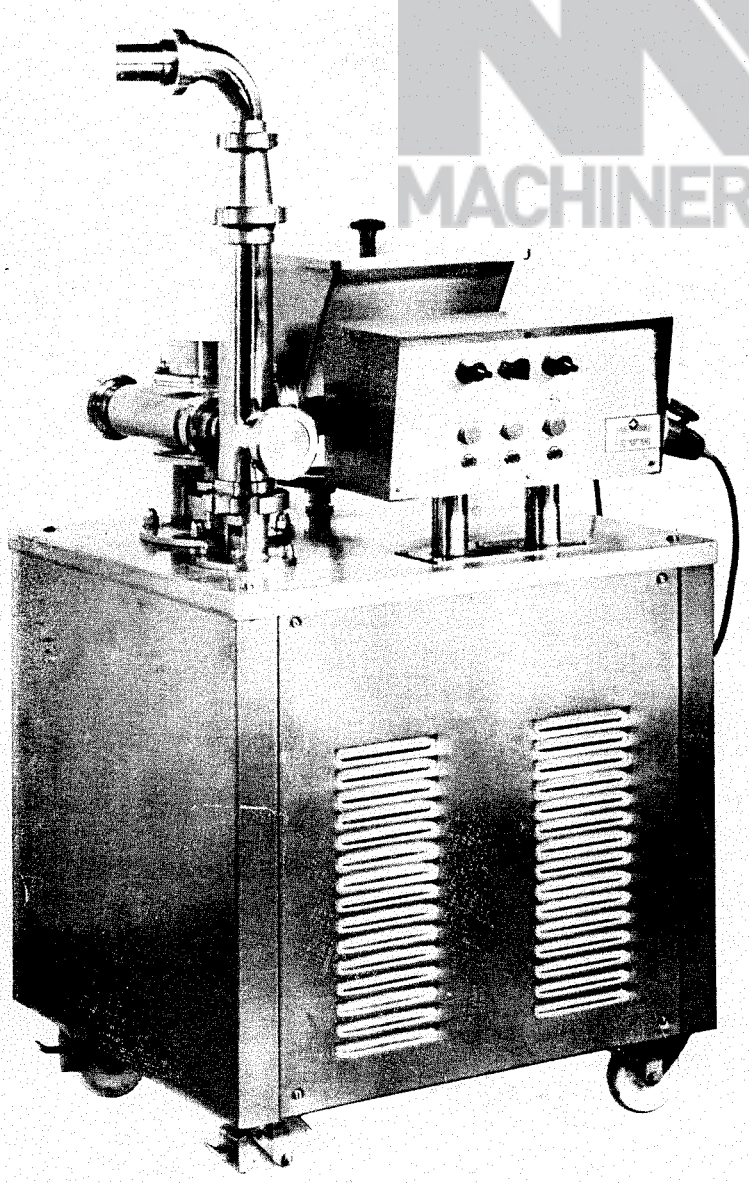
MARK®

# DISPENSA FRUTTA ■ FRUIT-FEEDER ■ FRUCHTVERTEILER





**INSTALLAZIONE - USO - MANUTENZIONE**

**INSTALLATION - USE - MAINTAINANCE**

**INSTALLIERUNG - GEBRAUCHSANWEISUNG - WARTUNG**

**INSTALLATION - EMPLOI - ENTRETIEN**

While thanking you for having chosen our machines, WE ADVISE YOU TO READ ATTENTIVELY THE INSTRUCTIONS GIVEN BY THIS HAND-BOOK.
These instructions will be surely useful to you for a long period machine's operation, without troubles.
We can here guarantee that our machines are built-up with the best materials coming from the best firms.
Furthermore, our machines are submitted to the most severe overhauls on account of our good will to help you in the best way.

## INSTALLATION

Place the machine in the production zone, checking that mains voltage is the same as that the machine is laid-out for.
The fruit-dispenser can be employed in different points of the laboratory; for that it is mounted on wheels. The lenght of the electric cable, will be, of course, sufficient to allow the various shifts.
Connect the feeding-cable down-stream from a wall switch with fuses, avoiding, when possible, the connections made with plugs and sockets.
**The dispenser has only one sense of rotation which does not be inverted.**
If we were obliged to employ the connections made with plugs and sockets, we must pay great attention, checking that the sockets for the fruit dispenser are connected to the mains, so that, when used, they do not make the machine turning on the wrong sense.
Between the switches and the reset-buttons, there are the symbols referring to the commanded parts.

**Looking at the machine from the high, the main dispenser has to turn anti-clockwise.**
The inside connection of the machine is made so that, when the main dispenser turns in the right sense, the other motors turn in the right direction too.

## USE (Fig. 2)

After the machine connection to the electric mains, it has to be dismantled, washed and desinfected.
The product used for washing, will not corrode the metals.
The candied fruit (or other naterials) to be introduced into the Ice-cream flow, before being poured into the dispenser-hopper, should be well prepared (stoned) and be not too sticky.
A good machine operation, depends also from the good state of the product to be inserted.
When the machine is washed and desinfected, connect the continuous freezer ice cream outlet tube to the joint (8), pour the fruit (or other product) to be inserted into hopper (4) then send the Ice-cream to the fruit-dispenser and start the machine working on all the three switches situated on the electric panel.
By the handwheel (1) adjust the speed of the dispenser, so that the right fruit quantity is inserted into the Ice-cream.
Diminishing the mixer speed, the quantity of fruit inserted diminish too, and "viceversa".
The quantity of materials to be added into the Ice-cream flow, can be also varied replacing the top cam of the dispenser. To replace the cam, take away the cap (5) which is on the top.
It is possible to mount two different cams, having strokes of 15 and 20 mm. respectively. On each cam the stroke number is printed.
The more the stroke is longer, more fruit is added into the Ice-cream flow.
The replacing of the cams is simple and rapid; release the allen screws which fix the cam to the top flange.
If we connect at the same time two freezers to the fruit-dispenser, we can proceed in two different ways:

1) Connecting the two freezers to the inlet (8) of the fruit-dispenser, making so a double flow of Ice-cream passing through the machine.
2) Connecting one freezer to the inlet (8) of the fruit-dispenser and the other one to the connector (13) at the base of the mixer.

In this case, through the dispenser will pass an Ice-cream flow coming from one freezer only.
The second case is advisable when the fruit-dispenser is branched with two freezers of 300 lt/h. each or more.

## SERVO-FEEDER (Fig. 2)

This device, situated on the bottom of the hopper, serves to facilitate the feeding of the fruit into the real distributor, and it is composed by a special feeding-screw, moved by the motor-reducer (3).
The servo-feeder can run continuously, discontinuously or remain inactive. In any case, it works only if the main-dispenser is running.
The above mentioned conditions are obtained by operating on the central three-positions selector (11).
When the selector knob is on the vertical position, the servo feeder is inactive; by turning the knob to the left or to the right, the servo-feeder runs continuously or discontinuously.
The intermittentt movement of the servo-feeder is syncronized with the opening of the main dispenser rotating drum: at each drum revolution, correspond two intermittences. One for each drum opening.
To vary the phase between the intermittence of the feeding screw and the revolving drum, we have to loose the ring-nut which fixes the cam to the speed reducer shaft and turn the drum by hand in the desired direction. Afterwards we have to fix again the cam to the shaft.
The servo-feeder group can be easily dismantled from the hopper loosening the winged screw (15), seizing the two lateral handwheels (2) and turn it rightward, so disengaging it from the fixing pegs, then take it off from the hopper.
To remount it we must drive it into the hopper with a certain pressure, making sure it is well housed into its seat.
At this point, always working on the handwheels (2) turn it leftward.
The fruit-feeder's motor-reducer does work only if its switch and the other one commanding the motor of the main distributor are duly inserted.
Stopping the main distributor, the servo-feeder automatically stops too.

## FINAL MIXER

This last device improve the fruit mixing into the Ice-cream flow.
Its sense of revolution, looking from the high, is counterclockwise and cannot be varied.
When the machine is delivered to the customer, it has the connections already made, so that, if the main-distributor turns in the right sense, the rotation sense of the final mixer is right too.
To dismantle the mixer: loose the joints locking the tubes and the outside hygienic envelope, using the special wrench. Then, the machine being always inactive, turn leftward the inside shaft (complete with the mixing blades).
At the base of the shaft with blades, there is a revolving seal which has to be periodically inspected, particularly in the case that some Ice-cream would leak from the mixer's base.

## MAINTENANCE (Fig. 1 and 2)

Check periodically the oil into the two inside reducers and add some, if necessary.
Use "OIL ESSO SPARTAN EP 220 OR SIMILAR ONE".
After the first 300 hours of work of the machine, the oil must be totally replaced with a new one. After that, the further total changes of oil, must be effected after 800/1000 hours of work.
Do never put too much oil into the reducers.
The main dispenser, has two seal gasket, type O Rings; replace them periodically, specially when the Ice-cream leaks from the revolving drum.
To dismantle the main dispenser, we must:

1) Take away the inox cap on the summit (5).
2) Take away the top flange to which the cam is anchored, turning it by hand rightward.
3) Screw the two little columns into the two draining threaded holes on the revolving drum, aside the sliding block which hold the two rolling pins (Fig. 1).
4) Insert on the two little columns the drilled bracket, and screw the two wing-nuts as shown by fig. 1.
5) After having withdrawn for 3/4 cm. the revolving drum, take the bracket, pull it upward, turning it at the same time and extract it totally.

To dismantle the moving piston which cross the drum of the distributor, loose the pivot at the center at the sliding block holding the two little pins.

When remounting the distributor, lubricate its single parts with vaseline oil or similar (odourless), replace the single parts at their place locking carefully the screws previously loosen.
The revolving drum is driven by a security plug (14) that, in case of an excessive stress will be sheared. In this case, by a punch, eject the sheared plug and replace it, with an other one made of same material (soft brass, not steel).
Check periodically the sliding-blocks and the pins which make the piston sliding into the drum; replace (or repair) the worn parts.
At the base of the final-mixer (6) there is a revolving seal. In case of Ice-cream leaking, dismantle the agitator, check the sliding seats of the revolving seal are mirror finished and quite matching one another. If necessary, lap them to one another and replace the worn out O Rings.

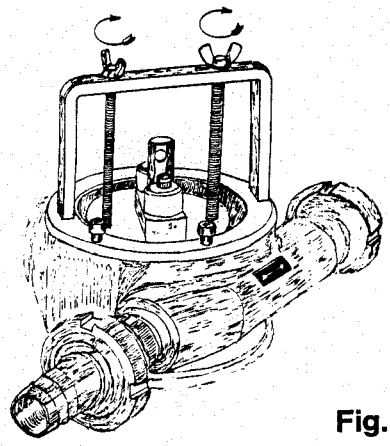


**Fig. 1**

## ELECTRICAL SYSTEM (Fig. 3)

The electrical system has been obtained in the most possible simple way; it is complete with all the security and protection devices.
The relevant controls will be by no means difficult if executed by a good electrician.
Bear in mind that the remote control switch of the motoreducer (3) of the feeding-screw, starts only after having had the "permission" from that one commanding the main-motor, therefore, to make the feeding-screw working, the switch commanding its motor and the other commanding the main-motor, have both to be inserted.
If, during the work one of the two motors stops, wait for some seconds, than work on the blue press-button which is one the panel, just up to the switch of the motor which has stopped.
If, after that, the motor does not start, control the fuses.
If the fuses are O.K. have the plant inspected by the electrician, following the electric scheme.

The materials used for the machine are the best we found on the market.

It is advisable to have the machine inspected by a capable technician, who can make the necessary repairs without provoking further damages.

MARK, S.p.A. declines any responsability caused by wrong interventions.

Dimensions and the other data of this brochure can be varied without notice.

## Legenda

1) Volantino regolatore velocità del distributore
2) Maniglie laterali del servoalimentatore
3) Motoriduttore del servoalimentatore
4) Tramoggia
5) Cappello protezione del distributore
6) Miscelatore finale
7) Uscita del gelato
8) Ingresso del gelato
9) Quadro elettrico
10) Interruttore iniettore
11) Interruttore coclea
12) Interruttore miscelatore
13) Ingresso del gelato secondario
14) Spina di trascinamento in ottone

## Legenda

1) Handwheel to adjust the distributor speed
2) Side
3) Motor-reducer of the servo-feeder
4) Hopper
5) Protection cap of the distributor
6) Final mixer
7) Ice-cream outlet
8) Ice-cream inlet
9) Electric panel
10) Injector' switeh
11) Screw feeder switch
12) Mixer switch
13 Subsidiary ice-cream inlet
14) Brass driving-pin

## Legenda

1) Petit volant pour régler la vitesse du distributeur
2) Poignées laterales du servo-alimentateur
3) Moto-reducteur du servo-alimentateur
4) Trémie
5) Chapeau protection du distributeur
6) Mélangeur final
7) Sortie créme glacée
8) Entrée créme glacée
9) Panneau éléctrique
10) Interrupteur de l'impecteur
11) Interrupteur vis d'alimentation
12) Interrupteur du mélangeur
13) Entrée secondaire de la créme glacée
14) Axe d'entrainement en laiton

## Legende (Aufstellung)

1) Regel (flügel) rad für Verteilergeschwindigkeit
2) Seitliche (Hand) Griffe für Selbstzuführung (-bedienung)
3) Motorregler für Selbstzuführung (-bedienung)
4) (Einfüll-) Trichter
5) Schutzkappe (Haube) für den Verteiler
6) Endmixer
7) (Speise-) Eisaustritt
8) (Speise-) Eiseintritt
9) Schalttafel
10) Einspritzschalter
11) Schneckenschalter
12) Mixerschalter
13) Eintritt des "Zweit-Eises"
14) Antriebs- (Transport) - "Dorn" (Messing)

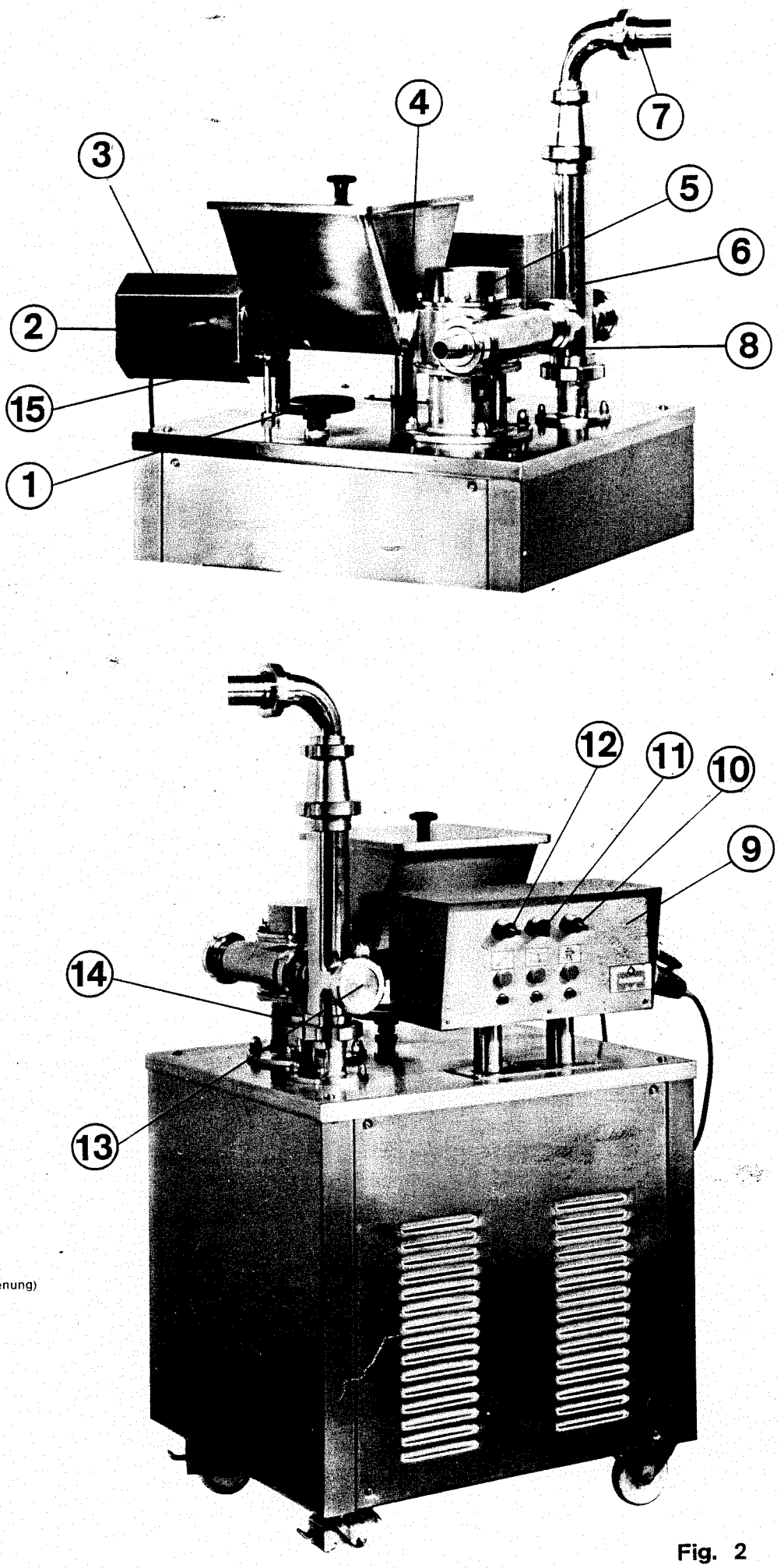
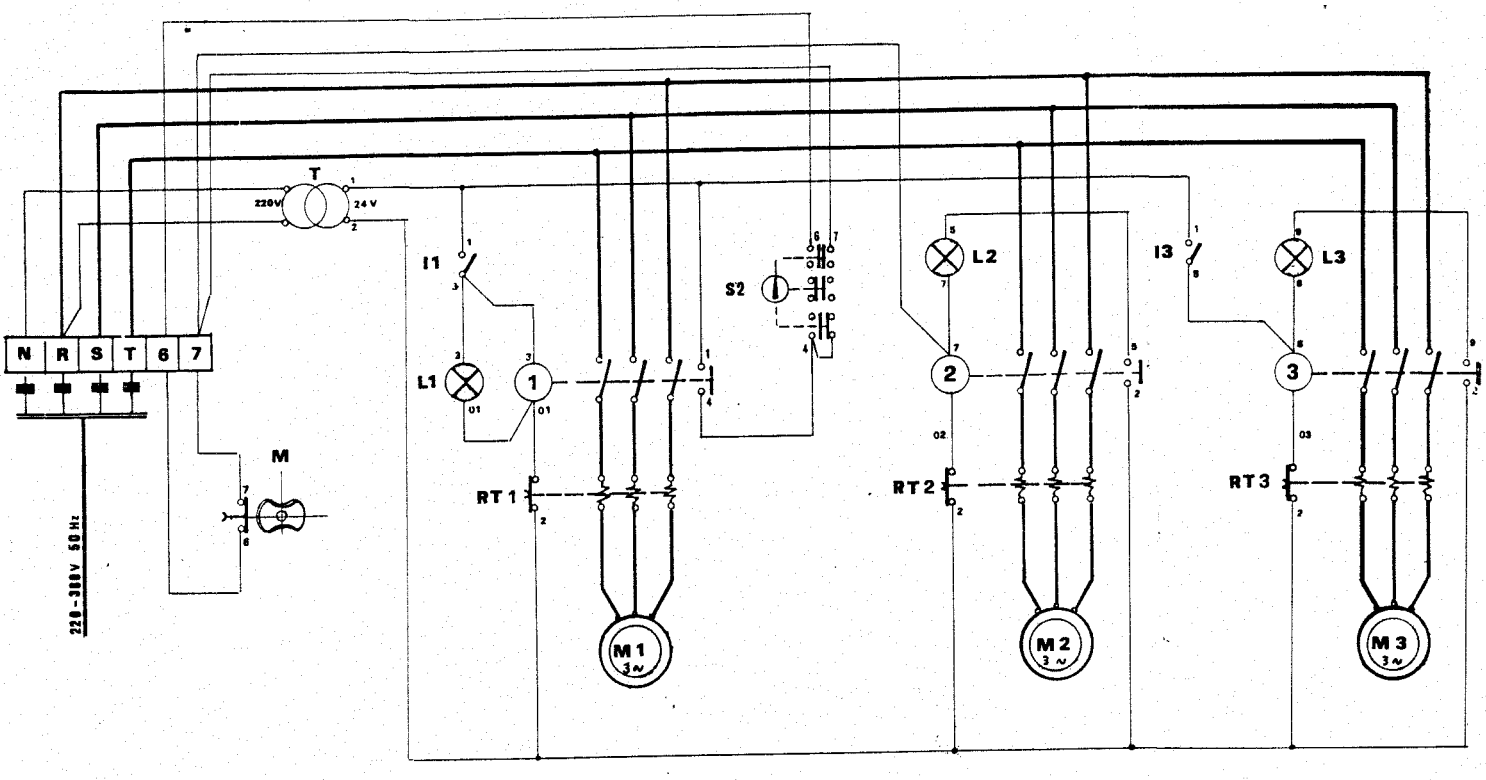



**Fig. 2**




**Legenda**

| | |
|---|---|
| L1 - L2 - L3 | Lampada spia |
| I1 - I3 | Interruttori |
| S2 | Selettore servo alimentatore |
| M1 | Motore principale HP 1,5 |
| M2 | Motore alimentatore HP 0,25 |
| M3 | Motore miscelatore HP 0,25 |
| RT | Relé termici |
| T | Trasformatore 30 VA |
| M | Microinterruttore |

Voltaggio: 380/220 - Trifase - 50 Hz.

**Legenda**

| | |
|---|---|
| L1 - L2 - L3 | Pilot lamps |
| I1 - I3 | Switches |
| S2 | Selector for servo-feeder |
| M1 | Main motor HP. 1.5 |
| M2 | Feeding motor HP. 0,25 |
| M3 | Mixer's motor HP. 0,25 |
| RT | Thermal relais |
| T | Transformer 30 VA |
| M | Microswitch |

Voltage 380/220 - triphase 50 Hz.

**Legenda**

| | |
|---|---|
| L1 - L2 - L3 | Lampes témoin |
| I1 - I3 | Interrupteurs |
| S2 | Sélecteur pour servo-alimentateur |
| M1 | Moteur principal HP. 1,5 |
| M2 | Moteur de l'alimentateur HP. 0,25 |
| M3 | Moteur du melangeur HP. 0,25 |
| RT | Rélés thermiques |
| T | Transformateur 30 VA |
| M | Micro-Interrupteur |

Voltage 380/220 - triphasé 50 Hz.

**Legende (Aufstellung)**

| | |
|---|---|
| L1-L2-L3 | Kontrollampe |
| I1-I3 | Unterbrecher (Schalter) |
| $S_2$ | Schalter fuer selbstzufuehrung |
| M1 | Hauptmotor 1,5 PS |
| M2 | Versorgungsmotor 0,25 PS |
| M3 | Mixermotor 0,25 PS |
| RT | Thermorelais |
| T | Transformator (Umwandler) 30 VA |
| M | Mikroschalter |

Spannung: 380/220 V, Drehstrom, 50 Hz.

**Fig. 3**

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FIG. 6

1) Freezing barrel pressure setting screw
2) Lock nut
3) Closing plug
4) Spring
5) Sliding cylinder
6) "T" connector
7) Packing
8) Threaded nut joint
9) Conical male
10) Shaft top bearing bronze bush
11) Bronze bush
12) Gasket
13) T.E. Screw
14) Freezing barrel
15) Scraping blades holding pins
16) Scraping blades guiding pins
17) Scrapign blades
18) Hold-spring ring
19) Bronze bush
20) Gasket
21) Fixing screws for rear cover
22) Low cylinder support
23) Fixing motor gudgeon
24) Motor plate
25) T.E. Screw
26) Hexagonal nut
27) Motor shaft
28) Leading pulley
29) Spacer
30) Pin
31) Washer
32) T.E. Screw
33) Bottom shaft
34) Tang UNI 92
35) Driven pulley
36) Trapezoidal belts
37) Seeger ring
38) Bearing
39) Seeger ring
40) Bearing
41) Water drain
42) Cover
43) T.C.E.I. Screw
44) Gasket
45) Gasket
46) Stop device
47) Reinfrocing nut
48) Threaded male
49) Inlet tube
50) Gasket
51) Hexagonal nut
52) Movable rear cover
53) Gasket
54) T.E. Screw
55) Spring
56) Holding-cylinder cage
57) Bronze bushing
58) Outside cylinder envelope
59) Blades-holder shaft
60) Screw and stud bolt
61) Hexagonal nuts
62) Top cover
63) Ring-nut
64) Hexagonal nut
65) Locking knob
66) Holding bronze bush hub
67) Retainer ring
68) Eccentric shaft
69) Top cover
70) Outlet tube
71) Gasket
72) Ring plug

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Fig. 1.1.

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FIG. 4

1) Top flange
2) O-Rings
3) Dasher shaft top bearing
4) Retaining ring
5) Top bronze bush
6) Dasher
7) Shaft with holes
8) Scraping blades
9) Rotary packing pressure spring.
10) O-Ring
11) Rotary packing ring
12) Low bronze bush
13) O-Ring

MIX GEL FREE MARK

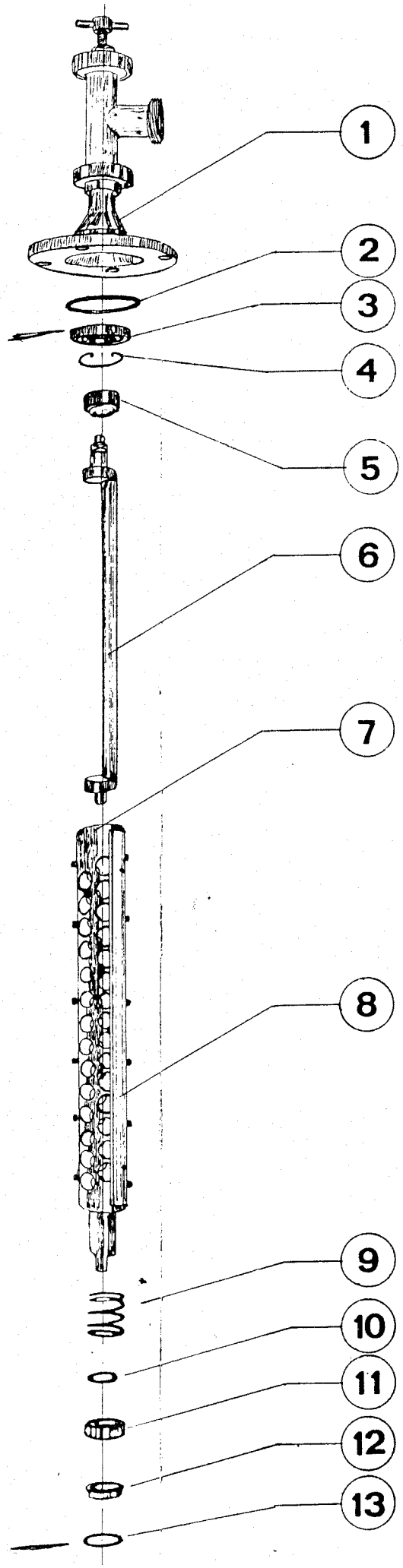


FIG. 4