

MINIPRESS PRO

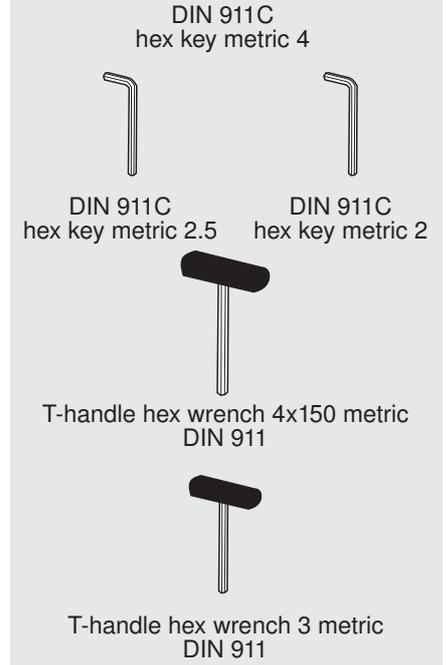
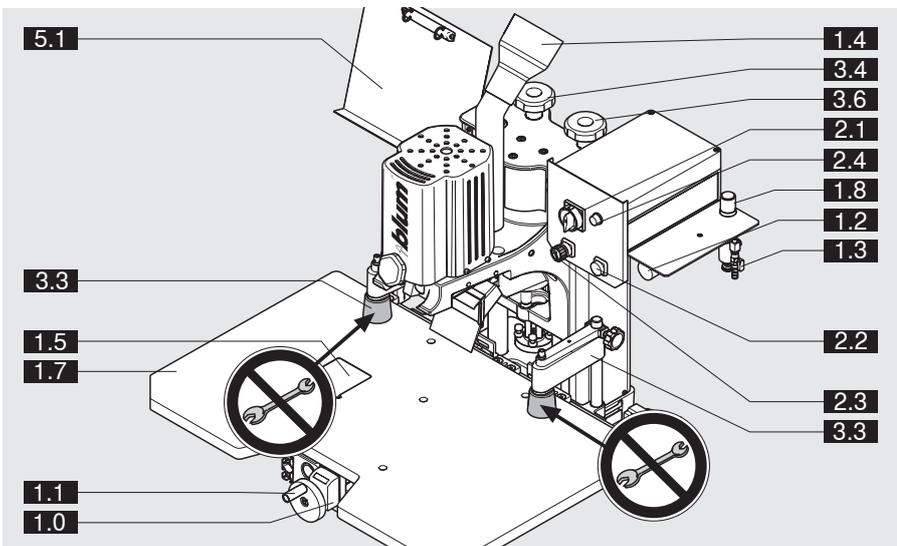
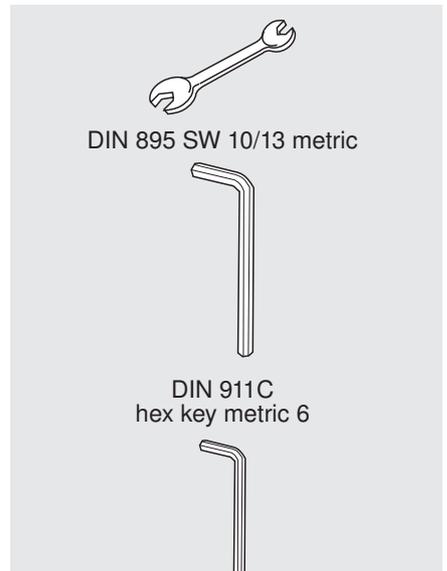
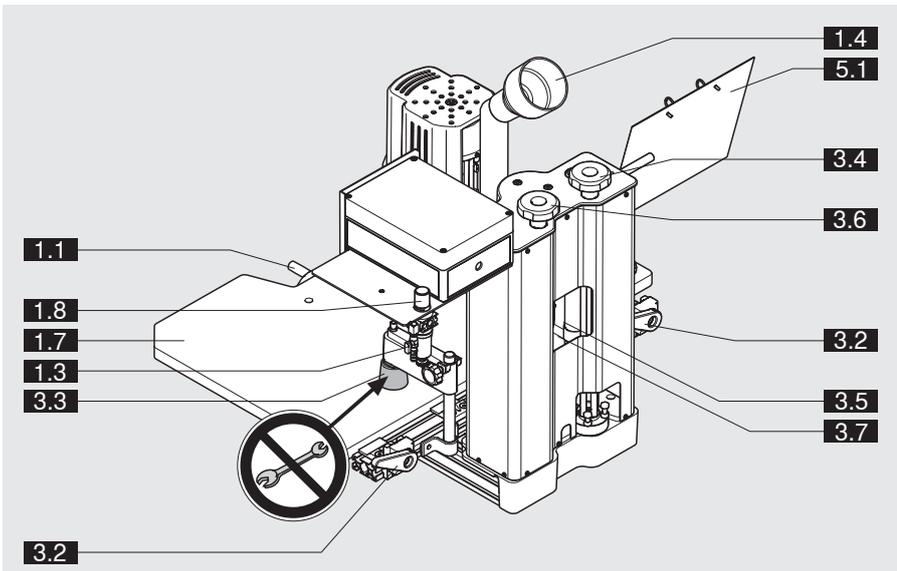
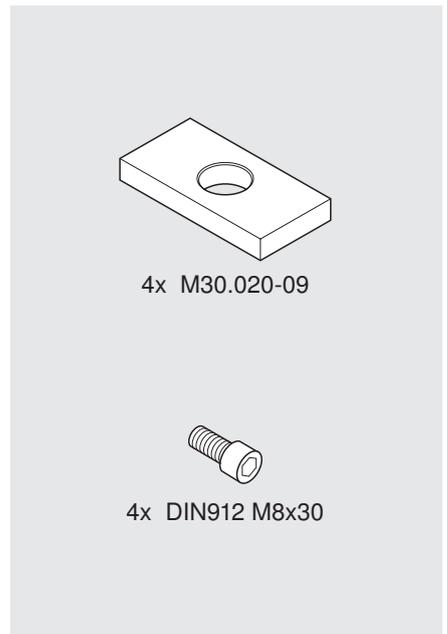
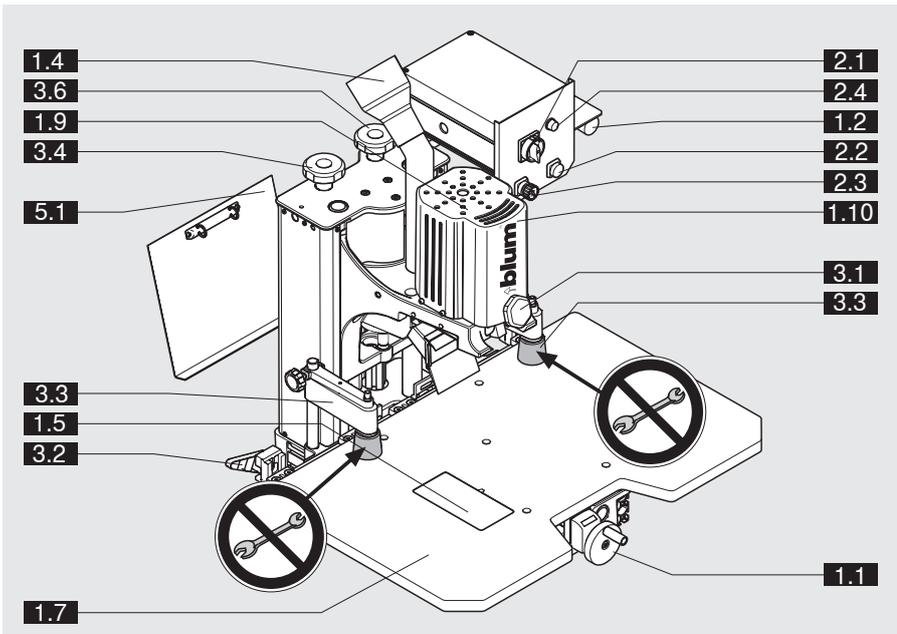
Please keep a copy of the operating instructions.

The operating instructions contain the EC Declaration of Conformity, which must be produced for authorities upon request.

EN

 **blum**[®]

BA-102/2EN M54.XXXX



 **Safety device:**
Do not remove - replace immediately with original parts if damaged.

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C.1 - How to use these operating instructions

- Please keep a copy of the operating instructions.
- Completely read the operating instructions and the safety information before operating the assembly machine.
- We recommend that you use the orientation diagram for easier identification of the parts being described.
- Individual sections are indicated by capital letters or numbers which makes it easier to navigate the instructions.

**Safety information:**

This exclamation point indicates important safety information that must be followed.

Comment:

This exclamation point indicates a comment. If this comment is not followed, then assembly machine components as well as the work piece itself may be damaged or the assembly machine may be rendered inoperable and/or the work piece unusable.

(2.1) Component description codes correspond to the section where the component and its function is described. For example, **(2.1)** is described in section 2.

Dear valued Blum customer,

We would like to congratulate you on your decision to purchase the Blum assembly machine. You are now the owner of a modern, high-quality assembly machine that will give you years of productive use with the proper care and maintenance.

We realise that your time is valuable. However, you should carefully read these operating instructions before you set up and use the machine for the first time. In this way, you will best determine how to adjust the assembly machine to your needs as well as protect yourself against injury. In addition, the operating instructions also contain important information about machine maintenance. At the time of printing, these operating instructions contained up-to-date information for this model. Small deviations due to continual development of the assembly machine design cannot be ruled out entirely. These operating instructions are an important component to the assembly machine and must be transferred to the new owner if the machine is sold.

For your own safety, you should only use Blum-approved replacement parts and accessories. Blum is not liable for any damages resulting from the use of unapproved products.

Blum GmbH retains the right to make changes to and/or cancel without replacement the technical design, equipment, technical information, colour, materials, services provided and similar without prior notice and without explanation as well as the right to discontinue production of a specific model also without prior notice.

D.1- Remaining risks according to ISO EN 12100-2

- This machine complies with current safety standards. However, risks remain for
- the operator and second persons due to the stroke movement of the drilling unit and especially in case safety devices are removed or control elements should fail.
- Other remaining risks are indicated by the safety decals and in the following safety rules. It is therefore absolutely necessary to follow all safety instructions carefully.

D.2 - Safety decals

	Completely read the operating instructions and the safety information before operating the assembly machine
	Wear proper eye and face protection when operating this machine
	Wear proper ear protection when operating this machine
	Only one person at a time must operate the machine. The work area is located in front of the machine.
	Electrical connections and maintenance should only be performed by a qualified electrician. Disconnect electrical and pneumatic connections before making any repairs (plug / rapid hose coupling).
	Keep hands away from the drill or swing arm during the drilling or insertion process. Do not remove safety devices - danger of injury.
	Keep hands away from the danger zone. - danger of being crushed
	Class 2M laser - Never look directly into the laser beam. The laser can cause eye damage.

D.3 - Intended use

- The designated purpose of the assembly machine is the drilling and insertion of furniture fittings into work pieces made of wood, particle board or plastic coated wood. The assembly machine should only be used in manufacturing. The assembly machine is only intended for stationary operation. The manufacturer does not assume liability for uses not described in the instruction manual.
- The intended purpose of the laser marking line is measurement and position determination on the work piece. Only wood or particle board should be used as the work piece since they are non-reflective. Coated and/or reflective work pieces may not be used.
- The machine is not explosion-proof. It should not be set up near a paint finishing system

D.4 - Safety information

- Before retooling, cleaning, maintenance or performing any work on drill bits, turn the main switch **(2.1)** to pos.0 and disconnect the assembly machine from the pneumatic connection.
- Only use sharp, clean drill bits. Attach drill bits securely.
- Particular care must be taken when working on sections that jut out over the work top. Attach a larger work table or use extensions.
- Secure the work piece during drilling/insertion. Use the assembly machine clamps or if these are not sufficient for the particular job, use suitable clamping equipment.
- Wear appropriate work clothing.
- You should always check that all safety devices and machine parts are functioning properly before use. Replace damaged parts with original Blum parts.
- Make sure that no other tools or objects are on the work table aside from your work piece before turning on the assembly machine.
- Always turn the main switch **(2.1)** to POS. 0
- For your own safety, only use those accessories which are recommended or indicated in the instruction leaflet or the BLUM catalogue.
- Do not make any alterations or modifications to the assembly machine.
- If there are any questions and/or problems, please contact the BLUM Customer Service Department.
- Wear ear protection
- Make sure that the work area is illuminated properly
- All national regulations regarding labour law, industrial safety as well as all disposal guidelines must be followed.

D.5 - Noise emission

The work place noise level LpA determined according to DIN EN ISO 11202 with Supplement CEN -TC 142 is 85 dB(A). The sound power level LWA determined according to EN ISO 3746 with Supplement CEN-TC 142 is 92 dB(A). The measurement uncertainty constant K is 4 dB (A).

The following supplements from CEN - TC142 to maintain an accuracy class better than 3 dB were taken into account:

The ambient correction factor K3A is 4 dB. The difference between the extraneous noise level and the sound intensity level at each measuring point is 6 dB. The machine-specific measuring conditions were as follows taking into account ISO 7960 sections 0 through 4:

Drill bits:	1 boss hinge drill bit	d= 35 mm; t= 12 mm, n= 2890 U/min
	2 dowel drill bits	d= 8 mm; t= 12 mm, n= 5600 U/min,
Work piece:	Chipboard 300 x 700 x 19.	
Microphone position:	Centred 1 m in front of the drill axle at a height of 1.5 m	

Note:

The values specified here are emission values, which means that they are not necessarily safe workplace values at the same time. Because there is no correlation between emission values and workplace values, they cannot be used to reliably determine whether or not additional precautions are required. Factors that can influence the current workplace value include the duration of exposure, the type of work space, other sources of noise, the number of machines and other nearby influences. Also, admissible workplace levels may vary from country to country. The information provided here is designed to enable users to assess the hazards and risks involved more accurately.

D.6 - Dust emission

If connected properly to a dust extraction system, dust emissions fall clearly below the technical standard value. The assembly machine is equipped with a connecting piece for hoses with an inside diameter of 50 mm. This provides negative pressure of 1000 Pa for the maximum required average air velocity of 20 m/sec. If there is no extraction system connector with a diameter of 50 mm, the supplied adapter can be used.

- The assembly machine must be connected to a dust extraction system. (The extraction system connection must be flexible and flame resistant).
- Regularly remove remaining dust and chips using a vacuum cleaner.

MINIPRESS PRO 	
Ser.No.: KC00001	2010
V Hz kW	CE
kg / lbs	
Bohr- und Beschlagsetzmaschine	
Ref.No.: M54.2000	
Julius Blum GmbH - A - 6973	

BG	Пробивни машини
DA	Bore- og beslagssætmaskiner
DE	Bohr- und Beschlagsetzmaschine
EN	Drilling and insertion machine
ET	Puurimis- ja sisestusmasinad
FI	Asennusporakoneet
FR	Machine pour percer et poser des ferrures
EL	Μηχάνημα διάτρησης και τοποθέτησης
IT	Macchina forainseritrice
LV	Urbšanas un furnitūras iestrādāšanas iekārta
LT	Grężimo-montavimo staklės
NL	Boor- en beslagmachines
PL	Maszyna do nawiercania i osadzania okuć
PT	Furadeira e máquina para a montagem de ferragens
RO	Maşină de găurit şi montat feronerie
SV	Borr- och beslagsmonteringsmaskiner
SK	Vrtací a lisovací stroj
SL	Vrtalni stroj in stroj za okovje
ES	Máquinas para taladrar y de instalación de herrajes
CS	Vrtací a lisovací stroje
HU	Fúró- és vasalatbepréselő gépek

F.1 - EC Declaration of Conformity



Julius Blum GmbH, Industriestr. 1, A-6973 Höchst herewith declare on our own responsibility that the product MINIPRESS (M54.xxxx) with drilling heads (MZK.2000, MZK.2100, MZK.2110, MZK.2200, MZK.2230, MZK.2400, MZK.2410, MZK.2800, MZK.2810) to which this Declaration refers, complies with the following EC Directives:

EC Machine Directive 2006/42/EC
EC EMV Directive 2004/108/EC

The following harmonised European standards have been used to ensure proper implementation of the requirements specified in the EU Directives: EN ISO 12100-1, EN ISO 12100-2, EN 60204-1, EN 349, EN 983

In addition, the following standards have also been applied: EN ISO 11202, EN ISO 11204, DIN 33893-2

Registered location:

Fachausschuß Holz
Prüf- und Zertifizierungsstelle im BG - PRÜFZERT
Postfach 800480
70504 Stuttgart / Deutschland
GS-Prüfbescheinigungsnr: 051140
BG-Prüfbescheinigungsnr: 051141

Höchst, 06.07.09

Dipl.-Ing. Herbert Blum,
Managing Director
www.blum.com

Documentation authorised agent:
Dipl.-Ing. (FH) Thomas Maier,
www.blum.com

F.2 - Technical data

1) General data

- Voltage: see serial tag
- Current: see serial tag
- Connected load
 - Motor: 1.1 kW
- RPM: see serial tag
- Air consumption: 1.5 litres per cycle
- Noise emission: 80.4 dB(A)

Important: Provide a 16 A mains backup fuse.

Installation location for storage and operation:

- Temperature range: 5 - 40 °C (39.2 - 104 °F)
- Rel. humidity: 35 - 55 %

2) Weight and measurements

Weight: m= 75 kg

Dimensions: H= 863 mm
W= 936 mm
D= 745 mm

3) Max. work piece thickness

- drilling only 45 mm
- Insertion
Depending on the fitting max. 20 mm to max. 32 mm

4) Max. drilling distance

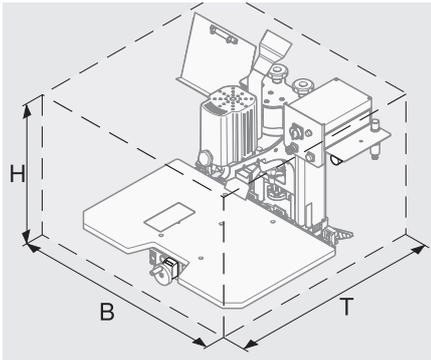
- Drilling distance centre spindle: 0 - 130 mm

5) Max. drilling diameter

- Max. drilling diameter 45 mm
- For drill bits see Blum complete catalogue
Only Blum-approved drill bits
may be used.

6) Accessories

- For accessories see BLUM complete catalogue



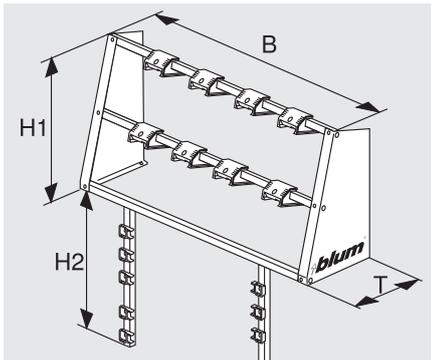
1.1 - Unpacking and assembly

1.1.1) Assembly machine space requirement

H=	863 mm
W=	936 mm
D=	875 mm



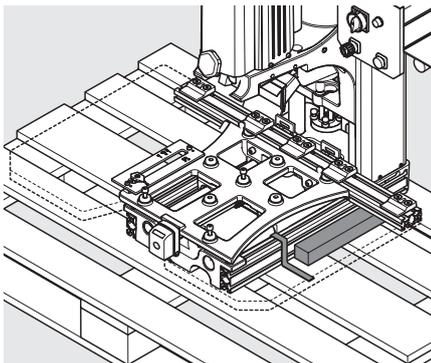
ATTENTION:
The centre of gravity for the assembly machine is in the back



1.1.2) Space requirement of drilling head and ruler storage rack (optional)

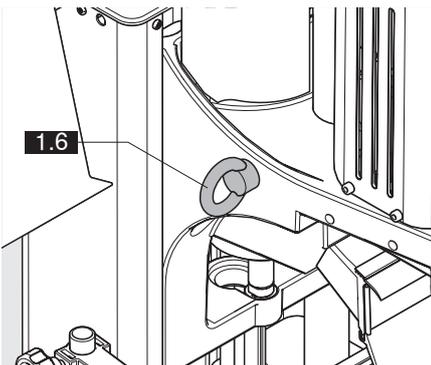
Part number: MZA.2600

H1=	613 mm
H2=	600 mm
W=	1,282 mm
D=	350 mm



1.1.3) Unpacking assembly machine

- Remove box
- Remove fixing components

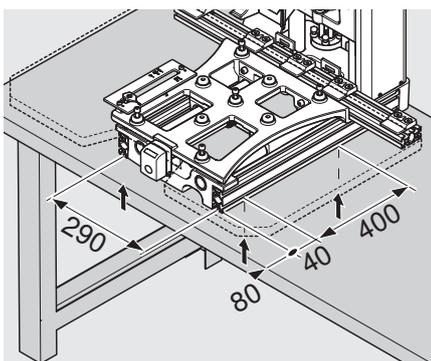


1.1.4) Use lifting machine to place machine on table



ATTENTION:
Machine must be lifted using a crane.
Do not hold or lift machine using the motor hood.

- Lift machine by the ring eyes (1.6) using a lifting tool
- Do not setup or store assembly machine in a moist environment. The space should be dry.
- The workplace must have proper illumination.

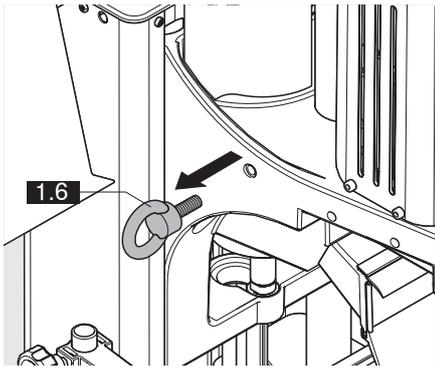


1.1.5) Securing assembly machine to a suitable table



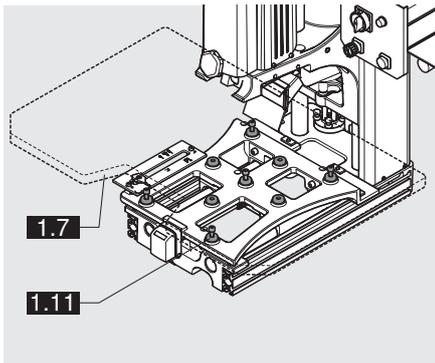
ATTENTION:
The assembly machine weighs approx. 75 kg.
The table should have the proper dimensions

- Use a lifting tool to lift the assembly machine onto the table
- Recommended table height 80 - 90 cm
- Secure assembly machine using enclosed screws (drilling required).
(4x DIN 912 M8x30 + 4x counter plate)



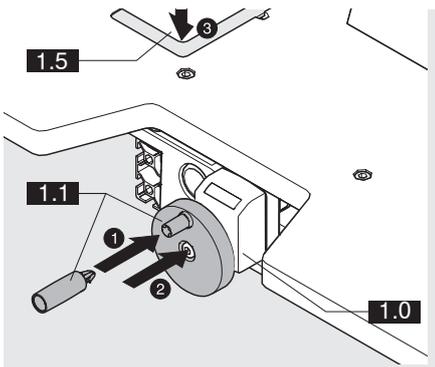
1.1.6) Removing ring screw (1.6)

- !** **Note:**
Remove the ring screws (1.6) to avoid damaging the assembly machine and work piece.



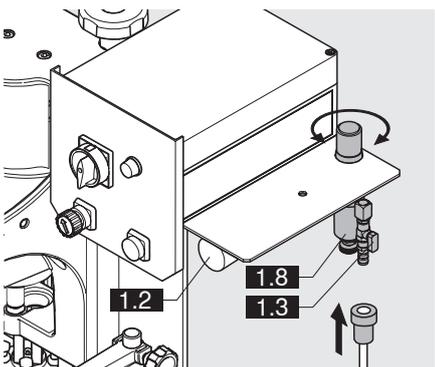
1.1.7) Attaching table (1.7)

- Attach table (1.7) using screws provided



1.1.8) Attaching handle

- Insert gauge-glass (1.5)
- Attach hand wheel and attach handle (1.1)



1.2 - Connecting to compressed air system

1.2.1) Connecting air supply

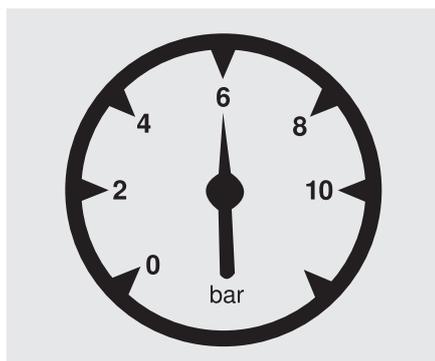
- !** **ATTENTION:**
During the following procedure, the drill unit (2.23) makes an upward motion

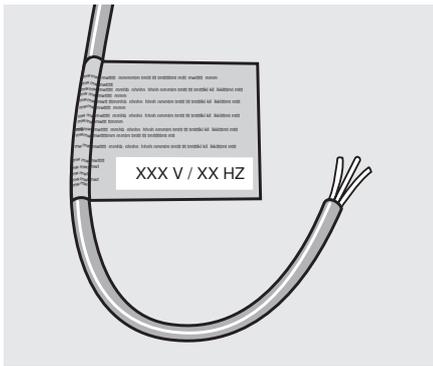
- Connect the air supply to the air filter unit (1.8) of the assembly machine
- Open lock valve (1.3).

- !** **Important:**
A rapid hose coupling must be inserted a max. 3 m from the machine in the air pressure supply line.

1.2.2) Setting operating pressure (1.2)

- The operating pressure is 6 bar
(Pmin = 5 bar)
(Pmin = 7 bar)
- Air consumption per work cycle is 1.5 litres





1.3 - Electrical connection

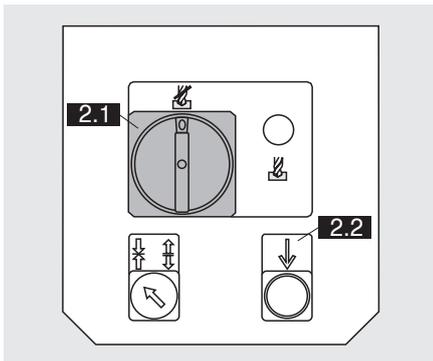
1.3.1) Electrical connection

The assembly machine comes equipped with a plug. If it cannot be used, an electrician should replace the plug.



ATTENTION:

The electrical connection must be performed by a qualified electrician!



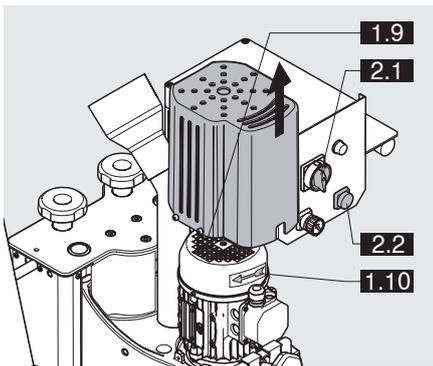
- Set main switch (2.1) to **Pos.0**
- The attached plug should correspond to national standards. Provide a 16 A mains backup fuse (see Chapter 12 - Diagrams).



Important:

The assembly machine is designed for the voltage printed on the label of the connection cable.

For use with other assembly machine operating voltages, see Chapter 12 - Diagrams



1.3.2) Checking motor rotation

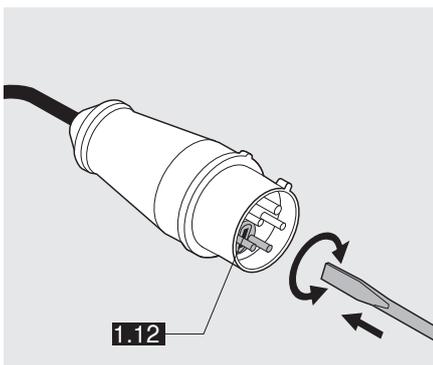
These work steps should only be carried out when operating with three-phase current and/or power current.



ATTENTION:

During the following procedure, keep your hands away from the work area of the assembly machine

- Set main switch (2.1) to **Pos.I**
- Remove motor hood
- Briefly press feed switch (2.2)
- The motor fan (1.9) must turn in the direction of the arrow (1.10)

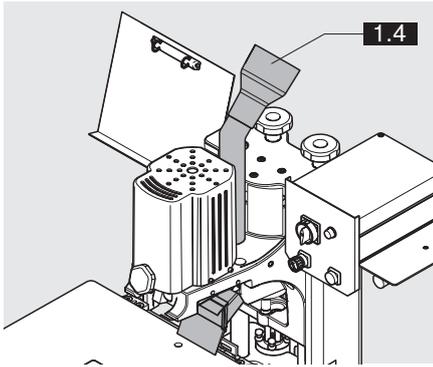


1.3.3) Correcting motor rotation

These work steps should only be carried out when operating with three-phase current and/or power current.

If the motor rotation is wrong:

- Set main switch (2.1) to **Pos.0**
- Disconnect assembly machine from the mains
- Rotate the turnover plate (1.12) in the plug by 180 deg. by pressing and turning
- Recheck the motor rotation.



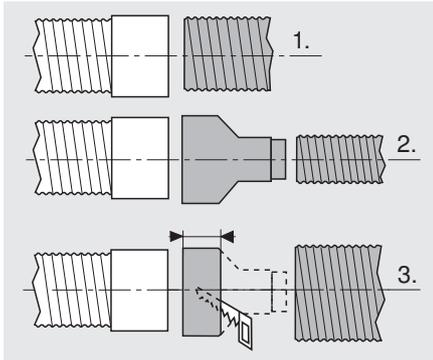
1.4 - Dust extraction

1.4.1) Connecting extraction system to the assembly machine



ATTENTION:
The machine must be connected to a dust extraction system!

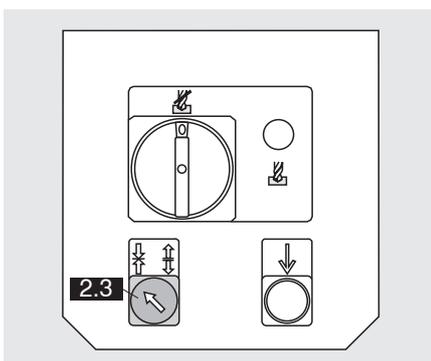
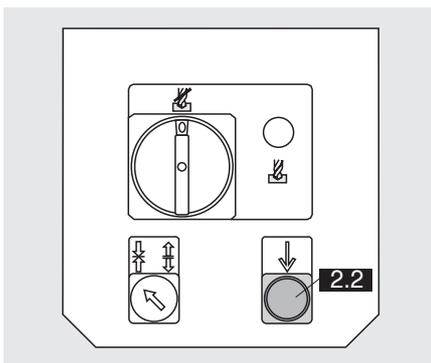
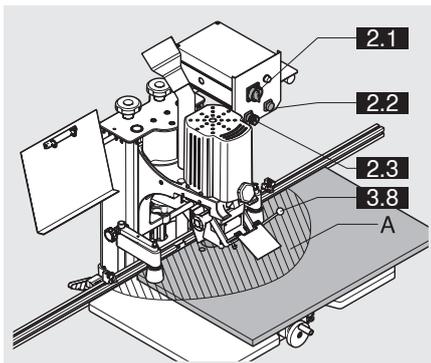
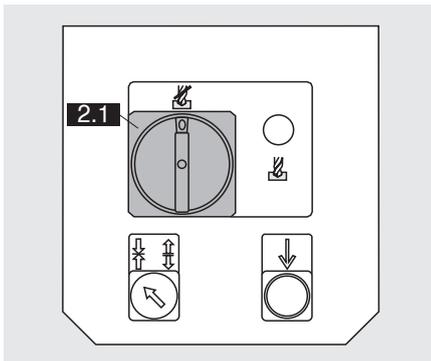
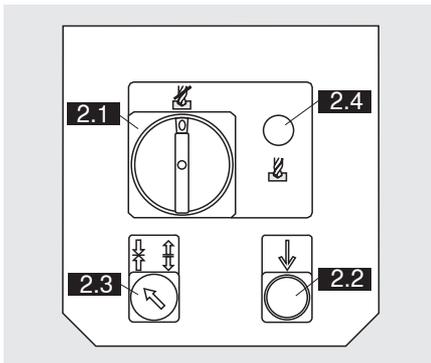
- Insert the spiral hose with an inside diameter of 50 mm into the receiving tube (1.4) and fix it
- Make sure that the average air velocity for the extraction system is at least 20 m/sec.
- If there is no extraction system connector with a diameter of 50 mm, the supplied adapter (image 1.4.2) can be used. For connection, make sure that a minimum air velocity of 20 m/sec is provided at the cross-section of the 50 mm hose.



1.4.2) Attaching the extraction system with the controller



ATTENTION:
The electrical connection must be performed by a qualified electrician.



2.1 - Description of operator panel

2.1.1) Designation of operating elements

- (2.1) Main switch
- (2.2) Feed switch
- (2.3) Hold down clamp switch
- (2.4) Operating mode display indicator

ATTENTION:



The main switch (2.1) does not disconnect the assembly machine from the air pressure system.



Pos.0: Operating mode indicator (2.4) does not light. Assembly machine in set-up mode

- Motor cannot be started
- Stroke movement can be carried out



Pos.1: Operating mode indicator (2.4) lights. Assembly machine is in operational mode

- Drilling and the fitting insertion can be carried out
- The marking line lights

ATTENTION:



The main switch (2.1) should be set to pos. 0 when not in use to prolong the life of the marking line.

The main switch (2.1) can be secured against unauthorised drilling using a standard padlock.

2.1.2) Feed switch (2.2)

ATTENTION:



When pressing the feed switch (2.2), keep your hands away from the work area (A) of the assembly machine.

Pressing the feed switch (2.2) will carry out the currently selected work process.



Set up:

Set main switch (2.1) to Pos.0 + press feed switch (2.2)



Drill:

Set main switch (2.1) to Pos.1 + press feed switch (2.2)



Insert fitting:

Swivel in swing arm + press feed switch (2.2)

2.1.3) Hold down clamp switch (2.3)

Pos. Clamps on:

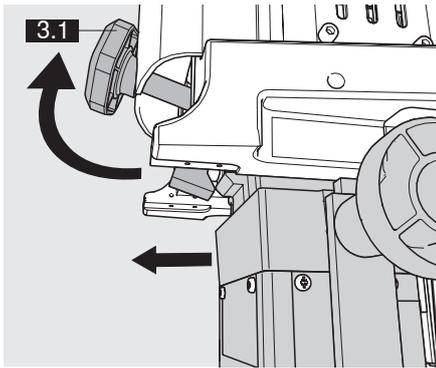


Pressing the feed switch (2.2) automatically engages the hold down clamps. Briefly touching the hold down clamp switch (2.3) will disengage the clamps (3.3).

Pos. Clamps off:



Pressing and turning the clamp switch (2.3) to pos. ⚡ will turn off the hold down clamps. When the feed switch (2.2) is pressed, the hold down clamps (3.3) remain engaged.



3.1 - Vertical drilling unit

3.1.1) Gearbox replacement

- Main switch (2.1) at Pos. 0
- Loosen locking device (3.1) by turning to the left
- Lift the locking unit on the locking device (3.1) and pull forward
- Remove the drilling head from the guide and place to the side
- Insert the desired drilling head into the guide until the stop

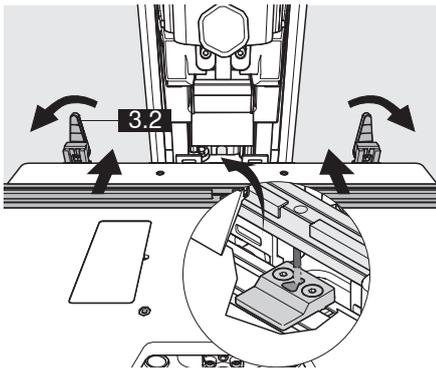
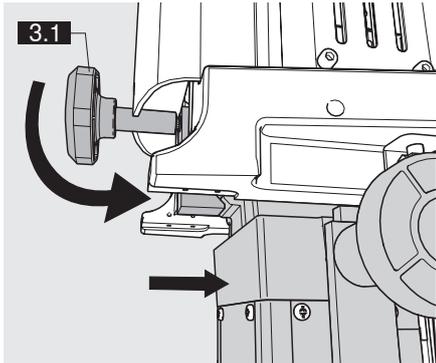


ATTENTION:

A damaged coupling could cause injury. Tighten locking device before operating the machine

Move the locking unit on the locking device (3.1) down

- Tighten locking device (3.1)
- Check that the gear box is fixed. If the gear box is not fixed, the coupling could break (Replacing the coupling (9.1), see point 9.1.3)



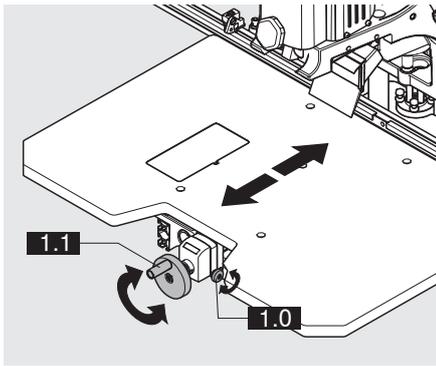
3.1.2) Replacing rulers

- Main switch (2.1) at Pos. 0
- Pull ruler (3.2) forward and remove from the top
- Place ruler (3.2) to the side
- Insert desired ruler (3.2) into the specified elongated hole with the indexing pegs and slide all the way back
- Close clamping knobs (3.2)



Important:

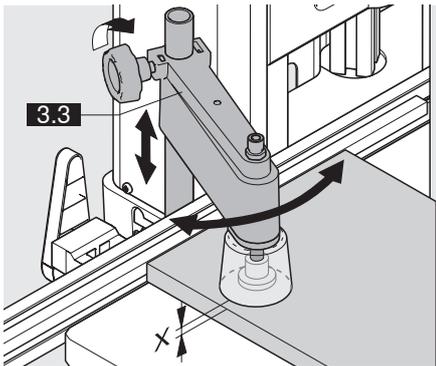
Make sure that the ruler (3.2) is inserted and clamped cleanly aligned and not askew. The clearance for the standard ruler must point to the front.



3.2 - Setting work top to drilling distance

3.2.1) Setting drilling distance

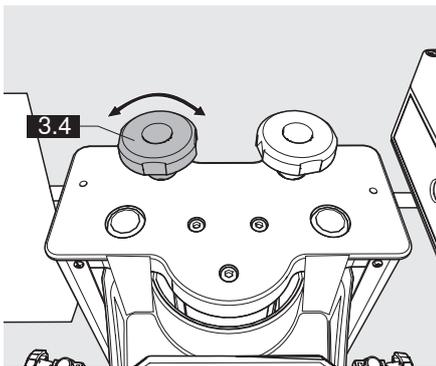
- Loosen clamping (1.0)
- Set the desired dimension using the hand wheel (1.1)
- Tighten clamping (1.0)



3.3 - Setting clamps

3.3.1) Setting hold down clamps (3.3) to the material thickness

- Open clamp screw
- Set the hold down clamps (3.3) so that the distance between the door and the clamp guard is a max. $x = 3$ mm.
- Loosely tighten clamp screw

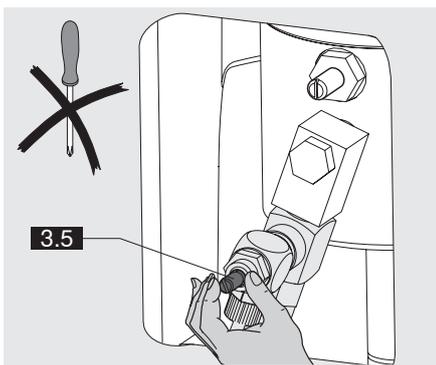


3.4 - Setting drilling depth

3.4.1) Setting drilling depth

- Set main switch (2.1) to **Pos. 0**
- The drilling depths for work piece thicknesses 16 and 19 mm are already pre-set.
- Turn revolving handle (3.4) to the desired position.
The drilling depth is now set.

! **Important:**
How to set other dimensions is described in point 4.1.2 “Pre-setting revolver for drilling depth.”

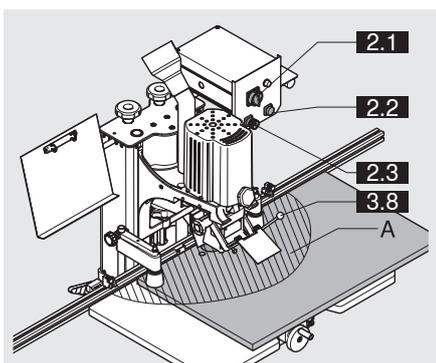


3.5 - Setting cam speed

3.5.1) Setting cam speed (3.5)

- **Faster:** Turn screw (3.5) to the left
- **Slower:** Turn screw (3.5) to the right

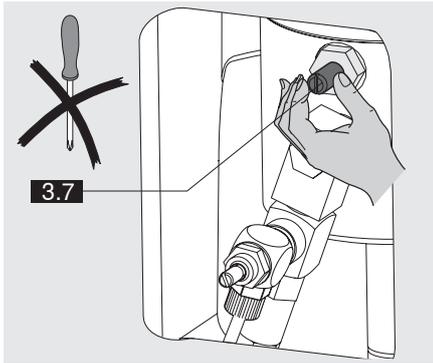
Reduce the cam speed for work pieces that are thicker than 19 mm.



3.5.2) Checking cam brake

The cam brake slows down the cam speed just before the drill enters the wood. (This extends the life of the drill and ensures tear-free drilling)

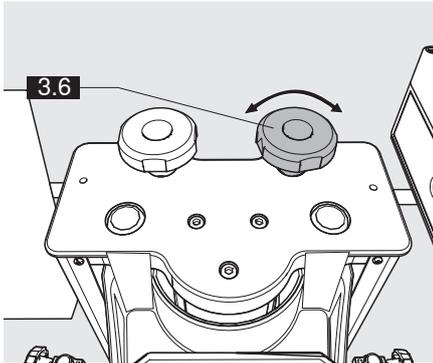
- Main switch (2.1) at **Pos. 0**
- Keep the assembly machine's work area (A) free.
- Press the feed switch (2.2) and observe the cam movement.



3.5.3) Setting cam brake (3.7)

The brake is set by turning the screw (3.7) on the cylinder.

- Turn screw (3.7) to the right: slows down the drill bit
- Turn screw (3.7) to the left: speeds up the drill bit



3.6 - Setting operating mode



ATTENTION:
Set main switch (2.1) to Pos. 0

3.6.1) "Drilling" and/or "Drilling and inserting fittings" mode switch (3.6)

- Press feed switch (2.2)
- Set mode switch (3.6) to the desired setting



Pos. A - Drilling

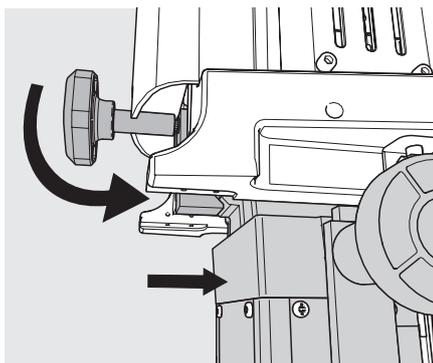
The return stroke of the assembly machine is limited.



Pos. B - Drilling and/or inserting fittings

The vertical drilling unit uses a full stroke.

- Release feed switch (2.2)



3.7 - Drilling and inserting fittings

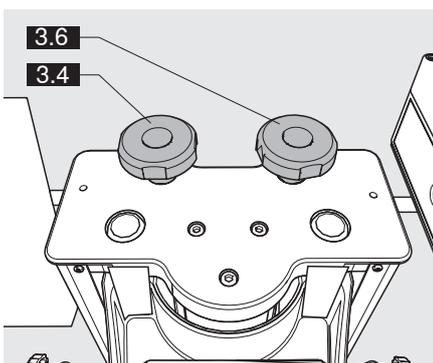
3.7.1) Assembly of furniture hinges, furniture connectors, METABOX and TANDEMBOX front fixing brackets

- Insert the gear box (see point 3.1.1)
- Insert ruler (3.2)
- Set work top

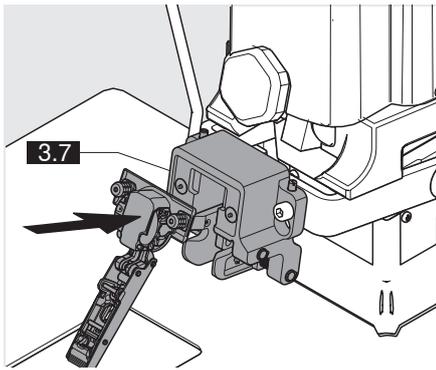


Important:

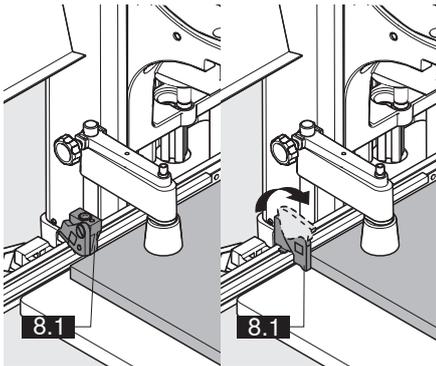
Particular care must be taken when working on sections that jut out over the work top. Use extensions.



- Set hold down clamp (3.3) (see point 3.3.1)
- Set drilling depth (3.4) (see point 3.4.1)
- Set mode switch (3.6) to "Drilling and insertion" (see point 3.6.1)

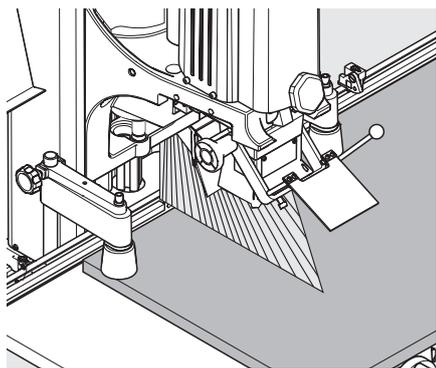


3.7.2) Clipping fitting onto insertion ram (3.7)

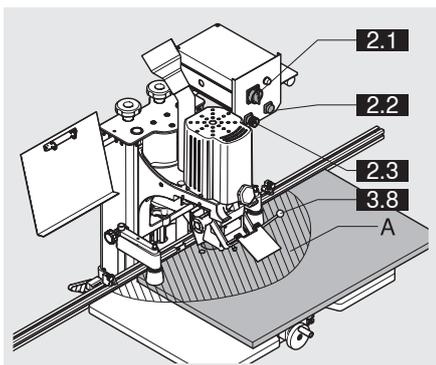


3.7.3) Pushing work piece to the swivel stop (8.1)

- !** Important:
The stop surface can be enlarged by swivelling the stop flap forward for grooved work pieces and work pieces with radiuses.



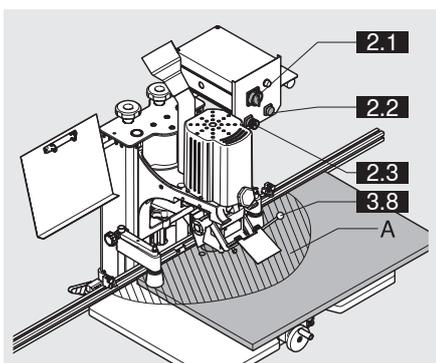
3.7.4) Pushing work piece to the marking line



3.7.5) Drilling

- !** ATTENTION:
All items except for the work piece should be removed from the work area of the assembly machine. Keep your hands out of work area (A).

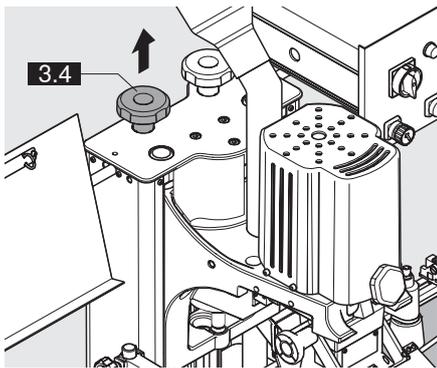
- Main switch (2.1) at Pos. 1
- Hold down clamp (2.3) at Pos. $\frac{1}{2}$
- Swing arm (3.8) must be swivelled up.
- Hold down piece outside of danger area (A) and press against the swivel stop (8.1).
- Press feed switch (2.2) until drilling depth is reached.
- Release feed switch (2.2).



3.7.6) Inserting the furniture hinge

- !** ATTENTION:
Keep your hands and other objects away from assembly machine work area (A).

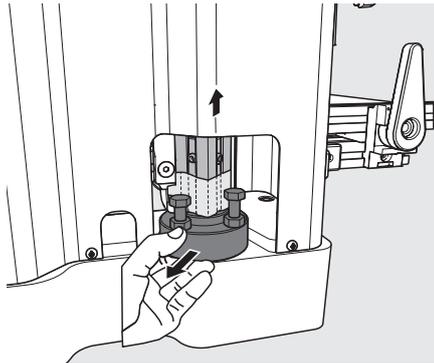
- Press the feed switch (2.2) until the furniture hinge is inserted completely.
- Release feed switch (2.2)
- Swivel down swing arm (3.8)
- Loosen the clamps (2.3) by touching the clamp switch (2.3)
- Remove piece from the work top or push to the next stop (8.1)



4.1 - Pre-setting revolver for drilling depth

The drilling depths for panel thicknesses 16 and 19 mm are already pre-set. 2 additional dimensions can also be pre-set.

- Lift revolving handle (3.4)



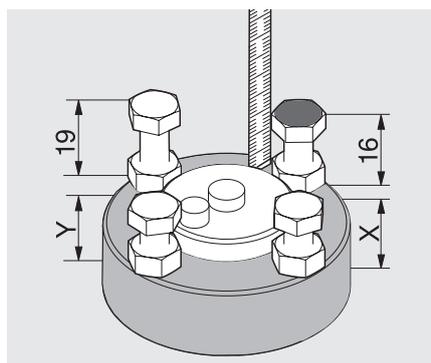
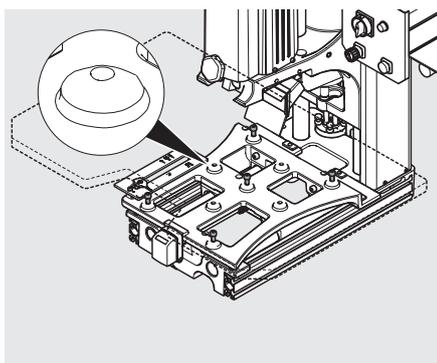
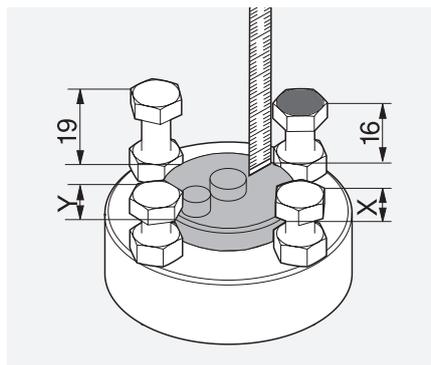
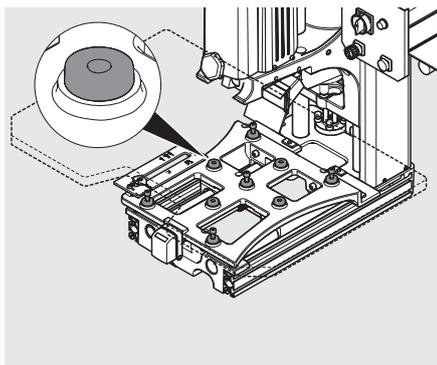
The revolver is located on the back of the machine.

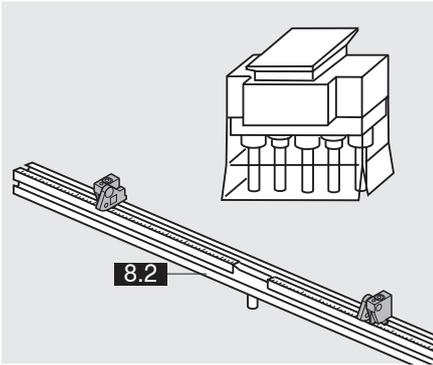
- Remove revolver

Two screws are preset to 16 and 19 mm.

The other available screws (X, Y) can be set as desired.

- Set the dimension using the spanner and lock the screw with the screw nut
 - Check dimension with a test drilling
- Label revolver handle (3.4) using the included stickers





5.1 - Creating a setup plan

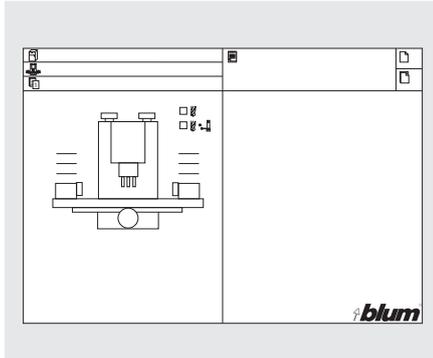
5.1.1) Identifying drilling head and ruler

Note:



To better understand the following description and procedures, take a look at the included sample setup plan.

- In the overview on pages xx, xx and xx, select the required gear box and ruler (8.2) for the desired assembly application.



5.1.2) Removing setup plan template

- Fill out header data

Explanation of symbols:



Enter parts description



Enter work procedure



Enter creation date



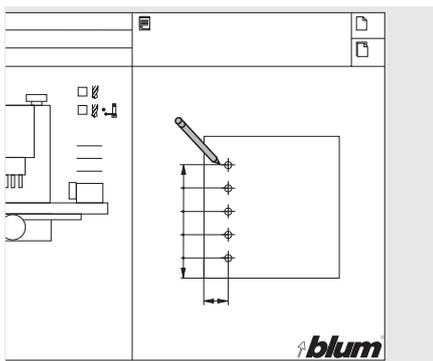
Enter comments



Enter page numbers

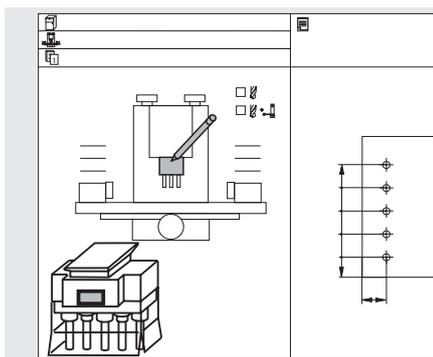


Enter number of pages



5.1.3) Creating work piece drawings on the setup plan

- Make hand drawing on setup plan or copy drawing to setup plan



5.1.4) Drilling head setup for machine

- Add the colour description for the selected drilling head to the setup plan
- In the fields

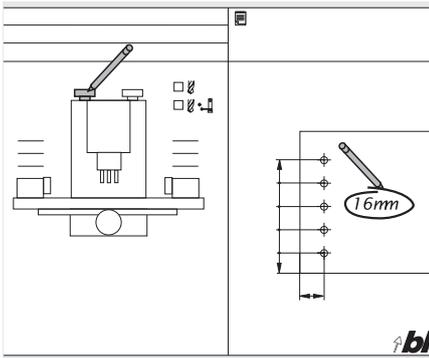


Drilling



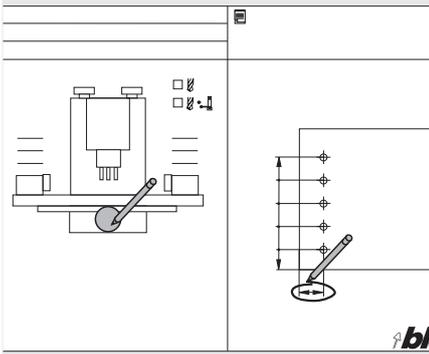
Drilling and insertion

Check whether or not mode switch (3.6) is set to vertical drilling or vertical drilling and fittings insertion.



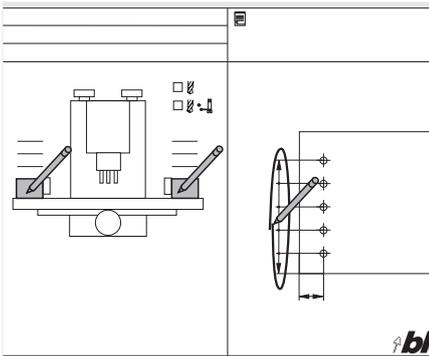
5.1.5) Setting drilling depth

- Add drilling depth description (colour) to the setup plan
- The drilling depth 13 mm for work piece thicknesses 16 and 19 mm is already pre-set and identified with the colours red and yellow.
- The setup for other work piece thicknesses is described in chapter 4.



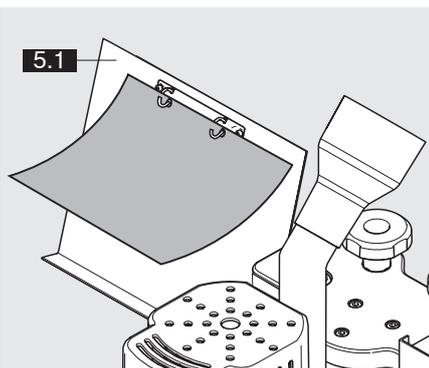
5.1.6) Setting work top

- Enter drilling distance in the setup plan.
- The setup for other distances is described in chapter 4.



5.1.7) Setting swivel stops (8.1)

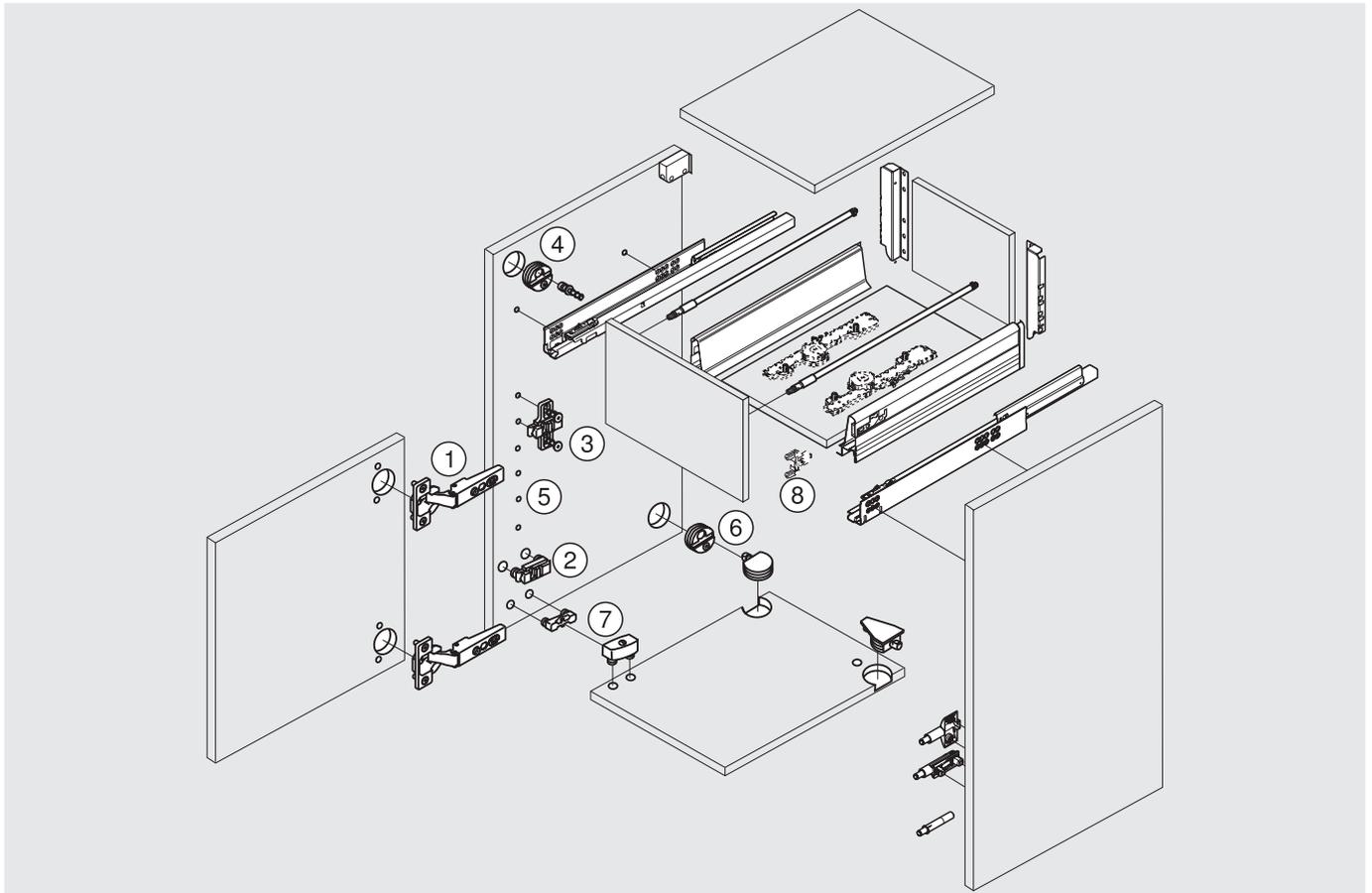
- Set the swivel stop (8.1) to the ruler (8.2) and label with coloured stickers.
(The corresponding stickers are provided with MINIPRESS PRO)
- Add ruler type and description to the setup plan.
- Enter the dimensions on the ruler over the stops to which the stops are set.
- Stop installation is described in chapter 8

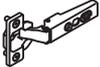
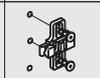
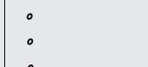


5.1.8) Storing setup plan

Put the completed setup plan into the clear plastic folder and store on the setup plan rack (5.1) on the machine.

6.1 - Assembly with drilling heads and rulers

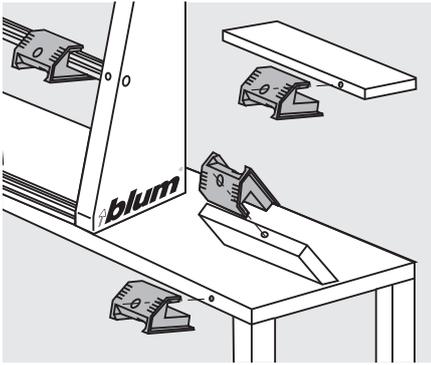


Assembly application		Drilling heads*								Rulers*			
		MB	MPH	MPV	D	SY-H	SY-V	BOX		ST	U	LR	V
1	 Furniture hinges	●								●	○		○
2	 Dowel plates		●							●	○		○
3	 Cruciform mounting plates			●						●	○		○
4	 Cabinet profiles					●				●	○		○
5	 System drilling				○		●			○	○	●	○
6	 Furniture connectors		●							●	○		
7	 Furniture connectors			●						●	○		
8	 TANDEMBOX + METABOX Front fixings				○			●		●	○		

● preferred use

○ can be used

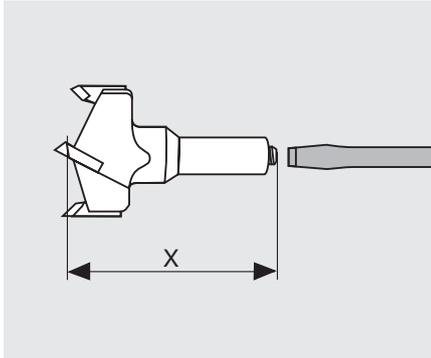
* For a description, see chapter 7 Drilling heads and chapter 8 Rulers



7.1 - General

7.1.1) Attaching drilling heads

- Attach drilling head holder to a wall, table or the storage rack. The storage rack is available from Blum as an accessory. (MZA.2600)

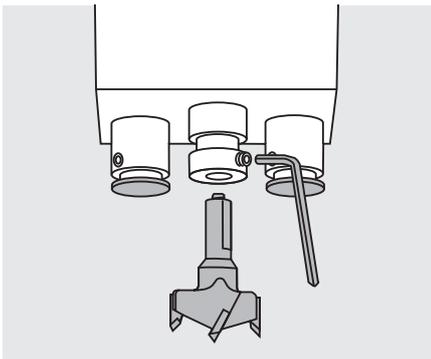


7.1.2) Setting drill bit length

- ! IMPORTANT:**
The total length of the drill bits (from bit-tip to adjustment screw) should be $x = 57$ mm.

Adjustment:

- Set length by turning the drill bit adjustment screw using a screwdriver.

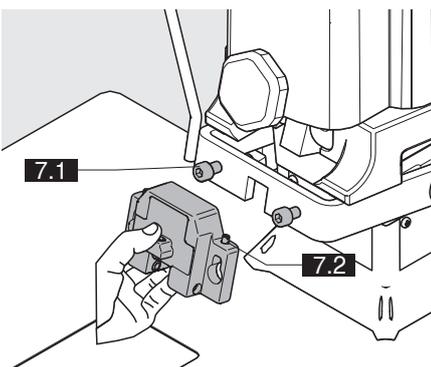


7.1.3) Inserting drill bits into the chuck

- ! ATTENTION:**
Before changing drill bits, remove the drilling head from the machine.

- Loosen the fixing screw using a hex wrench.
- Push drill bits into the chuck (The surface of the drill shaft must be placed in the direction of the fixing screw)
- Retighten fixing screw

- ! IMPORTANT:**
Insert cover caps into the unused bits. This will keep the bits clean and prevent the fixing screws from coming out on their own.

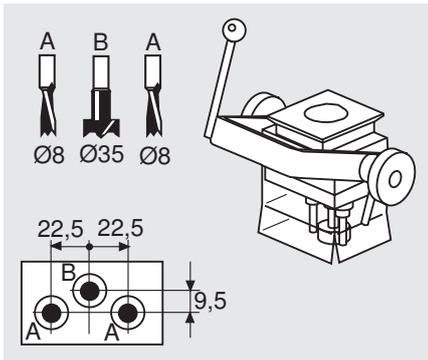


7.1.4) Attaching insertion ram to the swing arm

- Place insertion ram onto the two fixing screws **(7.1)** on the swing arm
- Tighten the fixing screws **(7.1)** so that the insertion ram is secure

Setting insertion ram position:

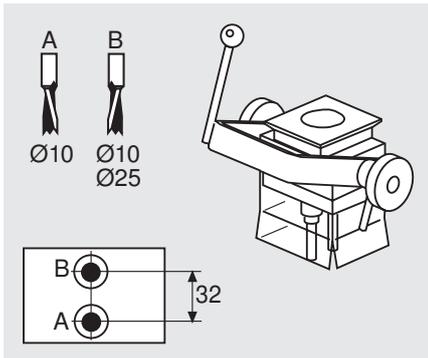
- Loosen fixing screws **(7.1)**
- Correct the position of the insertion ram by setting the adjustment screws **(7.2)**
- Loosely retighten fixing screws **(7.1)**



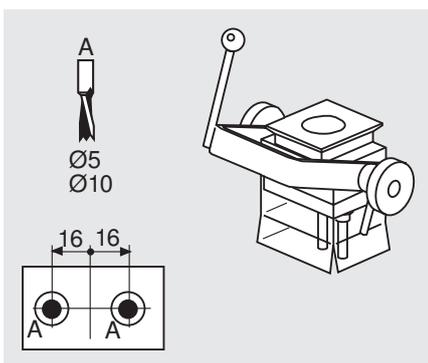
7.2 - drilling heads

7.2.1) FH drilling head: MZK.2000
Furniture hinge drilling head for standard hinges

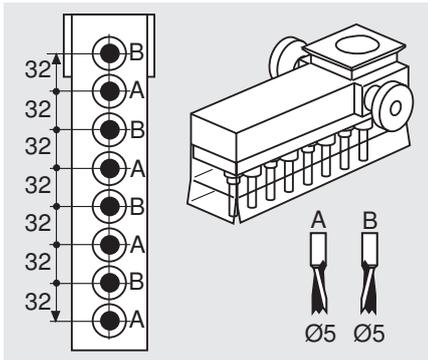
- Drilling head with 3 spindles
- With drilling depth spacing
- Swing arm for ram attachment
- Drill bits:
 - (A) ... 2x Ø 8 mm left hand / (B) ... 1x Ø 35 mm right hand
- Colour coded bits:
 - left hand are red, right hand are black


7.2.2) MPH drilling and insertion head: MZK.2100
for horizontal dowel plates and furniture connectors

- Drilling head with 2 spindles
- Swing arm for ram attachment
- Drill bits:
 - (A) ... 1x Ø 10 mm left hand
 - (B) ... 1x Ø 10 mm right hand
 - or
 - (B) ... 1x Ø 25 mm right hand
- **Note:**
 - ! Use slip-on countersink for the Ø 10mm drill.
- Colour coded bits:
 - left hand = red
 - right hand = black

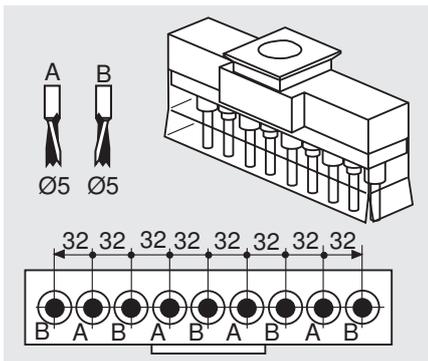

7.2.3) MPV drilling and insertion head: MZK.2110
for cruciform mounting plates and furniture connectors

- Drilling head with 2 spindles
- Swing arm for ram attachment
- Drill bits:
 - (A) ... 2x Ø 5 mm, left hand or
 - (A) ... 2x Ø 10 mm left hand
- **Note:**
 - ! Use slip-on countersink for the Ø 10mm drill.
- Colour coded bits: left hand are red / right hand are black



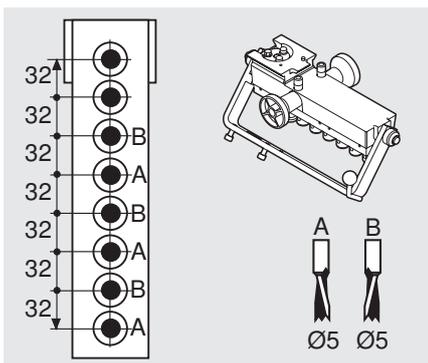
7.2.4) SYH drilling head: MZK.2200.01
for all Blum cabinet profiles

- Drilling head with 8 spindles
- Drill bits:
 - (A) ... 4x Ø 5 mm left hand
 - (B) ... 4x Ø 5 mm right hand
- Colour coded bits:
 - left hand = red
 - right hand = black



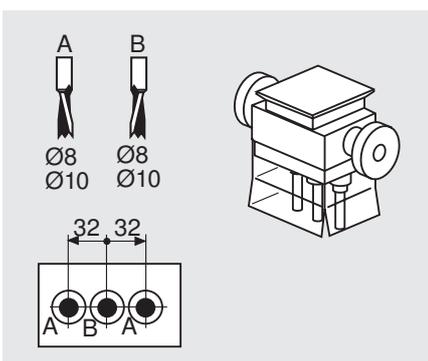
7.2.5) SYV drilling head: MZK.2800
for hole groups and system drilling

- Drilling head with 9 spindles
- Drill bits:
 - (A) ... 4x Ø 5 mm left hand
 - (B) ... 5x Ø 5 mm right hand
- Colour coded bits
 - left hand = red
 - right hand = black



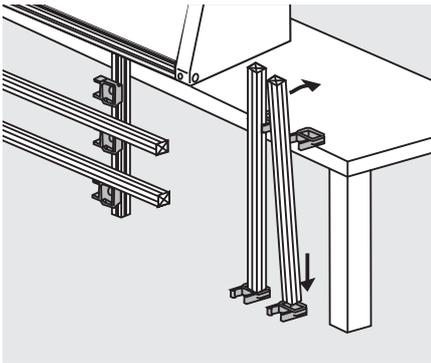
7.2.6) BOX drilling head: MZK.2230
for all TANDEMBOX and METABOX front fixing brackets and back fixing positions

- The extraction system should be removed before attaching the drilling head
- Drilling head with 8 spindles
- With drilling depth spacing
- Swing arm for ram attachment
- Drill bit for METABOX:
 - (A) ... 1x Ø 10 mm left hand
 - (B) ... 4x Ø 10 mm right hand
- Drill bit for TANDEMBOX:
 - (A) ... 3x Ø 10 mm left hand
 - (B) ... 1x Ø 10 mm right hand
- Colour coded bits
 - left hand = red
 - right hand = black



7.2.7) D drilling head: MZK.2400
for wooden dowel connections

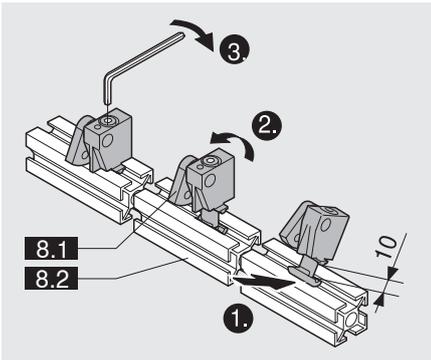
- Drilling head with 3 spindles
- Drill bits:
 - (A) ... 2x Ø 8 mm left hand
 - (B) ... 1x Ø 8 mm right hand
 - or
 - (A) ... 2x Ø 10 mm left hand
 - (B) ... 1x Ø 10 mm right hand
- Colour coded bits
 - left hand = red
 - right hand = black



8.1 - General

8.1.1) Storing rulers

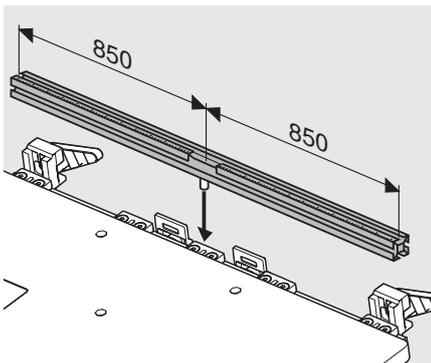
- Installing ruler holders to the work top:
 - Attach a ruler holder to the work top surface.
 - Attach the second ruler holder to the floor
 - Place the ruler vertically into the lower holder and clip into the top holder.
- The storage rack can also be used as a ruler holder.
The storage rack (MZA.2600) is available from Blum as an accessory.



8.1.2) Attaching swivel stop (3.1)

- Loosen clamping knob until the counter plate protrudes 10 mm
- Attach swivel stop to ruler at an angle and stand upright
- Tighten clamping knob

! **Note:**
This procedure can also be used to set a stop between two available stops.

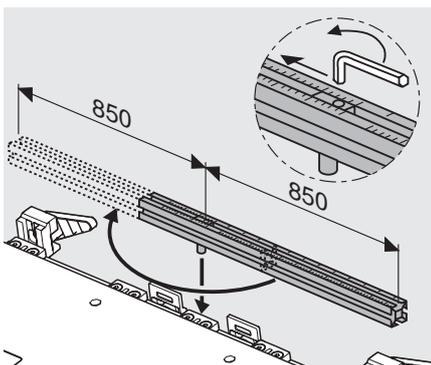


8.2 - Rulers

8.2.1) ST ruler: MZL.2000 standard ruler

- The scale is symmetrical starting from the 0 point going to 850 mm to the left and right.
- This ruler can be used universally.

! **Note:**
The MZR.1200 centre marking stop can only be used with this ruler.



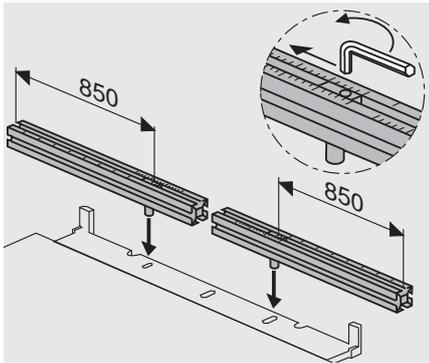
8.2.2) R ruler: MZL.2010 Reversible ruler

- One-sided scale starting from the 0 point to 850 mm
- This ruler is installed one-sided either on the right or left. It must be reversed to drill right or left pieces. This makes the results more exact since the stops only need to be set once.
- 0 point setting

The 0 point can be set to compensate for differences between the door dimension and the cabinet dimension. The stops thus do not need to be adjusted.

Adjustment:

- Loosen the clamping knob with a hex key and set the part to the desired dimension.
- Retighten clamping knob.



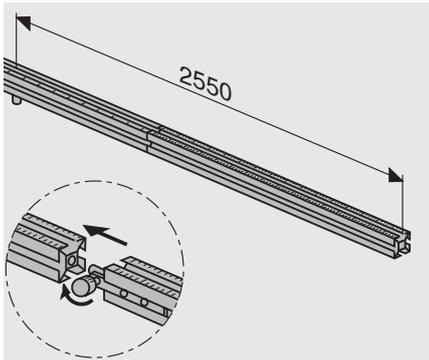
8.2.3) LD ruler: MZL.2080 line drilling ruler

- two-piece
- Calibration per side is 850 mm
- The ruler 0 point is on each outside spindle of the SYV drilling head
- 0 point setting

To set the first drilling, e.g. to 8 mm, the 0 point must be set to 8 mm. The stop settings do not need to be changed.

Adjustment:

- Loosen the clamping knob with a hex key and set the part to the desired dimension.
- Retighten clamping knob.



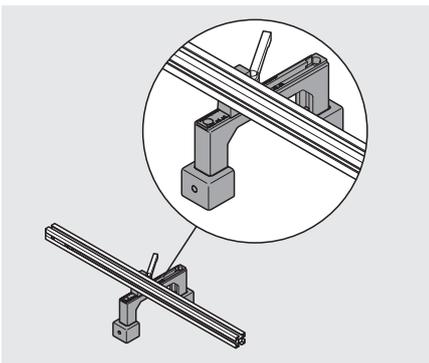
8.2.4) E ruler: MZL.2090 extension ruler

- Calibration from 851 - 2550

Assembly:

- Slide extension ruler onto the ruler on the machine
- Clamp with the clamping knob

! **Important:**
Support the extension ruler using ruler supports.

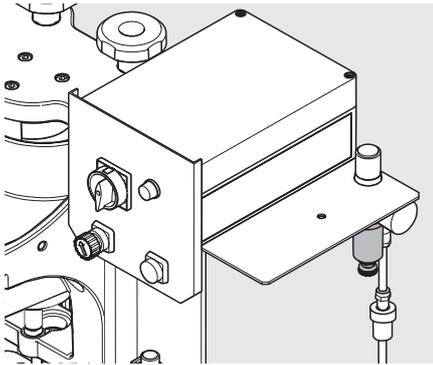


8.2.5) Ruler supports: MZV.2100 for extension ruler

- Attach the ruler supports to the table at the outside third of the extension ruler.

! **Important:**
Make sure that the calibration on the ruler support corresponds to the one on the work top of the MINIPRESS PRO. Pay attention to the adjustment area of the work top.

- Before setting the work top, loosen the clamping lever on the ruler support. Then retighten.



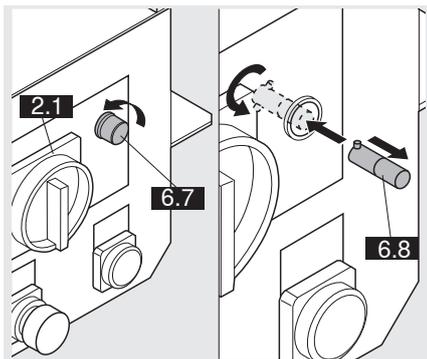
9.1 - Maintenance



ATTENTION:
Disconnect assembly machine from compressed air and power supply.

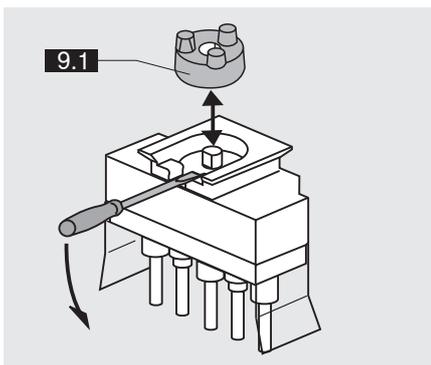
10.1.1) Maintenance

- Drilling dust should be removed from the assembly machine on a regular basis
- Before using the machine, you should always check the air filter unit (6.1) for water which may accumulate there. Empty the unit if necessary.
- Before every use of the machine, check the pneumatic lines and electrical lines for damage. Damaged lines should only be replaced by authorised personnel.
- The supports are maintenance free and should not be oiled



9.1.2) Replacing the operational status indicator

- Disconnect assembly machine from the power supply.
- Set main switch (2.1) to **Pos. 0**
- Remove front (6.7) from the operational status indicator. (unscrew)
- Remove defective lamp (6.8). (Press and turn to the left)
- Install new lamp (6.8). (Press and turn to the right)
- Reattach front (6.7) to the operating mode display indicator.



9.1.3) Replacing a damaged gearbox coupling



ATTENTION:
Replace broken or damaged parts immediately.
Only use Blum original parts.

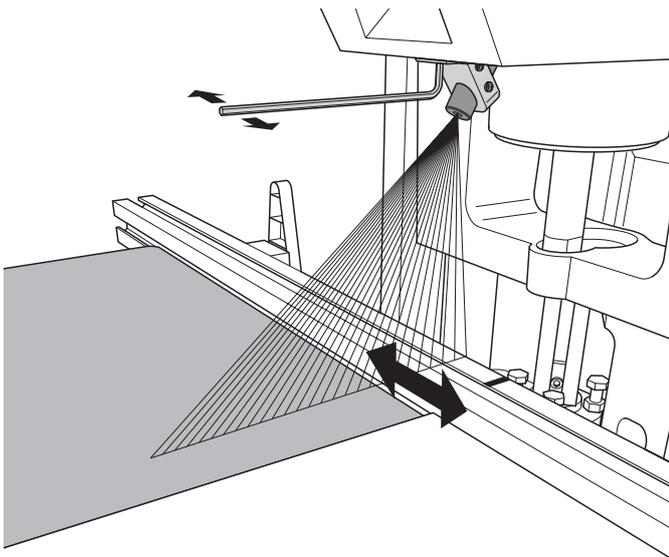
- Use a flathead screwdriver to remove the damaged coupling (9.1).
- Slip the replacement coupling (9.1) onto the shaft until it aligns with the shaft at the top.

11.1 - Error during drilling

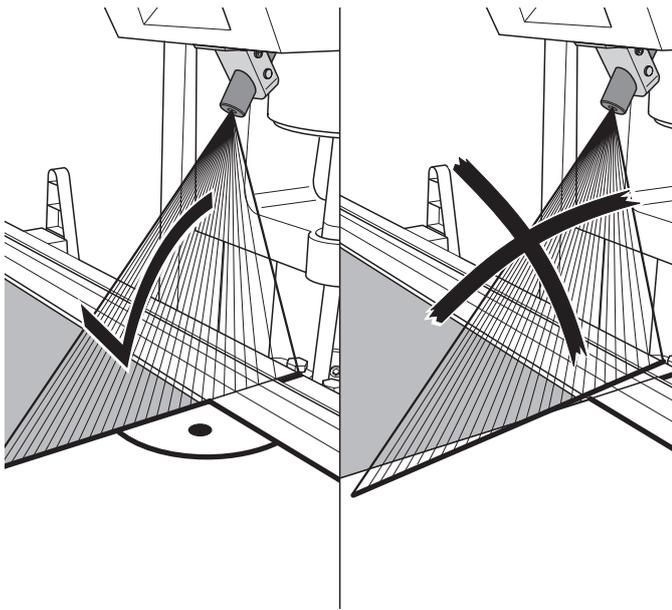
Error	Cause	Solution	Comment
Drilled holes too large, oval or ragged	Drill diameter is too large	Check drill	none
	Drills are twisted	Replace drill	none
	Cam speed for drilling is too high	Set correct cam speed	See point 3.5.1
	Drilling through work pieces	Use roof tip drill bit to drill through	none
	Drive shafts are bent, e.g. supports are defective	Replace drilling head	none
Drill blockage in wood	Improper material has been drilled	Only use work pieces made from wood, particle board or plastic coated wood	none
	Cam speed for drilling is too high	Set proper cam brake	See point 3.5.3
	Locking device broken (motor runs, drill blockage in wood)	Replace defective locking device	See point 9.1.3
	Drills are dull	Repoint drills or replace	none
	Motor rotation incorrect	Correct the motor rotation	See point 1.3.3
	Drill rotation not set properly	Install left hand drill bits into chucks marked in red and right hand drill bits into chucks marked in black	none
	Assembly machine connected to the wrong voltage	Check mains voltage and compare with motor data. Have checked by authorised electrician	See chapter 12 - Diagrams
	Drill bits cannot be gripped in the chucks	Drill bits full of chips	Clean drill chuck User cover caps
Drill shaft diameter too large or deformed		Repoint drill shaft or replace	none
Drilling depth does not match	Drilling depth set incorrectly	Correct drilling depth setting	See point 3.4.1
	Drilling length does not match	Drilling length set to 57 mm	See point 7.1.2
	Drill bits not completely pushed into the chuck	Clean dirt from chuck and completely insert drill bit	See chapter 3
	Work piece thickness does not correspond to the given value (e.g. 15 mm instead of 16 mm)	Check work piece thickness, Correct drilling depth setting	See chapter 3.4

11.1 - Error during drilling

Error	Cause	Solution	Comment
Drillings are off centre or in the wrong position	Assembly machine is driving against an object (e.g. swivel stop)	Remove object	none
	Feed switch was released before the drilling depth was reached	Keep feed switch engaged until the drilling depth has been reached	none
	Work top height (thickness)	Put work top underneath until a height of 24 mm has been reached	See chapter 11 - Appendix
	Cam brake set too high	Open restrictor valve slightly	none
	The swivel stops were not set properly on the ruler.	Check positions and stops and correct if necessary	none
	Ruler not set properly	Set ruler to the 0 point	See point 3.1.2
	Chips between the ruler and the work piece	Remove dirt and chips	none
Extension ruler is not attached properly	Check ruler attachments and extension - check spacing of both rulers	none	

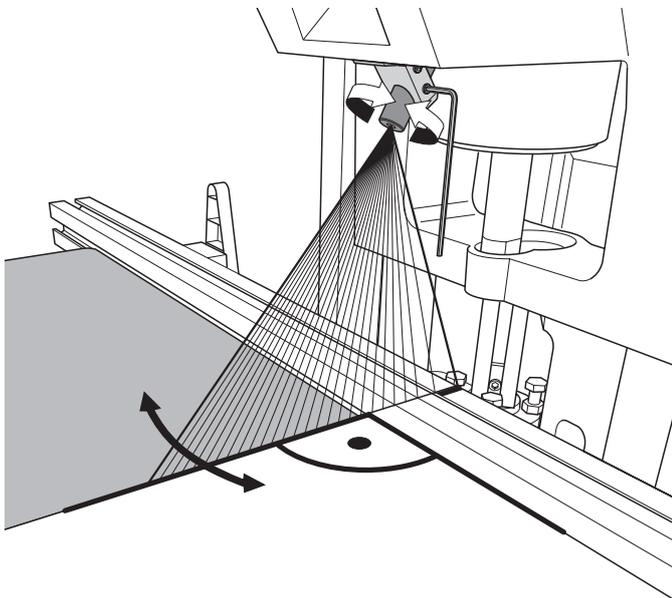

Adjusting laser to zero marking line:

- Slightly loosen sub-assembly screw using a wrench (counter-clockwise)
- Set laser line to the zero position
- Tighten screws using wrench (clockwise)

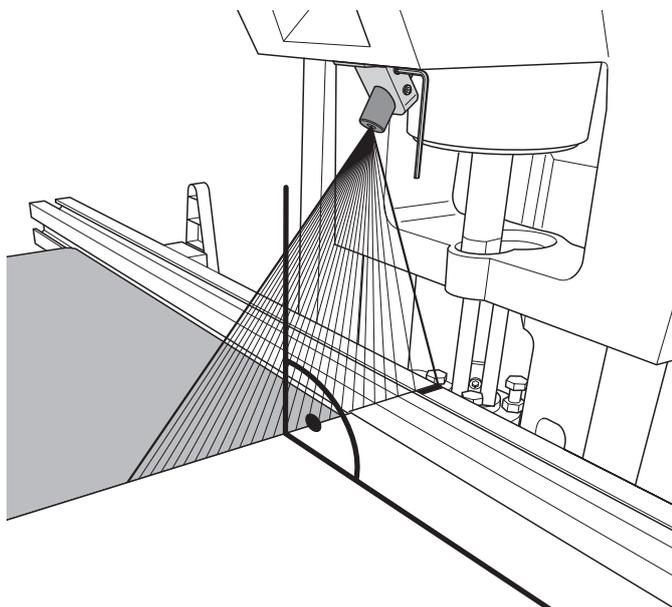


Adjusting the laser angle

Only carry out the following steps when the laser angle is not correct



- Loosen set screw using allen key (counter-clockwise)
- Turn laser diode until the correct angle is reached on the work piece or ruler. Use a work piece for the alignment. Affix the work piece to the work center using clamps.
- Re-tighten set screw using allen key (clockwise)



Laser beam is not perpendicular

Only carry out the following steps when the laser is not perpendicular
The laser beam is not perpendicular when it has moved from the zero position due to the stroke movement

- Loosen set screw using allen key (counter-clockwise)
- Move laser diode until the laser beam is perpendicular
- Re-tighten set screw using allen key (clockwise)

11.2 - Fitting insertion error

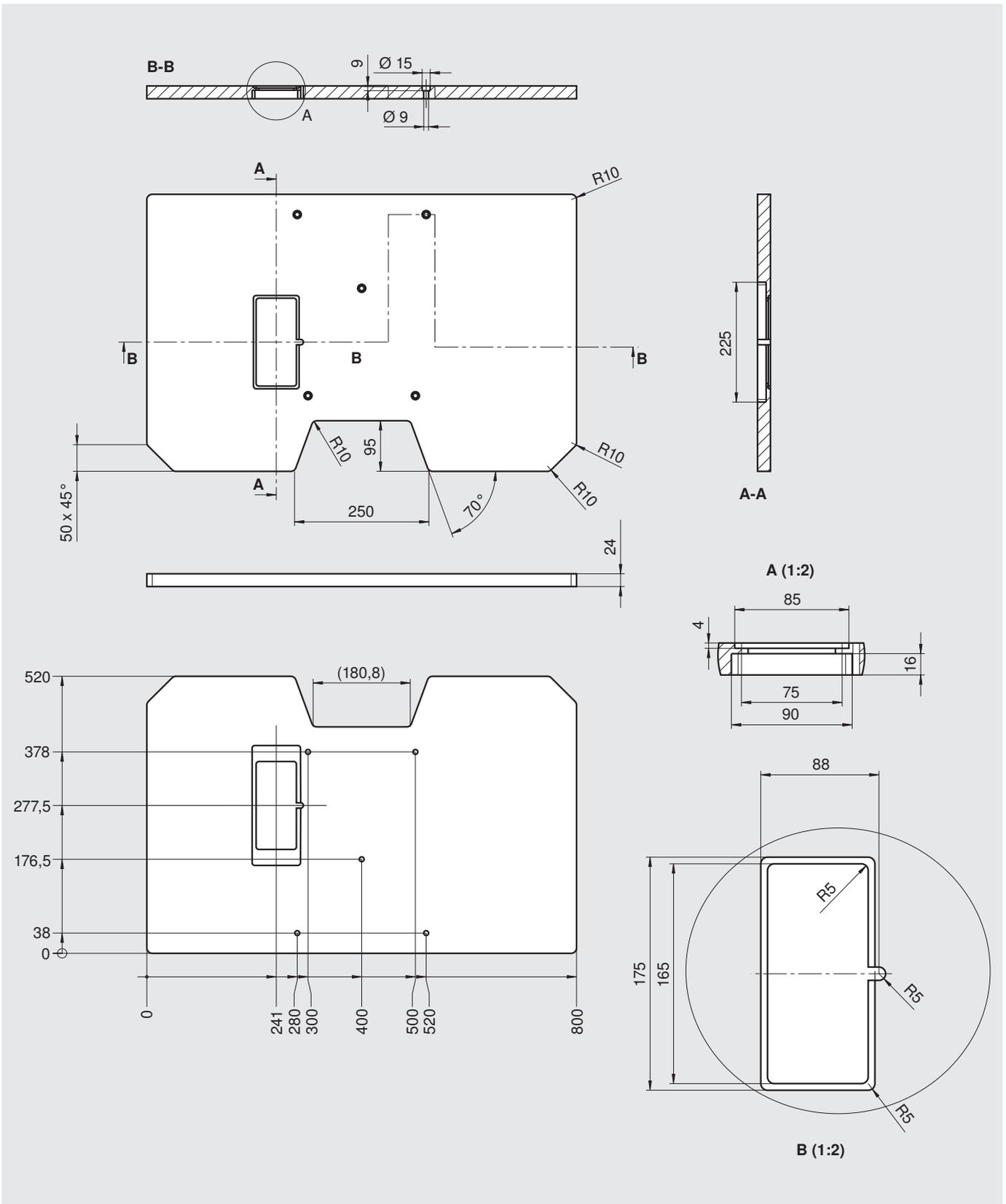
Error	Cause	Solution	Comment
Fittings cannot be inserted or only with great difficulty	The air pressure is too low	Air pressure must be 5 - 7 bars.	See point 1.2.2
	Insertion ram or swing arm is driving against an object (e.g. swivel stop)	Remove object	none
	The surface of the work piece is too hard	Bevel drillings	Use slip-on counter-sink
	Drillings are not deep enough	See point "Drilling depth not reached"	none
	The drilling diameters are too small	Check drill bits and replace if necessary	none
	The insertion ram has shifted or turned	Set insertion ram	See point 7.1.4
	Drill chips are in the drill holes	Remove chips from drillings	none

11.3 - Function errors

Error	Cause	Solution	Comment
Motor does not run	Assembly machine is not connected to the power supply	Connect assembly machine to the power supply	none
	Assembly machine is not connected to the air supply	Connect assembly machine to the air supply	none
	Building fuse has failed	Reset fuse or replace	none
	Assembly machine fuse is defective	Have fuse replaced by an authorised electrician	See chapter 12 - Diagrams
	Main switch is not at position "1" (drilling)	Set main switch to position "1"	See point 2.1.1
	Swing arm is swivelled in	Swivel up swing arm	See point 3.7.5

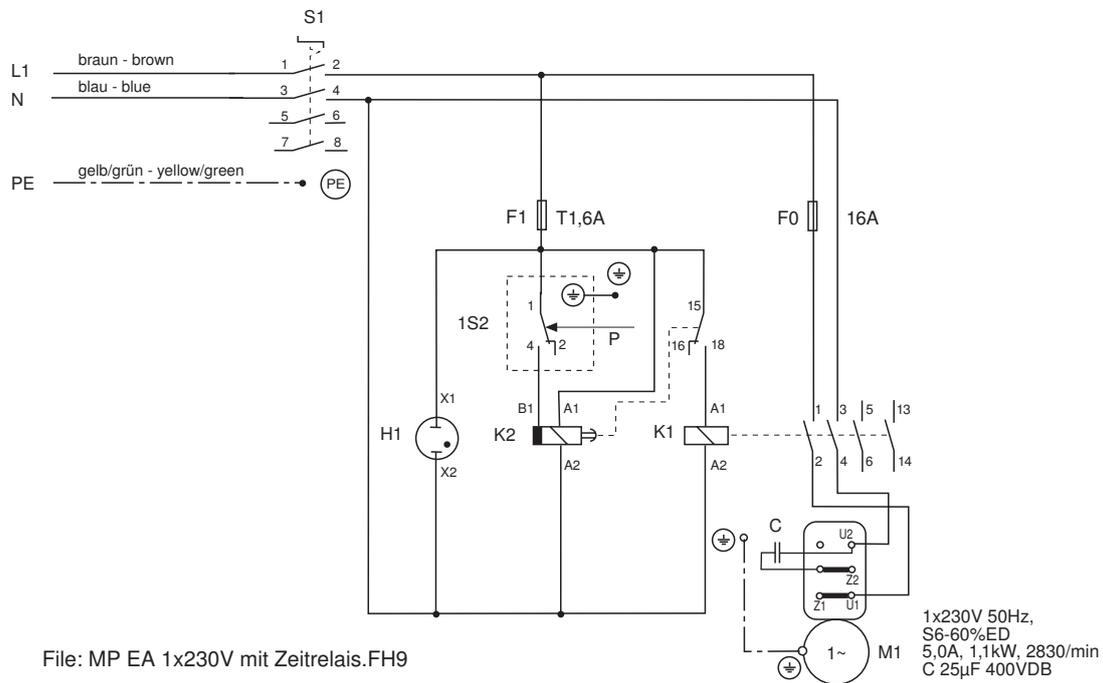
Error	Cause	Solution	Comment
Motor overheats	Assembly machine connected to the wrong voltage	Check mains voltage and compare with motor data. Have checked by authorised electrician	See chapter 12 - Diagrams
	Motor defective	Have motor replaced by an authorised electrician	none
	Assembly machine connected to the wrong voltage	Check mains voltage and compare with motor data. Have checked by authorised electrician	See chapter 12 - Diagrams
	Drilling in hard wood with too high a speed	Reduce cam speed	See point 3.5.1
Stroke movement missing out when feed switch is activated	Motor hood is dirty or covered by something	Remove objects and chips in the area of the motor hood	none
	Assembly machine is not connected to the air supply	Connect assembly machine to the air supply	See point 1.2.1
	Air pressure is too low	Adjust air pressure (5-7 bar)	See point 1.2.2
	Pneumatic hose is kinked or damaged	Check air lines	none
	Restrictor for setting the cam speed is closed	Open restrictor	See point 3.5.1
	Feed key valve is jammed	Replace valve	none
	Cylinder defective	Replace cylinder	none
	Clamps do not function (optional)	Incorrect clamp switch position	Change clamp switch position
Clamp valve defective		Replace clamp valve	none
Operational status indicator does not light		Neon bulb defective	Replace neon bulb
	Drive circuit fuse F1 defective	Have an authorised electrician replace the drive circuit fuse	none
Air filter is not tight	Bracket fitting is loose or defective	Attach bracket fitting or replace	none
	Other problems	Replace air filter	none
Chip blow-off is defective	Hose is kinked or not tight	Replace hose	none
	Chip blow-off is displaced	Correct chip blow-off by turning the blow-off hose	none
Drilling head defective	Support, spindles or gears are damaged	Replace drilling head	none

11.1 – User-supplied work top

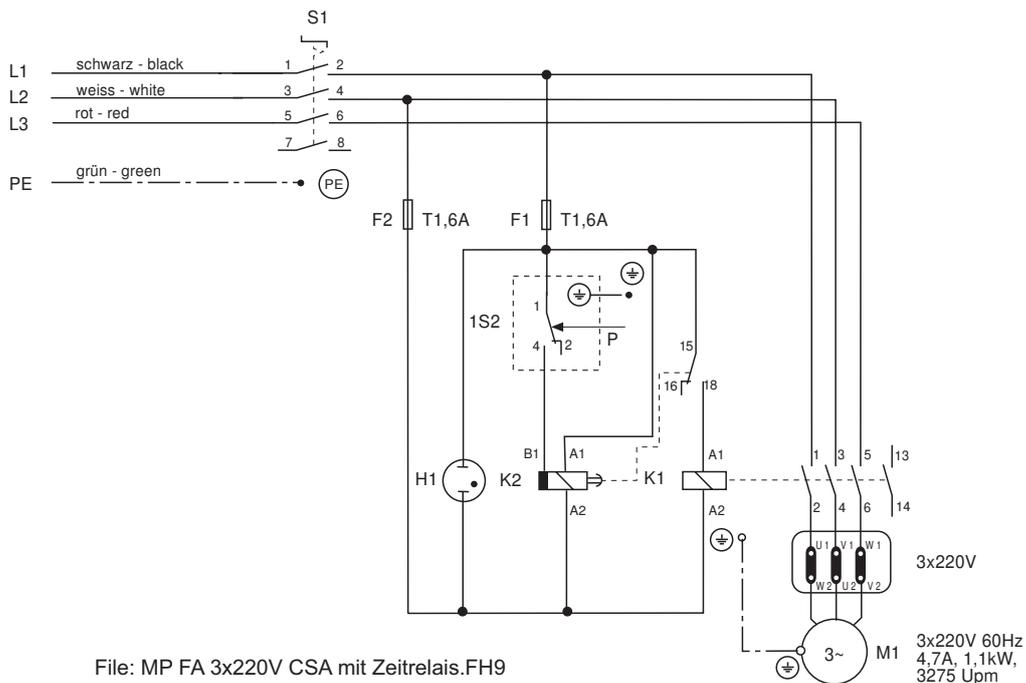


- If you are making your own work table, use plywood or laminated wood.
- In addition, please use the supplied screws for fixing the work table as well as spacer discs M54.220-12.
- Gauge-glass M54.220-14 should be installed after table assembly.

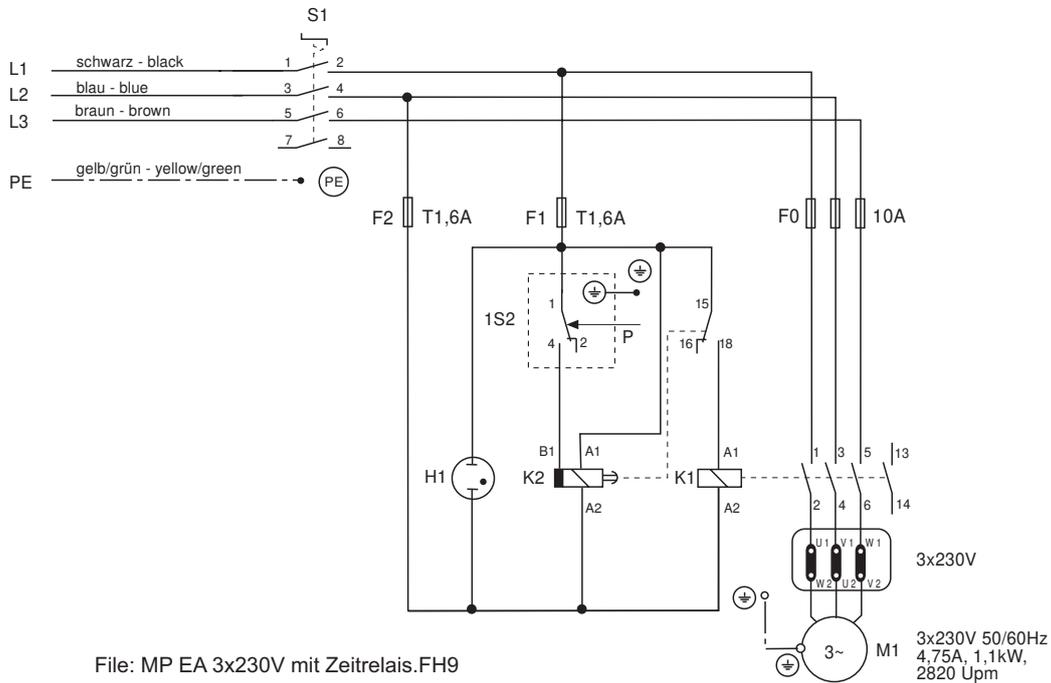
12.1 - Electrical diagram 1x 230 V 50 Hz



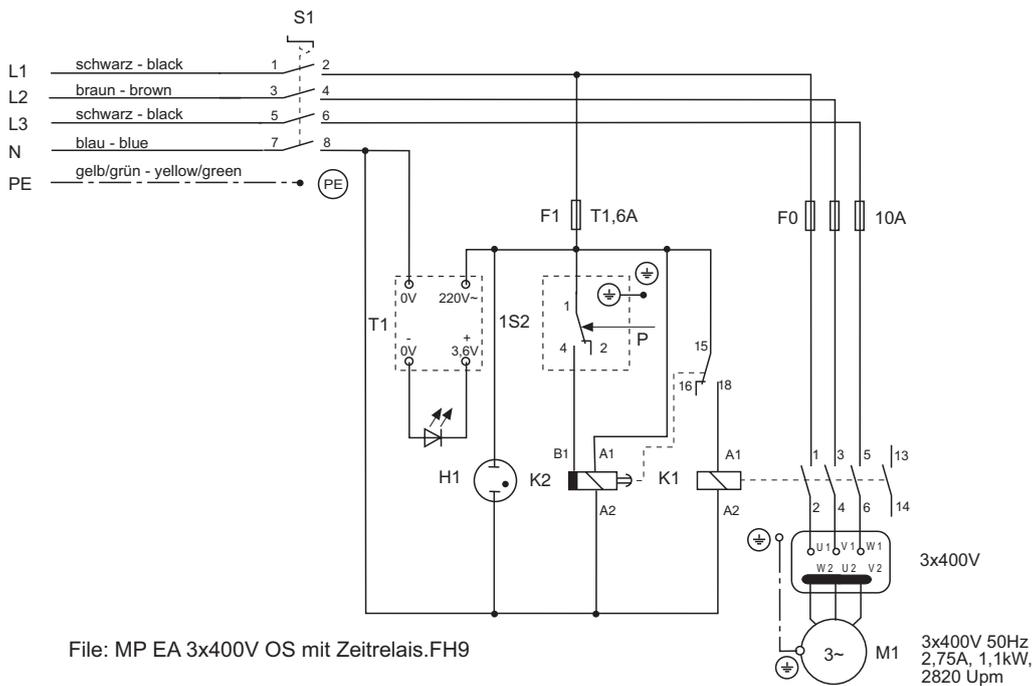
12.2 - Electrical diagram 3x 220 V 60 Hz



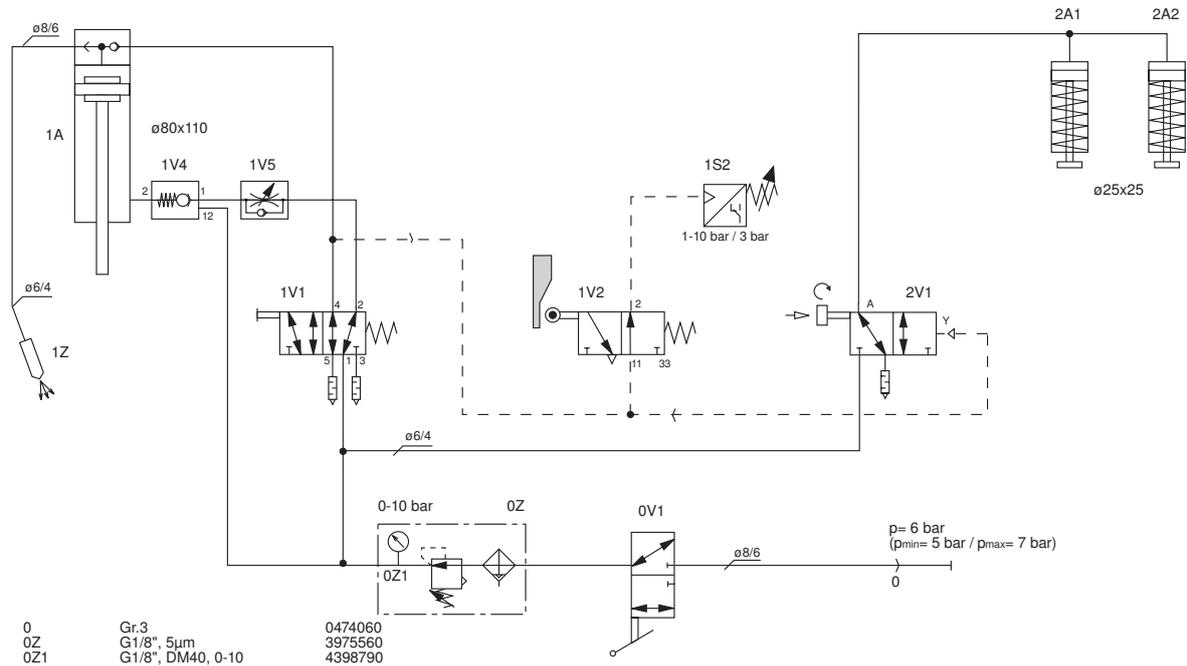
12.3 - Electrical diagram 3x 230 V 50 Hz



12.4 - Electrical diagram 3x 400 V 50 Hz



12.5 - Pneumatic diagram



0	Gr.3	0474060
OZ	G1/8", 5um	3975560
OZ1	G1/8", DM40, 0-10	4398790
1A	G1/8"	2454384
1V1	G1/8"	8585365
1V2	NW3	7128930
1V5	G1/8"	2454970
1S2	G1/4", 250V/6A	3988890
2V1	G1/8"	1800330
2A1	G1/8"	2285329 li/left
2A2	G1/8"	2285679 re/right

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