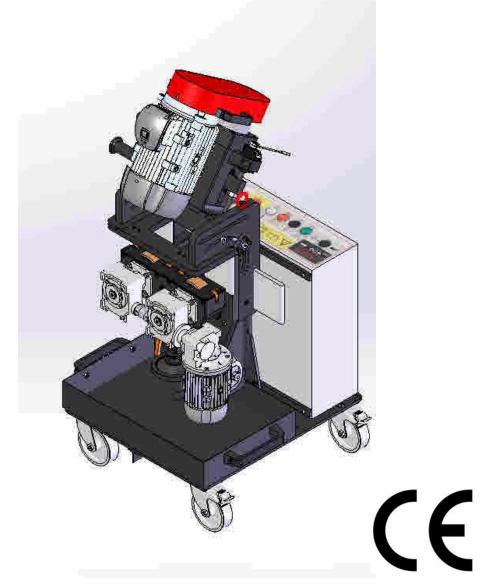


INSTRUCTION MANUAL



MULTIEDGE 80

Range w.t. 6-120mm (5/21"- 4 3/4")

% G.B.C. ULTIEDGE 80

Original Instructions—Rev.2017— In compliance with the § 1.7.4 of the Machine Directive 2006/42/CE





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<u>PRESENTATION OF THE COMPANY AND</u> 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 bevelling procedures of any sort and plate bevelling 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 modification 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

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

MULTIEDGE 80

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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 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.

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% G.B.C. MULTIEDGE 80

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INTENDED USE OF THE MULTIEDGE80

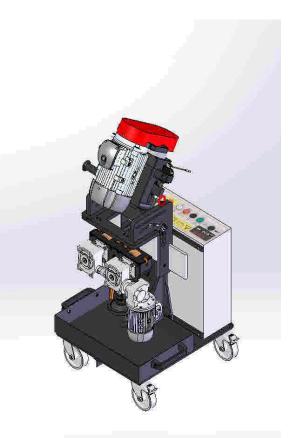
GBC's plate bevellers, can perform a welding prep bevel on 90° edges. There are several models available depending by the wall thickness of the plate, usable for on-site jobs and for workshop daily production purposes.

All the machines are equipped with an automatic feeding system, therefore once they are positioned and locked on the plate edge (models for beveling the upside and models for beveling the down side of the plate), the beveling is performed automatically, with no need of any intervention by any operator. These machines can be equipped with a comfortable trolley designed ad-hoc, adjustable in height and particularly suggested when working large plate sheets so that no overhead cranes or other lifting devices are involved in the process.

Our plate bevelers can ve divided in two cathegories:

CHALLENGE Series (12 and 15) Plate Thickness 6-40mm Beveling Angles from 22° to 55° Completely silent, equipped with a shearing toothed wheel for Mild Steel and Stainless Steel High Traveling Speed Self-propelled.

EDGE Series (46, Compact, Multi) The GBC MULTIEDGE 80 range w.t. 8-120mm Variable bevel angle from 0° to 90°, High RPM face mill with interchangeable inserts Surface high finishing grade High material removal capacity and pass depth.



THE MACHINE SHOULD BE USED ONLY BY SPECIALIZED OPERATORS WHO HAVE BEEN DULY TRAINED. FOLLOWING TO A SPECIFIC FORMATION THERE IS NO REASONABLY PREDICTALBE MISUSE OF THE UNIT.

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



IEDGE 80 In compliance with the § 1.7.4 of the Machine Directive 2006/42/CE Original Instructions-Rev.2017-

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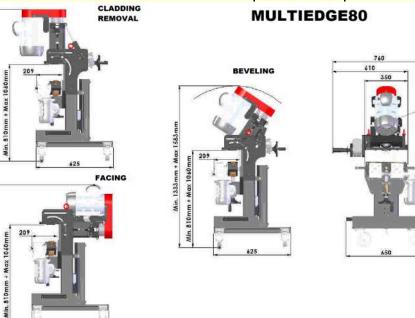
G.B.C.

Min. 1254mm + Max 1504mm

Min. 1134mm + Max 1364mm

625

<u>TECHNICAL FEATURES</u>				
		ELECTRIC		
Electric Motor Power	W	4000		
Tension	Volt	230 / 400		
Frequency	Hz	50 / 60		
Face Mill Speed	rpm	300 ÷ 1500		
Face Mill Type		Ø80mm - 9 inserts		
Angle of Bevel		From 0° to 90°		
"J" Bevel Angle		0° - 30°(R6 or R8)		
Plate Thickness	mm	Min. 6 - Max 120		
Diagonal Bevel Length	mm	Min. 0 - Max 80		
Linear Feeding Speed	Mt/min	0 ÷ 1.6		
Weight of the Machine	Kg	240		
Maximum Acoustic Emission (Idle)	dB	76		
Average Acoustic Emission (Operating)	dB	86		







MACHINE STANDARD EQUIPMENT

The machine is supplied with:

- Service Tools
- 9 Inserts Face Mill
- Wooden Box
- Instruction Manual and Diagrams



Wooden Box

<u>Instruction Manual and Dia-</u> grams





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



JLTIEDGE 80

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.
- •

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• 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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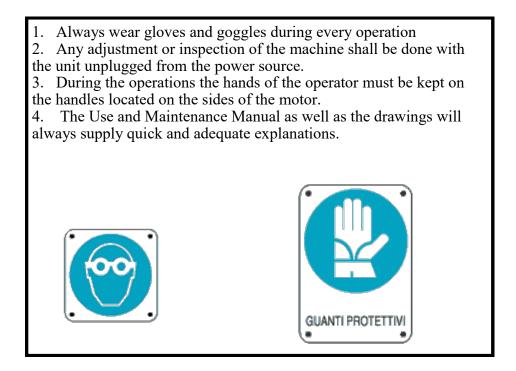
MULTIEDGE 80

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

The acoustic emissions are within the limits provided by Machine Directive in force. Proof of this is recorder and stored by the production department which files all the acoustic tests performer on every single unit.



SHIPPING DIMENSIONS

Peso macchina	kg	240	
Dimensioni spedizione	mm	-	
Peso spedizione	kg	340	

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







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

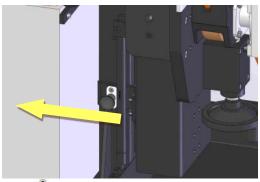
EMERGENCY STOP INSTALLATION

The machine is equipped with an emergency stop button — See the paragraph regarding the control panel.



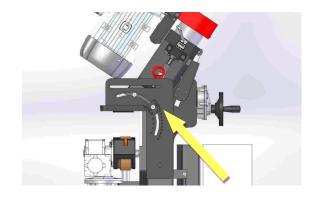


N.B.:Before starting any setup operation make sure the unit is duly clean and that it is not connected to the main power supply. Ensure there is enought room around the area of operation.



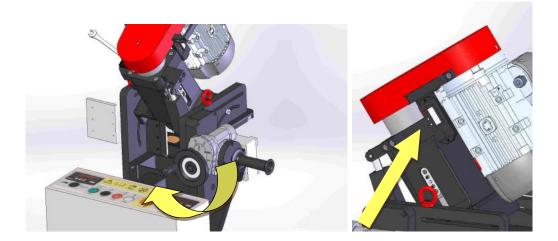


N.B.: Pull the security pin to unlock the machine amortization system



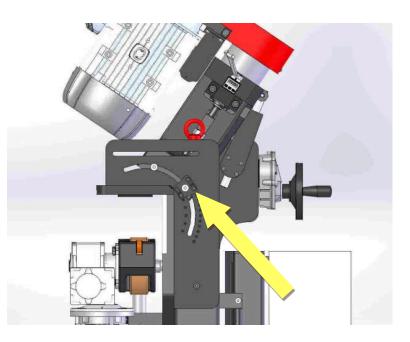
The bevel angle adjustment can be achieved by loosing the set screws (4 in total) located on the sides of the machine frame.

N.B. : This area must be kept adequately clean and lubricated.



Adjust the angle by turning the hand wheel until the digital reader shows the desired angle on the display.



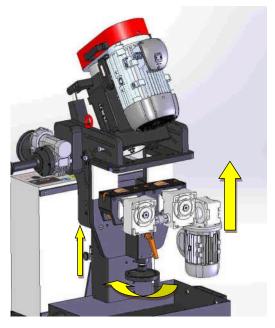


Fasten the set screws previously loosened to secure the head in position.

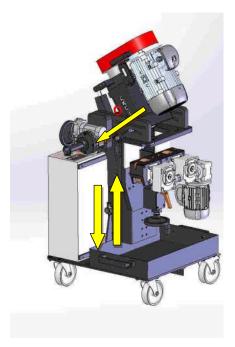




In compliance with the § 1.7.4 of the Machine Directive 2006/42/CE Original Instructions-Rev.2017-



Turn the hand wheel to adjust the locking assembly height in relation to the plate thickness.

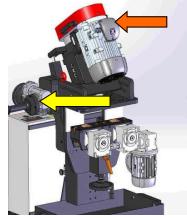


Use the handles to lower or raise the machine to match the height of the plate.

% G.B.C. MULTIEDGE 80

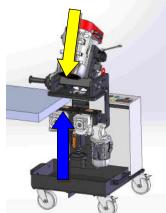


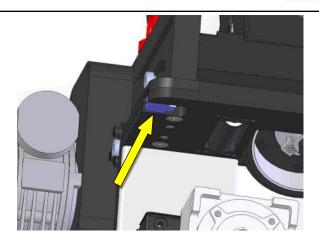
Original Instructions—Rev.2017— In compliance with the § 1.7.4 of the Machine Directive 2006/42/CE



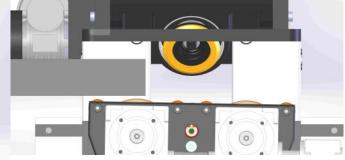
Move the machine and place it on the plate using the handles. Make sure the plate is inserted on the side of the machine which is equipped with the plate detecting sensor.

The plate has to be positioned between the first orange rubber wheel (blue arrow) and the retainer roller (yellow arrow).





N.B. The machine travels from left to right. In case of doubt you can use the plate detecting sensor as reference because this is the way the plate should enter first.



Here you can see the correct position of the plate before locking it in position.

It is extremely important that the plate is not entering in the Face Mill action area but at the same time it has to be inside enought to be engaged by the retainer roller and the orange rubber wheel.

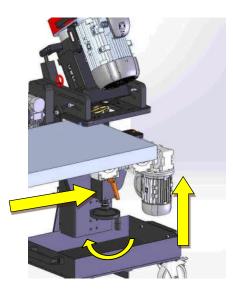
Prima di posizionare la lamiera curare la pulizia della stessa da grassi, oli e in caso di presenza di residui di saldatura o di imperfezioni dovute all' ossitaglio, eseguire una lieve molatura per permettere un serraggio ottimale.

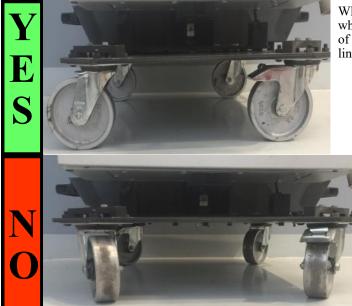
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Raise the locking assembly using the hand wheel until the plate is engaged and secured between the rollers. Now you can lock the assembly by the orange security lever located just above the hand wheel.





While approaching the plate make sure that the wheels of the trolley are all facing the direction of motion so that they will not interfere with the linear movement.



JLTIEDGE 80

FINDING THE ACTUAL ZERO

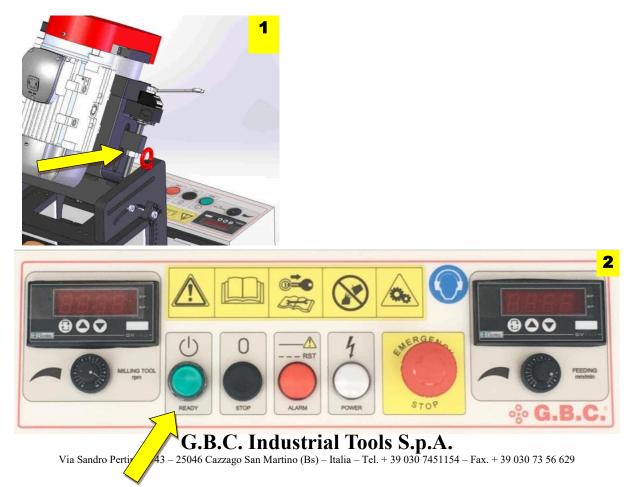
When the reading on the **Depth Digital Reader** is "0.00" it normally indicates that the face mill is not protruding from its compartment and therefore it should not touch the plate when the machine runs on it. However, when the configuration of the machine is changed (from bevel to facing, from bevel to clad removal, or vice-versa) it is necessary to find the **actual "ZERO"** position of the Face Mill relative to that specific configuration and to reset the **DDR** counter to obtain correct readings.

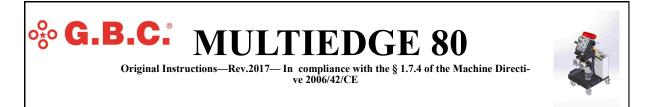
The actual ZERO can be found by following the steps and the corresponding pictures below :

1) Loosen the locking nut;

% **G.B.C**.

2) Place the machine on the middle of the plate, lock it on the plate and start it by pressing the green button on the control panel.





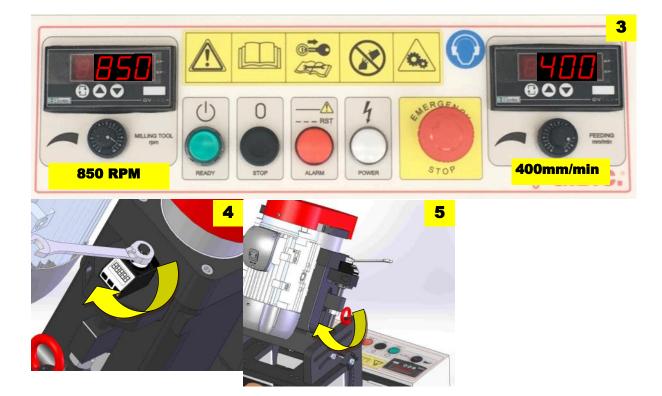
3) The Milling Tool RPM (Face Mill) should be set to 850 and the Feeding Speed should instead be set to about 400mm/min;

4) As the machine starts, you should slowly increase the face mill depth with a ratchet until you hear the distictive buzzing noise of the face mill touching the edge of plate.

This is your **ZERO**. Now you can press the reset button on the **DDR**.

5) Once the pass depth is set to the required value, fasten the locking nut

Now you can rely to the beveling charts on the next page for the normal beveling procedure.



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The below charts are an example of how a bevel can be obtained in 3 different angle settings defining the exact steps depth increase necessary to reach the maximum bevel length achievable with the unit.

0° Angle (FACING)				
Pass	в	L		
1	1	80	1	80

15° Angle				
Pass	Max Pass Depth	Α	в	L
1	6	23.18	6.21	24
2	4.11	39.06	10.46	40.44
3	3.14	51.17	13.71	52.98
4	2.62	61.28	16.42	63.45
5	2.29	70.13	18.79	72.61
6	0.15	70.70	18.94	73.19

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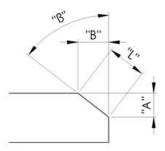
	45° Angle				
Pass	Max Pass Depth	Α	в	L	
1	6	8.49	8.49	12	
2	6	16.97	16.97	24	
3	4.91	23.91	23.91	33.82	
4	3.98	29.54	29.54	41.78	
5	3.42	34.37	34.37	48.61	
6	3.04	38.67	38.67	54.69	
7	2.76	42.57	42.57	60.21	
8	2.54	46.17	46.17	65.30	
9	2.37	49.52	49.52	70.04	
10	2.23	52.68	52.68	74.50	
11	2.11	55.66	55.66	78.72	
12	0.65	56.57	56.57	80	

For any additional information on the parameters such as the Face Mill rotation speed, machine feeding speed, material typologies and different angles you are invited to contact your referent of the Sales Department.

- Plate insertion speed suggested 0.2m/min

- Plate exit speed suggested 0.2m/min

- The travelling speed when the plate is fully engaged can vary in relation to the bevel depth.



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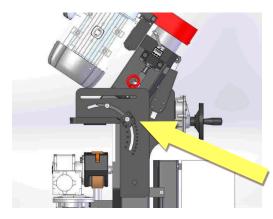


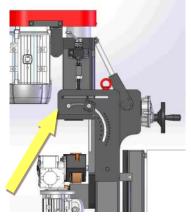


CLADDING REMOVAL CONFIGURATION



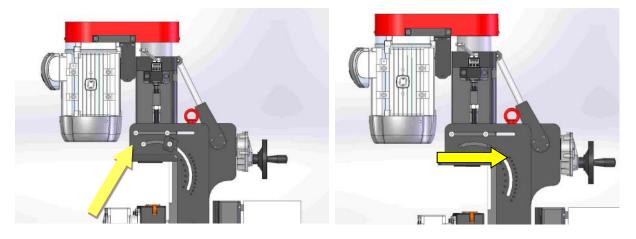
WARNING. Before proceeding with this operation make sure that the unit has been properly cleaned and that it has been disconnected from the main power source. This operation should be carried out in a clean and comfortable area.





Loose the set 4 set screws on both sides of the machine and adjust the head position by using the hand wheel until the digital angle display reads 90°.

N.B. : The area where the set screw slide has to be kept clean and lubirifed at all time.



Move the set screws from the beveling position to the cladding removal position. Now the hand wheel will provide a different movement to the head allowing to achieve a clad removal range from 0 mm to 80 mm.

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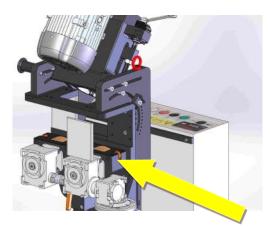


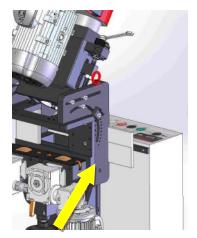
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FACING CONFIGURATION



WARNING. Before proceeding with this operation make sure that the unit has been properly cleaned and that it has been disconnected from the main power source. This operation should be carried out in a clean and comfortable area.

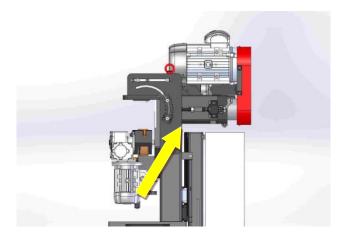




Remove the screws that hold in place the PLATE ABUTMENT TILE indicated in the above picture and replace it with the thicker one supplied with the MultiEDGE 80, which serves specifically for this configuration.



In Facing configuration, the pass depth must be set to 1mm/pass.



Move the set screws from the beveling position to the cladding removal position. Now the hand wheel will provide a different movement to the head allowing to achieve a clad removal range from 0 mm to 80 mm. N.B. : The area where the set screw slide has to be kept clean and lubirifed at all time.

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WARNING. Before proceeding with this operation make sure that the unit has been properly cleaned and that it has been disconnected from the main power source. This operation should be carried out in a clean and comfortable area.

WARNING. Before proceeding with this operation the operator has to install the face mill with round inserts as shown in the following paragraphs.

To determine the correct positioning of the head for the desired J bevel it is necessary to know the specific details such as plate thickness, required land, required radius and exit angle. Once established the details we can calculate the specific angles to set as per the example below:

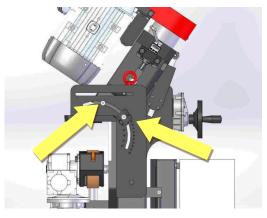
Plate Thickness : 40mm - Land : 3mm

J Bevel °	Head Tilt °	Axis Tilt °	1st Pass	2nd Pass	3rd Pass	4th Pass
5	26,63	5	4mm @ 660mm/min	4,08mm @ 647mm/min	0,62mm @ 1550mm/min	
10	29,73	10	5mm @ 671mm/min	4,04mm @ 647mm/min	2,35mm @ 1110mm/min	
15	32,82	15	6mm @ 680mm/min	3,96mm @ 647mm/min	3,96mm @ 647mm/min	0,1mm @ 1550mm/min
20	35,91	20	6mm @ 870mm/min	4,6mm @ 647mm/min	3,85mm @ 647mm/min	2,15mm @ 1150mm/min

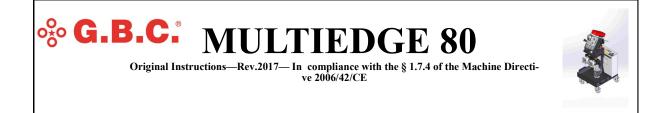
Let's consider we want to make a J Bevel @ 20°

The setting of the head has to be achieved in two steps:

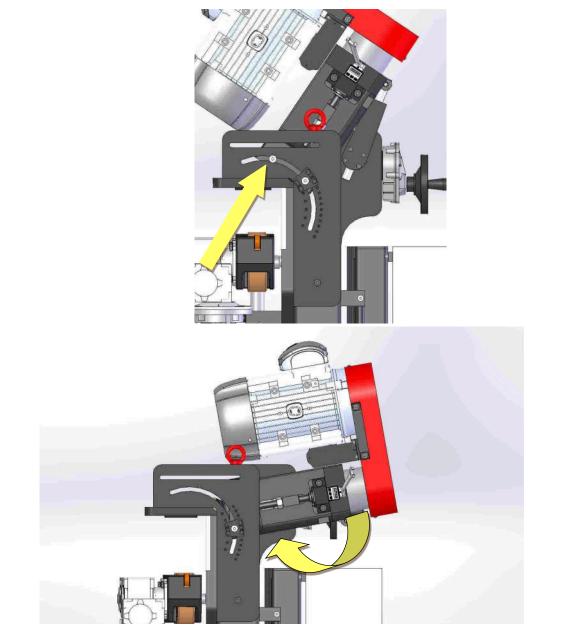
STEP 1 : Loosen the set screws located on both sides of the machine and move the head @ 35.91° as you would do for a normal bevel.



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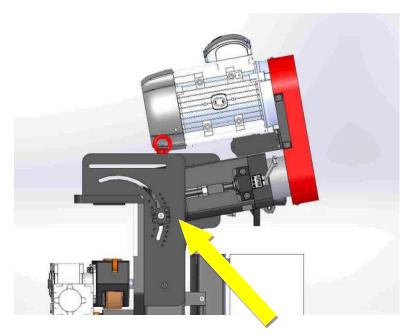
STEP 2: Remove the 2 upper set screws and by using the hand wheel move the head of the machine until it reaches the angle of 20°



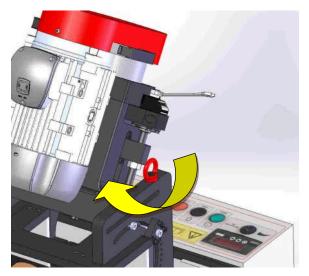




G.B.C.



Fasten the 2 set screws on the sides adding the smaller fixing screws required to secure the side tiles to provide an additional security lock to the acquired position.

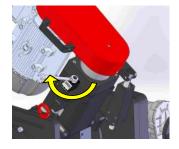


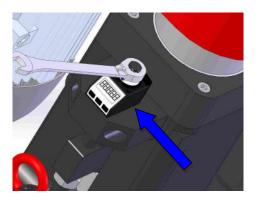
Now you can place the machine onto the plate by adjusting the locking assembly as shown in the previous chapter (Pages 13/14/15) and find the actual "ZERO" as explained earlier (Pages 16 / 17) and proceed with the usual stepping process to obtain the required finishing.

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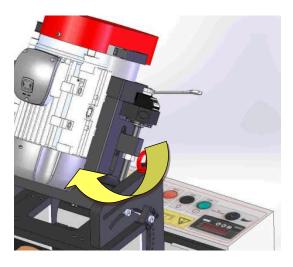








Loosen the locking nut, set the required depth reading the value on the DDR.



Once the deisred depth is reached fasten the locking nut.





Below you can find an example of J Bevel preparation in steps.

10° Angle				
Pass	L			
1	5.30	30.99		
2	2.49	45.58		
3	1.99	57.21		
4	1.69	67.12		
5	1.60	71.08		
6	1.60	70.68		
7	1.60	72.11		

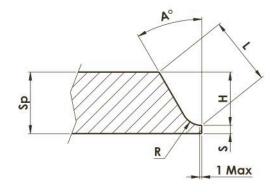


Plate insertion speed suggested 0.2m/min
Plate exit speed suggested 0.2m/min

- The travelling speed when the plate is fully

engaged can vary in relation to the bevel depth.

For any additional information on the parameters such as the Face Mill rotation speed, machine feeding speed, material typologies and different angles you are invited to contact your referent of the Sales Department.

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TIEDGE 80



In compliance with the § 1.7.4 of the Machine Directive 2006/42/CE Original Instructions—Rev.2017—

CONTROLS



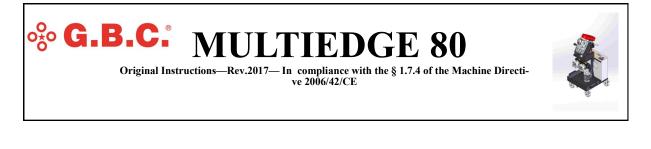
- 1 Face Mill Speed Regulator with LCD
- 2 START/STOP Button With Plate Detection Light
- 3 Face Mill and Feeding Stop
- 4 Wrong Phase/ Inverter Alarm
- 5 Power
- 6 Emergency Stop
- 7 Feeding Speed Regulator With LCD



If the red light is blinking the machine will not start because you need to change the phase in the power

chord.

If the red light is still the machine is in protection mode. Reset the unit.

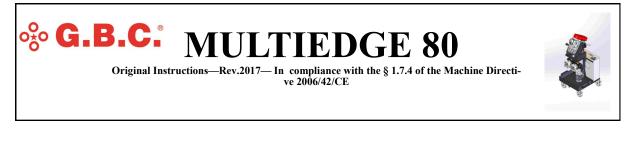




Once the machine is connected to the power source and positioned onto the plate as previously explained the green light will turn on .



Start the machine by pushing the green button as shown in the above picture. The machine will then start working.

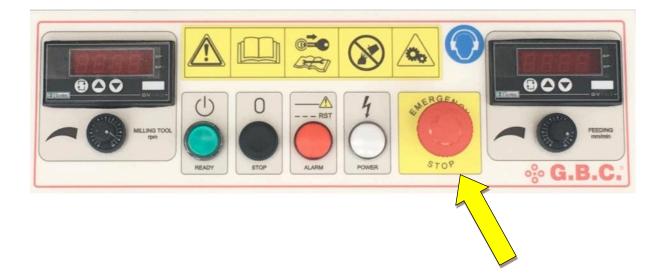




Milling Tool rpm

Feeding mm/min.

Adjust the Face Mill RPM and the Feeding Speed in relation to the material and the pass depth acting of the respective knobs as shown in the above picture.

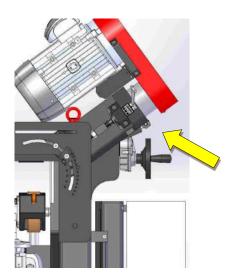


In case of emergency push the **EMERGENCY STOP BUTTON** for an immediate stop of the machine.

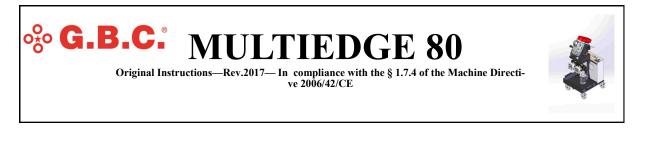


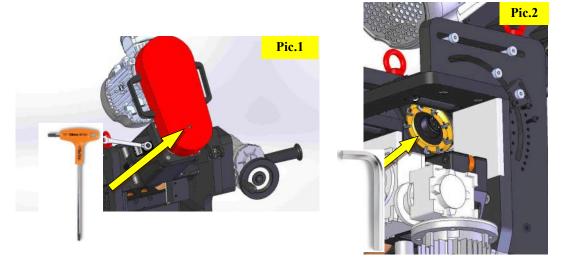


Before proceeding with this operation make sure the access area is clean and that the face mill is easily accessible.

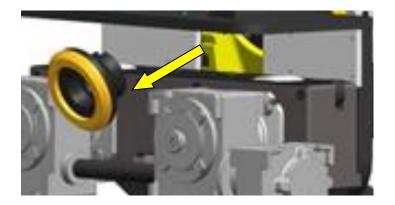


Set the head of the machine to a 45° angle.





This operation can be easily carried out by one single operator. Use the long handle hex key (Pic.1) to reach the socket head cap of the shaft through the hole located on the red protection and at the same time engage the socket head cap of the Face Mill fixing screw (Pic.2) with the standard Allen Key supplied and hold it steady while with the other hand you turn the long handle hex key.



Remove the face mill

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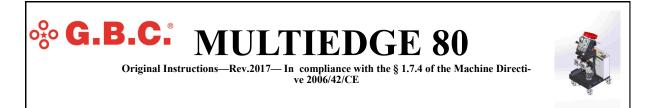


G.B.C.



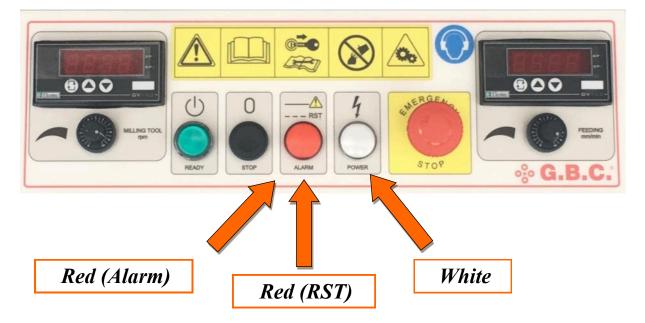
Rotate or replace the carbides using the torx key supplied with the machine tool kit.

Put the face mill back in its seat and fix it by following the dismantling instruction in reverse.





Clean the unit after every single bevel execution paying particular attention to the working area of the Face Mill blowing compressed air to clean off the shavings.



THE MACHINE DOES NOT WORK:

- Verify that the *white* light is on.
- If the *red light (RST)* is blinking you need to switch the phases in the power chord.
- If the *red light (Alarm)* is turned on check the motor protection circuit breaker and/or error codes on the inverter display.
- If the machine should stop due to a mechanical problem the *red light* will turn on. Turn off the main switch and check for possible causes that led to the situation (feeding speed too high or pass too deep). Turn on the unit with the *main switch* and repeat the starting sequence.

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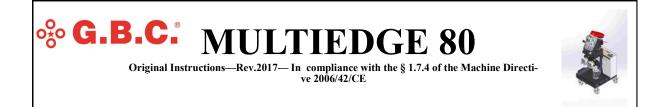




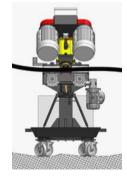
- The machine trolley is equipped with swivel casters with breake to be used for beveling short plates, providing a steady stand to the unit.
- The trolley can be locked in two fixed positions with the locking screw located on the side:
 - Lower position : for storage and transport (Pic.1).
 - Higher position : for beveling short plates and keeping the machine steady during the operation (Pic. 2).

In case of transportation of lifting by means of any kind of lifting device the operator has to ensure the trolley has been locked in the lower position. Failing to do so may very likely damage the pistons and the linear guide of the trolley. This kind of damage is not covered by the warranty.

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The MultiEDGE 80 is equipped with a floating trolley that helps the machine to work on irregular pavements and irregular plates, however we highly recommend the use of the unit on flat pavements with no slopes, free of putholes and obstacles or anything that may hinder the machine travel during the beveling operations.







ORDINARY MAINENANCE

THE MACHINE SHOULD BE SERVICED EVERY 400 WORKING HOURS

THE SERVICE SHOULD BE CARRIED OUT BY G.B.C. OR BY A GBC **CERTIFIED DISTRIBUTOR**

PERIODICAL CHECKS

- CHECK THE GENERAL CONDITIONS OF THE UNIT

- CHECK THE CARBIDES CONDITIONS AFTER EVERY BEVEL AND TURN OR REPLACE CHIPPED OR BROKEN INSERTS AS SOON AS THEY ARE SPOTTED.

GBC SALES DEPARTMENT IS AT YOUR DISPOSAL FOR ANY CLARI-FICATION YOU MAY DEEM NECESSARY, THEREFORE DO NOT HESI-TATE TO CONTACT US AT SALES@GBCSPA.COM.