TRANSLATION OF THE ORIGINAL VERSION

CE

PANHANS
QUALITÄT SEIT 1918

Mounting instructions

3-wheel bandsaw machine type 3V with optional sliding table

Mounting and alignment of the sliding table

Machine type:	**Bandsaw type 3V with sliding table**

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Table of contents

List of figures

Revisions:

Revision	Autor	Modification	Datum
000	AG	Original document translated (1st version)	11.11.2024

1 Introduction

These mounting instructions for the PANHANS 3V band saw model illustrate the correct installation, alignment and other settings for the optional sliding table.

1.1 Legal notice

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1.2 Illustrations

All photos, figures and graphics contained in this document are for illustration purposes only and to aid understanding. They may differ from the actual state of the machine and/or sliding table due to the version or customer specifications.

1.3 Safety during installation

The general safety regulations must be observed for unloading, installation and transport!

	***When setting up, also observe the safety instructions described in section ⇨ 8.4 "Machine installation" and chapter 5 "Safety" in the machine operating manual.***

1.4 Substrate at the installation site

	***Before setting up the machine and the additional components supplied, make sure that the ground is clean and level so that the adjustment processes described below cannot be affected by dirt or parts lying around.***

1.5 Additional documents

These mounting instructions are a supplement to the machine operating manual. Both documents are therefore required to install the sliding table. If you do not have the machine operating manual to hand, you can download it from ☞ https://www.hokubema.com/manuals/wp-content/uploads/BA_PH_3V_EN.pdf.

1.6 Transport of the sliding table to the machine

To transport the two sliding table halves (left and right) to the machine, either 4 people or an overhead crane are required, depending on the design and its own weight. The weight of the right sliding table is approx. 100 kg and the left one is slightly more.

	***It is mandatory to wear personal protective equipment and to comply with the general safety regulations during transport and when mounting the sliding table to the machine!***
	***Danger to life when lifting loads with an overhead crane! Loads must not be moved over people. When lifting a load, people are not allowed to stand under the suspended load.***

2 Delivery and acceptance

2.1 Unloading from the transport vehicle

The two sliding table halves (left and right) are delivered on two separate pallets.

- Use a forklift truck with widely set forks to unload.
- Insert the forks (as shown in ⇨ Figure 1) centrally under the transport pallet and lift it just a few centimetres.
- Then lift the pallet with the forklift truck off the transport vehicle and place it on the ground.
- Now transport the loaded pallet with a pallet truck to the immediate vicinity of the installation site.

Figure 1: Sliding table halves (left and right) on pallets

	***Be aware of the risk of crushing when unloading the sliding tables from the transport vehicle using a forklift truck. In particular, watch out for your hands and feet and wear safety shoes and protective gloves as a precaution.***
	***Danger to life when using a forklift truck! Keep a sufficient distance from the forklift truck and watch its speed. Vehicles with combustion engines also produce toxic exhaust gases. Wear a breathing mask if necessary.***

2.2 Unpack and check delivery

- Remove the film packaging and all fixings to the pallet required for transport.
- Check the shipment for completeness and possible transport damage. In case of transport damage, please keep the packaging and inform the shipping company and the manufacturer immediately! Subsequent complaints cannot be accepted.
- Lift the two sliding tables off the pallet with 4 people or an overhead crane.
- To transport the two sliding table halves to the band sawing machine, proceed as described in sections ⇨ 6.1 (left sliding table half) and ⇨ 6.5 (right sliding table half).

Remark: The sequence of installation, alignment and other settings described in these installation instructions must be strictly adhered to.

	***Danger to life when lifting loads with an overhead crane! Loads must not be moved over people. When lifting a load, people are not allowed to stand under the suspended load.***
	***Dispose of the packaging material in an environmentally friendly way!***
	***Fire hazard! Do not smoke and do not light an open fire.***

2.3 Temporary storage

If the sliding table is not put into operation immediately after delivery, it must be carefully stored in a protected location. Cover the table halves so that neither dust nor moisture can penetrate. Bright parts (such as the linear guides) are preserved with a light film of oil. Occasionally check the effectiveness of this preservation and lightly oil the guides again if necessary.

3 Components (completely mounted)

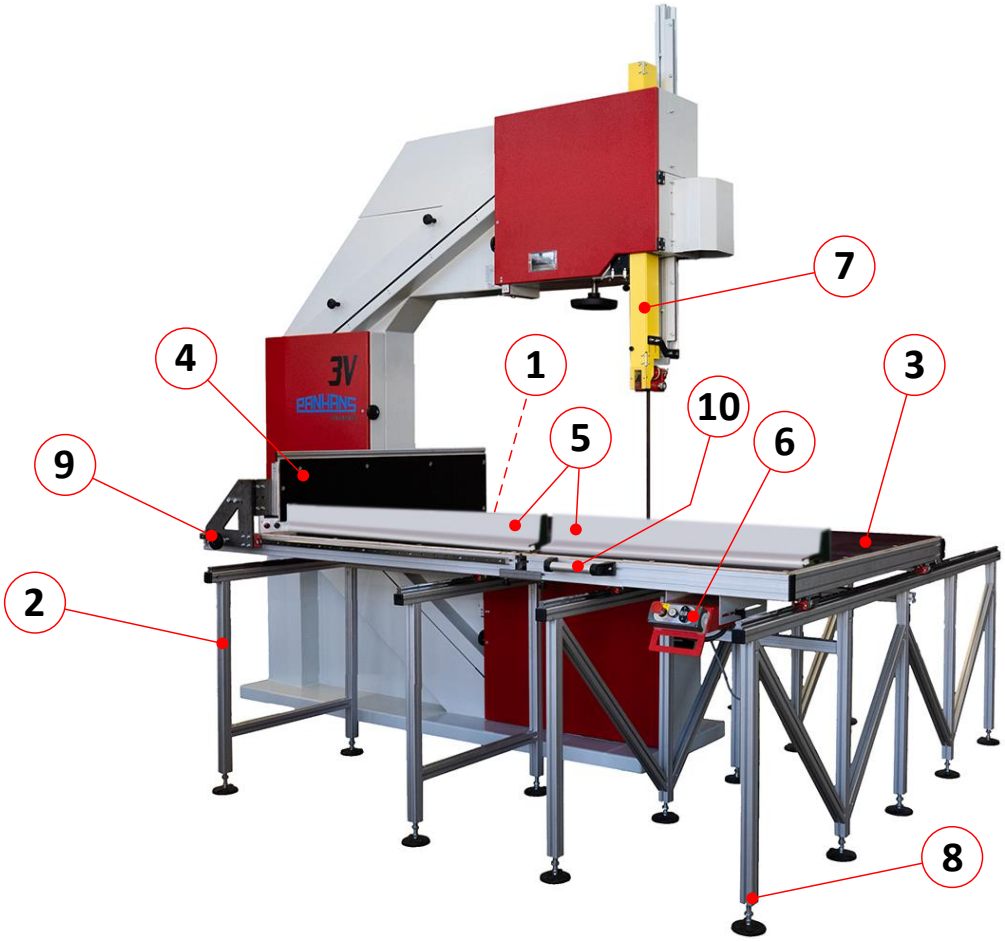


Figure 2: Components (completely mounted)

No.	Description	No.	Description
1	Left sliding table half (rear)	**6**	Two-handed control for blade guard
2	Separate base frame element (front)	**7**	Saw blade guard
3	Right sliding table half	**8**	Levelling feet
4	Table fence	**9**	Clamp wheel for table fence (**4**)
5	Laterals stops	**10**	Push handle for right-hand table half

4 Dimensions of the sliding table

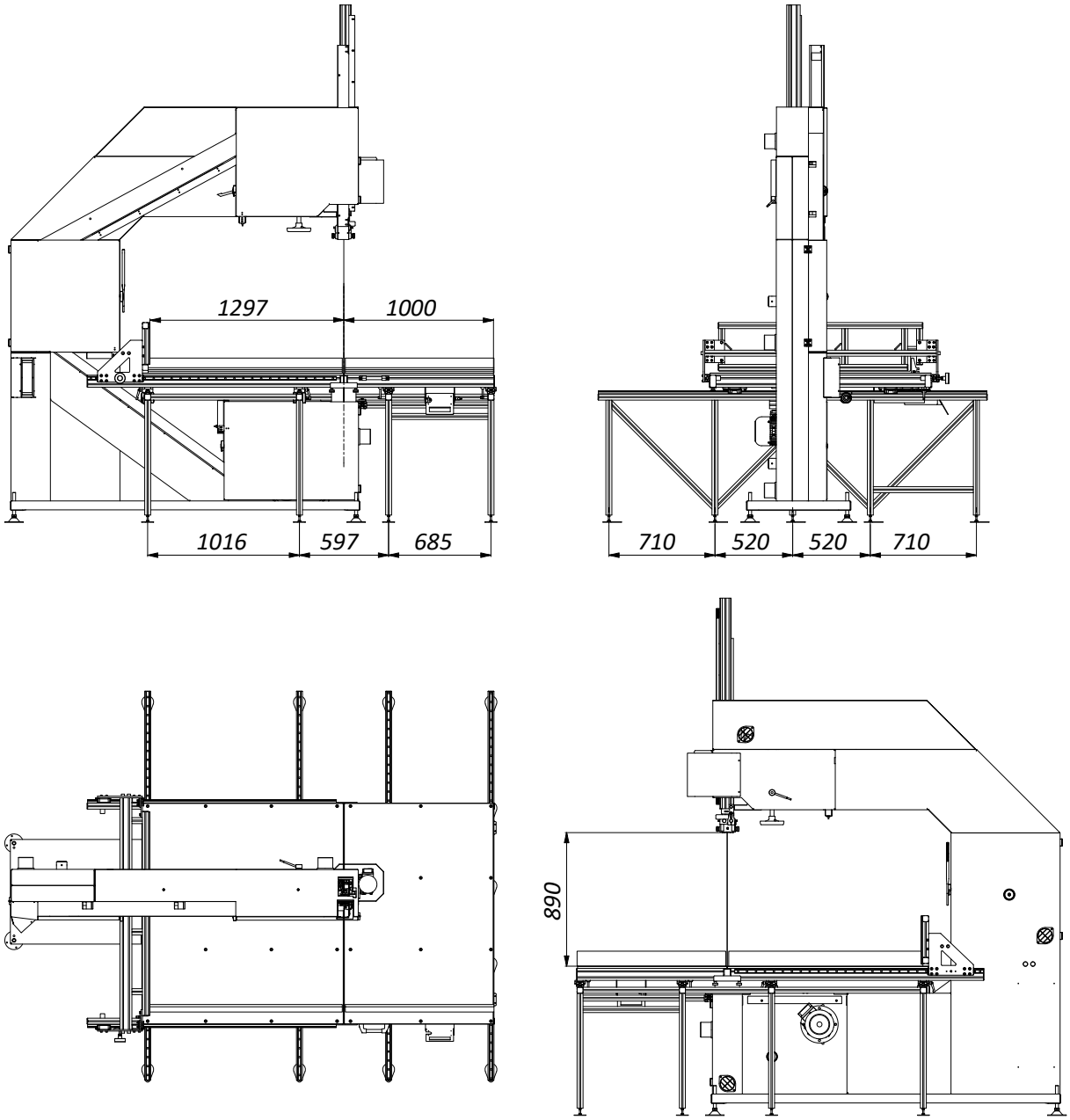


Figure 3: Dimensions of the sliding table

5 Preparatory measures

5.1 Levelling the machine

Before the sliding table is mounted on the bandsaw, the machine must be levelled at the installation site using a machine spirit level (0.1 /1 m).

1. To do this, place the spirit level on the machine stand.
2. The levelling is done using the 6 adjustable feet. Each foot has an M20 threaded bolt with a locknut and an adjusting nut.
3. Loosen the locknuts and use an open-end spanner SW 30 to align the machine exactly horizontally on all sides using the adjusting nuts.
4. Then tighten the locknuts again.

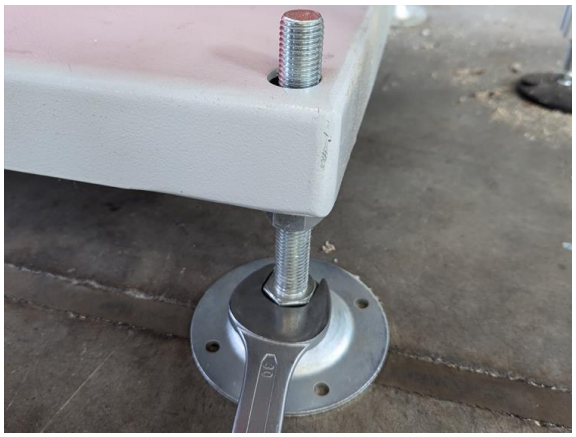


Figure 4: Levelling the machine

☝	***When levelling, ensure precise adjustment! The more precise the levelling process, the easier and faster it will be to align the sliding table later.***

5.2 Position the saw blade guard upwards

Before the left sliding table half (**1**) can be mounted, the saw blade guard must be moved to the upper position using the two-hand control.

Remark: The two-hand control (**6**) is supplied loosely but already fully electrically connected (see machine base plate). It is only attached to the machine after the sliding table has been mounted.

Figure 5: Two-hand control for height adjustment

Further details on the two-hand control can be found in section ☞ 11.6 of the machine operating manual.

⚠	***After the saw blade guard has been moved up, the machine must be disconnected from the power supply and secured against unauthorised restarting!***

6 Installation and alignment of the sliding table

6.1 Attaching the left half of the sliding table

After you have positioned the saw blade guard upwards, push the left half of the sliding table (**1**) with 4 people or an overhead crane all the way up to the bandsaw machine (see ⇨ Figure 6 , far right).

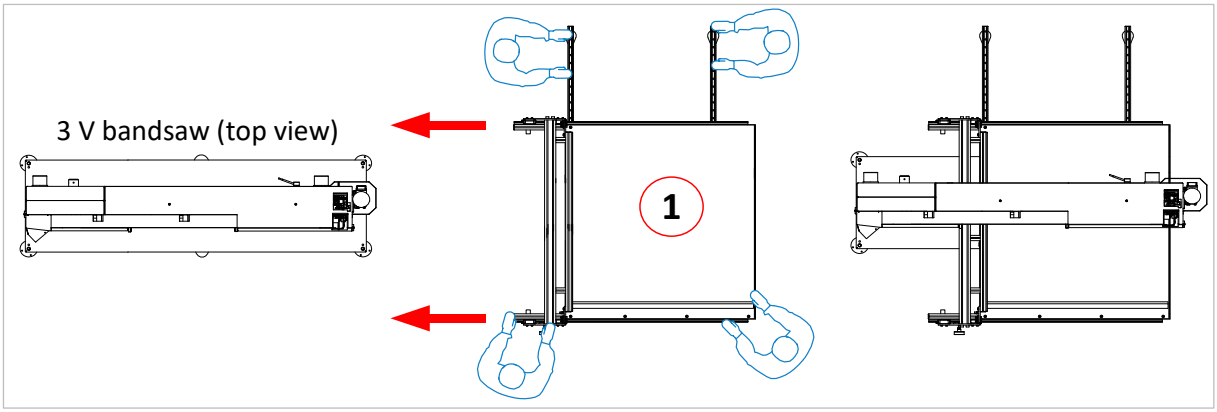


*Figure 6: Move the left sliding table half (**1**) towards the machine*

	***Danger of death when lifting loads with an overhead crane! Loads must not be driven over people. It is not permitted for people to stand under the load while it is being lifted.***

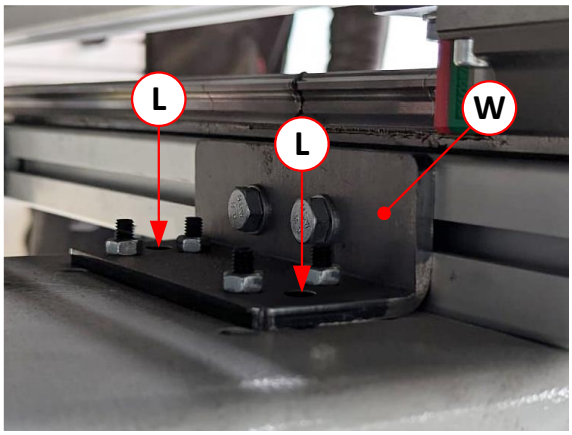


Figure 7: Mounting brackets (2 pcs)

Mounting on the machine stand is done using the two holes (**L**) in the two mounting brackets (**W**), which are already bolted to the profiles of the left sliding table. Use the M8 hexagon bolts provided (see ⇨ Figure 8).

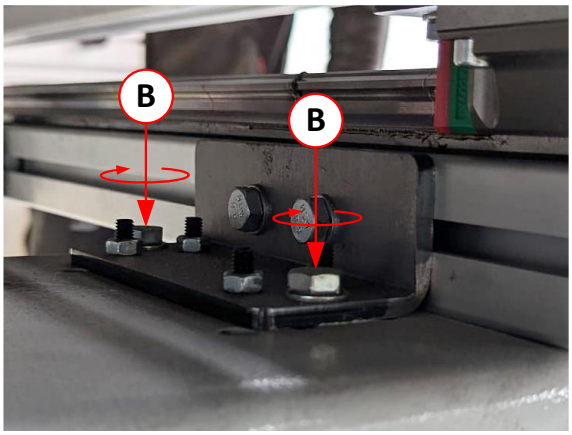


*Figure 8: Hand-tighten the mounting screws (**B**)*

Position the sliding table half so that the two M8 hexagon head screws (**B**) can be screwed into the threaded holes of the machine stand by hand (do not tighten them, just screw them in by hand to fix the position!)

6.2 Install and tension a bandsaw blade

Important: Since the complete alignment of the sliding table is relative to the bandsaw blade, the blade must be installed (immediately after pushing the left half of the sliding table to the machine) and properly tensioned before the sliding table can be levelled and aligned. The detailed procedure for installing the bandsaw blade can be found in section ☞ 11.4 of the machine operating manual.

6.3 Attaching the separate underframe element (front)

The guide frame of the left sliding table half is designed separately to allow access to the lower bandsaw door when changing the saw blade. Therefore, the front frame element (**2**) must be mounted separately.

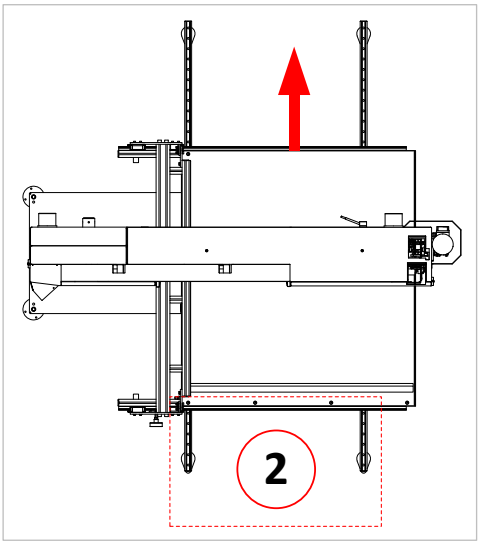


Figure 9: Move the sliding table (left) to the back

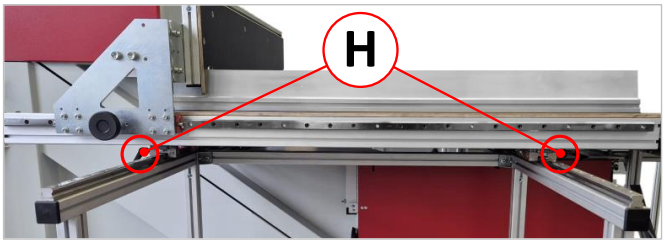


*Figure 10: Clamping lever (**H**) for left sliding table*

1. Release the two clamping levers (**H**) located on the left and right under the table top.
2. To enable access for mounting, the left sliding table must first be pushed all the way back (see arrow in ⇨ Figure 9).
3. Retighten the two clamping levers (**H**) to fix the table in the rear end position.

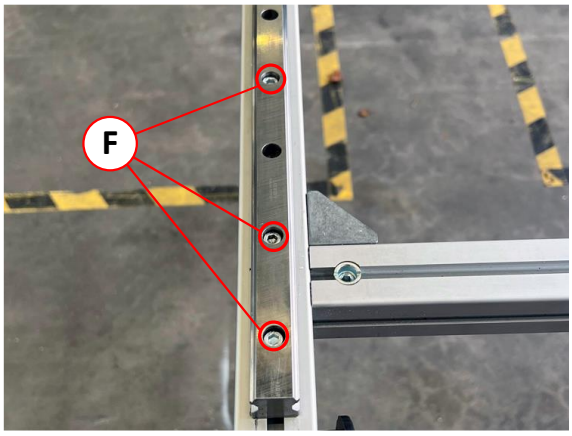


*Figure 11: Arrangement of the guide fixing screws (**F**)*

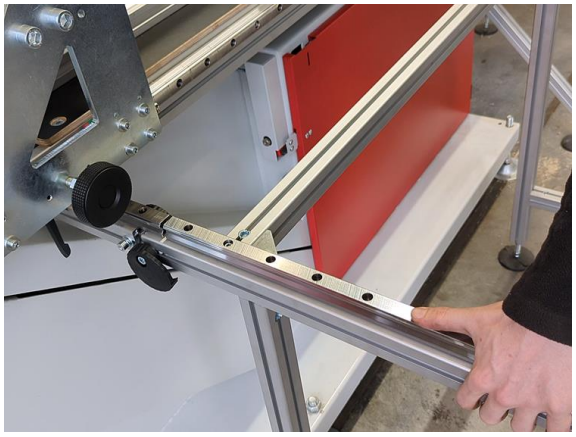


Figure 12: Move the separate element to the fixed one

4. There are 9 selected holes in the top of each of the left and right guide rails of the element to be attached, each of which is equipped with a fixing screw (**F**).

➔ First, use a size 5 Allen key to make sure that all the fixing screws (**F**) are tightened on both sides.

5. Then move the separated element as close as possible to the fixed frame.
6. Adjust the height using the levelling feet (**8**) to match the height of the fixed frame, so that all guide rails are exactly horizontal at the same height at the front and back.

Continued on ⇨ next page

Continuation "Attach separate underframe element (front)"

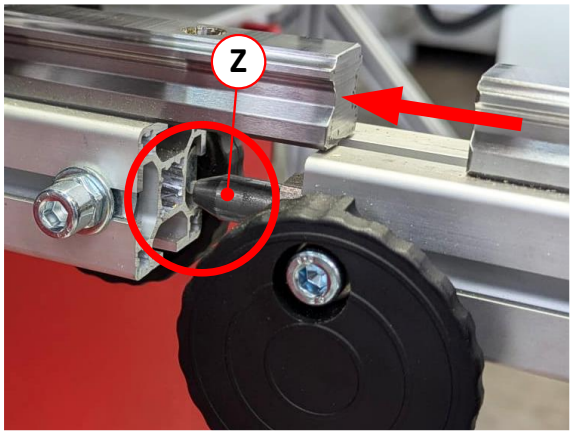


*Figure 13: Centring pin (**Z**) and centring hole*

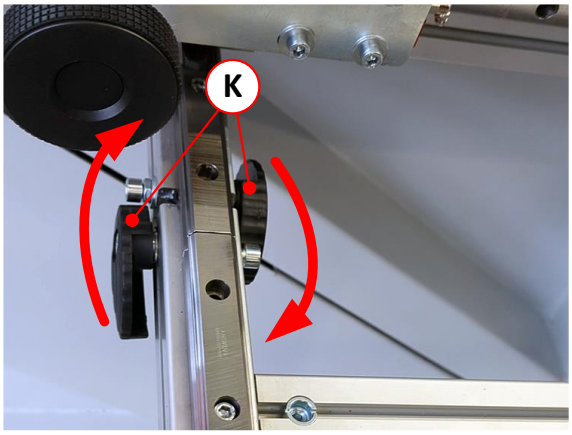


Figure 14: Clamping wheels for locking

7. Then push the separated element completely and flush against the fixed frame so that the centring bolt (**Z**) shown in ⇨ Figure 13 is inserted into the centring hole of the fixed frame.

8. Fasten the disconnected element to the fixed element by swivelling the two clamping wheels (**K**) on the left and right sides of the element in the direction of the arrow (see ⇨ Figure 14).

6.3.1 Check the alignment of the guide rails

Remark: The following steps 9. to 11. are to be carried out only once (during initial installation). After that, the attachment and removal for changing the saw blade is simply done by opening/closing the locks on the clamp wheels (**K**), which are located on the side of the guides (see ⇨ Figure 14).

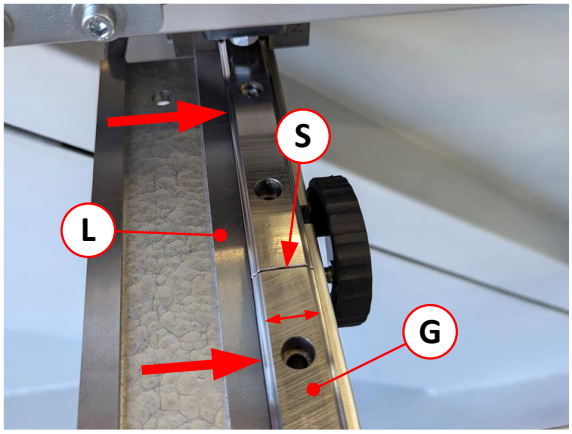


Figure 15: Check/correct alignment at the joint

9. Place a straight edge (**L**) alongside the guide rail (**G**) of the fixed frame and the element to be attached (see ⇨ Figure 15).
10. Now check the alignment from the front to the rear guide rail in the area of the joint (**S**):

➔ The front (attached) guides must be exactly flush with the rear (fixed) ones.

➔ If this is not the case, loosen all the fixing screws (**F**) - see ⇨ Figure 11 - and adjust the guide rail (**G**) by manually moving it against the straight edge until there is no longer a gap. Then tighten all the fixing screws (**F**) again.

11. Then place the straight edge on the guide rails from above and check that the front and rear sections of the rails are exactly flush, and that the rails are at the correct height and linear (if necessary, use a spirit level to help).

➔ If there are any deviations, you can correct them using the levelling feet (see also ⇨ Figure 18).

6.4 Align and level the left sliding table

In order to level and align the sliding table, the following conditions must be met:

☝	• ***The four hexagon head screws (B) in the two mounting brackets (see ⇨ Figure 8) must only be hand-fitted and not tightened.*** • ***Both clamping levers (H) under the left-hand sliding table (see ⇨ Figure 10) must be open.*** • ***The saw blade guard must be in the uppermost position.*** • ***A bandsaw blade must be installed and correctly tensioned.***

6.4.1 Establish parallelism to the bandsaw blade

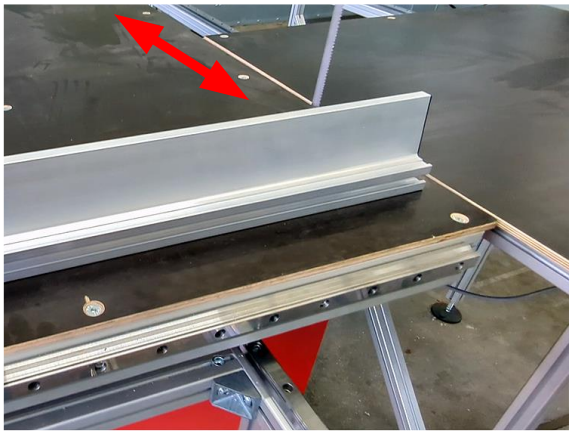


Figure 16: Check alignment over entire length

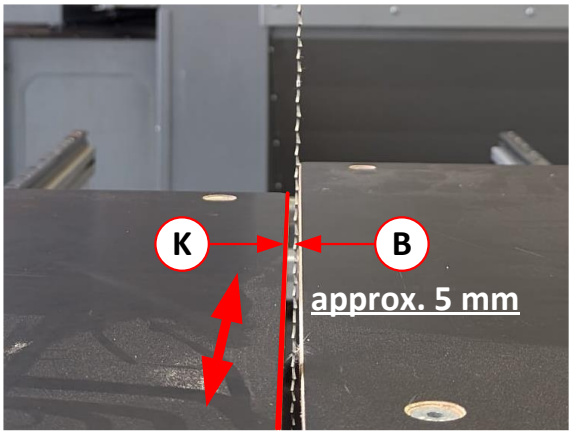


Figure 17: Check distance from table edge to saw blade

1. Check that the sliding table runs parallel to the saw blade over the entire travel distance by sliding it back and forth several times (see arrow in ⇨ Figure 16).
2. The distance from the table edge (**K**) to the saw blade (**B**) must be approx. 5 mm and must be identical over the entire travelling distance.

   ➔ Check with measuring equipment.

➔ Slightly shift the entire base frame to even out any deviations.

6.4.2 Levelling the sliding table and checking the angle

The sliding table must always be aligned in relation to the bandsaw blade.

Figure 18: Level the sliding table

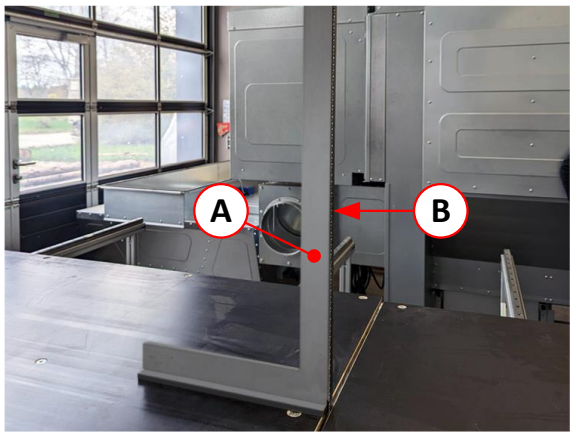


Figure 19: Check the right angle to the saw blade

1. Place a spirit level on the tabletop once lengthwise and once crosswise (see examples in ⇨ Figure 18).
2. At the same time, place a 90° angle stop (**A**) on the band saw blade (**B**).
3. To adjust, loosen the lock nuts on the levelling feet using a size 22 open-ended spanner and adjust the height using a size 14 open-ended spanner on the bottom of the foot plates.
4. Move the table to all possible positions (front/centre/rear) and adjust the feet until the table top is exactly horizontal on all sides and the angle to the saw blade is 90°.
5. When all settings are correct, tighten all lock nuts on the levelling feet.
6. As soon as the left sliding table has been aligned completely correctly, it can be finally fixed. This is done by tightening the (previously only hand-tightened) hexagon head screws (**2**) on the mounting brackets (shown in ⇨ Figure 8) with an open-end spanner size 13.

6.5 Attaching the right half of the sliding table

First, roughly adjust the height of the right sliding table (**3**) to the height of the left table using the levelling feet. Then, with the help of 4 people or an indoor crane, push the right sliding table half up to the left sliding table (see ⇨ Figure 20, far right).

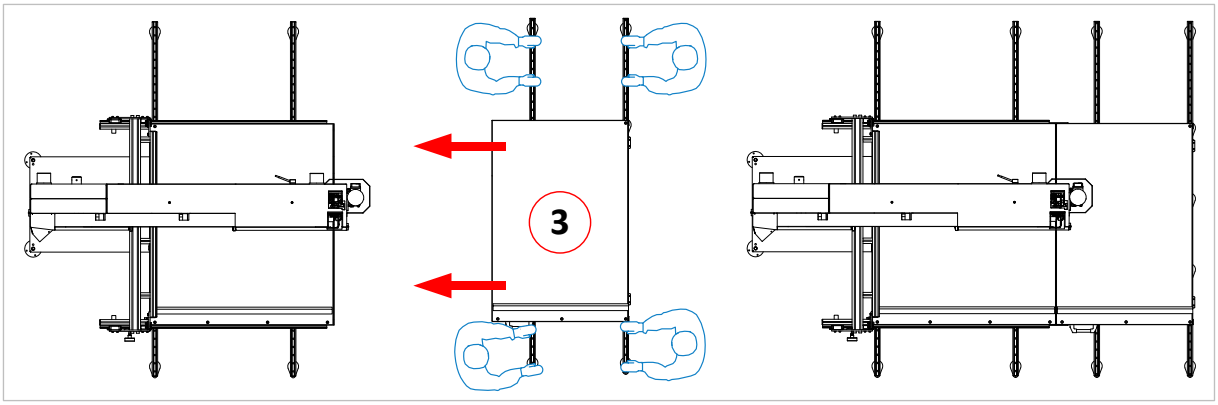
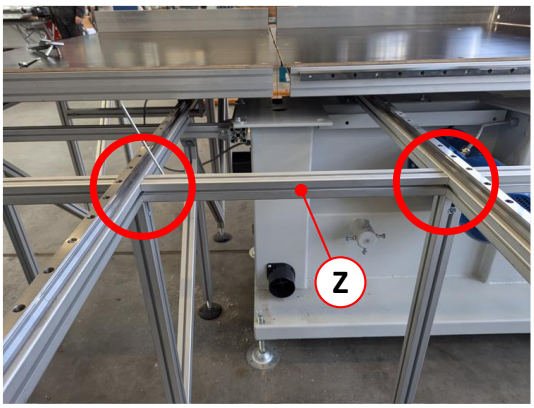


*Figure 20: Move the right-hand sliding table (**3**) to the machine*

	***Danger to life when lifting loads with an overhead crane! Loads must not be moved over people. When lifting a load, people are not allowed to stand under the suspended load.***

6.5.1 Attach the spacer profiles



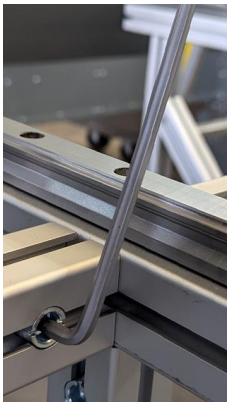


*Figure 21: Attach spacer profiles (**Z**)*

1. Attach the enclosed spacer profiles (**Z**) between the two table halves.
2. Use an Allen key SW 5 for this and tighten the screws only very lightly at first (**do not tighten them fully**).

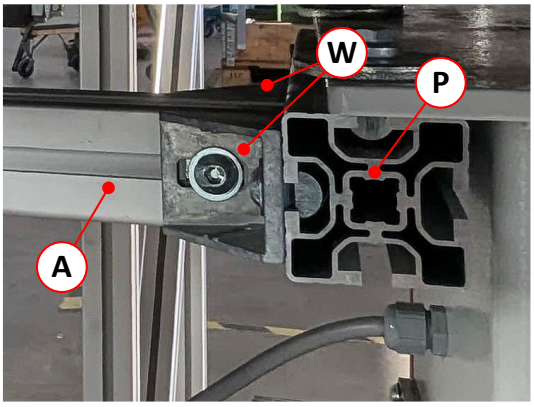


*Figure 22: Mount connecting profiles (**A**) on the front and back of the profile (**P**)*

3. Mount the right sliding table on both sides with two brackets (**W**) each in the two connecting profiles (**A**) on the profile (**P**) at the back and front of the machine stand. The brackets (**W**) and M8 Allen screws are already located in the grooves of the connecting profiles (**A**). The T-nuts are included.
4. Use an Allen key SW 5 for this and tighten the screws only very lightly at first (**do not tighten them fully**).

6.6 Align and level the right sliding table

Level the right-hand table using the levelling feet and align it at the same time in relation to the bandsaw blade (distance 5 mm) and to the left-hand sliding table. The procedure is identical to section ⇨ 6.4.

6.7 Checking the alignment of both table halves

Figure 23: Table control - front end position (example)

Figure 24: Table control - rear end position (example)

To check the alignment, place two sufficiently long rulers across both halves of the table to verify that they are at identical heights and linear. Repeat this process by moving the tables to different positions (front/centre/rear), see examples in ⇨ Figure 23 and ⇨ Figure 24.

6.8 Fix settings

When everything is aligned correctly, tighten all the lock nuts on the levelling feet and the M8 Allen screws on the spacer profiles (**Z**) and connecting profiles (**A**), refer to ⇨ Figure 21 ⇨ Figure 22.

Important:

- ➔ Then check again by moving the tables back and forth several times to ensure that the alignment, angles and distances to the bandsaw blade are correct on both halves over the entire travel distance.
- ➔ Also check that the sliding table can be moved smoothly over the entire travelling distance.

If these checks are passed, the levelling and alignment of both table halves is complete. If not, the above mentioned screws and locks must be loosened again and readjusted accordingly.

6.9 Connecting the table halves

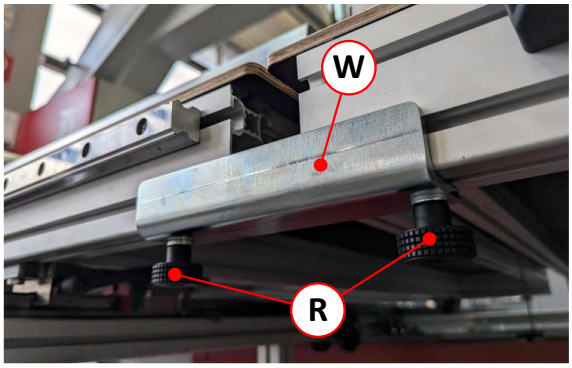


Figure 25: Attaching of the connecting brackets

After all the levelling, alignment and adjustment work on the sliding tables has been completed, the two halves of the table must be connected to each other.

- ➔ To do this, attach the supplied connecting brackets (**W**) centrally on the front and back of the two table halves, aligning them with the position of the slot nuts integrated in the table profiles.
- ➔ Then you can fix the brackets with the knurled screws (**R**) provided.

7 Attaching the table fence and the lateral stops

7.1 Checking and adjustment of the table fence

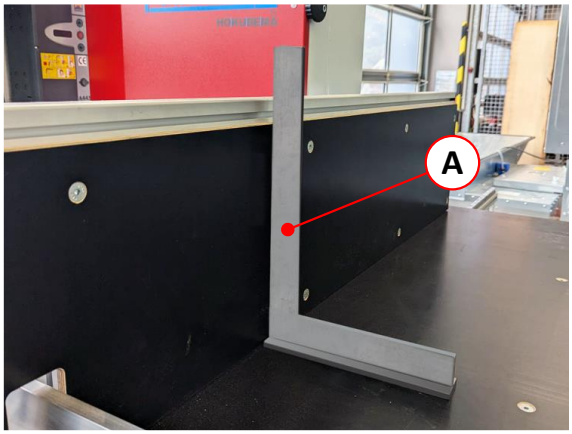


Figure 26: Checking of the 90° angle at the table fence

1. Use a stop angle (**A**) to check the 90° angle of the table fence in relation to the table top.

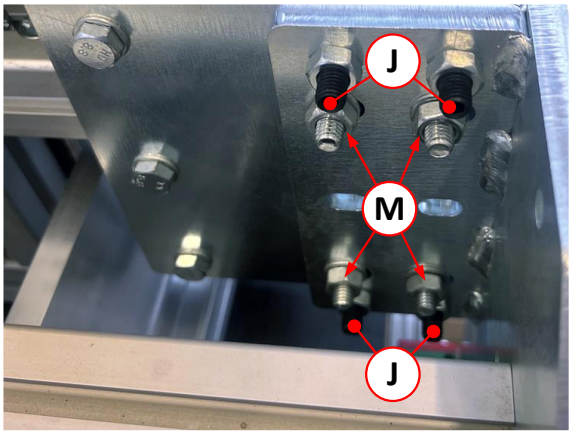


Figure 27: Adjusting the 90° angle of the table fence

2. If necessary, readjust the angle at the rear (on both sides) using the 4 adjusting screws (**J**) with a 3 mm Allen key ➔ First, loosen the lock nuts and the four inner nuts (**M**).

7.2 Checking and adjusting the lateral stop rails

7.2.1 Checking the lateral stop on the left sliding table

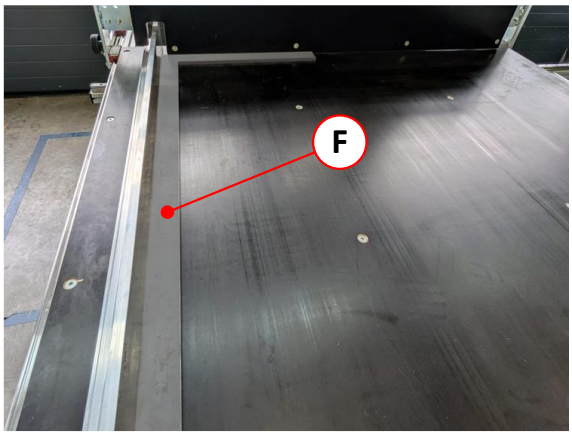


Figure 28: Checking of the 90° angle at lateral stop rail

1. Use a large flat angle (**F**) of sufficient length to check the 90° angle at the lateral stop rail of the left sliding table in relation to the table fence.

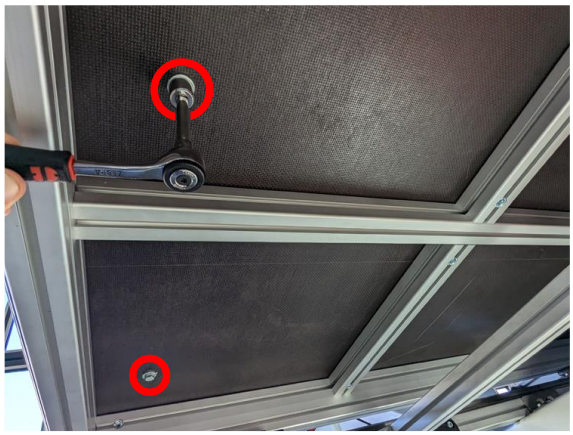


Figure 29: Adjusting the 90° angle of the lateral stop rail

2. To adjust, loosen the M8 screws on the underside of the table top using an 8 mm socket spanner, adjust the stop rail to the correct 90° angle and tighten the screws again.

7.2.2 Checking the lateral stop on the left sliding table

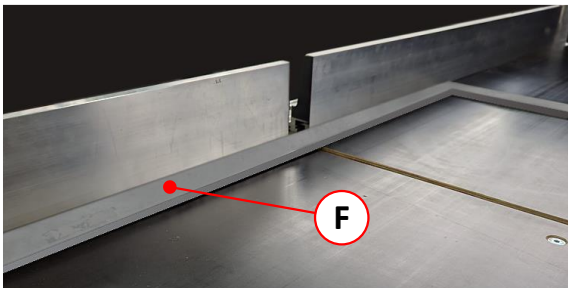


Figure 30: Checking the lateral stop rail (right)

Now align the 90° angle and the alignment of the right-hand stop rail with the left-hand stop rail.

1. Use the long side of the large flat angle (**F**) or a long ruler for this. Both stop rails must be exactly flush.
2. To readjust, loosen the mounting screws (**J**) on the underside and proceed as described in the text below ⇨ Figure 29.

8 Attaching the two-hand control

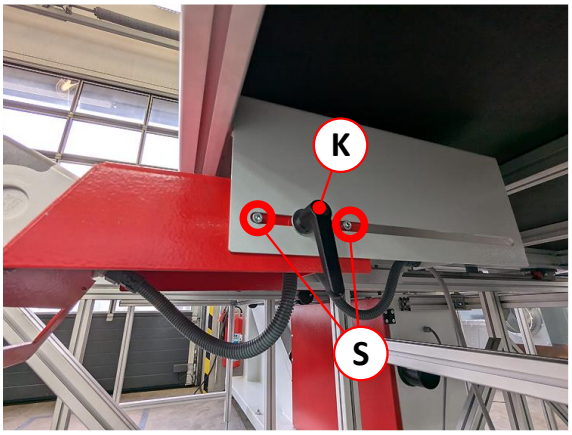


Figure 31: Attaching the two-hand control

After the adjustments, the two-hand control for adjusting the height of the saw blade guard, which is supplied loose, must be mounted on the machine.

1. To do this, insert the two-hand control unit into the designated holder, insert the side screws (**S**) - two on the left and two on the right - and tighten them.
2. Then screw the clamping lever (**H**) into the side threaded hole and slide the two-hand control to the desired position.
3. Then tighten the clamping lever (**K**).

9 Shorten the travel distance for the right sliding table

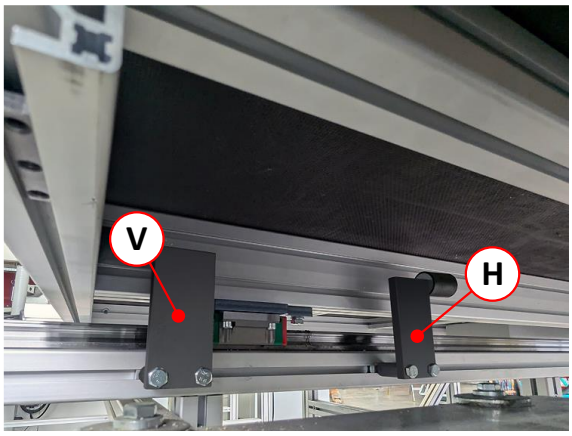


Figure 32: End positions to limit the travel

Both table halves are set to the maximum travel distance ex works via mechanical end stops. While the end positions on the left cannot be changed, the travel distance of the right sliding table can be shortened if necessary by moving the end positions.

➔ The rear-mounted end stop (**V**) is used to limit the movement of the sliding table on the front side.

➔ The front-mounted end stop (**H**) is used to limit the movement of the sliding table on the rear side.

☝	***Important: The end stops must never be completely removed, as otherwise the table can move beyond the end position and fall out of the guides. The repair is very complicated and can only be carried out by a service technician using special tools.***

10 Lower door when changing the bandsaw blade

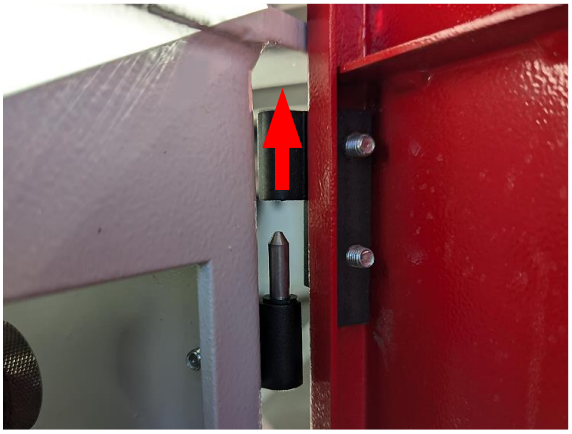


Figure 33: Remove lower bandsaw wheel door

The lower bandsaw door cannot be opened completely because it hits the levelling foot on the machine base when it is opened. If this proves to be a problem when changing the bandsaw blade, the door can be unhinged from the upper and lower hinge and put aside.

➔ To do this, open the door about halfway and then pull it up and out of the two hinge pins.

➔ Re-attach and lock the door after changing the band saw blade.

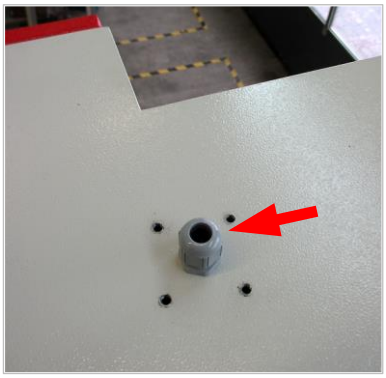
11 Mounting the industrial signal tower (optional)

For 3V bandsaw machines equipped with an optional industrial signal tower, this still needs to be mounted onto the machine and electrically connected.

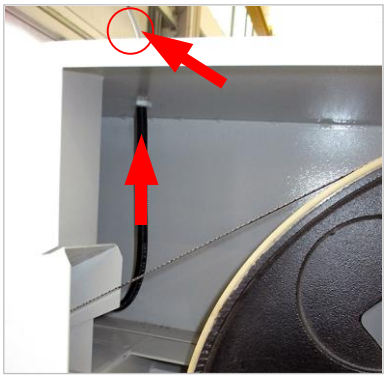
⚠	• ***The electrical connection must be carried out by a certified electrician!*** • ***Before starting work, the machine must be disconnected from the power supply and secured against unauthorised restarting!***

1. The signal tower, including the mounting screws, is located in the control cabinet.

2. The connection cable with the cable gland is located in the hood on the side next to the upper bandsaw wheel.



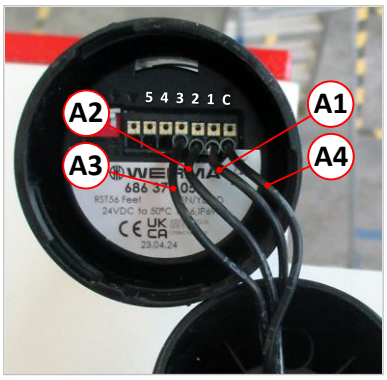
3. Screw the M16 cable gland by hand from above onto the machine hood.



4. Guide the cable through the cable gland.

5. Tighten the cable gland on the top of the hood.

6. Mount the signal tower base on the hood using 4 screws.



7. Connecting the electric cable*
   Wire **A1** → terminal "**1**"
   Wire **A2** → terminal "**2**"
   Wire **A3** → terminal "**3**"
   Wire **A4** → terminal "**COM**"

8. Place the signal tower on the base and lock it by turning it briefly in a clockwise direction (see markings on the back of the tower).

*) **Remark:** The connection is made via push terminals; the wires only need to be inserted.

11.1 Signal tower status information

The operating statuses of the machine are displayed by the signal tower in assorted colours:

Figure 34: Operational readiness

Figure 35: The bandsaw drive is running

The machine is ready for operation	The bandsaw blade drive is running

Figure 36: Frequency inverter error

Figure 37: Not ready

There is a fault in the frequency inverter	The machine is <u>not</u> ready for operation: - An emergency stop button is active and locked or a bandsaw door is open