
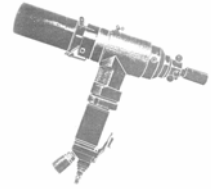


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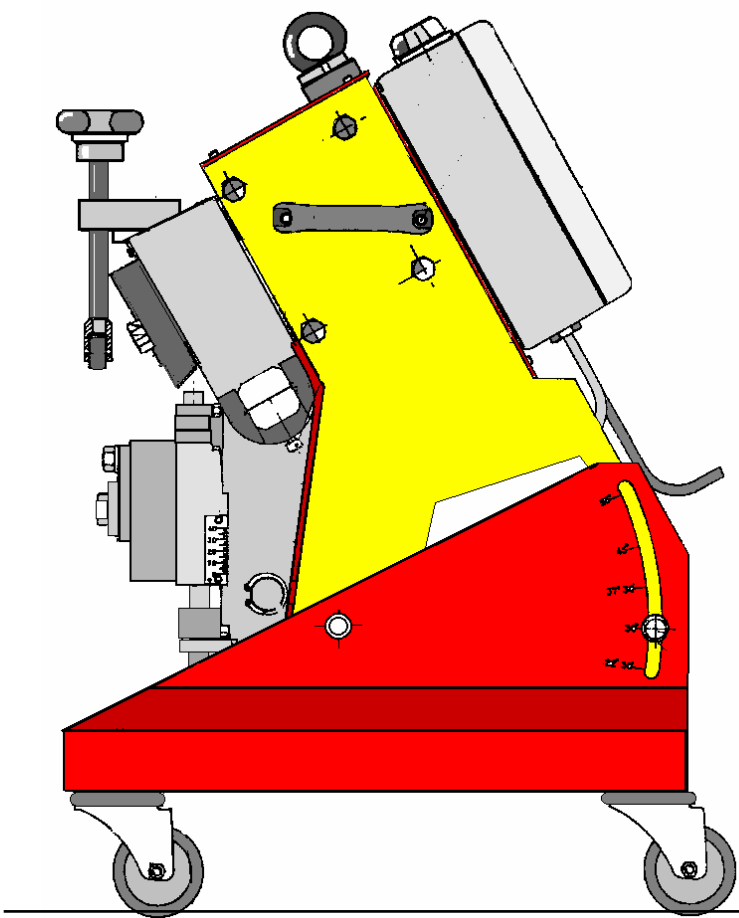
|  | <i>Subject<br/>page</i> |
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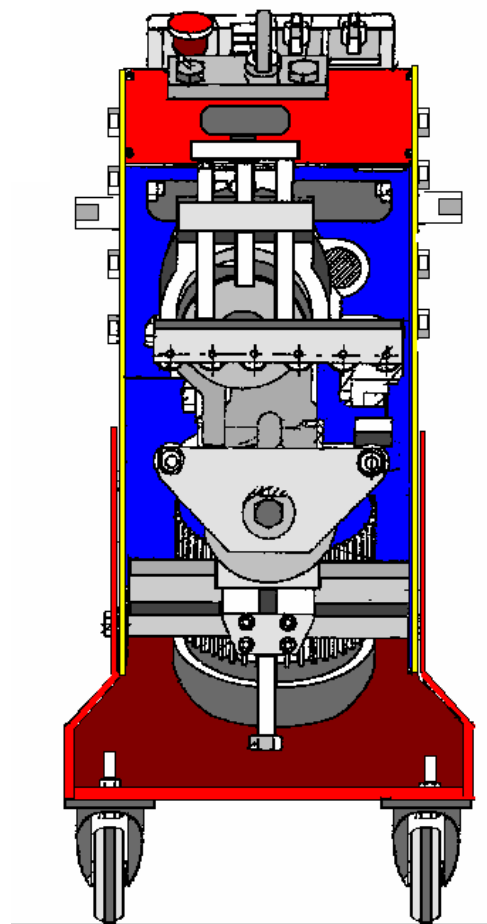
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*Images of the machine*

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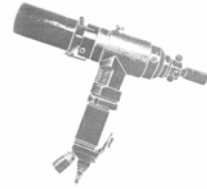


*side view*



*front view*

*CHALLENGE 15 with adjustable cutter head*



## *General information*

This **Operating and Maintenance Manual** is for workers on building sites and in plants who have been entrusted with pipe-bevelling.

**G.B.C. Industrial Tools S.p.a.** warns its customers that any tasks performed on the machines that are not specified in this manual void all guarantee rights.

**G.B.C. Industrial Tools S.p.a.** recommends that before embarking on any tasks that are not specified in the operating and maintenance manual its own maintenance service shop (MSS) should be contacted by calling one of the telephone numbers (TORBIATO DI ADRO-BRESCIA-ITALY).

**G.B.C. Industrial Tools S.p.a.**' commercial office will dispatch any spare parts shown in the attached assembly drawing.

This manual is supplied with the machine **CHALLENGE 15 with adjustable cutter head** to which it refers. The customer may request other copies from **G.B.C. Industrial Tools S.p.a.**.

For any other information, please call:

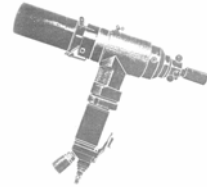
**Tel. + (0) 30- 7451154**

**Fax + (0) 30-7356629**

**G.B.C. Industrial Tools S.p.a.** maintains all intellectual property rights to this document and prohibits its total or partial distribution to legal personalities or physical persons without its prior consent.

**G.B.C. Industrial Tools S.p.a.** has been registered since 1995 to the **UNI EN ISO 9002** quality assurance system and was certified in 1996 by **S.G.S.** (General Supervision Company S.p.a.).





***Declaration of conformity*** **CE**

**G.B.C. Industrial Tools S.p.a.**  
legally represented by: Eng. **Bruno Giottoli**  
**HEREBY DECLARES**

that the machine .....

with serial number.....has been designed and manufactured in compliance with **89 / 392 EEC** provisions and further emendments.

In particular it has been designed following the indications given by:

- **UNI EN 292- 1**
- **UNI EN 292- 2**

and in compliance with the provisions of **Legisl. Decree 94 /626**

**G.B.C. Industrial Tools S.p.a.**  
**HEREBY DECLARES**

that the technical file has been drawn up with:

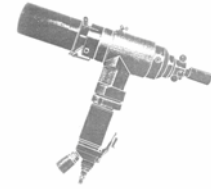
- 1 drawings
- 2 machine risk assessment

Further to the above mentioned declarations, the manufacturer prints marking on the machine



The Legal Representative

.....  
Eng. **Bruno Giottoli**



## *Warranty general clauses*

---

**G.B.C.** guarantees the efficient operation of its products subject to the following terms and conditions.

The warranty covers any machine, machine component and assembly faults for a period of one year from the date of delivery to the user (see delivery note). Parts that are subject to wear and tear are excluded from the warranty at the sole discretion of **G.B.C.**. If operating faults are discovered during the warranty period, **G.B.C.** or the approved Maintenance Service Shop, known henceforth as **MSS** for the sake of brevity, shall remedy the fault without charging the user for labour costs or spare parts provided that the defect is not directly or indirectly due to incorrect use or tampering.

The machine must in all cases not have been even partially disassembled or tampered with when it is delivered.

The warranty is valid only if the certificate has been countersigned by **G.B.C.** and has been countersigned by an official **G.B.C.** distributor with a **MSS** service.

The delivery of material on which the fault has been found must be made within 8 (eight) days from the date of notification of the fault and/or complaint and/or request for technical assistance. Otherwise, all warranty rights are voided.

**G.B.C.** and **MSS** obligations concern only the repair of the fault and the general maintenance and testing of the material in object. The component replacement is at the sole discretion of **G.B.C.**

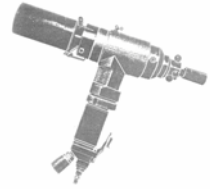
The costs of the forwarding to and from **MSS** as well as the costs directly or indirectly due to the product repair are at the user's charge. Any interventions under warranty or any extraordinary maintenance must be executed by **G.B.C.** or by any authorized **MSS**; otherwise the warranty rights are voided.

Any non-routine maintenance carried out by the customer/user or by technical assistance centres that have not been approved by **G.B.C.** will not be refunded and will immediately void warranty rights.

The warranty is not valid for cases that are not specified by this certificate or for damage caused by incorrect use of materials, incorrect feeding, negligence, unauthorised modifications, atmospheric agents, act of vandalism, damage due to improper handling and/or transportation, use of spare parts that are not original **G.B.C.** spare parts and harm from causes that are not specified by **G.B.C.**, for which **G.B.C.** accepts no responsibility.

**G.B.C.** reserves the right to modify and improve its products without being under any obligation to modify the equipment and components already supplied.

Nobody is authorised to modify the conditions contained in this certificate or to issue any others in the name of **G.B.C.** The customer has 8 (eight) days from the date of delivery within which to lodge complaints about faults and/or defects in the ordered material and quantities delivered and if he accepts delivery he automatically accepts the above warranty conditions.



**G.B.C. INDUSTRIAL TOOLS S.p.A.**

Ufficio operativo  
Operative office

**Via Artigiani, 17 – 25030 Torbiato di Adro (Bs) - Italy-**  
Tel + 39 (0)30 - 74.51.154 Fax + 39 (0)30 - 73.56.629

Centro Tecnico Assist. CTA  
Maintenance Service Shop MSS

**Via Artigiani, 17 – 25030 Torbiato di Adro (Bs) - Italy-**  
Tel + 39 (0)30 - 74.51.154 Fax + 39 (0)30 - 73.56.629

Sede Legale  
Administration Office

**Via E. Carpi, 20 – 20131 MILANO (MI) –Italy**  
Tel + 39 (0)2 - 95 321 379 Fax+ 39 (0)2 - 95 321 389

**CERTIFICATO DI GARANZIA  
WARRANTY CERTIFICATE**

Modello   
*Model*

Codice   
*Code*

Matricola   
*Serial No.*

Data collaudo   
*Testing date*

Voltage

Rif. Collaudo   
*Testing ref.*

Firma Uff. Tecnico

*Tech. Dept. Signature*

**Data vendita**  
*Sales data*

**Solo per distributori esteri -**

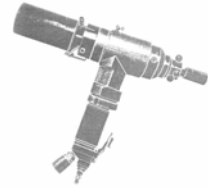
*GBC Signature*

**For foreign**

**distributors only**

Distributore   
*Distributor*

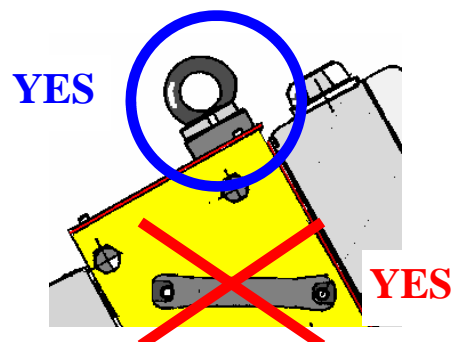
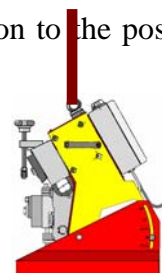
*Sales Dept. Signature.....*

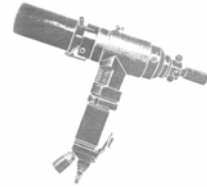


## *General safety regulations*

The following list of safety regulations is provided with the operating and maintenance instructions for all **G.B.C. pipe beveling machines** and **G.B.C. plate beveling machines** and is an integral part of the supply of goods. **G.B.C.** designs and plans its machines in accordance with EEC accident prevention standards (89/392 and further amendments) and current Italian legislation. **G.B.C.** is not responsible for any improper use of the machines or for the use of the machines that does not comply with the regulations listed below or with the attached operating and maintenance instructions.

- 1** Carefully read ALL the following regulations and attached operating and maintenance instructions before embarking on any operation. Make sure that the operator and the Department Manager using the machine are familiar with the regulations and instructions.
- 2** All maintenance operations and adjustments are to be executed with the machine **DISCONNECTED** from the power supply.
- 3** Do not place hands near the milling tool in motion.
- 4** Handle the milling tool with care while it is being replaced so as to avoid injury from the cutting edges.
- 5** Any intervention on the electric board must be executed only by personnel qualified to carry out these interventions and when the machine is **DISCONNECTED**.
- 6** While working small lengths (sections) of plate pay attention to the position of your hands.
- 7** While working long lengths of plate, the machine is suspended and must **ALWAYS** be held by a safety rope (see figure).
- 8** Never try to remove chippings (swarf) with your hands but use a suitable tool (e.g. screw-driver).
- 9** To lift the machine, use the eyebolt (*pos.63; cod. 09491*) and not the two handles (*pos. 7, cod. 09516*) which are only for moving the machine on wheels.





## *General safety standard*

- 10** NEVER make single steps thicker than 10-12 mm so as not to damage the milling tool and the machine.



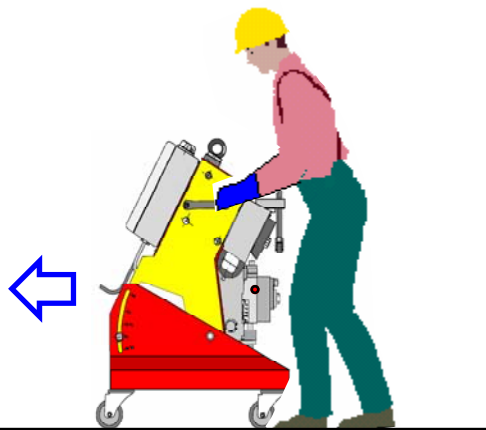
- 11** In the case of bevels made with the machine angle set to 55° never make steps higher than 8 mm.



- 12** In the case of plates flame-cut or with burrs it is advisable to lightly pass the grinding wheel to clean the surface.



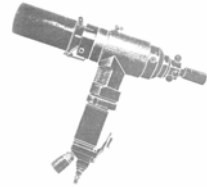
- 13** To prevent unauthorized personnel from starting-up the machine, close the door with a lock (*pos. 14; dwg. 03421*).



- 14** To move the machine when the wheels are assembled (*pos.40; cod. 08000*) push it forward as shown in the figure in order to prevent the machine from unbalancing and falling.

In case of machine malfunctioning, check the fuse conditions ( *pos.....;*  
*cod.....* )





*General safety regulations*

Operators do not need specific qualifications but the site or factory foreman must permit only persons with sufficient technical and manual experience to operate the machine. The applicable standards and regulations are set out in the CE declaration of conformity. The authorized operator must in all cases abide by basic safety rules, for example:

- 1 use gauntlets and goggles (PPE- personal protective equipment - provided by company in charge of the workplace)**
- 2 make sure that there is sufficient space around the work area (at least 1,5 metres around the operator)**
- 3 make sure that there is sufficient lighting around the work area**
- 4 do not carry out movements that are not specified by the manual**
- 5 do not replace the motor control or blocking protection system**
- 6 do not allow other operators/personnel into the work area**
- 7 do not replace parts with non-original spare parts**
- 8 do not direct jets of water at the machine**
- 9 do not allow the machine to come into contact with water or other liquids**
- 10 remove chippings (swarf) with the appropriate tools**
- 11 do not place hands anywhere near sharp edges**

**G.B.C. Industrial Tools S.p.a.** emphasises that for all the operations that are not specified in the operating and maintenance manual the manufacturer's authorization is required.

**DO NOT TRY TO INTERPRET INSTRUCTIONS AND DRAWINGS!**

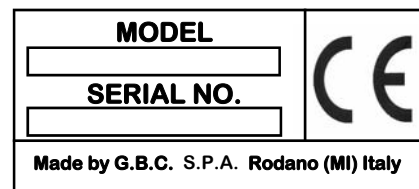
*G.B.C. technical service is at your complete disposal for any further clarification*

*N.B.:*

In case of doubts before using the machine contact **G.B.C. technical** and/or **commercial office** by writing to the addresses or calling the telephone listed on page 3.

**G.B.C. Industrial Tools S.p.a.** also points out that it is **FORBIDDEN** to remove or replace the machine declaration of conformity plate.

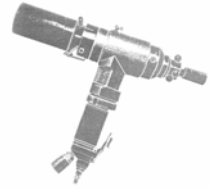
The customer is requested to inform the manufacturer if the plate is tampered with.



**G . B . C .**

CE plate

**Industrial Tools S.p.a.** also declares that the machine has been subjected to testing of the basic parameters at its own assistance service. The test included noise measurements conducted by qualified personnel that yielded satisfactory results.



## *Main safety regulations*

G.B.C. machines conform to EEC Work Safety Directives ( 89/392 Eec and further updating).

Make sure that the operator acts in compliance with the following indications:

**1**

*Always work with: gloves and goggles.*



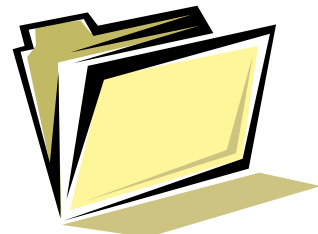
**2**



***NEVER** set the machine when the milling tool is on.*

**3**

*The machine Operating and Maintenance Manual and drawings will always provide quick and specific*





## *Machine standard equipment*

The machine is supplied with:

- double fork wrench
- socket wrenches
- 4 (four) pins suitable for 22° 5' ; 37°.30'; 45°, 55° angles.
- 4 (four) wheels
- the **MACHINE SECTION DRAWINGS** showing ALL the details contained in the present **OPERATING AND MAINTENANCE MANUAL**.



DOUBLE FORK  
WRENCH



SOCKET WRENCH



**22.5°**



**37.30°**

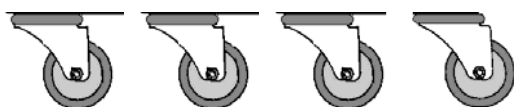


**45°**

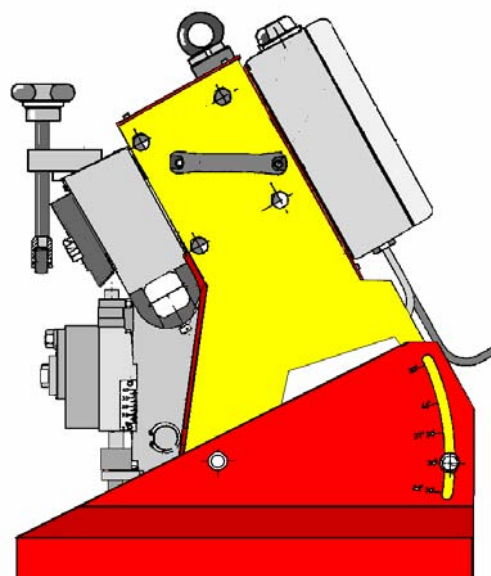


**55°**

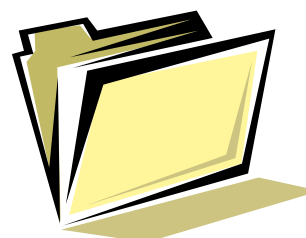
PINS



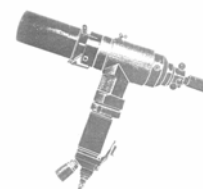
WHEELS



**CHALLENGE 15**  
WITH ADJUSTABLE CUTTER HEAD

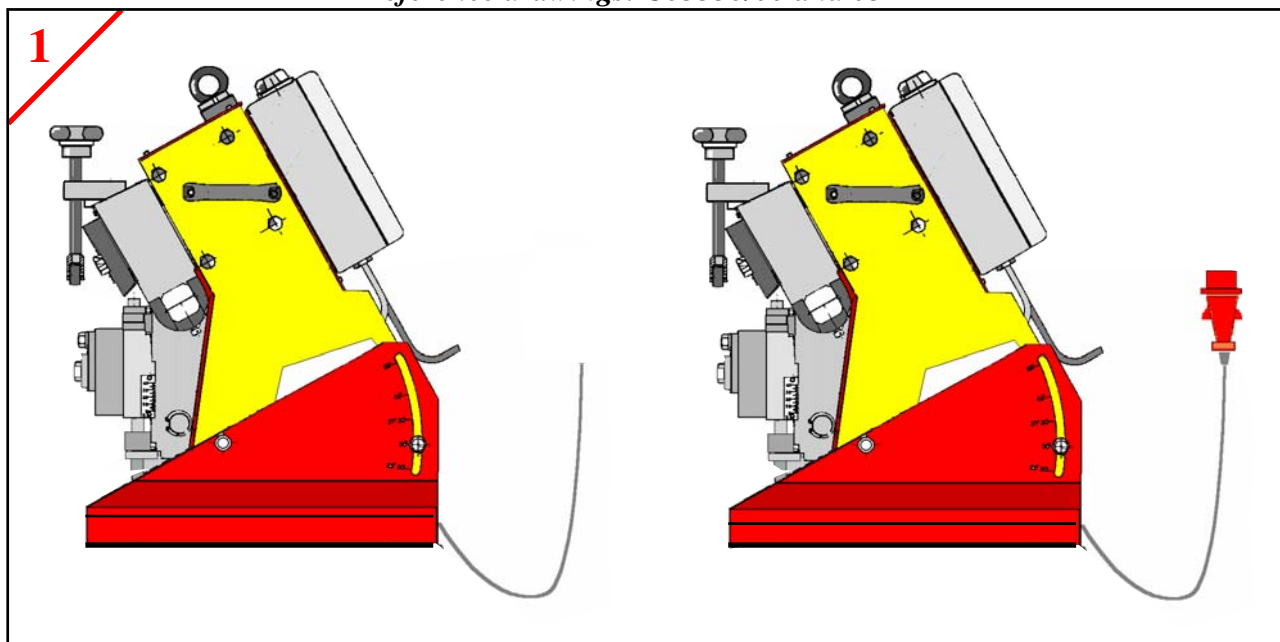


OPERATING AND  
INSTRUCTION MANUALS  
AND DRAWINGS

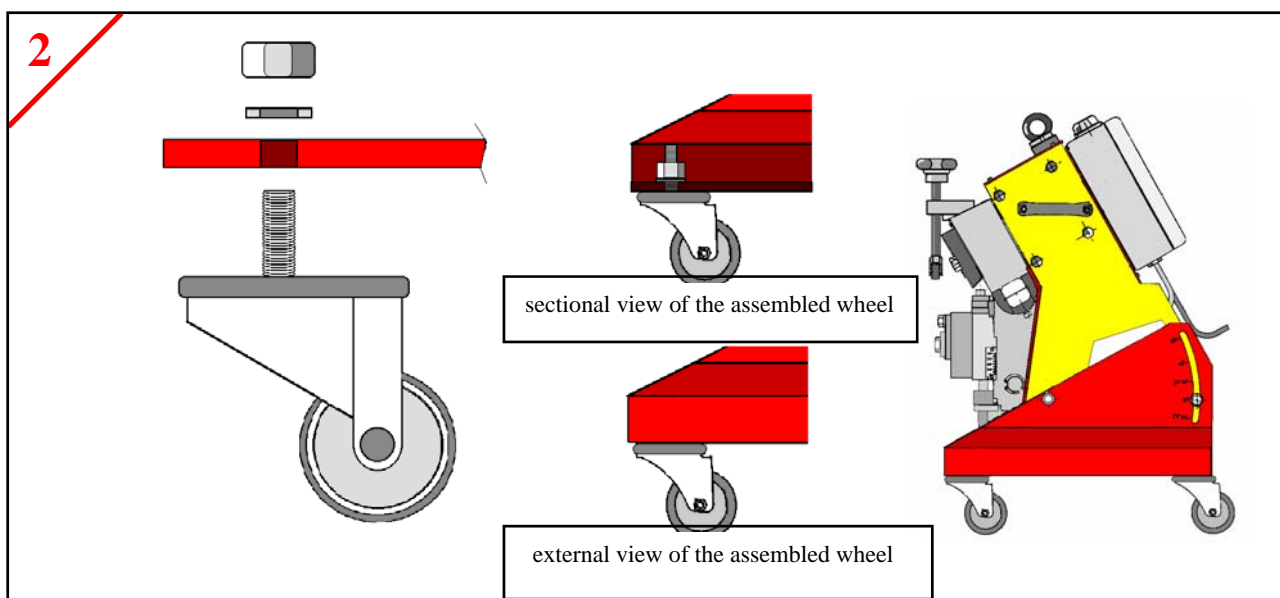


*Machine setting*

*Reference drawings: C03350/00 and 03421*

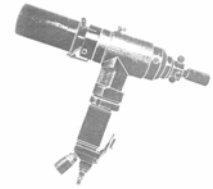


The machine is supplied without plug. Connect the machine cable to a plug suitable for the machine voltage with the assistance of an electrician.

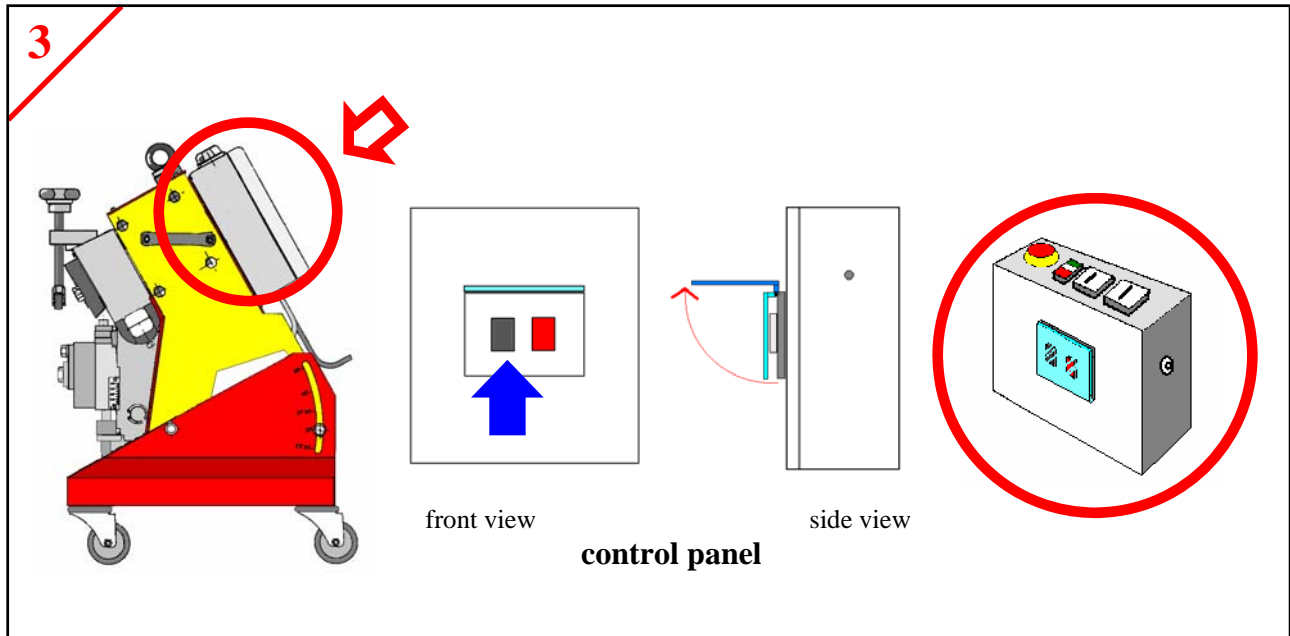


Assemble the four wheels (*pos. 40; cod. 08000*) supplied under the machine as shown in the figure.

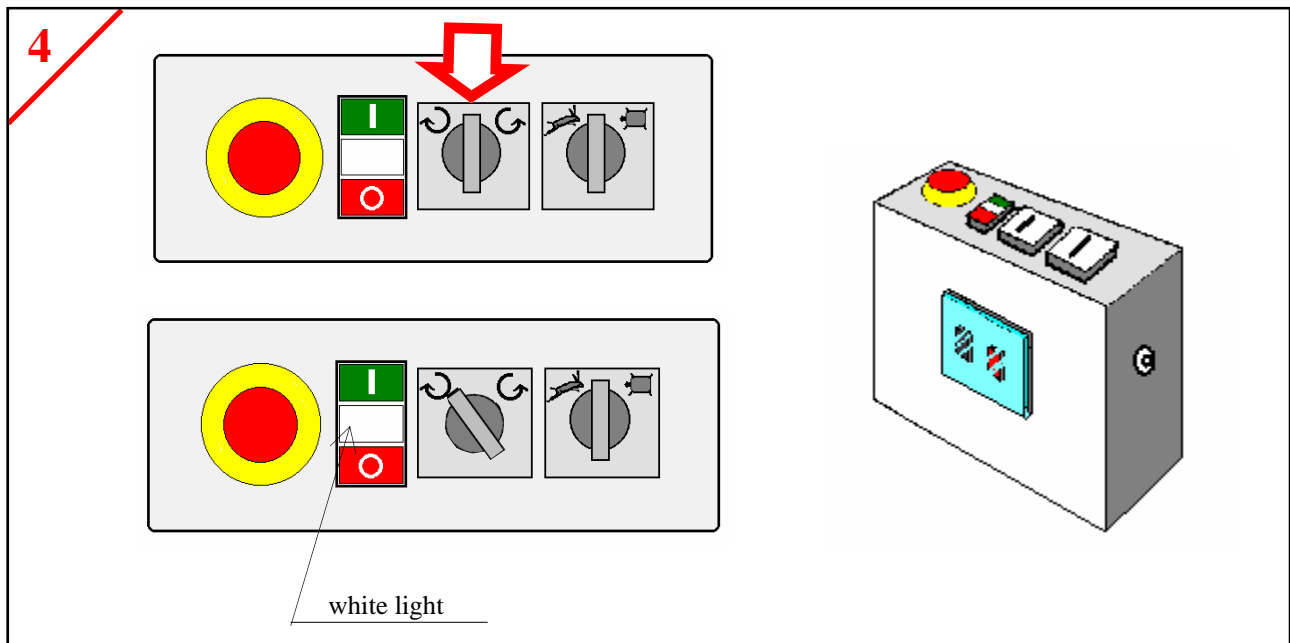
**DO NOT TRY TO INTERPRET INSTRUCTIONS AND DRAWINGS!**  
**G.B.C. technical service is at your complete disposal for any further clarification.**



*Machine setting*



Make sure that the thermal overload black button (*pos. 1; dwg. 03421*) is enabled.



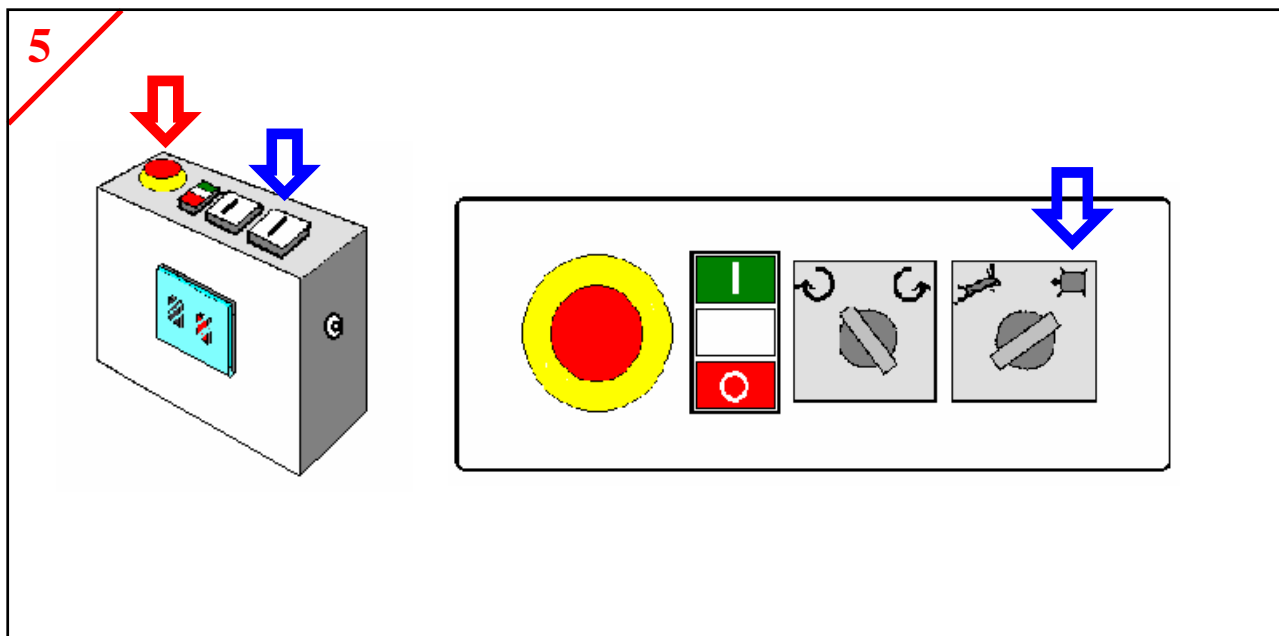
Insert the plug into the socket and turn the power board to “ON”. Turn the switch (*pos.9; dwg. 03421*) to (d) clockwise rotation.

If the connection is ok, the white light will lit up on the control panel.

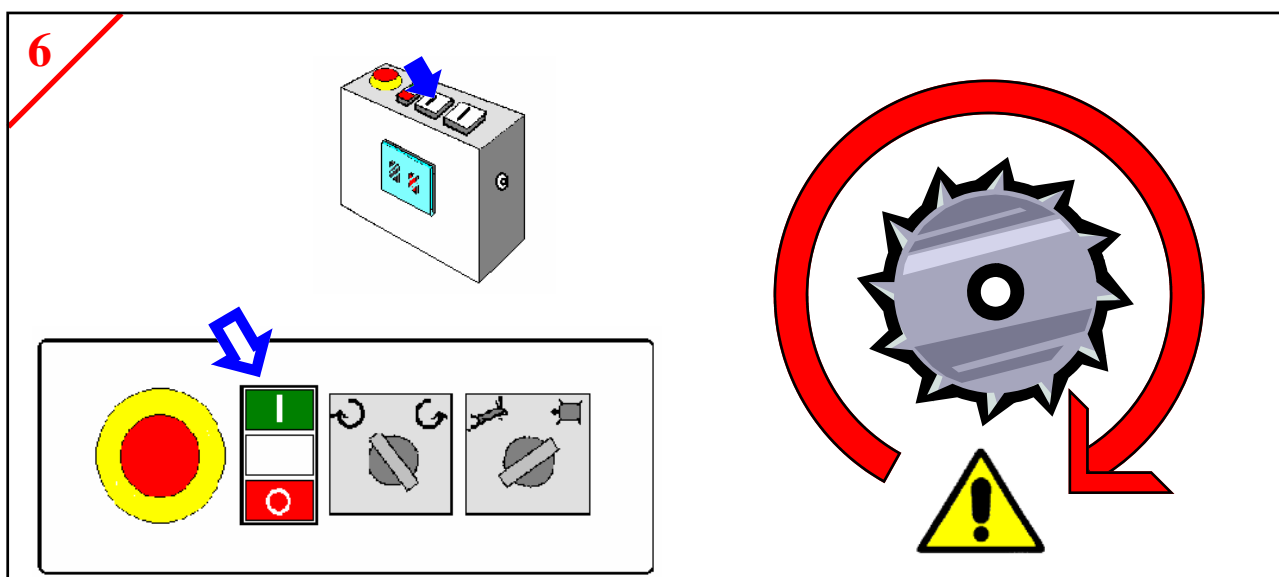
**DO NOT TRY TO INTERPRET INSTRUCTIONS AND DRAWINGS!**  
**G.B.C. technical service is at your complete disposal for any further clarification.**



*Machine setting*



Check that the **emergency button** (*pos. 3; dwg. 03421*) is not enabled.  
Turn the speed control (*pos. 2; dwg. 03421*) to **turtle** position.

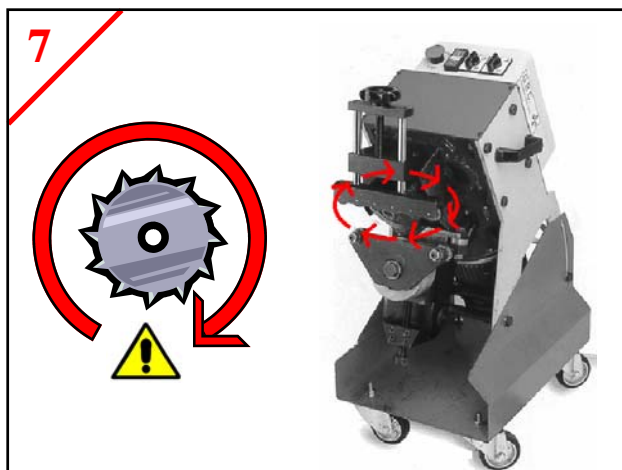


Push the green button (*pos.4 ; dwg. 03421*) and check that the milling tool (*pos. 15;cod. V03385/ carb*) turns **CLOCKWISE**. Should it turn counterclockwise, **DEFINITELY** turn the rotation control (*pos. 9; dwg 03421*) to **(C)** *counterclockwise*.

**DO NOT TRY TO INTERPRET INSTRUCTIONS AND DRAWINGS!**  
**G.B.C. technical service is at your complete disposal for any further clarification.**

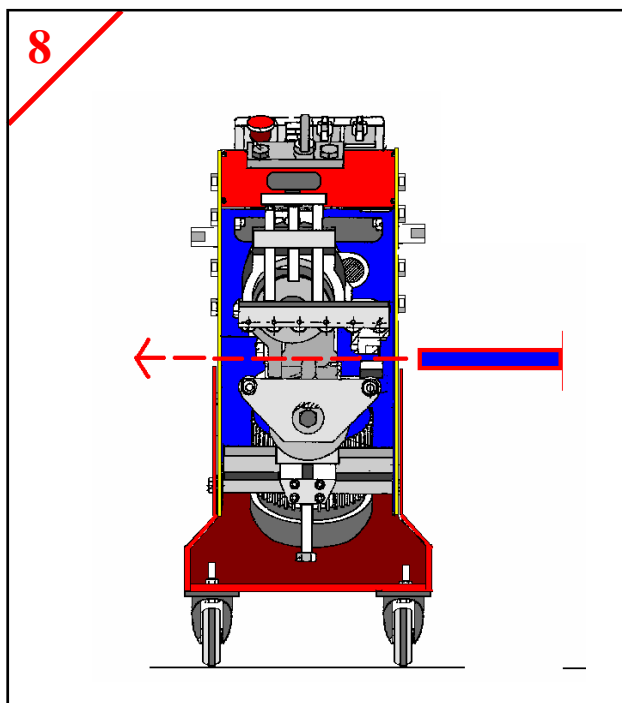
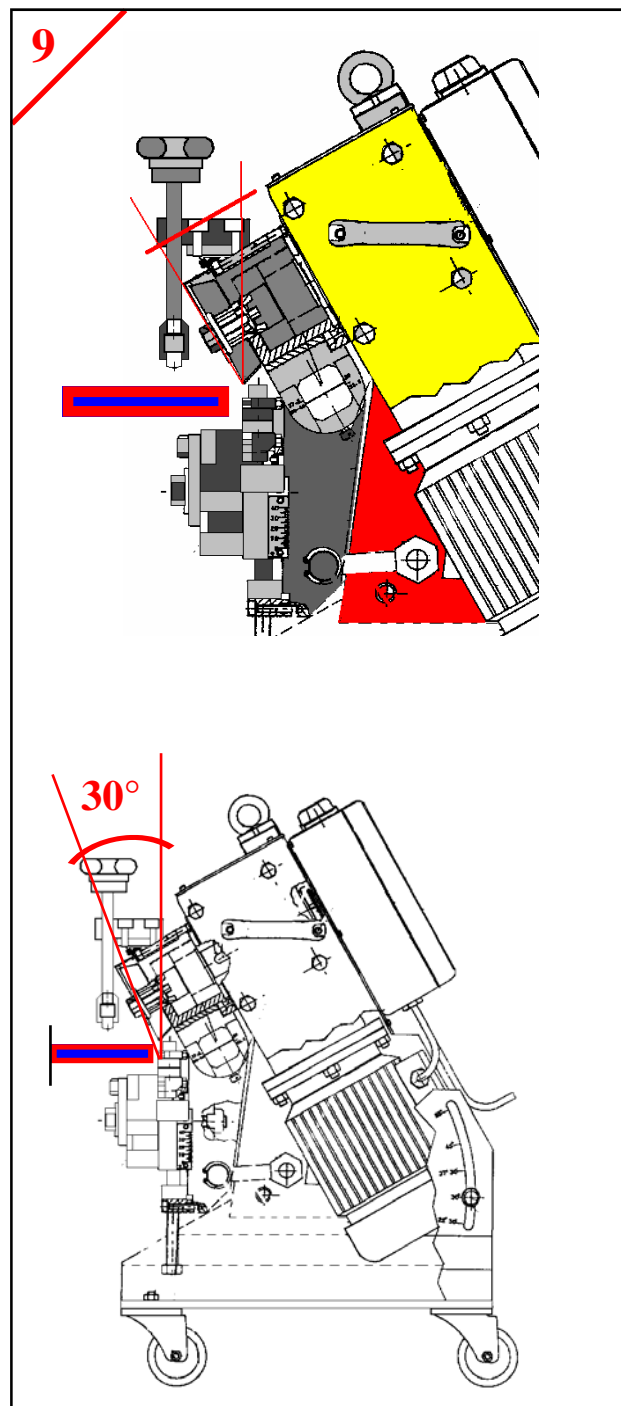


*Machine setting*



**ATTENTION!**

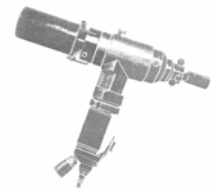
To bevel the plate, the milling tool must rotate **CLOCKWISE** (d).



The plate must be introduced from right to left.

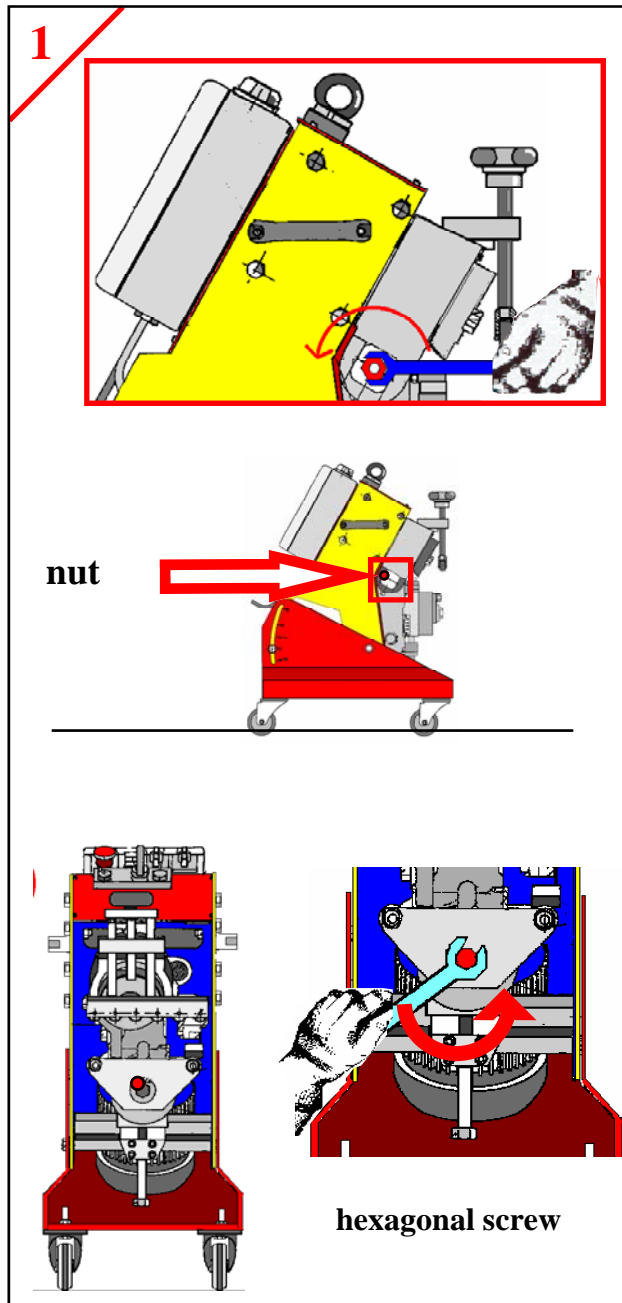
The machine is supplied with the bevelling angle preset at 30°.

**DO NOT TRY TO INTERPRET INSTRUCTIONS AND DRAWINGS!**  
G.B.C. technical service is at your complete disposal for any further clarification.

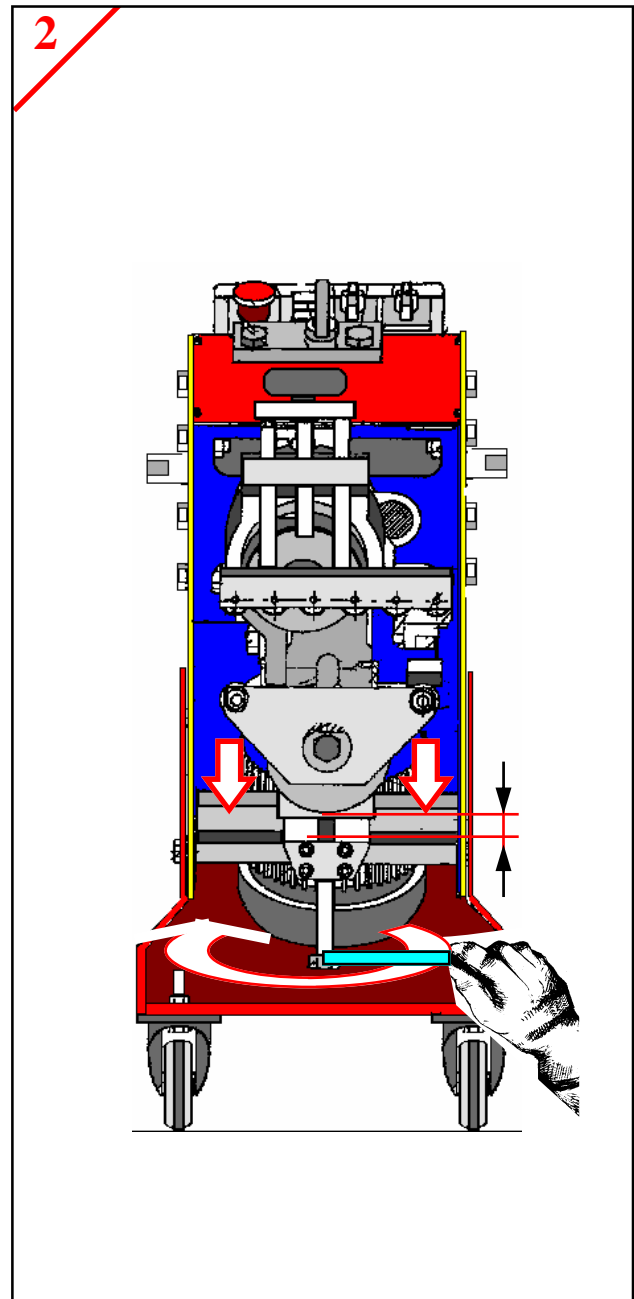


***Variation of the bevelling angle Reference drawing: C03350/00***

***OPERATIONS FOR 30° - 37,5° - 45° angles.***



Loosen the **nut** (pos. 48; cod. 07760) and the **hexagonal screw** (pos. 77; cod. 06948) with the fork wrench supplied.



Unscrew the **adjusting screw** (pos. 41; cod. 03362) until the entire roller group is brought down (end of stroke).

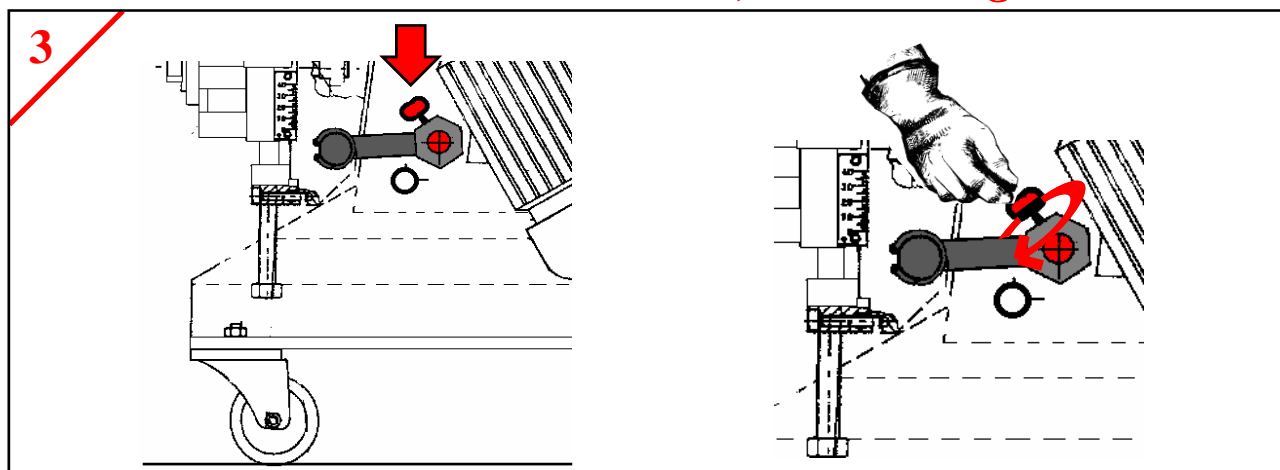
**DO NOT TRY TO INTERPRET INSTRUCTIONS AND DRAWINGS!**  
G.B.C. technical service is at your complete disposal for any further clarification.



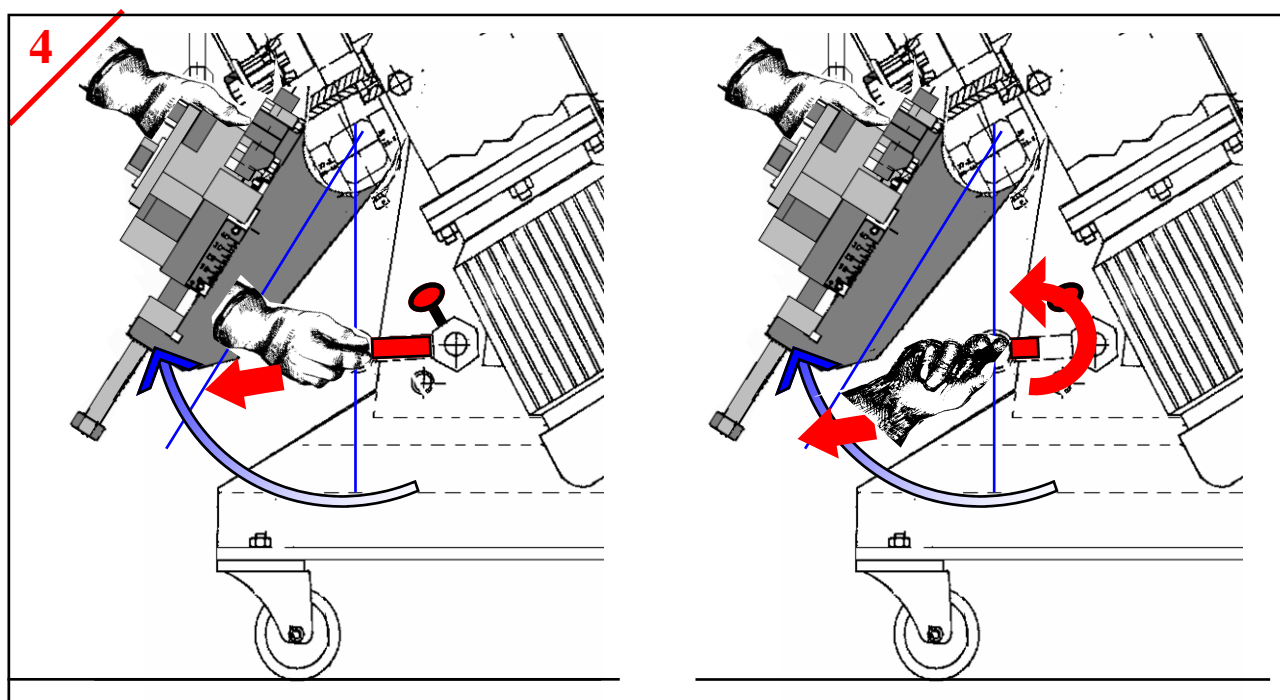


### *Variation of the bevelling angle*

#### **OPERATIONS FOR 30° - 37,5° - 45° angles**

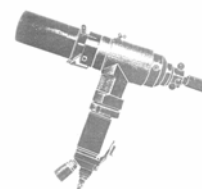


Loosen the **segmented screw** (*pos.58; cod.....*) placed on the **first mobile pin** (*pos. 59; cod. 03370*).



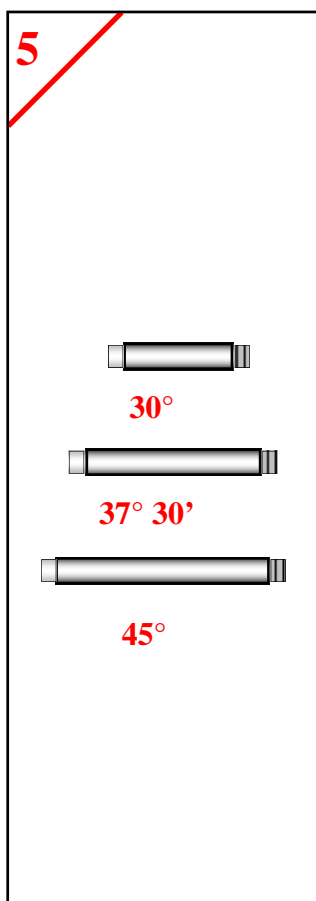
By pulling the **adjustable bracket** outward (*pos. 33; cod. 03363*), extract the **angle register** (*pos.37; cod. 03387/...*) from the **first mobile pin** (*pos.59; cod.03370*) and, at the same time, unscrew it from the **second mobile pin** (*pos. 35; cod.03386*).

**DO NOT TRY TO INTERPRET INSTRUCTIONS AND DRAWINGS!**  
G.B.C. technical service is at your complete disposal for any further clarification.

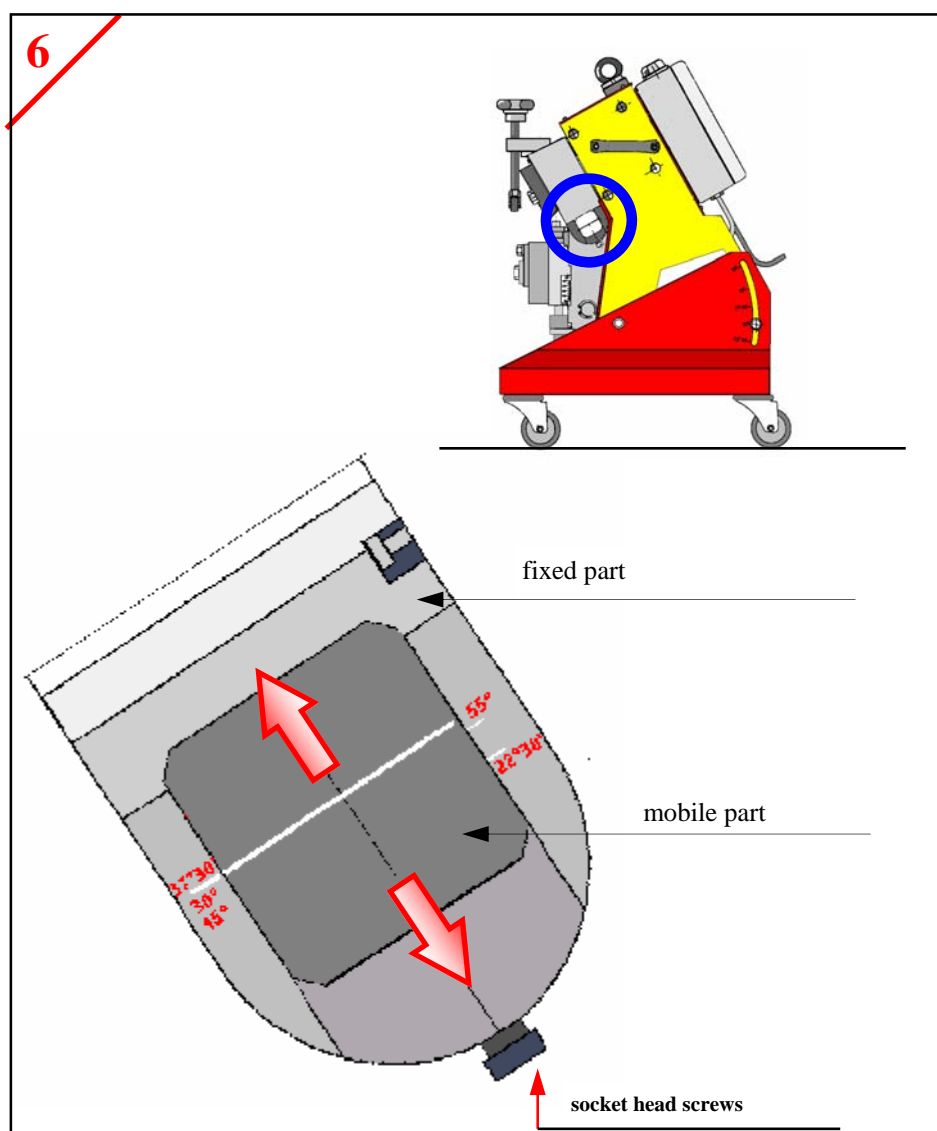


*Variation of the bevelling angle*

**OPERATIONS FOR 30° - 37,5° - 45° angles.**



Choose the new pin among those supplied (every pin has the angle dimension printed on it) and assemble it by repeating the operations described in figures 3 and 4 the other way round.



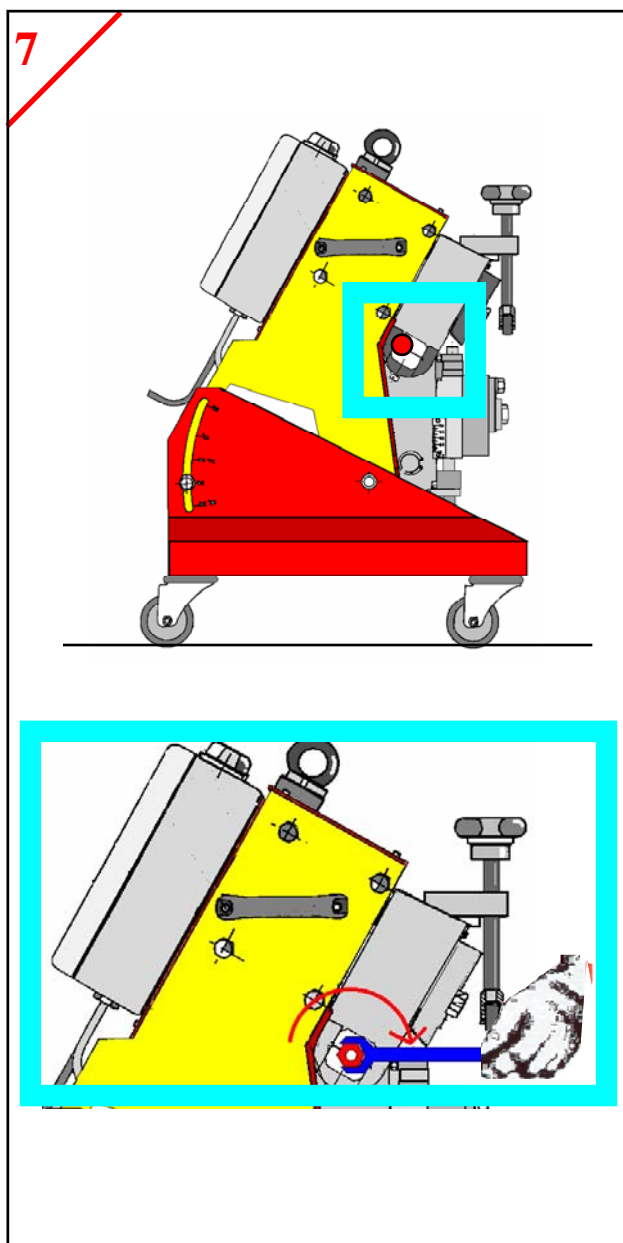
Check that the white line printed on the locking screw (*pos. 3; cod. 03369*) coincides with the reference line of the 37.5; 30°; 45° angles. If necessary adjust the **socket head screws** (*pos 9; cod.06805*).

**DO NOT TRY TO INTERPRET INSTRUCTIONS AND DRAWINGS!**  
G.B.C. technical service is at your complete disposal for any further clarification.

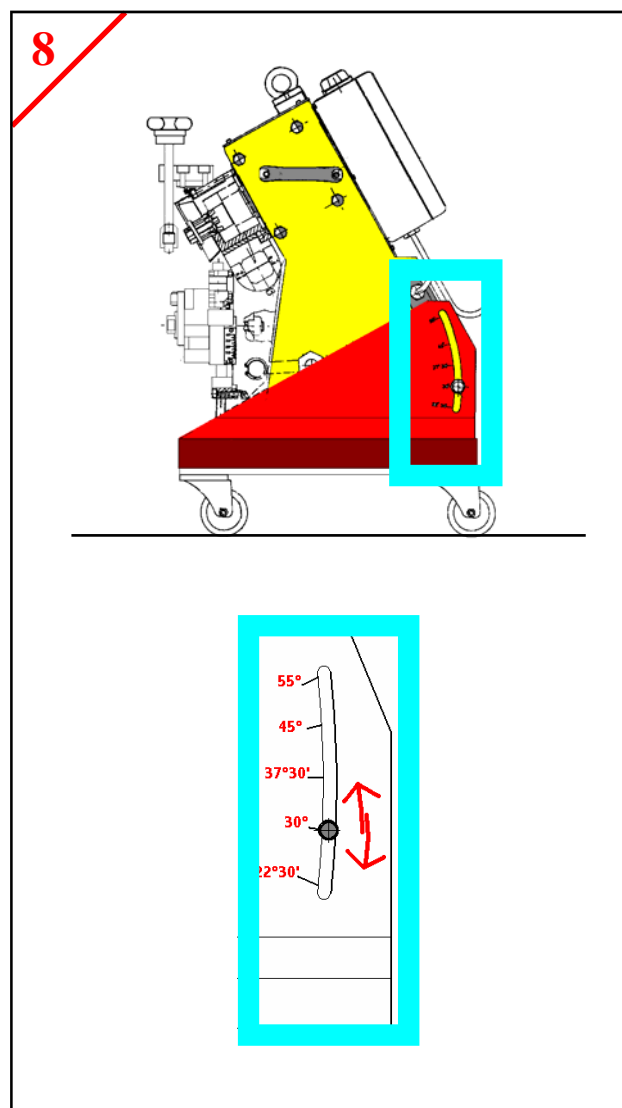


*Variation of the bevelling angle*

*OPERATIONS FOR THE 30° - 37,5° - 45° angles.*



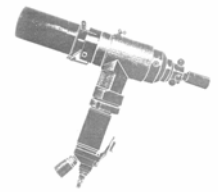
Firmly tighten the **nut** (*pos. 48; cod. 07760*) and also block the **two socket head screws** (*pos. 9; cod.06805*).



Adjust the **machine base** (*pos. 80; cod. 03367*) according to the bevelling angle chosen by moving the machine to the same cutting angle dimension.

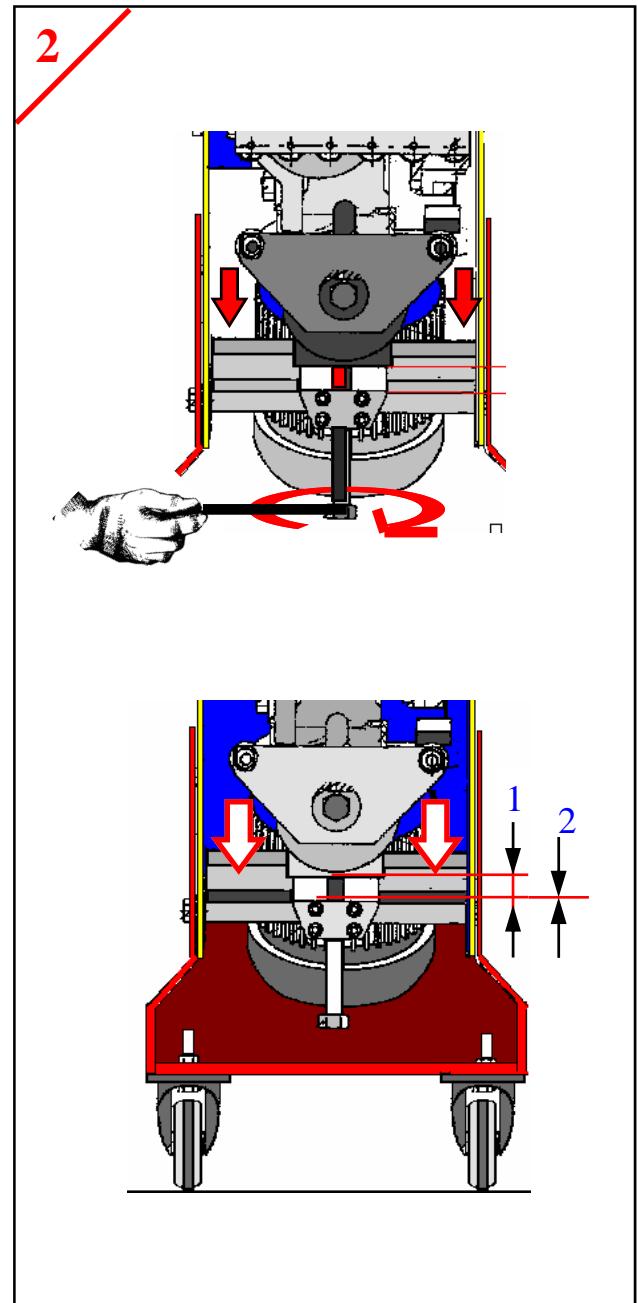
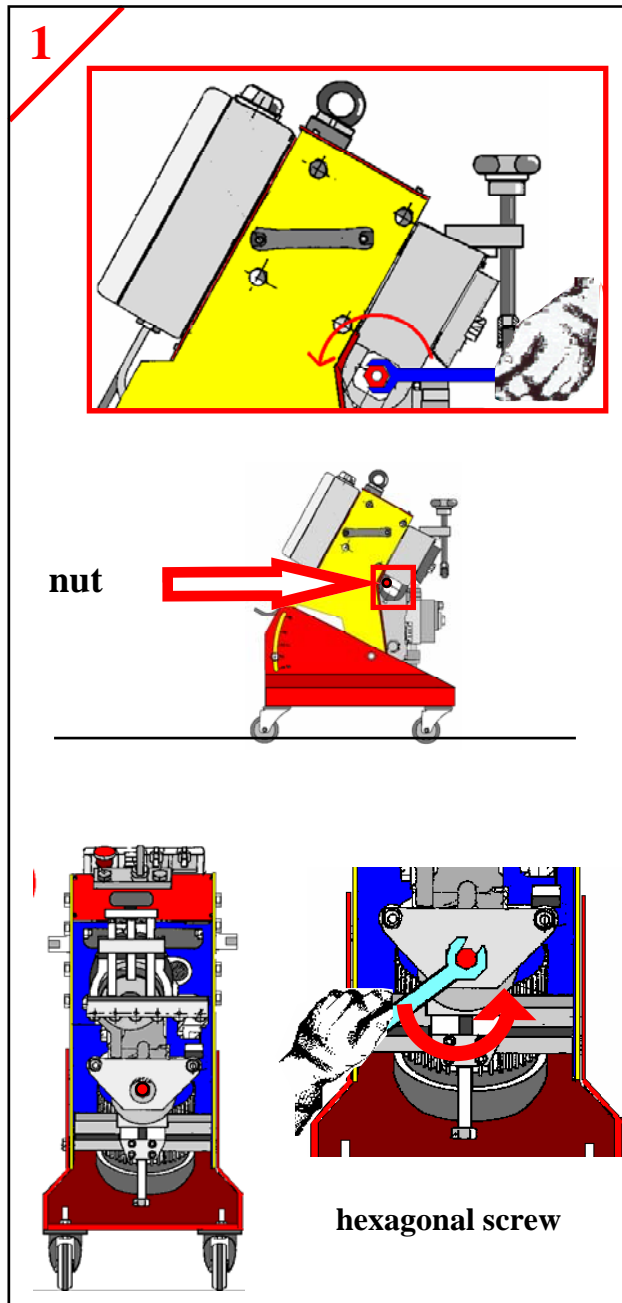
**ATTENTION!**  
**HOLD THE MACHINE !**  
DURING THIS OPERATION, THE MACHINE TENDS TO FALL FORWARD.

**DO NOT TRY TO INTERPRET INSTRUCTIONS AND DRAWINGS!**  
G.B.C. technical service is at your complete disposal for any further clarification.



**Variation of the bevelling angle:** *reference drawing C03350/00*

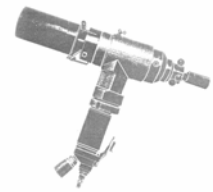
**OPERATIONS FOR 22,5° - 55° angles.**



Loosen the **nut** (*pos. 48; cod. 07760*) and the **hexagonal screw** (*pos. 77; cod. 06948*) with the fork wrench supplied.

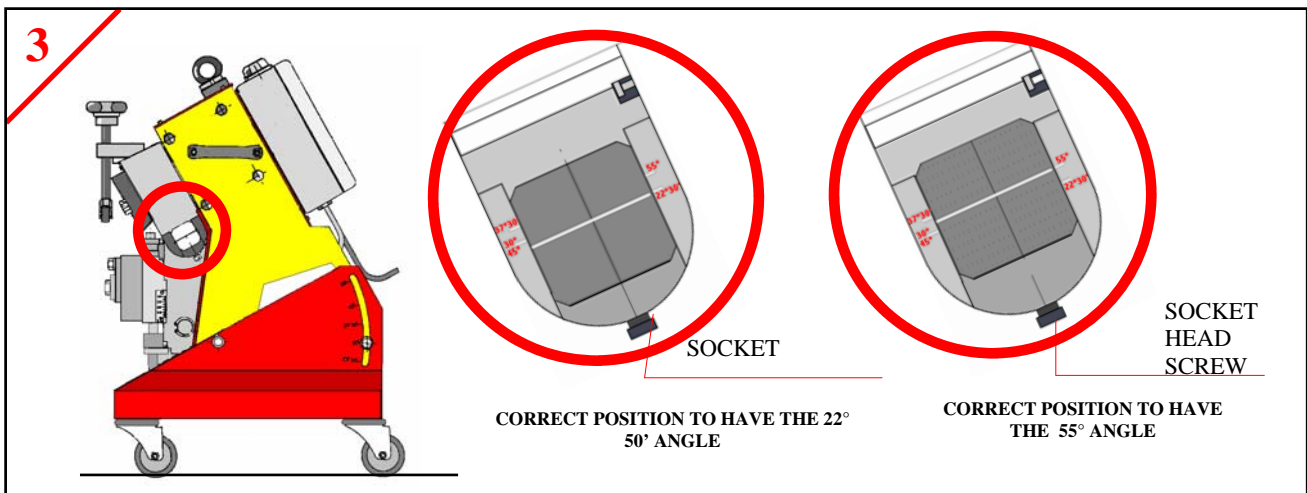
Loosen the **adjusting screw** (*pos.41;cod.03362*) until the entire roller group is brought down (end of stroke).

**DO NOT TRY TO INTERPRET INSTRUCTIONS AND DRAWINGS!**  
G.B.C. technical service is at your complete disposal for any further clarification.

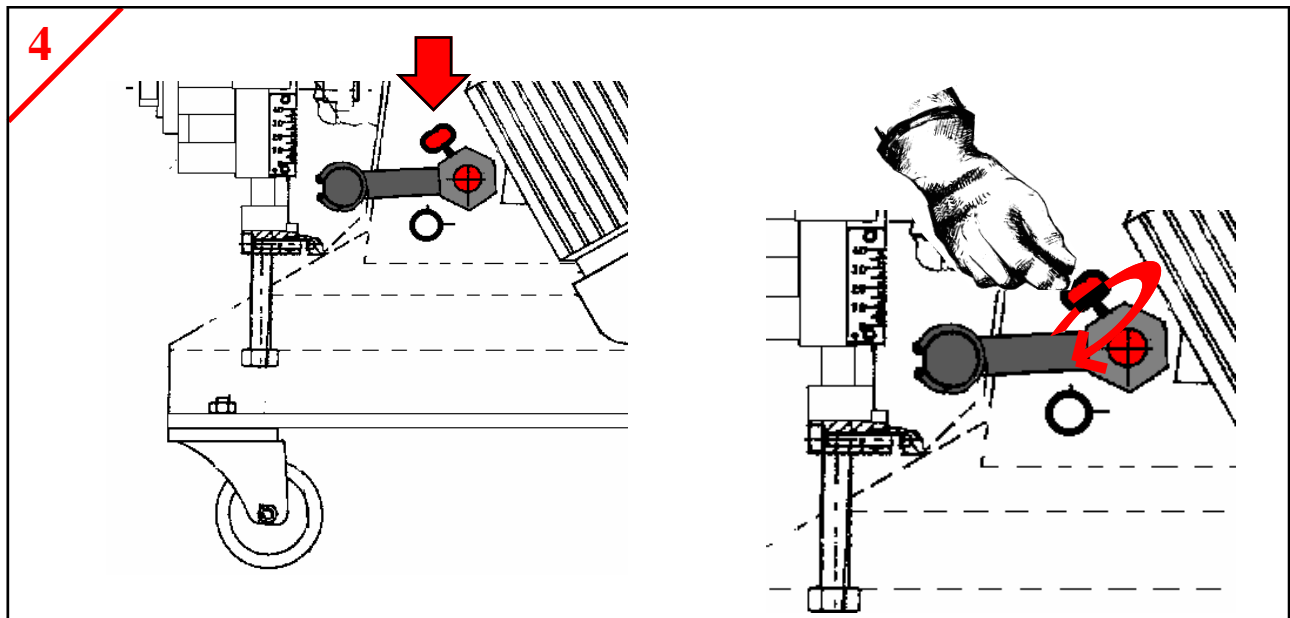


**Variation of the bevelling angle:** *reference drawing C03350/00*

**OPERATIONS FOR 22,5° - 55° angles.**

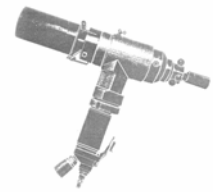


Loosen (or tighten) the **two socket head screws** (*pos. 9; cod. 06805*) until the **white line printed on the locking screw** (*pos. 3; cod. 03369*) coincides with the **reference line of the 55° or 22.5° angles**, according to the angle required.



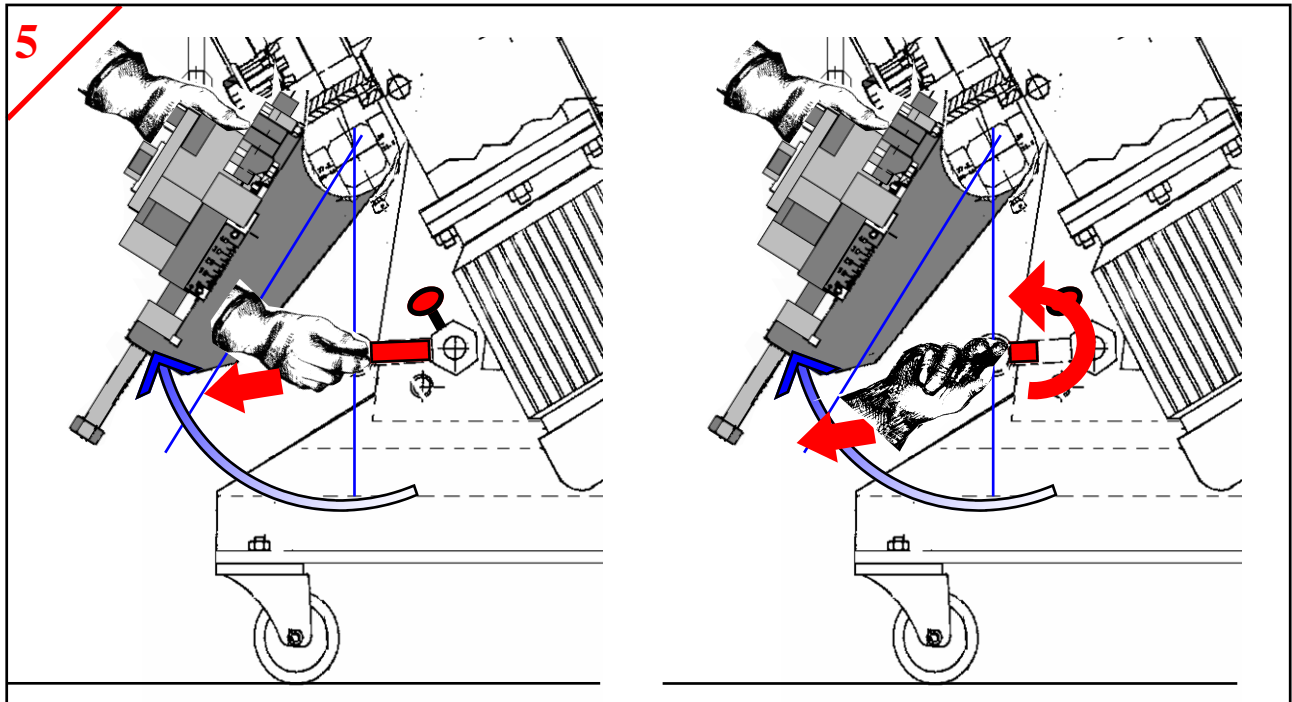
Loosen the **segmented screw** (*pos. 58; cod. ....*) placed on the **first mobile pin** (*pos. 59; cod. 033870*).

**DO NOT TRY TO INTERPRET INSTRUCTIONS AND DRAWINGS!**  
G.B.C. technical service is at your complete disposal for any further clarification.

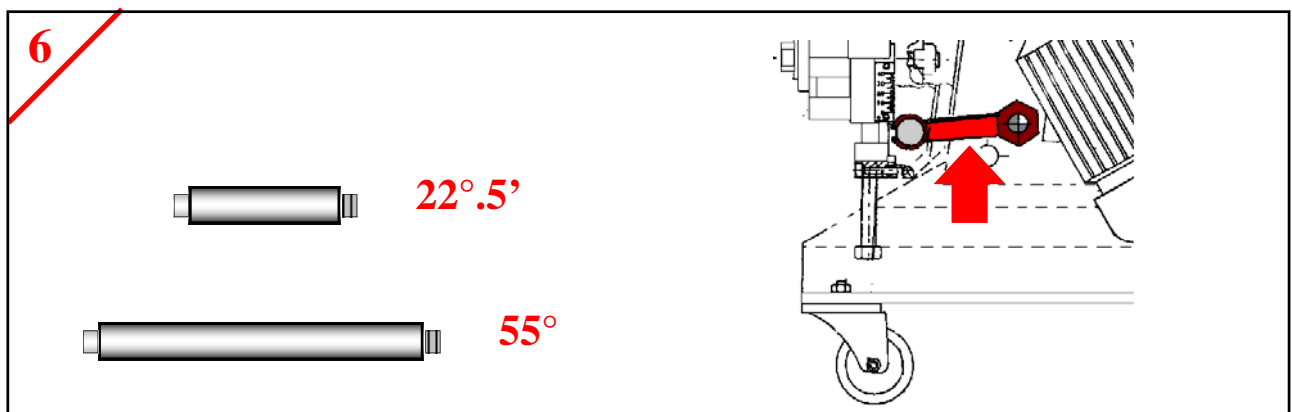


**Variation of the bevelling angle:** *reference drawing C03350/00*

**OPERATIONS FOR 22,5° - 55° ANGLES.**



By pulling the **adjustable bracket** outward (*pos. 33; cod. 03363*), extract the **angle register** (*pos.37; cod. 03387/...*) from the **first mobile pin** (*pos.59; cod.03370*) and, at the same time, unscrew it from the **second mobile pin** (*pos. 35; cod.03386*).



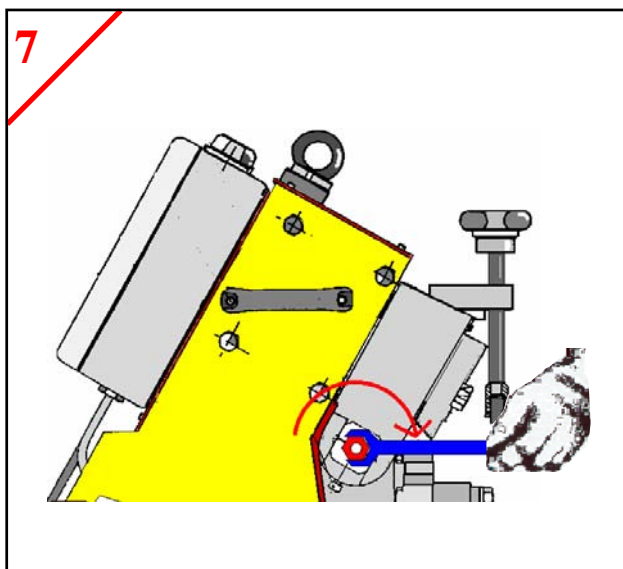
Choose the new **pin** among those supplied (each pin has the angle dimension printed on it) and assemble it by repeating the operations described in the figures 3 and 4 the other way round (on pag. 21).

**DO NOT TRY TO INTERPRET INSTRUCTIONS AND DRAWINGS!**  
**G.B.C. technical service is at your complete disposal for any further clarification.**

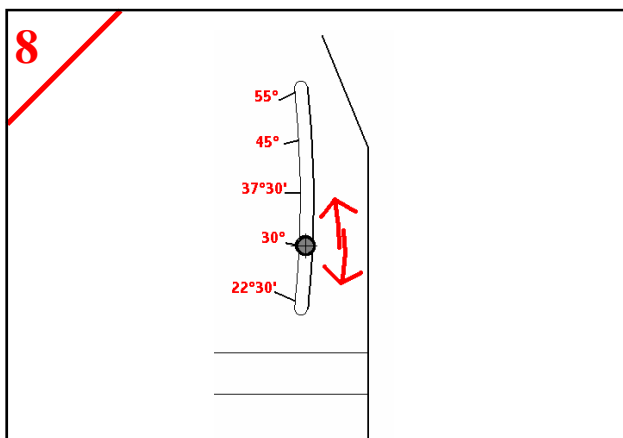


**Variation of the bevelling angle:** reference drawing **C03350/00**

**OPERATIONS FOR 22,5° - 55° ANGLES .**



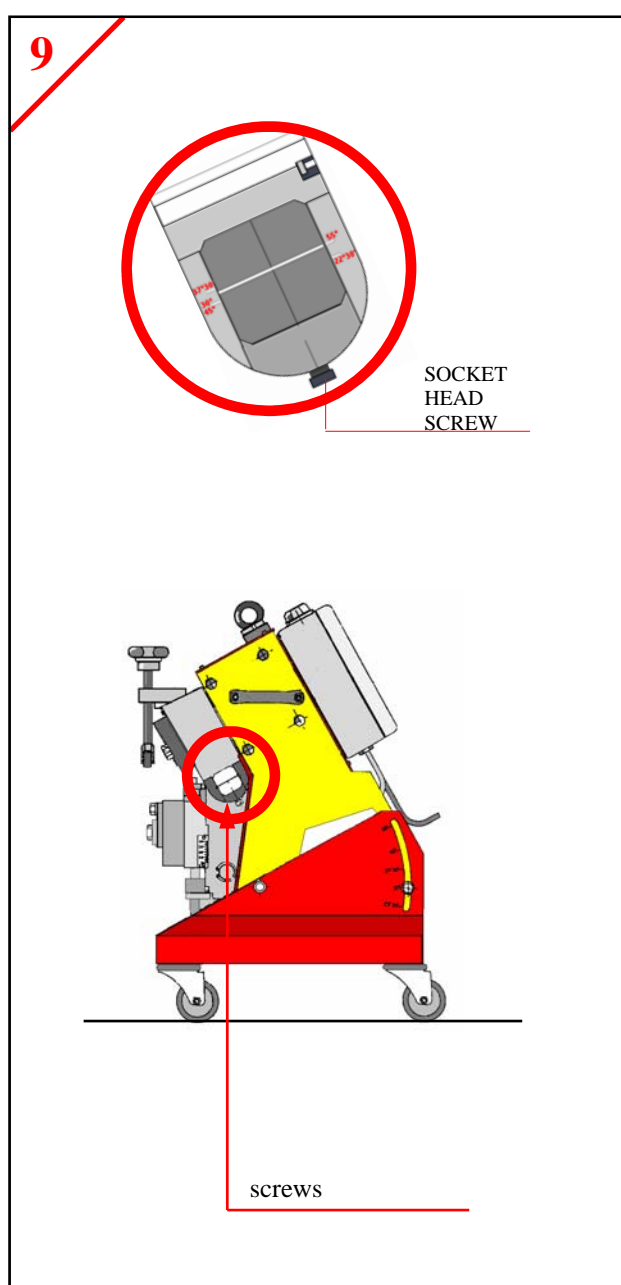
Firmly tighten the **nut** (pos. 48; cod. 07760).



Adjust the machine base (pos. 80; cod. 03367) according to the bevelling angle chosen by moving the machine to the dimension of the cutting angle .

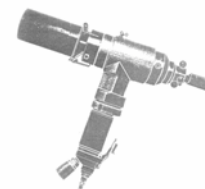
**ATTENTION!**  
**HOLD THE MACHINE!.**

DURING THIS OPERATION THE MACHINE TENDS TO FALL FORWARD

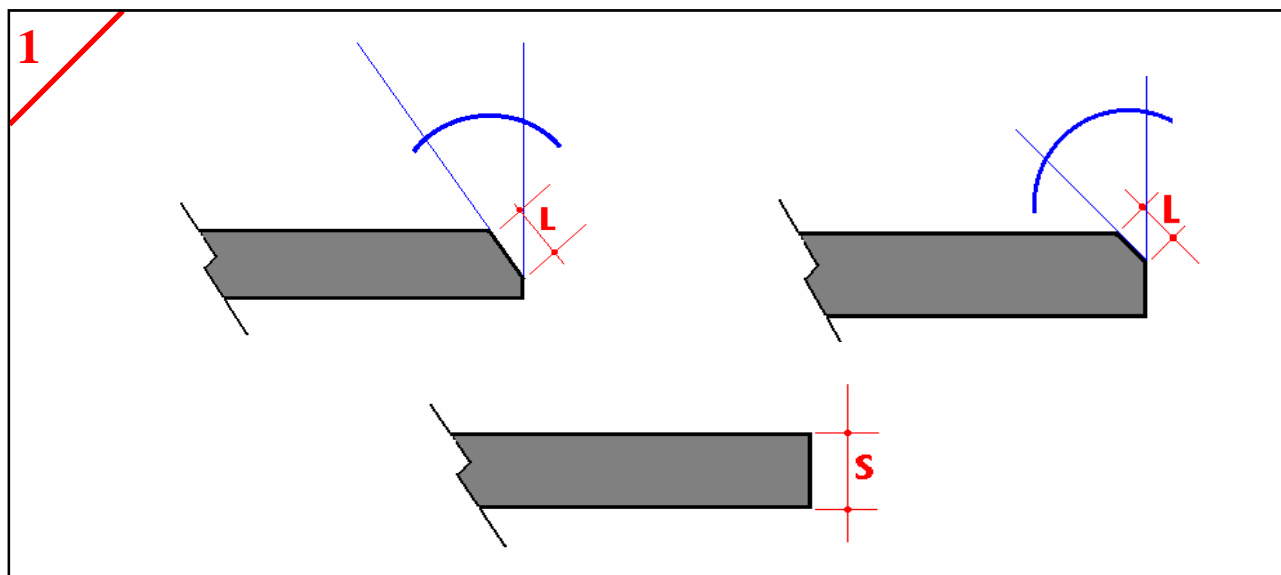


Block the two **screws** (pos. 9; cod. 06805).

**DO NOT TRY TO INTERPRET INSTRUCTIONS AND DRAWINGS!**  
**G.B.C. technical service is at your complete disposal for any further clarification.**



## *Machine setting for bevelling*



Check the thickness of the plate to be bevelled and the length of the bevelling diagonal desired.

**2**

$$\mathbf{S - L = X}$$

**S= PLATE THICKNESS**  
**L= BEVELLING LENGTH**  
**X= NUMBER OBTAINED**

The formula to use is as follows: **S-L=X**

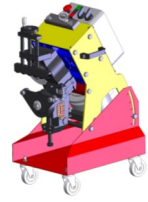
where **S**= plate thickness

**L**= bevelling length desired

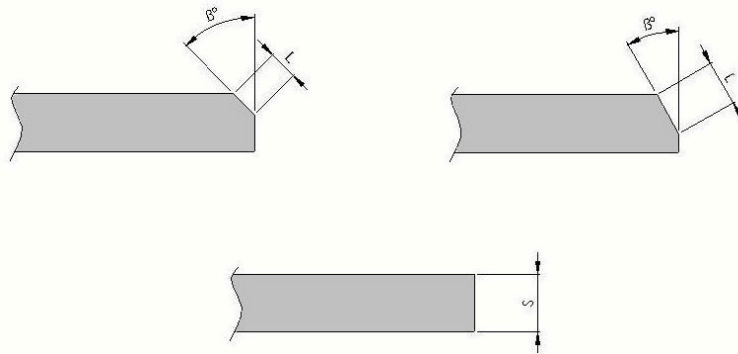
**X**= number obtained where the nonius lines will have to coincide.

**DO NOT TRY TO INTERPRET INSTRUCTIONS AND DRAWINGS!**  
**G.B.C. technical service is at your complete disposal for any further clarification.**





## *Execution of the Bevel*



Measure the thickness of the plate you want to bevel and ensure about the bevel diagonal length that you want to obtain.

$$S - L = X$$

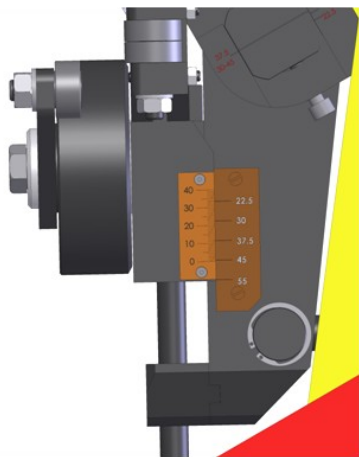
*S = PLATE THICKNESS*

*L = BEVEL LENGTH*

*X = RESULT OF YOUR EQUATION*

You will have to use the above mentioned formula and the number obtained as result is the value you will have to set on the vernier of the machine.

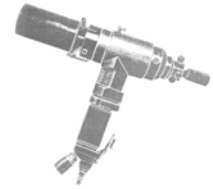
The bevel shall be executed in several steps. See the under mentioned chart.



| <b>BEVEL EXECUTION</b> |  |  |
|------------------------|--|--|
| <b>Steps</b>           | <b>Vernier Setting<br/>Carboni Steel</b> | <b>Vernier Setting<br/>Stainless Steel</b> |
| 1st                    | “X” 9mm                                  | “X” 7mm                                    |
| 2nd                    | “X” 3mm                                  | “X” 2mm                                    |
| 3°rd                   | “X” 3mm                                  | “X” 2mm                                    |
| 4°th                   | “X” 3mm                                  | “X” 2mm                                    |

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

Via Artigiani,17 – 25030 Torbiato di Adro (Bs) – Italia – Tel. + 39 030 7451154 – Fax. + 39 030 73 56 629



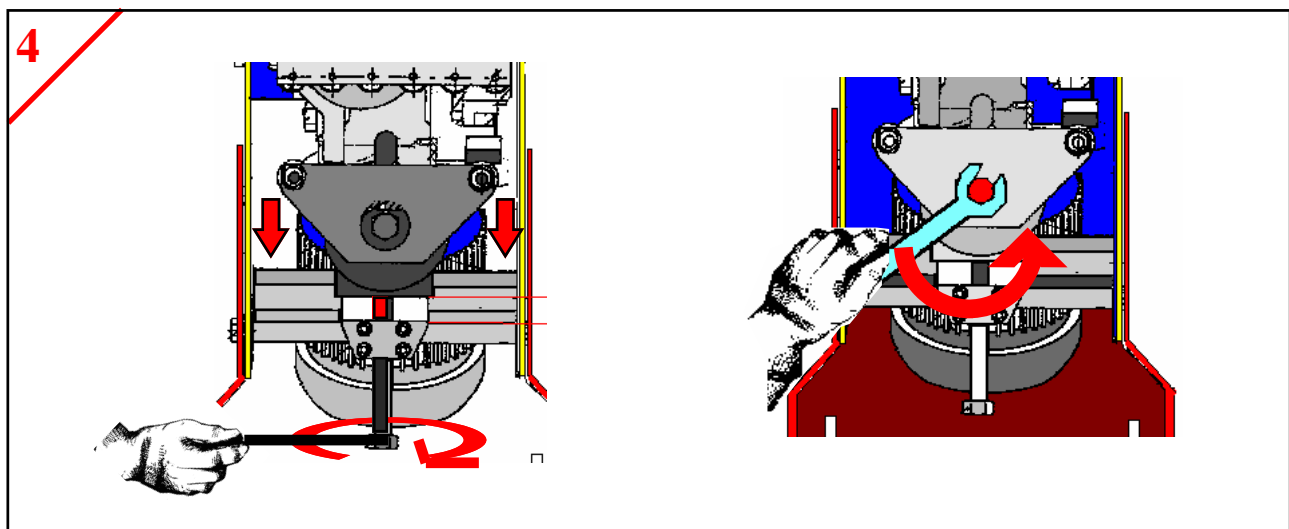
*Machine setting for bevelling*

**3** *EXAMPLE: 30° angle*

**S - L = X**  
**S** = plate thickness = 20  
**L** = length = 12  
**20 - 12 = 8**  
**X = 8**

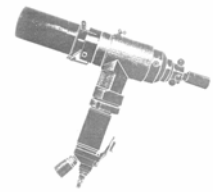
The diagram shows a vertical scale on the fixed part of the machine. The scale has markings at 0, 10, 20, 30, and 40. A red line is drawn at the 30-degree mark. A blue arrow labeled 'x = 8' points to the 30 mark on the scale. To the right of the scale, there are additional markings: 22.5, 30, 37.5, 45, and 55.

Consider the red line (30°) - on the fixed part - as reference point (zero) to correctly set the machine.

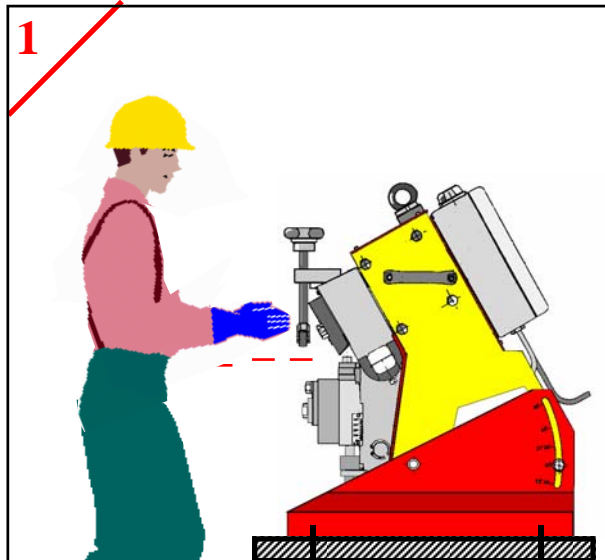


To adjust the **nonius**, unscrew the **screw** (*pos. 77; cod.06948*) and act on the **adjusting screw** (*pos. 41; cod.03362*).

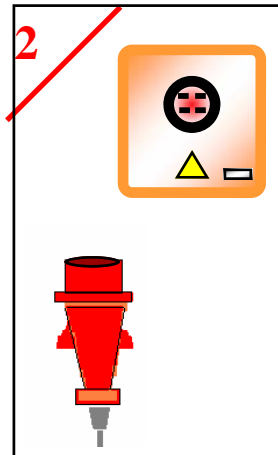
**DO NOT TRY TO INTERPRET INSTRUCTIONS AND DRAWINGS!**  
**G.B.C. technical service is at your complete disposal for any further clarification.**



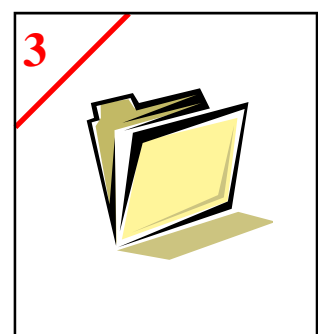
***START OF MACHINING : 1st case : small lengths of plate***



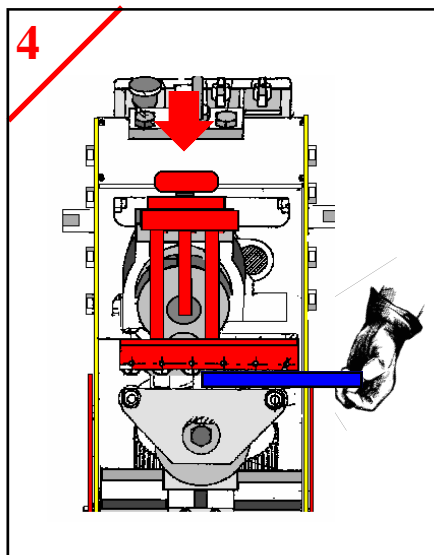
Fix the machine without the four wheels to a surface at the height of a man.



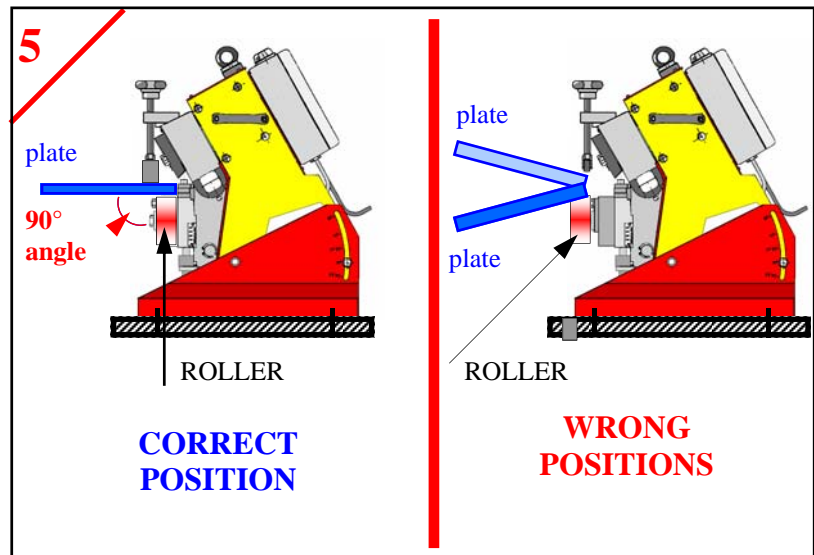
Connect the machine plug to a power socket.



With the machine off, execute the adjustment described in the paragraph “**Machine setting for bevelling**” (from page 12 to page 15).

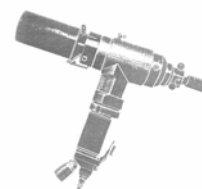


Position the plate length with the thickness required inside the mouth to adjust the **roller holding plate** (pos. 51; cod.03349) as shown in the figure.

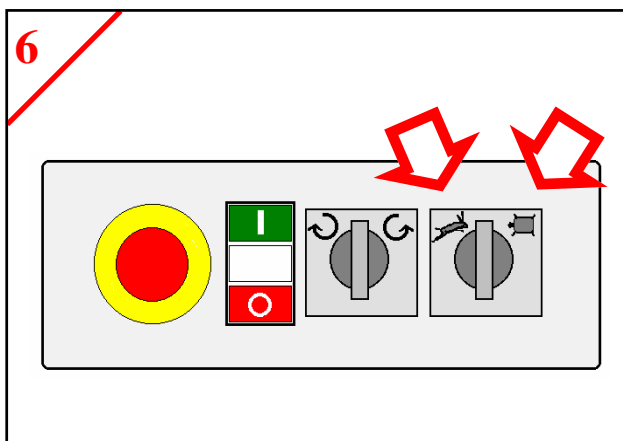


**ATTENTION!**  
**THE PLATE MUST BE IN LINE WITH THE ROLLER**  
(pos.78; cod.033569) AS SHOWN IN THE FIGURE  
Carefully check the indications and then remove the plate length.

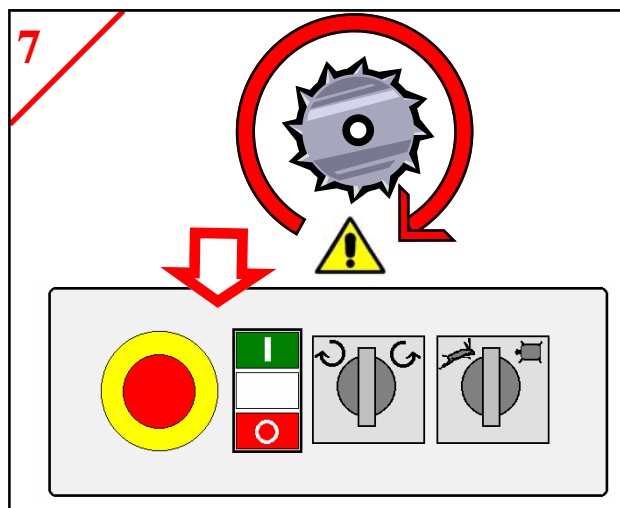
**DO NOT TRY TO INTERPRET INSTRUCTIONS AND DRAWINGS!**  
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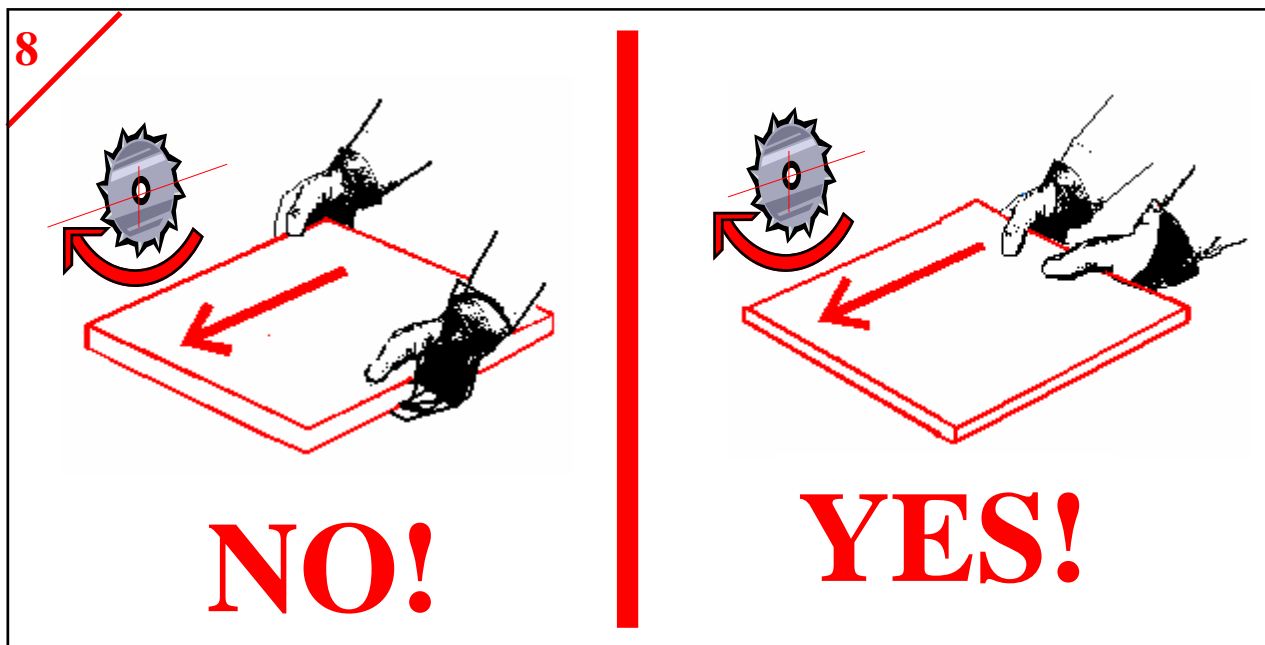
**START OF MACHINING: 1st case : small lengths of plate**



If machining materials such as carbon steel or similar, turn the speed control to “hare”, if the materials are like stainless steel or tougher, turn the control to ‘turtle’.

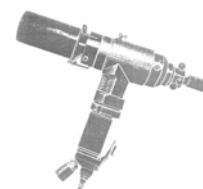


Press the **green button** (pos. 4; dwg. 03421) to start up the machine and check that the milling tool turns clockwise.

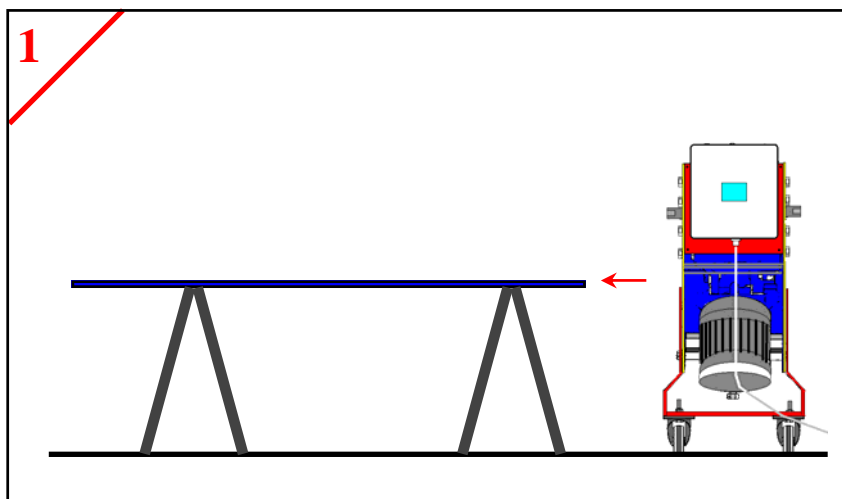


Position the plate on the plate guiding device (pos. 73; cod. 03358) which is parallel to the ground and push it towards the machine. **ATTENTION!**  
**PAY ATTENTION TO THE POSITION OF YOUR HANDS** (see figure)

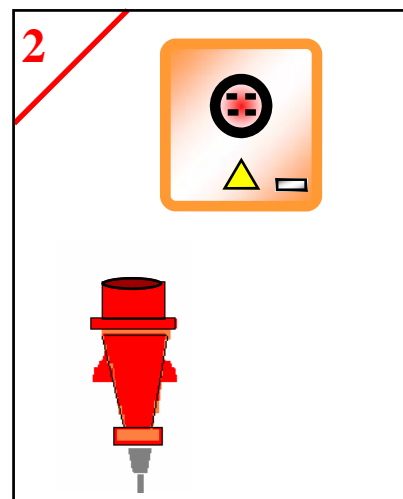
**DO NOT TRY TO INTERPRET INSTRUCTIONS AND DRAWINGS!**  
G.B.C. technical service is at your complete disposal for any further clarification.



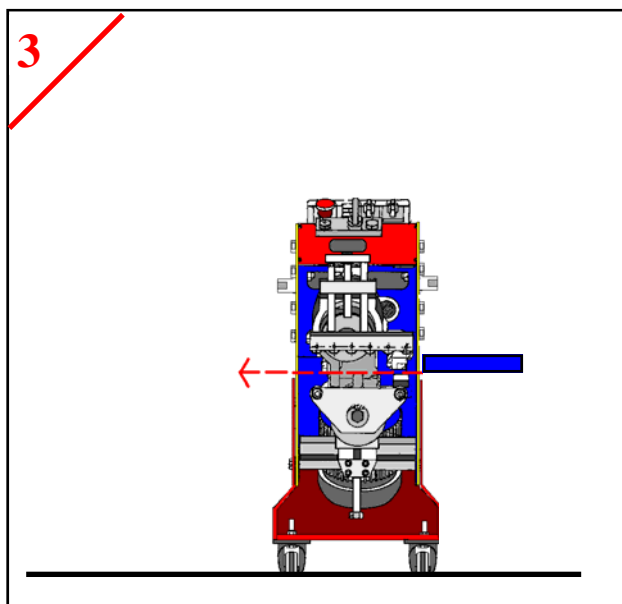
## ***START OF MACHINING : 2nd case : long lengths of plate***



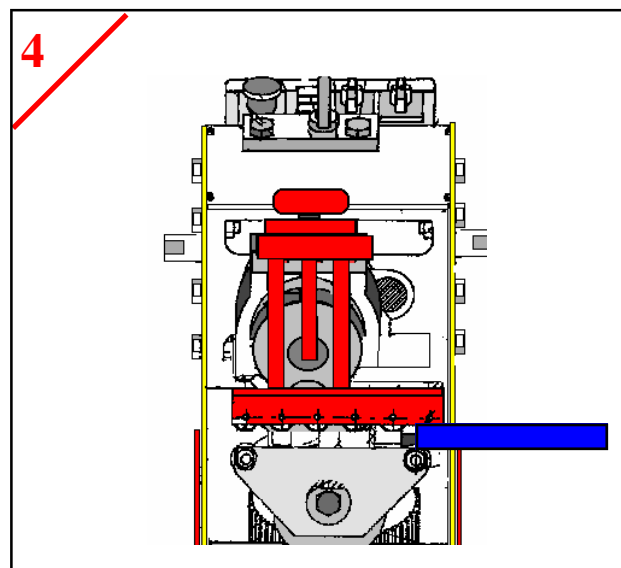
Leave the four wheels of the machine assembled and, if possible, position the plate, by means of trestles, at the level of the machine mouth.



Insert the machine plug into the power socket.



Set the machine by using a length of plate with the same thickness as the long plate ( see paragraph: ‘ **setting the machine for bevelling**’ ).

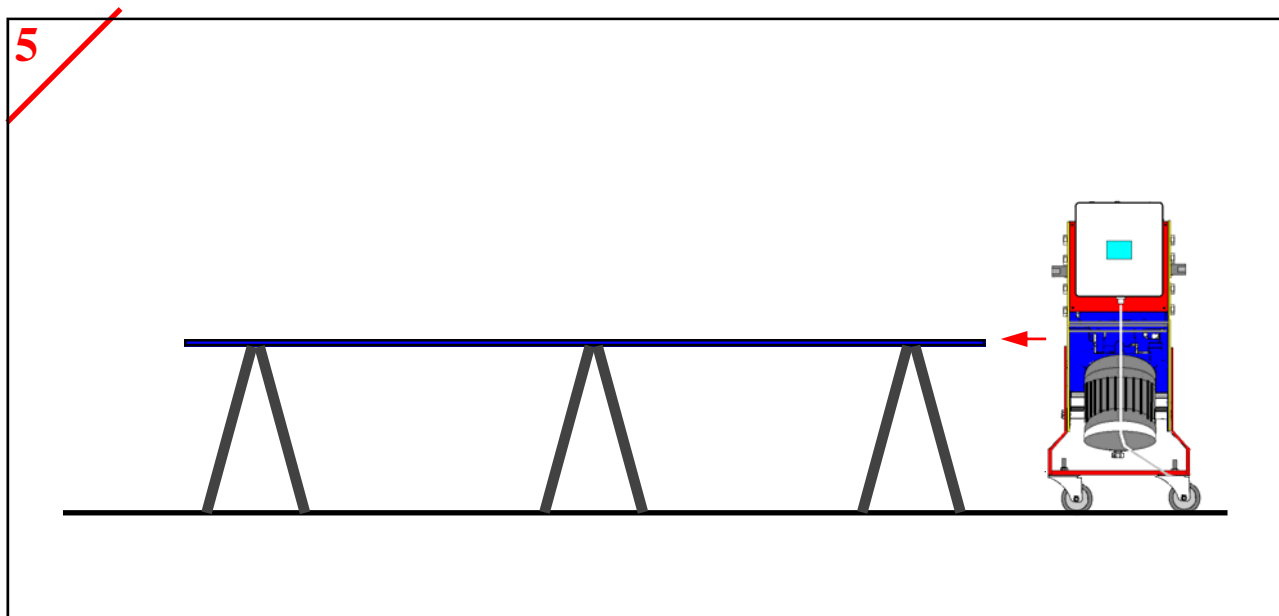


Position a length of plate with the thickness required inside the mouth in order to adjust the roller holding plate (*pos. 51; cod.03349*), as shown in the figure, and then remove it.

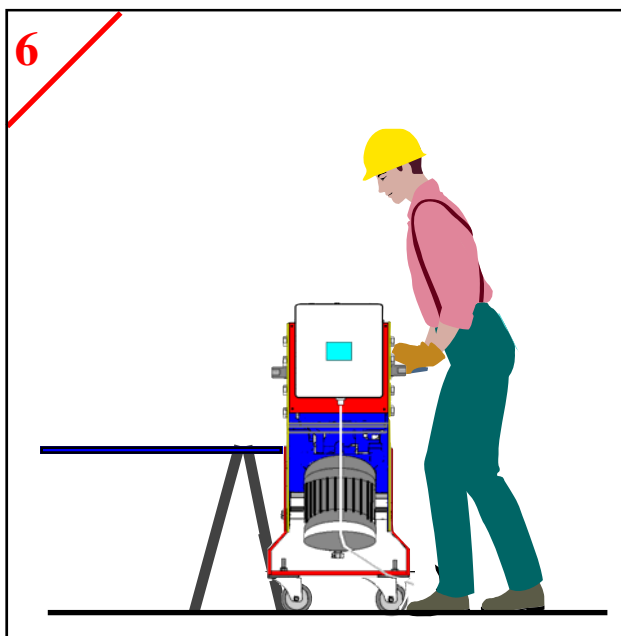
**DO NOT TRY TO INTERPRET INSTRUCTIONS AND DRAWINGS!**  
**G.B.C. technical service is at your complete disposal for any further clarification.**



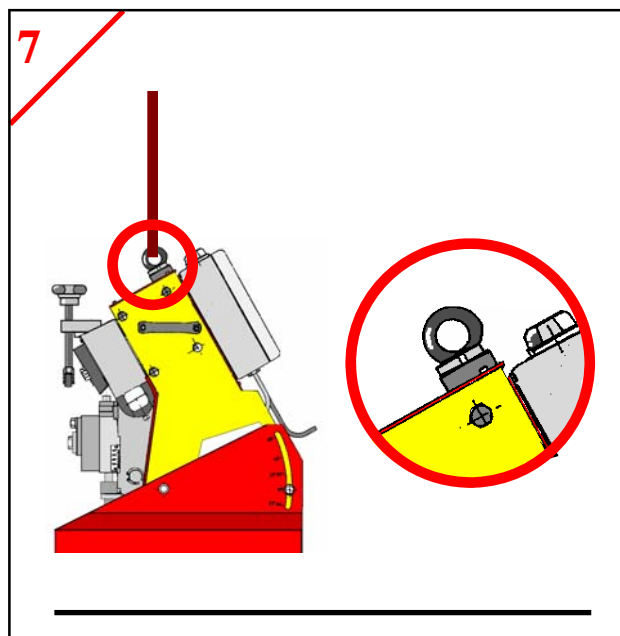
***START OF MACHINING: 2nd case : long lengths of plate***



Position the machine to the right of the plate as shown in the figure.



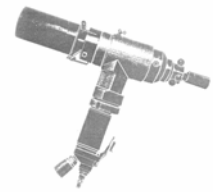
Push the machine towards the plate until the milling tool hooks the plate to be worked.



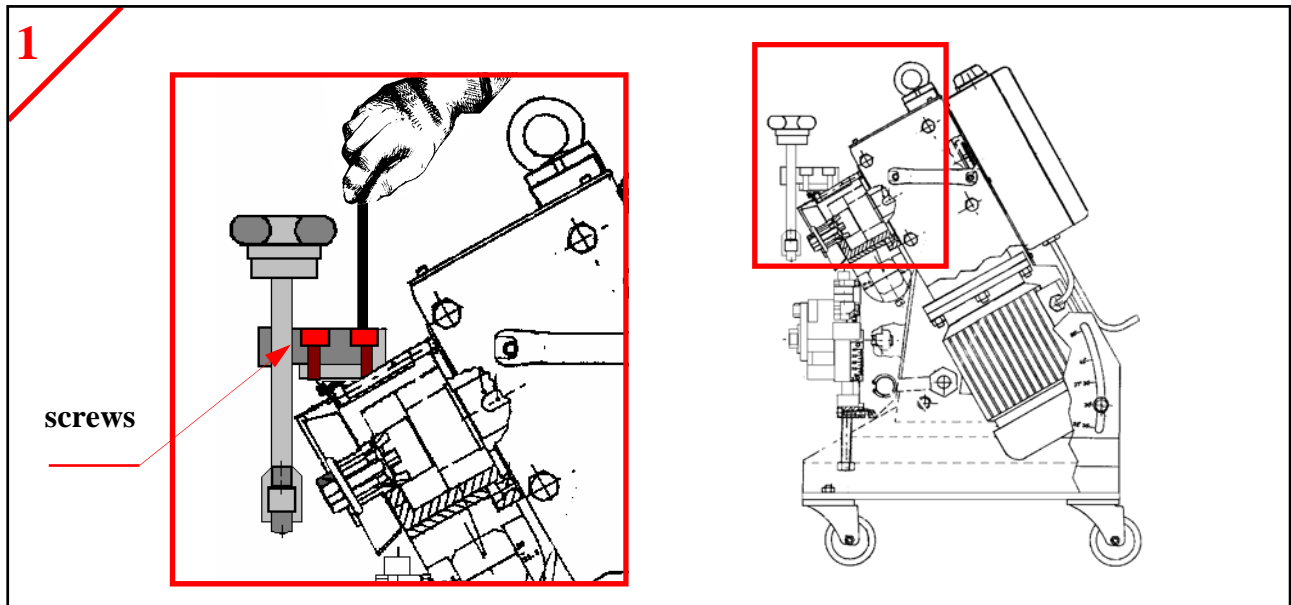
**ATTENTION!**

The machine can be operated when suspended as long as the suitable safety systems are adopted (bridge crane, manual hydraulic hoister, etc).

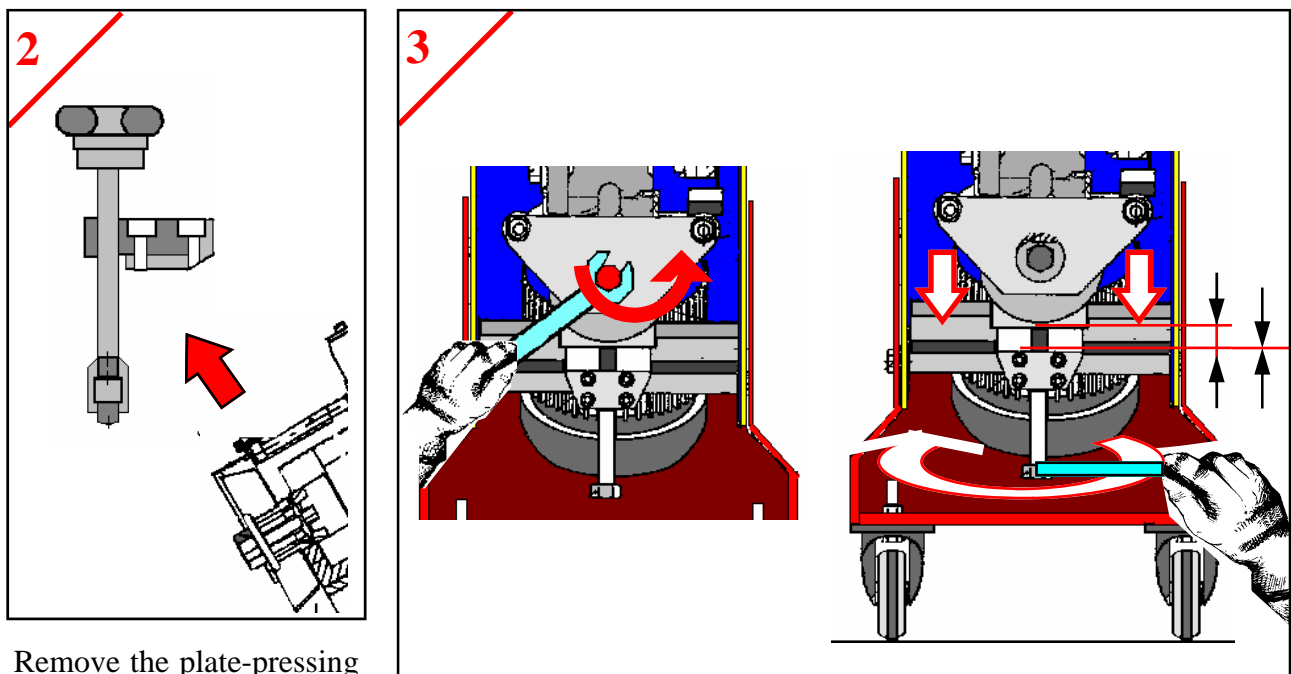
**DO NOT TRY TO INTERPRET INSTRUCTIONS AND DRAWINGS!**  
**G.B.C. technical service is at your complete disposal for any further clarification.**



## Replacing the milling tool



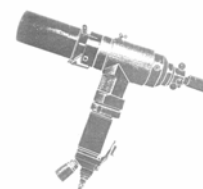
Unscrew and remove the 4 screws (*pos. 1 ; cod. 06800*).



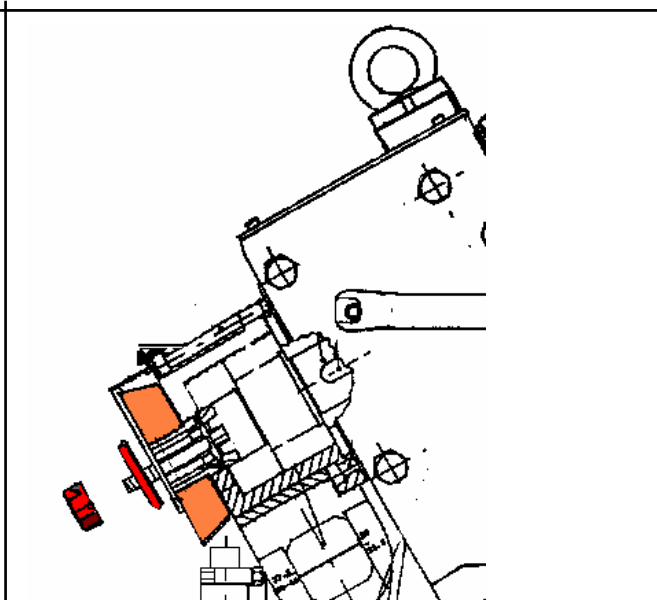
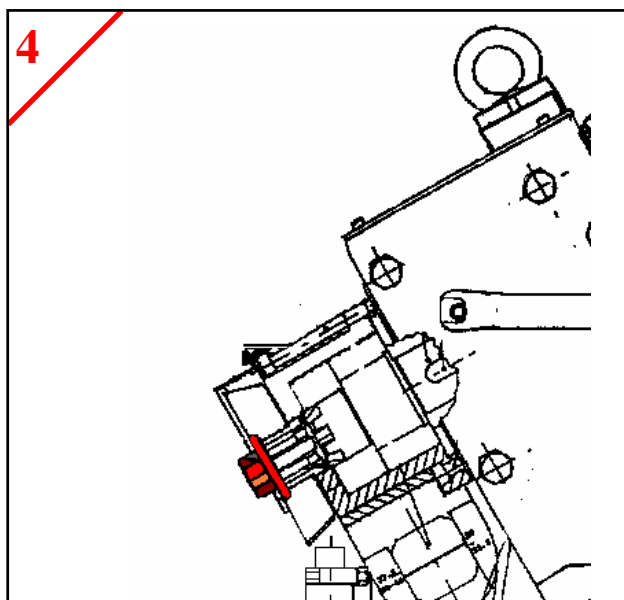
Remove the plate-pressing group as indicated in the figure.

Loosen the **hexagonal screw** (*pos. 77; cod. 06948*) and, by means of the **adjusting screw** (*pos. 41; cod.03362*), lower the roller group.

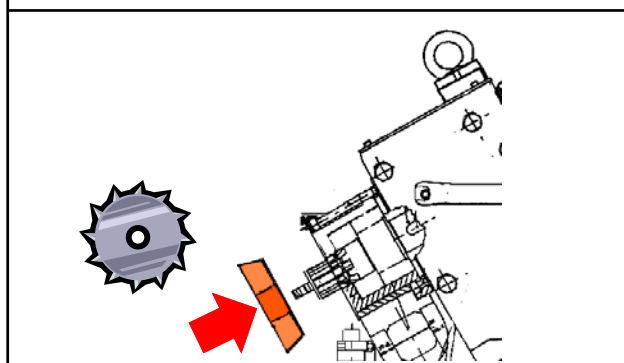
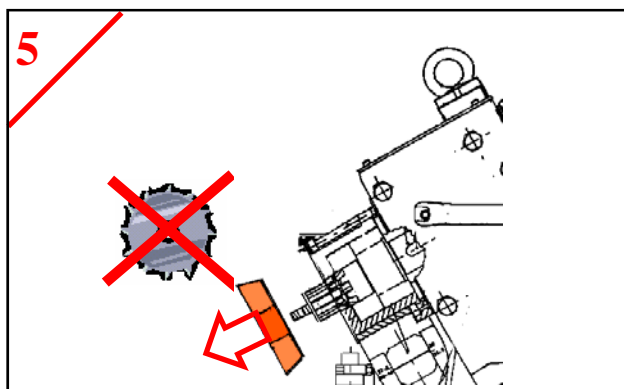
**DO NOT TRY TO INTERPRET INSTRUCTIONS AND DRAWINGS!**  
G.B.C. technical service is at your complete disposal for any further clarification.



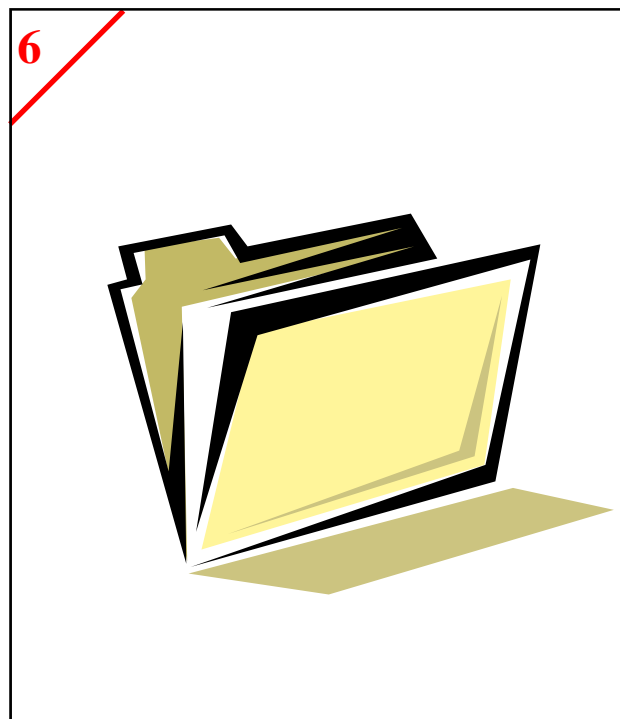
*Replacing the milling tool*



Unscrew and remove the **hexagonal nut** (pos. 16;cod. 07786) and the **washer** (pos.18;cod.



Remove and replace the milling tool.



Repeat the operations the other way round, that is, starting from figure 4 to figure 1.

**DO NOT TRY TO INTERPRET INSTRUCTIONS AND DRAWINGS!**  
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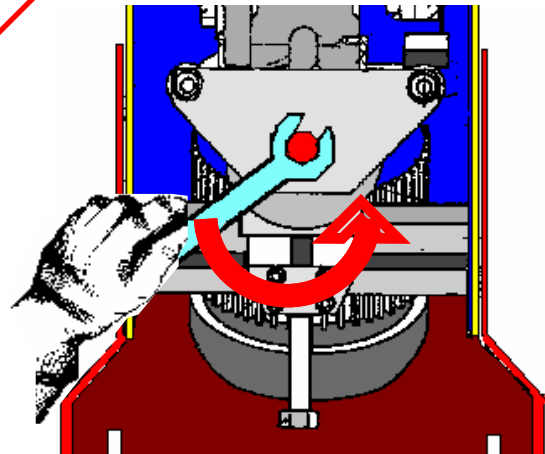
## *Tank bottom and pipe machining*

1

**minimum  
diameter  
12 inches**

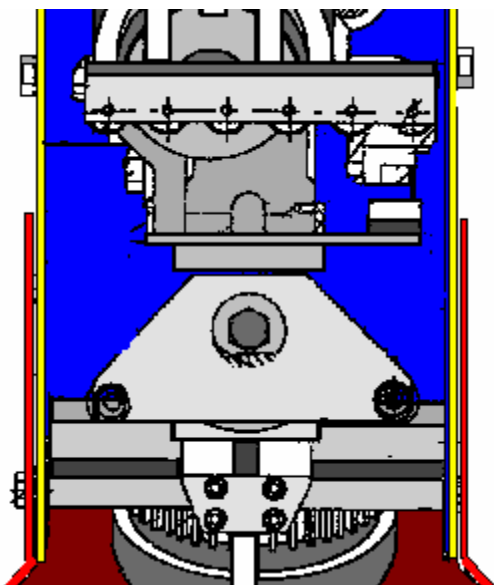
Challenge 15 with adjustable cutter head can machine tank bottoms or pipes starting from a diameter of at least 12 inches.

2



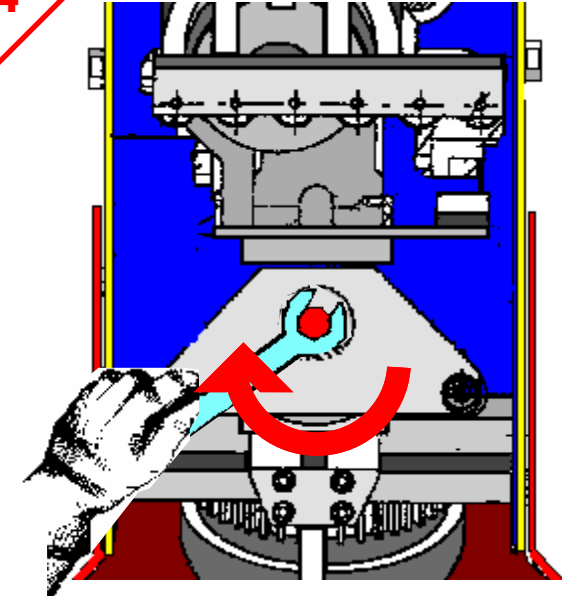
Unscrew the hexagonal screw (*pos. 77; cod. 06948*) and extract it.

3



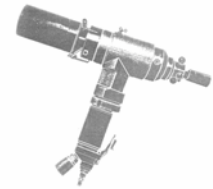
Remove the **roller holding plate** (*pos. 76; cod. 03357*) and reassemble it with the two bearings directed downward as shown in the figure.

4



Screw the **hexagonal screw** again (*pos. 77; cod. 06948*).

**DO NOT TRY TO INTERPRET INSTRUCTIONS AND DRAWINGS!**  
G.B.C. technical service is at your complete disposal for any further clarification.



## ***Ordinary maintenance***

**EVERY 400 OPERATING HOURS, IT IS ADVISABLE TO OVERHAUL THE MACHINE AT G. B. C. MSS**

### ***Periodic checks***

- 1 CHECK THE MACHINE GENERAL CONDITIONS**
- 2 PERIODICALLY CLEAN THE MECHANICAL PARTS IN MOTION WITH COMPRESSED AIR**
- 3 CHECK THE WEARING CONDITION OF THE PROTECTION WASHER IN TEFLON (POS. 26; COD. 03454)**
- 4 CHECK THAT THE MILLING TOOL CUTS THE MATERIAL CORRECTLY SO AS TO ENSURE THE SHAFT AND REDUCTION GEAR FUNCTIONALITY.**

***G.B.C. AND ITS MSS ARE AT YOUR COMPLETE DISPOSAL FOR THE ABOVE MENTIONED INTERVENTIONS AND FOR ALL THE CLARIFICATIONS NECESSARY.***