

EVA 150 E

mafeil

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en	Orbital disk sander	Translation of the original operating instructions	13
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MAF02046/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

Veillez 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 allvarliga 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.**

D - EG Konformitätserklärung

Wir bescheinigen hiermit, dass die Maschine EVA 150 E 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 EVA 150 E 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 EVA 150 E est conforme aux directives CE applicables comme suit. Lors de la construction, les règlements suivants ont été utilisés. Pléniopotentiaires pour l'assemblage des documentations techniques: Mafell AG

I - Dichiarazione di conformità CE

Con la presente certifichiamo che la macchina EVA 150 E 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 EVA 150 E 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 EVA 150 E 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 EVA 150 E 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 EVA 150 E 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 EVA 150 E opfylder de angivene EU-direktiver. Konstruktion og bygning er udført iht. de angivene standarder. Person, der er befuldægtiget til at sammenstille det tekniske materiale: Mafell AG

RUS - Сертификат соответствия ЕС

Настоящим подтверждаем, что машина EVA 150 E отвечает требованиям указанных директив ЕС. При проектировании и изготовлении применялись перечисленные нормы. Уполномоченный представитель по составлению технической документации: Mafell AG

PL - Deklaracja zgodności UE

Niniejszym potwierdzamy, że maszyna EVA 150 E spełnia wymagania wyszczególnionych dyrektyw UE. W trakcie konstrukcji urządzenia zastosowano przedstawione normy. Pełnomocnik odpowiedzialny za zestawienie dokumentacji technicznej: Mafell AG

CZ - PROHLÁŠENÍ O SHODĚ

Tímto prohlašujeme, že stroj EVA 150 E splňuje pokyny uvedených směrnic EU. Při plánování a sestavení byly využity uvedené normy. Za sestavení technických podkladů zodpovídá: Mafell AG

SLO - ES izjava o skladnosti

S tem izjavljamo, da stroj EVA 150 E ustreza navedenim direktivam EU. Pri konstrukciji in izdelavi so uporabljeni našteti standardi. Za sestavo tehnične dokumentacije je pooblaščen o podjetje: Mafell AG



2006/42/EG
2014/30/EU
2011/65/EU

EN 62841-1, EN62841-2-4, EN 55014-1, EN 61000-3,
EN 12100

EVA 150 E / 3
EVA 150 E / 5

Art.-Nr. 917701, 917720, 917721, 917725
Art.-Nr. 917710, 917740, 917741, 917745

Mafell AG

D - 78727 Oberndorf, den 25..07.2019

Dipl.-Ing. Matthias Krauss
Vorstandsvorsitzender / CEO

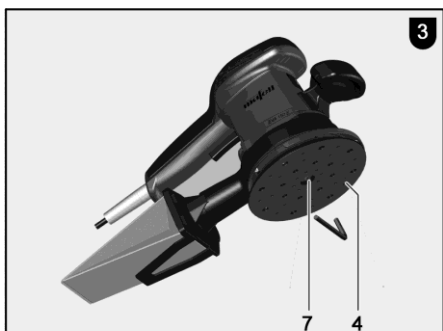
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Leitung Entwicklung und Konstruktion



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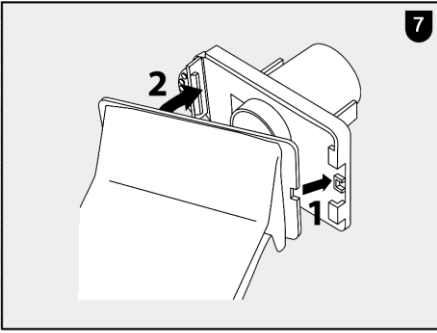
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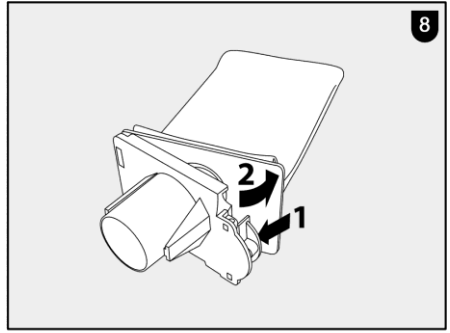
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1 Signs and symbols



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

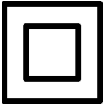
in respect of machines with item No. 917701, 917710, 917720, 917721, 917725, 917740, 917741, 917745 or 917748

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 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

Universal motor, radio and TV interference suppressed	230 V~, 50 Hz	220 V~, 60 Hz
Input power	350 W	350 W
Strokes at idling speed	12000 – 24000 strokes / min	
Strokes at normal load	9000 – 20000 strokes / min	
Sanding stroke	3,0 mm (at EVA150E 3) 5.0 mm (at EVA150E 5)	
Sanding pad	Ø 150 mm	
Abrasive – for Velcro® fastening	Ø 150 mm	
Hose connector diameter	35 mm (1 3/8 in.)	
Weight without mains cable and front handle	2,1 kg (4.6 lbs)	

2.4 Emissions

The values stated are emission levels. Although there is a correlation between emission and imission level, it cannot be reliably derived from this whether additional precautions are necessary. Factors influencing the current imission level existing at the workplace comprise the duration of exposure, the room characteristic, other source of noise, etc. such as e.g. the number of machines and other adjacent machining operations. In addition, the permissible imission level may differ from country to country. This information is nevertheless suitable for providing the machine user with an improved assessment of the hazard and risk.

2.4.1 Noise emission specifications

Noise emission values determined according to EN 62841:

Sound pressure level	$L_{PA} = 83 \text{ dB (A)}$
Uncertainty	$K_{PA} = 3,0 \text{ dB (A)}$
Sound power level	$L_{PA} = 94 \text{ dB (A)}$
Uncertainty	$K_{PA} = 3,0 \text{ dB (A)}$

The noise measurement was recorded using the tool included in the standard equipment.

2.4.2 Vibration specifications

Noise emission values determined according to EN 62841-2-4 :

at the main handle smaller than 2.5 m/s^2

at the front handle 3.6 m/s^2

The measuring inaccuracy K is 1.5 m/s^2

2.5 Scope of supply

Orbital disk sander EVA150E 3 / EVA150E 5 complete with:

- 1 abrasive grid Abranet - kit, P 60 – P 320
- 1 protective layer ø150 57-hole
- 1 universal filter bag with bracket
- 1 edge protection
- 1 carrying case

- 1 operating manual
- 1 folder with «Safety Instructions»
- 1 operating tool

2.6 Use according to intended purpose

The orbital disk sander is exclusively intended for the dry smooth surface finishing of wood, paints, lacquers, filler, plaster and metal.

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.

2.7 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 abrasive grid or the grinding disk during grinding.
- 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 when working for long periods 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:

- Children and adolescents must not operate this machine. This rule does not apply to young persons receiving training and being supervised by an expert.
- Never work without the protection devices prescribed for the respective operating sequence

and do not make any changes to the machine that could impair safety.

- When operating the machine outdoors, use of an earth-leakage circuit-breaker is recommended.
- Damaged cables or plugs must be immediately replaced. Replacement may only be carried out by Mafell or an authorised MAFELL service workshop in order to avoid safety hazards.
- Avoid sharp bends in the cable. Especially when transporting and storing the machine, do not wind the cable around the machine.

Instructions on the use of personal protective equipment:

- Always wear ear protectors during work.
- Dust arising during work is often hazardous (e.g. when processing oak and beech wood, mineral materials, metal or coats of paint containing lead or other harmful substances) and should not enter the body. Do not touch or inhale the dust. Use a dust extraction and in addition wear a dust protection mask. Remove any deposited dust thoroughly, e.g. by vacuuming it with a special vacuum cleaner. Please also observe these instructions when changing the filter bag

Instructions on operation:

- Do not reach with your hands into the oscillation range of the abrasive grid or its mounting. With your other hand, support the supplementary handle or the motor casing.
- Never support the workpiece in your hand or over your leg. Secure the workpiece against a sturdy support.
- Whenever possible, secure the workpiece against slipping, e.g. with screw clamps.
- Provide for an unobstructed and slip-proof location with adequate lighting.
- Only use abrasive grids with the dimensions specified in these operating instructions.

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.



Only connect the machine with the mains when it is switched off.

- Free the grinding disk 4 of dust and dirt before fitting a new abrasive.
- When using abrasive grids, the protective layer 5 should be fitted to the grinding disk to prevent excessive wear.
- When pressing the protective layer into place, pay attention that the punched holes match those of the sanding pad.



Only use original MAFELL abrasives.

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.

4.2 Dust 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 internal diameter of hose connector is 35 mm (1 3/8 in.).

Correct dust extraction can only be guaranteed if an abrasive grid or punched sanding paper is used. As the sander is equipped with its own dust extraction, it is possible to work with the sander's own dust extraction and the filter bag supplied for short assignments and in inaccessible areas. Make sure that the filter bag is replaced on a regular basis (Fig. 7 and 8).

4.3 Abrasive replacement



Danger
Pull the power plug during all service work.

Attaching abrasives with Velcro® fastening

(Fig. 2)

The Velcro® fastening allows for a quick changing of the abrasive 6

4.4 Grinding disk

4.4.1 Grinding disk selection

In order to achieve a good grinding quality, use the correct grinding disk in accordance with the applications in the following list:

Universal for rough and fine grinding on surfaces, grinding at edges:

- Grinding disk "hard" ø150, 35 Shore

Fine grinding of mouldings, curvatures and radii.

Do not use on edges

- - Grinding disk "soft" ø150, 20 Shore

Order No. see special accessories.

4.4.2 Grinding disk exchange



Danger
Pull the power plug during all service work.

Proceed as follows:

- Take out the screw 7 (Fig. 3). Now the grinding disk 4 can be replaced.
- Turn the grinding disk while fitting it until it engages on the flats of the locating bolt 8 (Fig. 4).
- Turn the screw 7 (Fig. 3) back in again.



Only use original MAFELL grinding disks.

4.4.3 Grinding disk brake

To prevent an unchecked raising of the grinding disk, it is braked by a sleeve 9 (Fig. 5). As the sleeve wears out in the course of time, it must be replaced with a new one at a MAFELL customer service shop if the braking effect decreases.

4.5 Additional handle

If necessary, the additional handle 10 (Fig. 6) can be dismantled from the machine with the integrated screw 11 using the enclosed hexagon screw driver.

4.6 edge protection

The edge protection 12 (Fig. 6) can be detached from the machine, if necessary. To do so, turn it to the left into its rear position, then push downwards and pull out to the rear.

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

Short operation

- **Switching on:** Press switch 1 (Fig.1).
- **Switching off:** Release the switch.

Continuous operation

- **Switching on:** Press switch 1 and locking button 2 consecutively. Then release the switch with depressed locking button. The motor runs without pressure on the switch.
- **Switching off:** Press switch 1 until locking button 2 pops out. Then release the switch.

5.3 Control electronics

The stroke rate of the orbital disk sander EVA150E 3 / EVA150E 5 can be adjusted in a continuously

variable manner between 9000 strokes/min and 22000 strokes/min at the adjusting wheel 3 (Fig.1) of the control electronics .

With the control electronics, the sanding speed can be adapted to the respective material. Thus, heat-sensitive materials such as plastics, paints, varnishes and glazes are protected against damage by excessive sanding speeds. In addition, the abrasive grid lasts longer as it does not get clogged. Thus, when grinding different materials, always use the control electronics to select a grinding speed that is appropriate for the material to be processed.

5.4 Work instructions

The best sanding performance is achieved with slight pressure.

You can avoid scratching caused by switching on and off, if you position the running orbital sander on the workpiece and also remove it with running motor from the workpiece.

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.

Regularly remove deposited dust from the machine. In the process, blow out the ventilation openings on the motor.

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. 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
Machine cannot be switched on	No mains voltage	Check power supply
	Carbon brushes worn	Take the machine to a MAFELL customer service shop
Unchecked raising of the grinding disk	The braking effect of the sleeve has decreased	Take the machine to a MAFELL customer service shop

8 Grinding material

Part No.	Order No.	Price Code	Description	Design	Qty
520	093447	99	Abrasive grid Abranet HD ø150, 20 pieces	Grain 60	1
521	093448	99	Abrasive grid Abranet ø150, 35 pieces	Grain 80	1
522	093449	99	Abrasive grid Abranet ø150, 40 pieces	Grain 100	1
523	093450	99	Abrasive grid Abranet ø150, 40 pieces	Grain 120	1
524	093451	99	Abrasive grid Abranet ø150, 40 pieces	Grain 150	1
525	093452	99	Abrasive grid Abranet ø150, 40 pieces	Grain 180	1
526	093453	99	Abrasive grid Abranet ø150, 40 pieces	Grain 240	1
527	093454	99	Abrasive grid Abranet ø150, 40 pieces	Grain 320	1
500/1	093446	99	Protective layer ø150		1

9 Special accessories

Part No.	Order No.	Price Code	Description	Design	Qty
11/1	093455	99	Grinding disk hard cpl. packed	ø150, 35 Shore	1
11	093457	99	Grinding disk soft cpl. packed	ø150, 20 Shore	1
-	093459	99	soft adhesive disk packed	ø150	1
502	205570	99	Univ. filter bag packed, 5 pieces		1

10 Exploded drawing and spare parts list

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