7. Setting up the wall saw system

7.1 Connecting the power unit

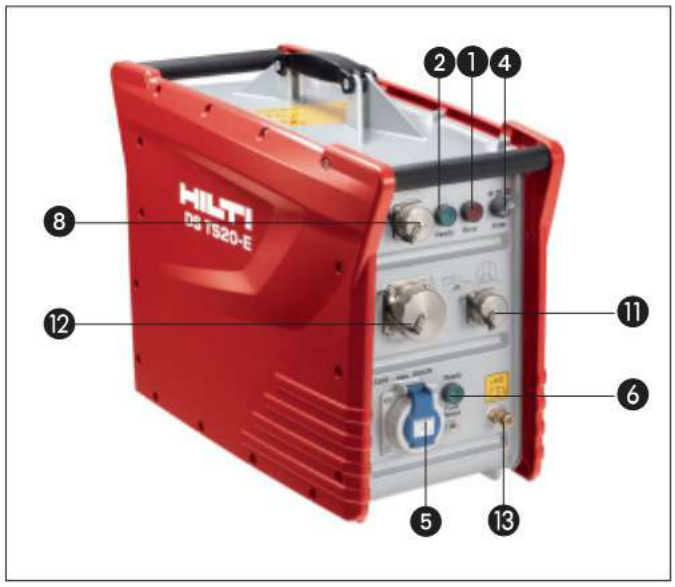
NOTE

Operating the main swith several times in quick succession will cause the electric supply to be temporarily interrupted. Wait for a few seconds before switching on again.

1. Set the current input limiter ❹ to the corresponding fuse rating. Connect the earth/ground terminal ⓮ to an earth/ground rod if the unit is powered by a generator.
2. Connect the power cable ❼ (observe the information on the type plate ⓾).
3. Remove the protective cap and connect and secure the remote control unit ❽.
4. Close the protective caps ❽ by fitting them together.
5. Move the main switch ❸ to the "I" position. The "Ready" indicator ❷ then lights.
6. Connect the external cooling water hose ❾. Water pressure must not exceed 6 bar.

Parts

No.	Designation
❶	Error indicator (red)
❷	"Ready" indicator (green)
❸	Main switch
❹	Current input limiter
❺	230 V power outlet (only with 3 × 400 V version)
❻	Automatic fuse / circuit breaker and ready indicator for 230 V outlet
❼	Power cable connector
❽	Socket for remote control unit
❾	Cooling water connection (feed)
⓾	Type plate
⓫	Plug for saw head control cable
⓬	Plug for saw head power cable
⓭	Cooling water connection (exit)
⓮	Earth/ground terminal



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7.2 Fastening the rail supports

CAUTION

- Failure to observe the spacing shown may cause the saw to wander off course and, in extreme situations, may result in failure of the anchor fastenings.
- Adequately dimensioned and correctly installed fastenings are essential in order to ensure efficient and safe operation of the equipment.

WARNING

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

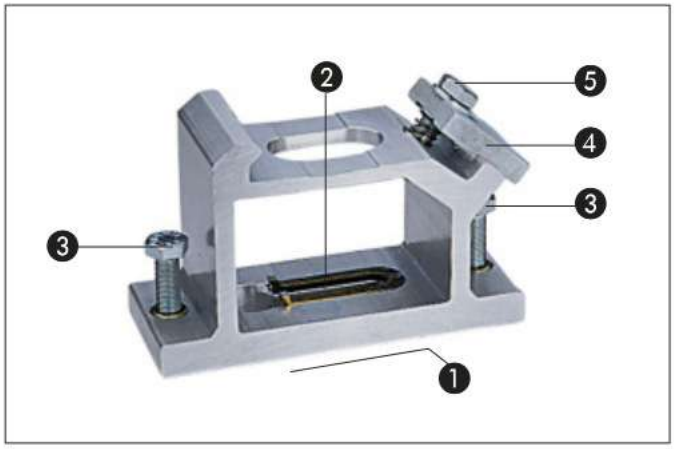
NOTE

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

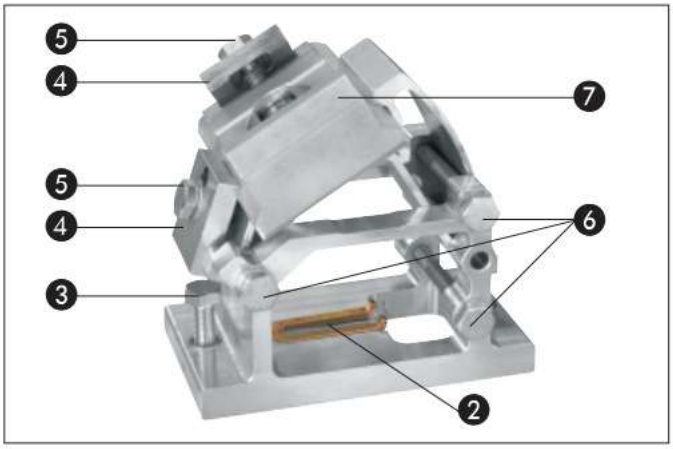
- The construction materials and conditions encountered at the location where sawing is to be carried out vary from site to site. Should you be unsure of the strength of the supporting material and have doubts about the solidity of the fastening obtained, please contact Hilti Customer Service for technical advice.

NOTE

- During installation, the leveling screws should not project beyond the contact surface of the rail supports.
- Use the DS-RFP rail support for angled and stepped cuts.



Rail support for regular cutting



Rail support for angled and stepped cutting

Parts

No.	Designation
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 stepped cuts

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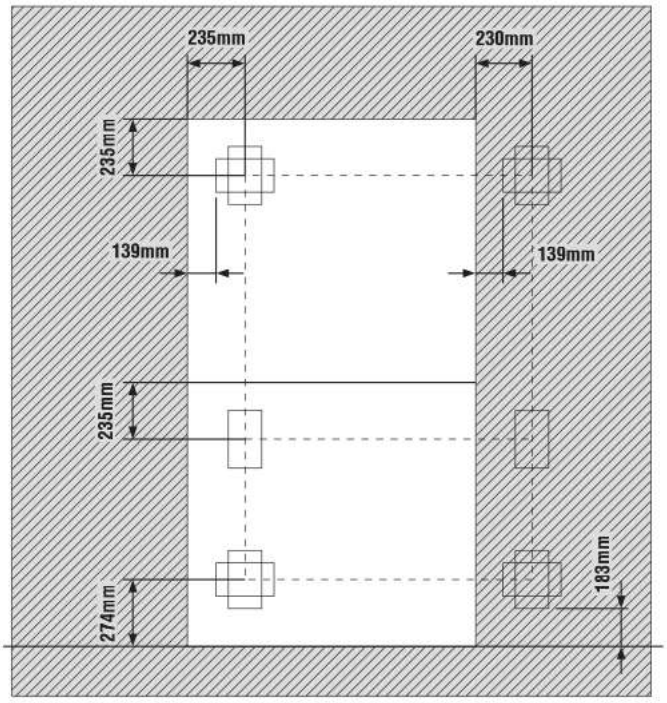
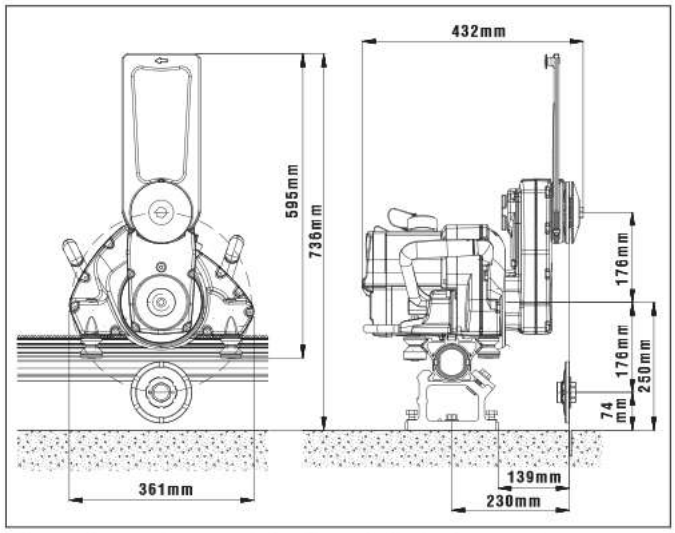
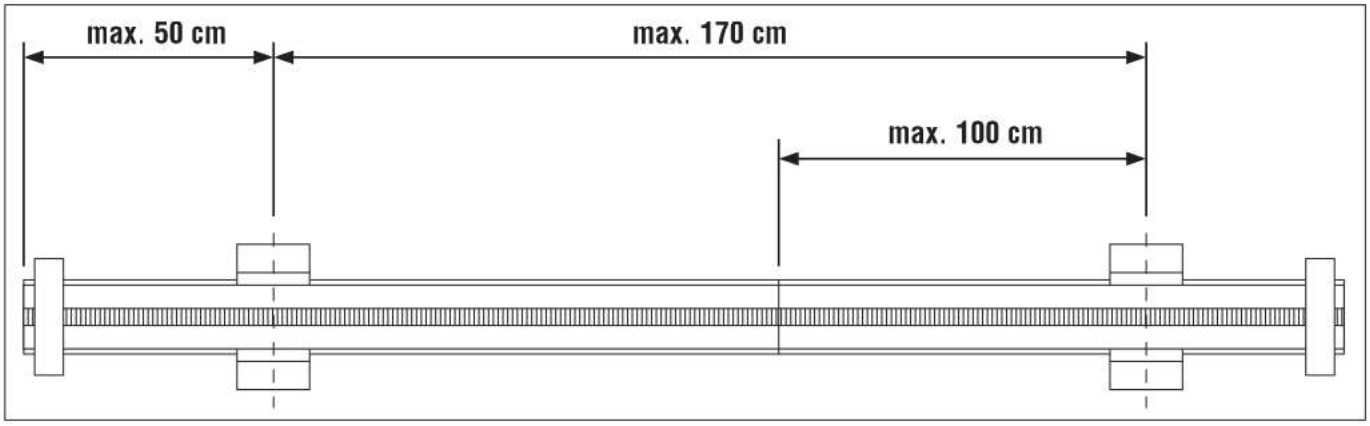
1. Mark the positions of the anchor holes for the rail supports.
2. Drill the anchor holes (depth and diameter in accordance with the manufacturer's instructions).
3. Clean the holes (remove the drilling dust).
4. Insert and expand the anchors (e.g. Hilti HKD-D M12) using the setting tool.
5. Screw in 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.



Anchor hole distance



Main dimensions of the DS TS20-E (in mm)



Maximal permissible rail support distance

7.3 Fitting the rail

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.
5. Align the rail at the correct distance from the cutting line and then tighten the fastening screws.
6. Fit end stops at both ends of the rail.

NOTE

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

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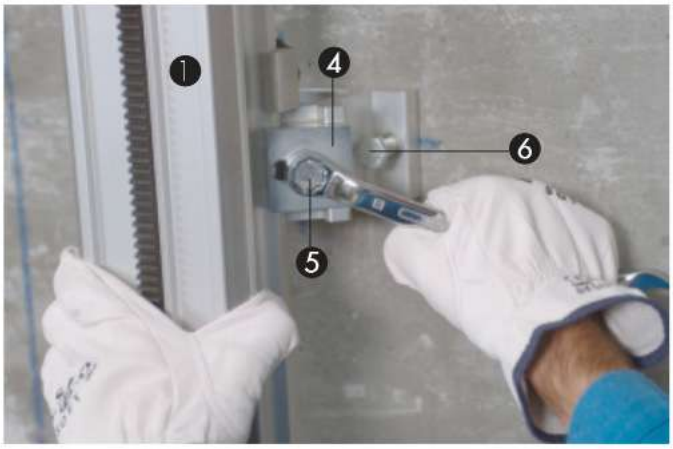
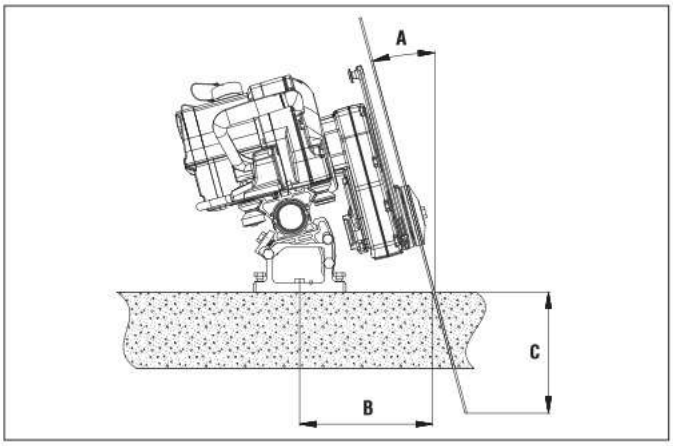
Setting up the wall saw system

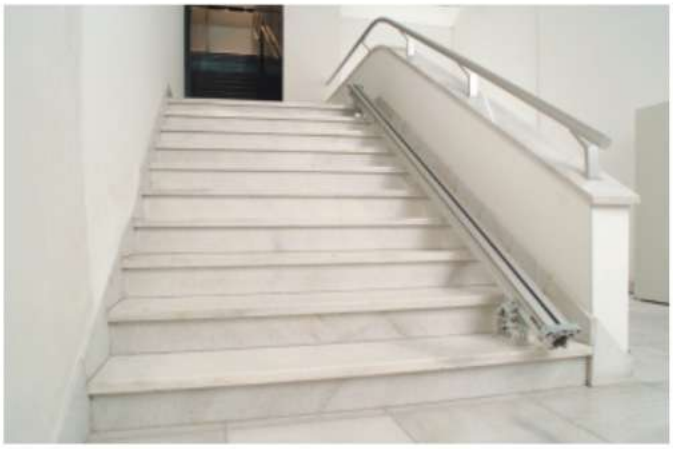


Parts

No.	Designation
1	Rail
2	Rail clamp
3	Rail support
4	Rail clamping plate
5	Rail clamping screw
6	Leveling screws
7	Clamping plate for stepped cuts



A [°]	B [cm]	C [cm]					
		∅ 700 mm	∅ 800 mm	∅ 900 mm	∅ 1000 mm	∅ 1200 mm	∅ 1600 mm
0°	23	28	33	38	43	53	73.0
5°	23.8	24.9	29.9	34.9	39.8	49.8	69.7
10°	24.8	22.0	26.9	31.8	36.8	46.6	66.3
15°	26.0	18.8	23.7	28.5	33.3	43.0	62.4
20°	27.6	15.5	20.2	24.9	29.6	39.0	57.8
25°	29.5	12.0	16.5	21.1	25.6	34.6	52.7
30°	31.8	8.3	12.7	17.0	21.3	30.0	47.3
35°	34.6		8.6	12.7	16.8	25.0	41.4
40°	38.1			8.3	12.2	19.8	35.1
45°	42.5				7.3	14.4	28.5



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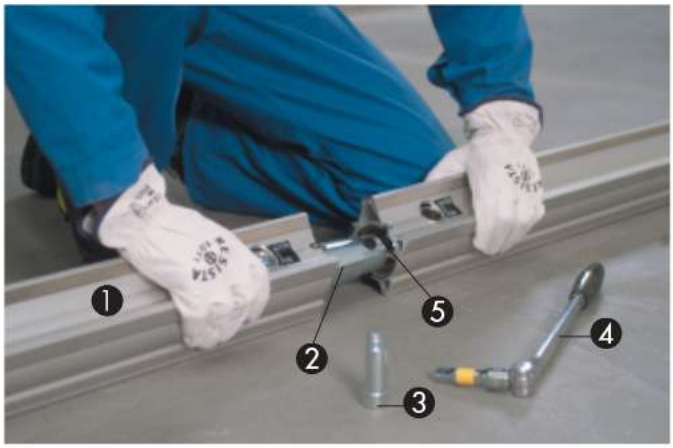
7.4 Extending the rail

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. 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.



Parts

No.	Designation
1	Rail
2	Tapered connector
3	Eccentric pins

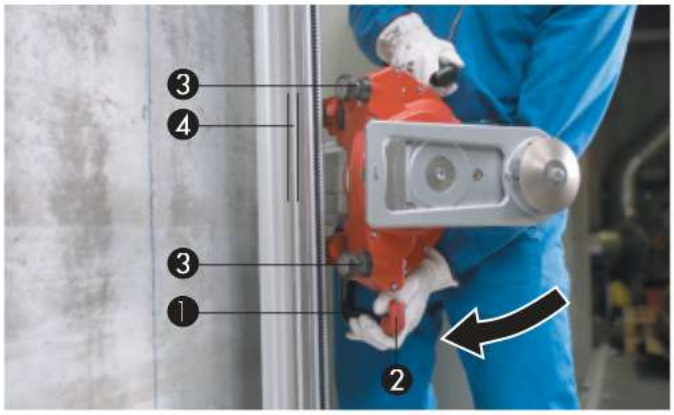
No.	Designation
4	½" square drive wrench
5	Tapered sleeve

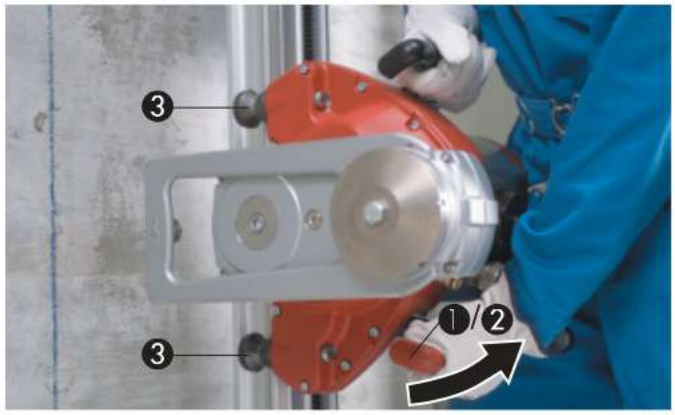
7.5 Mounting the saw head

NOTE

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

1. Press the release button ❷ on the locking lever ❶ and push the locking lever downwards.
2. Position the saw head on the previously fastened rail.
3. Check that the guide rollers ❸ are correctly aligned. The center of the guiding surface ❹ should be in line with the middle of the guide roller.
4. Press the release button ❷ and pull the locking lever ❶ upwards.
5. Check the position of the guide rollers ❸ (move the levers several times) and check that the clamping lever engages correctly before letting go of the saw head.





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Parts

No.	Designation
❶	Clamping lever
❷	Release button
❸	Guide roller
❹	Guiding surface

7.6 Adjusting the blade guard

1. Release the clamping screw ❷ on the saw arm.
2. Pivot the blade guard holder ❶ into the desired position.
3. Tighten the clamping screw ❷.

Parts

No.	Designation
❶	Blade guard holder
❷	Clamping screw
❸	Hex. socket wrench, 8 mm AF

7.7 Connecting the power cable, remote control unit and cooling water hose to the power unit and saw head

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.
- When unplugging, always grip the plug and not the cable. Fit the protective cap immediately.
- Do not use the plug as a grip or carrying handle.
- Do not allow the cables to become tangled and place them carefully so that the plug connectors are not lying in water. The cables must be long enough to allow the saw head to move freely.

1. Remove the protective caps.
2. Align the plug carefully with the socket and push it in all the way without using excessive force.
3. Close the securing sleeve and check that it engages.
4. Close the protective caps together.
5. Connect the cooling water hose.

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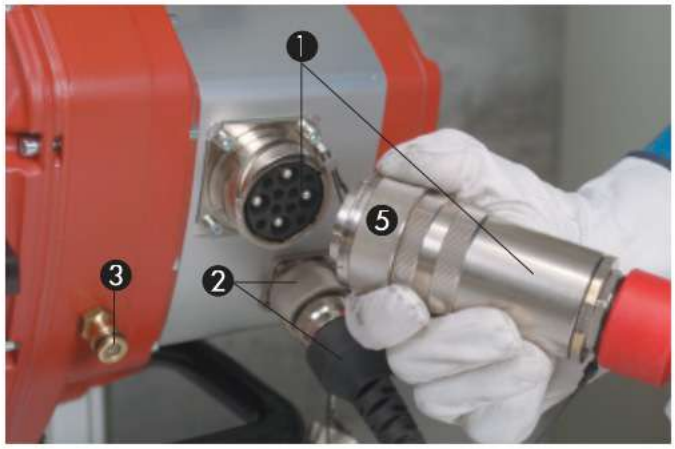


Parts

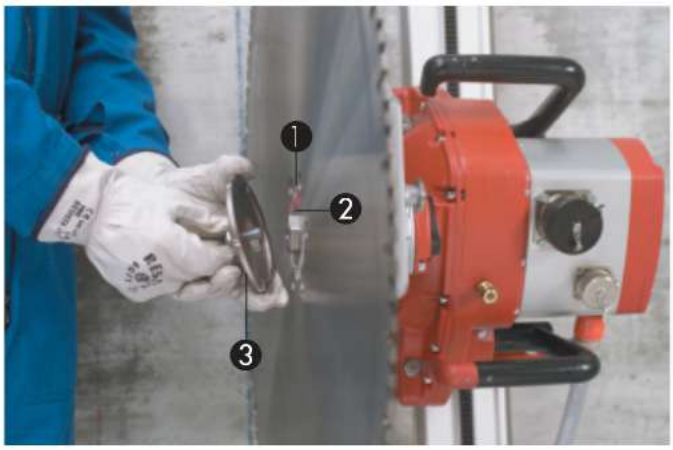
No.	Designation
1	Power cable plug / socket
2	Control cable plug / socket
3	Cooling water hose connectors
4	Protective cap
5	Securing sleeve

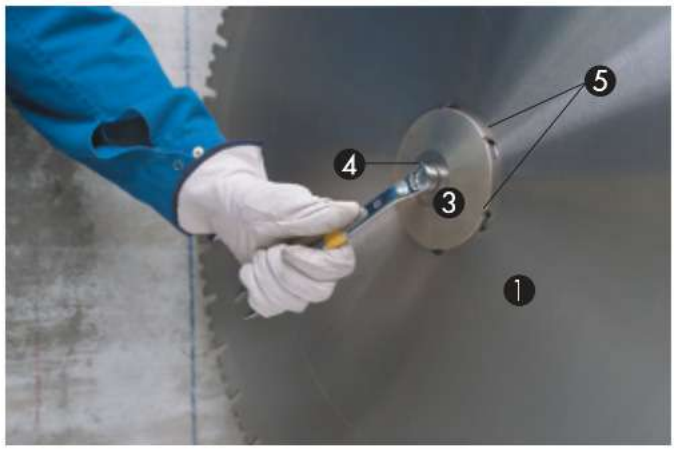
7.8 Fitting the saw blade

NOTE

- Use the DS FCA 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. 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 4 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).





Parts

No.	Designation
1	Saw blade
2	Centering and mounting flange
3	Saw blade flange
4	Mounting screw
5	Mounting holes for flush cutting

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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 flush-cutting flange and flush-cutting blade guard (available as accessories) for flush-cutting applications.
- Keep the holes for the side section guide pins clean in order to prevent sticking of the side sections.
- 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.

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

Parts

No.	Designation
❶	Blade guard center section
❷	Blade guard side section
❸	Guide pin
❹	Blade guard holder
❺	Guide rollers
❻	Clamp
❼	Tensioning lug
❽	Rubber tensioning strap

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7.10 Adjusting the blade cooling water flow rate

Set the water regulating valve to the desired flow rate.

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