

COLLI FGB S.R.L.

USER MANUAL *BS3*

**OPERATION AND MAINTENANCE OF INDUSTRIAL MACHINERY
IN ACCORDANCE WITH ANNEX I OF THE NEW MACHINERY DIRECTIVE
2006/42/CE**

***MACHINERY FOR POUNDING AND IRONING OUT STITCHES AFTER THE
TRIMMING PROCESS ON FINISHED FOOTWEAR***



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MACHINE CODE BS3
USER MANUAL CODE BS3 ING
EDITION 01 / 2017



KEEP THIS USER MANUAL FOR FUTURE REFERENCE AND FOR THE MACHINE'S ENTIRE LIFETIME

EC DECLARATION OF CONFORMITY

The Manufacturer

COLLI F.G.B. S.R.L.

Via Russo, 25 - 27029 Vigevano (PV) - ITALY

Declares that the machine

MACHINE	POUNDING / IRONING
MODEL	BS3

See also
attached
EC Declaration of Conformity

conforms to all provisions of Directives

2006/42/EC - NEW MACHINERY DIRECTIVE

2014/35/EU – LOW VOLTAGE DIRECTIVE

2014/30/EU - ELECTROMAGNETIC COMPATIBILITY

HARMONISED APPLIED STANDARDS

NON-HARMONISED APPLIED STANDARDS

and constitutes its technical file

The Managing Director



INTRODUCTION AND NOTE TO USERS

This operating manual provides all the necessary information allowing machine users to correctly operate the machine.

Standards for routine periodic maintenance aimed at maintaining the machine in efficient operating condition are listed herein.

The manufacturer recommends carefully reading this user handbook in all its parts before using the machine for the first time.

Some information and illustrations in this manual may differ from the machine actually delivered to the user, since all machine configurations are described and illustrated, including OPTIONAL accessories: refer solely to the information describing the machine configuration acquired.

This operating manual is compiled exclusively for use by the manufacturer's customers, providing users with the most up-to-date documentation on the use of the product on the date of issue.

The use of this manual is under the user's full responsibility.

No further guarantees will be conceded by the manufacturer for any defects, incompleteness and/or operating difficulties, expressly excluding any liability by the manufacturer for direct or indirect damages howsoever arising from the use of this document.

COLLI F.G.B. S.R.L. reserves the right to make changes to the product described in this manual at any time and without prior notice.

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1 GENERAL INFORMATION

1.1 IDENTIFICATION OF THE MANUFACTURER

Manufacturer: COLLI F.G.B. S.R.L.
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1.2 MACHINE IDENTIFICATION

The machine's identification appears in detail on the nameplate situated on the motor safety guard. When ordering spare parts or requesting recommendations on operation and maintenance, always cite the machine model and serial number on the identification nameplate. It is absolutely forbidden to remove the identification nameplate or alter its data.



1.3 RECOMMENDATIONS ON THE MACHINE'S OPERATION AND MAINTENANCE

This user manual describes all operations regarding the machine's correct usage and normal maintenance.

The machine must be operated only by qualified and trained operators of adult age.

The head of safety and production should ensure that the person assigned to the machine's operation has read and understood the information provided in this user manual.

Maintenance staff providing both routine and extraordinary machine maintenance are required to possess proper mechanical and electrical knowledge.

It is advisable not to remove the safety protections during the machine's operation.

The manufacturer recommends not carrying out any other type of workmanship, repairs or intervention other than those indicated in this user manual.

All operations and interventions requiring the disassembly of machine parts must be entrusted to authorized technicians.

Follow the instructions and indications contained in this manual for a correct usage of the machine. The manufacturer recommends keeping this operating manual in good condition in a location where it can be easily accessed for consultation by machine operators. A careful and meticulous observance of the indications contained in this manual will ensure a safe and correct use.



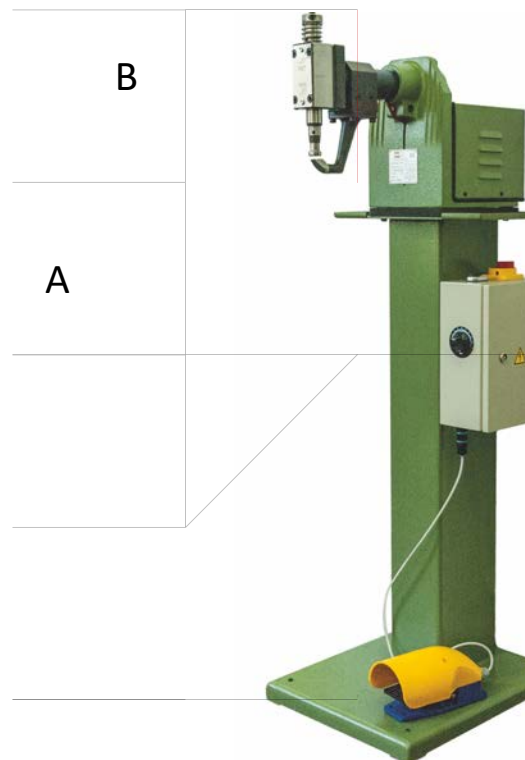
ANY MANIPULATION OR REMOVAL OF THE SAFETY ELEMENTS CAN CAUSE SERIOUS ACCIDENTS: IT IS FORBIDDEN TO REMOVE, EXCLUDE OR ALTER ANY OF THE SAFETY ELEMENTS ON BOARD THE MACHINE. THE PERFECT OPERATION OF THE SAFETY ELEMENTS MUST BE GUARANTEED AT ALL TIMES THROUGH PERIODIC CHECKS. ANY DEFECTS OR PROBABLE MALFUNCTIONS ENCOUNTERED MUST BE ELIMINATED IMMEDIATELY.

2 SPECIFICATIONS

2.1 GENERAL DESCRIPTION OF THE MACHINE

This BS3pounding and ironing machine is designed to pound and iron out the stitches on finished footwear, after trimming operations. The machine consists of a column with a base fitted with anti-vibrating feet, and an operating head support base with the pounding unit (hammer/anvil) mounted onto it. A soundproof plate is inserted between the column and the base. The electrical box containing the electrical components is mounted onto the column. The motor is situated at the rear of the operating head support base; it is protected by a closed safety casing.

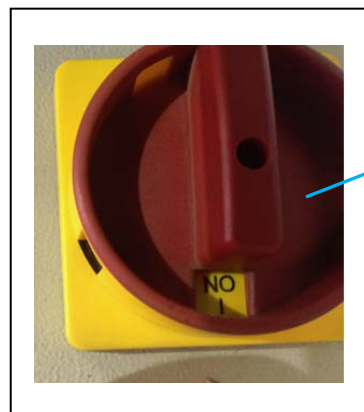
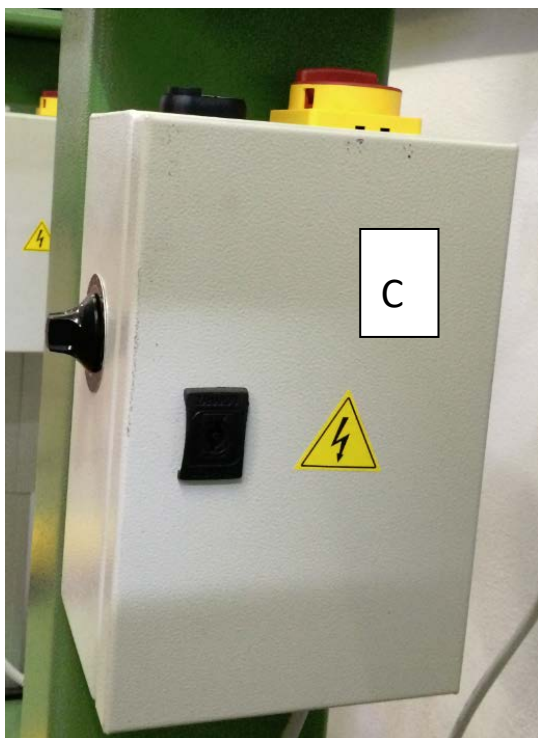
B – POUNDING GROUP
C - COLUMN



2.2 TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS	
WEIGHT	95 Kg
WIDTH	42 cm
DEPTH	55 cm
HEIGHT	145 cm
VOLTAGE	220/380 V standard (other voltages on request)
FREQUENCY	50/60 Hz
NUMBER OF PHASES	3+N standard
MOTOR	0.25 kW
NOISE EMISSIONS	Leq=83 dB(A)Lpc (C)<130 dB(C)
POUNGING FORCE	750 N
PRODUCTION	800 pairs per day
POWER ABSORPTION	0.5 kW

2.3 CONTROL PANEL



A - Power ON / OFF main switch

B- Power ON button and light

C- Electrical box

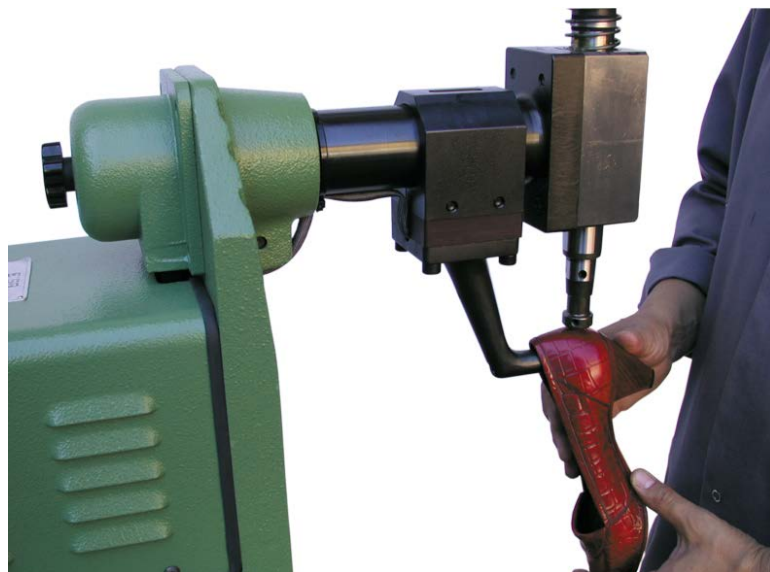
2.4 OPERATING CONDITIONS

- The machine is designed to be used by a single operator.

Working
position



Detail of workmanship



MACHINE EQUIPMENT

ALLEN KEY 5mm	1
ANTI-VIBRATION SUPPORT FEET (part no. 362)	4
SPARE PARTS CATALOGUE AND INSTRUCTIONS	1

Any damage to persons, animals or objects due to an improper usage of the machine is not attributable to the manufacturer.

2.5 IMPROPER OPERATING CONDITIONS

- The end user is responsible for damages caused by any usage of the machine differing from that which is specified in this user manual, or using materials differing from those for which the machine has been designed.
- It is forbidden to mishandle the safety protections and make use of the machine without having correctly installed the protections.
- Any actions that do not respect the indications mentioned herein shall be deemed improper usage.
- Any alteration is prohibited and invalidates the machine's Declaration of Conformity.
- The machine is identified by the data printed on the nameplate on the frame.

When ordering spare parts or requesting advice on the machine's use or maintenance, always cite the machine model and serial number on the nameplate.



This type of machinery can be hazardous unless used properly.

Machine operators must meticulously follow all safety related indications.

- The machine operator must be trained on the machine's correct use, as well as on the operation of the protection devices and all accessory equipment.
- The devices mounted onto the machine must be correctly assembled and adjusted.
- The entire machine must undergo routine and extraordinary maintenance procedures on a regular basis, as required for its usage.
- Prior to using the machine, make certain that you have read and properly understood the operating manual supplied by the manufacturer.
- Before performing any operation whatsoever on the machine, make certain that the work area around the machine is clear of people or other obstacles that might be a source of danger.
- Make certain that the power cable connecting to the mains line is whole, properly extended and laid out straight rather than rolled up.
- Any interventions on the machine must be performed with the electrical power switched off and blocked.
- Do not place flammable substances in the machine's proximity, since any sparks produced can cause an explosion or fire.
- The operator must always reflect on all possible consequences before moving in with his/her hands to the machine's most dangerous areas.
- Always keep the machine powered off when not in use, and for extended pauses in production disconnect the machine from its electrical power source.



All safety measures cited in this user manual are provided solely and exclusively in relation to the machine's correct uses, as authorized by the manufacturer. These uses refer to the procedures involving the machine's preparation, operation and maintenance.

It is forbidden to use the machine for work processes not authorized by the manufacturer.

It is forbidden to alter the machine and/or any of its parts without the prior consent of the manufacturer.

2.6 SCOPE

This BS3 pounding and ironing machine is designed to pound and iron out the stitches on finished footwear, after trimming operations.

The following is a brief list of the machine's main operating characteristics:

- Easy operation.

The machine performs fast and perfect pounding operations thanks to the hammer / anvil device.

- Anvil tool heating.

The machine is equipped with an anvil heating system, through which the temperature can be set using an electronic impulse regulator as a percentage. (On request the machine can also be supplied with a hammer tool heating system).

- High production.

Up to 1000 pairs daily production.

-Material feed guide on version BS3 Special (optional).

A special pin feed guide device is available for pounding décolleté footwear.

- Low noise emissions.

Special attention to the machine's design ensures reduced noise emissions to a minimum.

In any case, it is essential for the employer to check actual noise levels for each specific workmanship process, implementing the required safety measures where necessary, based on current regulations in force in the user's country, and equipping operators with personal protective equipment (ear plugs, headphones, etc.).

- Operating safety.

Protection systems have been included in the area of moving parts (belt, pulleys) for the operator's safety.

- Minimum maintenance requirements.

Simple routine maintenance will keep the machine running in perfect condition for many years.

- **All machine spare parts are readily available.**

Refer to the spare parts drawings and their description when ordering parts, specifying the machine type, part identification number and quantity of parts.

Use original spare parts only

- **NEVER remove the machine's safety protections during operation.**
- **Conforms to CE standards**

3 INSTALLATION AND ASSEMBLY



- **Lifting and handling operations must be carried out by qualified, specially trained personnel.**
- **Make certain the surrounding area is free of obstacles and that no one is in the immediate vicinity of the machine, or within the radius of the equipment being used for lifting, handling and/or transporting the machine.**
- **During all lifting and handling procedures, use extreme caution to avoid hazards to the machine people and property.**

3.1 LIFTING AND HANDLING

The machine arrives at its destination packed in a wooden crate, or wooden case or support. Lifting and handling operations can be carried out using a fork lift truck or pallet jack.



Before beginning any manoeuvres, free the machine of all parts that have not been firmly fixed to it due to transport or packaging requirements.

Check that the load bearing capacity of the lifting equipment used is suitable to the gross weight of the machine (see data in the TECHNICAL SPECIFICATIONS).

For storage purposes, keep the machine in a dry place, away from rain, snow or humidity.

Use a fork lift truck or pallet truck for machine handling operations:

- if the machine is installed on a pallet, or inside a crate or case (4 M10 holes are available at the base for anchoring the machine to a wooden pallet), insert the lifting forks on the fork lift truck (or pallet truck) underneath the pallet until they protrude at the rear by at least 15 cm;
- lift slowly and handle with maximum care, avoiding oscillations to a minimum, and position the machine in the pre-established area.

3.2 MACHINE PLACEMENT

The machine must be installed inside an industrial building that is well lit and ventilated, and has a solid and level floor capable of supporting the machine's weight, and not on a sloping floor.

The working environment should not be humid.

Set the machine in the most suitable position, according to production needs, positioning it in a place where there is an easy connection to the mains line, and where there is sufficient lighting to ensure that all parts of the machine are visible.

The lighting must comply with the laws in force in the country where the machine is installed, and should provide good visibility at every point, without creating dangerous reflections, allowing a clear view of the control panel and identification of the emergency buttons, without interfering with any equipment installed on board the machine.

Make sure the machine is perfectly set on the floor.

Do not use solvents such as gasoline and diesel fuel when cleaning the machine, since these substances can damage the paintwork and render it opaque, or produce rust on different parts.

3.3 INSTALLATION

- Remove the packing and check for any damage on the machine incurred during transport.
- Position the machine in a non-humid environment, on a stable non-sloping floor.
- Set a minimum clearance of 1 meter in order to allow for correct operation in safety conditions.
- Install the 4 anti-vibrating support feet supplied with the machine.
- Carefully clean the machine, removing grease from all non-painted parts.
- Lubricate the upper rocker arm guide support 3027 and the areas around the greasers 3051.
- Check to make sure the machine's voltage corresponds to the power supply and connect to a disconnecting switch.
- If the supply voltage does not match the machine's voltage, change the connections on the motor terminal block.

- Turn the main switch 3092 to ON position. Test the anvil heating system (hammer on request) using the SUNVIC temperature setting regulator 3095. Press the start button 3482 (I)
- Check the motor's correct direction of rotation by making sure the handwheel 112 turns in the direction indicated by the arrow on the pulley casing 1106. If the direction of rotation is incorrect, invert two phase wires on the power cable.
- The machine is now ready for operation.

3.4 CONNECTING THE MACHINE TO THE POWER SUPPLY



WARNING: THE ELECTRICAL CONNECTION, OPERATING CHECKS AND MAINTENANCE TO THE ELECTRICAL SYSTEM MUST BE PERFORMED BY QUALIFIED AND TRAINED PERSONNEL ONLY

The manufacturer recommends not connecting the machine to the power line until it has been correctly set in its working location. Prior to connecting the machine to the power line, check to make sure the electrical system meets the following power and safety requirements:

- Check to make sure the production plant's grounding and trunk line to which the machine will be connected are perfectly efficient.
- Make sure the trunk line to which the machine will be connected is protected upstream by a differential switch.
- The mains must be provided with an efficient neutral and ground line (equipotential grounding).
- Ensure the presence of fuses or circuit breakers against short circuits on every RTD cable conductor, except for the grounding.
- The electrical system must comply with CEI 64.8 (CENELEC HD 384, IEC364-4-41).
- Make sure the line voltage (V) and frequency (Hz) correspond to the machine's design specifications.
- If the voltage on the mains line is not identical with the machine's voltage, change the connections on the motor terminal and transformer.

Refer to the wiring diagrams annexed to this user manual for references.

The manufacturer is not liable for damage due to the machine's incorrect connection to the mains line or problems deriving from malfunctions to the mains line.

After correctly connecting the machine to the mains line, start up the machine and check the motor's correct direction of rotation by making sure the handwheel 112 turns in the direction indicated by the arrow on the pulley casing 1106.

If the direction of rotation is incorrect, invert two phase wires on the power cable (R-S-T or L1-L2-L3); do not intervene on the Neutral and Ground connections when cutting off the voltage.

The machine is supplied with an electric cable without a plug; this allows the machine to be set to the requirements of each country it is exported to.

4 STARTING UP THE MACHINE

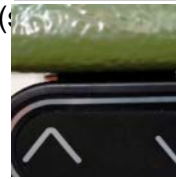
4.1 SETTINGS

Prior to starting up the machine, set the correct distance between the hammer tool 3038 and anvil 3039 according to the thickness of the material to be pounded (see point 4.2).



To start up the machine:

- Insert the plug of the button panel cable into the housing column (see figure 1).
- turn the main switch 3092 to the **ON** position.
- adjust the height of the machine by acting on the keypad
- set the anvil (anvil and hammer on request) to the desired temperature using the SUNVIC temperature regulator 3095.
- press the start button 3482 (I). Simultaneously with the machine's start-up, the orange pilot light will light up.
- proceed with the pounding operation, keeping the item resting against the anvil (on the BS3 Special version, against the guide pin 3064).



To stop the machine:

- press the stop button 3482 (O).

At the end of production, turn the main switch 3092 to the **OFF** position.



4.2 ADJUSTING THE POUNDING SETTING

Power off the machine.

Turn the rear handwheel 112 to set the hammer at its lower point.

Loosen the screw 6x20 UNI 5931 on the adjustment ring nut 3033.

Turn the adjustment ring nut 3033, keeping the hammer 3038 still to increase or decrease the distance between the hammer and anvil, according to the thickness of the material to be pounded.

Once the correct setting has been achieved, properly tighten the screw 6x20 UNI 5931.

BS3 STANDARD



COLLI FGB S.R.L.

BS3 SPECIAL VERSION

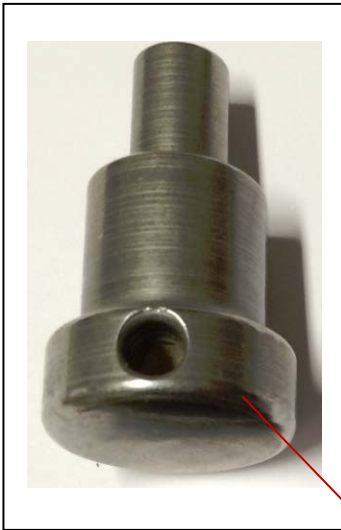


HAMMER
3066

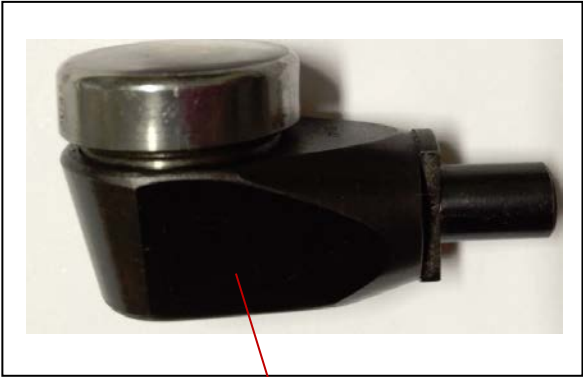


ANVIL
3063

BS4 Type VERSION



HAMMER
3043



ANVIL
3044

BS3 STANDARD option with hammer heating system



Hammer
resistance 3069

5 SAFETY DEVICES AND RESIDUAL RISKS

5.1 PREMISE

The machine's risk analysis and related considerations, included in this section of the manual, are based on the following notions:

- knowledge of normal operating conditions and the machine's expected usage, as specified in this user manual;
- the premise that the machine is designed to be used for pounding and ironing out creases on lasted footwear.
- the premise that machine operators have been suitably trained and made aware of specific risks.

The protective measures the production manager must provide to workers are: collective and individual.

5.2 INFORMATION ON RESIDUAL RISKS

In spite of the validity of the protection systems adopted by the manufacturer, the machine operator is nonetheless exposed to the following hazards:

- Contact with the pounding tool
- Contact with moving parts (belts, pulley)
- Ejected inserts from the tool
- Electrocution due to contact with live parts
- Risks linked to improper tool assembly
- Burn hazard through contact with mechanical parts heated to a high temperature, particularly in the material pounding area.



Never touch any moving part on the machine during its operation, for any reason, whether directly or indirectly.

Always make sure that the machine is disconnected from all electrical power sources before carrying out any cleaning, lubrication, maintenance, repairs, adjustments or part replacements.

The operator mustn't ever, for whatever reason, leave the machine unattended when in use.

5.3 PERSONAL PROTECTIVE EQUIPMENT

To prevent risks during the installation, adjustment, operation, routine and extraordinary maintenance, the manufacturer recommends the use of the following personal protective equipment:

- gloves for reducing vibrations absorbed by the machine operator and to handle and replace mechanical machine parts;
- protective safety non-slip footwear;
- eye goggles or a face shield against possible splinters during processing or subsequent machine cleaning;
- dust masks.



Clothing must be suitable in order to prevent the following hazards:

- entanglement, dragging, crushing, slipping and abrasion;
- the use of contact lenses is forbidden.

Furthermore, the machine operator must adhere to the following warnings:

- maintain the machine and work area in order and clean;
- provide suitable containers and/or demarcated areas for storing both work pieces and already processed pieces;

This type of machinery can be dangerous if not used appropriately.

We strongly recommend that the operator carefully follow all safety information.

All safety measures cited in this user manual are provided solely and exclusively in relation to the machine's correct uses, as authorized by the manufacturer. These uses refer to the procedures involving the machine's preparation, operation and maintenance.

It is forbidden to use the machine for work processes not permitted by the manufacturer.

It is forbidden to alter the machine and/or any of its parts without the prior consent of the manufacturer.

- do not use the machine if not under normal physical conditions.
- wear suitable clothing to avoid impediments and/or hazardous entanglement to/from the machine.
- wear personal protective equipment as required in this Instruction Manual and as pertaining to the operations to be performed.
- do not remove or alter the safety and warning signs affixed by the manufacturer on the machine.
- do not remove or circumvent the security systems on board the machine.

THE USE OF EAR PROTECTION DEVICES IS RECOMMENDED DURING WORK OPERATIONS.

5.4 SAFE WORKING PRACTICES

It is essential for operators to be:

- suitably trained on the machine's use, settings and operation;
- knowledgeable of factors that affect exposure to noise;
- informed of factors that affect exposure to dust, such as:
 - the type of material being processed;
 - the importance of local extraction (collection at source);
 - the correct adjustment of hoods, deviators, etc.

It is essential that:

- the pavement in the work area around the machine is level, properly maintained and free of loose materials, e.g. plastic and waste;
- suitable general or localized lighting is provided in the work area;
- raw materials and finished pieces are placed near the operator's normal working position.

It is essential that the operator:

- use personal protective equipment whenever necessary.

This can include:

- devices for hearing protection to reduce the risk of hearing loss;
 - respiratory protection to reduce the risk of inhaling hazardous dust;
 - gloves when handling the knife tools (knife tools should be stored in a special tool box);
- shut down the machine when it is left unattended;
 - report any defects or malfunctions to the machine, as soon as they appear;
 - adopt safe procedures for cleaning and maintenance, regularly remove plastic materials and dust to prevent a risk of fire;
 - follow the manufacturer's instructions on the operation, adjustments and repairs of the knife tools;
 - abstain from removing discarded pieces or other parts in the cutting area while the machine is operating;
 - make sure that all safety casings and other safety devices necessary for the machine's operation are in place, in good condition and subjected to proper maintenance.

5.5 CHECKING THE SAFETY DEVICES

WORK AREA: prior to beginning any activity, check that the work area and machine are clean and devoid of plastic materials and dust. Make sure the work area is properly illuminated and the material storage area and finished pieces area are within arm's length and in order.

MAIN SWITCH: the machine is equipped with a power ON/OFF switch that also functions as a safety device.

Periodically check that the main switch is in operating correctly.

PROTECTIONS: the machine is equipped with protections designed to prevent the operator from coming into contact with the machine's hazardous parts.

Periodically check to ensure the protections are undamaged and operating correctly.

5.6 RISK DUE TO NOISE EMISSIONS

The machine is designed to reduce noise emission at its source.
 The machine’s acoustic levels are listed in point 2.3 of the following report.

NOTE:

The noise emissions values indicated are emission levels and do not necessarily represent safe operating levels.

In spite of the fact that a relationship exists between emission levels and exposure levels, this cannot be used reliably to establish whether further precautions are necessary. The factors that determine the level of exposure to which workers are exposed include the duration of exposure, worksite characteristics and other sources of noise (overall number of machines, adjoining processes, etc.).

Furthermore, allowable exposure levels can vary from one country to another.

In any case, the information cited herein will enable the machine user to better assess the hazard and risk to which the operator is subjected.

The following rules must be meticulously adhered to in order to avoid increasing noise levels over time:

- periodically check and replace the work tools and related fastening devices;
- clean and lubricate machine parts at the recommended frequency.

5.7 RISK DUE TO VIBRATIONS

The machine is designed and built taking into consideration risks due to vibrations transmitted, and reducing such risks to a minimum, accounting for technical progress and the availability of equipment aimed at reducing vibrations, particularly at the source.

In accordance with levels established by Legislative Decree 81/08 and subsequent amendments, article 201, regarding vibrations transmitted to the operator’s arm and hand, i.e.:

Level of daily exposure $A(8) = 2.5 \text{ m/s}^2$	Limit daily exposure level $A(8) = 5 \text{ m/s}^2$
---	--

USE OF MACHINE BS3 8 hours/day

$T = 480 \text{ min/d}$	$A_{eq,w,14.32\text{m/s}^2}$
$A(8) = [(480 \times 4.32^2) / 480]^{1/2} = 4.32 \text{ m/s}^2$	
$A(8) = 4.32 \text{ m/s}^2$ value comprised between 2.5 m/s^2 and 5 m/s^2	

USE OF MACHINE BS3 4 hours/day

$T = 240 \text{ min/d}$	$A_{eq,w,14.32\text{m/s}^2}$
$A(8) = [(240 \times 13.65^2) / 480]^{1/2} = 3.05 \text{ m/s}^2$	
$A(8) = 3.05 \text{ m/s}^2$ value comprised between 2.5 m/s^2 and 5 m/s^2	

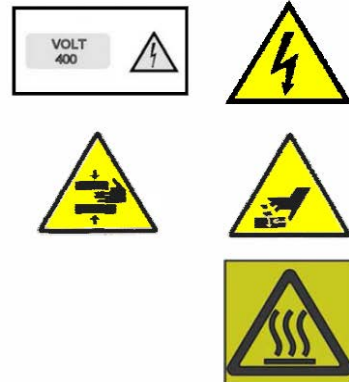
5.8 SAFETY NOTIFICATIONS



A safety label indicating the presence of live current is affixed to the electrical box.



Check to make sure that the images, colours and headings of all signs affixed to the machine are in perfect condition; any signs must be replaced promptly if worn out or unclear, notifying the production manager and/or supervisor, who will take appropriate action.



6 MAINTENANCE

On a weekly basis, lubricate the upper rocker arm guide support 3027 (see upper oil channel) and lubricate the greasers 3051.

Use "Q8 ROSSINI EP 1-2" or an equivalent lubricant.



- Prior to carrying out any maintenance, the operator must disconnect the machine from its electrical power source.
- Always wear personal protective equipment.

Adequate maintenance is a decisive factor towards obtaining optimal operating conditions and a long machine lifetime.
Follow the procedures and recommendations described in the user manual.

6.1 REPLACING THE TOOLS



ALWAYS WEAR PROTECTIVE GLOVES WHEN HANDLING TOOLS.
POWER OFF THE MACHINE BEFORE PROCEEDING WITH ANY TOOL REPLACEMENTS.

Periodically check the condition of the machine's operating tools and replace as required.



POWER OFF THE MACHINE BEFORE LIFTING THE PROTECTIVE CASING

7 TROUBLESHOOTING



WARNING: THE MACHINE MUST BE DISCONNECTED FROM ALL ELECTRICAL POWER SOURCES BEFORE CARRYING OUT ANY INTERVENTIONS

PROBLEM	CAUSE	SOLUTIONS
THE MACHINE DOES NOT START UP WHEN THE MAIN SWITCH 3092 IS TURNED TO THE ON POSITION	1- Check the connection to the mains line. 2- Check the fuses on the electrical panel.	1-Check the voltage. 2-Replace the fuses on the electrical panel.
THE MACHINE DOES NOT START UP WHEN THE START BUTTON 3482 (I) OR PEDAL ARE PRESSED	1- The main switch 3092 is not turned to the ON position. 2-Check the fuses or belt 3072 to make sure it isn't broken.	1- Turn main switch 3092 is not turned to the ON position. 2- Replace the fuses or belt 3072.

DIRECTION OF ROTATION OF THE HANDWHEEL 112 CONTRARY TO THE DIRECTION INDICATED BY THE ARROW ON THE PULLEY CASING 1106	1- Faulty electrical connection.	1-Invert two phase wires on the mains power cable.
UNSATISFACTORY POUNDING ACTION	1- Check the distance between the hammer and anvil. 2-Incorrect anvil temperature.	1- Adjust the distance between the hammer and anvil. 2- Set the anvil temperature.
THE ANVIL WON'T HEAT UP	1- Faulty SUNVIC regulator 3095 / fuses / transformer / static relay 3093. 2-Incorrect machine temperature.	1- Replace: SUNVIC regulator 3095, fuses, transformer or static relay 3093. 2- Check and set the temperature on the SUNVIC regulator 3095.
EXCESSIVE MACHINE NOISE	1- Worn out bearings and/or rocker arm 3029.	1- Replace the bearings and/or rocker arm 3029.

N.B. CONTACT QUALIFIED TECHNICIANS ONLY FOR ANY OTHER PART REPLACEMENTS, INTERVENTION OR REPAIRS.

8 SPARE PARTS AND MAINTENANCE

8.1 REPLACING THE ANVIL 3039

Power off the machine.

Unfasten the screw 6 x 35 UNI 5931.

Remove the anvil and replace it.



8.2 REPLACING THE HAMMER 3038

Power off the machine.

Remove the anvil (see point 8.1).

Hold the hammer still 3038 and simultaneously unfasten the tie-rod 3037.

Remove the hammer and replace it.

Fasten the tie-rod 3037.



8.3 REPLACING THE ANVIL RESISTANCE 3023

Power off the machine.

Remove the motor safety protection 40.

Disconnect the anvil resistance wires from the ceramic terminal 3023.

Unfasten the screws 8x30 UNI 5931 and remove the anvil support 3022.

Loosen the dowel 6x6 UNI 5923.

Remove the resistance 3023 and replace it.

Re-assemble all parts in reverse order (do not tighten the dowel 6x6 excessively).

8.4 REPLACING THE HAMMER RESISTANCE 3069 (OPTIONAL)

Power off the machine.

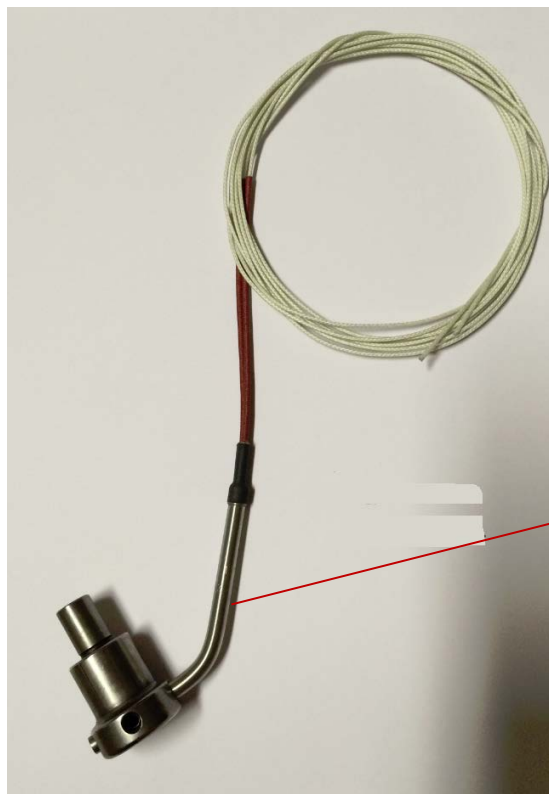
Remove the motor safety protection 40.

Disconnect the hammer resistance wires 3069 from the ceramic terminal.

Loosen the dowel 5x8 UNI 5923.

Remove the resistance and replace it.

Re-assemble all parts in reverse order (do not tighten the dowel 5x8 excessively).



Hammer
resistance 3069

8.5 REPLACING THE DRIVE BELT3072

Power off the machine.

Unfasten the handwheel112.

Remove the pulley protection 1106 and motor protection 40.

Replace the belt and re-assemble all parts.



8.6 REPLACING THE ANVIL (BS3 SPECIAL VERSION)

Power off the machine.

Loosen the dowel 3065 and remove the guide pin 3064.

Unfasten the screw 3061, then remove the anvil and replace it.

Re-assemble all parts, centring the guide pin 3064 the hammer hole.



8.7 REPLACING THE HAMMER (BS3 SPECIAL VERSION)

Power off the machine.

Remove the guide pin 3064 (see point 8.6).

Remove the anvil group, by unfastening the screw 6x50 UNI 5931.

Hold the hammer still and simultaneously unscrew the tie rod 3037.

Remove the hammer and replace it.

Fasten the tie rod 3037.



N.B. CONTACT QUALIFIED TECHNICIANS ONLY FOR ANY OTHER PART REPLACEMENTS, INTERVENTION OR REPAIRS.

9 CLEANING

Regular cleaning on all of the machine's main parts and the surrounding work environment translates into greater safety for the operator and an extended machine life time.



Prior to carrying out any cleaning on the machine make certain that all parts have cooled down.

AFTER EVERY WORK CYCLE AND AT THE END OF EACH WORK SHIFT

Carefully clean the machine and all its parts, meticulously removing any plastic material and dust. Use compressed air only when strictly necessary, making use of protective eye goggles and a face mask.

9.1 DISCONTINUING AND DISPOSING OF THE MACHINE

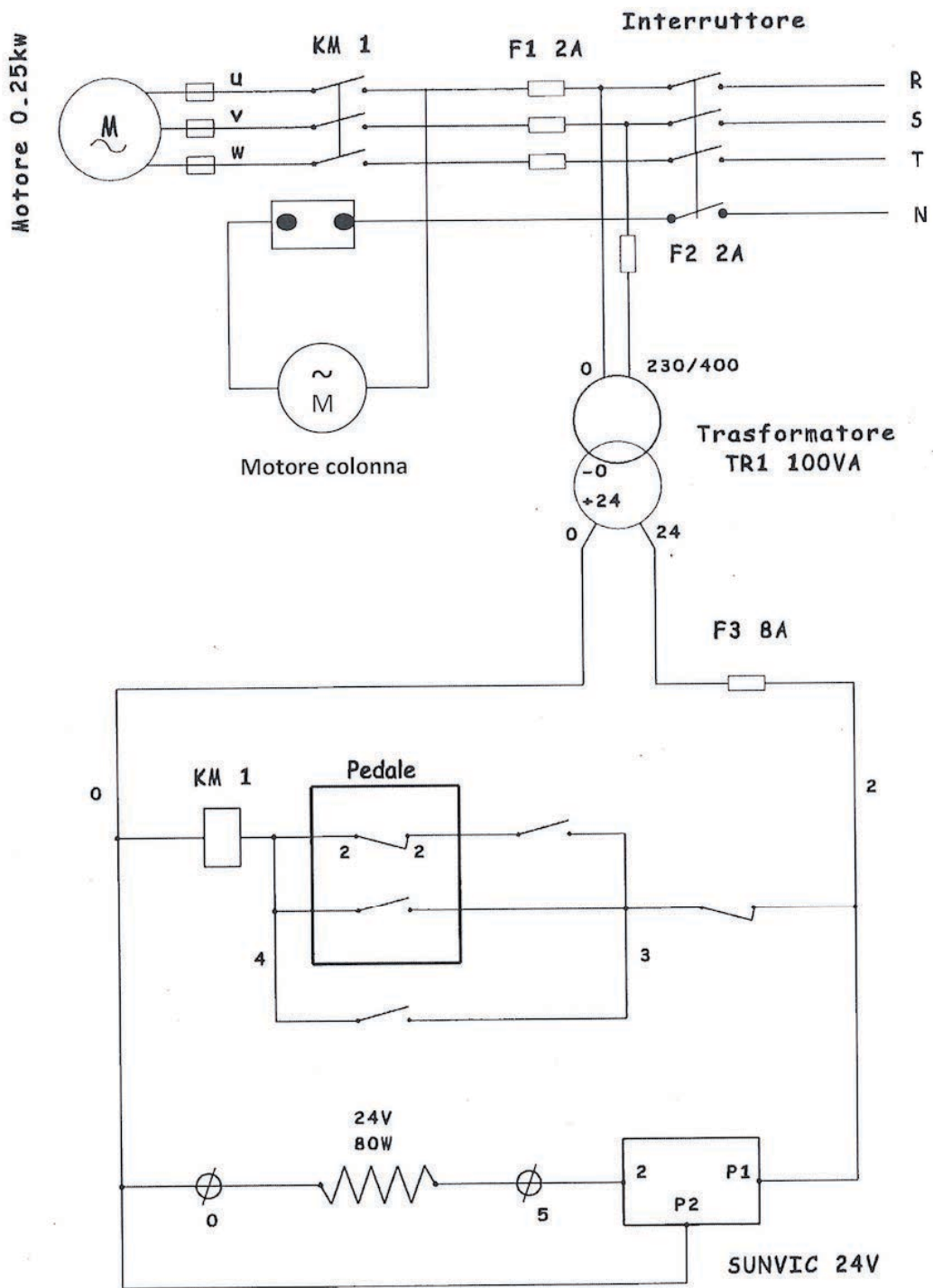
During the production process, waste substances or discarded scraps of material are generated which must be collected, recycled or disposed of in accordance with current laws and regulations in force in the country in which the machine is installed. The following substances are produced during the production process:

- raw material waste (plastic, sheathing, etc).

In the event that the machine needs to be dismissed, follow the instructions below strictly in order to protect the safety of people and/or the environment in which the machine and its parts may come into contact.

- Separate parts made of plastic, which must be sent to an authorized waste collection site in accordance with current regulatory standards.
- For metal parts on the machine, simply group by type of material to allow for the recycling of the materials making up the original machine.
- Remove all electrical components, so that they can be re-used after being checked or reconditioned.
- Do not dump non-biodegradable products and lubricant oils into the environment.
- Contact a qualified waste collection company for the recovery and disposal of materials (solid and liquid) in order to dispose of the various materials, in accordance with current laws and regulations in force.

10 WIRING DIAGRAM AND ELECTRICAL COMPONENTS



11 WARRANTY

The warranty certificate is valid for one year from the date of purchase.

During the warranty period, the Manufacturer will consequently replace any defective parts, charging the customer only the shipping costs.

The warranty shall not be effective if the machine is used improperly or is damaged during transport.

WARRANTY CERTIFICATE

The machine is designed and built according to technological and safety criteria, and tested at our manufacturing plant before being shipped.

COLLI F.G.B. S.R.L. guarantees the operation and quality of the machine, in accordance with the law, for a period of 12 months.

Any improper use and maintenance which fails to respect the provisions cited in this user manual, such as machine settings and adjustments not approved by the manufacturer, will invalidate the warranty.

Warranty conditions on the machine's correct operation are tied to the respect of all indications provided in this OPERATION AND MAINTENANCE MANUAL.

Any defective parts shall be replaced free of charge only after having verified the machine's correct usage.

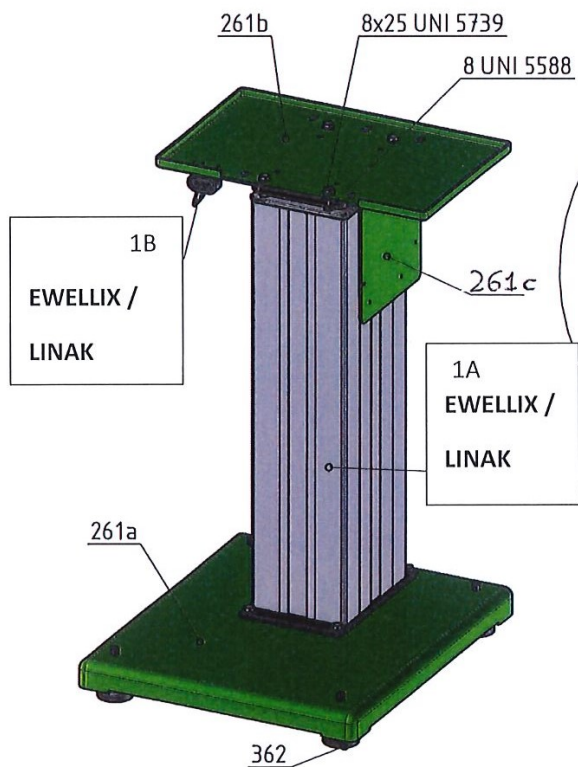
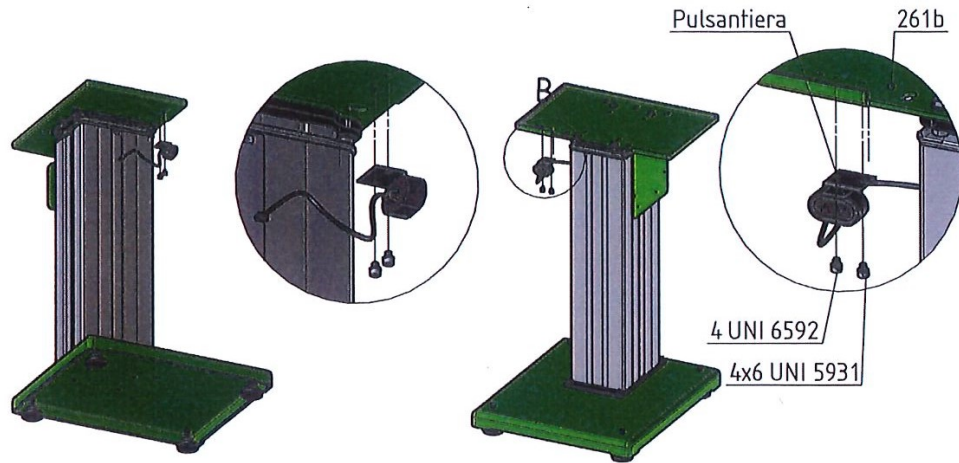
Any warranty claims and interventions shall be accepted solely upon presentation of the machine's serial number, as it appears on the identification nameplate.

Upon receiving the machine, check to make certain the packing materials have not been damaged.

Unless otherwise agreed, the manufacturer is not liable for damage caused during transport.

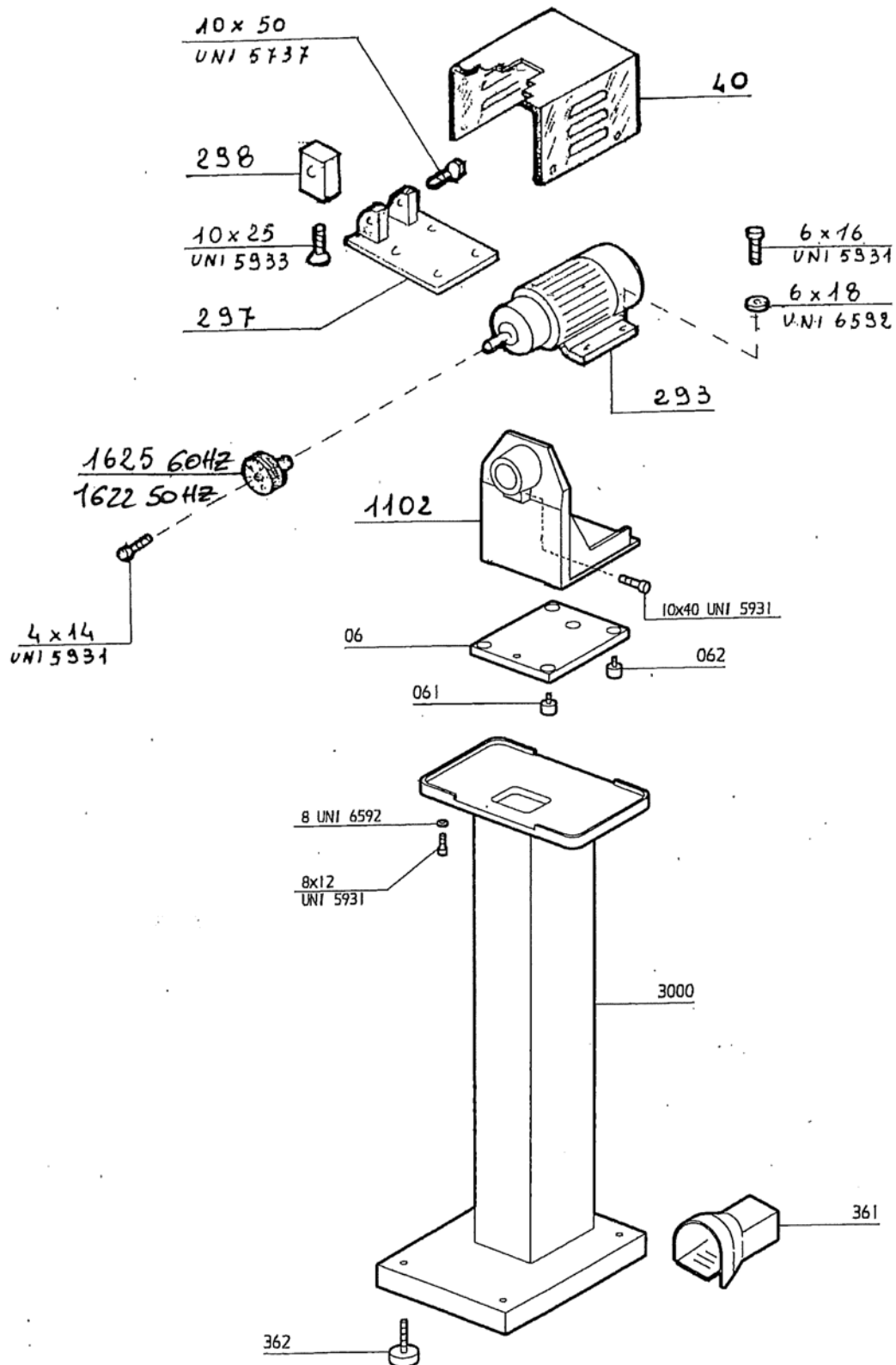
In the event that damages are apparent on the packaging, please contact the carrier immediately.

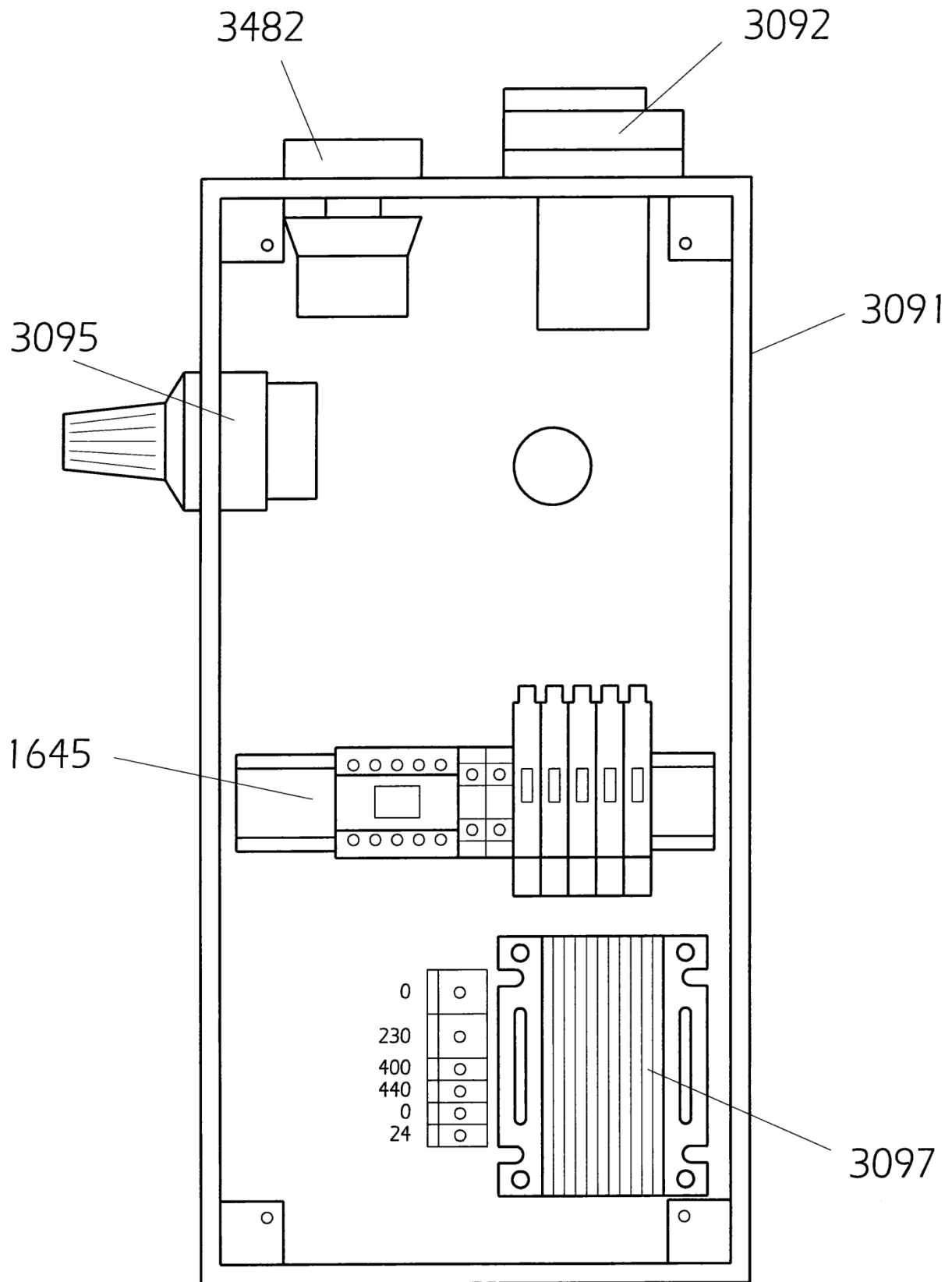
Our company will be available to provide the necessary support.



SPARE PARTS

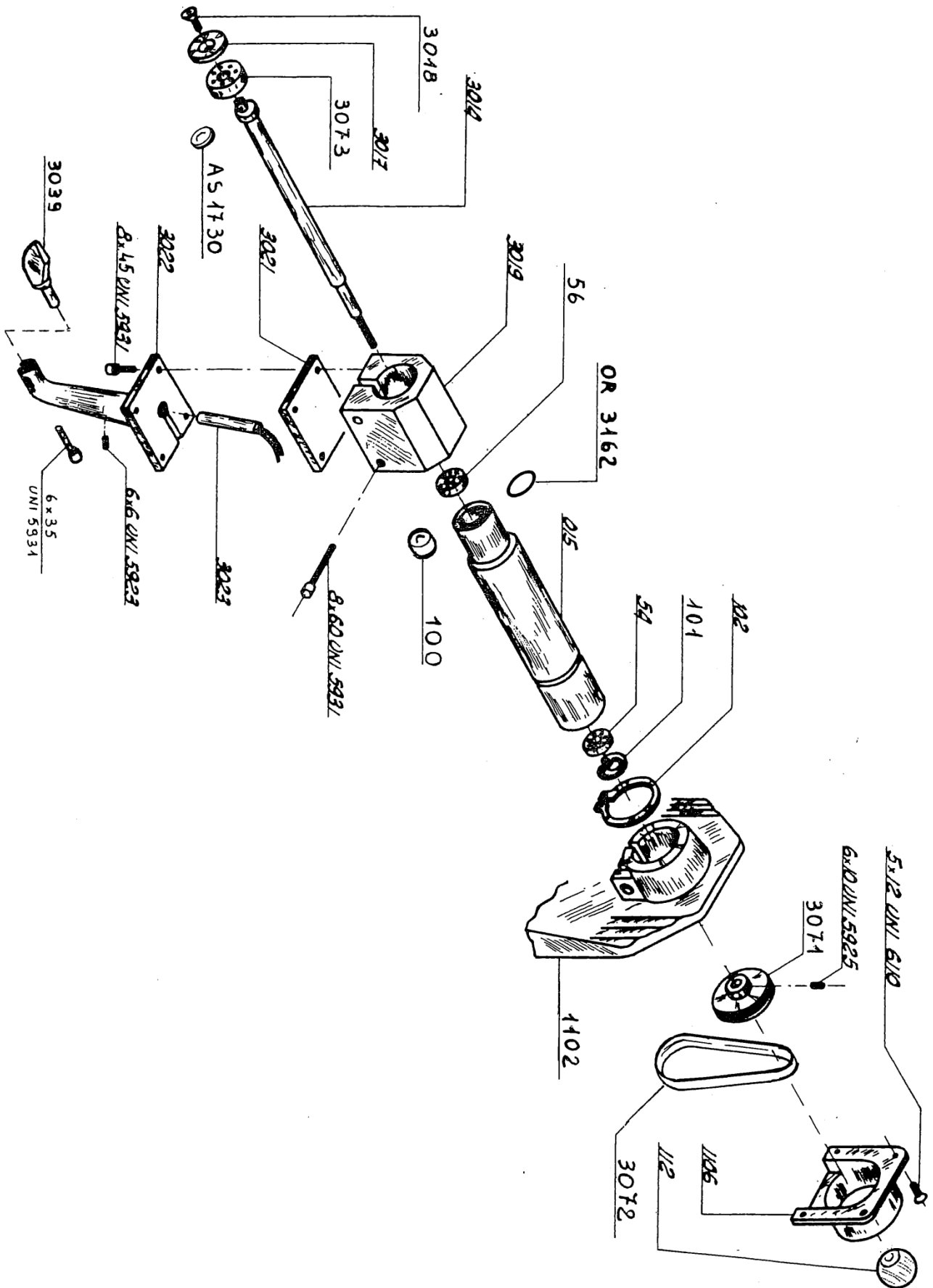
13a Column





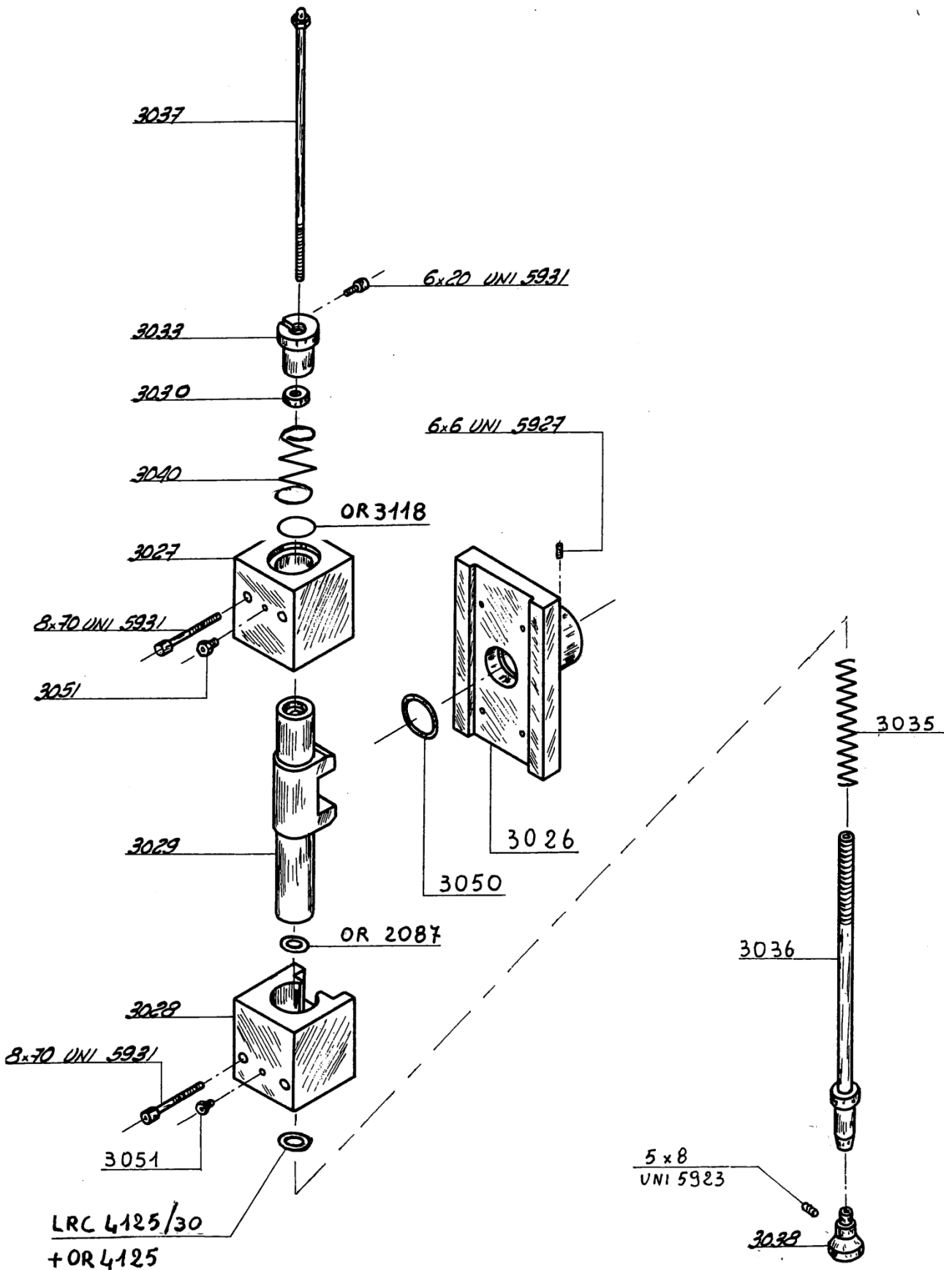
SPARE PARTS

13c Main shaft

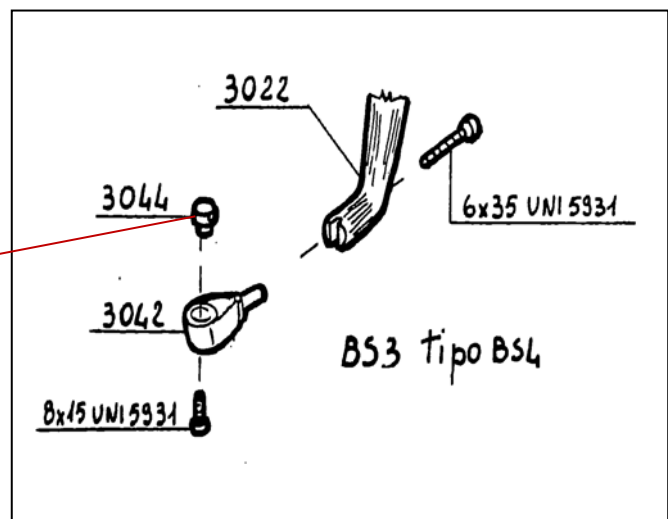
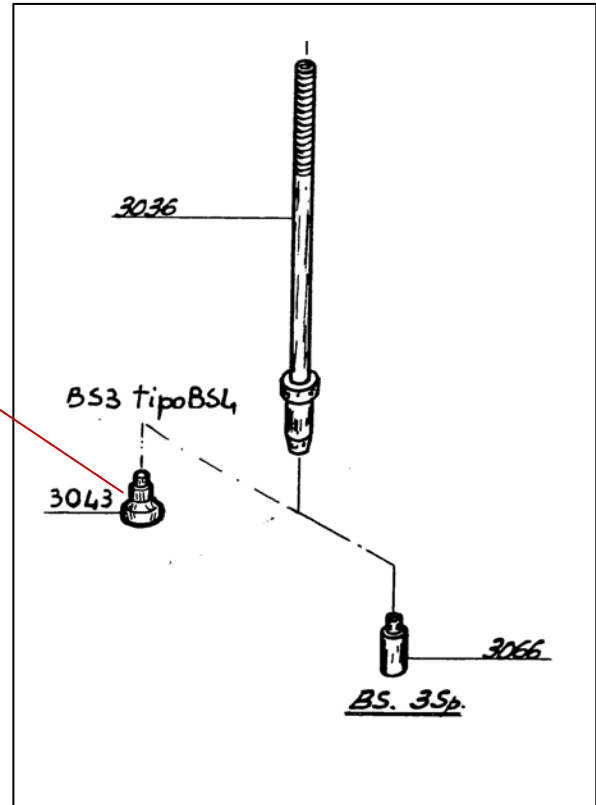


SPARE PARTS

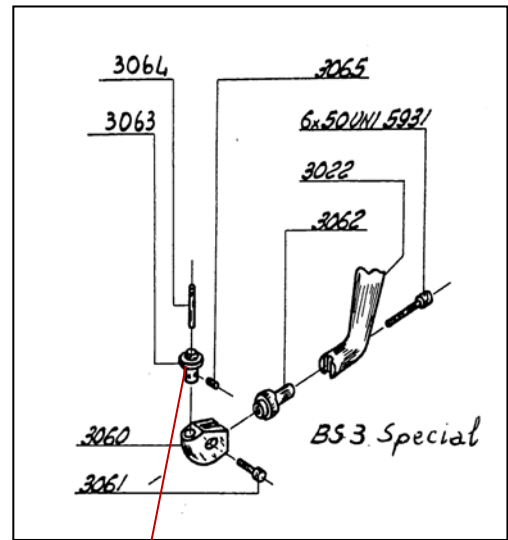
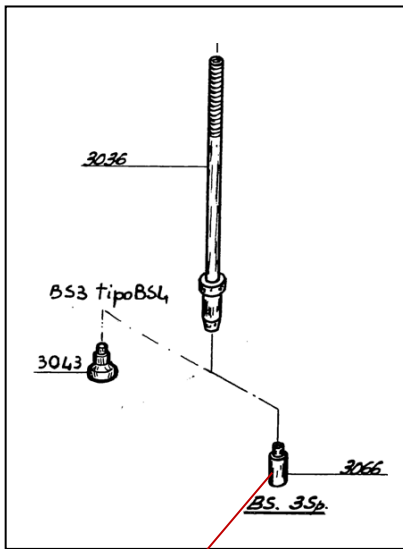
13d Rocker arm



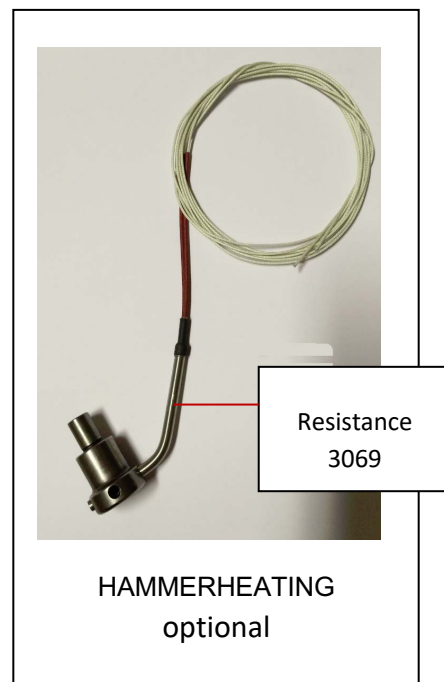
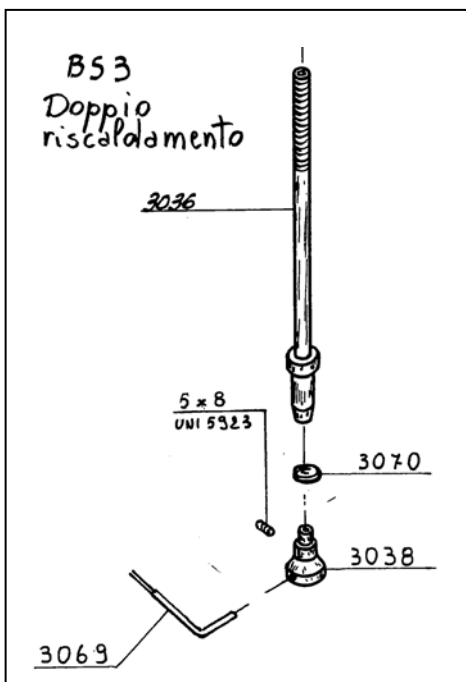
Version BS3 type BS4



Version BS3 Special



HAMMER HEATING - optional



14 LIST OF SPARE PARTS FOR BS3 POUNDING / IRONING MACHINE

PART	PAGE	DESIGNATION
1A	31	Telescopic column
1b	31	Pushbutton
06	32	Soundproof plate
015	34	Sleeve
061	32	Front anti-vibration rubber 55 Sh
062	32	Rear anti-vibration rubber 45 Sh
40	32	Motor protection
54	34	Bearing 6201 2RS
56	34	Bearing 3202
100	34	Washer MIM 15.30.7
101	34	Seeger ring Ø32 UNI 3654
102	34	Seeger ring Ø54 UNI 3653
112	34	Handwheel
261a	32	Telescopic column base
261b	32	Telescopic column table
261c	32	Electric cassette holder plate
293	32	Three-phase motor 0.25 kW
297	32	Motor plate
298	32	Motor support block
361	32	Pedal
362	32	Anti-vibration foot
1102	32.34	Base
1106	32	Pulley protection hood
1622	32	Motor pulley 50 Hz
1625	32	Motor pulley 60 Hz
1645	33	N.O. minicontact
3000	32	Column
3014	34	Main shaft
3017	34	Bearing washer

LIST OF SPARE PARTS FOR BS3 POUNDING / IRONING MACHINE

PART	PAGE	DESIGNATION
3018	34	Washer lock nut
3019	34	Anvil group support band
3021	34	Thermal spacer
3022	34.35.37	Anvil support
3023	34	Anvil resistance
3026	35	Hammer group support
3027	35	Upper rocker arm guide support
3028	35	Lower rocker arm guide support
3029	35	Rocker arm
3030	35	Shock absorber
3033	35	Adjustment ring nut
3035	35	Hammer shaft spring
3036	35.36.37	Hammer shaft
3037	35	Tie rod
3038	35.37	Hammer
3039	34	Anvil
3040	35	Rocker arm compensation spring
3042	36	Anvil support (type BS4)
3043	36.37	Hammer (type BS4)
3044	36	Anvil (type BS4)
3050	35	Washer OR 3181
3051	35	Lubricator
3060	36.37	Anvil support BS3s
3061	36.37	Screw BS3s
3062	36.37	Connector BS3s
3063	36.37	Anvil BS3s
3064	36.37	Guide pin BS3s
3065	36.37	Dowel BS3s
3066	36.37	Hammer BS3s

LIST OF SPARE PARTS FOR BS3 POUNDING / IRONING MACHINE

PART	PAGE	DESIGNATION
3069	37	Thermal resistance (optional)
3070	37	Thermal washer (optional)
3071	34	Shaft pulley
3072	34	Belt
3073	34	Bearing STO 15
3091	33	Electrical box
3092	33	Rear panel main switch
3095	33	SUNVIC 24 Volt thermoregulator.
3097	33	100 VA transformer
3482	33	ON / OFF button

N.B. WHEN REQUESTING SPARE PARTS, IT IS ESSENTIAL TO SPECIFY THE PART NUMBER, QUANTITY OF PARTS AND MACHINE TYPE - "BS 3"

