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# T130N - NPS

TOUPIE  
SPINDLE MOULDER  
TOUPIE  
TISCHFRÄSE  
TUPI

ENGLISH

USO E MANUTENZIONE  
OPERATION AND MAINTENANCE  
FONCTIONNEMENT ET ENTRETIEN  
BETRIEBS- UND WARTUNGSANLEITUNG  
USO Y MANTENIMIENTO



**scmi**

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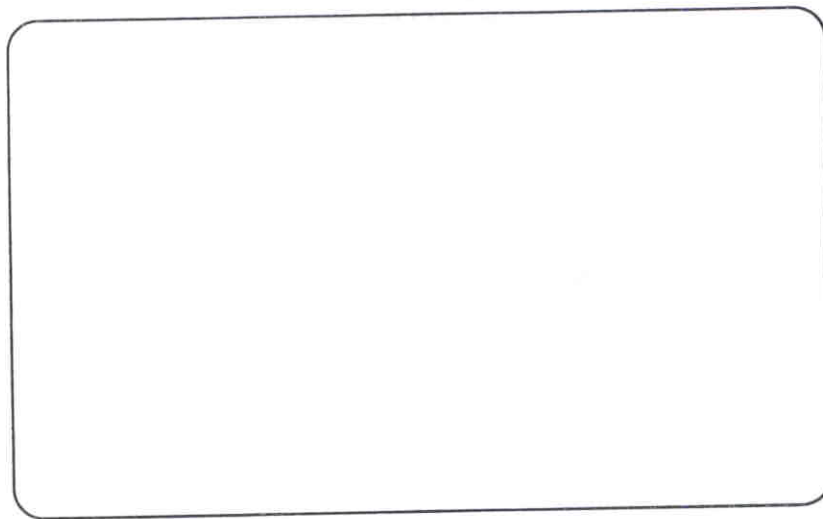






SCM is not responsible for the damages due to a use of the machine not described in this manual or due to a maintenance carried out in a wrong way.

For any technical problem concerning the machine apply to SCM dealer:



EDITION 01/94/2 ..... PRINT No. 0000502266A



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### 1.1 MACHINE IDENTIFICATION

Machine model and serial number are punched onto a metallic plate placed on the the machines frame.

|   |      |
|---|------|
|  |      |
| scm s.p.a.  |      |
| Via Cassale, 450 47040 V. VERUCCHIO ITALY   |      |
| Mod.  |      |
| N.  | Ref. |
| V   | Hz   |
| kg  |      |
| Amp.  |      |
|   |      |
|   |      |

1.1

### 1.2 NOTES FOR THE USER

The machine was designed for shaping, tenoning wood as well as wood material; therefore the user is responsible for the damages due to the different use of the machine.

The handbook describes all the operations usually required for the machine maintenance.

Do not carry out operations not described in the handbook.

Operations which require the demounting of machine members as well as maintenance operations shall be carried out only by authorized technicians.



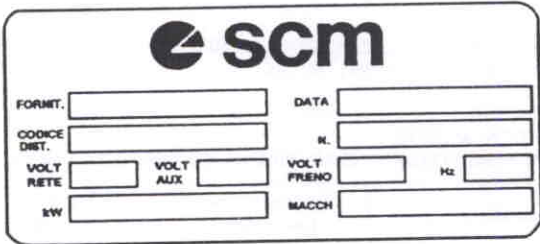
### 1.3 CORRESPONDENCE

Writing or telephoning to your dealer or to SCM for whatever reason regarding your machine, always supply the following information:

- 1) MODEL OF THE MACHINE
- 2) SERIAL NUMBER
- 3) VOLTAGE AND FREQUENCY
- 4) PURCHASE DATE
- 5) NAME OF DEALER WHERE THE MACHINE WAS BOUGHT
- 6) DETAILED INFORMATION OF WHATEVER THE PROBLEM MAY BE
- 7) DETAILED INFORMATION ABOUT THE PARTICULAR JOB TO BE PERFORMED
- 8) PERIOD OF USE-NUMBER OF WORKING HOURS

NOTE: for information concerning specifically the electric system you must specify the data punched on the metallic plate (fig.1.2) located on the inside of the door giving access to the electric housing.

SCM S.p.A.  
Via Casale, 450  
47037 - VILLA VERUCCHIO - FO  
Tel.0541-674111-677061 - Tlx.550142 - TELEFAX 0541-677360



|   |   |
|---|---|
| <b>scm</b>  |   |
| FORMET. <input style="width: 90%;" type="text"/>  | DATA <input style="width: 90%;" type="text"/>   |
| COODICE <input style="width: 90%;" type="text"/>  | N. <input style="width: 90%;" type="text"/>   |
| VOLT <input style="width: 40%;" type="text"/> VOLT <input style="width: 40%;" type="text"/> | VOLT <input style="width: 40%;" type="text"/> Hz <input style="width: 40%;" type="text"/>     |
| RIETE <input style="width: 40%;" type="text"/> AUX <input style="width: 40%;" type="text"/> | PRENO <input style="width: 40%;" type="text"/> MACCH <input style="width: 40%;" type="text"/> |
| KW <input style="width: 90%;" type="text"/>   |   |

1.2



## 1.4 SPECIFICATIONS

|   | T130N                         | T130NPS    |
|---|-------------------------------|------------|
| Table dimensions mm                                     | 1200x730                      | 1080x760   |
| Table height mm   | 920                           | 942        |
| Spindle diameter  | from 30 1" 1/4 - 35 - 40 - 50 |            |
| Usable length mm  | 180                           | 180        |
| Run mm  | 260                           | 260        |
| Max projection of the table mm                          | 230                           | 230        |
| Descent under the table mm                              | -30                           | -30        |
| Spindle speed rpm                                       | 3000-4500-6000-7000-10000     |            |
| Max dimensions for retractable tools under the table mm | 320x90                        | 320x90     |
| Main motor power (St)                                   | 4kW (5,5HP)                   | 4kW(5,5HP) |
| Brake   | pedal                         | pedal      |
| Net weight kg   | 475                           | 493        |

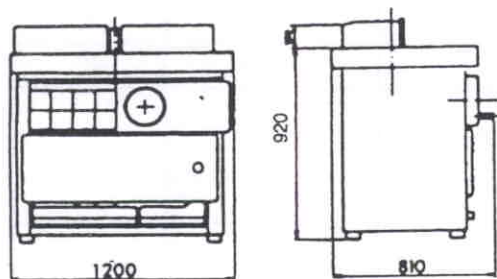
## 1-5 NOISE LEVEL

| MEASUREMENT OF THE SOUNDING EMISSION<br>ACCORDING TO DIN 45635/1 RULES:           |                                |                           |
|---|--------------------------------|---------------------------|
| UTILIZATION: MILLING<br>FUNCTIONING CONDITIONS ACCORDING TO DIN 45635/1652 RULES: |                                |                           |
| Operator place  | Equivalent Level<br>LAeq dB(A) | Maximum Level<br>Lpeak dB |
| Alimentation of the piece   | 84.6                           | < 130                     |
| Acoustic power = .....dBW(A) (mW)<br>only if LAeq > 85 dB(A)                      |                                |                           |

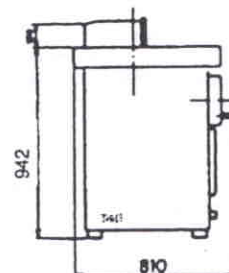


## 1.6 OVERALL DIMENSIONS

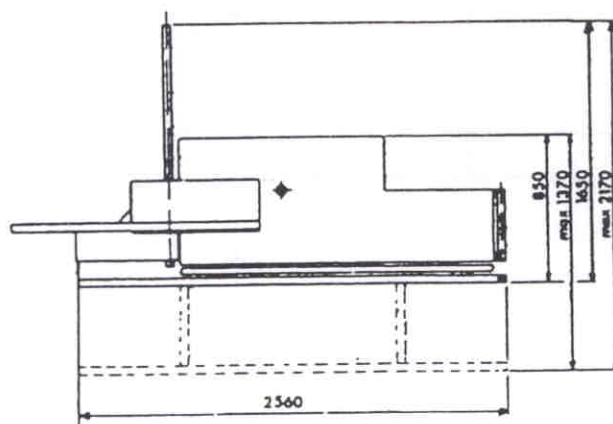
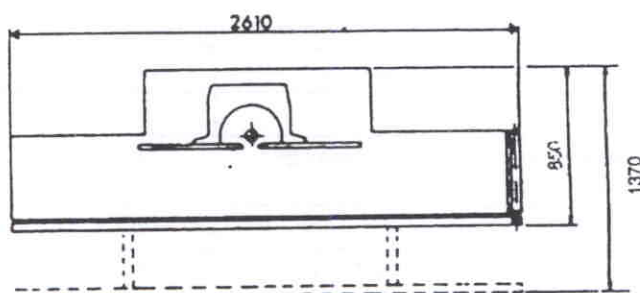
TYPE N-



TYPE NPS



TYPE LL



TYPE TL



## 1.7 MACHINE COMPOSITION

| MACHINE COMPOSITION T130N  | T130N | T130NT | T130NTL | T130NLL | T130NPS |
|--|-------|--------|---------|---------|---------|
| ADJUSTABLE SPINDLE MOULDER FENCE   | X     | X      | X       | X       | X       |
| SUCTION HOOD   | X     | X      | X       | X       | X       |
| MECCANICAL BRAKE PEDAL   | X     | X      | X       | X       | X       |
| EXCENTRIC ARM FITTING  |       | X      | X       |         |         |
| FENCE +/- 45°  |       | X      | X       |         |         |
| CHIP BREAKER   |       | X      | X       |         |         |
| TENONING HOOD  |       | X      | X       |         |         |
| INSTALLATION OF THE ADDITIONAL TABLES  |       |        |         | X       |         |
| FRONT SUPPORT BAR  |       |        | X       | X       |         |
| TENONING CARRIAGE  |       | X      | X       |         |         |
| 3 MOVEMENT FENCE WHICH MAY BE SWITCHED OFF                                   | X     |        |         | X       |         |
| INTERCHANGEABLE SPINDLE  | X     | X      | X       | X       | X       |
| 8 STOPS  | X     | X      | X       | X       | X       |
| 3- MOVEMENT FENCE WHICH MAY BE SWITCHED OFF WITH DISPLAY                     | X     | X      | X       | X       | X       |
| DISPLAY  | X     | X      | X       | X       | X       |
| PANEL WITH LIFTING AND DISPLAY   | X     | X      | X       | X       | X       |
| SPINDLE PROGRAMMING AND POWER FENCE WHICH MAY BE SWITCHED OFF BY CONTROL BOX | X     |        |         | X       |         |
| AUTOMATIC BRAKE  | X     | X      | X       | X       | X       |
| FENCE +/- 45° WITH EXCENTRIC FITTING.  |       |        |         |         | X       |
| TENONING TABLE   |       |        |         |         | X       |



## 1.8 SAFETY & WARNINGS

Carefully read this booklet before beginning a work cycle.

This machine was built to offer maximum security and at the same time the best performance.

Maximum security is in your hands. Utilizing any type of utensil machine you run certain risks, you must keep this in mind.

### PERSONAL SAFETY

- 1- Experience teaches that there are various objects on a person that can provoke injuries, take off rings, watches, bracelets; button your sleeves tightly around your wrists, take off ties that could be caught in tight places, keep hair gathered underneath appropriate nets (cap, elastic, hair pins). Use prescribed footwear usually recommended by all countries in their safety norms.
- 2- Always use glasses, protective shields to protect your eyes.

### MACHINE SAFETY

- 1- Be extremely careful when starting a new work cycle.
- 2- Do not start the machine without correctly installing all guards to the moulding spindle, the belts, chains etc.
- 3- Work only with all guards in the correct place and in perfect conditions.
- 4- Do not perform on work pieces too small or too big for the machine.
- 5- Before fitting the moulder spindle make sure that the rest surfaces are clean, without dents and perfectly flat.
- 6- Make sure that the cutters are balanced, sharpened, well locked.
- 7- Never use deformed or bent cutters and beyond their speed limit, prescribed by SCM or by the tool makers.

### MAINTENANCE SAFETY

- 1- If you stop the machine to make some adjustments or to take off a piece, turn the main switch to zero, indicate so with a sign and padlock the main switch.
- 2- Completely stop the machine before proceeding with the cleaning or before removing the protections for maintenance.
- 3- The general cleaning of the machine (in particular the work table) and of the floor represents an important safety factor.







## SECTION 2 INSTALLATION

|  |      |
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| - Three movement spindle moulder fence (T130N-NPS-NLL) ..... | 2.6  |
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| - Installation of the additional tables (T130LL-TL) .....    | 2.10 |
| - Installation of the front support bar (T130LL-TL) .....    | 2.12 |
| 2.3 Electric connection .....                                | 2.14 |
| 2.4 Connection to the suction system .....                   | 2.14 |



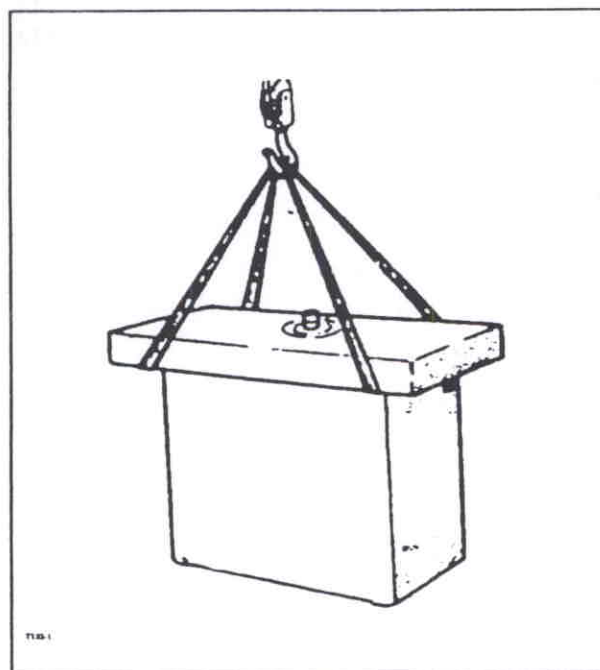
## 2.1. UNLOADING AND POSITIONING OF THE MACHINE

So that the machine may have a stable and secure support, a solid floor is needed.

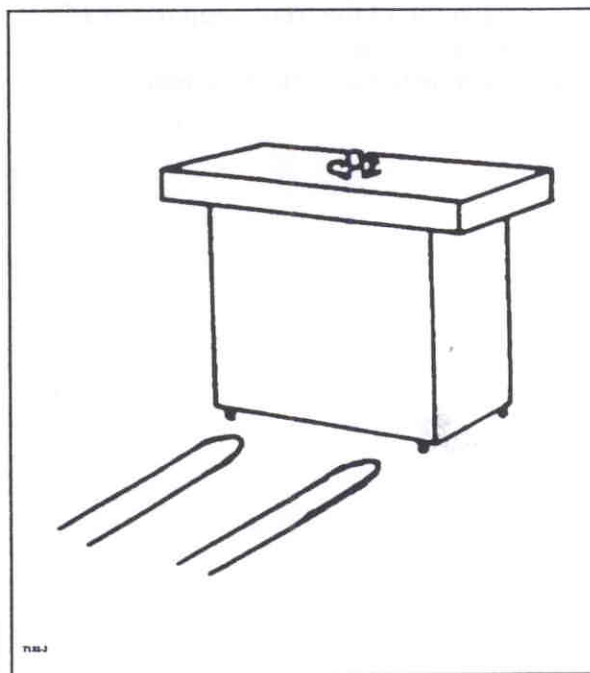
A cement floor is excellent, an asphalt floor is not advisable.

The T130N can be lifted by using a crane placing the cables as shown in figure 2.1 or with a forklift inserting the forks as close as possible to the supports (see fig.2.2).

The T130NPS must be lifted with a crane hooking the cables or chains of equal length in their appropriate hooks inserted in the openings placed under the table (see figure 2.3-2.4).

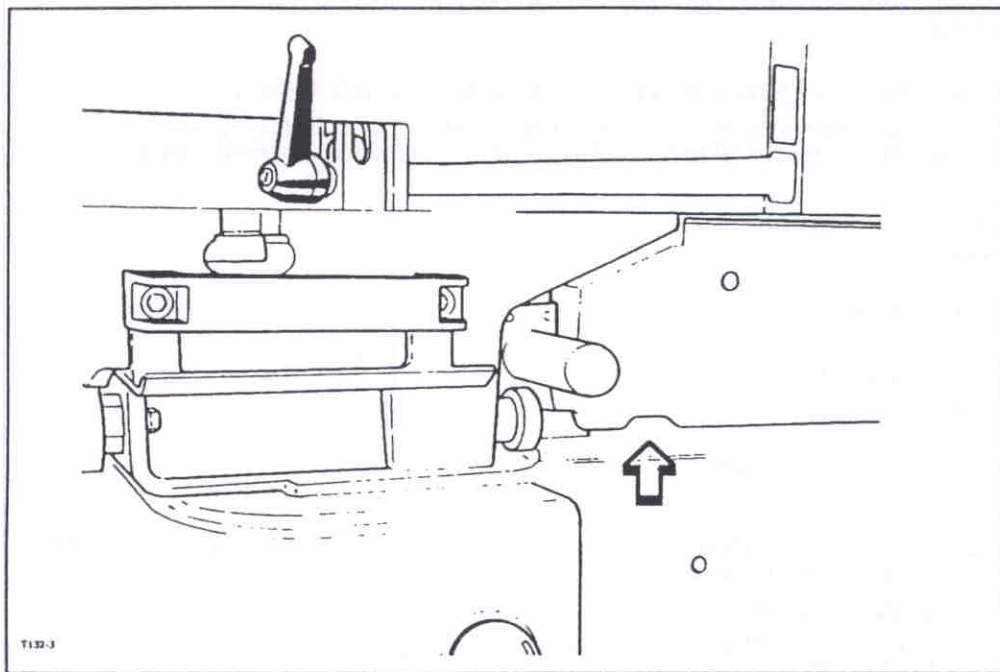


2.1

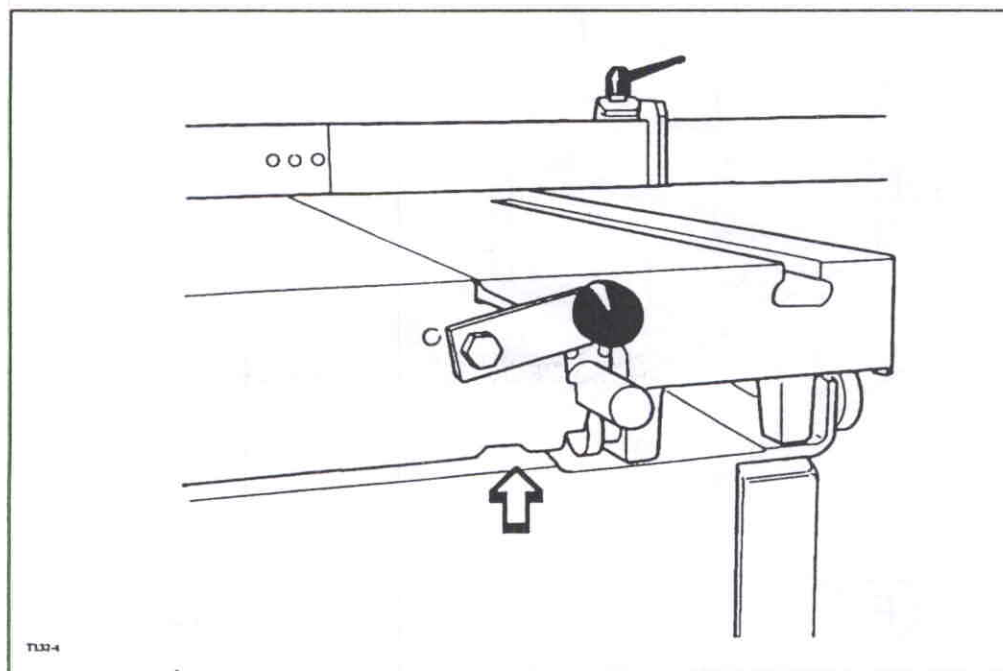


2.2





2.3



2.4



## 2.2 INSTALLATION OF THE PARTS DISMOUNTED

For packing and transportation demands, some parts of the various versions of the machine (LL-TL-T) are shipped dismantled.

### INSTALLATION AND REGULATION OF THE SPINDLE MOULDER FENCE

Lean the spindle moulder fence on the work table and to secure in position tighten the handles (L & H fig.2.5). The infeed and outfeed fences (P & M fig.2.5) are regulated micrometrically by the knobs (R fig.2.6).

To regulate the infeed fence (P fig.2.5):

- keep the handle (L) tight,
- loosen handle (H),
- turn the knob (R) to find the right position,
- tighten handle (H).

To regulate the outfeed fence (M):

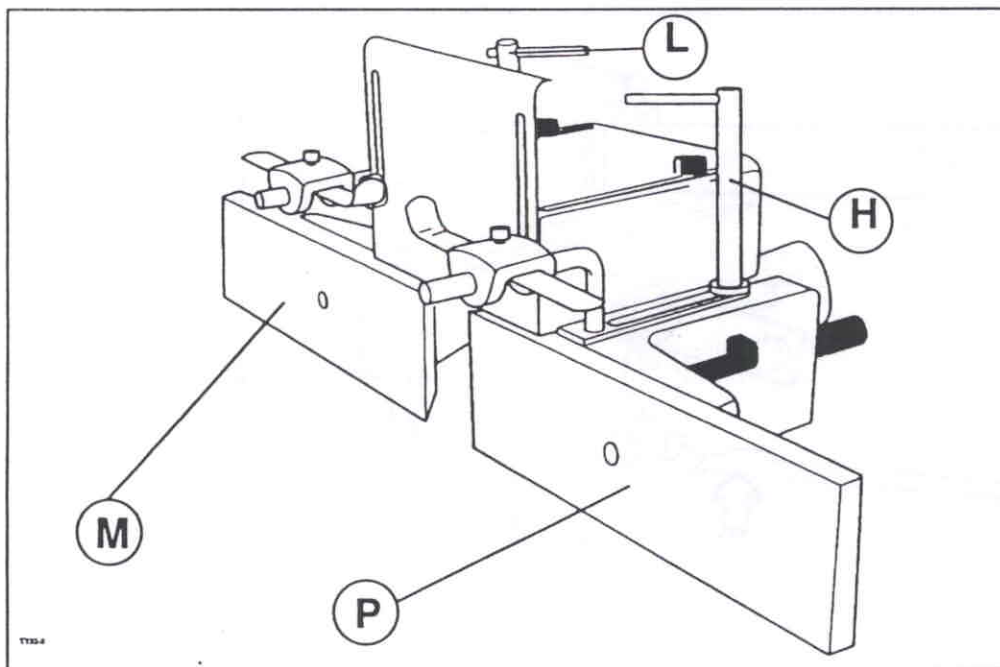
- keep handle (H) tight,
- loosen handle (L),
- turn the knob (R) to bring it into position,
- tighten handle (L).

The fences have to be as close as possible to the utensils, to perform this regulation turn the two knobs (F fig.2.6) placed behind respectively to each fence.

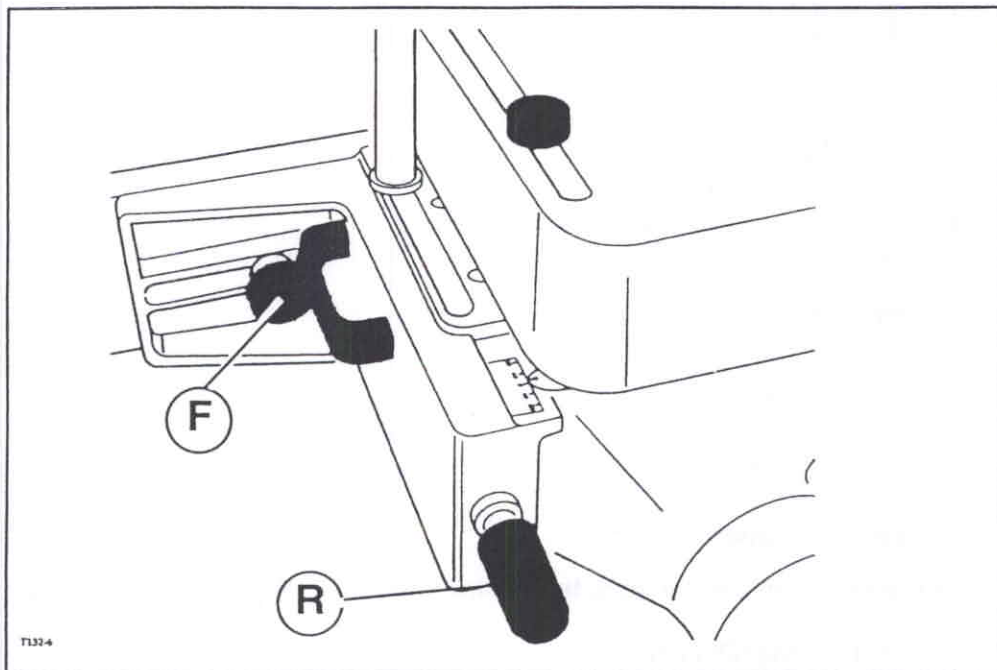
### INSTALLING THE TENONING HOOD (T130NT-NTL-NPS)

Lean the hood on the table, regulate the distance from the cutters and secure the position by tightening the knobs (A fig.2.7-2.8).

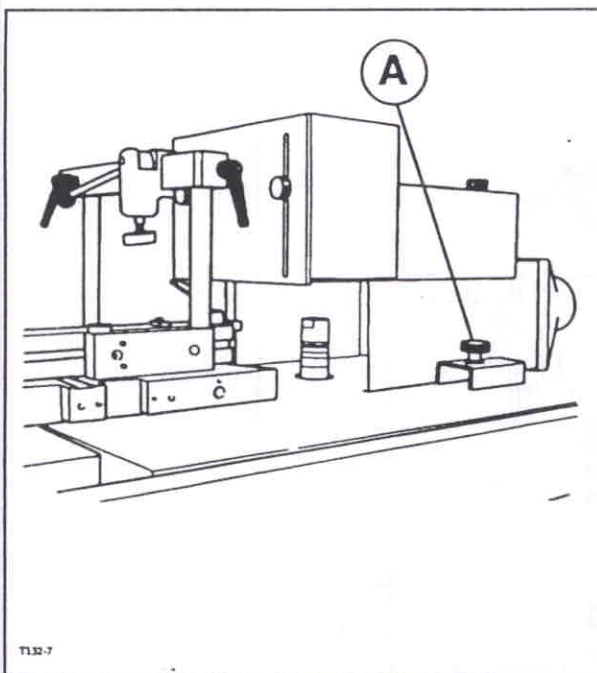
Regulate the height of the protection in respect of the cutters by turning the knobs (B fig.2.8).



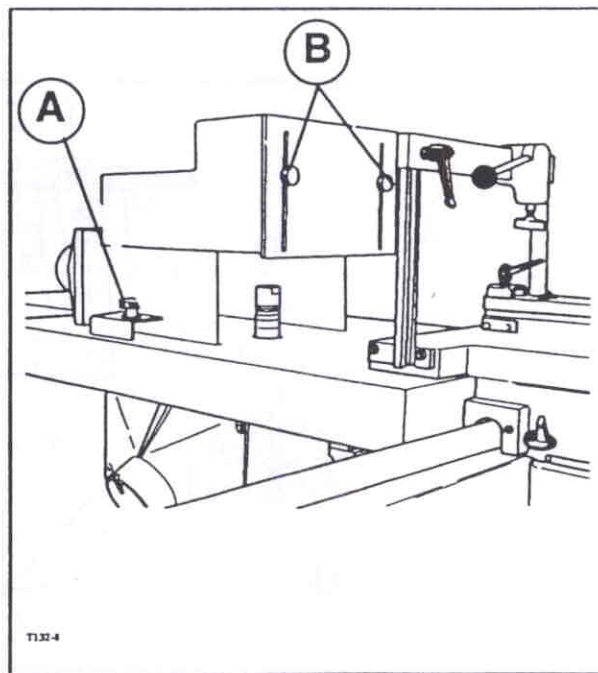




2.6



2.7



2.8



## INSTALLATION AND REGULATION OF A THREE MOVEMENT SPINDLE MOULDER FENCE (N-LL)

The fence is fixed to the table so that it may be switched off (A fig.2.9a).  
Regulate the 6 stops (S) of the revolver according to the diameters of the cutters used.

To move the moulder fence:

- 1) Loosen handles (L & H),
- 2) With the lever (T) move the fence,
- 3) Select the stop desired by turning the knob (U),
- 4) With the lever (T) bring the fence to the stop on the revolver,
- 5) Tighten the handles (L & H).

Fine adjustment of infeed fence (P fig.2.9):

- keep handle (L) tight,
- loosen handle (H),
- turn the knob (R fig.2.6) to find the right position,
- tighten handle (H).

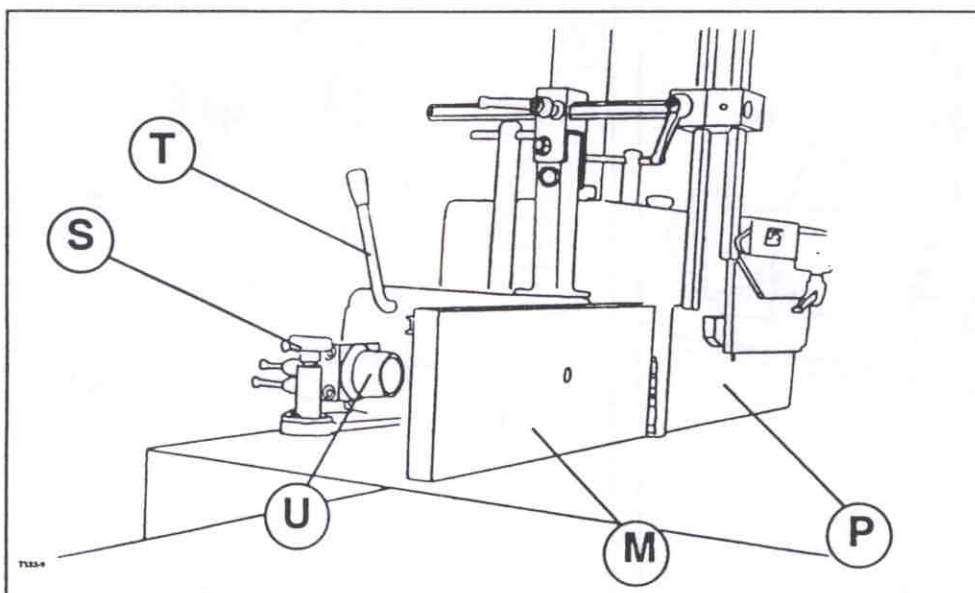
Fine adjustment of outfeed fence (M fig.2.9):

- keep handle (H) tight,
- loosen handle (L),
- turn the knob (R) to bring it into position,
- tighten handle (L).

Regulate the fences as close as possible to the tool, by turning the two knobs (F fig.2.9a) placed respectively behind each fence.

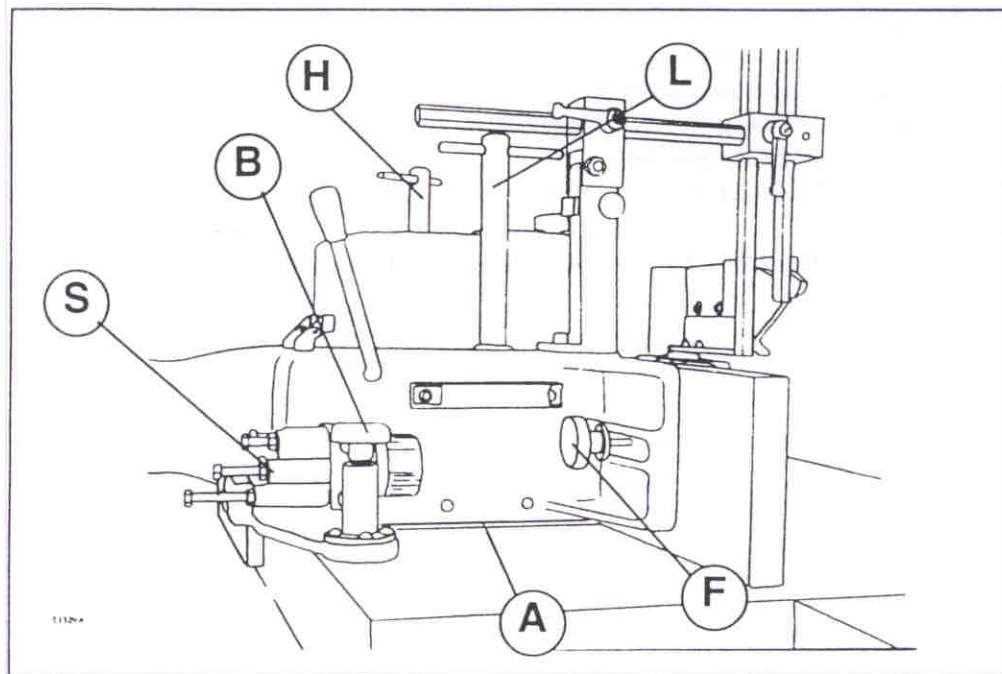
### SWITCHING OFF THE 3- MOVEMENT FENCE

- 1) Fully unscrew knob (B fig.2.9a)
- 3) Turn hood (C fig.2.9b) 90° to the original position

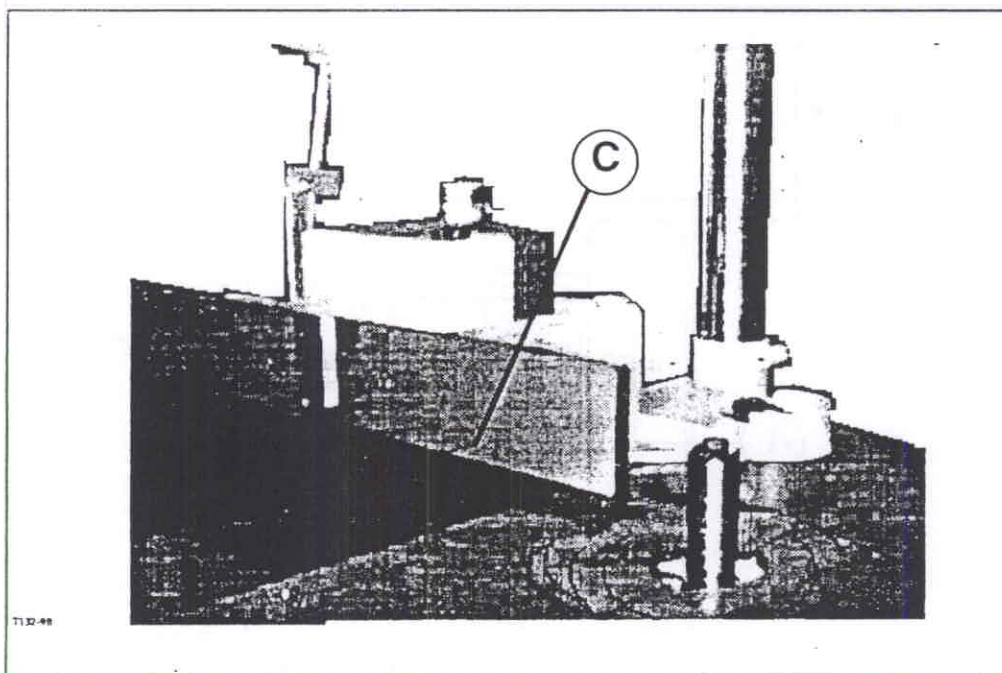


2.9





2.9a



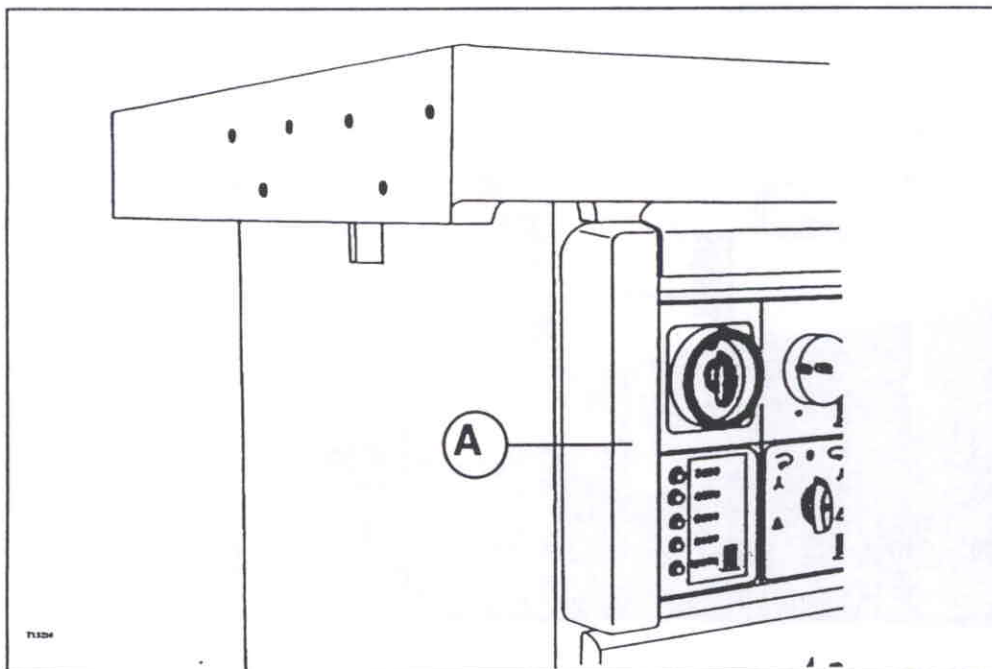
2.9b



## INSTALLING THE TENONING CARRIAGE (OPTIONAL FOR THE T130NT-TL)

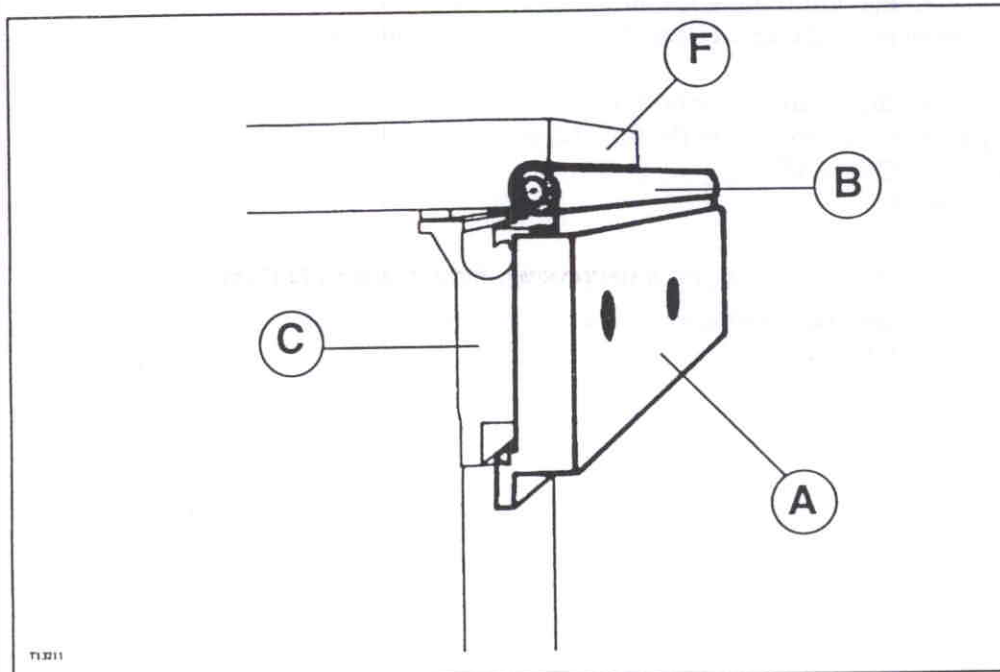
- 1) Take off the electric panel y loosening the 4 screws located at the angles,
- 2) Take off the carter (A fig.2.10),
- 3) Lift using a crane or a lifting device, the group composed of the beam (A fig.2.11), the round bar (B) and the supports (C) attached to the machine,
- 4) Install the whole group, by tightening the two supports (C fig.2.12) tightening the screws (D fig.2.12), underneath the the tale of the machine,
- 5) Make sure that the round bar (B fig.2.11) is parallel in horizontal position beside the tale of the machine (F),
- 6) Make sure the round bar is parallel in a vertical position with a maximum parallelism error of 0,15 mm out of 700 mm.

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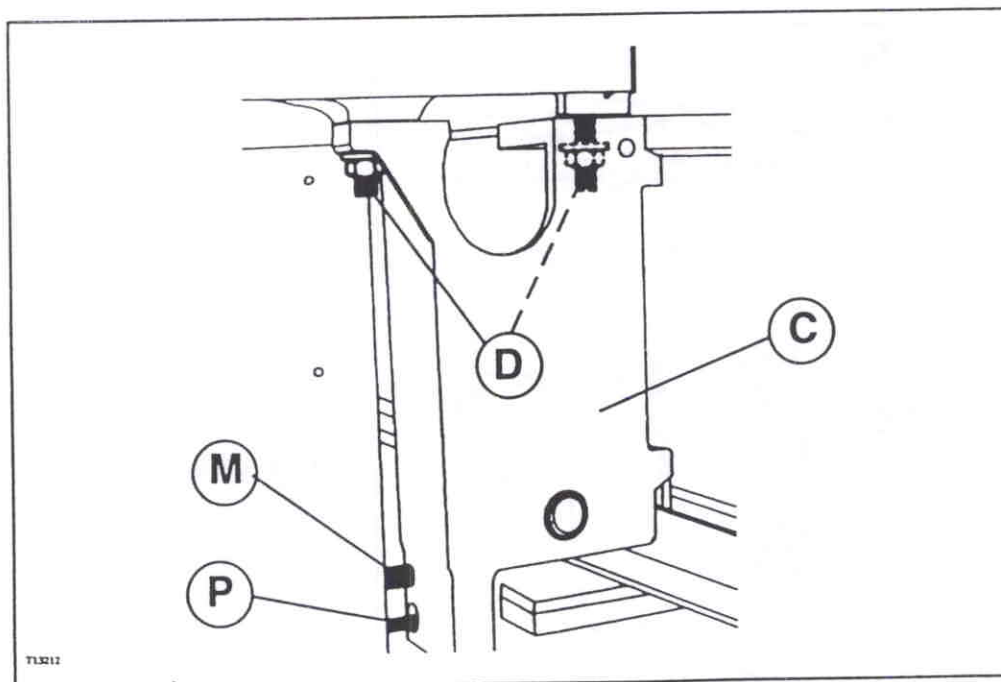


2.10





2.11



2.12

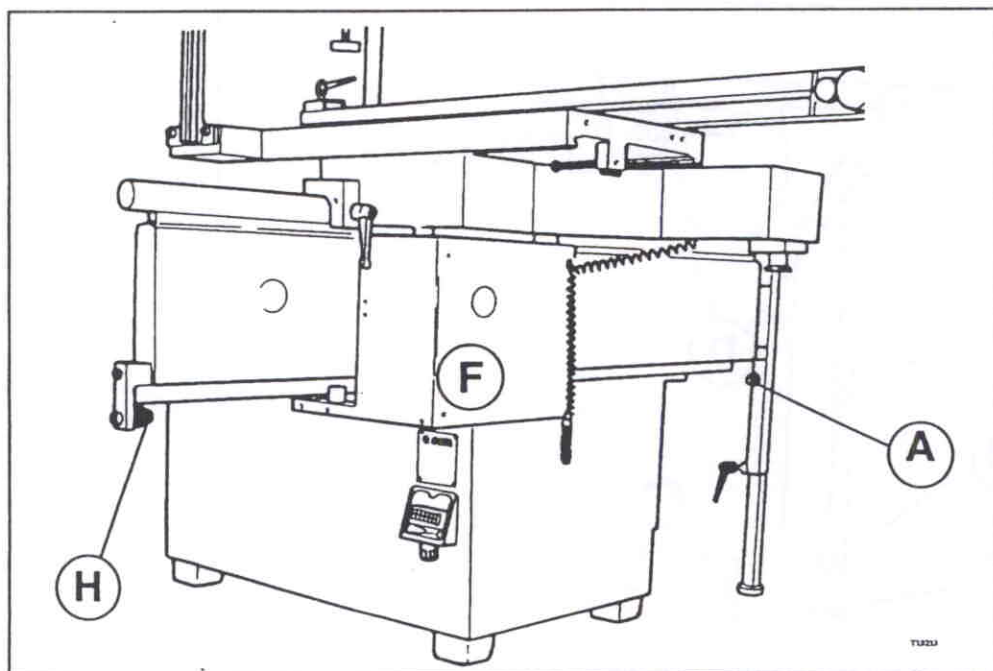


Eventually use wedges between the tale and the supports to reach the tolerance rate.

- 7) Insert the sliding carriage unit (F fig.2.13) onto the round bar (B),
- 8) Install the limit switch stops (H fig.2.13)(on the rear of the machine) and (A) on the front of the machine,
- 9) Make sure that the machines tale is aligned with the sliding carriages tale.  
Perform this regulation with the screw (M fig.2.12) and the blocking unit (P).
- 10) Install the new carter (C fig.2.14),
- 11) Close the electric panel.

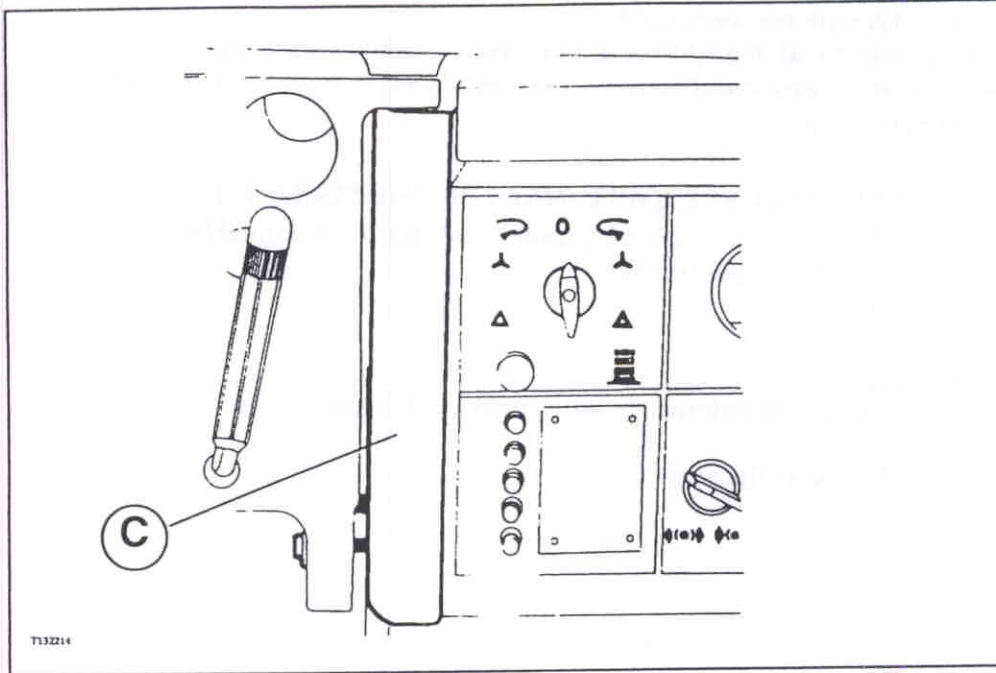
## INSTALLING THE ADDITIONAL TALES (OPTIONAL FOR T130LL-TL)

- 1) Lift each of the 2 extension tables with a crane or a lifting device and ring them in correspondance to the threaded holes (F fig.2.15),



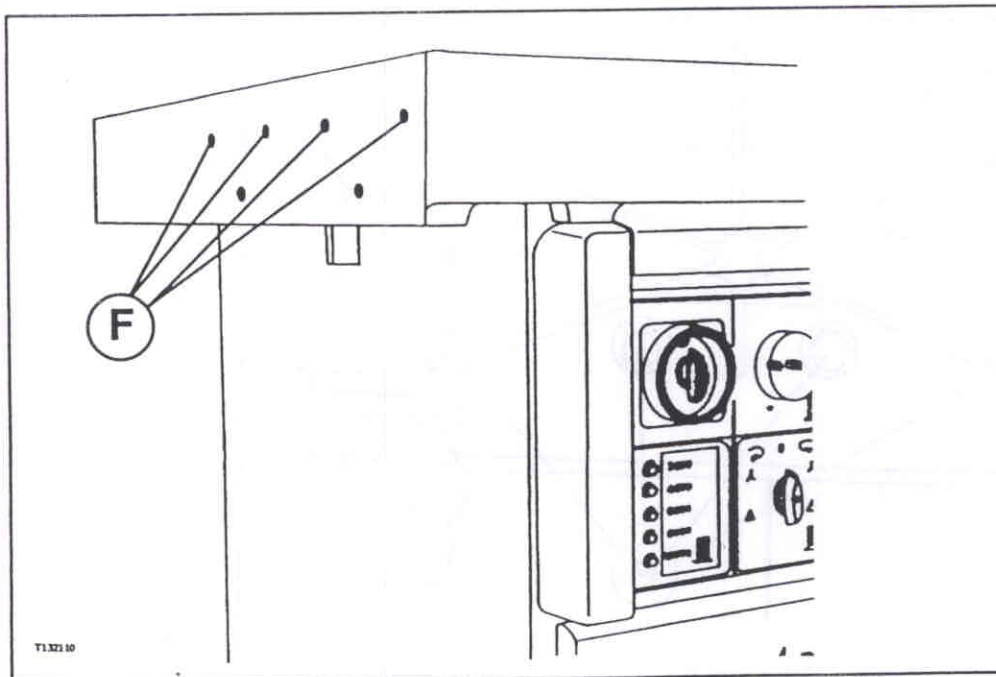
2.13





344

2.14



2.15



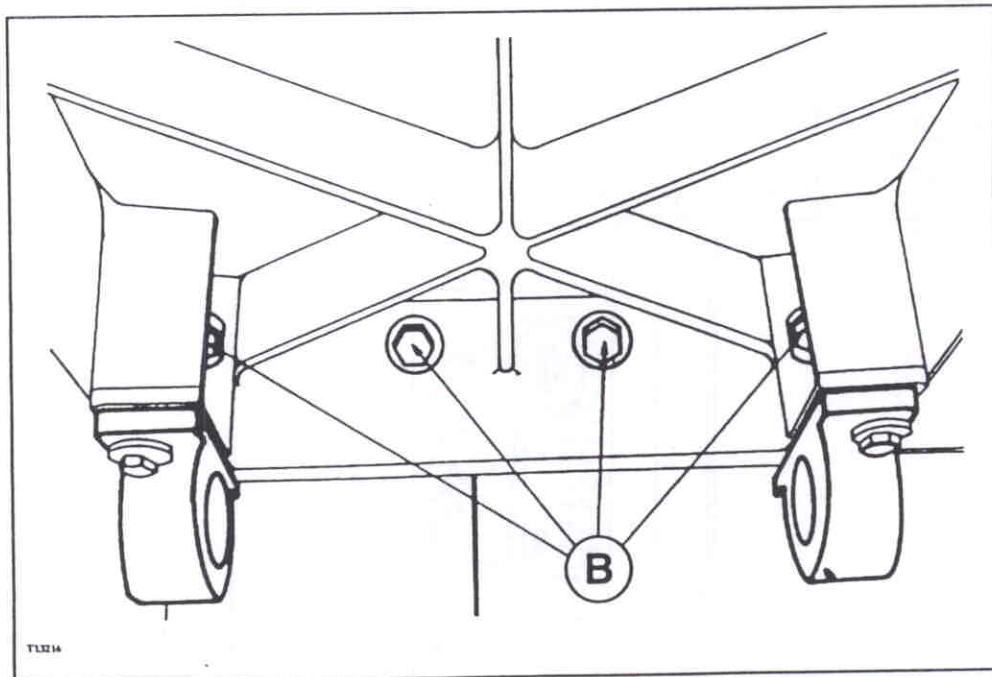
- 2) Tighten the 4 screws (K fig.2.17) when the extension table is perfectly aligned with the machine table,
- 3) Install the staffs (K fig.2.17) with the screws (C),
- 4) Bring the screw (D) in contact with the additional table and tighten it with a nut (E),  
The contrast screw (D) works so as to avoid that any object placed on the extension table can lower it in respect to the machine table.

## INSTALLING THE FRONT SUPPORT BAR (OPTIONAL FOR THE T130LL-TL)

- 1) Install the supports (S fig.2.18) with the screws (P) underneath the extension tables,
- 2) Insert the bars (Z fig.2.19) into the supports (S),
- 3) Install the limit switches (X).

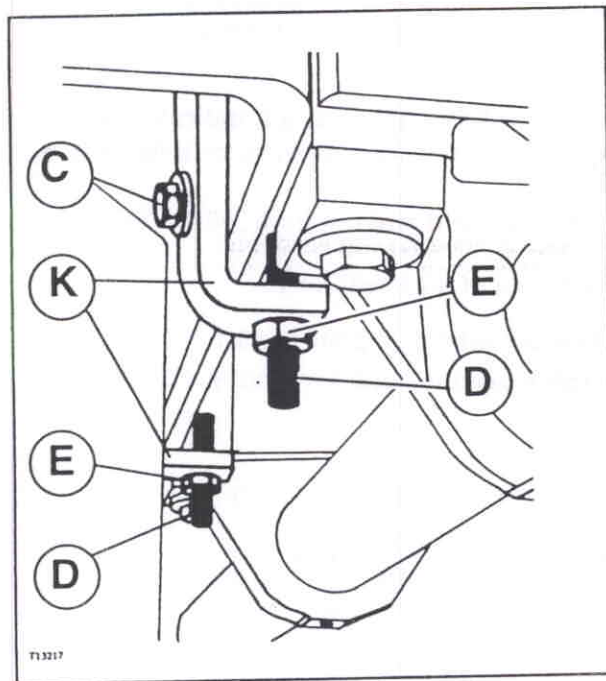
The machine is equipped with:

- infeed roller (R fig.2.19) to favor the entrance of work pieces to long and/or to heavy onto the table,
- emergency push button (P) to stop the shaft.

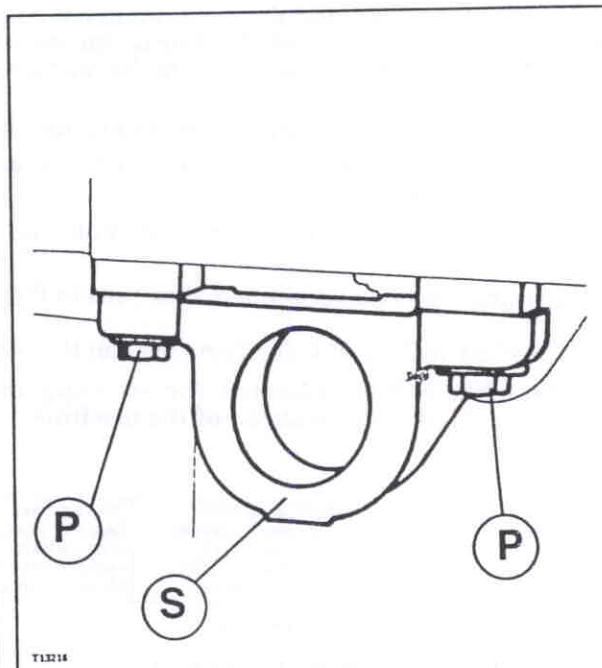


2.16

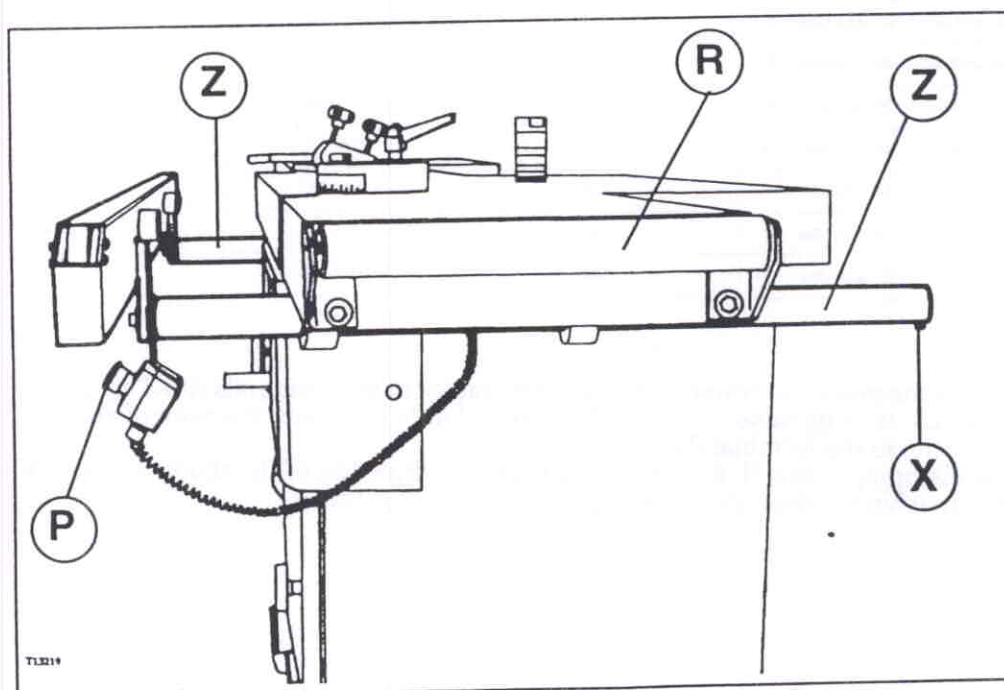




2.17



2.18



2.19



## 2.3 ELECTRIC CONNECTION

The electric connection and the verification have to always be done by a certified electrician. Make sure that the factories electric line is dimensioned so that it can support the machine power and control that the voltage corresponds to the machines.

NOTE: the best work conditions for the machine is to furnish the right tension indicated on the metallic plate in fig. 1.2; however it can adapt itself to tensions superior or inferior in a tolerance field of  $\pm 5\%$ .

(ex. a machine with a work tension of 380 Volts has a tolerance field ranging from 360 to 400 Volts).

Putting aside what was described above see to the regulation of the tension feed.

Read the electrical input value (Ampere) on the machine identification plate (fig.1.1)

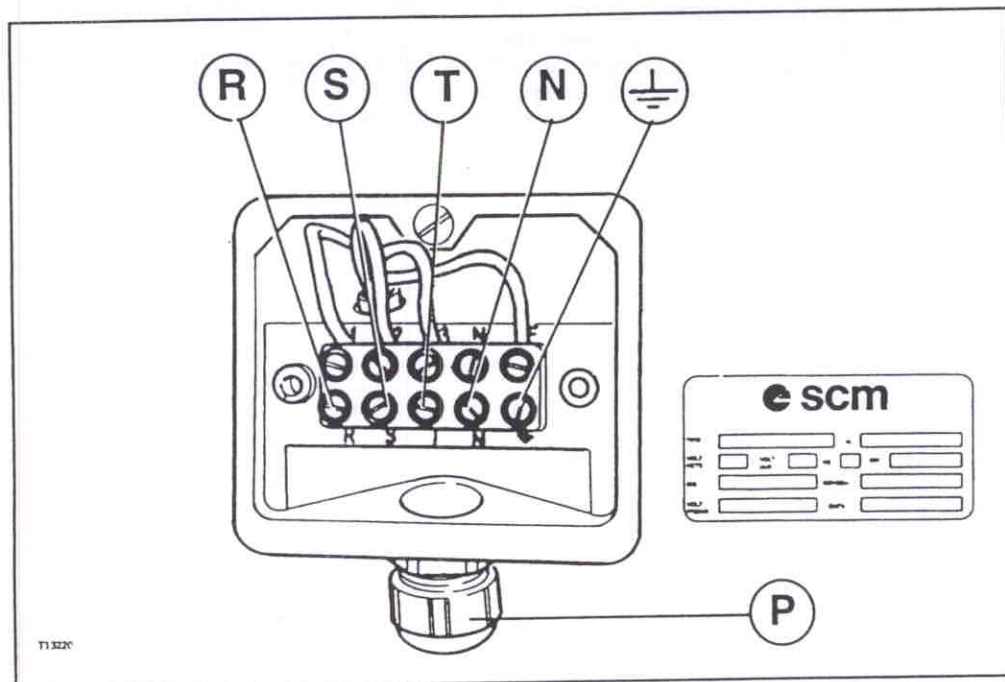
Use the table below indicated for selecting the cable section and for fitting "DELAYED INTERVENTION" fuses ahead of the machine.

| AMPERE ASSORBITI<br>ELECTRICAL INPUT (AMPERE)<br>AMPERES ABSORBES<br>STROMAUFNAHME (AMPERE)<br>AMPERE ABSORBIDOS | SEZIONE CAVI<br>CABLE SECTION<br>SECTION CABLE<br>KABELQUERSCHNITT<br>SECCION CABLES | mm <sup>2</sup> | FUSIBILI AM<br>AM FUSE<br>FUSIBLE AM<br>SICHERUNGEN<br>FUSIBLES AM |
|--|--|-----------------|--|
| fino a/up to/ jusqu'à /bis 10.   |  | 2.5             | 12 A AM  |
| da/from/de/von 10 a/to/à/bis 14  |  | 4.0             | 16 A AM  |
| da/from/de/von 14 a/to/à/bis 18  |  | 6.0             | 20 A AM  |
| da/from/de/von 18 a/to/à/bis 22  |  | 6.0             | 25 A AM  |
| da/from/de/von 22 a/to/à/bis 28  |  | 10.0            | 32 A AM  |
| da/from/de/von 28 a/to/à/bis 36  |  | 10.0            | 40 A AM  |
| da/from/de/von 36 a/to/à/bis 46  |  | 16.0            | 50 A AM  |
| da/from/de/von 46 a/to/à/bis 54  |  | 16.0            | 63 A AM  |
| da/from/de/von 54 a/to/à/bis 76  |  | 25.0            | 80 A AM  |
| da/from/de/von 76 a/to/à/bis 92  |  | 35.0            | 100 A AM   |
| da/from/de/von 92 a/to/à/bis 110   |  | 50.0            | 125 A AM   |

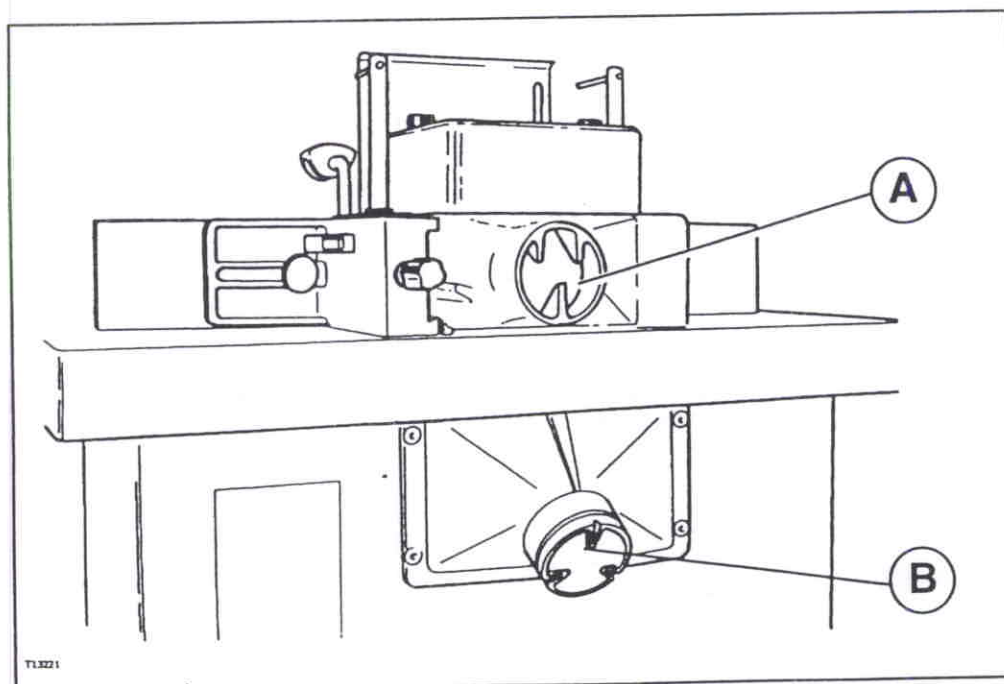
Electronically isolate the machine and connect the 3 electric cables to the terminals R-S-T fig.2.20. Connect the yellow/green cable (ground  $\oplus$ ) to the terminal indicated with the symbol and the neutral wire, if there is one to the terminal (N).

Tighten with care the clamping screw (P fig.2.20), make sure the direction of the shafts rotation is correct by starting the machine as described in its appropriate paragraph.





2.20



2.21



### 2.4 CONNECTION TO THE SUCTION SYSTEM

For better performance from the machine, connect the machine to the suction system of the factory. Connect a hose with a diameter of 120 mm to the hooded fence fitting (A fig.2.21).

Tighten with an appropriate metallic strip to make sure there is contact between the fitting and the hose. Eventually an another fitting for the suction can be applied to the hood (B).

The suction system has to guarantee a range of 1000 cubic meters/hour for a flow speed of 25 m/s.



## SECTION 3

### USE - ADJUSTMENTS

|      |  |      |
|------|--|------|
| 3.1  | Control panel .....                                | 3.2  |
| 3.2  | Starting the machine .....                         | 3.2  |
| 3.3  | Interchangeable shaft (optional) .....             | 3.4  |
| 3.4  | Installation of the utensils .....                 | 3.4  |
| 3.5  | Vertical positioning of the shaft .....            | 3.6  |
| 3.6  | Speed change and regulating the belt tension ..... | 3.6  |
| 3.7  | Choosing the speed of the shaft .....              | 3.6  |
| 3.8  | Vertical positioning of the shaft stops .....      | 3.8  |
| 3.9  | Automatic lifting of the shaft (optional) .....    | 3.10 |
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| 3.15 | 0° fence 0 +/-45° .....                            | 3.12 |
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| 3.18 | Telescopic support fence (NPS) .....               | 3.16 |
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| 3.20 | Motorized fence .....                              | 3.20 |
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| 3.22 | Selfbraking motor (Optional) .....                 | 3.   |
| 3.23 | SV101M Counter .....                               | 3.   |



### 3.1 CONTROL PANEL

The command panel (fig.3.1) in one of the more complete versions is composed of the following devices:

- A- Main lockable switch
- B- Y switch-  $\Delta$  to start the shafts motor with a double sense of rotation
- C- Visualizer of the shafts rotation speed
- D- ON-OFF button for the motor salvage
- E- Low tension system fuses
- F- Switch that unblocks the spindle moulder motor brake
- G- Spy light indicating that the brake is unblocked
- H- Shaft lifting switch
- L- Switch for the movement of the fence (optional)
- M- Switch that unblocks the lifting brake
- N- Innerblock button that changes the sense of rotation (germany)
- O- Visualizer malfunctioning spy light (germany)

The machine, upon request, can be equipped with a mobile command panel which is usefull when you are working pieces of big dimensions and is available for all T130 versions.

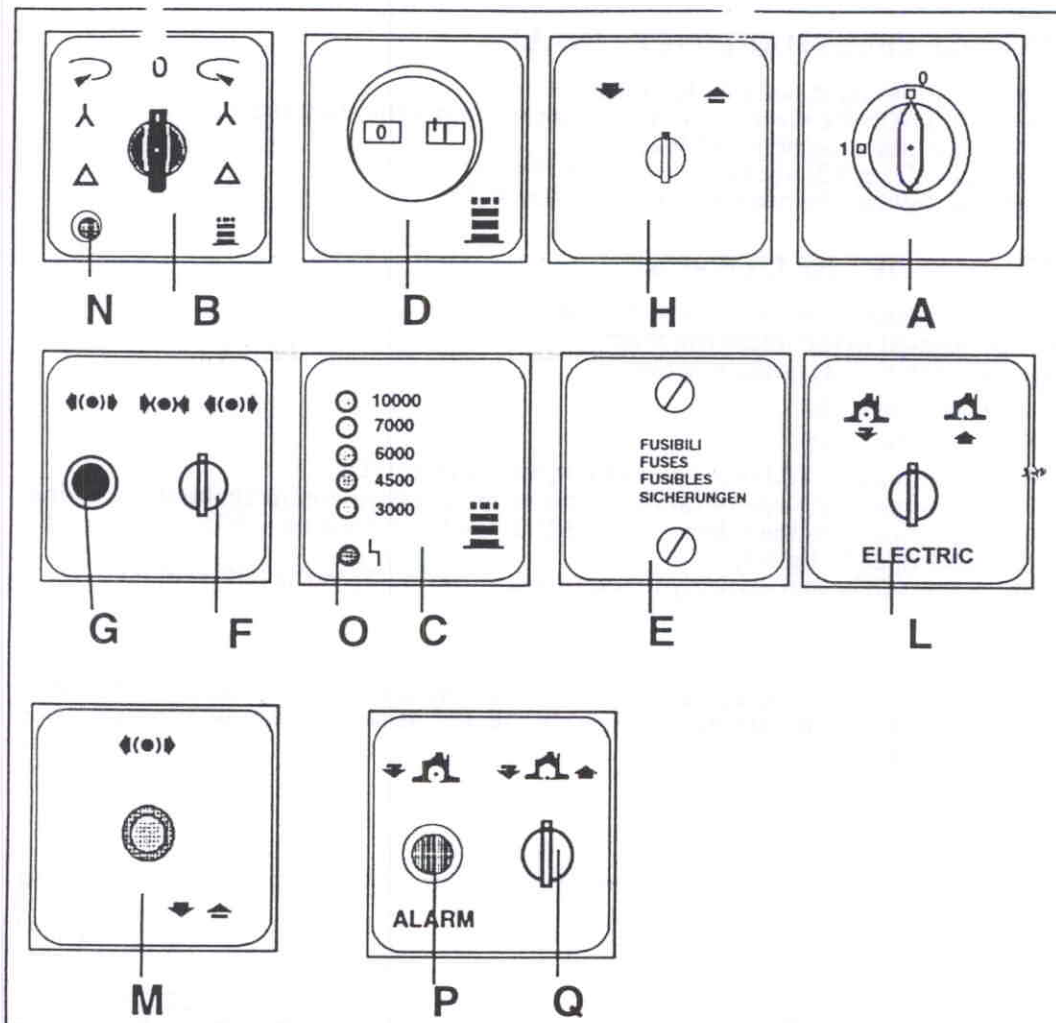
### 3.2 STARTING THE MACHINE

After having verified the correct position of the emergency button, the closing of the motor door, turn the main switch (A) in the 1 position, press button (I), and turn the switch (B) in the Y position. Wait a few seconds for the motor to warm up, then turn the switch to the triangle.

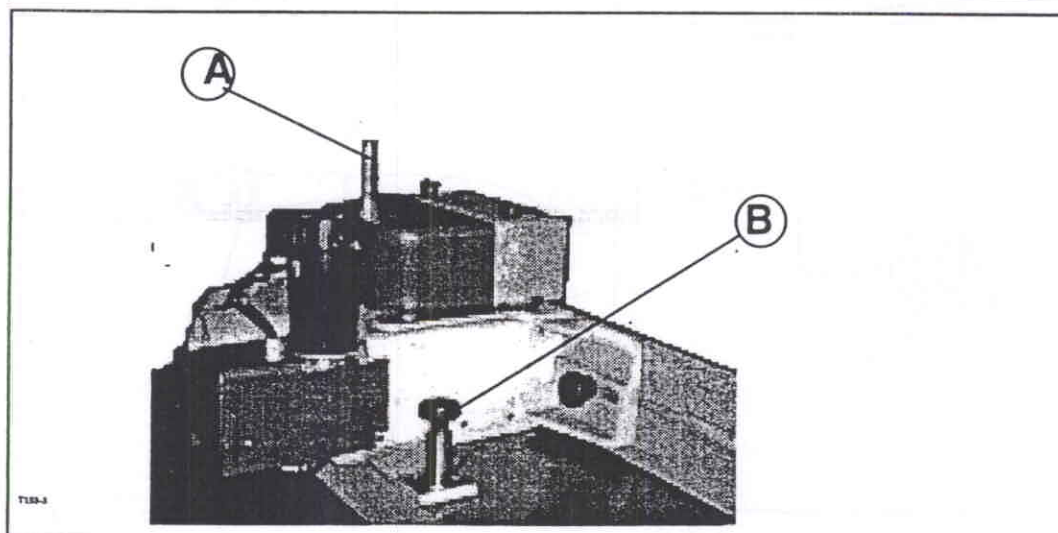
In case of machines with power fence, before profiling operations make sure that knob (B fig.3.1a) and handle (A) are well campled.

In case of machines with fence that may be switched off before shaping make sure that the hood is totally open in position 90° to the normal working position.





3.1



3.1a



## 3.3 INTERCHANGEABLE SHAFT (OPTIONAL)

To take off the shaft press the right pedal of the machine.  
Loosen the nut (A fig.3.2) with the wrench (B) until you can extract the shaft (fig.3.3).  
Installing the new shaft is done the opposite way.  
Make sure that the cones (C fig.3.3) are clean as well as threaded.  
Insert the new shaft and tighten the nut (A) with the wrench (B).

## 3.4 INSTALLATION OF THE UTENSILS

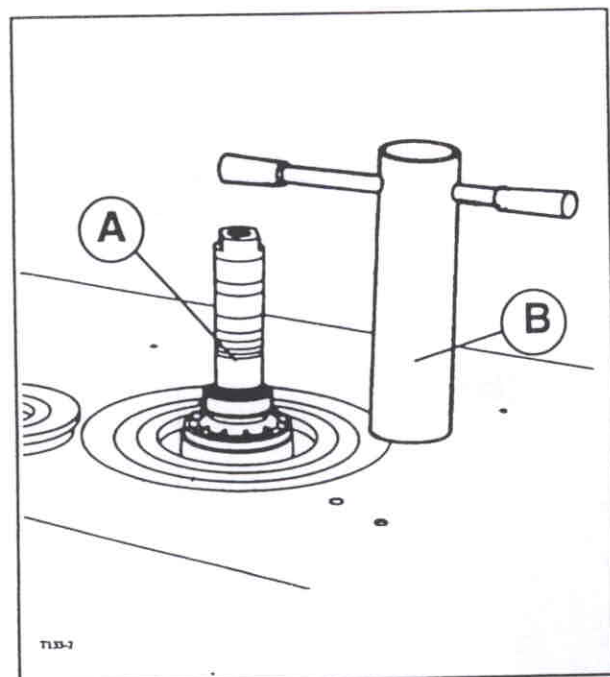
Install the utensils in the position as low as possible of the shaft.  
The installation is performed in the following manner:

- Press the right pedal (P fig.3.4) of the machine,
- Unscrew the distance rings (S),
- Insert the utensil onto the shaft,
- Insert the distance rings again and block everything with the nut (D).

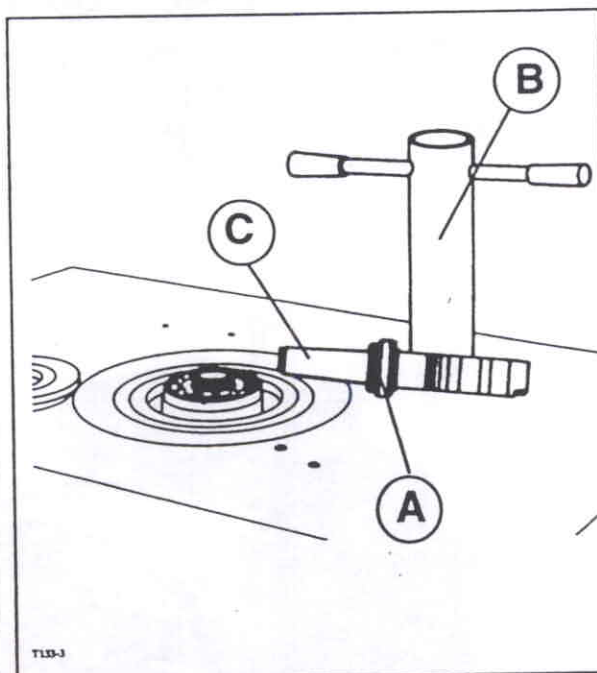
When the machine is equipped with a self-braking motor, to be able to rotate freely the shaft during the installation of the utensils, turn the selector (F fig.3.1) in the right position <-(O)->, at the same time the spy light will turn on (G fig.3.1).  
Remember that the motor can be started, only if you turn the switch (F) to the left position.

### IMPORTANT

Always insert underneath the blocking nut, the ring with the lateral screw (E fig.3.5) which inserts itself into one of the two extreme grooves (E fig.3.6) of the shaft and prohibits the accidental loosening of the utensils.

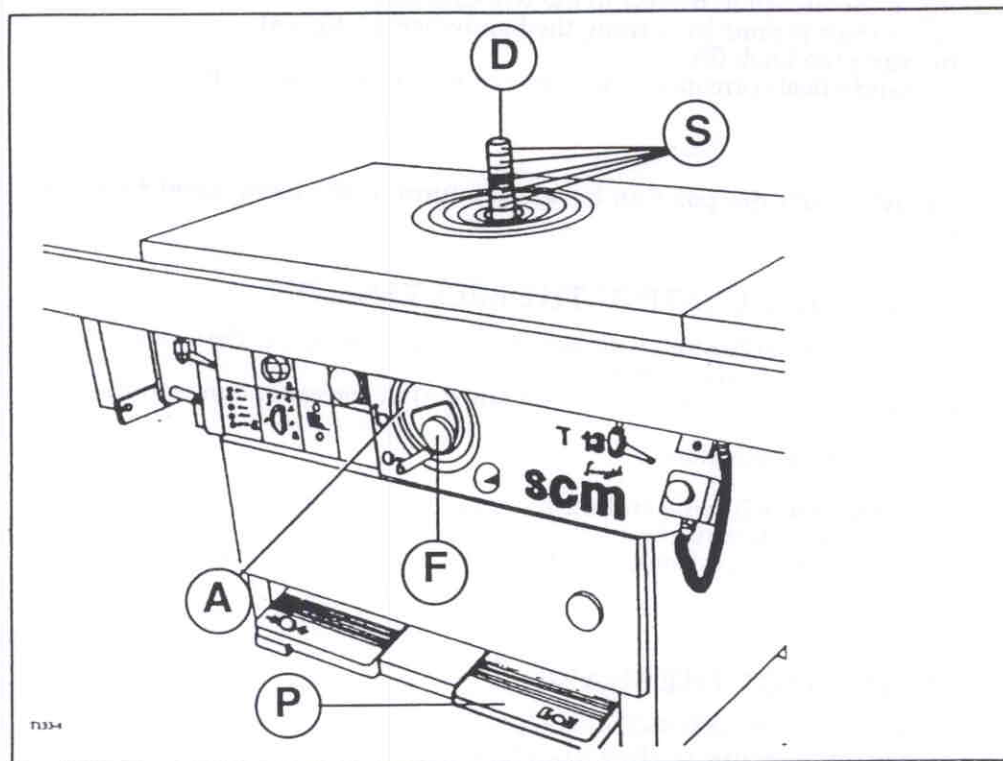


3.2

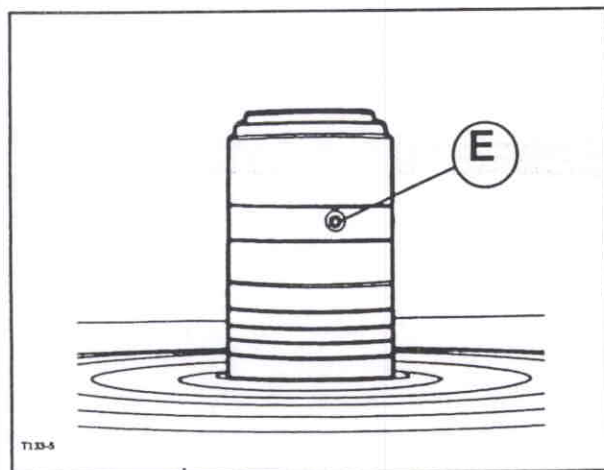


3.3

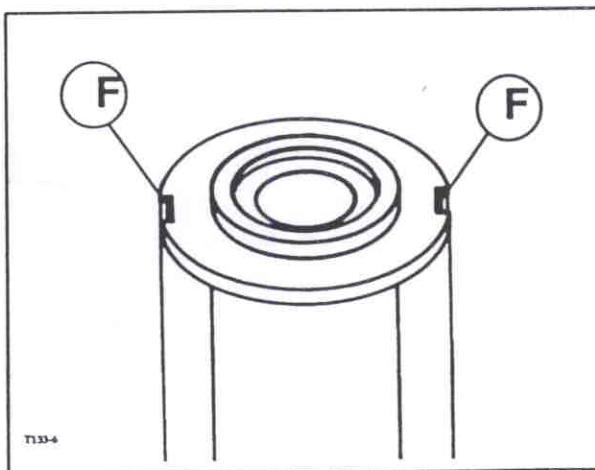




3.4



3.5



3.6



## 3.5 VERTICAL POSITIONING OF THE SHAFT

It's used for the positioning of the utensil in respect to the working table.  
The vertical movement of the shaft is done by turning the handwheel (A fig.3.4).  
The rotation is blocked by using the knob (F).  
A complete rotation of the handwheel corresponds to a movement of the shaft of 2 mm.

### IMPORTANT

To eliminate eventual "play", reach the position by always turning the handwheel from the bottom towards the top.

## 3.6 SPEED CHANGE AND REGULATING THE BELT TENSION

Loosen the belt (C fig.3.7) using the lever (L), move the belt on the pulleys to obtain the speed desired as shown on the speed layout located on the motor door.  
With the speed visualizer, move the loophole with the handle (M) in correspondance to the new speed.  
Bring the lever (L) back to its original position.

During the first work phase, the belt will settle and thus a reduction of the tension.  
Turn the two nuts (E & F fig.3.7) to obtain the best tension of the chain.  
The correct tension of the belts is when a pressure of 3 kg is placed in the middle point between the two pulleys and the belt sags 5 mm.  
All this can be tried manually.

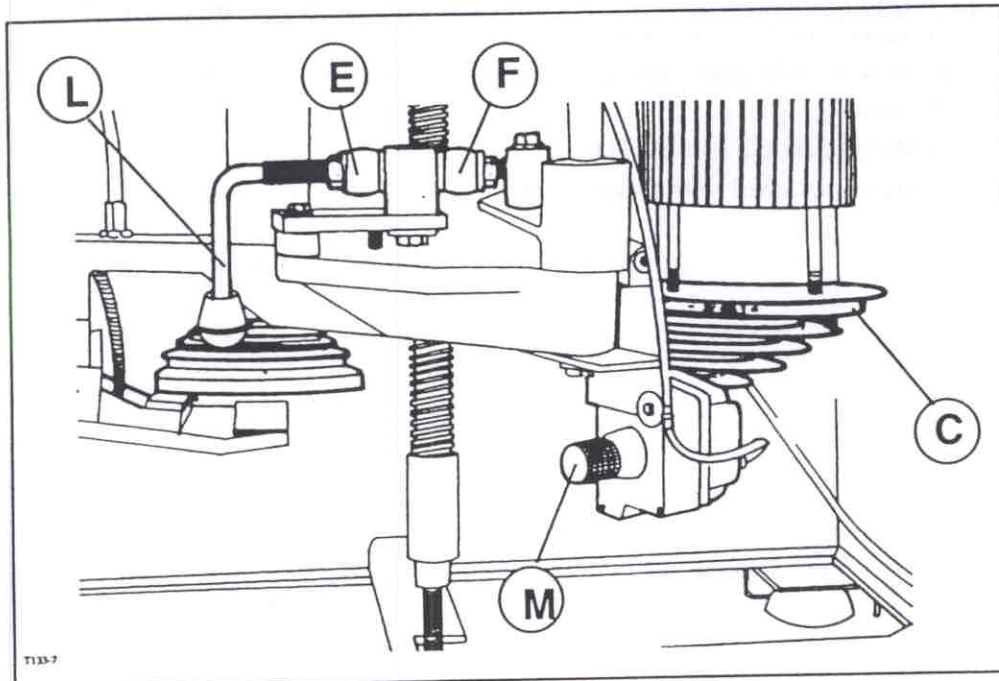
## 3.7 CHOOSING THE SPEED OF THE SHAFT

The machine is equipped with 5 speeds 3000-4500-6000-7000-10000 rpms.  
In the diagram (fig.3.8) a concrete example of choosing a speed in function to the diameter of the utensil, and the most opportune peripheral speed for the type of material to be worked on.

Oriente values for the peripheral speed

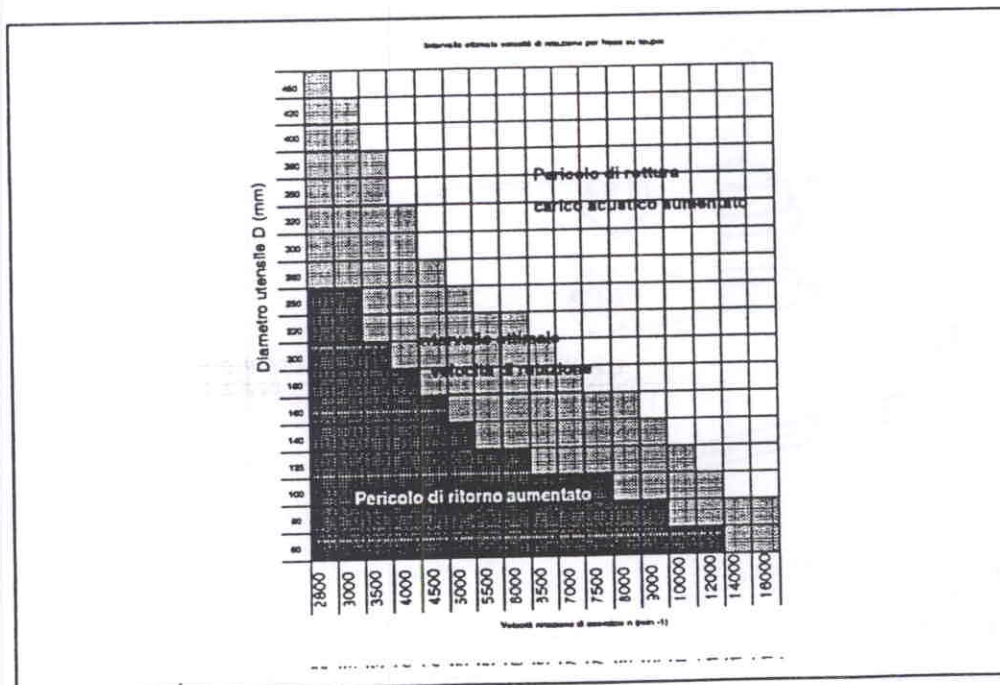
|                | SRR m/s | HM m/s |
|----------------|---------|--------|
| Soft wood      | 50-80   | 60-90  |
| Hard wood      | 40-60   | 50-80  |
| Shaving panels |         | 60-80  |





T133-7

3.7



3.8



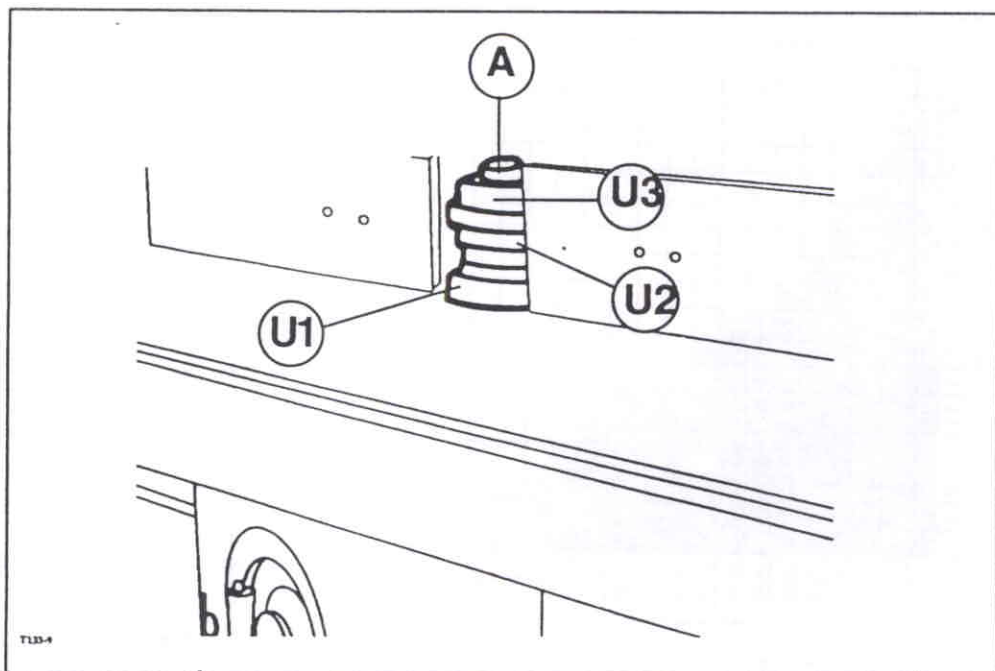
### 3.8 VERTICAL POSITIONING OF THE SHAFT STOPS

Install the utensils (U1-U2-U3 fig.3.9) onto the shaft (A). For each work phase, the utensil has to be positioned opportunely in respect of the work table.

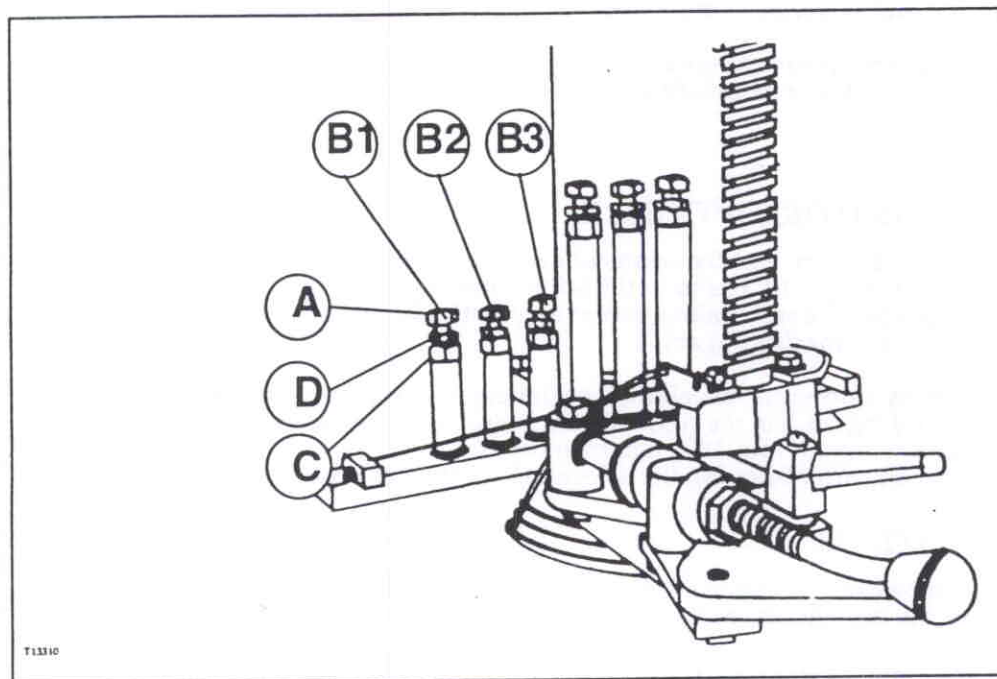
The regulation of the stops is done by bringing the screw (A fig.3.10) to the height wanted, blocking it with the nut (D) and the bolt (C).

Choosing the stop desired use the switch (B fig.3.11).

With the handwheel (V) move the utensil to the work line.

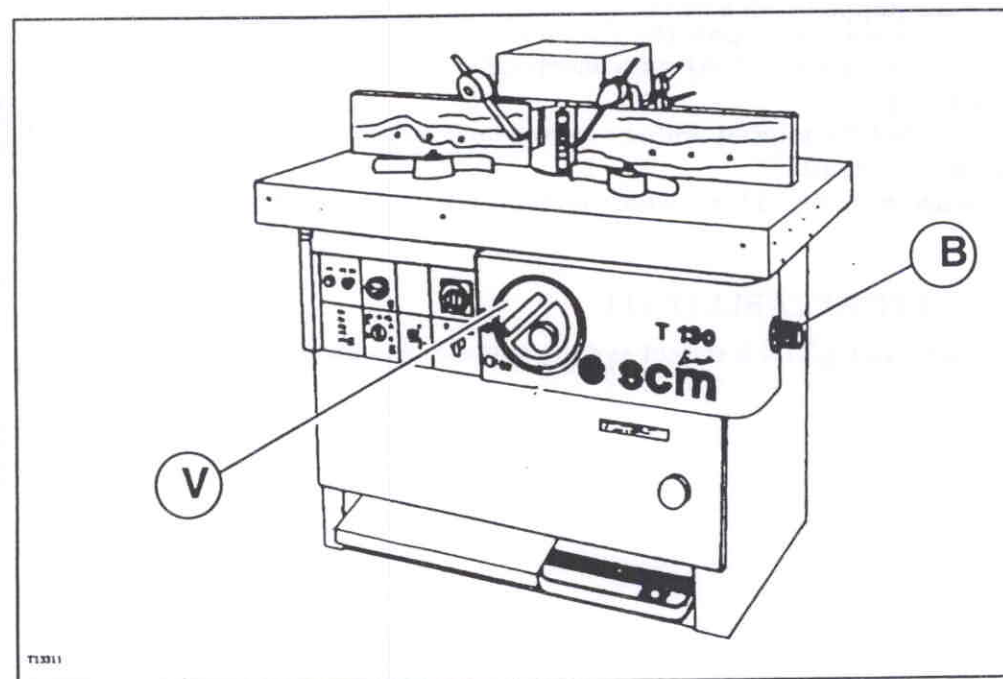






3-47

3.10



3.11



### 3.9 AUTOMATIC LIFTING OF THE SHAFT (OPTIONAL)

For the automatic raising and lowering of the shaft turn the switch (H fig.3.12).

PLEASE NOTE:

If on the machine the "shaft stop positioning system" is present, let the switch (H) go when the shaft has reached the limit switch on the stop, insisting in this position will damage the automatic raising and lowering device.

### 3.10 SELF-BRAKING MOTOR (OPTIONAL)

The rotation of the shaft can happen also by means of a self-braking electric motor.

In work position the switch (F fig.3.12) has to in the left position ->(O)<-.

When you turn the machine off, the self-braking motor automatically stops the shaft and remains in that position until you start the machine again.

The shaft has to rotate freely during the installation of the utensils or during the regulation.

To do this: turn the switch (F fig.3.12) in the right position <-(O)-> to free the movement of the shaft and at the same time the spy light (G fig.3.12) will turn on.

The motor can be started only after bringing the selector (F) to the left position.

### 3.11 SLIDING BEAM (T-TL)

The sliding beam (A) can be loosened by using the lever (B fig.3.13) to position the piece in respect to the shaft or to reduce the dimensions of the tenoning carriage.

### 3.12 TENONING CARRIAGE (T-TL)

The sliding tenoning carriage (D) is at the same level of the machines tale, to consent an extension during the forming and banging of long work pieces.

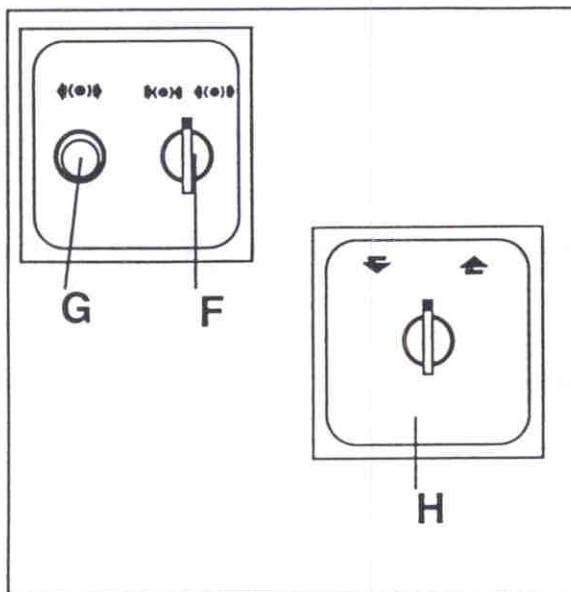
The tenoning carriage is equipped with a handle (F) that blocks the sliding of the carriage on the beam, and a supplementary support stopper (X), it is also composed of the following:

- Telescopic support fence (G fig.3.12A) with independant stops (Q) and a box with two programmable stops (L).
- Tenoning support table (P) equipped with a carriage limit switch stop (Y) to avoid contact between the tale and the utensil.
- Forming table extension (D fig.3.13) on which underneath an emergency pushbutton (R) is installed.

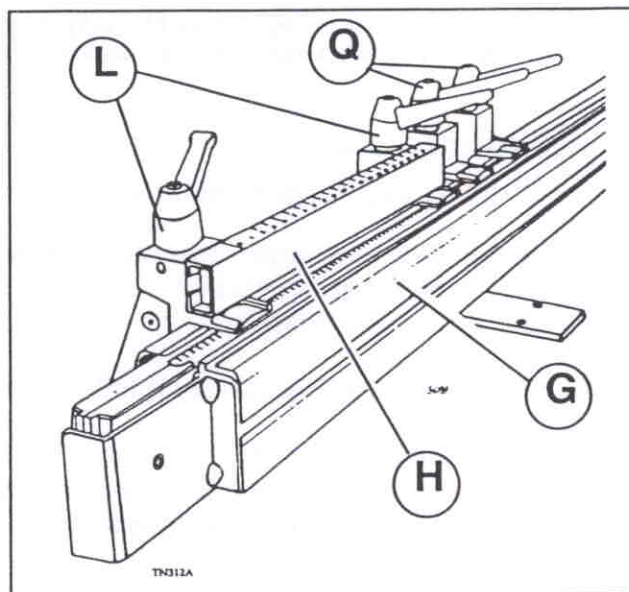
### 3.13 TENONING SUPPORT TABLE (T-TL)

The tenoning support table (E fig.3.13) is rought as close as possible to the utensil and locked with the lever (F).

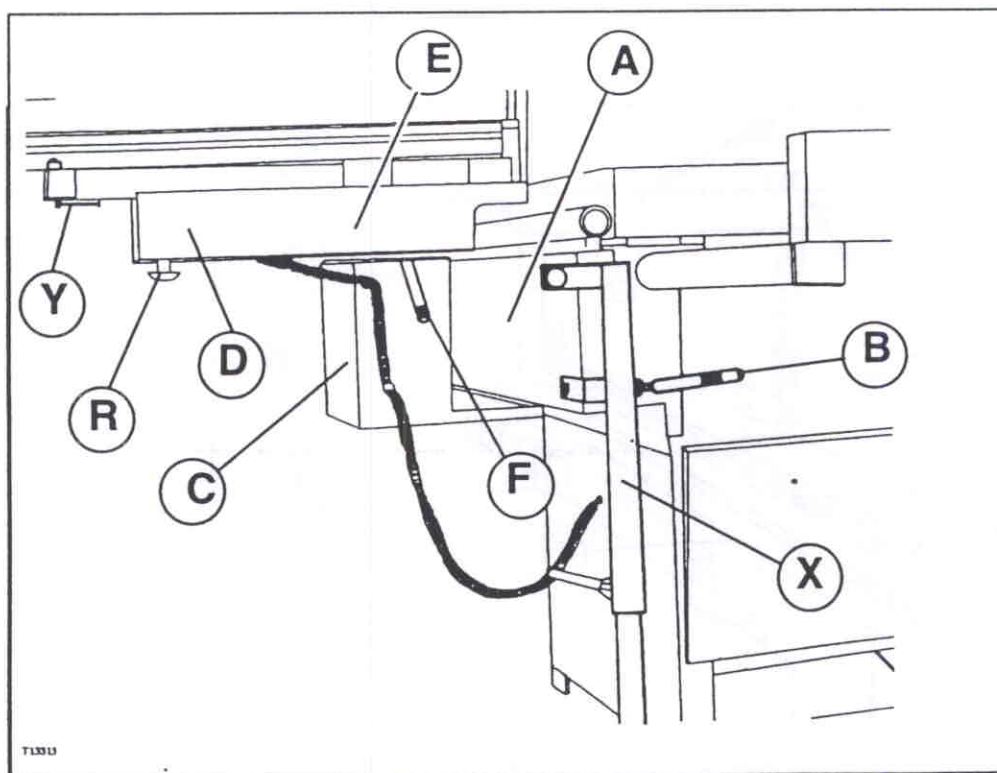




3.12



3.12A



3.13



## 3.14 TELESCOPIC SUPPORT FENCE (T-TL)

The fence (G fig.3.14) is united thru a blocking gib (L), which is secured into position on the tale by tightening the pivot (P), which also acts as a support for the fitting (S).

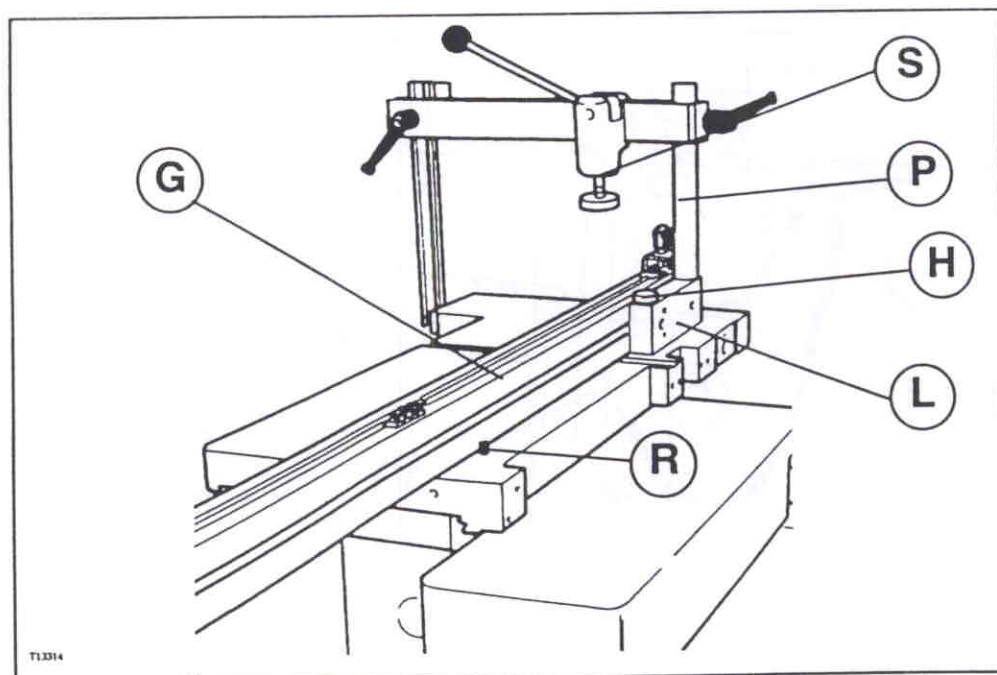
## 3.15 0° FENCE +/- 45°

Install the tale (C fig.3.15) in the following manner:

- insert the tale (C) on the side of the carriage that presents two threaded holes (A fig.3.16) and two outlets (B) for the exact position,
- tighten the screws (V fig.3.15).

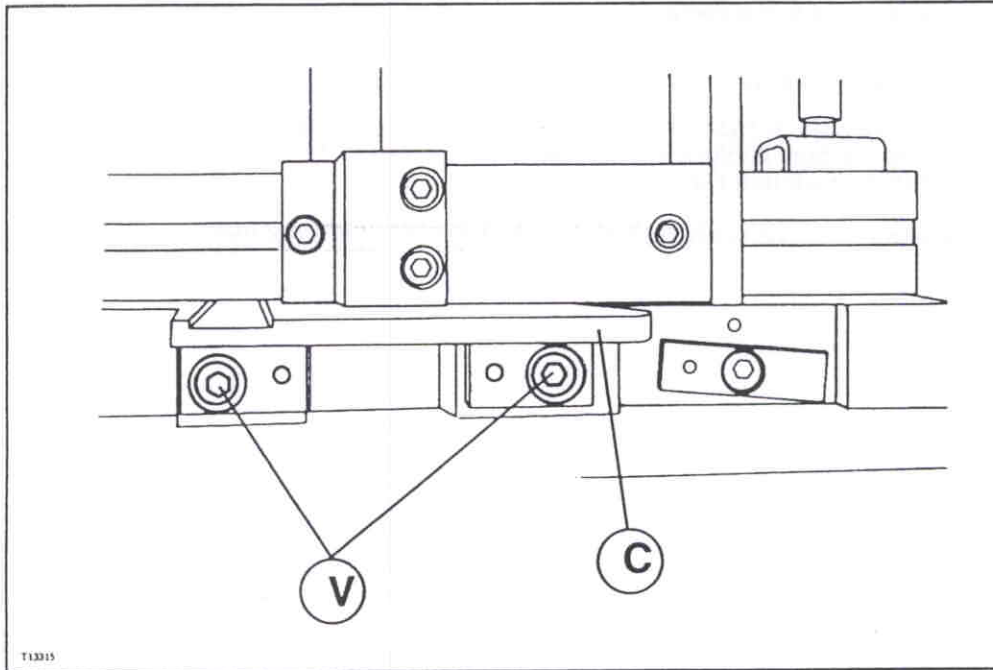
Move the fence for negative cuts in the following manner:

- loosen the pivot (P fig.3.14)
- take the gib from the pivot (H) and insert it under the slot of the tale (C),
- lock the fence in place by tightening the pivots (H) and (P).

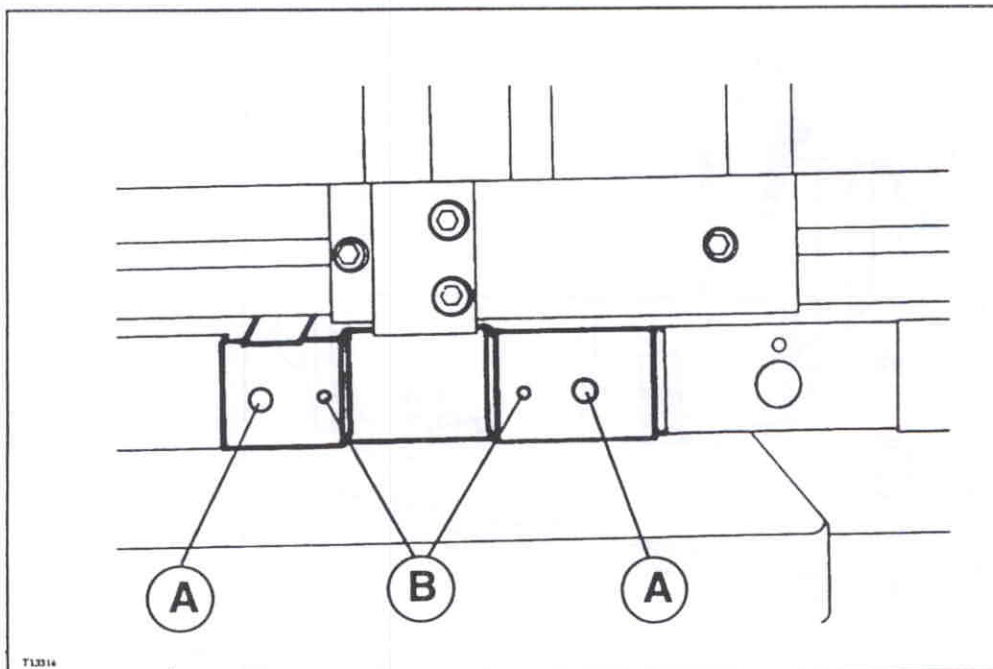


3.14





3.15



3.16



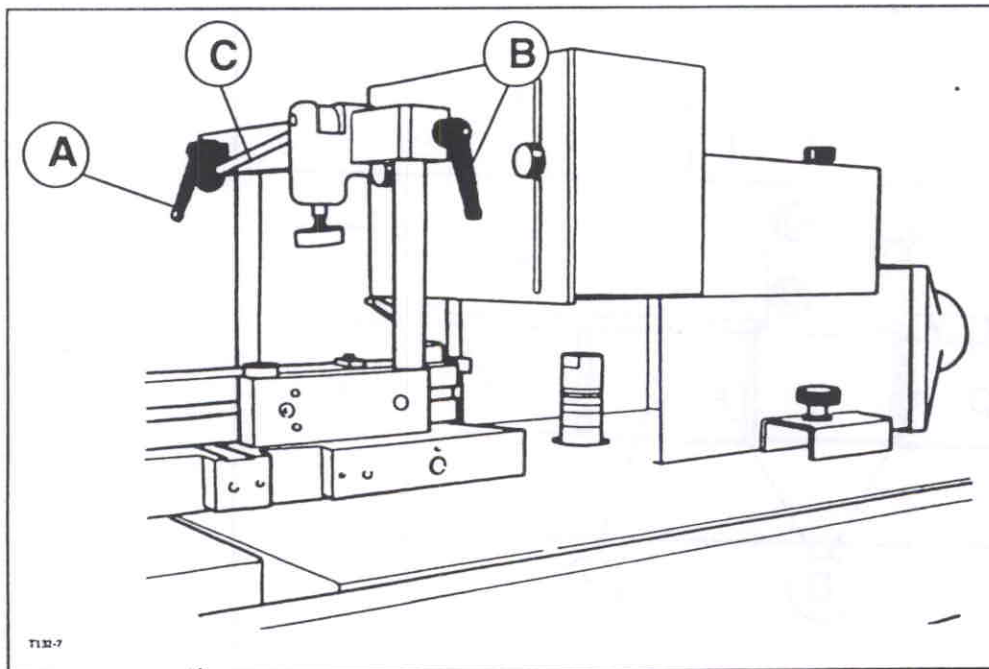
### 3.16 EXCENTRIC ARM FITTING (NT-NTL)

Loosen the handle (A & B fig.3.17) and position it at the height desired then tighten. With the lever (C) lower the stopper to secure the work piece.

### 3.17 SLIDING CARRIAGE (NPS)

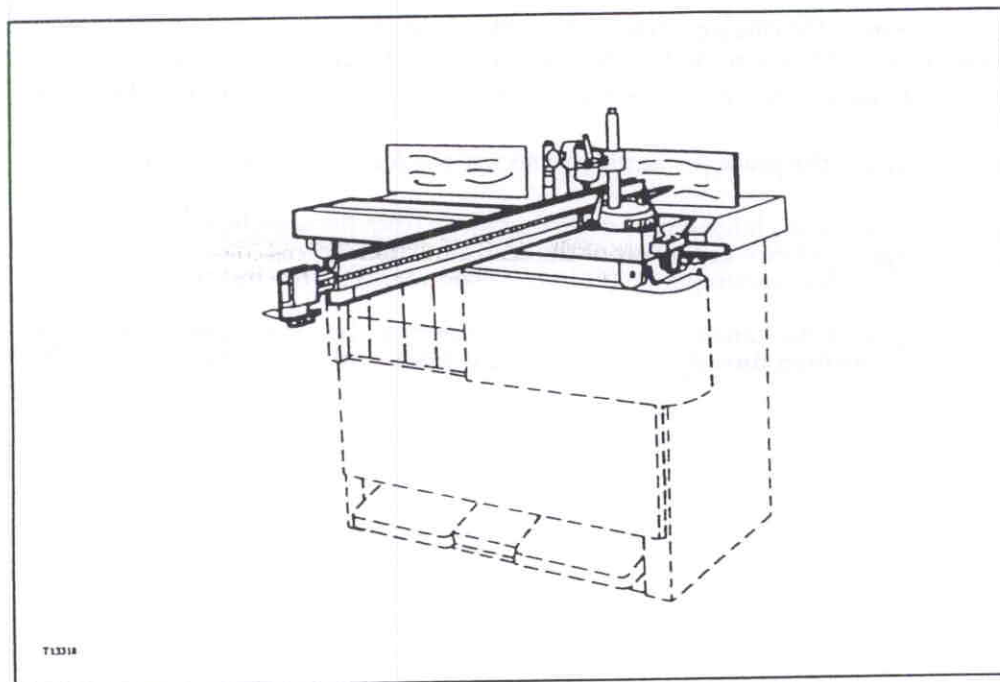
In the T130 NPS the sliding carriage is placed directly on machines tale in the front (fig.3.18).  
For transportation needs the carriage is blocked with the screw (A fig.3.19).  
Take off this screw after having installed the machine.

Secure the sliding carriage into position with the lockage (Aa fig.3.20), if it is not used (ex. forming).

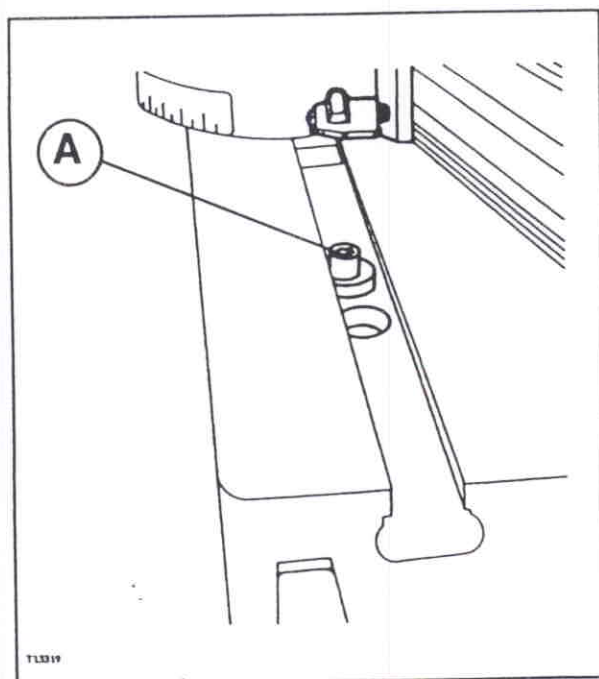


3.17

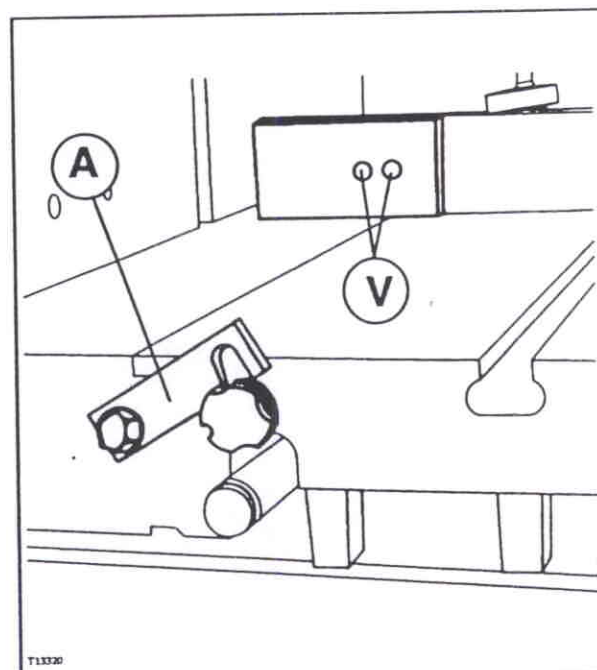




3.18



3.19



3.20



### 3.18 TELESCOPIC SUPPORT FENCE (NPS)

Position the telescopic fence onto the carriage in the following manner:

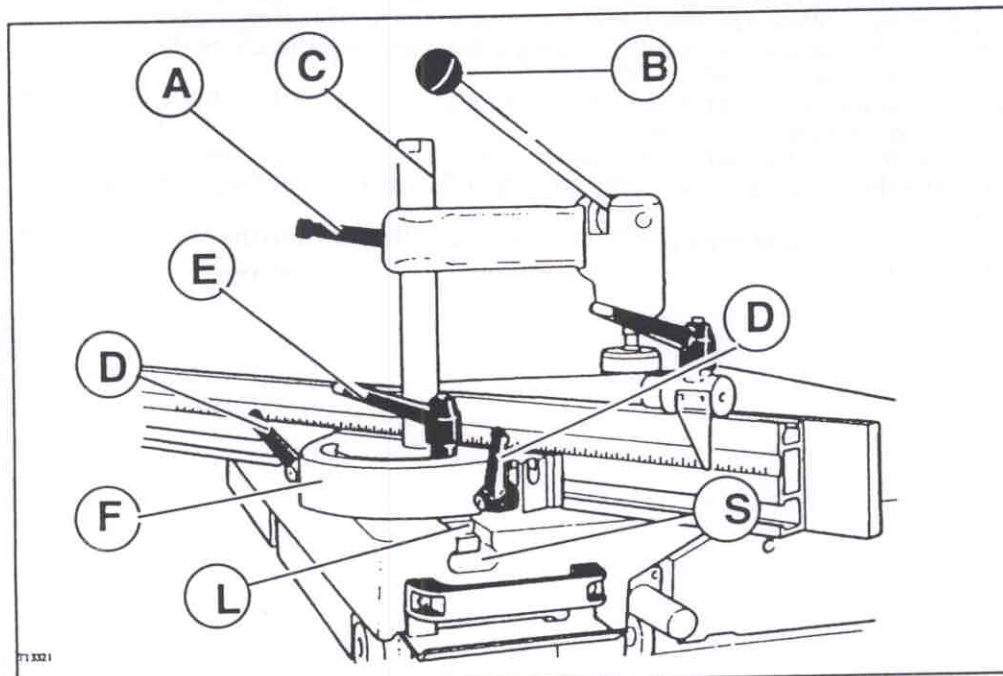
- 1- Insert the ruled fence (L fig.3.21), connected to the pivot (C), into the groove (S) on the carriage.
- 2- Position the telescopic fence into the position desired on the carriage in function to the work phase.
- 3- Block the fence by tightening the pivot (C), until you secure the fence onto the carriage.

Use the handle (D fig.3.22) to move the fence closer or farther away from the spindle moulder shaft. The handle (E) is used to angle the fence in respect of the feed direction.

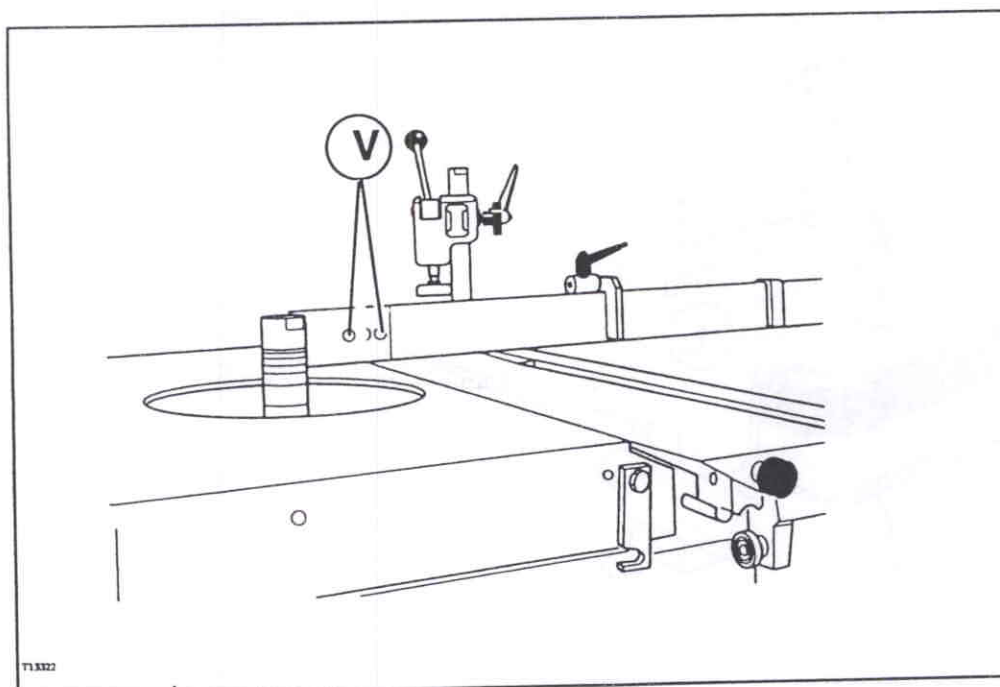
The angle is read directly on the half moon gauge (F) in correspondance to the index on the ruled fence (L).

Vertically position the fitting with the handle (A) and lock the piece on the carriage with handle (). Secure the chip breakers into position directly on the telescopic fence with the screws (V fig.3.22).





3.21



3.22



### 3.19 TENONING TABLE (NPS)

Install the gib (L fig.3.23) in its appropriate groove on the fence and on top of this the cross gib (C).

Lean the tenoning table (P fig.3.24) on the gib (C), secure it with the screw (V fig.3.24).

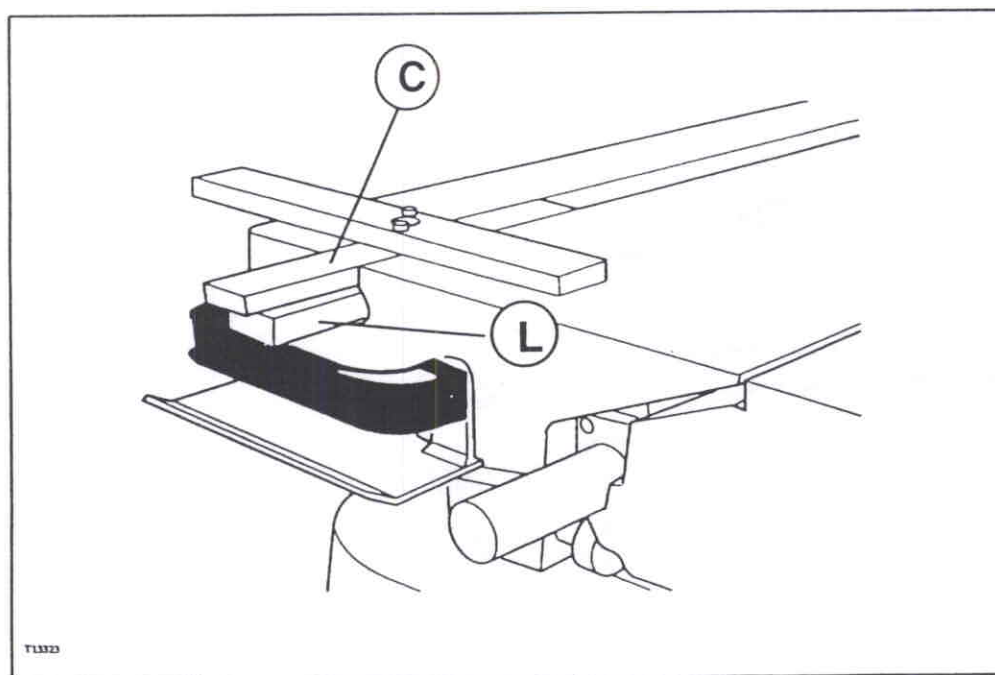
Regulate its position in function to the blade used, sliding it by loosening the screw (V).

Finished with the regulation tighten the screw (V).

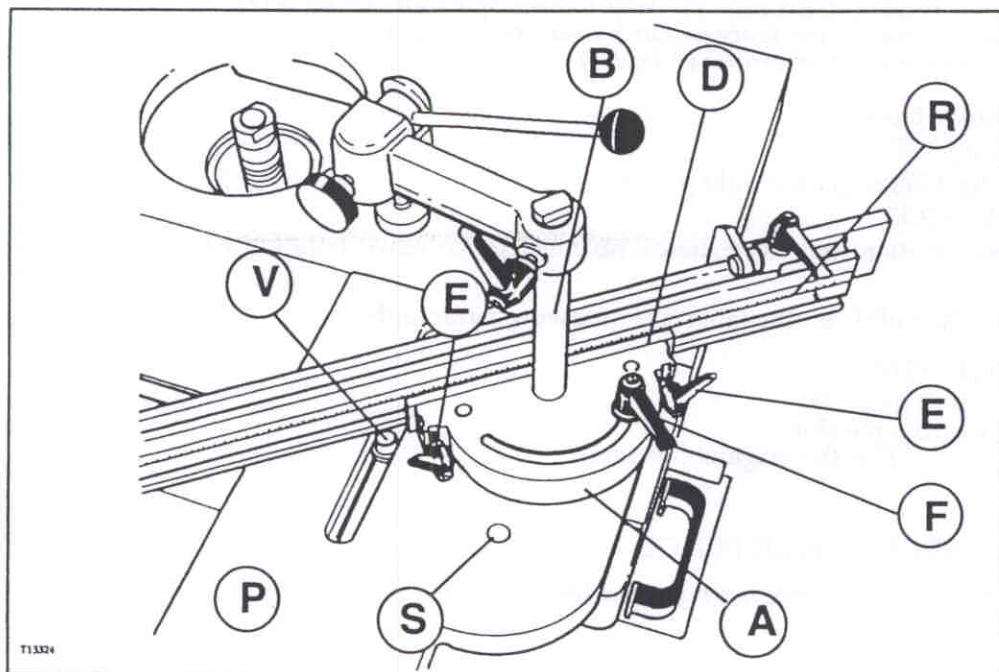
In function to the work cycle secure the half moon mitre gauge (A fig.3.24) to the table, blocking the fulcrum pivot (B) as seen in the figure, with the screw (C fig.3.25) located underneath the table; or securing the half moon on the hole (S) locking it with the screw underneath the tale.

Install the ruler (R) sliding the lateral groove on the gib (D) and securing it in the position desired with the handle (E fig.3.24).

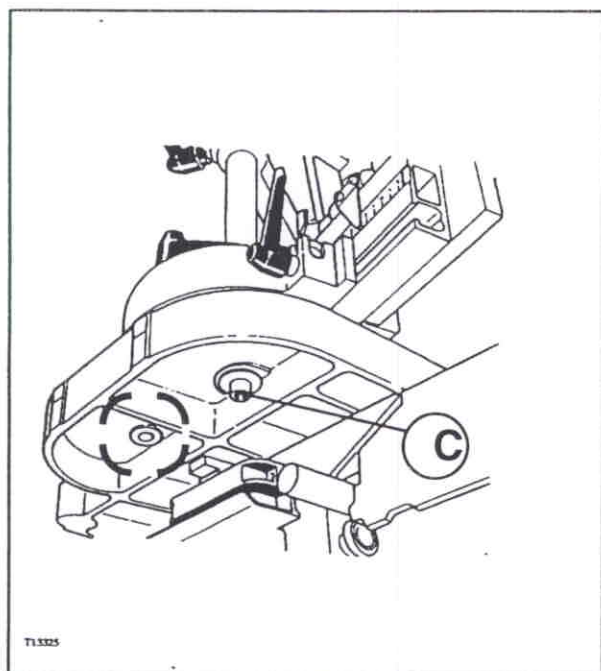
To perform angled cuts loosen the handle (F fig.3.24) and turn the half moon into the position desired referring to the index (I fig.3.26).

**3.23**

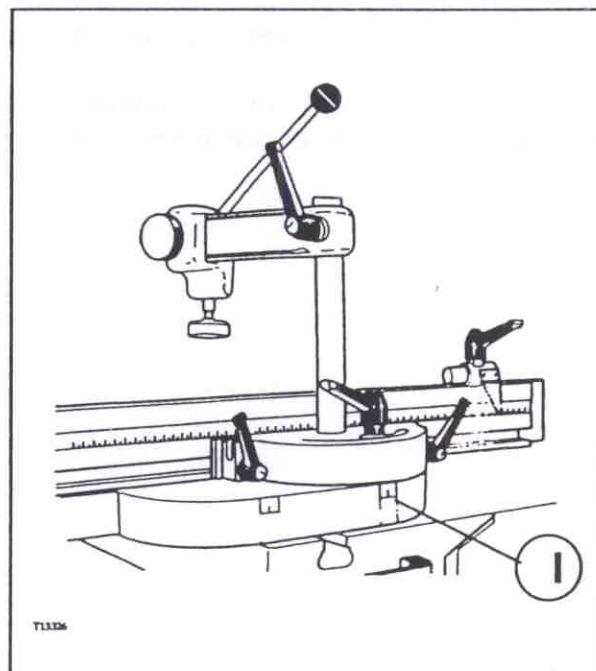




3.24



3.25



3.26



### 3.20 POWER FENCE

The movement of this fence, is carried out only after loosening handle (A fig.3.27).

The forward-backward motion of the fence occurs by selector (Q fig.3.1)

The fine adjustment is carried out by button (P fig.3.1)

Fine adjustment of infeed fence:

- loosen handle (A fig.3.27)
- turn the knob (R fig.3.27) to get the right position
- tighten handle (A fig.3.27).

N.B. During the fence motion, make sure there is no interference between the fence halves and the tools.

The fence may be switched off from the table (see following paragraph).

#### SWITCHING OFF THE FENCE

- 1) Fully unscrew knob (B fig.3.27)
- 2) Remove handle (A) from the slot
- 3) Turn hood (C fig.3.27) 90° to the original position

### 3.21 PROGRAMMABLE POWER FENCE

The motion of the fence occurs by programmer after loosening handle (A fig.3.27).

Fine adjustment of infeed fence half:

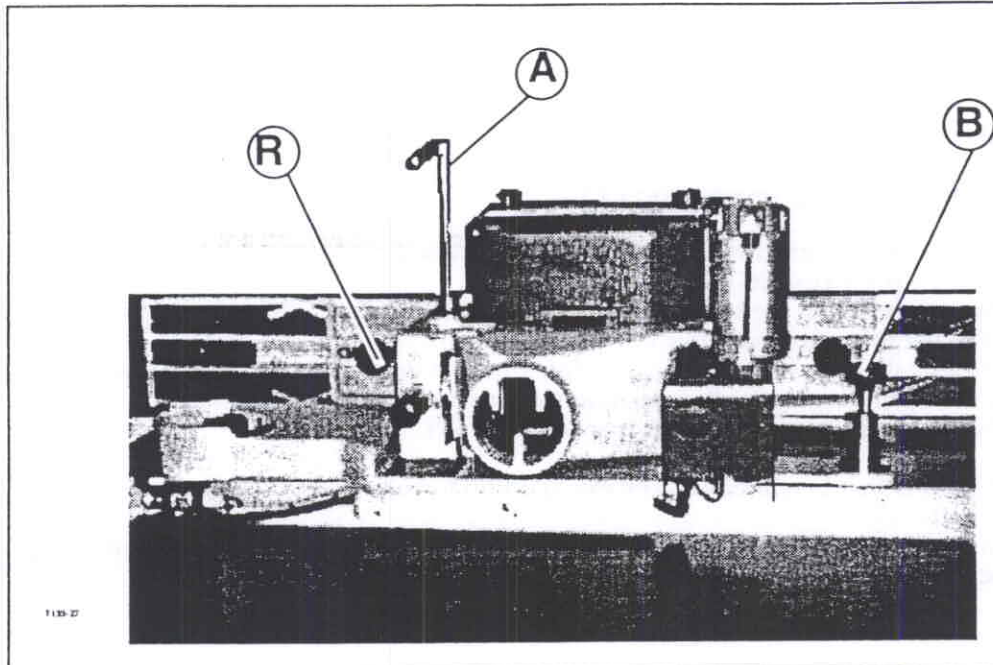
- Loosen handle (A fig.3.27)
- Turn knob (R fig.3.27) to get the right position
- Clamp handle (A fig.3.27)

NOTE: Before the execution of a program, make sure there is no contact between the fence halves and the tools.

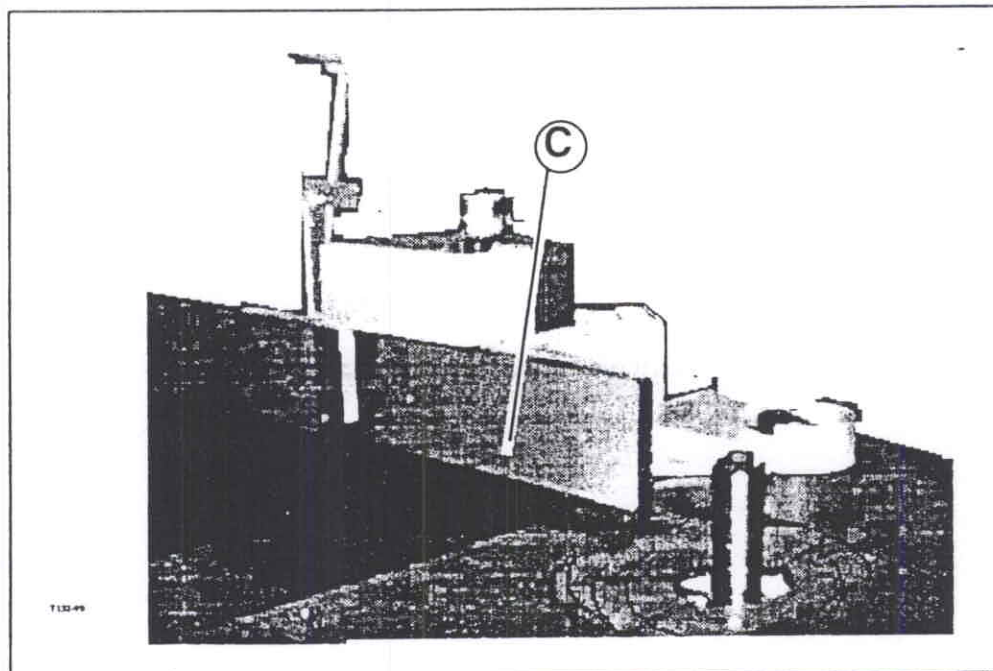
The fence may be switched off from the table (see following paragraph).

As to programming see the handbook enclosed.





3.27



3.28



### SWITCHING OFF THE FENCE

- 1) Fully unscrew knob (B fig.3.27)
- 2) Take off handle (A) from the slot
- 3) Turn hood (C fig.3.29) so that it rests against column (F fig.3.29).

### 3.22 SELFBRAKING MOTOR (OPTIONAL)

The rotation of the shaft can be performed by an electric selfbraking motor.

In normal situations place the switch (G) on the left.

When you turn off the current bring the saw switch to the "0" position, the motor will automatically brake and will remain like that until you start the machine again.

Having to make some adjustments, like installing blades, etc., that the shaft has to rotate freely, turn the selector (G) into the right position, at the same time the spy light (H) will turn on.

The motor can start only when the switch (G) is turned to the left.

Periodic controls and adjustments will have to be executed on the electromagnetic braking device illustrated in figure 3.30-3.31.

Before performing any type of assistance on the electric motor, you must turn off the current by turning the main lockable switch on "0".

#### ELECTROMAGNET AIR GAP

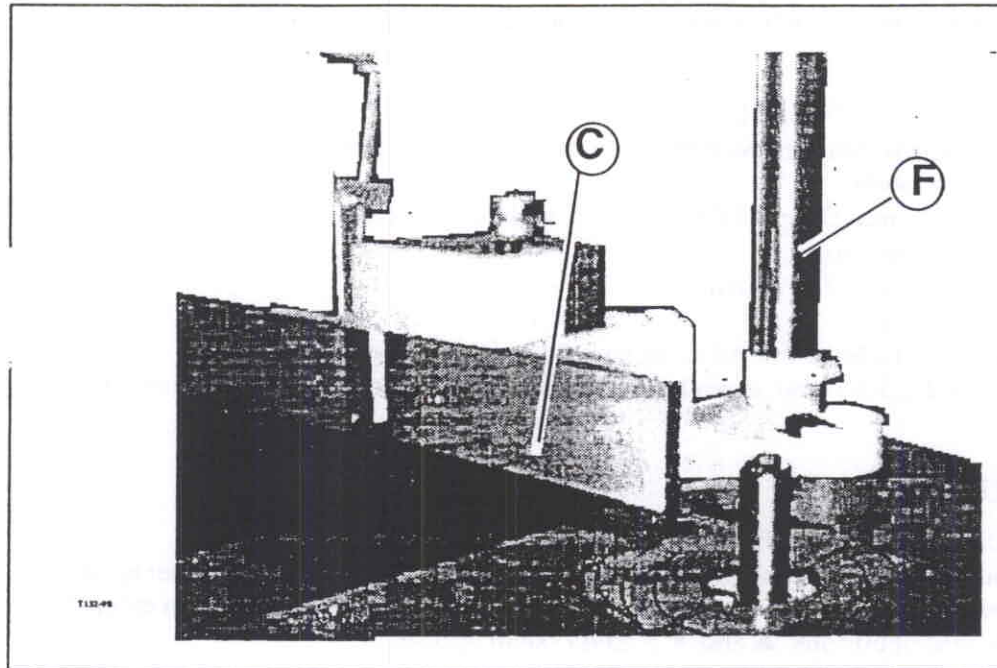
The distance (A fig.3.30) between the electromagnet casing (B fig.3.30) and the mobile unit (C fig.3.30) is called "air gap" and is adjusted during the construction phase of the device.

You will have to make adjustments only if you have to replace the mobile unit (C) which has glued onto its surface the friction ring (F fig.3.30) subject to wear.

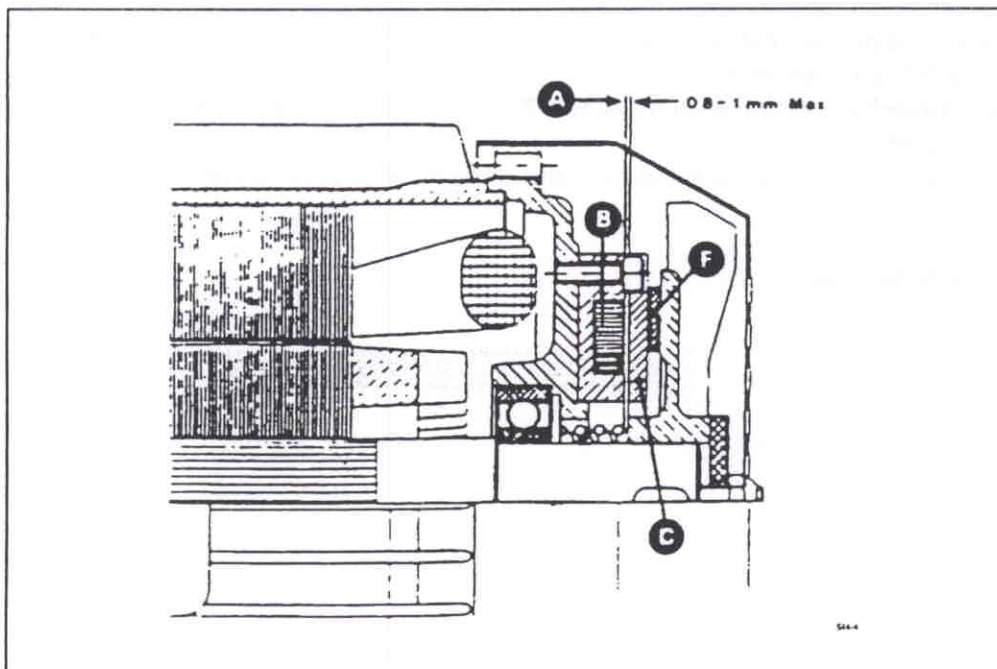
The limit of the friction ring is 3 mm

The replacement of this piece has to be done only by a technician from your Area Dealer.

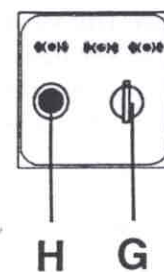




3.29



3.30





### ADJUSTMENT OF THE BRAKING UNIT

The reduction of the braking efficiency is seen by how much time it takes for the shaft to completely stop.

- take off the protection hood (P fig.3.31)
- insert a hexagonal wrench into the space existing on the outside of the shaft, and blocking the shaft so that it will not rotate.
- progressively tighten the nut (D fig. 3.31) until all the mobile parts come together and until you cancel the distance (A) (air gap).
- loosen nut (D fig.3.31) by a half of a turn.
- install the cover (P fig.3.31).
- turn the motor on and off a few times to make sure it works properly.

NOTE: by moving nut (D fig.3.31) over 1 mm backward the brake is mechanically loosened.

### 3.23 SV101M COUNTER

#### INPUT OF A NEW DISPLAYED NUMBER:

To enable the 3 front buttons press button O (more than 3 seconds); "START" and the number appear. Enter the new number by pressing buttons ▲ and ▼ or press button O to set to zero, then enter the new number by means of buttons ▲ and ▼; "END" shall appear.

NOTE: In case of counting in the contrary way, interchange the wires of terminals 7 and 8.

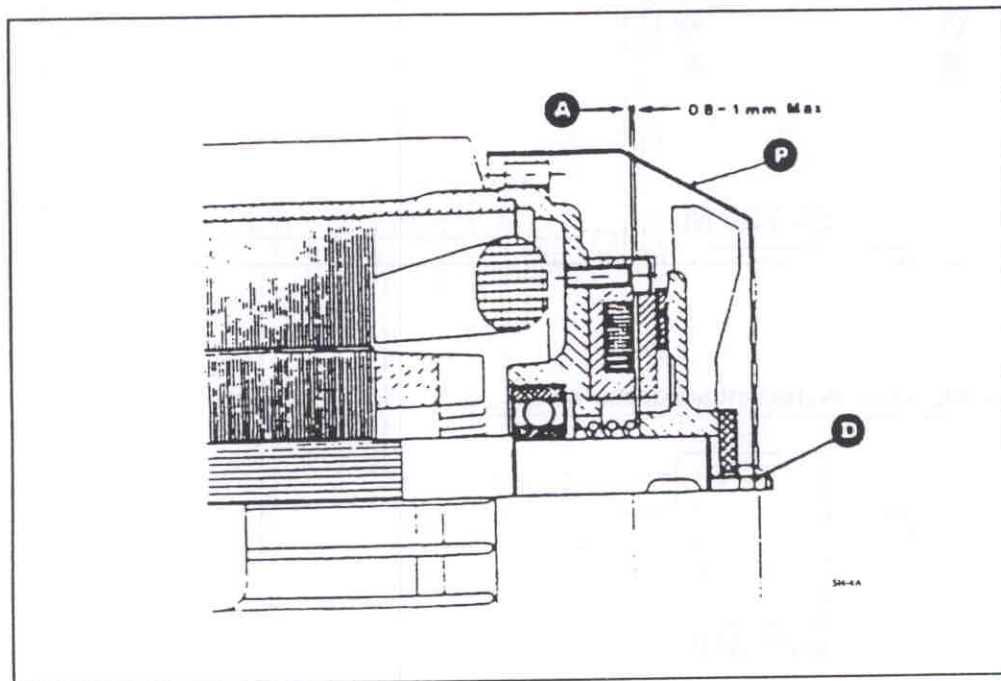
#### CONSTANT INPUT

The constant is the number of pulses emitted by the encoder in case of a motion equal to 1 mm.

- Turn DIP switch 3 to "ON": E (constant value) appears (e.g: E 40)
- Enter the new constant value by pressing buttons ▲ and ▼ or press button O to set to zero before entering the new constant
- Turn DIP switch 3 to "OFF" to store the new constant and to reset the normal counter operation

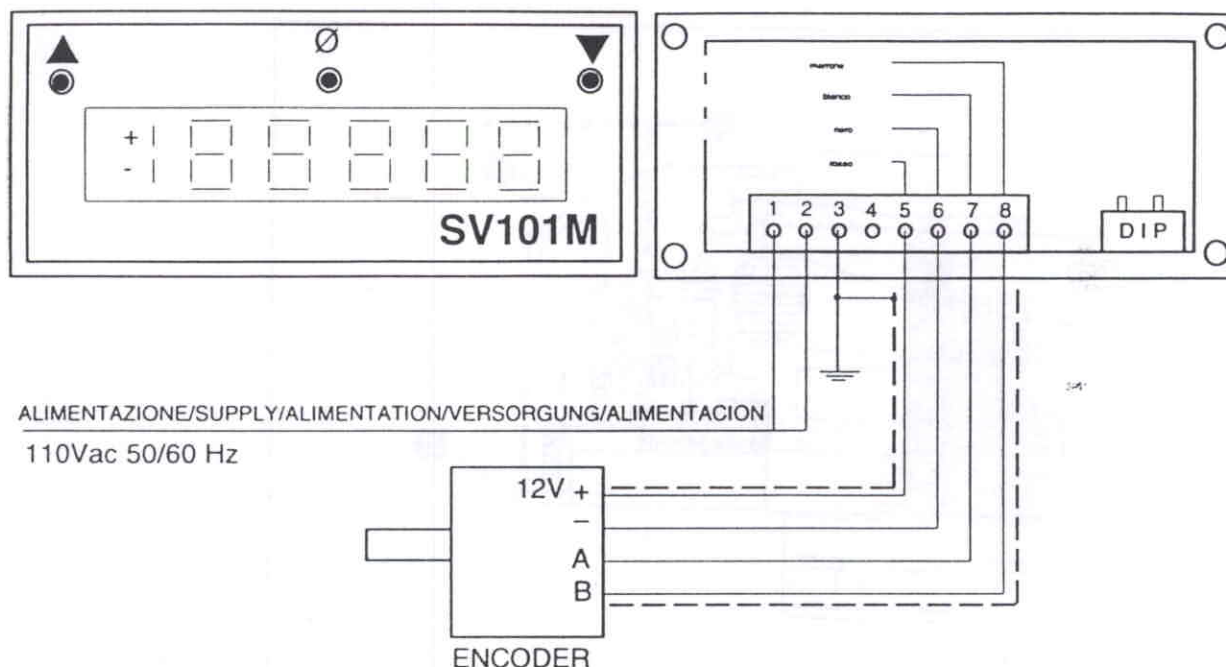
Constants for T130N - NPS 10 models





3.31





| DIP N° |     |     |     | FUNZIONE - FUNCTION<br>FUNKTION |
|--------|-----|-----|-----|---------------------------------|
| 1      | 2   | 3   | 4   |                                 |
| OFF    |     |     |     | Not used                        |
| ON     |     |     |     | Not used                        |
|        | OFF |     |     | Normal operation                |
|        | ON  |     |     | Error correction                |
|        |     | OFF |     | Normal operation                |
|        |     | ON  |     | Constant input                  |
|        |     |     | OFF | Measure (mm)                    |
|        |     |     | ON  | Measure (inch)                  |

## ERROR CORRECTION

In case this conctator is to be replaced enter the following value into the new counter by proceeding as follows.

- Move DIP 2 to ON position.
- Press buttons ▲ and ▼ to enter the number or press button 0 to set to zero then press buttons ▲ and ▼ to enter the new constant value
- Tmove DIP 2 to OFF position: the new constant is stored and one returns to the normal operation of the counter.



## SECTION 4 MAINTENANCE

|  |     |
|--|-----|
| 4.1 Machine cleaning .....               | 4.2 |
| 4.2 Periodic lubrication .....           | 4.2 |
| 4.3 Inconveniences-causes-remedies ..... | 4.3 |



### 4.1 MACHINE CLEANING

Periodically clean the inside of the machine from eventual presence of shavings or dust.  
Eventually clean resin deposits from the tenoning carriages sliding beam with a rag soaked with solvents (gasoline, kerosene, etc.).  
Machine cleaning increases the machines life and its performance.

### 4.2 PERIODIC LUBBRICATION

All T130 ball-bearings are protected and lubricated for life, so they do not need any maintenance.  
Periodically clean the shafts sliding cylinder with compressed air.  
Fill the grease container (staufer) placed on the fixed cylinder and slide the spindler moulder shaft up and down to lubricate the cylinder.  
Clean the shafts lifting screws with compressed air and oil them with fluid oil.

The shafts superior ball-bearings are special.

To replace these ball-bearings request them directly from the spareparts office citing the following SCM part number 0000606166E.

Or request them at stores selling SNR ball-bearings citing all the information that is found on the ball-bearing: ball-bearing sphere rad.rig. 55x90x18 2z 601F700.

Ball-bearings coming from other manufacturers with corresponding marks are NOT to be used.



### 4.3 TROUBLES-CAUSES-WHAT TO DO

The machine was tested by SCM and should not present any defects.  
An incorrect use of the machine could in the future cause inconveniences.  
For each inconvenience, the cause will be explained, and for each cause a remedy will be given.

#### TROUBLES

The machine will not start

#### CAUSE

Electric energy is missing  
from one or more line phases

Auxiliary circuit fuses interrupted:  
or the fuse hoods are loose

Front door open  
with the protection micro

the door comes open.

Emergency inserted

#### TROUBLES

The machine stops during a work cycle

#### CAUSE

Electric energy is missing from  
one or more line phases

Auxiliary circuit fuses  
start

replace them.

Excessive intake of current on the  
motors behalf due to too many  
working hours

#### WHAT TO DO

Make sure that the tension in the  
factory is in line with the three phases

1-Tighten the fuse hoods if the machine  
does not start.

2-Loosen the fuse hoods

3-Control the integrity of the fuses  
and eventually replace them.

Carefully close the door so that it comes into contact

This micro is used to stop the shafts rotation in case

Turn off the emergency button

#### WHAT TO DO

Make sure there is tension in line  
with the three phases.

1-Tighten the fuse hoods if the machine does not

2-Loosen the fuse hoods

3-Control the integrity of the fuses and eventually

Turn off the machine.

Wait until the thermic protection  
cools off located on the command panel.

Start the machine again once it has cooled off.



