

EN Instruction manual

Bevel Mite® TEBI 3.0



www.beveltools.com

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1 Important basic information

1.1 Scope of delivery

Before you start setting up and using the TEBI 3.0, please check whether the following components are included in the scope of delivery.

- Bevel Mite® TEBI 3.0
- This manual
- Open-end wrench 22mm

1.2 Service address

Contact	Beveltools B.V.
Address	Folrijweg 33 6883 JN VELP The Netherlands
Phone	+31 (0)26 369 9222
E-mail	info@beveltools.com
WWW	www.beveltools.com

1.3 Legal information

Without the express written permission of **Beveltools B.V.** this operating manual - neither as a whole nor in excerpts - may be electronically or mechanically reproduced, distributed, modified, transmitted, translated into another language or used in any other way.

Beveltools B.V. shall not be liable for any damage resulting from the fact that the operating instructions have not been observed or have been observed only in part.

2. Safety

2.1 Symbols used in the operating instructions

The following symbols and signal words are used in these operating instructions. They are primarily intended to draw the reader's attention to the text of the adjacent safety note.



Note on safety / Warning

This information serves to achieve safe operation. Failure to observe this information may compromise the operator's safety.



Information

This information serves for a good understanding of the operation of the product, thereby permitting full exploitation of the operational potential of the product.



Technical Document

Read the technical document prior to commissioning.



Safety glasses and ear protection

Wear safety glasses and ear protection.



Danger

Warns against serious injuries caused by rotating milling head.



Power connector

Before any work is carried out on the machine, disconnect the power connector.



Disposal



2.2 Operator's duty of care

- In particular, the operator must ensure that the TEBI 3.0 is used only as intended.
- The TEBI 3.0 may be operated only if it is in perfect working order.
- The safety equipment must be checked regularly for proper functioning.
- Required personal protective equipment (safety goggles) must be provided and worn by the operating and maintenance personnel.
- The operating manual is part of the product. They must always be kept in a legible and complete state at the place of use of the TEBI 3.0. It must be ensured that all persons who have to carry out activities on the TEBI 3.0 have read and understood the Operating Instructions and can view them at any time.
- The personnel must be regularly instructed in all applicable requirements of occupational safety and environmental protection. The personnel must have understood the operating instructions and in particular the safety instructions contained therein. In addition to the operating instructions, the rules and regulations for accident prevention applicable at the place of use must also be observed.
- Attached safety and warning notices must not be removed and must remain legible. Damaged or illegible signs must be replaced immediately.
- The basic prerequisite for safe handling and trouble-free operation of the TEBI 3.0 is knowledge of the basic safety instructions.
- Failure to comply with the operating instructions or inadequate safety measures can result in serious injuries.
- No modifications of any kind may be made to the TEBI 3.0.
- A safety distance of 1m from the machine must be maintained for persons passing by the TEBI 3.0.
- In the event of malfunctions of the TEBI 3.0, it must be switched off immediately using the on/off switch.

2.3 Intended use of the TEBI 3.0.

The TEBI 3.0 is intended exclusively for deburring and chamfering internal and external contours on workpieces made of steel (except hardened steel), stainless steel, plastics and non-ferrous metals.

The TEBI 3.0 is not intended for any other type of use than that described above - this is considered improper use. The TEBI 3.0 may only be used in industry and trade. Intended use also includes observance of all the information in these operating instructions and compliance with the maintenance work. Beveltools B.V. is not liable for damage caused by incorrect use or by non-observance of these operating instructions.

2.4 Qualification of staff

The TEBI 3.0 may only be operated by persons who have been trained, instructed and authorized to do so. These persons must have read and understood the operating instructions and act accordingly. The respective powers of the operating personnel must be clearly defined.

The corresponding qualifications are required for the following activities:

- The TEBI 3.0 may only be transported by authorized personnel.
- The TEBI 3.0 may only be connected by a qualified electrician or by instructed persons under the direction and supervision of a qualified electrician in accordance with the electrotechnical regulations.
- Troubleshooting may only be carried out by authorized personnel.
- Maintenance and servicing may only be carried out by authorized and qualified personnel.
- Cleaning may only be carried out by instructed authorized personnel.

2.5 Personal protective equipment



When working on the TEBI 3.0, it is mandatory to wear protective goggles!

2.6 Safety-relevant ambient conditions

The TEBI 3.0 must not be operated in an explosive environment or outdoors.

2.7 Residual dangers

2.7.1 When transporting the TEBI 3.0

WARNING!

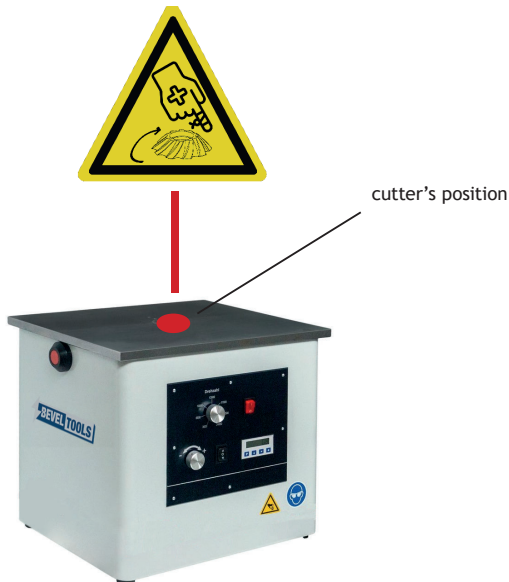
When lifting the TEBI 3.0, there is a risk of it from falling over. Before lifting the TEBI 3.0, all persons must leave the danger area. The TEBI 3.0 may only be transported and set up in the manner specified in Chapter 5!

2.7.2 When operating and handling the TEBI 3.0

WARNING!

Serious risk of injury from cutter!

Never touch or reach into the cutter! (see following figure)



2.7.3 During maintenance

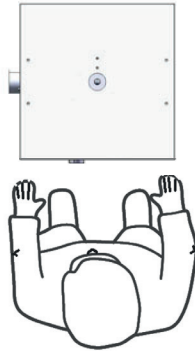
CAUTION!

A cutter that is not securely fastened will result in serious injuries to the operating personnel and damage to TEBI 3.0.

Always tighten the cutter!

2.8 Workplace of the operator

The position of the operator when using the TEBI 3.0



2.9 Observance of the operating manual

- The operating instructions must always be observed in full and kept in the immediate vicinity of the machine.
- The operating instructions must be available at all times and in all phases of the life of the TEBI 3.0.
- The operating instructions must be passed on to any subsequent owners of the machine.

2.10 Safety marking on the TEBI 3.0

All safety-relevant information in the form of stickers, signs or other notices on the machine must be observed.



- **MANDATORY!** Wear protective goggles!



- **WARNING!** Danger due to dangerous electrical voltage! Unplug the TEBI 3.0 when not in use.



- **WARNING!** Serious risk of injury from rotating milling head! Never touch or reach into the rotating milling head.

2.11 Checking the function of the machine and safety symbols.

Operation with defects on the TEBI 3.0 is strictly prohibited!

2.12 Emergency Procedures

In case of an emergency, immediately switch off the TEBI 3.0 using the on/off switch!

2.13 Accident Information

Immediately inform Beveltools about accidents and potential hazards that are identified.

2.14 In Case of Fire

In the event of a fire, immediately switch off the TEBI 3.0 using the on/off switch.

When using unsuitable equipment for firefighting:

- Toxic gases (vapors) can be generated,
- There is a risk associated with electricity,
- There is a danger of electric shock.

For firefighting:

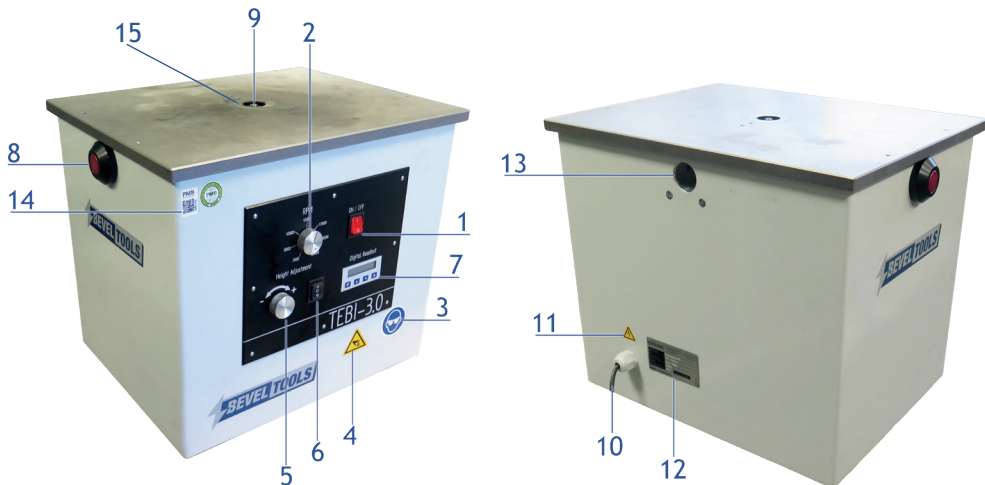
- Only use fire extinguishers of class ABC.
- Use CO2 fire extinguishers for fires involving the electrical system.

3. Technical Data

Dimensions:	L x W x H: 450 x 350 x 398 mm
Weight:	45 kg
Sound Power Level:	70 dB(A)
Motor Power:	1800 W
Rotation Speed:	3000 - 24000 rpm
Voltage Supply / Frequency:	230 V AC / 50 Hz

4. Structure and Function

4.1 Structure and Controls



No.	Description
1	On/Off switch
2	Rotation speed adjustment dial
3	Use safety goggles reminder
4	Rotating cutter danger warning
5	Cutter height adjustment speed dial
6	Cutter height adjustment button
7	Digital display for reading the cutter height
8	Button for locking the spindle when changing the cutter
9	Adapter for the cutter
10	Power cable with Schuko plug
11	Dangerous voltage safety sign
12	Type plate
13	Hole for (optional) vacuum cleaner
14	Inspection certification sticker & QR link
15	Ring cover

4.2 Functional Description

The TEBI 3.0 is used for chamfering and deburring internal and external contours on flat workpieces. The chamfer height can be adjusted using the adjustment button and dial (5,6), and the corresponding rotation speed can be set using the dial (2).

4.3 TEBI Guide (Optional)

4.3.1 Functional Description

The TEBI Guide is an optional attachment for the TEBI 3.0. Placed on top of the TEBI 3.0, it gives extra protection and guidance when using the TEBI 3.0. The TEBI Guide can also be combined with a MQL (Minimum Quantity Lubrication) unit.

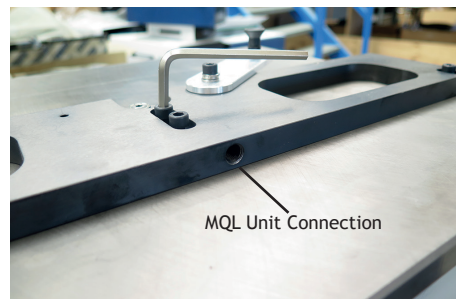
Note that the TEBI Guide is sold separately.

4.3.2 Assembly and use

- Place the TEBI Guide on the TEBI 3.0 plate and line up the screw holes.
- Line up the TEBI Guide with the guide bearing of the cutter.
- Secure the TEBI Guide onto the TEBI 3.0 with screws.
- Close the cover over the cutter.

Optionally

- When using a MQL unit, connect the hose to the TEBI Guide.



5. Delivery, Intra-company Transport, Unpacking



5.1 Safety WARNING!

When lifting the edge and contour milling machine, it can overturn, shift, or fall. Before lifting, all persons must leave the work area. Safety shoes must be worn!

5.2 Delivery

The TEBI 3.0 is delivered on a pallet with the accessories (see scope of delivery). Pay attention to the symbols on the packaging. The TEBI 3.0 should only be lifted using lifting devices with sufficient load-bearing capacity.

5.3 Intra-company Transport

5.3.1 Before Transport

- Disconnect the TEBI 3.0 from the power supply. (Unplug the Schuko plug)
- Remove any workpieces still on the TEBI 3.0.
- Remove all tools.

5.3.2 Transporting the TEBI 3.0 to the Installation Site

- Drive the TEBI 3.0 under it with a suitable lifting device.
- Pay attention to weight distribution (center of gravity) to prevent tipping, and lift the machine carefully.
- Drive cautiously and slowly. Avoid inclined surfaces and prevent abrupt lowering.

5.4 Unpacking

- Unpack the contents and check if all parts listed in Chapter 1 are present.
- In case of transport damage or incomplete content, please contact the service address listed in Chapter 1.
- If the TEBI 3.0 needs to be stored before use, consider the following points:
 - Completely cover the TEBI 3.0 to prevent dirt and dust from entering.
 - The storage area must be dry and clean.
 - Do not expose the TEBI 3.0 to extreme cold or heat.
 - The TEBI 3.0 must be placed on a level surface to avoid warping or twisting.
 - The manufacturer/supplier assumes no liability or warranty for corrosion damage resulting from improper storage.

6. Assembly and Installation, Initial Operation

6.1 Space Requirements and Fastening of the TEBI 3.0

- Place the TEBI 3.0 on a sturdy foundation.
- Provide sufficient space on all sides of the TEBI 3.0 to facilitate assembly and maintenance.
- Align the TEBI 3.0 horizontally using a spirit level.
- Operate the TEBI 3.0 in a dry, clean workspace.

6.2 Electrical Connection of the TEBI 3.0

The electrical connection of the TEBI 3.0 is made via the power cable with the Schuko plug to 230V* (pre-fuse 16A). Local regulations and legal requirements must be observed.



WARNING! Dangerous electrical voltage!

6.3 Using the TEBI 3.0

Before using or turning on TEBI 3.0, ensure the following points are met:



- The TEBI 3.0 must be securely positioned.
- The TEBI 3.0 must be connected to 230V* via the Schuko plug (pre-fuse 16A).
- Foreign objects or tools on the TEBI 3.0 must be removed.

* In the US & UK, this is 120V.

7. Operation

7.1 Safety

To avoid machine damage or life-threatening injuries during the operation of the TEBI 3.0, the following points must be strictly observed:

- The TEBI 3.0 should only be used/deployed according to its intended purpose (see Chapter 2).
- Familiarize yourself with the correct procedures in case of malfunctions before turning on the TEBI 3.0 (refer to Chapter 8).
- Inspect the protective devices/coverings on the TEBI 3.0 before switching it on.
- If a "malfunction" occurs, the TEBI 3.0 must be shut down immediately.

7.2 Before Turning On the TEBI 3.0

- Put on the safety goggles (eye protection).
- Ensure that no objects are on the machine, and the housing is not damaged.

7.3 Turning On the TEBI 3.0, Adjusting, and Feeding the Workpiece

To set up the machine for the workpiece, follow these steps:

WARNING!

There is a risk of injury due to the rotating cutter during the following tasks!
Never reach into the rotating cutter!



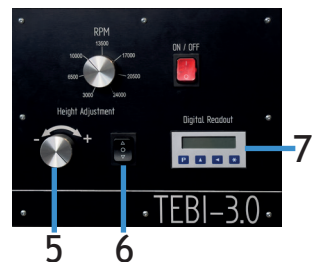
MANDATORY

When working on the TEBI 3.0, wearing safety goggles is mandatory!

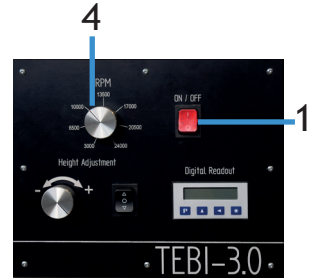


- Power on the machine by plugging in the power plug.
- Before use, calibrate the cutter's position. To do this, ensure that the top of the cutter is lined up with the TEBI's tabletop by following these steps:
 1. Set the cutter height by using the button (6).
 2. Fine-tune the height by decreasing the speed with which the cutter is moving up or down. Turn the dial (5) to the right to increase the height adjustment speed, and left to decrease it.
 3. Once the top of the cutter is lined up with the TEBI's tabletop, press and hold the button labeled (*) underneath the digital display (7) for a few seconds. This will set the baseline measurement to '0,0' so that the cutter is calibrated.

- The required cutter height for your workpiece can now be set. The corresponding cutter height can be read from the digital display (7).



- Turn on the TEBI by pressing the ON/OFF switch (1).
- Set the required rotation speed using the controller (4).



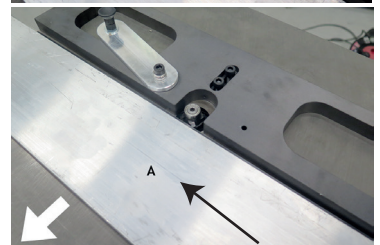
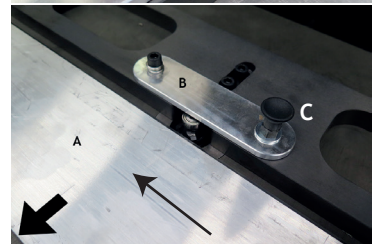
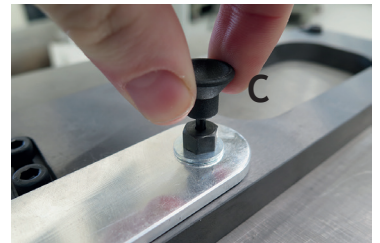
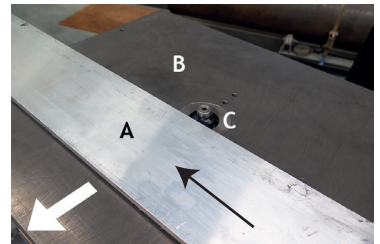
CAUTION!

Never touch the cutter with the workpiece when the cutter is not rotating.

In the following pictures, the arrow in the bottom-left points towards the operator. The thinner arrow on the workpiece signifies the direction in which the workpiece must be moved across the cutter.

- Without using the TEBI Guide:
 - Place the workpiece (A) on the milling plate (B), align the edge to be processed with the cutter (C), and feed the workpiece along the cutter.
- When using the TEBI Guide:
 - Pull on the handle (C) and hold it open. Turn the cover (B) in position over the cutter for extra protection.
 - Place the workpiece (A) against the TEBI Guide and feed it along the cutter.

After processing, remove the workpiece from the opposite side.



7.4 Emergency Shutdown of the TEBI 3.0

In case of an emergency to bring the Tebi 3.0 to a stop, immediately press the On/Off switch.

Bear in mind that there is no emergency button on the TEBI 3.0. Always use the On/Off switch in to stop the machine.

7.5 Troubleshooting

To troubleshoot issues, follow the procedures described in Chapter 8.

7.6 Shutdown

- Turn off the machine using the On/Off switch.
- Unplug the Schuko plug from the power outlet.

8. Troubleshooting

8.1 Safety

To prevent machine damage or injuries when troubleshooting the machine, the following points must be strictly observed:

- Only eliminate a malfunction if you have the specified qualifications.
- Always adhere to the safety instructions in Chapter 1.

8.2 Service Address

If a malfunction cannot be resolved following the troubleshooting steps below, promptly contact the following service address:

Contact	Beveltools B.V.
Adress	Folrijweg 33 6883 JN VELD The Netherlands
Phone	+31 (0)26 369 9222
E-mail	info@beveltools.com
WWW	www.beveltools.com

8.3 Measures for Troubleshooting

Malfunction	Possible Cause(s)	Remedy
Milling head not turning	TEBI 3.0 not turned on	Turn on the TEBI 3.0 using the On/Off switch
	Plug not inserted in Schuko socket	Insert the plug into the Schuko socket
Poor chamfer/roundings or unclean chamfer/roundings	Dull cutter	Replace the milling cutter. See Chapter 9 for instructions

Specific troubleshooting steps may vary based on the nature of the malfunction. Always refer to the manufacturer's guidelines for accurate troubleshooting and resolution.

9. Maintenance

9.1 Safety

To avoid damage to the machine or life-threatening injuries during maintenance of the TEBI 3.0, the following points must be strictly observed:

- Turn off the TEBI 3.0 using the On/Off switch and unplug the power cord.
- Maintenance work should only be performed by authorized personnel with adherence to safety regulations.
- Use only spare parts listed in our spare parts list.
- Repairs should only be carried out by the service personnel of esmatec GmbH (Service address as mentioned in Chapter 1).
- If specified, use the prescribed special tools (included in the delivery) during maintenance.
- Always read the safety instructions in Chapter 1.

9.2 Maintenance Schedule

Activity	Maintenance interval	Actions to be performed
Clean casing	Weekly	Clean the casing or covers with a neutral cleaning agent.
Before each startup	Check safety devices	Verify that the safety devices are fully applied, secured, and undamaged.
Replace milling cutter	Poor or unclean chamfer	Follow the procedure for replacing the milling cutter as described in the subsequent Chapter 9.3.
Check the sacrificial adaptor	When replacing the cutter	When broken, replace it with a new adaptor.

9.3 Changing the cutter

- Turn off the TEBI 3.0 using the On/Off switch (1).
- Extend the cutter as much as possible by pressing the height adjustment button (6).

Optionally, remove the metal ring cover. This allows for easier access to the cutter and allows for cleaning around the cutter. The metal ring cover can be easily removed by hooking an allen wrench into it and lifting it up.



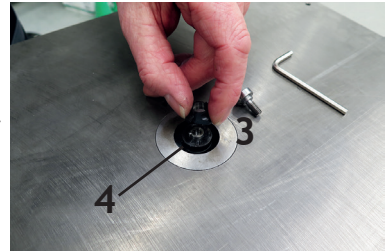
- Press the locking button (1), keep it pressed while turning the guide bearing(2) with the provided hex wrench until the internal locking mechanism snaps the spindle. From this point, keep turning the guide bearing until you can take the guide bearing out and remove the cutter.



WARNING!

Pushing the locking button when the spindle is still rotating, because the TEBI 3.0 is on, will damage the locking fork!

- Remove the cutter (3).
 - If the adaptor (4), located underneath the cutter, is broken, replace this. If necessary, replace the adaptor pin as well before replacing the cutter.
- To replace the cutter, follow the reverse order. Note that when placing a new cutter, make sure that the adaptor pin fits inside the niche at the base of the cutter.



CAUTION!

Risk of injury due to inadequately secured milling cutter. Always tighten the securing nut of the cutter firmly!

10. Disassembly and Disposal

Protect the environment!

- Before disassembling for recycling or scrapping, completely remove all oils and other water-polluting substances.
- Dispose of unusable hazardous substances at the designated disposal site.
- Generally, the TEBI 3.0 can be separated into the following material groups:
 - Metals
 - Electronic waste (boards, cables, etc.)
 - Plastics (according to labeling)
 - Operating and auxiliary materials such as oils, greases, coolant





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