Translation of the original operating instructions

This manual must be kept for future reference and must always remain with the machine

S41 ELITE S

INSTRUCTION MANUAL

CE

THICKNESSER FOR WORKING WITH WOOD AND MATERIAL WITH SIMILAR PHYSICAL CHARACTERISTICS



Rel. 0.0 / 04-2013 **00L0130572A** **EN**

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MANUFACTURER:	**SCM INDUSTRIA S.p.A.**
ADDRESS:	**Via Valdicella, 7 - 47892 - Gualdicciolo - Rep. San Marino**
DESIGNATION:	**THICKNESSER FOR WORKING WITH WOOD AND MATERIAL WITH SIMILAR PHYSICAL CHARACTERISTICS**
BRAND:	**MINIMAX**
TYPE:	**SP-01**
MODEL:	**S41 ELITE S**
SERIAL N°:	
TYPE OF DOCUMENT:	**INSTRUCTION MANUAL**
DOCUMENT CODE:	**00L0130572A**
EDITION:	**Rel. 0.0 / 04-2013**
CONFORMITY:	CE

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DICHIARAZIONE "CE" DI CONFORMITA'

(AI SENSI DELL' AII.IIA DELLA DIRETTIVA 2006/42/CE E DI ALTRE DIRETTIVE APPLICABILI)

"EC" DECLARATION OF CONFORMITY

(IN ACCORDANCE WITH ANNEX II A TO DIRECTIVE 2006/42/EC AND OTHER DIRECTIVES APPLICABLE)

IL FABBRICANTE: *THE MANUFACTURER:*	**SCM INDUSTRIA S.P.A** **VIA VALDICELLA 7 - 47892 GUALDICCIOLO (R.S.M.)**

DICHIARA CHE LA
DECLARES THAT THE

MACCHINA: *MACHINE:*	**PIALLATRICE A SPESSORE PER LA LAVORAZIONE DEL LEGNO E DI MATERIE CON CARATTERISTICHE FISICHE SIMILI** **THICKNESSER FOR WORKING WITH WOOD AND MATERIAL WITH SIMILAR PHYSICAL CHARACTERISTICS**		
MARCA: *BRAND:*	**Minimax**	N°DI SERIE: *SERIAL No:*	
TIPO: *TYPE:*	**SP-01**	ANNO DI COSTRUZIONE: *YEAR OF CONSTRUCTION:*	
MODELLO: *MODEL:*	**S41 ELITE S**		

E' CONFORME A TUTTE LE DISPOSIZIONI PERTINENTI DELLE SEGUENTI DIRETTIVE:
COMPLIES WITH ALL THE RELEVANT REGULATIONS IN THE FOLLOWING DIRECTIVES:

2006/42/CE	***2006/42/EC***
2004/108/CE	***2004/108/EC***

ORGANISMO NOTIFICATO CHE HA EFFETTUATO L'ESAME CE DI TIPO: *NOTIFIED BODY WHICH DELIBERATED ON THE "EC" TYPE EXAMINATION CERTIFICATE*	**CERMET Soc. Cons. arl. - NB 0476** **HEADQUARTER ITALY - VIA CADRIANO, 23** **40057 CADRIANO di GRANAROLO E. (BO) ITALY**
NUMERO DI ATTESTATO D'ESAME CE DI TIPO: *NUMBER OF "EC" TYPE EXAMINATION CERTIFICATE*	**C09E223/03**

PERSONA AUTORIZZATA A COSTITUIRE IL FASCICOLO TECNICO: *PERSON AUTHORISED TO PRODUCE THE TECHNICAL FILE:*	**SCM GROUP spa Via Emilia n°77** **I - 47921, Rimini (RN) - ITALY**

IL RAPPRESENTANTE DELEGATO DEL FABBRICANTE
THE MANUFACTURER'S REPRESENTATIVE

CITTA'*, *DATA,

*** IDENTIFICAZIONE FIRMATARIO ***
FIRMA AUTOGRAFA

[IT] LINGUA ORIGINALE DICHIARAZIONE
[EN] TRANSLATION OF DECLARATION ORIGINAL LANGUAGE

FACSIMILE OF THE COPY OF THE "EC" DECLARATION PRINTED ON WATERMARKED PAPER THAT IS DELIVERED TO THE CUSTOMER

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1.1 AIM OF THE HANDBOOK

(ev-1-1_0.0)

Responsible for the introduction of the machine onto the EU market in compliance with article 9, paragraph 2 of the EMC 2004/108/EC Directive
SCM GROUP S.p.A. Via Emilia n.77, I-47921, Rimini (RN) - ITALY

This handbook has been written by the machine manufacturer and is an integrating part of the machine[2].
The information serves for qualified technicians[3].

With this handbook we wish to give you all information regarding to the use and maintenance of the machine: in this way you are sure to protect the production as well as the equipments.

The handbook defines the proper use of the machine and gives all information necessary for:
- right use of the machine
- working economy
- long operation life

If the instructions are always kept, it is possible to guaranty safety conditions for the operator, safe machine operation, service economy and a longer life of the machine.

To make the easier, the handbbok is divided in proper sections.
To quickly find the subject, see the Contents.



NOTE-INFORMATION:
some images present in this handbook may:
- not exactly correspond to the real machine version when this does not influence the validity of the information and instructions described and does not prejudice the safe operation.
- Be indicated without safety guards in order to make the parts described in the text more visible.



DANGER-WARNING:
the safety guards are necessary to ensure the safe machine operation and the working without the safety guards is forbidden.

SCM sales organization is always at your disposal for any technical problem (reparation, spare part delivery etc.) and to improve your business.
Keep this handbook for future information besides it shall always be with the machine.
SCM is not responsible for damages caused by wrong use or maintenance of the machine.

For any technical problem apply to SCM dealer:

2 The definition "machine" replaces "S41 ELITE S" machine name.

3 Technicians who, thanks to their technical background and experience, are able to recognize and to avoid possible dangers during:
- the machine transport
- the installation
- the machine use and maintenance.

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1.2 MACHINE IDENTIFICATION

(gg-1-2_0.0)

Machine data are punched on the metallic plate applied to the side of the machine frame.

Designation		Abbreviated, conventional description of the machine designation and its function
Marca		Merchandise mark
Anno		Production year
N° Serie		Serial number
kg		Weight (kg)
Tipo		Machine type
Modello		Machine model
Un	V	Rated voltage (volt)
~		Phases number (alternate current)
In	A	Rated current (ampere)
F	Hz	Frequency (hertz)
Icc.	kA	Short circuit breaking capacity of the protective device (kA)
w.d.		Wiring diagram number
Comp.		Machine configurations
Ref.		Internal references



1.3 MAIL CONTACT

(gg-1-3_0.0_ce)

Writing or telephoning to the dealer or to SCM for problems concerning your machine, always specify the following information:

1) machine model
2) serial number
3) voltage and frequency
4) purchase date
5) name of the dealer where the machine was bought
6) detailed information about the trouble
7) detailed information about the working to be carried out
8) period of use - number of working hours

Manufacturer's address:

SCM INDUSTRIA S.p.A.
Via Valdicella, 7
47892 - GUALDICCIOLO - (R.S.M.)
E-mail: info@minimax.sm
web-site: www.scmgroup.com

Assistance Department
from Italy: Tel. 0549/876910 - Fax. 0549/999604

from abroad: Tel. 00378 - 0549/876912 - Fax. 00378 - 0549/999604
E-mail: info@minimax.sm

Spare Parts Department
from Italy: Tel. 0541/674714 - Fax. 0541/674720

from abroad: Tel. 0039 - 0541/674714 - Fax. 0039 - 0541/674720
E-mail: mastolfi@scmgroup.com

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1.4 NOTES FOR THE USER

(gg_1-4_0.0_ce)

The handbook describes all operations required for the normal maintenance of the machine.
Do not carry out any operation not described in this handbook.
All operations which require to desmount machine members as well as maintenance operations shall be carried out only by authorized technicians.
For the correct use of the machine carry out the proper instructions given in this handbook.
Only trained and authorized technicians may use the machine and carry out maintenance operations.
Keep the general safety norms as well as the rules of industrial medicine.
Keep this handbook for future necessity.

NOTE-INFORMATION:
- use only SCM ***parts. The manufacturer is not responsible for damages due to the use of not original parts.***

1.4.1 ABBREVIATIONS USED IN THIS HANDBOOK

(gg-1-41_0.0_ce)

pag.	=	page
fig.	=	figure
par.	=	paragraph
chap.	=	chapter
i.e.	=	example
ref.	=	reference
DPI	=	Individual protective equipment (IPE)

1.4.2 ENCLOSED DOCUMENTATION

(mmax_1-4-2_0.0)

The following attachments are an integral part of this instruction manual:

- Electrical diagrams (read the number of the electrical diagram on the identification plate placed on the machine in the "W.D." line).
- Spare parts catalogue

NOTE-INFORMATION:
the electrical diagrams are for the exclusive use of competent technicians, therefore they are only in Italian and English.

1.5 SYMBOLS USED IN THIS HANDBOOK

(gg-1-5_0.0_ce)

OPT	***OPTIONAL = devices indicated in list price available only upon request.***

	***Operator position.***
	***DANGER-WARNING: imminent dangers could cause serious injuries; careful attention is needed.***
	***NOTE-INFORMATION: technical, very important information.***
	***READ-MANUAL: indicates that before using the machine, you must read the instructions manual and understand all its parts***
	***FORBIDDEN: indicates manouvres, commands or others that cannot be carried out as they can create very dangerous situations for persons and damage the machine.***
	***CAUTION: suitable measures should be taken to prevent accidents or to prevent things from being damaged.***
	**MACHINE OFF STATUS** efore carrying out any type of maintenance and/or making any adjustment to the machine, all of the power supplies (electric and pneumatic) must be switched OFF. Make sure that the machine is stopped power supplies electric and pneumatic (if is present) must be switched OFF. Make sure that the machine is stopped and that it is impossible for it to start up unexpectedly (main switch in the “0” position and locked; compressed air cut-off valve closed and compressed air cut-off valve closed and locked).

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Personnel who will be working on the machine must, apart from being professionally trained for the job, read the manuals paying particular attention to the safety regulations and the paragraphs relative to his area of competence. The machine operators are identified as follows:

	**ASSIGNED OPERATOR** A professionally trained operator who is at least 18 years old, in compliance with the laws in force in the country where the machine is being used, qualified to exclusively turn on, use, tool-up, set (only with the safety devices enabled and the machine turned off) and to switch off the machine, in full compliance with the instructions given in this with the instructions given in this manual.

	**MAINTENANCE ELECTRICIAN** A qualified technician (electrician with the technical/professional qualifications required by current regulations), authorized to exclusively carry out operations on the electric devices in making adjustments, performing maintenance and/or repairs, even with the power supply ON and the safety devices disabled (subject to the consent of the health and safety officer), in full compliance with the instructions given in this manual or in other specific documents furnished exclusively by the Manufacturer.

	**OPERATOR IN CHARGE OF MOVING THE MACHINE** A professionally trained operator who is at least 18 years old, in compliance with the laws in force in the country where the machine is being used, qualified to drive fork lift trucks, bridge cranes or cranes used to safely move the machine and/or parts of the used to safely move the machine and/or parts of the machine.

	**MAINTENANCE MECHANIC** A skilled technician qualifi ed to exclusively carry out operations on the mechanical, hydraulic and pneumatic parts of the machine, to make adjustments, perform maintenance and/or repairs, even with the safety device disabled (subject to the consent of the health and safety officer), in full compliance with the instructions given in this manual or in other specific documents furnished exclusively by the Manufacturer.

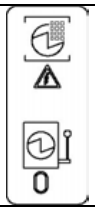
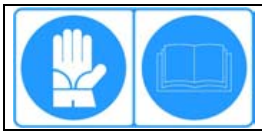
	**COMPANY HEALTH AND SAFETY OFFICER** A qualified technician, designated by the Client with the technical/professional qualifications required by current regulations relative to worker health and safety in the by current regulations relative to worker health and safety in the workplace.

	**MANUFACTURER'S TECHNICIAN** A qualified technician sent by the Manufacturer and/or Dealer who is authorized to provide required technical assistance, to perform routine and extraordinary maintenance operations and/or operations not referred to in this manual which require specific and detailed knowledge of the machine.

1.6 SYMBOLS ON THE MACHINE

(gc-1-6_0.0_ce)

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

	***Danger due to electric power***	**- B -**
	***Main electrical switch (padlockable)*** ***Danger due to electric power; when at zero (OFF), it cuts electrical power supply to the machine***	**- D -**
	***Use gloves for handling the tools*** ***Read the manual and follow the manufacturer's instructions***	**- E -**
	***Indicates the point where the hooks shall be applied for machine raising***	**- L -**

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	*Danger: cutting of upper limbs (rotating tools)*	- N -
	*Indicates the tool rotation direction*	- O -
	*Thickness switch on feed plate*	- T -

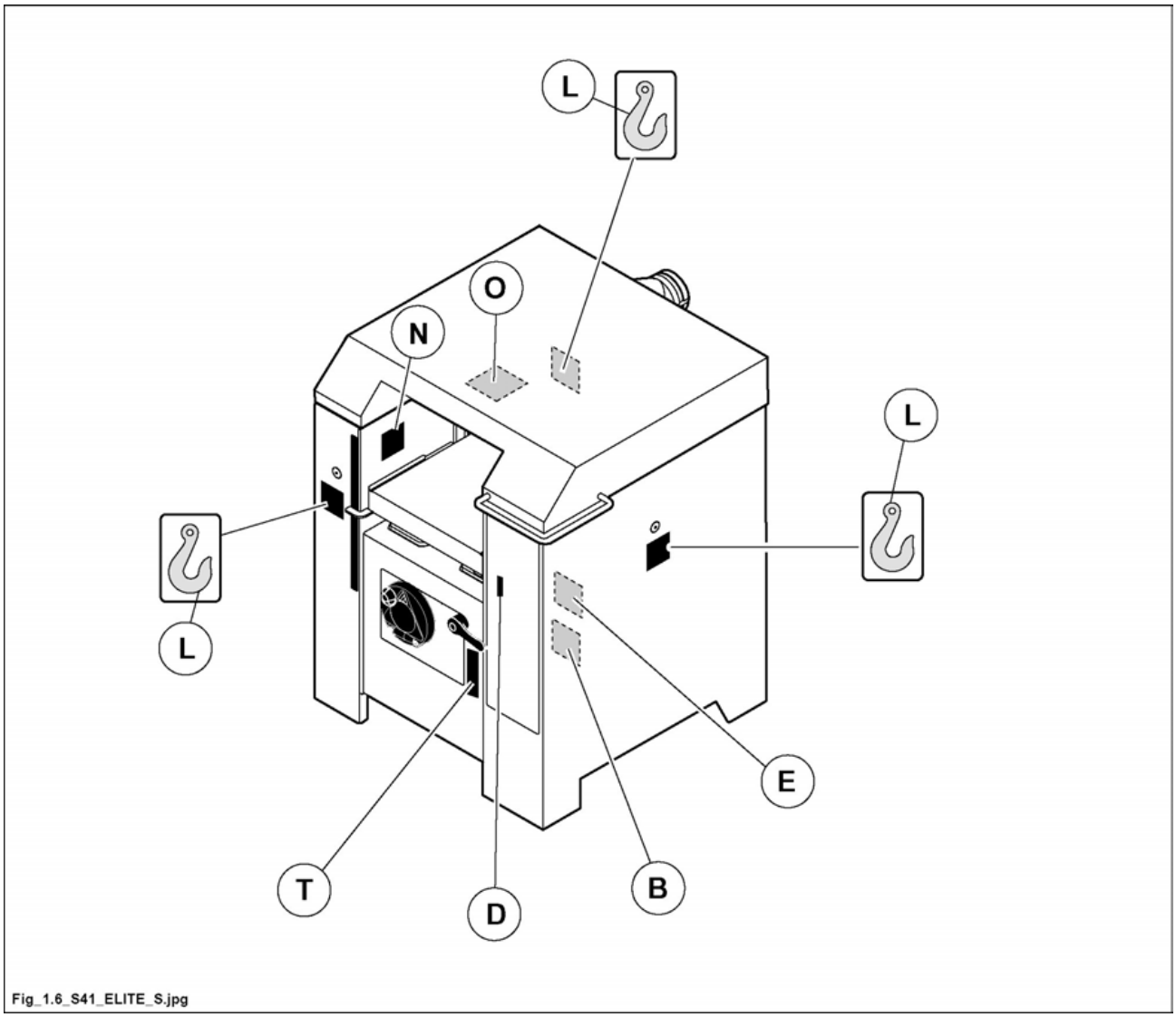


Fig. 1.6A

1.7 MACHINE DESCRIPTION

(fs_1-7_0.0)

The machine has been designed and manufactured for thicknessing solid wood pieces and wood based materials: therefore a different use of the machine is not permitted and the user is responsible for damaged caused.

The basic machine parts are herein referred to and described to make you quickly familiar with them since they shall be later mentioned in this manual. Please pay attention to the following descriptions:

1 - PLANING THICKNESS INDICATOR

2 - THICKNESSING TABLES

3 - WOOD SHAVING SUCTION HOOD

4 - PROTECTION BONNET

5 - CONTROL BOARD

6 - FEED ROLLER DRIVE LEVER

7 - SHIM LIFTING LOCK

8 - SHIM LIFTING (ELECTRICAL LIFTING ON REQUEST)

9 - THICKNESSING TABLE LIFTING DISPLAY

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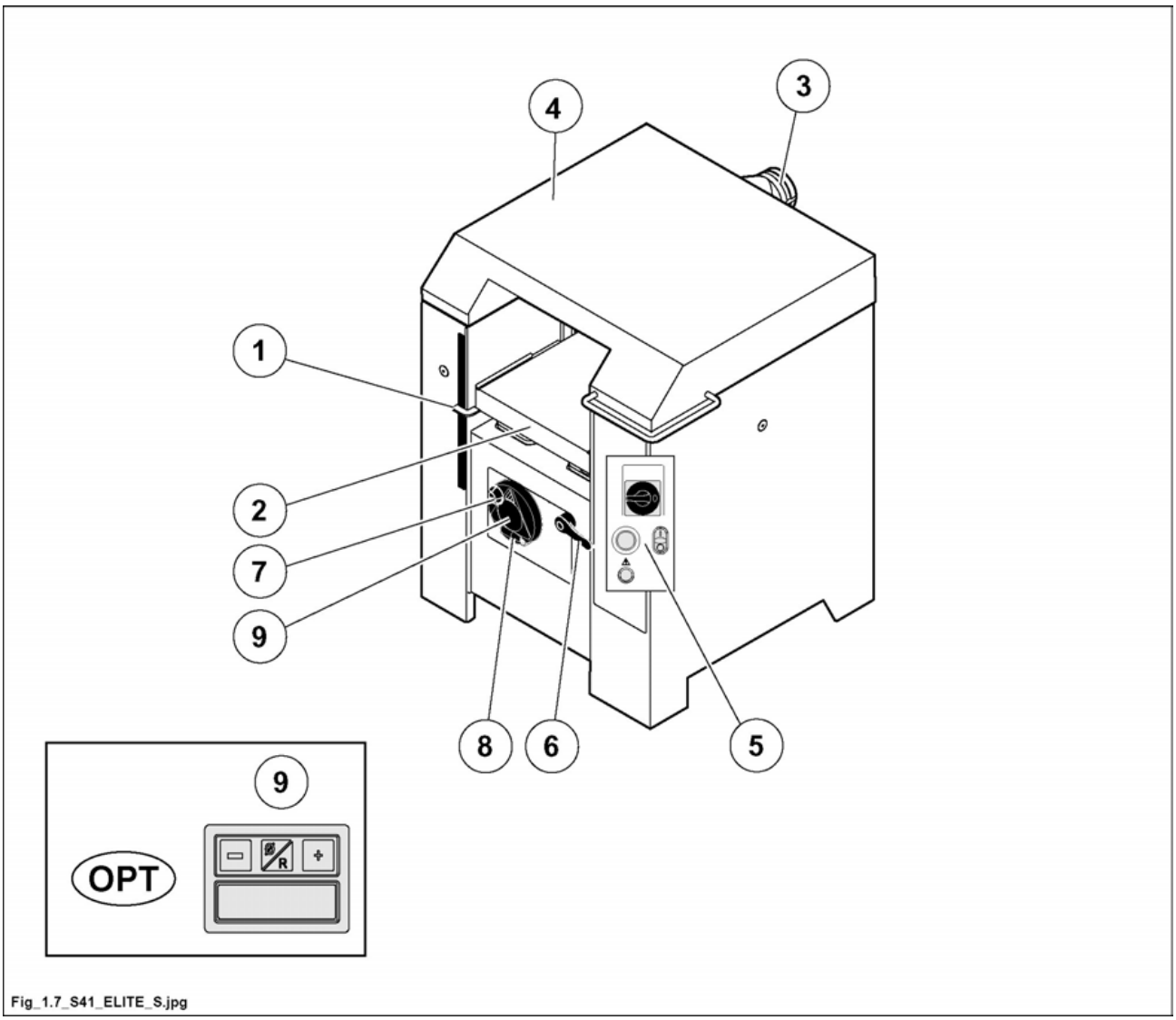


Fig. 1.7

1.8 CONDITIONS FORESEEN FOR THE USE

(ev_1-8_0.0)

The machine has been designed and manufactured for thicknessing solid wood pieces and wood based materials: therefore a different use of the machine is not permitted and the user is responsible for damaged caused.



DANGER-WARNING:
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.

1.9 TOOLS WHICH MAY BE USED

(ev_1-9_0.0)

The machine has been designed to use only tools for manual feed, in accordance with EN 847-1 Norm, proper for the material used.

By manual feed we mean the piece guidance by means of:
- the hand,
- the sliding table pushed by hand,
- the feeder.

1.10 WORKING ENVIRONMENT

(gg_1-9_0.0)

The machine can work under these conditions:
Max. humidity 90%
Temperature: Min. +1° C Max. +40° C
Max. altitudine sea level: 1000 m (in case of higher altitude apply to the machine manufacturer)

Always connect the machine to the suction system (see par. 4-5).

The machine may not be used in the open air.
The machine was designed for industrial use.

The machine may not operate in explosive rooms.

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1.11 INCORRECT USE THAT CAN BE REASONABLY EXPECTED

(1.1_(01-2010))

- DO NOT use the machine if you are not an authorised and trained operator.
- DO NOT use the machine in ways that differ from those that the machine has been designed for and 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 (Sect.1.8).
- DO NOT use the machine in environmental conditions that differ from the ones indicated above (Sect.1.10)
- 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.
- DO NOT machine materials of dimensions that the machine has not been designed for and that are not set out in this manual(Sect.1.8).
- 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.
- DO NOT allow children, domestic animals or any unauthorised personnel in the work area.

NOTE-INFORMATION:
performing modifications, voids the machine's Declaration of Conformity.
The user will be solely responsible for any damages resulting from improper use.

1.12 RESIDUAL RISKS

(ev_1-12_0.0)

Any machine tool may be potentially dangerous, do not forget it.
The final safety depends on you.

The machine is equipped with proper guards to ensure the safe machine operation.
Such guards are efficient if they are properly used and kept.

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 with the standstill or rotating tool.**
- **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.**
- **Dust inhalation in case of working without suction.**
- **Fulguration caused by contact with hot 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.**

1.13 OPERATOR'S TRAINING

(ev_1-13_0.0)

It is compulsory that the machine operator is trained for the machine set up and operation.
The operators shall carefully read this handbook and consider the safety rules.

In particular the training shall include:
a) the principles of the right use and operation of the machine.
b) The correct handling of the workpieces during the working.
c) The right position of the hands to the tools, before, during and after the cutting.
d) The right selection of the tools.
e) The piece feed to the tool which shall occur in the contrary direction to the spindle rotation direction.
f) The selection of the proper spindle speed required by the tool.

The operators are to be informed about the dangers due to the machine operation and about the precautions to be taken; besides the operator shall be able to carry out periodical tests on guards and safety devices.

NOTE-INFORMATION:
a padlock for locking the main switch of the power supply is required.
The authorized operator shall keep the key.

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SAFETY OVER ALL

1.14 SAFETY RULES

(gg_1-13_0.0)

1- Carefully read this instructions manual completely before starting the machine.
2- Carefully read the warning plates applied on the machine and comply with their indications.
3- Only correctly trained personnel can use the machine.
4- The operator training must include information about the dangers associated with using the machine and the precautions that he must observe.
5- The operator must trained on the correct use of the guards and safety devices.
Moreover he must be trained to perform regular controls on the aforementioned guards and safety devices.
6- The operator must never leave the machine unattended while it is operating.
7- This machine has been designed to be used by one operator.
8- This machine has been manufactured to provide maximum safety along with optimum performance.
9- Unauthorised changes to the machine release the manufacturer of any responsibility from any damages that may result.
10- Do not use the machine under the influence of alcohol, drugs or sleep inducing medication.

The safety depends on you. Any machine tool may be potentially dangerous, do not forget it.

1.14.1 PERSONAL SAFETY

(gg_1-13-1_0.0)

1- Before starting the machine the operator shall already have read the handbook.
Your eyes are the best safety device you have: carefully look before moving.
2- Experience teaches that there are various objects on a person that can cause injuries; take off rings, watches, bracelets; button your sleeves tightly around yuor wrists, take off ties that could be caught in tight places, keep hair gathered underneath proper nets (cap, elastics, hair pins). Use prescribed footwear usually recommended by all countries.

ALWAYS WEAR THE FOLLOWING INDIVIDUAL PROTECTIVE EQUIPMENT (IPE) (NOT SUPPLIED BY THE SCM**) BEFORE STARTING TO WORK:**

A- Proper aprons, e.g: aprons made of double leather with synthetic fiber cloth insertion (not supplied by SCM**) to protect the operator in case of splinters ejection.**
B- Glasses or protective shields for your eyes.
C- Proper means for ear protection.
D- Proper means against dust inhalation (masks).
E- Gloves for handling the blades.
F- Proper shoes with reinforced steel point and rubber soles.

1.14.2 MACHINE SAFETY

(ev_1-14-2_0.0)

DANGER-WARNING:
the machine must be fixed to the floor.
Fix the supplied angles (B fig. 4.2) to machine feet (A fig. 4.2) and fix on ground by means of expansion bolts (C fig. 4.2) (not supplied).

1- Be extremely careful when starting any working and periodically check the shields and safety devices.
2- Never start the machine without having properly closed the covers.
3- Before lifting the thicknessing table make sure that there are no wood residues on the table.
4- Before starting the machine make sure that the worktable is free from parts which do not relate to the working.
5- It is forbidden to move the table when the machine is running.
6- Do not machine workpieces too small or too big for the machine.
See relative paragraph 3.1 "DIMENSIONS OF WORKPIECE TO BE MILLED".
7- Do not machine pieces with defects (deflections, clefts, knots, metallic parts, ...).
8- Work only with all guards properly fitted and efficient.
The use of the machine is not permitted if such conditions are not kept.
9- In case of long pieces use roller tables or table extensions (not supplied by SCM).
10- It is necessary to connect all suction hoods to the suction system.
Before starting the working make sure that the suction system is switched on.
11- Test working to check the cutterblock adjustment may not carried out without the guards required.
12- After inserting the workpiece, move to the machine side.
13- Never try to remove the wastes or other parts of the workpiece from the working area when the machine is in operation.
14- Push the workpiece forwards by using a proper pusher or feeder.
15- After a given working period the transmission belts get slack; this may cause an increase of the time required to stop the tool. In that case immediately stretch the belts (see paragraph 20-28).
16- Periodically remove chips and dust to avoid fire risk: carry out this operation always with the machine off.
17- Every evening when the working is finished carefully clean the anti-kick back fingers and make sure that they can freely rotate. The presence of chips and dust in position corresponding to the anti-kick back fingers may damage the right machine operation. The opening of the anti-kick back fingers may cause the ejection of splints against the operator.
18- Remove the resin residues among the anti-kick back fingers by washing the entire unit with a brush and turpentine.
NEVER OIL OR GREASE THE ANTI-KICK BACK FINGERS.
Check that the non-return hammers are functioning efficiently after at least every hour of operation.
19- Adjustments to the guard and to the planer guide must be made when the machine is off.
20- Always fasten the machine to the floor.

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1.14.3 TOOLS SAFETY

(ev_1-14-3_0.0)

- Before fitting the tools, make sure that each support surface is clean, free from dents and perfectly flat.
- The tools shall be fitted and set when the machine is off, STILL TOOLS and with proper instruments (gauge, comparator).
- Make sure that the tools are perfectly balanced, sharp and well clamped.
  Not sharp tools reduce not only the quality of the finished piece but they increase the piece kickback danger.
- Fit the tools in the right working direction.
- Use only tools in accordance with EN 847-1 Norm and proper for manual feed.
- Before starting the machine make sure that the tools do not touch the fixed parts of the machine.
- Start working only when the tools have reached the right cutting speed.

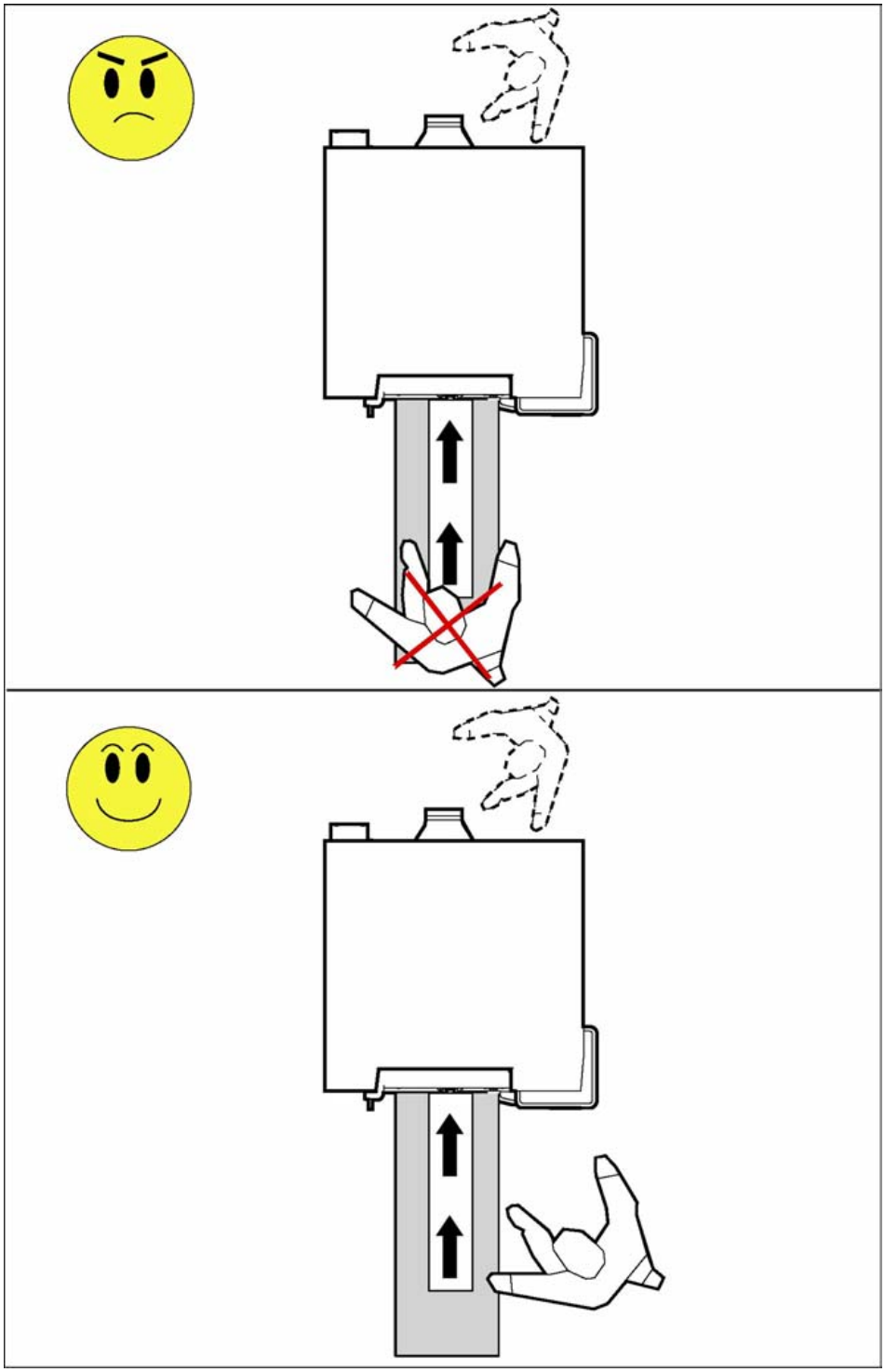
1.14.4 WORKING AREA SAFETY

(gg_1-13-4_0.0)

The working area shall have a good lighting and a sufficient room so that the operator is always out of a dangerous area.
The floor shall be well leveled to avoid slipping danger and also free from loose material (e.g. waste, chips).
Only the authorized operator may stay in the working area.
The operator shall never stay in the trajectory where eventual splits or tool parts are ejected.
If along this trajectory there is another work station (that is another machine) or a passage for persons, immediately install proper protective barriers.

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Operator position



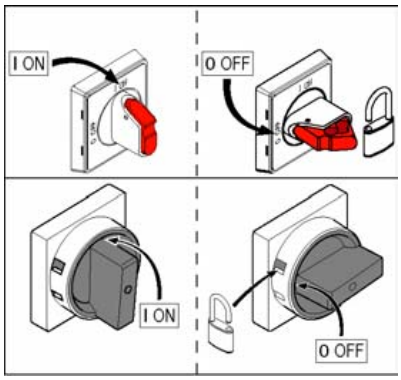
DANGER-WARNING
the operator must take a working position to the machine so that it is out of the dangerous area due to the reject phenomenon (shaded area in figure).
If along this trajectory there is another work station (that is another machine) or a passage for persons, immediately install proper protective barriers.

1.14.5 MAINTENANCE SAFETY

(ev_1-14-5_0.0)

DO NOT THINK that the electric current is switched off during the maintenance .... CHECK IT PERSONALLY!
Strictly follow the indications provided for the frequency of the controls and maintenance of devices subject to checks and/or wear.

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.
The operator who carries out the machine set up, maintenance and cleaning shall keep the only key.



2- Completely stop the machine before cleaning operations and before removing any guard to carry out the maintenance.
3- The general cleaning of the machine (in particular of worktable) and of the surrounding floor is an important safety factor.
4- Regularly carry out cleaning and maintenance operations: remove chips and dust to avoid fire risk.
5- Use proper gloves for handling the tools.
6- The tools require a regular maintenance: when necessary replace them.
7- In case of any trouble concerning the machine, the guards and the tools, it is necessary to immediately take the proper measures.

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1.15 EMERGENCY CONDITIONS

(ev_1-15_0.0)

DANGER-WARNING:
in case of flooding of the room where the machine is housed, immediately disconnect the electrical power supply. Before starting work, have the machine checked by a specialised technician.

DANGER-WARNING:
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.

A free space without obstructions must be provided around the machine (see par. 3.7), to allow fast escape in case of danger.

This machine must not be operated in explosive environments.

1.16 MACHINE REMOVAL - STORING - DEMOLITION

(ev_1-16_0.0)

To remove the machine, disconnect it from the electric and pneumatic system. Follow the instructions in chap. 4.

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

The machine is constructed in non-toxic unharmful materials. In case of demolition, separate the ferrous material from the plastic materials and send them to the respective scrap yards.

1.16.1 OUT OF ORDER MACHINE

(1.16.1)

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 chap. 4.

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2.1 Arrangement and description of emergency devices (Fig. 2.1).....2

2.2 Arrangement and description of safety devices (Fig. 2.2).....4

2.1 ARRANGEMENT AND DESCRIPTION OF EMERGENCY DEVICES (FIG. 2.1)

(ev-2-1.0.0)

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

DANGER-WARNING:
emergency devices must never be removed or disconnected for no reason whatsoever ("Machine Directive" 2006/42/CE).

Description

A - Emergency mushroom-head push-button:
it causes an immediate emergency stop.

CAUTION:
periodically, check that the devices, listed above, are efficient.

DANGER-WARNING:
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.***

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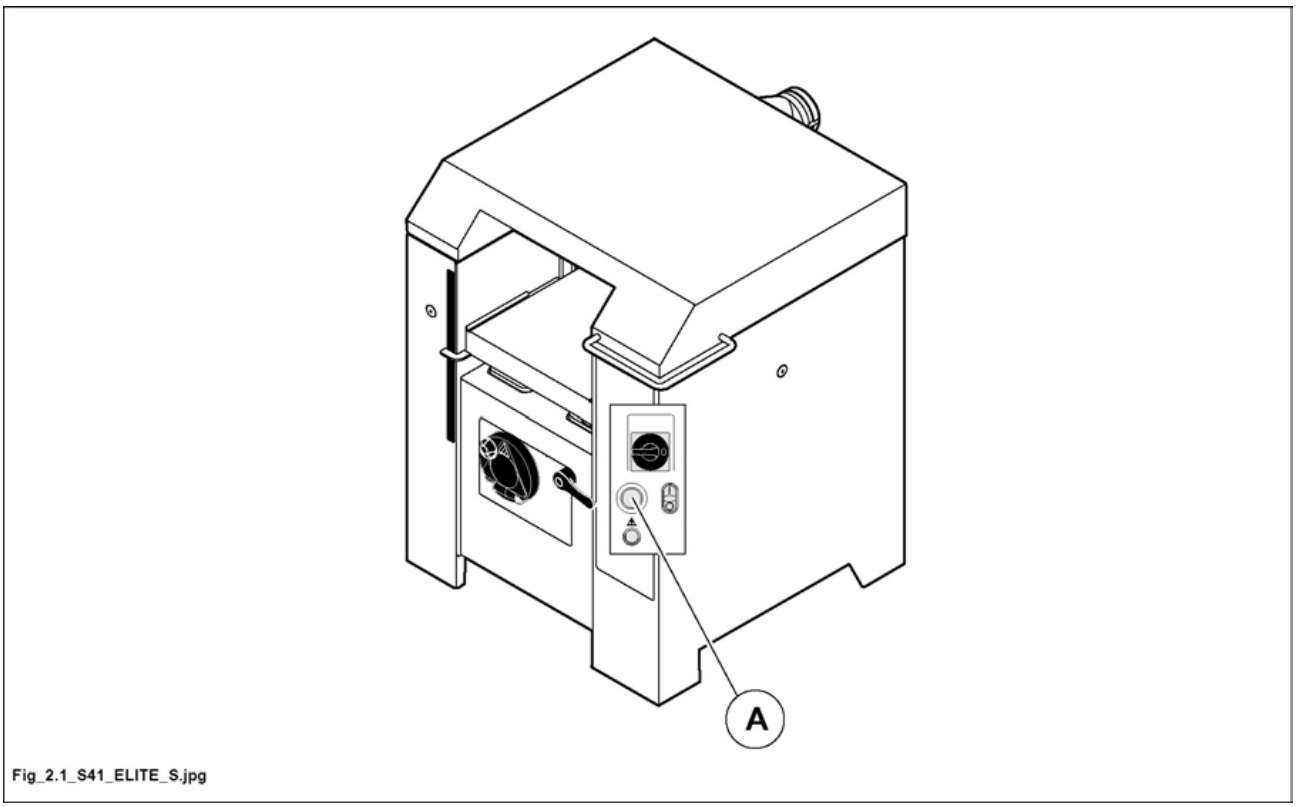


Fig. 2.1

2.2 ARRANGEMENT AND DESCRIPTION OF SAFETY DEVICES (FIG. 2.2)

(ev-2-2.0.0)

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

DANGER-WARNING:
emergency devices must never be removed or disconnected for no reason whatsoever ("Machine Directive" 2006/42/CE).

Description

A - Main electrical switch (padlockable):
when at zero (OFF), it cuts electrical power supply to the machine.

B - Anti-kickback fingers:
anti-kickback fingers, working with pieces of different thickness, prevent the workpiece to be thrown back towards the operator, thus providing an effective protection.

C - Guard for the cutterblock (C fig. 2.2).

D - Automatic brake:
it acts directly on working unit.

P - Plane microswitch:
it stops the machine when the top cover (S fig. 2.2) is raised.

CAUTION:
periodically, check that the devices, listed above, are efficient.

DANGER-WARNING:
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.***

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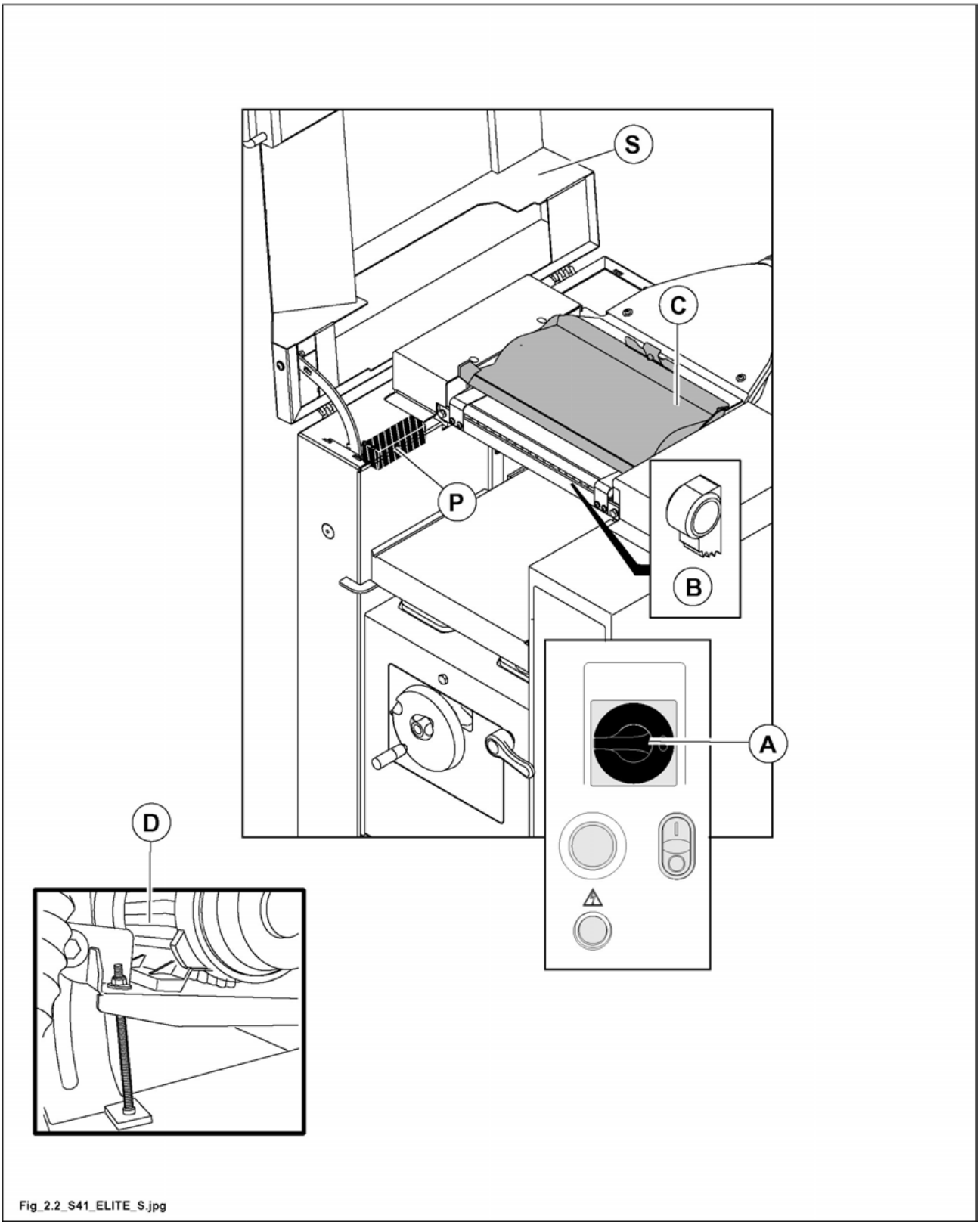


Fig. 2.2

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3.2 Technical data 2

3.3 Standard accessories 3

3.4 Optional accessories 3

3.5 Noisiness level 4

3.5.1 Dust emission 5

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3.7 Working area 7

3.1 DIMENSIONS OF WORKPIECE TO BE THICKNESSED

(fs_3-1_0.0)

Max. thickness	240 mm	
Max. length		**DANGER-WARNING: may be not defined; we recommend to use table extensions (not supplied by SCM) at entry and exit side in case of panels longer than 400 mm.**
Max. width	410 mm	
Min. thickness	3,0 mm	
Min. length	180 mm	**DANGER-WARNING: never machine shorter workpieces.**
Min. width	10 mm	**DANGER-WARNING: never machine shorter workpieces.**

3.2 TECHNICAL DATA

(fs_3-2_0.0)

GENERAL TECHNICAL DATA			
Worktable size		775x410	mm
Useful working length		410	mm
Max. depth of cut in one stroke		5	mm
Cutterblock diameter		95	mm
Knives		30x3x410	N° 4
Cutterblock speed		5000	rpm
Time required to stop the cutterblock		less than 10 sec.	
Motors:			
Motor power	50 Hz	5,0	kW
	60 Hz	6,0	kW
Technical details: see data plate on the motor Duty cycle: S6 - 40% (excluded from the energy efficiency constraints of EC Commission Regulation 640/2009) Conditions of service: see Par. 1.10			
Feed speed to thicknesser		6-12	m/min
Weight without mortiser: see identification plate on the machine			

AIR SUCTION TECHNICAL DATA		
Suction hood diameter	120	mm
Air speed	20	m/sec
Air consumption	814	m^3/h

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3.3 STANDARD ACCESSORIES

(fs_3-3_0.0)

1.st top feed roller (inlet side): steel scored roller
Steel feed roller (on the exit side)
Pressers on the entry side
Height adjusting of thicknessing table by handwheel
Knife setting gauge
N° 4 knives
Suction hood of 120 mm diameter
Handle for pusher

Planer spindle guards

Direct start of main motor
Numerical display for the vertical motion of the thicknessing table

Auto-brake motor
Set of wrenches for maintenance operations

3.4 OPTIONAL ACCESSORIES

(fs-3-4-0.0)

Rubber coated steel feed roller (on the exit side)
Power height adjusting of thicknessing table
Cutterblock with throw-away knives

Working height digital display

Main motor (three-phase) - S6 / 40%: ..... 7,0 kW - 50 Hz (8,0 kW - 60 Hz)
..... with automatic "0-star-delta" starting

3.5 NOISINESS LEVEL

(fs_3-5_0.0)

Operating conditions – **Thicknessing machine** (according to norm EN 860:2007+ A1:2009)*					
Measured size description		Reference norm	Uncertainity **K** (probability 68.27%)	**Thicknessing machine**	
Lop: sound pressure level at operator station dB (A) and peak level [dB(C)]	Operator station	EN ISO 11201:1995	2.5	**VSA**	**LAV**
	INPUT			77.6	87.9 [95.7]
	OUTPUT			75.0	84.2 [92.6]
Lw: sound power level dB (A) $_{re\ 1pW}$ [mW (A)]		EN ISO 3744:1995	2.0	90.1 [1.0]	97.7 [5.9]
The maximum istantaneus noise level pressure is under 130 dB (C).					
VSA : Idle working without suction			**LAV** : In operation		
*Refer to the test document N° 06158 (Rdp 06158) to analyse the actual operating conditions used to make the test, different from those operating conditions prescribed by the norm mentioned above.					

DANGER-WARNING
the noise levels which have been measured are emission levels and not levels of safe working. The relation between emission levels and exposure levels may not be used to determine whether further precautions are required. Factors which influence the real exposure level for the operator include the exposure time, the room features, further sound sources (as for example number of the adjacent working machines). Also the exposure levels permitted are not the same for all countries. Thank to this information the operator to evaluate the risks and the dangers.

Here are some factors which reduce the exposure to the noise:
- right tool selection
- machine and tool maintenance
- proper use of ear protective means

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3.5.1 DUST EMISSION

(mmax_3-5-1_0.0)

DUST EMISSION	
Operating conditions – **Thicknessing**	
Reference regulations: **BG-GS-HO- 05**	Dust emitted [mg/m^3]
Operator's site	< 2



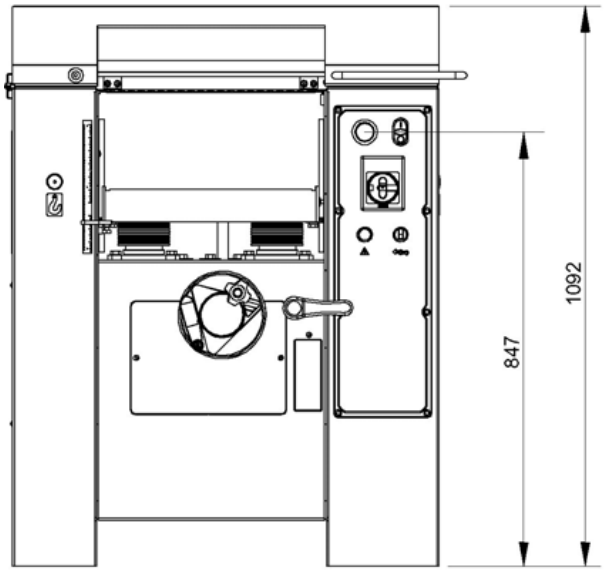
FORBIDDEN:
DO NOT USE COMPRESSED AIR.

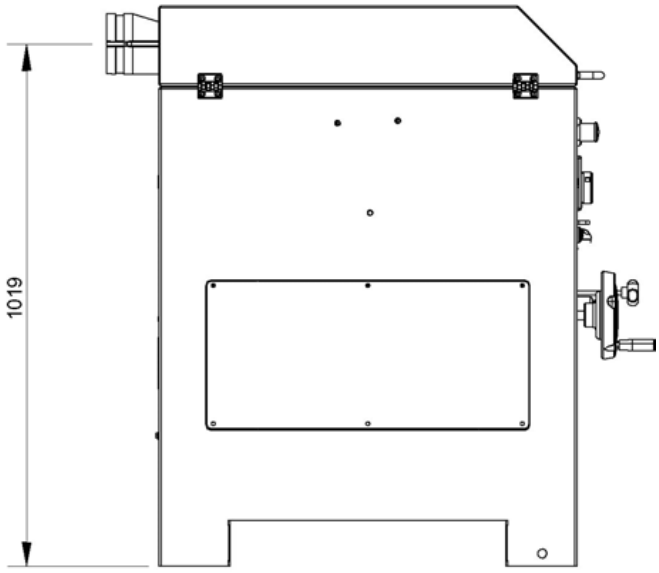


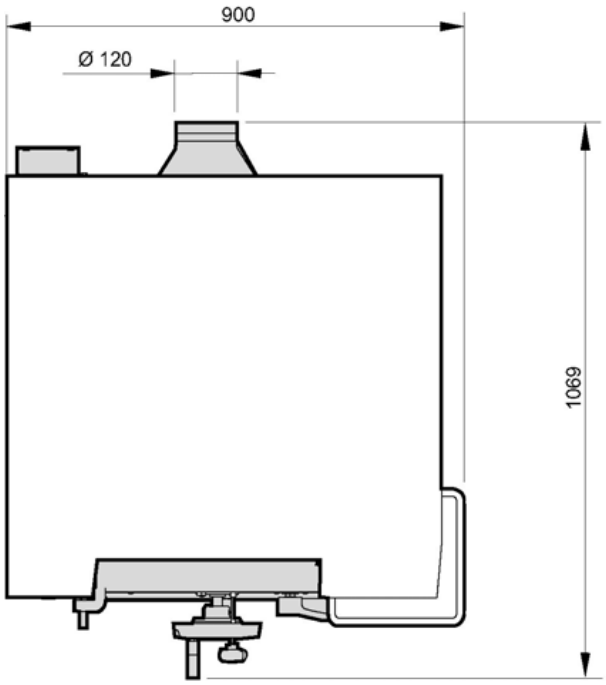
DANGER-WARNING:
it is necessary to connect all suction hoods to the suction system.
Before starting the working make sure that the suction system is switched on.

3.6 OVERALL DIMENSIONS

(fs_3-6_0.0)



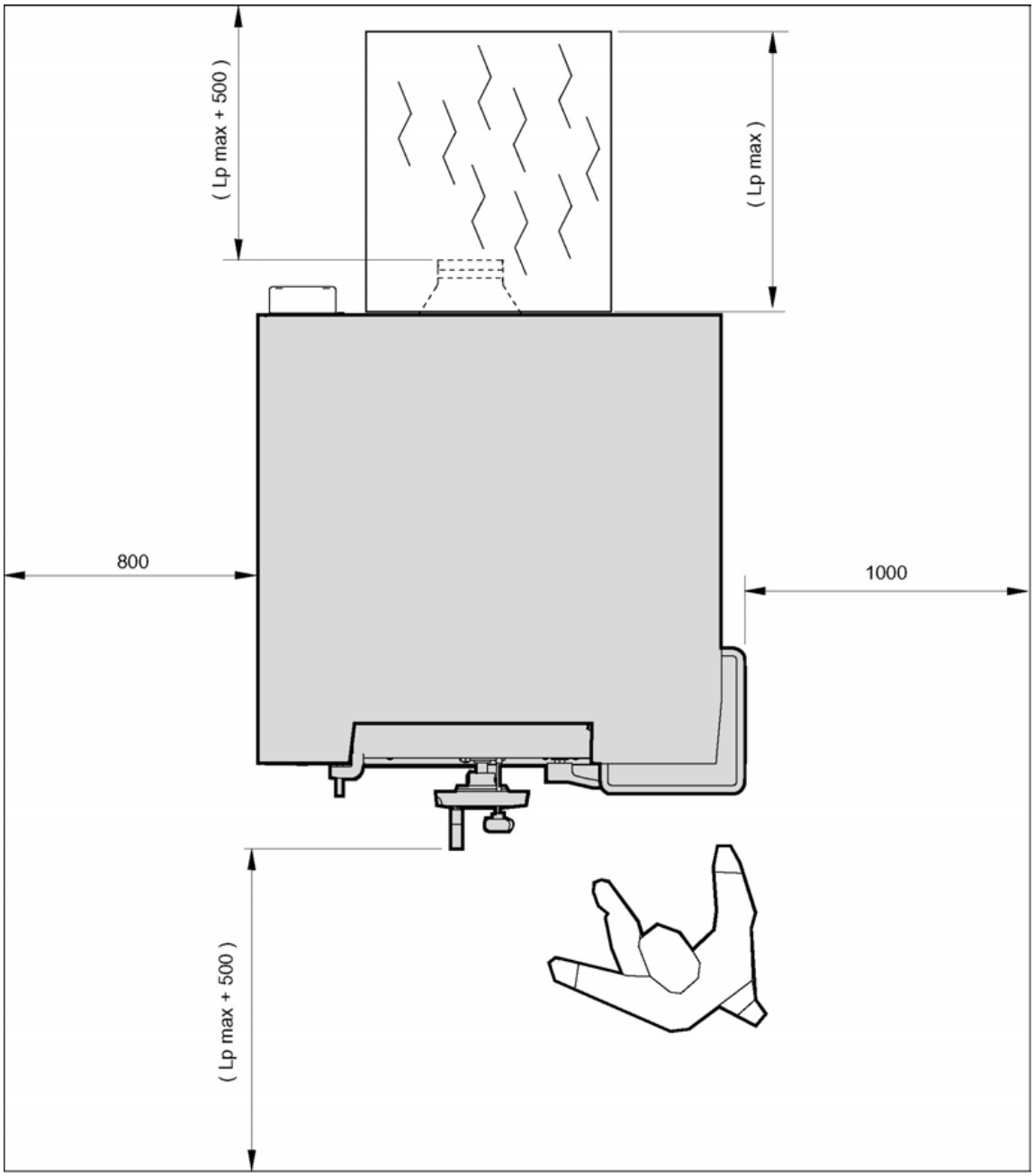




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3.7 WORKING AREA

(fs_3-7_0.0)



CAUTION:
the measures indicated above shall be considered as the free room around the machine.

DANGER-WARNING:
this machine has been designed to be used by one operator.

Lp max = Max. workpiece length

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4.1 Unloading the machine 2

4.2 Machine positioning 4

4.4 Electric connection and grounding 7

4.5 Connection to the suction system 10

4.1 UNLOADING THE MACHINE

(ev_4-1_0.0)

NOTE-INFORMATION:
the packing of the machine indicates:
- the weight to be raised
- the hooking areas

DANGER-WARNING:
lifting and handling should only be carried out by skilled personnel specially trained to execute this kind of operations. During loading and unloading, avoid knocks to prevent damages to persons or things. Make sure no one is standing under the overhung load and/or within the bridge crane working range during machine lifting and handling.

Before unloading the machine take off all parts rested on it for packing and transport reasons.

DANGER-WARNING:
- the machine shall be lifted by crane or other raising means by hooking the slings as shown in fig. 4.1.

If a bridge crane or a crane is available, proceed as follows:
– provide slings (C fig. 4.1) of equal lengths and capacity (belts minimum length 2000 mm);
– lift the slings and position them as is shown in the figure 4.1;
– fasten the slings to the bridge crane (D fig. 4.1) having adequate lifting power;
– move the bridge crane by small steps to allow the slings (C fig. 4.1) to settle, until optimum stability conditions are reached;
– lift carefully and slowly, without causing the load to swing, and place the machine in the selected setting.

NOTE-INFORMATION:
if lifting with a hook, open the holes already prepared and indicated by the plate as shown in the figure.

If hoisting is carried out with a lift truck A, proceed as follows:
– provide a fork lift truck (A fig. 4.1) having suitable carrying capacity;
– insert the forks (B fig. 4.1) as per the figure (keeping them alongside the two feet (E fig. 4.1) and check that these protrude at least 15 cm from the rear part of the base.

DANGER-WARNING:
- make sure that the crane, the slings as well as the fork truck are proper for lifting the machine.

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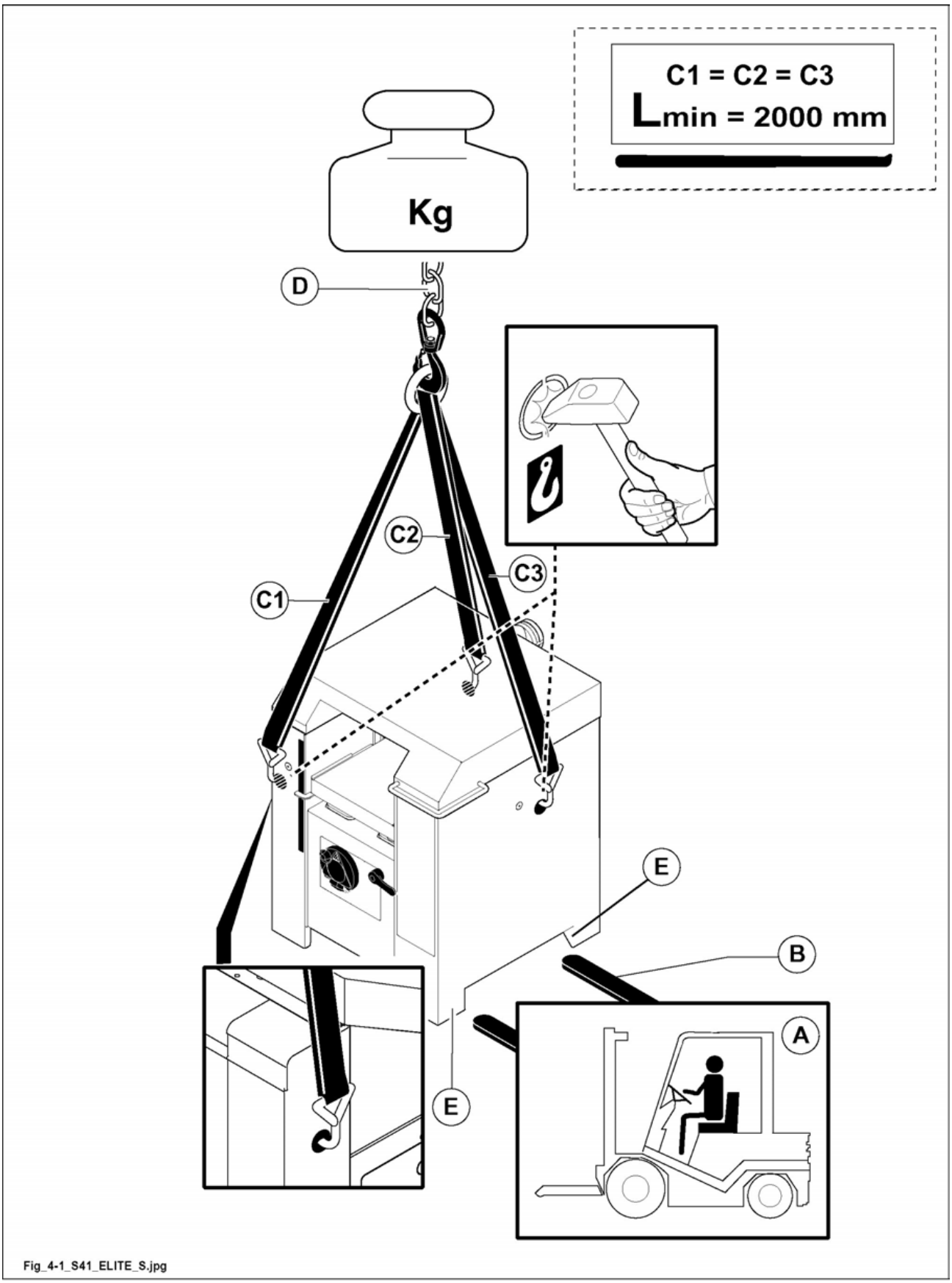


Fig. 4.1

4.2 MACHINE POSITIONING

(ev_4-2_0.0)

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-WARNING:
during the machine positioning you have to consider that, in case of longer pieces, a sufficient room is required to avoid squashing points towards the fixed parts of the working envinronment as walls, columns etc... (see par. 3.7).

Check that the floor is firm in order to ensure a uniform rest of the machine.
A concrete floor is recommended; an asphalt floor is not proper.
We recommend to insert steel plates between machine feet and floor eventually with vibration-dumping material.

DANGER-WARNING:
the machine must be fixed to the floor.
Fix the supplied angles B (fig. 4.2) to machine feet A (fig. 4.2) and fix on ground by means of expansion bolts C (fig. 4.2) (not supplied).

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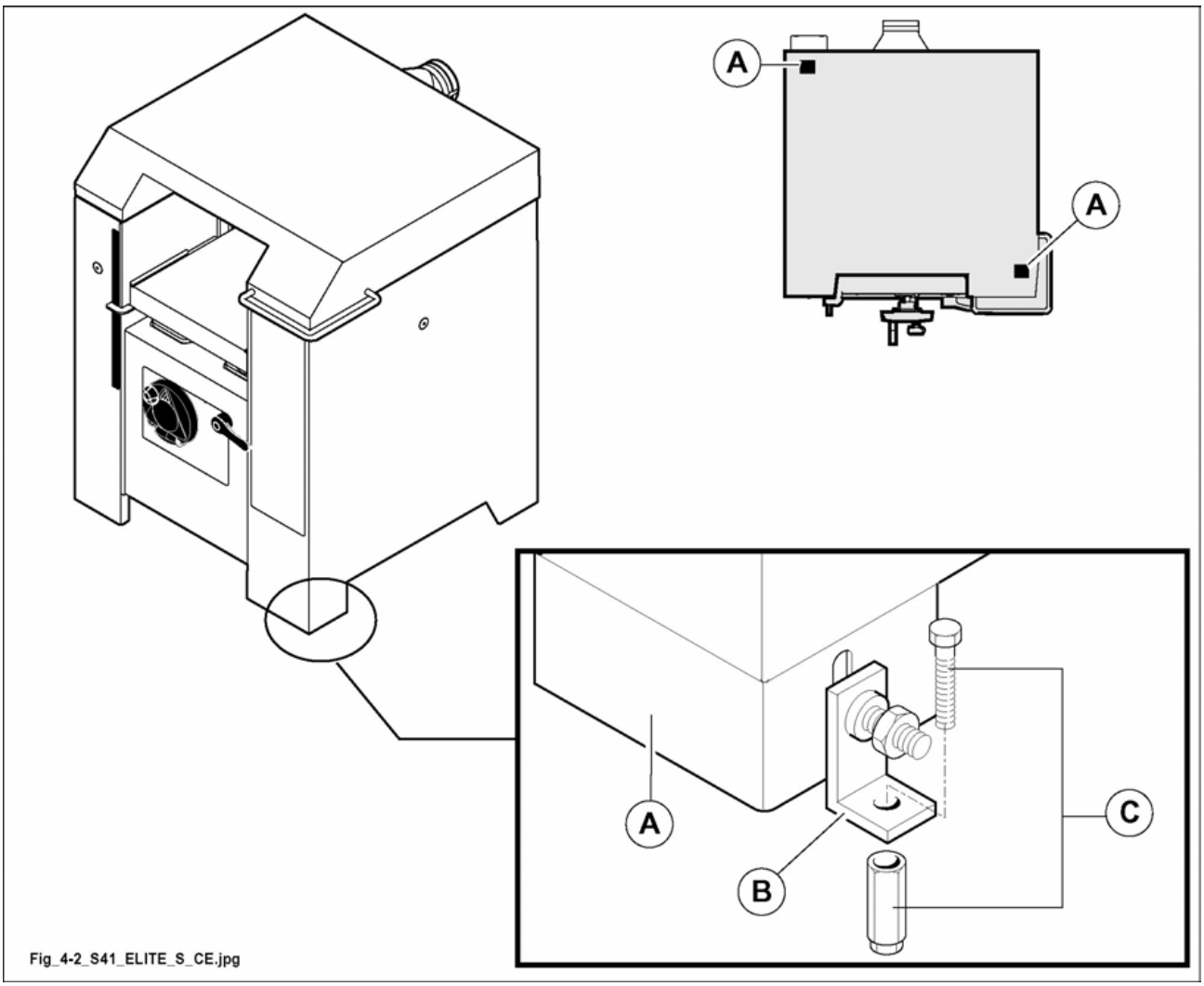


Fig. 4.2

(vuota_pg1)

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4.4 ELECTRIC CONNECTION AND GROUNDING

(ev_4-4_0.0)

DANGER-WARNING:
the electric connection as well as the check operations described later on shall be carried out by a skilled electrician.

Make sure that the main electric system of the factory can absorb the machine power and that earthing system meets the norms in force.

In the connection point the supposed short-circuit current shall be lower than 10 kA.
Make sure that the mains voltage corresponds to the machine one.

NOTE-INFORMATION:
the right working voltage is indicated on the plate fig.4.4; tolerance range: +/- 5%.

For voltage values out of this range you have to set the mains voltage.
Read out the value of the total absorbed current (Ampere) on the machine identification plate.

DANGER-WARNING:
use the table indicated below and select the cable section and the "RETARDED INTERVENTION" fuses to fit ahead of the machine.

ELECTRICAL INPUT (Amp.)	CABLE SECTION (mm²)	AM FUSE
0 → 10	2,5	12 A aM
10 → 14	4,0	16 A aM
14 → 18	6,0	20 A aM
18 → 22	6,0	25 A aM
22 → 28	10,0	32 A aM
28 → 36	10,0	40 A aM
36 → 46	16,0	50 A aM
46 → 54	16,0	63 A aM
54 → 76	25,0	80 A aM
76 → 92	35,0	100 A aM
92 → 110	50,0	125 A aM

DANGER-WARNING:
the machine is not protected against risks of electrocution due to indirect contact.

Machine protection against indirect contact is the responsibility of the Customer, which must use specialist personnel (electrician qualified to install electrical systems) for that purpose.

NOTE-INFORMATION:
with regard to this, in the following systems:

1) TT type, Low Voltage, mains-powered
2) TN type, Medium Voltage, mains-powered

the machine power supply line must be protected by type A or B Residual Current Devices, suitably coordinated with the user's earthing system.

For environments at greater risk of fire, the maximum value of the RCD trip current is 1A (even with delayed activation).

For TN type systems, the system must be type TN-S with separate neutral and protective earth conductors.

Connect the machine to the elecric system by proceeding as follows:

DANGER-WARNING:
ensure that the connection cable is not electrically powered.

- shut off the power (indicate it by a sign);
- take off the cover of the terminal board (C fig. 4.4);
- insert the supply cable into proper terminal screw (P fig. 4.4);
- connect the 3 phases to terminals L1-L2-L3 (fig. 4.4);
- connect the ground cable yellow-green, to terminal (⏚ / PE);
- if necessary connect neutral cable to terminal (N fig. 4.4);
- fit the cover of terminal board C;
- clamp terminal screw (P fig. 4.4).

Make sure that the cutterblock rotation direction is right (the cutterblock shall rotate to the direction opposite to the workpiece feed) after starting the machine: see chap. 5.

DANGER-WARNING:
CAREFUL WITH THE ELECTRICAL CONNECTION.
Incorrect rotation of the tool causes danger to the operator and damage to the product. Should rotation be incorrect, immediately switch off the power and invert two of the three phases on the terminals (L1-L2-L3).

CAUTION:
if the machine is connected by a mobile supply cable, use a flexible rubber cable marked H07RN-F or A07RN-F.
The relative socket shall meet DIN 49463 as well as IEC 309-1 and IEC 309-2.

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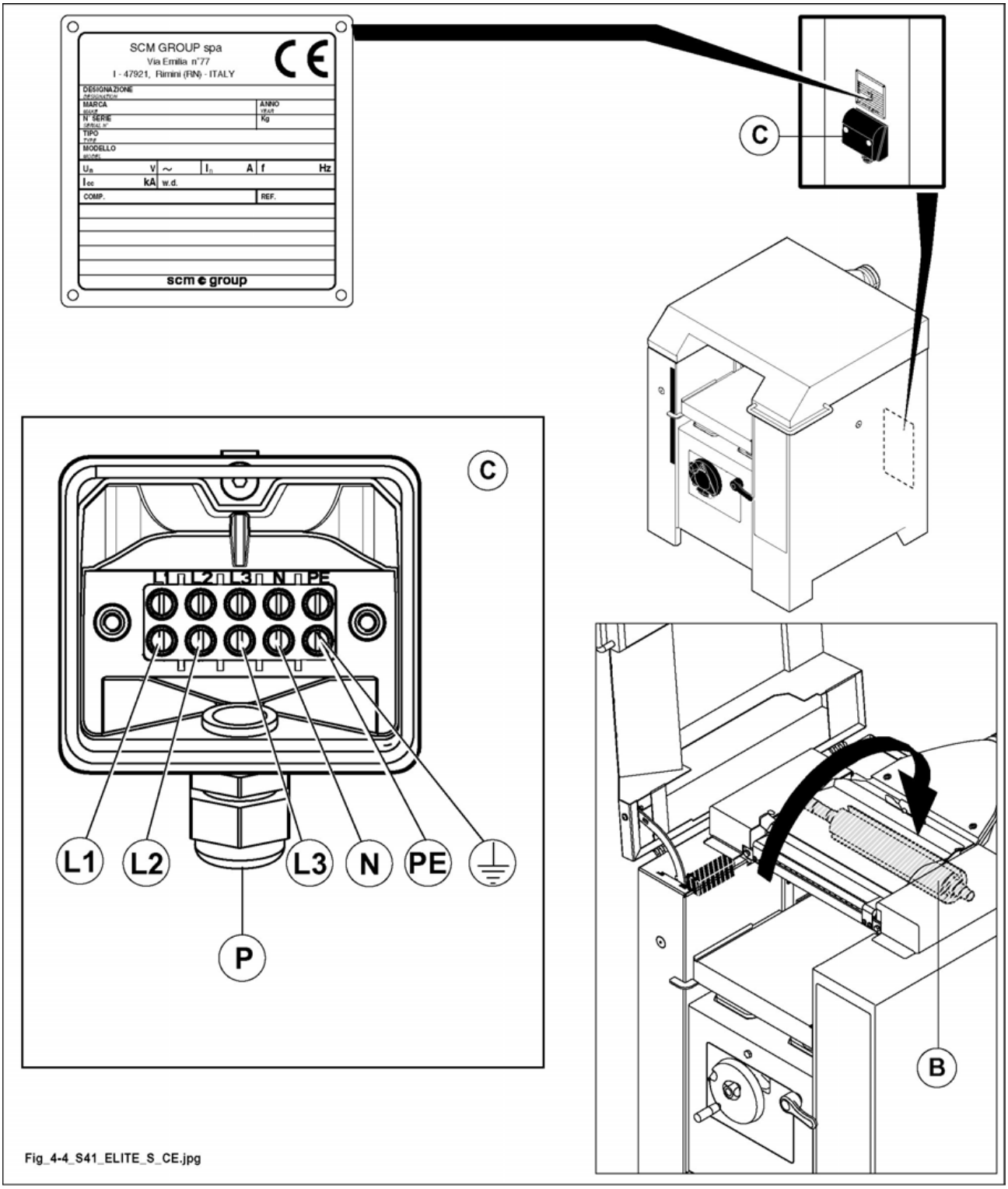


Fig. 4.4

NOTE-INFORMATION:
the documentation with wiring diagram and certificates is inside the accessories case. A set of fuses is supplied in the accessories bag.

4.5 CONNECTION TO THE SUCTION SYSTEM

(ev_4-5_0.0)

DANGER-WARNING:
the connection to the suction system is necessary for the machine operation and for the operator's safety. Always work with the suction system in operation.

NOTE-INFORMATION:
the extraction system must comply with EN 12779:2004.

Always start the suction system and the operator assembly motor at the same time.

Connect the exhaust pipes to the suction system with hoses of proper diameter.

NOTE-INFORMATION:
we recommend that the suction sleeve is arranged out of the suction hood in order to avoid clogging caused by chips.
The suction pipe fitting should not hinder the operator during the woodworking process.

Connect the hose to suction hood (A fig. 4.5), diameter 120 mm.
Clamp it with the proper metallic clip to ensure the contact between suction hood and hose.

The suction system shall ensure a flow equal to 814 m^3/h at a flow speed at least of 20 m/s.

This value shall be checked before starting the working.
If further machines are connected to central suction system carry out a test when all suction systems are in operation.
The right operation of the suction system reduces the risks due to dust inhalation.

Other factors which reduce the dust emission in the working environnement.
- maintenance of tools, of the machine and of the suction system;
- proper use of protective devices against dust.

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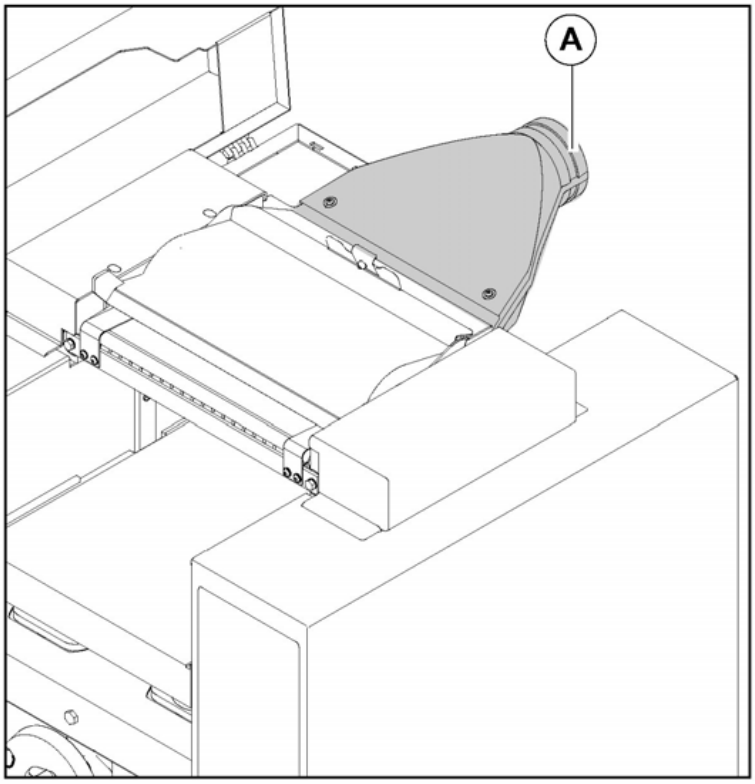


Fig_4-5_S41_ELITE_S.jpg

Fig. 4.5

NOTE-INFORMATION:
to connect the machine to the suction plant, use hoses made of antistatic and self-decomposing material, in order to prevent electric discharges due to an accumulation of static electricity (the discharges could compromise the right operation of the electronic components on the machine) and to avoid possible fire to propagate.

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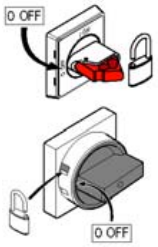
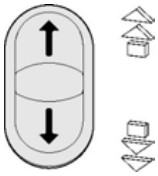
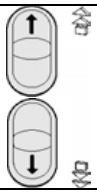
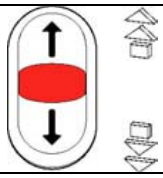

5.5 Machine start - stop 6


5.5.2 Start - stop Thicknesser 6

5.11 Auto-brake motor 7

5.1 CONTROLS BOARD

(ev_5-1_0.0)

Ref.	Image	Description / Function	Use and/or explanation
1		Padlockable main switch on electric cubicle Machine supply voltage switching on/off Possible locking to "0" by padlock..	I ON = ON O OFF = OFF
2		Emergency button. Motor supply voltage switching off with intervention of brakes when these are present.	Pressed: machine in emergency condition. Reset by turning the button to the arrow direction.
3		Motor supply voltage switching off with intervention of brakes when these are present. Locked motor brake, pilot lamp switched off.	 = Locked motor brake, pilot lamp switched off.  = Locked motor brake, pilot lamp switched off.
4		Buttons for cutterblock start/stop.	 Press to start cutterblock motor. Press to stop cutterblock motor.
5		Numerical display for the vertical motion of the thicknessing table.	
7		Buttons (OPT) to lift or to lower the surfacing table.	 Surfacing table lifting. Surfacing table lowering.
		Pilot lamp thicknessing table motor overload.	Contact our technical service (see telephone number on Chap. 1).
8		Working height digital display (OPT) .	
9		Power on warning lamp.	Lights up when you turn switch **"1"** to position **I** and indicates the presence of power in the machine electrical circuit.

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Ref.	Image	Description / Function	Use and/or explanation
10		Lever for feed speed change.	Turn lever for selecting the speed (6 -12 m/min).

5.2 EMERGENCY BUTTONS

(ev_5-2_0.0)

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

Emergency buttons present on the machine are:

- emergency button (2 fig. 5.3) on control board.

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

DANGER-WARNING:

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

(fs_5-3_0.0)

CAUTION:
only a skilled electrician may reach the electric housing.

To reach the electric housing proceed as indicated later on:
- switch off the mains voltage then indicate this with a sign;
- turning the main switch (1 fig. 5.3) to 0 (OFF) lock it then indicate this with a sign;
- unscrew the screws (V fig. 5.3) to open the control board (P fig. 5.3).

After carrying out the operation:
- close the control board (P fig. 5.3).

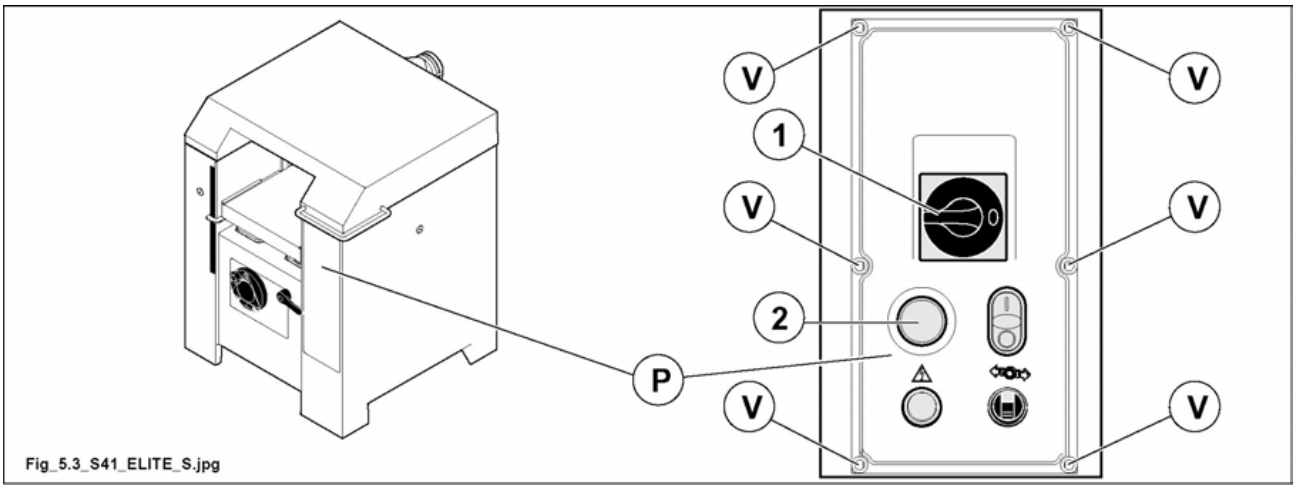


Fig. 5.3

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5.4 GENERAL CONTROLS BEFORE MACHINE STARTING

(ev_5-4_0.0)

Make sure that:
- the machine is connected to the suction system.
- Make sure that the emergency buttons (2 fig. 5.4) are released, otherwise turn them in the arrow direction.
- Switch (3 fig. 5.4) is turned to (pilot lamp off).
- Main switch (1 fig. 5.4) is turned to I (ON).

DANGER-WARNING:

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-INFORMATION:
make sure that the speed indicated is proper for the tool fitted to the saw spindle.

FORBIDDEN:
do not modify or exclude any of the circuits or devices installed.

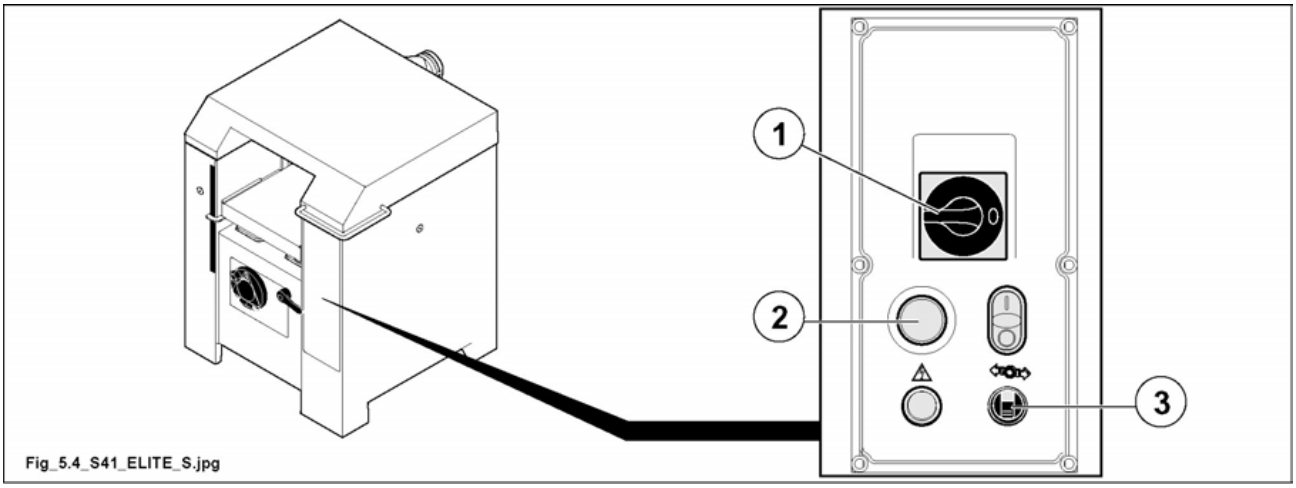


Fig. 5.4

5.5 MACHINE START - STOP

(ev_5-5_0.0)

NOTE-INFORMATION:
carry out the checks of par. 5.4.

5.5.2 START - STOP THICKNESSER

(fs_5-5-2_0.0)

Machine Start procedure

- Choose work height (see par. 9.6).
- Press push-button (D fig. 5.5-2) to start the machining head.
- Select feed speed with lever (L fig. 5.5-2).

Machine Stop procedure

1) Press the (H fig. 5.5-2) button.
2) Turn the padlockable main switch (1 fig. 5.5-2) to "0" (OFF).

DANGER-WARNING

it is forbidden to stop the motor by turning selectors (3 fig. 5.5-2) to ; unlocked motor brake, pilot lamp switched on.

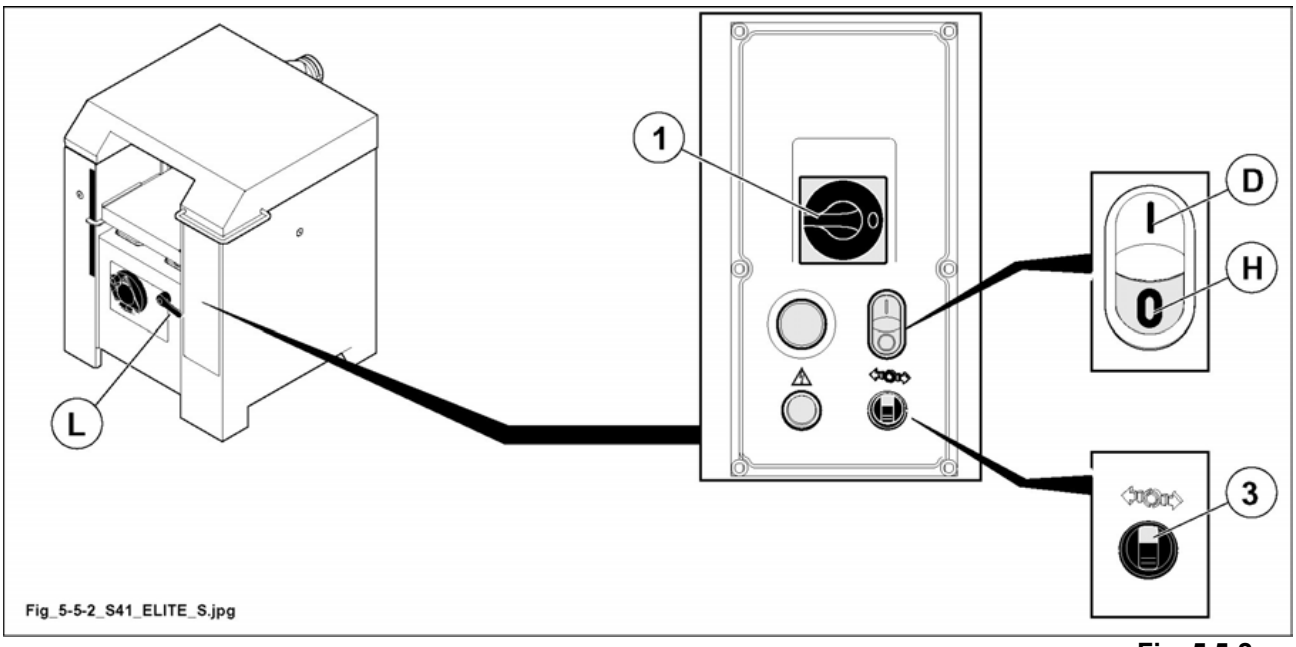


Fig. 5.5-2

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5.11 AUTO-BRAKE MOTOR

(ev_5-11_0.0)

The spindle rotation occurs by means of autobrake motor.

Under normal working condition selector (3 fig. 5.11) is turned to ; locked motor brake, pilot lamp switched off. When you switch off the motor or you shut off the power, the motor automatically brakes and remains braked until the next spindle start.

In case of adjustment as cutter fitting etc. for which the spindle shall turn freely, turn selector (3 fig. 5.11) to ; the pilot lamp lights up at the same time.

The motor may be started only when selector (3 fig. 5.11) is turned to ; locked motor brake, pilot lamp switched off.

NOTE-INFORMATION:
the material used for auto-brake motors does not contain any cancerous components.

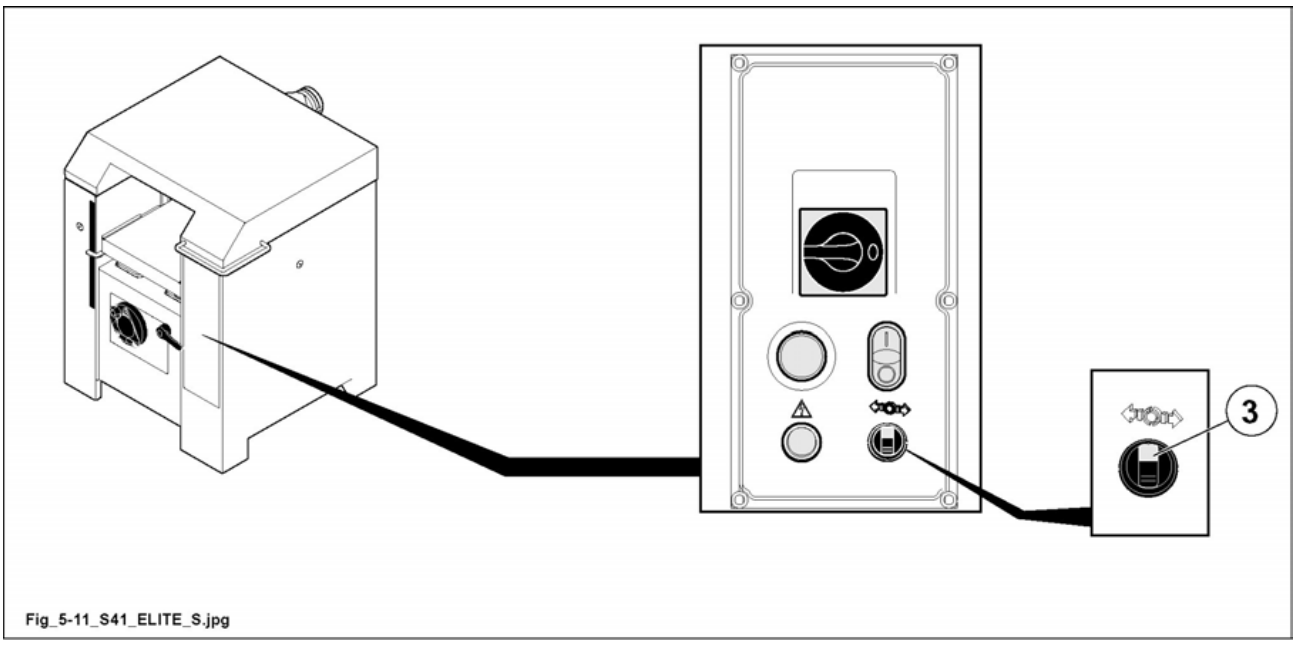


Fig. 5.11

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9.13 Levelling the thicknessing table 18

9.4 AUTOMATIC FEED AND SPEED CHANGE

(fs_9-4_0.0)

To switch on the feed turn lever (L fig. 9.5). Carry out this operation with the machine running.
2 speeds are available (6 - 12 m/min); between 2 speeds there is the idle position (feed unit standstill).

NOTE-INFORMATION:
the feed is possible only if the cutterblock is rotating.

DANGER-WARNING
never machine workpiece of length and thickness lower than the values permitted (L = 180 mm; thickness 3,0 mm), as in that case the system, which control the feed and the pressure on the workpiece, can not operate and causes dangerous conditions.

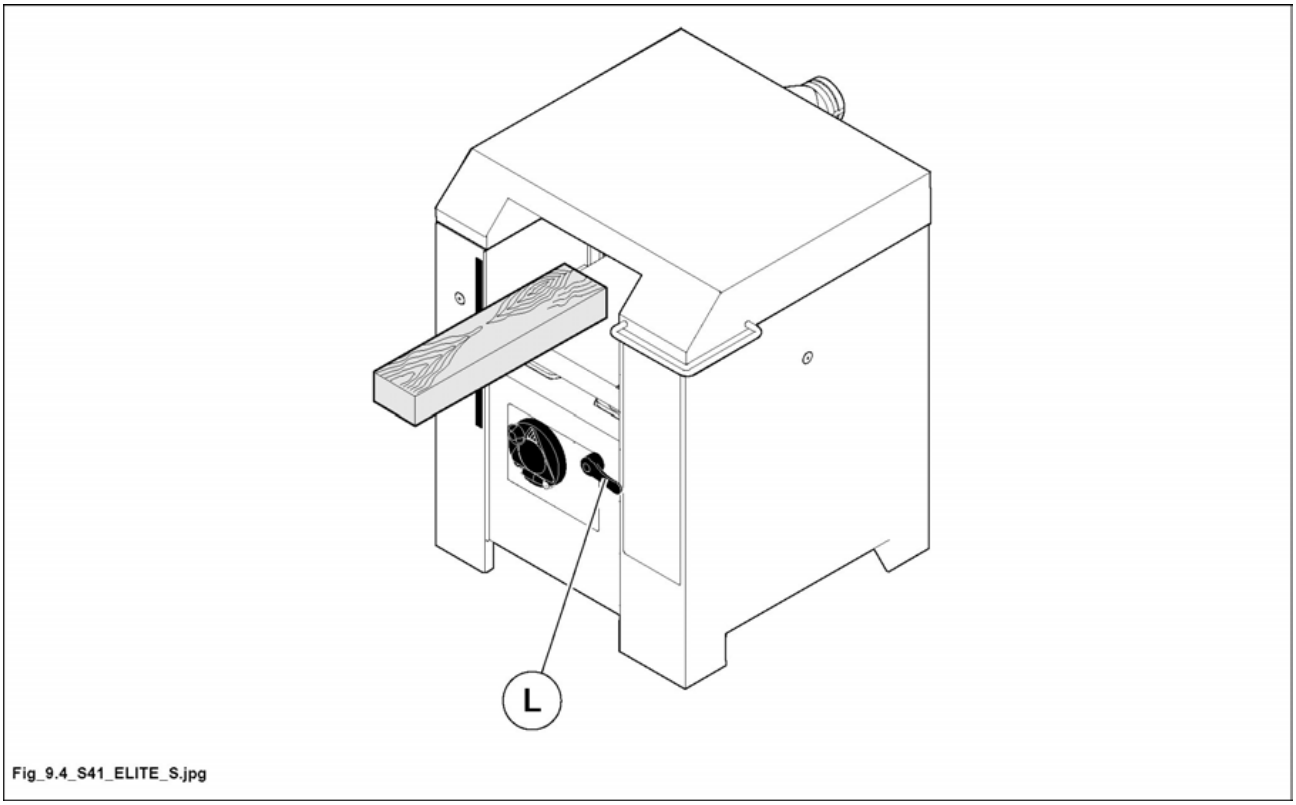


Fig. 9.4

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9.5 MANUAL ADJUSTING OF THICKNESSING TABLE

(fs_9-5-0.0)

DANGER-WARNING
Before lifting the thicknessing table make sure that there are no wood residures on the table, as in that case the system, which control the feed and the pressure on the workpiece, can not operate and causes dangerous conditions.

For thicknessing table lifing operate on handwheel (V fig. 9.5) after unlocking knok (P fig. 9.5).

Always reach the working height with table motion upwards to take up slack bewteen lead screws and lead nuts.

Turn the handwheel watching numeric gauge (L fig. 9.5).

After adjusting lock handwheel (V fig. 9.5) by knob (P fig. 9.5).

FORBIDDEN:
it is forbidden to move the table when the machine is running.

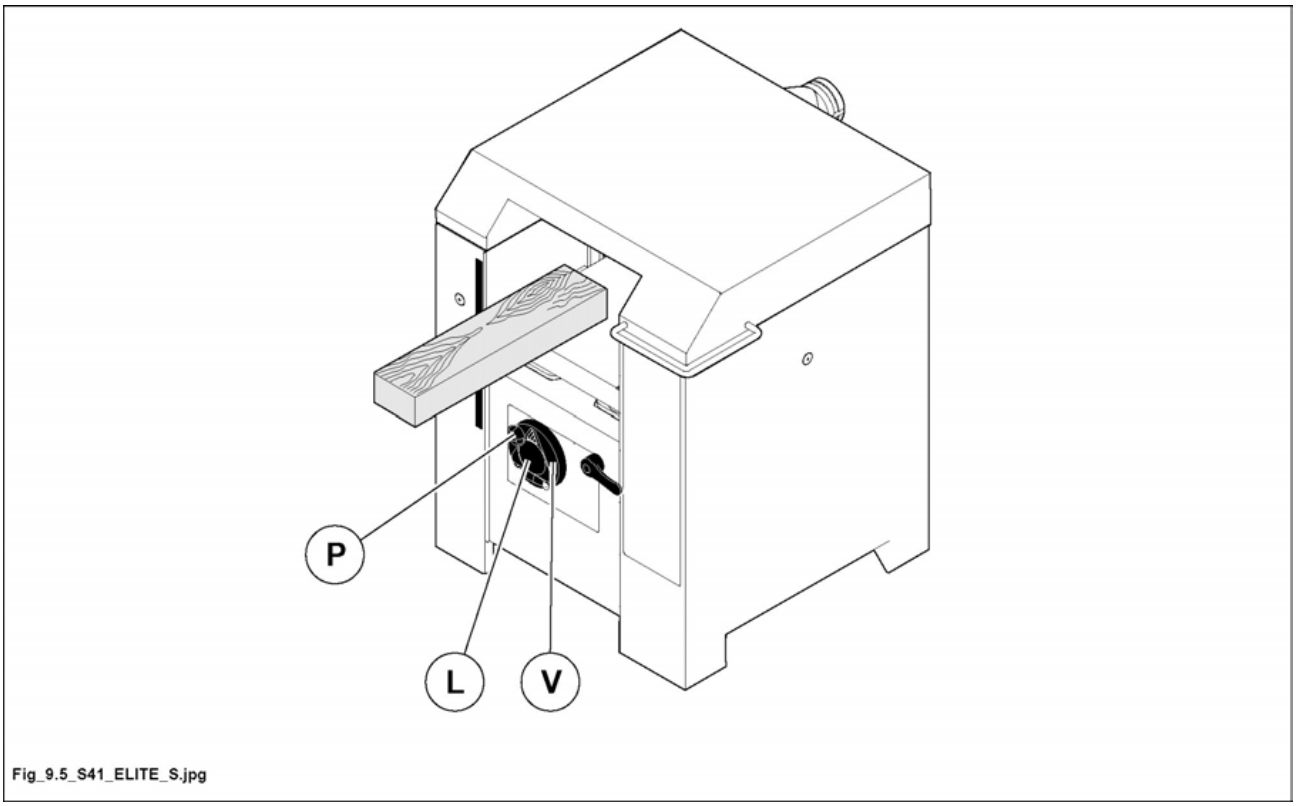


Fig. 9.5

9.5.1 ADJUSTING STANDARD INDICATOR

(fs_9-5-1_0.0)

If the indicator (L fig. 9.5-1) gives an imprecise indication, restore adjustments as follows:

- unscrew screw (A fig. 9.5-1) and remove indicator.
- Manually rotate indicator until the pointer, which is always in a vertical position, does not coincide with 0° notch.

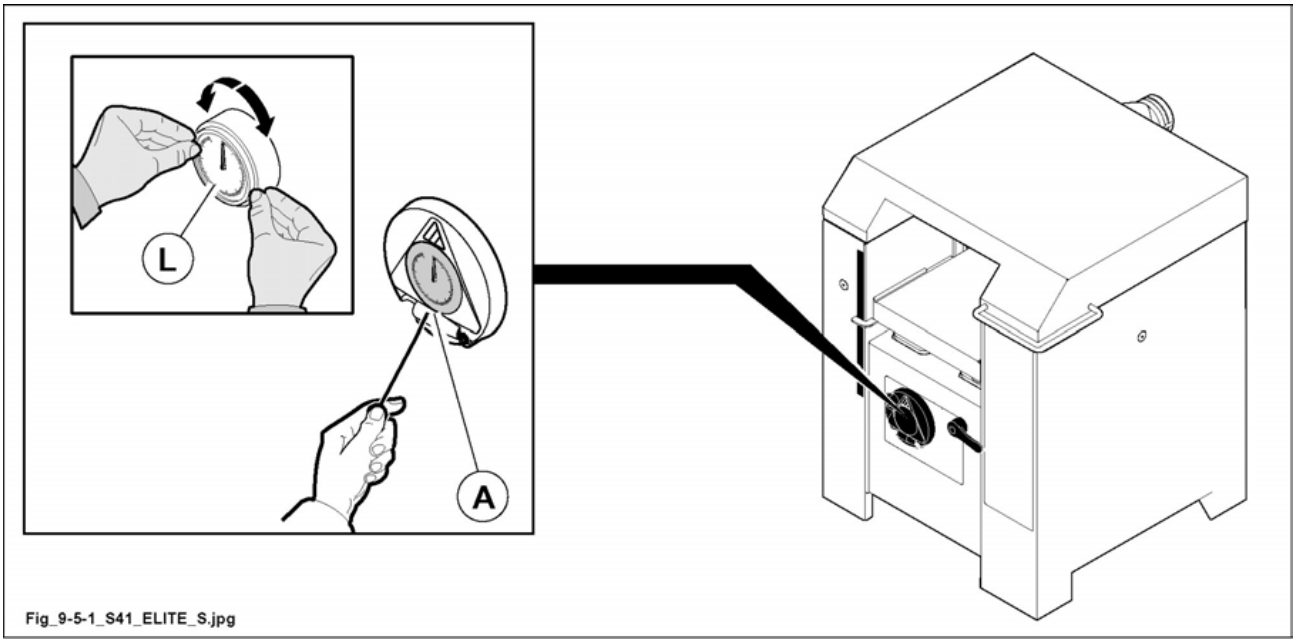


Fig. 9.5-1

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(fs_vuota_9-01)

9.6 POWER HEIGHT ADJUSTING OF THICKNESSING TABLE

(fs_9-6_0.0)

OPT

DANGER-WARNING
Before lifting the thicknessing table make sure that there are no wood residures on the table, as in that case the system, which control the feed and the pressure on the workpiece, can not operate and causes dangerous conditions.

To lift or to lower the thicknessing table operate on buttons (C-D fig. 9.6).
The table motion is slow for 2 seconds then it gets quicker.
Always reach the working height with table motion upwards to take up slack bewteen lead screws and lead nuts.

The working measure is indicated on display (I fig. 9.6).
With table fully up the min. working height is 3,0 mm corresponding to the min. workpiece thickness.

DANGER-WARNING
if the worktable is locked against the mechanic stops or against the piece owing to a wrong manoeuvre, the pilot lamp (ALARM) (L fig. 9.6) lights up and the motion stops.

Reverse the feed direction by proper button to reset the normal working conditions.
If the measure shown on display (I fig. 9.6) does not correspond to the real measure of the finished workpiece, read the instructions Chapter 16.

DANGER-WARNING
it is forbidden to move the table when the machine is running.

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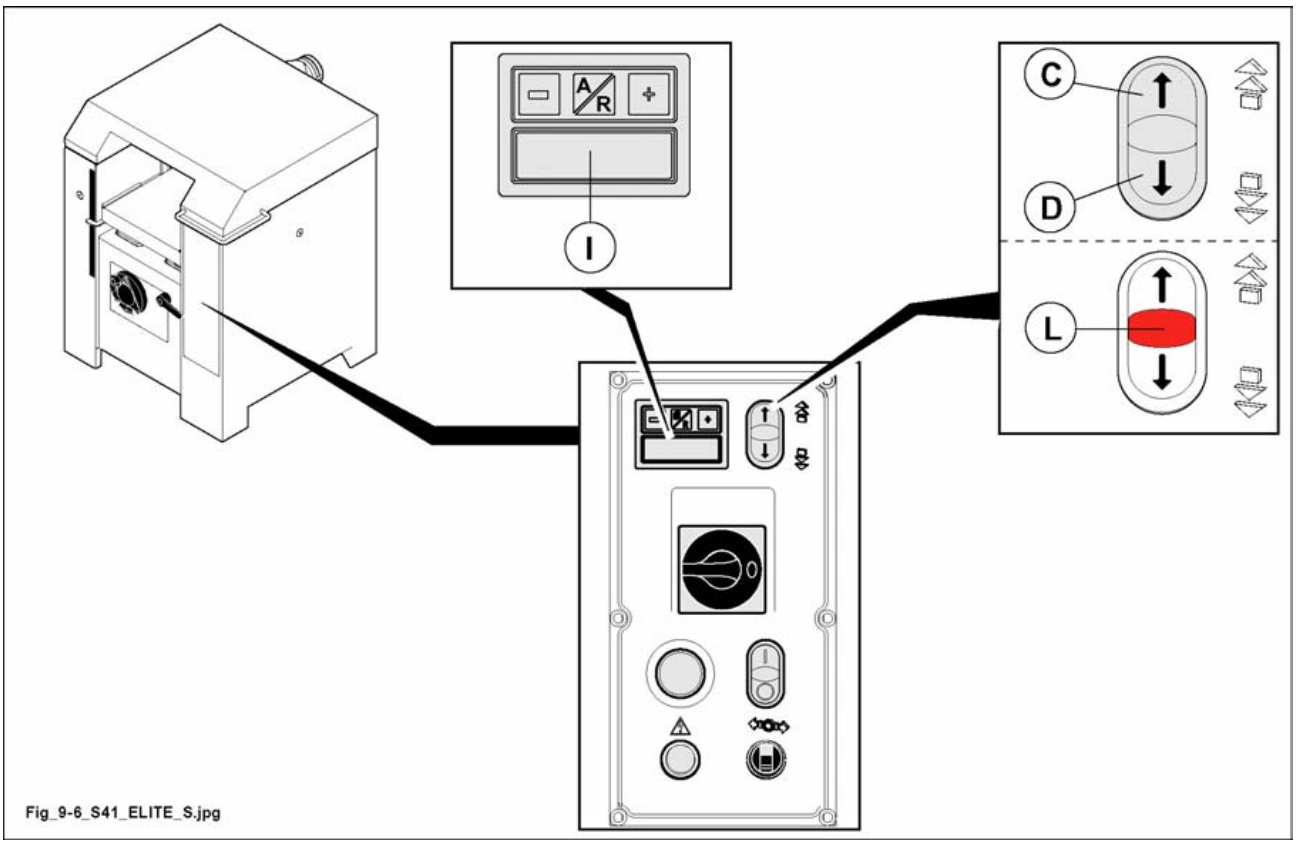


Fig. 9.6

9.8 PRESSURE ROLLERS ADJUSTING

(fs_9-8_0.0)

The spring pressure of the feed rollers is adjusted at factory during the machine test to ensure the right piece feed.
Only in peculiar cases set bushes (E fig.9.8) by means of Allen wrench.
Uniformly adjust the spring pressure of the same roller on both sides.

NOTE-INFORMATION:
pressure should be increased to machine hard wood and/or large sized workpieces.

DANGER-WARNING
disengage blockage (C fig. 9.8) and close bonnet (A fig. 9.8).

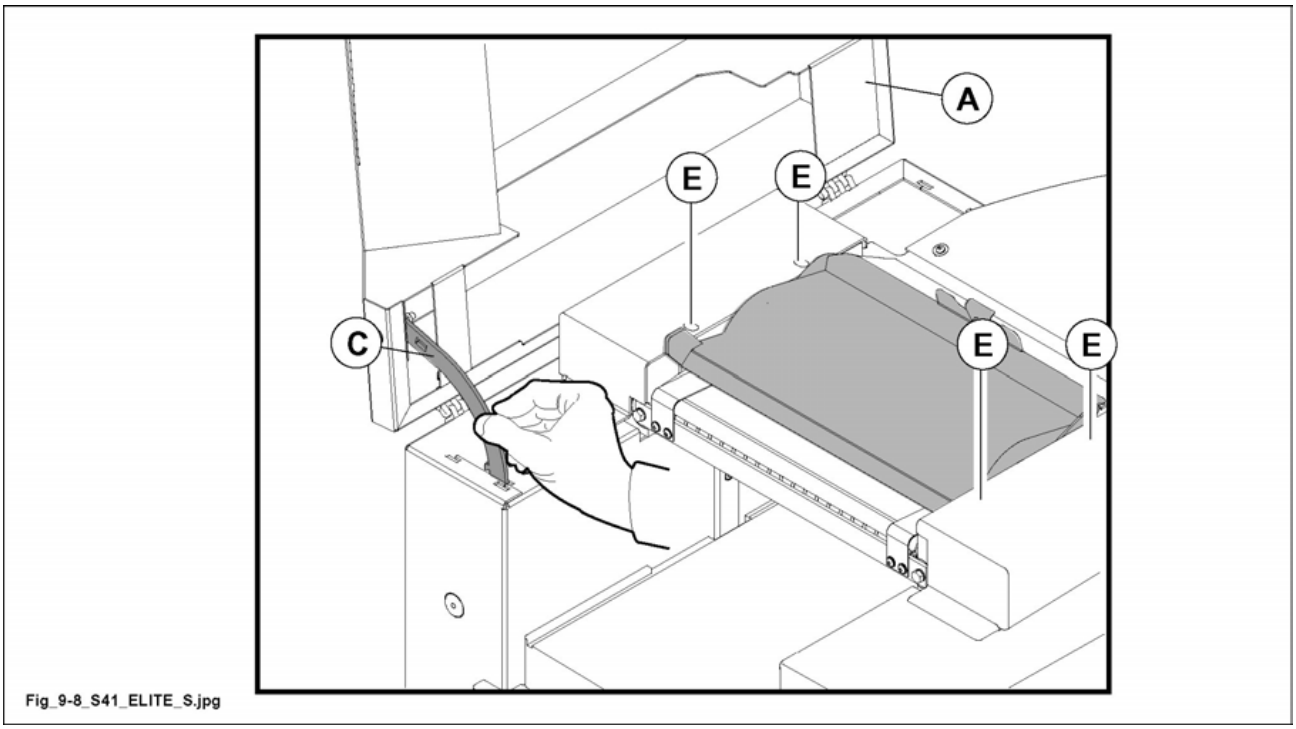


Fig. 9.8

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(fs_vuota_02)

9.9 SAFETY GUARDS

(fs_9-9_0.0)

- Anti-kickback fingers (T fig. 9.9) working with pieces of different thickness prevent the workpiece to be thrown back towards the operator, thus providing an effective protection.
- Before starting the working check that the fingers (T fig. 9.9) can rotate smoothly around their support shafts.
- The presence of chips and dust in position corresponding to anti-kickback fingers (T fig. 9.9) can compromise the good machine operation.
- The opening of anti-kickback fingers (T fig. 9.9) can cause the ejection of splints compromising the operator safety.
- To prevent binding or jamming of some fingers (T fig. 9.9), always keep clean them clean by removing the shavings fitted in the fingers.
- Remove resin residues by washing the unit with a brush and terpentine.
  NEVER OIL OR GREASE THE ANTI-KICK BACK FINGERS.
  Thicknessing can only be carried out if the safety guard is in position (A fig. 9.9).

FORBIDDEN:
the machine use is forbidden if these conditions are not ensured.

SAFETY WARNINGS

- Periodically press emergency button to verify the efficiency.
- Make sure that the motor brake stops the cutterblock within 10 seconds; otherwise adjust the brake (see Par.20-8).
- DO NOT process wood pieces with clefts, knots etc.
- **DO NOT feed boards with different thickness at the same time.**
- Select the feed speed according to the piece width and the depth of cut.
- Make sure that the feed rollers are free to rise in the right way.
- Never stay in front of the machine infeed side during the working and do not try to look inside the machine; there is the danger that the splinters are ejected.
- Never put your hands inside the machine to remove chips or splinters when the machine is running.
- **When a workpiece is locked in the machine, stop the cutterblock, lower the table, take off the piece.**
- DO NOT try to carry out depth of cut larger than the one specified.
- It is forbidden to move the table when the machine is running.
- **DO NOT workpieces of too large thickness or lower than 3.0 mm**
- **DO NOT workpieces of length lower than 180 mm**

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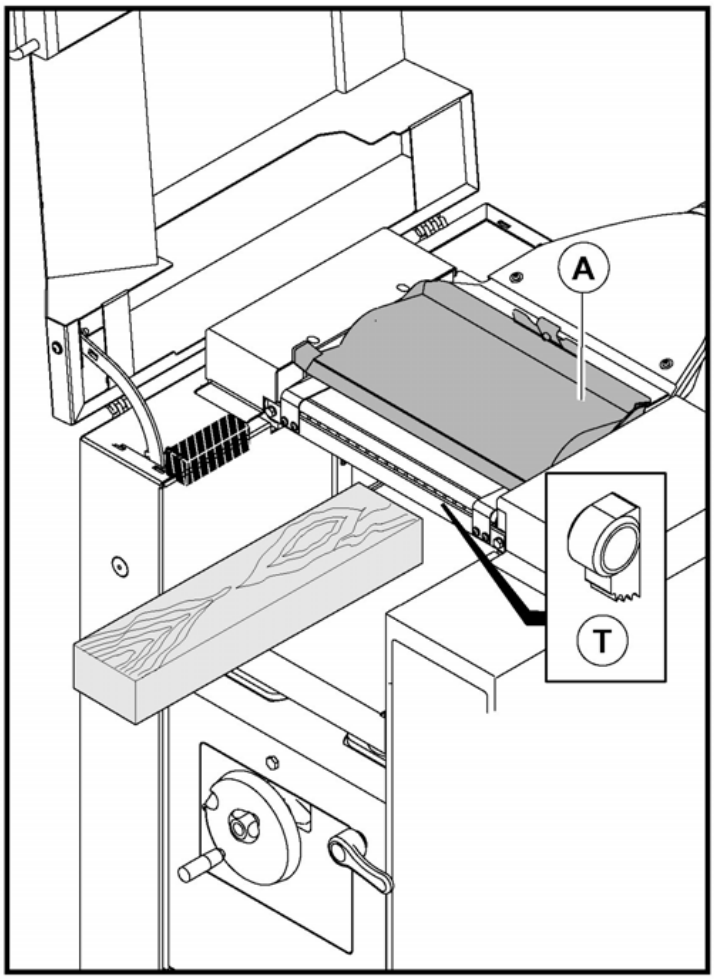


Fig_9.9_S41_ELITE_S.jpg

Fig. 9.9

9.10 KNIFE ADJUSTMENT

(fs_9-10_0.0)

DANGER-WARNING
to handle the knives and the cutterblock you shall wear safety gloves.

Exclusively mount knives of the same series (with the same height) to prevent unbalancing. Minimum permitted height: 18 mm.

NOTE-INFORMATION:
for safety reasons the blades are completely inserted in the cutter block; before machining adjust them in accordance with the instructions below.

For adjusting the knife projection proceed as follows:

- Turn selector (3 fig. 9.10) to (brake release); unlocked motor brake, pilot lamp switched on.
- Lift top cover (Z fig. 9.10) by handle (G fig. 9.10);
  (a safety limit switch ensures that when the cover is open the motor can not start).

DANGER-WARNING
- ***ensure the device to block open bonnet (S fig. 9.10) is correctly inserted.***

- Turn the chip conveyor hood (B fig. 9.10) upside.
- Insert the knife in the special housing (D fig. 9.10) respecting the sharpening angle orientation with reference to the rotation direction of the planer spindle (E fig. 9.10).
- Make sure springs are in good working order by exerting a light pressure on cutters: these should go deeper into their seats and then go back to their initial position.
- Make sure cutters are centered in relation to cutterblock (E fig. 9.10).
- Position the cutter adjuster (F fig. 9.10) as shown in figure.

NOTE-INFORMATION:
for a correct adjustment, check that the four supports of the cutter adjuster evenly stick to the cutterblock (fig. 9.10). In this way proper projection of the knife from the planer spindle is guaranteed (maximum 1 mm).

- Tighten the locking screws using the special wrench (C fig. 9.10) and exerting pressure on the cutter adjuster.

In the same way mount all the knives.

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DANGER-WARNING
max. knife projection from the cutterblock: 1 mm.

- Take off the knife setting gauge.

- **Once operation is completed close conveyor (B fig. 9.10), disengage blockage (S fig. 9.10) and close bonnet (Z fig. 9.10).**

- Turn selector (3 fig. 9.10) to (brake locking); locked motor brake, pilot lamp switched off.

If the knives are well adjusted, the finished workpieces are not convex without the step at their rear end.

IMPORTANT

Keep the knives and gibs always clean to ensure the best performance of the machine.
Remove resin residues, sawings and chips with a hard bristle brush and terpentine, kerosene or light oil.
Never use other different product or synthetic solvents.
Remove dirty then dry each part.
Clean the worktable with a dry cloth.

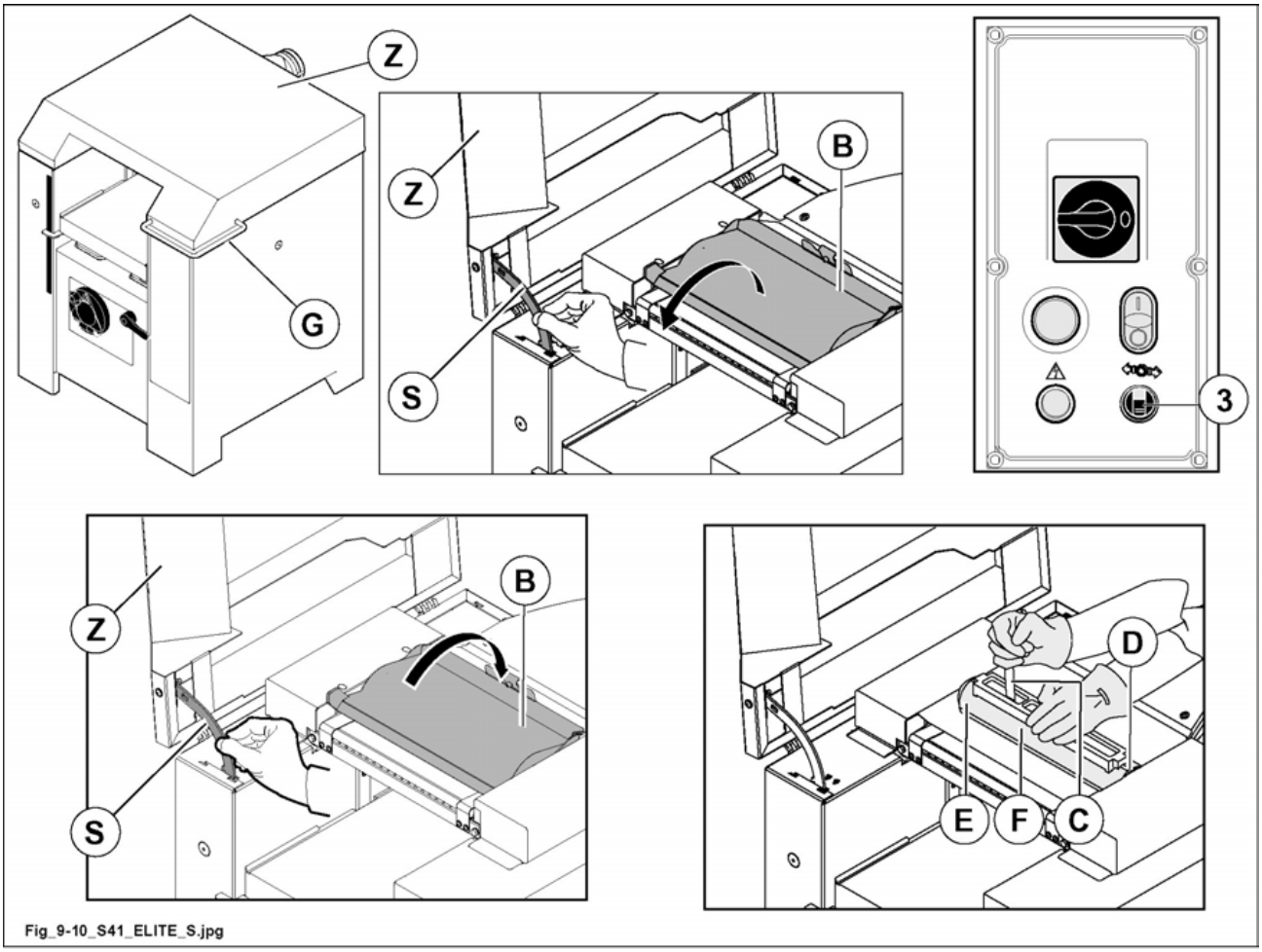


Fig. 9.10

9.11 KNIFE REPLACING

(fs_9-11_0.0)

DANGER-WARNING
to handle the knives and the cutterblock you shall wear safety gloves.

Exclusively mount knives of the same series (with the same height) to prevent unbalancing. Minimum permitted height: 18 mm.

DANGER-WARNING
do not start the cutterblock motor when the knives are not fitted.

For replacing the knife projection proceed as follows:

- Turn selector (3 fig. 9.11) to (brake release); unlocked motor brake, pilot lamp switched on.
- Lift top cover (Z fig. 9.11) by handle (G fig. 9.11);
  (a safety limit switch ensures that when the cover is open the motor can not start).

DANGER-WARNING
- ***ensure the device to block open bonnet (S fig. 9.11) is correctly inserted.***

- Turn the chip conveyor hood (B fig. 9.11) upside.
- Turn the cutterblock in order to bring the knife to be replaced to the top part.
- Loosen screws (T fig. 9.11) of the knives with the 7 mm wrench.
  The knives come out pushed by the internal springs.
- Withdraw the knife and replace or grind it.
- Fit the knives and adjust them; see the previous paragraph.

- **Once operation is completed close conveyor (B fig. 9.11), disengage blockage (S fig. 9.11) and close bonnet (Z fig. 9.11).**

- Turn selector (3 fig. 9.11) to (brake locking); locked motor brake, pilot lamp switched off.

DANGER-WARNING
the knife grinding is permitted up to a min. width of 18 mm (fig. 9.11). When this value has been reached, replace the knife.

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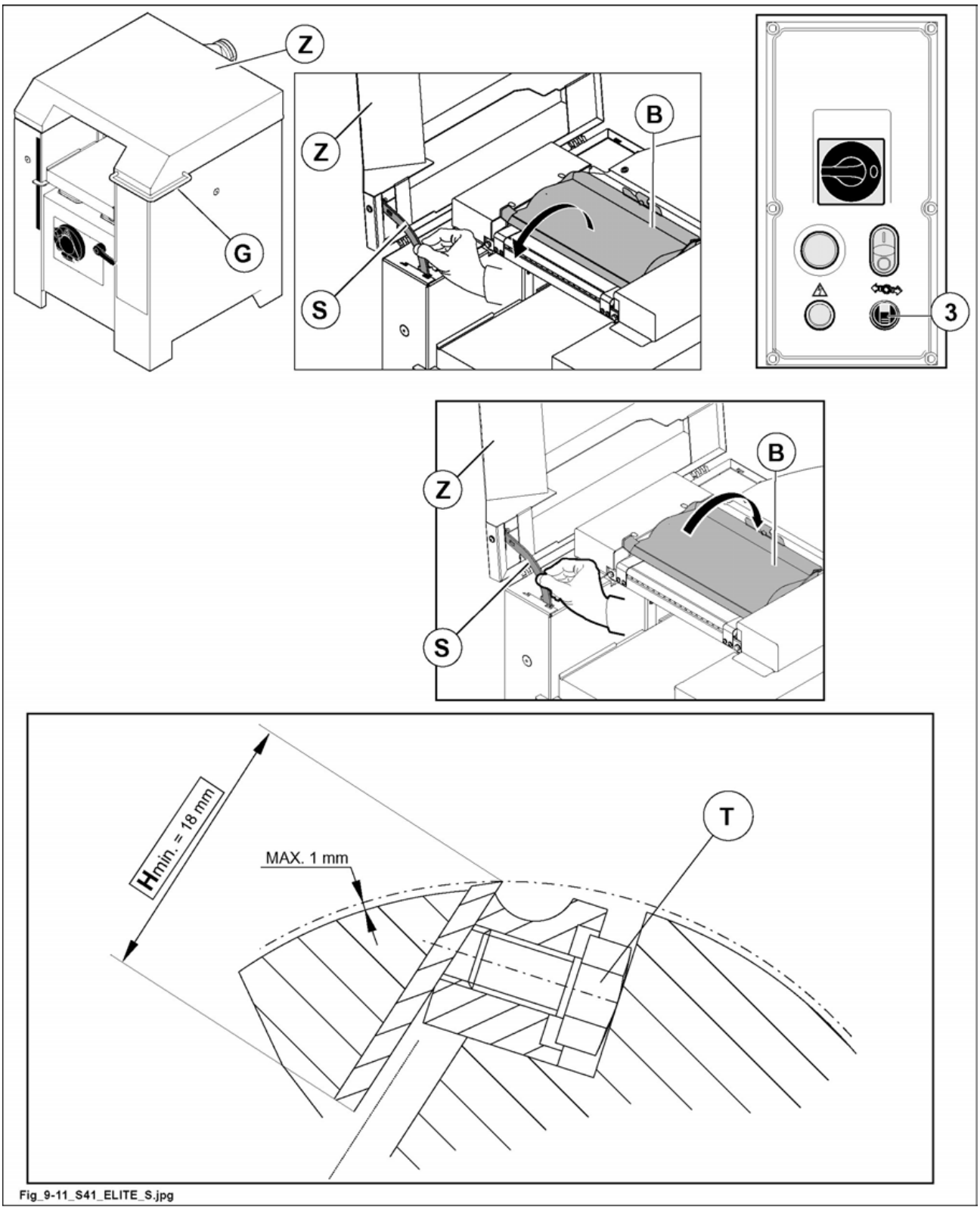


Fig. 9.11

9.12 REPLACING THE THROW-AWAY KNIVES

(fs_9-12_0.0)

OPT

DANGER-WARNING
to handle the knives and the cutterblock you shall wear safety gloves.

DANGER-WARNING
do not start planer spindle motor when knives are not fitted.

Do not unblock the screws (V fig. 9.12).

For replacing the knife projection proceed as follows:

- Turn selector (3 fig. 9.12) to (brake release); unlocked motor brake, pilot lamp switched on.
- Lift top cover (Z fig. 9.12) by handle (G fig. 9.12);
  (a safety limit switch ensures that when the cover is open the motor can not start).

DANGER-WARNING
- ***ensure the device to block open bonnet (S fig. 9.12) is correctly inserted.***

- Turn the chip conveyor hood (B fig. 9.12) upside.
- Turn planer spindle (F fig. 9.12) until bring the knife to be changed next to the extraction hole (A fig. 9.12).
- Loosen the gibs by exerting a light pressure with a wood or plastics hammer.
- By using a screwdriver push the knife outwards.
- Take hold of the knife with one hand and pull it out.
- Fit the new knife (E fig. 9.12) or the old one after turning it; center the knife in length direction.
  Starting machine, the gibs (U fig.9.12) position themselves automatically.

- **Once operation is completed close conveyor (B fig. 9.12), disengage blockage (S fig. 9.12) and close bonnet (Z fig. 9.12).**

- Turn selector (3 fig. 9.12) to (brake locking); locked motor brake, pilot lamp switched off.

Take a piece of hard wood and plane it on its whole length for a few minutes, in order to get a better locking of the cutter-gib unit.

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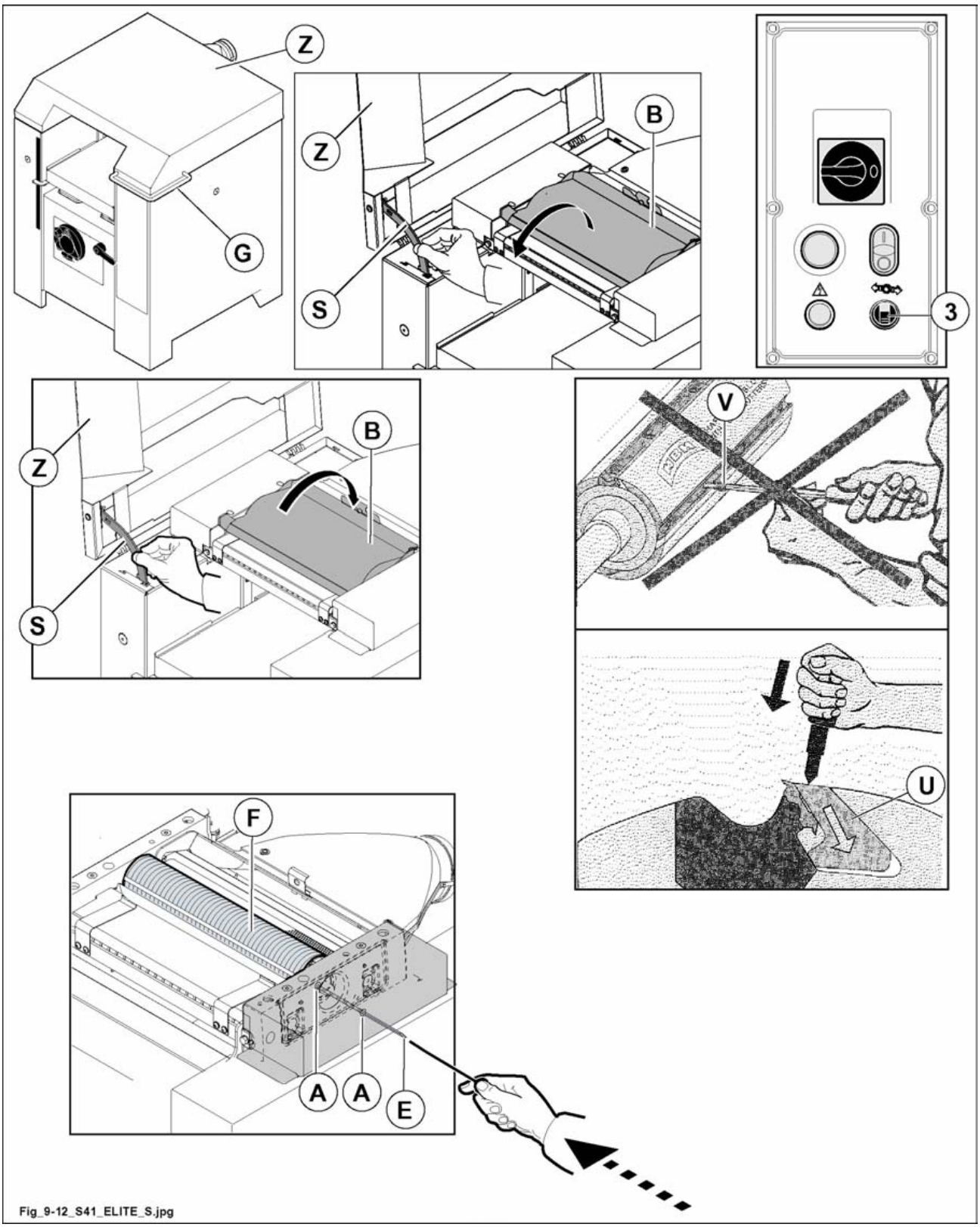


Fig. 9.12

9.13 LEVELLING THE THICKNESSING TABLE

(fs_9-13_0.0)

The manufacturer levels the thicknessing table with the screws (A fig. 9.13).
This work requires specific skill and equipment.

FORBIDDEN:
to avoid losing the levelling adjustment of the thicknessing table, do not touch the screws (A fig. 9.13) for any reason.

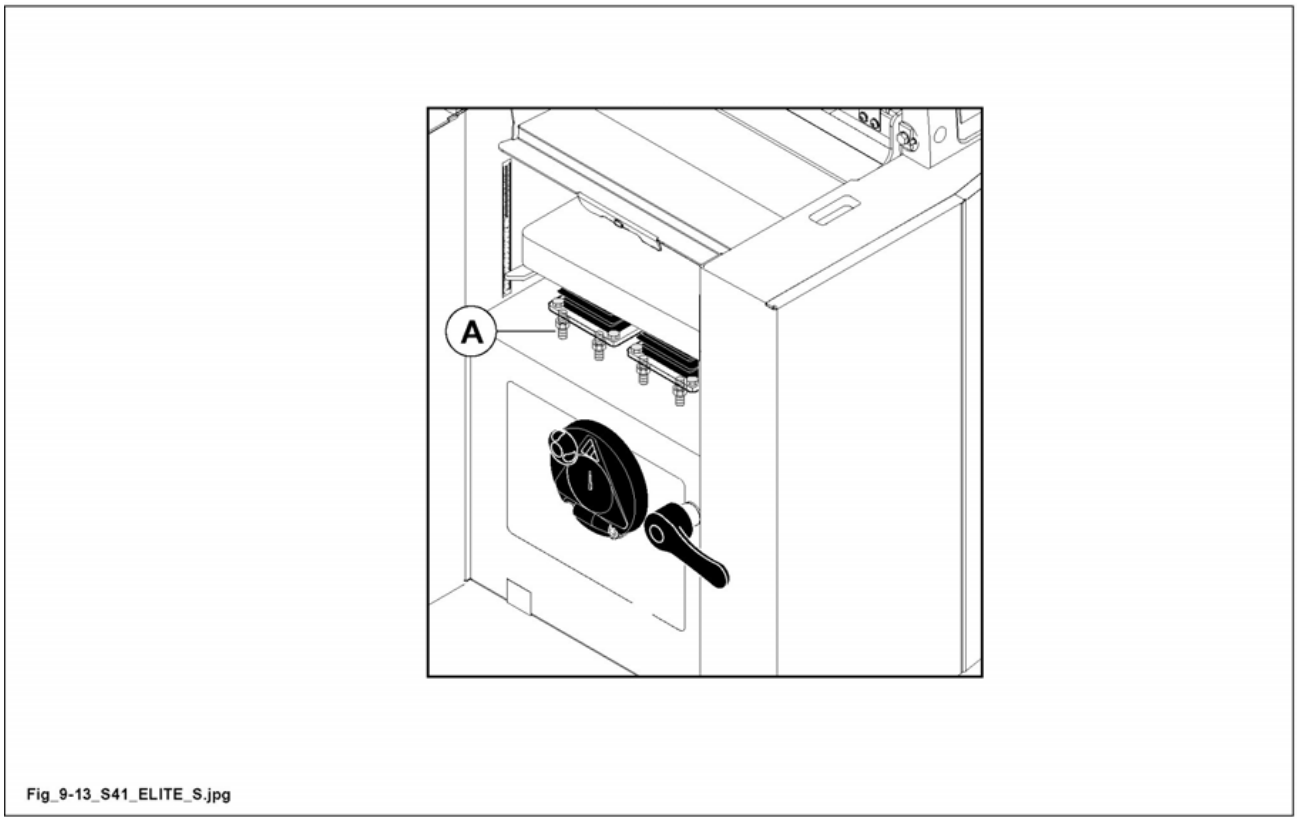


Fig. 9.13

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16.A.2 Instructions only for skilled technician authorized by SCM 2

EV 200

(titolo_ev 200)

16.A.1 ENTERING A NEW DISPLAY NUMBER

(he_16.a.1_0.0-ce)

The function of the 3 front keys is hindered until you press "A/r" for more than 8 seconds.

"--------" is displayed.

Within 5 seconds press "+" and " -" key to enter the new number or press "A/r" key to set to zero (if within 10 seconds you do not press the keys, you return to the normal operation).
The value, you have entered, is stored, if for 10 seconds no key is pressed (and the message “end” is displayed to confirm this).

16.A.2 INSTRUCTIONS ONLY FOR SKILLED TECHNICIAN AUTHORIZED BY SCM

(he_16.a.2_0.0_ce)

CONSTANT INPUT

1) Within 60 seconds after switching on the display, press “+” and “-“ keys at the same time and hold them pressed until “P1” appairs.

2) Press “A/r” key: the constant, you have set, appairs on the display; by means of “+” and “-“ keys input the required constant value.

3) Press “A/r” key: the constant is stored, “P2” appairs on the display. Press “A/r” key again: the correction value is displayed.
By means of “+” and “-“ keys input the required correction value.

4) Press “A/r” key: the correction value is stored, “P2” appairs on the display. Press “A/r” key again the point position is displayed.
By means of “+” and “-“ keys move the point to the required position (0 - 0.0 - 0.00 - 0.000 - 0.0000).

5) Press “A/r” key to store the point position.

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LIST OF FACTORY SET CONSTANT		
Variables	**mm**	**Inch**
P1	30	77
P2	0,09868	0,9972
P3	0.0	0.00

If necessary, it is possible to activate the absolute Zero function or relative Zero. Absolute Zero refers to the zero dimension determined by the worktable. Relative Zero refers to the zeroing effectuated by the operator on the basis of his requirements.

- Press the key “A/r” for at least 0.5 seconds; on the first display the letter “r” appears and the dimension is zeroed. It is possible to perform relative movements.
- To pass to absolute Zero again, press “A/r”.

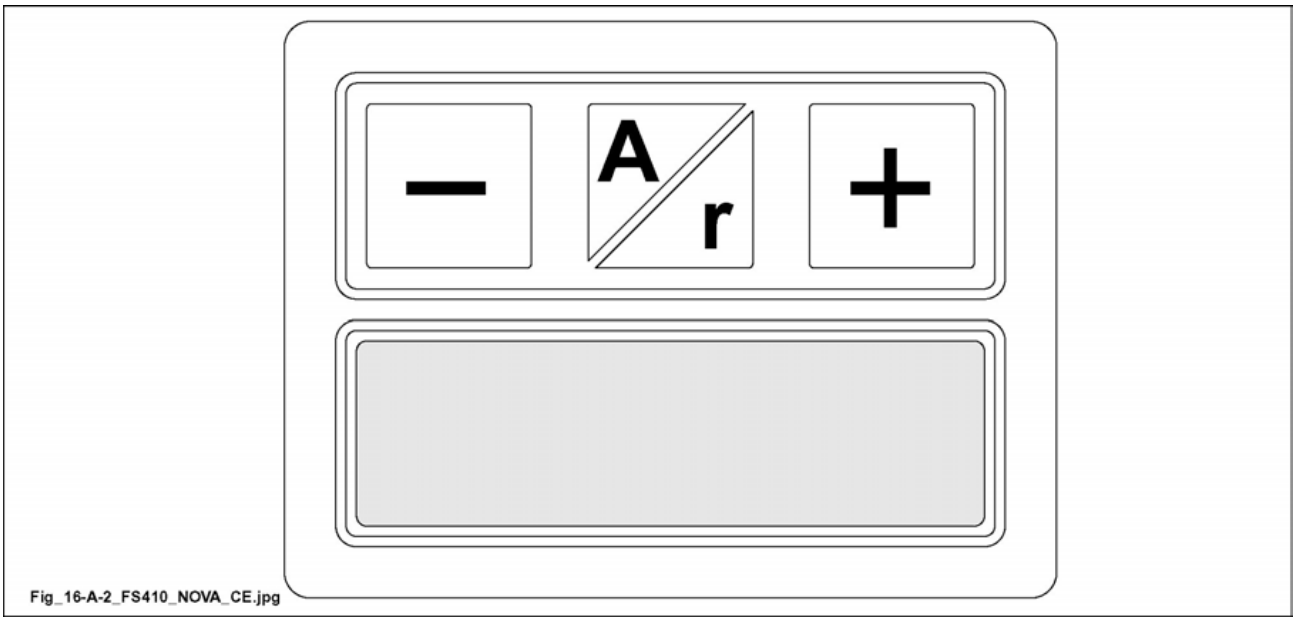


Fig. 16.A.2

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18.1 How to replace the card for D.C. motor drive 2

18.2 Card for SEPRI CMR D.C motor control 4

18.1 HOW TO REPLACE THE CARD FOR D.C. MOTOR DRIVE

(fs_18-1_0.0)

1) Shut off the power by means of main switch QS on the electric cubicle.

2) Open the door of electric cubicle by unscrewing the fixing screws and make the access to the card inside the electric box free.

3) Take off the card (S fig. 18.1) from the 4 plastic supports by bending the locking tooth; we suggest to use a small plastic pipe of proper diameter (e.g. a body pen see fig. 18.1).

4) Disconnect the 3 connectors on the card.

5) Position the dip-switches; see diagram fig. 18.1.

6) Connect the new card according to the wiring diagram, fasten the card to the door of the electric box, shut the electric cubicle before putting the machine under voltage.

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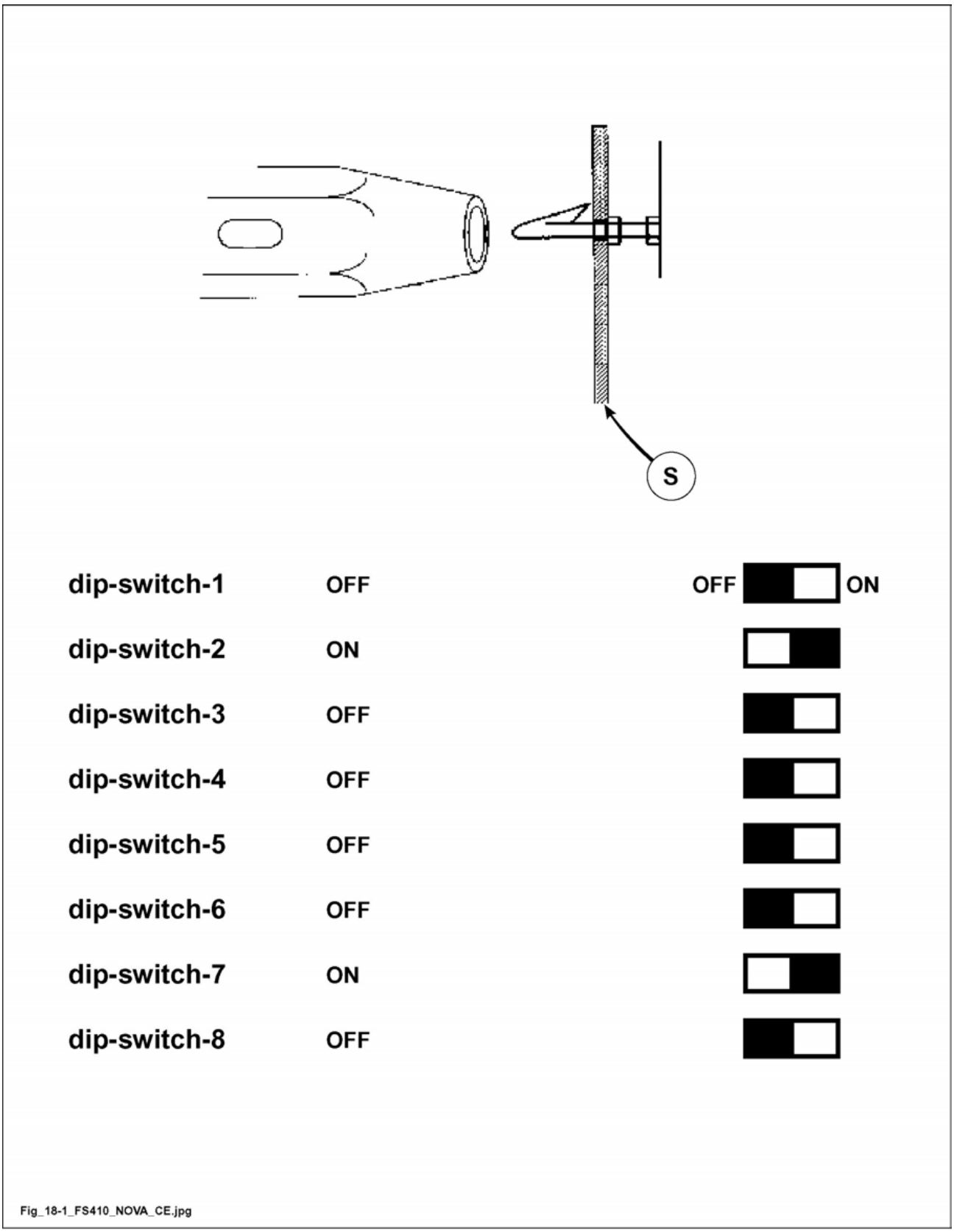

S
dip-switch-1 OFF
dip-switch-2 ON
dip-switch-3 OFF
dip-switch-4 OFF
dip-switch-5 OFF
dip-switch-6 OFF
dip-switch-7 ON
dip-switch-8 OFF
OFF
ON
Fig_18-1_FS410_NOVA_CE.jpg

Fig. 18.1

18.2 CARD FOR SEPRI CMR D.C MOTOR CONTROL

(fs_18-2_0.0)

NOTE-INFORMATION:
check the conditions for the right operation of the card.

Make sure that the following voltage values are present on the card (fig. 18.2):

1) 30 V a.c between terminals 1 and 2 of the terminal board with 10 terminals (fig. 18.2);

2) if the fuse is OK, these are the conditions to have 24 V d.c at output between terminals 3 and 4 of the same terminal board, by sending 110 V voltage (high potential) to channel A (fig. 18.2) or to channel B (fig. 18.2) of the terminal board with 8 terminals.

Otherwise, replace the card and send the defective one to SCM Technical Service.

3 leds are present on the card (E fig. 18.2) :

- red light lit: fuse of the card interrupted;
- green light lit: intervention of motor overvoltage cutout;
- yellow light lit: intervention of motor overload cutout.

CMR CONTROL CARD LEGEND	
Reference	**Description**
A	CHANNEL A - 110 V high
B	CHANNEL B - 110 V high
C	110 V low
D	EMERGENCY
E	LEDS
V a.c.	Volt - alternate current
V d.c.	Volt - direct current

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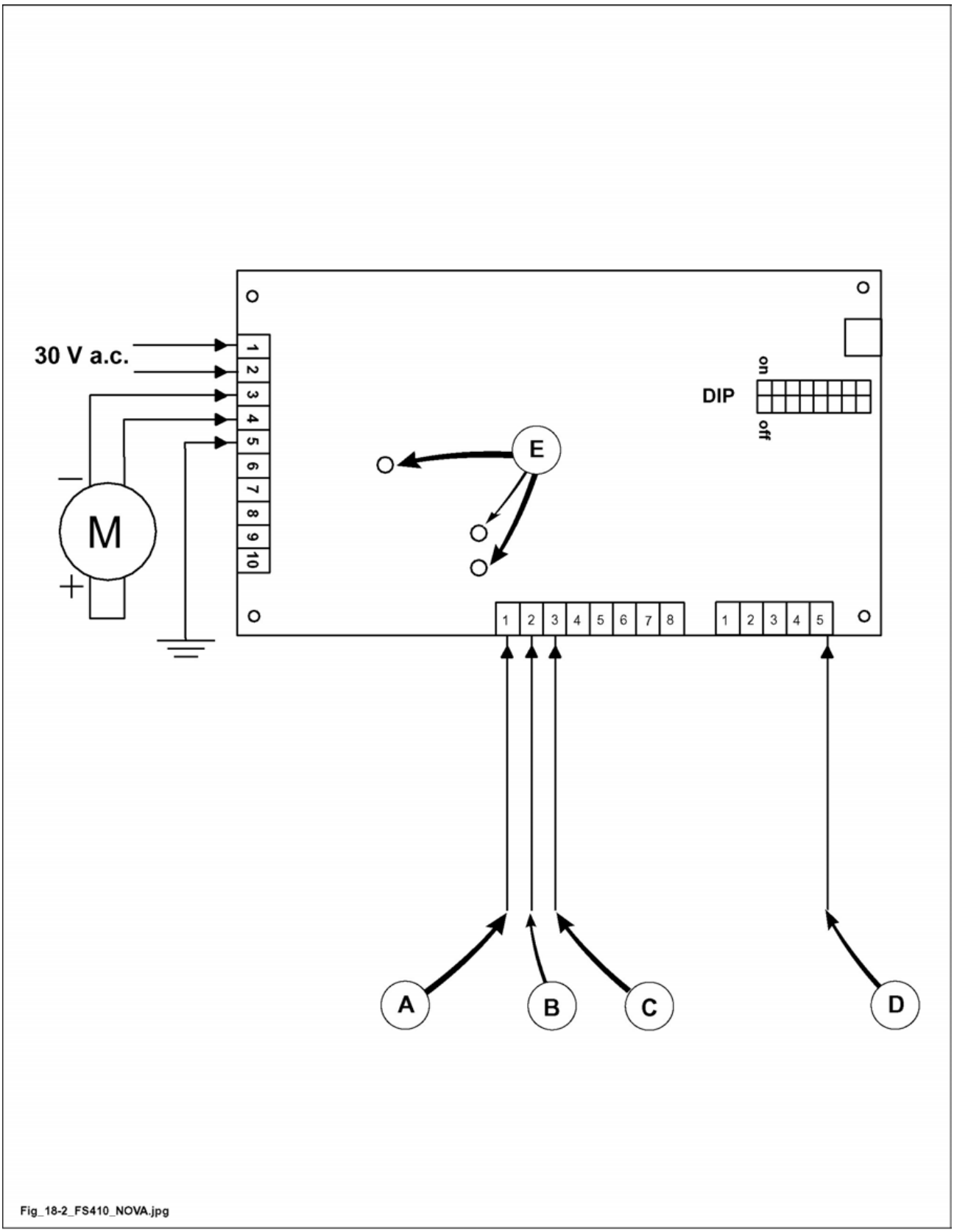

30 V a.c.
1
2
3
4
5
6
7
8
9
10
M
DIP
on
off
E
1
2
3
4
5
6
7
8
1
2
3
4
5
A
B
C
D
Fig_18-2_FS410_NOVA.jpg

Fig. 18.2

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20.1 MACHINE CLEANING

(fs_20-1-0.0)

DANGER-WARNING
all cleaning operations are to be carried out by the machine operator or by skilled technician.

DANGER-WARNING
before carrying out maintenance operations, adjustments or to dismount any machine member turn main switch to 0, lock it then indicate this with a sign.

DANGER-WARNING
to handle the knives and the cutterblock you shall wear safety gloves.

FORBIDDEN:
DO NOT USE COMPRESSED AIR; by blowing with a strong air jet chips,dust and dirt of any type may enter into the moving members, so the machine is no more efficient.

The machine cleaning is not only an important safety factor but it ensures the long life and the best performance of the machine.

NOTE-INFORMATION:
the frequency of cleaning interventions is determined by the room in which the machine is installed and by the machined material.

Rules for a correct machine cleaning

Every evening by using a proper aspirator clean:
- the table, cutterblock, anti kickback fingers and the cavities where you see dust and chips seepage;
- periodically clean the rollers by using not dangerous products; never use acid products;
- suction hoods (C fig.20.1) by checking that there are no occlusions.

Never use acid products.

After sucking chips or dust, with a cloth drunken with a not dangerous solvent clean:
- all moving parts, particularly the ones exposed to the resin and to the dust;
- knives (B fig. 20.1) of the cutterblock.

FORBIDDEN:
NEVER OIL OR GREASE THE ANTI-KICK BACK FINGERS.

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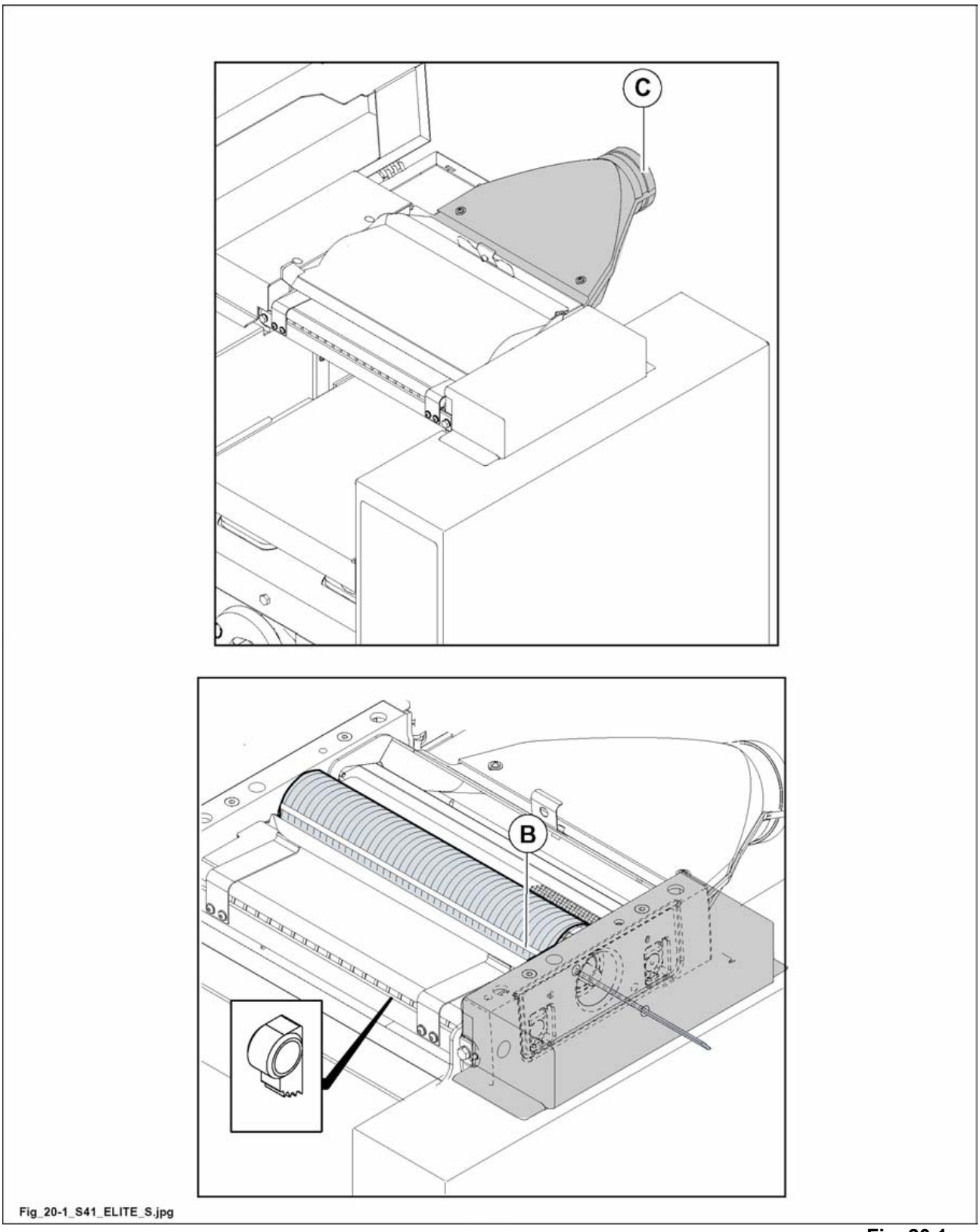


Fig. 20.1

20.2 SCHEDULED MAINTENANCE

(fs_20-2_0.0)

Scheduled maintenance is of the utmost importance to obtain the best performance as well as a safe operation of the machine.

DESCRIPTION	INSPECTION	INTERVALS	OPERATIONS
General machine cleaning	Visual inspection	Daily	- By using an aspirator remove dust or chips (Par. 20.1).
Tools (B fig. 20.2) of the planer unit	Visual inspection	Daily	- By using an aspirator remove dust or chips (Par. 20.1). - Clean with a cloth or brush soaked in a suitable product which is not dangerous.
Cleaning of suction hoods (C fig. 20.2)	Visual inspection	Weekly	- Disconnect the flexible tubes from suction hoods, check that there are no occlusions and clean by sucking.
Thicknessing table (H fig. 20.2)	Visual inspection	Daily	- Clean with a vacuum cleaner.
Cleaning the moving parts, particularly the ones exposed to the resin and to the dust	Visual inspection	Weekly	- Clean with proper detergents.
Table lifting chain	Visual inspection	Weekly	- Clean and lubricate (Par. 20.3).
Feed rollers	Visual inspection	Daily	- Clean with proper detergents.
⚠ Anti kickback fingers (L fig. 20.2)	Visual inspection	Daily	- By using an aspirator remove dust or chips (Par. 20.1). Clean with proper detergents. - **Do not oil, do not grease.**
	Visual inspection	After 1 working hour	- **Check that the anti-kick back fingers are efficient.**
Operator units' belts (O fig. 20.2)	Check tensioning and wear	Every 1000 hours	- Tension correctly (Par. 20.28) or replace (Par. 20.18) if necessary.
Safety and emergency devices (Chapter 2)	Visual check and check functioning	Every 2 weeks	- Perform stop tests (Par. 20.4).

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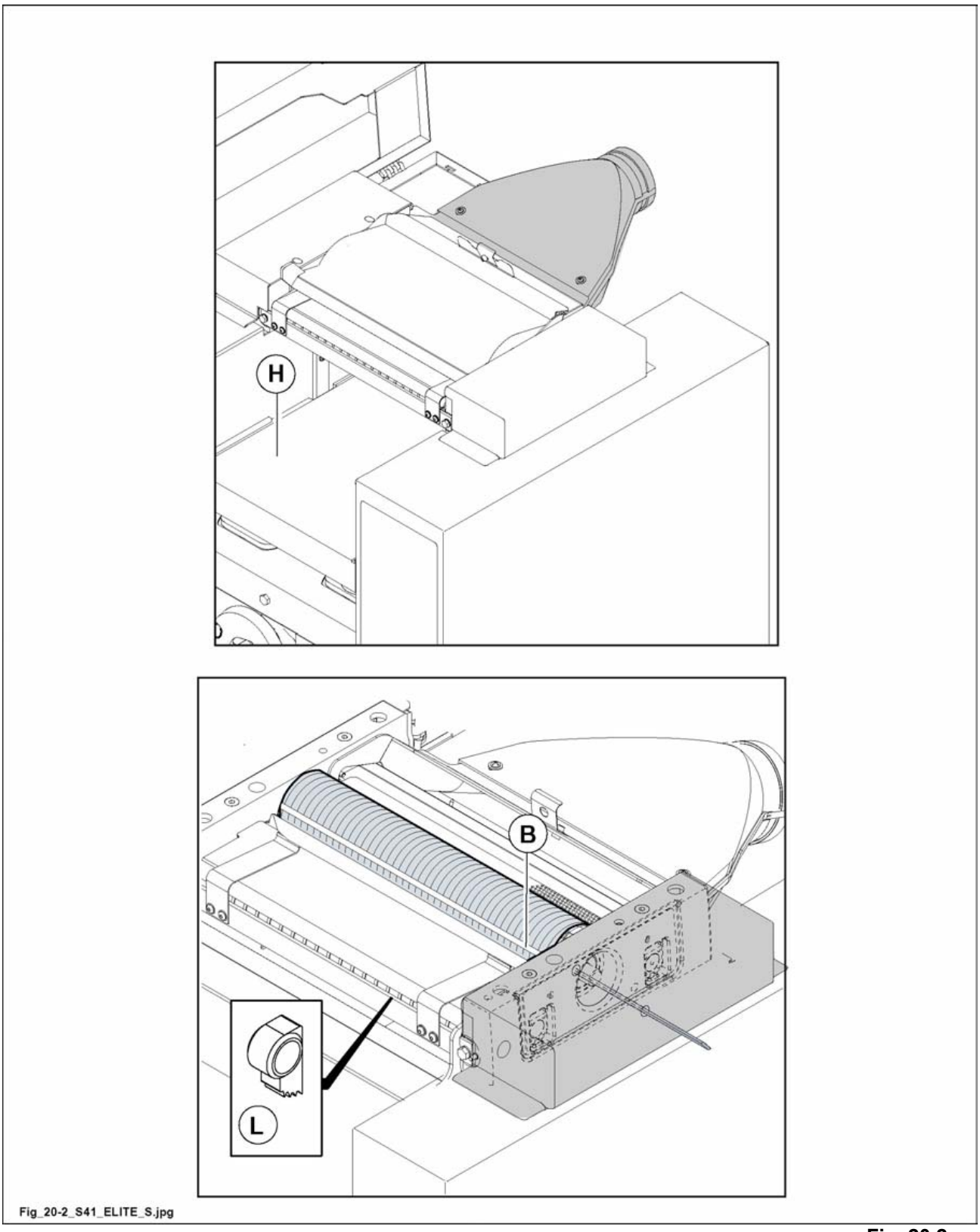


Fig. 20.2

20.3 LUBRICATION

(fs_20-3_0.0)

An accurate lubrication ensures the long life as well as the best performance of the machine.

Lubricate with oil here indicated:

Manufacturer	Lubricant name
AGIP	EXIDIA 220
ARAL	DEGANIT B 220
BP	ENERGOL GHL 220
SHELL	TONNA OIL T220
MOBIL	VACTRA OIL N° 4
KLÜBER	LAMORA SUPER POLADD 220
ESSO	FEBIS K 220

4) Transmission chain (A fig.20.3) of the motion to the feed rollers.
5) Table lifting chain (N fig.20.3).

NOTE-INFORMATION:
- as all bearings are sealed and lubrificated-for life, they do not require any maintenance;
- when you have to replace these bearings directly apply to SCM ***Ufficio Ricambi;***
- bearings of other makes with corresponding names are NOT suitable.

NOTE-INFORMATION:
protect all belts and pulleys to avoid contamination with oil.

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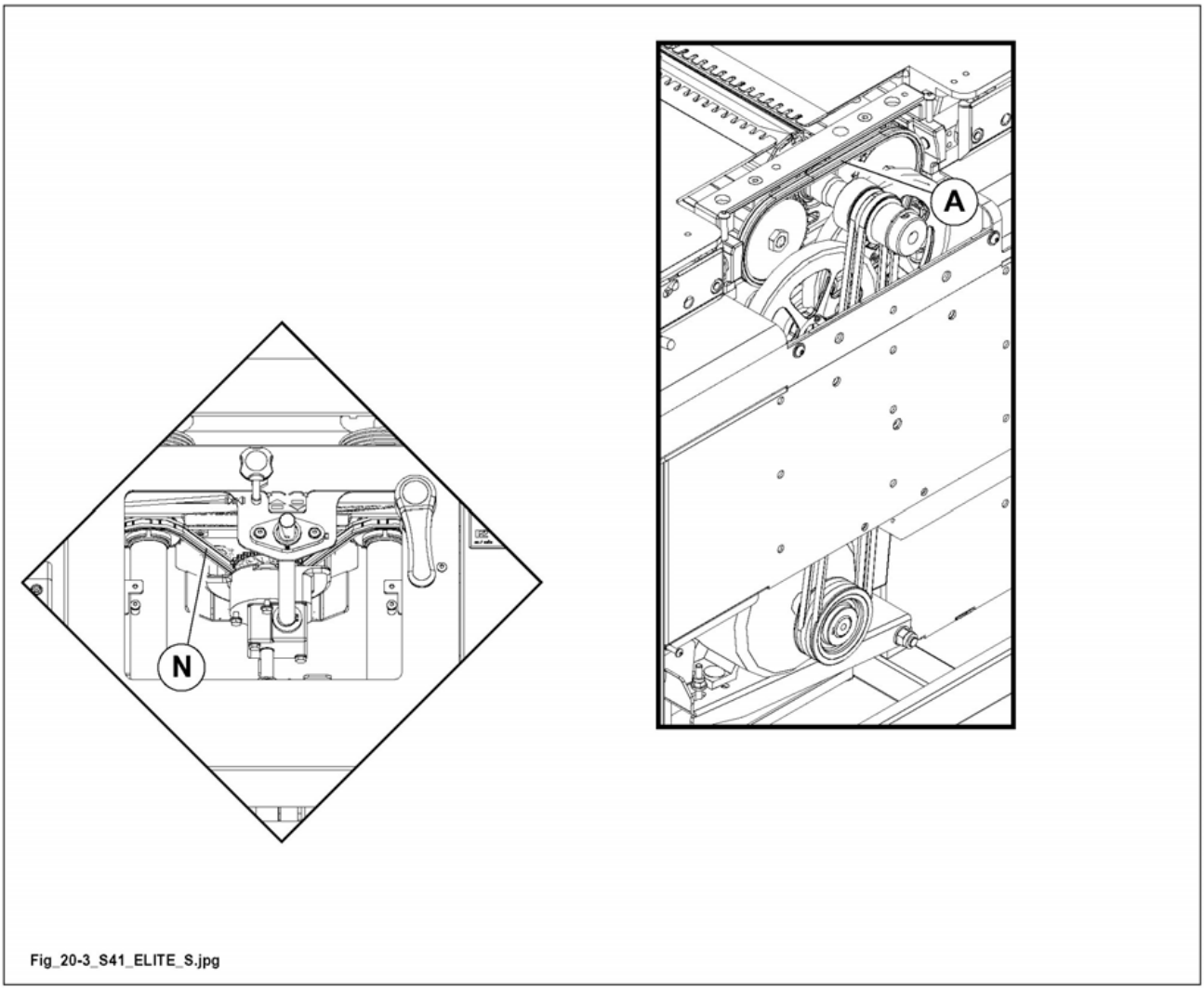


Fig. 20.3

20.7 CHECK OF SAFETY DEVICES

(fs_20-7_0.0)

The machine is equipped with safety devices described in Chapter 2 which ensure tha safe machine operation.

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 machine; with the machine under normal operating conditions, after opening the top cover, the motor shall stop.

NOTE-INFORMATION:
- the belt slackening may cause an increase of the braking time, therefore make sure that the belts are stretched and in good conditions (see par. 20.23).

- Every 2 months or approx. every 500 brakings check the motor braking time (max. time to stop the motor: 10 sec); in case of brake adjusting, see par. 20-8.

At the beginning of each work shift check that all guards properly operate and that they ensure an efficient protection.

Periodically check the plates in particular the ones with yellow ground are in good state.

DANGER-WARNING:

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 Technical Service of SCM ***dealer.***

20.7.1 SPARE PARTS THAT AFFECT THE OPERATOR'S HEALTH AND SAFETY

(mmax_20-7-1_0.0)

The previous section "Checking safety devices" indicates the operations which the user must perform and the respective frequency.
Such operations allow early identification of any malfunctions in machine safety systems.

NOTE-INFORMATION:
if a malfunction is detected, the user must contact the Assistance Centre authorised by SCM***.***

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FORBIDDEN:
never attempt any work on the devices unless otherwise indicated in this manual.

The SCM assistance centre will identify which safety system component needs substituting and will substitute it (or will provide instructions on how to proceed).

NOTE-INFORMATION:
the user (or a specialised user technician) is only authorised to carry out the work described in this Instruction manual.

NOTE-INFORMATION:
when carrying out any maintenance tasks original spare parts supplied by the SCM ***(manufacturer) must always be used). The manufacturer is not responsible for damages due to the use of not original parts.***

NOTE-INFORMATION:
the entire machine electrical/electronic system is essential to machine safety. Therefore, the user is not authorised to carry out any repair/substitution of electrical or electronic components, except what is indicated in this manual.

DANGER-WARNING:
the user must also comply with the substitution times for the various safety devices, always using the SCM ***Assistance service to identify the correct spare part and to install it (unless otherwise indicated in this manual).***

SPARE PARTS THAT CAN BE INSTALLED BY THE USER

NOTE-INFORMATION:
in the spare parts catalogue the letter "C" indicates the codes of spare parts which affect operator health and safety.

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

DANGER-WARNING:
for all other spare parts contact the Manufacturer's Dealer SERVICE or contact the Manufacturer's SERVICE directly.

20.8 AUTO-BRAKE MOTOR

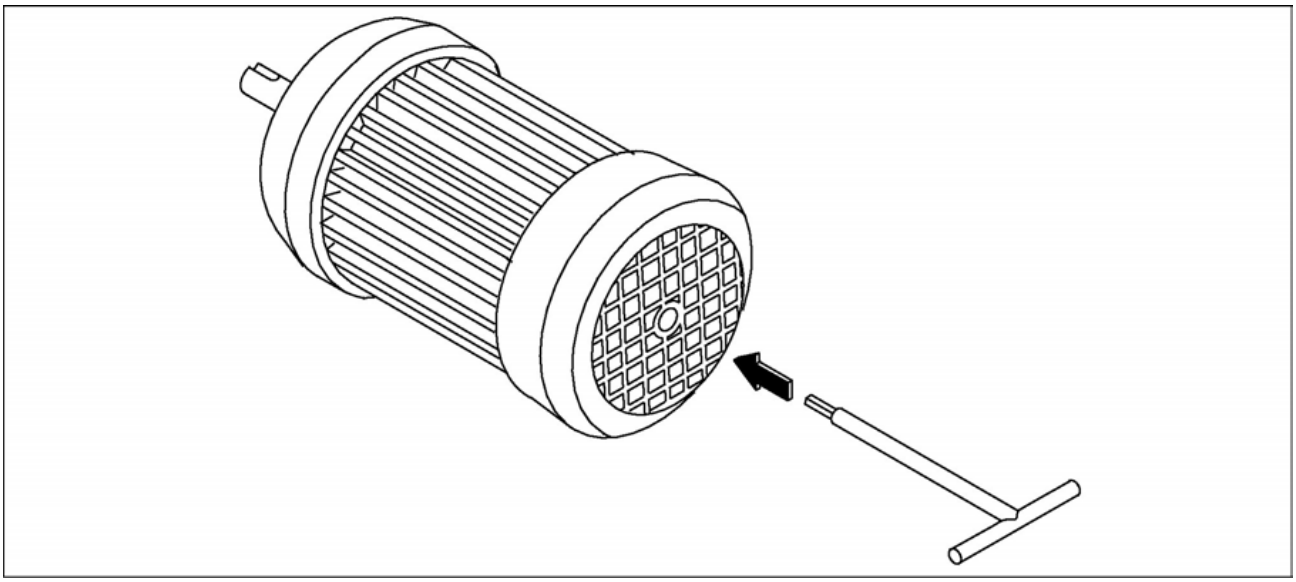
(ev_20-8_0.0)

At least every 2 months or 500 stops, check and adjust the electromechanic braking device.
Before carrying out any intervention on the motor, shut off the power by turning the padlockable main switch to 0 - OFF.

Electromagnet brake clearance
Distance between electromagnet and mobile core is called “air gap” and is adjusted during device construction.
Adjustment is required only in case of replacement of mobile core having glued to its surface a brake disk of friction material being subject to wear .
Wear limit of friction disk is 3 mm.
Replacement is to be carried out only by technicians of SCM dealer.

Adjustment of braking unit
Braking efficacy reduction can be noticed by the increase of the time required to fully stop the cutterblock/spindle (max. time 10 seconds) in case of tool of max. size and at the maximal permitted speed.
To reset the best braking torque proceed as follows:
- insert an Allen wrench into the hole on cover for the fan in order ot reach the adjusting screw;
- progressively screw down screw in order to join the mobile elements and to eliminate distance (brake clearance);
- unscrew screw by min.1/4 turn (max.1/3 turn) (corresponding to about 0.4 mm air gap);
- start and stop the motor a few times to check the correct running.

DANGER-WARNING
the brake is released by moving back the screw more than 1 mm.



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(fs_vuota_20-02)

20.18 BELTS REPLACING

(fs_20-18_0.0)

DANGER-WARNING:
main switch (Y fig. 20.18) is turned to I (ON).
Turn selector (3 fig. 20.18) to (brake release); unlocked motor brake, pilot lamp switched on.

If only one belt is worn or too long, you have to replace all belts.

1) Stop the machine (see Chapter 5); turn the main switch to 0, lock it and indicate it with a sign.
2) Remove guards (A , B fig. 20.18).
3) Loosen screw (D fig. 20.18).
4) Loosen the nut (C fig. 20.18).
   By using a lever lift the motor and keeping it in this position withdraw the worn belts (E fig. 20.18), then fit the new ones.
5) Stretch the belts as described (see par. 20.28).
6) Fit guards (A , B fig. 20.18) again.

DANGER-WARNING
turn selector (3 fig. 20.18) to (brake locking); locked motor brake, pilot lamp switched off.

FORBIDDEN:
- never pair belts of different makes;
- never use a new belt and an old one, because in that case the new belt tramsmits the entire power by itself and so it is damaged in short time.

DANGER-WARNING
the cover and door are fixed safety guards and must be reassembled before operating.

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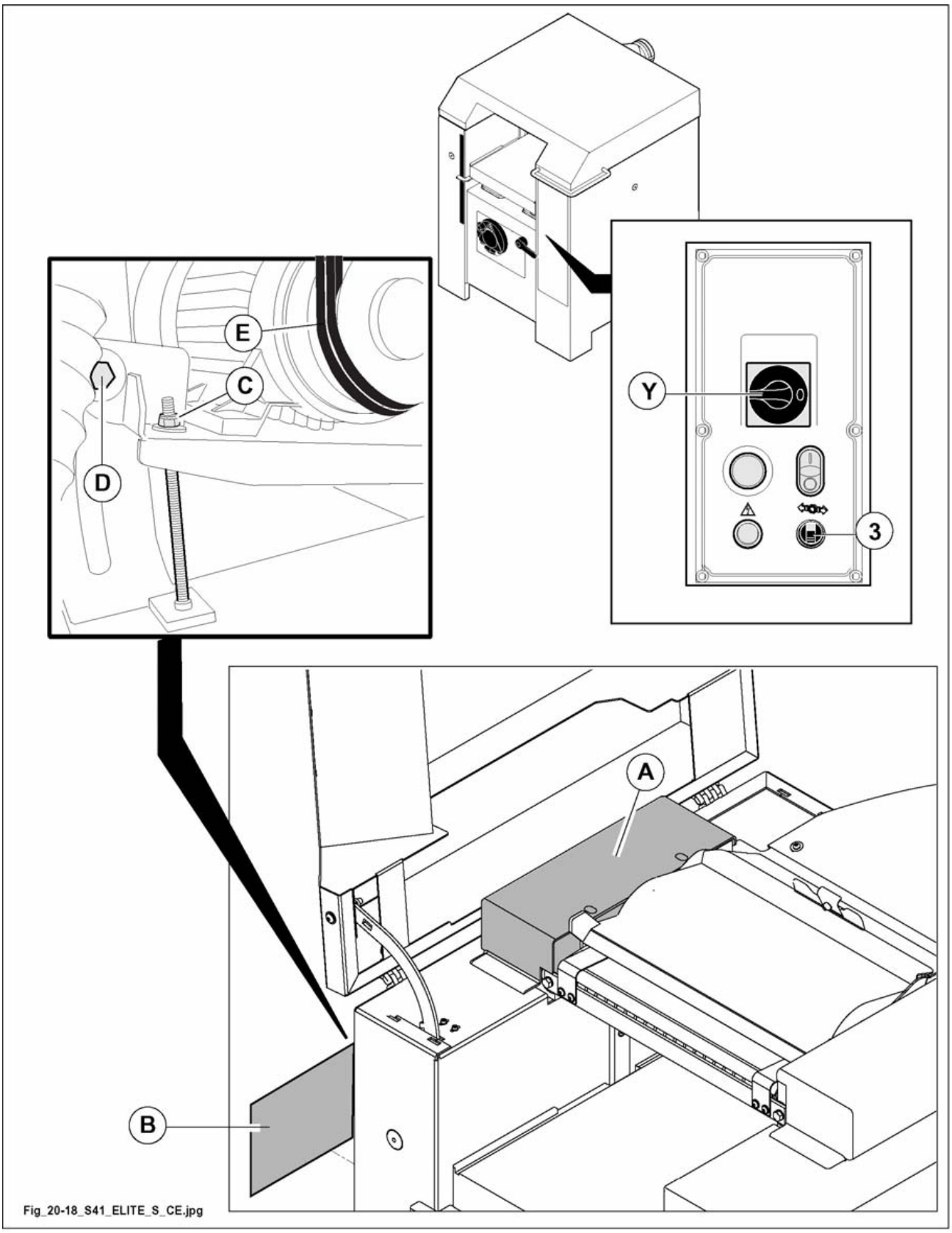


Fig. 20.18

20.28 BELT TENSION ADJUSTING

(fs_20-28_0.0)

DANGER-WARNING:
main switch (Y fig. 20.28) is turned to I (ON).
Turn selector (3 fig. 20.28) to (brake release); unlocked motor brake, pilot lamp switched on.

DANGER-WARNING
check the belt tension after the first 10 hours of machine operation.
At least every 6 months, it is necessary to perform a periodical check on the belt.
Do not overstretch the belts not to overload the bearings.
Overstretching may overheat and destroy the belts.

NOTE-INFORMATION:
every week check the cutterblock belts.

To stretch the belts proceed as follows.
1) Stop the machine (see Chapter 5); turn the main switch to 0, lock it and indicate it with a sign.
2) Take off the rear door (B fig. 20.28).
3) Loosen screw (D fig. 20.28).
4) Screw in the nut (C fig. 20.28) to tension the belts.
5) When the adjustment has been carried out tighten the screw (D fig. 20.28).
6) Fit the rear door (B fig. 20.28) again.

DANGER-WARNING
turn selector (3 fig. 20.28) to (brake locking); locked motor brake, pilot lamp switched off.

DANGER-WARNING
DO NOT use the machine without the required guards for every machining process or removing part of the guards.

CAUTION:
an excessive belt tightening will cause both functioning failures and belts wear beforehand.
By exerting a force P in the middle of a belt, the latter must have a yielding f as shown in the table.

Force P		Yielding f (mm)
N	Kp	
25	2,5	13 ÷ 14

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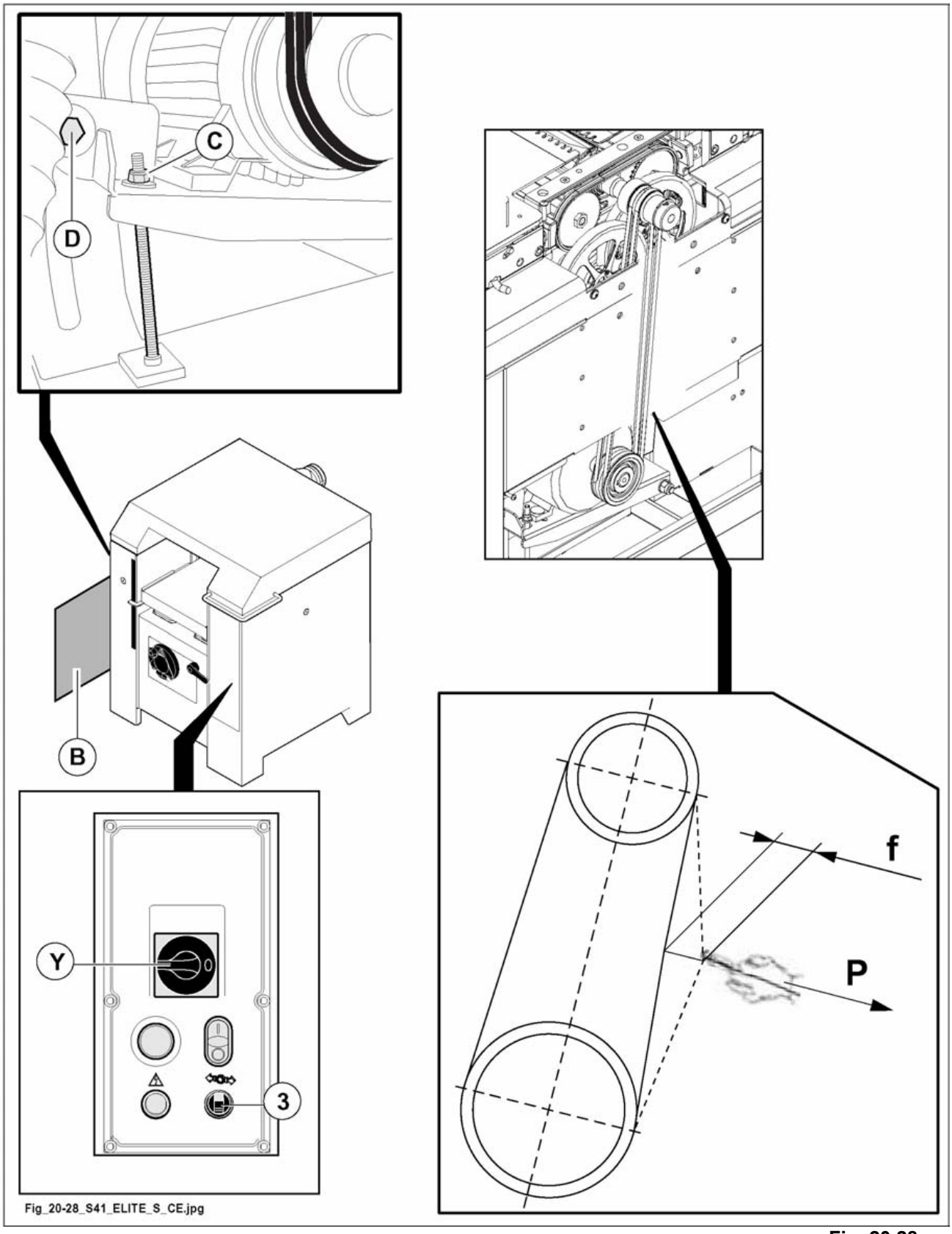


Fig. 20.28

20.37 TROUBLES - CAUSE - WHAT TO DO

(fs_20-37_0.0)

This section indicates some solutions in case of eventual troubles which may rise during the machine operation.

The operator shall intervene only after reading all that concerns the problem in this handbook.

In case of troubles not described here, apply to SCM Technical Service.

PROBLEM	CAUSE	REMEDY
The spindle motor does not start.		
	No electrical energy on one or more phases of the line.	Check with a tester there is voltage in the three phases.
	The fuses of the auxiliary circuit are interrupted or the fuse block cover is open.	Close the fuse block cover. If the machine does not start: 1- Open the fuse block cover. 2- Check the integrity of fuse, if necessary, replace them (a set is supplied with the accessory pack).
	Emergency on.	Switch off the button by turning it.
	Top cover open.	Close the cover to actuate the limit switch.
	Overload triggered	Reset overload located on the control board.
	Motor brake off.	Turn selector for brake release to (brake locked).
	Main ON/OFF switch can be padlocked in position **0** (OFF).	Rotate main ON/OFF switch to **I** (ON).
The machine stops during machining.		
	No electrical energy on one or more phases of the line.	Check with a tester there is voltage in the three phases.
	The fuses of the auxiliary circuit are interrupted or the fuse block cover is open.	Close the fuse block cover. If the machine does not start: 1- Open the fuse block cover. 2- Check the integrity of fuse, if necessary, replace them (a set is supplied with the accessory pack).
	Too heavy operation in relation to the power of the motor, or bad cutting conditions.	Wait for the thermal cut-out protection located inside the control panel, then restore it to cool down. Check the condition of planer spindle' knives and sharpen or replace them if necessary.
	Belts worn or slow.	Adjust them or change then as described in Par. 20.28 o 20.18.
The thicknesser table does not lift or lower.		
	CMR card faulty.	Carry out section 18 checks; if necessary change it.
	The table screws height adjusting are clogged with dust and resin and after a few mm of lifting the red warning light comes ON.	Clean the screws; check the state of the chain.
The wood is not fed.		
	Advancing speed too slow.	Change speed (see paragraph9.4).
	Roller pressure too low.	Adjust rollers (see paragraph 9.8).
	The thicknesser table is adjusted to a measurement greater than the thickness of the wood.	Bring the table to the correct height (see paragraph 9.5; 9.6).

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PROBLEM	CAUSE	REMEDY
	The chain is broken	To change it call your dealer's Assistance Service SCM.
The motor operates but the spindle stops when it is in contact with the workpiece.		
	The belts between motor pulley and shaft have slowed down.	Stretch the belts (as described in paragraph 20.28).
The digital display indicates an unreal quota.		
	Display irregular.	Read chapter 16 to restore display.

20.60 UNSCHEDULED MAINTENANCE

(mmax_20-60-0.0)

All tasks not expressly listed in this manual, such as:

- tasks to be carried out following component or electric motor faults
- tasks to be carried out following mechanical system component faults

shall be considered unscheduled maintenance tasks.

These tasks require specific skills and must only be carried out by qualified personnel authorised by the machine manufacturer.

DANGER-WARNING:
never attempt to carry out makeshift repairs or replacements; this could result in dangers of a serious nature for exposed personnel and the machine itself.

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