

UF 820 p

SUGGESTIONS

First of all we should like to thank you for having chosen our machine. Our machines have been specifically studied to fully satisfy the operator.

We are sure you will be completely satisfied if you follow the instructions in this booklet.

Always use high quality ingredients in preparing the ice cream, which will satisfy your customers and assure you a good business now and in the future.

Savings made on the quality of ingredients will be cancelled by the loss of a customer or customers.

Bearing in mind the above statements, please take heed of the following suggestions :

1. Mixes should be made, by yourself, with pure high quality ingredients, or bought from reliable trustworthy suppliers. In the last case it is imperative that you follow exactly the suppliers instructions. Do not alter recipes by adding, for example, water or sugar.
2. Taste the ice cream yourself and do not put it on sale unless fully satisfied.
3. Make sure your staff are neat and hygienic at all times.
4. Make sure your staff keep the machine clean at all times.
5. For all servicing contact COLDELITE authorized technicians only.

Thanking you again we wish you every success and good business.

WHERE TO INSTALL THE MACHINE (General instructions)

Some useful tips :

- a) The more people see the machine the higher will be the demand. Choose carefully, therefore, where you install the machine.
- b) Customers will not always go to the trouble of looking for an assistant, keep your staff alert and someone near the machine.
- c) Machine with AIR cooled condenser must be set up with its rear part not nearer than 50 cm to any wall or obstruction. Air must circulate freely on all sides.

Clean frequently floor near or under machine, this will prevent paper, etc. from blocking air circulation.

It is IMPORTANT that the machine be protected from direct sunlight. The output of machine with air cooled condenser will decrease 1 % for every degree over 20 °C of room temperature.

- d) Make sure machine is easily accessible for cleaning, maintenance, etc.

CONDENSER CONNECTIONS

Machines with air cooled condenser

As previously stated in point "c" (Where to install the machine) machine must be installed not closer than 50 cm to any wall in order to allow free air circulation around the condenser. Condenser must be cleaned monthly, eliminating dust, paper, etc. that by obstructing it could cause malfunctioning.

Machines with water cooled condenser

Machines with water cooled condenser must be connected to running water with a pressure of at least one atmosphere and a delivery at least equal to estimated hourly consumption (see : Adjustment water valve).

Connect "Water inlet" to water supply, installing a shut-off valve on the water supply line. Connect "Water outlet" to a drain pipe (fig. 2). Use rubberized canvas tubing suitable for pressure of up to 8 Atm.

ADJUSTMENT OF WATER VALVE (fig. 4, ref. 18)

(for water cooled machines only)

Set water valve so that, with machine off, no water comes out, but begins to circulate as soon as the freezing unit is switched on. High pressure outlet of compressor must be set on 15 bars. Estimated water consumption per hour :

Water used in one hour

UF 820 p - 420 L/h

Consumption will be increased if entering water is above 20 °C.

CAUTION

Do not leave machine in a room with a temperature of less than 0 °C without having drained water from condenser. For draining unscrew water plug (fig. 4, ref. 14) until water has run out completely then replace plug.

ELECTRICAL CONNECTIONS

When connecting machine to mains insert a circuit breaker with fuses (see electrical diagram).

There are three current carrying wires, one neutral and one earth lead, be sure to earth well.

Before switching on current verify that machine voltage indicated in the characteristic plate on the rear panel of the machine corresponds with mains.

Check : Beater rotation directions by lifting spigot body (fig. 1, ref. 7), verify that beaters are rotating in a clockwise direction.

To reverse direction of rotation, interchange two of the three leads coming from circuit breaker, installed as stated above.

WARNING

Improper installation or operation may cause injury to personnel. Keep fingers and foreign objects away from openings and rotating parts. Disconnect all power sources before touching any internal parts.

CARPIGIANI declines all responsibility for accidents due to inobservance.

HARD-O-MATIC CONTROL ADJUSTMENT

It is possible that due to jolting in transit the machine arrives with the H.O.M. control micro switches (fig. 5) displaced.

The micro switches should therefore be checked and regulated to go into action when beater motors absorb about 9/10 of current indicated on motor plate.

The table below indicates at which beater motors amperage the micro switches must be set to stop machine.

To stop beaters at higher amperages, turn screw (fig. 5) clockwise. Do not exceed amperage indicated on motor plate.

Threephase version

UF820p - 4A

MIX PUMPS ADJUSTMENT

With the adjustable gear pumps one can ensure an optimal proportion of air and mix in the product.

For normal operation of the machine it is recommended to put the levers (ref. 271, TAV. III) in the six o'clock position.

Depending on the mix, the pumps may need a clockwise adjustment to allow for higher production and faster draw, without the risk of air coming out of the spigot.

Optimal overrun is obtained at three o'clock position. However, production is then to be reduced to a relatively lower level.

During quiet periods of low demand the levers may be left at the three o'clock position in order to maintain high overrun.

CONSERVATION THERMOSTATS ADJUSTMENT

IMPORTANT

Remember that the thermostats only control conservation temperature, i.e. the working of the machine when set to " CONSERVATION ".

There is no point, it is in fact dangerous, in adjusting it to influence the production or distribution of the machine.

During reasonably long periods of inaction the machine should be at " CONSERVATION ".

In this position the beaters are stopped and the functioning of the refrigerator compressor is controlled by three thermostats. Two (thermostats TEC in the electrical box) control the temperature of the cylinders, the other thermostat controls the temperature in the mix tanks (thermostat TEV, fig. 7).

These thermostats are regulated to keep the temperature in the cylinders and of the mix in the tanks between +2 °C and +6 °C, which is a perfect conservation temperature.

Setting of TEC thermostats[in electric control box (TAV. VII)]

The thermostats are regulated in such a way that, after two hours of conservation, the ice cream contained in the cylinders has a temperature not higher than +5 °C and that, when passing from " CONSERVATION " to " DISTRIBUTION " the beaters are not forced.

If ice cream temperature in the cylinder is above +5 °C, turn the TEC thermostat regulating screw clockwise (fig. 7).

Setting of TEV thermostat

If, after about two hours of " CONSERVATION ", the temperature of the mix in the tanks is above +6 °C, turn the thermostat control screw clockwise.

If, after about two hours of " CONSERVATION ", the temperature is below +2 °C, turn control screw anticlockwise.

THE COOLING UNIT HAS BEEN DESIGNED TO LOWER RAPIDLY THE TEMPERATURE OF THE MIX IN THE TANKS.

THE INTRODUCTION OF WARMER MIX WILL PROLONG THE REQUIRED COOLING TIME.

CONTROLS AVAILABLE TO THE OPERATOR

Four position switch

- OFF : The machine is off.
- CONSERVATION : The beaters are stationary, the compressor is controlled by the thermostats and starts up and cuts out automatically keeping the mix in the tanks and the ice cream in the cylinders at a correct conservation temperature. This setting is to be used for rests of a few hours or more.

- DISTRIBUTION : The beaters and the compressor are activated automatically by the HARD-O-MATICs control. If, when the H.O.Ms. are cut out, the mix temperature is too high the compressor will continue functioning as long as is necessary. Machine must be set at this position during business hours.
- CLEAN OUT : Only the beaters run, the refrigerating circuit is cut-out.
- TAPE FOR WATER DELIVERY : Opening this tap (ref. 341, fig. 1), the water for machine cleaning is introduced in the tanks.

Ice cream distribution and beater control handles (fig. 1, ref. 5)

Then open taps and start beaters allowing the distribution of the ice cream even when the machine, set on distribution, is still as the ice cream has reached the right consistency.

If ice cream delivery is too fast or too low, operate the stop screw in order to obtain the right spigot opening.

Lights (fig. 1, ref. 1a)

Light up when machine is set at " CLEAN OUT ". Machine must remain in this position the minimum possible. The lights serve as a reminder that the machine is set at " CLEAN OUT ", and prevent their overuse which could have serious consequences, not covered by the guarantee.

Push buttons (fig. 1, ref. 12)

Used for resetting motor protectors, cut out through machine malfunctioning caused by voltage failure, phase interruption OR jamming of the beaters caused by wrong adjustment of the HARD-O-MATICs control (see chapter) or of thermostats regulation (see chapter).

The thermometer (fig. 1, ref. 2)

The thermometer is used for controlling the temperature of the mix in the tanks.

Temperature must be between +2 °C and +6 °C.

When necessary regulate the TEV thermostat as shown in chapter " Conservation thermostat adjustment ".

Level indicators (fig. 1, ref. 1)

The warning lights light up, when the mix level in the mix tanks is too low. In order that the machine can continue functioning regularly fresh mix must be added as soon as the lights light up. Do not forget to insert floats (TAV. IV, ref. 348) on supports (ref. 347).

STARTING THE MACHINE

Once the machine is installed as per instructions given in the section " INSTALLATION " and after having been carefully cleaned and sanitized as in section " CLEAN OUT ", the following procedure should be followed :

Pour mix into the tanks which are refrigerated to keep the mix cold. While machine is operating the tank cover must be kept shut to keep mix dust and dirt free.

Mix level in tanks must not reach the pump (fig. 6).

Shut the main circuit breaker and, in machines equipped with water cooled condenser, open water supply cock.

Set machine at " DISTRIBUTION ".

Carefully pull upward or push on the pressure relief plungers at the front of the feeding tube assemblies until you hear the hissing sound of escaping air. This releases excessive air in the freezing cylinders.

When the machine stops after about 5 minutes ice-cream distribution can begin by lowering the spigot handles (TAV. II, ref. 5).

Thanks to the hard-o-matic controls no further action is necessary as long as the machine is running.

Dispense the ice cream without exceeding the rate of maximum production of your machine, as indicated below :

UF820p : 80 Kg/h one 75 g cone every 3,4 seconds

CONSERVATION

Out of business hours keep machine at " CONSERVATION ". If the thermostats have been well set the mix will be conserved at the correct, hygienic temperature. Beater motors being still and compressor working only when necessary, you will also save electricity.

CLEAN OUT

Washing

To drain all the ice cream as well as all the mix, set machine at " CLEAN OUT ".

Leave in this position for at least ten minutes so that the ice cream in the cylinder softens.

Caution

Do not forget the machine in this position. The lights (fig. 1, ref. 1a) serve as a reminder.

Any damage caused by leaving the machine in this position is not covered by the guarantee.

Lower spigot handles and drain all ice cream and mix from the machine.

Pour in a solution of cold or lukewarm water and low foam detergent.

Too hot water could damage the special materials of the machine.

IMPORTANT

Running the cylinders empty or filled with water and cleansing agent, for more than a minute, will wear out rapidly the cylinders and pumps.

Place a container under the taps and drain the machine. Then set at " OFF " straight away.

Remove container (fig. 1, ref. 27). If this contains mix it means that the beater seals (ref. 28, TAV. V) are leaking.

Change with spare. If the beater seals do not present any defects they can be used again, after being washed, at room temperature, reacquired their original shape.

Disassemble machine as indicated in chapter " Disassembling and reassembling of parts coming into contact with ice cream ". Besides disassembled parts wash cylinders, tanks and connecting tubes.

Dry and reassemble.

Warning

Prolonged operation in " CLEAN OUT " position, warning lamp (fig. 1, ref. 1A) on, cylinder empty or full of water with cleaning and sterilizing solution, causes an early wear out of cylinders and pumps. Therefore, during cleaning and sterilizing operations let machine run only the time strictly necessary for such operations. No danger exists during ice cream sale because mix acts as lubricant.

To start ice cream production again, lower dispensing handles drain sterilizing solution completely and recharge with fresh mix. It is important not to touch sterilized parts with your hand; towels, etc.

SANITATION

Mildew and bacteria thrive and multiply rapidly in the ice cream fat contents. Therefore washing, cleaning and rinsing of each and every part that comes in contact with the ice cream should be done with the utmost care, as indicated above. Parts coming in contact with ice cream are made of stainless steel and metals; proper design is of some help, but mildew and bacteria can be avoided only by most careful washing and rinsing.

DISASSEMBLING AND REASSEMBLING OF PARTS COMING IN CONTACT WITH ICE CREAM

Spigot body and pistons (TAV. II)

To remove spigot body (ref. 7), unscrew knobs (ref. 8) and remove pistons (ref. 30). Always clean perfectly. Plastic employed in the construction of the spigot body will not stand heat. Therefore use only lukewarm or cold water.

Remove all o'rings. Wash and reassemble after lubricating with vegetable fats, butter or margarine.

Beaters (TAV. V, ref. 21)

Once spigot body has been removed, beaters can be pulled out together with beater seals (TAV. V, ref. 28).

Before reassembling beater seals, grease their contact ends with fats fit for human consumption.

Pressurizing pumps (TAV. III)

To disassemble pumps, pull out connection pipes (ref. 207).

To disassemble pressure pipes, pull it upward. Turn pumps clockwise through 45 ° and pull.

By-pass valves [pressurizing pumps (TAV. III)]

Remove the regulators (ref. 271) and take out valves (ref. 245).

The springs (ref. 206) are calibrated and tested by the supplier. Therefore they must neither be compressed nor made longer during sanitizing operation, otherwise correct calibration could be altered.

When reassembling pumps after sanitizing and cleaning make sure that valves are reassembled with their flat part upward.

Check valves (TAV. III, ref. 31)

(for connection pipes, ref. 207)

Installing the machine or after clean out operation, assemble valves as indicated in TAV. III.

REFRIGERATING UNIT INSTALLATION

Valves and refrigeration controls we use are produced by manufacturers known throughout the world, in order to facilitate replacement.

The refrigeration system has been thoroughly dried and charged with R 502. When additional gas is to be added, original R 502 bottles only should be used to avoid humidity.

The compressor should work with a suction pressure of about :

UF820p : (two beaters in operation) : 1,2 bars (compressor)

TRANSMISSION OF MOVEMENT

Transmission from the motors to the beaters is obtained by means of trapezoidal belts, whose stretch is set automatically.

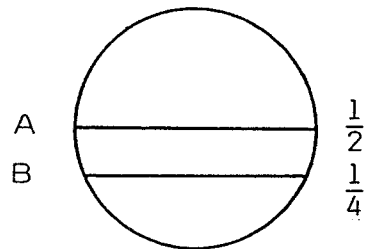
Although the stretch of the trapezoidal belts is set automatically, we suggest checking after a few days operation and when the belts have reached their greatest elongation, that the belts are well stretched and that there is no slippage on the pulleys.

If necessary adjust tension regulator (TAV IV, ref. 34) on bracket of motor housing.

LUBRICATION

Check oil level in compressor crankcase, and adjust if necessary.

Stationary machine should have level between points A and B



If necessary add SUNISO 3G oil.

The beaters are mounted on grease soaked ball bearings and can therefore run for years without servicing.

ACCESSORIES AND TOOLS

The tool kit contains the following :

- screwdriver for cross-cut screws
- o'ring extractor
- brush for cleaning
- spare cross-cut screws
- spare beater seals
- spare o'rings
- valves
- rubberized pipe connections with gaskets and clamps
- plastic spatula
- petrogel tube

ORDERS OF SPARE PARTS

In the explanation sheets which follow, the various parts of the machine have been each identified by a number.

When ordering spare parts, identifying number must always be indicated as well as the machine's serial number, found on the plate.

Note

A soft ice cream freezer by **COLDELITE** is more than just a machine.

It is rather a complete automatic production unit including in its engineering the most modern features of today's manufacturing techniques.

It is advisable to have qualified and skilled personnel in charge of maintenance in order to avoid that, through carelessness or lack of experience on the part of non qualified or unskilled personnel, the good running order of the machine is impaired or its operational life shortened. It is also advisable to call on the manufacturer's or their representative at all times to follow closely their suggestions which alone can assure a long and satisfactory operation of the machine.

COLDELITE cannot be made responsible for any accident occurring during operation, cleaning or maintenance of the machine. All technical data, pictures and drawings contained in this booklet are only indicative. **COLDELITE** reserves the right to make any change for which purchasers cannot lodge any claim.

TROUBLES WHICH CAN BE FIXED BY OPERATOR

TROUBLE	CAUSE	PROCEDURE TO FOLLOW
1. Machine does not start	<ul style="list-style-type: none"> - Fuses burnt - Machine unplugged - Thermic released - Not set at distribution 	<ul style="list-style-type: none"> - Check and replace - Check and plug in - Push buttons (I,12) - Check and even if set at distribution turn to "OFF" then back to "DISTRIBUTION"
2. Compressor starts then stops after a few seconds without the ice being thick.	<ul style="list-style-type: none"> - Water cooled machine: water not circulating - Air cooled machine: air not circulating 	<ul style="list-style-type: none"> - Open water cock. Check that rubber tube is not squashed or very doubled up - Check that rear of machine is at 50 cm from wall. Clean condenser obstructed by rags, dust, etc
3. Machine fails to cut out when set at "DISTRIBUTION".	<ul style="list-style-type: none"> - Air or water not circulating enough - Air has not been expelled when machine started, too much air left in cylinders - No mix in tanks or just froth - Pumps not working properly 	<ul style="list-style-type: none"> - See procedure no. 2 - Open cock and take off 1/2 litre of product - Add mix - Wet gears with water or mix. Tighten well pump knobs. Check that valve (III,245) and spring (III,206) are correctly installed. Check all pump ORs and replace if necessary
4. Machine works, but no ice cream comes from cock.	<ul style="list-style-type: none"> - Frozen water in spigot - Not enough sugar in mix 	<ul style="list-style-type: none"> - Allow to thaw, take out one glass of ice cream before resetting - Allow to thaw then modify or replace

TROUBLE	CAUSE	PROCEDURE TO FOLLOW
5. Machine works; ice cream is too soft	<ul style="list-style-type: none"> - Too much sugar in mix - Machine has run for too long without dispensing ice cream - Ice cream is dispensed too fast 	<ul style="list-style-type: none"> - Modify or replace mix - Take out ice cream until cylinders contain only fresh mix - Remember not to exceed product rate shown on table PRODUCTION
6. Mix or ice cream come out above or below closed pistons.	<ul style="list-style-type: none"> - Pistons without OR or OR is ruined 	<ul style="list-style-type: none"> - Insert or replace OR
7. Mix comes out into box (I,27)	<ul style="list-style-type: none"> - Beater seals, (V,28) missing or ruined 	<ul style="list-style-type: none"> - Install or replace
8. Ice cream does not come out of central cock in mixed flavours but in one or more	<ul style="list-style-type: none"> - One cylinder is empty or nearly empty - One tank without mix - Too much air in one cylinder - Compositions of mixes too different - Different pressures in cylinders 	<ul style="list-style-type: none"> - Check pump - Add mix - Bleed air - Reduce amount of sugar in mix which gives softest ice cream - Replace springs (III,206)
9. Passing from "CONSERVATION" to " DISTRIBUTION" machine stops	<ul style="list-style-type: none"> - Blockage due to too low "CONSERVATION" temp. 	<ul style="list-style-type: none"> - See section on "Conservation thermostat adjustment"
10. Ice cream comes out from behind spigot body (II,7)	<ul style="list-style-type: none"> - Gaskets missing or not properly installed - Spigot body knobs (II,8), not tightened evenly 	<ul style="list-style-type: none"> - Fix or replace - Loosen and tighten again

TROUBLE	CAUSE	PROCEDURE TO FOLLOW
11. Ice cream has not increased much in vol.	<ul style="list-style-type: none"> - O'rings leaking air - No pressure in cylinders - Pumps cover loose - Mix unsuitable 	<ul style="list-style-type: none"> - Check and replace if necessary ORs of pipes carrying mix from pumps to cylinders. - Check that valves (III,245) are set correctly. If necessary replace valves and springs (III,245) - Tighten knobs - Refill with fatter or less sugary mix. Fruit juice mixes do not increase much in volume. Do not use, therefore the pumps but mix feeding valves
12. Pump is blocked.	<ul style="list-style-type: none"> - Gears crushed - Mix contains hard pieces (nuts, seeds) 	<ul style="list-style-type: none"> - Find damaged part and file clear - Filter mix as pump works only with filtered mix
13. Mix gets too hot during "CONSERVATION".	<ul style="list-style-type: none"> - Thermostats not adjusted 	<ul style="list-style-type: none"> - See chapter on "Thermostat adjustment"
14. Central spigot sprays when opened.	<ul style="list-style-type: none"> - Ice cream in internal channels turned liquid 	<ul style="list-style-type: none"> - When long periods pass between one extraction and another first extract a small amount then pour it back into reservoir (I,26)
15. Bacteria tests shows too high level.	<ul style="list-style-type: none"> - Too much bacteria in mix - Machine not clean enough 	<ul style="list-style-type: none"> - Improve preparation procedure by sterilizing all containers, spoons, etc., have mix analyzed before being introduced to machine. - "CONSERVATION" temperature is too high, see chapter "Thermostat adjustment" - Empty and clean machine with care. It is important to follow instructions in chapter "Sterilization" with care.
16. Level indicators remain lit.	<ul style="list-style-type: none"> - No mix in tanks 	<ul style="list-style-type: none"> - Add mix

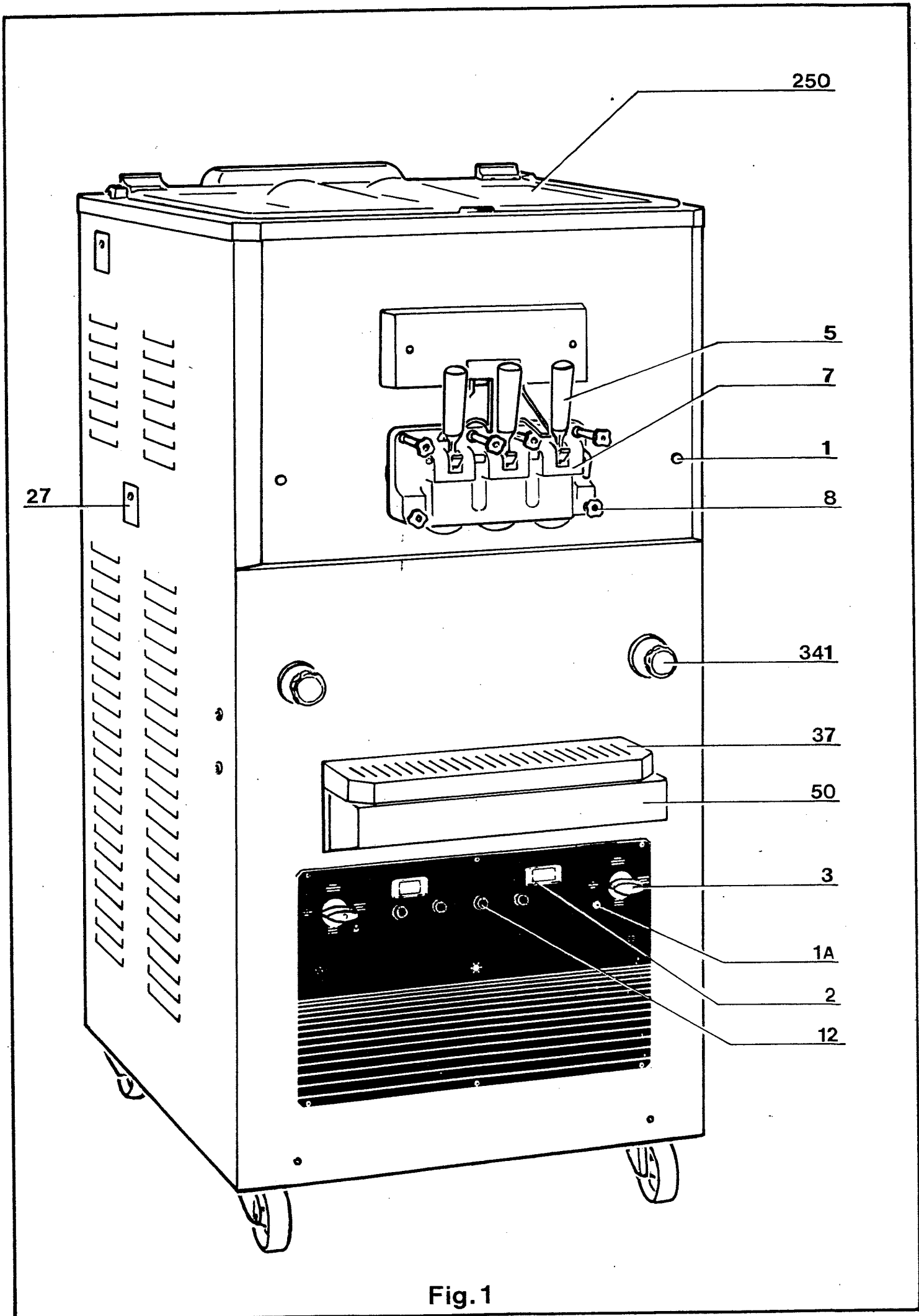


Fig. 1

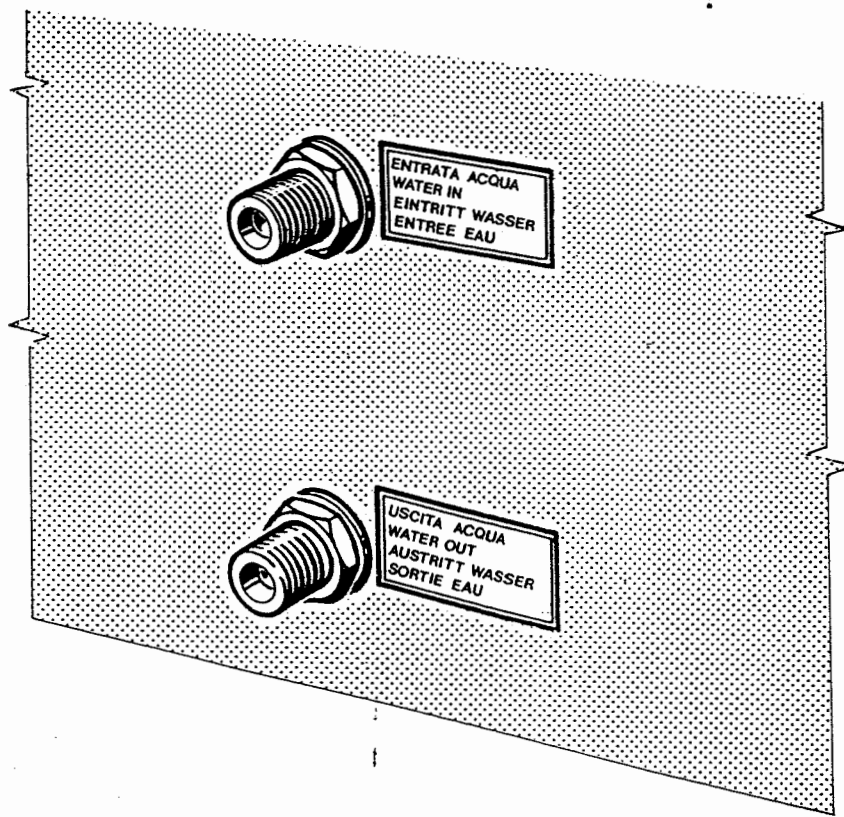


Fig. 2

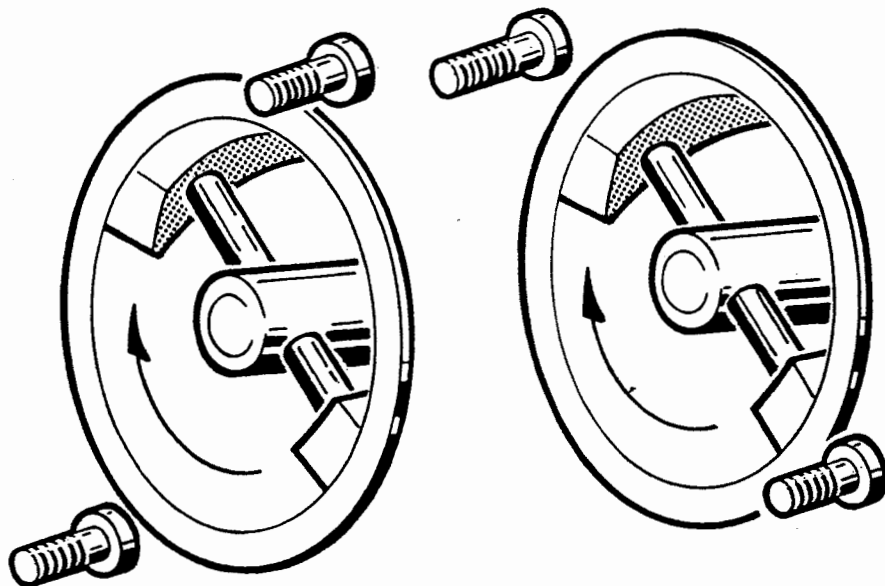


Fig. 3

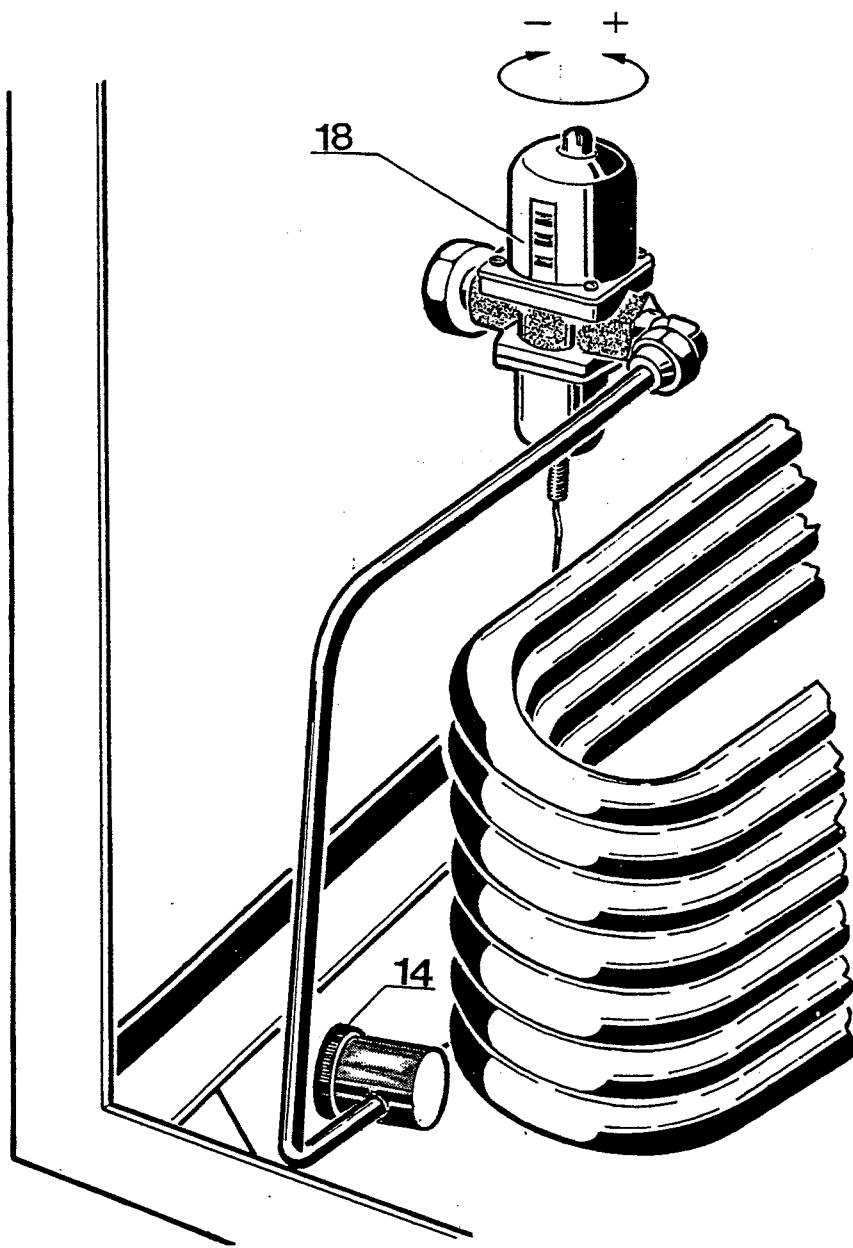


Fig. 4

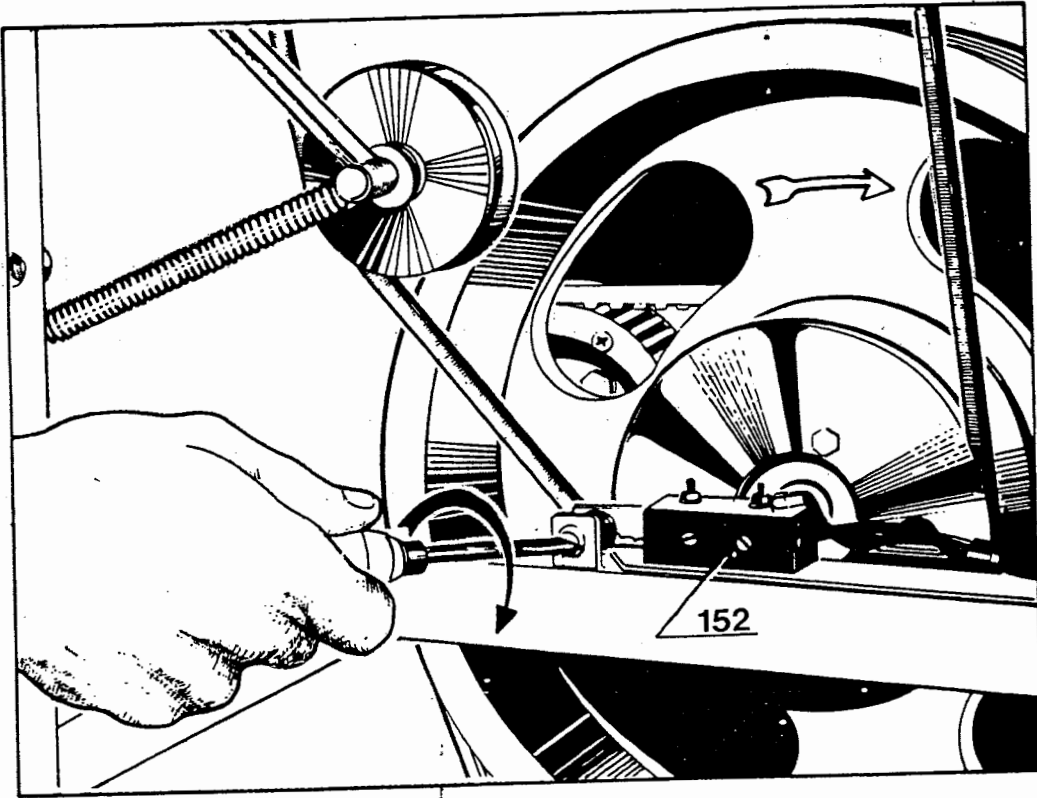


Fig. 5

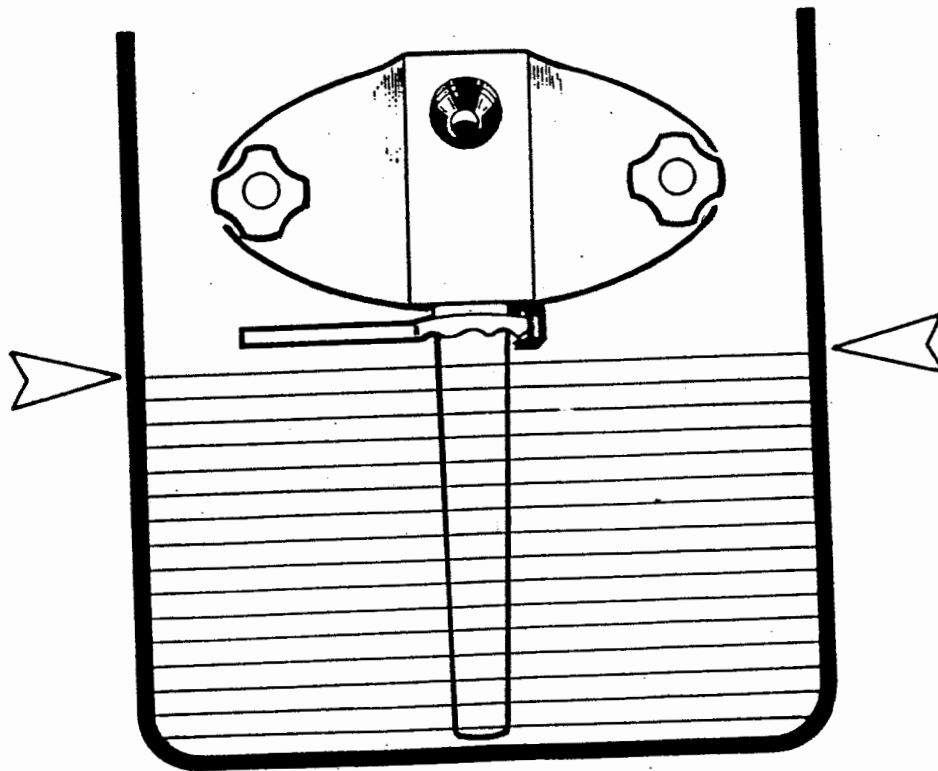


Fig. 6

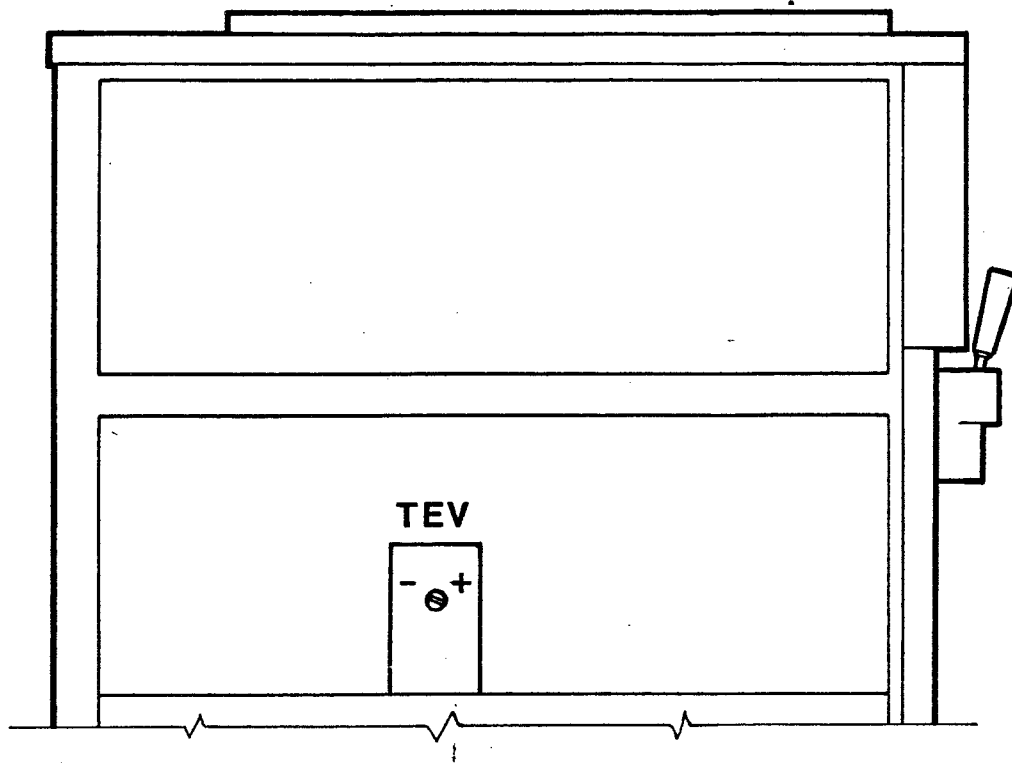


Fig. 7

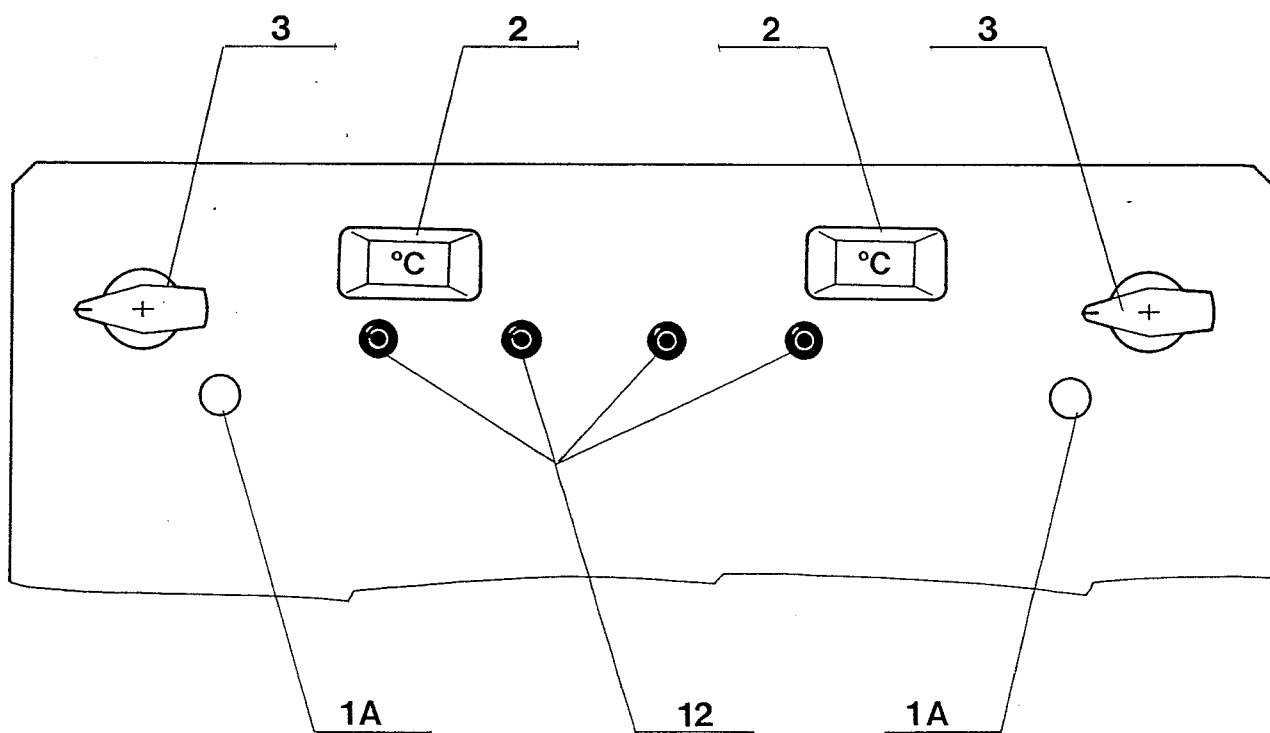
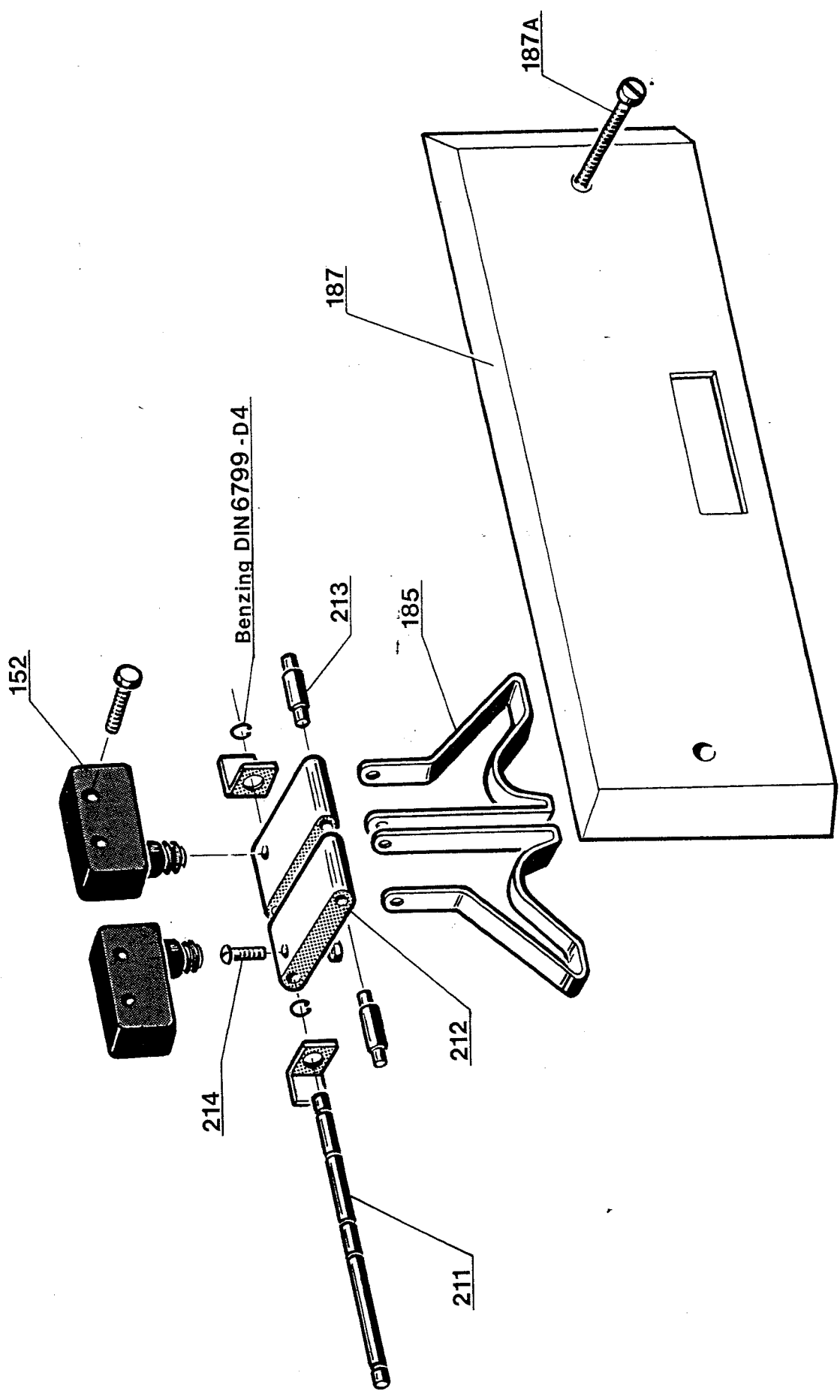
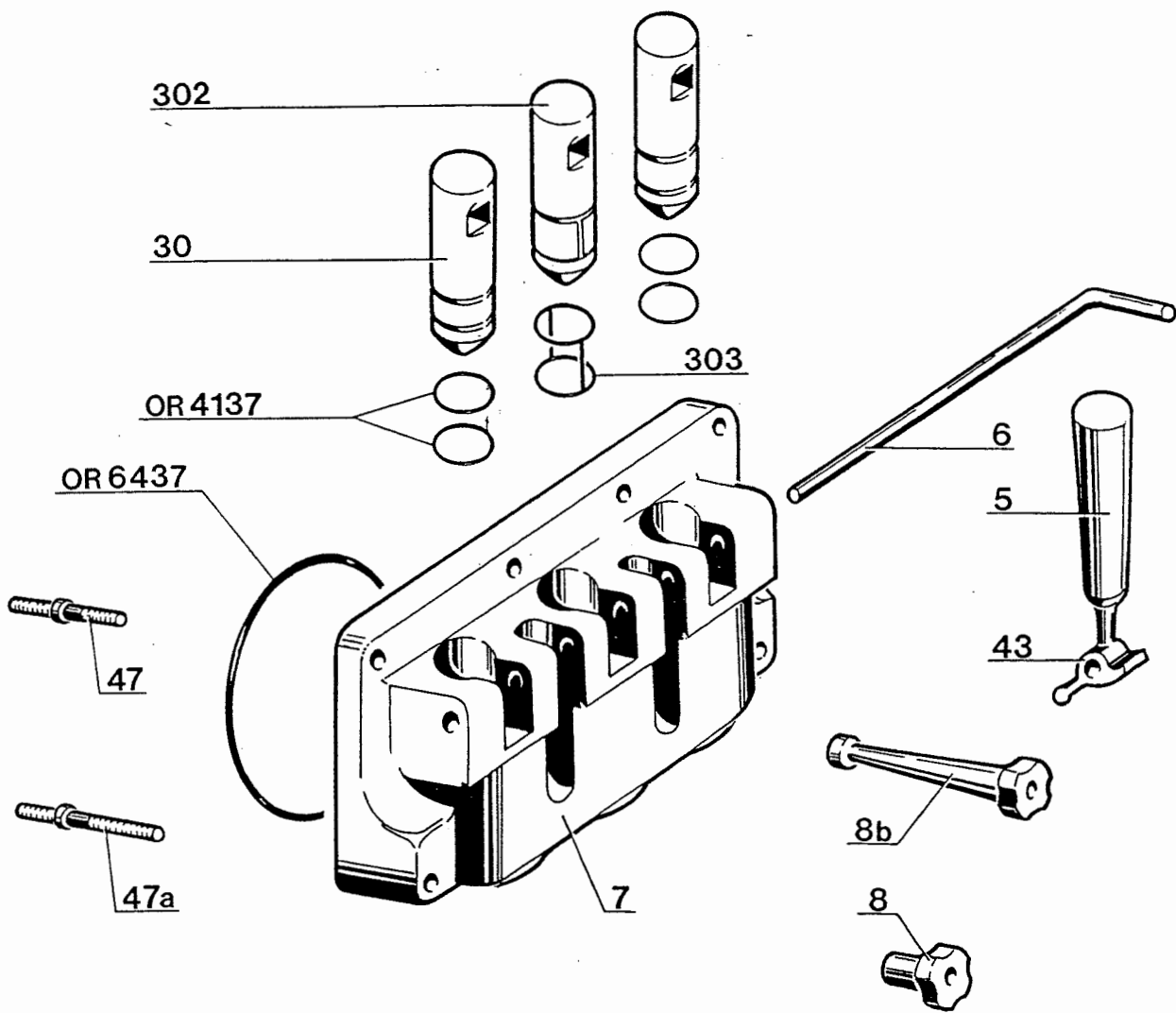


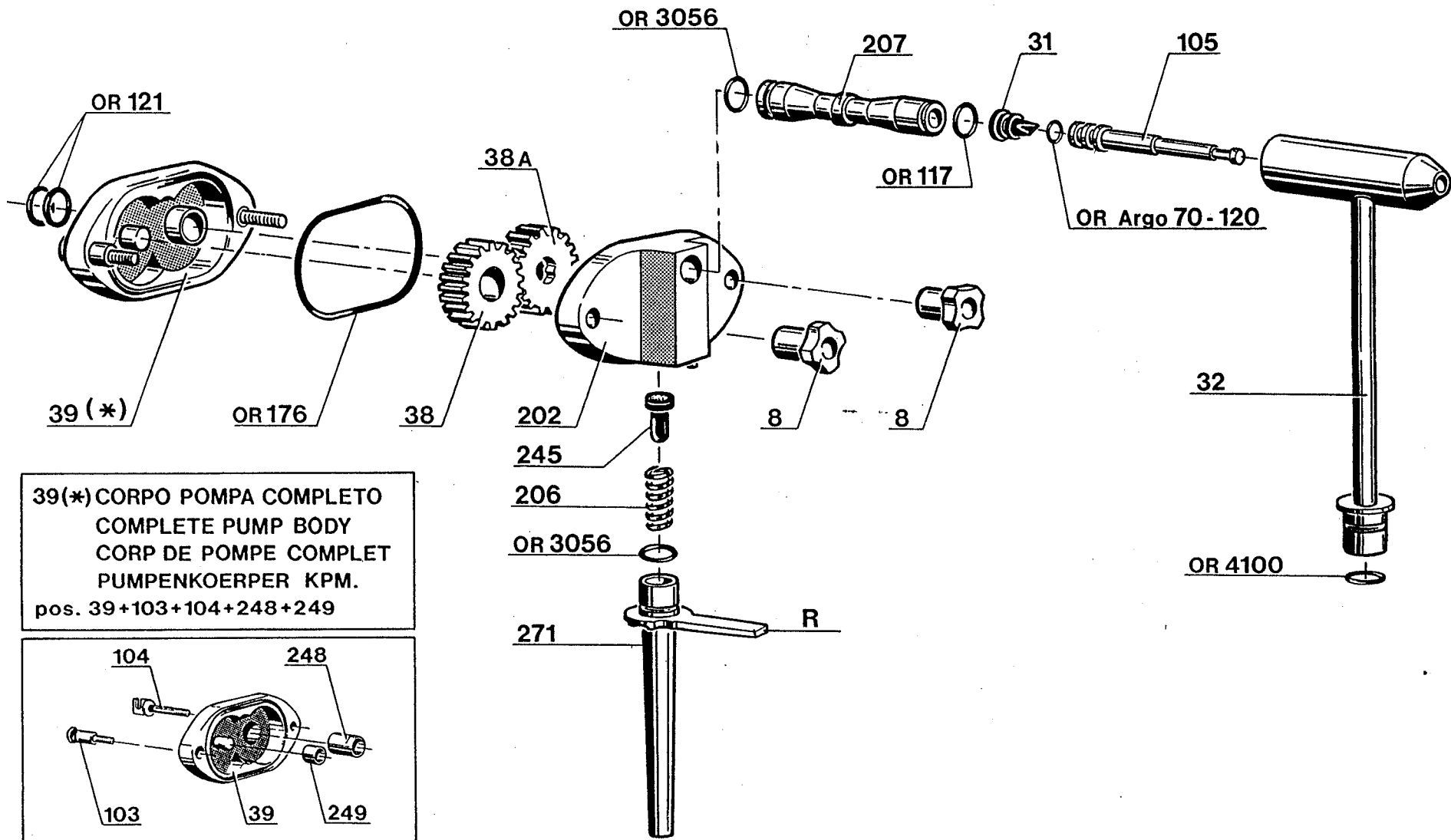
Fig. 8

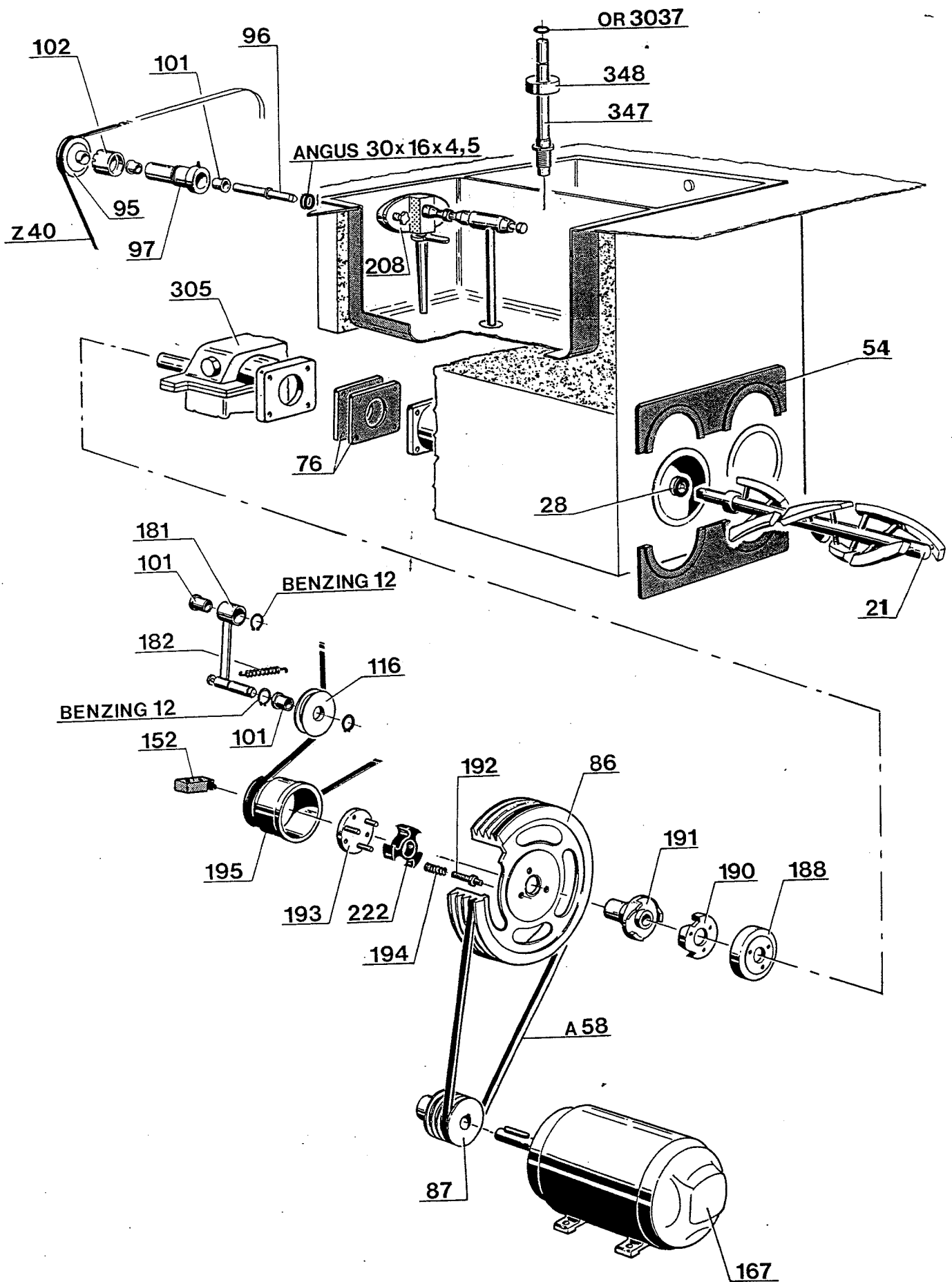


Tav. 1

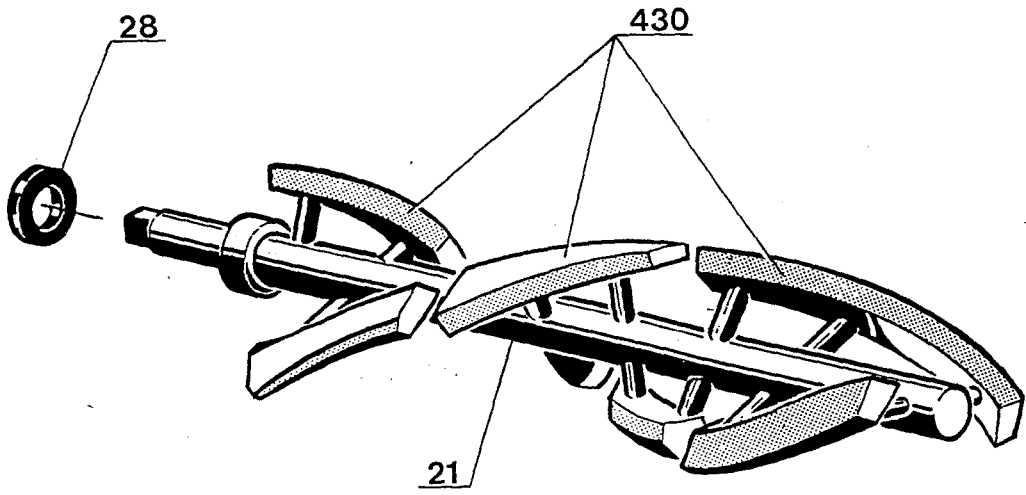


Tav. 2

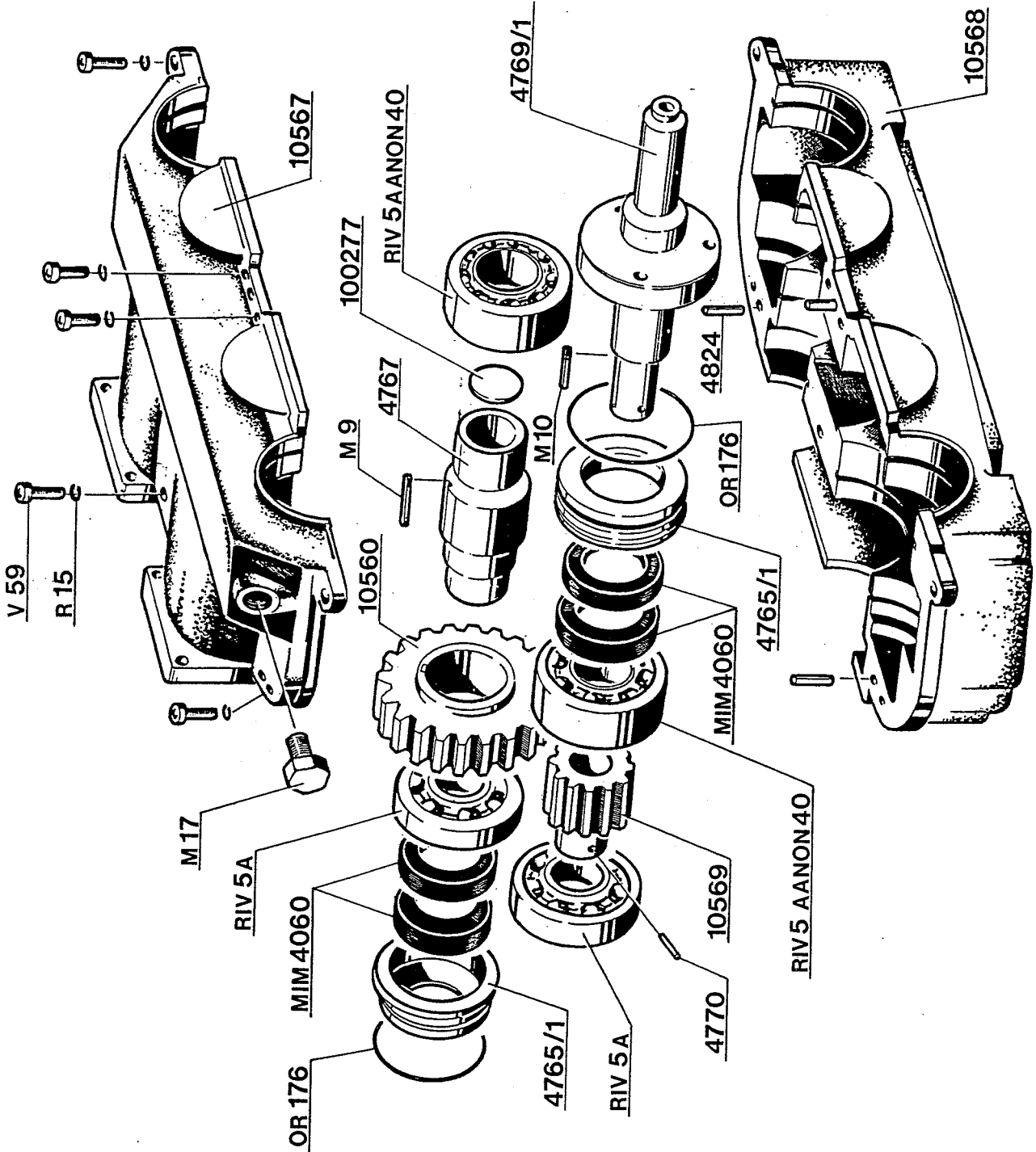




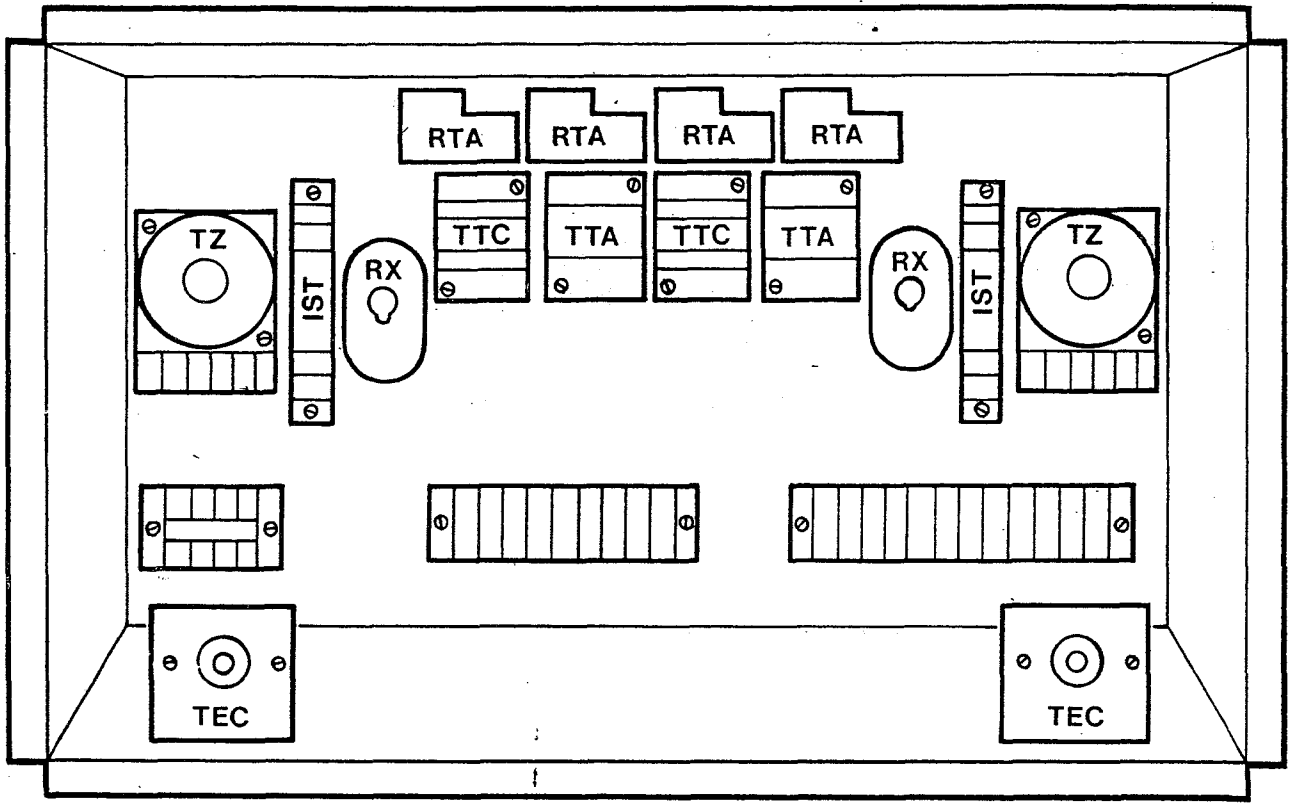
Tav. 4



Tav. 5



Tav. 6



Tav. 7