

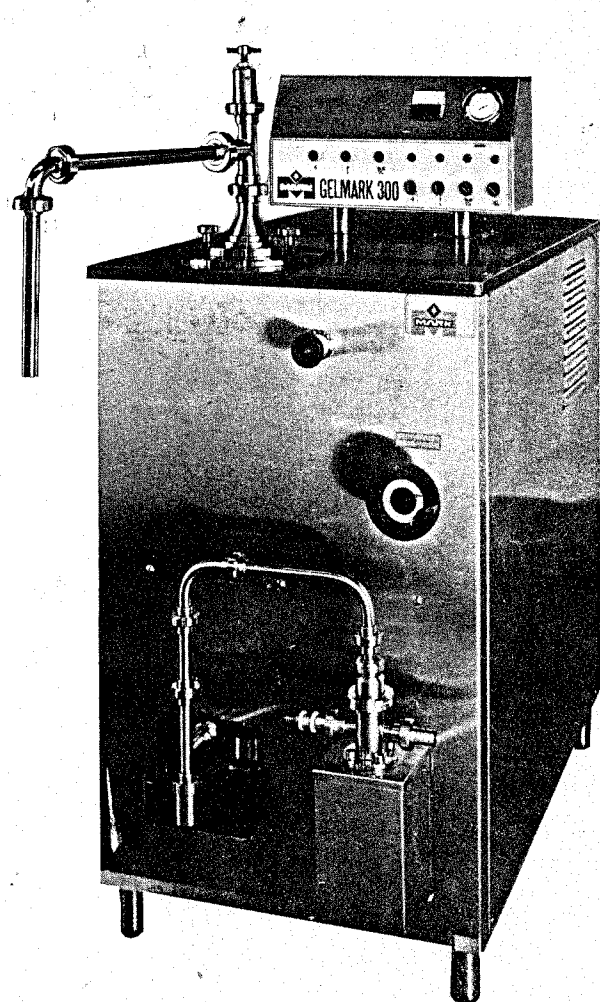


LE MACCHINE PER GELATO - THE ICE CREAM MACHINES

**CONTINUOUS FREEZERS
FREEZERS CONTINUS**

GELMARK

MW
MACHINERY WORLD



**Instructions for installation,
use and maintenance**

**Instructions pour l'installation,
emploi et entretien**

85/03/1 - C.G.S.



MARK S.p.A.

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Telex 321351 MARK I

While thanking you for having chosen our machines, we advise you to read carefully the instructions given in this hand-book.

These instructions will be useful to you for a long period of trouble free operations.

We can guarantee that our machines are built with the best materials coming from the best firms.

Furthermore our machines are submitted to the most severe testing in the consideration that this will help you in any way possible to run this machine.

Vous avez choisi nos machines et nous vous remercions vivement de votre préférence. Nous vous prions aussi de lire attentivement les instructions qui vous permettront d'utiliser ces machines pendant longtemps sans aucun problème.

Nous pouvons vous garantir que nos machines sont construites avec les meilleurs matériaux produits par les meilleures sociétés. En outre, elles ont subi de sévères contrôles car notre but est de vous aider le mieux possible.

MARK S.p.A.

The freezer consists of a stainless steel cabinet with easy removable side panels.

The removable panels provide easy access to the various components for cleaning, inspection and maintenance.

The following parts are housed in the cabinet:

- the vertical freezing barrel complete with dasher shaft and scraping blades; drive motor for the dasher.
- the refrigerating motorcompressor, semi-hermetic type and relevant connections.
- the control system for air-mix pump.

On the front of the cabinet the following parts are located:

- Air-mix pump (16) and relevant support
- Pump speed control handwheel (17).

The control panel (12) is fitted on the top of the unit and contains all the electric devices to operate the machine.

Above each switch, there is an indication light and below the symbol of the controlled component.

The following controls are installed to check the machine operation:

- the ammeter (10), indicating the power absorption of the dasher motor, and the corresponding product hardness into the freezing cylinder.
- the refrigeration-gauge (11), indicating at which rate the compressor is working.

The machine is supplied complete with a general wall-switch and with 3 metres of electric cable.

This switch should be installed by the customer.

		GM/80	GM/160	GM/300
Electric power	Kw.	3	6	9,2
Water condensation temperature +15° / +18°C. (59° / 64°F.) min. pressure 1,5 Atm (P.S.I. 21)	Lt/h	190	350	600
Dasher motor	Hp.	1,5	3	4
Motor-compressor	Hp.	2	4	7,5
Refrigerating fluid		R22	R22	R22
Refrigerating capacity -30° / 30°C.	Fr/h	2400	4300	7300
Refrigerating fluid charge	Kg.	3	7	10
Production up to	Lt/h	80	160	300
Mix pump motor	Hp.	0,5	1	1

Non-freezing lubricating oil "SUNISO 3G".

NOTE when water coming from a cooling tower is used, check that water flow control valve (3, fig. 2) be fully opened, take it off if necessary.

INSTALLATION AND CONNECTION – FIG. 1

- Install the freezer in the desired location and level it by adjusting feet (1).
- Fit the main switch (supplied with the freezer) to the wall and connect it to the mains.
- Check that the main voltage and the freezer are set to match.
- Remove the side panels and check the dasher motor for correct rotation. The dasher should rotate clockwise like the arrows.
- Remove the tape from the dasher blades.

ATTENTION! The freezer is shipped with all valves of the refrigerating system set in working position. Therefore, they do not require any adjustment for the starting-up of the freezer.

Connect the main water hose to the "inlet" pipe (2, fig. 2).

Connect the water drain hose to the “outlet” pipe (1, fig. 2).

The diameters of the connecting hoses shall not be smaller than those of the pipes installed on the machine and they shall not be throttled.

In any case, the inlet pipe is the one fitted with the water-flow control valve (3, fig. 2).

Never use mixes having a temperature above $+4^{\circ}/+5^{\circ}\text{C}$. ($39^{\circ}/41^{\circ}\text{F}$.).

If a mix with a higher temperature has to be used, reduce the pump speed to the minimum.

OPERATION – FIG. 1

Switch on the general wall switch and supply electricity to the machine at least 5/6 hours before starting the refrigerating compressor.

The heating element placed in the compressor shall slightly heat the oil, so ejecting the refrigerating gas accidentally contained.

For the same reason, electricity should never be switched off when finishing the daily production.

Before starting production, the machine (see “Daily cleaning of the machine”) must be cleaned and disinfected.

Connect the inlet pipe (15) of the pump to the tank containing the mix.

Switch on the pump (9) then regulate the flow to the minimum by turning the handle-wheel (17) towards the mark “—”.

Wait until the mix begins to pour out of the outlet pipe (5), and then stop the pump.

Subsequently switch on (8) the dasher and switch on (14) the refrigerating compressor.

The mix then begins to harden into the freezing barrel.

Check the consistency of the product on ammeter (10), as the motor stress is proportional to the product hardness.

When the mix has reached the desired hardness, start the pump once again and adjust the flow of the air to be injected.

To set the air to be injected into the mix proceed as follows:

- On all Gelmark freezers the pump is supplied complete with a special valve (3) which allows to set the air quantity to be injected into the mix.

The regulation of this valve is obtained by turning the kurlled nut (4) located between the two springs which are fitted on the valve.

By turning the nut (4) clockwise, the quantity of air introduced increases; to diminish, turn the nut anti-clockwise.

- 1) When the product begins to harden (the freezing barrel is full and the pump is stopped) close air-valve (3) by turning the nut (4) anti-clockwise.
- 2) When the pump is started again and ice-cream is continuously pouring from outlet pipe (5), open valve (3) by turning the nut (4) by 1/4 of a revolution at a time clockwise.

After each adjustment, wait a few minutes to allow the setting to distribute the air in the product.

Please note that when valve (3) is too open, the ice-cream could be delivered intermittently, with air bubbles.

When the pump fails to work, check:

- 1) That the pipeline does not leak.
- 2) That the O Rings are in good condition. Replace if necessary.
- 3) That ball valve does not leak.
- 4) Mechanical operations are correct.

Therefore, when the pump does not operate correctly, check:

- A. That the sucking pipeline connected to the inlet (15), fig. 1, does not leak thus preventing the mix to come in.
- B. That the gaskets are in good conditions, particularly the one inside the cylinder. If worn-out, replace it.
- C. The valve placed on the pump's top closes and that its seat is in order. If necessary, regrind the seat and replace the ball.
- D. That the belt of the variator and the pulley with variable diameter are in good conditions. If necessary replace the worn-out pieces.

Check the oil level in the pump at least every 200 working hours. If necessary, top up oil.

To assemble and disassemble pump and air valves, see fig. 5.

By tightening adjusting screw (6), the pressure in the freezing barrel increases, thus assisting the overrun formation.

However, adjusting screw (6) should never be tightened completely, as excessive pressure in the freezing barrel could cause undue stress of other mechanical parts of the freezer.

If GELMARK is fitted with a pressure gauge measuring the pressure inside the freezing barrel and a vacuum gauge controlling the amount of air injected into the mix, a procedure identical to the one just indicated may be followed to control the amount of air to be injected.

At the beginning of production when the air inlet valve is almost closed the vacuum gauge needle will show $30 \div 40$ cm/hg. When production is at full blast the needle will indicate 20 cm/hg approx.

Once the air inlet valve has been set to inject the required amount of air into the mix, the position of the vacuum gauge may be recorded to simply setting the machine during subsequent production cycles.

Immediately under the vacuum gauge a retention valve is fitted: this valve should be periodically disassembled, the gasket checked, and if necessary, replaced.

Normally the vacuum gauge is considered sufficient for the operator to control the drawing rate of the pump.

If the unit is also fitted with a pressure gauge, to measure the inside pressure of the freezing barrel, same should be kept between 6 and 9 kg/cm².

If pressure reaches below 6 kg/cm², the freezer constant output may be affected.

To restore pressure proceed as follows:

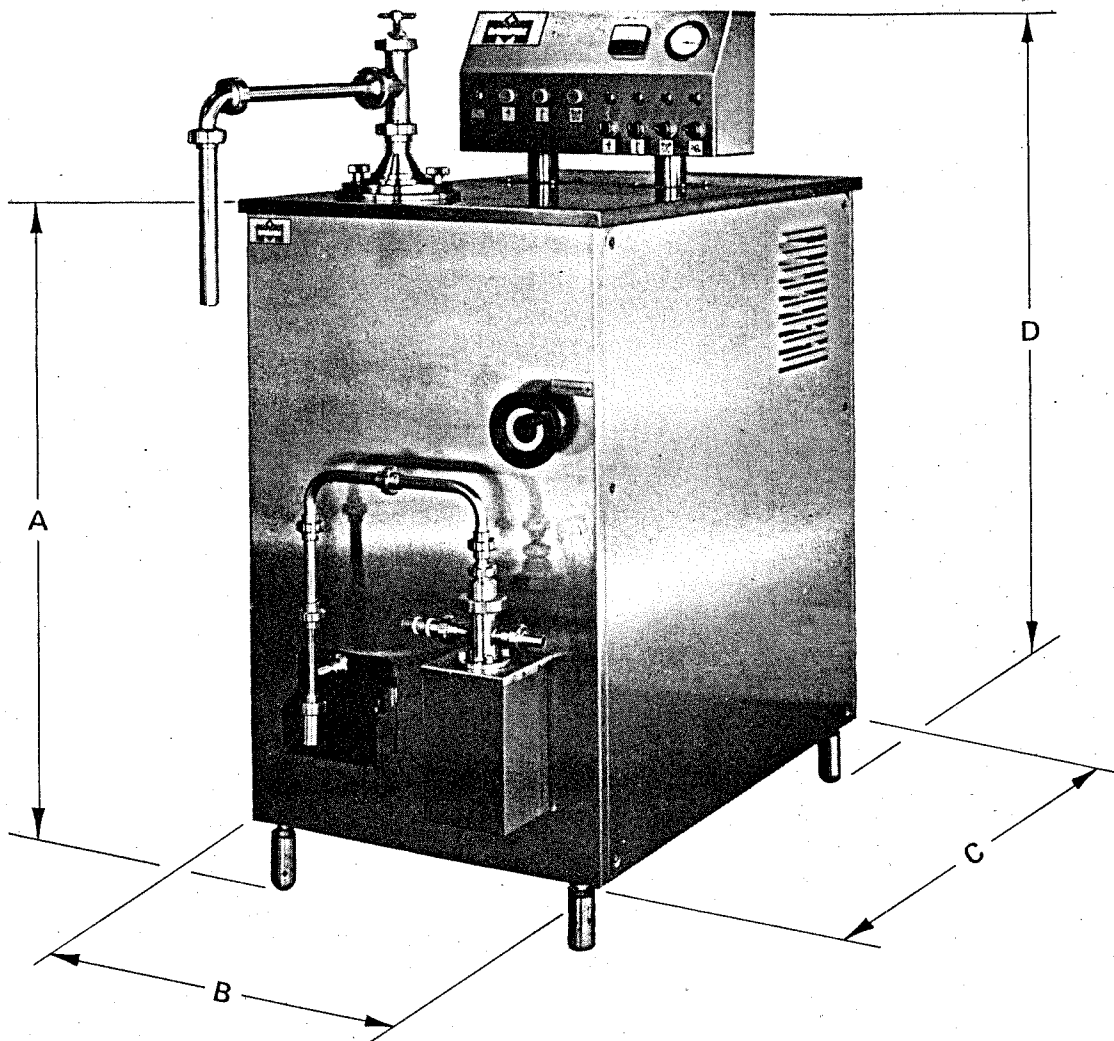
- 1) Check the speed of the air-mix pump; lower same if too high.
- 2) Check temperature of the mix coming from ageing vat.
- 3) Check the refrigerating system of the freezer. Any intervention should be carried out by a trained skilled technician.

If, on the contrary, the pressure reaches over 9 kg/cm² check that:

- ice cream outlet pipe is not throttled and in case it is not longer than 3/5 mt.;
- adjusting screw be fully opened;
- pump speed be increased;
- hot gas device be used as per following instructions.

All GELMARK freezers are fitted with a pressure relief valve which opens when pressure reaches over 10 kg/cm², in order to prevent damaging the machine.

NOTE: Do not tamper with the setting of the pressure relief valve.
Always ascertain what has tripped the valve.



	A		B		C		D		Kg.	lb.
GM/80	980	39"	580	23"	820	32"	1280	50"	210	462
GM/160	1070	42"	670	26"	930	37"	1410	56"	330	728
GM/300	1230	48"	750	30"	1150	45"	1570	62"	520	1146

For reassembly refer to fig. 4 and fig. 5.

To simplify cleaning operations, the bottom housing of the freezing cylinder can be removed.

1) To disassemble the bottom housing proceed as follows: **CAREFULLY LIFT THE DASHER ASSEMBLY FROM THE CYLINDER.**

2) Remove the pipeline connecting the pump to the cylinder.

3) Seize firmly the pipe and turn it right as much as possible (see particular fig. 1).

Push then the pipe and the bottom cover downward. At this point the cover will slide out from its seat.

To reassemble the bottom cover, reverse the sequence of operations, taking care of not damaging the O Ring, as this should cause the leaking of mix from the bottom cover.

NOTE: The products used for washing disinfecting, must not be corrosive to the mechanical parts they come in contact with.

To disassemble the dasher (fig. 4) remove top cover (1), top support ring (3). By means of the relevant threaded eye bolt, lift dasher from the freezing barrel.

The blades must not stretch the barrel. Also remove O Rings (2-10-13) from their seats.

To obtain a rational cleaning, disassemble the dasher, as shown on plate 4.

After cleaning make sure that the seal ring (11) located on the dasher, slides freely and that the scraping blades (8) are locked in their holding pins. Carefully place the dasher assembly into the barrel and make sure that it fits well in its retaining seat.

Refit top flange (1) and relocate top support (3) into its relevant seat.

NOTE: WHEN INSTALLING THE DASHER ASSEMBLY ALWAYS USE THE PLASTIC RING SUPPLIED WITH THE MACHINE: WILL AVOID DAMAGING THE CHROMIUM PLATED TOP EDGE OF THE FREEZING BARREL.

MAINTENANCE – FIG. 2

A periodic inspection of the different parts of the machine is necessary, in particular after a shut down time. To avoid troubles or interruptions when maximum efficiency and output are required.

Remember what above for your own interest !

Maintenance includes the mechanical, electrical and refrigerating systems.

MECHANICAL PARTS – FIG. 2-4-5-6

- a) Inspect bottom housing which accomodates the bearings, the pulley and the main shaft. If the main shaft makes noise when running, remove it (refer to fig. 6), replace the defective bearings and O Rings and refit all parts.

Make sure that the shaft has no back-lash in the relevant bearings.

- b) Check the bronze bushings which hold the dasher shaft; if the bushings are worn out, replace them.

- c) Check the scraping blades. They must properly fit on their pins in order not to slip off during operation. If their edge is not perfect, sharpen it or replace the blade with a new one.

- d) Check rotary packing ring located on the dasher bottom end (11, fig. 4). Its seat has a hard metal coating (carbide). When the ring is pushed by the spring (9) the carbide face slides against the face of bronze bushings (12, fig. 4).

The two faces must always be mirror polished, otherwise the mix will leak from the bottom of the freezing barrel.

To polish the two faces, use a fine emery.

First rub them against a very hard surface (glass), then against each other (same method as used for emering valves).

If the O Rings are worn out, replace them.

- e) Check the belts of the main shaft and of the pump. The main drive belts should be stretched uniformly. Do not replace one belt only, but replace them all simultaneously.

If the pump speed variator belt is worn out, replace it.

ELECTRICAL SYSTEM – FIG. 2

The system is designed for maximum protection of the machine components.

If a motor stops, proceed as follows:

- a) Wait for a few seconds before pressing relevant reset push button (20-21-

22, fig. 1).

- b) If the motor or motors do not start, check the main circuit fuses and those contained in the fuses holder on the control panel.
- c) When the compressor motor stops, check pressure-switch (22): it could be open or defective.

Effect these operations before checking the electrical system.

Refer carefully the electrical diagrams!

To simplify controls all terminals and connections fitted on the machine have been numbered to match the diagrams.

NOTE: Maintenance should be carried out by qualified trained personnel only.

REFRIGERATING SYSTEM – FIG. 2

Have the refrigerating system checked and if necessary repaired by a specialist.

Possible causes for defective operation could be:

- 1) Insufficient condensation.
- 2) Incorrectly set or faulty expansion valve (17).
- 3) Dirty or clogged circuit filter (19).
- 4) Hot gas solenoid valve (16) jammed or open.
- 5) Solenoid valve (20) jammed or closed.
- 6) Insufficient gas into the system.

Insufficient condensation may be due to:

- a) Poor water supply from the mains.
Check whether all valves of the line supplying the water to the freezer are open and whether the water is supplied consistently.
- b) Incorrectly set water flow control valve (3).
Set the valve (3) by means of the screw (or cap) located on the valve head.

If the valve is correctly set, the water temperature at the drain, with the compressor running, will be +30°/+35° C. (86°/95° F.).

If the expansion valve (17) is not set correctly, it weakens the performance

of the system.

The valve shall be set so that refrigeration gauge (11, fig. 1), indicates $-26^{\circ}/-30^{\circ}\text{C}$. ($-14^{\circ}/-22^{\circ}\text{F}$.), during the operation.

If circuit filter (19) is clogged, frost will appear on the outside: it should be replaced. In any case, it should be replaced whenever the refrigerating system is opened.

If hot gas solenoid valve (16) remains open it causes a considerable reduction of the refrigerating capacity and the refrigeration (11, fig. 1) indicates a temperature above $+20^{\circ}\text{C}$. (68°F .). Check the solenoid and, if necessary, replace the part.

Solenoid valve (20) automatically shuts-off the liquid line when the compressor stops. If this valve does not open, the refrigerating system evacuates the refrigerant gas and the refrigeration-gauge (11, fig. 1) falls down to -35°C . (-31°F .). Check that electrical power is supplied to the solenoid valve and replace it, if necessary.

In the electrical system and all the above listed points are in good order, the poor efficiency is due to insufficient gas into the system. Insufficient gas generates a flow of bubbles through the sight glass (18, fig. 2).

Before adding gas, find out the fault originating the leakage and repair it.

NOTE: Periodically check the oil in the compressor through sight glass (33, fig. 2). Refer to the enclosed drawings and diagrams for any checks. When ordering spare parts, specify the part numbers, the drawing number and set the serial number of the freezer.

NOTE: DUE TO THE POSSIBLE TECHNICAL CHANGES THE INFORMATION GIVEN ON THIS MANUAL IS NOT BINDING AND MAY BE ALTERED WITHOUT NOTICE.

CAUTION

MARK freezers are made with chrome plated nickel cylinders, and hardened stainless steel blades. These metals require special care when cleaning; to avoid damaging the machine, please follow instructions in the manual regarding the points listed below.

MAINTENANCE

- 1 - Recondition blades regularly, remove burrs.
- 2 - Check regularly bearing and oil level of pump gearbox.

CLEANING AND SANITIZING

- 1 - Never use acid cleaning compound.
- 2 - Both acid and chlorine sanitizers should be used at minimum concentrations, with 38°C . maximum water temperature.
- 3 - If a cylinder is sanitized and is not to be used immediately it should be rinsed with clear water to remove the sanitizer.

**CHLORINE PITS AND RUSTS DASHERS
AND BLADES AND PITS CHROME**

ACID ATTACKS CHROME

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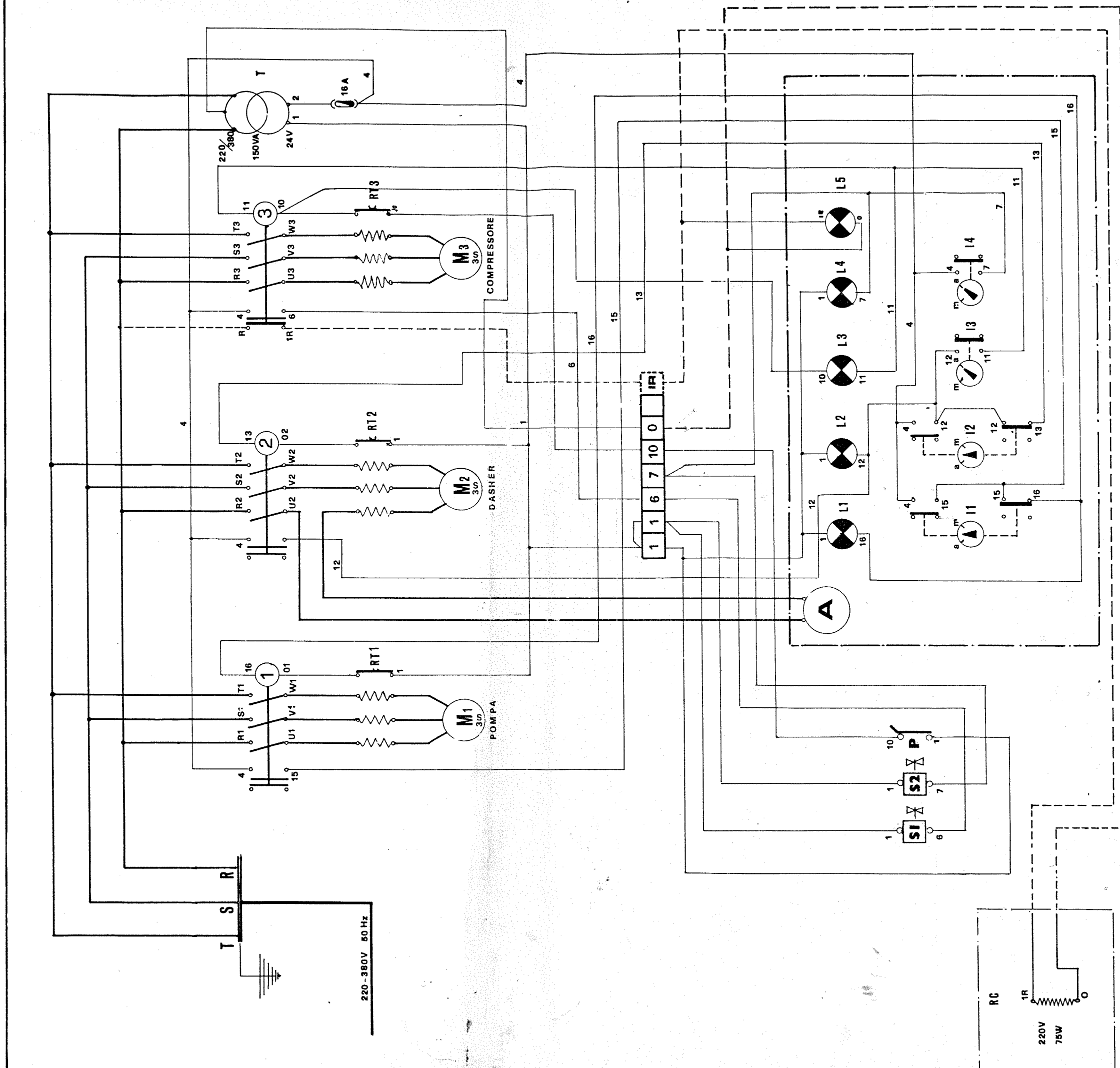
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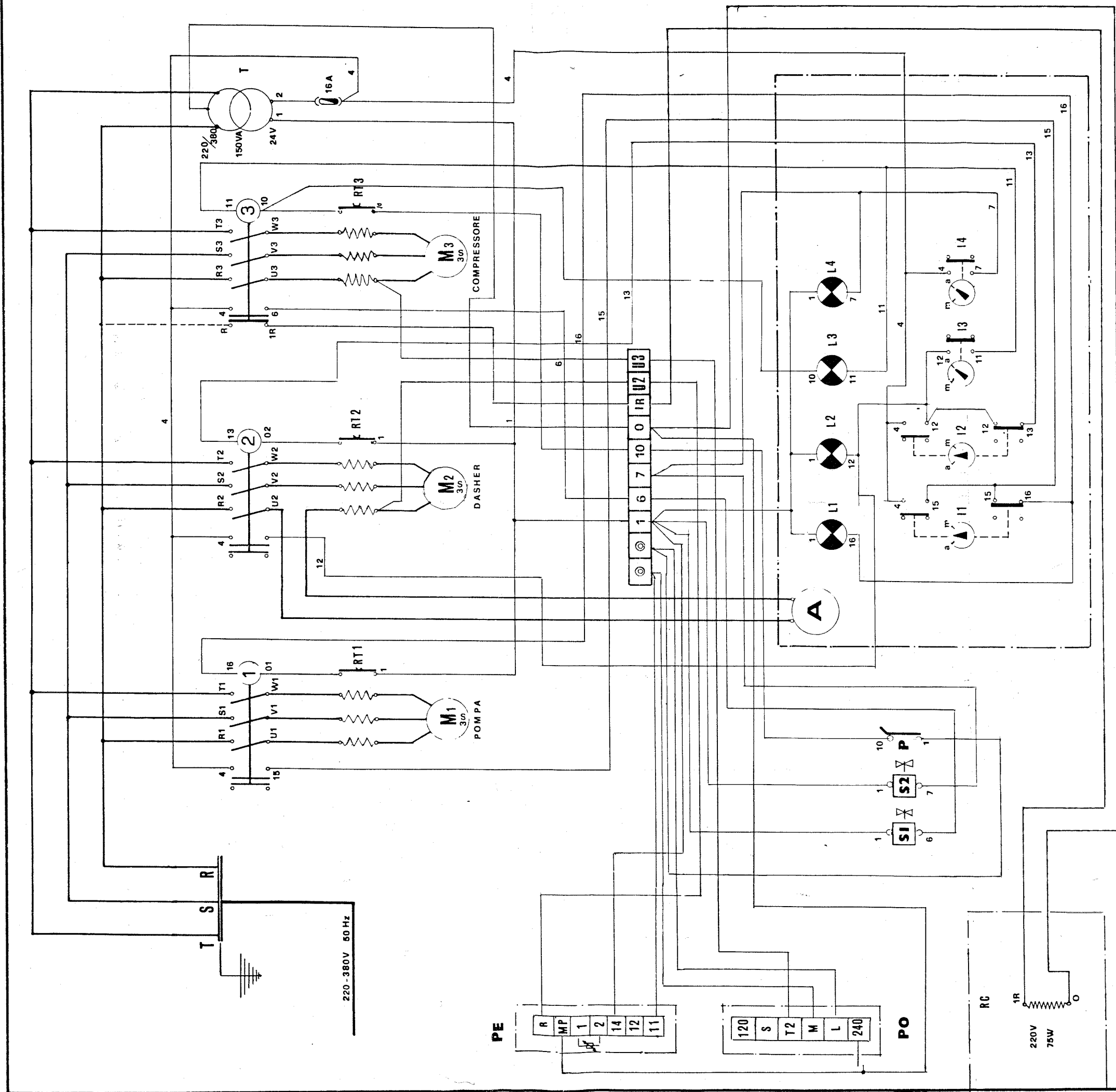
	220 V	380 V
RT 1	2.7 ÷ 4 A	1.8 ÷ 2.7 A
RT 2	8 ÷ 12 A	5.4 ÷ 6 A
RT 3	11 ÷ 17 A	5.5 ÷ 8 A

GM 160

	220 V	380 V
RT 1	1.8 ÷ 2.7 A	
RT 2	4 ÷ 6 A	2.7 ÷ 4 A
RT 3	5.5 ÷ 8 A	2.7 ÷ 4 A

GM 80

FIG. 3



GM 300

	220V	380V
RT 1	2,7 ÷ 4A	1,8÷2,7A
RT 2	11÷16,5A	8 ÷ 12A
RT 3	15 ÷ 23A	11÷16,5A

LEGENDE

- 1 - Contacteur pompe
- 2 - Contacteur arbre batteur
- 3 - Contacteur compresseur
- RT - Relais thermique
- T - Transformateur
- A - Ampèremètre
- L1 - Lampe témoin pompe
- L2 - Lampe témoin arbre batteur
- L3 - Lampe témoin compresseur
- L4 - Lampe témoin vanne solénoïde gaz chaud
- I1 - Interrupteur à poussoir pour pompe
- I2 - Interrupteur à poussoir pour arbre batteur
- I3 - Interrupteur pour compresseur
- I4 - Interrupteur pour vanne solénoïde gaz chaud
- P - Pressostat
- PE - Protection électronique
- PO - Pressostat de sécurité huile
- S1 - Electrovalve arrêt liquide
- S2 - Vanne solénoïde gaz chaud
- RC - Résistance pour huile compresseur

LEGENDA

- 1 - Pump Contactor
- 2 - Dasher Contactor
- 3 - Compressor Contactor
- RT - Overload thermal relays
- T - Trasformer
- A - Ammeter
- L1 - Pump Signal Lamp
- L2 - Dasher Signal Lamp
- L3 - Compressor Signal Lamp
- L4 - Hot Gas Solenoid Valve Signal Lamp
- I1 - Push-button switch for pump
- I2 - Push-button switch for dasher
- I3 - Switch for compressor
- I4 - Switch for Hot Gas Solenoid Valve
- P - Pressure Switch
- PE - Electronic Protection
- PO - Oil Pressure Safety Switch
- S1 - Liquid Shut-off Solenoid Valve
- S2 - Hot Gas Solenoid Valve
- RC - Heating Element for Compressor Pump

FIG. 3 A

PLATE 4

- 1) Top flange
- 2) O-Rings
- 3) Dasher shaft top support
- 4) Retaining ring
- 5) Top bronze bush
- 6) Eccentric shaft
- 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

FIG. 4

- 1) Calotte supérieure
- 2) Anneau OR
- 3) Support supérieur
- 4) Anneau d'arrêt
- 5) Coussinet supérieur
- 6) Arbre batteur
- 7) Arbre vide
- 8) Lames râcleuses
- 9) Ressort pour garniture tournante
- 10) Anneau OR
- 11) Garniture étanche
- 12) Coussinet en bronze inférieur
- 13) Anneau OR

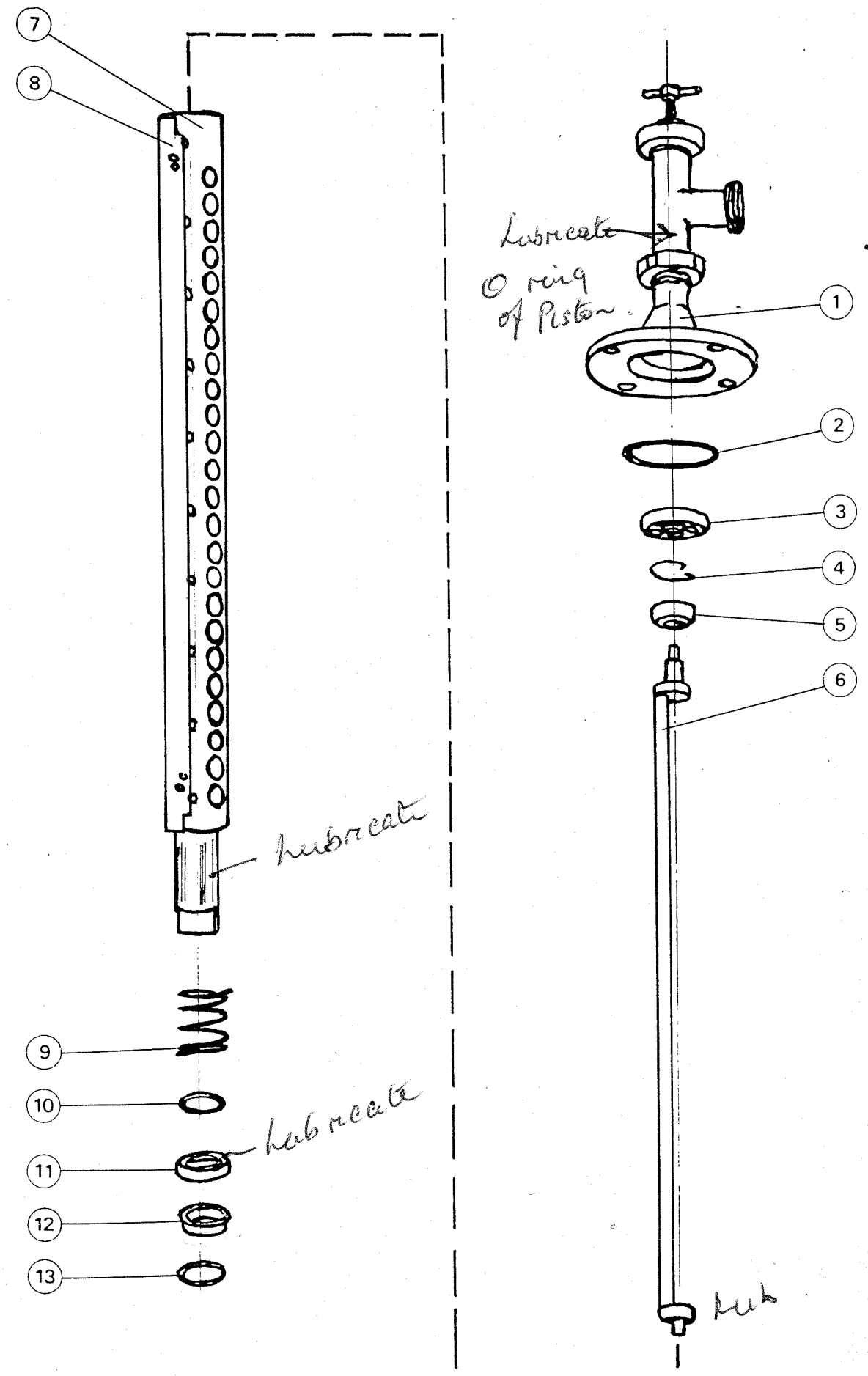


FIG. 4

PLATE 6

- | | |
|---|------------------------------|
| 1) Freezing barrel pressure setting screw | 40) Bearing |
| 2) Lock nut | 41) Water drain |
| 4) Spring | 42) Cover |
| 6) "T" connector | 43) T.C.E.I. Screw |
| 7) Gasket | 44) Gasket |
| 8) Threaded nut joint | 45) Gasket |
| 9) Conical male | 46) Stop device |
| 10) Shaft top bearing bronze bush | 47) Reinforcing nut |
| 11) Bronze bush | 48) Threaded male |
| 12) Gasket | 49) Inlet tube |
| 14) Freezing barrel | 50) Gasket |
| 15) Scraping blades holding pins | 51) Hexagonal nut |
| 16) Scraping blades guiding pins | 52) Movable rear cover |
| 17) Scraping blades | 53) Gasket |
| 18) Hold-spring ring | 54) T.E. Screw |
| 19) Bronze bush | 55) Spring |
| 20) Gasket | 57) Bronze bushing |
| 21) Fixing screws for rear cover | 58) Outside cylinder body |
| 22) Low cylinder support | 59) Blades-holder shaft |
| 23) Fixing motor gudgeon | 60) Screw and stud bolt |
| 24) Motor plate | 61) Hexagonal nuts |
| 25) T.E. Screw | 62) Top cover |
| 26) Hexagonal nut | 64) Hexagonale nut |
| 27) Motor shaft | 65) Locking knob |
| 28) Leading pulley | 66) Holding bronze bush hub |
| 30) Pin | 67) Retainer fing |
| 31) Washer | 68) Eccentric shaft |
| 32) T.E. Screw | 69) Top cover |
| 33) Bottom shaft | 70) Outlet tube |
| 34) Tang UNI 92 | 71) Gasket |
| 35) Driven pulley | 72) Ring plug |
| 36) Trapezoidal belts | 73) Sliding cylinder housing |
| 37) Seeger ring | 74) Sliding cylinder |
| 38) Bearing | |

FIG. 6

- | | |
|----------------------------------|------------------------------------|
| 1) Volant-réglage | 40) Coussinet |
| 2) Frette de blocage | 41) Ecoulement eau |
| 4) Ressort | 42) Couvercle |
| 6) Raccord en "T" | 43) Vis T.C.E.I. |
| 7) Garniture | 44) Garniture |
| 8) Ecrou de fermeture | 45) Garniture |
| 9) Jonction conique | 46) Vis d'arrêt |
| 10) Support supérieur pour arbre | 47) Anneau moletté de renforcement |
| 11) Coussinet | 48) Mâle filété |
| 12) Garniture | 49) Tube entrée |
| 14) Cylindre congélateur | 50) Garniture |
| 15) Goujons fixage lames | 51) Ecrou hexagonal |
| 16) Goujons de guide | 52) Culasse movable |
| 17) Lames râcleuses | 53) Garniture |
| 18) Anneau porte-ressort | 54) Vis T.E. |
| 19) Coussinet en bronze | 55) Ressort |
| 20) Garniture | 57) Coussinet en bronze |
| 21) Vis fixage coulisse | 58) Enveloppe extérieure cylindre |
| 22) Support inférieur cylindre | 59) Arbre porte lames |
| 23) Pivot fixage moteur | 60) Prisonnier |
| 24) Plaque moteur | 61) Ecrous hexagonals |
| 25) Vis T.E. | 62) Couvercle supérieur |
| 26) Ecrou hexagonal | 64) Ecrou hexagonal |
| 27) Moteur arbre | 65) Volant de fermeture |
| 28) Poulie motrice | 66) Moyen porte coussinet |
| 30) Tourillon | 67) Anneau d'arrêt |
| 31) Rondelle | 68) Arbre excentrique |
| 32) Vis T.E. | 69) Couvercle supérieur |
| 33) Arbre inférieur | 70) Tube sortie |
| 34) Clavette UNI 92 | 71) Garniture |
| 35) Poulie entraînée | 72) Bouchon ressort |
| 36) Courroies trapézoïdales | 73) Dôme |
| 37) Anneau Seeger | 74) Cylindre glissant |
| 38) Coussinet | |

PLATE 5

- 1) Eccentric shaft flange
- 2) Screw
- 3) Key
- 4) Supporting bracket
- 5) Fixing base
- 6) Centring flange
- 7) Speed reducer shaft
- 8) Parallel pin
- 9) Rear cover
- 10) O-Ring
- 11) Air control valve closing needle
- 12) Air control valve rear spring
- 13) Air control valve setting nut
- 14) Air control valve front spring
- 15) Air control valve body
- 16) O-Ring
- 17) O-Rings
- 18) Pump body
- 19) O-Ring
- 20) Inox ball
- 21) Delivery hose nipple lock nut
- 22) Mix outlet union
- 23) Spring
- 24) Top body valve-holding
- 25) Top valve-body lock nut
- 26) Piston
- 27) Suction nipple lock nut
- 28) Suction mix union
- 29) Screws
- 30) Piston pin
- 31) Connecting rod
- 32) Screws
- 33) Ball bearings
- 34) Eccentric shaft
- 35) Front cover
- 36) Seeger ring for shaft

FIG. 5

- 1) Bride pour excentrique
- 2) Vis
- 3) Clavette
- 4) Equerre de support
- 5) Base de fixation
- 6) Bride de centrage
- 7) Arbre réducteur vitesse
- 8) Gouhou cylindrique
- 9) Couvercle fermeture arrière
- 10) Anneau OR
- 11) Pointeau fermeture valve réglage air
- 12) Ressort arrière valve réglage air
- 13) Molette réglage valve air
- 14) Ressort avant valve air
- 15) Corps valve air
- 16) Anneau OR
- 17) Anneau OR
- 18) Corps de pompe
- 19) Anneau OR
- 20) Bille inox
- 21) Erou blocage raccord de sortie
- 22) Raccord de sortie
- 23) Ressort
- 24) Corps supérieur porte valve à bille
- 25) Erou blocage valve 24
- 26) Piston
- 27) Molette de blocage
- 28) Raccord aspiration mélange
- 29) Vis
- 30) Tourillon
- 31) Bielle
- 32) Vis
- 33) Roulement à billes
- 34) Pivot excentrique
- 35) Couvercle avant
- 36) Anneau Seeger pour arbre

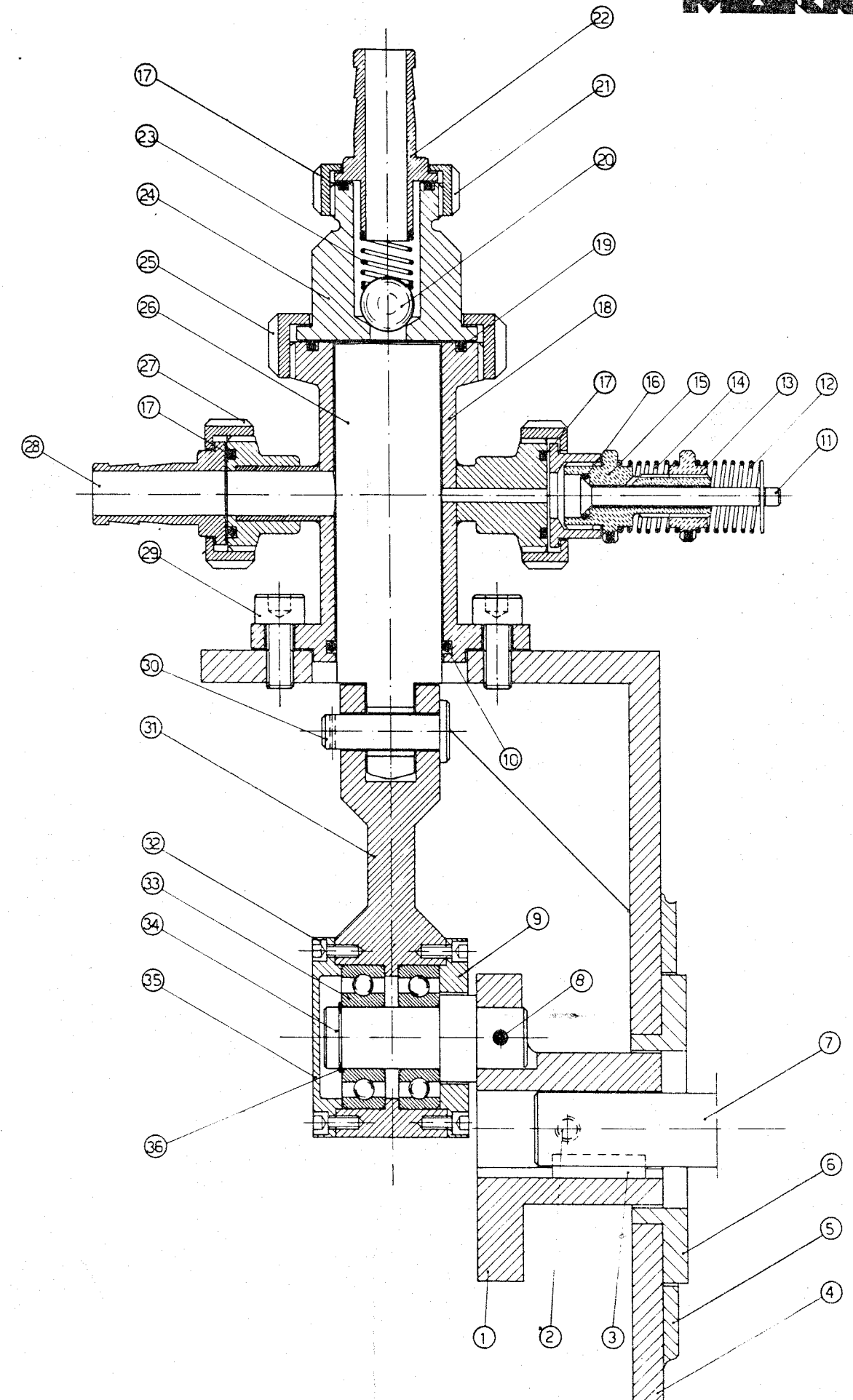


FIG. 5

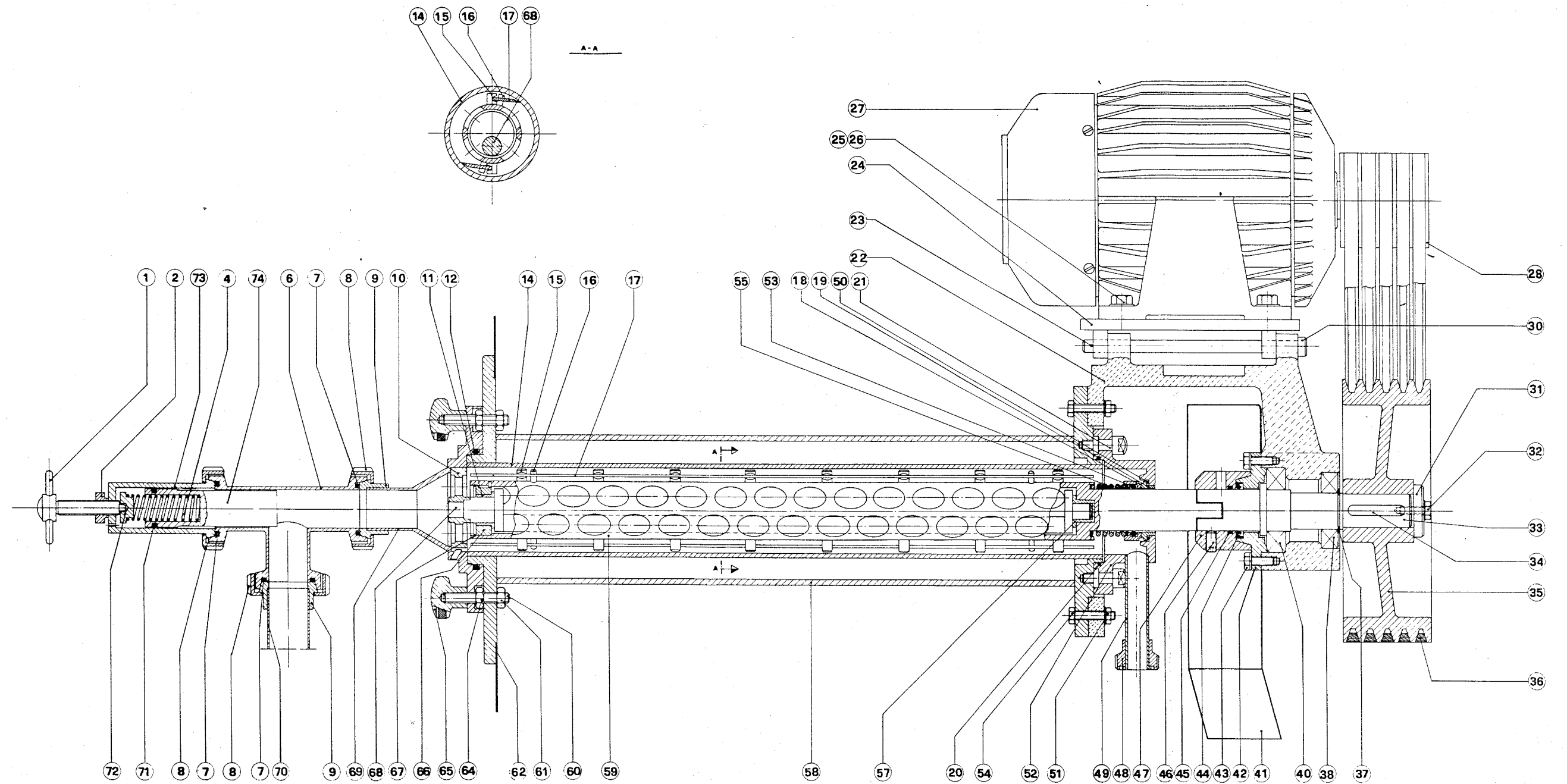


FIG. 6

R. 22

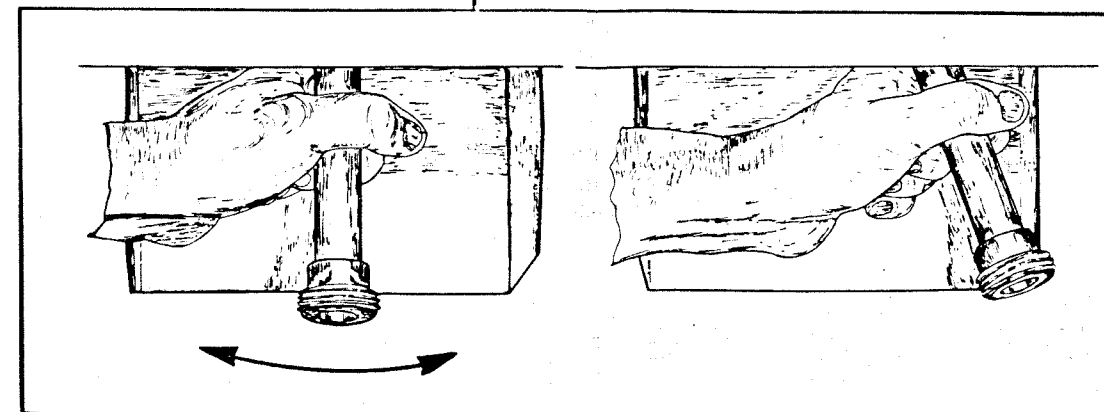
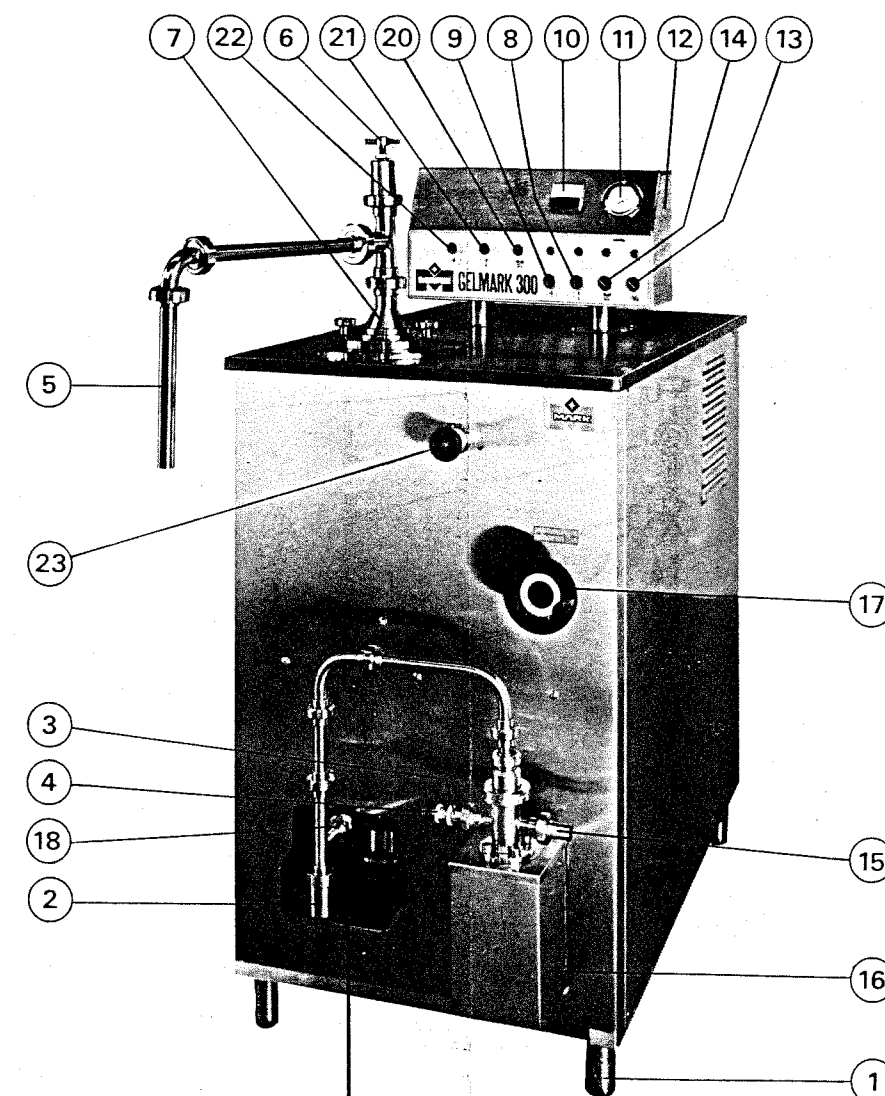
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PLATE 1

- 1) Adjustable feet
- 2) Safety valve
- 3) Air flow control valve
- 4) Air regulating nut
- 5) Ice-cream delivery tube
- 6) Adjusting screw
- 7) Outlet ice-cream top flange
- 8) Dasher switch
- 9) Mix pump switch
- 10) Ammeter
- 11) Thermovacuum gauge
- 12) Control panel
- 13) Hot gas solenoid valve switch
- 14) Compressor switch
- 15) Mix inlet tube
- 16) Mix pump
- 17) Pump stepless speed variator handwheel
- 18) Inlet union (for mix)
- 20) Push button for compressor relay reset
- 21) Push button for dasher thermal relay reset
- 22) Push button for pump thermal relay reset
- 23) Hot gas adjusting knob

FIG. 1

- 1) Pieds réglables
- 2) Valve de sécurité
- 3) Valve réglage air
- 4) Frette réglage valve air
- 5) Tube sortie crème glacée
- 6) Vis de réglage
- 7) Bride supérieure sortie crème glacée
- 8) Interrupteur moteur batteur
- 9) Interrupteur moteur pompe mélange
- 10) Ampéremètre
- 11) Mano-vacuomètre
- 12) Boîte tableau de commande
- 13) Interrupteur valve gaz chaud
- 14) Interrupteur compresseur frigorifique
- 15) Tube entrée mélange
- 16) Pompe mélange
- 17) Volant réglage vitesse pompe
- 18) Raccord entrée mélange
- 20) Poussoir réenclenchement thermique du compresseur
- 21) Poussoir réenclenchement thermique arbre batteur
- 22) Poussoir réenclenchement thermique pompe
- 23) Robinet réglage gaz chaud



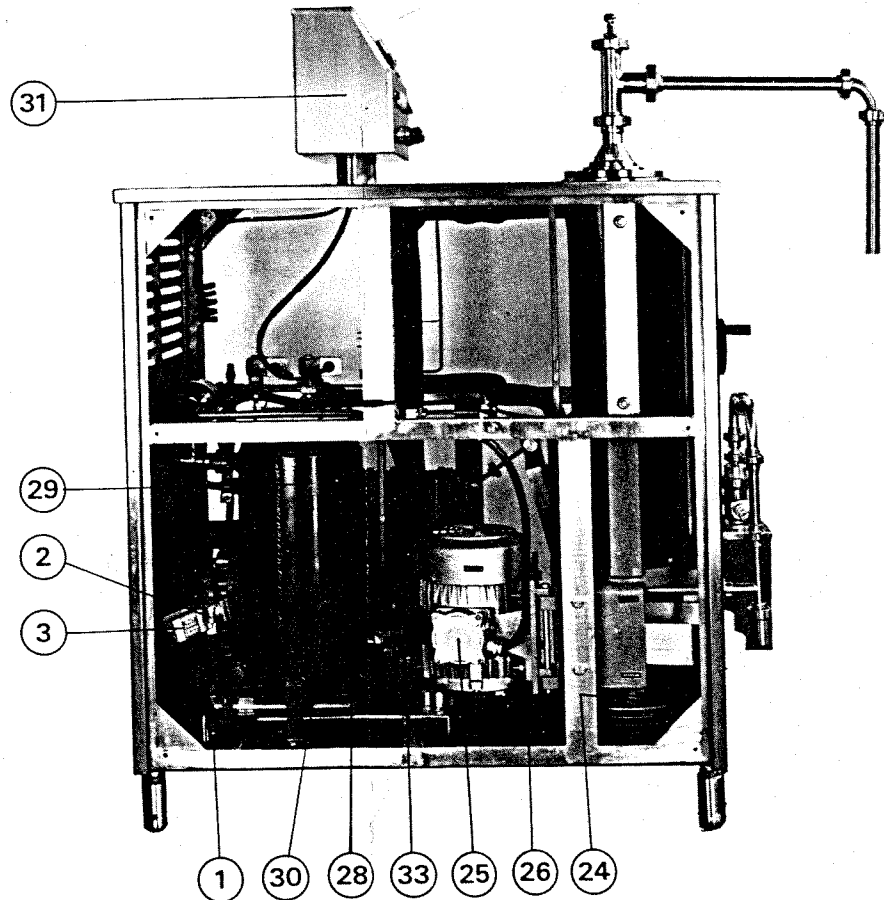
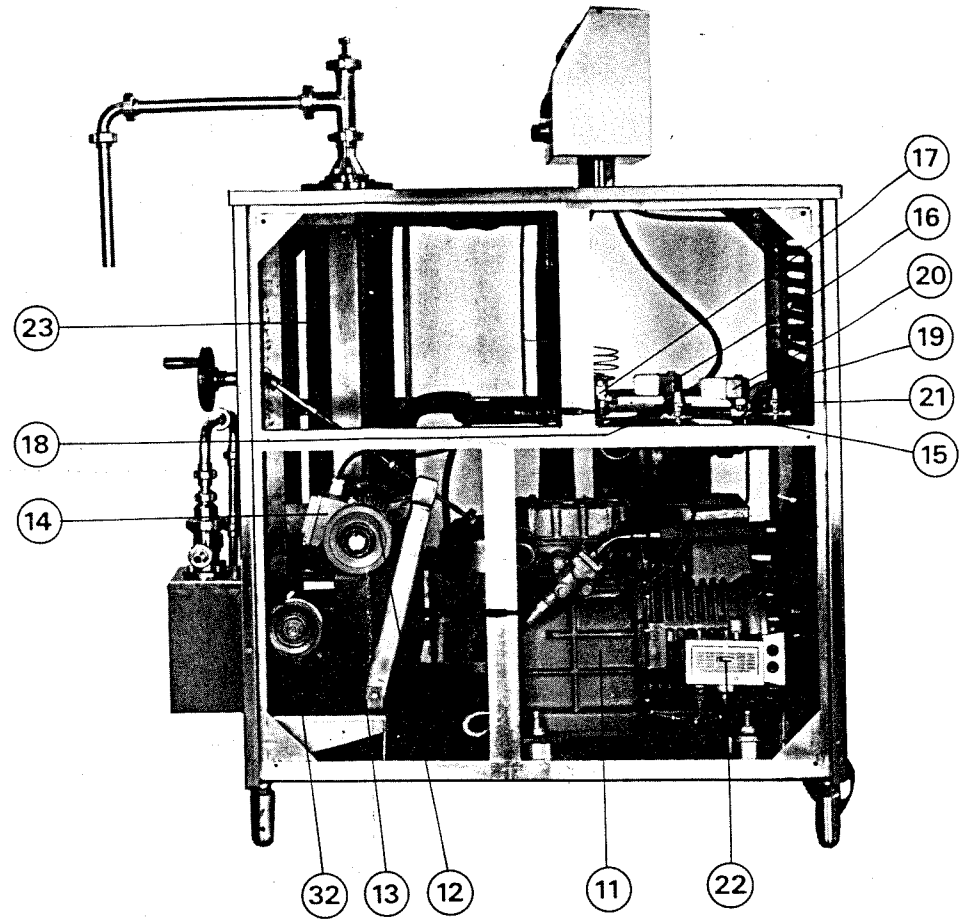


FIG. 2

PLATE 2

- 1) Water outlet tube
- 2) Water inlet tube
- 3) Water flow control valve
- 4)
- 5)
- 6)
- 7)
- 8)
- 9)
- 10)
- 11) Compressor
- 12) Variable pulley for mix pump speed variator.
- 13) Speed variator belt
- 14) Pump motor
- 15) Hot gas shut-off cock
- 16) Hot gas solenoid valve
- 17) Expansion valve
- 18) Liquid flow sight galss
- 19) Line filter
- 20) Liquid shut-off solenoid valve
- 21) Pressure gauge shut-off cock
- 22) Pressure switch
- 23) Freezing barrel
- 24) Driven pulley
- 25) Dasher motor
- 26) Trapezoidal belts
- 27) Motor pulley
- 28) Compressor oil plug
- 29) Liquid receiver and condenser
- 30) Safety plug
- 31) Electric panel
- 32) Pump reduction unit
- 33) Oil compressor level

FIG. 2

- 1) Tube sortie eau
- 2) Tube entrée eau
- 3) Valve réglage débit eau
- 4)
- 5)
- 6)
- 7)
- 8)
- 9)
- 10)
- 11) Moto-compresseur frigorifique
- 12) Poulie variable pour variateur vitesse pompe
- 13) Courroie variateur vitesse pompe
- 14) Moteur pompe
- 15) Robinet ligne gaz chaud
- 16) Electrovalve gaz chaud
- 17) Valve d'expansion
- 18) Regard passage liquide
- 19) Filtre de ligne
- 20) Electrovalve arrêt liquide
- 21) Robinet isolement manovacuomètre
- 22) Pressostat
- 23) Cylindre congélateur
- 24) Poulie entraînée
- 25) Moteur arbre batteur
- 26) Courroies section trapézoïdale
- 27) Poulie moteur
- 28) Vouchon huile du compresseur
- 29) Condenseur récepteur de liquide
- 30) Bouchon de sécurité
- 31) Tableau électrique
- 32) Réducteur pompe
- 33) Niveau huile compresseur

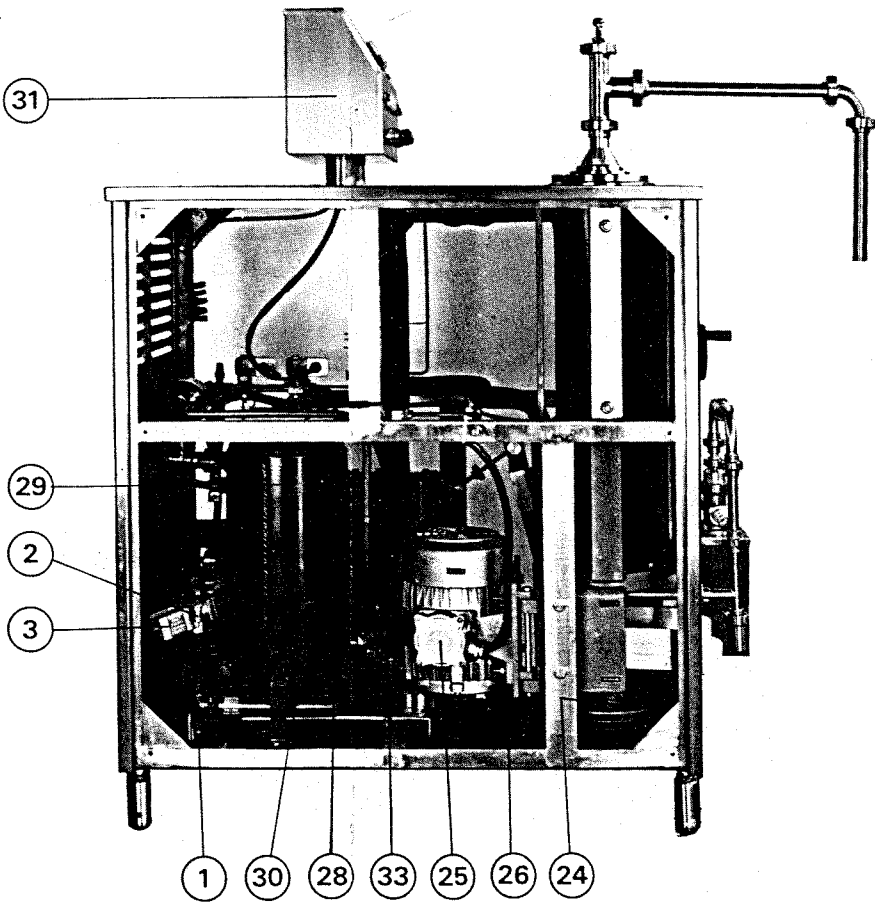
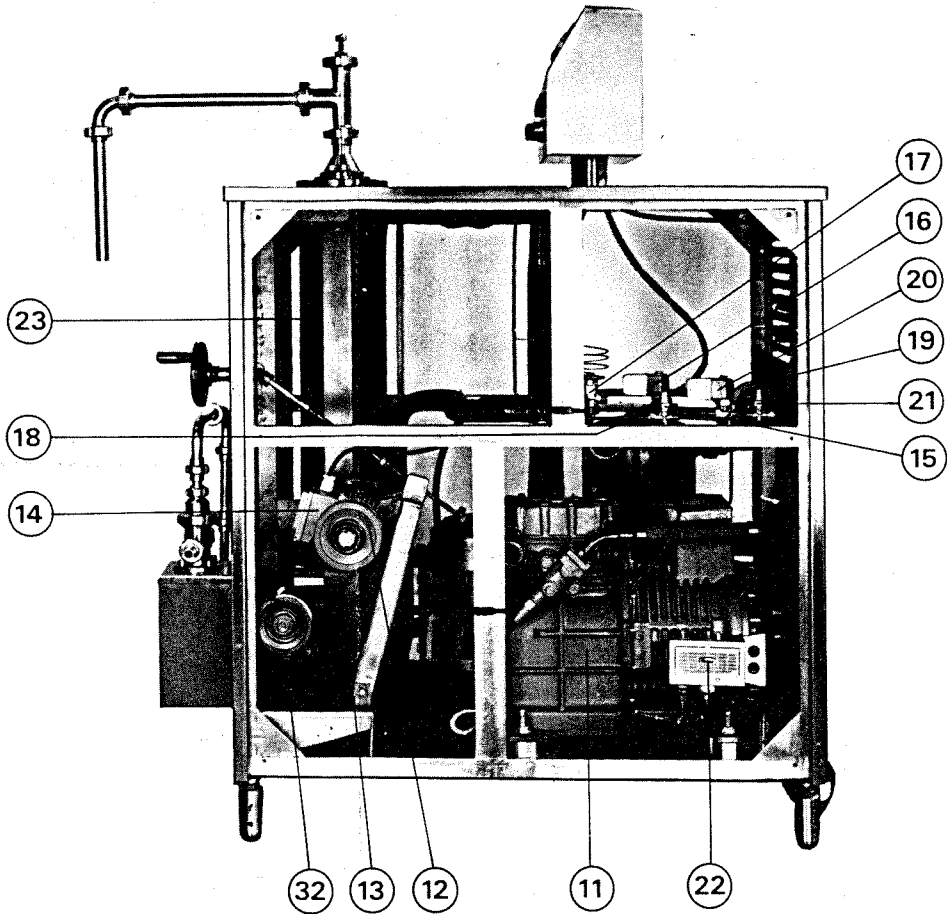


FIG. 2