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MAF01313/a

WARNING

Lesen Sie alle Sicherheitshinweise und Anweisungen. Versäumnisse bei der Einhaltung der Sicherheitshinweise und Anweisungen können elektrischen Schlag, Brand und/oder schwere Verletzungen verursachen. **Bewahren Sie alle Sicherheitshinweise und Anweisungen für die Zukunft auf.**

WARNING

Please read all safety instructions and directions. Failure to comply with the safety instructions and directions can cause electric shock, fire and/or serious injuries. **Please retain all safety instructions and directions for future reference.**

AVERTISSEMENT

Veuillez lire toutes les consignes de sécurité et instructions. Tout non-respect des consignes de sécurité et instructions risque d'être à l'origine de décharges électriques, d'incendies et/ou de blessures graves. **Conservez toutes les consignes et instructions pour pouvoir les relire à tout moment.**

AVVERTENZA

Leggere tutte le avvertenze di sicurezza e le istruzioni. La mancanza del rispetto delle avvertenze di sicurezza e delle istruzioni possono causare scossa elettrica, incendio e/o gravi lesioni. **Conservare tutte le avvertenze di sicurezza e le istruzioni per il futuro.**

WAARSCHUWING

Lees alle veiligheidsaanwijzingen en instructies. Nalatigheid bij het naleven van de veiligheidsinstructies en aanwijzingen kan elektrische schok, brand en/of ernstige letsels veroorzaken. **Bewaar alle veiligheidsaanwijzingen en instructies voor later gebruik.**

ADVERTENCIA

Lea todas las indicaciones de seguridad e instrucciones. Si no se cumplen las indicaciones de seguridad e instrucciones, se pueden producir descargas eléctricas, incendios y/o lesiones graves. **Guarde todas las indicaciones de seguridad e instrucciones para el futuro.**

VAROITUS

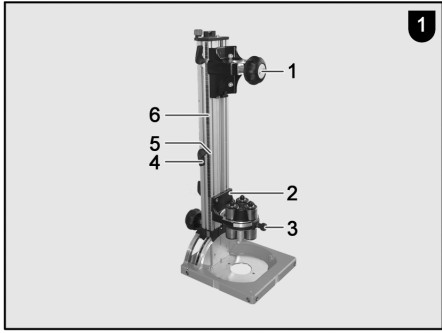
Lue kaikki turvaohjeet ja käyttöohjeet. Laiminlyönti turvaohjeiden ja käyttöohjeiden noudattamisessa voi aiheuttaa sähköiskun, tulipalon ja/tai vakavia vammoja. **Säilytä kaikki turvaohjeet ja käyttöohjeet tulevaisuuden varalle.**

WARNING

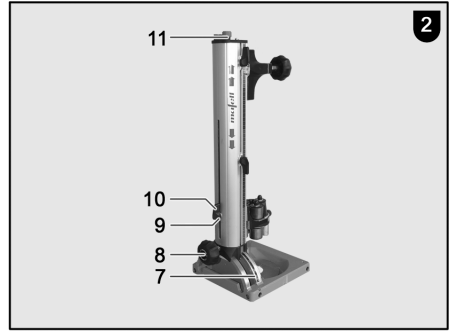
Läs alla säkerhetsanvisningar och anvisningar. Underlåtenhet att följa säkerhetsanvisningar och anvisningar kan orsaka elstötar, brand och/eller allvariga personskador. **Behåll alla säkerhetsanvisningar och anvisning för framtida användning.**

ADVARSEL

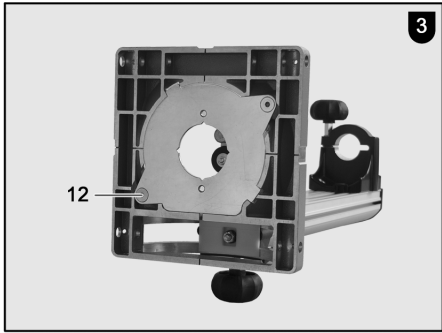
Læs alle sikkerhedshenvisninger og instruktioner. En manglende overholdelse af sikkerhedshenvisningerne og instruktionerne kan føre til elektrisk stød, brand og/eller alvorlige kvæstelser. **Opbevar alle sikkerhedshenvisninger og instruktioner til fremtidig brug.**



MAF01310/a



MAF01311/a



MAF01312/a

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1 Signs and symbols



This symbol appears at places where you will find instructions for your own safety.

Non-compliance with these instructions may result in very serious injuries.



This symbol indicates a potentially hazardous situation.

If this situation is not avoided, the product or objects in its vicinity may get damaged.



This symbol indicates tips for the user and other useful information.

2 Product information

for all units with the item numbers 961216, 961215, 961211, 961210, 961225, 961226, 961227 and 961228

2.1 Manufacturer's data

MAFELL AG, Beffendorfer Straße 4, D-78727 Oberndorf / Neckar, Phone +49 (0)7423/812-0, Fax +49 (0)7423/812-218

2.2 Device identification

All details required for machine identification are available on the attached rating plate



To reduce the risk of injury, please read the operating instructions.

2.3 Technical data

	BST 650 S	BST 460 S	BST 460	BST 320
max. tool Ø at 0°	130 mm (5 1/8 in.)	130 mm (5 1/8 in.)	130 mm (5 1/8 in.)	130 mm (5 1/8 in.)
max. tool Ø at 45°	100 mm (3 15/16 in.)	100 mm (3 15/16 in.)	-	-
max. drilling length	650 mm (25 19/32 in.)	460 mm (18 7/64 in.)	460 mm (18 7/64 in.)	320 mm (12 19/32 in.)
max. drilling depth	455 mm (17 29/32 in.)	265 mm (10 7/16 in.)	300 mm (11 13/16 in.)	160 mm (6 19/64 in.)
Clamping range drill guide	8 - 30 mm (5/16 - 1 3/16 in.)	8 - 30 mm (5/16 - 1 3/16 in.)	8 - 30 mm (5/16 - 1 3/16 in.)	8 - 30 mm (5/16 - 1 3/16 in.)
Swivel range on both sides	45°	45°	-	-
Weight	6,2 kg (13.7 lbs.)	5,6 kg (12.3 lbs.)	5,2 kg (11.5 lbs.)	5,1 kg (11.2 lbs.)

2.4 Scope of supply

Drilling station BST 650 S, BST 460 S, BST 460 or BST 320 complete with:

- 1 insert panel
- 1 service tool in bracket on the machine
- 1 operating manual
- 1 folder "Safety Instructions"

2.5 Use according to intended purpose

The drilling station is an all-purpose unit for drilling into wood and wood-like materials. It is used along with a suitable drill with a collar of Ø 43 mm.

e.g. MAFELL Type HSB

Any other use than described above is not permissible. The manufacturer cannot be held liable for any damage arising from such other use.

In order to use the appliance as intended, you must comply with the operating, maintenance and repair instructions specified by MAFELL.

2.6 Residual risks



Danger

Even if used in accordance with its intended purpose and despite conforming with the safety instructions, residual risks caused by the intended use will always remain.

- Touching the drill bit while drilling
- Drill bit breaks
- Hearing impairment due to working without ear protection for longer periods of time
- Emission of hazardous wood dust when operated in closed areas with insufficient ventilation for longer periods of time.

3 Safety instructions



Danger

Always observe the following safety instructions and the safety regulations applicable in the respective country of use!

General instructions:

- Never work without the protection devices prescribed for the respective operating sequence and do not make any changes to the device that could impair safety.
- Children and adolescents may not operate this device. This rule does not apply to young persons receiving training and being supervised by an expert.
- Consider environmental influences. Do not expose the device to rain and avoid working near combustible liquids or gases.
- Chips or slivers must not be removed while the machine is in operation.
- Store the device in a dry, locked place outside the reach of children.

Instructions on the use of personal protective equipment:

- Always wear ear protectors during work.
- Always wear protective goggles during work.
- Always wear a dust mask during work.

Instructions on operation:

- Provide for an unobstructed and slip-proof location with adequate lighting.
- Check to ensure that the tool is clamped correctly before switching it on.
- As far as possible ensure that the workpiece is secured from slipping away and toppling by using e.g. tension clamps.
- Ensure that the area where the drill bit emerges from the workpiece is free of obstacles.
- Examine the workpiece for foreign objects.
- Never reach under the workpiece while working (risk of injury!).

- Check the unit before every use. If damaged, do not use the unit. Only expert personnel may carry out repairs. Never open the unit yourself.
- When drilling adjust the feed to the drill bit \varnothing and material thickness. Too large of a feed leads to motor overload, unclean drill holes and an accelerated blunting of the drill bit.
- Never take hold of the tool while the machine is in operation.

Instructions on service and maintenance:

- To ensure safety it is essential to regularly clean the unit, above all the guides. The drill must be removed from the unit before starting this work.
- Only original MAFELL spare parts and accessories may be used. Otherwise, the manufacturer will not accept any warranty claims and cannot be held liable.

4 Setting / Adjustment

4.1 Securing the drilling machine

Place a suitable drill with drill bit into the locating hole and clamp the machine with the handle 1 (Fig. 1).



Danger

Follow the safety instructions for the drill!

4.2 Setting the drill guide



The drill guide is continuously variable for drill bits between \varnothing 8 mm and \varnothing 30 mm.

Unfasten the wing nut 3 (Fig. 1) Use the wing nut to turn the setting disc so that the guide sleeves barely touch the drill bit circumference. Tighten the wing nut again.



The height of the drill guide can be adjusted along the column.

To do this unfasten both cylinder screws, 2 (Fig. 1) move the drill guides into the desired position and tighten the cylinder screws again.



The drill guide can be removed from the column for machining tools larger than \varnothing 30 mm.

To do this unfasten both cylinder screws 2 (Fig. 1) until the drill guide can be removed.

In order to re-attach the drill guide, put it in place on the column and tighten the cylinder screws.

4.3 Tool change



Danger

Always remove the drill's power plug from the power supply before changing tools.

Completely open the drill guide (see section 4.2), open the boring socket of the drill and remove the tool.

Place the new tool into the drill and set the drill guide (see section 4.2).

4.4 Mounting the insert plate



Using the insert panel is recommended for drilling into end-grain wood or wood with thin widths.

Set the insert panel from below into the base plate and tighten it with both countersink screws 12 (Fig. 3).

4.5 Hoisting rope setting



Danger

The hoisting rope can be tensioned. The rope guide can be catapulted.



The returning force of the hoisting rope is continuously adjustable, which is especially advantageous for horizontal drill holes.

Open the tension lever 10 (Fig. 2) and move the rope guide to 9 to the desired position.

Re-tighten the tension lever.

4.6 Set 0° angle (only BST 650 S and BST 460 S)

Unfasten the handle 8 (Fig. 2) by turning it. Press the button 11 and keep it pressed. Swivel the column slowly toward the 0° angle (angle scale) until the push rod snaps into place. Turn the button to the left and then release it. Tighten the handle.

The 0° angle is then locked into place. In order to release the lock, press the button downward and turn it toward the right until the push rod snaps out of place.

4.7 Mounting the copy insert (special accessory)



A copy insert (special accessory) can be used for hole patterns and rows of holes.



Templates with Ø 25 mm of wood or metal can be used for drilling the holes of repeated drilling patterns.

Set the copy insert from below into the base plate and tighten it with both countersink screws 12 (Fig. 3).

4.8 Working with the parallel guide (special accessory)

The parallel guide (special accessory) can be attached on all four sides to the base plate and be tightened with the wing nuts included in delivery.

The base plate has read-off edges on three sides; you can use them to read the scale on the parallel guide.

Furthermore the parallel guide can be used as a twin pad simply by turning it over.

The parallel guide also has a lateral stop that can be inserted into the side-face from both sides and then tightened with the Allen wrench included in delivery.

The scale can be read on the edges at the end of the side-face.

5 Operation

5.1 Initial operation

Personnel entrusted to work with the machine must be made aware of the operating instructions, calling particular attention to the chapter "Safety instructions".

Ensure that the tool is properly fastened.

5.2 Operating method

Switch on the drill.

Use moderate pressure to press the running drill downward until the crest of the drill thread engages the wood. The drill then automatically continues the feed. Once a hole has been drilled, the built-in Zugseiden Schlitten wieder zurück. It might be necessary to help by pulling on the handle of the drill.

The return force of the hoisting rope is continuously adjustable (see section 4.5).

5.3 Drill holes at right angles

First set the column to the 0° angle (only BST 650 S and BST 460 S) (see section 4.6)

Align the drilling station to the break of the desired bore hole. The break indicator on the base plate or insert panel are helpful for this.

5.4 Slanted drill holes (only BST 650 S and BST 460 S)



The column can be swivelled to the left and right by 45 degrees°.

The pivot axis is on the workpiece surface so that the break indicator of the base plate can be used even when swivelled.

Unfasten the handle 8 (Fig. 2) by turning it. Swivel the column to the desired position according to the angle scale 7. Re-tighten the handle.

5.5 Stud holes

Unfasten the tension lever 4 (Fig. 1). Set the depth stop 5 according to the depth scale 6 and re-tighten the tension lever. (Take the drill bit distance above the wood into account).

The surfaces of the depth stop marked in red and the die coloured depth scale are helpful for this.

6 Service and maintenance



Danger

Always remove the drill from the drilling station before working on the unit.



After a significant operating time MAFELL recommends that the unit be inspected by an authorised MAFELL customer service repair shop.

authorised customer service station for MAFELL products.



Danger

Only use MAFELL accessories and spare parts. Components of which their replacement has not been described must be replaced by a MAFELL customer service repair shop.

6.1 Unit

The unit must be regularly dusted. The guides should be cleaned with a vacuum cleaner.

Occasional spraying with machine oil maintains the ease of movement of joints and guide pieces.

The storage place must be dry and frost-protected.

If the device fails despite diligent manufacturing and test procedures, the repair must be carried out by an

6.2 Storage

If the unit is not used for a long period of time, it must be cleaned carefully (see Chapter 6.1). Spray bright metal panels with a rust inhibitor.

7 Troubleshooting



Danger

Determining the causes for existing defects and eliminating these always requires increased attention and caution. Pull the mains plug beforehand!

Some of the most frequent defects and their causes are listed in the following chart. In case of other defects, contact your dealer or the MAFELL customer service.

Defect	Cause	Elimination
Drill bit is stuck	Blunt drill bit	Replace or re-sharpen drill bit
Drill bit becomes very hot near the drill guide	Drill guide lies too taut on the drill bit	Rest the drill guide only lightly adjacent to the drill bit
The column cannot be sufficiently tightened after swivelling (only BST 650 S and BST 460 S)	Column clamp improperly set	Adjust the hex nut of the column clamp

8 Optional accessories

- Parallel guide fence cpl. Order No. 204407
- Template guide Ø 24,8 / 18 Order No. 204290
- Template drill Ø 25 Order No. 090276
- Drilling machine retaine Ø 57 Order No. 204476

BST 650 S

- Drill box 650 with wood drill Ø 12, 14, 16, 18, 20 mm	Order No. 093292
- Wood drill Ø 10 x 650	Order No. 090240
- Wood drill Ø 12 x 650	Order No. 090241
- Wood drill Ø 14x 650	Order No. 090242
- Wood drill Ø 16 x 650	Order No. 090243
- Wood drill Ø 18 x 650	Order No. 090244
- Wood drill Ø 20 x 650	Order No. 090245
- Wood drill Ø 22 x 650	Order No. 090246
- Wood drill Ø 24 x 650	Order No. 090247
- Wood drill Ø 26 x 650	Order No. 090248
- Wood drill Ø 28 x 650	Order No. 090249
- Wood drill Ø 30 x 650	Order No. 090250

BST 460 S / BST 460

- Drill box 460 with wood drill Ø 8, 10, 12, 14, 16, 18 mm	Order No. 093291
- Wood drill Ø 8 x 460	Order No. 090251
- Wood drill Ø 10 x 460	Order No. 090252
- Wood drill Ø 12 x 460	Order No. 090253
- Wood drill Ø 14 x 460	Order No. 090254
- Wood drill Ø 16 x 460	Order No. 090255
- Wood drill Ø 18 x 460	Order No. 090256
- Wood drill Ø 20 x 460	Order No. 090257
- Wood drill Ø 22 x 460	Order No. 090258
- Wood drill Ø 24 x 460	Order No. 090259
- Wood drill Ø 26 x 460	Order No. 090260
- Wood drill Ø 28 x 460	Order No. 090261
- Wood drill Ø 30 x 460	Order No. 090262

BST 320

- Drill box 320 with wood drill Ø 8, 10, 12, 14, 16, 18 mm	Order No. 093290
- Wood drill Ø 6 x 320	Order No. 090279
- Wood drill Ø 7 x 320	Order No. 090280
- Wood drill Ø 8 x 320	Order No. 090263
- Wood drill Ø 9 x 320	Order No. 090264
- Wood drill Ø 10 x 320	Order No. 090265
- Wood drill Ø 12 x 320	Order No. 090266
- Wood drill Ø 14 x 320	Order No. 090267
- Wood drill Ø 16 x 320	Order No. 090268
- Wood drill Ø 18 x 320	Order No. 090269
- Wood drill Ø 20 x 320	Order No. 090270
- Wood drill Ø 22 x 320	Order No. 090271
- Wood drill Ø 24 x 320	Order No. 090272
- Wood drill Ø 26 x 320	Order No. 090273
- Wood drill Ø 28 x 320	Order No. 090274
- Wood drill Ø 30 x 320	Order No. 090275

9 Exploded drawing and spare parts list

The corresponding information in respect of spare parts can be found on our homepage: www.mafell.com