



OPERATING INSTRUCTIONS

WSE1621 WALL SAW

Index 000



Congratulations!

You have decided to purchase a tried-and-tested TYROLIT Hydrostress unit and have thus acquired a highly sophisticated and reliable state-of-the-art device. Only genuine TYROLIT Hydrostress replacement parts can guarantee quality and interchangeability. If maintenance work is neglected or carried out inexpertly, we will be unable to honour our warranty obligations. All repairs must be carried out by trained personnel only.

Our after-sales service is available to help ensure that your TYROLIT Hydrostress units remain in perfect working order.

We hope that working with your TYROLIT unit will be a satisfying and fault-free experience.

TYROLIT Hydrostress

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1 Safety

1.1 Generally safety instructions



These instructions are just one part of the documentation which is supplied together with the wall saw. These instructions go together with the "Safety Manual/System Description for Wall Saws" to form a complete set of documentation.



DANGER

Failure to comply with the safety instructions in the "Safety Manual/System Handbook" and the operating instructions may result in serious injury or even death.

- ▶ Please ensure that the "Safety Manual/System Description for Wall Saws" and the operating instructions have been read and understood in full.



DANGER

Laceration from the saw blade.

- ▶ Always wear protective gloves when working on the wall saw, particularly when working on the saw blade.
- ▶ Always use the blade guard when operating the wall saw.



DANGER

Serious injury or material damage as a result of uncontrolled movements of the wall saw.

- ▶ Never connect or disconnect cables when the wall saw is running.



DANGER

Death or serious injury can be caused by sudden start-up of the machine.

- ▶ Before switching on the system, ensure that no other persons are present in the danger areas.
- ▶ On leaving the system, switch it off and ensure that it cannot be switched on again.



DANGER

Death or serious injury as a result of the sawing machine continuing to run after an accident.

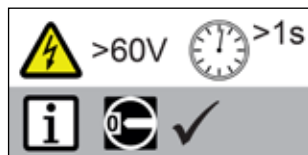
- ▶ Ensure that the EMERGENCY STOP button can be reached quickly.



DANGER

Electric shock from live cables and connectors.

- ▶ Switch off the WSE1621 Wall saw before connecting or disconnecting cables.
- ▶ Ensure the power supply is earthed and fitted with an AC/DC sensitive residual current circuit breaker (FI type B) with a maximum residual current of 30mA.



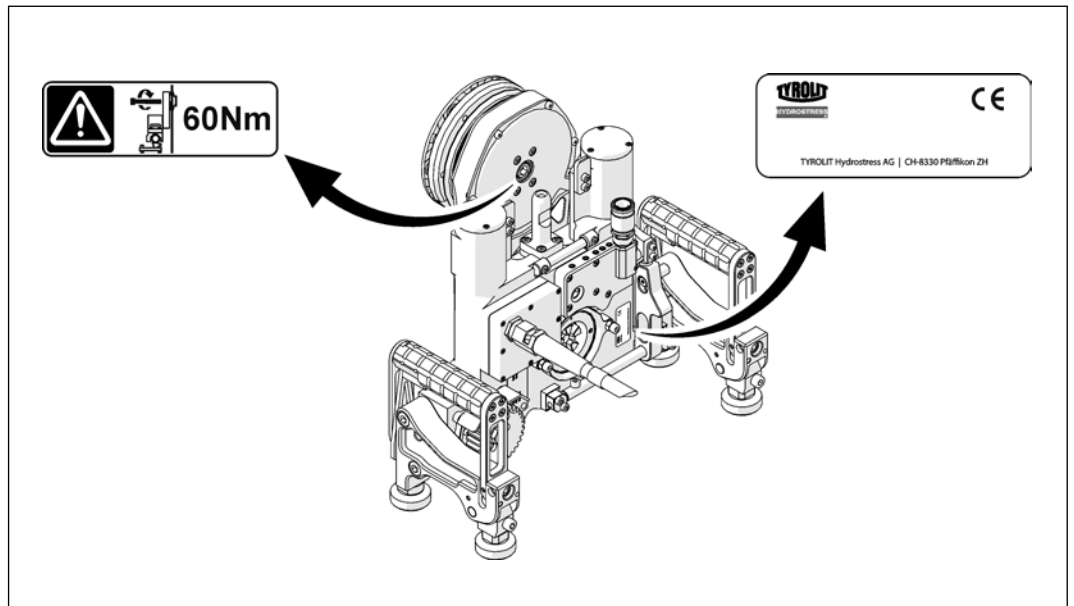
DANGER

Risk of fire due to incorrect mains voltage.

- ▶ Make sure the mains voltage and mains frequency correspond to the mains settings of the WSE1621 Wall saw.

1.2 Signs on the machine

Torque information / name plate

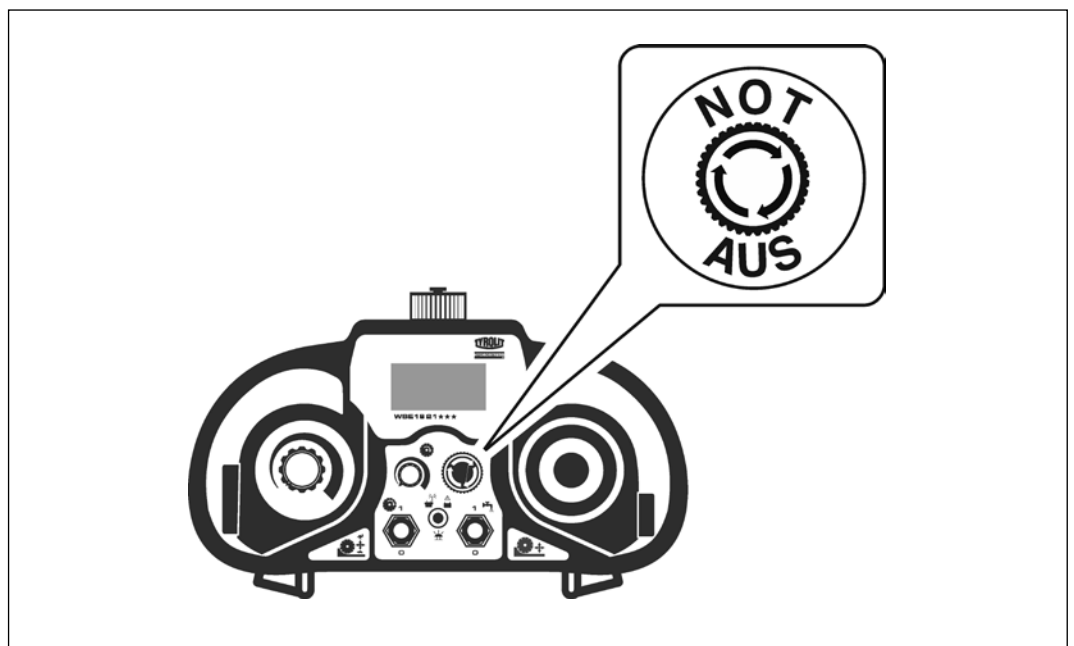


Signs on the machine

1.3 What to do in an emergency

- ▶ Press the EMERGENCY STOP button on the remote controller.

The LED indicator light flashes quickly when the EMERGENCY STOP function is activated on the radio remote controller.



EMERGENCY STOP

2 Description

2.1 Wall saw system



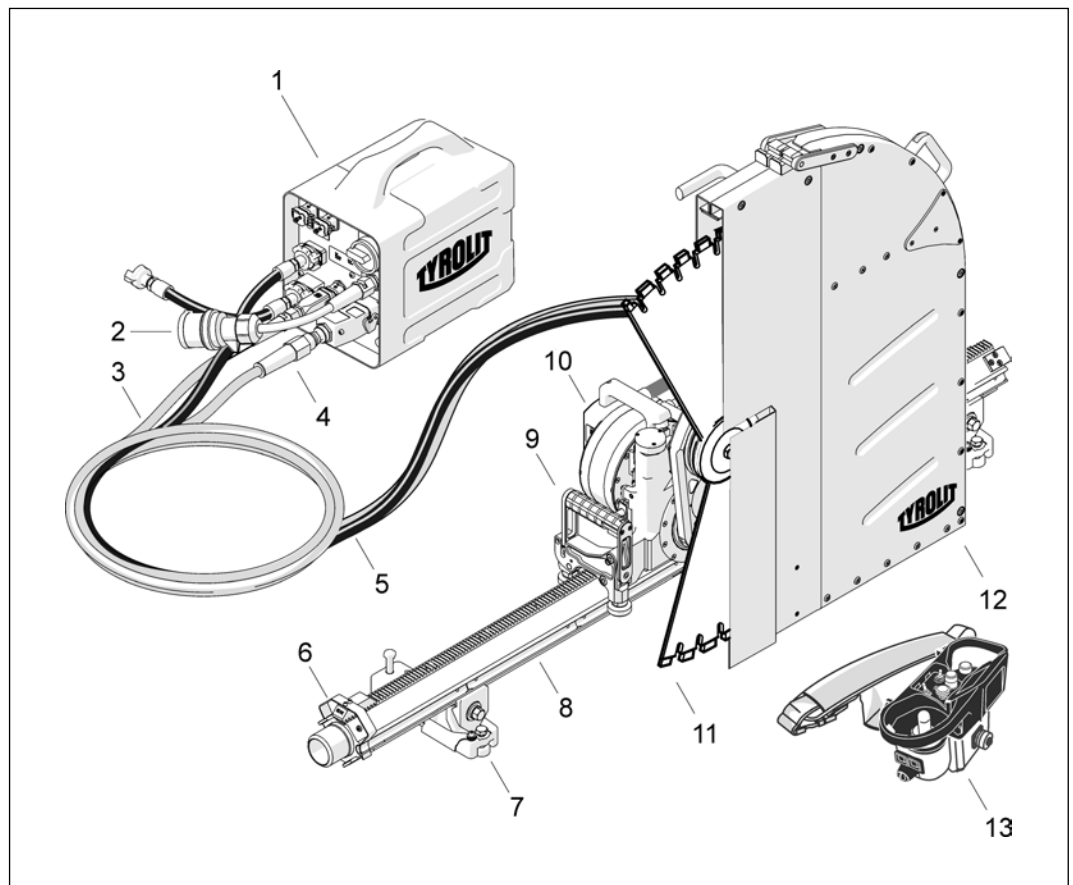
The design and function of the wall saw systems are described in the "Safety Manual/System Description for Wall Saws".

2.2 Intended use

Transportable wall saw for use on construction sites, for cutting (reinforced) concrete, stone and masonry. Only for industrial use.

Not suitable for use in potentially explosive atmospheres.

2.3 Wall saw system components

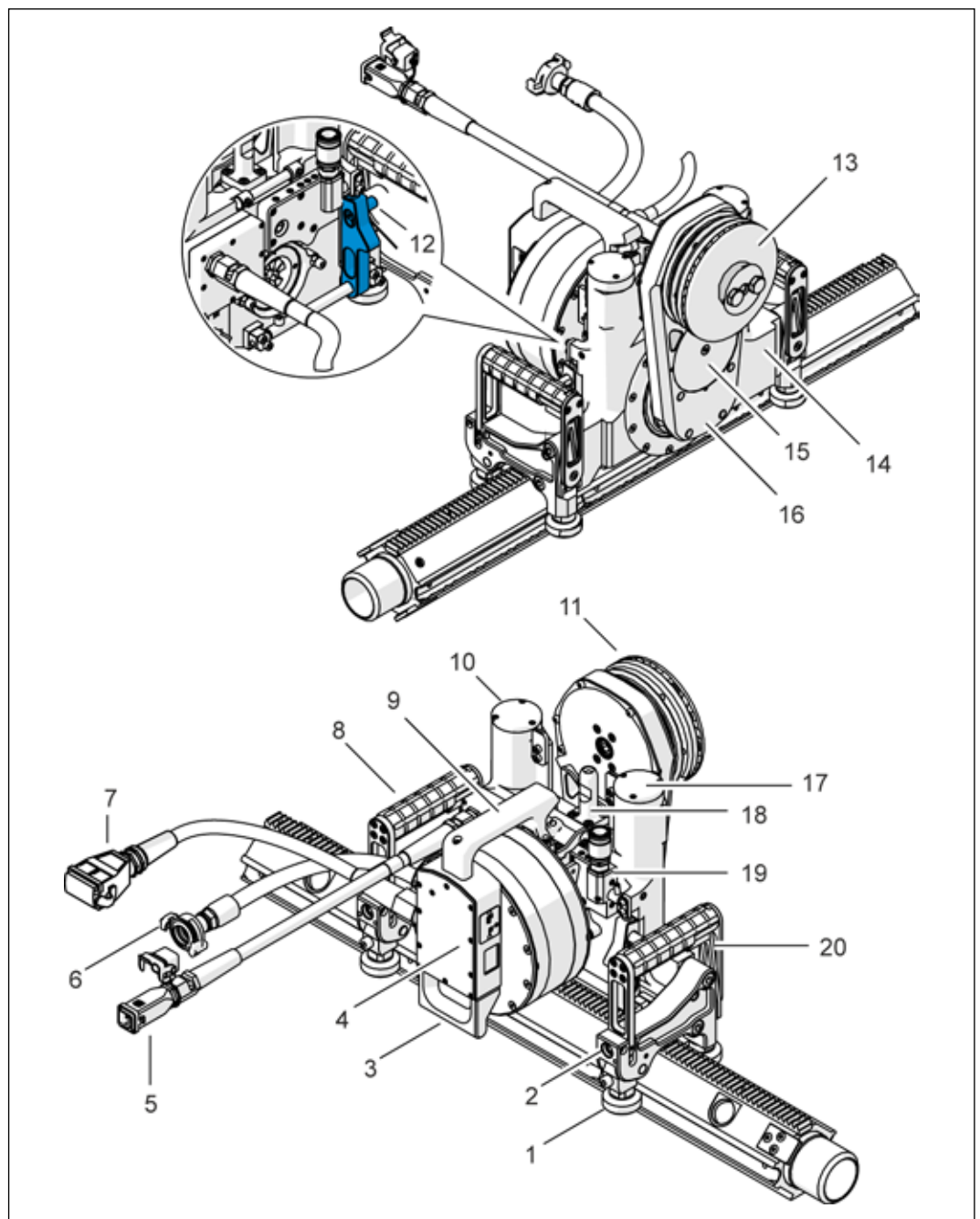


Wall saw system

- | | |
|---------------------------------|----------------------------|
| 1 WSE1621P Control unit | 8 Guide rail |
| 2 Mains cable with connector | 9 Wall saw head |
| 3 Electric cable for feed motor | 10 Drive motor |
| 4 Electric cable for main motor | 11 Diamond saw blade |
| 5 Water hose | 12 Blade guard |
| 6 Rail stopper | 13 Radio remote controller |
| 7 Rotating rail support | |

2.4 Main components of the wall saw head

2.4.1 Wall saw head components

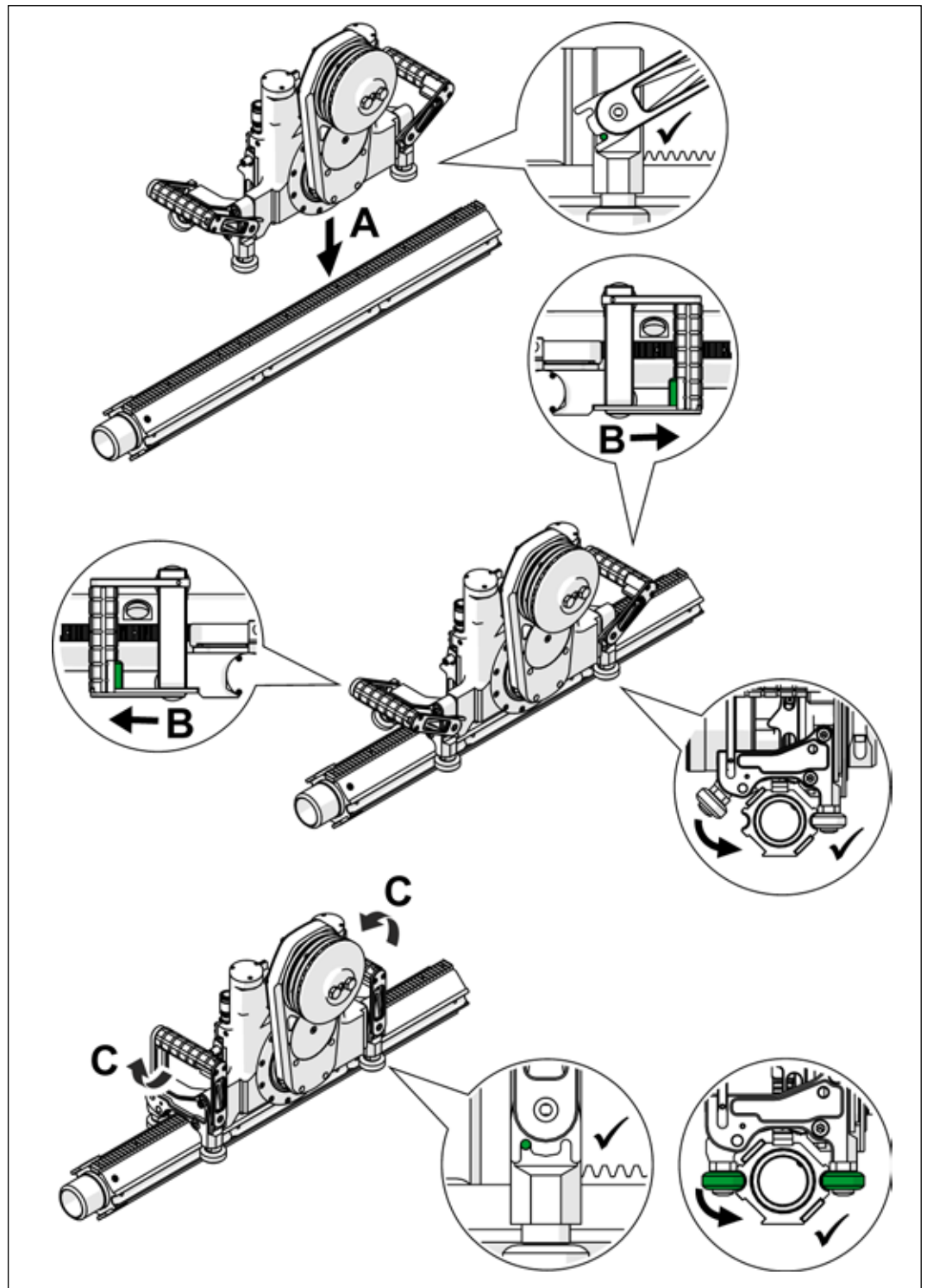


Components

- | | | | |
|----|-------------------------------------|----|----------------------------|
| 1 | Guide roller | 11 | Saw blade mount |
| 2 | Undercarriage | 12 | Motor fuse |
| 3 | Grip for motor | 13 | Quick-release flange |
| 4 | Saw blade drive motor | 14 | Casing |
| 5 | Connector for feed motors | 15 | Housing cover (oil change) |
| 6 | Water connection | 16 | Swivel arm |
| 7 | Connector for saw blade drive motor | 17 | Feed motor, swivel |
| 8 | Grip / lock grip | 18 | Blade guard uptake |
| 9 | Grip for motor | 19 | Water control valve |
| 10 | Feed motor, travel | 20 | Lock unit |

3 Mounting / removal

3.1 Placing the wall saw on the guide rail



Mounting the wall saw



If the swivelling handle fails to engage or the wall saw sits too loosely on the guide rail: adjust the guide rollers.

3.2 Adjusting the guide rollers

✓ Tool

Fork wrench

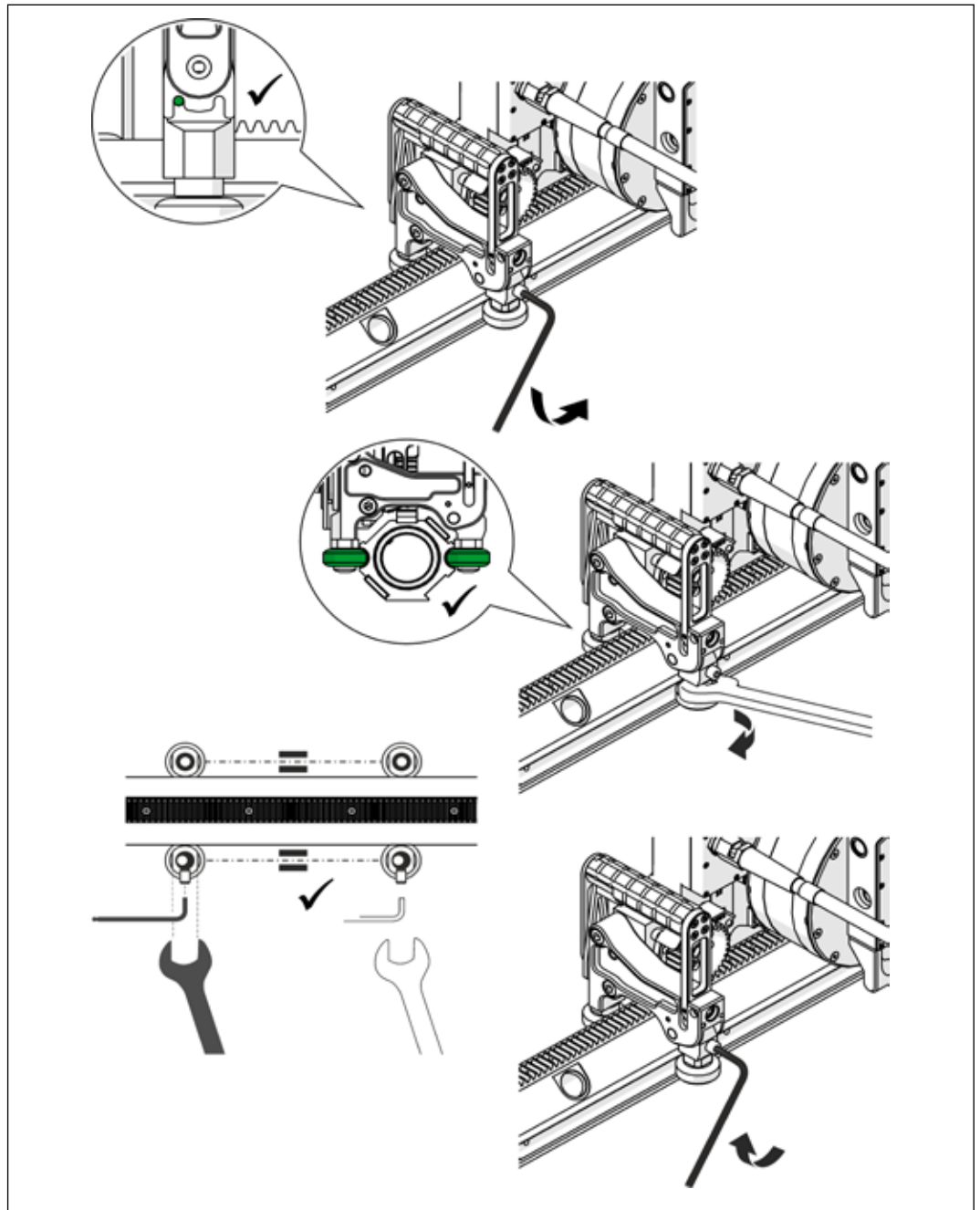


Size 24
TYROLIT No. 973773

Allen key



Size 6
TYROLIT No. 973792



Adjusting the guide rollers



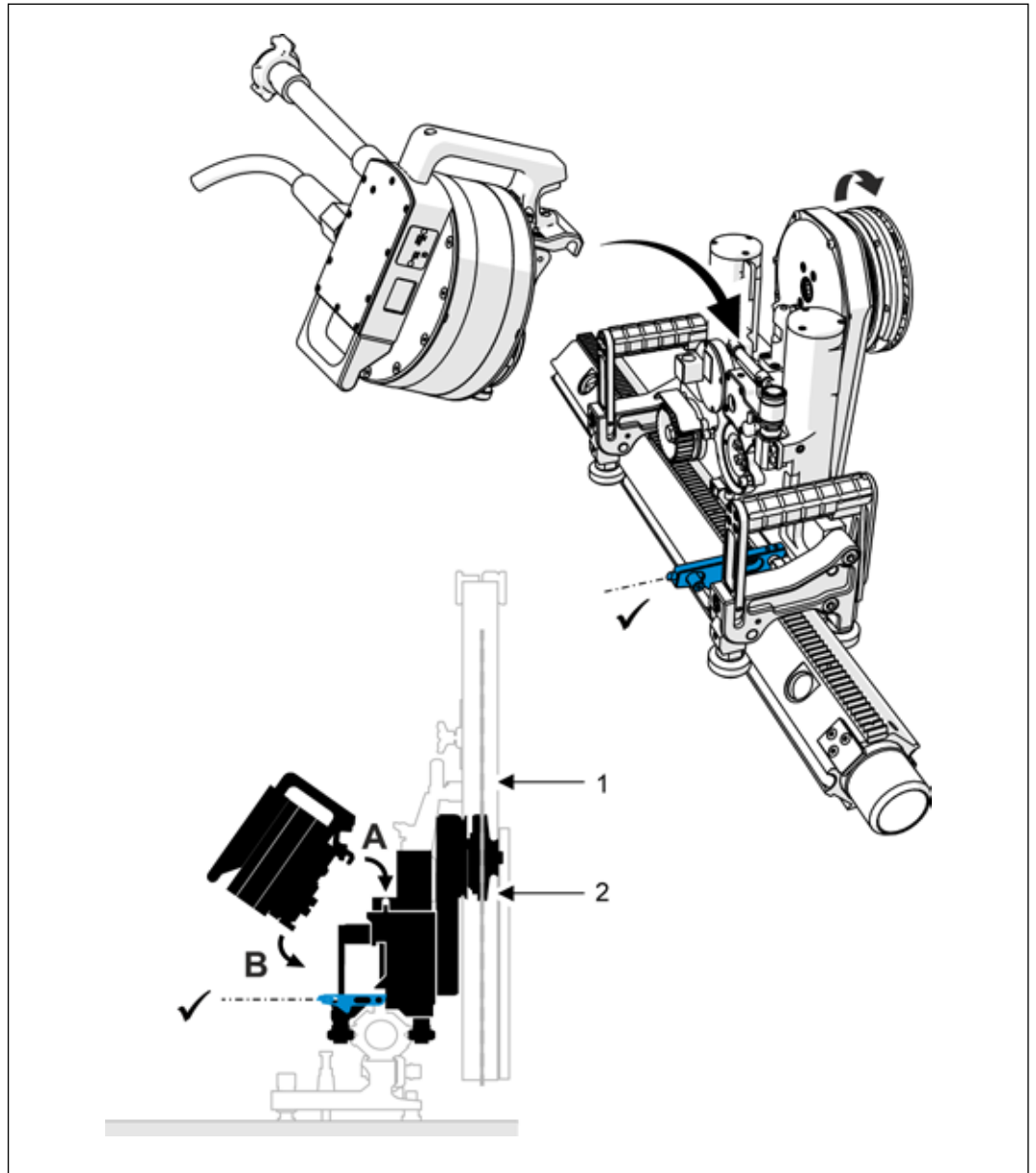
The guide rollers have been set correctly if they can no longer be turned by hand. In order for the machine to travel parallel to the rail, both guide rollers must be adjusted identically.

3.3 Mounting the motor



The motor can be mounted without using any tools.

To enable the motor to engage with the coupling, you must be able to turn the blade hub. This is only possible if the diamond saw blade (1) or the quick-release flange (2) is mounted.



Mounting the motor

- 1 Diamond saw blade
- 2 Quick-release flange

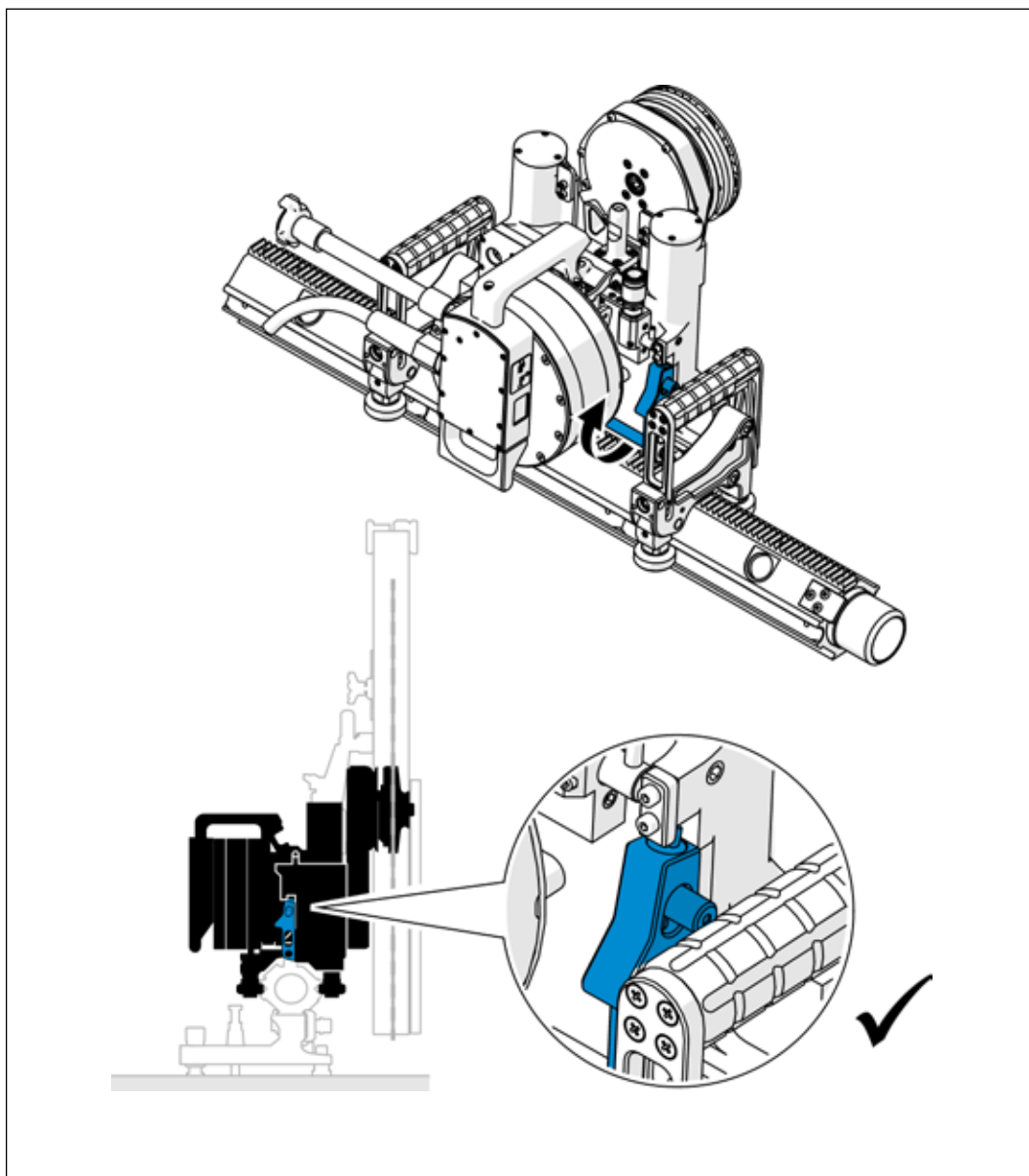
3.4 Securing the motor



DANGER

Risk of injury if the motor falls!

- ▶ When the motor has been mounted, it must be secured.

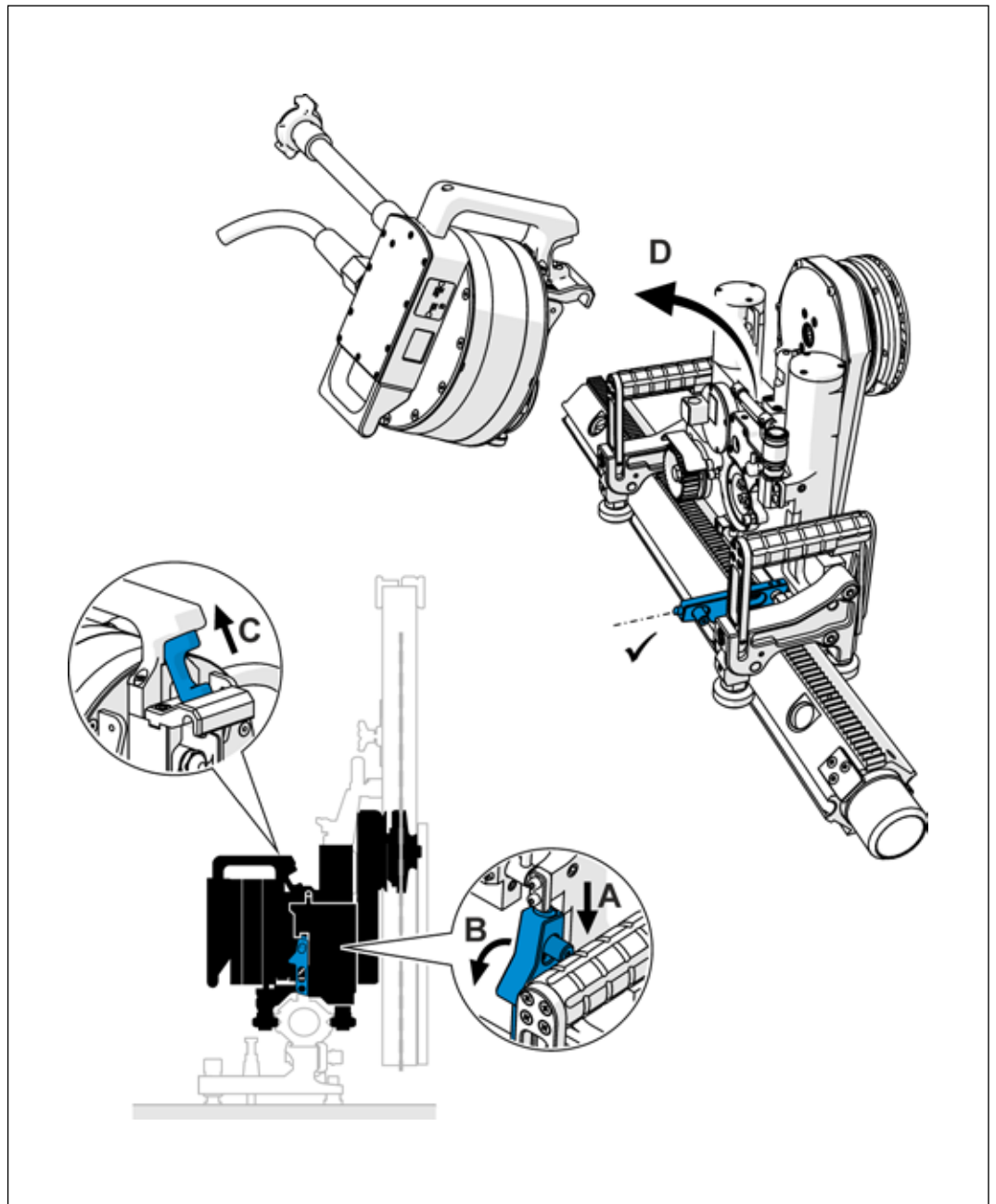


Securing the motor

3.5 Removing the motor



The motor can be removed without using any tools.



Removing the motor

3.6 Mounting the saw blade



DANGER

Death or serious injury can be caused by an escaping saw blade.

- ▶ Only use original screws and bolts from TYROLIT Hydrostress AG.



DANGER

Serious injury can be caused by sudden start-up of the saw blade.

- ▶ Switch off the wall saw before working on the saw blade.
- ▶ Isolate the wall saw from the mains supply.



Diamond saw blades can be mounted on the WS1621 wall saw using uptake drill holes of Ø60 mm.

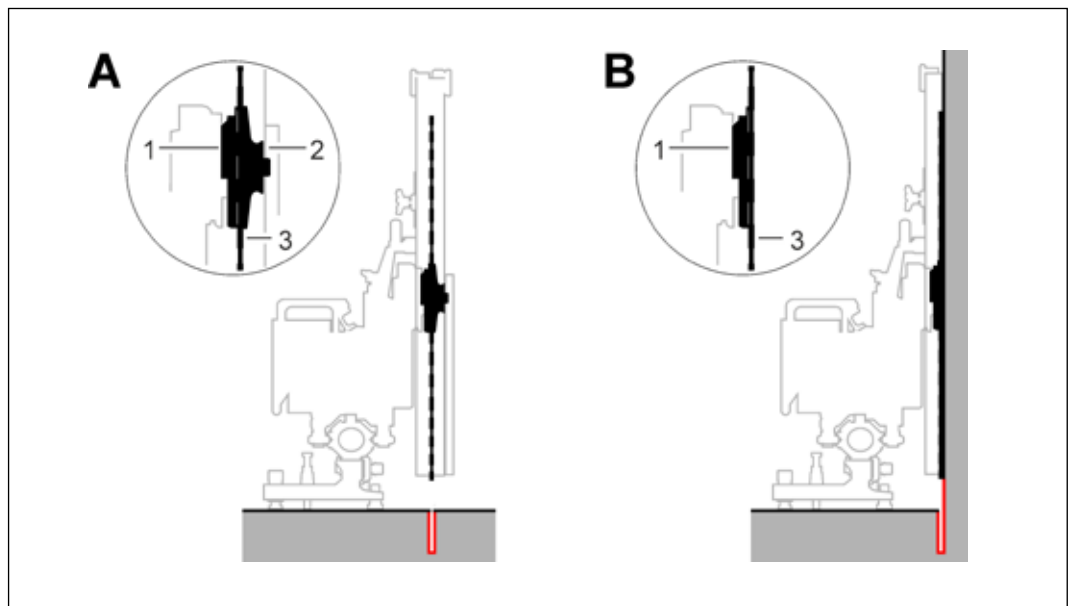
3.6.1 Saw blade unit



The saw blade unit consists of the TYROLIT quick-release flange and the saw blade.

The direction of rotation of the saw blade must match the direction of rotation of the machine.

Correct alignment: Countersinking of the fixing holes against the blade cover.



Saw blade unit

- | | | | |
|---|-----------------------------------|---|-----------|
| A | Saw blade unit for normal cutting | 1 | Flange |
| B | Saw blade unit for flush cutting | 2 | Cap |
| | | 3 | Saw blade |

3.6.2 Saw blade fixing for normal cutting



DANGER

Death or serious injury can be caused by a flying saw blade!

- ▶ Always secure the diamond saw blade by using 6 original TYROLIT countersunk screws and 2 blade cover screws.
- ▶ Tighten the countersunk screws to a torque of 10 Nm.
- ▶ Tighten the blade cover screws to a torque of 50 Nm.
- ▶ Tighten the central screw to a torque of 60 Nm.



Saw blade diameters

Ø 650 mm / Ø 825 mm / Ø 1025 mm / Ø 1200 mm / Ø 1600 mm

✓ Tool

Fork wrench

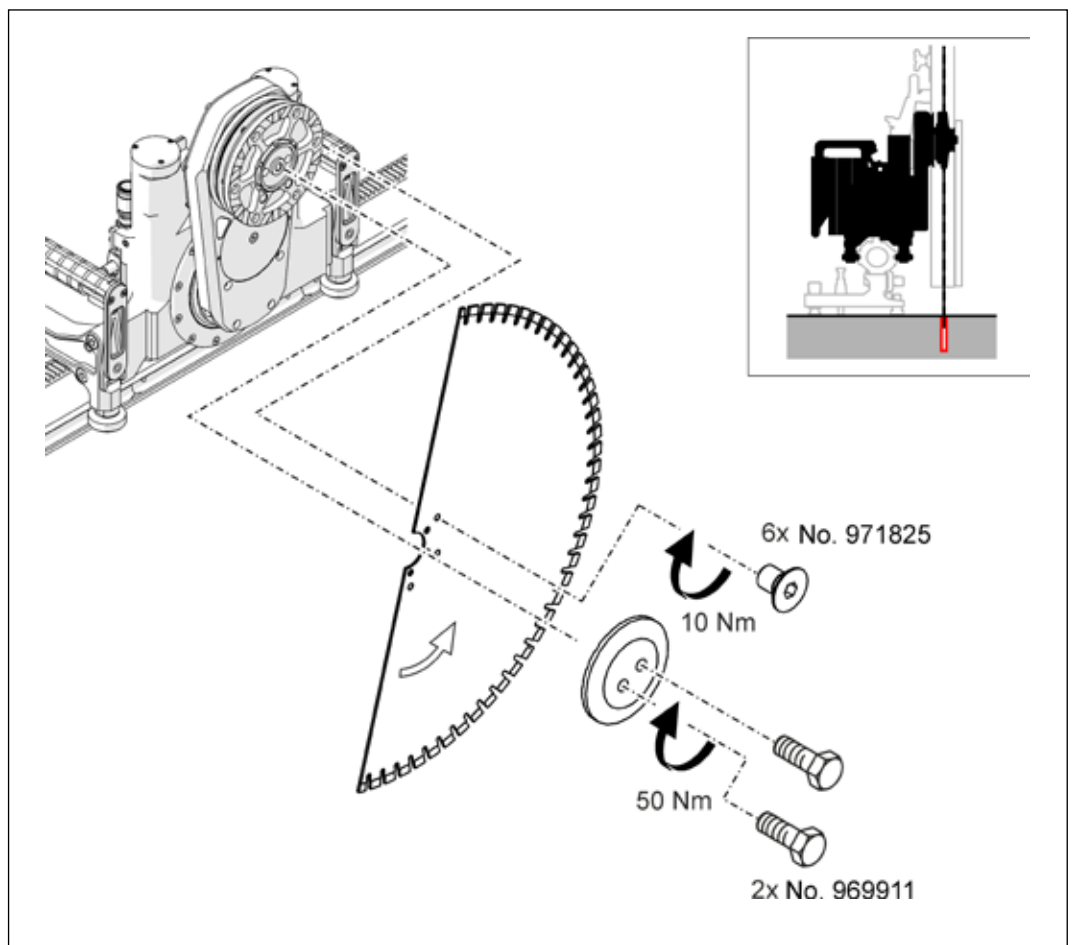


Size 19
TYROLIT No. 973784

Allen key



Size 5
TYROLIT No. 973791



Saw blade fixing for normal cutting

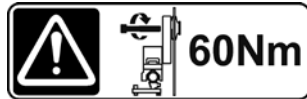
3.6.3 Saw blade fixing for flush cutting



DANGER

Death or serious injury can be caused by a flying saw blade!

- ▶ Always secure the diamond saw blade by using 6 original TYROLIT countersunk screws.
- ▶ Tighten the countersunk screws to a torque of 10 Nm.
- ▶ Tighten the central screw to a torque of 60 Nm.



Saw blade diameters

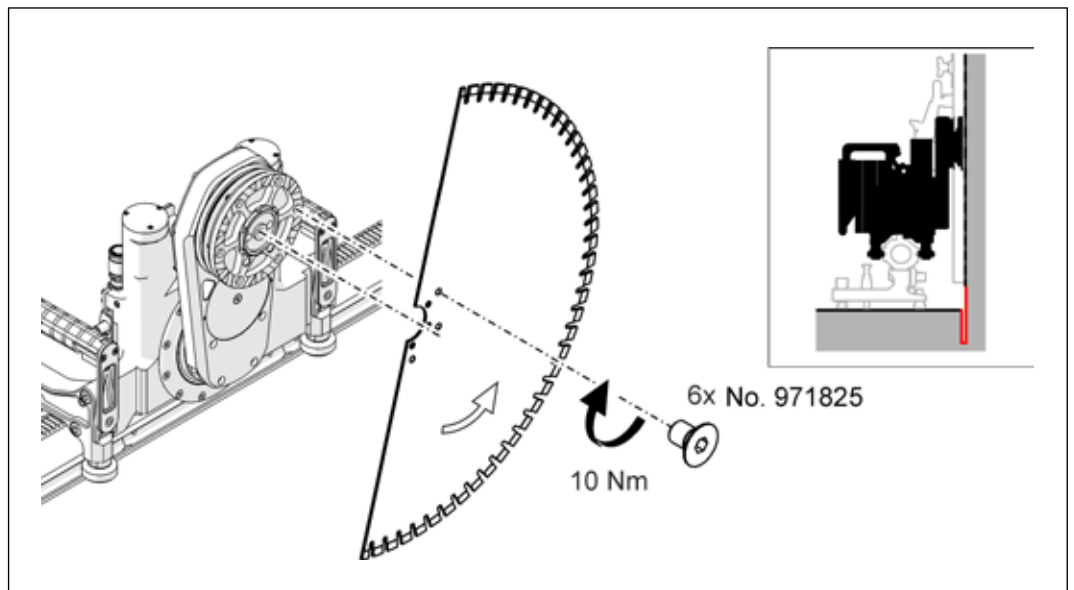
Ø 650 mm / Ø 825 mm / Ø 1025 mm / Ø 1200 mm / Ø 1600 mm

✓ Tool

Allen key



TYROLIT No. 973791 (size 5)



Saw blade fixing for flush cutting

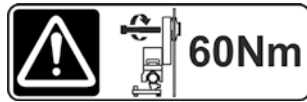
3.7 Mounting the saw blade unit



DANGER

Death or serious injury can be caused by a flying saw blade!

- ▶ Check whether the sleeve and central screw are countersunk.
- ▶ Tighten the central screw to a torque of 60 Nm.



✓ Tool

Allen key

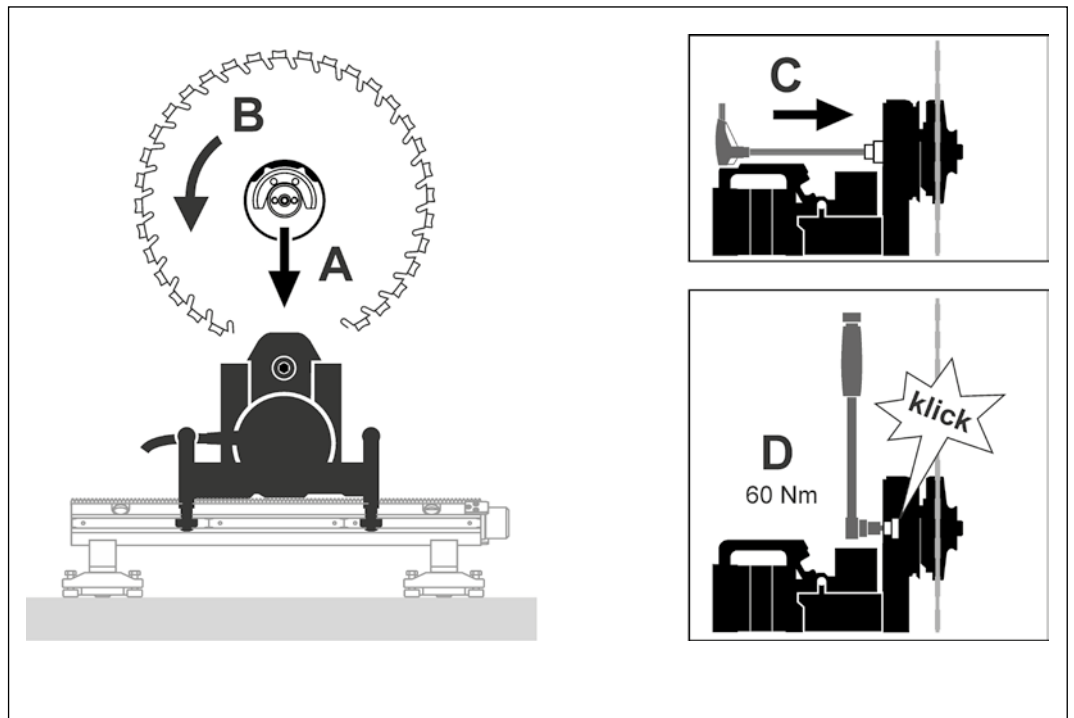


TYROLIT No. 10980265

Torque wrench



TYROLIT No. 10982724



Mounting the saw blade unit

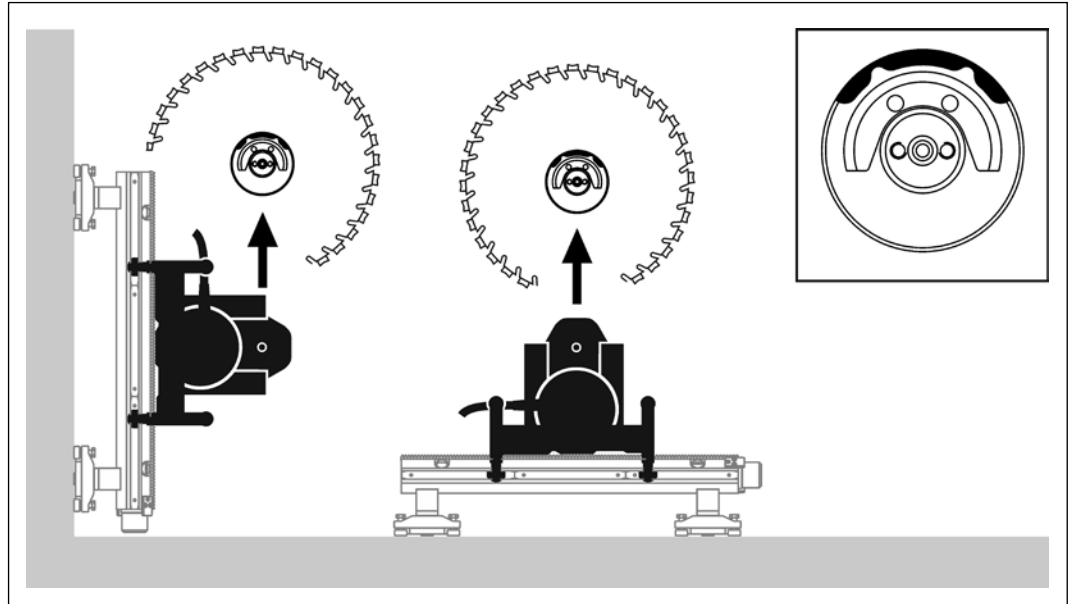
3.8 Removing the saw blade unit



WARNING

Risk of injury if the saw blade falls!

► Lift out the saw blade unit to the top when removing it.



Removing the saw blade unit

3.8.1 Removing the saw blade unit

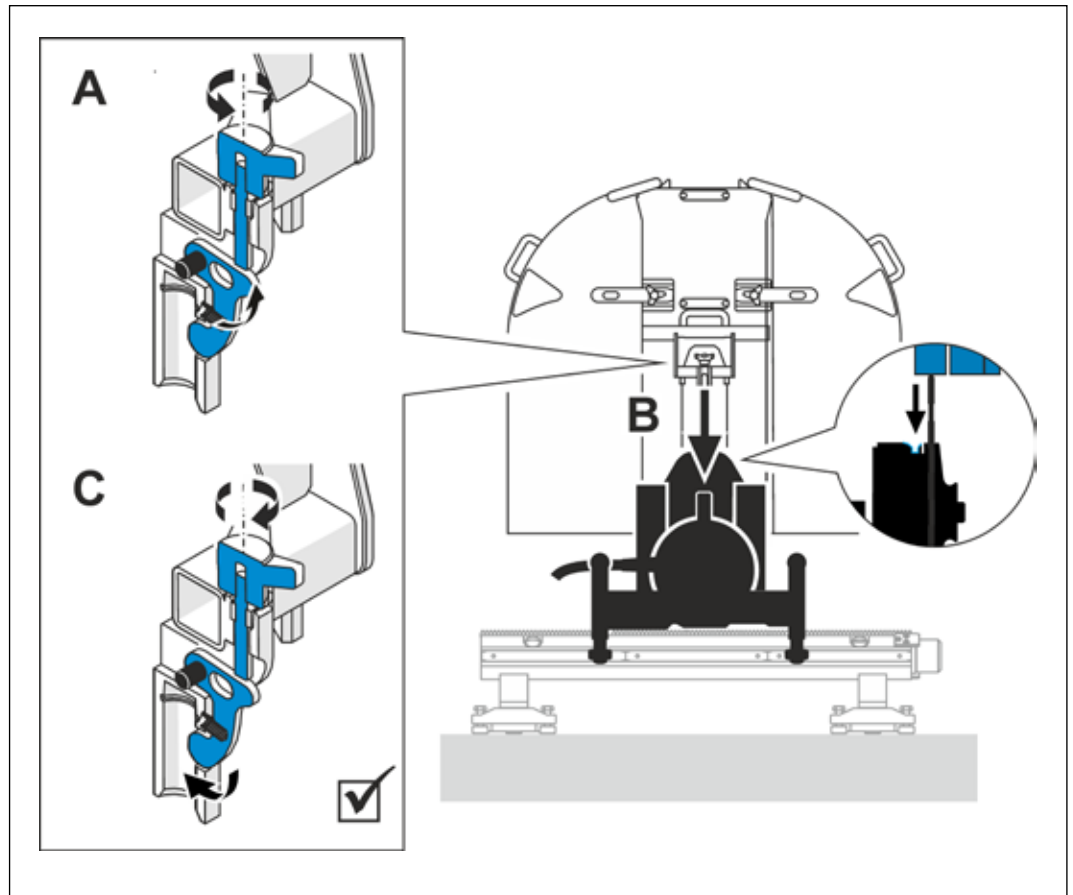


Remove the saw blade unit in reverse order to the mounting/assembly process.

3.9 Blade guard

3.9.1 Mounting the blade guard

- ▶ Mount the blade guard according to the instruction leaflet.



Mounting/removing the blade guard

3.9.2 Removing the blade guard



Remove the blade guard in the reverse order to the mounting/assembly process.

3.10 Connecting the control unit

3.10.1 Establishing the mains, motor and water supply



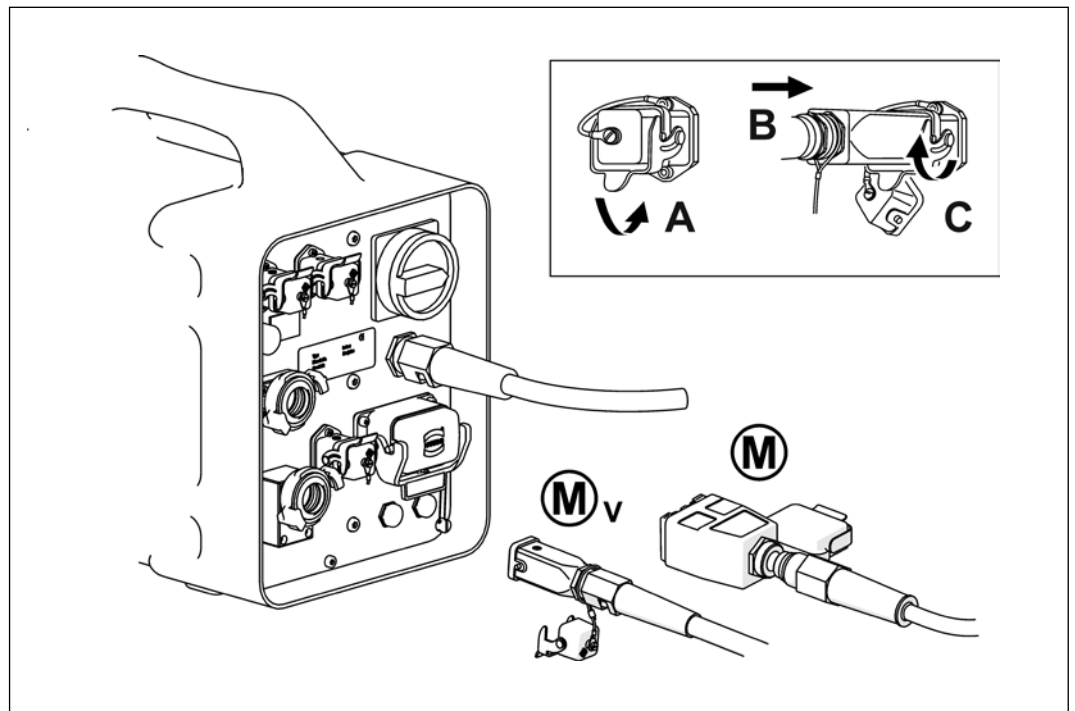
Before starting to use the system, please read the operating instructions supplied with the WSE1621 Control unit.

3.10.2 Mains

- ✓ Connectors/plugs are clean
- ✓ Cables are undamaged
- ✓ The power supply is earthed and fitted with an AC/DC sensitive residual current circuit breaker (FI type B; max. residual current 30 mA)
- ✓ Sufficient cable cross-sections: up to 50 m long 4 x 4 mm², more than 50 m long 4 x 6 mm²

3.10.3 Connecting motors

- ✓ Connectors are clean
- ✓ Cables are undamaged



Control unit connections

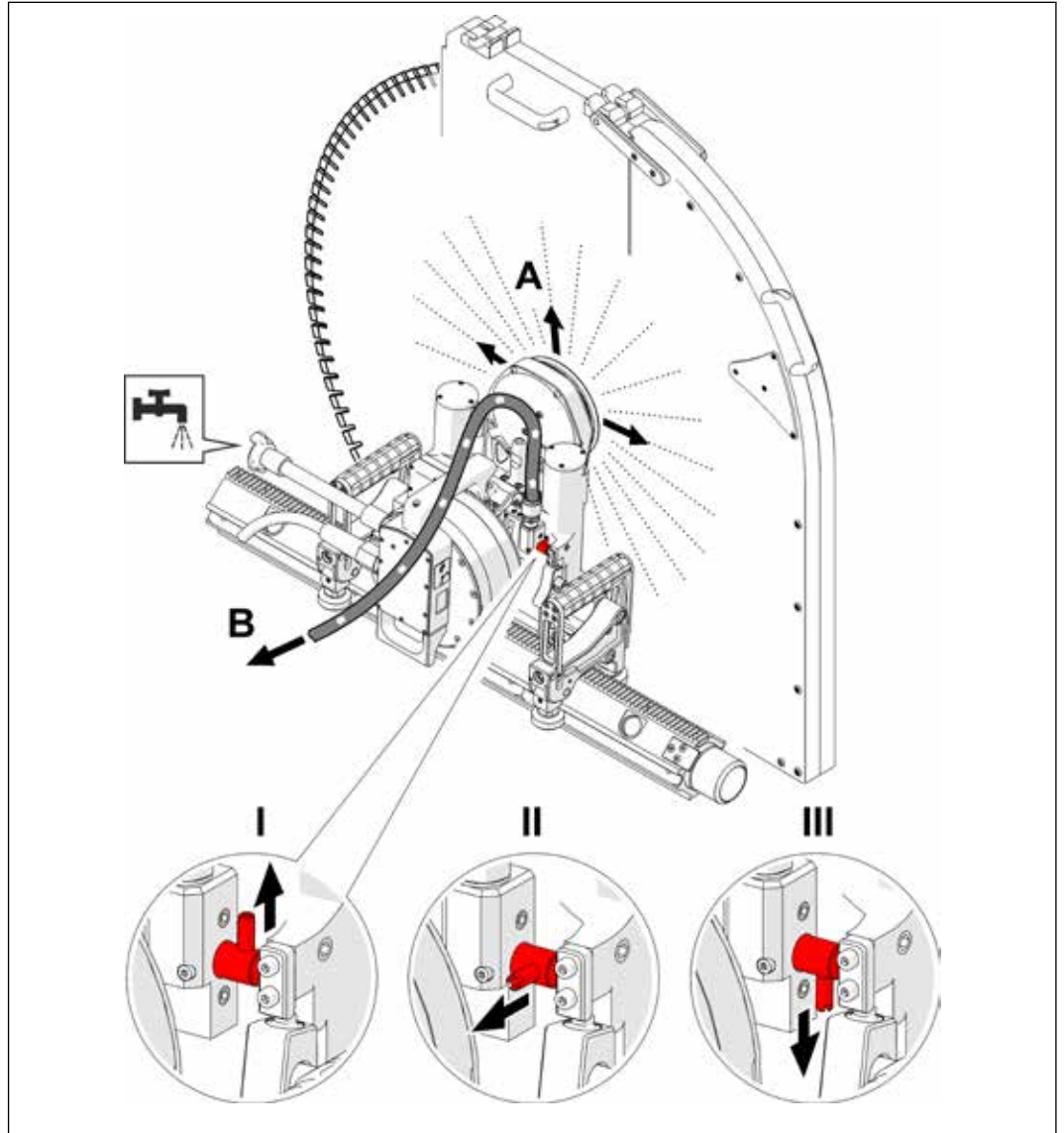
- M Cutting tool drive motor
- M v Feed motor

3.10.4 Water

Wet and dry cutting



The WSE1621 Wall saw can be used for wet and dry cutting applications.



Wet and dry cutting

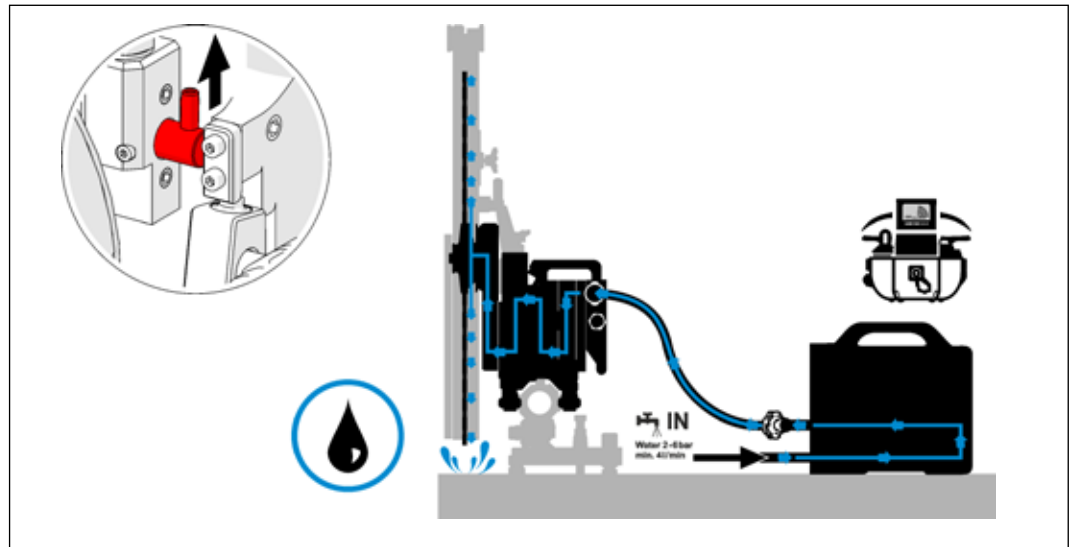
- A Water outlet on the saw blade
- B Water outlet via bypass line

- I position: Wet cutting
- II position: Dry cutting without swivel arm cooling (no continuous operation)
- III position: Dry cutting with swivel arm cooling (continuous operation possible)

Wet cutting

Water

- ✓ Pressure: Min. 2 bar/max. 6 bar
- ✓ Amount: Min. 4 l/min
- ✓ Max. temperature 25 °C



Wet cutting

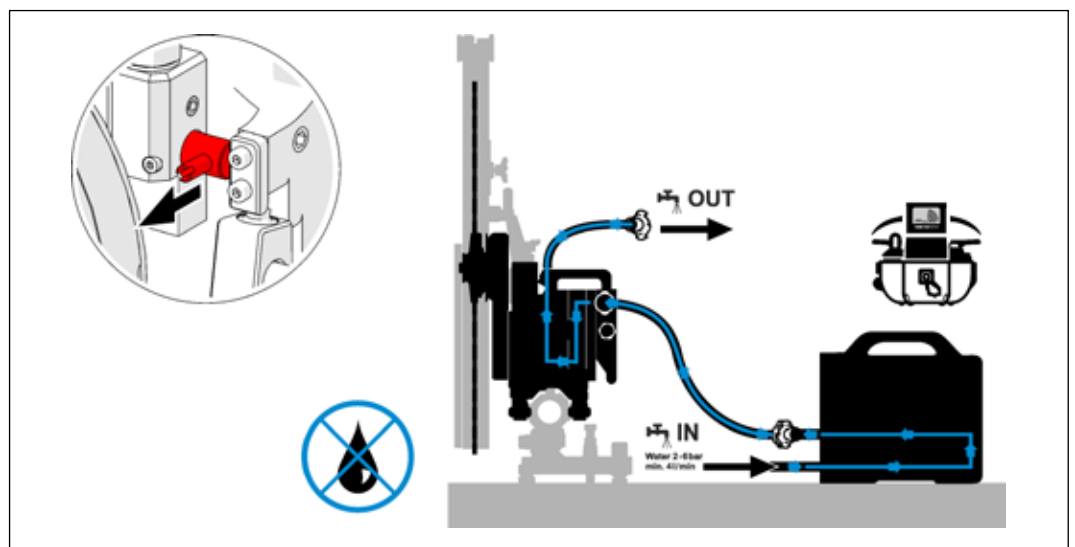
Dry cutting without swivel arm cooling



When using the dry cutting method without swivel arm cooling, the water is drained via a bypass line. When using the dry cutting method without swivel arm cooling, continuous operation is not possible. The gearbox could overheat and cause damage to the seals and bearings. After using for 5 minutes, a ¼ hour break must be maintained to ensure adequate cooling.



The dry cutting method without swivel arm cooling can be used, for example, for cut-offs (if only the last 2-3cm is cut from the concrete).



Dry cutting without swivel arm cooling

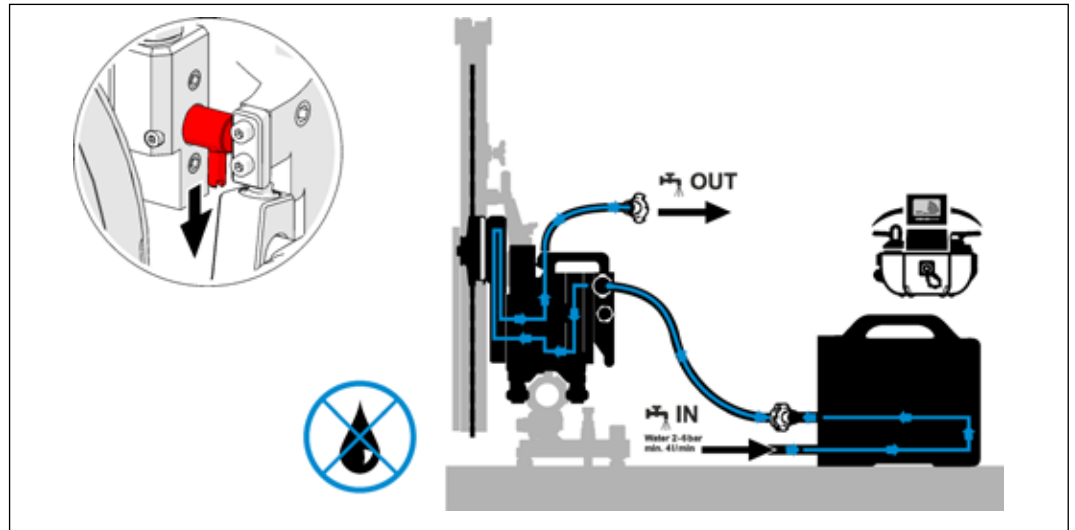
Dry cutting with swivel arm cooling and special diamond tool



The gearbox of the swivel arm can be cooled to allow longer periods of dry cutting. The cooling water is directed through the swivel arm here and drained via the bypass. When using the dry cutting method, special TYROLIT diamond tools must be used.

Important:

The special blade flange TYROLIT No. 10999403 must be mounted for this application.



Dry cutting with swivel arm cooling

Cutting without the blade guard



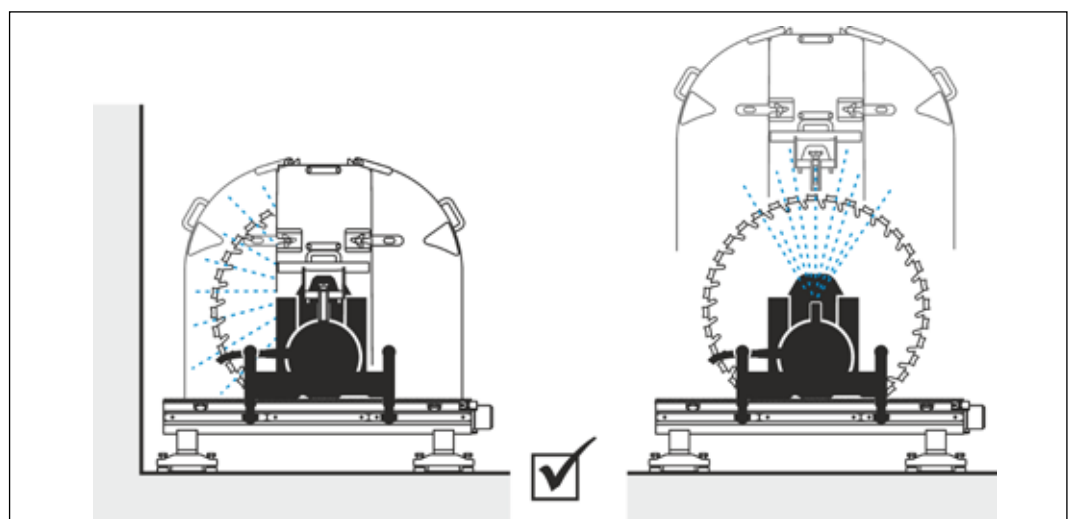
DANGER

Danger from segments or concrete chips flying off from the cutting tool.

- ▶ Cutting without a blade guard is prohibited.
- ▶ When cutting without protective side parts, e.g. door cut-outs, the side parts must be disassembled when the machine is at a standstill.



If the blade guard centre section is not mounted, the water will emerge in an uncontrolled manner over the blade guard uptake.

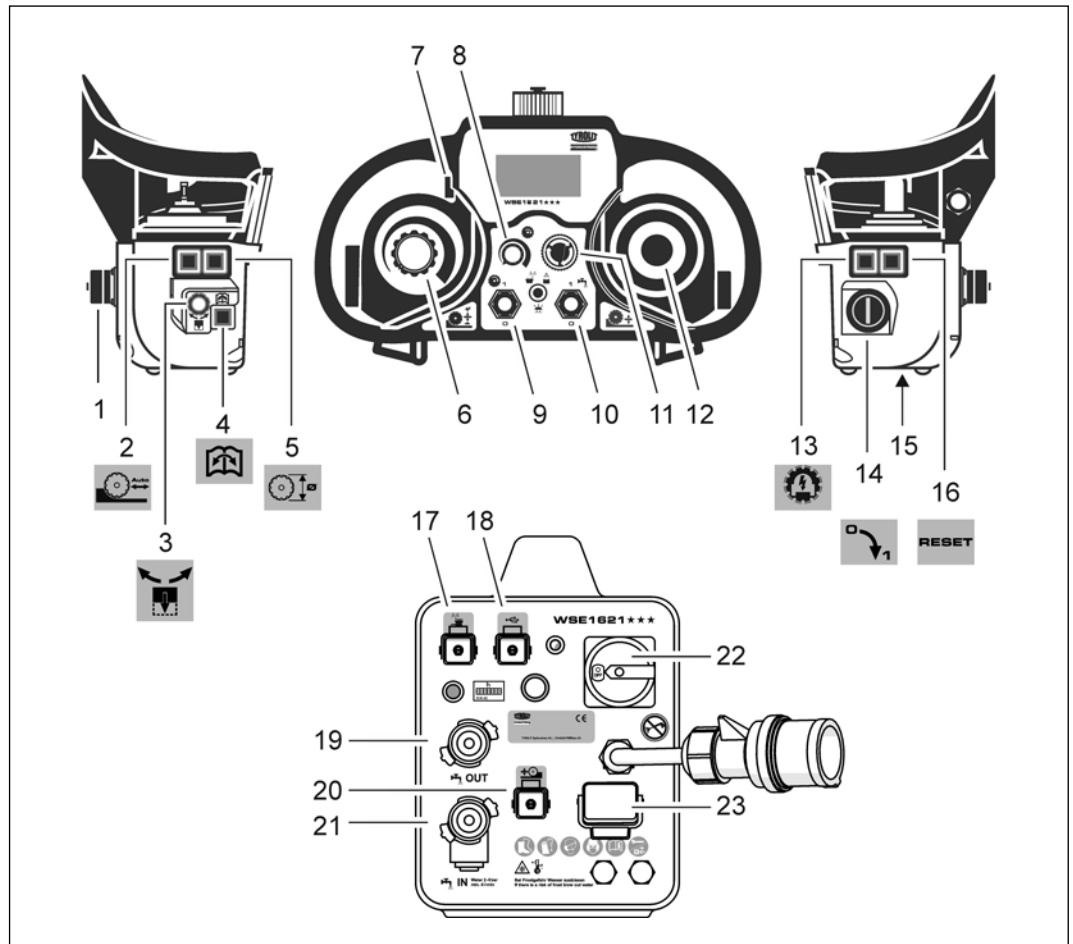


Cutting without the blade guard

4 Operation

4.1 Overview of controls

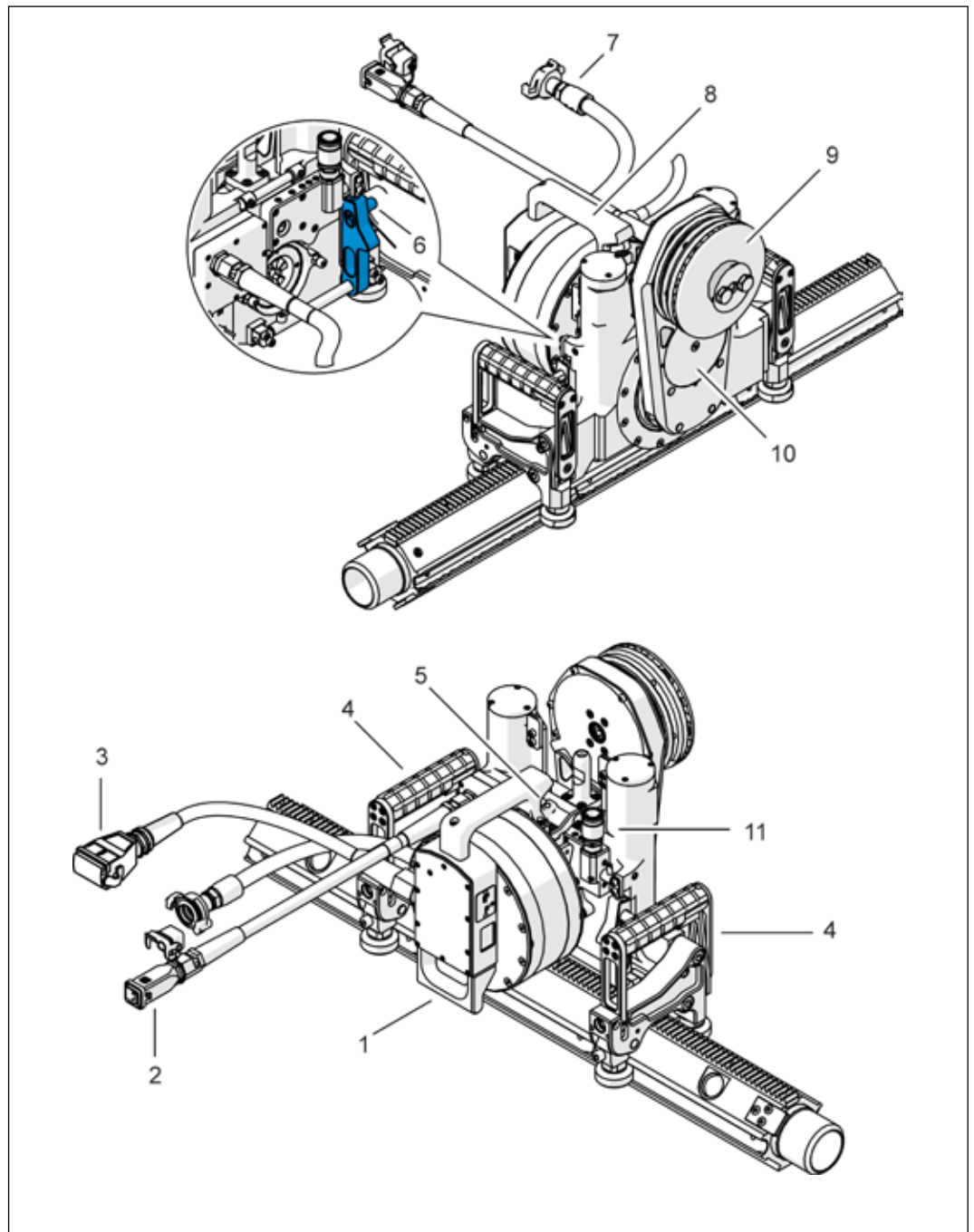
4.1.1 Remote controller / control unit



Controls

- | | | | |
|----|--|----|--|
| 1 | Connection for remote controller cable | 13 | Pulse button |
| 2 | Locking button (traverse feed) | 14 | Start switch |
| 3 | Rotary knob/push button, universal | 15 | Battery compartment |
| 4 | Menu selection button | 16 | Reset button |
| 5 | Tool selection button | 17 | Connection for remote controller cable |
| 6 | Feed motor potentiometer | 18 | USB port |
| 7 | USB port | 19 | Water connection |
| 8 | Main motor potentiometer | 20 | Connection for feed cable |
| 9 | Main motor On/Off | 21 | Water connection |
| 10 | Water On/Off | 22 | Start switch |
| 11 | EMERGENCY STOP | 23 | Connection for main motor cable |
| 12 | Feed joystick | | |

4.1.2 Wall saw head

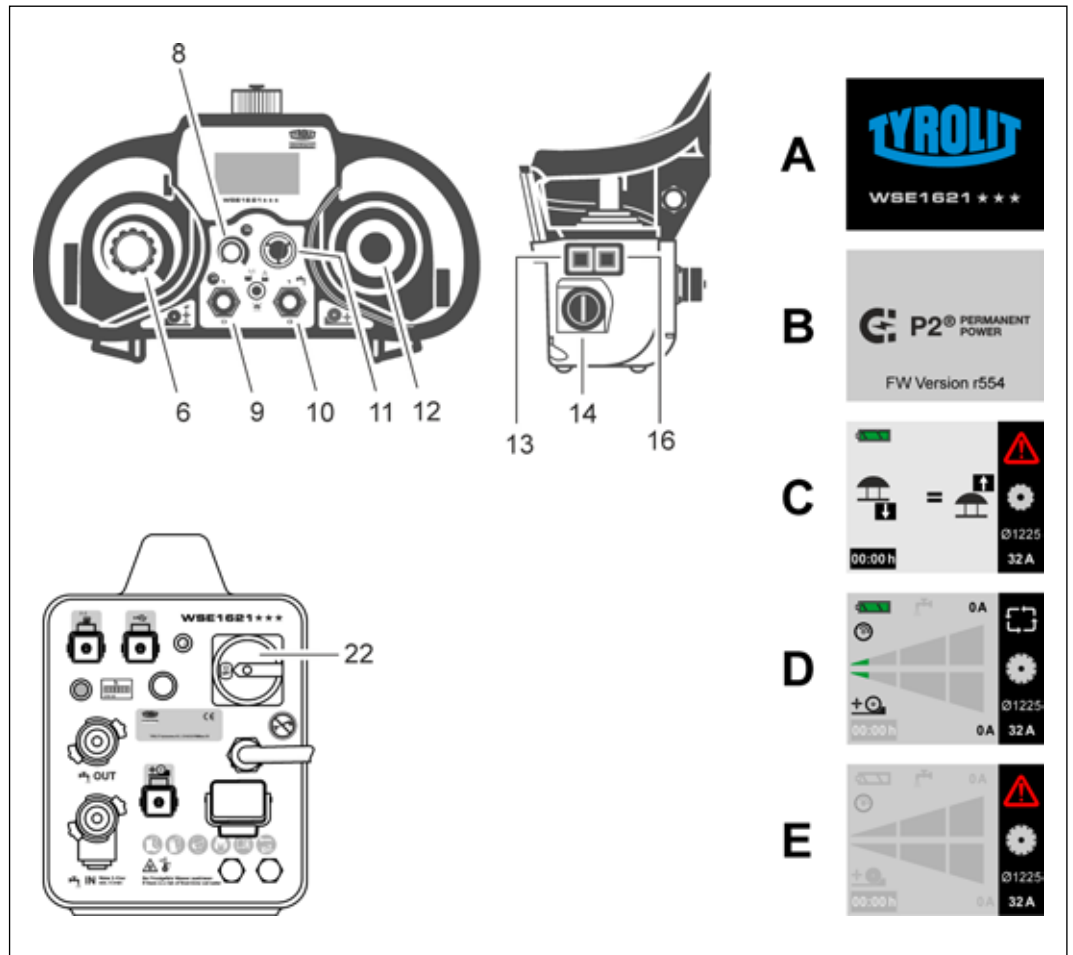


Controls on the wall saw

- | | |
|-----------------------------------|-------------------------------|
| 1 Grip | 7 Water connection |
| 2 Feed motor cable | 8 Grip with locking mechanism |
| 3 Drive motor cable for saw blade | 9 Quick-release flange |
| 4 Roller locking unit | 10 Oil change cover |
| 5 Motor locking mechanism | 11 Water connection bypass |
| 6 Motor fuse | |

4.2 Starting the wall saw

- ✓ The WSE1621 Control unit is connected to the mains and the water supply.
- ✓ The machine system is connected to the WSE1621 Control unit.
(See “Operating instructions - Sawing system”)
- ✓ The remote controller EMERGENCY STOP (11) has been deactivated.



Starting the control unit

- Move the controls listed below on the remote controller to the 0 position.

Feed motor potentiometer (6)

Main motor potentiometer (8)

Main motor On/Off (9)

Water switch (10)

Feed joystick, automatically takes up 0 position (12)

Starter switch (14)

- Switch on the WSE1621 Control unit by using the main switch (22).
- Switch on the radio remote controller using the starter switch (14).

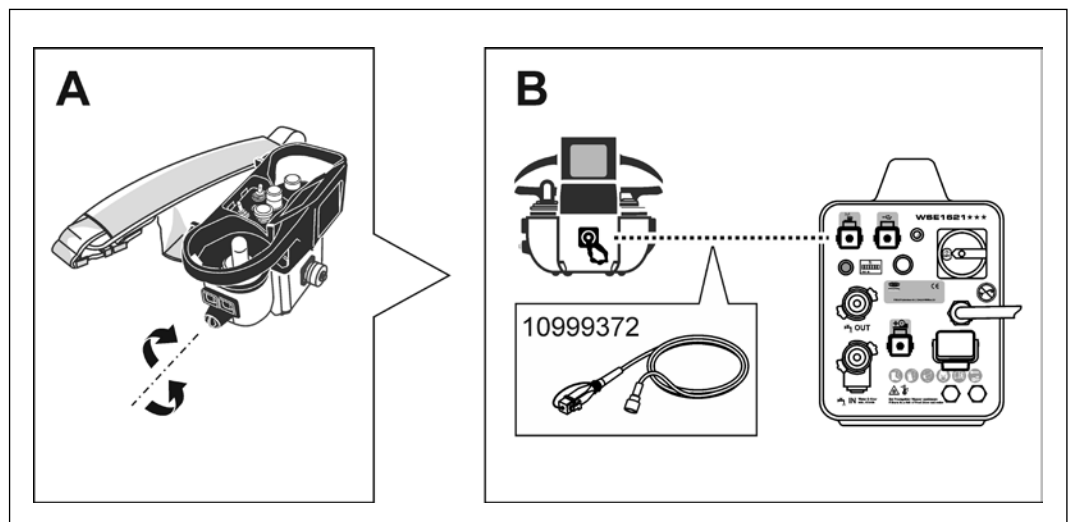
- Indicator lights (radio and battery) initially light up red
- An audible signal is emitted simultaneously
- The TYROLIT logo (A) appears in the display
- The P2 logo and firmware version e.g. r554 appear in the display (B)
- “EMERGENCY STOP information” screen appears in the display (C)
- The indicator light flashes green



If only the remote controller is switched on, the P2 screen will remain on the display.
Application: Check display of software version e.g. r554

- ▶ Press the blue reset button (16) on the radio remote controller.
 - The operating screen (D) appears on the display.
 - If an error message (E) appears, press the blue reset button (15) again.
- ▶ Press the green pulse switch (13)
 - The system indicator on the display lights up.
 - The feed and main motors are released from this point onwards.
 - The control unit automatically detects which machine system is connected.
- ▶ Open the water valve on the system supply line.
 - The water valve is displayed on the screen
- ▶ Press the Water On/Off switch (10) on the remote controller to I.
 - Water emerges at the cutting tool.
- ▶ Press the main motor On/Off switch (9) on the remote controller to position I.
 - The electric motor starts when the main motor potentiometer is in the max. position.
- ▶ The WSE1621 Control unit has started up and is ready for operation.

4.3 Changing the frequency of the remote controller



Frequency search



The radio remote controller systems are equipped with a frequency generator for selecting a frequency.
If the systems experience a malfunction or radio communication is interrupted (external transmitter, range, rechargeable battery empty), the systems immediately revert to the EMERGENCY STOP state.

New frequency search:

The next frequency is selected by switching the start switch on the remote controller off and then on again.

The process of switching off and on is limited to four attempts (channels). If the system does not locate a suitable frequency after four attempts, a changeover to cable operation is necessary.

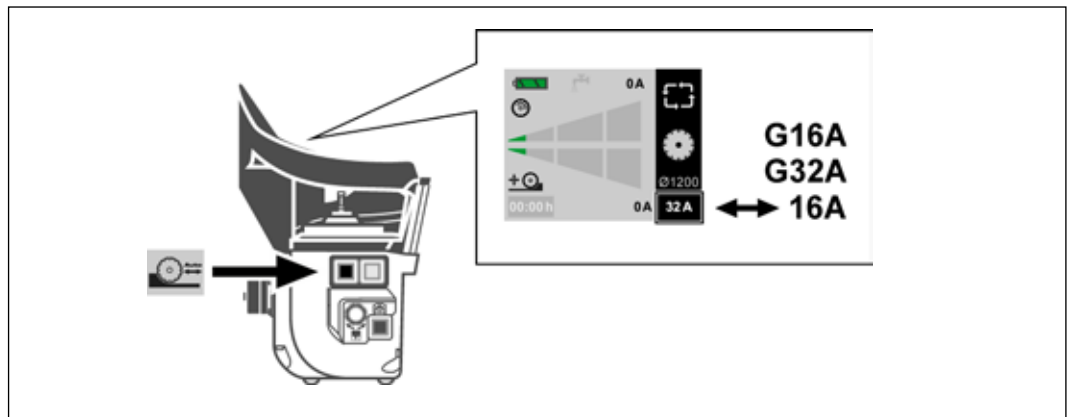
4.4 Selecting the mains power supply



The WSE1621 Control unit is preset for a 32 A mains power supply. (32A appears on the display). The mains power supply can be switched to a 16 A setting or an emergency power supply mode (G32A / G16A). The control unit will automatically return to the 32 A setting when it is restarted.

To switch the control unit to the 16 A setting or emergency power supply mode (G32A / G16A), perform the startup procedure as far as the point designated **“Press the black locking button (2) on the radio remote controller”**.

Instead of using the pulse button (13), you can now use the locking button (2) to switch to the 16 A mains power supply or the emergency power supply mode (G32A / G16A). (16A or emergency power supply (G32A / G16A) appears on the display.)



Selecting the mains power supply

4.5 Selecting the tool station

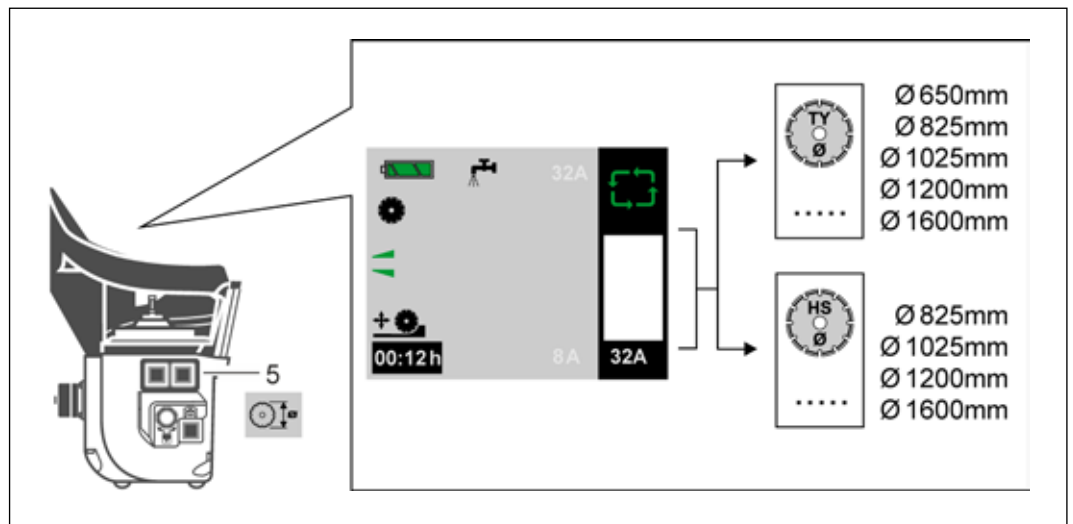
The machine systems (wall saws, wire saws, core drilling) are detected automatically during the startup process.

When the 1621 control unit has been started correctly, the tool stations can be selected before switching on the main motor.



The tool stations must not be changed during operation.

The tool stations are set with reference to the tool diameter for the optimum rotational speed and cutting performance.



Selecting the tool station



A selection can be made between the following cutting tools:

Tool selection



Wall saws

TYROLIT diamond tool
(Ø650mm / Ø825mm / Ø1025mm / Ø1200mm / Ø1600mm)



Wall saws

TYROLIT high-speed diamond tool
Ø825mm / Ø1025mm / Ø1200mm / Ø1600mm

Proceed as follows:

- ▶ Press the tool selection button (5). Toggle between the individual dimensions by repeatedly pressing the tool selection button.

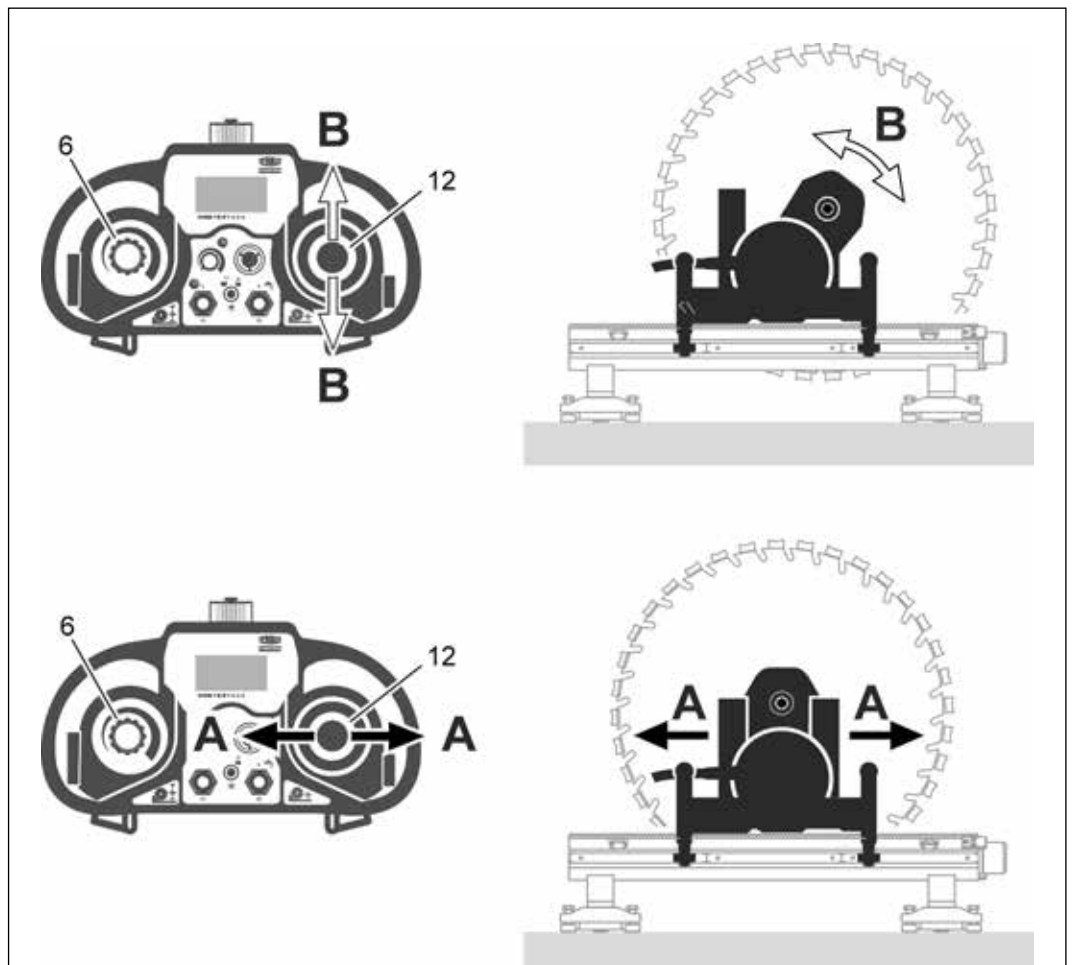


To switch to the high-speed diamond tool:

- ▶ To activate the change, press the tool selection button (5) for 3 seconds. When the button is released, the displayed symbol will change.
- ▶ Pressing the tool selection button (5) for 3 seconds again and then releasing it will result in the WSE1621 Control unit reverting back to the standard tools.

4.6 Adjusting the feed

The feed movements are selected with the joystick (12) and the speed is regulated via the potentiometer (6).

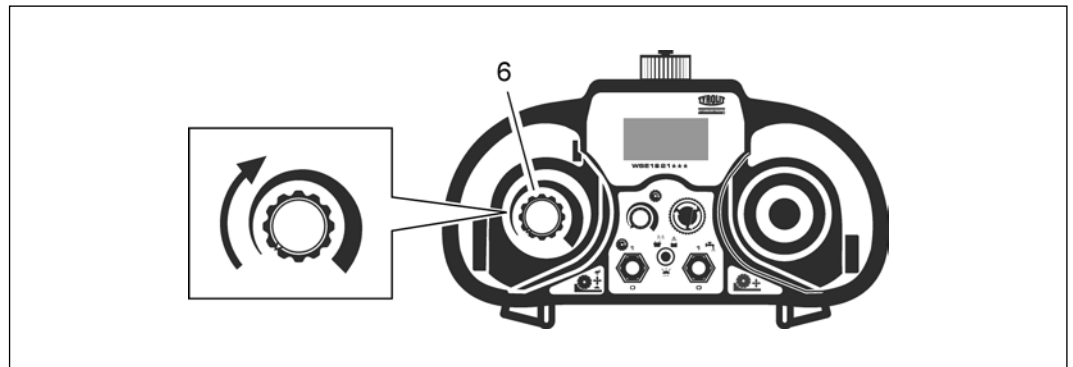


Adjusting the feed



During the cutting process, the feed speed is automatically supported by an assisted feed.

4.7 Manually adjusting the feed speed

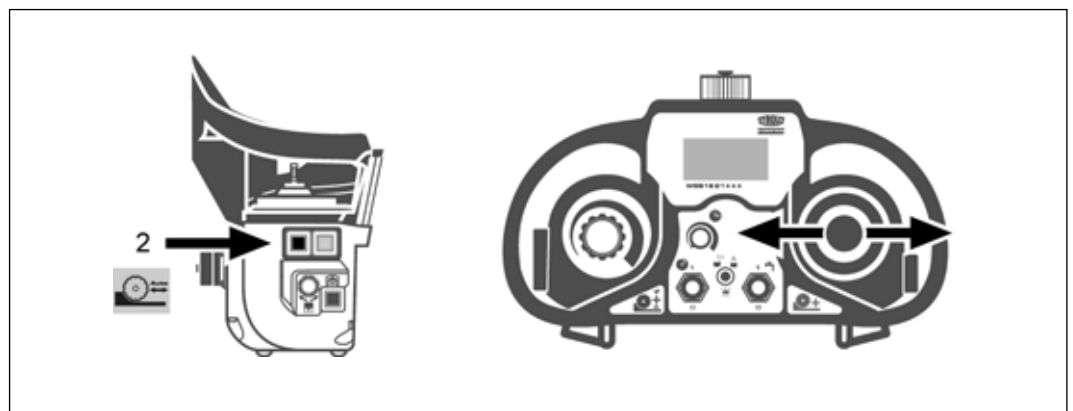


Feed speed

- ✓ The WSE1621 Control unit has been started
- ▶ Select the required feed speed via the feed potentiometer (6).

4.8 Locking the feed

So that the joystick does not have to be held in position during the travel feed motion, the travel feed can be locked.



Locking the feed

Proceed as follows:

- ▶ Push the joystick in the desired direction of travel and, at the same time, press the locking button (2).
- ▶ When the joystick and the locking button (2) are released, the feed is locked.

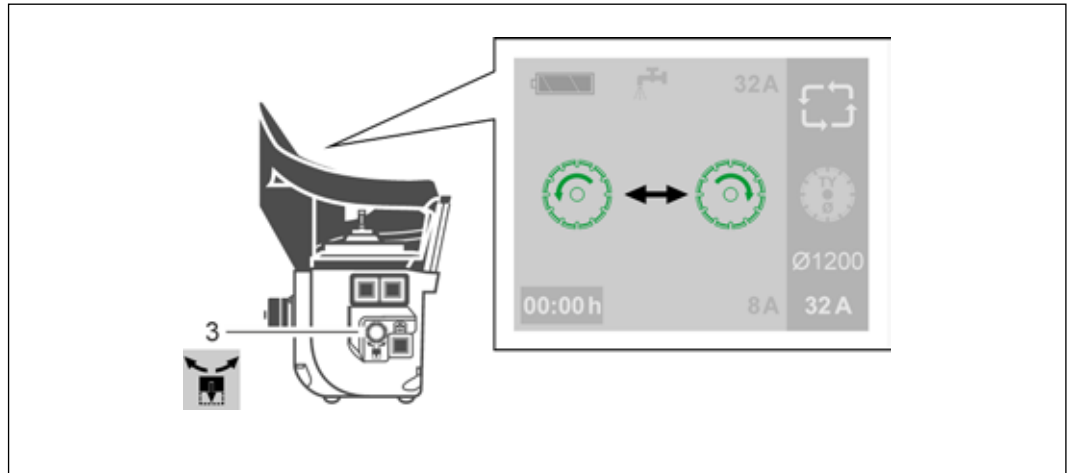


In order to release the feed lock, move the joystick slightly in any desired direction or press the locking button.

4.9 Changing the direction of rotation of the main motor



This function is only possible for wall sawing applications.
The direction of rotation can only be changed before starting the main motor.



Changing the direction of rotation of the main motor

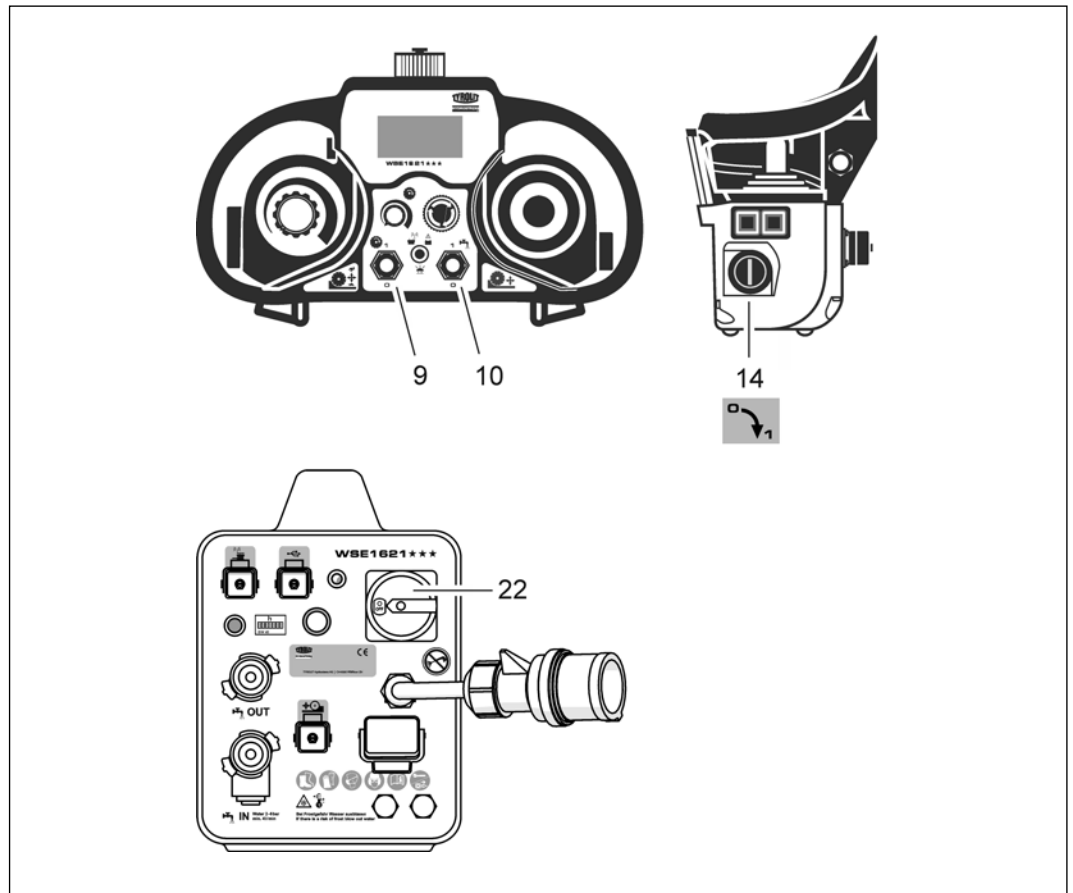
Proceed as follows:

- ▶ Press the universal rotary knob/push button (3).
 - The current direction of rotation of the main motor is indicated on the display.
- ▶ Turn the universal rotary knob/push button (3) until the direction of rotation changes on the display.
- ▶ Press the universal rotary knob/push button (3).
 - The direction of rotation has been changed and the operating screen is displayed.



When the WSE1621 Control unit is restarted, the direction of rotation of the main motor reverts to the default setting.

4.10 Switching off the WSE1621 Control unit



Switching off the control unit

Proceed as follows:

- ▶ Switch off electric motor (9), On/Off Main motor.
- ▶ Deactivate the cooling water, switch (10) Water On/Off.
- ▶ Close the water valve on the WSE1621 Control unit.
- ▶ Turn the start switch (14) on the remote controller to the 0 position.
- ▶ Switch off the WSE1621 Control unit by using the main switch (22).



CAUTION

Risk of frost damage to the WSE1621 Control unit!

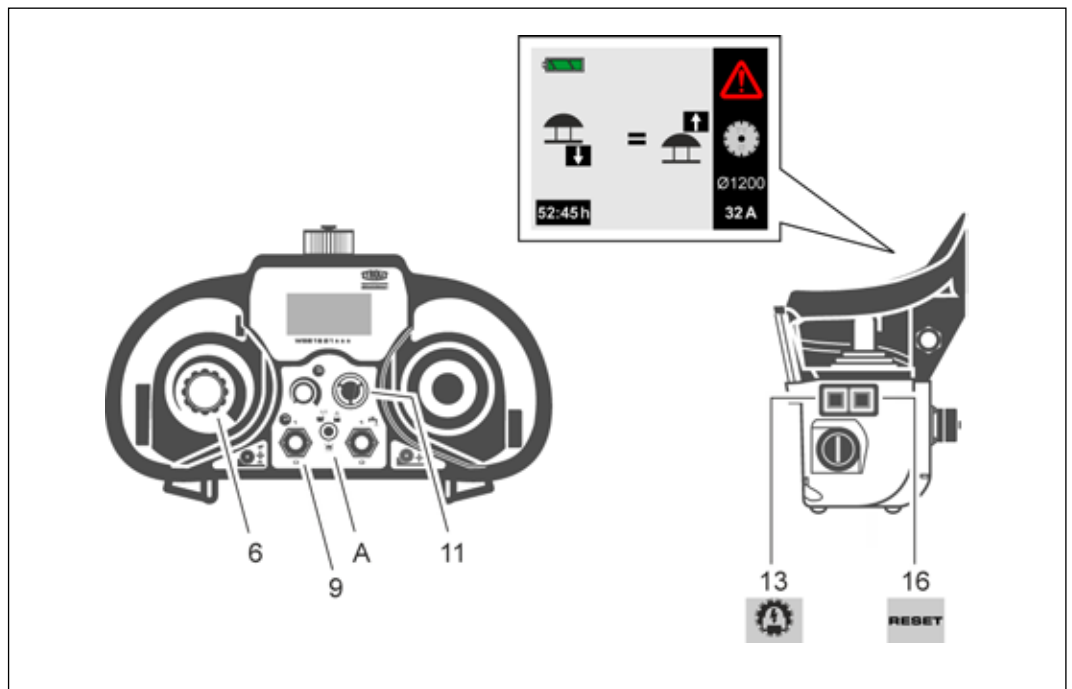
- ▶ If there is a risk of frost, blow out any water.



Only use the EMERGENCY STOP function in an emergency to stop the WSE1621 Wall saw.

4.11 Deactivating the EMERGENCY STOP

If the EMERGENCY STOP function is activated on the radio remote controller, the radio and battery light (A) will flicker.



Deactivating the EMERGENCY STOP

The following controls must be moved to the 0 position:

- Feed potentiometer (6)
- Turn the EMERGENCY STOP button (11) clockwise
 - The EMERGENCY STOP screen appears on the display.
- Main motor On/Off (9).

Proceed as follows:

- ▶ Press the blue reset button (16).
 - The operating screen appears.
- ▶ To continue operation, press the green pulse button (13).

4.12 After finishing the work

Proceed as follows:

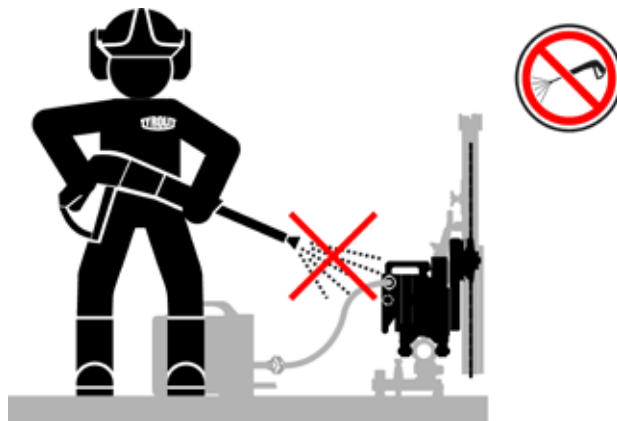
- ▶ Turn the main switch on the WSE1621 Control unit to the 0 position.
- ▶ Disconnect the mains plug.
- ▶ Disconnect the water hoses from the WSE1621 Wall saw.
- ▶ Blow out water from all lines.
- ▶ Clean the WSE1621 Wall saw, the remote controller and the cables by using a damp cloth.



Caution

Cleaning using high-pressure cleaning equipment is not permitted.

The WSE1621 Wall saw could be damaged if it is cleaned with high-pressure cleaning equipment. Products containing cleaning agent can damage parts of the WSE1621 Wall saw, the remote controller and the cables.

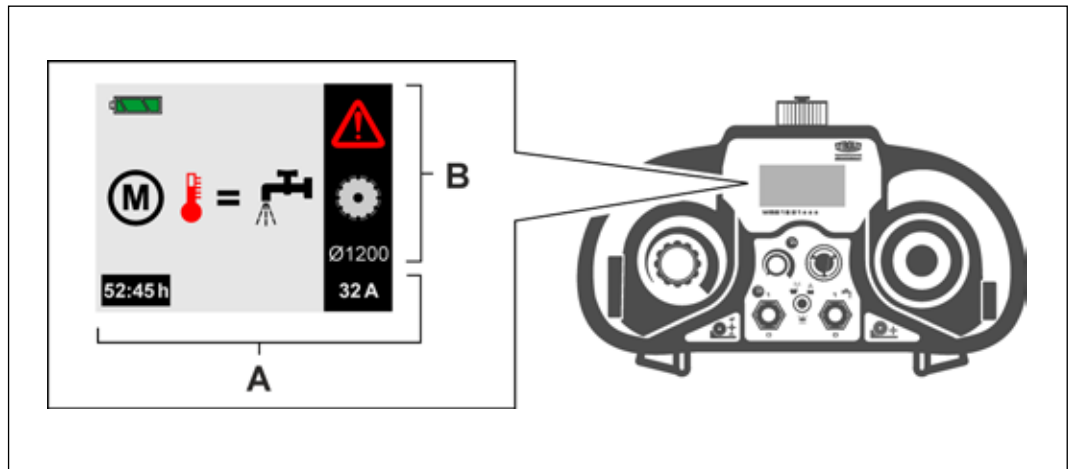


High-pressure cleaner

4.13 Responding to displays



Information regarding how to respond to displays in the vario information and status information fields can be found in the operating instructions supplied with the WSE1621 Control unit.



Responding to displays

Display fields

- A Vario information field
- B Status information field

4.13.1 Vario information field



The vario information field displays information regarding faults, power and time.

4.13.2 Status information field



The status information field displays information regarding the machine system.

4.14 Power display during operation




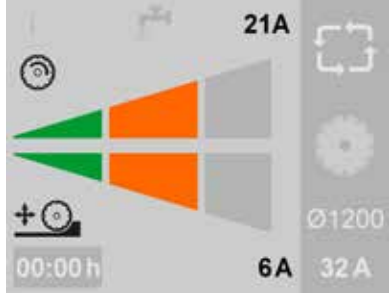

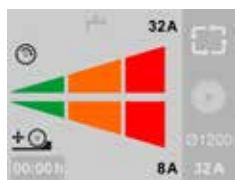
The current power range is displayed with a coloured bar and a power value (digit adjusts continuously).
Ideally: In the second orange segments (in iron in the third red segments).



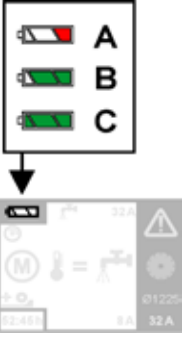
Display of the power for the feed- and main motor

- A Power display for the main motor
- B Power display for the feed motor

4.14.1 Display of power for the feed- and main motor

Power display during operation		
	Operation with less than 40% nominal power	Example: 
	Operation with 40% to 80% nominal power	
	Motors are operated at 100%	

4.14.2 Display of the power supply for the remote controller

Power displays			
	Display	Power supply	Action
	<p>A 1/3 red</p>	<p>Rechargeable battery: Battery empty</p>	<p>Replace the battery</p>
	<p>B 2/3 green</p>	<p>Rechargeable battery: Low battery level</p>	<p>Keep a fresh battery ready</p>
	<p>C 3/3 green</p>	<p>Rechargeable battery: Fully charged</p>	<p>N/A</p>

5 Servicing and maintenance

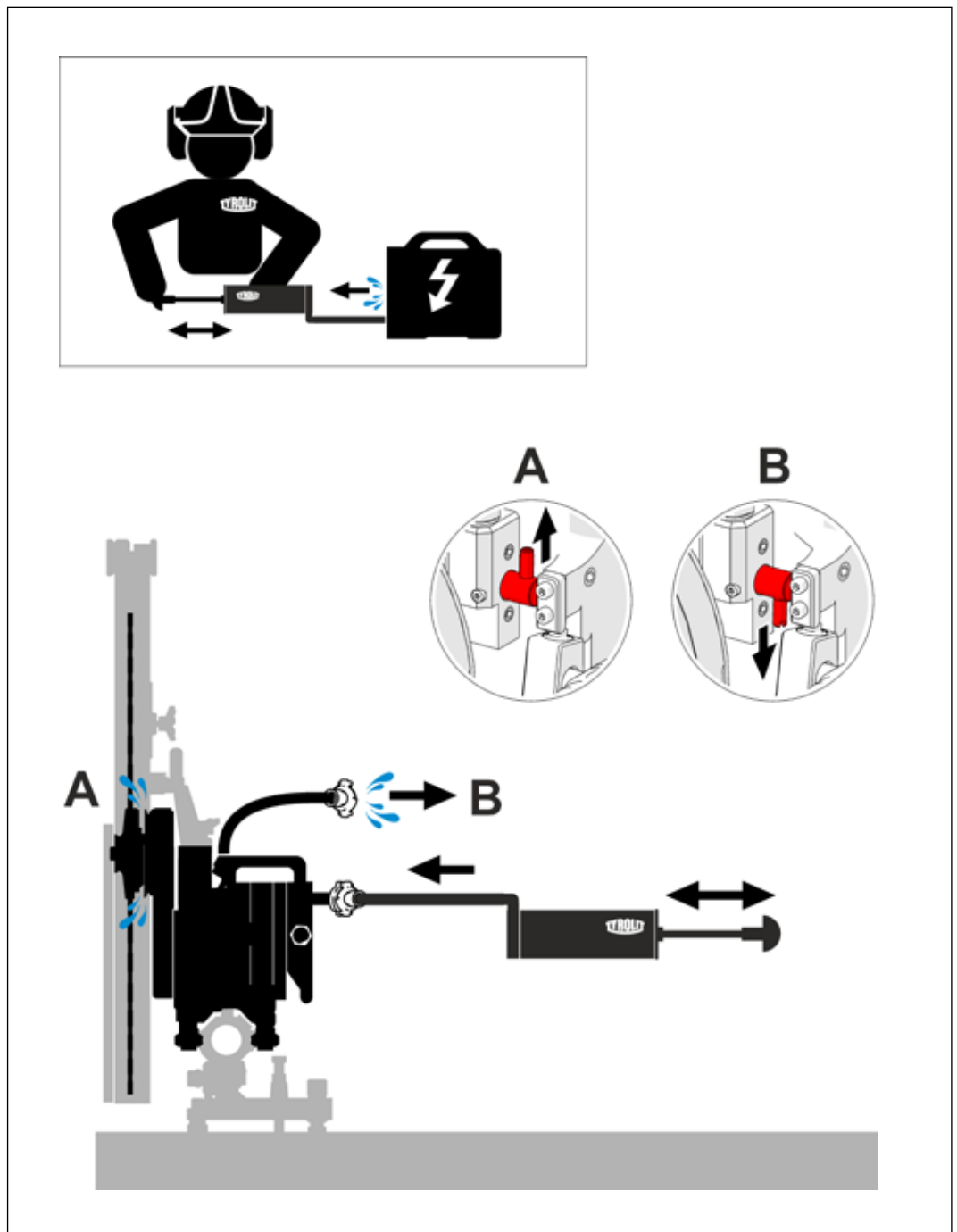
Maintenance and servicing table							
		Before starting up	On finishing work	Weekly	Annually	After faults	After damage
Electrical system	▶ Check the condition and cleanliness of electric cables, plugs/connectors and switches.	X	X			X	X
	▶ Check the condition and cleanliness of couplings.	X	X			X	X
Wall saw head	▶ Retighten loose bolts, screws and nuts (refer to the tightening torque specifications)	X				X	X
	▶ Check cleanliness	X	X			X	X
Lock unit	▶ Clean latching recesses and guide grooves	X	X			X	X
	▶ Lubricate WD40			X		X	X
Guide rollers	▶ Check the bearing clearance for wear	X	X			X	X
	▶ Clean	X	X			X	X
	▶ Change						X
Motor locking mechanism	▶ Clean with water		X			X	
	▶ Lubricate WD40			X		X	
Chassis	▶ Clean with water		X				
	▶ Check the saw blade uptake for wear	X				X	X
Swivel arm	▶ Replace the gear oil	Every 100 h					
Motor	▶ Replace the gear oil	Every 100 h					
Water economy	▶ Check the water line for cleanliness and leak-tightness	X				X	X
	▶ Blowing out water		X				
Saw blade	▶ Clean with water		X				
	▶ Check for wear	X	X			X	X
Service	▶ To be performed by TYROLIT Hydrostress AG or an authorised workshop	After 100/300/500/700 hours					

5.1 Blowing out the water

- ✓ The main switch is set to **OFF**
- ▶ Disconnect the mains plug.
- ▶ Disconnect all water lines.
- ▶ Connect the purge pump to the water nipple.
- ▶ Blow out water until all of the cooling water has been removed.
- ▶ Remove the pump.



The blade guard must be fitted, so that the water can be properly blown out of the lines. Use the TYROLIT purge pump, no.10982667.



Blowing out water

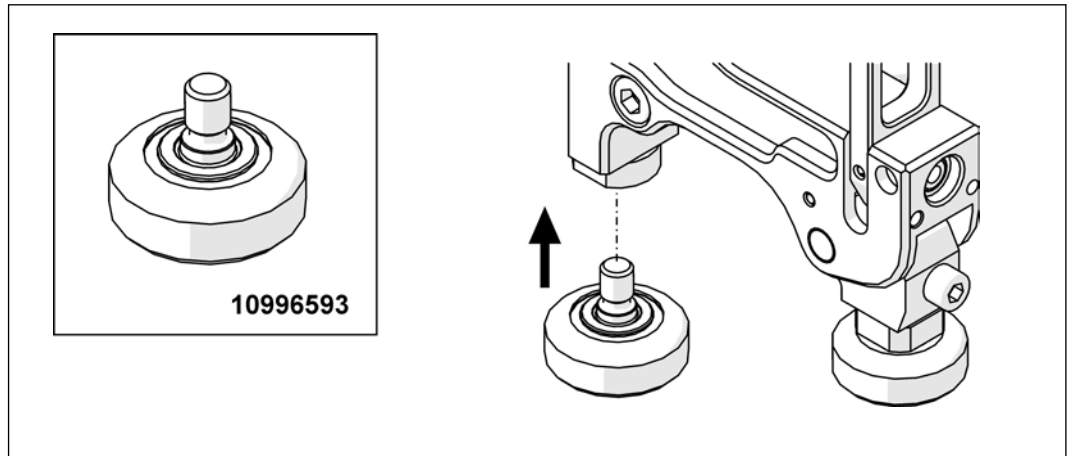
5.2 Replacing the guide rollers

✓ Tool

Allen key



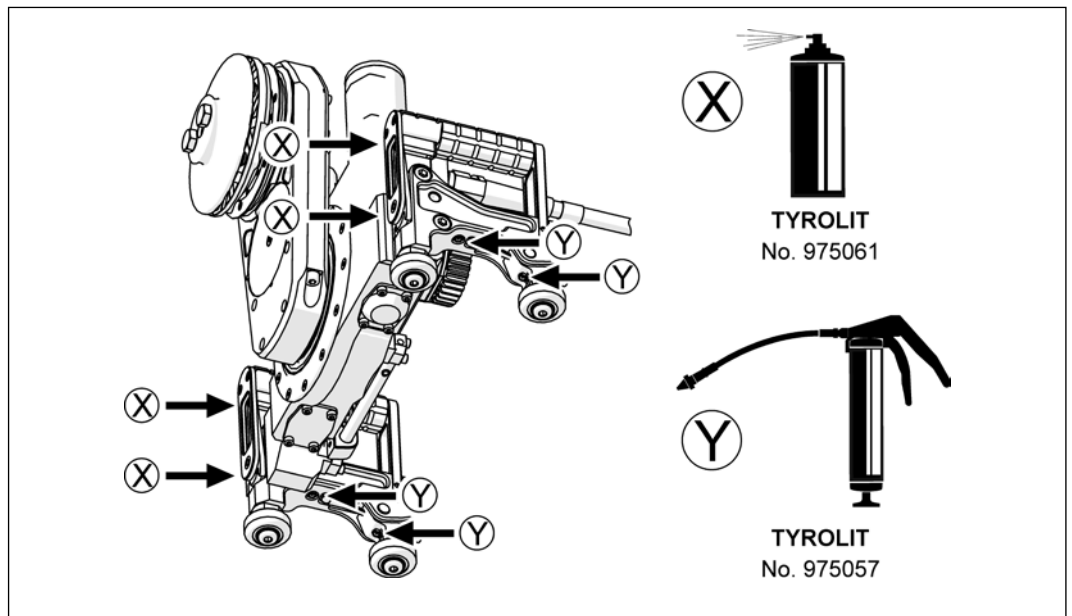
Size 6



Replacing the guide rollers

► Replace defective guide rollers no.10996593.

5.3 Lubricating the lock unit



Lubricating the lock unit



Lubricating grease

- 1 Treat joints and lock unit with lubricant TYROLIT no. 975061 (spray).
- 2 **Lubricate using a grease gun** (EP Grease 2)

5.4 Changing the gear oil



The use of unsuitable oil can damage the wall saw.

► Only use TYROLIT Hydrostress AG oil containers (no. 10981362, 1dl).

✓ Tool

Allen key



Size 5

2x screwdrivers

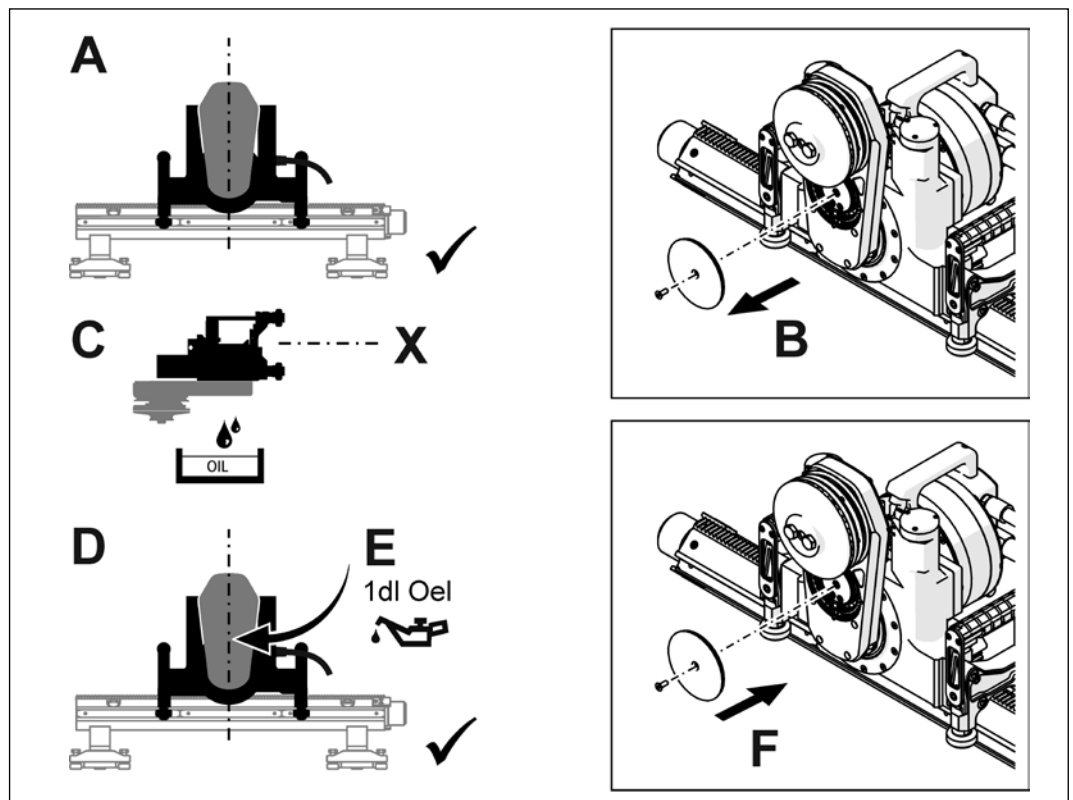


Size 0

Oil container



1.0 dl (TYROLIT no.10981362)



Changing the gear oil

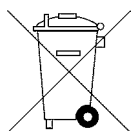


Allow the gear oil to drain.

To ensure all of the gear oil can drain adequately, let the swivel arm rotate for approx. ¼ hour (swivel arm position X, see image).

Important: Waste oil is harmful to health and must not be disposed of directly in the ground or in natural resources.

5.5 Recycling waste



TYROLIT Hydrostress power tools are manufactured using a high proportion of recyclable materials. A prerequisite for recycling is proper material separation. In many countries, TYROLIT is already prepared for taking back your used equipment for recycling. Contact TYROLIT customer service or your sales adviser.

6 Malfunctions

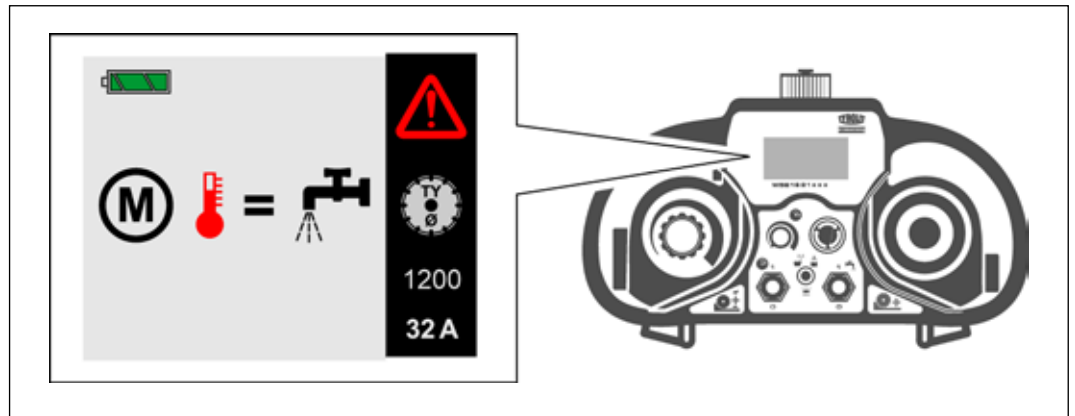


Information regarding system faults and errors that appear on the display of the remote controller can be found in the operating instructions supplied with the WSE1621 Control unit, under the section entitled Faults and error displays.

Example of an error display:

Cause: Overtemperature of main motor

Action: Cool with water

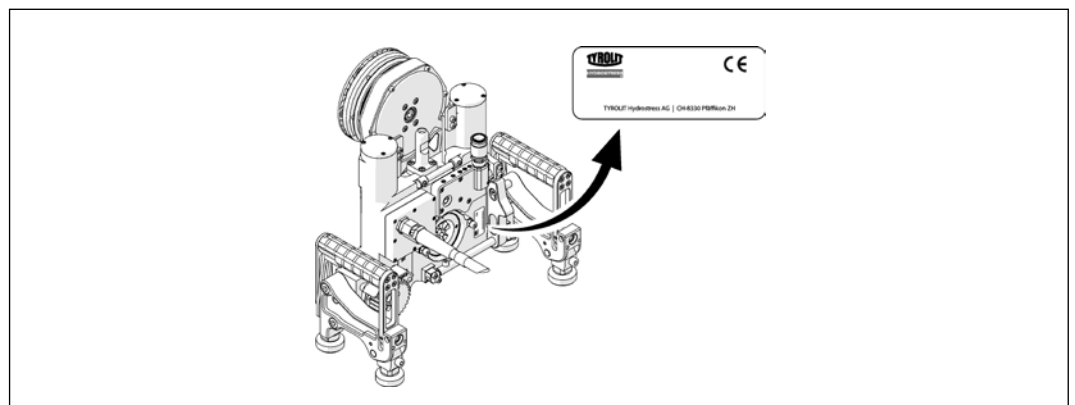


Example of an error display



If you are unable to remedy a fault, please contact our service centre (see manufacturer's address on the reverse of the title page).

To guarantee a rapid and professional solution to the problem, it is important that you prepare as follows before calling:



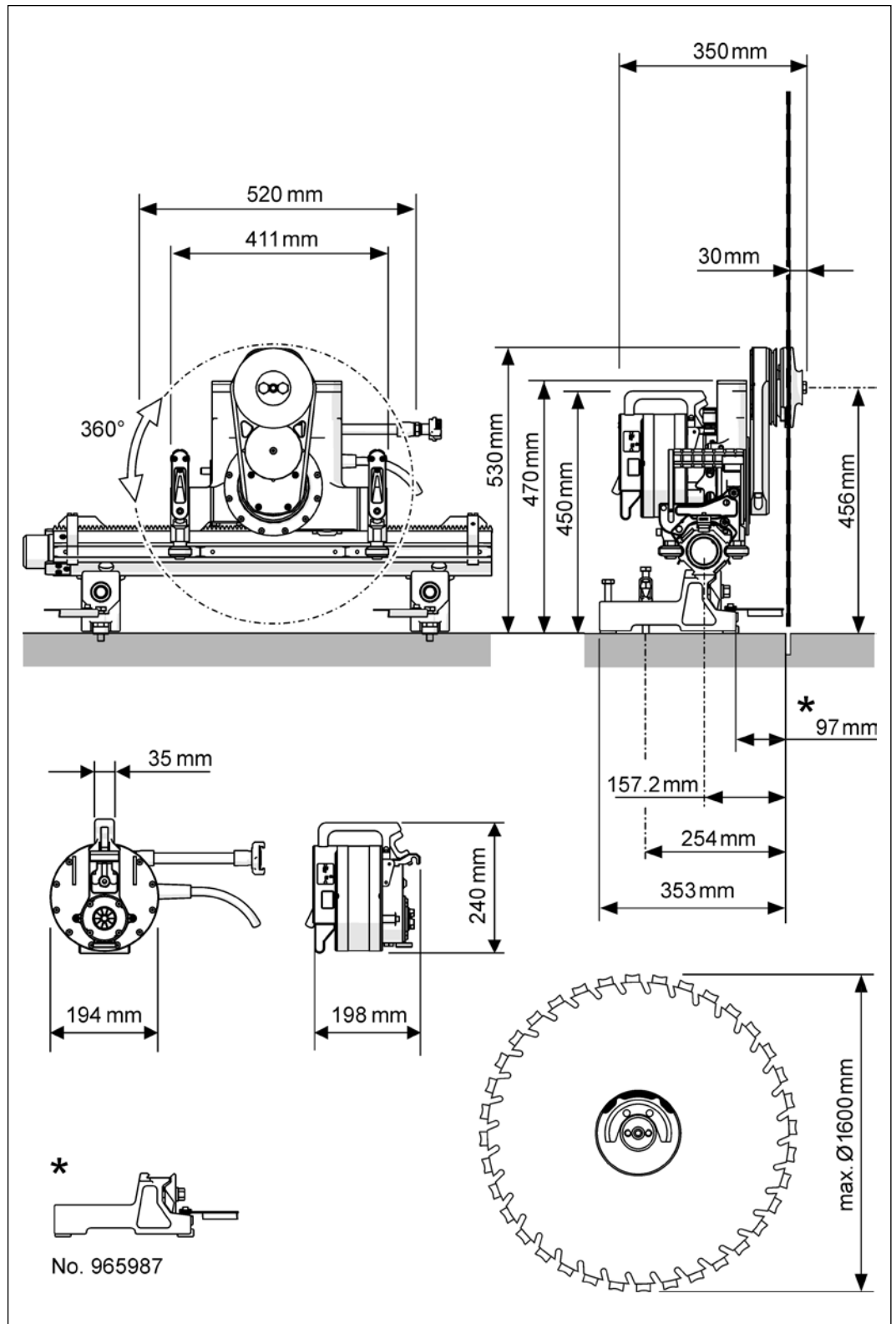
Name plate

Proceed as follows:

- ▶ Try to describe the fault as precisely as possible.
- ▶ Note the type and index designation of your unit (name plate).
- ▶ Have the operating instructions close to hand.

7 Technical data

7.1 Dimensions



Measurements in mm

7.2 Weights

Weight	
Parameter	Value
Wall saw head complete	23.5 kg
Drive motor	15 kg
Control unit	11 kg
Remote controller	1.8 kg

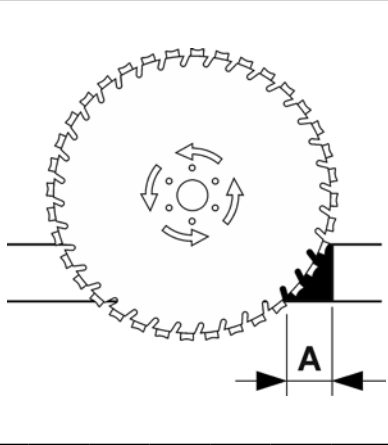
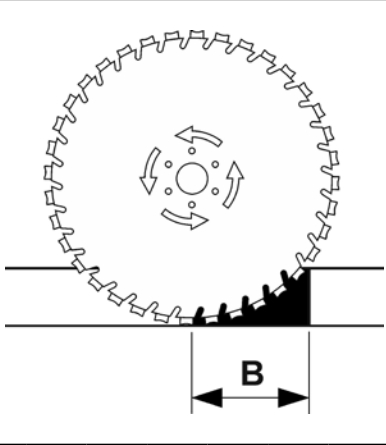



7.3 Design

Design	
Parameter	Value
Construction	Light aluminium/steel construction
Rotatable swivel arm	360°
Power transmission	Toothed wheel
Grips	2 pieces, grips with locking function
Guide rollers	Low-wearing, suitable for all VS and VAS rails
Rail mounting	Locking and safety function on grip
Main motor	High-frequency, water-cooled, with quick-release device
Feed motor/swivelling motor	Electric motor with gearbox
Flush cutting	Flange without blade cover
Normal cutting	Flange with blade cover
Water	Water connection on chassis

7.4 Saw blades

Saw blades	
Parameter	Value
Saw blade max.	Ø1600 mm
Fully detachable saw blade	Ø900 mm
Blade flange fixing at wall saw	Flange
Blade flange fixture for normal cutting	Quick-release flange ST with blade cover
Blade flange fixture for flush cutting	Quick-release flange ST without blade cover 6 countersunk screws M8x16 10.9 reference circle 130 mm
Blade cover fixing on blade flange	2 hexagon head screw M12x35 8.8
Cutting depth (saw blade Ø 1600 mm)	max. 705 mm

7.5 Overcut table

Overcut														
	Cutting tool with maximum penetration							Cutting tool with minimum penetration						
														
														
	Ø 650 mm	Ø 750 mm	Ø 825 mm	Ø 1025 mm	Ø 1200 mm	Ø 1500 mm	Ø 1600 mm	Ø 650 mm	Ø 750 mm	Ø 825 mm	Ø 1025 mm	Ø 1200 mm	Ø 1500 mm	Ø 1600 mm
5 cm	2	2	1	1	1	1	1	17	19	20	22	24	27	28
10 cm	5	4	3	3	2	2	2	23	25	27	30	33	37	39
15 cm	9	7	6	5	4	3	3	27	30	32	36	40	45	47
20 cm	16	12	11	8	7	5	5	30	33	35	41	45	51	53
25 cm		20	16	12	10	7	7		35	38	44	49	56	58
30 cm			26	17	13	10	9			40	47	52	60	62
35 cm				23	18	13	12				49	55	63	66
40 cm				34	24	17	16				50	57	66	69
45 cm					32	22	20					58	69	72
50 cm					46	28	25					59	71	74
55 cm						35	31						72	76
60 cm						44	38						73	77
65 cm						60	48						74	79
70 cm							64							79

7.6 Saw blade feed depths

Feed depths		
Cut	Saw blade Ø	Cutting depth
Precut	- 900mm	max. 8 cm
Follow-on cut	Ø650mm - 1025mm	max. 10 cm
	1200mm	max. 7 cm
	1600mm	max. 5 cm

7.7 Saw blade drive motor

Blade drive motor	
Parameter	Value
Electric motor	High-frequency, water-cooled
Voltage	350 V 3~
Output	17 kW
Frequency	800 Hz
Speed	6000 rpm

7.8 Feed motor, travel

Electric feed motor with gearbox	
Parameter	Value
Voltage	36 V
Output	150 W
Gear reduction	01:53
Worm gear	1:15
Feed	Toothed wheel on rail

7.9 Feed motor, swivel

Electric feed motor with gearbox	
Parameter	Value
Voltage	36 V
Output	150 W
Gear reduction	1:66
Worm gear	1:66
Swivel range (swivel arm)	360°

7.10 Noise level

Noise data according to ISO 3744	
Parameter	Value
Sound pressure level L_{pA}	76 dB(A) *
Maximum sound pressure level L_{pCpeak}	124 dB
Acoustic power level L_{WA}	96 dB(A) *

Conditions for the measurement:

* Saw blade Ø825mm (not silenced) not in cutting operation under full load

7.11 Water

Water connection	
Parameter	Value
Pressure	Min. 2 bar/max. 6 bar
Quantity	Min. 4 l/min
Max. temperature	25 °C

7.12 Lubricants and fluids

Lubricants and fluids		
Parameter	Value	
Gear oil (swivel arm)	Klüber GEM 4N (TYROLIT no. 10981362 / 100ml)	
Gear oil (motor)	Klüber GEM 4N (TYROLIT no. 10982366 / 50ml)	
Grease (lock unit) TYROLIT no. 975057	Penetration	265 to 295
	NLGI	2
Universal Spray 250 ml (lock unit) TYROLIT no. 975061		
Lubricating grease (travel and swivel gear) TYROLIT no. 10999375	Penetration	400 to 430
	NLGI	00

7.13 Electrical data

Electrical data		
Parameter	Value	
Protection class	IP 65	
Connected values	400 - 480 V / 50 Hz - 60 Hz	
Power consumption	32A (400V)	
Output (control unit)	20 kW	
Internal control voltages	Computer/remote controller	24 VDC
	Feed drives	48 VDC
	Main drive unit	400 VAC = 565 VDC 480 VAC = 680 VDC

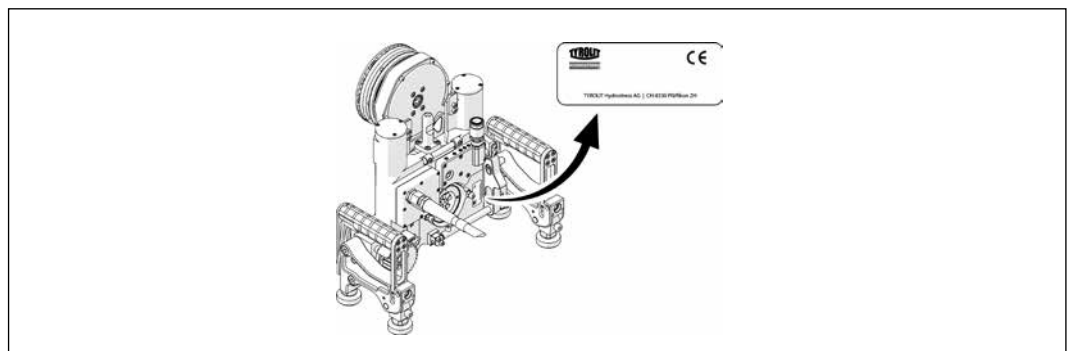
7.14 Ambient temperature recommendation

Ambient temperature	
Parameter	Value
Storage	-20 °C to 50 °C
Operation	-10°C to 45°C

7.15 Remote controller

Remote controller	
Parameter	Value
Cable length (optional)	10 m
Nominal voltage	24 VDC
Protection class	IP 65
Weight	1.8 kg
Frequency	2.4 GHz

7.16 Name plate



Name plate

8 EC Declaration of Conformity

Description	Wall saw
Type designation	WSE1621

We declare under our sole responsibility that this product complies with the following directives and standards:

Directive applied

2006/42/EC	from 17 May 2006
2011/65/EU	from 08 June 2011
2012/19/EU	from 04 July 2012
2014/30/EU	from 26 February 2014

Applied standards

EN 15027:2007+A1:2009
EN ISO 12100:2010
EN 60204-1:2006+A1:2009
EN 61000-6-2:2005
EN 61000-6-4:2007+A1:2011

TYROLIT Hydrostress AG

Witzbergstrasse 18
CH-8330 Pfäffikon
Switzerland

Pfäffikon, 10/04/2018



Pascal Schmid
Head of Development



