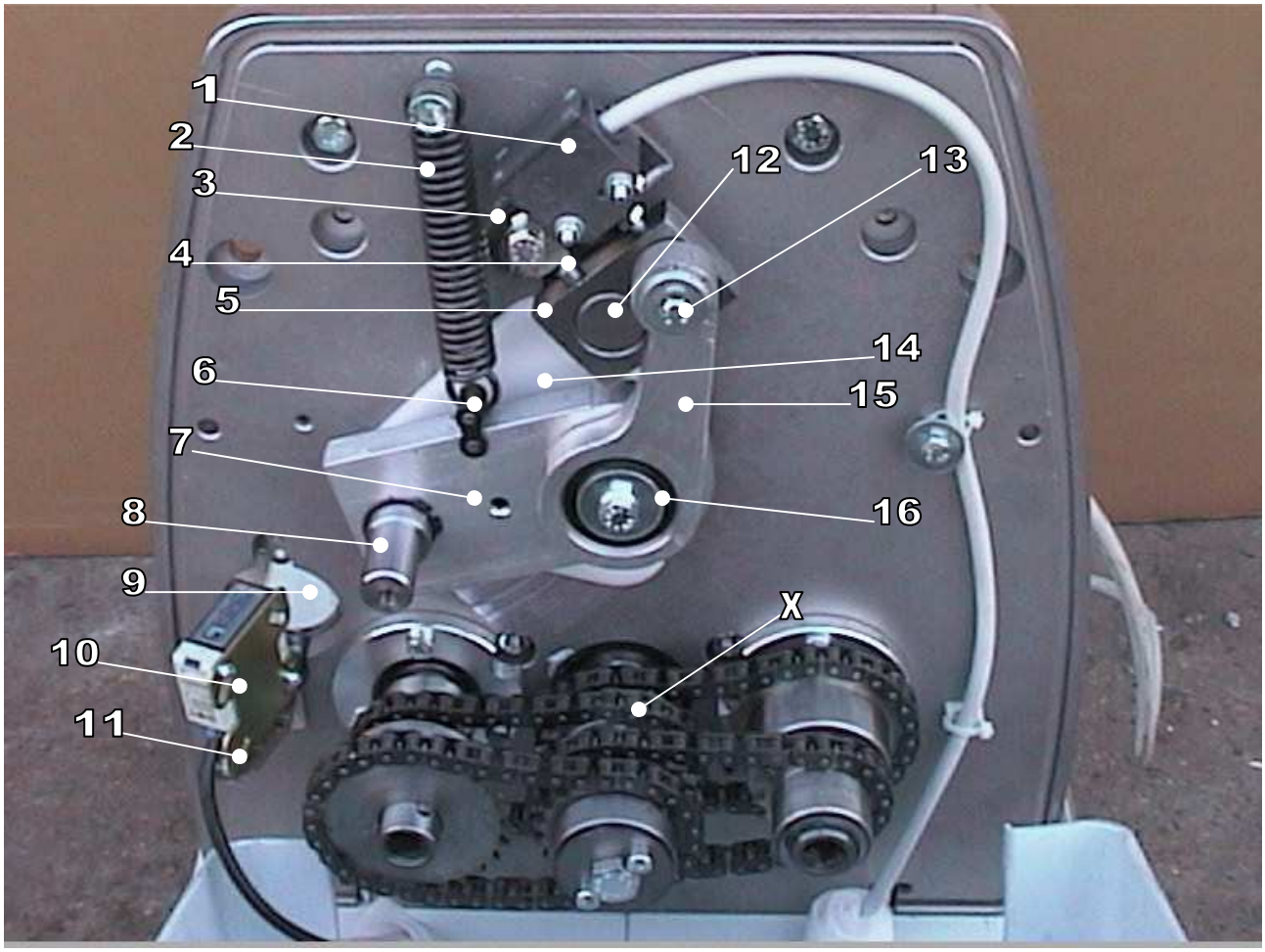


8.3 TAV. N°2 - CLUTCH UNIT

REF.	CODE	DESCRIPTION	REF.	CODE	DESCRIPTION
1	0101431	SHAFT SUPPORTING FLANGE	11	0515001	FIXED PINION
2	0415001	SEEGHER RING	12	0415001	SEEGHER RING
3	0401019	BEARING	13	0430002	IDLING WHEEL
4	0101432	BEARING SPACER	14	0515003	IDLING WHEEL PINION
5	0401019	BEARING	15	0415001	SEEGHER RING
5	0415001	SEEGHER RING	16	0101431	SHAFT SUPPORTING FLANGE
7	0416006	SEEGHER RING	17	0415001	SEEGHER RING
8	0101490	CLUTCH SUPPORTING SHAFT	18	1801044	TONGUE
10	1801023	TONGUE	19	0401019	BEARING

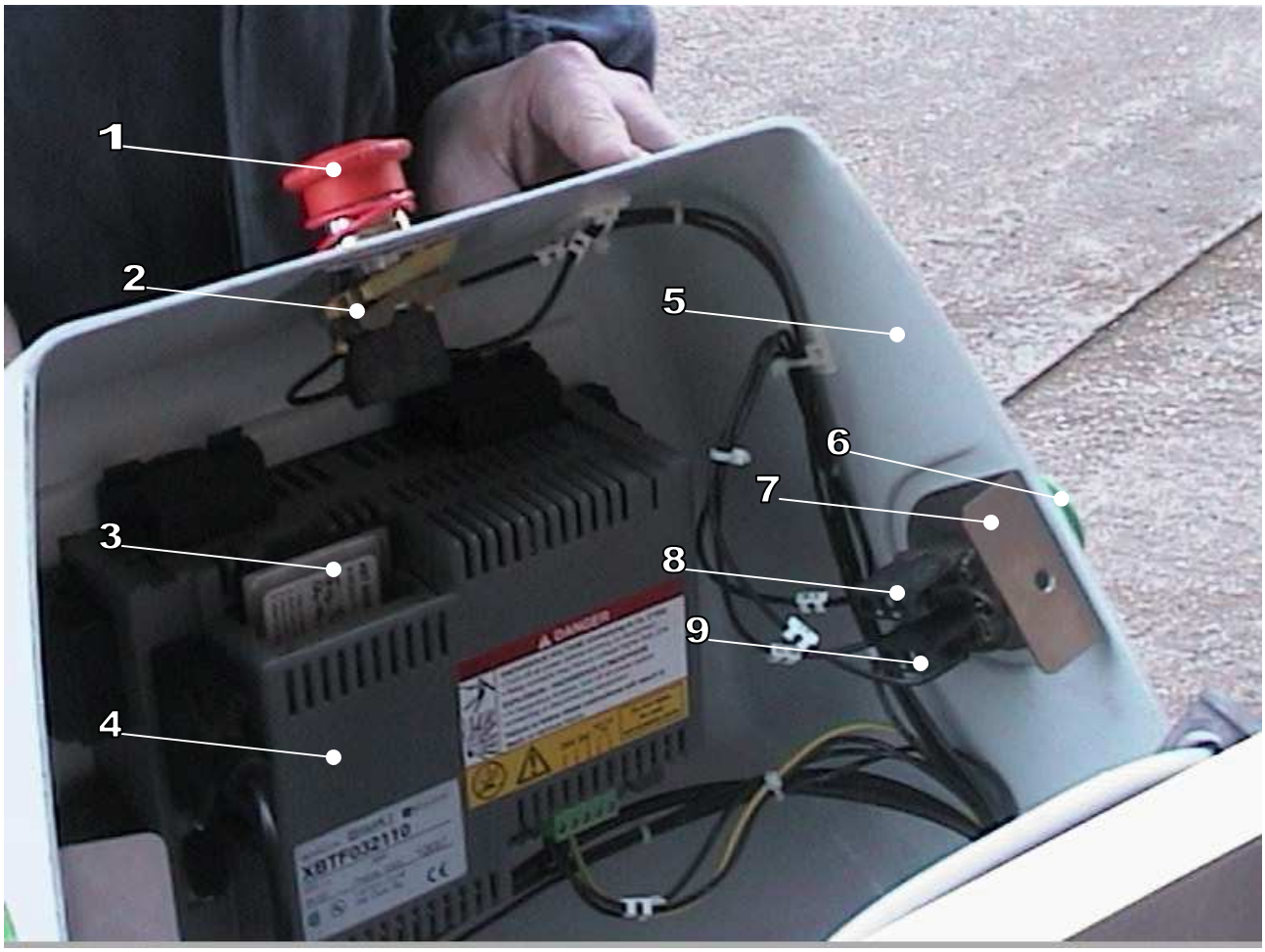
20	0101432	BEARING SPACER	33	0420010	NDC BUSH
21	0101578	CLUTCH SPACER	34	0515004	IDLE PINION
22	0401019	BEARING	35	0430002	IDLING WHEEL
23	0515004	IDLE PINION	36	0101579	FRONT CLUTCH SPACER
25	0415001	SEEGER RING	37	TT 05 15 003	IDLE PINION
26	0420010	NDC BUSH	38	0101010	CLUTCH BUSH
27	0416001	SEEGER RING	39	0415001	SEEGER RING
28	0101489	CLUTCH NUT	40	0515001	FIXED PINION
29	0101491	CLUTCH SHAFTS	41		
30	1801023	TONGUE	42		
31	FR0512003	DOUBLE PINION	43		
32	0415001	SEEGER RING	44		

8.4 TAV. N°3 - SIDE PANEL CLUTCH UNIT



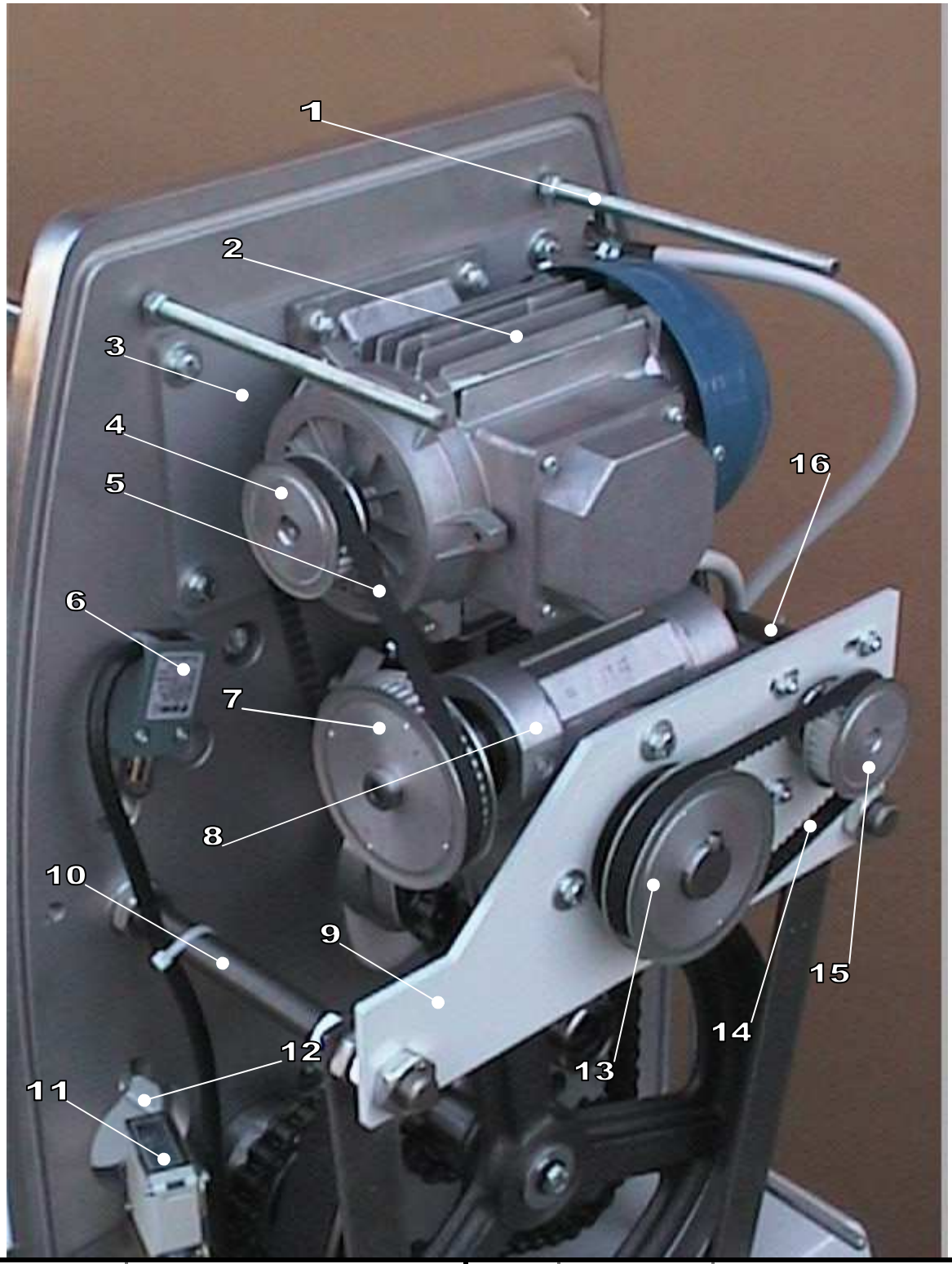
REF.	SERIAL NR	DESCRIPTION	REF.	SERIAL NR	DESCRIPTION
1	0805260	CONNECTING ROD SENSOR	15	FR0301098	COUPLING ROD
2	0202003	CYLINDERS SPRING	16	0401019	BEARING
3	1910093	SENSOR HOLDER			
4	1801015	CONICAL PIN			
5	1331002	UPPER COUPLING ROD			
6	1932003	JUNCTION LINK			
7	1319003	LINKING ROD			
8	0101418	COUPLING ROD PIN			
9	0103040	TRANSPARENT GLASS			
10	0805261	PHOTOCELL			
11	1905050	PHOTOCELL HOLDER			
12					
13					
14					

8.5 TAV. N°4 - TOUCH-SCREEN UNIT



REF.	CODE	DESCRIPTION	REF.	CODE	DESCRIPTION
1	0805195	STOP KEY	9	0805226	CONTACT
2	0805203	CONTACT BODY			
3		MEMORY CARD			
4	0805259	TOUCH-SCREEN			
5	0103146	FRONT CLOSING CARDS			
6	0805233	START KEY			
7	1917095	CARTER FIXING HOLDER			
8	0805202	CONTACT BODY			

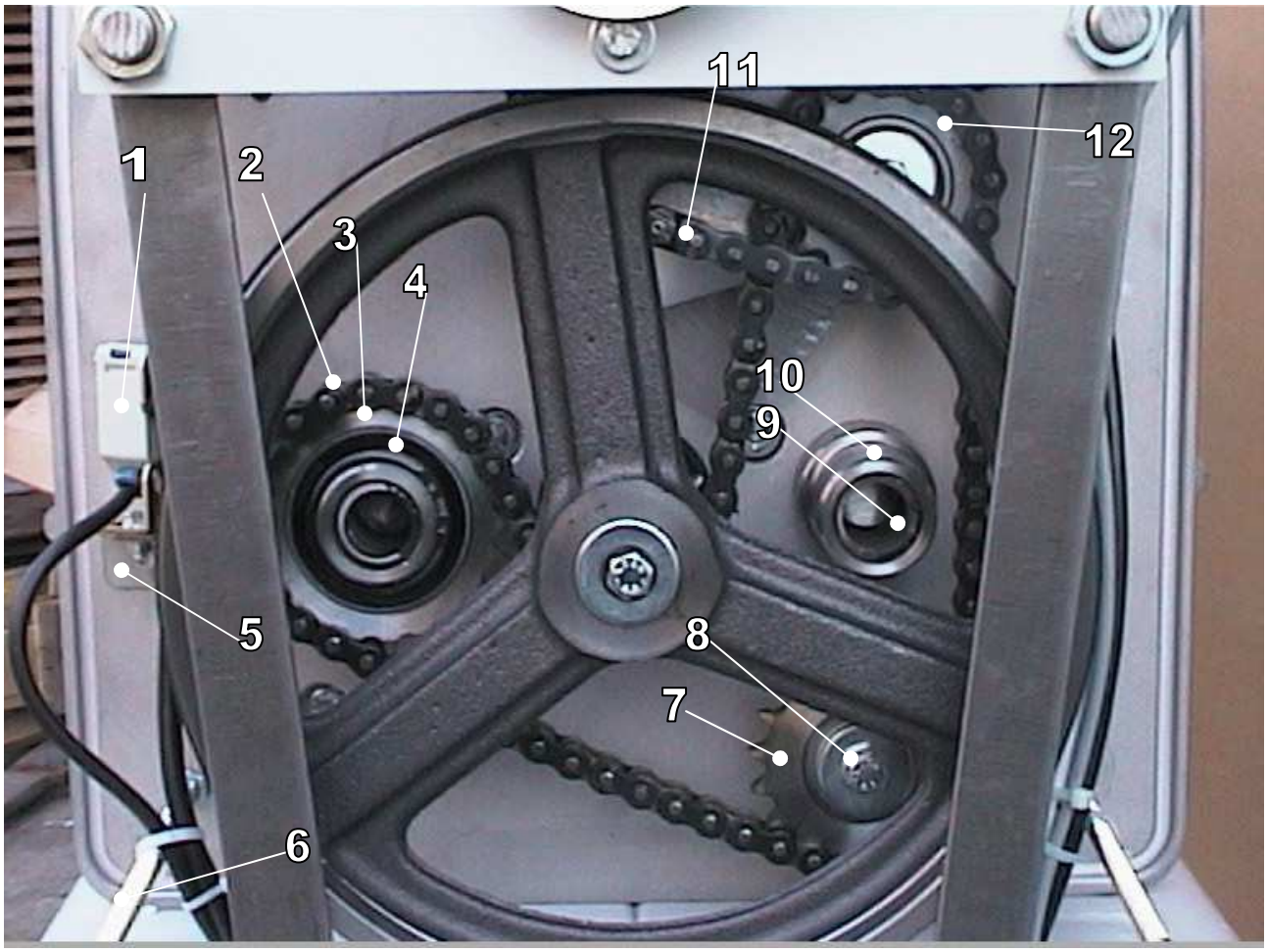
8.6 TAV. N°5 – REAR SIDE UNIT



REF.	CODE	DESCRIPTION	REF.	CODE	DESCRIPTION
1	1604010	CARTER UPPERFIXING ROD	11	0805265	PHOTOCELL

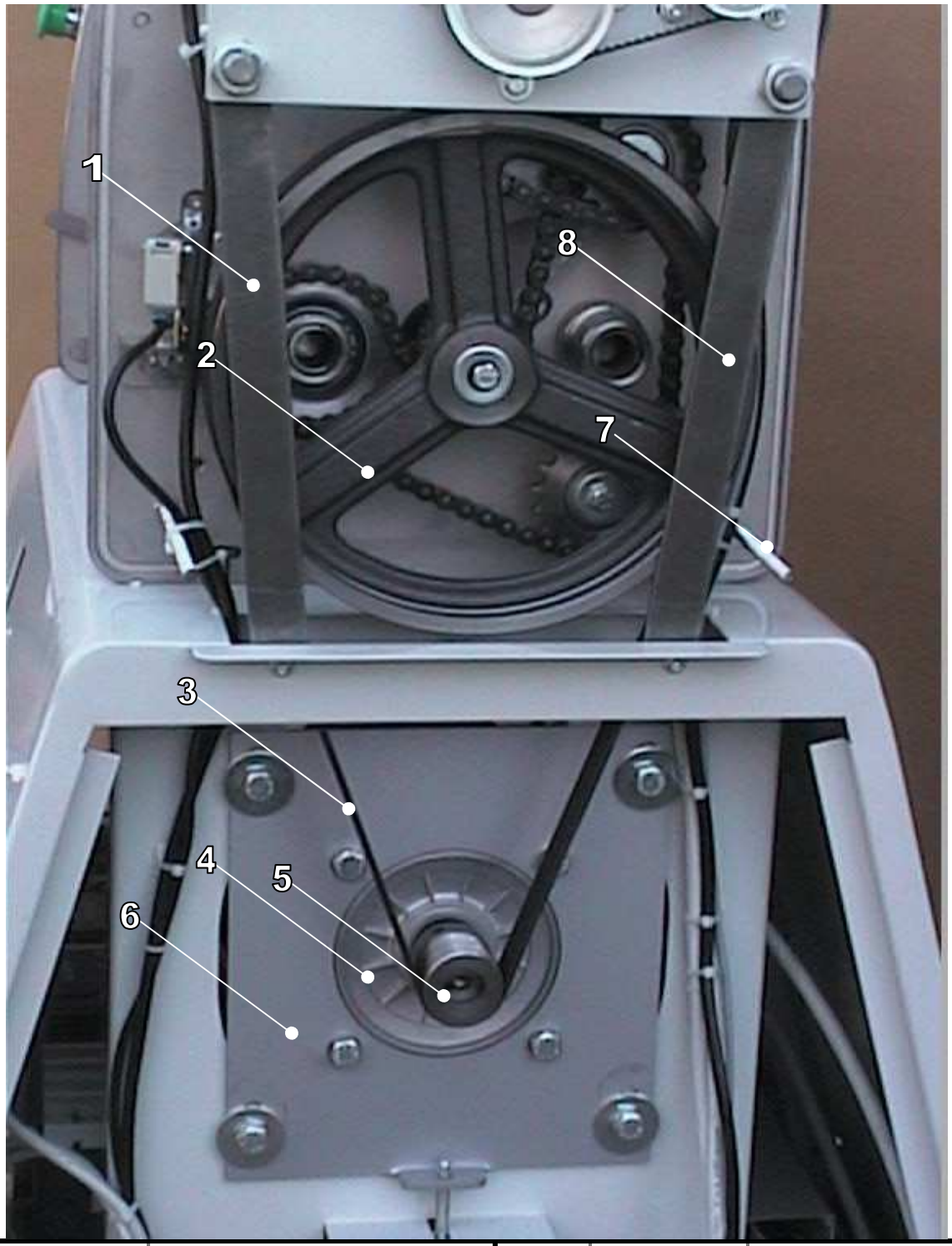
2	0801045	UP-DOWN MOTOR	12	0103040	TRANSPARENT GLASS
3	1910088	A.A.MOTOR HOLDER	13	0502011	COUPLING SHAFT PULLEY
4	0502013	A.A.MOTOR PULLEY	14	0525014	A.A. TOOTHED BELT
5	0525014	A.A. TOOTHED BELT	16		ENCODER
6	0805264	MICROSWITCH			
7	0502010	A.A.REDUCER PULLEY			
8	0810024	SPEED REDUCER			
9	VE1910089	REDUCER PLATE			
10	1601004	PLATE HOLDING ROD			

8.7 TAV. N°6 – CHAINS UNIT



REF.	CODE	DESCRIPTION	REF.	CODE	DESCRIPTION
1	0805265	PHOTOCELL	11	0533024	CHAIN
2	0533026	CHAIN	12	0511003	CYLINDERS DOUBLE PINION
3	0514004	IDLE GEAR			
4	0401024	BEARING			
5	1905050	PHOTOCELL HOLDER			
6	1604009	CARTER SUPPORTING ROD			
7	0535002	CHAIN TIGHTENER			
8	0101421	CHAIN TIGHTENER PIN			
9	0201003	COMPRESSING SPRING			
10	0101461	COUNTERBIT HOLDER			

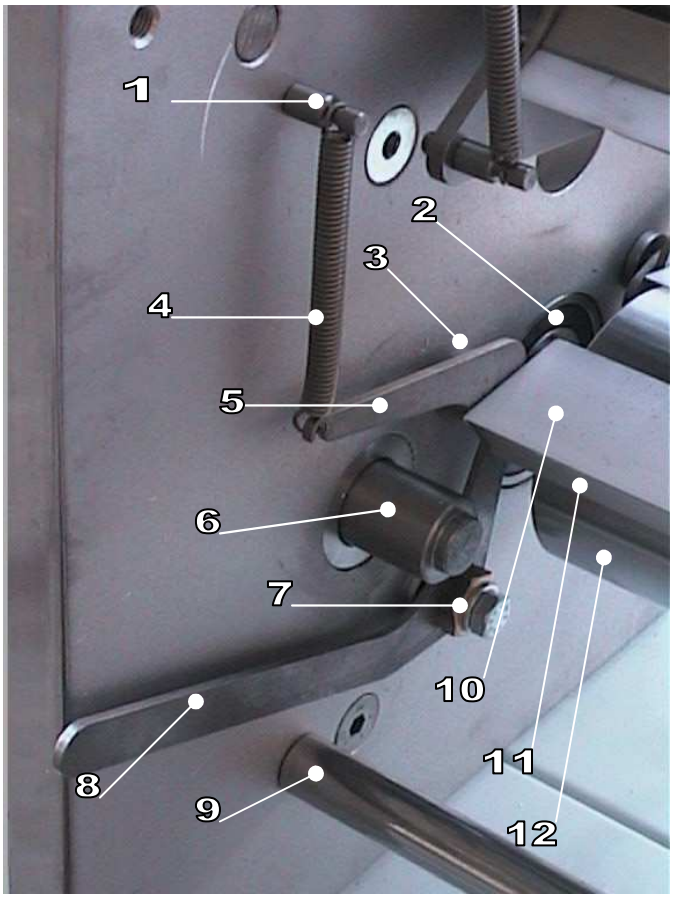
8.8 TAV. N°7 – PULLEYS UNIT

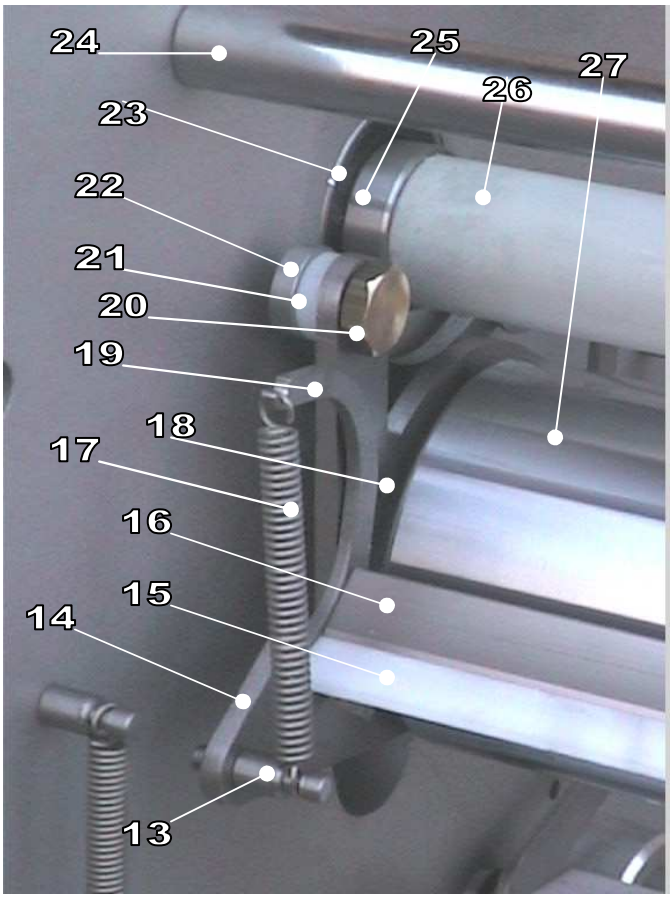


REF.	CODE	DESCRIPTION	REF.	CODE	DESCRIPTION
1	1308008	MOT/RED.PLATE HOLDER ROD			
2	FR0501015	PULLEY			

3	0525013	BELT			
4	0801045	MOTOR			
5	0501009	MOTOR PULLEY			
6	1910076	MOTOR PLATE			
7	1604009	CARTER SUPPORTING ROD			
8	1308008	MOT.ROD SUPPORT.PLATE			

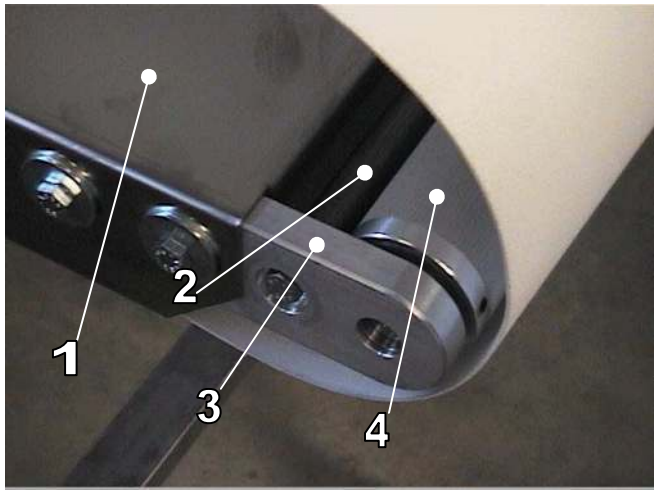
8.9 TAV. N.8 – SCRAPERS UNIT

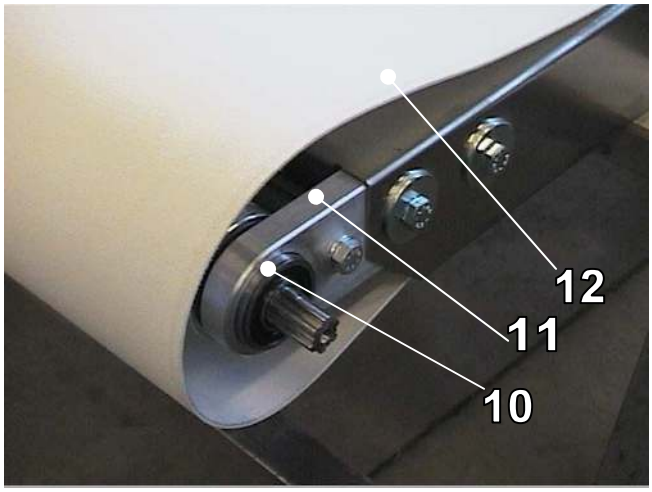


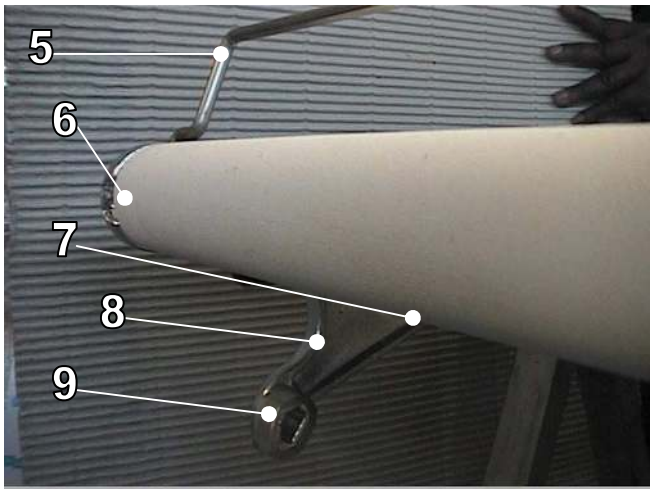


REF.	CODE	DESCRIPTION	REF.	CODE	DESCRIPTION
1	0101577	SPRING PIN	18	0401023	BEARING
2	0401011	BEARING	19	1913036	SCRAPER PLATE HOLDER
3	0101416	LOWER SCRAPER PIN	20	0101576	SCRAPERS PIN
4	0202005	SCRAPERS SPRING	21		PLASTIC SPACER
5	1913034	SCRAP. SPRING CONNECTION	22	1910087	SCRAPERS TIE-ROD
6	0101037	COUNTER CENTER BIT	23	0401008	BEARING
7	0101424	ROTATING PIN SCRAP.STOPPER	24	0101572	MACHINE SPACER
8	1913035	SCRAPER STOPPER	25	0101575	COUPLING ROD SPACER
9	0101572	MACHINE SPACER	26	0805241	GREY PROTECTING PIPE
10	0103166	SCRAPER KNIFE	27	CR0101469	UPPER CALIBRATING CYLINDER
11	0101582	LOWER SCRAPER HOLDER			
12	CR0101468	LOWER CALIBRATING CYLINDER			
13	0101577	SPRING PIN			
14	1909027	SCRAPERS HOLDER			
15	0103134	SCRAPER KNIFE			
16	0101581	UPPER SCRAPER HOLDER			
17	0202006	SCRAPERS SPRING			

8.10 TAV. N°9 - CONVEYOR BELT UNIT

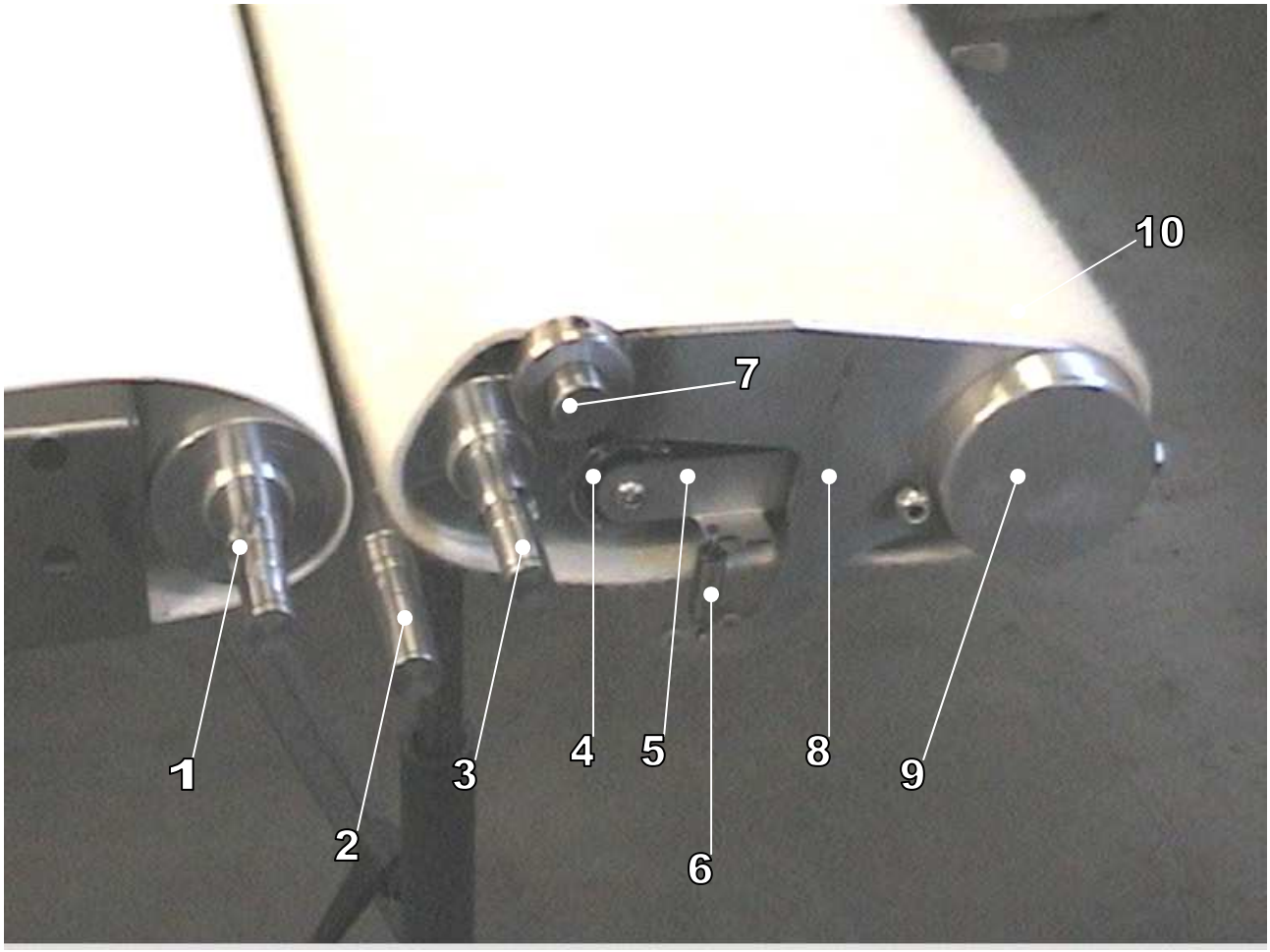






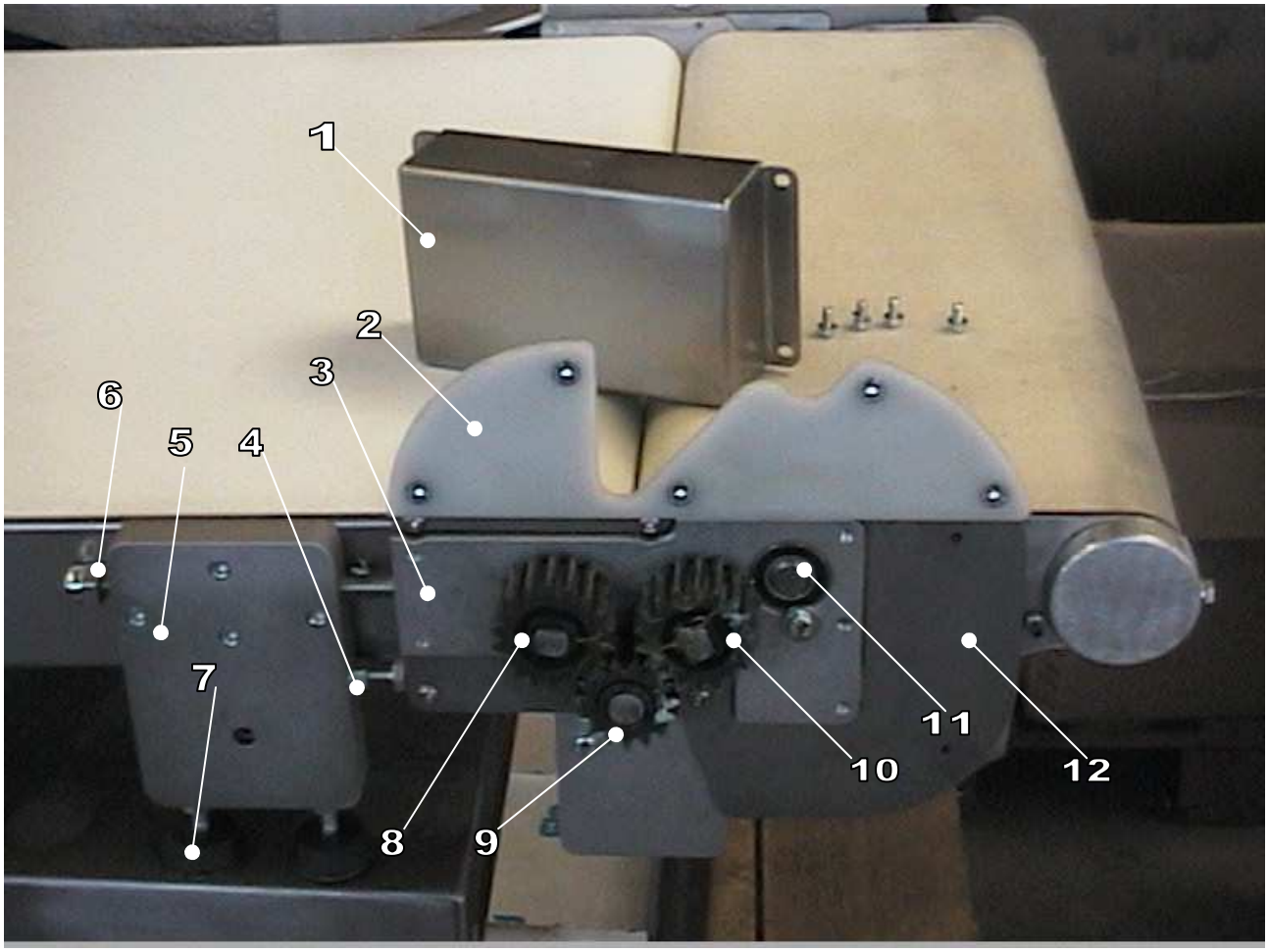
REF.	CODE	DESCRIPTION	REF.	CODE	DESCRIPTION
1		WORKTOP	9	0103179	BELT TIGHTENER HOLDER
2	0101467	WORKTOP SPACER	10	0401004	BEARING
3	0101463	LEFT WORKTOP LINK	11	0101464	RIGHT WORKTOP HOLDER
4	LM65010	DRIV CYLINDER	12		BELT
5	1401002	RECTIFIER ROD	13		
6	1222001	IDLE CYLINDER PIPE	14		
7	0103129	BLACK EXTERNAL PUSHROD			
8	0301107	BELT TIGHTENER			

8.11 TAV. N°10 - DOUGH WINDING UNIT



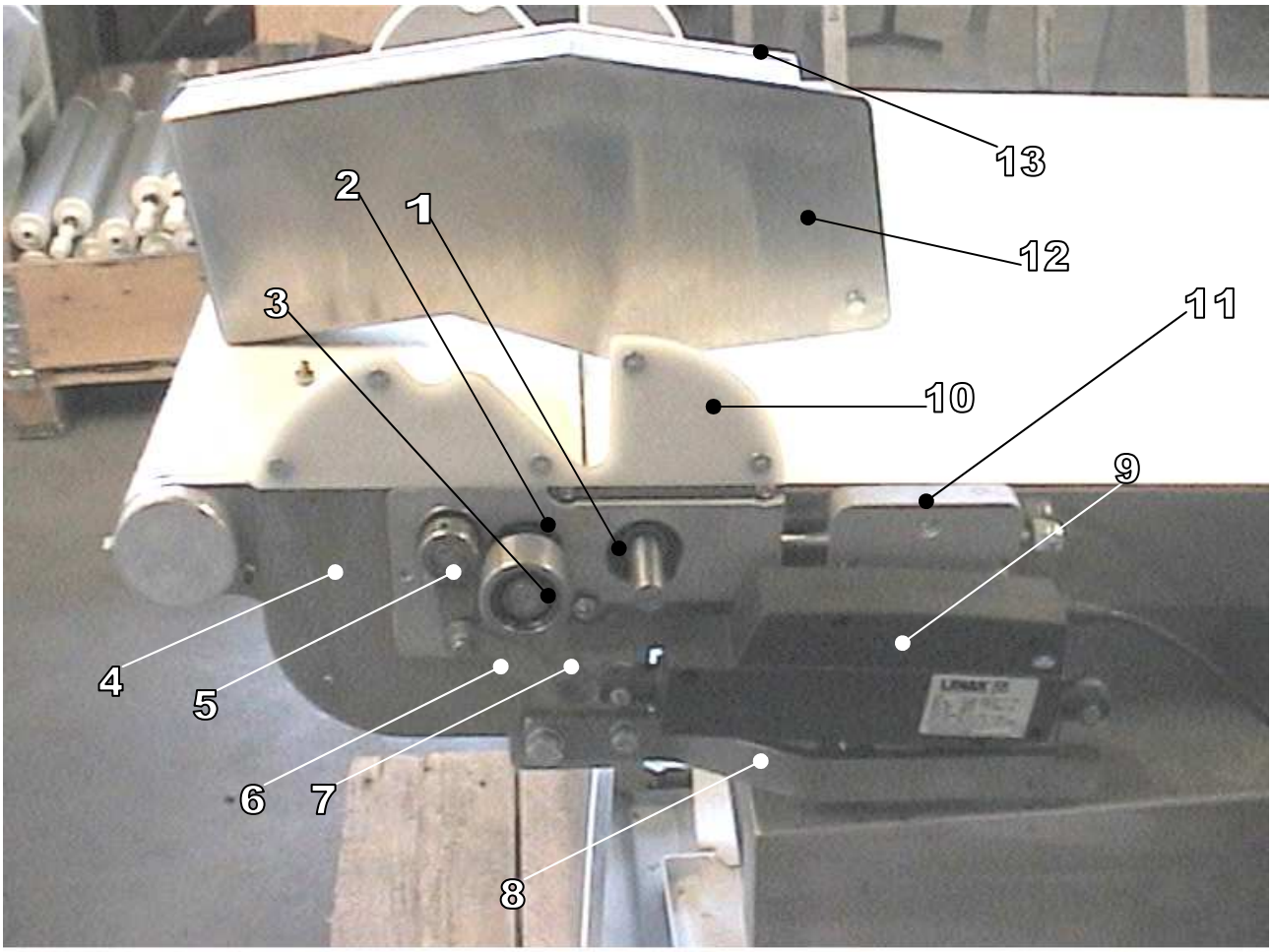
REF.	CODE	DESCRIPTION	REF.	CODE	DESCRIPTION
1	LMAU006	WINDER DRIVING SHAFT	9	0101601	WINDER FLANGE
2	0101609	WINDER SIDE SPACERS	10		
3	LMAU006	WINDER DRIVEN SHAFT	11		
4	1234005	BELT COUNTERWEIGHT	12		
5	LMAU008	BELT HOLDER	13		
6	0202010	TIGHTENING SPRING	14		
7		WINDER ARM PIN			
8	LMAU007	WINDER ARM			

8.11 TAV. N°10 - DOUGH WINDING UNIT



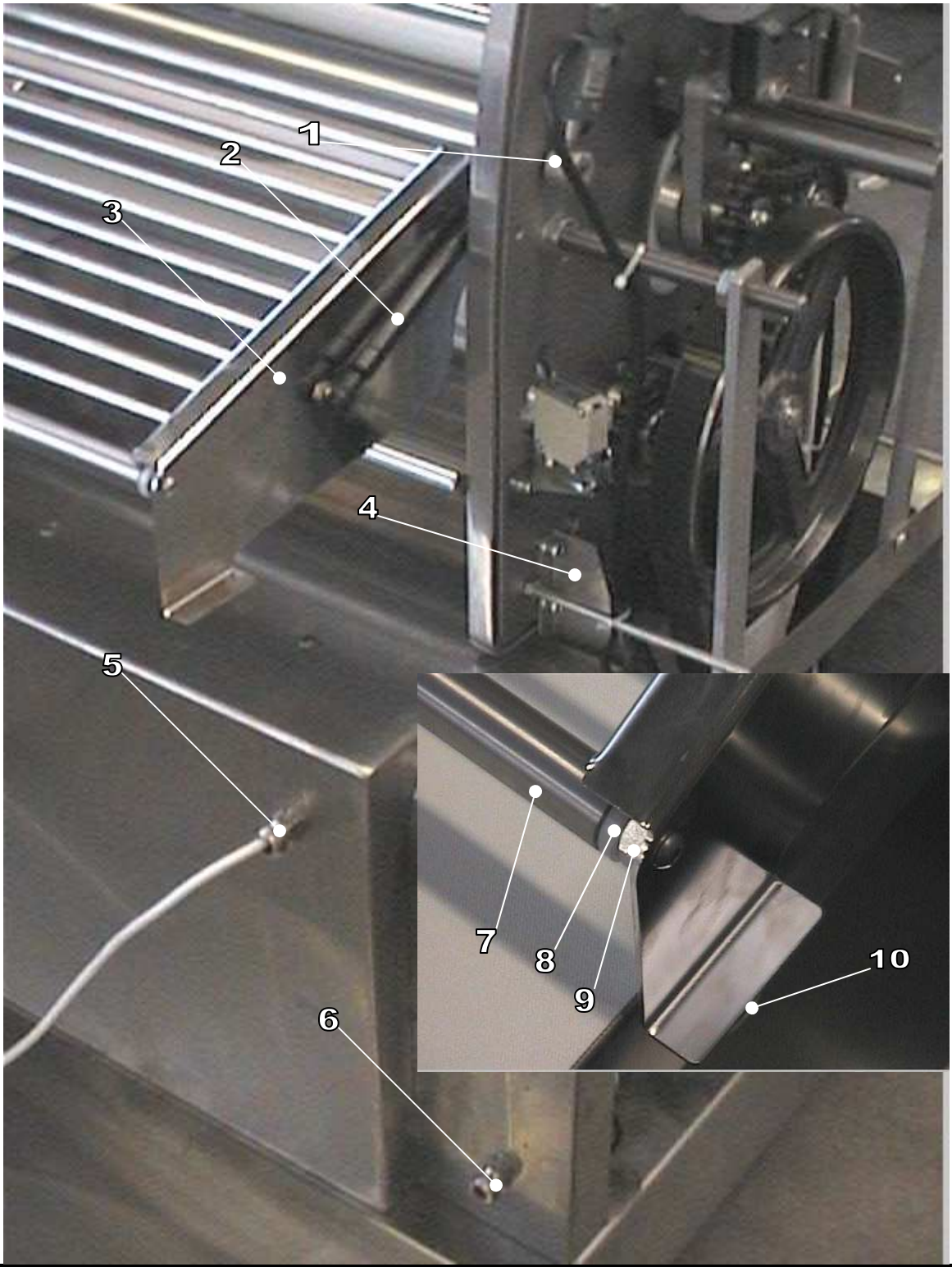
REF.	CODE	DESCRIPTION	REF.	CODE	DESCRIPTION
1	1912120	WINDER SMALL CARTER	9	0523001	PLASTIC PINION
2	0103148	WINDER PLASTICE COVER	10	0523004	PLASTIC PINION
3	1344001	WINDER LEFT SIDE	11	0401003	BEARING
4		BELT TIGHTENER SCREW	12	1920032	WINDER SIDE COVER
5	1346001	LEFT BELT TIGHTENER PLATE	13		
6	1603009	WINDER TIHGTENER ROD	14		
7	0103015	LEANING FOOT			
8	0523004	PLASTIC PINION			

8.11 TAV. N°10 - DOUGH WINDING UNIT



REF.	CODE	DESCRIPTION	REF.	CODE	DESCRIPTION
1	0401004	BEARING	9	0805254	ACTUATOR
2	0401004	BEARING	10	0103148	WINDER PLASTIC
3	0401003	BEARING	11	1346002	BELT TIGHTENER PLATE
4	1920032	WINDER SIDE COVER	12	1912119	WINDER CARTER
5	LMAU013	WINDER 2ND LEVER	13	0103174	PACKING
6	1920030	CONNECTING TIE-ROD	14		
7	LMAU003	WINDER 1ST LEVER			
8	LMAU004	ACTUATOR HOLDER			

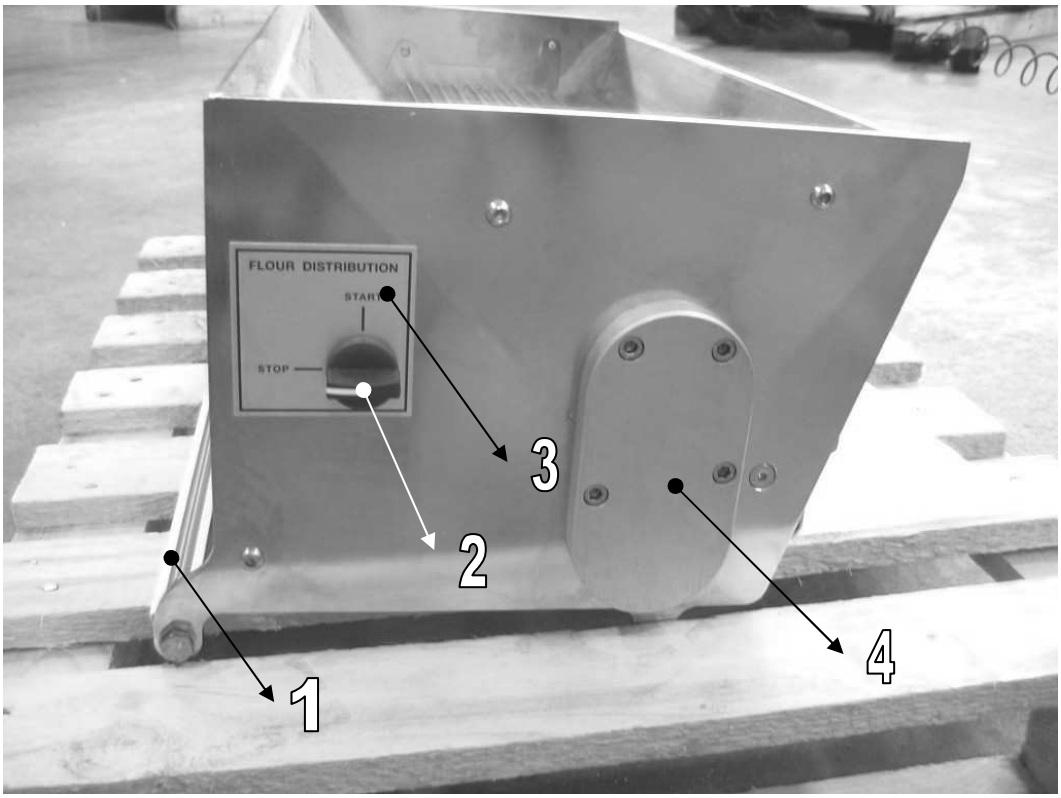
8.12 TAV. N°11 – SAFETY GRIDS UNIT



REF.	CODE	DESCRIPTION	REF.	CODE	DESCRIPTION
1	0101043	CAM MICROSWITCH	7	1240001	GRID PIPE

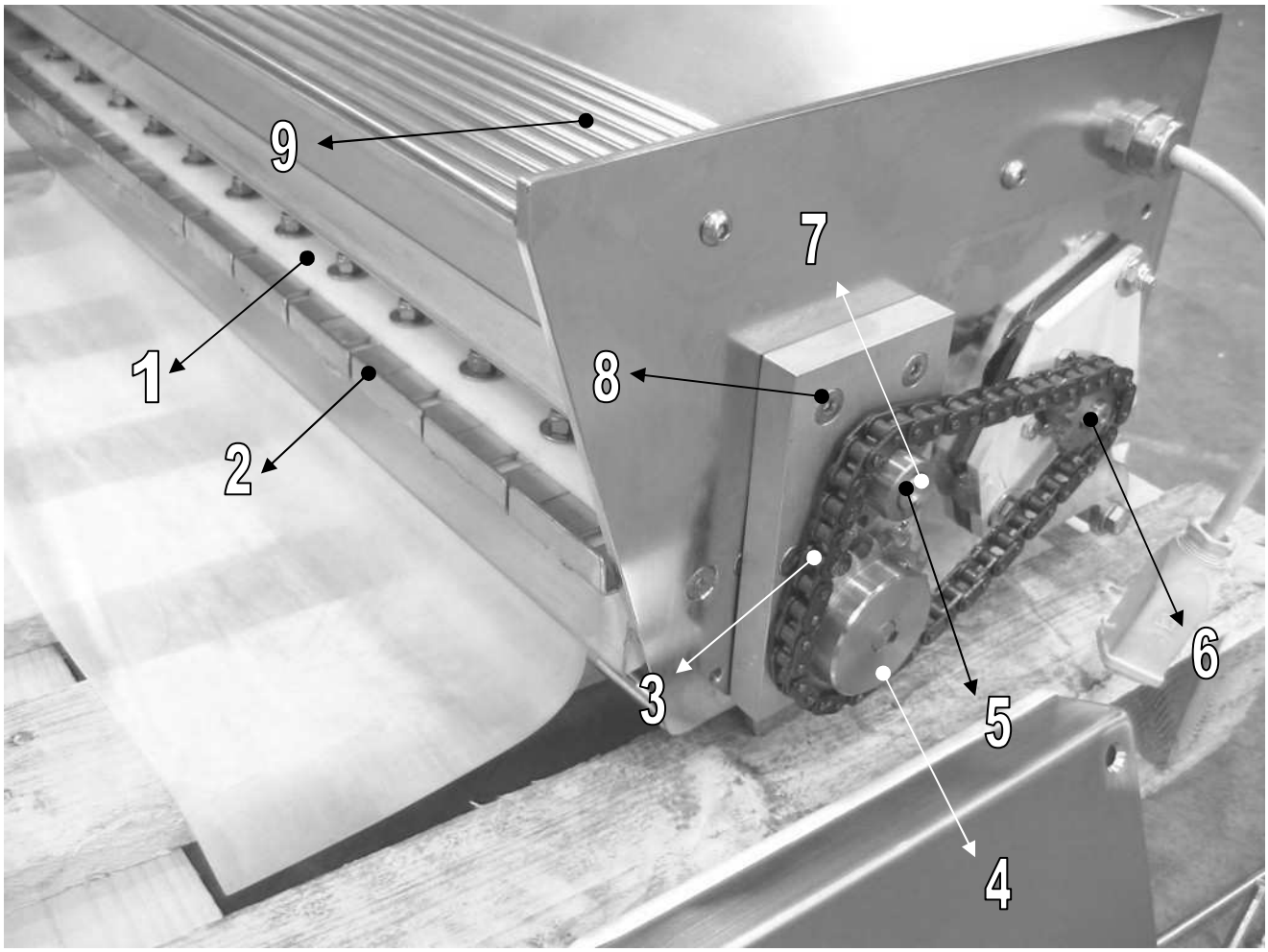
2	1806002	GAS SPRING	8	0103002	PLASTIC WASHER FOR GRID
3	LULM65003	SAFETY GRID	9	0101661	BRASS WASHER FOR GRID
4	LMAU017	MOTOR PLATE UNIT	10	0101474	GRID STOPPER
5	0805223	WIRE HOLDER			
6	0805223	WIRE HOLDER			

8.13 TAV. N°12 - FLOUR DUSTER



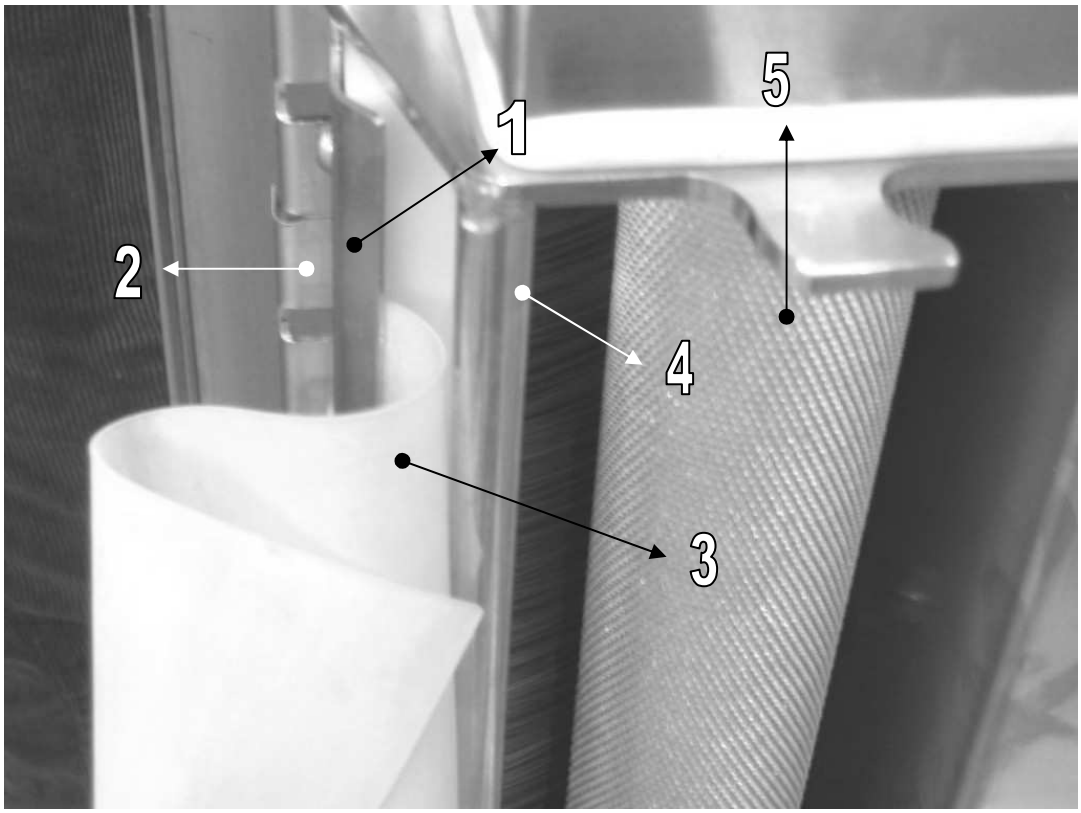
RIF.	CODICE	DESCRIZIONE	RIF.	CODICE	DESCRIZIONE
1	01 01 781	Distanziale	4	13 50 001	Flangia posteriore
2	08 05 193	Interruttore 2 posizioni			
3	01 03 219	Etichetta			

8.14 TAV. N°13 - FLOUR DUSTER



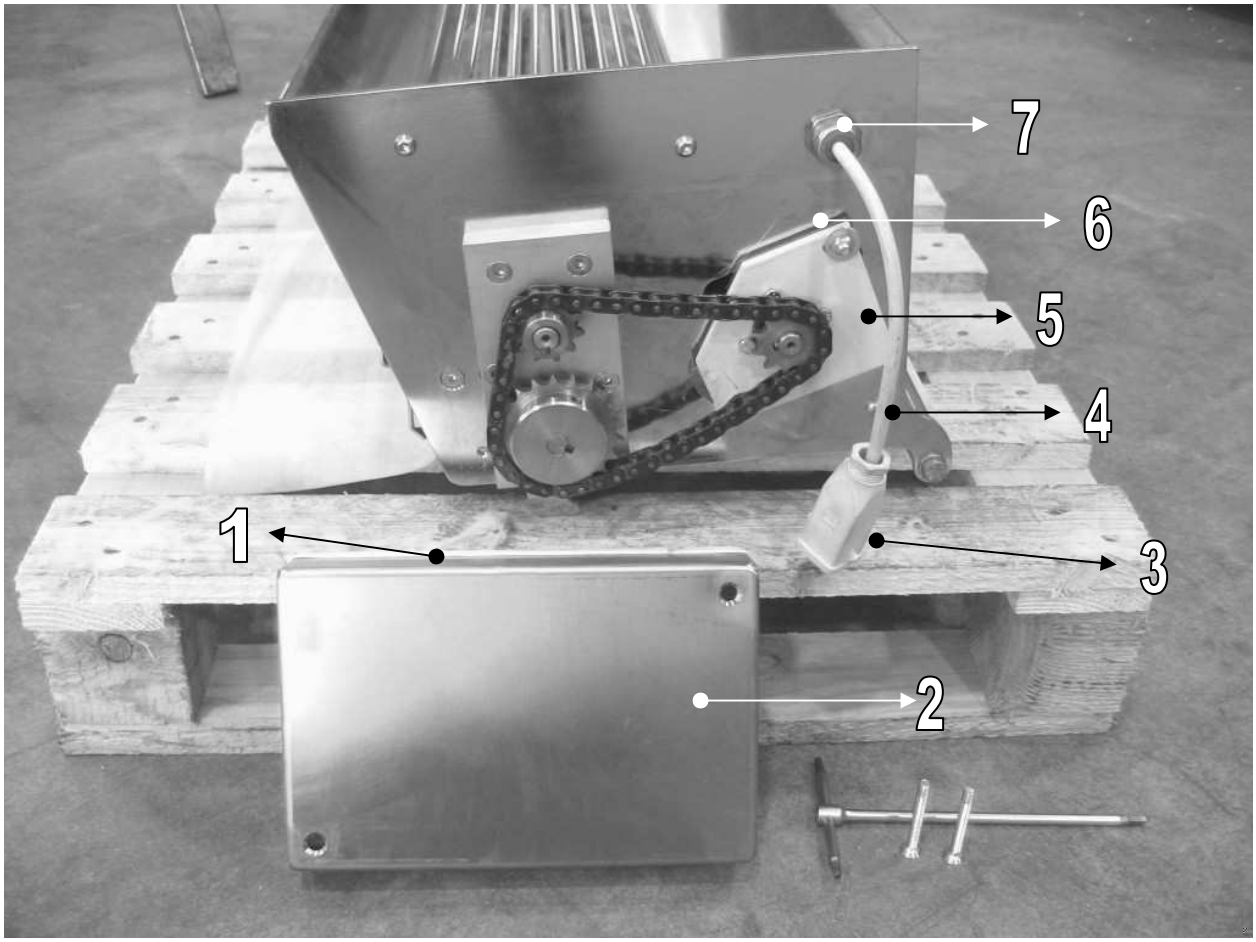
RIF.	CODICE	DESCRIZIONE	RIF.	CODICE	DESCRIZIONE
1	01 03 245	Plastica parzializzatore	6	05 15 014	Pignone
2	19 17 185	Piastrina dosatrice	7	LU LM AU 031	Agitatore
3	05 33 028	Catena	8	13 56 002	Flangia anteriore
4	05 15 015	Pignone	9	LU LMAU 032	Griglia antinfortunistica
5	05 15 014	Pignone			

8.15 TAV. N°14 - FLOUR DUSTER



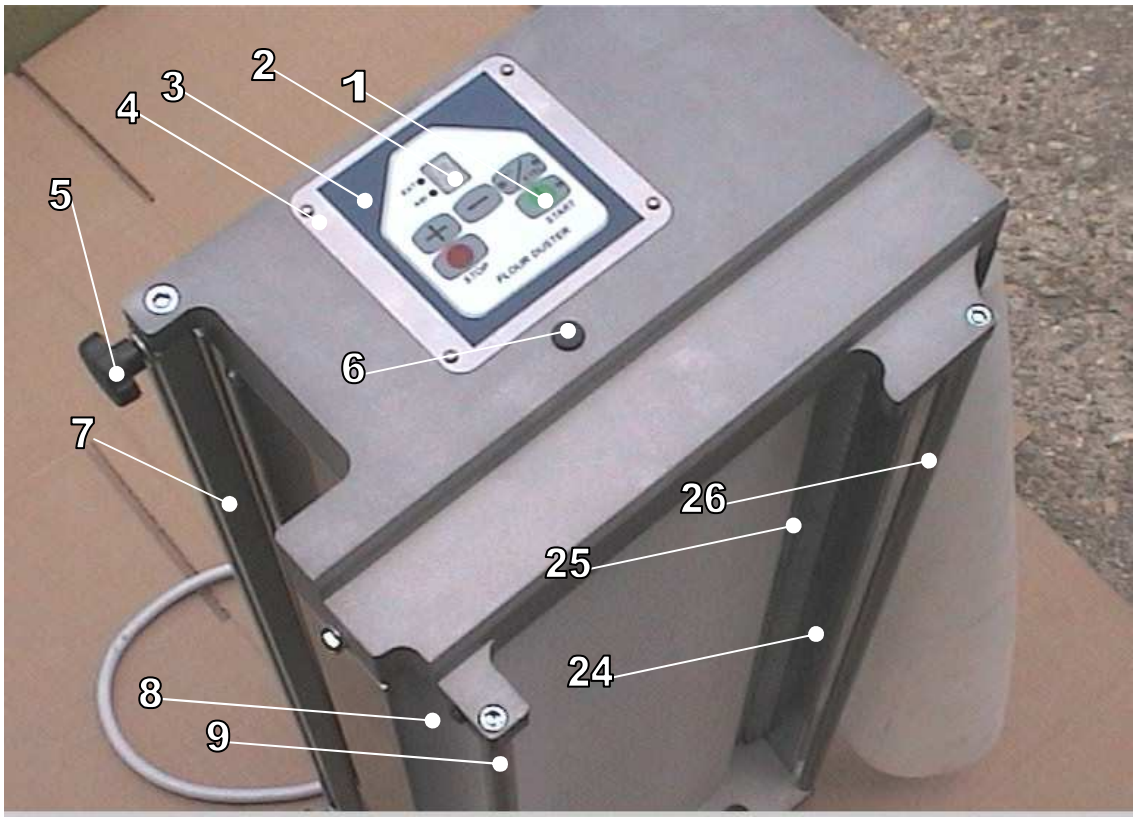
RIF.	CODICE	DESCRIZIONE	RIF.	CODICE	DESCRIZIONE
1	13 63 001	Piatto parzializzatore	4	01 03 218	Spazzola
2	19 17 185	Piastrina dosatrice	5	12 09 001	Tubo alluminio zigrinato
3	01 03 203	Paratia sfarinatore			

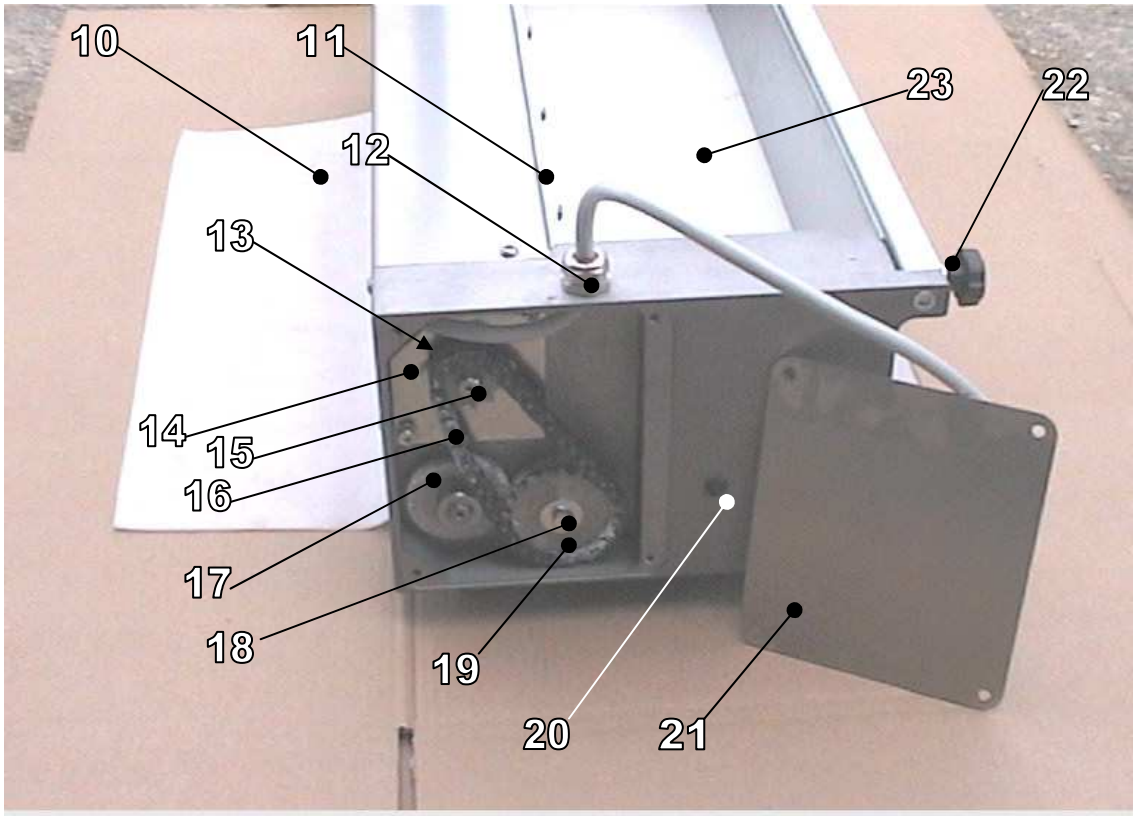
8.16 TAV. N°15 - FLOUR DUSTER



RIF.	CODICE	DESCRIZIONE	RIF.	CODICE	DESCRIZIONE
1	19 12 187	Profilo ferma gomma	5	19 08 004	Piastra motore
2	19 12 186	Carter laterale	6	01 03 203	Paratia sfarinatore gomma
3	08 05 317	Custodia mobile	7	08 05 223	Pressacavo
4	08 05 226	Cavo elettrico			

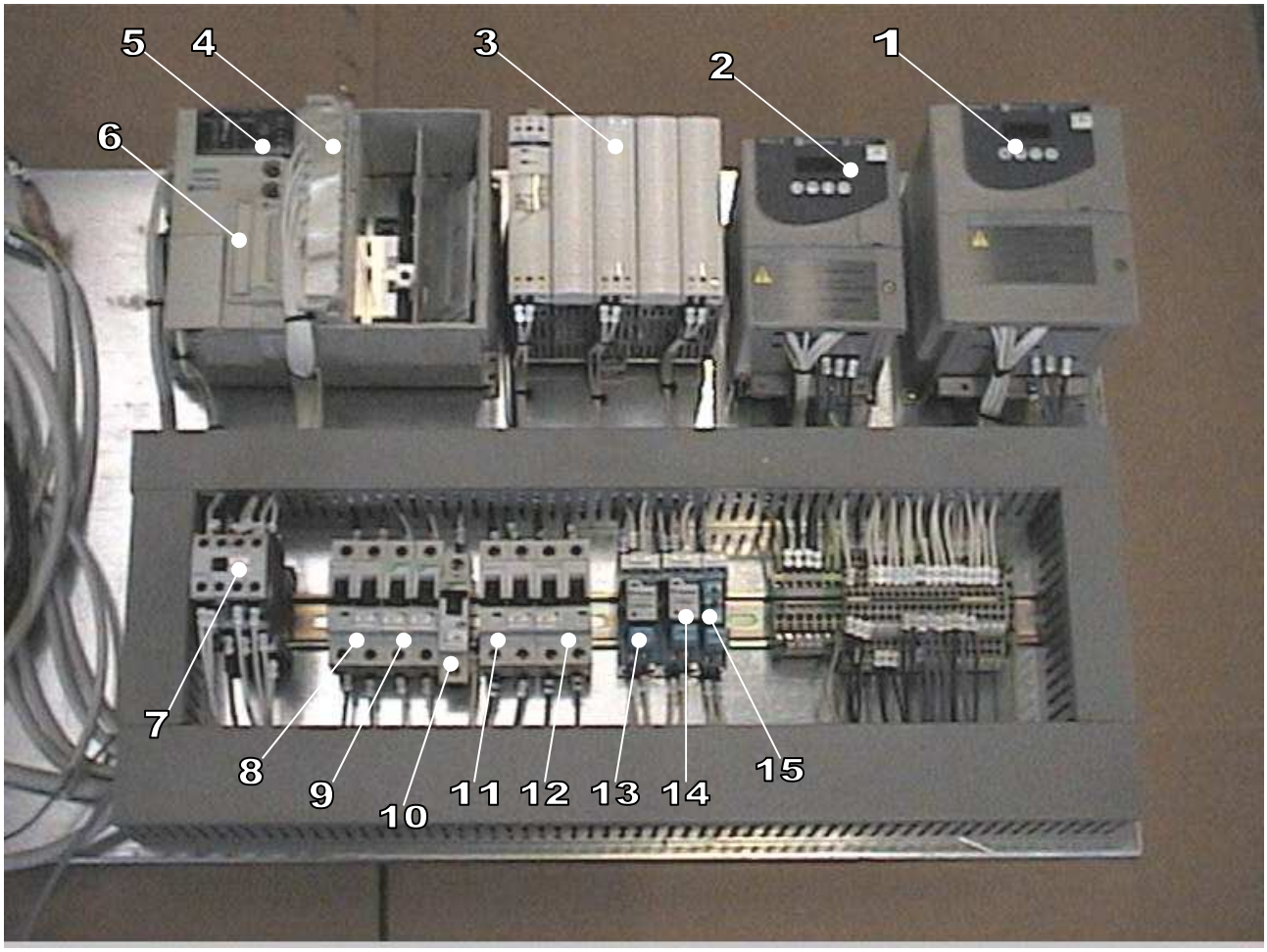
8.17 TAV. N°16 – FLOUR DUSTER UNIT





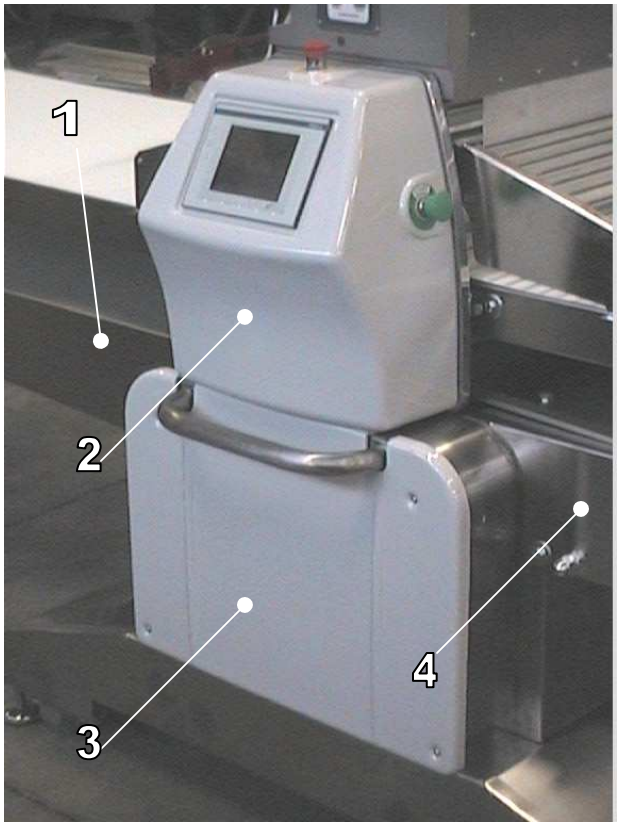
REF.	CODE	DESCRIPTION	REF.	CODE	DESCRIPTION
1	0103155	STICKERS	18	LMAU014	DRIVING SHAFT
2	0805278	DUSTER ELECTR. KEYBOARD	19	0515010	DUSTER PINION
3		BLUE SILK-SCREEN PROCESS	20		HOLE BLACK COVER
4	1913066	KEYBOARD SUPPORT	21	1912155	REAR SIDE COVER
5	0103032	WALL FIXING WHEEL	22	0103032	WALL FIXING WHEEL
6		HOLE BLACK COVER	23	2302017	BELT
7		SLIDING RAIL	24	TFLMAU018	SCRAPER UNIT
8	2302017	BELT	25	0101622	SIDE WALLS SPACER
9	0101622	SIDES SPACER	26		
10	0103203	DUSTER WALL	27		
11		SCRAPER			
12	0805223	WIRE HOLDER			
13	0810027	MOTORISED REDUCER			
14	1908004	MOTOR PLATE			
15	0515007	MOTOR PINION			
16	0533024	CHAIN			
17	0524001	BRUSH GEAR			

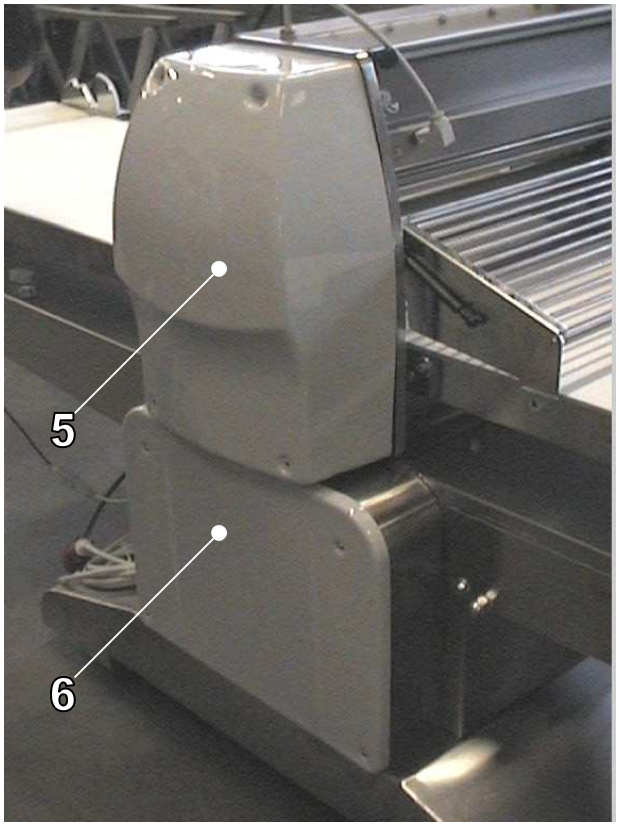
8.18 TAV. N°17 – ELECTRIC PLANT



REF.	CODE	DESCRIPTION	REF.	CODE	DESCRIPTION
1	0805251	ALTIVAR	8		
2	0805257	ALTIVAR	9		
3	0805258	ELECTRIC FEEDER	10		
4	0805258	PLC ELECTRIC CONNECTIONS	11		
5	0805256	PLC	12		
6	0805266	MEMORY CARD	13		
7			14		

8.19 TAV. N°18 – PANELS UNIT





REF.	CODE	DESCRIPTION	REF.	CODE	DESCRIPTION
1	LMAU012	SHORT FLOUR SHEET			
2	0103146	FRONT UPPER COVER			
3	0103145	LOWER COVER			
4	LMAU011	LONG FLOUR SHEET			
5	0103147	UPPER REAR COVER			
6	0103145	LOWER COVER			
7					

9- ACCESSORIES ON REQUEST

ON ECOSMART – SMART MODELS

9.1 - AUTOMATIC FLOUR DUSTER

9.2 - AUTOMATIC DOUGH WINDER

ON ALL AUTOMATIC SHEETERS

9.3 - CUTTING DEVICE

9.4 – DIE-CUTTERS UPON REQUEST

10- ELECTRICAL EQUIPMENT

10.1 DESCRIPTION

The electrical equipment consists of:

1. Electric motor for machine movement.
2. an unit contening all the control devices closed in a plastic box with proection degree IP54
3. Running switch
4. general machine switch.
5. emergency push-button
6. Two safety grid opening microswitches.
7. Two movement control lever microswitches.

– A set of suitably protected cables for connection of the various utilities and safety devices:

10.2 DOCUMENTATION

This maintenance book includes:

- Circuit diagram with data necessary for choosing the type, specifications, rated current and adjustments of the protection device against overcurrents which must be installed at the origin of the power supply cable.
- Layout diagram of the equipment contained in the housings (Pos. 1 and 2).
- Operating diagram of terminals.
- List of parts.

⚠ **CAUTION** These documents must be reserved exclusively for professionally qualified and/or technical support personnel.