



SAVIOLI LELIO s.n.c. di Savioli L. & C.

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OPERATING AND MAINTENANCE HANDBOOK FOR

Bone bandsaw 200
(Segaossi 200)

anodized or painted

Bone bandsaw 220
(Segaossi 220)

painted

Bone bandsaw 2000
(Segaossi 220)

anodized or painted
with or without sliding
working table



WARNING! THIS HANDBOOK HAS TO BE READ CAREFULLY AND UNDERSTOOD CORRECTLY BEFORE USING THE MACHINE; KEEP IT ALWAYS AVAILABLE FOR AN EASY CONSULTATION. FOR ANY DOUBT, CONTACT THE MANUFACTURER IMMEDIATELY.

WARNING! ANY OPERATION NOT EXPLICITLY DESCRIBED OR NOT EXPLICITLY ENVISAGED IN THIS HANDBOOK IS ABSOLUTELY FORBIDDEN.

WARNING! Whoever uses or gives the machine to someone to use it, explicitly and irrevocably acknowledges that the Manufacturer cannot be held liable (from the civil and criminal points of view nor any other type of liability) in case of accident occurred in the presence of (and not necessarily “as a consequence of”) a breach of one -or more (no exclusions admitted)- of the rules envisaged in this handbook. The above has to be intended explicitly and irrevocably accepted with the startup and use of the machine.



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WARNING! ANY OPERATION NOT EXPLICITLY DESCRIBED OR NOT EXPLICITLY ENVISAGED IN THIS HANDBOOK IS ABSOLUTELY FORBIDDEN

WARNING! Whoever uses or gives the machine to someone to use it, explicitly and irrevocably acknowledges that the Manufacturer cannot be held liable (from the civil and criminal points of view nor any other type of liability) in case of accident occurred IN THE PRESENCE OF (and not necessarily “as a consequence of”) a breach of one -or more (no exclusions admitted)- of the rules envisaged in this handbook. The above has to be intended explicitly and irrevocably accepted with the startup and use of the machine.

The design of this machine features many safety measures to safeguard the operator, however there are hazards which cannot be wholly reduced through design and protection techniques; these hazards are called “non-eliminable residual hazards” and are present in a machine as hidden and potential dangers. Therefore, reading carefully this handbook and all the attached documents is mandatory as is paying the utmost attention to all the rules.

CONVENTIONS

If not otherwise specified, the terms “**machine**” or “**bone band saw**” mean the machine(s) equipped with the feeding cable and standard and/or customized accessories and produced by **SAVIOLI LELIO s.n.c. di Savioli L. & C.** as indicated by commercial names in the cover of this handbook or in the context of the different chapters of this handbook.

The term “**Manufacturer**” or the term “**SAVIOLI**” mean the Company:

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VAT and fiscal code IT 02274240403

“**dealer**” is the machine dealer authorized by the Manufacturer.

“**maintenance**”, if not otherwise specified, means both ordinary and extraordinary maintenance (repairs). Such repairs are extraordinary maintenance.



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TECHNICAL SPECIFICATION Bone bandsaw 200

	SINGLE-PHASE	THREE-PHASE
dimensions (± 1 cm) (LxWxH)	46 cm x 43 cm x 73 cm	46 cm x 43 cm x 73 cm
weight (anodized / painted)	32 kg / 34 kg	32 kg / 34 kg
working table (LxW)	fixed, 33 cm x 33 cm	fixed, 33 cm x 33 cm
max. cutting height	19 cm	19 cm
max. cutting width	18,5 cm	18,5 cm
meat pusher	falling	falling
blade guide and blade protection	Manual setting	Manual setting
portion device	Manual setting	Manual setting
saw blade material	steel for food	steel for food
saw blade length	1.520 mm	1.520 mm
saw blade width	16 – 20 mm	16 – 20 mm
pulleys engine diameter / channel	$\varnothing 20$ cm / $\varnothing 20$ cm	$\varnothing 20$ cm / $\varnothing 20$ cm
interaxle pulleys	Manual setting	Manual setting
electrical supply	230 V ~ 50 Hz	400 V 3~ 50 Hz
engine and its protection ($\pm 10\%$)	0,9 kW / 6,2 A thermal switch	1,1 kW / 2,8 A thermal switch
motor rotation speed	1.400 \pm 50 rpm	1.400 \pm 50 rpm
fuse on each engine supply line	T 12,5 A H $\varnothing 6,3$ mm x 32 mm	T 6,3 A H $\varnothing 6,3$ mm x 32 mm
building differential switch	set 7,5 A	set 4,0 A
type of braking	electromechanical	electromechanical
earthing	Yes (class I device)	Yes (class I device)
insulation class	IP 54	IP 54
environment at T temperature	5 °C < T < 45 °C	5 °C < T < 45 °C
environment relative humidity U_R	5% < U_R < 90%	5% < U_R < 90%
environment pressure	1 bar \pm 10%	1 bar \pm 10%
environment atmosphere	non-explosive	non-explosive
door material	painted or anodized aluminum	painted or anodized aluminum
base frame material	painted or anodized aluminum	painted or anodized aluminum
optional tripod material	painted steel (stainless steel upon request)	painted steel (stainless steel upon request)
optional tripod weight	10 kg and +67 cm	10 kg and +67 cm



TECHNICAL SPECIFICATION Bone bandsaw 220

	SINGLE-PHASE	THREE-PHASE
dimensions (± 1 cm) (LxWxH)	53 cm x 46 cm x 89 cm	53 cm x 46 cm x 89 cm
weight (anodized / painted)	36 kg / 38 kg	36 kg / 38 kg
working table (LxW)	fixed, 39 cm x 37,5 cm	fixed, 39 cm x 37,5 cm
max cutting height	27 cm	27 cm
max cutting width	21 cm	21 cm
meat pusher	falling	falling
blade guide and blade protection	Manual setting	Manual setting
portion device	Manual setting	Manual setting
saw blade material	steel for food	steel for food
saw blade length	1.830 mm	1.830 mm
saw blade width	16 – 20 mm	16 – 20 mm
pulleys engine diameter / channel	Ø 22 cm / Ø 22 cm	Ø 22 cm / Ø 22 cm
interaxle pulleys	Manual setting	Manual setting
electrical supply	230 V ~ 50 Hz	400 V 3~ 50 Hz
engine and its protection (±10%)	0,9 kW / 6,2 A thermal switch	1,1 kW / 2,8 A thermal switch
motor rotation speed	1.400 ± 50 rpm	1.400 ± 50 rpm
fuse on each engine supply line	T 12,5 A H Ø 6,3 mm x 32 mm	T 6,3 A H Ø 6,3 mm x 32 mm
building differential switch	set 7,5 A	set 4,0 A
type of braking	electromechanical	electromechanical
earthing	Yes (class I device)	Yes (class I device)
insulating class	IP 54	IP 54
environment at T temperature	5 °C < T < 45 °C	5 °C < T < 45 °C
environment relative humidity U _R	5% < U _R < 90%	5% < U _R < 90%
environment pressure	1 bar ± 10%	1 bar ± 10%
environment atmosphere	non-explosive	non-explosive
door material	painted aluminum	painted aluminum
base frame material	painted aluminum	painted aluminum
optional tripod material	painted steel (stainless steel upon request)	painted steel (stainless steel upon request)
optional tripod weight	10 kg and +67 cm	10 kg and +67 cm



TECHNICAL SPECIFICATION Bone bandsaw 2000

PF = Fixed working table PM = Sliding working table	SINGLE-PHASE	THREE-PHASE
dimensions (± 1 cm) (LxWxH) PF	54 cm x 47 cm x 89 cm	54 cm x 47 cm x 89 cm
dimensions (± 1 cm) (LxWxH) PM	54 cm x 47 cm x 89 cm	54 cm x 47 cm x 89 cm
weight (fixed work table) anodized / painted	39,5 kg / 42 kg	39,5 kg / 42 kg
weight (sliding work table) anodized / painted	44 kg / 46 kg	44 kg / 46 kg
fixed working table (LxW)	(L) 39 cm x (W) 37,5 cm	(L) 39 cm x (W) 37,5 cm
sliding working table laid on the fixed working table (without meat pusher)	fixed part: (L) 48 cm x (W) 48 cm sliding part: (L) 27 cm x (W) 29 cm	fixed part: (L) 48 cm x (W) 48 cm sliding part: (L) 27 cm x (W) 29 cm
max cutting height	PF: 27 cm / PM: 26,5 cm	PF: 27 cm / PM: 26,5 cm
max cutting width	21 cm	21 cm
meat pusher	PF: falling / PM L-shaped	PF: falling / PM L-shaped
protective blade guide	Manual setting	Manual setting
portion device	Manual setting	Manual setting
saw blade material	steel for food	steel for food
saw blade length	1.830 mm	1.830 mm
saw blade width	16 – 20 mm	16 – 20 mm
pulleys engine diameter / channel	$\varnothing 22$ cm / $\varnothing 22$ cm	$\varnothing 22$ cm / $\varnothing 22$ cm
interaxle pulleys	Manual setting	Manual setting
electrical supply	230 V ~ 50 Hz	400 V 3~ 50 Hz
engine and its protection ($\pm 10\%$)	0,9 kW / 6,2 A thermal switch	1,1 kW / 2,8 A thermal switch
motor rotation speed	1.400 \pm 50 rpm	1.400 \pm 50 rpm
fuse on each engine supply line	T 12,5 A H $\varnothing 6,3$ mm x 32 mm	T 6,3 A H $\varnothing 6,3$ mm x 32 mm
building differential switch	set 7,5 A	set 4,0 A
type of braking	electromechanical	electromechanical
earthing	Yes (class I device)	Yes (class I device)
insulating class	IP 54	IP 54
environment at T temperature	5 °C < T < 45 °C	5 °C < T < 45 °C
environment relative humidity U_R	5% < U_R < 90%	5% < U_R < 90%
environment pressure	1 bar \pm 10%	1 bar \pm 10%
environment atmosphere	non-explosive	non-explosive
door material	painted or anodized aluminum	painted or anodized aluminum
basic frame material	painted or anodized aluminum	painted or anodized aluminum
optional tripod material	painted steel (stainless upon request)	painted steel (stainless upon request)
optional tripod weight	10 kg and +67 cm	10 kg and +67 cm



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IDENTIFICATION

The identifying label of the machine can be adhesive or metallic (in both cases, it must not be removed). Make sure that the machine has a label or a plate with the following data (note: obviously, the data in brackets or in italic may change):



CE, WEEE, Savioli marks:

Manufacturer:

seat of the Manufacturer:

name of the model:

serial number:

year of manufacturing:

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Bone bandsaw mod. 200 *or* 220 *or* 2000

(alphanumeric, can vary according to the type)

2010 (or any next year)

In case of differences between the data of machine accompanying documents (technical specifications of this handbook, transport documents, commercial invoices, etc.) and all the other data indicated in machines labels or plates, absolutely avoid using the machine and immediately contact the Manufacturer by fax or e-mail according to the procedures described in this handbook.

The Manufacturer of the machine cannot be held liable, neither explicitly nor implicitly, for the machines whose accompanying documentation and identifying label or plate might lead to assume that undue changes to machine and/or doubts about originality of the machine and/or its parts have been carried out or are present.

FINAL USE, INTENDED USE

The machine described in this handbook is an electrically-driven band saw which is exclusively destined to meat cutting (and bones, if present) and similar materials (fish), both fresh and frozen, in non-domestic and rigorously professional environments (not temporary, not improvised butcher's shops and permanent kitchens, big communities), always in closed spaces and always abiding by the rules indicated in this handbook.

This is the only final use and intended use for which the Manufacturer's warranty exists and for which the safety measures have been studied.

WARNING! Any other use of the machine not explicitly envisaged in this handbook is forbidden and imply hazards; therefore, it goes against the safety rules in force and determines liabilities both for anyone who orders such different use and anyone who carries it out.



TRANSPORT AND HANDLING

The machine is delivered in a cardboard box on a pallet inside which there is an anti-crash foam polystyrene padding in suitably shaped shavings and/or parts in transparent plastic films with an integral padding with bubbles or balloons.

During transport, fix the box on the means of transport and make sure it cannot move during the trip.

As for the moving of the box in which the machine is packed, address to skilled staff if lifting and transport systems such as forklifts, bridge cranes, cranes, etc. are used (never use any rope because the box of the packing is not suitable to bear concentrated loads and has no anchoring points to prevent ropes from moving).

As for the transport and/or handling without considerable hazards, carefully consider the weight indicated on the box, its dimensions and the approximate position of its centre of gravity.

A single box with the product inside has a weight exceeding the limits allowed by the law and the health rules on the total safety lifting of objects of such weight and dimensions by only one person; therefore, the manual handling without the support of lifting means is forbidden by the Manufacturer and should it occur, it is at the sole risk of anyone ordering and/or carrying out such operation.

In the event, this prohibition is not complied with for any reason, at least a very robust person for each 20 kg÷30 kg (20 kg is the maximum value for boxes or big objects; 30 kg is the maximum value for boxes or big objects) would be necessary for the weight to lift.

The bearable force of transport means and the force which can be exercised by lifting means must be at least the double of the sum of the weights to lift.

As for the value of the weight to be lifted, please refer to the summarizing tables in the first pages of this handbook.

No foreign objects nor cables, pipes and any other thing which might hinder the operator carrying out the assembly have to be present in the handling area.



CONTENT OF THE PACKAGING

Make sure that the content of the box corresponds to the following list:

- (A) the maintenance handbook.
- (B) a spare saw blade wrapped in a paper packaging.
- (C) a machine supplied in this way:
 - with electrical feeding cable equipped with plug if having a single-phase electrical feeding (230 V ~ 50 Hz);
 - with electrical feeding cable equipped with plug if having a three-phase electrical feeding (400 V 3~ 50 Hz) for the Italian market;
 - with electrical feeding cable not equipped with plug if three-phase electrical feeding (400 V 3~ 50 Hz) for the non-Italian market;
 - ↳ in such a case, the plug suitable for the country of destination has to be chosen, supplied and assembled by a qualified electrician considering the respect of the procedure of the feeding phases (at the assembly, check the labels and the colors of cable wires; at the end of the assembly, check that the sense of rotation of both motor and pulleys is the one indicated by the arrow located close to them).
 - with assembled or disassembled working table according to dimensions, machine model, the packing and the transport means; this is not binding and can be decided on a case by case basis by the Manufacturer.

If the working table is disassembled and has to be assembled, proceed in this way: [1] unscrew the screws which fix the working table on the machine body in the bottom part of the working table; [2] lay the working table without the screws onto the machine body paying attention to the coupling of the housings of the screws and the working table with relevant housings on machine body; [3] screw such screws from the bottom side through the housings couples now coupled (in the lower part, the unthreaded screws of the machine body, while in the upper part the threaded ones from the bottom part of the working table) and ensure a strong tightening of the screws; [5] manually check the robustness of the assembly. The operation is very easy and does not require any graphics because it is simple and intuitive and relevant screws and housings are blatantly clear.

Generally, the machine is supplied in bright metal, however it can be supplied with different external surfaces upon customer's request but it must **always be compatible with food** as for example, painted with non-toxic varnishes and of the color chosen by the customer, or anodized (if made of aluminum) or plated (if made of steel).

In order to abide by the rules on food safety, it is absolutely forbidden to paint or treat machine surfaces in a different way than that indicated by the Manufacturer.



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VIEW OF THE MACHINE BONE BANDSAW 200 ANODIZED





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VIEW OF THE MACHINE BONE BANDSAW 200 PAINTED





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VIEW OF THE MACHINE BONE BANDSAW 220 PAINTED





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VIEW OF THE MACHINE BONE BANDSAW 2000 ANODIZED





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VIEW OF THE MACHINE BONE BANDSAW 2000 PAINTED





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VIEW OF THE MACHINE BONE BANDSAW 2000 SLIDING WORKING TABLE





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EC DECLARATION OF CONFORMITY

Savioli Lelio s.n.c. di Savioli L. & C.

having its seat in via della Repubblica, 21 – 47853 Coriano di Rimini – RN – Italia

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whose employee authorized to form the technical file is Mr. **Erge Ondedei** whose address for the purposes of this declaration is the seat of the firm **Savioli Lelio s.n.c. di Savioli L. & C.**

DECLARES THAT THE MACHINE

called (model and type): **Bone bandsaw 200 ; Bone bandsaw 220 ; Bone bandsaw 2000 fixed working table ; Bone bandsaw 2000 sliding working table ;**

serial number and year of manufacturing, both on the identifying label

description: **band saw (single-phase or three-phase, fixed or sliding working table);**

destined to: **processing of meat and similar substances;**

is the indivisible set of several parts which have not been designed nor manufactured to work independently and in a way which differs from the way in which they have been manufactured and arranged by the Manufacturer and they cannot be altered at all;

is in conformity with relevant rules of the 2006/42/CE Directive on “machinery”, as stated by the EC type certifications No. **MAC 1015088 AT 001** (Segaossi 200), No. **MAC 1015088 AT 002** (Segaossi 220), No. **MAC 1015088 AT 003** (Segaossi 2000 fixed working table), No. **MAC 1015088 AT 004** (Segaossi 2000 sliding working table) all issued on **2019-03-11** by ANCCP Certification Agency s.r.l. (Notified Body 0302)

complies with the safety targets as per Attachment I of the directive 2014/35/EC (Low Voltage Directive) on “electrical material to be used within certain limits of tension” and it has been manufactured in conformity with the following harmonized rule:

- **CEI EN 60204-1:2006 Safety of machines – Machines electrical equipment – Part 1: general rules.**

complies with the essential requisites as per Attachment I of 2014/30/EC Directive on “EMC” (“Electro-Magnetic Compatibility”); the fundamental rules considered are:

- **CEI EN 61000-6-3:2007 Emission for residential, commercial and light industry settings.**
- **CEI EN 61000-4-3:2007 Immunity to radiofrequency-irradiated electromagnetic fields.**
- **CEI EN 61000-6-1:2007 Immunity for residential, commercial and light industry settings.**
- **CEI EN 61000-4-11:2006 Immunity to gaps of tension, short interruptions and variations of tension.**

* * * * *

date (including the last two digits when the EC mark has been affixed): **2019.03.12**

Savioli Lelio s.n.c. di Savioli L. & C.

the head of technical department

Mr. Erge Ondedei



USE AND KEEPING OF THE HANDBOOK

The goal of this handbook aims at giving the essential information and the instructions to correctly and safely perform the activities linked to the service life of the machine from transport and assembly up to its removal.

The information contained in this handbook are the conditions of use envisaged by the Manufacturer; therefore, it is of utmost importance reading carefully and wholly understand this handbook and integrally and scrupulously comply with its instructions and advices before using the machine in order to ensure the regular working of the machine, its reliability and the safeguarding from damage to people and properties.

Therefore, the handbook has to be always kept in an easily accessible place which has to be close to the place where the machine is used to enable a prompt and easy consultation.

In order to guarantee the use of the handbook, the place of conservation must be dry, free of dust, clean and shielded against insects or other animals or bad weather or other agents which could damage it.

If further copies of the handbook are necessary, please contact the Manufacturer who will promptly send them.

The Manufacturer always reserves the right to introduce the changes he deems to be suitable for the manufacturing or relevant use and maintenance handbooks with no obligation as for the updating of already supplied equipment and handbooks except for the cases which the laws in force explicitly envisage as compulsory.

The machine has not been designed to be installed or repaired or disposed by non-professional operators and therefore any assembly, repair and disposal has to be exclusively performed by qualified and trained staff. Under their responsibility, authorized dealers can address you to one they trust.

The Manufacturer declines any and all liability for any (direct and/or indirect) damage (to people and/or properties) stemming from the incorrect use and/or maintenance of the machine.

The electrical layouts and any other accompanying document are integral parts of this handbook and therefore they have to be kept and read with care.

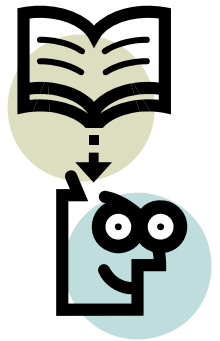
If doubts about the machine rise or these instructions are not clearly understandable or you are unable to trace the necessary information in this handbook, stop using the machine and immediately call the Manufacturer (through the phone numbers and/or fax and/or the e-mail indicated on the letterhead of this handbook) who will promptly reply.

To this end, you are kindly requested to anticipate us by e-mail and/or fax your requests and details together with a phone and fax number and/or e-mail where we can send the written instructions which might become necessary.

Such customer service is free and operates from Monday to Friday (not on bank holidays or company holidays), 9:00-12:00 and 14:30-17:30 (Italian time); however, the number is not a “free toll” and therefore the cost for phone or fax connection is at your charge according to the rates of your Telephone Service Provider without higher costs for us.



WARNING! Do not use the machine before you have read, understood and memorized this handbook, the warnings and/or all pictograms put on the machine as well as any adding and correction and any other information, instruction, explanation which the Manufacturer and/or his technical and commercial network will give you in any way (e-mail, fax, website, letter).



WARNING! Do not use the machine in a way which differs from what stated in this handbook and/or in the warnings and/or in pictograms put on the machine because this might imply hazards for the life of persons and the integrity of materials located nearby.

- The Manufacturer and the dealer cannot be held responsible for the consequences stemming from behaviors which are not in conformity with those envisaged in this handbook and/or warnings and/or pictograms on the machine.
- The non-compliance with the instructions indicated in this handbook and/or warnings and/or pictograms on the machine implies the decadence of any form of explicit and implicit warranty and can also have legal repercussions in case of accident.



WARNING! Do not alter the machine and its assembly system in any way (neither a minimum change is allowed) and remember that **any change**:

- is a breach of the laws in force and might have a strong criminal repercussion in case of accident both for the person who carried out the change and the person who ordered it;
- any explicit and/or implicit warranty expires;
- relieves the Manufacturer and the dealer from any liability concerning the direct and/or indirect consequences.



WARNING! Never damage or alter any device of the machine since all devices, both general and specific for the safety, are directly or indirectly necessary for your safety.



WARNING! Any use not explicitly allowed by the Manufacturer and herein envisaged is absolutely forbidden and may imply hazards; therefore, it is in breach of safety rules in force and determines the liability both for the person who gives the instruction and the person who carries it out.



WARNING! Although several safety measures have been envisaged, in general there exist dangers which cannot be totally reduced through the design and the safeguarding techniques. Such dangers are called “*non-eliminable residual hazards*” and are present as a hidden potential danger: therefore, reading carefully and understand this handbook and all the warnings and the pictograms on the machine is mandatory as well as is the scrupulous complying with all the instructions, with no exclusions.



ATTENZIONE

- E' OBBLIGATORIO LEGGERE IL MANUALE DELLE ISTRUZIONI D'USO IN DOTAZIONE ALLA MACCHINA PRIMA DI EFFETTUARE QUALSIASI MANOVRA !!!
- READ THE INSTRUCTION MANUAL OF THE MACHINE BEFORE BEGINNING ANY OPERATION
- LIRE ATTENTIVEMENT LE MANUEL D'UTILISATION JOINT A LA MACHINE AVANT D'EFFECTUER TOUTE SORTE D'OPERATION



WARRANTY

The warranty can be exerted through the retailer (therefore it is exerted by the Manufacturer only when he is the dealer of the final user) and

- ❑ it always starts from the date when the machine is delivery by Manufacturer's authorized retailers and lasts for a maximum period of 12 (twelve) months since the machine is exclusively destined to professional users;
- ❑ it guarantees the free replacement of the pieces which might break or abnormally wear due to assessed faults of design, supply, construction, assembly which can be attributed to the Manufacturer;
- ❑ the request for a free intervention has to be directly addressed to the Manufacturer or the dealer where the machine has been purchased;
- ❑ as for the repair (both free of charge and not), the machine has to be put in safe conditions (in the original packing or in another robust and padded packing suitable for transport), wholly at charge of the person requiring such repair at Manufacturer's seat or at the seat of the authorized dealer where it has been purchased or at the seat of the technicians entrusted with such service or who have been authorized by the Manufacturer to perform the repair (both free of charge and not);
- ❑ possible faults in planning, supply, construction, assembly, appearance, functioning, training which can be attributed to the Manufacturer have to be definitely notified to Manufacturer by registered letter with return receipt to send to the registered office within the end of the day following their detection and have to be immediately made known even by fax and/or e-mail in order to avoid further damage and/or accidents; **NOTA BENE:** the non-fulfillment of these rules releases the Manufacturer from the consequences of further damage and/or accidents subsequent to delayed or omitted communications;
- ❑ **NOTA BENE:** for any civil claim, the Court of Rimini (RN) – Italy is the sole competent place of jurisdiction. This has to be explicitly and irrevocably accepted with machine's startup and use.



WARRANTY EXCLUSIONS

WARNING! The warranty of the Manufacturer **NEVER INCLUDES:**

- ❑ the replacement of the machine after a service required for a failure;
- ❑ the reimbursement for the working hours used by staff not directly entrusted by the Manufacturer to carry out services and/or repairs;
- ❑ the reimbursement for consumables and/or rent of equipment and/or purchase of equipment to carry out services and/or repairs by staff not directly entrusted by the Manufacturer;
- ❑ the reimbursement for costs and transport (and withdrawal) of the machine to (from) the seats stated or authorized by the Manufacturer for the application of the warranty (namely Manufacturer, retailers, authorized service centers). In short, the transport and withdrawal of the machine to and from the seats where the warranty applies are wholly at charge of the person requiring the free repair in warranty;
- ❑ the free supply of necessary packing to transport the repaired machine if it has been delivered without the original packing.
- ❑ the reimbursement for damaged or destroyed possessions or goods;
- ❑ the reimbursement for (direct or indirect) loss of profit and/or service interruption and/or (direct and indirect) expenses of any kind (non-comprehensive example: expert's report and legal expenses) and/or (direct or indirect) penalties and/or (direct or indirect) damage having a commercial and/or corporate image nature due to the interruption of machine functioning and/or other equipment and/or machines and/or manufacturing lines working together with this machine and/or subsequent to damage or destruction of things, goods in these equipments and/or machines and/or lines;
- ❑ damage caused by the unsuitability of the environment where the machine is located (non-comprehensive example: humidity or temperature or electromagnetic fields or dirt which exceed the strictest limits established by this handbook and those established by law);
- ❑ phenomena which do not depend on the normal functioning of the machine (non-comprehensive example: atmospheric electric discharge, power stress, fire, flooding, etc.);
- ❑ defects and/or failures caused by materials or equipments realized according to a project or an idea of the buyer/user, defects depending upon the wrong use of the machine by anyone and those defects which appear after changes carried out on the machine without the written authorization of the Manufacturer;
- ❑ defects and/or failures in case of non-original pieces manufactured by the Manufacturer of the machine here described, notwithstanding their equivalence;



WARRANTY EXPIRATION

WARNING! The warranty of the Manufacturer **COMPLETELY EXPIRES:**

- ❑ if any rule, instruction, recommendation, warning, prohibition envisaged by the Manufacturer and/or by his commercial network in any form (oral, written, by phone, fax or e-mail, on paper, electronic, magnetic, optical, audiovisual supports, etc.); in particular, if any rule of this handbook is infringed;
- ❑ with the improper or unreasonable use of the machine, though not envisaged and/or not explicitly forbidden by the Manufacturer;
- ❑ if the machine is modified in any way, even slightly;
- ❑ if non-original spare parts or accessories of the Manufacturer of the machine -independently of their possible technical or functional equivalence or equivalence of another type- are assembled;
- ❑ if the machine is modified, without the written approval of the Manufacturer, even if this would occur after recommendations and/or orders of public or private authorities for control and/or prevention;
- ❑ if the machine is repaired by staff who is not directly authorized by the Manufacturer; inexperienced staff and unauthorized staff must not perform any repair or extraordinary maintenance;
- ❑ if the damage to the machine is attributable to carelessness and negligence;
- ❑ if the machine has not been regularly purchased and paid according to contractual agreements existing with the Manufacturer and/or with the network of his authorized retailers;
- ❑ if there is no regular invoice or fiscal receipt proving the purchase;
- ❑ in particular, any missed or delayed payment implies the expiry of the validity of the warranty granted by the Manufacturer for the whole period of the missed or delayed payment;
- ❑ the periods relevant to the missed or delayed payment cannot be recovered after the settlement of the debt; in brief, the warranty of the Manufacturer expires at the envisaged date;



SURVEILLANCE OF THE MACHINE

The machine must not be used by persons under age of 18 (eighteen).

The use of the machine is forbidden to people with disability and/or temporary and/or permanent psychic weakening since the machine is designed to be exclusively used by people having all their psycho-physical virtues.

People with peculiar stress and/or weakening, even though they do not depend on blatantly clear and/or certified illnesses, have to be considered as lacking all the usual and necessary psycho-physical virtues for the safe use of machine's controls.

People under the effect of alcohol, psychotrope drugs, narcotics (soft and heavy drugs) must not even approach the machine.

The machine has to be used by one (1) operator who is well-acquainted of its functioning. The simultaneous use of the machine by two or more operators, though skilled ones, is not allowed.

The machine is not destined to non-professional user, therefore all activities have to be only performed by professional staff properly **trained** and **qualified**: use and maintenance for butchers; repairs carried out by technicians; dismissal by relevant operators.

If the machine is left with no direct surveillance of the person in charge (examples: end of shift; weekend; holidays, bank holidays and permissions; absence for any reason), never leave it switched on and connected to the power line though the drive is not running, to avoid the useless consumption of power and for safety reasons.

All the above circumstances do not depend on the Manufacturer and the person in charge of the machine in the environment where it is installed has to take care of them.

At the end of each shift, the machine has to be switched off and put in the emergency state by pushing the red pushbutton. If the control board is equipped with a safety key for the startup (optional device), the operator must remove such key and keep it carefully without giving it to anybody else.

The machine must never be used, even occasionally, by staffs who have not been trained and who are not formally authorized. If the operator is not trained, the supervision of a qualified operator acting as a trainer is necessary.

Remind anyone using the machine that diligence and prudence during the use avoid accidents and increase working safety.

The machine is supplied with guards and safety devices which must not be removed or modified; the person in charge of safety and the machine operator must supervise so that the machine is always equipped with original guards and safety devices.





PERSONAL PROTECTIVE EQUIPMENT

PERSONAL PROTECTIVE EQUIPMENT IN CONFORMITY WITH CURRENT RULES: all the following personal protective equipment (PPE) has to be in conformity with relevant technical rules in force (Directive no. 89/656/CEE and following amendments and updates) and therefore has to be EC-marked and have relevant declaration of conformity which usually refers to specific European (EN) technical rules of the harmonized type. The operators must always inform the employer, manager and/or representative of the anomalies in the operation or characteristics of the use of personal protective equipment used and/or in conformity with the rule.

HEAD: the use of a cap to keep the hair gathered is mandatory in order to avoid entanglement within the moving elements; for hygiene reasons, the cap must always be clean and with no dust and must be able to retain the hair of the operators though they are long and/or voluminous. The hair might get entangled and cause serious accidents.

EYES: to protect the eyes from bone splinters and/or accidental blade breaking, the wearing of safety, integral or separated glasses respect to devices to protect the respiratory tract (nose, mouth) is mandatory.

NOSE, MOUTH: to protect the respiratory tract from toxic emissions and/or miasmas of meat and similar substances under processing and at the same time for the hygiene of meat and similar substance under processing as for possible illnesses which the operator could carry, the wearing of filtering masks is mandatory; they have to be replaced with the frequency recommended by the Manufacturer and in any case as soon as they show signs of dirt or partial clogging; they have to be replaced after 2 (two) working days.

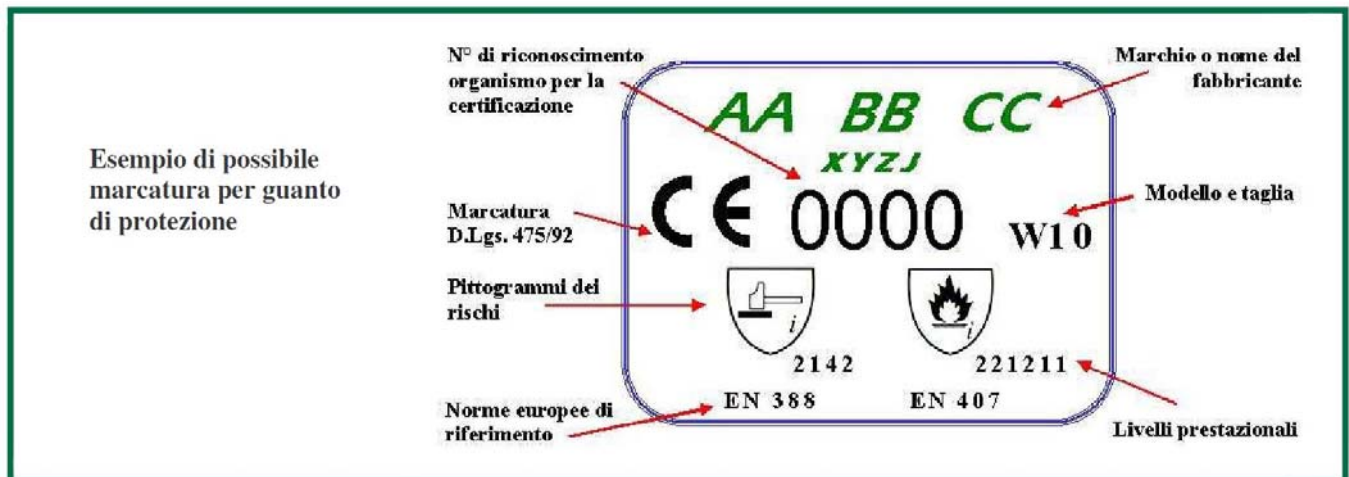
EARS: Use headphones or earplugs to protect your ears.

LIMBS AND BODY (what not to do): never wear rings, wrist watches, bracelets, jewels, torn dresses or with loose parts, scarves, ties, belts not entirely inserted into relevant loops of the trousers; they might get entangled and cause serious accidents.

LIMBS AND BODY (what to do): for the superficial protection of both bust and limbs, always wear overalls or coats with elastic cuffs; both have to be wore well tight, without leaving them open or just partially tight nor with loose parts; tight the sleeves around the cuffs and always keep your hair -especially if long or voluminous- gathered in a cap.

FEET: it is mandatory to wear safety shoes with steel tips to protect the feet from the fall of heavy objects (the machine itself or its spare parts or big blocks of frozen food).

HANDS: to protect your hands, wear EC-marked protective gloves to be in conformity with the European EN 388 harmonized rule (protective gloves against mechanical hazards) since they must suitably protect hands against abrasion, cuts and tears and perforations, too. The following is an example of their marking.



Example of a possible marking for a protective glove

Identification number of the certifying body

Brand or name of the manufacturer

Marking according to Leg. Decree no. 475/92 Model and size

Pictographs on hazards

European rules of reference

Performance levels

PROTECTIVE GLOVES AGAINST MECHANICAL HAZARDS (EN 388)

First of all, the gloves must fulfill the requisites of EN 420 rule while the EN 388 rule establishes the compulsory requisites and the performance levels (PL) which the gloves must have; the PL are indicated in the pictograph through a sequence of characters and each indicates a specific PL. They are formed by:

- abrasion resistance (PL from 1 to 4) 1st character under the pictograph of the hammer
- cutting resistance (PL from 1 to 5) 2nd character under the pictograph of the hammer
- tear resistance (PL from 1 to 4) 3rd character under the pictograph of the hammer
- perforation resistance (PL from 1 to 4) 4th character under the pictograph of the hammer

Gloves having the following characteristics (not necessary for the machine described in this handbook but reported for completeness) can also be obtained:

- antistatic nature (volume resistivity in W cm)
- impact cutting resistance (falling height: 150 mm - UNI EN 1082/1)

The gloves to be used according to EN 388 must have the following PL, Performance Levels:

abrasion resistance: LP = 3 or 4

cutting resistance: LP = 5

tear resistance: LP = 3 or 4

perforation resistance: LP = 2 or 3



Esempio di pittogramma su guanto per protezione meccanica

3 5 3 2 (Performance Levels)

ATTENTION: depending on the type of machining to be carried out, the employer shall choose the most appropriate type of gloves among those listed on characteristics of LP

ATTENTION: many types of metal mesh gloves are only suitable for the use of cutting tools moved by human force (knives, scissors, axes); their use with motorized band saws is forbidden due to the risk of entanglement in the teeth of the band saw blade dragged with force and speed by the engine and, therefore, serious wounds to the hand;



DUTIES OF THE EMPLOYER ON PERSONAL PROTECTIVE EQUIPMENT

➔ The employer must **put** such personal protective devices of the relevant type and size (caps, anti-noise headset, masks for the breathing system, overalls and coats, shoes and gloves) **at each operator's disposal** (assigned to use or clean the machine) **for free**.

➔ The employer must **check** that each operator assigned to use or clean the machine is wearing all personal protective devices of the relevant type and size.

Besides (contemporarily) the gloves in conformity to EN 388 as per previous points, the operators assigned to use and/or clean the machine can also wear (internally in contact with the skin) gloves made of cotton or other comfortable material to absorb the sweat produced by the skin with the use of gloves due to limited air circulation. Such gloves (to be put in contact with the skin before wearing the gloves in conformity to EN 388) make the internal microclimate comfortable for hands' skin wearing the protecting gloves which are in conformity to EN 388.

The employer must **put at free disposal of each operator** assigned to use or clean the machine even the above gloves (in natural cotton or other similar material having better performance) of the relevant type, size and quantity.

NOISE AND DUTIES OF THE EMPLOYER

The machines described in this instruction and maintenance handbook produce an aerial noise in the place of work (that is a continuous level of acoustic pressure of the emission weighted equivalent "A") lower than or equal to:

- 82 dB(A) \pm 1 dB(A) vacuum;
- 88 dB(A) \pm 1 dB(A) in the dry cutting of bones particularly big and strong;

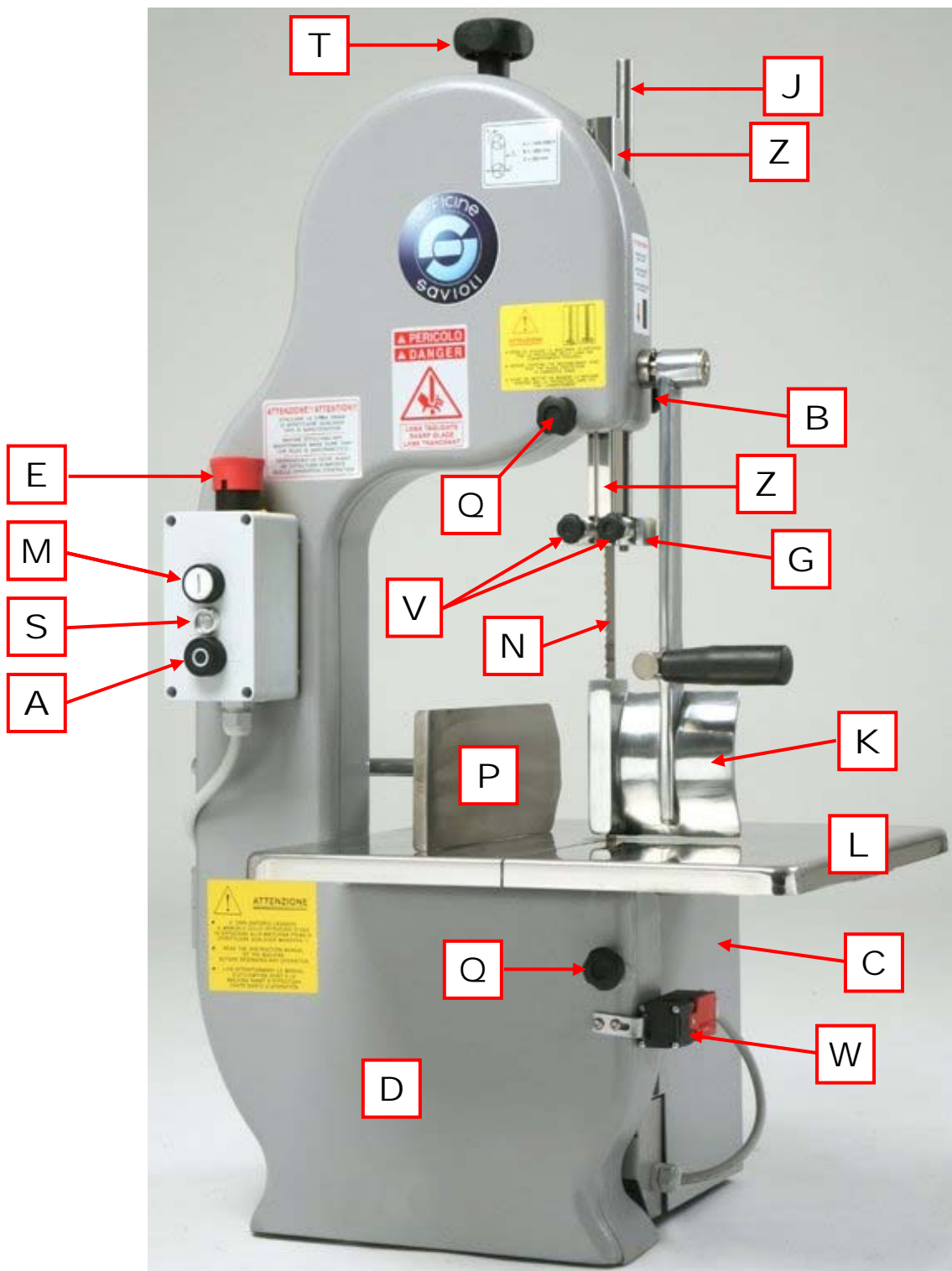
The use of new blades or very sharp blades and water-lubrication of the cutting area of bones contribute to reduce the noise.

Other factors which affect the hazards linked to noise exposure in the place of work are the length of exposure, the characteristics of the buildings, the noise of adjacent machines, etc.

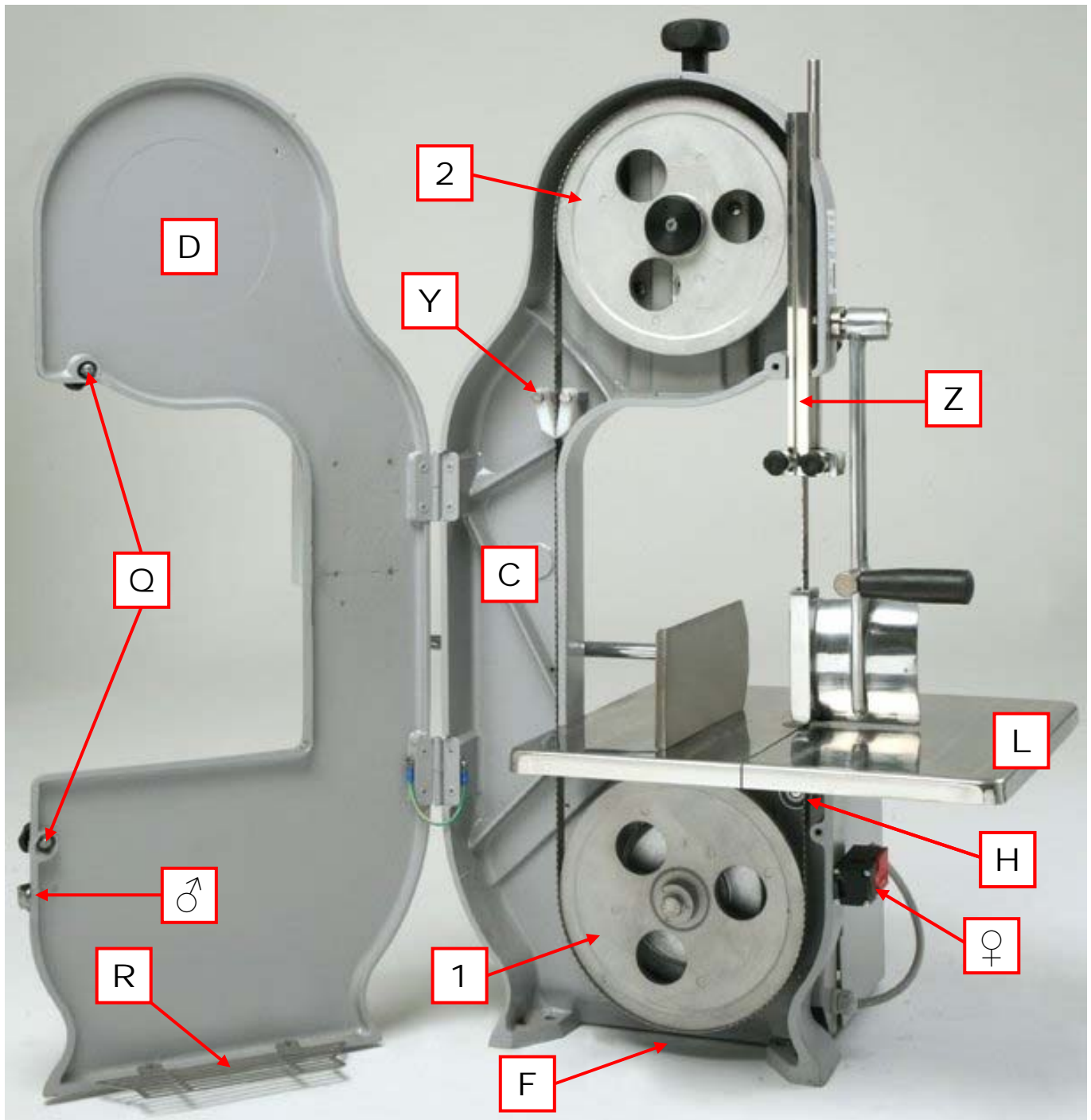
Therefore **THE EMPLOYER MUST** adopt the following measures:

- Limit the time of exposure through the adoption of shift work.
- Supply the workers with personal protection devices (protective headset) and instruct them on their correct use.
- Submit workers to regular health checks.

KNOWING THE MACHINE



LEGENDA: (C) machine body; (D) door; (L) working table; (M) start pushbutton; (S) pilot lamp; (A) stop pushbutton; (E) emergency stop pushbutton; (P) portion device; (Z) blade protection; (G) blade guide; (N) saw blade; (V) blade guide screws; (B) blade guide block knob; (J) blade guide rod; (K) falling meat pusher; (T) blade tension knob; (W) door opening msw; (Q) door locking knobs;



LEGENDA: (C) machine body; (D) door; (L) working table; (Z) blade protection; 1) driving pulley; (2) pulley path; (F) exit waste opening; (R) metallic grid protection against access to blade and pulley from exit waste opening; (Y) sliding blocks for saw blade cleaning; (H) saw blade thrust bearing; (♀) door opening female msw; (♂) door opening male msw; (Q) door locking knobs screws;



SAFETY DEVICES

Never remove nor alter the safety devices since they have been installed for your safety. The main machine safety devices are the following:

- Falling meat pusher.
- Manually adjustable blade guide and blade protection.
- Manually adjustable portioning device (lateral pusher).
- Door interlocked by safety microswitch.
- Knobs for door screwing locking.
- Grid-protected waste exit opening.
- On/off switch.
- Pilot light for electrical feeding.
- Safety fuse.
- Earthing circuit.
- Insulation class IP 54.
- Fireproof feeding cable.
- Earthing cable between door and frame.
- Labels and pictographs.
- Ergonomic pedestal.





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INSTALLATION AND STARTUP

A free space of at least 100 cm in plan view has to be left around each side of the machine to avoid hazards of crash and fall of the machine, difficulty in cleaning and maintenance, difficulty of use with pieces of meat and similar big materials. The floor must be anti-slippery and has to be always kept clean, especially free from possible waste of the material being processed in order to avoid the operator slipping.

The machine has to be exclusively assembled on a steady horizontal plane having a height **ranging from at least 45 cm and not exceeding 69 cm from ground** so that the rule requiring that the working table upper surface is at a height from the ground ranging from 800 mm (80 cm) and 1,050 mm (105 cm) is respected.

If this is not possible due to the working table on which the machine lays, the optional pedestal (3 or 4 supports) specific for each machine model has to be used; it is exclusively supplied by the Manufacturer upon request. In this case, the pedestal has to be soundly blocked to the ground with wedges suitable to prevent the overturning. If one or more fixing points show signs of loosening or collapse, immediately remove the machine and install it in a safer position or use new and bigger wedges (which are not supplied with the machine).

Here two views of the pedestals (with 3 or 4 supports) available upon request.





ELECTRICAL INSTALLATION

After positioning the machine onto the working table or onto the optional pedestal supplied by the Manufacturer, the electrical assembly has to be carried out.

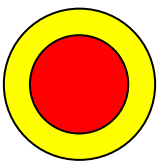
If the machine has a three-phase motor and is destined to the non-Italian market, the feeding cable has to be completed with a feeding socket suitable for the country of destination, supplied and assembled by a qualified electrician; the sequence of the feeding phases (at the assembly, check the labels and the colors of the cable wires and, at the end of the assembly, check that the rotation of the motor and the pulleys is the one indicated by the arrow located close to them) has to be complied with.

After the installation, make sure that nobody touches the machine and connect the feeding plug to a socket (230 V ~ 50 Hz for single-phase motor machines and 400 V 3~ 50 Hz for three-phase motor machines).

- To switch the machine on, push the pushbutton (green or white) **I = ON = switched on**
- To switch the machine off, push the pushbutton (red or black) **O = OFF = switched off**

I	I	START INSERTION	↑ UP	higher energy level; machine start- up
O	O	SHUTDOWN STOP	DOWN ↓	lower energy level; machine shut- down

→ Check that (both when the motor is running and when it is idle, but the machine is powered) the efficacy of the connection to the equipotential protection circuit (earthing) and that the due surcharge protection of the feeding electrical switchboard of the building (suitable differential switch and fuse) have been performed.



→ Check that if the emergency (red mushroom pushbutton on a yellow background) pushbutton is activated, the machine stops immediately and cannot restart without the manual restart, namely keep the counterclockwise rotation of the emergency pushbutton pushed and without a subsequent voluntary pushing of the (green or white) **I = ON** pushbutton.

→ If door is opened, check that the machine stops within 4 (four) seconds after the opening has reached a 1-cm space and can never restart without the necessary locking of the door and without the pushing of the **I = ON** pushbutton

→ Check the correct rotation sense of the motor through the proper pictograph for blade running direction, **which always goes from upwards to downwards** where the blade is visible: if the sense is opposite to what indicated, invert 2 phases on the electrical switchboard of the building from which the machine gets the power (the machine has been built in a masterly fashion!).

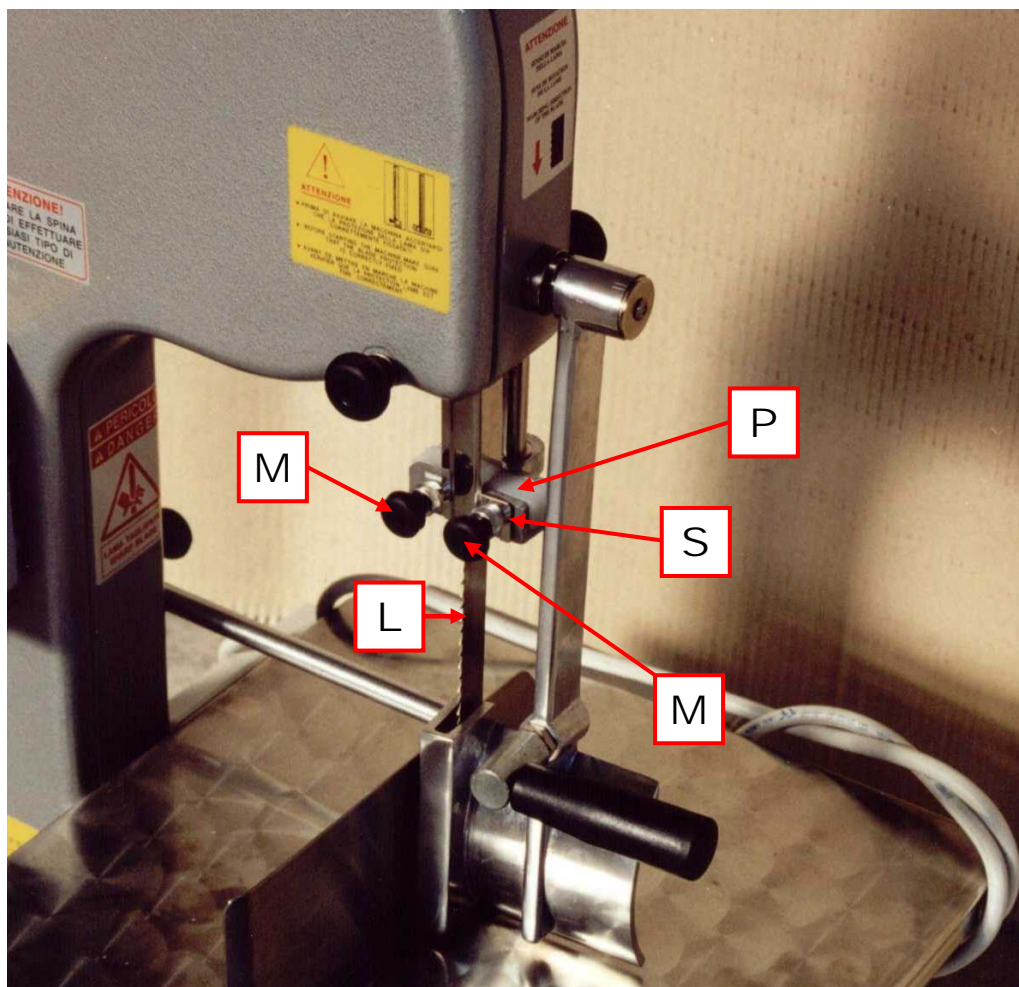


If such checks are passed, the machine is electrically installed; if they are not, contact the Manufacturer or the dealer for maintenance.



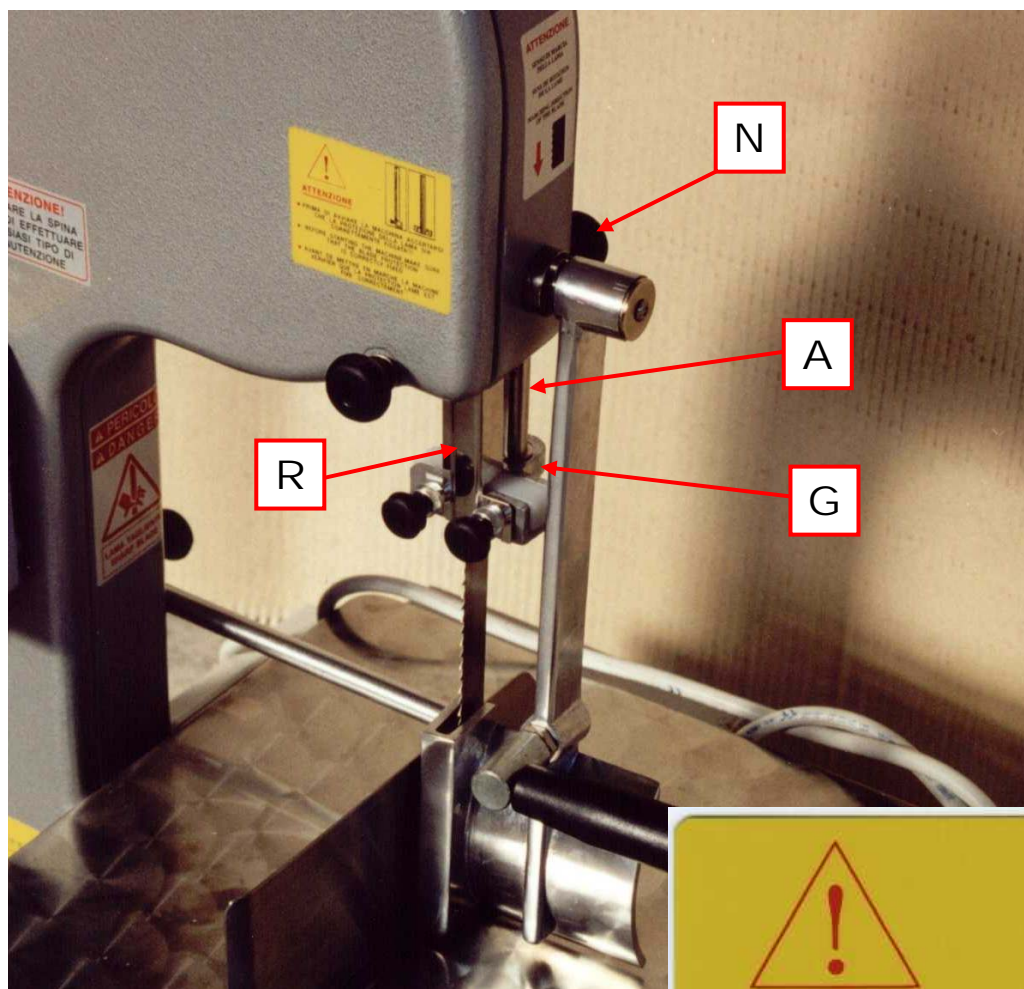
BLADE GUIDE SLIDING BLOCKS ADJUSTMENT

- [P1] make sure that the machine is switched off (red **O** or black **O** pushbuttons pushed)
- [P2] make sure that the machine is not working (blade stopped);
- [P3] unscrew any of the two black (**M**) small knobs paying attention not to unscrew it completely from its seat (**S**);
- [P4] bring the relevant white sliding block (**P**) close to the blade (**L**) until they come very close;
- [P5] evaluate the thickness of the sliding block (the sliding blocks of the blade guide continuously wear; therefore they have to be replaced when their thickness is below 1.5 cm) and, if necessary, replace it with a new sliding block;
- [P6] re-screw the small knob (**M**) up to lock the sliding block (**P**);
- [P7] repeat the operations from [P1] to [P6] for the other unit knob/sliding block;



BLADE GUIDE HEIGHT ADJUSTMENT

- [H1] make sure that the machine is switched off (red **O** or black **O** pushbuttons pushed)
- [H2] make sure that the machine is not working (blade stopped);
- [H3] unscrew the black knob (**N**) (located on the fixed part which is opposite to the working table of the operator) which -through its integral screw- usually blocks the rod (**A**) of the blade guide (**G**) coming out from machine upper part and the working table; in this way, the rod (**A**) of the blade guide (**G**) can run vertically;
- [H4] adjust the height of the blade guide (**G**) according to the height of the material to cut (max. 1 cm above it);
- [H5] screw the small knob (**N**) to block the rod (**A**) of the blade guide (**G**), the blade guide (**G**) and the protection (**R**) integral to them, at the desired height;





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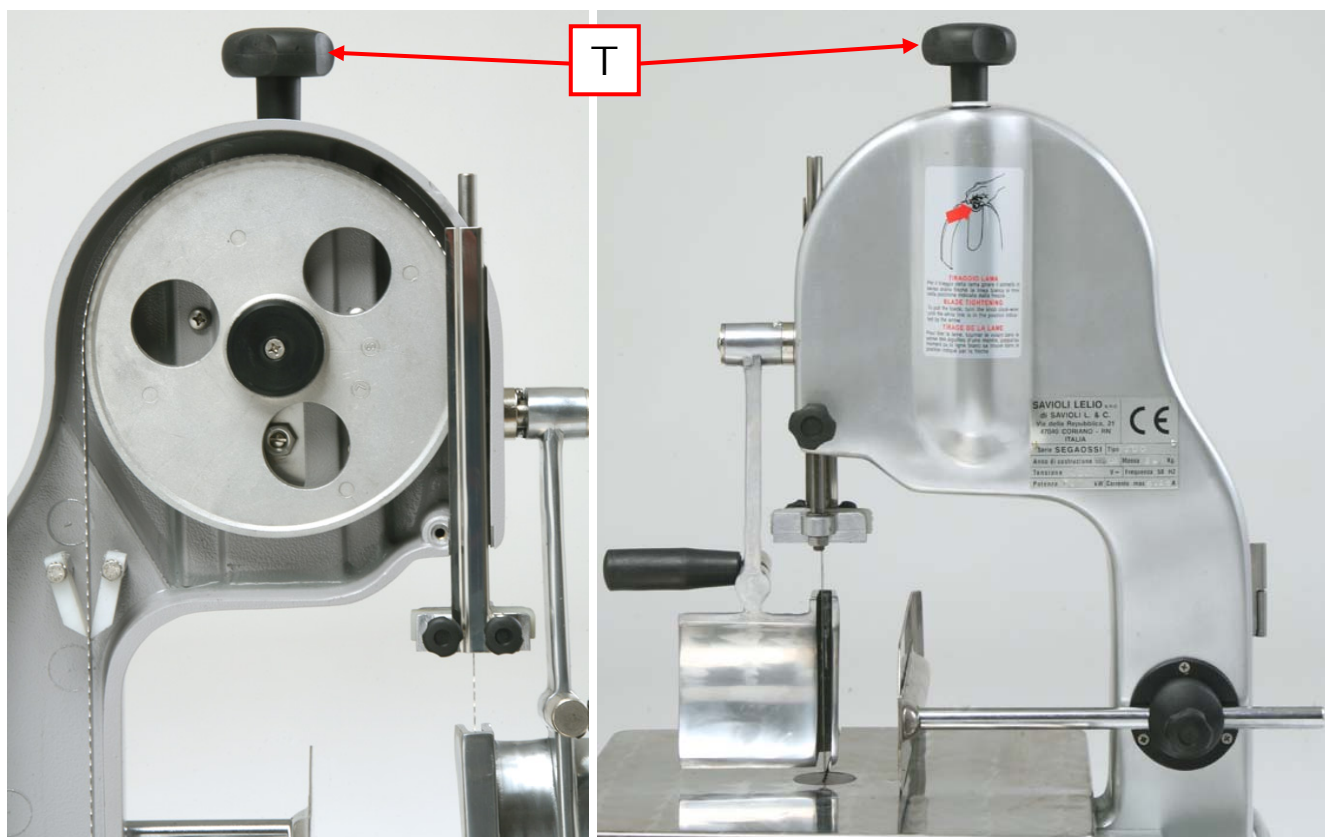
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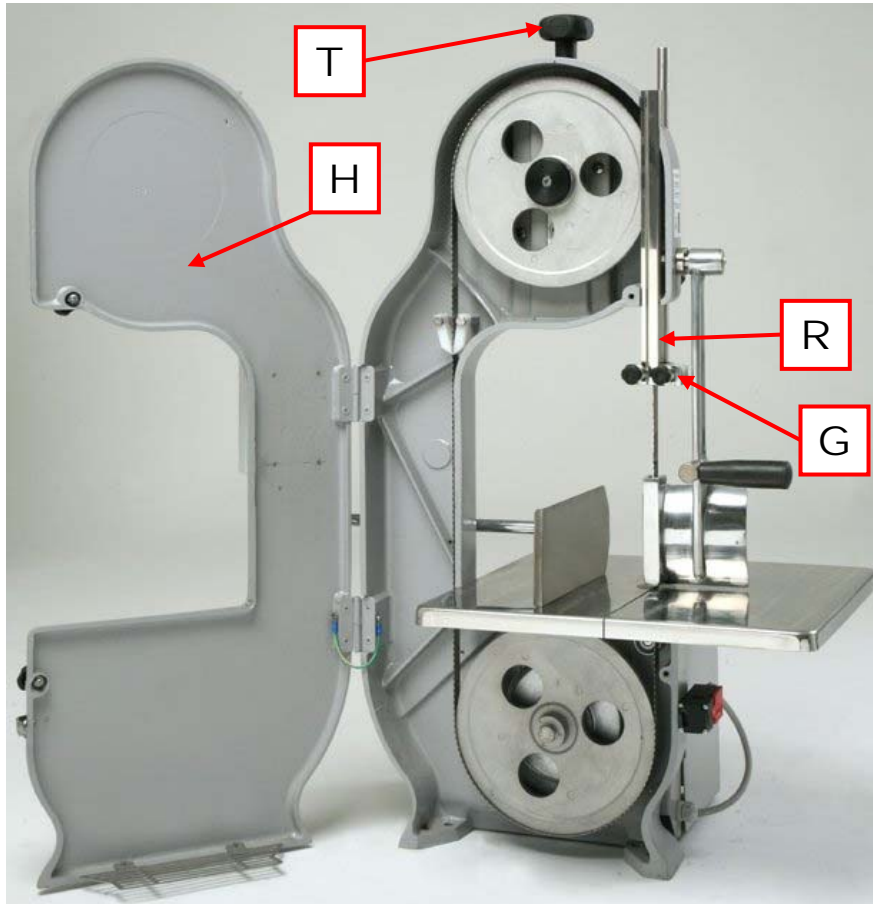
BLADE TENSION ADJUSTMENT

- [T1] make sure that the machine is switched off (red  or black  pushbuttons pushed)
- [T2] make sure that the machine is not working (blade stopped);
- [T3] screw the black knob (T) located on top to increase the blade tension and unscrew to decrease the blade tension; it is not necessary to open the door or unscrew the pulley to perform such adjustment;
- [T4] screw the black knob (T) so that the white line on the neck of such knob is very close to the frame of the bone band saw (as per photo of the back side of the bone band saw);
- [T5] always check the blade tension when the machine is not working before restarting it (namely before restarting the motor);



BLADE REPLACEMENT

- [S1] make sure that the machine is switched off (red  or black  pushbuttons pushed)
- [S2] make sure that the machine is not working (blade stopped);
- [S3] open the door (**H**) of at least 90°;



- [S4] disassembly the protection device (**R**) from the blade integral to the blade guide (**G**);
- [S5] unscrew the black knob (**T**) located on the top to decrease the interaxle between the two pulleys and therefore reduce the tension of the blade until it easily and manually comes out from pulleys;
- [S6] extract the blade from the pulleys paying attention not to be injured (do not work bare hands, but use the prescribed protective gloves) and put it in a safe place not accessible to people who do not use the machine;
- [S7] assemble a new blade in the pulleys paying attention not to be injured (do not work bare hands, but use the prescribed protective gloves) inserting it in the pulleys with a shifting which is opposed to those performed to draw it out;
- [S8] check the correct positioning of the new blade on the two pulleys;
- [S9] screw the black knob located on the top to increase the interaxle between the two pulleys and therefore increase the tension of the blade up to the desired value and in any case the blade cannot be manually extracted from the pulleys;
- [S10] re-assemble and adjust the protection device (**R**) of the blade integral to the blade guide;
- [S11] close the door;





MOTOR BRAKE ADJUSTMENT

The machine is supplied with motor brake already adjusted and tested by the Manufacturer. For a normal use and in standard working conditions, no further adjustment and/or maintenance of the motor brake is necessary because it is equipped with the automatic recover of plays. However, if an adjustment becomes necessary during the service life of the machine, strictly follow the following instructions:

- make sure your hands are dry and free from oil and grease.
- wear insulating protective gloves.
- switch the machine off through the relevant pushbuttons and disconnect it from the electrical feeding by disconnecting the plug.
- in the hole located in the back part of the motor carter, insert a 4 or 5 mm-socket head cap screw (hexagonal head) (the different size depends on the motor supply) with which you reach and lock the above screw of the motor brake which is coaxial to motor rotation axis.
- the locking has to be carried out manually and clockwise rotating the above socket head cap up to the complete locking of the device; however pay attention not to force the locking with auxiliary screwing tools such as electric drill or electro-pneumatic screws, etc.
- when the locking is complete, unscrew the screw making a counterclockwise half-rotation (180°);
- remove the above socket head cap screw and pay attention not to leave it close to the machine within the reach of other persons;
- insert again the plug into the socket;
- make sure that there is nobody near the machine, then start the machine by pressing the relevant pushbutton (green or white) **I = ON**;
- let at least 15 seconds pass and then push the red mushroom pushbutton for the emergency stop to check the immediate activation of the brake which has to stop the motion of the machine blade almost immediately;
- rearm the red mushroom pushbutton for the emergency stop through its anticlockwise rotation;
- restart the machine by pushing the pressure of the relevant pushbutton (green or white) **I = ON**;
- let at least 15 seconds pass and then push the (red or black) **O = OFF** pushbutton for the normal stop to check the immediate activation of the brake which has to stop the motion of the machine blade almost immediately;
- If everything works as it should, it means that the brake is well adjusted.



USE

- [U1] make sure that the machine is switched off (red  or black  pushbuttons pushed)
- [U2] make sure that the machine is not working (blade stopped);
- [U3] put the material to cut on the working table;
- [U4] adjust the height of the blade guide according to the height of the material to cut;
- [U5] adjust the portion device lateral position and leave a space similar to the thickness of the slice of material to be obtained from the cutting of the material under process between it and the saw blade;
- [U6] lift the falling meat pusher (keep it with a hand on relevant knob);
- [U7] bring the material to cut in contact with the portion device;
- [U8] lower the falling meat pusher onto the material to cut (keep it with a hand on relevant knob);
- [U9] → **NOTA BENE:** it is forbidden to cut without using the falling meat pusher and/or without using the portion device and/or without using the blade protection and/or without the correct adjustment of the blade guide;
- [U10] → **NOTA BENE:** it is forbidden to cut materials such as wood, plastic, paving tiles, bricks, stones, glass, metals, leather, cardboard, fabrics, etc. even though a specific blade for this aim is available;
- [U11] wear the safety gloves and start the machine after having checked that nobody is close to it by pushing the green or white “ON” = “ I ” pushbutton
- [U12] use the pusher (keep it with a hand on relevant knob) to push the material to cut to make it go towards the running blade until the end of the cutting of the desired slice;
- [U13] to cut other slices having the same thickness, go back to [U7];
- [U14] to cut other slices having a different thickness, go back to [U5];
- [U15] if the height of the material to cut varies of more than 1 cm when cutting more slices, go back to [U1].





MAINTENANCE, CLEANING, REGULAR CHECKS

WARNING: Before any cleaning and/or maintenance and/or check, switch the machine off pushing the (red or black) **O = OFF** stop pushbutton and disconnect it from feeding power disconnecting the feeding plug, too. Cleaning and/or maintenance and/or check, **no exclusions are admitted**, have to be performed when the machine is not connected to the feeding power.

Before restarting the machine, make sure that no people are touching it. The use and the regular cleaning of the machine, according to the instructions of this handbook reduce the need for extraordinary maintenance and repair; the daily cleaning of the machine is an important factor to promptly detect possible defects or damages.

At least once a week, clean the machine with a soft and dry cloth which does not lose its fabric on the rubbed surfaces.

Avoid using petrol, solvents and any other type of detergent on the non-metallic parts which can be exclusively cleaned with a neutral and non-foamy water-based detergent, in case of need.

Never use abrasive products, chlorate substances, wire wools, brushes of any type, scrapers, etc., but just use small brushes having sufficiently rigid bristles and cloths which do not lose fabrics or fibers or fragments.

WARNING! The machine must never be washed with water jet of any nature and quantity (thus without buckets, rubber hoses or sponges).

WARNING! The machine does not need lubrication or greasing since it is equipped with self-lubricating bearings.

WARNING! After a thorough visual check at the beginning of each shift, pay attention to:

- the cleanness inside the machine with special care to the areas close to the pulleys; if necessary, clean and sanitize them;
- the cleanness of the lower container gathering the processed waste; if necessary, clean and sanitize it;
- the integrity of the electrical cable (with relevant plug) located outside the machine body;
- the integrity of the switchboard and the control pushbuttons (check whether there are cracks, splintering, scratches, distortions, cuts, etc.);
- the working of all safety devices: first, the emergency stop (red mushroom pushbutton on a yellow background) and door interlock microswitch; then all the remaining safety devices already listed;

NOTA BENE: if damaged or bad working components and/or devices are detected, do not allow staff to use the machine and put a warning about such prohibition on it; then contact the dealer or the Manufacturer for the maintenance interventions to be performed.





DIAGNOSTICS

PROBLEM	POSSIBLE CAUSES	SOLUTIONS
Machine does not start	Lack of tension of the electrical network of the building.	Restore the tension of the electrical network of the building.
	ON/OFF switch of the electrical network of the building in “O” position.	Turn the ON/OFF switch of the electrical network of the building to “I”.
	Machine ON/OFF switch in “O” position.	Turn the ON/OFF switch to “I”.
	Machine fuse burned	Replace the fuse and check the electrical parameters (V, A, cos φ).
	Breakdown of machine ON/OFF switch.	Contact the manufacturer to have the ON/OFF switch replaced and check the electrical parameters (V, A, cos φ).
	The emergency (red mushroom on a yellow background) pushbutton is pushed.	Turn anticlockwise the emergency (red mushroom on a yellow background) pushbutton
	Breakdown of electronic control card.	Contact the manufacturer or the dealer to have the electronic card replaced and check electrical parameters (V, A, cos φ).
Machine does not stop	Machine ON/OFF switch in “I” position.	Turn the machine ON/OFF switch to “O”.
	Breakdown of machine ON/OFF switch.	Turn the ON/OFF switch of the electrical network of the building to “O” and contact the manufacturer or dealer to have the ON/OFF switch repaired.
	Breakdown of feeding electronic control card.	Contact the manufacturer or the dealer to have the electronic card replaced; check electrical parameters (V, A, cos φ).
Door is open but the machine does not stop	Breakdown of door safety microswitch	Contact the manufacturer or the dealer to have the door safety microswitch replaced.
The emergency pushbutton does not stop the machine	Breakdown of emergency pushbutton	Contact the manufacturer or the dealer to have the emergency pushbutton replaced.
	Breakdown of electronic control card.	Contact the manufacturer or the dealer to have the electronic card replaced and check electrical parameters (V, A, cos φ).



PROBLEM	POSSIBLE CAUSES	SOLUTIONS
The machine is noisy (vibration, creaking, whistling, etc.).	Ground backing of the working table (or the pedestal of the manufacturer) where the machine is laid with one or two supports which do not lay on the ground	Add some shims under the supports of the working table (or adjust the supports of the pedestal of the manufacturer) on which the machine is laid so that they all lay simultaneously
	One or two supports of the machine do not lay properly on the working table	Adjust the machine supports so that all lay simultaneously
	Saw blade too slow or too tight	Check the pulleys and the tension of the feeding band and adjust it through the upper black knob if it differs from relevant values
	One or both pulleys are damaged or out of their axis	Check the condition of the pulleys and if they are out of axis or not properly fixed, contact the manufacturer or the dealer to have them repaired
	The feeding and electronic control card is broken (it causes quick variations of speed which induce vibrations).	Contact the manufacturer or the dealer to replace the electronic card, and check electrical parameters (V, A, cos φ).
	The door is not properly fixed	Check door hinges and relevant locking screws and, if necessary, screw them
	The safety microswitch is not properly fixed	Check the safety microswitch locking screws and, if necessary, screw them
	The sliding blocks of the blade guide are too tight on saw blade	Better adjust the sliding blocks of the blade guide slightly taking them away from the blade.
	Saw blade with damaged tothing	Replace the saw blade with a new and original one
	Saw blade with tothing unsuitable for the material to cut	If the material to cut is among those envisaged for the machine, contact the Manufacturer or the dealer to have a saw blade suitable for the material to cut, otherwise read below ↗.
	Material to cut is too hard	Avoid trying to cut such material since it is not included in the list supplied by the Manufacturer
	Material to cut is not included among those envisaged by the Manufacturer	Avoid trying to cut such material since it is not included in the list supplied by the Manufacturer



PROBLEM	POSSIBLE CAUSES	SOLUTIONS
Coming out of the saw blade from pulleys	Saw blade is too slow or too tight	Check the pulleys and the tension of the feeding band and adjust it through the upper black knob if it differs from relevant values
	One or both pulleys are damaged or out from their axis	Check the pulleys and contact the Manufacturer or the dealer to have them repaired if they are out of their axis or not well fixed
	Bad quality of the blade	Replace the saw blade with a new and original one
Considerable heating of the saw blade	Loss of sharpening of the saw blade	Replace the saw blade with a new and original one
	Waste clogged between blade and blade guide	Disassembly and thoroughly clean the blade guide and then re-assemble it considering the safety position
	Bearings of one or both pulleys are damaged or blocked	Contact the Manufacturer or the dealer to replace the bearings
Cutting is not perfect	Saw blade is too slow or too tight	Check the pulleys and the tension of the feeding band and adjust it through the upper black knob if it differs from the relevant values
	Loss of sharpening of the saw blade	Replace the saw blade with a new and original one

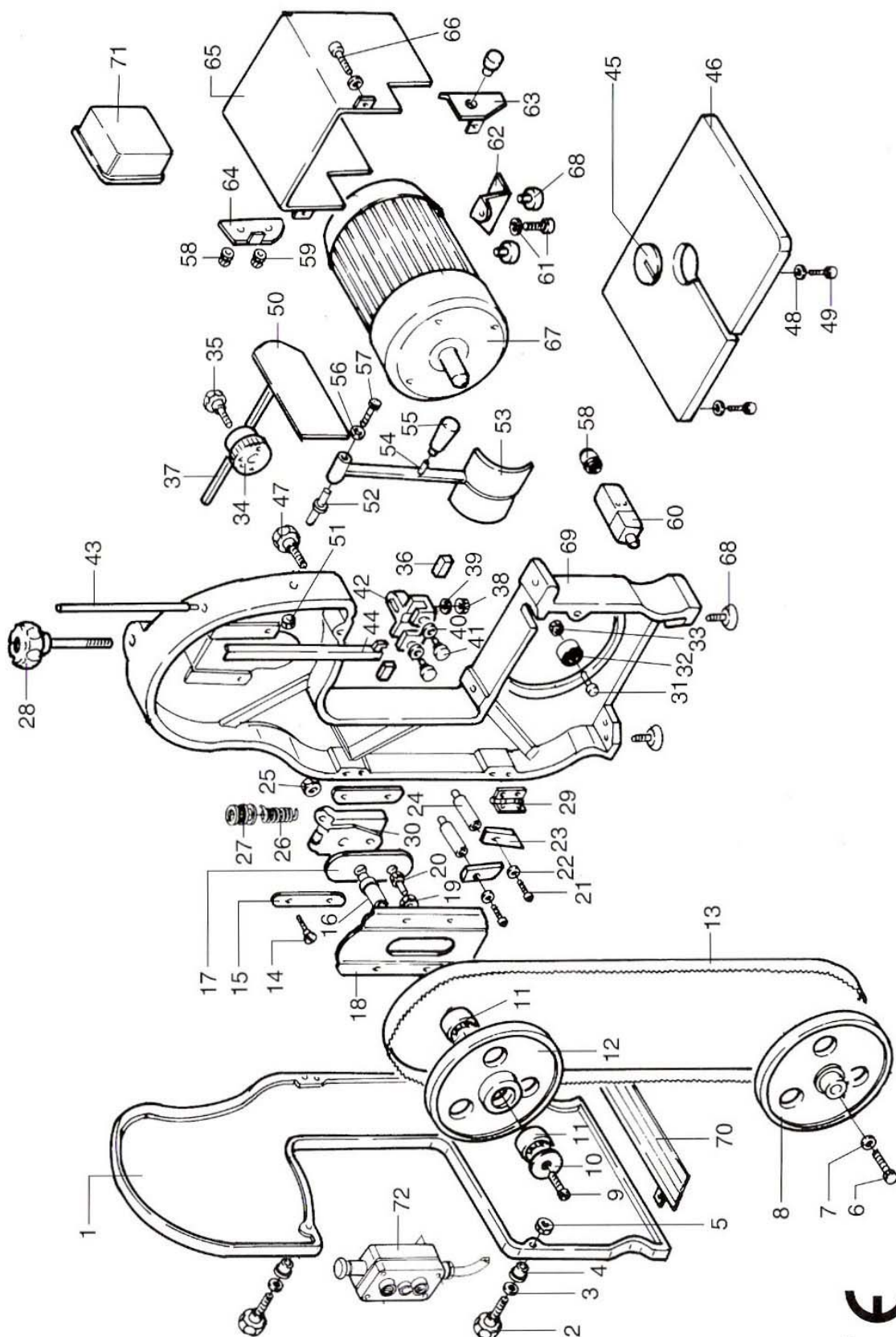
SPARE PARTS

Exclusively use the original spare parts as per Manufacturer's instructions because non-original components may jeopardize the safety of the machine and the persons as well as damage materials and things close to it. The Manufacturer declares the warranty null and void and declines any liability for damages due to the use of non-original spares.

The spare parts must be directly required to the Manufacturer or his authorized dealer quoting the serial number of the machine and the date of purchase.

The following pages show the schemes and the reference lists to order the spare parts.

SPARES EXPLODED VIEW Bone bandsaw 200

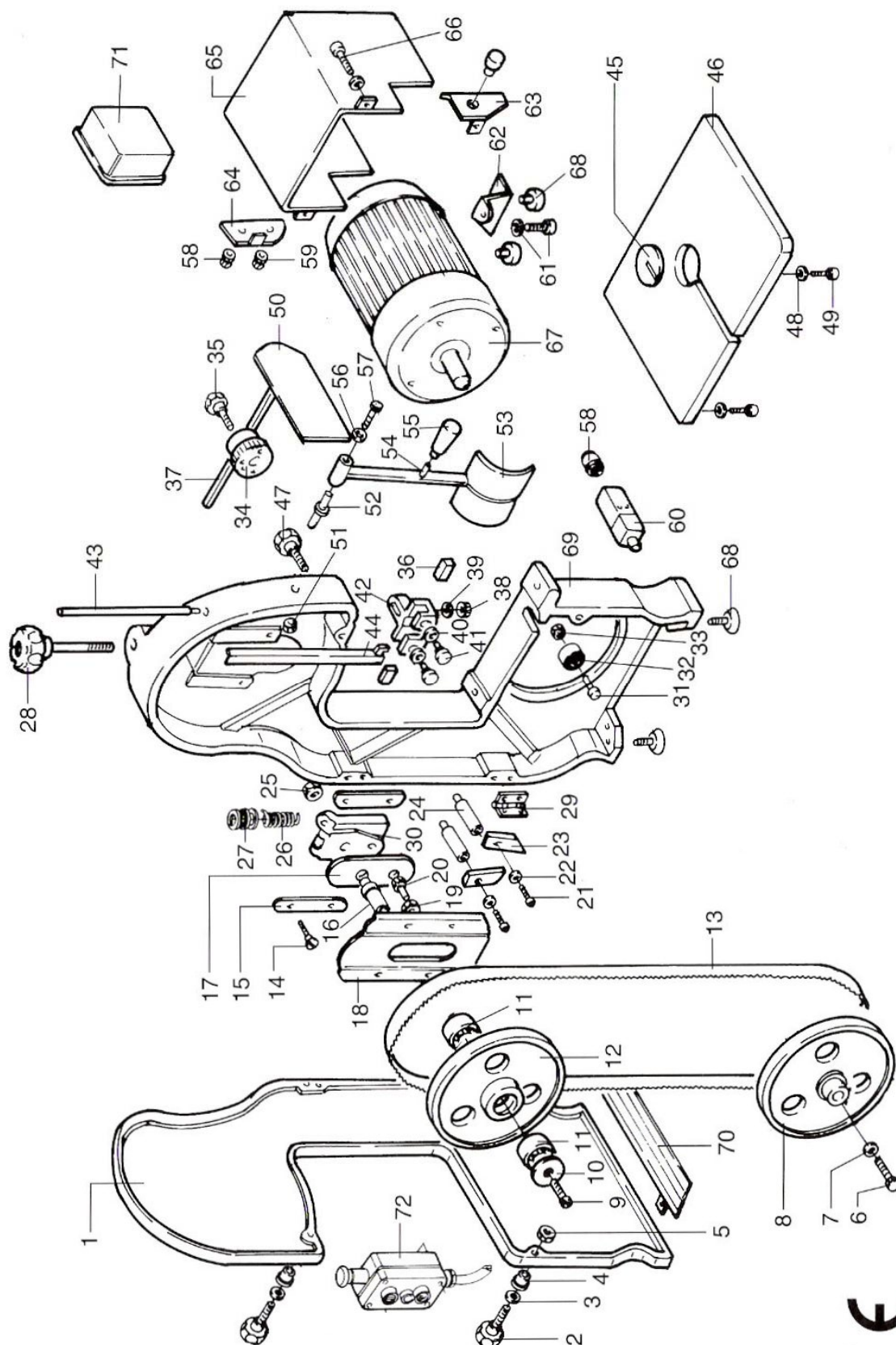




LIST OF SPARES Bone bandsaw 200

- | | |
|-------------------------------|--------------------------------------|
| 01) Painted door | 37) Portioning device rod |
| 02) Door locking knob | 38) Blade guide nut |
| 03) Washer | 39) Blade guide washer |
| 04) Brass bushing | 40) Blade guide ring nut |
| 05) Door locking nut | 41) Blade guide knob |
| 06) Lower flywheel screw | 42) Aluminum blade guide |
| 07) Lower flywheel washer | 43) Blade guide rod |
| 08) Lower flywheel | 44) Blade protection |
| 09) Anti-dust washer screw | 45) Bakelite disk |
| 10) Anti-dust washer | 46) Working table |
| 11) 6203 2RS bearing | 47) Blade guide rod knob |
| 12) Upper flywheel | 48) Working table washer |
| 13) 1520mm tempered blade | 49) Working table screw |
| 14) Coulisse gibs screws | 50) Portioning device |
| 15) Coulisse gib | 51) Meat pusher pivot nut |
| 16) Upper flywheel pivot | 52) Meat pusher pivot |
| 17) Coulisse steel sheet | 53) Meat pusher |
| 18) Coulisse guard | 54) Meat pusher knob joint |
| 19) Flywheel setting nut | 55) Meat pusher knob |
| 20) Flywheel setting screw | 56) Meat pusher washer |
| 21) Scraper screw | 57) Meat pusher screw |
| 22) Scraper washer | 58) PG 11 cable press device |
| 23) Blade-cleaning scraper | 59) PG 09 cable press device |
| 24) Scraper support | 60) Microswitch |
| 25) Nut pivot flywheel | 61) Motor support screw and washer |
| 26) Blade tightener spring | 62) Motor support |
| 27) Blade tightener bearing | 63) Microswitch press device support |
| 28) Blade tightener knob | 64) Line press device support |
| 29) Hinge | 65) Case motor cap |
| 30) Brass coulisse | 66) Screw and washer of motor cap |
| 31) Thrust bearing pivot | 67) Self-braking motor |
| 32) Thrust bearing | 68) Rubber support |
| 33) Thrust bearing pivot nut | 69) Aluminum body |
| 34) Portioning device support | 70) Lower guard |
| 35) Portioning device knob | 71) Lower switchboard box |
| 36) Blade guide wedge | 72) Switchboard control box |

SPARES EXPLODED VIEW Bone bandsaw 220





LIST OF SPARES Bone bandsaw 220

- | | |
|-------------------------------|--------------------------------------|
| 01) Painted door | 37) Portioning device rod |
| 02) Door locking knob | 38) Blade guide nut |
| 03) Washer | 39) Blade guide washer |
| 04) Brass bushing | 40) Blade guide ring nut |
| 05) Door locking nut | 41) Blade guide knob |
| 06) Lower flywheel screw | 42) Aluminum blade guide |
| 07) Lower flywheel washer | 43) Blade guide rod |
| 08) Lower flywheel | 44) Blade protection |
| 09) Anti-dust washer screw | 45) Bakelite disk |
| 10) Anti-dust washer | 46) Working table |
| 11) 6203 2RS bearing | 47) Blade guide rod knob |
| 12) Upper flywheel | 48) Working table washer |
| 13) 1830mm tempered blade | 49) Working table screw |
| 14) Coulisser gibs screws | 50) Portioning device |
| 15) Coulisser gib | 51) Meat pusher pivot nut |
| 16) Upper flywheel pivot | 52) Meat pusher pivot |
| 17) Coulisser steel sheet | 53) Meat pusher |
| 18) Coulisser guard | 54) Meat pusher knob joint |
| 19) Flywheel setting nut | 55) Meat pusher knob |
| 20) Flywheel setting screw | 56) Meat pusher washer |
| 21) Scraper screw | 57) Meat pusher screw |
| 22) Scraper washer | 58) PG 11 cable press device |
| 23) Blade-cleaning scraper | 59) PG 09 cable press device |
| 24) Scraper support | 60) Microswitch |
| 25) Nut pivot flywheel | 61) Motor support screw and washer |
| 26) Blade tightener spring | 62) Motor support |
| 27) Blade tightener bearing | 63) Microswitch press device support |
| 28) Blade tightener knob | 64) Line press device support |
| 29) Hinge | 65) Case motor cap |
| 30) Brass coulisser | 66) Screw and washer of motor cap |
| 31) Thrust bearing pivot | 67) Self-braking motor |
| 32) Thrust bearing | 68) Rubber support |
| 33) Thrust bearing pivot nut | 69) Aluminum body |
| 34) Portioning device support | 70) Lower guard |
| 35) Portioning device knob | 71) Lower switchboard box |
| 36) Blade guide wedge | 72) Switchboard control box |



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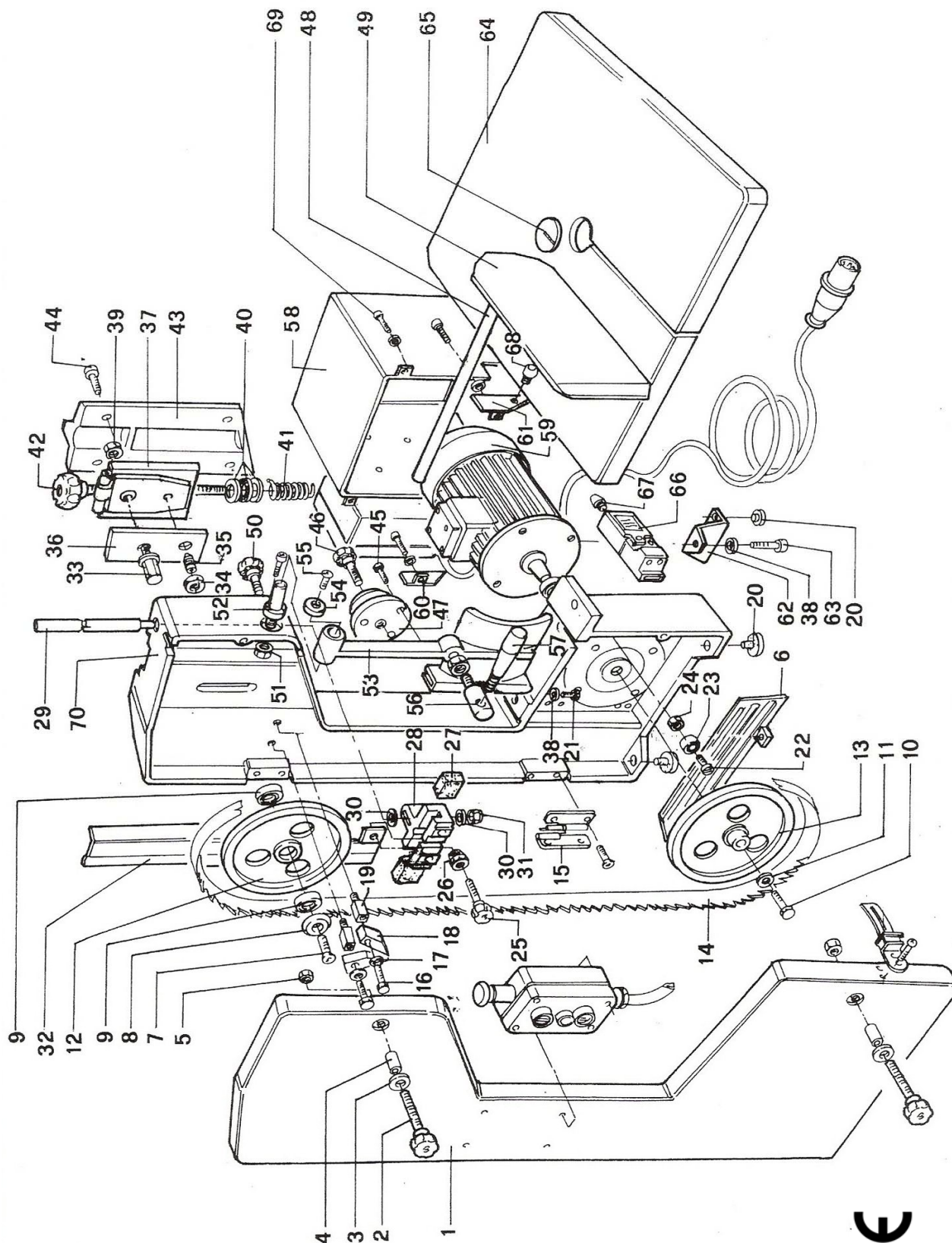
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SPARES EXPLODED VIEW Bone bandsaw 2000 Fixed working table



CE



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LIST OF SPARES Bone bandsaw 2000

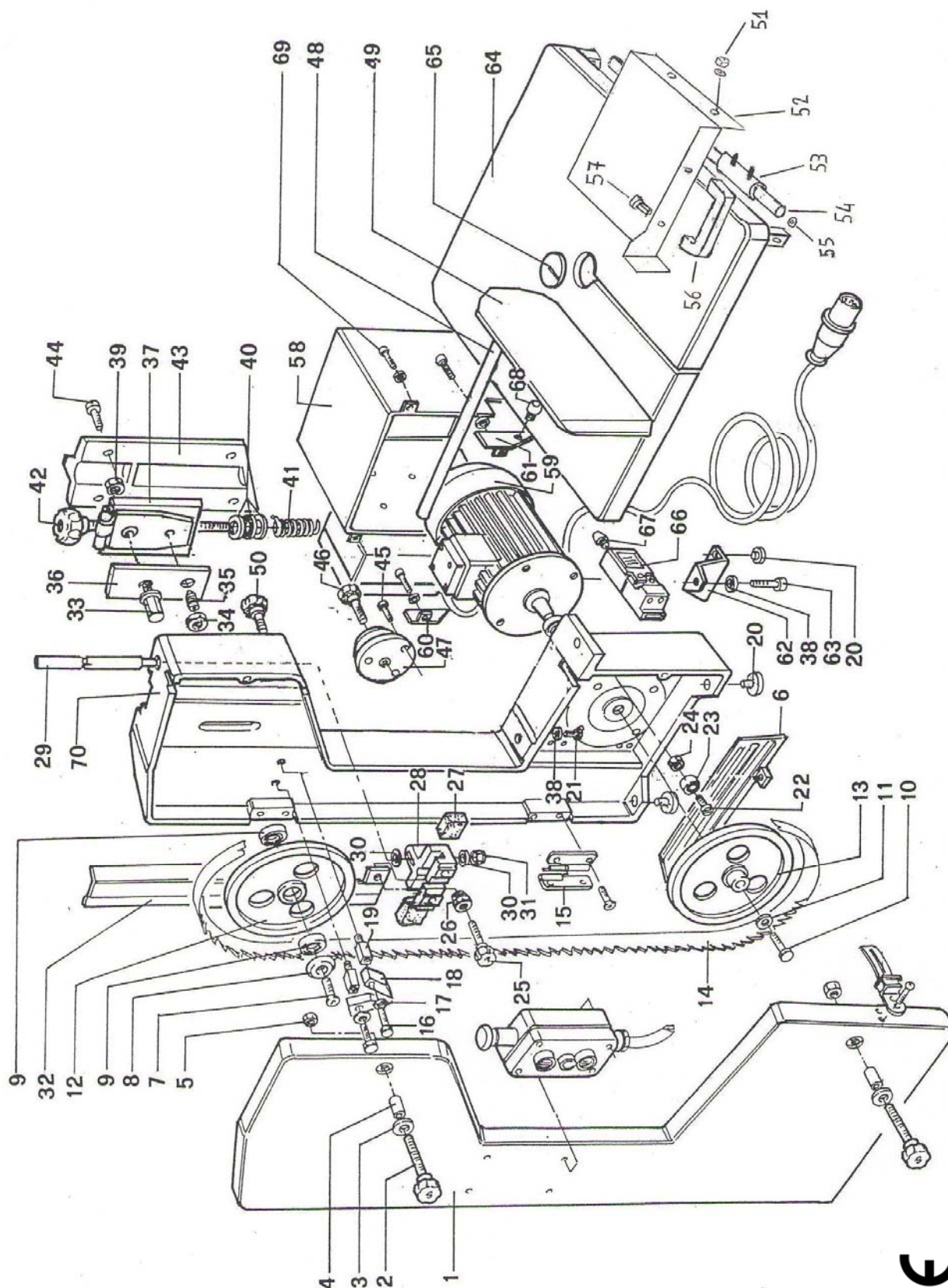
Fixed working table

- | | |
|---|---|
| 01) Anodized door (not interchangeable) | 37) Coulisser |
| 02) Door locking knob | 38) Motor support and table fixing washer |
| 03) Locking knob washer | 39) Flywheel pivot nut |
| 04) Brass bushing | 40) Blade tightener bearing |
| 05) Door locking nut | 41) Blade tightener spring |
| 06) Lower guard | 42) Blade tightener knob |
| 07) Anti-dust washer screw | 43) Coulisser guard |
| 08) Anti-dust washer | 44) Coulisser screw |
| 09) Upper flywheel bearing | 45) Portioning device screw support |
| 10) Lower flywheel screw | 46) Portioning device support knob |
| 11) Lower flywheel washer | 47) Portioning device support |
| 12) Upper flywheel | 48) Portioning device rod |
| 13) Lower flywheel | 49) Portioning device |
| 14) 1830mm tempered blade | 50) Blade guide rod knob |
| 15) Hinge | 51) Meat pusher pivot nut |
| 16) Scraper screw | 52) Meat pusher pivot |
| 17) Scraper washer | 53) Meat pusher |
| 18) Blade-cleaning scraper | 54) Meat pusher washer |
| 19) Scraper support | 55) Meat pusher screw |
| 20) Rubber support | 56) Meat pusher knob joint |
| 21) Working table fixing screw | 57) Meat pusher knob |
| 22) Thrust bearing pivot | 58) Case motor cap |
| 23) Thrust bearing | 59) Self-braking motor |
| 24) Thrust bearing pivot nut | 60) Press device support |
| 25) Blade guide knob | 61) Micro press device support |
| 26) Aluminum blade guide ring nut | 62) Motor support |
| 27) Blade guide wedge | 63) Motor support screw |
| 28) Aluminum blade guide | 64) Stainless steel working table |
| 29) Blade guide rod | 65) Bakelite disk |
| 30) Blade guide washer | 66) Microswitch |
| 31) Blade guide nut | 67) PG 11 cable press device |
| 32) Blade protection | 68) PG 9 cable press device |
| 33) Upper flywheel pivot | 69) Motor support screw and washer |
| 34) Flywheel setting nut | 70) Anodized machine body (not interchangeable) |
| 35) Flywheel setting screw | |
| 36) Steel sheet coulisser | |

← Bone bandsaw 2000 PF previous page

Bone bandsaw 2000 PM next page →

SPARES EXPLODED VIEW Bone bandsaw 2000 Sliding working table





LIST OF SPARES Bone bandsaw 2000 Sliding working table

- | | |
|---|---|
| 01) Anodized door (not interchangeable) | 36) Steel sheet coulisse |
| 02) Door locking knob | 37) Coulisse |
| 03) Locking knob washer | 38) Motor support and table fixing washer |
| 04) Brass bushing | 39) Flywheel pivot nut |
| 05) Door locking nut | 40) Blade tightener bearing |
| 06) Lower guard | 41) Blade tightener spring |
| 07) Anti-dust washer screw | 42) Blade tightener knob |
| 08) Anti-dust washer | 43) Coulisse guard |
| 09) Upper flywheel bearing | 44) Coulisse screw |
| 10) Lower flywheel screw | 45) Portioning device screw support |
| 11) Lower flywheel washer | 46) Portioning device support knob |
| 12) Upper flywheel | 47) Portioning device support |
| 13) Lower flywheel | 48) Portioning device rod |
| 14) 1830mm tempered blade | 49) Portioning device |
| 15) Hinge | 50) Blade guide knob rod |
| 16) Screw scraper | 51) Nut and washer |
| 17) Scraper washer | 52) Sliding table |
| 18) Blade-cleaning scraper | 53) Sliding table support |
| 19) Scraper support | 54) Sliding table rod |
| 20) Rubber support | 55) Rubber ledge |
| 21) Working table fixing screw | 56) Handle |
| 22) Thrust bearing pivot | 57) Screw |
| 23) Thrust bearing | 58) Motor case |
| 24) Thrust bearing pivot nut | 59) Self-braking motor |
| 25) Blade guide knob | 60) Press device support |
| 26) Aluminum blade guide ring nut | 61) Micro press device support |
| 27) Blade guide wedge | 62) Motor support |
| 28) Aluminum blade guide | 63) Motor support screw |
| 29) Blade guide rod | 64) Working table stainless steel |
| 30) Blade guide washer | 65) Bakelite disk |
| 31) Blade guide nut | 66) Microswitch |
| 32) Blade protection | 67) PG 11 cable press device |
| 33) Upper flywheel pivot | 68) PG 9 cable press device |
| 34) Flywheel setting nut | 69) Motor cap screw and washer |
| 35) Flywheel setting screw | 70) Anodized machine body (not interchangeable) |



STORAGE

In order to preserve the switched off machine for a very long period and apart from disconnecting it from the power network through (“male”) plug disconnection from the (“female”) feeding plug, the following rules must be abided by:

- do not lay on the machine any other object of any nature, dimension and weight;
- make sure that the place of storage is dry, not humid, dust-free, clean and free from insects or other animals and protected against bad weather conditions or other agents (for example, atmospheric agents, drops of water or other liquids, pollution) which might damage it; the place must not be subject to considerable temperature ranges;
- in any case, abide by the data of the machine technical specification indicated in the first pages of this operating handbook;
- if the original packing is still available, put the machine into it or cover it with a piece of cloth of nylon or cellophane or polyethylene or other material of suitable size and -if possible- stuff it to avoid it being damaged due to fortuitous falls or damaged by other materials which might enter into contact with it.

DISPOSAL



It is also forbidden to leave and/or scatter the machine and/or any of its parts in the environment and it is also forbidden to dispose it in the container for solid urban waste, as is shown by the WEEE symbol, on your left.

If the machine is no longer used, deliver it to qualified disposal facilities or authorized dealers.

NOTES FOR THE STAFF OF THE DISPOSAL FACILITIES

During the disassembly operations avoid being under or above the machine since such operation can be done without performing such dangerous actions, but stay at the side of the machine.

Before the disassembly of any piece and/or disconnection and/or slackening of any coupling element, make sure that no pieces fall onto someone.

Remember that the use of personal protective equipment usually envisaged for disposal facilities is mandatory.

Never perform such disassembly operations on your own but always require the assistance of somebody able to help and/or support in case of mistake or accident.

The gathering and separation of the different types of materials (metals, plastics, electrical cables, glass, etc.) fall within the professional competence of the staff of the disposal facilities and are not included into this operating handbook.



LIST OF INTERVENTIONS PERFORMED

date and reason	operations performed
I.N.1) date: _ _ _ _ _	
I.N.2) date: _ _ _ _ _	
I.N.3) date: _ _ _ _ _	
I.N.4) date: _ _ _ _ _	
I.N.5) date: _ _ _ _ _	
I.N.6) date: _ _ _ _ _	
I.N.7) date: _ _ _ _ _	
I.N.8) date: _ _ _ _ _	
I.N.9) date: _ _ _ _ _	
I.N.10) date: _ _ _ _ _	
I.N.11) date: _ _ _ _ _	
I.N.12) date: _ _ _ _ _	
I.N.13) date: _ _ _ _ _	



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date and reason	operations performed
I.N.14) date: _ _ _ _ _	
I.N.15) date: _ _ _ _ _	
I.N.16) date: _ _ _ _ _	
I.N.17) date: _ _ _ _ _	
I.N.18) date: _ _ _ _ _	
I.N.19) date: _ _ _ _ _	
I.N.20) date: _ _ _ _ _	
I.N.21) date: _ _ _ _ _	
I.N.22) date: _ _ _ _ _	
I.N.23) date: _ _ _ _ _	
I.N.24) date: _ _ _ _ _	
I.N.25) date: _ _ _ _ _	
I.N.26) date: _ _ _ _ _	

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NOTES AND OBSERVATIONS

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



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ELECTRICAL LAYOUTS

NOTE: in the wiring diagrams of the following pages, for the sole purpose of increasing the safety margin, all the fuses indicated can be replaced with fuses with lower intervention amperage, which, however, by intervening with lower current flows, can cause more frequent stops; in any case it is necessary to adequately protect the power supply line of the machine power supply (i.e. the electrical system of the host building) with a suitable differential magneto-thermal switch depending on the type of motor installed, that will be chosen and mounted by a qualified and expert electrical technician.



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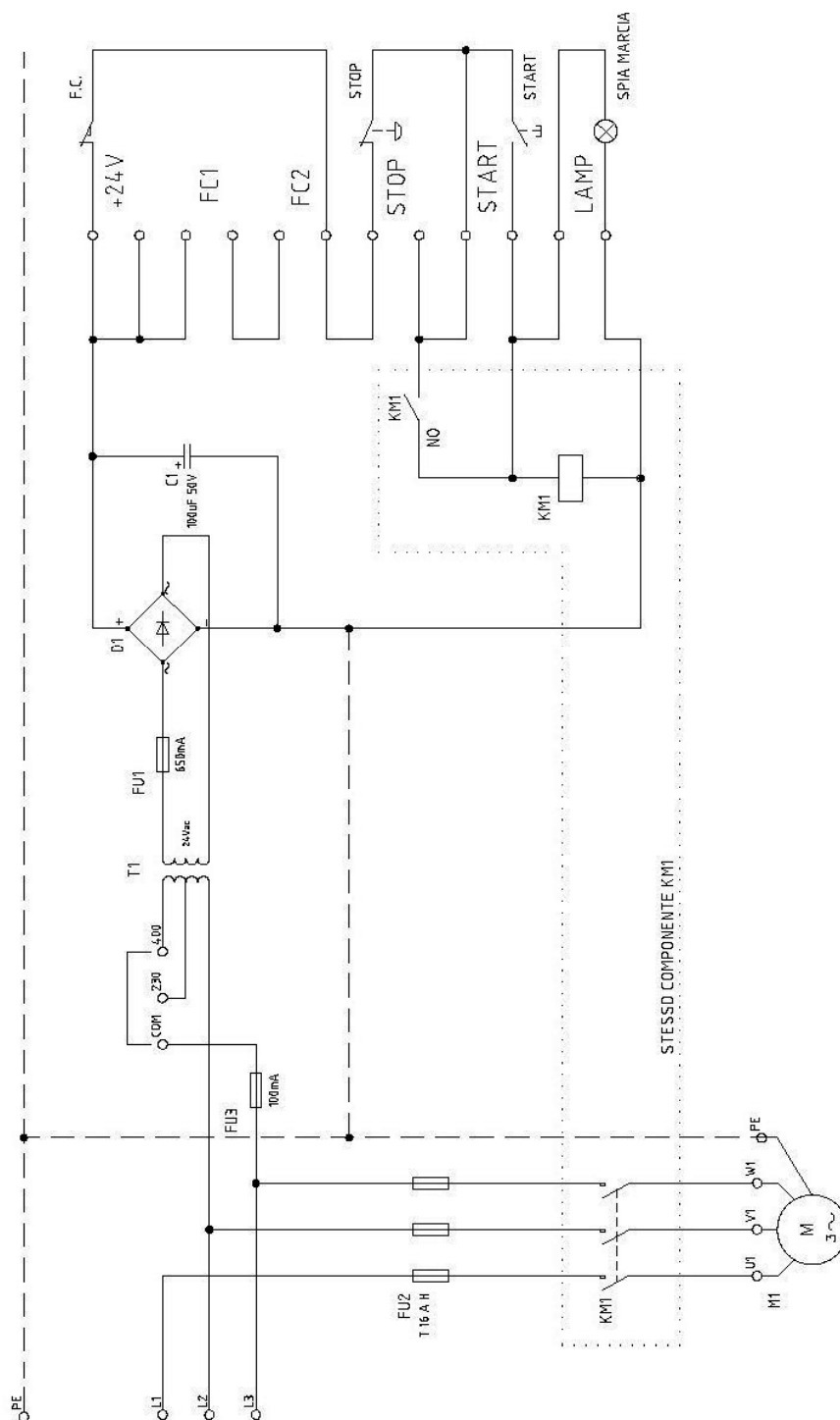
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SCHEDA Tگار02



Foglio		Ordine		Impianto		Dis. N.	
1		Commissa		SCHEDA MARCIA ARRESTO		Tگار02	
2		Esecutore		Denominazione		Nome File	
		LUCA		SCHEMA ELETTRICO 400V TRIFASE		Tگار02(01)	
				Data		05/09/2011	



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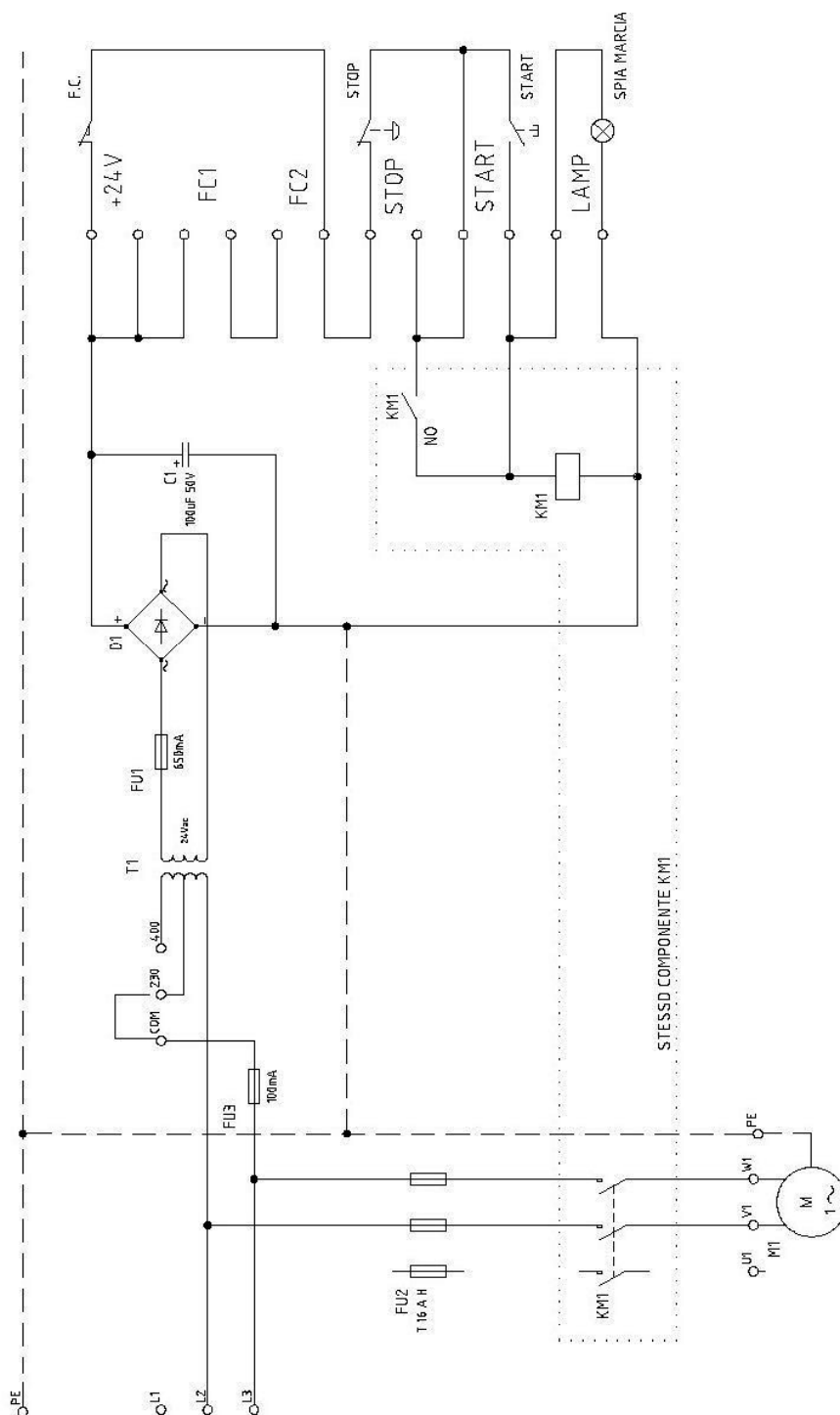
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SCHEDA Tگار02



			Foglio	
			2	
			3	
			SEGUE	
			3	



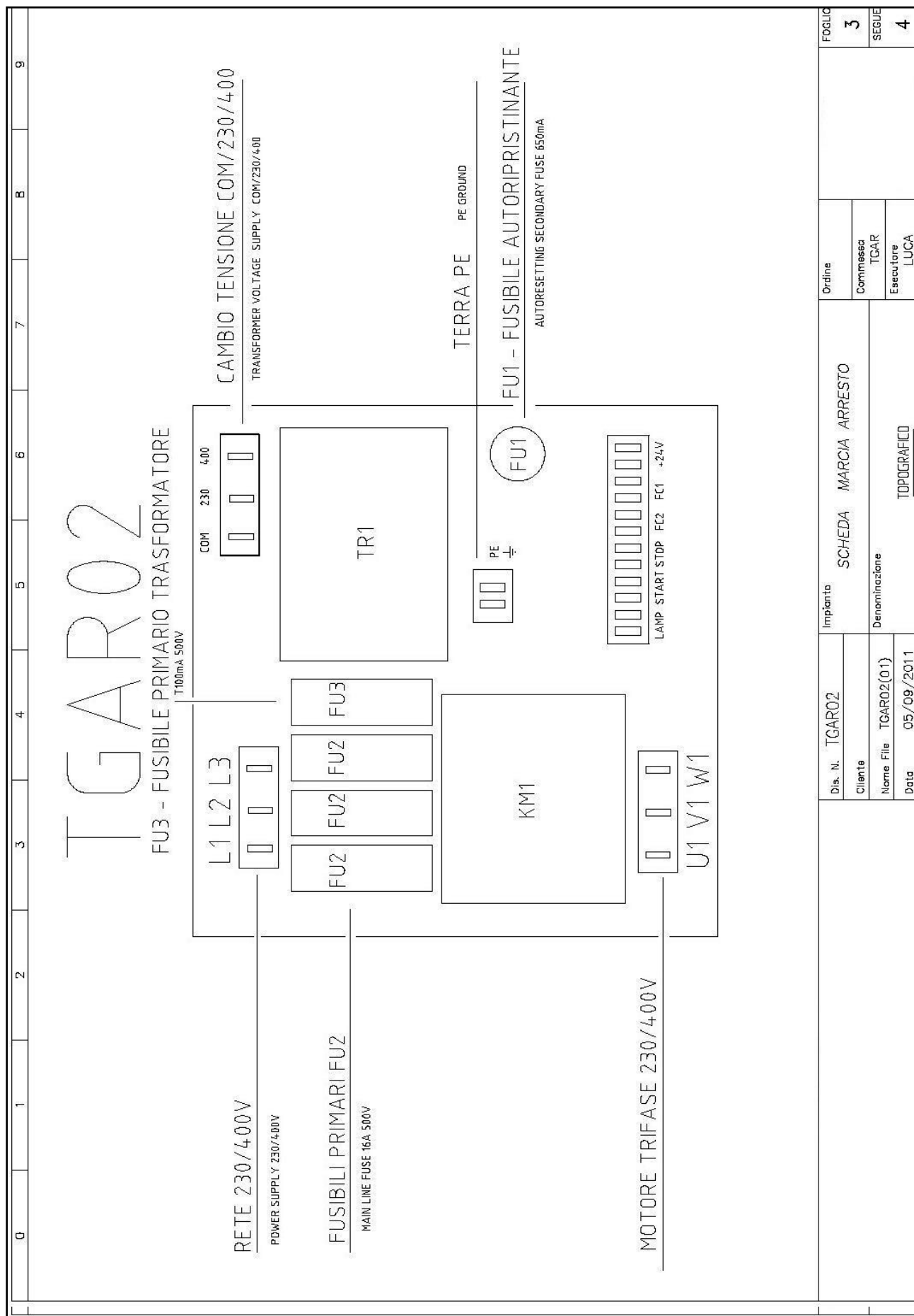
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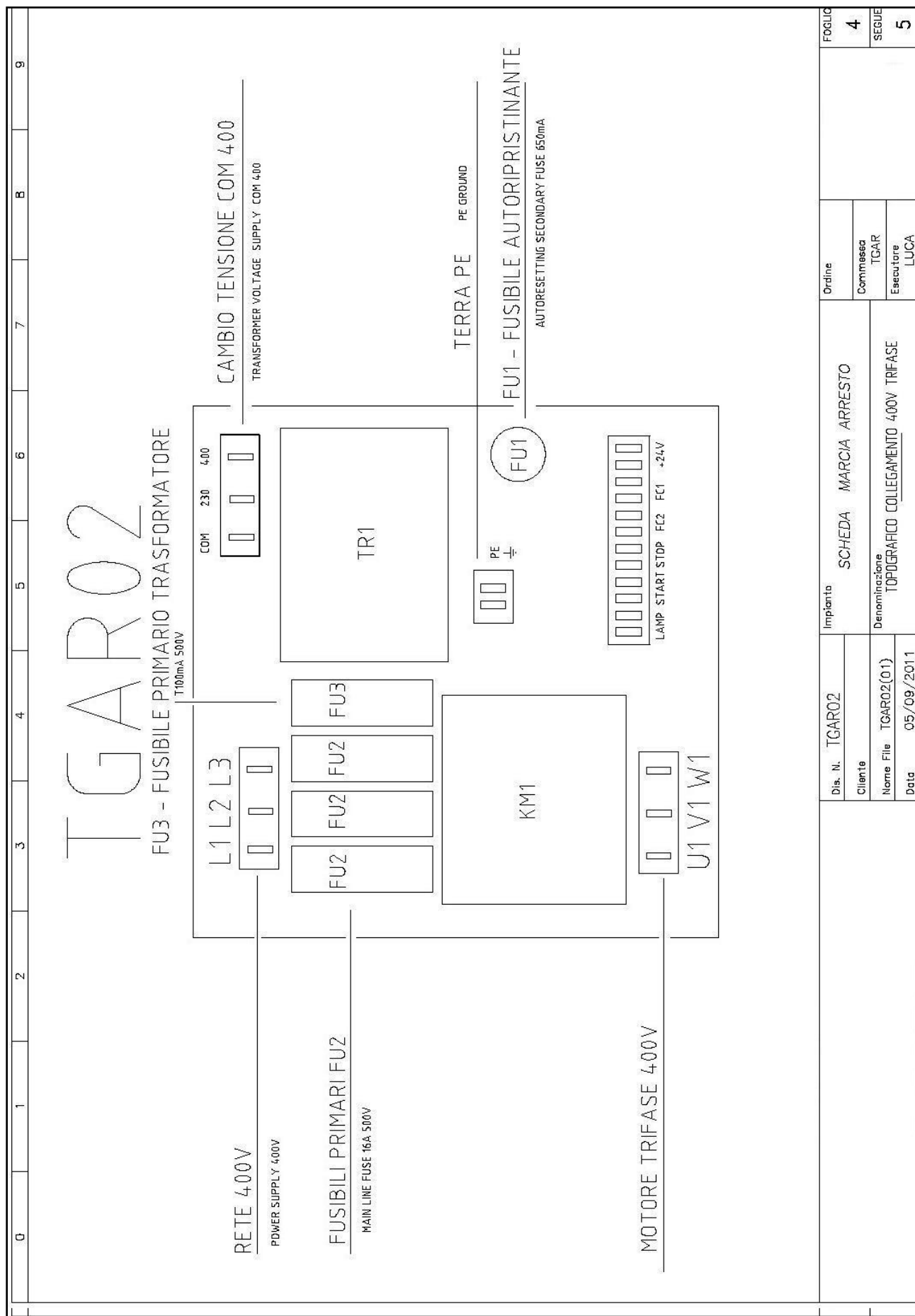
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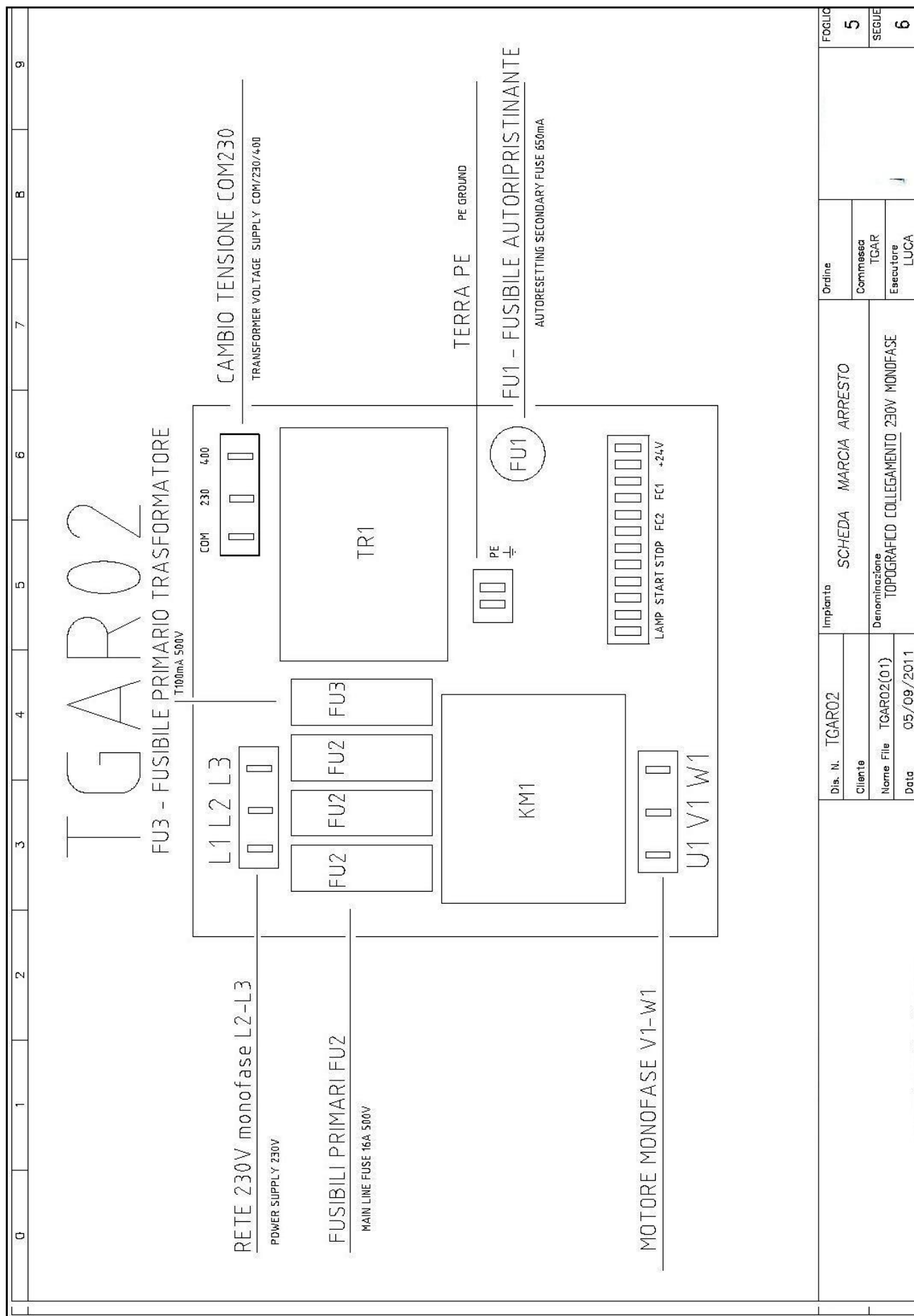
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	Dis. N.	Implanto	SCHEDA	MARCIA ARRESTO	Ordine	Foglio	
	Cliente						
	Nome File	Denominazione	TOPOGRAFICO COLLEGAMENTO 400V TRIFASE	Commissa	Segue		
	Data						



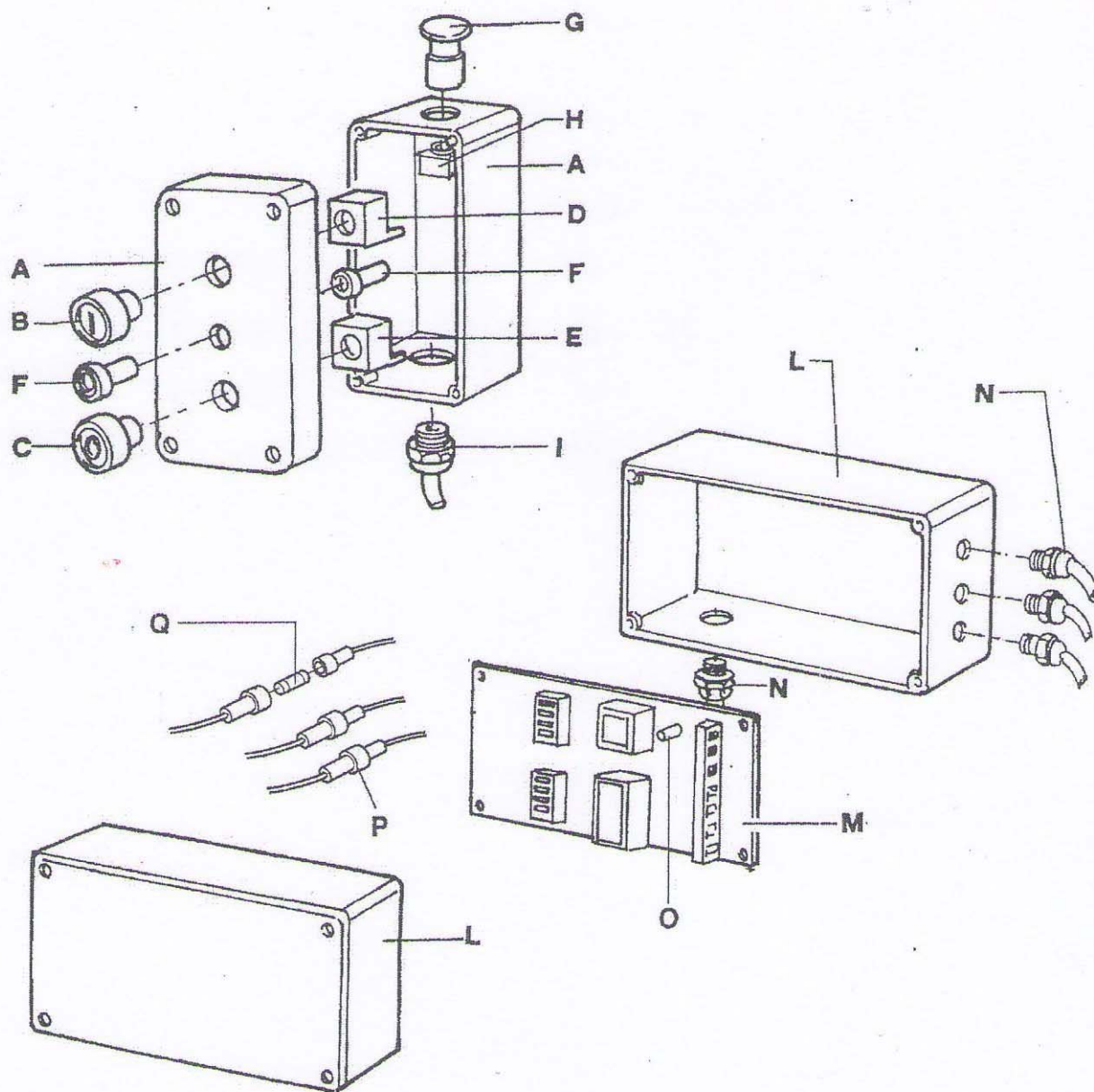
0	1	2	3	4	5	6	7	8	9	
Nome/Item	Tipi/Type	Descrizione/Description					Costruttore/Marke	Quadro/Board	Fg/Sh	Q.tà/Qty
CN1 L1/L2 L3	CQN-C-03-062	Faston 3Poli P10					FITTINGS	QG	1	1
CN2 U V W	CQN-C-03-062	Faston 3Poli P10					FITTINGS	QG	1	1
CN3 PE	CQN-A-02-062	Faston 2Poli P5					FITTINGS	QG	1	1
CN4 CAMBIO TENSIONE	CQN-C-03-062	Faston 3Poli P10					FITTINGS	QG	1	1
FU1	RXE 065 -T 650mA	FUSIBILE AUTORIPRISTINANTE					RAYCHEM	QG	1	1
FU2	GT632316 - T 16 A H	FUSIBILE 6.3x32 T 16 A H					OMEGA	QG	1	1
FU3	GT632110 - T 100mA	FUSIBILE 6.3x32 T 100 mA H					OMEGA	QG	1	1
KM1	ABB B6-30-10-P	TELERUTTORE					ABB	QG	1	1
T1	BV 048-0789.0	TRASFORMATORE PRI. 230VAC 400VAC SEC. 24VAC					ERA	QG	1	1
C1	100uF 50V	CONDENSATORE ELETTROLITICO					ELITE	QG	1	1
D1	W04M	PONTE A DIODI 1.5A 400V					DC COMPONENTS CO. LTD	QG	1	1
CN5	CQN-A-06-062	Faston 6 Poli P5					Weidmuller	QG	1	1
CN6	CQN-A-06-062	Faston 6 Poli P5					Weidmuller	QG	1	1

NOTE: I 3 FUSIBILI FU2 SONO VOLUTAMENTE SOVRADIMENSIONATI PER PROTEGGERE IL CIRCUITO SOLO IN CASO DI CORTO CIRCUITO SULLA LINEA MOTORE, L'ALIMENTAZIONE FORNITA ALLA SCHEDA DEV'ESSERE COMUNQUE PROTETTA CON UN INTERRUETTORE MAGNETOTERMICO DIFFERENZIALE A MONTE DIMENSIONATO SECONDO LE CARATTERISTICHE DEL MOTORE IMPIEGATO.

FOGLIO 6 SEGUE /	Ordine	SCHEDA MARCIA ARRESTO	Impianto	Dis. N. TGA02	Foglio
			Denominazione		
			Commissa TCAR		
			Esecutore LUCA		



VERSION NO. "2" OF THE SUPPLY OF THE PUSH-BUTTON CONTROL PANEL

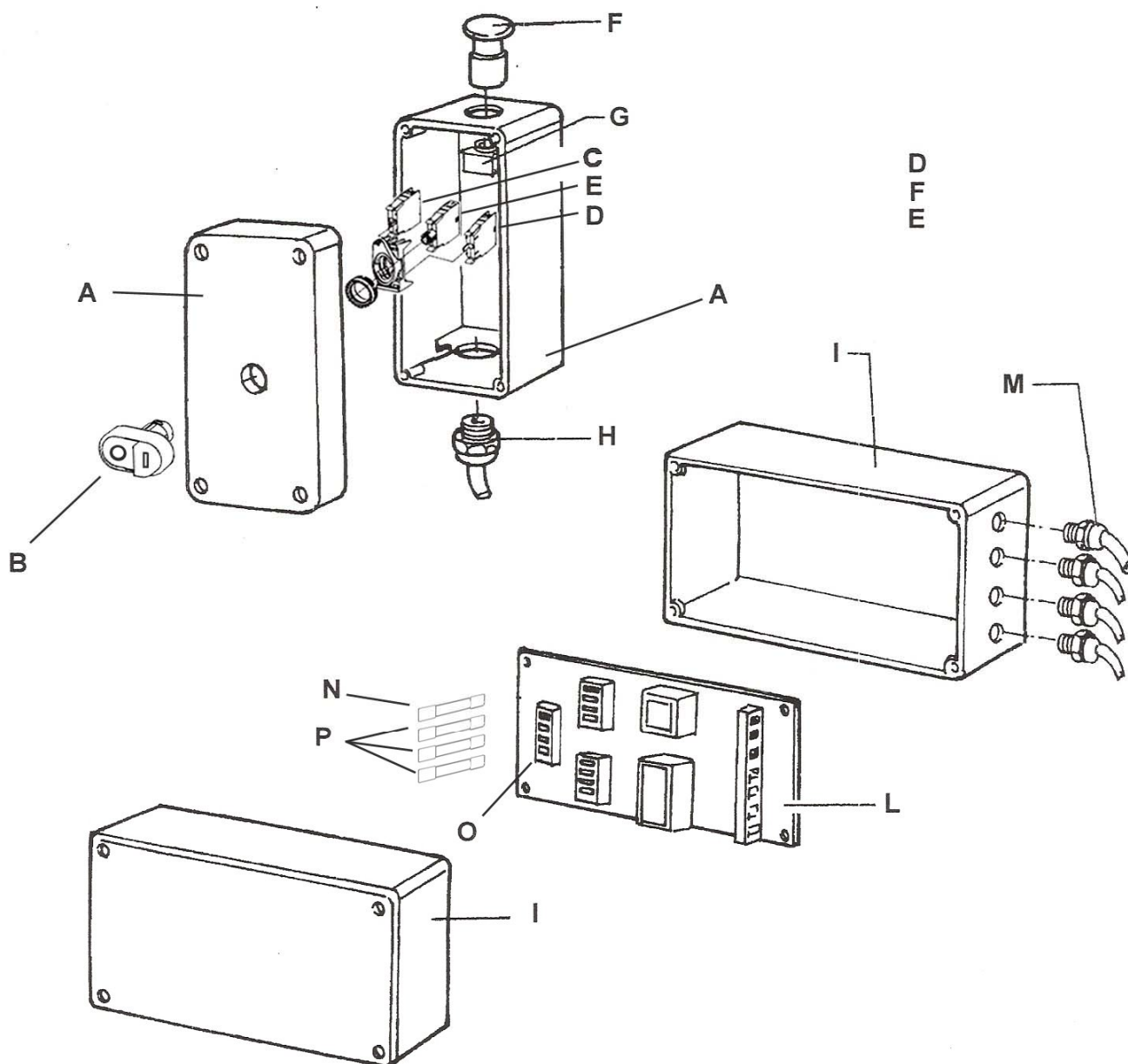


LEGENDA:

A = Control unit;	B = Working pushbuttons;	C = Stop pushbutton;
D = Working pushbutton electric contact;	E = Stop pushbutton electric contact;	F = Pilot light;
G = Emergency pushbutton;	H = Emergency pushbutton electric contact;	I = Cable gland;
L = Electrical card box;	M = Electrical card;	N = Cable gland;
O = Fuse(s);	P = Fuse(s) support;	Q = Fuse(s);



VERSION NO. "0" OF THE SUPPLY OF THE PUSH-BUTTON CONTROL PANEL



LEGENDA:

- | | | |
|---|--|-------------------------|
| A = Control unit; | B = Stop pushbutton + Pilot light + Working pushbutton; | |
| C = Working pushbutton electric contact; | D = Stop pushbutton electric contact; | E = Pilot light; |
| F = Emergency pushbutton; | G = Emergency pushbutton electric contact; | H = Cable gland; |
| I = Electrical card box; | L = Electrical card; | M = Cable gland; |
| N = Fuse(s); | O = Fuse(s) support; | P = Fuse(s); |



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