



DST 20-CA

English

DST 20-CA

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Original operating instructions

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1 Information about the operating instructions

1.1 About these operating instructions

- **Warning!** Read and understand all accompanying documentation, including but not limited to instructions, safety warnings, illustrations, and specifications provided with this product. Familiarize yourself with all the instructions, safety warnings, illustrations, specifications, components, and functions of the product before use. Failure to do so may result in electric shock, fire, and/or serious injury. Save all warnings and instructions for future reference.
- products are designed for professional users and only trained, authorized personnel are permitted to operate, service and maintain the products. This personnel



must be specifically informed about the possible hazards. The product and its ancillary equipment can present hazards if used incorrectly by untrained personnel or if used not in accordance with the intended use.

- The accompanying documentation corresponds to the current state of the art at the time of printing. Please always check for the latest version on the product's page on Hilti's website. To do this, follow the link or scan the QR code in this documentation, marked with the symbol
- Ensure that these operating instructions are with the product when it is given to other persons.

1.2 Explanation of symbols

1.2.1 Warnings

Warnings alert persons to hazards that occur when handling or using the product. The following signal words are used:

DANGER

DANGER !

- ▶ Draws attention to imminent danger that will lead to serious personal injury or fatality.

WARNING

WARNING !

- ▶ Draws attention to a potential threat of danger that can lead to serious injury or fatality.

CAUTION

CAUTION !

- ▶ Draws attention to a potentially dangerous situation that could lead to personal injury or damage to the equipment or other property.

1.2.2 Symbols in the operating instructions

The following symbols are used in these operating instructions:

	Comply with the operating instructions
	Instructions for use and other useful information
	Dealing with recyclable materials
	Do not dispose of electric equipment and batteries as household waste

1.2.3 Symbols in illustrations

The following symbols are used in illustrations:

2	These numbers refer to the illustrations at the beginning of these operating instructions.
3	The numbers in illustrations refer to important work steps or to components important for the work steps. In the text, the corresponding numbers draw attention to these work steps or components, e.g. (3) .
⑪	Item reference numbers are used in the overview illustration and refer to the numbers used in the key in the product overview section.





This symbol is intended to draw your special attention to certain points for handling the product.

1.3 Product-dependent symbols

1.3.1 Symbols on the product

Depending on the applicable country, the following symbols may be used on the product:

n_0	Rated speed under no load
/min	Revolutions per minute
\varnothing	Diameter
	Saw blade direction of rotation (arrow on the blade guard holder)
	Splash-proof
	Warning: risk of cutting injury
	Lifting by crane prohibited
	Use of high-pressure cleaning equipment prohibited
	Wear eye protection
	Wear ear protection
	Wear protective gloves
	Wear safety shoes
	Suspension point provided for lifting by crane

1.4 Stickers

Stickers on the product

	On the transport trolley Using the transport trolley
	On the saw head Maximum water pressure and action to be taken in the event of risk of frost
	On the saw head The machine is equipped with the Cut Assist function.

1.5 Product information

products are designed for professional users and only trained, authorized personnel are permitted to operate, service and maintain the products. This personnel must be specifically informed about the possible hazards. The product and its ancillary



equipment can present hazards if used incorrectly by untrained personnel or if used not in accordance with the intended use.

The type designation and serial number are printed on the rating plate.

- ▶ Write down the serial number in the table below. You will be required to state the product details when contacting Hilti Service or your local Hilti organization to inquire about the product.

Product information

Electric wall saw	DST 20-CA
Generation	02
Serial no.	

2 Safety

2.1 General safety rules (acc. to UL 745-1)

WARNING! Read and understand all instructions. Failure to follow all instructions listed below, may result in electric shock, fire and/or serious personal injury.

SAVE THESE INSTRUCTIONS.

Work area

- ▶ **Keep your work area clean and well lit.** Cluttered benches 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 bystanders, children, and visitors away while operating a power tool.** Distractions can cause you to lose control.

Electrical safety

- ▶ **Grounded tools must be plugged into an outlet properly installed and grounded in accordance with all codes and ordinances. Never remove the grounding prong or modify the plug in any way. Do not use any adaptor plugs. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded.** If the tools should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user.
- ▶ **Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is grounded.
- ▶ **Do not abuse the cord. Never use the cord to carry the tools or pull the plug from an outlet. Keep cord away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately.** Damaged cords increase the risk of electric shock.
- ▶ **When operating a power tool outside, use an outdoor extension cord marked "W-A" or "W".** These cords are rated for outdoor use and reduce the risk of electric shock.

Personal safety

- ▶ **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use tool while tired or under the influence of drugs, alcohol, or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- ▶ **Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes, jewelry, or long hair can be caught in moving parts.



- ▶ **Avoid accidental starting. Be sure switch is off before plugging in.** Carrying tools with your finger on the switch or plugging in tools that have the switch on invites accidents.
- ▶ **Remove adjusting keys or switches before turning the tool on.** A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.
- ▶ **Do not overreach. Keep proper footing and balance at all times.** Proper footing and balance enables better control of the tool in unexpected situations.
- ▶ **Use safety equipment. Always wear eye protection.** Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.

Tool use and care

- ▶ **Use clamps or other practical way to secure and support the workpiece to a stable platform.** Holding the work by hand or against your body is unstable and may lead to loss of control.
- ▶ **Do not force tool. Use the correct tool for your application.** The correct tool will do the job better and safer at the rate for which it is designed.
- ▶ **Do not use tool if switch does not turn it on or off.** Any tool that cannot be controlled with the switch is dangerous and must be repaired.
- ▶ **Disconnect the plug from the power source before making any adjustments, changing accessories, or storing the tool.** Such preventive safety measures reduce the risk of starting the tool accidentally.
- ▶ **Store idle tools out of reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users.
- ▶ **Maintain tools with care. Keep cutting tools sharp and clean.** Properly maintained tools, with sharp cutting edges are less likely to bind and are easier to control.
- ▶ **Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tools operation. If damaged, have the tool serviced before using.** Many accidents are caused by poorly maintained tools.
- ▶ **Use only accessories that are recommended by the manufacturer for your model.** Accessories that may be suitable for one tool, may become hazardous when used on another tool.

Service

- ▶ **Tool service must be performed only by qualified repair personnel.** Service or maintenance performed by unqualified personnel could result in a risk of injury.
- ▶ **When servicing a tool, use only identical replacement parts. Follow instructions in the Maintenance section of this manual.** Use of unauthorized parts or failure to follow Maintenance Instructions may create a risk of electric shock or injury.

2.2 General power tool safety warnings

⚠ WARNING Read all safety warnings, instructions, illustrations and specifications provided with this power tool. Failure to follow all instructions listed below 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.

Work area safety

- ▶ **Keep work area clean and well lit.** Cluttered or 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.

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.

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 a dust mask, non-skid safety shoes, hard hat or hearing protection used for appropriate conditions will reduce personal injuries.
- ▶ **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.
- ▶ **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.
- ▶ **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- ▶ **Dress properly. Do not wear loose clothing or jewellery. Keep your hair and clothing away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.
- ▶ **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.
- ▶ **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.

Power tool use and care

- ▶ **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.
- ▶ **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.
- ▶ **Disconnect the plug from the power source and/or remove the battery pack, if detachable, 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.

- ▶ **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.
- ▶ **Maintain power tools and accessories. 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.
- ▶ **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- ▶ **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.
- ▶ **Keep handles and grasping surfaces dry, clean and free from oil and grease.** Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.

Service

- ▶ **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.

2.3 Additional safety instructions for wall saws

- ▶ **Operate power tool by insulated grasping surfaces, when performing an operation where the cutting accessory may contact hidden wiring or its own cord.** A cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.
- ▶ **Wear ear protectors when diamond sawing.** Exposure to noise can cause hearing loss.
- ▶ **When sawing through the workpiece, ensure to protect persons and the work area on the other side.** The diamond wheel may protrude through the workpiece.
- ▶ **Never leave the wall saw unattended during operation.** This reduces the risk of the diamond wheel jamming, which could cause loss of control or damage to the wall saw.
- ▶ **Ensure that the method of securing the track guiding system to the workpiece is capable of holding and restraining the machine during use.** If the workpiece is weak or porous, the anchor(s) can pull out, causing the track guiding system to release from the workpiece.
- ▶ **If the diamond wheel becomes jammed, stop applying feed force and turn off the tool. Investigate and take corrective action to eliminate the cause of the diamond wheel jamming.** Attempting to continue operation with a stalled diamond wheel can lead to loss of control or damage to the wall saw.
- ▶ Before starting, make sure that the AC supply voltage, AC supply frequency and fuse rating correspond to the specification given on the type identification plate.
- ▶ Check the machine's electric supply cable at regular intervals and have it replaced by a qualified electrical specialist if found to be damaged.
- ▶ Check extension cords at regular intervals and replace them if found to be damaged.
- ▶ If the electric supply cable to the saw is damaged while working, do not touch the supply cable or the saw. Switch the wall saw off at the on/off switch or press the **EMERGENCY STOP** button and unplug the supply cord from the power outlet.



- ▶ Use only extension cables of a type approved for the application and with conductors of adequate gauge.
- ▶ Do not work with rolled-up extension cables. A rolled-up cable may cause a drop in power and may result in the cable overheating.
- ▶ Disconnect the power cable before beginning cleaning and maintenance work or in the event of an interruption between periods of operation.
- ▶ Drilling and sawing work on buildings and other structures may influence the statics of the structure, especially when steel reinforcing bars and/or load-bearing components are cut through. Approval must always be obtained from the site engineer or site management before beginning drilling and sawing work.
- ▶ Make sure that the workplace is adequately ventilated. Exposure to dust at a poorly ventilated workplace may present a health risk.
- ▶ Install suitable supports to ensure that the part cut out does not move. Blocks slipping or falling when cut free could cause serious injury and/or damage.
- ▶ Install suitable supports to ensure that the structure retains its stability while cutting work is in progress and also after removal of the part cut away.
- ▶ In cooperation with the site engineer or architect, check to ensure that no gas, water, electricity or other supply lines are located in the cutting area. Supply lines of these kinds present a serious risk of accident if damaged during the course of the work. External metal parts of the machine could become live if, for example, an electric supply cable is damaged.
- ▶ Avoid skin contact with drilling and sawing slurry. In the event of contact with the eyes, rinse immediately with clean water and consult a doctor if necessary.
- ▶ Dust produced by grinding, sanding, cutting and drilling can contain dangerous chemicals. Some examples are: lead or lead-based paints; brick, concrete and other masonry products, natural stone and other products containing silicates; certain types of wood, such as oak, beech and chemically treated wood; asbestos or materials that contain asbestos. Determine the exposure of the operator and bystanders by means of the hazard classification of the materials to be worked. Implement the necessary measures to restrict exposure to a safe level, for example by the use of a dust collection system or by the wearing of suitable respiratory protection. The general measures for reducing exposure include:
 - ▶ working in an area that is well ventilated,
 - ▶ avoidance of prolonged contact with dust,
 - ▶ directing dust away from the face and body,
 - ▶ wearing protective clothing and washing exposed areas of the skin with water and soap.
- ▶ When working in dusty conditions, use a suitable dust removal system whenever possible. Dust from materials such as concrete, masonry and stone containing quartz, as well as minerals and metals, may present health risks. Contact with or inhalation of the dust may cause allergic reactions and/or respiratory or other diseases to the operator or bystanders.
- ▶ Always lead cables and hoses flat on the ground or floor away from the machine. This will help to reduce the risk of tripping while working.
- ▶ Keep cables and hoses away from rotating parts.
- ▶ Make sure that the cooling water used is drained away or collected (vacuum) in a suitably controlled manner. Water that's allowed to flow away or spray around in an uncontrolled manner can lead to damage or accidents. Also remember that water could drain away into internal, hidden cavities.
- ▶ Don't work from a ladder.

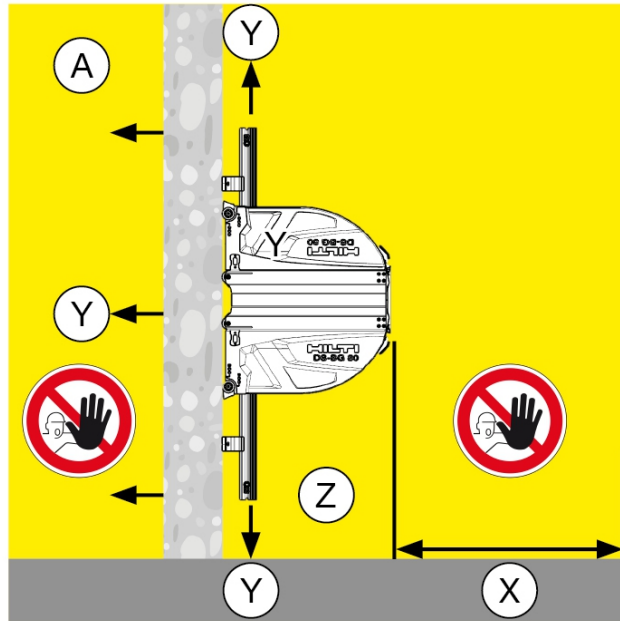
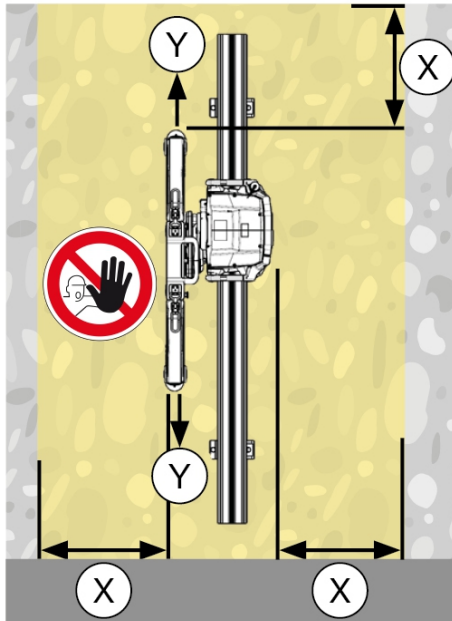


2.4 Safety measures at the danger areas

⚠ WARNING

A risk is presented by moving parts, by falling objects or debris that may fly off! Falling or flying objects could cause serious injury.

- ▶ Make sure that the area is cordoned off and that warnings to third parties are displayed.
- ▶ Make sure that no one is present in the area immediately beneath the workplace while work is in progress.

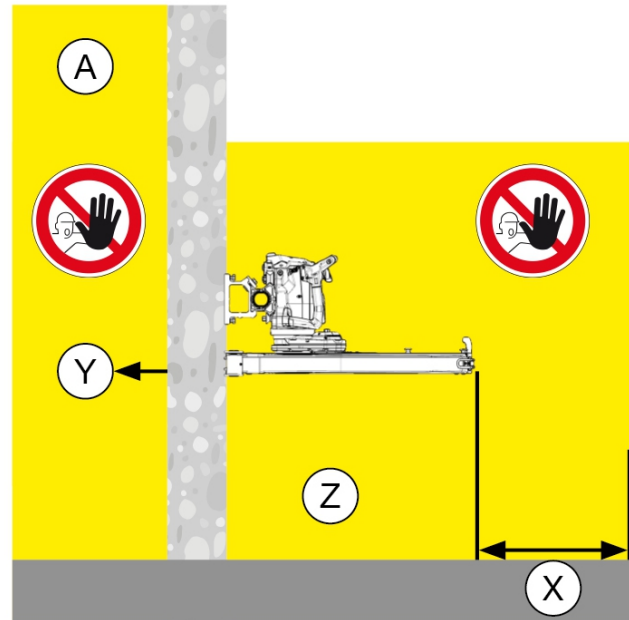
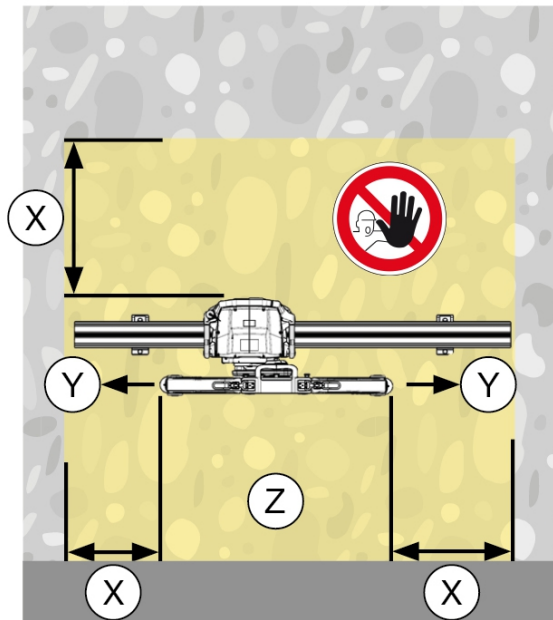


View: Vertical cut in the wall

- | | |
|---|---|
| <p>X Keep a safe distance of at least 1.5 m away from all moving parts.</p> <p>Y Never stand in line with the rotating saw blade.</p> | <p>Z Never stand below the working area</p> <p>A Never stand on the other side of the working area.</p> |
|---|---|

Secure the working area. Make sure that persons cannot be injured and property cannot be damaged by falling, flying or moving parts.





View: Horizontal cut in the wall

- X Keep a safe distance of at least 1.5 m away from all moving parts.
- Y Never stand in line with the rotating saw blade.

- Z Never stand below the working area
- A Never stand on the other side of the working area.

Safety measures must also be implemented in the area not directly visible to the operator, i.e. at the rear of objects being cut.

Never loiter in a position directly below the equipment.

2.5 Safety during operation

- ▶ Check the flange and saw blade for damage and degrease the blade holder each time before putting the saw into operation.
- ▶ Work with the saw only when the rail supports are securely and rigidly fastened to a solid surface and when the wall saw system has been correctly installed.
- ▶ Use only suitable fastening materials of adequate dimensions to fasten the track supports and to secure the parts of the object being cut.
- ▶ As a basic rule, never stand directly in line with the rotating saw blade.
- ▶ Always use a blade guard suitable for your application: Standard blade guard for normal cutting and flush-cut blade guard for flush-cutting.
- ▶ When making corner cuts that require use of a partly open blade guard, operate the machine from the side at which the blade guard is closed, i.e. from the protected side. When necessary, the operator must implement suitable additional safety measures.
- ▶ Before entering the danger area, switch the wall saw off at the on/off switch or press the **EMERGENCY STOP** button. Persons may enter the danger area only after the blade drive unit has been switched off and the blade has come to a standstill.
- ▶ Adhere to the permissible drive unit parameters and recommended guide values for blade rotation speed, cutting depth and advance speed while sawing.
- ▶ Use only saw blades that comply with the requirements of EN 13236. Observe the information on the diameter of the arbor hole and the maximum saw blade disc thickness in the section headed **Technical data**. Mount the blades the right way round (observe correct direction of rotation). **Use of saw blades of a size outside the specified diameter range is prohibited!**



- ▶ Always wear working gloves when touching the saw blade. The saw blade is sharp and can get hot.
- ▶ Stay alert at all times while working. Monitor the progress of the sawing operation and keep an eye on the cooling water system and the area surrounding the workplace. Do not operate the machine if your full attention is not on the job.
- ▶ No-one is permitted underneath the saw when overhead work is undertaken. Make sure, also when overhead work is overtaken, that no-one enters the danger area.

2.6 Safety during transport

- ▶ Transport only tracks of length up to max. 1.5 m on the transport trolley. The higher center of gravity of tracks longer than 1.5 m would increase the risk of the transport trolley tipping over.
- ▶ Use the transport trolley only to transport the saw system and its specified accessories. Do not use the trolley to transport other items or materials.
- ▶ Before transporting, make sure that all removable items of equipment are securely fastened to the transport trolley or locked in position.
- ▶ Avoid lifting and carrying heavy objects. Use suitable lifting equipment and means of transport and share heavy loads between several people as necessary.
- ▶ Use the grips provided for transportation. Keep the grips dry, clean and free from oil and grease.
- ▶ Bear in mind that the transport trolley can topple. Stand the transport trolley only on a solid, level surface.
- ▶ Secure the saw system and its components to prevent inadvertent movement or falling over during transportation.
- ▶ Bear in mind that only tested and approved lifting gear correctly secured to the points provided for the purpose may be used for crane-lifting the transport trolley.
- ▶ Never loiter beneath a load suspended by a crane or lifting equipment.



3 Description

3.1 Product overview



- | | | | |
|---|--------------------------------------|---|--|
| ① | Saw head | ⑦ | Guide rail with end stop |
| ② | Remote control unit | ⑧ | Accessories box |
| ③ | Transport trolley | ⑨ | Toolbox |
| ④ | Lifting point for transport by crane | ⑩ | Inner flange (saw blade: normal cutting) |
| ⑤ | Blade guard center section | ⑪ | Inner flange (saw blade: flush cutting) |
| ⑥ | Blade guard side section | ⑫ | |



3.2 Intended use

The product described is a water-cooled, electrically powered wall saw with wireless remote control. It is designed for cutting lightly to heavily reinforced concrete as well as stone or masonry structures using diamond-tipped saw blades with a diameter of between 600 and 1600 mm.

The maximum permissible blade diameter for starting cuts is 800 mm.

Diamond saw blades with a diameter of up to 1200 mm must be approved for use at a cutting speed (blade peripheral speed) of at least 63 m/s and blades with a diameter of greater than 1200 mm must be approved for use at a cutting speed of at least 80 m/s.

Tap water is used as a dust-binding agent and to cool the blade and the motor.

The product may be operated only when connected to an electric supply and water supply that provide an AC supply voltage, electric current rating, AC frequency, fuse rating and water pressure in compliance with the technical specifications given on the rating plate or in these operating instructions.

Before carrying out work, consult your **Hilti** sales adviser.

In addition to these operating instructions, the operating instructions for the remote control unit must also be observed.

3.3 Possible misuse

- Do not use saw blades with a diameter greater than 1600 mm.
- Work in the correct speed range.
- Do not use the saw to cut materials which, when being worked on, can give off hazardous and/or flammable dust or vapors.
- Work only with guide tracks connected by means of the track connector designed for the purpose.

3.4 Items supplied DST 20-CA

Other system products approved for use with this product can be found at your local **Hilti Store** or at: www.hilti.group

1×	Saw head	1×	Saw head operating instructions
1×	Remote control unit	1×	Remote control unit operating instructions
1×	Tool set	1×	Transport trolley
1×	Tapered connector	1×	Transport box
4×	Rail supports	1×	DS-BG80 blade guard (up to Ø 900 mm / 34 in)
3×	eccentric pin	1×	Carrying handle for saw blade with flange
1×	Inner flange for normal cutting	1×	Inner flange (flush-cutting)
		6×	Securing screws
1×	Clamping flange for inner flange (normal cutting)	•/•	



3.5 Accessories

Accessories for the rail system

Item number	Designation	Description
284808	DS-R100-L guide rail	Saw head guide, long 100 cm (39.4 in)
284809	DS-R200-L guide rail	Saw head guide, long 200 cm (78.7 in)
284810	DS-R230-L guide rail	Saw head guide, long 230 cm (90.6 in)
371703	DS-ES-L end stop	Safety stop for saw head
207137	DS-RF clamping piece	Fastening rails
273336	DS-RF-L rail support	Fastening rails
273337	DS-RFP-L rail support	For cutting at an angle or on stairs
232241	D-CO-ML tapered connector	Rail connector
232244	D-EP-ML eccentric pin	Rail connector

Accessories for the blade guard for normal cutting

Item number	Designation	Description
238000	DS-BG65 saw blade guard	Blade guard, saw blades up to \varnothing ≤ 650 mm
2051935	DST-BG80 saw blade guard, small	Blade guard, saw blades up to \varnothing 600 mm ... 800 mm
238002	DS-BG80 middle section	Blade guard, saw blades up to \varnothing 600 mm ... 900 mm
238003	DS-BG80 side section, set	Blade guard, saw blades up to \varnothing 600 mm ... 900 mm
238004	DS-BG120 middle section	Blade guard, saw blades up to \varnothing 1,000 mm ... 1,200 mm
238005	DS-BG120 side section, set	Blade guard, saw blades up to \varnothing 1,000 mm ... 1,200 mm
2064904	DST-BG160 saw blade guard	Blade guard, saw blades up to \varnothing 1,500 mm ... 1,600 mm

Accessories for the flush-cutting blade guard

Item number	Designation	Description
2135201	DS-BGFT 80 middle section	Saw blade guard for flush cutting, \varnothing 600 mm ... 900 mm
2135202	DS-BGFT 80 side section, set	Saw blade guard for flush cutting, \varnothing 600 mm ... 900 mm



Item number	Designation	Description
2135203	DS-BGFT 120 middle section	Saw blade guard for flush cutting, Ø 1,000 mm ... 1,200 mm
2135204	DS-BGFT 120 side section, set	Saw blade guard for flush cutting, Ø 1,000 mm ... 1,200 mm
2135205	DS-BGFT 160 middle section	Saw blade guard for flush cutting, Ø 1,500 mm ... 1,600 mm
2135206	DS-BGFT 160 side section	Saw blade guard for flush cutting, Ø 1,500 mm ... 1,600 mm

Accessories for flanges

Item number	Designation	Description
2330128	Inner flange DST-CF 60 kt-45	Inner flange for normal cutting
2017811	Clamping flange DST-CF 60 6kt	Outer flange for inner flange DST-CF 60 kt-45
221343	Hex screw M12 × 25	Clamping screw for clamping flange DST-CF 60 6kt
2328063	Inner flange DST-FCF 60-110	flush-cutting flange
2349028	Countersunk-head screw (hex socket) M10×16 (set of 6)	Positioning screw for saw blade to flush-cutting flange

Electrical connection accessories

Item number	Designation	Description
2189562	DST-ESC 20 US, 3×480 V	Electric supply cable for the DST 20-CA (US)

4 Technical data

4.1 Technical data for the saw head

Rated values guaranteed at an ambient temperature of max. 18 °C and at an altitude of max. 2000 m above sea level.

Rated speed	400 /min ... 940 /min
Rated voltage	480 V
AC frequency	50 Hz ... 60 Hz
Mains connection (phase requirements)	3~ + PE
Rated current	24.9 A
AC supply fuse rating (depends on setting on the remote control unit)	<ul style="list-style-type: none"> • 16 A • 25 A • 32 A



Generator power requirements	≥ 20 kVA (16 A) ≥ 32 kVA (25 A) ≥ 40 kVA (32 A)
Subtransient longitudinal reactance X''d of the generator	≤ 10 %
Leakage current	≤ 10 mA
Permissible saw blade diameter	600 mm ... 1,600 mm (23.62 in ... 62.99 in)
Maximum blade diameter for guide cut	800 mm (31.50 in)
Maximum cutting depth	730 mm (28.74 in)
Weight	33.8 kg (74.52 lb)
Storage temperature	-25 °C ... 63 °C (-13.0 °F ... 145.4 °F)
Application temperature, ambient temperature	-15 °C ... 45 °C (5.0 °F ... 113.0 °F) At temperatures below zero, allow the machine to warm up slowly before subjecting to load and drain (blow out) the water from the cooling circuit after use (a pump is supplied for this purpose). Use preheated water.
Cooling water flow rate	> 2 ℓ/min (> 0.5 liq. gal _{US} /min)
Cooling water temperature	4 °C ... 25 °C (39.2 °F ... 77.0 °F)
Protection class in accordance with IEC 60529	IP 65
Maximum emitted transmission power (P_{EIRP})	17.6 dBm
Frequency band	2.4 GHz ... 2.4835 GHz

4.2 Technical data for the transport trolley

Maximum load	180 kg (396.8 lb)
Dimensions (L×W×H)	1,100 mm × 690 mm × 1,180 mm (43.31 in × 27.17 in × 46.46 in)
Weight, loaded	100 kg (220.5 lb)
Tyre pressure	2.1 bar (30.5 psi)

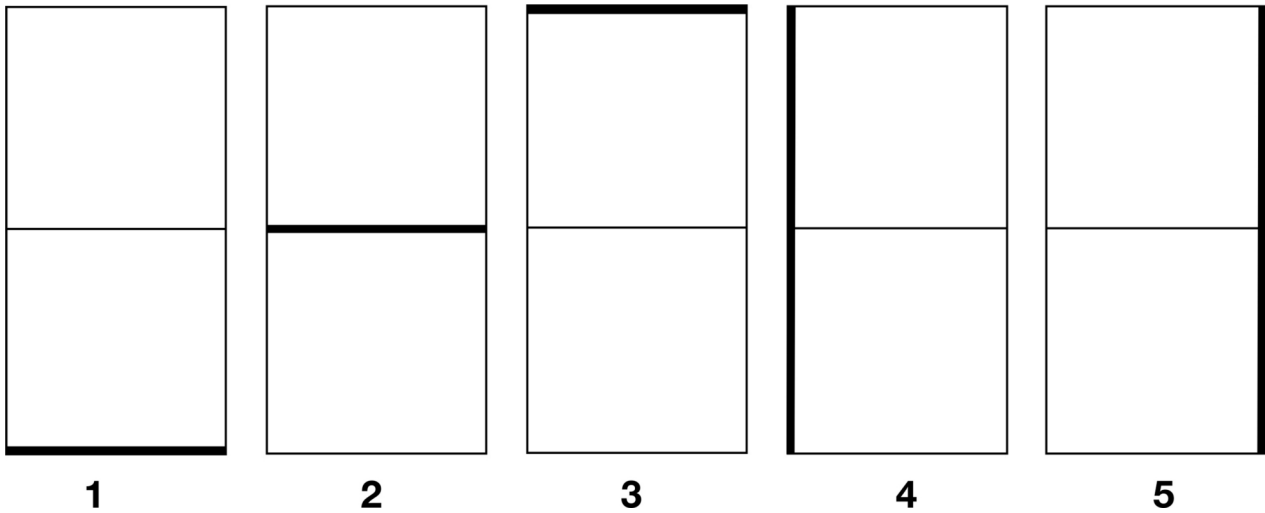


5 Planning

5.1 Cutting sequence

- ▶ Make dividing cuts to adjust the maximum size and weight of the concrete blocks to the prevailing conditions (i.e. the lifting capacity of the crane or the maximum permissible floor loading capacity and size of doors).

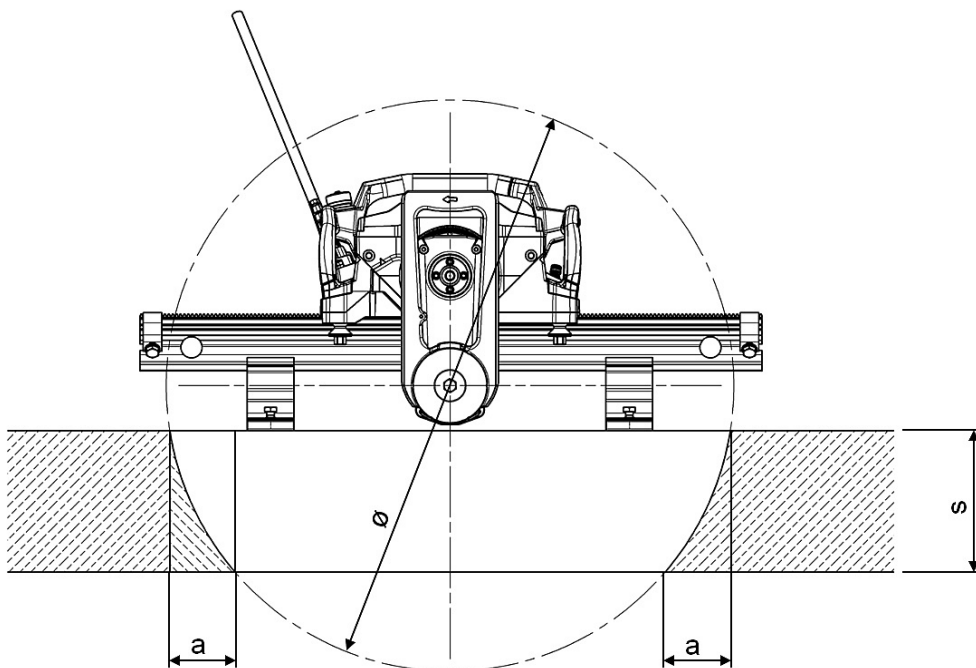
i A rational cutting sequence can be followed when the rail supports are cleverly positioned at a suitable distance.



The illustration shows an example of the cutting sequence for a door opening with a dividing cut

- ▶ Secure the parts to be cut away so that they cannot move. Movement of the parts being cut can cause the saw blade to jam, presenting a risk of injury!

5.2 Overcut or uncut distances



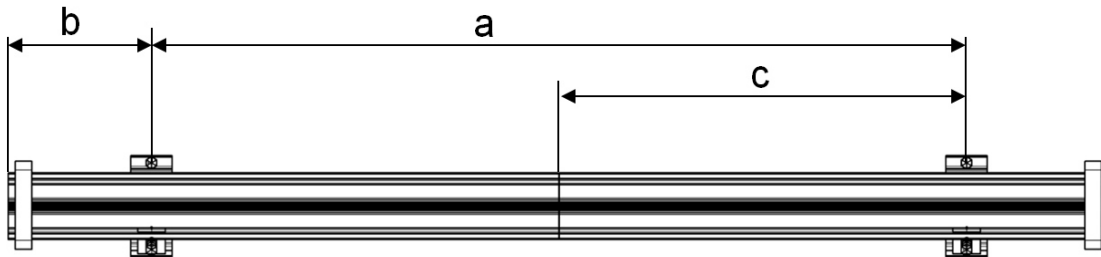
s	a				
	with blade diameter (Ø)				
	650 mm (25.59 in)	800 mm (31.50 in)	1,000 mm (39.37 in)	1,200 mm (47.24 in)	1,600 mm (62.99 in)
200 mm (7.87 in)	139 mm (5.47 in)	100 mm (3.94 in)	75 mm (2.95 in)	61 mm (2.40 in)	44 mm (1.73 in)
225 mm (8.86 in)	185 mm (7.28 in)	126 mm (4.96 in)	93 mm (3.66 in)	74 mm (2.91 in)	54 mm (2.13 in)
250 mm (9.84 in)	273 mm (10.75 in)	156 mm (6.14 in)	112 mm (4.41 in)	89 mm (3.50 in)	64 mm (2.52 in)
275 mm (10.83 in)	•/•	194 mm (7.64 in)	135 mm (5.31 in)	106 mm (4.17 in)	76 mm (2.99 in)
300 mm (11.81 in)	•/•	246 mm (9.69 in)	161 mm (6.34 in)	125 mm (4.92 in)	89 mm (3.50 in)
325 mm (12.80 in)	•/•	345 mm (13.58 in)	191 mm (7.52 in)	146 mm (5.75 in)	102 mm (4.02 in)
350 mm (13.78 in)	•/•	•/•	227 mm (8.94 in)	169 mm (6.65 in)	117 mm (4.61 in)
375 mm (14.76 in)	•/•	•/•	271 mm (10.67 in)	195 mm (7.68 in)	133 mm (5.24 in)
400 mm (15.75 in)	•/•	•/•	330 mm (12.99 in)	225 mm (8.86 in)	151 mm (5.94 in)
425 mm (16.73 in)	•/•	•/•	440 mm (17.32 in)	260 mm (10.24 in)	170 mm (6.69 in)
450 mm (17.72 in)	•/•	•/•	•/•	300 mm (11.81 in)	191 mm (7.52 in)
475 mm (18.70 in)	•/•	•/•	•/•	349 mm (13.74 in)	213 mm (8.39 in)
500 mm (19.69 in)	•/•	•/•	•/•	415 mm (16.34 in)	237 mm (9.33 in)
525 mm (20.67 in)	•/•	•/•	•/•	536 mm (21.10 in)	264 mm (10.39 in)
550 mm (21.65 in)	•/•	•/•	•/•	•/•	294 mm (11.57 in)
575 mm (22.64 in)	•/•	•/•	•/•	•/•	326 mm (12.83 in)
600 mm (23.62 in)	•/•	•/•	•/•	•/•	363 mm (14.29 in)
625 mm (24.61 in)	•/•	•/•	•/•	•/•	404 mm (15.91 in)
650 mm (25.59 in)	•/•	•/•	•/•	•/•	452 mm (17.80 in)
675 mm (26.57 in)	•/•	•/•	•/•	•/•	510 mm (20.08 in)



s	a				
	with blade diameter (Ø)				
	650 mm (25.59 in)	800 mm (31.50 in)	1,000 mm (39.37 in)	1,200 mm (47.24 in)	1,600 mm (62.99 in)
700 mm (27.56 in)	•/•	•/•	•/•	•/•	587 mm (23.11 in)
725 mm (28.54 in)	•/•	•/•	•/•	•/•	728 mm (28.66 in)

With the values shown on the right the cut cannot be completed using the Cut Assist function. The cut must thus be completed by overcutting manually.

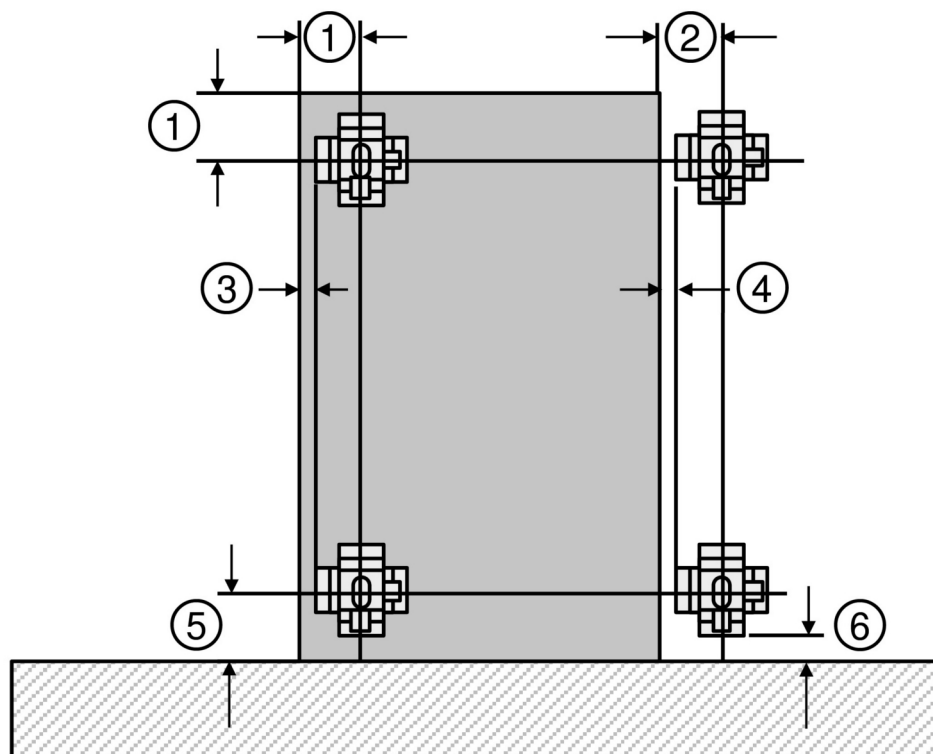
5.3 Distance between rail supports



- a Max. distance between 2 track supports = 66.9 in (170 cm)
 - b Max. track end projection = 19.7 in (50 cm)
 - c Max. distance between track support and track joint = 39.4 in (100 cm)
- The maximum permissible distance between rail supports, as shown in the illustration, must be observed.



5.4 Position of holes drilled for fastening the rail supports



- | | |
|---|--|
| ① Distance between anchors with track support positioned on the inside = 9.3 in (235 mm) | ④ Distance between track supports with support positioned on the outside = 5.5 in (139 mm) |
| ② Distance between anchors with track support positioned on the outside = 9.1 in (230 mm) | ⑤ Distance between anchors for flush-cutting = 9.3 in (235 mm) |
| ③ Distance between track supports with support positioned on the inside = 5.7 in (144 mm) | ⑥ Distance between track supports for flush-cutting >5.7 in (144 mm) |

- ▶ The holes drilled for fastening the rail supports should be positioned as shown in the above illustration.

5.5 Power source

WARNING

Risk of electric shock! Severe injury and burns can result if any attempt is made to operate the tool without an earth/ground conductor and ground fault circuit interrupter correctly connected.

- ▶ Irrespective of whether mains power or generator power is used, always make sure that an earth/ground conductor and ground fault circuit interrupter are present in the power supply and that these are correctly connected.
- ▶ Do not use the product unless these safety measures are in place and fully operational.

Fuse rating

Make sure that the electric supply installation on the jobsite (3 x 480 ... V) has the following fuse rating:



Technical data	
AC supply fuse rating (depends on setting on the remote control unit)	<ul style="list-style-type: none"> • 16 A • 25 A • 32 A
Ground fault circuit interrupter (GFCI)	Type A, 30 mA

Pin assignment 3~ + N + PE

	X	Phase 1
	Y	Phase 2
	Z	Phase 3
	G	Earth / ground conductor

5.6 Use of extension cables

WARNING

A damaged supply cord presents a hazard! Do not touch the supply cord or extension cord if damaged while working. Disconnect the supply cord plug from the power outlet.

- ▶ Check the appliance's supply cord at regular intervals and have it replaced by a qualified specialist if found to be damaged.
-
- ▶ Use only extension cables of a type approved for the application and with conductors of adequate gauge (cross section). The machine may otherwise suffer a drop in performance and the extension cable may overheat.
 - ▶ Check to ensure that an extension cable is fully unrolled before the saw is put into operation.
 - ▶ Check the extension cable for damage at regular intervals.
 - ▶ Replace damaged extension cables.



- ▶ When working outdoors, use only extension cables that are approved and correspondingly marked for this application.

Minimum conductor cross section (gauge) for extension cables

	Extension cable length			
	≤ 50 m	> 50 m ... ≤ 75 m	> 75 m ... ≤ 135 m	> 135 m ... ≤ 200 m
Minimum conductor cross section (gauge)	4 mm ² (0.006 in ²)	6 mm ² (0.009 in ²)	10 mm ² (0.016 in ²)	16 mm ² (0.025 in ²)
* The data apply at ambient temperatures below 30 °C (86 °F).				

Recommended minimum conductor cross-sections and maximum power cord lengths

Extension cables	AWG 12	AWG 10	AWG 8	AWG 6
Extension cable conductor cross-section	3.3 mm ²	5.3 mm ²	8.4 mm ²	13.3 mm ²
Extension cable conductor cross-section	6.53 kcmil	10.4 kcmil	16.5 kcmil	26.3 kcmil
Extension cable length	<60 m	>60 ... <100 m	>100 ... <160 m	>160 ... <260 m
Extension cable length	<200 ft	>200 ... <330 ft	>330 ... <530 ft	>530 ... <850 ft
The data apply at ambient temperatures below 30 °C (86 °F).				

5.7 Cooling water supply

At a cooling-water temperature of 77 °F (25 °C), a flow rate of at least 0.5 liq gal_{US}/min (2 l/min) is required to cool the saw head.

The power of the machine will be reduced in the event of inadequate cooling. If this is not sufficient, the machine's automatic cut-out will be activated.

- ▶ Use only clean cooling water.
- ▶ Do not use salt water, i.e. sea water.
- ▶ Where pressure in the water supply line is low, a non-return valve should be fitted in order to prevent dirty water finding its way into the water supply.
- ▶ Use a pressure reduction valve if the supply line pressure is greater than 90 psi (6 bar).



6 Assembling the saw system

6.1 Installing the anchors for the rail supports

WARNING

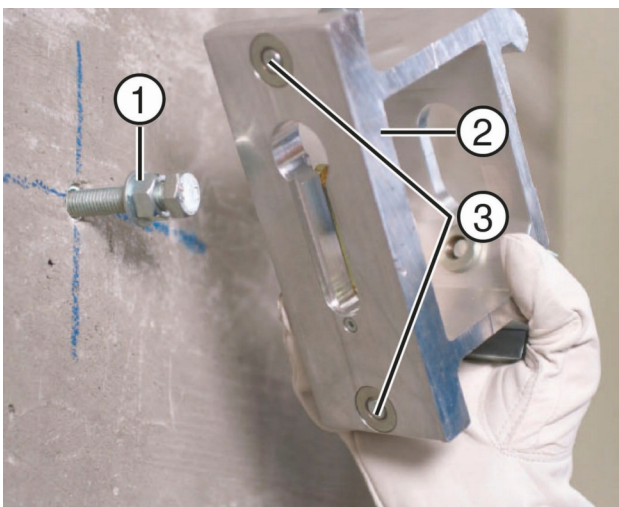
Inadequate fastening presents a hazard! A basic prerequisite for safe and efficient use of the saw system is that it must be secured using a means of fastening suitable for the applicable material and of adequate dimensions.

- ▶ Use a fastening system suitable for the material on which you are working and observe the fastening system manufacturer's instructions.
- ▶ For fastening on uncracked concrete use **HKD-D M12** flush anchors or anchors of an equivalent type with a minimum tensile loading capacity of 8.5 kN. Note that the **HKD-D M12** flush anchor is not suitable for use in masonry, man-made or natural stone and similar materials.
- ▶ Please contact **Hilti** Technical Service if you have any questions about secure fastening.

The following instructions apply to use of the **HKD-D M12** flush anchor. If you use a different type of anchor, please follow the anchor manufacturer's instructions.

1. Mark the positions where the anchor holes are to be drilled. Attention must be paid to the instructions given in the "Planning" section regarding the position of the anchor holes. → page 21
2. Drill the anchor holes.
3. Remove the drilling dust from the anchor holes.
4. Insert the anchors in the holes and use the setting tool to expand the anchors.
5. Screw the fastening bolts into the anchors by hand, to the full depth of each anchor, and then unscrew the bolts one complete revolution.

6.2 Fastening the rail supports

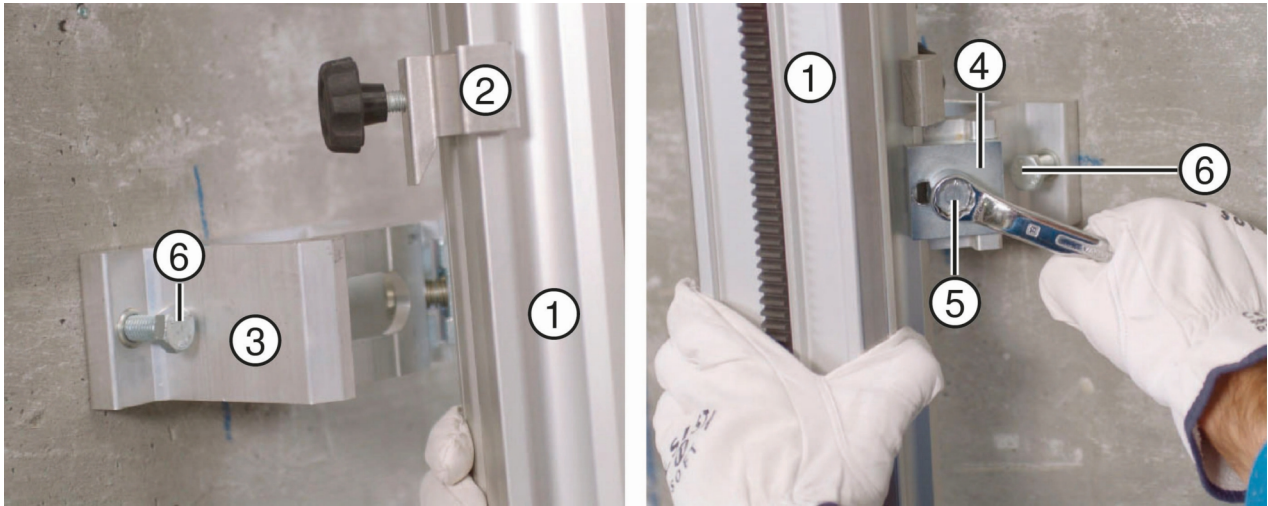


- ① Securing screw with collar nut ③ Leveling screw
 ② Rail support

1. Turn back the two leveling screws until they no longer project.
2. Place the rail support over the fastening bolt.
3. Align the rail support at right angles to the line of cut and then tighten the collar nut slightly.



6.3 Mounting the rail on the rail supports for normal cutting



- | | |
|----------------|-----------------------|
| ① Rail | ④ Rail clamping plate |
| ② Rail clamp | ⑤ Rail clamping screw |
| ③ Rail support | ⑥ Leveling screw |

1. Fit rail hooks on the rail.

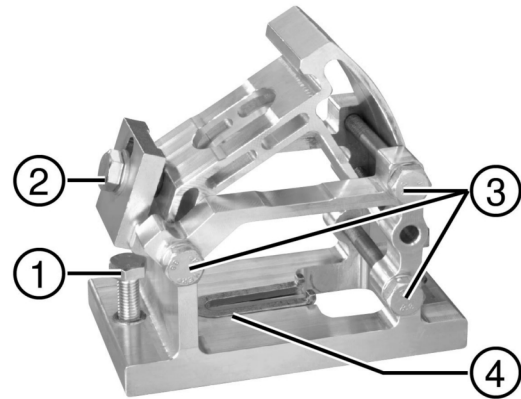
i Rail hooks may be used only together with rail supports for normal cutting.

2. Engage the rail with the rail hooks in the rail supports and slide the clamping plates over the edge of the rail.
3. Bring the rail supports into alignment at right angles to the rail and then tighten the rail clamping bolts.
4. Check and adjust the offset distance of the rail from the cutting line and then tighten the rail support securing screws.
5. Use the leveling screws to compensate for differences in level.
6. Fit end stops at the ends of the rail.



6.4 Mounting rail on rail supports for bevel cutting and adjusting cutting angle

1. Slacken the clamping screw for the clamping plate on all rail supports.



- ① Leveling screw
- ② Clamping plate with clamping screw
- ③ Clamping screws for bevel-cut angle
- ④ Slot for securing screw



2. Fit the rail onto the rail supports.
3. Slide the clamping plate over the edge of the rail and tighten the plate clamping screw.
4. Slacken the bottom clamping screw for the bevel-cut angle.

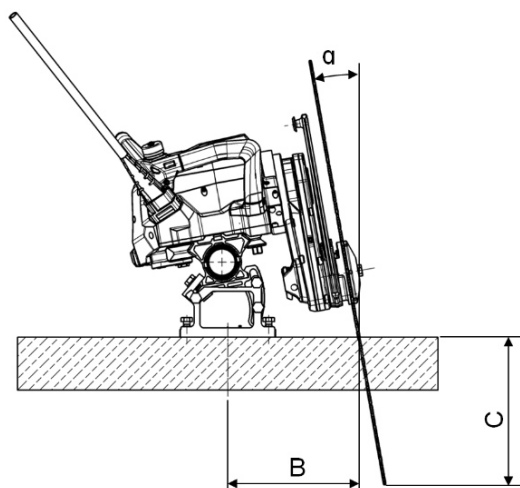


5. Remove the clamping screw from the rail support.
6. Slacken the top clamping screw for the bevel-cut angle.
7. Adjust the rail to the desired cutting angle.
8. Retighten the clamping screws for the bevel-cut angle.
9. Check and adjust the offset distance of the rail from the cutting line and then tighten the rail support securing screws.

Dimensions for setting up for angular cutting → page 27

10. Use the leveling screws to compensate for differences in level.
11. Fit end stops at the ends of the rail.

Dimensions for setting up for angular cutting

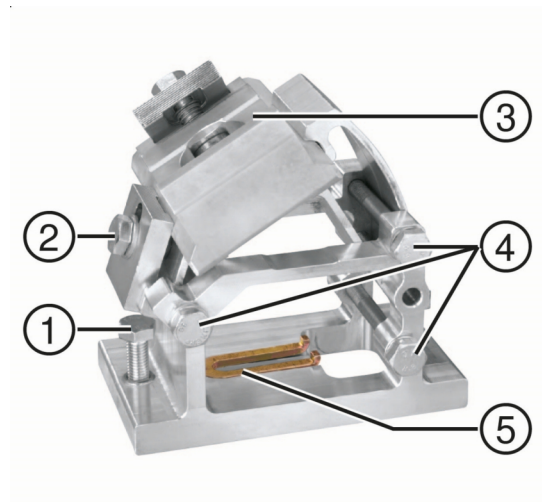


α	B	C				
		with blade diameter				
		650 mm (25.59 in)	800 mm (31.50 in)	1,000 mm (39.37 in)	1,200 mm (47.24 in)	1,600 mm (62.99 in)
0°	230 mm (9.06 in)	253 mm (9.96 in)	328 mm (12.91 in)	428 mm (16.85 in)	528 mm (20.79 in)	728 mm (28.66 in)
5°	238 mm (9.37 in)	226 mm (8.90 in)	301 mm (11.85 in)	401 mm (15.79 in)	500 mm (19.69 in)	700 mm (27.56 in)
10°	248 mm (9.76 in)	197 mm (7.76 in)	271 mm (10.67 in)	370 mm (14.57 in)	468 mm (18.43 in)	665 mm (26.18 in)
15°	260 mm (10.24 in)	167 mm (6.57 in)	239 mm (9.41 in)	336 mm (13.23 in)	432 mm (17.01 in)	625 mm (24.61 in)
20°	276 mm (10.87 in)	134 mm (5.28 in)	204 mm (8.03 in)	298 mm (11.73 in)	392 mm (15.43 in)	580 mm (22.83 in)
25°	295 mm (11.61 in)	99 mm (3.90 in)	167 mm (6.57 in)	258 mm (10.16 in)	349 mm (13.74 in)	530 mm (20.87 in)
30°	318 mm (12.52 in)	64 mm (2.52 in)	129 mm (5.08 in)	215 mm (8.46 in)	302 mm (11.89 in)	475 mm (18.70 in)
35°	346 mm (13.62 in)	27 mm (1.06 in)	88 mm (3.46 in)	170 mm (6.69 in)	252 mm (9.92 in)	416 mm (16.38 in)
40°	381 mm (15.00 in)	•/•	47 mm (1.85 in)	123 mm (4.84 in)	200 mm (7.87 in)	353 mm (13.90 in)

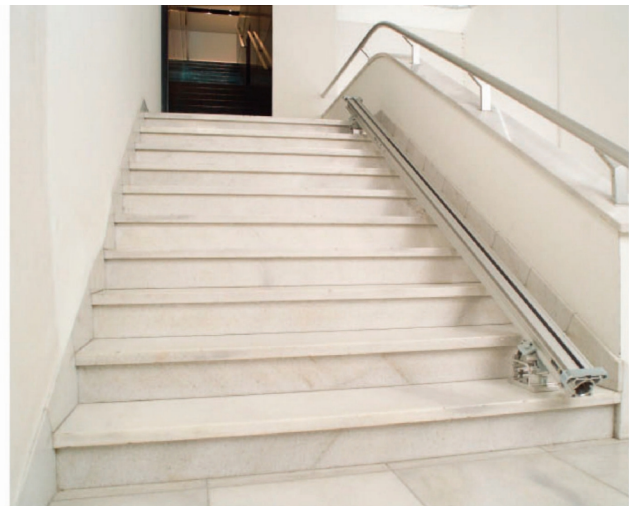
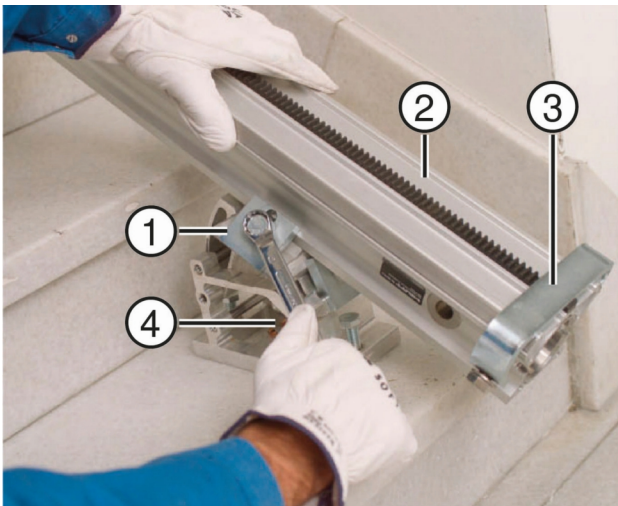


6.5 Mounting the rail on the rail supports for cutting on stairs

1. Mount the rail supports for cutting on stairs on the stairs.
2. Attach the clamping insert for cutting on stairs to the rail support.
3. Slacken the clamping bolts for angle adjustment.



- ① Leveling screw
- ② Clamping plate with clamping screw
- ③ Clamping insert for cutting on stairs
- ④ Clamping screws for bevel-cut angle
- ⑤ Slot for securing screw

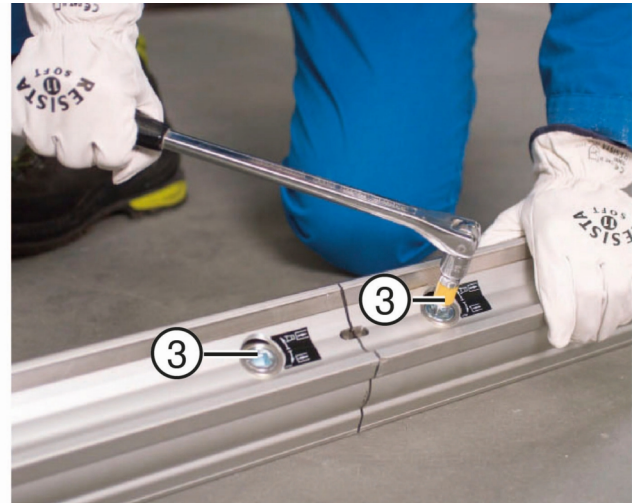


- ① Clamping insert for cutting on stairs
- ② Rail
- ③ End stop
- ④ Securing screw for the rail support

4. Mount the rail on the clamping insert for cutting on stairs.
5. Tighten the clamping bolt for the angle adjustment mechanism.
6. Check and adjust the offset distance of the rail from the cutting line and then tighten the rail support securing screws.
7. Use the leveling screws to compensate for differences in level.
8. Fit end stops at the ends of the rail.



6.6 Extending rails



- | | |
|---------------------|--------------------------|
| ① Rail | ④ 1/2" square pin wrench |
| ② Tapered connector | ⑤ Tapered sleeve |
| ③ Eccentric pin | |

1. Clean the tapered connector and tapered sleeves and then grease these parts.
2. Insert the tapered connector in the rail and tighten the eccentric pin by turning it in clockwise with the 1/2" square wrench.

i The rail extension can be removed by releasing the eccentric pin by turning it in counterclockwise and pushing out the tapered connector.

7 Preparing the saw system for use

7.1 Mounting the saw head

⚠ CAUTION

Risk of injury! Inadvertent starting of the product.

- ▶ Unplug the supply cord before making adjustments to the power tool or before changing accessories.

⚠ CAUTION

Risk of personal injury and damage to the equipment or other property! The saw presents a hazard if it falls.

- ▶ Before releasing the saw head, make sure that the guide rollers are positioned correctly relative to the rail and that the locking lever is fully engaged in the recess in the saw head casing.
- ▶ Before releasing the saw head locking levers, make sure you are holding the saw head securely.





- ① Locking lever
- ② Rail

- ③ Guide roller

1. Disengage the locking lever by lifting and pivoting the lever upwards.
 - ▶ Spring pressure holds the locking lever in the “open” position.
2. Lift the saw head by the grips and place it on the previously fastened rail. Make sure that the guide rollers are positioned correctly.
 - ▶ The guiding surface of the rail should lie against the middle of the guide rollers.
3. Lift the locking lever slightly and pivot it back to the casing edge.
4. Push the locking lever all the way down and make sure that the locking lever engages fully in the recess in the casing.
 - ▶ If the locking lever does not engage correctly, discontinue the saw head installation operation and remove the saw head from the rail!



When mounted horizontally, with the saw blade positioned below the rail, the saw head must be lifted by hand in order to close the locking lever.

Put the saw into operation only when it can be locked on the rail correctly and securely.

5. Check that the guide rollers are positioned correctly and that the locking lever is fully engaged.



7.2 Connecting the saw to the electric supply and water supply



- ① Cooling water hose connector
- ② Connection for remote control cable
- ③ Electric supply cable
- ④ Mark for determining position
(**CUT ASSIST**)

- ⑤ Distance to end of cut in minus direction
(**CUT ASSIST**)
- ⑥ Distance to end of cut in plus direction
(**CUT ASSIST**)
- ⑦ “Ready for operation” indicator
- ⑧ Antenna

WARNING

Risk of unintentional starting! The saw could start unintentionally when the electric supply cable is plugged in.

- ▶ Press the emergency stop button on the remote control unit before connecting the electric supply cable.

CAUTION

Risk of accident! Incorrectly positioned cables and hoses can result in damage to the equipment or other property.

- ▶ Position the cables and hoses so that they can follow the movement of the saw head without being under tension.
- ▶ Take care to ensure that the cable plug connectors don't lie in water.
- ▶ Position the cables and hoses so that they cannot come into contact with the rotating saw blade and cannot be pinched between moving parts.

1. Connect the electric supply cable to the electric supply.
 - ▶ The “ready for operation” indicator on the saw head shows.
2. If the following conditions are met, also take this action:

Conditions: You intend to work without wireless remote control.

- ▶ Remove the protective caps from the plug connectors and sockets for the remote control cable.
- ▶ Bring the plug into alignment with the socket and push it into the socket as far as it will go without applying excessive force.
- ▶ Rotate the locking sleeve on the plug until it engages.
- ▶ Close the protective caps.



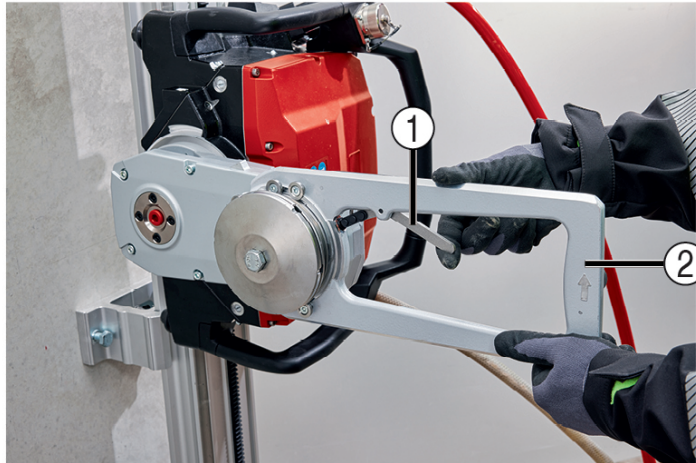
3. Switch the remote control unit on.



For details, please refer to the operating instructions for the **DST WRC-CA** remote control unit

4. Connect the cooling water hose: (**Gardena** system connector on the saw head).

7.3 Adjusting the blade guard



① Lever, keyless locking system ② Blade guard holder

1. Adjust the blade guard holder to the desired position (45°, 90° or 135°).
2. Lightly press the lever of the keyless retaining mechanism.
3. Keep the lever pressed and turn the blade guard holder slightly until it is felt to engage.
4. Move the lever further, beyond the pressure point.
 - ▶ The blade guard holder is then fixed in the set position.



To release the blade guard holder, move the lever in the opposite direction.

7.4 Installing inner flanges and saw blades

WARNING

Risk of injury! Using damaged parts or parts that do not function as described is highly dangerous.

- ▶ Do not use parts that evince signs of damage or that are not in full working order.
- ▶ If you find defects, stop work immediately and replace the defective parts.

Before your start installing:

- ▶ Check the contact surfaces for dirt and damage. Damage and dirt on the contact surfaces lead to vibrations of the saw blade. This, in turn, can result in the fastener working loose.
- ▶ Check the contact surfaces of the saw blade for damage, dirt and traces of lubricant. Dirt and lubricant on to the surface can cause the saw blade to slip in the mount, even though the clamping screw was tightened to the correct torque. This, in turn, can result in damage to flange and saw blade.
- ▶ Check all internal and external threads (flange nut, tie rod, clamping screw, saw arm arbor) and splines and the condition of the shouldered guide studs. Start installation only if all threads, splines and guide studs are undamaged.



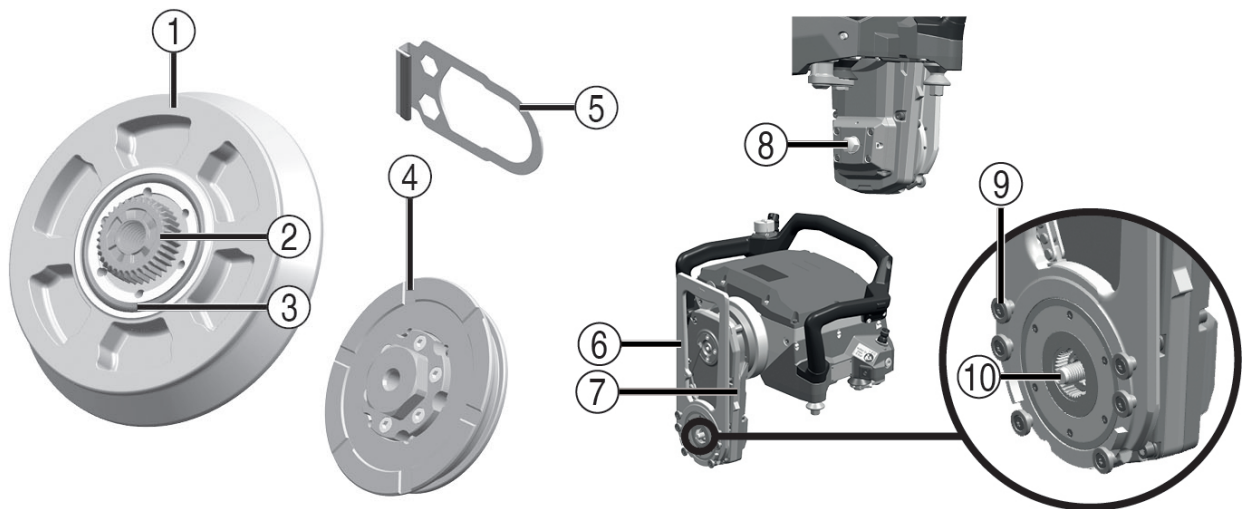
- ▶ Clean and grease the thread of the clamping screw. Make sure that no grease makes its way on to the clamping surfaces.
- ▶ Check the O-ring on the inner flange for wear and damage.
- ▶ Before operating the saw, check the saw blade for damage (e.g. cracks, wear at the area of the flange or blue discoloration caused by overheating). Mount the saw blade in the correct direction of rotation.

7.4.1 Installing inner flange (normal cut)

For tightening the tie rod, use only the tools described in the instructions. Do not, under any circumstances, use an impact wrench or other, similar power tools to tighten the tie rod.

i You can leave the inner flange for normal cutting installed until you are going to make a flush cut. The inner flange does not necessarily have to be removed for transport purposes.

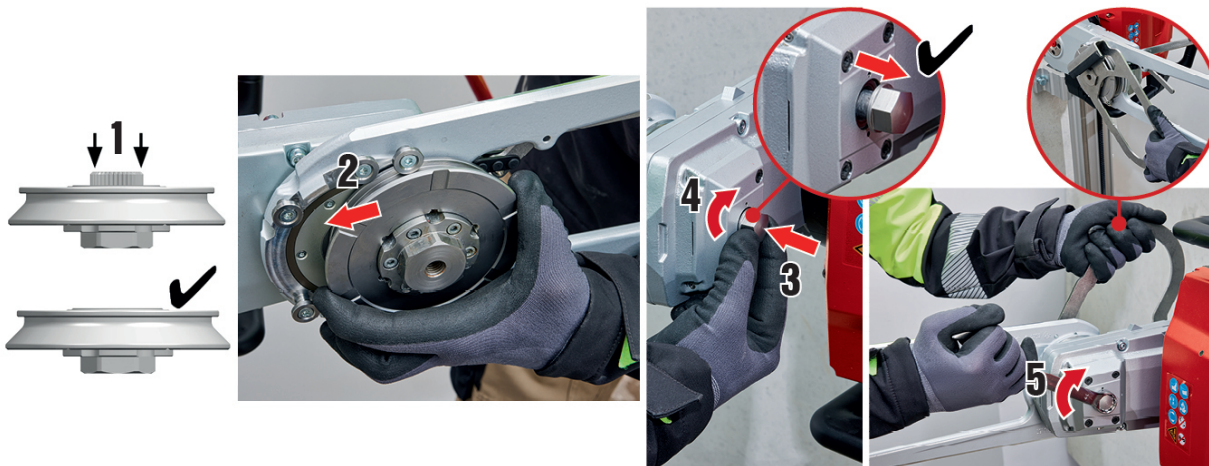
The carrier tool for flush-cut saw blades can be used to counter-hold the tie rod.



- | | |
|---|-------------------------|
| ① Inner flange | ⑥ Blade guard holder |
| ② Flange nut | ⑦ Saw arm |
| ③ O-ring | ⑧ Tie rod |
| ④ Cooling-water slot | ⑨ Shouldered guide stud |
| ⑤ Carrier tool for flush-cut saw blades | ⑩ Saw arm arbor |

1. Turn the blade guard holder up.





2. Press the flange nut fully into the inner flange **(1)**.

i The inside face of the flange must form a flat surface. Install the flange only if the flange nut is fully countersunk. Attempting installation with the flange nut protruding can result in damage to the inner flange and mount.

3. Insert the inner flange into the 6 shouldered guide bushes of the saw arm **(2)**.
 - ▶ The shoulder of each shouldered guide stud is seated in the groove in the inner flange.
4. Push the tie rod into mount **(3)** and tighten the tie rod by hand **(4)**.
5. Counter-hold the tie rod in the inner flange with the carrier tool for flush-cut saw blades and tighten the tie rod by hand **(5)** until it is seated.
 - ▶ If tightening by hand is not possible, use a ring/open-ended wrench.

i • Tightening the tie rod draws the flange nut out of the parked position into the inner flange, so that it slips into the mount of the saw arm arbor. When the flange nut slips into the mount of the saw arm arbor the tie rod becomes easy to move and spring tension can pull it back to the initial position. At least 6 full turns are necessary for correct installation of the inner flange.

• **IMPORTANT!**

If the tie rod does not turn readily after about 3 full turns, the splines might not be in correct alignment and the flange cannot be installed correctly.
 → Abort installation.
 → Remove the inner flange, eliminate the cause of the difficulty and re-install the inner flange.

6. Tighten the tie rod to the specified torque.

Technical data	
Ring/open-ended wrench (for tie rod)	19 mm (0.75 in)
Tightening torque	80 Nm (59.0 ftlb _r)

7. Check that the inner flange is seated flat and with zero play on the saw arm arbor.

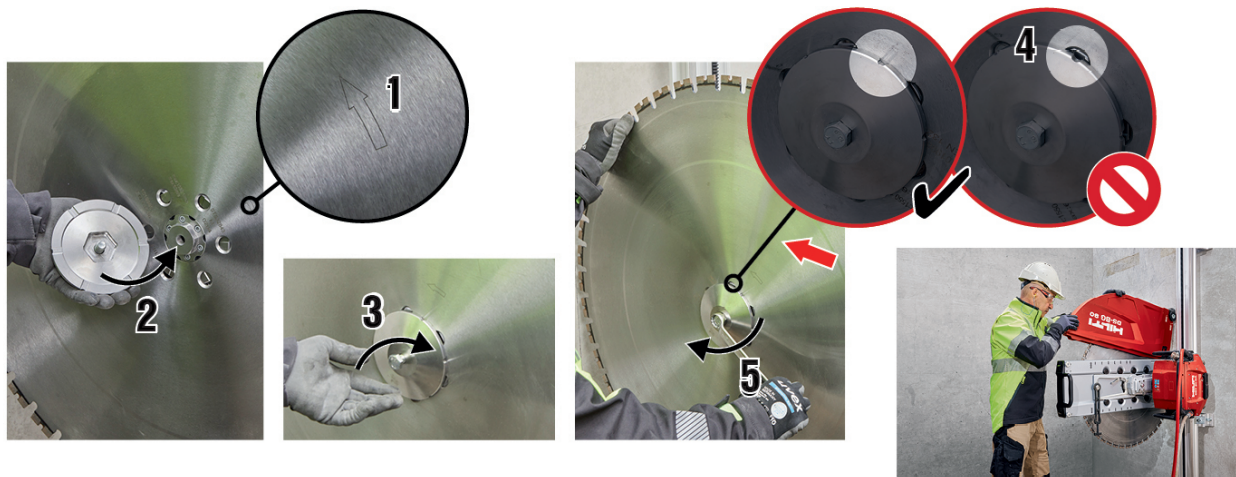
7.4.2 Installing saw blade (normal cut)

Before starting installation, switch the wall saw off at the on/off switch or press the **EMERGENCY STOP** button.

Disconnect the supply cord plug from the power outlet.



i Always use the genuine **Hilti** M12×25 10.9 clamping screw to secure the saw blade.



1. Fit the saw blade on to the centering device on the flange.
 - ▶ The direction-of-rotation arrow on the saw blade **(1)** must point in the same direction as the direction-of-rotation arrow on the blade guard holder.
2. Position the outer flange on the centering spigot and screw in the clamping screw **(2)** .
3. Turn the saw blade until the cooling-water slots of the inner flange are between the holes (securing screws for flush-cutting flange) in the saw blade.

i If the cooling-water slots are open in the holes, correct cooling of the saw blade is not ensured **(4)**.

Grease the thread of the clamping screw with the grease provided for the purpose so that the clamping force necessary to transfer drive to the saw blade is achieved. Be sure to grease only the thread.

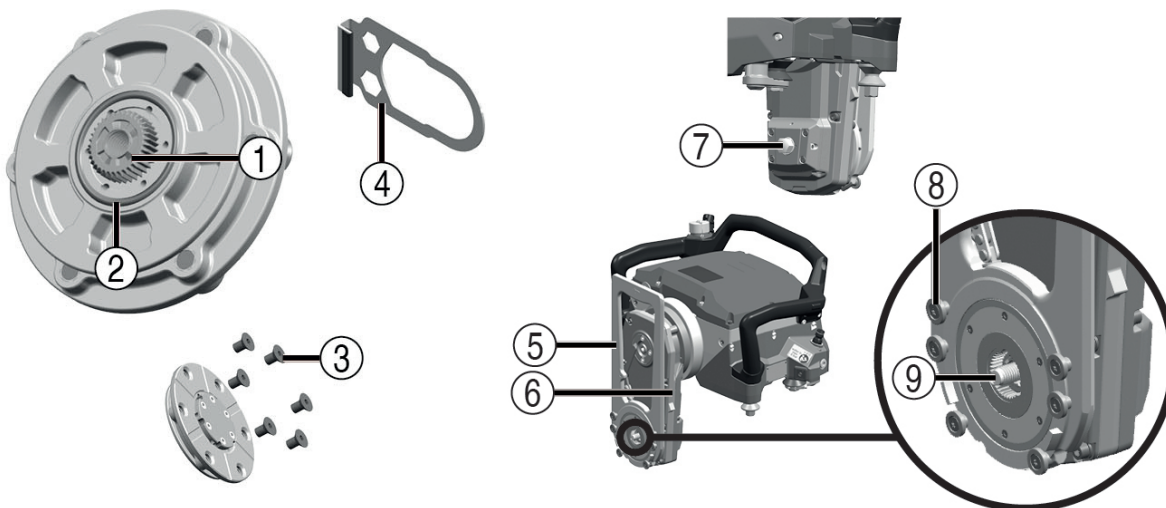
4. Tighten the clamping screw to the specified torque **(5)** .

Technical data	
Ring/open-ended wrench (for clamping screw)	19 mm (0.75 in)
Tightening torque (M12×25 10.9 clamping screw)	80 Nm (59.0 ftlb _f)

5. Fit the blade guard. → page 38

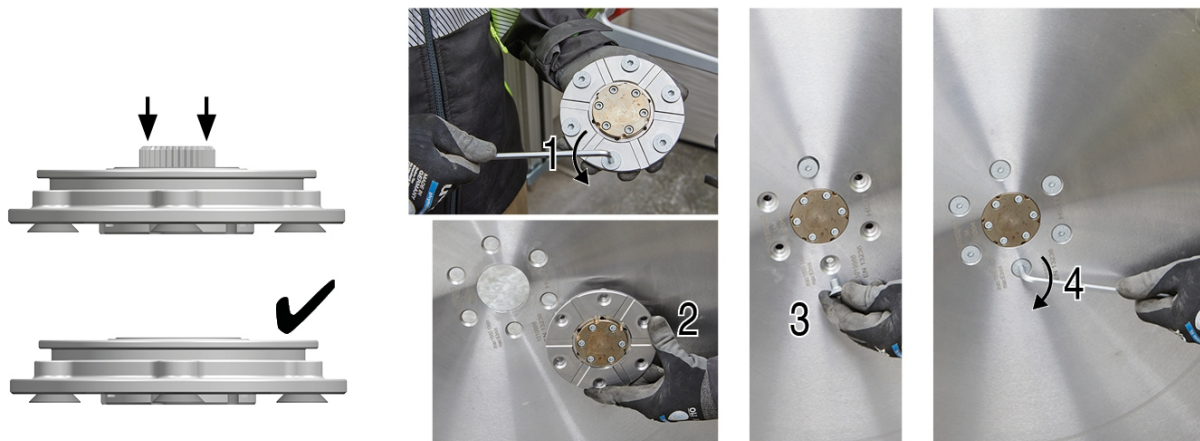


7.4.3 Installing inner flange (flush cutting)



- ① Flange nut
- ② O-ring
- ③ Countersunk-head screws for securing saw blade (6 of)
- ④ Carrier tool for flush-cut saw blades
- ⑤ Blade guard holder
- ⑥ Saw arm
- ⑦ Tie rod
- ⑧ Shouldered guide stud
- ⑨ Saw arm arbor

1. Remove the inner flange (normal cutting), if fitted. → page 40



2. Press the flange nut fully into the inner flange.

i The inside face of the flange must form a flat surface. Install the flange only if the flange nut is fully countersunk. Attempting installation with the flange nut protruding can result in damage to the inner flange and mount.

- 3. If applicable, unscrew the 6 countersunk-head screws from the inner flange (1).
- 4. Set the inner flange (flush cutting) on the saw blade (2).
- 5. Screw the 6 countersunk-head screws into the face of the saw blade (3).
- 6. Tighten the 6 countersunk-head screws to the specified torque (4).

Technical data

Tightening torque (countersunk-head screws M10 10.9)	15 Nm (11.1 ftlb _f)
--	------------------------------------

7. Check that the inner flange is correctly installed.



7.4.4 Installing saw blade (flush-cut)

Before starting installation, switch the wall saw off at the on/off switch or press the **EMERGENCY STOP** button.

Disconnect the supply cord plug from the power outlet.



1. Turn the blade guard holder in the direction from which you want to insert the saw blade with inner flange.

i Turn the blade guard holder so that the saw blade is held by the shouldered guide studs.

2. Push the saw blade with installed inner flange into the mount of the 6 shouldered guide studs **(1)**.
3. Press the tie rod on the saw arm into the mount **(2)** and tighten the tie rod hand-tight **(3)**.

i • Tightening the tie rod draws the flange nut out of the parked position in the inner flange, so that it slips into the mount of the saw arm arbor. When the flange nut slips into the mount of the saw arm arbor the tie rod becomes easy to move and spring tension can pull it back to the initial position.

At least 6 full turns are necessary for correct installation of the inner flange.

- **IMPORTANT!**

If the tie rod does not start to turn readily after about 3 full turns, the splines might not be in correct alignment and the flange cannot be installed correctly.
→ Abort installation.

→ Remove the inner flange, eliminate the cause of the difficulty and re-install the inner flange.

4. Tighten the tie rod to the specified torque **(4)**.

Technical data	
Ring/open-ended wrench (for tie rod)	19 mm (0.75 in)
Tightening torque	80 Nm (59.0 ftlb _r)

5. Check that the inner flange is seated flat and with zero play on the saw arm arbor.



7.5 Fitting the blade guard




DANGER

Risk of injury! Operating the saw without the blade guard fitted increases the risk of injury.

- ▶ Always work with both side sections of the blade guard fitted (except when making corner cuts).
- ▶ When making a corner cut, remove the side section only immediately before starting work on the corner. Take additional safety precautions.

1. Slide the blade guard middle section onto the blade guard holder.
2. Fit the blade guard side section, inserting the metal hook in the blade guard middle section.
3. Secure the blade guard side section with the tensioning bar.
 - ▶ The blade guard middle section and side section then form a unit that can be removed or refitted to the blade guard holder as a single unit.
4. Secure the complete blade guard to the blade guard holder by pulling the rubber tensioning strap over the tensioning lug.
 - ▶ The blade guard is then ready for use.

 If, due to the particular cutting situation, the blade guard cannot be used, alternative safety / protective measures must be implemented to secure the surrounding areas. One possibility is to build an enclosure with formwork boards to contain flying debris.

8 Working with the saw

8.1 Checks before beginning sawing work

Before beginning sawing, make sure that all of the following conditions are fulfilled:

- Preparatory work on the jobsite has been completed (supports in place, provision made for collecting water, etc.)
- Danger zones have been cordoned off and all persons are outside these zones.
- The water supply has been connected, water pressure is within the approved range and the water supply system is not leaking.
- The electric power, with earth / ground connection and a ground fault circuit interrupter, is connected.
- The remote control unit is connected to the saw wirelessly or by cable and is within easy reach.



- The water supply hose and electric cables as well as the remote control cable are connected and suitably positioned outside the area of movement of the saw.
- The rail supports and rails are positioned correctly and mounted securely.
- End stops are fitted at both ends of the rails.
- The saw head is seated correctly on the rail, the locking lever is closed and fully engaged in the recess in the saw head casing.
- The operating instructions for the saw head have been read by the operating personnel.
- The saw blade has been fitted in the correct direction of rotation and the clamping flange or, respectively, the clamping bolts tightened to the required torque.
- The complete blade guard has been fitted and secured or an alternative protective system installed.
- The emergency stop button on the remote control unit functions correctly and it has been pulled out and reset. The operating instructions for the remote control unit have been read by the operating personnel.
- Personal protective equipment, as illustrated on the machine, is worn by the personnel.
- The “ready for operation” indicator on the saw head shows.
- The operating personnel has become familiar with the procedures for operation of the saw and its components.
- All safety measures have been implemented.

8.2 Guidelines and guide values

The initial or guide cut

The initial cut is known as the guide cut. This cut should always be made with the saw arm in the trailing position (i.e. pulling the blade).

The depth of the cut depends on the material (hard, soft or masonry).

Technical data	
Cutting depth for the guide cut	≈ 4 cm (≈ 1.6 in)

- ▶ When making the guide cut, the power of the saw should be reduced in order to ensure a straight cut.

Technical data	
Power setting for the guide cut	30 % ... 50 %

Subsequent cuts

Subsequent cuts can be made at full power (100 %) with the saw arm in the trailing or leading position.

The depth of subsequent cuts depends greatly on the material.

Technical data	
Recommended cutting depth for subsequent cuts	5 cm ... 15 cm (2.0 in ... 5.9 in)

WARNING

Risk of damage! The saw may suffer damage if the saw head is advanced along the track while the saw blade is in the kerf but not rotating, and the blade comes into contact with the edge of the kerf.

- ▶ Always pivot a stationary blade out of the kerf before moving the saw head.



9 Dismantling the saw system

9.1 Removing saw blade (normal cutting)

1. Remove the blade guard.
2. Pivot the saw arm into the 12 o'clock position.
3. Switch the saw off at the on/off switch and press the **EMERGENCY STOP** button.
4. Disconnect the supply cord plug from the power outlet.
5. Slacken the clamping screw of the outer flange and remove the outer flange.
 - ▶ Make sure that the saw blade does not drop off the centering spigot after the outer flange is removed.
6. Remove the saw blade from the centering spigot.
7. Secure the outer flange to the inner flange with the clamping screw.

9.2 Removing inner flange (normal cutting)

i You can leave the inner flange for normal cutting installed until you are going to make a flush cut. The inner flange does not necessarily have to be removed for transport purposes.

The carrier tool for saw blades with inner flange (flush cutting) supplied with the equipment has a hex socket that you can use to counter-hold the tie rod in the inner flange.

1. Counter-hold the tie rod in the inner flange with the carrier tool for flush-cut saw blades and unscrew the tie rod from the thread of the flange nut.
2. Use the tie rod to press the flange nut fully back into the inner flange.
3. Remove the inner flange from the 6 shouldered guide studs.

9.3 Removing saw blade and inner flange (flush cutting)

1. Turn the blade guard holder vertically up.

i Make sure (especially after wall cuts) that the opening of the 6 shouldered guide studs is facing up, so that the saw blade cannot drop out after the tie rod has been slackened and removed.

2. Fully unscrew the tie rod from the thread of the flange nut.
3. Disengage the tie rod and use the tie rod to press the flange nut fully back into the inner flange.
4. Lift the saw blade out of the 6 shouldered guide studs.
5. Unscrew the 6 countersunk-head screws in the inner flange.
6. Remove the inner flange (flush cutting) from the saw blade.

9.4 Dismantling the saw system

⚠ WARNING

Risk of injury! Avoid starting the saw unintentionally.

- ▶ Unplug the electric supply cable before carrying out any work on the saw.

⚠ CAUTION

Risk of injury! A hot saw blade presents a risk of burning injury. Sharp edges present a risk of cutting injury.

- ▶ Wear protective gloves when changing the saw blade.



1. Remove the blade guard.
2. Remove the saw blade:
 - ▶ Removal after normal cutting → page 40.
 - ▶ Removal after flush cutting → page 40.
3. Disconnect the remote control unit from the saw head and fit the protective caps to the connectors / sockets.

i If the remote control unit is used without a cable: Switch the remote control unit off.

4. Disconnect the cooling water hose from the saw head.
5. Blow out the cooling circuit. → page 41
6. Remove the saw head from the track.
7. Remove the guide track.
8. Dismantle / remove the track supports.
9. Clean all components and check them for damage.
10. Stow the components on the transport trolley and secure them all in position.

9.5 Blowing out the cooling circuit

i To avoid frost damage when there is a risk of frost, the cooling circuit must be blown out after completion of the work or before long pause between periods of work.



1. Push the pump hose on to the blow-out adapter as far as it will go **(1)**.
2. Connect the blow-out adapter to the water supply connector on the saw head **(2)**.
3. Applying at least 8 strokes of the pump, blow out the saw head until no further water is ejected.

i To release the pump hose from the blow-out adapter, press down the release ring on the adapter and pull the hose out of the blow-out adapter.

10 Care and maintenance

WARNING

Electric shock hazard! Attempting care and maintenance with the supply cord connected to a power outlet can lead to severe injury and burns.

- ▶ Always unplug the supply cord before carrying out care and maintenance tasks.
-



Care

- Carefully remove stubborn dirt.
- Carefully clean the air vents, if present, with a dry, soft brush.
- Use only a slightly damp cloth to clean the housing. Do not use cleaning agents containing silicone as these can attack the plastic parts.

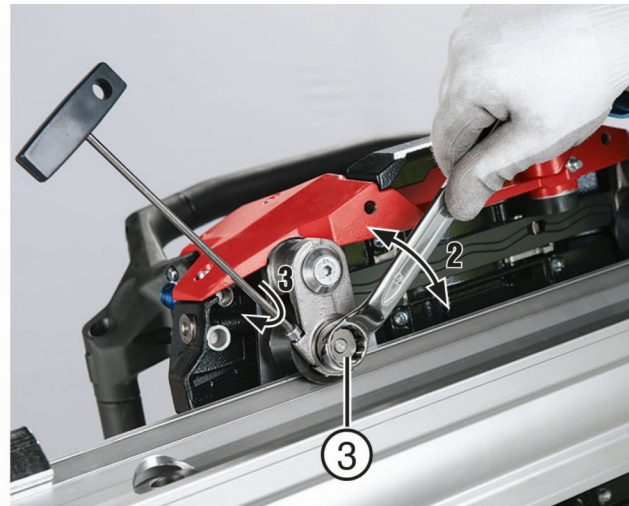
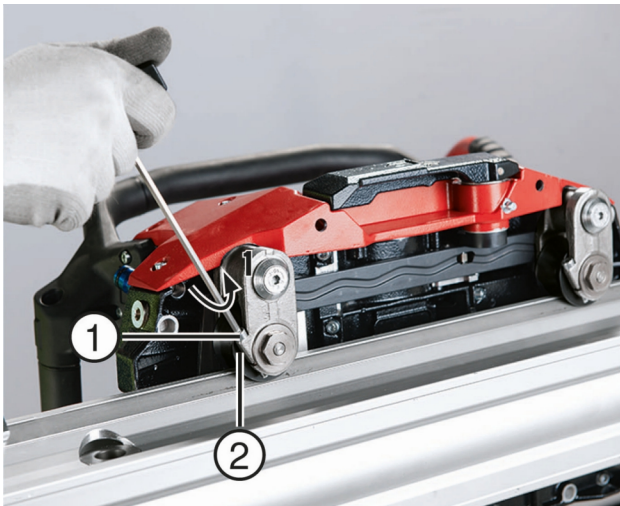
Maintenance**⚠ WARNING**

Danger of electric shock! Improper repairs to electrical components may lead to serious injuries including burns.

- ▶ Repairs to the electrical section of the tool or appliance may be carried out only by trained electrical specialists.
-
- Check all visible parts and controls for signs of damage at regular intervals and make sure that they all function correctly.
 - Do not use the product if signs of damage are found or if parts malfunction. Immediately have the product repaired by **Hilti Service**.
 - After cleaning and maintenance, install all guards and protective devices and check that they are in full working order.



To help ensure safe and reliable operation, use only genuine Hilti spare parts, consumables and accessories. Spare parts, consumables and accessories approved by **Hilti** for use with your product can be found at your **Hilti Store** or online at: www.hilti.group

10.1 Adjusting the guide rollers

- ① Clamping screw
- ② Guide roller

- ③ Eccentric guide roller axle

1. Fasten the rail to the wall and then mount the saw on it.
2. Slacken the clamping screw for the guide roller locking mechanism.
3. Adjust the eccentric shaft of the roller axle so that the guide roller is in contact with the rail.
4. Retighten the clamping screw.



It must be possible to turn the guide roller by hand.

5. Adjust the second roller in the same way.



10.2 Inspection

- ▶ Have the machine checked by **Hilti** Service at intervals of 200 operating hours.

i The remote control unit shows the number of operating hours remaining until the next service is due.

- ▶ Check all visible parts and controls for signs of damage at regular intervals and make sure that they all function correctly.

10.3 Maintenance

WARNING

Danger of electric shock! Improper repairs to electrical components may lead to serious injuries including burns.

- ▶ Repairs to the electrical section of the tool or appliance may be carried out only by trained electrical specialists.

Maintenance → page 43

- ▶ Do not operate the electric wall saw if signs of damage are found or if parts malfunction. Have the power tool repaired by **Hilti** Service immediately.

i To help ensure safe and reliable operation, use only genuine Hilti spare parts and consumables. Spare parts, consumables and accessories approved by Hilti for use with the product can be found at your local **Hilti** Center or online at: www.hilti.com

Maintenance

Parts	Procedure	Daily	Weekly
Track support	Check the contact and clamping surfaces. Clean if necessary	✓	
	Check the threads for smoothness and ease of operation. Clean if necessary		✓
Track	Check the contact and running surfaces. Clean if necessary	✓	
	Check the splines and the running surfaces for damage and wear; replace the track if necessary		✓
	Check the tapered sleeves, clean and lubricate with oil if necessary	✓	
	Checking means of securing end stops	✓	
Blade guard	Check and clean inner and outer surfaces. Remove any slurry deposits	✓	
	Check that the guide rollers are free to move. Clean or replace the parts if necessary		✓
	Check the condition of the rubber tensioning straps and replace if necessary		✓
	Check the clamping lever tension and adjust if necessary by turning the hexagon screw		✓



Parts	Procedure	Daily	Weekly
Saw head	Check that the locking mechanism moves smoothly and engages securely. Clean and lubricate (grease nipples) or have repairs carried out as necessary	✓	
	Check the guide rollers for ease of operation and excessive play, have them replaced / repaired as necessary		✓
	Clean the threads of the tie rod and inner flange, check condition and if damage is found have the damaged parts replaced.		✓
	Clean the external splines on the flange nut and the internal splines on the arbor, check condition and if damage is found have the damaged parts replaced.		✓
	Check the freedom of movement of tie rod and carrier; have repairs carried out as necessary.		✓
	Clean and lubricate the external thread of the clamping screw and the internal thread of the inner flange; if damaged, have parts replaced as necessary.		✓
	Check the condition of the shouldered guide studs; have them replaced if damage is visible.		✓
	Check the plug connectors for cleanliness and damage; blow out with compressed air or have them replaced as necessary	✓	
	Check the cable for damage and replace it if necessary	✓	
	Check the saw blade flange and the clamping screw for wear and cleanliness. Clean or replace if necessary	✓	
	Check the saw head for oil or water leakage and have it repaired if necessary		✓
	Check the water flow and replace the mesh filter at the water supply connection if necessary		
	Clean the clamping screw, check it for damage and lubricate		✓
	Water hose	Check the plug connectors for cleanliness, ease of operation and freedom from leaks; clean and lubricate (lubricant spray) as necessary	✓
Check all hoses for leaks			✓
Cables / plugs	Check the plug connectors for cleanliness, ease of operation and freedom from damage. Blow out with compressed air or have the parts replaced if necessary	✓	
	Check the cables for damage and replace them if necessary	✓	



Parts	Procedure	Daily	Weekly
Transport trolley	Check the tire pressure (see the section headed "Technical data" for details)		✓
Tool set	Check for completeness		✓

11 Transport and storage

Transport

- ▶ Do not transport this product with an accessory tool installed.
- ▶ Make sure that the equipment is held securely throughout all transport operations.
- ▶ After transporting, always check all visible parts and controls for signs of damage and make sure that they all function correctly.

Storage

- ▶ Always store this product with the electric supply cable unplugged from the electricity supply.
- ▶ Store this product in a dry place, where it cannot be accessed by children or unauthorized persons.
- ▶ After a long period of storage, always check all visible parts and controls for signs of damage and make sure that they all function correctly.

12 Troubleshooting

If the trouble you are experiencing is not listed in this table or you are unable to rectify the problem by yourself, please contact **Hilti** Service.

Trouble or fault	Possible cause	Action to be taken
The cut is not straight	Inadequate blade tension.	▶ Change the saw blade.
	The saw blade is blunt.	▶ Change the saw blade. Pay attention to the specification.
	No guide cut made or the guide cut was not straight	▶ Check whether the given guide values were adhered to.
	Flange not correctly tightened	▶ Check that the flange is seated correctly and check the tightening torque of the securing screw. ▶ Repeat the flange installation procedure.
	The play at the guide rollers exceeds the specified value.	▶ Check the play at the rollers and adjust the rollers correctly. If adjustment is not sufficient, replace the rollers or the guide rail.
	The rail fastenings are loose.	▶ Check the fastenings. ▶ Refasten the rails.
	The rail distorts (twists).	▶ Install additional rail supports.




Trouble or fault	Possible cause	Action to be taken
Low sawing performance	Unsuitable blade specification	<ul style="list-style-type: none"> ▶ Check the saw blade specification. ▶ Change to the right specification.
	Depth of cut is excessive.	▶ Reduce the depth of cut.
	Saw advance speed is too low.	▶ Increase the saw advance speed.
	Drop in performance due to the blade wandering off course.	▶ See fault: The cut is not straight.
	Drop in performance due to high reinforcement content.	▶ Make the cut in a different position if the reinforcement content is too high.
	Saw blade speed of rotation is too high or too low.	▶ Set the speed of rotation correctly.
The saw blade is jammed in the kerf and the saw doesn't start.	A piece of steel cut free is jammed in the kerf.	<ul style="list-style-type: none"> ▶ Try to lift the saw blade out of the kerf by alternately moving the saw head forward and back (advance / return). Try to start the blade drive as soon as the blade can be moved freely. Caution! Avoid use of excessive force as this could result in damage. ▶ If the saw blade can't be moved: Disconnect the saw blade from the saw and use a breaker / jackhammer to chisel away concrete until the blade is free.
	The part cut free is pressing against the saw blade.	<ul style="list-style-type: none"> ▶ Disconnect the saw blade from the saw. ▶ Remove the part that has been cut free.
Saw blade slips	Tightening torque too low	▶ Grease the thread of the clamping screw and tighten the clamping screw to the specified torque.
	Clamping faces of flange and saw blade dirty or oily	▶ Clean and degrease the clamping surfaces.
	Threads of clamping screw and inner flange dirty or damaged	▶ Clean and check the threads of clamping screw and inner flange.



Trouble or fault	Possible cause	Action to be taken
Saw blade slips	Thread of the clamping screw is stiff	▶ Grease the thread of the clamping screw.

13 Disposal

 Most of the materials from which **Hilti** products are manufactured can be recycled. The materials must be correctly separated before they can be recycled. In many countries, your old tools, machines or appliances can be returned to **Hilti** for recycling. Ask **Hilti** Service or your Hilti sales representative for further information.

Drilling and sawing slurry

Disposing of drilling and sawing slurry directly into rivers, lakes or the sewerage system without suitable pretreatment is problematic from an environmental point of view.

- ▶ Ask the local public authorities for information about current regulations.

We recommend the following pretreatment:

- ▶ Collect the drilling or sawing slurry (for example, using a wet-type vacuum cleaner).
- ▶ Allow the drilling or sawing slurry to stand for some time or add a flocculation agent to help the fine particles in the slurry settle and separate from the water.
- ▶ Dispose of this solid portion of the drilling or sawing slurry at a construction waste disposal location.
- ▶ Neutralize the remaining water from the drilling or sawing slurry (alkaline, pH-value > 7) by adding an acidic neutralizing agent or dilute it by adding a large quantity of water before allowing it to enter the sewerage system.

14 Manufacturer's warranty

- ▶ Please contact your local **Hilti** representative if you have questions about the warranty conditions.

15 FCC statement (applicable in US) / IC statement (applicable in Canada)

This device complies with Part 15 of the FCC Rules and RSS-210 of IC. Operation is subject to the following two conditions:

1. this device may not cause harmful interference, and
2. this device must accept any interference received, including interference that may cause undesired operation.









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