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FESTOOL

Instruction manual - Eccentric sander

Page 6

IMPORTANT: Read all instructions before using.

Guide d'utilisation - Ponceuse excentrique

Page 15

IMPORTANT: Lire toutes les instructions avant de démarrer les travaux.

Manual de instrucciones - Lijadora excentrica

Página 27

IMPORTANTE: Lea todas las instrucciones antes de usar.

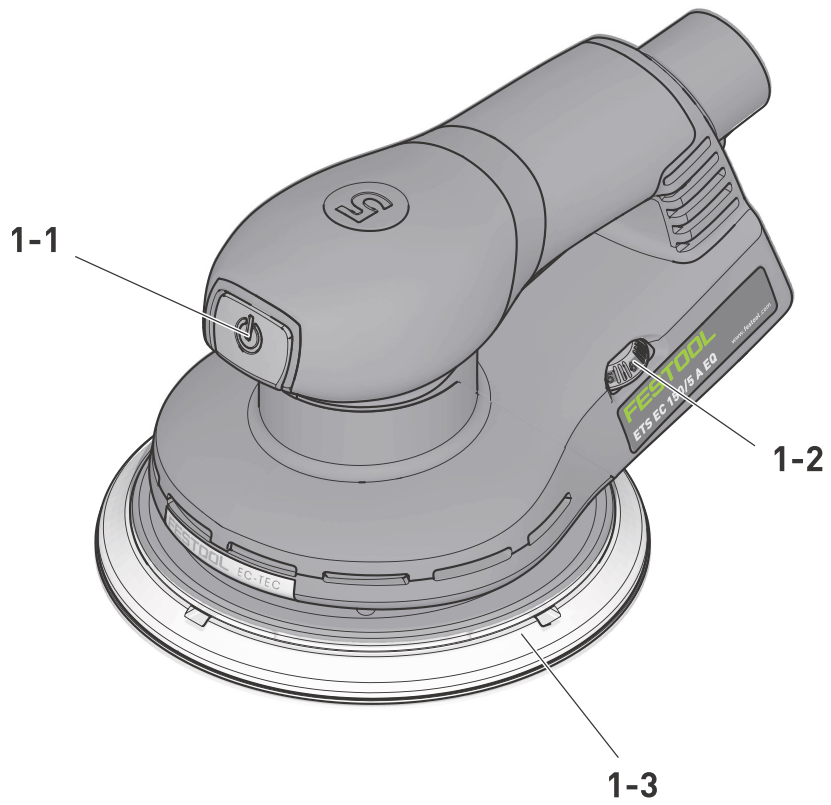
**Instruction manual
Guide d'utilisation
Manual de instrucciones**

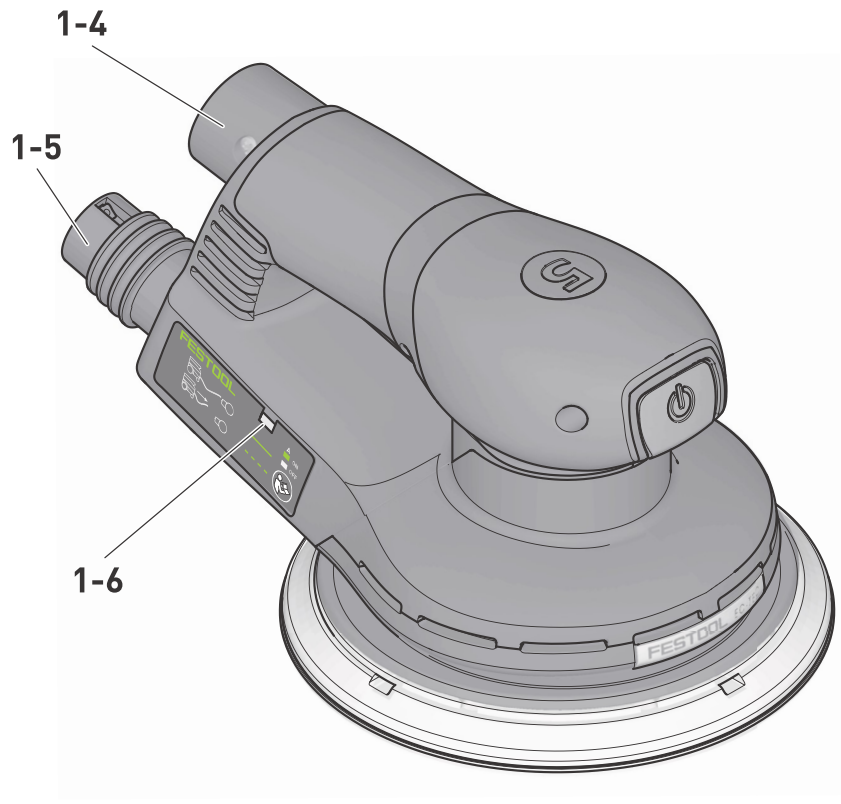
**ETS EC 150/3 EQ
ETS EC 150/5 EQ**



705798_003










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About this manual

Save these instructions





It is important for you to read and understand this manual. The information it contains relates to **protecting your safety** and **preventing problems**. The symbols below are used to help you recognize this information.

	DANGER	Description of imminent hazard and failure to avoid hazard will result in death.
	WARNING	Description of hazard and possible resulting injuries or death.
	CAUTION	Description of hazard and possible resulting injuries.





	NOTICE	Statement including nature of hazard and possible result.
	HINT	Indicates information, notes, or tips for improving your success using the tool.

Symbols

Symbol Significance

	Warning of general danger
	Risk of electric shock
	Read operating instructions and safety notices!
	Wear ear protection.

Symbol Significance


	Wear a dust mask.
	Wear protective goggles.
	Do not dispose of as domestic waste.
	Tip or advice

Symbol Significance

▶	Handling instruction
□	Safety class II
V	volts
A	amperes
Hz	hertz
~ a.c.	alternating current
— d.c.	direct current
n_0	no load speed
□	Class II construction
rpm	revolutions per minute
min^{-1}	
"	inch
lb.	pound
∅	diameter

Safety instructions

General safety instructions

 **WARNING! Read all safety warnings and all instructions.** Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

1 WORK AREA SAFETY

- Keep work area clean and well lit.** Cluttered and dark areas invite accidents.
- Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.
- Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

2 ELECTRICAL SAFETY

- Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
- Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and**

refrigerators. There is an increased risk of electric shock if your body is earthed or grounded.

- Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
- When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
- If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.** Use of an RCD reduces the risk of electric shock.

3 PERSONAL SAFETY

- Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust mask, non skid safety shoes, hard hat, or

hearing protection used for appropriate conditions will reduce personal injuries.

- c. **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.
- d. **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- e. **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- f. **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.
- g. **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.
- h. **Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore, tool safety principles.** A careless action can cause severe injury within a fraction of a second.

4 POWER TOOL USE AND CARE

- a. **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.
- b. **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- c. **Disconnect the plug from the power source and/or battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
- d. **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
- e. **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power**

tool repaired before use. Many accidents are caused by poorly maintained power tools.

- f. **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- g. **Use the power tool, accessories and tool bits etc. in accordance with these instructions taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.
- h. **Keep handles dry, clean and free from oil and grease.** Slippery handles do not allow for safe handling and control of the tool in unexpected situations.

5 SERVICE

- a. **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

Machine-related safety instructions

- **Harmful/toxic dust can be produced during your work (e.g. lead-containing paint, some types of wood and metal).** Contact with this dust, especially inhaling it, can represent a hazard for operating personnel or persons in the vicinity. Comply with the safety regulations that apply in your country. Connect the electric power tool to a suitable extraction system.



To protect your health, wear a P2 protective mask.



Always wear protective goggles to protect against sanding hazards.

- **Use a residual current protective device when metal grinding, as well as when the operation of the power tool in a wet environment cannot be avoided.** In the event of an electric shock, the protective switch protects you against life-threatening current through the body.
- **Clean work equipment soaked in oils, for example sanding pad or polishing felt, with water and allow to dry.** Work equipment soaked in oil may combust spontaneously.
- **Attention: Risk of fire! Avoid overheating the grinding material and the sander. Always empty the dust container before taking a break.** Swarf in the filter bag or filter of the mobile dust extractor may self-ignite in unfavourable conditions such as flying sparks when grinding metals. Particular danger exists if the swarf is mixed with paint, polyurethane residue or other chemical

materials and the grinding material is hot after long periods of work.

- **Always use original Festool sanding pads.** Foreign pads are not suitable for the speed of the sander and may break.
- **If the power tool is dropped or falls, check for damage to the machine and sanding pad. Remove the sanding pad for closer inspection. Repair damaged parts before using again.** Broken sanding pads and damaged machines can cause injuries and machine instability.

Mixed dust containing metal and sanding damp surfaces



With mixed dust containing metal (such as dust resulting from paint sanding in the automotive field) and when sanding damp surfaces, the following measures must be observed for reasons of safety:

- Install a residual-current circuit breaker (GFCI, PRCD) upstream.
- Connect the machine to a suitable dust extractor.
- Regularly blow out the motor housing of the machine to remove dust deposits.



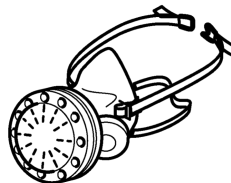
Wear protective goggles.

Health hazard by dust



WARNING! Various dust created by power sanding, sawing, grinding, drilling and other construction activities contains chemicals known (to the State of California) to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- lead from lead-based paints,
- crystalline silica from bricks and cement and other masonry products, and
- arsenic and chromium from chemically treated lumber.



The risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles. Wash hands after handling.



WARNING

TO REDUCE THE RISK OF INJURY, USER MUST READ INSTRUCTION MANUAL.

Intended use

The sanders are designed for sanding wood, plastic, composite, paint/varnish, filler and similar materials as directed. With mixed dust containing metal (such as dust resulting from paint sanding in the automotive industry) and when sanding damp surfaces, special safety instructions must be followed.

The sanders are not intended to be suitable for grinding bare metal. Material containing asbestos cannot be processed.



The user is liable for improper or non-intended use.

Technical data

Eccentric sander	ETS EC 150/3 EQ	ETS EC 150/5 EQ
Power	400 W	400 W
Idle speed	6000 - 10000 min ⁻¹	6000 - 10000 min ⁻¹
Sanding stroke	3.0 mm (0.12 in.)	5.0 mm (0.20 in.)
Sanding pad	D 150 mm (5.9 in.)	D 150 mm (5.9 in.)
Weight (without mains cable, with sanding pad)	1.2 kg (2.65 lb)	1.2 kg (2.65 lb)
Safety class	□ /II	□ /II

Functional description

The pictures for the functional description are on a fold-out page at the beginning of the instruction manual. While reading the manual you can fold out the page for comparison and quick reference.

[1-1] ON/OFF button

[1-2] Speed control

[1-3] Sanding pad

[1-4] Plug it-connection

[1-5] Extractor connector

[1-6] LED for extractor signal

[1-7] Handle (insulated gripping surface)

Operation

Consider the pictures on the fold-out page.



WARNING

Unauthorised voltage or frequency!

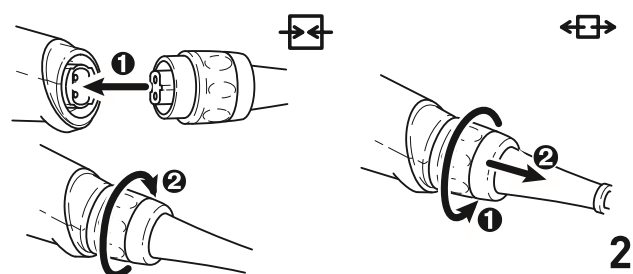
Risk of accident

- ▶ The mains voltage and the frequency of the power source must correspond with the specifications on the machine's name plate.
- ▶ In North America, only Festool machines with the voltage specifications 120 V/60 Hz may be used.

Connecting and detaching the mains power cable - see Fig. [2].



Before switching on the machine make sure that the bayonet fitting at the power supply cord is closed fully and locked.



ON/OFF button [1-1]

ON Press the ON/OFF button [1-1]

OFF Press the ON/OFF button [1-1]

- ① When the extractor signal is active, the power tool cannot be switched on without a connected extractor hose - see chapter Extractor signal.
- ① In case of a power failure or if the mains connector is removed, move the on/off switch immediately to the Off position. This prevents uncontrolled restarting.

Settings



WARNING

Risk of injury, electric shock

- ▶ Always pull the mains plug out of the socket before performing any type of work on the machine!

Electronics

The power tool is equipped with a brushless EC-TEC motor for a long service life and power electronics with the following properties:

Smooth start-up

The electronically controlled smooth start-up ensures that the machine starts up jolt-free.

Constant speed

The preselected motor speed is kept constant through electronic control to ensure a uniform sanding speed even when under load.

Speed reduction in the event of high vibrations

If high vibrations and oscillations occur at the power tool, e.g. with the use of an interface pad, the speed is automatically reduced in order to protect the power tool and the user.

Temperature cut-out

To avoid the motor overheating, the power consumption is limited at an excessive motor temperature. If the temperature continues to rise, the power tool switches off and can only be switched on again once the motor has cooled sufficiently.

Setting and adjusting the speed

The speed can be set **[1-6]** between 6000 and 10000 min⁻¹ using the adjusting wheel.

This enables you to optimise the sanding speed to suit the material (see chapter Working with the machine).

Extractor signal

The electronic extractor signal detects whether an extractor hose is connected at the power tool. Upon activation the power tool can only be switched on with a connected extractor hose.

Switching the extractor signal ON/OFF

The extractor signal is supplied in a deactivated state.

▶ Switch on power tool by briefly pressing the ON/OFF button **[1-1]**.

▶ Switch off the power tool again and hold down the ON/OFF button **[1-1]**.

Power tool beeps once.



▶ Turn speed control **[1-2]** to both end positions (Level 1 and 6).

Power tool beeps three times for ON and twice for OFF.

▶ Release ON/OFF button **[1-1]**.

Extractor signal is activated or deactivated.

The operating mode is indicated via the LED **[1-6]**:

	Permanent light: Extractor hose is connected
	Flashing light: No extractor hose connected, power tool cannot be switched on.
	No light: Extractor signal is not active.

Replacing the sanding pad [3]



An optimal work result can only be achieved using original accessories and consumables. The use of non-original accessories or consumables invalidates the right to claim under warranty.

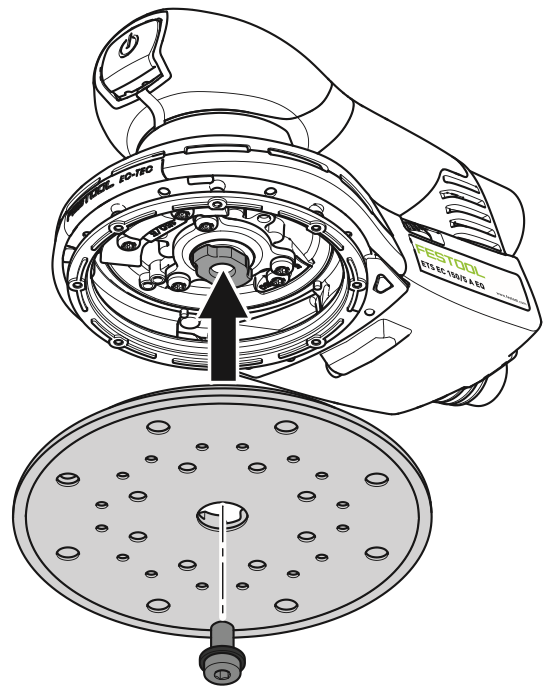


Warning! Do not perform any structural changes in the open interior space of the machine when the sanding pad is dismantled.



Health risk: Fitting sanding pads of incorrect size causes excessive vibration of the machine.

3



Tuned to the surface being processed, the machine can be equipped with three sanding pads of different hardnesses.

Hard: Coarse and fine sanding on surfaces. Sanding edges.

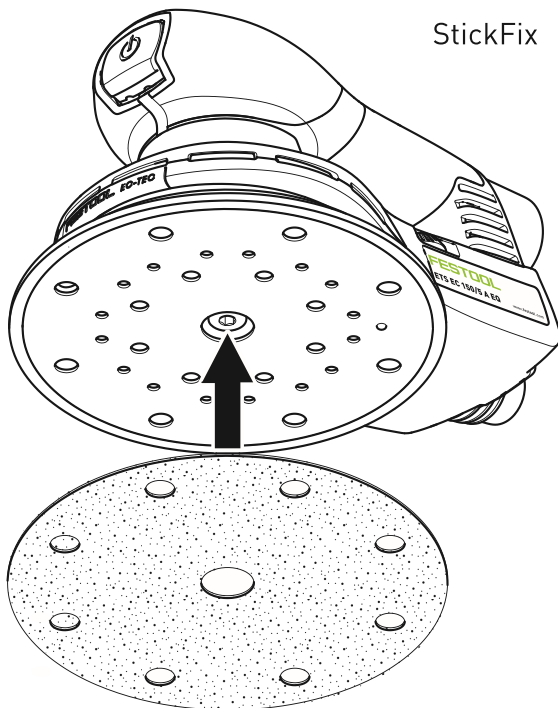
Soft: Universal for coarse and fine sanding, for flat and convex surfaces.

Extra-soft: Fine sanding of moulded parts, arches, radii. Do not use on edges.

Attaching sanding accessories using Stick-Fix [4]

The suitable StickFix sandpaper and StickFix sanding cloth can be attached quickly and simply to the StickFix sanding pad.

4



In the case of a weakening adhesive effect of the StickFix surface, the sanding pad accessories, in particular those which are not yet touching the workpiece, **may come loose from the sanding pad and cause injuries**. Replace the sanding pad!

Dust extraction



WARNING

Dust hazard

- ▶ Dust can be hazardous to health. Always work with a dust extractor.
- ▶ Always read applicable national regulations before extracting hazardous dust.

The power tool does not have its own extractor unit. At the extractor connector [1-5], a Festool mobile dust extractor with an extraction hose diameter of 27 mm should be connected.

Recommendation: Use anti-static extractor hose! This helps reduce the electric charge.

Working with the machine



WARNING

Risk of injury

- ▶ Always secure the workpiece in such a manner that it cannot move while being machined.

Observe the following instructions:

- Do not overload the machine by pressing with excessive force! The best sanding results are achieved with moderate application pressure. The sanding capacity and quality are mainly dependent on the selection of the correct abrasive.
- Hold the machine with one hand on the handle [1-7].

For sanding we recommend the following settings for the adjusting wheel [1-2]:

Sanding work

Adjusting wheel setting

- | | |
|---|-------|
| - Sanding with max. abrasion | 5 - 6 |
| - Sanding off old paint | |
| - Sanding of wood and veneered surface prior to paintwork | |
| - Intermediate sanding of paintwork on surfaces | |
| - Sanding thinly applied undercoat | 4 - 5 |
| - Sanding wood with nonwoven pad | |
| - Edge breaking on wooden parts | |
| - Smoothing primed wooden surfaces | |

Sanding work

Adjusting wheel set- ting

- Sanding solid wood and veneered edges 3 - 4
- Sanding rebate of windows and doors
- Intermediate sanding of paintwork at edges
- Light sanding of natural wood windows using nonwoven pad
- Smoothing wooden surfaces using nonwoven pad before staining
- Rubbing or removing excess limestone residue using nonwoven pad
- Intermediate sanding of paintwork on 2 - 3 stained surfaces
- Cleaning natural wood window rebate using nonwoven pad
- Sanding stained edges 1 - 2
- Sanding of thermoplastics

Service and maintenance



WARNING

Any maintenance or repair work that requires opening of the motor or gear housing should only be carried out by an authorised Customer Service Centre (name supplied by your dealer)!

- ▶ Maintenance or repair work carried out by an unauthorised person can lead to the wrong connection of the power cord or other components, which in turn can lead to accidents with serious consequences.



WARNING

To prevent accidents, always remove the plug from the power supply socket before carrying out any changes or maintenance work on the tool!

- ▶ Do not use compressed air to clean the electrical tool! Do not try to clean parts inside the tool in this way, as you could let foreign objects in through the openings of the tool housing.



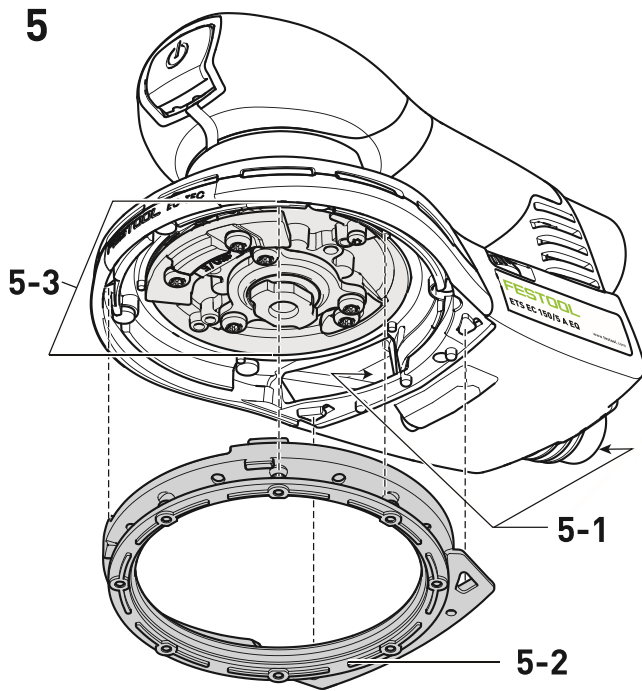
Customer service and repair only through manufacturer or service workshops: Please find the nearest address at: www.festoolusa.com/service



Use only original Festool spare parts! Order No. at: www.festoolusa.com/service

To ensure constant air circulation, always keep the cooling air openings in the motor housing clean and free of any obstruction.

In the event of a slowdown in performance or increased vibrations, blow and clean cooling air openings.



Cleaning the extraction channels

We recommend cleaning the extraction channels in the machine **[5-1]** roughly once a week (particularly if sanding synthetic resin, in the case of wet sanding and if sanding plaster) using a small flat brush or a cloth.

Cleaning the inside of the power tool

Regularly clean the inside of the power tool at the bottom of the fan, **[5-3]** otherwise the vibration values worsen as a result of the dust accumulation.

Replace sanding pad and sanding pad brake

The rubber sleeve **[5-2]** brushes off the sanding pad and prevents uncontrolled turning of the sand-

ing pad. The sanding pad brake is almost wear-free thanks to the pins used.

In the case of a decreasing braking effect, first check the sanding pad for wear and replace it if necessary. Replace damaged sanding pad brake/ rubber sleeve.

Accessories

Use only original Festool accessories and Festool consumable material intended for this machine. These components are designed specifically for this machine. Using accessories and consumable material from other suppliers will most likely affect the quality of your results and limit warranty claims. Machine wear or your own personal workload may increase depending on the application. Protect yourself and your machine, and preserve your warranty claims by always using original Festool accessories and Festool consumable material!

Only use original Festool sanding and polishing pads. Low-quality sanding and polishing pads may cause serious machine imbalance that decreases the quality of the working results and increases machine wear.

The order numbers of the accessories and tools can be found in the Festool catalogue or on the Internet under "www.festoolusa.com".

Environment

Do not dispose of the device as domestic waste! Dispose of machines, accessories and packaging at an environmentally responsible recycling centre. Observe the respective national regulations.