INSTRUCTION MANUAL

«TRANSLATION OF THE ORIGINALS INSTRUCTIONS»

This manual is to be kept for future reference and must always accompany the machine.

TYPE

SE20

MODEL

SI 3BO

SEGA SQUADRATRICE

SQUARING CIRCULAR SAW FOR WORKING WITH WOOD AND MATERIAL WITH SIMILAR PHYSICAL CHARACTERISTICS



Read this manual in its entirety before using the machine for the first time. Failure to follow the instructions given in this manual can lead to death or serious injury.

- Ed. 11-2023 / Rev. 1.6 CE 00L0921072G EN

THIS MANUAL IS THE PROPERTY OF SCM GROUP S.P.A. - ANY REPRODUCTION, EVEN PARTIAL, IS PROHIBITED

Manufacturer	SCM GROUP S.p.A.
Address	Via Emilia, 77 - 47921 Rimini (RN) - Italy
Registered Office	
Importer	
Importer's address	
Name	SEGA SQUADRATRICE
Name	SQUARING CIRCULAR SAW FOR WORKING WITH WOOD AND MATERIAL WITH SIMILAR PHYSICAL CHARACTERISTICS
Brand	SCM
Year of manufacture	
Serial number	
Client:	
Type	SE20
Model	SI 3BO
Composition	
Work order	
CNC type	
Type of document	Instruction manual
Document code	00L0921072G
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Compliance	CE

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EC Declaration of conformity

DICHIARAZIONE “CE” DI CONFORMITÀ

(AI SENSI DELL’ AII.IIA DELLA DIRETTIVA 2006/42/CE E DICHIARAZIONE “UE” AI SENSI DI ALTRE DIRETTIVE APPLICABILI)

EC DECLARATION OF CONFORMITY

(IN COMPLIANCE WITH ATT. IIA OF THE DIRECTIVE 2006/42/EC AND “EU” DECLARATION AND IN COMPLIANCE WITH OTHER APPLICABLE DIRECTIVES)

IL FABBRICANTE *THE MANUFACTURER*	**SCM GROUP S.p.A.** **Via Emilia, 77 - 47921 Rimini (RN) - Italy**

DICHIARA CHE LA
DECLARES THAT THE

MACCHINA: *MACHINE:*	***Sega circolare squadratrice per la lavorazione del legno e di materie con caratteristiche fisiche simili*** ***Circular saw squaring machine for machining wood and material with similar physical characteristics***		
MARCA: *BRAND:*	**SCM**	*N° DI SERIE* *SERIAL NUMBER*	***141042***
TIPO: *TYPE:*	**SE20**	*ANNO DI COSTRUZIONE:* *YEAR OF CONSTRUCTION:*	***XXXX***
MODELLO: *MODEL:*	**SI 3BO**		

È CONFORME A TUTTE LE DISPOSIZIONI PERTINENTI DELLE SEGUENTI DIRETTIVE:
COMPLIES WITH ALL THE RELEVANT REQUIREMENTS OF THE FOLLOWING DIRECTIVES:

2006/42/CE	***2006/42/EC***
2014/30/UE	***2014/30/EU***

ORGANISMO NOTIFICATO CHE HA EFFETTUATO L’ESAME CE DI TIPO ***NOTIFIED BODY THAT EXECUTED THE EC TYPE-EXAMINATION***	**VERICERT Srl** **Via L.Masotti, 5 Loc Fornace Zarattini** **48124 Ravenna (RA) - ITALY**
NUMERO DI ATTESTATO D’ESAME CE DI TIPO ***EC ASSESSMENT REPORT NUMBER TYPE***	**1878M1P11553CT0921**

PERSONA AUTORIZZATA A COSTITUIRE IL FASCICOLO TECNICO: *PERSON AUTHORISED TO COMPILE THE TECHNICAL FILE:*	**SCM GROUP S.p.A.** **Via Emilia, 77 - 47921 Rimini (RN) - Italy**

IL RAPPRESENTANTE DELEGATO DEL FABBRICANTE
THE MANUFACTURER'S DELEGATED REPRESENTATIVE

Rimini, XX/XX/XX

XXXXXXXX

(IT) DICHIARAZIONE IN LINGUA ORIGINALE
(EN) TRANSLATION OF THE DECLARATION IN ORIGINAL LANGUAGE

FACSIMILE

NOTICE

*THE "EC DECLARATION OF CONFORMITY" IS DRAWN UP IN SINGLE COPY, IT MUST ALWAYS REMAIN WITH THE OWNER OF THE MACHINE AND IT MUST BE STORED WITH THE MACHINE: the original copy, printed on watermarked paper, is provided.

THE ORIGINAL COPY OF THE ""EC" DECLARATION OF CONFORMITY" MUST REMAIN WITH THE MACHINE WHEN SOLD TO ANOTHER USER.

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1.1 Importance of the instruction manual

Aim

The instruction manual provides the user with all the information necessary to operate the machine safely.

The machine is accompanied by:

- "original instructions", in Italian
- "translation of the original instructions", in the language of the country of destination

NOTE The manufacturer assumes responsibility for the "original instructions", which are also provided to allow the user to verify the accuracy of the translation in case of doubt.

Notes for use

⚠WARNING Before using the machine, the “authorized operators” assigned to the use and maintenance operations must read and understand the manual supplied with the machine.

- **The manufacturer declines any responsibility for any damages to people, animals or property caused by the non-compliance with the warnings and operating methods described in this manual.**
- Some images in this manual may not correspond exactly to the actual machine configuration. This does not affect the validity of the information and instructions described in any way and does not, therefore, impact upon the operator's safety.

About the manual

NOTE **This manual is an integral part of the machine, it must be kept for future reference and must always accompany the machine, even if it is transferred to a third party.**

The instruction manual contains proprietary information.

Reproduction and/or disclosure in whole or in part, in any form, without the manufacturer's written authorization is prohibited.

1.2 Machine Identification

Plate is marked with the identification data for the machine. Please quote this data when making technical enquiries or ordering spare parts.

The plate is placed on the base and contains the following data:

- DESIGNAZIONE = Short and standard description of the machine name and its function
- MARCA = Commercial brand
- TIPO = Machine type
- ANNO = Year of production
- N° SERIE = Serial number
- Kg = Weight in kilograms
- Un V = Voltage rated in volts
- ~ = Phases number (alternate current)
- In A = Nominal current in amperes
- f Hz = Electrical frequency in hertz
- Icc. kA = Short circuit breaking capacity of the protective device in kiloamperes
- W.D. = Wiring diagram number
- MODELLO = Machine model
- COMP. = Machine version
- REF. = Internal reference

It is a good idea to write down the machine identification data on this page for ready reference.

The plate also indicates the manufacturer's company name and full address and, if necessary, the EC marking.

1.2.1 Machine identification plate



NOTE For the position of the plate, refer to the "Machine description" chapter

1.3 Documentation supplied with the machine

The documentation supplied with the machine consists of:

- Instruction manual in paper copy (this one)
- Spare parts catalogue
- Electrical diagram
- Pneumatic diagram (if present)
- User and programming manual (if available)
- EC declaration of conformity* (See FACSIMILE)
- Technical generic documentations of machine components is not necessarily included

"CE" literally means "Conformité Européene" ("European Conformity").

With the "EC declaration of conformity", the manufacturer certifies complete compliance of the line with the relevant provisions of the "Machinery Directive" applicable upon it being placed on the market.

The machine is subject to The provisions set out in Annex IV of Directive 2006/42/CE.

In the event of modifications, tampering or alterations of the line or parts of the line that are unauthorised by the manufacturer, the "EC declaration" shall cease to be valid.

NOTE The pneumatic and electrical diagrams are for the exclusive use by specialised personnel appointed by the manufacturer, therefore they only show the information in Italian and English.

NOTICE

All the documentation supplied with the machine, with particular reference to this manual, to the EC declaration of conformity, plus the electrical and pneumatic diagrams, must obligatorily accompany the machine should it be sold to another user.

NOTICE

*THE "EC DECLARATION OF CONFORMITY" IS DRAWN UP IN SINGLE COPY, IT MUST ALWAYS REMAIN WITH THE OWNER OF THE MACHINE AND IT MUST BE STORED WITH THE MACHINE: the original copy, printed on watermarked paper, is provided.

The EC declaration of conformity refers to the machine, complete with all its possible configurations based on the list of options in the catalogue.

NOTE the devices on the price-list can change at Manufacturer’s discretion

1.4 Technical support

The technical support service provides information and support via telephone, in writing and training and maintenance interventions.

Contact information

When writing or phoning SCM GROUP SpA for any reason concerning the machine, always supply the following information:

- Machine type
- Machine model
- serial number
- Voltage and frequency
- Date of purchase
- name of dealer from whom machine was purchased
- Detailed description of any faults found
- detailed information on the machining tasks to be executed
- Period of use - number of hours of operation

Technical Support Service

Address: SCM GROUP S.p.A. **-** Via Emilia, 77 - 47921 Rimini (RN) - Italy
Web - site: www.scmgroup.com
Spare Parts Office (IT): Tel. +39 0541 674706
E-mail: spareparts@scmgroup.com
Technical Support Service: Tel. +39 0541 700100
E-mail: scm_service@scmgroup.com

1.5 Consultation notes - Abbreviations - Acronyms - Glossary

Layout of the pages

The top contains:

- the company logo
- the number of the chapter
- the description of the chapter;

The bottom contains:

- the machine model (if present)
- the machine type (if present)
- the serial number (if present)
- the edition and revision of the Instruction Manual
- the page number

Abbreviations - Acronyms

Par.	Chapter	ca.	about
CC	Continuous current	**AC**	alternate current
NC / CNC	Numeric Control	**EN**	European Norm
DX - R	right	**SX - L**	left
D -φ	diameter	**PPE**	Personal Protective Equipment
E.M.	of the electrospindle	**.**	.
Fig.	Figure	**H**	height
min.	minimum	**max**.	maximum
MDF	Medium Density Fiberboard.	**Ref**.	Reference
No.	number	**pos**.	position
OPT	optional	**STD**	standard
page	page	**par**.	paragraph
PC	Personal Computer	**a.s.l.**	above sea level
PES	expert person	**PAV**	warned person
o.s.	operating system	**sw**	software
UPS	Uninterruptible power supply unit	**.**	.
<	“Less than..." symbol "	**>**	"Greater than..." symbol "
≤	"Equal to, less than..." symbol "	≥	"Equal to, greater than..." symbol "

Glossario

Workpiece	Means the element to be machined in the material indicated in the chapter "Machinable materials"

NOTICE In the manual the definition “SCM”, “Manufacturer” replace the complete name .

1.6 Symbols in the instruction manual

NOTE The present manual applies to all versions of machines. Instructions and information applicable only to a particular version or versions are indicated with a Note or symbol.

Symbol	Description
	Indicates that the information is specifically for : **ASSIGNED OPERATOR**
	Indicates that the information is specifically for : **TRANSPORT OPERATOR**
	Indicates that the information is specifically for : **MECHANICAL MAINTENANCE OPERATOR**
	Indicates that the information is specifically for : **ELECTRICAL MAINTENANCE OPERATOR**
	Indicates that the information is specifically for : **COMPANY SAFETY MANAGER**
	Indicates that the information is specifically for : **MANUFACTURER'S TECHNICIAN**



DANGER

Indicates a danger with a high risk probability that if not avoided will lead to death or serious injuries.



WARNING

Indicates a danger with a medium risk probability that if not avoided could lead to death or serious injuries.



CAUTION

Indicates a danger with a low risk probability that if not avoided could lead to moderate or light injuries.



NOTICE

Information to prevent damages to the machine

NOTE Neutral and positive information that emphasizes or adds information to the main text. Provides information that can only be applied in special cases.

Symbols

	Machine user
	Users cannot enter this zone with the machine functioning or switched on
	Ear protective equipment must be used
	Eye protective equipment must be used
	Hands protective equipment must be used
	Respiratory tract protective equipment must be used.
	**MACHINE OFF**: Before performing any type of maintenance and/or adjustment operation on the machine, cut off all the supply sources (electrical and pneumatic). Make sure that the machine is actually stopped and that it cannot be started accidentally (main switch in position “0” and padlocked and compressed air valve closed and padlocked).
	**PROHIBITED**: indicates manouvres, commands or others that cannot be carried out as they can create very dangerous situations for persons and damage the machine.
	**OPTIONAL**: devices available only on request
	Special devices, not included in the price list, available only upon specific request and after technical verification.

1.7 Plates on the machine

SPECIALISED PERSONNEL

The operator must pay attention to the signs and plates fixed on the machine.

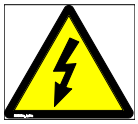
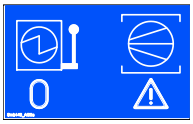
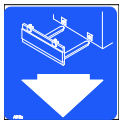
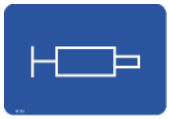
Ensure that the labels are always clearly visible. Replace any labels which are damaged or illegible. Always observe the safety labels on the machine.

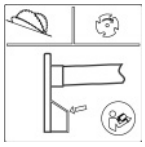
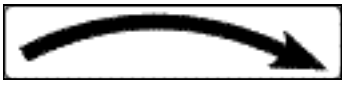
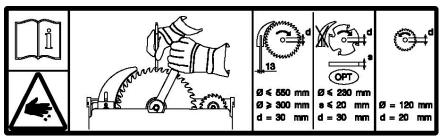
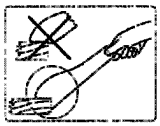
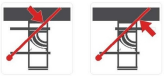
The signals and plates must be regularly inspected and cleaned in order maintain them clearly legible.

If the signs and the plates are not clearly legible, contact the manufacturer to replace them.

If they need to be replaced, proceed as follows:

- Remove the old sign or plate.
- Clean the zone with detergent.
- Position the new sign or plate in the same position of the one removed.

	REF.	SIGNAL	TYPE	DESCRIPTION
	Ap01a		**Danger**	Electrocution
	A p02a		**Danger**	Cut fingers
	Ap07g		**Danger**	Because of rotating or moving parts, hazards of crushing of the upper limbs are present
	Ai09a		**Information**	Indication that the main electrical switch DOES NOT cut off the pneumatic supply
	Ai02o		**Information**	Indication of air pressure
	Ai13a		**Information**	Sign indicating fork insertion point for lifting machine with a fork lift truck.
	Ai08b		**Information**	Lifting points
	Ai15a		**Information**	Greasing point

	REF.	SIGNAL	TYPE	DESCRIPTION
	Ai16a		**Information**	Weight: kg...
	Ao01a		**Compulsory**	Read and understand the instruction manual
	Ai33b		**Information**	Replacement of suspended guard rear side
	--		**Information**	Rotation direction indication
	--		**Information**	Rotation direction indication
	--		**Information**	Locking symbol
	--		**Information**	Warning plate
	--		**Information**	Indicates how to use the workpiece pusher
	--		**Information**	Indicates on which side of the rule the workpiece being machined must be positioned

1.8 Conditions foreseen for the use

This machine has been designed and built to cut solid wood, materials with wood-like physical features, wood-based chipboard, multi-layer, cork, hard rubber or plastic materials, plywood covered in plastic or lightweight alloy.

Metals, cement-based composites cannot be cut.

Milling is prohibited with a tool other than a circular saw blade and without the use of the protection provided with this machine.

DANGER

Materials different from those quoted above, since dissimilar to wood, are thus prohibited: the user is solely responsible for any damage caused by machining such materials.

CAUTION

Use tools fit for any type of material that you want to process.

DANGER

The material to be machined must not contain any metal parts.

NOTICE

Always use a special mask ensuring stability when cutting curved pieces.

NOTE

For any requirement or advice on cutting plastic materials, contact the tool manufacturer or the local SCM dealer.

WARNING

The additional device BLADE OFF must always be used for machining solid wood that is not humid and materials similar to wood.

The device must be excluded only when cutting humid woods, light alloys or plywood coated with light alloys.

To exclude the BLADE OFF system and for the upper wood humidity limits beyond which the system must be excluded, see the table and graphic in the warning section in paragraph "Blade Off System".

1.9 Tools that can be used

The machine has been designed to be used exclusively with manual feeding tools, EN 847-1 compliant tools, suitable for the type of material that must be processed.

Manual feed means guiding the pieces:

- the hand,
- with sliding trolley pushed by hand,
- the feeder.



SPECIALISED PERSONNEL

For the use, adjustment and repair of tools, follow the manufacturer's instructions.

1.10 Environmental conditions

The environment conditions required are:

- relative humidity: Max 50% at 40 °C (higher relative humidity values are allowed at lower temperatures: for example 90 % at 20 °C)
- temperature with the machine operating: Min. + 10°C ; Max + 35°C
- temperature with the machine off: Min. + 5°C ; Max + 35°C
- altitude: max 1000 a.s.l. (at higher altitudes, consult Manufacturer)

NOTE The electrical equipment resists the effects of transport and storage temperatures in the range between -25 ° C and +55 ° C (up to +70 ° C for periods of time not exceeding 24 h).Under different conditions, take appropriate precautions to protect it.

Sufficient lighting must be provided, general or localised at the workstation, min. 500 LUX.

NOTICE

A clear working area around the machine is fundamental for safety: the floor must be flat (a cement industrial floor), well-kept and free of material, e.g. shavings, scraps, etc.

The machine is designed for use indoors in industrial environments.

PROHIBITED

The machine cannot be started in environments classed as potentially explosive in accordance with European Directive "99/92/EC".

DANGER

always connect the machine to a suitably dimensioned extraction system (see paragraph " Connection to the suction system").

NOTICE

For proper functioning, it is advisable to use the machine in an environment with temperatures between 18° and 30° C and relative humidity between 30% and 65%.

1.11 Incorrect use that can be reasonably expected

- DO NOT use the machine if you are not an authorised and trained operator.
- It is FORBIDDEN to use the machine in any way other than that for which it has been designed or any way other than described in this manual.
- DO NOT use the machine without the required guards for every machining process or removing part of the guards (DO NOT disassemble the fixed and mobile guards, bypass the safety microswitches)
- DO NOT use the machine in ways that differ from those described above (see par. "Conditions foreseen for the use").
- DO NOT use the machine in environmental conditions that differ from the ones indicated above (see par. " Environmental conditions")
- DO NOT handle the tools without individual protective equipment (not supplied by SCM) for the hands and forearms.
- DO NOT use the machine without individual protective equipment from noise (ear plugs) (not supplied by SCM).
- DO NOT use the machine without extraction.
- DO NOT use the machine without having assessed the need to use individual protective equipment (not supplied by SCM) in relation to wood dust (we recommend the use of individual protective equipment: hard wood dust is carcinogenic).
- DO NOT use the machine if the area around the machine is not flat, well maintained and free of loose material (e.g. shavings and rejects).
- DO NOT machine different materials from the ones that the machine has been designed for and that are not set out in this manual (see par. "Conditions foreseen for the use").
- DO NOT machine materials of dimensions that the machine has not been designed for and that are not set out in this manual (see par. "Dimensions of workpiece to be thicknessed").
- DO NOT use tools not included in standard EN847-1 or of a size not compatible with the machine technical specifications.
- DO NOT make modifications to the machine.
- It is FORBIDDEN to allow children, pets or any unauthorised personnel into the work area.
- IT IS FORBIDDEN to use tools that are not suitable for the work piece.

Performing modifications, voids the machine's Declaration of Conformity.
For damages deriving from improper use the user is solely responsible.

1.12 ⚠RESIDUAL RISKS

There is a certain degree of risk whenever any kind of machine tool is used and this should never be forgotten.

Ultimately, safety is in the hands of the operator.

This machine complies with the safety standards in force and has the very latest safety features.

These protections are effective as long as they are properly used and kept in efficiency.

Even if the safety prescriptions are kept and the machine use occurs in accordance with the rules described in this handbook, the following risks may rise:

- Contact of parallel fence in horizontal position with saw blade and scorer blade.
- Contact with rotating members (belts, pulleys, chains ...).
- Kickback of the workpiece or of its parts (splits): never stop in the position corresponding to the trajectory of possible split ejection.
- Ejection of tool inserts: never stop in the position corresponding to the trajectory of possibile split ejection.
- Electrocution from contact with live parts
- Contrary direction of tool rotation due to wrong electric connection.
- Danger due to wrong working position of the operator.
- Danger caused by the wrong tool fitting.
- Possible squashing of the hands, with the fixed parts of the machine, during the sliding table motion.
- Contact with the standstill or rotating tool.
- The machine can cause fires during operation. Fire hazard from sparks in the event of contact between rotating tools and foreign bodies.
- In the event of a power failure, the tool can continue to rotate beyond the maximum switch-off time.
- If there is not electrical current, the blade is excluded due to the effect of the BLADE OFF system.
- Dust inhalation in case of working without suction.



WARNING

Some factors that influence exposure to dust are:

- regular maintenance of the tools, the machine and the extractor system;
- the type of material being processed;
- connection to the extractor outlets;
- correct adjustment of the protections / extractor outlets;
- the connection of the machine with an external suction system, which guarantees the parameters indicated in the instructions for use.

Danger due to exposure to machine noise. Some factors which influence noise are:

- Correct tool selection
- Correct speed selection
- Tool and machine maintenance
- the type of material being processed
- Correct use of hearing protection.

1.13 Personnel training

It is obligatory that all operators receive adequate training for the use, adjustment and function of the machine.

Machine operators must read the handbook and pay particular attention to safety warnings, more specifically, operators must have an understanding of:

In particular:

a) The principles of the right use and operation of the machine.
b) How to handle the work-pieces during machining.
c) Using the pusher supplied with the machine.
d) Position of the hands with respect to tools, before, during and after maintenance.
e) The right selection of the tools.
f) The piece feed to the tool which shall occur in the contrary direction to the spindle rotation direction.
g) The selection of the proper spindle speed required by the tool.

Operators must also be informed vis-à-vis risks associated with using the machine and the precautions that need to be taken. They must be instructed to carry out periodic inspection of safety guards/devices.

NOTE

A suitable padlock must be procured to lock the main power switch.

The keys are the responsibility of the qualified, authorised operator.

1.14 Emergency conditions

DANGER

In the case of flooding of the room where the machine is housed, disconnect the electricity and pneumatic supplies immediately. Before starting work, have the machine checked by a specialised technician.

DANGER

In case of fire, immediately disconnect the electrical power supply and intervene using suitable fire extinguishers directing the jets at the base of the flames. Even if the machine has suffered no apparent damage, before restarting work have the machine checked by a specialised technician.

There must be enough space around the machine, as described in the paragraph "Work area", to allow a fast exit in the event of danger.

This machine must not be operated in explosive environments.

1.15 REMOVAL - STORAGE - SCRAPPING

For the removal of the machine, disconnect it from the electrical system and the pneumatic system, following the instructions in the paragraphs for lifting.

In case of extended inactivity of the machine, disconnect it from the electrical system. Thoroughly clean it, as already described for ordinary cleaning, and coat the work and sliding tables and the tool holder spindles with anti-rust protection. Do not store the machine in humid environments and protect it from atmospheric agents.

The machine is manufactured with non-toxic or harmful materials; in case of scrapping separate the ferrous materials from the plastic materials and scrap respectively.

1.15.1 Dismantling the device

The machine is manufactured with non-toxic or harmful materials; in case of scrapping separate the ferrous materials from the plastic materials and scrap respectively. We recommend contacting a specialised and authorised company, in compliance with the applicable laws and standards.

The operators moving the machine and the maintenance personnel must wear the IPE required for the risks involved with the type of use and in compliance with the applicable laws and standards.

To move and transport the machine refer to the instructions in section "Installation" .

2 Safety and emergency stop devices

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2.2 Arrangement and description of safety devices..... 29

2.1 Arrangement and description of emergency devices

Emergency equipment consists of special devices whereby operators can promptly stop the machine if necessary or in case of danger.

DANGER

Emergency devices must never be removed or disconnected for no reason whatsoever.

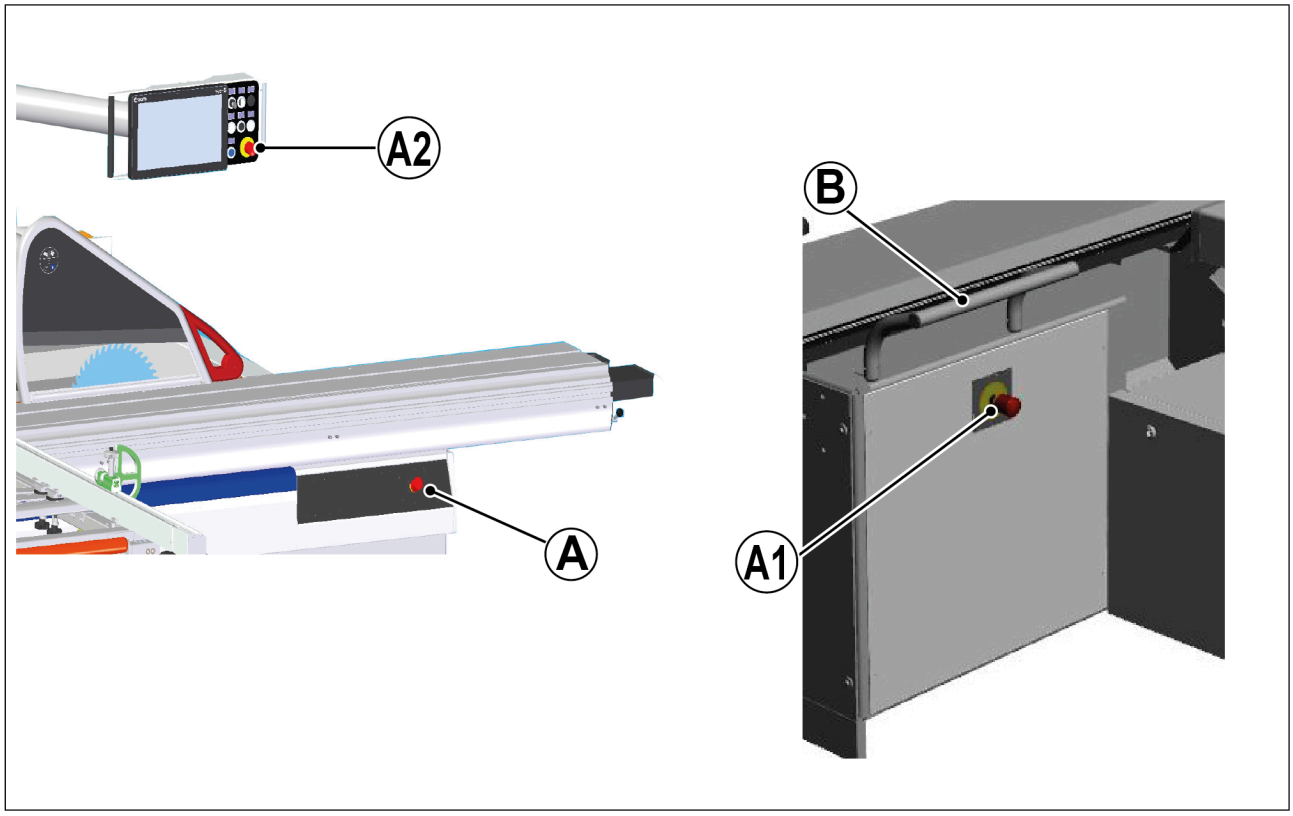
A	Emergency push-button	on the control panel (A)
		parallel guide side (A1)
		on the mobile control panel (A2)
	It causes an immediate emergency stop.	
B	Emergency bar	Device whose actuation causes the emergency stop of the motorized guide for parallel cuts.

SPECIALISED PERSONNEL

Periodically, check that the devices, listed above, are efficient.

DANGER

Any anomalies found during the control of these devices, must be reported promptly to the manager , who will put the machine out of service and call the Support Service. SCM



2.2 Arrangement and description of safety devices

Safety devices are special accident-prevention guards whereby the machine is protected against possibly dangerous situations.

DANGER

Safety devices must never be removed or disconnected for no reason whatsoever.

Description

A	Main electrical switch (padlockable)
	When at zero (OFF), it cuts electrical power supply to the machine
B	Lower blade change zone safety panel
C	Limit switch fitted on the side of saw unit guard Prevents access to the blade compartment if the pneumatic system is not discharged and to ensure that with guard (B) open, the motor cannot be started.
D	Automatic brake It acts directly on working unit.
E	Suspended blades safety panel The guard is made of material (aluminium + polycarbonate) so that the saw blade is not damaged if it touches the guard
F	Operator detection sensors (Blade Off activation sensors) They activate the retraction of the blade from the surface in the event that a part of the operator's body is detected in the vicinity of the rotating blade.
L	One limit switch (L) driven by stop interrupt the run of the power fence if the electric control does not operate. The 2 mechanic stops on the frame of the fence serve as further safety devices.
K	A limit switch (K) delimits the area where movements must be controlled with hold-down buttons.

SPECIALISED PERSONNEL

Periodically, check that the devices, listed above, are efficient.

DANGER

Any anomalies found during the control of these devices, must be Reported promptly to the manager , who will put the machine out of service and call the SCM Support Service.

WARNING

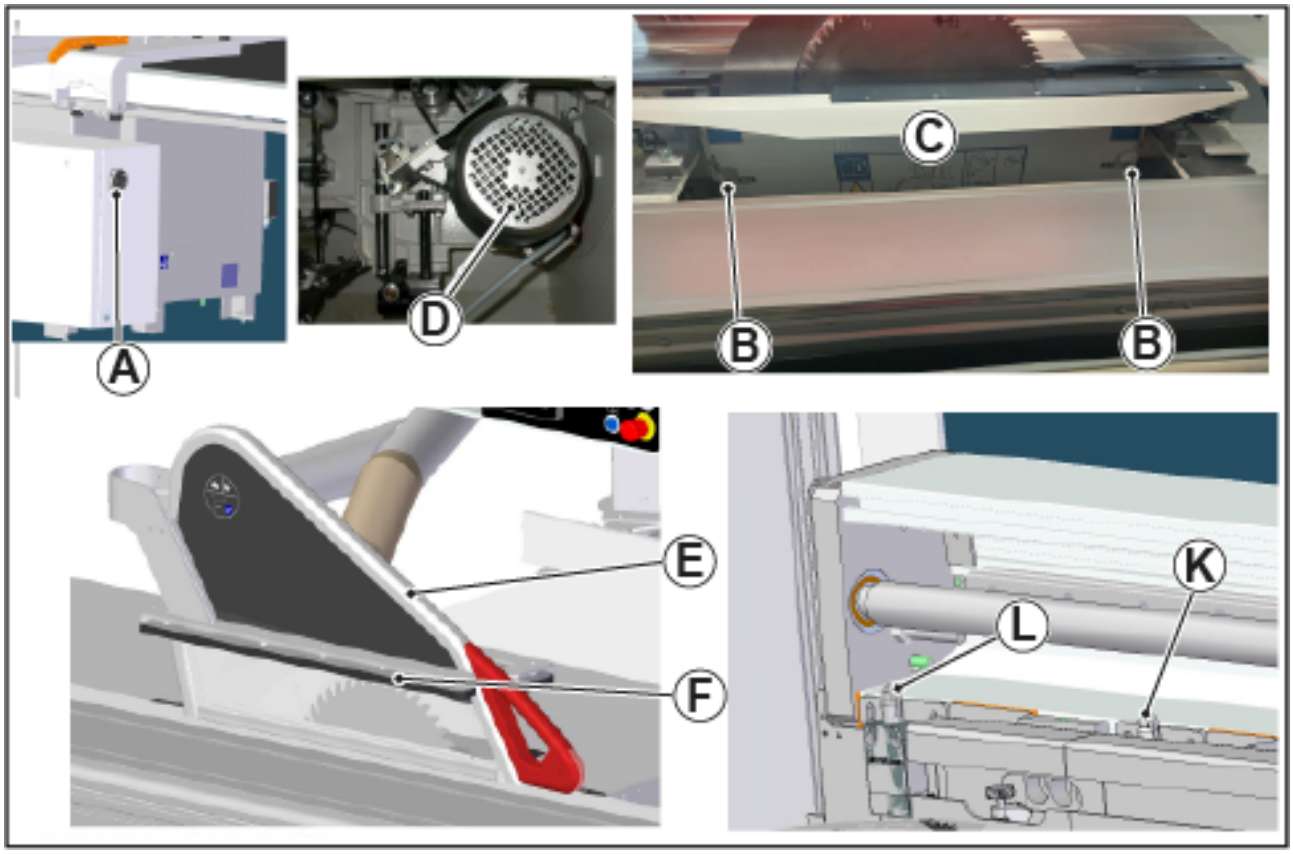
The BLADE OFF device is additional to the safety devices supplied with the machine and it cannot be considered as a replacement.

The BLADE off device simply reduces the residual risk of injury. Do not rely only on its function or refrain from using standard safety devices.

The BLADE OFF device cannot prevent accidents in all conditions.

The BLADE OFF device does not exclude the scorer.

Therefore all the other devices must always be present, operational and adjusted to work in safety.


A
D
C
B
B
E
F
K
L

3 Technical specifications

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3.1 Dimensions of workpiece to be thicknessed

DIMENSIONS OF WORKPIECE TO BE MACHINED			
Maximum height	With a Ø 400 blade	120	mm
Maximum height	With a Ø 350 blade	95	mm
Maximum height	With a Ø 300 blade	70	mm
Minimum working height		3	mm
Minimum length	When squaring	30	mm
Minimum width	When squaring	150	mm
Maximum length	When squaring with “slide 3800”	3800	mm
Maximum width	When squaring with “slide 3800”	3200	mm
Maximum length	When squaring with “slide 3200”	3200	mm
Maximum width	When squaring with “slide 3200”	3200	mm
Minimum width	For parallel guide cutting	10	mm
Maximum width OPT	For parallel guide cutting	1170	mm
Maximum width OPT	For parallel guide cutting	900	mm
Maximum width OPT	For parallel guide cutting		mm
Maximum width	For parallel guide cutting	1500	mm

3.2 Technical data

GENERAL TECHNICAL SPECIFICATIONS

Fixed table dimensions		1040 x 630	mm
Sliding table dimensions	With “slide 3800”	3820 x 360	mm
Sliding table dimensions	With “slide 3200”	3200 x 360	mm
Squaring capacity with sliding table and extendable stop	With “slide 3800”	3800 x 3200	mm
Squaring capacity with sliding table and extendable stop	With “slide 3200”	3200 x 3200	mm
Saw blade inclination		from 90° to 45°	
Maximum saw blade diameter		Øi 30 x 400	mm
Minimum saw blade diameter		Øi 30 x 300	mm
Scoring saw blade diameter		Øi 20 x 120	mm
Cutting height at 90°	With a 400 mm blade	120	mm
Maximum cutting height at 45°	With a 400 mm blade	84	mm
Maximum cutting height at 90°	With a 350 mm blade	95	mm
Maximum cutting height at 45°	With a 350 mm blade	66	mm
Maximum cutting height at 90°	With a 300 mm blade	70	mm
Maximum cutting height at 45°	With a 300 mm blade	49	mm
Saw blade rotation speed		from 2700 to 5000	rpm
Saw blade stop time:		less than 10 seconds	
Scoring saw blade rotation speed		8500	rpm
Cutting width with a parallel guide		1500	mm

Motors

Potenza motore sega:	50 Hz	9	kW
Potenza motore incisore:	50 Hz	1,3	kW

Dati Tecnici: vedi targa di identificazione sul motore
Tipo di servizio: S6 – 40% (escluso dai vincoli di efficienza energetica previsti dal Regolamento (CE) 640/2009)
Service conditions: (see "Environment")

Net weight: see identification plate on the machine

EXTRACTION TECHNICAL SPECIFICATIONS

Extraction inlet under table diameter	Ø 120	mm
Diametro della bocca di aspirazione sulla cuffia di protezione sospesa (separata dal coltello divisore) OPT	Ø 100	mm
Velocità aria aspirazione	20	m/sec
Portata aria aspirazione [Ø 120]	814	m³/h
Portata aria aspirazione [Ø 100]	565	m³/h
Depressione raccordo sotto il piano [Ø 120 mm]	1214	Pa
Depressione della bocca di aspirazione sulla cuffia di protezione sospesa (separata dal coltello divisore) [Ø 100 mm] OPT	2648	Pa

3.3 Standard accessories

Eccentric clamping arm
Table extensions
Sliding table length 3200 mm
CompeX frame
Rule for square cuts
Extension arm of the squaring frame with sliding on linear prismatic guides with recirculating ball screws
Sliding table in aluminium alloy with sliding guides
Tile-shaped stop
N° 2 Riving knives
N° 2 Brackets (for anchoring the machine to the floor)
Wood pusher
Wood pusher handle
Main motor direct start up
Transformer for auxiliary circuit 110 V
Overload cutout protection
Self-braking motor
Motorised saw unit height adjusting and tilting
Electronic control for the movement of the motorised axes (EYE-S)
Scoring unit with independent motor
Scorer unit with power adjusting
Mobile control board
Motor start and stop buttons built-in on the carriage
Power-driven fence for parallel cuts with electronic reader
Suspended saw guard with Ø 100 mm diameter suction pipe junction
Set of tools and wrenches for use and maintenance

3.4 Optional accessories

Sliding table length 3800 mm
Track sliding second frame
Cast iron extensions for the worktable
Cutting width with parallel fence: 1000 mm
Additional device for parallel cuts
Additional device for parallel cuts with electronic measure reader
Device for oblique cuts with stop position compensation
Device for oblique cuts with stop position compensation and electronic reader of the rule angle
Fence for angular cutting on sliding carriage
Mobile frame for angular cutting "Full Support" complete with Wireless function
Support carriage for "Full Support"
Fence for complementary cuts
Saw motor power 9.0 kW - Hz 50 (S6 / 40%) with automatic starting
Saw blade motor automatic 0-star-delta start up
Pneumatic presser along the whole table length, with working capacity:

- 3030 mm with sliding table 3200
- 3650 mm with sliding table 3800

Presser stroke: 25 mm
3-stop rule for square cuts with electronic reader
Inverter for speed change from 2700 to 6000 rpm
One riving knive for min. saw blade diameter Øi 30 x 250 mm
Max. cutting height (90° blade position) with 250 mm blade diameter: 0 - 65 mm
Max. cutting height (45° blade position) with 250 mm blade diameter: 0 - 46 mm
Savenergy (only with Inverter)
Expandable scoring blade
min.÷max. thickness: 2.8 ÷ 3.6 mm
Blade diameter: 120 mm
Diameter of hole: 20 mm
Number of teeth: Z 24
Surface reinforcement treatment for sliding table
Pro-Lock” main blade quick locking system and quick adjustment of the riving knife. Système de blocage rapide de lac lame principale Pro-Lock" et réglage rapide du couteau diviseur.
Blade micro-lubrication system.
Scoring saw danger area LED luminous warning
Mechanical setup for "DADO-SET" tool assembly with suspended protection on the blades.

SPECIFICATIONS - tool "DADO SET"

Maximum diameter	Ø 203	mm
Maximum thickness	20	mm
Maximum cutting height at 0°	40	mm
tools that can be used:	router marked MAN compliant with standard EN 847-1:2013 or pack of blades, each one compliant with EN 847- 1:2013	

3.5 Noise levels

Operating conditions:		Circular sawblade cut		(in accordance with EN 1870-1:2007+A1:2009)*	
Description of sizes measured		Reference norm	Uncertainty K	Circular sawblade cut	
	Operator positions			**VSA**	**LAV**
Lop: Level of sound pressure at operator position dB(A) and peak level [dB(C)]	INFEED	EN ISO 11202:2010	4	82	93 [102]
Lw : power of sound level emitted: dB(A)		EN ISO 3744:2010	2	96	106
The maximum istantaneus noise level pressure is under 130 dB (C).					
VSA:vacuum without aspiration			**LAV:** during operation		

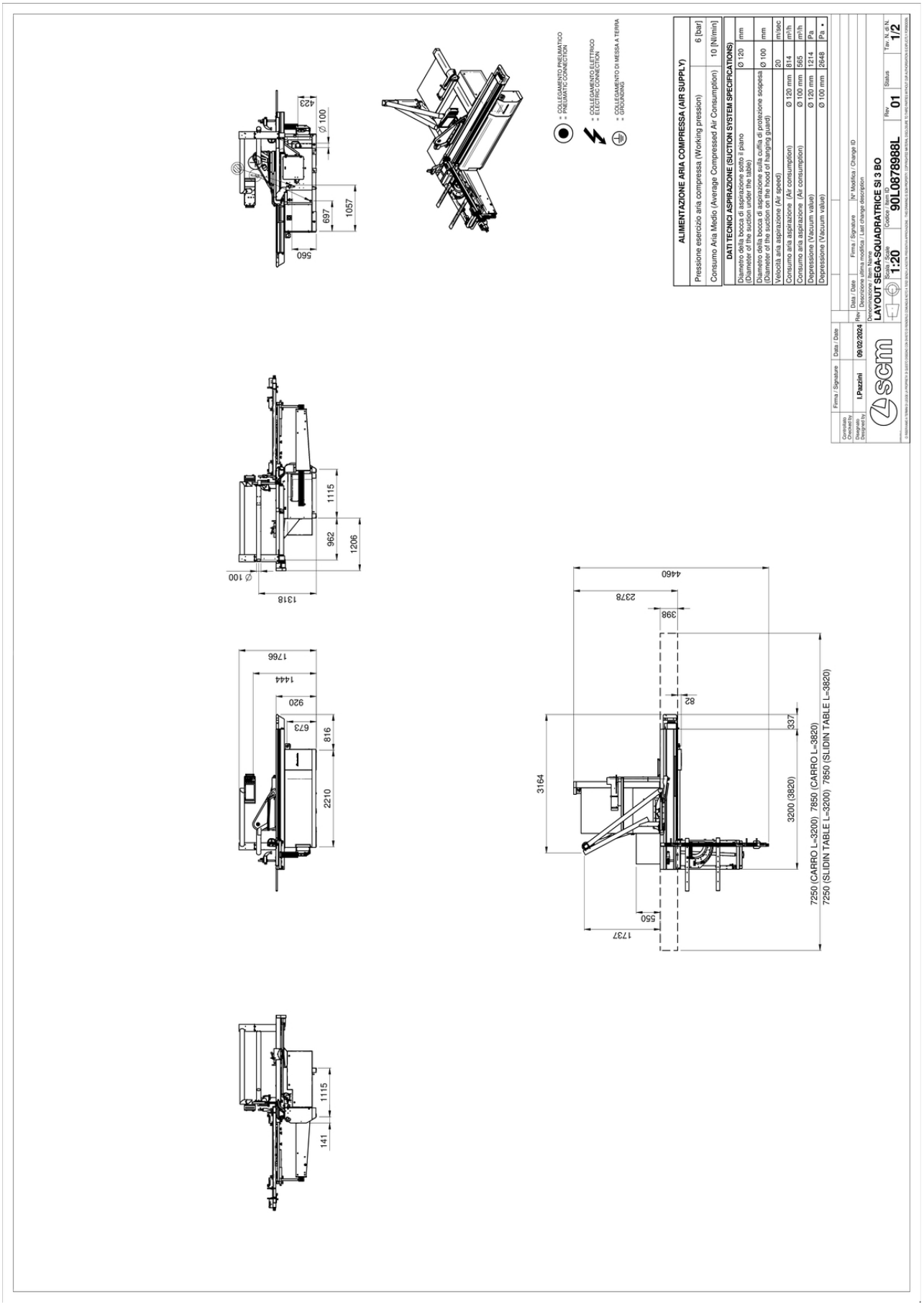
DANGER

The measured sound levels are emission values and cannot necessarily be taken as safe workplace levels. Although there is a correlation between the emission levels and the exposure levels, this cannot be used reliably to determine whether or not further precautions are required. Factors influencing the actual level of worker exposure include duration of exposure, the characteristics of the workplace, other sources of emission (e.g. the number of machines installed and other adjacent machinery). The permitted exposure values may also vary from country to country. The user should take all this into account to improve evaluation of the associated risks and dangers.

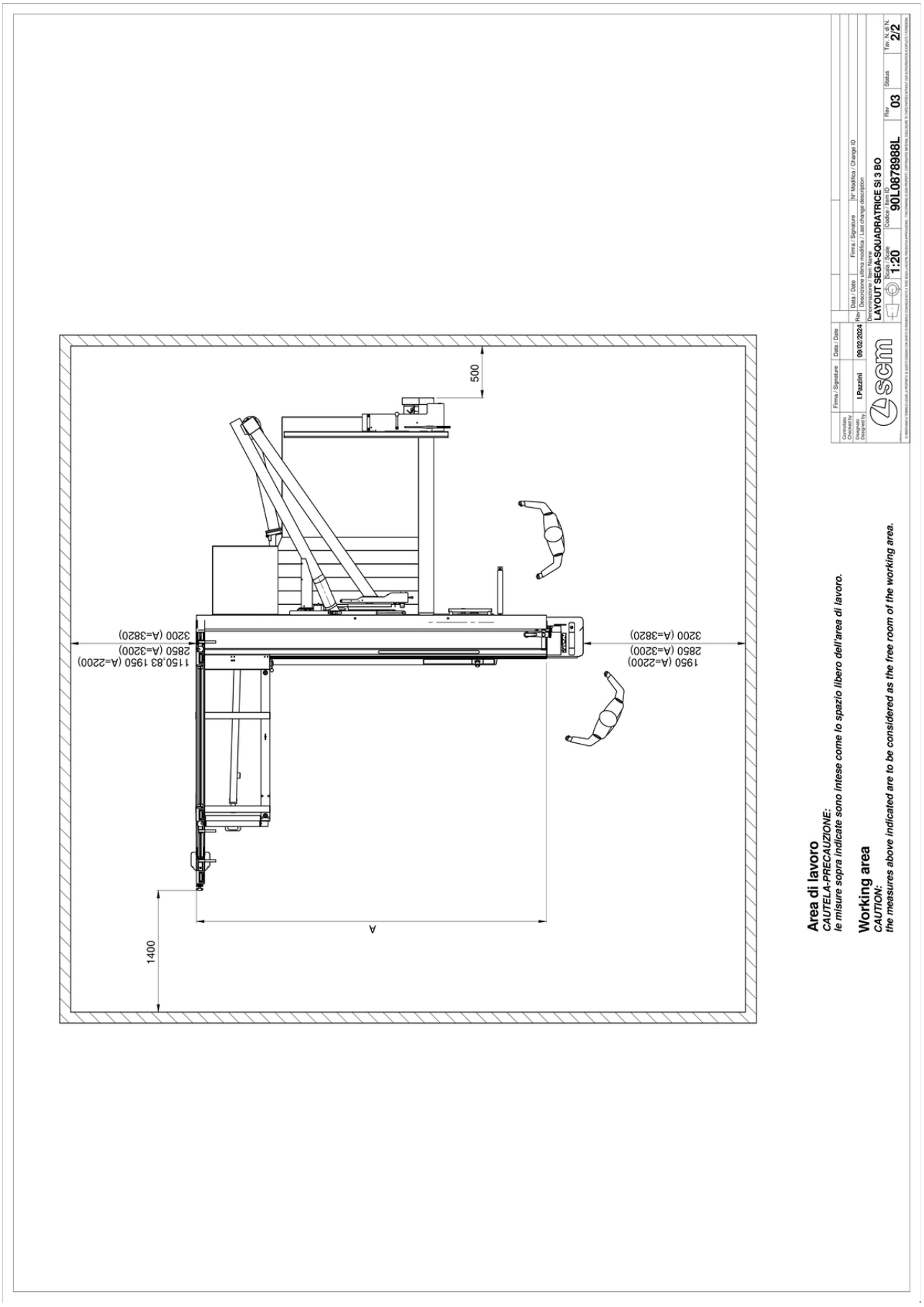
Some factors which reduce exposure to noise:

- correct tool choice (see Par. "Tools that can be used")
- correct speed selection (where adjustment is possible);
- tool and machine maintenance
- correct use of hearing protection.
- type of material machined.

3.6 Encumbrance dimensions



3.7 Work area


500
3200 (A=3820)
2850 (A=3200)
1150,83 1950 (A=2200)
3200 (A=3820)
2850 (A=3200)
1950 (A=2200)
A
1400
Area di lavoro
CAUTELA-PRECAUZIONE:
le misure sopra indicate sono intese come lo spazio libero dell'area di lavoro.
Working area
CAUTION:
the measures above indicated are to be considered as the free room of the working area.
LAYOUT SEGA-SQUADRATRICE SI 3 BO
Scala / Scale 1:20
Codice / Item ID 90L08789881
Rev 03
Status
Tav. N. di N. 2/2
Designed by L.Puzzini
09/02/2024

SPECIALISED PERSONNEL

The measures above indicated are to be considered as the free room of the working area.

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4.1 Unloading the machine

NOTE

The machine package indicates:

- the weight to lift
- the hookup areas

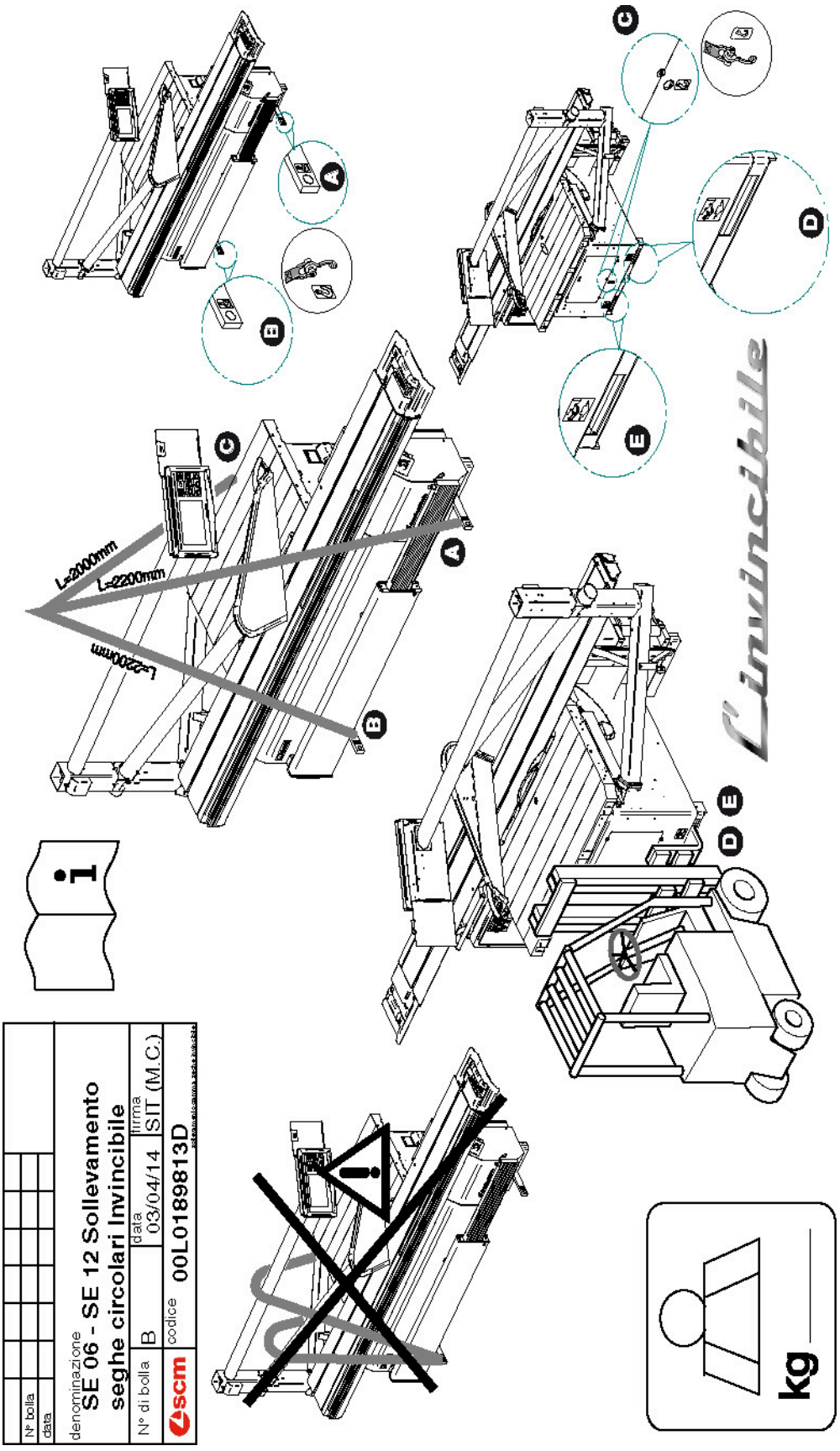
Before unloading the machine, remove all the parts used for transport or packaging.

DANGER

- **the machine must be unloaded with a crane or other lifting equipment by hooking the cables as shown in the figure.**
- **Ensure that the crane, cables or lift truck have a capacity equal to or greater than the weight of the machine.**

During lifting avoid tearing or sudden movements.

As an alternative to the instructions above, the machine (when equipped with feet or pallets) may be lifted with a fork-lift truck by inserting the forks under the base as shown in the figure and taking all the necessary precautions to ensure that the machine does not tip over.


A
B
C
D
E
L=2000mm
L=2200mm
L=2200mm
Invincible
kg
N° bolla
data
denominazione
SE 06 - SE 12 Sollevamento
seghe circolari Invincibile
N° di bolla
B
data
03/04/14
firma
SIT (M.C.)
scm
codice
00L01898813D

4.2 Positioning

Before positioning the machine take off the wood sockets from the machine feet.

The position where to install the machine shall be well lightened (at least 500 LUX), proper for the connection to the power line, to the suction system and for maintenance operations.

DANGER

Durante il piazzamento della macchina, tenere anche in considerazione che quando si lavoreranno pezzi più lunghi dovrà esserci spazio sufficiente a non creare punti di possibile schiacciamento verso le parti fisse dell'ambiente, come ad esempio, pareti, colonne, ecc... (vedi "Work area").

Check that the floor is solid enough to support the base at the contact points uniformly. We recommend a concrete flooring and do not recommend an asphalt flooring.

We recommend positioning steel plates between the feet and the flooring, with anti-vibration material, if necessary.

DANGER

When the machine is positioned and levelled remove the brackets *(A and B)*removing them from the rear.

Keep the brackets necessary to change the machine position.

DANGER

Always fasten the machine to the floor by inserting the pivots of the 2 brackets (S, supplied in the accessories bag) into the holes of machine; then screw down the M10 screws (the machine is equipped with 2 holes "D" and "D1").

NOTE

With the leveled machine, loosen nut (B) and without forcing, bring the head (A) of the screws arranged in the rear feet, in contact with the floor. Tighten nut (B).

Some machine parts are greased and oiled.

Before starting working carefully degrease the working areas as well as the guards with not dangerous solvent.

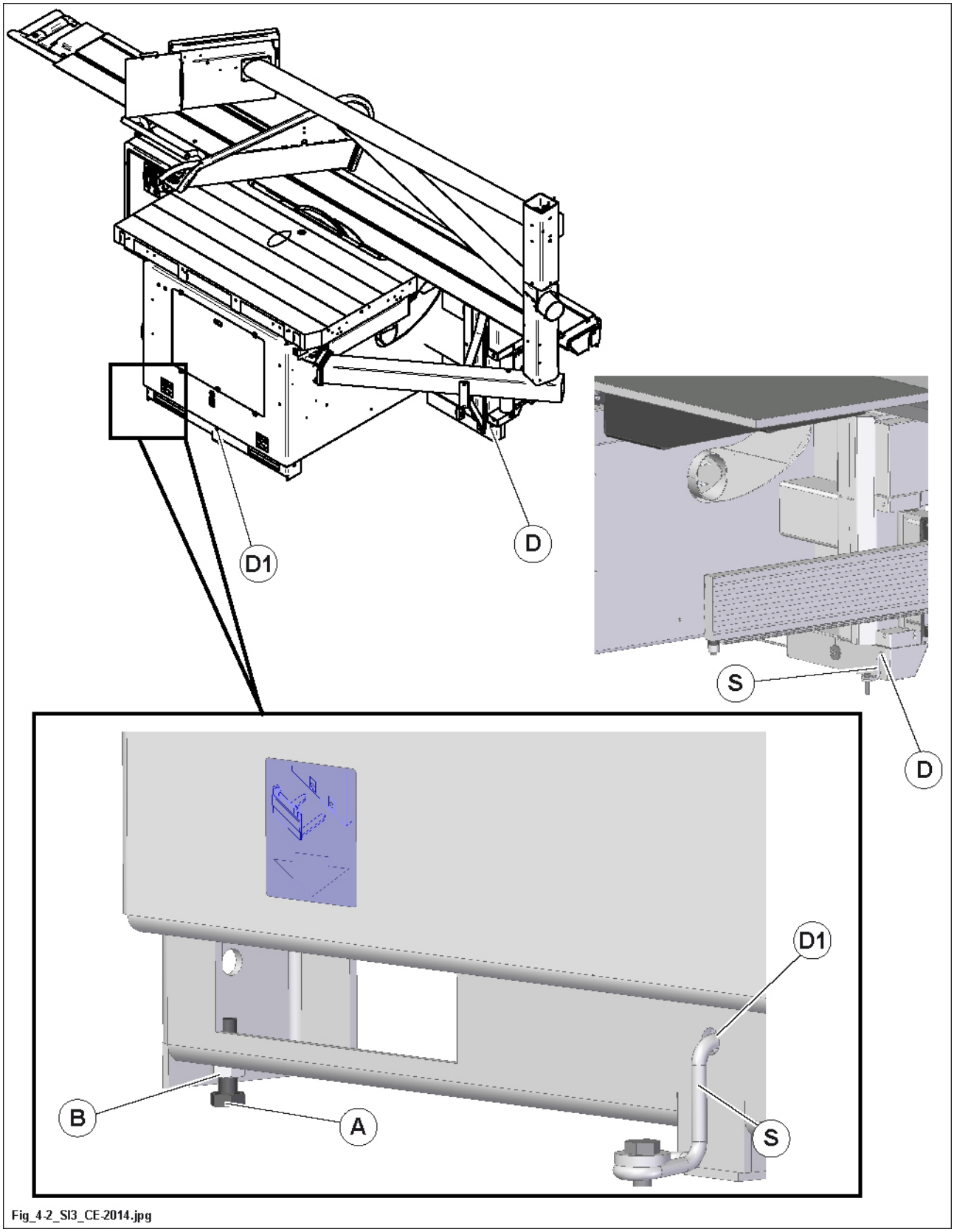


Fig_4-2_SI3_CE-2014.jpg

NOTE

Once positioned reassemble the guard (C) .
Block the casing with washers (E) and nuts (F)

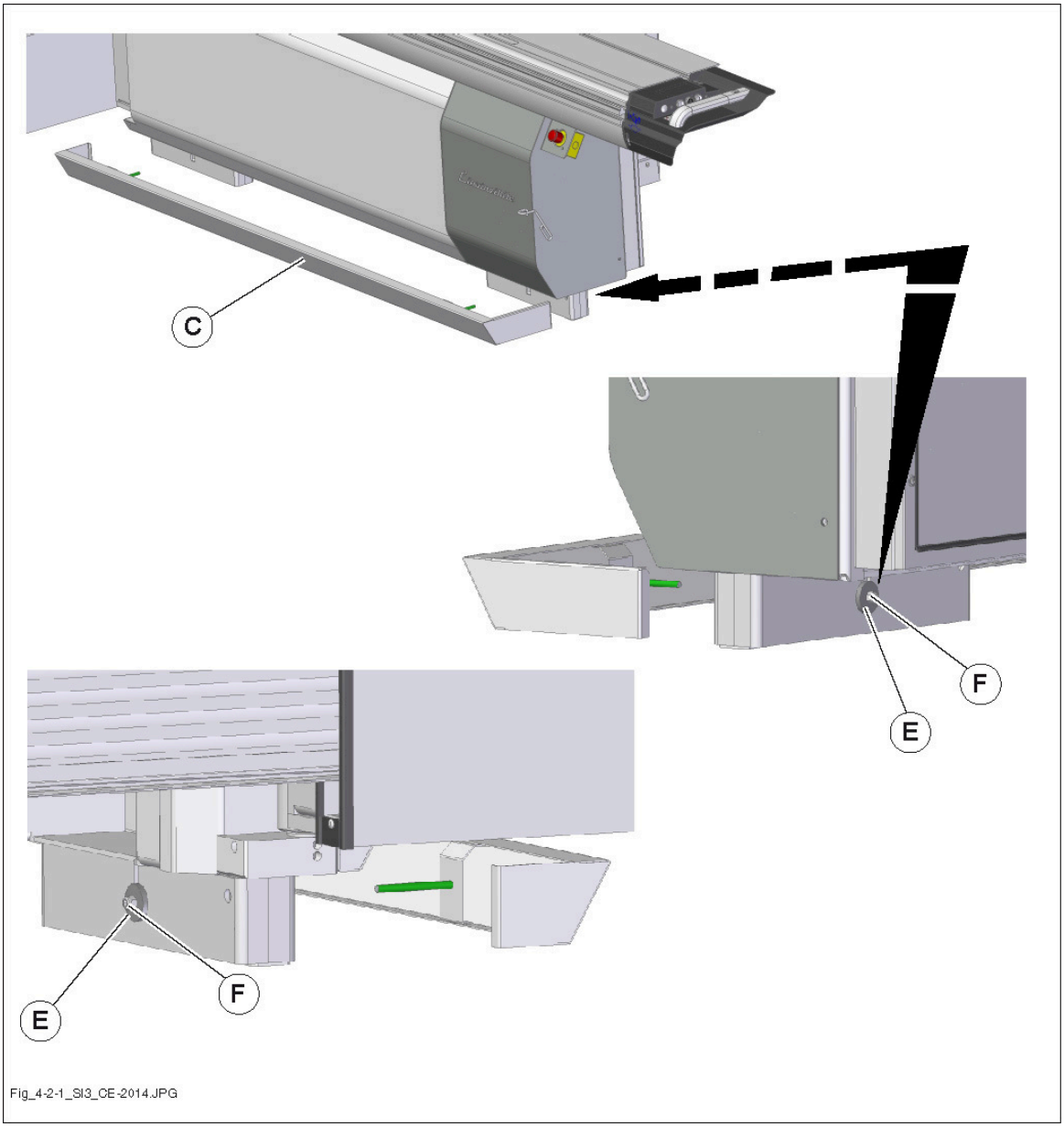


Fig_4-2-1_SI3_CE-2014.JPG

4.3 Fitting parts removed for transport requirements

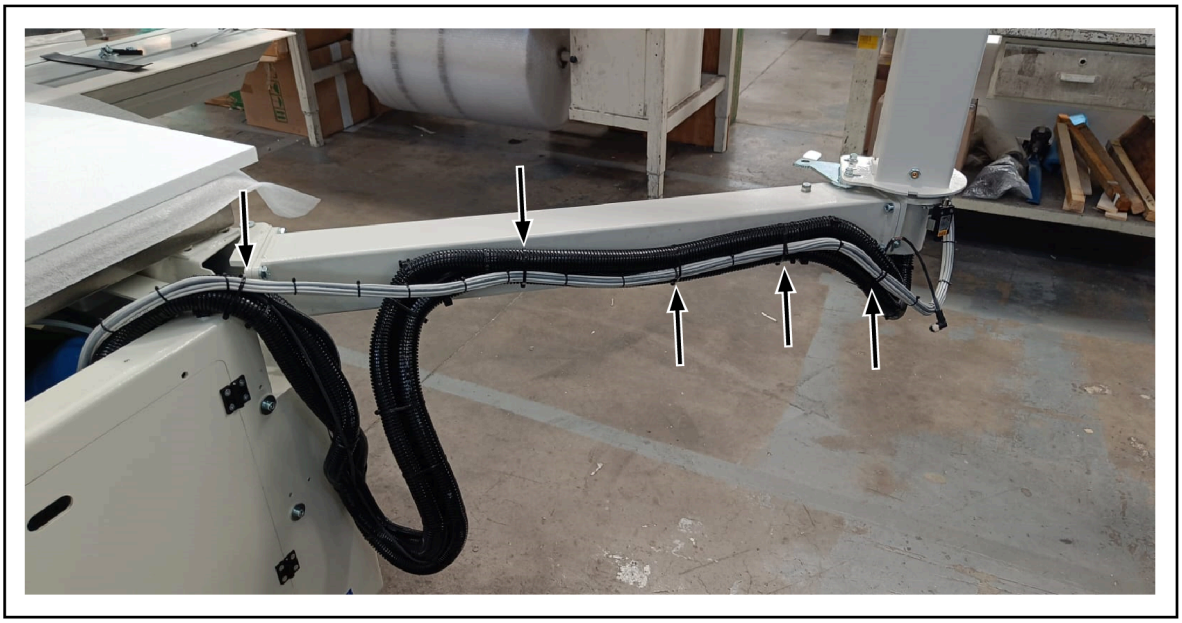
For packaging and transport reasons some parts are shipped unassembled.

1. Stop the machine to carry out adjustments or to demount any machine, turn the main switch to zero and lock it, then indicate it by a sign.

Padlock keys must only be in the possession of the person carrying out the machine adjustment, maintenance or cleaning work.

CAUTION

During packaging, the clamps indicated in the figure are removed.
It is recommended to apply them again in the indicated positions.



4.3.1 Fitting the sliding table

DANGER

All fitting operations require 2 persons.

The accessories bag contains 4 plugs, 4 screws (M10x30), 1 screw (M5x100) and 2 pins necessary for fitting the sliding table.

Proceed as follows:

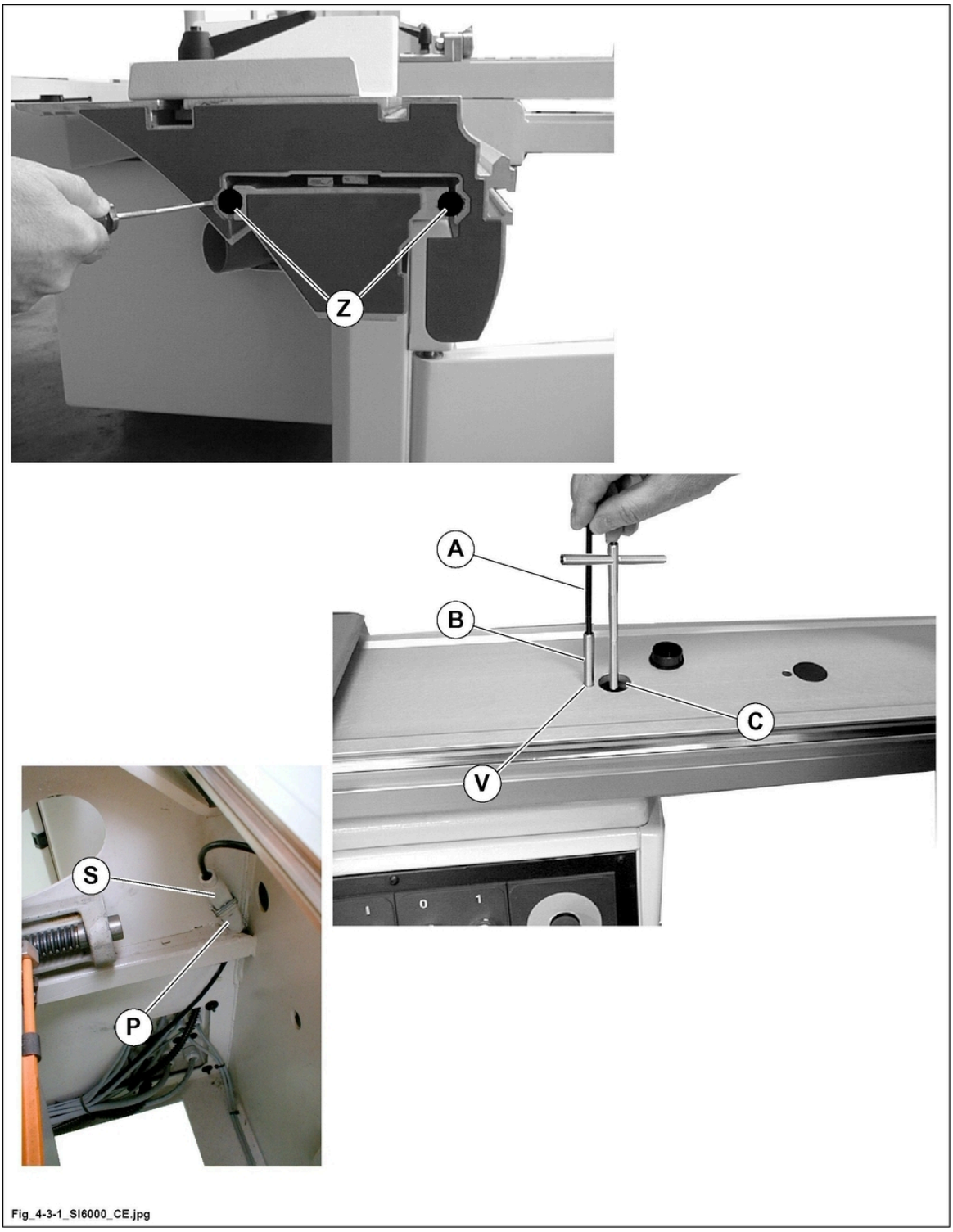
1. Remove the plastic plugs (Z) placed for protection at the end of the wagon (2 on the right and 2 on the left).
2. Rest the sliding table complete with rule on the machine frame.
3. Move the carriage to the left just enough to uncover the holes (V and C) attempting to align them with the holes on the base.

DANGER

Do not move the sliding table in any direction too much because it might upset.

4. To lock the rule to the base, screw the M5x100 screw (A) into the threaded hole at the head of the pin (B).
5. Pass the reference pin (B) through the hole (V) to insert it in the holes below, one inside the rail and the other on the base.
6. Push the screw (A) as far as it will go to insert the plug on the base.

7. Unscrew the screw (A).
8. Rest an iron rod on the pin then by beating with a hammer insert the pin into the proper seat.
9. Insert the M10x30 cylindrical head screw into the hole (C) and screw it in without tightening it.
10. Move the sliding tale to the right in order to uncover the holes in the opposite side and carry out the same operations 4) ,5), 6), 7), 8) and 9).
11. Permanently tighten the M10x30 screws.
12. Close the hoses with the proper plugs.
13. Move the sliding table to the end of stroke at entry side (totally to the right).
14. Connect the plug (S) to the socket (P).



4.3.1.1 Fitting the supporting foot

With 3800 mm sliding table OPT

DANGER

Once the machine has been positioned and levelled, mount the foot (A) as indicated in the figure. Adjust the height by unscrewing or screwing the extremity (F).

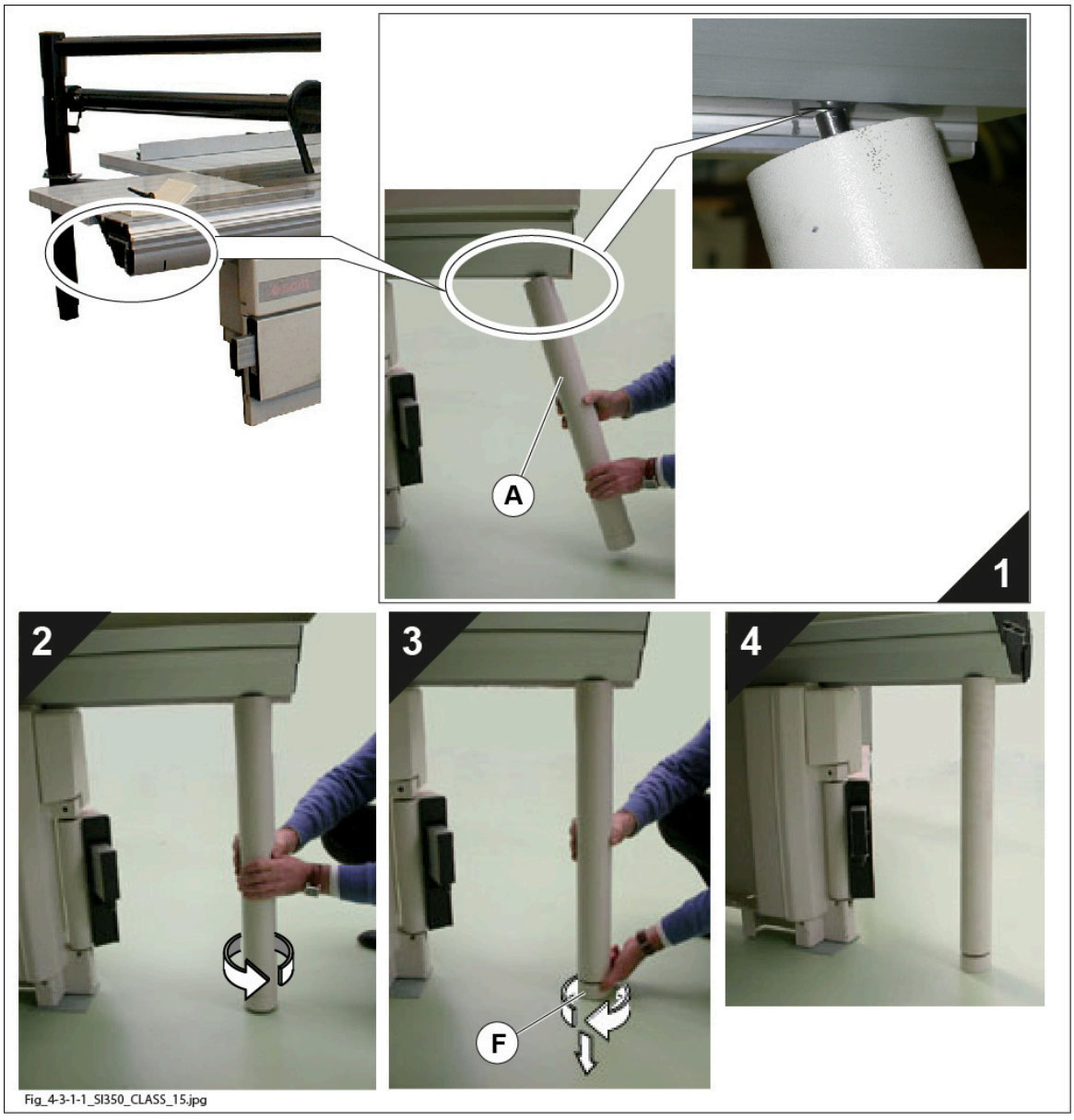


Fig_4-3-1-1_SI350_CLASS_15.jpg

4.3.2 Fitting the additional tables

DANGER

All fitting and demounting operations require 2 persons.

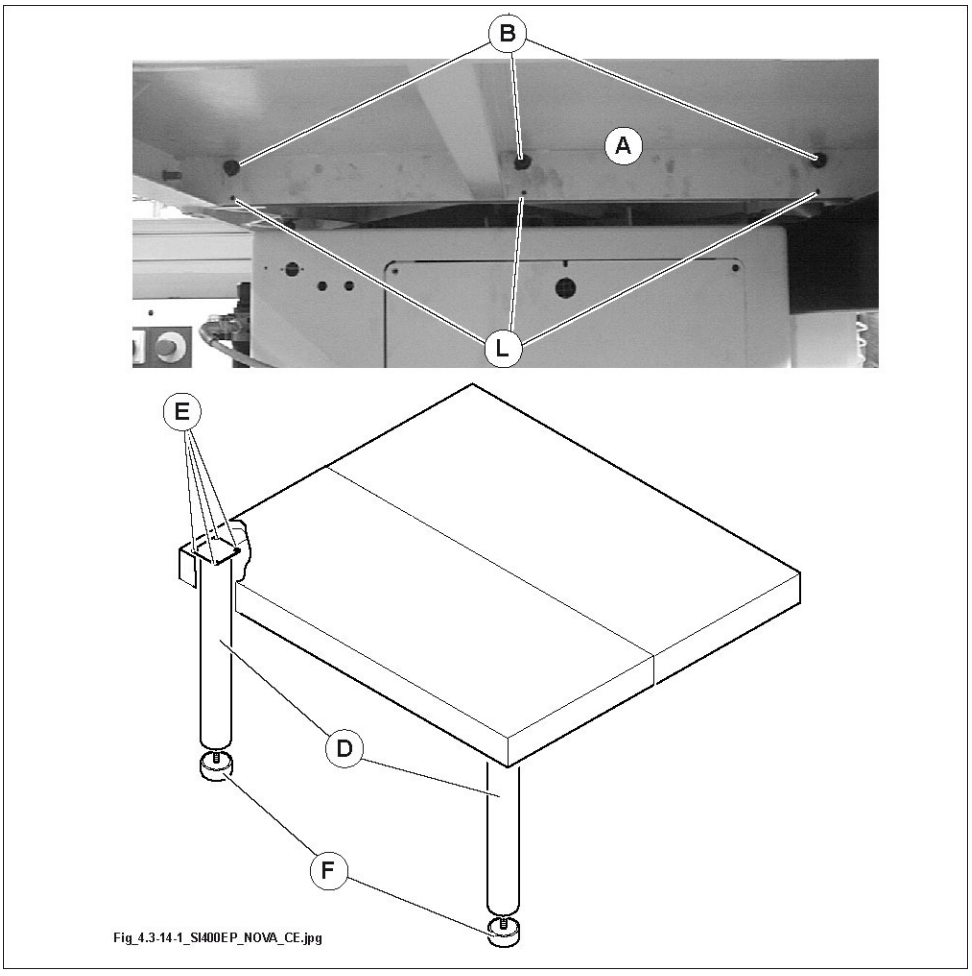
4.3.2.1 Fitting the rear additional table

Fasten the rear additional table (A) and keep it aligned with worktable (check the alignment with a rule placed on the tables), screw down the screws (B), then adjust with grub screws (L).

ADDITIONAL TABLE FOR 1500 mm CUT

Secure the feet (D) to the surface using the screws (E) as shown in the figure.

Adjust the table height by unscrewing or screwing down ends (G).

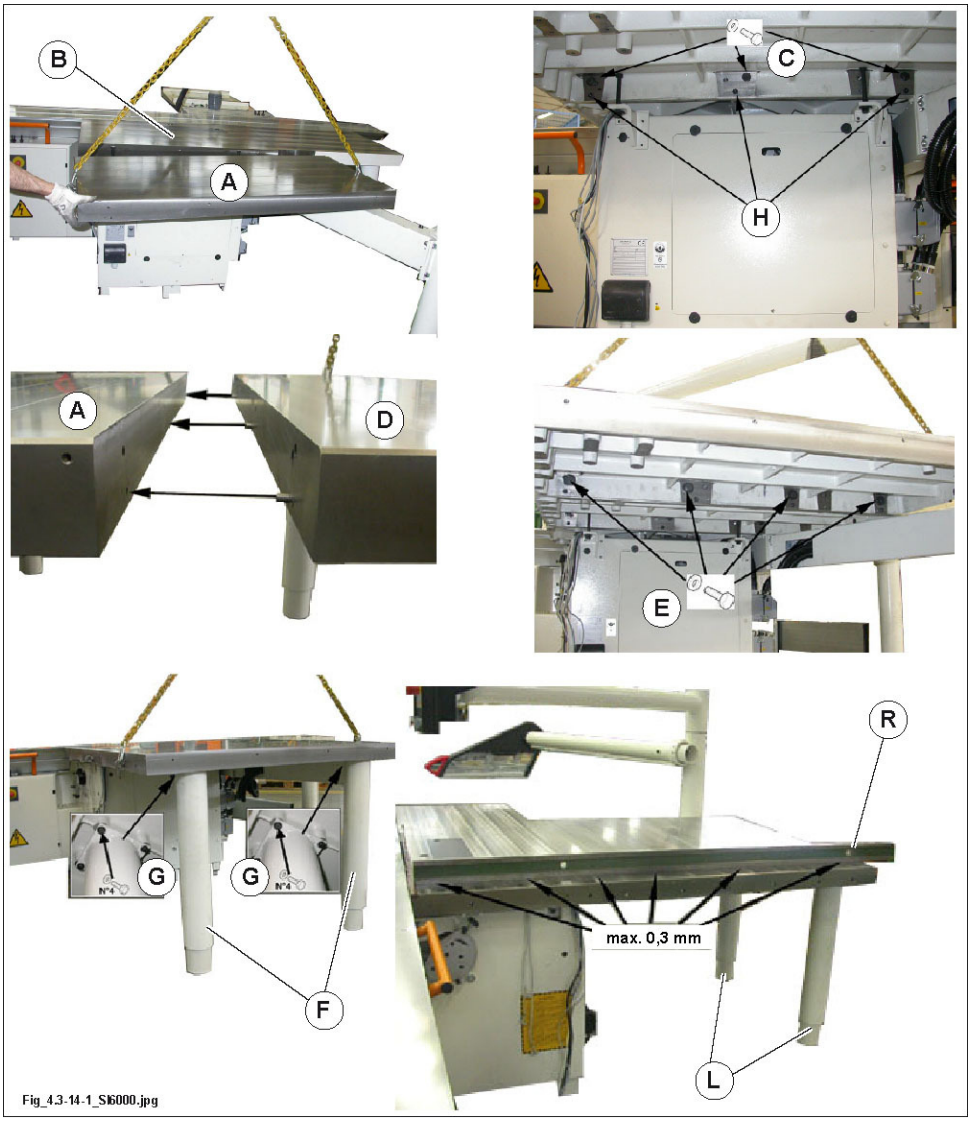


1. Install the table (A) (the one without the pins installed) resting it on the machine table (B).
   Screw and tighten the screws (C) with washers in the appropriate holes.
2. Install the table (D) inserting the pins in the holes of the table (A).
   Screw and tighten the screws (E) with washers in the appropriate holes.
3. Install the legs (F) screwing the screws (G) with washers in the holes under the table (D).

To align the tables use a reference rule (R) and operate on:

1. on the screws (H) after having loosened the screws (C);
2. on the legs (F) adjusting the feet (L).

When the adjusting is finished the max. flatness shall be 0,3 mm.



4.3.2.2 Fitting the additional table at exit side

Fix the table (A) to the surface (B) using the screws (C) and align it perfectly with the surface using the grub screws (D) (check alignment using a rule).

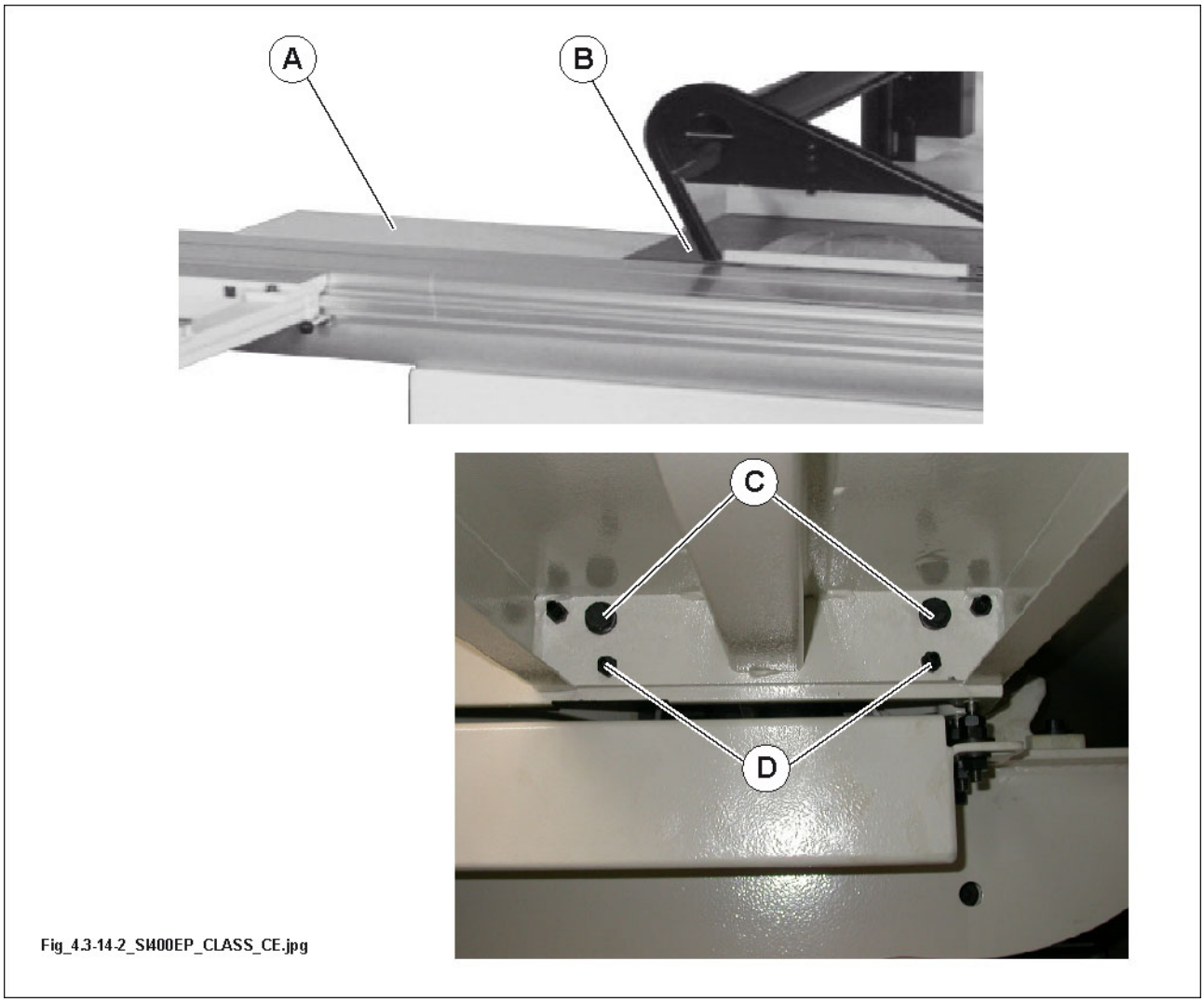


Fig_4.3-14-2_SI400EP_CLASS_CE.jpg

1. Install the table (M) resting it on the machine table (B).

   Screw and tighten the screws (N) with washers in the appropriate holes.

2. Install the leg (P) screwing the screws (Q) with washers in the holes under the table (M).

To align the table use a reference rule and operate on:

- on the screws (S) after having loosened the screws (N);
- on the leg (P) adjusting the foot.

When the adjusting is finished the max. flatness shall be 0,3 mm.

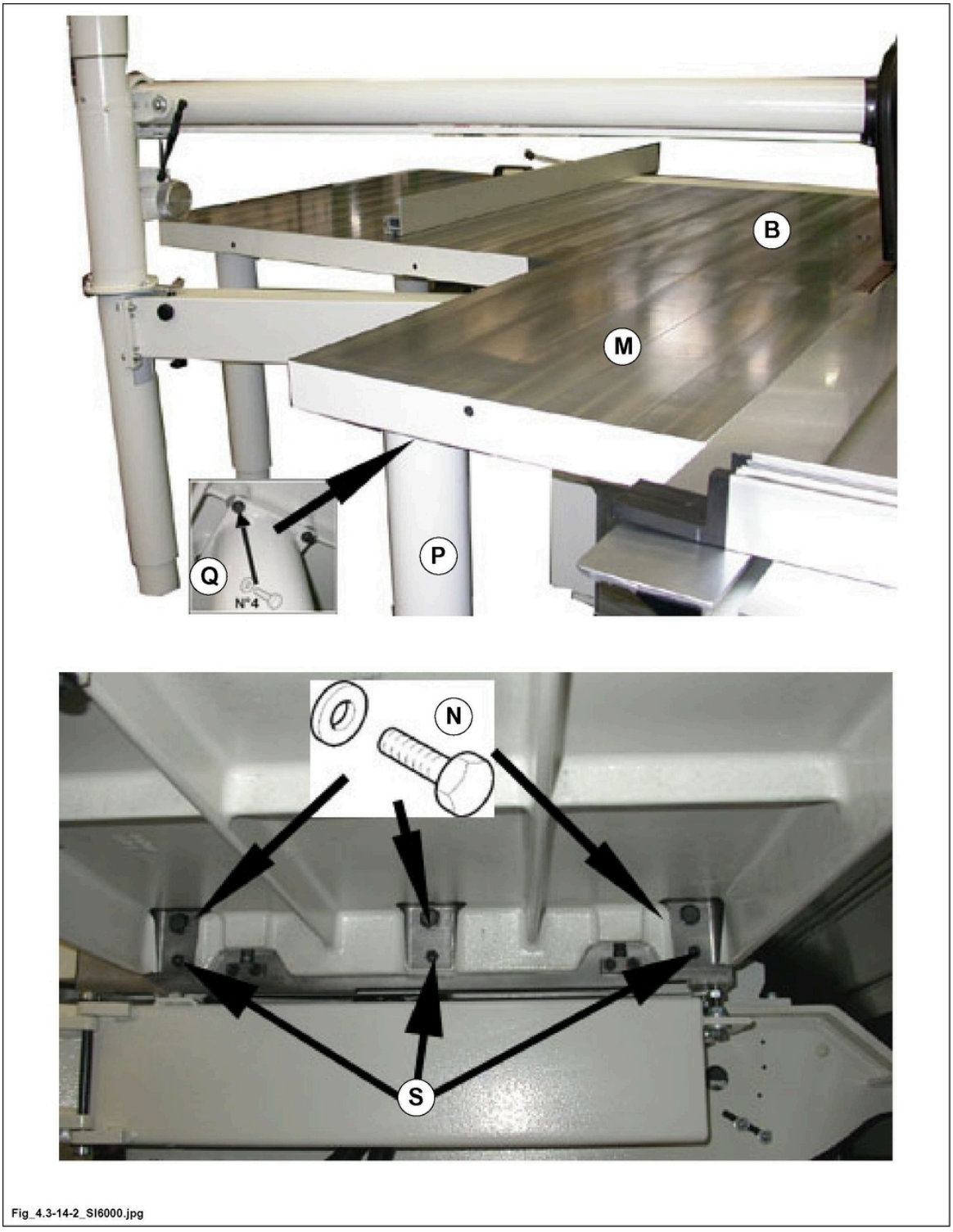


Fig_4.3-14-2_SI6000.jpg

To move the machine with fitted tables, preset device (A) as indicated in the following figures.

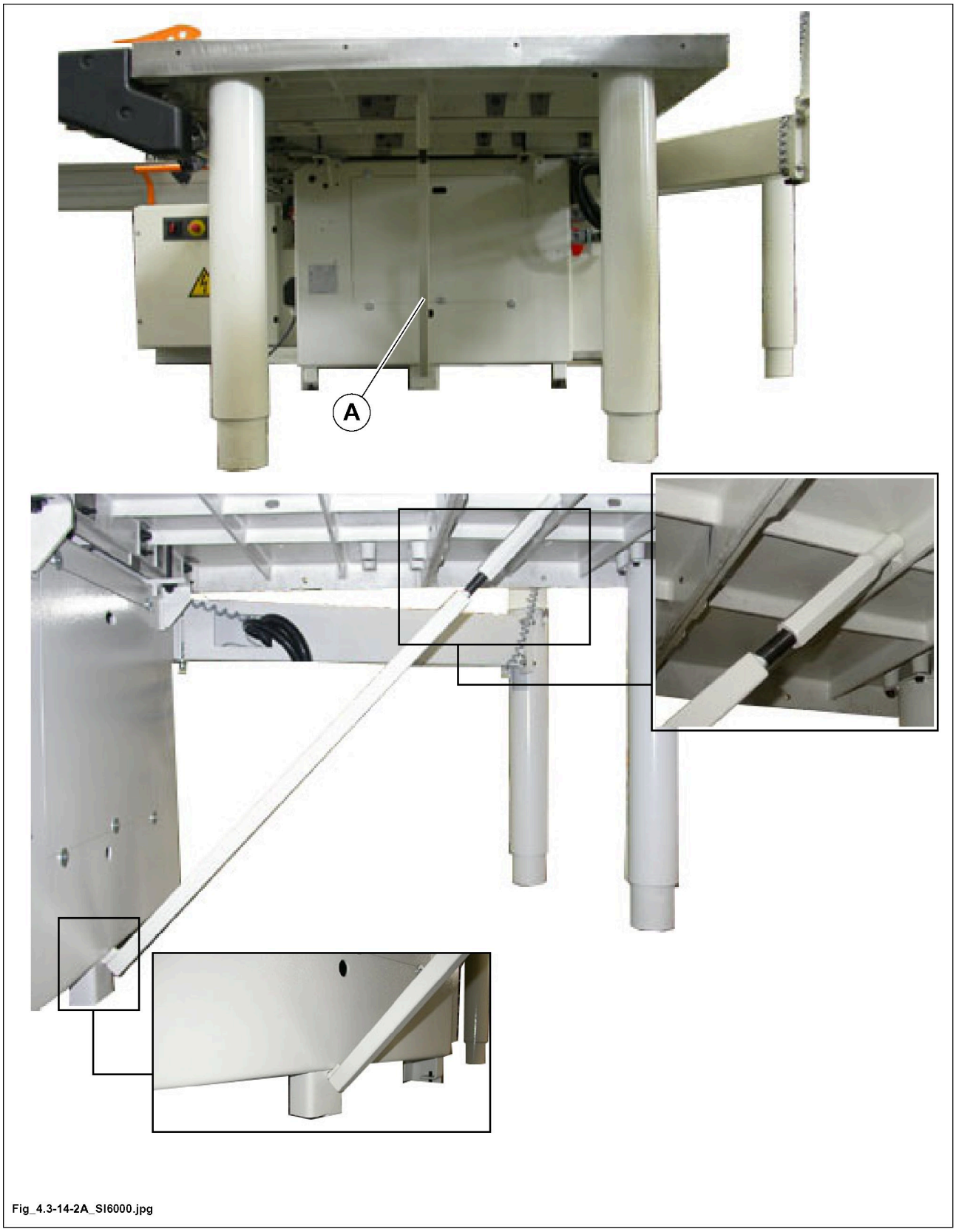


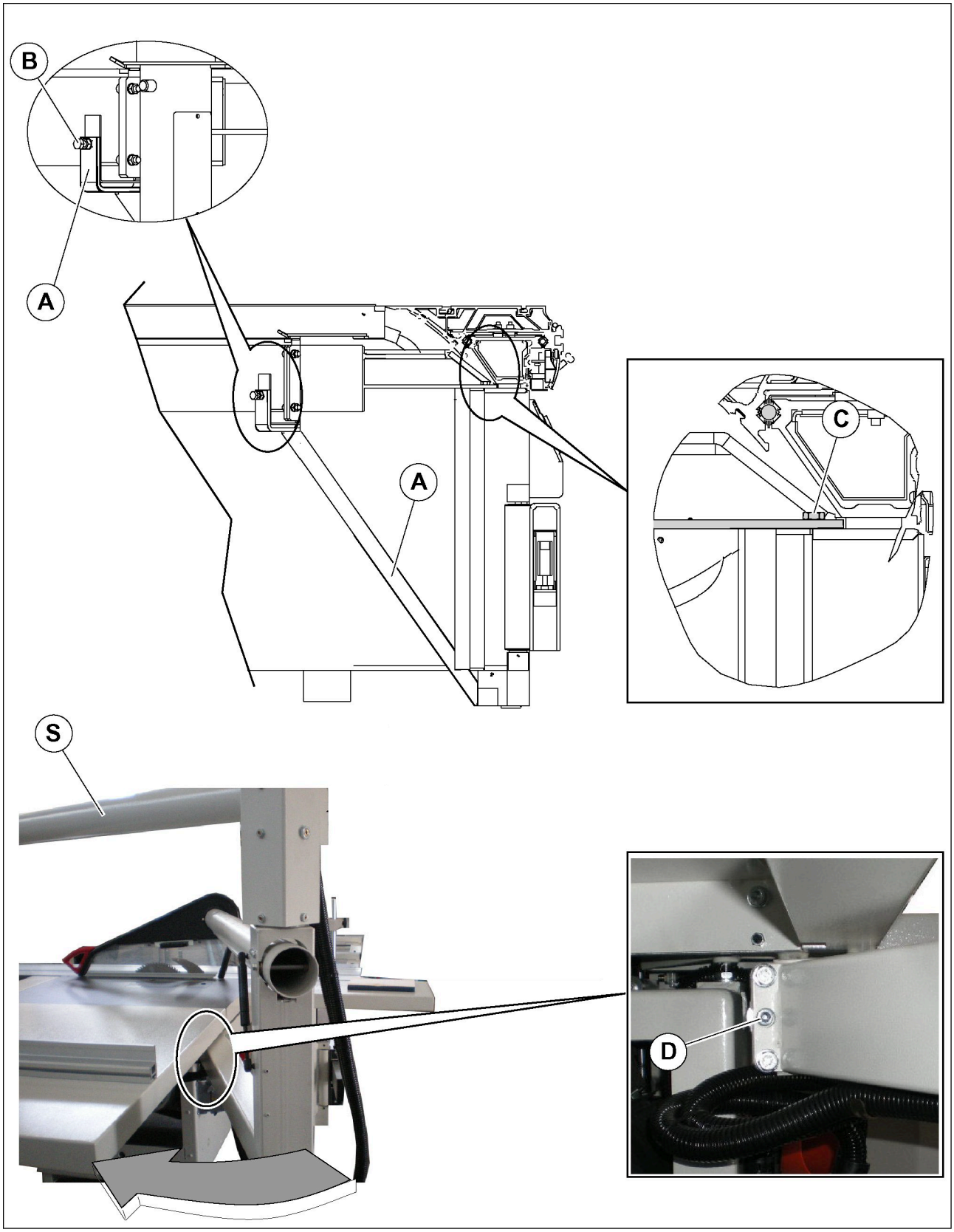
Fig_4.3-14-2A_SI6000.jpg

4.3.3 Positioning the support arm with “mobile control board”

For packaging purposes, the machine is shipped with the arm folded as in the figure and blocked to the table with the bracket (A).

For the definitive positioning of the arm:

1. Unscrew and remove the grub screw (B).
2. Unscrew and remove the screw (C).
3. Remove the bracket (A).
4. Close the arm in the direction of the arrow.
5. Tighten the screw (D) fully with the relative nut.
6. Rotate the arm (S) to move the mobile control panel in position on the blades.


B
A
A
C
S
D

4.3.4 Fitting the supporting rotating frame “Full Support”

OPT

DANGER

During all assembly and disassembly operations, the frame must be moved with a crane or other lifting device by hooking up the ropes (minimum length 1500 mm).

Make sure that the crane and slings can support the frame weight equal to 133 kg.

During lifting avoid tearing or sudden movements.

Before installing the frame on the machine, make sure that the button (F) is pressed and the lever (B) is rotated completely up.

Move the frame close to the sliding table and hook it to the groove (A).

To make the hooking of the frame to the sliding table easier keep the frame with the part near the sliding table lightly slanting.

When the cylinder (G) of the frame has entered in the groove (A) correctly, rotate the lever (B) until the button (F) is freed.

Insert the frame support (C) on the flag (E) extension (D).

To move the frame along the sliding table grip it in the point indicated by the arrow (L).

After having positioned it, rotate the lever (B) fully down to block it.

For any further adjustment operation lift the lever (B) without ever pressing the button (F).

DANGER

The button (F) must be pressed to allow the complete rotation of the lever (B), only to disassemble the frame after having hooked it to the lifting ropes.

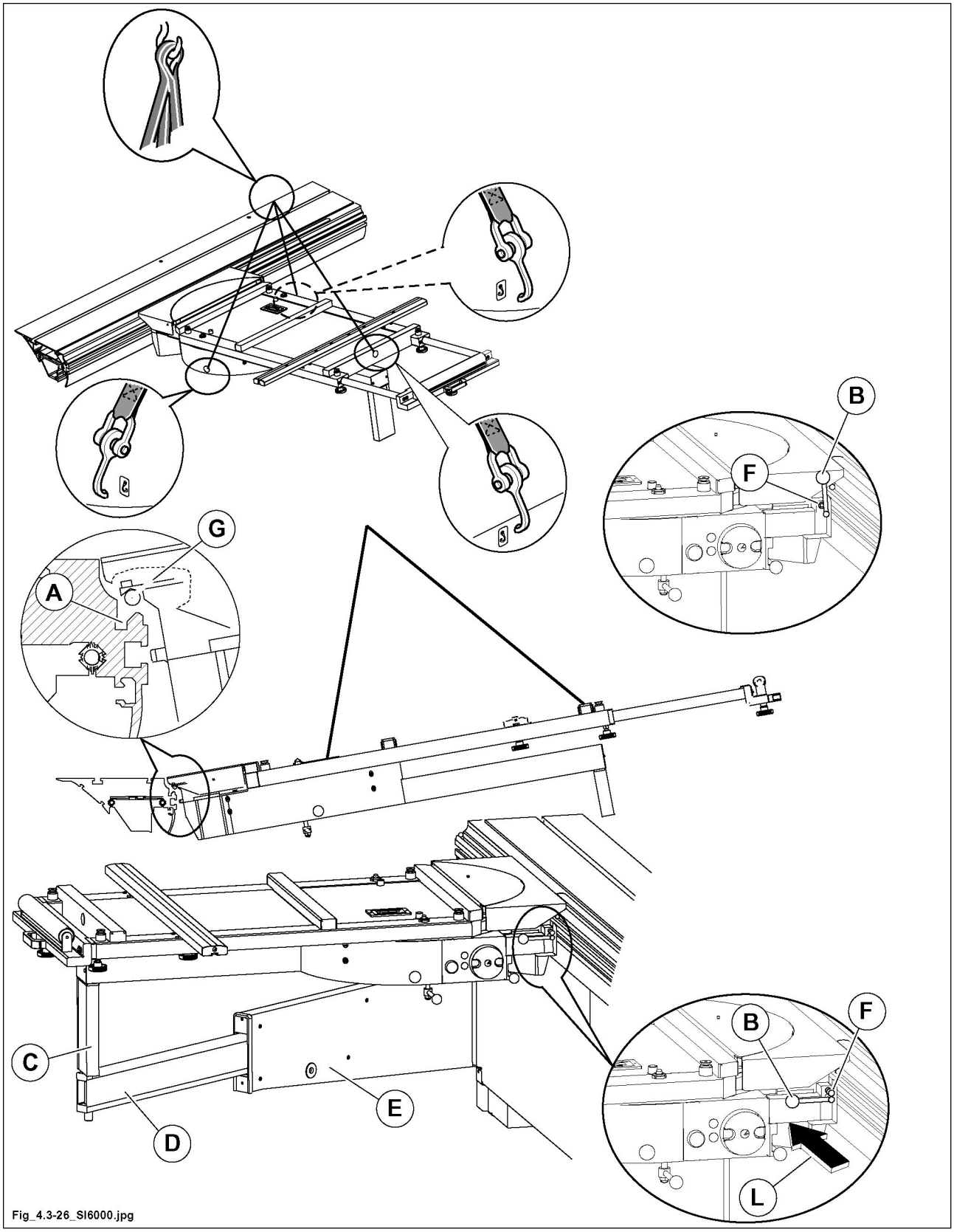


Fig_4.3-26_SI6000.jpg

To increase the support surface, loosen the two knobs (O) and pull the side (Q) with the handle (H).

SPECIALISED PERSONNEL

Loosen the knob (S) and move the roller (U) to the right or left to avoid interference with the rule (N).

4.3.4.1 Installing the mobile crossbeam (T).

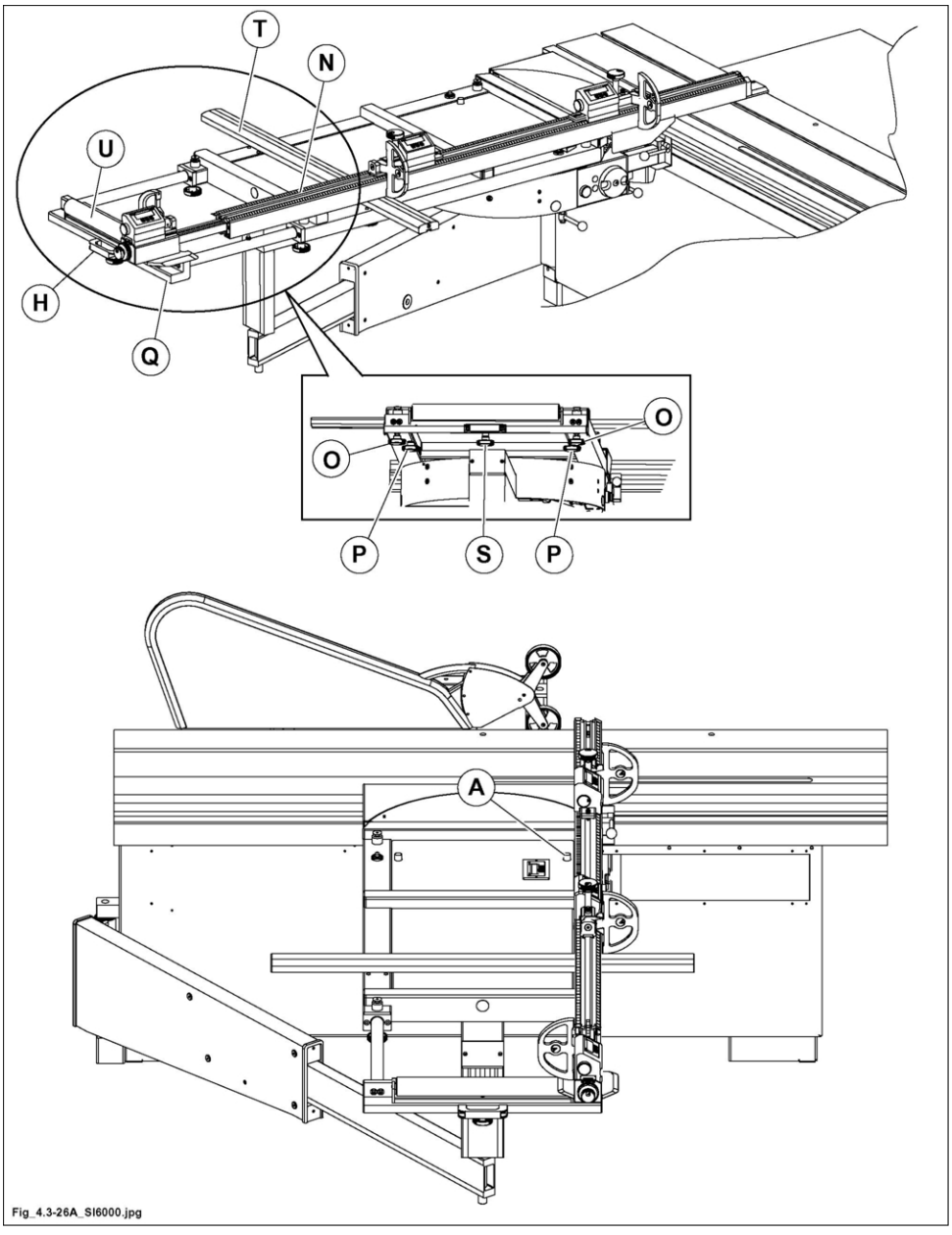
Fit the threaded pivots into the holes on the frame, then lock them with knobs (P), supplied in accessories bag.

4.3.4.2 Fitting the rest rule

Carry out the same instructions given in par. " Fitting the rest rule "
The perpendicular position of the rest rule has been set at factory during the machine test.
Start the machine as described in Chapter “"Commands"” and trim the chip breaker by moving the sliding table forward.

4.3.4.3 Demounting the rest rule

Press the button (A) to exclude the pin and, at the same time, move the support rule back.



4.3.5 Fitting the additional frame sliding on rail OPT

The additional frame is useful in case of large panels.

Once the frame is fixed, fix the foot (P), complete with extension with wheel (A), to the appropriate blocks (B) with the M6 screws.

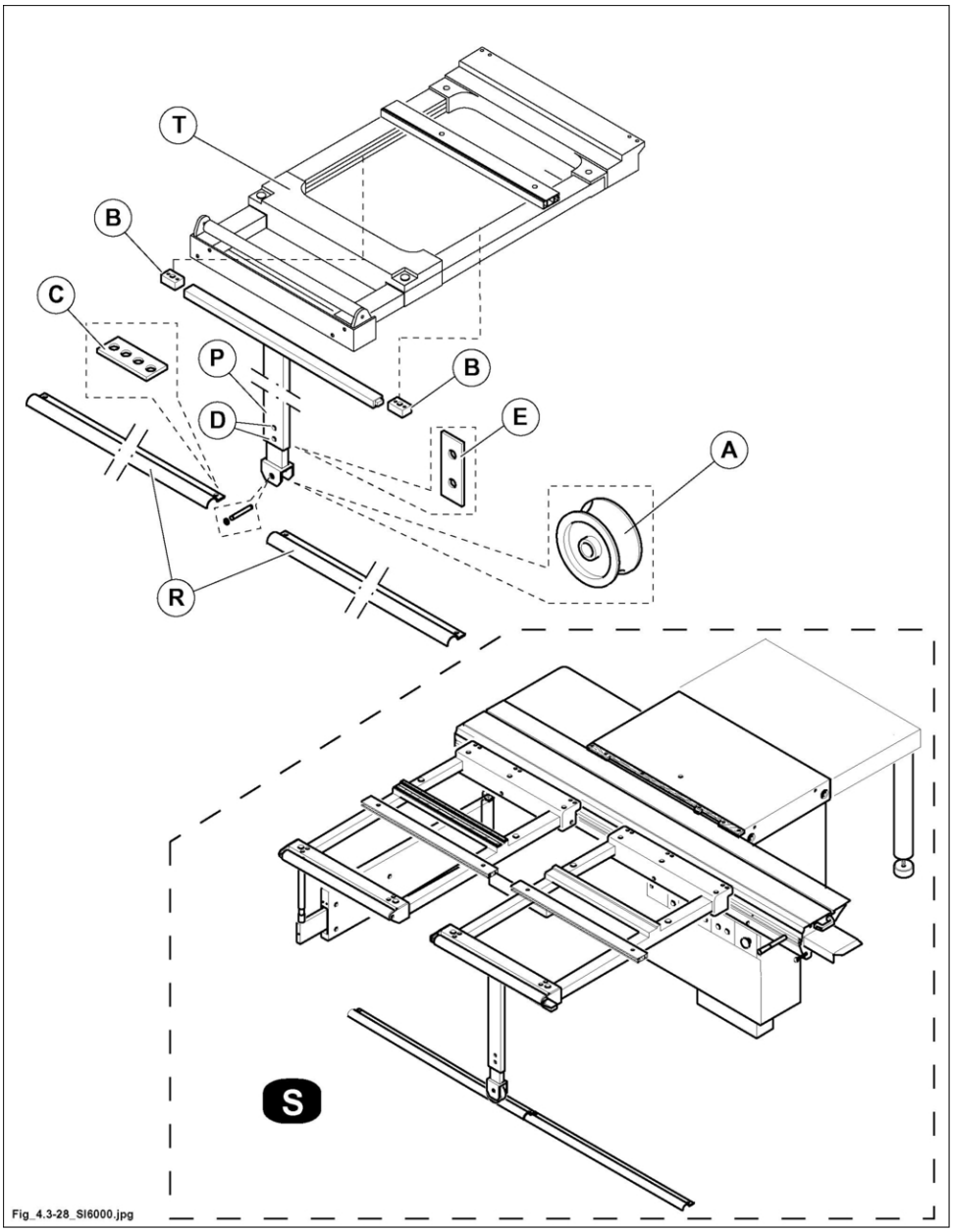
Lay two pieces of rail (R) connecting them with the rule (C).

Move sliding table and frame for the entire stroke in order to find the right position of the rail on the ground.

Now fix the rail to the floor with M8 screws.

As a last step, align the added frame at the same height as the first one with the two M8 screws (D) that secure the counter-plate (E) to the wheel extension.

The finished assembly is shown in (S).



4.3.6 Fitting the rest rule

Install the support rule (N) as follows:

1. Rest the rule (N) on the frame (T) so that the coupling plates (P) are positioned in front of the pins (F).
2. Slide the rule (N) forwards (towards the saw blade) so that the plates (P) engage in the pins (F) and the wedge (C) passes through the pin (B).

   The rule is locked.

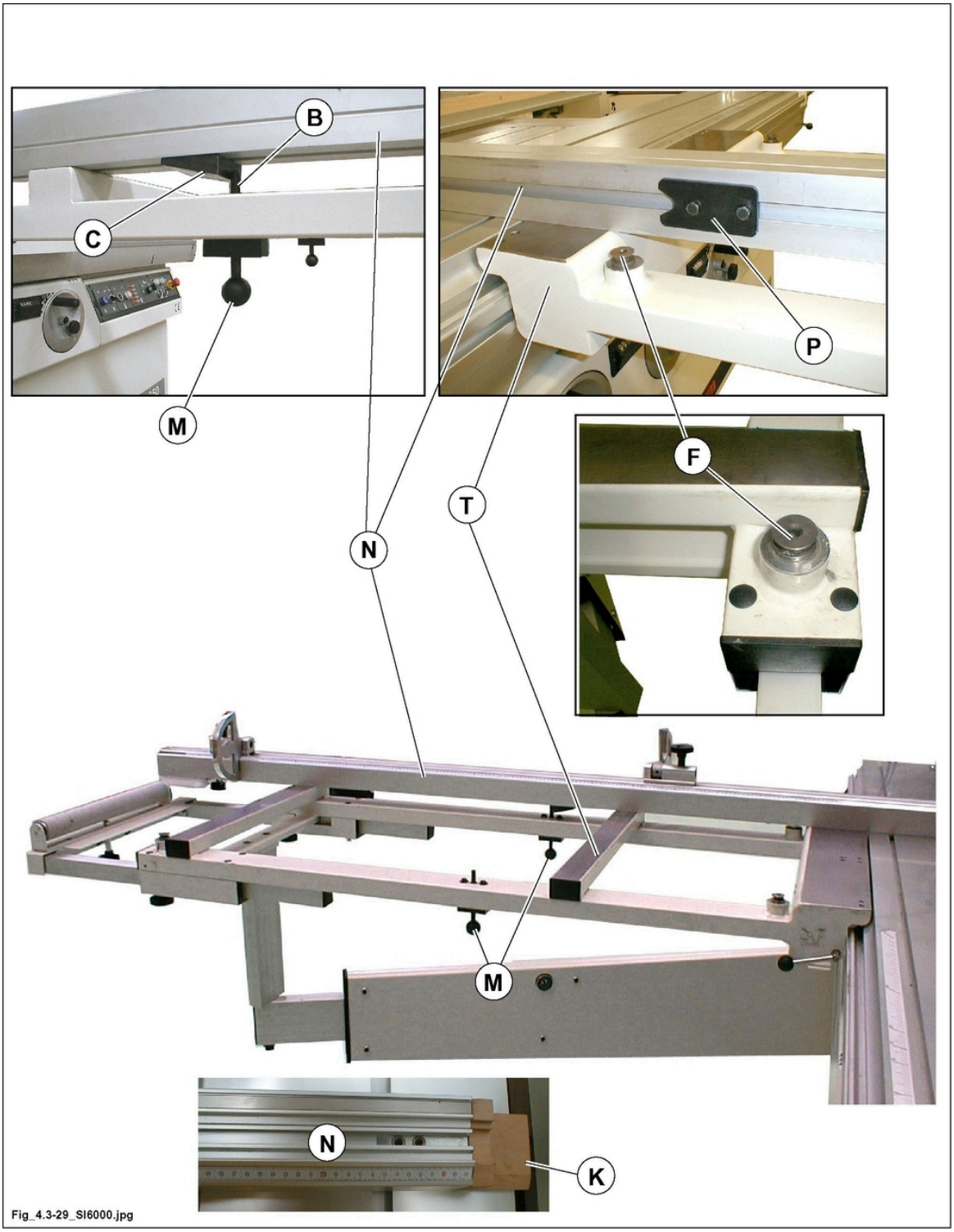
   To disassemble the support rule, pull down the knob (M) to exclude the pin (B) and, at the same time, move the support rule back.

   The wooden end (K) of the rule must be aligned with the blades, in order to function as splinter guard during machining.

NOTE

Rest rule (N) has been set perpendicular to the saw blade during the machine test at factory.

Start the machine as described in Chapter"Commands" "" and trim the end (splinter guard) (K), sliding the sliding table forward.


B
C
M
P
F
T
N
M
N
K
Fig_4.3-29_SI6000.jpg

4.3.7 CompeX support frame assembly OPT

DANGER

All fitting operations require 2 persons.

1. The lever (A) must be in the rest position ( ).
2. Hook the frame (G) onto the groove (E).
3. Rotate the lever (A) to the central position ( ).
4. Position the end of the flag so it is aligned with the pin (Z).
5. Lift the end (M) of the frame just enough to insert the pin (Z) in the end of the flag (N).
6. Turn the lever (A) to the blocking position ( ).

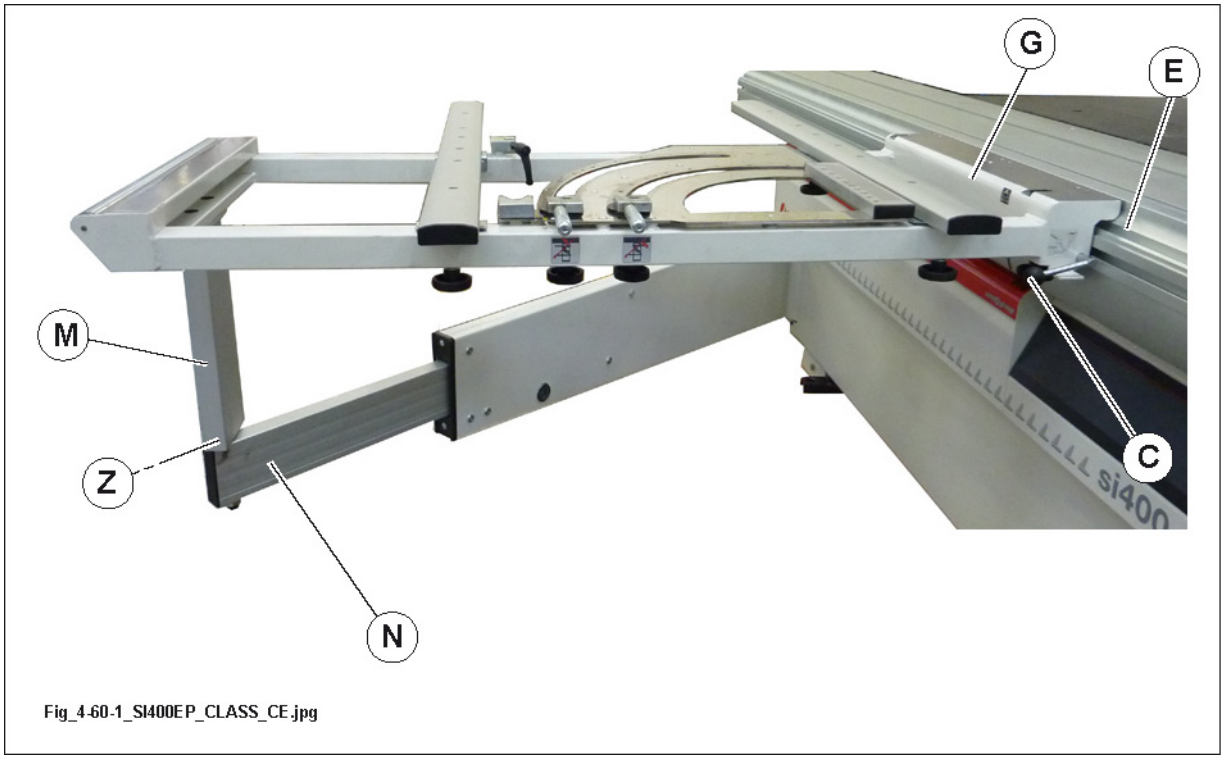


Fig_4-60-1_SI400EP_CLASS_CE.jpg

4.3.7.1 Fitting the mobile traverse

Fit threaded pivots (R) into holes (S) of the frame.
For locking the traverse (T), fit spacer (V) and washer (W) to the threaded pivots, then tighten knobs (U).
Repeat the instructions to assemble the second crossbar.

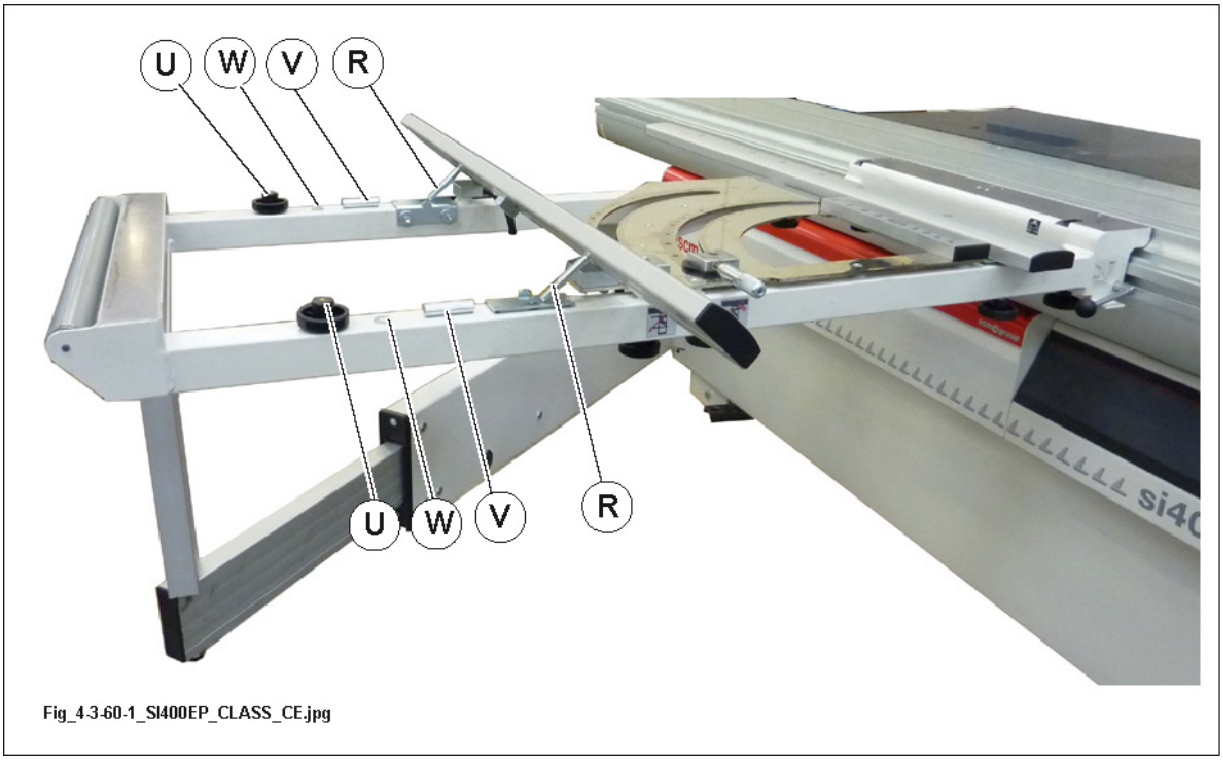


Fig_4-3-60-1_SI400EP_CLASS_CE.jpg

4.3.7.2 Fitting the rest rule

Position the rule (A) on the frame so that the blocks (B) match the seatings (C) (see figure)
Rotate the rule and slide the fulcrum pin (D) in its seating and block it with the knob (E)
Insert the fulcrum pin (D) in the seating (H).
Tighten the knob (F) or (G) to define the side of the rule to be used as support for the workpiece being machined. (see plates)

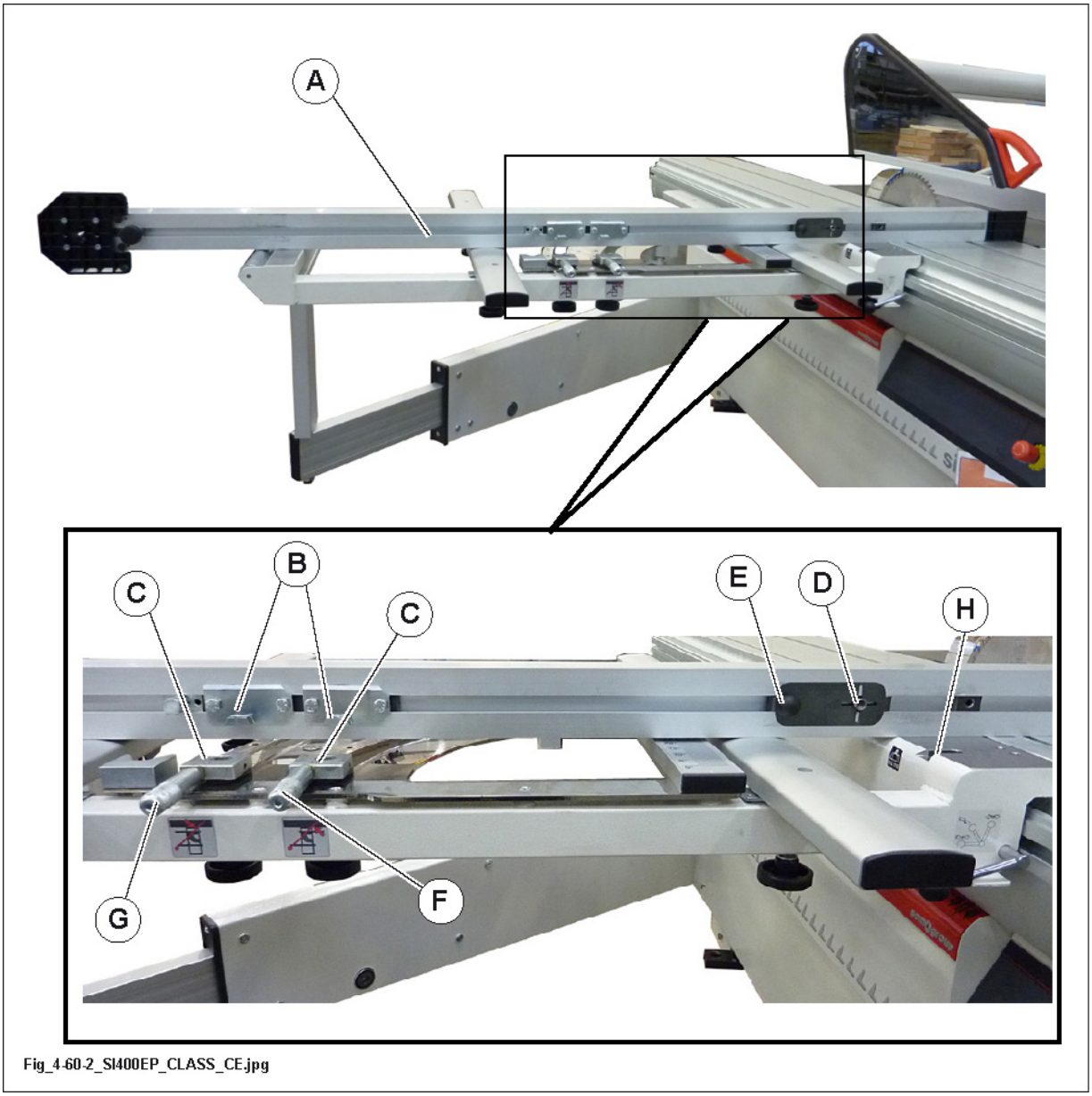


Fig_4-60-2_SI400EP_CLASS_CE.jpg

4.3.8 Power fence for parallel cuts with electronic control

DANGER

All fitting and demounting operations require 2 persons.

DANGER

For the fitting it is necessary to use a proper lifting device with min. capacity equal to 200 kg.

4.3.8.1 Setting up

NOTE

Ensure that the sliding table is fully open, so that you have as much working space as possible.

CAUTION

Before proceeding with the assembly of the table, it is important to extract the cables from the base in order to connect them to the motorised guide.

For transport reasons the power fence unit (A) may be demounted, for fitting it proceed as follows:

1. Raise the guide unit (A) from the eyebolt (B) and place it next to the fixed surface.
2. Position the pins of the guide extrusion in the appropriate holes of the worktable and block it with the screws (C).
3. Tighten the bolt nuts of the guide extruder to secure it to the fixed worktable.
4. Remove eyebolt (B) and safety cable (D).
5. Rotate the support (S) outwards.

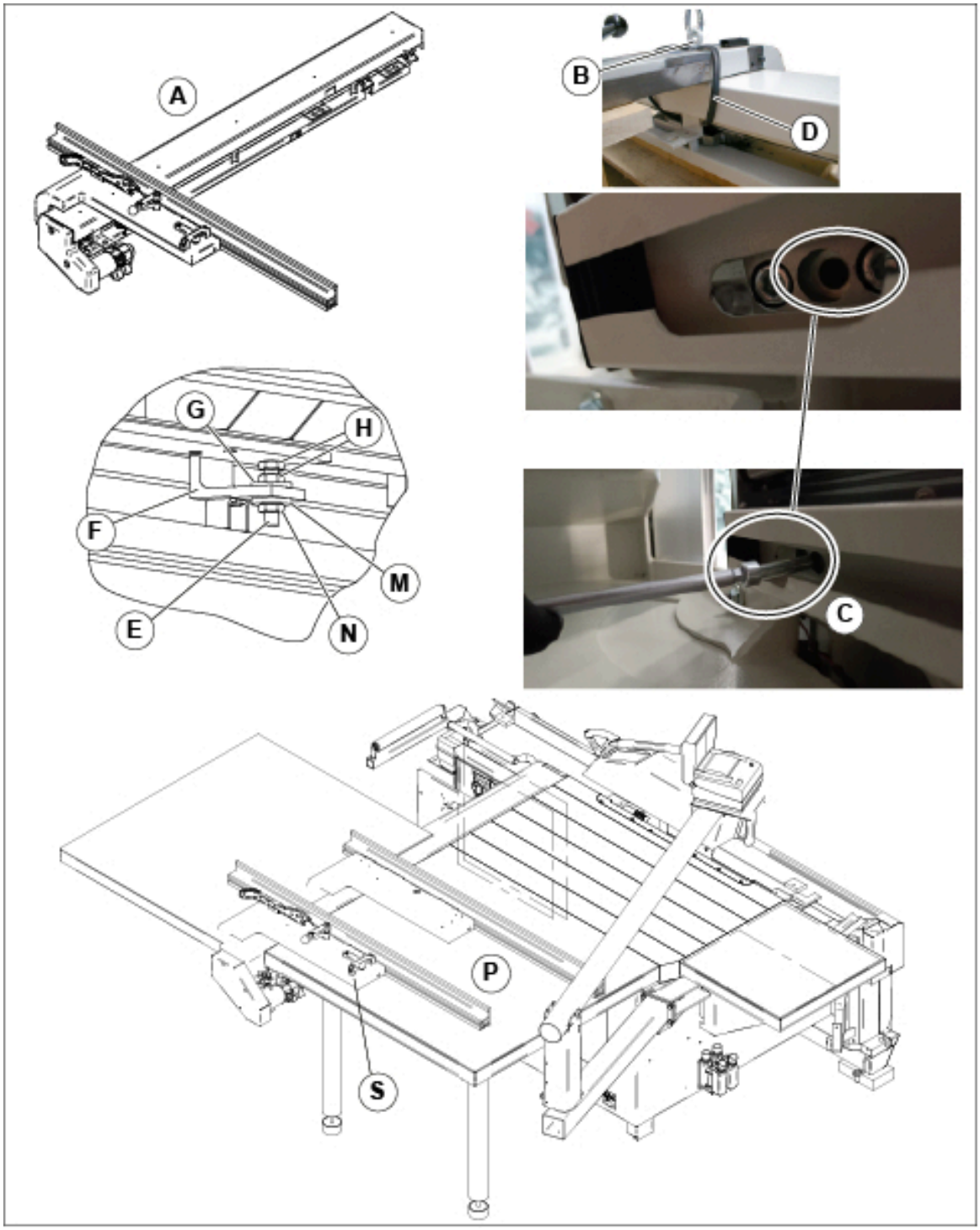
   WARNING

   It is advisable to mount the additional table after having already fixed the motorised guide to the fixed worktable.

   Fasten the power fence unit also to the rear additional table (P) by proceeding in this way:

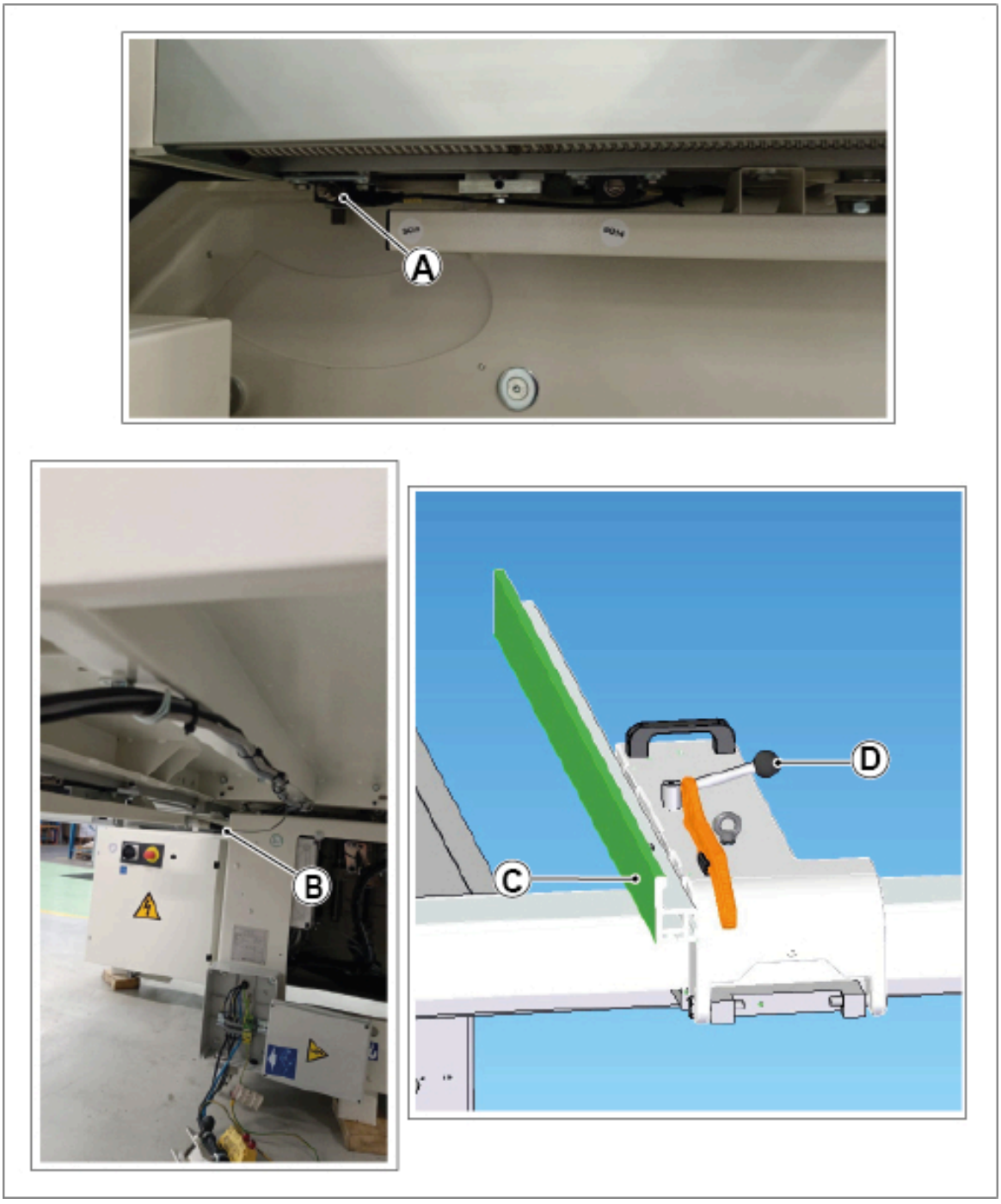
   1. Position the washers (G) in correspondence with the holes of the guide brackets F.
   2. Insert the grub screws (E) of the table into the holes of the brackets.
   3. Fit the washers (M) and the nuts (N).
   4. Tighten the nuts (H) and (N).

6. Ensure that the fixed work table, the motorised guide and the additional table are flush (Check the presence and constancy of the gap with the aluminium rule).


A
B
D
G
H
F
M
E
N
C
P
S

4.3.8.2 Electrical connection

1. Turn the main switch to 0 to turn off the machine.
2. Connect the micro switch connector (A) between the guide and the base and then screw.
3. Connect the connector (B) to the encoder socket on the rail.
4. Fit the supplied hooks to secure the cable braid under the additional table.
5. Connect the motor wires following the indications on the nameplates (SQ ->WSQ, M->WM, YB->WYB).
6. Fit the aluminium rule (C), locking it with the lever (D).



4.3.9 Riving knife fitting

NOTE
See Chapter ("Using and adjusting on the blade unit")

4.3.10 Fitting the saw blade

NOTE
Selector (3) for locking and releasing the motor brake is not present when the machine is equipped with inverter.

DANGER
Use proper gloves for handling the saw blade.

To mount or replace the saw blade, proceed as follows (operations to be done with the blades off):

1. Raise the saw unit as far as it will go (see paragraph " Height adjusting of the saw unit").
2. Press the pneumatic system discharge pushbutton "**11**".

   CAUTION
   If the system does not properly discharge air, a warning appears on the screen. In this case do not use the machine and contact service.

3. Lift the suspended guard completely.
4. Exclude the suspended guard by rotating it out of the work table.
5. Move the squaring frame fully to the left.
6. Move the sliding table totally to the right (entry side), by using the special handle (M).
7. Raise the hooks (B) to release and open the blade guard (C).
8. Exclude the sensors support (D) by rotating it towards the operator.

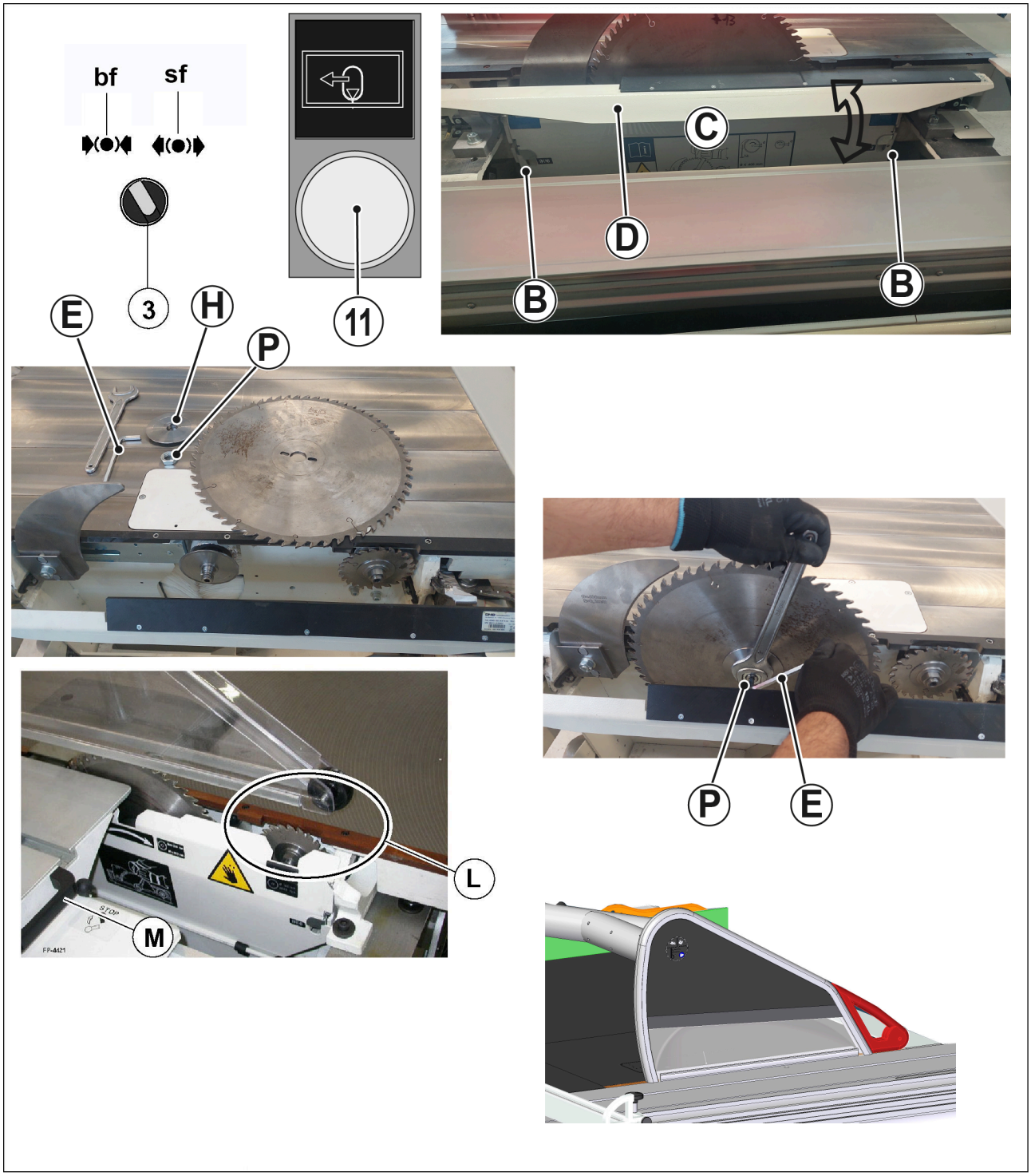
   NOTE
   A safety limit switch guarantees that motor cannot be started when the guard (C) is open.

9. Lock the spindle by inserting the Allen key (E) into the hexagonal slot.
10. Using a fixed wrench (A), loosen the nut (P) by rotating it clockwise.
11. Before fitting the saw blade make sure that both flanges (H) are clean in order to avoid vibrations when the saw blade is rotating.
12. Mount the blade, flange and nut; then, after locking the spindle as described above, tighten the nut (P) by rotating it counter-clockwise.
13. Return the sensors support (D) in position by rotating it towards the inside of the machine.
14. Adjust the suspended guard to cover the blade as much as possible.
15. Release the emergency stop button.

DANGER
For safety reasons it is obligatory to close the sensors support (D) and the guard (C), otherwise:

- **The machine does not start.**
- **The guards interfere with the sliding table motion.**

WARNING
It is absolutely mandatory that the suspended guard is correctly positioned above the blade otherwise the machine does not start.


bf
sf
3
11
E
H
P
C
D
B
B
P
E
L
M

4.3.11 Fitting the saw blade with Pro-lock

NOTE
The selector (3) for locking and releasing the motor brake is present with (OPT) "Single blade rotation speed".

DANGER
- **Use proper gloves for handling the saw blade.**
- **In case of large pieces and it is necessary the help of another person, on the machine, we recommend to apply an extension table to the exit side for removing the piece already cut and the second operator shall stay at the exit side of the additional table.**

DANGER
Work on the saw blades should be performed with extreme caution.
Danger of injury from the very sharp blades.

NOTE
Recommended tightening torques of the grub screw on the screw clamp (E) is: 11-13 Nm

To fit or replace the saw blade, proceed as follows:

1. Raise the saw unit fully (see paragraph "" Height adjusting of the saw unit"").
2. Press the pneumatic system discharge pushbutton"**11**".
3. Press the emergency button
4. Wait for the blades to stop moving.
5. Lift the suspended guard completely.
6. Exclude the suspended guard by rotating it out of the work table.
   ° Rotate the selector switch (3) to (OPT) the symbol .
7. Move the squaring frame fully to the left.
8. Move the sliding table totally to the right (entry side), by using the special handle (M).
9. Raise the hooks (B) to release and open the blade guard (C).
10. Exclude the sensors support (D) by rotating it towards the operator.

    NOTE
    A safety limit switch guarantees that motor cannot be started when the guard (C) is open.

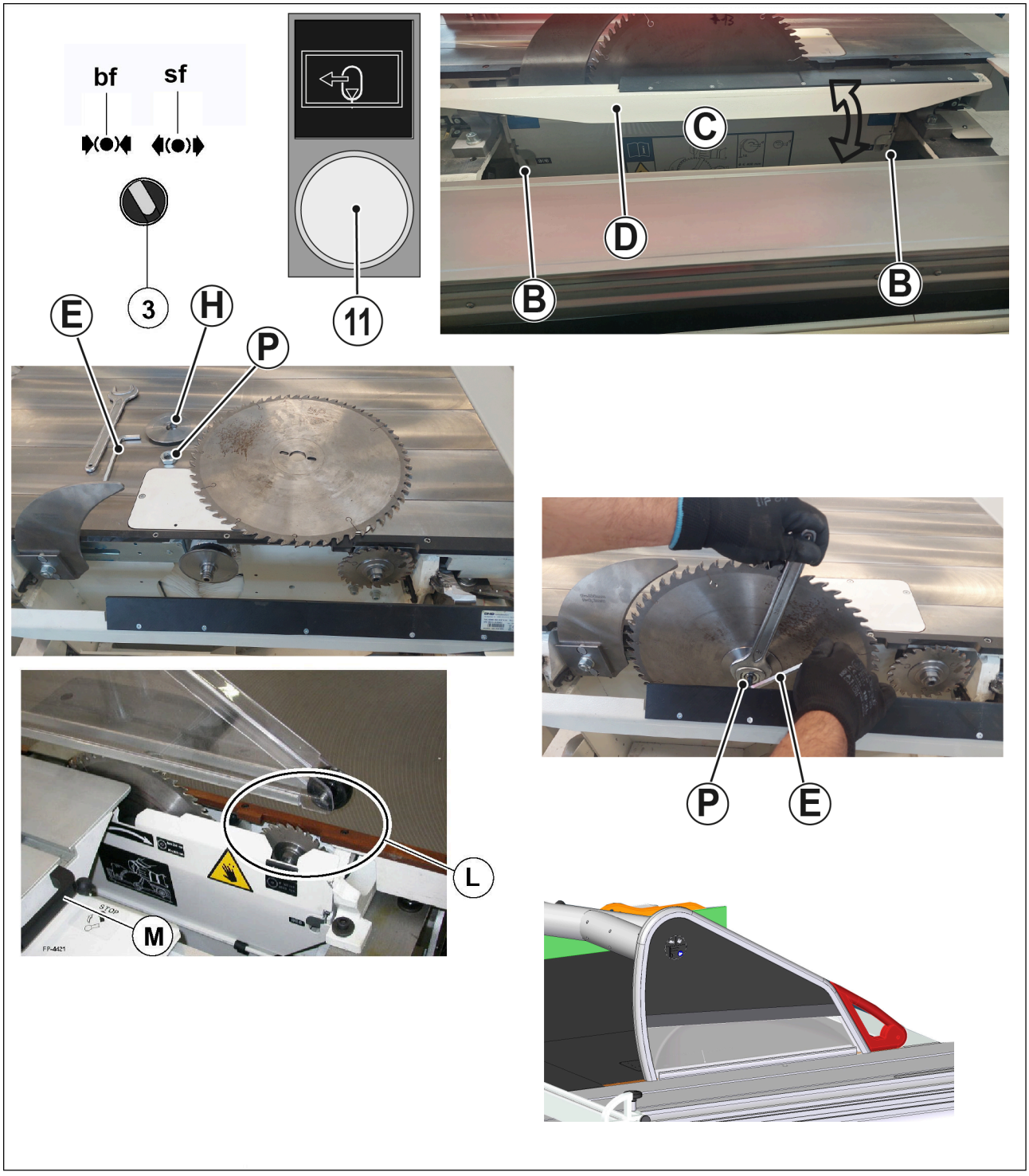
11. Lock the spindle by inserting the Allen key (E) into the hexagonal slot.
12. Using a fixed wrench (A), loosen the nut (P) by rotating it clockwise.
13. Before fitting the saw blade make sure that both flanges (H) are clean in order to avoid vibrations when the saw blade is rotating.
14. Mount the blade, flange and nut; then, after locking the spindle as described above, tighten the nut (P) by rotating it counter-clockwise.
15. Return the sensors support (D) in position by rotating it towards the inside of the machine.
16. Reposition the blade guard (C).
17. Rotate the selector switch (3) to (OPT) the symbol .
18. Return the suspended guard in position.
19. Release the emergency button.

DANGER
For safety reasons it is obligatory to close the sensors support (D) and the guard (C), otherwise:

- **The machine does not start.**
- **The guards interfere with the sliding table motion.**

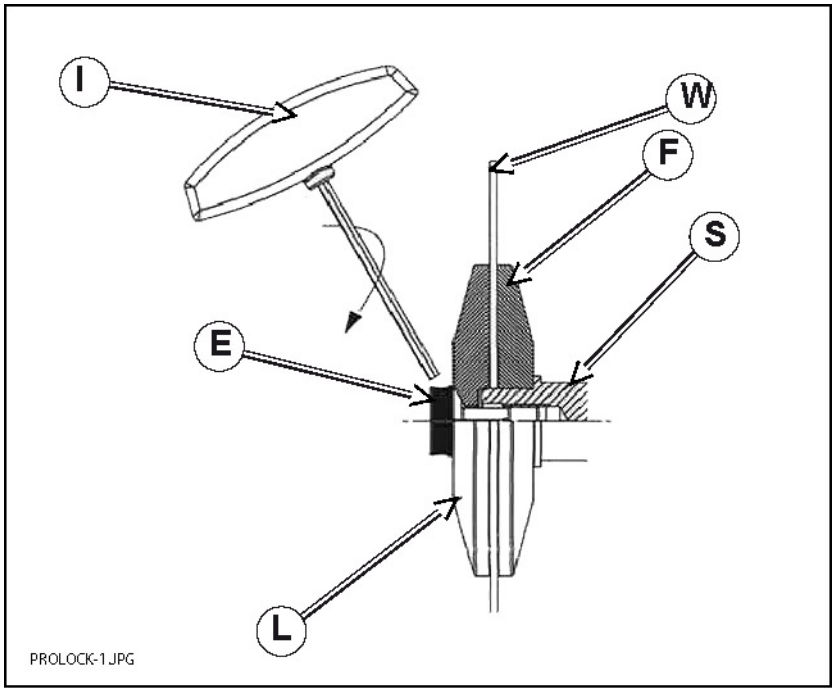
WARNING

It is absolutely mandatory that the suspended guard is correctly positioned above the blade otherwise the machine does not start.



4.3.12 Removing the saw blade

1. Release the blade by unscrewing the threaded grub screw with a hexagon screw wrench (I). No more than about 2 turns are necessary, anti-clockwise
2. Unscrew the locking device (E) manually from the end of the shaft (S) and extract the flange (L).
3. Remove the saw blade (W) from the schaft end (S).


I
W
F
S
E
L
PROLOCK-1.JPG

4.3.13 Fitting the scorer

DANGER

Use gloves for handling the scorer blade.

To fit or replace the scorer blade, proceed as follows:

1. Press the push-button "**11**".
2. Press the emergency button
3. Wait for the blades to stop moving.
4. Exclude the suspended guard by rotating it out of the work table.
5. Move the squaring frame fully to the left.
6. Move the sliding table totally to the right (entry side), by using the special handle (M).
7. Raise the hooks (B) to release and open the blade guard (C).
8. Exclude the sensors support (D) by rotating it forward towards the operator.

   NOTE
   A safety limit switch guarantees that motor cannot be started when the guard (C) is open.
9. Lock the spindle by inserting the Allen key (E) into the hexagonal slot.
10. Using a fixed wrench (A), loosen the nut (H) by rotating it counter-clockwise.
11. Remove the nut (H) and a flange (F).
12. Before fitting the scorer blade make sure that flanges (F) are clean to avoid vibrations during the scorer rotation.
13. Mount the blade, flange and nut; then, after locking the spindle as described above, tighten the nut (H) by rotating it clockwise.
14. Return the sensors support (D) in position by rotating it back towards the machine.
15. Reposition the blade guard (C).
16. Reposition the suspended guard.
17. Release the emergency stop button.

DANGER

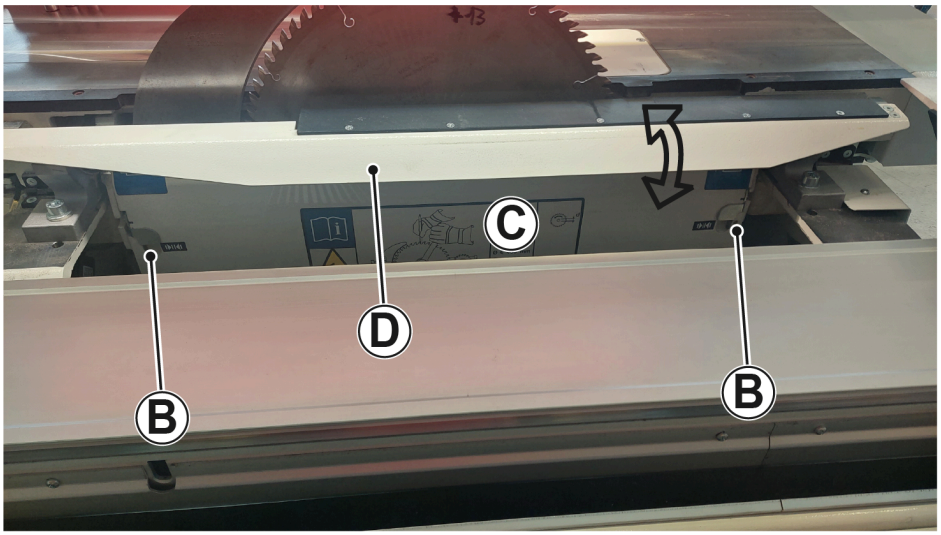
For safety reasons it is obligatory to close the sensors support (D) and the guard (C), otherwise:

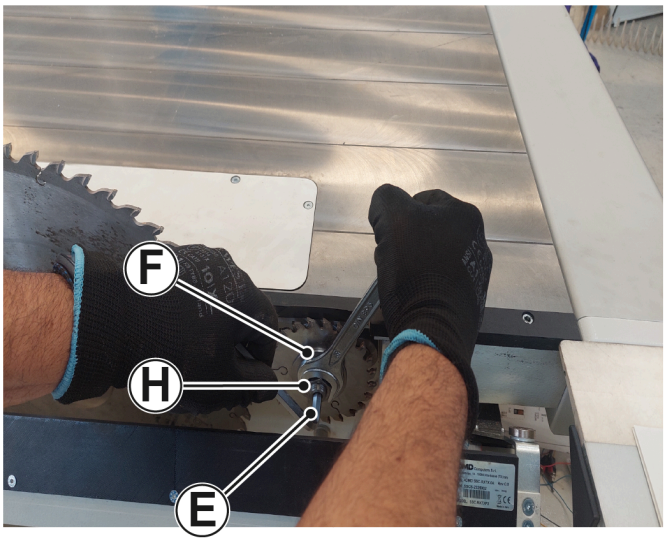
- **The machine does not start.**
- **The guards interfere with the sliding table motion.**

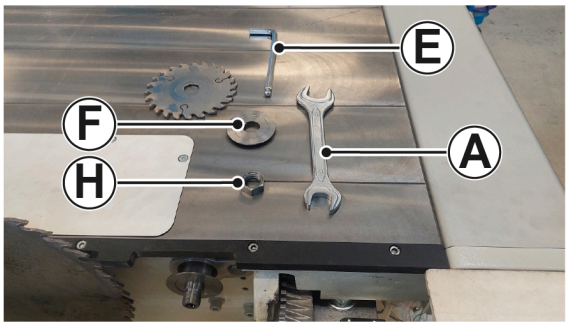
During the machine use, pay attention when the sliding table is totally on the left as for the working a part of the blades remains uncovered (L).

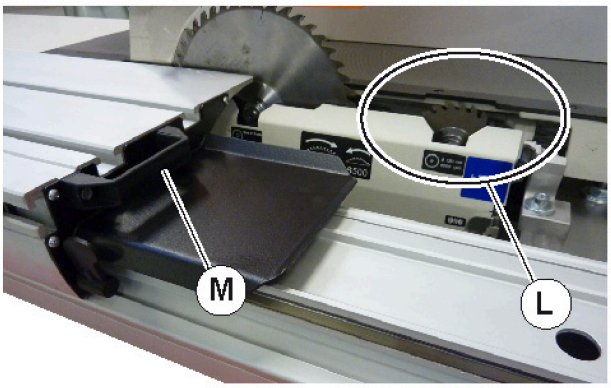
CAUTION

It is absolutely mandatory that the suspended guard is correctly positioned above the blade otherwise the machine does not start.


C
D
B
B

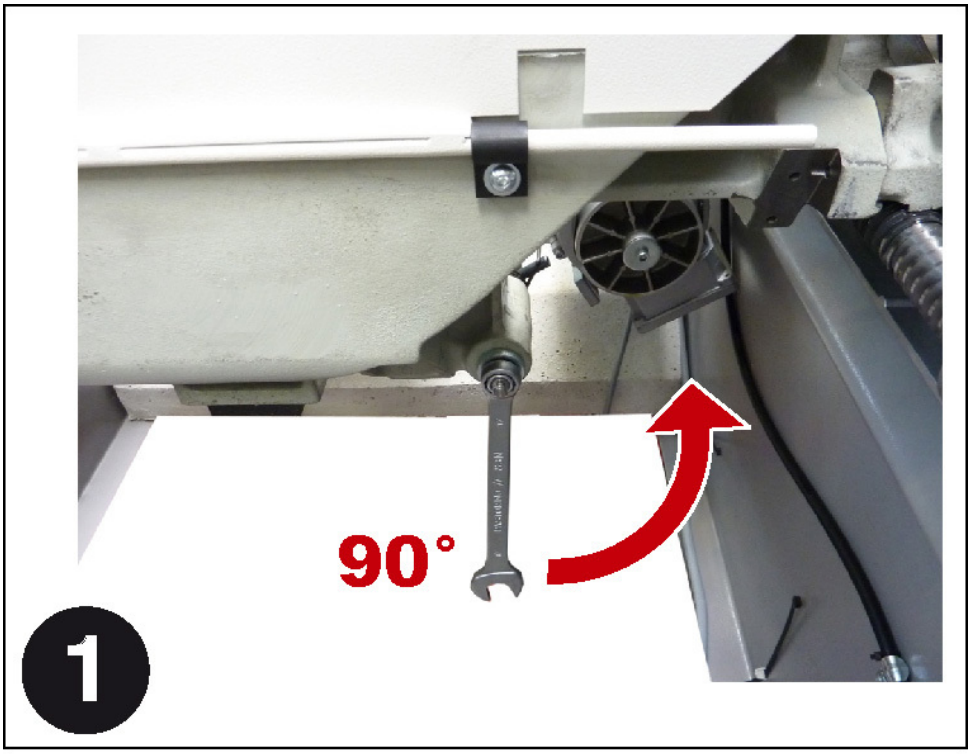

F
H
E

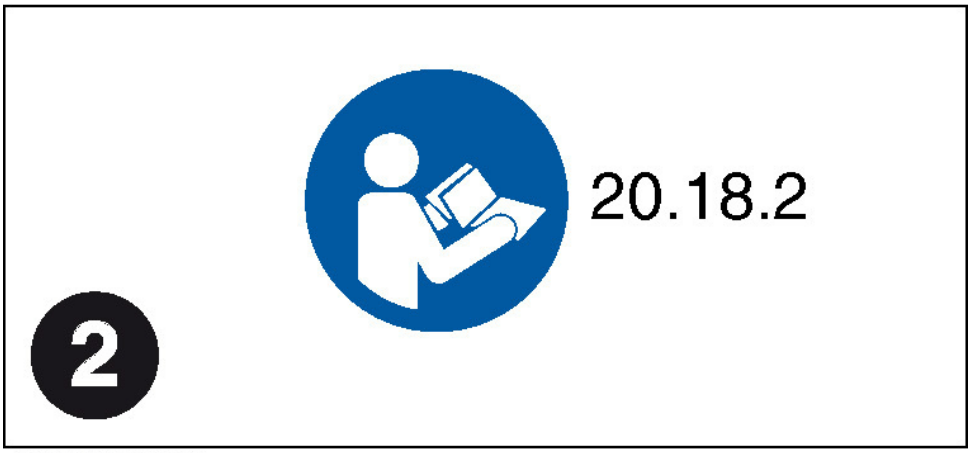

E
F
A
H


M
L

4.3.14 Scoring blade belt assembly

If the scoring blade belt is disassembled, to assemble it see figure 1 and read 2 the relevant section of the instructions manual.





CINGHIA-INCISORE.JPG

4.4 Electrical installation

NOTICE

The installation operations must be performed by the manufacturer's specialised technical personnel or personnel authorised by the manufacturer.

4.4.1 Requisites for the electricity supply system

INTRODUCTION

SPECIALISED PERSONNEL

For proper connection it is always mandatory to refer, in addition to the following, also to the wiring diagram and the plate on the electric panel of the individual machine.

The electrical panels of the machines are suitable to be powered to a single/three-phase network with/without neutral as indicated in the machine/plate electric panel/LAYOUT.

If the power supply voltage at the final client is different to the indications on the machine plate/electrical panel plate/ LAYOUT, see the "machine electrical power supply specifications" section.

The input and connection of the power supply line inside the electrical panel must be carried out in compliance with the following instructions:

- attesting the cables to the input terminals of the main disconnection device of the electrical panel or, where present, to the connection terminal board located upstream of the switch (as also indicated in the electrical diagram)
- so as not to compromise the degree of protection IP54 of the electrical panel declared by the manufacturer by NOT drilling holes in the electrical panel carpentry;
- respecting the radii of curvature as indicated by the cable manufacturer;
- complying with the laying limits as indicated by the cable manufacturer;
- using the tightening torque indicated on the wiring diagram of the machine;
- without mechanically damaging the switch and the cable itself.

SPECIFICATIONS OF THE ELECTRICAL SUPPLY OF THE MACHINE

- Distribution systems allowed: type TN-S / TN-C.
- Phases number (~) and neutral conductor: see the indications on the machine plate/electrical panel plate/LAYOUT.
- Nominal voltage (Un) and tolerance when different from +/- 10%: see the indications on the machine plate/electrical panel plate/LAYOUT.
- Voltage interruption: Power supply voltage interrupted or reset for a time not exceeding 3 ms, at any moment of the power cycle with more than 1 s between two successive interruptions.
- Voltage gaps: not exceeding 20 % of the peak supply voltage for more than one cycle with more than one second between two successive gaps.
- Frequency (f) and tolerance when different from +/- 1%: see the indications on the machine plate/electrical panel plate/LAYOUT.
- Nominal machine current (In): see the indications on the machine plate/electrical panel plate/LAYOUT.
- Short circuit seal (Icc): see the indications on the machine plate/electrical panel plate/LAYOUT.
- Minimum neutral conductor section: see the indications on the electrical diagram/LAYOUT.
- Minimum earthing protection conductor section: see the indications on the wiring diagram/LAYOUT.

NOTE

The LAYOUT can be provided as a separate document, attached to the machine instruction manual, or integrated with it.

NOTICE

When the distribution system and/or the supply voltage at the customer's premises are different from those provided for the machine, the following prescriptions apply:

- Distribution system type TN-C / TN-S in the presence of voltages other than those provided for the machine: the use of an autotransformer or transformer is required (not provided for in the standard supply unless otherwise agreed).
- IT type distribution system: it is mandatory to use a three-phase transformer regardless of the supply voltage (not provided for in the standard supply unless otherwise agreed).
- TT type distribution system: in order to avoid disturbances and malfunctions it is mandatory to use a three-phase transformer regardless of the supply voltage (not provided for in the standard supply unless otherwise agreed).

The supply of a transformer/auto-transformer is ALWAYS understood as:

1. Component not included in the standard supply and an integral part of the distribution system of the installation site.
2. Component external to the machine and not an integral part of it.
3. Component to be connected and protected by the client.

MACHINE PROTECTION AGAINST INDIRECT CONTACTS:

The machine is equipped with a grounded earth circuit to the PE terminal.

It is up to the customer to complete the protection against indirect contact.

To this end, the customer must:

1. Use a qualified professional for the project and a qualified installer (both with the necessary requirements according to local legislation).
2. If there is a TN-S distribution system, install a differential current device (RCD) on the supply line with the following minimum specifications:
   - adjustable both in current and intervention time.
   - suitable for recognizing continuous or high frequency fault differential currents.
   - positioned outside the machine electrical panel
3. If there is a TN-C distribution system, install a differential current device (RCD) with the characteristics indicated in point 2, after separating THE PEN conductor into the respective PE and N conductors upstream of the RCD itself.

DANGER

The installation of inadequate differential protection devices may result in unwanted untimely interventions during the use of the machine.

Any damage of any kind resulting from untimely interventions cannot be attributed to the Manufacturer of the Machine.

NOTE

Remember that in environments with greater fire risks, as expressed in IEC60364-4-42, to ensure the protection against fires caused by currents dispersed to the ground, the maximum value of the differential triggering current must be 300mA.

NOTICE

The protection against such risks is the responsibility of the Customer who, for this purpose, will have to use specialized personnel (electrician, installation personnel of electrical systems).

The CUSTOMER must COMPLETE the measures to guarantee the protection against electrocution risks due to indirect contacts, even if the machine includes an internal grounding system as far as the PE terminal.

MACHINE PROTECTION AGAINST OVERCURRENTS

All branch circuits of the machine are protected against overcurrents (overload and short circuit).

It is up to the customer to ensure protection against short circuit overcurrents of the Feeder

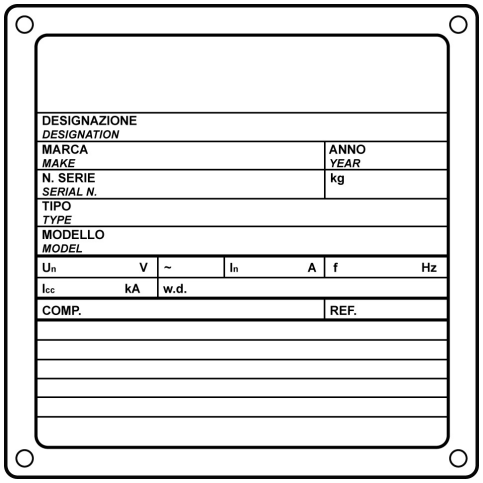
(part of the circuit between the general disconnecting device of the machine and the bypass circuits).

To this end, the customer must:

1. Use a qualified professional for the project and a qualified installer. (Both with the necessary requirements according to local laws).
2. Protect the Feeder by installing a three-wire fuse supply line with the following minimum specifications:

- Quick type.
- Compatible with the Icc value required for the machine.
- Positioned outside the machine electrical panel
- A size not exceeding that shown in the table.

COORDINATION OF POWER LINE PROTECTIONS	
Nominal machine current (In) (A)	**Fuse type Quick Maximum size allowed (A)**
0 → 10	12
11 → 14	16
15 → 18	20
19 → 22	25
23 → 28	32
29 → 36	40
37 → 46	50
47 → 54	63
55 → 76	80
77 → 92	100
93 → 110	125
111 → 145	160
146 → 190	200
191 → 230	250
231 → 300	315
301 → 380	400
381 → 500	500



A

Voltage (Volt), current (I=ampere) are indicated on the machine identification plate.
When supplying with a transformer, see the transformer plate data.

SPECIALISED PERSONNEL

If the power cables extend from above, do not pass them near the monitor or PC.

Moreover do not use the electrical cabinet walls as a support for fixing the power cables.

MACHINE OVERVOLTAGE PROTECTION

The machine is NOT protected against overvoltages.

The electrical system may be subject to overvoltages caused by manoeuvres or faults on the electrical system or of atmospheric origin (phenomena of direct or indirect electrocution of the structure in which it is located or of the electrical line from which the machine is powered).

In the absence of specific requests or requirements from the customer, the Manufacturer of the machine cannot be held liable for damage to the electrical equipment of the machine caused by overvoltages of any kind.

NOTE

The auto-transformers provided by the manufacturer are equipped with "neutral" line.

4.4.2 Electrical power and earth connection

Connect the machine to the electrical system as follows:

1. Shut OFF the power (indicate this using a sign).
2. Remove the cover from the electrical terminal board (C).
3. Insert the supply cable into proper terminal screw (P).
4. Connect the ground cable yellow-green, to terminal (PE /).
5. Connect the 3 phases to terminals L1-L2-L3.
6. Connect the neutral wire to terminal N.
7. Fit the cover of terminal board C.
8. Carefully tighten the cable clamp (P).

Switch on the mains voltage and check that the saw spindle rotates in the right direction (the saw blade shall rotate against the piece feed) after starting the machine as described later on (see Chapter 5).

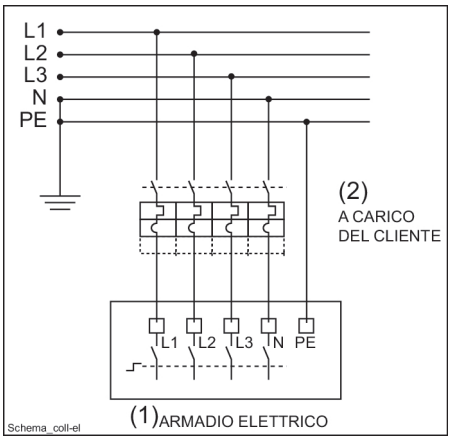
If the scorer blade does not rotate in the right direction (counterclockwise direction):

1. Disconnect he power supply.
2. Invert two of the three phases on the terminal block.
3. Switch ON the power.
4. Check the spindle direction of rotation again.

SPECIALISED PERSONNEL

If the machine is connected with a mobile power supply cable, use a rubber flexible cable marked with H07RN-F or A07RN-F. The relative plug-in socket must comply with the standard DIN 49463 and the international standards IEC 309-1 and IEC 309-2.

The impedance of the fault ring and the suitability of the over-current protection device associated, must be checked in the machine installation location.



CONNECTION TO A "TN-S" SYSTEM WITH VOLTAGE EQUAL TO 400V ±10%

[1]Electrical cabinet

[2]Performed by the client

4.5 Connection to the suction system

DANGER

The machine must be connected to suction system in order to function correctly and safeguard the operator. Always work with the suction system in operation.

l'impianto di aspirazione deve essere conforme a UNI EN 12779:2016 o EN 16770:2018.

DANGER

When working with materials other than wood, take the appropriate precautions to prevent the chips from damaging the suction system.

Ensure that when the main motor is started, the extraction starts automatically too.

NOTE

Connect the sawdust/shavings extractor intake to the extraction system using hoses with a matching diameter.

NOTE

we recommend that the suction sleeve is arranged out of the suction hood in order to avoid clogging caused by chips.

Tighten them with the metal hose clip to ensure contact between port and hose.

The suction system shall ensure a flow equal to 1300 m^3/h at a flow speed at least of 20 m/s.

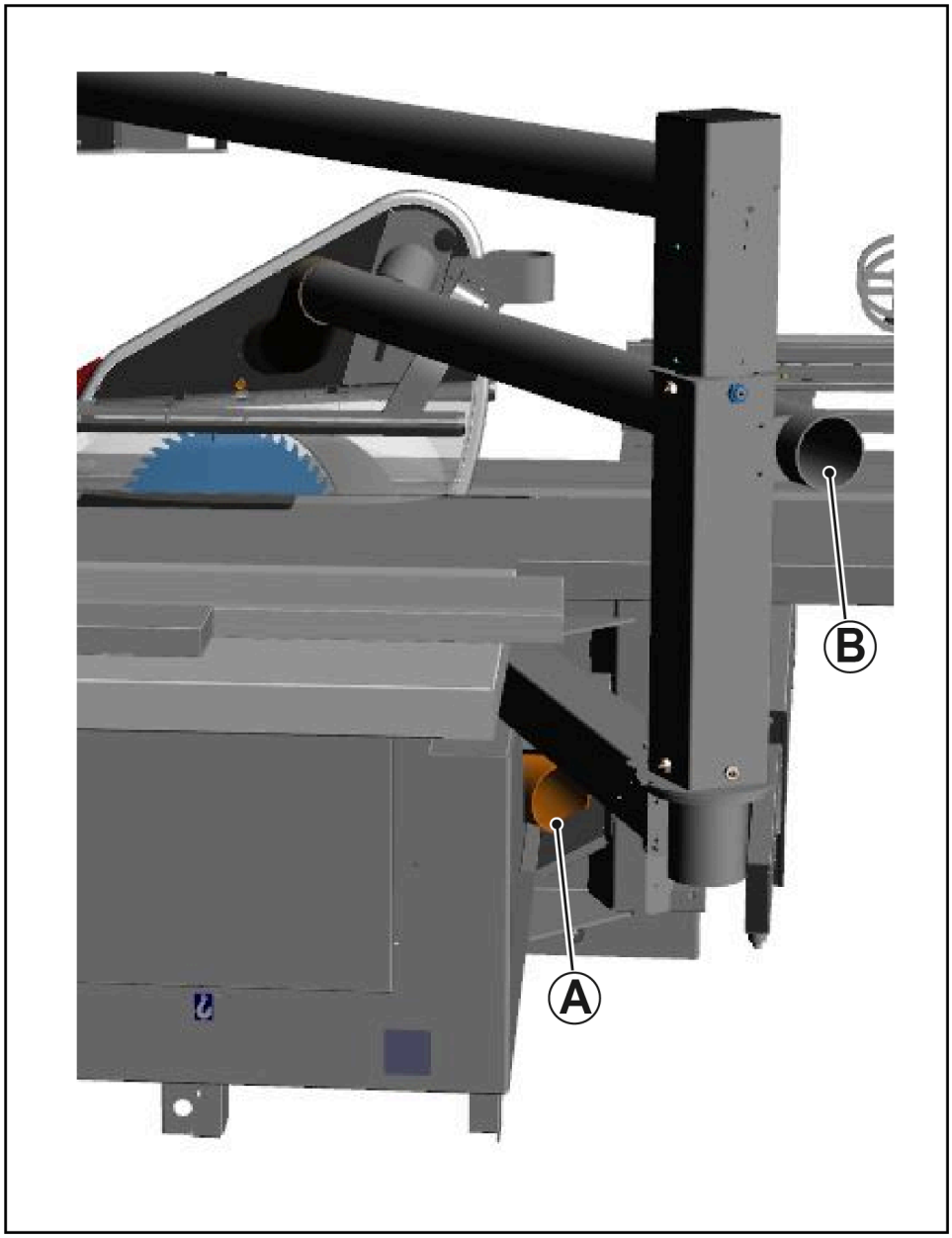
These values must be checked before starting work.

If other machines are connected to the central system, perform a test when all the suction systems are running.

Good suction operation reduces the risk of inhalation of dust.

Certain factors that reduce the emission of dust in the work environment are:

- regular maintenance of the tools, the machine and the extractor system
- Proper use of dust protectors


B
A

4.6 Connection to pneumatic system

Ensure that there is no water condensate or impurities (residues, emulsified oil, scales) in the compressed air delivery system.

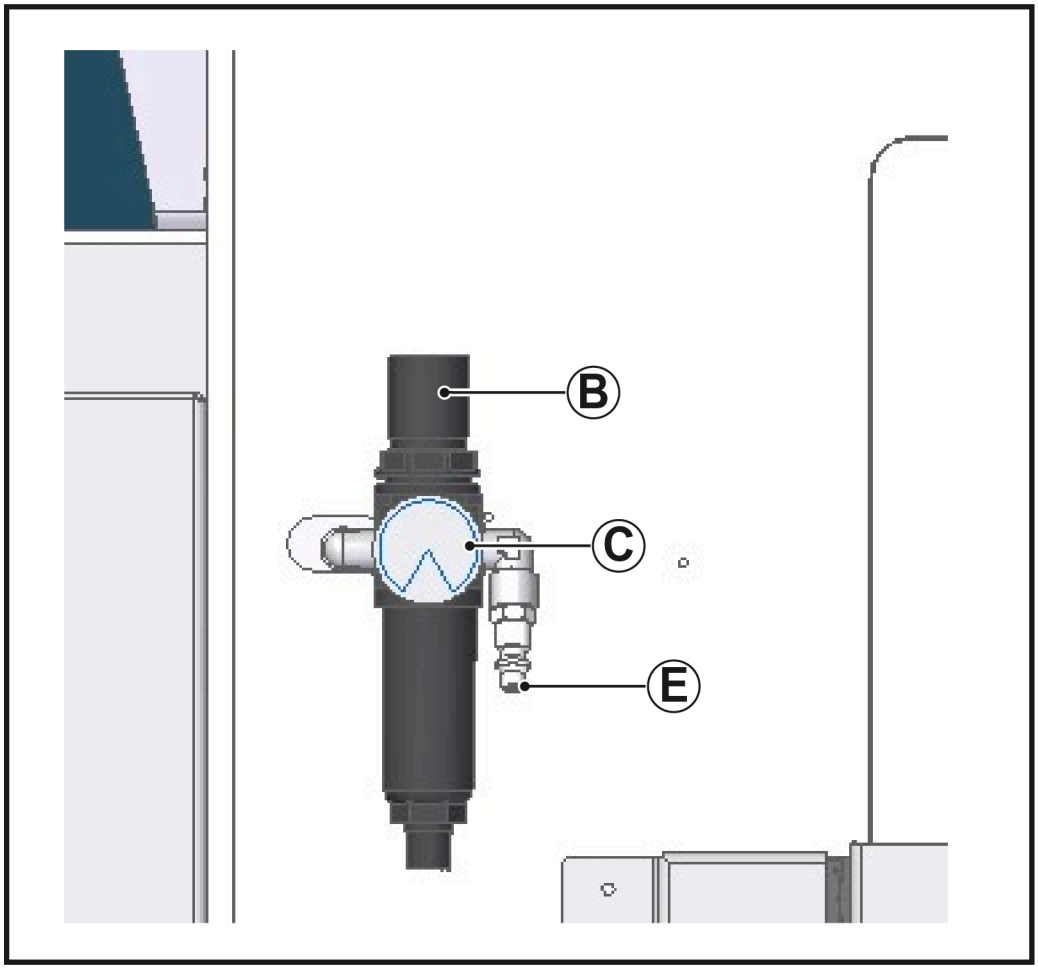
The distribution line must have tubes with an internal diameter that does not exceed 8mm.

Ensure that there are no cross-section restrictions upstream of the regulating filter unit.

Connect the machine to the compressed air system by means of a 1/4" hose with pneumatic coupling to fitting (E).

Adjust the pressure by rotating the knob (B), checking that the pressure gauge (C) of the pressure reducing valve indicates a pressure of no less than 7 bar.



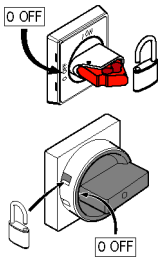
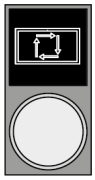


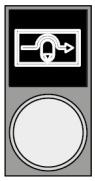
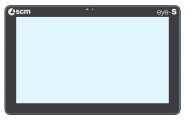
5 Commands

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5.4.1 Check the operation of the additional BLADE off system..... 91
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5.5.1 Reactivating the system..... 97
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5.7 Kit "SAVENERGY" (optional).....100

5.1 Control board

The control board depends on the machine version:

REF.	Image	Description / Function	Use and/or indication	
1		Padlockable main switch on electric cabinet Switches the main machine power supply on/ off Can be blocked in position "0" with a padlock.		= on
				= disabled
2		Emergency pushbutton. Cuts off the motor power supply with intervention of brakes, when present.	Pressed down: machine in emergency.	
			Reset by turning the pushbutton in the direction of the arrow.	
4		Saw motor illuminated START pushbutton.		Press pushbutton to start saw motor.
5		Scorer motor illuminated START pushbutton.		Press pushbutton to start scorer.
6		Saw and scorer motor STOP pushbutton		Press pushbutton to stop saw and scorer.
7		Key selector for motor start controls.		To activate pushbuttons on mobile control panel.
				To activate pushbuttons on sliding table
8		Electronic control START pushbutton	Press pushbutton to activate electronic control.	

REF.	Image	Description / Function	Use and/or indication
9		Detection system bypass button	Press the button to activate the bypass to the hand detection system.
10		Pneumatic system load button	Press the button to activate the pneumatic system.
11		Pneumatic system discharge button	Press the button to deactivate the pneumatic system.
12		USB Port.	
13		Electronic control to program and carry out the motion of the power axes.	Read the handbook of the electronic control enclosed with the machine.

5.2 Emergency buttons

In case of danger if you press an emergency button any function of the machine is locked.

Emergency buttons present on the machine are:

- Emergency pushbutton (1)

NOTE

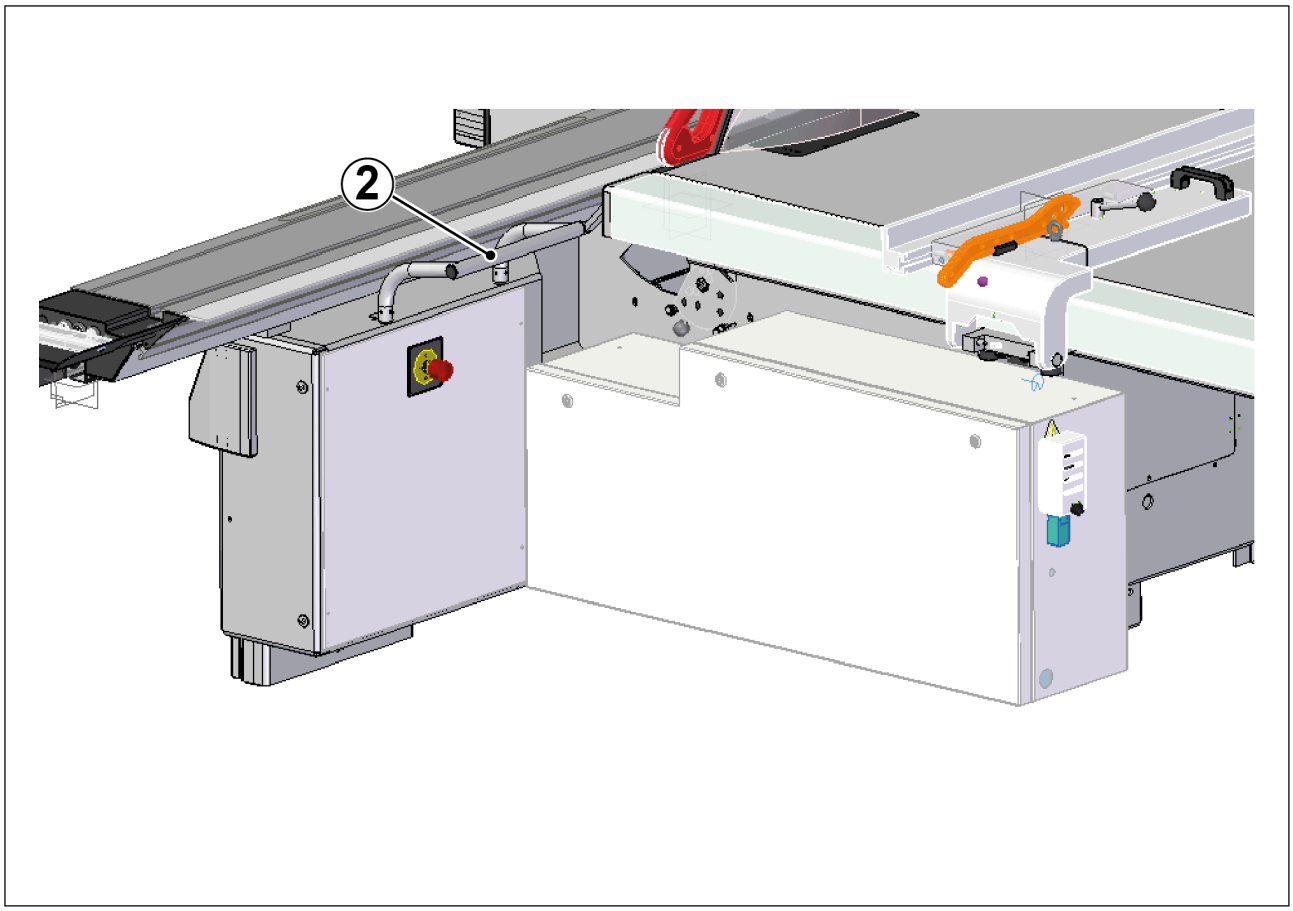
The emergency bar (2) is a device whose actuation stops only the motorized guide for parallel cuts.

NOTE

Periodically press the emergency buttons to check whether they are efficient.

DANGER

Any anomalies found during the control of these devices, must be reported promptly to the manager , who will put the machine out of service and call the electrical, mechanical maintenance personnel or the SCM Support Service..



5.3 Access to the electric housing

DANGER

Only a skilled electrician may reach the electric housing.

Electric compartment on base

1. Open the cover (S) of the main switch (A).

   WARNING

   Never cut off the mains power supply before opening the cover of the main switch.

2. Set the main switch (A) to 0 (OFF).
3. Remove the screws (V) on the base.

Electrical cabinet

1. Open the cover (S) of the main switch (A).

   WARNING

   Never cut off the mains power supply before opening the cover of the main switch.

2. Set the main switch (A) to 0 (OFF).
3. With the supplied wrench open locking elements (B).

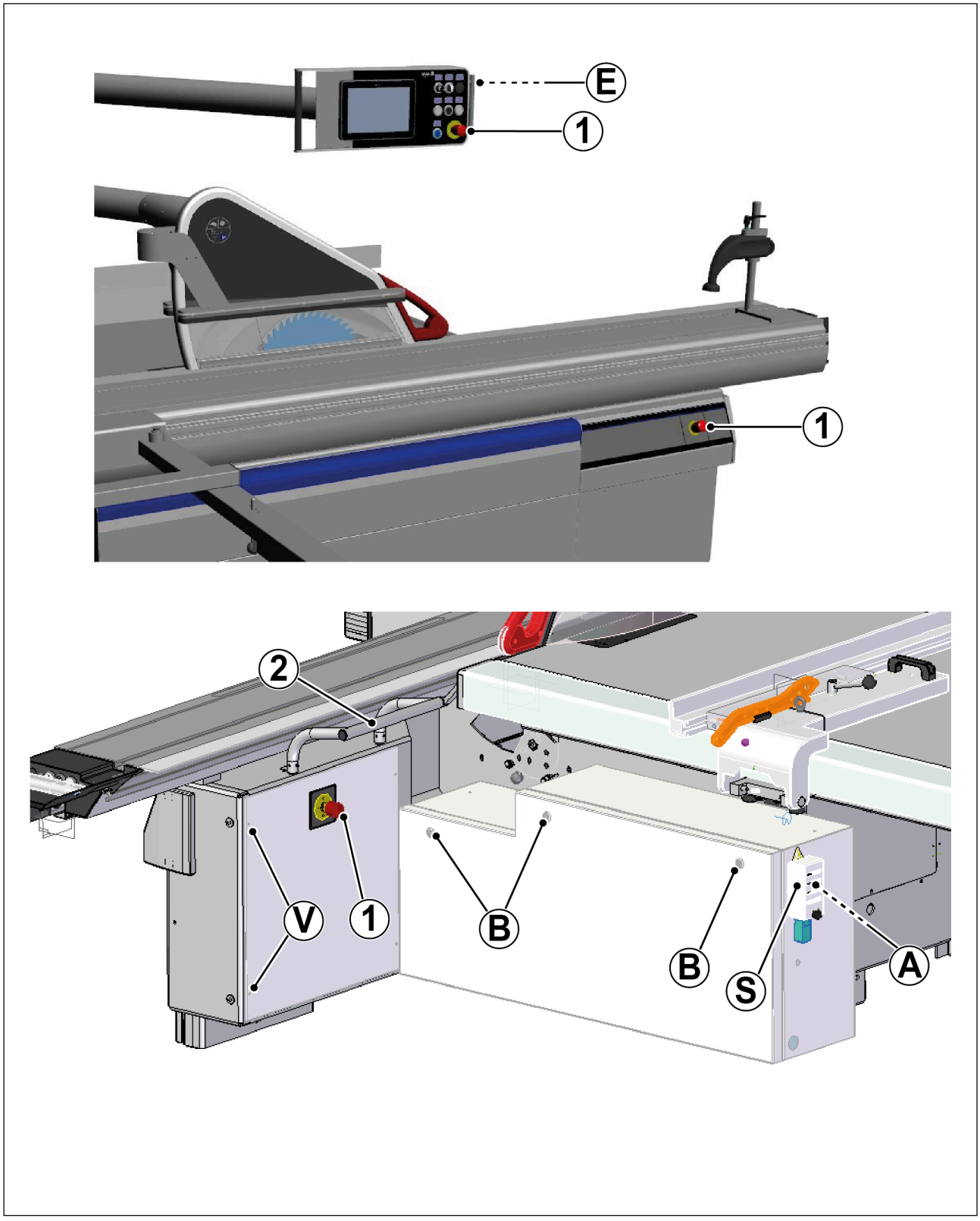
Mobile control board

1. Open the cover (S) of the main switch (A).

   WARNING

   Never cut off the mains power supply before opening the cover of the main switch.

2. Set the main switch (A) to 0 (OFF).
3. Remove the screws behind the panel (E) in order to open it.


E
1
1
2
V
1
B
B
S
A

5.4 general controls before machine starting

Check:

- the guard of the saw unit is closed
- the machine is connected to the extraction system
- the emergency stop buttons are off (reset the buttons where necessary)
- that the suspended guard and the sensor support are in the correct position
- the main switch cover is closed.

DANGER

Any anomalies found during the control of these devices, must be reported promptly to the manager , who will put the machine out of service and call the electrical, mechanical maintenance personnel or the SCM Support Service..

NOTE

Make sure that the speed indicated is proper for the tool fitted to the saw spindle.

PROHIBITED

Do not modify or exclude any of the circuits or devices installed.

5.4.1 Check the operation of the additional BLADE off system.

NOTICE

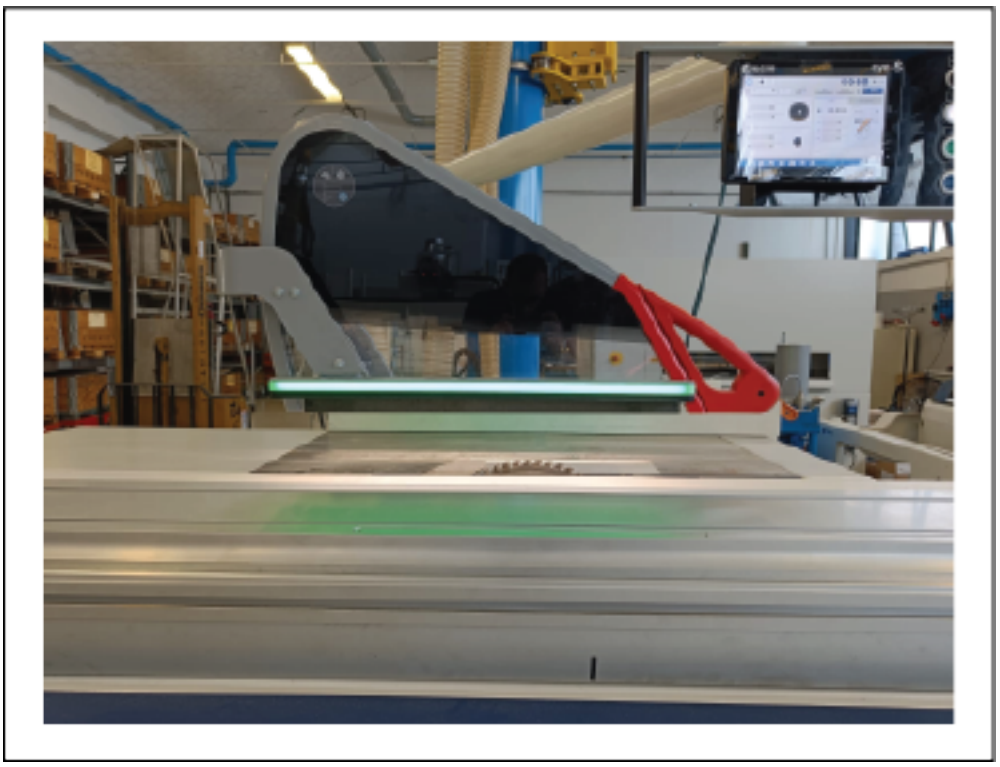
It is advisable to check the operation of the BLADE off system at least once a week.

CAUTION

Always turn off the scorer before checking, as the Blade Off system does not exclude the scorer.

1. Block the sliding table.
2. Tilt the blade to 0°.

3. Adjust the blade vertically 30 mm from the surface, do not turn on the blade.



4. Place a 30x30x400 sized wood on the sliding table about 15mm from the blade tooth and lock it with the wood pusher.

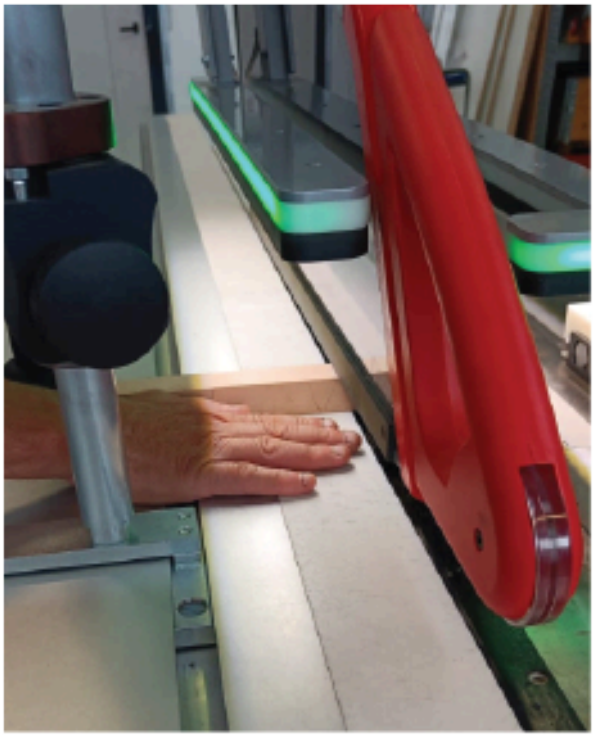


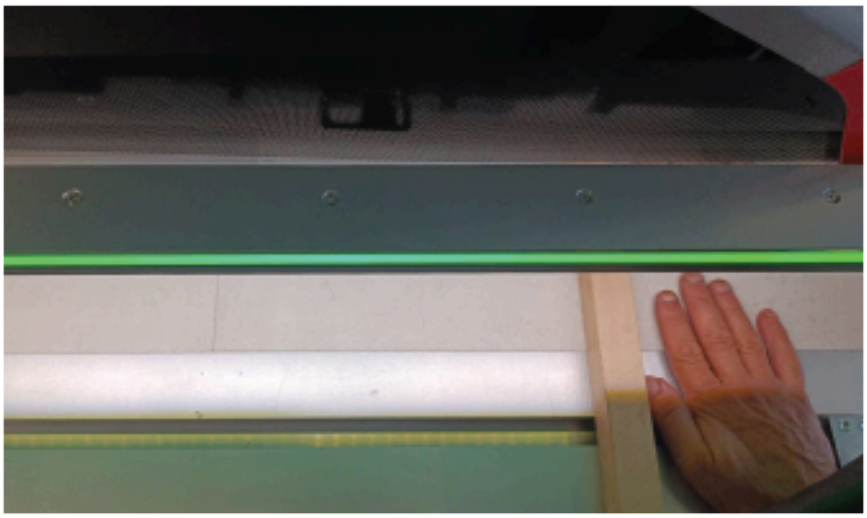
5. Lower the suspended protection resting it on the wood.

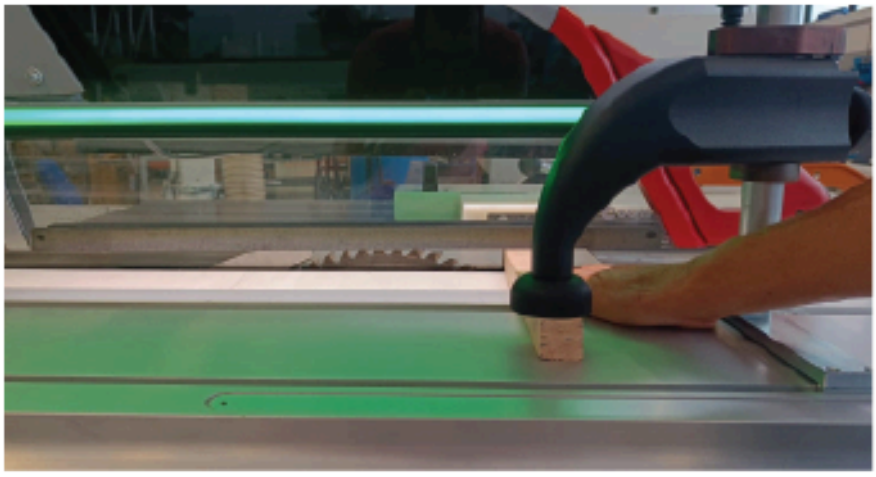


6. Turn on the blade.
7. Do not turn on the scorer as the Blade OFF system does not exclude the scorer.

8. Slowly insert a hand as shown so that the hand does not protrude from the wood.







9. Check that the blade has disappeared.
10. Record the verification of the operation of the system on a special register provided by the user.

5.5 Blade Off System

System activation

CAUTION

The BLADE OFF device is additional to the safety devices supplied with the machine and it cannot be considered as a replacement.

The BLADE off device simply reduces the residual risk of injury. Do not rely only on its function or refrain from using standard safety devices.

Therefore all the other devices must always be present, operational and adjusted to work in safety.

CAUTION

Always adjust the suspended guard based on the thickness being cut, before executing the indications below (See paragraph " Hanging guard adjusting").

To activate the blade off exclusion system, proceed as follows:

1. Press the button ("**10**") to load the pneumatic blade exclusion system.
2. The blade, if not already in position, rises above the table.
3. The system starts charging the air tank (button "**10**"flashes).
4. The indicator light becomes steady when the loading phase is completed.
5. The LED on the guard turns green.

✓ The exclusion device is active and the machine is ready to use.

NOTICE

The exclusion device is deactivated when the blade is stopped, even if the system is loaded.

CAUTION

With the blade rotating the system is active with the hand presence monitoring.

NOTE To open the compartment, blade and motor access doors, it is obligatory to discharge the exclusion pneumatic system otherwise the doors don't open.

System deactivation

To deactivate the blade off exclusion system, proceed as follows:

1. Press the pushbutton "**11**" to discharge the pneumatic blade exclusion system.
2. The blade remains in position.
3. The LED on the guard turns red.

✓ The exclusion device is disabled and the blade cannot be rotated.

System Bypass

To carry out operations not normally allowed by the exclusion system (e.g. the cutting of particularly damp wood or of panels coated with metallic material) it is possible to suspend the blade exclusion system.

CAUTION

Always adjust the suspended guard based on the thickness being cut, before executing the indications below (See paragraph " Hanging guard adjusting").

To suspend the blade off exclusion system, proceed as follows:

1. Press the bypass pushbutton "**9**".
2. The LED on the guard switches off to signal the suspension of the safety system.

NOTICE

The bypass has a time duration of 10 minutes. During the last 60 seconds, the light on the bypass button starts flashing to signal the expiration of the timer.

If you want to extend the time, press the bypass button again to reset the timer.

3. When the timer expires, the monitoring system returns to active.
4. The LED on the guard turns green.

✓ The exclusion device is active again.

NOTICE

To use for less than 10 minutes, press the load button "**10**" to exit the system bypass mode at any time.

WARNING

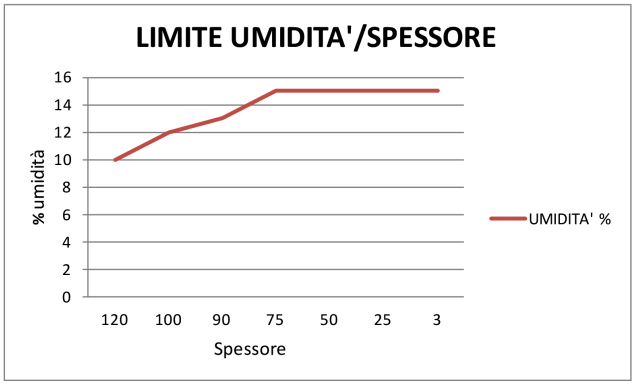
The additional device BLADE OFF must always be used for machining solid wood that is not humid and materials similar to wood.

The device must be excluded only when cutting humid woods, light alloys or plywood coated with light alloys.

To exclude the BLADE OFF system and for the upper wood humidity limits beyond which the system must be excluded, see the table and graphic below.

Any scraps between the guide and the blade can activate the BLADE OFF system.

Thickness	HUMIDITY %
120	10
100	12
90	13
75	15
50	15
25	15
3	15



5.5.1 Reactivating the system

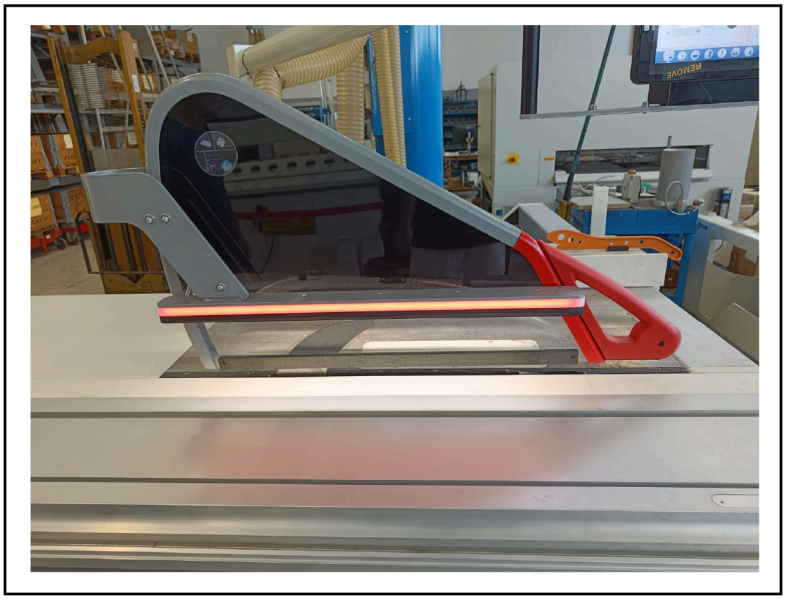
CAUTION

Make sure the guard is lowered on the table before performing the procedure.

To reactivate the Blade Off exclusion system, proceed as follows:

1. Make sure there is nothing above the working position of the blade.
2. Press the pneumatic system charge pushbutton "**10**".
3. Wait for the system to load until the green lights on the hood come on.

✓ The system is active again when the system has finished loading.



5.6 Machine start-up - shutdown

NOTE
Perform the checks set out in paragraph " general controls before machine starting".

NOTE
With the built in sliding table Start - Stop machine buttons

Before carrying out the Machine Start-Stop described later on, select the control board, which you want to use, in the indicated way:

a) Rotate the selector switch (9) to the symbol to operate via the mobile control panel (B).
b) Rotate the selector switch (8 or 9) to the symbol to operate via the control panel on the carriage (A);

Machine Start procedure

1. Press the load button of the pneumatic system and wait for the end of the load cycle indicated by the green light on the guard.
2. Press the push-button (4) to start the saw motor.
3. Press the push-button (5) to start the scoring motor.

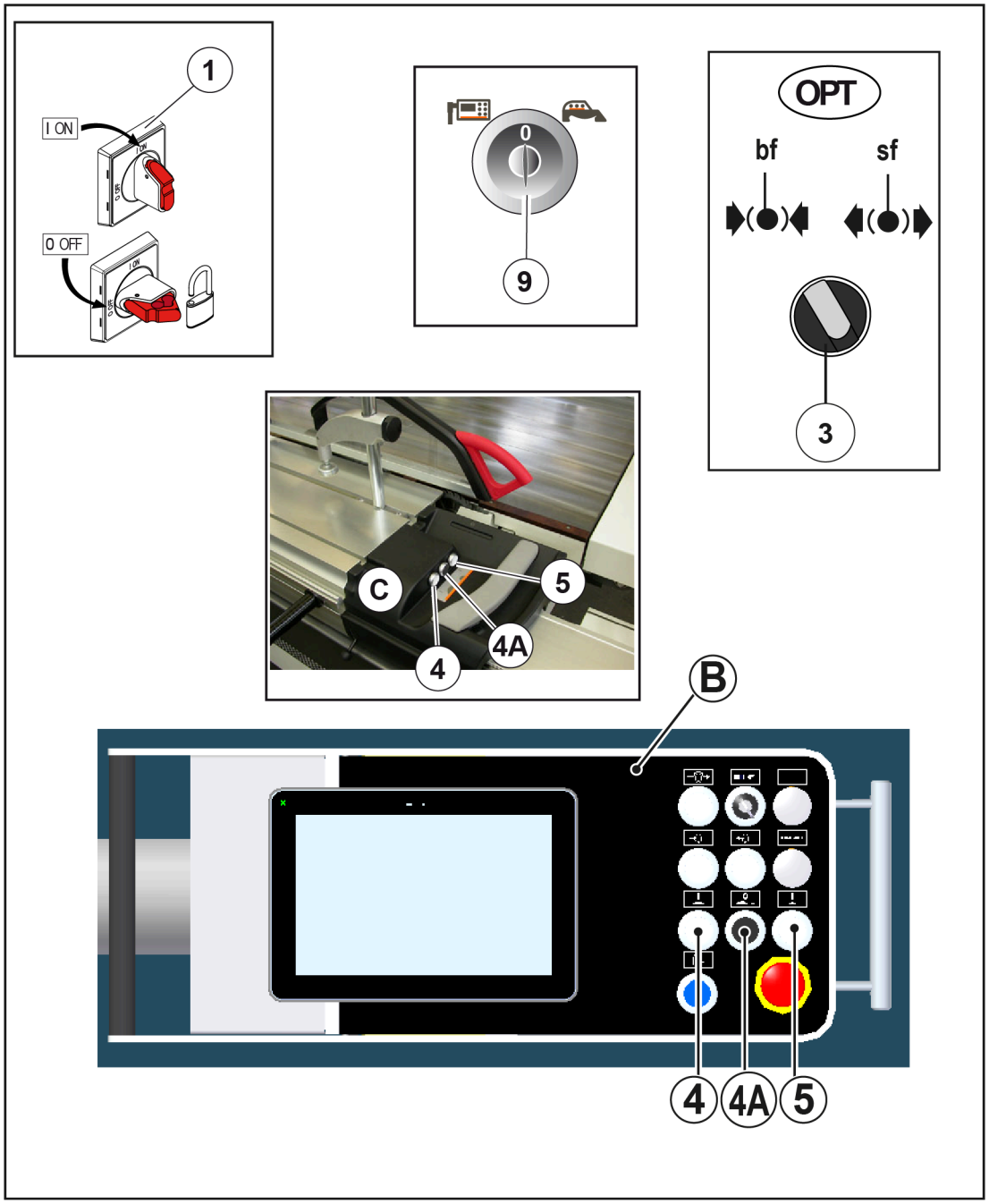
NOTE
The blade motor may only be started after having loaded the pneumatic system; indicator lamp on and green lighting.

Machine Stop procedure
From to mobile control panel and/or from controls on the sliding table .
To stop the saw blade and scorer, press button (4A).

PROHIBITED
It is forbidden to stop the motor by rotating the selector switch (3) to position (sf) (NO with OPT inverter).

PROHIBITED
Never attempt to stop the motor by rotating the selector switch (3) to position (sf).

NOTE
The stop buttons are active from all selector positions (8 or 9).


1
I ON
0 OFF
0
9
OPT
bf
sf
3
C
5
4A
4
B
4
4A
5

5.7 Kit "SAVENERGY" (optional)

A series of measures aimed at saving energy. The condition of energy saving can be activated:

- Automatically from control (after a preset time of inactivity).

NOTE

Read the electronic control manual supplied with the machine.

6 Using and adjusting on the blade unit

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6.1 Riving knife adjusting

NOTE

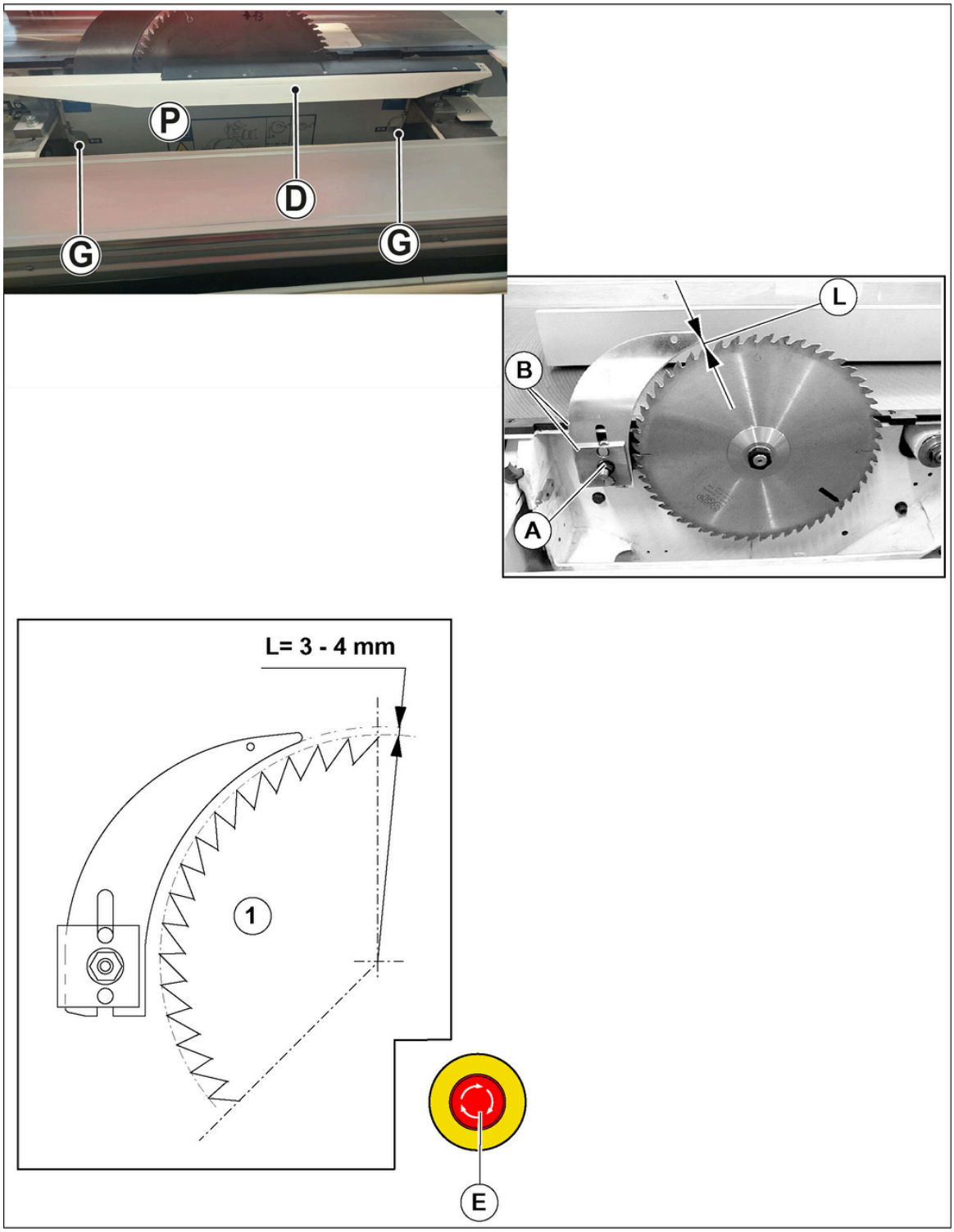
The machine is always equipped with 2 riving knives.

One for Ø 300 or Ø 350 mm saw blade and the other for Ø 400 mm saw blade.

DANGER

For all other machining operations, always fit the riving knife supplied with the machine, based on the diameter of the blade used.

1. Press the emergency button (E).
2. Wait for the blades to stop moving.
3. Discharge the pneumatic system with the button "**11**" on the control panel.
4. Rotate the sensor support downwards (D).
5. Raise the hooks (G) to release and open the blade guard (P).
6. Loosen the nut (A) using a fixed wrench.
7. Mount the riving knife by inserting it between the two plates (B).
8. Adjust the riving knife according to the saw blade diameter (gap L between saw blade and riving knife shall be 3 ÷ 4 mm).
9. Tighten the nut (A).
10. Reposition the sensor support.
11. Reposition the blade guard (P).
12. Release the emergency stop button (E).


P
D
G
G
L
B
A
L= 3 - 4 mm
1
E

6.2 Axis positioning

- Blade unit vertical movement
- Blade unit tilting
- Parallel fence motion

NOTE

As to the positioning see the enclosed manual for the electronic control instructions.

DANGER

During the positionings never place hands close to the tools, even if the blade is not turning.

6.2.1 Height adjusting of the saw unit

- Alzare la protezione sospesa (D).
- Regolare l'altezza della lama facendo riferimento allo spessore che si deve tagliare.

NOTE

The saw blade height is right when it exceeds the piece thickness 1-1.5 cm

- Con la maniglia (5) posizionare la protezione (1) fino a toccare il pezzo di legno da tagliare o a non più di 4/5 mm dal pezzo.

6.2.2 Saw blade tilting

SPECIALISED PERSONNEL

Replace rear side (F) with side (C).

1. Raise the guard (D) as far as it will go.
2. Hold button (A) pressed and with handle (B), withdraw the rear side by pushing it downwards.
3. Fit supplied side (C, supplied) so that button (A) locks it.
4. Adjust the blade tilting according to the angle you want to achieve.
5. With the handle (5) position the guard (1) until it touches the wooden piece being cut or not more than 4/5 mm from the piece.

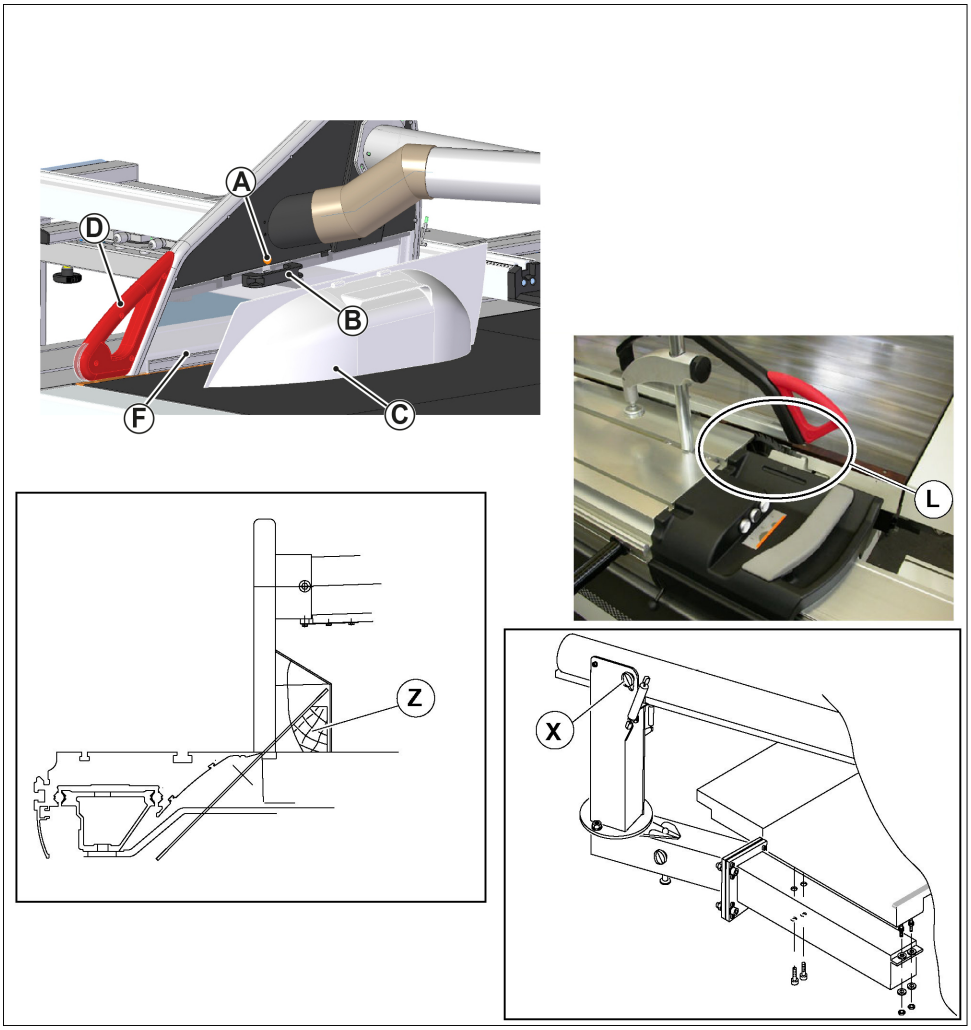
DANGER

With the "Smart Lifter" automatic suspended guard (special), check that no machining residue can remain inside the guards (Z).

In this case lift it and block it with the knob (X) in the maximum safety position.

DANGER

During the machine use with scorer, pay attention when the sliding table is totally on the left (L) as for working a part of the blades remains uncovered.



6.2.3 Parallel fence motion

DANGER

Make sure that there is no contact of the guards with the saw blade.

6.3 Description of hanging guard

This guard can be adjusted simply by raising or lowering the handle (5).

DANGER

The hanging guard has already been adjusted at factory: never tamper it.

Never remove the guard.

Before starting to work, ensure that the guard is resting against the workpiece and, at the end of the operations, lower it until it comes into contact with the table.

PRESENTATION

The hanging guard is made by the following parts:

1. Blade guard
2. Arm
3. Flexible tube
4. Side which may be replaced with wide side for oblique cuts
5. Height adjustment handle
6. Button for releasing the side
7. Fitting for suction pipe
8. Blocking pin
9. Infeed wheel
10. Clutch adjusting nut
11. Wide side panel for oblique cuts

DESCRIPTION

With the handle (5) lift and lower, parallel with the table, the guard (1) which will maintain the selected position.

The front and rear side are made of transparent polycarbonate (3 mm thickness) so that the saw blade is visible during the working.

For oblique cuts use the wide rear side panel (12) supplied with the machine.

To replace it press the release button (6), then withdraw the side downwards.

The guard is equipped with fitting (7, 100 mm diameter) for connection to centralized suction system.

DANGER

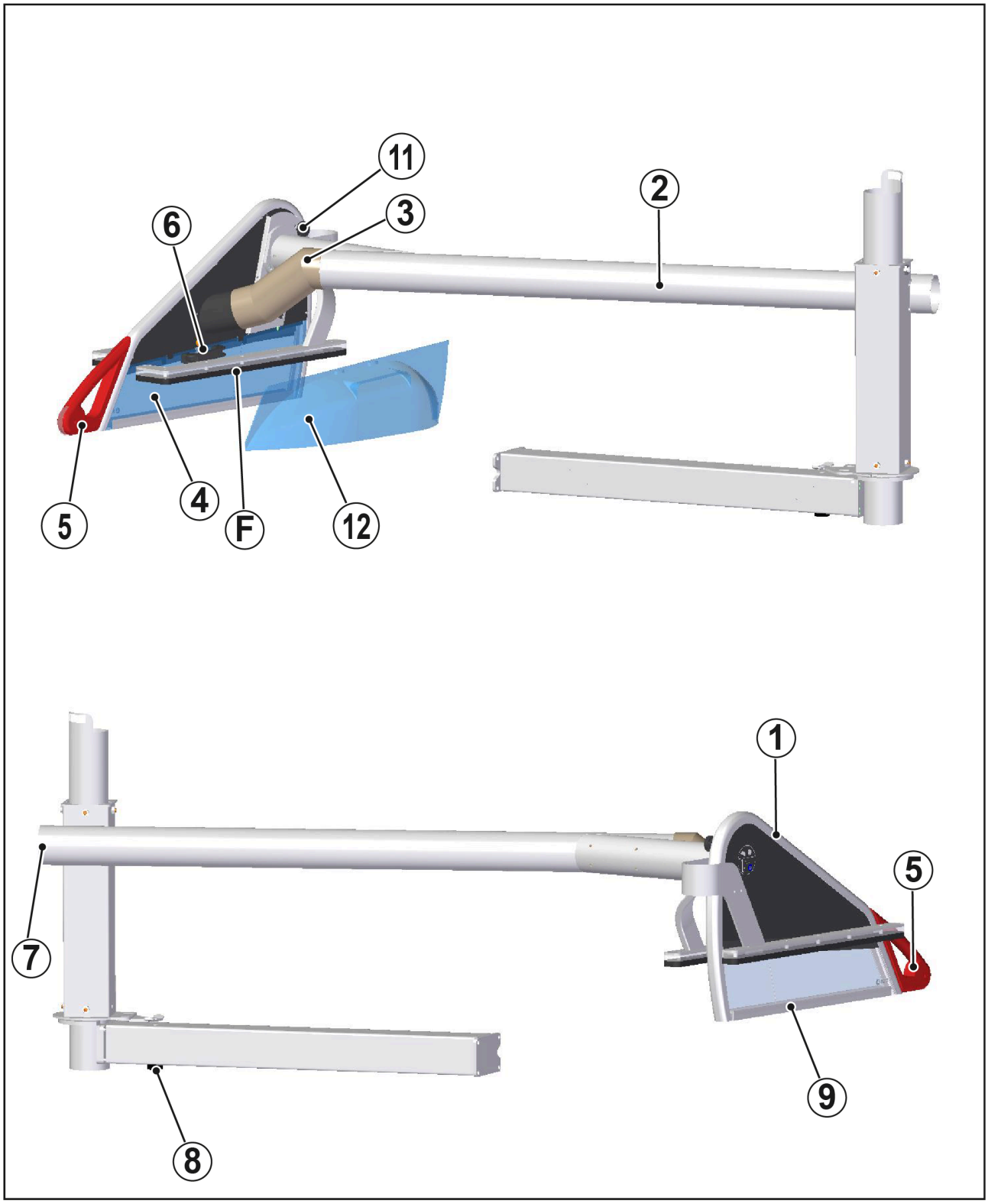
The Blade OFF (F) detection sensors, that are connected mechanically to the tubular arm (2), must never be disassembled for any reason.

In this case the blade is excluded automatically and renders the machine unusable.

DANGER

Under no circumstances should hands be placed between the rear transmitter (on the suspended guard) and the guard with 90° blade and narrow guard.





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6.4 Hanging guard adjusting

With the handle (5) position the guard (1) until it touches the wooden piece being cut or not more than 4/5 mm from the piece.

For oblique cuts use the wide rear side panel (12) supplied with the machine.

To replace it press the release button (6), then withdraw the side downwards.

NOTE

The clutch has been adjusted during the assembly of the guard unit.

If the guard does not remain in position, use the knob (11) to adjust the clutch.

NOTE

We recommend to keep the guard always clean and to periodically check its conditions.

Keep the guard resting on the table, when the machine is off.

DANGER

Never remove the guard.

DANGER

Per nessun motivo devono essere messe le mani tra il trasmettitore posteriore (sulla protezione sospesa) e la protezione con lama a 90° e protezione stretta.



6.5 Hanging guard switching off

DANGER

The safety guard may only be excluded, as indicated by the arrow (16) when carrying out maintenance work.

DANGER

At the end of maintenance operations immediately return the guard to the normal work position.

To exclude the guard, keep the pin (8) unlocked and rotate the guard in the direction of arrow (16).

To exclude the guard:

1. Press emergency button.
2. Keep the pin (8) unhooked.
3. Rotate the guard in the direction of the arrow (16).
4. When the guard is set to the work position again, the pin (8) ensures the correct positioning in relation to the blades.

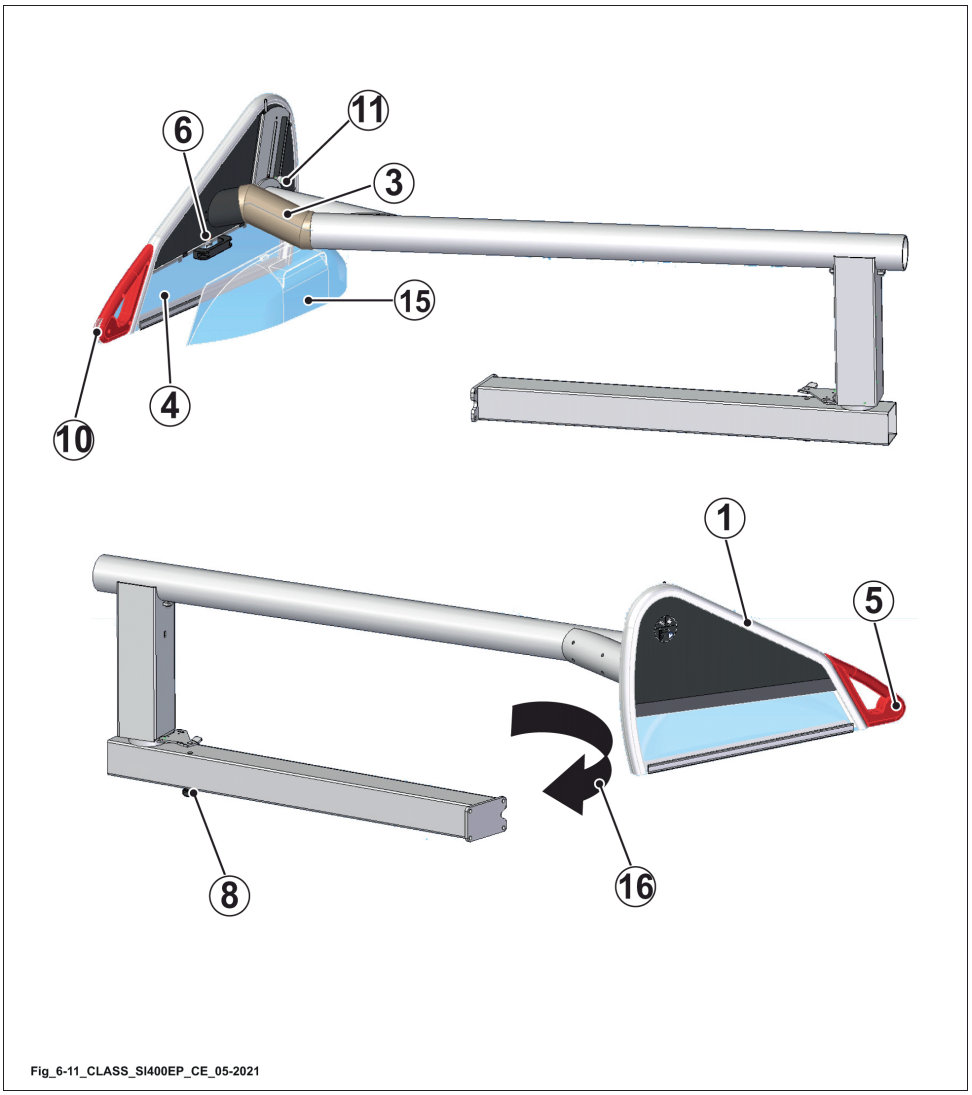


Fig_6-11_CLASS_SI400EP_CE_05-2021

6.6 Speed change with inverter

The last speed set for the saw shaft for that type of blade is shown on the display (A).

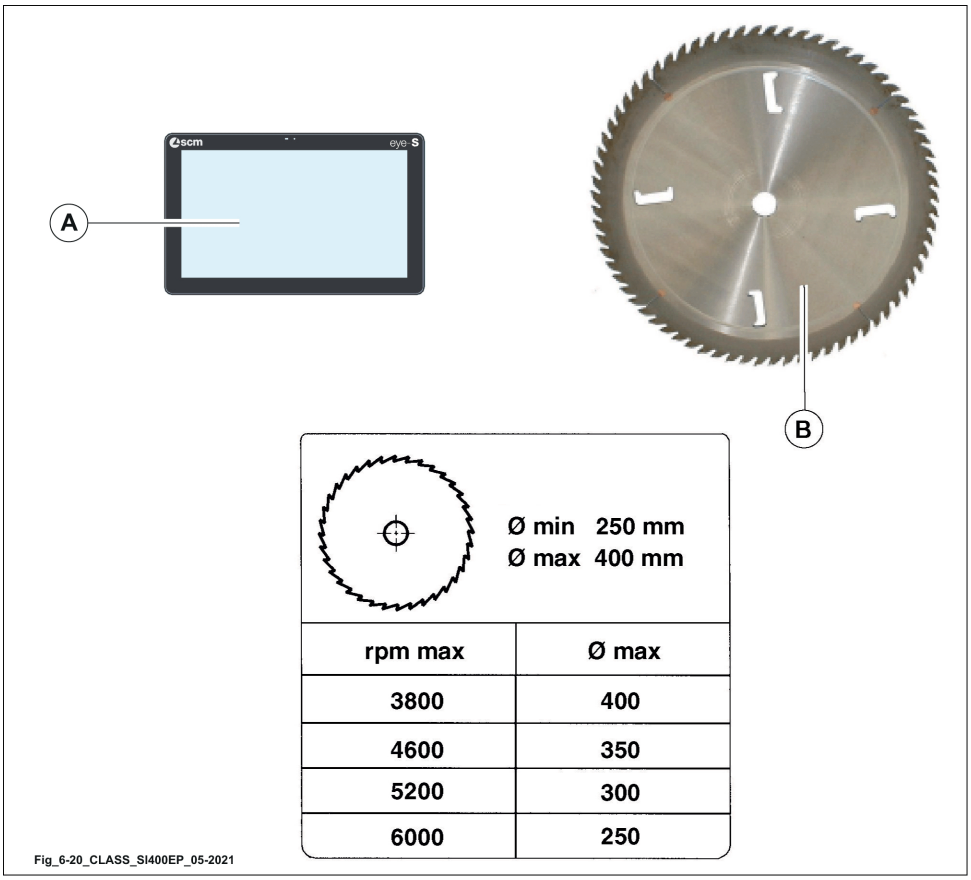
To set the speed read control handbook supplied with the machine.

DANGER

Before starting the working make sure that the selecteed speed does not exceed the max. speed indicated on the saw blade.

DANGER

With the optional INVERTER, do not use blades with slots (B).



rpm max	Ø max
3800	400
4600	350
5200	300
6000	250

Fig_6-20_CLASS_SI400EP_05-2021

7 Using and adjusting the support frame and parallel guide

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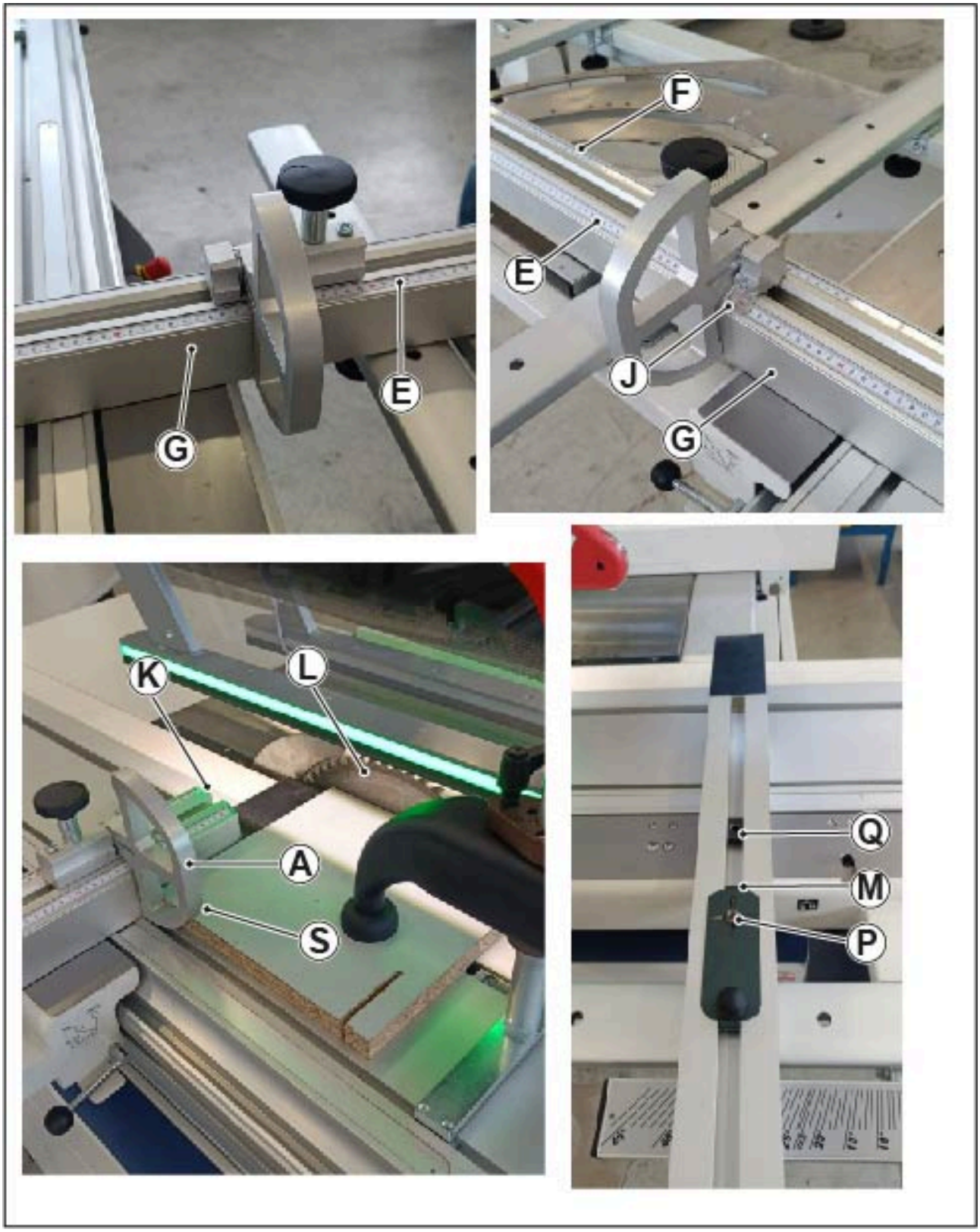
7.1 Setting to zero the rest rule

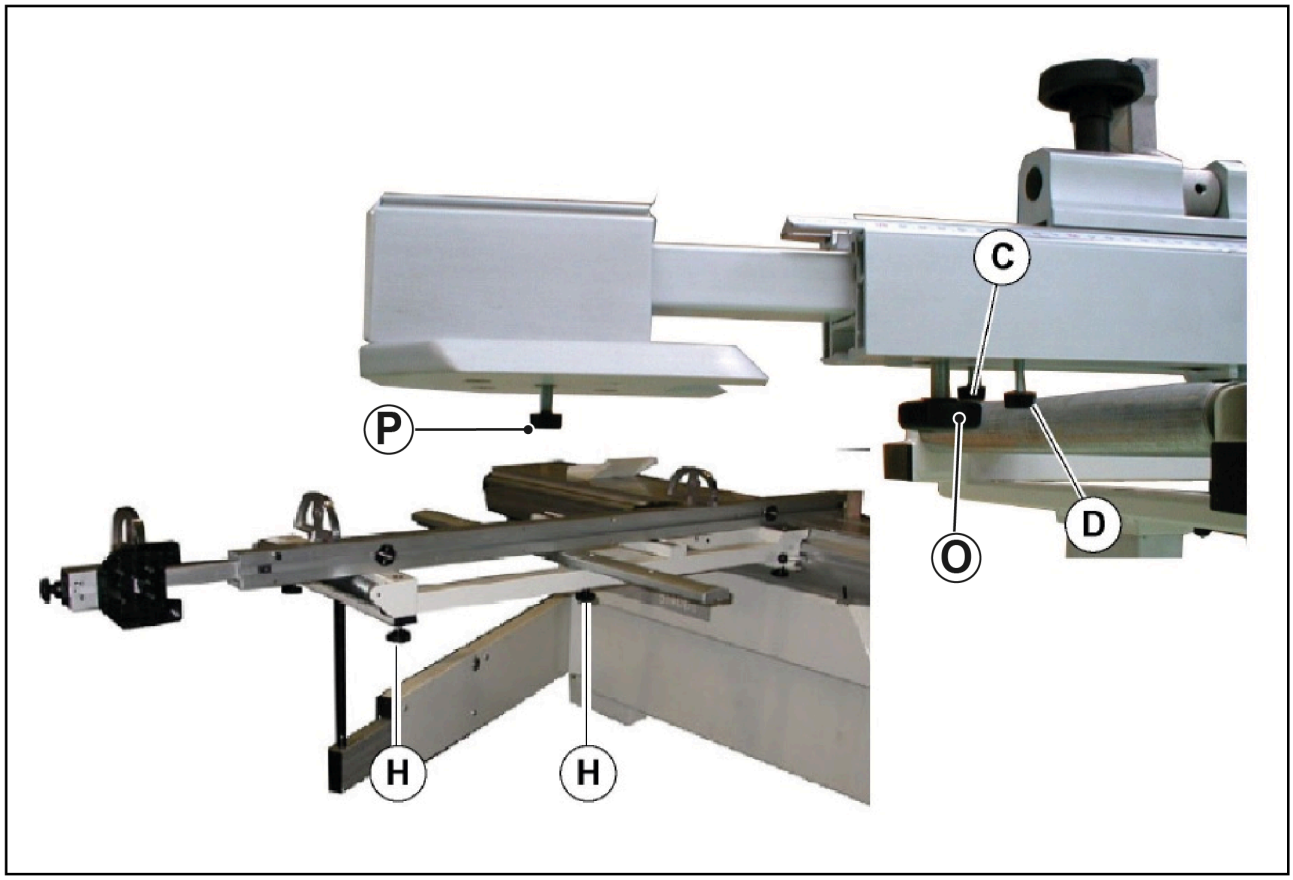
Once the splinter guard has been trimmed (K), proceed as follows:

1. With motors off lift the saw guard (saw blade at 90°).
2. Lock a stop in position (e.g. A) so as to read a value (e.g.: 150 mm) on the ruler (F) in correspondence with the inside edge (S) of the stop (the one facing the blades).
3. Use a ruler to measure the actual distance between the blade (L) and the stop (A).
4. Loosen the knob (D) and move the millimetre rule (F) so as to read, on the stop lens (J), the same value as previously measured with the meter.
5. At this point, turn the stop (A) on the opposite side of the rule; loosen the knob (C) and slide the millimetre rule (E) to align it with the stop (S).

7.1.1 Checking the setting to zero

1. Lower the guard.
2. Trim a panel on 2 sides in order that they are perpendicular each to other.
3. Lock stop (A) on the rule at a given measure so that the panel may be cut.
4. Place the panel so that one of the two sides that was trimmer earlier is positioned on the rule (G) while the other rests against the stop (A).
5. After cutting, measure the cutting width.
6. When corrections are required, you have to set the millimeter rules again as already explained.


G
E
F
E
J
G
K
L
A
S
Q
M
P


C
P
D
O
H
H

7.1.2 Setting to zero the central millimeter rule

When cutting panels greater than 2150 mm in width, the telescopic part (N) must be used by loosening the knob (O).

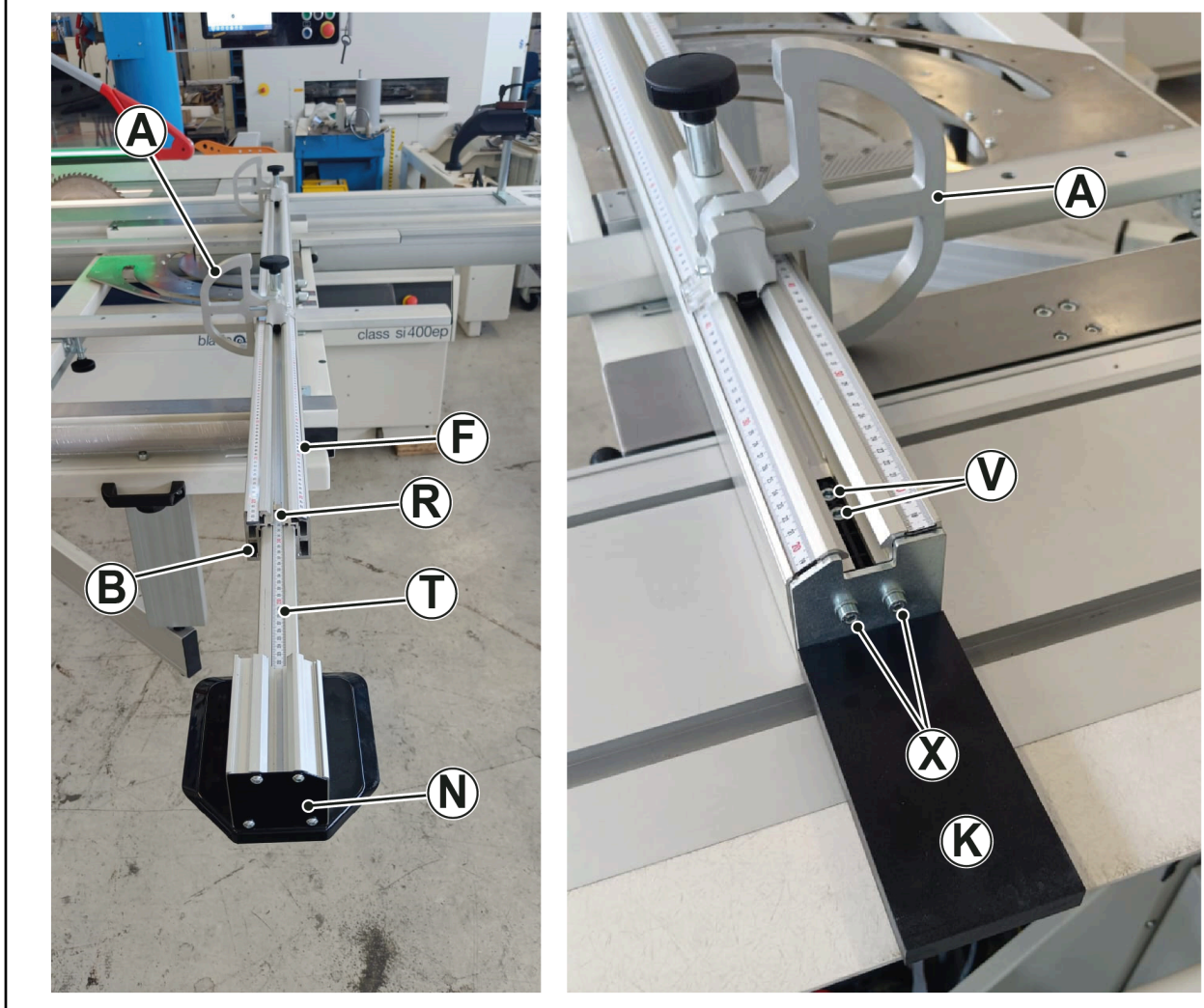
1. Move the telescopic part (N) into contact with the fixed part (B).
2. Move the stop (S) on the part (N).
3. Read the measurement indicated by the inner edge of the stop (S) on the previously calibrated lateral graduated rule (F).
4. Release the knob (P), slide the central graduated rule (T) so that the index (R) indicated the same value as measured at point 3);
5. Lock the knob (P).

From now on, each time the telescopic part (N) is used to machine large panels, read the height indication directly on the index (R).

The rest rule is set to zero.

7.1.3 Splinter guard adjustment

To align the splinter guard with the reference side for the panel to be cut, adjust the screws (X).
It is possible to the splinter guard (K) more than once without having to move the entire supporting rule.
Loosen the screws (V), slide the splinter guard (K) towards the blade, tighten the screws and trim the guard again.
If necessary replace it see Chapter "Maintenance".



7.2 Adjusting the supporting rotating frame “Full Support”

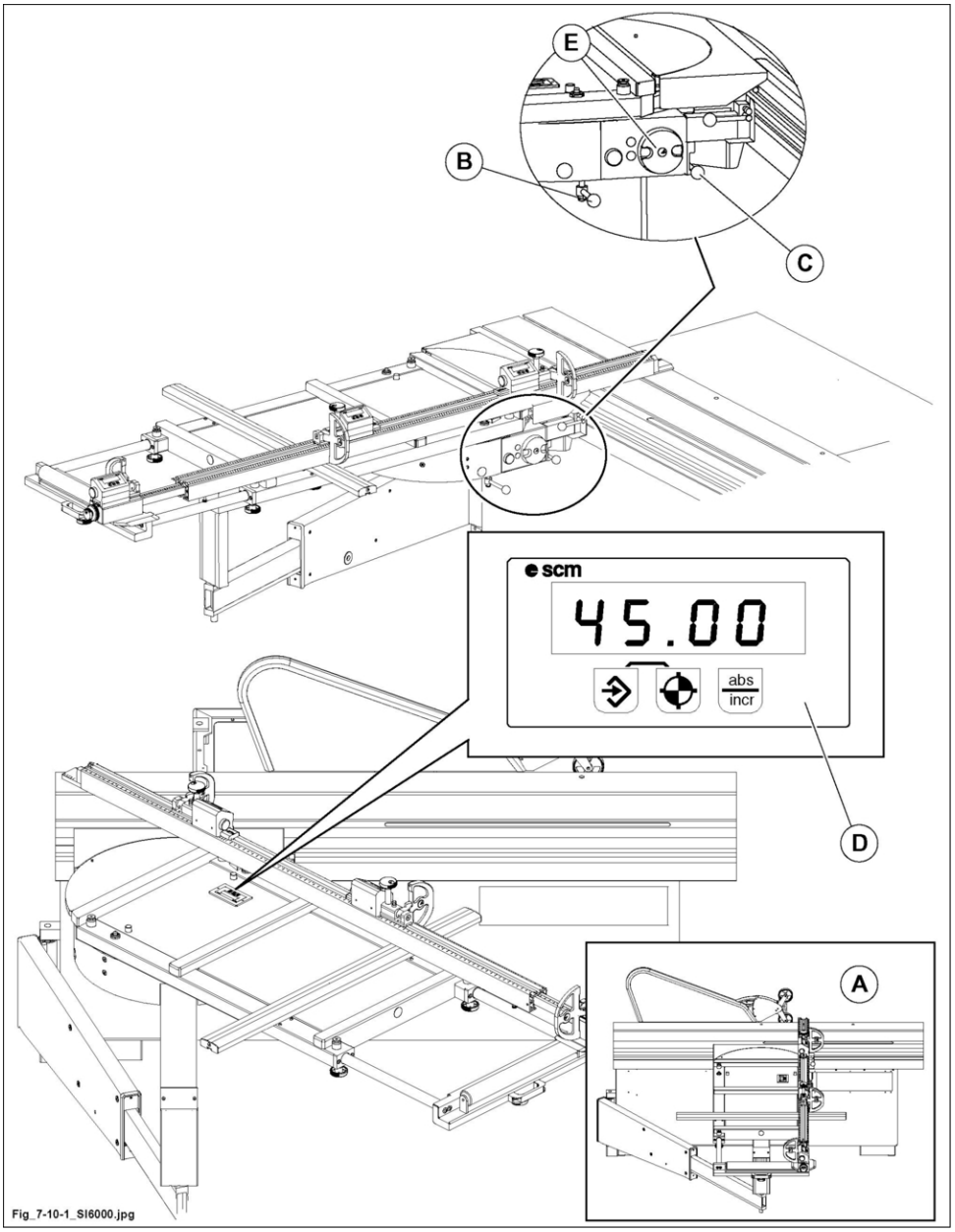
OPT

7.2.1 For positive oblique cuts

1. Release the lever (B) (turning it to the left).
2. Turn the frame to obtain an angle almost equal to the desired one.
3. Press and simultaneously rotate the handwheel (E), to micrometrically reach the desired angle, reading it on the display (D).
4. For 45° cutting angles turn the frame to the end of stroke.
5. To overcome the 45° stop, keep the lever (C) raised.
6. Under this condition the rotation to the end of stroke corresponds to 50°.
7. To return the frame to 0°, rotate it to the limit switch (A).
8. After positioning the frame lock lever (B).

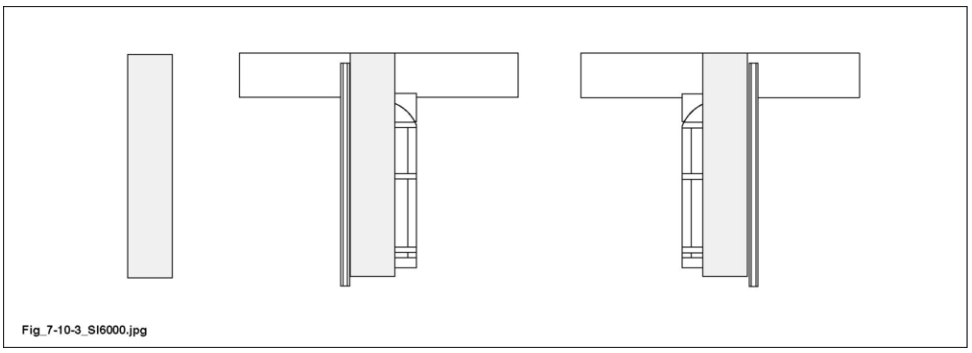
7.2.2 For negative oblique cuts

1. Release the lever (B) (turning it to the left);
2. Exceed 0° keeping the lever (C) raised;
3. Turn the frame to obtain an angle almost equal to the desired one;
4. Press and simultaneously rotate the handwheel (E), to micrometrically reach the desired angle, reading it on the display (D).
5. To set the frame to 0° again, turn it to the positive field, then set it against 0° stop.



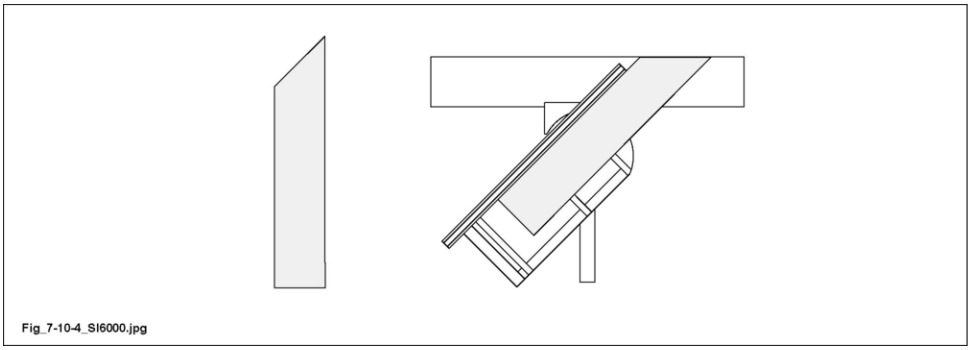
7.2.3 Example for positioning the rule for cuts perpendicular to the rule

Cuts perpendicular to the rule: set the rule on the right or on the left side according to the working requirements.



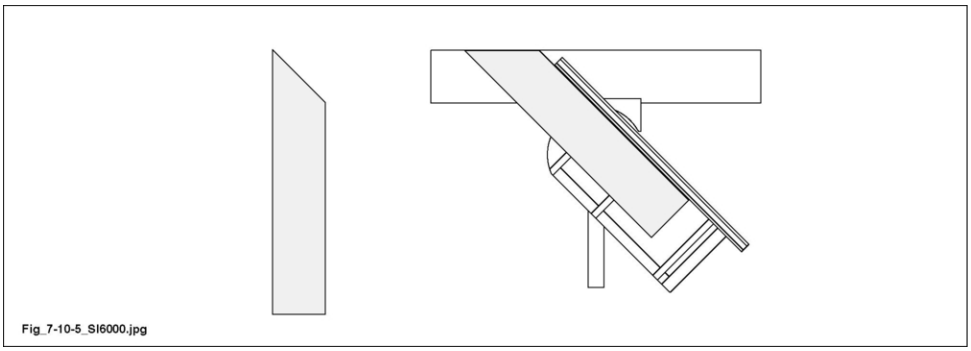
7.2.4 Example for positioning the rule for negative oblique cuts

Negative oblique cuts: we recommend to set the rule on the left side of the frame so that the rule is closer to the saw blade



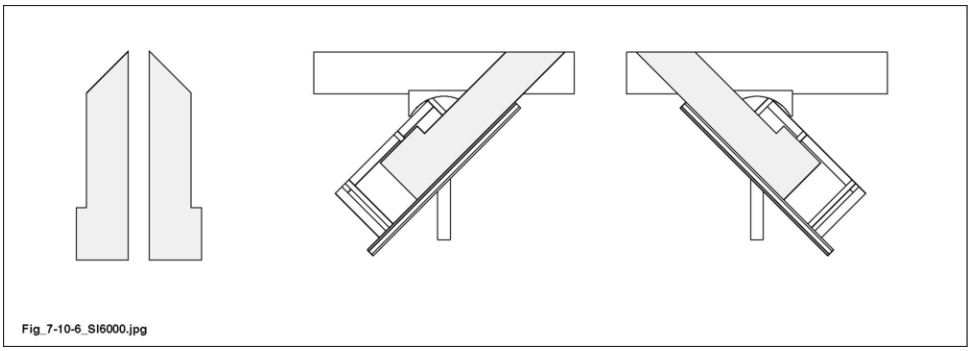
7.2.5 Example for positioning the rule for positive oblique cuts

Positive oblique cuts: we recommend to set the rule on the right side of the frame so that the rule is closer to the saw blade.



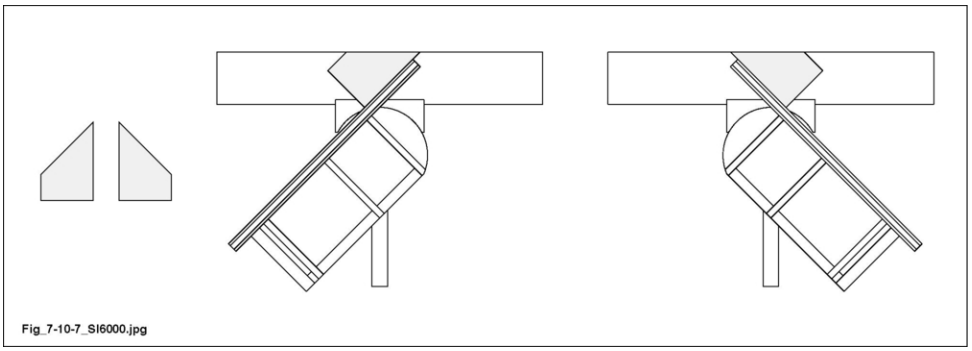
7.2.6 Example for positioning the rule for oblique cuts on pieces sufficiently long but with a bond on the reference side

Oblique cuts on pieces sufficiently long but with a bond on the reference side: set the rule as indicated in figure.



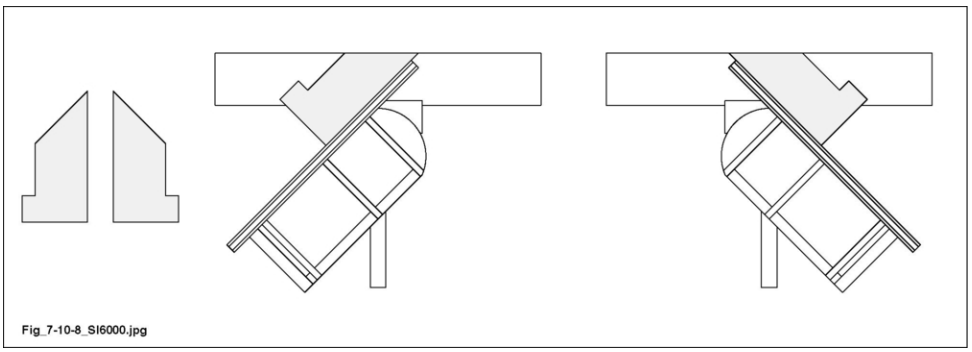
7.2.7 Example for positioning the rule for oblique cuts on short pieces

Oblique cuts on short pieces: set the rule as indicated in figure.



7.2.8 Example for positioning the rule for oblique cuts on short pieces but with a bond on the reference side

Oblique cuts on short pieces but with a bond on the reference side: we recommend to set the rule as indicated in figure.



7.3 Use of the 3-stop rule with electronic reader for square cuts OPT

Once the splinter guard (K) has been trimmed, it is possible to zero the rule

1. With the blades stopped (motors off), move the first stop (1) (the stop closest to the blade) to the limit of the rule, until it is in contact with the reference stop, then lock it;
2. Press keys (C and D) at the same time; the measurement preset at the factory during machine testing appears on the display;
3. Loosen the knob (F) of the extension (H) and move it to the end stop, towards the blade;
4. On the display (V) press the keys (C and D) at the simultaneously; the quota set-up during factory testing appears on the display;
5. Unlock the stop unit (2) by releasing the knob (P), and move it back so it rests against the stop (3) with the extension (H) at its end stop, towards the blade.
   Repeat the operation of point 2);
6. On the display (V) press the keys (C and D) at the simultaneously; the quota set-up during factory testing appears on the display;
7. To adjust the stop units (1 and 2), loosen the knob (P), move as close as possible to the desired quota, using the wheel (B), to fine tune the stop to the desired quota and tighten the knob (P);
8. To adjust the stop on the extension (H), release the knob (F), position is as close as possible to the desired quota and tighten the knob (F); use the ring nut (L) to “fine tune” the stop to the desired quota;

For incremental movements:

- Press key (E), 0.0 appears on the display.
- Move the stop unit by the desired measurement and read the movement on the display.

To quit the "incremental" function press key (E).

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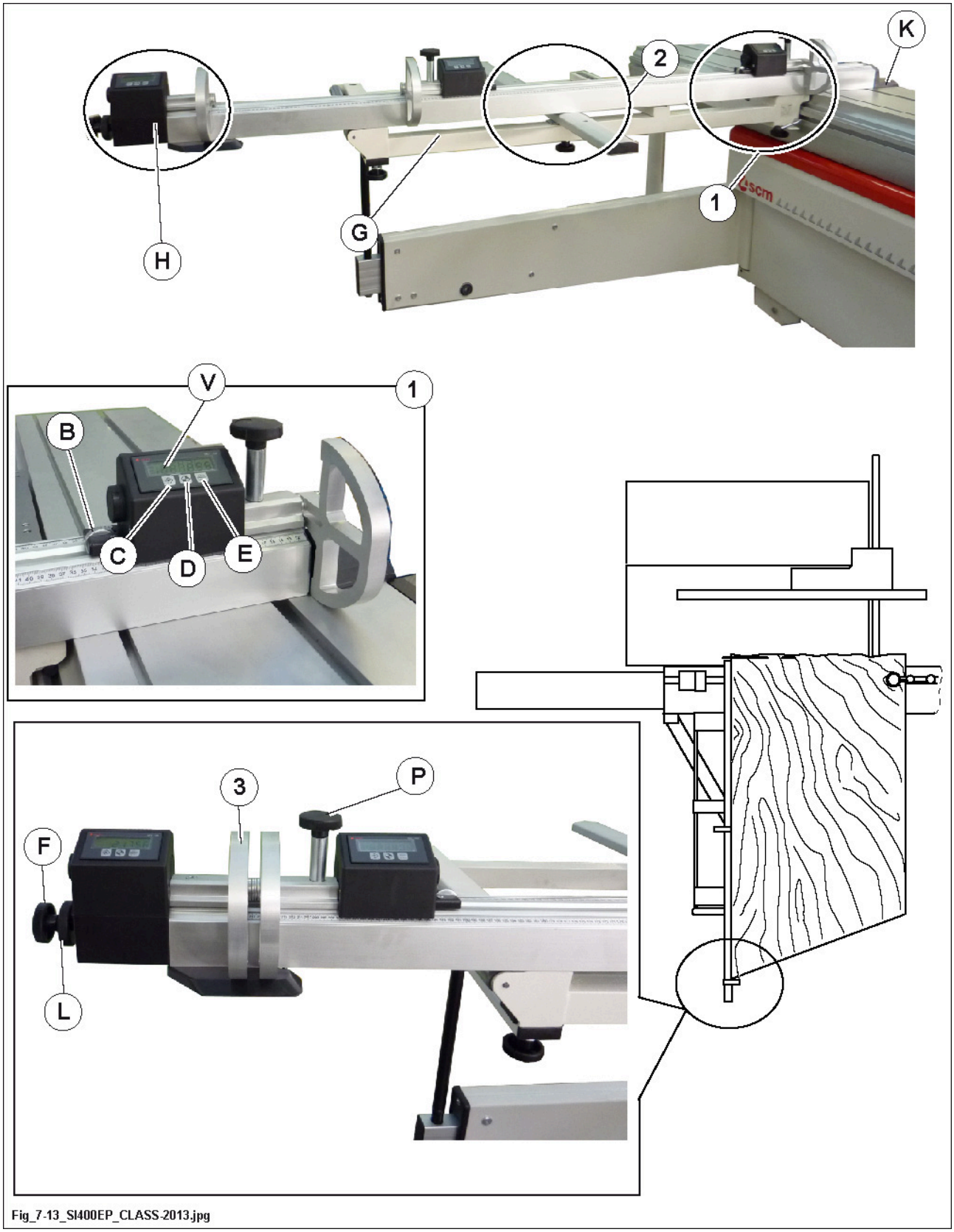


Fig_7-13_SI400EP_CLASS-2013.jpg

7.4 Power-driven fence for parallel cuts with electronic reader

7.4.1 Resetting Operation

NOTE
Read the electronic control manual supplied with the machine.

7.4.2 Working

The power fence is controlled by an electronic control and driven by a motor.
Two limit switches driven by stops interrupt the run of the power fence if the electric control does not operate.
The 2 mechanic stops on the frame of the fence serve as further safety devices.

NOTE
As to the fence use see the manual of the electronic control enclosed to the machine.

There is an area of possible contact between fence and saw blade or between fence and hanging guard.
To position the fence in the area above indicated, you have to hold START button pressed.
As soon as you release this button, the fence immediately stops.

DANGER
During the motion of the fence to the saw blade in the area of possible contact pay attention in order to avoid collisions with the slanting saw blade or with the hanging guard.

The rule (R) can be moved longitudinally after releasing the lever (P) and can assume 2 different positions:

a) Vertical position with the side (W) facing the workpiece.
b) Horizontal position rotated 90° (O) for thin workpieces and inclined cuts.
c) At the end of each positioning, tighten the lever (P).

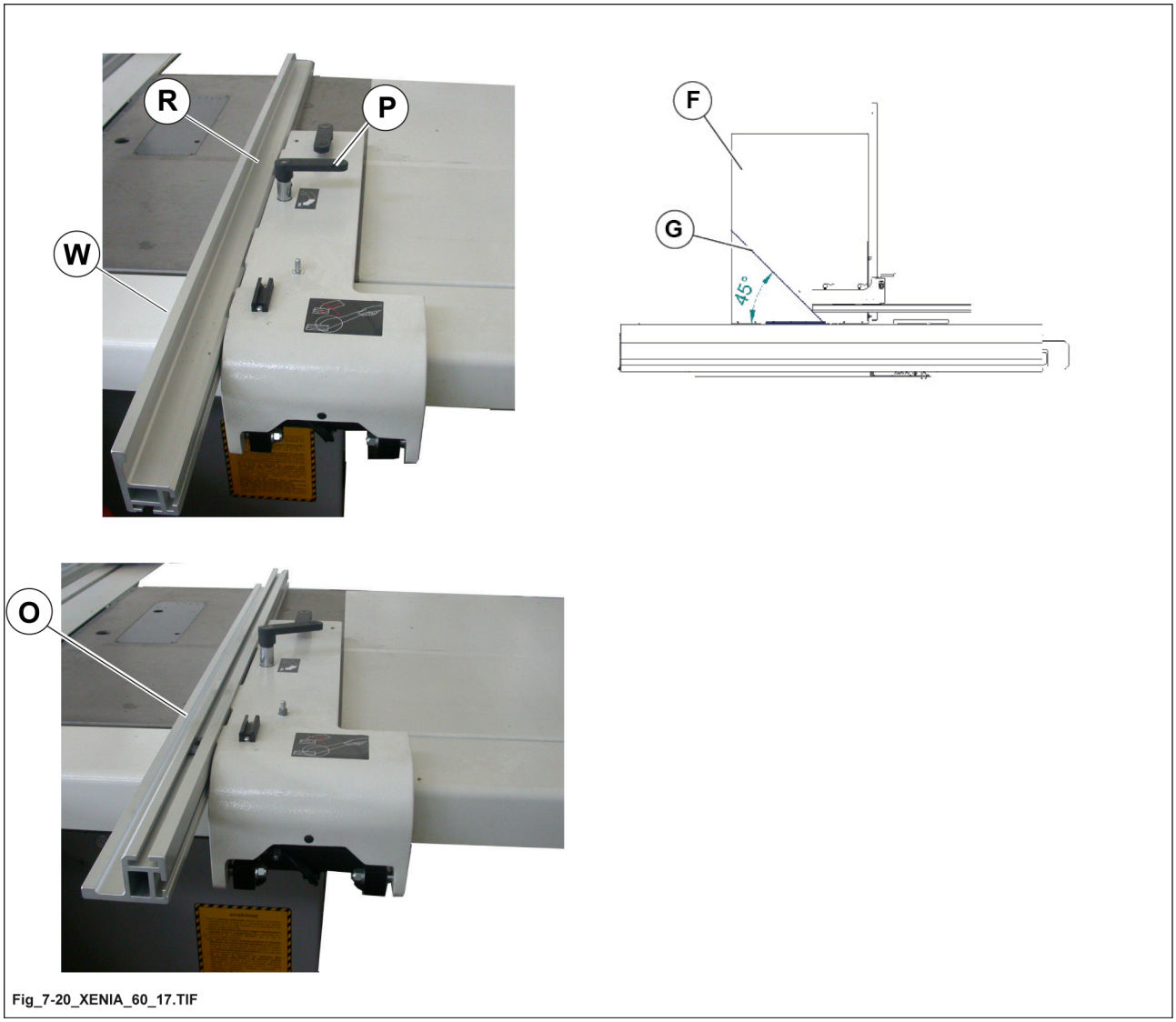


Fig_7-20_XENIA_60_17.TIF

DANGER

In this position, it is possible to move the work-piece forward using the pusher (H) supplied with the machine.

NOTE

In any position of the rule, the electronic control reads the real dimension of the piece.

DANGER

When the rule is in this position, it may touch the saw blade.

Move the parallel rule back so that the workpiece does not lock between rule and riving knife.

DANGER

The front extremity of the rule must never protrude beyond the end of the plane on the side (F), but must reach an imaginary line (G) that starts from the first tooth of the blade and slides forward by 45°. This is to prevent the saw teeth from gripping the work-piece and projecting it towards the operator.

NOTE

In case of cutting width exceeding the max. opening of the parallel fence, move the fence totally to the right and switch it off from he worktable by turning it over carefully then move it against the stop.

DANGER

When for the execution of a peculiar working, the operator is obliged to put his hands near the tools, for safety reasons a proper pusher shall be used to move the work piece forwards, to push it against the fence or to remove it after the cutting (see chapter " Wood pusher").

USING THE PUSHERS

DANGER

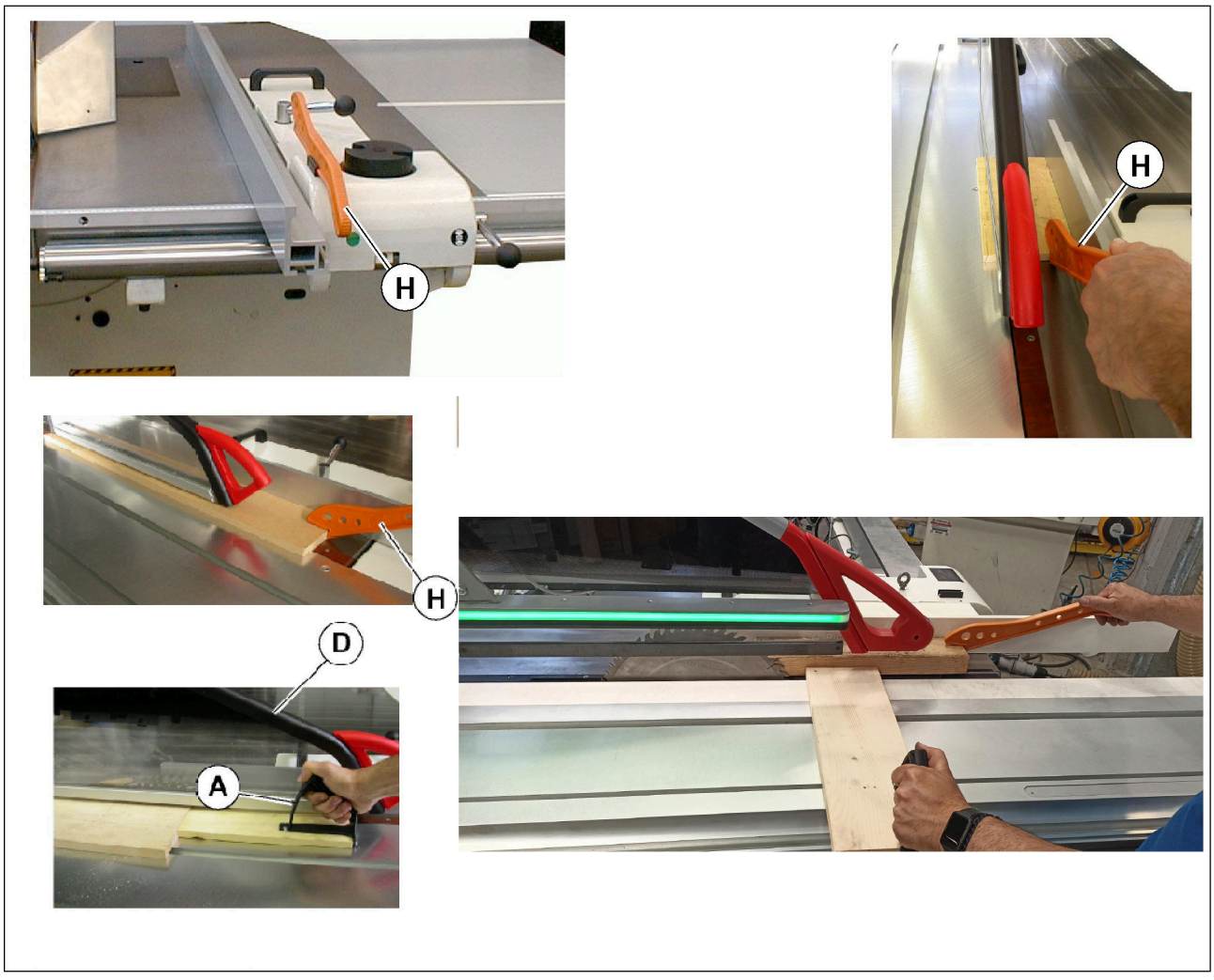
Before commencing machining, ensure that the guard (D) is resting on the workpiece or no more than 4/5 mm from the workpiece, and at the end of the operation lower it until it comes into contact with the table.

To avoid getting too close to the blades with your hands, use the pusher (H) supplied with the machine.

After using this device return to its seating.

When cutting small pieces and you need to push against the guide, use the pushers supplied with the machine, one to push the wood against the blade and the other to keep the wood pressed against the parallel guide.

The handle (A) is supplied and can be applied to pushers of different sizes (see chapter" Wood pusher").



NOTE

When machining small workpieces, it may be necessary to use both wood pusher, one to push the wood against the blade and the other to hold the wood against the parallel guide.

7.5 Use of sliding table and frame for large panels

7.5.1 Aluminium sliding table

The aluminium sliding table moves on high precision slideways made of hardened steel in order to ensure the uniform and smooth motion with small friction, necessary for obtaining precise cuts.
Use the lever (A) to lock and release the sliding carriage:

1. Lever raised - carriage locked;
2. Lever lowered - carriage released;

The carriage has 3 locking positions, indicated by the references (1 and 2), where an internal cam engages a slot (B) on the rule.

The sliding table may be locked in 3 points:

- Carriage fully open on the right (the left index is aligned with the symbol);
- Carriage in the central position (the central index is aligned with the symbol);
- Carriage in position (P) for working with the parallel guide (the right index is aligned with the symbol);

The blade start/(OPT)stop commands (C) are located on the front of the carriage.

Fasten the following devices:

- Insert the column rod (D) in the groove on the carriage, mount the arm (E) on the column and secure it in position by locking the knob (F);
- Mount the tile stop (G) by inserting the rod in the groove on the carriage and locking the handle (H);

DANGER

Do not use this device when the blade is tilted with negative values.

- Mount the handle (L, included in the accessory kit) in the desired position on the carriage and screw it into place.

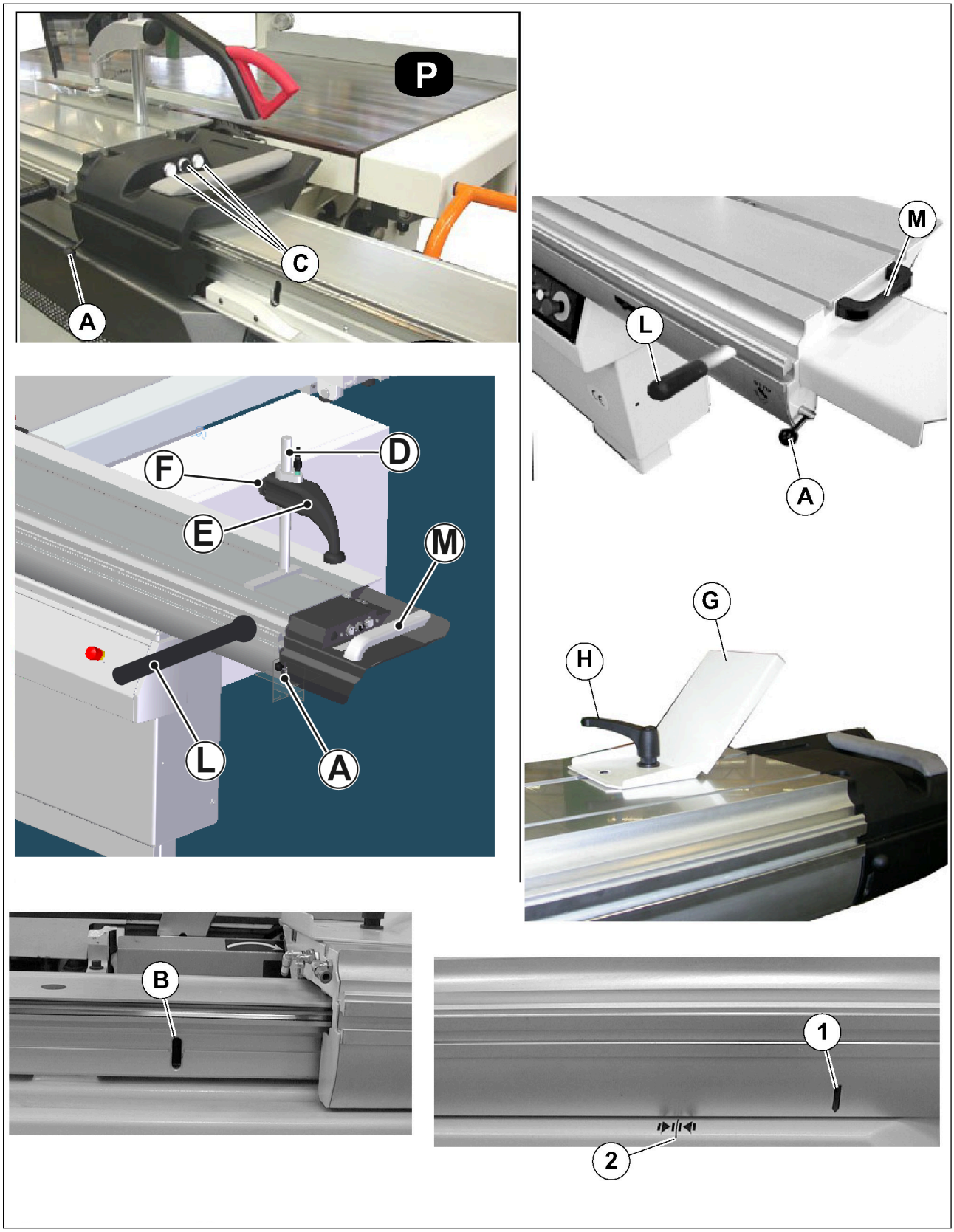
DANGER

To move the sliding table ALWAYS use handle:

- **L with small and medium sized work-pieces;**
- **M with large work-pieces;**

DANGER

Move the carriage by the handles only (L or M) so as to avoid possible crushing hands against fixed parts.



7.5.2 Longitudinal positioning of the frame

1. Bock the sliding table using the lever (B).
2. Release the frame by lifting the lever (A) into position .
3. Move the frame.
4. Lower the lever (A) into position to lock the frame.

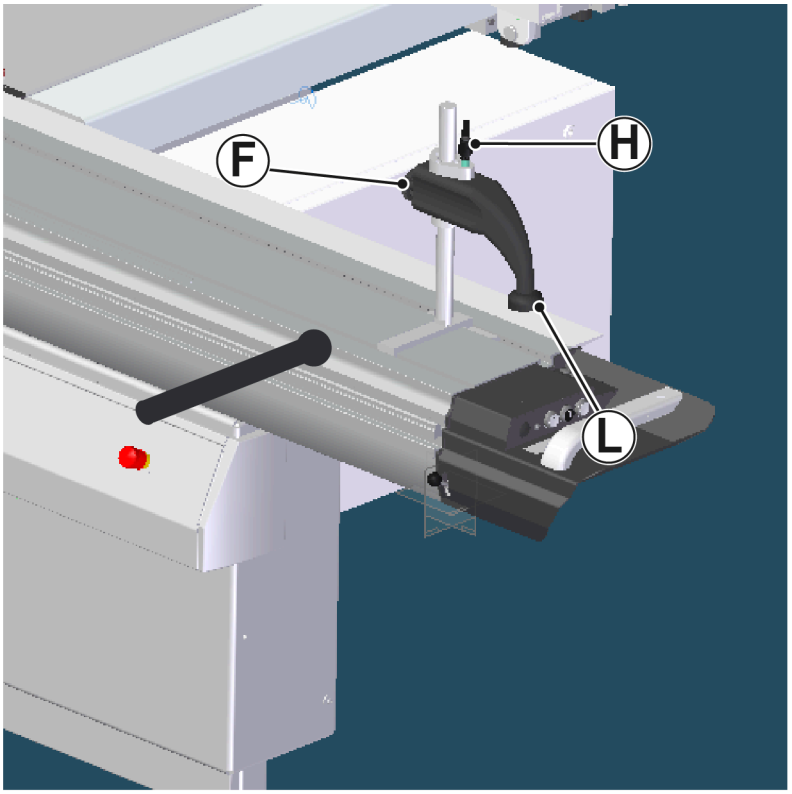
7.5.3 Use of the presser unit

- Use the knob (f) to adjust the height of the foot.

DANGER

To ensure a strong panel clamping, the foot shall be at a 2 mm height from the panel surface before lowering the lever.

- Use the lever (H) to lower the foot (L) and secure the work-piece in position.



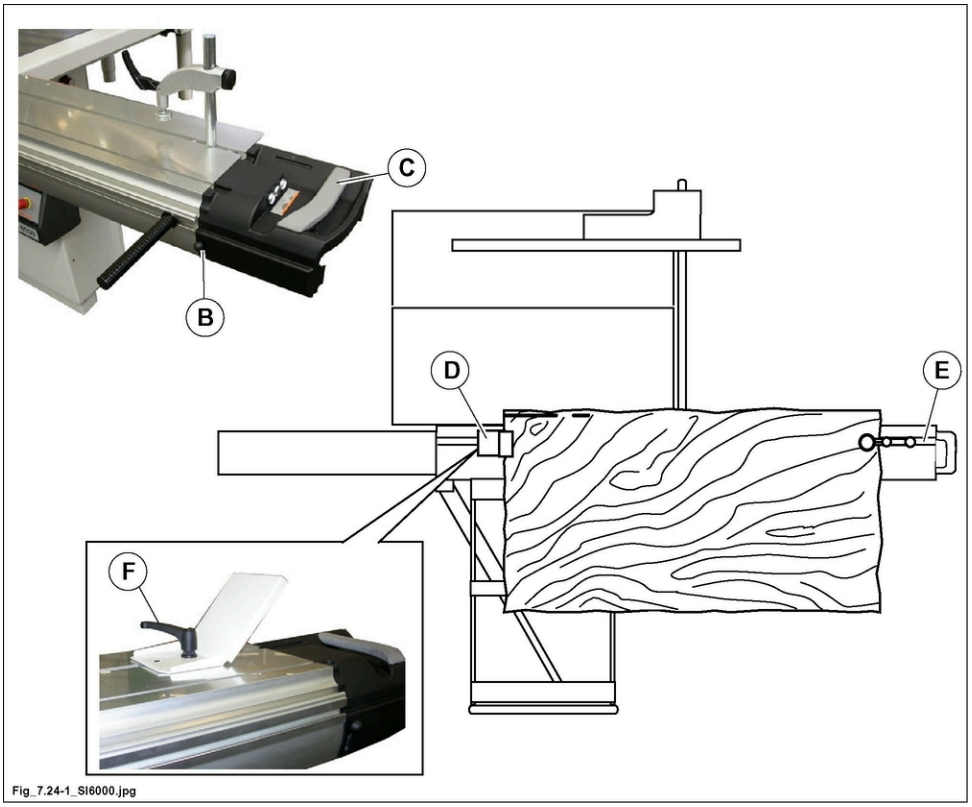
7.6 Example: longitudinal cut

7.6.1 First cut

1. Open the carriage completely as in and secure it in position using the lever (B).
2. Place the piece to be trimmed on the carriage and on the frame as shown in the figure.
3. Release the handle (F) and slide the tile stop (D) into the groove so that it comes to rest against the work-piece.
4. Lock the handle (F).
5. Position the presser unit (E) close to the work-piece.
6. Release the carriage using the lever (B).

DANGER

Move the work-piece against the blade (already set at the desired height) by pushing the carriage using the handle (C).



7.6.2 Second cut (squaring)

- Rotate the panel by 90°. Place the trimmed side (A) against the aluminium rule, secure it with the part clamp (G) and execute the new cut (B).

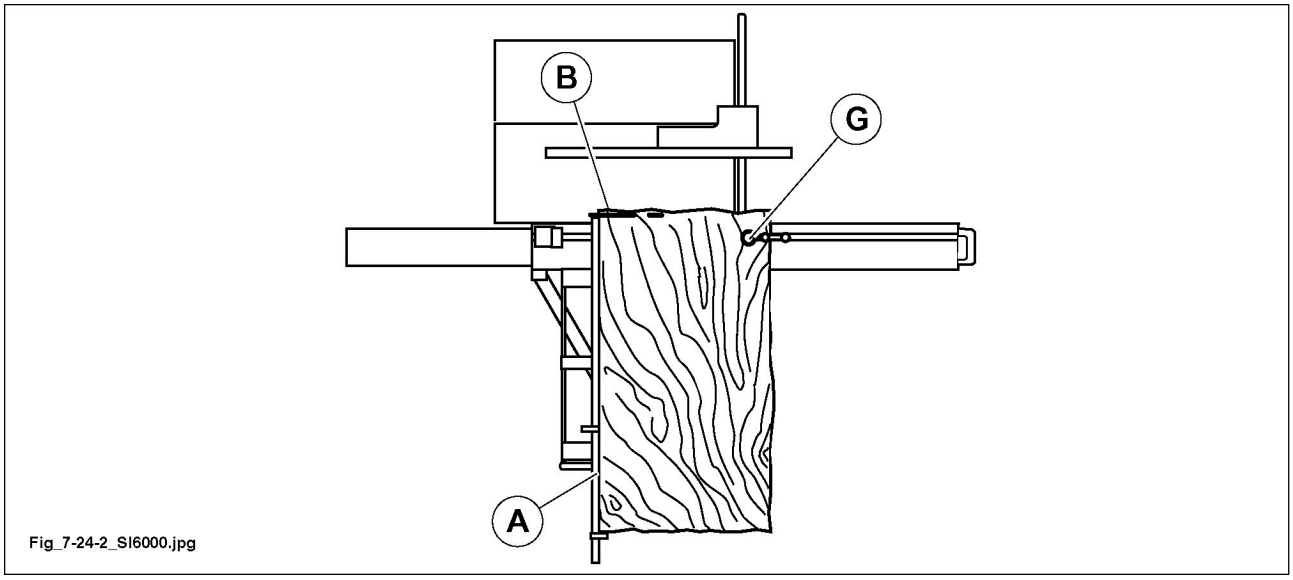


Fig_7-24-2_SI6000.jpg

7.6.3 Third cut

- Rotate the panel by 90° again. Place the newly cut side (B) against the aluminium rule, the trimmed side (A) against the stop (T) on the rule (positioned at the cutting quota), secure it with the part clamp (G) and execute the cut (C).

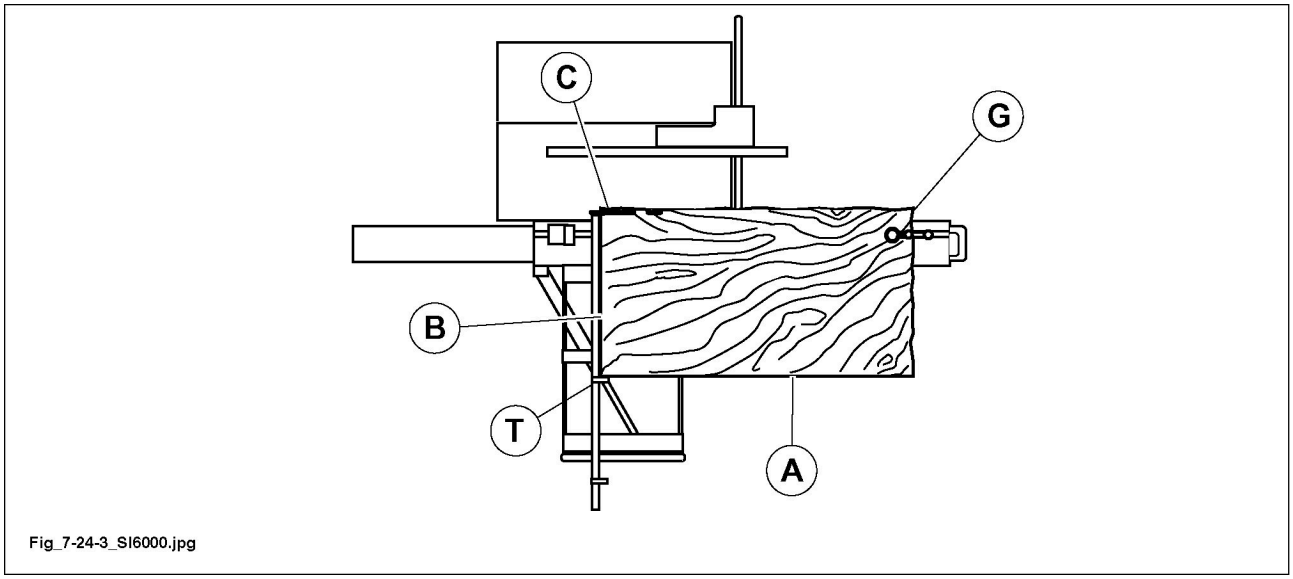
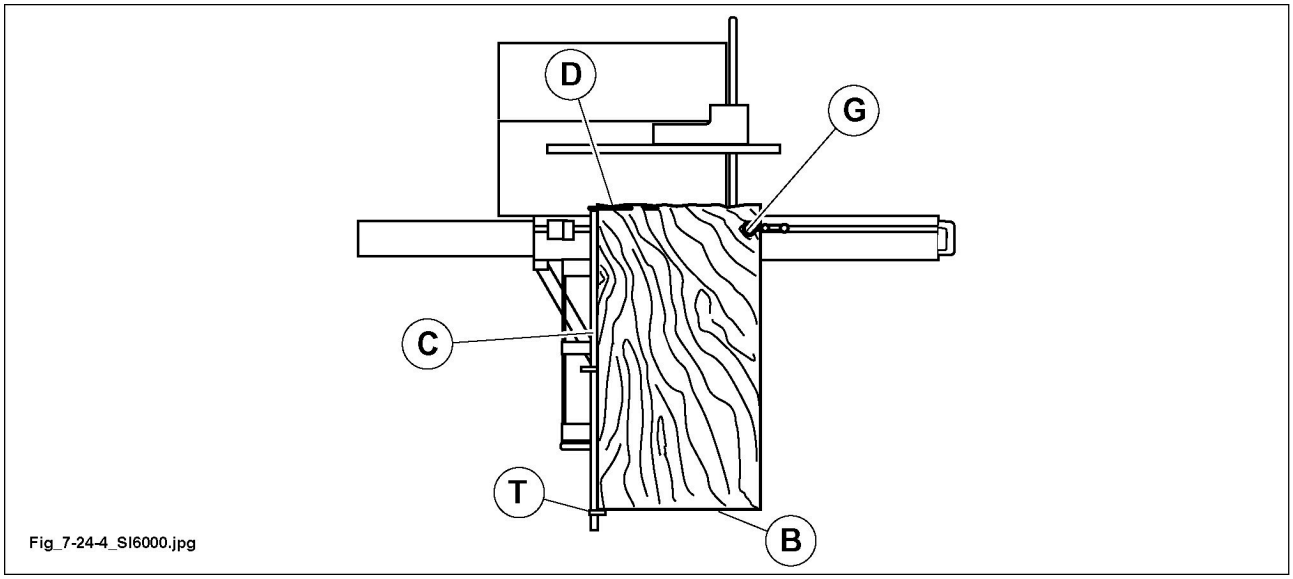


Fig_7-24-3_SI6000.jpg

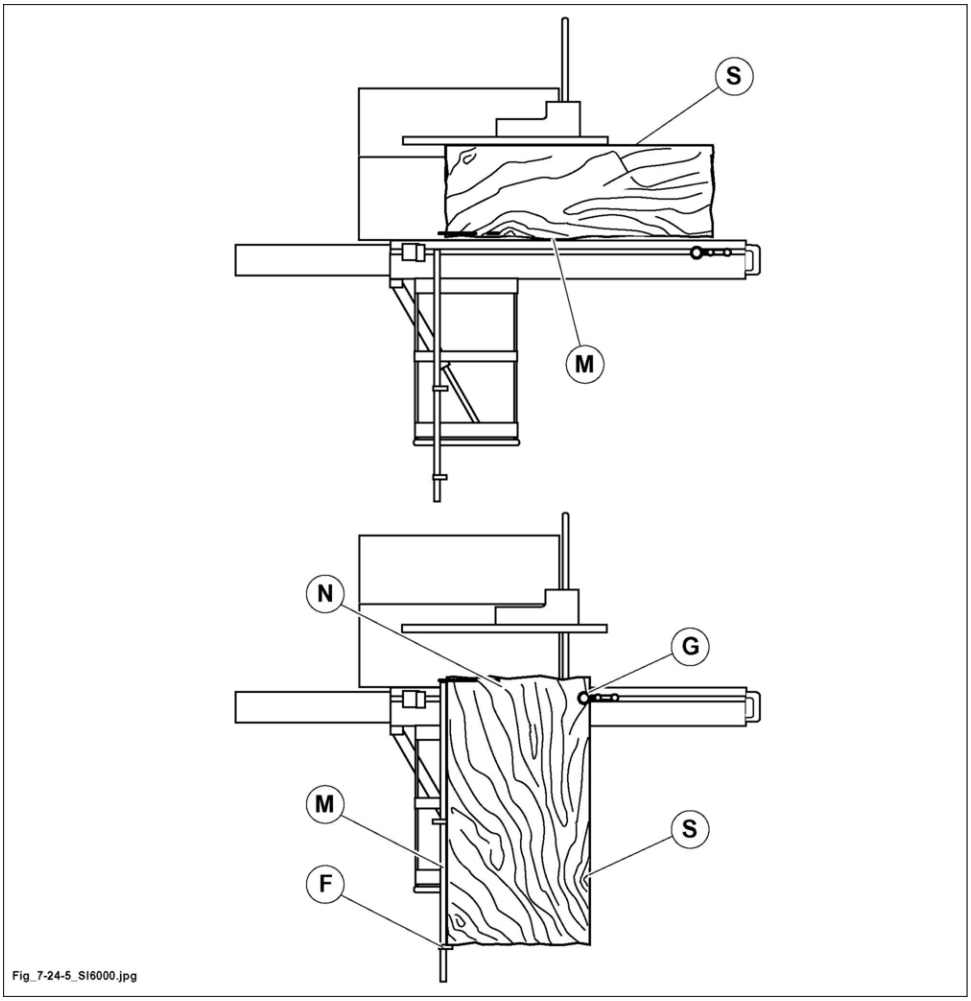
7.6.4 Fourth cut

- Rotate the panel by 90° again. Place the newly cut side (C) against the aluminium rule, the side (B) against the stop (T) on the rule (positioned at the desired cutting quota), secure it with the part clamp (G) and execute the cut (D).



7.6.5 Cut for obtaining pieces with opposite sides parallel

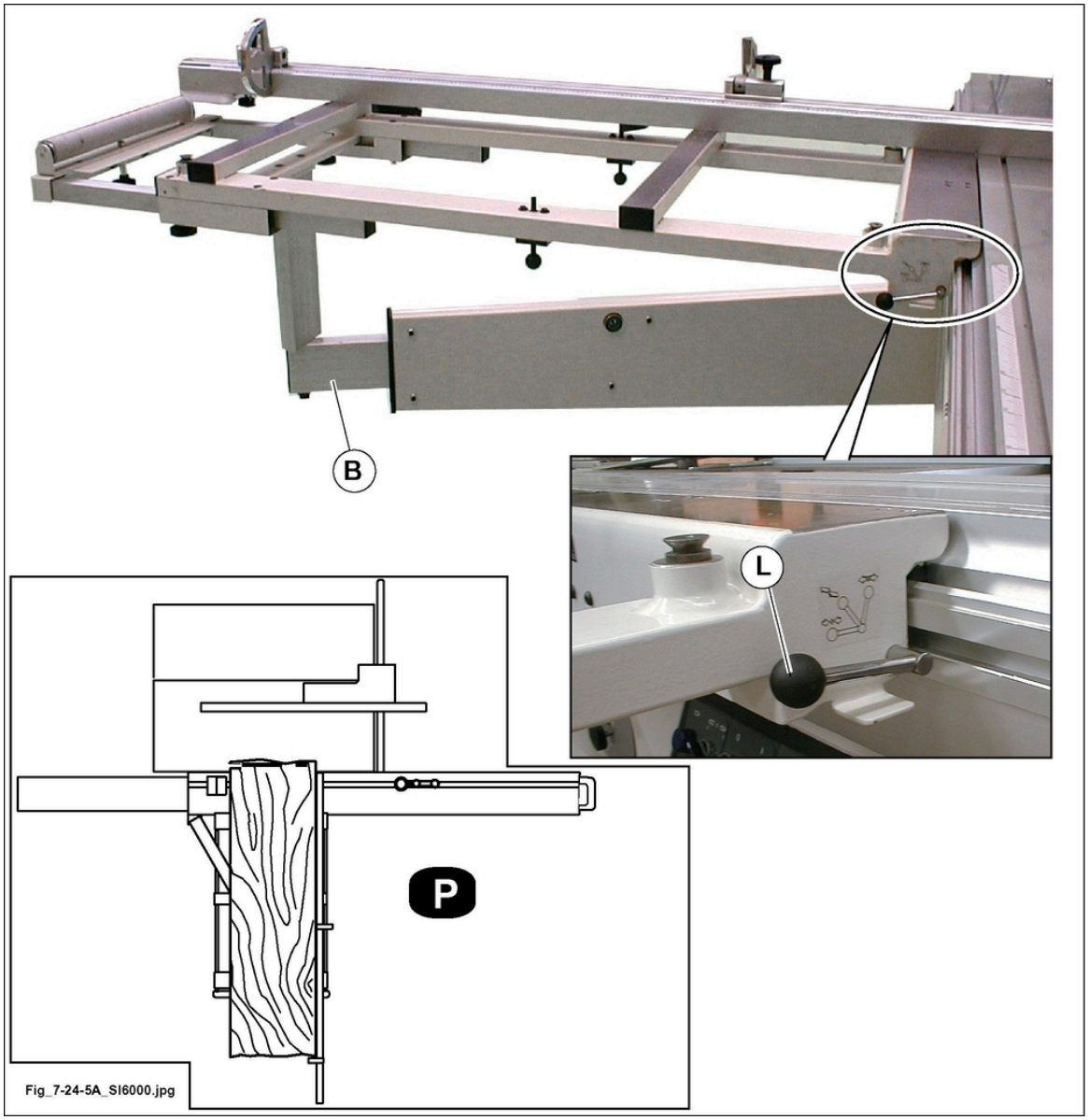
1. Execute the trimming cut (S) as described above (first cut).
2. Place the machined part (S) against the aluminium rule for parallel cuts (positioned at the desired cutting quota) and execute the parallel cut (M).
3. Rotate the panel by 90°, placing the trimmed part (M) against the rule as in the figure.
4. Lock the panel in position using the presser (G) and execute the third cut (N).
5. Rotate the panel by 180° so that the side (N) rests against the stop (F), which has already positioned at the desired quota.
6. After locking the panel in position using the presser (G), execute the last cut.



To let the sliding table cover the entire stroke proceed as follows:

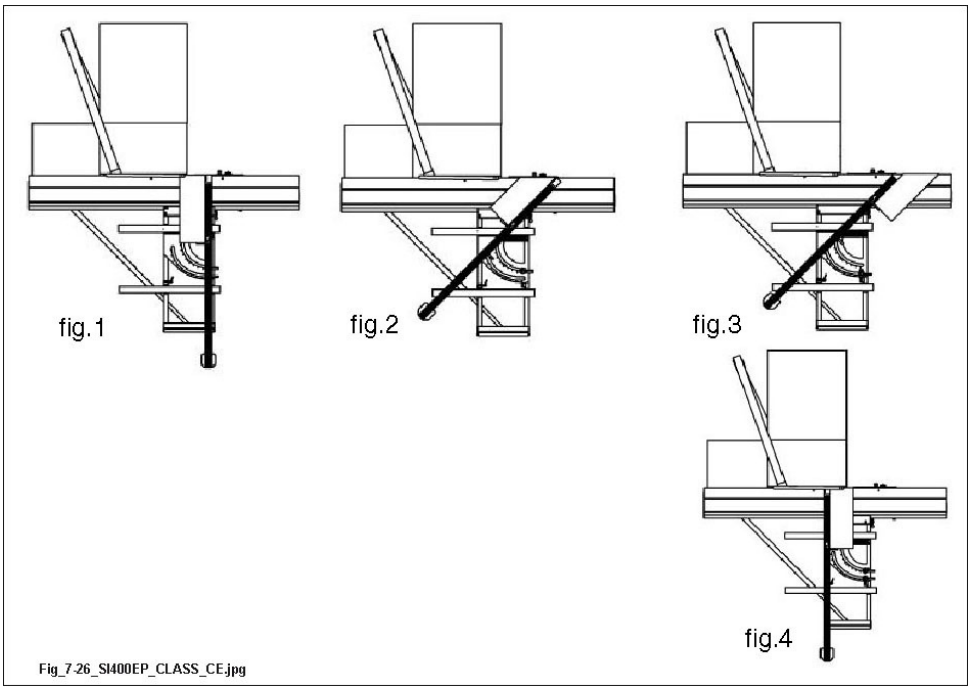
1. Release the handle (L) .
2. Totally move the sliding table to the end of stroke (entry side).
3. Slide the frame all the way to the left and position the rule as in A.
4. Lock the frame again using the handle (L) .
5. Make sure that the stroke of sliding table and frame is sufficient for the working.

It is possible to work also with the rule following the panel, (i.e. see P) but as in that case the squaring stroke decreases very much, this system is recommended only for small pieces.



7.7 CompeX support frame adjustment

The rule can assume different positions based on the type of cut being executed.



RULE POSITIONING AS IN Fig.1

1. Assemble the rule (A) as described in section "Fitting the rest rule".

RULE POSITIONING AS IN Fig.2

1. Starting from the position of Fig.1, tighten the knob (G) (the one on the left);
2. Release the reference pin (H), loosen the knob (L), rotate the rule to the desired angle, read the angle on the graduated rod (M);
3. **For cutting angles 5° / 10° / 15° / 20° / 22,5° / 25° / 30° / 35° / 40° / 45°** , once you are close to the desired angle, release the reference pin (H) and continue rotating the rule that will stop exactly at the desired position.
4. Always re-tighten the knob when you have finished (L);
5. For all the other angles block the knob (L) at the desired angle;

RULE POSITIONING AS IN Fig.3

NOTE

For this position, always remove the splinter guard (S) from the rule (A).

1. Starting from the position of Fig.1, tighten the knob (F) (the one on the right);
2. Release the reference pin (H), loosen the knob (L), rotate the rule to the desired angle, read the angle on the graduated rod (M);
3. **For cutting angles 5° / 10° / 15° / 20° / 22,5° / 25° / 30° / 35° / 40° / 45°** , once you are close to the desired angle, release the reference pin (H) and continue rotating the rule that will stop exactly at the desired position;
4. Always re-tighten the knob when you have finished (L);
5. For all the other angles block the knob (L) at the desired angle;

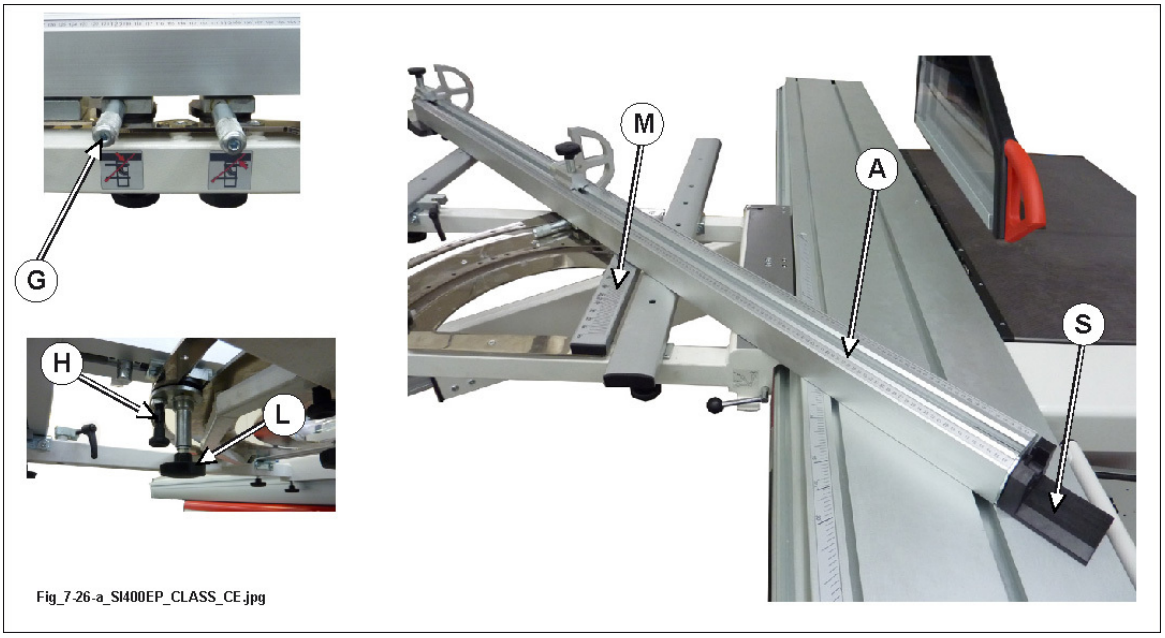
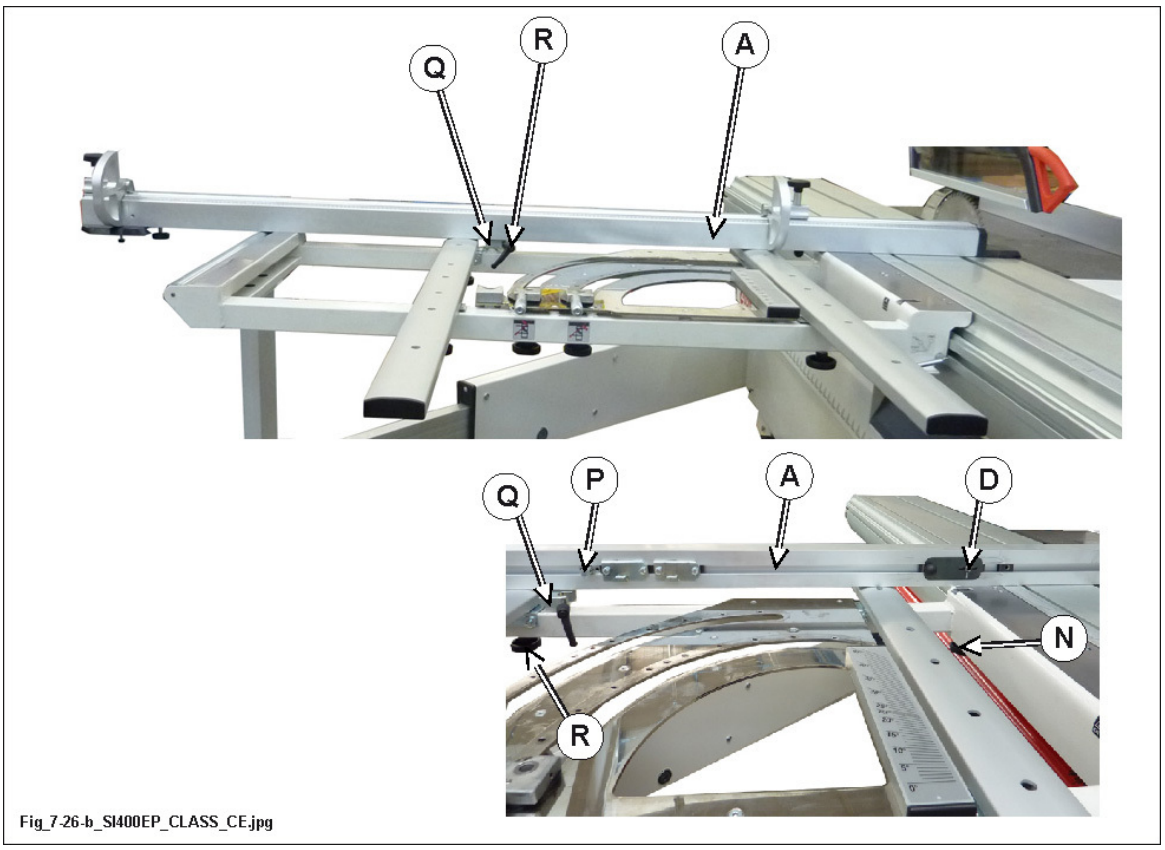


Fig_7-26-a_SI400EP_CLASS_CE.jpg

RULE POSITIONING AS IN Fig.4

1. Position the support rule (A) as shown in the figure so that the pin (P) is positioned in front of the block (Q);
2. Slide the fulcrum pin (D) in its seating and block it with the knob (N);
3. Slide the rule (A) back (away from the saw blade) so that the pin (P) engages in the block (Q), then tighten the lever (R);



7.8 Additional device for parallel cuts OPT

The device for parallel cuts has two parts:

- Part (A) already calibrated in the factory, which must be installed on the rule (1) and tightened with the handle (B).
- Part (C) that must be installed on the sliding table as follows:
  1. Insert the support gib (E) in the appropriate groove on the side of the sliding table.
  2. Place the device on the sliding table.
  3. Screw the knob (D) to the gib.

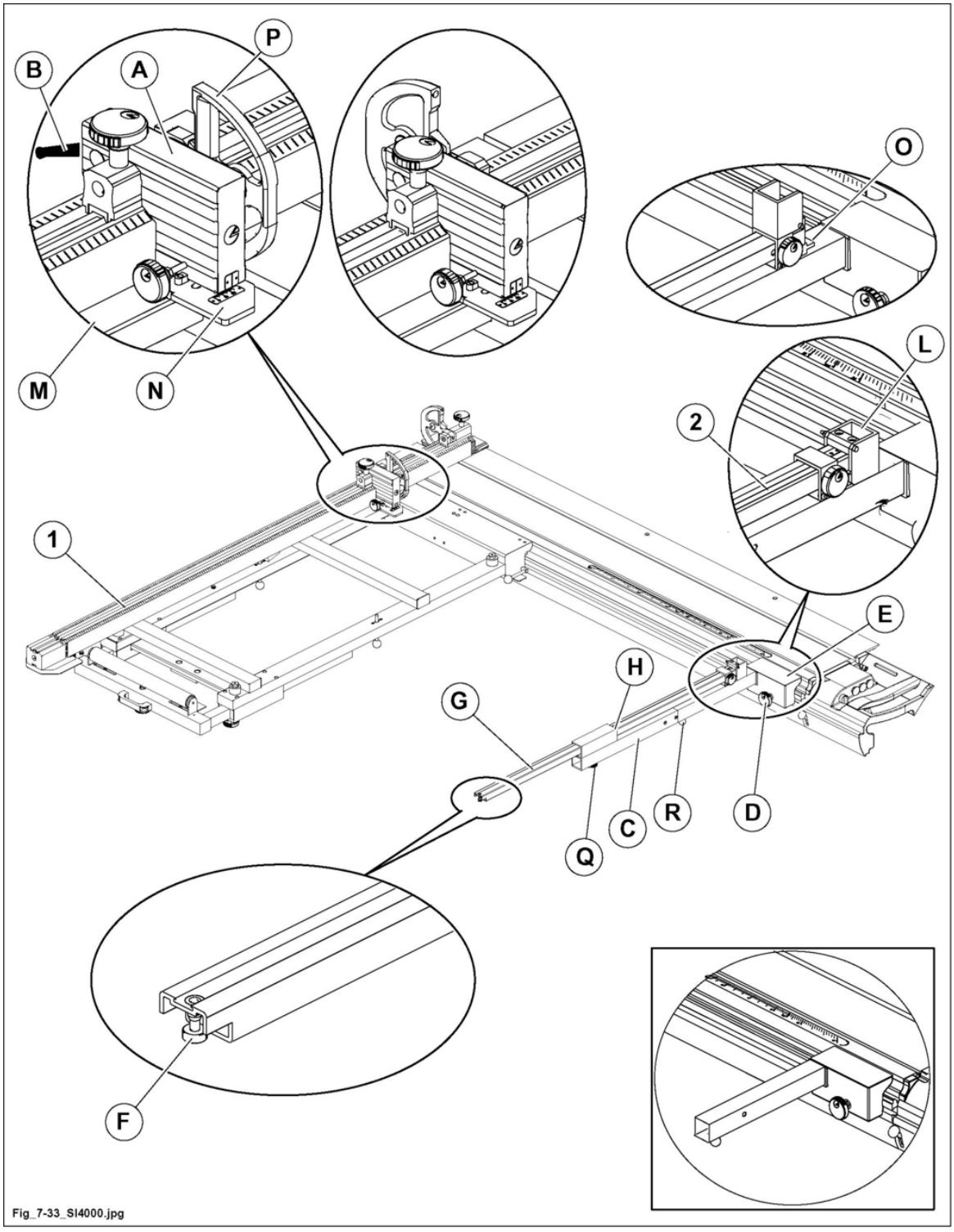
Carry out the calibration of the part (C) as follows:

1. Turn main switch to 0 (OFF).
2. Release the knob (Q).
3. Move the device so that stop (B) is against the saw blade (make sure that the saw blade is in 90° position).
4. Release the knob (F) and slide the graduated rule (G) until it reads 0 on the inner edge (H).

7.8.1 Cutting example

1. Adjust the stop unit (M) and the part (2) at the same height (e.g.: 600 mm);
2. Adjust the stops (N and O) of the first cut (trimming) (e.g. 10 mm), lift the stops (P and L);
3. Rest the panel simultaneously on the stops (N and O) and perform the first cut (trimming);
4. Lower the stops (P and Q), rest the trimmed edge on them and perform the second cut (parallel);

By means of knob (R) it is possible to withdraw the top part of the device without taking off the device support from the slidindg table (see box) that in that case may be used as an extension to rest the panels.


B
A
P
M
N
O
L
2
1
E
H
G
R
C
Q
D
F
Fig_7-33_SI4000.jpg

7.9 Additional device for parallel cuts with electronic reader OPT

The device for parallel cuts has two parts:

- Part (A) already calibrated in the factory, which must be installed on the rule (1) and tightened with the handle (B).
- Part (C) that must be installed on the sliding table as follows:
  1. insert the support gib (E) in the appropriate groove on the side of the sliding table.
  2. Place the device on the sliding table.
  3. Screw the knob (D) to the gib.

Carry out the calibration of the part (C) as follows:

1. Move the line (2) at the end stop towards the blade after loosening the knobs (S and T).
2. Press at the same time and the display (F); the factory set quota during testing appears on the display.

   Carry out the calibration of the part (C) as follows:

   1. Move the line (2) at the end stop towards the blade after loosening the knobs (S and T).
   2. Press at the same time and the display (F); the factory set quota during testing appears on the display.

- Loosen the screw (H), slide the rule (G) until it reads on the inner edge (L) the same dimension as the display (F). Tighten the screw (H);

To adjust the rule (2), loosen the knobs (S and T) and move the rule until a height very close to that desired is displayed on the display.

Tighten the knob (T), adjust the ring nut (U) until the desired dimension is displayed on the display.

Tighten the knob (S).

7.9.1 Cutting example

1. Adjust the stop unit (M) and the part (2) at the same height (e.g.: 600 mm);
2. Adjust the stops (N and O) of the first cut (trimming) (e.g. 10 mm), lift the stops (P and Q);
3. Rest the panel simultaneously on the stops (N and O) and perform the first cut (trimming);
4. Lower the stops (P and Q), rest the trimmed edge on them and perform the second cut (parallel);

By means of knob (R) it is possible to withdraw the top part of the device without taking off the device support from the slidindg table (see box) that in that case may be used as an extension to rest the panels.

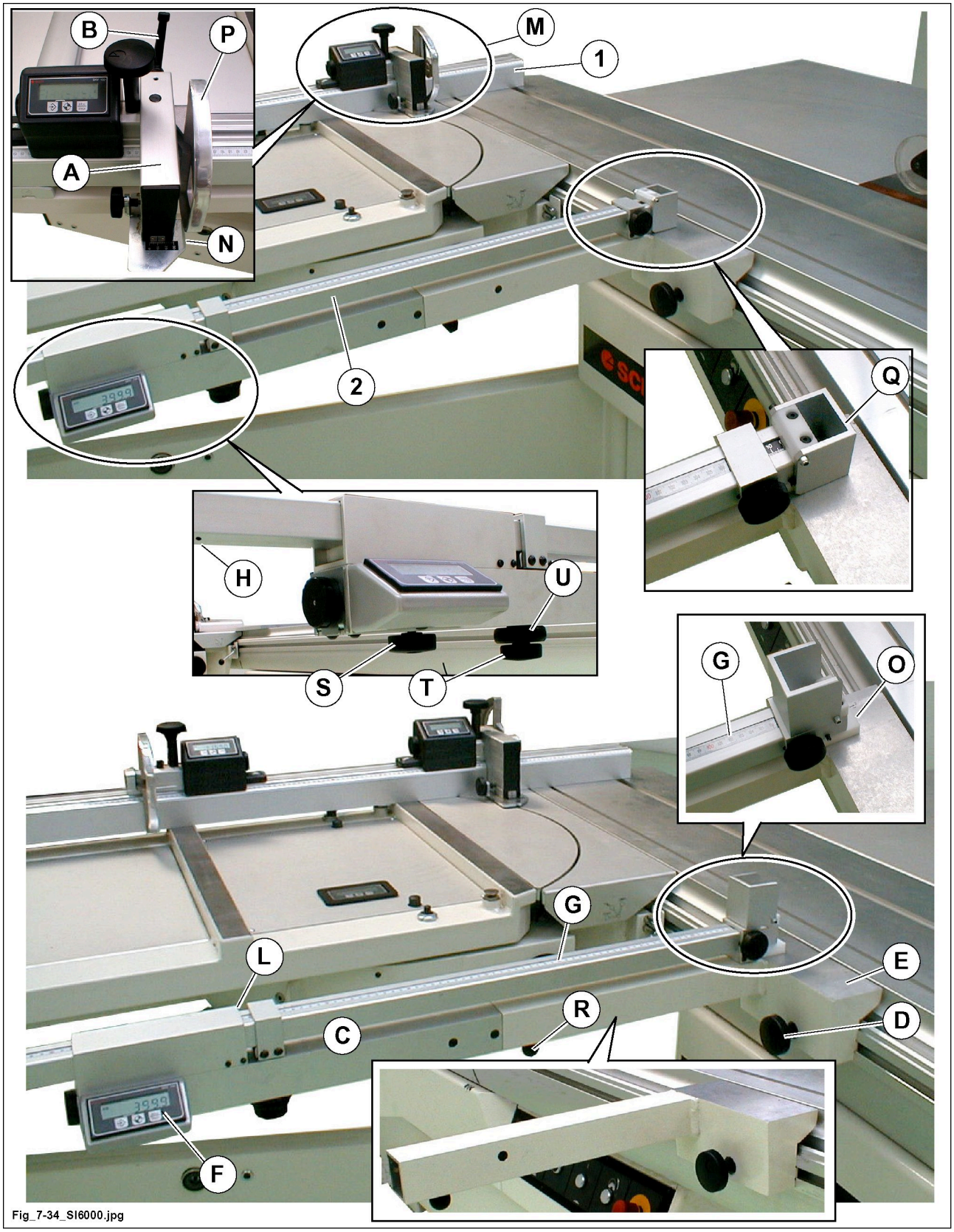


Fig_7-34_SI6000.jpg

7.10 Pneumatic pressure bar on the entire length

OPT

NOTE

It serves for clamping large panels in a simple and safe way during the cutting.

DANGER

All fitting and demounting operations require 2 persons.

7.10.1 Positioning

1. Place the two columns (B) including gibs, at both ends, in the groove (A) of the sliding table.
2. Screw them in, inserting the appropriate Allen key in the hexagonal hole (C).
3. Insert the arms (D) on the columns and lock them by tightening the handles (E).
4. Install the pistons (F) on the arms, locking them in position by tightening the knobs (G).
5. Insert the piston rod (F), in the slots (L), at the ends of the presser bar (H).
6. Connect the compressed air pipes as shown in the picture.

NOTE

For demounting the pressure bar proceed in the contrary way.

7.10.2 Use

1. Adjust the height of the press bar with the handles (E), depending on the wood to be blocked (maximum thickness 120 mm).

SPECIALISED PERSONNEL

To block the wood correctly, the two arms (D) must be adjusted to the same height and the presser bar must be 8 mm from the wood before rotating the selector (N).

2. Save the position by placing the collars (M) in contact with the arms.
3. Turn the selector (N) to the right, the presser bar lowers and blocks the wood.
4. Turn selector to the left, the pressure bar rises.
5. If the panel is small, the pressure bar may get bent.

To correct this deformation and return the presser bar to a horizontal position, adjust the pads (O) using the knobs (P).

DANGER

Connect the filter unit, located on the left side of the machine, to the pneumatic network and, if the pressure indicated on the pressure gauge (S) is less than 6 bar, adjust it by lifting and turning the knob (R). Once the pressure is found, lower the knob (R).

DANGER

In case of rupture or disconnection of a pneumatic hose, a valve hinders the pressure bar lifting.

For pieces of small dimensions it is possible to use only one pneumatic presser see (W).

First of all demount the pressure bar and disconnect the hoses with quick coupling of larger diameter (Z), for the compressed air of the presser on the exit side.

Connect the hose (supplied) to the pressure bar at inlet side.

Use the selector switch (N) to operate.

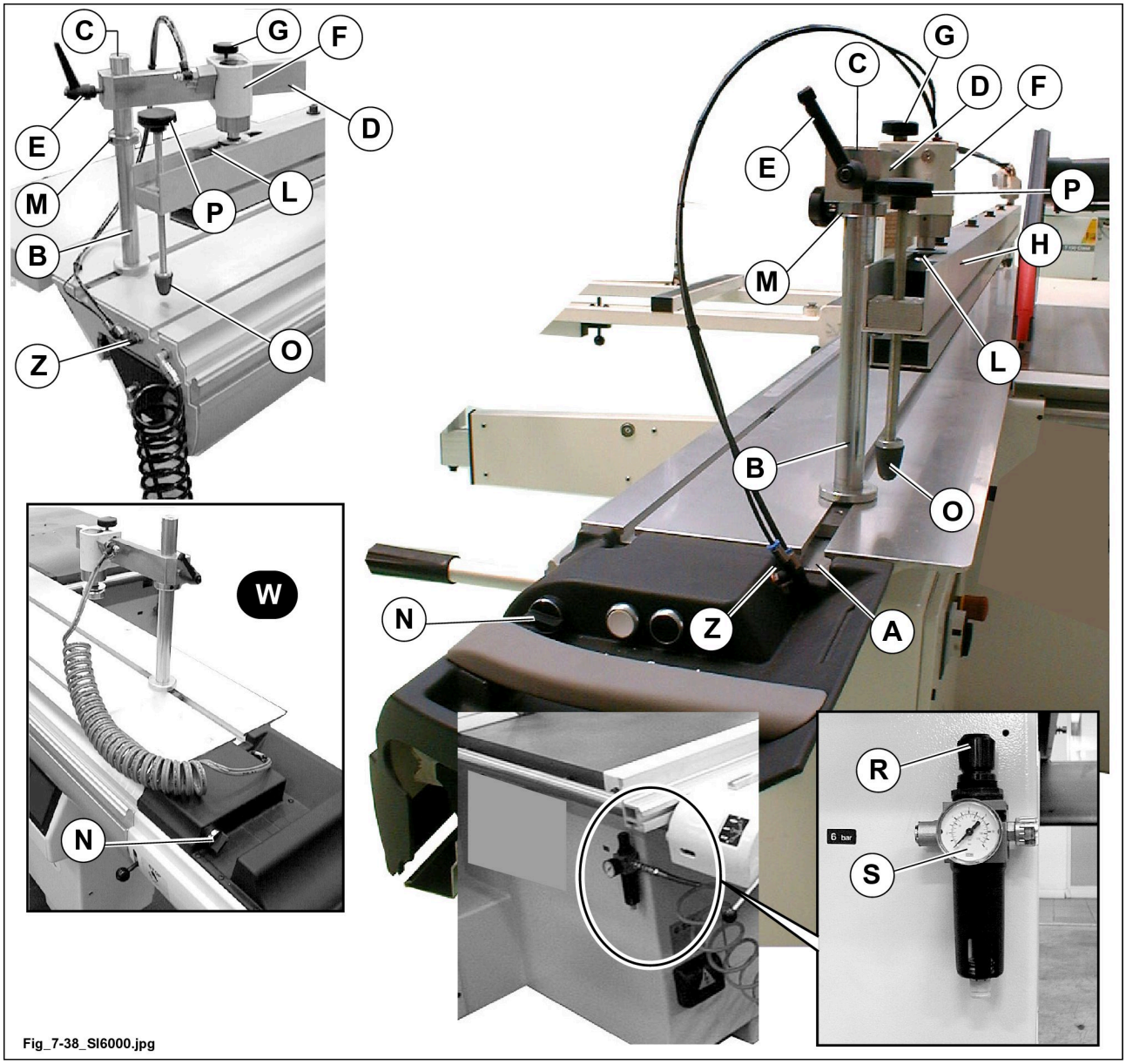


Fig_7-38_SI6000.jpg

8 Wood pusher

8.1 Wood pusher 146

8.1 Wood pusher

DANGER

When for the execution of a peculiar working, the operator is obliged to put his hands near the tools, for safety reasons a proper pusher shall be used to move the workpiece forwards, to push it against the fence or to remove it after the cutting.

Use the workpiece pusher (G) supplied, or:
Handle (A) is supplied for this purpose and can be applied to pushers (D) of different size by means of screws (B and C).

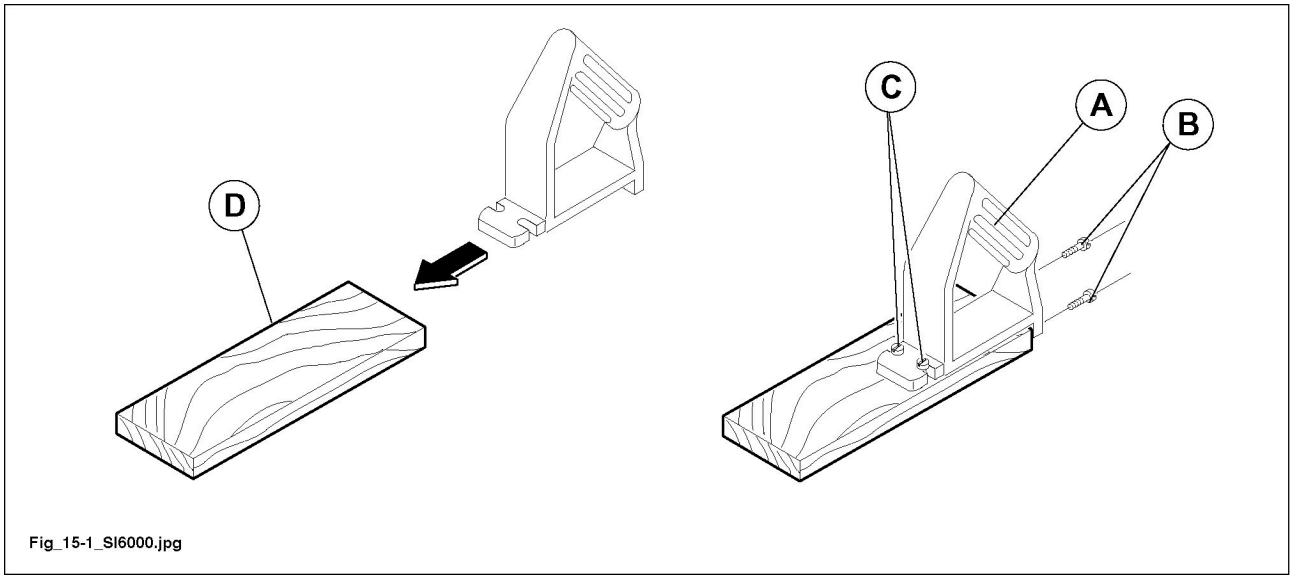
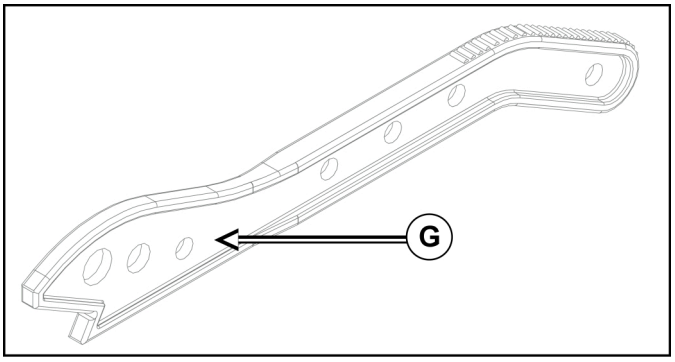


Fig_15-1_SI6000.jpg



NOTE

To machine small pieces it may be necessary to use both wood pushers, one to push the wood against the blade and the other to keep the wood pressed against the parallel guide.



9 Readers or displays

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9.1 VK1

9.1.1 General

- Magnetic sensor directly fitted.
- Display LCD.
- Measure setting by means of keyboard.
- mm / inch / degree conversion.
- Programmable counting reverse.
- Signaling on the display: battery is down.
- Error message: max. distance between sensor and band surpassed.

9.1.2 Technical data

TECHNICAL DATA		
Battery power supply (type LR 14)	1.5	Vdc
Maximum sensor speed	5	m/sec
Max. distance sensor-band	2	mm
Tool precision	+/- 0.1	mm
Operating temperature	0 / + 50	°C

9.1.3 Instructions for the operator

A) To recall the pre-set measure:

1. Press ⇨ and ✥ simultaneously.

B) Absolute / incremental mode selection:

1. Press abs/incr to select incremental mode.
2. The display is reset automatically and the ◀◀◀ symbol appears.
3. Press abs/incr again to return to absolute mode.

NOTE
In incremental mode the display does not carry out the zero setting.

C) To modify the pre-set measure:

1. press ⇨ and abs/incr simultaneously for 3 seconds.
2. rES appears on the display.
3. Press ⇨ until the message rEF appears, followed by a number corresponding to the Factory Pre-set value.
4. Press abs/incr to modify the value (if necessary).
5. Press ✥ to shift one decade to the left.
6. Press ⇨ to confirm.
7. To exit press ⇨ repeatedly.



Fig_16-3_SI6000.jpg

9.1.4 Messages on the display

1. S_Err ..... indicates that the distance between reading sensor and magnetic band is too large or the sensor cable is broken.
   To reset move the sensor close to the band or replace the reader.
2. The ▭ symbol indicates the battery is low.
   To reset replace the battery.

NOTE
The internal parameters as well as the real measure are not erased when the battery is taken off.

9.1.5 For experienced operators authorised by SCM

Programming the parameters in the internal memory

To access the internal display memory press and simultaneously for approximately 3 seconds.

A) The following is displayed:

- **rES**
  and then a number corresponding to the reader resolution type.
- Press to modify the resolution (if necessary):
  0.1 = resolution in mm
  0.001 = resolution in inches
  FrEE = resolution for angular measuring.
- Press to confirm.

B) On the display you see:

- **corFAc**
  and then a number (100000) set at factory corresponding to the factor for multiplying the sensor pulses.
- Press to modify the factor (if necessary).
- Press to shift one decade to the left.
- Press to confirm.

C) The following is displayed:

- **rEF**
  and then a number corresponding to the Preset value already set at factory.
- Press to modify the value (if necessary).
- Press to shift one decade to the left.
- Press to confirm.

D) On the display you see:

- **dir**
  and then
- **uP**
  or
- **dn**
  corresponding to the sensor counting direction appear on the display.

- Press to modify the value (if necessary).
- To confirm and exit the parameter settings, press.

The last measure displayed appears on the display.

If rES parameter has been set to: FrEE (angular measuring) immediately other two parameters (FAc and dP) appear.

E) The following is displayed:

- **FAc**
  a 6 - digit number corresponding to the calculation factor to get angular measuring.
  This factor is got as follows:

Example:	
angular display of an arc of circumference from 0° to 90° with the magnetic strip positioned on a radius r = 300 mm.	
Circumference	2 x x r = 2 x 3.14 x 300 = 1884.96 (out of 360°)
Circumference completed	1884.96 : 4 = 471.24 (out of 90°)
Calculation factor	900 : 471.24 = 0.01909
FAc to enter	001909 (enter only the first 6 decimal places of the calculation)

- Press abs/incr to modify the value (if necessary).
- Press ✥ to shift one decade to the left.
- Press to confirm ⏎.

F) On the display you see:

- **dP**
  and then a number corresponding to the angle display type.

0.0 = display in tenths of a degree

0.00 = display in hundredths of a degree.

- Press abs/incr to modify the value (if necessary).
- Press to confirm ⏎.

G) On the display you see:

- **corFAc**

See instructions on the previous point B.

9.2 (OPT)V - R Reader- Wireless display

9.2.1 General

- Magnetic sensor directly fitted.
- Display LCD.
- Measure setting by means of keyboard.
- mm / inch / degree conversion.
- Programmable counting reverse.
- Signaling on the display: battery is down.
- Error message: max. distance between sensor and band surpassed.
- Hardware inibition to protect the fixed data you have entered.

9.2.2 Technical data

TECHNICAL DATA			
Battery power supply (type LR 14)	1.5	Vdc	
Maximum sensor speed	5	m/sec	
Max. distance sensor-band	2	mm	
Tool precision	+/- 0.1	mm	
Operating temperature	0 / + 50	° C	

9.2.3 Instructions for the operator

A) To recall the pre-set measure:

- press ⊕ and F simultaneously.
- The displays are to be preset only when the machine is on, the angular position of FS frame and the tilting of the saw blade are 0°.

B) Absolute / incremental mode selection:

- press abs/incr to select incremental mode.
- The display is reset automatically and the ◀◀◀ symbol appears.
- If you press ⊕ in incremental mode the displayed measure is set to zero but the absolute measure of the display is not modified.
- Press abs/incr again to return to absolute mode.

NOTE

in incremental mode the display does not carry out the zero setting.

C) To modify the pre-set measure:

- press F for 5 seconds.
- The following appears on the display: "PASS" and under the value 0000 where the first number is flashing.
- To calibrate enter the password 2201.
- Press ⊕ to increase the flashing number on the display. For example for 2 press the key twice.
- Press the abs/incr or → keys to select the number on the left or the right of the flashing number.
- Once the password has been entered press F to confirm.
- Press → until "OriGin" appears on the display. Press F to display the value for the preset quota set.
- To change the preset quota use the same procedure indicated to enter the password.
- To exit press ⊕ repeatedly.

NOTE

carry out this operation when the machine is on, the angular position of Full Support frame and the tilting of the saw blade are 0°.

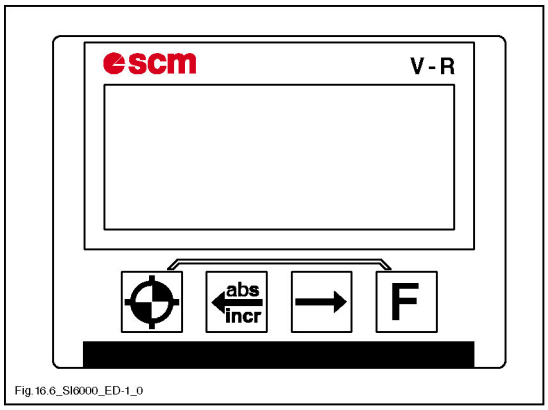


Fig.16.6_SI6000_ED-1_0

9.2.4 Messages on the display

1. NO TAPE..... indicates that the distance between reading sensor and magnetic band is too large or the sensor cable is broken.
   To reset move the sensor close to the band or replace the reader.
2. The  symbol indicates the battery is low.
   To reset replace the battery.
3. indicates that the wireless connection is active.
   If the machine is on but this symbol is not activated, the display is not connected to the wireless mains.

NOTE
The internal parameters as well as the real measure are not erased when the battery is taken off.

9.2.5 For experienced operators authorised by SCM

To enter into the main menu of the display press F key for 5 seconds and enter password 2201 as previously described.
The "dir" menu appears on the display. Use the abs incr or → keys to scroll through all the menus of the display.
After selecting the menu press F key to enter into the corresponding functions.
To quit a menu and to return to the previous one press ⊕

A) dir

Used to change the count direction of the display. Entering the menu "- - dir" or "dir - " appears, which corresponds to the count direction set.

Press the abs incr or → keys to change the value and F to confirm the change.

B) OriGin

This menu includes the "zero" quota of the display.

If you need to change this value used the procedure described for the Password insertion.

NOTE

carry out this operation when the machine is on, the angular position of Full Support frame and the tilting of the saw blade are 0°.

C) AnGuLAr

This menu contains the data used to calculate the measure on the angular display and consists of 2 submenus.

Press F to access the submenu.

- **rAdiuS**
  it contains the radius value in mm of the arc of circumference on which the magnetic band of the angular display is positioned.
  If necessary, to modify this value follow the same procedure used to enter the password.
- **dEG rES**
  it enables to set the number of decimal digits with which the angular measure is displayed.
  By entering into the menu 0,01° or 0,1° or 1°, which indicate 2, 1 decimal digits or no digit in the display, appear.
  Use the ⊕ key to change the value and F to confirm the value.

D) Lin Corr:

It contains the value of the measure correction factor for the linear displays.

Normally this value is 1.0000 and corresponds to a constant which multiplies the number of pulses read on the magnetic band.

To modify this value use the same procedure described to enter the password.

E) SETuP

If you press F key from this menu the setup procedure of the magnetic sensor is activated.

After activating the setup procedure, move the display to a direction until the numeric measure appears.

F) SyS

This menu contains the display configuration parameters and 3 submenus.

- **"SSid"**
  it is a numeric value with 4 digits which indicates the identification code of the unit of the displays associated to the machine in the wireless certificate.
  This value for all displays of a machine shall be equal to the last 4 numbers of the machine serial number.

NOTE

If the first of these 4 numbers is 0 must be set to 1.
For example, if the 4 numbers are 0123 set 1123.

To modify this value use the same procedure described to enter the password.

- **"SSnr"**
  it is the numeric value identifying the single display inside the wireless certificate
  This parameter shall have the following values:
  1 for the display nearest the saw blade
  2 for the central display
  3 for the display on the telescopic rule
  4 for the angular display
  Press → to change the value and press F to confirm.

NOTE

numbers 1 and 2 identify the displays fitted as indicated in figure W-4-A .

By inverting the position of the displays also the number is inverted see figure W-4-B.

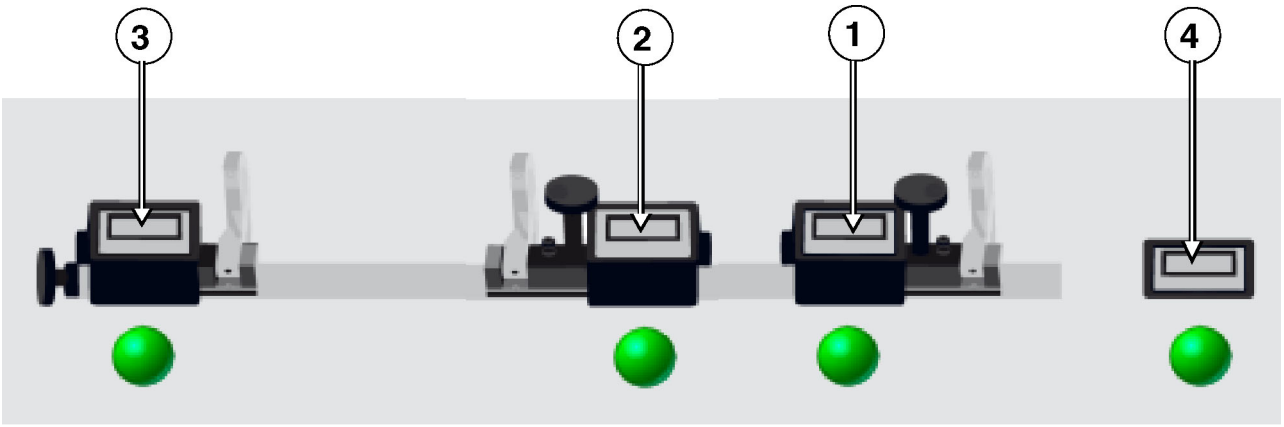


Fig.W-4-A

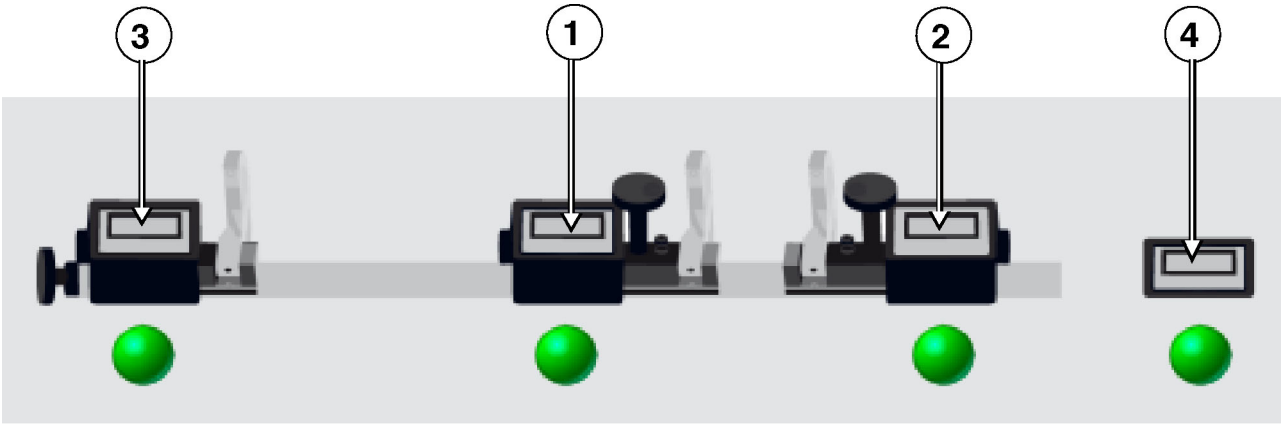


Fig.W-4-B

"[][][][]"

it is the menu in which the modification of the measure unit used on the display is enabled by means of → key.

Normally this function is locked as the electronic control of the machine inserts into the single displays the measure units according to parameters previously set.

Master display

In machines with wireless displays, an interface module is installed inside the electronic control mobile control panel between the control and the wireless devices. This module is called the Master display.

By pressing F key on Master display one enters into the device configuration menus.

- **"SSid"**

  it is a numeric value with 4 digits which indicates the code identifying the unit of displays associated to the machine in the wireless certificate and which corresponds to the Ssid of the displays.

  This value must be equal to the last 4 digits of the serial number of the machine.

  To modify this value use the same procedure described to enter the password into the single displays.

- **"SSnr"**

  it is the numerical value that identifies the number of displays recognised by the master module. It can be between 1 and 4.

  To change this value press F and use the key ✥.

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10.1 Recommendations

NOTE

When one of these messages appears on the screen or display:

- "Warning! We recommend a regular maintenance intervention. Contact the authorised service."
- "Warning! Ordinary maintenance recommended".

The message displayed indicates that the use limit has been reached. After this limit the general maintenance intervention is recommended to check the optimal efficiency and operating conditions of the machine.

NOTICE

We recommend contacting service personnel authorised by SCM to perform the intervention.

PROHIBITED

Do not carry out any repair and/or intervention not included in this manual.

NOTICE

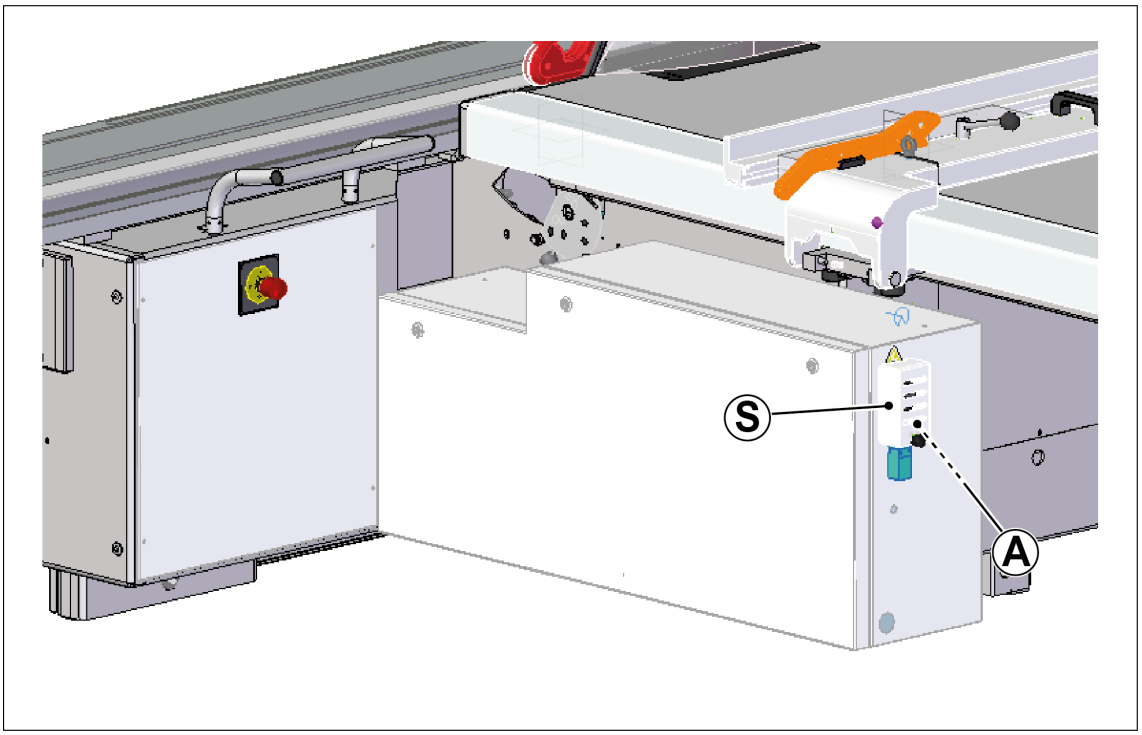
Before any maintenance intervention, cut off the power supply to the machine, by following the instructions below:

1. Open the cover (S) of the main switch.

   WARNING

   Never cut off the mains power supply before opening the cover of the main switch.

2. Set the main switch (A) to 0 (OFF).



10.2 Pulizia della macchina

DANGER

Tutte le operazioni di pulizia devono essere eseguite dall'operatore della macchina o da personale tecnico qualificato.

DANGER

Prima di eseguire le operazioni di pulizia, manutenzione, regolazioni e/o sostituzioni di qualunque organo, mettere a zero l'interruttore generale, lucchettarlo e segnalare ciò con un cartello.

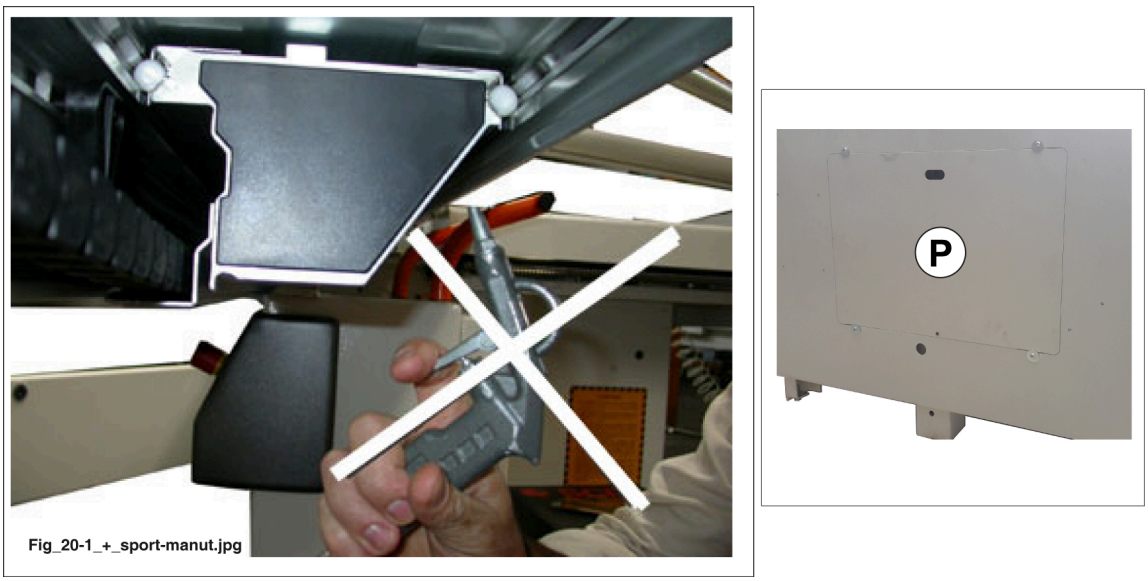
DANGER

Per alcune operazioni di pulizia e manutenzione, è necessario smontare lo sportello posteriore (P) svitando le apposite viti.

Finite le operazioni di manutenzione rimontare sempre lo sportello (P), mettendolo in posizione e serrando le apposite viti.

PROHIBITED

NON UTILIZZARE ARIA COMPRESSA; soffiare con un forte getto d'aria può spingere trucioli e sporco di qualsiasi altro genere negli organi di movimentazione compromettendo l'efficienza della macchina.



La pulizia generale della macchina conserva inalterate nel tempo le prestazioni e rappresenta un importante fattore di sicurezza.

NOTE

La frequenza degli interventi di pulizia è determinata dall'ambiente in cui è installata la macchina e dal tipo di materiale lavorato.



Fig_20-1A_SI6000.jpg

Regole per una corretta pulizia della macchina

Utilizzando un aspirapolvere potente pulire:

- i piani e tutte le cavità ove notate residui di polvere e trucioli.
- Le cuffie di aspirazione (T), controllando che non vi siano occlusioni.
- Con il vagone in posizione 1 (tutto in entrata), poi in posizione 2 (tutto in uscita), pulirne le guide inferiori ed in particolare modo i punti indicati dalle frecce (H), per una profondità di 15 cm.
- Le guide (A) del telaio a squadrare.
- Le guide di scorrimento (S) del vagone e (B) della rotaia.
- L'estensione (D) della bandiera e controllare che i raschia polvere funzionino correttamente sull'estensione. Eventualmente registrarli, agendo sulle apposite viti anteriori (3) e posteriori (4), dopo aver tolto la copertura frontale (E).
- Togliere il carter (F) e pulire l'anello (G) di scorrimento del telaio "Full support" (OPT).

Successivamente, utilizzando un panno o un pennello imbevuto di un prodotto adatto e non pericoloso,

Pulire tutti i movimenti indicati precedentemente, specialmente quelli esposti alla resina ed alla polvere.

DANGER

Non oliare nè ingrassare:

- **le guide di scorrimento del vagone (S) e della rotaia (B) e l'anello (G) di scorrimento del telaio FULL SUPPORT (OPT) .**



Fig_20-1B_SI_5.jpg

10.3 PROGRAMMED MAINTENANCE

Regular maintenance is essential for achieving the best performance and safe operation.

DESCRIPTION	INSPECTION	FREQUENCY	ACTION
General machine cleaning	Visual inspection	Daily	• With an aspirator remove dust and chips
Carriage sliding guides (S)	Visual inspection	Weekly	• With an aspirator remove dust and chips • Clean with a cloth or brush soaked in a suitable product which is not dangerous. • **Do not oil or grease.**
Squaring frame guides (A)	Visual inspection	Daily	• With an aspirator remove dust and chips • Clean with a cloth or brush soaked in a suitable product which is not dangerous.
The sliding guides (B) of the rail	Visual inspection	Weekly	• With an aspirator remove dust and chips • Clean with a cloth or brush soaked in a suitable product which is not dangerous. • **Do not oil or grease.**
Extractor hoods cleaning (T)	Visual inspection	Weekly	• Disconnect the flexible tubes from suction hoods, check that there are no occlusions and clean by sucking.
Flag extension (D)	Visual inspection	Weekly	• With an aspirator remove dust and chips • Clean with a cloth or brush soaked in a suitable product which is not dangerous.
	Visual check and check the operation of the dust scrapers (E)	At least once a year.	• If necessary, adjust them
	Visual inspection	At least once a year.	• Grease the pads of the flag of the grease ports
Sliding ring (G) of the "Full support" frame	Visual inspection	Weekly	• With an aspirator remove dust and chips • Clean with a cloth or brush soaked in a suitable product which is not dangerous. • **Do not oil or grease.**
Scoring unit mechanisms	Visual inspection	Every 2 weeks	Remove any dust using an aspirator and grease
Motor driven guide unit	Visual inspection	Monthly	• Grease
Tilting and lifting toothed sector (B) and screws (A)	Visual inspection	Weekly	• Grease

DESCRIPTION	INSPECTION	FREQUENCY	ACTION
The right and left sector guides (D) for tilting the saw.	Visual inspection	Weekly	• Grease
Saw lifting guide pins (E)	Visual inspection	Weekly	• Grease
Hanging guard arm rotation pin.	Visual inspection	Weekly	• Grease
Safety and emergency devices	Visual check and check operation	Every 2 weeks	• Carry out some stopping tests
Check the operation of the brake release selector	operation check	Daily	• Vedi Par. " general controls before machine starting"

10.4 Lubrication

Correct lubrication will extend the machine life and ensures better performance.

Every month lubricate the power driven guide unit by inserting AGIP MU EP 0 into the lubricators (F) by using the supplied grease syringe.

Each week, lubricated with type of grease:

Manufacturer	Acronym
AGIP	GR MU EP1
ARAL	ARALUB HL1
BP	GREASE LTX1
SHELL	SUPER GREASE EP1
MOBIL	MOBILPLEX 46
KLÜBER	CENTOPLEX 1
ESSO	BEACON EP0

1. Tilting and lifting toothed sector (B) and screws (A).
2. Saw blade tilting right and left sector guides (D).
3. Saw lifting guide pins (E).
4. Periodically lubrificate the pivot for hanging guard arm rotation.
5. Scoring unit mechanisms (C).

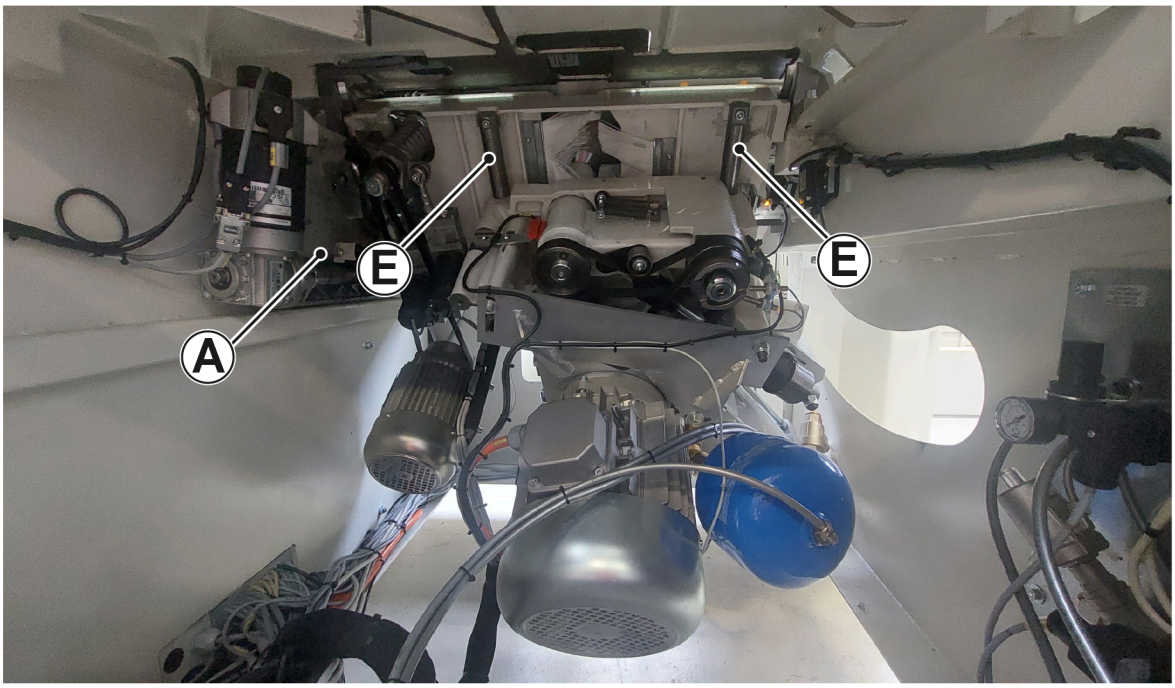
DANGER

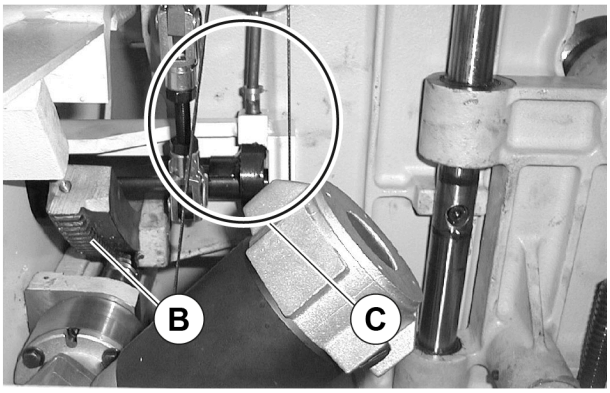
Do not oil, do not grease:

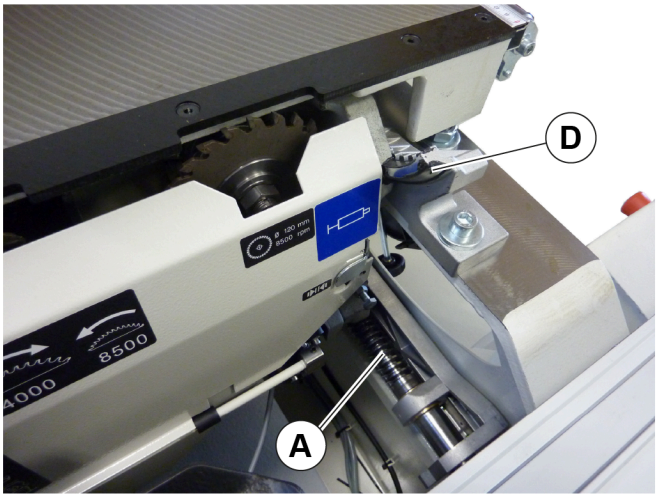
- **le guide di scorrimento del vagone (S) e della rotaia (R).**

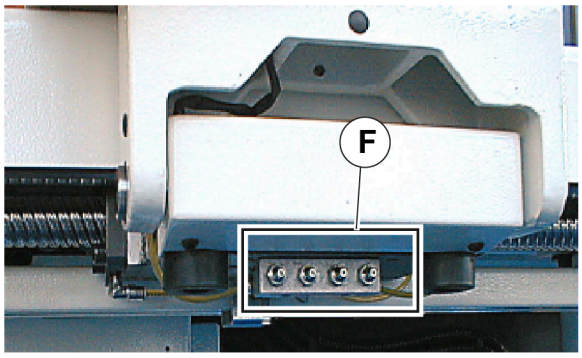
NOTE

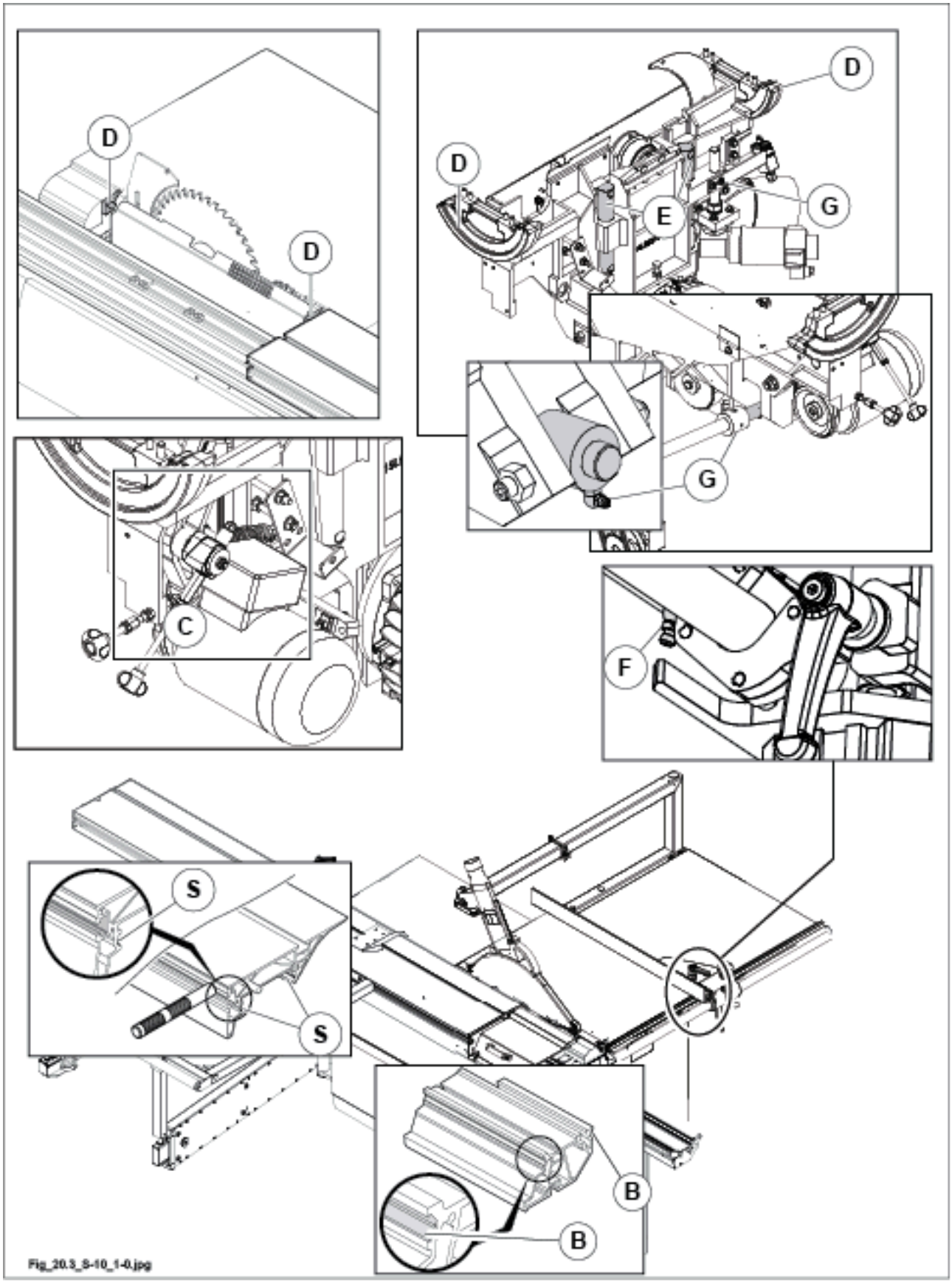
- As all bearings are sealed and lubricated-for life, they do not require any maintenance;
- per la sostituzione, richiedere tali cuscinetti direttamente al nostro Ufficio ricambi;
- cuscinetti di altre marche, con sigle corrispondenti, NON sono idonei all'uso.


E
E
A


B
C


D
A
8500


F


D
D
D
D
E
G
G
C
F
S
S
B
B
Fig_20.3_S-10_1-0.jpg

10.5 Safety devices check

La sicurezza della macchina è conseguenza diretta dello stato di efficienza dei dispositivi di sicurezza utilizzati e descritti nel Capitolo "Arrangement and description of safety devices".

Every 2 weeks check the controls for emergency stops with a test.

With the machine under normal operating conditions press the emergency buttons arranged on the machine one at a time.

The motor shall stop.

Every 2 weeks check that micro switches on the bottom saw blade guard:

With open guard, the saw motor shall not start.

With power fence for parallel cuts with electronic control, every 2 weeks check that the microswitches on the emergency bar (side of parallel fence) are efficient:

If you push the emergency bar the power fence shall stop.

NOTE

- L'allentamento delle cinghie di trasmissione può provocare un aumento del tempo di frenata quindi, verificare il tensionamento o il buono stato delle cinghie (vedi par." Belt stretching" o" Replacing the belts").

  Machine without Inverter:
- Every two months or (about) every 500 brakings check the motor braking times (maximum stop time 10 sec). If the brake needs to be adjusted, consult the manual (see par."Self-braking motor").

  Machines with Inverter OPT:
- check the motor braking times (maximum stop time 10 sec). Otherwise, call the Dealer's Service departmentSCM.

Regularly check the efficiency of the guards and the good state of the plates, especially those with a yellow background.

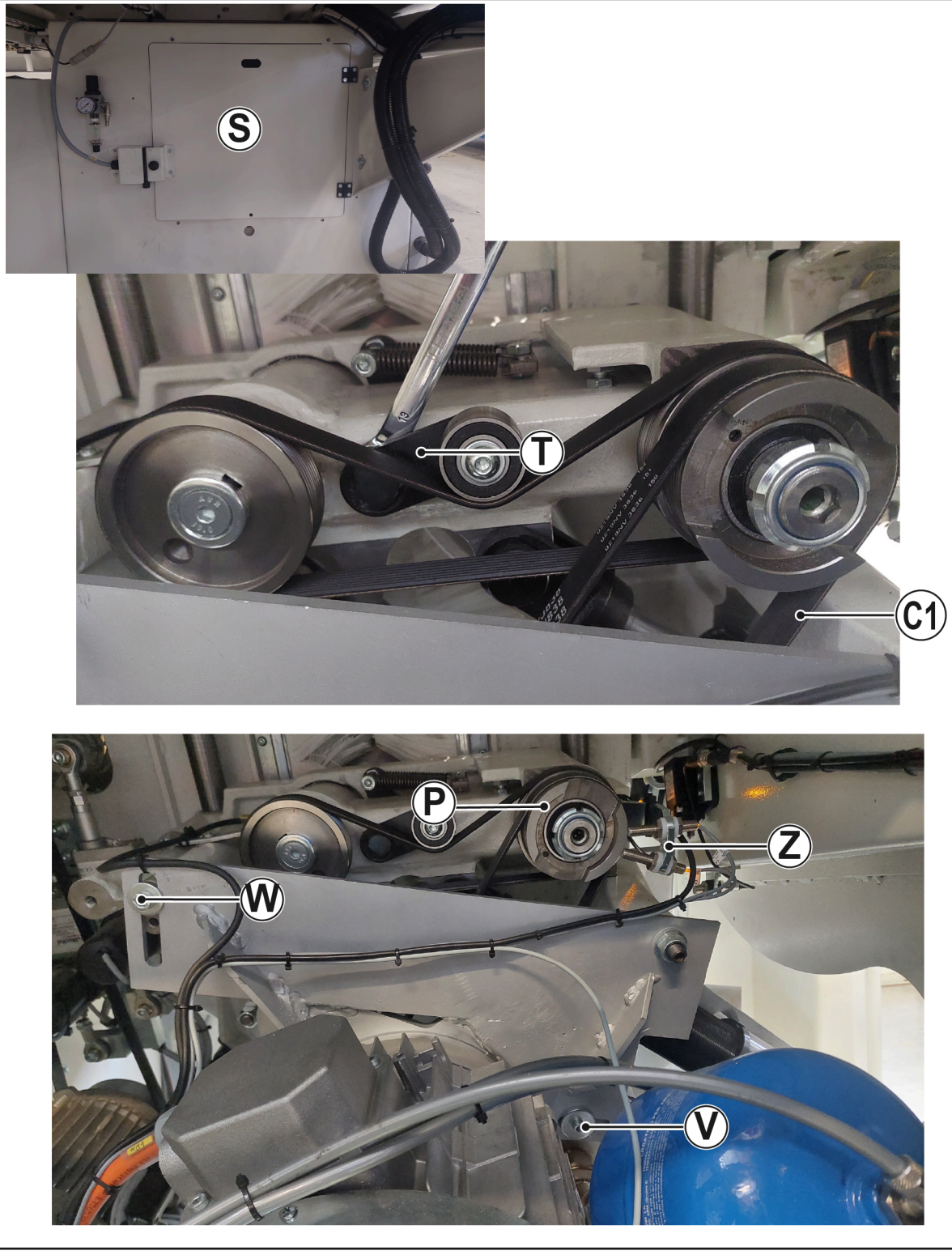
DANGER

The responsible technician is to be informed about eventual troubles during the test; in that case he shall shut off the machine and apply to SCM Technical Service of dealer.

10.6 Replacing the belts

10.6.1 Saw blade spindle

1. Set the saw unit to a position corresponding to the half of its stroke.
2. Discharge the system by pressing the button "**11**".
3. Open the rear door (S) .
4. Set the main switch to zero, padlock it and place a sign indicating the situation.
5. Loosen the screws (V), (W) of the motor support.
6. Lift the motor (weight approx. 10 kg) and support it (e.g. with a wooden beam) and lock it with screw (W).
7. Remove the old belt (C1), to do this manually rotate the pulley P until the space in front of the sensors (Z) is free.
8. Use a wrench to rotate the belt tensioner (T) to remove the belt (C2) .
9. Fit the new belt (C2) and release the tensioner T .
10. Fit the new belt (C1) .
11. Loosen the screw (W), the belt is stretched by the motor weight.
12. Tighten the screws (V) of the motor support.
13. Close the rear door (S).

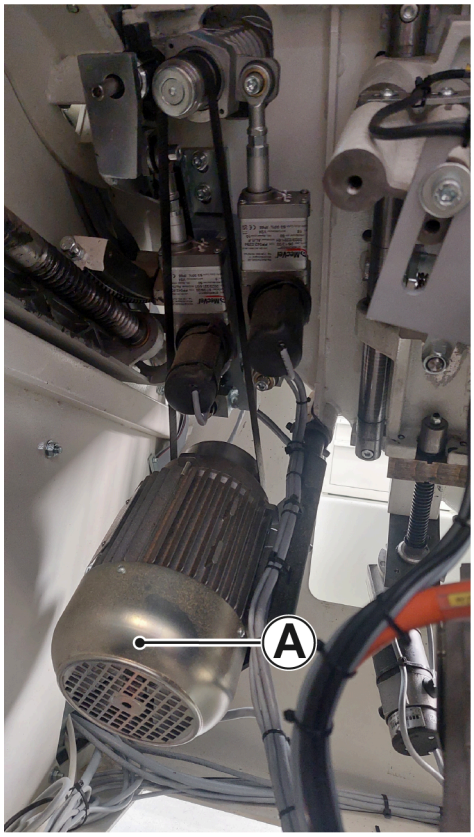

S
T
C1
P
Z
W
V

10.6.2 Scorer spindle

1. Set the saw unit to a position corresponding to the half of its stroke.
2. Discharge the system by pressing the button (B) on the control panel.
3. Open the rear door (S).
4. Set the main switch to zero, padlock it and place a sign indicating the situation.
5. Take off the rear door.
6. Lift motor (A, weight approx. 10 kg) and support it (e.g. with a wood traverse): in this way it is possible to replace the belt.
7. Fit the new belt.
8. Lower the motor.
9. Manually make the belt cover 2 or 3 complete turns so that it may get the right settling.
10. Close the rear door (S).

NOTE

The scorer belt remains always stretched by the motor weight.



10.7 Belt stretching

DANGER

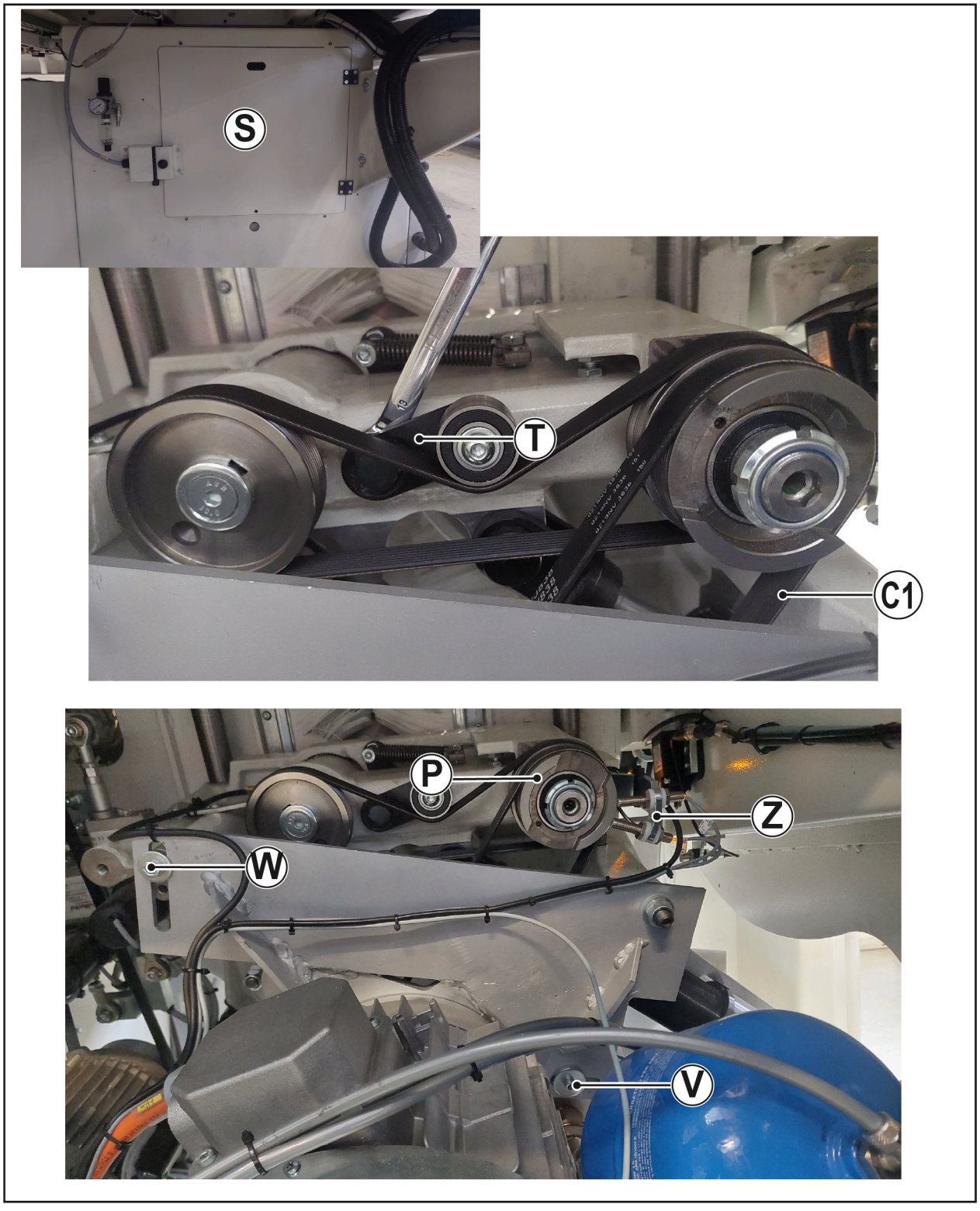
Dopo un primo periodo di assestamento o dopo molte ore di lavoro, può verificarsi l'allentamento delle cinghie di trasmissione.

Questo provoca un aumento del tempo di arresto della lama principale.

The belt tension is right if, by applying a 3 kg force in the middle of the belt, you get an elastic flexion of approx. 2 mm.
To stretch the belts proceed as follows.

10.7.1 Saw blade spindle

1. Set the saw unit to a position corresponding to the half of its stroke.
2. Discharge the system by pressing the button ("**11**").
3. Open the rear door (S).
4. Set the main switch to zero, padlock it and place a sign indicating the situation.
5. Loosen the screws V of the motor support, the belt (C1) is stretched by the motor weight.
6. Tighten the screws V of the motor support.
7. The belt (C2) remains always stretched by the tensioner T.
8. Close the rear door (S).


S
T
C1
P
Z
W
V

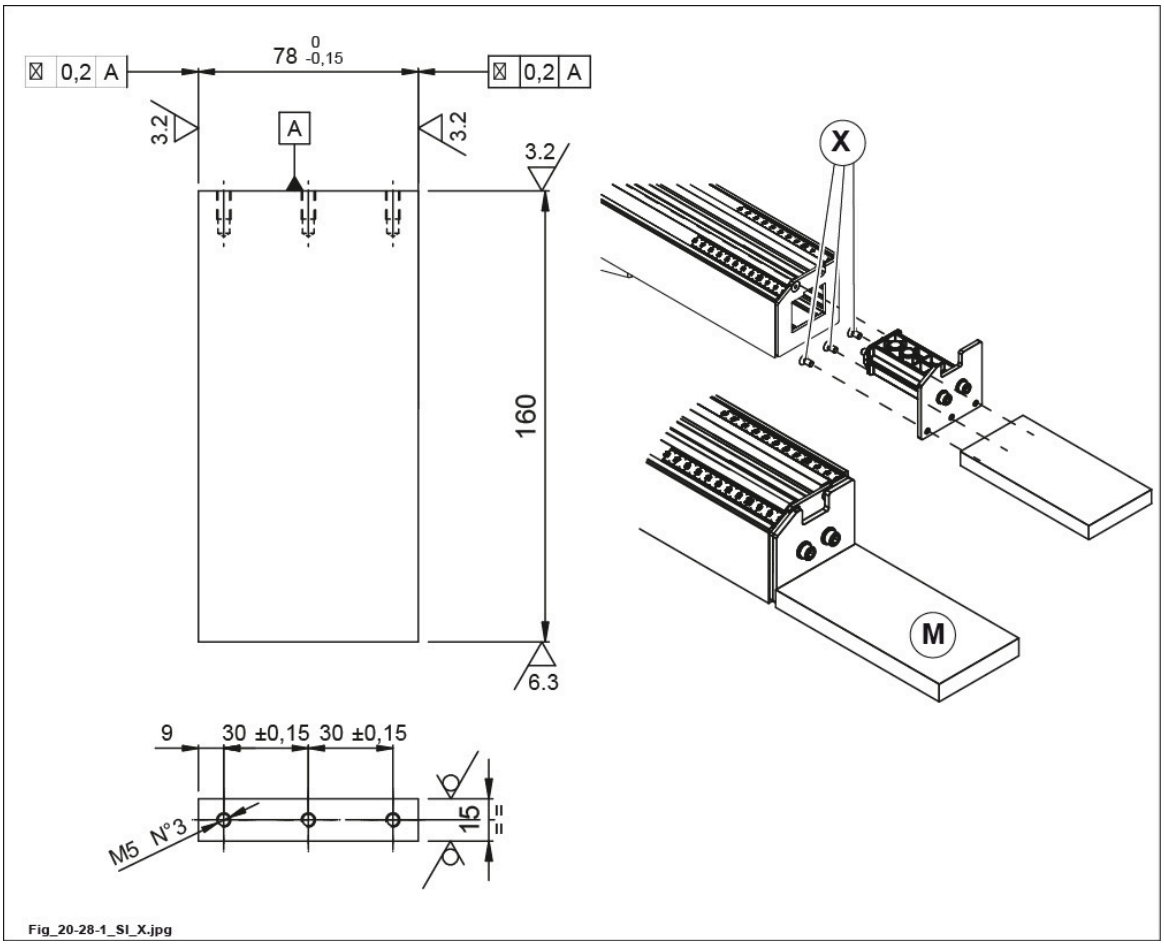
10.8 Making the parts which get worn

10.8.1 Replacing the chip breaker

If it is necessary to replace the wooden part (M), contact:

- to SCM dealer;
- or to SCM Spare Parts Department,

Alternatively, it is possible to produce a replacement using beech wood and respecting the original measurements.
To replace the worn splinter guard, unscrew the screws (X).
Reassemble the new splinter guard and tighten the screws (X).



10.9 Problems - Causes - Solutions

This section indicates some solutions for problems that may arise while using the machine.
It is important to intervene only after having read everything related to the problem in detail, whether it is found in the following pages or in the rest of the manual.
In case of troubles not described here, apply to SCM Technical Service.

PROBLEM	CAUSES	REMEDIES
La lama si esclude all'avvio o durante il taglio	Materiale troppo umido	Use material with a humidity level as described in paragraph "Blade Off System".
	Materiale contenente parti metalliche	See system Bypass indications as described in paragraph "Blade Off System".
	Sensori non posizionati o guasti	Mettere fuori servizio la macchina e chiamare il Servizio Assistenza SCM.
The machine does not start.	No electrical energy on one or more phases of the line.	Check that there is voltage in the three phases in the laboratory.
	The fuses of the auxiliary circuit are interrupted or the fuse block cover is open.	Close the fuse block cover (located inside electric cabinet). If the machine does not start: 1- Open the fuse block cover. 2- Check the integrity of fuse, if necessary, replace them. 3- Adjust the braking unit as described in paragraph "Self-braking motor"
	Emergency on.	Switch off the emergency button by turning it.
	Saw unit guard open.	Close the guard.
	Motor compartment door open	Close the door
	Overload triggered	Reset overload located inside electric cabinet
	Motor brake off.	Rotate the brake release selector switch to position  (brake locked).
	The selector switch is  not in the correct position.	Turn selector to: -  to use mobile control panel; -  to use the push-buttons on the carriage.
	Main switch turned to “**0**” (OFF).	Turn it to “**I**” (ON).
	Pneumatic system pressure too low	Check the correct pneumatic supply of 7 bar.
	The blade off system is not loaded.	Press the system load button A (see the button"**10**" of the paragraph "Control board").

PROBLEM	CAUSES	REMEDIES
The machine stops during machining	No electrical energy on one or more phases of the line.	Check that there is voltage in the three phases in the laboratory.
	The fuses of the auxiliary circuit are interrupted or the fuse block cover is open.	Close the fuse block cover (located inside electric cabinet). If the machine does not start: 1- Open the fuse block cover. 2- Check the integrity of fuse, if necessary, replace them. 3- adjust the braking unit as described in paragraph "Self-braking motor"
	Operation too demanding in relation to the motor power.	Wait for the cooling of the thermal cut out protection. Reactivate it after a few minutes.
The scorer does not start	The saw motor is not on.	Start the saw motor.
	Pneumatic system pressure too low.	Check the correct pneumatic supply of 7 bar.
The brake is not released when the selector switch is set to .	The fuses of the auxiliary circuit are interrupted or the fuse block cover is open.	Close the fuse block cover (located inside electric cabinet). If the brake is not released: 1- Open the fuse block cover. 2- Check the integrity of fuse, if necessary, replace them. 2- Check the integrity of fuse, if necessary, replace them. 3- adjust the braking unit as described in paragraph "Self-braking motor"
The motor rotates but the saw blade stops when it is in contact with the piece.	The belts are slack.	Tighten the belts as described in paragraph " Belt stretching"
The cut measure on the panel does not correspond to the measure read on display of the rest rule.	The rest rule has moved.	Recalibrate the rule as described in Chapter "Using and adjusting the support frame and parallel guide".
	The millimetre rule has moved.	Set the rule.
The cut measure on the panel does not correspond to the measure read on the rest rule.	The rest rule has moved.	Recalibrate the rule as described in Chapter "Using and adjusting the support frame and parallel guide".
	The millimetre rule has moved.	Set the rule.
The cut measure on the panel does not correspond to the measure indicated by pointer of the parallel fence.	The millimeter rule has moved.	Zero the guide as described in Chapter"Using and adjusting the support frame and parallel guide".
The saw blade “rubs” the panel after the cut.	Fence not parallel to the saw blade.	Apply to Technical Service of SCM dealer.
The cut is not parallel.	Fence not well adjusted.	The fence position to the saw blade hall be adjusted in order to have on the exit side a micrometric “opening” (offset) equal to 0.10 mm. To adjust the position of the fence in relation to the saw blade, call the Manufacturer’s Technical Assistance Office SCM.

PROBLEM	CAUSES	REMEDIES
The parallel cuts are not squared.	The aluminium rule for making squared cuts is not fitted correctly.	Adjust the position of holes (A) as follows: unscrew the grub screw (C) that holds the eccentric in place and rotate the bush in the desired direction. Tighten the grub screw and make a test cut to check that the ruler is perpendicular. • OPT Adjust the position of the coupling plates (P) by unscrewing the screws (V), and then tighten the screws again. Make a test cut to check that the ruler is perpendicular.
The saw blade lifting or tilting does not occur.	Motor faulty.	Replace the motor.
	The electric control is not working.	See electronic control manual supplied with machine.
	The fuses of the auxiliary circuit are interrupted or the fuse block cover is open.	Close the fuse block cover (located inside electric cabinet). If the machine does not start: 1- Open the fuse block cover. 2- Check the integrity of fuse, if necessary, replace them. 3- adjust the braking unit as described in paragraph "Self-braking motor"
	START pushbutton has not been pressed.	Press the START (2) pushbutton.
	The blade off system is not loaded.	Press the system load button A (see panel photo).
The power fence with electronic control does not operate.	The fuses of the auxiliary circuit are interrupted or the fuse block cover is open.	Close the fuse block cover (located inside electric cabinet). If the machine does not start: 1- Open the fuse block cover. 2- Check the integrity of fuse, if necessary, replace them. 3- adjust the braking unit as described in paragraph "Self-braking motor"
	START pushbutton has not been pressed.	Press the START (2) pushbutton.
	The electric control is not working.	See electronic control manual supplied with machine.
The electronic control may not be started.		Make sure that the fuse on the supply unit of the electronic control inside the electric cubicle is efficient.
The SKV100 – SKV200 electronic reader display is off.	Battery dry.	Replace the battery: type LR14-1.5V unscrew the cover (A) at the positions indicated in the figure, depending on the type of application keep the right direction of the polarity.

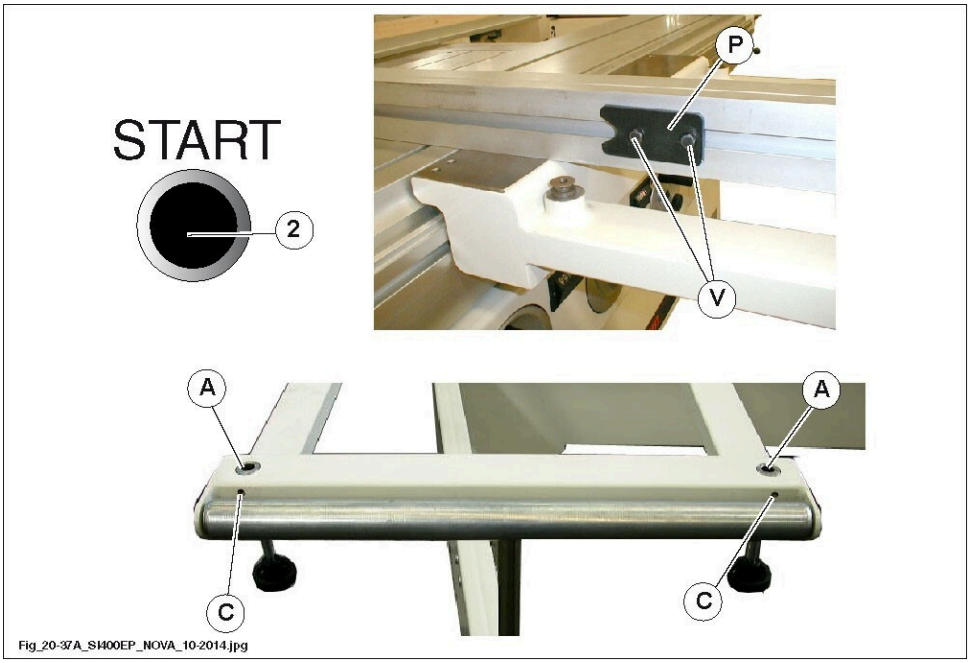


Fig_20-37A_SH00EP_NOVA_10-2014.jpg

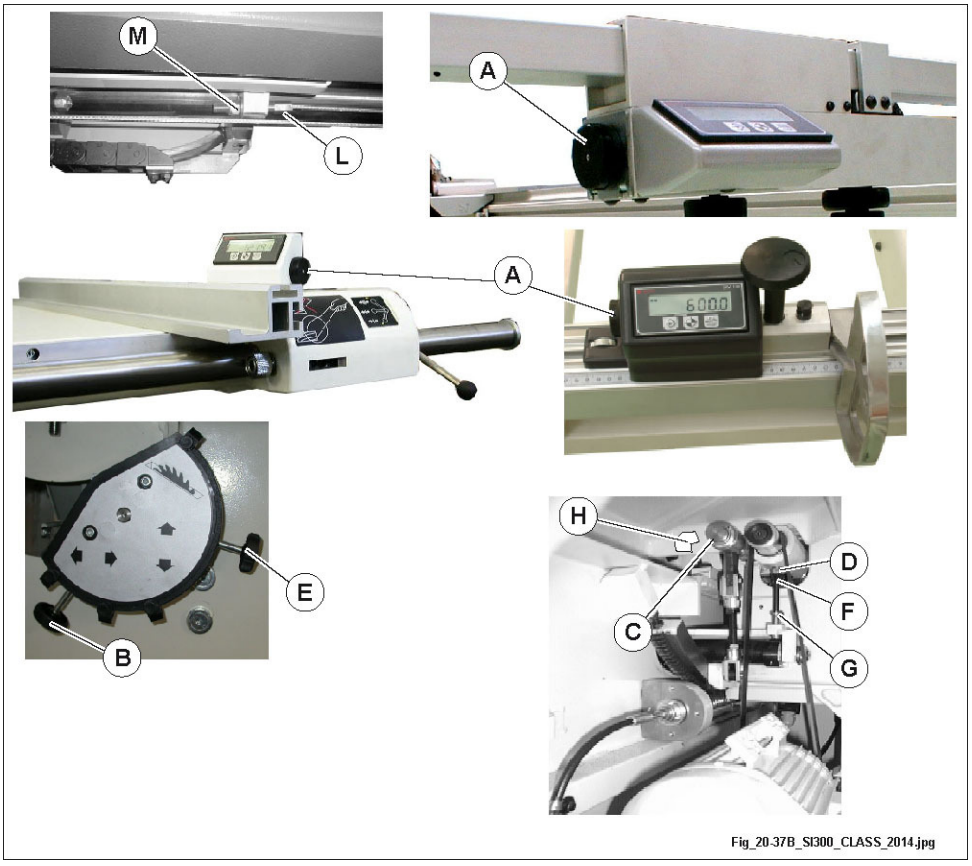
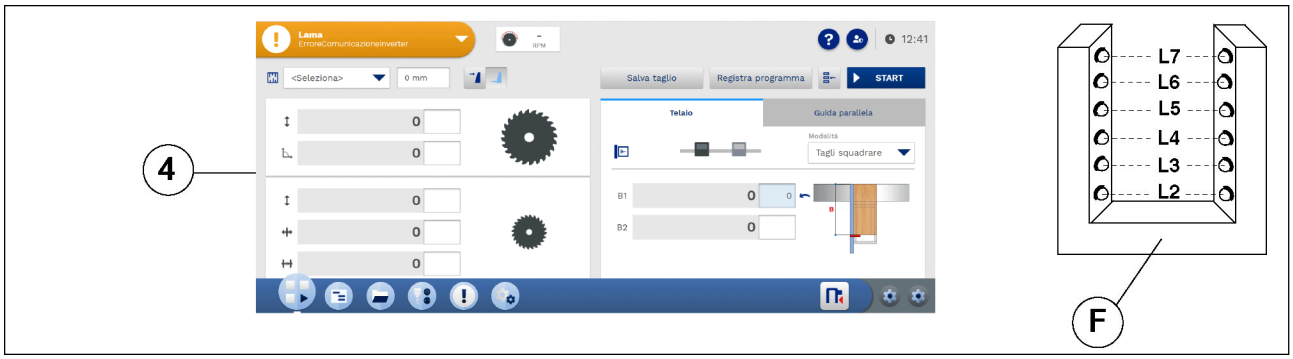


Fig_20-37B_SI300_CLASS_2014.jpg

10.10 Error messages of speed display fitted to the "Fork" when the inverter is not present

The following errors may appear on display (4):

PROBLEM	CAUSES	REMEDIES
ERROR No. - 1		
	There is no communication between control and fork (F).	Check the wiring between the fork and the control.
ERROR No. - 2 / - 3 / - 4 / - 5 /- 6 / - 7 (they correspond to the LEDs of the fork F, L2 - L3 - L4 -L5 - L6 -L7)		
	LED fault.	Replace the fork.
ERROR No. - 8		
	Belts missing, or positioned incorrectly.	Reposition the belts. If the fault persists call your SCM dealer Service Department.
	LEDs dirty.	Clean all the LEDs with a dry cloth.
ERROR No. - 9		
	The belts are not positioned correctly, they select only one LED.	Reposition the belts. If the fault persists call your SCM dealer Service Department.
	LEDs dirty.	Clean all the LEDs with a dry cloth.
ERROR No. - 10		
	The belts are not positioned correctly, they select more than two LEDs.	Reposition the belts. If the fault persists call your SCM dealer Service Department.
	LEDs dirty.	Clean all the LEDs with a dry cloth.
ERROR No. - 11		
	The belts are positioned incorrectly.	Reposition the belts. If the fault persists call your SCM dealer Service Department.



10.11 Error messages of the encoder and SRF20 device



The error codes for the inverter and the SRF20 safety device, which controls the tool speed, appear in the tool speed setting field on the Electronic Control (see booklet attached to the machine).

There are 3 types of alarm codes:

Fxxxx: inverter alarms

To reset these alarms, select field "Impostazione velocità dell'utensile" (Tool speed setting) on the Electronic Control (see booklet attached to the machine).

The alarm is reset, if the cause of the alarm has been solved.

Otherwise, solve the cause and repeat the operation

- xxxx: alarms in board SRF20

see table in chap. 20.40 to reset these alarms

Bxxxx and Cxxxx: Can open and RS422 alarm codes

see chapter 20.42 to reset these alarms

10.12 Errors generated by the inverter checking device

OPT

To reset these alarms, select field "Impostazione velocità dell'utensile" (Tool speed setting) on the Electronic Control (see booklet attached to the machine).

Overload		
CODE	**MEANING**	**CAUSE / REMEDIES**
F0100 / F0102	Overload inverter	Generated when the current exceeds the maximum threshold for a time longer than the time allowed to protect the motor It can occur when the machining starts in acceleration ramp The machining must start with the tool at the operating speed
F0103	Short term overload inverter (1s)	Check the inverter parameters
Dissipater temperature		
CODE	**MEANING**	**CAUSE / REMEDIES**
F0200	Dissipater temperature too high	Check: • the electrical cabinet temperature • the operation of the fan
F0201	Dissipater temperature too low	Check: • the operation and parameters of the inverter • the ambient temperature
Internal temperature		
CODE	**MEANING**	**CAUSE / REMEDIES**
F0300	Internal temperature too high	Check: • the electrical cabinet temperature • the operation of the fan
F0301	Internal temperature too low	Check: • the operation and parameters of the inverter • the ambient temperature
Motor connection		
CODE	**MEANING**	**CAUSE / REMEDIES**
F0400	Motor temperature higher than the limit value or temperature sensor damaged	Let the motor cool down
F0401 /F0402	Errors due to an incorrect inverter configuration	Call the technical support office
F0403	Lack of an engine phase	Check: • the connections between inverter and motor • the windings of the motor
Output current		
CODE	**MEANING**	**CAUSE / REMEDIES**

F0500	Motor current overload	Generated when the current exceeds the maximum threshold for a time longer than the time allowed to protect the motor It can occur when the machining starts in acceleration ramp The machining must start with the tool at the operating speed Let the motor cool down
F0503	Short circuit towards motor ground	Check: • the connections between inverter and motor • the windings of the motor
F0504	Motor overload	Generated when the current exceeds the maximum threshold for a time longer than the time allowed to protect the motor It can occur when the machining starts in acceleration ramp The machining must start with the tool at the operating speed Let the motor cool down
F0505 / F0506 / F507	Asymmetric current on the motor phases or current on one phase too high	Check: • the connections between inverter and motor • the windings of the motor
DC link voltage		
CODE	**MEANING**	**CAUSE / REMEDIES**
F0700	DC link voltage too high	Check: • the inverter parameters • that the rotation speed set is compatible with the tool installed • the wiring of the braking resistor • the braking resistor (50 Ohm for 7.5Kw inverter)
F0701 / F0702 / F0703 / F0704 / F0705 / F0706	Network voltage too low or phase missing	Check: • the machine supply voltage • the wiring of the inverter and the protection fuses
Electronic voltage		
CODE	**MEANING**	**CAUSE / REMEDIES**
F0801	Electronic voltage on the inverter too low	Check the wiring of the terminals X210A and X210B of the inverter Call the technical support office
F0804	Electronic voltage on inverter too high	
Braking		
CODE	**MEANING**	**CAUSE / REMEDIES**
F1010	Braking resistor overcurrent	Check: • the inverter parameters • the wiring of the braking resistor • that the rotation speed set is compatible with the tool installed • the braking resistor (50 Ohm for 7.5Kw inverter)
Output frequency		
CODE	**MEANING**	**CAUSE / REMEDIES**
F1100 - F1101	The limit frequencies set in the parameters have been reached	Check the inverter parameters Call the technical support office
STO safety functions		
CODE	**MEANING**	**CAUSE / REMEDIES**

F1201	Incorrect connection of the STO inverter inputs	Check the wiring of the STO inputs on the motor drive circuit
F1204	Internal inverter software alarm	Call the technical support office
F1205	Incorrect connection of the STO inverter inputs	Check the wiring of the STO inputs on the motor drive circuit
Motor connection		
CODE	**MEANING**	**CAUSE / REMEDIES**
F1300	Dispersion to ground of motor current	Check: • the connections between inverter and motor • the windings of the motor
F1301 / F1310	Current limit thresholds reached	Check: • the inverter parameters • the connections between inverter and motor • the windings of the motor
Control link		
CODE	**MEANING**	**CAUSE / REMEDIES**
F14-- / F0A-- /F0A--	Internal Alarms	Call the technical support office
Can Open		
CODE	**MEANING**	**CAUSE / REMEDIES**
FFFF / F2025	Can Open Alarm	The machine has switched off and back on before the inverter has switched off completely

10.13SRF20 error codes

Safety functions check alarms. To reset wait 1 minute from the motor stop or from the end of the alarm condition ⚠ CAUTION: for safety reasons in case of -00BX alarm, the SRF20 disables the inverter therefore, if the motor is rotating, wait for the stop due to inertia		
CODE	**MEANING**	**REMEDIES**
• 00B0	The motor speed is higher than the speed set.	Call technical support if this error appears frequently.
• 00B1	There is no motor running contactor return	Check the wiring of the SRF20 and of the motor running contactor
• 00B3	The motor running command has been given with the tool released	
Speed sensor control alarms To reset wait 1 minute from the motor stop or from the end of the alarm condition		
CODE	**MEANING**	**REMEDIES**
• 00C0	There is no motor speed sensor reading or motor stopped	Check: • the operation and the wiring of the speed sensor • the motor running circuit • the operation and the wiring of the inverter
• 00C1	Speed sensor damaged (reads at reduced speed) or inverter damaged	Replace the speed sensor Check the inverter operation Check the parameters of the NC
• 00C2	Motor braking time greater than 10 seconds	Check: • that the rotation speed set is compatible with the tool installed • the wiring of the braking resistor • the braking resistor (50 Ohm for 7.5Kw inverter)
• 00C3	The SRF20 detects the tool rotation without the running command	Check the wiring of the SRF20
• 00C5 (Speed dropped below 10%)	Speed sensor damaged (reads at reduced speed) or inverter damaged Machining too demanding has stopped the motor	Replace the speed sensor Check the inverter operation Check the parameters of the NC
• 00C6	Incorrect Dip Switch configuration of the SRF20 (rotation direction check)	Call the technical support office
Returns control alarms To reset switch off and then on the machine ⚠ WARNING: for safety reasons in case of -00DX alarm, the SRF20 disables the inverter therefore, if the motor is rotating, wait for the stop due to inertia		
CODE	**MEANING**	**REMEDIES**
• 00D0	When the motor is switched on the motor running contact return stays high	Check • the running contactor • The wiring of the SRF20 and of the running contactor
SRF20 control alarms To reset switch off and then on the machine		
CODE	**MEANING**	**REMEDIES**

• 00E1 / -00E2 / -00E3 / -00E4 / -00E5 / -00E6 / -00E7 / -00E8	Internal alarms of the SRF20 device	Call the technical support office
• 00E9	Motor braking time greater than 10 seconds for 3 times	Check: • that the rotation speed set is compatible with the tool installed • the wiring of the braking resistor • the braking resistor (50 Ohm for Inverter 7.5Kw, 30 Ohm for Inverter 11Kw)
• 00EA	Inconsistent signals on one of the redundant inputs of the SRF20	Check the wiring of all the redundant inputs
• 00EB	Incorrect Dip Switch configuration of the SRF20 (machine model)	Call the technical support office
• 00EC	Incorrect SRF20 wiring (both runnings at the same time)	Call the technical support office
• 00ED	Missed reading on one of the two inputs of the speed sensor	Check the wiring of the speed inputs
Emergency circuit check alarms To reset switch the machine off and back on and perform the reset procedure described for the alarm code 00F1		
CODE	**MEANING**	**REMEDIES**
• 00F0	After an alarm condition of the SRF20 the motor running command has remained hooked	Check • the running circuit wiring • that the running contactor is not glued • that the emergency relay of the SRF20 is not glued
• 00F1	When the machine is switched back on after a -00F0 alarm the SRF20 generates the -00F1 alarm, from which the board can be reset	Press the motor start key. The SRF20 starts an automatic test cycle of the emergency circuit. If the test is positive the board is reset If the test fails the -00F0 alarm returns. In this case repeat the checks for this alarm or call the technical support office

10.14 Spare parts that affect the operator's health and safety

DANGER

Use only original spare parts SCM. The manufacturer will not be responsible for any damages due to the use of non-original spare parts.

"In the spare parts catalogue the letter "C" indicates the codes of spare parts which affect operator health and safety.

See below for an extract of the spare parts catalogue containing only the codes of spare parts that affect the health and safety of the operators. They may be present on your machine and can be installed by the user.

SPARE PARTS THAT CAN BE INSTALLED BY THE USER

The following spare parts can be installed by the user:

- the signals and the safety plates (see paragraph "Plates on the machine", for the identification codes consult the Spare Parts Catalogue).

These spare parts can be installed by expert personnel instructed by the user.

DANGER

For all other spare parts which can be installed by the Manufacturer’s SERVICE, consult the Spare Parts Catalogue.

NOTE

The entire electrical system of the machine is functional to the machine's safety.

The user is therefore NOT AUTHORISED to perform any repair/replacement intervention of electrical components, apart from any indicated in this manual.

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