

HILTI

DST 10-CA

Operating instructions

en



DST 10-CA electric wall saw

It is essential that the operating instructions are read before the machine is operated for the first time.

Always keep these operating instructions together with the machine.

Ensure that the operating instructions are with the machine when it is given to other persons.

Contents

1	General information	3
2	Description	5
3	Accessories	6
4	Technical data	8
5	Safety instructions	10
6	Preparations at the workplace	17
7	Setting up the system	19
8	Before use	31
9	Care and maintenance	35
10	Troubleshooting	39
11	Disposal	40
12	Manufacturer's warranty	41
13	EC declaration of conformity (original)	42

In these operating instructions, the designation “the saw” or “the wall saw” always refers to the DST 10-CA electric wall saw. For instructions on use of the remote control unit, please refer to the operating instructions supplied with the remote control unit.

Overview of parts



- ① Saw head
- ② Remote control unit
- ③ Transport trolley
- ④ Blade guard center section
- ⑤ Guide rail with end stop
- ⑥ Blade guard side section
- ⑦ Accessories box
- ⑧ Toolbox
- ⑨ Saw blade

1 General information

1.1 Safety notices and their meaning

DANGER

Draws attention to imminent danger that will lead to serious bodily injury or fatality.

WARNING

Draws attention to a potentially dangerous situation that could lead to serious personal injury or fatality.

CAUTION

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

NOTE

Draws attention to an instruction or other useful information.

1.2 Explanation of the pictograms and other information

Warning signs



General warning



Warning: electricity



Warning: sharp edges

Obligation signs



Read the operating instructions before use.



Wear ear protection.



Wear eye protection.



Wear protective gloves.



Wear safety shoes.



Use the intended lifting points.

Symbols



Diameter



Nominal speed under no load

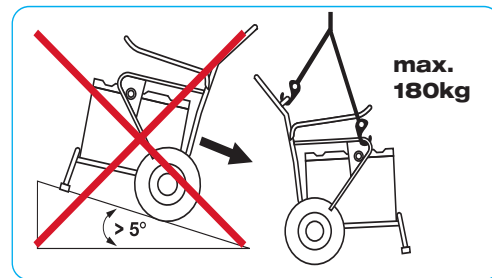


Revolutions per minute



Return materials for recycling

On the transport trolley



The transport trolley will not stand safely on a sloping surface.

The transport trolley may be lifted (by crane, etc.) only at the lifting points provided for this purpose.

On the saw head



To avoid damage, keep the water pressure below 6 bar. In the event of a risk of frost, blow the water out of the cooling circuit as described.

On the saw head

CUTASSIST

The saw is equipped with the CutAssist function.

Location of identification data on the machine

The type designation, item number, year of manufacture and technical status of the machine can be found on the type plate. The

1 General information

serial number is marked on the side of the saw head beside the locking lever. Make a note of this data in your operating instructions and always refer to it when making an enquiry to your Hilti representative or service department.

Type: DST 10-CA saw head

Generation: 01

Serial no.:

2 Description

2.1 Use of the product as directed

The DST 10-CA is a water-cooled, electrically powered wall saw that can be operated by wireless or cable-connected remote control.

Using diamond saw blades in the 600 to 900 mm diameter range, it can cut through lightly to moderately reinforced concrete and stone or masonry (maximum starting blade diameter: 800 mm).

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

The best sawing performance will be achieved when the DST 10-CA is used together with the specially matched Hilti wall saw blades.

Use only diamond wall saw blades that comply with EN 13236 and which have been approved for use at a peripheral cutting speed of at least 63 m/s.

Use only anchors of adequate size and load capacity to secure the machine to the working surface.

Do not cut materials that may release hazardous or explosive dust or vapors during the cutting process (e.g. asbestos).

Do not cut easily flammable materials.

The CutAssist function is not suitable for making angular cuts or for cutting through stairs.

Overhead sawing is possible only when additional precautionary measures are taken.

Please consult your Hilti representative for further information and advice.

To avoid the risk of injury, use only genuine Hilti accessories and cutting tools.

Check that the electric supply provided at the construction site is always equipped with an earth/ground conductor and a ground fault circuit interrupter (PRCD type A, trigger

current max. 30 mA) and that these are connected.

2.2 Items supplied

- 1 Saw head
- 1 Remote control unit
- 1 Operating instructions for the saw head
- 1 Operating instructions for the remote control unit
- 1 Tool set
- 1 DS-BG80 blade guard for blade diameters up to max. 900 mm
- 4 Rail supports
- 1 Transport box
- 1 Transport trolley
- 1 Tapered connector
- 3 Eccentric pins

3 Accessories

3 Accessories

Additional accessories can be found at your Hilti Center or online at www.hilti.com.

3.1 Accessories for the rail system

Designation	Designation	Description
DS-R100-L	Rail	Saw head guidance
DS-R200-L	Rail	Saw head guidance
DS-R230-L	Rail	Saw head guidance
DS-ES-L	End stop	Safety stop for saw head
DS-CP-ML	Rail clamp	Fastening rails
DS-RF-L	Rail supports	Fastening rails
DS-RFP-L	Rail supports	For cutting at an angle or on stairs

3.2 Accessories for the blade guard for normal cutting

Designation	Designation	Description
DS-BG65	Saw blade guard	Saw blade guard, up to 650 mm diameter
DS-BG80	Center section ¹	Saw blade guard, 600 mm to 900 mm diameter
DS-BG80	Side section	Saw blade guard, 600 mm to 900 mm diameter
DST-BG80	Saw blade guard	Saw blade guard, up to 800 mm diameter

¹ to be used only complete with the appropriate side sections

3.3 Accessories for the flush-cutting blade guard

Designation	Designation	Description
DS-BGF80	Center section ¹	Saw blade guard for flush cutting, 600 mm to 900 mm diameter
DS-BGF80	Side section	Saw blade guard for flush cutting, 600 mm to 900 mm diameter

¹ to be used only complete with the appropriate side sections

3.4 Accessories for the flush-cutting flange

Designation	Designation	Description
DS-FCA-110	Flush-cutting flange	Saw blade mounting flange for flush cutting
DS-FCA-110FF	Auxiliary flange	Saw blade mounting flange for flush cutting

4 Technical data

4 Technical data

Right of technical changes reserved.

Technical data for the DST 10-CA saw head

Rated values guaranteed at max. 18°C and heights of up to 2,000 m above sea level.

Power rating ¹	9 kW
Rated speed	160... 1,275/min
Rated voltage ²	380... 400 V
Mains frequency	50 / 60 Hz
Mains connection (phase requirements)	3~+PE
Rated current	16 A
Mains fuse rating min. / max.	16 A
Saw blade diameter	600... 900 mm
Max. blade diameter for initial guide cut	Max. 800 mm
Max. cutting depth	Max. 38 cm
Weight	32 kg
Dimensions l × b × h	36.5 × 40 × 35 cm
Storage temperature ³	-25... +63°C
Ambient temperature range during operation ³	-15... +45°C
Cooling water temperature	Flow rate 4 l/min: +4... +30°C
Cooling water pressure	2... 6 bar
Protection class ⁴	IP 65

¹ Continuous operation 100%

² Power output is reduced at voltages below 370 V.

³ 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).

⁴ Protection class IP65 in accordance with EN 60529:2000-09, 6 = protection against entry of dust, 5 = protection against water jets ("hose proof")

Noise information (measured in accordance with EN 15027)

Wear ear protection!

Note: The noise pressure level can be reduced by approx. 10 dB(A) when noise-reducing (silent) saw blades are used.

Typical A-weighted sound power level	114.5 dB (A)
Typical A-weighted sound emission pressure level	96.9 dB (A)
Uncertainty for the given sound level	3 dB (A)

Technical data for the transport trolley

Dimensions l × w × h	loaded: 110 × 69 × 118 cm
Weight loaded ¹	100 kg
Permissible total weight	Max. 180 kg
¹ Contents in accordance with list of items supplied	

5 Safety instructions

5 Safety instructions

WARNING

Failure to observe warnings and safety instructions may lead to potentially fatal injury and serious damage to property or equipment.

5.1 Proper organization of the workplace

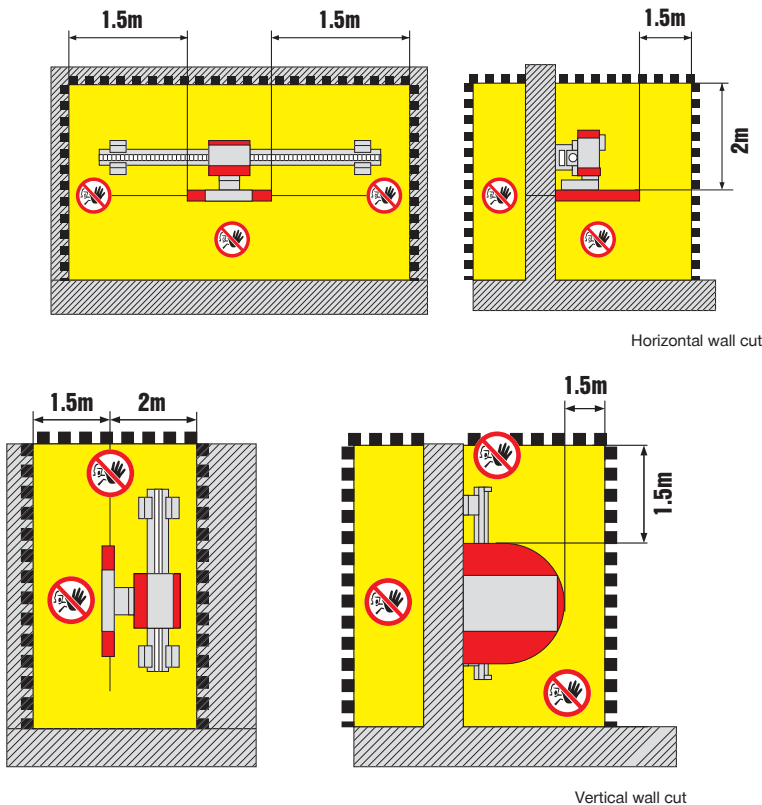
- a) Approval must be obtained from the site engineer or site management before beginning drilling and sawing work. Drilling and sawing work on buildings and other structures may influence the statics of the structure, especially when steel reinforcing bars or load-bearing components are cut through.
- b) **Ensure that the workplace is well lit.**
- c) **Ensure that the workplace is well ventilated.** Exposure to dust at a poorly ventilated workplace may result in damage to the health.
- d) **Keep the workplace tidy. Objects which could cause injury should be removed from the working area.** Untidiness at the workplace can lead to accidents.
- e) Falling or other uncontrolled movement of the blocks cut free could cause injury or damage. Blocks that are to be cut free must be supported by a suitable means (e.g. steel wedges or supports) in order to avoid uncontrolled movement of the blocks.
- f) Ensure that adequately-sized supports are correctly installed so that the remaining structure maintains its stability after completion of the cutting work and removal of the part cut away.
- g) Never loiter beneath a load suspended by a crane or lifting equipment.
- h) The area of the cut or the opening created by the cutting process must be safely and visibly cordoned off in order to avoid the risk of persons falling.
- i) Wear personal protective equipment. Wear safety shoes or boots, protective gloves, ear and eye protection and, when required, a hard hat.
- j) Certain types of dust, e.g. mineral dust, are considered to be carcinogenic (cancer-causing). Wear respiratory protection if the work causes dust.
- k) **Dress properly for the work. Do not wear loose clothing or jewelry as it could be caught in moving parts. Contain long hair.**
- l) **Keep children away. Keep other persons away from the working area.**
- m) **The machine is not intended for use by children, by debilitated persons or those who have received no instruction or training.**
- n) **Children must be instructed not to play with the machine.**
- o) Dust from materials, such as paint containing lead, some wood species, concrete / masonry / stone containing silica, and minerals as well as metal, may be harmful. Contact with or inhalation of the dust may cause allergic reactions and/or respiratory or other diseases to the operator or bystanders. Certain kinds of dust are classified as carcinogenic such as oak and beech dust, especially in conjunction with additives for wood conditioning (chromate, wood preservative). Material containing asbestos must only be treated by specialists. **Where the use of a dust-extraction device is possible it shall be used. To achieve a high level of dust collection, use a suitable dust extractor. When indicated wear a respirator appropriate for the type of dust generated. Ensure**

that the workplace is well ventilated. Follow national requirements for the materials you want to work with.

- p) Do not allow other persons to touch the equipment or the extension cable.
- q) **Avoid unfavorable body positions. Make sure you work from a safe stance and stay in balance at all times.**
- r) To avoid presenting a tripping hazard, always ensure that cables and hoses leading to the machine are laid flat on the floor.
- s) Keep cables and hoses away from rotating parts.
- t) Gas and water or other pipes and electric cables present a serious hazard if damaged while the work is in progress. 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. External metal parts of the machine could become live if, for example, an electric supply cable is damaged.
- u) Water that is allowed to flow away or spray around in an uncontrolled manner can lead to damage or accidents. The fact that water could drain away into internal, hidden cavities, e.g. in brickwork or masonry, must also be taken into account. Ensure that the cooling water used is drained or extracted in a suitably controlled manner.
- v) **Don't work from a ladder.**

5 Safety instructions

5.2 Safety measures at the danger areas



Horizontal wall cut

Vertical wall cut

Secure the working area. Ensure that no persons can be injured or property / equipment damaged by moving parts, falling objects or by debris that may fly off during the sawing operation.

Keep a safe distance of at least 1.5 m away from all moving parts while the equipment is in operation.

Never stand directly in line with the rotating saw blade.

Never loiter in a position directly below the equipment.

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

Make sure that the area is cordoned off, that supports are in place and warnings to third parties are displayed.

When setting up the saw system and when removing blocks that have been cut away, always ensure that no persons are below the area in which you are working.

NOTE

Falling objects could cause serious injury.

5.3 General safety rules

- a) Use the machine only when you have read the operating instructions, when you are familiar with the information the instructions contain, and when you have received training from a Hilti specialist on how to use the machine safely. Observe all warnings and instructions.
- b) Press the emergency stop button on the remote control unit if you encounter a dangerous situation.
- c) **Unplug the supply cord from the power outlet if you identify a dangerous situation.**
- d) **Use the right tool or machine for the job. Do not use the tool or machine for purposes for which it was not intended. Use it only as directed and when in faultless condition.**
- e) Use of this machine for operations other than those intended could result in hazardous situations. Use the machine, accessories and saw blades etc., in accordance with these instructions and in the manner intended for this particular type of machine. In doing so, the working conditions and the tasks to be performed must be taken into account.
- f) **Use only the genuine Hilti accessories or ancillary equipment listed in the operating instructions.** Use of accessories or ancillary equipment not listed in the operating instructions may present a risk of personal injury.
- g) Electric tools and machines generate sparks which may ignite dust or gas. Take the influences of the surrounding area into account. Do not use the machine where there is a risk of fire or explosion.
- h) Keep the grips dry, clean and free from oil and grease. Before releasing the saw head locking levers, make sure you are holding the saw head securely.
- i) **Do not overload the machine. It will work more efficiently and more safely within its intended performance range.**
- j) Never leave the machine unattended.
- k) Store appliances in a secure place when not in use. When not in use, appliances must be stored in a dry place, locked up or out of reach of children.
- l) When the machine is not in use (e.g. during breaks between working), before mounting the saw head and before cleaning or maintenance, always unplug the supply cord from the power outlet. This safety precaution prevents the machine starting unintentionally.
- m) **Protect the electrical contacts from rain and dampness.**
- n) Remove any adjusting key or wrench before switching the machine on. A wrench or a key left attached to a rotating part of the machine may result in personal injury.
- o) Before use, the machine, the saw blade and accessories must be checked carefully to ensure that all items function faultlessly and as intended. Check that moving parts function correctly without sticking and that no parts are damaged. All parts must be fitted correctly and fulfill all conditions necessary for correct operation. Damaged parts must be repaired or replaced properly by an authorized service center.
- p) 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.
- q) Wear a protective mask during work that generates dust, e.g. dry cutting. Connect a dust removal system. Working on materials hazardous to the health (e.g. asbestos) is not permissible.

5 Safety instructions

- r) Follow the instructions concerning care and maintenance.

5.4 Electrical safety

- a) There is an increased risk of electric shock if your body is earthed or grounded. Take steps to avoid electric shock. Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.
- b) Check the machine's supply cord 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.
- c) Check the condition of the machine and its accessories. Do not operate the machine and its accessories if damage is found, if the machine is incomplete or if its controls cannot be operated faultlessly.
- d) If the electric supply cord to the saw is damaged while working, do not touch the supply cord or the saw. Press the emergency stop button and unplug the supply cord from the power outlet.
- e) Damaged or faulty switches must be replaced at a Hilti service center. Do not use the machine if it cannot be switched on and off correctly.
- f) **Have the machine repaired by an electrical specialist (Hilti Service) using genuine Hilti spare parts. The users may otherwise be exposed to potential hazards.**
- g) **Do not use the supply cord for purposes for which it is not intended. Never carry the machine by the supply cord. Never pull the plug out of the power outlet by pulling the supply cord.**
- h) **Do not expose the supply cord to heat, oil or sharp edges.**
- i) Sawing inadvertently into a live cable presents a risk of fatal accident if the machine is not earthed/grounded or the insulation on a part of the machine is faulty. Never, under any circumstances, operate the machine without an earth/ground connection. Connect the machine and its ancillary equipment only to a power source equipped with an earth/ground conductor and ground fault circuit interrupter (PRCD). Check that these items are in perfect working order before operating the equipment. Install an earth/ground rod if a generator is used or if no earth/ground conductor is present in the on-site electric supply.
- j) Make sure that the mains voltage corresponds to the specification given on the type plate.
- k) Electric cables and their plug connectors must be kept dry. When not in use, close power outlets with the cover provided.
- l) Use only extension cables of a type approved for the application and with conductors of adequate gauge. Do not use extension cables that are still rolled up. This can result in a drop in output at the equipment and may cause the cable to overheat.
- m) Disconnect the power cable before beginning cleaning and maintenance work or in the event of an interruption between periods of operation.
- n) Please note that certain components within the casing retain an extremely dangerous (potentially fatal) high voltage for up to 10 minutes after disconnection from the electric supply.

5.5 Requirements to be met by users

- a) The machine may be operated only by specialists trained in concrete cutting techniques, referred to in the following as “operators”. These persons must be fully familiar with the content of these operating instructions and must have been trained in their safe application by a Hilti specialist.
- b) A moment of inattention could result in serious injury. Stay alert, watch what you are doing and use common sense when working. Don't use the machine when you are tired or under the influence of drugs, alcohol or medication.
- c) Wear personal protective equipment. Wear safety shoes or boots, protective gloves, ear and eye protection and, when required, a hard hat.
- d) Always operate the machine from the closed side of the blade guard, i.e. the protected side, when corner cuts are made with the blade guard in the partly open position. The operator must take additional precautions (fit a cover, plank of wood, boards etc.) where necessary.
- e) Never enter the danger area (e.g. to change the saw blade, remove the blade guard side section, hammer in wedges, etc.) before the blade drive is switched off and the blade has come to a standstill. Press the emergency stop button before entering the danger area.
- f) Do not touch rotating parts. Keep the grips dry, clean and free from oil and grease.
- g) Adhere to the permissible drive unit parameters and recommended guide values for blade rotation speed and advance speed while sawing.

5.6 Safety during operation

- a) Check that the wall saw and its components, the saw blade and all accessories are in good condition and in perfect working order before use. Make sure that any damage or malfunctions are rectified in a **professional** manner before operation commences.
- b) A falling object could result in serious personal injury or damage to property or equipment. Sawing may begin only once the wall saw system (rail supports) have been fastened securely to a solid surface and the other parts of the system have been assembled or installed correctly (all bolts tightened, the saw head positioned securely on the rail, locking levers closed, end stops fitted).
- c) **As a basic rule, never stand directly in line with the rotating saw blade.** Always use the appropriate, correctly fitting blade guard (DS-BG for normal cutting, DS-BGF for flush cutting).
- h) Use only saw blades that comply with the requirements of EN 13236. Use of blades beyond the specified diameter range is not permissible. Fit the blades the right way round (observe correct direction of rotation).
- i) Use of blades with laser-welded segments can reduce the risk of segments breaking and flying off.
- j) Check the blade mounting flange and blade for damage (e.g. cracks in the steel disc) and degrease the blade mount each time before operating the wall saw.
- k) The saw blade may get hot. Always put on gloves before touching it.
- l) Use only fastening materials of adequate size (anchors, bolts, etc.) to fasten the rail supports and to secure the part being cut away.
- m) Use of accessories other than the recommended genuine Hilti accessories may result in personal injury or damage. Use only the accessories recommended in these operating instructions.

5 Safety instructions

- n) If equipment such as scaffolding, platforms or ladders is used, check that this equipment complies with regulations, that it is undamaged and set up in accordance with regulations.
- o) The operator must make sure that no persons enter or loiter in the danger area at any time while the saw is in operation. This also applies to the area not immediately visible to the operator, i.e. the area behind or below the object in which the cut is being made. If necessary, a large area must be cordoned off or security personnel posted.
- p) Stay alert at all times. 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.
- q) No modifications may be made to the saw system.
- f) Danger of tipping over! Rails with a length of 1.5 m or greater may cause the transport trolley to tip over. Do not transport rails with a length of 1.5 m or greater on the transport trolley. The transport trolley may cause injury or damage to the equipment or other property if it tips over.
- g) The trolley is intended to be used for transporting the saw system and the specified accessories. The trolley must not be used to transport other items.

5.7 Safety instructions for transportation

- a) Avoid lifting and carrying heavy objects. Use suitable lifting equipment and means of transport and share heavy loads between several people.
- b) Use the grips provided for transportation. Keep the grips dry, clean and free from oil and grease.
- c) Bear in mind that the machine could fall over. Stand it only on a solid, level surface.
- d) Secure the saw system and its components to prevent inadvertent movement or falling over during transportation.
- e) The machine may be lifted by crane only at the lifting points provided using tested and approved lifting gear. Before lifting, check that all removable items of equipment are securely attached to the transport trolley or locked in position. Never loiter beneath a load suspended by a crane or lifting equipment.

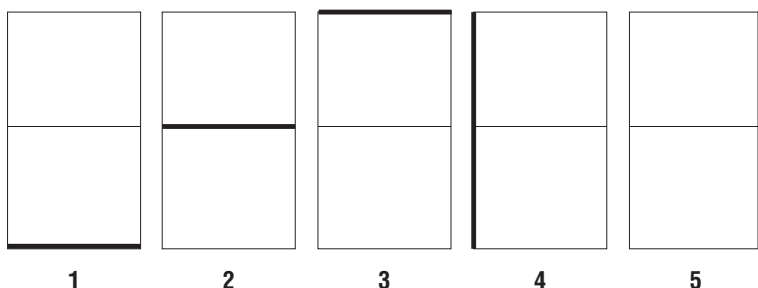
6 Preparations at the workplace

6 Preparations at the workplace

6.1 Planning the cutting sequence, marking the cutting line and fastening points

NOTE

The parts to be cut out are usually marked by the client. A rational cutting sequence can be followed when the rail supports are cleverly positioned.



Example of the cutting sequence for a door opening with dividing cut

If necessary, make dividing cuts to adjust the 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).

Use steel wedges and supports, as necessary, to secure the cut sections of concrete.

6.2 Electric power supply / fuse rating

CAUTION

Irrespective of whether using mains power or generator power, always check that an earth/ground conductor and ground fault circuit interrupter are present in the power supply and that these are connected.

Check that the fuse rating of the electric power supply at the construction site is as follows:

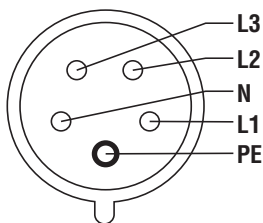
Voltage version 3 × 380 ... 400 V

Fuse rating	16 A
Ground fault circuit interrupter (FI)	Type A 30 mA
Generator power requirements	Min. 20 kVA @ 16 A

6 Preparations at the workplace

6.3 Electric power connection / power cable plugs

Pin assignment



L1	Phase 1
L2	Phase 2
L3	Phase 3
N	Neutral conductor (not used by the saw and not connected)
PE	Earth / ground conductor

Voltage version	3 × 400 V
Pin assignment	3~ + N + PE - 16 A

NOTE

The remote control unit displays the electric supply voltage and indicates an error if any one of the phases (L1, L2, L3) provides no power.

6.4 Extension cables / conductor cross section

Take care to use only extension cables of adequate gauge and of a type approved for this field of use as the cable may otherwise overheat.

In accordance with EN 61029-1 the conductor cross section must be at least 1.5 mm² for 16 A (conductor cross section = cross sectional area of each conductor).

Inadequate conductor cross sections and long cables lead to a drop in voltage and, accordingly, to a loss of performance.

Check to ensure that cables are fully unrolled before the wall saw is put into operation.

6.5 Cooling water supply

When the cooling water has a temperature of 25°C, a flow rate of approx. 2 l/min is required to cool the saw head.

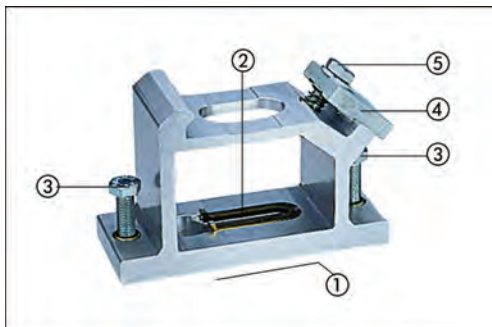
The machine's automatic cut-out will be activated in the event of inadequate cooling.

Use only clean cooling water.

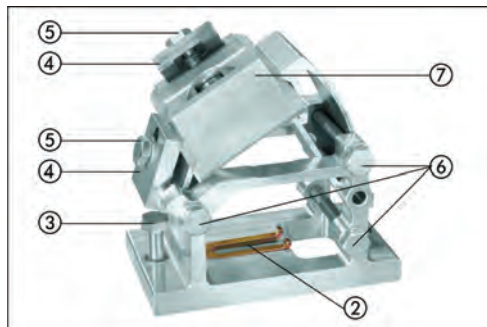
Where pressure in the water supply line is low, a non-return valve should be fitted in order to prevent dirty water finding its way into the water supply.

7 Setting up the system

7.1 Rail supports



Rail support for regular cutting



Rail support for cutting at an angle or on stairs

- ① Contact surface
- ② Anchor slot for fitting rail support
- ③ Leveling screws
- ④ Rail clamping plate
- ⑤ Rail clamping screw
- ⑥ Clamping screw for angle adjustment
- ⑦ Clamping plate for cutting on stairs

7.2 Fastening the rail supports

WARNING

Use an anchor suitable for the material on which you are working and observe the anchor manufacturer's instructions.

CAUTION

Positioning and spacing the rail supports at distances greater than those shown may cause the saw to wander off course and, in extreme situations, may result in failure of the anchor fastenings.

CAUTION

Adequately dimensioned fastenings of a type suitable for the applicable material are essential in order to ensure efficient and safe use of the equipment.

WARNING

Hilti M12 metal expansion anchors are usually suitable for fastening the equipment on uncracked concrete. Under certain conditions, however, it may be necessary to use an alternative fastening method. Please contact Hilti Technical Service if you have any questions about secure fastening.

7 Setting up the system

WARNING

The HKD-D M12 anchor is unsuitable for use on cracked concrete, masonry and synthetic or natural stone or similar materials.

NOTE

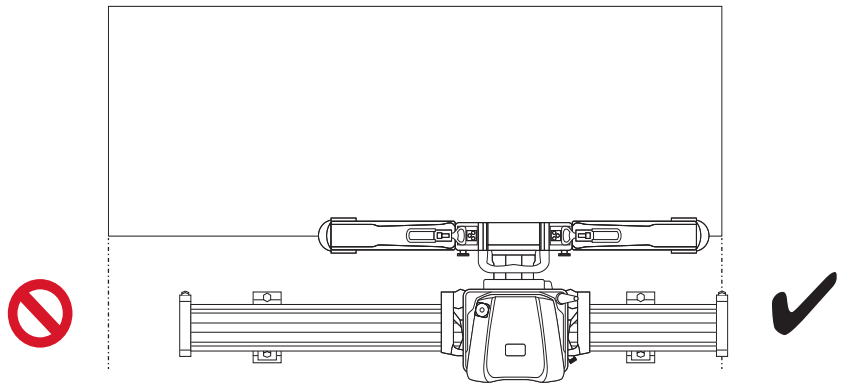
Use the DS-RFP rail support for cutting at an angle or on stairs.

NOTE

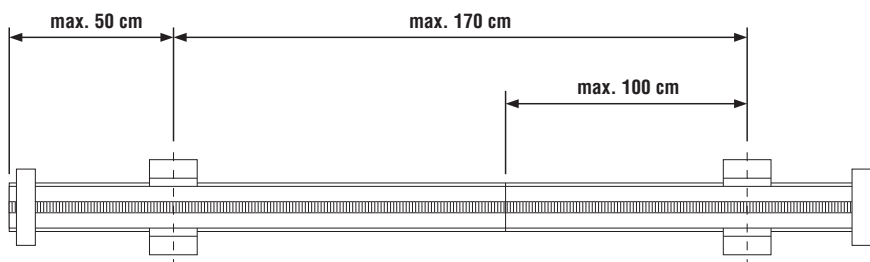
When mounting the rail make sure that an adequate length of rail remains free at least up to the end of the cut and that it is not limited by the end stops.

The saw head will otherwise be stopped by the end stop and the sawing operation interrupted.

Distances to the ends of the rail, ends of the cut, rail supports and anchors

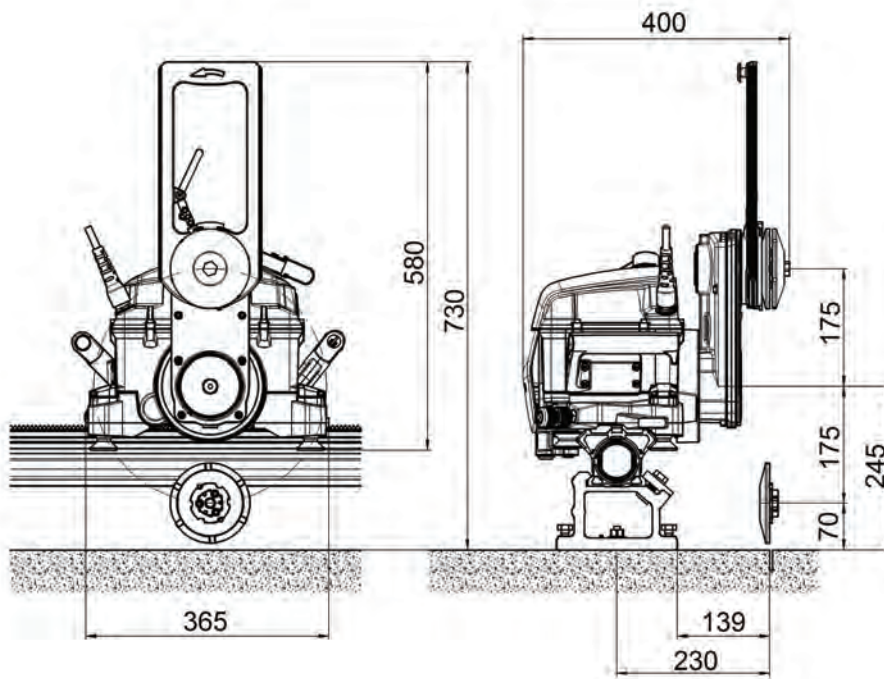


The ends of the rail must project beyond the ends of the cut.

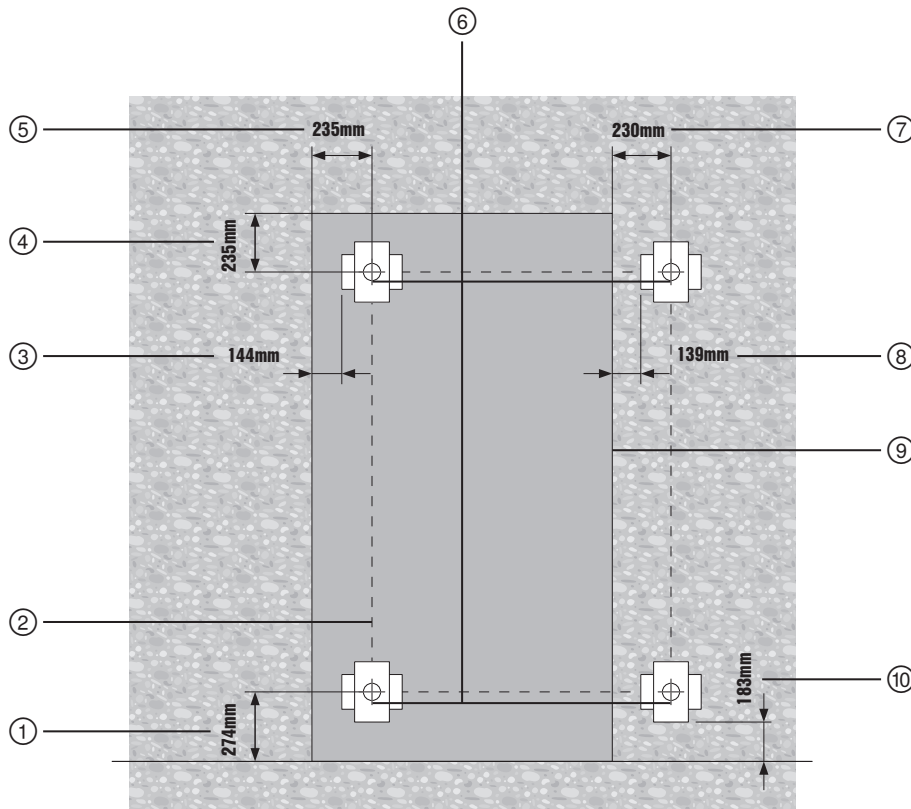


Maximum distance between rail supports and the ends of rails or joints between rails

7 Setting up the system



Main dimensions of the DST 10-CA saw head (in mm)



Distance of anchors and rail supports from the kerf

7 Setting up the system

- ① Distance of anchors from the floor for flush cutting
- ② Anchor line
- ③ Distance of rail supports from the cut edge (with saw blade)
- ④ Distance of anchors from the cut edge (with saw blade)
- ⑤ Distance of anchors from the cut edge (with saw blade)
- ⑥ Anchor positions with rail support; can be used for horizontal and vertical cuts by pivoting through 90°
- ⑦ Distance of rail supports from the cut edge (without saw blade)
- ⑧ Distance of anchors from the cut edge (without saw blade)
- ⑨ Planned cut (e.g. door opening)
- ⑩ Distance of rail supports from the floor for flush cutting

1. Mark the positions of the anchor holes for the rail supports.

NOTE Rail supports must be positioned less than 50 cm from the end of the rail and less than 100 cm from a joint between two rails. The distance between two rail supports must not exceed 170 cm.

2. Drill the anchor holes (depth and diameter in accordance with the manufacturer's instructions).
3. Clean the holes (remove the drilling dust).
4. Insert and expand the anchors (e.g. Hilti HKD-D M12) using the setting tool.
5. Screw in the fastening screws (8.8 grade with collar nut, supplied in the accessory box) to their full depth by hand.

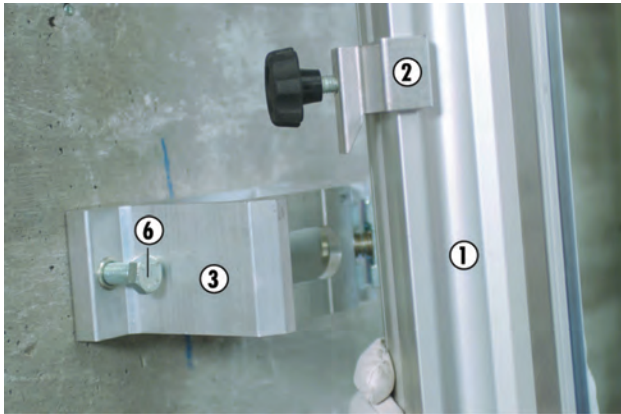


6. Position and align the rail supports and then tighten the collar nuts slightly.

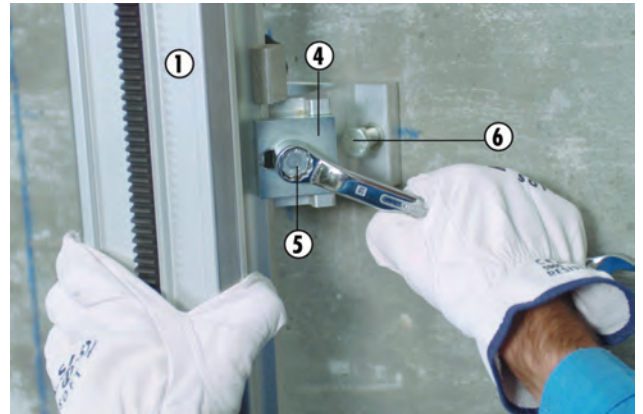
NOTE During installation, the leveling screws should not project beyond the contact surface of the rail supports.

7 Setting up the system

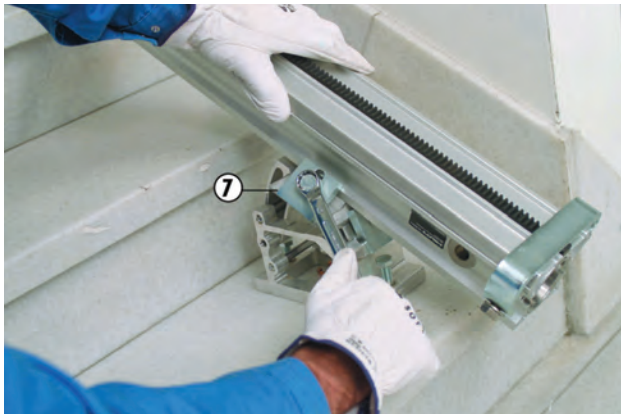
7.3 Fitting the rail



Installation of standard rail supports



Installation of standard rail supports



Installation of rail supports for angular cutting and cutting on stairs



Installation of rail supports for angular cutting and cutting on stairs

- ① Rail
- ② Rail clamp
- ③ Rail support
- ④ Rail clamping plate
- ⑤ Rail clamping screw
- ⑥ Leveling screws
- ⑦ Clamping plate for cutting on stairs

NOTE

The rail clamps cannot be used with the rail supports for angular cutting.

1. Fit the rail clamp to the rail.
2. Position the rail with fitted rail clamp on the rail support and close the clamping plate.
3. Turn the rail support until at right angles to the rail and then tighten the clamping plate securely.
4. Compensate for any difference in level by adjusting the leveling screws.

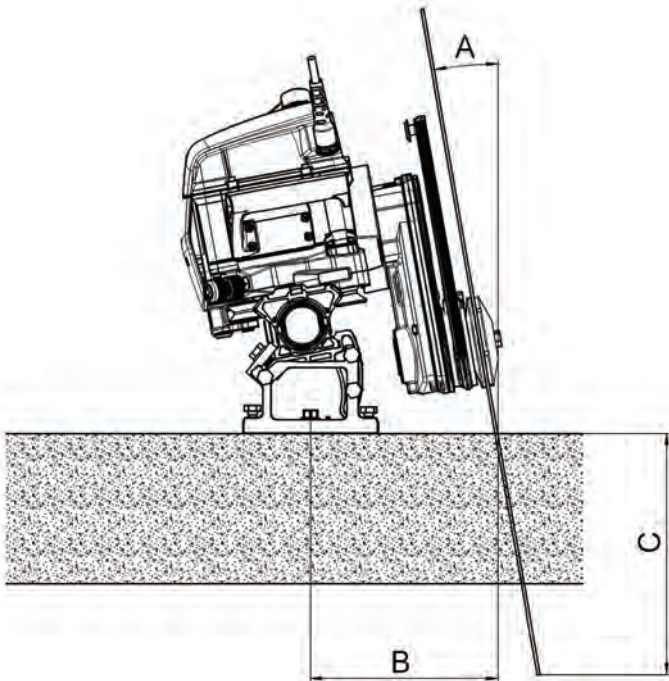
7 Setting up the system

- Align the rail at the correct distance from the cutting line and then tighten the fastening screws.

NOTE The specified distance of the rail supports from the planned cutting line must be observed.

- Fit end stops at both ends of the rail.

7.3.1 Dimensions for setting up for angular cutting



A	B	C			
		(Ø) 600 mm	(Ø) 700 mm	(Ø) 800 mm	(Ø) 900 mm
0°	23.0 cm	23.0 cm	28.0 cm	33.0 cm	38.0 cm
5°	23.8 cm	19.9 cm	24.9 cm	29.9 cm	34.9 cm
10°	24.8 cm	17.1 cm	22.0 cm	26.9 cm	31.8 cm
15°	26.0 cm	13.9 cm	18.8 cm	23.7 cm	28.5 cm
20°	27.6 cm	10.8 cm	15.5 cm	20.2 cm	24.9 cm
25°	29.5 cm	7.5 cm	12.0 cm	16.5 cm	21.1 cm
30°	31.8 cm		8.3 cm	12.7 cm	17.0 cm
35°	34.6 cm			8.6 cm	12.7 cm
40°	38.1 cm				8.3 cm

7 Setting up the system

7.4 Extending the rail

NOTE

When long cuts are to be made, tapered connectors and eccentric pins can be used to join individual rails together to form a rigid unit.



- ① Rail
- ② Tapered connector
- ③ Eccentric pins
- ④ 1/2" square drive wrench
- ⑤ Tapered sleeve

1. Clean the tapered connector and connector sleeves.
2. Insert the tapered connector and secure it with an eccentric pin.
3. Slide the rail onto the tapered connector and also secure it with an eccentric pin.
4. To release the connection, turn the eccentric pins in the opposite direction and push out the tapered connector.

7.5 Mounting the saw head

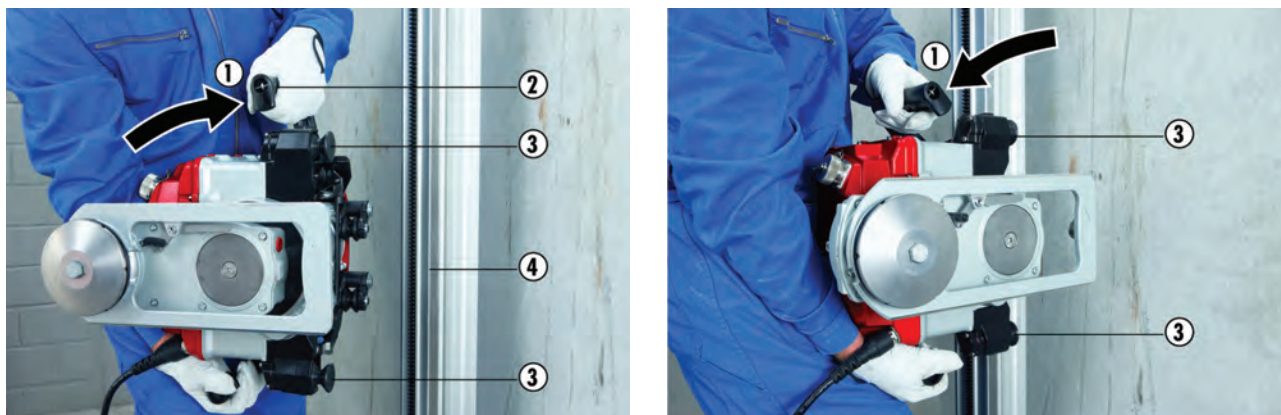
CAUTION

Before releasing the saw head locking levers, make sure you are holding the saw head securely.

NOTE

The DS-FCA-110 flush-cutting flange should be mounted on the saw head for flush-cutting applications.

7 Setting up the system



- ① Clamping lever with built-in release button
- ② Release button
- ③ Guide roller
- ④ Guiding surface

1. Press the release button ② and then push the clamping lever ① downwards and engage it in the lower position.
NOTE Do not continue to attempt to mount the saw head on the rail if the clamping lever cannot be correctly locked in the open or closed position.
2. Position the saw head on the previously fastened rail.
3. Check that the guide rollers ③ are correctly aligned.
NOTE The center of the guiding surface ④ should be in line with the middle of the guide roller.
4. Press the release button ② and then pull the clamping lever ① upwards until it engages in position.
5. Continue to hold the saw head securely until you have checked the position of the guide rollers ③ on the guide rail and ensured that the clamping lever has engaged correctly (move the clamping lever back and forward).

7.6 Adjusting the blade guard



- ① Blade guard holder
- ② Keyless clamping mechanism

7 Setting up the system

1. Set the blade guard holder ① to the desired position (45°/90°/135°).
2. Apply slight pressure to the lever ② while rotating the blade guard holder until it is felt to engage and then push the lever fully into the locking position.
3. To release the mechanism, push the lever ② in the opposite direction into the open position.

7.7 Connecting the power cable, remote control cable and cooling water hose

CAUTION

When unplugging, always pull the plug, not the supply cord. Close the protective cap immediately.

CAUTION

To avoid damage to the parts, check that the plug and socket are clean and in good condition before connecting. Clean the parts or remedy any damage before connecting them.

CAUTION

Don't allow the cables to become tangled. Position the cables carefully so that the plug connectors are not lying in water and so that the cables can follow movement of the saw head without coming under tension.



-
- ① Remote control cable socket
 - ② Cooling water hose connector
 - ③ Protective caps for sockets and plugs
 - ④ Securing sleeve
 - ⑤ Supply cord
-

7 Setting up the system

- ⑥ Antenna
- ⑦ “Ready for operation” indicator
- ⑧ Positioning mark (for CutAssist)
- ⑨ Distance to end of cut in minus direction (for CutAssist)
- ⑩ Distance to end of cut in plus direction (for CutAssist)

1. Connect the cooling water hose.
2. Connect the power cable to the power source.
3. If you wish to use wireless remote control, now switch on the remote control unit.
NOTE If you wish to use the remote control cable, carry out the following additional steps:
 4. Remove the protective caps from the remote control cable.
 5. Align the plug connectors and push them in fully without using excessive force.
 6. Close the securing sleeve and make sure it engages.
 7. Switch on the remote control unit.

7.8 Fitting the saw blade

NOTE

Use the DS-FCA-110 flush-cutting flange and flush-cutting blade guard (available as accessories) for flush-cutting applications.

Use only the original Hilti screw (10.9 grade steel) as the central blade mounting screw.

Before operating the wall saw each time, always check the mounting flange and saw blade for damage, cracks or discoloration caused by overheating and clean the saw blade if it has been oiled or greased.



- ① Saw blade
- ② Centering and mounting flange
- ③ Blade flange
- ④ Clamping screw
- ⑤ Mounting holes for flush cutting

7 Setting up the system

1. Position the saw blade ① on the saw arm, taking care to observe the correct direction of rotation.
2. Fit the blade flange ③ and mounting screw. Tighten the screw only slightly.
3. Align the saw blade ① so that the mounting holes for flush cutting ⑤ lie between the water grooves.
4. Tighten the mounting screw ④ securely with the 19 mm AF ring wrench (110 Nm).

7.9 Fitting the blade guard

NOTE

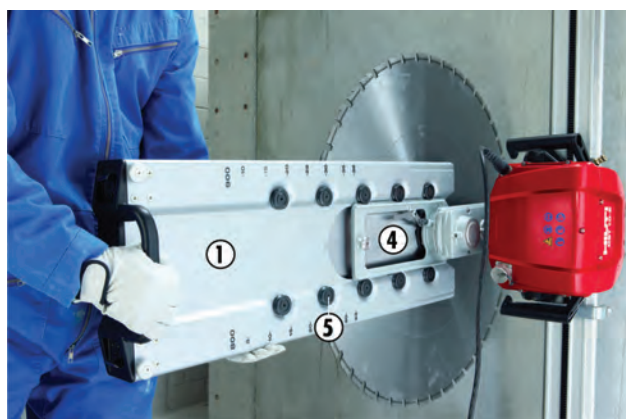
Should it prove impossible to use the blade guard due to specific circumstances at the working area, special measures must be taken, such as construction of a temporary enclosure (e.g. using forming boards), to protect the surrounding area from flying fragments etc. while sawing.

Use the DS-FCA-110 flush-cutting flange and flush-cutting blade guard (available as accessories) for flush-cutting applications.

Keep the blade guard clean. Clean it regularly each time after use to ensure that it remains in good working order.

CAUTION

Remove the side section only immediately before beginning a corner cut.



7 Setting up the system

① Blade guard center section

② Blade guard side section

③ Metal hook

④ Blade guard holder

⑤ Guide wheels

⑥ Clamp

⑦ Tensioning lug

⑧ Rubber tensioning strap

1. Push the center section of the blade guard ①, or the complete blade guard, onto the blade guard holder ④.
2. Fit the blade guard side section by engaging both metal hooks ③ of the side section ② with the center section ① and then close the clamp ⑥.
3. Secure the blade guard to the blade guard holder by pulling the rubber strap ⑧ over the tensioning lug ⑦.
4. To remove the side section ②, open the clamp ⑥ and lift the side section away from the center section.

8 Before use

8.1 Checks before beginning sawing

- On-site preparations must be completed (supports, water collection, etc.).
- The danger zones in front of and behind the object where sawing is to take place must be secured and cordoned off. No persons may remain in a danger zone.
- The power cable and water supply must be connected. The electric supply must be earthed / grounded and equipped with a ground fault circuit interrupter. The water supply must be within the permitted pressure range.
- The rail supports and rails must be aligned and fastened correctly, with all screws and nuts tightened securely.
- The saw head must be mounted correctly and the locking levers engaged. Move the locking levers back and forward slightly to check that they are engaged correctly.
- The saw blade must be mounted in the correct direction of rotation and the mounting screw at the saw blade flange (or six countersunk screws for flush cutting) tightened securely.
- The blade guard and end stops must be fitted securely.
- The remote control unit can be connected to the saw head wirelessly or by cable.
- Check that the emergency stop button on the remote control unit works and that the button has been pulled out and reset.
- The remote control unit must be within easy reach.
- The “ready for operation” indicator on the saw head must light.
- The safety precautions must be observed.
- **You must have read the operating instructions for the remote control unit and you must be familiar with the operating procedures.**

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).

Depending on the material being cut (hard or soft concrete, masonry) the guide cut should be made to a depth of about 4 cm.

NOTE

The guide cut should always be made at reduced advance speed (e.g. 60%). This helps to ensure that the blade stays on course, making a straight cut.

Subsequent cuts

Subsequent cuts can be made at full advance speed (100%) with the saw arm trailing (pulling the blade) or leading (pushing the blade).

The depth of subsequent cuts depends greatly on the material. A cutting depth of 5 to 9 cm is recommended.

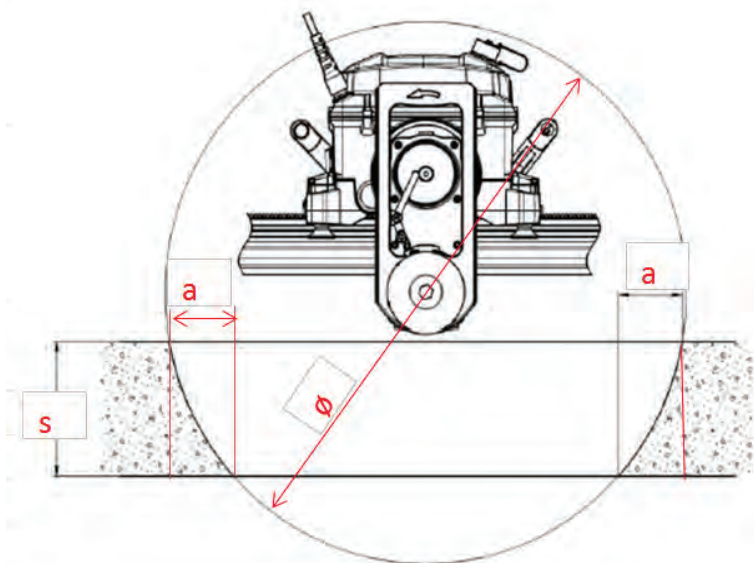
CAUTION

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

8 Before use

If the blade is not rotating, always pivot the blade out of the kerf before moving the saw head.

8.3 Overcut or uncut distances



s Thickness of object

a Remaining distance

Ø Blade diameter

The “overcut distance” or, respectively, the “uncut distance”, depends on the thickness of the wall and the saw blade diameter.

Overcut or uncut distances

s	a			
	(Ø) 660 mm	(Ø) 710 mm	(Ø) 810 mm	(Ø) 910 mm
120 mm	53 mm	48 mm	41 mm	36 mm
130 mm	60 mm	55 mm	47 mm	41 mm
140 mm	68 mm	62 mm	53 mm	46 mm
150 mm	77 mm	69 mm	59 mm	51 mm
160 mm	86 mm	78 mm	66 mm	57 mm
170 mm	96 mm	86 mm	73 mm	63 mm
180 mm	107 mm	96 mm	80 mm	69 mm
190 mm	119 mm	106 mm	88 mm	76 mm
200 mm	133 mm	118 mm	97 mm	83 mm
210 mm	148 mm	130 mm	106 mm	91 mm
220 mm	165 mm	143 mm	116 mm	99 mm
230 mm	185 mm	158 mm	127 mm	107 mm
240 mm	209 mm	175 mm	138 mm	117 mm
250 mm	242 mm	194 mm	151 mm	126 mm

s	a			
	(Ø) 660 mm	(Ø) 710 mm	(Ø) 810 mm	(Ø) 910 mm
260 mm		217 mm	164 mm	136 mm
270 mm		246 mm	179 mm	147 mm
280 mm		289 mm	195 mm	159 mm
290 mm			213 mm	171 mm
300 mm			234 mm	185 mm
310 mm			259 mm	199 mm
320 mm			290 mm	215 mm
330 mm			335 mm	233 mm
340 mm				252 mm
350 mm				275 mm
360 mm				301 mm
370 mm				334 mm
380 mm				382 mm

NOTE

In Cut Assist mode, overcutting is possible only up to the distances shown on the right.

Example: When using a saw blade with a diameter [Ø] of 810 mm and with a wall thickness [s] of 280 mm, the uncut distance or, respectively, the overcut distance [a] is 195 mm. This cut, with overcutting, can be made only in manual mode.

8.4 Dismantling the saw system

CAUTION

Before releasing the saw head locking levers, make sure you are holding the saw head securely.

CAUTION

To avoid the possibility of damage, always switch off the saw blade drive and the advance / plunge controls before disconnecting the power cable.

CAUTION

To avoid damage when temperatures below freezing are expected, the cooling system must be fully emptied by blowing out with air pressure.

1. Pivot the saw arm into the 90° position, switch off the machine and unplug the power cable.
2. Unplug the remote control cable and fit the protective cap to the connector.
3. Disconnect the water hose from the saw head and clean the blade guard, the saw head and the rail system.

8 Before use

4. Remove the blade guard and saw blade and clean these parts.
5. Remove the saw head from the rail and clean the parts.
6. Stow and secure the saw head, the rail system, the blade guard and accessories on the trolley.
7. Clean the cables and hose, roll them up and stow them on the trolley.

8.5 Blowing water out of the cooling circuit when there is a risk of frost



1. Fit the blow-out adapter to the hose on the pump.
2. Connect the pump to the water connection on the saw head.
3. Operate the pump (at least 8 full strokes) until no further water is ejected from the saw head.

9 Care and maintenance

9.1 Functional test

The following system components must be checked at regular intervals for correct functioning and inspected visually for obvious faults in order to avoid potential hazards:

- Casing of the saw head and remote control unit
- Saw blade and mounting flange
- Emergency stop button on the remote control unit
- Operating controls
- Indicators
- Seals
- Cables
- Blade guard
- Mounting system

9.2 Maintenance

Parts	Procedure	Daily	Weekly
Rail supports	Check the contact and clamping surfaces, clean if necessary.	●	
	Check the threads for smoothness and ease of operation, clean if necessary.		●
Rail	Check the contact and running surfaces, clean if necessary.	●	
	Check the toothing for damage and wear, replace the rail if necessary.		●
	Check the tapered sleeves, clean and lubricate with oil if necessary.	●	
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 hex. head screw.	●	
Saw head	Check the locking mechanism for security of engagement, have it repaired if necessary.	●	
	Check the guide rollers for ease of operation and excessive play, have them replaced / repaired as necessary.		●

9 Care and maintenance

Parts	Procedure	Daily	Weekly
Saw head	Check the guide rollers for ease of operation and excessive play, have them replaced / repaired as necessary.	●	
	Check the cable for damage and replace it if necessary.	●	
	Check the saw blade mounting flange and mounting screw, 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.		●
Water hose	Check the couplings for cleanliness, ease of operation and leakage. Clean and lubricate the couplings if necessary (lubricant spray).	●	
	Check the hose for leakage.		●
Cables / plugs	Check the plug connectors for cleanliness, damage and ease of operation. Blow out with compressed air or have the parts replaced if necessary.	●	
	Check the cables for damage and replace them if necessary.	●	
Transport trolley	Check the tire pressures (2.1 bar or 30 PSI).		●
Tool set	Check for completeness.		●

9.3 Cleaning

CAUTION

Do not use high-pressure water jet cleaning systems to clean the saw head, remote control unit or cables. Water finding its way into these parts may cause malfunctions and damage to the equipment.

CAUTION

If a parting agent for concrete formwork or oil is applied to the equipment (to help prevent adhesion of concrete) take care to ensure that these substances and any cleaning agents used contain no solvents.

CAUTION

Substances containing solvents may attack seals and casing parts, leading to deterioration (hardness, cracking etc.).

9 Care and maintenance

1. Disconnect the system from the electric supply.
2. Clean the entire set of equipment after finishing work or before long breaks between periods of use.
3. Do not allow the dirt and slurry adhering to parts to dry out.
4. When cleaning, pay particular attention to the operating surfaces, threads, connectors, toothed sections, points of contact between moving parts, operating controls and safety or operating information plates.
5. Fit the protective caps to all plugs and connectors.
6. Use a medium-hard brush and water to clean the saw head, rails, blade guard system and transport trolley.

9.4 Adjusting the guide rollers

In the event of play at the guide rollers, they can be adjusted as follows:



1. Mount and secure the saw on the rail.
2. Release the guide roller locking screw.



3. Apply very light pressure by way of the eccentric section of the roller axle until the roller comes into contact with the guide rail.
4. Re-tighten the guide roller locking screw.

NOTE The roller must remain free to rotate (by hand).

9 Care and maintenance

5. Repeat the procedure with the second roller.

9.5 Repairs

CAUTION

The machine may be operated, serviced and repaired only by authorized personnel who have been trained by Hilti. This personnel must be informed of any special hazards that may be encountered.

CAUTION

Repairs to electrical components may be carried out only by trained electrical specialists.

CAUTION

NEVER open the cover on the machine's casing while on a construction site.

9.6 Service intervals

We recommend that the system is checked at a Hilti service center after every 200 operating hours. This will ensure that the equipment is ready for use when required and help avoid high repair costs.

NOTE

The remaining operating hours until the next service is due can be displayed on the remote control unit.

10 Troubleshooting

10.1 Causes of faults with no error code and how these faults can be remedied

Fault	Possible cause	Remedy
Blade wanders off course	Inadequate blade tension	Check the tension / replace the blade.
	Saw blade segments have lost cutting ability	Check the specification / replace the blade.
	No guide cut made or the guide cut was not straight	Adhere to the guidelines.
	Play at the guide rollers	Check for play and re-adjust the rollers or replace the rollers or rails if necessary.
	Rail fastenings are loose	Check and improve the fastenings.
	Rail distorts (twists)	Install additional rail supports.
Low sawing performance	Unsuitable blade specification	Check the specification; increase power if possible.
	Depth of cut is set too deep.	Check the cutting depth; reduce if possible.
	Advance speed is too low	Check the setting; increase power if possible.
	Drop in performance due to blade wandering off course	See "Blade wanders off course".
	Drop in performance due to high reinforcement content	Check the reinforcement content; increase power if possible.
	Saw blade speed is too high or too low	Check speed of rotation; increase or reduce speed if possible

11 Disposal

11 Disposal



Most of the materials from which Hilti machines or appliances are manufactured can be recycled. The materials must be correctly separated before they can be recycled. In many countries, Hilti has already made arrangements for taking back old machines and appliances for recycling. Ask Hilti customer service or your Hilti representative for further information.



For EC countries only

Disposal of electric appliances together with household waste is not permissible.

In observance of the European Directive on waste electrical and electronic equipment and its implementation in accordance with national law, electrical appliances that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility.

Disposal of drilling and sawing slurry

NOTE

With regard to environmental aspects, allowing drilling or sawing slurry to flow directly into rivers, lakes or the sewerage system without suitable pre-treatment is problematical.

In addition to the following recommended pre-treatment procedures, the applicable national regulations must be observed when disposing of drilling or sawing slurry. Ask the applicable local authorities for further information.

We recommend the following pre-treatment:

1. Collect the drilling or sawing slurry (e.g. using a suitable industrial vacuum cleaner).
2. The fine particles in the drilling or sawing slurry must be separated from the water through deposition (e.g. leave standing for a while or add a flocculent).
3. Solid material from the drilling or sawing slurry should be deposited at a construction waste disposal site.
4. Water from the drilling and sawing slurry should be neutralized (e.g. by adding a large quantity of water or other neutralization agents) before it is allowed to flow into the sewerage system.

12 Manufacturer's warranty

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

13 EC declaration of conformity (original)

13 EC declaration of conformity (original)

Designation:	Electric wall saw
Type:	DST 10-CA
Generation:	01
Year of design:	2014

We declare, on our sole responsibility, that this product complies with the following directives and standards: until 19th April 2016: 2004/108/EC, from 20th April 2016: 2014/30/EU, 1999/5/EC, 2006/42/EC, 2011/65/EU, EN 300 328 V1.8.1, EN 301 489-1 V1.9.2, EN 301 489-17 V2.2.1, EN 15027, EN 60204-1, EN ISO 12100.

This equipment complies with the applicable standard provided that the short-circuit power S_{SC} at the interface point between the user's supply and the public supply network is greater than or equal to 3.2 MVA. It is the responsibility of the installer or user of the equipment to ensure, by consultation with the supply network operator if necessary, that the equipment is connected only to a supply with a short-circuit power S_{SC} of greater than or equal to 3.2 MVA.

Hilti Corporation, Feldkircherstrasse 100, FL-9494 Schaan



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Business Area Electric Tools & Accessories
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