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](image)

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](image)
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
2. Mains cable with connector
3. Electric cable for feed motor
4. Electric cable for main motor
5. Water hose
6. Rail stopper
7. Rotating rail support
8. Guide rail
9. Wall saw head
10. Drive motor
11. Diamond saw blade
12. Blade guard
13. Radio remote controller
2.4 Main components of the wall saw head

2.4.1 Wall saw head components

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

3.1 Placing the wall saw on the guide rail

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

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.
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.

![Diagram of saw blade unit](image)

Saw blade unit

A Saw blade unit for normal cutting
B Saw blade unit for flush cutting

1 Flange
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.

![60Nm](image)

**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](image)
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.

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 diagram]

Control unit connections

- M Cutting tool drive motor
- Mv 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

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 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.

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.
4 Operation

4.1 Overview of controls

4.1.1 Remote controller / control unit

Controls

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

Controls on the wall saw

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

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.)
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.

A selection can be made between the following cutting tools:

<table>
<thead>
<tr>
<th>Tool selection</th>
<th>Tool</th>
</tr>
</thead>
</table>
| 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).

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.

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.
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.

**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

<table>
<thead>
<tr>
<th>Power display during operation</th>
<th>Operation with less than 40% nominal power</th>
<th>Example:</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Power display" /></td>
<td>Operation with 40% to 80% nominal power</td>
<td><img src="image2.png" alt="Power display" /></td>
</tr>
<tr>
<td><img src="image3.png" alt="Power display" /></td>
<td>Motors are operated at 100%</td>
<td>Main motor 80% nominal power Feed motor 80% nominal power</td>
</tr>
</tbody>
</table>
### 4.14.2 Display of the power supply for the remote controller

<table>
<thead>
<tr>
<th>Power displays</th>
<th>Display</th>
<th>Power Supply</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Display" /></td>
<td>A 1/3 red</td>
<td>Rechargeable battery: Battery empty</td>
<td>Replace the battery</td>
</tr>
<tr>
<td></td>
<td>B 2/3 green</td>
<td>Rechargeable battery: Low battery level</td>
<td>Keep a fresh battery ready</td>
</tr>
<tr>
<td></td>
<td>C 3/3 green</td>
<td>Rechargeable battery: Fully charged</td>
<td>N/A</td>
</tr>
</tbody>
</table>
## 5 Servicing and maintenance

### Maintenance and servicing table

<table>
<thead>
<tr>
<th>Component</th>
<th>Before starting up</th>
<th>On finishing work</th>
<th>Weekly</th>
<th>Annually</th>
<th>After faults</th>
<th>After damage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Electrical system</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Check the condition and cleanliness of electric cables, plugs/connectors and switches.</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Check the condition and cleanliness of couplings.</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td><strong>Wall saw head</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Retighten loose bolts, screws and nuts (refer to the tightening torque specifications)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Check cleanliness</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td><strong>Lock unit</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Clean latching recesses and guide grooves</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Lubricate WD40</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td><strong>Guide rollers</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Check the bearing clearance for wear</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Clean</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Change</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td><strong>Motor locking mechanism</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Clean with water</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Lubricate WD40</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td><strong>Chassis</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Clean with water</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Check the saw blade uptake for wear</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Swivel arm</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Every 100 h</td>
<td></td>
</tr>
<tr>
<td>Replace the gear oil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Motor</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Every 100 h</td>
<td></td>
</tr>
<tr>
<td>Replace the gear oil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Water economy</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Check the water line for cleanliness and leak-tightness</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Blowing out water</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td><strong>Saw blade</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Clean with water</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Check for wear</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td><strong>Service</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>After 100/300/500/700 hours</td>
<td></td>
</tr>
</tbody>
</table>
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

Lubricating the lock unit

5.3 Lubricating the lock unit

- Replace defective guide rollers no. 10996593.

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

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:

- 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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wall saw head complete</td>
<td>23.5 kg</td>
</tr>
<tr>
<td>Drive motor</td>
<td>15 kg</td>
</tr>
<tr>
<td>Control unit</td>
<td>11 kg</td>
</tr>
<tr>
<td>Remote controller</td>
<td>1.8 kg</td>
</tr>
</tbody>
</table>

7.3 Design

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

7.4 Saw blades

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

<table>
<thead>
<tr>
<th>Overcut</th>
<th>Ø650 mm</th>
<th>Ø750 mm</th>
<th>Ø825 mm</th>
<th>Ø1025 mm</th>
<th>Ø1200 mm</th>
<th>Ø1500 mm</th>
<th>Ø1600 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 cm</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>17</td>
</tr>
<tr>
<td>10 cm</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>23</td>
</tr>
<tr>
<td>15 cm</td>
<td>9</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>20 cm</td>
<td>16</td>
<td>12</td>
<td>11</td>
<td>8</td>
<td>7</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>25 cm</td>
<td>20</td>
<td>16</td>
<td>12</td>
<td>10</td>
<td>7</td>
<td>7</td>
<td>35</td>
</tr>
<tr>
<td>30 cm</td>
<td>26</td>
<td>17</td>
<td>13</td>
<td>10</td>
<td>9</td>
<td>40</td>
<td>47</td>
</tr>
<tr>
<td>35 cm</td>
<td>23</td>
<td>18</td>
<td>13</td>
<td>12</td>
<td></td>
<td>49</td>
<td>55</td>
</tr>
<tr>
<td>40 cm</td>
<td>34</td>
<td>24</td>
<td>17</td>
<td>16</td>
<td></td>
<td>50</td>
<td>57</td>
</tr>
<tr>
<td>45 cm</td>
<td>32</td>
<td>22</td>
<td>20</td>
<td></td>
<td></td>
<td>58</td>
<td>69</td>
</tr>
<tr>
<td>50 cm</td>
<td>46</td>
<td>28</td>
<td>25</td>
<td></td>
<td></td>
<td>59</td>
<td>71</td>
</tr>
<tr>
<td>55 cm</td>
<td>35</td>
<td>31</td>
<td></td>
<td></td>
<td></td>
<td>72</td>
<td>76</td>
</tr>
<tr>
<td>60 cm</td>
<td>44</td>
<td>38</td>
<td></td>
<td></td>
<td></td>
<td>73</td>
<td>77</td>
</tr>
<tr>
<td>65 cm</td>
<td>60</td>
<td>48</td>
<td></td>
<td></td>
<td></td>
<td>74</td>
<td>79</td>
</tr>
<tr>
<td>70 cm</td>
<td>64</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>79</td>
</tr>
</tbody>
</table>
### 7.6 Saw blade feed depths

<table>
<thead>
<tr>
<th>Cut</th>
<th>Saw blade Ø</th>
<th>Cutting depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precut</td>
<td>- 900mm</td>
<td>max. 8 cm</td>
</tr>
<tr>
<td>Follow-on cut</td>
<td>Ø650mm - 1025mm</td>
<td>max. 10 cm</td>
</tr>
<tr>
<td></td>
<td>1200mm</td>
<td>max. 7 cm</td>
</tr>
<tr>
<td></td>
<td>1600mm</td>
<td>max. 5 cm</td>
</tr>
</tbody>
</table>

### 7.7 Saw blade drive motor

<table>
<thead>
<tr>
<th>Blade drive motor</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electric motor</td>
<td>High-frequency, water-cooled</td>
</tr>
<tr>
<td>Voltage</td>
<td>350 V 3~</td>
</tr>
<tr>
<td>Output</td>
<td>17 kW</td>
</tr>
<tr>
<td>Frequency</td>
<td>800 Hz</td>
</tr>
<tr>
<td>Speed</td>
<td>6000 rpm</td>
</tr>
</tbody>
</table>

### 7.8 Feed motor, travel

<table>
<thead>
<tr>
<th>Electric feed motor with gearbox</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>36 V</td>
</tr>
<tr>
<td>Output</td>
<td>150 W</td>
</tr>
<tr>
<td>Gear reduction</td>
<td>01:53</td>
</tr>
<tr>
<td>Worm gear</td>
<td>1:15</td>
</tr>
<tr>
<td>Feed</td>
<td>Toothed wheel on rail</td>
</tr>
</tbody>
</table>

### 7.9 Feed motor, swivel

<table>
<thead>
<tr>
<th>Electric feed motor with gearbox</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>36 V</td>
</tr>
<tr>
<td>Output</td>
<td>150 W</td>
</tr>
<tr>
<td>Gear reduction</td>
<td>1:66</td>
</tr>
<tr>
<td>Worm gear</td>
<td>1:66</td>
</tr>
<tr>
<td>Swivel range (swivel arm)</td>
<td>360°</td>
</tr>
</tbody>
</table>
### 7.10 Noise level

Noise data according to ISO 3744

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sound pressure level $L_{PA}$</td>
<td>76 dB(A) *</td>
</tr>
<tr>
<td>Maximum sound pressure level $L_{P_{Peak}}$</td>
<td>124 dB</td>
</tr>
<tr>
<td>Acoustic power level $L_{WA}$</td>
<td>96 dB(A) *</td>
</tr>
</tbody>
</table>

Conditions for the measurement:
* Saw blade Ø825mm (not silenced) not in cutting operation under full load

### 7.11 Water

Water connection

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure</td>
<td>Min. 2 bar/max. 6 bar</td>
</tr>
<tr>
<td>Quantity</td>
<td>Min. 4 l/min</td>
</tr>
<tr>
<td>Max. temperature</td>
<td>25 °C</td>
</tr>
</tbody>
</table>

### 7.12 Lubricants and fluids

Lubricants and fluids

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gear oil (swivel arm)</td>
<td>Klüber GEM 4N</td>
</tr>
<tr>
<td>(TYROLIT no. 10981362 / 100ml)</td>
<td></td>
</tr>
<tr>
<td>Gear oil (motor)</td>
<td>Klüber GEM 4N</td>
</tr>
<tr>
<td>(TYROLIT no. 10982366 / 50ml)</td>
<td></td>
</tr>
<tr>
<td>Grease (lock unit) TYROLIT no. 975057</td>
<td>Penetration 265 to 295</td>
</tr>
<tr>
<td></td>
<td>NLGI 2</td>
</tr>
<tr>
<td>Universal Spray 250 ml (lock unit) TYROLIT no. 975061</td>
<td></td>
</tr>
<tr>
<td>Lubricating grease (travel and swivel gear) TYROLIT no. 10999375</td>
<td>Penetration 400 to 430</td>
</tr>
<tr>
<td></td>
<td>NLGI 00</td>
</tr>
</tbody>
</table>
### 7.13 Electrical data

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

### 7.14 Ambient temperature recommendation

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage</td>
<td>-20 °C to 50 °C</td>
</tr>
<tr>
<td>Operation</td>
<td>-10 °C to 45 °C</td>
</tr>
</tbody>
</table>

### 7.15 Remote controller

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable length (optional)</td>
<td>10 m</td>
</tr>
<tr>
<td>Nominal voltage</td>
<td>24 VDC</td>
</tr>
<tr>
<td>Protection class</td>
<td>IP 65</td>
</tr>
<tr>
<td>Weight</td>
<td>1.8 kg</td>
</tr>
<tr>
<td>Frequency</td>
<td>2.4 GHz</td>
</tr>
</tbody>
</table>

### 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 ISO 12100:2010
- EN 61000-6-2:2005

TYROLIT Hydrostress AG
Witzbergstrasse 18
CH-8330 Pfäffikon
Switzerland

Pfäffikon, 10/04/2018

Pascal Schmid
Head of Development