

B-Dock device for bevelling smaller parts and strips - ordering no. 25350

Operation & Maintenance Manual

These instructions can only be used in conjunction with the official instructions for B10 Electra or B15 Electra



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1. General information

1.1 Introduction

Thank you for purchasing one of our products, and we hope that you will be fully satisfied.

This manual contains all instructions for the installation, adjustment, operation and maintenance of the B-Dock device for bevelling smaller parts and strips in compliance with applicable safety standards.

The information and data contained in this manual can be subject to changes due to further improvement of machinery and devices. To eliminate any doubts, when differences are detected, please contact N.KO.

Never perform any operation before you read the instructions in the manual and understand them. Major part of accidents that happen at the workplace are due to the fact that the instructions and recommendations contained in the manual are not complied with.

The graphic symbols used in the manual are intended to emphasize the important information regarding the safety and operation of the machinery and devices.



Attention :

Information important for the personal safety of the operating staff.



Important:

Instruction that needs to be observed to ensure proper functioning of the machine.

1.2 Warranty

The B-Dock device is provided by the seller with a warranty that the article shall not feature any material and production defects for a period of 12 months following the delivery date.

The machine is provided with a 12-month warranty from the delivery date for the faultless function of the article and the materials used.

The seller undertakes to make sure that any potential warranty defects are removed free of charge and without undue delay so that the buyer is able to use the article the way they desire. Should the buyer claim liability for warranty-unrelated defects, it shall reimburse the seller for any expenses associated with that.

The warranty period does not run from the date the buyer reports to the seller the existence of a defect covered by the warranty, which does not allow the buyer to use the article and assert its rights from liability for defects of the provided warranty up to the date of its removal by the seller.

The warranty does not cover natural and normal wear and tear and defects caused by improper use of the article in violation with the provided training and documentation. This warranty does

not further cover defects caused by overloading of the article, or defects occurred after any improper interference in the article, or improper repair or modification of the article. Tampering, repair or modification means any intervention, repair or modification that was made in contradiction with the provided training and documentation, or was made by a person other than the seller, or a person authorised or approved by the seller.

Any rights from liability for defects from the provided warranty must be filed at the seller without undue delay after the buyer discovers a defect, but no later than by the end of the warranty period, otherwise the rights will expire.

To exercise the rights from liability for defects of the provided warranty it is necessary to submit a tax document. Otherwise, the buyer cannot be assigned these rights.

The Seller's liability for defects covered by the warranty does not arise if these defects were caused after the risk of damage to the article due external events was transferred. External events are, in particular, natural disaster, force majeure event, or conduct of third parties.

N.KO. considers the warranty invalid in the following cases:

- improper use of the product;
- it is used in conflict with national or international standards;
- improper installation;
- defective power supply;
- severe shortcomings in maintenance;
- unauthorised modifications and/or interventions;
- use of non-original or wrong spare parts and accessories for that model;
- full or partial failure to follow the instructions;
- extraordinary events, natural disasters or others.

2. SAFETY

2.1 Safety recommendations



Attention:

Get thoroughly familiar with the following instructions to prevent personal injuries and/or damage to property.

- Never attempt to work with the device unless you have become fully familiar with the way it works. Should you have any doubts even after you have carefully and completely read this manual, please contact N.KO.
- Make sure that all technical workers that are supposed to use the device and perform its maintenance are fully familiar with all the relevant safety recommendations.
- The device must be installed only by specialised workers and in accordance with the instructions contained in this manual.

- Prior to starting the work, the operating staff must make sure that all safety devices are functional and all safety covers are mounted.
- Never use the device for another purpose than the one specified in the manual. Never process other than the defined products.
- Before you start using the machine for another purpose than the one described in this manual, please contact N.KO.
- Parts considered defective replace with other parts recommended by the manufacturer. Never replace parts with other than original ones.
- Never wear clothing or jewellery that might get caught in the moving parts.
- Always wear safety clothing, shoes with non-slip soles, gloves, ear muffs and goggles.



Important:

If any defects occur during the life of the device that cannot be repaired according to this manual, it is advisable to contact the company N.KO to resolve the problem as soon as possible.

2.2 Qualification and protection of operating staff

Employer is obliged to inform the operating staff on safety standards and also ensure that those are respected, and make sure that the working area is large enough and well lit.

The term “operating staff” means a person who assembles, installs, operates, adjusts, performs maintenance, cleans and repairs the device.



Attention:

Before starting the work, the operating staff must be familiar with the characteristics of the device, and must have read this entire manual.



Attention:

The operating staff shall always make sure that:

- that all safety covers are mounted, and that all safety devices are functional before they start up the device.
- refrain from wearing clothing or jewellery that might get caught in the moving parts.
- wear the approved safety clothing, such as shoes with non-slip soles, ear muffs and goggles.
- apply safety standards, make sure that they are always observed and if in doubt, look again into this manual before making any arrangements.
- contact the supplier when any defects that cause malfunction of the device cannot be removed when the defects relate to faulty parts or irregular operation.

2.3 Safety equipment

The B-Dock device is equipped with safety covers to isolate zones that could be dangerous for the operating staff. These covers are screwed to the frame or screwed together with the device and machine structure. They can be removed using suitable wrenches. This operation may be needed for certain maintenance activities.



Attention:

Removing the cover must always be carried out when the machine with the device are at rest and the electrical supply line plug is pulled out. Never use the device without the mounted safety guards.

2.4 Residual risks

The B-Dock device was designed and constructed with all devices and equipment to ensure the health and safety of the operating staff.

The device is fully enclosed, so that the risk of contact with the moving parts was prevented to the utmost extent.

However, there is one remaining risk:

As mentioned above, the working zone is protected as much as possible, but must remain partially open in order to insert the material for machining.

It is therefore possible that the operating staff may put their fingers into the zone in which both the cutting tool and the guide ruler are located.



Attention:

Keep the hands as far away as possible from the cutting zone.



Attention:

Always apply the safety procedures contained in the manual and make sure they are observed, and that all residual risks have been eliminated.



Attention:

Information labels with safety instructions and recommendations are located on the machine. Never remove these labels.

3. TECHNICAL SPECIFICATION

3.1 Mounting the B-Dock device

The B-Dock device for bevel chamfering on smaller parts and strips is designed exclusively for use with the B10 Electra or B15 Electra machines produced by the N.KO. company. One of its main advantages is the possibility of processing smaller work pieces or parts that cannot be clamped to the working table and machined directly by the B10 Electra or B15 Electra bevelling machine.

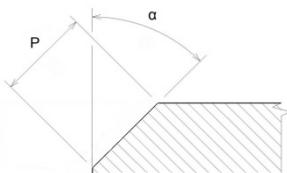
The B-Dock bevel chamfering device is reliable and requires only minimal maintenance.

3.2 Technical data

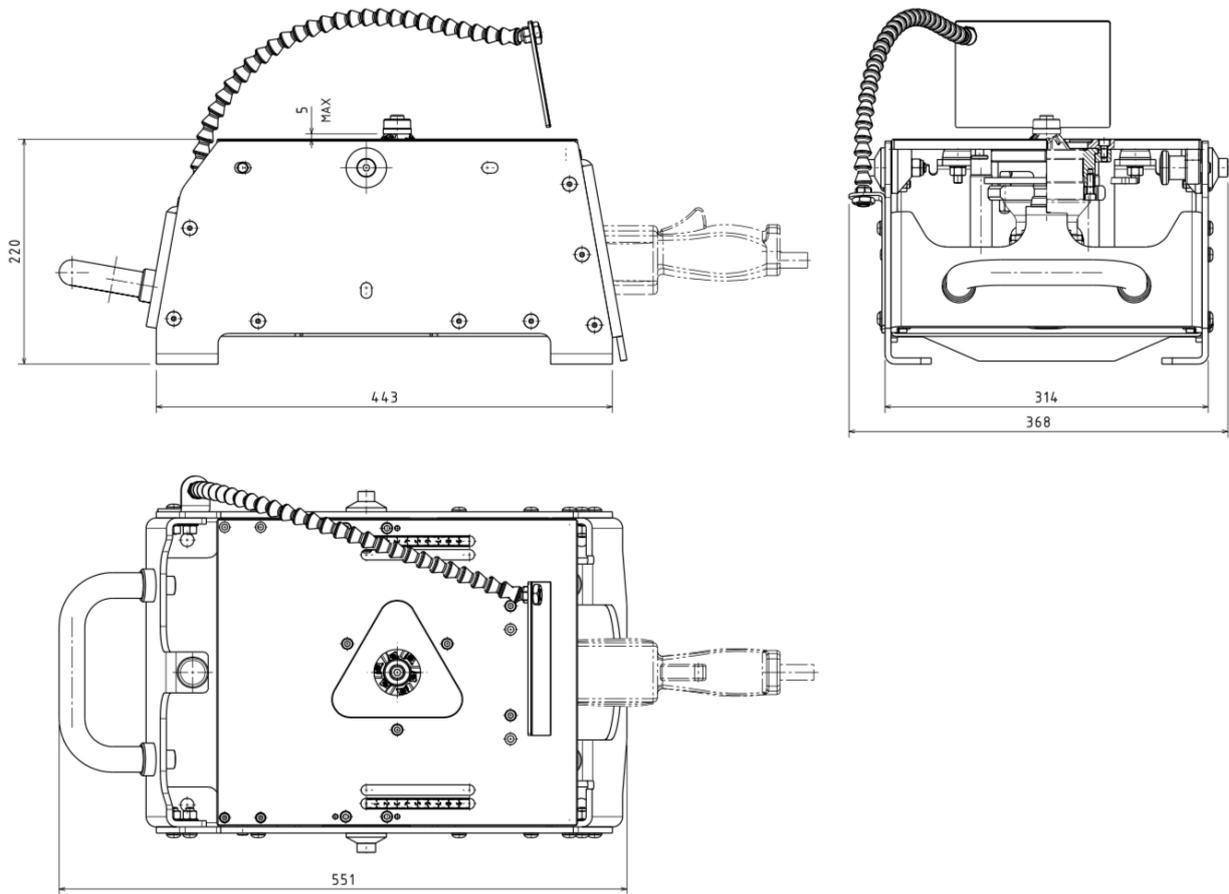
Bevel size on steel at each angle

The maximum bevel width that is allowed to be machined with B-Dock is 5 mm (dimension P, Fig. 3.2.1.)

Fig. 3.2.1.



The maximum and minimum dimensions of the processable material must always be such as to ensure safe grip and holding of the work piece in the hands of the operating staff. If there is a risk of contact of the operating staff with the cutting tool, it is forbidden to carry out such an operation and it is recommended to use a suitable fixture for clamping the work piece and for safe bevelling or chamfering.



Weight of the device without the power unit: 28 kg/62 lb.

3.3 Conditions of work environment

The environment in which the device operates must comply with the following values:

Temperature: 0°C - 50°C
Humidity: 10% - 90% (non-condensed)

The machine with the device must be placed under a cover and not be exposed to rain.

Any conditions of the working environment other than the listed above may cause serious damage.

If the device is not in use, it may be stored in a place where the temperature varies in the range of: -10°C to 70°C

All other values remain unchanged.

4 INSTALLATION AND MOUNTING OF THE B-DOCK DEVICE

4.1 Transport and handling



Important:

The operations described in this section shall be performed by qualified personnel only.

When the B-Dock device is delivered to the place of destination, make sure (yet in the presence of the carrier) that it meets the specifications in the order and that it suffered no damage during the transport. Inform the N.KO company and the carrier in detail immediately should any damage or missing parts be detected. Later claims are disregarded.



Attention:

Please observe the following instructions and ensure that handling of the device is safe:

- Wear protective clothes, such as work gloves, shoes with non-slip soles, and a helmet and safety goggles when handling the device and the machine.
- If the device is in a carrying case, remove it and dispose of it in accordance with the applicable laws of the particular country.

4.2 Mounting of the B-DOCK device and mounting of the B10 Electra or B15 Electra power unit.



Important:

The operations described in this section shall be performed by qualified personnel only.

The B-Dock device is supplied standardly in a cardboard box and unfolded. Follow the instructions below to assemble the device and connect the power unit.

Mounting the B-Dock device:

- Remove all parts and fasteners from the cardboard box.
- Using screws, washers and nuts (Pos. A, Fig. 4.2.1.), assemble the side panels D and F, front panels E and C and bottom panel B to form the machine frame according to Fig. 4.2.1.
- Mount the assembled plexi-glass shield holder (Pos. A, Fig. 4.2.2) on the side of the machine.
- Install the handle on the front panel of the frame (Pos. B, Fig. 4.2.2.).
- Mount the working table (Pos. A, Fig. 4.2.3.) using the supplied pins (Pos. B, Fig. 4.2.3.) and secure with retaining rings. You may need to use special pliers or a screwdriver to install the retaining rings.
- Depending on the type of power unit installed, mount the supplied pins (Pos. A, Fig. 4.2.4.) into the pre-drilled holes (Pos. B, Fig. 4.2.4.) for the B10 Electra or (Pos. C, 4.2.4.) for B15 Electra power unit. The pins are used to retain the shock response of the power unit during machining. Install the pins on the back of the working table.
- Depending on the type of power unit installed, install or remove the stop pins (Pos. A, Fig. 4.2.5.). If using the B10 Electra power unit, remove the stops. If using the B15 Electra power unit, install the stops.

Fig. 4.2.1.

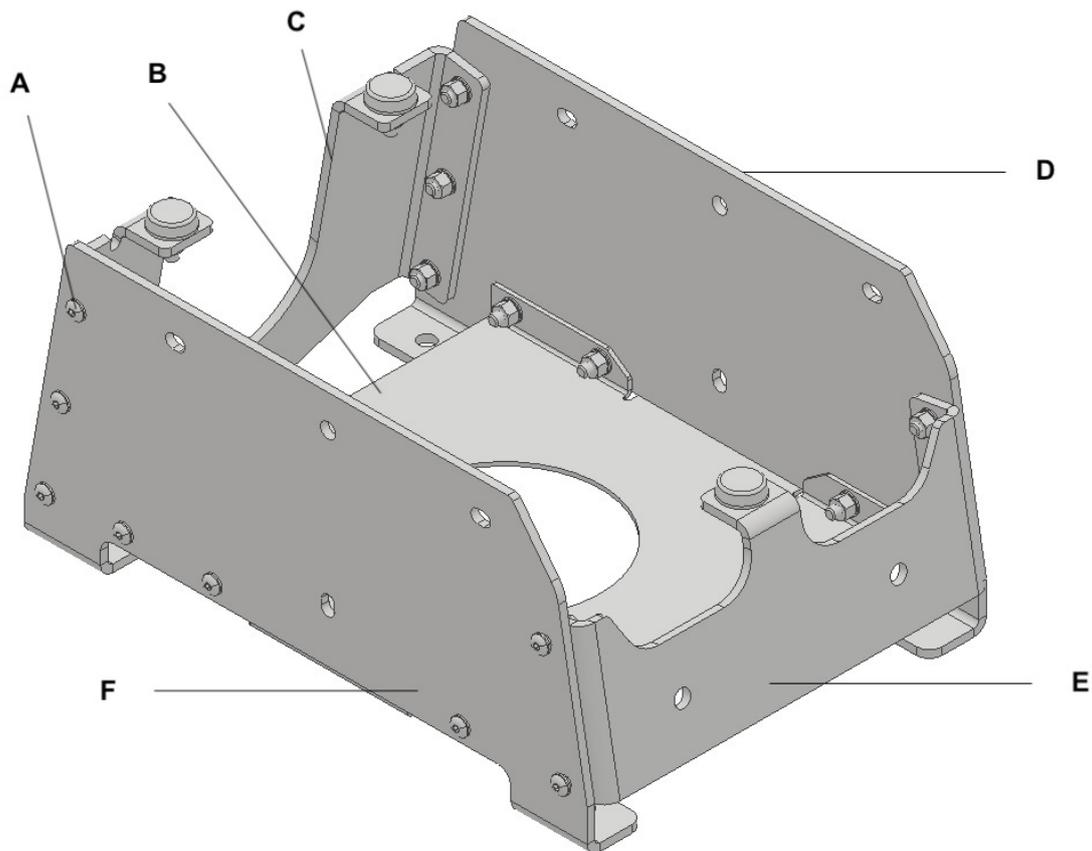


Fig. 4.2.2.

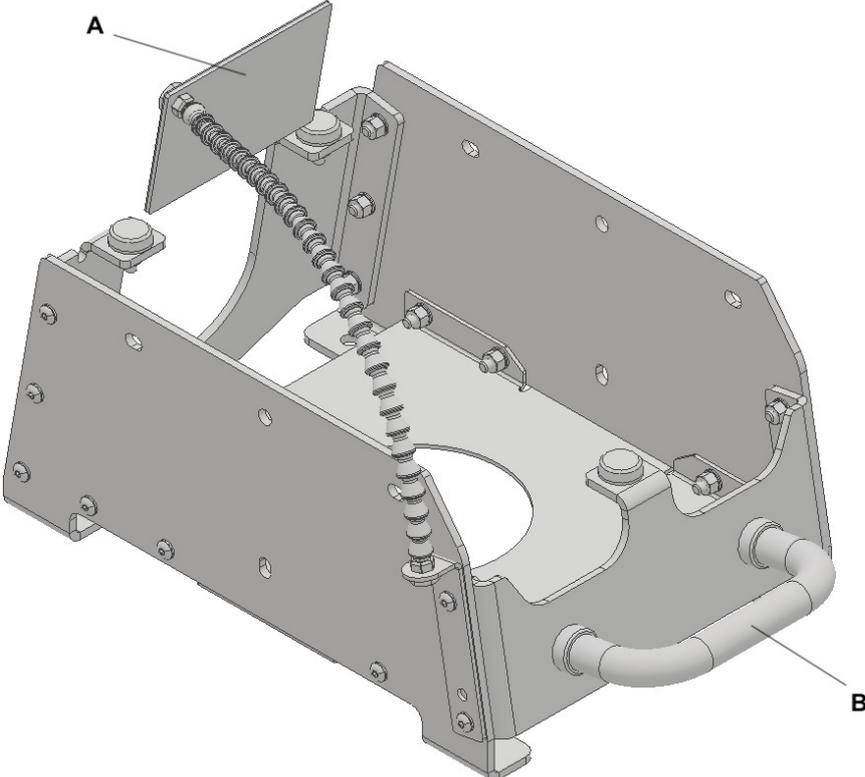


Fig. 4.2.3.

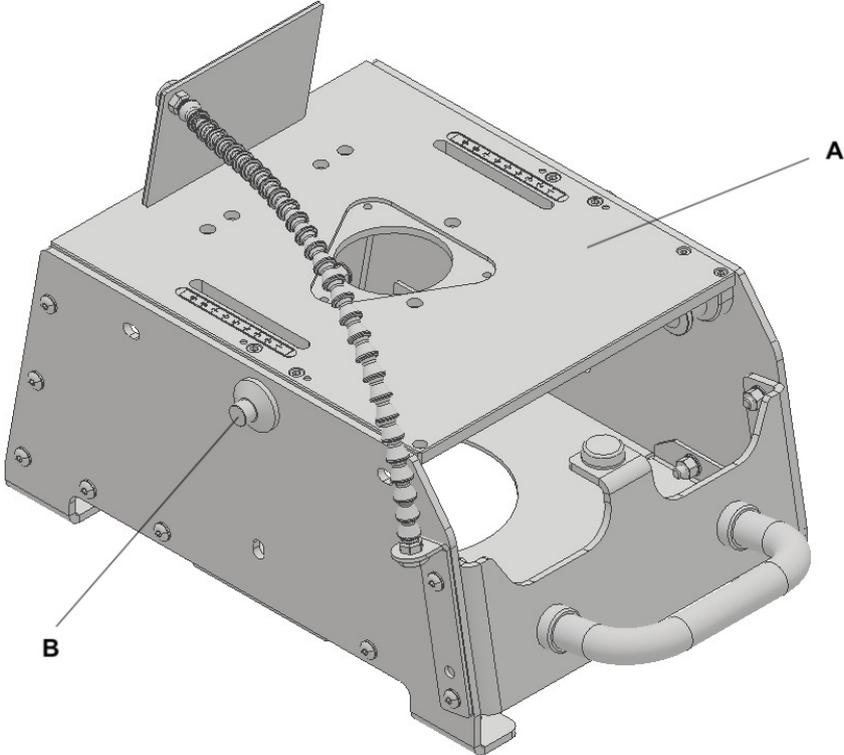


Fig. 4.2.4.

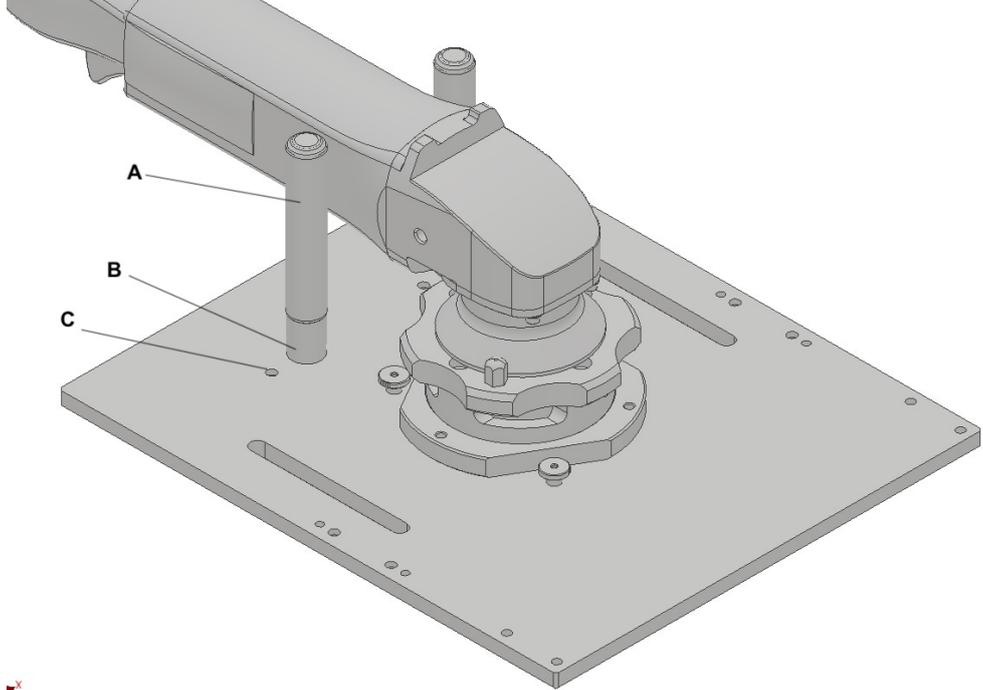
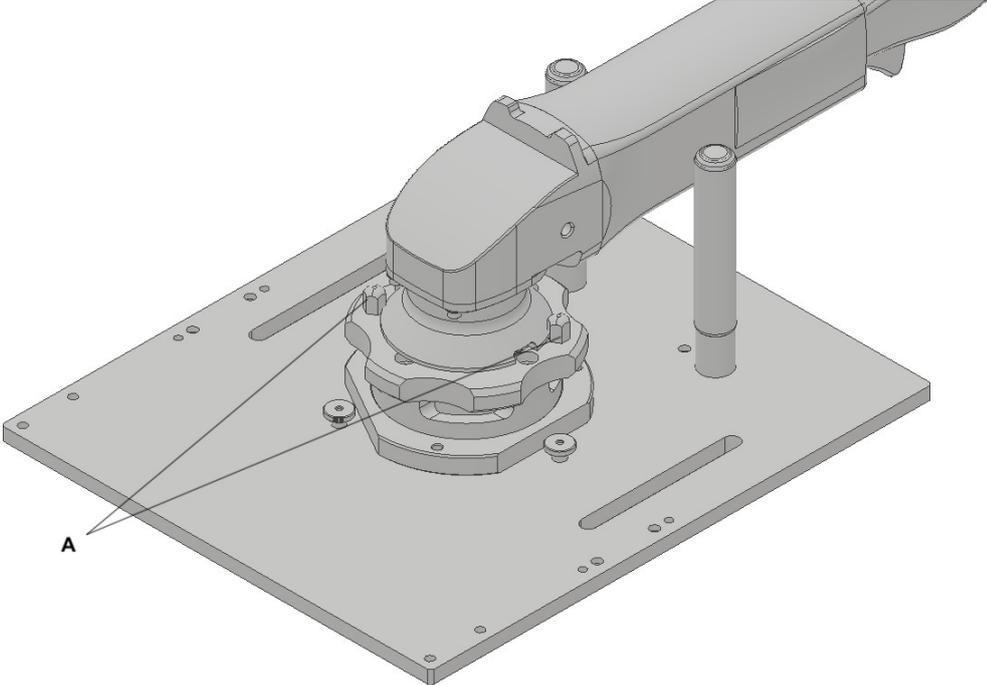


Fig. 4.2.5.



Mounting of the B10 Electra or B15 Electra power unit:

- Unlock the working table with a locking pin (Pos. A, Fig. 4.2.6.) and swivel it by 180° to a position suitable for mounting the power unit.
- Remove the pressure guide plate from the B10 Electra or B15 Electra power unit. Follow the instructions for the respective B10 Electra or B15 Electra power unit.
- Mount the required milling head or grinding adapter on the appropriate B10 Electra or B15 Electra power unit, see the manual for the B10 Electra or B15 Electra power unit.
- Loosen the three screws (Pos. A, Fig. 4.2.7.) to secure the set reduction.
- Install the power unit in the nut (Fig. 4.2.8.). Gradually turn the rosette (Pos. A, Fig. 4.2.8.) to set the desired reduction rate.
- Secure the set reduction with three screws (Pos. A, Fig. 4.2.7.).
- Unlock the working table with a locking pin (Pos. A, Fig. 4.2.6.) and swivel it by 180° to a position suitable for machining.
- The B-Dock device is now ready for use.

Fig. 4.2.6.

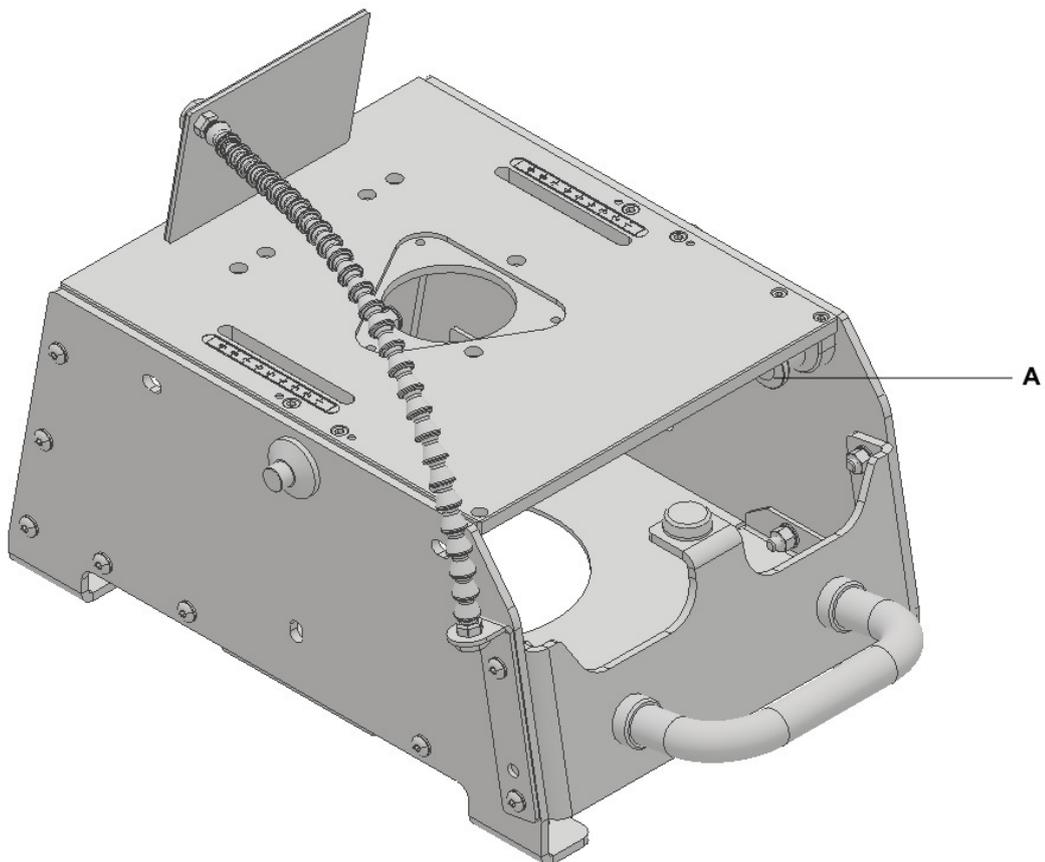


Fig. 4.2.7.

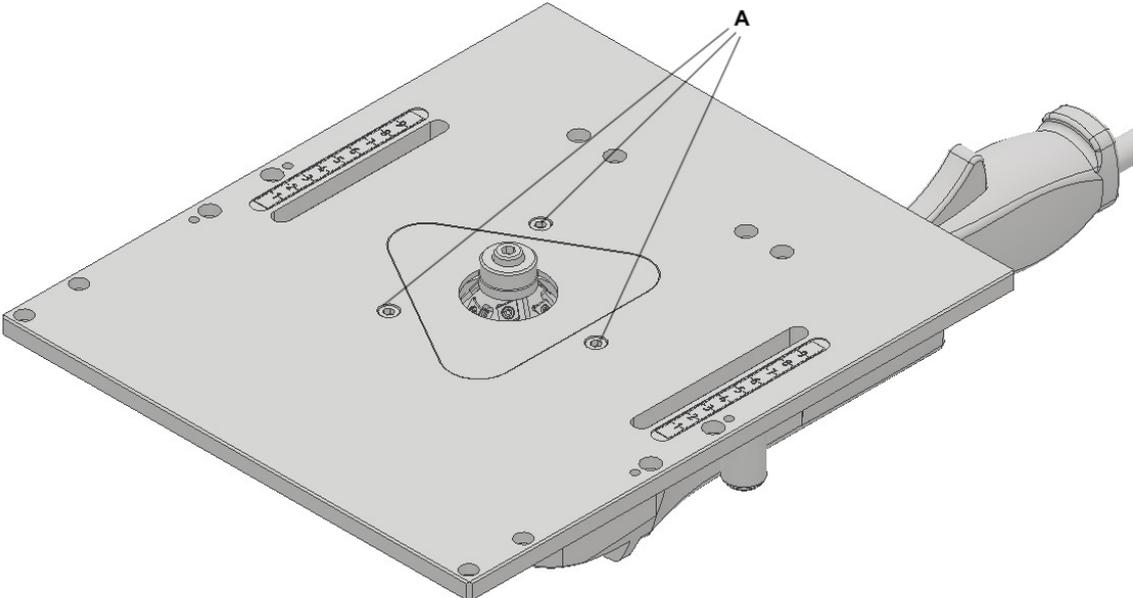
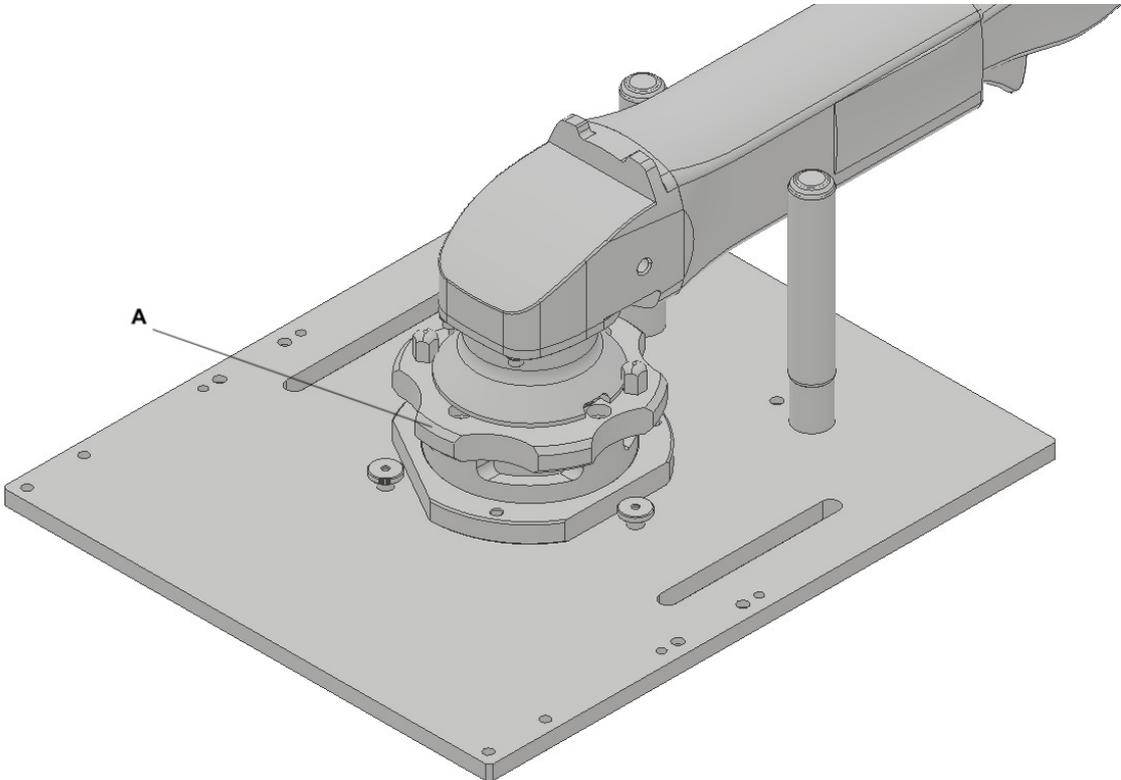


Fig. 4.2.8.



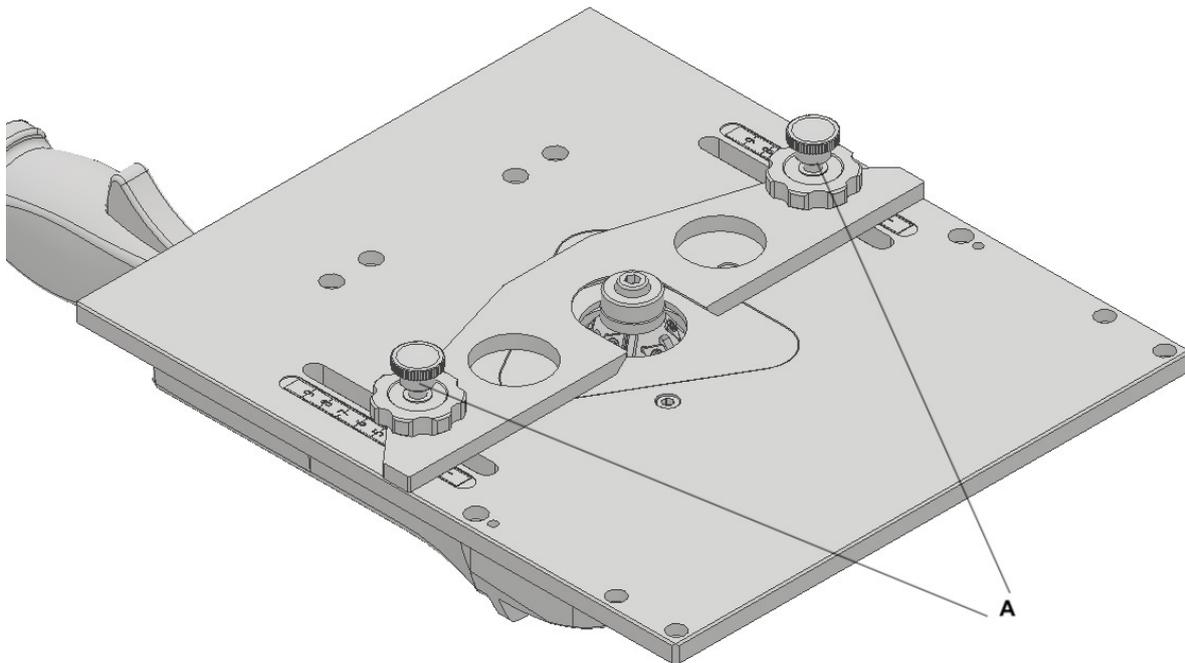
Rulers

The B-Dock device is supplied with two rulers for bevelling straight edges of work pieces and bevelling tubes and rods. These rulers increase work safety and greatly facilitate the bevelling process.

Installing a straight edge ruler

- Install the straight edge ruler into the prepared grooves on the B-Dock working table, using locking screws with a bayonet lock (Pos. A, Fig. 4.2.9.).
- Adjust the ruler so that its edge is aligned with the surface of the guiding roll on the milling head. For correct adjustment on both sides of the working table, use the installed gauges on the surface of the working table.
- Tighten the locking screws of the ruler (Pos. A, Fig. 4.2.9.).

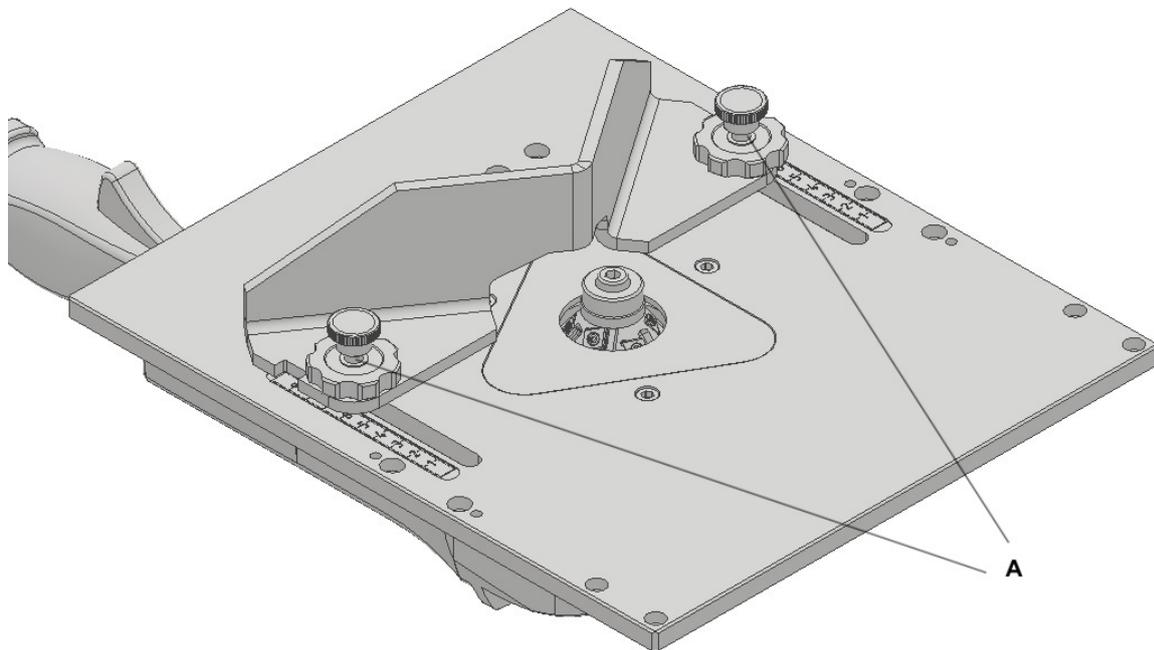
Fig. 4.2.9.



Installation of a ruler for bevelling tubes and rods

- Install the ruler for bevelling tubes and rods, Fig. Y, into the prepared grooves on the B-Dock working table, using the locking screws X, Fig. Y, with a bayonet lock (Pos. A, Fig. 4.2.10.).
- Unlock the working table with a locking pin (Pos. A, Fig. 4.2.6.) and swivel it by 90° to vertical position suitable for bevelling tubes.
- Adjust the ruler so that the edge of the tube intended for bevelling lies on the surface of the guiding roll on the milling head. For correct adjustment on both sides of the working table, use the installed gauges on the surface of the working table.
- Tighten the locking screws of the ruler.

Fig. 4.2.10.



4.3 Checks before commissioning

Important:

Never run the B-Dock device with a power unit without performing the checks described in this paragraph.

Before starting the works, make sure that the B-Dock device with a power unit is ready for operation by the following controls and inspections in order to achieve the highest possible efficiency and meet the safety procedures:

- check that no screws or other parts are loose;
- make sure that the tool and its parts do not collide with the cutting tool and that it rotates freely.
- To start and stop the machine, proceed as described in the operating instructions for the B10 Electra or B15 Electra power unit.

4.4 Destruction and disposal

When disposing the B-Dock device, keep in mind that the materials it is made of are not of dangerous nature, and that they include mainly:

- lacquered or metallised ferritic steel;
- 300/400 stainless steel;
- plastic material of different nature.

Follow this procedure:

- follow the applicable laws of your country relating to the safety of the working environment;
- demount the device and components and sort them into groups according to their chemical nature;
- scrap the device parts in accordance with the applicable laws of your country;
- during the disassembly stages, observe strictly the applicable work safety regulations.

5 USE

5.1 Proper use

The B-Dock device for bevel chamfering on smaller parts and strips is designed exclusively for use with the B10 Electra or B15 Electra machines produced by the N.KO Machines company. One of its main advantages is the possibility of processing smaller work pieces or parts that cannot be clamped to the working table and machined directly by the B10 Electra or B15 Electra bevelling machine. All recommendations relating to the machinable material are identical to the B10 Electra and B15 Electra products.

The maximum and minimum dimensions of the bevel and the thickness of the material to be machined are detailed in chapter 3, paragraph 3.2 “Technical Specifications”.

Other uses differing from the above described are considered improper. Specifically, it is forbidden:

- to process any products differing from those that the device is manufactured and sold for;
- to modify the operation of the machine;
- to replace parts with other than original;
- to remove or modify protective guards.



Attention:

It is strictly forbidden to perform bevel chamfering on materials differing from the listed ones, because their processing could become a risk for the operating staff, and may damage the device.

The company N.KO. must be notified before making any modifications, to issue an adequate approval. Otherwise the company N.KO. disclaims any liability.

5.2 Presetting



Attention:

Wear gloves during the adjustment operation. The operations must be carried out on the machine at rest and after disconnecting from the power supply.



Important:

The B-Dock device is only a tool for extending the B10 Electra or B15 Electra power unit. All settings of the B10 Electra and B15 Electra power units are in the manuals for these machines.

This manual only lists the differences related to the operation of the B-Dock device and the B10 Electra and B15 Electra machines.

Material preparation

The material to be machined must meet the conditions of Article 3.2. The bevelled edges of the material must be burr-free and free of slag residue after removal by soldering.

5.3 Machining

- Place the B-Dock device on a suitable working table to avoid the risk of the product falling. It is strongly recommended to fasten the B-Dock device firmly with suitable screws into the prepared holes.
- Set the appropriate reduction rate depending on your requirements, the condition of the cutting tool and the strength of the work piece material.
- Switch on the power unit with the appropriate switch on the drive unit and activate the lock in the on position.
- Adjust the protective plexi-glass shield to protect you from flying chips.
- Hold the work piece with both hands so that your hands do not come into contact with the edge being machined.
- Place the work piece into the B-Dock device with the bottom surface on the working table. Always hold it firmly with both hands.
- Now slowly slide the work piece edge to the cutting tool. CAUTION! Be ready for kickback when the edge and cutting tool are in contact.
- Gradually press on the work piece to mill the full profile of the set chamfer so that the edge of the work piece touches the guiding roll. Only then move the work piece along the cutting tool in the sense of up-cut milling.
- The guiding roll and working table must always be in contact with the edge and the lower surface of the work piece.
- For maximum reduction, it is recommended to split the reduction into multiple chips and bevel in multiple steps.
- If a straight edge ruler is used, follow the same procedure to keep the edge of the material in contact with the ruler.
- If using a ruler for tubes and rods insert the work piece into the V-shaped guiding prism and rotate the tube until it is completely machined.

 **Important:**

Although the B-Dock device is designed so that most of the chips and metal scrap are discharged away from the working zone and the cutting tool, some of this waste accumulates in the cutting tool area during work. It is very important to control the amount of this waste and to remove it continuously. To do this, remove the cutting tool cover (black triangular cover in the middle of the working table) and clean the area with compressed air, a suitable tool or simply swivel the working table by 180° into the position for the mounting of the power unit.

5.4 Radius machining on work piece edge

The B-Dock device also allows edge rounding to be applied. For this operation, it is necessary to install the appropriate cutting tool into the power unit, see manual for the B10 Electra or B15 Electra power unit. The cutting tool for rounding the edges has an outside diameter larger than the hole in the cutting tool cover (black triangular cover in the middle of the working table). If you intend to apply edge rounding, you need to enlarge this hole so that the rounding cutting tool fits into the hole. This can be done by you.

5.5 Machining with a grinding adapter - Facing

The B-Dock device allows the use of a grinding adapter (see the N.KO. catalogue). The grinding adapter is used to clean and align the material edges up to 30 mm thick. For this operation, it is necessary to install the appropriate grinding adapter into the power unit.

 **Important:**

If your power unit does not have a lockable switch in the on position, contact the manufacturer. The switch can be purchased additionally and installed into the power unit.

6 MAINTENANCE AND ADJUSTMENT

6.1 Recommendations

 **Important:**

Maintenance workers must be qualified technicians.

Never work on the moving parts, not even using tools or other objects.

It is strictly forbidden to remove or modify the safety equipment or guides. If such conduct occurs, the manufacturer denies any liability for safe work with the machine and its accessories.

Always use original spare parts (see chapter 7 “Spare parts”).



Attention:

Always wear gloves when performing maintenance on the machine. The maintenance operations on the machine must be carried out at rest and after disconnecting it from the power supply.

Before each work shift and then as needed during the shift clean the device, the tool, and the moving parts with compressed air.



Attention:

When using compressed air for cleaning, wear safety goggles and never use a pressure exceeding 2 bar.

7 SPARE PARTS

7.1 How to order spare parts

Only the selected part group is available for the B-Dock device. Orders of spare parts shall contain the following information:

- machine / device type
- description of the required part and its photograph
- quantity.

A copy of this manual is supplied with every B-Dock device.

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