Technica EU

Operating manual

D429725XA

vers.**2.0**

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INDEX

GUIDE TO THE MANUAL

This manual has been produced to serve as a guide for users of the TECHNICA EU key-cutting machine. Read it carefully; it is essential if you wish to operate your machine safely and efficiently.

CONSULTATION

Technical terns

Common technical terms are used in this manual.
To assist those with little experience of keys and key-cutting, below is an illustration of the terms most frequently used.

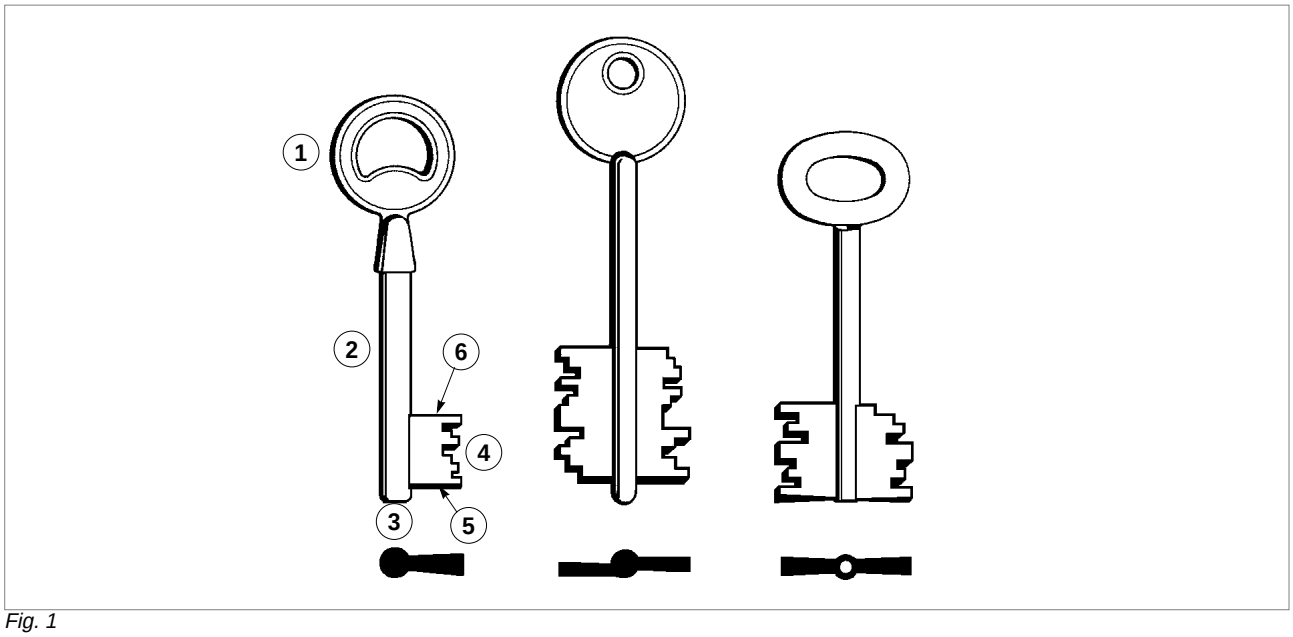


Fig. 1

1) Head
2) Rim
3) Tip
4) Bit
5) Shoulder
6) Side

GENERAL

TECHNICA EU has been designed in compliance to the European Community normative (CE).
From the design stage, risks for the operator have been eliminated in all areas: transport, regulation, cutting and maintenance.
Risks have been eliminated by means of protective devices.
The use of protective goggles is compulsory during cutting operations, as indicated on the machine itself and in this manual.
The materials used to manufacture this machine and all its components are not hazardous.

USE

The TECHNICA EU must be installed and used in the way laid down by the manufacturer.
If the key-cutting machine is used differently or for purposes different from those described in this manual, the customer will forego any rights he may have over Silca. Furthermore, unforeseen danger to the operator or any third parties may arise from incorrect use of the machine.
Negligence in the use of the machine of failure on the part of the operator to observe the instructions given in this manual are not covered by the guarantee and the manufacturer declines all responsibility in such cases.
It is therefore indispensable to read the operating manual carefully in order to make the best use of the TECHNICA EU and benefit from its potential.

Instructions manual

The instructions manual provided with the machine is essential to its proper use and to carry out the necessary maintenance.
We therefore recommend protecting the manual from damage in a safe sheltered place, easily to hand for quick consultation.

Further risks

- **when the machine is in operation only the operator should be close to it as the moving tools are partially exposed and metal swarf is generated by machining.**
- **before activating the master switch (A) (fig. 5, page 5), the operator must make sure that the cutter motor starting switch is in position "0" (fig. 33, page 21).**
- **when the machine is in operation, area "A" (fig. 2) can be hazardous for the operator and any third parties in the proximity of the key-cutting machine if the warnings and precautions given in this manual are not observed.**

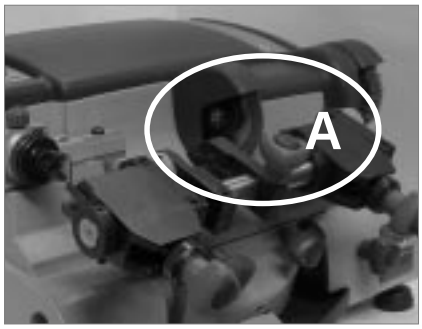


Fig. 2

Protection and safety precautions for the operator

The TECHNICA EU key-cutting machine is entirely built in compliance to the Machine Directives. The operations for which it has been designed are easily carried out with no risk to the operator.
The adoption of general safety precautions (wearing protective goggles) and observation of the instructions provided by the manufacturer in this manual eliminate all human error, unless deliberate.
TECHNICA EU is designed with features which make it completely safe.

- **Power Supply**

The key-cutting machine must be supplied with electricity. **The plug must be earthed.**

- **Electric power**

The machine is started up by means of the master switch.

- **Start-up**

The speed commutator activates the machine and allows selection of the required speed.

- **Maintenance**

The operations to regulate, service, repair and clean the machine are structured in the simplest and safest way possible. Parts that the operator can dismount cannot be incorrectly replaced therefore avoiding any risks.

- **Machine identification**

The machine TECHNICA EU is provided with an identification label which includes the machine's serial number (fig. 3).

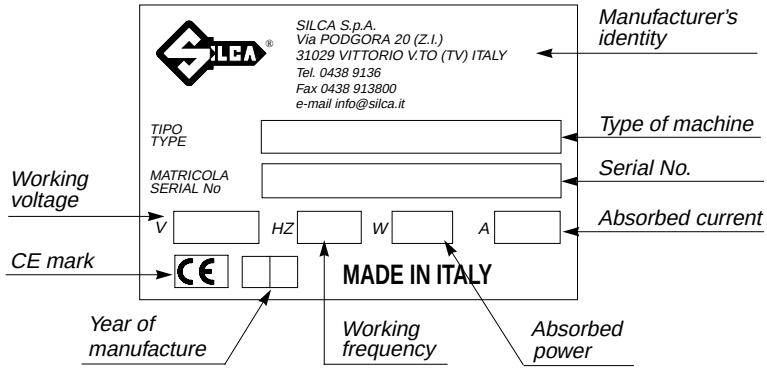


Fig. 3

1 MACHINE DESCRIPTION

Fig. 4

1.1 Main Characteristics

- **KEY-CUTTING UNIT WITH CARRIAGE**

The key-cutting unit contains the working parts of the TECHNICA EU key-cutting machine, which carry out reading and cutting of the original key and the necessary finishing off. The working parts are:

Cutter:
The cutter is the part of the key-cutting machine used to cut keys. It is in super rapid steel (HSS) and is protected by a special shield to guarantee safety for the operator.

Tracer point unit:
The tracer point is dedicated to reading the cuts on the keys. It is easily regulated (depth and axial gauging).

Carriage:
The carriage comprises a clamp unit for cutting bit and double bit keys.
The carriage movement is horizontal on 2 axes (X-Y) and controlled by means of the lever (L) (fig. 5, page 5).
The knob (R) is used for rounding off bit and double bit keys.

Clamps for bit and double bit male and female keys:
The clamps comprise two self-centering jaws that ensure perfect grip on the stem of bit-double bit and pump keys (with round or square stems).

- **MASTER SWITCH**

The master switch is located on the bottom left-hand side of the lamp.

- **MOTOR ON SWITCH / SPEED COMMUTATOR**

On the top left-hand side there is a switch for starting the motor at the required speed.

- **ILLUMINATION**

The lamp is fixed and it illuminates the work zone to be used perfectly.

1.2 Working parts

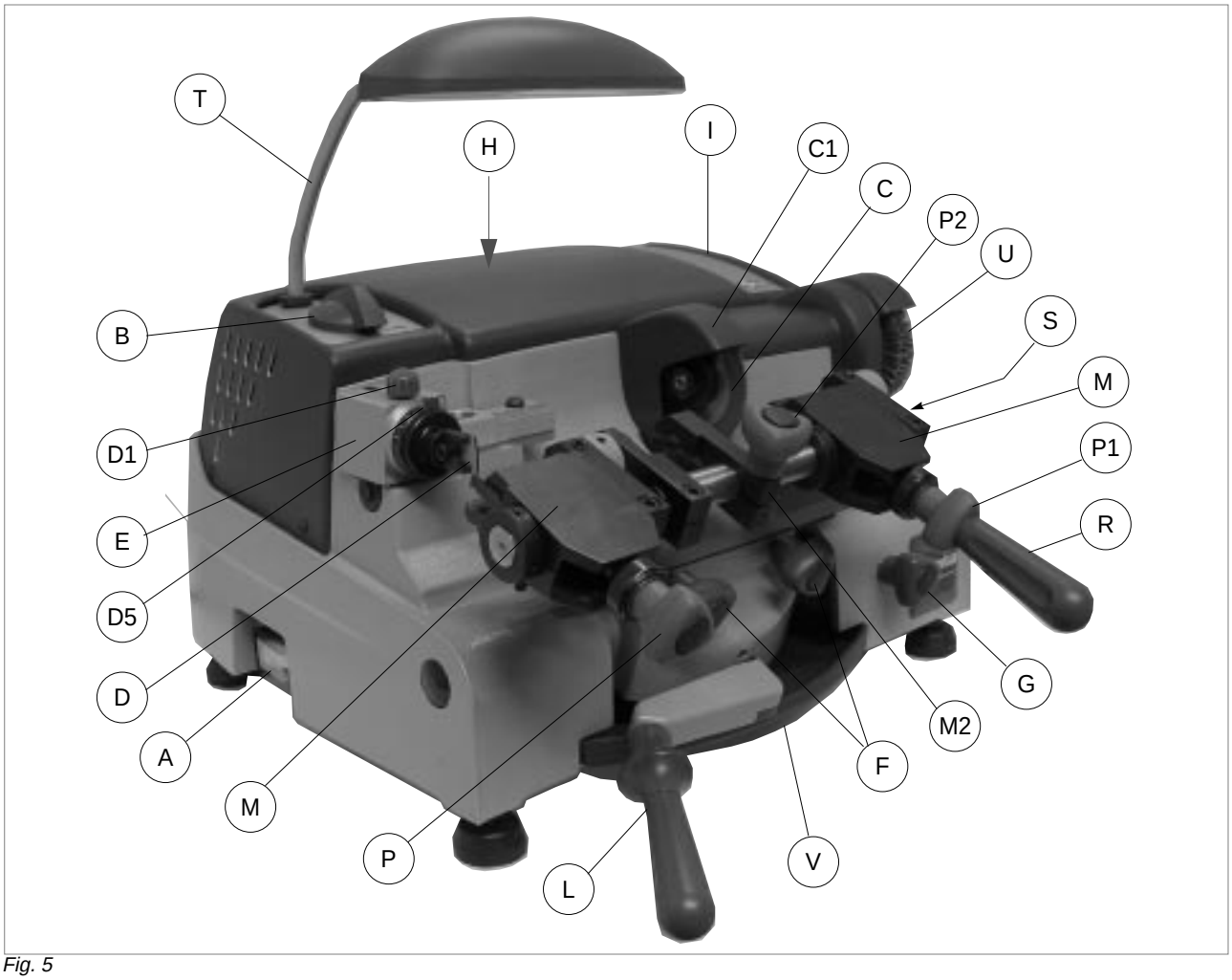


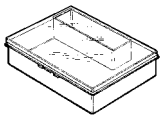
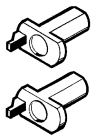
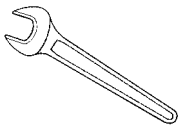
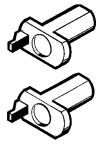
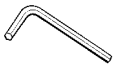
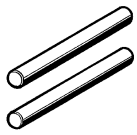
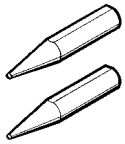
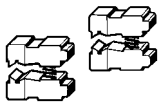
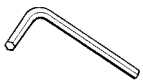
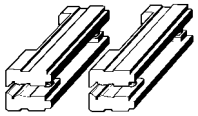
Fig. 5

A - master switch
A1- main plug with fuses
B - motor switch / speed commutator
C - cutter
C1- cutting tool housing
D - tracer point
D1- tracer point spring locking knob
D5- ring nut locking knob
E - tracer point support
F - clamp carriage locking levers
G - carriage locking knob
H - motor
I - top cover
L - clamp carriage traverse lever
M - fixed clamp for bit and double bit keys
M1- mobile clamp for bit and double bit keys
M2- head stop
P - fixed clamp locking lever
P1- mobile clamp locking lever
P2- knob for head stop
R - knob for movement of mobile clamp
S - locking lever for mobile clamp
T - lamp
U - brush
V - chippings tray

1.3 Technical Data

MOTOR:	2 speed single phase, 230V-50Hz
CUTTER:	ø 80 x 1,5 x 22 super rapid steel (HSS)
CUTTER SPEED:	speed 1 = 320 rpm (for steel keys) speed 2 = 650 rpm (for brass keys)
MOVEMENTS:	by means of lever and rectified carriage shaft
CLAMPS:	hardened steel
ILLUMINATION:	neon lamp 230V d.c.
DIMENSIONS:	width: 440 mm depth: 500 mm height: 420 mm
WEIGHT:	Kg. 33
SOUND PRESSURE:	Lp (A) = 91 dB (A) max. [brass keys] Lp (A) = 86,5 dB (A) max. [iron/steel keys]

1.4 Accessories provided

Tool box D306547AA 	5 mm allen key D300225LR 	Key stops ø 7 mm 2 pcs. D906756ZR (1 pc.) 
19 mm spanner D300783ZZ 	6 mm allen key D300226ZZ 	Key stops ø 7-10 mm 2 pcs. D906757ZR (1 pc.) 
2 mm allen key D300221ZZ 	Setting pins D200470ZZ 	Universal centering pins 2 pcs. D409825BA 
2,5 mm allen key D300222ZZ 	Cutting tool release bar D400754BA 	fuses 5 Amp - rapid D310788ZZ 
3 mm allen key D300223ZZ 	Single jaws 2 pcs. D906421ZR (1 pc.) 	
4 mm allen key D300224ZZ 	Double jaws 2 pcs. D906400ZR (1 pc.) 	

1.5 Safety

- **CUTTER MOTOR PROTECTION**

ATTENTION: the cutter motor is protected from overheating by a device (inside the motor) that stops it when it reaches a dangerous temperature.

This condition can occur when the machine motor is left on continuously, with high ambient temperatures or in severe working conditions. If the cutter motor overheats it cuts out automatically. In such cases proceed as follows:

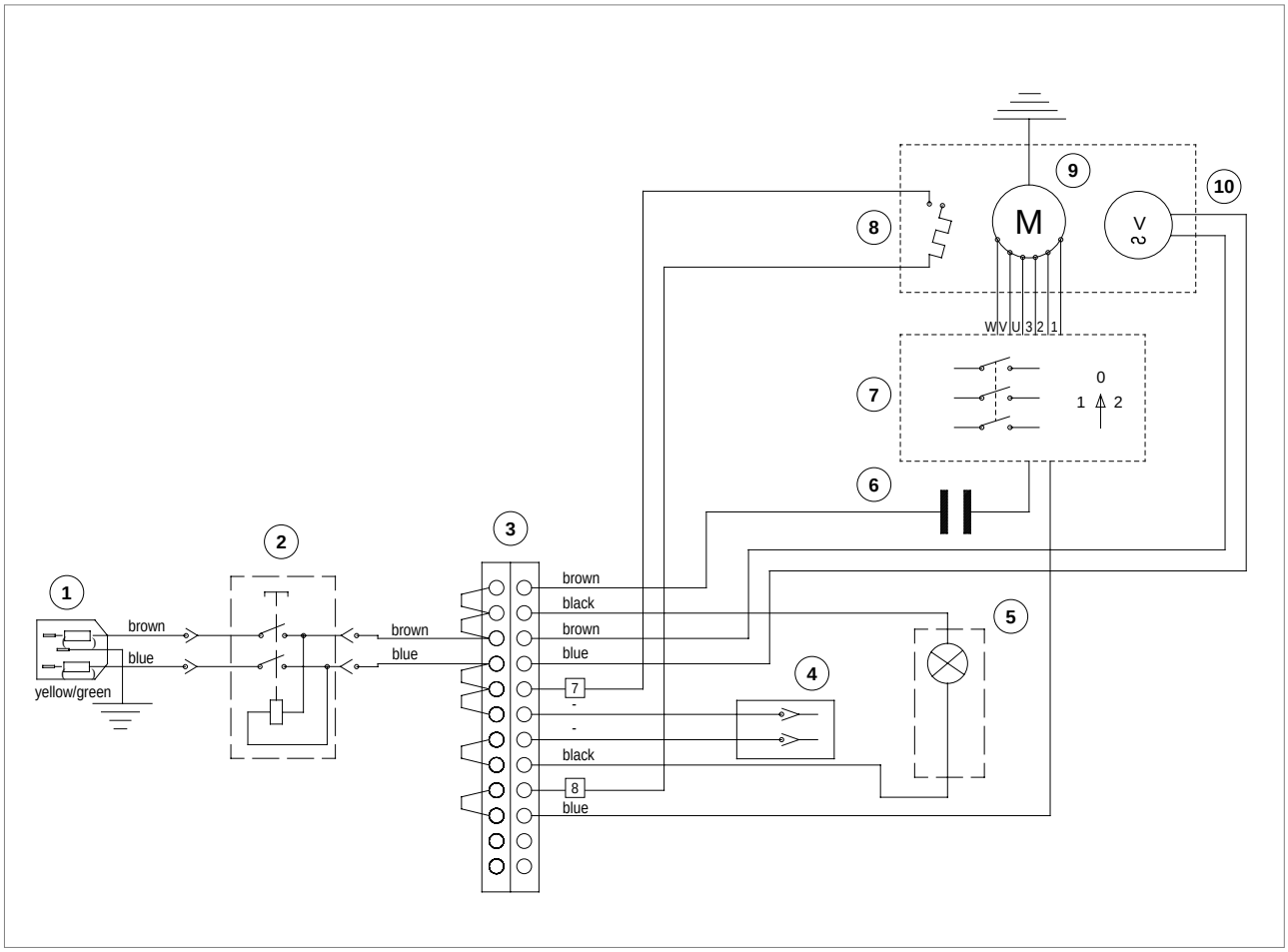
a) turn off the master switch (A).
b) let the motor cool for at least 2 hours then use the machine normally.

- **START-UP**

The master switch (A) has a safety function that prevents untimely start-up when voltage returns after a cut-out.

1.6 Electric circuit

1) Main plug with fuses
2) Safe main switch
3) Terminal board
4) Lamp reactor
5) Neon lamp
6) Cutter motor condenser
7) Commutator
8) Motor cut-out safety switch
9) Cutter motor
10) Motor ventilator



2 TRANSPORT

The TECHNICA EU key-cutting machine is easy to transport and is not hazardous to handle.
The packed machine should be carried manually by at least 2 persons.

2.1 Packing

The packing for TECHNICA EU is designed to ensure safe transportation and protect the machine and all its parts.
It comprises a pallet base (b) to which the machine is attached, and a cardboard box as a cover (a) (fig. 6).
The machine is fixed to the base with screwed down brackets to hold it firm during transport and protect it.
The closed packing is held in place by two straps which hold the cardboard box firmly on the pallet.
Symbols are printed on the outside of the cardboard box to give instructions and warnings for transportation.

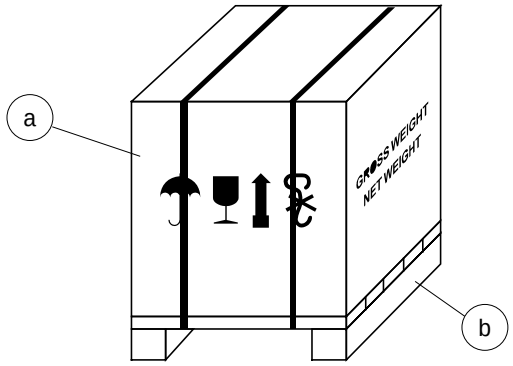


Fig. 6


Keep dry


Handle with care


This side up


Don't use

2.2 Unpacking

To remove the machine from the packing box:
1) cut the straps with scissors and remove.
2) raise the top part of the cardboard box.
3) loosen the screws on the front and rear brackets holding the machine on the pallet.
4) use the special spanner to loosen the nuts on the feet by a couple of turns.
5) remove the metal brackets and tighten the nuts on the feet.
6) check the contents of the box, comprising:
   - 1 key-cutting machine
   - 1 set of documents, including: operating manual, spare parts list and guarantee
   - 1 power cable
   - 1 tools pouch

2.3 Machine handling

When the TECHNICA EU key cutting machine has been unpacked, place it directly on its workbench; this operation should be carried out by at least two people. **Take care to lift the machine firmly holding the base, and no other part.**

3 MACHINE INSTALLATION AND PREPARATION

The key-cutting machine can be installed by the purchaser and does not require any special skills; some checks and preparation for use operations have to be carried out by the operator.

3.1 Checking for damage

TECHNICA EU is solid and compact and will not normally damage if transport, unpacking and installation have all been carried out according to the instructions in this manual. However, it is always advisable to check that the machine has not suffered any damage.

3.2 Positioning

1) Place the machine on a horizontal surface, solid enough to take its weight.
2) to facilitate operation the workbench height should be about 100 cm.
3) we recommend leaving clearance of at least 20 cm behind the machine and on each side to ensure proper ventilation and handling.
4) check that the weight of the machine is evenly distributed over the four feet.
5) connect the machine power supply cable to the mains.

ATTENTION: ensure that the machine voltage is the same as that of the mains, which must be properly earthed and provided with a differential switch.

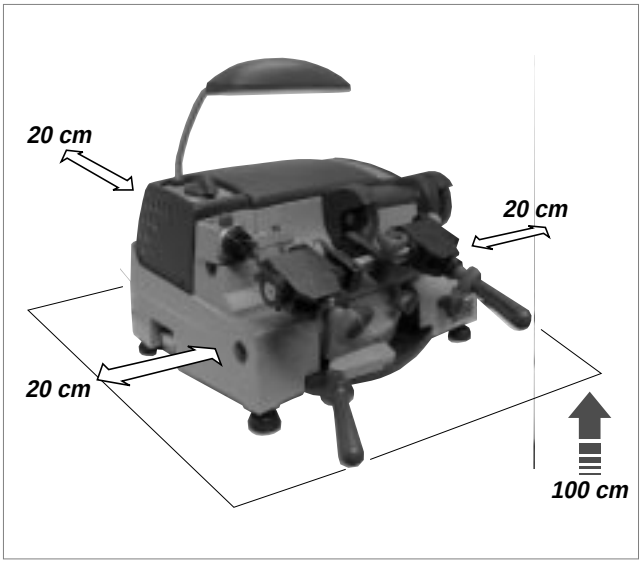


Fig. 7

3.3 Description of work station

The machine needs only one operator, who has the following controls at his/her disposal:

- Master switch (A) located on the bottom left-hand side of the lamp.
- Motor start switch/commutator (B) located on the left-hand side (near the lamp).
- levers:
  - lamp carriage traverse lever (L)
  - Right-hand clamp lever (R) for rounding off cuts (bit and double bit)

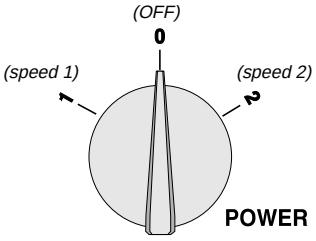
3.4 Environmental conditions

To ensure that the best use is made of the key-cutting machine, certain parameters must be borne in mind:

- damp, badly ventilated sites should be avoided.
- the ideal conditions for the machine are:
  - temperature: between +10 and +40˚C
  - relative humidity: approx 60%

3.5 Graphics

THE USE OF PROTECTIVE GOGGLES IS COMPULSORY



MOTOR START-UP COMMUTATOR 2 SPEED

Fig. 8

4 REGULATION AND USE OF THE MACHINE

To get the most out of your key-cutting machine, check gauging periodically.

4.1 Micrometric tracer point

The choice of using a micrometric tracer point on a machine for cutting bit and pump keys allows perfect rapid reading, as well as prompt resolution of the tiny variations in depth presented by worn keys.

Note: when the 2 ring nuts are turned together, each notch moves them 0.05 mm (with (D1) knob released)

4.2 Tracer point spring

The spring movement facilitates the identification of the cutting space before the cut is made.

- **To activate the tracer point spring:**

release the tracer point spring locking knob (D1) (fig. 9).

- **To disable the tracer point spring:**

push the tracer point up against its stop and secure with the knob (D1).

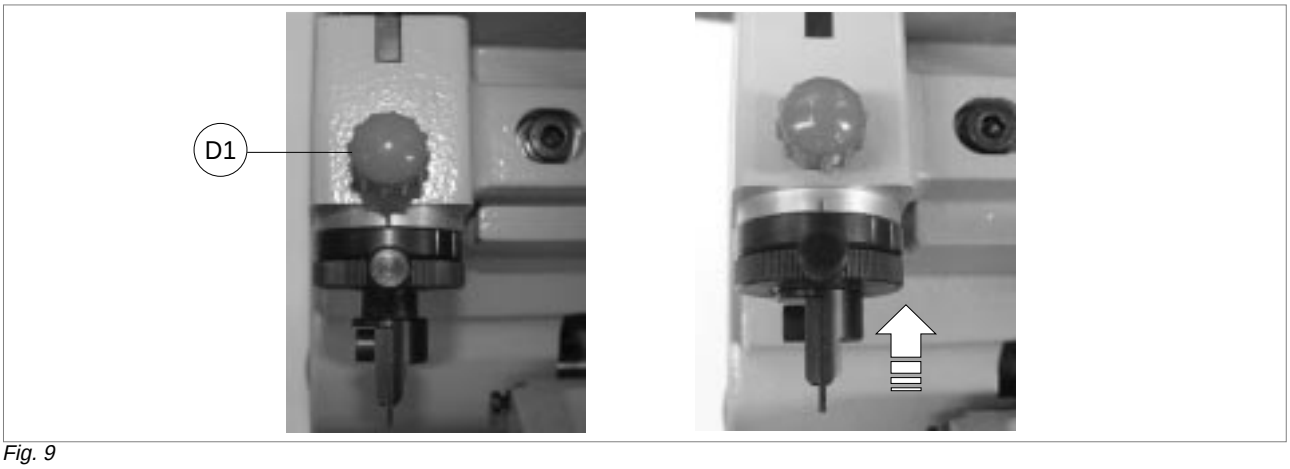


Fig. 9

4.3 Right-hand clamp movement

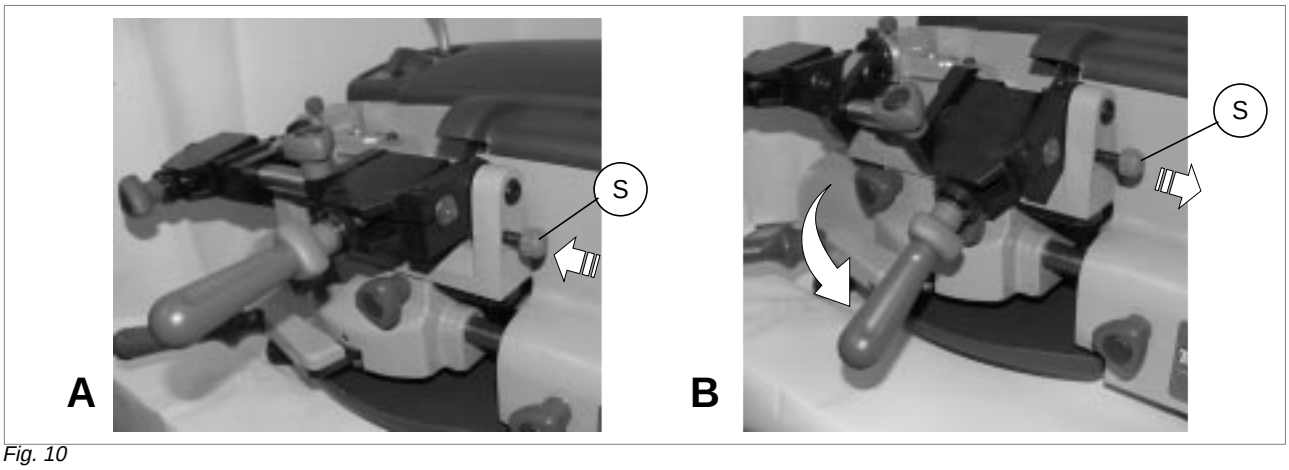


Fig. 10

[A]
Clamp aligned for gauging and positioning the keys.
Hold the mobile clamp in the horizontal position by pushing knob (S) inwards.

[B]
Rocker clamp for cutting bit/double bit keys (rounding off cuts).
Pull out knob (S) to release the mobile clamp.

4.4 Using the key stops

The TECHNICA EU key-cutting machine is provided with two pairs of key stops: one pair (J) (fig. 11) is already fitted to the clamps, the other pair (J2) is with the accessories in the tool box.
The difference between them is in the length of the pawl:

- the shorter pawl (J) is for use with keys where the diameter of the shaft is below 7 mm and/or in any case with keys having a very low first cut.
- key stop (J2) is for use with keys where the diameter of the shaft is above 7 mm.

REPLACING THE KEY STOPS

1) Open clamps (M) and (M1) completely (fig. 15, page 12).
2) Unscrew the grub screws (Q) (fig. 15), remove the key stops and replace them.
3) Tighten the grub screws (Q).

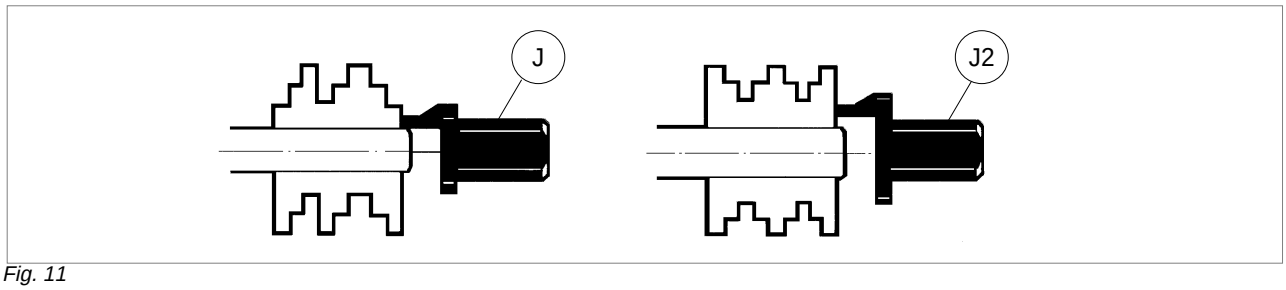


Fig. 11

4.5 Using the jaws

- The double jaws (already fitted to the clamps) are designed to grip mortice and bit or double bit male keys;
- The single jaws (supplied with the machine) are used for cutting female keys.

REPLACING THE JAWS:

1) Open the clamps (M) and (M1) completely by loosening the relative knobs (P) and (P1).
2) Take hold of the jaws with index finger and thumb, press inwards (fig. 12) and pull outwards until they come out of their seating.
3) To fit the single jaws, follow the instructions illustrated in fig. 13.
4) Check that the jaws are properly seated (they should click into place).

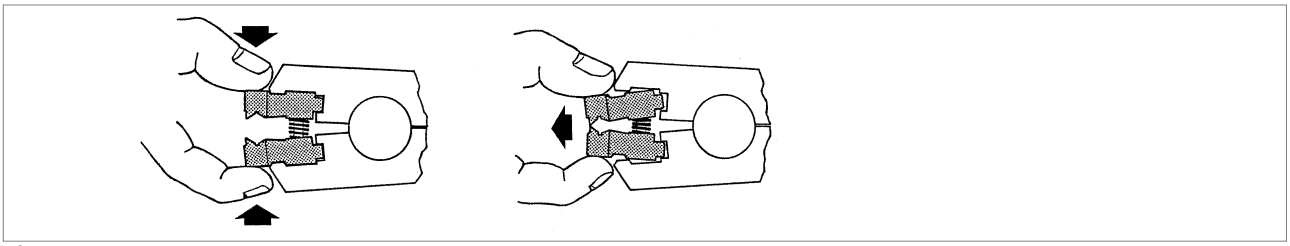


Fig. 12

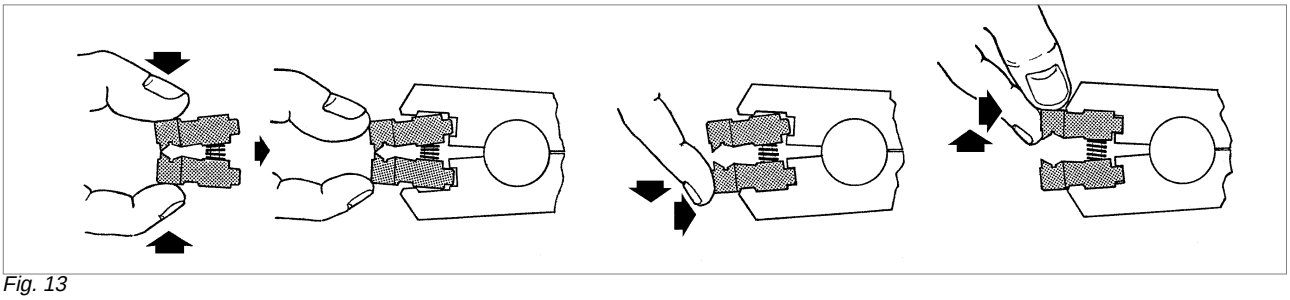


Fig. 13

4.6 Checking and gauging

There are two types of regulation for the TECHNICA EU key-cutting machine, defined as **axial gauging** and **depth gauging**.

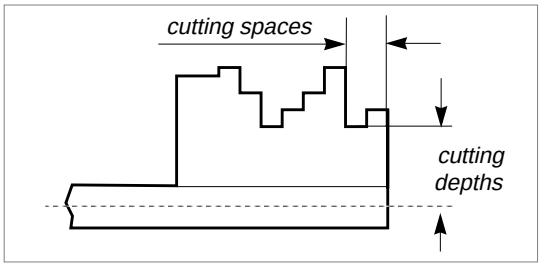


Fig. 14

4.6.1 AXIAL GAUGING ON BIT/DOUBLE BIT KEYS

Axial gauging is regulation of the spaces for the cuts on the key (fig. 14).

Checking axial gauging:

1) Turn the machine off and unplug it.
2) Use the knob (S) to lock the right-hand clamp in a horizontal position.
3) Use the handles (P) and (P1) to close the clamps.
4) Lock the tracer point spring.
5) Use the lever (L) to raise the carriage and take the stops (J) for double bit keys up against the right-hand side of the tracer point and cutter (fig. 15).

The ideal situation is when the internal part of the left-hand stop is up against the right-hand side of the tracer point and the internal part of the right-hand stop is in contact with the right-hand side of the cutter.
If this is not so, loosen the screw (D2) and use a screwdriver to regulate the screw (D4) (fig. 16) until the ideal situation is reached.

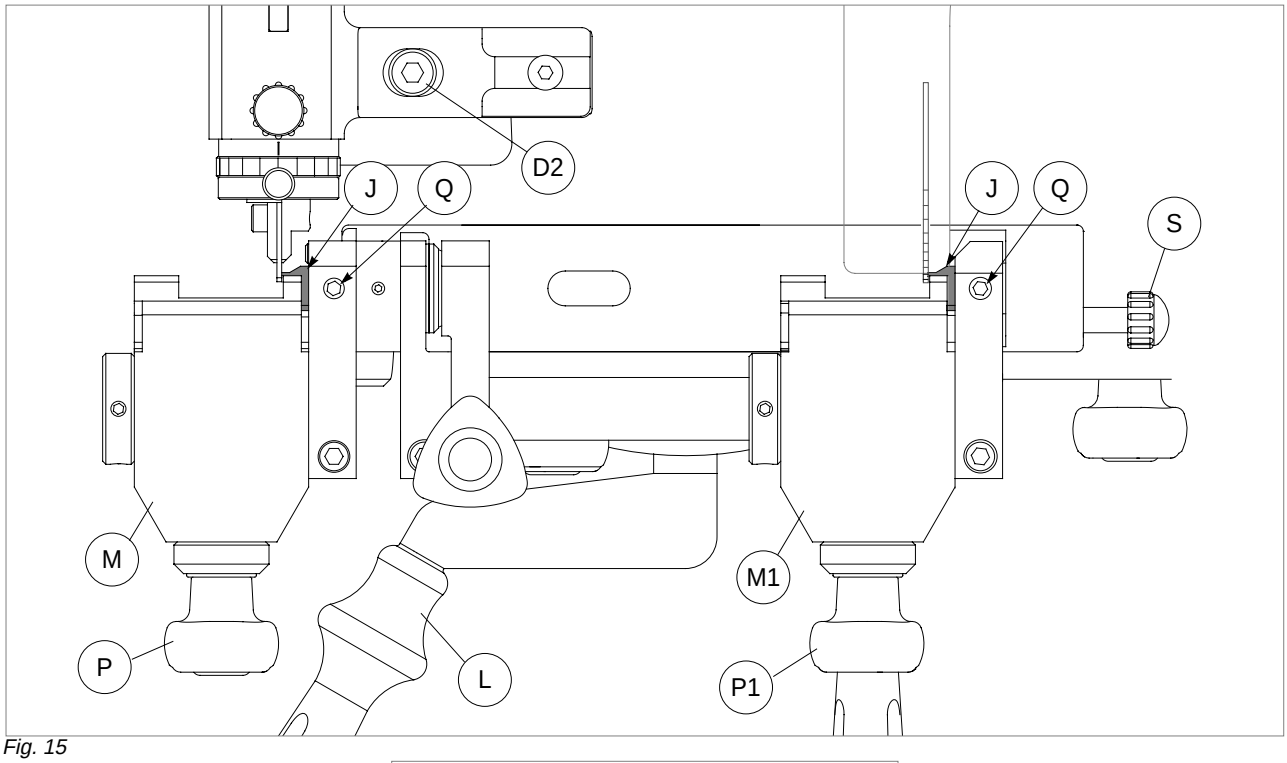


Fig. 15

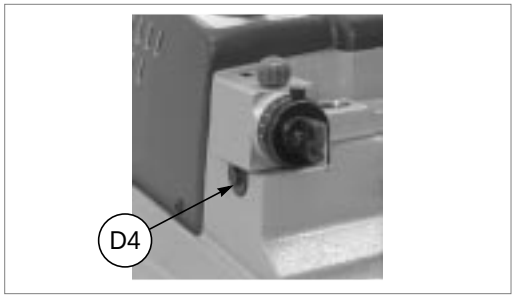


Fig. 16

4.6.2 DEPTH GAUGING

Depth calibration is regulation of the cutting depth (fig. 14, page 12).
Depth gauging should be checked periodically to ensure perfect efficiency for the machine, and whenever the cutter or tracer point is replaced (due to wear or job changeover.

CHECKING DEPTH GAUGING:

1) **Turn the machine off and unplug it**.
2) Use the knob (S) to lock the right-hand clamp in a horizontal position;
3) Place the adjusting pins (provided) on the clamps (fig. 17);
4) Disable the tracer point spring (chap. 4.2, page 10).
5) Release knob (D5) placed on ring nut (N).
6) Raise the carriage and take the setting pins into contact with the tracer point and cutting tool (fig. 17).
7) Turn the cutting tool anticlockwise manually and check that it skims the adjusting pins in several places.
8) If necessary, regulate the cutting depth by means of the tracer point, as described below:
    c) turn the nut (N) clockwise to advance the tracer point (cut less deep).
    d) turn the nut (N) anticlockwise to move the tracer point back (cut more deep).
9) Repeat these operations until the cutting tool skims the setting pins in several points.
10) Once obtained the corret gauging, lock ring nut (N) by tightening knob (D5).
11) After having locked ring nut (N) turn the other ring nut (N1) until the red indicator is aligned with the notch on the tracer point.

Note: when the 2 ring nuts are turned together, each notch moves them 0.05 mm (with (D1) knob released).

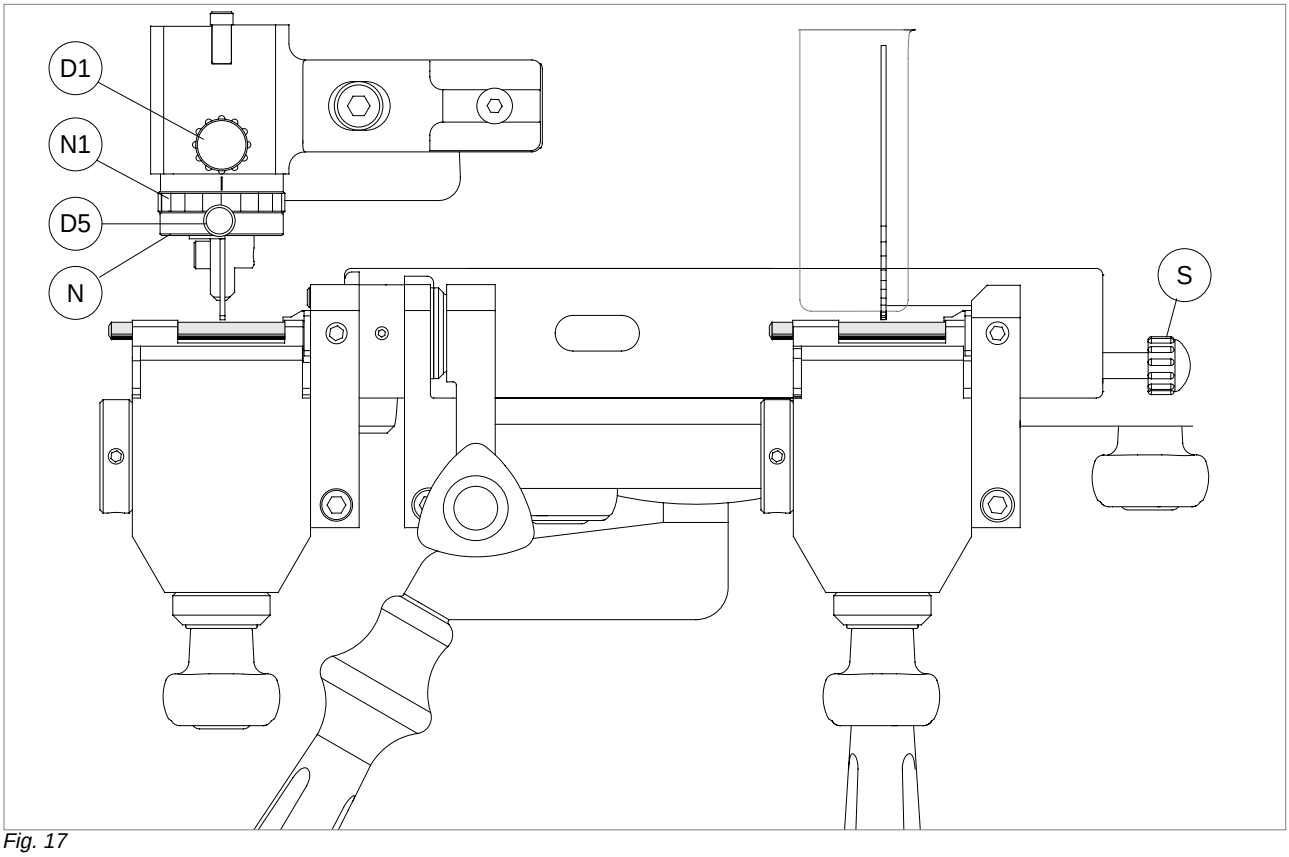


Fig. 17

4.7 Cutting operations

ATTENTION: to work in complete safety, pay special attention to the following recommendations:

- **start the motor only when all the operations with the carriage have been carried out (securing keys, etc.)**
- **always work with dry hands.**
- **check that the machine is properly earthed.**
- **use the protective goggles, even if the cutting tool is fitted with a protective shield.**
- **keep the hands away from the cutting tool when in motion.**

4.8 Cutting bit and double bit keys - male

1) Use the knob (S) to lock the right-hand clamp in a horizontal position.
2) Place the keys into the jaws, pushing them to the right until the bit is in contact with the key stop (Y). Close the jaws, taking care that the keys are securely fitted into their seating and that the bits of the two keys are parallel.
3) Release the right-hand clamp by pulling out the knob (S).
4) Switch the motor commutator to the correct position (1 = low speed for steel keys, 2 = high speed for brass keys); turn the machine on and use lever (L) to take the carriage slowly towards the cutter, at the same time raising lever (R) very slightly. With the clamp positioned lower than the cutter, starting from the right, cut the key, lowering lever (R) to round off the cut. The spring incorporated in the carriage helps the operator by returning the rocking clamp to its original cutting condition.
5) Cut the whole bit and remove any burrs at the end of the cutting operation.
6) When the cutting operation is complete, turn the switch to “0” and remove the keys.
7) For double bit keys, turn both keys and repeat the operations described above.

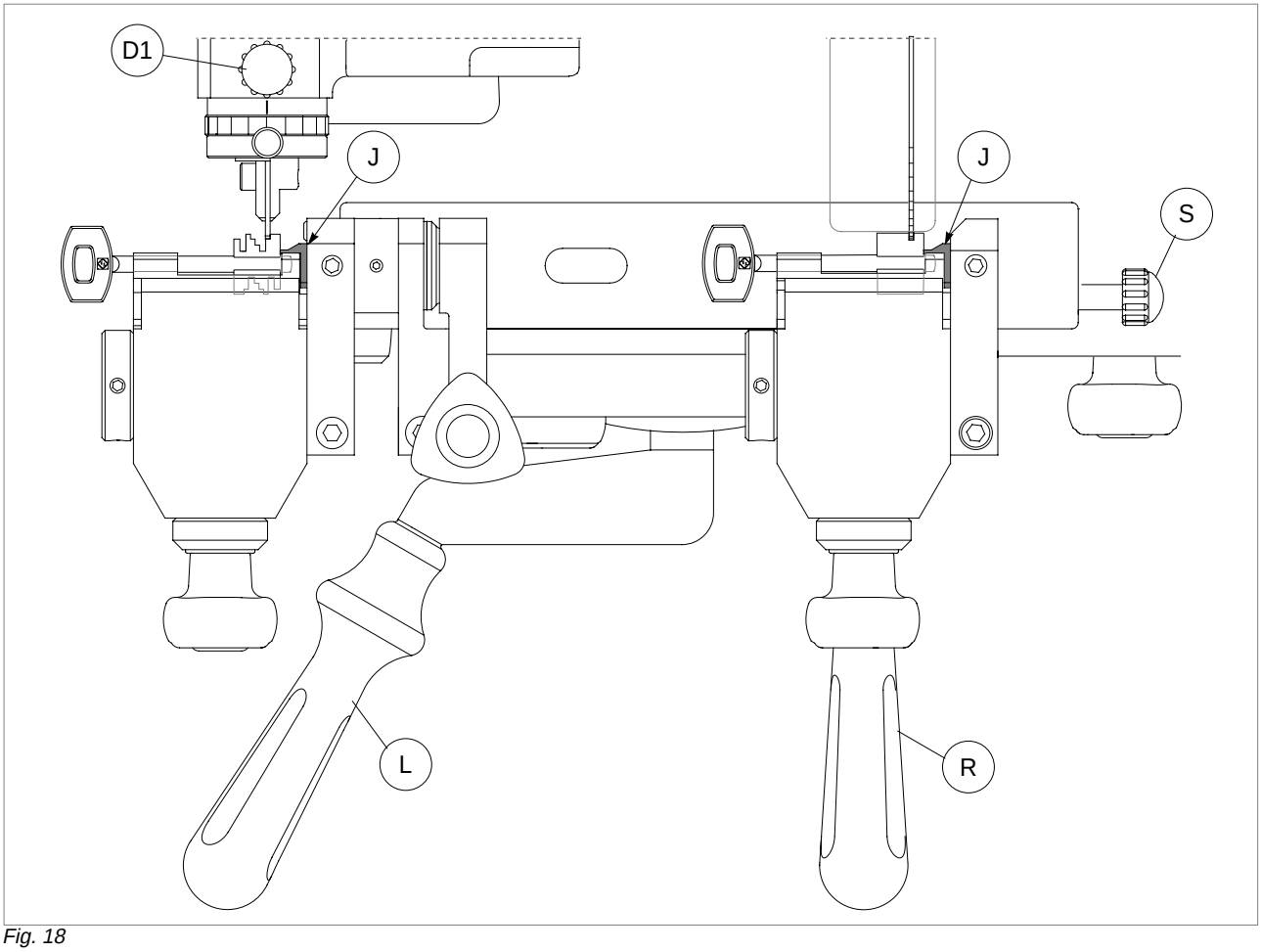


Fig. 18

4.9 Cutting bit and double bit keys - female

To cut female keys it is necessary to use the two universal centering pins supplied (chap. 1.4, page 6).

1) Use the knob (S) to lock the right-hand clamp in a horizontal position.
2) Remove the key stops (J) (chap. 4.4, page 11).
3) Remove the double jaws and replace with the single jaws (chap. 4.5, page 11).
4) Lock the tracer point spring using knob (D1).
5) First place a centering pin (K) on the fixed clamp (M) and secure by means of the grub screw (Q); insert the original key so that the centering pin enters the hole in the shaft and secure loosely with knob (P).
6) Take the carriage to the tracer point and cutter by means of lever (L), rest the key bit against the tracer point and lock the carriage in this position by means of knob (G).
7) Place the keyblank into the mobile clamp (M1) so that it butts against the cutter and secure loosely with knob (P1).
8) Insert the centering pin (K) pushing well into the hole in the key shaft, secure with the grub screw (Q) and tighten knob (P1).
9) Rest the head stop (M2) against the head of the key and secure by tightening knob (P2) and tightening completely knob (P1); in this way the key is perfectly secured.
10) Release the tracer point spring.
11) Make sure that the key bit is in the horizontal position.
12) Release the carriage by means of knob (G) and, starting from the right, cut the key.

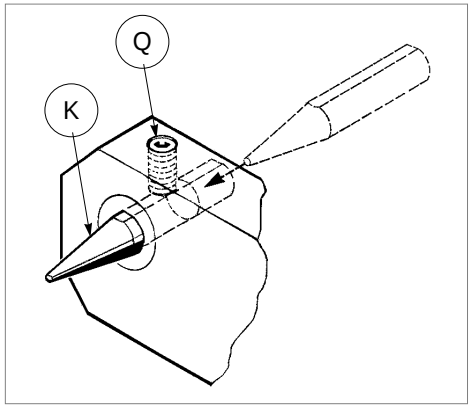


Fig. 19

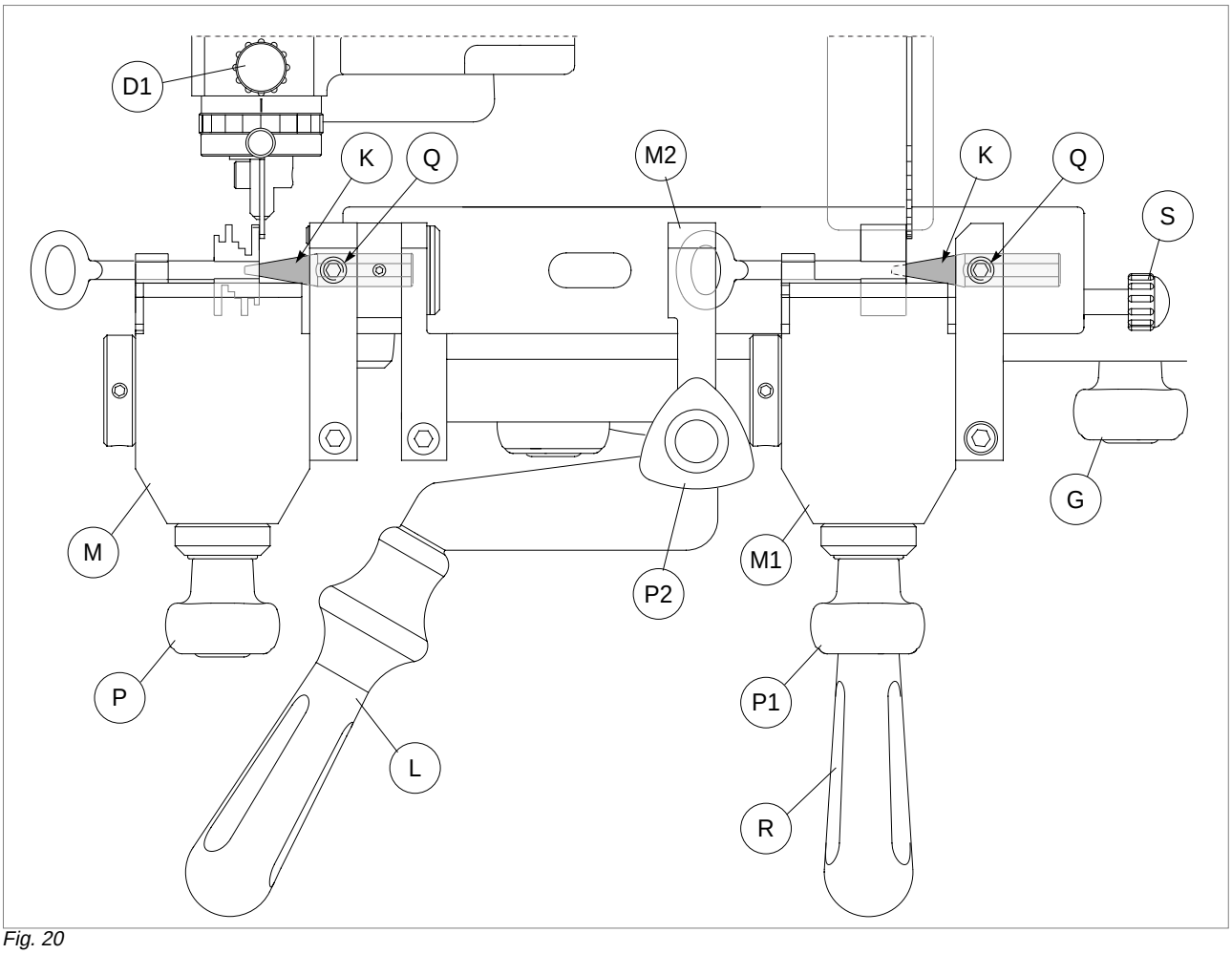


Fig. 20

5 MAINTENANCE

ATTENTION: for repairs or replacement of parts for maintenance, the 'CE' mark is guaranteed only if original spare parts provided by the manufacturer are used.

Although the TECHNICA EU key-cutting machine does not require special maintenance, it is advisable to check and, if necessary, replace the parts subject to wear, such as: the belt, cutting tool, tracer point. Replacement is simple and can be carried out by the operator.

ATTENTION: to keep the machine well maintained we recommend using protective oil, e.g. WD40 or similar, applied to the burnished mechanical parts. This prevents oxidation of the parts in question (clamps, guides, carriages...).

Before starting any type of maintenance (checks or replacements), read the instructions below:

- **NEVER CARRY OUT MAINTENANCE OR SERVICING WITH THE MACHINE SWITCHED ON.**
- **ALWAYS REMOVE THE MAINS PLUG.**
- **FOLLOW ALL THE INSTRUCTIONS IN THE MANUAL TO THE LETTER.**
- **USE ORIGINAL SPARE PARTS.**

5.1 Cleaning

- **keep the carriage and clamps free of chippings from the cutting operations by cleaning with a dry brush.**
- **Do not use oily substances or solvents to clean the painted surfaces, clamps or electrical connectors.**
- **Under no circumstances must compressed air be used to clear the work area of chippings, as these may find their way into the working parts of the machine.**

5.2 Carriage replacement

ATTENTION: Turn the machine off and unplug it.

1) Loosen the 2 knobs (F) (fig. 21) y two turns and remove the carriage, pulling it to the left.
2) Fit the new carriage from left to right, into the dovetail groove, taking it all the way in, then secure by tightening the 2 knobs (F).
3) Check machine gauging.

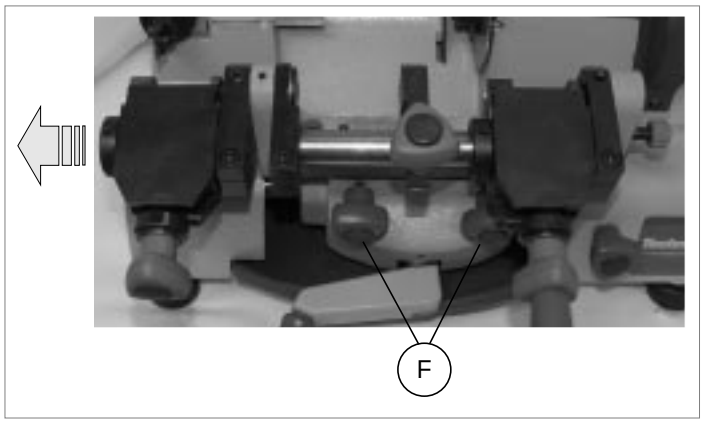


Fig. 21

5.3 Replacing the tracer point

Proceed as follows to replace the tracer point (D) (fig. 22):

ATTENTION: turn the machine off and unplug it.

1) Loosen the screw (D3).
2) Remove the worn tracer point.
3) Fit the new tracer point, pushing all the way in. Ensure that the seat is clean.
4) Tighten the screw (D3).
5) Re-calibrate the machine, following the procedure described in chap. 4.6.2, page 13.

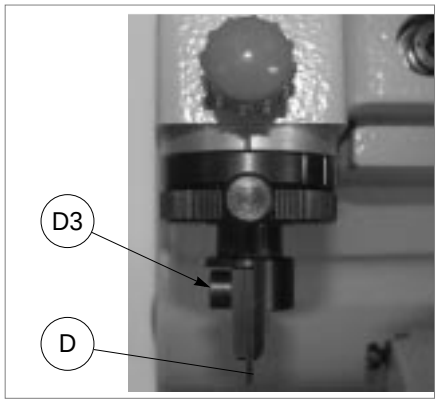


Fig. 22

5.4 Replacing the cutter

ATTENTION: turn the machine off and unplug it.

1) Loosen the 3 screws (C2) on the cutter shield and remove (fig. 23).
2) Remove the carriage (see chap. 5.2).
3) Place the locking bar into the special hole in the cutter shaft (fig. 24).
4) With the spanner provided loosen the cutting tool locking nut.

ATTENTION: the thread is left-handed.

5) Remove the worn cutter.
6) Carefully clean the new cutting tool and all the parts which come into contact with it.
7) Replace the cutting tool and tighten the nut.

ATTENTION: the tool rotates clockwise.

8) Remove the locking bar.
9) Fit the cutter shield and secure with the 3 screws (C2).
10) Re-calibrate the machine, following the procedure described in chap. 4.6.2, page 13.

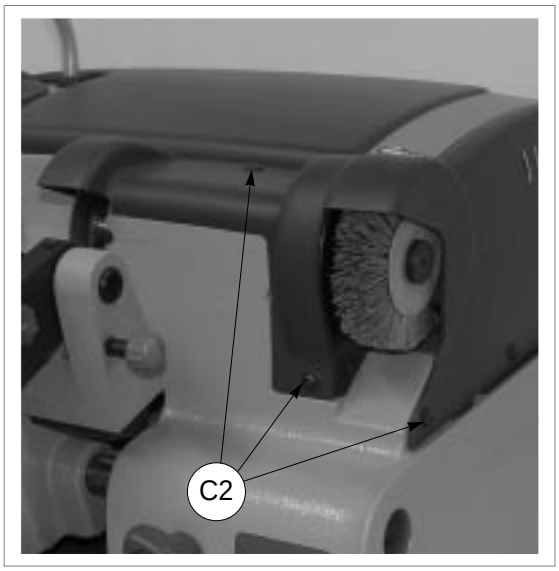


Fig. 23

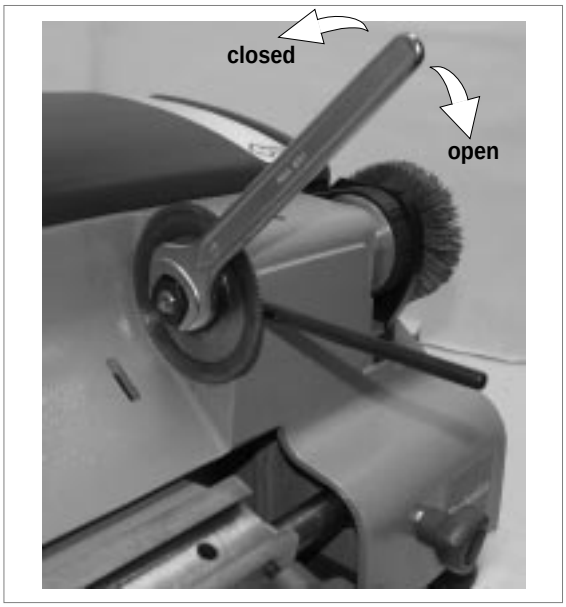


Fig. 24

5.5 Replacing the brush

ATTENTION: turn the machine off and unplug it.

1) Remove the carriage (see chap. 5.2).
2) Place the locking bar into the special hole in the cutter shaft (fig. 25).
3) Use the Allen wrench to loosen the screw (U1) holding the brush in place (fig. 25).
4) Replace the brush and tighten the screw (U1) with the Allen wrench.

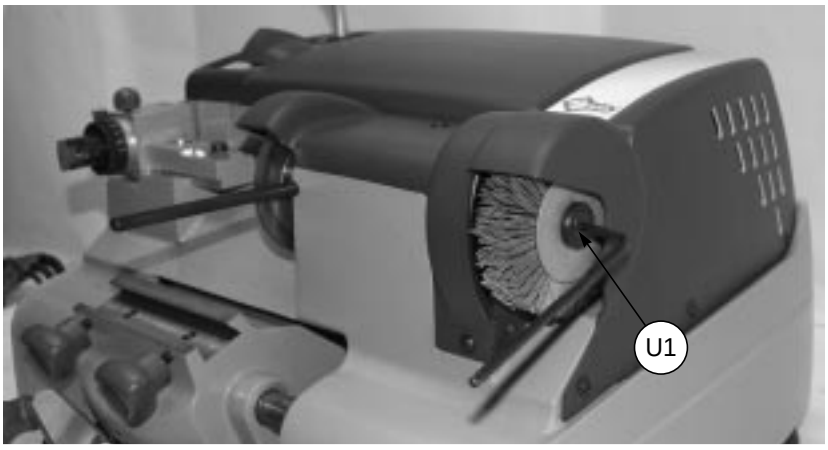


Fig. 25

5.6 Belt replacement and/or tensioning - Belt tightening pulley replacement

ATTENTION: Turn the machine off and unplug it.

1) Take out the 4 screws (V1) on the top cover and remove by lifting a little and turning.
2) Loosen the 3 screws (C2) on the cutter shield and remove (fig. 27).

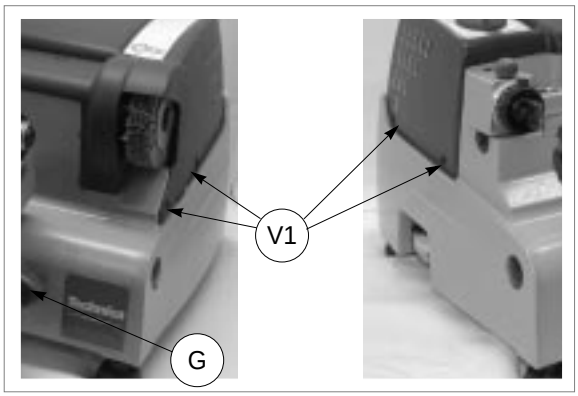


Fig. 26

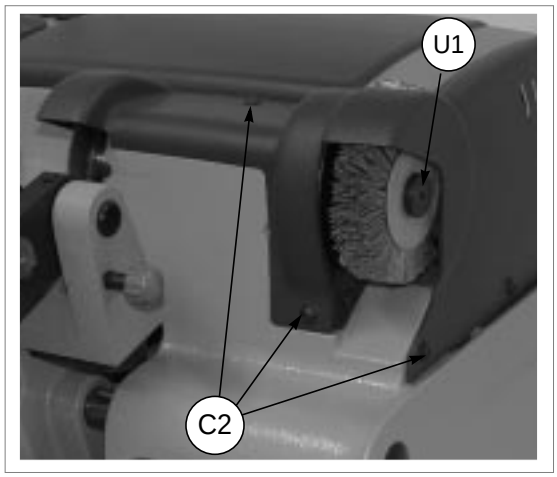


Fig. 27

TENSIONING (ONLY TO VERIFY THE POSITION OF THE GRUB SCREW W3)

1) Use the lever to raise the carriage and secure by tightening the knob (G) (fig. 26).
2) Remove the swarf tray (V) (fig. 5, page 5).
3) Place the machine on its back.
4) Tighten or loosen the grub screw (W3) until the right tension is reached (the head of the grub screw must be lined up with the base of the machine).

REPLACEMENT

1) Remove the swarf tray.
2) Loosen the screw (W2) on the belt cover and remove.
3) Use the lever to raise the carriage and secure by tightening the knob (G).
4) Place the machine on its back.
5) Loosen the grub screw (W3) until it can be removed. Pay attention to the spring.
6) Place the machine upright on the bench.
7) Loosen the screw (U1) and remove the brush and spacer (fig. 28).
8) Remove the old belt, turning the main pulley manually and exerting a little pressure on the belt to prize it out of its seat.
9) Fit the new belt by inserting it into the motor pulley then (exert a little pressure) into the main pulley, turning it manually.
10) Place the machine on its back.
11) Insert the spring then tighten the grub screw (W3), until the right tension is reached (the head of the grub screw must be lined up with the base of the machine).
12) Place the machine upright on the bench.
13) Replace the belt cover and secure with the screw (W2).
14) Replace the top cover and secure with the 4 screws (V1).
15) Replace the cutter shield and secure with the 3 screws (C2).
16) Replace the swarf tray.

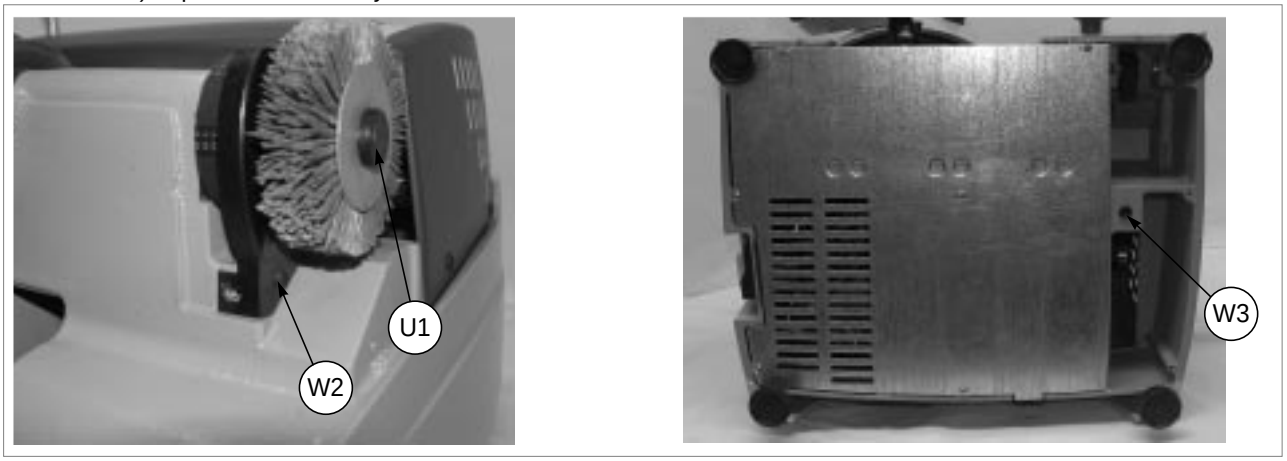


Fig. 28

5.6.1 BELT TIGHTENING PULLEY REPLACEMENT

Follow the instructions for replacing the belt up to point 8, then:

1) Loosen the 2 screws (W4) on the plate and remove the unit (fig. 29).
2) Pull the belt tightening pulley upwards.
3) Fit the new belt tightening unit with the grooved part of the pin facing backwards.
4) Replace the plate and tighten the 2 screws (W4) making sure that the pin will not turn.

- Go on with the operations described in points 9 to 16 of the instructions for belt replacement.

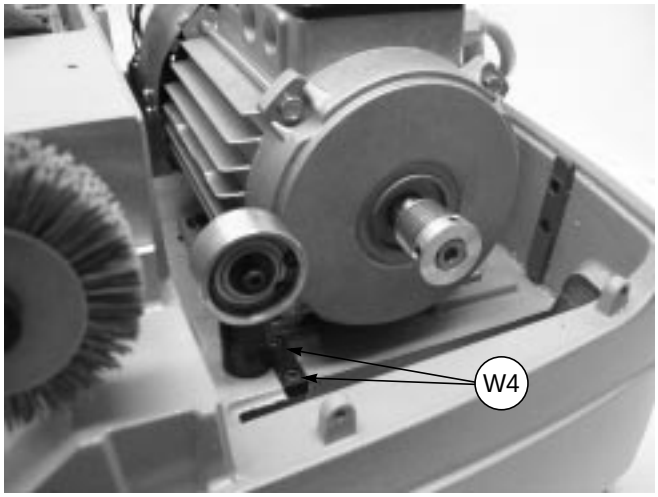
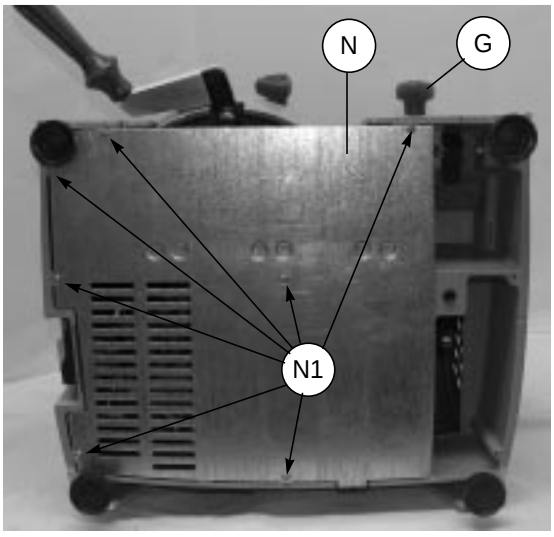


Fig. 29

5.7 Replacing the master switch

ATTENTION: Turn the machine off and unplug it.

1) Remove the swarf tray (V) (fig. 5, page 5).
2) Use the lever to raise the carriage and secure by tightening the knob (G) (fig. 30).
3) Place the machine on its back.
4) Loosen the 7 screws (N1) and remove the bottom plate (N) (fig. 30).
5) Detach the various connectors [1] [2] [3] [4] paying careful attention to their positions.
6) Press on the 2 tabs (L2) on the switch and pull it out.
7) Fit the new switch properly, taking care to secure it well (tabs).
8) Reconnect the various connectors [1] [2] [3] [4].
9) Replace the bottom plate and fix with the 7 screws (N1).
10) Replace the machine upright on the bench and fit the swarf tray.



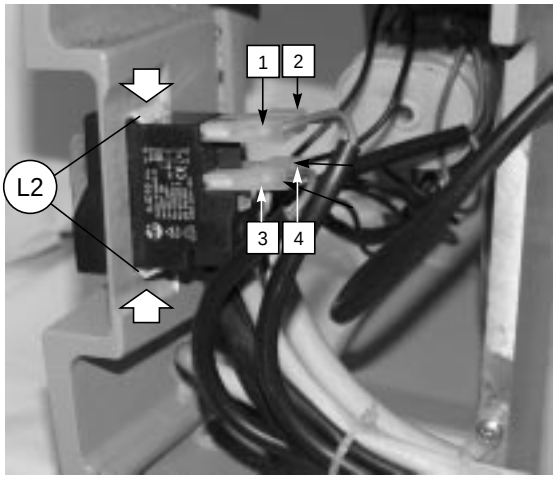


Fig. 30

5.8 Condenser (motor) and/or Feeder (lamp) replacement

ATTENTION: Turn the machine off and unplug it.

1) Remove the swarf tray.
2) Use the lever to raise the carriage and secure by tightening the knob (G) (fig. 31).
3) Place the machine on its back.
4) Loosen the 7 screws (N1) and remove the bottom protective plate (N) (fig. 31).

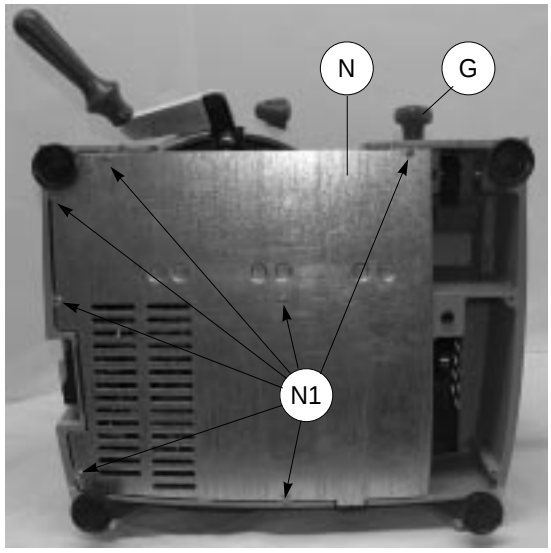


Fig. 31

CONDENSER

1) Loosen the nut (J1) and remove the washer (J2) and condenser (fig. 32).
2) Remove the cap (J3) on the new condenser.
3) Remove the cap on the old condenser and detach the connectors paying attention to their position, to connect them to the new one.
4) Replace the cap (J3) on the new condenser.
5) Fit the new condenser and secure with the washer (J2) and nut (J1).
6) Replace the bottom protective plate and secure with the 7 screws (N1).
7) Place the machine upright on the bench and fit the swarf tray.

FEEDER

1) Loosen the 2 screws (K1) and remove the reactor.
2) Use the tip of a small plain screwdriver to enter the slits (K2) and detach the 2 wires.
3) Fit the 2 wires into the special connections on the new reactor.
4) Place the new reactor into its seat and secure with the 2 screws (K1).
5) Replace the bottom protective plate and secure with the 7 screws (N1) (fig. 31).
6) Replace the machine upright on the bench and fit the swarf tray.

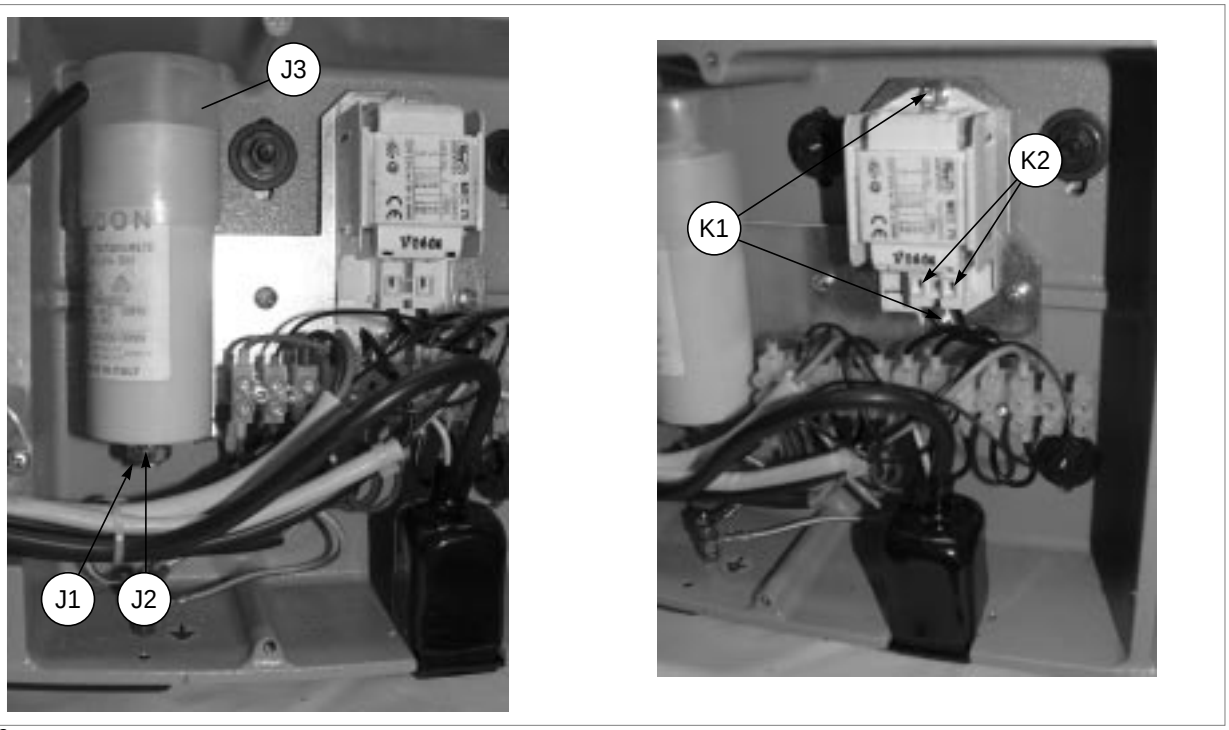
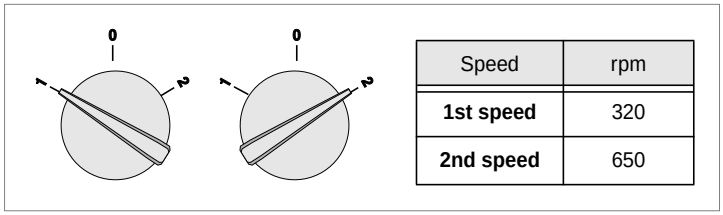


Fig. 32

5.9 Speed commutator

0 = stop
1 = 1st speed: 320 rpm
2 = 2nd speed: 650 rpm



Speed	rpm
1st speed	320
2nd speed	650

Fig. 33

5.9.1 REPLACING THE COMMUTATOR

ATTENTION: turn the machine off and unplug it.

1) Take out the 4 screws (V1) (fig. 34) on the top cover and remove by slightly lifting and turning it.
2) Remove the switch knob (B) and loosen the 2 fixing screws (B2) (fig. 35 and fig. 36).
3) Pull the switch out to the left and, paying attention to their position disconnect the wires from each connection before removing it.
4) Connect the wires to the new commutator.
5) Push the switch into its seat and secure with the 2 screws (B2).
6) Replace the top cover and secure with the 4 screws (V1).
7) Replace the commutator knob (B).

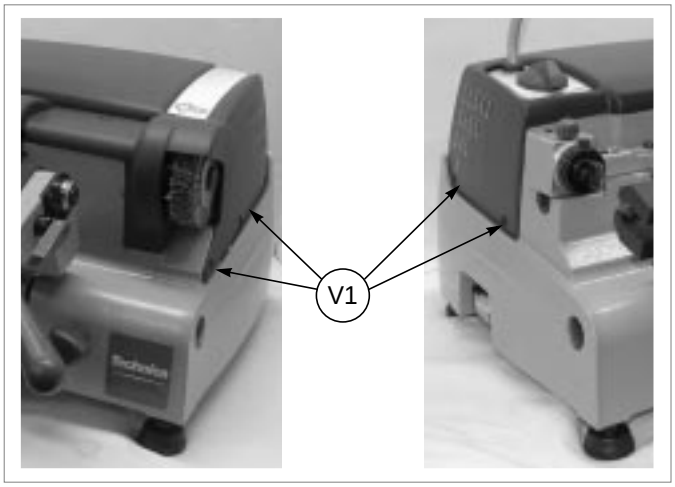


Fig. 34

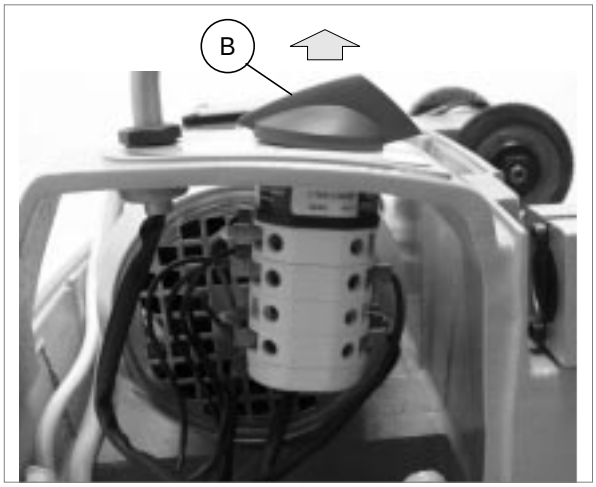


Fig. 35

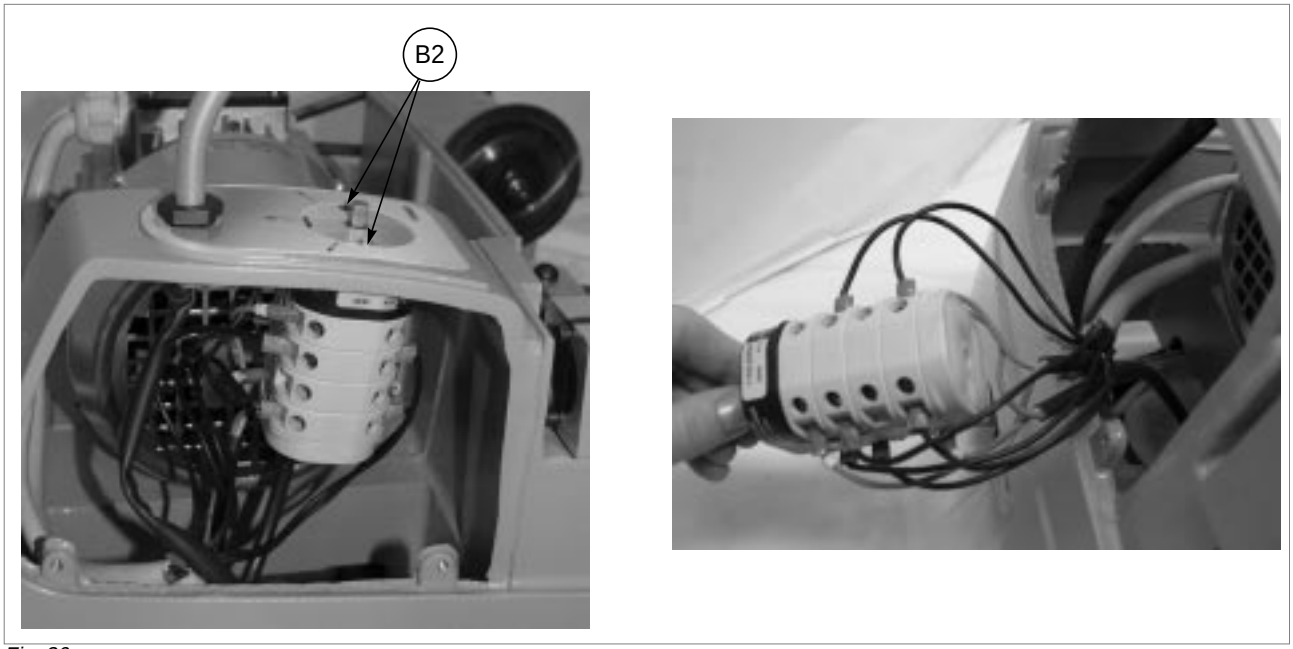


Fig. 36

5.10 Motor replacement

ATTENTION: turn the machine off and unplug it.

1) Remove the swarf tray (V).
2) Loosen the 3 screws (C2) on the cutter shield and remove (fig. 27, page 18).
3) Remove the 4 screws (V1) on the top cover and remove by lifting it slightly and turning (fig. 26, page 18).
4) Loosen the screw (W2) on the belt cover and remove (pull out towards the front of the machine) (fig. 28, page 18).
5) Place the machine on its back.
6) Loosen the 7 screws (N1) and remove the bottom protective plate (N) (fig. 31, page 20).
7) Loosen the grub screw (W3) (fig. 37) in order to lower the belt tightening pulley and allow the belt to come off the motor pulley.
8) Disconnect the 4 wires [3] [4] [5] [9] from the terminal board and the earth wire by loosening the nut (V4).
9) Loosen the 4 fixing nuts (H2) on the motor and remove together with their washers.
10) Place the machine upright on the bench.
11) Pull out the commutator knob (B) and loosen the 2 fixing screws (B2) (fig. 36, page 21).
12) Pull the switch out to the left and, paying attention to their position, disconnect the 6 motor wires from their connections (fig. 39, page 23).
13) Loosen the 2 grub screws (H1) on the motor pulley (fig. 38). Remove the pulley and fit to the new motor, secure by tightening the 2 grub screws (H1).
14) Remove the old motor from its seat, together with the 4 screws (H3) (fig. 38, page 23).
15) Fit the new motor into its seat, together with the 4 screws (H3).
16) Fit the belt, first into the motor pulley then (exerting a little pressure) into the main pulley, turning it manually.
17) Place the machine on its back, paying attention to the motor.
18) Tighten (first place the washers in position) the 4 motor fixing nuts (H2) (fig. 37).
19) Tighten the grub screw (W3) until the belt is properly tensioned.
20) Connect the 4 terminal board wires [3] [4] [5] [9] and the earth wire and tighten the nut (V4).
21) Replace the bottom protective plate and secure with the 7 screws (N1).
22) Place the machine upright on the bench.
23) Connect the 6 motor wires to the switch.
24) Push the switch upwards to fit into its seat. Secure with the 2 screws (B3) and replace the knob (B) (fig. 35 and fig. 36).
25) Replace the belt cover and secure with the screw (W2).
26) Replace the top cover and secure with the 4 screws (V1).
27) Replace the cutter shield and secure with the 3 screws (C2).
28) Replace the swarf tray.

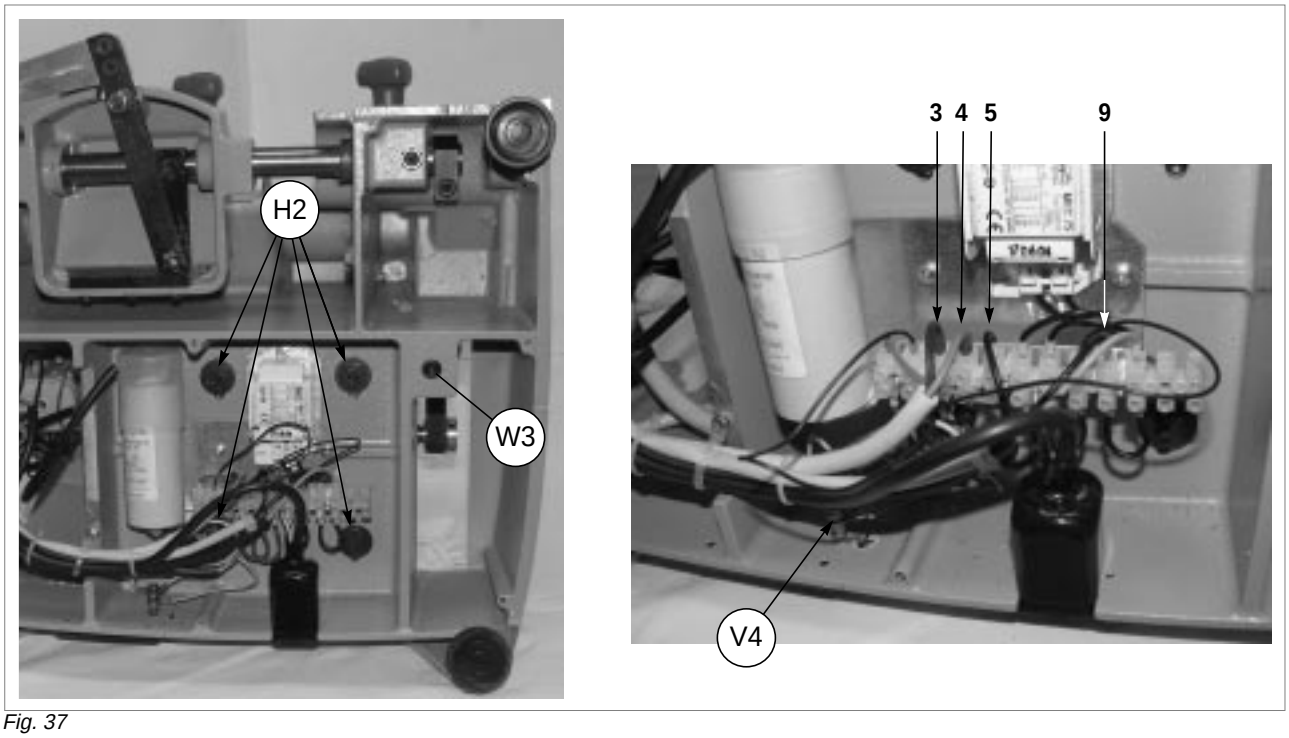


Fig. 37

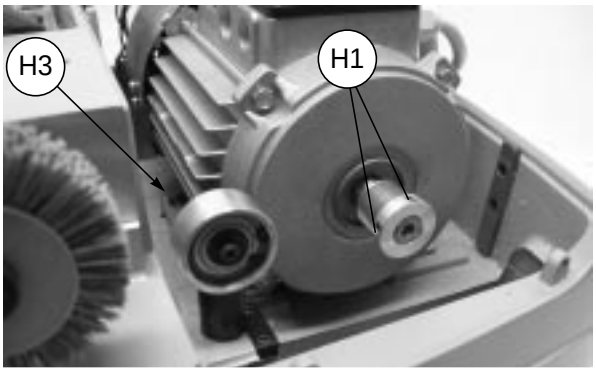


Fig. 38

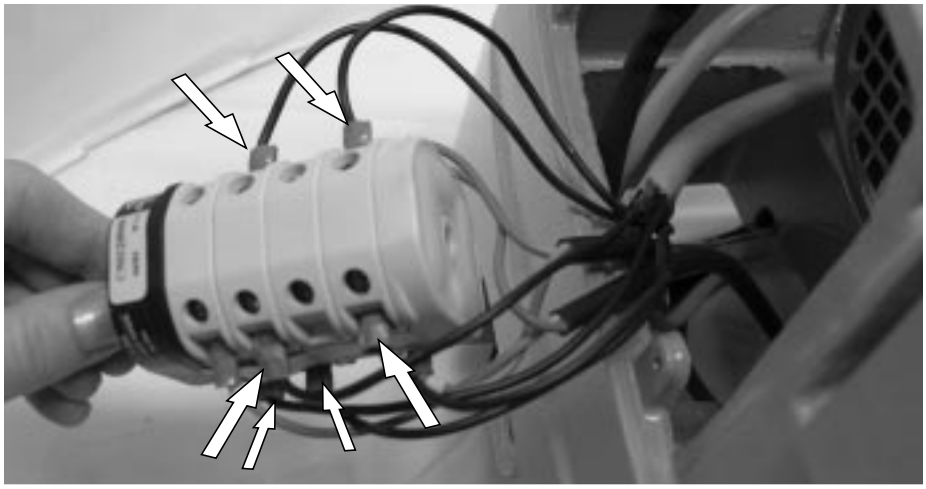


Fig. 39

5.11 Replacing the fuses

The fuses should always be checked with a continuity measuring instrument (tester, ohmeter, multimeter etc.) as a visible check may not reveal an electrical fault. Fuses must always be replaced with others of the same type (rapid or delayed) and with the same Amps, as shown in the manual.

The TECHNICA EU key-cutting machine has 2 fuses placed in the inlet socket (fig. 40) to protect the key-cutting machine from sudden changes in voltage or short circuits.

1) Turn the machine off and unplug it.

2) Remove the fuse board with the aid of a screwdriver.

ATTENTION: fuses must always be replaced with others of the same type (rapid) and with the same Amps (5 Amps).

Fig. 40

5.12 Replacing the light bulb

ATTENTION: turn the machine off and unplug it.

1) Loosen the 5 screws (T1) on the lamp shield and remove.
2) Remove the bulb taking care not to use pointed utensils for this operation.
3) Fit the new bulb.
4) Replace the lamp shield and tighten the 5 screws (T1) to secure.

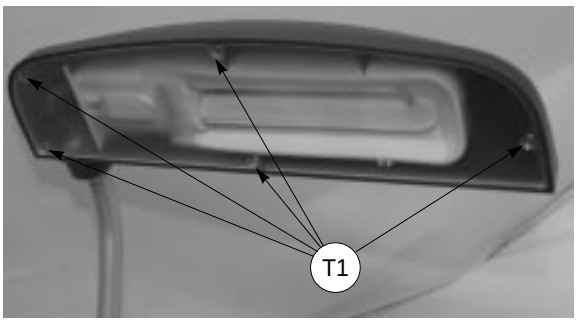


Fig. 41

6 DECOMMISSIONING

To decommission the machine, it must be rendered unusable by carrying out the operations below:

- disactivation of the electricity supply;
- separation of the plastic and metal parts;

When these operations have been carried out, the machine can be disposed of according to the current regulations in the country of use.

WASTE DISPOSAL

EEC standards lay down special regulations for waste disposal (*).

Machine

TECHNICA EU is a durable machine and is also re-usable.
Recycling is an ecologically sound practice to be recommended.

Packing

As the packing in which the machine is transported is made of cardboard and wood it can be re-used if intact or used as fuel for the production of heat (e.g. wood-fired stoves) if dismantled.
Warning! Take great care when dismantling the case as it contains nails, the points of which will be exposed. Bend them down into the wood with a hammer or remove separately and dispose of them in an authorized metal recycling centre.
As waste the packing is considered solid urban waste and must not be thrown into the environment but placed in the special collection bins.

Waste deriving from key cutting

Waste deriving from key cutting is classified as special waste, but included in solid urban waste, considered as metal wool. Such waste must be disposed of in the special collection centres according to the classification assigned to them by current Italian and EEC law. The circumstances which transform metal residue from solid urban waste into contaminated or toxic noxious waste are listed in the appendices to current Italian and European Union regulations regarding disposal of such waste.

To facilitate disposal of the waste generated by the machine during its operation and of the machine itself at the end of its useful life, refer to identification of the main types of waste by the relative European CER code:

	code CER
- Iron filings and swarf	12 01 01
- Paper and cardboard packaging	15 01 01
- Wooden packaging	15 01 03
- Plastic packaging	15 01 02

(*) Waste is any substance or object deriving from human activity or natural cycles, thrown away or to be thrown away.

7 AFTER SALES SERVICE

Silca provides full assistance to purchasers of the TECHNICA EU key-cutting machine.
To ensure complete safety for the operator, any job not specified in this manual should be carried out by the manufacturer or in the special Service Centres recommended by Silca.
On the back cover of this manual is a list of the manufacturer's addresses; listed below are the addresses of specialised Service Centres.

7.1 How to request service

The guarantee attached to TECHNICA EU key-cutting machines ensures free repairs or replacements of faulty parts within twelve months of purchase. All other service calls must be arranged by the customer with Silca or with a Silca service centre.

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