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MAF01223/a

ACHTUNG!

Diese Betriebsanleitung enthält Hinweise, die für das sichere Arbeiten mit dieser Maschine wichtig sind. Lesen Sie deshalb unbedingt diese Betriebsanleitung.

WARNING!

These operating instructions contain important information on safe working practices for this machine. It is therefore essential that you read these operating instructions carefully.

ATTENTION !

Cette notice d'emploi contenant des indications importantes pour la sécurité du travail avec cette machine, veuillez donc la lire impérativement.

ATTENZIONE!

Le presenti istruzioni per l'uso contengono avvertenze importanti per lavorare con sicurezza con questa macchina. Per questo motivo è assolutamente necessario leggere le presenti istruzioni per l'uso con la dovuta accuratezza.

ATTENTIE!

Deze gebruiksaanwijzing omvat instructies die voor het veilige werken met deze machine belangrijk zijn. Lees vandaar in ieder geval deze gebruiksaanwijzing.

¡ATENCIÓN!

Lea atentamente este manual de instrucciones, que contiene la información necesaria para garantizar la seguridad en el trabajo con esta máquina.

HUOMIO!

Tämä käyttöohje sisältää ohjeita, jotka ovat tärkeitä koneen turvallisen käytön kannalta. Lue käyttöohje sen vuoksi huolellisesti!

OBSERVERA!

Denna bruksanvisning innehåller anvisningar, viktiga för säkert arbete med denna maskin. Läs därför denna bruksanvisning noga!

GIV AGT!

Denne driftsvejledning indeholder vigtige henvisninger om sikkerheden ved brug af maskinen. Læs driftsvejledningen omhyggeligt.

D - EG Konformitätserklärung

Wir bescheinigen hiermit, dass die Maschine Z 5 Ec den angeführten EU-Richtlinien entspricht. Bei Konstruktion und Bau wurden die gelisteten Normen angewendet.

Bevollmächtigter für die Zusammenstellung der technischen Unterlagen: Mafell AG

GB - EC Declaration of Conformity

We herewith confirm that the machine Z 5 Ec complies with the EU directives quoted. The standards listed were used for design and construction.

Empowered person for the configuration of the technical documents: Mafell AG

F - Déclaration CE de conformité

Nous déclarons par la présente que la machine Z 5 Ec est conforme aux directives CE applicables comme suit. Lors de la construction, les règlements suivants ont été utilisés.

Plénipotentiaires pour l'assemblage des documentations techniques: Mafell AG

I - Dichiarazione di conformità CE

Con la presente certifichiamo che la macchina Z 5 Ec è conforme alle seguenti direttive CE applicabili. Nella progettazione e la costruzione sono state applicate le seguenti norme.

Responsabile per la composizione della documentazione tecnica: Mafell AG

NL - EG conformiteitsverklaring

Wij bevestigen hiermede dat de machine Z 5 Ec aan de vermelde EU-richtlijnen beantwoord. Bij constructie en bouw werden de vermelde normen toegepast.

Gemachtigde voor de samenstelling van de technische documenten: Mafell AG

E - Declaración de conformidad CE

Con la presente se certifica que la máquina Z 5 Ec cumple las directivas europeas mencionadas, las cuales forman la base tanto del diseño constructivo como de los procesos de fabricación.

Apoderado legal para la compilación de la documentación técnica: Mafell AG

FIN - EY-vaatimustenmukaisuusvakuutus

Vakuutamme täten, että kone Z 5 Ec vastaa mainittujen EU-direktiivien vaatimuksia. Sen suunnittelussa ja valmistuksessa on sovellettu luettelossa ilmoitettuja standardeja.

Teknisten asiakirjojen laatimiseen valtuutettu henkilö: Mafell AG

S - EG Konformitetsförklaring

Vi intygar härmed att maskinen Z 5 Ec uppfyller angivna EU direktiv. De angivna normerna användes vid konstruktion och tillverkning.

Befullmäktigad för sammanställningen av den tekniska dokumentationen: Mafell AG

DK - EU overensstemmelseserklæring

Vi attesterer hermed, at maskinen Z 5 Ec opfylder de angivene EU-direktiver. Konstruktion og bygning er udført iht. de angivene standarder.

Person, der er befuldmægtiget til at sammenstille det tekniske materiale: Mafell AG



2006/42/EG

2014/30/EU

2011/65/EG

Z 5 Ec

Mafell AG

D - 78727 Oberndorf, den 22.06.16


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Krauss

EN 60745, EN 55014-1, EN 55014-2, EN 61000-3, EN 12100 T1, EN 12100 T2, EN 1037

Art.-Nr. 925301, 925320, 925321, 925322, 925325

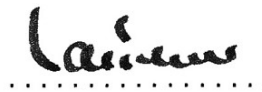

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i. V. Dr. Lauckner

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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

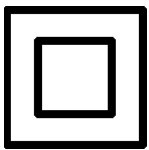
in respect of machines with item No. 925301, 925320, 925321, 925322, 925323, 925324 or 925325

2.1 Manufacturer's data

MAFELL AG, Postfach 1180, D-78720 Oberndorf / Neckar, Phone +49 (0)7423/812-0, Fax +49 (0)7423/812-218

2.2 Machine identification

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



Protection class II



CE symbol to document compliance with the basic safety and health requirements according to Appendix I of the Machinery Directive.



For EU countries only

Do not dispose of electric tools together with household waste material!

In accordance with the European directive 2002/96/EC on waste electrical and electronic equipment and transposition into national law, obsolete electrical tools must be collected separately and recycled in an environmentally-compatible manner.



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

2.3 Technical data

Cutting depth	305 mm (12 in.)
Roller diameter	205 mm (8 1/16 in.)
Saw band width	6 - 8 mm (15/64 – 5/16 in.)
Saw band length	1752 mm (69 in.)
Saw band gauge max.	0.65 mm (1/32 in.)
Band pivoting	30°
Idling speed	1550 - 650 rpm
Cutting speed when idle	16.6 – 6.9 m/s (54.4 – 22.6 ft/sec)
Hose connector diameter	35 mm (1 3/8 in.)
Weight without mains cable	13,6 kg (29.9 lbs)
Universal motor with radio and television interference	230 V~, 50 Hz
Input power continuous operation	2250 W
Current at nominal load	10 A

2.4 Noise emission specifications

Noise emission values determined according to EN 60745-1:

	Sound power level	Workplace-related emission value
Idling	99 dB (A)	88 dB (A)

The noise measurements were conducted using the band saw blades included in the delivery specification.

The values stated do not take into consideration any possible series variances and are not suitable for determining the rating levels, as these fluctuate in dependence on the time in service, the respective type of machining and the environmental influences. The noise rating level can therefore only be determined on an individual basis at the machine user's position.

2.5 Vibration specifications

The typical hand-arm vibration is less than 2.5 m/s².

2.6 Scope of supply

Portable band saw Z 5 Ec complete with:

- 1 saw band, coarse 8 mm (5/16 in.), serrated
- 1 saw band, coarse 6 mm (15/64 in.)
- 1 saw band, coarse 8 mm (5/16 in.)
- 1 handle cpl.
- 1 adapter
- 1 operating manual
- 1 folder "Safety Instructions"

2.7 Safety devices



Danger

These devices are required for the machine's safe operation and may not be removed or rendered inoperative.

The machine is equipped with the following safety devices:

- Top cover
- Bottom cover
- Band guard
- Large base plate
- Handles
- Switchgear and mechanical brake

2.8 Use according to intended purpose

The MAFELL portable band saw is designed exclusively for cutting solid wood and board materials such as chip board, table tops and MDF panels when using tempered saw bands.

The dimensions of the saw bands must lie within the following ranges:

Saw band length	1752 mm (69 in.) ±10 mm
Saw band width	6 - 8 mm (15/64 – 5/16 in.)
Saw band gauge max.	0.65 mm (1/32 in.)

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

So as to use the machine as intended, comply with the operating, maintenance and repair instructions specified by Mafell.

2.9 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 saw band in an open area.
- Breakage or saw band or the saw band coming off.
- Touching live parts with the housing open and the mains plug not removed.
- Hearing can be impaired when working for long periods without ear protectors.
- Emission of harmful wood dusts during longer operation without extraction.

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 stipulated for the respective operating sequence and do not effect any modifications on the machine that could impair safety.
- Children and adolescents must not operate this machine. This rule does not apply to young persons receiving training and being supervised by an expert.
- Damaged cables or plugs must be immediately replaced.
- Always check before beginning work whether the protection and work devices are safely attached and not damaged. Damaged protection devices and parts must be repaired or exchanged appropriately.
- Consider environmental influences. Do not expose the machine to rain and avoid working in a damp or wet environment as well as near to combustible liquids and gases.
- Do not carry the machine by its cable and do not use the cable to pull the plug out of the socket outlet.
- Pay attention that the cable is protected against oil and heat and is not pulled across sharp edges.

- Avoid sharp bends in the cable. Especially when transporting and storing the machine, do not wind the cable around the machine.
- Only allow an electrician to carry out work on the electrical parts of the machine.
- Store the machine in a dry, locked place outside the reach of children.

Do not use:

- Cracked or contorted saw bands.
- Dull saw bands due to the bad saw roller coming off.
- Saw bands of which the gauge is greater than 0.65 mm (1/32 in.).

Instructions on the use of personal protective equipment:

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

Instructions on operation:

- Plug in the machine only when it is switched off.
- Provide for an unobstructed and slip-proof location with adequate lighting.
- Before switching the machine on, check that the saw band is properly tensioned and that the protective coverings are attached.
- Unplug the power cord before changing tools, making adjustments or rectifying faults (including the removal of jammed chips).
- Do not work on workpieces which are too small or too large for the capability of the machine.
- Whenever possible, secure the workpiece against slipping, e.g. with screw clamps.
- Remove the machine's protective coverings only when changing tools. Never work without protective coverings!
- Start cutting the workpiece only once the saw band has reached its full speed.
- Examine the workpiece for foreign objects. Never attempt to cut into nails or other metal objects.
- Always keep the connection cable behind the machine while sawing (fig. 6).
- Match the feed speed during sawing to the material thickness. Pushing forward too quickly leads to the motor overload, jagged saw cuts and quick dulling of the saw band.

- Never reach in front of or under the workpiece while cutting (risk of injury!).
- Never brake the saw band with sideward counterpressure.
- Remove the machine from the workpiece only after the saw band has come to a standstill.
- Never reach over the chip ejector or into the saw band while the machine is running.
- Use only saw bands with the specifications noted in this operating manual.

Instructions on service and maintenance:

- Regularly cleaning the machine, especially the adjusting devices and guides, constitutes an important safety factor.
- 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 Mains connection

Prior to commissioning make sure that the mains voltage complies with the operating voltage stated on the machine's rating plate.

Direction of rotation

The band saw roller moves rightward as seen from the front.

4.2 Chip extraction

Connect the machine to a suitable external dust extractor during all work generating a considerable amount of dust. The air velocity must be at least 20 m/s (65.6 ft / sec.).

The inside diameter of the hose connector is 35 mm (1 3/8 in.).

4.3 Saw band selection

Use a sharp tool to obtain a good cut quality and select a tool from the following list according to material and application:

Cutting sry and hard wood; for tight curves:

- Saw band 1752 x 6 x 0,65; 6 teeth/inch

Cutting wet and dry wood; for tight curves:

- Saw band 1752 x 6 x 0,65; 4 teeth/inch

All-purpose for wet and dry wood; curves and straight lengthwise and cross cuts:

- Saw band 1752 x 8 x 0,65; 4 teeth/inch

4.4 Saw band replacement and setting



Danger

Pull the power plug during all service work.

To replace the saw band, proceed as follows:

- Unscrew the cover 23 below and 22 above (fig. 2).
- Loosen the cylinder screws 104 and remove the band guard 145.
- Loosen the band tension by turning the star handle 6 to the left (fig. 5) until the saw band can be removed. If necessary, clean the roller coating of residual resin and chips.
- First place the saw band with the tooth tips in the direction of rotation on the lower roller (arrow on the roller).
- Then roll the saw band onto the upper roller and tension it by turning the star handle to the right 6. The correct band tensioning is achieved when the friction clutch in the star handle engages.
- Manually move the band saw roller in the direction of rotation. When doing so regulate the the saw band by rotating the star handle screw 79b until the back of the saw band runs slightly against the 2 band blushing stones 82 and the 2 slotted bolts 137.

If the saw band does not come into contact with the upper or lower band blushing stone / slotted bolts despite adjustment with star handle screw, adjust the friction clutch in the star handle as follows:

- Completely loosen the band tension by turning the star handle 6 to the left.
- Maintain the distance clearance "X" between the base plate and any edge of the pivoting band guide.
- This distance must be reduced by at least 4 mm (5/32 in.) but not more than 6 mm (15/64 in.) when tensioning the saw band with the star handle. If this distance is reduced more than 6 mm (15/64 in.) or less than 4 mm (5/32 in.), the friction clutch in the star handle 6 must be adjusted with a hexagonal spanner SW 6 (6 mm) (less tension to the left, more tension to the right), until the friction clutch engages in the tension range of 4 - 6 mm (5/32 to 15/64 in.).
- Then set the band position with the handle screw 79. Ensure that the back of the saw band runs slightly against the band blushing stones 82 / slotted bolts 137.
- To check, again loosen the star handle 6, and re-tighten it until the friction clutch engages. When doing so, check the reduction of the clearance between the base plate and roller housing to ensure that it is 4 - 6 mm (5/32 to 15/64 in.).



The band guard or covering above and below must always be attached.



Only saw bands with a width of 6 - 8 mm (1/4 or 5/16 in.) may be used.

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".

5.2 Switching on and off



Danger

Switch on the machine only whenever the saw band is not touching the workpiece.

- **Switching on:** First move the locking mechanism 24 (fig. 3) upward and then press the the end of the rocker marked with "I".
- **Switching off:** Then press the red pushbutton 20. Continuing to press it will brake the saw blade until it reaches a standstill. Set down the machine only once it has been switched off.

5.3 Work instruction

When sawing always keep the machine in a secure position and guide it with both hands.

5.4 Pivot saw band

Press lever 21 completely forward 21 (fig. 2): The saw band continuously pivots 30° (fig. 3) to the band roller axis toward the right. In this position wood up to a thickness of 9 cm (3 9/16 in.) can be sawed at right angles at any point. Pull the lever back: The saw band returns to its initial position.

5.5 Conversion of the Z 5 Ec to a two-man saw

In order for two people to use the Z 5 Ec, it must be equipped with a third handle! First turn both handles 7 (fig. 4) on the motor to the left until they can be folded back by 90°; then tighten them in this position. Turn the rubber buffer 156 three turns to the left and remove it from the slot. From the accessories included, put the handle verp. 507 into the slot and tighten it.

The base plate can be removed for a better view of the interface. To do this remove it from the rollers according to the section "Change and tension saw band" and loosen the base plate from its mount by turning the wing screw 61 to the left 61. Re-mount and set the saw band and protective coverings. The machine is guided by both hands when sawing. The saw band can also be pivoted outward with levers 21 and 30 for two-man sawing°.

6 Service and maintenance



Danger

Pull the power plug during all service work.

MAFELL machines are designed to be low in maintenance.

The ball bearings used are greased for life. When the machine has been in operation for a longer period of time, we recommend to hand the machine in at an authorised MAFELL customer service shop for inspection.

Only use our special grease, order No. 049040 (1 kg tin) for all greasing points.

The machine must be regularly cleaned off deposited dust. The ventilation openings on the motor should be cleaned with a vacuum cleaner.

The band saw rollers on the machine should be deresinified at regular intervals.

6.1 Storage

If the machine is not used for a longer period of time, it has to be carefully cleaned. Spray bright metal parts with a rust inhibitor.

7 Troubleshooting



Danger

Determining the causes for existing defects and eliminating these always requires increased attention and caution. Unplug the rechargeable battery 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
Machine cannot be switched on	No mains voltage	Check power supply
Undervoltage shutdown	No mains voltage (power interruption)	Switch machine off and on again
Saw band is stuck	Dull saw band	Replace saw band
Chip ejection blocked	Wood is too damp	
	Extended operation without extraction	Connect to an external extraction, e.g. portable dust extractor

8 Special accessories

- Pair of adapters for parallel stop for hooking into the guide rail Order No. 037195
- Guide rail cpl., 3 m (9.8 ft) long Order No. 037037
- Guide rail extension part, 1.5 m (4.9 ft) lang Order No. 036553
- Guide rail one-piece, cpl., 3 m (9.8 ft) long Order No. 200672
- Transport cart Z 5 Ec Order No. 202110
- Saw bands, 10 pcs 1752 x 6 x 0.65 4 teeth/1" Order No. 092335
- Saw bands, 10 pcs 1752 x 6 x 0.65 6 teeth/1" fine Order No. 092333
- Saw bands, 10 pcs 1752 x 8 x 0.65 4 teeth/1" Order No. 092336
- Saw bands, 10 pcs with serration 1752 x 8 x 0.65 4 teeth/1" Order No. 092337

9 Exploded drawing and spare parts list

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