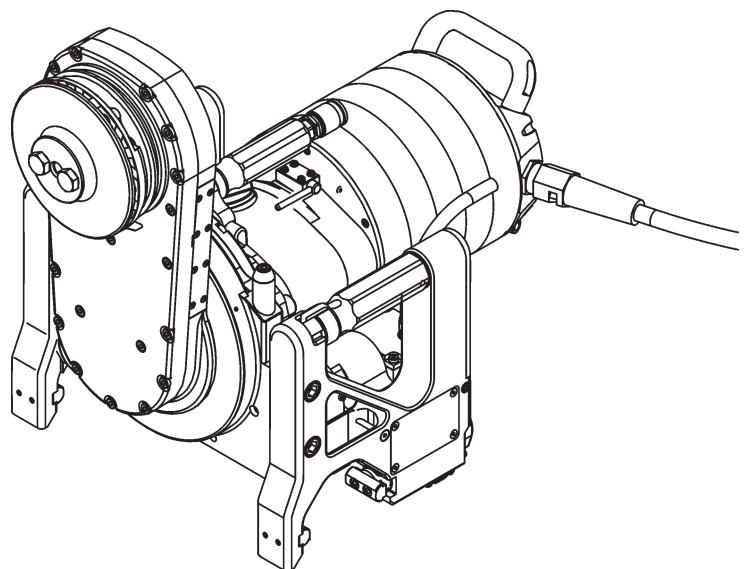


# *Operating Instructions*

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## **Wall saw WSE2226 ★★★**

*Index 000*



## **Congratulations!**

With a Hydrostress unit from TYROLIT, you have chosen a tried and tested piece of equipment which has been designed and built to leading technical standards. 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. Any repair work must be carried out by trained personnel only.

Our aftersales 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



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



## **DANGER**

Failure to comply with the safety instructions in the «Safety Manual / System Manual» may result in serious injury or even death.

- ▶ Please ensure that the «Wall Saw Safety Manual / System Description» has been read and understood in full.



## **DANGER**

### **Cuts 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**

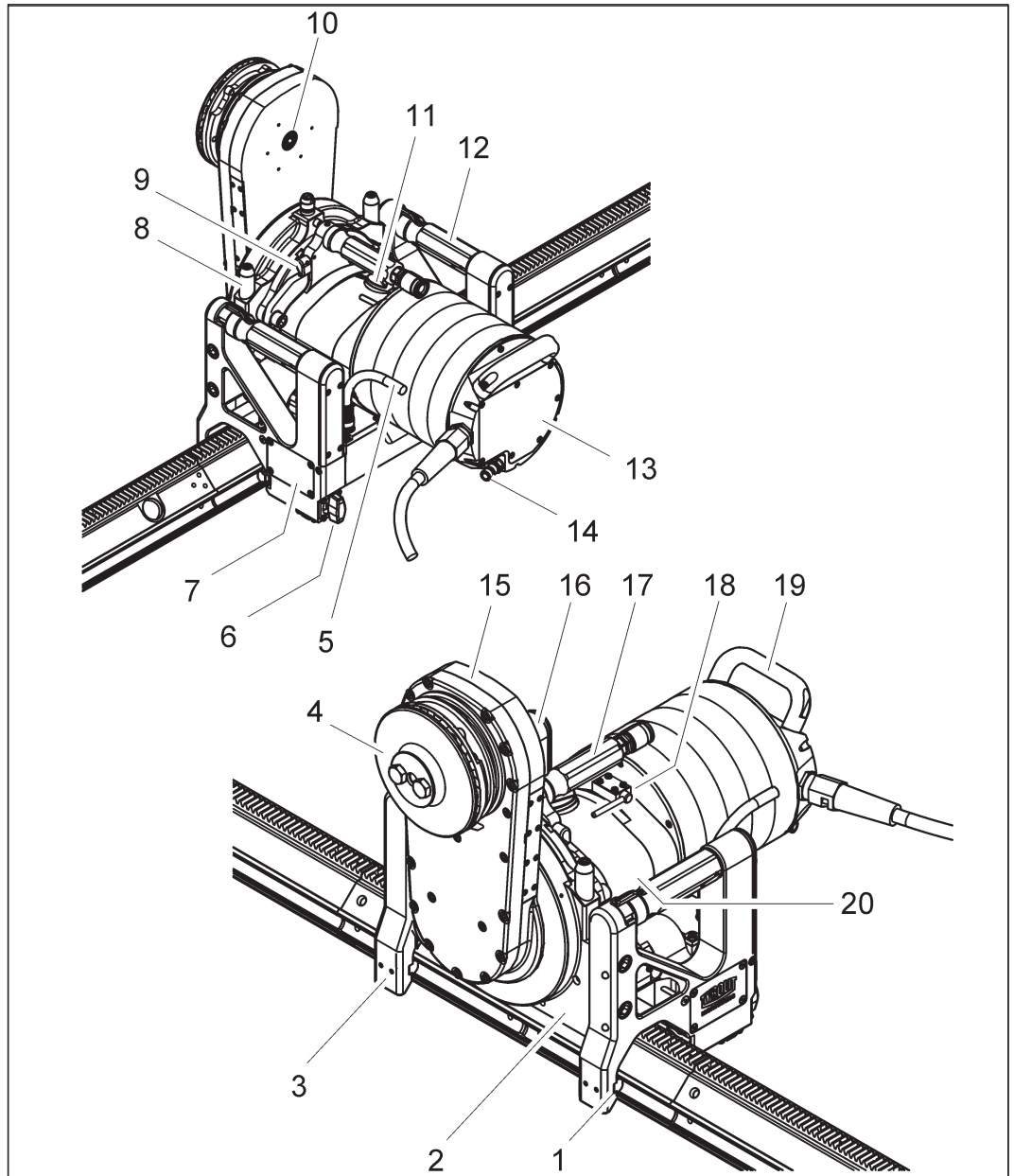
- ▶ Never connect or disconnect cables when the control unit is switched on.

## 2 Description

### 2.1 Wall saw system

The design and function of the wall saw systems are described in the «Wall Saw Safety Manual / System Description».

### 2.2 Wall saw

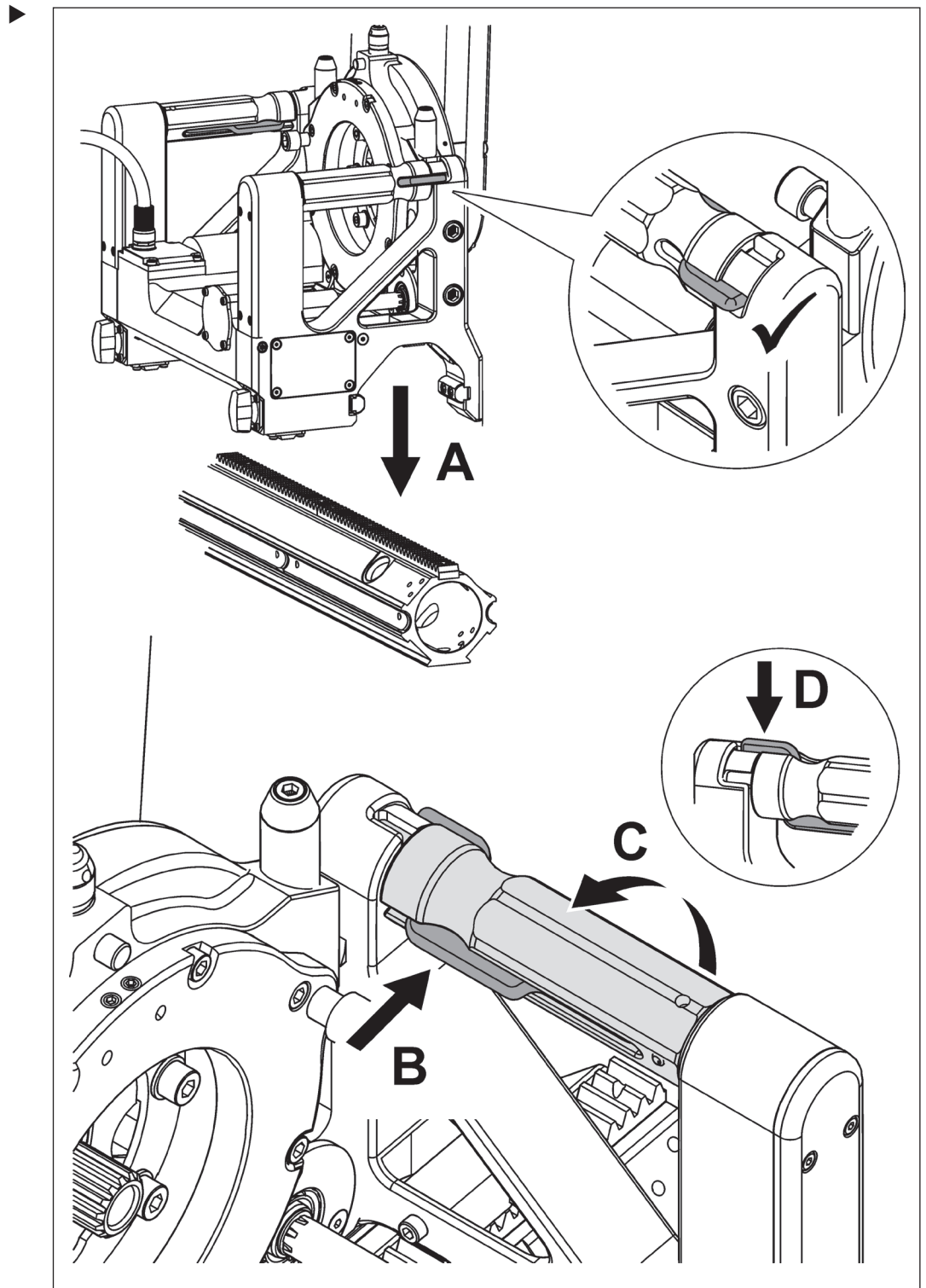


#### Components

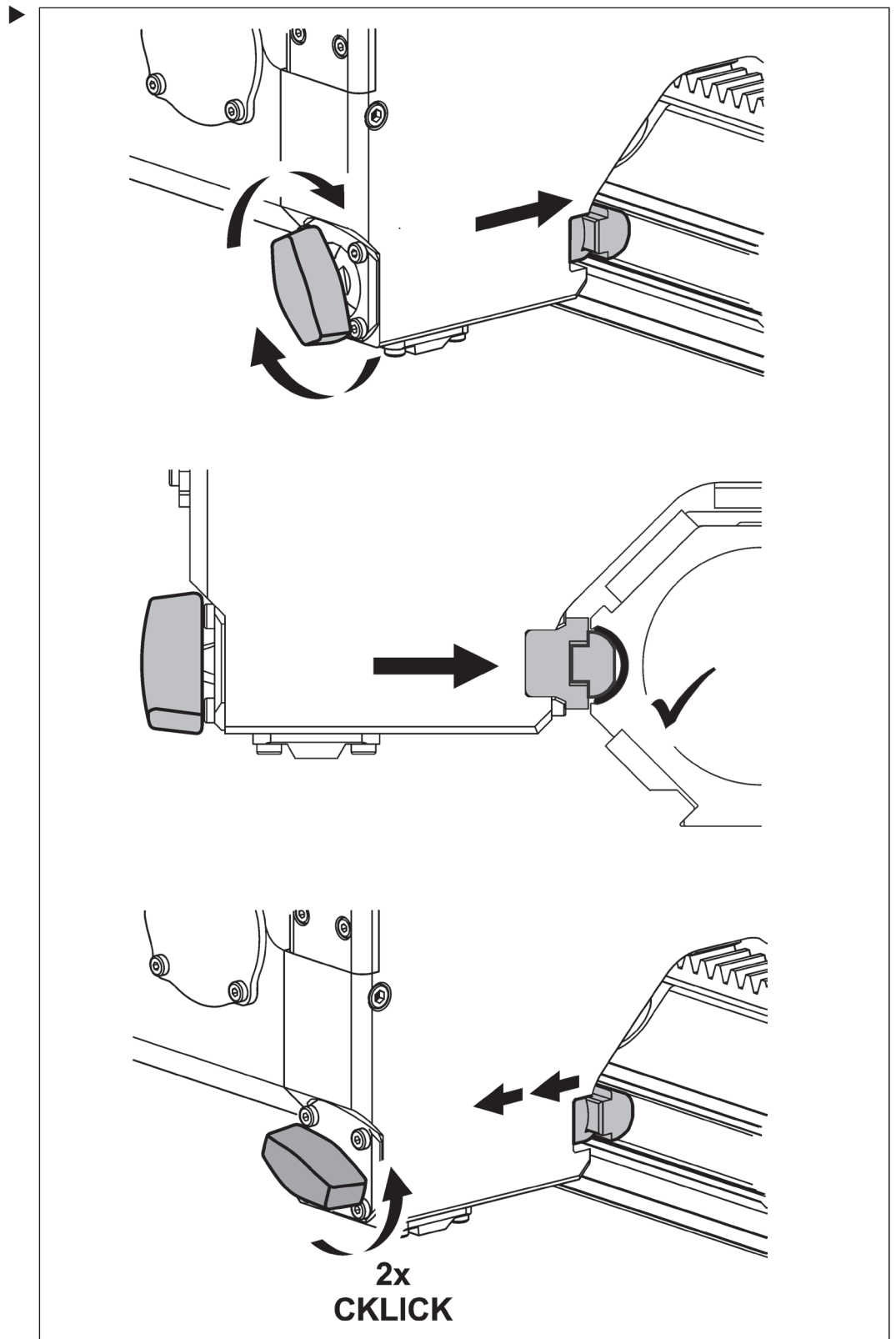
- |                                                   |                            |
|---------------------------------------------------|----------------------------|
| 1 Guide prism                                     | 11 Rotary gear speed knob  |
| 2 Chassis                                         | 12 Grip / lock grip        |
| 3 Lock unit                                       | 13 Saw blade drive motor   |
| 4 Quick-release flange                            | 14 Water connection        |
| 5 Cable connection<br>travel / swivel feed motors | 15 Geared swivel arm       |
| 6 Fine adjusting device                           | 16 Blade guard holder      |
| 7 Cover                                           | 17 Water - Bypass          |
| 8 Blade guard holder                              | 18 Locking coupling handle |
| 9 Water bypass line changeover handle             | 19 Drive motor grip        |
| 10 Saw blade fixing central screw                 | 20 Gearbox                 |

### 3 Assembly / Disassembly

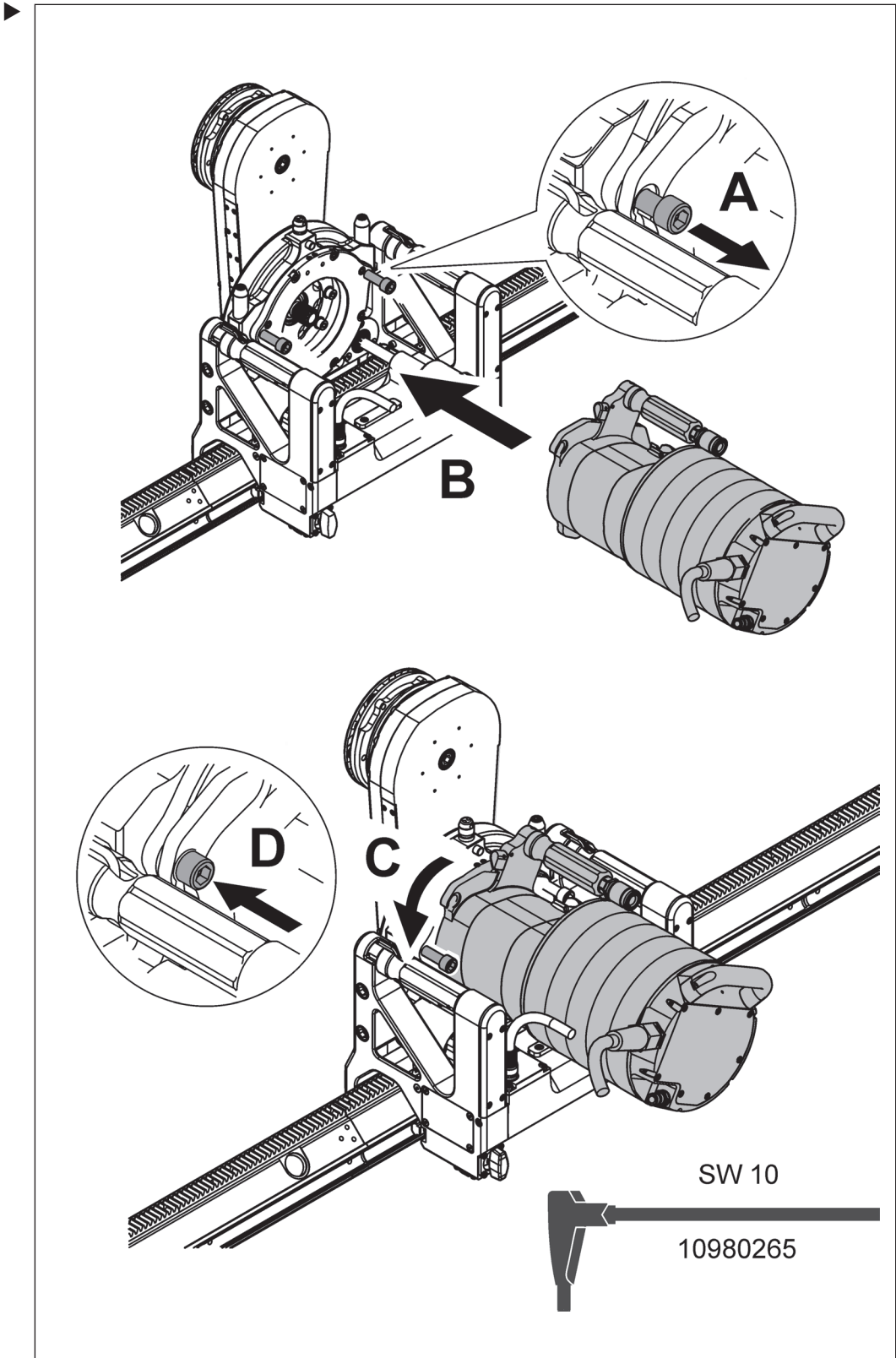
#### 3.1 Place the wall saw on the guide rail



### 3.2 Guide prism fine adjustment



### 3.3 Mounting the drive motor



### 3.4 Mounting the saw blade



**DANGER**

**Death or serious injury can be caused by escaping saw blades!**

- ▶ 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 control unit before working on the saw blade.
- ▶ Isolate the control unit from the mains supply.

#### 3.4.1 Preparations for assembly

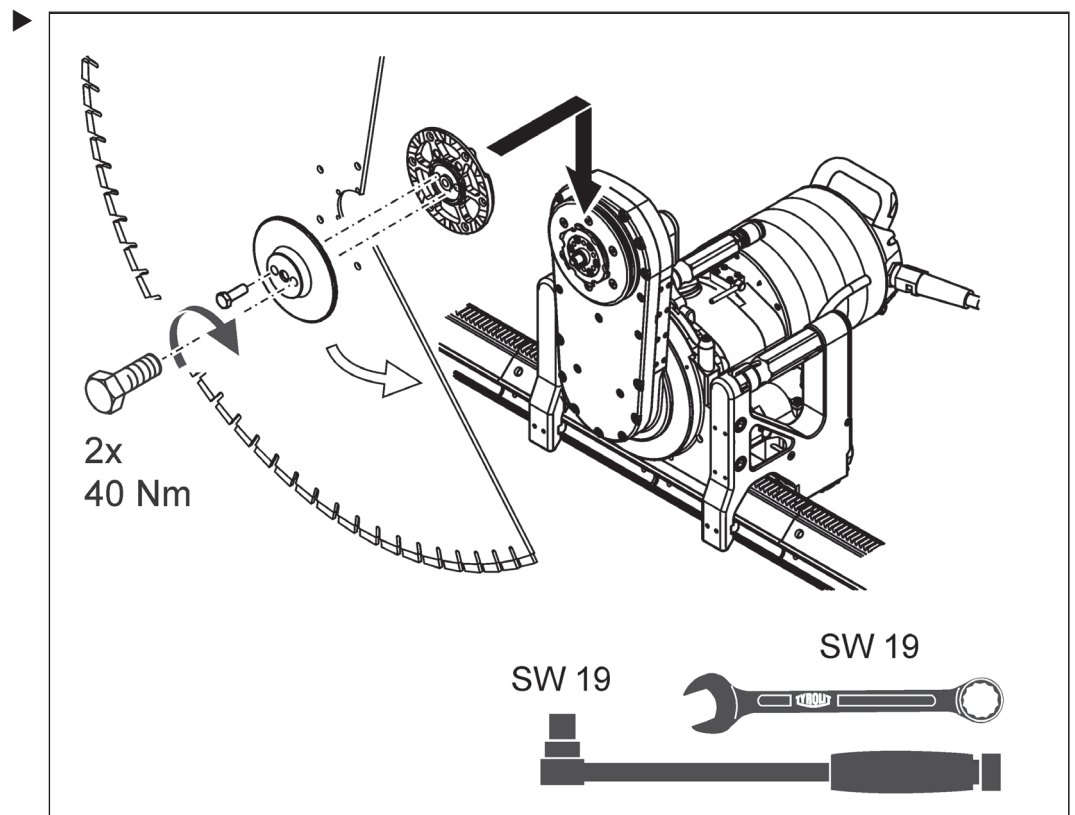
- ▶ During initial installation, remove the flush cut anchoring screws on the quick-release flange.

#### 3.4.2 Preassembling the saw blade unit



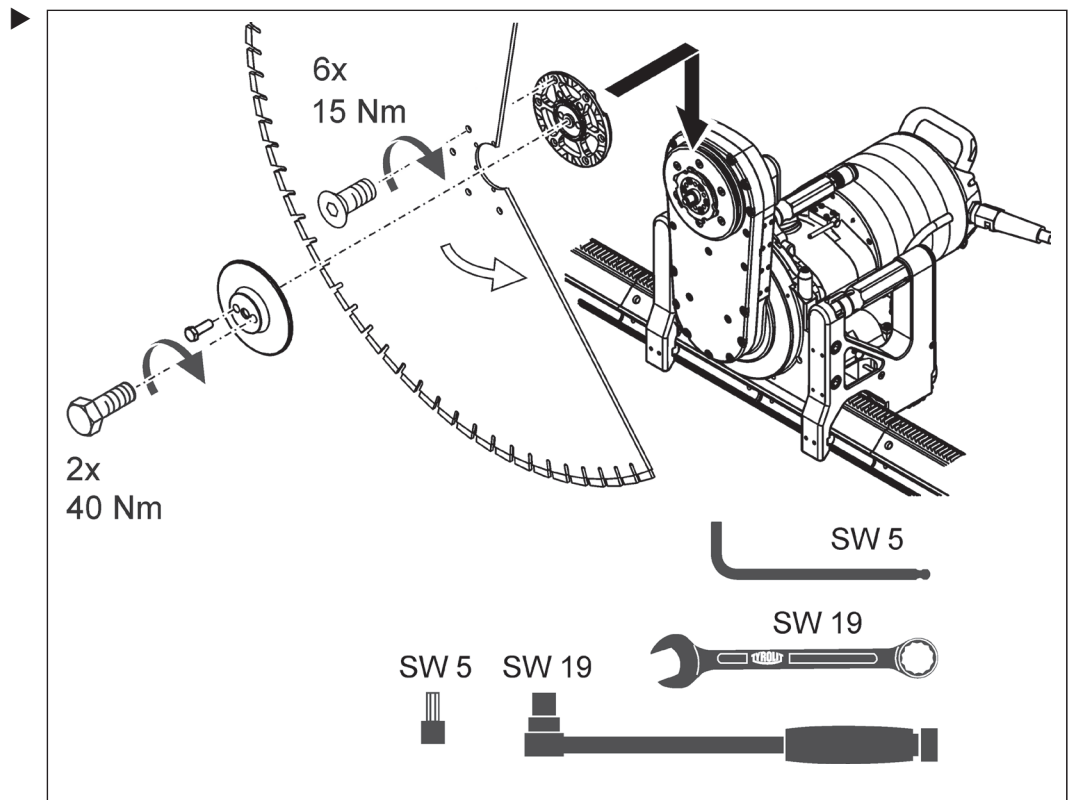
The direction of rotation of the saw blade must match the direction of rotation of the machine.  
Correct alignment: Countersinking of the fastening holes against the blade cover.

#### 3.4.3 Fixing for normal cuts with saw blades up to Ø 1000 mm

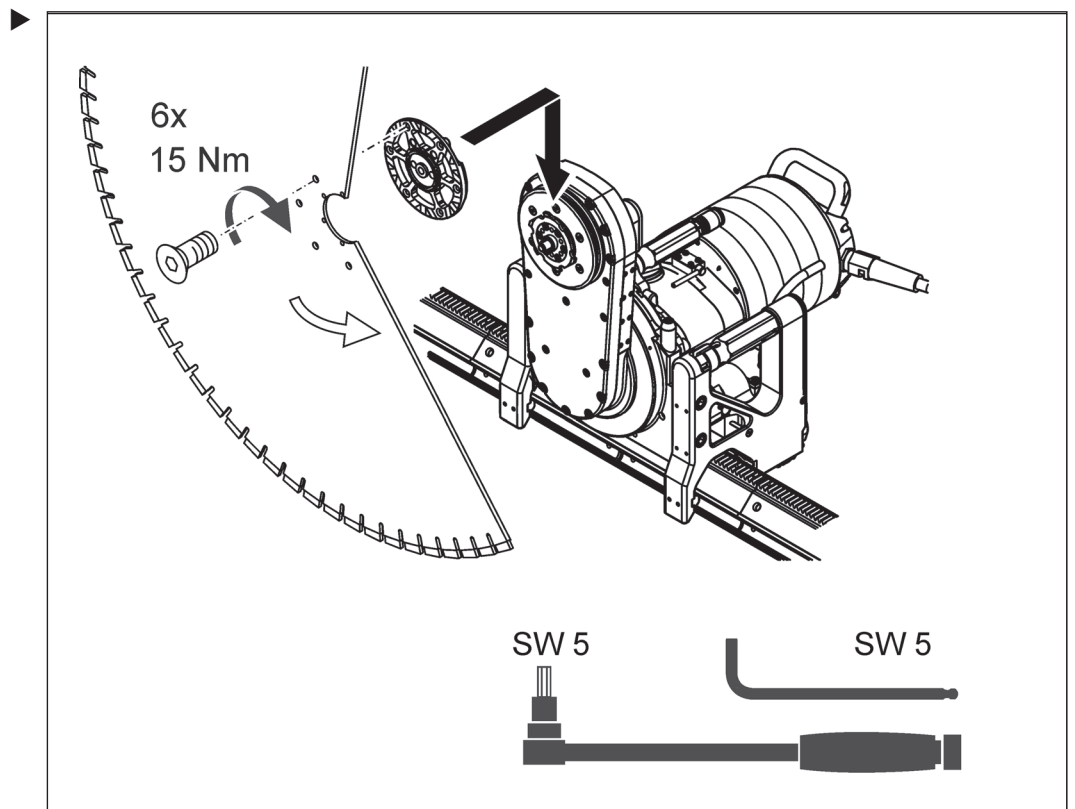




**3.4.4 Fixing for normal cuts with saw blades bigger than  $\varnothing$  1000 mm**



**3.4.5 Fixing with flush cut**



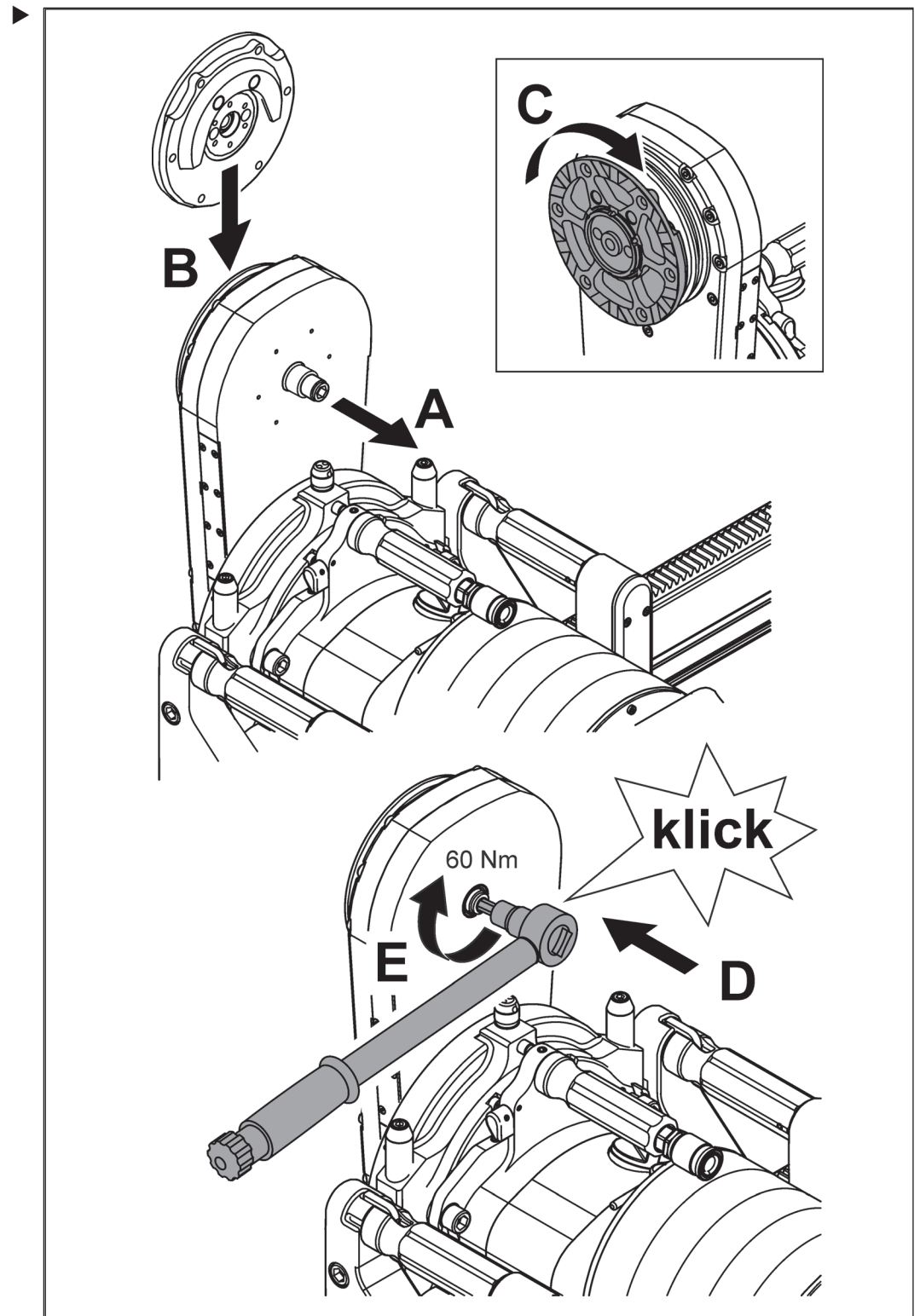
### 3.5 Securing the saw blade unit



**DANGER**

**Death or serious injury can be caused by escaping saw blades!**

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



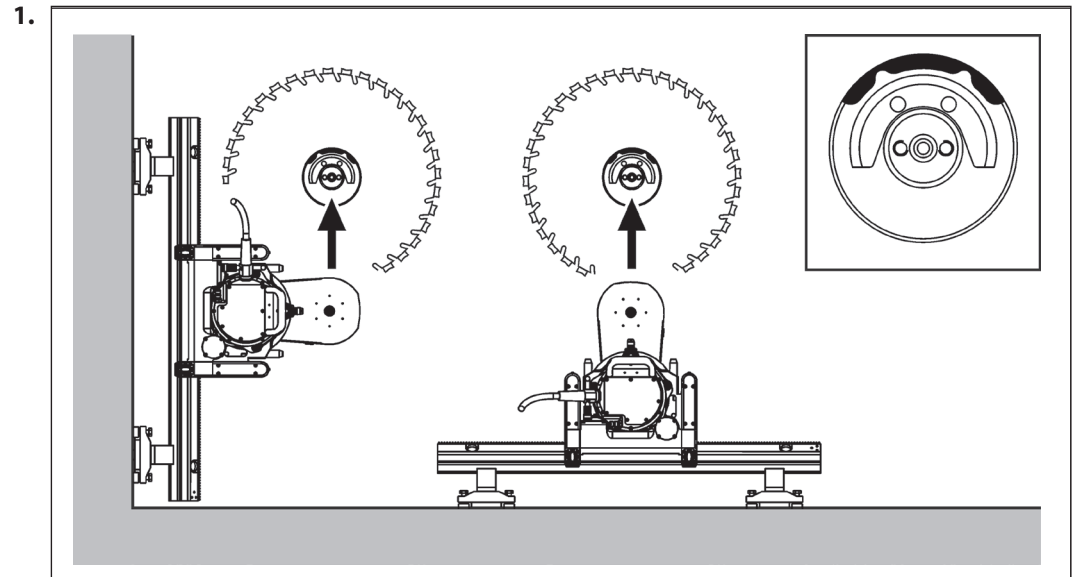
### 3.6 Removing the saw blade unit



**WARNING**

**Injuries can be caused if the saw blade drops down.**

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

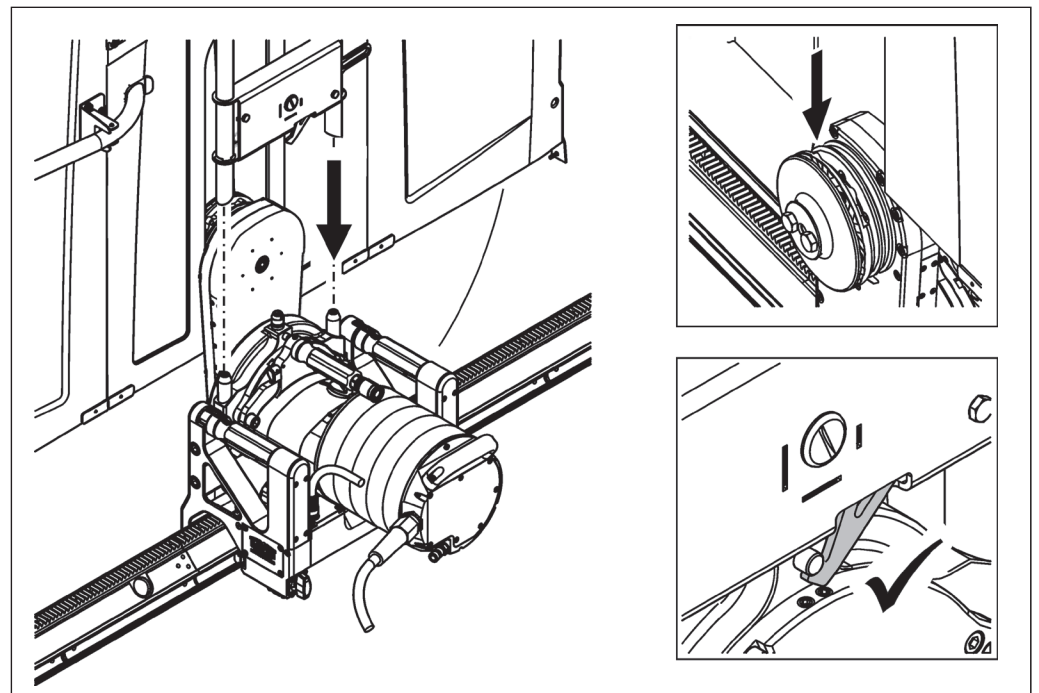


2. Disassemble the saw blade unit in the reverse order to the installation/assembly process.

### 3.7 Blade guard

#### 3.7.1 Mounting the blade guard

► Mount the blade guard according to the instruction leaflet.



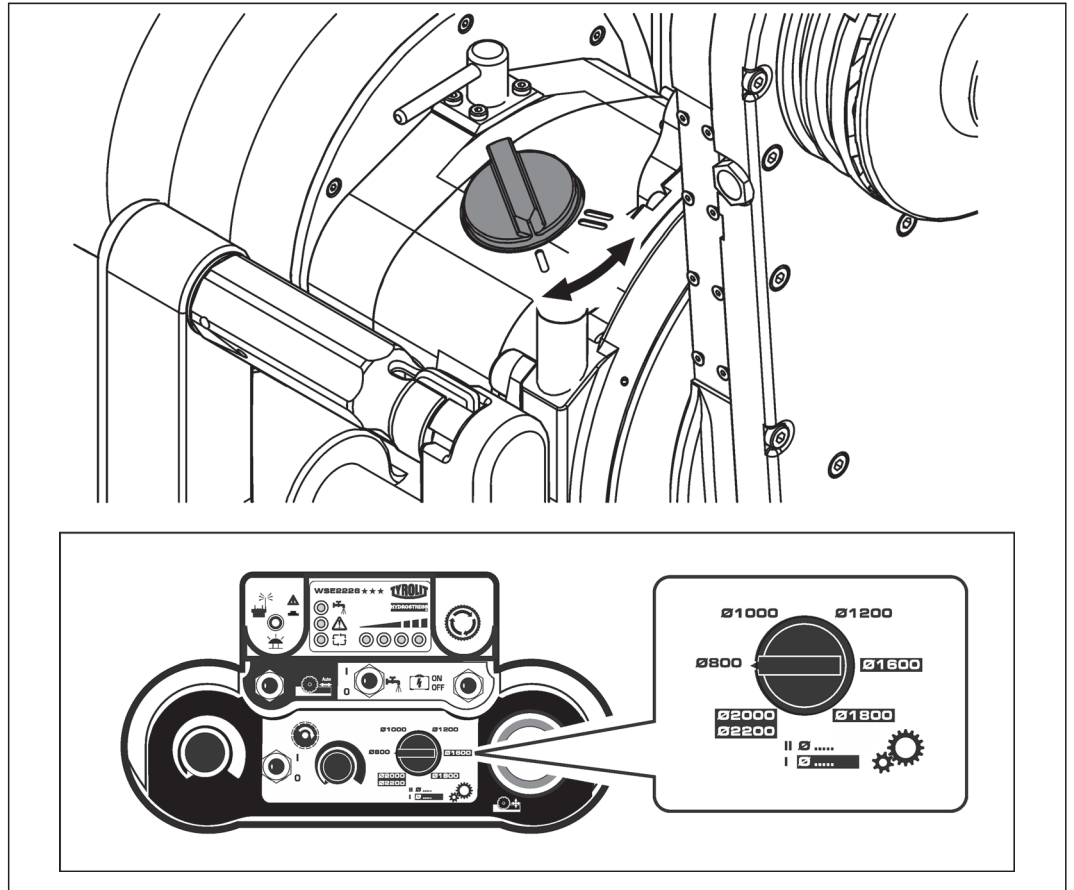
### 3.8 Selecting gear

Gears I and II are selected in relation to the tool diameter.



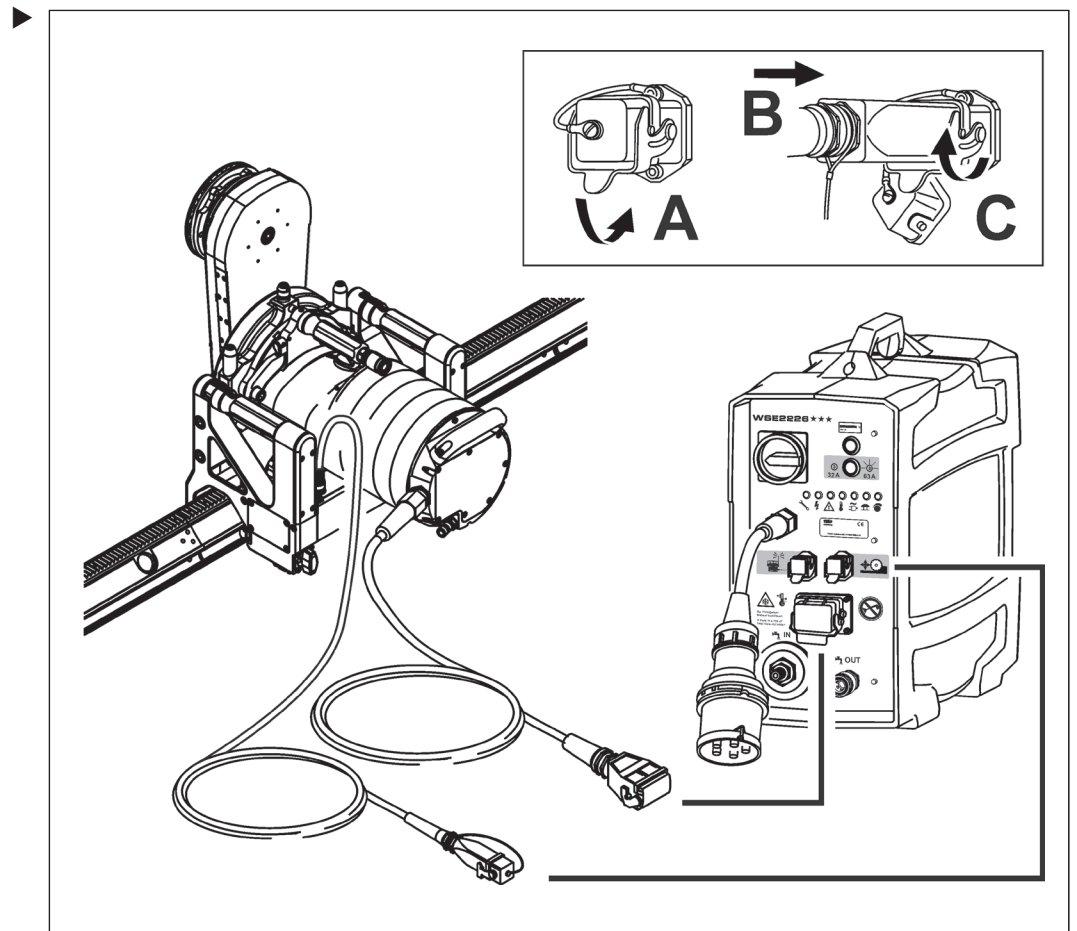
Select the switch position in accordance with the size of the saw blade. Never use force, and always change over with the drive motor stationary.

If the gear does not engage, rotate saw blade until the switch can be moved to the required gear.



### 3.9 Connecting the wall saw to the control unit

- ✓ The control unit is isolated from the power supply.
- ✓ Connectors/plugs are clean.
- ✓ Cables are undamaged



## 4 Operation



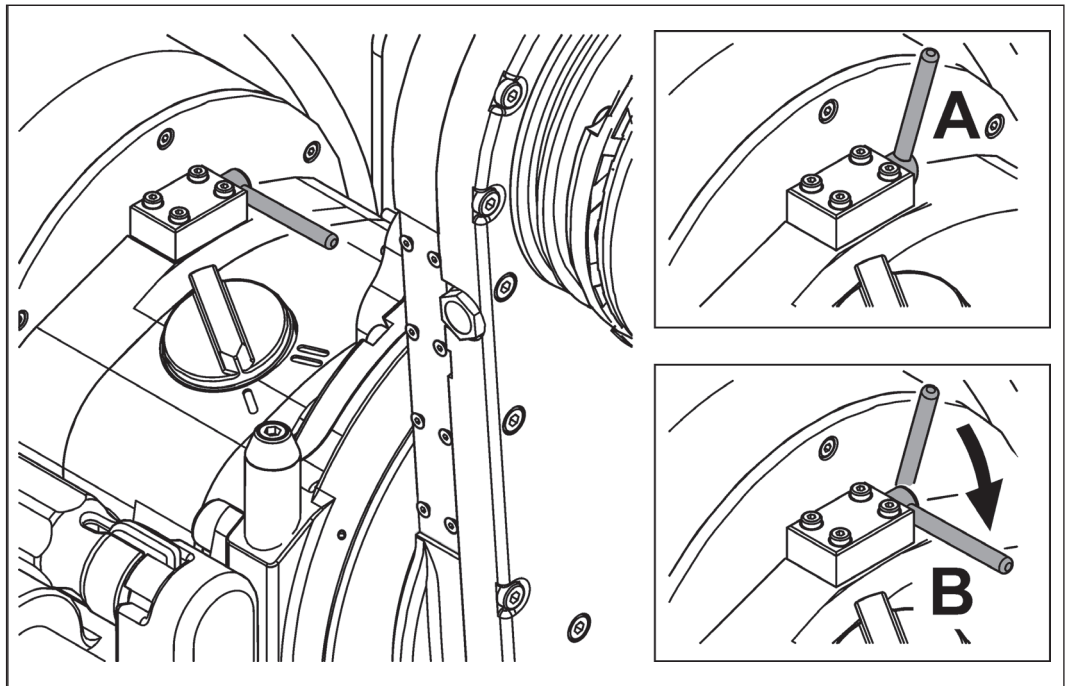
The WSE2226 ★★★ wall saw is turned into a wall sawing system by adding suitable TYROLIT Hydrostress components. Information on safe working with wall saw systems can be found in the «Wall Saw Safety Manual / System Description».

### 4.1 Safety coupling



The drive motor unit of the WSE2226 ★★★ wall saw has a safety coupling. The safety coupling provides protection from machine damage and triggers in the event of overloading. The safety coupling may only be operated if the drive motor is stationary.

#### 4.1.1 Reset safety coupling



A ⇒ The safety coupling has activated.

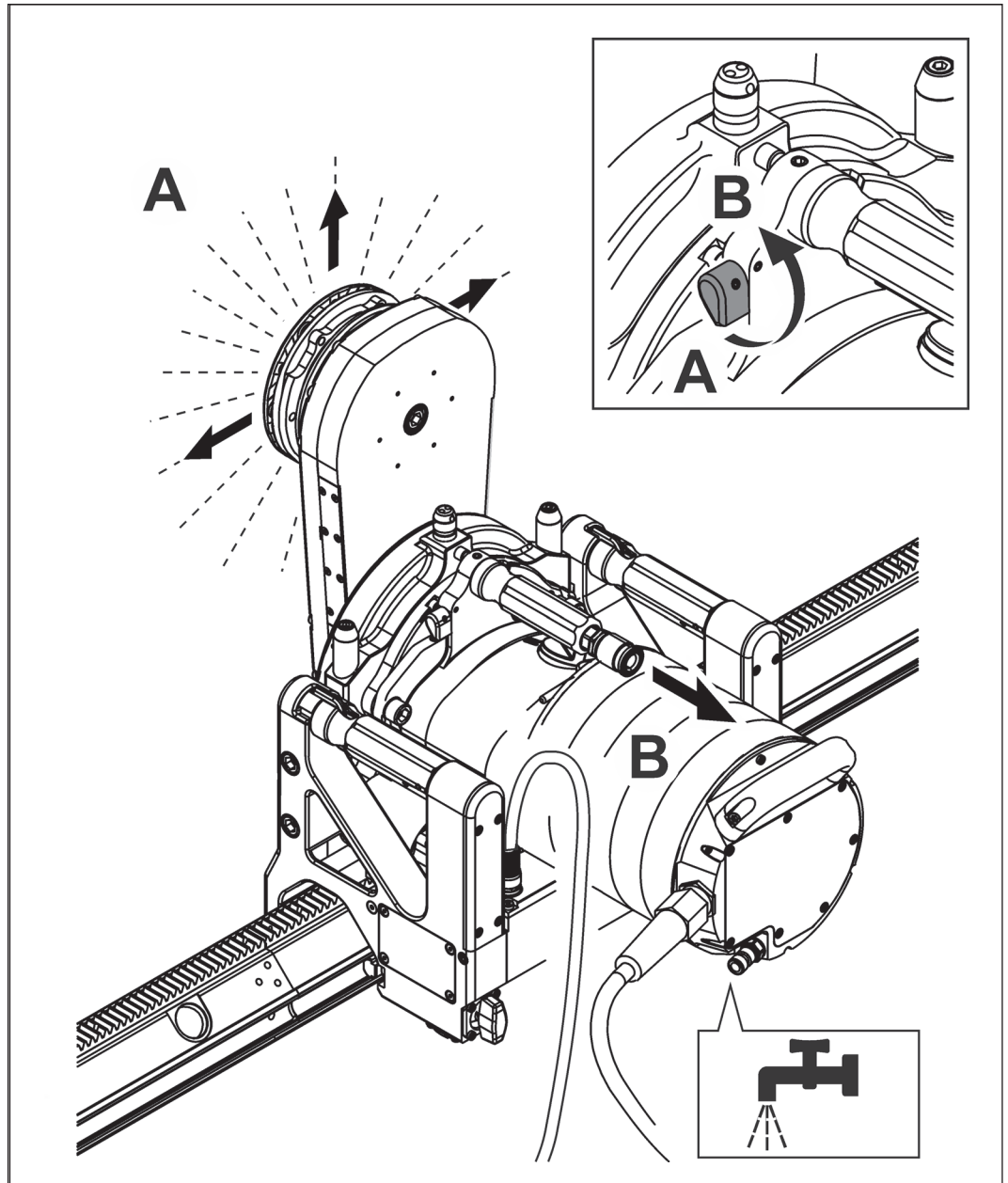
B ⇒ The safety coupling must be reset by hand.

## 4.2 Water supply

### Wet and dry cut



The WSE2226 ★★★ wall saw can be used for wet and dry cutting. For dry cutting the water is led away via a bypass after cooling the main motor.



#### Water connection

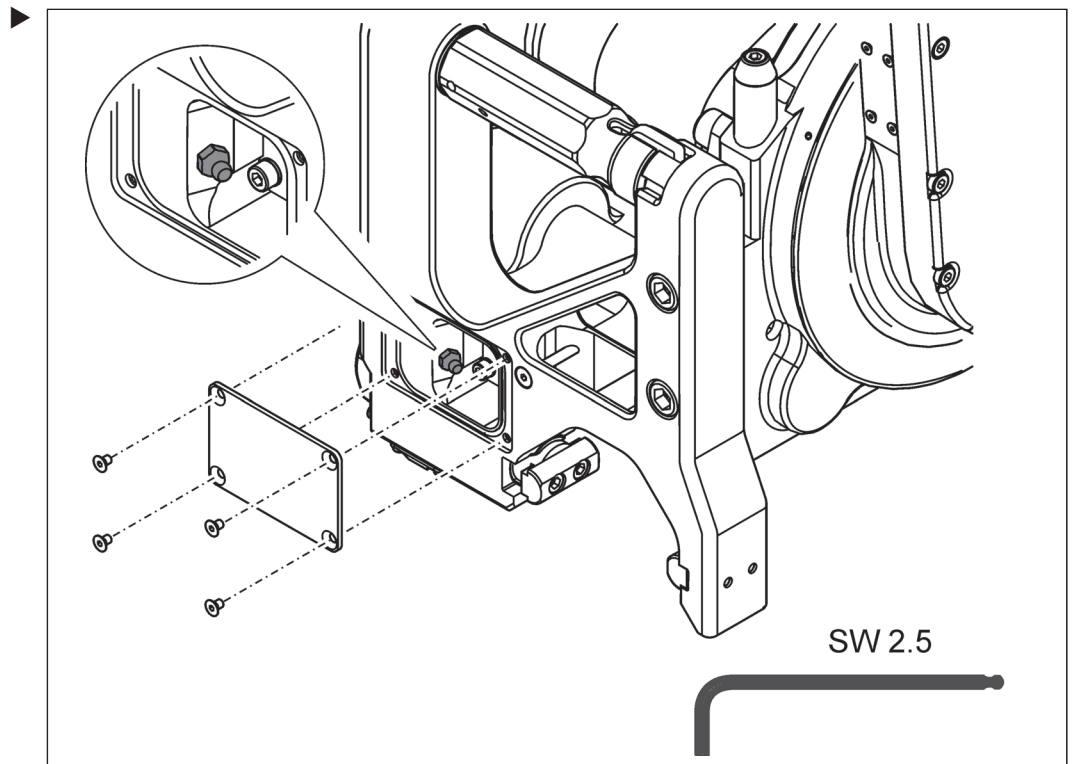
Parameter	Value
Pressure	min. 2 bar / max. 6 bar
Quantity	At least 4 l/min
Max. temperature	25 °C

## 5 Servicing and maintenance

Maintenance and servicing table		Before every commissioning	At end of work	Weekly	Yearly	After faults	After damage
Wall saw	<ul style="list-style-type: none"> <li>▶ Retighten loose bolts, screws and nuts (refer to the tightening torque specifications)</li> <li>▶ Check cleanliness</li> </ul>	X				X	X
Lock unit	▶ Clean latching recesses and guide grooves	X	X			X	X
	▶ Lubricate (page 17 / 5.1)			X		X	X
Guide prisms	▶ Check for wear	X	X			X	X
	▶ Clean	X	X			X	X
	▶ Replace (page 18 / 5.3)						X
Swivel arm	▶ Clean with water		X				
	▶ Check the saw blade uptake for wear	X				X	X
	▶ Replace gear oil (page 17 / 5.2)	Every 100 h					
Drive motor	▶ Check cleanliness	X	X			X	X
	▶ Replace gear oil (page 17 / 5.2)	Every 100 h					
Water economy	▶ Check the water line for cleanliness and leak-tightness	X				X	X
	▶ Blow 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 Lubricating the lock unit

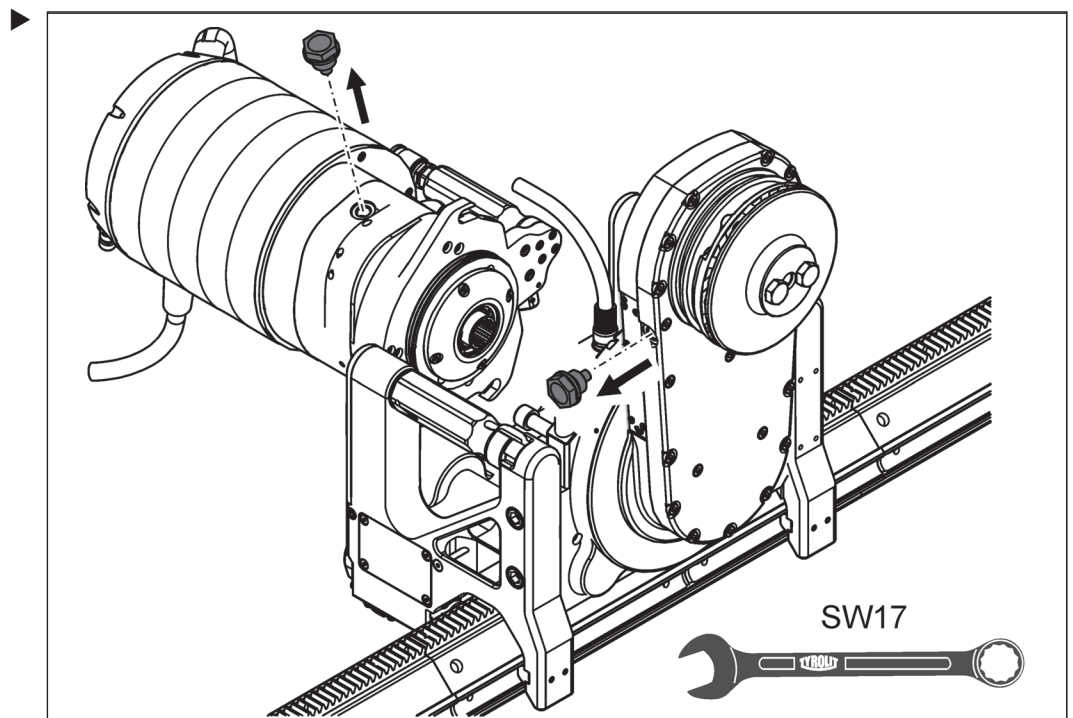


## 5.2 Changing the gear oil



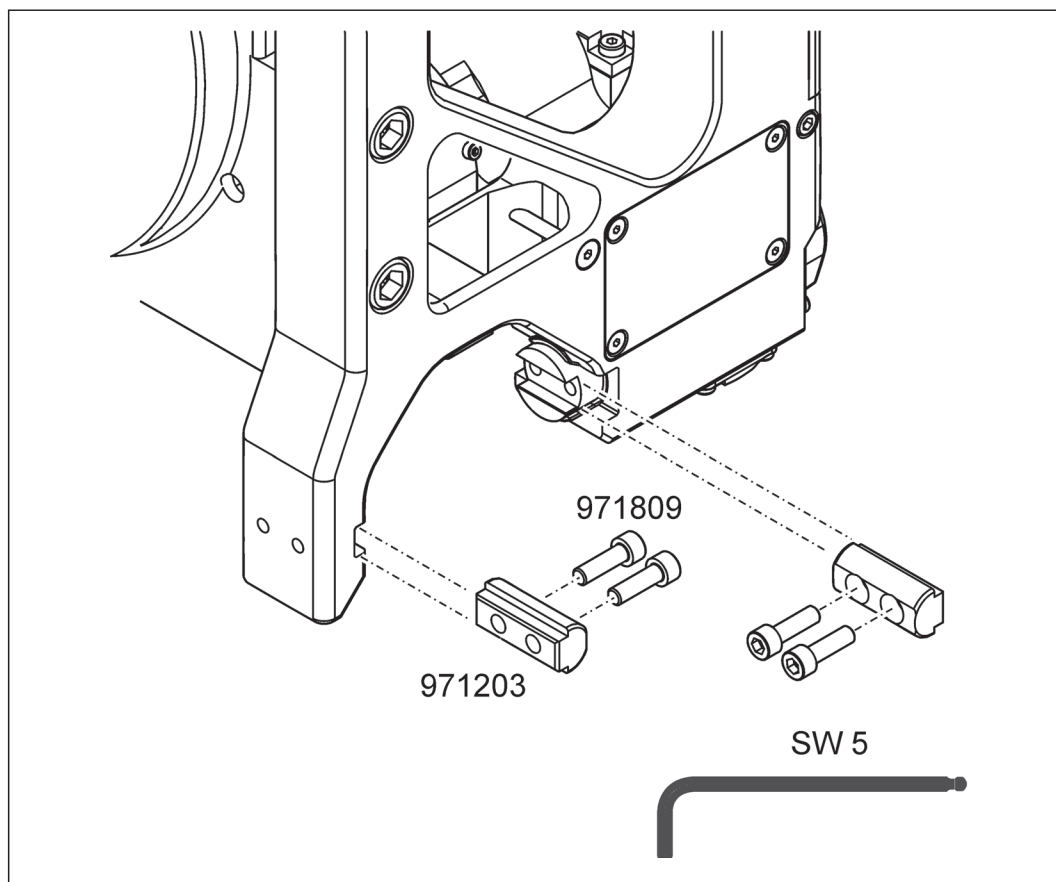
The use of unsuitable oil can damage the wall saw.

- ▶ Only use TYROLIT Hydrostress AG oil containers.
- Swivel arm: Oil container no. 10981362, 1dl
- Drive motor gears: Oil container no. 10992759, 2dl



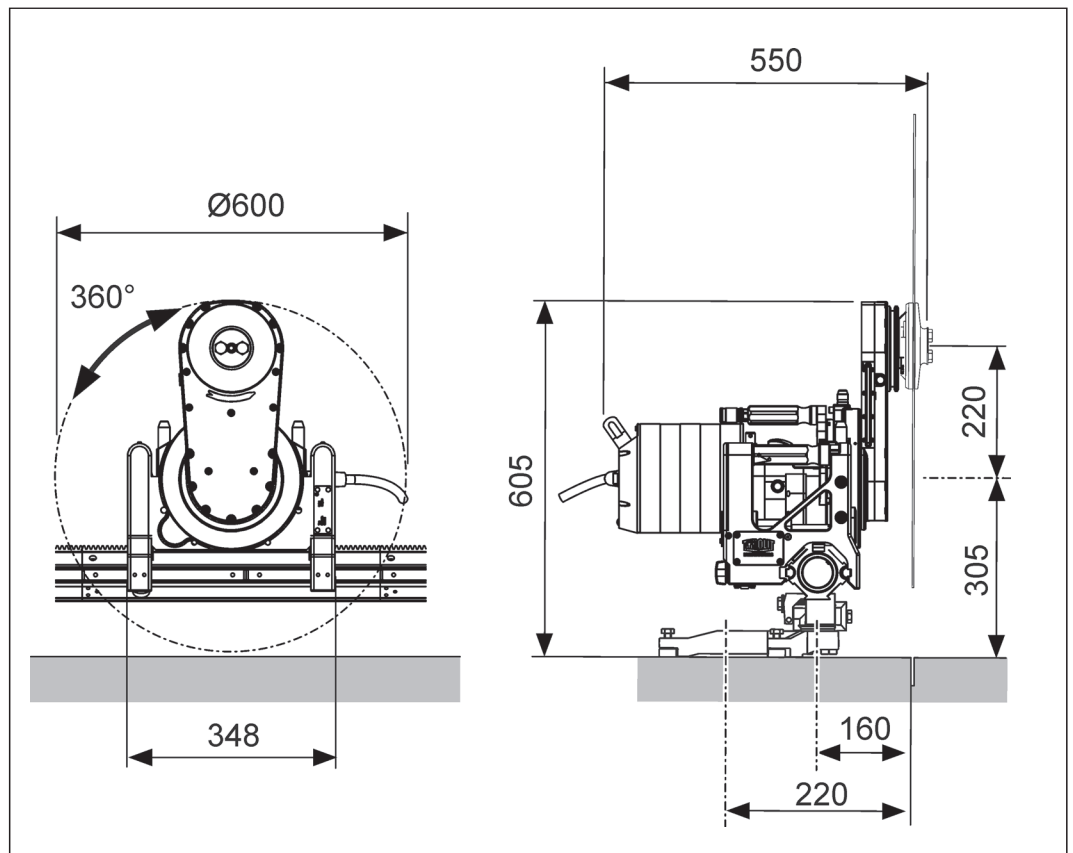
### 5.3 Replacing the sliding prisms

► Defective or worn guide prisms must be replaced with new guide prisms.



## 6 Technical data

### 6.1 Dimensions



Measurements in mm

### 6.2 Design

Design	
Parameter	Value
Construction	Light aluminium/steel construction
Rotatable swivel arm	$360^\circ$
Power transmission	Gear wheel
Carrying handle	2-piece with locking function
Sliding guide	Low-wearing, suitable for all VS and VAS rails
Rail mounting	Locking and safety function on carrying handle
Main motor	High-frequency, water-cooled, with quick-release device
Feed motor / swivel motor	Electric motor with self-inhibiting gear
Flush cutting	Quick-release flange ST without blade cover
Normal cutting	Quick-release flange ST with blade cover
Water	Water connection on motor

### 6.3 Weight

Weight	
Parameter	Value
Wall saw head complete	26 kg
Drive motor	25 kg

### 6.4 Blade geared drive motor

Blade drive motor	
Parameter	Value
Electric motor	High-frequency, water-cooled
Voltage	390 V
Frequency	400 Hz
Gears	2 (gear I $\Rightarrow$ $i=6$ / gear II $\Rightarrow$ $i=3$ )
Speed	8,000 rpm
Power	26 kW
Current	38 A
Safety class	IP67
Operating mode	S1
Number of poles	6
Insulation class	F

### 6.5 Feed motor, travel

Electric feed motor with gearbox	
Parameter	Value
Gear reduction	$i : 32$
Voltage	36 V
Feed	Toothed wheel on rail

### 6.6 Feed motor, swivel

Electric feed motor with gearbox	
Parameter	Value
Gear reduction	$1 : 21$
Voltage	36 V
Swivel range (swivel arm)	$360^\circ$

## 6.7 Saw blades

Saw blades		
Parameter		Value
Saw blade max.		Ø 2,200 mm
Fully detachable saw blade		Ø 1,000 mm
Blade holder		Ø 60 mm
Blade flange mounting at wall saw		Quick-release flange ST
Saw blade fixing on blade flange (also for flush cuts)		6 countersunk head screws reference circle 130 mm
Blade cover mounting on blade flange		2 hexagonal bolts
Cutting depth	Ø 800 mm	315 mm
	Ø 1,000 mm	415 mm
	Ø 1,200 mm	515 mm
	Ø 1,600 mm	715 mm
	Ø 1,800 mm	815 mm
	Ø 2,000 mm	915 mm
	Ø 2,200 mm	1,015 mm

## 6.8 Lubricants, fluids and sealants

Lubricants, fluids and sealants		
Parameter		Value
Gear oil (swivel arm)		Klüber GEM 4-150 N (TYROLIT No. 10981362)
Gear oil (drive motor gearbox)		Klüber GEM 4-150 N (TYROLIT No. 10992759)
Lubricating grease (lock unit)	Penetration	265 to 295
	NLGI	2
Lubricating grease (swivel gear)	Penetration	420 to 460
	NLGI	00

## 6.9 Noise level

Noise data according to ISO 3744	
Parameter	Value
Sound pressure level $L_{pA}$	89.8 dB(A)*
Highest value of sound pressure $L_{pCpeak}$	111.4 dB
Acoustic power level $L_{WA}$	109.8 dB(A)*

Conditions for the measurement:

\* Saw blade Ø1600 mm not in cutting operation under full load

## 6.10 Connectable control units

The wall saw must only be operated with the coordinated control units from TYROLIT Hydrostress.

Control unit	
Parameter	Type
Control unit	WSE2226★★★ (Ø800 / Ø1,000 / Ø1,200 / Ø1,600 / Ø1,800 / Ø2,000 / Ø2,200)

## 6.11 Water

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

## 7 EU Declaration of Conformity

Description	Wall saw
Type designation	WSE2226★★★
Year of construction	2011

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

### Applied directives

2006/42/EC	from 17th May 2006
2004/108/EC	from 17th December 2004

### Applied standards

EN 15027/A1:2009  
 EN 12100:2010  
 EN 60204-1/A1:2009  
 EN ISO 3744:2010  
 EN 55014-1/A1:2009  
 EN 55014-2/A2:2008  
 EN 6100-3-11:2000  
 EN 6100-3-12:2005

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Pfäffikon, 28.04.2011



Pascal Schmid  
 Head of Development

