INSTRUCTION MANUAL

MINI K

Versione 01 . 2016

G.B.C. Industrial Tools S.p.A.
Via Sandro Pertini 41/43 – 25046 Cazzago San Martino (Bs) – Italia – Tel. + 39 030 7451154 – Fax. + 39 030 73 56 629

MINI K

Original Instructions—rev.2011— In compliance with the step 1.7.4 of the Machinery Directive 2006/42/CE

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PRESENTATION OF THE COMPANY AND INTRODUCTION TO THE INSTRUCTION MANUAL

G.B.C. Industrial Tools S.p.A. is known worldwide for the quality of its machines and accessories for pipe cutting and beveling procedures of any sort and plate beveling machines..

The Headquarters are located in Cazzago San Martino (BS) where are currently operating the General Management, the sales de-department, as well as the main workshop and the shipping department.

QUALITY STANDARD—All our machines are assembled according to the highest quality standard. Since 1996 **G.B.C. Industrial Tool S.p.a.** has implemented management procedures in compliance with the quality system regulations UNI EN ISO 9001 (SGS ITALIA S.R.L. N° IT 96.088 / 1996).

This Manual is supplied together with the machine it makes reference to. The customer may apply for fur-ther copies to **G.B.C. Industrial Tools S.p.a.** Our company owns the copyright of this document and any partial or complete copy or distribution to natural persons or to corporate bodies is strictly forbid-den unless our prior approval to do so is obtained. **G.B.C. Industrial Tools S.p.a.**

informs its customers that any operation carried out on the machines which is not prescribed in this manual entails the automatic invalidation of the warranty. G.B.C. Industrial Tools S.p.a.

recommends to contact the Maintenance Service in Cazzago San Martino – Italy prior to proceed with any modi-fication on the machine.

You are invited to scrupulously adhere to the information written on the identification tag.

For any further information you are invited to contact us at these numbers:

Tel. +39 - 030 -7451154
Fax +39 - 030 – 7356629

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WARRANTY GENERAL CLAUSES

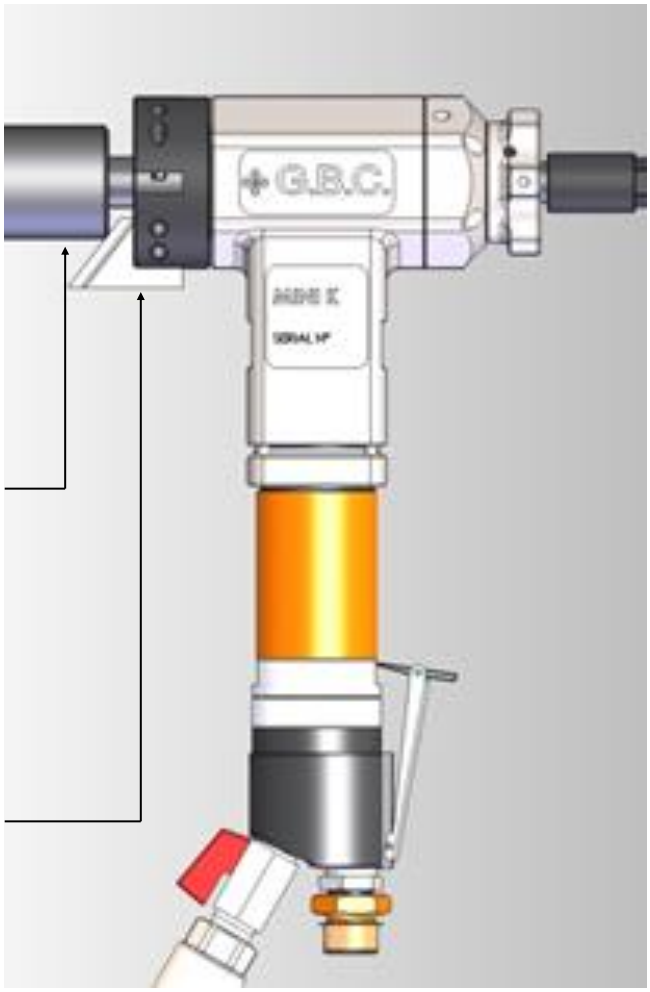
G.B.C. Industrial Tools S.p.a. guarantees the reliability of the machine and its conformity to the specifications herewith reported. The warranty covers the machine in its whole for a time period of one year from the shipment date (ref. Delivery Note) for any flaw not imputable to the user.
The parts subject to wear are excluded from the warranty at sole discretion of **G.B.C. Industrial Tools S.p.a.**
In case of any operational malfunction arising during the warranty period, **G.B.C. Industrial Tools S.p.a.**
And its Maintenance Service, hereinafter called MSS, will remedy this inconvenient free of charge , both for handwork and for eventual replaced parts, except when the malfunction is directly or indirectly imputable to misuse or alteration. In any case the machine must not be disas-sembled or altered before the shipment. The warranty is valid only when the warranty document is duly signed by **G.B.C. Industrial Tools S.p.a.** and by a **G.B.C.** official distributor con-nected with the MSS maintenance service.
The shipment of the defective material must be performed within 8 (eight) days from the notification of the defect and/or the claim and/or the request of technical assistance. On the contrary the warranty will be void. **G.B.C. Industrial Tools S.p.A.** and **MSS** obligations will cover the defect resolution, the general maintenance and the inspection of the parts subject of the claim only. The component replacement is at **G.B.C. Industrial Tools S.p.A.** discretion only. The shipmen to costs from and to the **MSS** as well as the direct and indirect costs rising from repair of the product are at user's charge. Any warranty repair or extraordinary repair must be executed by **G.B.C. Industrial Tools S.p.A.** and MSS, otherwise the warranty will be void.
Any ordinary maintenance performed by the customer/user or by any service centre non recognized or approved by **G.B.C. Industrial Tools S.p.A.** will not be refunded and will make the warranty void. The warranty is not valid for cases not listed in this certificate or for damage caused by a misuse of materials, power supply, negligence, unauthorized modifications, atmospheric events, acts of vandalism, incautious handling and/or transport, use of non original **G.B.C. Industrial Tools S.p.A**. parts and damage for causes not specified by **G.B.C. Industrial Tools S.p.A.** and for which **G.B.C. Industrial Tools S.p.A.** declines any responsibility. **G.B.C. Industrial Tools S.p.A.** reserves the right to modify and to improve its products without any obligation to modify equipment and components already supplied. Nobody is authorized to modify the conditions herewith contained or to issue any on behalf of **G.B.C. Industrial Tools S.p.A.** The claim terms for defects and/or damages in the material or of the ordered quantities, are those pre-scribed by the Civil Code; the goods acceptance entails the buyer to automatically accept the above mentioned warranty clauses.

INTENDED USE OF THE MACHINE

The Mini K is used for beveling pipe ends preparing them for the subsequent welding.

The Mini K has to be locked in the pipes ID

The bevel is obtained by bevelling tools of various shape and materials, depending by the type of finishing required and by the nature of the material to be beveled.



THE MACHINE SHOULD BE USED ONLY BY SPECIALIZED OPERATORS WHO HAVE BEEN DULY TRAINED ON THE UNIT.

FOLLOWING TO A SPECIFIC FORMATION THERE IS NO REASONABLY PREDICTALBE MISUSE OF THE UNIT

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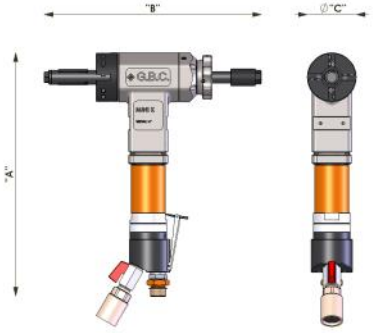
TECHNICAL FEATURES

		PNEUMATIC	ELECTRIC	BATTERY
ID Locking range	mm (inches)	20 - 42 (0.78-1.65)	20 - 42 (0.78-1.65)	20 - 42 (0.78-1.65)
Idle Speed	gg/min (Rpm)	180	305	151
Max Chuck Torque	Nm (Nm)	6 (6 bar) 18 (8 bar)	17	30
Axial Feeding	mm (inches)	23 (0.90)	23 (0.90)	23 (0.90)
Pneumatic Motor Power	Hp (W)	0.59 (435)		
Air Consumption	Nl/min (cfm)	615 (21.7)		
Air Pressure	Bar (psi)	6 ÷ 8 (87 ÷ 116)		
Air Hose Connection	Pollici (inches)	1/2" (1/2")		
Electric Motor Power	W		720	720
Tension	Volt		110 / 230	18V 4.0 Ah
Frequency	Hz		50 / 60	
Max Acoustic Emission	Db	75	75	75
Machine Weight	Kg	4.8	5.5	5.7



MACHINE DIMENSION

		PNEUMATIC	PNEUM.+LOCKING	ELECTRIC	BATTERY
A	mm (inches)	375 (12.79)	375 (12.79)	410 (16.14)	470 (18.50)
B	mm (inches)	300 (11.81)	460 (18.11)	300 (11.81)	300 (11.81)
Ø C	mm (inches)	67 (2.63)	67 (2.63)	67 (2.63)	67 (2.63)
Ø C (Optional)	mm (inches)	60 (2.36)	60 (2.36)	60 (2.36)	60 (2.36)

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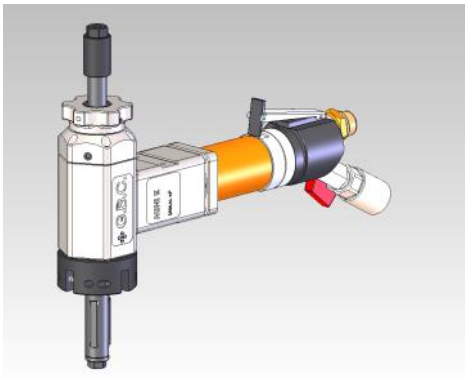
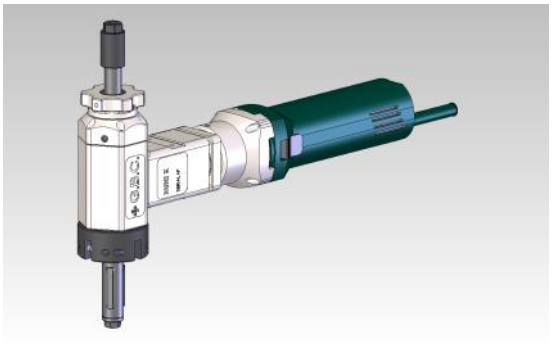
MINI K MODELS

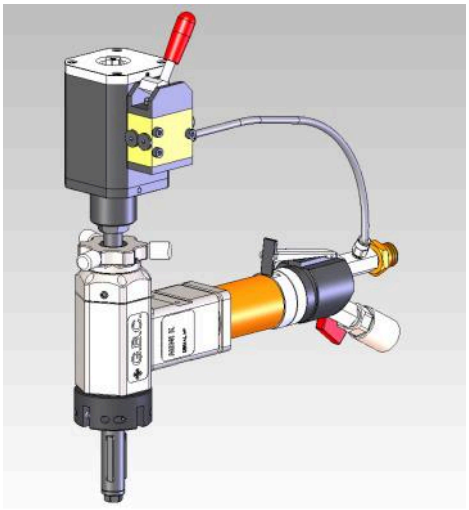
MINI K



MINI K " E"



MINI K " with autolock"



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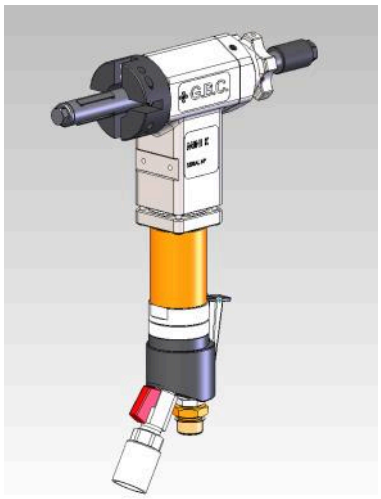
MACHINE STANDARD EQUIPMENT

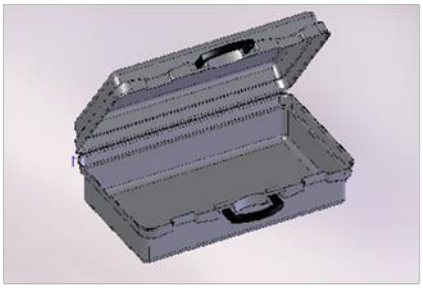
The machine is supplied inclusive of the following equipment:

- Series of locking jaws from 20 to 42 mm (One set is already mounted on the unit)
- 3 mm Allen Key
- 14-17mm wrench
- Machine Case
- Instruction Manual And Exploded Drawings

Mini K



Machine Case



Instruction Manual And Exploded Drawings

Service Tools

G.B.C. Industrial Tools S.p.A.

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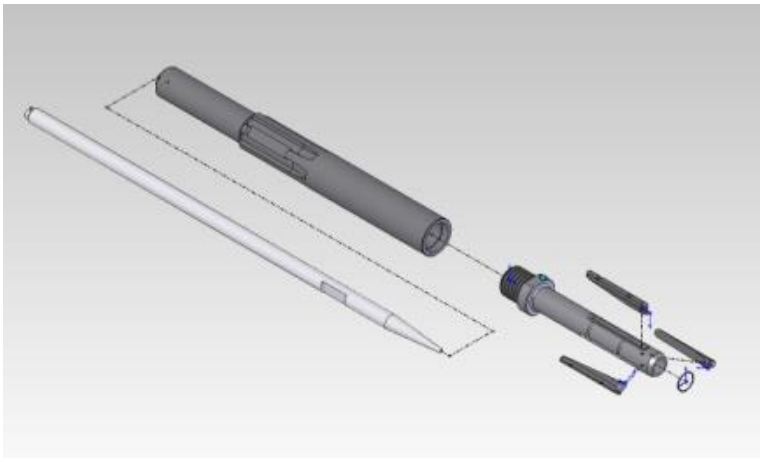
OPTIONAL EQUIPMENT

INTERCHANGEABLE REDUCED SHAFTD FOR ID PIPES FROM 12,5mm to 21mm.



INTERCHANGEABLE ELBOW SHAFTS FOR CURVED ID PIPES FROM 25mm to 51mm.

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SAFETY PRESCRIPTIONS

G.B.C. Industrial Tools S.p.A. designs and assembles its machines in strict compliance with the safety regulations provided by the applicable EC directives and by the Italian laws regulating this matter.
G.B.C. Industrial Tools S.p.A. declines any responsibility for misuse of its machines and their use when in contrast with the regulation listed hereinafter and with the use and maintenance instructions hereto.

- Carefully read ALL the following regulations and the instructions herewith attached before starting any operation.
- Carefully ensure that the operator and the foreman using the machine are fully aware of all the regulations and all the instructions and that they are qualified to operate the unit.
- Strictly attain to the indications given by the international symbols applies on the machine and/or on its case.
- Do not perform any maintenance operation when the machine is plugged to the power supply.
- Before every use, ensure the power supply connections to be conform to the specs given by our manual.

The authorized operator in any case will not have to disregard the basic safety rules such as:

- Using gloves and goggles (safety gear supplied by the company responsible for the site or for the building)
- To properly illuminate the working area
- Ensure you are operating in an area which grants free movements (at least 1,5 metres around the operator)
- Do not replace the control system and do not replace parts with non original spare parts, and do not project violent water squirts on the machine
- Keep the hands away from hot and sharpened parts.
- **G.B.C. Industrial Tools S.p.A**. remarks that for any non specified circumstances it is necessary to obtain the authorization of the manufacturer.

Proper use of the safety gear entails the only risks to be generated by the user's system and not by inborn defects of our machines.

1. Always wear gloves and goggles during every operation
2. Any adjustment or inspection of the machine shall be done with the unit unplugged from the power source.
3. During the operations the hands shall be kept on the security valve and on the hand wheel.
4. The Use and Maintenance Manual as well as the drawings will always supply quick and adequate explanations.

SHIPPING DETAILS

Weight of the Machine	kg	**6**	**5**
Shipping Dimensions	mm	**370x430x120**	**370x480x120**
Shipping Weight	kg	**12,5**	**11**

Under 25 Kgs no lifting machines are required.

MACHINE STABILITY

Considering the mass of the machine no particular problem has been detected in regard to the operator safety.

WORKPLACE

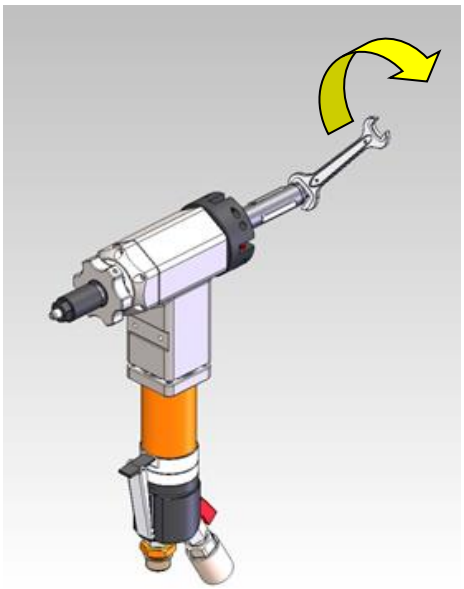
By always using both hands for operating the machine, the operator is unable to reach the bevelling tools as the unit would suddenly stop – motor brake –

EMERGENCY STOP INSTALLATION EXEMPTION

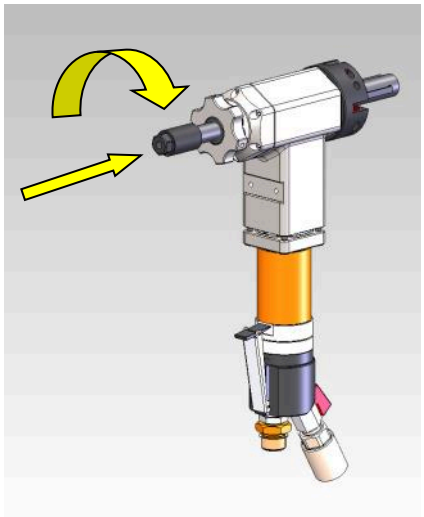
As provided for the paragraph 1.2.4.3. of the attachment 1 of the Machinery Directive, portable machines are exempt to have this feature.

MACHINE SETUP

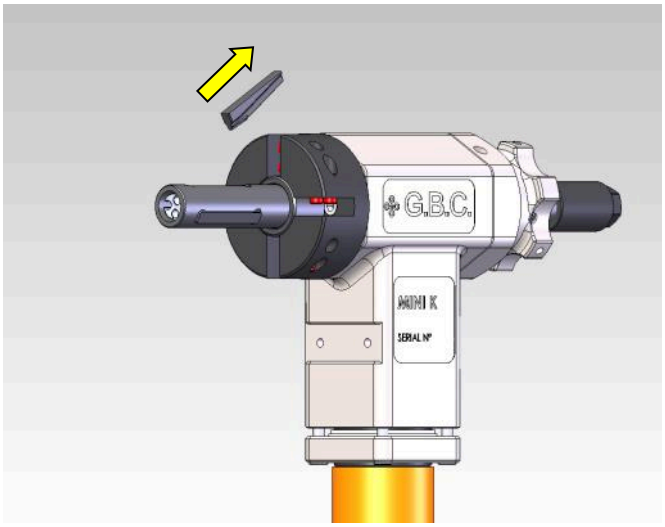
Unscrew the **VANE ABUTMENT CAP** and remove it.

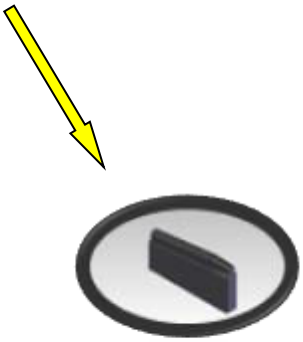


Screw the **VANE ABUTMENT NUT** for the full stroke



Remove the three **LOCKING JAWS** previously mounted.





<u>WARNING!!!! DO NOT MOVE THE EXPANSION SHAFT!!!!</u>

You will be able to move it by acting on the **VANE EXPANSION NUT** only ***<u>AFTER</u>*** the docking jaws have been put back in position.

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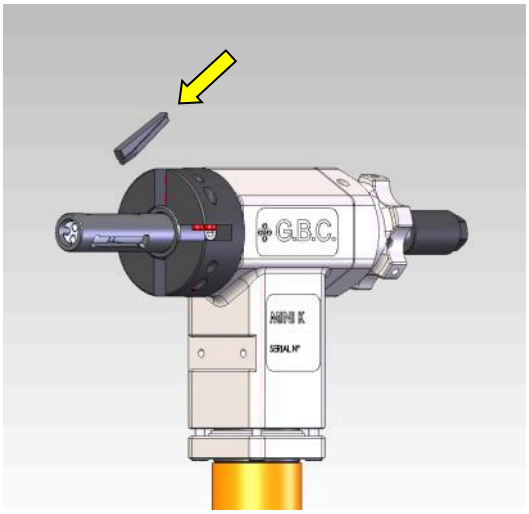
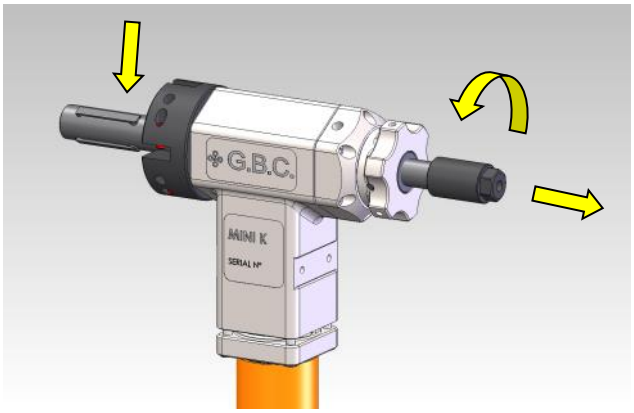
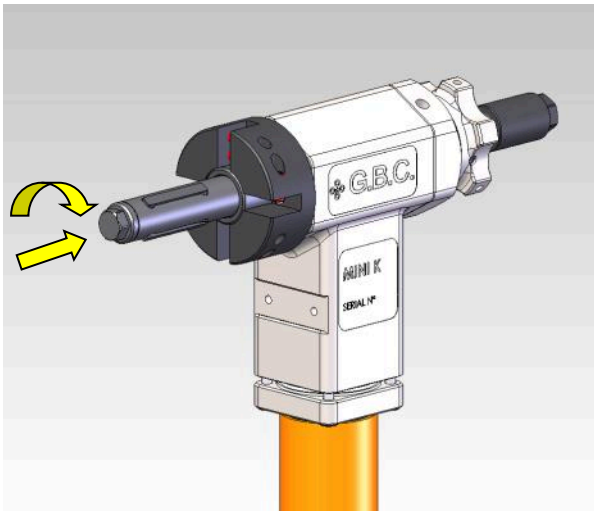
Select the **LOCKING JAWS** according to the diameter of the pipe and install them on the expansion shaft as shown in the picture.



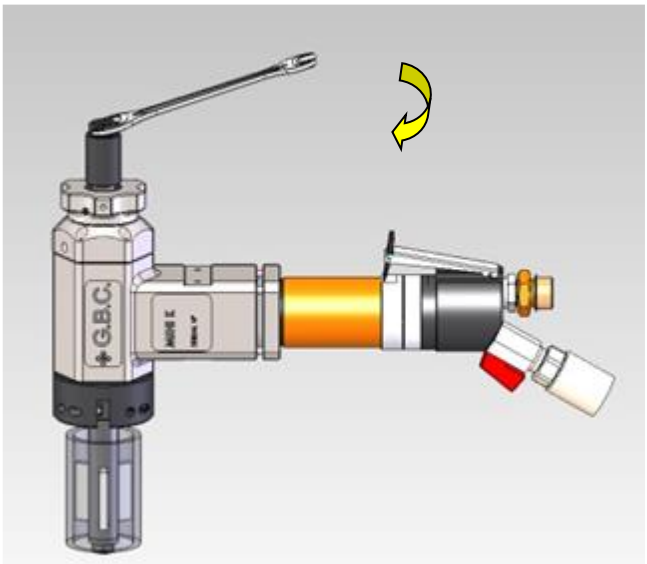
While holding the three **LOCKING JAWS** you have just mounted, unscrew the **VANE E-XPANSION NUT** in order to let them enter their seat. If the procedure is correctly made the locking jaws should have a small backlash.



Put back the **VANE EXPANSION NUT** and torque ir.



While keeping the machine in axis with the pipe, insert the **SHAFT in the pipe** (about 15-20mm)
Firmly screw clockwise the **VANE EXPANSION NUT.**
This will cause the expansion of the locking jaws and will have the machine to achieve a stable grip.



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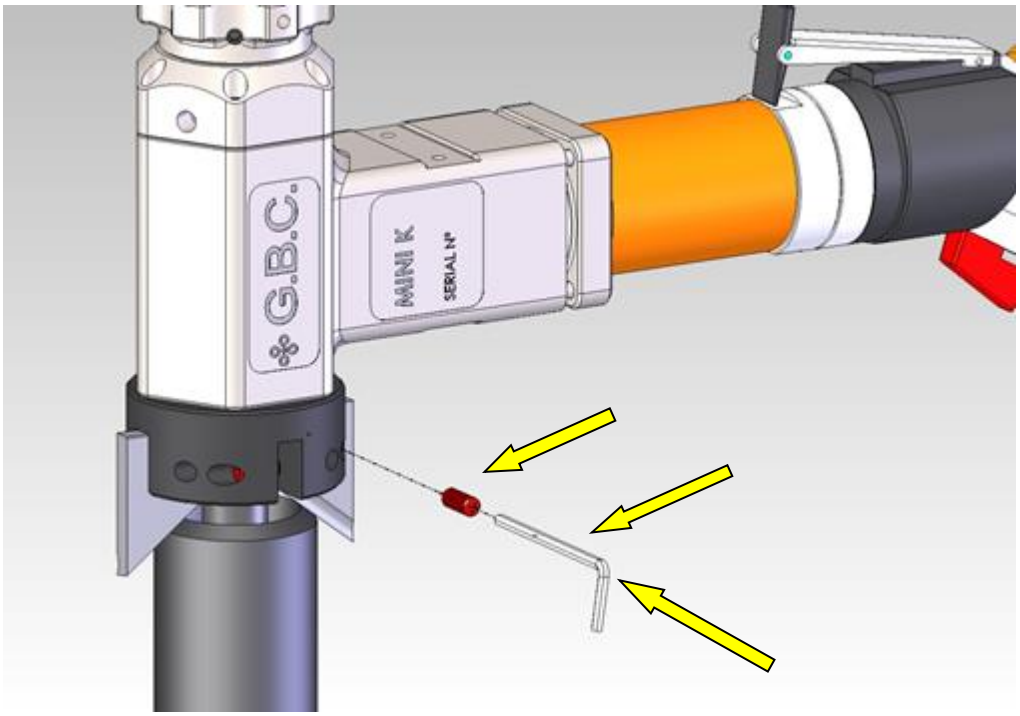
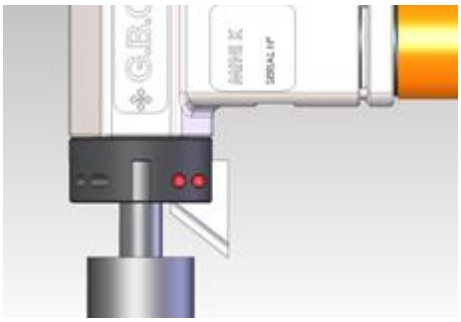
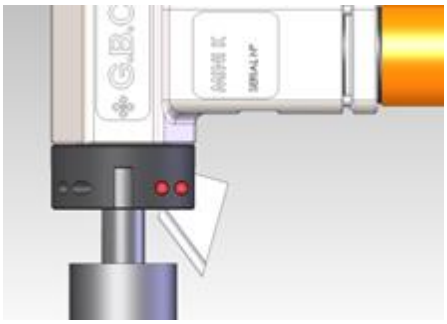
Select the **BEVELING TOOL** according to the required finishing and place it on any of the **CHUCK** slots locking it with the two grub screws by using the Allen key .
Using two beveling tools simultaneously (placed opposite to each other as shown below) will help preserving their life.
The remaining free slots can be used for a facing tool and an ID beveling tool if necessary.





TOOL
CORRECT POSITIONING



TOOL
WRONG POSITIONING

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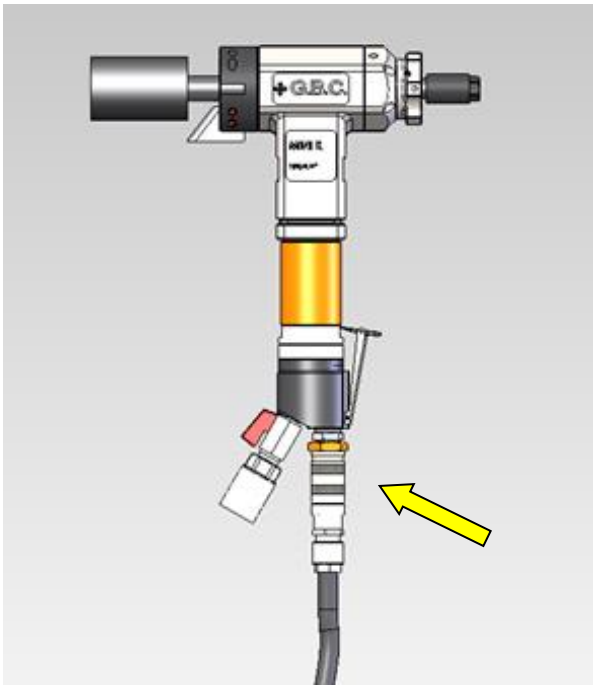
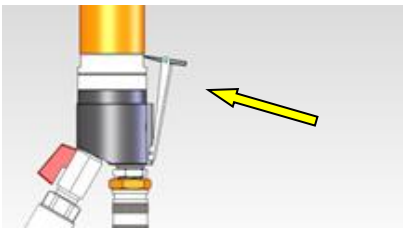
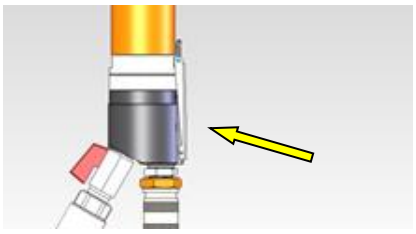
USE INSTRUCTIONS

Connect the machine to the **AIR HOSE**.



To start the machine, push the black security lever forward/up and press the metal lever





WARNING!!!!
The starting mechanism is a “Dead Man Switch” therefore it requires a constant push by the operator.
Releasing the lever will stop the machine immediately.

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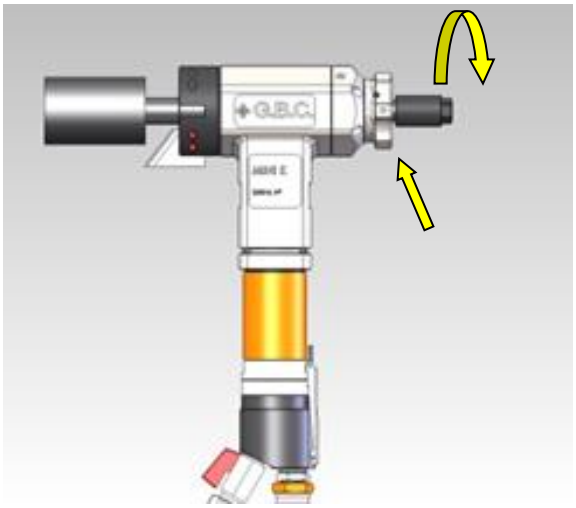
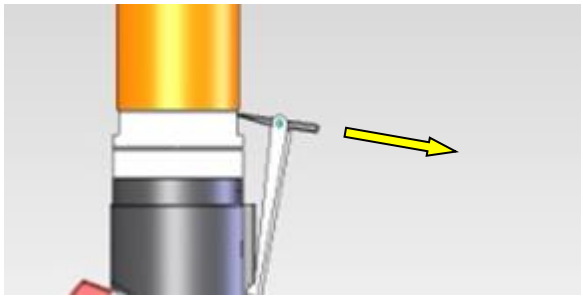
The machine feeding is actuated by turning the hand wheel clockwise as shown in the picture.
Maintain a constant and continuous action to obtain a uniform feeding.



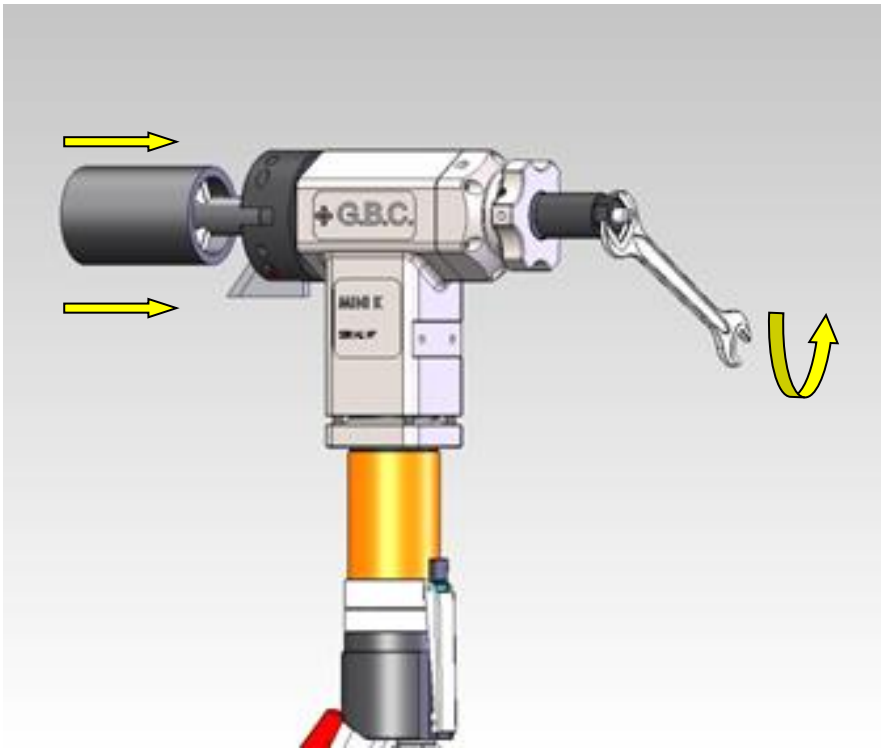
WARNING!!!!!! **DO NOT LET THE BEVELING TOOLS TOUCH THE LOCKING JAWS AS THIS MAY DAMAGE THEM BOTH.**

The motor will automatically stop by releasing the lever.



MINI K REMOVAL OPERATION

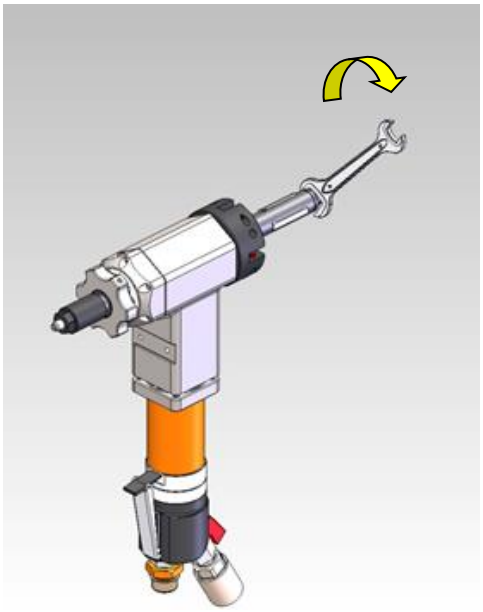
1. Unscrew the vane expansion nut using the wrench supplied with the machine.
2. Remove the machine.

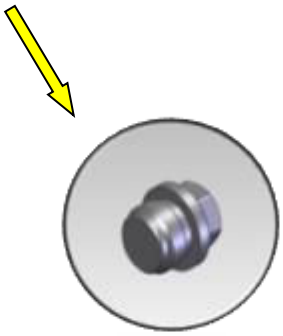


REDUCED SHAFT KIT ASSEMBLY

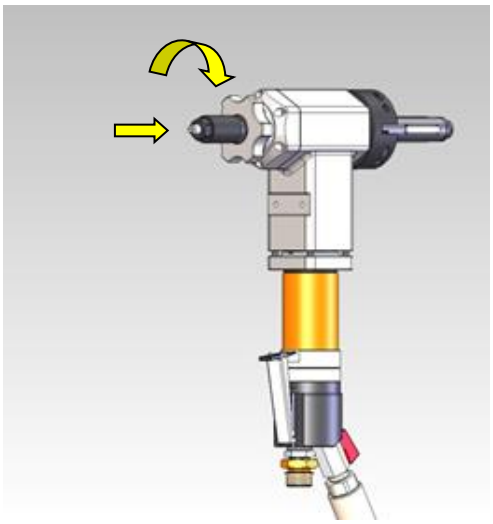
Unscrew the vane abutment cap and the **VANE ABUTMENT CAP** counter-clockwise.

.

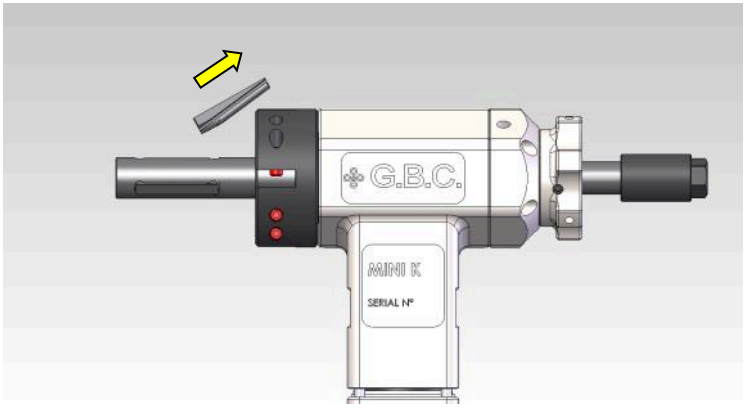


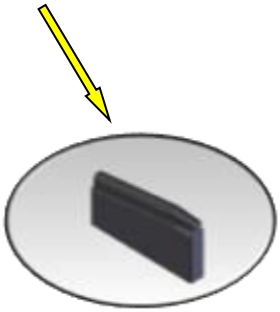


Screw the **VANE EXPANSION NUT** until it is abutted.

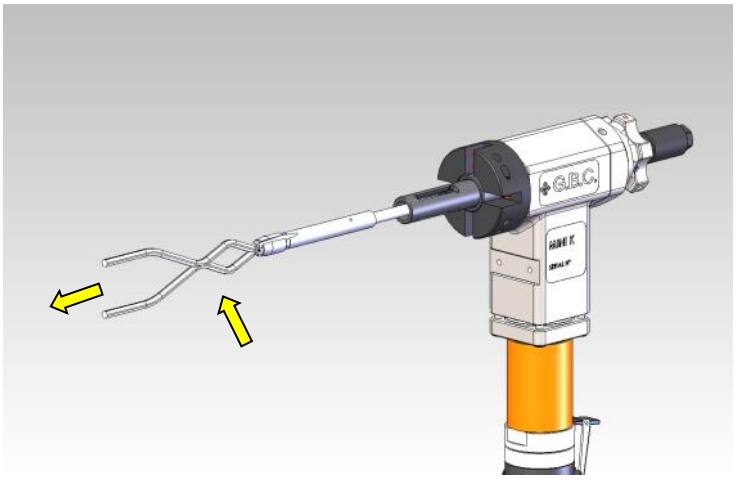


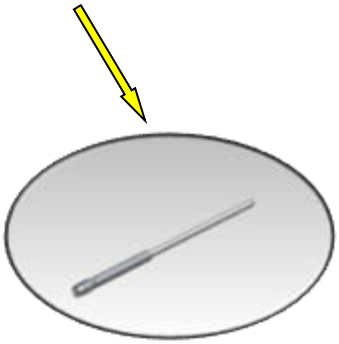
Remove the LOCKING JAWS



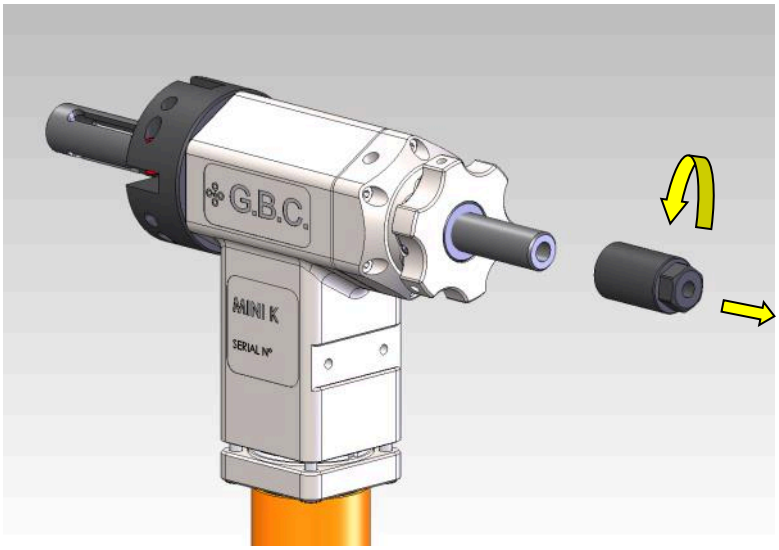


By using **LONG NOSE PLIERS** unscrew the **EXPANSION SHAFT** with a clockwise rotation until it comes out.

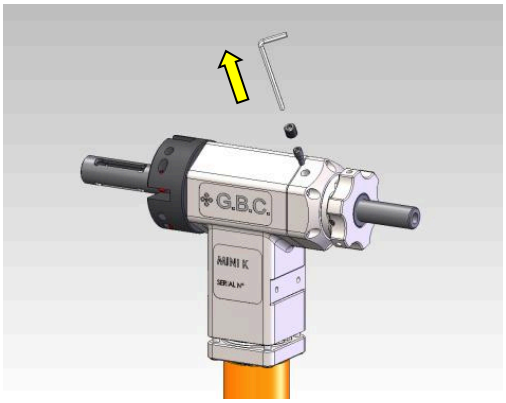




Remove the **VANE EXPANSION NUT** unscrewing it counter-clockwise.



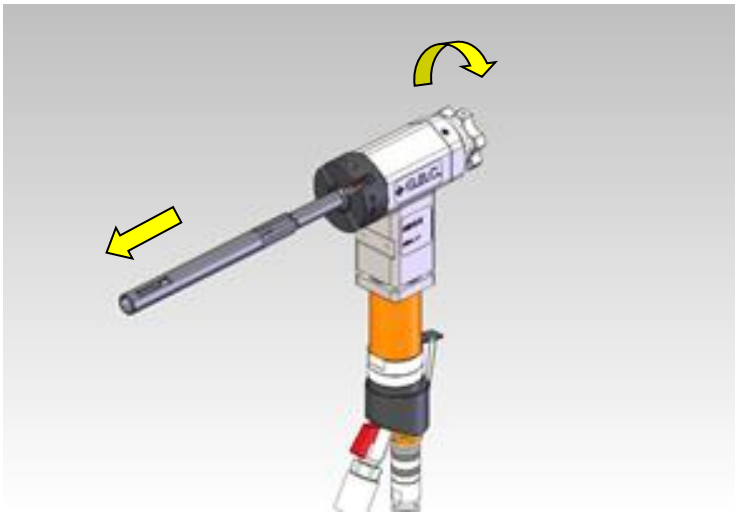
Unscrew and remove the **GRUB SCREW CAP** and the **GRUB SCREW** from the machine cover as shown in the picture.



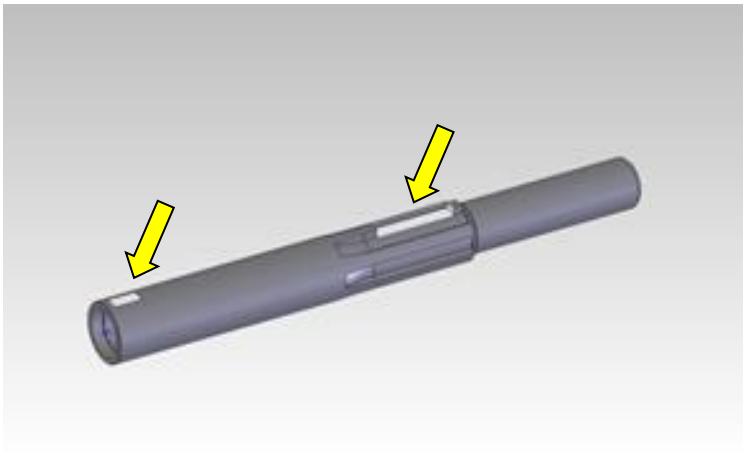
GRUB SCREW CAP

GRUB SCREW

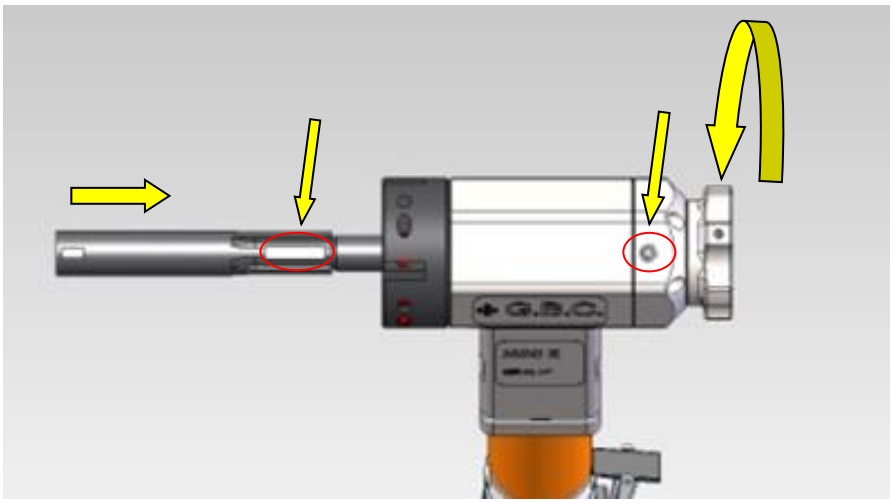
Remove the **GUIDING SHAFT** by rotating the **HANDWHEEL** counter-clockwise as shown in the picture.



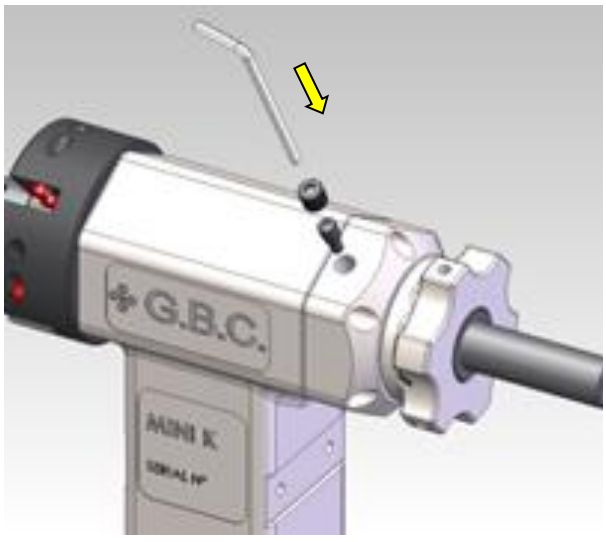
Take the guiding shaft from the reduced shaft kit and mark the groove of the lap joint as well as the far end of the shaft as shown in the picture.



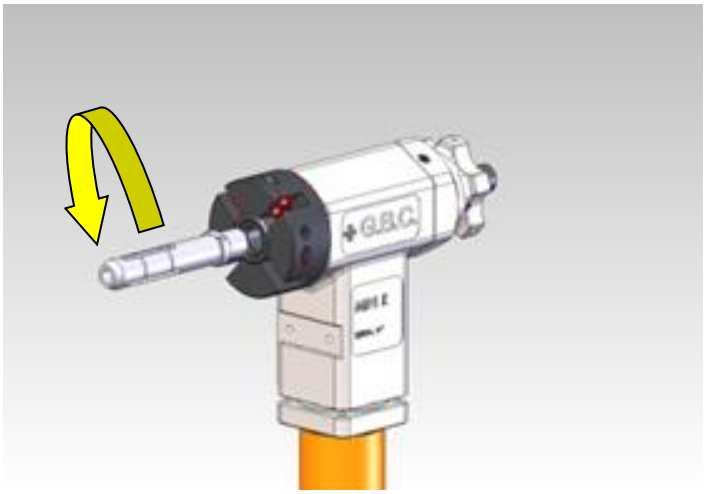
Insert the expansion shaft in the machine and align its lap joint with the hole of the cover case where you will want to insert the two grub screws previously removed.
Rotate the hand wheel to get the shaft in the machine.



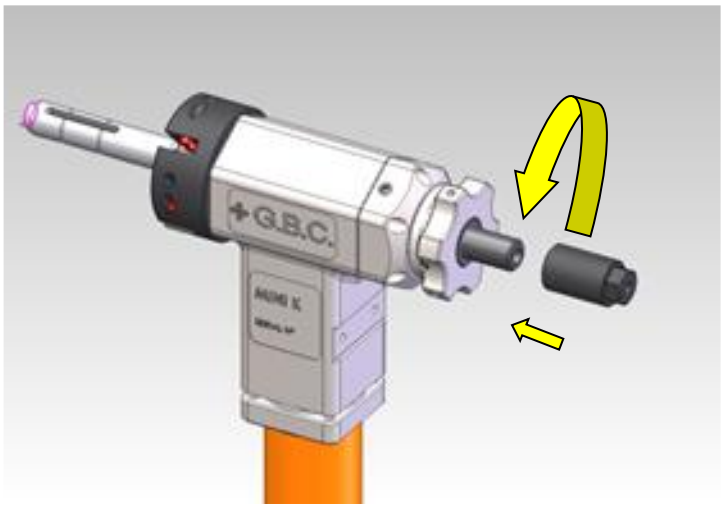
Re-assemble the GRUB SCREW and the GRUB SCREW CAP on the cover locking them tight.



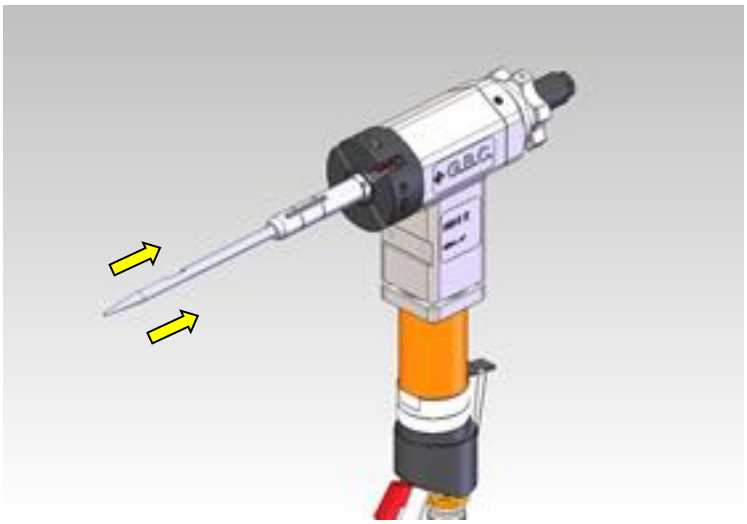
Take the required **TOP** and install it on the **EXTENSION** rotating counter-clockwise as shown in the picture.



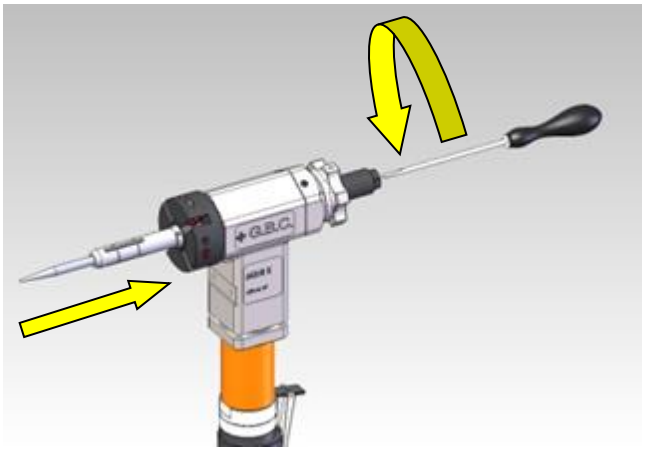
Take the **VANE EXPANSION NUT** previously removed and screw it back on again on the **EXTENSION** until it is abutted**.**

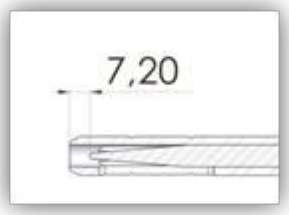


Take the **REDUCED EXPANSION SHAFT** from the kit and slide it in the **TOP.**

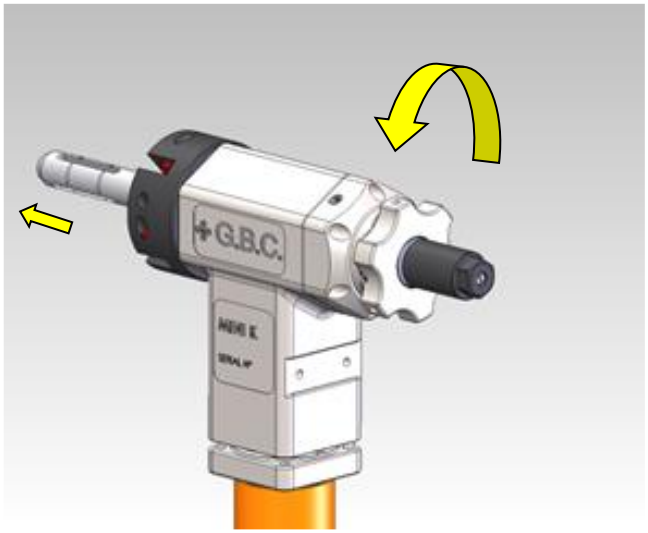


Using a screwdriver screw the **REDUCED EXPANSION SHAFT that** can be reached passing through the **HEXAGONAL EXPANSION NUT.**
Turn until the TIP of the REDUCED EXPANSION SHAFT reaches a distance of about 7.20mm from the internal side of the **HEAD** as shown below.

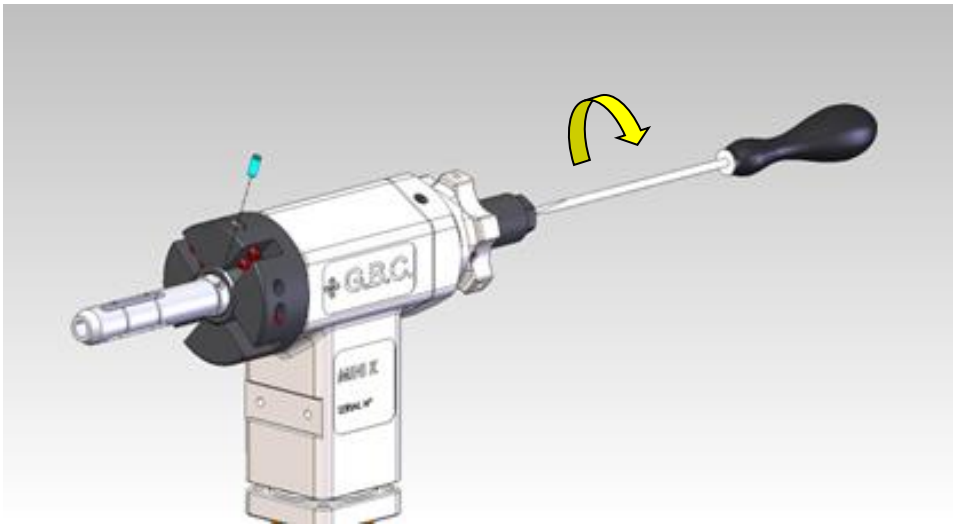




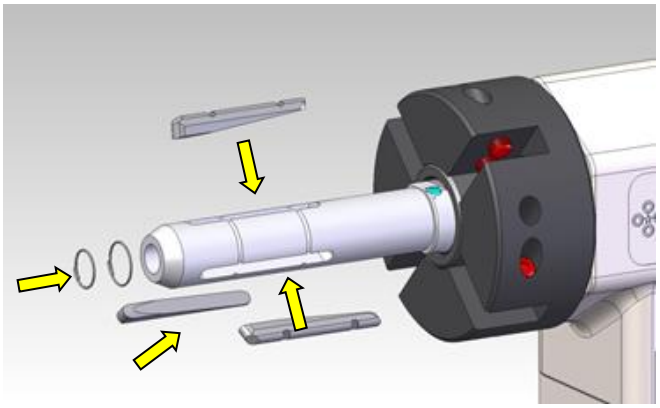
Turn the **HAND WHEEL** counter-clockwise until it reaches a full stop and the **HEAD** is fully extended out from the **CHUCK**.

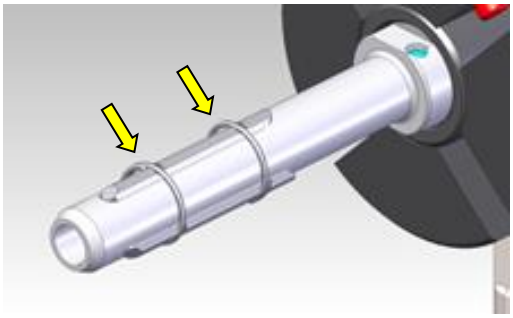


Helping yourself with a screwdriver rotate the **EXPANSION SHAFT** until its groove is aligned with the hole located on the **HEAD.** Now you will have to insert the elastic pin which will function as feeding stop.

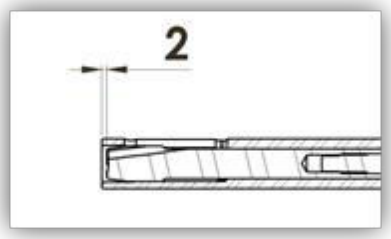


Select the **THREE LOCKING JAWS** and insert them in the seats, then apply the **RINGS** making sure to fix them right in the grooves of the shaft as shown in the picture.



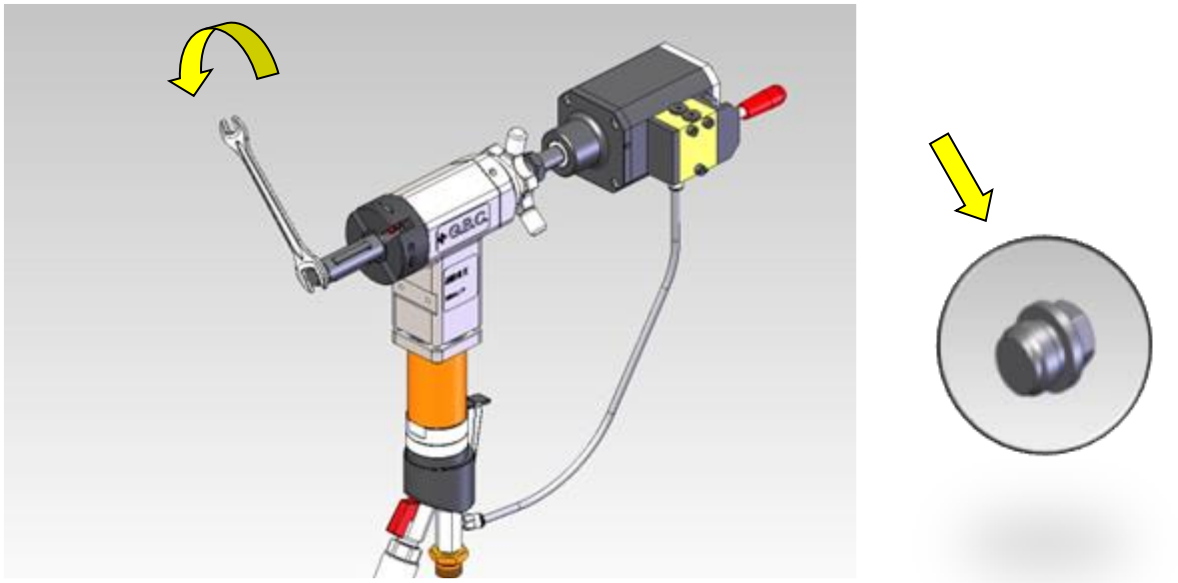


WARNING!!! In order to mount back the **20mm STANDARD GUIDING SHAFT** you will have to proceed in reverse making sure that the **EXPANSION SHAFT** is positioned in correspondence of the grooves of the locking jaws, **2mm** inside the tip of the **GUIDING SHAFT,** also making sure to fully screw the **VANE EXPANSION NUT** as shown in the picture.

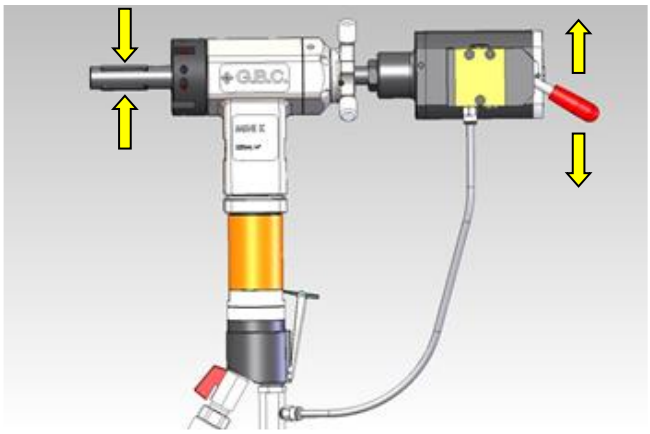


SHAFT ASSEMBLY WITH AUTOMATIC LOCKING DEVICE

Unscrew the **VANE EXPANSION CAP** and remove it.



After having supplied the pneumatic locking device with air, move the lever downward or upward to withdraw the expansion shaft inside the machine.



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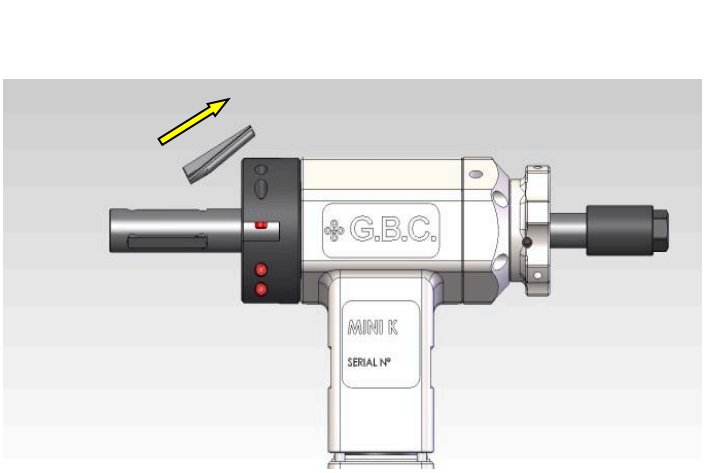
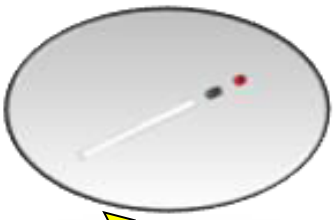
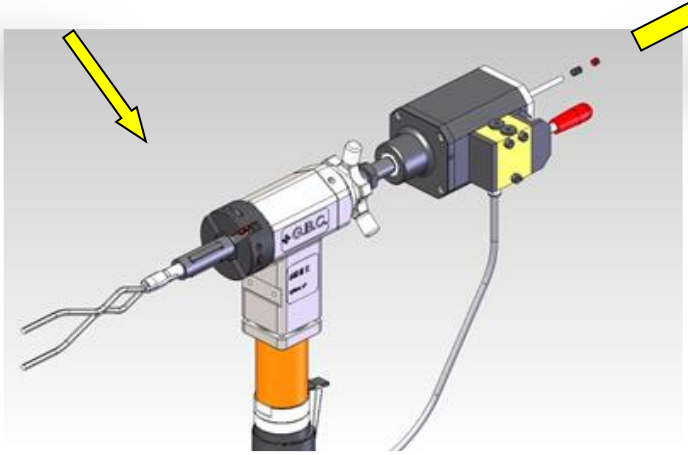
Remove the **THREE LOCKING JAWS**.

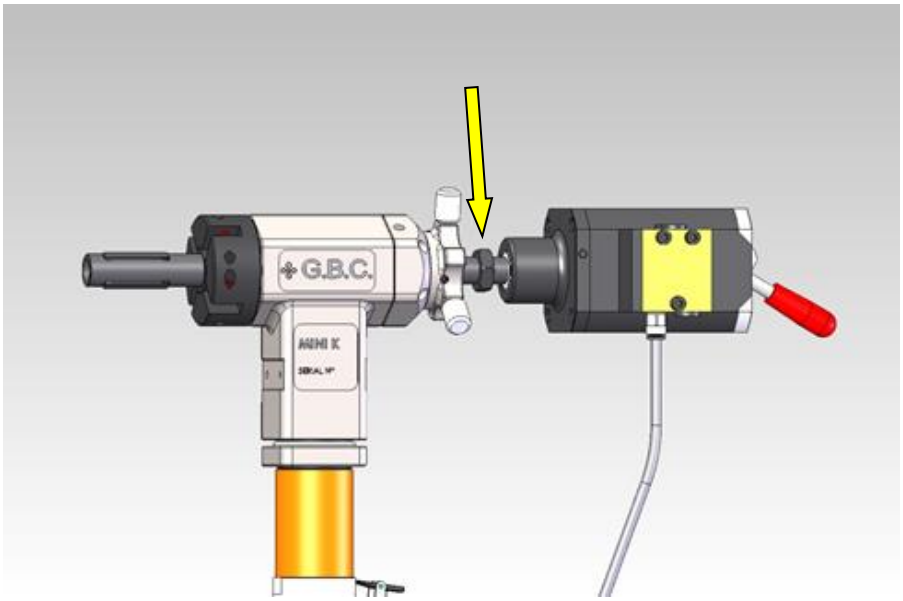


Unscrew the two **GRUB SCREWS** located in the rear **STEM** of the locking device. Using **LONG NOSE PLIERS**, rotate the EXPANSION SHAFT clockwise until you can remove it.

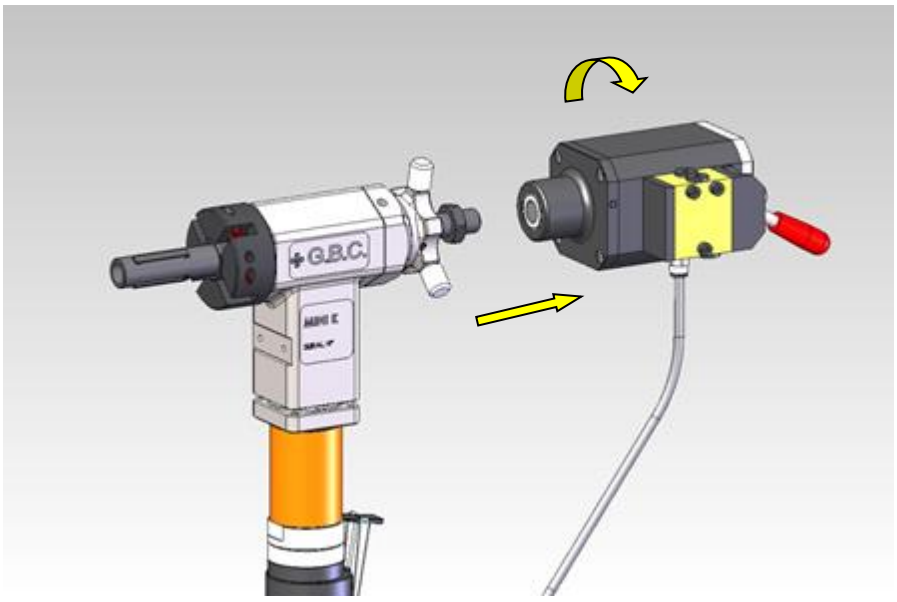




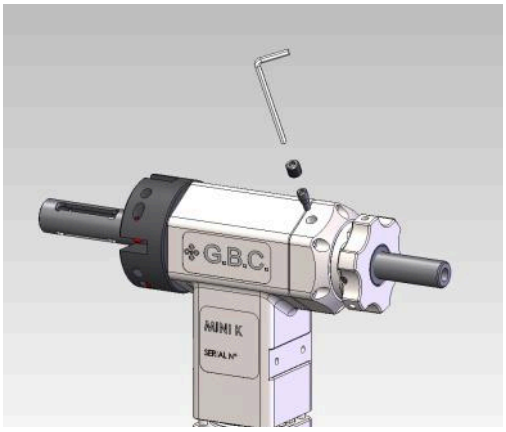
Loose the **ABUTMENT NUT** rotating it clockwise.



Unscrew and remove the **PNEUMATIC LOCKING DEVICE**



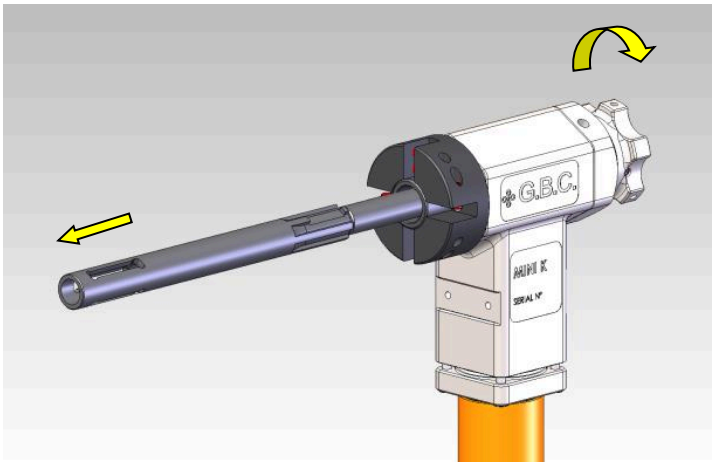
Remove the **GRUB SCREW COVER** and the **GRUB SCREW** from the cover case as shown in the picture



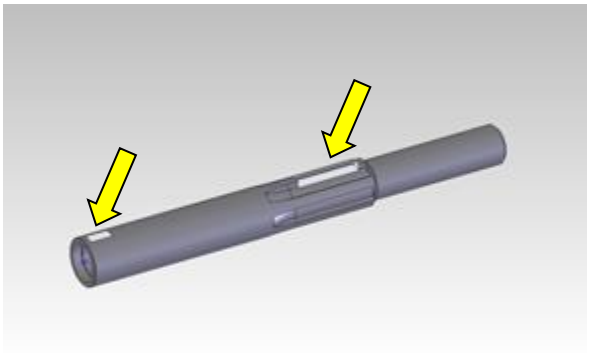
GRUB SCREW COVER

GRUB SCREW

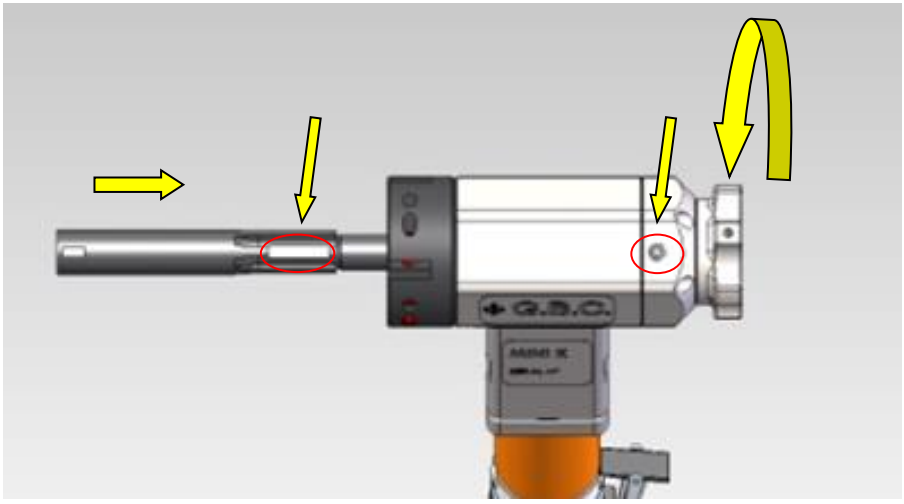
Remove the **GUIDING SHAFT** by rotating the **HANDWHEEL** Counter-clockwise as shown in the picture.



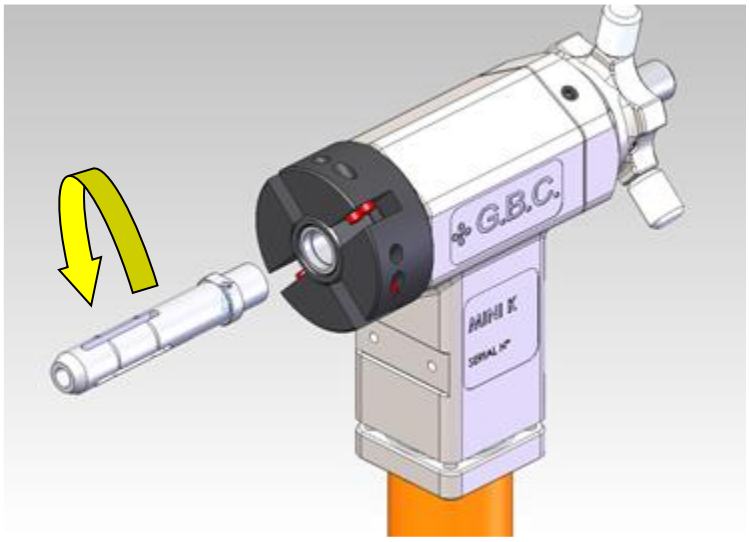
Take the Elbow Kit Assembly **Extension**, and mark the groove of the lap joint as well as the far end of the partas shown in the picture.



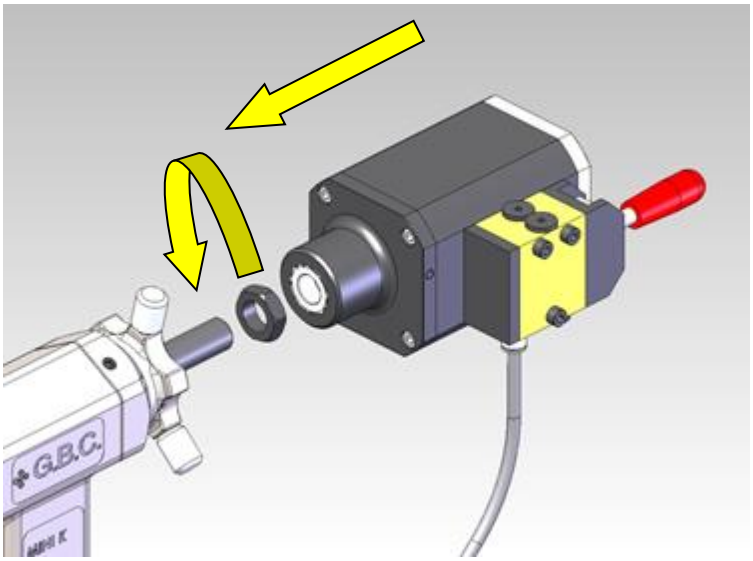
Insert the **EXTENSION** in the machine and align its lap joint with the hole of the cover case where the two grub screws should then be screwed back in.
Rotate the hand wheel in order to engage the shaft in the machine.



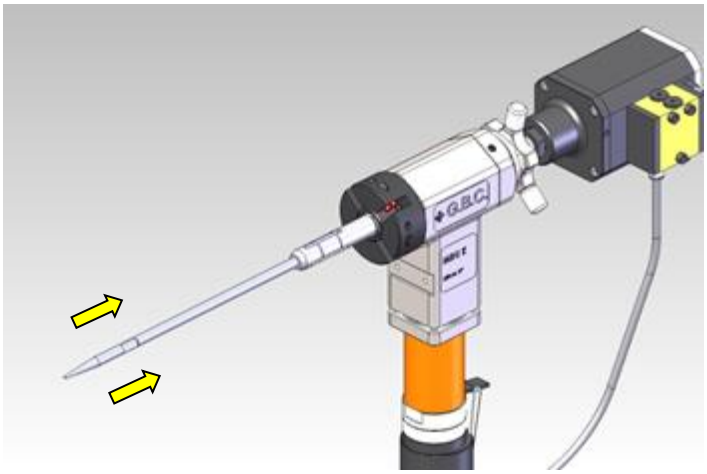
Select the desired **TOP** and screw it on the **EXTENSION** counter-clockwise as shown in the picture.



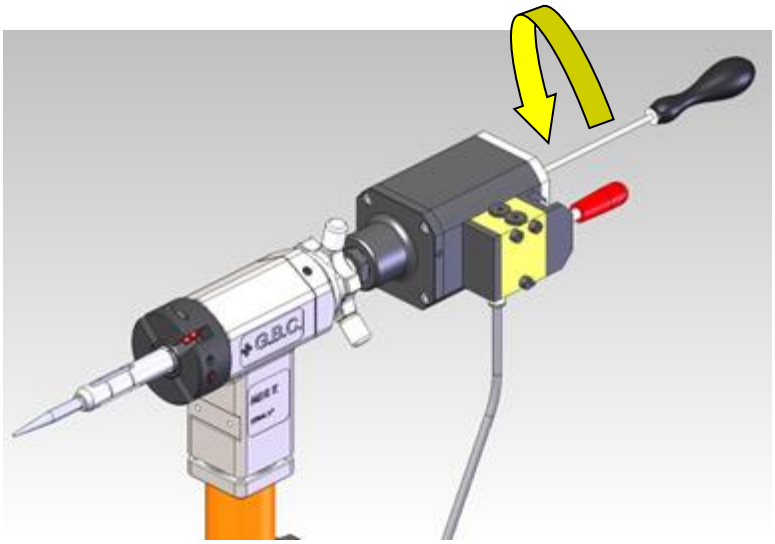
Screw back on clockwise the **ABUTMENT NUT** then the **PNEUMATIC LOCKING DEVICE** for the full stroke.

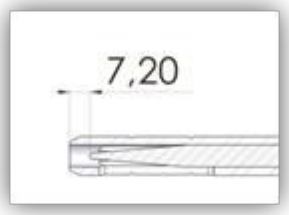


Now insert the **REDUCED EXPANSION SHAFT** and introduce it in the expansion.

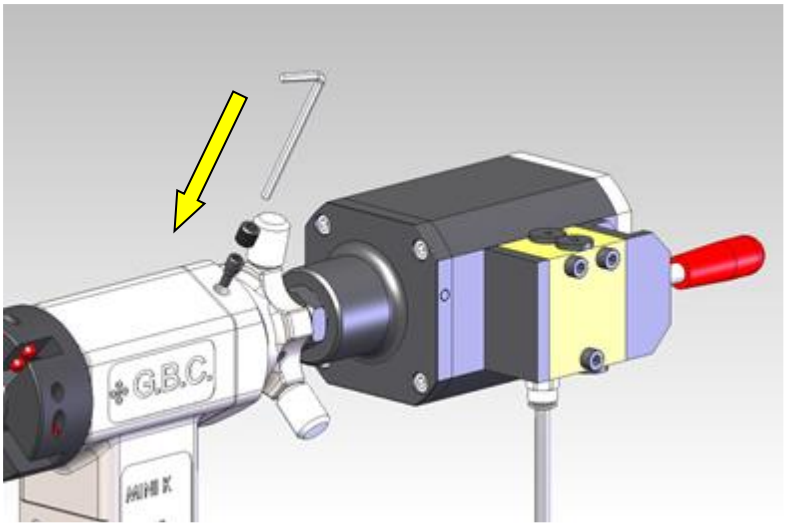


Helping yourself with a screwdriver, screw the **REDUCED EXPANSION SHAFT** in the rear stem of the **PNEUMATIC LOCKING DEVICE** until the tip is 7,2mm inside the **TOP** as shown in the picture.

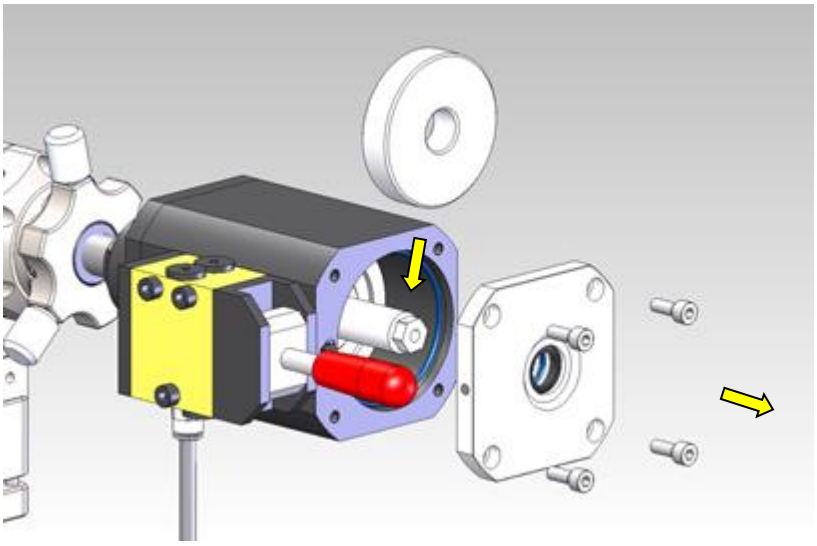




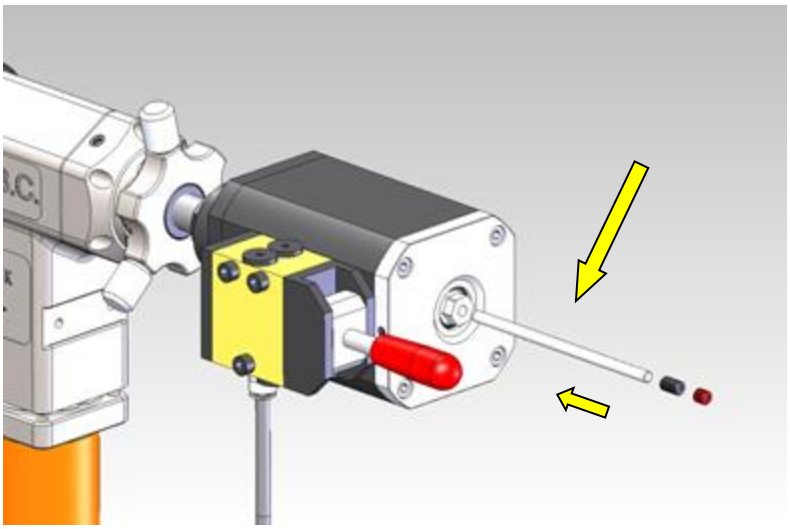
Now screw back on the **GRUB SCREW** and subsequently the **GRUB SCREW COVER** previously removed and lock them in position tightly.



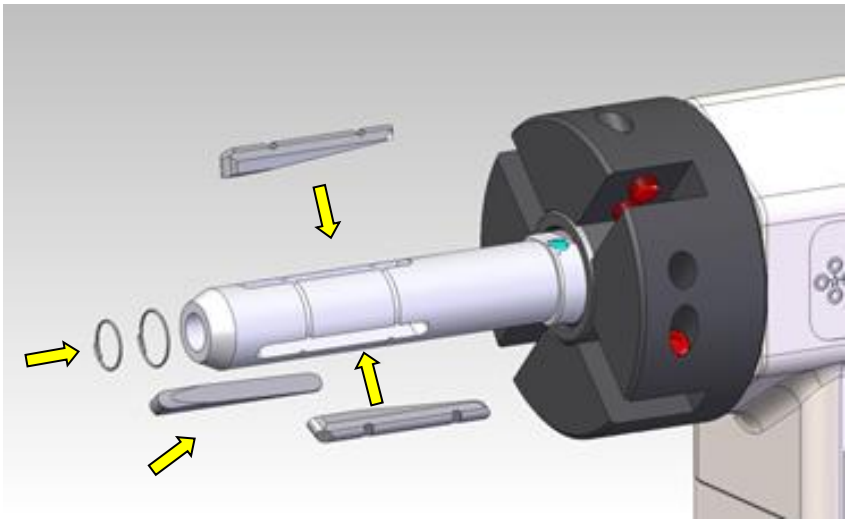
Remove the four screws from the **REAR COVER** of the PNEUMATIC LOCKING DEVICE, remove the **LID** and the **FEEDING STOP** as shown in the picture.
N.B. Reassemble the **PNEUMATIC LOCKING DEVICE** paying particular attention to the gaskets located inside the **MAIN BODY** of the **LOCKING DEVICE.**



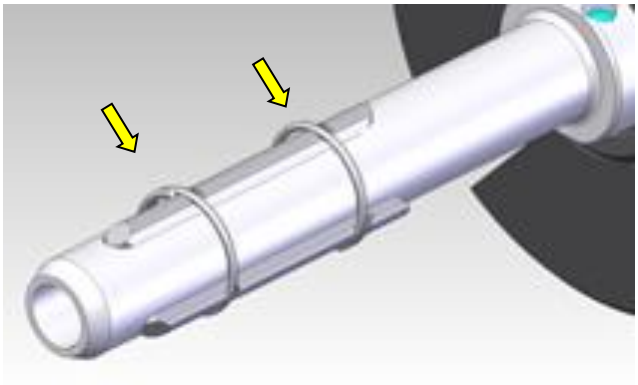
Reassemble the **LONG PIN**, the **SHORT PIN** and the **GRUB SCREW**



Select the required **LOCKING JAWS.**

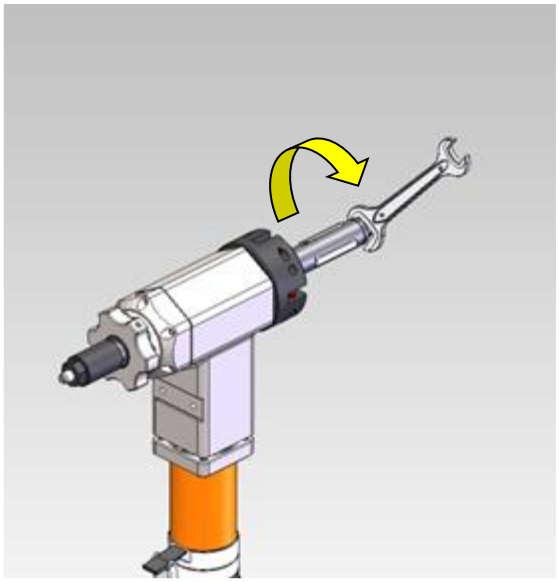


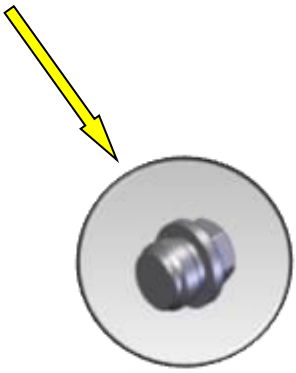
Apply the **RINGS** so that they are perfectly seated in the grooves of the TOP as shown in the picture.



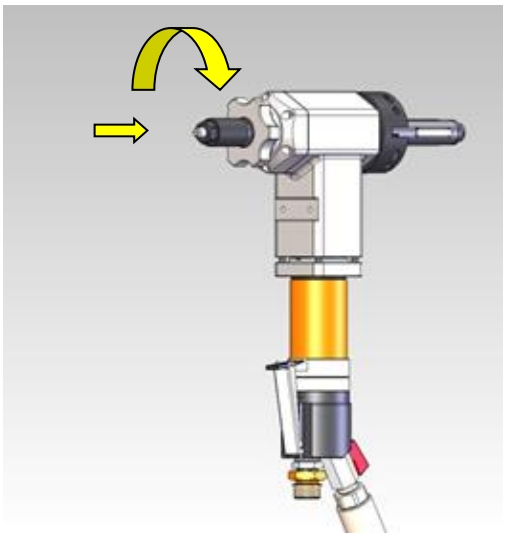
ELBOW SHAFT KIT ASSEMBLY

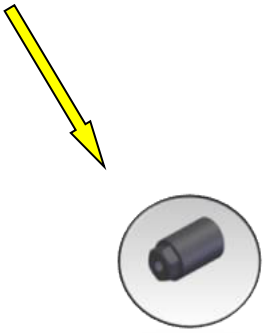
Remove the **VANE EXPANSION CAP**.



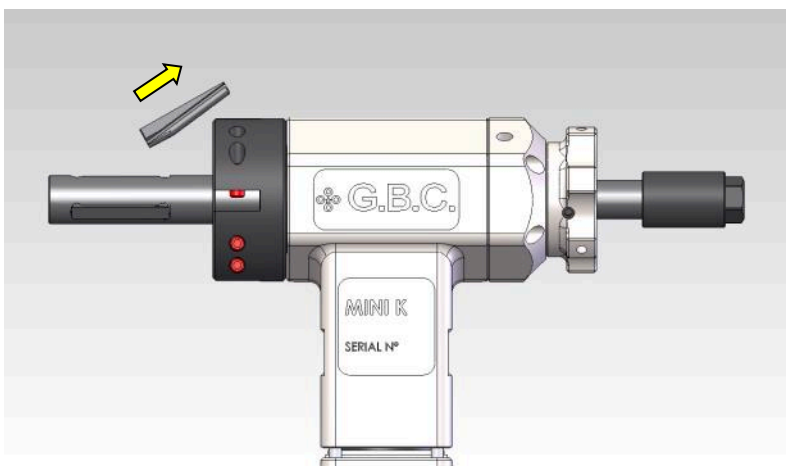


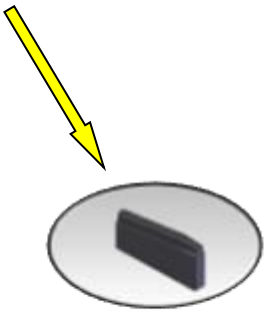
Screw the **VANE EXPANSION NUT** for all the feeding.



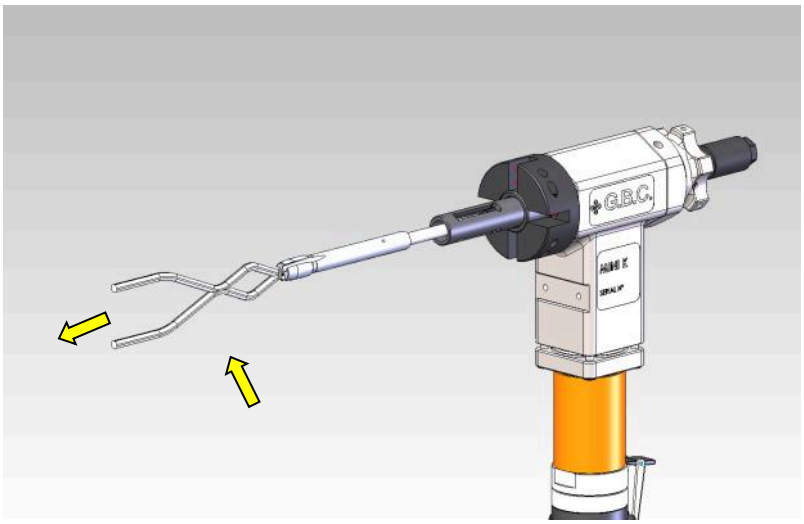


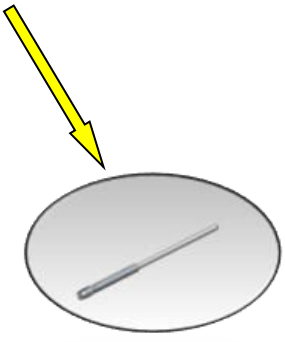
Remove the three **LOCKING JAWS** from the shaft.



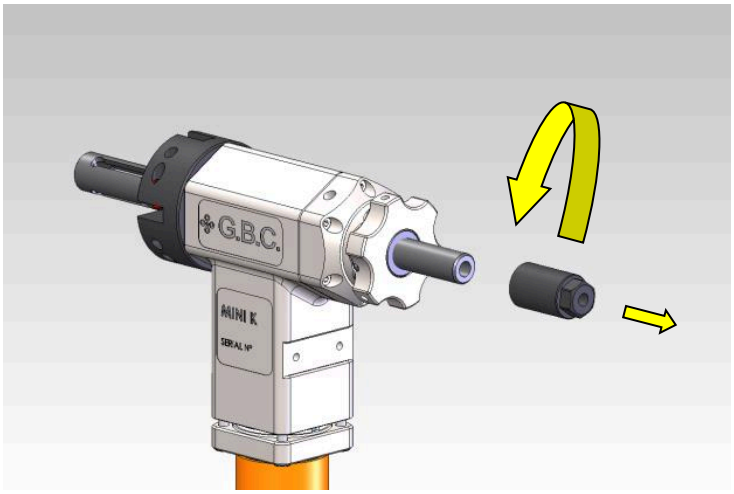


Helping yourself with **LONG NOSE PLIERS** rotate clockwise the **EXPANSION SHAFT** until it comes out.

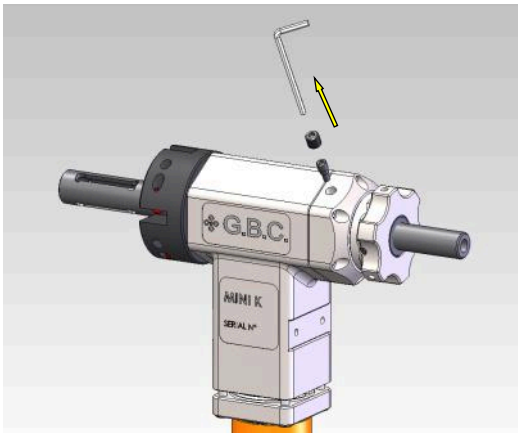




Remove the **VANE EXPANSION NUT** rotating it counter-clockwise.



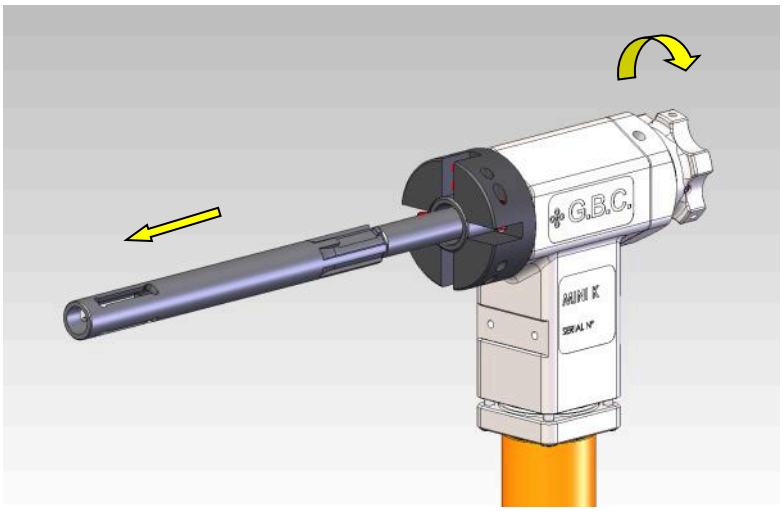
Remove the **GRUB SCREW COVER** and the **GRUB SCREW** from the cover case as shown in the picture



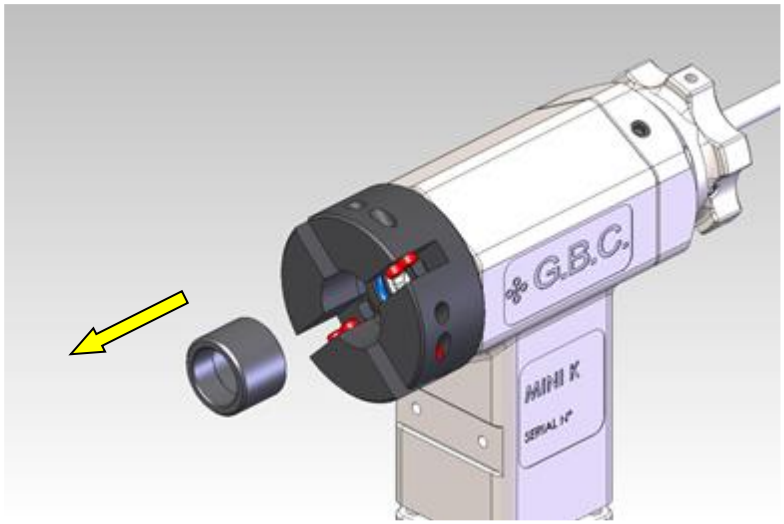
GRUB SCREW

GRUB SCREW COVER

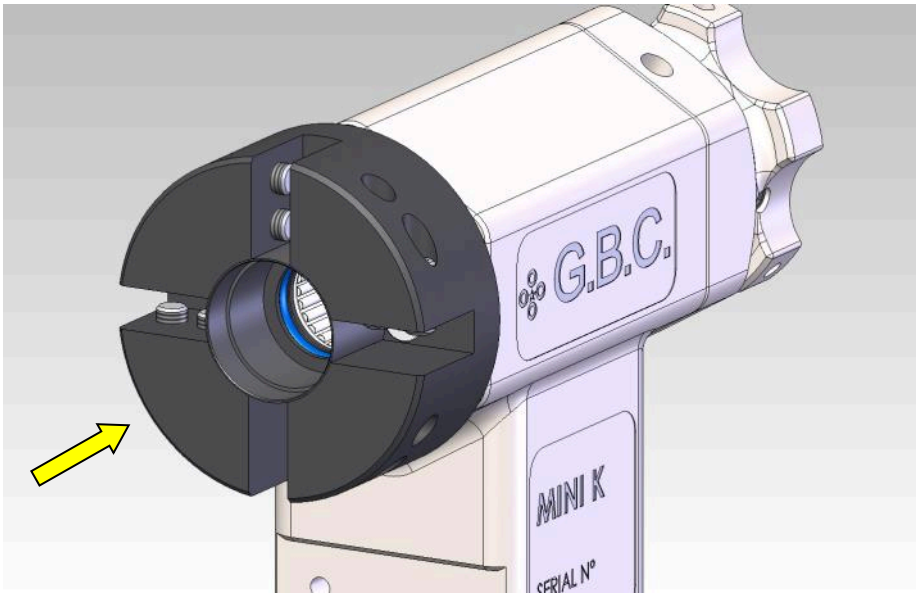
Remove the **GUIDING SHAFT** by rotating the **HANDWHEEL** Counter-clockwise as shown in the picture.



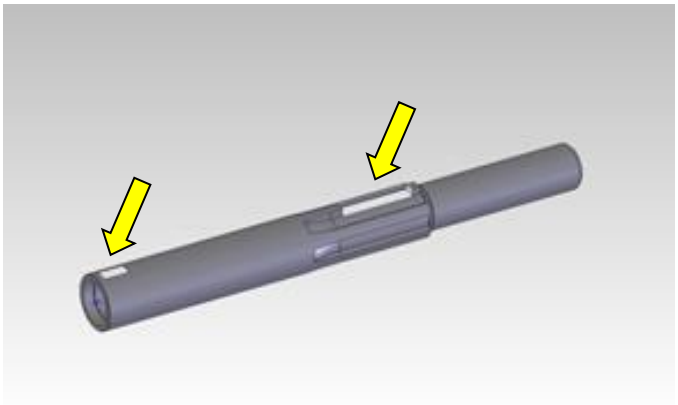
Remove the **TOOL ABUTMENT BUSH** using the appropriate extracting tool.



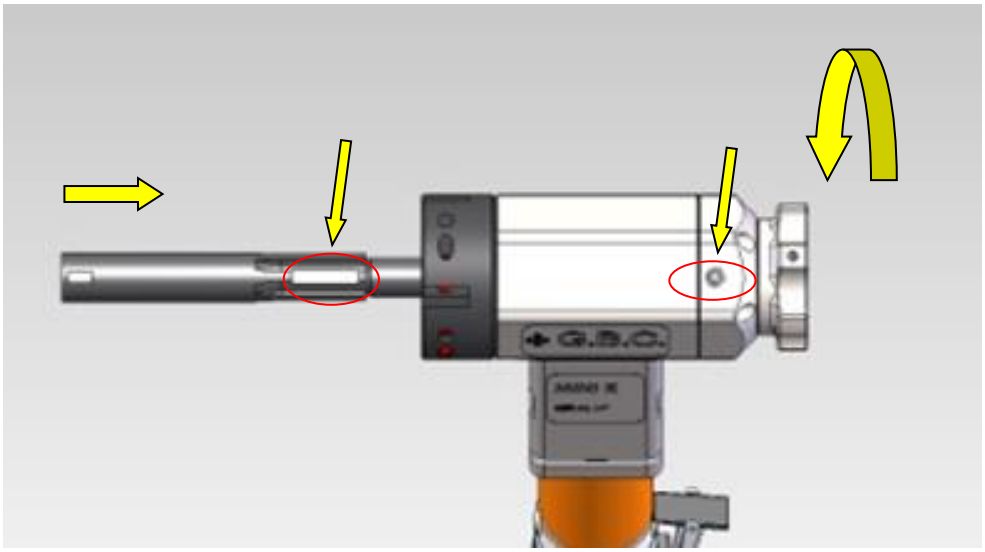
Take the **TOOL ABUTMENT RING** supplied with the ELBOW SHAFT KIT and install it in the seat as shown in the picture.



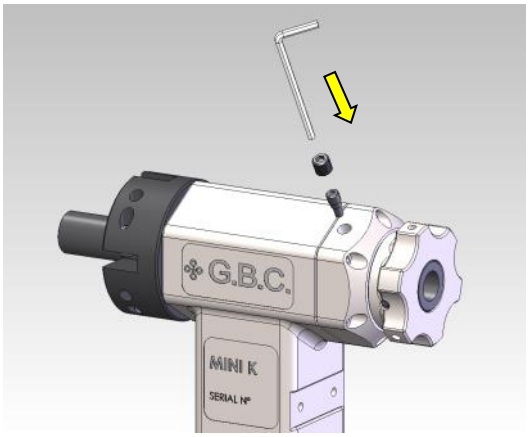
Take the **EXTENSION** of the ELBOW SHAFT KIT, and mark the groove of the lap joint as well as the far end of the shaft as shown in the picture.



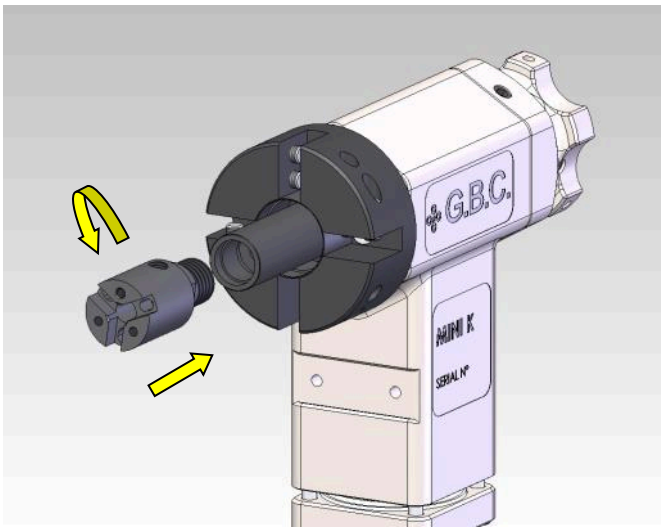
Insert the expansion shaft in the machine and align its lap joint with the hole of the cover case where you will want to insert the two grub screws previously removed.
Rotate the hand wheel to get the shaft in the machine.



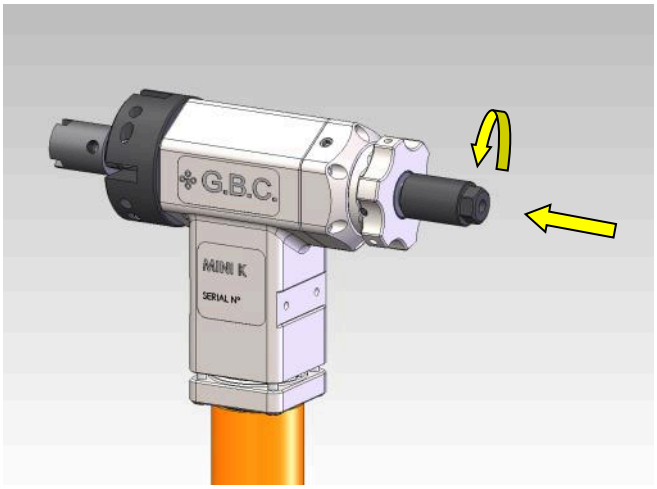
Re-assemble the grub screw and the grub screw cover locking them tight.



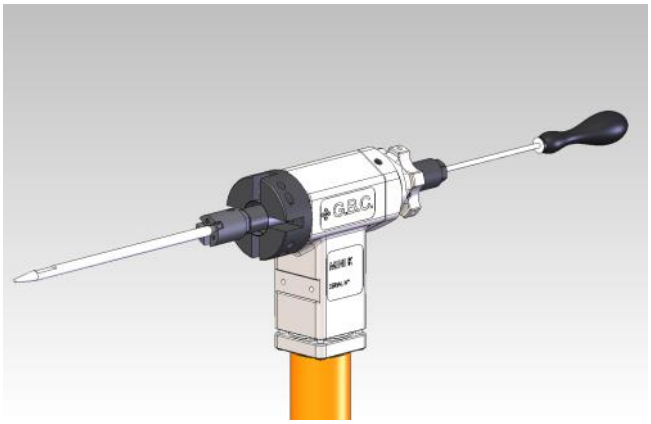
Insert and rotate counter-clockwise the **HEAD FOR ELBOW** on the **GUIDING SHAFT EXTENSION** you have just installed.
Choose between: ø25mm o ø35mm.



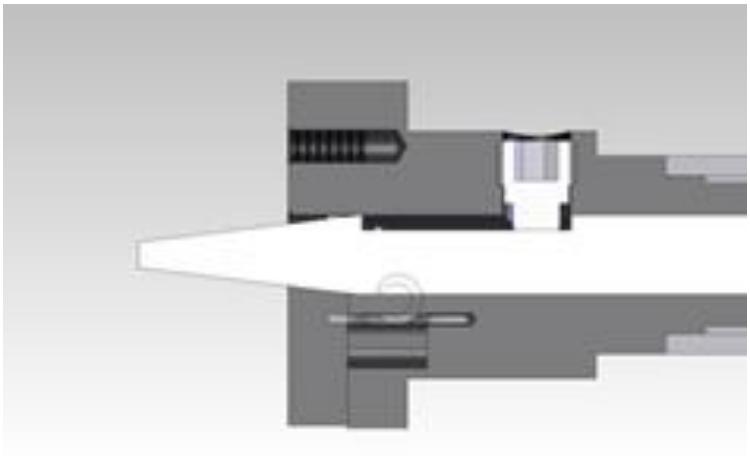
Screw in all way down the vane expansion nut.



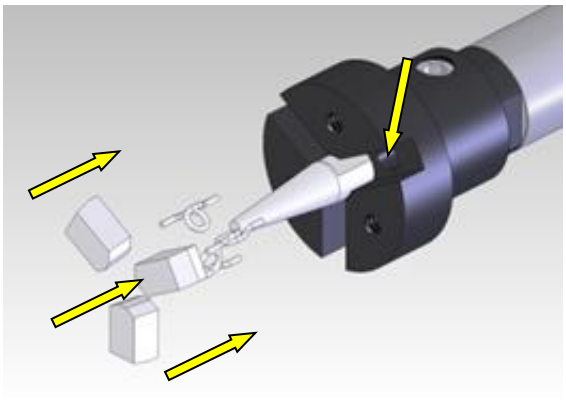
Take the **EXPANSION SHAFT** from the kit and insert it in the **HEAD FOR ELBOWS** screwing it on with a female screwdriver from the rear part as shown in the picture until the initial part of the leap joint is visible through the hole of the **STOP GRUB**.



Insert the **STOP GRUB** and screw it for all the stroke length.

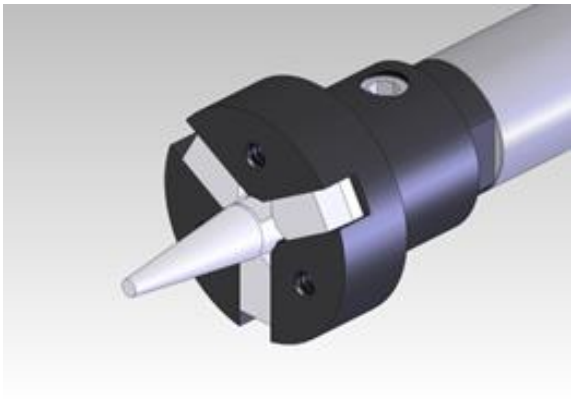


Insert the three **SPRINGS** in their seats located at the base of the **LOCKING JAW**



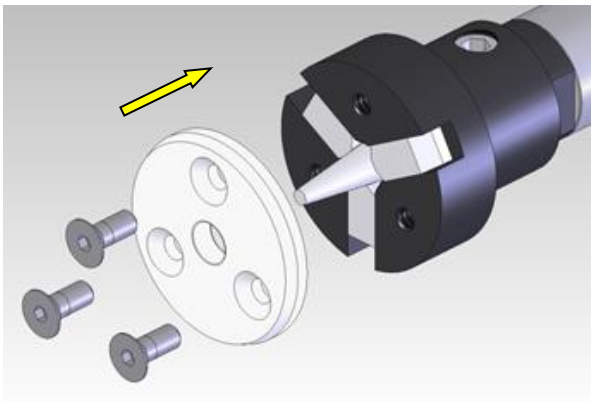
SPRING 

Install the **LOCKING JAWS** in their seat, matching the hole at their bottom with the spring pins



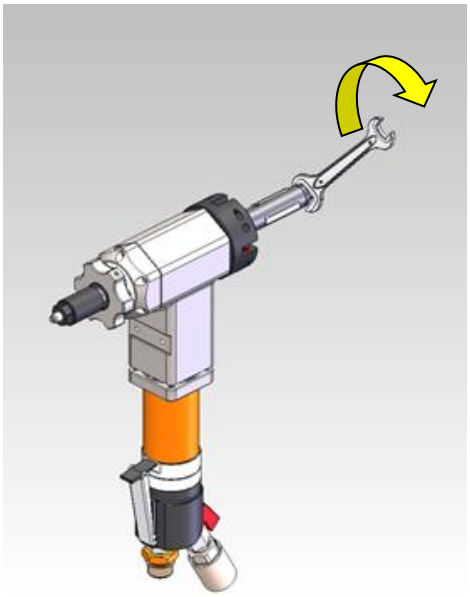
LOCKING JAW 

Mount the **COVER LID** and fix it with its screws.

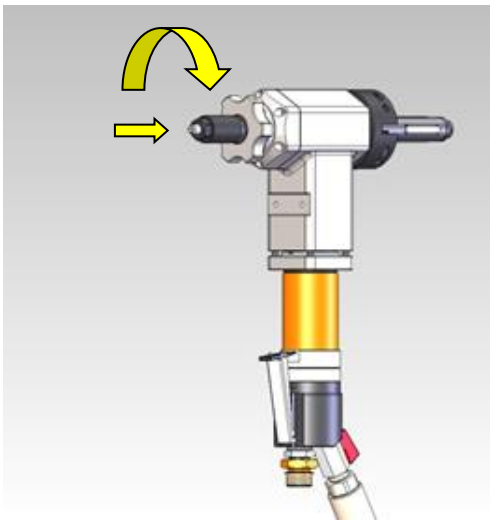


PNEUMATIC LOCKING DEVICE ASSEMBLY

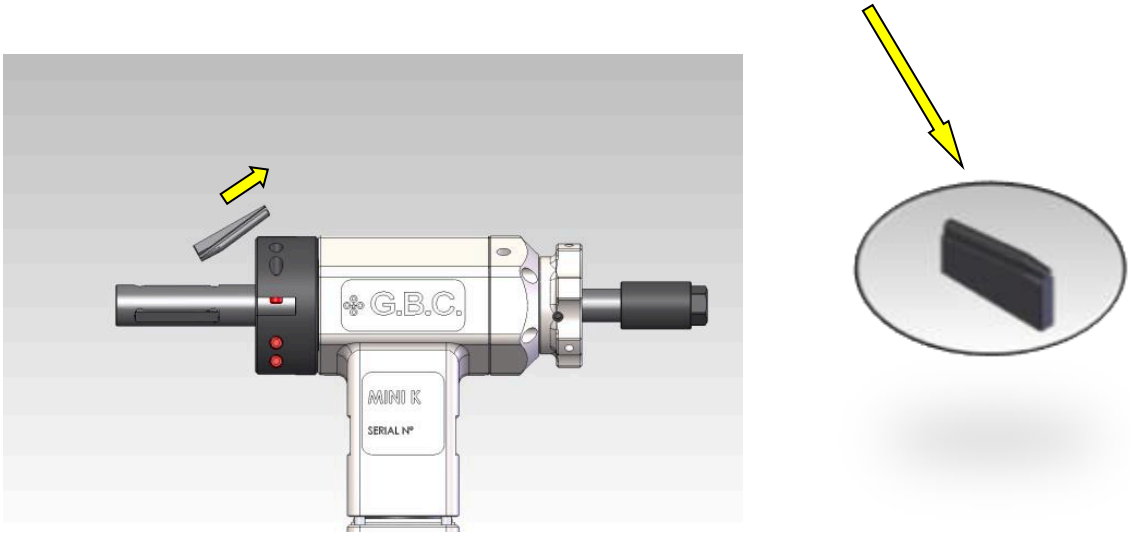
Unscrew the **VANE EXPANSION CAP** and remove it.



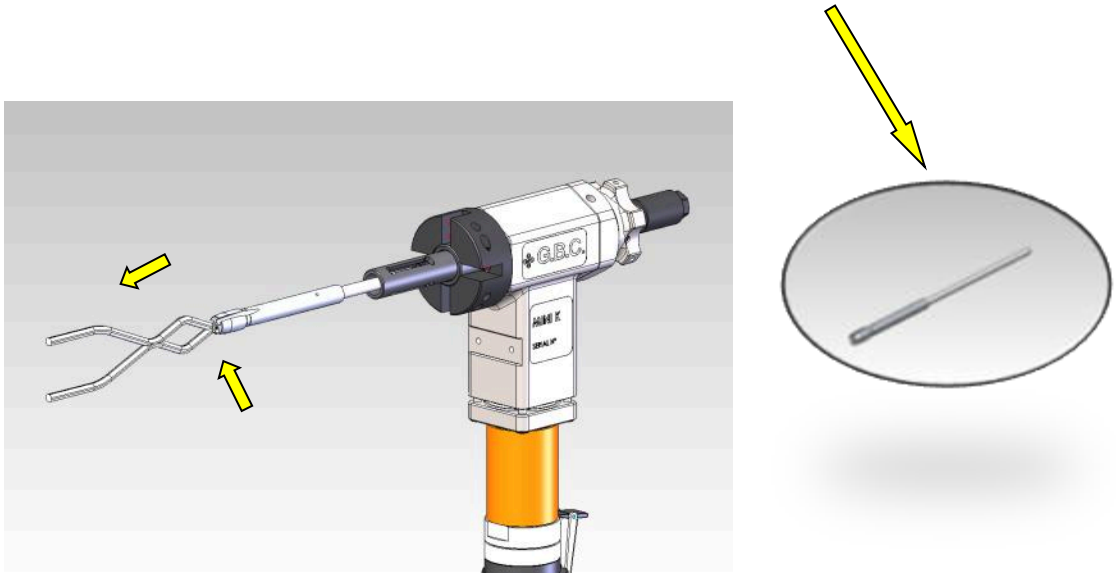
Screw the **VANE EXPANSION NUT** for the whole stroke.



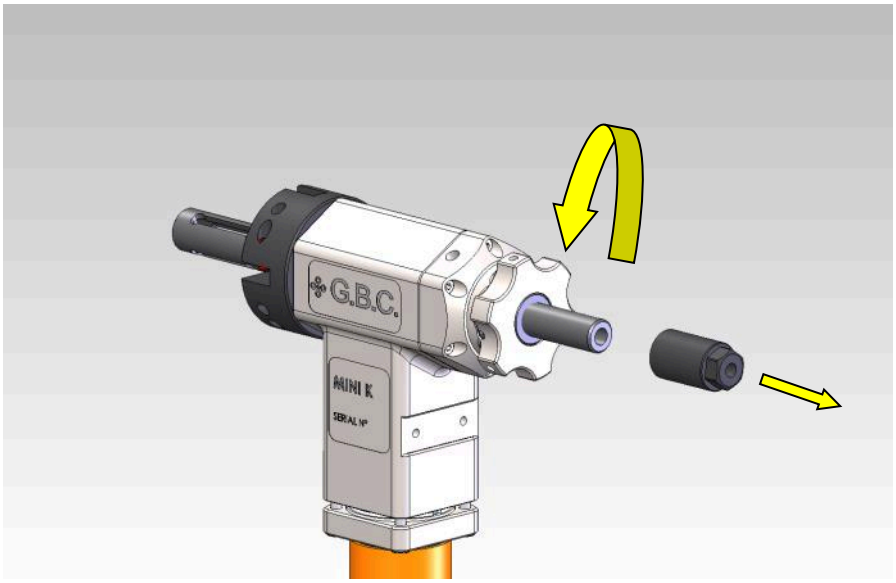
Remove the **LOCKING JAWS**.



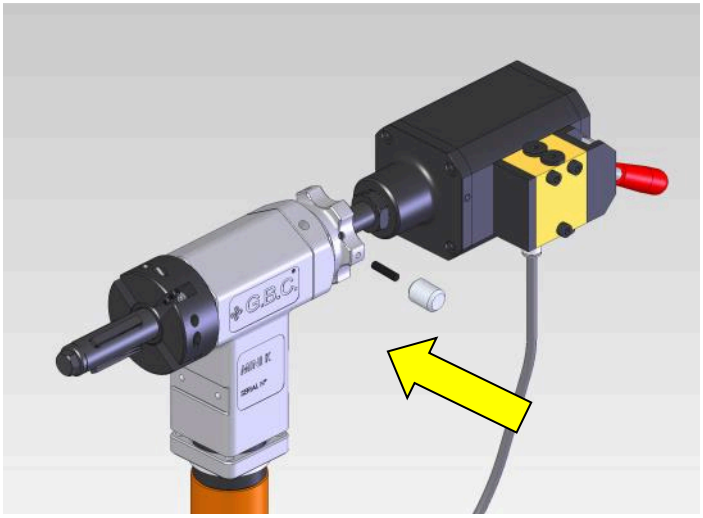
Helping yourself with **LONG NOSE PLIERS**, rotate the **EXPANSION SHAFT** clockwise until it comes out.



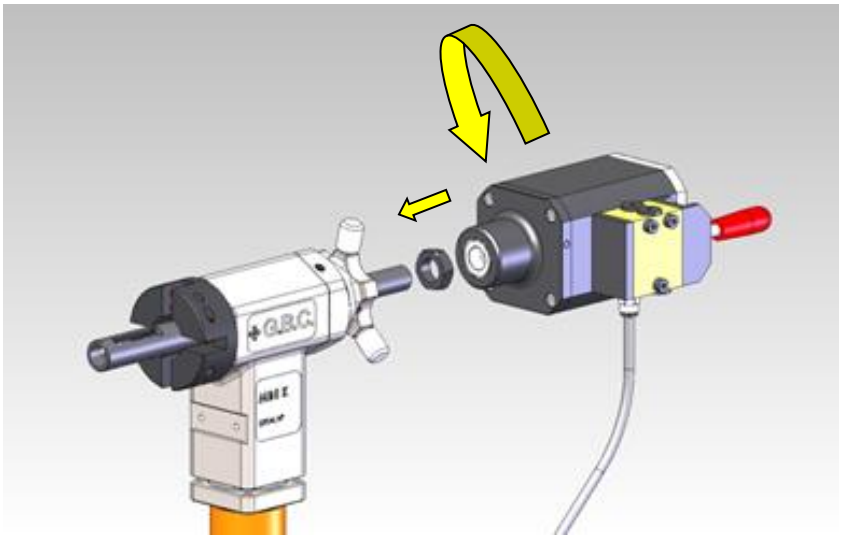
Remove the vane expansion nut



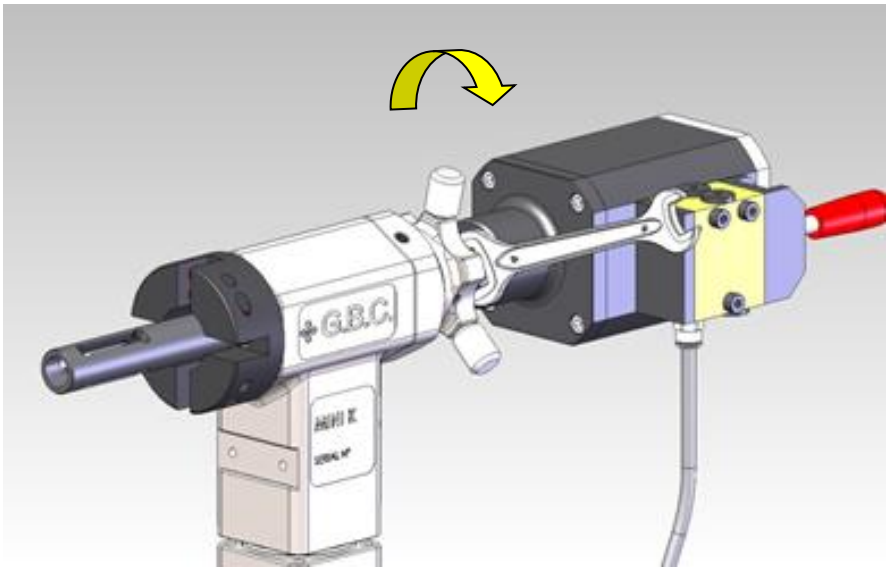
Apply the 3 little knobs on the hand wheel. These knobs are delivered with the **PNEUMATIC LOCKING DEVICE.**



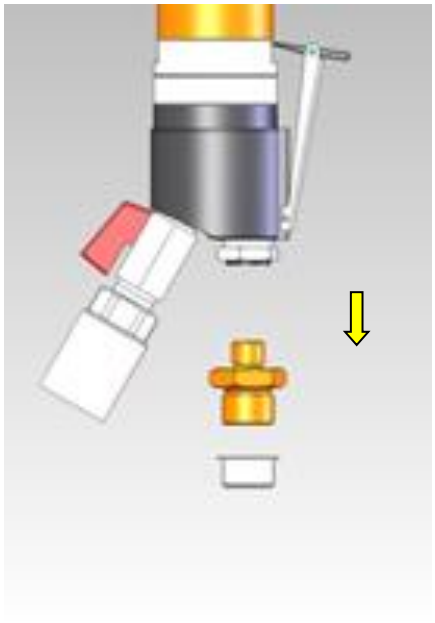
In replacement of the vane expansion nut you will need to screw the counter nut, and then the pneumatic locking device as shown in the picture.

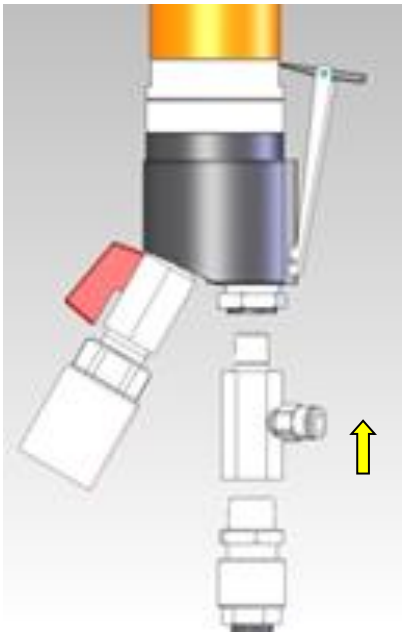


Abut the locking device and fix it in position with the counter nut. As shown in the picture.

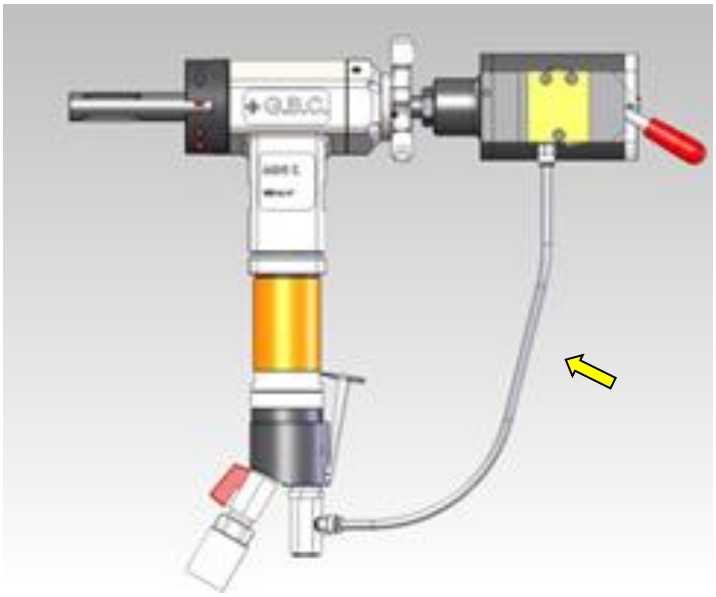


Unscrew the nipple and install the air connector supplied with the kit.

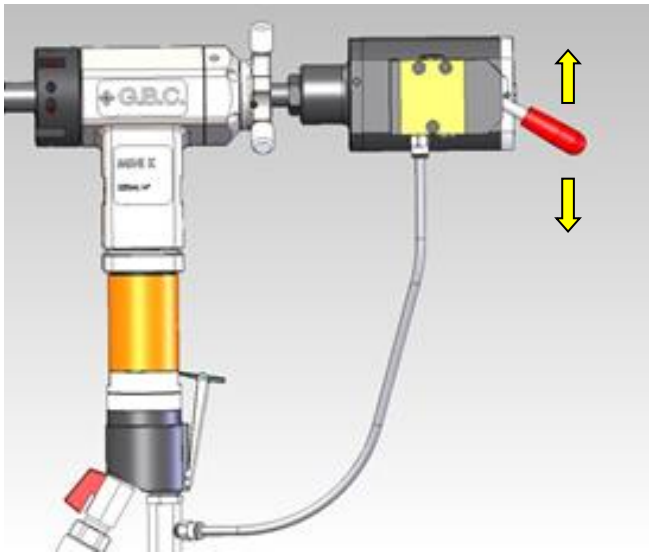




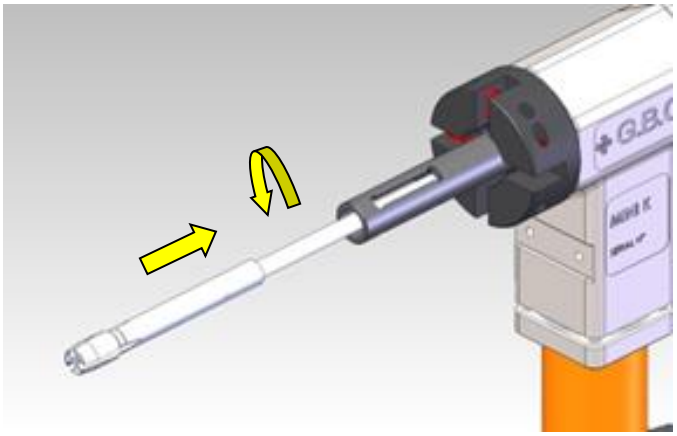
Connect the air supply tube.

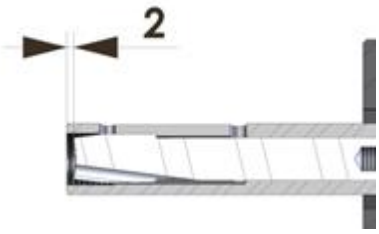


After having supplied the pneumatic locking device with air, move the lever downward or upward to move the locking piston forward.

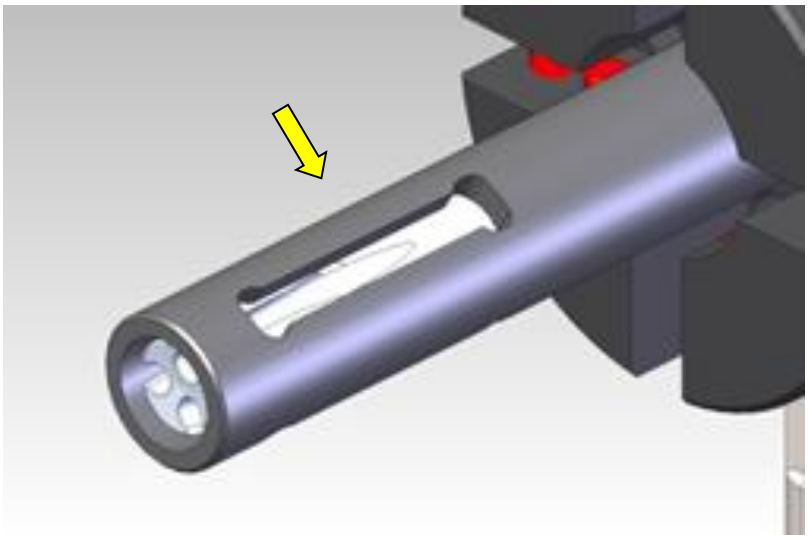


Slide the **VANE EXPANSION SHAFT** inside the **GUIDING SHAFT** and screw it counter-clockwise until it is about 2mm inside.

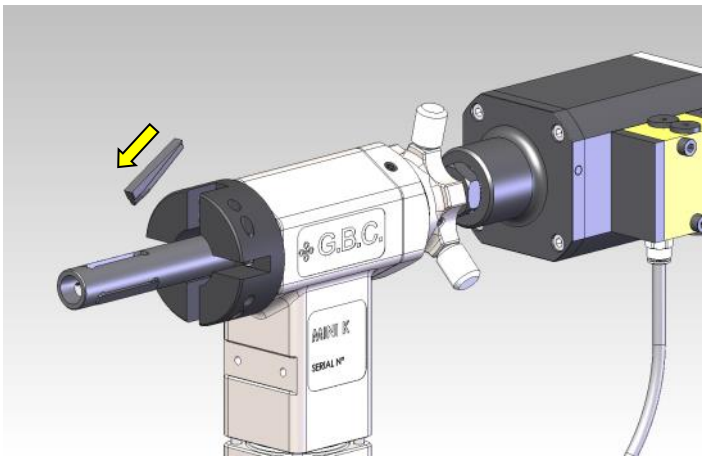




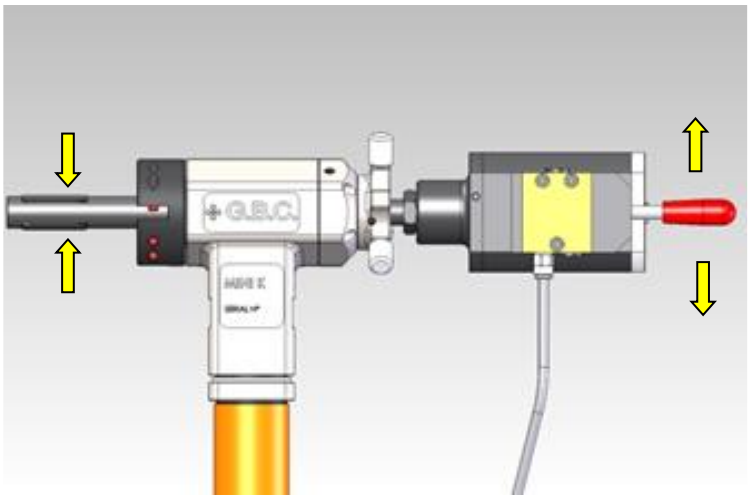
Align the **LOCKING JAW GROOVES** as shown in the picture.



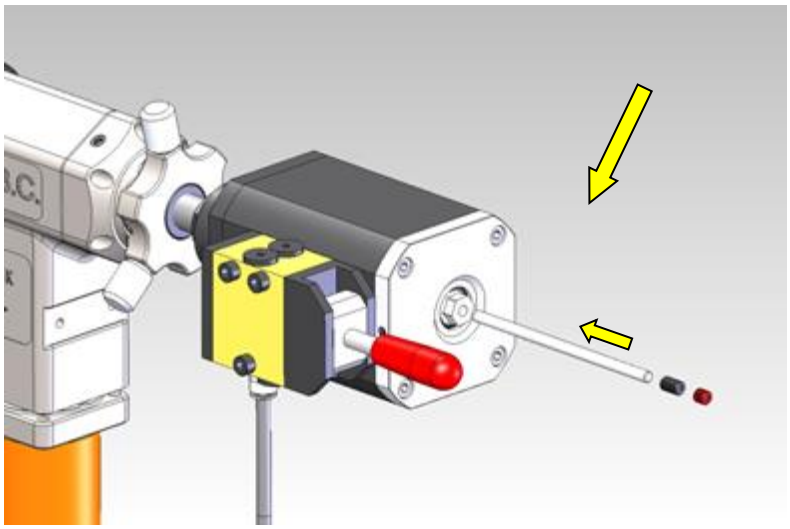
Insert the desired **LOCKING JAWS.**



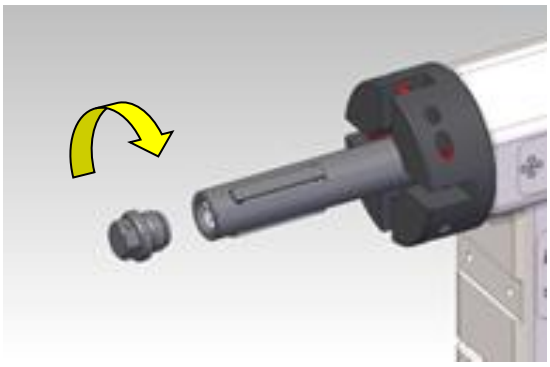
After having supplied the pneumatic locking device with air, keep the locking jaws pressed with your hand and move the lever upward or downward to get the expansion shaft withdrawn in the machine.
If the assembling has been correctly executed the locking jaws should a little play in their seat.



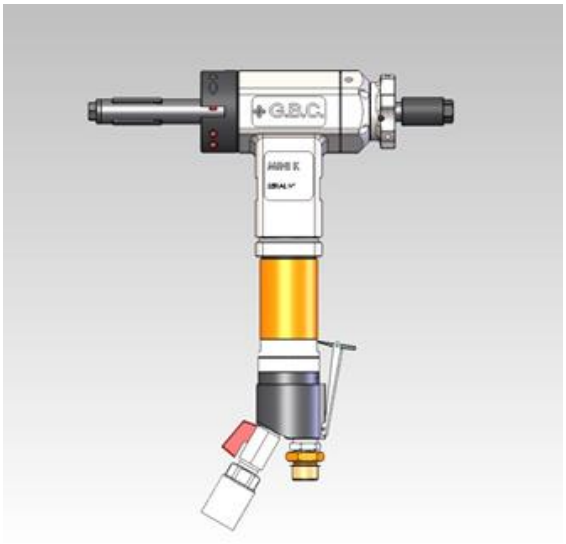
In the rear part of the locking device you shall now insert the **STEM**, the **GRUB SCREW** and the **GRUB SCREW COVER** locking them in position tightly.



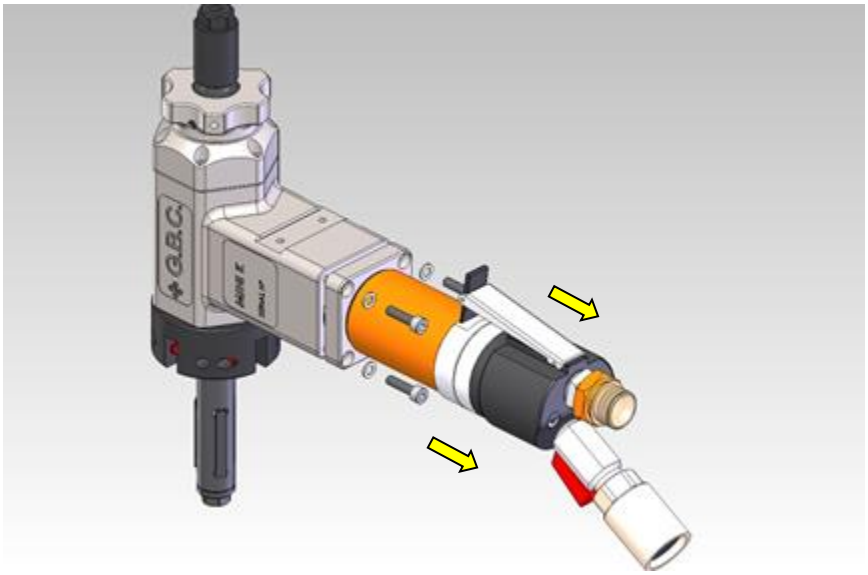
Screw back on the **VANE ABUTMENT CAP, now the machine is ready for use.**



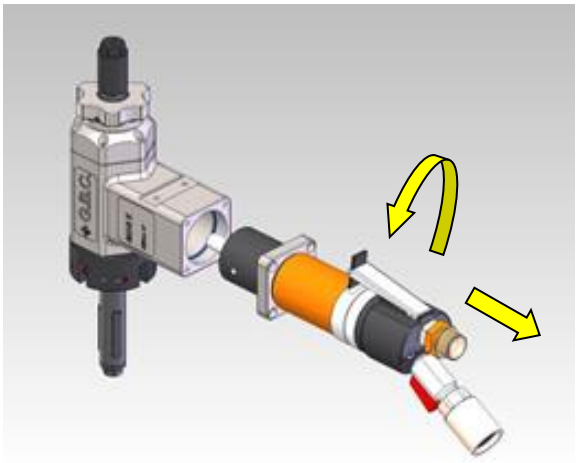
CONVERTING THE MACHINE FROM PNEUMATIC TO ELECTRIC



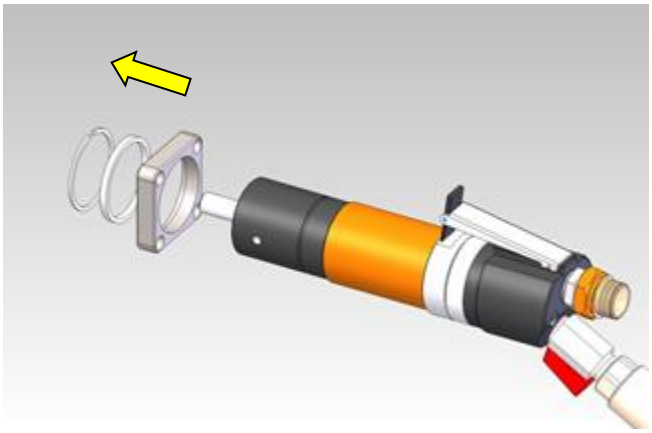
Remove the **FOUR SCREWS** paying attention to the washers.



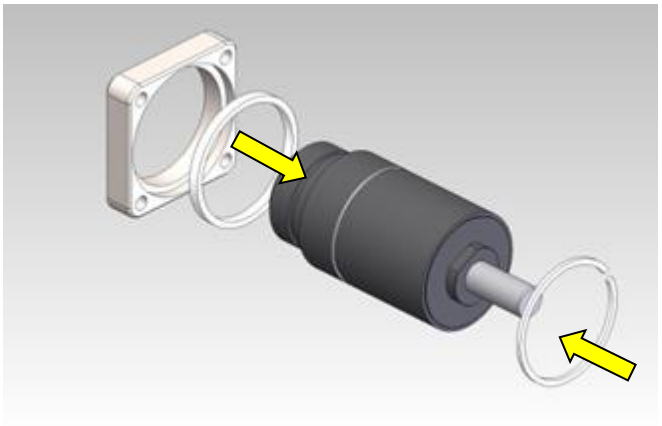
Hold the motor and pull it applying a little rotating movement until it comes off.
N.B.: While performing this operation ensure that the pinion remains in its seat.

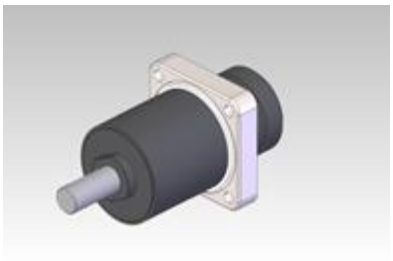


From the PNEUMATIC MOTOR you will have to remove the ELASTIC RING, and the SPACER, and the SUPPORT FLANGE

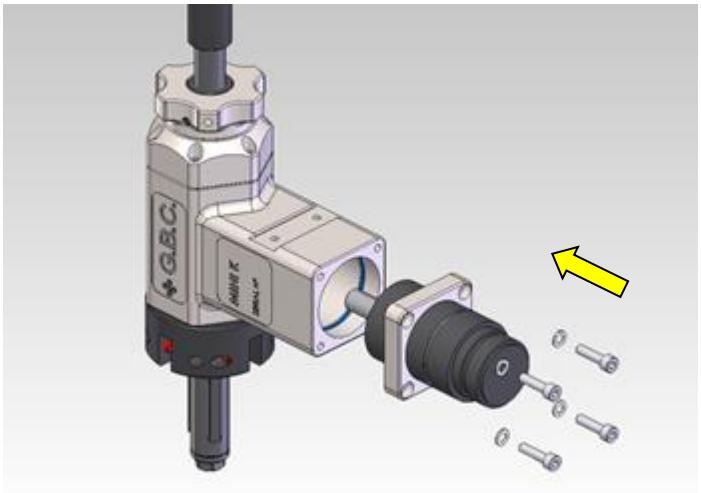


Insert the **ELASTIC RING** in the seat located on the reducer, then insert the **SPACER** and the **SUPPORT FLANGE** previously taken from the pneumatic motor.

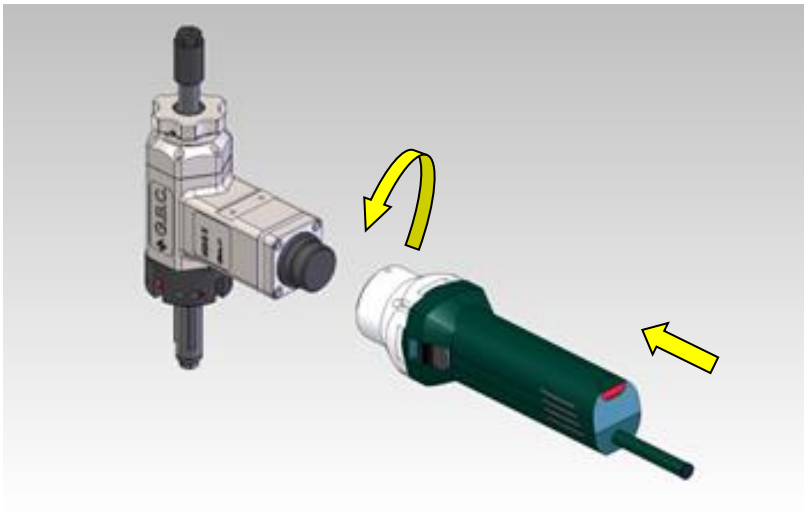




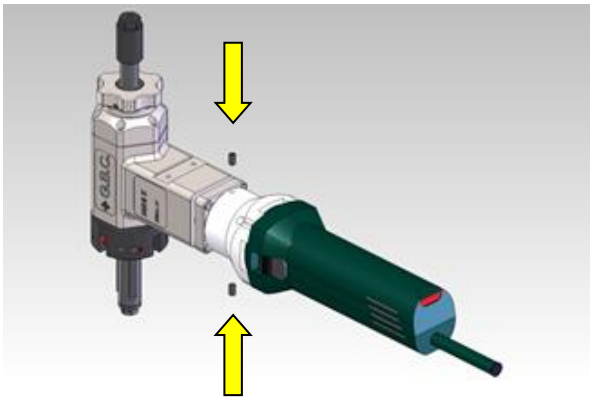
Insert the **MACHINE BODY** and the **REDUCER** with the **SUPPORT FLANGE** already mounted and fix it with the four screws previously removed.

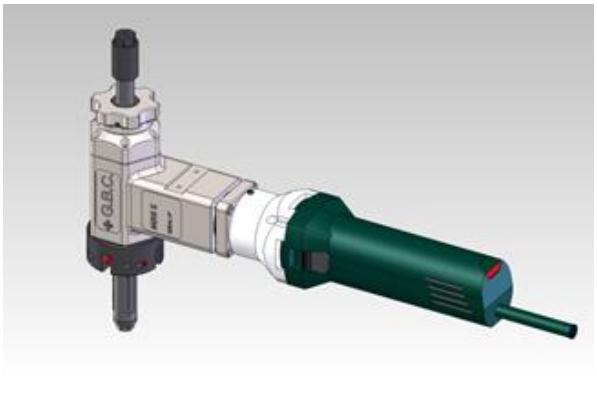


Insert and screw the **ELECTRIC MOTOR ASSEMBLY** on the end of the **REDUCER** protruding from the **MACHINE BODY**.
(**WARNING**!! The thread is inverted, therefore you will have to screw by rotating **COUNTER-CLOCKWISE**)



Screw on the two grub screws and fix the **ELECTRIC MOTOR ASSEMBLY** to the **REDUCER**





ORDINARY MAINTENANCE

It is advisable to perform a service c/o G.B.C. Industrial Tools S.p.A. premises every 400 hours working cycles.

PERIODICAL CHECKS

- Verify the general conditions of the machine;
- Always use the filter + lubricator when using pneumatic machines
- Ensure the filter + lubricator is mounted the nearest possible to the machine and that the lubricant contained is supplied by G.B.C. In-dustrial Tools S.p.A. only.
- Perform a compressed air periodical cleaning on the threaded part of the guiding shaft and in the rear part of the machine.
- Always ensure that the seats of the tools on the chuck are clean
- Every 20 – 30 hours ensure the security valve has no air leaks
- Ensure no air leaks are present on the air supply system nearby the connection between the machine and the hose.
- Introduce some drops of gasoline or similar oily solvent in the air intake nipple of the pneumatic motor and start the machine in idle.
- Always use well sharpened tools to obtain the maximum result.

G.B.C. Industrial Tools is at your disposal for any information you may re-quire about the above mentioned procedures and for any general clarification you may need.

TROUBLESHOOTING AND ACOUSTIC EMISSION

The machine does not run : Check the power supply is connected and suitable in regard to the motor power consumption.

The machine does not run properly : Check the condition of the shaft and verify it to perfectly spins around its axis of rotation.

The machine does not bevel : Check the beveling tools condition and ensure that the pipe you are working does not require special bevelling tools due to its composition. Always ask suggestions to your referent in G.B.C. as we are at your complete disposal.

The acoustic emissions are within the maximum limits provided by the current Machinery Directive.
The tests are performed on every single machine and the results are stored in our archives.