

UNOCODE

F100 F400 F600
F800 F900

Operating manual
Translation of original instructions

D4A3096XA

vers. 3.0

CE

EN



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Edition: April 2021

Printed at Vittorio Veneto

by SILCA S.p.A.

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Said trade-marks or trade names are nominated only for the purposes of information so that any lock for which our keys are made can be rapidly identified.

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USE OF THE MANUAL

This manual has been drawn up by the Manufacturer and is an integral part of the machine literature. The manual gives information that is obligatory for the operator to know and which makes it possible to use the machine safely.

User's Manual

This user's manual is provided because it is essential for proper use and maintenance of the machine. The manual must be kept carefully throughout the life of the machine, including the decommissioning stage. Keep in a dry place close to the machine where it is always to hand for the operator.



IT IS OBLIGATORY to read the manual carefully before using the machine.

Readers' characteristics

This manual must be read and its contents acquired by those who will use it.

Manufacturer's ID

Unocode F has an ID plate located on the back of the machine, showing the serial number.

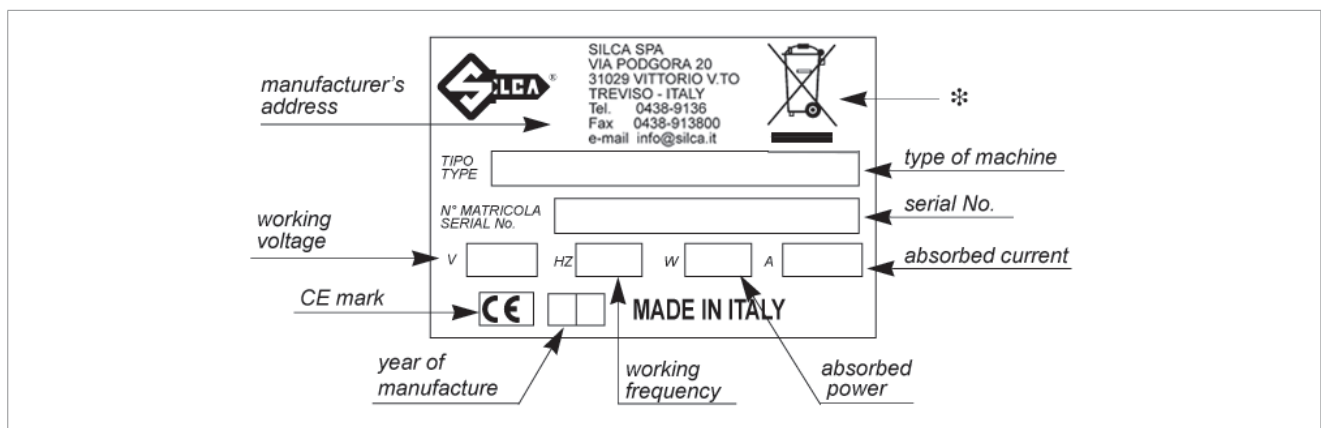


Fig. 1

(*) see Ch. 16 DISPOSAL.

How to apply for after-sales service

Silca provides purchasers of UNOCODE F with After-Sales Service.

For the total safety of the operator and machine, any operation not described in the manual must be carried out by the manufacturer or in the special Service Centers recommended by Silca.

At the end of the manual there is a list of manufacturers' and authorized Service Centre addresses; if the manual was downloaded is necessary visit the website to see the contacts (www.silca.biz).

The warranty card attached to the machine covers free repairs or replacement of faulty parts for 24 months from the date of purchase*. All operations must be agreed by the user with Silca or the Service Center.

* Damage caused by negligence or wrong use of the machine by the user will null the warranty.

TERMINOLOGY

For those inexperienced in the subject of keys and key cutting, below is an illustration of the most frequently used terms:

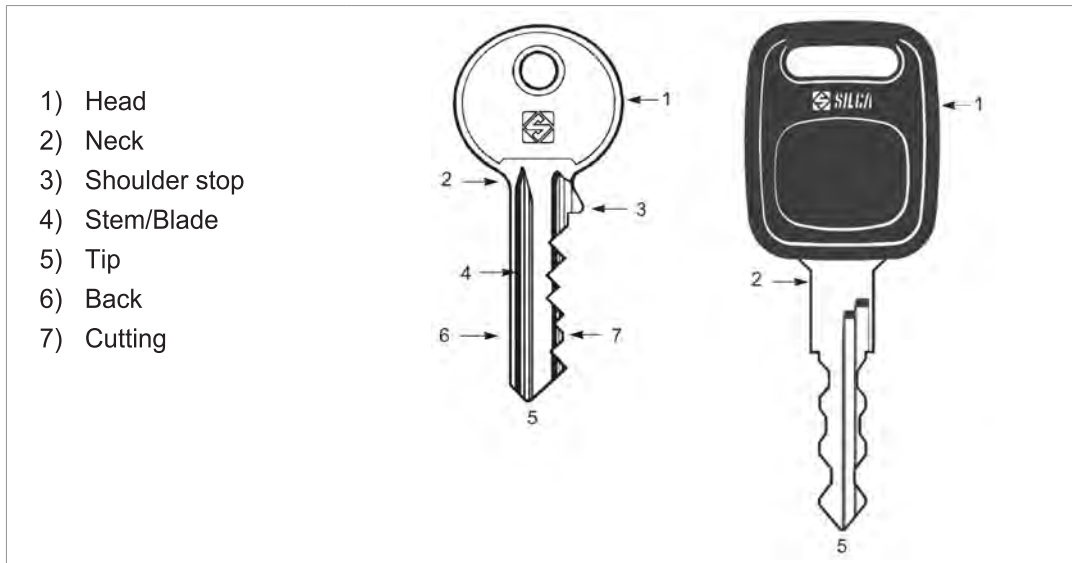


Fig. 2

GRAPHICS IN THE MANUAL

Pay attention	Obligation to read the manual

GRAPHICS ON THE KEY-CUTTING MACHINE

Do not clean with compressed air	Obligation to read the manual	ATTENTION! DANGEROUS MOBILE PARTS

F100 - F400 - F600 Adhesive label Mass-RPM-Fuse	F800 - F900 Adhesive label Mass-RPM-Fuse

GENERAL WARNINGS

UNOCODE F key-cutting machines are designed to European Standards (CE).

Right from the design stage solutions have been adopted to eliminate hazards for the operator in all the stages of use: handling, regulation, use and maintenance.

The materials used in manufacture and the components employed in using the machine are not dangerous and ensure that the machine complies to current standards.

Silca S.p.A. has also experimented and applied numerous technical solutions that allow the key-cutting machine to optimize the quality of the cut keys.

To guarantee maintaining these results over time, please follow the instructions below:

- **Observe the procedures described in this manual;**
- **Always use Original Silca Tools as they are designed to make the best of UNOCODE F and provide quality key-cutting;**
- **Use Silca key blanks, made with top quality materials;**
- **Have the key-cutting machine checked periodically by an authorized Silca After-Sales Service Center;**
- **Always use Silca Original Spare Parts. Beware of imitations!**

NORMAL USE

UNOCODE F are key-cutting machines and must be installed and used observing the manufacturer's rules and specifications.

The key-cutting machine must be used only by skilled personnel (professional use).

The key-cutting machine is designed for use on business or industrial premises (e.g. hardware shops, key cutting centers, etc...).

Any other use different from that indicated in this manual will cause the forfeiture of all customers' rights to make claims on Silca S.p.A. and may be an unknown source of hazard for the operator or third parties.



ATTENTION: negligent use or failure by the operator to observe the instructions in this manual are not covered by the warranty and the manufacturer declines any responsibility in such cases.

RESIDUAL RISKS

UNOCODE F key-cutting machines do not produce residual risks.

SAFETY REGULATIONS

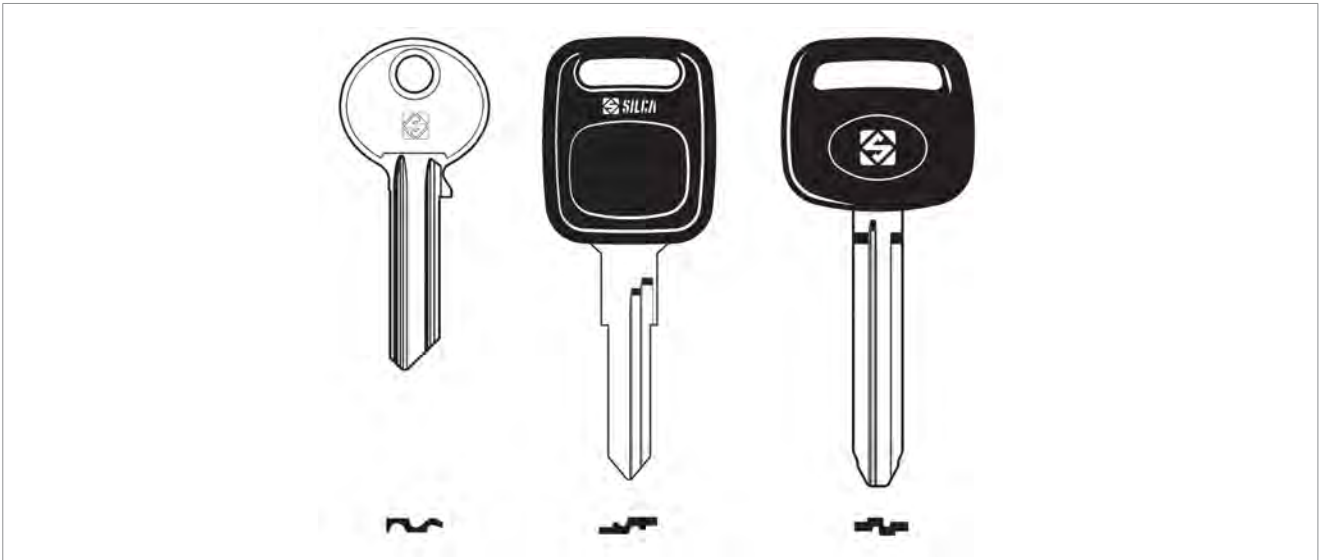
- **Always disconnect the machine when it is not in use or when performing maintenance operations.**
- **Check the electrical wiring periodically; replace any wires that show signs of wear.**
- **Always work with dry hands free of grease or oil.**
- **Never tug on the electricity supply lead and make sure it is not in contact with oil or other liquids, sharp objects or heat. Never remove the grounding pin from the plug. Check that the ground wire is connected properly.**
- **Do not use the machine in dangerous environments (wet or damp).**
- **All visitors, especially children, must stay at a safe distance from the machine and must never come into contact with the electric wiring. This equipment should not be used where children may be present.**

1 UNOCODE F MACHINE DESCRIPTIONS

Unocode F machines are professional electronic key-cutting machines for cutting flat cylinder keys, and vehicle keys with standard cuts.

These electronic machines feature controlled movement. Studied in great detail, they combine rapid execution and ease of use with high precision results.

UNOCODE F key-cutting machines are used to duplicate the following types of flat keys with standard cuts:



KEY-CUTTING



ENGRAVING



COPIES WITH FEEDER

1.1 MAIN CHARACTERISTICS

- **Movements**

The axes (X-Y) move by means of ball screws activated by step motors, on ground roller runners.

- **Automatically opening safety shield**

The shield closes itself automatically when the decoding and/or cutting process starts.

The shield opens itself automatically at the end of the decoding and/or cutting process.

- **Clamp**

According to the machine version, the clamp is manual or electric with two or four sides to lock almost all types of flat keys (see machine version details).

- **Cutter**

The cutter is in hard metal, easily replaced and with resistance and cutting properties suitable for the type of process involved and the tool rotation speed.

- **Display**

The display for machine function management is placed on top of the machine.

- **Photo Reader (Unocode F400 - F600 - F900)**

This device reads the key cuts to be made by a photo/optic system.

- **Engraving Unit (Unocode F600 - F800 - F900)**

The device engraves both sides of the key head. It does not engrave plastic or anodised key heads.

- **Electric Feeder (Unocode F800 - F900)**

The electric feeder can handle a great number of keys for a continuous cutting process (only single cut keys with head stop). The device includes orderly unloading unit.

- **Orderly unloading unit (Unocode F800 - F900)**

This system provides precise collection of the cut keys discharged by the feeder on the machine.

IGNITION

To activate the machine, connect the power lead and turn on switch (B) on the back. Check that the emergency button (R) is released: turn the knob (R) di 45°.

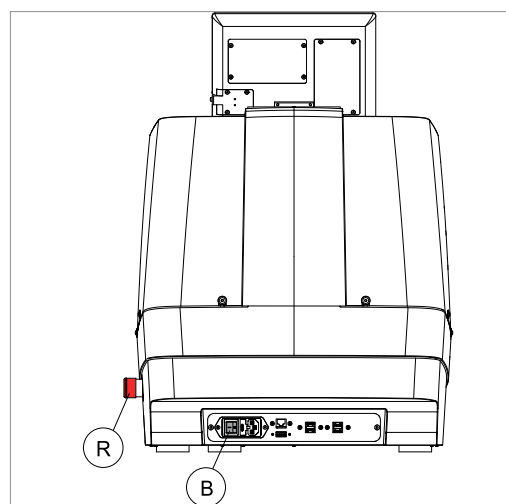


Fig. 3

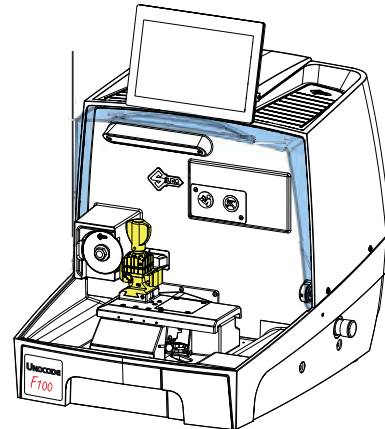
UNOCODE F100

Used to ONLY BY CODE the following types of keys with standard cuts:

- Flat cylinder and vehicle keys.

Characteristics:

- V2 MANUAL CLAMP



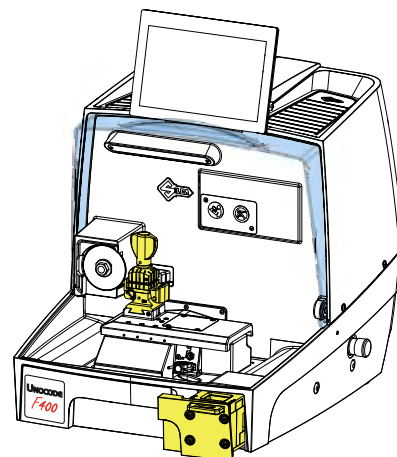
UNOCODE F400

Used to cut the following types of keys with standard cuts:

- Flat cylinder and vehicle keys.

Characteristics:

- V2 MANUAL CLAMP
- PHOTO READER UNIT



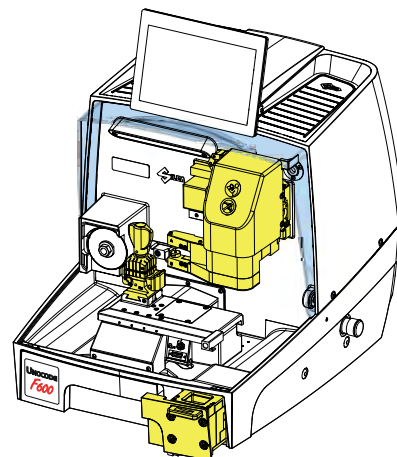
UNOCODE F600

Used to cut the following types of keys with standard cuts:

- Flat cylinder and vehicle keys.

Characteristics:

- V2 MANUAL CLAMP
- PHOTO READER UNIT
- ENGRAVING UNIT



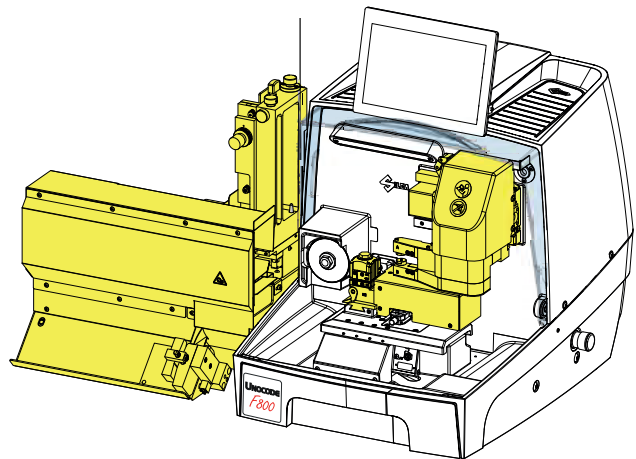
UNOCODE F800

Used to cut ONLY BY CODE the following types of keys with standard cuts:

- **Flat cylinder and vehicle keys**

Characteristics:

- **V4 ELECTRIC CLAMP**
- **ENGRAVING UNIT**
- **ELECTRIC FEEDER**

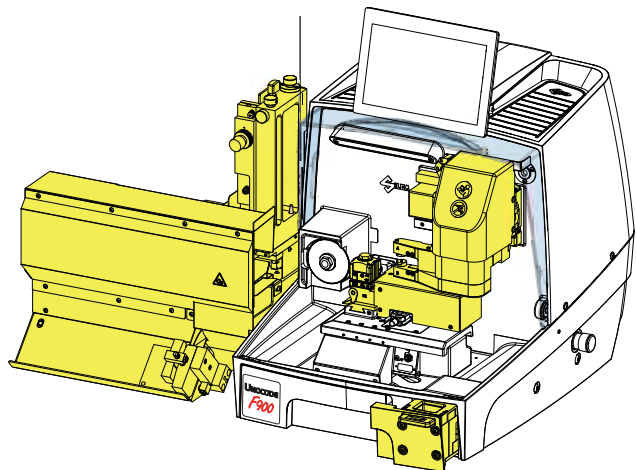
**UNOCODE F900**

Used to cut the following types of keys with standard cuts:

- **Flat cylinder and vehicle keys**

Characteristics:

- **V4 ELECTRIC CLAMP**
- **PHOTO READER UNIT**
- **ENGRAVING UNIT**
- **ELECTRIC FEEDER**



2 SAFETY

UNOCODE F key-cutting machines fully comply with Machine Directive. The operations for which each machine is designed are easy to perform with no risk whatsoever for the operator.

The adoption of general safety precautions and observation of the instructions provided by the manufacturer in this manual eliminate all human error, unless deliberate.

UNOCODE F is designed with features which make it completely safe.

2.1 SAFETY SHIELD

The protective shield is designed to cover the working parts as completely as possible, ensuring operator safety.

The shield must be open to fit the keys to be cut or to perform other operations on the machine.

The operator activates shield opening and closing by means of a button on the machine display.

The shield is controlled by microswitches that activate/deactivate operating and movement functions, including those of the cutter.

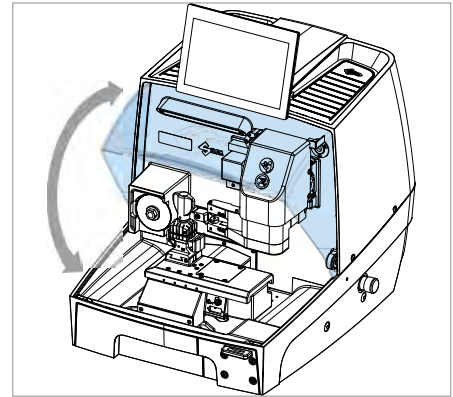


Fig. 4

2.2 EMERGENCY STOP

Use the red emergency button (R) (Fig. 5), located on the right-hand side of the machine to stop the machine immediately in the event of serious malfunctioning or a hazard for the operator.

When the cause of the emergency has been eliminated, turn the button 45° clockwise to deactivate it.

NOTE: *the operator is responsible for keeping the area around the button clear so that it can be reached as quickly as possible.*



ATTENTION: if the machine stops the display remains active.

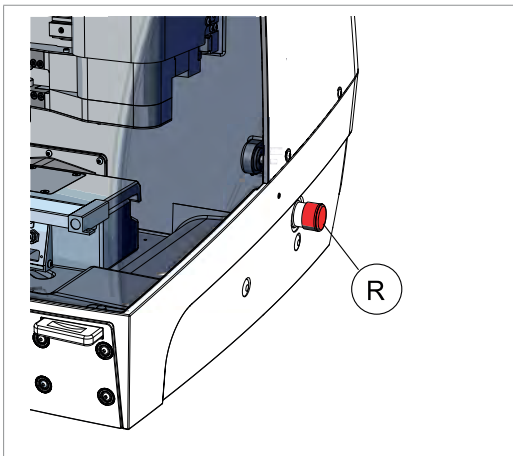


Fig. 5

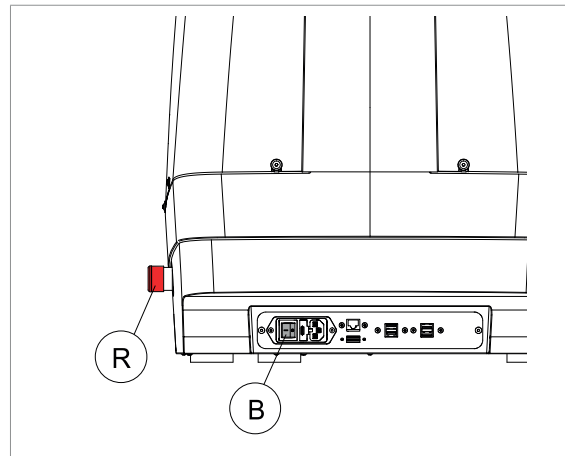


Fig. 6



ATTENTION: turn off the master switch (B) on the back of the machine (Fig. 6) and unplug before carrying out maintenance operations.

2.3 SWARF COLLECTION UNIT OPENING/CLOSING MICROSWITCHES

If the swarf collection unit is missing or partially open, special microswitches deactivate the operating and movement functions, including those of the cutter.

NOTE: *the machine must always have a swarf collection unit, which must be properly closed.*

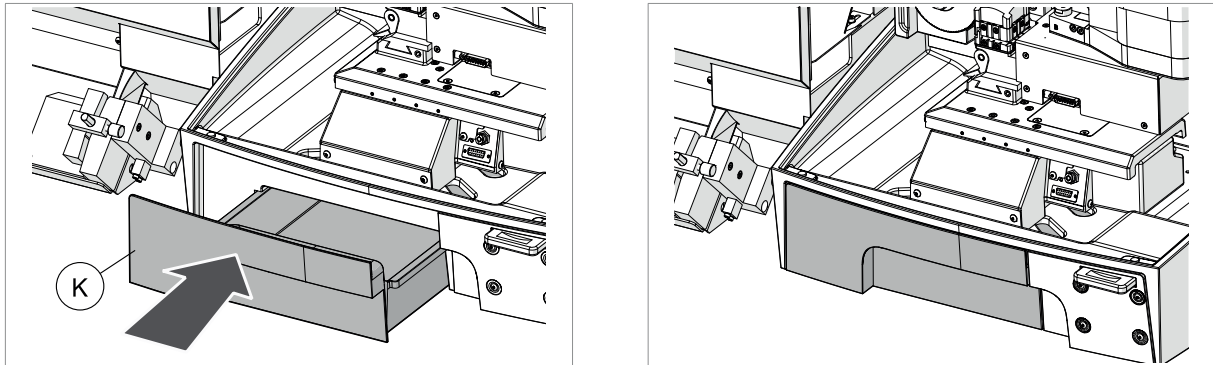


Fig. 7

2.4 FEEDER MICROSWITCHES (VERSIONS F800-F900 ONLY)

2.4.1 Feeder flap microswitches

The operating and movement functions are deactivated if the flap (U4) is open (Fig. 8).

2.4.2 Top-loader microswitches

If the top loader is wrongly positioned or missing, all the operating and movement functions are deactivated.

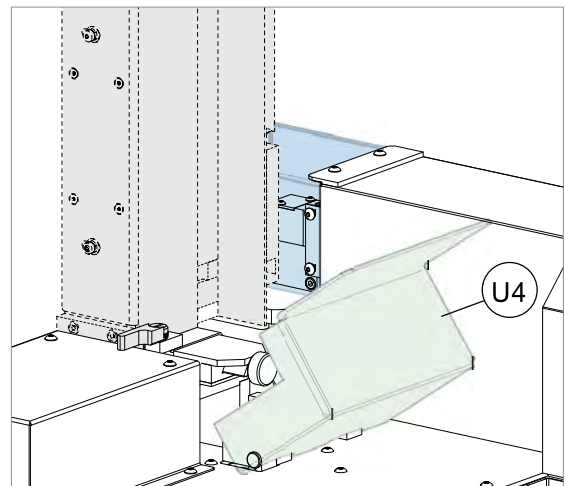


Fig. 8

2.5 TECHNICAL DATA

Electricity supply:	100-240V - 50/60Hz	
Cutter motor:	48VDC	
Engraving motor:	24VDC	
Key cutter:	prismatic - hard metal	
Engraving cutters:	upper cutter 'A' in hard metal lower cutter 'B' in hard metal	
Tool speed:	prismatic cutter: 1070 rpm engraving cutters: 14500 rpm	
Movements:	on 2 axes with ball screws activated by step motors on ground roller runners. A third axis can be added to activate the clamp (rotation, inclination).	
V2 Manual clamp: (F100-F400-F600)	with 4 sides, closes perfectly keys fitted on their backs or on the profile if the key has symmetrical cuts.	
V4 Electric clamp: (F800-F900)	with 4 standard sides for gripping keys with different thicknesses <2,7: for thicknesses 1 mm to 2,7 mm >2,5: for thicknesses 2.5 mm to 4 mm	
Runs:	with clamp:	X axis: 30 mm Y axis: 72 mm
	keys with head stop:	Y axis: max.45 mm (by copy / by code) Y axis: max.42 mm (with feeder)
	keys with tip stop:	Y axis: max.45 mm (by copy / by code)

Noise Level - Sound pressure Lp(A) :

	STEEL flat keys	BRASS flat keys
F100-F400:	82,9 dB	72,8 dB
F600:	80,5 dB	72,2 dB
F800-F900:	78,7 dB	73,1 dB

Max dimensions:

F100-F400-F600:	width: 502 mm - depth: 740 mm - height: 680 mm
F800-F900:	width: 921 mm - depth: 740 mm - height: 680 mm

Mass:

F100:	52 Kg	
F400:	54 Kg	
F600:	58,6 Kg	
F800:	without feeder 61,2 Kg	witht feeder 87,2 Kg
F900:	without feeder 61,7 Kg	witht feeder 87,7 Kg









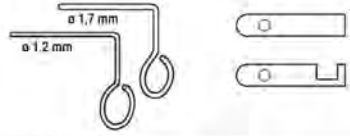



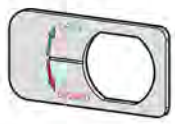





2.6 ELECTRICAL CONTACT

UNOCODE F key-cutting machines come with a low voltage electrical device that detects the key blank as it approaches the cutter at operating speed.

The electrical contact function is used for keys in steel, brass, silver nickel, zamak or iron (nickel-plated or not). Electrical contact is used for calibration, engraving and safe movements.

2.7 ACCESSORIES PROVIDED

UNOCODE F key cutting machines are provided with a series of accessories for their use and maintenance (tools, hex keys, fuses...) housed in a special tool box:

Allen keys set 1,5 ÷ 5 mm 	"T" allen key 6 mm 	10 mm spanner 
13 mm spanner 	17 mm spanner 	Torx screwdriver 
template Z3 (regulating key) 	template Z34 for engraving setting 	pins and bars set 
cutter unlocking socket wrench 	pipe wrench 	slanted brush 
cutter unlocking plate 	1 Amp fuse rapid (2 pcs) 	6,3 Amp fuse delayed (2 pcs) 
stylus touch pen 	USB pen 	USB cable 

F800 - F900			
feeder serial cable 	feeder USB cable 	V4 clamp serial cable 	template Z36 

3 HANDLING

There are no particular hazards involved in handling the key-cutting machine. The packed machine must be carried manually by 2 (or more) people or with a transpallet truck.

3.1 PACKING

The packing for the UNOCODE F key-cutting machine ensures transport safe for people and the machine and all its components. It comprises a pallet base to which the machine is attached, and a cardboard box as a cover.

The machine is fixed to the base of the pallet with screwed down brackets that hold it firm into place. This prevents the machine and its protective shield from any damage.

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.

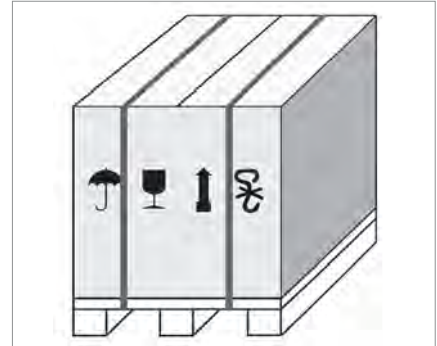


Fig. 9



Keep dry



Handle with care



Up



Use no hooks



ATTENTION: to avoid knocks which could damage the machine, it is advisable to use the original packing and fix the machine with the special brackets every time it is transported. The complete packing (cardboard, pallet, brackets and screws) should be kept for use whenever the machine is moved.

3.2 OPENING PACKING FOR UNOCODE F800-F900

To remove the machine from its packing:

- 1) Remove the straps.
- 2) Lift the cardboard box (a).
- 3) Remove the cardboard box (b).
- 4) Check the contents of the packing (see table).
- 5) Remove the screws attaching the machine-locking side brackets to the pallet.
- 6) Remove the metal brackets from the sides of the machine.

F800-F900 PACKING CONTENT

1 key-cutting machine Unocode F800/F900	
1 cardboard box (b) containing:	1 feeder unit
	1 top loader
	1 V4 electric clamp
	1 serial cable
1 power cable	
1 tool set	
1 set of documents, including:	user's manual, spare parts sheet, optional accessories guide and warranty

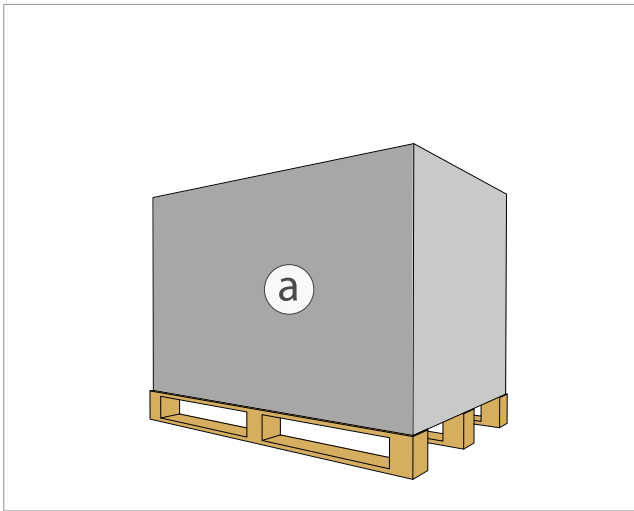


Fig. 10

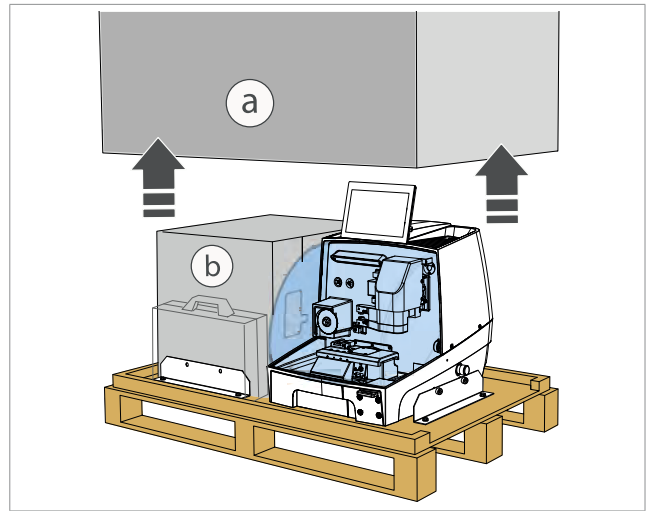


Fig. 11

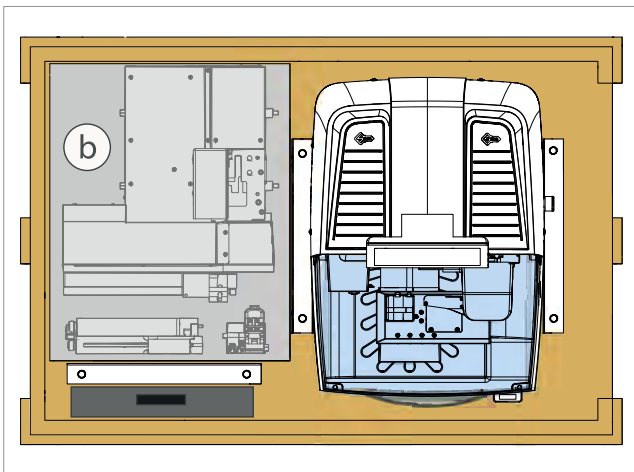


Fig. 12

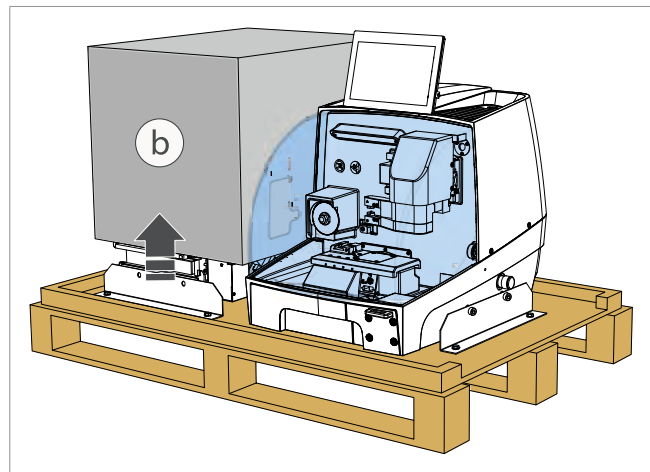


Fig. 13

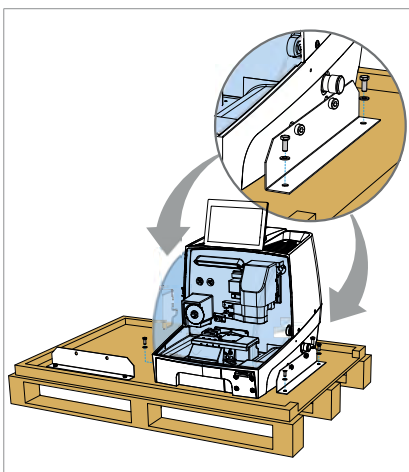


Fig. 14

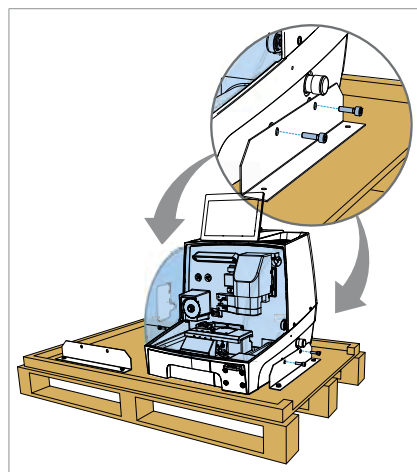


Fig. 15

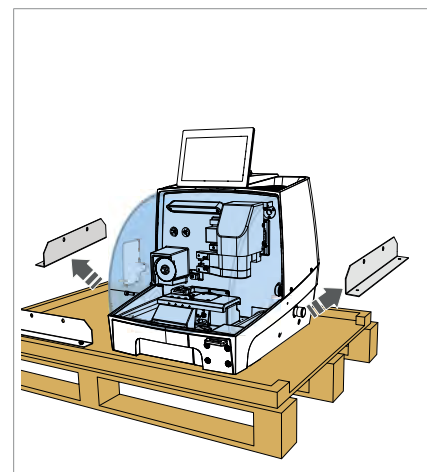


Fig. 16

3.3 OPENING PACKING FOR UNOCODE F100-F400-F600

To remove the machine from its packing:

- 1) Remove the straps.
- 2) Lift the cardboard box.
- 3) Check the contents of the packing (see table below).
- 4) Remove the screws attaching the machine-locking side brackets to the pallet.
- 5) Remove the metal brackets from the sides of the machine.

F100-F400-F600 PACKING CONTENT

- 1 key-cutting machine Unocode F100/F400/F600
- 1 power cable
- 1 tool set
- 1 set of documents, including: user's manual, spare parts sheet, optional accessories guide and warranty

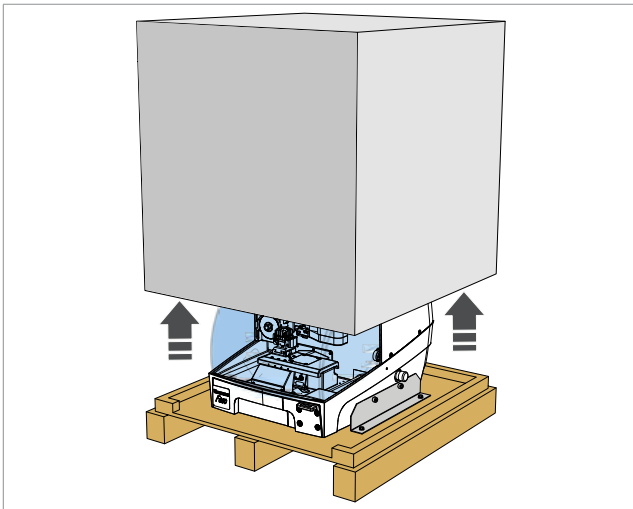


Fig. 17

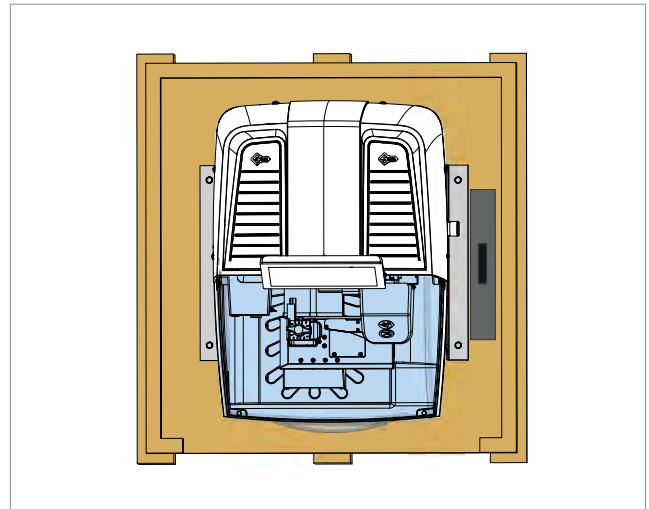


Fig. 18

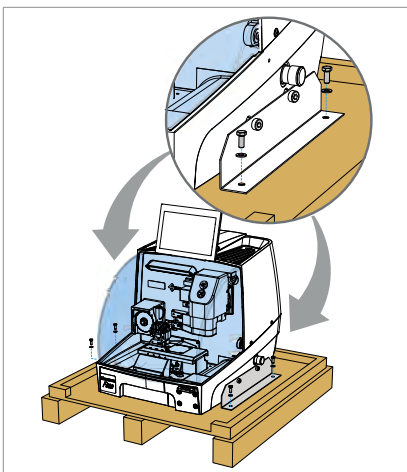


Fig. 19

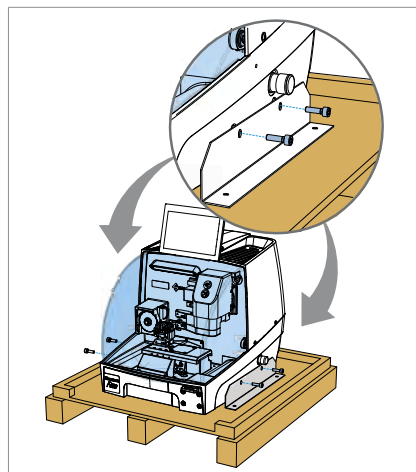


Fig. 20

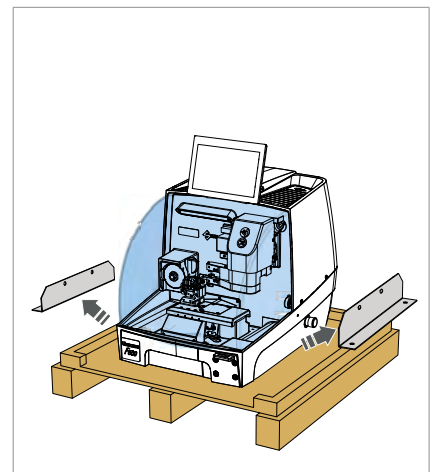


Fig. 21

3.4 MACHINE HANDLING

When the machine has been unpacked, place it directly on its workbench; this operation should be carried out by at least two people.

To make gripping the machine easier, remove the swarf collecting unit (Fig. 22).



ATTENTION: lift the machine by holding onto the base. Never lift the machine by holding the swarf collection unit, clamps or other parts.

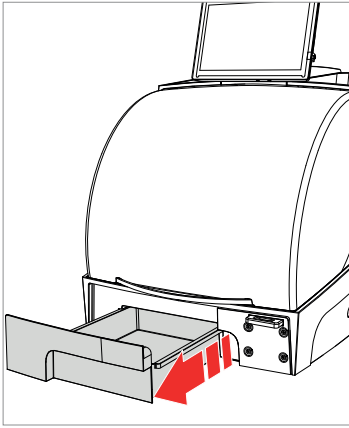


Fig. 22

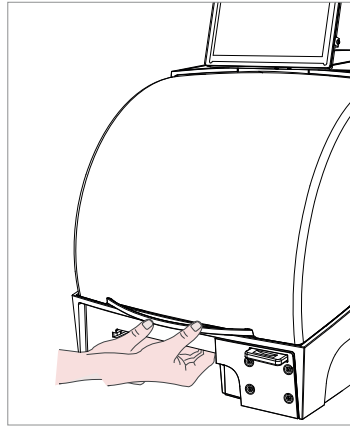


Fig. 23

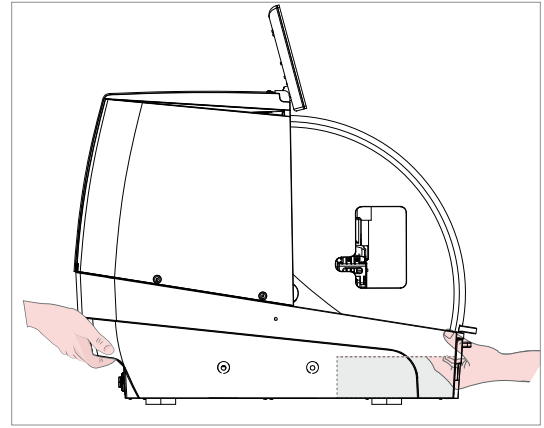


Fig. 24

4 MACHINE INSTALLATION AND PREPARATION

Installation is the customer's task and does not require any special skills.

The key-cutting machine is supplied ready for use and does not need calibration except for the tools to be used and any additional jaws that are included with the machine; however, the operator is required to make certain checks and prepare the machine for use.

4.1 CHECKING FOR DAMAGE

UNOCODE F is a solid machine and will not break if handling, unpacking and installation are carried out to the instructions in this manual. However, it is good practice to check that the machine has not been damaged.

4.2 ENVIRONMENTAL CONDITIONS

To make the most of the key-cutting machine, bear in mind the following environmental parameters: it is advisable for the area to be dry with good air circulation.

The optimum environmental conditions for machine operation are:

- temperature 10° C to 40°C;
- relative humidity: approx: 60%

4.3 POSITIONING

- 1) Place the key-cutting machine on a solid horizontal work bench suitable for the weight of the machine (chap.2.5, page 10). The work bench should be approximately 100-120 cm high to facilitate access to the working parts. We recommend leaving at least 30 cm clearance behind and around the machine to ensure good ventilation and facilitate handling (Fig. 25).
- 2) Install any separate parts (see Ch.5).
- 3) Make sure machine voltage is suitable for the mains supply and that the latter is earthed with a differential switch.
- 4) Connect the power lead to the machine (Ch.5.4).

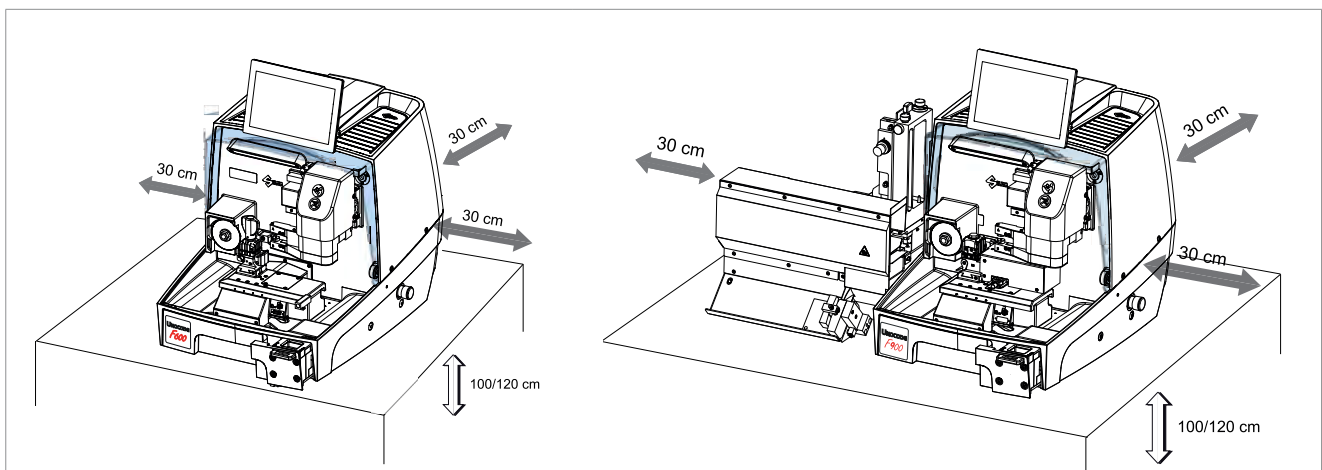


Fig. 25

5 SEPARATE PARTS

The machine packing also contains the following components, separately packed:

5.1 V4 ELECTRIC CLAMP (UNOCODE F800-F900)

- 1) Fit the clamp into the special dovetail groove (Fig. 26).
- 2) Tighten the grub screw (M3).
- 3) Connect the clamp to the machine with the serial cable (M4) (Fig. 28).

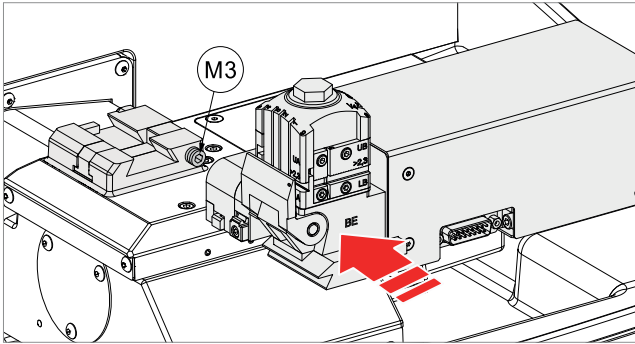


Fig. 26

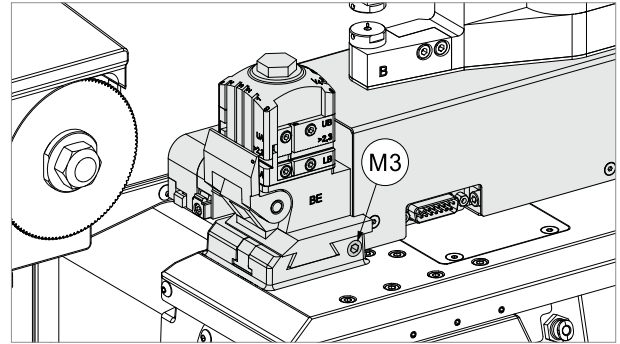


Fig. 27

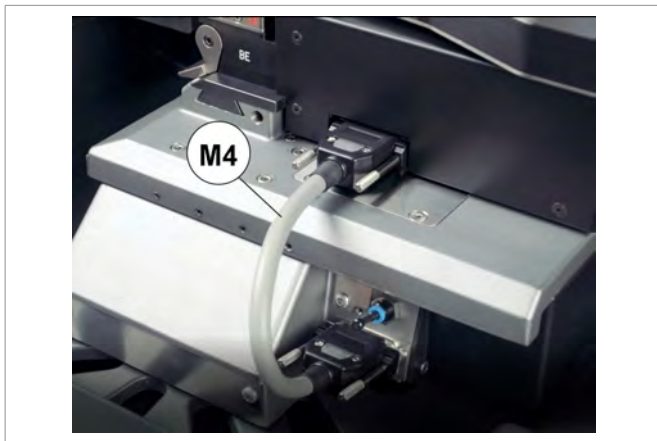


Fig. 28

ATTENTION: if the machine does not have the BE-V4 clamp installed, one must be fitted to perform the guided Feeder Unit CALIBRATION procedure.

5.2 FEEDER UNIT (UNOCODE F800-F900)

INSTALLATION OF FEEDER ON MACHINE

ATTENTION: if the machine does not have the FEEDER UNIT installed, it must be fitted to perform the guided CALIBRATION procedure.

- 1) Place the feeder unit in position with the threaded pins (U2) in the holes on the left-hand side of the key-cutting machine (Fig. 30).
- 2) Move the feeder unit to the machine, insert the 2 pins into the threaded holes and then the bushings in the seat (counterbore) of the machine base (Fig. 32 and Fig. 33).
- 3) Screw the hexagonal head of the pins (U3) to lock the feeder onto the machine (Fig. 34).
- 4) Connect the USB and serial cables to the machine and feeder (Fig. 35).



ATTENTION: the feeder unit must be calibrated after installation (Ch.13.5 CALIBRATING/ALIGNING THE FEEDER).

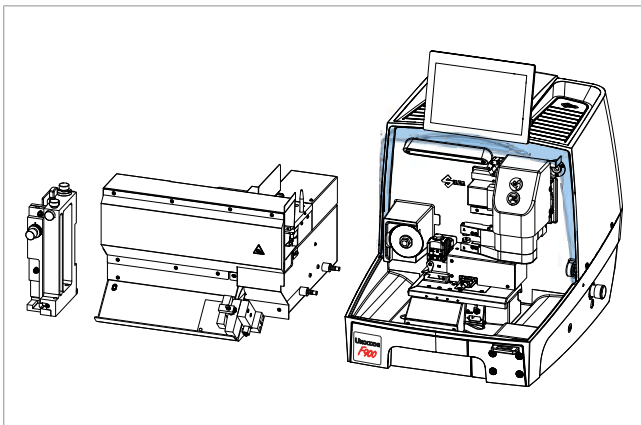


Fig. 29

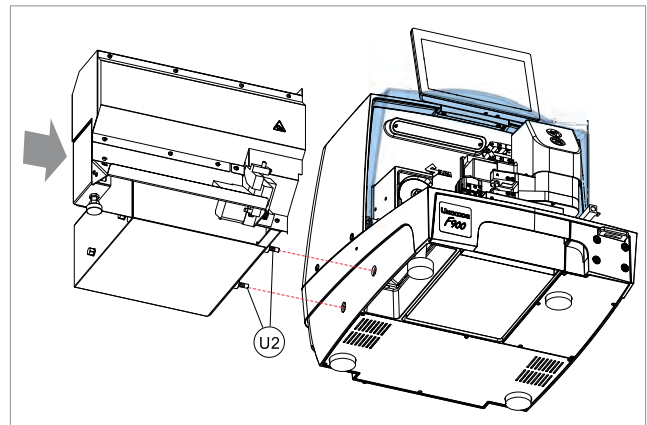


Fig. 30

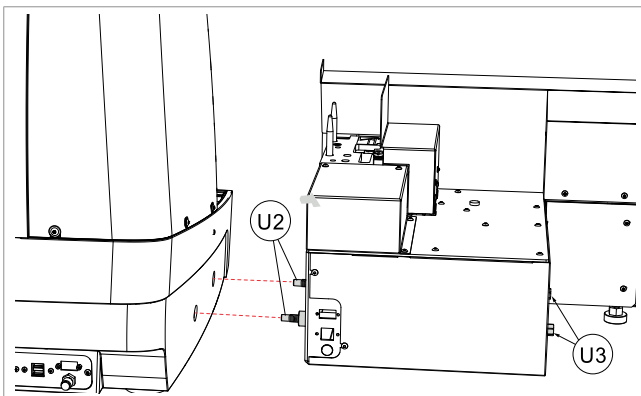


Fig. 31

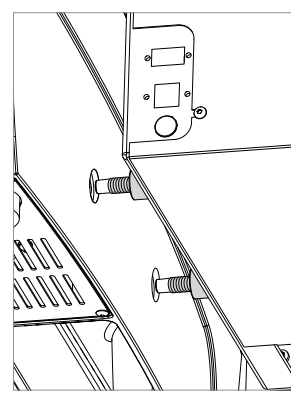


Fig. 32

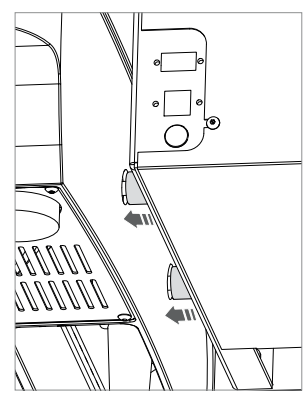


Fig. 33

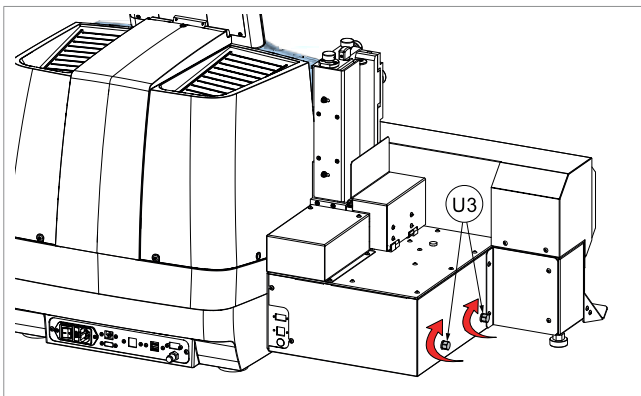


Fig. 34

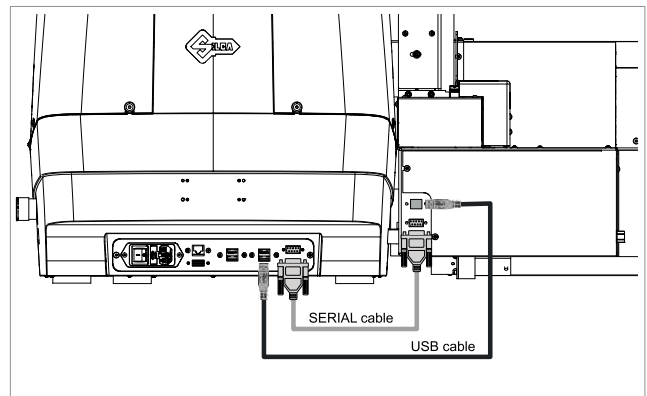


Fig. 35

5.3 TOP LOADER (UNOCODE F800-F900)

INSTALLATION OF TOP LOADER ON FEEDER

- 1) Rotate the shield (U4) (Fig. 36).
- 2) Open the lever (U5) completely (Fig. 36).
- 3) Insert the top loader, centering on the pins (G1) (Fig. 37).
- 4) Close the lever (U5) and shield (U4) (Fig. 38).

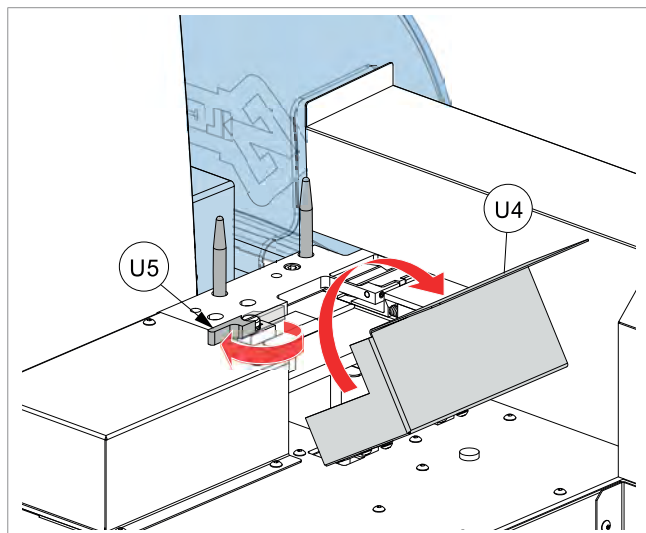


Fig. 36

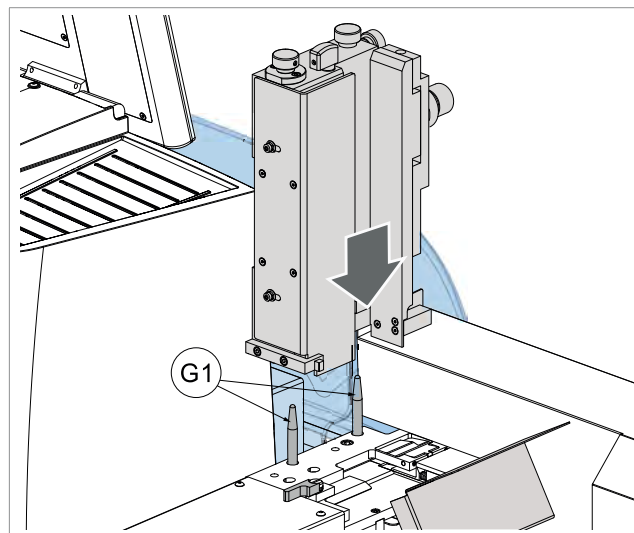


Fig. 37

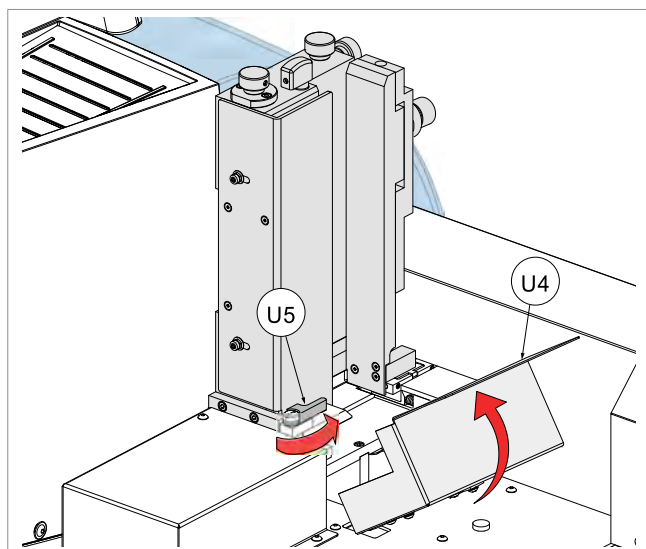


Fig. 38

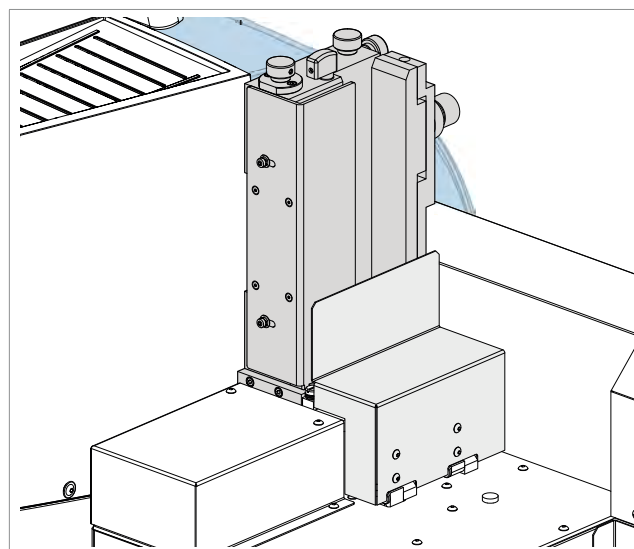


Fig. 39

5.4 POWER SUPPLY CABLE

Connect the power supply cable to the power supply socket.



Fig. 40

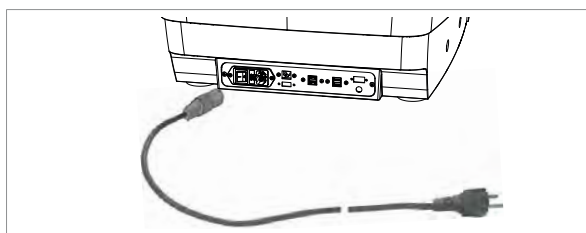
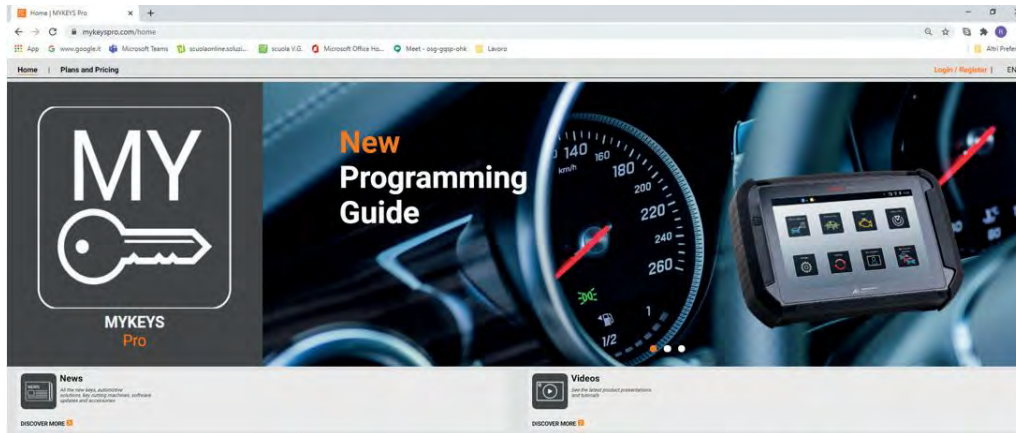


Fig. 41

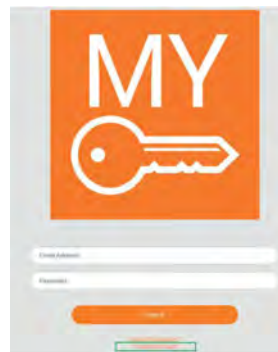
6 MACHINE REGISTRATION

This operation is required to enable the use of authorised updates and protected systems.

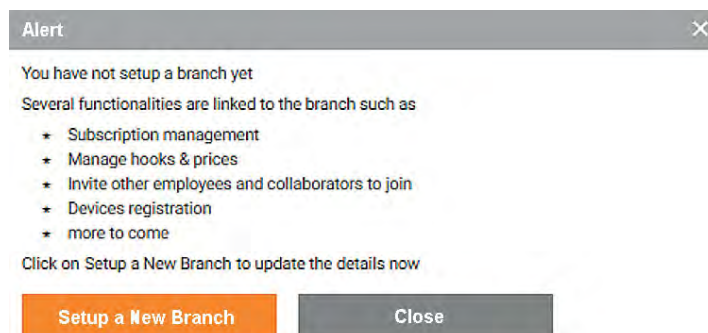
- 1) Go in mykeyspro.com



- 2) If you don't have a login follow next step, else follow from step 5.
- 3) Press link "Create account" and follow instructions.



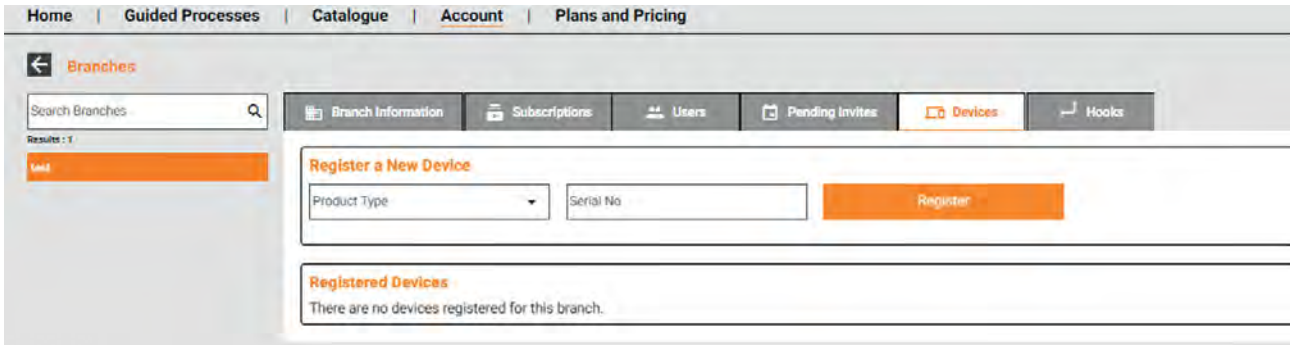
- 4) After registration, apply for login to enter MKP features.
- 5) If you did not create a "Business" into MKP follow next step, else go to step 7.



- 6) Press "Setup a new Branch" to create your Main Branch and follow instructions.
- 7) Select "Account" menu and will appear following page:



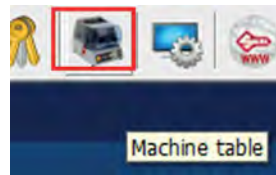
8) Select “My Devices”



9) Select “product type” you want to register, enter Serial Number and press “Register” button.

7 HOW TO SET UP A UNOCODE F KEY-CUTTING MACHINE IN SKP PRO

1) Start the SKP PRO program and enter:



2) In the 'Available Machines' window click on 'New'



3) In Machine Management, complete the different fields in General Data.

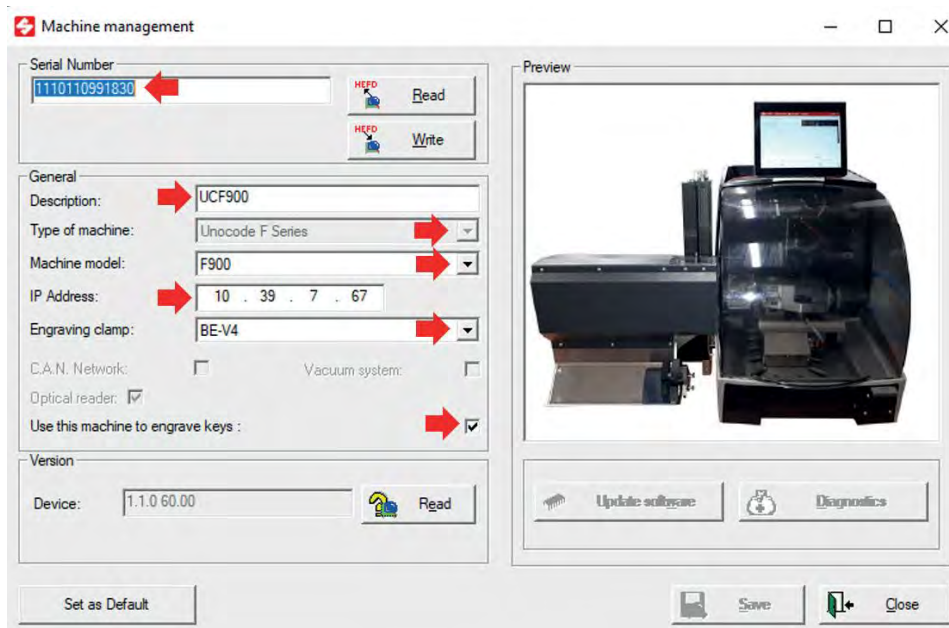


Fig. 42

Note: If the engraving function is required, check the box next to the words 'Use this machine to engrave keys' to enable the engraving function (if the machine mounts an engraving unit). This function is used to create engraving models in the SKP PRO program.

Go to the 'Engraving Models' function to choose the type of engraving 'Unocode's cutting' (Fig. 43).



Fig. 43

How to set the IP address for the Unocode F in your SKP PRO

- 1) Make sure the Unocode F is connected to the internet by means of a router (via LAN cable or Wi-Fi connection).



- 2) On the display enter the Settings – Network menu.

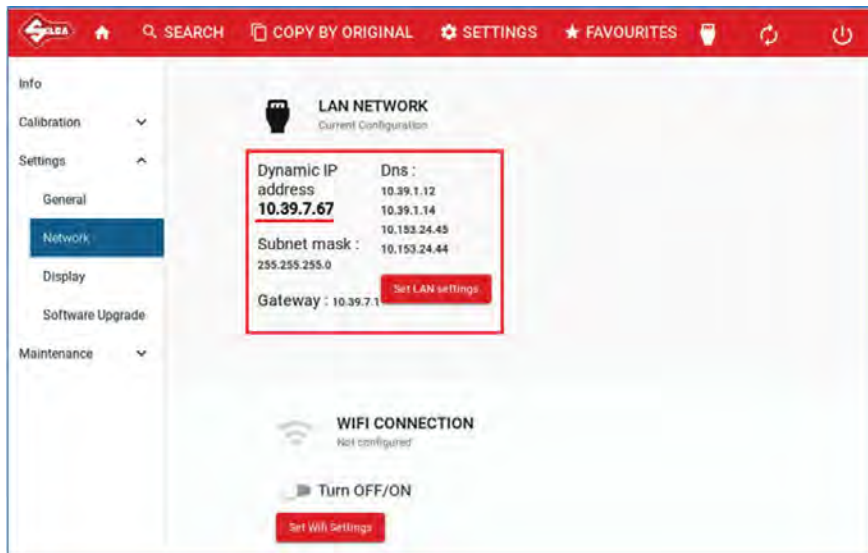
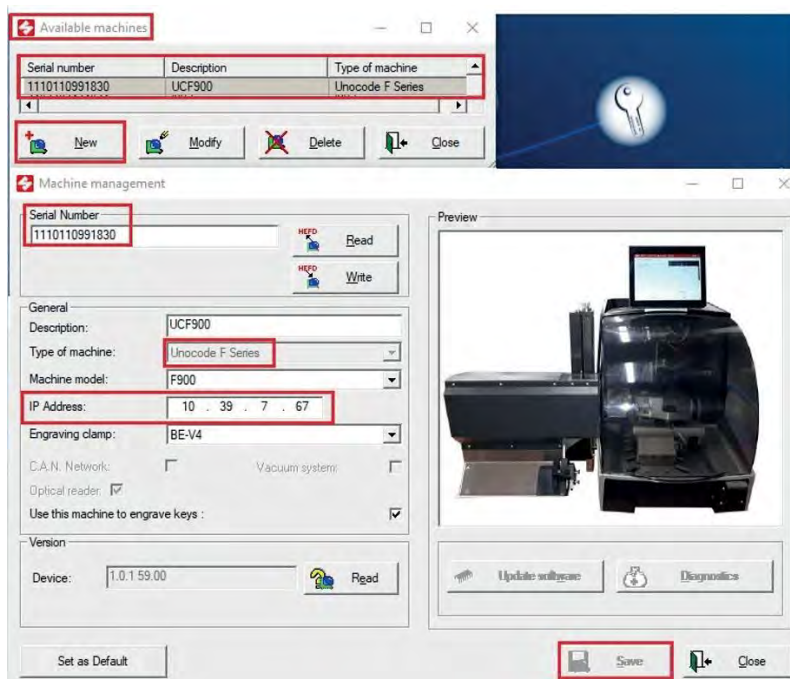
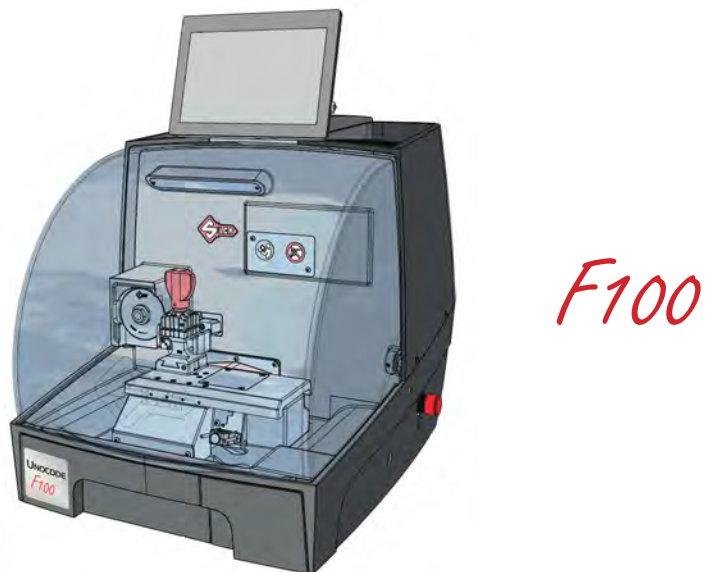


Fig. 44

If there is no Dynamic IP address, click on ‘Set LAN settings’.
Then digit the Dynamic IP in the IP Address field.
Click the ‘Read’ key to find the machine serial number.
Click on Save.



8 UNOCODE F100

UNOCODE F100 is used to CUT BY CODE flat cylinder and vehicle keys.

UNOCODE F100 operates in 2 ways:

- **Key code entry directly on the machine**
- **Connected to a PC (with Silca software)**

Characteristics:

- **V2 MANUAL CLAMP**

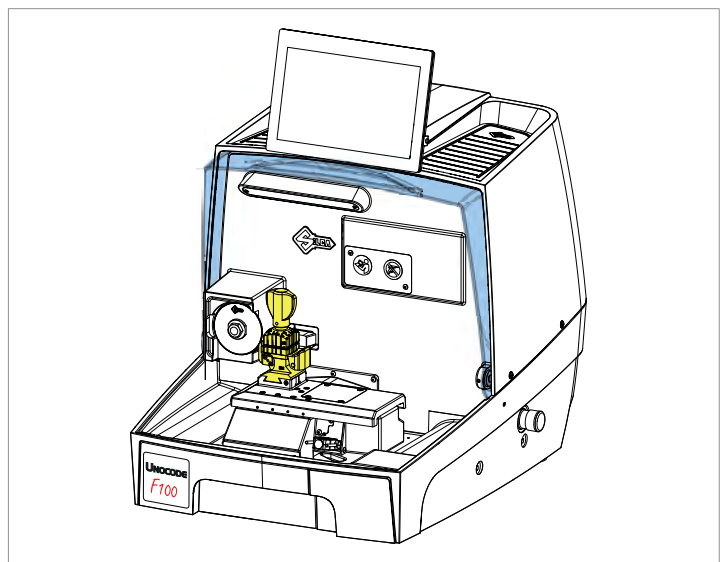


Fig. 45

8.1 MAIN OPERATING PARTS

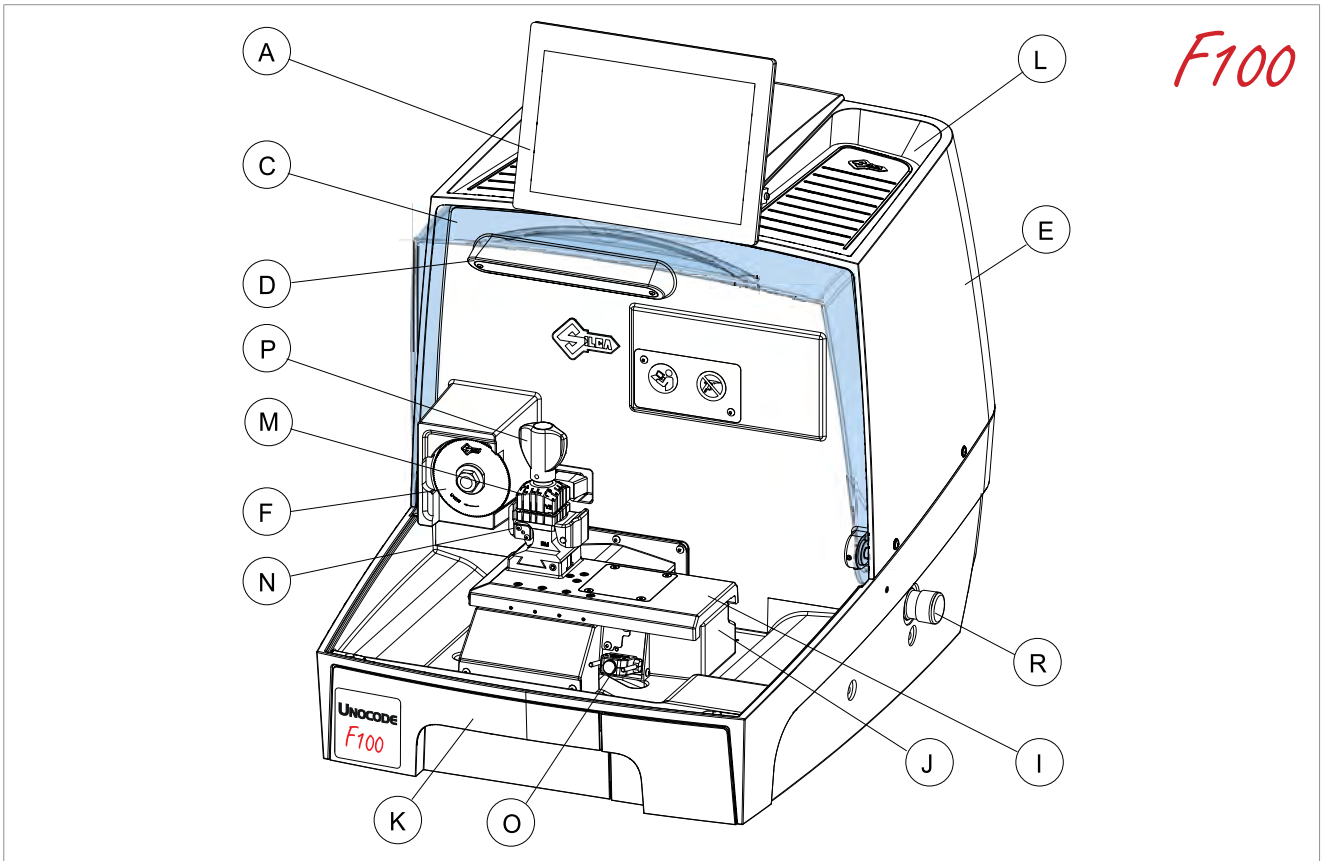


Fig. 46

- A - Monitor touch
- B - Master switch
- C - Protective shield
- D - Lamp
- E - Cover
- F - Prismatic cutter
- I - X axis carriage
- J - Y axis carriage
- L - Tool compartment
- K - Swarf collection unit
- M - V2 manual clamp
- M1 - Clamp knob
- N - Clamp gauge
- O - Connector for detecting V2 clamp
- R - Emergency push button
- Y - Power inlet
- Y1 - Fuse compartment
- Y2 - Video port
- Y3 - Ethernet port
- V1 - USB ports

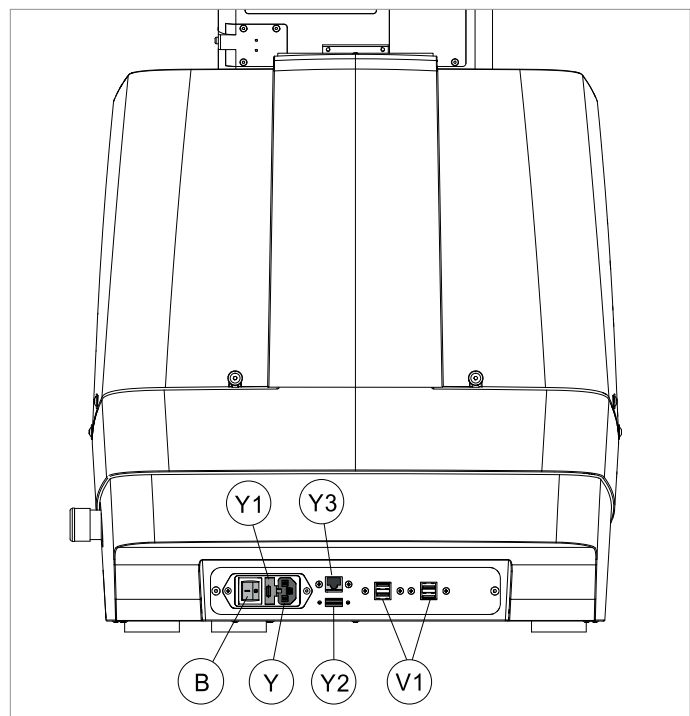


Fig. 47

8.2 V2 CLAMP

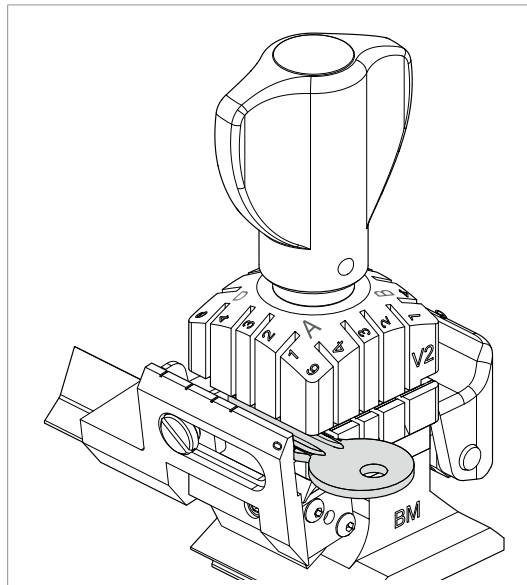


Fig. 48 - V2 manual clamp

The four-sided manual clamp blocks keys perfectly, whether they are inserted with the back against the bottom of the clamp or gripped by the profile.

- For key cutting by code, the machine display shows the clamp side to use for positioning the key.
- To fit keys with tip stops into the clamp, use the mobile stop on the gauge (Fig. 51) to be fitted into the special grooves (Fig. 50).

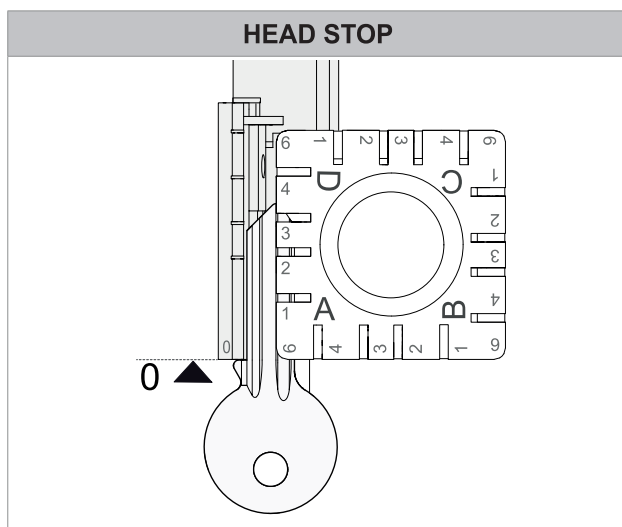


Fig. 49

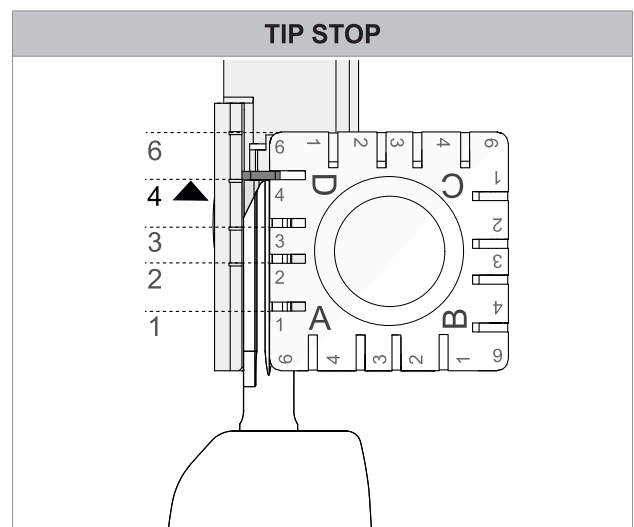


Fig. 50

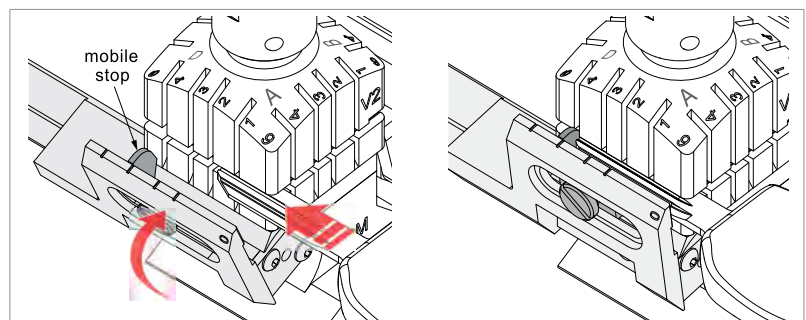


Fig. 51 - mobile stop

9 UNOCODE F400



F400

UNOCODE F400 is used to cut flat cylinder and vehicle keys.

UNOCODE F400 operates in 3 ways:

- **Key code entry directly on the machine**
- **Key reading by the PHOTO READER**
- **Connected to a PC (with Silca software)**

Characteristics:

- **V2 MANUAL CLAMP**
- **PHOTO READER UNIT**

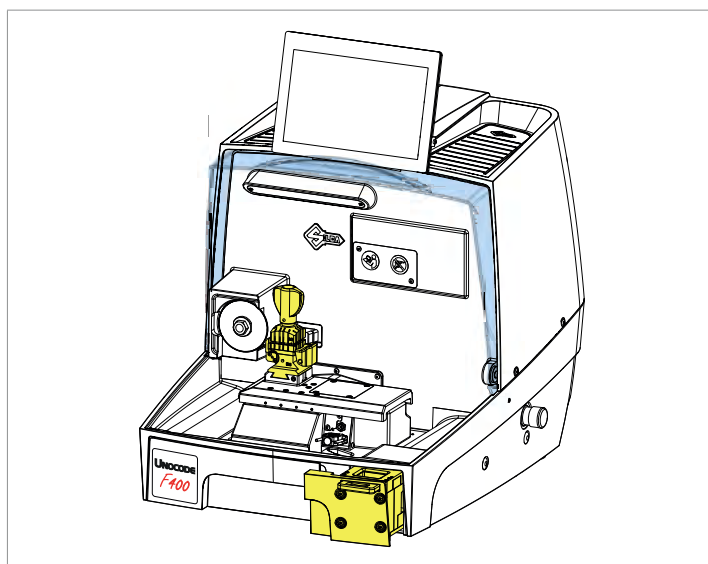


Fig. 52

9.1 MAIN OPERATING PARTS

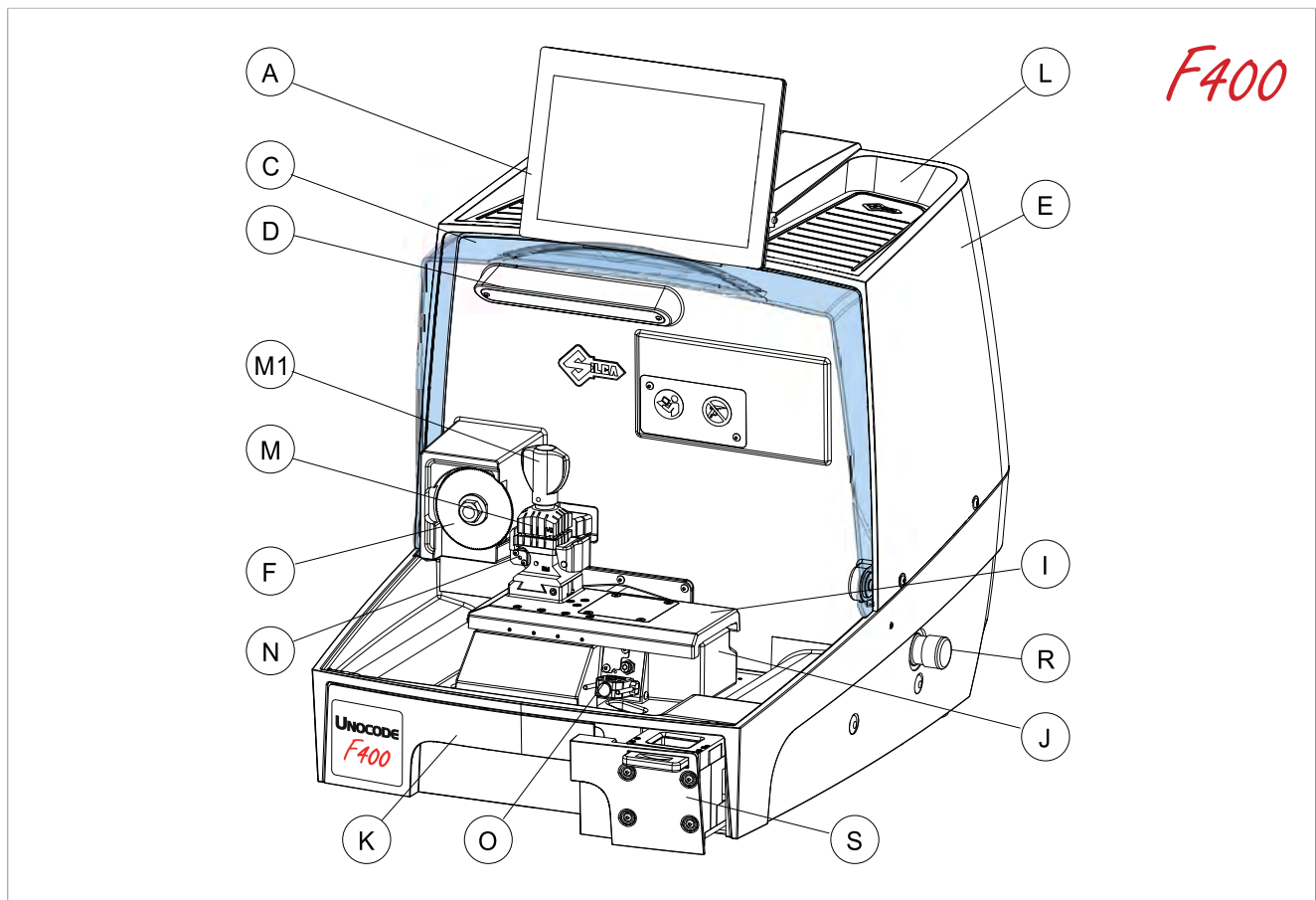


Fig. 53

- A - Monitor touch
- B - Master switch
- C - Protective shield
- D - Lamp
- E - Cover
- F - Prismatic cutter
- I - X axis carriage
- J - Y axis carriage
- L - Tool compartment
- K - Swarf collection unit
- M - V2 manual clamp
- M1 - Clamp knob
- N - Clamp gauge
- O - Connector for detecting V2 clamp
- R - Emergency push button
- S - Photo Reader unit
- Y - Power inlet
- Y1 - Fuse compartment
- Y2 - Video port
- Y3 - Ethernet port
- V1 - USB ports

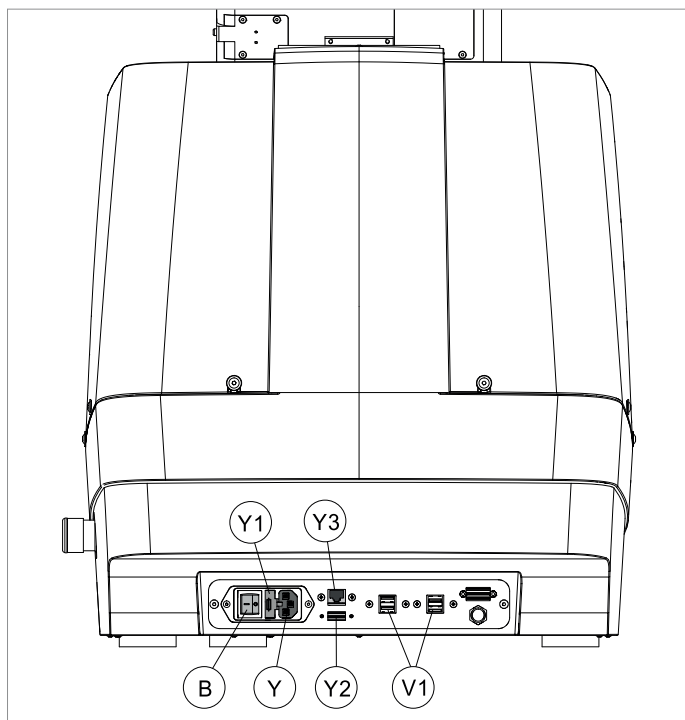


Fig. 54

9.2 V2 CLAMP

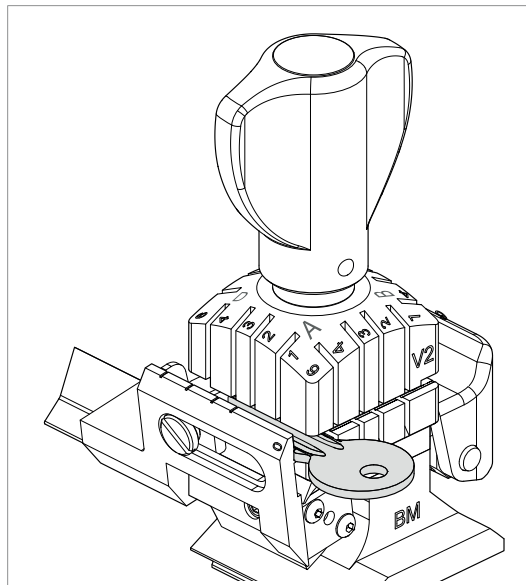


Fig. 55 - V2 manual clamp

The four-sided manual clamp blocks keys perfectly, whether they are inserted with the back against the bottom of the clamp or gripped by the profile.

- For key cutting by code, the machine display shows the clamp side to use for positioning the key.
- To fit keys with tip stops into the clamp, use the mobile stop on the gauge (Fig. 58) to be fitted into the special grooves (Fig. 57).

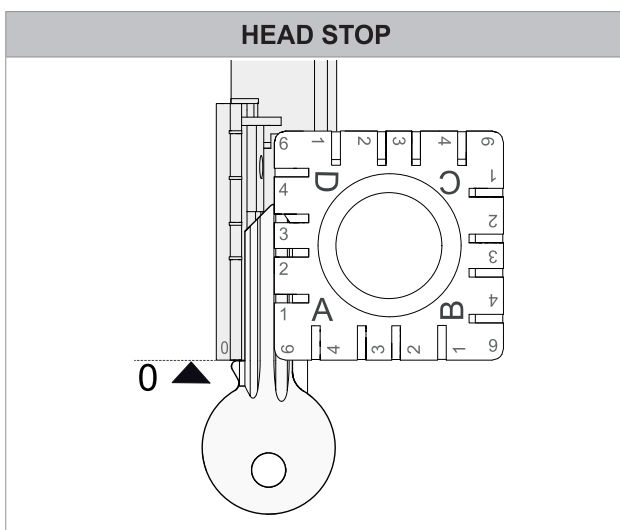


Fig. 56

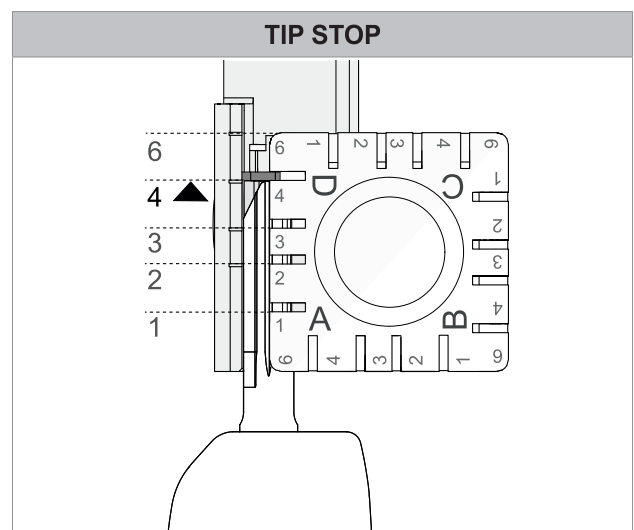


Fig. 57

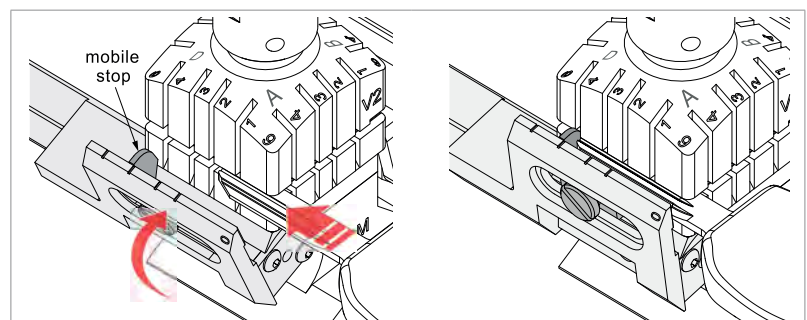


Fig. 58 - mobile stop

9.3 PHOTO READER

The photo reader uses a photo/optic system to read the cuts on keys to be duplicated. The device is located in the lower right-hand part of the key-cutting machine.

To read/decode keys using the photo reader, follow the instructions below:

- 1) Pull the photo reader unit (S) out all the way.
- 2) Hold the unit firmly with one hand and push the handle (S1) (Fig. 60).
- 3) Use the other hand to insert the key to be read (Fig. 61).
- 4) Follow the instructions on the display to proceed with reading.



ATTENTION: do not push the photo reader unit in when the key is inserted. The key is read with the unit pulled out all the way.

TO CLOSE THE PHOTO READER UNIT:

- 1) Hold the unit still.
- 2) Press the handle (S1) and remove the key.
- 3) Release the handle (S1) and push the unit in all the way.

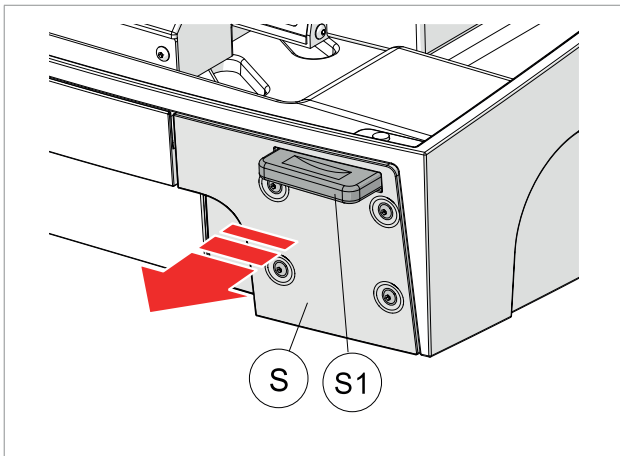


Fig. 59

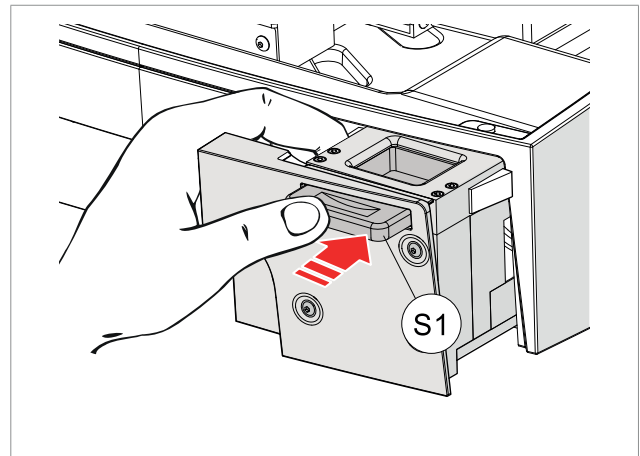


Fig. 60

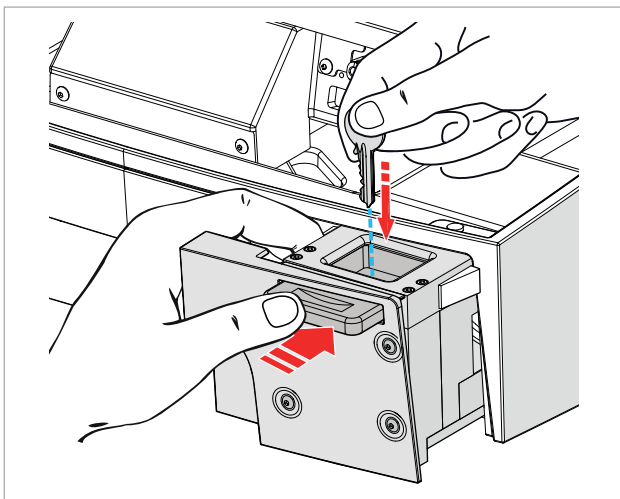


Fig. 61

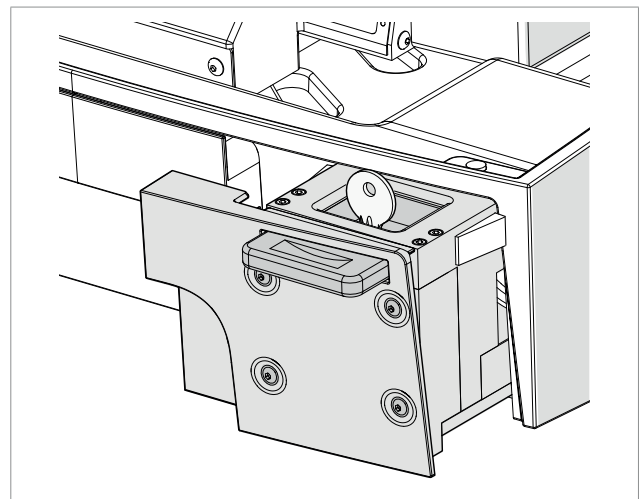


Fig. 62

9.3.1 CHARACTERISTICS OF KEYS TO BE READ

- stem thickness: min.1,2 mm max.4 mm
- stem width + stop: max. 15 mm
- reading length: max.48 mm (stem+stop)

Note: keys with oversized heads must have a neck length of no less than 16 mm

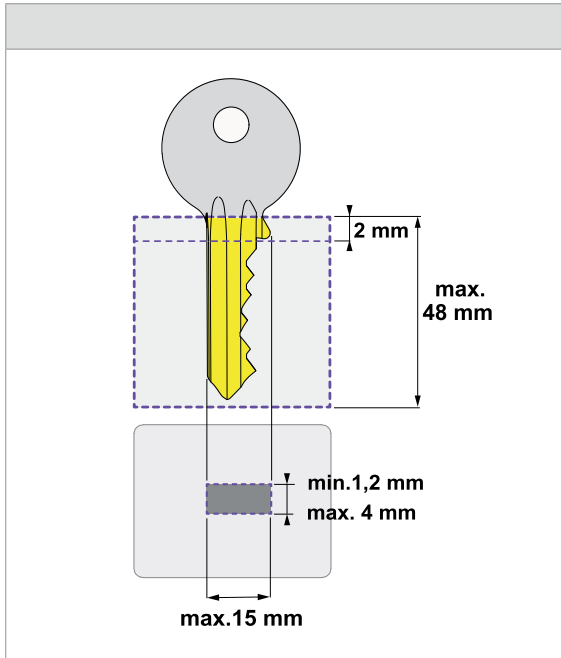


Fig. 63

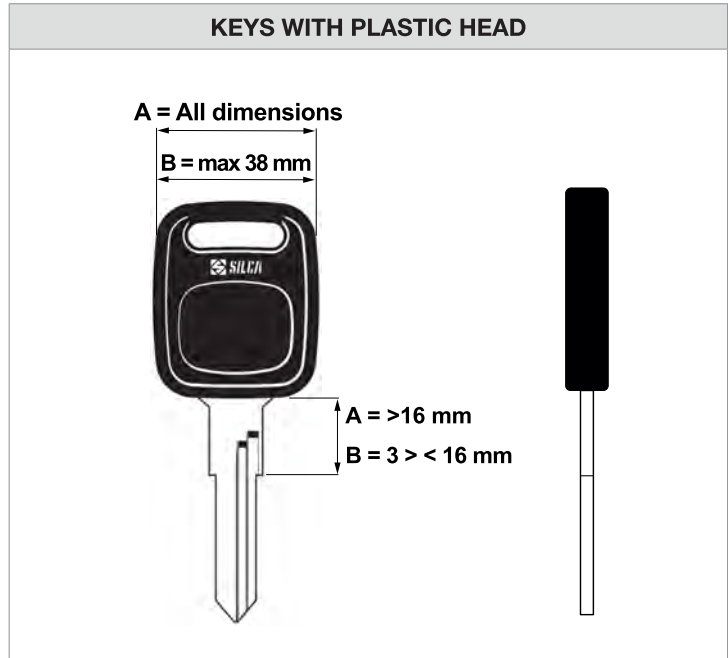


Fig. 64

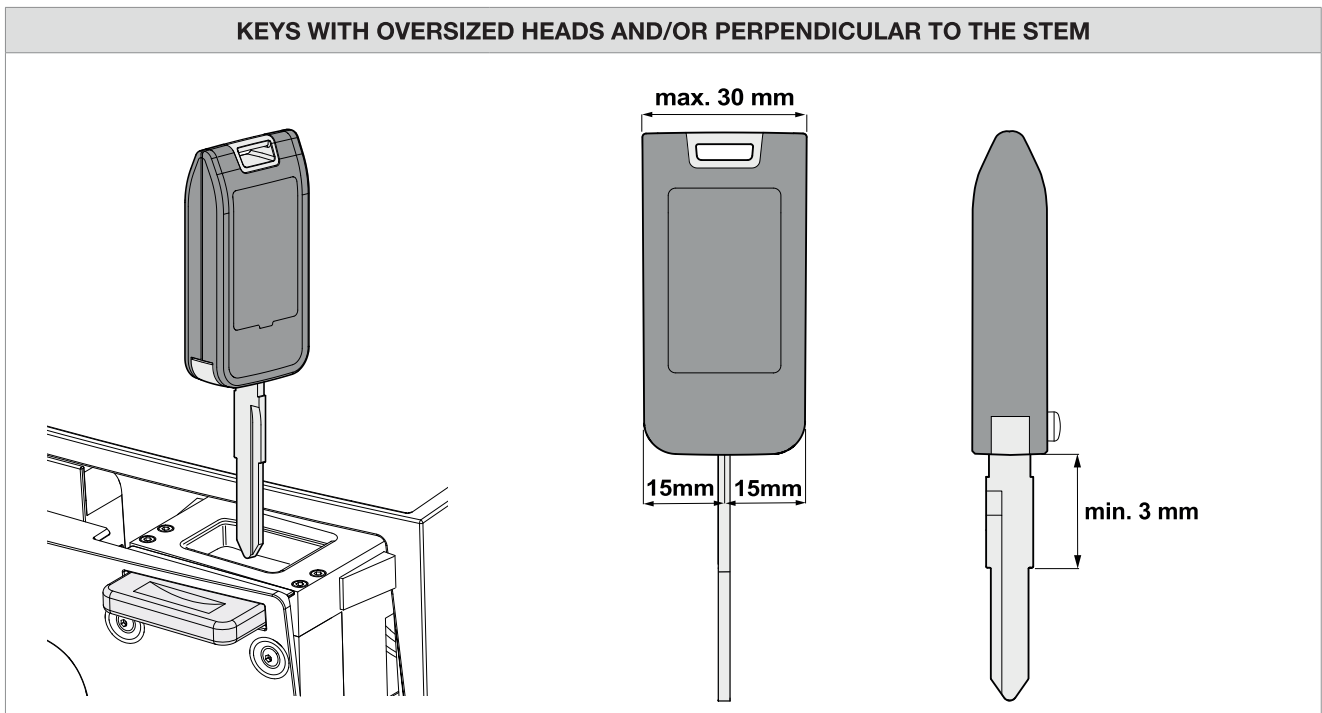


Fig. 65

10 UNOCODE F600



F600

UNOCODE F600 is used to duplicate flat cylinder and vehicle keys.

UNOCODE F600 operates in 3 ways:

- **Key code entry directly on the machine**
- **Key reading by the PHOTO READER**
- **Connected to a PC (with Silca software)**

Characteristics:

- **V2 MANUAL CLAMP**
- **PHOTO READER UNIT**
- **ENGRAVING UNIT**

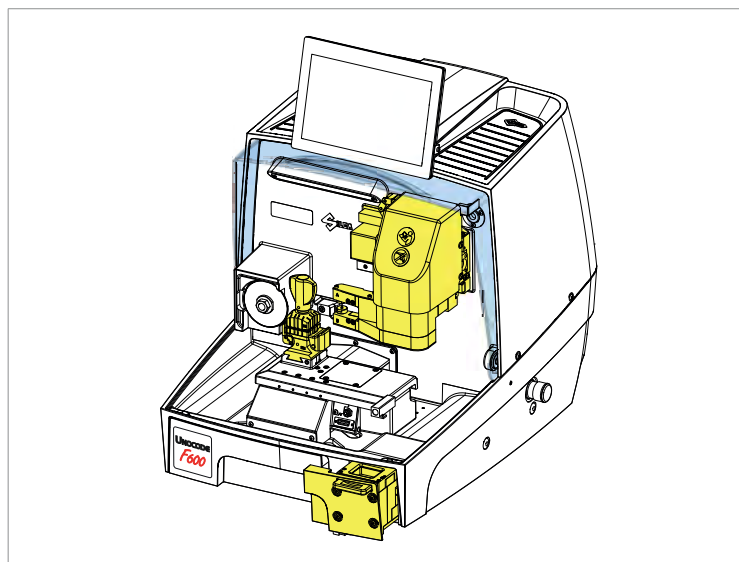


Fig. 66

10.1 MAIN OPERATING PARTS

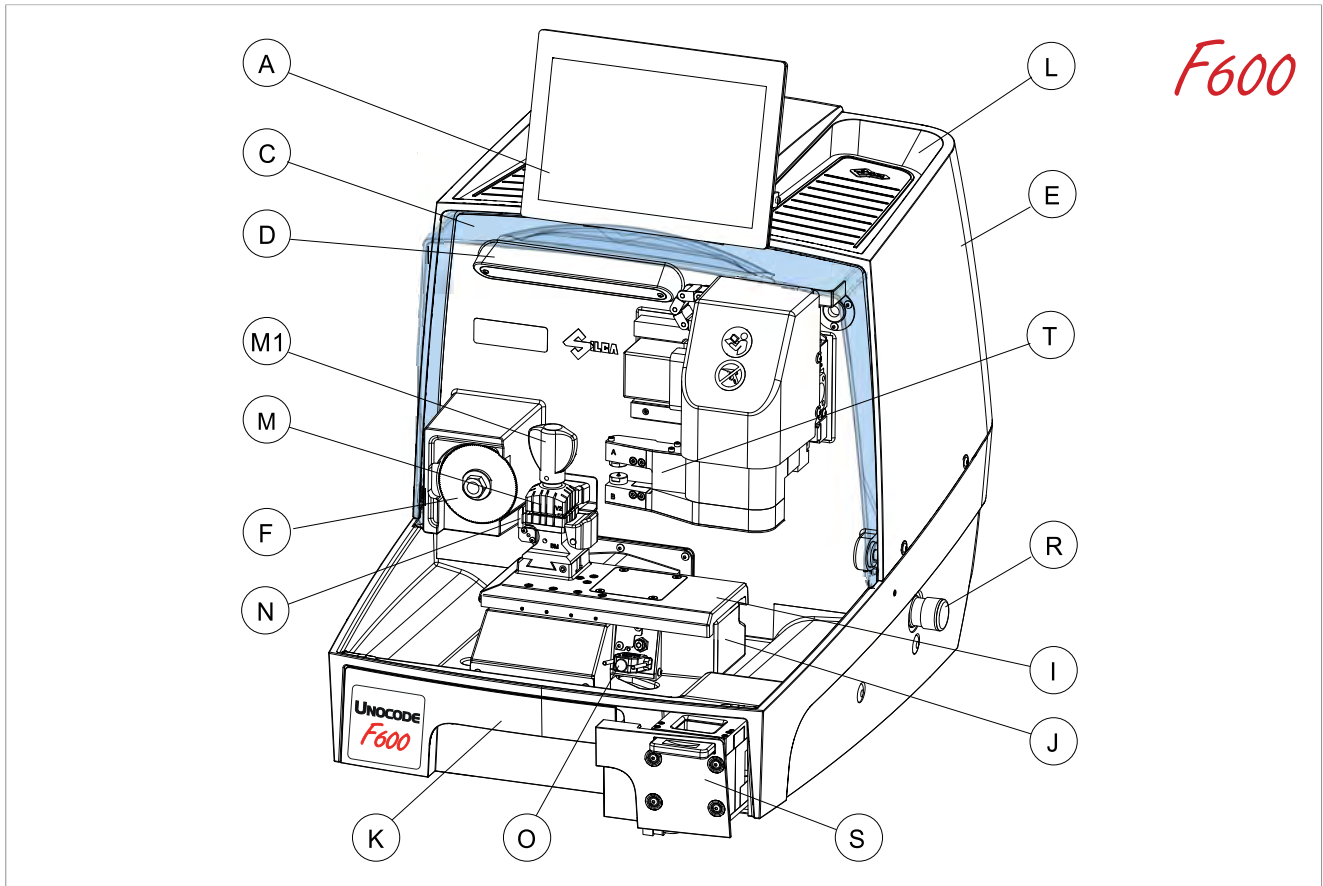


Fig. 67

- A - Monitor touch
- B - Master switch
- C - Protective shield
- D - Lamp
- E - Cover
- F - Prismatic cutter
- I - X axis carriage
- J - Y axis carriage
- L - Tool compartment
- K - Swarf collection unit
- M - V2 manual clamp
- M1 - Clamp knob
- N - Clamp gauge
- O - Connector for detecting V2 clamp
- R - Emergency push button
- S - Photo Reader unit
- T - Engraving unit
- Y - Power inlet
- Y1 - Fuse compartment
- Y2 - Video port
- Y3 - Ethernet port
- V1 - USB ports

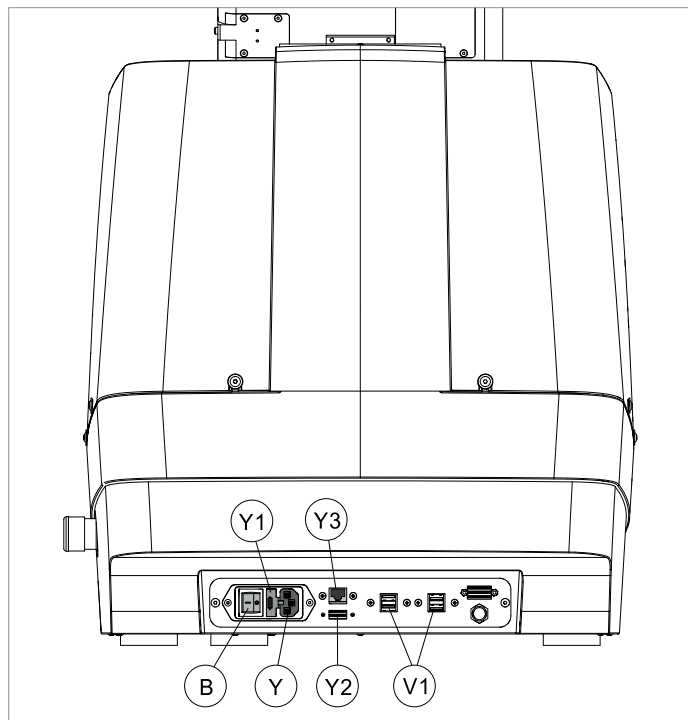


Fig. 68

10.2 V2 CLAMP

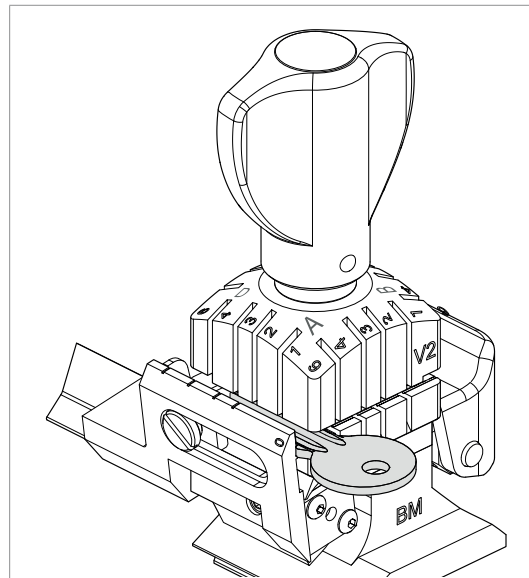


Fig. 69 - V2 manual clamp

The four-sided manual clamp blocks keys perfectly, whether they are inserted with the back against the bottom of the clamp or gripped by the profile.

- For key cutting by code, the machine display shows the clamp side to use for positioning the key.
- To fit keys with tip stops into the clamp, use the mobile stop on the gauge (Fig. 72) to be fitted into the special grooves (Fig. 71).

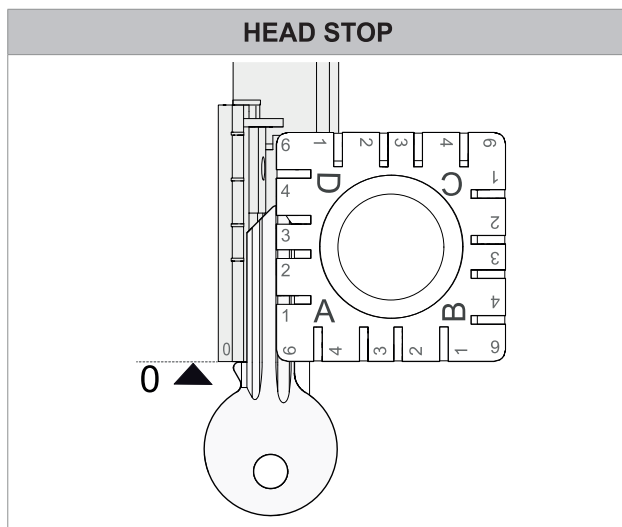


Fig. 70

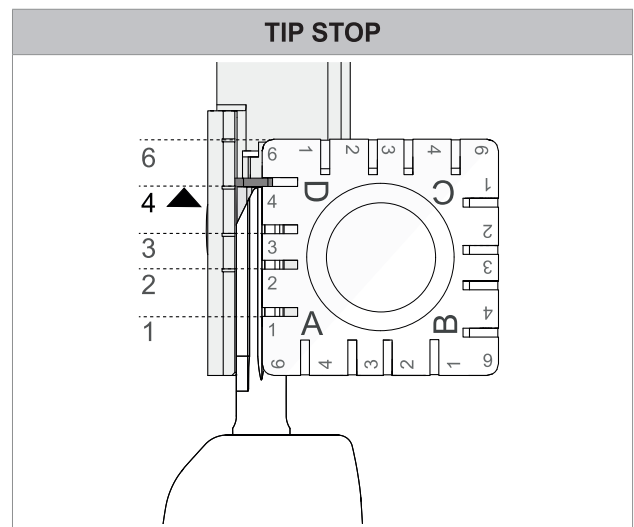


Fig. 71

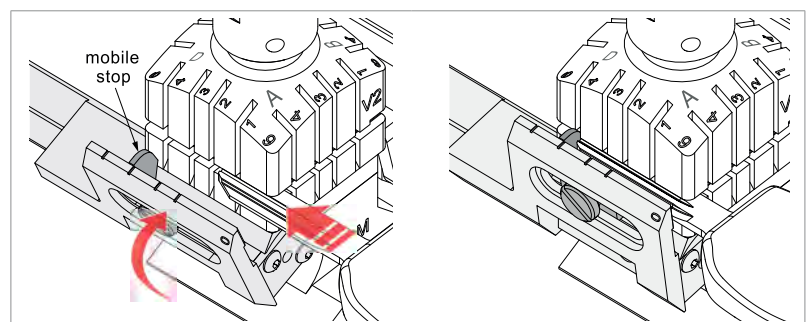


Fig. 72 - mobile stop

10.3 PHOTO READER

The photo reader uses a photo/optic system to read the cuts on keys to be duplicated. The device is located in the lower right-hand part of the key-cutting machine.

To read/decode keys using the photo reader, follow the instructions below:

- 1) Pull the photo reader unit (S) out all the way.
- 2) Hold the unit firmly with one hand and push the handle (S1) (Fig. 74).
- 3) Use the other hand to insert the key to be read (Fig. 75).
- 4) Follow the instructions on the display to proceed with reading.



ATTENTION: do not push the photo reader unit in when the key is inserted. The key is read with the unit pulled out all the way.

TO CLOSE THE PHOTO READER UNIT:

- 1) Hold the unit still.
- 2) Press the handle (S1) and remove the key.
- 3) Release the handle (S1) and push the unit in all the way.

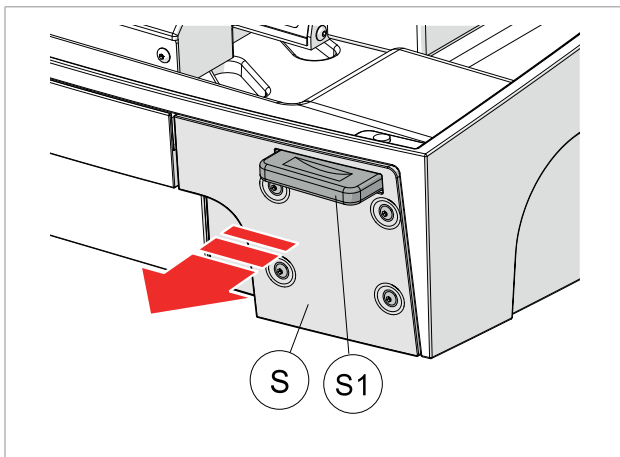


Fig. 73

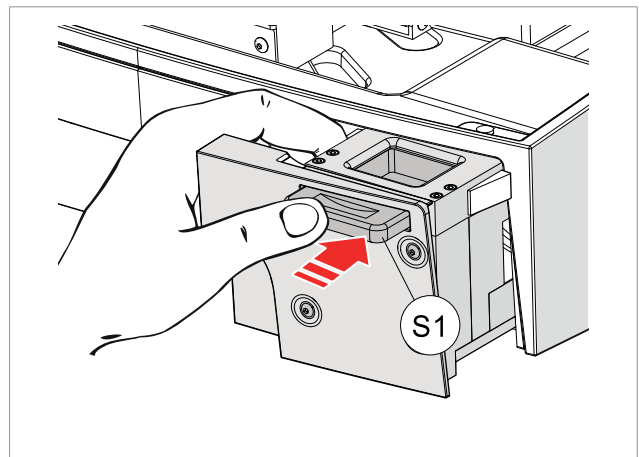


Fig. 74

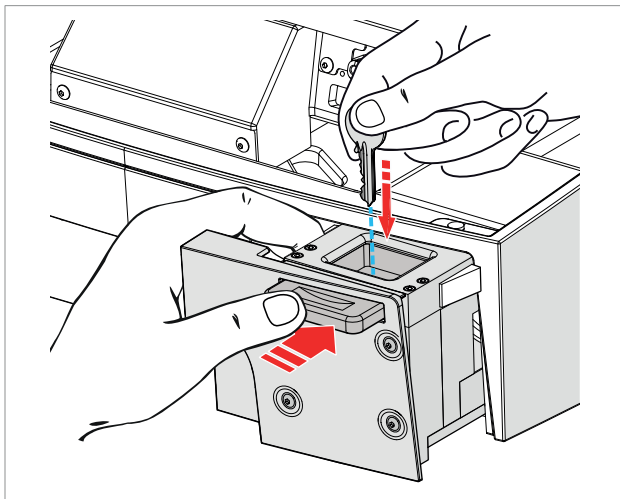


Fig. 75

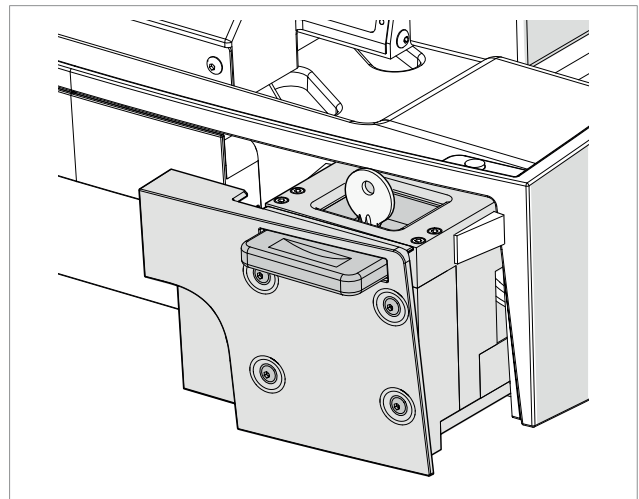


Fig. 76

10.3.1 CHARACTERISTICS OF KEYS TO BE READ

- stem thickness: min.1,2 mm max.4 mm
- stem width + stop: max. 15 mm
- reading length: max.48 mm (stem+stop)

Note: keys with oversized heads must have a neck length of no less than 16 mm.

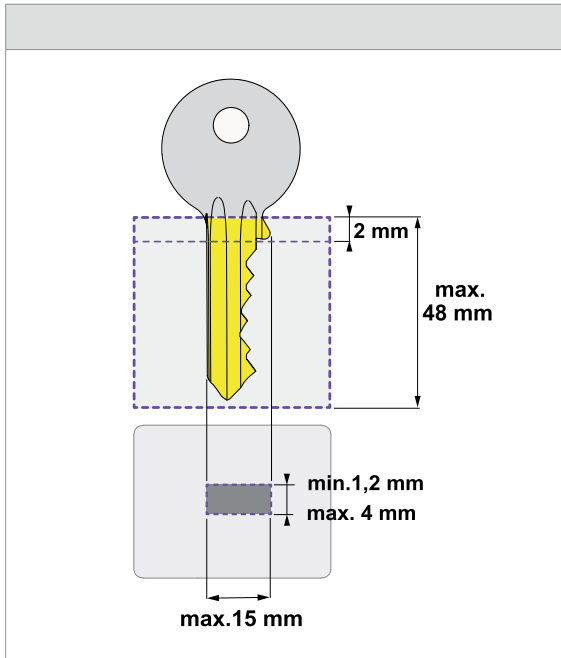


Fig. 77

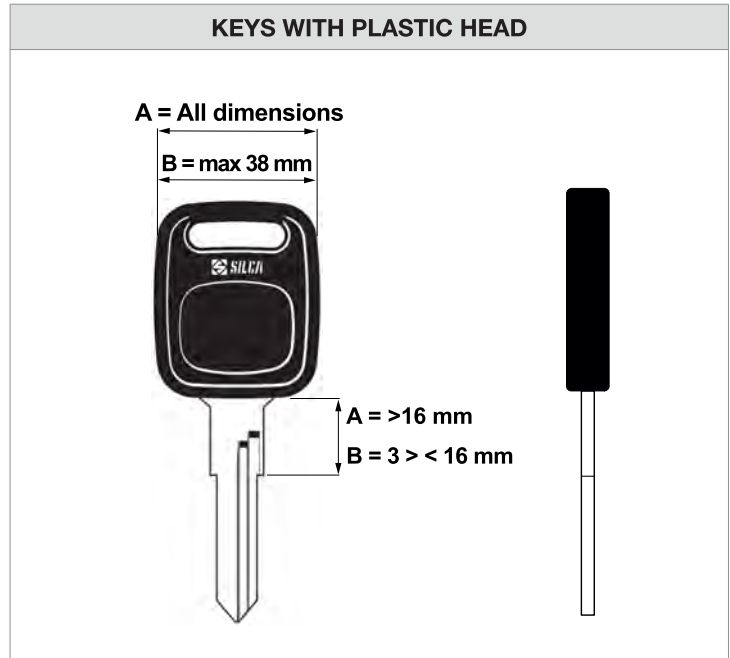


Fig. 78

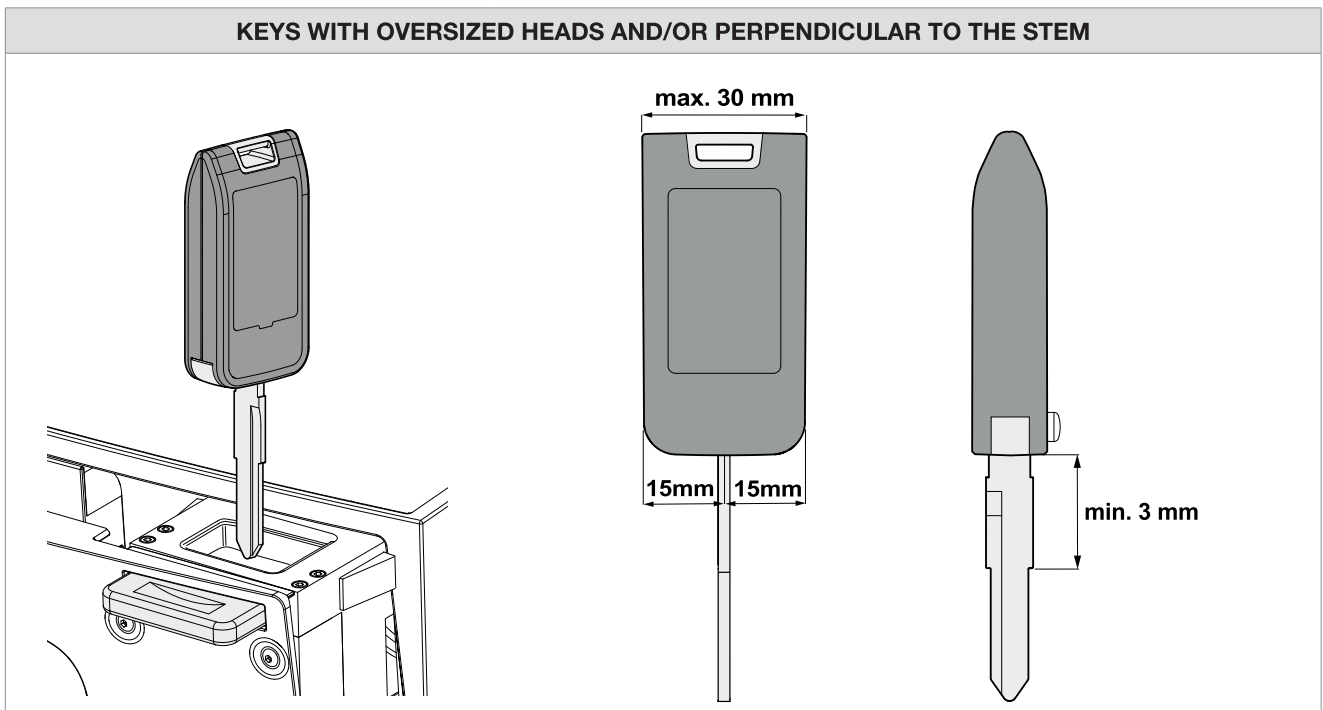


Fig. 79

10.4 ENGRAVING UNIT



UNOCODE F600 key-cutting machine is provided with an ENGRAVING system. Engraving can be done on flat, non-plastic heads of flat keys.



ATTENTION:

Keys must be metal and **NOT ALUMINIUM**.
The surface to be engraved must be flat.
Engraving cannot be done on cruciform keys.

CLAMP SIDES MANAGED

V2 manual clamp: A e B

For other optional clamps, see the instructions for SKP PRO.

DIMENSIONS

The maximum engraving area is shown in Fig. 80.

Max. key head thickness: 4 mm

NOTE: *In the cutting process, engraving takes place before cutting.*

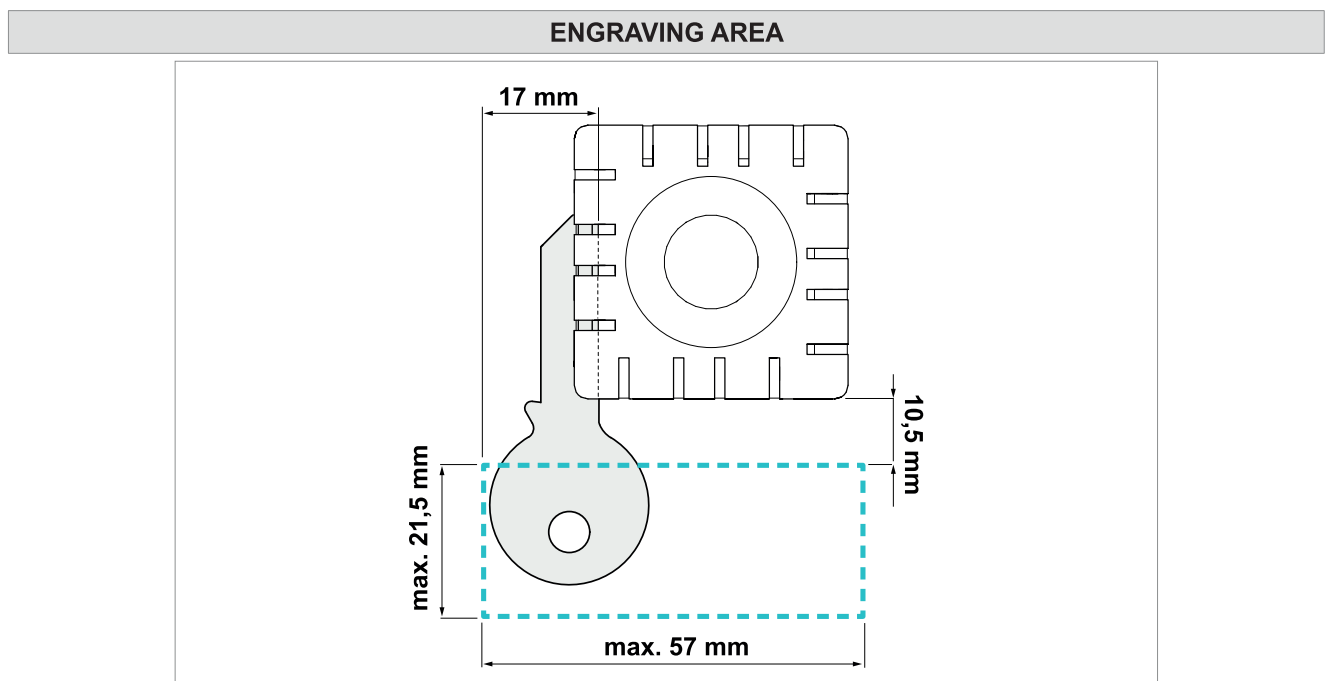
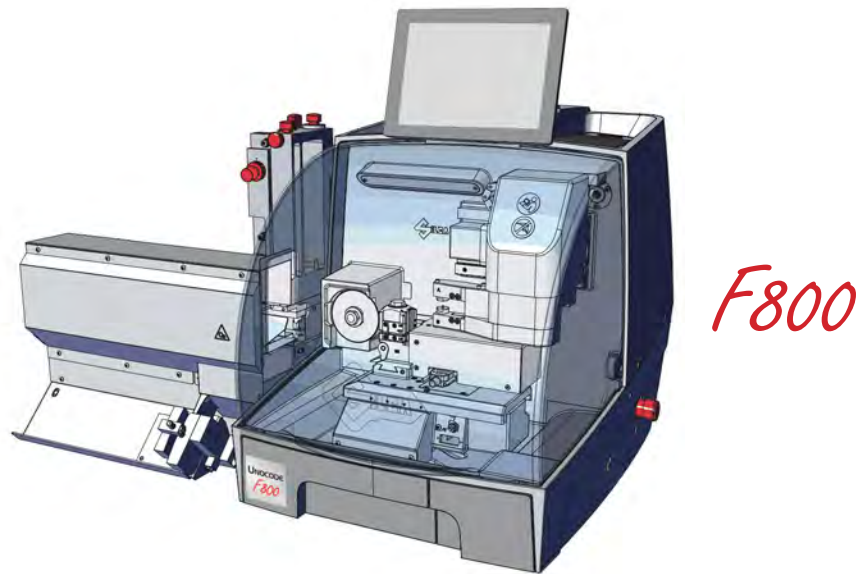


Fig. 80

11 UNOCODE F800



The UNOCODE F800 key-cutting machine is used to duplicate the following types of keys with standard cuts:

- Flat cylinder keys with one side and head stop (with clamp or feeder)
- Flat cylinder keys with one side and tip stop (with clamp only)
- Flat cylinder and vehicle keys and symmetrical keys with double cuts (with clamp only)

UNOCODE F600 operates in 2 ways:

- Key code entry directly on the machine
- Connected to a PC (with Silca software)

The functions 'Copy from original' and 'Decoding' are not included.

The machine is designed for cutting large quantities of keys.

Characteristics:

- V4 ELECTRIC CLAMP
- ENGRAVING UNIT
- ELECTRIC FEEDER

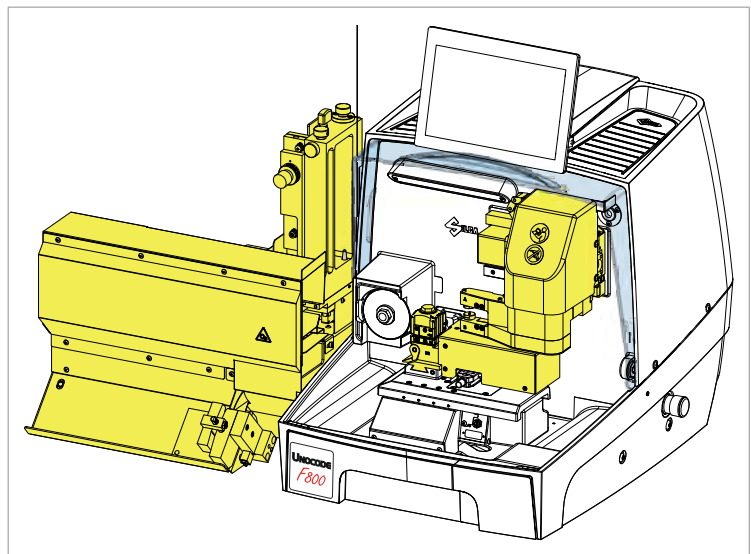


Fig. 81

11.1 MAIN OPERATING PARTS

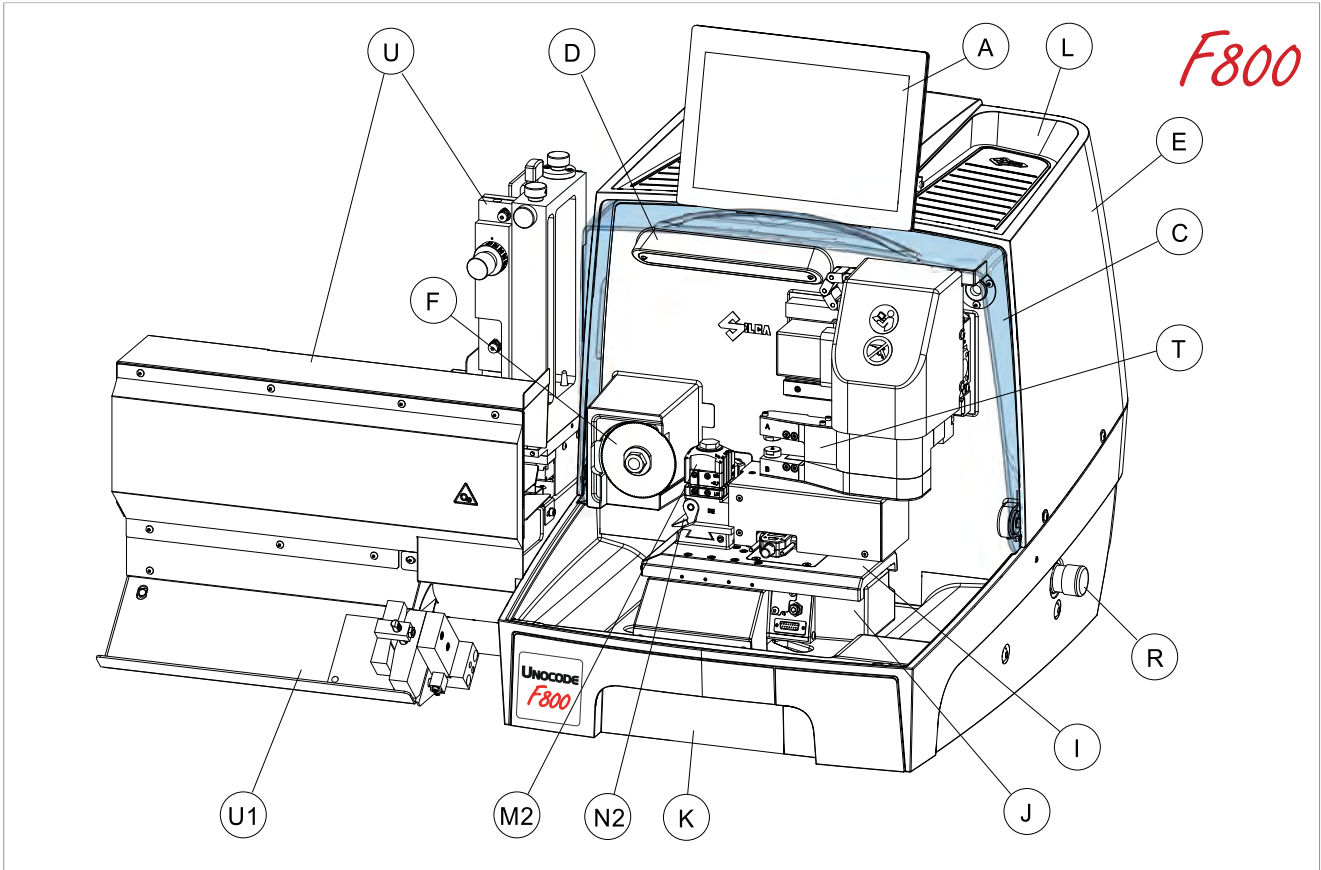


Fig. 82

- A - Monitor touch
- B - Master switch
- C - Protective shield
- D - Lamp
- E - Cover
- F - Prismatic cutter
- I - X axis carriage
- J - Y axis carriage
- L - Tool compartment
- K - Swarf collection unit
- M2 - V4 electric clamp
- N2 - Electric clamp gauge
- R - Emergency push button
- T - Engraving unit
- U - Electric feeder
- U1 - Orderly unloading unit
- Y - Power inlet
- Y1 - Fuse compartment
- Y2 - Video port
- Y3 - Ethernet port
- V - Feeder serial port
- V1 - USB ports
- V2 - Compressed air pipe connection

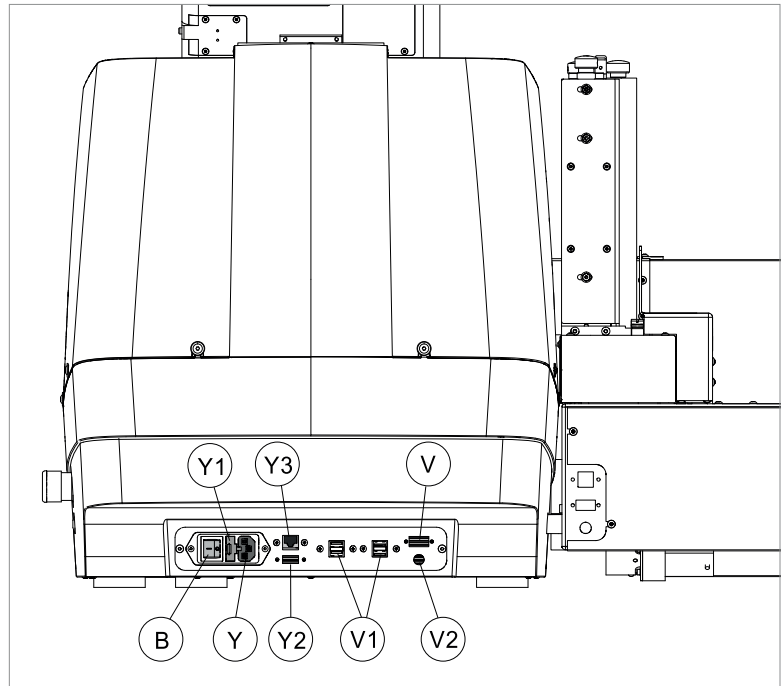
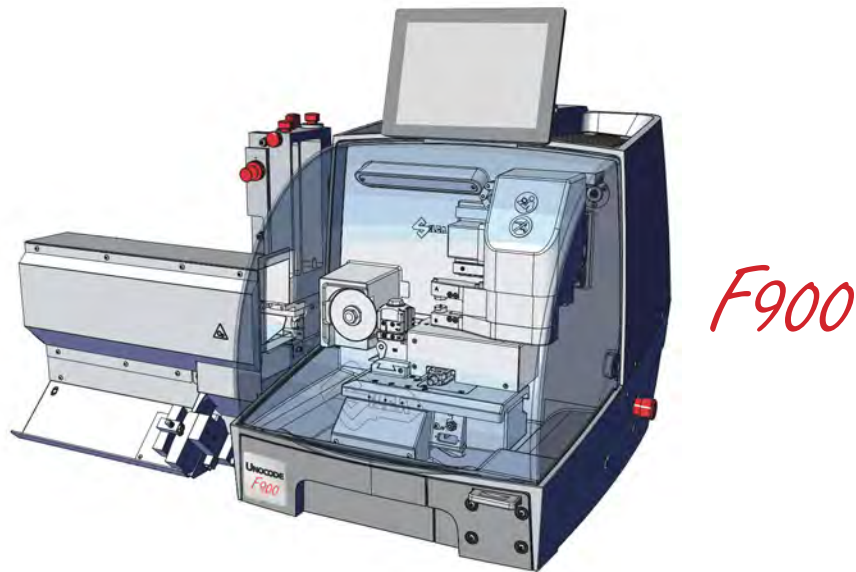


Fig. 83

12 UNOCODE F900



The UNOCODE F900 key-cutting machine is used to duplicate the following types of keys with standard cuts:

- Flat cylinder keys with one side and head stop (with clamp or feeder)
- Flat cylinder keys with one side and tip stop (with clamp only)
- Flat cylinder and vehicle keys and symmetrical keys with double cuts (with clamp only)

UNOCODE F900 operates in 3 ways:

- Key code entry directly on the machine
- Key reading by the PHOTO READER
- Connected to a PC (with Silca software)

The machine is designed for cutting large quantities of keys.

Characteristics:

- V4 ELECTRIC CLAMP
- PHOTO READER
- ENGRAVING UNIT
- ELECTRIC FEEDER

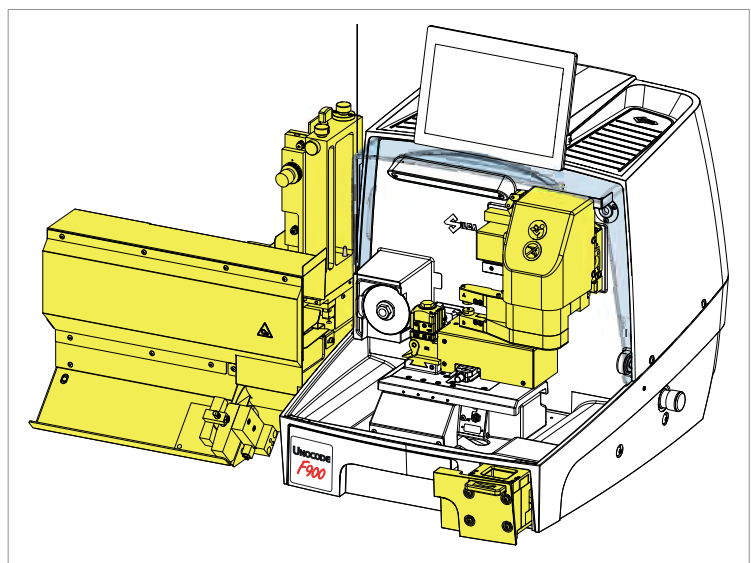


Fig. 84

12.1 MAIN OPERATING PARTS

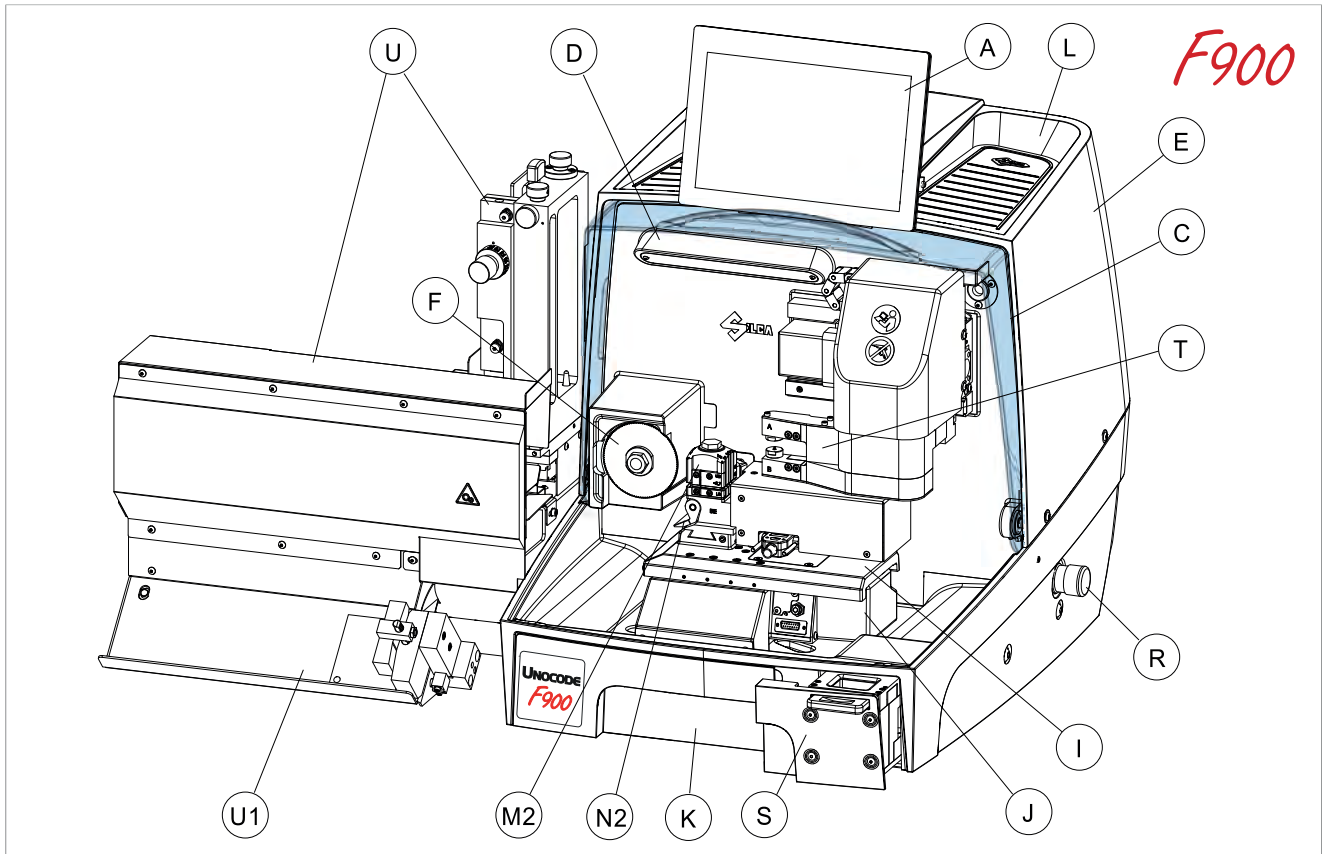


Fig. 85

- A - Monitor touch
- B - Master switch
- C - Protective shield
- D - Lamp
- E - Cover
- F - Prismatic cutter
- I - X axis carriage
- J - Y axis carriage
- L - Tool compartment
- K - Swarf collection unit
- M2 - V4 electric clamp
- N2 - Electric clamp gauge
- R - Emergency push button
- S - Photo Reader unit
- T - Engraving unit
- U - Electric feeder
- U1 - Orderly unloading unit
- Y - Power inlet
- Y1 - Fuse compartment
- Y2 - Video port
- Y3 - Ethernet port
- V - Feeder serial port
- V1 - USB ports
- V2 - Compressed air pipe connection

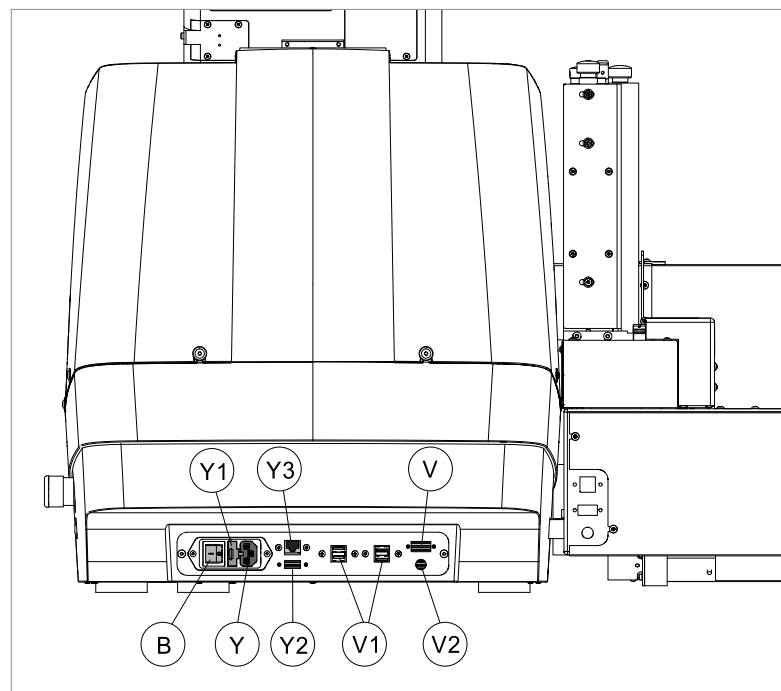


Fig. 86

12.2 V4 ELECTRIC CLAMP

The electric clamp has 2 standard sides for gripping keys with different thicknesses:

Side UA-LA <2,7: for thicknesses 1 mm to 2,7 mm

Side UA-LA >2,5: for thicknesses 2.5 mm to 4 mm

Side UB-LB <2,7: for thicknesses 1 mm to 2,7 mm

Side UB-LB >2,5: for thicknesses 2.5 mm to 4 mm

The two **UB-LB** sides of the clamp comprise replaceable jaws (Fig. 90) that can be customised. Re-position the UB-LB jaws as shown in the Fig. 89.

Note: to remove the screws that secure the jaws is necessary to use the special Torx screwdriver (provided). Remember to keep the clamp clean at all times.

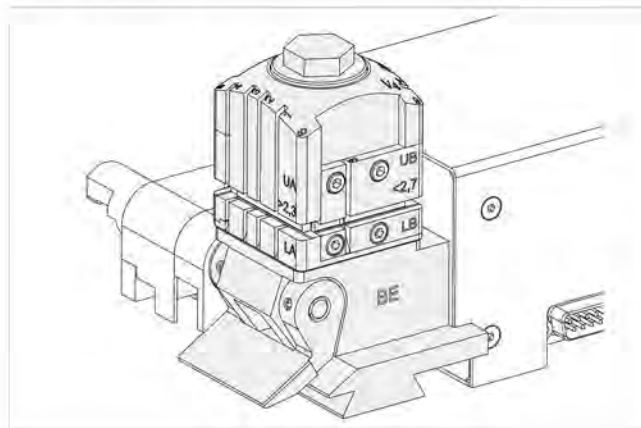


Fig. 87 - V4 electric clamp

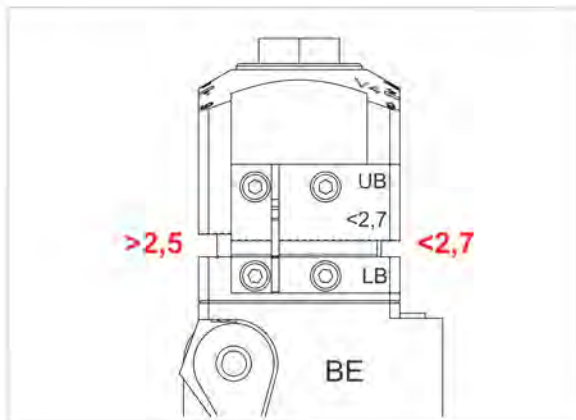


Fig. 88

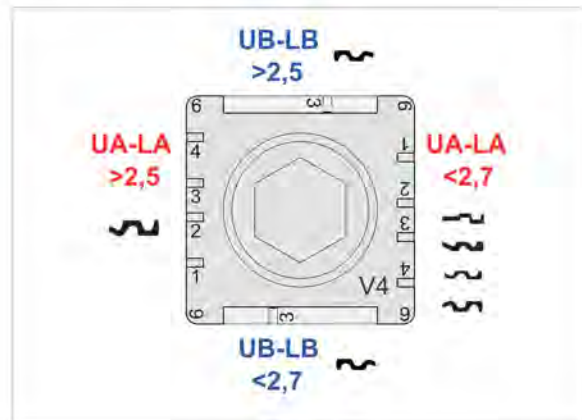


Fig. 89

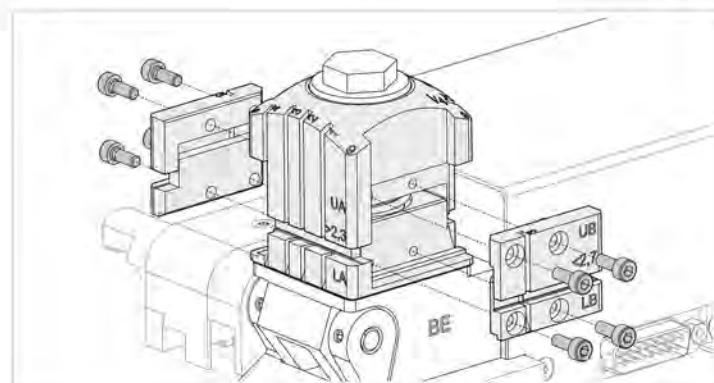


Fig. 90 - B sides replaceable jaws

The V4 electric clamp blocks the keys perfectly.

- For key cutting by code, the machine display shows the clamp side to use for positioning the key.
- To fit keys with tip stops, insert the bar provided into the special grooves (Fig. 92).



ATTENTION: remove the bar before proceeding with cutting operation.

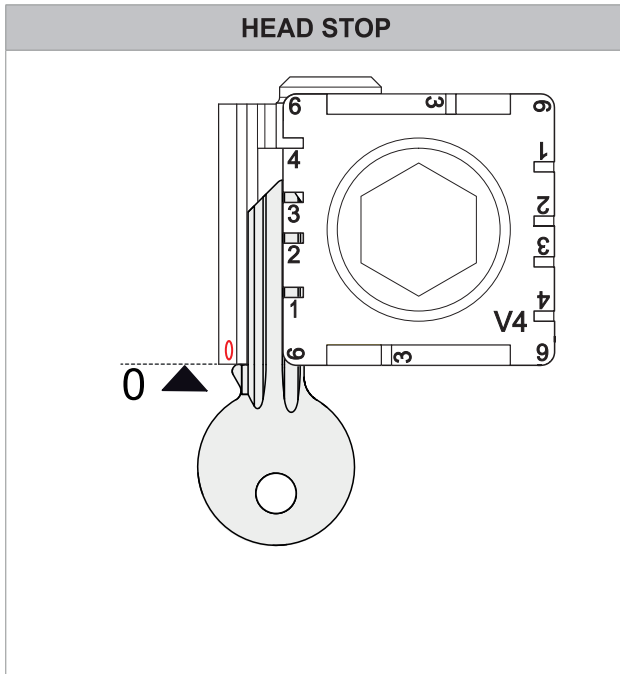


Fig. 91

**Cutting with V4 clamp
and cutting with Feeder**

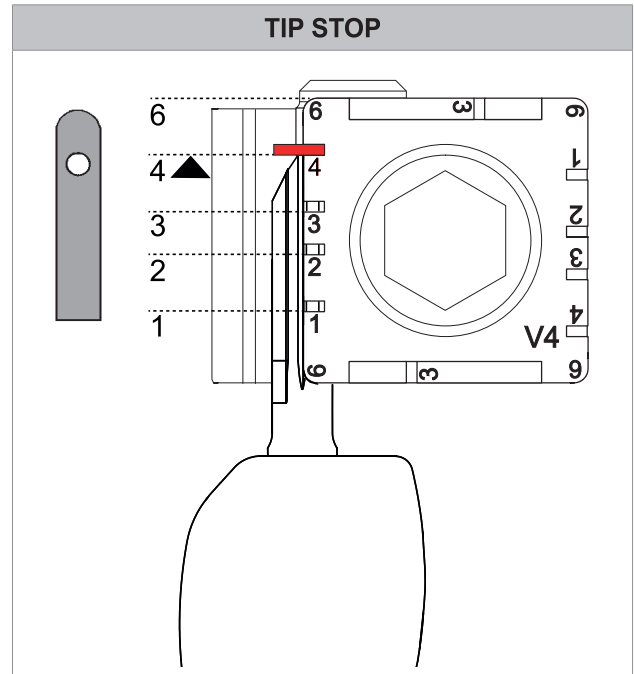


Fig. 92

**Cutting with V4 clamp ONLY
(without Feeder)**

12.3 PHOTO READER (ONLY F900 VERSION)

The photo reader uses a photo/optic system to read the cuts on keys to be duplicated. The device is located in the lower right-hand part of the key-cutting machine.

To read/decode keys using the photo reader, follow the instructions below:

- 1) Pull the photo reader unit (S) out all the way.
- 2) Hold the unit firmly with one hand and push the handle (S1) (Fig. 94).
- 3) Use the other hand to insert the key to be read (Fig. 95).
- 4) Follow the instructions on the display to proceed with reading.



ATTENTION: do not push the photo reader unit in when the key is inserted. The key is read with the unit pulled out all the way.

TO CLOSE THE PHOTO READER UNIT:

- 1) Hold the unit still.
- 2) Press the handle (S1) and remove the key.
- 3) Release the handle (S1) and push the unit in all the way.

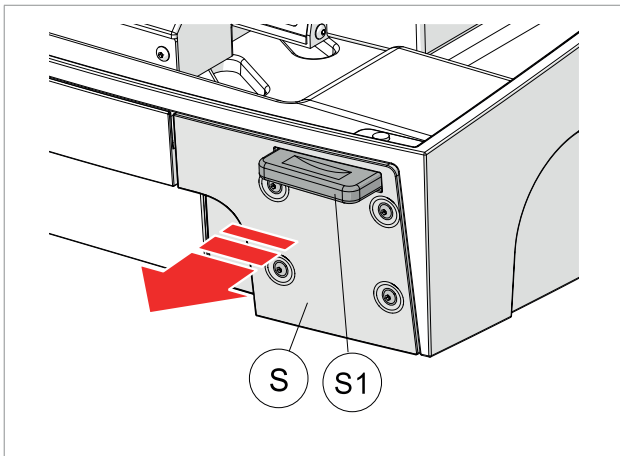


Fig. 93

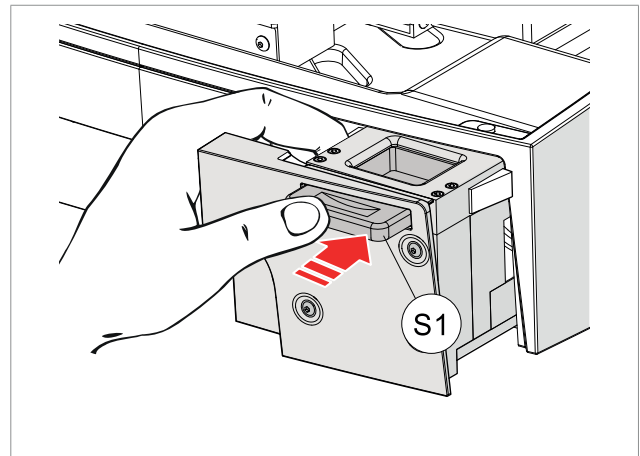


Fig. 94

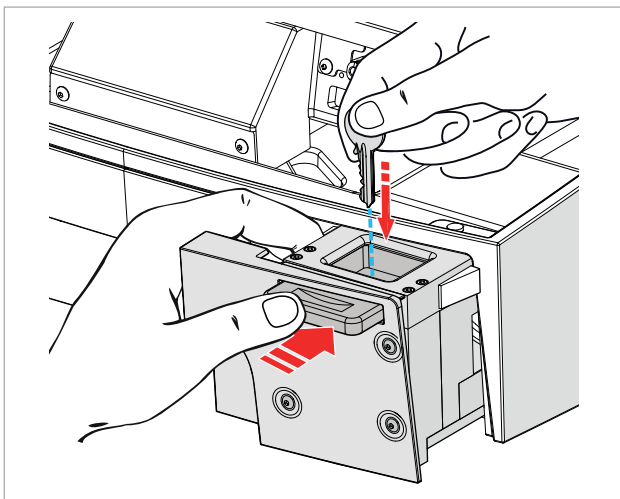


Fig. 95

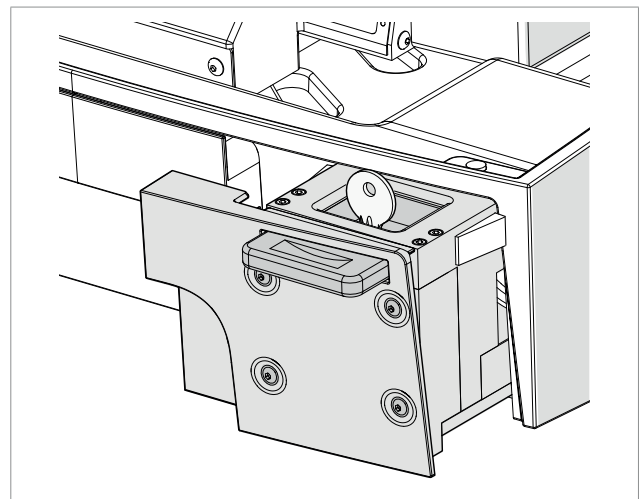


Fig. 96

12.3.1 CHARACTERISTICS OF KEYS TO BE READ

- stem thickness: min.1,2 mm max.4 mm
- stem width + stop: max. 15 mm
- reading length: max.48 mm (stem+stop)

Note: keys with oversized heads must have a neck length of no less than 16 mm.

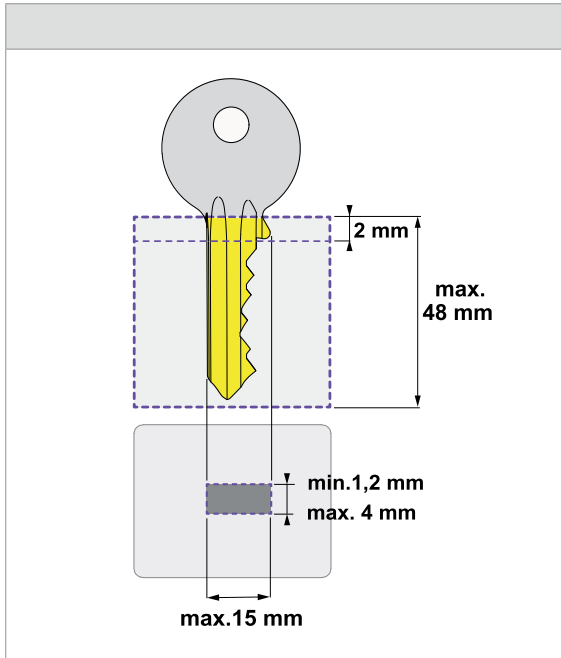


Fig. 97

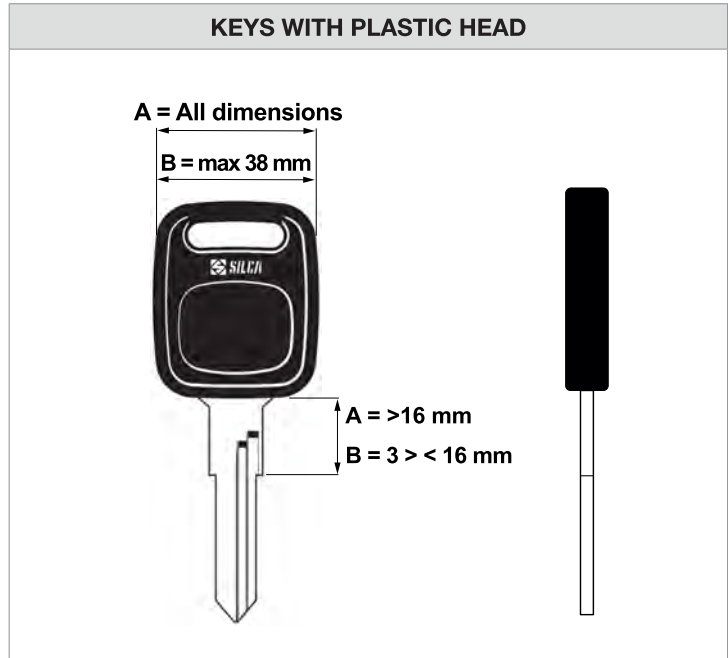


Fig. 98

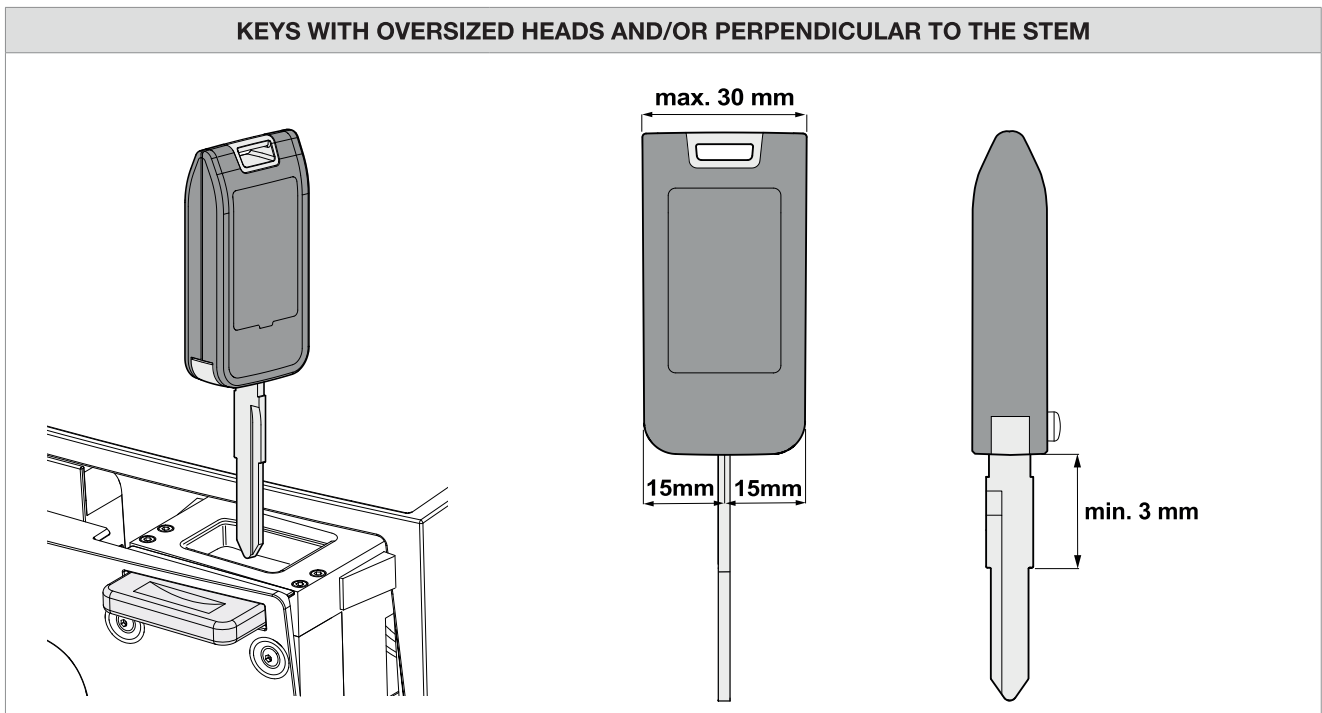


Fig. 99

12.4 ENGRAVING UNIT



UNOCODE F600 key-cutting machine is provided with an ENGRAVING system. Engraving can be done on flat, non-plastic heads of flat keys.



ATTENTION:

Keys must be metal and **NOT ANODISED ALUMINIUM**.

The surface to be engraved must be flat.

Engraving cannot be done on cruciform keys.

CLAMP SIDES MANAGED

V4 electric clamp: **UA-LA**
 UB-LB

For other optional clamps, see the instructions for SKP PRO.

DIMENSIONS

The maximum engraving area is shown in Fig. 100.

Max. key head thickness: 4 mm

NOTE: *In the cutting process, engraving takes place before cutting.*

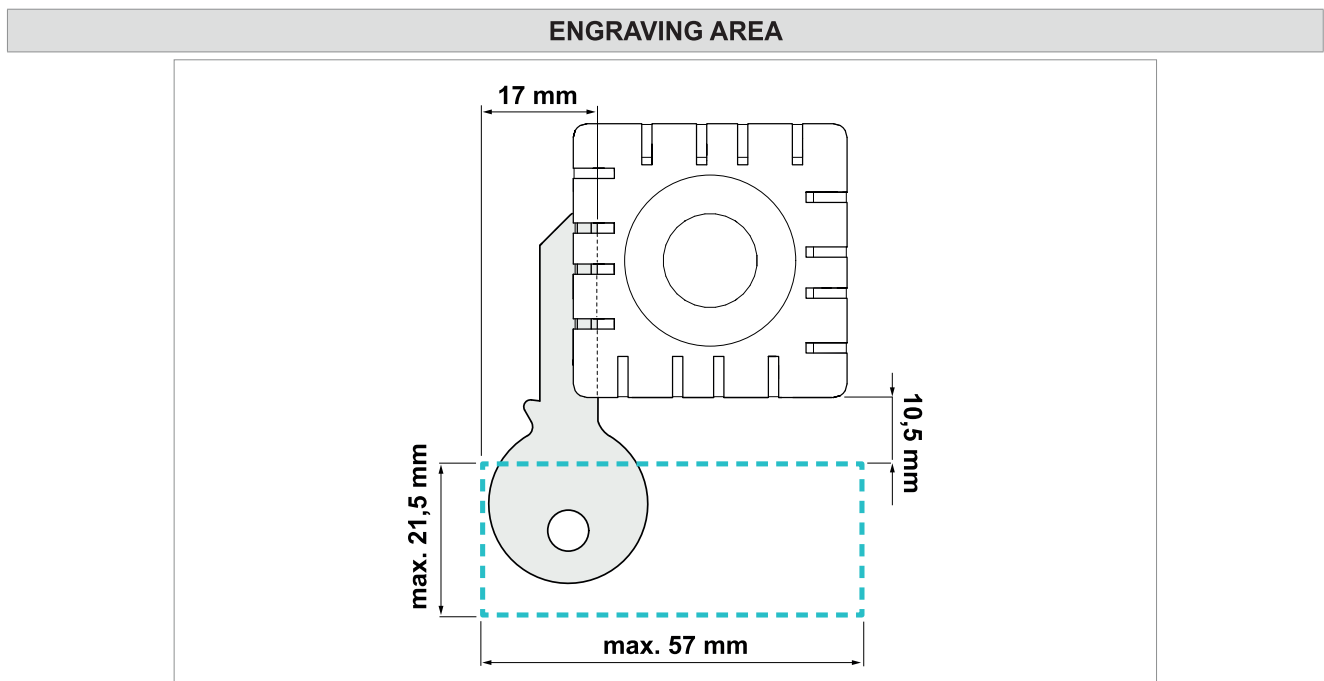


Fig. 100

12.5 ELECTRIC FEEDER WITH TOP LOADING AND ORDERLY UNLOADING UNIT

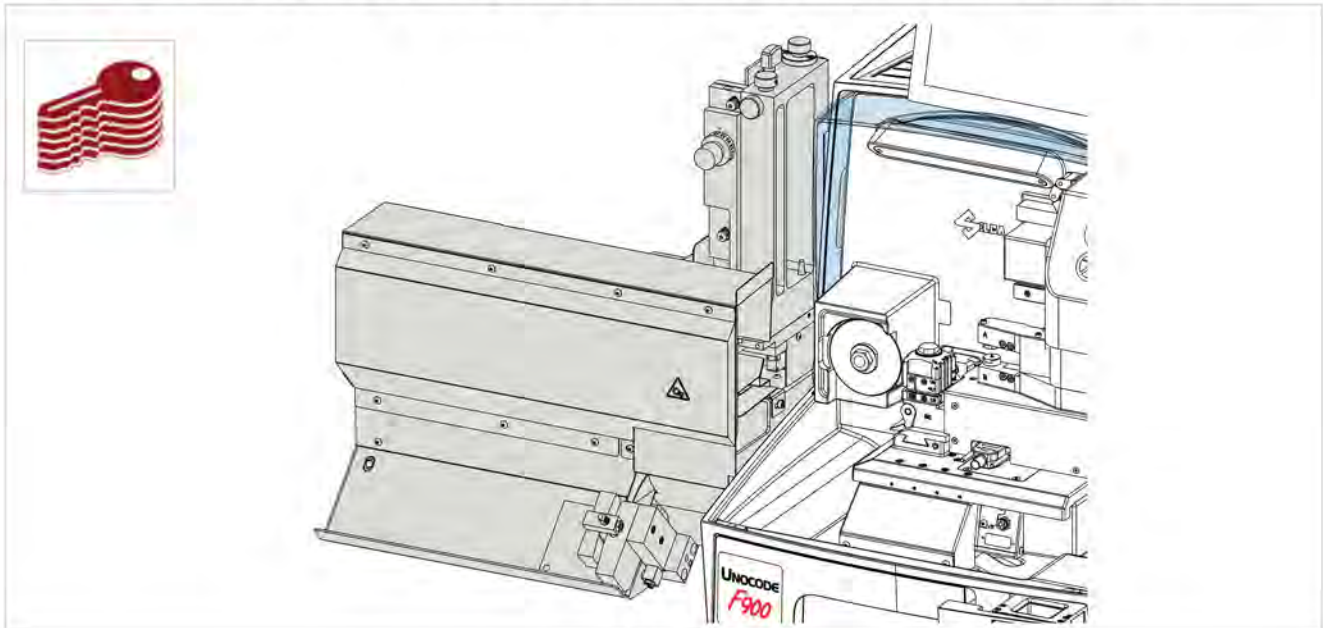


Fig. 101

The feeder takes flat keys with single cuts and head stop.



ATTENTION: keys with double cuts, plastic heads and cruciform keys or those with tip stops cannot be cut.

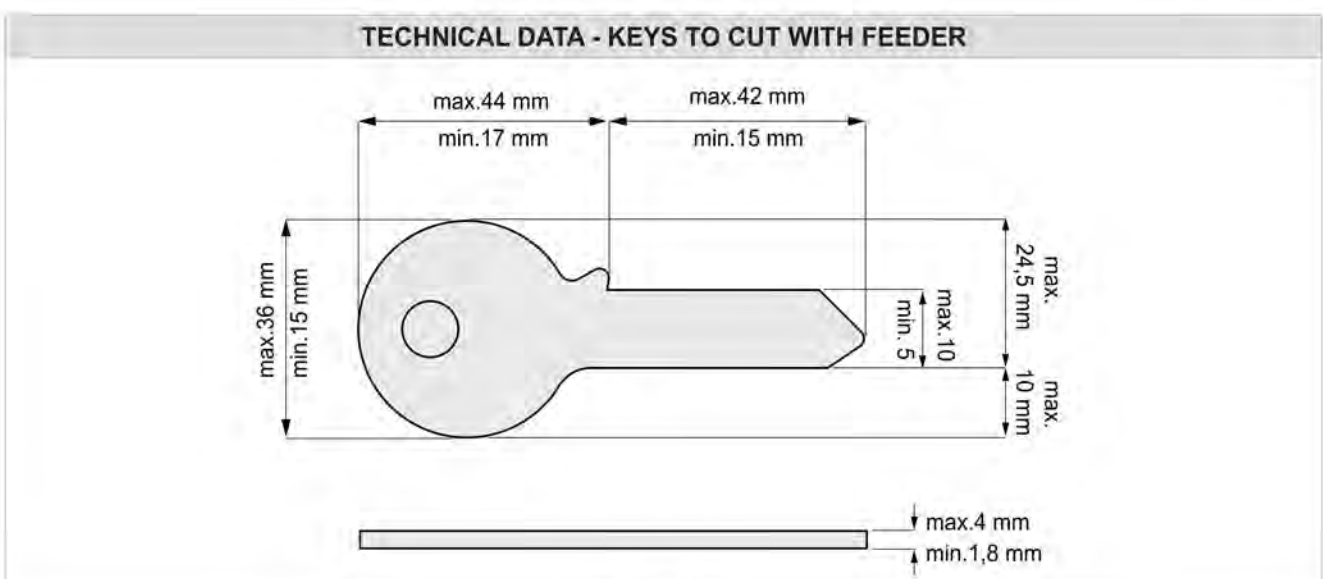


Fig. 102

The key received from the top loader is sent to the clamp, locked in, cut and sent to a tray through a funnel (orderly unloading unit).

The tray will house about 104 keys with an average thickness of 2.5mm. It is also known as a 'FIFO' unit, i.e. First In, First Out.

- **TOP LOADER**

Used to stack the keys to be processed by the feeder.

It can house up to 95x2.2mm thick keys and up to 60x3mm thick keys.

Loader capacity:

- **110 x 2.2mm thick keys**
- **96 x 2.5mm thick keys**
- **80 x 3mm thick keys**

To place the key blanks into the loader observe the parameters given in Fig. 102 and ensure that the unit operates well mechanically; carefully observe:

- **The direction in which the key is inserted**
- **Double regulation of stem width**
- **Head dimension regulation**
- **Thickness regulation**

12.6 REMOVING / INSERTING TOP LOADER

- 1) Rotate the protective shield (U4) (Fig. 103).
- 2) Open the lever (U5) completely (Fig. 103).
- 3) Insert the vertical loader centering on the special pins (G1).
- 4) Close the lever (U5) and shield (U4).

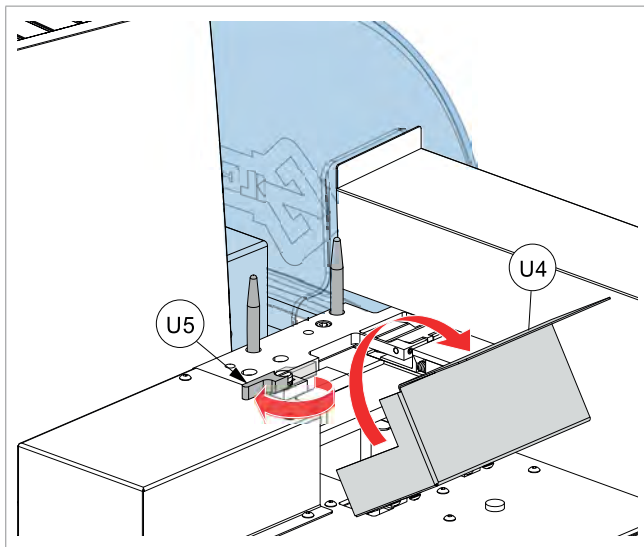


Fig. 103

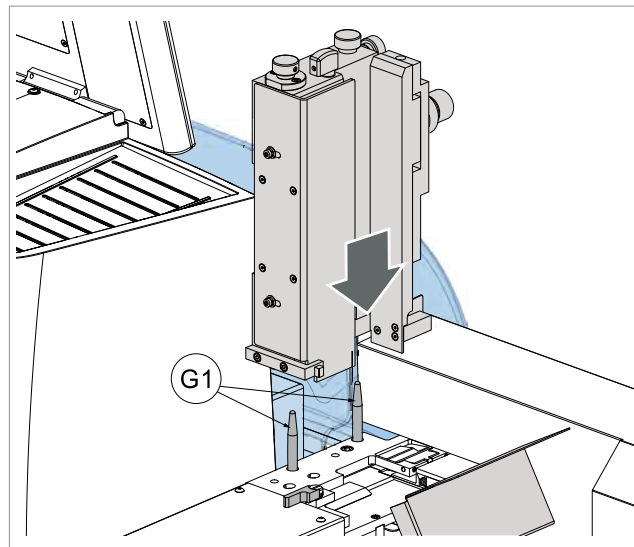


Fig. 104

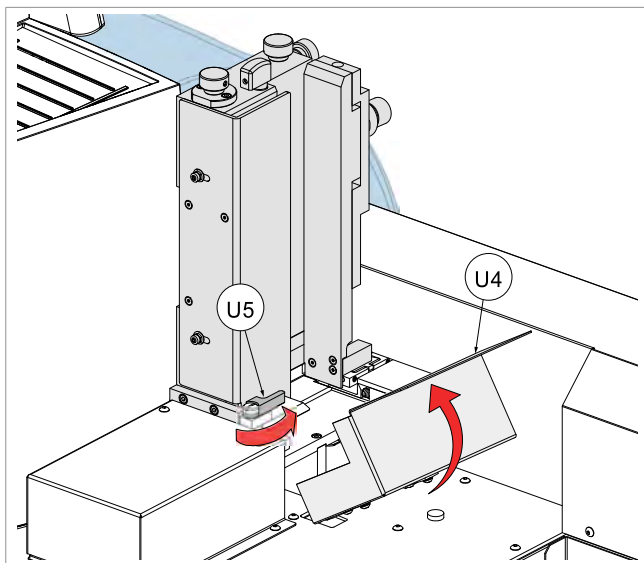


Fig. 105

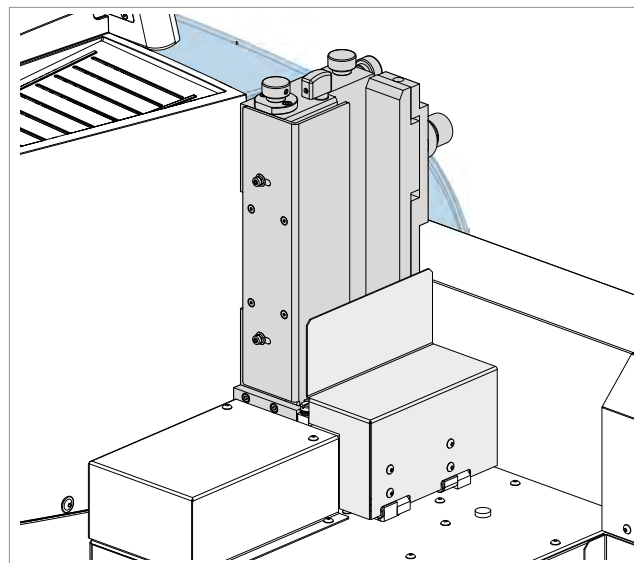


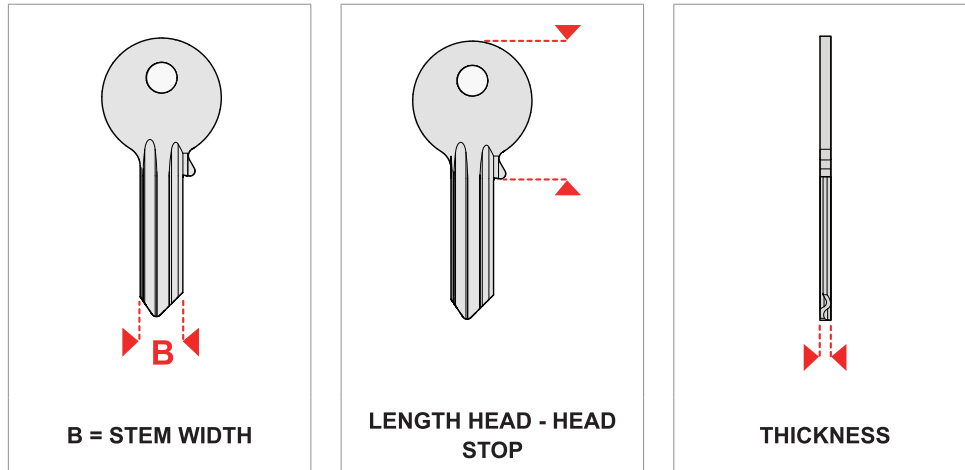
Fig. 106

12.7 REGULATION OF FEEDER AND TOP LOADER

The following regulations can be made:

One (1) regulation of feeder plate

Three (3) regulations of top loader:



12.7.1 Regulating STEM WIDTH for the FEEDER PLATE

To adjust this plate it's necessary REMOVE THE TOP LOADER.

- 1) Place one of the keys to be inserted into the loader on the slide (Fig. 107).
- 2) Adjust the plate (U6) up against the key with the knob (U7). From this position unscrew the knob (U7) by a half turn.
- 3) Optimal width should be slightly bigger than the width of the stem. **Attention: do not exceed the height of the key stop (Fig. 108).**

When regulation is complete, remove the key and insert the top loader.

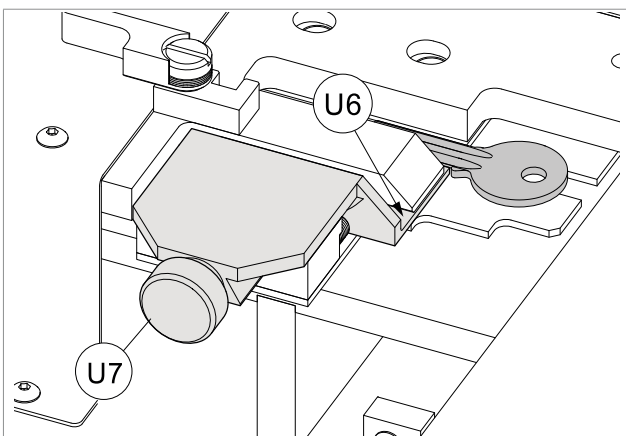


Fig. 107

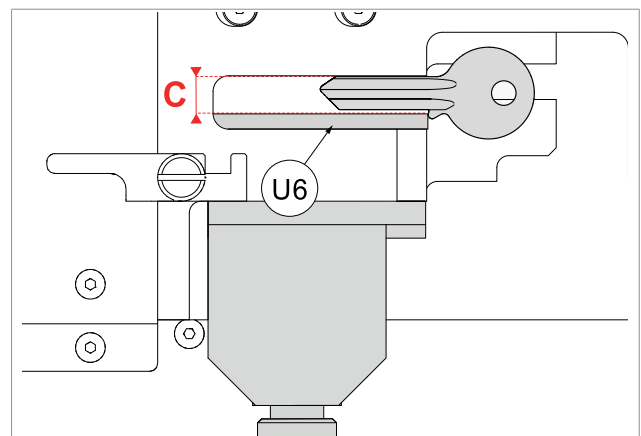


Fig. 108

ATTENTION: $C = B + 1$ mm, subject to the height of the key stop.

12.7.2 Regulating STEM WIDTH for the LOADER

- 1) Insert the key from the top, as shown in Fig. 109.
- 2) Adjust the knob (G3) until the key enters and slides down the loader without too much play (Fig. 111).

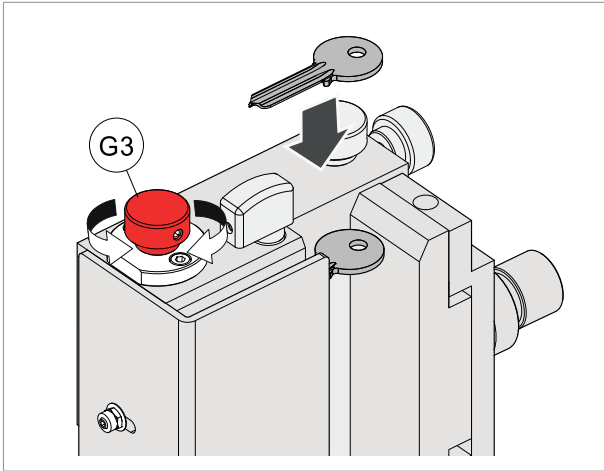


Fig. 109

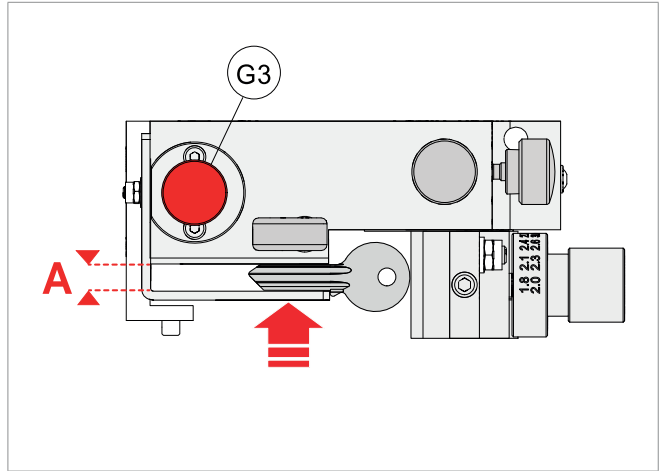


Fig. 110

ATTENTION: $A = B + 0,1/0,2$ mm

12.7.3 Regulating HEAD-HEAD STOP LENGTH

Use the knob (G2) (Fig. 111) to increase or decrease size until the right dimension is found. When adjustments have been made, tighten the knob (G6).

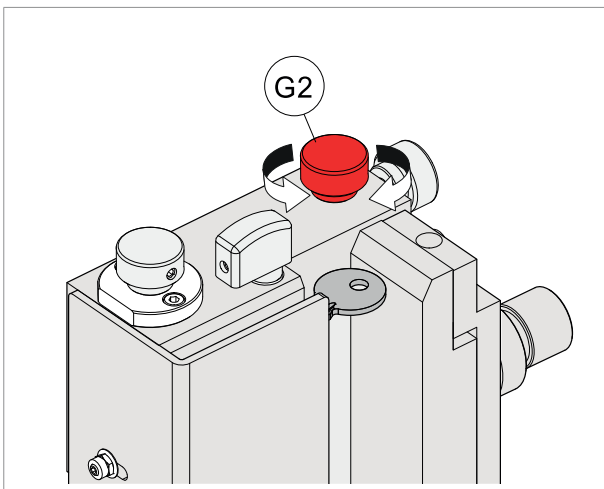


Fig. 111

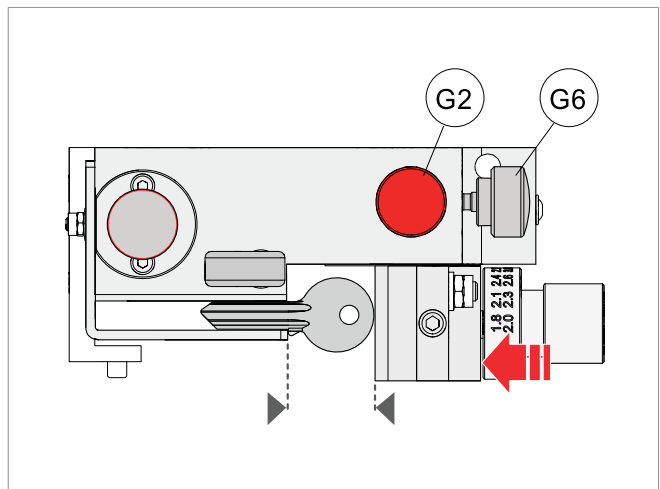


Fig. 112

12.7.4 Regulating KEY THICKNESS

Use the knob (G4) to raise or lower the thickness regulating plate (Fig. 115). The area beneath is regulated so that just one key can slide (Fig. 116 - Fig. 117).

The knob (G4) shows some indications of thickness to facilitate regulation (Fig. 113).

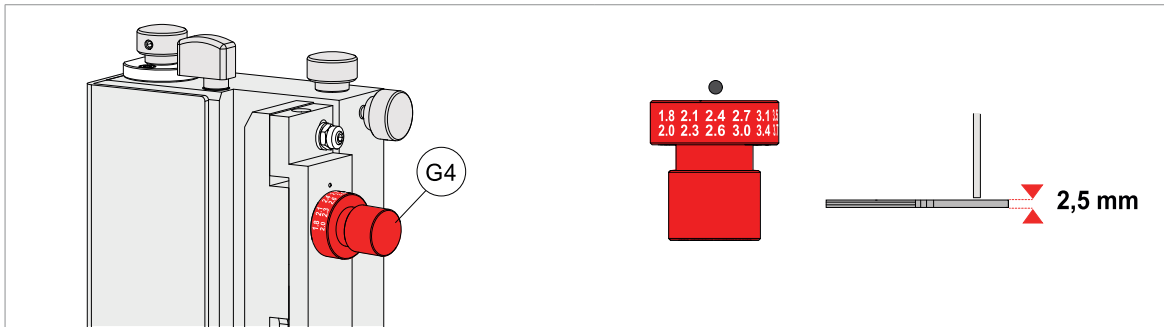


Fig. 113

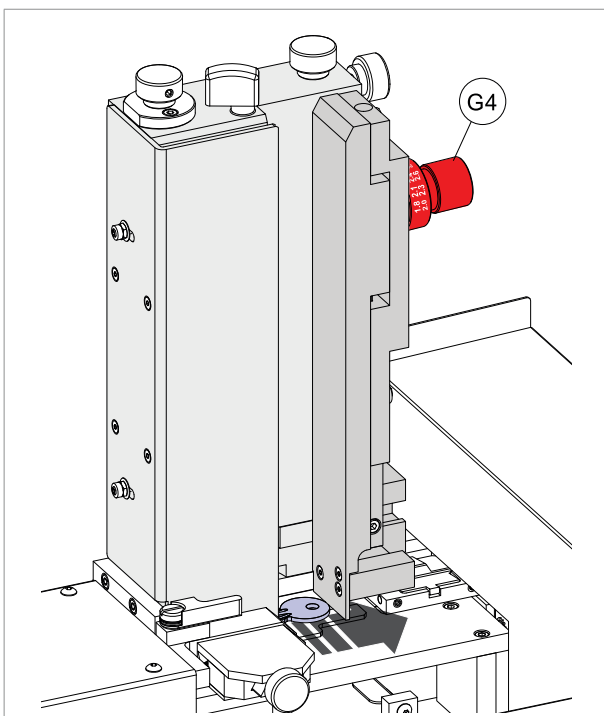


Fig. 114

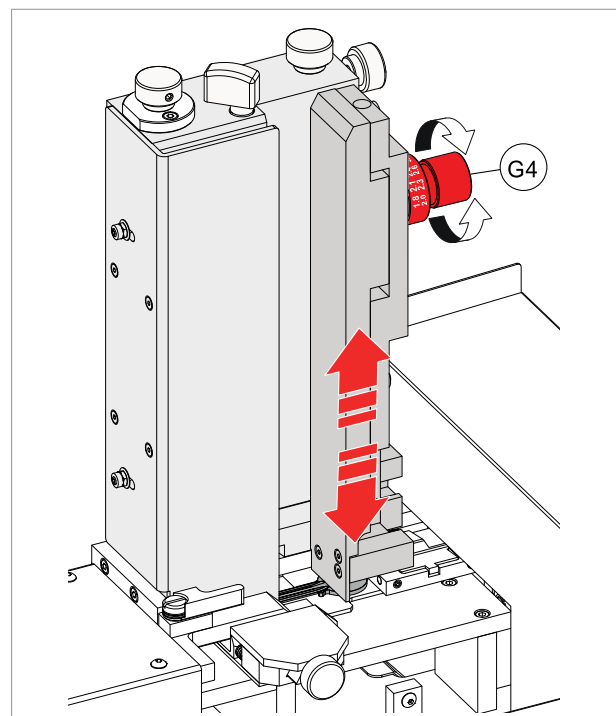


Fig. 115

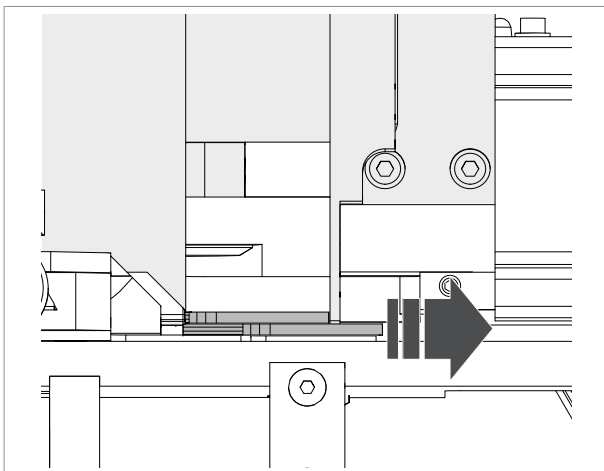


Fig. 116

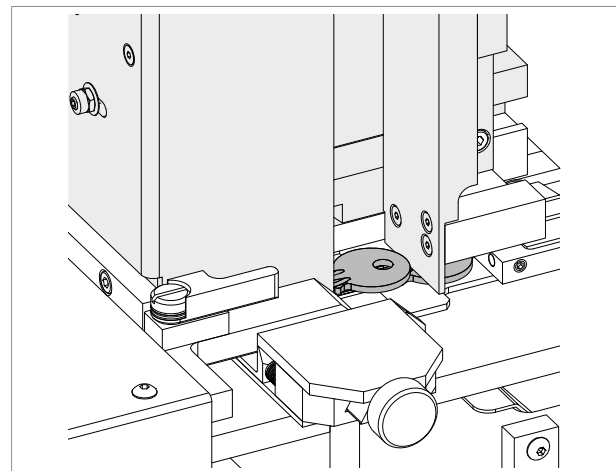


Fig. 117

12.8 KEY LOADING

DAfter regulating the top loader, insert the key blanks.

Nota Bene: this operation is also possible with the top loader not fitted to the machine.

- 1) Rotate the lever (G5) 90° to activate the bottom closure mechanism and prevent the keys from falling out.
- 2) To insert keys check the stem width (Ch.12.7.1) and head-head stop length (Ch.12.7.3).
- 3) Fit the vertical loader onto the machine (if removed) (Ch.12.6.).
- 4) Rotate the lever (G5) 90° to let the keys drop down (Fig. 121).
- 5) Pay attention to the regulation of key thickness (Ch.12.7.4) and stem width (Ch.12.7.2).

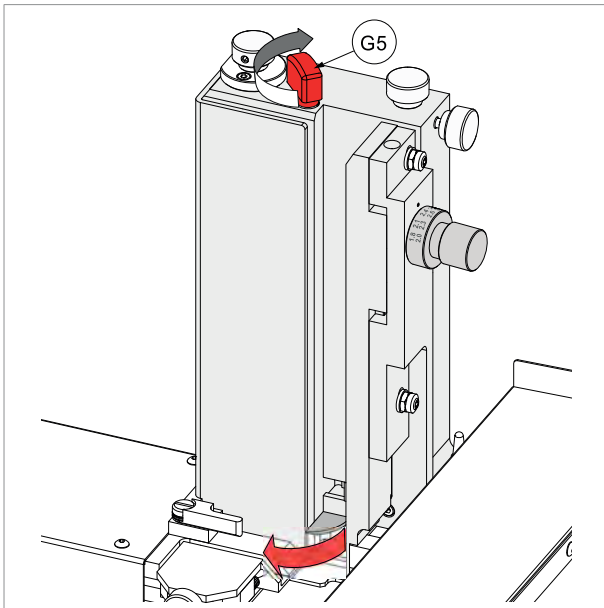


Fig. 118

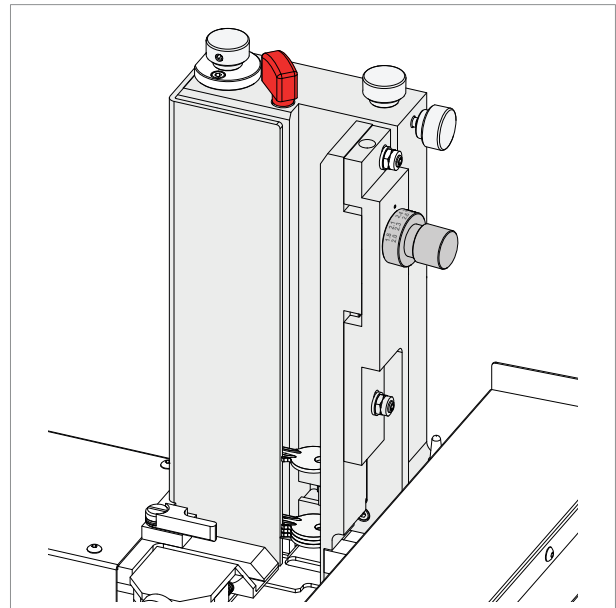


Fig. 119

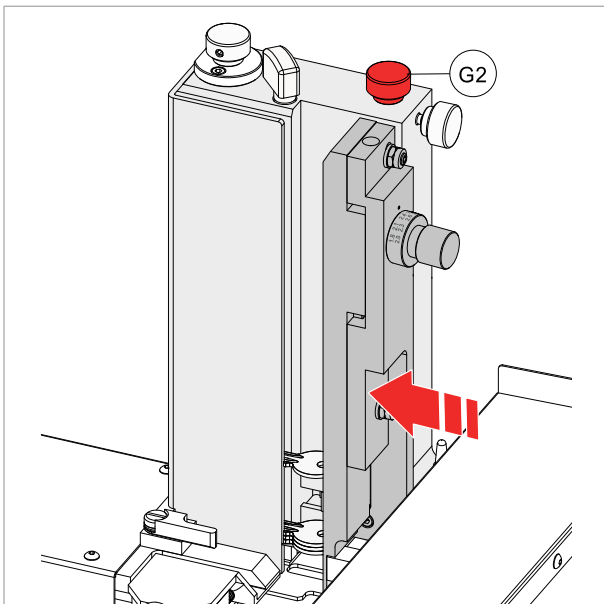


Fig. 120

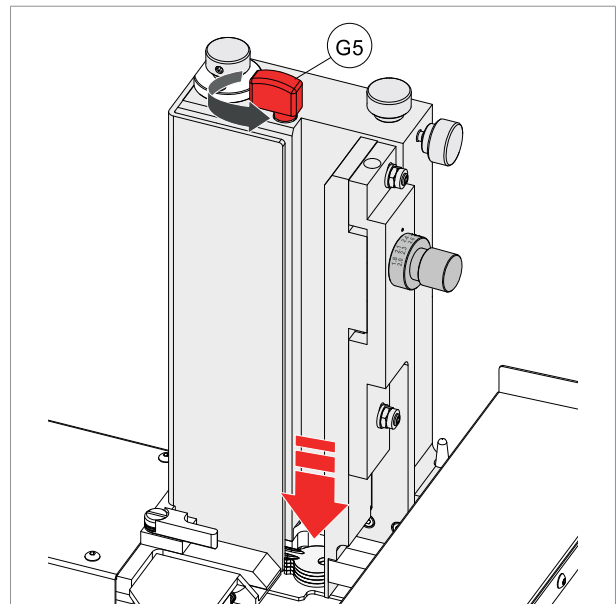


Fig. 121

12.9 REGULATING HEAD SIZE FOR KEY UNLOADING

It is necessary to align the key unloading device (U8) to the size of the key head (Fig. 122).
 After adjustment (Fig. 124) remove the key and move the plate (U9) to the right (Fig. 125).

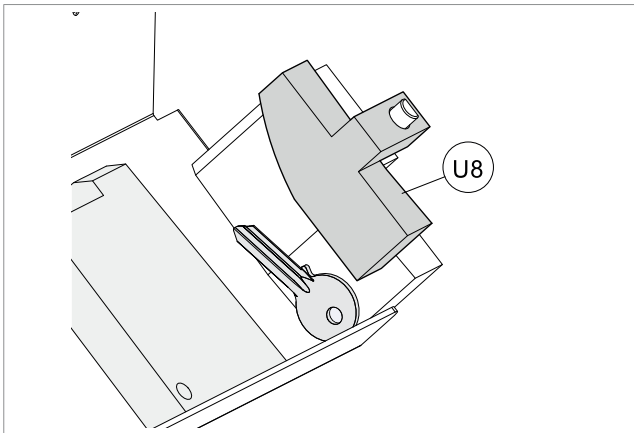


Fig. 122

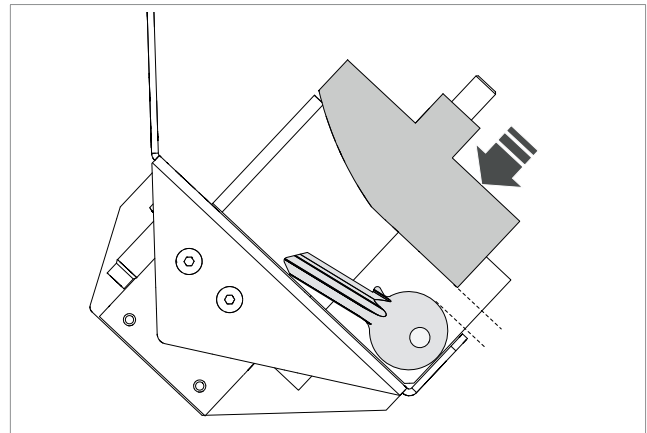


Fig. 123

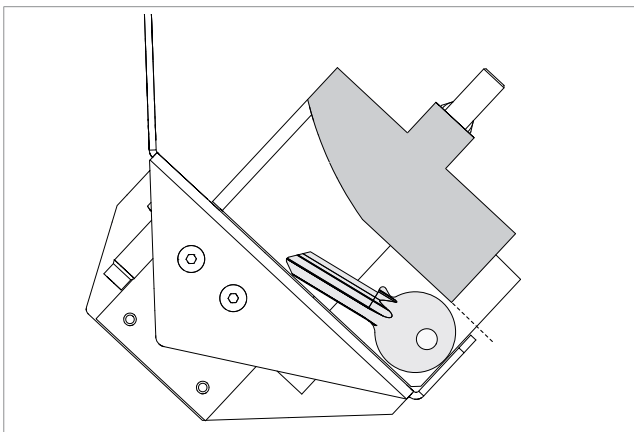


Fig. 124

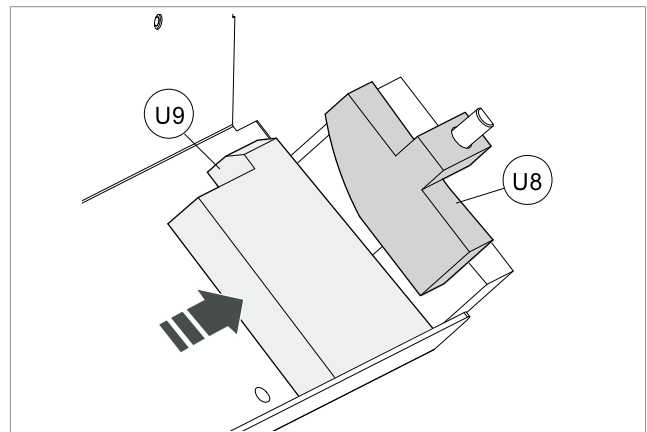


Fig. 125

13 CALIBRATIONS

Our key-cutting machines are supplied ready for use and do not need calibrating, except for the Feeder Unit. However, the operator must perform some checks and prepare the machine for use.

13.1 CALIBRATING THE V4 ELECTRIC CLAMP (F800-F900)

Note: it is not necessary to Calibrate the V4 clamp on first installation.

- 1) Check that the V4 electric clamp is installed.
- 2) Fit the template Z3 on side A of the clamp (**BE-V4 LA-UA**) with the stop all the way up against the gauge (Stop 0) (Fig. 126).
- 3) Clean the cutter carefully with the brush provided.
- 4) Lower the gauge by hand (Fig. 127).
- 5) Follow the instructions on the display.
- 6) Remove the (Z3) template.

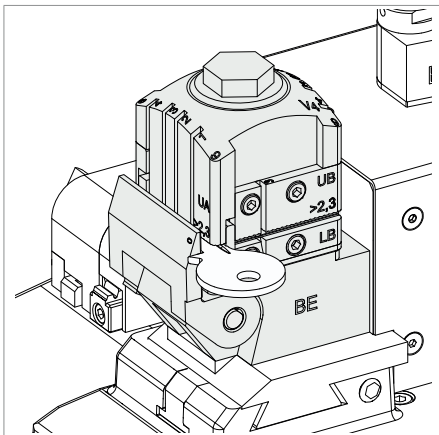


Fig. 126

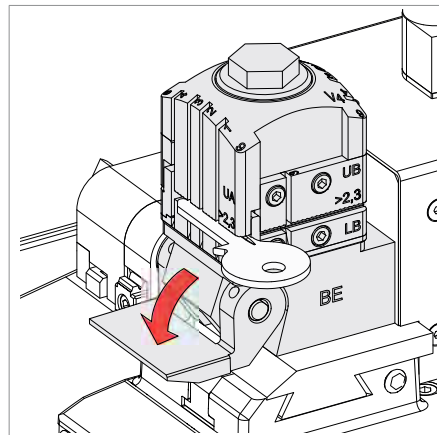


Fig. 127

13.2 CALIBRATING THE ENGRAVING UNIT (F600-F800-F900)

- 1) Enter the Engraving menu; the display will show the side of the clamp in use already calibrated.
- 2) Open the clamp.
- 3) Fit the template Z34 (side B upwards) (Fig. 128).
- 4) Use the NEXT key to activate the automatic cycle that reads the position of X, Y and Z.

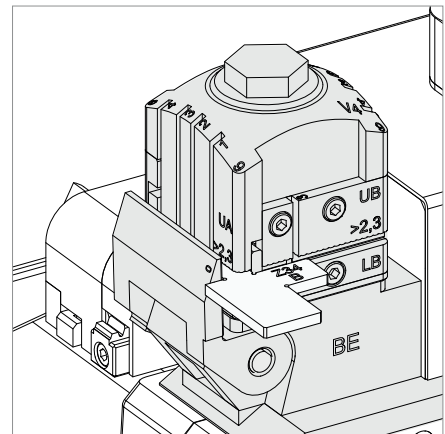


Fig. 128

13.3 CALIBRATING THE ADAPTORS

Only the 'MANUAL CORRECTION' function is used for the adaptors, without any automatic calibration cycle.

13.4 CALIBRATING THE PHOTO READER (F400-F600-F900)



ATTENTION: the machine must be returned to Silca if it is necessary to calibrate the photo reader.

13.5 CALIBRATING/ALIGNING THE FEEDER

WHEN STARTING UNOCODE F800-F900 FOR THE FIRST TIME

After fitting the feeder (Ch.5.2) proceed with calibration:

- 1) Turn off the machine with the master switch (B) on the back.
- 2) Check connection of the cables between the machine and feeder (Fig. 129).

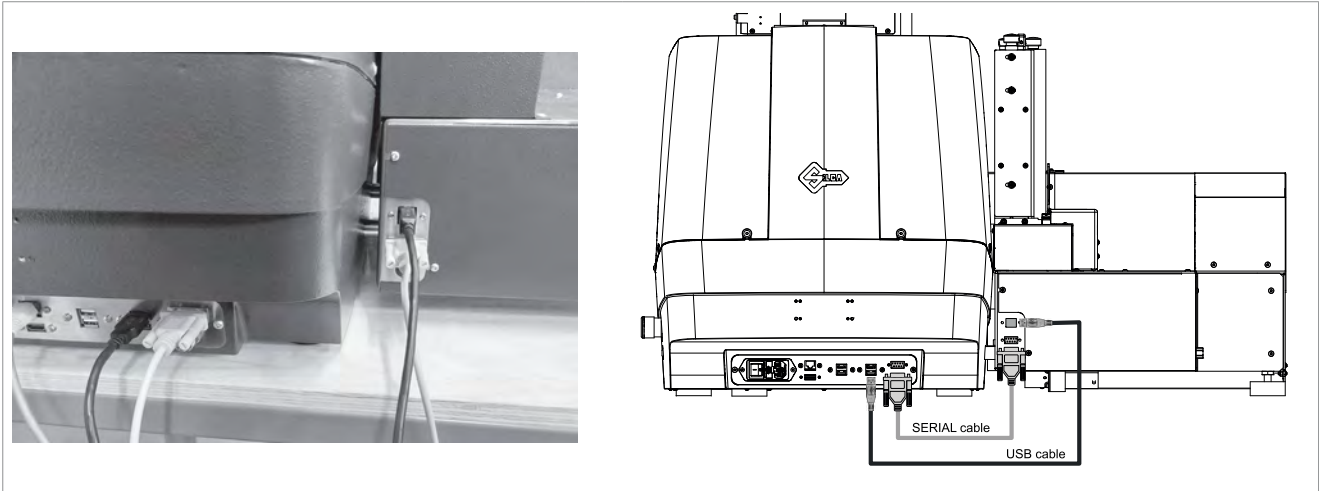


Fig. 129

- 3) Turn on the machine with the master switch (B) and follow the instructions on the display:
 - SETTINGS
 - CALIBRATION
- 4) Select 'Electric Feeder' – 'Full Calibration'

PROCEDURE FOR CALIBRATING THE ELECTRIC LOADER

- 5) Turn the clamp jaws onto side UA-LA >2,5.
- 6) Install the Z36 template for the BE-V4 clamp (Fig. 130). Close the clamp.
- 7) Check that the loader foot is completely tightened (Fig. 131).
- 8) Open the flap (U4), open the lever (U5) and remove the loader from the top (Fig. 132).
- 9) Fit the Z34A template to the loader (Fig. 133).
- 10) Replace the loader from the top and lock in place with the lever (U5).
- 11) Use knob (G3) to set maximum key stem width (Fig. 109).
- 12) Use knob (G4) to adjust the thickness of the Z34A template on the loader (2.7mm / 3mm) (Fig. 113).
- 13) Close the flap.

LOADER PRE-CALIBRATION (to adjust foot)

- START to begin
- 14) Lower the loader foot until the Z34 template is in contact with the Z36 template.
 - 15) Lock the loader foot in place by tightening the nut.
 - ATTENTION
 - 16) Remove the Z36 template from the clamp.
 - START
 - 17) Open the flap and take the feeder plate up against the transfer unit, ensuring it is all the way in (Fig. 134).
 - 18) Close the flap.

LOADER CALIBRATION - STEP 1

- START

- 19) Save the values.
- 20) Turn the jaw onto side UA-LA <2,7
- 21) Fit the Z34A template to the loader.
- 22) Replace the loader and close the flap.

CALIBRATION

- START

- 23) Save the values.
- 24) Remove the Z34A template from the clamp.

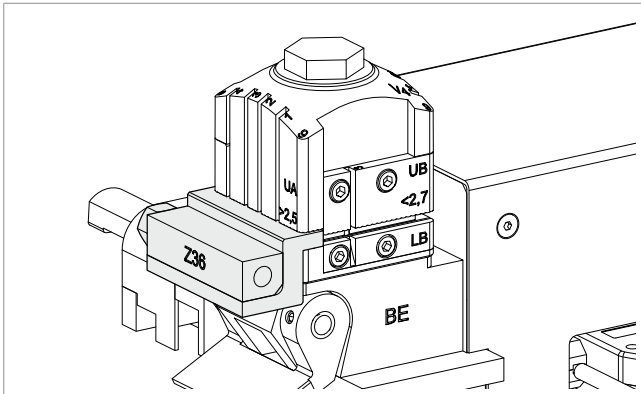


Fig. 130

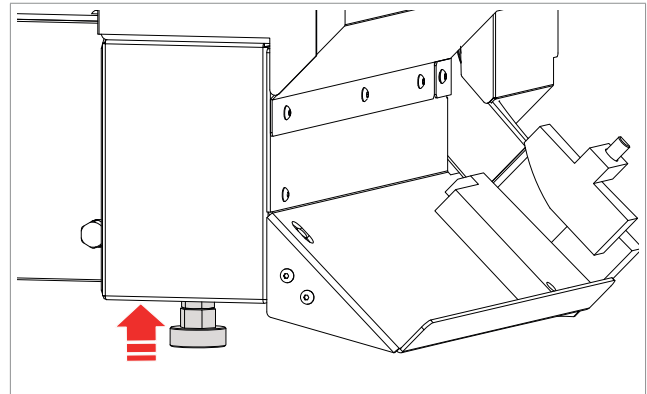


Fig. 131

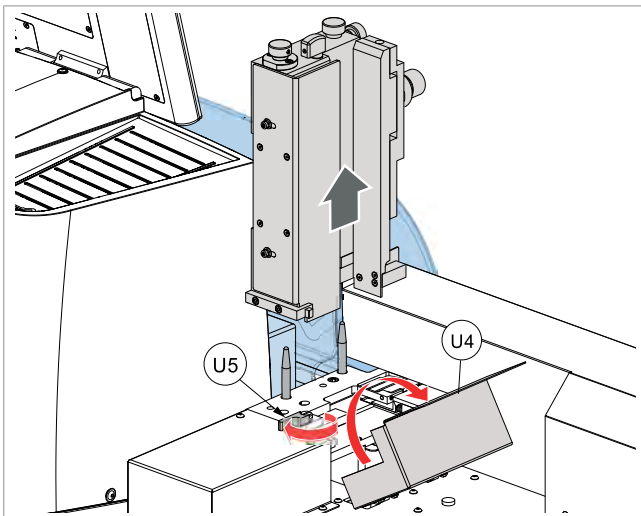


Fig. 132

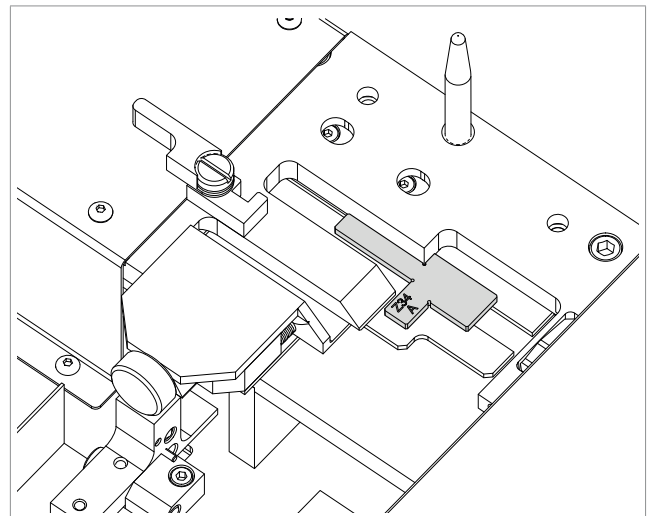


Fig. 133

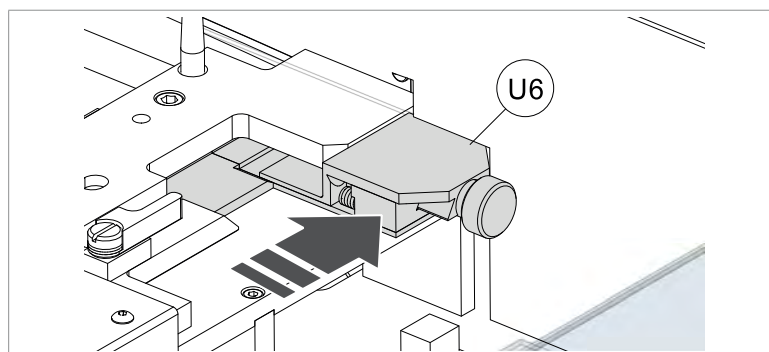


Fig. 134

13.6 FULL CALIBRATION OF THE ELECTRIC FEEDER



ATTENTION: this calibration operation must be carried out **ONLY IF A NEW FEEDER IS FITTED** (Optional for F400-F600 or Spare part for F800- F900).



ATTENTION: The V4 electric clamp is needed to use the feeder (optional for F400 and F600).

Once the feeder is fitted to key-cutting machines F400 and F600 the V4 electric clamp must be calibrated before use.

• Feeder Pre-Calibration

- 1) Enter the two values provided by SILCA onto the display.

Electric Feeder Calibration

Offset Z	Offset b
<input style="width: 100px; height: 20px;" type="text"/>	<input style="width: 100px; height: 20px;" type="text"/>
NEXT	CANCEL

Watch the screen for the guided procedure.

14 CLEANING

- **Keep the operational parts of the machine as clean as possible by brushing away the chippings in areas where they accumulate during cutting operations.**
- **Under no circumstances should compressed air be used to clear the work zone of chippings as this will blow them onto the moving parts.**
- **Never use oily products or thinners for cleaning painted surfaces, clamps, electrical or electronic connections.**
- **Carefully clean clamps, cutter, keys and optical reader (if present).**

15 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.

The FUTURA PRO key-cutting machine does not need special maintenance, but it is good practice to check and if necessary replace parts subject to wearquali: cutter, clamps, belts.

Replacement operations are simple and can be performed by the operator.



ATTENTION: DO NOT USE COMPRESSED AIR!



ATTENTION: to maintain machine efficiency we recommend using protective oil such as WD40 or similar to apply to the burnished mechanical parts. Make sure the oil does not come into contact with the electronic parts.

Before performing any type of maintenance (checks or replacements) read the warnings below:

- Do not perform any maintenance operations with the machine on.
- Turn off the master switch (B) on the back of the machine and unplug.
- Always disconnect the power lead.
- Follow the instructions in the manual carefully.
- Use original spare parts (see provided spare parts sheet).

15.1 OPERATIONS

- Adjusting monitor inclination
- Removing/fitting manual clamp V2 (F100-F400-F600)
- Removing/fitting electric clamp V4 (F800-F900)
- Access to rear compartment
- Checking and replacing fuse
- Replacing the cutter
- Replacing the engraving unit cutters and belts
- Electric contact brushes replacement

15.2 ADJUSTING MONITOR INCLINATION

The inclination of the monitor can be adjusted. Turn screw (A1) with the special 'T' wrench provided.

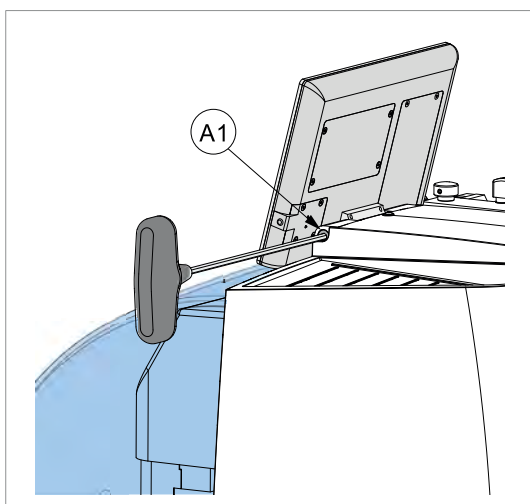


Fig. 135

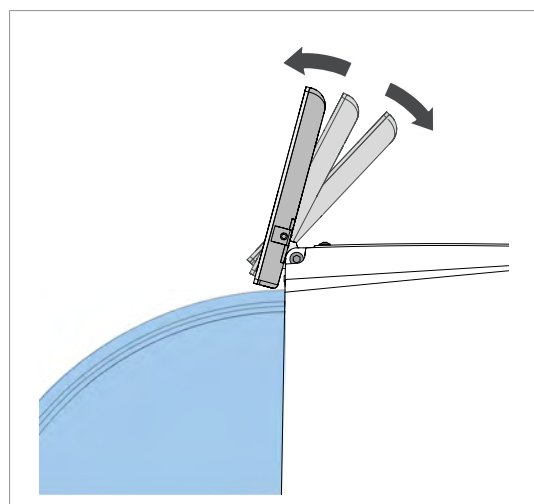


Fig. 136

15.3 REMOVING/FITTING MANUAL CLAMP V2 (F100-F400-F600)

- 1) Turn off the key-cutting machine and disconnect the power lead.
- 2) Raise the protective shield.
- 3) Unscrew the knob (P) and remove it (Fig. 137).
- 4) Pull the clamp upwards (Fig. 138).
- 5) Carefully clean the seat of the clamp support.
- 6) Clean the clamp before fitting into the support.
- 7) Tighten the knob (P).

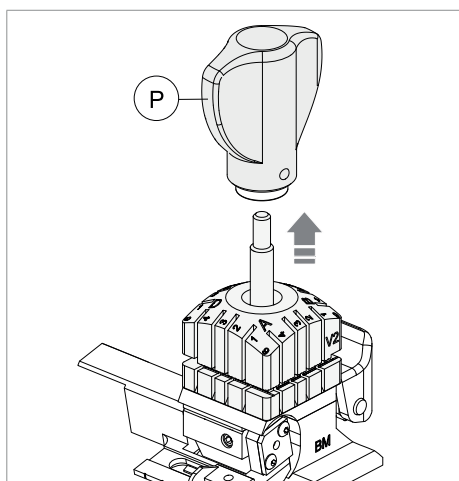


Fig. 137

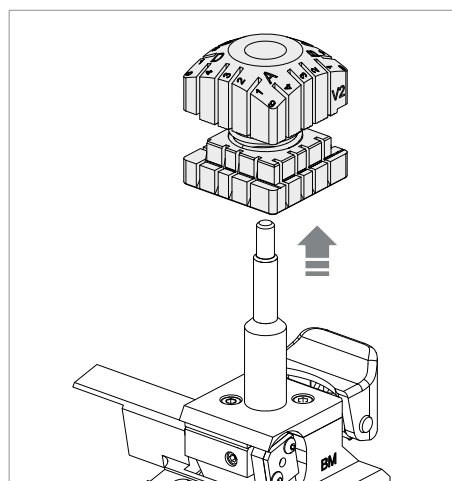


Fig. 138

15.4 REMOVING/FITTING ELECTRIC CLAMP V4 (UNOCODE F800 - F900)

- 1) Turn off the key-cutting machine and disconnect the power lead.
- 2) Raise the protective shield.
- 3) Disconnect the serial cable (M4) that connects V4 clamp to the machine (Fig. 139).
- 4) Loosen the grub screw (M3).
- 5) Remove the clamp unit from its dovetail groove (Fig. 140).

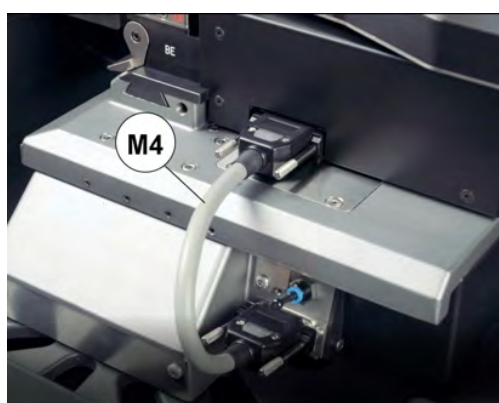


Fig. 139

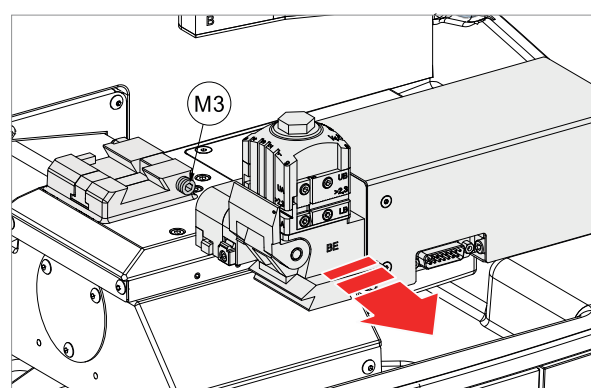


Fig. 140

15.5 ACCESS TO REAR COMPARTMENT

- 1) Turn off the key-cutting machine and disconnect the power lead.
- 2) Remove the seven screws (E1) securing the cover (E).
- 3) Remove the cover slowly.
- 4) Replace the cover (E) and secure with the seven screws (E1).

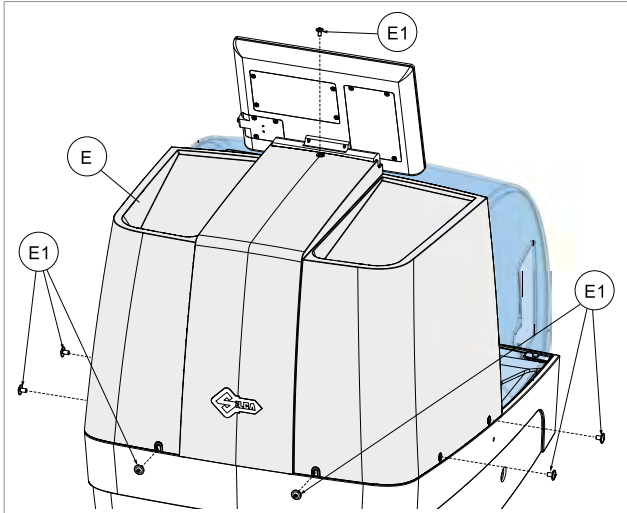


Fig. 141

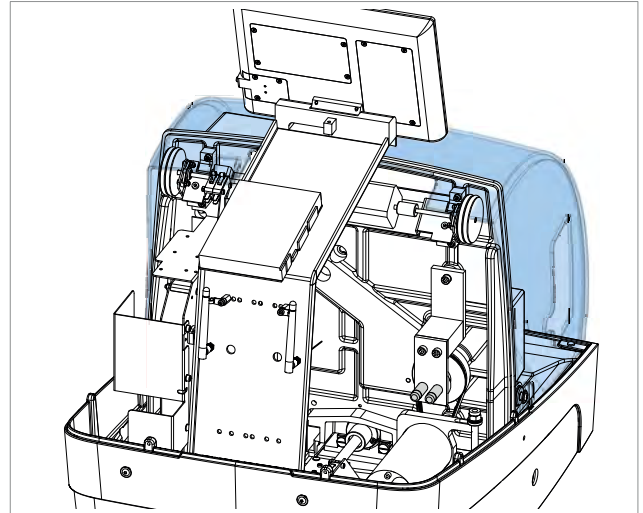


Fig. 142

15.6 CHECKING AND REPLACING FUSE

Fuses should be checked with a tester (ohmmeter, multimeter, etc.) as they may appear to be in good condition even when they are electrically faulty. Fuses must always be replaced with the same amperage and type (rapid or delayed), as indicated in this manual.

Machines UNOCODE F have 2 fuses:

- **6,3 Amps delayed**

Located next to the power socket on the back of the machine, next to the main switch. These fuses protect the machine from power surges and/or spikes in the electricity supply. To check and/or replace the fuses proceed as follows:

- 1) Turn off the key-cutting machine and disconnect the power lead.
- 2) Use a flat screwdriver to extract the fuse box from the socket (Fig. 143), remove the fuse and replace, if necessary.

- **1 Amps rapid**

Protects the electronic controls (24 d.c.)

If the fuse needs replacing contact Silca After-Sales Service.

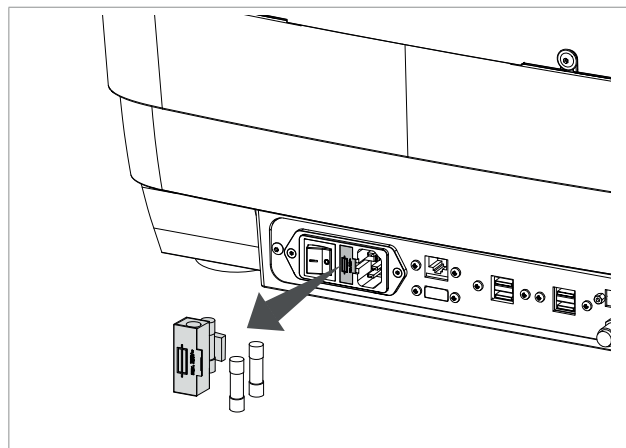


Fig. 143

15.7 REPLACING THE CUTTER

- 1) Turn off the key-cutting machine and disconnect the power lead.
- 2) Raise the protective shield (C).
- 3) Place the cutter release plate (F3) (provided) on the cutter nut, as shown in Fig. 145.
- 4) Use the pipe wrench (provided) to UNSCREW THE NUT (F2) CLOCKWISE (Fig. 146). **ATTENTION: THE THREAD GOES LEFT.**
- 5) Remove the nut (F2), hex washer (F1) and cutter (F) (Fig. 147).
- 6) Carefully clean the cutter shaft seat and the new cutter.
- 7) Fit the new cutter (F), paying attention to the direction of rotation.
- 8) Fit the hex washer (F1) and TIGHTEN THE NUT (F2) ANTICLOCKWISE. **ATTENTION: THE THREAD IS LEFT-HANDED.**

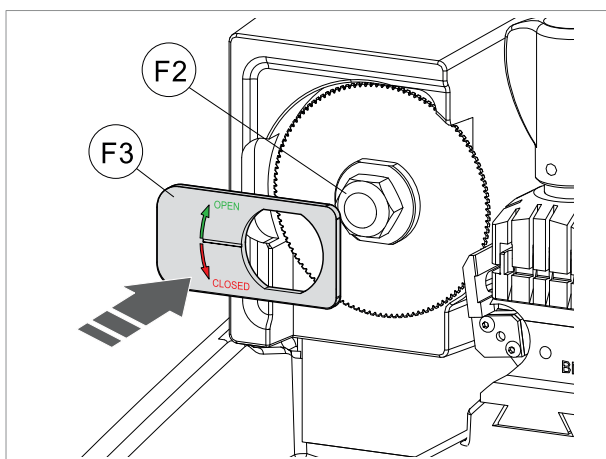


Fig. 144

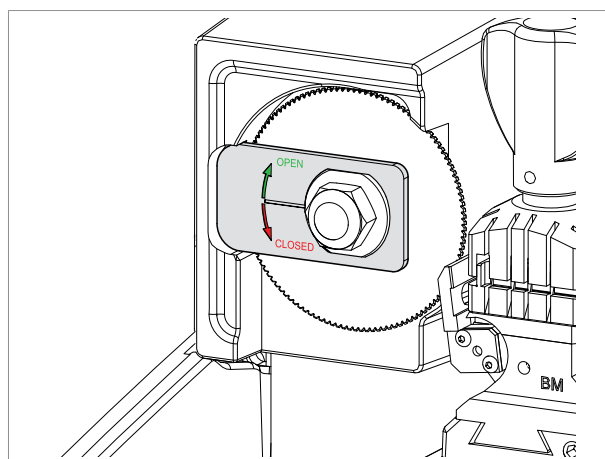


Fig. 145

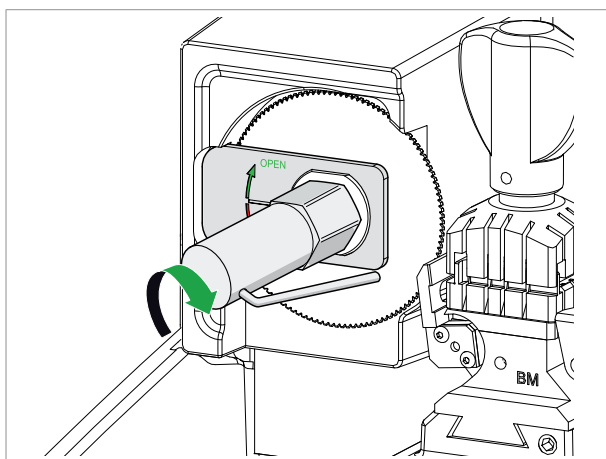


Fig. 146

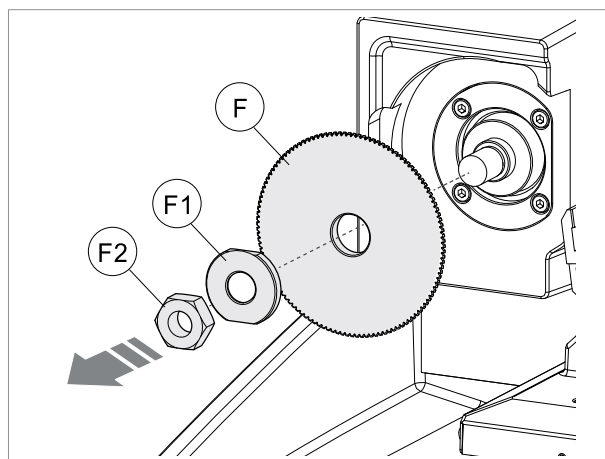


Fig. 147

15.8 REPLACING THE ENGRAVING UNIT CUTTERS AND BELTS FOR UNOCODE F600 - F800 - F900 ONLY

- **Case 1:** the upper cutter is not rotating. Replace the small top belt (W).
- **Case 2:** the lower cutter is not rotating. Replace the small lower belt (X).
- **Case 3:** neither of the cutters is rotating. Carry out the TEST to check that the engraving motor is working, then replace the lower belt (Y).

15.8.1 REPLACING THE UPPER BELT

- 1) Turn off the key-cutting machine and disconnect the power lead.
- 2) Raise the protective shield (C).
- 3) For the best access to the parts to be replaced, remove the clamp unit and rest it on the workbench.
- 4) Remove the three screws (T3) and cover (T4) to reach the belt (W).
- 5) Remove the worn or torn belt (Fig. 149).

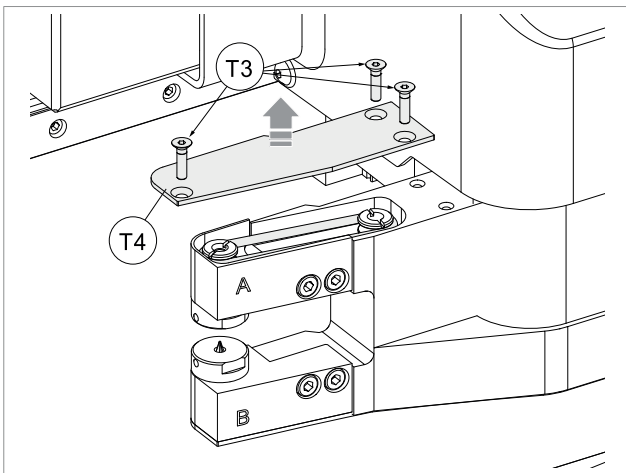


Fig. 148

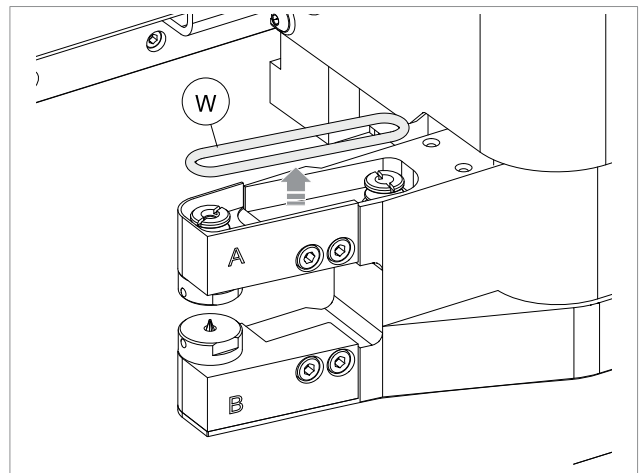


Fig. 149

15.8.2 REPLACING THE UPPER CUTTER

- 6) See points 1 to 5 above.
- 7) Remove the two front screws (T5) to take out the cutter support (Fig. 151).
- 8) Loosen the grub screw (T6).
- 9) Remove the cutter (T1) (Fig. 152). To facilitate the operation, insert a pin (provided) into the corresponding hole.
- 10) Fit the new cutter, pushing it all the way in, and lock with the grub screw (T6).

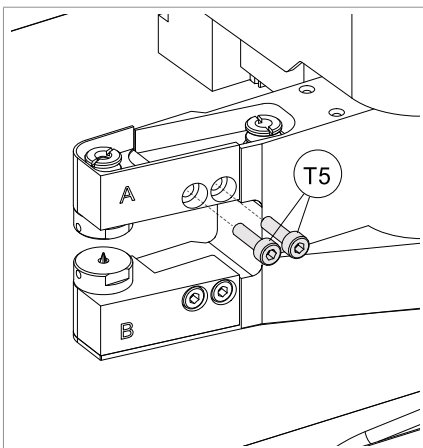


Fig. 150

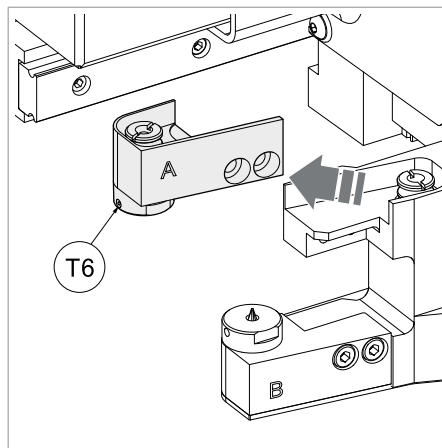


Fig. 151

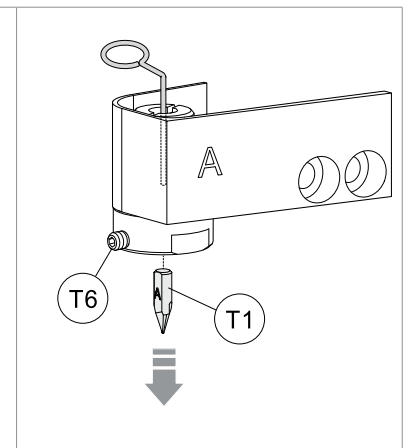


Fig. 152

15.8.3 REPLACING THE LOWER CUTTER

- 11) See points 1 to 7 above.
- 12) Remove the clamp in question.
- 13) Loosen the grub screw (T7).
- 14) Remove the cutter (T2). To facilitate the operation, insert a pin (provided) into the corresponding hole.
- 15) Fit the new cutter, pushing all the way in, and lock with the grub screw (T7).

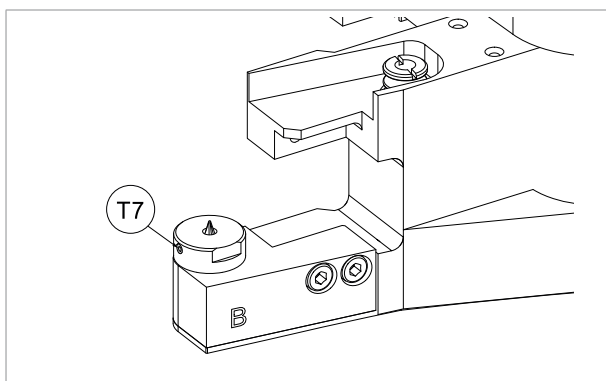


Fig. 153

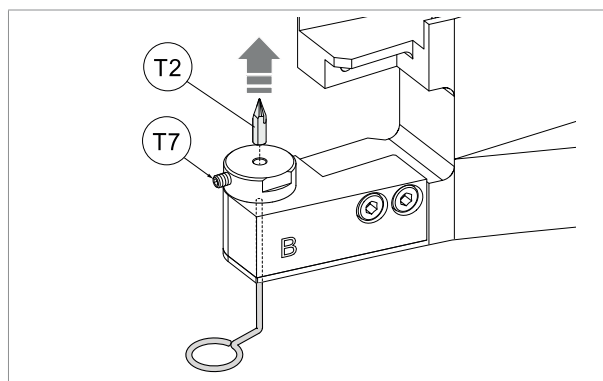


Fig. 154

15.8.4 REPLACING THE LOWER BELTS

- 1) Turn off the key-cutting machine and disconnect the power lead.
- 2) Raise the safety shield.
- 3) For the best access to the parts to be removed, remove the clamp unit and rest it on the workbench.
- 4) Remove the three screws (T8) and the cover (T9).
- 5) Remove the belt to be replaced (Fig. 156 or Fig. 157).

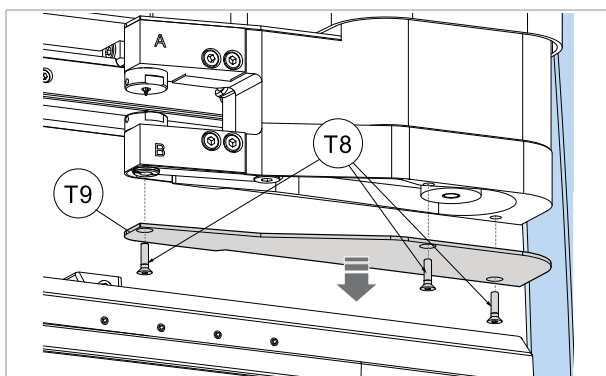


Fig. 155

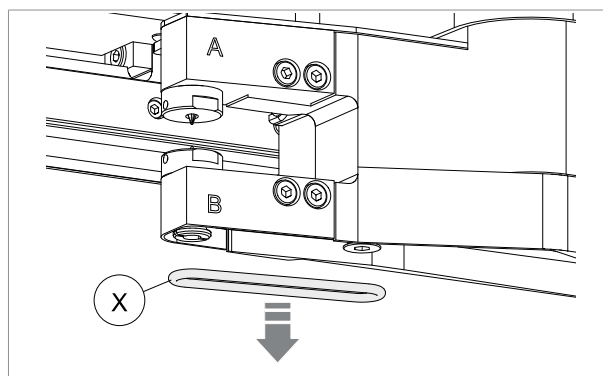


Fig. 156

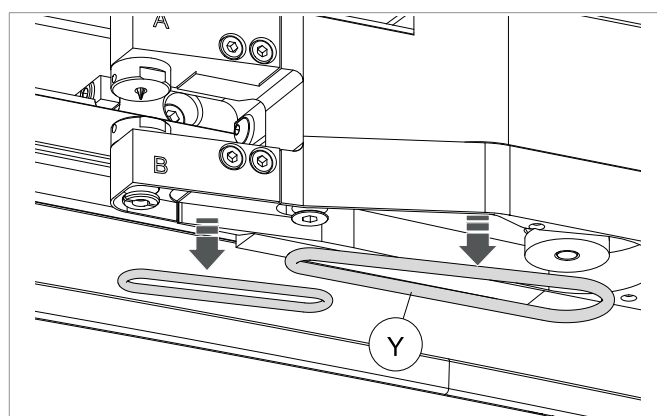


Fig. 157

15.9 ELECTRIC CONTACT BRUSHES REPLACEMENT

- 1) Turn off the key-cutting machine and disconnect the power lead.
- 2) Open the rear compartment (Ch.15.5).
- 3) Unscrew the two brush caps (G1), remove and fit two new brushes.
- 4) Replace the two caps (G1).
- 5) Replace the cover (E) and secure with the seven screws (E1).

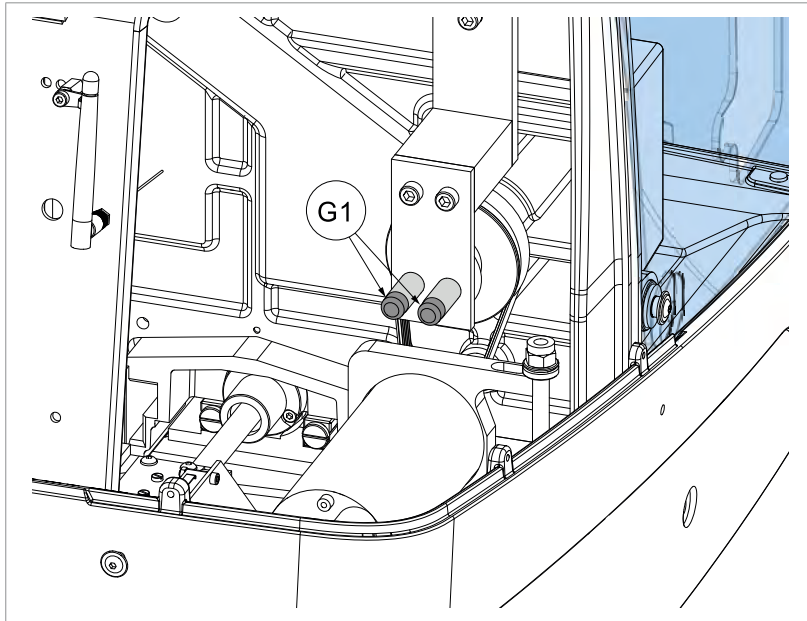


Fig. 158

16 DISPOSAL

For correct disposal please refer to current standards.

INFORMATION FOR USERS OF PROFESSIONAL EQUIPMENT



From “Actuation of Directive 2012/19/EU regarding Waste Electrical and Electronic Equipment (WEEE)”

The symbol of a crossed waste bin found on equipment or its packing indicates that at the end of the product’s useful life it must be collected separately from other waste so that it can be properly treated and recycled.

In particular, separate collection of this professional equipment when no longer in use is organised and managed:

- a) directly by the user when the equipment was placed on the market before 31 December 2010 and the user personally decides to eliminate it without replacing it with new equivalent equipment designed for the same use;
- b) by the manufacturer, that is to say the subject which was the first to introduce and market new equipment that replaces previous equipment, when the user decides to eliminate equipment placed on the market before 31 December 2010 at the end of its useful life and replace it with an equivalent product designed for the same use. In this latter case the user may ask the manufacturer to collect the existing equipment;
- c) by the manufacturer, that is to say the subject which was the first to introduce and market new equipment that replaces previous equipment, if it was placed on the market after 31 December 2010;

With reference to portable batteries/accumulators, when such products are no longer in use the user shall take them to suitable authorised waste treatment facilities.

Suitable separate collection for the purpose of forwarding discarded equipment and batteries/accumulators for recycling, treatment or disposal in an environmentally friendly way helps to avoid possible negative effects on the environment and human health and encourages re-use and/or recycling of the materials making up the equipment.

To remove batteries/accumulators, consult the manufacturer’s specific instructions: (see relevant chapter in the users’ manual)

The sanctions currently provided for by law shall apply to users who dispose of equipment, batteries and accumulators in unauthorised ways.

17 ASSISTANCE

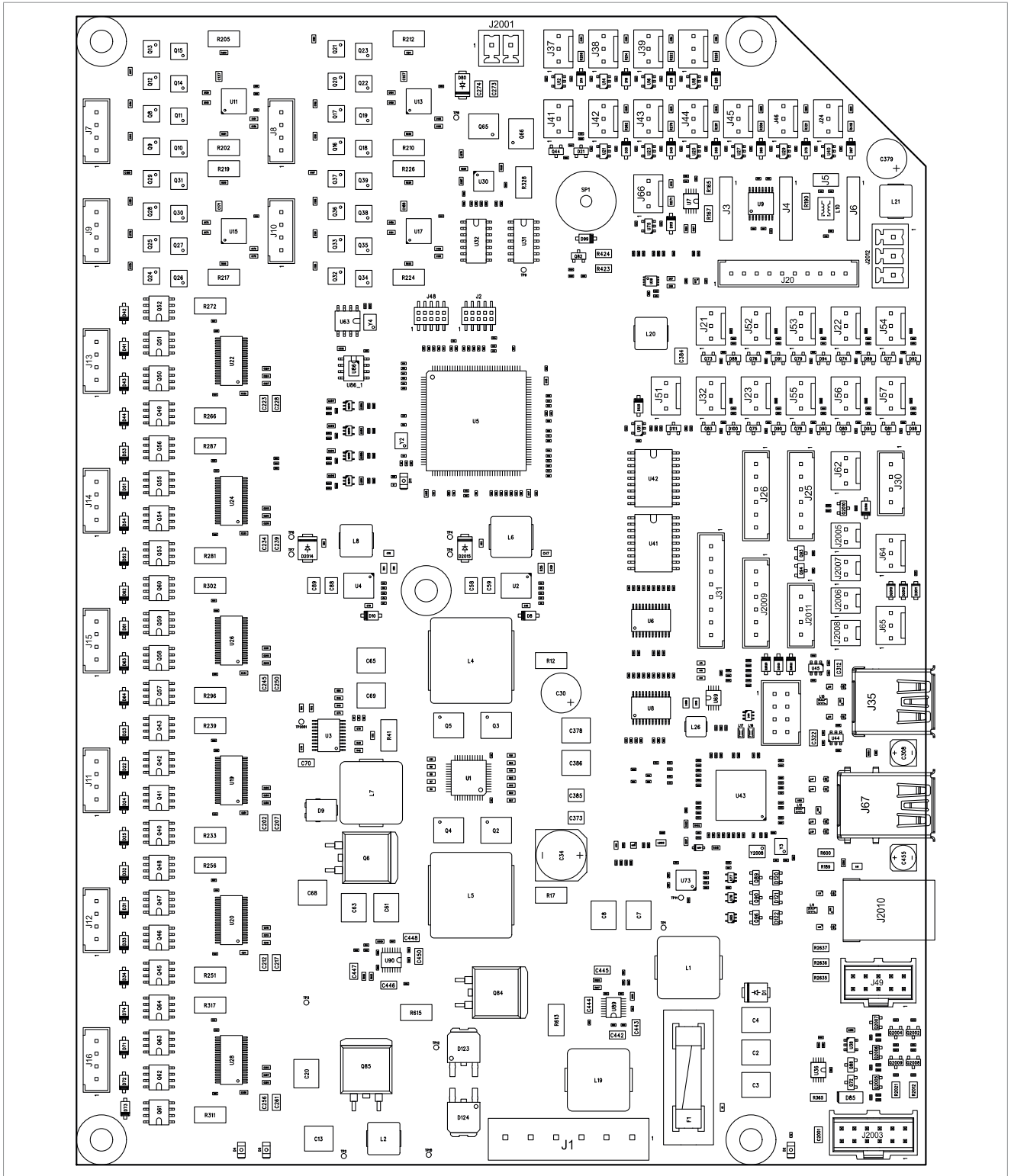
Silca provides full assistance to purchasers of the key-cutting machine. To ensure complete safety for the operator, any job not specified in this manual should be carried out by the manufacturer or in the special Service Centres recommended by Silca.

At the end of the manual there is a list of manufacturers' and authorized Service Centre addresses; if the manual was downloaded is necessary visit the website to see the contacts (www.silca.biz).

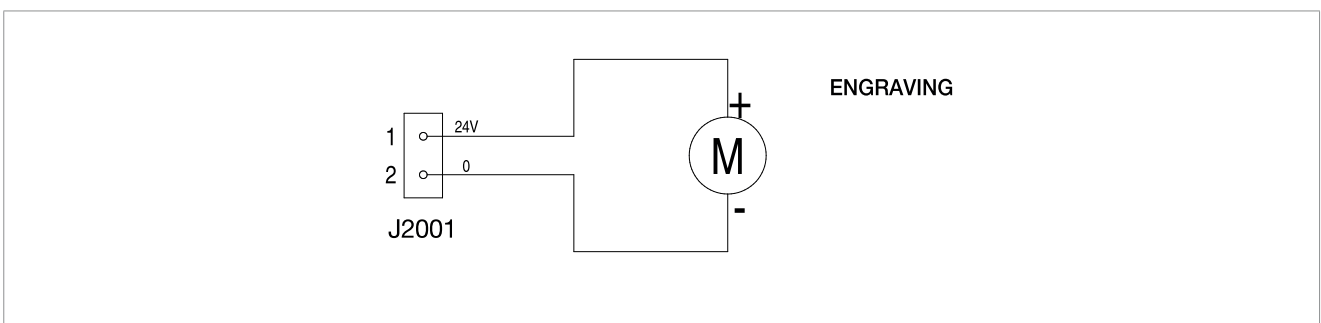
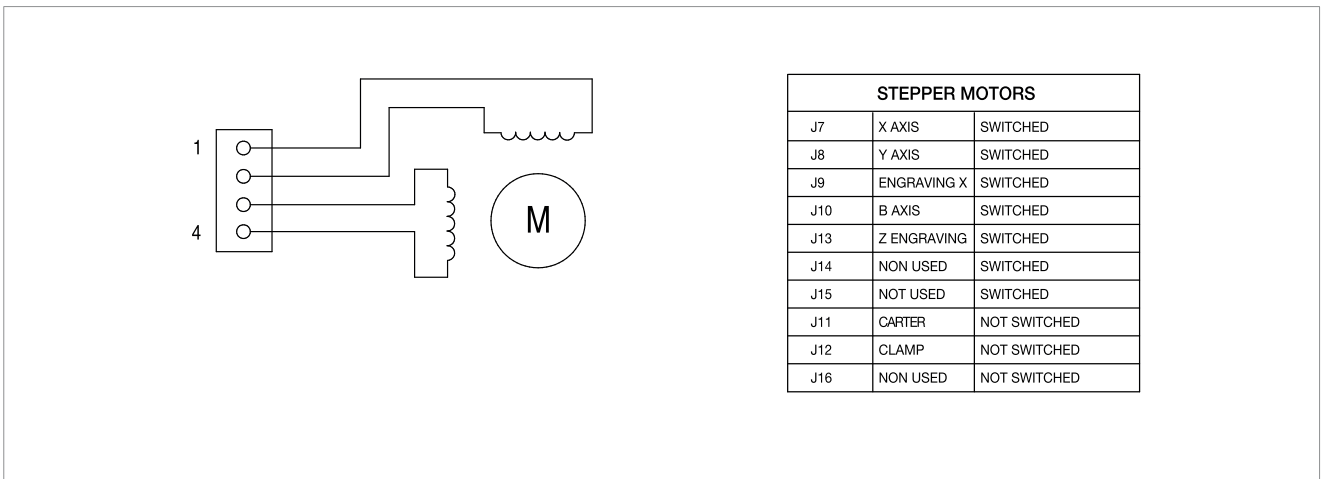
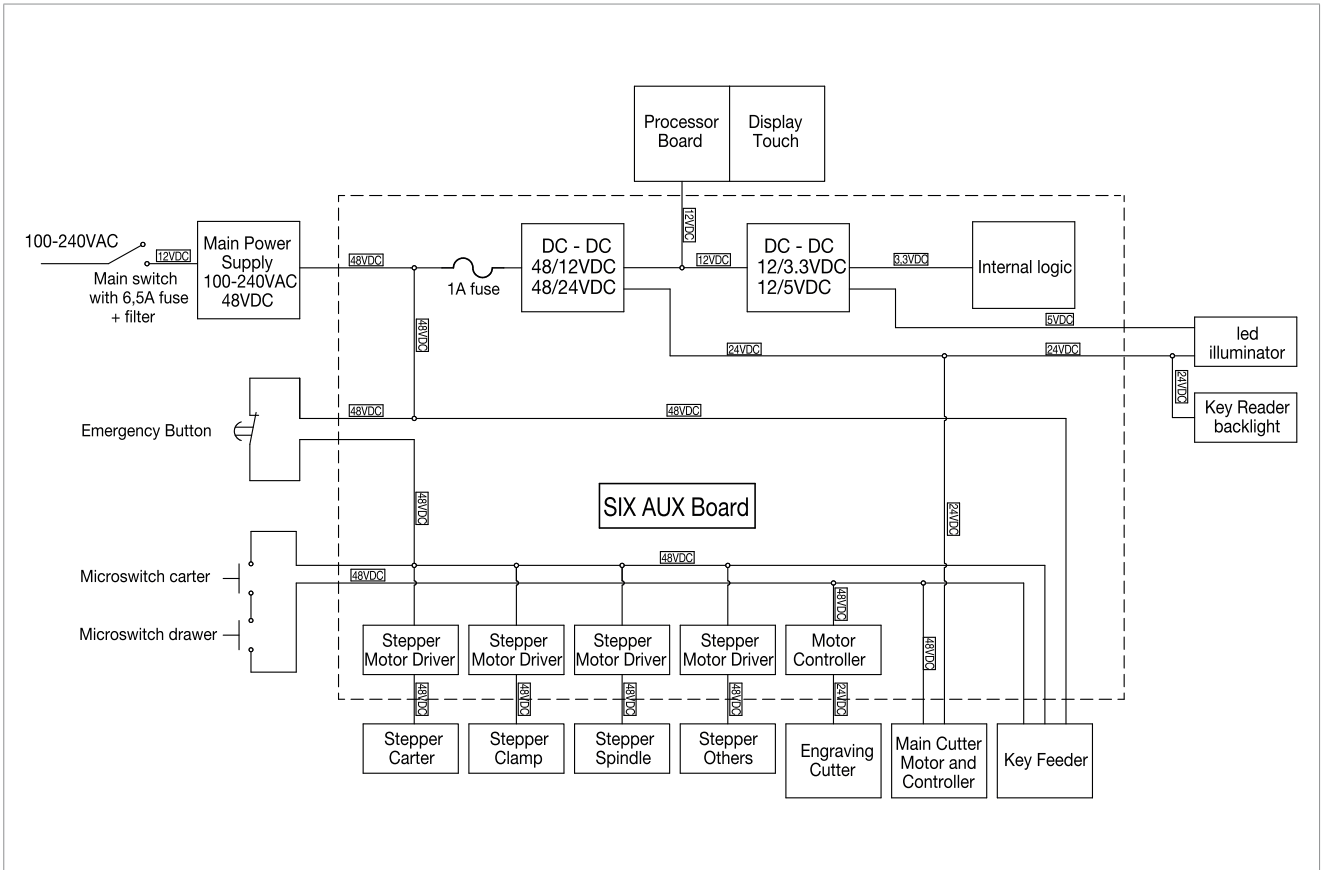
17.1 HOW TO REQUEST SERVICE

The guarantee attached to the key-cutting machines ensures free repairs or replacements of faulty parts within 24 months of purchase. All other service calls must be arranged by the customer with Silca or with a Silca service center.

18 ELECTRICAL DIAGRAMS



MOTHER BOARD



MAGNETIC SENSORS	
J37	X AXIS CARRIAGE
J38	Y AXIS CARRIAGE
J39	X AXIS ENGRAVING
J40	B AXIS TILTING
J42	NOT USED
J43	Z AXIS ENGRAVING
J44	NOT USED
J45	GAUGE
J46	MICRO DRAWER
J24	NOT USED

MICRO DRAWER READER

MICRO CARTER	
J55	CLOSED
J23	OPEN

MICRO CARTER/SWARF TRAY	
J51	OPEN

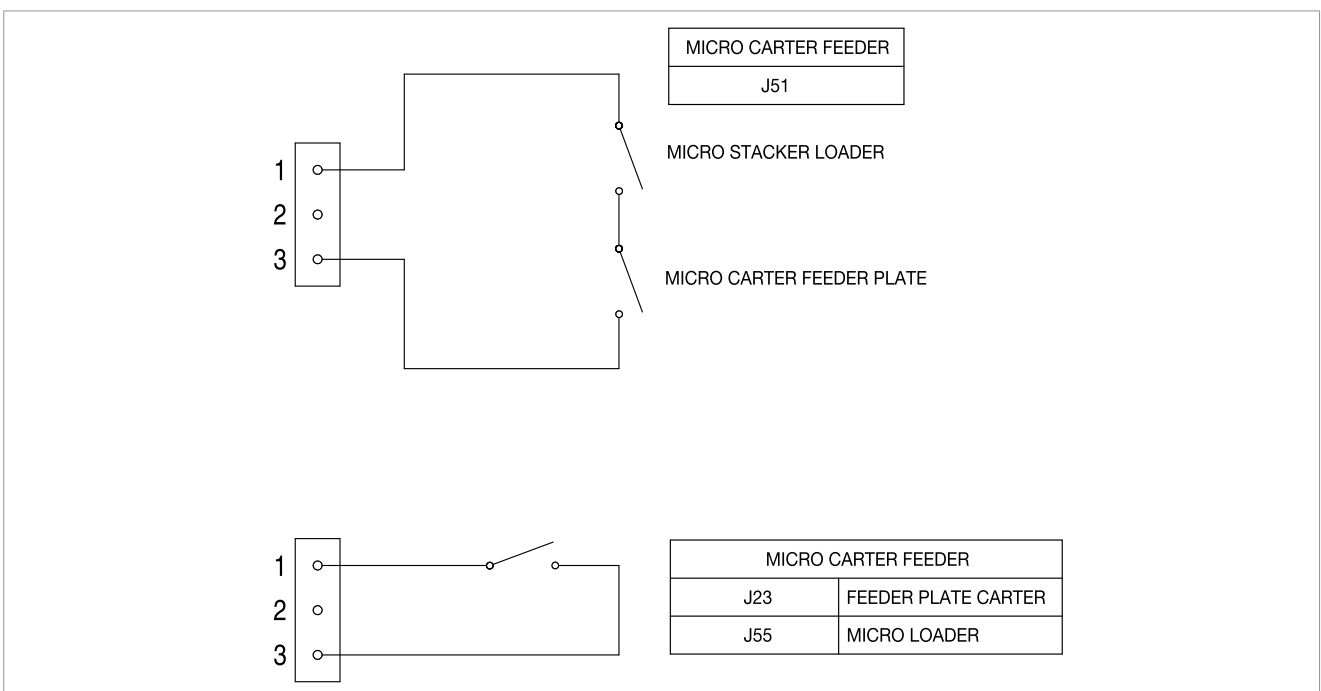
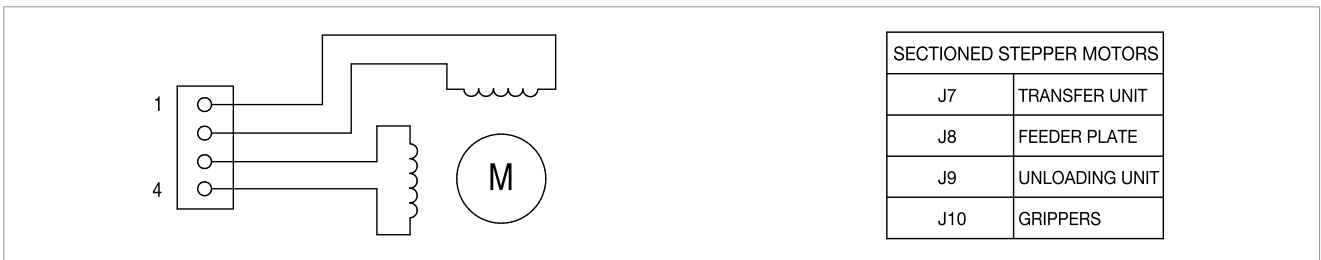
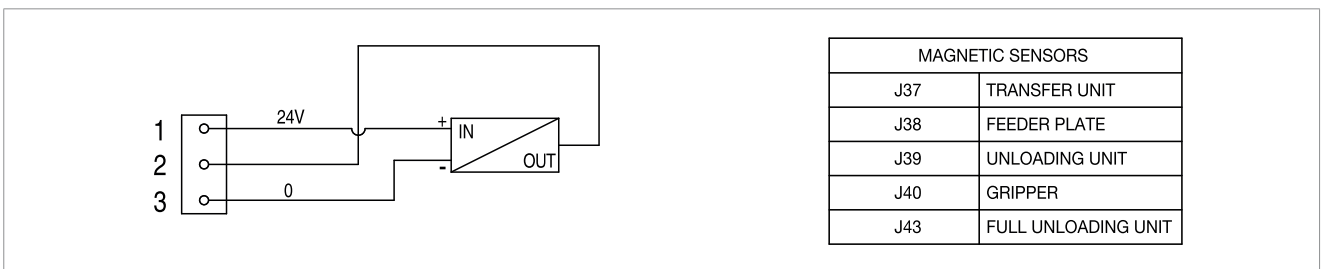
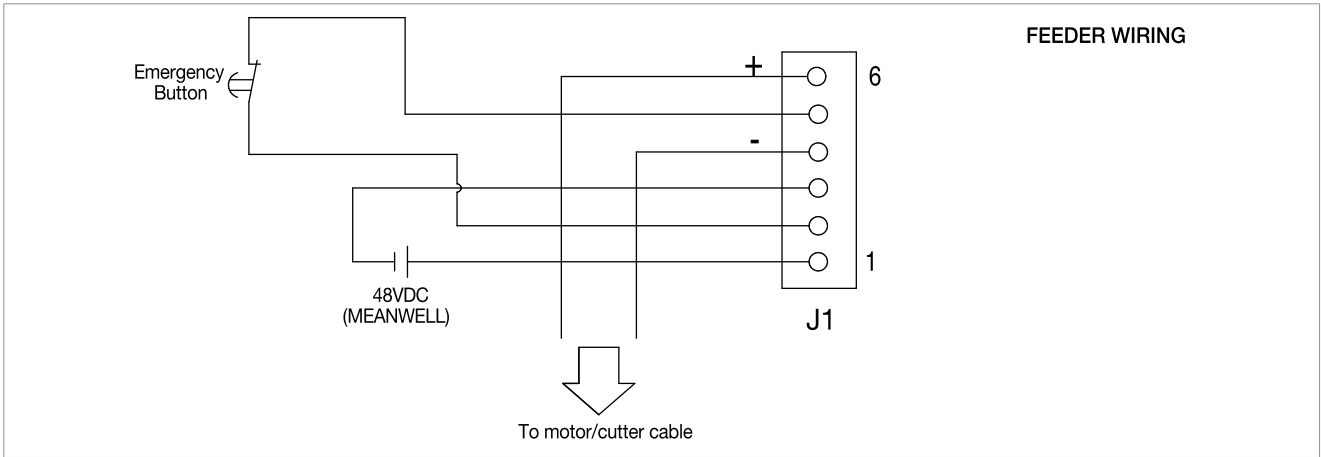
FEEDER PC BOARD

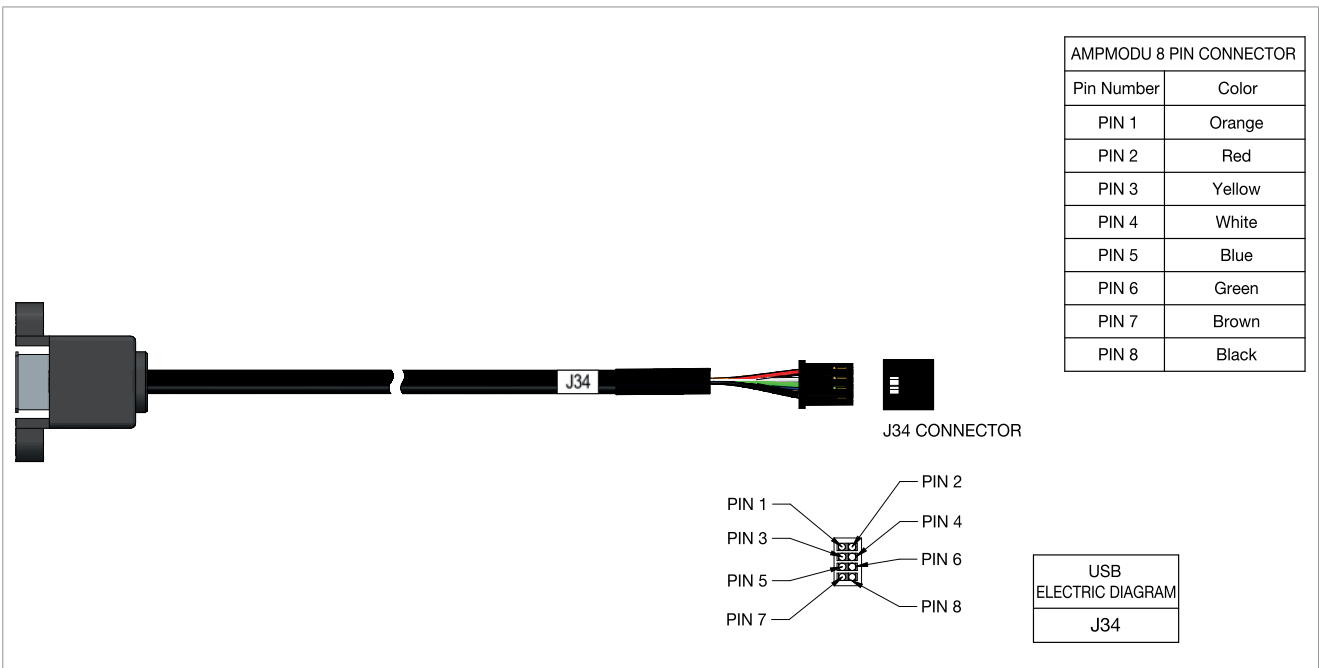
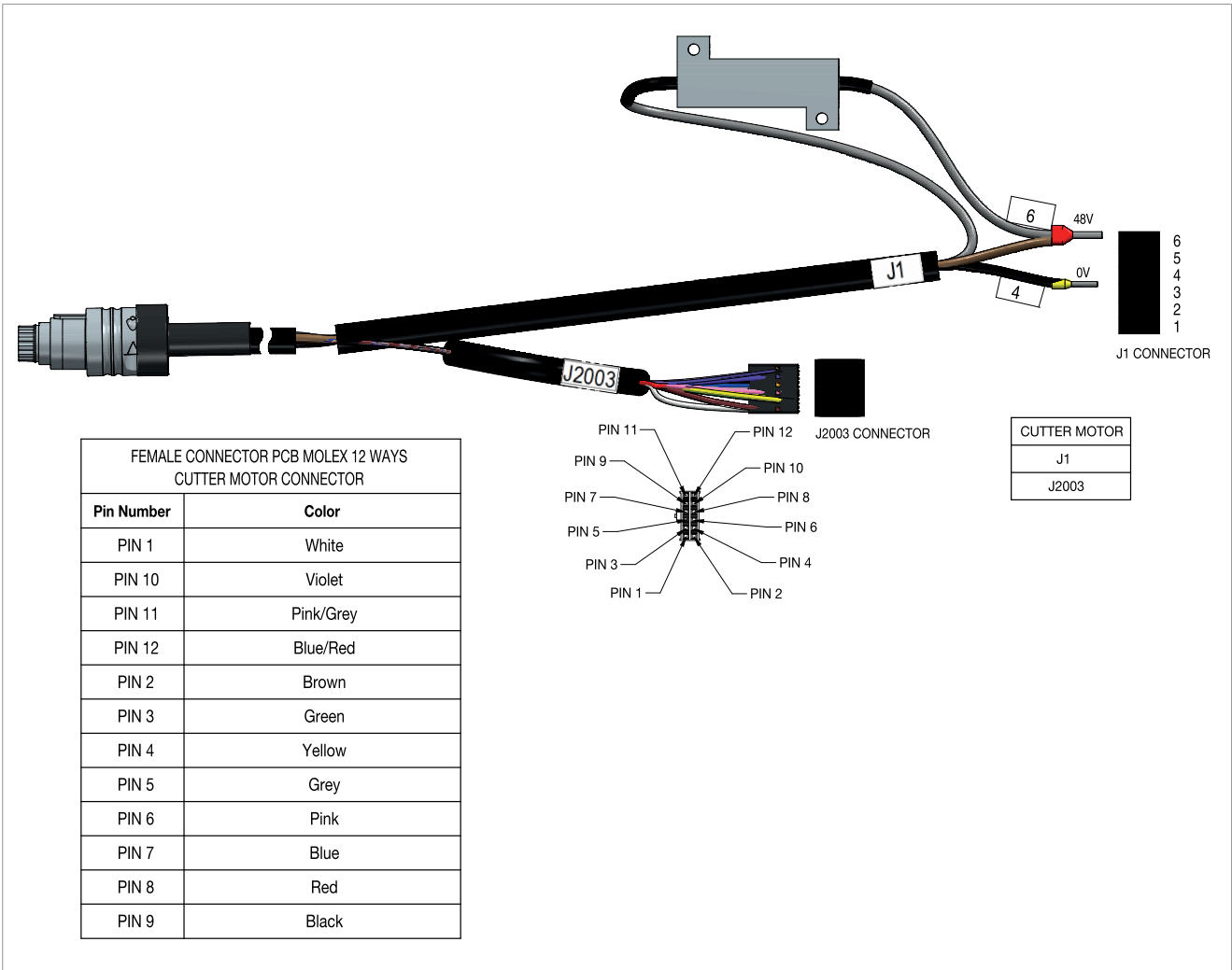
PHOTOCELL SENSORS	
J21	X AXIS
J32	TRACER T TOWER
J41	FEEDER PRESENCE
J22	NOT USED
J52	Y AXIS
J53	NOT USED
J54	ELECTRIC CONTACT ENGRAVING
J56	B AXIS
J57	CUTTER ELECTRIC CONTACT

FAN	
J2005	FAN 1
J2006	FAN2
J2007	FAN1
J2008	FAN2

KEY READER ILLUMINATOR

CLAMP DETECTION





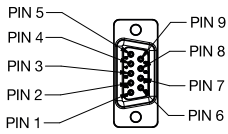
D-SUB 9 PIN FEMALE CONNECTOR ART.L77SDE09S		
Pin Number	ID	Color
PIN 1	Black8	Black
PIN 2	Red2	Red
PIN 3	Red4	Red
PIN 4	Red6	Red
PIN 5	Black9	Black
PIN 6	Blue1	Blue
PIN 7	Black7	Black
PIN 8	Blue3	Blue
PIN 9	Blue5	Blue

PCB MOLEX 10 PIN FEMALE CONNECTOR STEP 2.54mm ART. 90142-0010		
Pin Number	ID	Color
PIN 1	Blue1	Blue
PIN 10	Black7	Black
PIN 2	Red2	Red
PIN 3	Blue3	Blue
PIN 4	Red4	Red
PIN 5	Blue5	Blue
PIN 6	Red6	Red
PIN 8	Black8	Black
PIN 9	Black9	Black

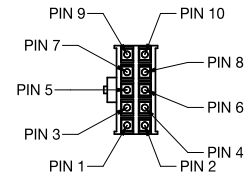
9 PIN FEMALE CONNECTOR



J49 CONNECTOR



FEEDER
ELECTRIC DIAGRAM
J49



9 PIN MALE CONNECTOR		
Pin Number	ID	Color
PIN 1	Black8	Black
PIN 2	Red2	Red
PIN 3	Red4	Red
PIN 4	Red6	Red
PIN 5	Black9	Black
PIN 6	Blue1	Blue
PIN 7	Black7	Black
PIN 8	Blue3	Blue
PIN 9	Blue5	Blue

PCB MOLEX 10 PIN FEMALE CONNECTOR STEP 2.54mm ART. 90142-0010		
Pin Number	ID	Color
PIN 1	Blue1	Blue
PIN 10	Black7	Black
PIN 2	Red2	Red
PIN 3	Blue3	Blue
PIN 4	Red4	Red
PIN 5	Blue5	Blue
PIN 6	Red6	Red
PIN 8	Black8	Black
PIN 9	Black9	Black

9 PIN MALE CONNECTOR

J49 CONNECTOR

FEEDER
ELECTRIC DIAGRAM
J49



EU DECLARATION OF MACHINE COMPLIANCE

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Declares under its own responsibility that the **Key-Cutting Machine** models

**UNOCODE F400
UNOCODE F600
UNOCODE F800
UNOCODE F900**

comply with the requirements of the following European Directives:

European Union **DIRECTIVE 2006/42/EC** (Machines)
European Union **DIRECTIVE 2014/30/EU** (Electromagnetic Compatibility)
European Union **DIRECTIVE 2014/35/EU** (Low Voltage)
European Union **DIRECTIVE 2014/53/EU** (RED)
European Union **DIRECTIVE 2011/65/EU** (RoHS2)
European Union **DIRECTIVE 2012/19/EU** (WEEE)

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and with the following Standards:

EN ISO 12100:2015	EN 55032:2015 + AC:2016
EN 55024:2010 + A1:2015	EN 61000-3-3:2013 + A1:2019
EN IEC 61000-3-2:2019	EN 301 489-17:2017 (V3.2.2)
EN 301 489-1:2017 (V2.2.3)	EN ISO 13849-2:2013
EN ISO 13849-1:2015	IEC TR 62778:2014
EN 62471:2008	EN 60825-1:2014
EN 62233:2008	
ETSI EN 301 328:2016 (V.2.2.2)	
EN 62368-1:2014 + A1:2017	

Silca S.p.A. R&D Division is authorized to create a Technical File.

VITTORIO VENETO, 30/11/2020

Michele Gazzola
Managing Director

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Società soggetta a direzione e coordinamento di Kaba Holding AG, con sede in Rümlang (Svizzera), Hofwisenstrasse 24, ai sensi e per gli effetti degli articoli 2497 - 2497sexies del Codice Civile.

