



Service Manual

PFT BOARDMASTER XL

Safety - Service Manual - Spare Part Lists



Mobile table for cutting boards

Article number of Operating Manual: 00 23 71 34

Article number of the Machine: 00 18 47 18



Read the Service Manual prior to beginning all tasks!

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General

2 General

2.1 Information on the Service Manual

This Service Manual gives important hints on handling the equipment. The prerequisite for working safely is to observe all the specified safety hints and handling instructions.

Moreover, the local accident prevention regulations and general safety provisions for the area of application of the equipment must be observed.

Read the Service Manual thoroughly prior to beginning all tasks! It is product component and must be kept directly near the equipment, and be accessible to the personnel at any time.

In the event of handing over the equipment to third person, hand over the Service Manual as well.

The diagrams in this Manual are not up to scale for the sake of representation of the subject matter and can slightly differ from the actual design of the equipment.

2.2 Information on safety notes

These safety notes give important hints on handling the equipment. Prerequisite for working safely is observing all the specified safety hints and handling instructions.

2.3 Explanation of symbols

Warning Notes

Warning notes in this Operating Manual are designated by symbols. The notes are introduced by signal words that express the scope of danger.

Ensure to observe the notes and act carefully to avoid accidents, personal and property damages.



DANGER!

... Refers to an impending dangerous situation, which leads to death or severe injuries, when it is not avoided.

Safety Designation in this Manual

3 Safety Designation in this Manual

The safety symbols together with the text of the safety note should draw attention to the unavoidable rest danger when operating the machine. This rest danger refers to persons, the machine, other things, and objects, the environment.

The following safety symbols are used in the present Operating Manual:



Danger!

This symbol refers to danger to life and health of persons - above all, it also refers to danger to machine, objects, or environment.

Should these notes be ignored, then severe - and even fatal injuries can occur.



Warning!

This symbol indicates that above all danger to machine, objects, and environment exists - danger to persons is not expected.

Should these notes not be observed, then this can lead to malfunction and damages to the machine damage to property and to the environment can occur.



This symbol draws attention to the fact that danger particularly to health exists.

These dangers are posed by sharp, cutting, and rotating tools.



This symbol draws attention to the fact that danger particularly to health exists.

These dangers are posed by moving parts with clamping or squeezing effect.



This symbol draws attention to particular dangers through electric voltages to life and health of persons.



Note!

This symbol designates notes that can contribute to better understanding of the machine - the information helps you to use the machine optimally. This symbol does not typify any safety notes.

Please also observe that a safety symbol can never replace the text of a safety note - the text of a safety note must therefore be fully read at all times.

Fundamental Safety Notes

4 Fundamental Safety Notes

4.1 Behaviour in the event of emergency



Danger!

- In case of dangerous situations on the plant (e.g. DANGER due to unexpected malfunction), the plant must be stopped immediately.
- It is possible to stop the plant immediately (mains separation) by means of the **EMERGENCY OFF Main Switch** at the control panel, or through **separation from the mains supply** (pulling off the plug). This switches off power supply immediately.
- Inform the physician and the trade supervisory board in the event of accidents and/or the authorities responsible for you.
- Particularly in cases of high-voltage accidents, immediate first-aid measures must be performed by appropriately trained personnel.

4.2 General safety notes

- Use the machine appropriately. The mobile cutting table for plates may only be used for the intended purpose.
- Keep your machine and accessory in order. A neglected machine or accessory conceals accidental danger.
- Inspect your equipment and the accessory regularly for damages. Check whether movable and safety parts function properly and whether they are neither sticking nor damaged.
- Consider environmental influences. Do not expose electric tools to moisture. Do not use electric tools near flammable liquids or gases.
- Protect yourself against electric shock.
- Keep children away! The mobile cutting table for plates with its accessory is not a toy. Ensure that children do not touch the tool or cable.
- Wear suitable clothing. Do not wear loose clothing or jewellery; they can be caught in moving parts. Wear hair net in case you have long hair.
- CATER FOR SUFFICIENT LIGHTING OF WORKING AREA!
- WEAR PROTECTIVE GOGGLES!

Fundamental Safety Notes

- ALWAYS WEAR EAR PROTECTION!
- Secure the workpiece. Use proper clamping equipments to hold the workpiece.
- **ATTENTION!** Prior to changing the machine units, the entire plant must be switched off. This is done using the main switch.
- Pay attention to a safe stand in order to have balance in every working position.
- Avoid inadvertent switch on. Ensure that the main switch is switched off when connecting it to the mains.
- Always remain vigilant. Concentrate on your work. Proceed rationally.
- This machine may be serviced only by unsuitably qualified persons.
- All persons that carry out tasks on the machine must read the Service Manual and by signing, confirm that they have understood the Service Manual.
- Switch off the equipment and wait until the tool has reached the rest position, before you leave the workplace. The mains plug must be pulled out whenever out of use, prior to maintenance and during tool change. The main switch must be locked against restart.
- Never touch the units when the machine is running. Never lift the units by the tools (saw blades or mills) nor touch under them. When you carry out tasks on the units (e.g. height adjustment on saws or milling units), switch off the main switch of the machine, and detach the machine by pulling out the mains plug. During normal work, use the pneumatic unit-lifting equipment for lifting and lowering the units.
- Never leave the tool key stuck on. Prior to switching on, check whether the key and setting tools are removed.
- Use the correct tool. Appropriate usage is described in this Operating Manual. You achieve an optimum quality with the correct tool and ensure your personal safety.
- **WARNING!** Using other tools and accessories or carrying out tasks with this electric tool, which do not conform to appropriate use can lead to accidental danger.

Fundamental Safety Notes

- Handle the cable with care. Do not use the cable to pull out the plug from the socket. Protect the cable from heat, oil, and sharp edges.
- Inspect your mobile cutting table incl. its accessories for damages. Prior to use the electric tool must be checked for proper and appropriate function. Check whether movable parts are damaged. All parts must be mounted correctly to ensure proper operation of the machine. Damaged parts and protective apparatus must be repaired appropriately or replaced. Do not use the machine when the switches are defective.
- Let repairs be carried out by a PFT - customer service. This mobile cutting table for plates conforms to relevant safety provisions. Repairs may only be carried out by a PFT - staff, otherwise accidental danger can occur to the operator.
- This machine is not suitable for operation in EX – areas (explosion threatened areas).

4.3 Observing the Service Manual

- This Service Manual must be kept by the service fitter. It must be ensured that all persons that have to carry out tasks on the machine can read the Service Manual at any time.
- In addition, the Operating Manual for the work equipments (milling unit and sawing unit) must be observed. All deviating usage notes (e.g. the tool change) are described in this Operating Manual.
- All safety notes signs and operating note signs on the machine must be kept always in a well readable state. Damaged or illegible signs must be renewed immediately.

4.4 Fundamental safety measures for maintenance

- The servicing tasks specified in the Operating Manual - setting, cleaning, lubricating, Maintenance, inspection, etc. must be carried out as scheduled.
- **Prior to carrying out servicing tasks**, the following items must be observed:
 - Switch off the central power supply using the main switch, close the main switch, and pull out the mains plug.
 - Immediately replace all machine parts that are not in proper condition.
 - Use only original spare parts or spare parts of the same type.

Special Safety Notes for Operation

- **After completing the servicing tasks** and prior to starting the machine, observe the following items:
 - Check all initially detached connections once again.
 - Check whether all initially removed protection apparatus, covers, etc. have been installed properly again.
 - Ensure that all used tools, materials and other equipment were removed from the working area.
 - Clean the work area.
 - Ensure that all safety equipments of the machine function properly

5 Special Safety Notes for Operation



Warning of cut injuries!



Warning of hand injuries!



Protective goggles:

For the protection of eyes from flying parts and liquid sprays.

Ear protection:

For Protection against Hearing Damages



Attention!

For tasks on electrical equipment:

- All tasks on the electrical equipment of the machine may be carried out only by trained electricians.
- Check the electrical equipment regularly:
 - Tighten loose connections again.
 - Replace damaged lines, cables, or defective equipments immediately.
 - Use only original spare parts.
- Pull out the plug prior to carrying out any task on the electrical equipment. The main switch must be locked against restart.
- Never clean electrical equipments with water or similar liquids.

Service Manual PFT BOARDMASTER and Units

6 Service Manual PFT BOARDMASTER and Units



DANGER!

During all service and setting tasks, the main switch must be put Off and/or the machine detached from the mains.

7 Settings Angularity on the Y- Arm

7.1 First, the Y –arm is checked for angularity



Figure 1.1

For this purpose, a gypsum board is laid on the machine table, which is placed against the rear rail. (Figure: 1.1)



Figure 1.2

Afterwards, lay a large angle in the middle of the gypsum board on the rear rail. (Figure: 1.2)



Figure 1.3

A pencil line is then drawn along the angle. (Figure: 1.3)



Figure 1.4

Afterwards the angle is rotated for verification and thus verified whether the rail is straight. (Figure: 1.4)

Settings Angularity on the Y- Arm



Figure 1.5.1



Figure 1.5.1

Now a milling unit (in deactivated state) with a 90° V groove mill is placed in the front part of the board exactly on the pencil line and the longitudinal axis is fixed. (Figure: 1.5.1 and 1.5.2)



Figure 1.6

Afterwards the milling unit is raised and again lowered with a fixed longitudinal axis (in the deactivated state) in the rear part of the table. (Figure 1.6)

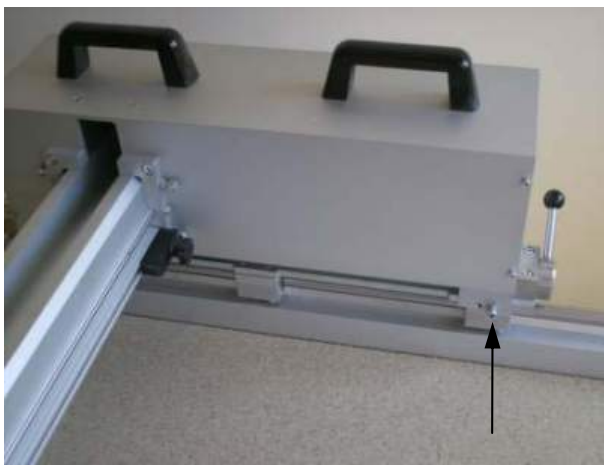


Figure 1.7

Now it is verified whether the milling tip in the rear part of the lies on the pencil line, if not then the angle has to be set as follows.

The angles are set ex-works; however, you have 2 possibilities of setting the angle.

A.) The angle can be set with two setting screws on the left side (viewed from the front) see **Figure 1.7**. A setting screw is located in front and one at the rear.

Settings Angularity on the Y- Arm

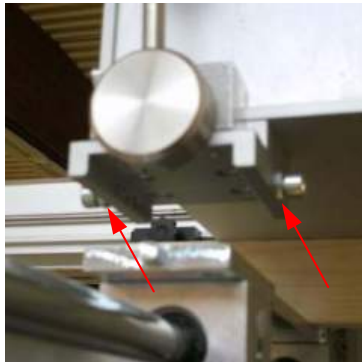


Figure 1.8

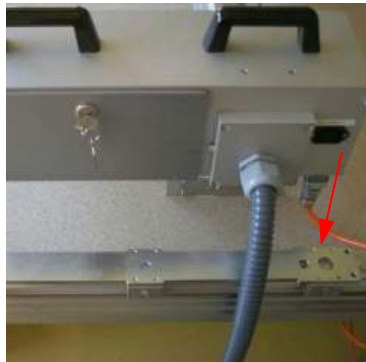


Figure 1.9

Prior to setting or rotating the screw the two lock nuts must be loosened, see **Figure 1.8**.

The setting screws must always be screwed in or out in opposite direction.

By displacing these screws, the Y-arm is swivelled either leftwards or rightwards via the pivot (**Figure 1.9**) (**Figure 1.10**).

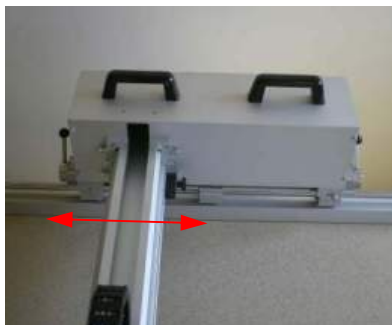


Figure 1.10

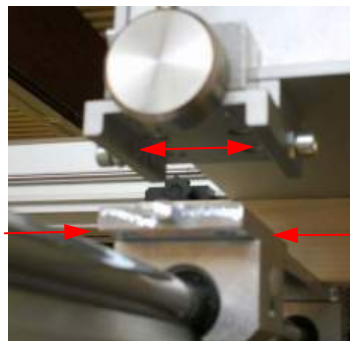


Figure 1.11

It should be ensured that the setting screws only press as firm against the slide, (**Figure 1.11**) that the equipment head can still be easily dismantled.

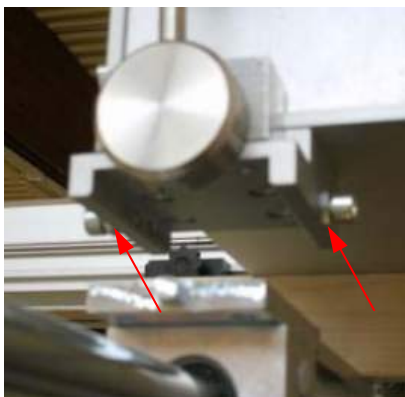


Figure 1.12

Afterwards the lock nuts are again tightened, see **Figure 1.12**

Settings Angularity on the Y- Arm

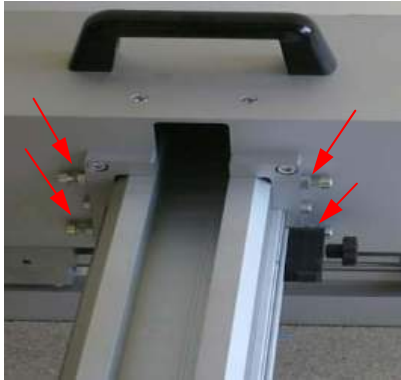


Figure 1.13

First, the lock nuts are opened and the screws (**Figure 1.13**) loosened, but not removed.

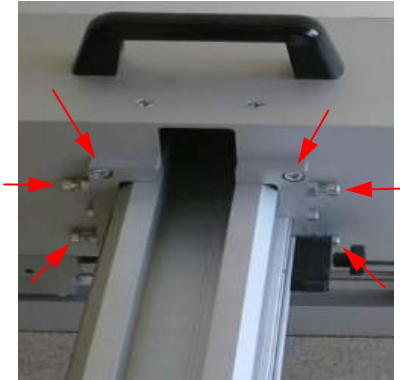


Figure 1.14

Afterwards the 4 screws on the guide box and the 4 screws on the terminal plate (**Figure 1.14**) are loosened, but not removed.

B.) Should the above mentioned variants not be sufficient for setting the angle, the one can set the angle on the equipment head as follows:



Figure 1.15

Afterwards, the 4 screws on the rear clamping plate (**Figure 1.15**) are loosened, but not removed.

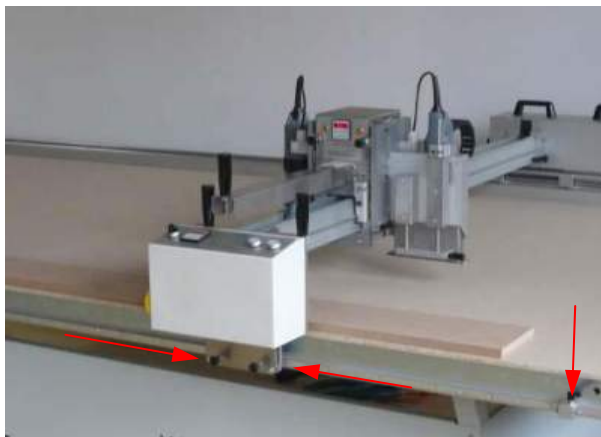


Figure 1.16

Only now can the Y-rail be shifted leftwards or rightwards with a light pressure.

During this task, the front stop limits (**Figure 1.16**) left, right on the Y-slide must be shifted, and the screws fastened, so that the slide is fixed.

Afterwards, the rear side of the guide box is shifted leftwards or rightwards until the angle is correct and the screws initially loosened at this point and tightened again in the reverse order.

It is recommendable to repeat the fine setting as in variant "A".

Replacing the Felt Seal on Equipment Head

8 Replacing the Felt Seal on Equipment Head



Important: Use a good tool and insert an Allen screw.

1.) Pull out the main plug



2.) Removing the two bottoms, Allen screws from the vertical guide (**these should protrude approx. 2 mm, so that the bearing cannot slide downwards**).



3.) Opening and removing the 4x4 screws. Allen screws on the equipment plate (caution - they do not get lost).

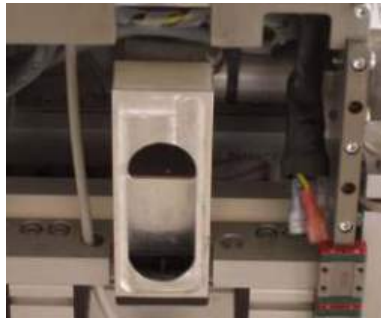


4.) Pulling the lateral detent bolt and loosening the equipment plate



5.) Carefully pull out the three plug clamps (**Pay attention that they are not stack wrongly during assembly**).

Replacing the Felt Seal on Equipment Head



6.) Loosening the suction seal (**if necessary, remove rest and adhesive residue**).

7.) Cleaning the suction nozzle with brake cleaning or Nitro (grease and dust free).



8.) Applying the adhesive on the suction nozzle.

9.) Putting the felt seal on the nozzle and pressing it firmly.



10.) Sticking in the cable into the equipment plate (**The earth terminal is in the top middle**).



11.) Returning the equipment plate and bringing the bearing in position.

Setting the Sawing Unit (Longitudinally, Transversely and Five-fold)



12.) Lightly screw in the screws (not tighten).



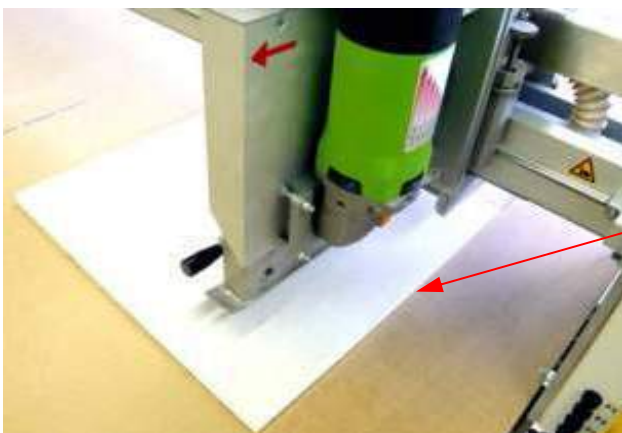
13.) Check the slide with angle and tighten the screws (tighten with care and tighten again).



14.) Tighten the two Allen screws of the guide rail.

9 Setting the Sawing Unit (Longitudinally, Transversely and Five-fold)

9.1 Checking and setting the cutting angle for the sawing units



Lay a gypsum board with approx. 40 x 30 cm on the cutting table and attach the stop limit strips. [Figure: 3.1.1]

Attach the gypsum board on the stop limit strips.

Figure: 3.1.1

Setting the Sawing Unit (Longitudinally, Transversely and Five-fold)



Figure: 3.1.2

Fix the transverse axis at approx. 10 cm from the stop limit. [Figure: 3.1.2]



Figure: 3.1.3



Figure: 3.1.4



Figure: 3.1.5

On the left side of the plate fix also the longitudinal axis (both brakes are fixed), [Figure: 3.1.3] Switch on the swing unit and cut into the gypsum board once with the sawing unit. (The sawing unit should be lowered very slowly and for machines with hydraulic lifting equipment, this should occur manually.) [Figure: 3.1.4]

Now switch off the unit and raise it, [Figure: 3.1.5] Loosen the longitudinal axis (the transverse axis remains fixed) and traverse with the equipment head rightwards.



Figure: 3.1.6

Between the slides there should be a gap of approx. 2-4 cm. [Figure: 3.1.6]

Setting the Sawing Unit (Longitudinally, Transversely and Five-fold)

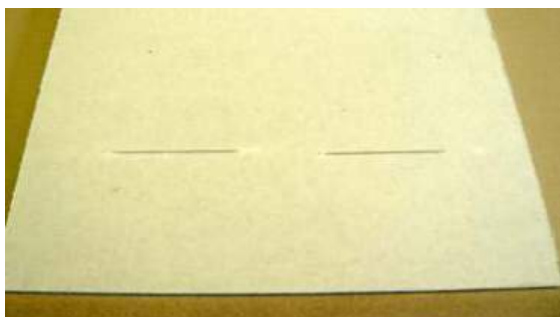


Figure: 3.1.7

Again fix the longitudinal axis (both brakes are fixed) switch on the sawing unit and now on the right side cut once with the sawing unit into the gypsum board. (The sawing unit should be lowered very slowly and for machines with a hydraulic elevating equipment, this should occur manually.) Switch off the unit and raise it. [Figure: 3.1.7]



Figure: 3.1.8

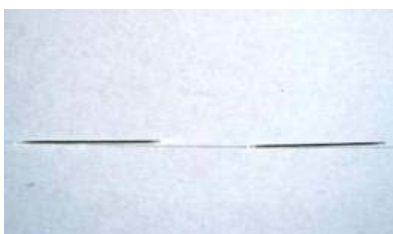


Figure: 3.1.9

Now a line is drawn along the two cuts [Figure: 3.1.8] and checked whether the two cuts are aligned. [Figure: 3.1.9]

Should the cuts not be aligned as shown on the sketch, [Figure: 3.1.10 and 3.1.11] the sawing unit must be set as follows.

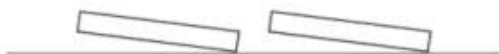


Figure: 3.1.10

The left screws have to be set.



Figure: 3.1.11

The right screws have to be set.



Attention!

When you carry out tasks on the units, switch off the main switch of the machine and detach the machine by pulling out the mains plug.

Never lift the units by the tools (saw blades or mills) nor touch under them. (Danger of being cut!) After terminating the setting tasks on the units and removing all tools from the working area, the machine should be switched on again.

Setting the Sawing Unit (Longitudinally, Transversely and Five-fold)

For this, on one side [side to be set, Figures: 3.1.10 or 3.1.11] the two external nuts are loosened (both equally much) [Figure: 3.1.12 / 1 + 2] and afterwards the internal nuts are tightened. [Figure: 3.1.12 / 3+4].



Figure: 3.1.12 / 1



Figure: 3.1.12 / 2



Figure: 3.1.12 / 3



Figure: 3.1.12 / 4

Now the test with the cuts has to be repeated and if necessary, the screw nuts adjusted anew until the cuts are aligned as depicted on the sketch. [Figure: 3.1.13].



Figure: 3.1.13

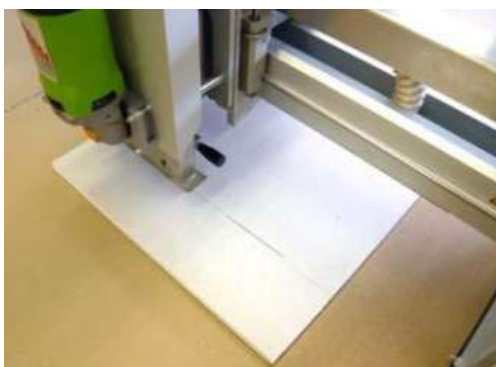


Figure: 3.1.14

Using the same method, also the transverse sawing units must be checked and set. [Figure: 3.1.14]

Setting the Sawing Unit (Longitudinally, Transversely and Five-fold)

9.2 Checking the cutting angle for the sawing units by means of a dial gauge



Attention!

For this method, the machine must be switched off and the machine's mains plug pulled off!



Figure: 3.2.1

First, the sawing protection of the sawing unit is tied upwards with a piece of wire or something similar. (so that it is fixed in an opened position)

After this, the dial gauge is set upright, aligned in height and the transverse axis is traversed to the measuring sensor of the dial gauge. Now the transverse axis has to be fixed. [Figure: 3.2.1]

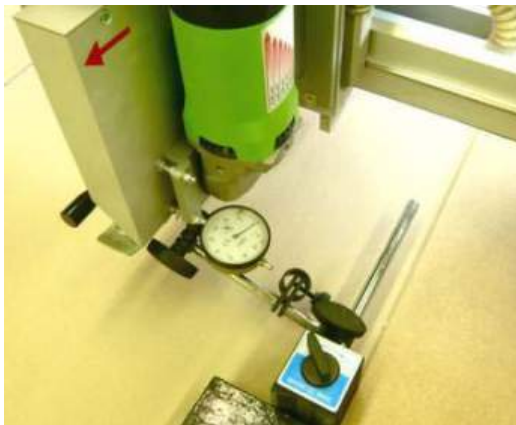


Figure: 3.2.2

Measuring begins on the left side of the sawing blade. [Figure: 3.2.1]

The measuring range or the scale of the dial gauge is set at 0. [Figure: 3.2.2]



Figure: 3.2.3

Now, with a braked transverse axis, the latter is pushed up to the end of the sawing blade rightwards. [Figure: 3.2.3]

Finally, the value is read out, should it exceed $\pm 5/100$ mm the sawing unit should be set as described in the previous section.

Using the same method also the transverse sawing units can be checked.

Setting the Sawing Unit (Longitudinally, Transversely and Five-fold)

9.3 Checking and setting the inclination angle on the sawing units

For this you use a gypsum board that is up to 40 mm thick or a mineral fibre board and fix the transverse or longitudinal axis and with the transverse or longitudinal saw at least make a 20 cm long cut into the material. Afterwards, switch off the unit and raise it.

Now check as shown on the sketch the cutting angle of the cut board with an angle. [Figure: 3.3.1]

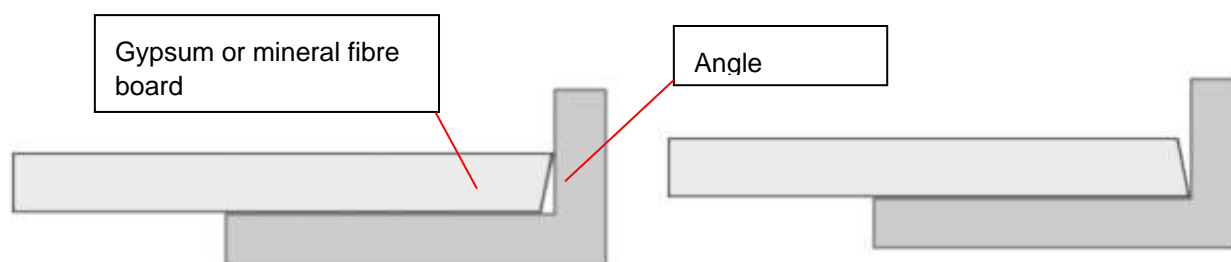


Figure: 3.3.1

The bottom screws have to be set.

Figure: 3.3.2

The bottom screws have to be set.

Should the cutting angle as shown on the upper sketch be incorrect, then the cutting angle must be adjusted by means of the two upper and the two lower screw nuts. For this, the sawing unit is removed from the machine head and on the upper or lower side (depending on which side the cutting angle is incorrect), first the two outer nuts are loosened (both equally) [Figure: 3.3.3 / 1 + 2] and afterwards the inner nuts are tightened. [Figure: 3.3.3 / 3 + 4]



Figure: 3.3.3 / 1



Figure: 3.3.3 / 2



Figure: 3.3.3 / 3



Figure: 3.3.3 / 4

Setting or Checking the Milling Units

Check the cutting angle again and if necessary adjust the screw nuts anew until the cutting angle is correct.
[Figure: 3.3.4]

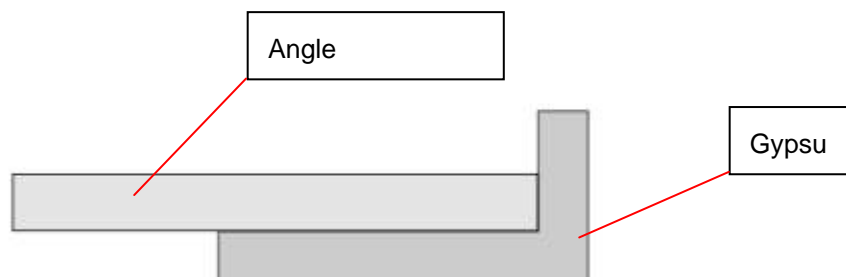


Figure: 3.3.4

The above-mentioned settings can be applied in the same manner to the longitudinal, transverse, and five-fold sawing units.

The tilt angle can also be checked by means of a dial gauge (Description in Chapter 3.2).

10 Setting or Checking the Milling Units

The milling housing of the milling units is manufactured and set ex-works exactly in the right angle. By improper fiddling with the milling unit (e.g. dropping), it can happen that the angle of the milling housing is no longer correct.

This is mostly evident through an increased dust development during milling tasks, or rather that the milling unit mills deeper at the beginning of the board. The angle of the milling unit is checked with an angle as follows. [Figure: 4.1 + 4.2]



Figure: 4.1



Figure 4.2




Should the angle of the milling unit be no longer correct, please get in contact with our hotline. See Page 2.

Spare Parts List

11 Spare Parts List

Pos	Figure	Article No.	Designation
1		00 20 83 26	Spare bearing - front Front guide rail set 2 pcs. No: 50168
2		00 20 83 27	Spare bearing – rear Rear guide rail set 2 pcs. No: 50169
3		00 20 83 32	Spare bearing for unit's slide on the equipment head set 4 pcs No: 50168B
4		00 20 83 33	Idem spare bearing, central equipment head 1 pcs. No: 50169A
5		00 20 83 34	Idem spare bearing, eccentric equipment head 1 pcs. No: 50169B
5		00 20 83 35	Spare part snapper on the equipment head No: 005 50121
6		00 20 83 38	FEY weight relief set for units L+R No: 50167
7		00 20 83 39	Guide rail, front, MF3000 incl. bearing and bearing plate No: 50168A
8		00 20 83 40	Guide rail, front, MF3000 incl. bearing and bearing plate V2A No: 50168D
9		00 20 83 41	MA Digital display (IVO) No: 071 50120

Spare Parts List

55		00 20 83 42	MA Sensor for the digital display (IVO) No: 071 40121
56		00 20 83 43	Magnetic tape, longitudinal with protective plate No: 071 40119
57		00 20 83 44	Magnetic tape, transverse with protective plate No: 071 40120

Notices:

12 Notices:

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Notices:

PFT – THE FLOW OF PRODUCTIVITY



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