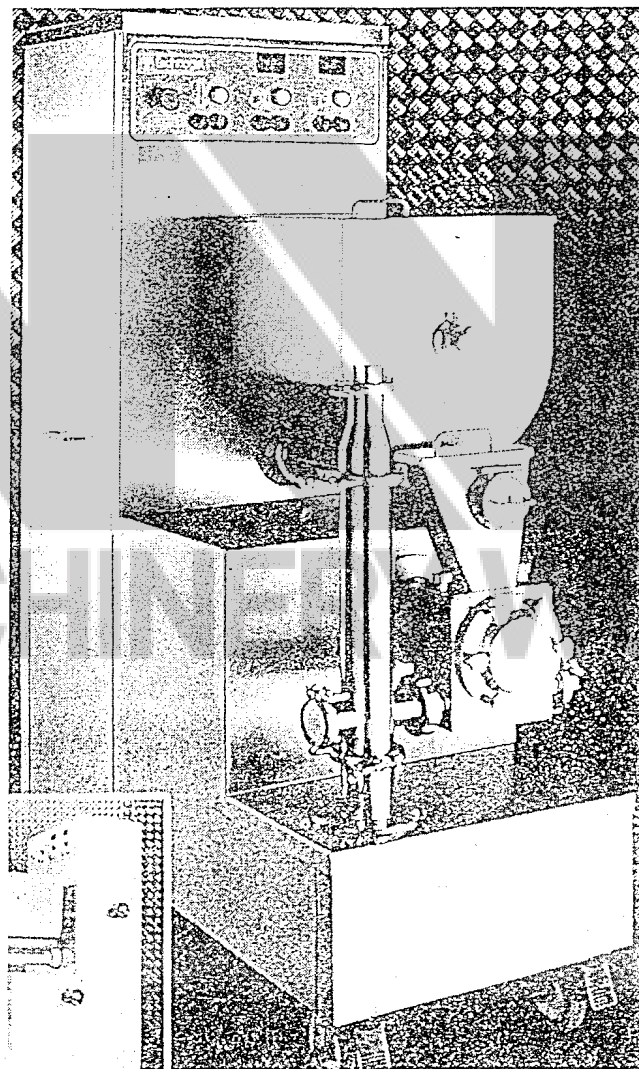


# INSTRUCTIONS FOR INSTALLATION, USE AND MAINTENANCE



FRUIT FEEDER FF 10S

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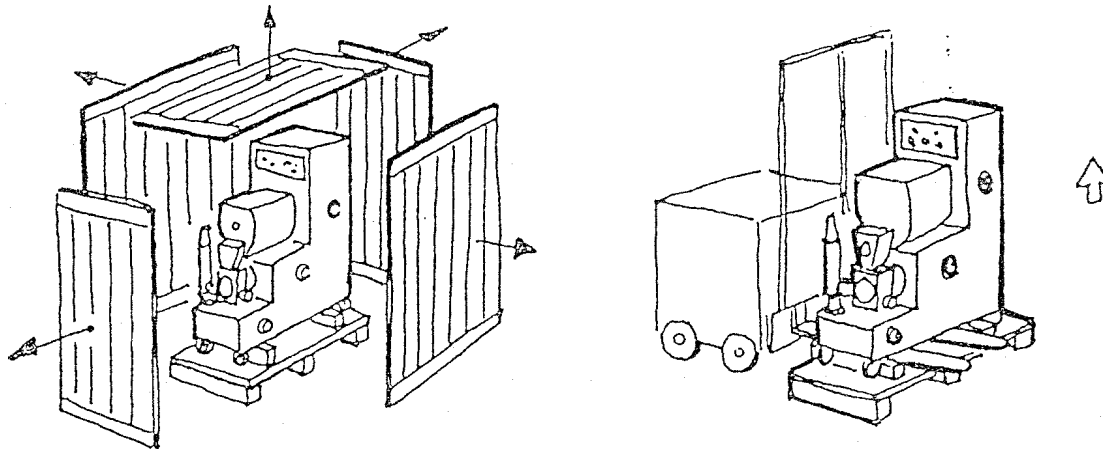
## - How to unpack the machine

FRUIT FEEDER FF 10S: GROSS WEIGHT 390 KG

NET WEIGHT 270 KG

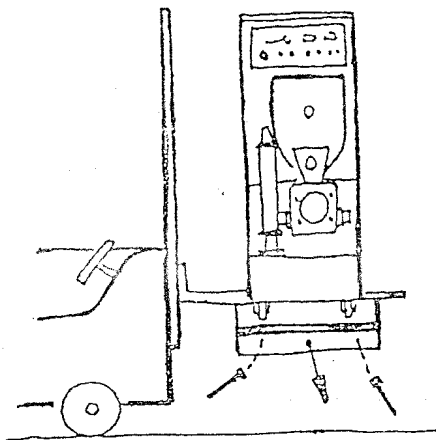
### ATTENTION

DUE TO ITS PARTICULAR SHAPE, THE MACHINE MAY BE UNSTABLE DURING HOISTING



1) Remove all the side and top wooden panels.

2) Lift the machine using a fork lift truck, inserting the forks between the machine base and the crate base.



3) Under the crate base unscrew the four bolts that hold the machine tightly in position.

### ATTENTION:

after removing these bolts, the base of the crate will drop to the ground.

4) After removing the crate base, lower the fork lift truck and place the machine on the ground. The machine can now be moved by means of the handles.

THE TYPE OF WOOD USED FOR THE PACKING CRATE IS NATURAL SPRUCE, NOT CHEMICALLY TREATED SO THAT IT CAN BE PERFECTLY RECYCLED.

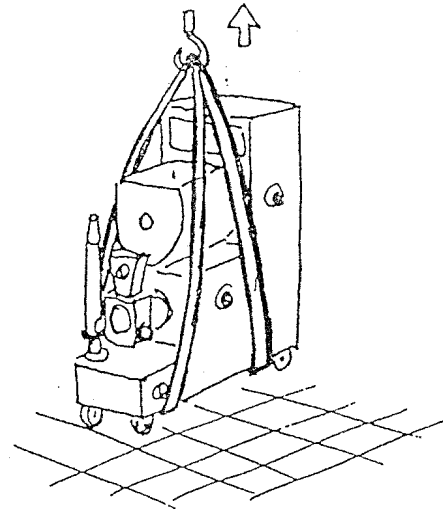
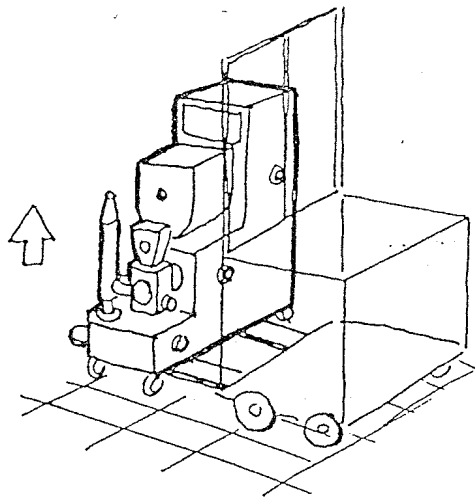
## - Hoisting the machine

FRUIT FEEDER FF 10S

NET WEIGHT = KG. 270

### ATTENTION

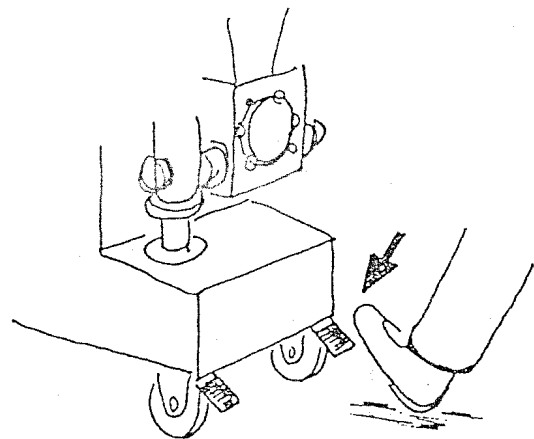
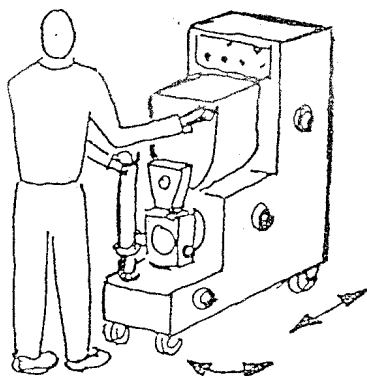
DUE TO ITS HIGH, NARROW SHAPE, THE MACHINE MAY BE UNSTABLE DURING HOISTING



Hoist the machine using a fork lift truck, inserting the forks from the side of the machine between the front and rear wheels.

Hoist the machine with belts near the front and rear wheels. (as in drawing). The tie rod lifting the machine must be at the exact centre of the machine.

## - Moving the machine



Move the machine by holding the flange handle in one hand and the corner of the machine in the other.

After positioning the machine, use your feet to lock with the front wheel brakes.

**NEVER USE YOUR HANDS**

## - Introduction

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Thank you for choosing our product. For best results, we recommend that you read this instruction manual carefully.

The descriptions and illustrations contained in this manual are not binding; TECHNOGEL reserves the right to modify and improve, without notice and at any point, machine parts where deemed necessary for construction and/or commercial motives.

## - Installation and first startup

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The installation and first startup of this machine must be carried out by a TECHNOGEL technician or one with TECHNOGEL authorization.



TECHNOGEL S.p.A. DECLINES ALL LIABILITY FOR INSTALLATIONS OR STARTUPS  
CARRIED OUT BY UNAUTHORIZED PERSONS.

## - Installation -

Fit a suitable wall switch: we strongly recommend fitting an automatic differential switch. See table (A) for power rating and absorption details.

Check that the mains voltage rate is the same as the machine rating, shown on the serial number plate (see page 6).

When the cable has 4 wires, the yellow/green is the earth wire- the other three are for the three phases.

TABLE (A)

FRUIT FEEDER FF 10S		220V/50hz	220V/60hz	V.200 50/60hz	380V/50hz	V.380/60hz	415V/50hz
Total power	KW	1,8	1,8		1,8	1,8	1,8
Max. absorp.	A	8	8		4,8	4,8	4,8
Power cable Wires & section		4 x 1,5 mm <sup>2</sup>	4 x 1,5 mm <sup>2</sup>		4 x 1 mm <sup>2</sup>	4 x 1 mm <sup>2</sup>	4 x 1 mm <sup>2</sup>

FRUIT FEEDER FF 30							
Total power	KW						
Max. absorp.	A						
Power cable Wires & section							

We recommend checking the earth connection and safety devices of your electric plant thoroughly.



TECHNOGEL CANNOT BE HELD LIABLE FOR ANY DAMAGE ARISING FROM INCORRECT INSTALLATION OR MAINS DEFECTS.



## - Machine identification

Each machine is equipped with a plate that includes the following information:

- type of machine
- wattage
- serial number
- type of gas and amount
- voltage and hertz

The plate can be found on the outside rear section of the machine.

Below is the serial number plate pertaining to this machine:

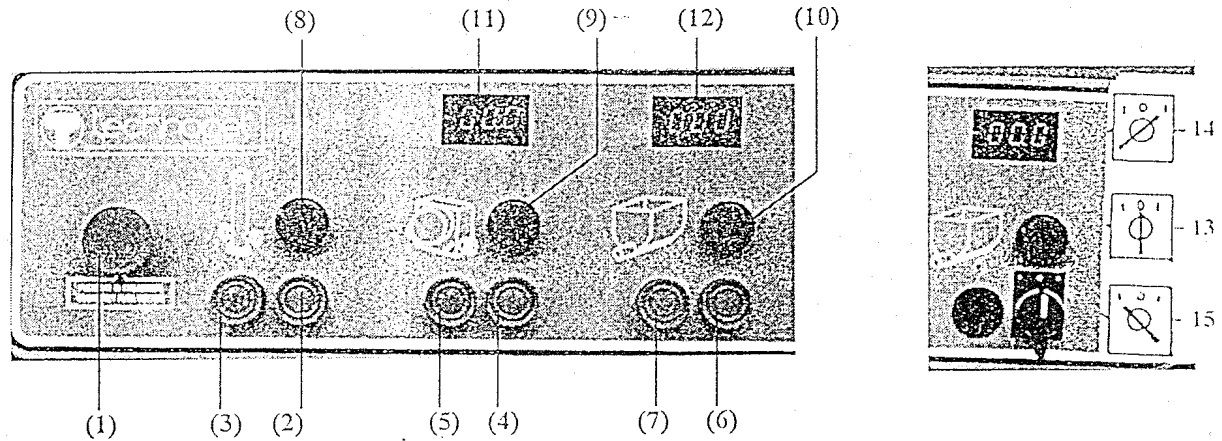
 <b>technogel</b>	
MACCHINA TIPO MACHINE TYPE	FRUIT FEEDER 10S
MATRICOLA N. SERIAL NUMBER	N. 258-C
VOLTAGGIO VOLTAGE	V 415-50.3 A 4
POTENZA POWER	KW 1,7
GAS FREON	R Kg
Via Cremasca, 14 - AZZANO S. PAOLO BERGAMO - ITALIA Tel. 035/530122 - Fax 035/531170	
	

When ordering spare parts or requesting technical assistance, always have the following data available:

- MACHINE TYPE FF 10 S
- SERIAL NUMBER 258-C
- VOLTAGE V-415-50-3

## - Control panel functions

- FRUIT FEEDER FF 10S



POSIT. #	FUNCTIONS
1	EMERGENCY button (stops the machine)
2	GREEN button MIXER starting
3	RED button stops the MIXER
4	GREEN button ROTOR starting
5	RED button stops the ROTOR
6	GREEN button SCREW DISPENSER starting
7	RED button stops the SCREW DISPENSER
8	Light ON = MIXER working Light OFF = MIXER stopped
9	Light ON = ROTOR working Light OFF = ROTOR stopped
10	Light ON = SCREW DISPENSER working Light OFF = SCREW DISPENSER stopped
11	ROTOR REVOLUTIONS PER MINUTE signal - 50 HZ - minimum 5 / maximum 25 - 60 HZ - minimum 6 / maximum 30
12	SCREW DISPENSER REVOLUTIONS PER MINUTE signal - 50 HZ - minimum 4 / maximum 20 - 60 HZ - minimum 5 / maximum 24

### MODEL FOR FF 10S WITH INTERMITTENCE

13	SCREW DISPENSER stopped
14	SCREW DISPENSER working INTERMITTENTLY
15	SCREW DISPENSER working CONTINUOUSLY

### WARNING

The start-ups should be performed sequentially; first push button 2, then button 4 and finally button 6. If the mixer should stop (button 3), the rotor and the screw dispenser will automatically stop.

## - Directions of rotation control

Before starting the machine, always verify the direction of rotation of the various motors:

C - mixer

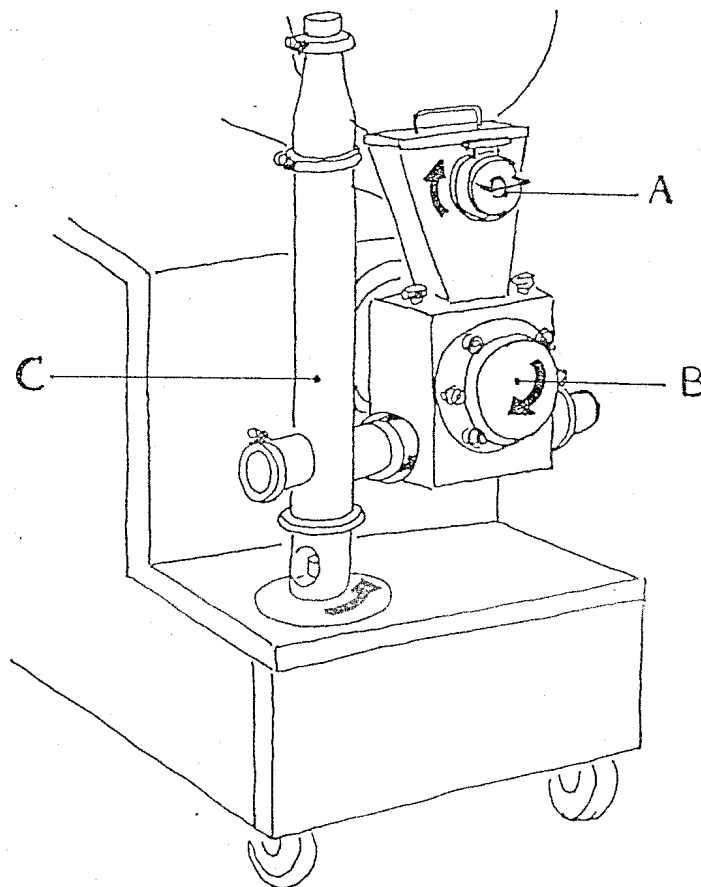
B - rotor

A - screw dispenser

Normally, the directions of rotation are set up during the machine's testing; if a component turns in the right direction, so will the others. Therefore, we advise starting only mixer C by pressing button (2) (see page 7). Then check to see whether the mixer is turning in the right direction (see illustration).

If the mixer is not rotating in the right direction, remove the electrical cable from the differential switch on the wall and reverse any two of the three phases. Reconnect the machine and try again.

For safety's sake, check once again the directions of rotation of the rotor and the screw dispenser.



**WARNING - IF THE MACHINE IS MOVED AND THE ELECTRICAL SOCKET CHANGED, VERIFY THE DIRECTIONS OF ROTATION BEFORE STARTING IT.**

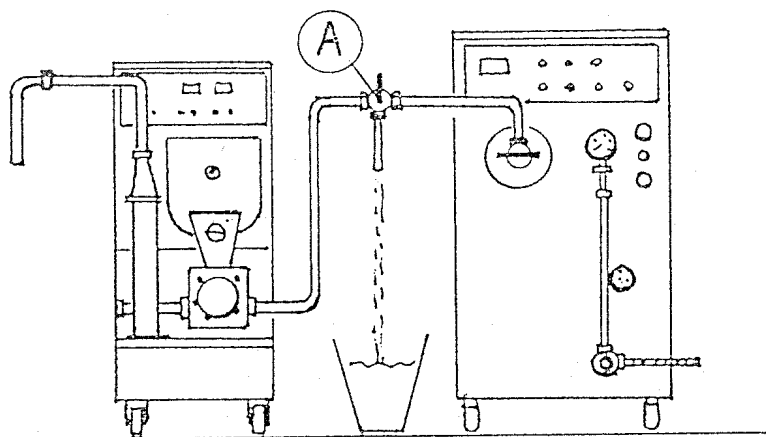


## - Connection between the machine and the freezer

We advise the installation of a three-way tap (A), between the fruit-feeder and the freezer that produces the ice cream.

The tap allows you to check, at the start, the consistency of the ice cream inside a container and, once it is ready, to send it to the fruit feeder.

In addition, the tap allows for the ice cream to be deviated should problems arise downstream of the fruit feeder.



## - Minimum and maximum quantities of ice cream the machine can receive

It is possible to connect the machine to one or more freezers, as long as the maximum quantity of finished ice cream does not exceed 900 litres/hour.

To prevent spoiling of the ice cream passing from the fruit feeder, the minimum quantity must be 150 litres/hour.

## - Connection between the fruit feeder and a packaging machine

The batcher of the packaging machine connected to the fruit feeder should remain in the open position whenever the packaging machine is not working.

If the batcher is closed, the tube connecting the fruit feeder to the packaging machine (almost always made of rubber), could explode from the increase in pressure.

**TECHNOGEL S.p.A. IS NOT RESPONSIBLE FOR ANY DAMAGES CAUSED BY CONNECTION PIPING THAT IS NOT SUITABLE OR INCORRECTLY POSITIONED, AS WELL AS BY INCORRECT STARTING OF PACKAGING MACHINES CONNECTED TO THE FRUIT FEEDER.**

## - Products that may be mixed with the ice cream

There is a wide variety of products available on the market that may be used to flavour the ice cream, some of which have compound characteristics that require particular care before being utilized.

Dry products such as: hazel-nuts, hazel-nut grains, walnuts, chocolate pieces and/or slivers, dried raisins, etc., pose no particular problems.

For products that are somewhat gluey and/or doughy, such as: candied fruit, marrons glacés and others, they need to first be washed by dousing them with an alcoholic liquid (for example, maraschino) to remove some of the sugary coating. If this is not done, these products have a tendency to become gluey and lumpy, thereby obstructing passage in the machine's rotor.

Never use water to wash these products. The water will only stick to the products and become ice once in contact with the ice cream.

To distribute small size products (hazel-nut grains, chocolate slivers, etc.) use the low capacity screw (the low one with the spiral tabs); for bigger sized products (whole walnuts, cherries, marrons glacés, etc.) use the high capacity screw (the high one with spiral tabs).

Following is a list of minimum and maximum quantities (in kgs) of some of the most widely used products that can be delivered by the machine:

Product Type	Min. and max. product quantities in KGs ( ) with intermittence		Product Specific Weight
Chocolate sliver	from 6.6 to 74	from (2) to (20)	0.60
Hazel-nut grain	from 12 to 65	from (2) to (18)	0.45
Pre-washed candied fruit	from 11 to 96	from (3) to (33)	0.90
Dried raisins	from 7 to 74	from (1.2) to (23)	0.60
Marrons glacés	from 12 to 57	from (3.6) to (26)	0.50
Whole candied cherries	from 16 to 91	from (7) to (27)	0.74
Shelled nut halves	from 8 to 45	from (2.4) to (11.4)	0.36

The quantities listed above may vary depending on the type of product and its humidity; however, they should be used as reference data.

The maximum quantities for some products (even if small-sized) may be obtained using the high capacity screw.

## - Speed adjustment: mixer - rotor - screw dispenser

Handwheel (1) regulates the mixer's speed.

- mixer's revolutions:

19 (minimum)	96 (maximum) at 50 HZ
24 (minimum)	115 (maximum) at 60 HZ

Handwheel (2) regulates the rotor's speed.

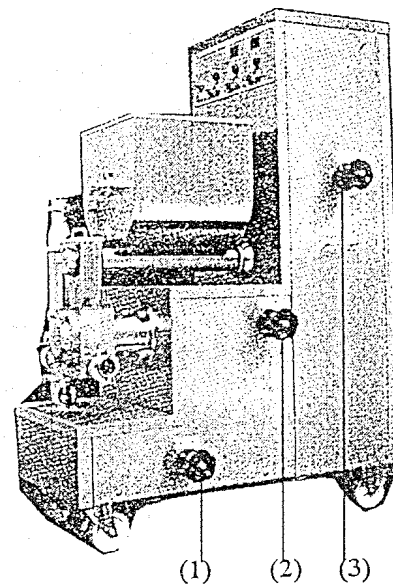
- rotor's revolutions (visible on the display):

5 (minimum)	25 (maximum) at 50 HZ
6 (minimum)	30 (maximum) at 60 HZ

Handwheel (3) regulates the screw dispenser's speed.

- screw dispenser's revolutions (visible on the display):

4 (minimum)	20 (maximum) at 50 HZ
5 (minimum)	24 (maximum) at 60 HZ



## - Starting the machine

A - Pour the product into the container, bearing in mind that the maximum capacity is 30 litres.

B - Pour the ice cream into the fruit feeder; once the ice cream begins to come out from the mixer's tube, start the mixer (see page 7, green button 2).

C - After approximately 15 seconds, start the rotor (see page 7, green button 4); adjust the rotor's speed using handle (2) until the display (see page 7, number 11) indicates the number 10 (revolutions). Do not start the screw dispenser.

D - Wait until the ice cream coming out from the exit tube becomes nice and compact. Only at this time you may start the screw dispenser (see page 7, button 6). Make sure that the speed is set on minimum using handwheel (3) to adjust it.

E - Slowly increase the revolutions of the screw dispenser, checking from the feedbox that the product is indeed exiting the rotor. If the product does not come out, increase the rotor's revolutions by using handle (2).

Once the ice cream is dispensed, verify that it contains the desired amount of product and that it is well mixed, otherwise:

Problems verified at fruit feeder's exit	What to do
- too little product in the ice cream or vice versa	increase or decrease the screw dispenser's speed by using handwheel (3)
- difficult evacuation of the product from the rotor	increase the rotor's speed by using handwheel (2)
- product not well-mixed in the ice cream	increase the mixer's speed by using handwheel (1)
- breaking or crushing of the product when it comes out (especially if it is large or crumbly like walnuts)	decrease the mixer's speed by using handwheel (1)

## - Useful advice for proper machine use

Always start the machine with the screw dispenser set at the minimum speed.

After having increased the speed of the screw dispenser, wait until all the ice cream contained in the machine has exited before increasing the speed once again. Verify that the rotor is capable of mixing most of the product poured in before increasing the rotor's speed.

Once the right ratio of ice cream to product has been established, we advise making a table listing product by product the appropriate number of revolutions of the rotor and the screw dispenser. For example:

Type of product	Ice cream litres/hour	Rotor rev.	Screw dispenser rev.
Chocolate slivers	600	20	10
Hazel-nut grains	300	14	6
Etc. etc.	etc.	etc.	etc.

Remember that the machine must be started sequentially: first the mixer, then the rotor and finally the screw dispenser.

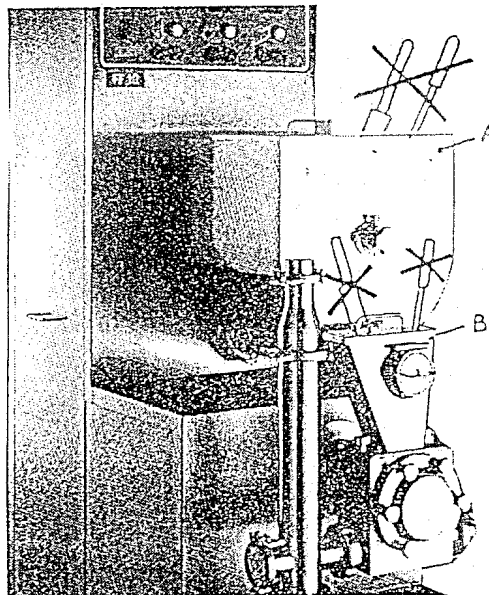
In case you need to stop the machine temporarily, we advise you to stop the rotor (which in turn will automatically stop the screw dispenser) and to leave the mixer in operation.

We recommend washing the gluey products before pouring them into the machine.

It is advisable to pour small amounts of product in the beginning and then add more during production.



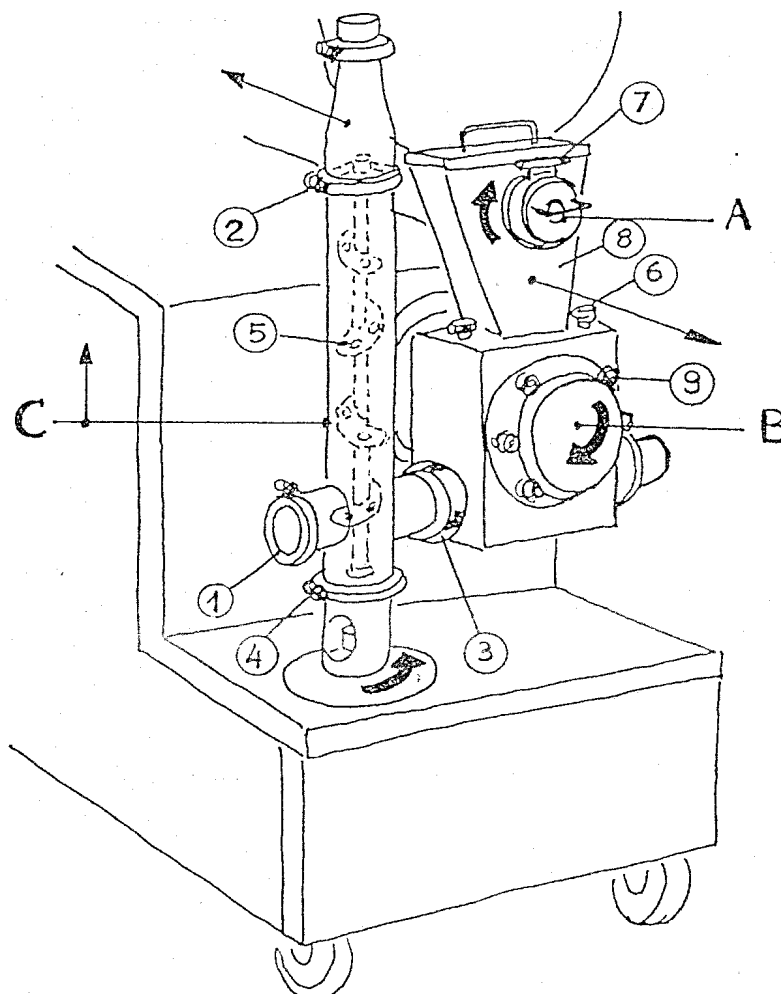
**FOR YOUR SAFETY'S SAKE, NEVER INSERT BLADES OR OTHER TOOLS INSIDE THE PRODUCT CONTAINER (A) AND/OR IN THE ROTOR'S CHARGING FEEDBOX (B) WHILE THE MACHINE IS WORKING.**



## - Washing and disassembling the machine

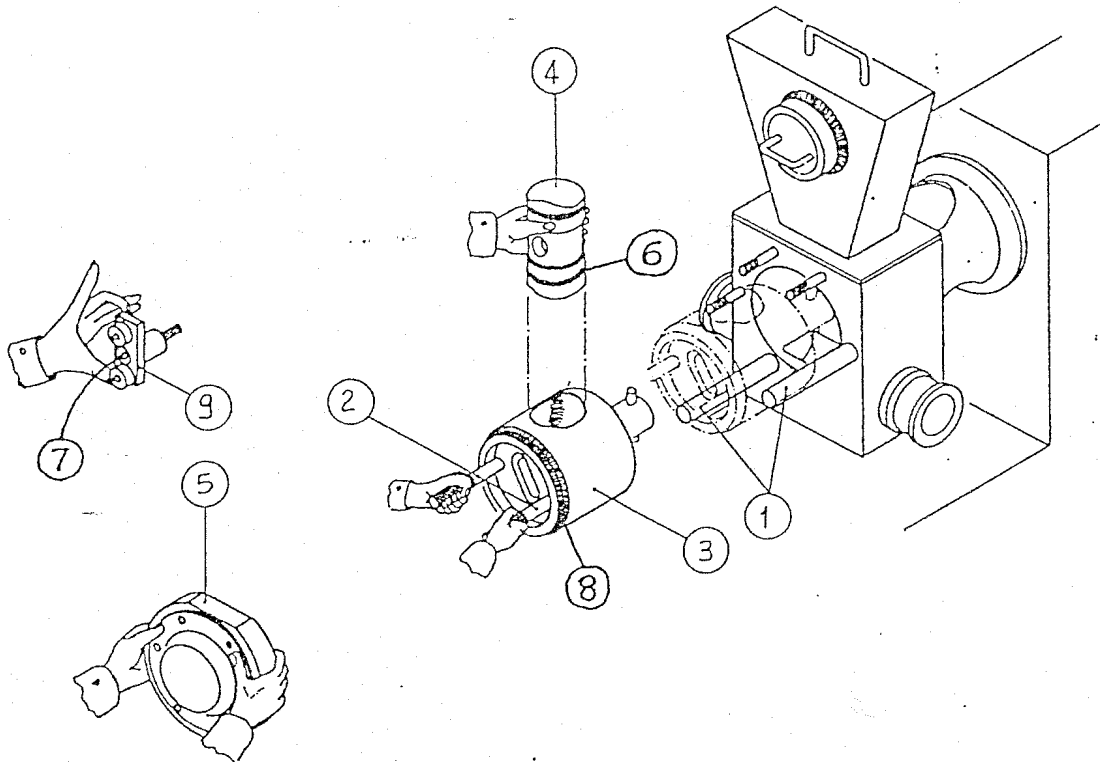
Once the machine has finished working, disassemble and wash its various parts by following this procedure:

- Pour hot water mixed with detergent into the ice cream entrance tube and discharge it until the water flowing out is perfectly clean. During this phase, keep the mixer working and once in a while start the rotor, letting it work for approximately 5 seconds and then stopping it.
- Once this is done, disconnect the machine from the electrical supply by pushing the **EMERGENCY** button (see page 7, pos.1) and disconnect the machine from the ice cream tubing. Begin to disassemble the various components in order to perform a detailed cleaning.
- Start by disassembling clamps 1-2-3-4, then remove the mixer tube C and mixing spiral 5 by pulling it from the bottom towards the top.
- Disassemble feedbox 8 by pulling it, after having unscrewed handwheels 6 and removed lock 7.



- Disassemble handwheels 9 and see following page for instructions on how to disassemble the rotor.

- Remove cam 5 by pulling it; assemble the two small columns 1 (found in the spare parts box furnished with the machine) by screwing them onto the two stud bolts, as illustrated in figure below, being careful not to block them.
- Screw the two handles 2 (they can also be found in the spare parts box furnished with the machine) onto rotor 3 and, holding them with both hands, rotate rotor 3 clockwise up to the block and then pull it out; once it is out of the stator let it rest on the two columns.
- Disassemble piston drag 9 by unscrewing screw 7 (warning - to unscrew it turn the opposite wrench clockwise) and then piston 4.



- Soak all the parts in a solution of water diluted with detergent and disinfectant - avoid all corrosive solutions containing chlorine since they would cause a premature wear of rust-proof and chrome surfaces.

- Rinse all the parts thoroughly. Reassemble them after having first greased the rubber gaskets 6 and 8, as well as the outside surface of rotor 3, with Vaseline.

#### WARNING

When assembling piston 4 into the rotor's housing, be careful not to cut or damage gaskets 6.

When mounting the complete rotor into the stator, be sure to fit it in perfectly. Since it is a very tight fit, it can get stuck if not guided in correctly.

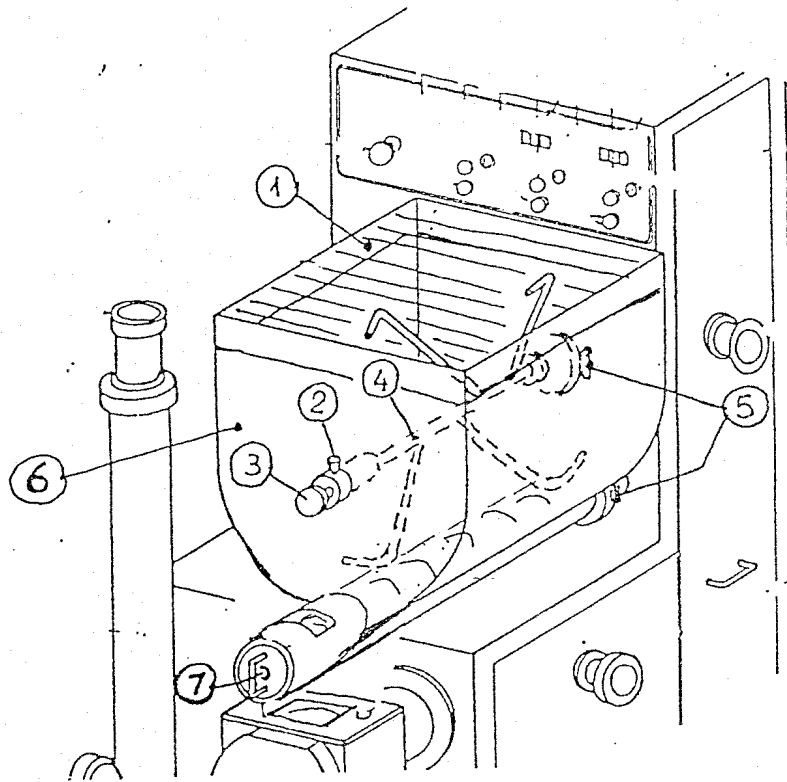
Once the rotor is assembled, verify that gaskets 8 are correctly positioned in their proper place.

Disassemble the small columns and service handles by unscrewing them, reassemble cam 5 along with its cover making sure to tightly close the five handwheels with the use of a wrench.

**IT IS VERY IMPORTANT TO KEEP THE PISTON DRAG ROLLERS (9) WELL OILED WITH EDIBLE GREASE BY POURING IT THROUGH THE APPOSITE GREASERS.**

**BE CAREFUL WHEN HANDLING THE VARIOUS PARTS (ESPECIALLY ROTOR 3). SINCE THEY ARE BUILT WITH SPECIAL, AND IN SOME CASES, SOFT MATERIALS, THEY COULD BE IRREPARABLY DAMAGED SHOULD THEY FALL. IN SUCH CASES, IT WOULD BE IMPOSSIBLE TO REASSEMBLE THEM.**

- Disassemble the ingredients container by first removing protection grille 1, then after removing the lock 2 and extracting the central agitator 3, remove from the inside of the container the product mixing spider 4. Extract the screw dispenser 7 by pulling it towards the outside.
- Unscrew the two clamps 5 to remove the entire container. The container can now be detached from the machine to be washed and disinfected separately.



- Reassemble all the parts. The machine is now ready to begin a new production.

**ALWAYS REASSEMBLE THE VARIOUS PROTECTIONS (PROTECTION GRILLE AND FEEDBOX).  
CLOSE ALL THE HANDWHEELS WITH THE AID OF WRENCHES. CHECK EVERYTHING BEFORE  
STARTING PRODUCTION.**

**TECHNOGEL S.p.A. IS NOT RESPONSIBLE FOR DAMAGES CAUSED BY INCORRECT ASSEMBLING  
OF THE MACHINE'S VARIOUS COMPONENTS, AS WELL AS BY HANDLING OF MACHINE  
ELEMENTS PLACED ESPECIALLY FOR THE PROTECTION OF PERSONNEL.**

## - Noise level -

The level of acoustic pressure, measured from a distance of 1 metre with the machine running, is inferior to 70 dB (A).

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## - Technical assistance

Technical interventions inside the machine carried out by unauthorized personnel may endanger their safety.

It is therefore advisable to call the **AUTHORIZED TECHNICAL SERVICE** whenever there are technical problems with the machine.

**TECHNOGEL S.p.A. IS NOT RESPONSIBLE FOR DAMAGES CAUSED BY TECHNICAL INTERVENTIONS CARRIED OUT BY UNAUTHORIZED PERSONNEL.**

**IN ADDITION, TECHNOGEL S.p.A. IS NOT RESPONSIBLE FOR DAMAGES CAUSED BY THE USE OF NON-ORIGINAL SPARE PARTS AND THEREBY NOT APPROVED FOR INSTALLATION ON TECHNOGEL MODELS.**

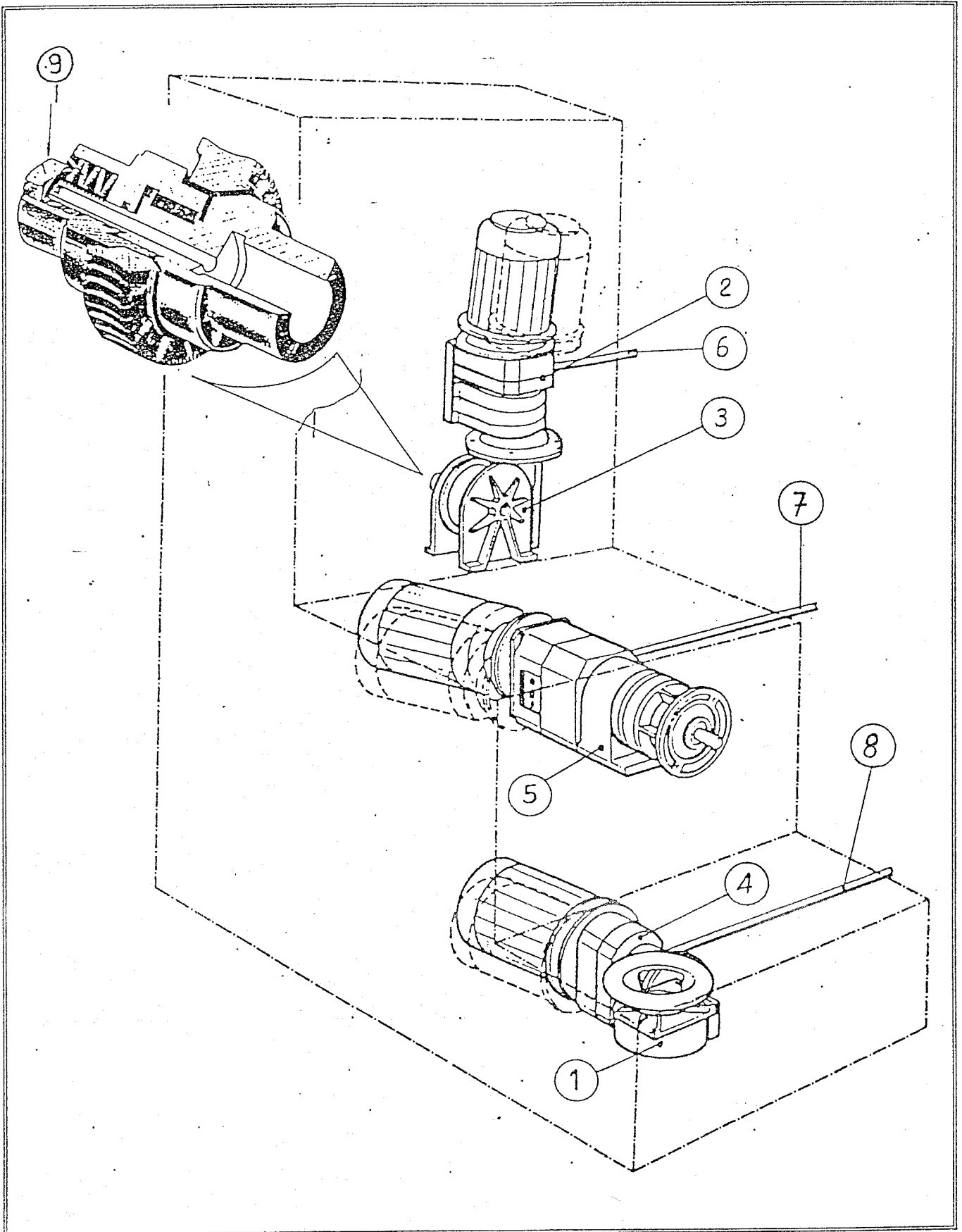
The next pages contain special instructions for technical service personnel responsible for **MAINTENANCE AND REPAIR** of the machine.



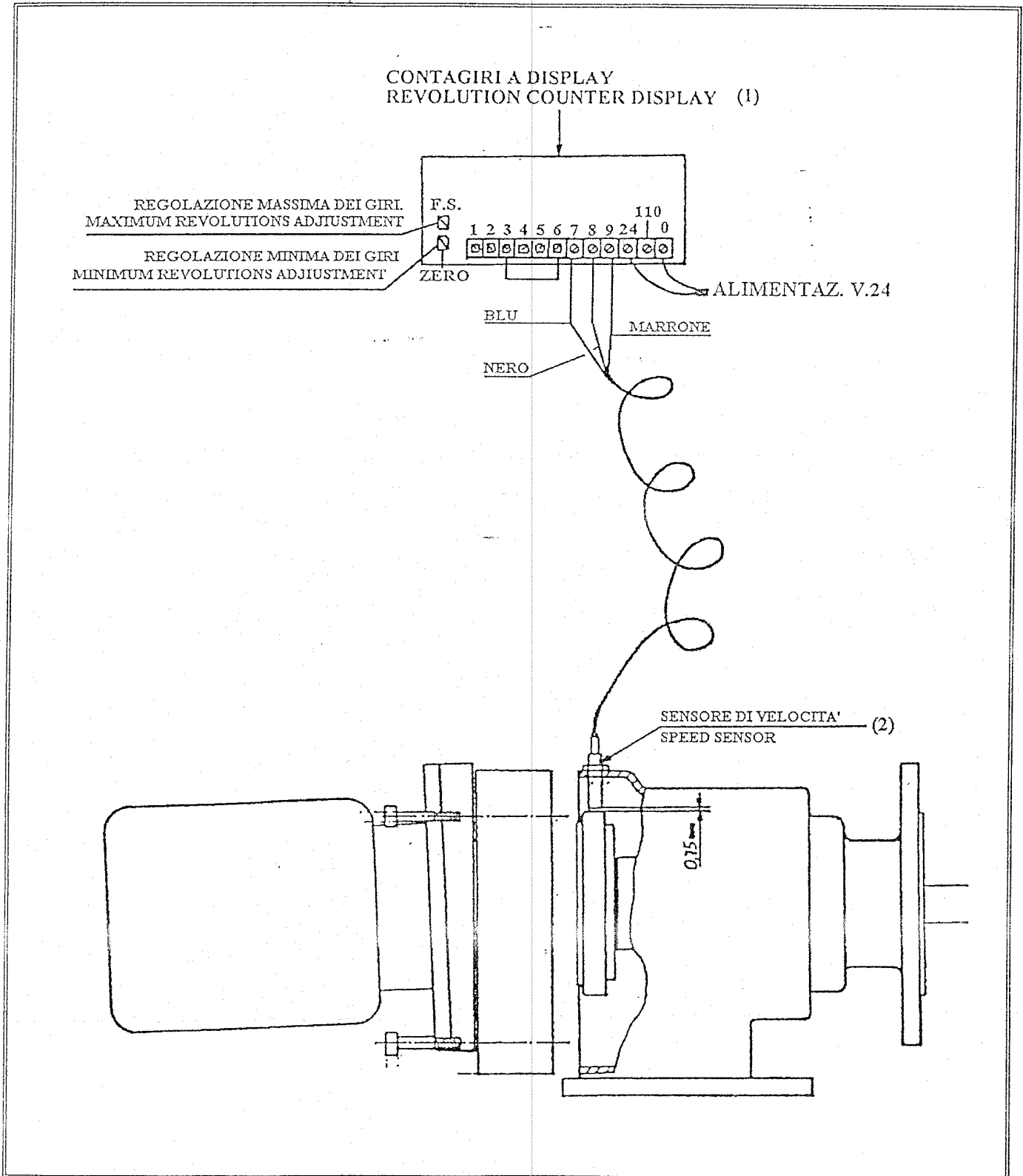
## - Problems, causes and solutions

PROBLEMS	CAUSES	SOLUTIONS
Irregular movement of the agitator and screw dispenser.	<p><i>Dragging disk worn-out or couple adjustment nut loose of the limiter incorporated in the reducer (page 18, pos. 9).</i></p> <p><i>Variator clutch slides (page 18, pos. 2).</i></p> <p><i>Variator adjustment shaft support plate is loose (page 18, pos. 6).</i></p>	<p>Tighten the couple adjustment nut or replace worn out components of the couple limiter.</p> <p>Check or replace the variator clutch.</p> <p>Check the fastening screws of the variator adjustment shaft support plate.</p>
Incorrect visualization of the revolutions on the revolution counter display (page 7 pos. 11 and 12).	<p><i>Revolution counter not calibrated (page 19, pos. 1).</i></p> <p><i>Revolution counter sensor not properly positioned or broken.</i></p>	<p>Calibrate the revolution counter by way of the trimmers indicated on page 19, pos. 3 and 4.</p> <p>Verify that the revolution counter sensor is correctly positioned: the minimum distance must be the same or inferior to that prescribed (0.75 mm).</p> <p>Replace the sensor.</p>
The revolution counter does not turn on and therefore does not display the rpms (page 7 pos. 11 and 12).	<p><i>Fuse valve discontinued.</i></p> <p><i>Insufficient contact of electrical terminals.</i></p> <p><i>Revolution counter broken.</i></p>	<p>Replace fuse valve.</p> <p>Check the electrical terminals.</p> <p>Replace revolution counter.</p>
When pushing start buttons of the mixer, rotor or screw dispenser (page 7 pos. 2-4-6) the motors do not start.	<p><i>The overload cutout (magnetothermal) has intervened, discontinuing power to the motor(s).</i></p> <p><i>Incorrect starting sequence.</i></p>	<p>Restore the overload cutout (magnetothermal) located in the electrical box.</p> <p>Start the group in the correct sequence: first the mixer, then the rotor and finally the screw dispenser.</p>
Once the motor has started, the particular group (mixer, rotor or dispenser) does not turn properly.	<p><i>Clutch of the variator in question slides (page 18, pos. 2-4-5).</i></p> <p><i>Variator adjustment shaft support plate is loose (page 18, pos. 6-7-8).</i></p>	<p>Check or replace the variator clutch.</p> <p>Check the fastening screws of the variator adjustment shaft support plate.</p>

# - Movement variators group with couple adjuster

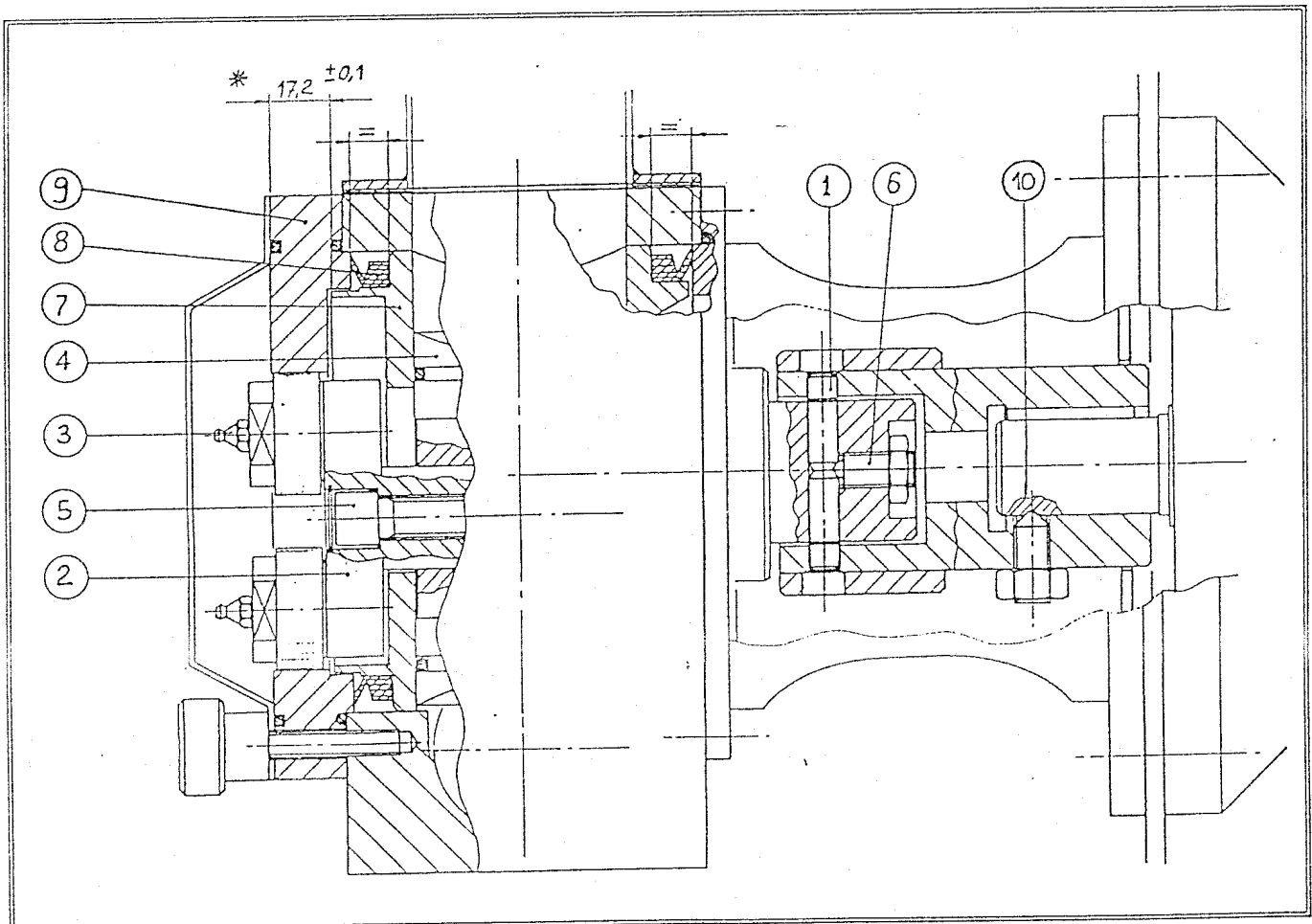


# - Revolution counter group and sensor positioning



## - Problems, causes and solutions

PROBLEMS	CAUSES	SOLUTIONS
Either the mixer, rotor or screw dispenser do not rotate in the right direction.	<i>Incorrect motor connection.</i> <i>Incorrect machine connection.</i>	If only one of the motors is rotating incorrectly, reverse two of the three phases that feed that specific motor.  If the entire machine is rotating incorrectly, reverse two of the three phases of the line cable.
Even though the rotor's movement variator works, the rotor does not turn.	<i>Break pin (1) is broken (see drawing below) due to a rotor blockage or the fall of a metal object inside the piston's rotor.</i>	Replace the break pin disassembling first the rotor (see page 14). Release the broken pin by first loosening pressure 6 (see drawing below).



- CROSS SECTION WITH ROTOR ASSEMBLY AND BREAK PIN -

## - Maintenance

### After every washing

- Restore the lubricating grease (the edible type) on the drag rollers (page 20, pos. 3).
- The gaskets must be greased with Vaseline before being mounted into their proper housing.
- Verify that the gaskets found on the rotor are correctly assembled as shown on page 20 pos. 8, that is, with the lip turned towards the outside.

### Periodically

- The mixer control reducers (page 18 pos. 1) and the mixer (page 18 pos. 3) are lubricated with oil. Periodically check the level and top up, as needed, with the following types of oil:

IP MELANIA OIL 220  
BP ENERGOL GR 550 XP

or similar, with the following viscosity characteristics:

viscosity SAE 120  
viscosity 220 cst at 40°C  
viscosity 22 degrees Engler at 50°C

The quantities to be used are 0.23 litres for each reducer. Replace the oil every 1500 working hours.

- The reducer incorporated in the rotor variator (page 18 pos. 5) and agitator (page 18 pos. 2) is lubricated with oil.

Periodically check the level and top up, as needed, using the following oil types:

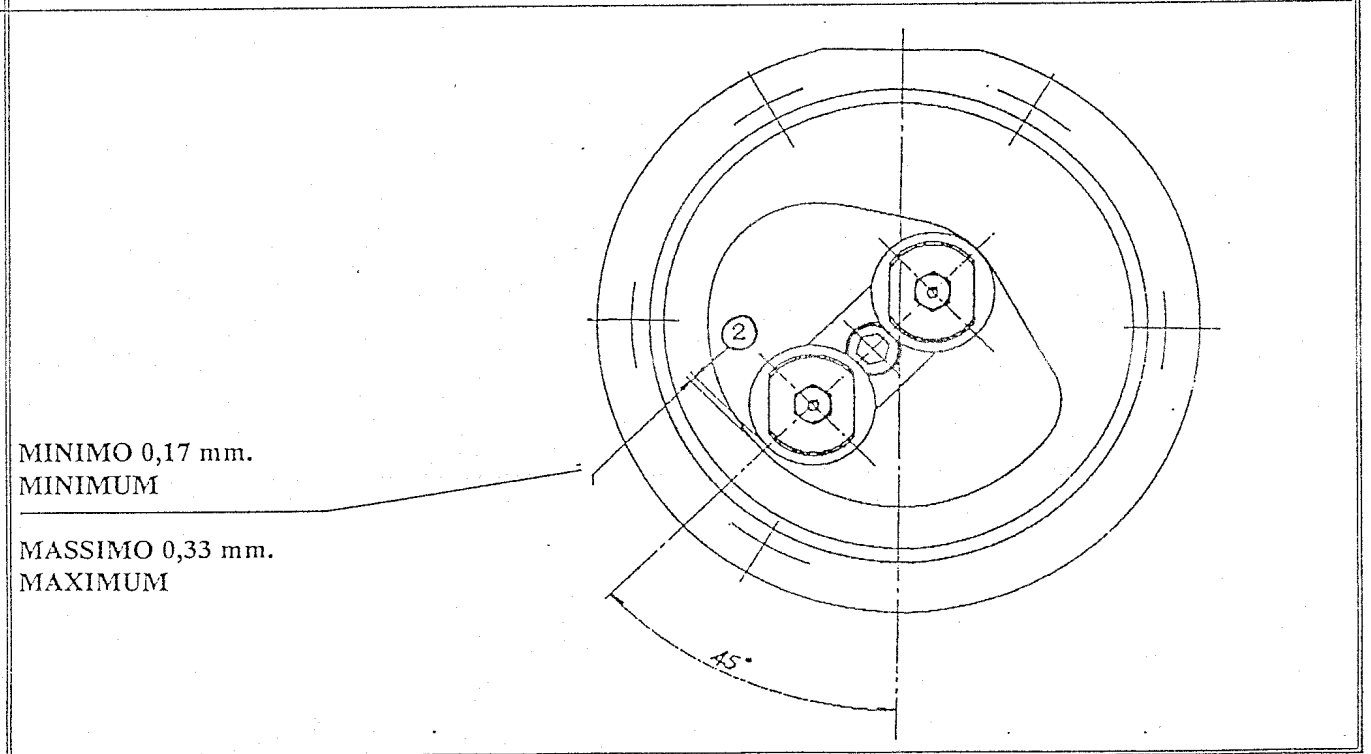
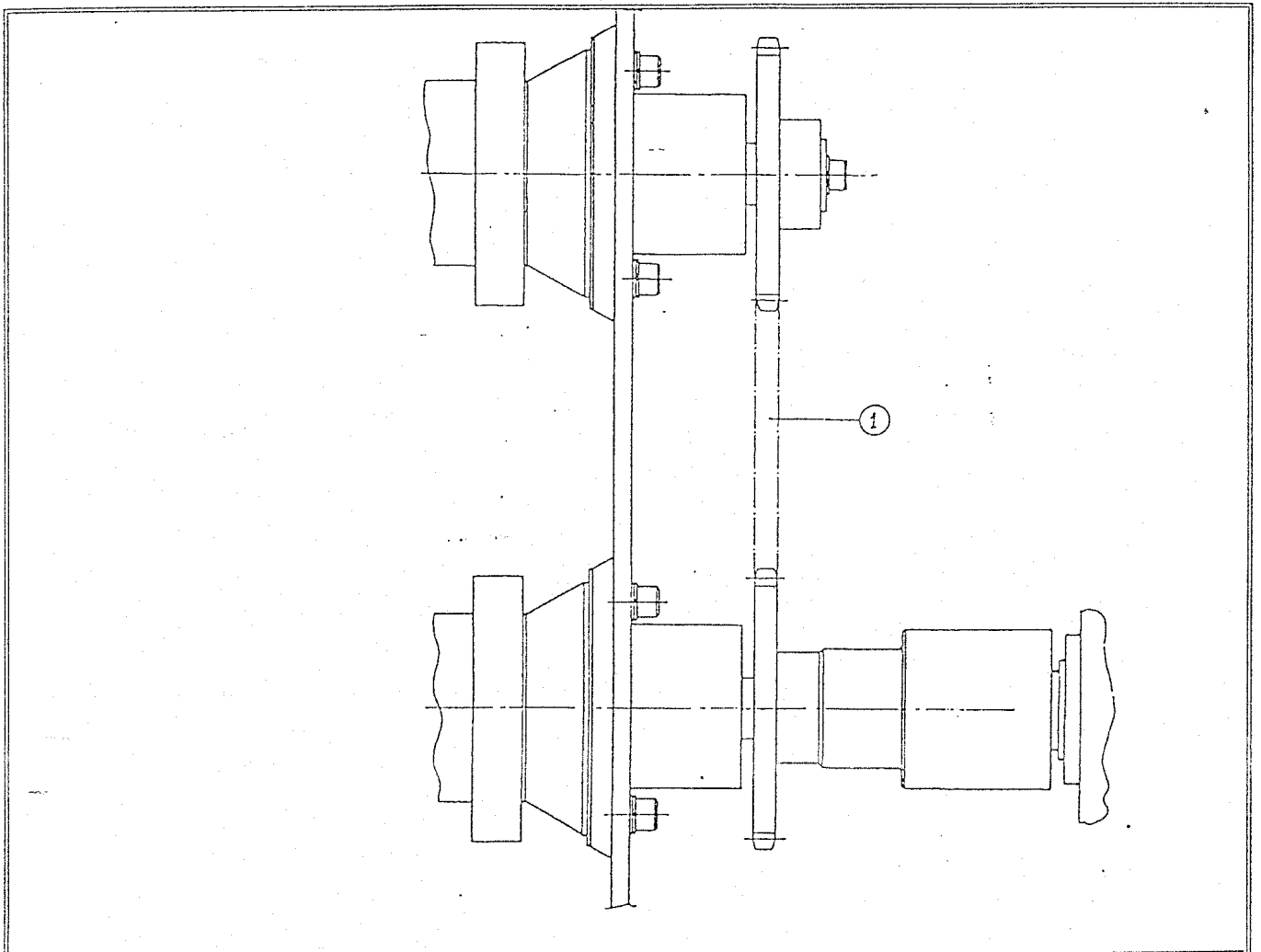
IP MELANIA OIL 220  
BP ENERGOL GR 550 XP

or similar, with the following viscosity characteristics:

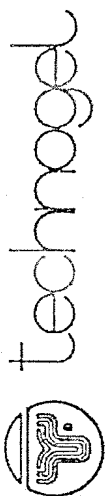
viscosity SAE 120  
viscosity 220 cst at 40°C  
viscosity 22 degrees Engler at 50°C

Replace the oil every 6000 working hours.

- Keep the chain located at the agitator's control (page 22 pos. 1) well greased.
- During assembly of the rotor group, verify that the two gaskets (page 20 pos. 8) are positioned at an equal distance from the stator's faces.  
In case of complete substitution of the variator, the conical seat on the shaft must be made (page 20 pos. 10), maintaining the distance indicated with an asterisk in the drawing. This allows to check the gaskets' centering condition (page 20 pos. 8).
- In case of cam replacement (page 20 pos. 9), or replacement of the complete rollers carrier group (page 20 pos. 2), you must check, before starting the machine, that there is play and no interference between the rollers carrier and the cam, in the position indicated at page 22 pos. 2. Any interference would cause breakdown of the components.

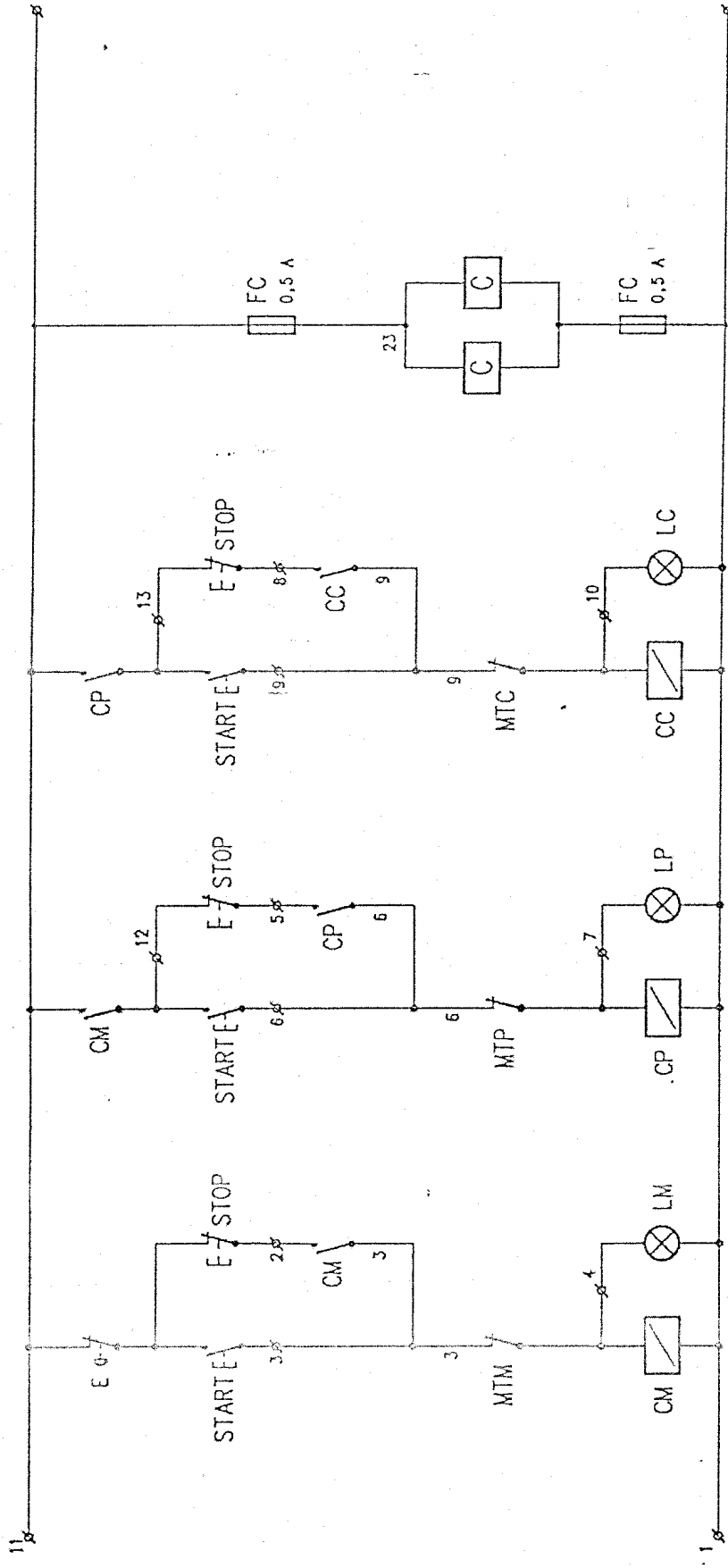


- Electric system: low voltage



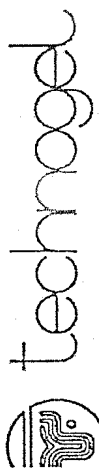
Macchina: FF10  
 N.Dis: DFA-11273.4  
 Foglio di Data

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

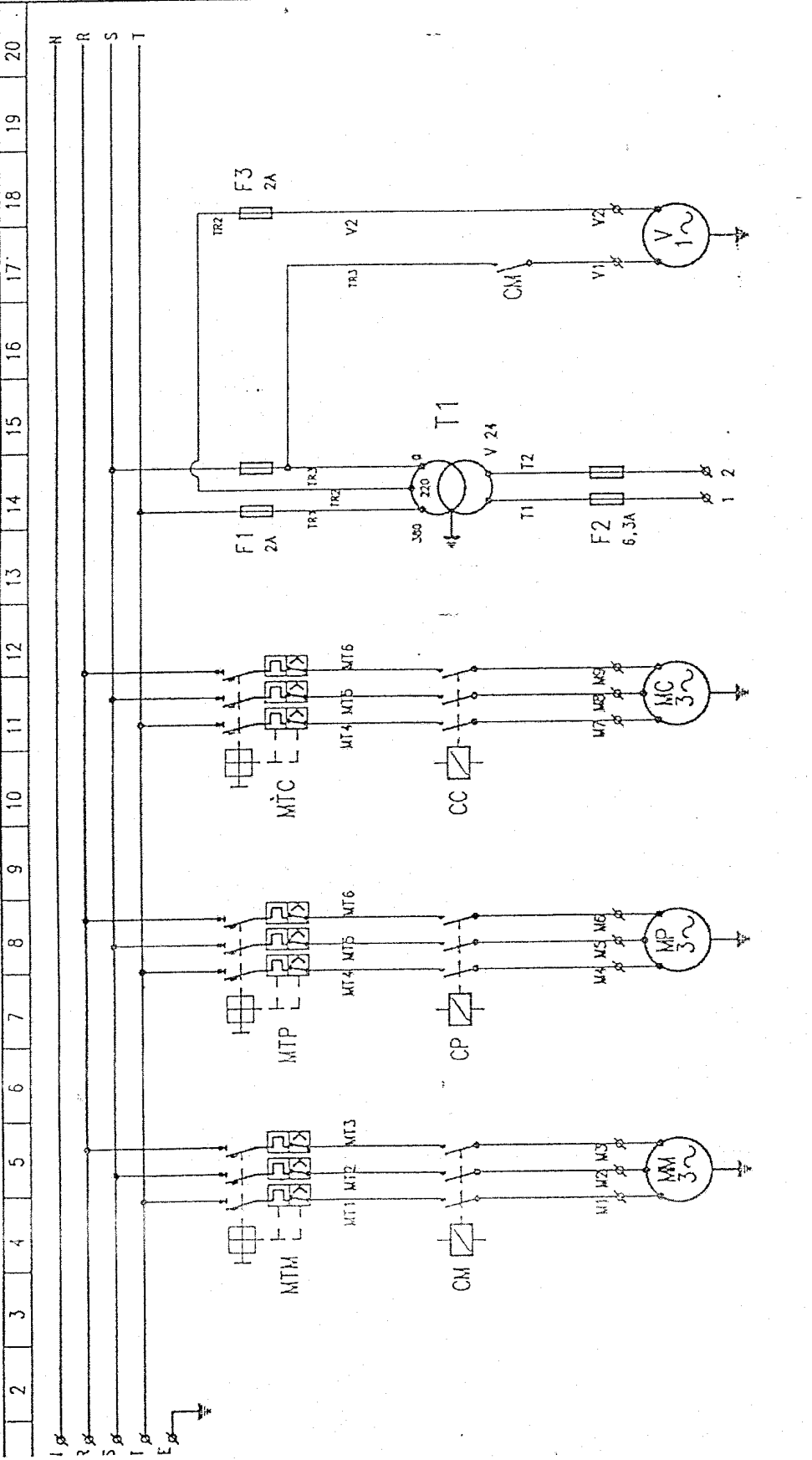


MISCELATORE BLENDER MIXER MELANGEUR	POMPA PUMP ROTOR POMPE	VIS COCLEA AUGER SCREW DISPENSER	CONTAGIRI COMPTE-TOUR RPM READOUTS REVOLUTION COUNTER
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- Electric system: high voltage



Mocchina:	FF 10
N.Dis:	
Foglio di	Data 9/94
	17 18 19 20



	MIXER MOTORE MISCELATORE MELANGEUR	ROTOR MOTORE POMPA POMPE	SCREW DISPENSER MOTORE COCLEA VIS	TRANSFORMER TRASFORMATORE TRANSFORMATEUR	FAN VENTILATORE VENTILATEUR
Kw	0.37	1.1	0.37	0.1	0.036



## - Technical specifications: FRUIT FEEDER FF 10S

Rotor variator	1,5 HP - 1,1 KW
Mixer variator	0,5 HP - 0,37 KW
Screw dispenser variator	0,5 HP - 0,37 KW
Fan	Single phase 0,040 KW

Overload cutout calibration	V.200 50/60HZ	V.220 50HZ	V.220 60HZ	V.380 50HZ	V.380 60HZ	V.415 50HZ
Rotor variator motor A.		5,5	5,5	3,5		3,5
Mixer variator motor A.		2,2	2,3	1,3		1,3
Screw dispenser motor A.		2,2	2,3	1,3		1,3

Electrical fuses	V.200 - V.220	V.380 - V.415
F2 primary transformer	n°2 d. 5 x 20 2A. rapid type	n°2 d. 5 x 20 2A. rapid type
F3 secondary transformer	n°2 d. 5 x 20 6,3A. delayed type	n°2 d. 5 x 20 6,3A. delayed type
Revolution counter protection	n°2 d. 5 x 20 0,5A. rapid type	n°2 d. 5 x 20 0,5A. rapid type

The machine is supplied with the above default values and settings.

**TECHNOGEL S.p.A. IS NOT RESPONSIBLE FOR DAMAGE TO OBJECTS AND/OR PERSONNEL CAUSED BY MODIFICATIONS TO THE PRE-SET VALUES, OR FROM USING FUSES THAT HAVE INCORRECT CHARACTERISTICS AND SIZE, OR IN ANY CASE DIFFERENT FROM THOSE PRESCRIBED.**

## - Spare parts

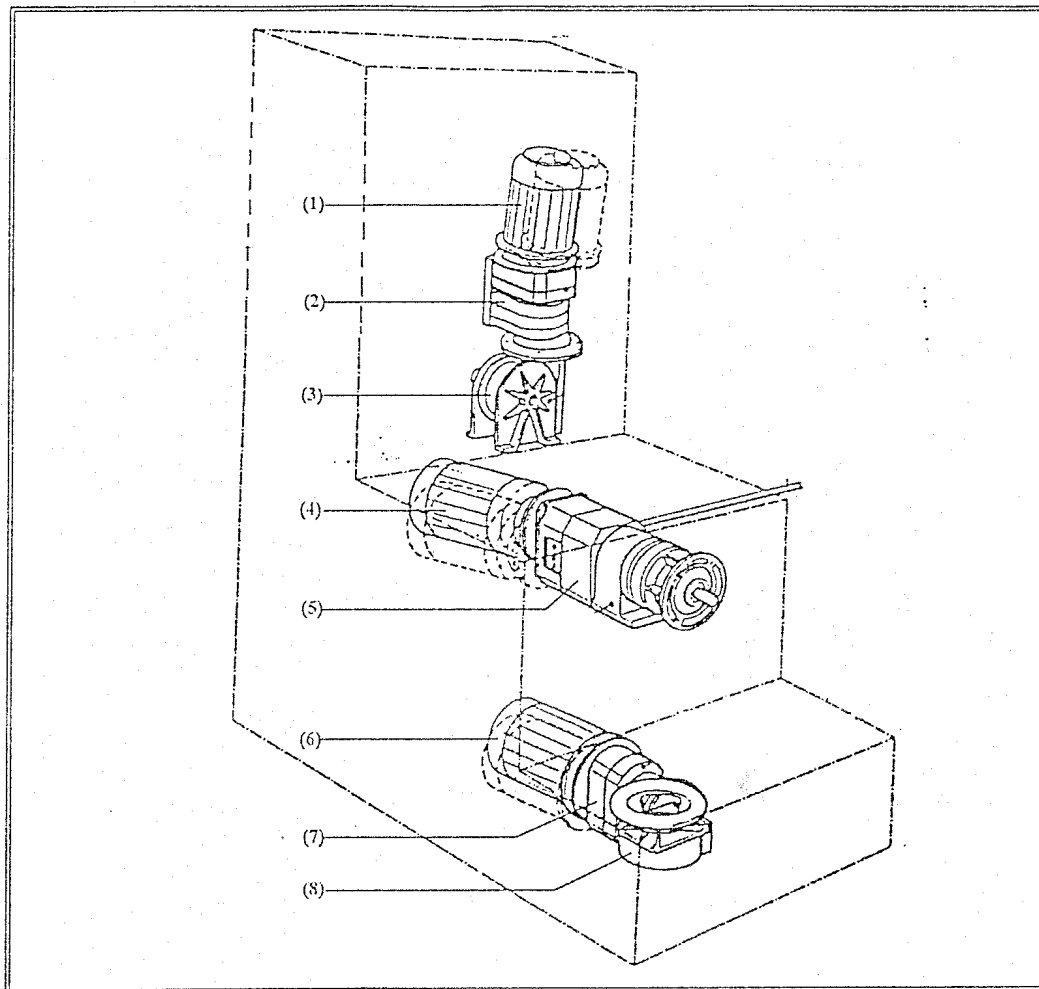
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The next pages contain a description of various components of the machine.

When ordering spare parts, always include the following data:

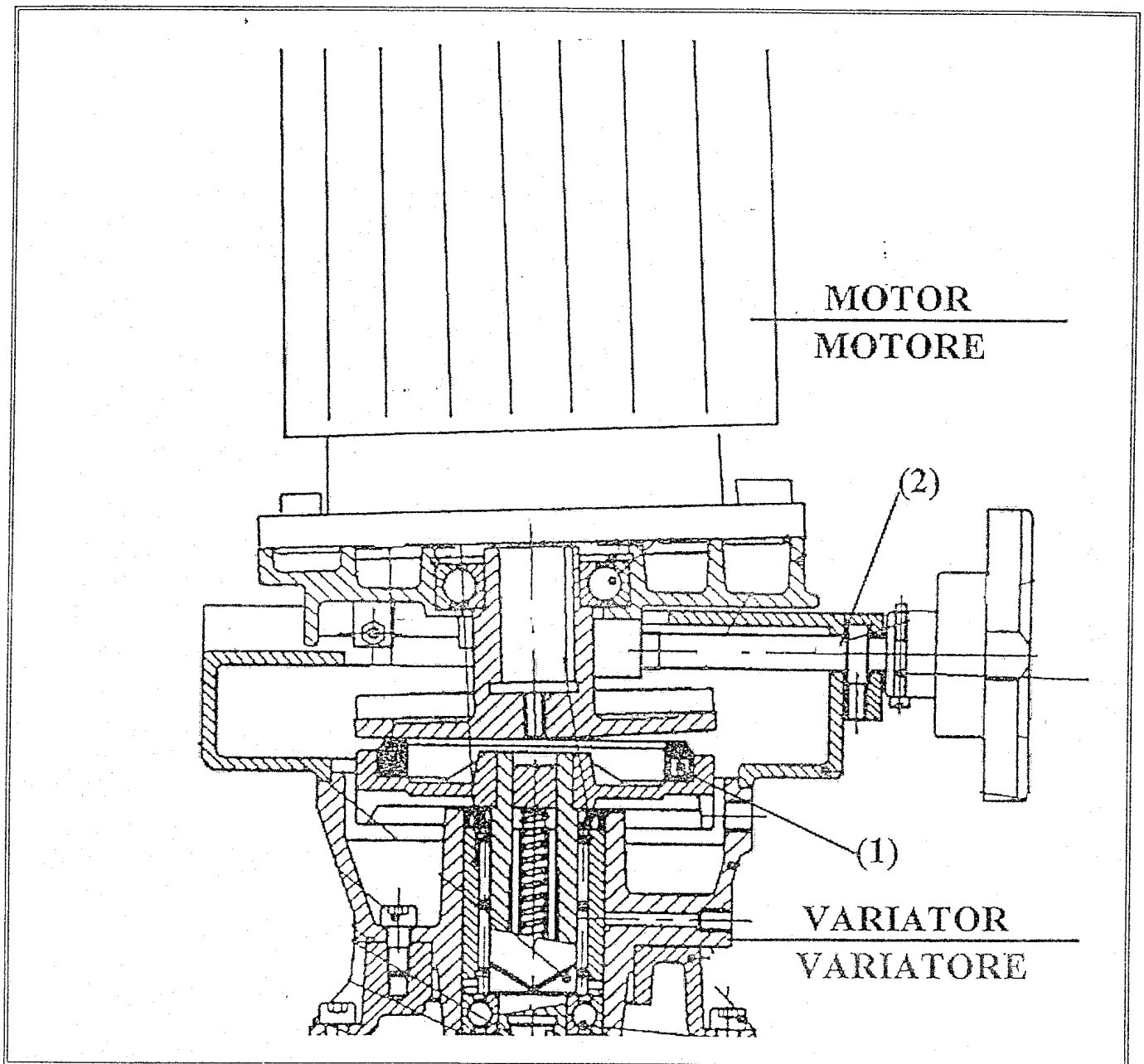
- machine model
  - serial number
  - electrical voltage (if the component requested is part of the electric installation)
  - part number of the component whenever available, otherwise the page number where the component is shown and its corresponding number.
- .....

## - Movement variators group



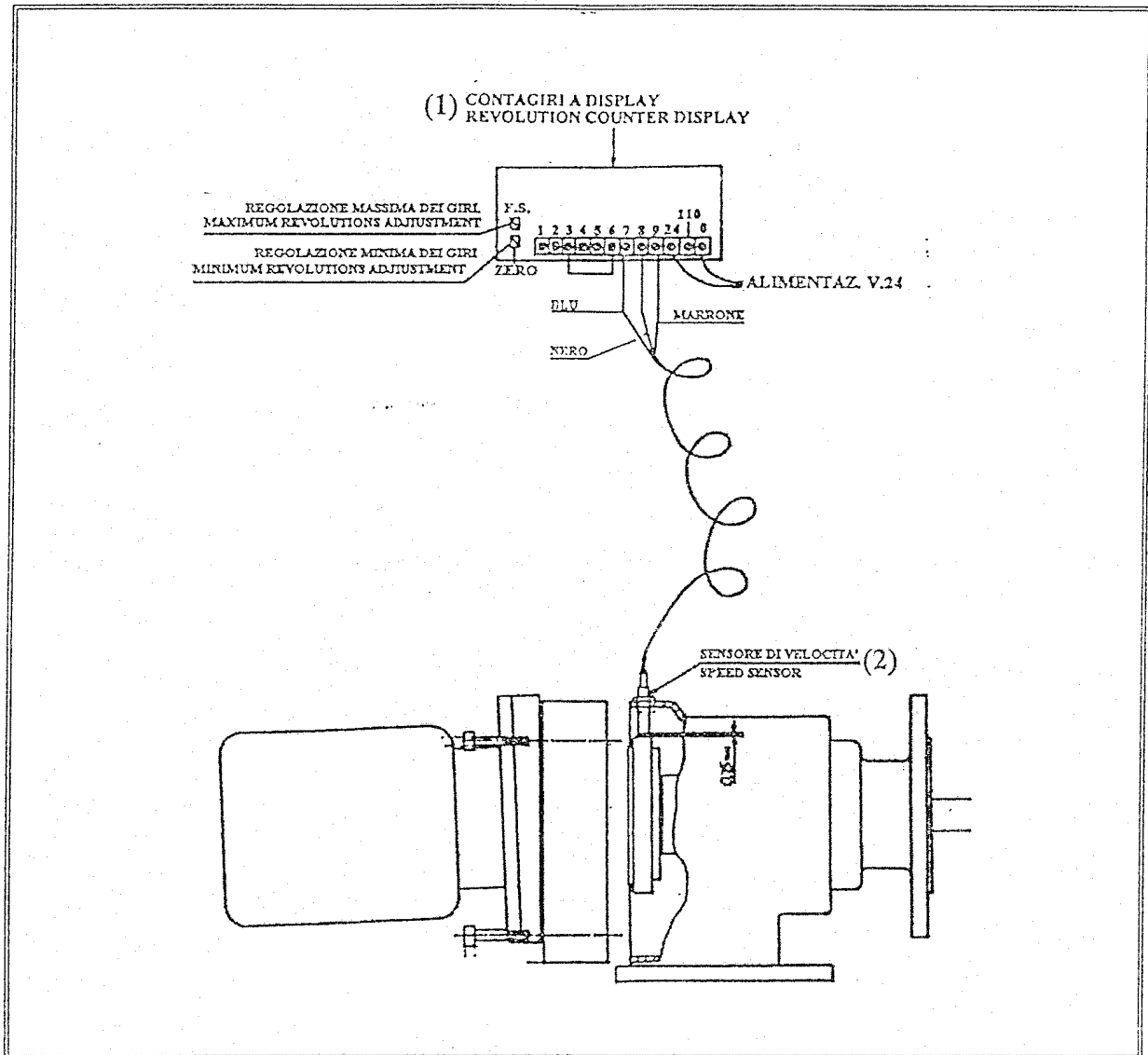
Pos.	Nome componente		Codice
1	Motore HP 0,5 1400 giri/minuto	V.220/240-380/415 50HZ V.220/380 60HZ V.200 - 50/60HZ	MO-0002 DF-0100/6 DF-0100/2B
2	Variatore 5/1 71 B5 - 200/1000 giri/minuto		DF-0099
3	Riduttore a vite senza fine RMI - 50D LCA 1:49		RV-6497.6
4	Motore HP 1,5 1400 giri/minuto	V.220/240-380/415 50HZ V.220/380 60HZ V.200 - 50/60HZ	MO-0007 DF-0023/6 DF-0023/2B
5	Variatore F41/2R B5 - 5/25 giri/minuto		RV-8006.6
6	Motore HP 0,5 1400 giri/minuto	V.220/240-380/415 50HZ V.220/380-60HZ V.200 - 50/60HZ	MO-0002 DF-0100/6 DF-0100/2B
7	Variatore 5/0 71 B5 - 350/1750 giri/minuto		DF-0103
8	Riduttore a vite senza fine RMI - 50FL 1:15		RV-6498.6

# - Clutch variator nest



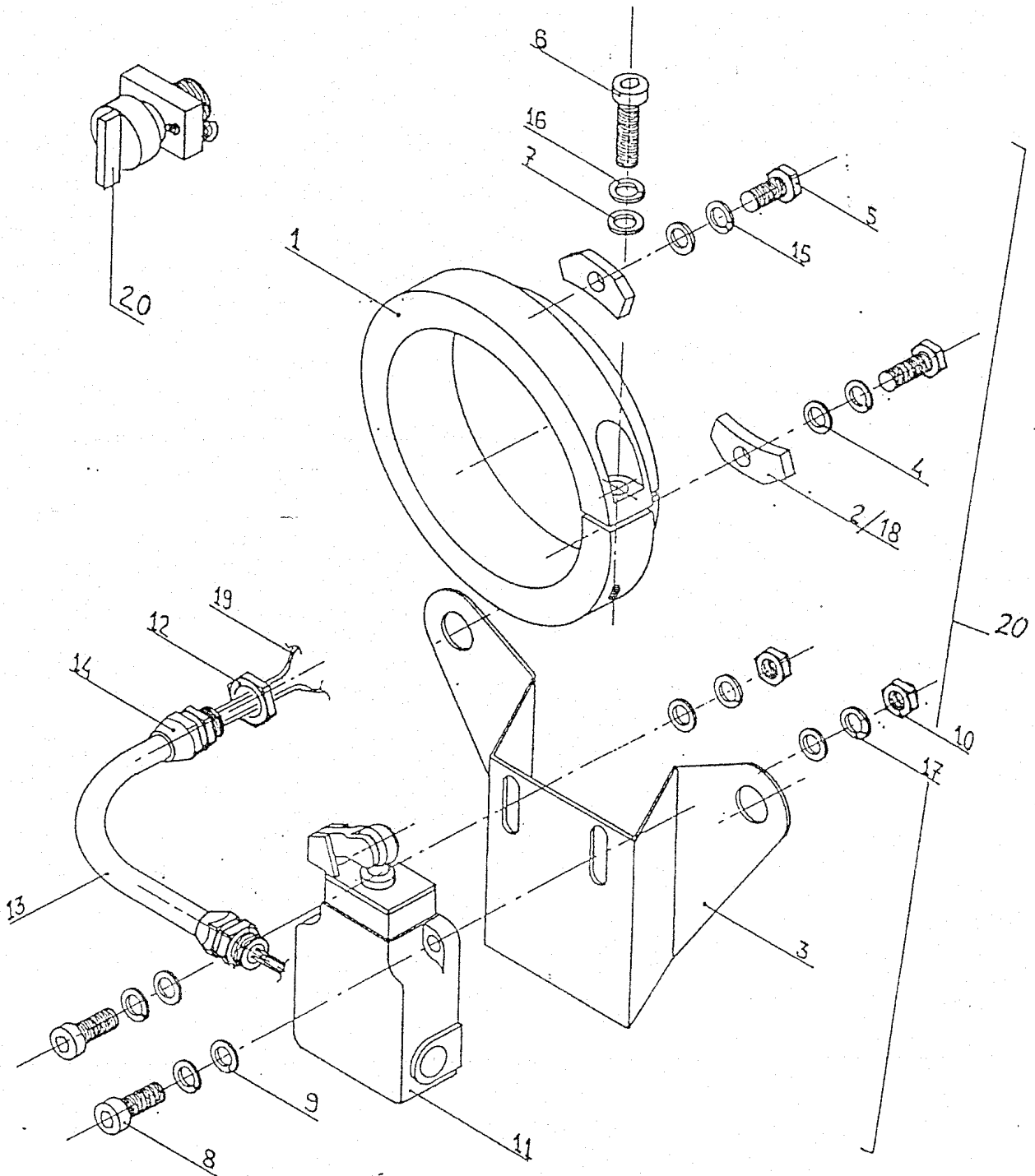
Pos.	Nome componente	Codice
1	Disco frizione completo di anello in carbone per: Variatore ROTORE Variatore MISCELATORE Variatore DISTRIBUTORE A COCLEA	FR3-0234 DFA-0202 DFA-0368
2	Slitta variatore completa di pignone e cremagliera per: Variatore ROTORE Variatore MISCELATORE Variatore DISTRIBUTORE A COCLEA	DF-0108 DFA-0448 DFA-0449

# - Revolution counter group and sensor

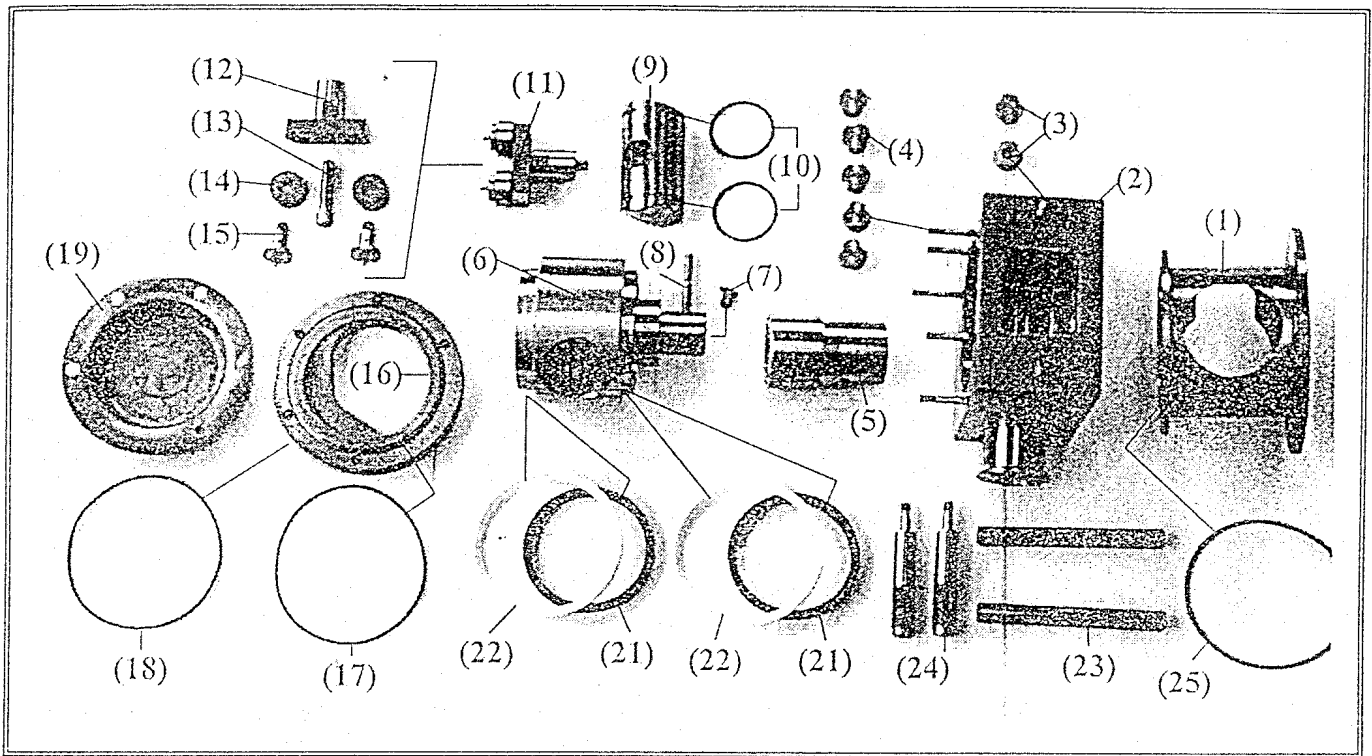


Pos.	Nome componente	Codice
1	Visualizzatore giri a display (Revolutions counter display)	CC-6032.6
2	Sensore (Speed sensor)	DFA-0031

- Intermittence group

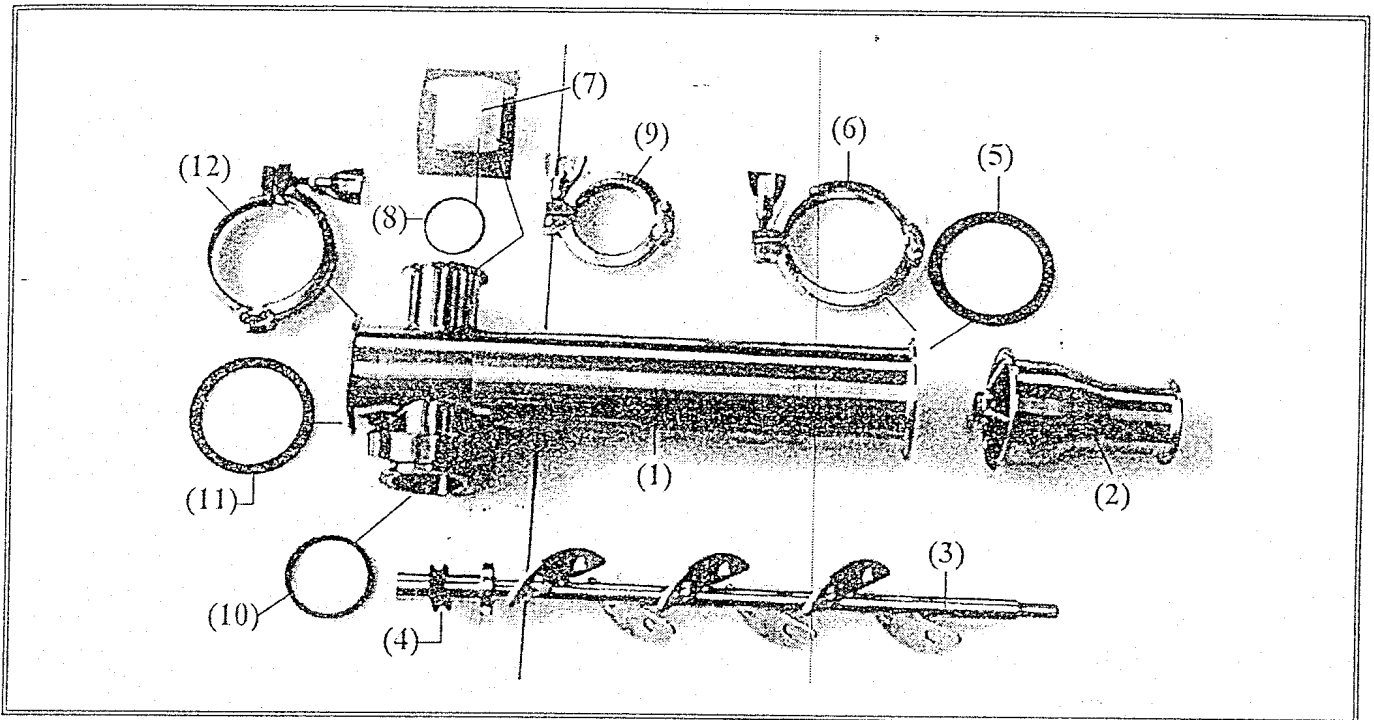


# ROTOR ASSEMBLY



Pos.	Part Name	Part Number
1	Pump casing support	DFA-4598.3/10
2	Pump casing	DFA-4566.3
3	Feedbox locking handwheel	DFA-4546.0
4	Cam cover locking handwheels	DFA-4548
5	Rotor dragging hub	DFA-4918.2/10
6	Rotor	DFA-4555.3
7	Break pin locking pressure pad	DFA-4745.6
8	Brass break pin	DFA-4572.0/20
9	Rotor piston	DFA-4571.0
10	Piston "OR" gasket	DF-0080
11	Complete piston drag	DFA-4827.4
12	Piston drag	DFA-4827.0
13	Piston drag locking screw	DFA-4724.0
14	Complete pin	DFA-4808.1
	▣ bearing retainer (# 1)	DFA-0409
	▣ lateral shoulder (# 2)	DFA-4671.0
	▣ outside roller (# 1)	DFA-4669.0
	▣ inside roller (# 1)	DFA-4670.0
15	Pin locking screw with lubricator	DFA-4826.0
16	Cam	DFA-4813.0
17	Cam seal "OR" gasket	DFA-0025
18	Cam cover seal "OR" gasket	DFA-0025
19	Cam cover	DFA-2464.0/10
21	Rubber V-gasket for rotor	GU-6075.6
22	Rotor gasket Teflon support	DFA-6679.0
23	Rotor disassembly guide columns	DFA-3988.0/10
24	Rotor disassembly knobs	DFA-3442.0
25	"OR" gasket for pump casing support	DFA-0025

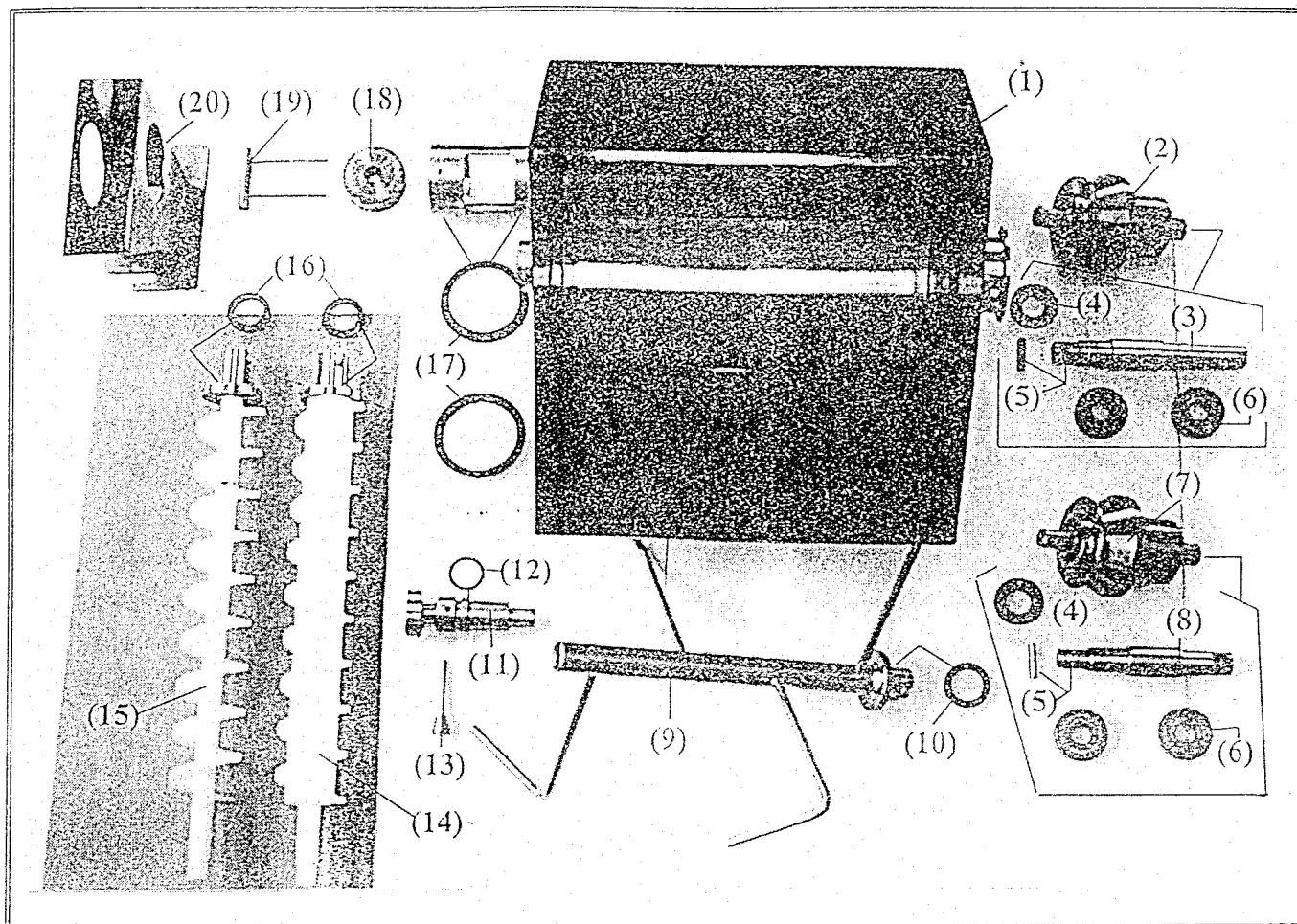
## MIXER ASSEMBLY



Pos.	Part Name	Part Number
1	Mixer T-pipe	DFA-4536.3
2	Reduction with guide	DFA-4505.3
3	Mixer with perforated fins	DFA-4529.3/10
4	Stirrer V-gasket	GU-4280.0/10
5	Tri-clamp gasket	DFA-0157
6	Tri-clamp closing clamp	DFA-0156
7	Plug	DFA-4513.0
8	Plug "OR" gasket	VR-029
9	Tri-clamp plug closing clamp	DFA-0152
10	DN gasket	DF-0058
11	Tri-clamp gasket	DFA-0157
12	Tri-clamp closing clamp	DFA-0156

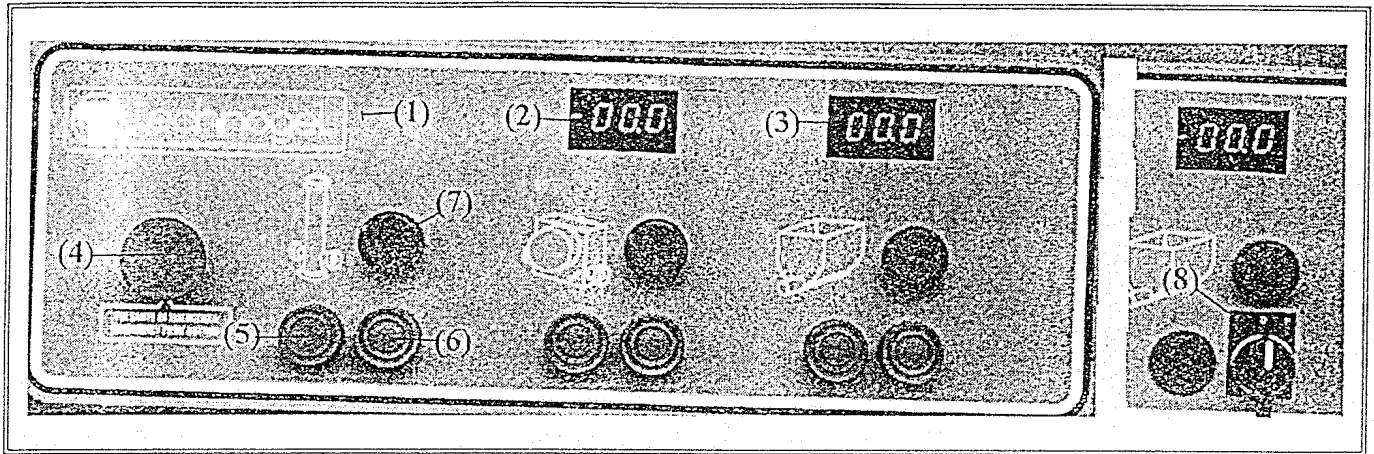


## - CONTAINER ASSEMBLY WITH SCREW DISTRIBUTOR



Pos.	Part Name	Part Number
1	Ingredients container	DFA-4488.3
2	Complete lower support	DFA-4505.4
3	Lower shaft support	DFA-4503.0
4	Support gasket	DFA-0399
5	Shaft pin	SPCI-8X35
6	Support bearing	CS-5635.6
7	Complete upper support	DFA-4496.4
8	Shaft for upper support	DFA-4497.0
9	Container internal stirrer	DFA-4482.2/10
10	Stirrer V-gasket	GU-3903.3
11	Stirrer guide coupling	DFA-4485.3
12	Coupling "OR" gasket	DFA-0229
13	Coupling locking gudgeon	DFA-3885.3
14	"Low capacity" screw	DFA-6077.3
15	"High capacity" screw	DFA-6076.3
16	Screw V-gasket	GU-3903.0
17	Container lip seal	GU-3881.0
18	Screw guide support	DFA-4495.2
19	Support locking prong	DFA-3884.2
20	Feedbox	DFA-4543.3

## CONTROL PANEL ASSEMBLY



Pos.	Part Name	Part Number
1	Adhesive label	DFA-0245
2	Rotor revolutions counter display	CC-6032.6
3	Screw dispenser revolutions counter display	* CC-6032.6
4	Emergency button	DFA-0092
5	"Red" stop button - internal body with contacts	DFA-0013 DF-0073
6	"Green" start button - internal body with contacts	DFA-0012 DF-0071
7	"Green" pilot light - light only	FR3-0165 + FR3-0164 CC-8574.6

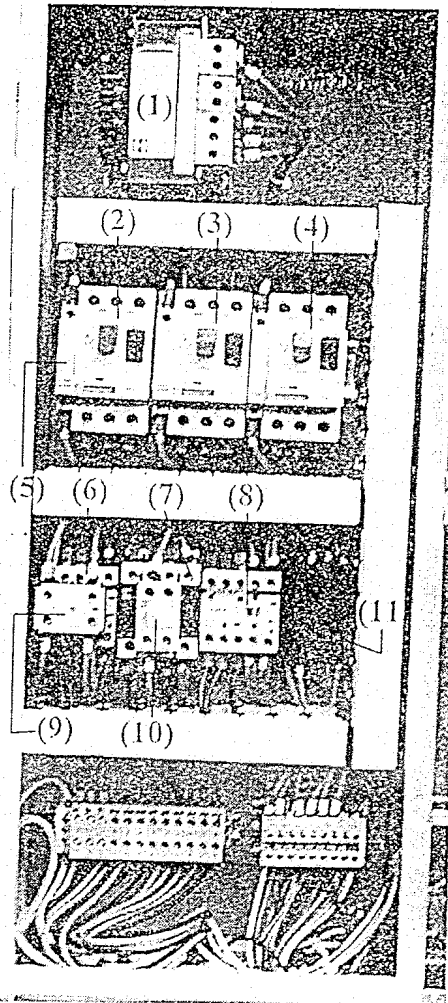
Model with INTERMITTANCE

8	Three-positions switch	FR6-0270
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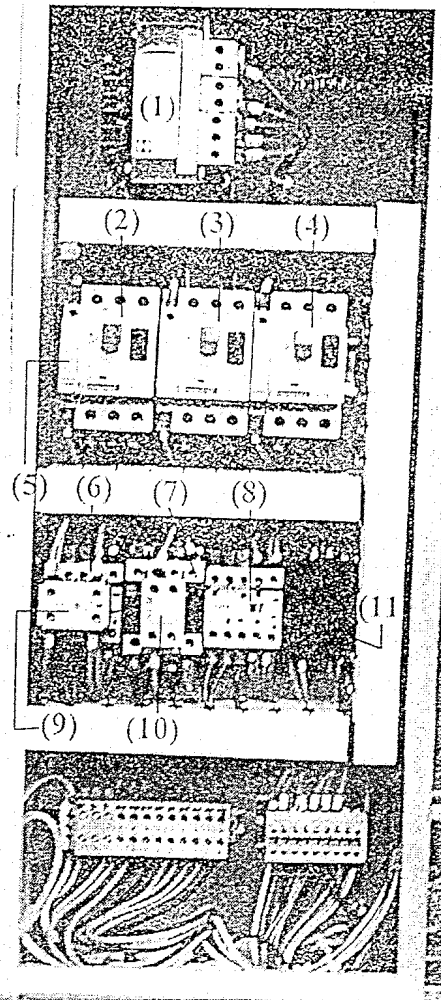
ELECTRIC BOX

FF 10S -

200 V - 220 V

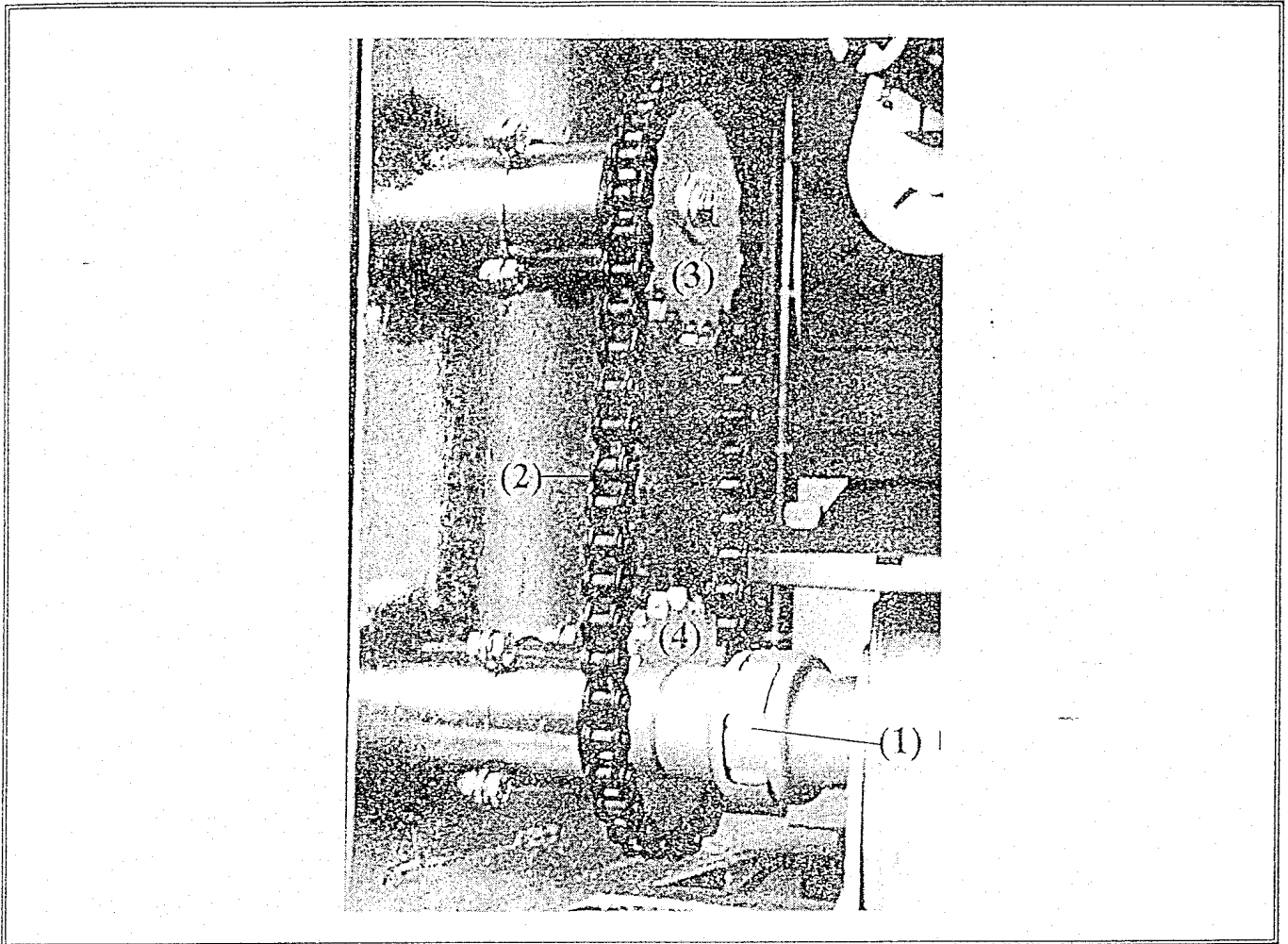


Pos.	Part Name	Part Number
1	Transformer 220/380 V 240/415 V 200 V	ME-0104 ME-0104/4 ME-0104/2B
2	Stirrer motor magnetothermal - GV2 M7	DFA-0445
3	Rotor motor magnetothermal - GV2 M10	MXT-0028
4	Screw distributor motor magnetothermal - GV2 M7	DFA-0445
5	Auxiliary contact for magnetothermal - GV2 AN11	MXT-0030
6	Stirrer motor contactor - LCI K0610	MXT-0027
7	Rotor motor contactor - LCI 0910	FR3-0157
8	Screw distributor motor contactor - LCI K0610	MXT-0027
9	Auxiliary contact LAI KN20	MXT-0036
10	Auxiliary contact LAI DN11	FR3-0162
11	Fuses: # 2 - 5 x 20 in glass 2 A quick type # 2 - 5 x 20 in glass 6.3 A delayed type # 2 - 5 x 20 in glass 0.5 A quick type	ME-0053/2 CC-9656.6 ME-0053/0



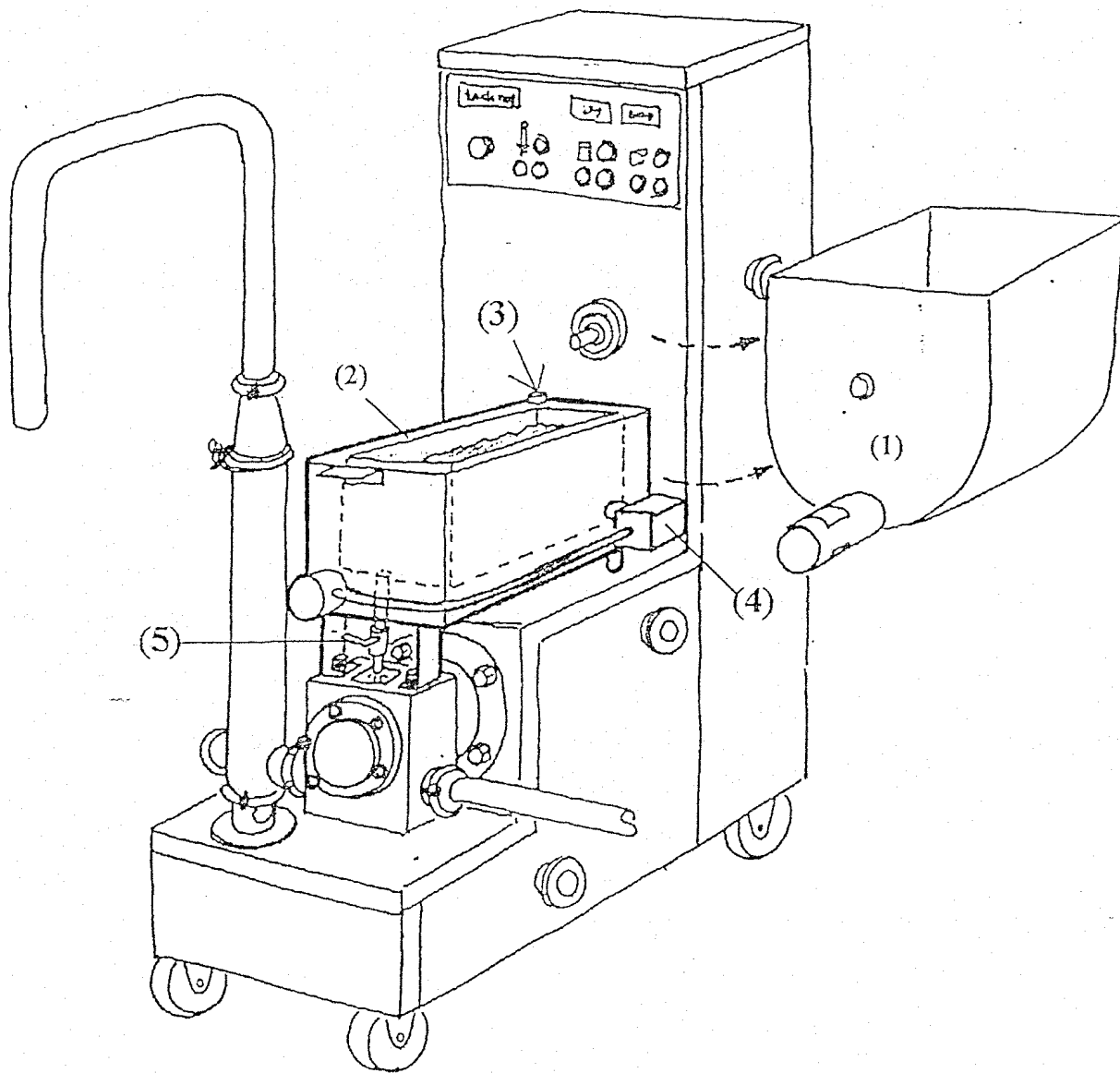
Pos.	Part Name	Part Number
1	Transformer 220/380 V 240/415 V 200 V	ME-0104 ME-0104/4 ME-0104/2B
2	Stirrer motor magnetothermal - GV2 M06	MXT-0033
3	Rotor motor magnetothermal - GV2 M08	MXT-0032
4	Screw distributor motor magnetothermal - GV2 M06	MXT-0033
5	Auxiliary contact for magnetothermal - GV2 AN11	MXT-0030
6	Stirrer motor contactor - LCI K0610	MXT-0027
7	Rotor motor contactor - LCI 0910	FR3-0157
8	Screw distributor motor contactor - LCI K0610	MXT-0027
9	Auxiliary contact - LA1 KN20	MXT-0036
10	Auxiliary contact - LA1 DN11	FR3-0162
11	Fuses: # 2 - 5 x 20 in glass 2 A quick type # 2 - 5 x 20 in glass 6.3 A delayed type # 2 - 5 x 20 in glass 0.5 A quick type	ME-0053/2 CC-9656.6 ME-0053/0

## TRANSMISSION ASSEMBLY WITH CHAIN



Pos.	Part Name	Part Number
1	Complete joint	DFA-3890.4
2	Gearing chain	DFA-0055
3	Crown gear	IG-3622.0/10
4	Crown gear	IG-3622.0/10

## CHOCOLATE HEATING CONTAINER (OPTIONAL)

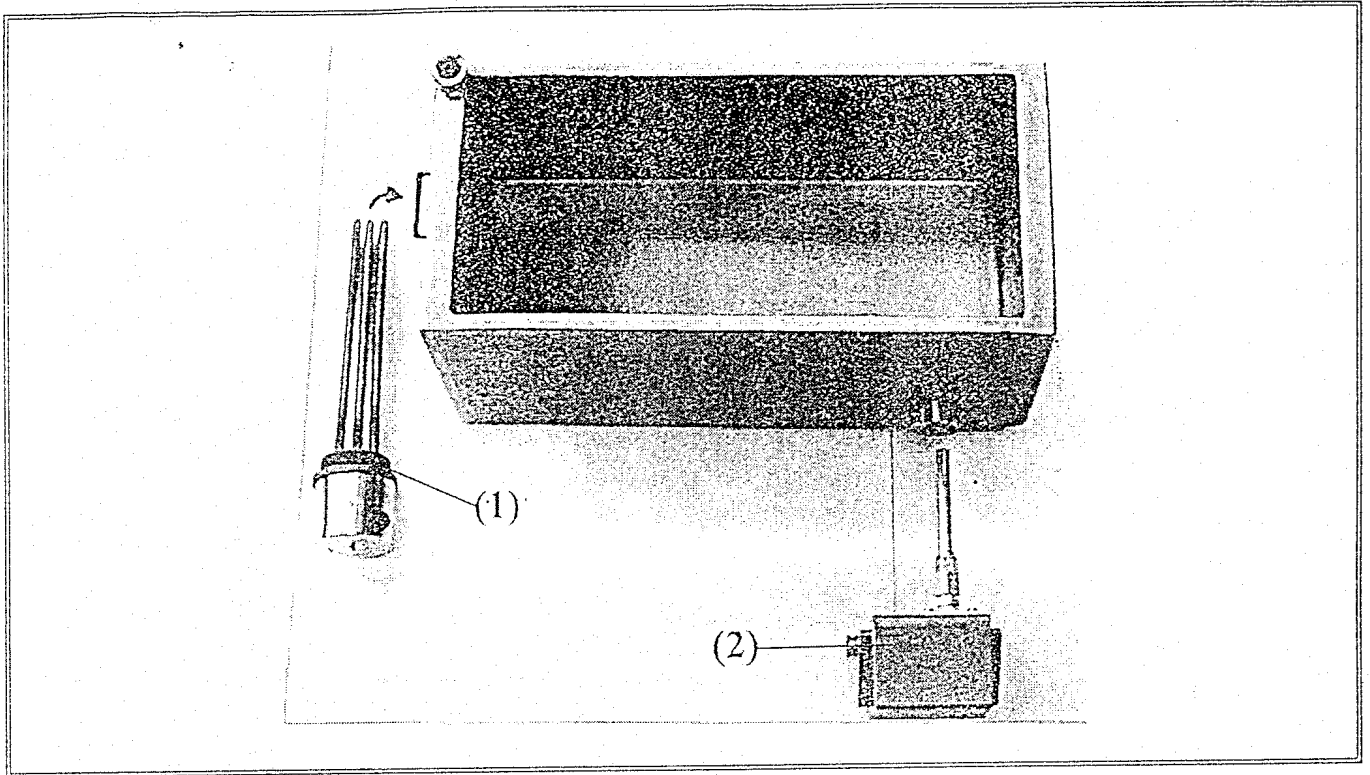


In order to work with the chocolate-heating container (2), the standard container (1) must first be disassembled from the machine.

Before turning on the chocolate-heating container, fill the empty space with water by way of filler (3).

Set the chocolate holding temperature using thermoregulator (4).

Use tap (5) to adjust the chocolate flow.

**- CHOCOLATE-HEATING CONTAINER: SPARE PARTS**

Pos.	Part Name	Part Number
1	Resistor	TR-8644.6
2	Thermoregulator	TR-8342.6