

Festool GmbH  
Wertstrasse 20  
73240 Wendlingen  
Germany

[www.festoolusa.com](http://www.festoolusa.com)

DISTRIBUTED BY:  
Pro Wood Finishes  
14622 Southlawn Lane  
Rockville MD 20850  
Ph: (301) 424-3033

# FESTOOL

## Instruction manual

Page 6

**IMPORTANT:** *Read and understand all instructions before using.*

## Guide d'utilisation

Page 18

**IMPORTANT:** *Lire et comprendre toutes les instructions avant de démarrer les travaux.*

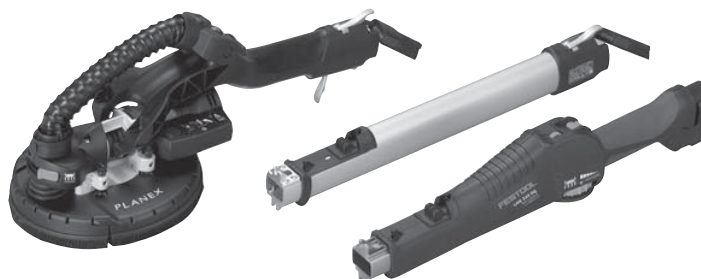
## Manual de instrucciones

Pagina 32

**IMPORTANTE:** *Lea y comprende todas las instrucciones antes de usar.*

Instruction manual  
Guide d'utilisation  
Manual de instrucciones

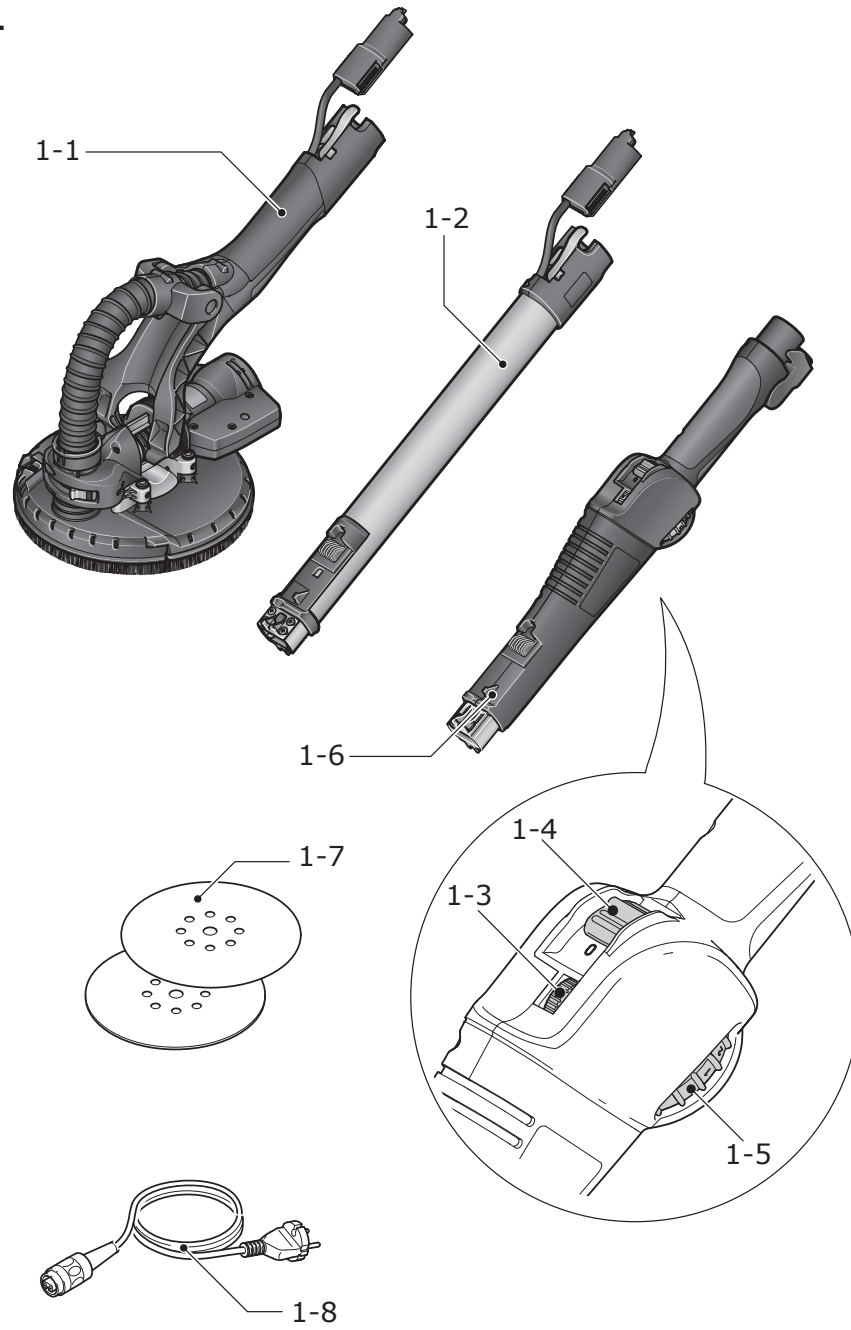
**PLANEX**  
**LHS 225 EQ**



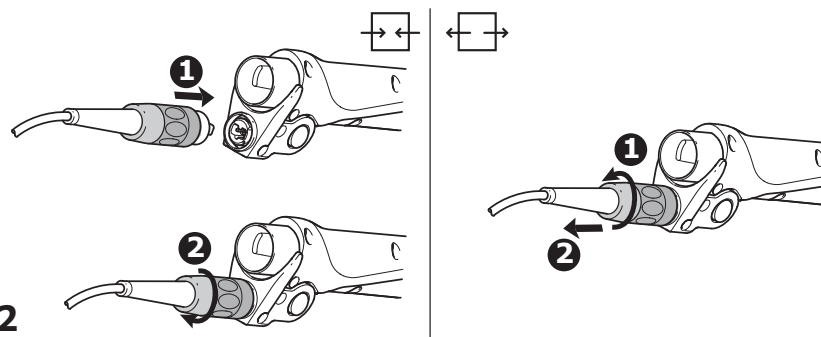
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**1**



**2**



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## Symbols



Warning of general danger



Risk of electric shock



Wear a dust mask!



Wear ear protection.



Clean the air vent slits and dust filter



Read the Operating Instructions/Notes!

V Volts

A Amperes

Hz Hertz

W Watt

~ Alternating current

$n_0$  No load speed

□ Class II Construction

rpm

min<sup>-1</sup> Revolutions per minute

∅ Diameter

① Tip, advice

## 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.

- f) **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

- a) **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.
- b) **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.

### 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 of 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

- **This machine is designed for sanding.** Please read all of the safety information, instructions, illustrations and descriptions delivered with the machine. If the following instructions are not observed, this can result in an electric shock, fire and/or serious injury.
- **Do not use this machine to perform work such as roughing, brushing, polishing or disc sanding.** Performing tasks for which the machine is not designed can create hazards and lead to injury.
- **Never use accessories that were not specially developed and intended for this machine.** Just because an accessory part can be fitted on your machine does not guarantee danger-free operation.
- **The permissible rotational speed of the accessory must be at least as high as the maximum speed specified on the machine.** Accessories that rotate faster than the permissible level can rupture.

- **The outside diameter and the thickness of accessories must be within the specified size range of the machine.** Accessories with incorrect dimensions cannot be sufficiently protected or controlled.
  - **Threaded mounting of accessories must match the grinder spindle thread. For accessories mounted by flanges, the arbour hole of the accessory must fit the locating diameter of the flange.** Accessories that do not match the mounting hardware of the power tool will run out of balance, vibrate excessively and may cause loss of control.
  - **Do not use damaged accessories. Before use, always check accessories such as sanding pads for nicks or cracks and check support plates for cracks and excessive wear. Every time the machine is dropped, check the machine and accessories for damage, or install undamaged accessories. Following the check and assembly of accessories, ensure that all persons are beyond the rotating range of the tool and run the machine for one minute at maximum speed.** Damage accessories usually break completely during this test time.
  - **Wear personal protective equipment. Depending on the application, use a shield or protective goggles. If practical, wear a breathing mask, ear protectors, safety gloves and a work apron suitable to protect against impact or small sanding or workpiece parts.** The protective goggles must be capable of blocking flying debris caused by the various work operations. The breathing mask or device must be capable of filtering particles generated during work. Continuous exposure to loud noise can cause loss of hearing.
  - **Ensure that persons standing near the machine are at a safe distance from the work area. All persons in the work area must wear personal protective equipment.** Parts of the workpiece or broken accessories can fly off and cause injury outside the immediate work area.
  - **Always hold the machine by the insulated handles if you intend to perform work that may pose a risk of cutting into hidden power cables or your own machine cable.** Contact with live cables transfers an electric current to metallic machine components and causes electric shocks.
  - **Keep the power cable away from rotating parts.** If you lose control, the power cable could be cut or become stuck and your hand or arm could be drawn into the rotating parts.
  - **Never set the machine down until the tool has stopped completely.** Turning tools can catch on the storage surface, causing you to lose control of the machine.
  - **Never allow the machine to operate while carrying it at your side.** The rotating tool can catch on your clothing by accident and cause serious cutting injuries.
  - **Clean the air vent slits on your machine on a regular basis.** The cooling air fan sucks the dust into the machine and excessive deposits of metal dust can result in electrical hazards.
  - **Never operate the machine near combustible materials.** Sparks can ignite these materials.
  - **Never use tools that have to be liquid-cooled.** Water and other liquid coolants can cause potentially fatal electric shocks.
- Cause and prevention of kickbacks**
- A kickback is a sudden reaction to jamming or catching of a rotating disc, a support plate, a brush or other accessory. Jamming or catching results in a rapid standstill of the rotating accessory, whereby, as a counter-reaction, an out-of-control machine is accelerated around the jamming point in a direction of rotation opposed to the accessory.
- If, for example, a sanding disc is jammed or caught by the workpiece, the disc circumference can dig into the workpiece surface at the jamming point, causing the disc to be expelled. The disc can either fly towards or away from the user, depending on the direction of rotation of the disc at the jamming point. This can also cause sanding discs to break. A kickback is the result of misuse of the machine and/or incorrect method of work or operation and can be avoided by closely observing the following precautionary measures.
- **Always hold the machine firmly and position your body and arms such that you can control any kickback force.** Always use the auxiliary handle, if included in the delivery, to ensure optimum control over kickbacks or reaction torques during start-up. The user can control reaction torques or kickbacks if suitable precautionary measures are taken.
  - **Never place your hands near rotating tools.** Tools can kick back over your hand.
  - **Never position your body in the area in which the machine moves in the event of a kickback.** A kickback accelerates the machine in the direction of rotation opposed to the disc at the jamming point.



- **Take extra care when working in corners, on sharp edges, etc.** Avoid kickbacks and prevent the tool from seizing. Corners, sharp edges or a jump back tend to cause the rotating tool to catch, thus leading to a loss of control or a kickback.

#### Special safety instructions for fine sanding

- **Do not use excessively large sanding discs when fine sanding. Observe the specifications of the manufacturer when selecting abrasive discs.** A sanding disc that is too large and protrudes over the sanding pad represents a cutting injury hazard and can cause catching, disc tears or kickbacks.

#### Additional warning notes

- **Hold the machine firmly with both hands and assume a stable stance when performing work.** Hold the machine with both hands to guide more securely.
- **If potentially explosive or self-igniting dust is produced during sanding, the processing instructions of the material manufacturer must be observed under all circumstances.**
- **Harmful/toxic dusts can be produced during your work (e.g. lead-containing paint, some types of wood and metal).** Contact with these dusts, especially inhaling them, 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.
- **Never use machines with a damaged cable. Do not touch damaged cables and pull the plug from the mains power supply if the cable becomes damaged during work.** Damaged cables increase the risk of electric shock.
- **Use a maximum of two extension pipes on the machine.**

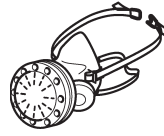
### Health hazard by dust

**⚠ 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,

- 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 use 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.**

### Technical data

Power	550 W
Rotational speed	340 – 910 rpm
Sanding pad dia.	215 mm (8.5")
Abrasive dia.	225 mm (8.9")
Tool holder	D 13/10
Dust extractor connection dia.	36 mm (1.4") (27 mm (1.06"))
Length of short version (without extension pipe)	1.10 m (43.3")
Length of long version (with extension pipe)	1.60 m (63.0")
Weight without cable	
Short version	3.80 kg (8.4 lbs)
Long version	4.60 kg (10.1 lbs)
Protection class	II/□

### Functional description

The pictures for the functional description are on a fold-out page at the beginning of the instruction manual. When reading of the manual you can fold out this page for having always an overview of the machine.

- [1-1] Sanding head
- [1-2] Extension pipe
- [1-3] Speed control adjusting wheel
- [1-4] On/off switch
- [1-5] Suction power adjusting wheel
- [1-6] Handle section
- [1-7] Abrasive
- [1-8] Mains power cable

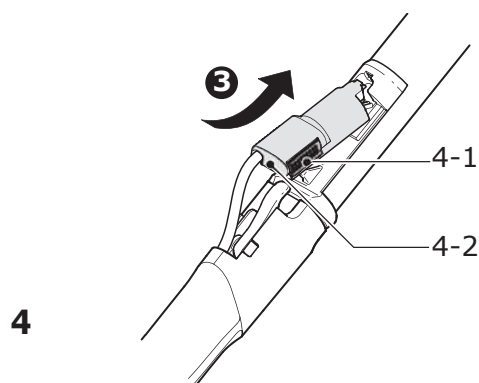
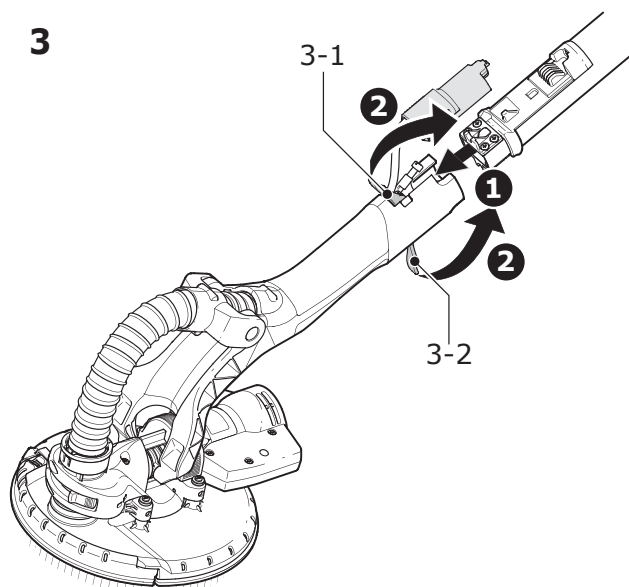
## Intended use

The *PLANEX* is designed for sanding primed drywall constructions, ceilings and walls in internal and external applications as well as removing carpet residue, coats of paint, coverings, adhesives and loose plaster.

① We recommend using the Festool dust extractor CT 36 E AC-LHS when sanding large filled surfaces, which generates large quantities of dust.

**⚠ WARNING** The user bears the responsibility for damage and accidents caused by improper use.

Total Extension Cord Length (feet)	25	50	100	150
Cord size (AWG)	18	16	16	14



## Commissioning



### WARNING

**Risk of accident if the machine is operated using unauthorised voltages or frequencies.**

- ▶ 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 voltage specifications of 120 V may be used.

The switch [1-4] is an on/off switch (I = ON, 0 = OFF). Connecting and detaching the mains power cable [1-8], see Fig. [2].

## Extension cord

If an extension cord is required, it must have sufficient cross-section to prevent an excessive drop in voltage or overheating. An excessive drop in voltage reduces the output and can lead to failure of the motor. The table adjacent shows you the correct cord diameter as a function of the cord length for the LHS 225.

Use only U.L. and CSA listed extension cords. Never use two extension cords together. Instead, use one long one.

**Note:** The lower the AWG number, the stronger the cord.

## Machine settings



### WARNING

**Risk of accident, electric shock**

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

## Fitting the *PLANEX*

- ▶ Hold the sanding head [1-1] with the sanding pad facing downwards.
- ▶ If closed, release the clamping levers [3-1] and [3-2].
- ▶ Slide the extension pipe [1-2] into the opening up to the stop as illustrated in [3].
- ▶ Close the clamping levers [3-1] and [3-2].
- ▶ Slide the contact slide [4-2] into the retainer as illustrated in [4].

- ▶ Press the contact slide down until it latches into position.
- ▶ Insert the handle section [1-6] at the same way.
- ① If you wish to use the *PLANEX* for sanding walls in cramped spaces, for example, reduce the length of the machine by fitting the sanding head [1-1] directly to the handle section [1-6].
- ▶ When disassembling the machine, do not forget to press the button [4-1] to release the contact slide before opening clamping levers [3-1] and [3-2].

## Electronics

The machine features full-wave electronics with the following properties:

### Smooth start-up

The electronically controlled smooth start-up function ensures that the machine starts up smoothly.

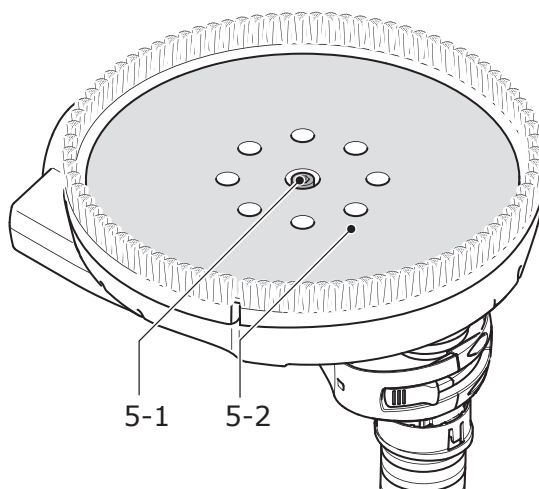
### Speed control

You can regulate the rotational speed steplessly between 310 and 920 rpm using the adjusting wheel [1-3]. This enables you to optimise the cutting speed to suit the respective material.

### Constant speed

The preselected motor speed remains constant through electronic control. This ensures a uniform cutting speed even when under strain.

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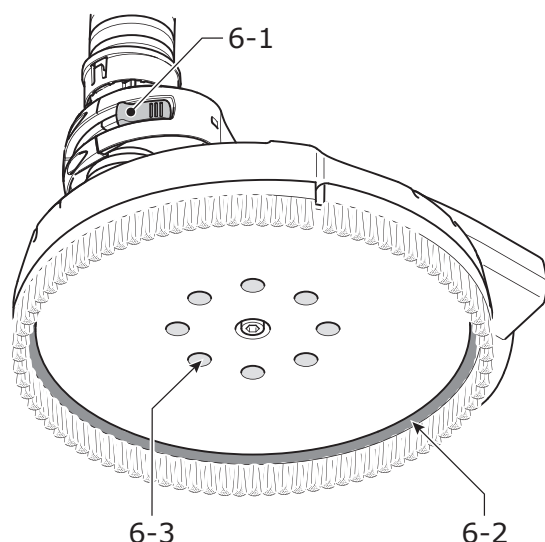


## Changing sanding pads

- ▶ Insert an Allen key (size 5) into the Allen screw [5-1] on the sanding pad.
- ▶ Hold the sanding pad securely and turn the Allen key to release.
- ① In order to further ensure optimum axial run-out, you must first clean the bearing surface for the grinding disk on the driveshaft.
- ▶ Attach the new sanding pad.
- ▶ Tighten the screw [5-1].
- ① Only attach specified sanding pads to the machine.
- ① In order to guarantee optimum suction output, the sealing face between the machine and the grinding disk is ground in during the first few minutes after the disk has been changed. During this time, the r.p.m. of the machine is slightly lower and white foam particles form during the grinding process. However, they do not damage the machine.





6



- ❶ If the machine cannot be started directly with a new sanding pad, rotate the sanding pad a few times by hand and run in.

## Affixing abrasives

Compatible StickFix sanding discs are quick and easy to attach to the StickFix sanding pad. Simply press the self-adhesive sanding discs [1-7] onto the sanding pad [5-2]. The adhesive coating holds the StickFix sanding pad securely in position. Make sure that the sanding disc holes line up with the suction holes [6-3]. Tear off the sanding disc when worn.

Symbol	Dust extraction	Use
	External extraction [6-2] (between sanding disc and brush ring)	Extracting larger particles such as carpet residue
	Internal extraction [6-3] (suction hole)	Extracting small particles such as filler with maximum suction effect

## Adjusting the internal/external extraction

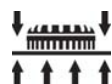
You can switch between internal and external extraction depending on the size of the particles produced by the sanding process.

- Push the switch [6-1] to change between the two dust extraction modes.

## Adjusting the suction power

You can adjust the suction power to match the surface type, but only when internal extraction is active (see chapter “Adjusting the internal/external extraction”).

- Use the adjusting wheel [1-5] to adjust the suction power.



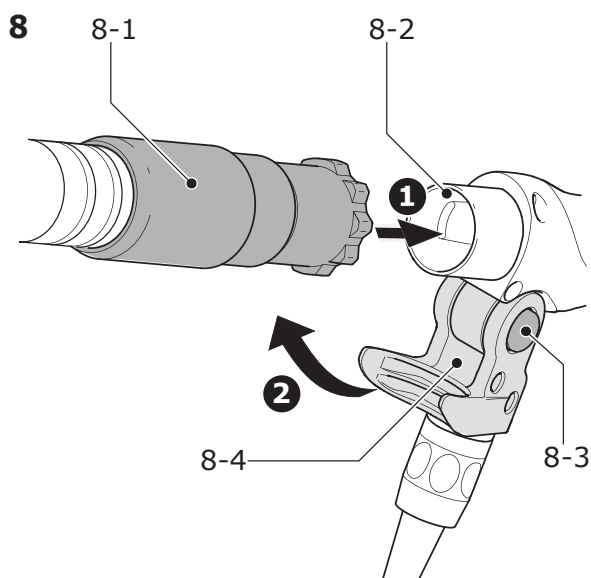
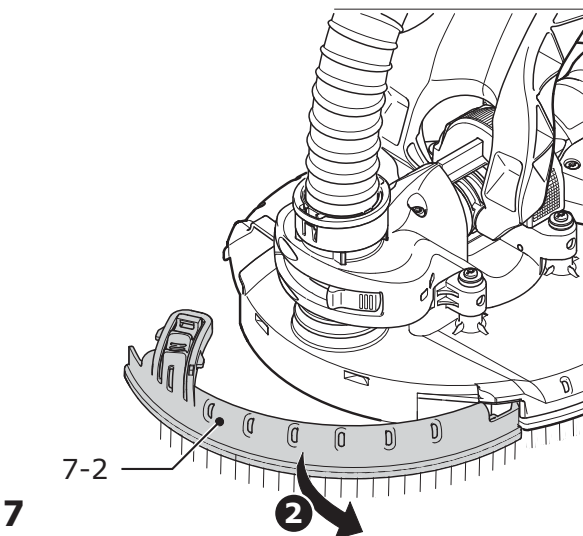
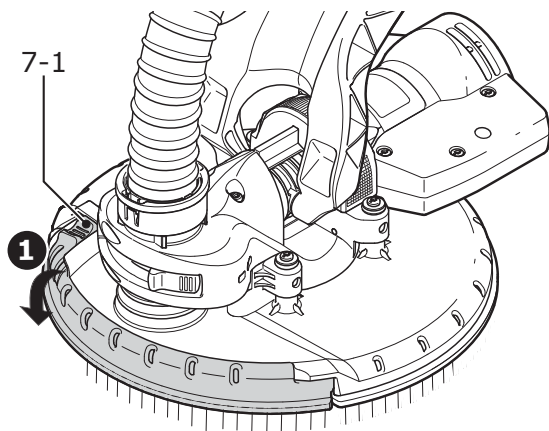
1: Low suction power

6: High suction power

- Start with a low suction power (position 1) and slowly increase until you can feel that the application pressure has noticeably changed.

- ❶ A high suction power makes sanding work on ceilings and walls less tiring.

- ❶ Excessive suction power can cause the machine to vibrate and become more difficult to guide. The machine may also be overloaded. This activates the protective circuit. The red diode flashes slowly. The electronic circuit switches to recovery speed. If this happens, you must stop working immediately until the machine has cooled down again.



## Sanding close to edges

The detachable brush segment allows you to reduce the distance between the wall/ceiling and the side of the sanding pad.

- Press and hold the knob [7-1].
- Remove the brush segment [7-2].

① There is a retainer in the lid of the SYSTAINER for storing the brush segment.

- Hook in the brush segment at the opposite end to the knob [7-1], swivel towards the sanding head and engage into position.

## Dust extraction



### CAUTION

**Breathing in dust can damage the respiratory passage!**

- Always connect the machine to a dust extractor.
- When performing work that generates dust, always wear a dust mask.

A Festool dust extractor with an extractor hose diameter of 27 mm or 36 mm (recommended due to the improved suction power) can be connected to the extractor connector [8-2].

① The special extraction hose and special suction sleeve [8-1] (available as an accessory) ensure permanent attachment and protect against kinking.

① Use the dust extractor CT 36 E AC-LHS on large surfaces because this extractor guarantees the permanent suction power required.

- Press the green button [8-4] to open the mechanical lock [8-3].
- Attach the extraction hose on the dust extractor to the outlet spigot [8-2].
- Swivel the mechanical lock [8-3] upwards until it engages.

## Operation



### WARNING

**Risk of injury**

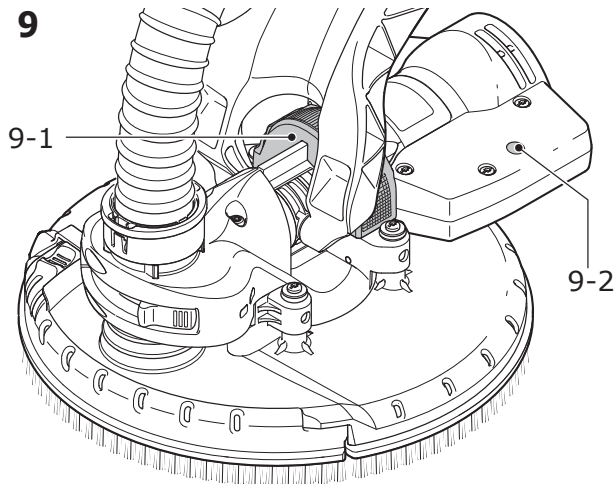
- Do not hold the machine by the head.
- Hold the machine with both hands.
- Make sure that all clamping levers are closed before operating the machine.

- ▶ Connect the machine to the mains power supply.
- ① Before switching on, hold the sanding head a slight distance away from the working surface.
- ▶ Switch on the machine.
- ① The on/off switch has a zero voltage actuator, which prevents the machine from starting automatically after the power supply is interrupted (e.g. after a power failure). After an interruption in voltage, press the on/off switch [1-4] to switch the machine on again.
- ▶ Perform the necessary sanding work.
- ① Do not overload the machine by pressing with excessive force! The best sanding results are achieved with moderate press-on pressure. The sanding performance and quality are mainly dependent on the selection of the correct abrasive.
- ▶ Switch the machine off once the sanding task is complete.



### Visual warning signals on the sanding head

The following visual signals appear on the LED [9-2] on the motor housing and the machine decreases in speed if necessary.



### LED flashing slowly

The machine is overheating due to heavy dirt deposits around the air vent slits and the dust filter [9-1].

- ▶ Clean the air vent slits.
- ▶ Remove the dust filter [9-1].
- ▶ Remove the dirt deposits.
- ▶ Insert the dust filter [9-1] until it audibly engages.
- ① The LED stops flashing once the machine is cleaned and cools down. You can then continue with your work.

If the LED is still flashing after the filter sieve and air vent slits have been cleaned:

- ▶ Apply less pressure on the surface.
- ▶ Reduce the suction output with the handwheel [1-5].

### LED flashing quickly

If a malfunction occurs and the speed signal is transferred incorrectly from the handle to the motor, the motor increases to maximum speed when switched on and the LED [9-2] flashes quickly until the machine is switched off.

- ① The machine has an internal malfunction. Have the machine inspected by an authorised service workshop.

## Service and maintenance



### WARNING

#### Risk of accident, electric shock

- ▶ Always pull the plug out of the socket before performing any type of work on the machine.
- ▶ All maintenance or repair work requiring the motor housing to be opened must be carried out only by an authorized service workshop. Maintenance or repair work carried out by an unauthorized person can lead to the incorrect connection of the wiring or other components, which in turn can lead to accidents with serious consequences.
- ▶ Check the plug and the cable regularly and should either become damaged, have them replaced by an authorised after-sales service workshop.

- ▶ To ensure constant air circulation, always keep the air vent slits in the motor housing clean and free of blockages. Read the instructions on visual warning signals in chapter "Operation".
- ▶ Clean the contact slide regularly. Do not use hard objects.

The machine is equipped with self-disconnecting special carbon brushes. If they are worn, power is interrupted automatically and the machine comes to a standstill.

- ① Tighten the clamping levers if they no longer capable of retaining the extension pipe properly:
- ▶ Turn the screws on the clamping levers [3-1] and [3-2] approx. 1/8 of a turn.

## Accessories, tools

**⚠ WARNING** For safety reasons, only use original Festool accessories and tools!


The accessory and tool order number can be found in the Festool catalog or on the Internet under [www.festoolusa.com](http://www.festoolusa.com).

### Systainer


Many Festool products are shipped in a unique system container, called "Systainer".

This provides protection and storage for the tool and accessories. The Systainers are stackable and can be connected together. They also can be connected atop Festool CT dust extractors.



#### To open the Systainer:

- Turn the T-loc [10-1] to the position .

#### To lock the Systainer:

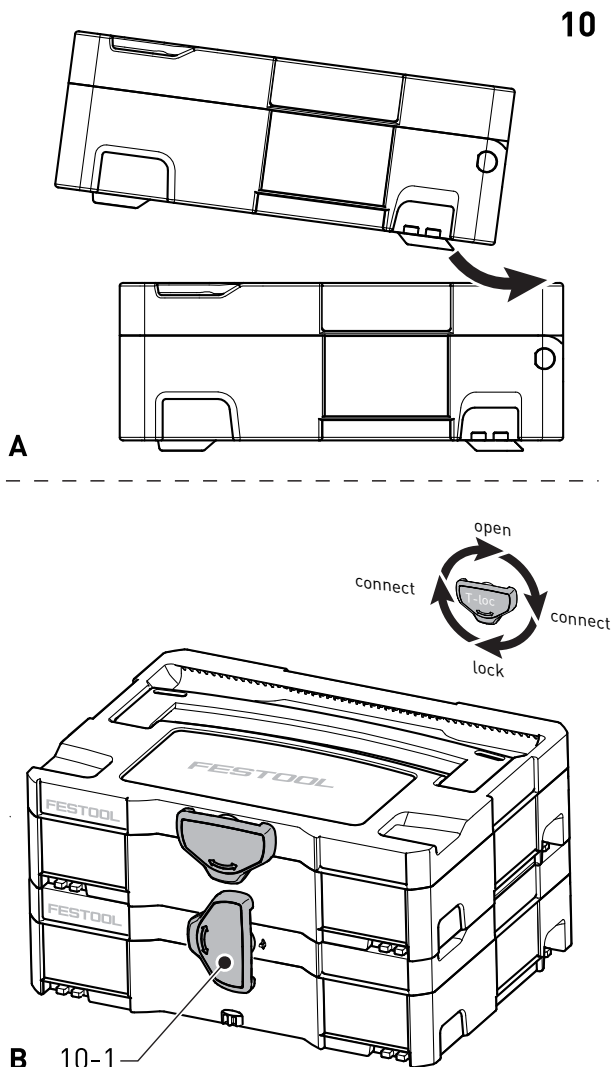
- Turn the T-loc [10-1] to the position .

#### To connect two Systainers:

- Place one Systainer on the top of the other (Fig. 10A).
- Turn the T-loc [10-1] to the position  or  (Fig. 10B).

The Systainers are connected and locked.

- ① A new generation Systainer is connectable on top of a previous generation Systainer by the four latches of the previous Systainer.



## Disposal

Do not throw the power tool in your household waste! Dispose of machines, accessories and packaging at an environmentally-responsible recycling centre. Observe the valid national regulations.

## Troubleshooting

Problem	Possible causes	Remedy
PLANEX bumps over the surface.	Suction power too strong	Reduce suction power or switch to external extraction if necessary.
	Hard repair compound or hard sublayers	Reduce suction power or switch to external extraction if necessary.
		Reduce speed.
Extraction power is insufficient.	Main filter on CT 36 E AC-LHS blocked / clogged.	Clean the main filter regularly: <u>Option 1</u> : Clean the main filter with Auto-Clean, set the suction power control to the maximum setting. Cover the nozzle, suction hose or intake opening on the extractor with the surface of your hand for 10 seconds until the automatic cleaning cycle starts. <u>Option 2</u> : Clean the main filter mechanically (extracting). <u>Option 3</u> : Check the main filter for damage and clogging. Insert a new filter element regularly.
	Disposal bag inserted incorrectly.	The holes punched in the disposal bag must be inside the container.
	Filter bag inserted instead of disposal bag.	Always work with the disposal bag when operating the PLANEX (grey bag).
	Suction power setting on CT 36 E AC-LHS too low.	Adjust the suction power to a higher setting.
	Speed of PLANEX too fast	Reduce speed.
	Internal extraction on PLANEX with extraction control on setting 1	Increase suction power or switch to external extraction.
	Repair compound with a high percentage of filler, soft filler	Switch on the external extractor connected to the PLANEX, set the extraction control to setting 6, in extreme cases, turn down the speed.
	Suction hose blocked or kinked.	Remove blockage and straighten hose.
	Disposal bag full	Dispose of the bag.
Excessive material removed from work-piece	Speed of PLANEX too fast	Reduce speed.
	Suction power of the PLANEX too strong	Reduce suction power or switch to external extraction.
	Repair compound with a high percentage of filler, soft filler	Switch on the external extractor connected to the PLANEX, set the extraction control to setting 6, in extreme cases, turn down the speed.
	Grit on abrasive too coarse	Select a finer grit.

Problem	Possible causes	Remedy
Surface quality not perfect	Incorrect abrasive grit	Select a finer grit.
	Drying times of the repair compound not observed.	Read the technical data sheets and manufacturer recommendations.
	Suction power of <i>PLANEX</i> too strong	Reduce the suction power of the <i>PLANEX</i>
	Repair compound with a high percentage of filler, soft filler	Select a finer grit, e.g. P180.
	Machine set down on the surface while running (groove formation)	Place the machine in position and then switch on. Always use detachable brush segments when working on surfaces.
Sanding grooves on the surface	Hard sanding pad set down on the surface at an angle.	Use sanding pad IP with interface pad.
	Sanding pad is too hard or abrasive grit too coarse for very soft repair compound.	Use sanding pad IP with interface pad. Select a finer abrasive grit (Brilliant 2 abrasive with grit up to P 320).
<i>PLANEX</i> switches off during work – red LED on the head of the machine flashes	Dust filter on <i>PLANEX</i> clogged	Clean the dust filter on the <i>PLANEX</i> .
	Excessive pressure -> machine activates overheating protection	Allow the machine to cool and apply less pressure; in extreme cases, switch on the external extraction system and set the extraction control to setting 6.
<i>PLANEX</i> does not function	Sanding pad blocked – is not run in after change of pad.	Rotate sanding pad a few times by hand and run in, also see chapter “Changing sanding pads”
	Electrical plug is not connected correctly.	Check that the electrical plug is inserted properly.

If other problems other than those listed occur, please contact your Festool service workshop or your local specialist dealer.