



EUROMARCHE

INTERNATIONAL SPECIALIST FOR SOLE MACHINES
SPECIALIZZATI IN MACCHINARI PER SUOLIFICI

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PRESSA AUTOMATICA MOD.ERP78 CON
PISTONE GRANDE , RADIATORE
RAFFREDDAMENTO OLIO

AUTOMATIC PRESS MOD.ERP78 WITH BIG
PISTON
OIL COOLING RADIATOR

MATRICOLA / SERIAL NR. 03742

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A - GENERAL INFORMATION REGARDING THIS INSTRUCTION MANUAL

Introduction

This manual is extremely useful in order to get to know and get the most from your machine.

Read it carefully before using the machine.

This instruction manual is written by Costruzioni Meccaniche Banf s.r.l. and is an integral part of the machine consignment.

Each machine is sold with its own instruction manual. The user is responsible for keeping this manual for the whole life of the machine and must only destroy it when the machine itself is dismantled.

Costruzioni Meccaniche BANF s.r.l cannot be held responsible for any tampering with this manual or any changes made to the machine by the user after its delivery which are not described in this manual.

The machine constructor holds the copyright of this manual: its contents must not be disclosed either wholly or partially in any form (printed, photocopied, microfilms or by any other means), neither must it be processed, reproduced or transmitted using electronic systems to legal or natural persons without approval and registration.

Reference standards

In writing this manual, the instructions in the following documents were used:

- EEC directive 89/392 - Enclosure 1 and subsequent modifications
- UNI EN 292 - 1 Nov. 92 - Machine safety, terminology
- UNI EN 292 - 2 Nov. 92 - Machine safety, specifications and technical principles;
- pr EN (information in the technical booklet available from Costruzioni Meccaniche BANF s.r.l.)

Aim of the manual

The aim of this manual is to provide the user with instructions and information which must be complied with scrupulously in order to use the machine correctly and safeguard the operator called upon to use it. For this reason, the user is invited to:

- make this manual available on the work site and let the operators know, and illustrate it to all the operators.
- pass the manual on to subsequent machine owners.

Machine marking data and identification plate

The plate fitted to the machine shows the machine constructor's data along with the model and serial number.

For any correspondence regarding the machine (problems found, guarantee operations, spare parts, etc.), always refer to this plate and the data shown on it.

The plate also bears the CE marking which guarantees that the machine complies with the EEC directives. Do not remove any warning signs fitted to the machine for any reason and follow the instructions they give fully.

Using and keeping this manual

Manual users

This manual is meant for use by the machine user and people assigned to its movement, installation, operation, supervision and final dismantling.

Purpose of the manual

This manual describes the purpose for which the machine was designed and its technical characteristics; it also provides instructions for its movement, suitable safe installation, assembly, adjustment and use; it provides information for carrying out maintenance operations, makes ordering spare parts easier and provides information regarding any remaining risks.

In particular, it must be constantly available for consultation in order to check the following information:

- design use conditions of the machine
- work post occupied by the operator;
- instructions concerning:

- . starting up;
- . use;
- . transportation;
- . installation;
- . assembly and dismantling;
- . adjustment operations;
- . maintenance and repairs;
- . training instructions (if any);
- . instructions relating to tools which may be fitted to the machine (if any);
- essential safety requirements in compliance with the machines directive and related enclosures.

Observance of the law

Besides with the instructions in this manual, all legal provisions specifically relating to accident prevention at work must be complied with.

Keeping this manual

This manual is considered an integral part of the machine consignment and must be kept in good condition until the machine is finally disposed of.

The manual must be kept in a protected, dry place away from direct sunlight, and must always be available for consultation near the machine.

Information for the user

- 1 - This manual reflects the present state of technology for this machine and cannot be considered inadequate simply because it has been updated on the basis of new knowledge.
- 2 - The machine constructor reserves the right to update the machines they construct and their manuals without being obliged to update previously constructed machines and manuals.
- 3 - The characteristics of the materials may be changed at any time according to technological developments without prior notice.
- 4 - If the machine is supplied without the electric control and protection part (electric panel fitted to the machine), the machine constructor is not liable for safety problems stemming from the use of electrical components which do not comply with recommendations and/or instructions.
In any case, the client is entirely responsible for making sure that all systems connected to the machine comply with the laws and electrical regulations in force and must duly provide suitable equipment for the purpose.
- 5 - The machine constructor is exempt from all liability if the machine is used:
 - . improperly;
 - . by untrained staff;
 - . in a way other than that described in this manual;
 - . in a way against regulations and laws in force;
 - . with a faulty primary power supply;
 - . without carrying out maintenance operations with the frequency described;
 - . after making alterations or carrying out operations which have not been authorized explicitly by the machine constructor in writing;
 - . with non-original spare parts or parts not specifically designed for this model;
 - . with total or partial failure to comply with the instructions in this manual
- 6 - The general sale guarantee is forfeited in the case of problems caused by:
 - . keeping the machine badly;
 - . incorrect use;
 - . lack of experience;
 - . exceeding performance limits;
 - . excessive mechanical and/or electric stress;
 - . use in the conditions described in point 4.

Any requests for additional copies of this manual must be made by sending a purchase order to Costruzioni Meccaniche BANF s.r.l.

In order to receive the correct spare parts, always send the following specifications to the machine constructor:

- type of machine;**
- serial number;**
- code number of part required;**
- quantity required.**

NB: This manual mentions accessories which may be supplied on request; they are marked as shown below (in the rest of the manual, only the identification number will be shown).

*	Magnetic surfaces
**	Oil cooling radiator
***	Insole detaching slide
****	Insole collector

1 MACHINE DESCRIPTION

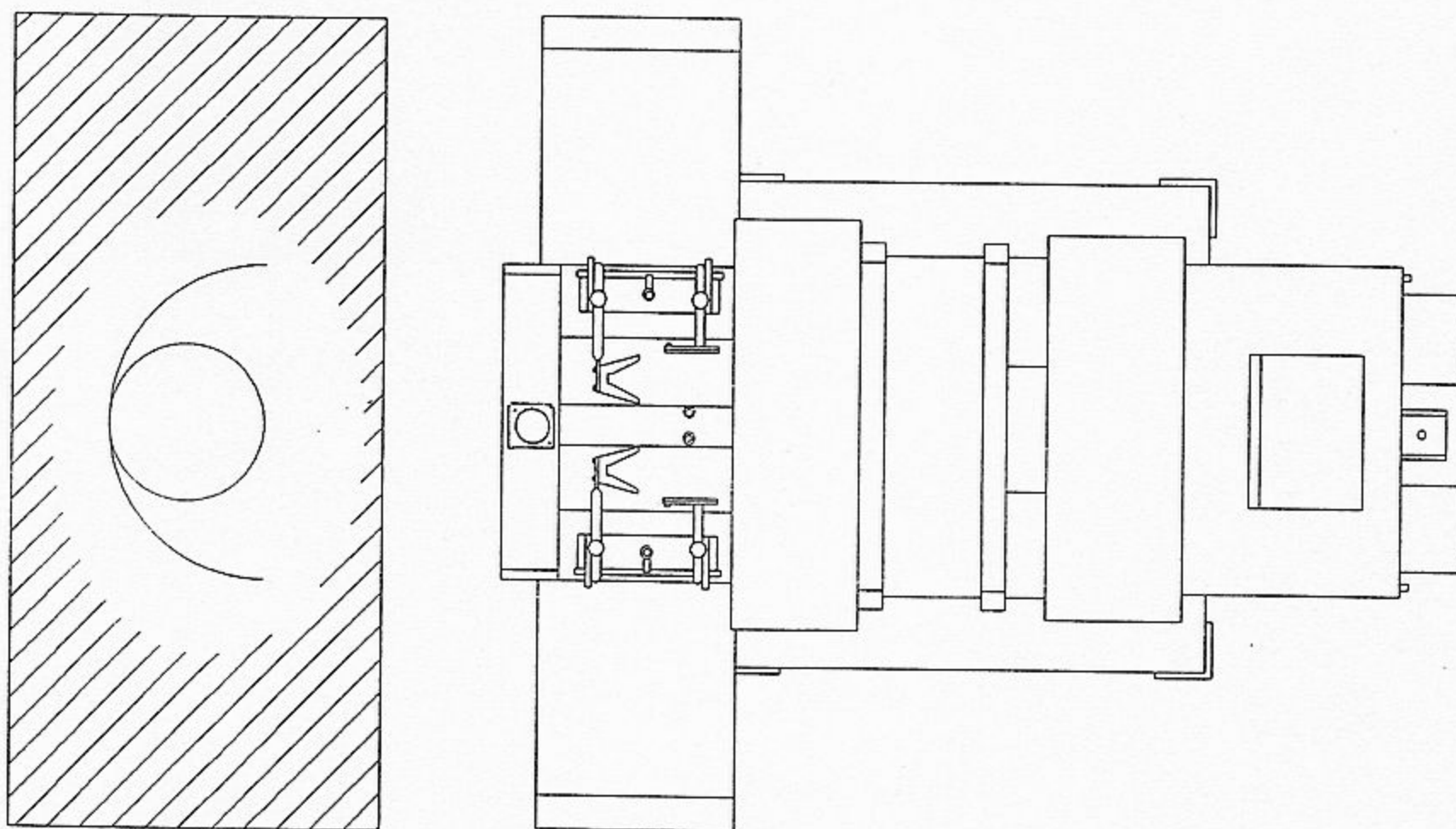
The Banf mod. P 78 machine is a hydraulic press for insole moulding constructed by Costruzioni Meccaniche Banf.

The operation takes place using a pair of dies between which the insole material is pressed and therefore moulded.

The pressing action is carried out by a hydraulically driven press piston.

The insoles are fed between the moulding dies using two conveyor belts run mechanically by chains which are driven by a feed shaft controlled by a hydraulic motor.

The press operator control post is as shown in the figure; the machine can be run manually or automatically.



1.1 Considerations regarding safety conditions and any remaining risks

In order to work in conditions of utmost safety and **prevent dangerous situations from occurring**, good conduct instructions are given below which must be followed by the operator in order to avoid accidents.

Each of the instructions mentioned below is accompanied by a reference to the chapter in which it is dealt with.

- *During operation, the guards must not be removed for any reason; in particular, the front mobile screen must not be tampered with in order to allow the press to be used without this device operating.*
Reference: **Chap. 1.2 Protection provided for safety reasons.**

- *Only one operator is needed to run this press; during operation no one, besides the operator, must find themselves near the machine or, worse still, carry out operations on it.*
Reference: **Chap. 7 STARTING THE MACHINE UP**

- *Before carrying out maintenance or machine set-up operations, always remember to:*
 - *stop the machine (MAIN POWER SWITCH selector set to 0),*
 - *disconnect the electric power cable.*

Reference: **Chap. 9 MAINTENANCE AND REPAIRS**
Chap. 9.2 Replacing the conveyor belts

- *Never run the machine without first fitting the dies correctly.*
Reference: **Chap. 7.2 and 7.3 Fitting the moulding dies**

- *Never carry out operations in the press cylinder movement area or the space between the upper and lower dies in order to remove the moulded insole.*
Reference: **Chap. 8 MACHINE USE**

- *In order to stop the work cycle instantaneously at any time, press the red EMERGENCY "mushroom" button.*

In order to reset working conditions, turn the mushroom button clockwise. In this way, the "mushroom" locking device is released and the conditions necessary for restarting the motor are reset.

Reference: **Chap. 8.1 Electric control panel**

1.2 Protection provided for safety purposes

The machine constructor has provided the following protection devices:

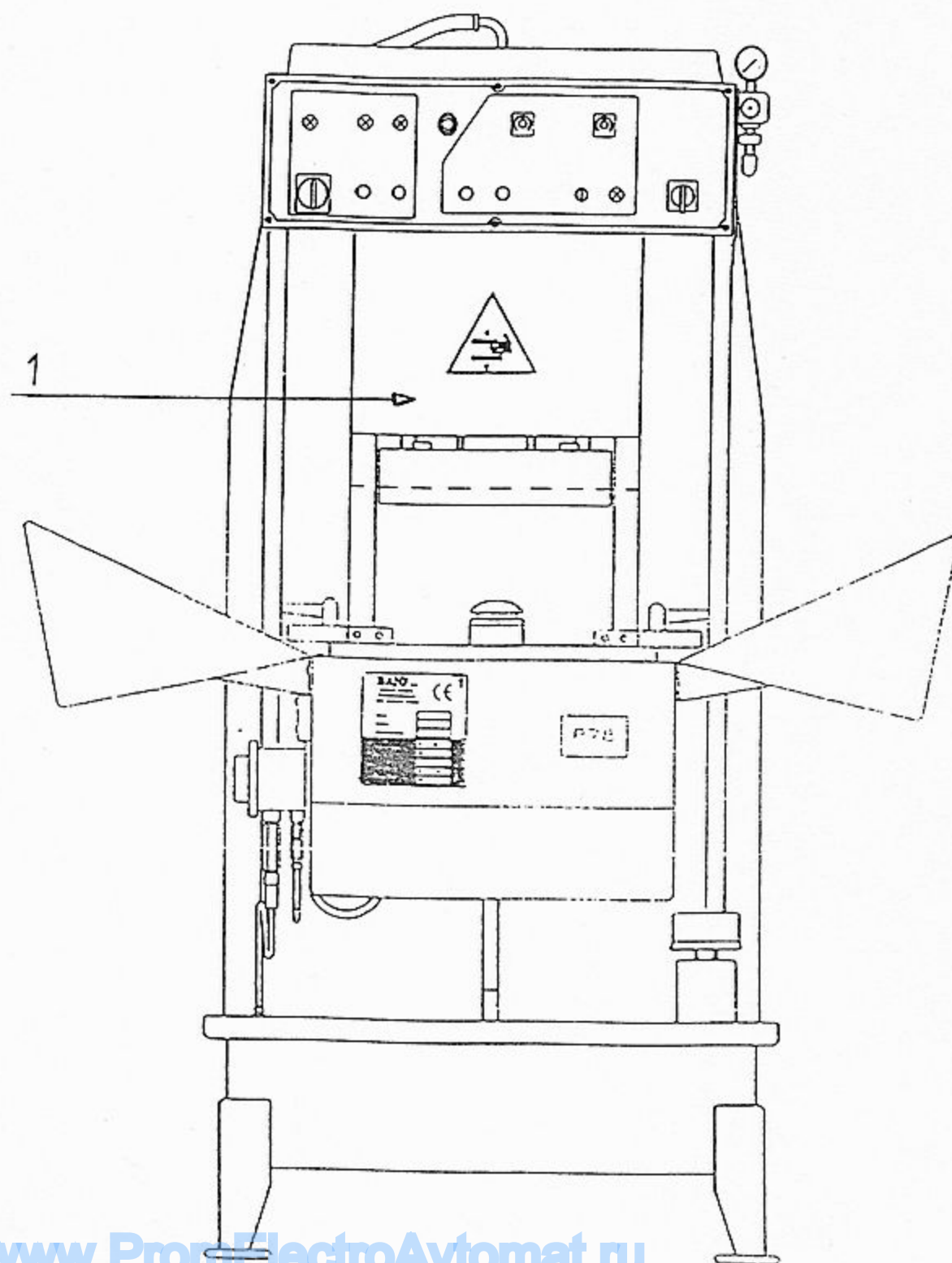
- 1 - Mobile guard screen
- 2 - Mobile plexiglass screen lifted 5 cm by the conveyor belts. During the work cycle, the screen lowers under its own weight and brushes against the conveyor belts themselves before the press cylinder is able to come down. During closure, the screen presses a microswitch which enables press piston lowering.
- 3 - One crossways guard located in front of the work post.
- 4 - One guard for each of the two pneumatic cylinders which control the conveyor belt tension
- 5 - One guard located between the two conveyor belts in the area where the insoles fall into the collector.
- 6 - One guard located between the two conveyor belts, fastened using two screws accessible from the work post.
- 7 - One guard which covers the conveyor belts in the area where the moulded insoles leave the machine
- 8 - Two guards (one on each side of the machine) which cover the slots along which the upper die fastening pins run.

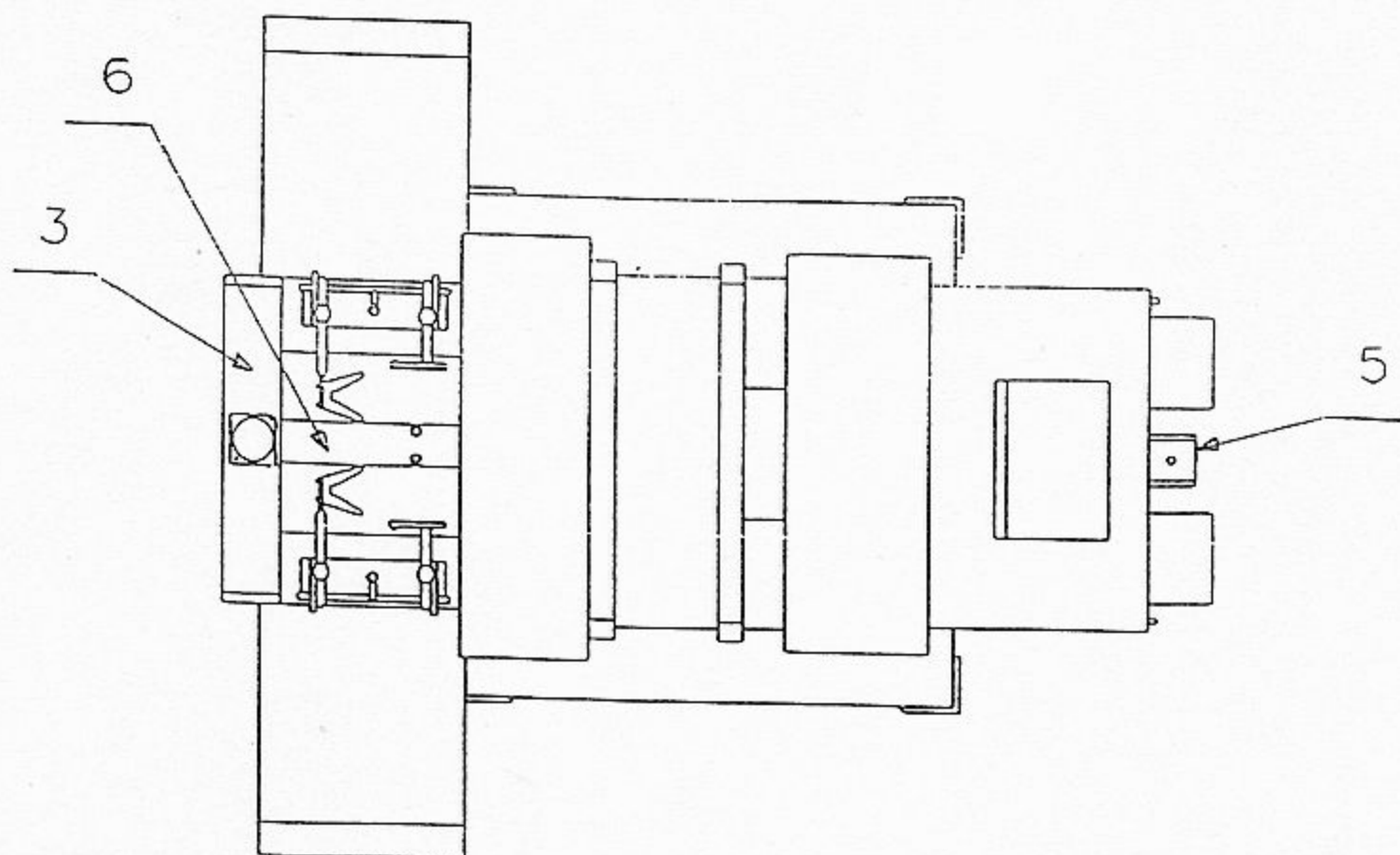
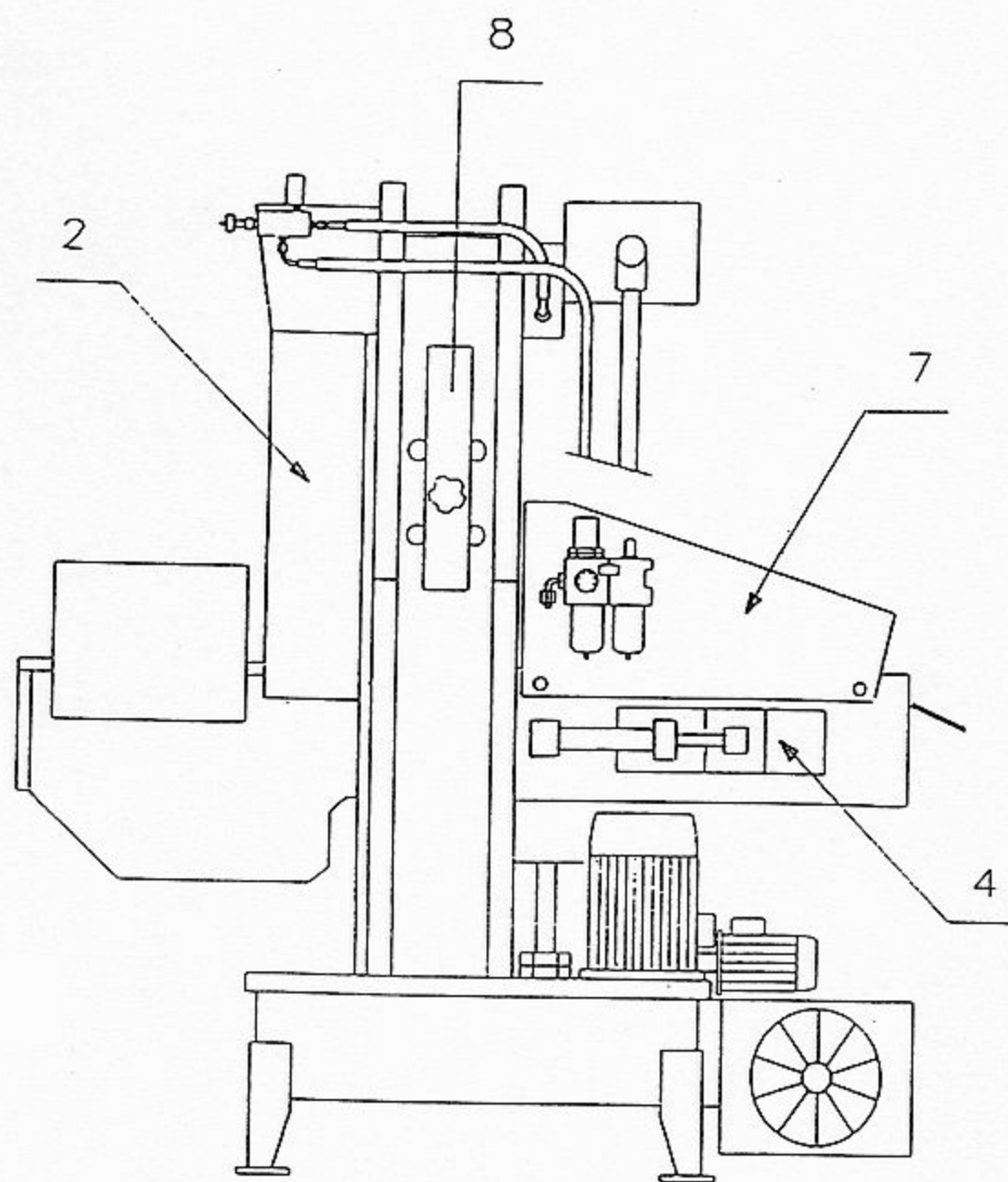
The guards cover the slot no matter which position they find themselves in thus preventing limbs from being crushed.

Warning

The protection devices have been provided by the machine constructor in order to safeguard operators while carrying out their tasks.

During operation, the guards must not be removed for any reason.





2 PROPER AND IMPROPER USE

The Banf mod. P 78 machine was designed for use as a hydraulic press for insole moulding; any use other than that for which the machine was designed is improper and may lead to damage to the machine and be seriously dangerous for the operator.

2.1 Warnings and danger due to improper use.

- The position of the microswitch control cams is adjusted at the machine constructor's factory. The press work cycle is tested several times before the machine is sent to the user.

The position of the cams must not be changed with the intention of altering the machine work cycle.

- The Banf model P78 machine is a press designed for moulding insoles;
it was not designed to be used as a press for joining the two parts of the sole; therefore this press must not be used for that purpose.
- The machine must not be run without fitting the conveyor belts correctly.
- **The machine must never be used without dies.**
- The press is not designed to operate in explosive environments; therefore **the machine must never be used in the presence of explosive gases.**
- The machine must never be run without the specific guard covers.
- For any use other than that for which the press was designed, the user must ask the machine constructor for information regarding warnings or risks which stem from this improper use.

2 TECHNICAL CHARACTERISTICS OF THE BANF MOD. P 78 HYDRAULIC PRESS

TECHNICAL CHARACTERISTICS TABLE		
	without collector	**** with collector
Width without packing (mm)	1,350	2,010
Depth without packing (mm)	1,600	2,160
Height without packing (mm)	1,730	1,730
Width with packing (mm)	1,500	2,150
Depth with packing (mm)	1,750	2,300
Height with packing (mm)	2,000	2,000
Machine weight filled with oil (kg)	1,600	1,800
Weight of oil (kg)	130	130
Gross weight packed in crate (kg)	1.800	2,000
Maximum press piston stroke (mm)	135	135
Maximum lower compensation piston stroke (mm)	10	10
Press force (t)	70	70
Recommended oil pressure (bar)	80-90	80-90
Recommended air pressure (bar)	4	4
Maximum air consumption with four-second production cycle (l/min.)	8.1	8.1

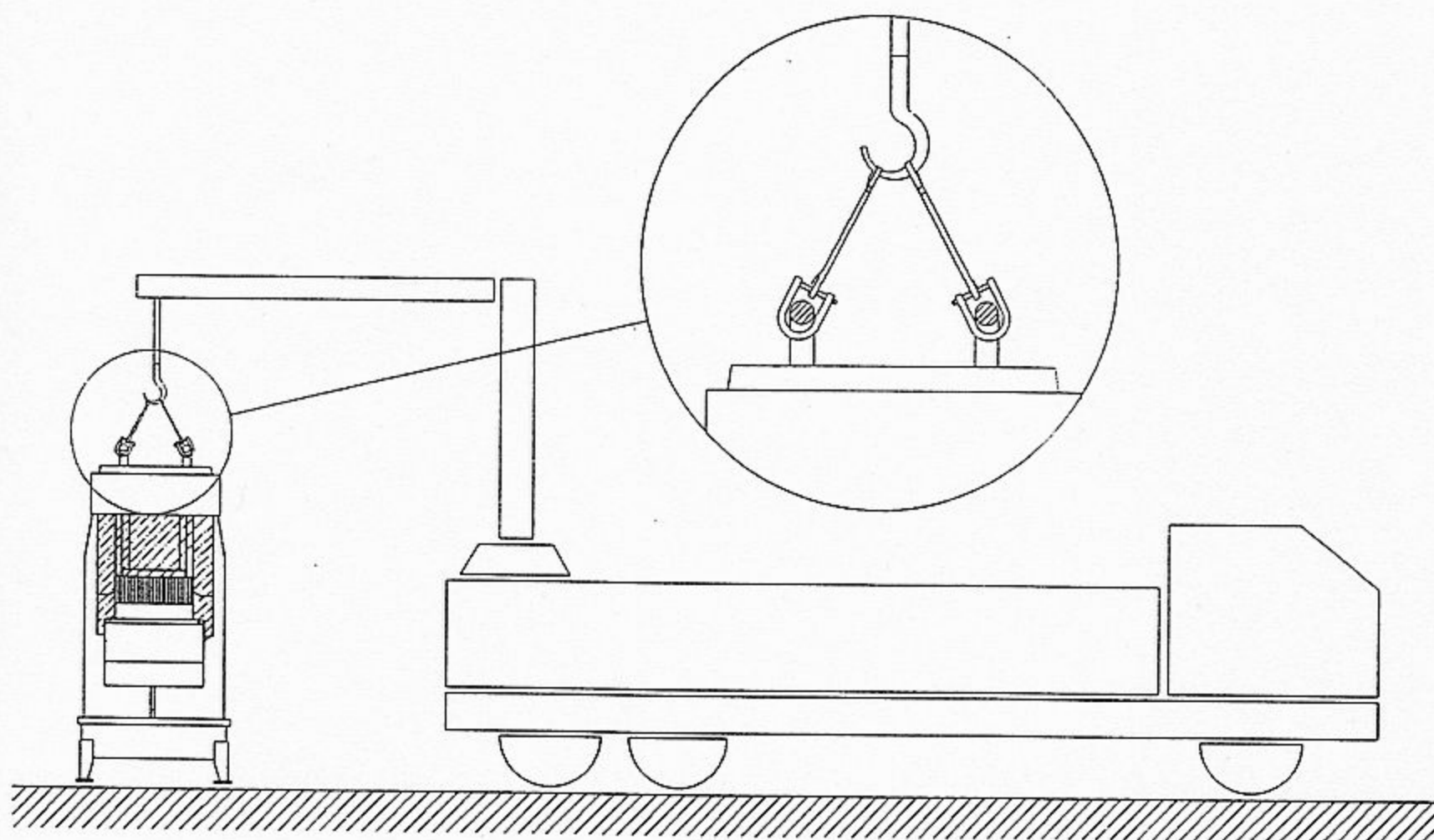
Hydraulic circuit motor and pump with 50 Hz network frequency	
Electric motor power (kW)	4
Pump flow rate (cm ³ /rev)	14.5
Hydraulic circuit motor and pump with 60 Hz network frequency	
Electric motor power (kW)	3
Pump flow rate (cm ³ /rev)	11
**Oil cooling system motor and pump	
Electric motor power (kW)	0.25
Pump flow rate (cm ³ /rev)	7.9
**** Insole collector electric motor	
Electric motor power (kW)	0.25x2

4 TRANSPORTING THE MACHINE

The mod. P 78 hydraulic press is fitted with two brackets on the top ends of the framework. The lifting cable hooks must be connected to these.

Lifting and movement must be carried out using a small crane operated by an expert crane operator as shown in the figure.

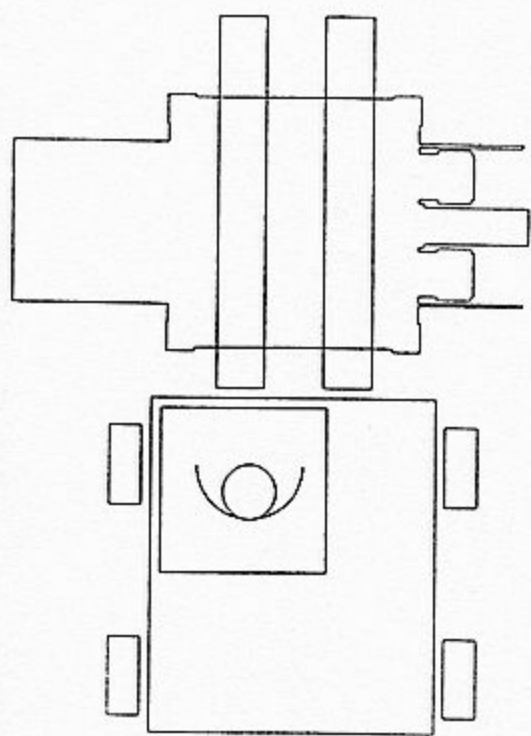
Bear in mind that the lifting cable used must be made of steel with suitable dimensions for the weight of the machine.



Warning

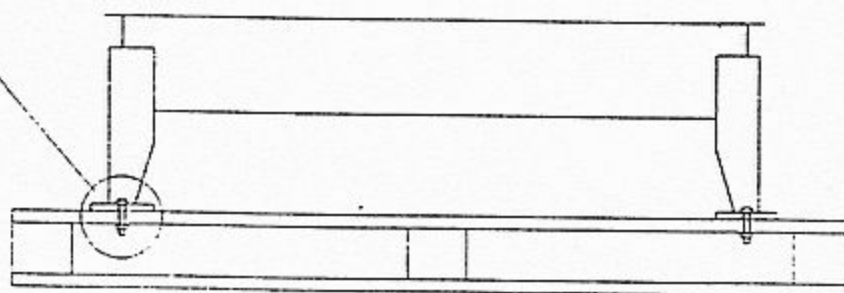
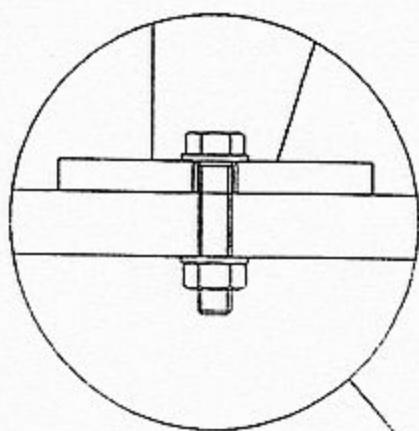
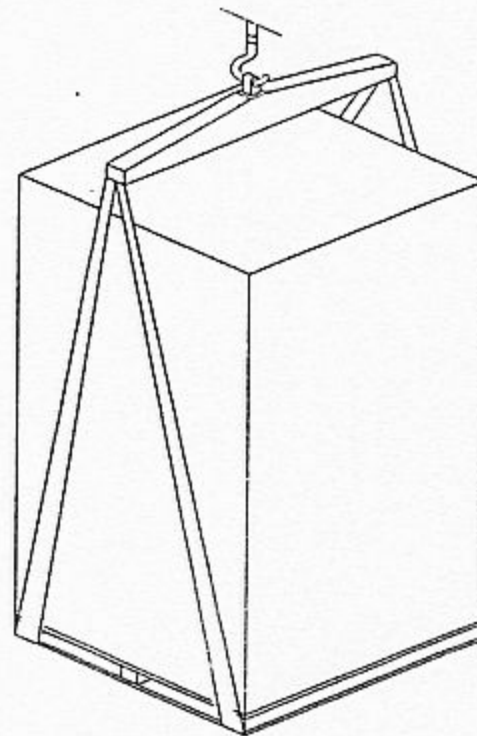
- 1) Make sure no one passes through the crane movement area in order to prevent the risk of accidents during the movement of hanging loads.

- 2) If the press is loaded on a pallet or sent packed in a wooden crate, it may be moved using a forklift truck or by securing the crate suitably with a sling after fixing the machine to the pallet. For this purpose the press rests on four feet made of iron angle bars with plates (plate dimensions: 100 mm x 100 mm). Each plate has a M14 threaded hole. The press must be anchored using four M10 screws, each of which passes through the rest plate and is fastened to the wooden pallet as shown in the following close-up drawing.



Movement with forklift truck

Machine movement in wooden case or crate



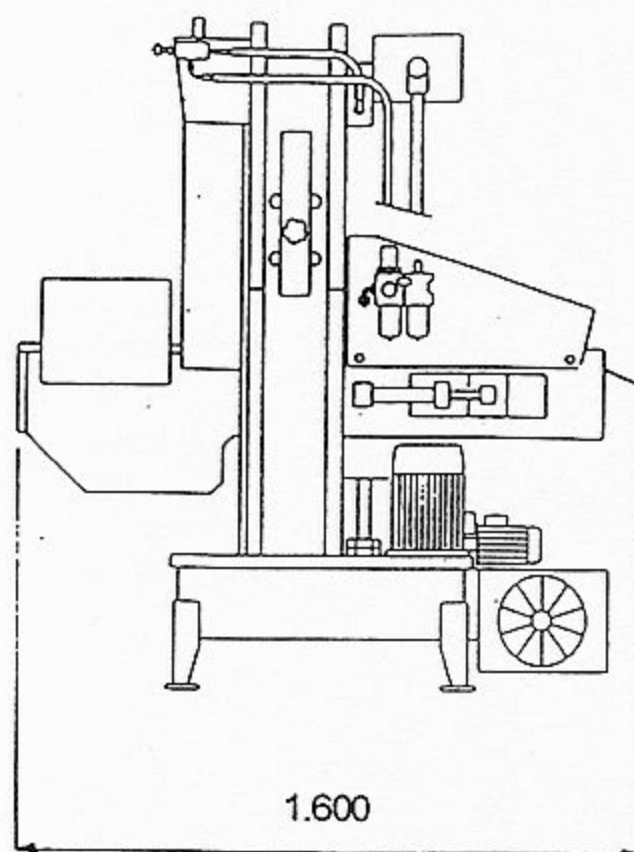
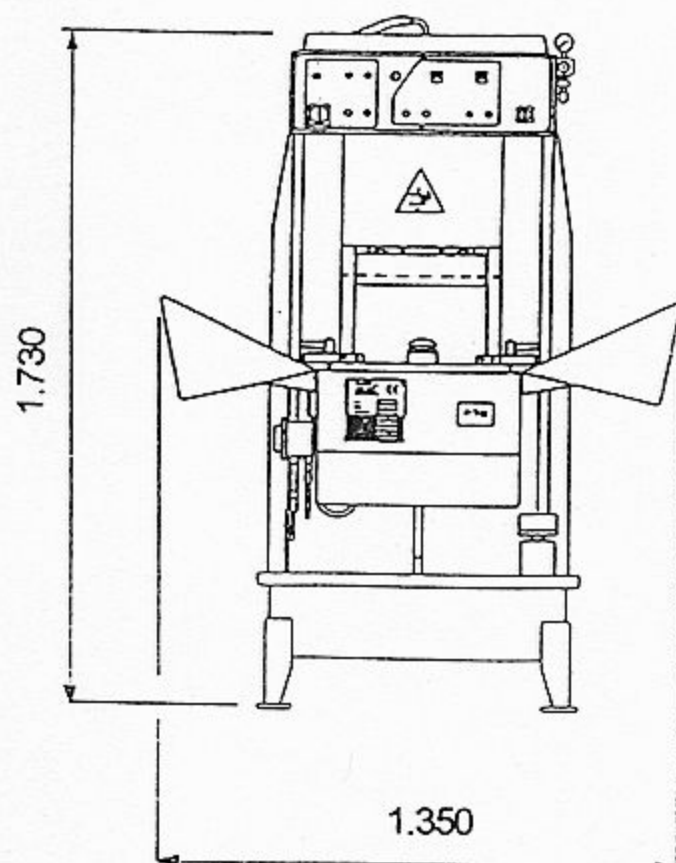
- 3) The two side insole support tables are shipped separately; they must be fastened to the sides of the machine using the holes provided when the machine arrives at the user's factory.

5 MACHINE INSTALLATION

The machine must be installed in a place with optimum temperature and humidity conditions for the health of the operator so as to reduce any possible tiring to a minimum and allow the operator to work in conditions of maximum safety.

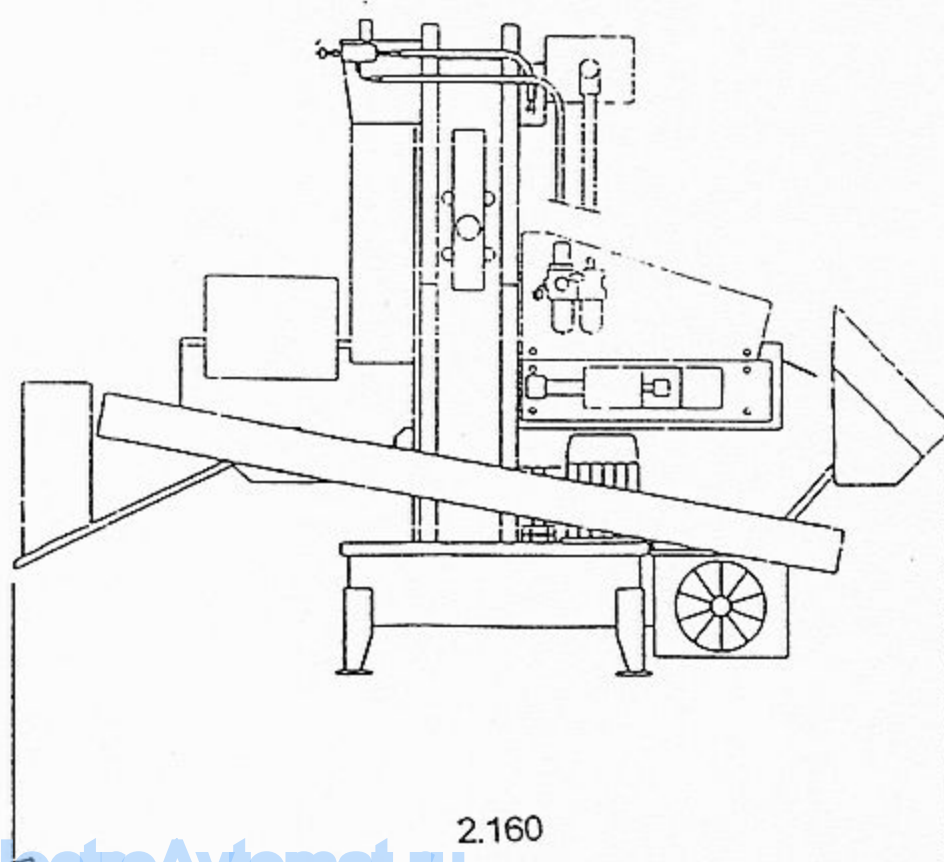
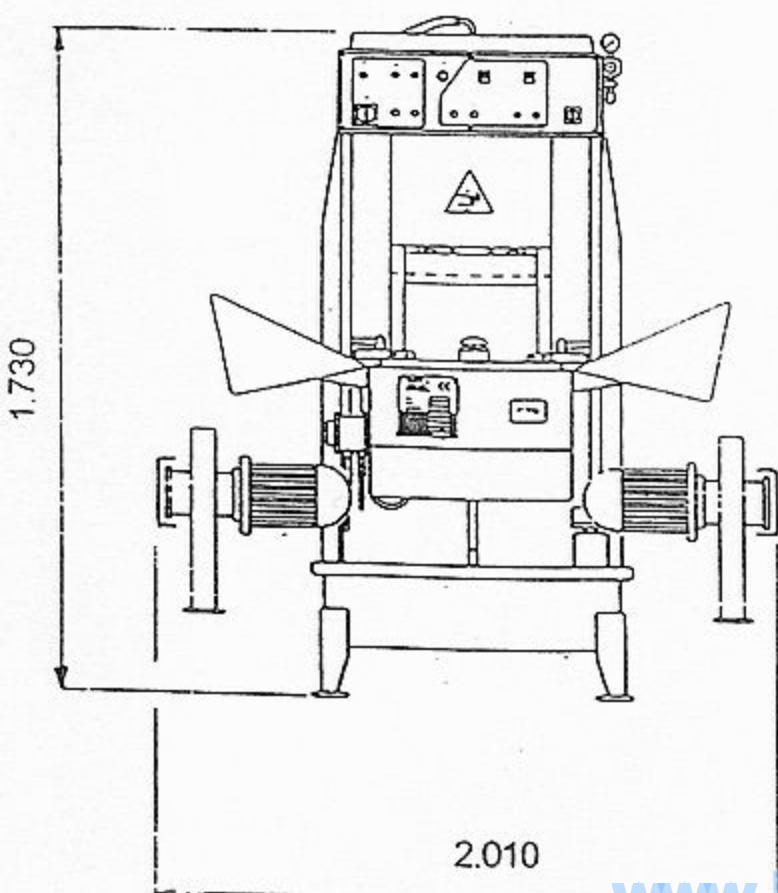
5.1 Overall machine dimensions

The maximum overall dimensions of the mod. P 78 press are shown in the figure:



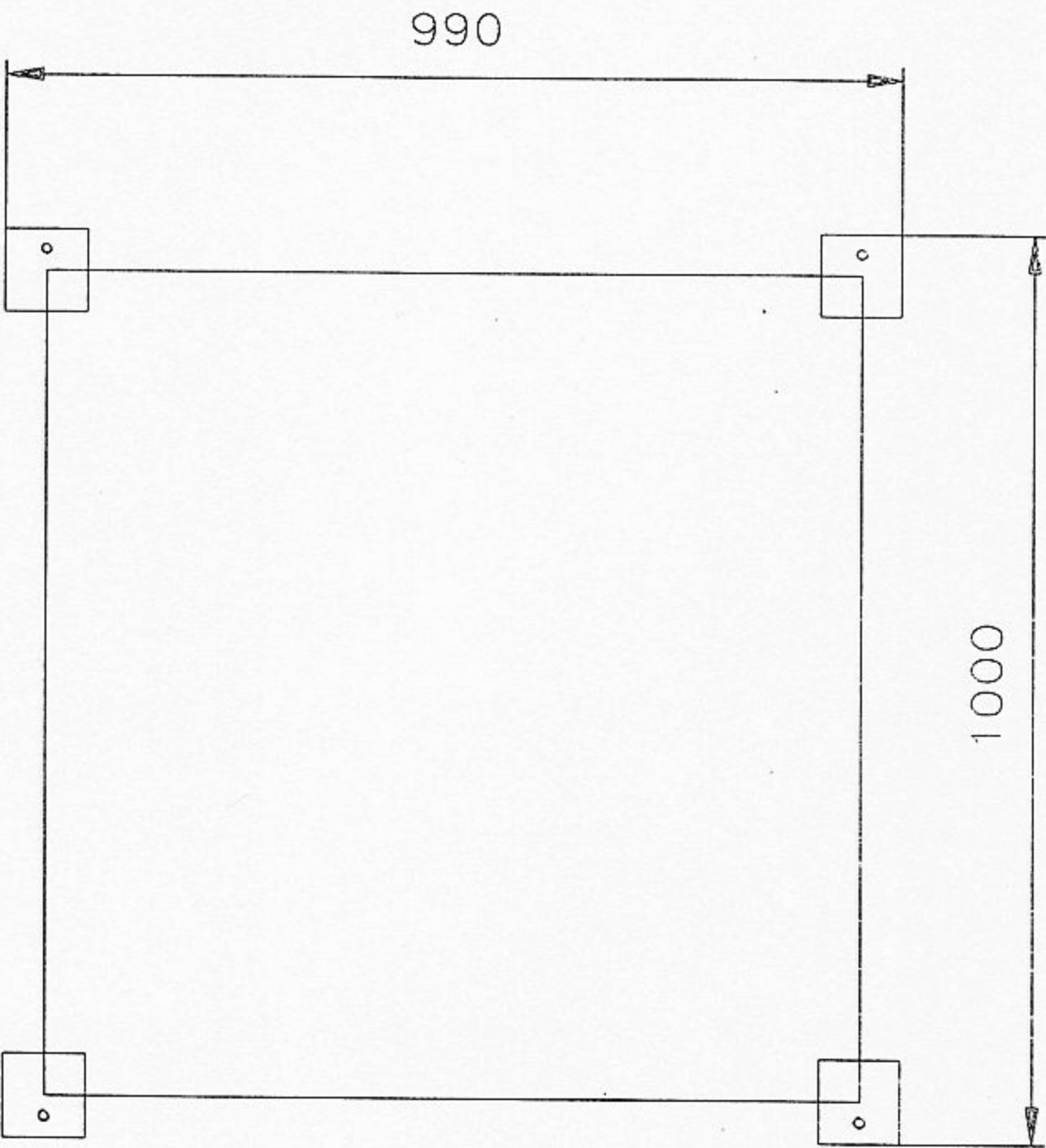
5.1.1 Overall machine dimensions with insole collector ****

The maximum overall dimensions of the mod. P 78 press with insole collector are shown in the figure:



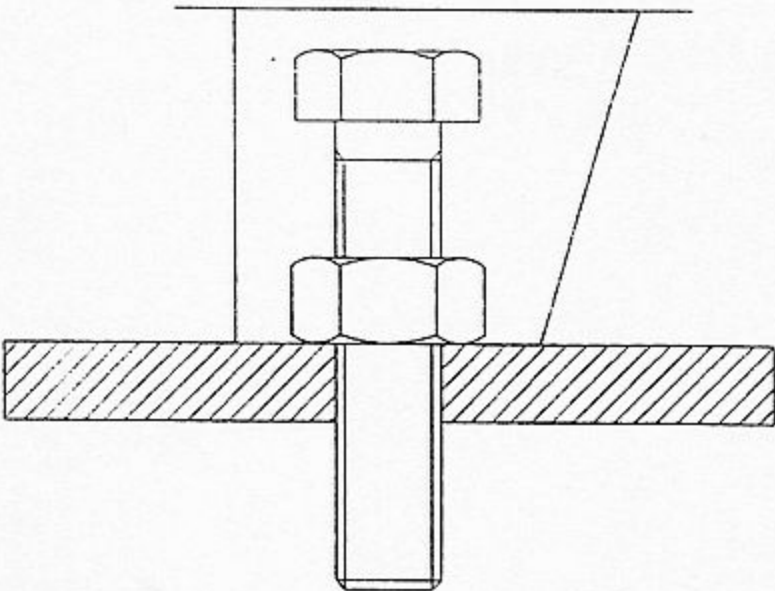
5.2 Foundation arrangements for the Banf mod. P 78 press

The press does not need to be anchored to the floor in order to work correctly, neither are particular mechanical devices necessary in order to reduce the transmission of vibrations.



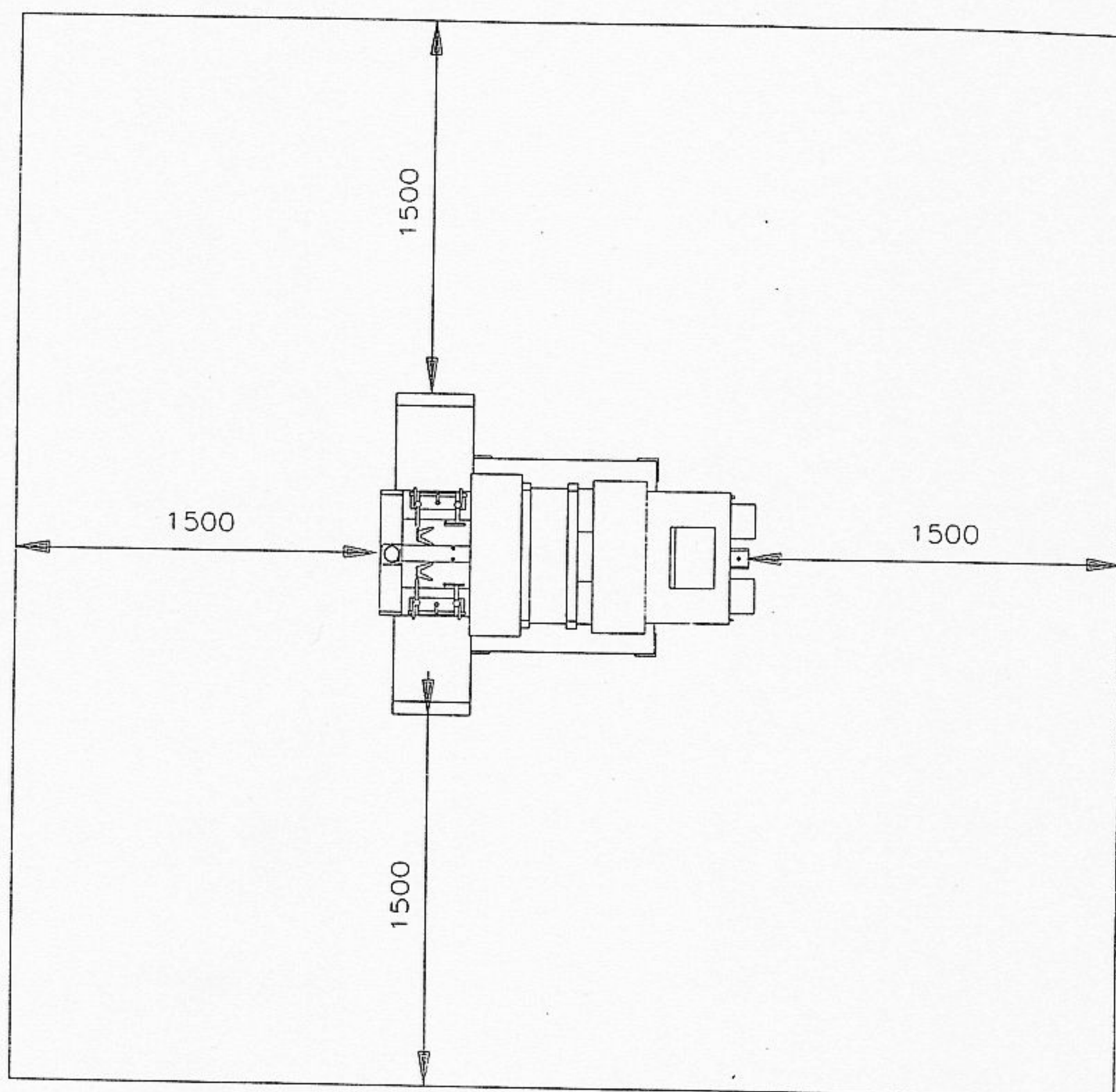
Warning:

If the floor on which the press is to rest is not perfectly flat, it is advisable to use levelling feet in order to ensure correct operation.



5.3 Free space compliance

So that the press may be used correctly and in order to allow easy maintenance in safe conditions, it is advisable to install the press in a place with the minimum surrounding space shown in the figure:



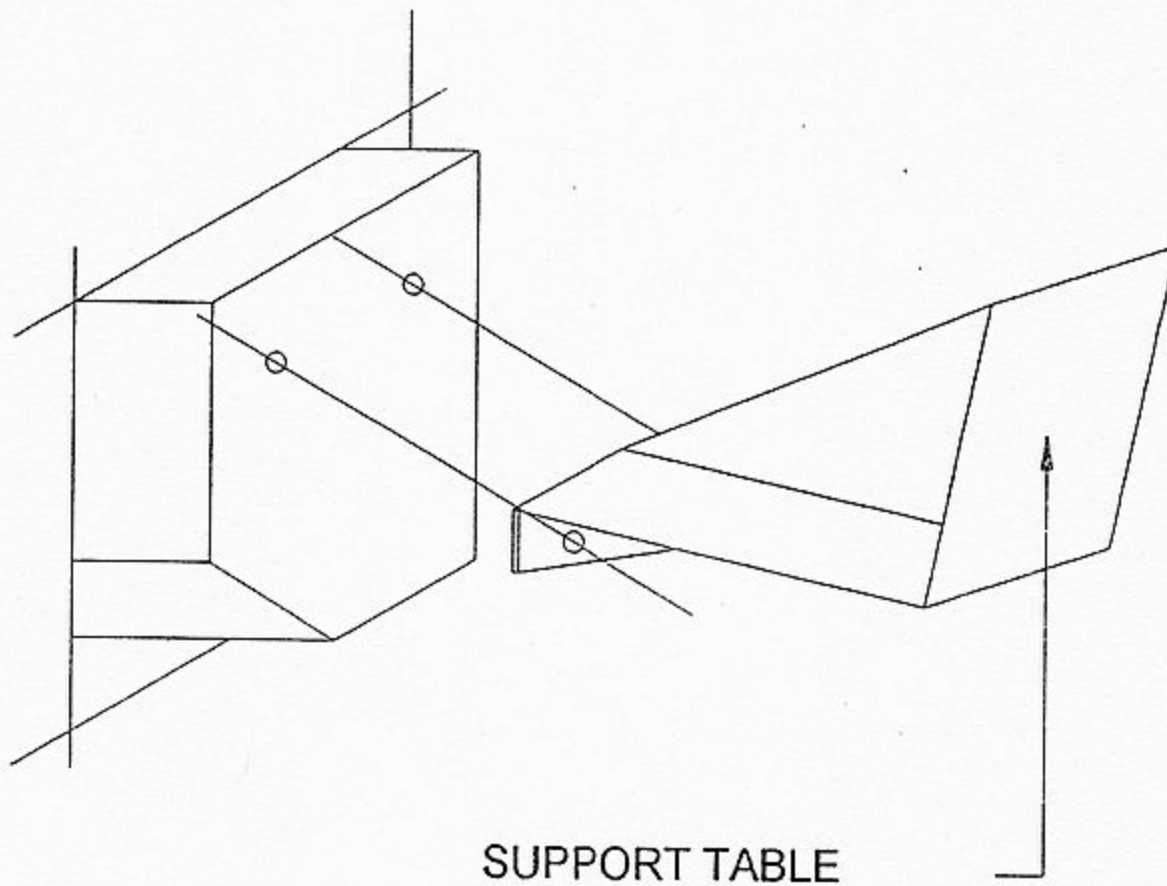
6 ASSEMBLY AND PREPARATION OF THE MACHINE FOR USE

6.1 Fitting the side tables

The machine is completely assembled at the machine constructor's factory with the exception of two side insole carrying tables.

Each of the two supporting tables must be fixed to the sides of the press in the holes provided for the purpose.

The screws required for fastening the tables are already screwed into the holes provided.



6.2 Preliminary tests and checks

When the machine is received, it is advisable to:

- check whether all the machine components have been delivered to the user's factory;
- carry out a series of preliminary tests and checks as described below.

6.2.1 Check for any damage which may have occurred to the machine

In order to discover whether any damage has occurred to the machine during transportation, check the condition of the following parts:

- flexible oil and air pipes and hoses;
- end-stop microswitches;
- hydraulic unit and motor/oil-cooling device heat exchanger unit **;
- oil tank;
- protection devices fitted to the machine;
- electrical, hydraulic and pneumatic components;
- protruding machine parts.

6.2.2 Machine cleaning

Clean the machine carefully and remove any dust and foreign substances which may have deposited on the machine during transportation.

While cleaning the press, the operator should wear overalls and gloves.

6.2.3 Oil tank

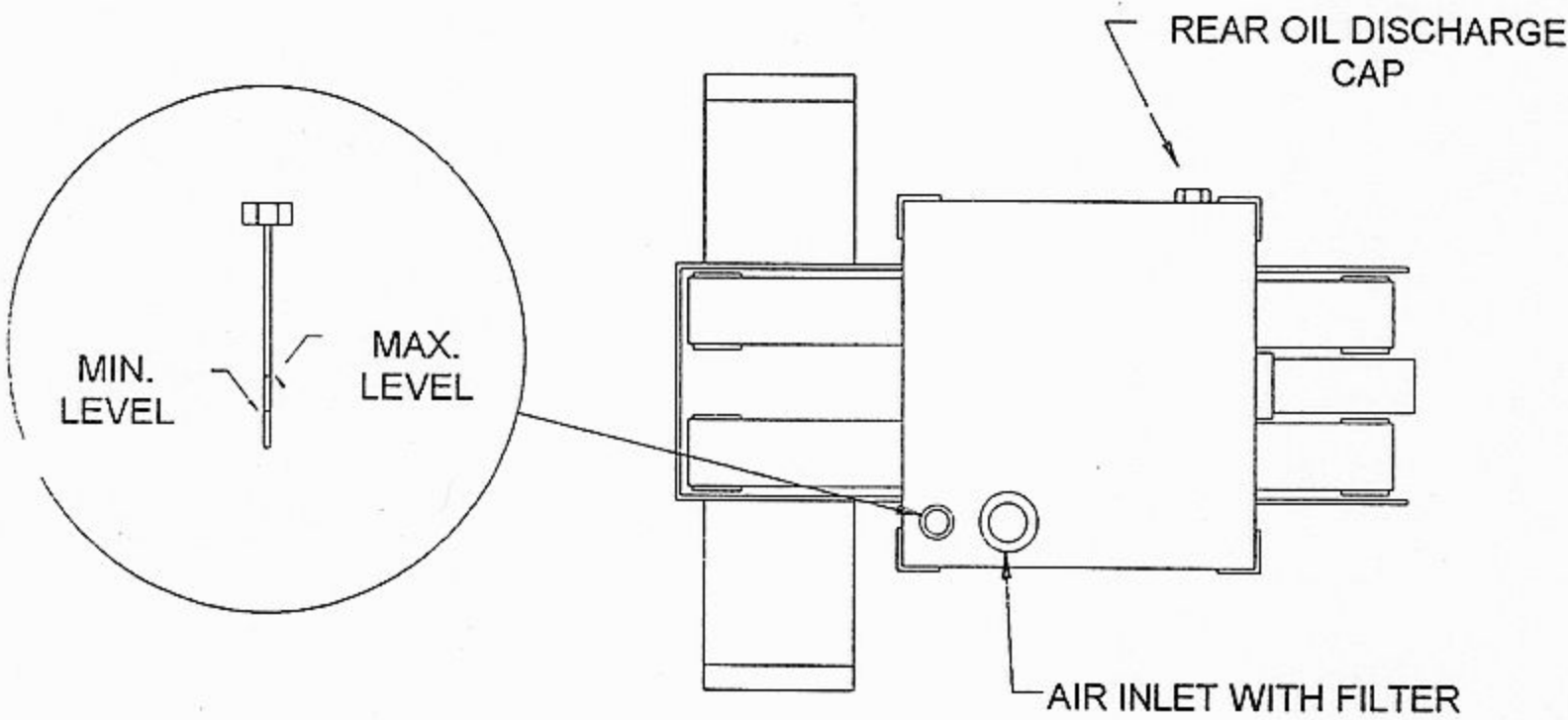
The machine is delivered completely filled with oil. The tank has an air intake on the top in order to keep the pressure inside the tank at atmospheric pressure and prevent vacuums from forming. A special filter filters the air taken in.

Level check

The oil level in the tank must be checked using the dipstick provided found on the right-hand side of the tank looking from the control post.
In order to check the level, remove the dipstick and make sure the oil level in the tank is between the minimum and maximum shown on the stick.
Any topping up must be carried out through the threaded hole (1" diameter) which holds the dipstick.

Oil change

The oil is drained out by loosening and then removing the Allen screw located on the bottom left of the tank looking from the operator post and letting the oil flow out for about ten minutes.
The new oil must be poured in through the threaded hole (1" diameter) which holds the dipstick until the maximum level is reached.



Warning

- 1) The oil must be drained when the machine is hot.
- 2) The oil change and level check must be carried out with the machine turned off.
- 3) Do not dump used oil in the surrounding environment: pass it on to firms specialized in disposing of these pollutants.

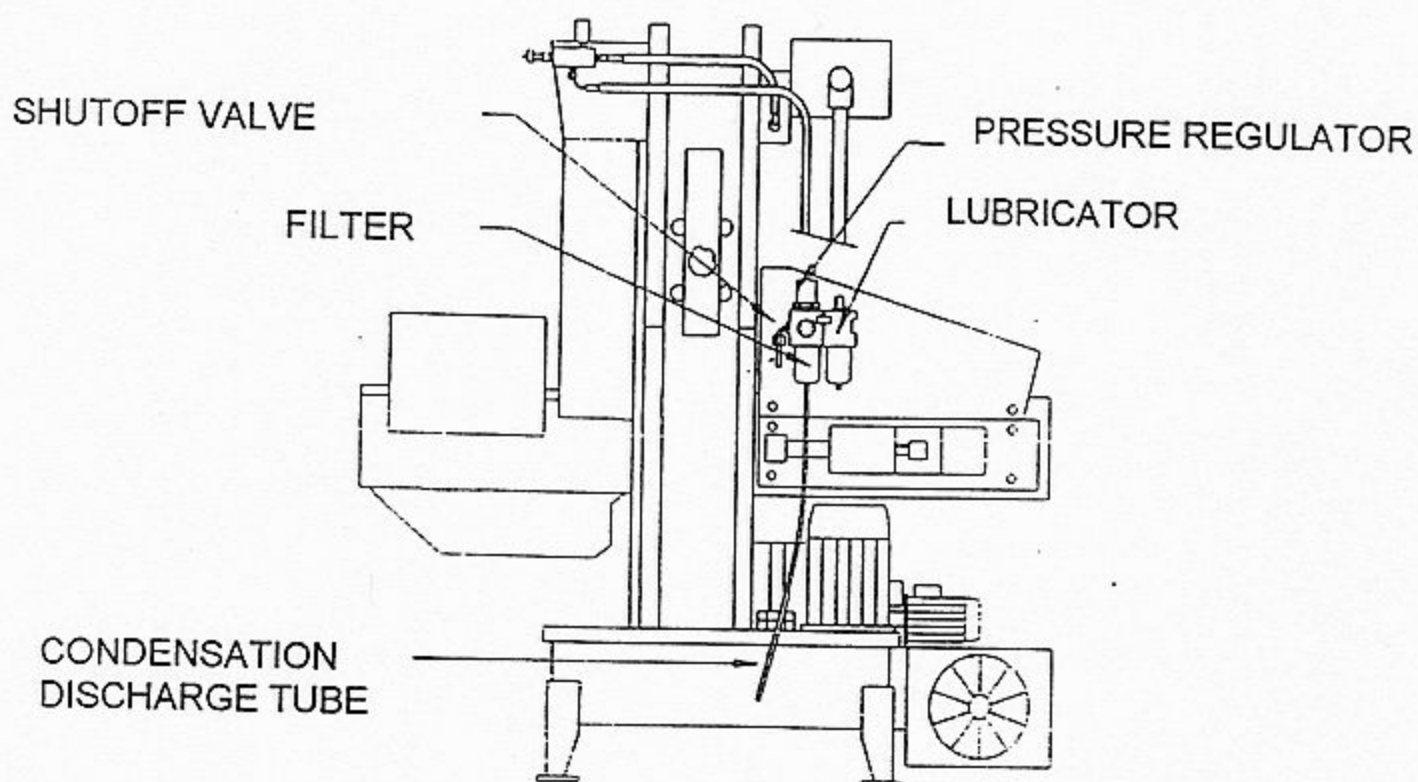
RECOMMENDED OIL TABLE	
Make	Type
MOBIL	DTE 16
SHELL	TELLUS T 68
BP	BARTRAN HV 68
ESSO	INVAROL EP 68
ROL OIL	LI/68 - IHV

6.3 Connecting the machine to external power sources

6.3.1 Compressed air connection

Connect the filter-pressure reducer-lubricator unit fitted to the machine to the compressed air supply line using the specific quick coupling.

The filter-pressure reducer-lubricator unit is located on the right-hand side of the machine looking from the control post.



6.3.2 Air pressure adjustment

Adjust the machine supply air pressure to 4 bar using the pressure regulator knob found on the filter-pressure reducer-lubricator unit.

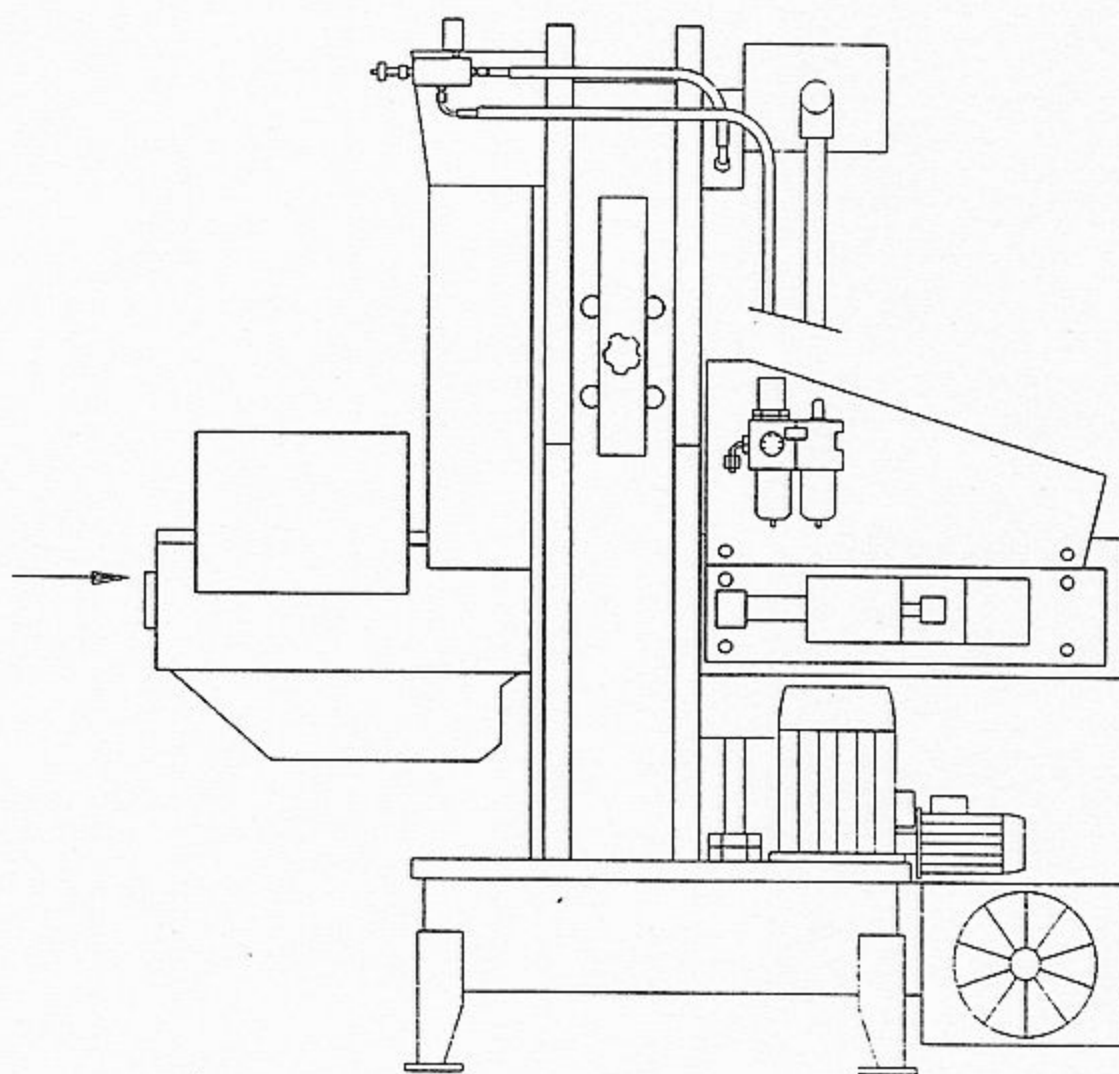
6.3.3 Electrical Connections

The machine is fitted with an electrical power cable without plug.

It is therefore necessary to attach a suitable plug and connect the cable to the mains after checking that the power supply voltage and frequency of the machine electric motors correspond to the line voltage available at the user's factory.

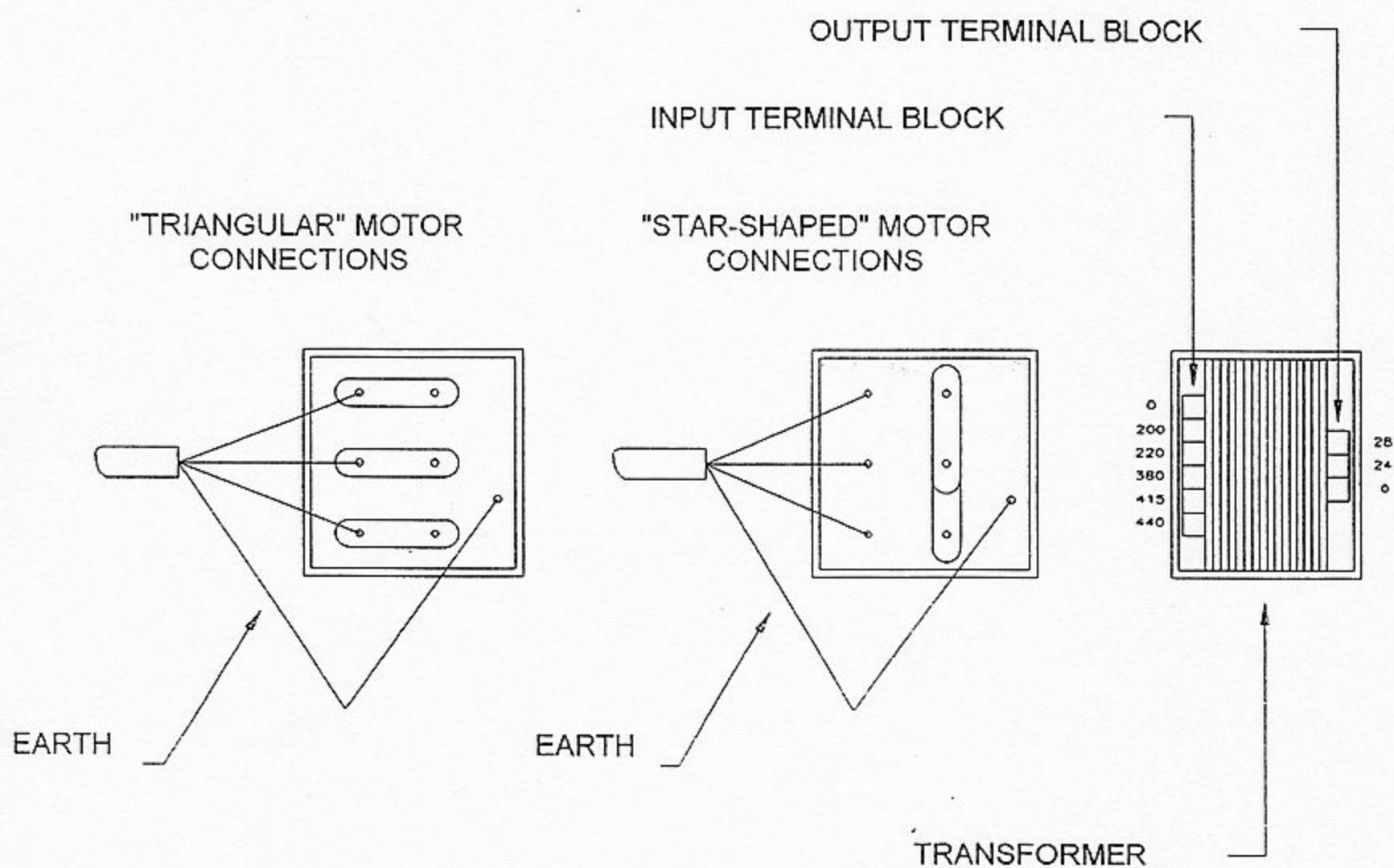
The electrical voltage and frequency of the motor power supply are shown on the specific metal plate fixed to the machine.

METAL PLATE



Warning:

- 1) *It is advisable to protect the user's main power supply line against any excess current by fitting safety switches (earth fault interrupters).*
- 2) *If the pump motor power supply voltage does not correspond to the line voltage, it is necessary to change the connections at the transformer and pump motor terminal blocks as shown in the figure. It will also be necessary to adjust or replace the thermal motor cut-out according to the ampere rating. It is advisable to have this operation done by qualified staff.*



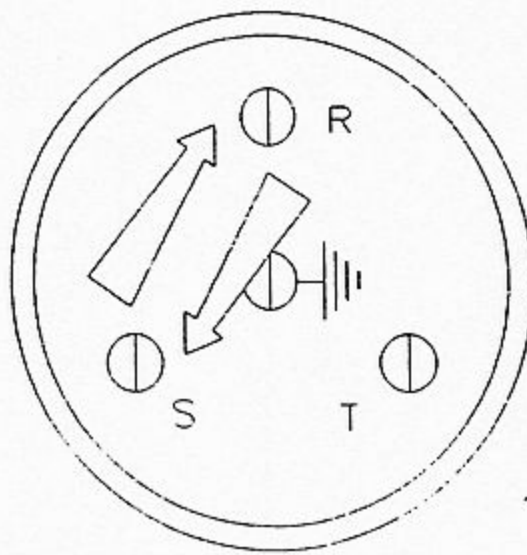
6.4 Checks and adjustments to carry out

6.4.1 Making sure the oil pump motor turns in the right direction.

In order to carry out this check, proceed as follows:

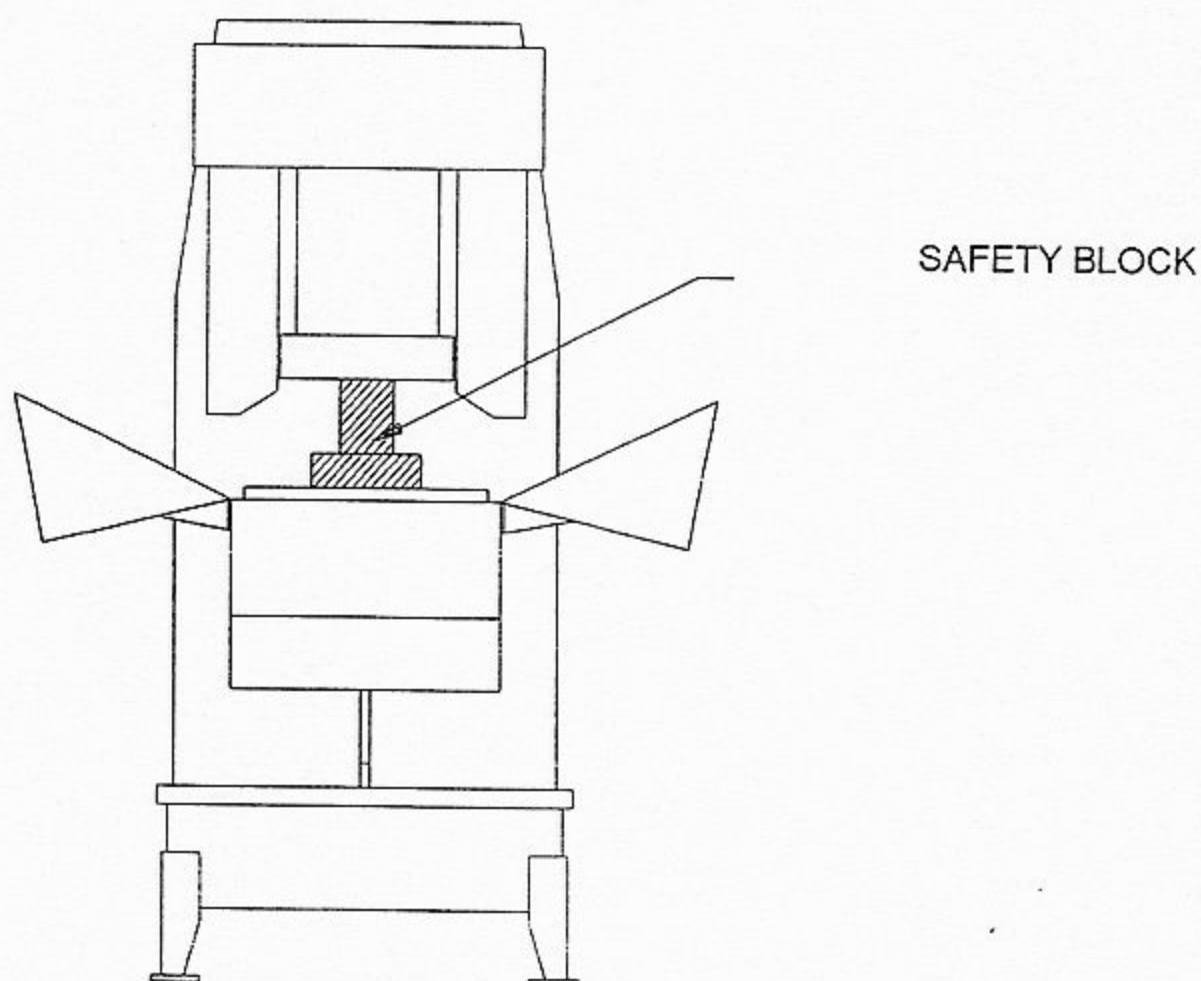
- turn the MAIN POWER SWITCH selector to position 1
- press the MOTOR START button
- make sure that:
 - . the motor cooling fan turns in an anticlockwise direction; the correct rotary direction is shown by a red arrow painted on the rear of the motor;
 - . The press piston surface lifts and thus frees the safety block located between the piston surface itself and the die holding surfaces.

If the machine is not operating correctly as described above, swap the two phase wires in the power supply cable.



6.4.2 Removing the safety block

The machine is delivered with a wooden safety block placed between the piston surface and the die holding surfaces; this is to prevent the press piston from lowering during transportation and damaging the machine. In order to remove it, after connecting the power plug to the mains and after connecting the filter-pressure reducer-lubricator unit to the compressed air line, turn on at the MAIN POWER SWITCH found on the electric control panel and start up the oil pump motor by pressing the MOTOR START button: the piston lifts leaving the wooden block free.

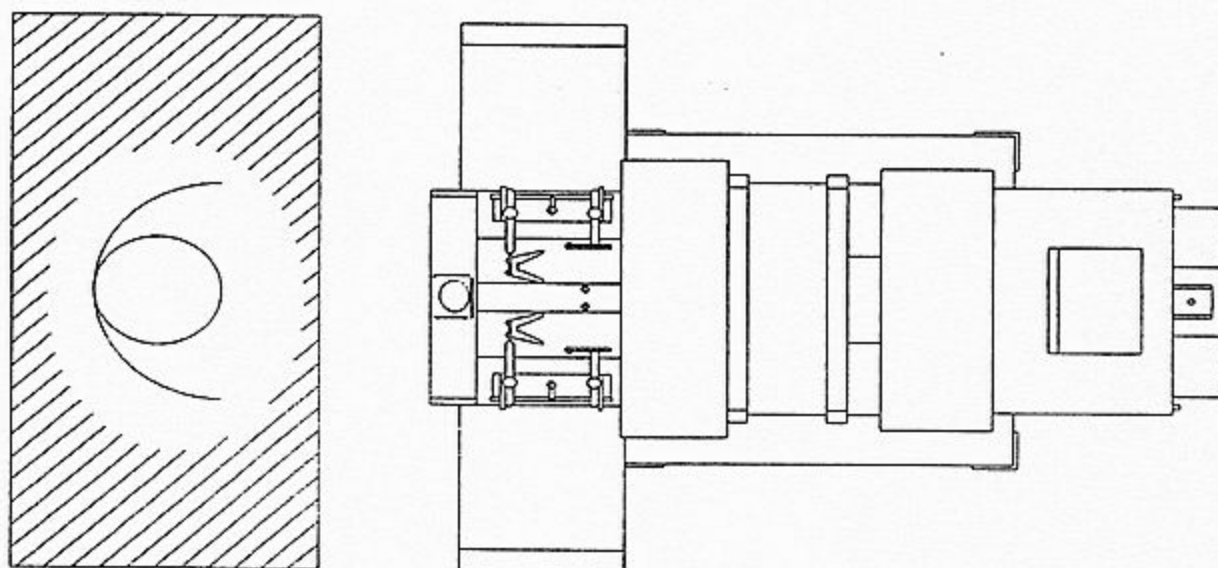


7 STARTING THE MACHINE UP

The machine operator control post is in front of the electric control panel.
To ensure the machine operates correctly and favour a long working life, the press should be entrusted to an expert operator.

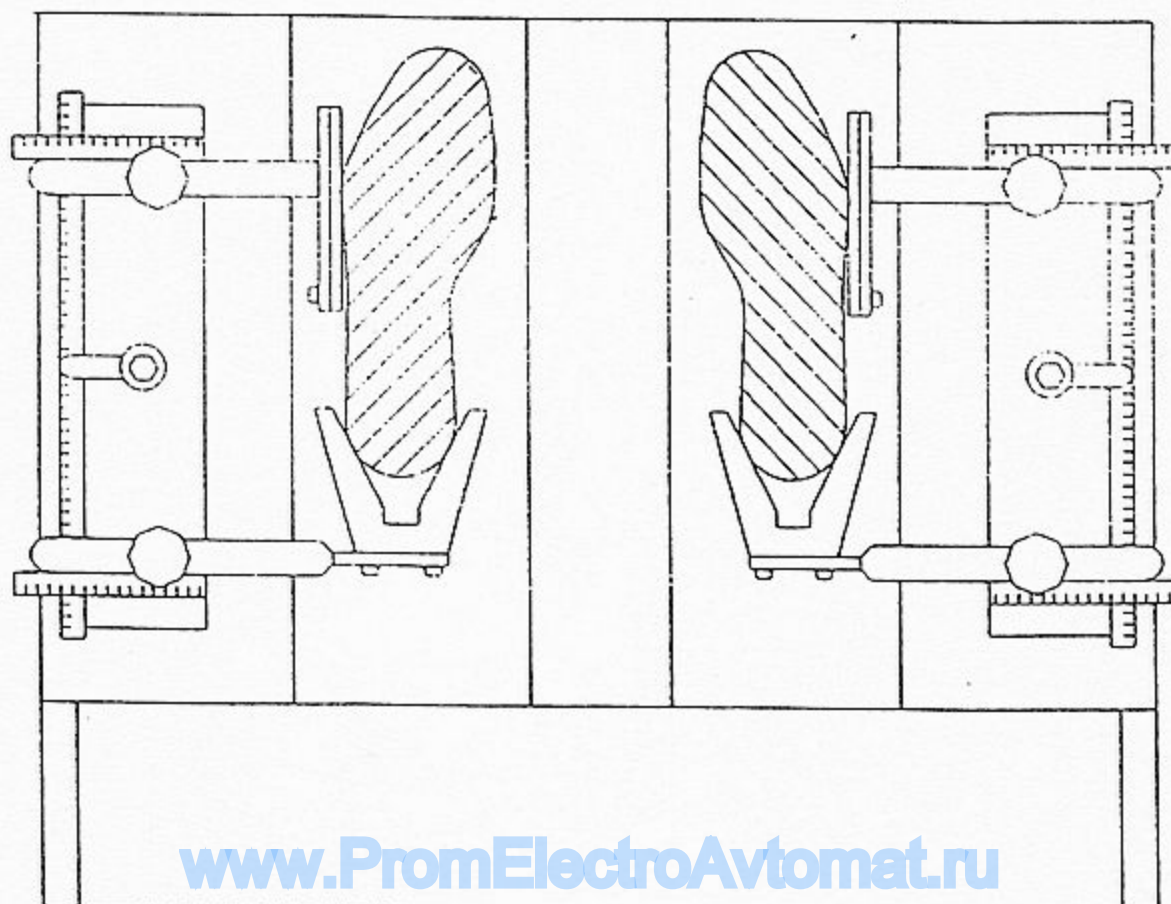
Warning:

Only one operator is needed to run the press; during operation no one, besides the operator, must find themselves near the machine or, worse still, carry out operations on it.



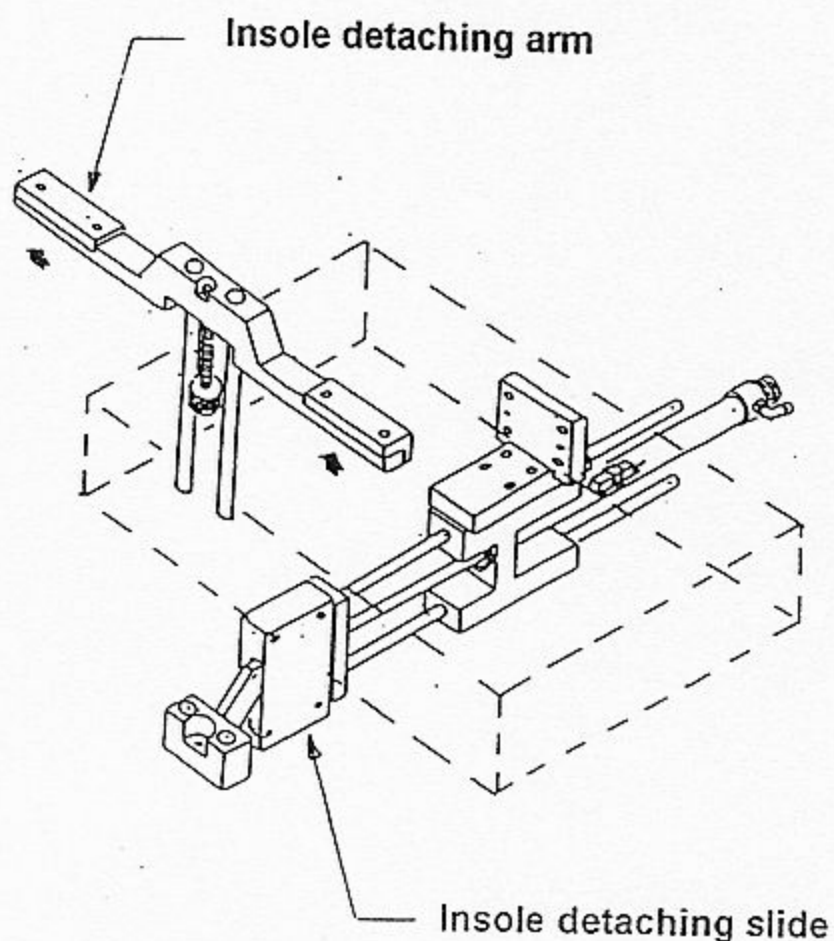
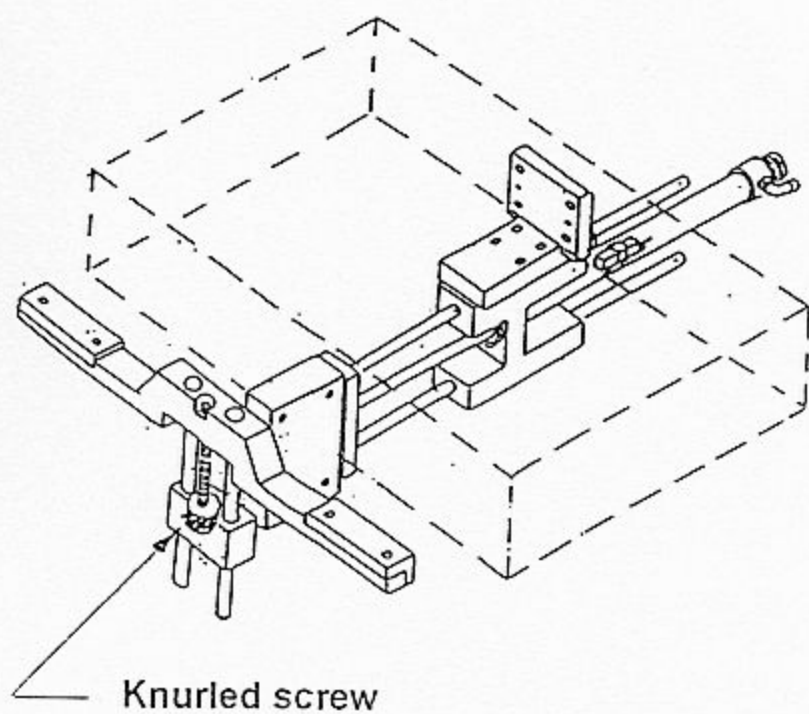
OPERATOR CONTROL POST

The operator feeds the insoles to be moulded into the press by resting them against the positioning guides provided.



7.1 Adjusting the insole detaching slide ***

- Turn the MAIN POWER SWITCH (1, INT 1) to position 1. The insole detaching arm must not be under the piston surface. If this is not so, use the two-position INSOLE DETACHING SLIDE RETURN selector (15, INT 4) to move it out;
- remove the insole detaching arm by slipping it upwards;
- use the INSOLE DETACHING SLIDE RETURN switch (15, INT 4) to cause the insole detaching slide to return; Fit the dies (refer to chap. 7.2 and 7.3) and move the insole detaching slide out again using the same two-position selector (15, INT 4);
- replace the insole detaching arm by inserting the pins into the correct places, and adjust the height of the plastic reference blocks by turning the knurled screw.



7.2 Fitting the moulding dies

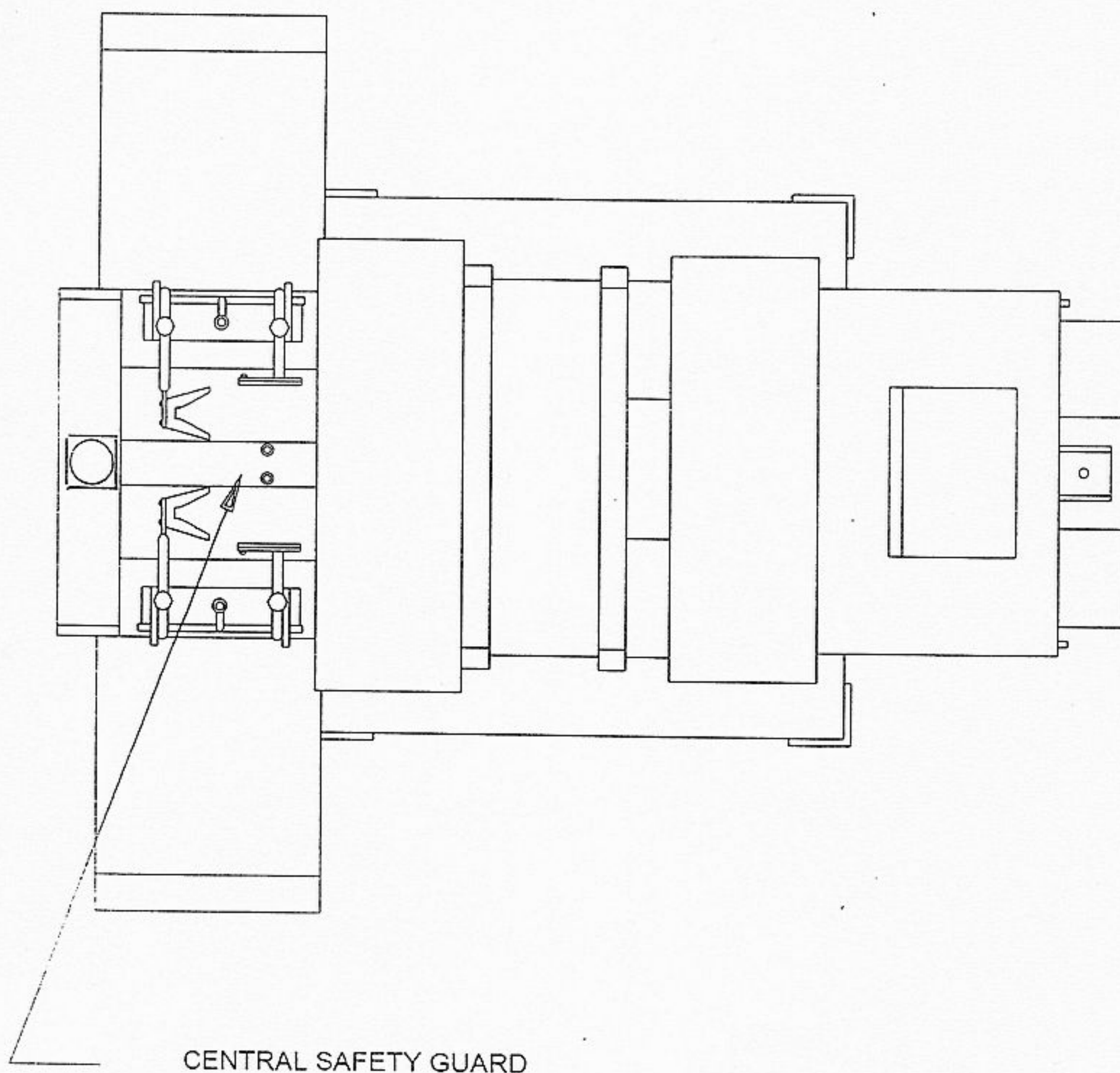
Warning:

Before carrying out maintenance or machine set-up operations in the cylinder movement area, always remember to:

- **stop the machine (MAIN POWER SWITCH selector set to 0),**
- **disconnect the electric power cable.**

In order to fit the dies, proceed as follows:

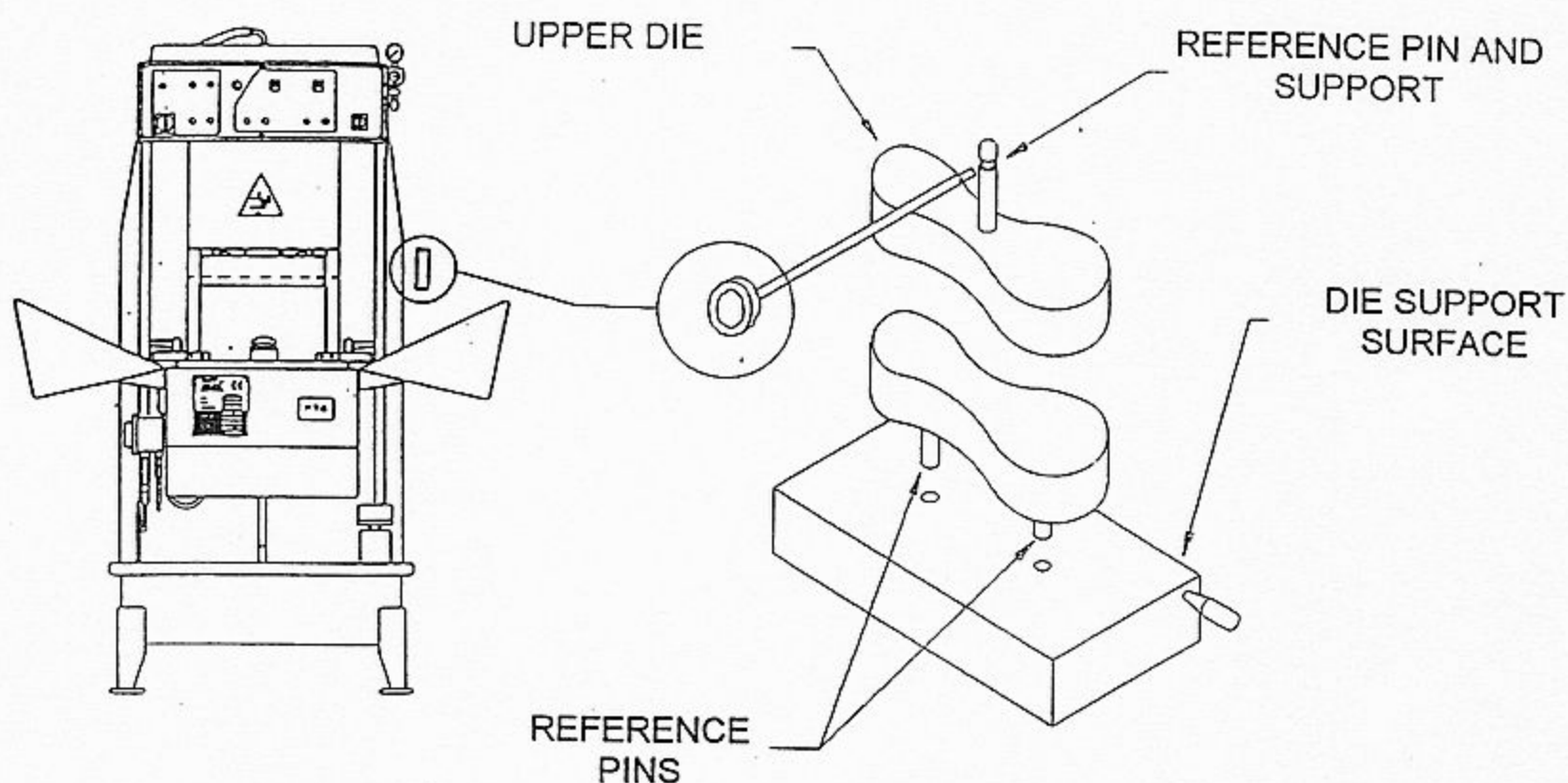
- remove the central safety guard located in front of the operator by loosening the two fastening screws.



- Place the two lower dies on the support surface making sure that the reference pins on each die fit into the holes specifically provided on the die holding surface; to do this, bear in mind that each pin consists of a bush fixed to the die using a screw which is screwed into a threaded hole on the die itself. One of the two bushes is off-centre so that by adjusting it correctly it is possible to line up the position of the pins with the holes.

The die holding surfaces are fitted to hydraulically controlled compensation pistons: any misalignment between the two pairs of dies on the right and left of the operator is compensated thanks to these devices (see hydraulic diagram).

- Put the upper dies in place by inserting the pin on each die into the hole provided and lock the die in place by turning the fastening knobs found on the side of the machine framework in a clockwise direction.
- Replace the central safety guard and tighten the fastening screws.



Warning:

- 1) The dies must be fitted with the machine stationary and the electric motor turned off.
- 2) Never run the machine without first fitting the dies.

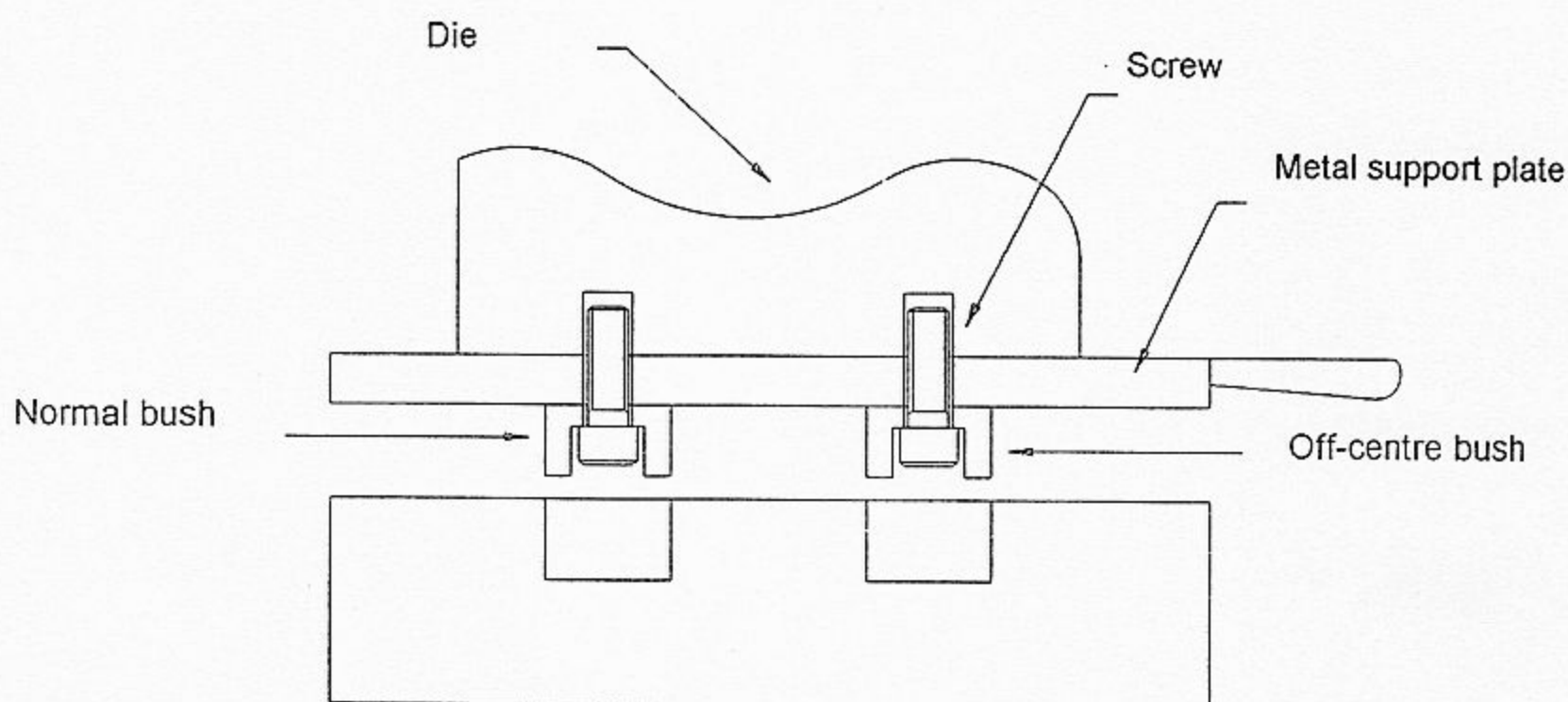
7.3 * *Fitting the lower dies when the machine is fitted with magnetic surfaces*

If magnetic surfaces are used, the lower dies are first fitted to metal support plates and then positioned on the magnetic die holding surfaces by lining up the pins with the two support plate holes.

In order to enable the magnetic surfaces:

- start up the press and have it press without insoles at low pressure with the timer set to the maximum time value. During the pressing, turn the MAGNETIC SWITCH selector located on the electric control panel.

Turning the selector to position M turns on the power supply to the magnetic surfaces. Turning the selector to SM demagnetizes the surfaces. The selector then automatically returns to the 0 position thanks to a return spring.



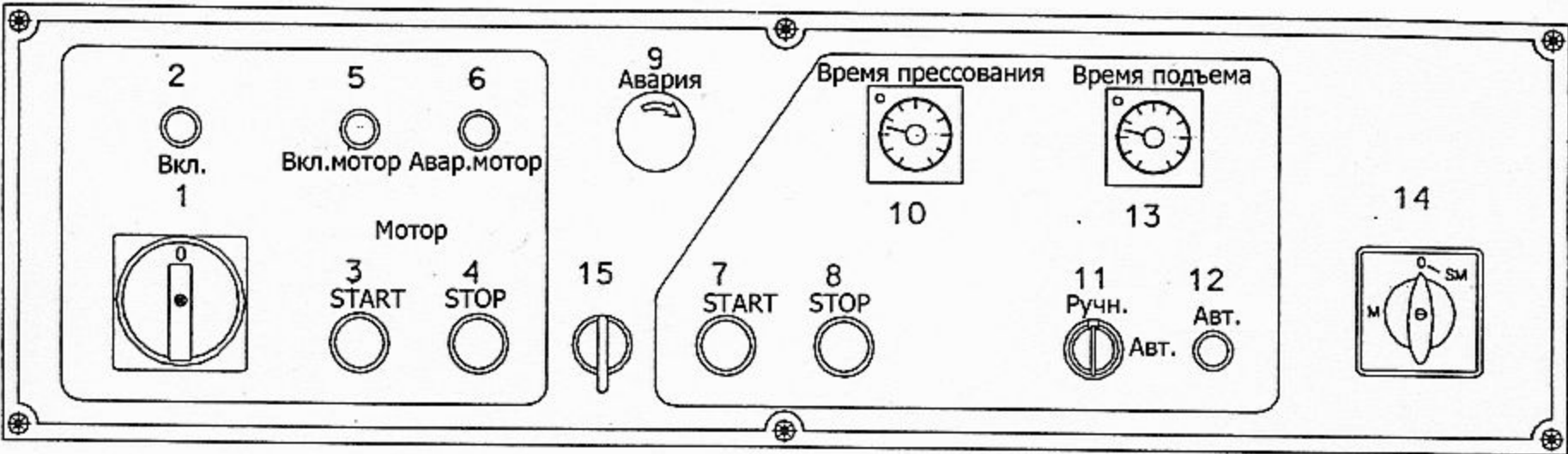
Warning:

- 1) *The dies must be fitted with the machine stationary and the electric motor turned off.*
- 2) *Never run the machine without first fitting the dies.*

8 MACHINE USE

8.1 Electric control panel

The electric control panel is located in front of the operator post at the operator's eye level. The electric controls are located on a satined aluminium panel held in place with 6 screws.



The following electric controls are found on the aluminium panel:

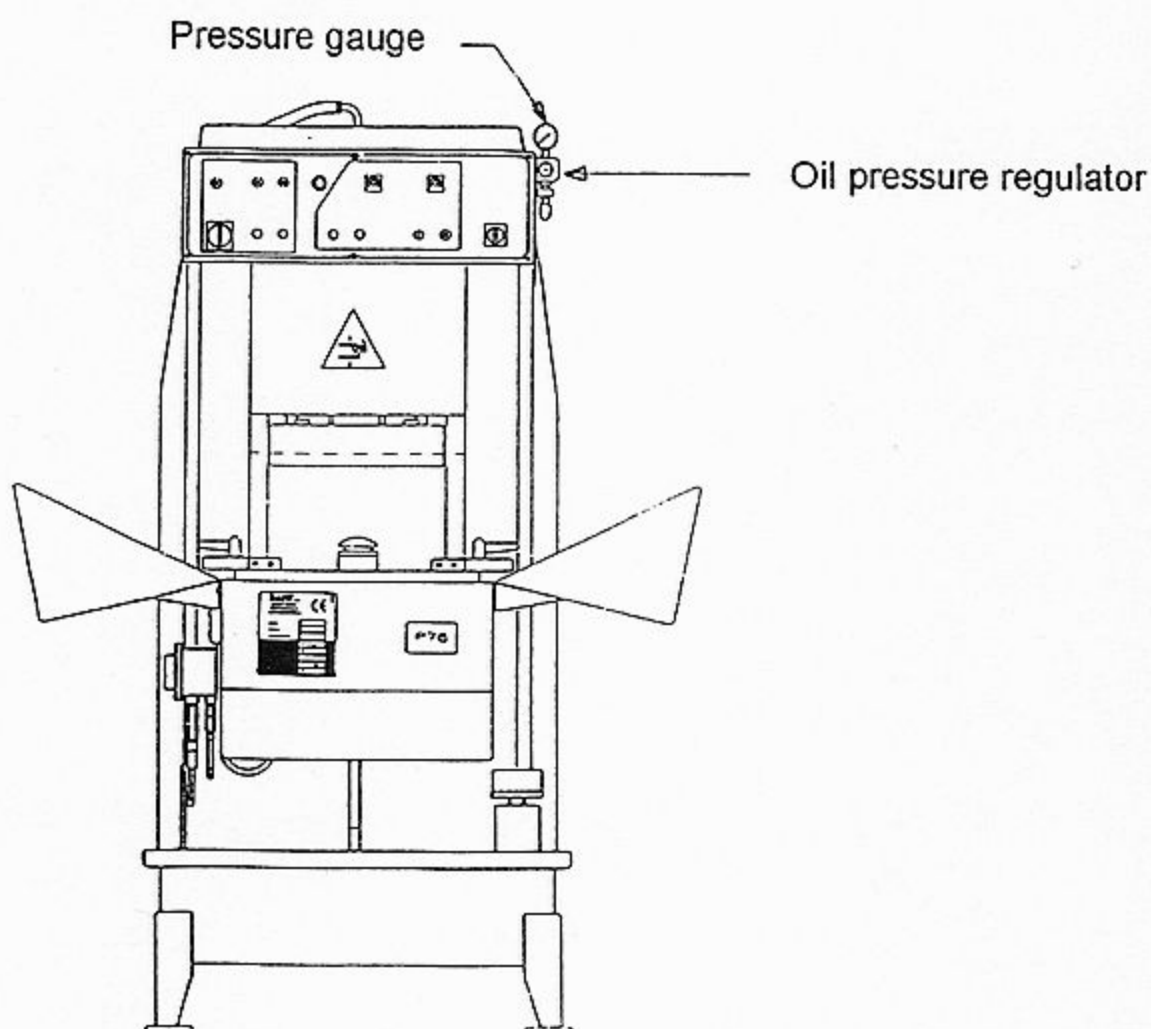
Reference	Function
1	MAIN POWER SWITCH - <u>Two position selector</u> When the selector is set to position one, electrical power is supplied to the entire machine electric system
2	POWER ON INDICATOR LIGHT - <u>Green light</u> This light comes when power is supplied to the machine electric system (MAIN POWER SWITCH in position 1).
3	MOTOR START - <u>Black button</u> Pressing this button starts up the electric motor which drives the hydraulic pump
4	MOTOR STOP - <u>Red button</u> Pressing this button stops the electric motor which drives the hydraulic pump.
5	MOTOR INDICATOR LIGHT - <u>Green light</u> This light comes on when the electric motor which drives the pump is operating.
6	THERMAL MOTOR CUT-OUT INDICATOR LIGHT - <u>Red light</u> This light comes on if the thermal motor cut-out trips on the pump motor power supply line.
7	START - <u>Black button</u> Pushing this button starts the machine working.
8	STOP - <u>Red button</u> Pressing this button stops the machine work cycle

<u>Reference</u>	<u>Function</u>
9	EMERGENCY - Red "mushroom" button and reset When the "mushroom" button is pressed, the work cycle stops immediately; using this button turns off the power supply to the whole electric system and stops the motor. In order to reset working conditions, turn the mushroom button clockwise.
10	TIMER - Rotating knob Pressing time setting (time which passes between when the hydraulic piston begins to lower and the end of the pressing operation). If the pressing time is set to 0 seconds, the piston does not lower.
11	MANUAL/AUTOMATIC CYCLE - Key selector for choosing between manual or automatic cycles If the key is turned to the left (vertical), manual operation is selected; if the key is turned to the right, automatic operation is set (the yellow indicator light comes on).
12	AUTOMATIC INDICATOR LIGHT - Yellow light This light comes on when the machine is set to run an automatic cycle.
13	TIMER - Rotating knob This adjusts the piston lifting position.
14 *	MAGNETIC SWITCH - Selector with two stable positions Turning the selector to position M supplies power to the sockets found in the lower part of the machine used for supplying the magnetic surfaces. Turning the selector to position SM demagnetizes the magnetic surfaces. The selector automatically returns to position 0 thanks to a return spring.
15 ***	INSOLE DETACHING SLIDE RETURN - Two position selector This switch allows the insole detaching slide to return manually to the middle of the piston surface so that the dies may be replaced.

8.2 Use of the press - Manual working mode

Proceed as follows:

- make sure the dies are fitted, the air system on the machine is connected to the compressed air supply line and the stopcock on the system inlet is open;
- turn the MAIN POWER SWITCH (1, INT 1) on the electric control panel to position 1;
- press the MOTOR START button (3, P 1);
- rest the insoles on the conveyor belts against the reference guides as shown in the figure in paragraph 7 **STARTING THE MACHINE UP**;
- adjust the pressing time using the TIMER (10, Timer);
- adjust the press piston drive oil pressure to 80-90 bars; use the hydraulic pressure regulator located on the right of the electric control panel for this adjustment. The best pressure depends of the type of work to be carried out (e.g. moulding insoles for men's or women's shoes) and the operator's experience.



- turn the MANUAL/AUTOMATIC CYCLE switch (11, INT 2) to the left (vertical position) for manual operation;
- press the START button (7, P3); try pressing an insole and, according to the results obtained, correct the initial position of the insole by adjusting the positioning guides;
- take note of the size of the insoles being worked and the position set on the positioning guides. In this way, the next time insoles of the same size are to be moulded the position the guides must be set to is already known.

Warning

- 1) When the press is used in a manual cycle, it is not possible to adjust the press piston lift stroke.

- 2) *In manual operating mode, once the press cylinder has carried out its complete cycle (lowering and lifting), the work cycle is over. In order to remove the insole from the machine it is necessary to carry out another 2 or 3 work cycles until the insole leaves the rear of the machine; never carry out operations in the press cylinder movement area or in the space between the upper and lower dies in order to remove the moulded insole.*

8.3 Use of the press - Automatic working mode

Proceed as follows:

- in order to start an automatic production cycle, after carrying out all the operations described in paragraph 8.2 Use of the press - Manual working mode, turn the MANUAL/AUTOMATIC CYCLE switch (11, INT 2) to the right, to the automatic cycle position (light 12 comes on).
- adjust the press piston lifting time using the timer (13, RT 3);
- press the START (7, P3) button in order to start the cycle;
- in order to feed the dies when working in automatic, wait until the conveyor belts stop moving (when the press cylinder is moulding the insole between the dies) and place two new insoles against the positioning guides.
- continue feeding in the insoles as described above until the production lot is complete.

In order to stop the cycle, press the STOP button (8, P4).

9 MAINTENANCE AND REPAIRS

9.1 Tools provided with the machine

The machine is delivered to the user together with the following tools:

- one (6x100 diam.) two-position screwdriver: normal and Phillips
- one set of Allen wrenches n. 3, 4, 5 and 6.

9.2 Replacing the conveyor belts

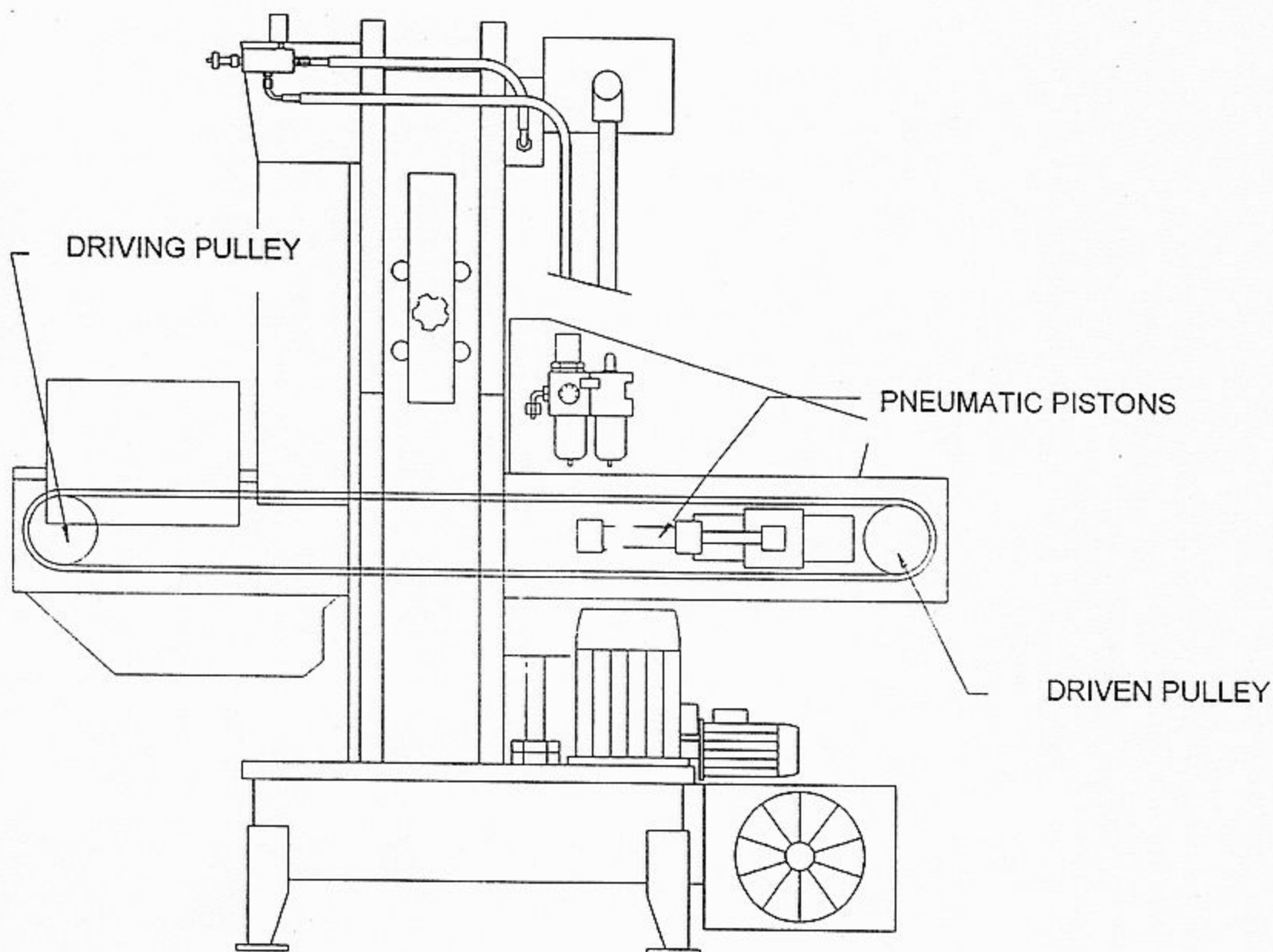
Warning:

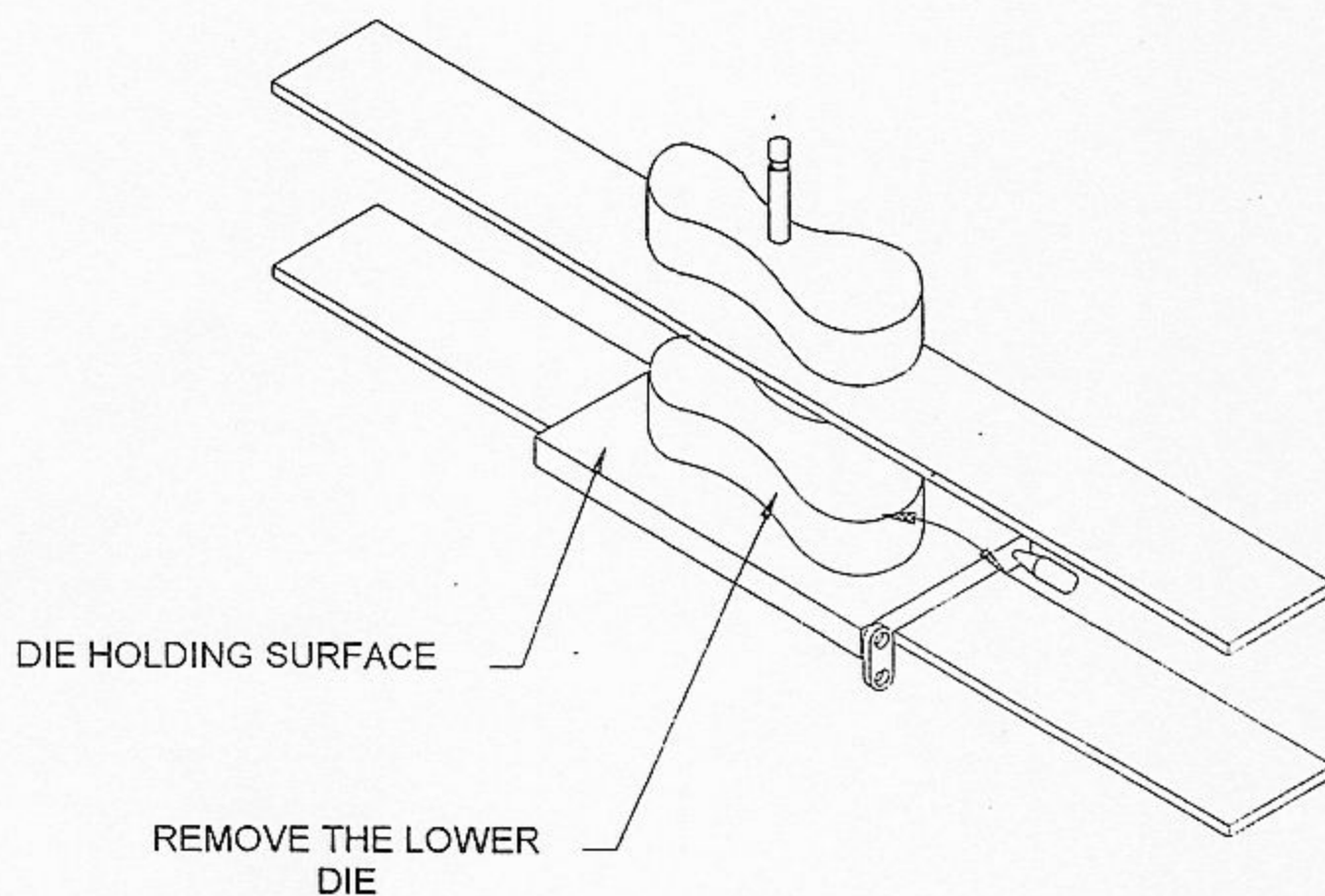
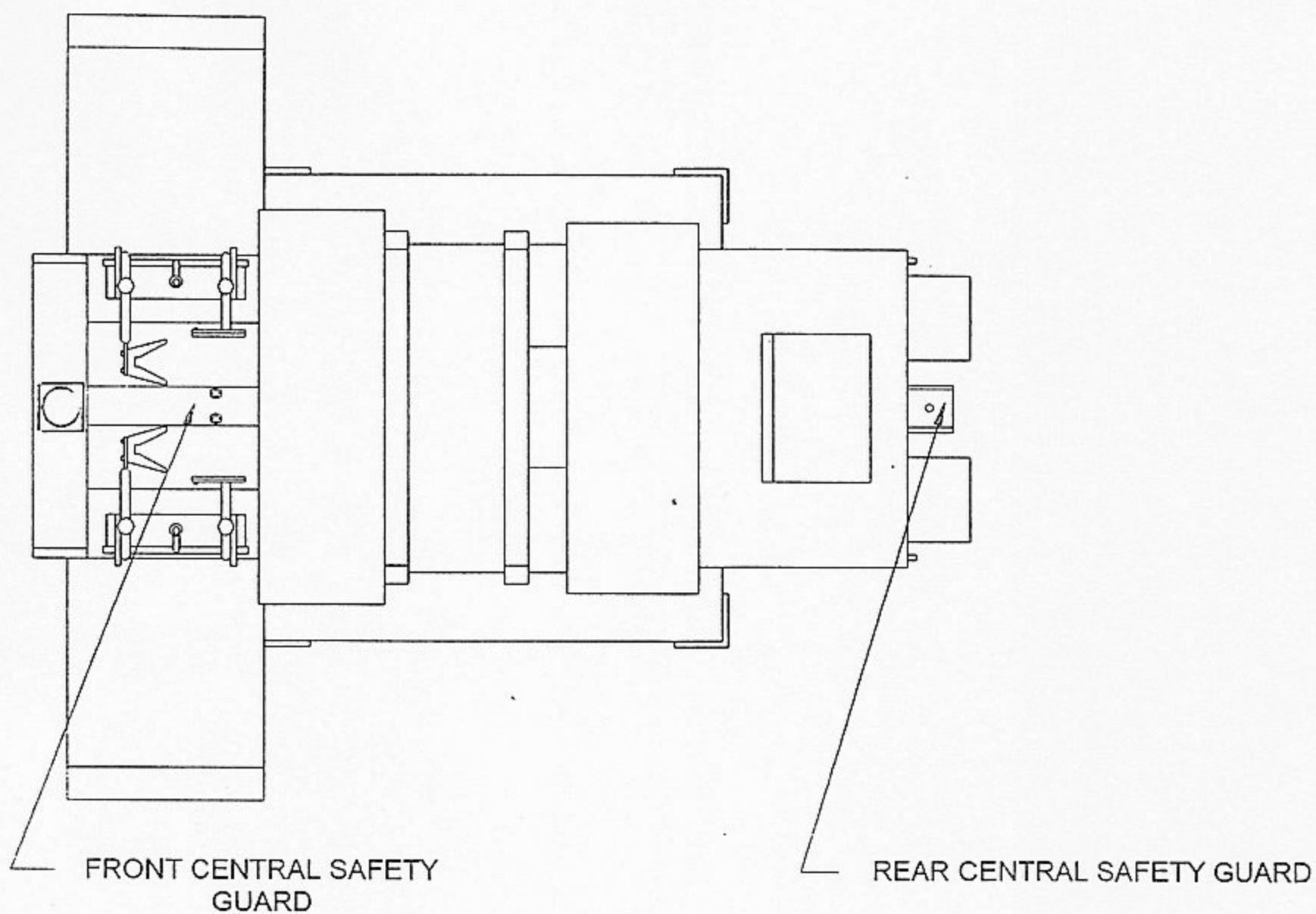
Before carrying out maintenance or machine set-up operations in the cylinder movement area, always remember to:

- *stop the machine (MAIN POWER SWITCH selector set to 0),*
- *disconnect the electric power cable.*

In order to replace the conveyor belts, proceed as follows:

- set the MAIN POWER SWITCH selector to 0: when the electric power supply to the machine is turned off, the two pneumatic pistons move inwards and the belts are no longer kept taut
- remove the front central safety guard by loosening the two fastening screw;
- remove the rear central safety guard by loosening the two fastening screw;
- remove the lower dies;
- remove the two worn belts in turn by proceeding as follows for each one: lift the die holding surface using the handle provided and slip the belt off it and off the driven and driving pulleys;
- fit the two new belts by carrying out the operations described above in reverse order
- replace and fasten the two safety guards removed at the beginning.





9 MAINTENANCE AND REPAIRS

9.3 Maintenance

Suitable maintenance is essential for long machine life and optimum working conditions and efficiency.

Routine maintenance table		
Operation	Machine part	Frequency
Lubrication	Chain	Weekly
Greasing	Bearings	Weekly
	Belt tension slide	Weekly
Visual check of condition	Hydraulic pipes and connections	Weekly
	Air pipes and connections	Weekly
	Conveyor belts	Monthly
	Press piston: traces of oil seepage due to bad gasket sealing	Daily
Level check	Oil in the tank using the dipstick provided	Weekly
	Oil in the glass tank on the lubricator in the F-PR-L unit	Weekly
Oil change	Tank	Yearly
Filter inspection	Air filter on the oil tank	Monthly
	Compressed air intake filter	Monthly
	Filter on the machine compressed air supply line	Monthly
Condensation outlet	Condensation bleeder found on the machine compressed air supply line	Weekly
	Condensation bleeder on the F-PR-L unit on the machine	Weekly
Check	Operation of the oil cooling unit	Daily
	Operation of the EMERGENCY button	At the start of every production cycle

9.4 Operations which must be carried out by the machine constructor's qualified staff.

Maintenance operations which require specific technical expertise and which therefore must be carried out by the machine constructor's qualified staff are listed below.

The user must never:

- replace gaskets, particularly press cylinder gaskets since these require a special spanner.
- replace the chrome-plated press cylinder rod
- replace and adjust the belt braking valve
- replace the pump motor
- calibrate the hydraulic motor
- replace the hydraulic motor
- adjust the hydraulic unit components
- remove the oil filter located under the pump
- change the position of the cams and microswitches. These components are factory-positioned when the machine is assembled.

9.5 Parts subject to wear and replacement

A list of parts subject to wear and replacement which it is advisable to keep in stock is given below.

Spare parts table		
Quantity	Machine part	Code number
4	Polyurethane belts	24050489
1	Timer	21055040
2	Start contact block	21010024
2	Stop contact block	21010036
2	relay	21655015
5	Unidirectional micro-contacts	21050032
1	11 kW 24 V P 78 remote-control switch	21050020
1	Three-way air solenoid valve	21050130
1	Five-way air solenoid valve	21050131
1	Delaying device	21055037
1	Oil discharge solenoid valve	22305082

9.6 Troubleshooting guide

The problems shown below refer to turning the machine on and starting it up for the first time. In order to find the fault more easily, it is therefore advisable to turn off the motor and start from the beginning of the pressing operation, first manually, and then automatically. If necessary, repeat this operation several times.

TROUBLESHOOTING TABLE	
MOTOR START-UP FAULT	
FAULT	SOLUTION
When the MAIN POWER SWITCH (INT 1) is turned, the indicator light (SP 1) does not come on.	Check: ☐ The fuses. ☐ The main power supply.
The red indicator light on the motor cut-out (SP 2) is on.	☐ The motor cut-out (RT) has tripped. In order to reset it, turn off the power supply and press the red button on the motor cut-out itself a few times.
When the MOTOR START button (P1) is pressed, the motor does not turn.	☐ The EMERGENCY button (EM1) found on the electric panel has been pressed. It must be released. ☐ The contact in the EMERGENCY button (EM1) found on the electric panel is broken. ☐ The contact in the motor start-up button (P1) is broken. ☐ The contact in the motor stop button (P2) is broken. ☐ Remote control switch (T1) is broken.
When the MOTOR START button (P1) is pressed, the motor turns, but does not stay on.	☐ Microswitch (MC 7) is broken. ☐ The contact in the EMERGENCY button (EM2) found near the conveyor belts is broken.

TROUBLESHOOTING TABLE	
CONVEYOR BELT FAULT	
FAULT	SOLUTION
The piston does not lower	Check: ☐ Hydraulic solenoid valve EV 2. ☐ Possible breakage of the washer inside solenoid valve EV2. ☐ Hydraulic solenoid valve EV 5 ☐ Microswitch MC 2. ☐ Microswitch MC 4. ☐ Microswitch MC 5. ☐ Microswitch MC 8 ***. ☐ The TIMER ☐ Relay R 5.
The piston lowers without pressing	Check: ☐ Delaying device RT 2. ☐ If the sequence valve is calibrated incorrectly or dirty.
After pressing, the piston does not lift	Check: ☐ Hydraulic solenoid valve EV 1 ☐ Microswitch MC 6 ☐ Delaying device RT 3. ☐ The TIMER
The piston rises, but the lift solenoid valve remains energized	Check: ☐ Microswitch MC 6

TROUBLESHOOTING TABLE	
CONVEYOR BELT FAULT	
FAULT	SOLUTION
The conveyor belt does not run because the mechanical stop does not open	Check: □ Pneumatic solenoid valve EVA 6; □ The oil level of the lubricator in the F-PR-L unit; □ Relay R 1; □ Relay R2; □ Relay R3; □ Relay R4; □ Relay R5; □ Relay R7; □ Delaying device RT1; □ Delaying device RT 2 ; □ Microswitch MC1; □ The TIMER □ The contact in the machine cycle start button P3.
The conveyor belt does not run even though the mechanical stop has opened.	Check: □ Hydraulic solenoid valve EV4;
The conveyor belt runs, but the mechanical stop does not close.	Check: □ Relay R 2; □ Microswitch MC 1
The conveyor belt moves, but then stops immediately	Check: □ Microswitch MC 2. □ Relay R 3;

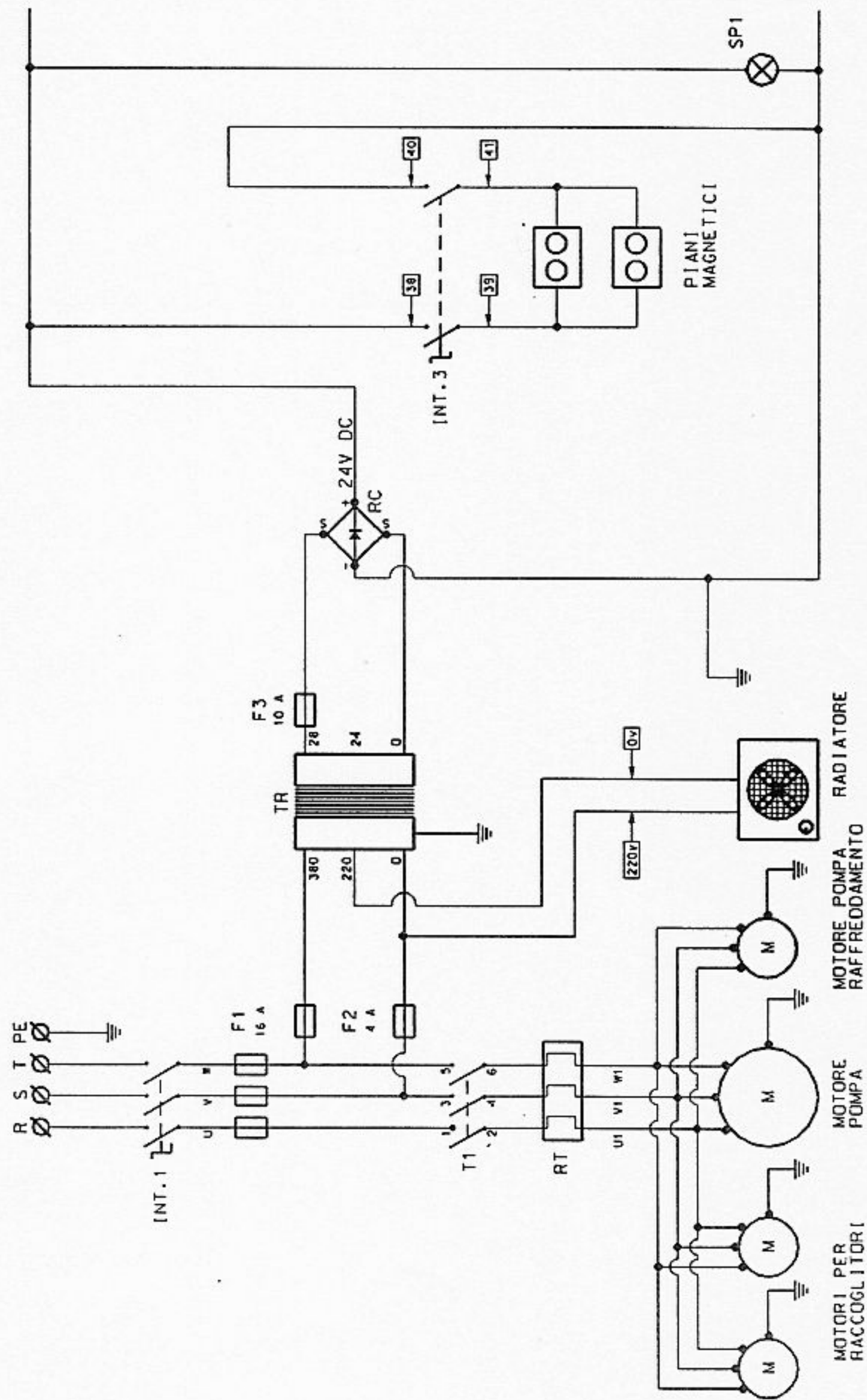
TROUBLESHOOTING TABLE	
GUARD SCREEN FAULT	
FAULT	SOLUTION
The screen does not lower after belt feed.	Check: ☐ Pneumatic solenoid valve EVA 8. ☐ The oil level of the lubricator in the F-PR-L unit. ☐ Microswitch MC 2. ☐ Microswitch MC 3. ☐ Microswitch MC 4. ☐ Relay R 4. ☐ Relay R 6.
The screen does not lift off the belts	Check: ☐ Pneumatic solenoid valve EVA 8 ☐ The oil level of the lubricator in the F-PR-L unit. ☐ Microswitch MC 3. ☐ Relay R 4. ☐ Relay R 6.
The screen does not lift completely or does not stop about 5 cm above the conveyor belts when the motor is turned on or off.	Check: ☐ Pneumatic valve EVA 9 ☐ The oil level of the lubricator in the F-PR-L unit.
When the screen is lifted completely by hand, the motor stops	Check: ☐ Microswitch MC 7.

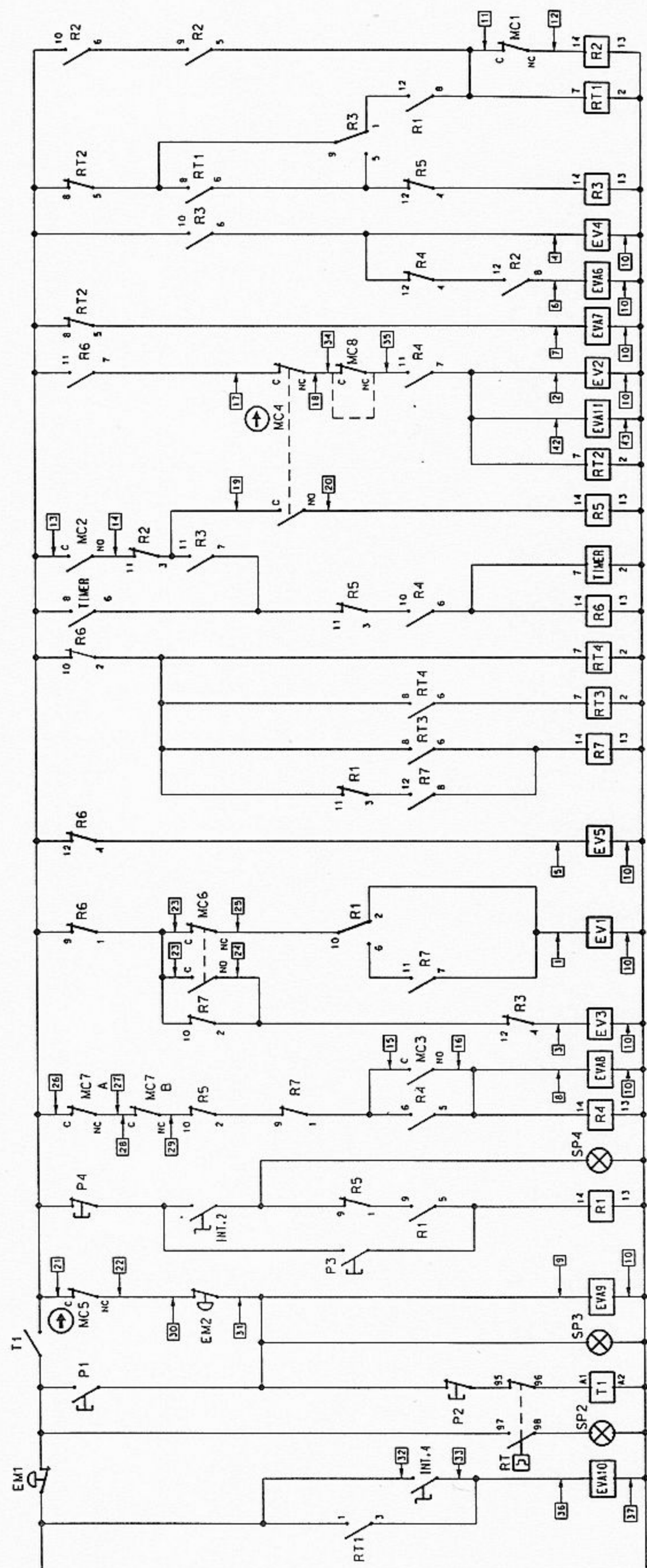
TROUBLESHOOTING TABLE	
AUTOMATIC CYCLE FAULTS	
FAULT	SOLUTION
The automatic cycle does not stay on	Check: ☐ The contact in start button P 3. ☐ The contact in cycle stop button P 4. ☐ the contact in automatic cycle switch INT 2. ☐ Relay R1.
When the automatic cycle switch (INT 2) is turned, the cycle starts without having to press the start button (P1)	Check: ☐ Relay R1
The piston lifts completely and it is not possible to adjust the piston lift stroke	Check: ☐ Delaying device RT 3.
During piston lowering if the guard screen is lifted, the piston lifts but the machine cycle does not stop	Check: ☐ Relay R7.

9.7 Electric system

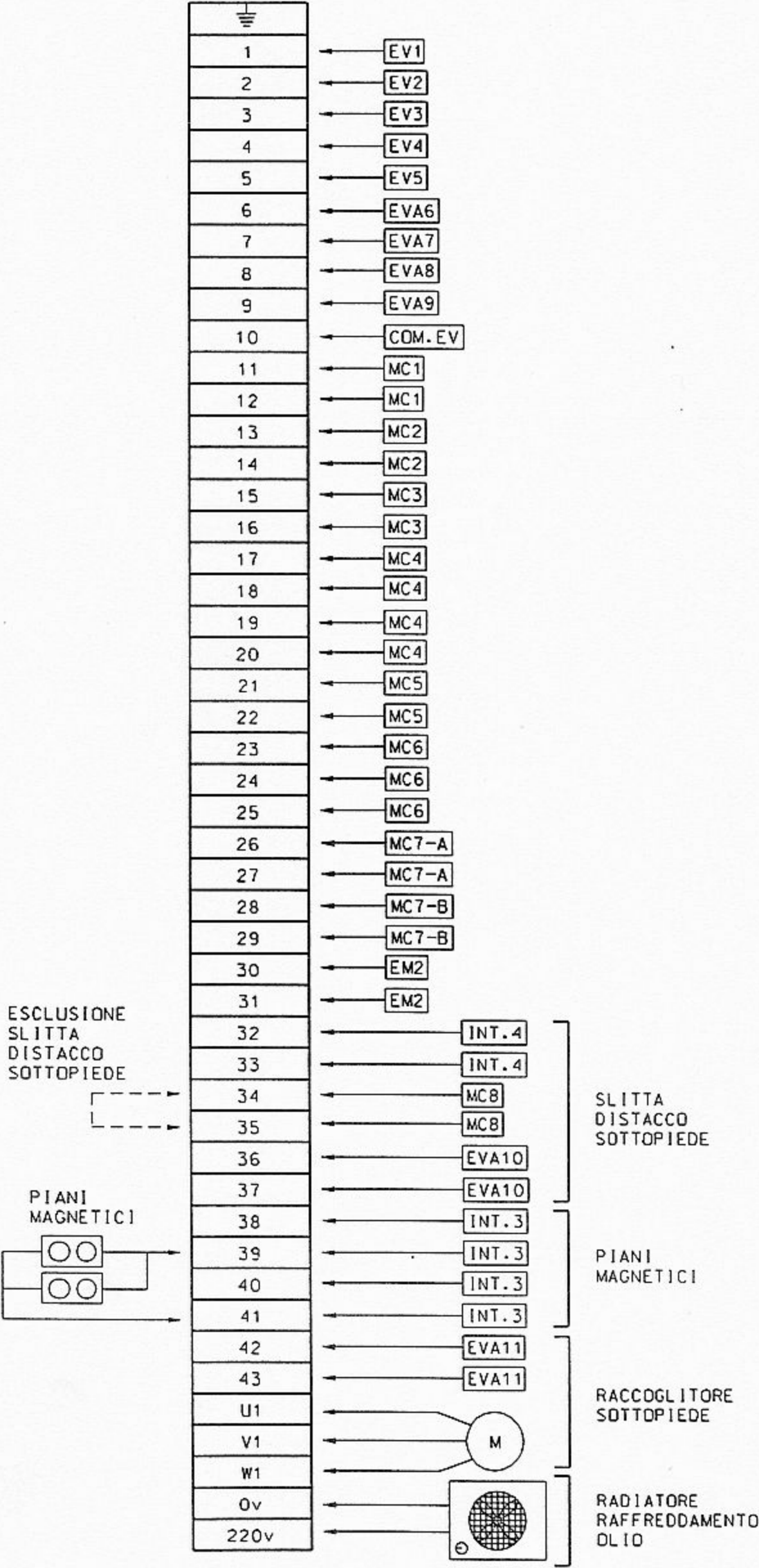
Key to electric system code names

INT. 1	- MAIN POWER SWITCH
INT. 2	- MANUAL/AUTOMATIC CYCLE SWITCH
T 1	- MOTOR REMOTE-CONTROL SWITCH
RT	- THERMAL MOTOR CUT-OUT
RC	- CURRENT RECTIFIER
TR	- TRANSFORMER
EM 1	- EMERGENCY BUTTON ON THE ELECTRIC PANEL
EM 2	- EMERGENCY BUTTON ON THE COLUMN
P1	- MOTOR START BUTTON
P2	- MOTOR STOP BUTTON
P3	- MACHINE CYCLE START BUTTON
P4	- MACHINE CYCLE STOP BUTTON
SP1	- POWER ON INDICATOR LIGHT
SP2	- THERMAL MOTOR CUT-OUT TRIPPED INDICATOR LIGHT
SP3	- MOTOR RUNNING INDICATOR LIGHT
SP4	- AUTOMATIC CYCLE ON INDICATOR LIGHT
TIMER	- PRESSING TIME COUNTDOWN TIMER
RT1	- FEED START DELAYING DEVICE
RT2	- CONVEYOR BELT SLACKENING DELAYING DEVICE
RT3	- PISTON LIFT STROKE ADJUSTMENT DELAYING DEVICE (ONLY IN AUTOMATIC CYCLE)
RT4	- DRAINAGE OIL PISTON DELAYER
R1	- AUTOMATIC CYCLE START RELAY
R2	- MECHANICAL STOP OPENING RELAY
R3	- CONVEYOR BELT START RELAY
R4	- SCREEN LOWERING RELAY
R5	- SCREEN DOWN SAFETY RELAY
R6	- SCREEN LIFT SAFETY RELAY
R7	- AUTOMATIC CYCLE EMERGENCY STOP RELAY
R8	- CONTROL MICROSWITCH (MC4) RELAY
MC 1	- MECHANICAL STOP ON MICROSWITCH
MC 2	- PRESS TIMER START MICROSWITCH
MC 3	- SCREEN LOWERING MICROSWITCH
MC 4	- SCREEN DOWN SAFETY MICROSWITCH
MC 5	- MAXIMUM DOWNWARD PISTON STROKE SAFETY MICROSWITCH
MC 6	- MAXIMUM UPWARD PISTON STROKE SAFETY MICROSWITCH
MC 7	- MAXIMUM SCREEN LIFTING HEIGHT SAFETY MICROSWITCH
EV1	- PISTON LIFT HYDRAULIC SOLENOID VALVE
EV2	- PISTON LOWERING HYDRAULIC SOLENOID VALVE
EV3	- OIL DRAINAGE HYDRAULIC SOLENOID VALVE
EV4	- CONVEYOR BELT HYDRAULIC SOLENOID VALVE
EV5	- PISTON RESTRAINT HYDRAULIC SOLENOID VALVE
EVA6	- MECHANICAL STOP PNEUMATIC SOLENOID VALVE
EVA7	- CONVEYOR BELT TENSION PNEUMATIC SOLENOID VALVE
EVA8	- SCREEN MOVEMENT PNEUMATIC SOLENOID VALVE
EVA9	- TOTAL SCREEN OPENING PNEUMATIC SOLENOID VALVE
*** INT4	- INSOLE DETACHING SLIDE SWITCH
*** MC8	- INSOLE DETACHING SLIDE OUT SAFETY MICROSWITCH
*** EVA10	- INSOLE DETACHING SLIDE PNEUMATIC SOLENOID VALVE
* INT 3	- MAGNETIC SURFACES SWITCH
**** EVA11	- INSOLE COLLECTOR PNEUMATIC SOLENOID VALVE

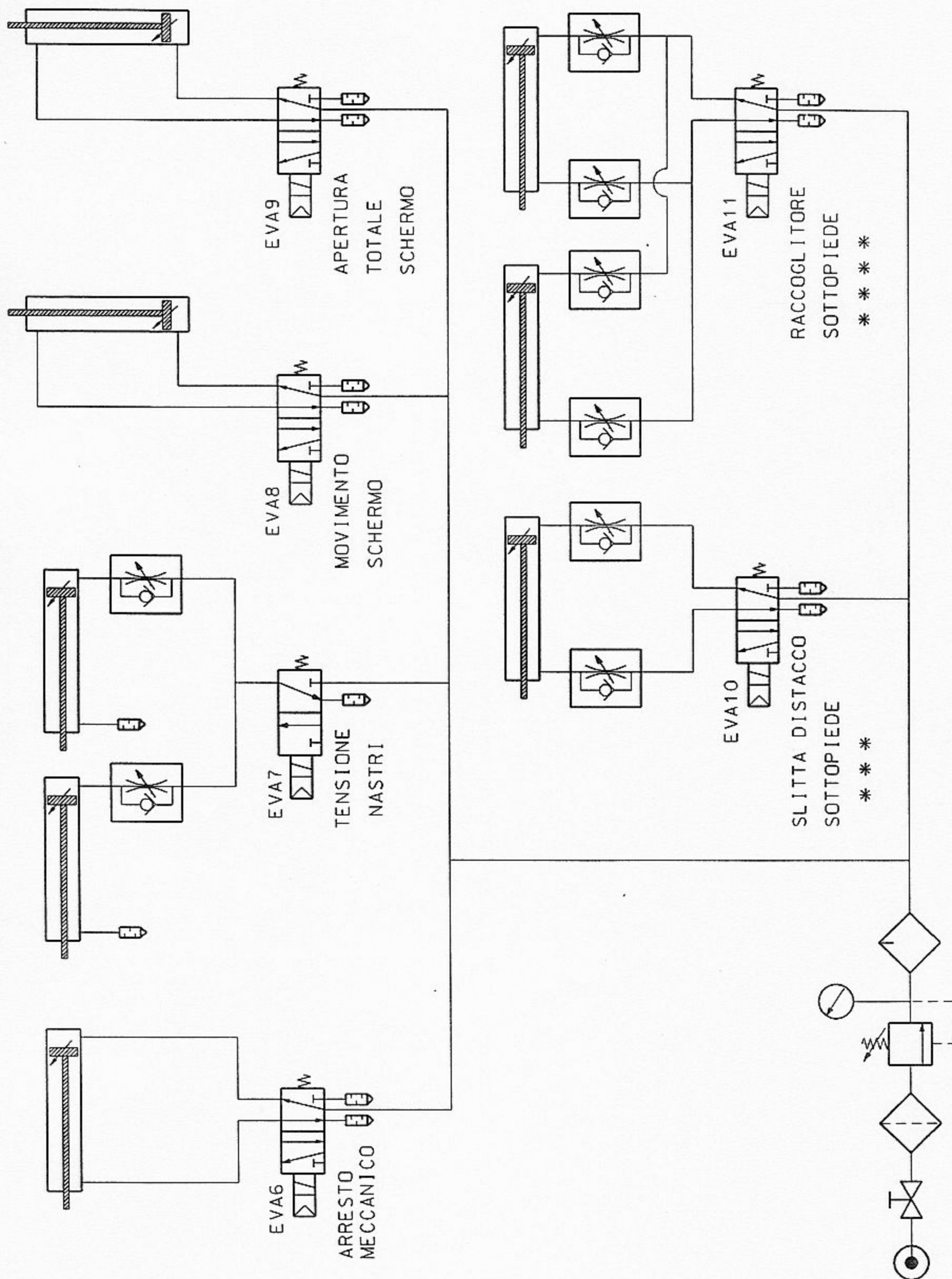




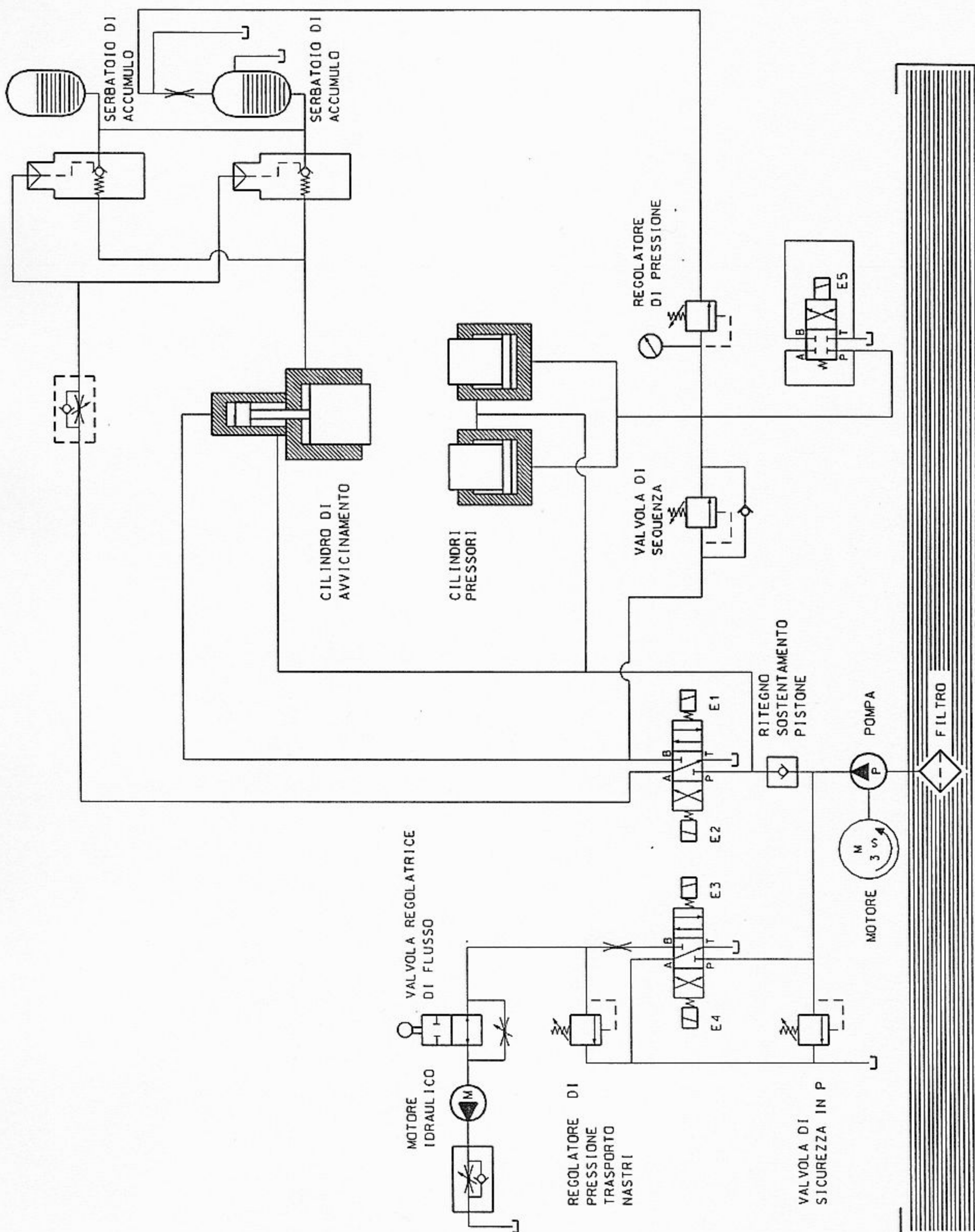
SCHEMA MORSETTIERA



9.8 SCHEMA IMPIANTO PNEUMATICO P78

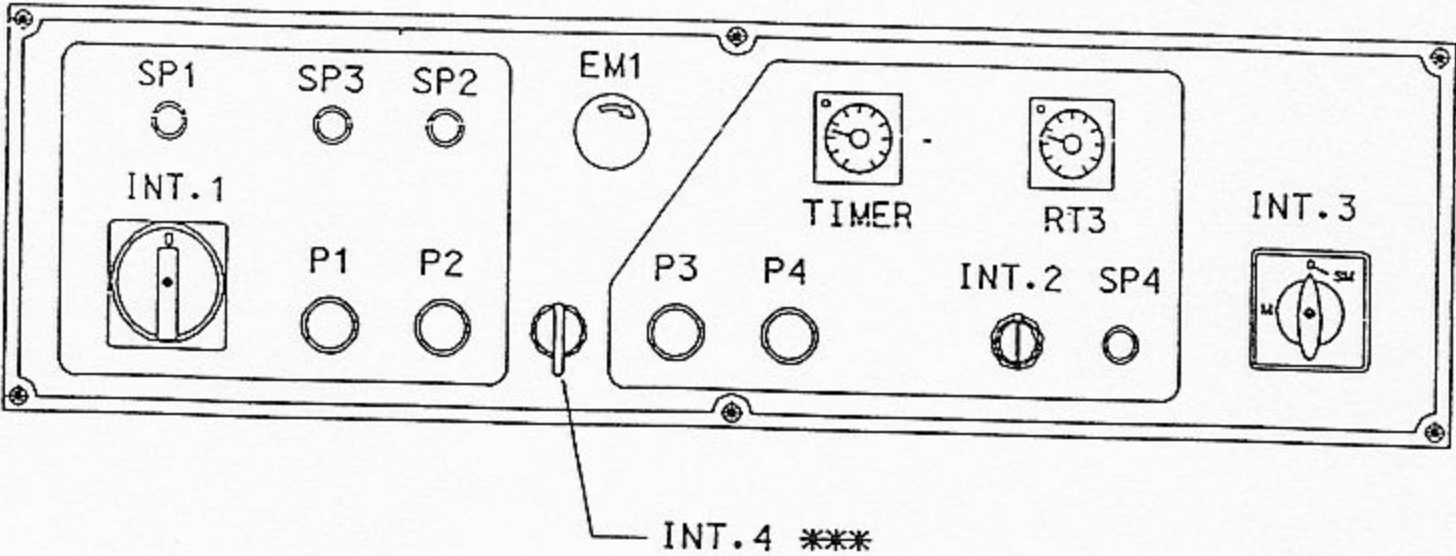


9.9 SCHEMA IMPIANTO OLEODINAMICO P78

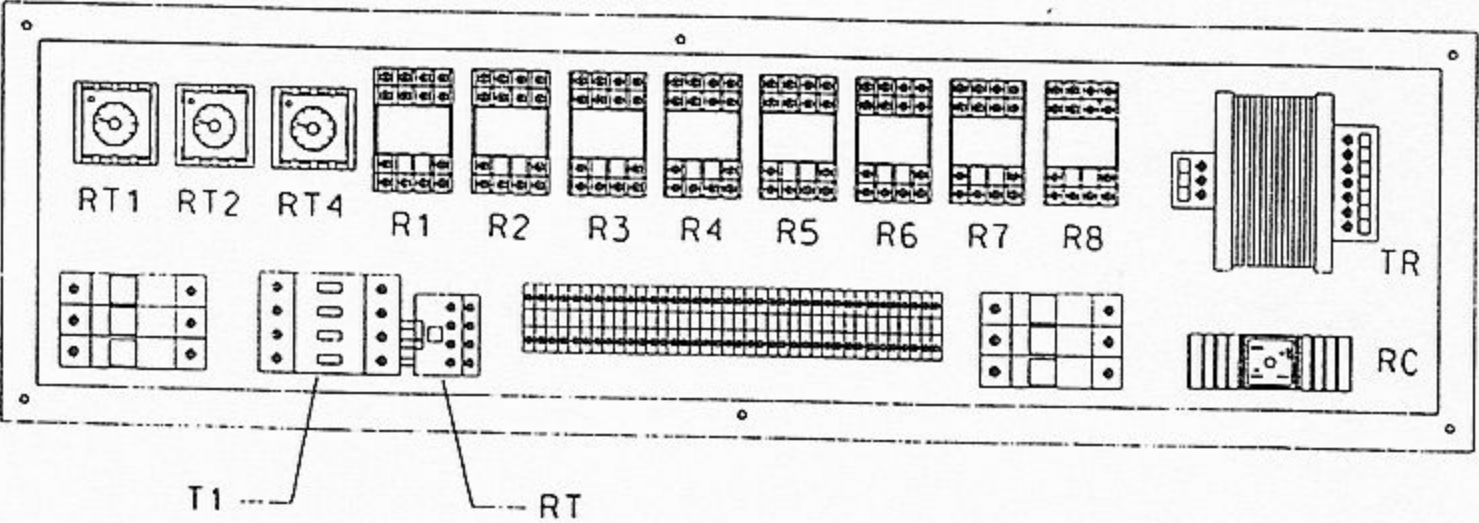


9.10 Location of the components described in the key

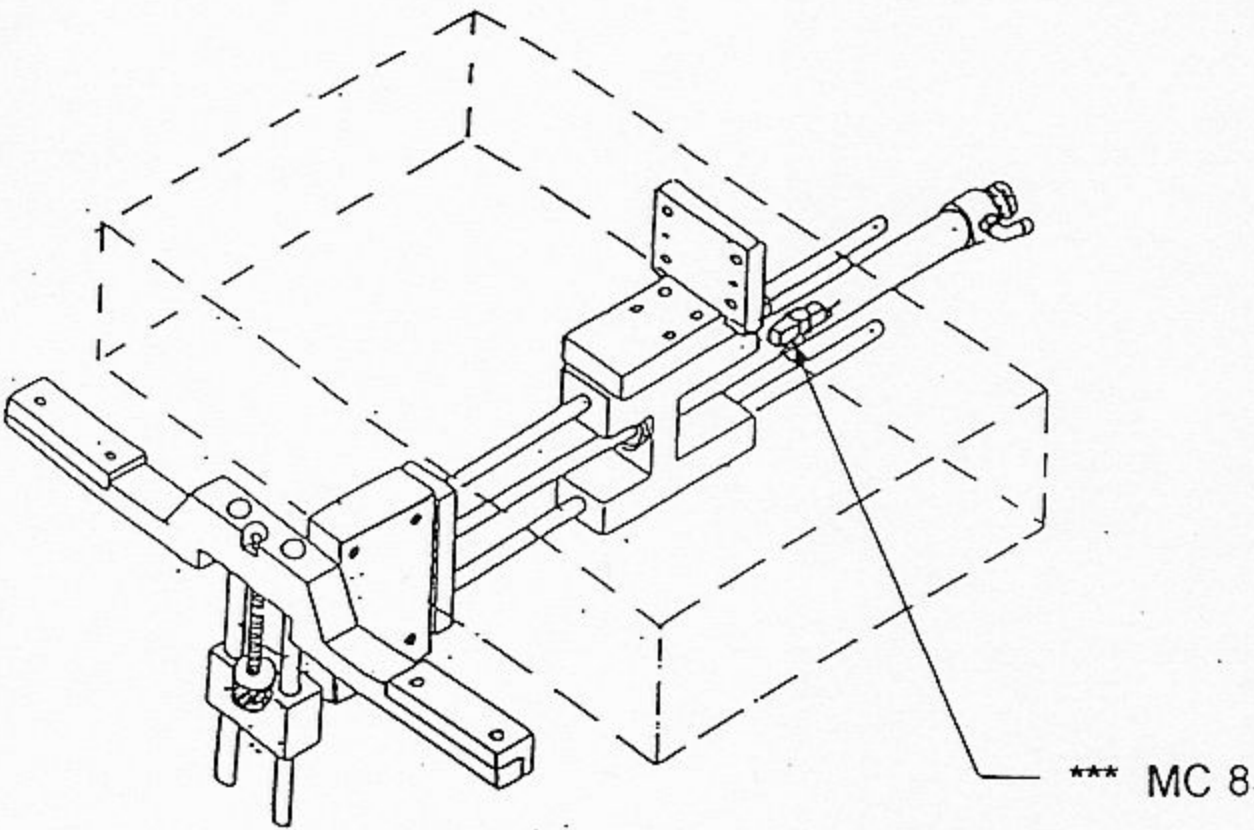
Electric control panel



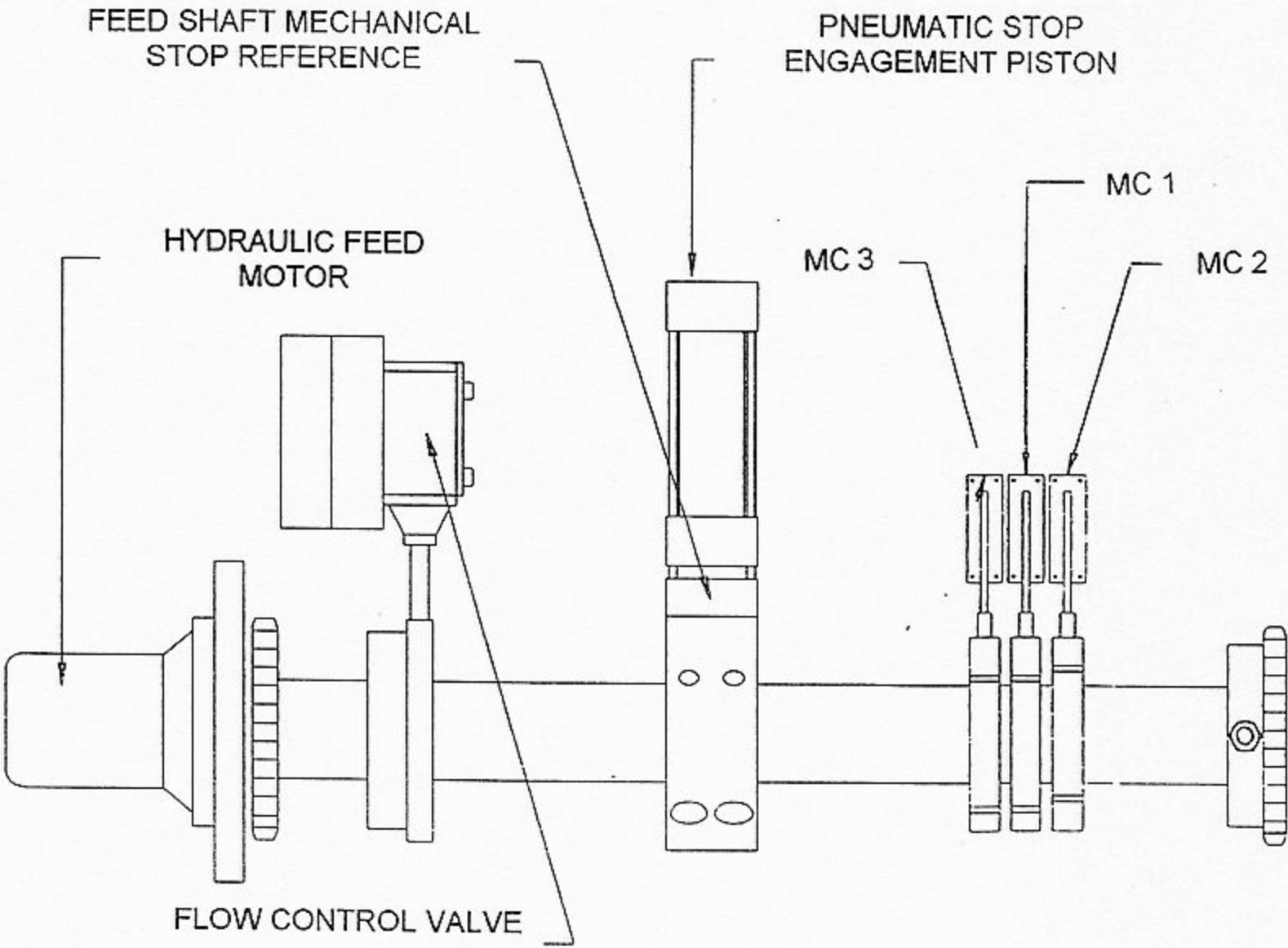
Electric control panel seen from inside



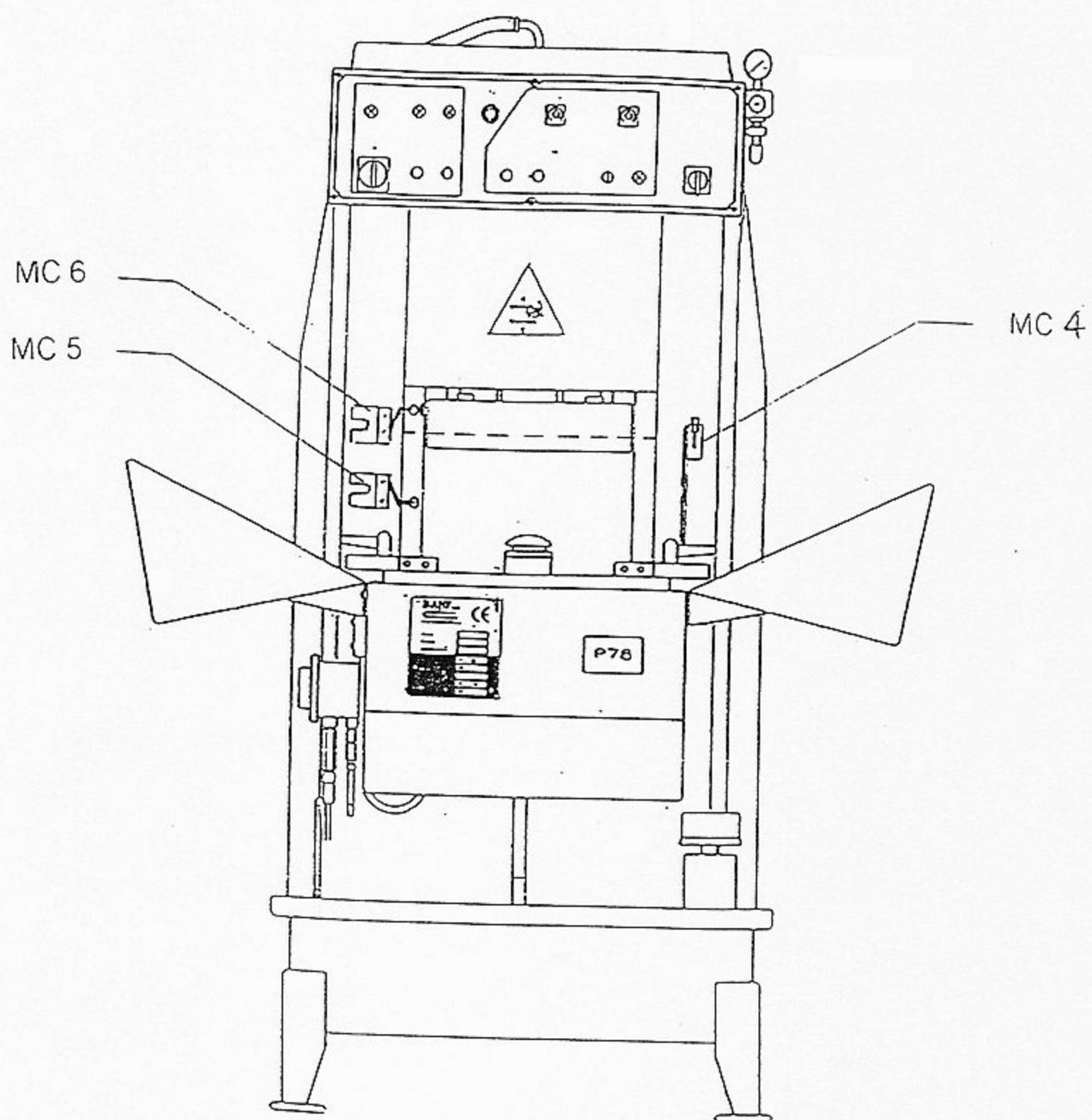
Microswitches



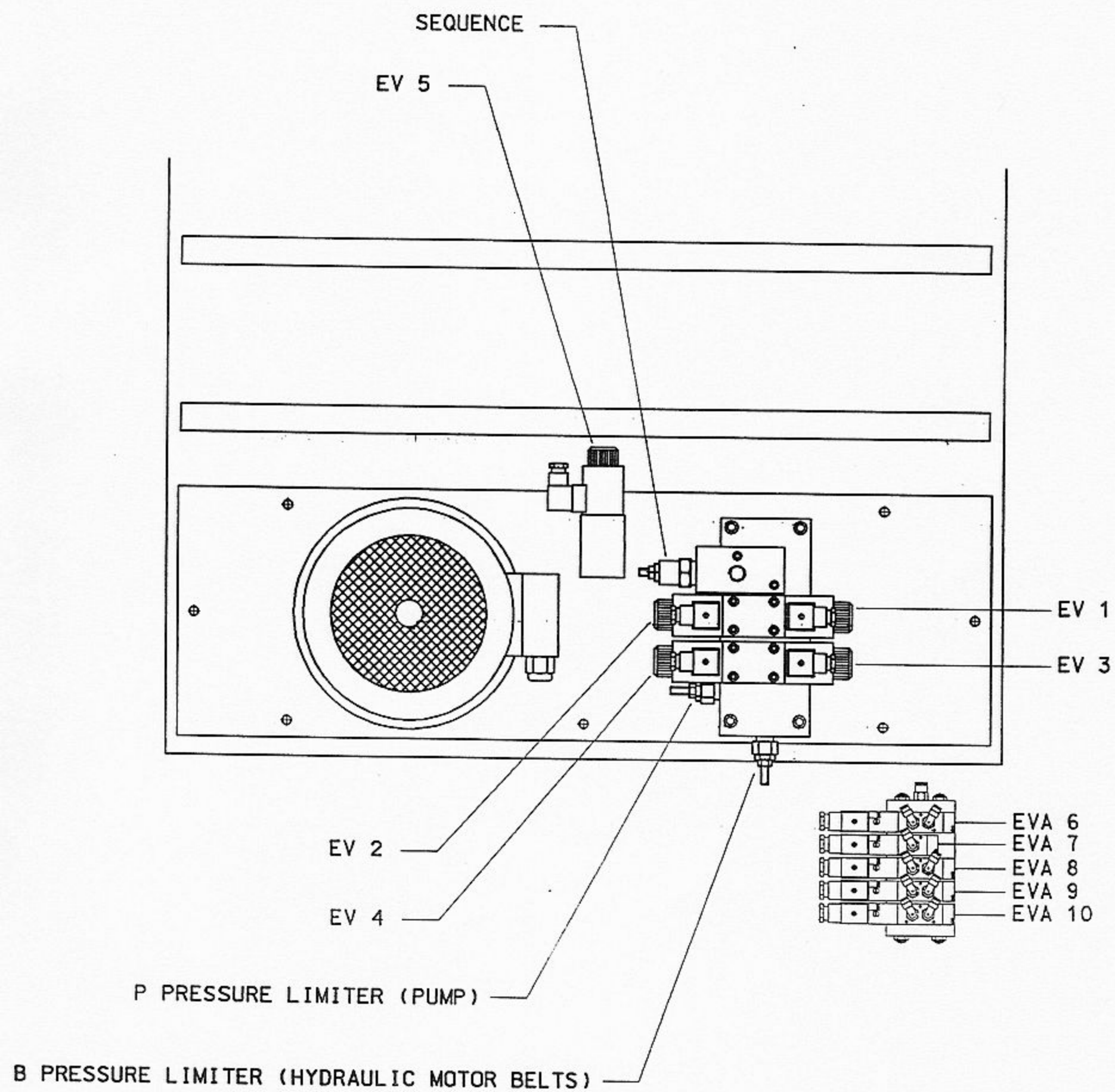
*** MC 8



SEQUENCE MICROSWITCHES ON FEED SHAFT



HYDRAULIC AND PNEUMATIC SOLENOID VALVES



10 DEMOLITION OF THE BANF MOD. P78 PRESS

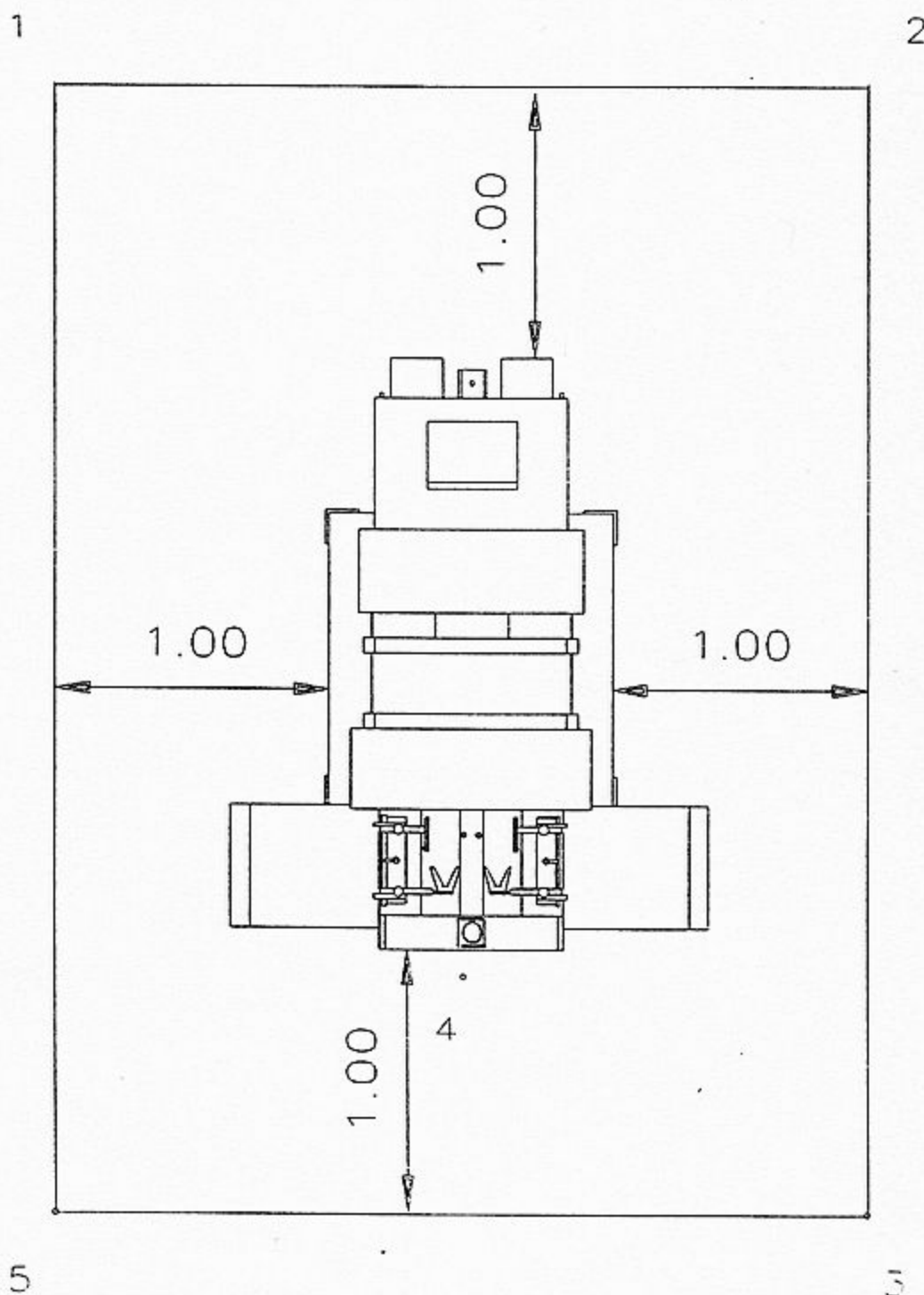
If the machine is to be shutdown and demolished for any reason, a few fundamental rules must be followed in order to safeguard our health and the environment in which we live:

- completely empty the oil tank and the whole hydraulic system in order to eliminate even the slightest trace of residual oil in the machine; the used oil should not be dumped, but should be handled by a company specialized in disposing of these substances,
- sheathes, flexible tubes and plastic and non-metal components should be removed and disposed of separately,
- hydraulic and electric components such as valves, solenoid valves, pressure regulators, breakers, transformers, etc., should be removed for reuse if they are still in good conditions, or overhauled and recycled if possible.
- the casing and all the metal parts of the machine should be removed and sorted according to type of metal. The various parts obtained this way may be broken up and melted down in order to recycle the materials which were originally used to construct the machine.

11 BANF MOD. P78 PRESS NOISE LEVEL

The weighted equivalent "A"-scale noise level, $L_{eq}(A)$ detected using a class 1 integrating sound-level meter with "SLOW" time constant as laid down in the I.E.C. standards was measured in the following conditions:

1 - Reference standards	: international ISO 3746
2 - Background noise before the measurement	: 53 dB(A)
3 - Background noise after the measurement	: 52 dB(A)
4 - Volume of the place where the measurements were taken	: 975 m ³
5 - Operator present	: yes
6 - If operator present	: two measurements 0.1 m from each side of the head; value taken: the highest.
7 - measurement height	: 1.5 m



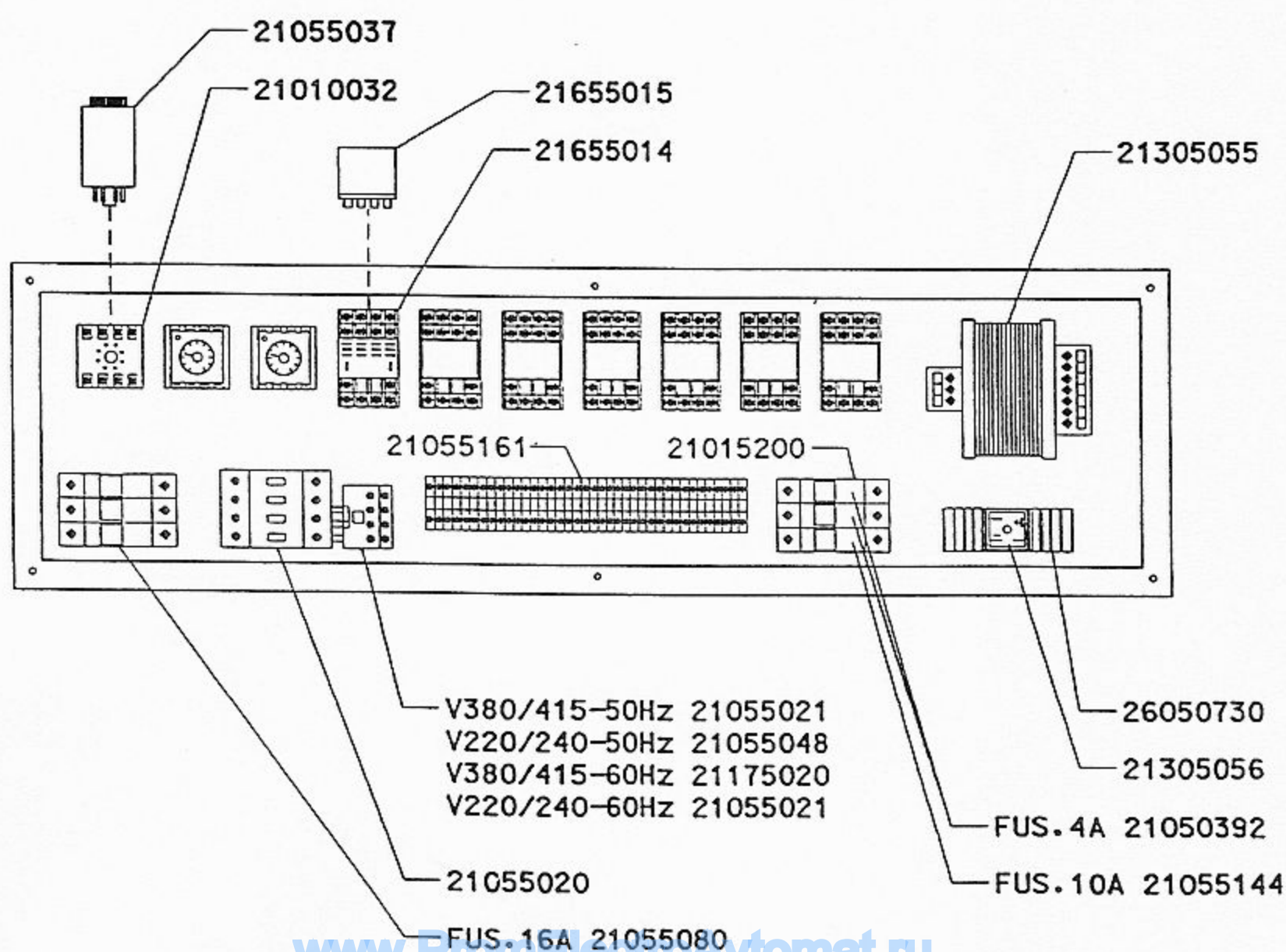
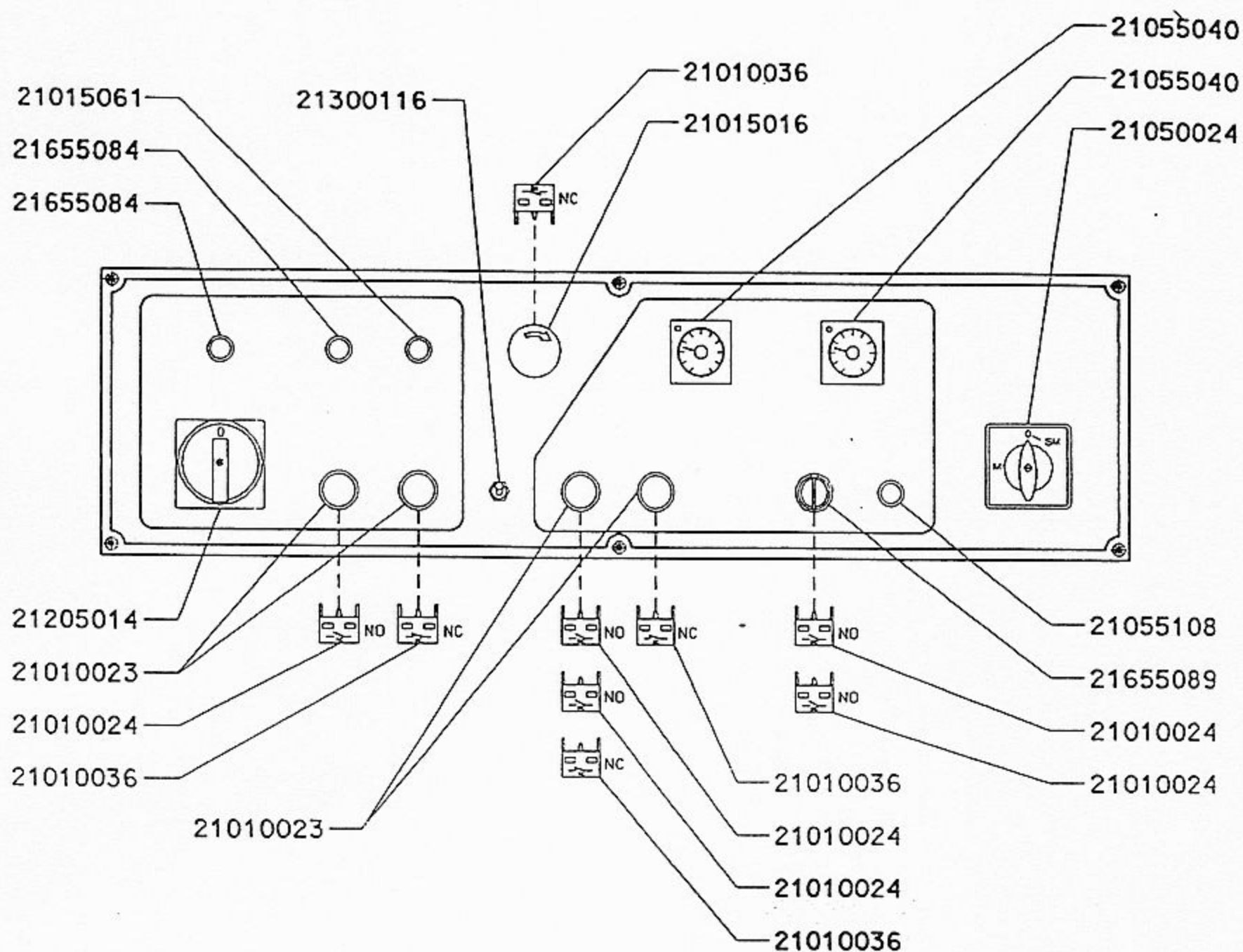
. measurement point
+ noise source

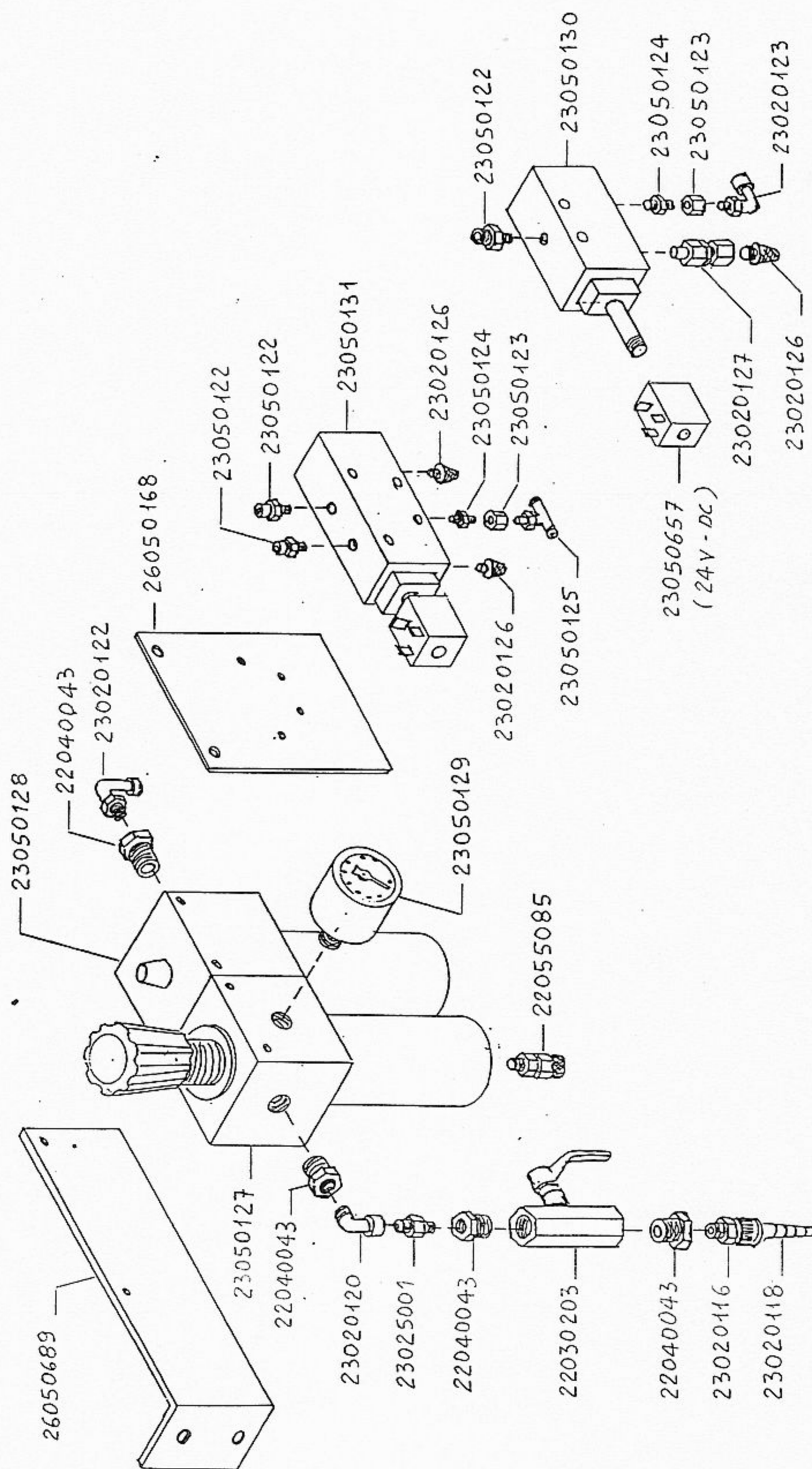
The noise level detected at the measurement points was as follows:

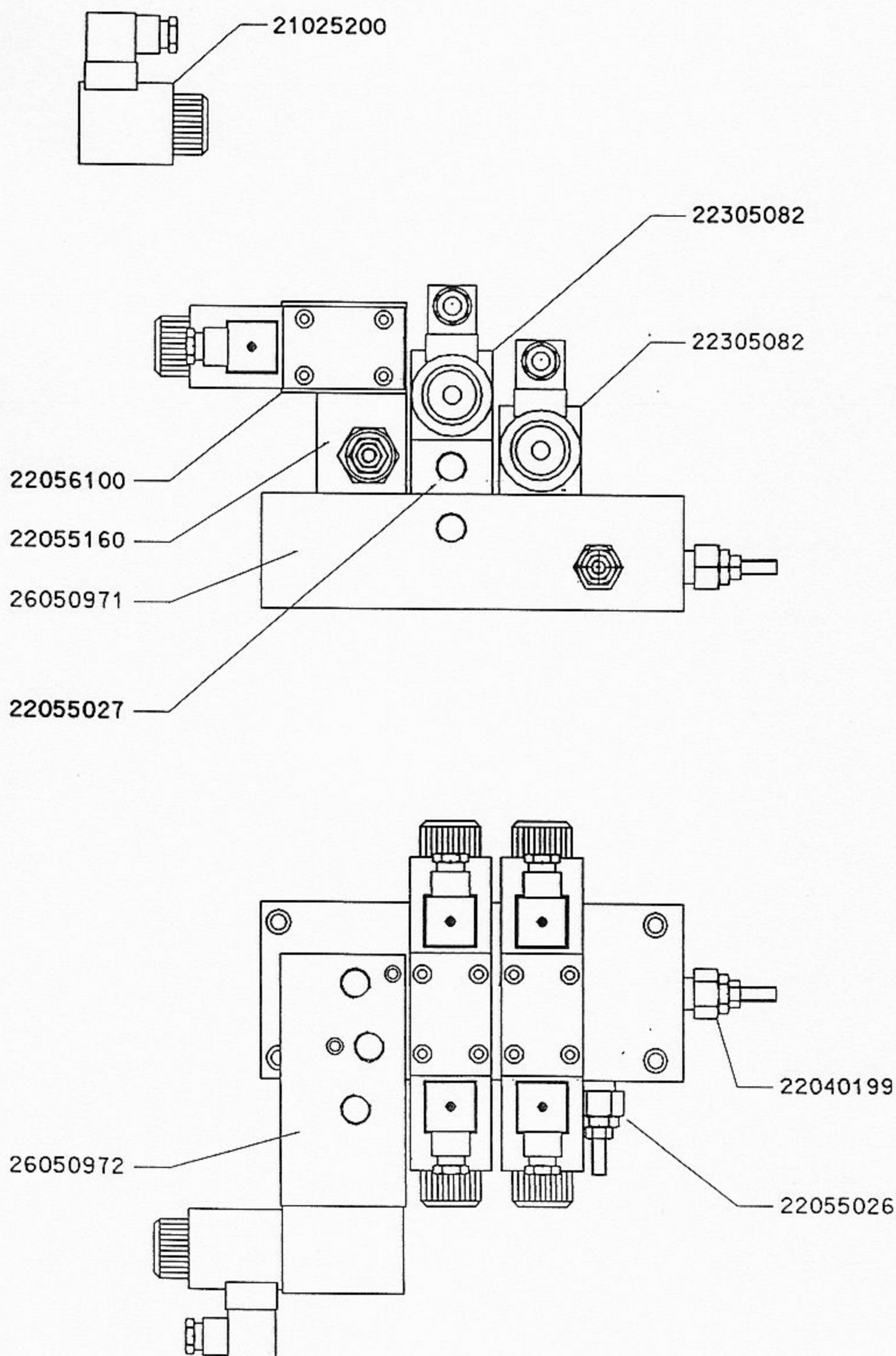
Position 1: 80 dB(A)
Position 2: 79 dB(A)
Position 3: 78 dB(A)
Position 4: 80 dB(A)
Position 5: 77 dB(A)

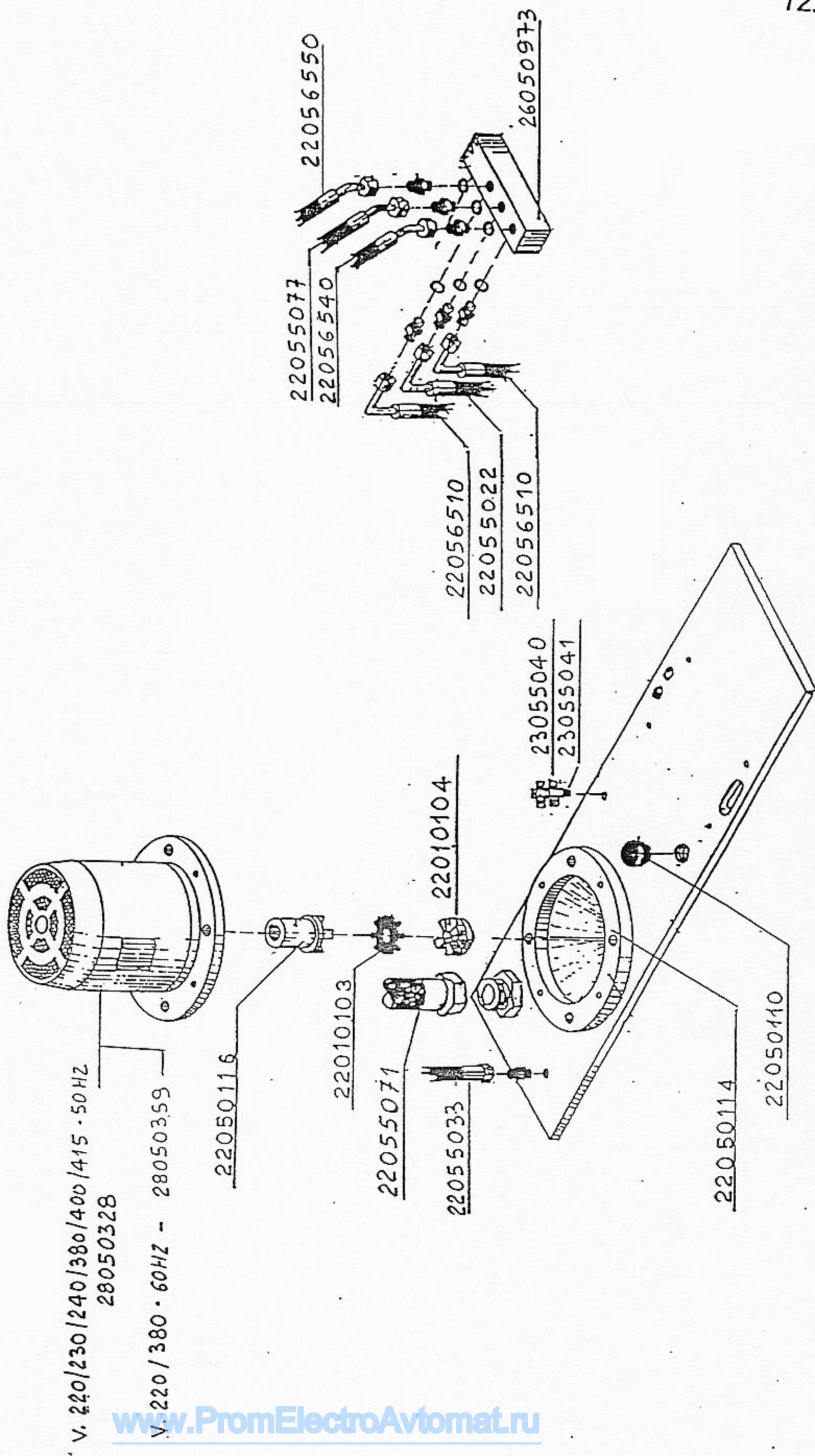
The measurements were carried out at the machine constructor's factory on the fully assembled machine ready for delivery.

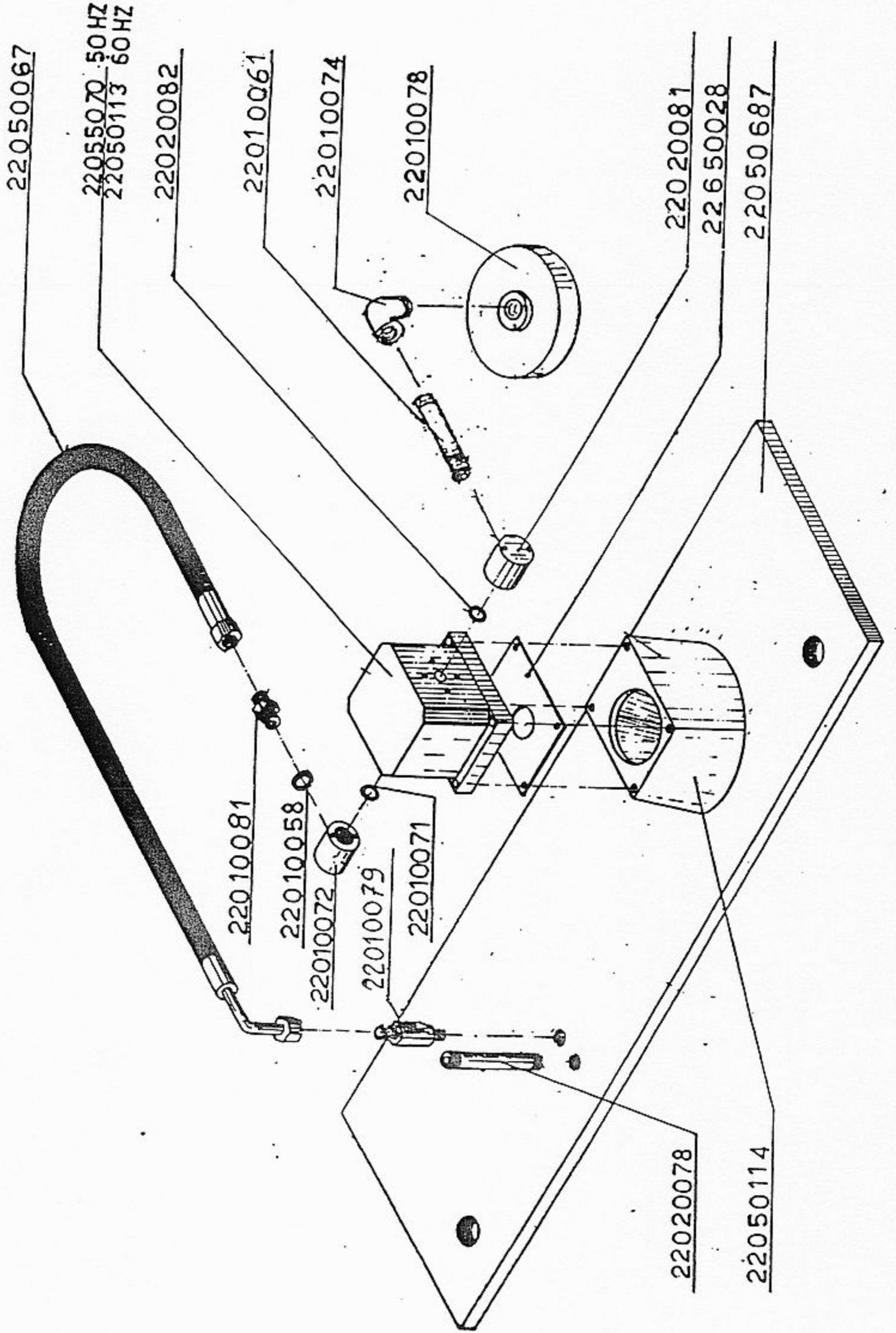
12 EXPLODED VIEWS

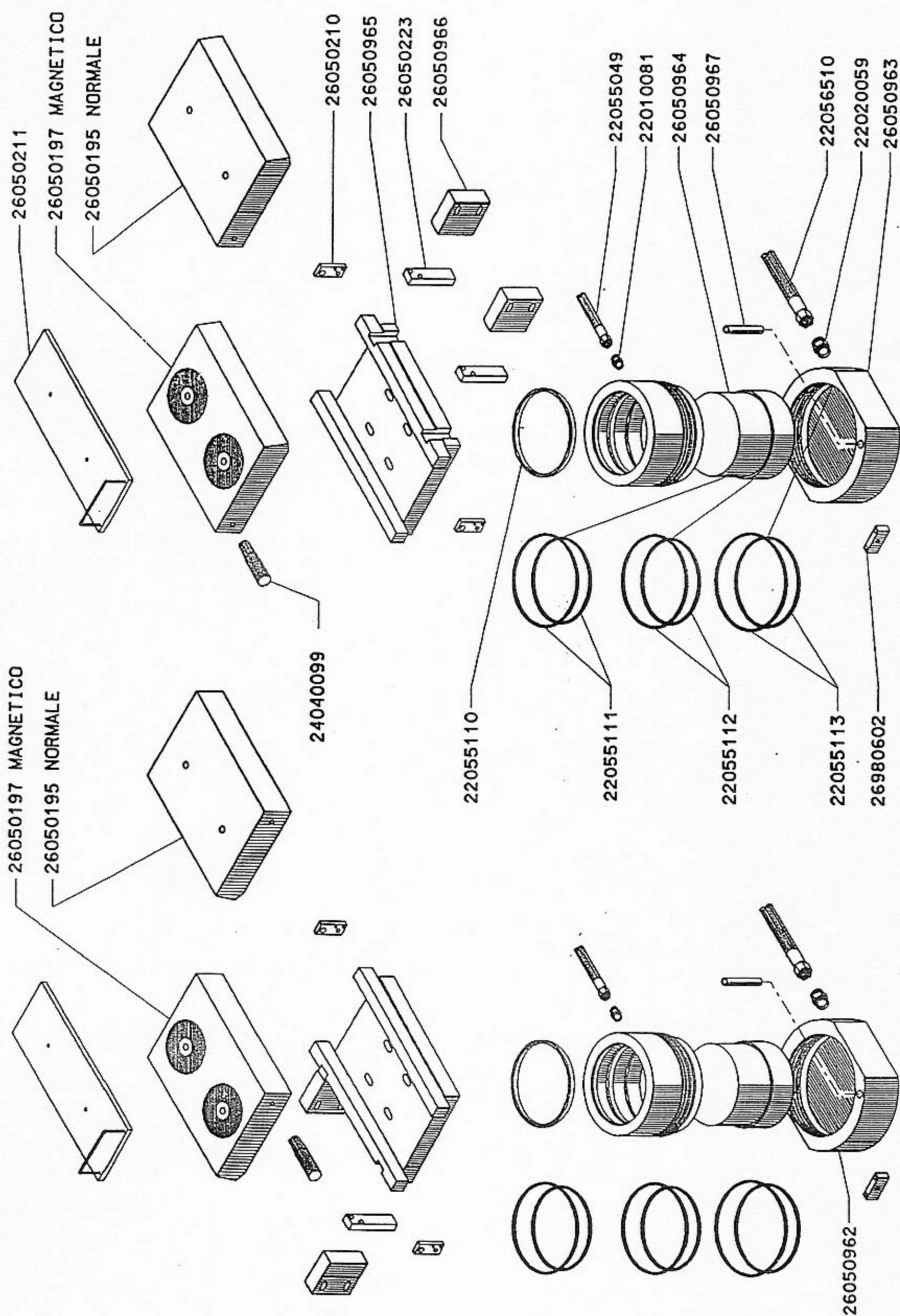


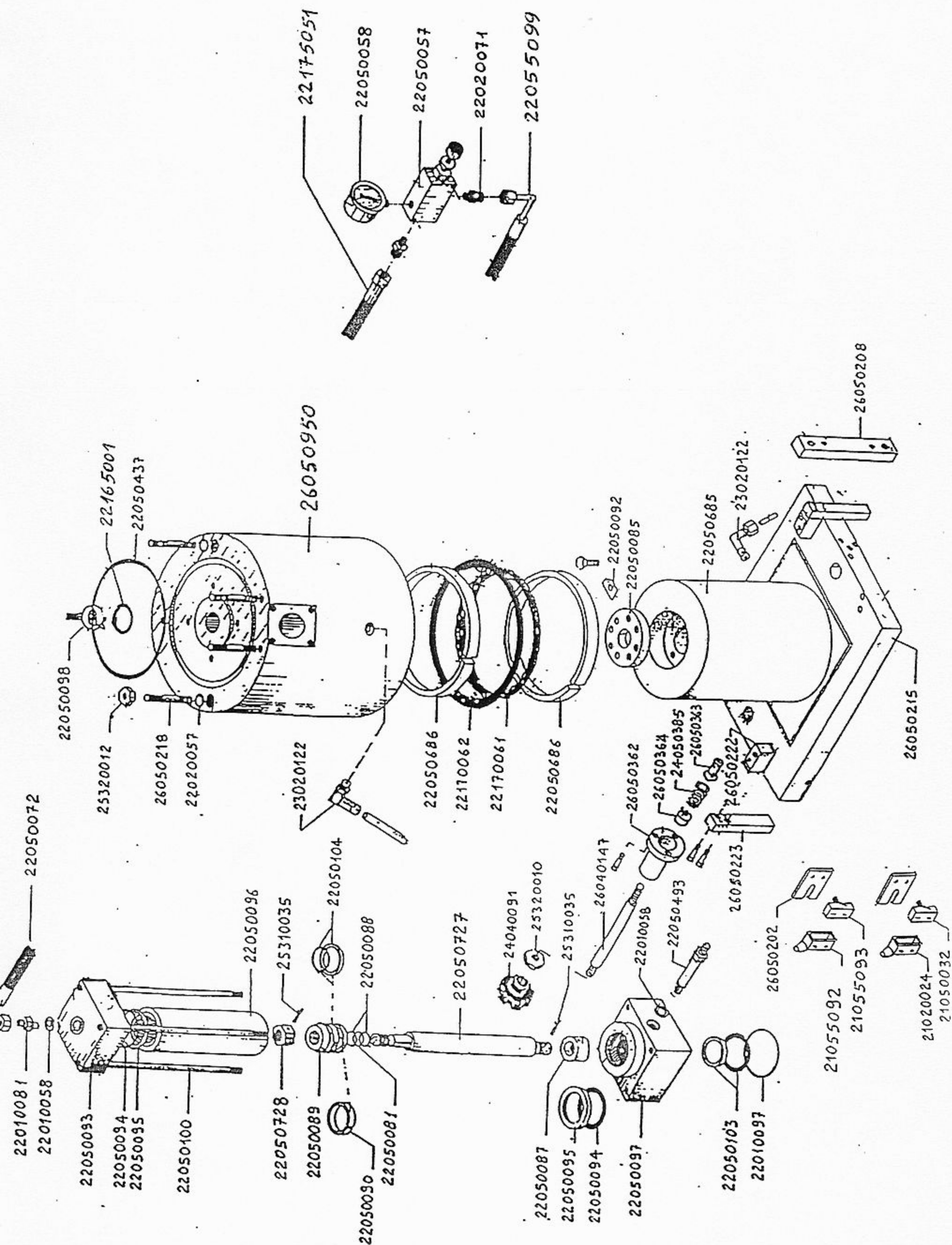


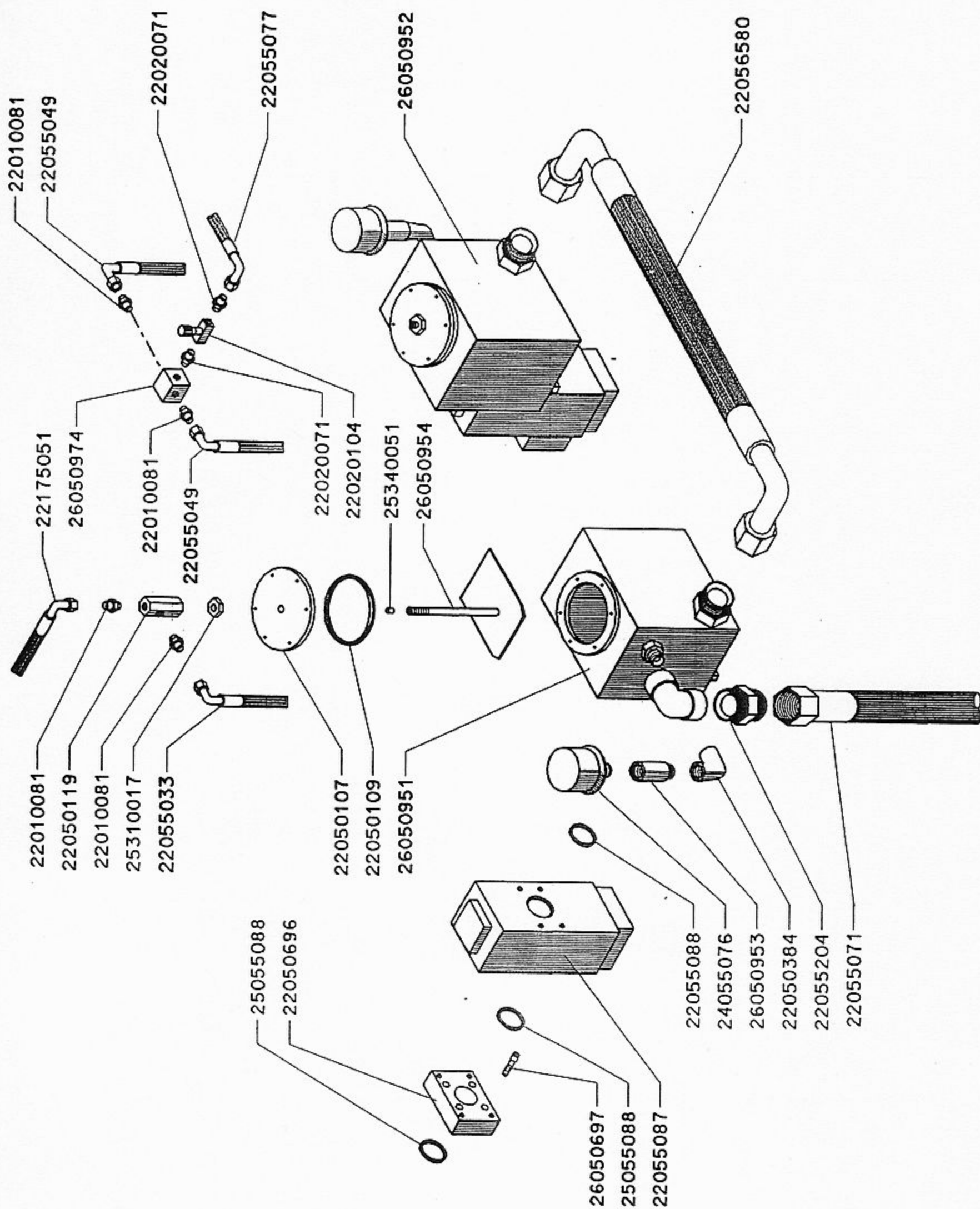


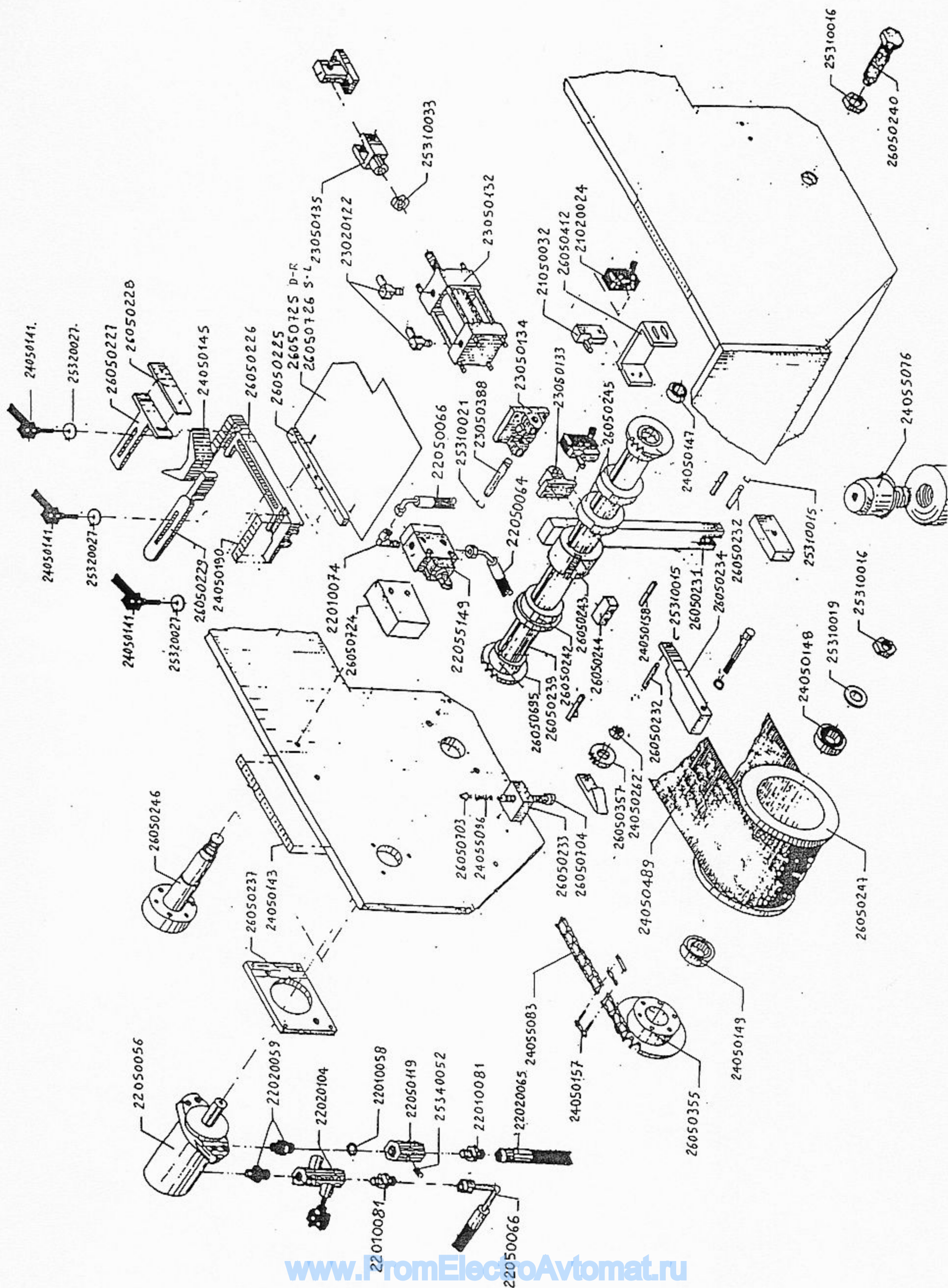


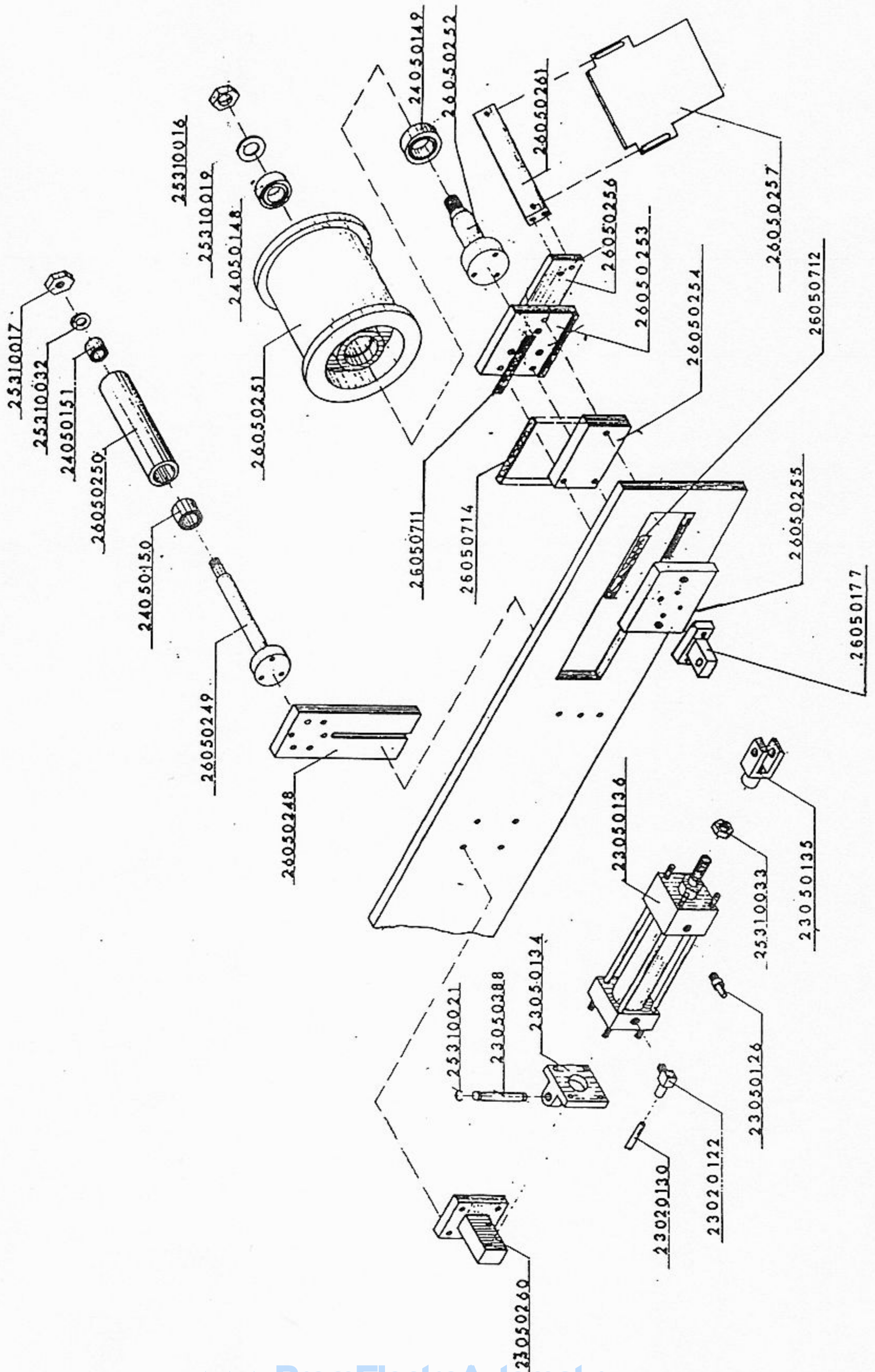


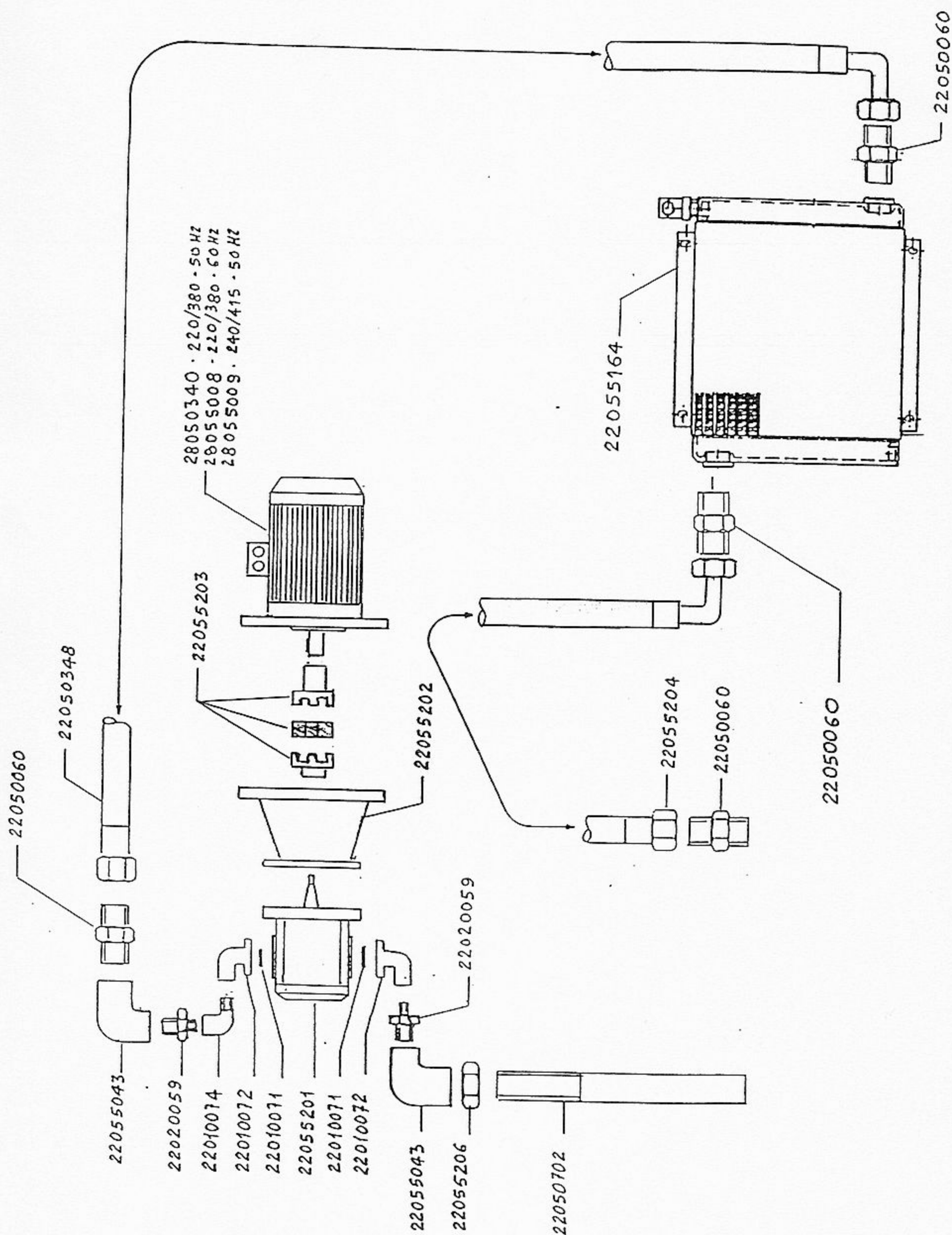


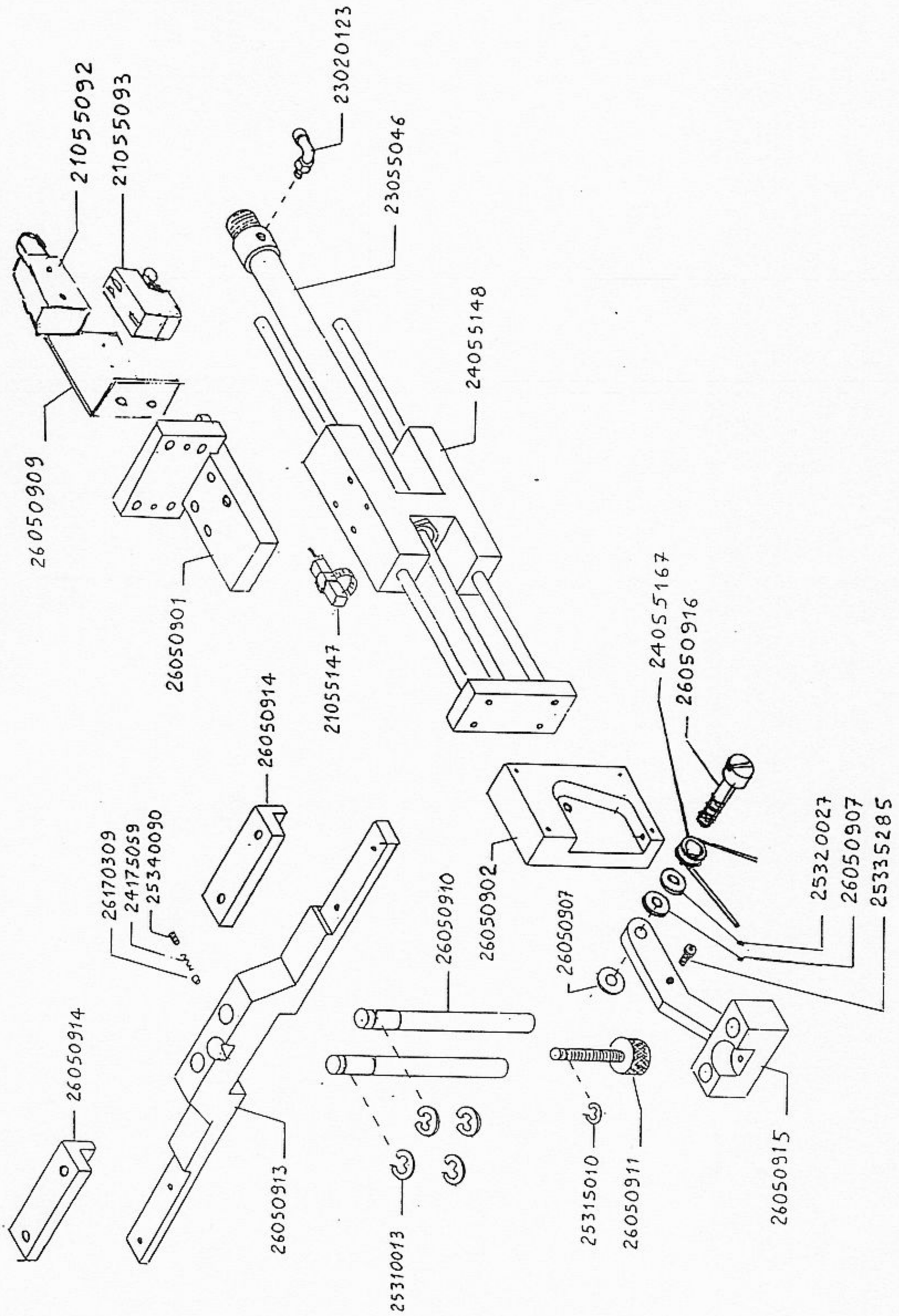


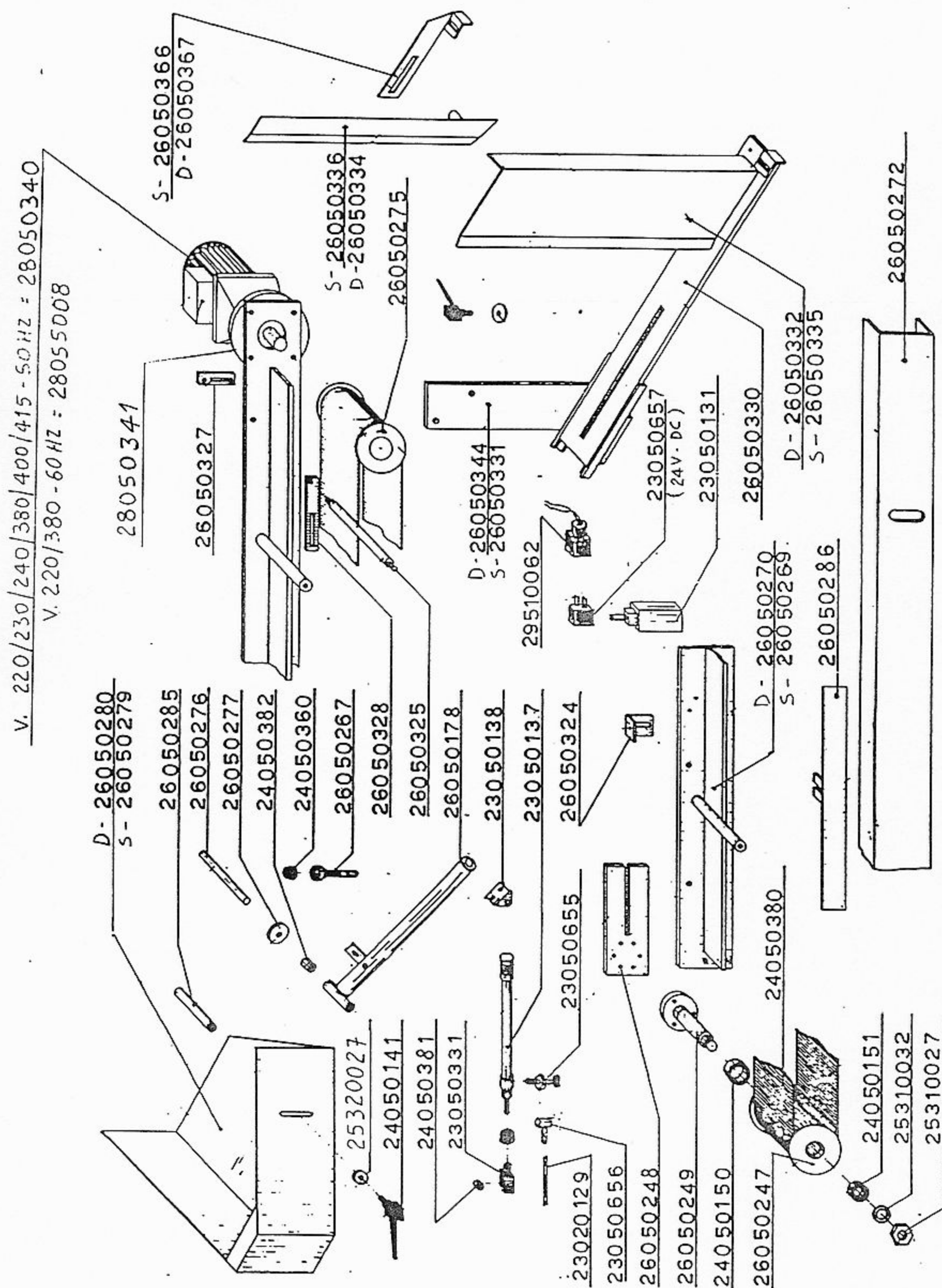


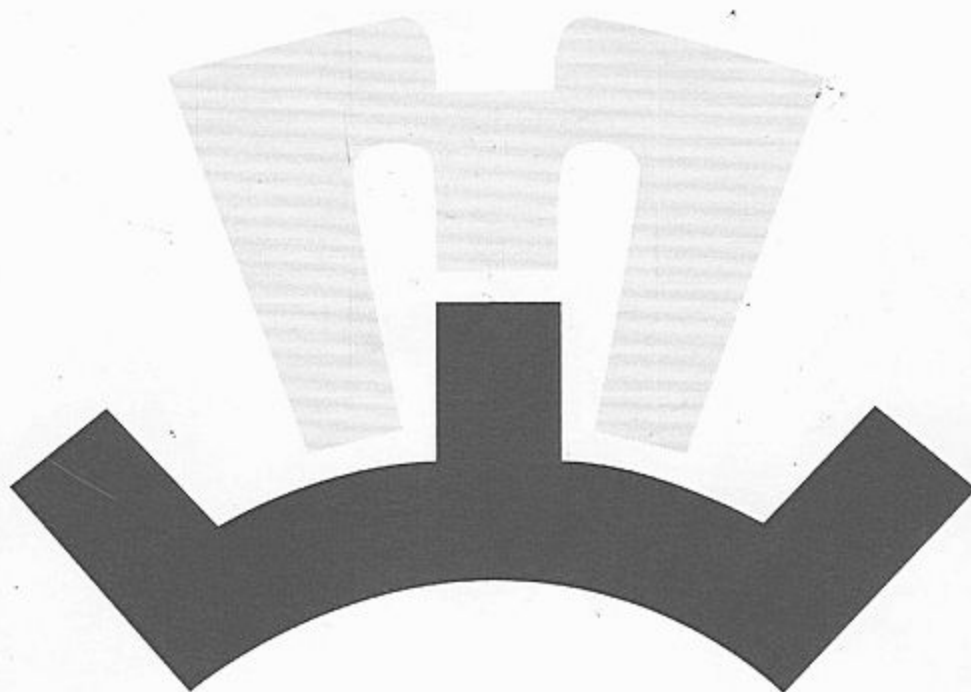












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