1.0 GENERAL INFORMATION

The firm LGF will not be responsible for eventual damages caused by a wrong use of the machine deriving from:

- use for functions which are not described in this hand-book;
- working of material, different from aluminium;
- bad or wrong maintenance;
- repairs which are not described in this hand-book;
- use of the machine in explosive places.

This machine was designed and built exclusively for working aluminium; those who make a wrong use of it, working other materials, do it at their own risk. Therefore the firm LGF declines all civil and penal responsibility.

For any necessity or direction, apply to the nearest dealer or to the manufacturer:

Nearest Dealer:

Manufacturer:

LGF s.n.c.
Via Togliatti, 81
47827-VILLA VERUCCHIO - ITALY
Tel.0541/677315 - Fax.0541/678752
Int. web site: www.lgf.it
e-mail: info@ lgf.it

MACHINE'S CONFORMITY

Conformity declaration

The firm L. G. F. s.n.c.
Via Togliatti, 81
47827- VILLA VERUCCHIO - ITALY
Tel. 0541/677315 - Fax. 0541/678752

declares on its own responsibility that the GAMMA cutting off machine with matriculation number.....,which this declaration refers to, is in conformity with the security requisites provided in the CEE directives 89/392, 91/368, 93/44, 73/23, 93/68-89/336, 93/68, and it was built respecting the following regulations: EN 292-1. EN 292-2, EN 60204-1, EN 294, EN 349, EN 418.

Date

L. G. F. s.n.c

Signature
Canuti Luciano

INDICE

INDICE

1.1 INTRODUCTION

This operation and maintenance hand-book concerns the following model of machine:GAMMA MX - GAMMA SWING MX cutting off machine.

1.2 MACHINE'S IDENTIFICATION

The machine is identified through the wording on the metal plate (Fig.1) set on the base of the machine.

1.3 SENDING OF CORRESPONDANCE

For any advice or explanation concerning the machine, please apply to LGF or to the nearest dealer, supplying with:

- model of the machine;
- matriculation number;
- voltage and frequency,
- purchasing date;
- name of the dealer where the machine has been purchased;
- information about the working to carry out;
- number of employment hours;
- number of duty hours.

For a correct identification of the information concerning the machine, please supply with the data reported on the plate (Fig.1) which is set on the clamps junction-box and describes the data of the electric installation.

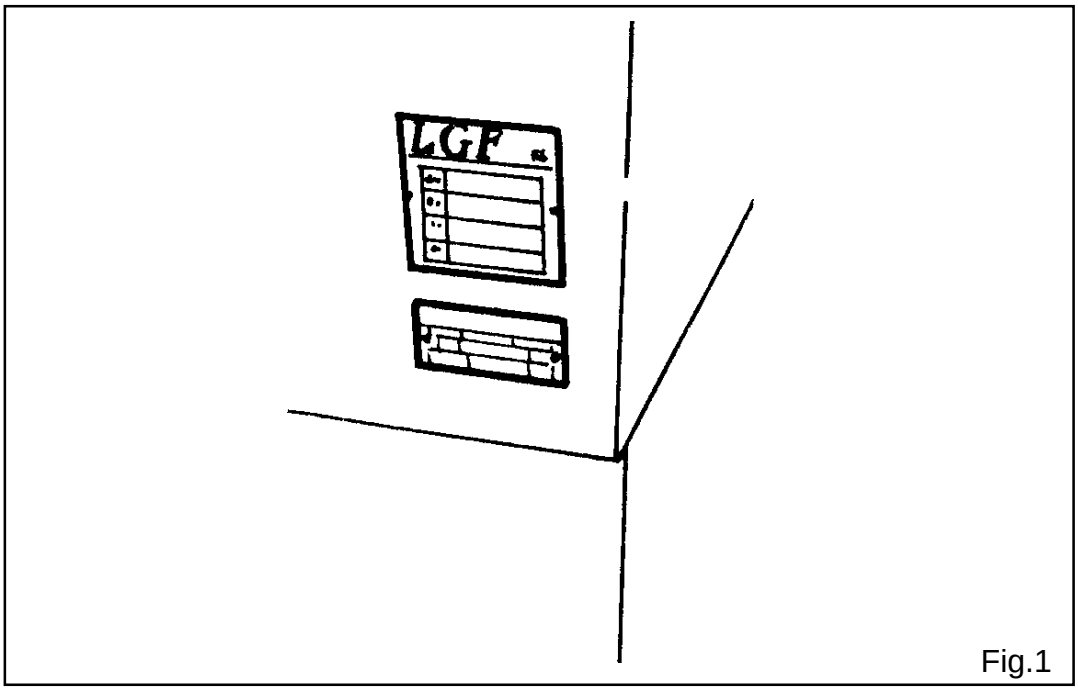
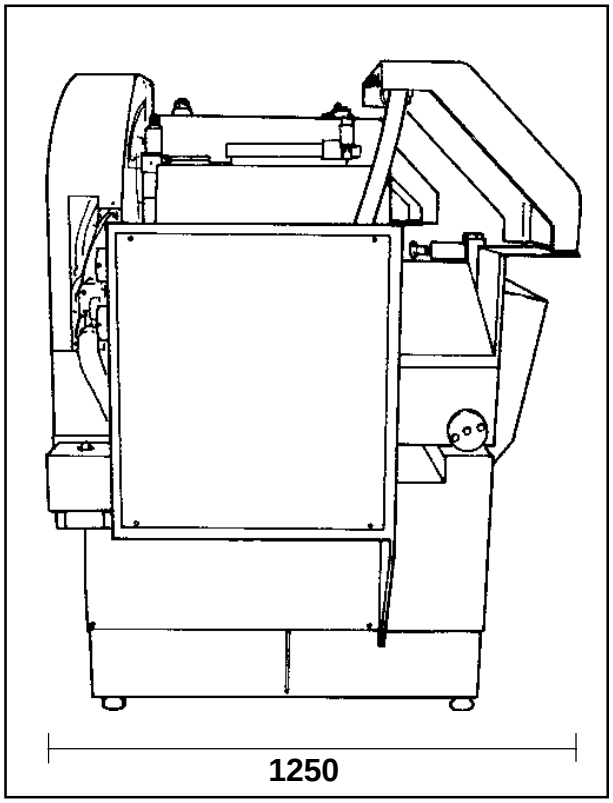
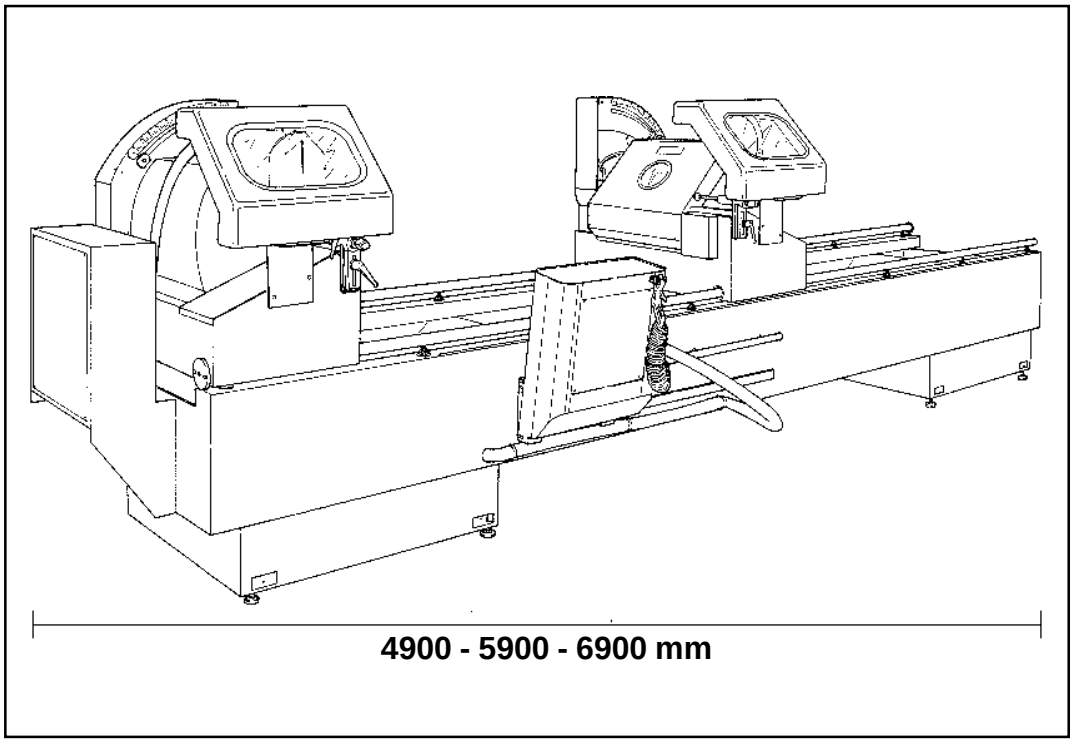


Fig.1

OVERALL DIMENSIONS





CONTROL BOARD:

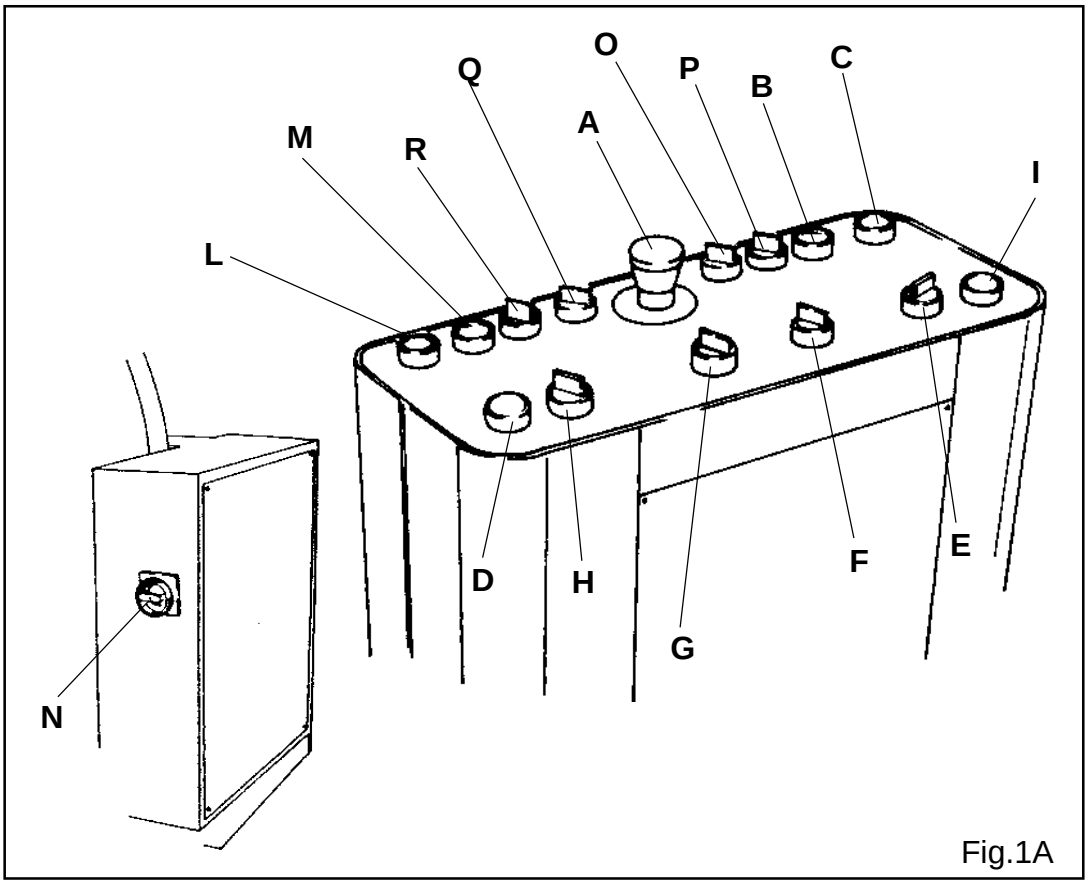


Fig.1A

A (Fig. 1A) = Emergency Button
B (Fig. 1A) = Movable Head's Motor OFF Button
C (Fig. 1A) = Movable Head's Motor ON Button
D (Fig. 1A) = Blade's way out Button
E (Fig. 1A) = Movable Head's Tilting Selector
F (Fig. 1A) = Clamps and Movable Head's Carter Closening Selector
G (Fig. 1A) = Clamps and Fixed Head's Carter Closening Selector
H (Fig. 1A) = Fixed Head's Tilting Selector
I (Fig. 1A) = Blade's way out Button
L (Fig. 1A) = Fixed Head's Motor ON Button
M (Fig. 1A) = Fixed Head's Motor OFF Button
N (Fig. 1A) = Main Switch
O (Fig. 1A) = Minimum cut clamp Selector
P (Fig. 1A) = Minimum cut piston Selector
Q (Fig. 1A) = Central pneumatic support Selector
R (Fig. 1A) = Brake Selector

By pressing buttons D and I both blades will come out.

1.4 TECHNICAL DATA

T.C.T Saw Blade Ø 530 mm
Three-Phase Motor 3HP 2800 rpm
Blade Shaft Diameter ..... 30 mm
Sliding movable head by ball bearing
Radial sliding of the blade unit
Min. working pressure ..... 7 bar
Heads tilting ..... 90°-45°
Overall ..... L. 4000 = (1250x4900x1350)
dimensions: ..... L. 5000 = (1250x5900x1350)
Weight ..... L. 4000 = 1200 Kg.
..... L. 5000 = 1350 Kg.

STANDARD EQUIPMENT

Air Gun
Pneumatic Clamps
Automatic lubrification
Full protection of the blade
Stops setting
Service Spanners

OPTIONAL

Reduced cut modification
Pneumatic central support
Right head support with rollers
Kit with industrial dust exhaust unit
N°2 T.C.T Saw blades Ø mm 530
Manual central support
Read out on display

1.4bis TECHNICAL DATA

T.C.T Saw Blade Ø 530 mm
Three-Phase Motor 3HP 2800 rpm
Blade Shaft Diameter ..... 30 mm
Sliding movable head by ball bearing
Radial sliding of the blade unit
Min. working pressure ..... 7 bar
Heads tilting ..... 90°-45°
Overall ..... L. 4000 = (1250x4900x1350)
dimensions: ..... L. 5000 = (1250x5900x1350)
Weight ..... L. 4000 = 1200 Kg.
..... L. 5000 = 1350 Kg.

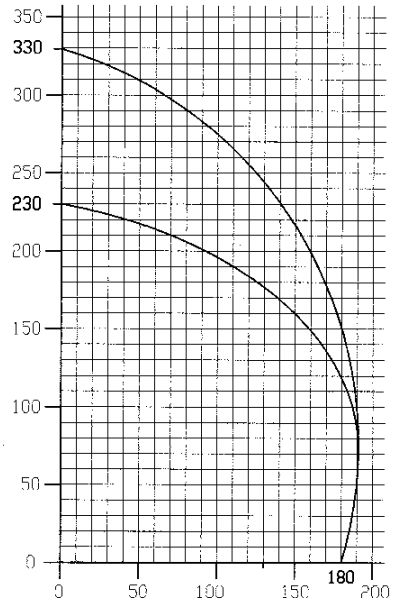
STANDARD EQUIPMENT

Air Gun
Pneumatic Clamps
Automatic lubrification
Full protection of the blade
Stops setting
Service Spanners

OPTIONAL

Reduced cut modification
Pneumatic central support
Right head support with rollers
Kit with industrial dust exhaust unit
N°2 T.C.T Saw blades Ø mm 530
Manual central support
Read out on display

1.5 CUTTING CAPACITY



1.6 NOISE LEVEL

ACOUSTIC EMISSION OF THE GAMMA CUTTING OFF MACHINE ACCORDING TO NORMS EN27560

(Lp) Level of the machine's medium sonorous pressure	(Ln) Level of the machine's normalized acustic power	(Lpi) Sonorous level in the operator's normal position	(Lmax) Maximum sonorous working level on the prescribe	WORKING CONDITIONS
dB(A)	dB(A)	dB(A)	dB(A)	
				IDLING WORKING

L min.: Minimum sonorous working level: dBA
L.o: Noise level range: dBA
Lep.D : Daily personal exposure level: dBA

SONOROUS EMISSION

Carrying out many activities together with the use of the machine can sometimes involve physical uneasiness and weariness . For example, being engaged with extra-working activities which require sonorous exposures involves higher risks and a lower health's defence.
Working conditions like, for example, the loudness of the working environment play an important role for the health and personal comfort.

Some factors which influence the real exposure level are:

- the period of exposure.

- the adjacent working machines

- the type and characteristics of the buildings.

Moreover, noise emission can be contained by:

- reducing the number of the machine's revolutions,
- a low advancing,
- a correct fastening of the piece,
- a good condition of the tools.
- and , above all, using the appropriate acoustic protections.

A protracted exposure over 85 dB (A) could cause health troubles.
In any case, it is advisable to employ some appropriate protection systems (ex: casings, plugs)

1.7 SAFETY WARNINGS

While drawing up this hand-book, we considered all the necessary functions for a correct maintenance of the machine, getting the best use of it.
Therefore read carefully through these directions before starting up the machine.
This machine was built to offer the highest possible safety together with the best performances.
The greatest security is in your hands. It must be kept in mind that the use of every kind of machine-tool involves some risks.

PERSONAL SAFETY

1) The operator must have reached the legal age, according to the law, and must not be lacking knowledge of manufactures of aluminium machines.
2) Experience teaches that there are several objects which could cause you accidents. Take off rings, watches and eventual bracelets; fasten the sleeves round your wrists, buttoning them accurately; take off neckties which, hanging down could get entangled in the most disparate places; put up your hair with proper accessories (caps, rubber bands).
   Make use of suitable footwear which antiaccident regulations in all countries of the world prescribe and recommend.
3) Always make use of glasses or protective screens for your eyes.
4) Always make use of working gloves
5) Always make use of anti accident shoes

MACHINE'S SAFETY

1) Pay the utmost attention before starting any work.
2) Never start the machine without controlling that all the protection coverings of cutters, betts, ecc. are properly set up.
3) Work only with all appropriate protections at their place and in perfect efficiency.
4) Make sure that the tools are perfectly balanced, sharped and accurately keyed and tight; never make use of bigger tools than the ones indicated in the technical data.
5) Never employ cracked, warped cutters.
6) The machine must be overhauled by specialized staff, acquainted with safety regulations.
7) The machine must not be left unguarded when working. Shutters and protections must be disassembled strictly when the machine is stalled and it is not working.
8) All shutters and protections provided with keys must be closed and the key is to be kept by responsible staff in suitable places.
9) Never employ benzine, solvents or other inflammables for the cleaning.
   Make use of commercial solvents which are not inflammable or toxic.
10) The manufacturing firm declines all responsability for the inobservance of these regulations.

N.B. All disassembly and repairing operations must be carried out exclusively by authorized and qualified staff.
Moreover, it is to be racommended not to carry out reparations or others which are not written in this hand-book.

1.8 MAINTENANCE SECURITY

Maintenance must be carried out by qualified staff. The various operations for the ordinary and extra ordinary maintenance are indicated in the last pages of this hand-book.
It is compulsory to switch off the general electrical equipment, when it is necessary to adjust the machine or to disassemble any protection, by pointing out such operation through a clearly visible plaquard.
An important security factor is the cleaning of the machine, of the working tables, of the floor and the surrounding places.
It is very useful to read carefully through this hand-book before starting the machine: in this way you will realize that the machine has been concerned to offer the best performances together with the highest security.
Encumbering and mobile objects, which could come into contact with the moving organs, are very dangerous.
A certain risk factor, which is eliminable with a good technique and with a constant attention by your side, exists in every work.
Before starting the machine, make sure that there are no other people carrying at maintenance operations.

1.9 OTHER RISKS

In spite of the adopted security directions, some other risks could remain.

- Electrical cabinet. The grid-feeding voltage persists, so pay attention every time you enter it.

- Due to high R.P.M of the blade, althougth precautions (like the polycarbonate guard) are adopted, those could be rejected if wrongly fitted therefore pay attention while fitting the blade.

2.0 MACHINE'S INSTALLATION

Your cutting off machine mod. GAMMA, will be delivered by one of your authorized carriers or directly by the dealer. Verify the conformity of your goods and their good repair.

2.1 MACHINE'S UNLOADING

Before unloading the machine, free it from all those parts which, for transport or packing exigences are put on it.
Therefore the machine's unloading from the transporting vehicle can be effected in the following way:

1) The machine is equipped with a special frame, which raises it from the ground. Therefore it can be easily lifted by an elevator by inserting the forks under the pedestal and balancing the weight which is totally of 1200 Kg. (Version L. = 4000) (Fig.2A) 1350 Kg.(Version L.= 5000)

2.2 PLACEMENT

Choose the most favourable position, according to the length of the pieces to work and to the connections of the eletric and compressed air installations, for an easy maintenance.
Verify the solidity of the floor surface (preferably a material that cannot be deformed, like cement) so that the frame can find a solid support.
Insert the 4 antivibration feet (which are included with the machine) in the special holes on the frame of the machine.
For levelling, screw or unscrew the feet (Fig.2).

N.B.The machine is greased and oiled for transport. Therefore, take the grease off the working tables and the protections accurately.

2.3 WHAT TO DO IF THE MACHINE IS DAMAGED?

1) Of course, the carrier is covered by an insurance, which will fairly refund you the damages.
2) After questioning the damages, you will have to communicate it within two days by registered letter to the carrier and the dealer.
3) Make to the manufacturer a request for eventual pieces to substitute as well. Those will be forwarded to you by cash on delivery. The invoice of such pieces, together with eventual assembly expenses, must be reimbursed by the insurance company.

Attention: the goods travel at the customer's exclusive risk.

2.4 MACHINE'S LEVELLING

Level the machine, controlling that it has been perfecty placed horizontally and transversally, using a spirit-level placed on the working table. Eventual level adjustments are carried out by operating on the adjusting screws A (Fig.2). Then fasten the machine at the floor by means of two expansion plugs inserted in the convenable B(Fig.2)holes which are on the pedestal back shutter (Fig.2).

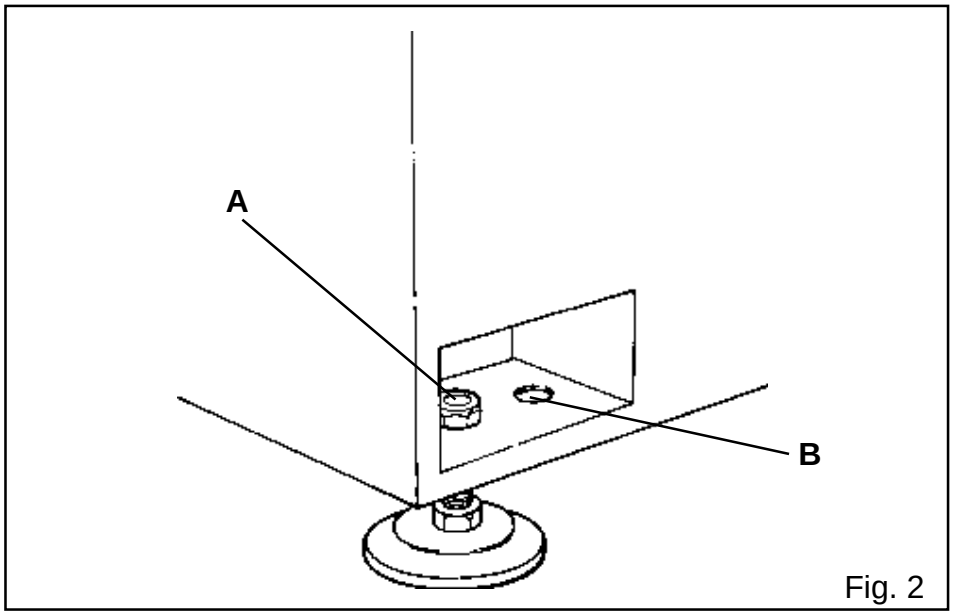


Fig. 2

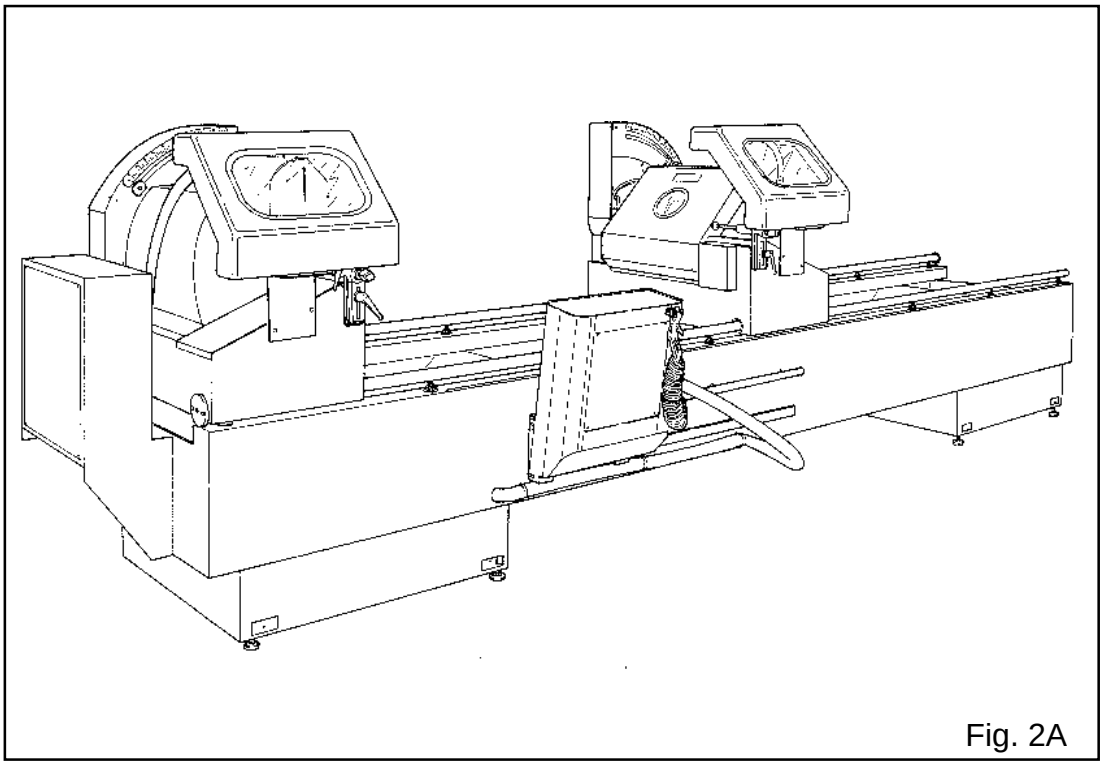


Fig. 2A

2.5 ELECTRICAL AND GROUNDING CONNECTIONS

The electrical connection and the necessary inspections must always be carried out by a specialized electrician according to norms EN 60204-1.
Make sure that the electrical installation in the factory is able to support the power of the machine and control that the main supply voltage corresponds to that of the machine.

Note: the best working condition for the machine is providing with the same voltage reported on the plate in Fig.1.

Yet it can also adopt itself to higher or lower working voltages in a range of endurance of +/- 5% (ex: a machine with working voltage V=380 has a range of endurance which runs from 360 to 400 volts).
Out of this range, provide for the adjustment of the feeding voltage.

Read the value of the total absorbed current (Amp) on the identification plate of the machine.
Consult the following table to use the right wire section and to install on the machine **"DELAYED INTERVENTION FUSES".**

Absorbed Ampere	Wire Section	Delayed Fuses
from 3 to 6	2,5 mm	10A AM
from 6 to 10	2,5 mm	10A AM
from 10 to 14	4,0 mm	16A AM

Insulate electrically the machine and connect the 3 electric wires (phases) to terminals **L1**, **L2**, **L3** in illustration 3. Connect the yellow-green wire (hearth) to terminal PE or marked by the symbol and the neutral wire, if required, to terminal N.
Fasten wire-press P accurately (Fig.3); check that the tools revolve in the right direction, starting the machine as described forward.

If the blade turns in the wrong direction, it is necessary to:

- take the voltage off the grid,
- Invert two phases,
- Check the revolving direction again.
  (The blade must -turn anti clock - wise).

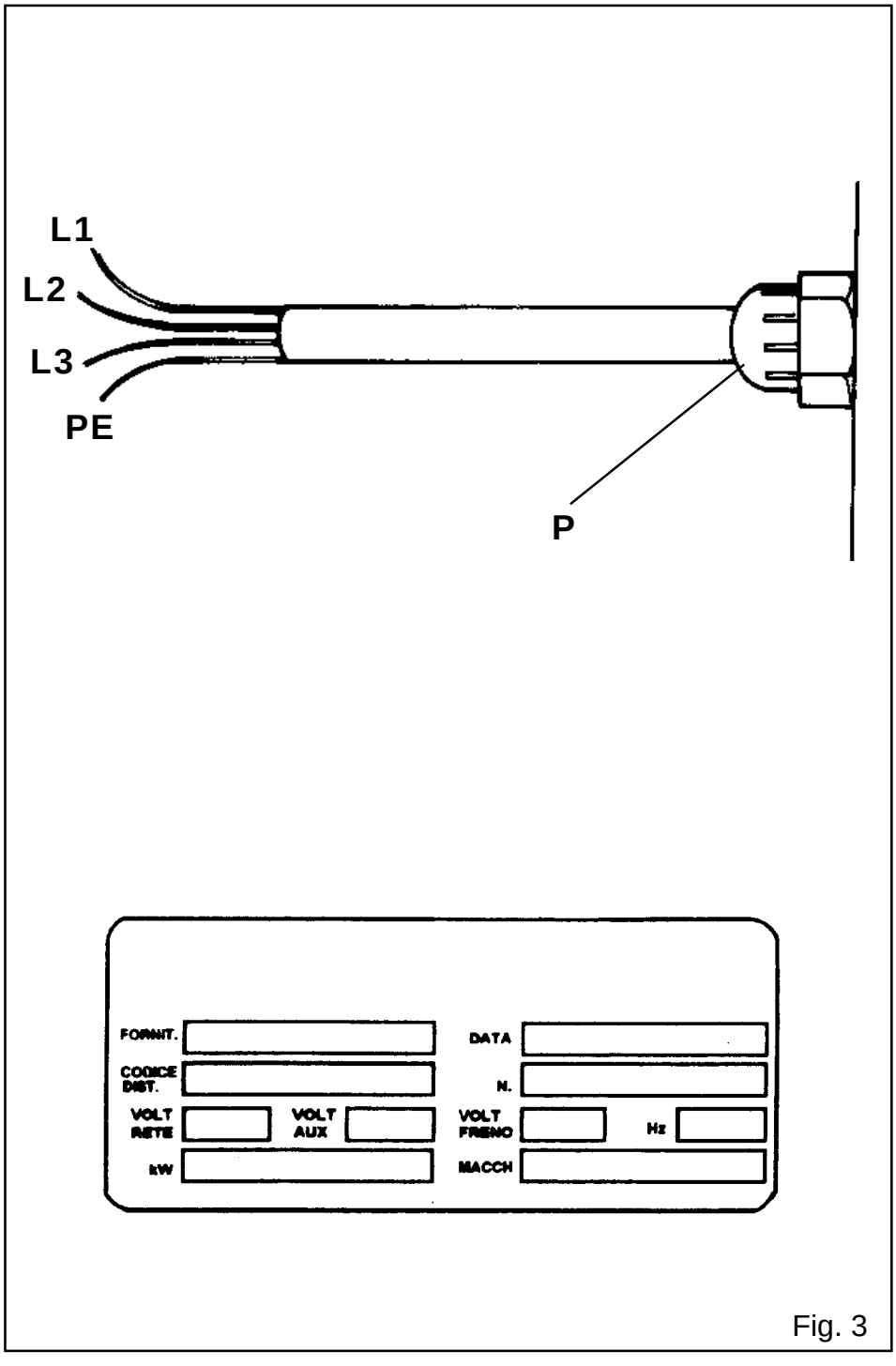


Fig. 3

2.6 PNEUMATIC CONNECTION

The pneumatic connection is effected by engaging in connection A (Fig.4) a flexible pipe (Ø mm.8)
Pressure can be adjusted from O to 12 ATM, operating on grip B (Fig.4) and reading the value on pressure gauge C (Fig.4).

N.B. The air pressure of the machine has to be 6/7 ATM.

PAY ATTENTION: The pneumatic energy must be easily sectioned whenever you do the maintenance

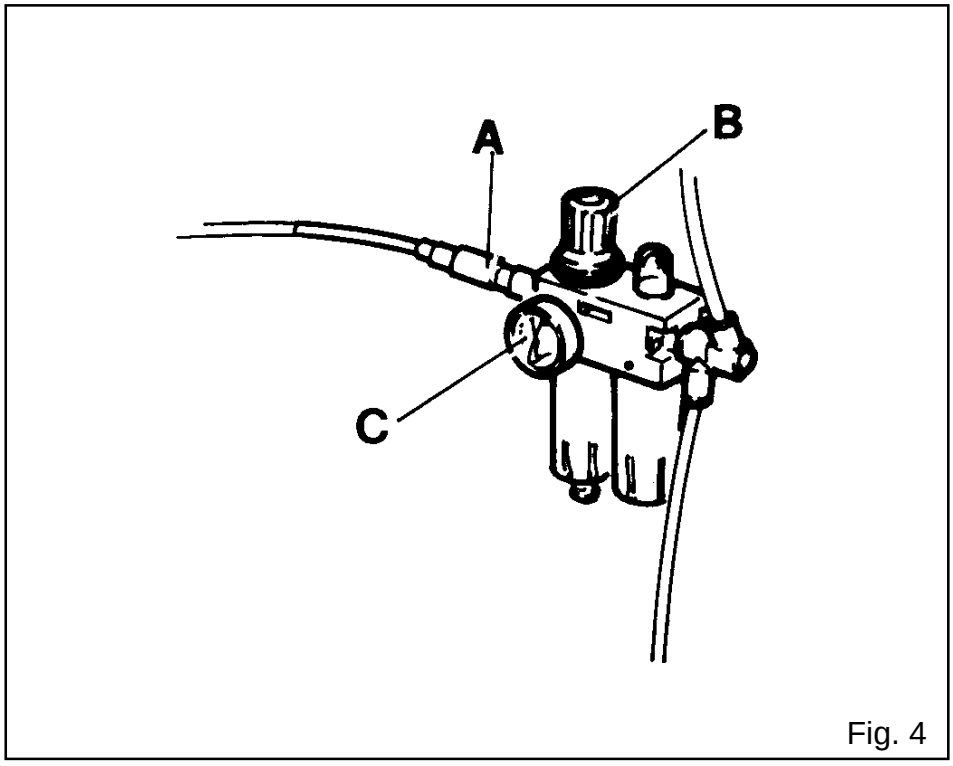


Fig. 4

2.7 COOLING SYSTEM

- Insert cutting oil in the suitable tank A (Fig.5).
- Insert oil for cooling the pneumatic installation in the proper tank B (Fig.5), (use MOBIL ALMA 525 or similar).

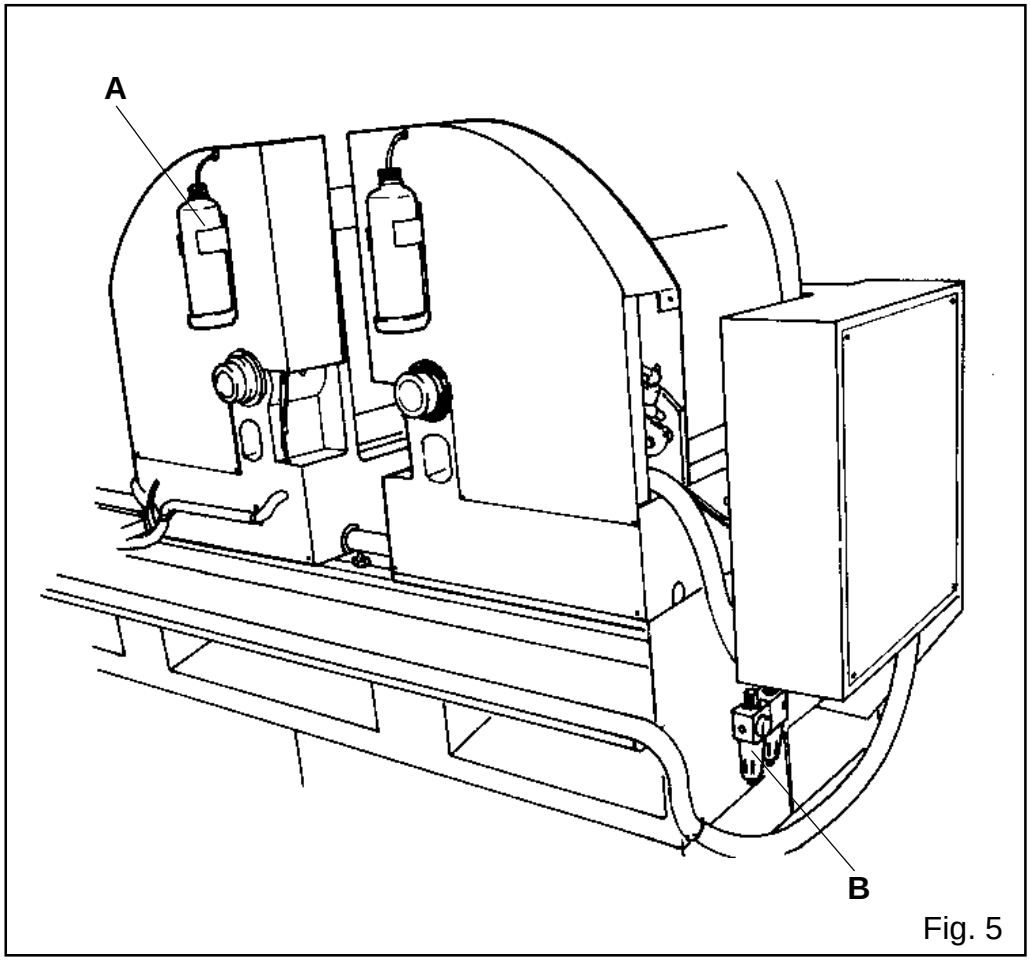


Fig. 5

3.0 USE AND ADJUSTMENTS

3.1 MACHINE'S STARTING

- Turn main switch 1 (Fig.6).
- Press button A (Fig.6) in order to turn on movable head's motor : warning light will start functioning
- Press button B (Fig.6) to turn on fixed head's motor : warning light will start functioning.

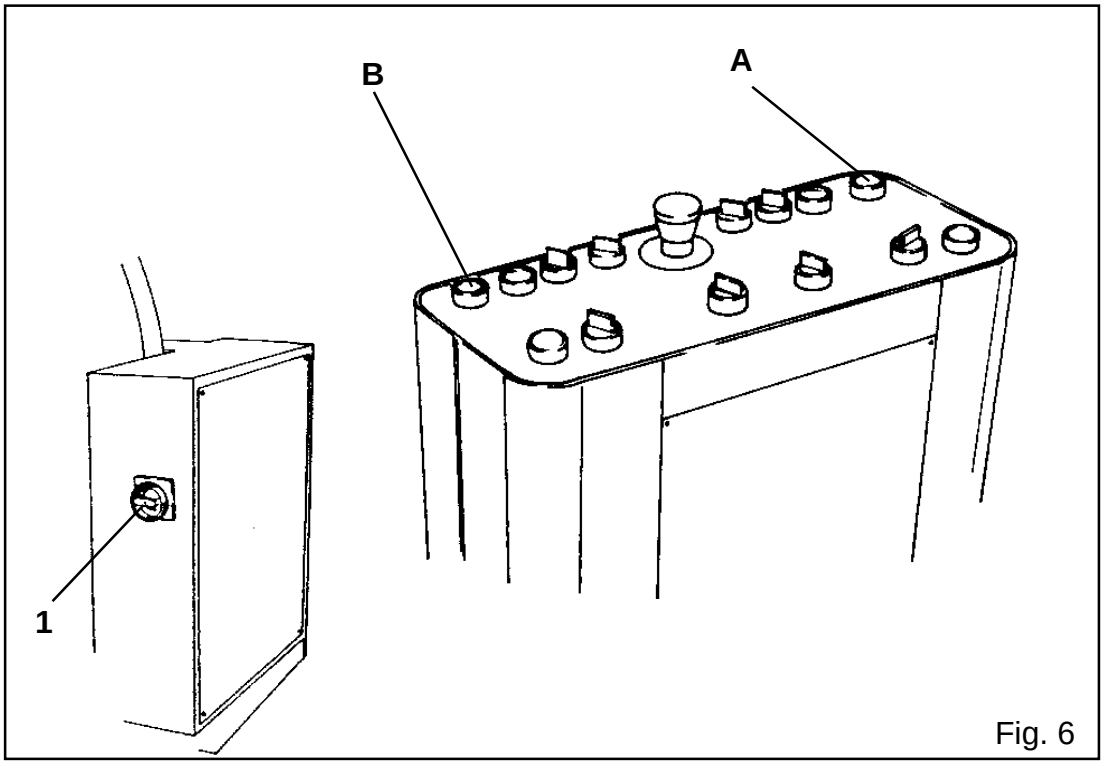


Fig. 6

3.2 CLAMPS ADJUSTMENT

Clamps have to be adjusted accordingly to the profile to be cut operating as follows:

(Mod. GAMMA SWING)

- For vertical adjustment loosen release handle A (fig. 7) lifting or lowering the support C (fig.7) of piston D (fig.7) till you reach the desired position, then block the release handle A (fig.7).

(Mod. GAMMA SWING)

- In case of a reduced section profile loosen screw E (fig.7) and push the profile closer to piston D (fig.7) then tighten screw E (fig.7).

(Mod. GAMMA SWING)

- In case of a bigger section profile, loosen screw E (fig.7) and push away piston D (fig.7) to the outside of the machine till it will be possible to block the profile, lastly fix again screw E (fig.7).

(Mod. GAMMA)

- In case of a reduced section profile loosen release handle E (fig.7/a) and push the profile closer to piston D (fig.7/a) then tighten release handle E (fig.7/a).

(Mod. GAMMA)

- In case of a bigger section profile, loosen release handle E (fig.7/a) and push away piston D (Fig. 7/a) to the outside of the machine till it will be possible to block the profile, lastly fix again release handle E (fig.7/a).

The machine Mod. GAMMA SWING MX is equipped with 2 horizontal clamps for each cutting unit.

N.B. Make sure that during positioning of the clamps the end parts G (fig.7) once opened skill the profile.

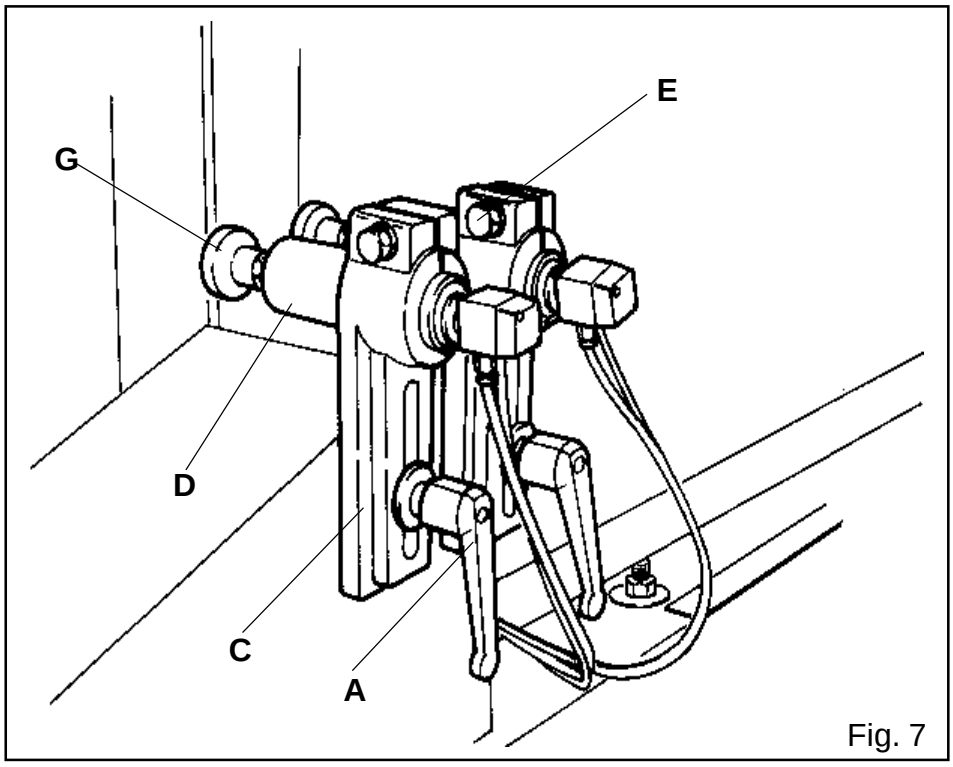


Fig. 7

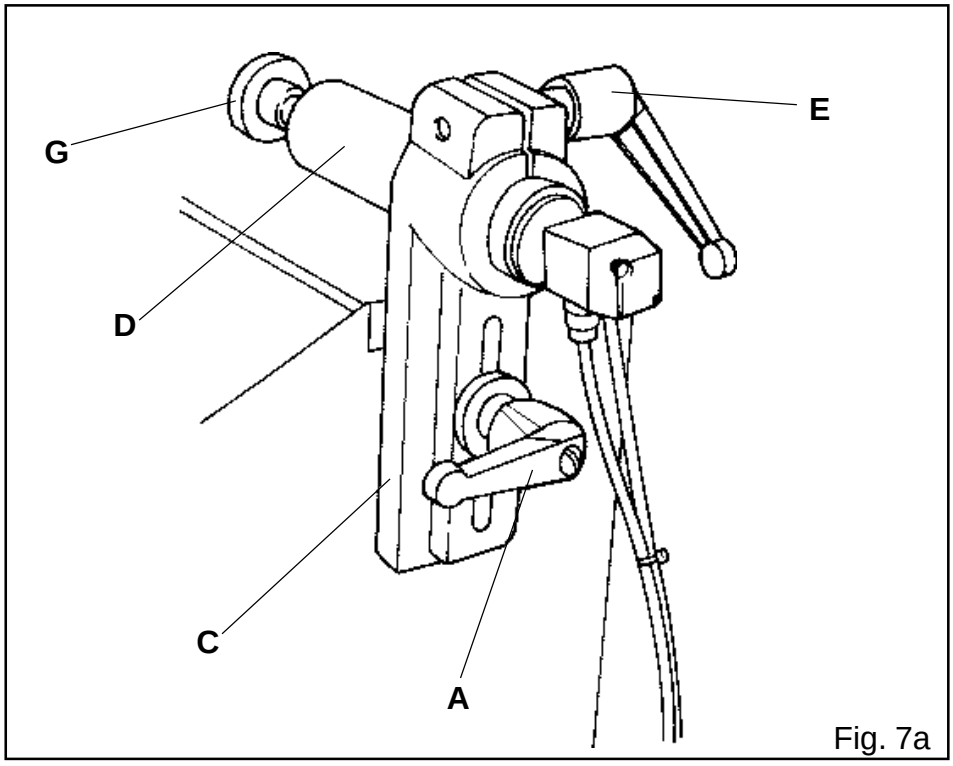


Fig. 7a

3.3 PROTECTION OF THE BLADE

- Fixed head's protection of the blade A (Fig.8a) starts fonctioning by turning selector B (Fig.8) which closes the clamp /s as well.
  To open it again turn selector B (Fig.8) to rest position.
- Movable head's blade's protection A (Fig.8a) starts fonctioning by turning selector C (Fig.8) which closes automatically the clamp /s as well.
  To open it again turn selector C (Fig.8) to rest position.
- Lowering speed of blade's protection may be adjusted by operating with a screwdriver on valve E (Fig.8b) turning to anticlockwise direction to increase lowering speed, turning to clockwise direction to reduce it.
- Uppering speed of blade's protection may be adjusted by operating with a screwdriver on valve G (Fig.8b) turning to anticlokwise direction to increase the speed and to clockwise direction to reduce it.

N.B.: Of course if protections are not closed, blades will not come out.

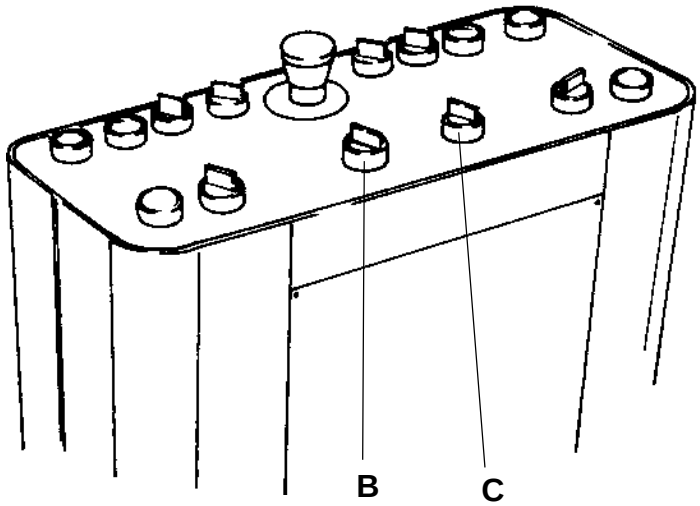


Fig. 8

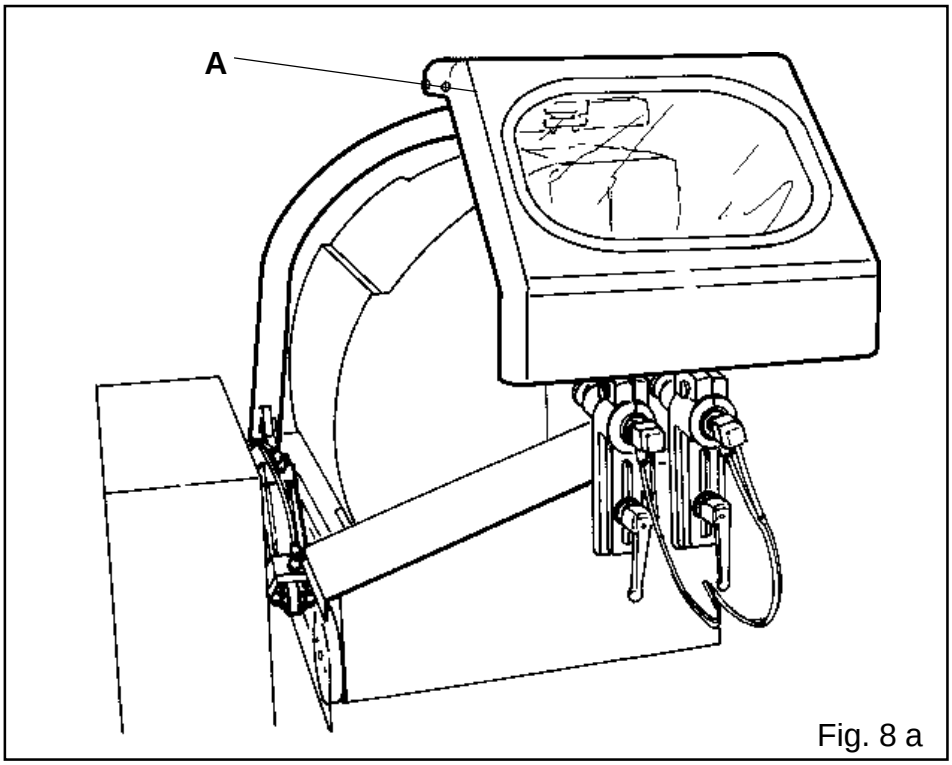


Fig. 8 a

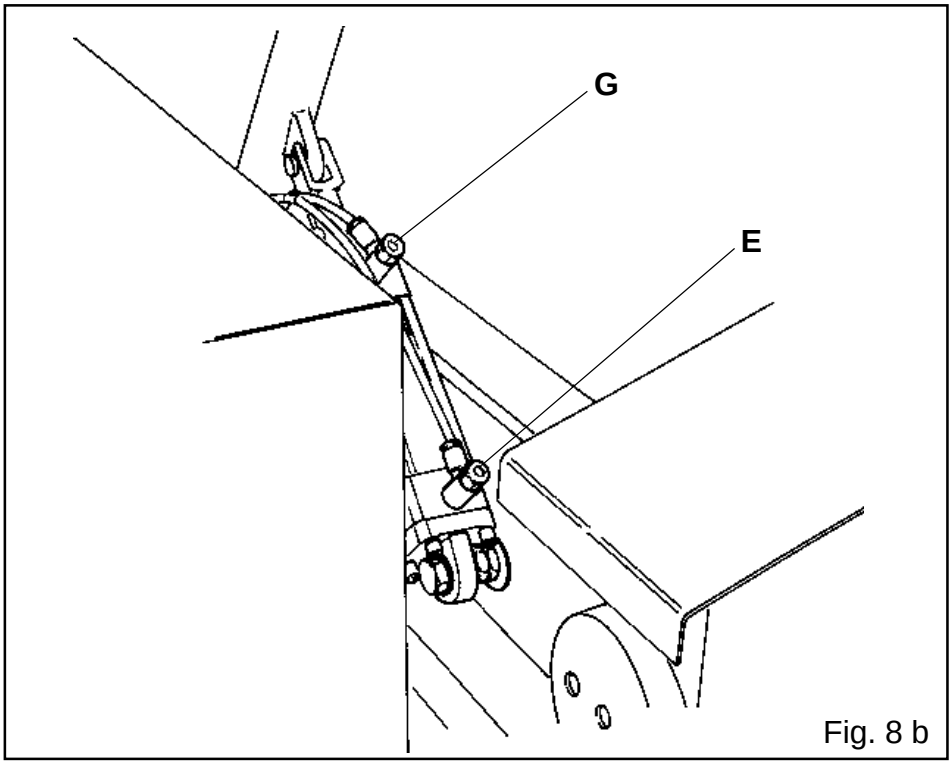


Fig. 8 b

3.4 CUTTING ADJUSTMENTS 45°-90°-45°(GAMMA SWING)

It may happen that due to some shocks, vibrations, you may miss the perfect alignment. In this case it is recommended to operate as follows (fix head):

45° INNER CUTTING
- Take off head's rear protection
- Loosen nut B (Fig.9) which fixes grub screw A (Fig.9) by menas of correspondent spanner.
- Turn bolt A (Fig.9) to clockwise direction to decrease cutting angle or to anticlockwise direction to increase cutting angle.
- Cut a fragment of profile and place it against the inside of a 45°steel precision square.

45° EXTERNAL CUTTING
- Take off head's rear protection
- Loosen nut C (Fig.9a) which fixes bolt D (Fig.9a) by means of correspondant service spanner.
- Turn bolt D (Fig.9a) to clockwise direction to reduce cutting angle or turn the screw to anti-clockwise direction to increase cutting angle.
- Cut a fragment of profile and place it against the inside of a 45°steel precision square to check perfection of the cutting.

90° CUTTING
- Take off head's rear protection
- Insert spanner A (Fig. 9a) in the appropriate place situated on shaft B (Fig. 9a) of piston C (Fig. 9a).
- Insert spanner D (Fig. 9a) inside nut E(Fig. 9a) situated on shaft B (Fig.9a) of piston C (Fig. 9a) by loosening it.
- Turn shaft B (Fig.9a) to the left to move the cutting angle to the right, or turn shaft B (Fig. 9a) to the right, in order to move the cutting angle to the left.
- Cut a fragment of profile and place it against the inside of a 90° steel precision square to check perfection of the cutting.
- Block nut E (Fig.9a) with the spanner D (Fig.9a)
- Assemble the head's rear protection.
- The piston E (Fig. 9) i sequipped with speed adjusters F and G,H and I (Fig.9).

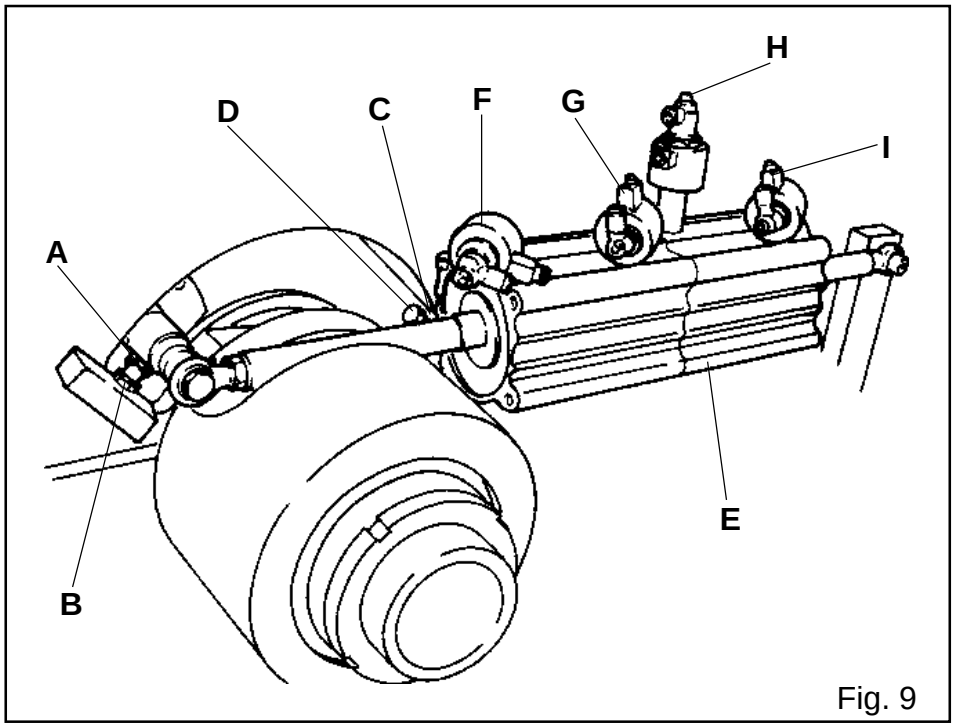


Fig. 9

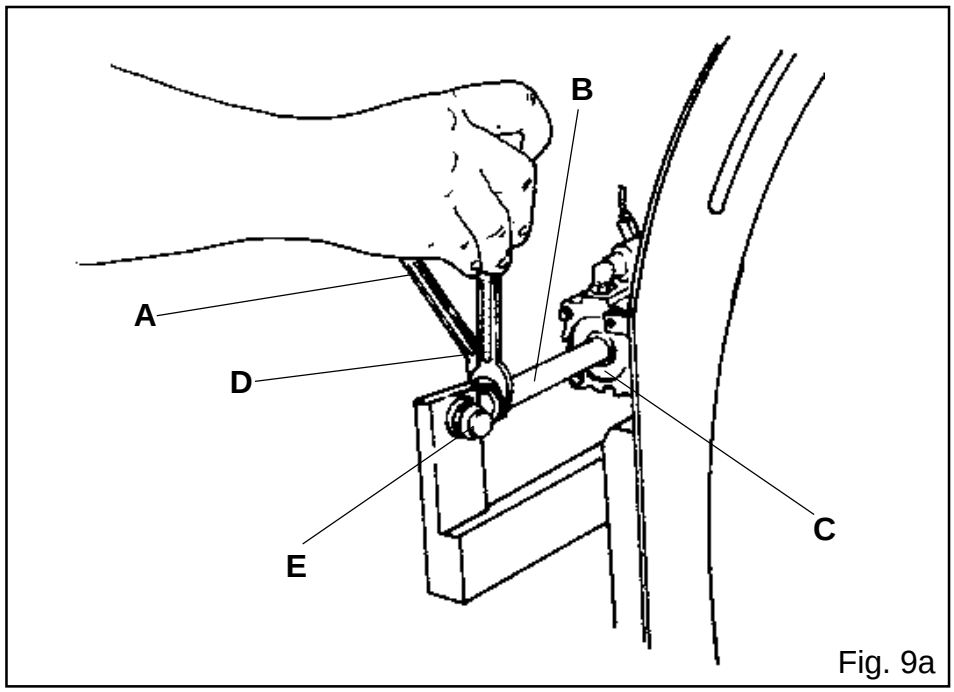


Fig. 9a

3.5 CUTTING ADJUSTMENTS 90°- 45° (GAMMA)

It may happen that due to some shocks, vibrations, you may miss the perfect alignment. In this case it is recommended to operate as follows:

90° CUTTING

- Take off head's rear protection
- Loosen nut B (Fig.10) which fixes screw A (Fig.10) by menas of correspondent spanner.
- Turn screw A (Fig.10) to clockwise direction to increase cutting angle or turn the screw to anticlockwise direction to reduce cutting angle.
- Cut a fragment of profile and place it against the inside of a steel precision square.
- Lock nut B (Fig.10) by means of a key C (Fig.10)

45° CUTTING

- Take off head's rear protection
- Loosen nut C (Fig.10) which fixes screw D (Fig.10) by means of correspondant service spanner.
- Turn screw D (Fig.10) to clockwise direction to reduce cutting angle or turn screw to anti-clockwise direction to increase cutting angle.
  Cut a fragment of profile and place it against the inside of a steel precision square to check perfection of the cutting.
- Lock nut C (Fig.10) by means of correspondent spanner.
- The piston E (Fig.10) is equipped with speed adjusters F e G (Fig.10).

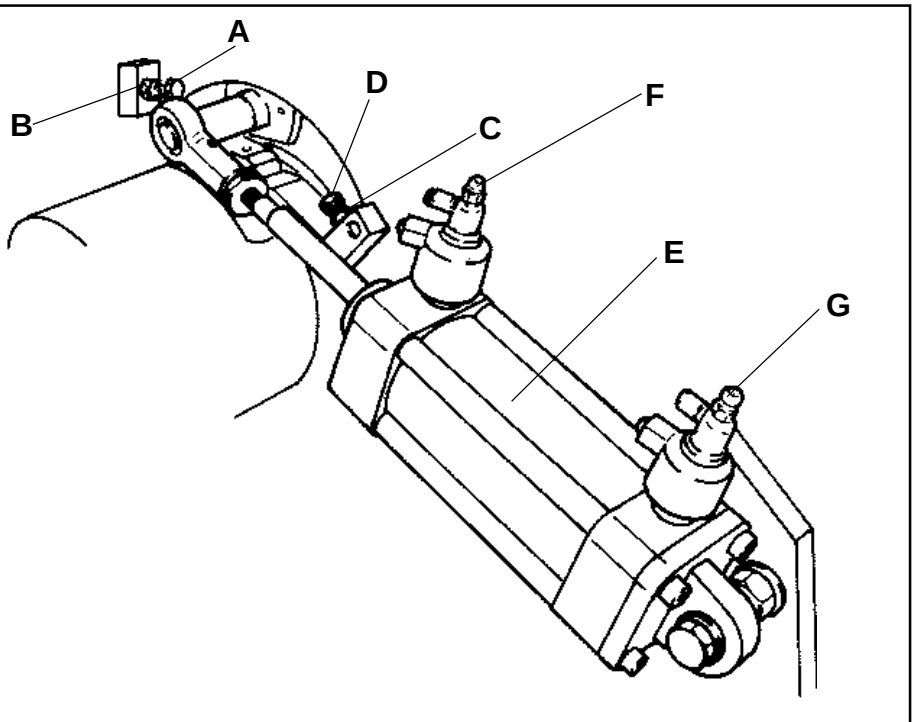


Fig. 10

3.6 INTERMEDIARY CUTTING ADJUSTMENT

The machine is equipped with a graduated sector A (Fig.11) on wich are reported all cutting angles that machine can perform.
In order to perform intermediate cuts operate as follows:

- Loosen screw B (Fig. 11) which locks pointer C (Fig.11) by means of service spanner D (Fig.11).
  Usually the pointer is in rest position pointed to the left on the movable head and pointed to the right on the fixed head.
- Move pointer C (Fig.11) to the expected position.
- Lock screw B (Fig.11) by means of correspondent service spanner and make the positioning.

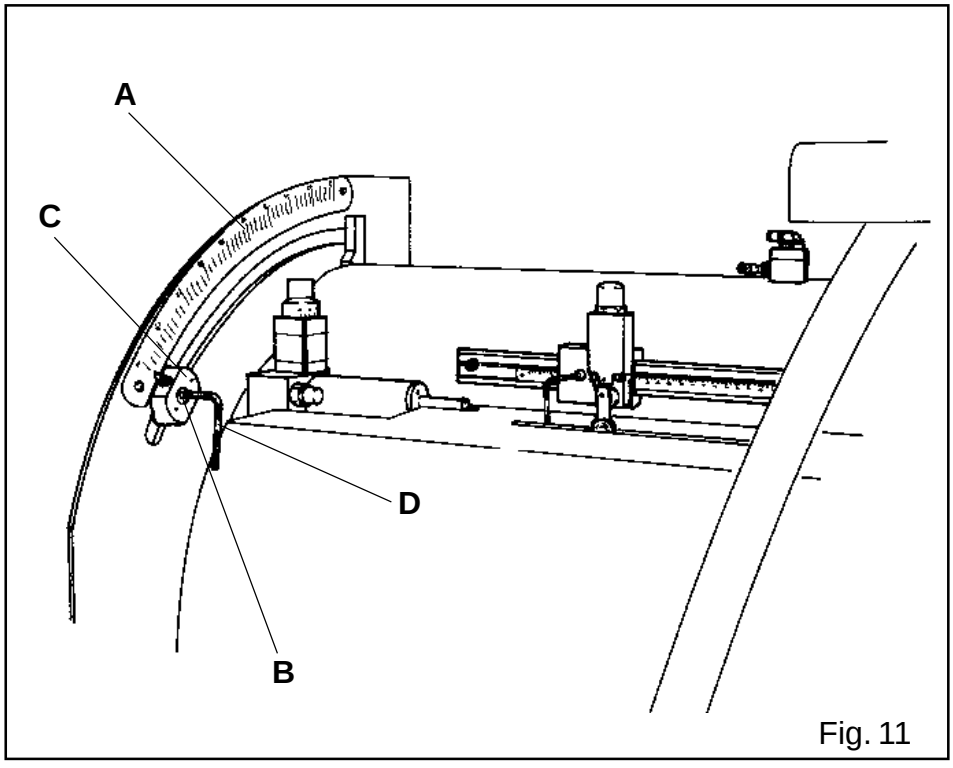


Fig. 11

3.7 MOVABLE HEAD'S ADJUSTMENT FOR THE CUTTING

To adjust movable head operate as follows:
- Turn handwheel A (Fig.12) in order to move the head to expected position indicated by arrow B (Fig.12) on millimetrical tape C (Fig.12).
- Block the head by means of lever D (Fig. 12).

N.B.: The index E - F must be positioned as for from the index B as the height of the profile you are using, as follows:
- Move index E as the height of the profile, when you have one head tilted at 45°.
- Move index F for the double of the height of the profile, when you have both heads tilted at 45°.

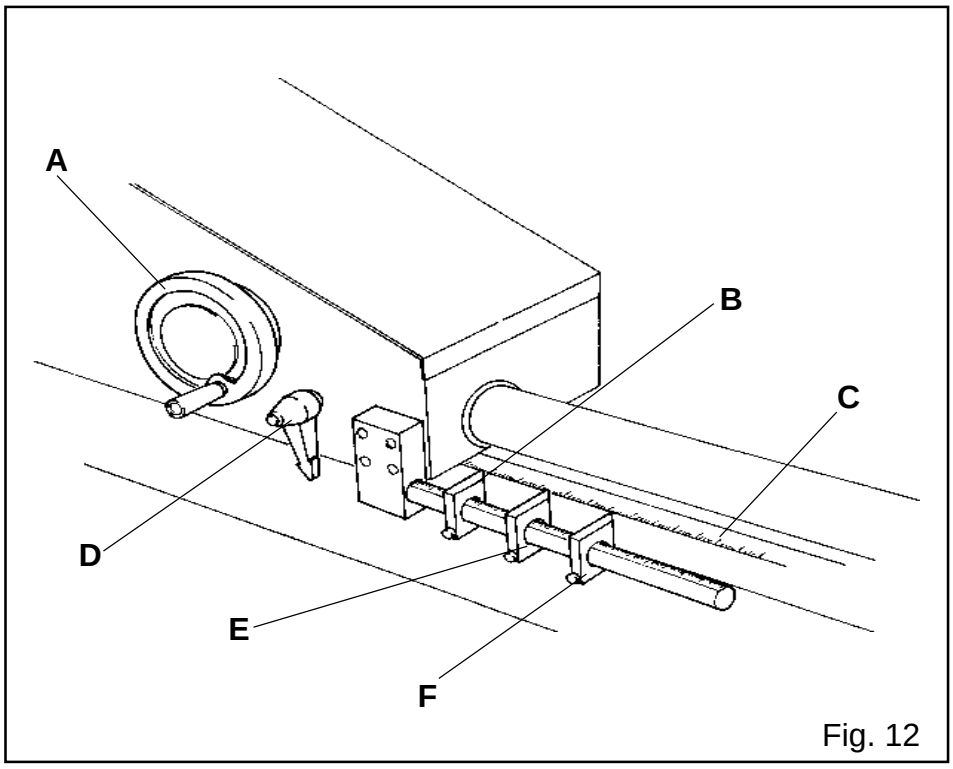


Fig. 12

3.8 CUTTING CYCLE

The complete cutting cycle is carried out in the following way:
- Turn main switch A (Fig.13)
- Position the movable cutting head to 45° or to 90°
  (version GAMMA SWING MX to 45°-90°-45°) by turning selector C (Fig.13)
- Position the fixed cutting head to 45° or 90°
  (version GAMMA SWING MX to 45°-90°-45°) by turning selector B (Fig.13)
- Position the movable cutting head to expected position by means of handwheel and checking the mesure on the millimetrical tape, then lock it by operating with the lever
- Insert the aluminium profile
- Selectors D (Fig.13) and E (Fig.13) respectively for fixed and movable head in order to clamp the profile
- Press bottons F and G (Fig.13) for starting of the motors
- Press and keep depressed buttons H and I in order to execute the cutting
- Open clamps by turning selector D and E (Fig.13)
- Take off aluminium profile and get ready for next cutting.

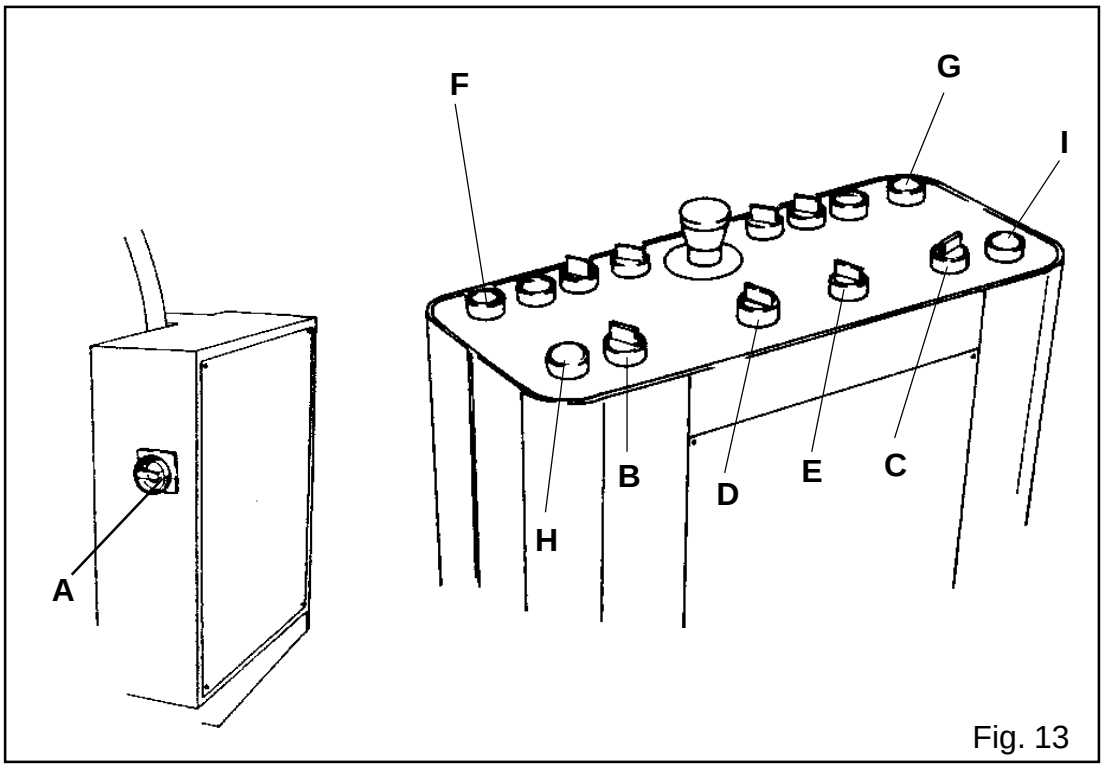


Fig. 13

3.9 DESCRIPTION OF THE COOLING SYSTEM

The machine, when cutting, has a cooling system through spray mist unit A (Fig.14) which automatically comes into function when the blade comes out.
Lubrication oil is placed in the tank B (Fig.14) previously described.
Check regularly (every 24 working hours) that oil is to right level (use exclusively cutting oil).

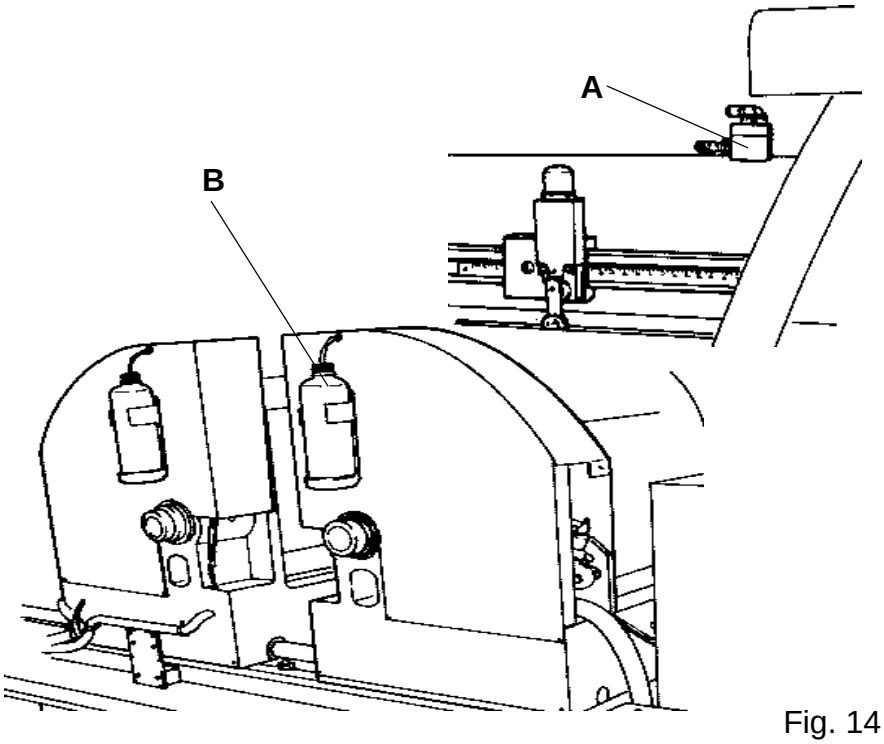


Fig. 14

3.10 BLADE'S ACCESS PROTECTION

To reach the blades, operate as follows:
Check that main switch A (Fig.15) is in on off position.
Remove screws B (Fig.15a) holding carter C (Fig.15a).

N.B. Before removing carter C (Fig.15a) make sure that the blade is steady.

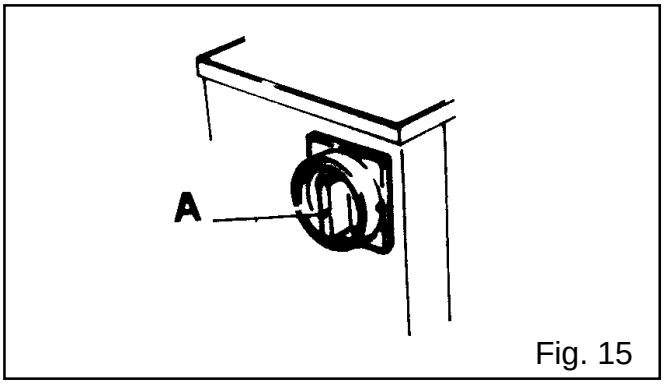


Fig. 15

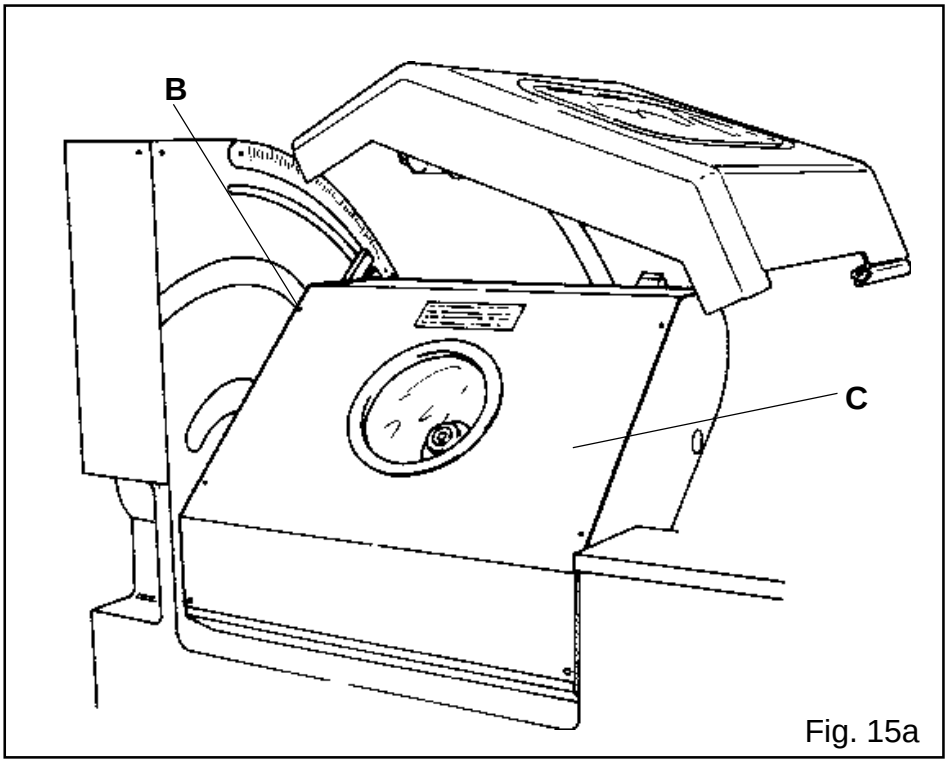


Fig. 15a

3.11 BLADE'S SETTING UP

To set up the blade A (Fig.16) operate with the two service spanners B and C (Fig16).

- Insert spanner B (Fig.16) in the appropriate seat placed on the top of the motor shaft.
- Put spanner C (Fig.16) in the appropriate slot of nut D (Fig.15), then keep steady spanner B (Fig.16), loosen nut D (Fig.16) turning it to clockwise direction for the mobile head (right), to anticlockwise direction for the fix head (left), through spanner C (Fig.16).
- Take off nut D (Fig.16) and flange E (Fig.16).
- Mount the blade A (Fig.16) making sure that the parts in contact are perfectly cleaned, in order to avoid dangerous vibrations.
- Assemble flange E (Fig.16) and nut D (Fig.16) again, blocking through spanners B and C (Fig.16).
- Make sure that blades are sharpened and in good order.

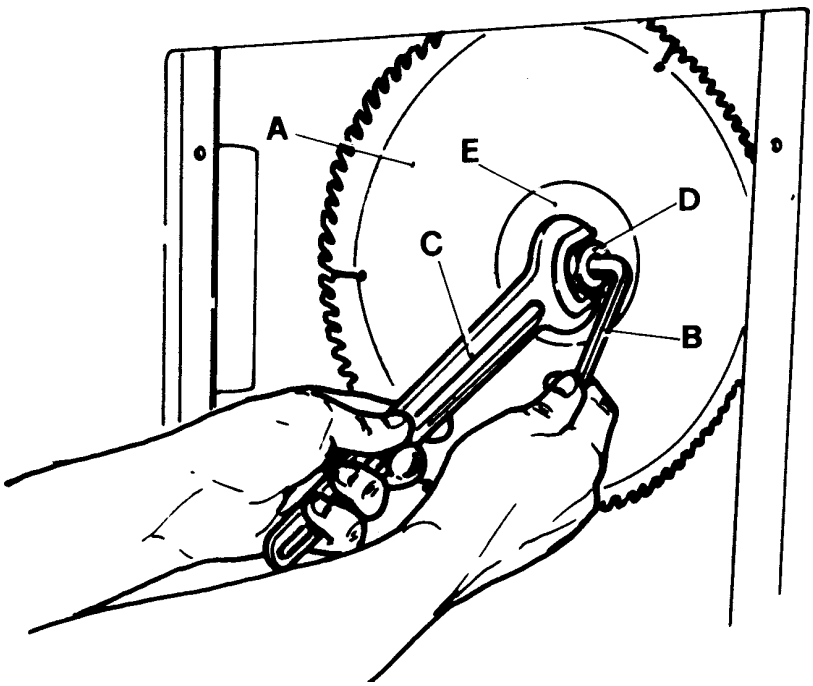


Fig. 16

3.12 ADJUSTMENT OF THE BLADE'S WAY OUT SPEED

To adjust speed of the blade's way out operate as follows:
- Turn knob A (Fig.17) situated on valve B (Fig.17) to clockwise direction to reduce the speed or to anticlock wise direction to increase blade's speed.

3.13 ADJUSTMENT OF THE BLADE'S WAY OUT

To adjust the cutting capacity (blade's way out) operate as follows:
- Loosen screw C (Fig.17) by means of spanner D (Fig.17), blocking the micron support E (Fig.17).
- Move manually the micron E (Fig.17) to the right in order to increase the cutting capacity, or to the left in order to decrease the cutting capacity. You can read the measure on the metric ruler F (Fig.17).

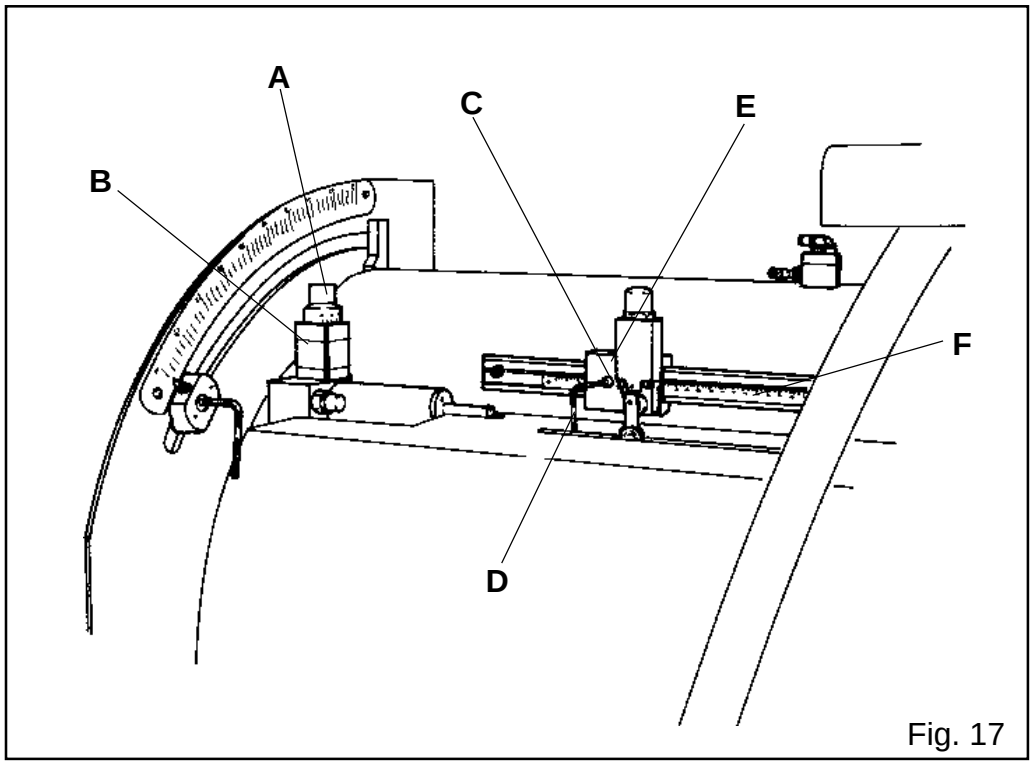


Fig. 17

3.14 WORKING TABLE ADJUSTMENT

Whenever blade's rotation centre is not perfect pls operate as follows:
- Loosen nr. 3 screw B (Fig.18) by means of correspondent spanner
- Then lower or lift working table D (Fig.18) operate by means of spanner A (Fig.18) by turning screw C (Fig.18) to anticlockwise direction to lower the working table or to clockwise direction to lift working table.

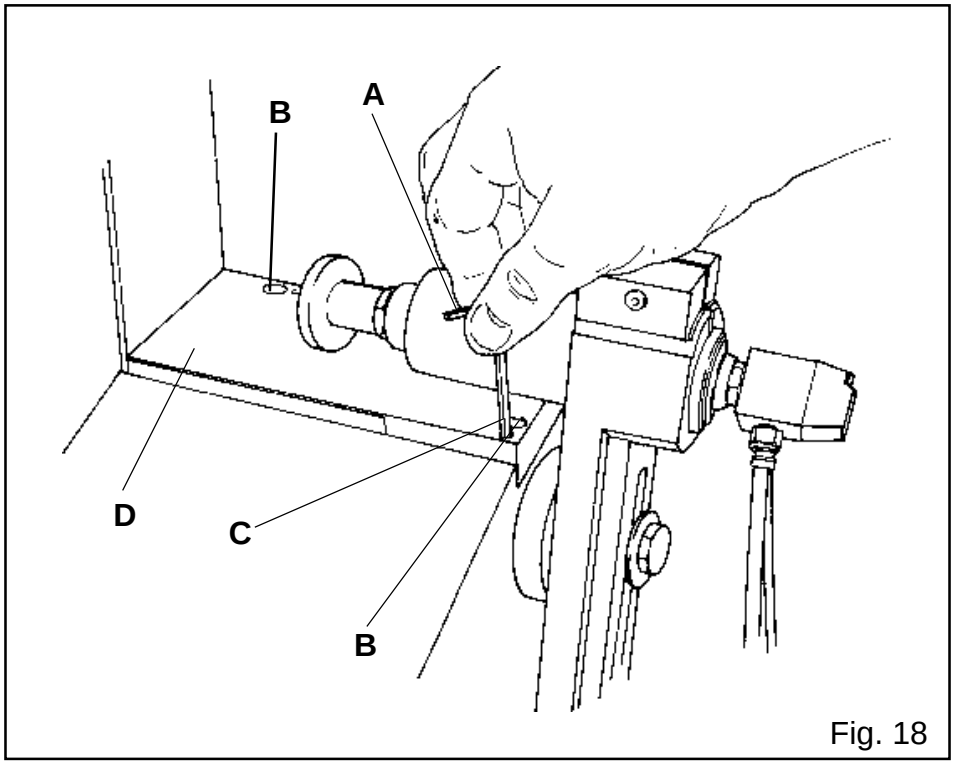


Fig. 18

3.15 SUCTION SYSTEM

The machine is featured in order to be connected with a vacuum for chips and smokes.

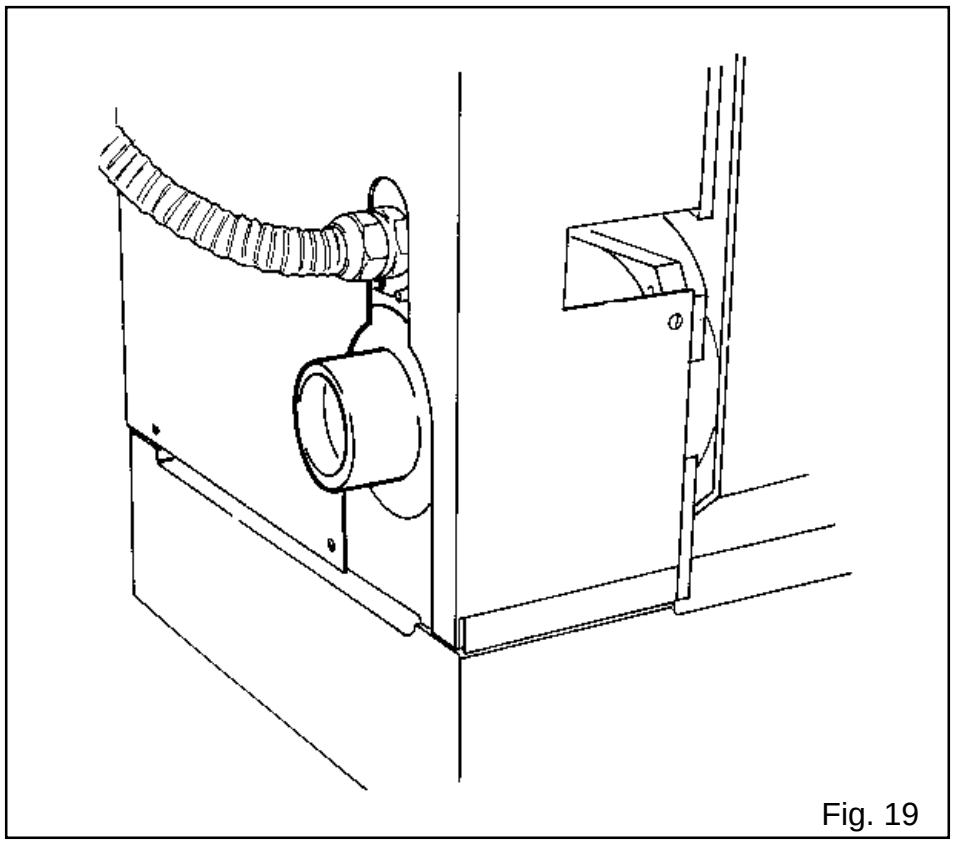


Fig. 19

4.1 CENTRAL MANUAL SUPPORT (ON DEMAND)

The machine can be delivered with the central manual support, equipped with nr. 1 roll A (fig.20).

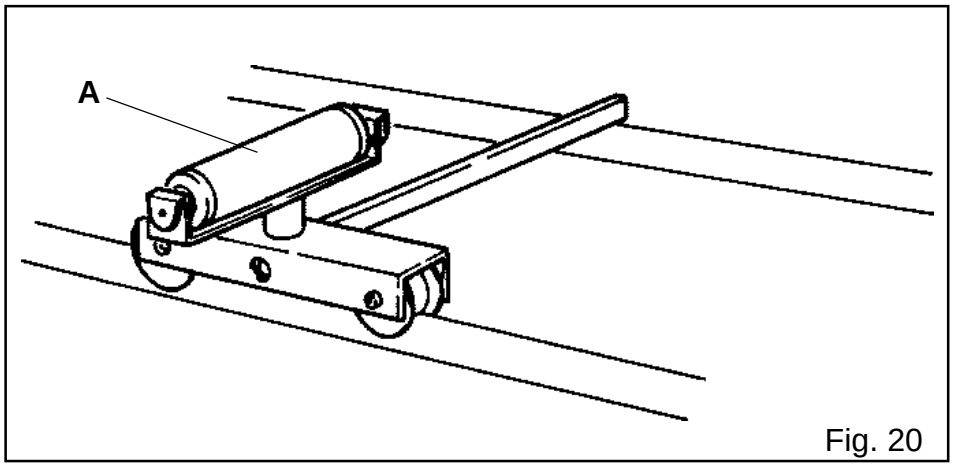


Fig. 20

4.2 CENTRAL PNEUMATIC SUPPORT (ON DEMAND)

The machine can be delivered with the central pneumatic support.
It may happen that because of crash and vibrations you loose the perfect alignment with the profile's supports, therefore operate as follows:

- Loosen grains A (fig. 21) with spanner B (fig.21), placed in the support C (fig.21) of piston D (fig.21).
- Place a square over the two supports F (fig.21) of the machine.
- Raise the piston D (fig.21) untill the support E (fig.21) touches the square.
- Block grains A (fig.21) with their spanner.

In order to activate the central support operate as follows:

- Check that the mobile head is not over the support E (fig.21)
- Turn selector G (fig.21a) on to lift it.

In order to exclude the central support operate as follows:

- Put the selector G (fig.21a) in its rest position.

NB. Pay attention when you move the mobile head, not to damage the central support.

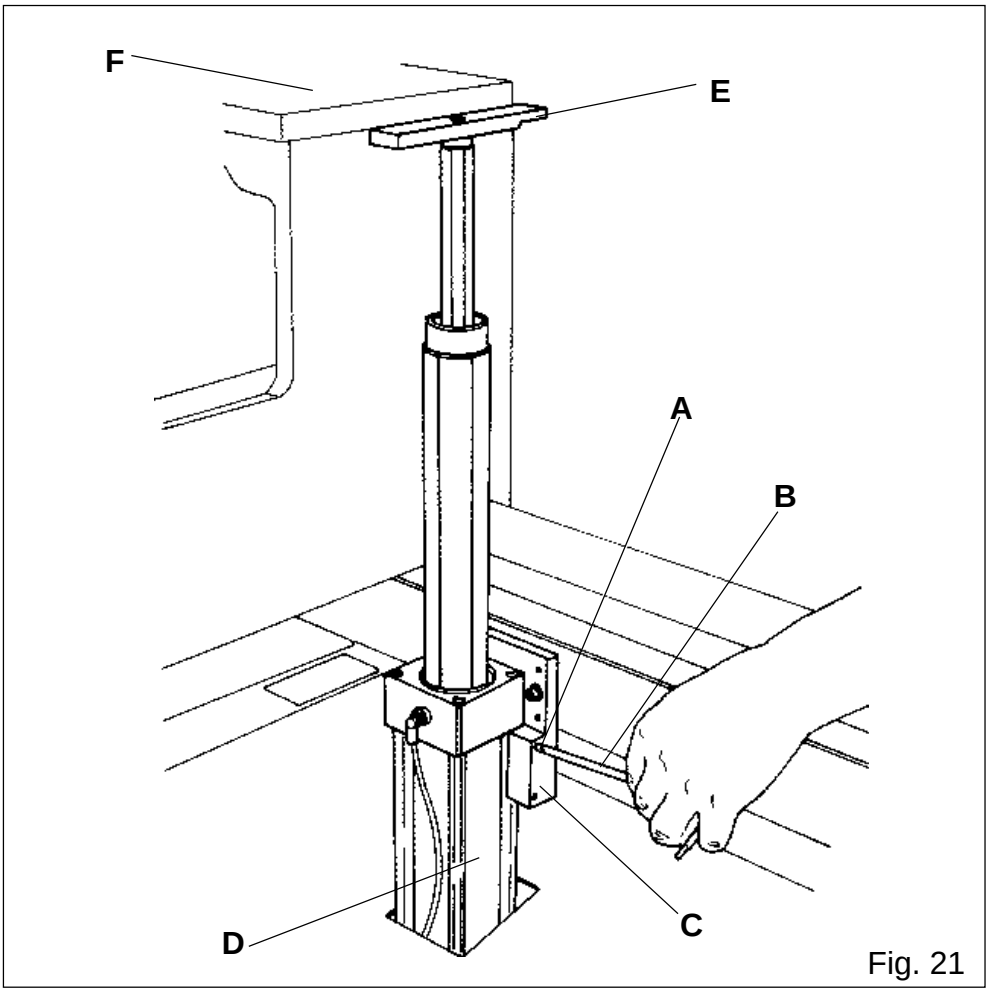


Fig. 21

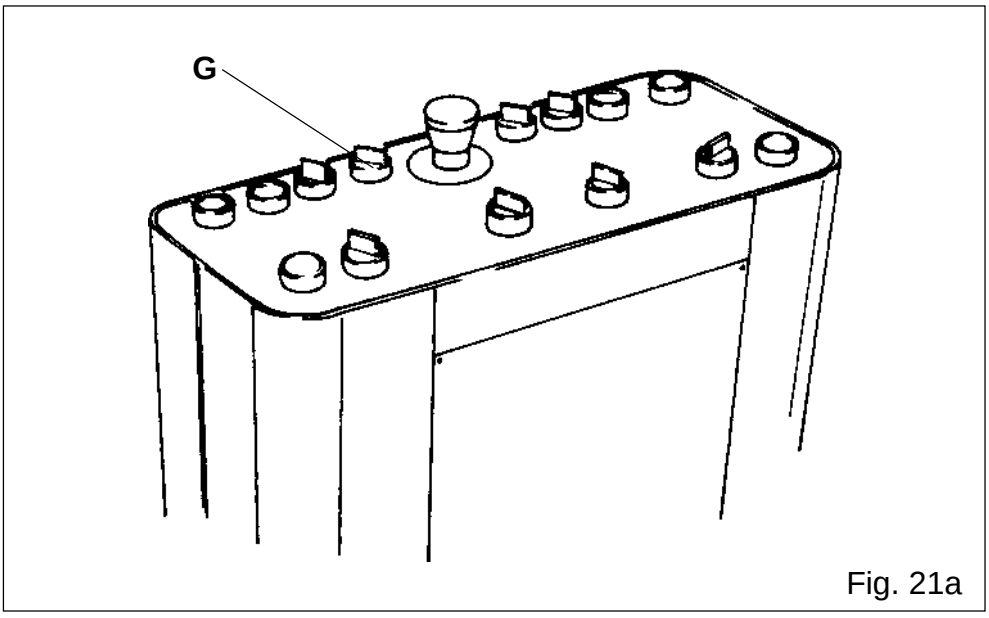


Fig. 21a

4.3 RIGHT HEAD SUPPORT WITH ROLLERS (ON DEMAND)

The machine can be euipped with side support with rollers, to assemble it operate as follows:

1° - Fix the support A (fig.22) with the appropriate screws B (fig.22) on the right side of the mobile head.

2°- Fix the connection C (fig.22a) to the extension guide D (fig.22a) blocking the screws with the spanner.

3°- Fix the connection C (fig.22b) to the guide E (fig.22b) of the machine, blocking the screws F (fig.22b) with the spanner G (fig.22b).

4°- Place a square over the two guides, checking their linearity, then blocking the support H (fig.22c) of the mobile guide D (fig.22b) with spanner I (fig.22c).

5°- Align the fence L (fig.22d)and the vertical rollers M (fig.22e) to the front plan profile support of the mobile head, checking through a precision square. If not aligned, operate as follows:

FENCE

- Loosen screw O (fig.22d) with spanner P(fig.22d)
- Move forward or backward the fence L (fig.22d) untill it is perfectly aligned
- Block the screw O (fig.22d) with the appropriate spanner.

VERTICAL ROLLERS

- Loosen nut Q (fig.22e) of the roller M (fig.22e) with the appropriate spanner.
- Move forward or backward the roller M (fig.22e) untill its perfect alignment.
- Block nut Q (fig.22e) with its spanners.

6°- Align the horizontal rollers N (fig.22e) to the support profile of the mobile head, checking through a precision square. If not aligned, operate as follows:

- Loosen grains R (fig.22e) with the appropriate spanners.
- Turn the grain S (fig.22e) with the appropriate spanner T (fig.22e) to clockwise direction in order to lift the roller, to anticlockwise direction to lower the roller.
- Block the grains R (fig.22e) with the appropriate spanner.

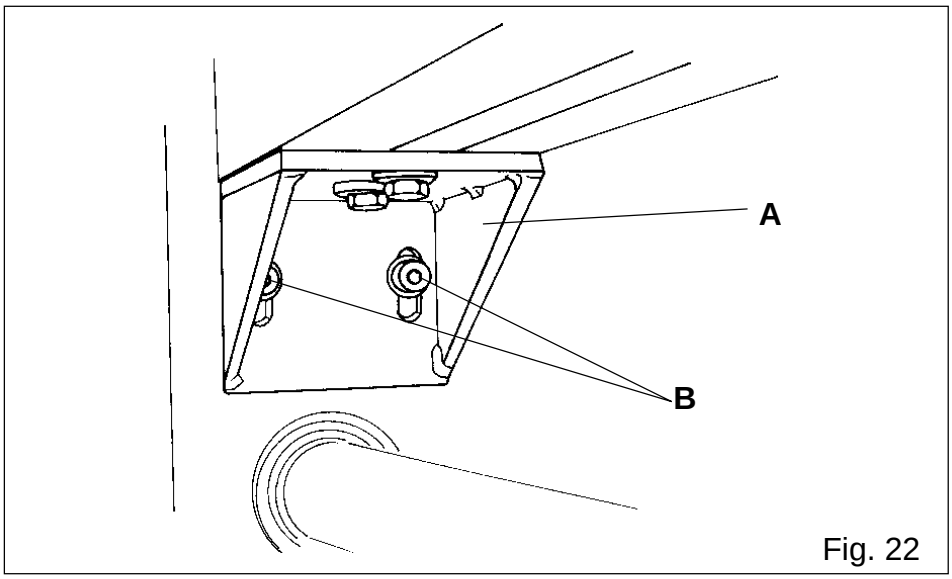


Fig. 22

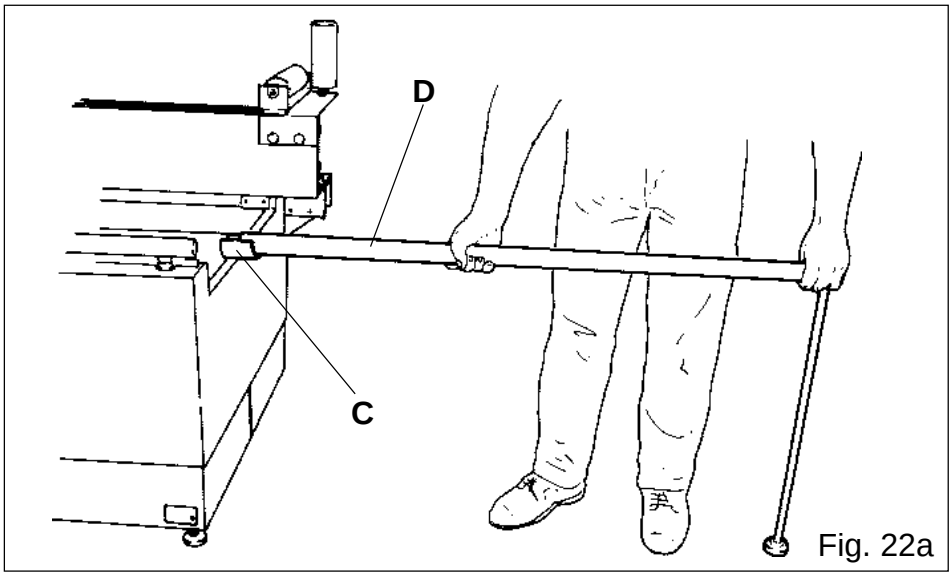


Fig. 22a

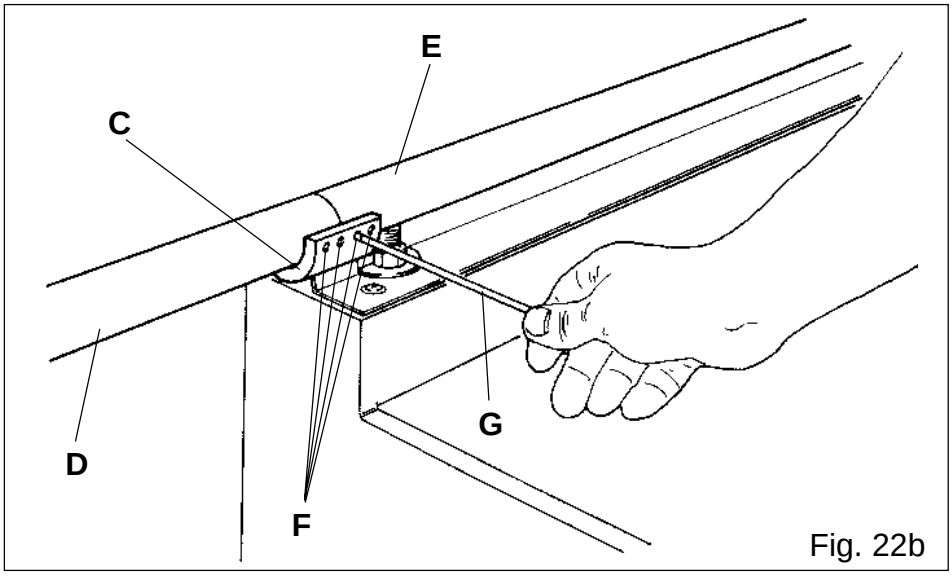


Fig. 22b

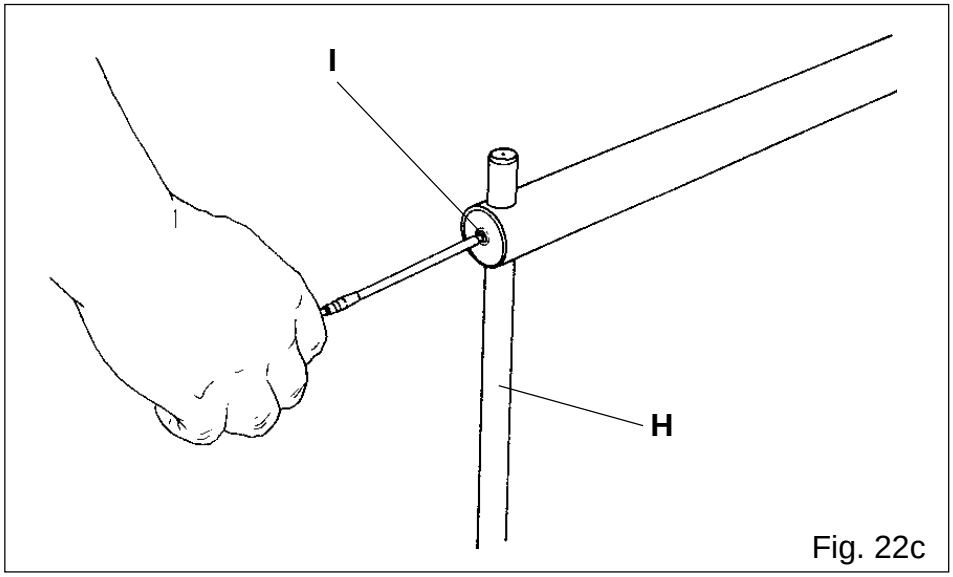


Fig. 22c

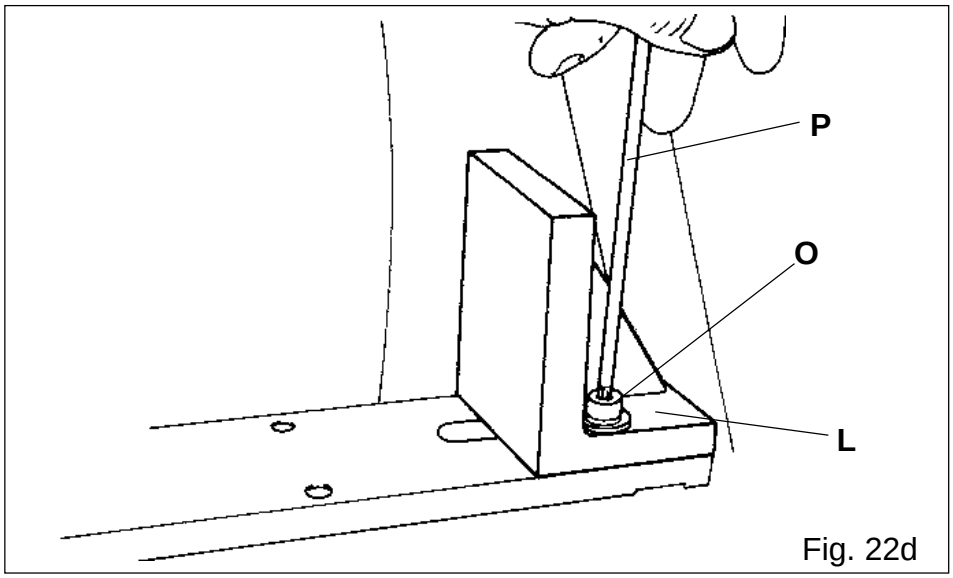


Fig. 22d

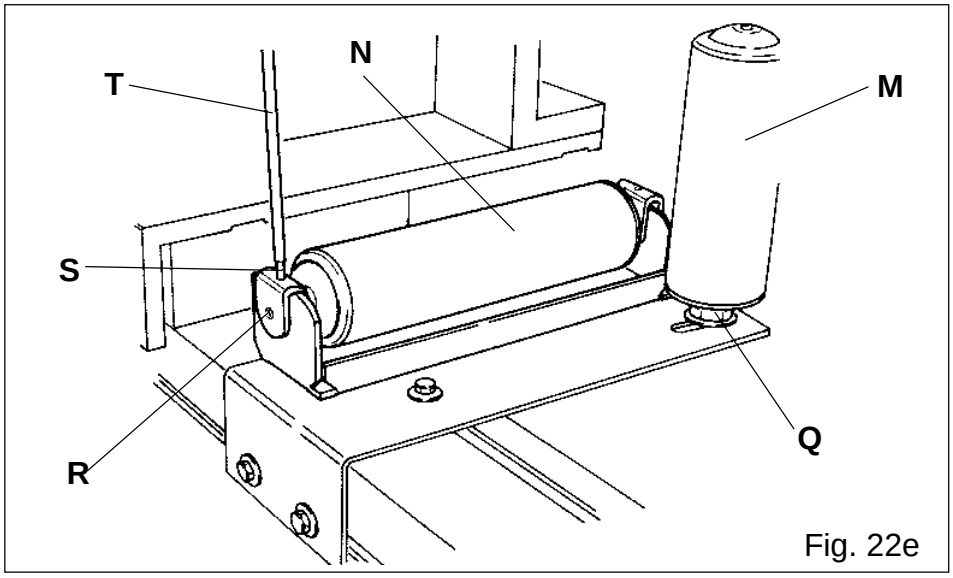


Fig. 22e

4.4 AUTOMATIC REDUCED CUT MODIFICATION WITH MOVABLE SIDE SUPPORT WITH ROLLERS (ON DEMAND)

The machine can be equipped with the automatic reduced cut modification c/w movable side support with rollers. For its adjustment and assembling, operate as per par.5.3 page 42 (fig.23). The engine is equipped with a piston A (fig.23a) for the movement of the aluminium profile. The piston A (fig.23a) is equipped with speed adjusters B and C (fig.23b).

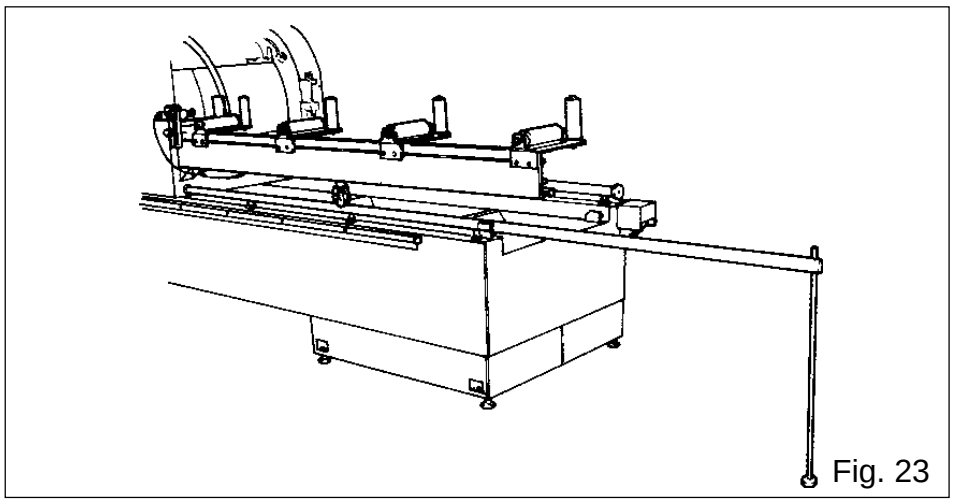


Fig. 23

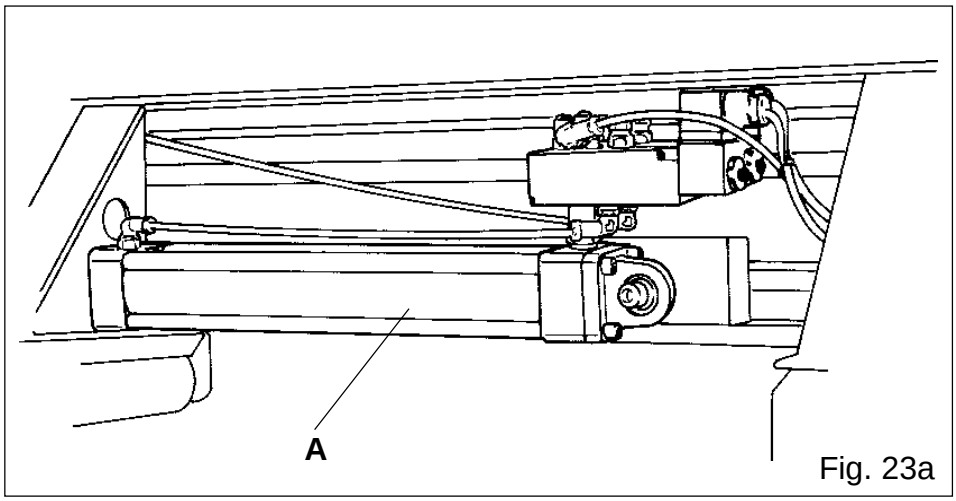


Fig. 23a

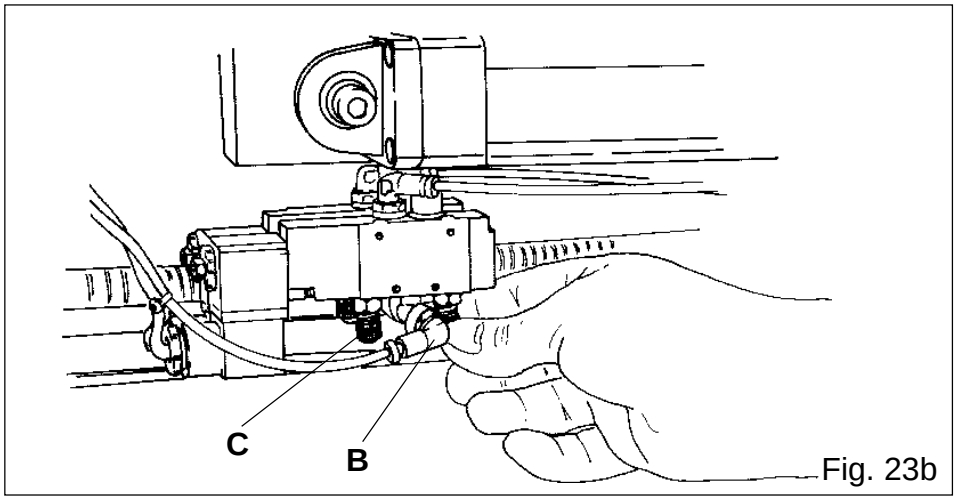


Fig. 23b

5.0 MAINTENANCE CARD

Check every morning the tank in case of condensate deposit (Fig.24)
(To let out the condensate press the botton situated on the bottom of the tank).
Check regularly the level of the oil in the tank E (Fig.24).

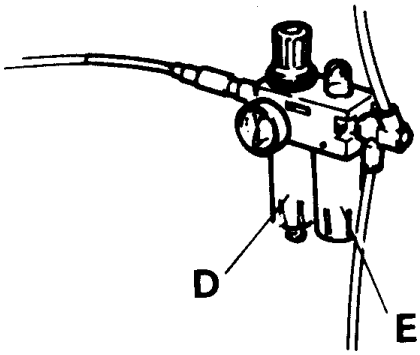


Fig. 24

PAY ATTENTION: Before making any cleaning operation take off the electric and pneumatic energy.
Clean periodically (every 15/20 days) the sliding bars ank keep them lubricated with grease or oil, to avoid that scrapers placed to protect the ball bush bearing run on areas of the bar without lubrication.

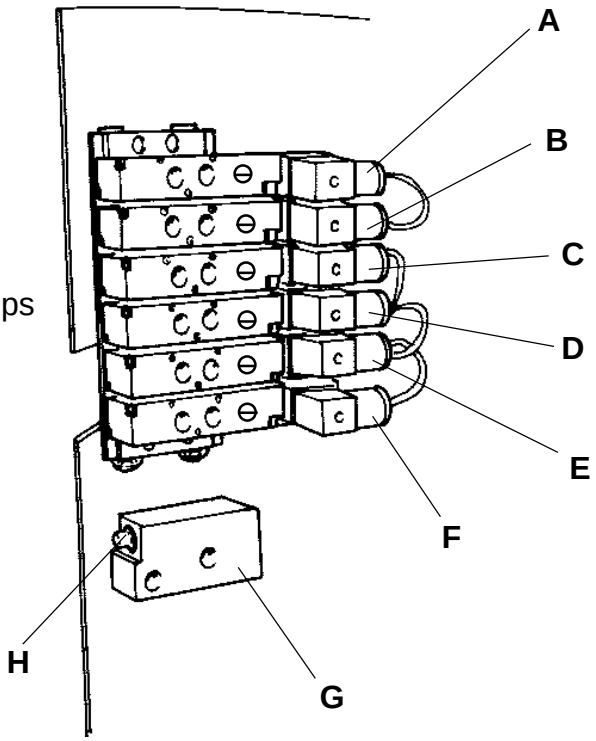
5.1 ELECTRICAL AND PNEUMATIC SCHEMES

PNEUMATIC INSTALLATION:
Check the oil level and, if necessary, replace it with the following oils:

AGIP, OSO15
ROL OIL, LR10
ESSO, NUTO H15
MOBIL, ALMO 525

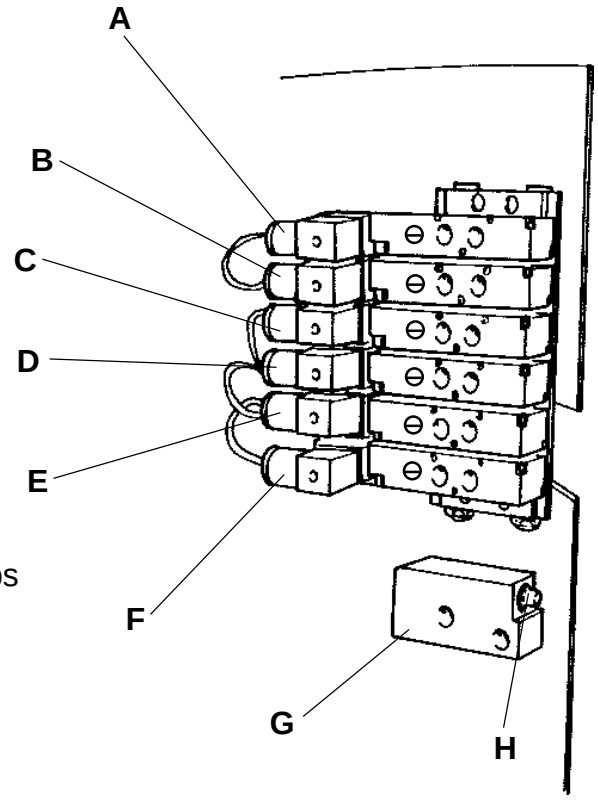
LEFT HEAD

A = Blocking valve
B = Material support (OPT)
C = Guard
D = Clamps
E = Blades way out
F = Tilting
G = Double pressure device
H = Adjustment screw low pressure clamps

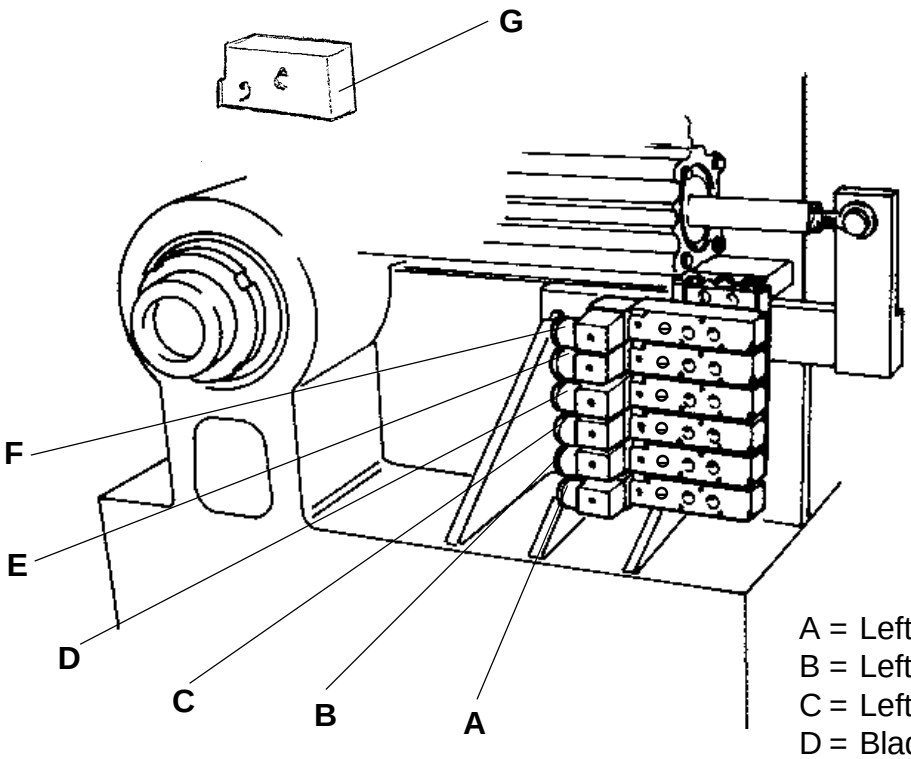


RIGHT HEAD

A = Tilting
B = Blade way out
C = Brake (OPT)
D = Clamps
E = Guard
F = Blocking valves
G = Double pressure device
H = Adjustment screw low pressure clamps

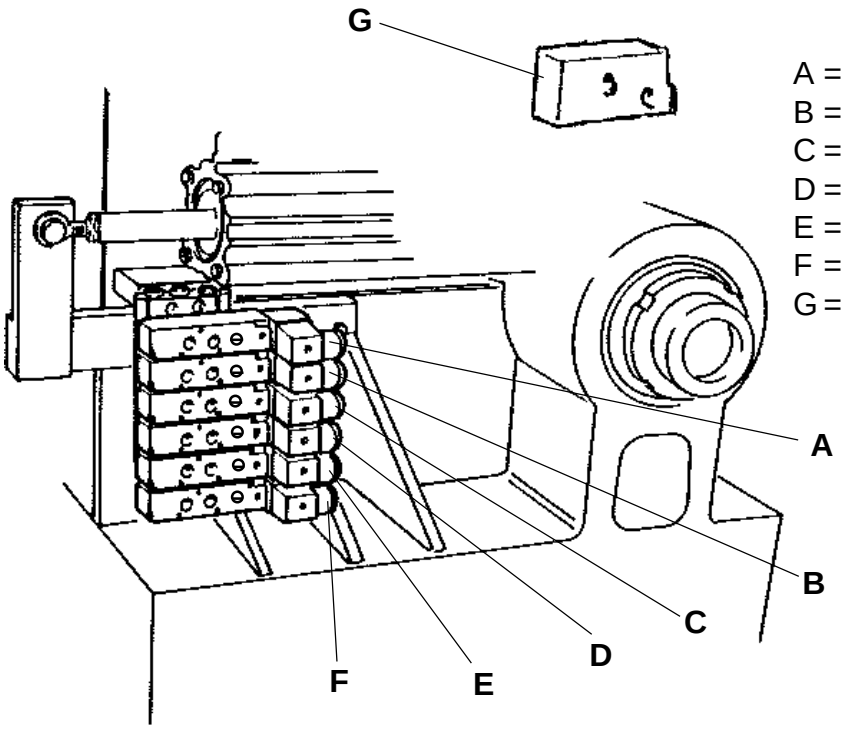


LEFT HEAD GAMMA SWING

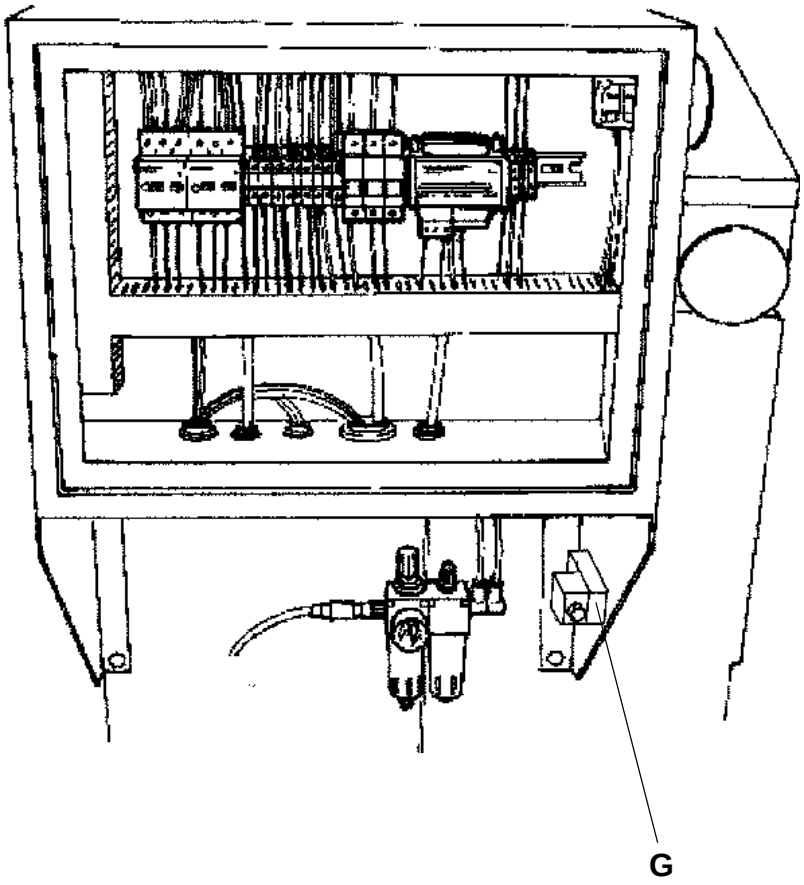


A = Left Head Material Support
B = Left Head Left Guard
C = Left Head Left Clamps
D = Blade Way Out
E = Int. Tilting
F = Ext. Tilting
G = Double Pressure Device

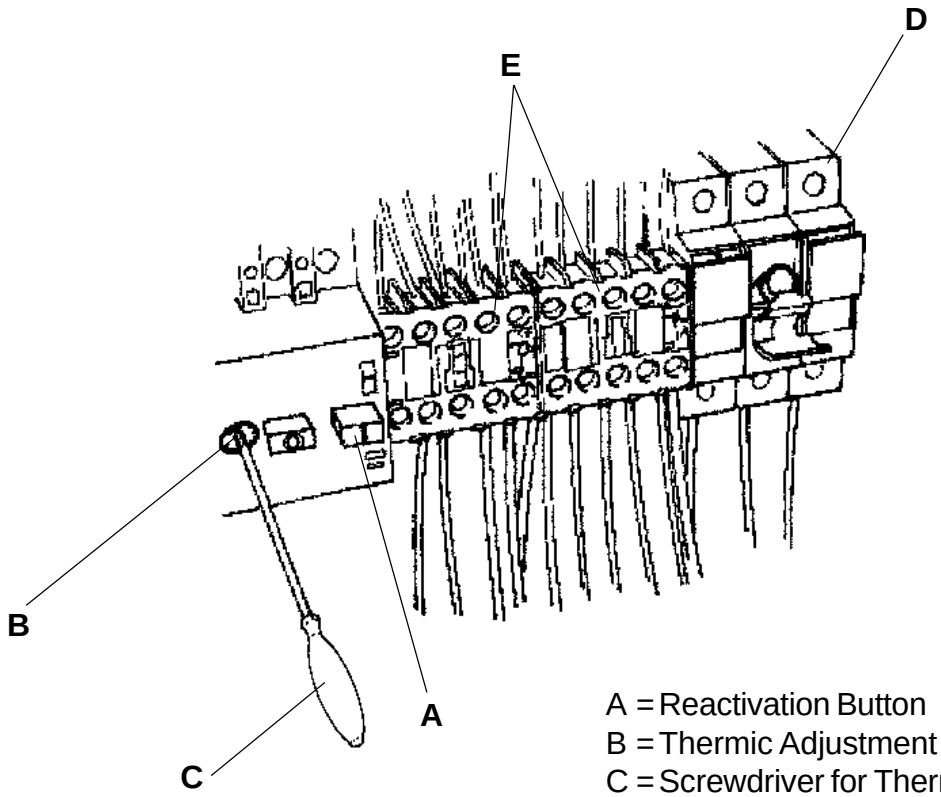
RIGHT HEAD GAMMA SWING



A = Guard
B = Clamps
C = Brake
D = Blade Way Out
E = Int. Tilting
F = Est. Tilting
G = Double Pressure Device



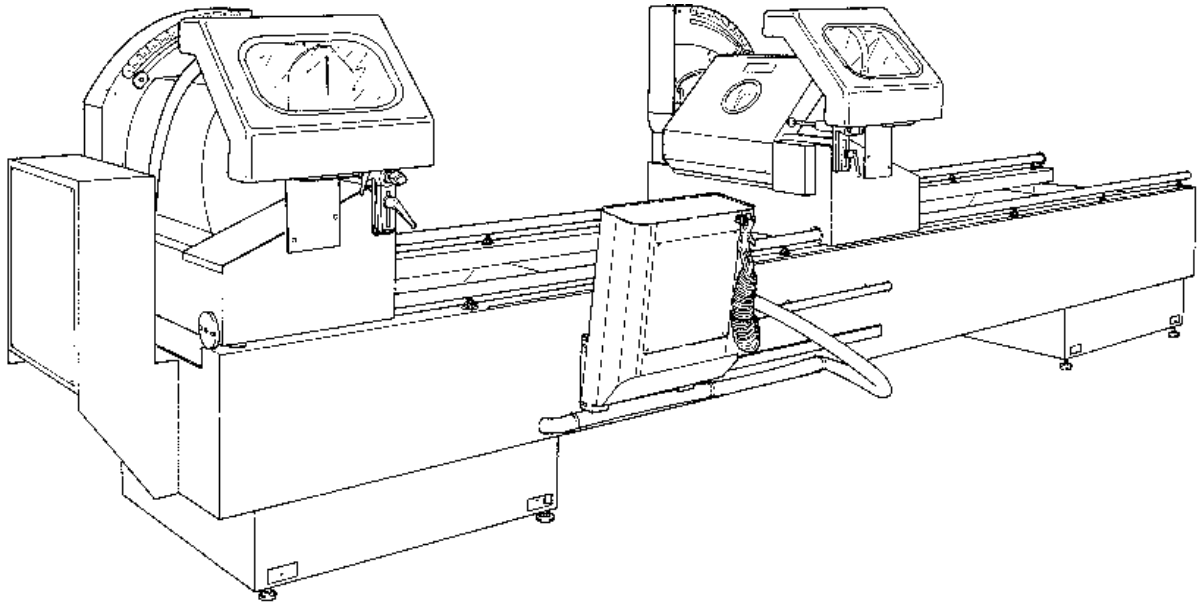
G = Blocking valve



A = Reactivation Button
B = Thermic Adjustment Motor Protector
C = Screwdriver for Thermic Adjustment
D = Fuse Holder
E = Remote Control Switches

LGF

ENGLISH



GAMMA MX

GAMMA MX-SW

INSTRUCTION MANUAL