



INSTRUCTION MANUAL



MINI K LEVER

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



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Istruzioni originali—rev.2011—in accordo al 1.7.4 della direttiva macchine 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 further 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 disassembled 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 connected 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 shipment 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.

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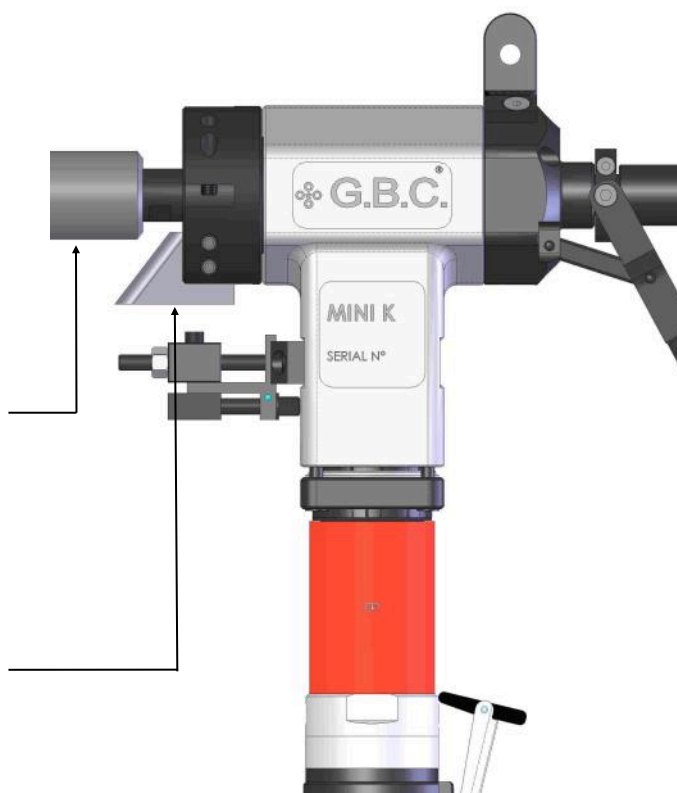


INTENDED USE OF THE MACHINE

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

The Mini K Lever 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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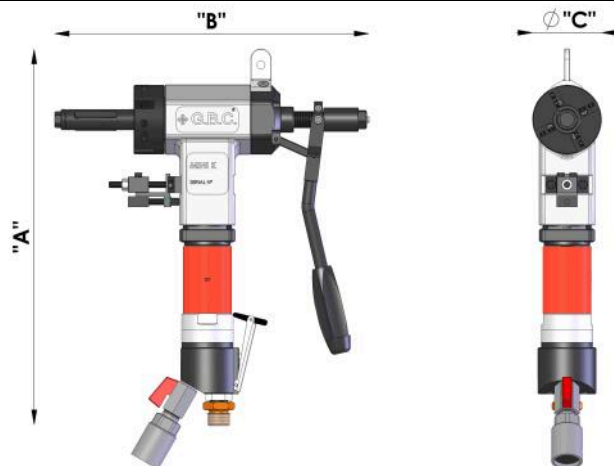
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TECHNICAL FEATURES			
		PNEUMATIC	ELECTRIC
ID Locking range	mm (inches)	20 - 42 (0.78-1.65)	20 - 42 (0.78-1.65)
Idle Speed	gg/min (Rpm)	180	305
Max Chuck Torque	Nm (Nm)	6 (6 bar)/18 (8 bar)	17
Axial Feeding	mm (inches)	20 (0.78)	20 (0.78)
Pneumatic Motor Power	Hp (W)	0.59 (435)	
Air Consumption	NI/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
Tension	Volt		110 / 230
Frequency	Hz		50 / 60
Max Acoustic Emission	Db	75	75
Machine Weight	Kg	4.8	5.5



MACHINE DIMENSION			
		PNEUMATIC	ELECTRIC
A	mm (inches)	365 (14.37)	450 (17.71)
B	mm (inches)	300 (11.81)	300 (11.81)
Ø C	mm (inches)	67 (2.63)	67 (2.63)
Ø C (Optional)	mm (inches)	60 (2.36)	60 (2.36)

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MINI K LEVER MODELS

MINI K LEVER PNEUMATIC



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MINI K LEVER ELECTRIC



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Modelli della serie MINI K A LEVA

MINI K LEVER “PLD” **“PNEUMATIC LOCKING DEVICE”**



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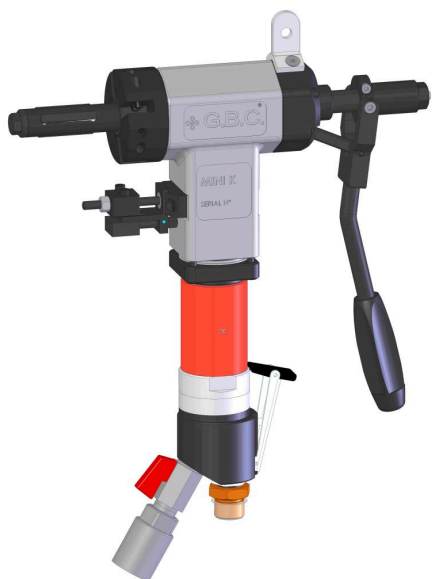


MACHINE STANDARD EQUIPMENT

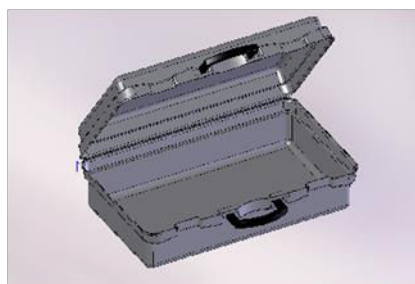
The machine is supplied inclusive of the following equipment:

- 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 Lever



Machine Case



Instruction Manual And Exploded Drawings

Service Tools



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OP- OPTIONAL EQUIPMENT TIONAL

INTERCHANGEABLE REDUCED SHAFT 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.

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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

Model		Pneu.	Elet.
Weight of the Machine	kg	6	5
Shipping Dimensions	mm	370x430x120	370x480x120
Shipping Weight	kg	12	11

Under 25 Kgs no lifting machines are required.

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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.

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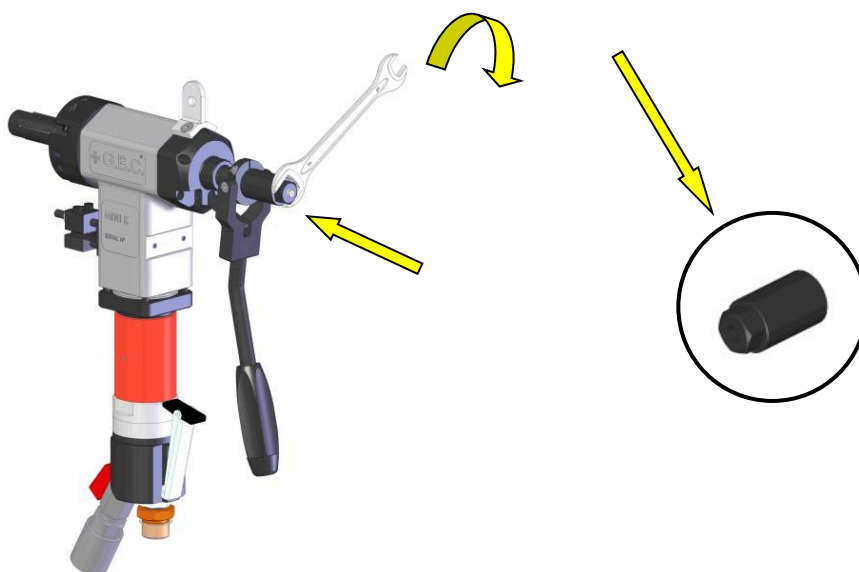


MACHINE SETUP

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



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



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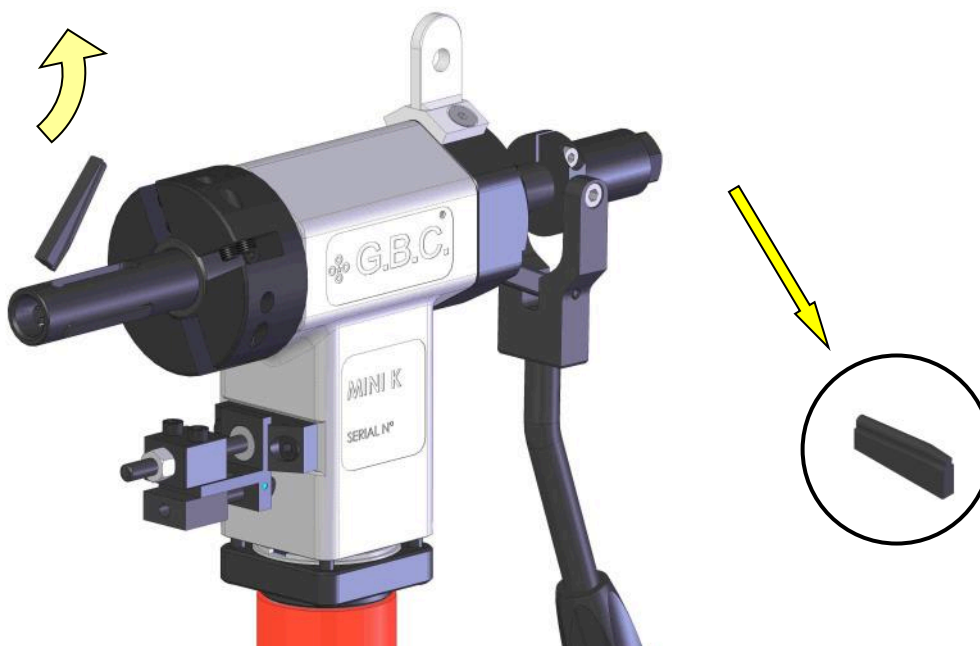


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Remove the three **LOCKING JAWS** previously mounted.



WARNING!!!! DO NOT MOVE THE EXPANSION SHAFT!!!!

You will be able to move it by acting on the **VANE EXPANSION NUT** only

AFTER the docking jaws have been put back in position.

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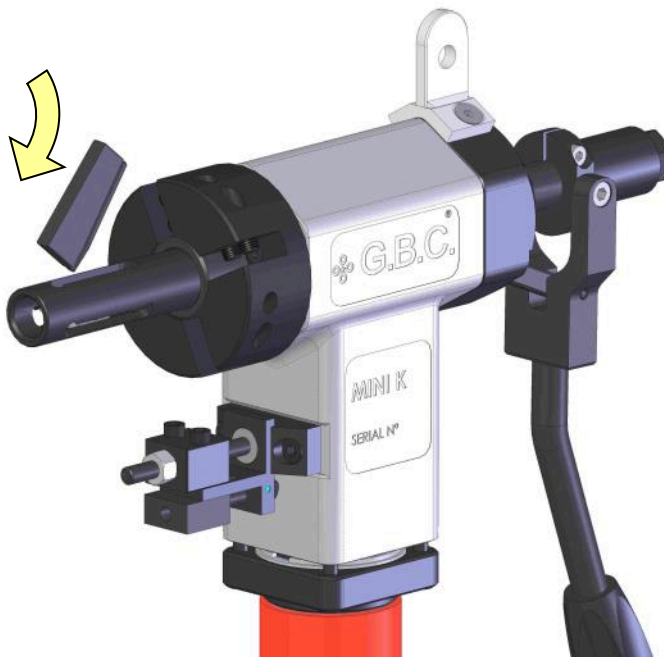


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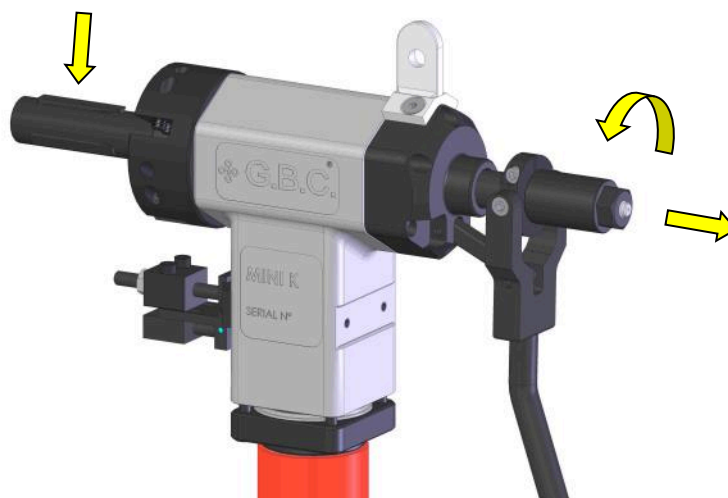
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Select the **LOCKING JAWS** according to the diameter of the pipe and install them on the expansion shaft as shown in the picture.



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.



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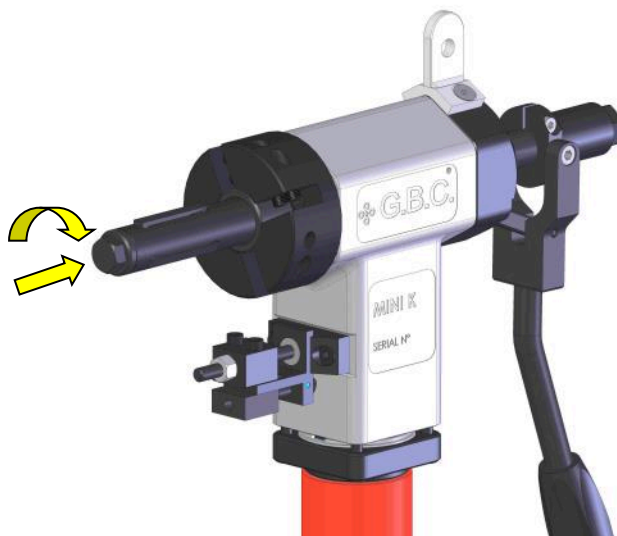
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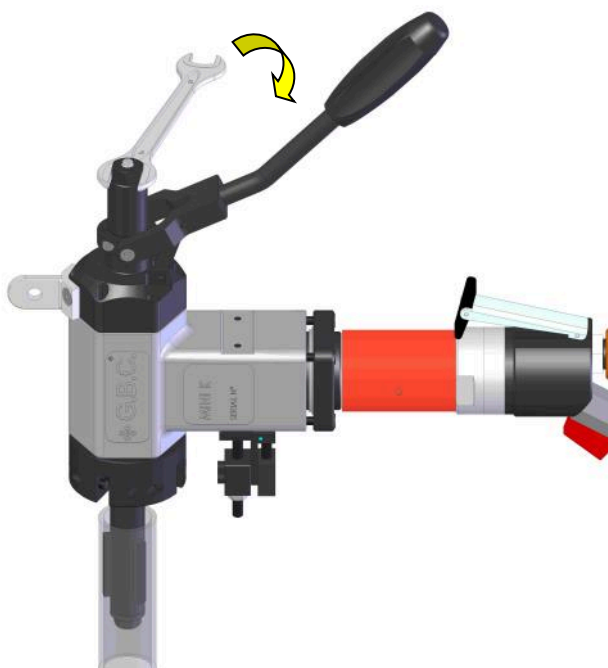
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Put back the **VANE EXPANSION NUT** and torque it.



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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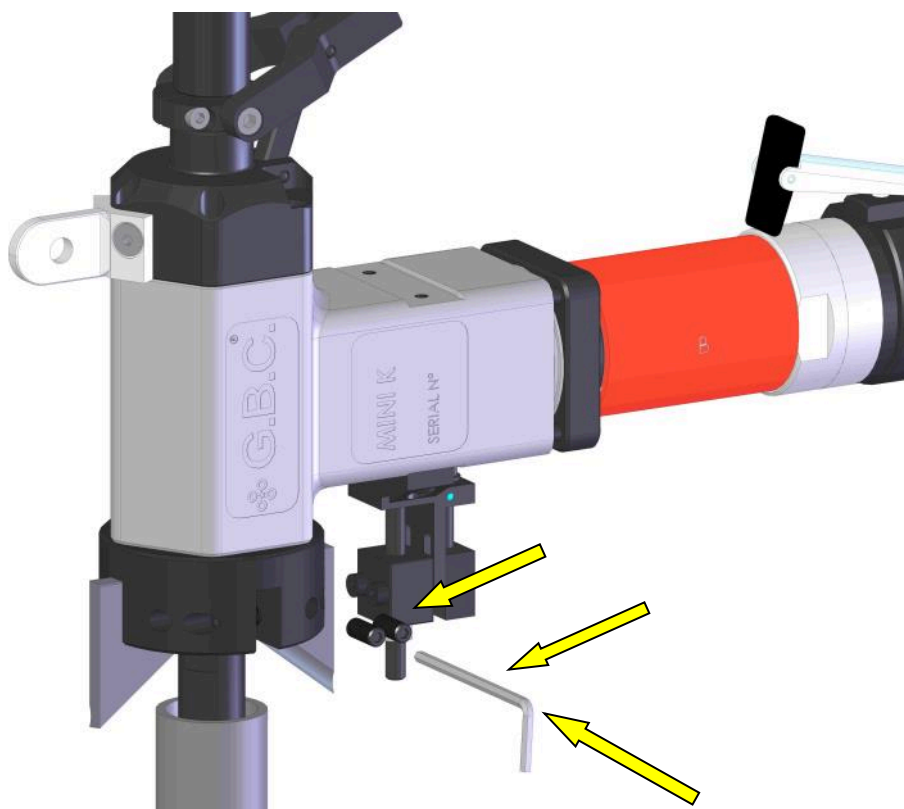
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Select the **BEVELING TOOL** according to the required finishing and place it on any of the **CHUCK** slots locking it with the two grub screws by using the Allen key .

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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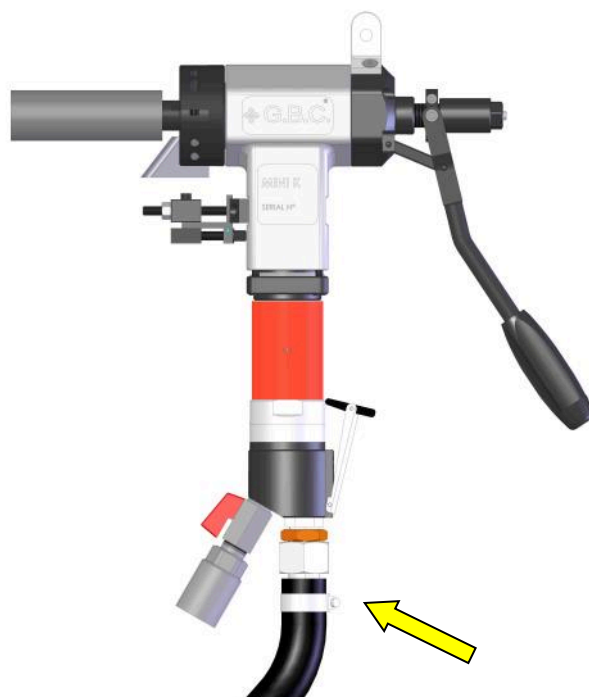
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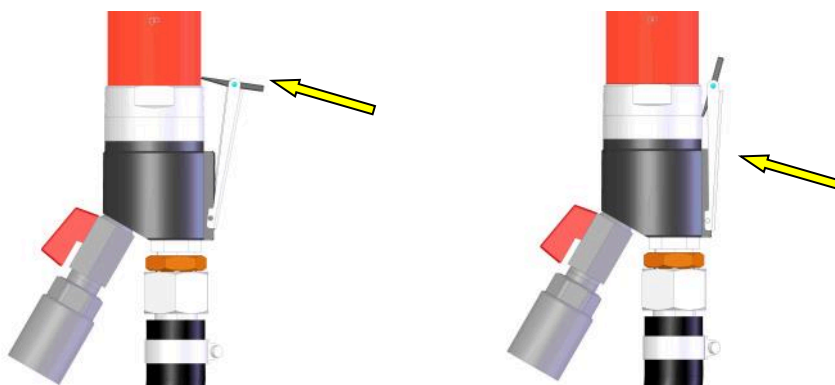


USE INSTRUCTIONS

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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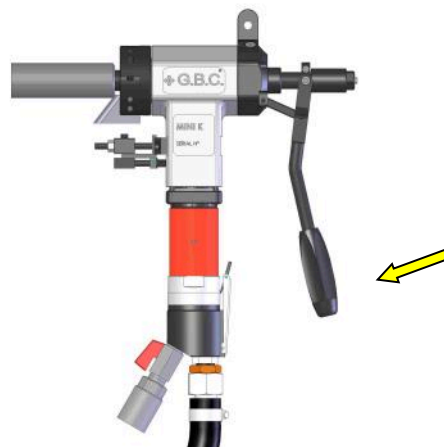
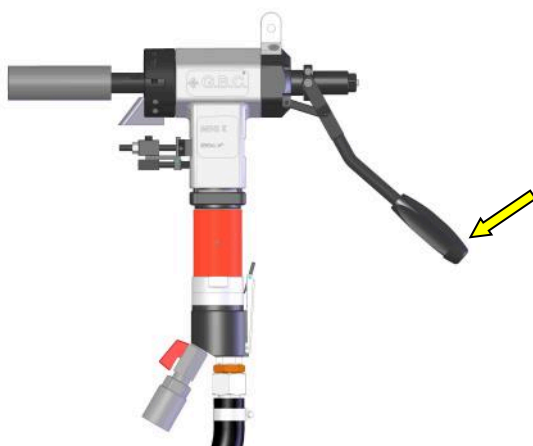
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The feeding of the machine is actuated by a LEVER.

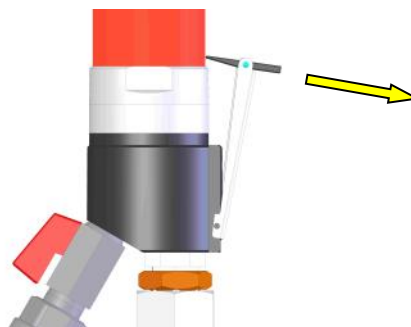
After you have started the motor push the **LEVER** as shown below and try to maintain a constant push in order to keep the machine working until you have reached the desired finishing.



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



When the required finishing is achieved release the **FEEDING LEVER** and release the **MOTOR LEVER**.



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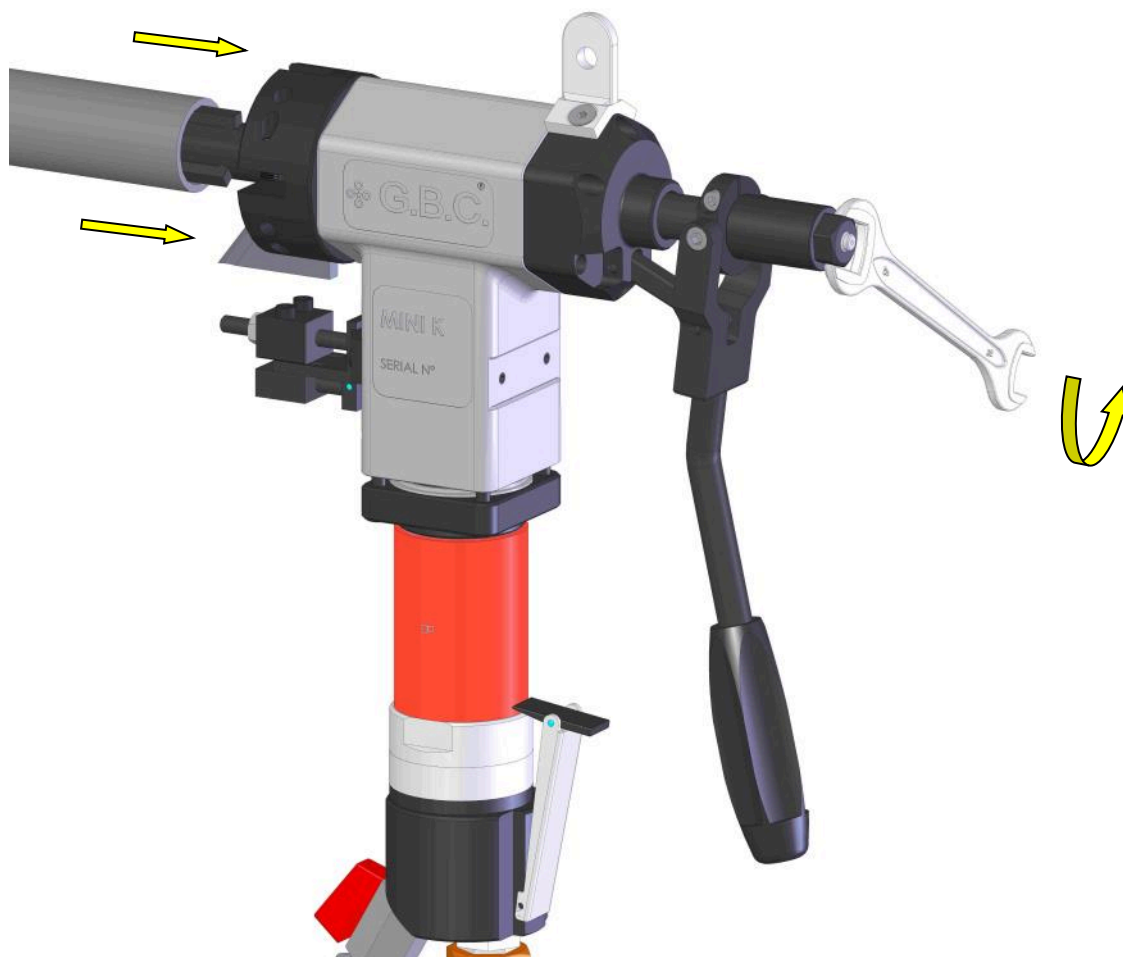
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MINI K LEVER REMOVAL OPERATION

Once the beveling operations are completed, turn counter-clockwise the **VANE EXPANSION NUT** using the spanner to withdraw the locking jaws and the machine will lose its grip.



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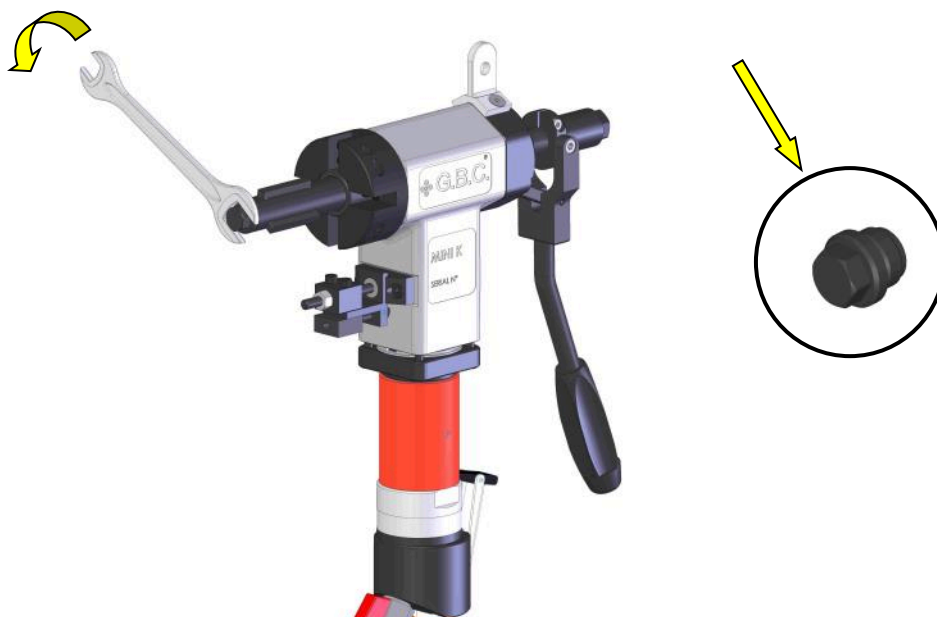
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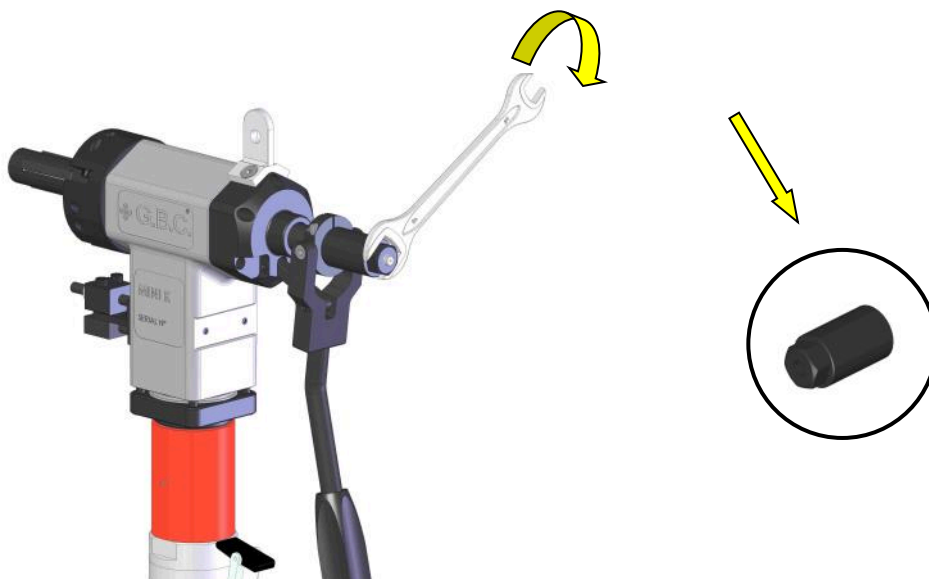


REDUCED SHAFT KIT ASSEMBLY

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



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



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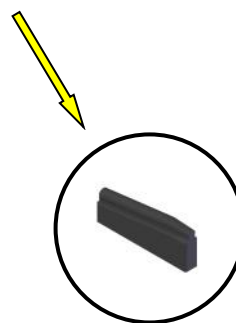
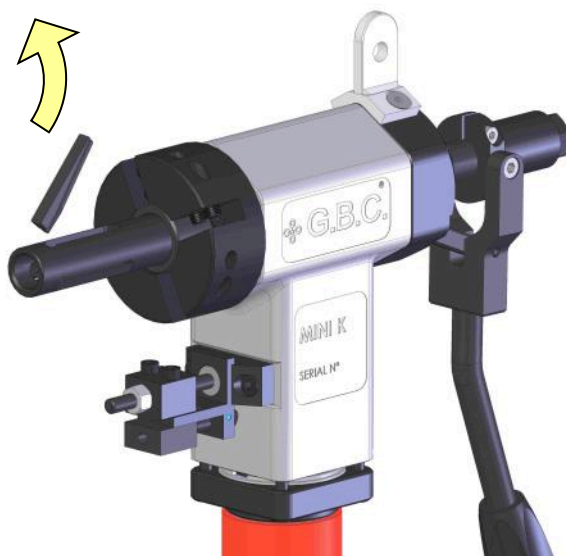
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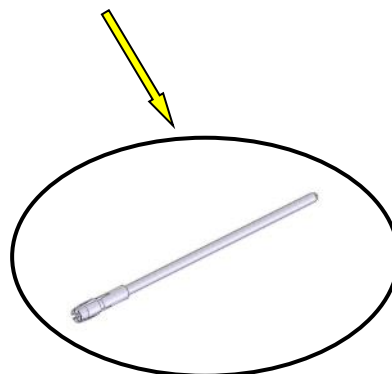
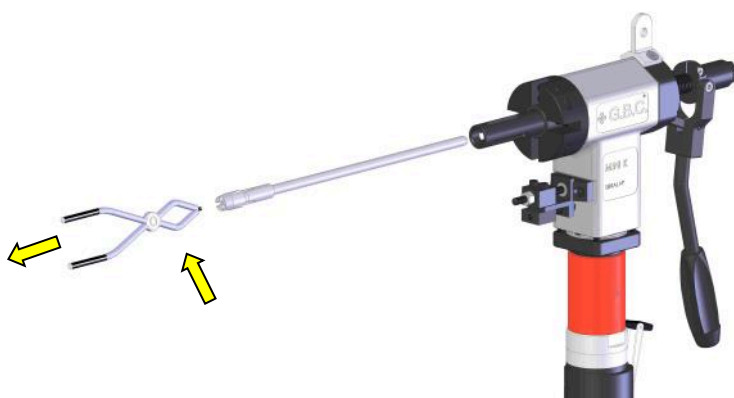
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Remove the **LOCKING JAWS**



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



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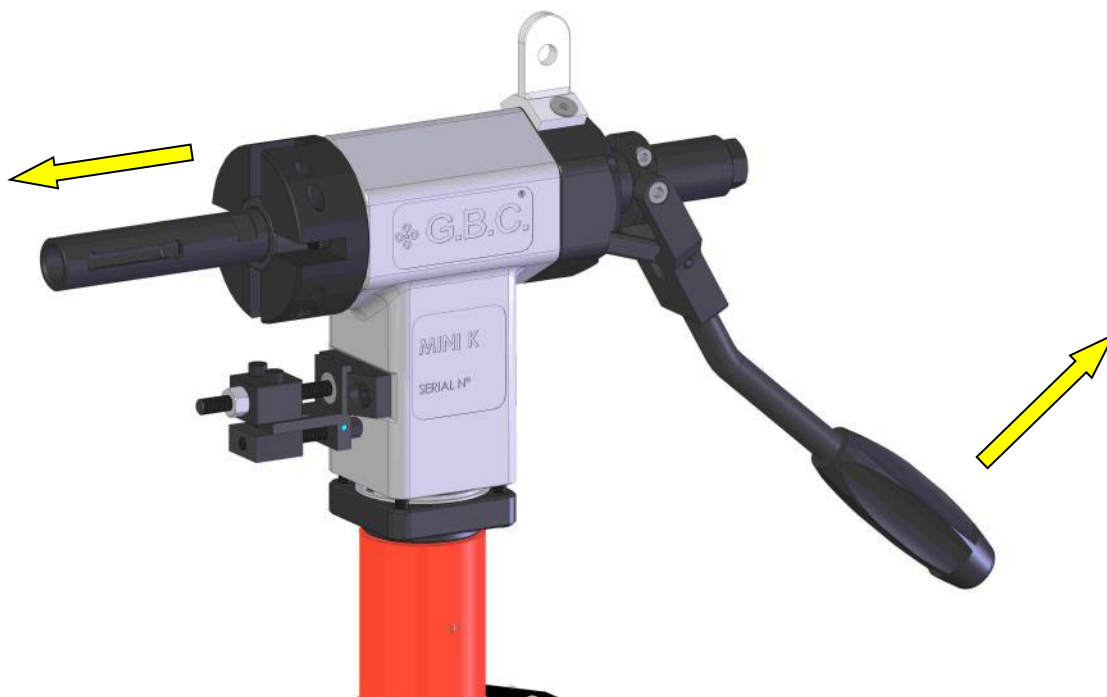


MINI K LEVER

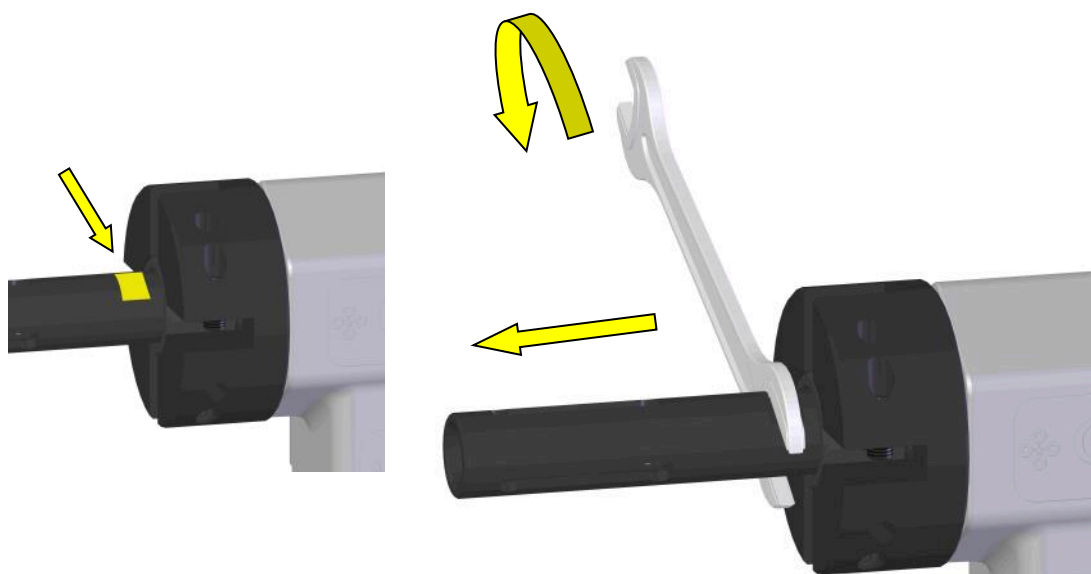
Istruzioni originali—rev.2011—in accordo al 1.7.4 della direttiva macchine 2006/42/CE



Pull the **FEEDING LEVER** backwards in order to expose the **ø20mm HEAD** of the **GUIDING SHAFT** as much as possible as shown below.



Unscrew the **ø20mm HEAD** of the **GUIDING SHAFT** using the spanner on the flats as shown below.



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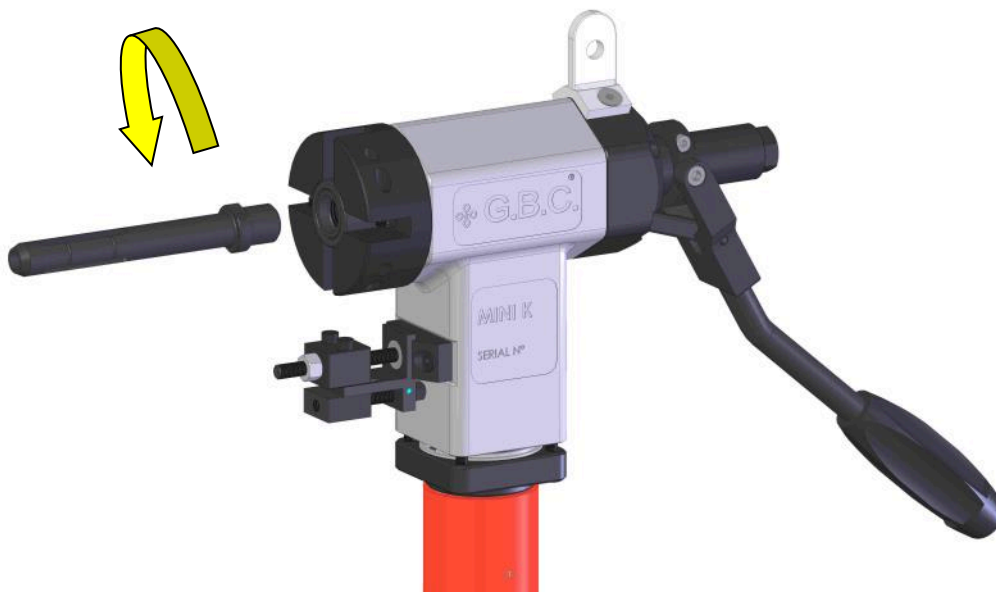


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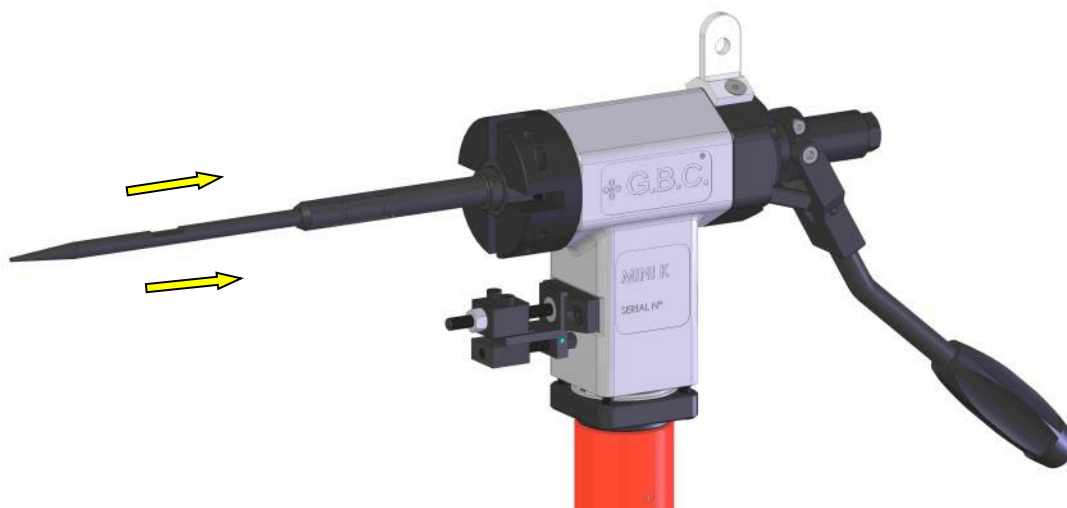
Istruzioni originali—rev.2011—in accordo al 1.7.4 della direttiva macchine 2006/42/CE



Select the desired **REDUCED HEAD** and screw it on the **EXTENSION** with a counter-clockwise movement as shown below.



Insert the **REDUCED EXPANSION SHAFT** and slide it inside the **REDUCED HEAD**.



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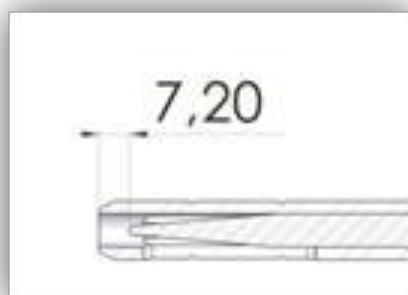
MINI K LEVER

Istruzioni originali—rev.2011—in accordo al 1.7.4 della direttiva macchine 2006/42/CE



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.



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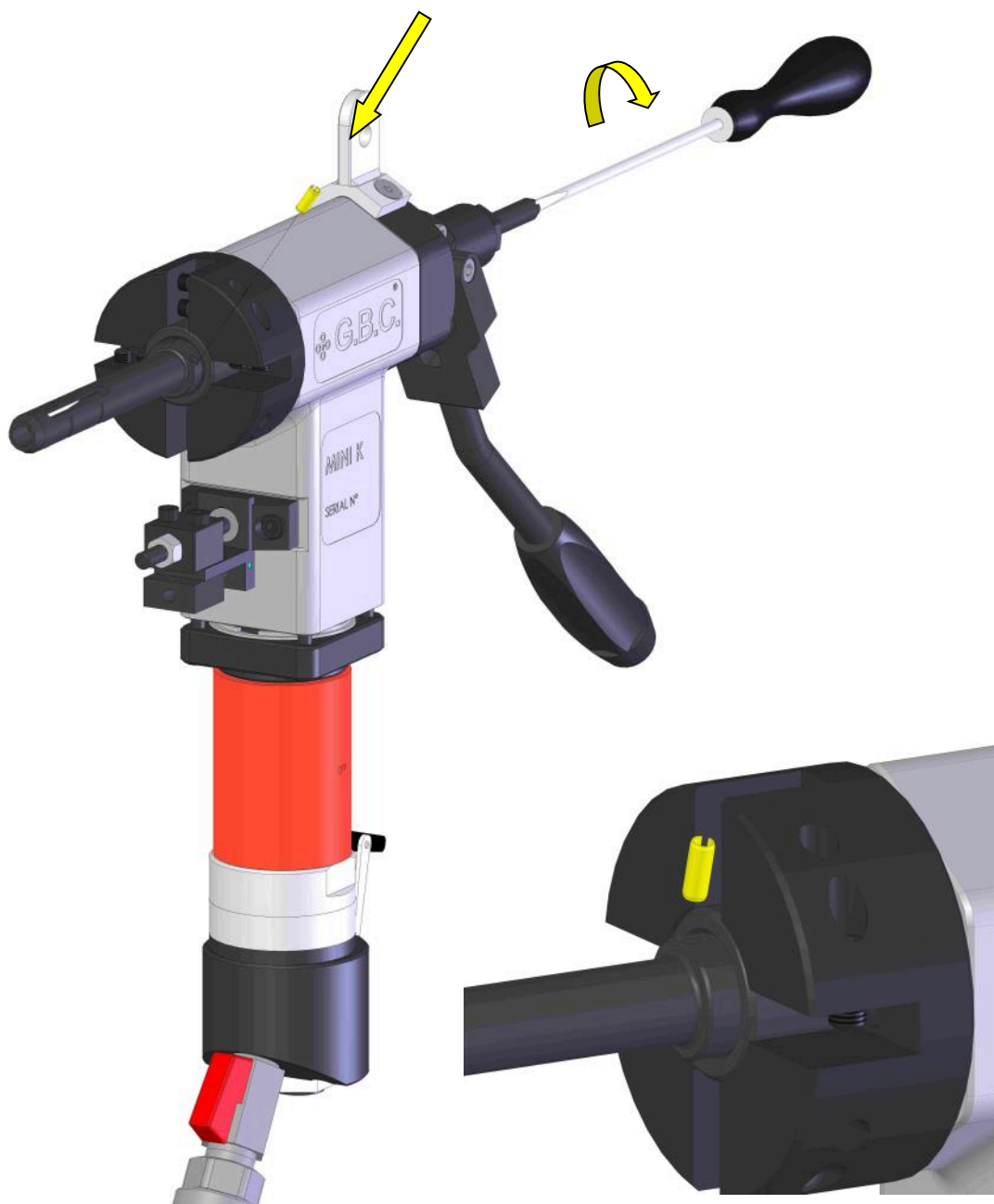


MINI K LEVER

Istruzioni originali—rev.2011—in accordo al 1.7.4 della direttiva macchine 2006/42/CE



Rotate the **REDUCED EXPANSION SHAFT** until the flat cut on its side is in line with the hole located on the **HEAD** and insert the **ELASTIC PIN** that will act as a feeding end stop.



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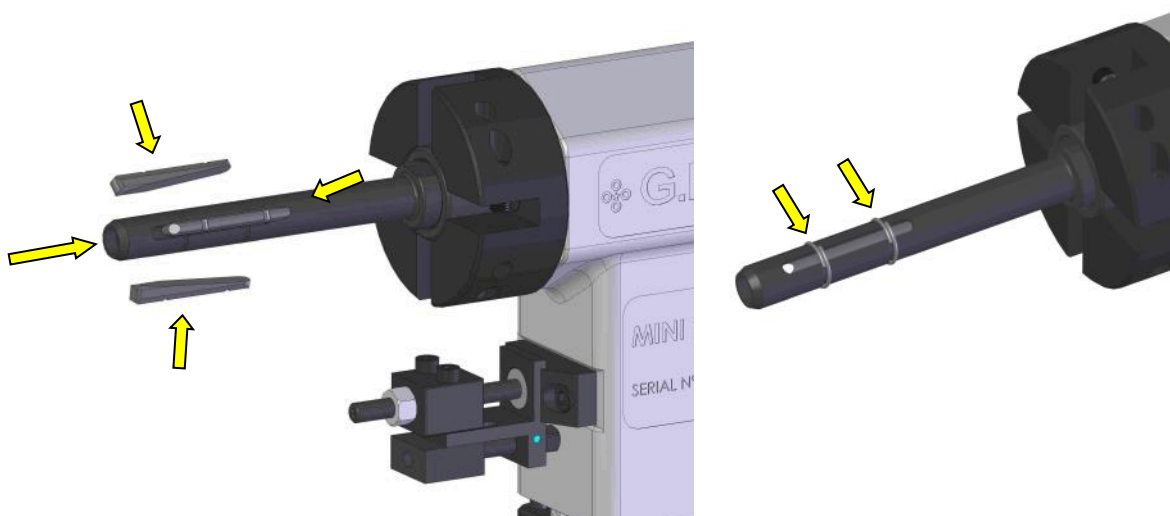
Via Sandro Pertini 41/43 – 25046 Cazzago San Martino (Bs) – Italia – Tel. + 39 030 7451154 – Fax. + 39 030 73 56 629

MINI K LEVER

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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.



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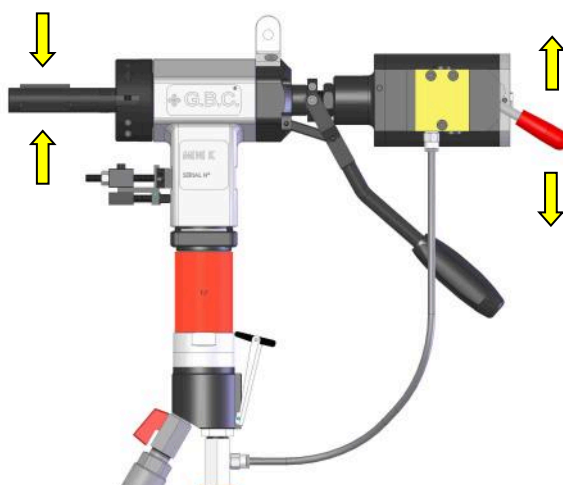


SHAFT ASSEMBLY WITH PNEUMATIC LOCKING DEVICE

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



Supply air to the PLD. Keep your hand around the **LOCKING JAWS** and move the **RED LEVER** either up or down so that the **EXPANSION SHAFT** moves back inside the **GUIDING SHAFT**.



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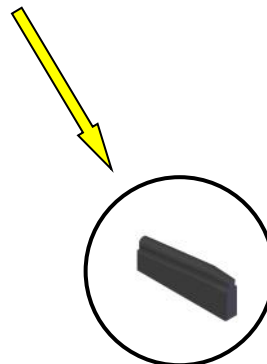
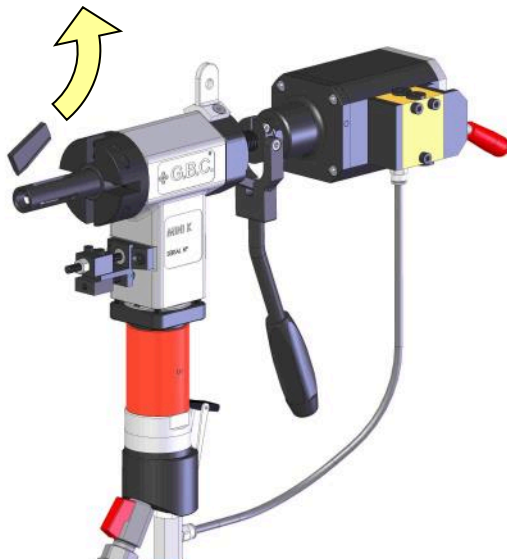
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Remove the **THREE LOCKING JAWS**.



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.



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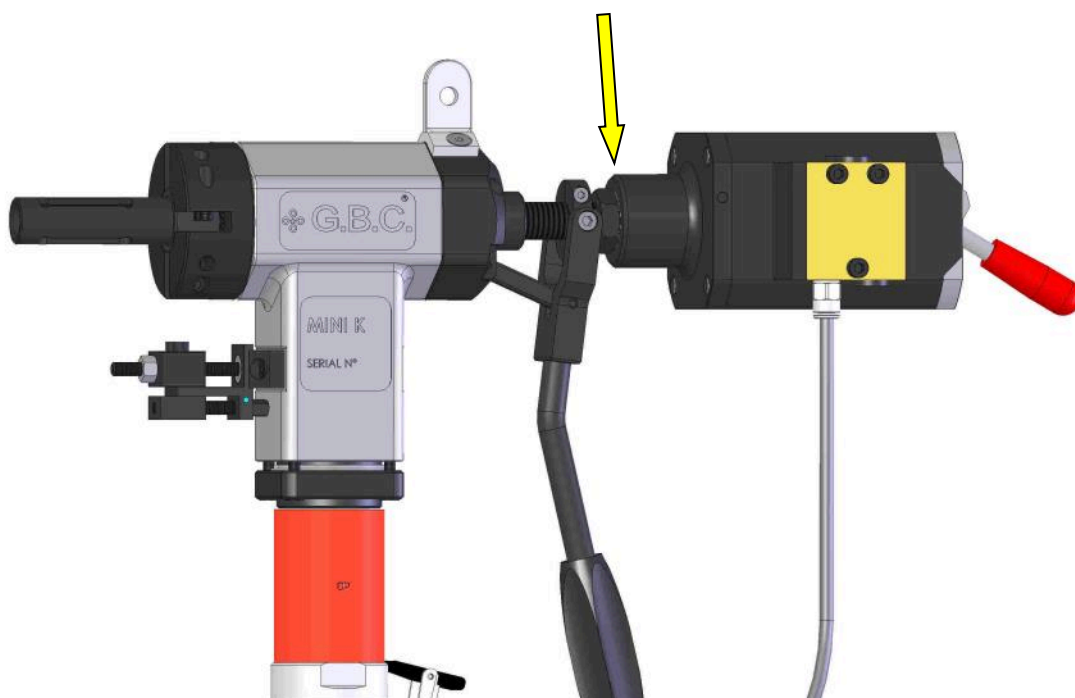
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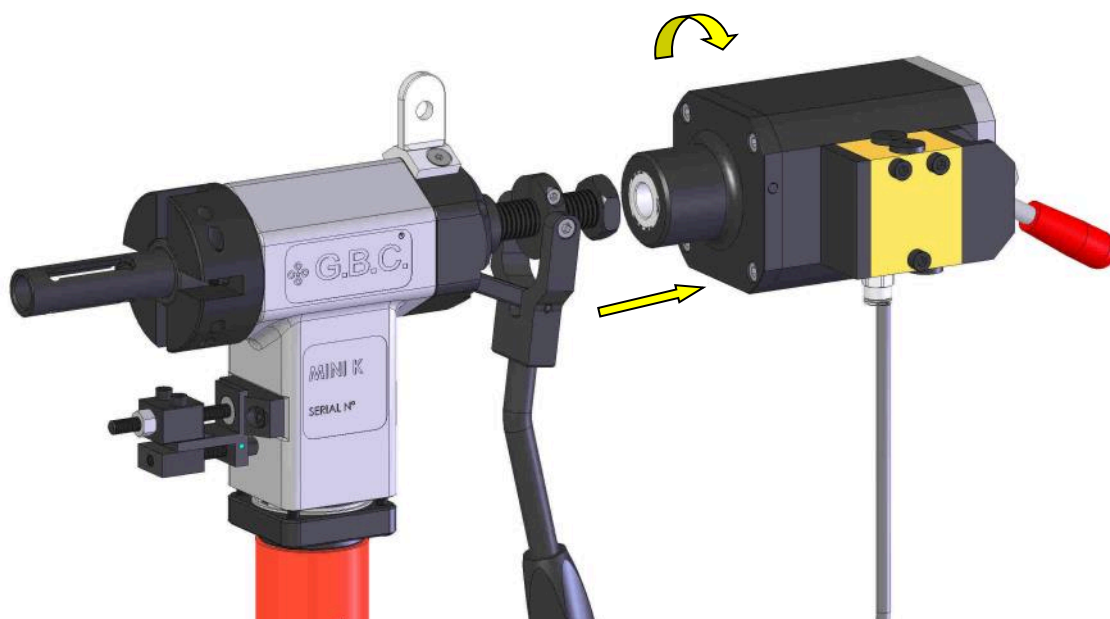
Istruzioni originali—rev.2011—in accordo al 1.7.4 della direttiva macchine 2006/42/CE



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



Unscrew and remove the **PNEUMATIC LOCKING DEVICE**



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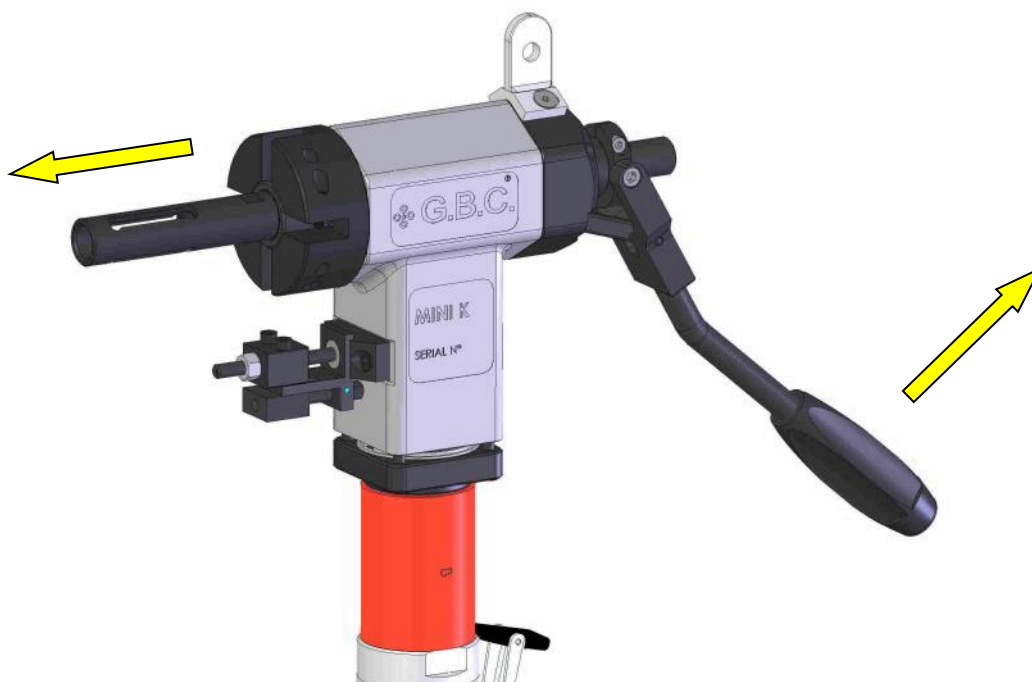


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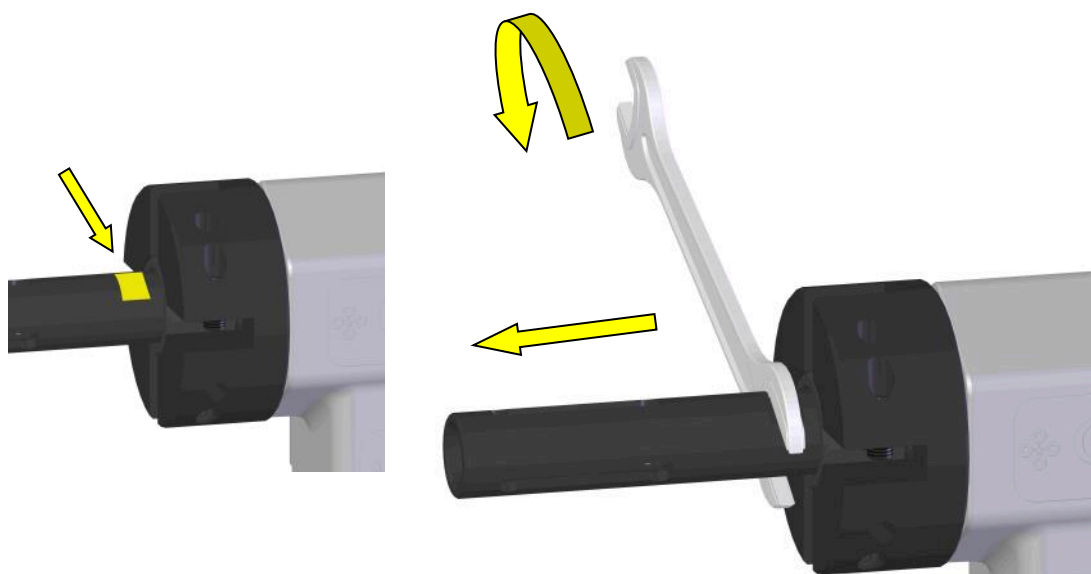
Istruzioni originali—rev.2011—in accordo al 1.7.4 della direttiva macchine 2006/42/CE



Pull the **FEEDING LEVER** backwards in order to expose the **ø20mm HEAD** of the **GUIDING SHAFT** as much as possible as shown below.



Unscrew the **ø20mm HEAD** of the **GUIDING SHAFT** using the spanner on the flats as shown below.



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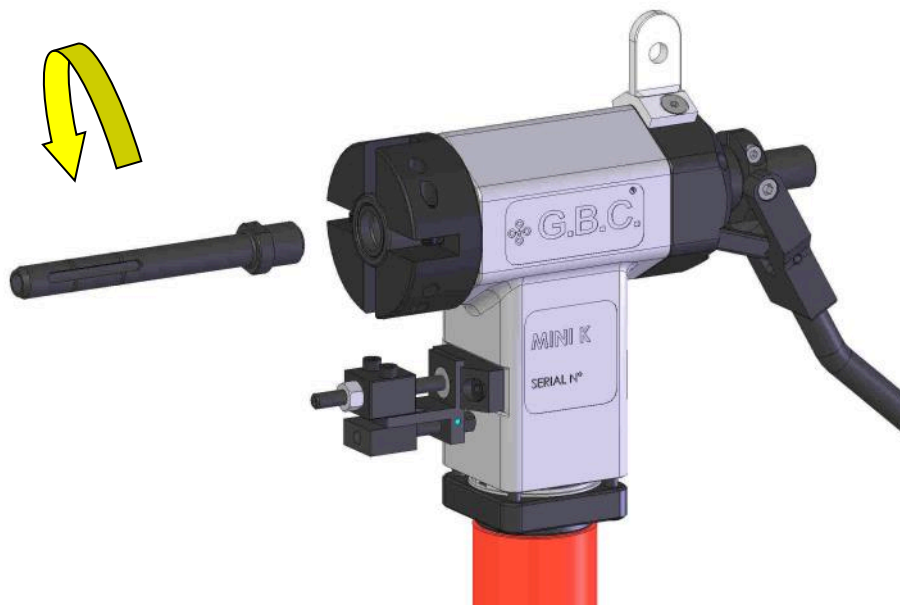
Via Sandro Pertini 41/43 – 25046 Cazzago San Martino (Bs) – Italia – Tel. + 39 030 7451154 – Fax. + 39 030 73 56 629

MINI K LEVER

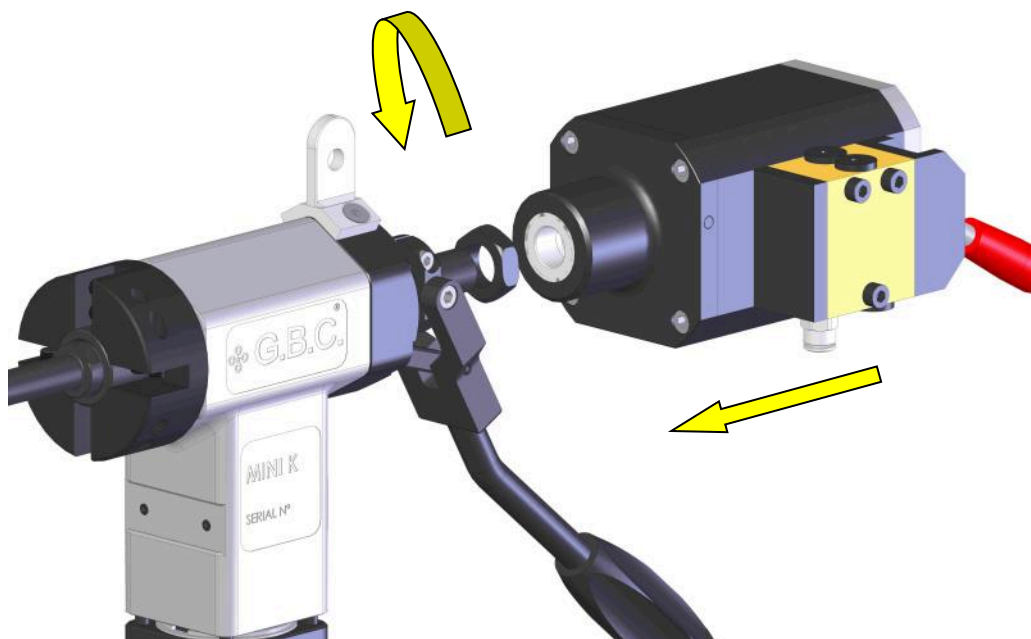
Istruzioni originali—rev.2011—in accordo al 1.7.4 della direttiva macchine 2006/42/CE



Select the desired **REDUCED HEAD** and screw it on the **EXTENSION** with a counter-clockwise movement as shown below.



Screw the **ABUTMENT NUT** and the **PNEUMATIC LOCKING DEVICE** all the way.



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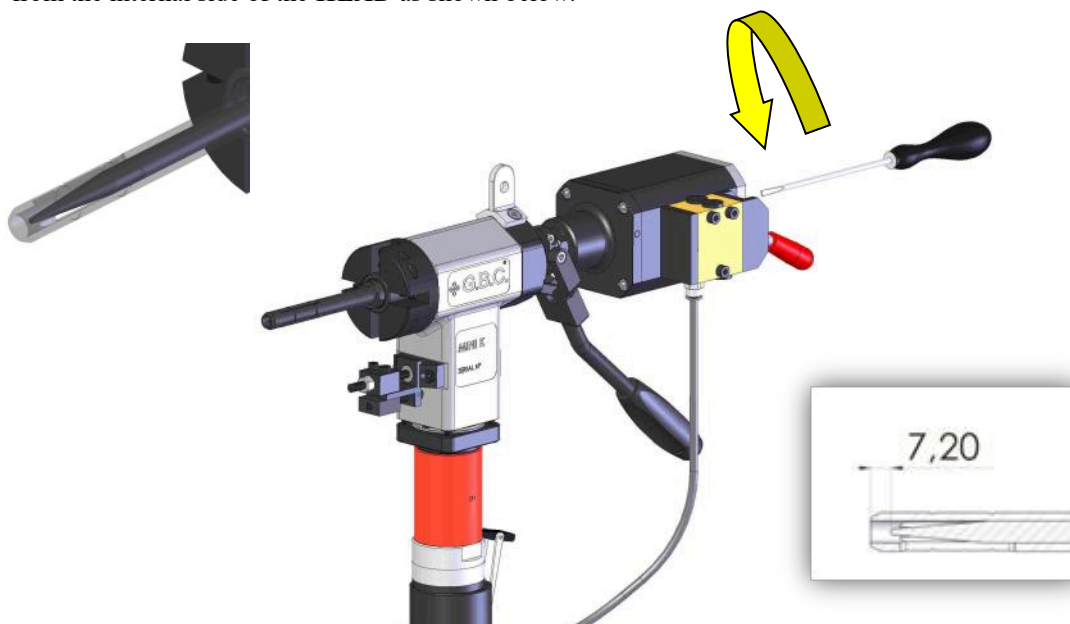
Istruzioni originali—rev.2011—in accordo al 1.7.4 della direttiva macchine 2006/42/CE



Insert the **REDUCED EXPANSION SHAFT** and slide it inside the **REDUCED HEAD**.



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.



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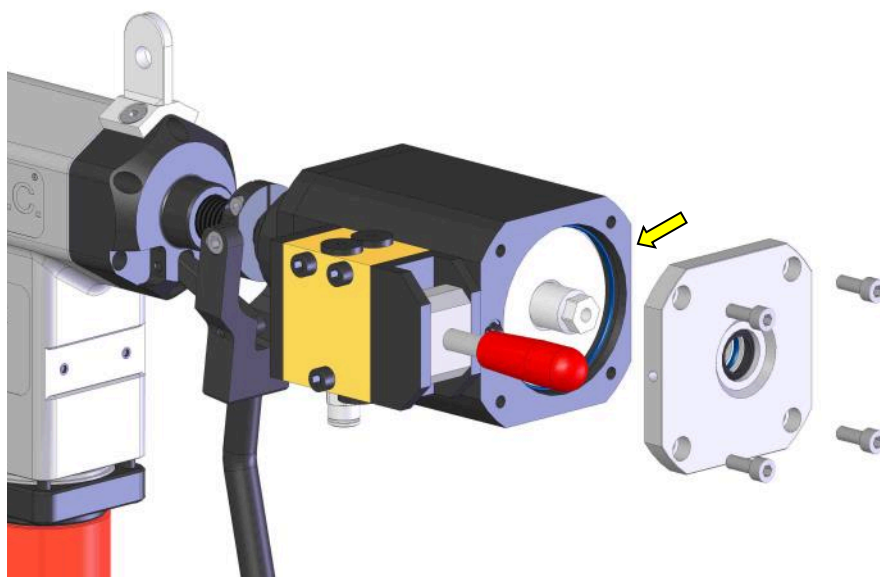
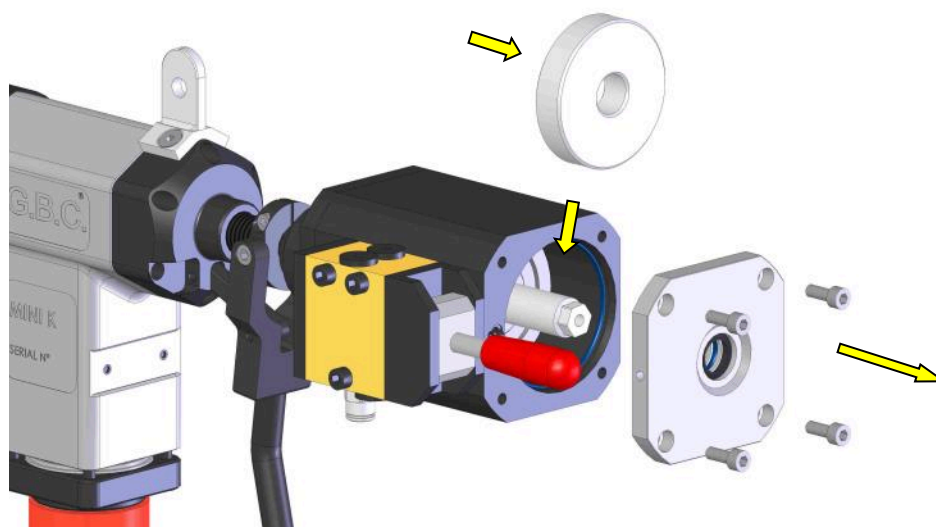
MINI K LEVER

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Remove the 4 screws and the **REAR PLATE** of the **PLD**, insert the **STROKE LIMITER** as shown below..

N.B. Put the **REAR PLATE** back paying particular attention not to damage its seals and the seal located inside the **CYLINDRICAL CHAMBER** of the **PLD**.



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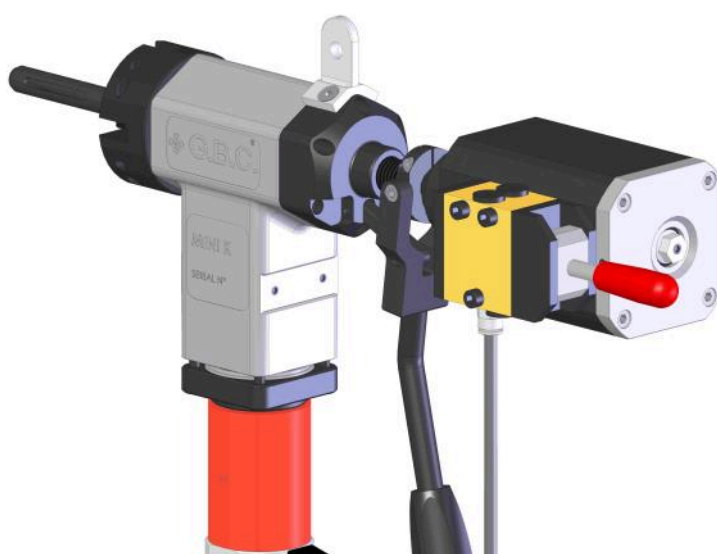
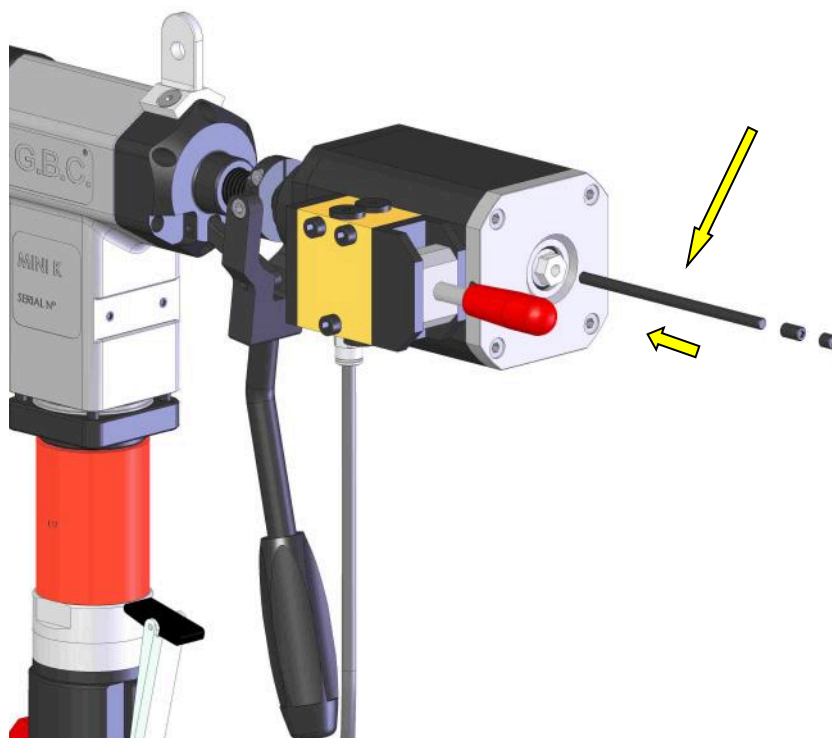


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Reassemble the **LONG PIN**, the **SHORT PIN** and the **GRUB SCREW**.



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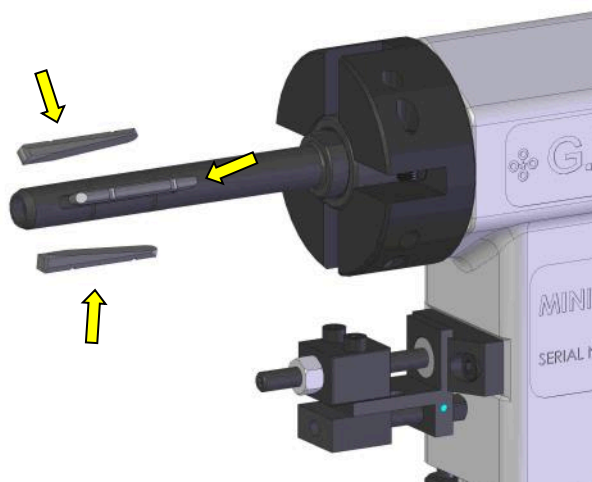
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MINI K LEVER

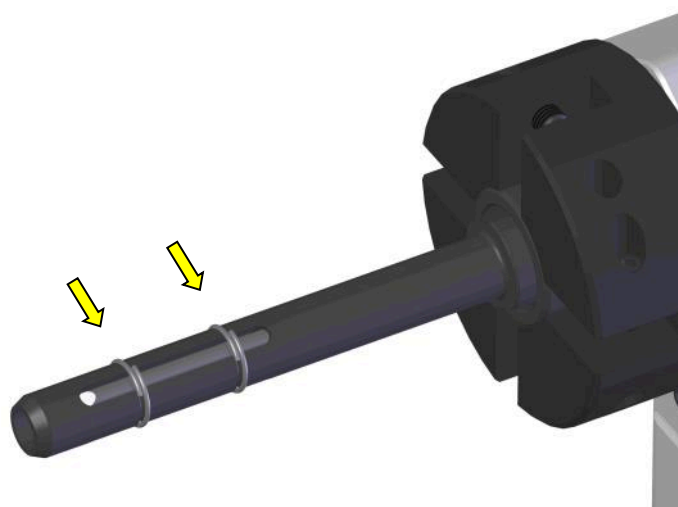
Istruzioni originali—rev.2011—in accordo al 1.7.4 della direttiva macchine 2006/42/CE



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.



Slide the **RINGS** on the **REDUCED HEAD** making sure they both seat in the grooves as shown below.



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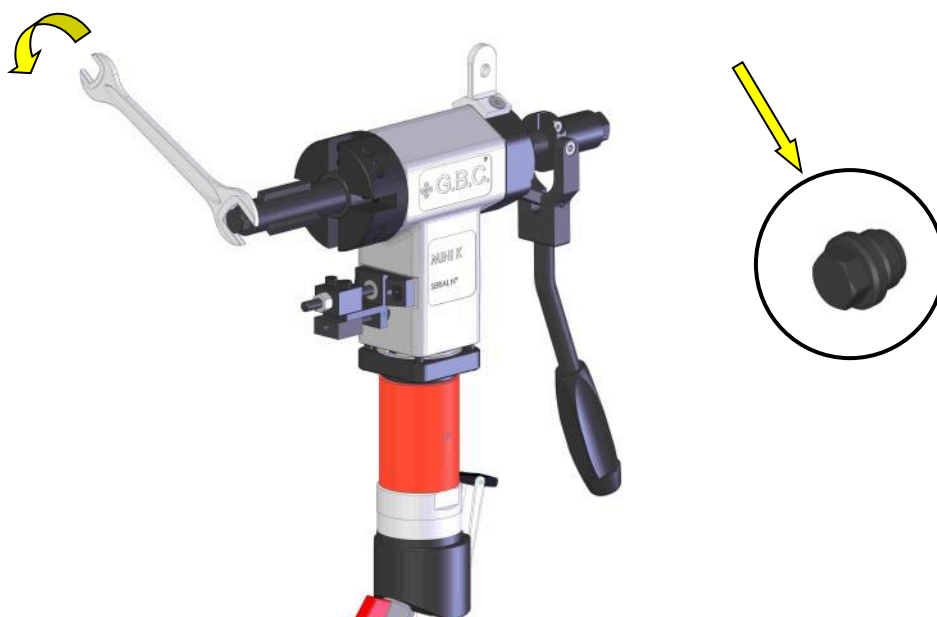
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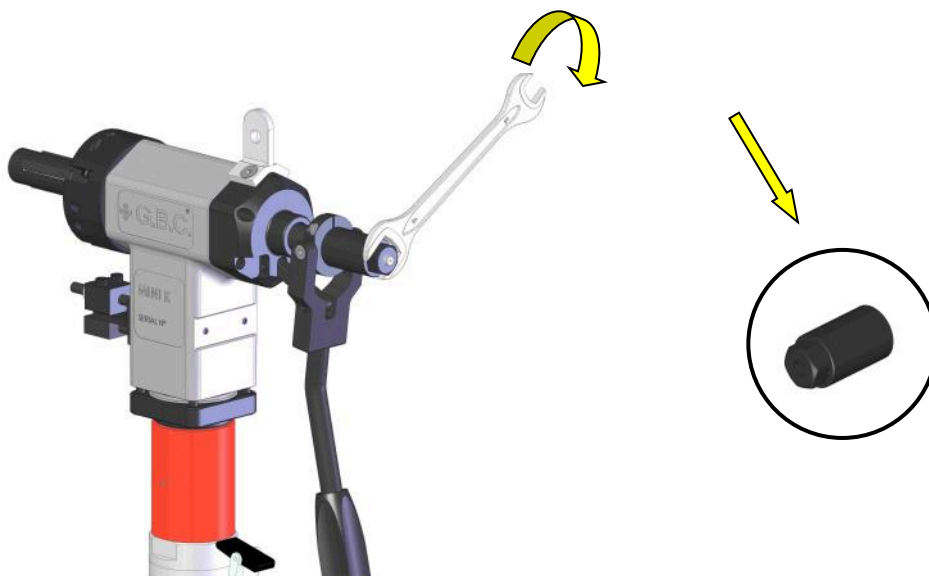


ELBOW SHAFT ASSEMBLY

Remove the **VANE EXPANSION CAP**.



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



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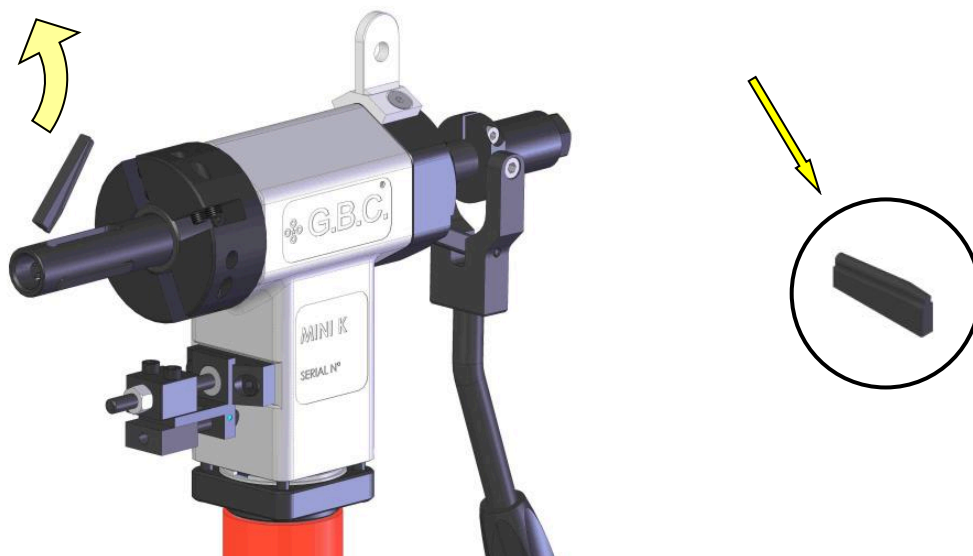


MINI K LEVER

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



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



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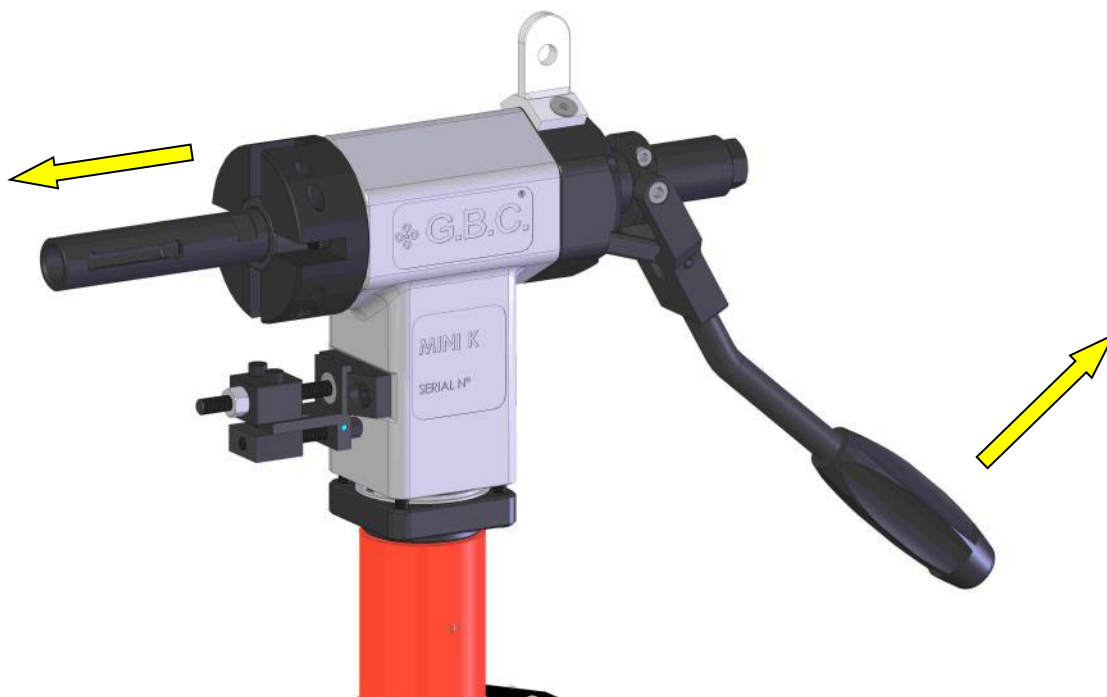


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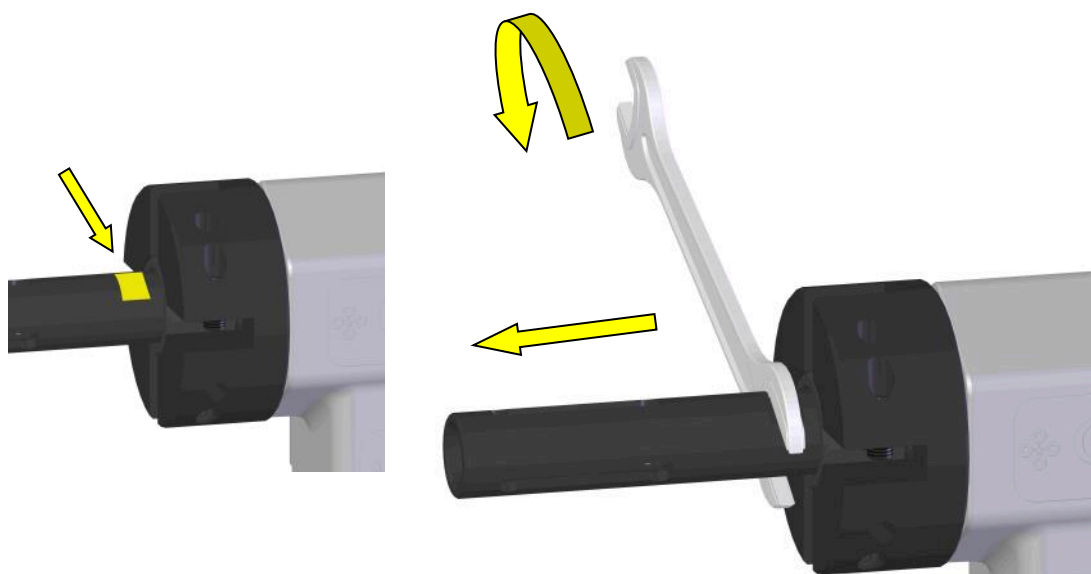
Istruzioni originali—rev.2011—in accordo al 1.7.4 della direttiva macchine 2006/42/CE



Pull the **FEEDING LEVER** backwards in order to expose the **ø20mm HEAD** of the **GUIDING SHAFT** as much as possible as shown below.



Unscrew the **ø20mm HEAD** of the **GUIDING SHAFT** using the spanner on the flats as shown below.



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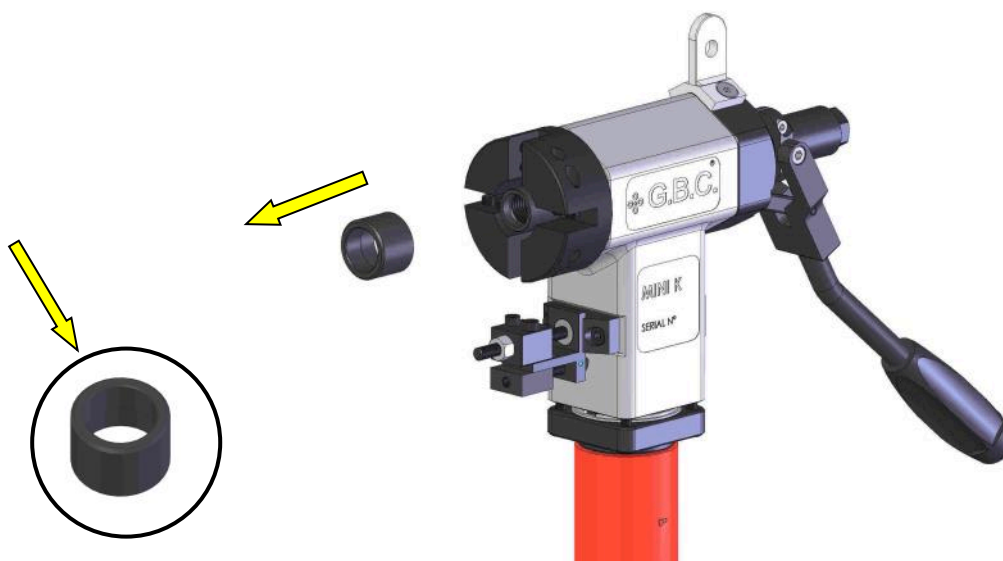
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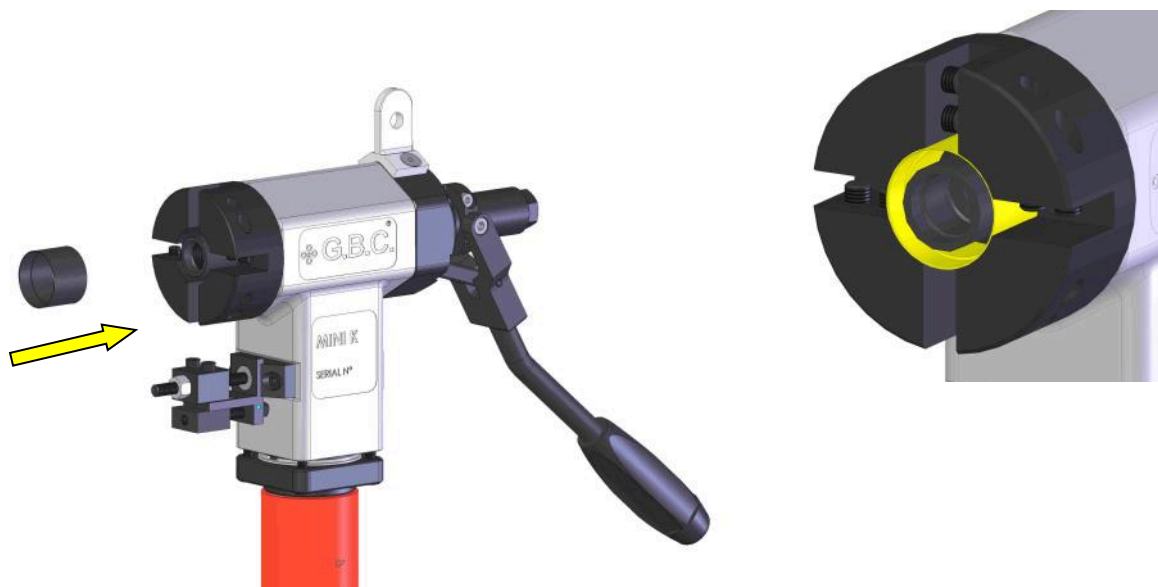
Istruzioni originali—rev.2011—in accordo al 1.7.4 della direttiva macchine 2006/42/CE



Pull out the **TOOL ABUTMENT BUSH**.



Replace it with the **TOOL ABUTMENT BUSH** supplied as part of the ELBOW SHAFT ASSEMBLY and make sure to install it in the proper way as shown below.



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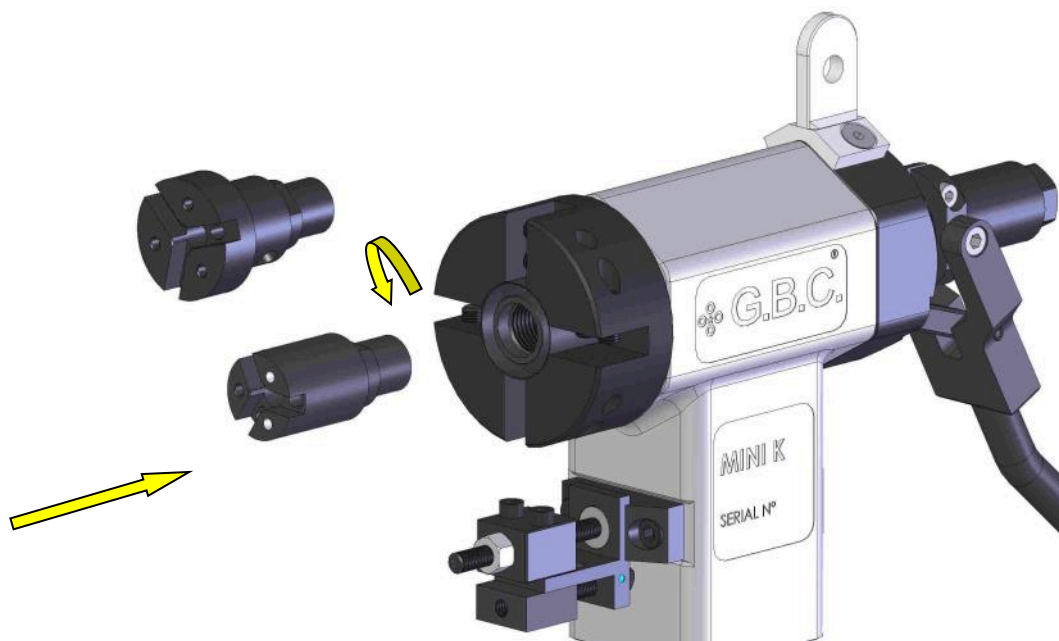


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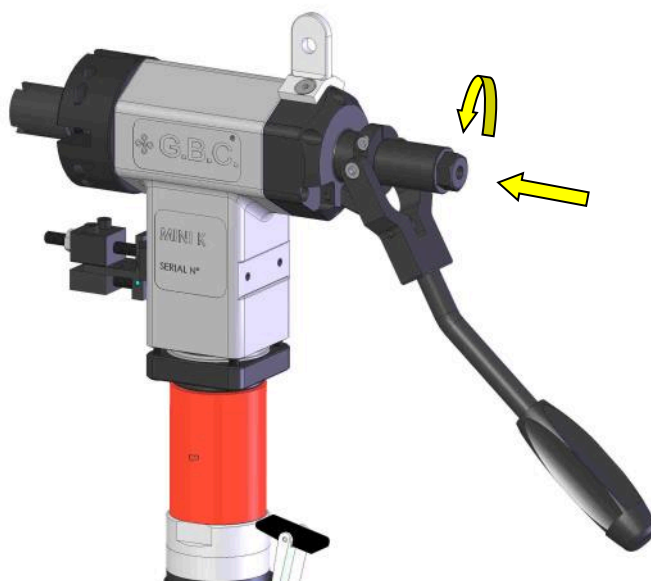
Istruzioni originali—rev.2011—in accordo al 1.7.4 della direttiva macchine 2006/42/CE



Insert the e ed avvitare in senso anti orario la **SPECIAL HEAD FOR ELBOWS** and screw it with a clockwise rotation to the **GUIDING SHAFT EXTENSION**.
The assembly includes two heads : $\varnothing 25\text{mm}$ and $\varnothing 35\text{mm}$.



Screw the **VANE ABUTMENT NUT** all the way down.



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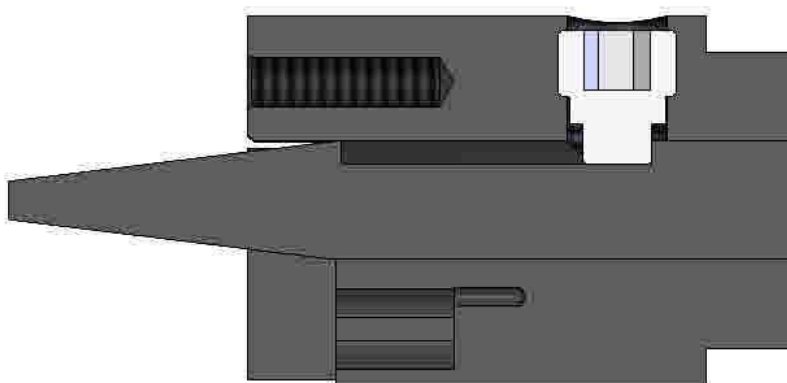
Istruzioni originali—rev.2011—in accordo al 1.7.4 della direttiva macchine 2006/42/CE



Insert the **VANE EXPANSION SHAFT** supplied with the **ELBOW SHAFT ASSEMBLY** and insert it inside the **HEAD** , screwing it with a flat head screwdriver inserted in the rear end as shown below, until the keyhole located on the **VANE EXPANSION SHAFT** can be detected looking through the hole of the **END STOP SCREW**.



Insert the **END STOP SCREW** and screw it all the way down as shown below.



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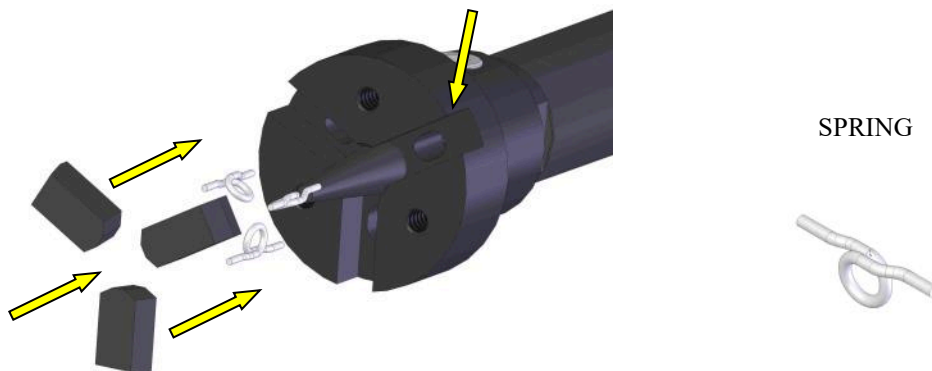
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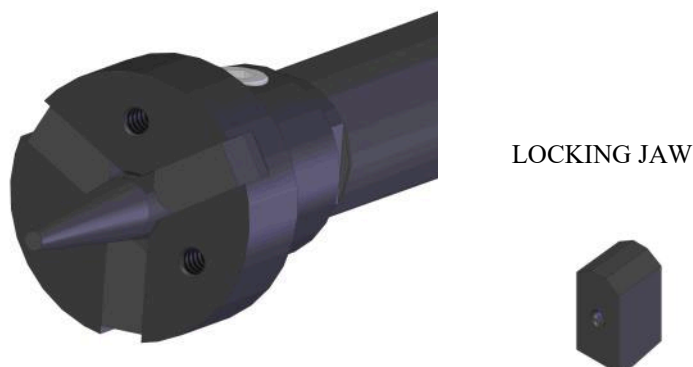


Insert the three **SPRINGS** in their seats located at the base of the **LOCKING JAW**



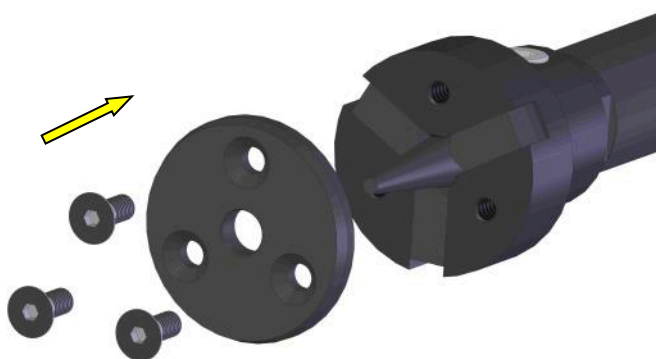
SPRING

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.



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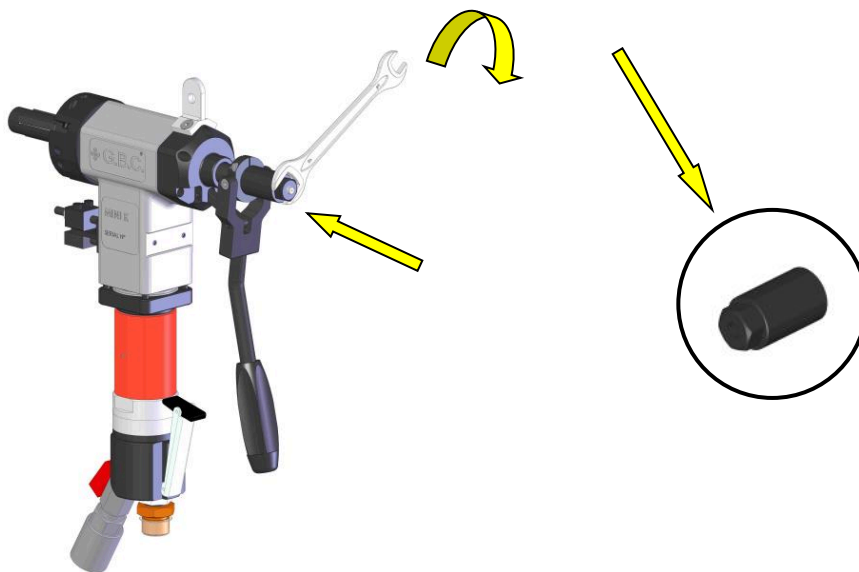


PNEUMATIC LOCKING DEVICE ASSEMBLY

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



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



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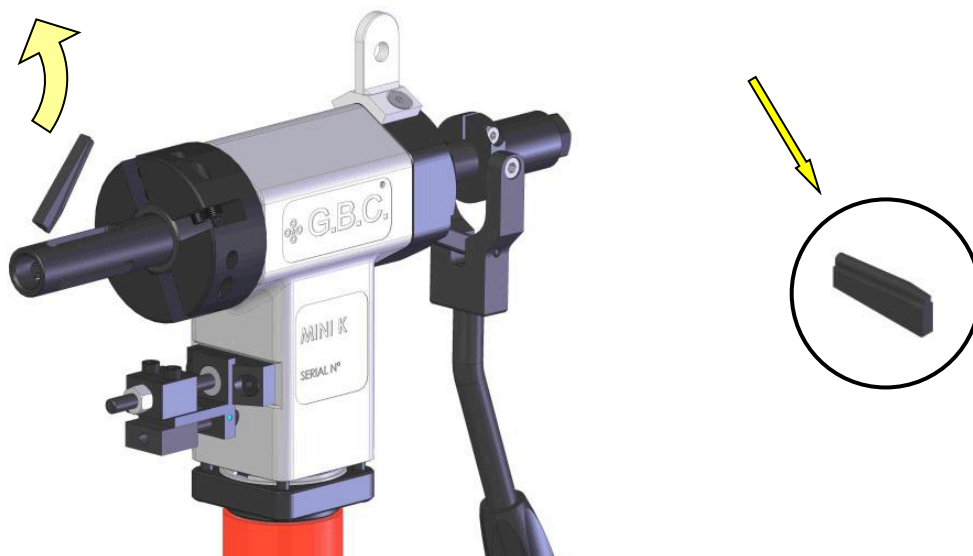


MINI K LEVER

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Remove the **LOCKING JAWS**.



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



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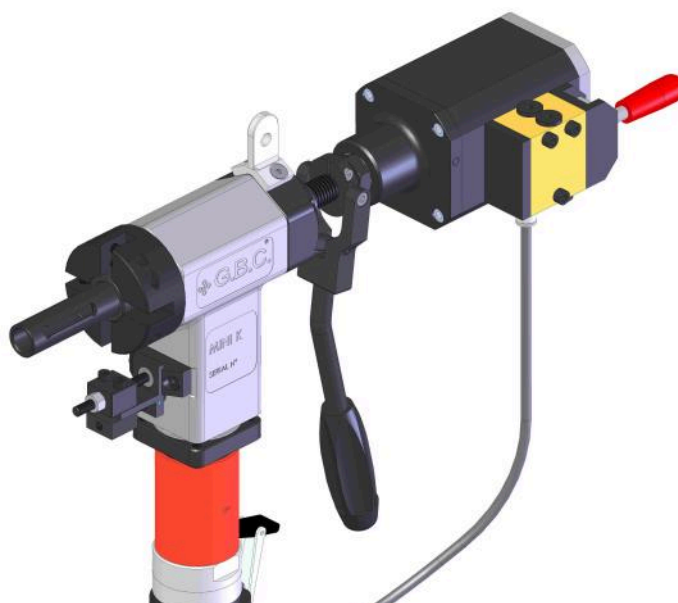
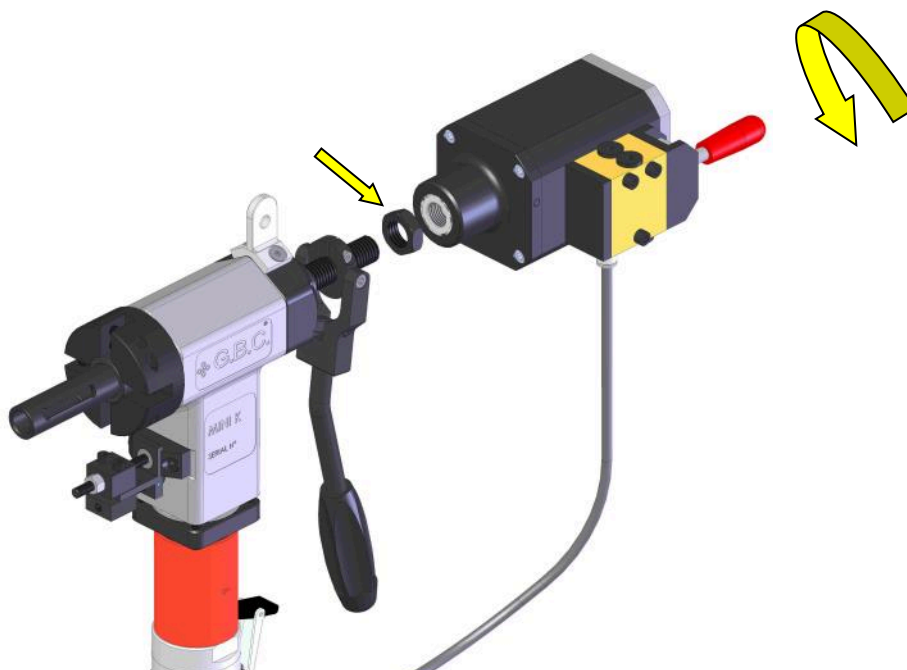


MINI K LEVER

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Screw the **ABUTMENT NUT** all the way down and then screw the **PNEUMATIC LOCKING DEVICE** making sure the two parts are abutted.



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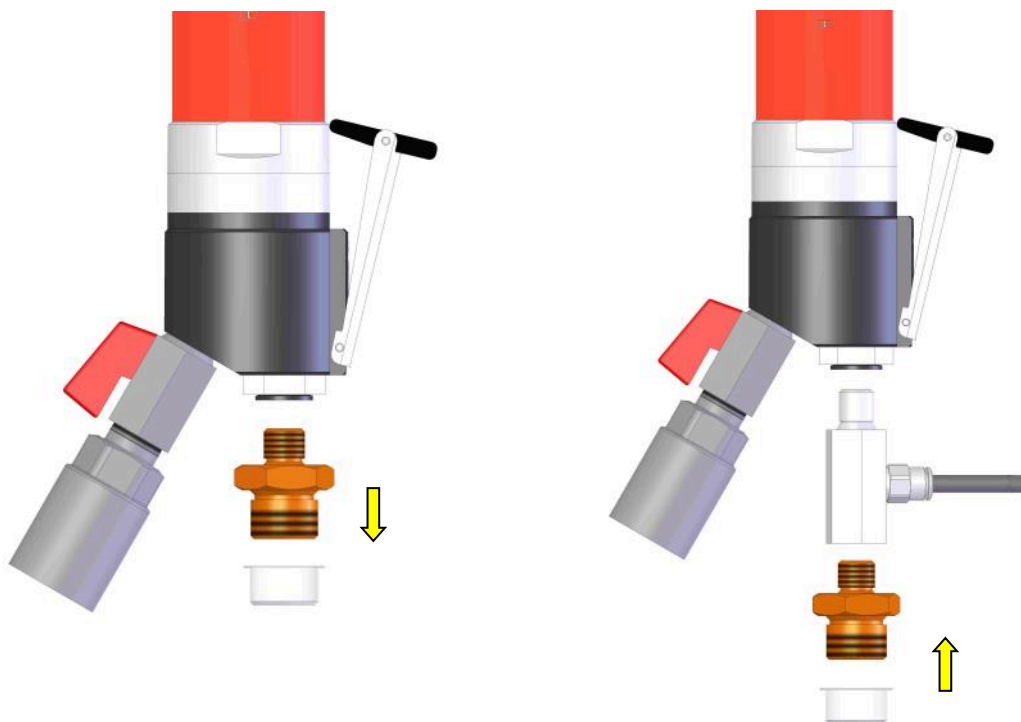
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Unscrew the nipple and install the air connector supplied with the kit.



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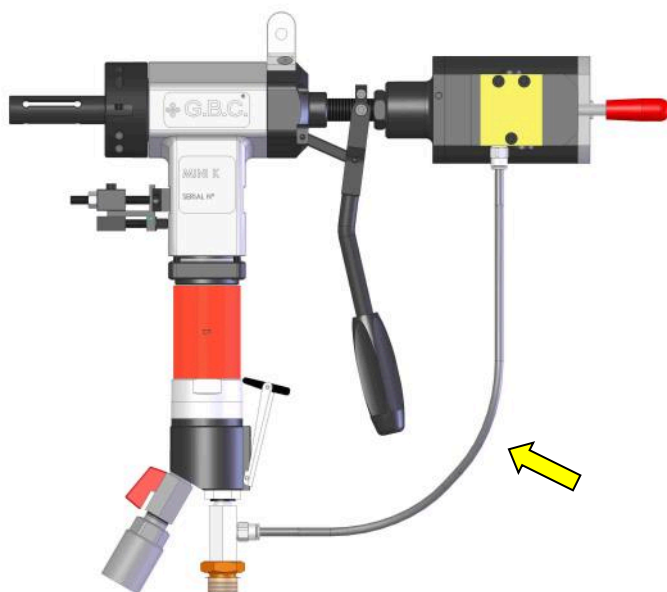
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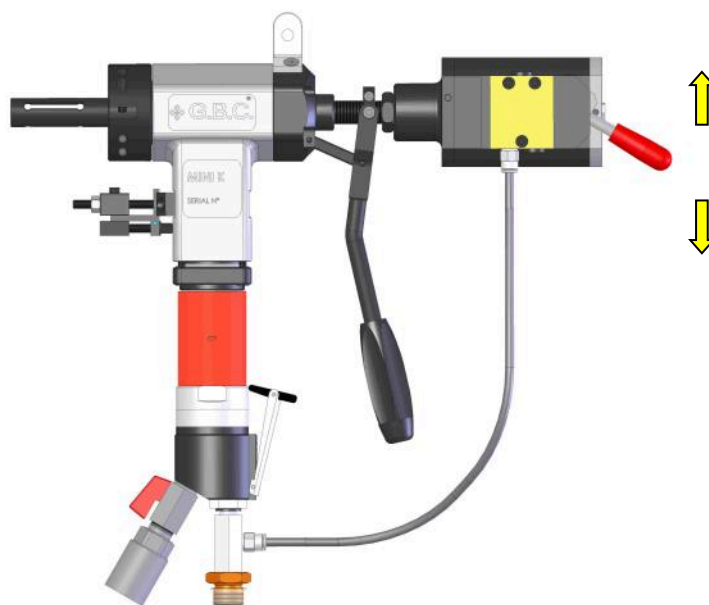
Istruzioni originali—rev.2011—in accordo al 1.7.4 della direttiva macchine 2006/42/CE



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.



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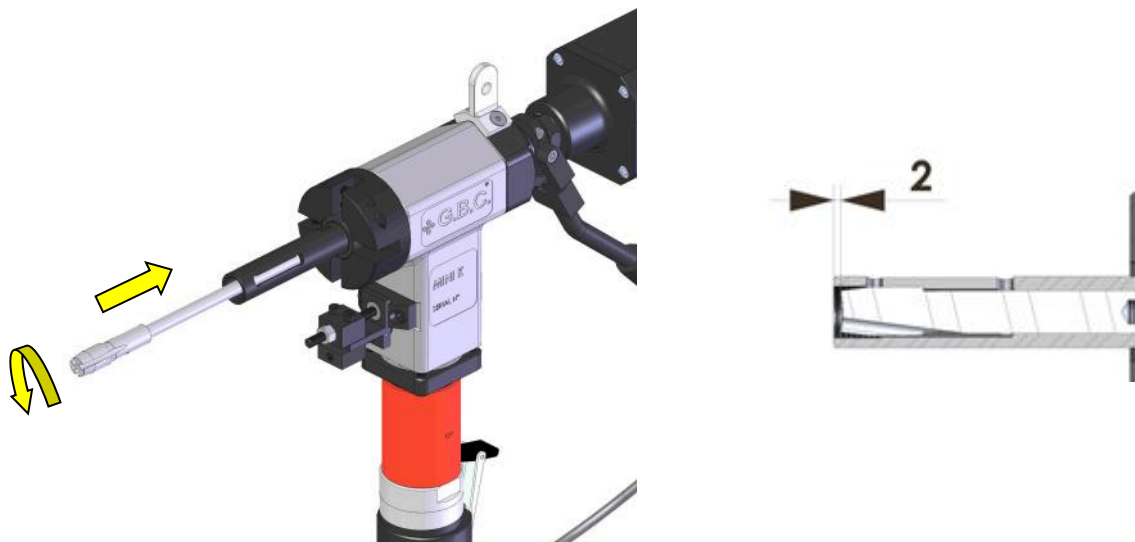


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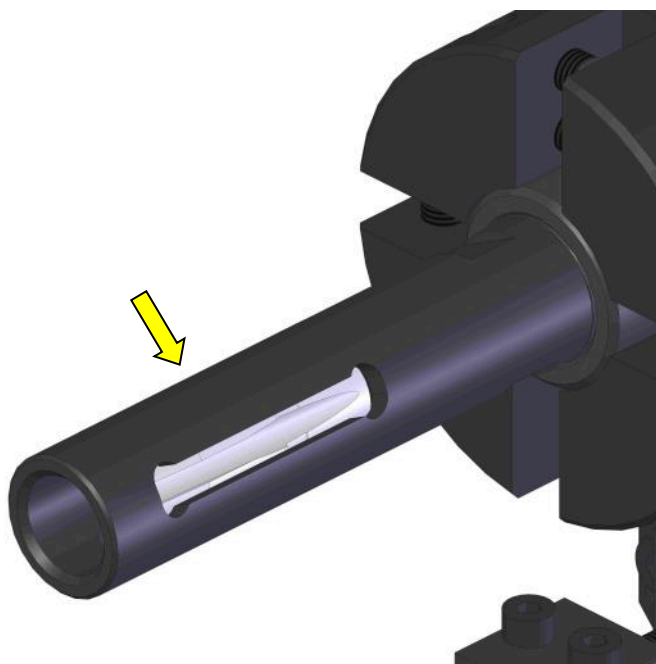
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Slide the **VANE EXPANSION SHAFT** inside the **GUIDING SHAFT** and screw it counter-clockwise until it is about 2mm inside.



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



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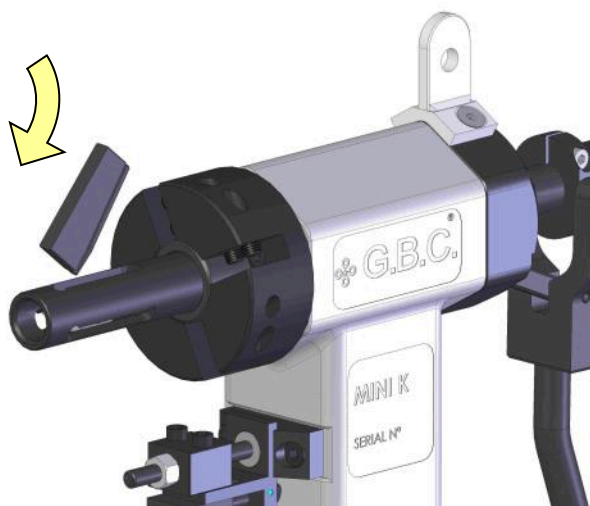


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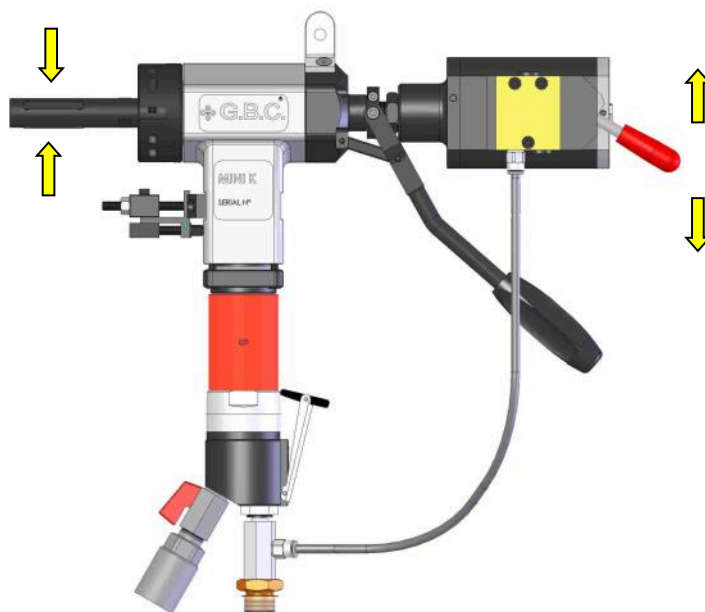
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Insert the desired **LOCKING JAWS**.



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.



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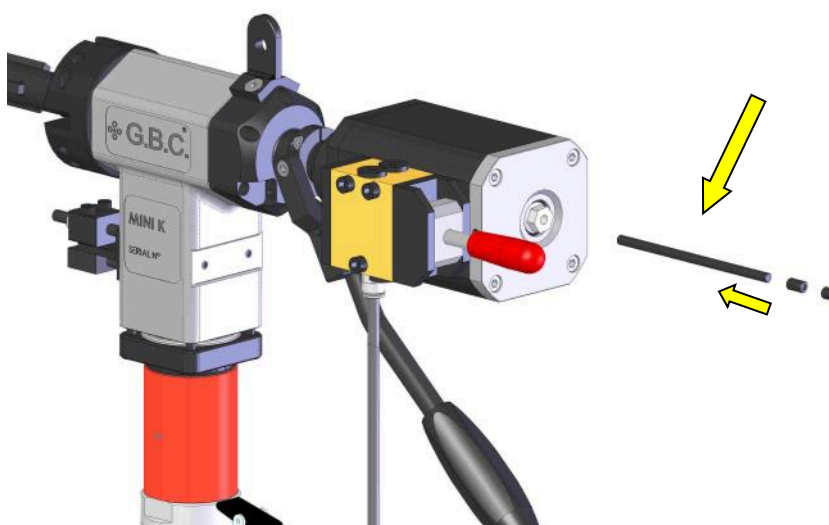


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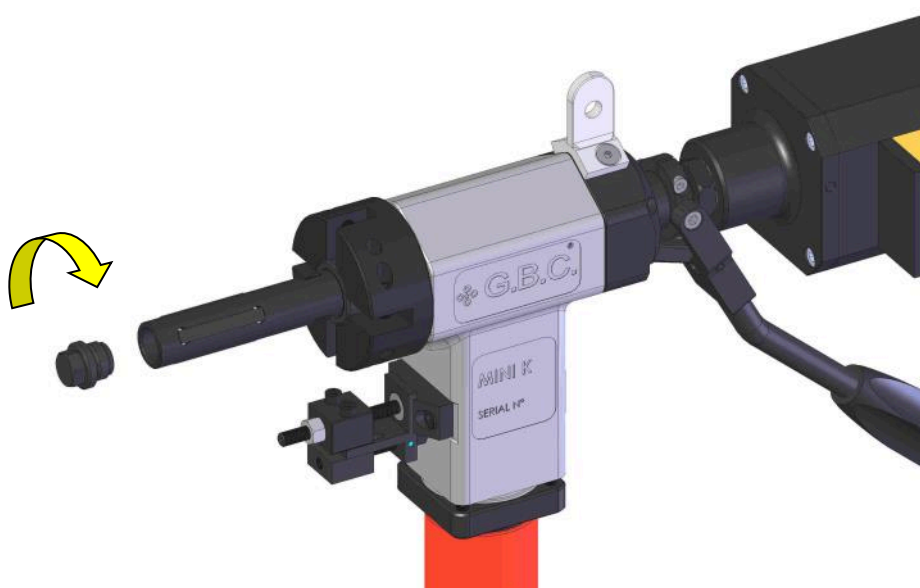
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In the rear part of the locking device you shall now insert the **STEM**, the **GRUB SCREW** and the **GRUB SCREW COVER** locking them in position tightly.



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



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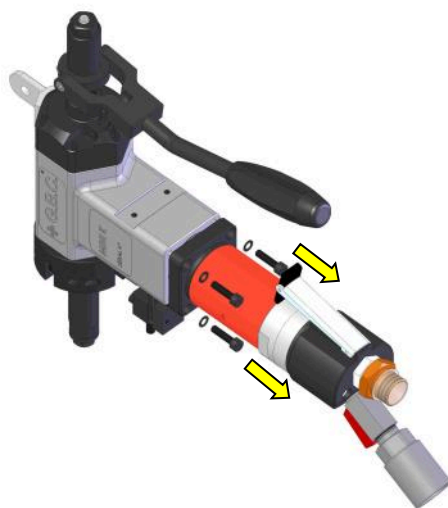
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CONVERTING THE MACHINE FROM PNEUMATIC TO ELECTRIC



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



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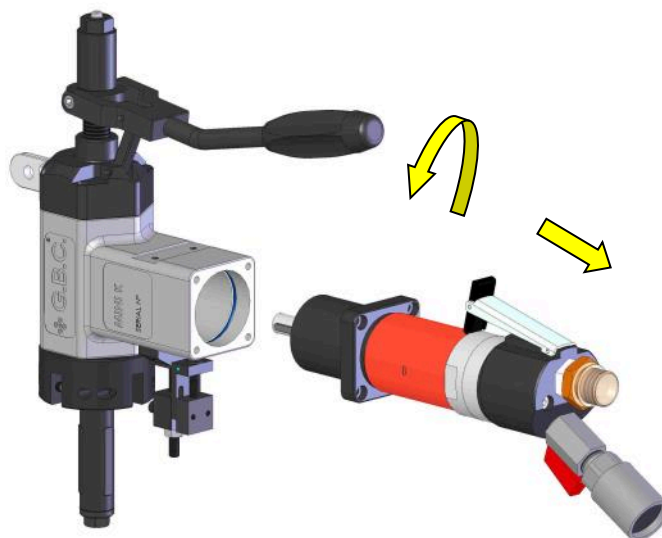
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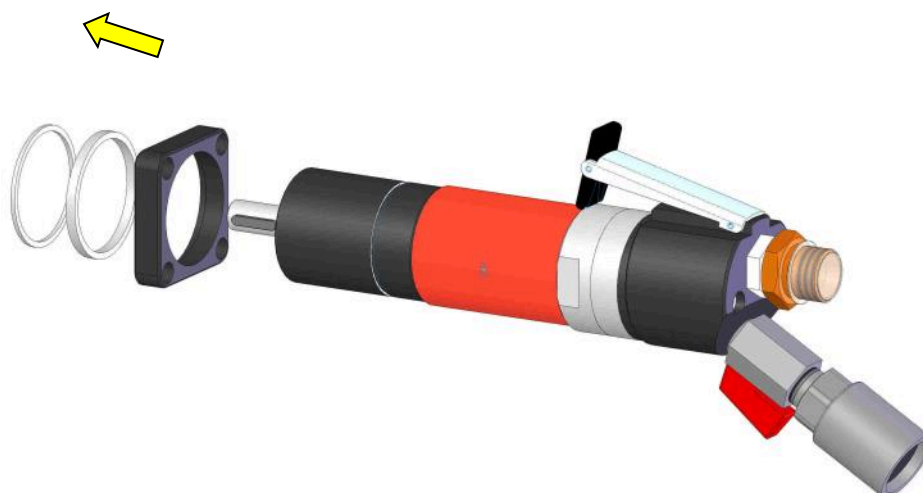
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Impugnare il **MOTORE** dalla parte del corpo e tirarlo verso l'esterno facendolo contemporaneamente ruotare fino ad estrarlo



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



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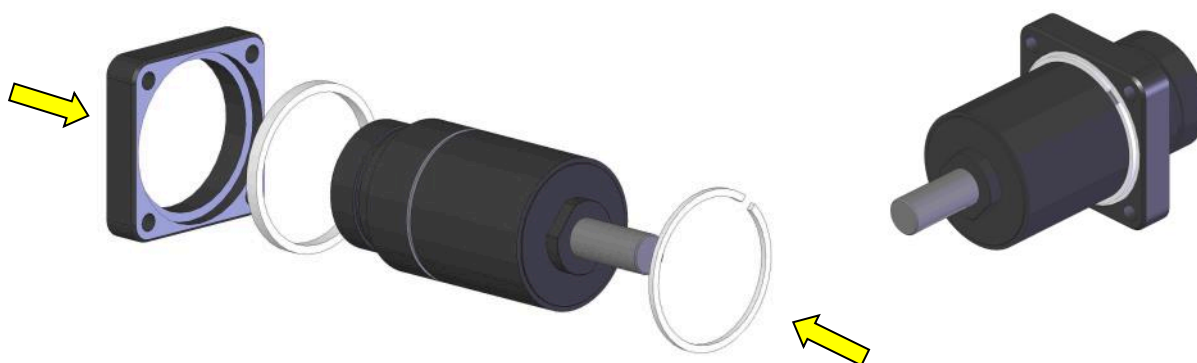
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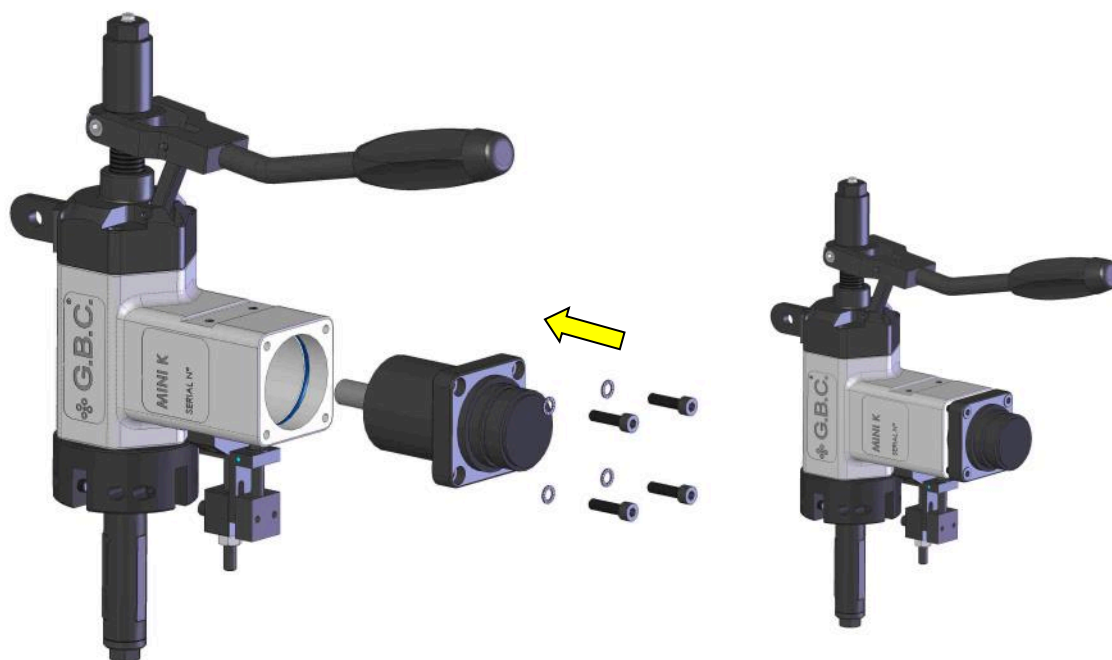
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Insert the **ELASTIC RING** in the seat located on the reducer, then insert the **SPACER** and the **SUPPORT FLANGE** previously taken from the pneumatic motor.



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



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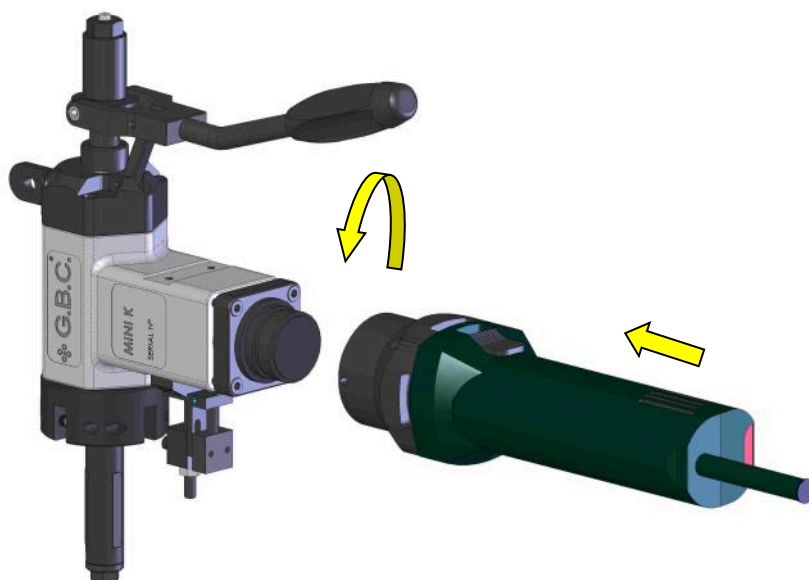


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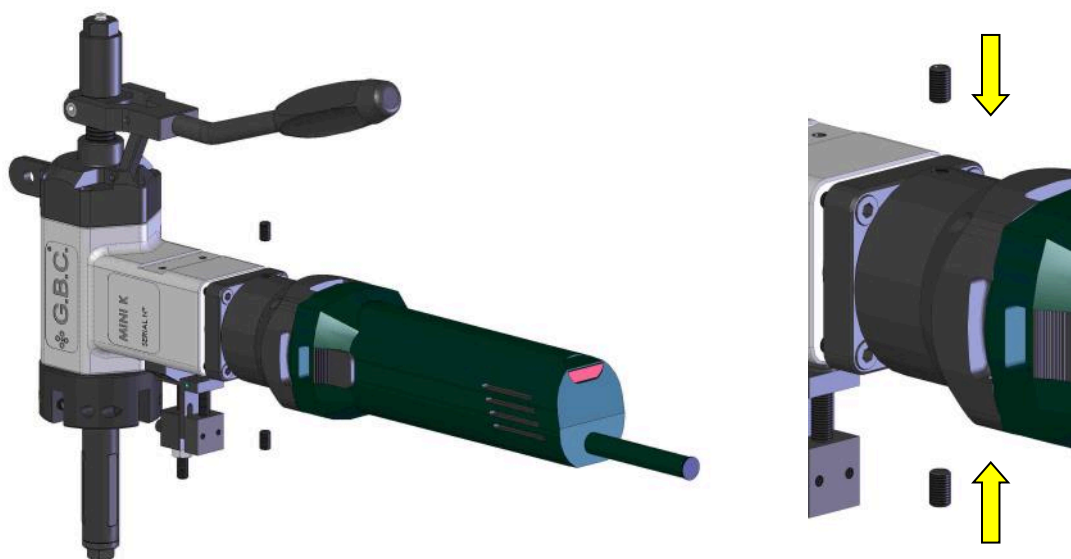
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Insert and screw the **ELECTRIC MOTOR ASSEMBLY** on the end of the **REDUCER** protruding from the **MACHINE BODY**.
(**WARNING!!** The thread is inverted, therefore you will have to screw by rotating **COUNTER-CLOCKWISE**)



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



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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. Industrial 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 require about the above mentioned procedures and for any general clarification you may need.

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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.

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