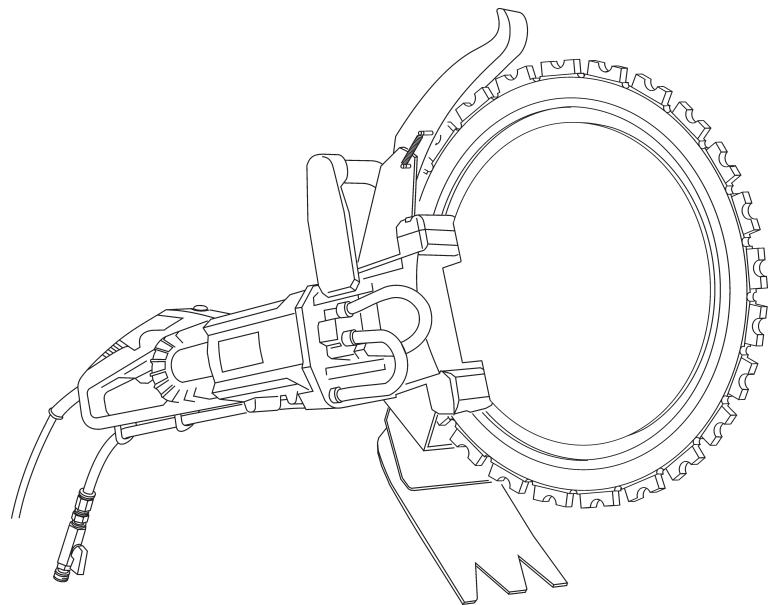


Operating Instructions

Ring saw HRE400 ★ ★ ★

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 Concerning these instructions

These instructions are a part of the electrical tool. They describe how to use the equipment safely and properly in all phases of operation.

- Read the instructions carefully before use, particularly the safety instructions.
- Keep the instructions for the entire service life of the electrical tool.
- Ensure that the instructions are available to the operator and the service engineers at all times.
- Pass the instructions on to all subsequent owners or users of the electrical tool.
- Update instructions with all supplements received from the manufacturer.

1.1 Danger symbols in these instructions



DANGER

Warning of danger, where failure to comply could lead to death or serious injury.



WARNING

Warning of danger, where failure to comply could lead to injuries or damage to property.



WARNING

Warning - dangerous electrical voltage.

Before working in an area identified in this way, ensure the installation or electrical tool is fully isolated from the power (voltage) and secured to prevent it being accidentally powered up again.



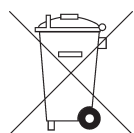
INFORMATION

Information for optimum use of electrical tool. Failure to take note of this information may mean it is not possible to guarantee the performance stated in the technical data.



RECYCLING

Take waste for recycling.



DISPOSAL

Observe country-specific national and regional laws and guidelines when disposing of the electrical tool.

2 Safety



Electrical tools must be operated by authorised personnel only. Information regarding authorised personnel is available in "Chapter 2.4".

2.1 General safety information



WARNING

Read all safety information and instructions. Any failure to observe the safety information and instructions can result in electric shock, fire and/or serious injuries.

Retain all safety information and instructions for future reference.



The term electrical tool used in the safety instructions pertains to the mains-operated electrical tool (with a mains cable) and battery-operated electrical tool (without a mains cable).

2.1.1 Workplace safety

- **Keep your place of work clean and well illuminated.** Untidy or non-illuminated work areas can lead to accidents.
- **Do not use the electrical tool in potentially explosive areas in which flammable liquids, gases or dust are present.** Electrical tools create sparks that can ignite dust or vapours.
- **Ensure children and other people kept at a safe distance when using the electrical tool.** If you are distracted, you may lose control of the tool.

2.1.2 Electrical safety

- **The electric plug of the electrical tool must fit into the socket outlet. Do not modify the plug in any way. Do not use adapter plugs together with earthed electrical tools.** Unmodified plugs and matching socket outlets reduce the risk of electric shock.
- **Avoid body contact with earthed surfaces such as pipes, heaters, ovens and refrigerators.** There is an increased risk of electric shock if your body is earthed.
- **Protect your electrical tool from rain and moisture.** Water ingressing an electrical tool increases the risk of electric shock.
- **Do not use the cable to carry or hang up the electrical tool or to pull the plug out of the socket outlet. Keep the cable away from heat, oil, sharp edges and moving tool parts.** Damaged or tangled cables increase the risk of electric shock.
- **When using an electrical tool outdoors, use an extension lead that is suitable for use in outdoor areas.** Using an extension lead suitable for use in outdoor areas reduces the risk of electric shock.
- **If it is not possible to avoid operating the electrical tool in a damp environment, ensure a residual current protective device is installed.** Using a residual current protective device reduces the risk of electric shock.

2.1.3 Safety of persons

- **Remain alert, be aware of what you are doing and use common sense when working with the electrical tool. Do not use the electrical tool when you are tired or under the influence of drugs, alcohol or medication.** A fleeting moment of carelessness when using the electrical tool can lead to serious injuries.
- **Wear Personal Protective Equipment and always wear safety goggles.** Wearing appropriate personal protective equipment according to the prevailing conditions, such as a dust mask, non-slip safety shoes, hard hat and/or hearing protection will reduce the risk of injuries.
- **Avoid starting the electrical tool unintentionally. Ensure the electrical tool is switched off before you pick up, carry or connect the electrical tool to the power supply and/or connect the rechargeable battery.** Carrying the electrical tool with your finger on the switch or the tool is switched on when you connect it to the power supply can lead to accidents.
- **Remove adjusting tools and spanners before switching on the electrical tool.** Never work from a ladder. A tool or key attached to the rotating tool may cause injuries.
- **Avoid abnormal postures. Ensure that you have firm footing, and keep your balance at all times.** That will ensure you are able to better control the electrical tool in unexpected situations.
- **Wear suitable clothing. Do not wear loose fitting clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.** Loose fitting clothing, jewellery and long hair can get caught up in moving parts.
- **If there is an option to fit dust extraction and collection devices, ensure they are correctly connected and used properly.** Using a dust extraction device can reduce risks associated with dust.

2.1.4 Using and caring for the electrical tool

- **Do not overload the tool. Use the correct electrical tool for your work.** Using the correct electrical tool will enable you to carry out your work better and more safely in the specified power range.
- **Do not use any electrical tool if the switch is faulty.** Any electrical tool that can no longer be switched on and off is dangerous and must be repaired.
- **Remove the plug from the socket outlet and/or remove the rechargeable battery before adjusting the tool, changing accessories or putting the tool away.** These cautionary measures prevent the electrical tool starting up unintentionally.
- **When not in use store the electrical tool out of reach of children. Do not allow anybody to use the tool not familiar with the tool or have not read these instructions.** Electrical tools are dangerous in the hands of untrained users.
- **Care for electrical tools appropriately. Check moving parts function flawlessly and do not jam; check if any parts are broken or damaged and impair the proper function of the electrical tool. Ensure damaged parts are repaired before using the tool.** Poorly maintained electrical tools are the cause of many accidents.
- **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp edges jam less often and are easier to use.
- **Observe these instructions when using the electrical tool, accessories and tool bits. Be aware of the working conditions and the task at hand.** Using electrical tools for any application other than for what they were designed can lead to hazardous situations.

2.1.5 Service

- **Allow only qualified and skilled personnel to repair your tool using only original spare parts.** That guarantees the safety of the electrical tool is maintained.

2.1.6 Safety information for hand saws

- **Wear hearing protection when using hand saws.** The effect of noise can lead to a loss of hearing.
- **Use the handles fitted to the tool.** Losing control of the machine can lead to injuries.
- **Hold the tool using the insulated gripping surfaces when carrying out work that risks the tool being used coming into contact with concealed power cables or its own mains cable.** Contact with a live conductor can cause metal parts to become live and result in an electric shock.

2.2 Pay attention to the safety instructions

Do not work with the electrical tool unless you have read and understood the safety instructions.

The electrical tool has been inspected before being shipped and is delivered in perfect condition. TYROLIT Hydrostress does not accept liability for damage caused by failing to follow these instructions. This applies in particular to the following damage:

- Damage caused by improper use and operator error
- Damage caused by failure to observe the safety-related information in these instructions or the warning signs on the electrical tool
- Damage caused by substandard maintenance work

2.3 Intended use

The electrical tool is used by trained personnel to cut concrete, masonry and stone.

Incorrect use:

- Working without protective equipment or inadequate protective equipment
- Cutting other materials
- Removing protective devices
- Cutting in potentially explosive areas
- Cutting loose parts
- Incorrect or absence of waste water disposal (sawing sludge)

2.4 Target groups and responsibility

2.4.1 Authorised personnel

Work on or with machines or systems from TYROLIT Hydrostress must be carried out by authorised personnel only. Personnel are considered to be authorised if they meet the necessary training and know-how requirements and have been assigned a precisely defined task.

2.4.2 Manufacturer

Manufacturers of products supplied by TYROLIT Hydrostress are:

- TYROLIT Hydrostress
- A company explicitly named by TYROLIT Hydrostress

Within the context of an integrated quality assurance and safety control system, the manufacturer is entitled to request from the operating company information about the products.

2.4.3 Operating company

The operating company named by TYROLIT Hydrostress is the primary, legal entity responsible for the correct use of the product and for the training and assignment of authorised personnel. The operating company sets out the skills and level of training of authorised personnel.

Personnel qualifications

- A person with technical qualifications in a management position
- Relevant experience in personnel management and risk assessment
- Has read and understood the safety instructions

2.4.4 Operator (user)

User is the term employed by TYROLIT Hydrostress to designate a person who performs the following work without direct supervision:

- Setting up the machines and systems from TYROLIT Hydrostress within the scope of their intended use
- Performs and monitors work without direct supervision
- Localises faults and organises troubleshooting and fault correction without direct supervision
- Maintenance
- Verifies safety devices are functioning correctly

Personnel qualifications

- Completed vocational training as a concrete tradesman or relevant occupational experience
- Introduction (basic training) in the operation of the electrical tool by a service engineer

2.4.5 Service engineer

A service engineer is the term applied by TYROLIT Hydrostress to a person who performs the following work without direct supervision:

- Installs TYROLIT Hydrostress machines and systems
- Makes adjustments to machines and systems for which certain access rights are required
- Complex service and repair work

Personnel qualifications

- Specialist vocational training (mechanical / electrical engineering)
- Product-specific training at TYROLIT Hydrostress

2.5 Organisational measures

2.5.1 Product monitoring obligation

Operate the electrical tool only when it is in a perfect and undamaged condition. Operating personnel must immediately notify a responsible person or the manufacturer of changes in the operational behaviour or to safety-related components of the tool.

The maintenance intervals must be adhered to. Faults that affect safety must be remedied immediately.

2.5.2 Location of these instructions

Keep a copy of these instructions available to personnel at the place of use of the electrical tool at all times.

2.5.3 Workplace

- ▶ Provide sufficient space to carry out work safely.
- ▶ Ensure that the workplace is sufficiently illuminated.
- ▶ Cordon off the danger area in a highly visible manner so nobody can enter the danger area during sawing.

2.6 Protective devices and signs on the electrical tool

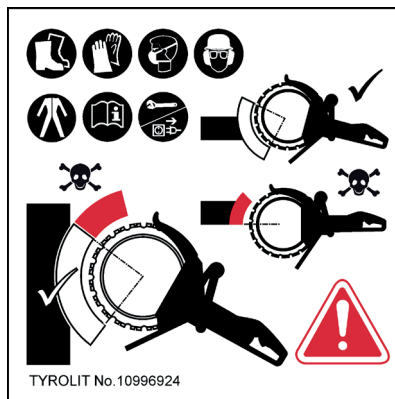
2.6.1 Protective devices

Protective devices may only be removed if the electrical tool has been switched off and is at a standstill. Safety components in particular should only be removed and refitted by authorised personnel.

Before switching the electrical tool back on again, check that the safety elements are operating correctly.

2.6.2 Signs on the electrical tool

Safety label "Kick-Back"



Name plate



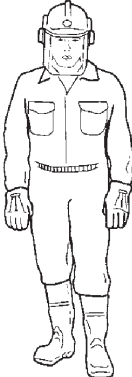







2.7 Spare parts and modifications

Only original spare parts from TYROLIT Hydrostress must be used. Otherwise damage may be caused to the electrical tool or to other property and personal injuries.

Do not affix any attachments or make any modifications to the electrical tool without prior written permission from TYROLIT Hydrostress.

2.8 Personal protective clothing

It is mandatory for anyone working with and on the electrical tool to wear personal protective equipment.

Personal protective clothing			
			
			
			

2.9 Residual risks

There is a risk of serious injuries from residual risks described in the chapters that follow.

2.9.1 Sharp edges

Risk of serious lacerations if contact is made with the cutting tool.

- ▶ Do not touch the tool during operation.
- ▶ Always wear gloves when handling the stationary tool.

2.9.2 Diamond segments flying off

- ▶ Before use, always ensure that the ring guard is correctly fitted and undamaged.
- ▶ Do not start sawing if anybody else is in the danger zone.
- ▶ Ensure a safe distance of 15 m to the electrical tool is maintained.
- ▶ Replace the disk grinding ring if diamond segments start to break off.

2.9.3 Kick-back

Incorrectly positioning the disk grinding ring or cutting the wrong materials can cause the electrical tool to kick-back and seriously injure the operator.

- ▶ Cut only approved materials for which the tool was designed and intended.
- ▶ Do not apply disk grinding ring above the centre to a corner of a workpiece.

2.9.4 Unintentional start-up

- ▶ Before starting up, ensure that:
 - The control handle with lockout is working correctly.
 - Nobody else is in the danger zone.

2.9.5 Vibration

Vibration can cause circulation problems and/or nerve damage. Consult a doctor in the event any symptoms become evident.

2.9.6 Uncontrolled movements and vibration

- ▶ When using, always hold the electrical tool with both hands on the handles. Thumbs and fingers must be closed around the handles.
- ▶ Keep the handles clean.
- ▶ Never saw above shoulder height.
- ▶ Never stand on ladder when sawing.
- ▶ Guide the electrical tool in a manner that ensures no part of your body is in the direct line of the disk grinding ring of the electrical tool.

A loose disk grinding ring can cause the electrical tool to vibrate uncontrollably.

- ▶ Ensure the smooth drive roller is correctly mounted.

2.9.7 Being caught up and drawn in

Items of clothing or long hair can be caught by the rotating disk grinding ring.

- ▶ Always work with the protective covers fitted.
- ▶ Do not wear loose items of clothing at work.
- ▶ Wear a hair net if you have long hair.

2.9.8 Particles flying off

Flying particles can cause eye injuries.

- ▶ Wear safety goggles or a visor.
- ▶ Ensure that danger area is properly cordoned off.

2.9.9 Falling parts

Falling parts can cause serious head and foot injuries.

- ▶ Wear a helmet and safety shoes with steel toecaps.
- ▶ Secure lumps of concrete that have been cut loose to prevent them falling.
- ▶ Safeguard front, underneath and rear of sawing area from falling parts and sawing sludge: It is imperative to ensure people cannot be injured or equipment damaged.

2.9.10 Noise

Noise can cause hearing damage.

- ▶ Wear hearing protection.

2.9.11 Harmful vapours and aerosols

Inhaling harmful vapours and/or aerosols can cause breathing problems.

Breathing in the emerging water mist is a health hazard.

- ▶ Wear a respiratory mask.
- ▶ Ensure confined spaces are adequately ventilated.

2.9.12 Slip hazard

- ▶ Do not work on uneven surfaces.
- ▶ Wear safety shoes with non-slip soles.

The sludge resulting from cutting is very slippery.

- ▶ Remove sludge or ensure that people cannot slip over.

2.9.13 Danger from ring saw continuing to run after an accident has occurred

- ▶ Ensure the ring saw can be stopped quickly.

2.9.14 Poor physical condition

- ▶ Do not work when under the influence of alcohol, drugs or medication.
- ▶ Do not work when you are overtired.
- ▶ Do not allow children or adolescents below the age of 18 to operate the electrical tool. Adolescents aged 16 and over are excepted from this ban if they are under the supervision of an expert for training purposes.

2.9.15 Reduced cutting ring quality

- ▶ Do not use damaged disk grinding rings.
- ▶ Check disk grinding ring for damage before fitting.
- ▶ Do not fit new diamond segments to a disk grinding ring.

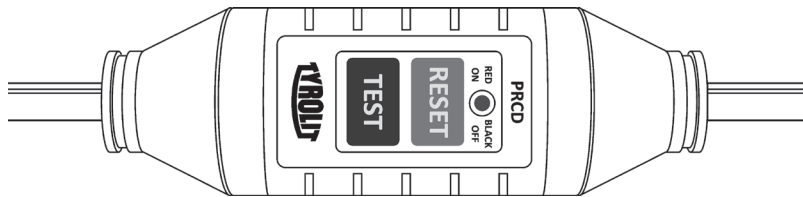
2.9.16 Transport

- ▶ Never transport the electrical tool when it is running!
- ▶ Always carry electrical tool using the bow-type handle.

2.10 Protection against electric shock

2.10.1 Personal residual current device (RCD, PRCD, GFCI)

Always ensure there is a functioning residual current-operated personal protective device (PRCD, GFCI) installed.



DANGER

Any failure to comply risks death or serious injuries.

- ▶ Protect your electrical tool from rain and moisture. Water ingressing an electrical tool increases the risk of electric shock.
- ▶ It is prohibited to work without a residual current device installed.

2.10.2 Power supply



INFORMATION

- The power supply must correspond with the information on the type plate.
- Protect the connecting cables from heat, oil and sharp edges.
- Do not use connecting cables for purposes for which they are not intended.
- Never carry the electrical tool using the connecting cable.
- Do not use the connecting cable to pull the plug out of the socket.
- In the event of power failure: switch off the electrical tool, pull out the plug.



Extension cable

- Use only approved and appropriately marked extension cables outdoors.
- Do not use extension cables with multiple sockets and operate several devices simultaneously.

Always use an extension cable with a sufficient cross-section that is approved for the field of application.

Do not use an extension cable with a conductor cross section of 1.25mm² and 16 AWG.

Recommended minimum cross-sections and maximum cable lengths					
Cross section mm ²	1.5	2.0	2.5	3.5	4.0
110 V	Not permitted	Not permitted	Not permitted	20 m	20 m
220-240 V	20 m	-	40 m	50 m	60 m

2.11 Risk of property damage

2.11.1 Cutting with the side of the disk grinding ring

Cutting with the sides of the ring can damage the disk grinding ring.

- ▶ Do not cut using the sides of the disk grinding ring.

2.11.2 Defective water cooling

The disk grinding ring can be damaged if the water cooling is faulty.

- ▶ Do not operate the electrical tool without water cooling.

2.11.3 Frost damage

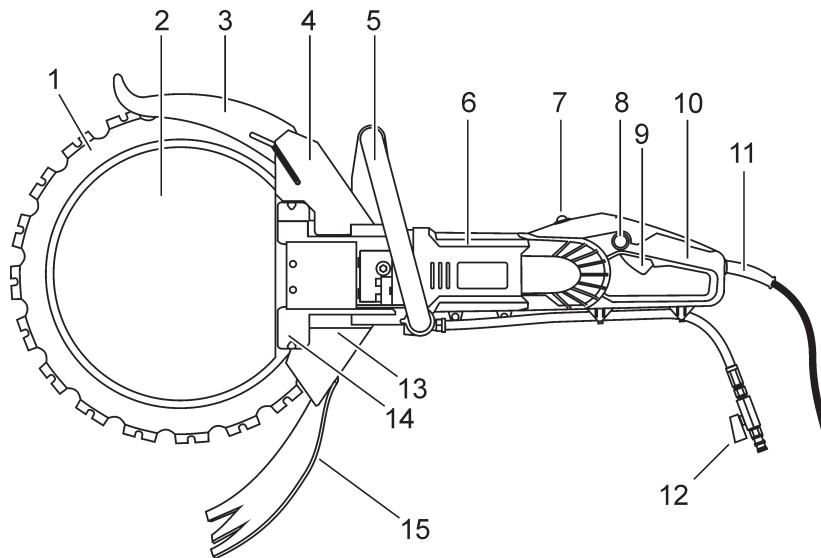
- ▶ When work is completed or before longer work breaks drain and blow out the water system.

2.11.4 Storage

- ▶ Store the electrical tool securely in a dry room. Do not store the electrical tool outdoors. Ensure children are unable to gain access to the electrical tool.

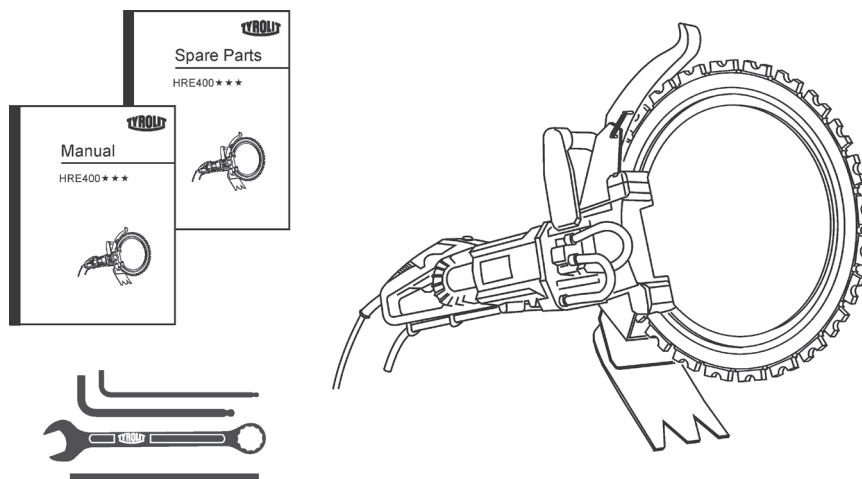
3 Product description

3.1 Ring saw



- | | | |
|----------------------|------------------|-------------------------------|
| 1 Disk grinding ring | 6 Electric motor | 11 Electric cable |
| 2 Guide plate | 7 Power display | 12 Water connection |
| 3 Disk guard | 8 Safety button | 13 Guard with spray protector |
| 4 Metal guard | 9 Start switch | 14 Housing |
| 5 Bow-type handle | 10 Handle | 15 Splash guard |

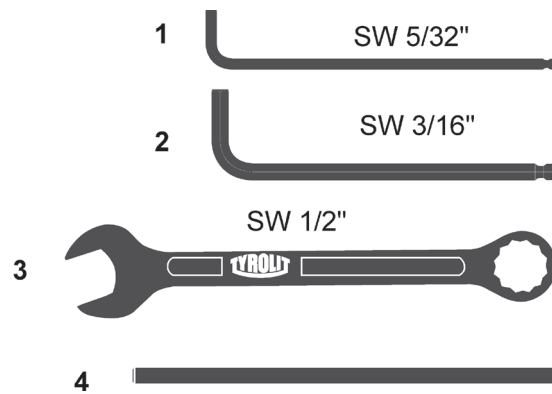
3.2 Scope of supply



- 1x Ring saw HRE400 ★★★
- 1x Tool set
- 1x Operating Instructions
- 1x Spare parts list with exploded view

3.3 Accessories

3.3.1 Tool



- 1 Allen key WAF 5/32"
- 2 Allen key WAF 3/16"
- 3 Open-ended spanner WAF 1/2"
- 4 Punch

4 Preparatory operations

The work is prepared as follows:

1. Determine conditions:
 - Location of supply lines in walls, floors and ceilings
 - Cooling water drainage (risk of electric shock and water damage)
2. Secure the site.
3. Secure cut-outs in walls, ceilings and floors (e.g. crane or supports). Take weight of concrete into consideration (1 m³ corresponds to 2400-2700 kg). Determine position and sequence of cuts.
4. Perform a visual inspection of the ring saw.

4.1 Position and order of cuts

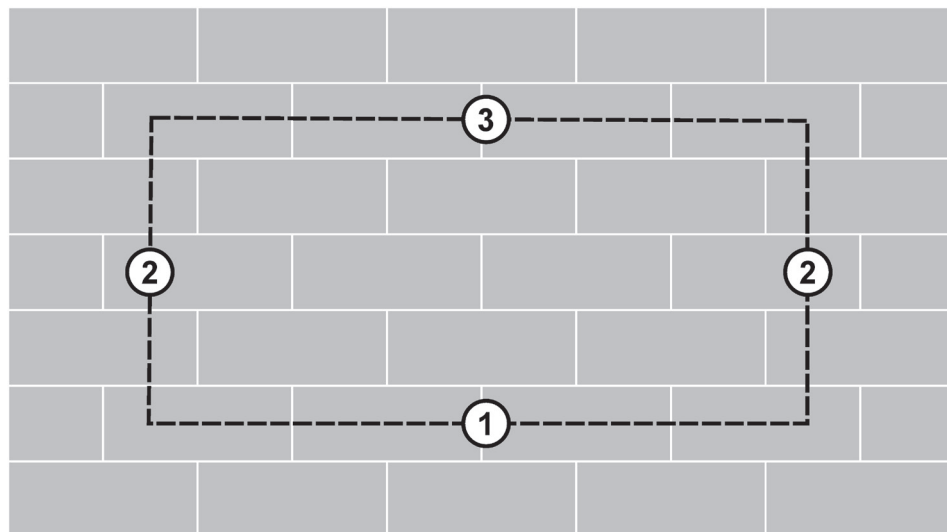
4.1.1 Define position

- ▶ Obtain information about the concrete or masonry to be sawn:
 - Where does the reinforcement run?
 - Is it heavily or slightly reinforced?
- ▶ Cut across the concrete if possible

4.1.2 Define the sequence of cuts



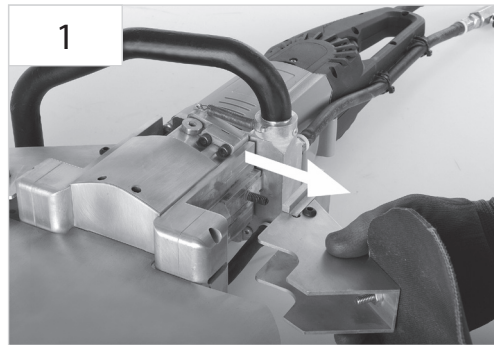
Using the wrong cut sequence can result in the disk grinding ring getting jammed.



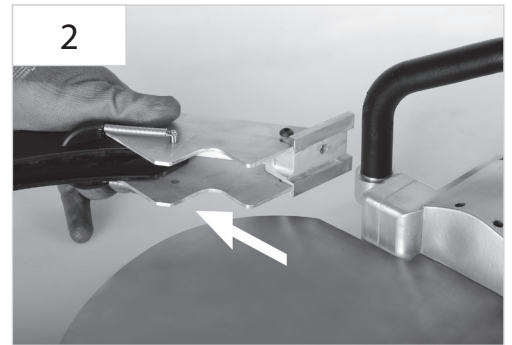
- ▶ Define cutting sequence (for example, for a window cutout carry out the bottom cut first, then the side cuts and finally the top cut).

5 Assembly/disassembly

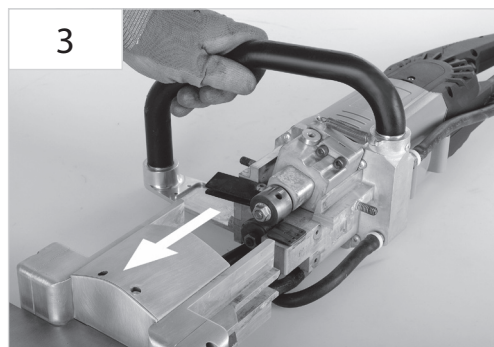
5.1 Mounting the disk grinding ring



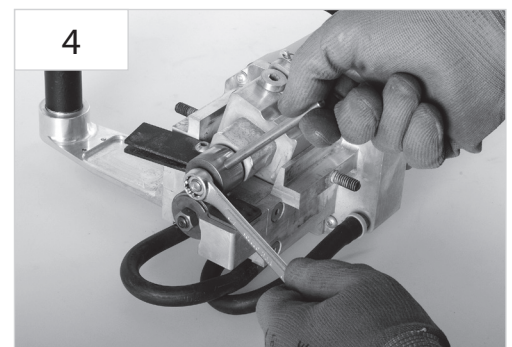
Remove the guard with spray protector.
Tool: ½" spanner



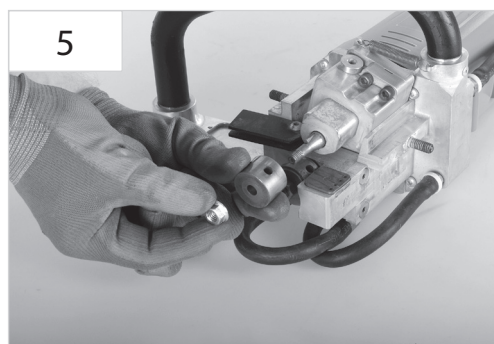
Remove disk guard.
Tool: ½" spanner



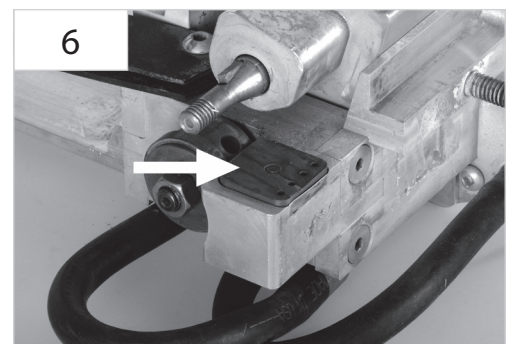
Remove housing.



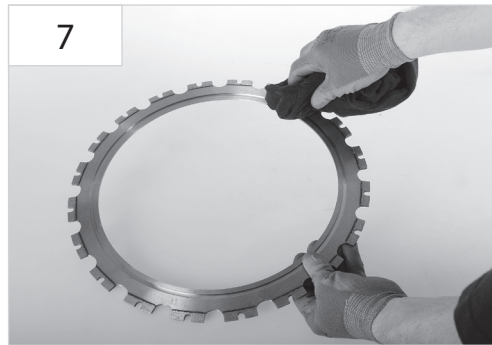
Undo nut of drive / swivel roller.
Tools: ½" spanner and a punch



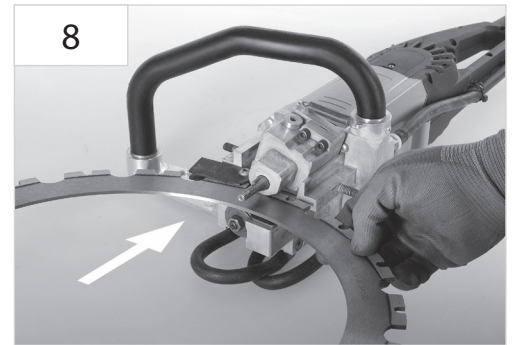
Remove swivel roller.



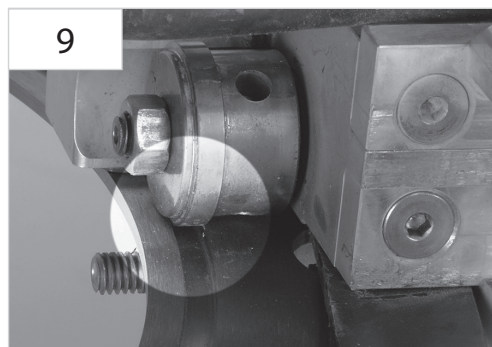
Replace skid plate.



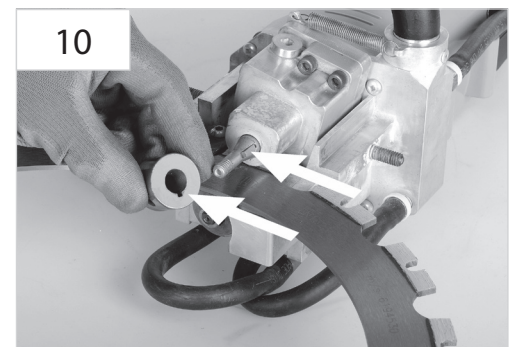
7
Clean both sides of disk grinding ring thoroughly.



8
Place disk grinding ring on profiled driver roller.



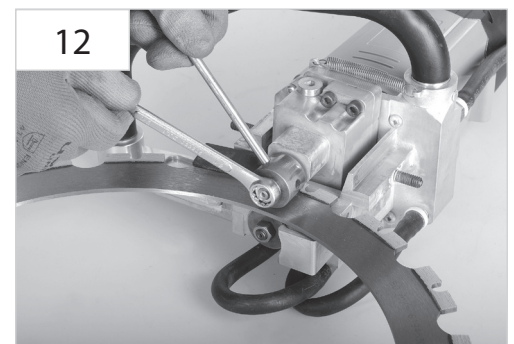
9
Ensure the groove of the disk grinding ring is on the shoulder of the drive roller.



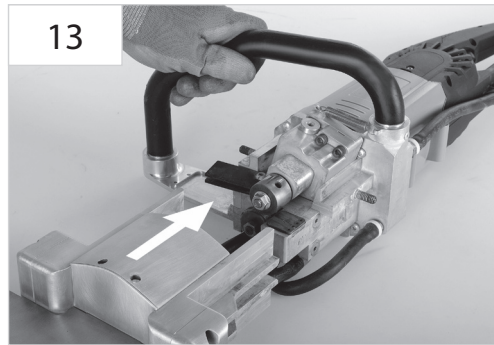
10
Mount the smooth driver roller; when doing so, observe the key and keyway.



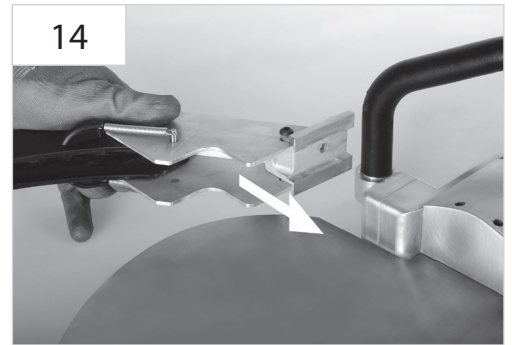
11
Screw on the smooth driver roller by hand.



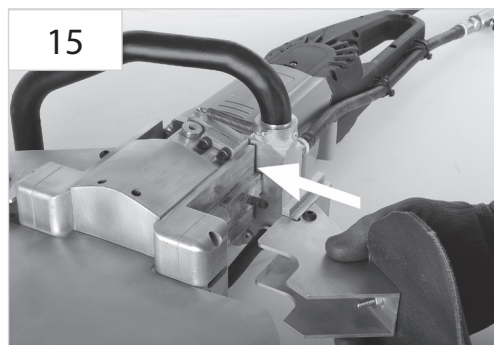
12
Tighten the smooth drive roller.
Tool: 1/2" spanner and a punch



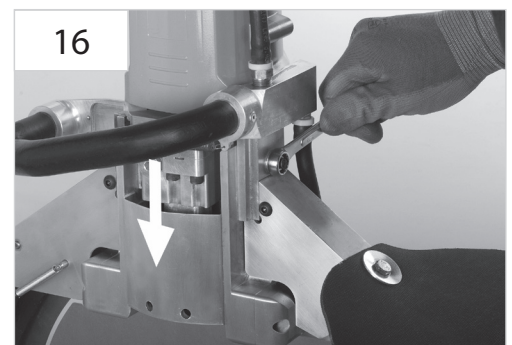
13 Mount housing.



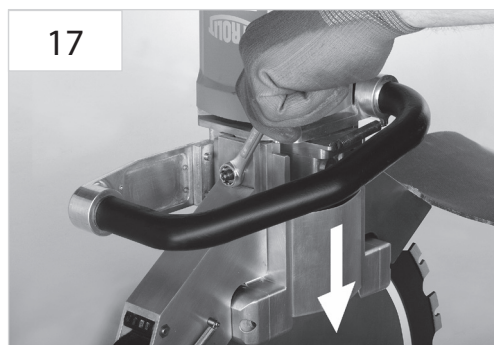
14 Fit and tighten disk guard finger tight.



15 Fit and tighten guard with spray protector finger tight.



16 Place housing onto edge of workbench, then push and hold down. Tighten the guard with spray protector.
Tool: ½" spanner



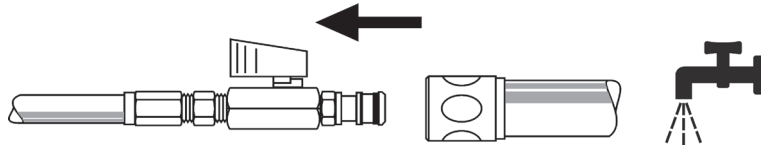
17 Place housing onto edge of workbench, then push and hold down. Tighten disk guard.
Tool: ½" spanner

5.2 Making the hose connection

5.2.1 Preparations for connection

- ▶ Ensure the coupling, ring saw and supply line are clean.
- ▶ Check hose and coupling for damage.

5.2.2 Connect water hose



- ▶ Connect water hose.

6 Operation

6.1 Monitoring, checking

6.1.1 Residual current protective device

- ▶ Switch on and check the personal residual current protective device PRCD.

Checking procedure:

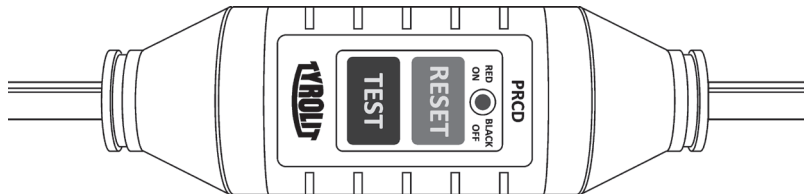
- ▶ Insert the plug of the electrical tool into a socket outlet with an earth connection.
- ▶ Press the reset button on the personal residual current protective device PRCD (indicator must illuminate).
- ▶ Press the test button on the personal residual current protective device PRCD (indicator must go out).



DANGER

Do not use the electrical tool if the indicator does not go out. Ensure the electrical tool is repaired by qualified and skilled personnel using only original spare parts.

- ▶ Press the reset button on the personal residual current protective device PRCD (indicator must illuminate).



Residual current protective device

6.2 Working

6.2.1 Start the electrical tool

- ✓ The disk grinding ring has been checked and is correctly fitted.
- ✓ The water supply is secured.
- ✓ The electrical tool is correctly attached to the power supply.
The power supply is earthed and equipped with a residual current circuit breaker.
- ▶ Open water supply and check water emerging at ring saw.
- ▶ Ensure you are standing firmly, then grip the front bow-type and rear handles firmly with your hands.
- ▶ Operate the start switch.

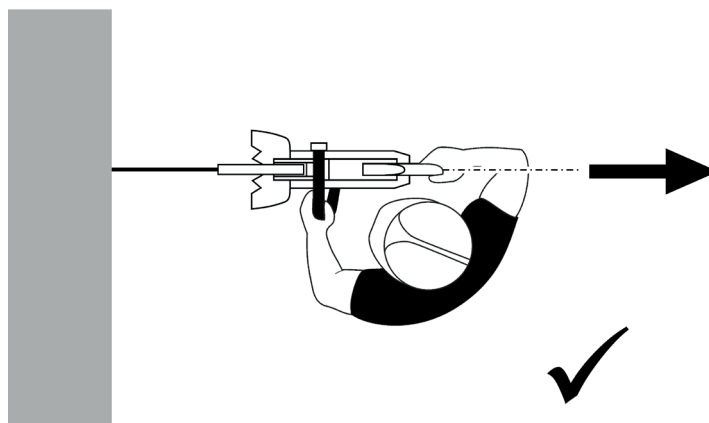
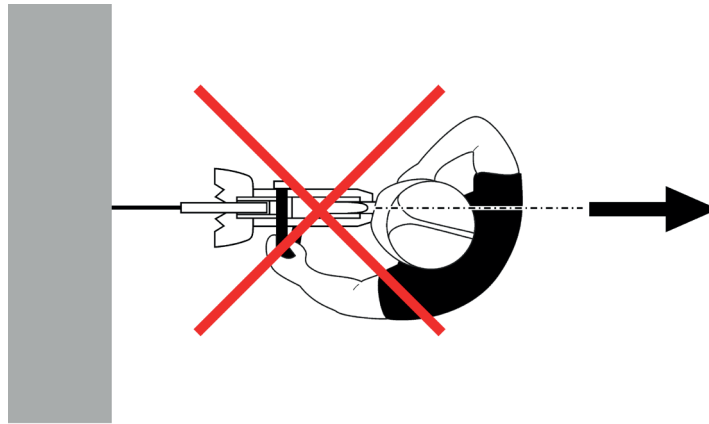
6.2.2 Cutting



Danger

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

- ▶ Never work with the disk grinding ring when the protective devices and guards have been removed.
- ▶ Never work in the line of the disk grinding ring.



The disk grinding ring is designed to cut in straight lines only. Turning, holding at an angle or overloading the disk grinding ring will cause damage.

6.2.3 Cutting technique



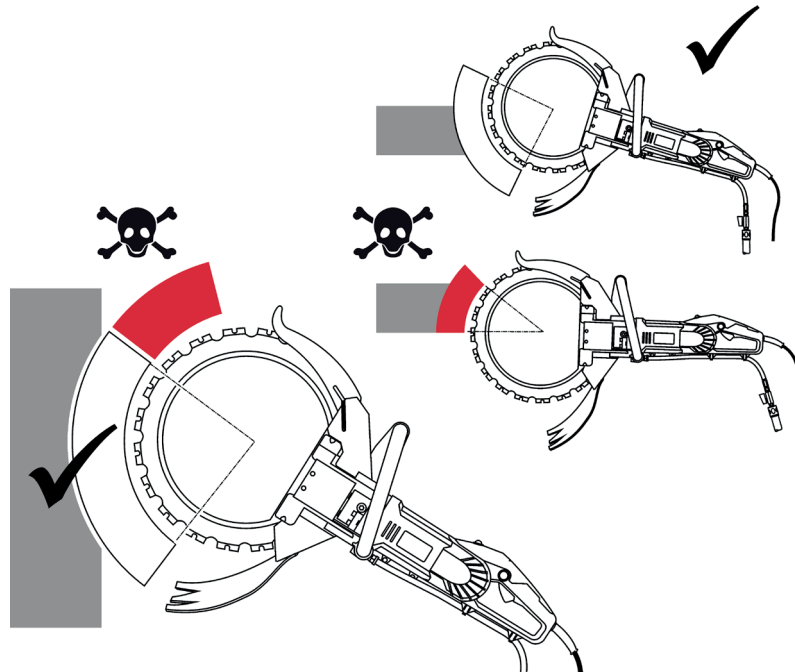
Position disk grinding ring below the centre. Always start cutting with the disk grinding ring rotating.



Danger

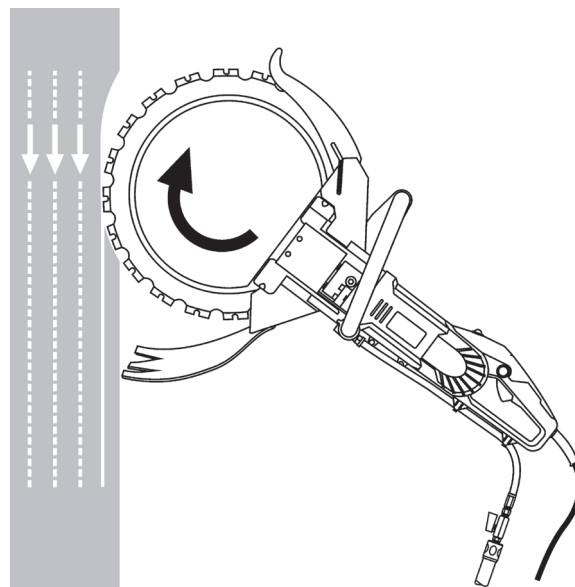
Risk of injury from the electrical tool suddenly kicking back.

► Do not apply disk grinding ring above the centre to a corner of a workpiece.



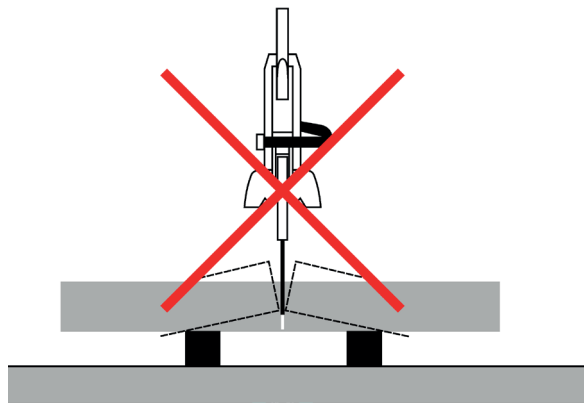
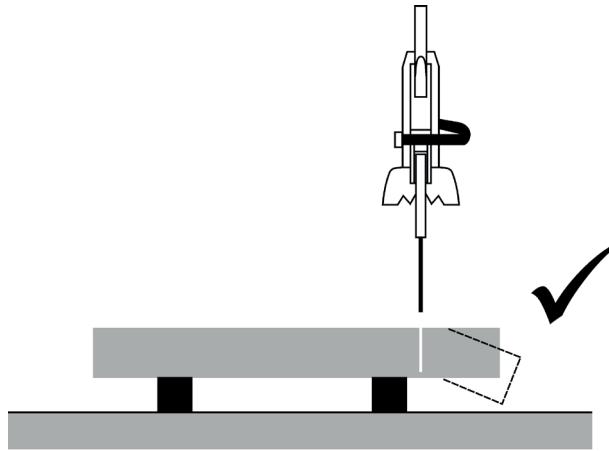
It is more economical to divide the entire cutting depth into several cuts.

- For optimum guidance, first make a 50 to 70 mm cut.
- Divide the entire cut depth into several cuts.





In most cases, the workpiece being worked on will be heavy. Ensure the disk grinding ring cannot become jammed. Cord off the danger area so that nobody can be injured and nothing can be damaged if the workpiece falls down.



6.3 Finishing work

1. With the motor still running withdraw the disk grinding ring from the cut.
2. Turn of the electrical tool.
3. Isolate the electrical tool from the power supply.
4. Turn off and disconnect the water supply.
5. Blow out water from all lines.
6. Clean the electrical tool with water.

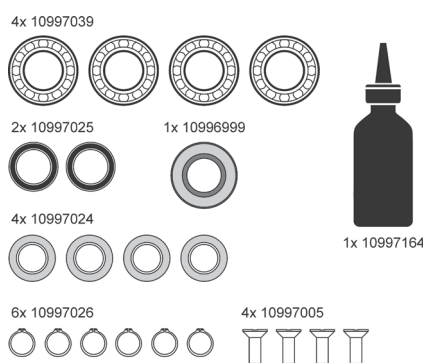
7 Maintenance

Maintenance and servicing table		Before starting up	After finishing work	Weekly	Annually	After faults	After damage
Motor	▶ Check motor (damage, cleanliness).	X	X			X	X
Water supply	▶ Check water line (damage, leaks, cleanliness).	X	X			X	X
	▶ Blow out water (risk of frost).		X				
Rollers	▶ Check rollers for wear.	X				X	
Ring guard	▶ Check ring guard.	X					
Disk grinding ring	▶ Check the disk grinding ring for wear.	X	X				
Guide plate	▶ Check alignment of guide plate.	X					
Major service	▶ To be performed by TYROLIT Hydrostress AG or an authorised workshop.				X		



Change the gear oil each time the disk grinding ring is replaced.
Gear oil container: TYROLIT No.10997164

7.1 Repair kit



Repair kit 10997028			
4x 10997039	Bearings	6x 10997026	Circlip
2x 10997025	Bearings	4x 10997005	Screw
1x 10996999	Seal	1x 10997164	5 ml oil
4x 10997024	Seal		

8 Faults

Faults		
Fault	Possible cause	Solution
The electrical tool cannot be started	Faulty mains cable	▶ Contact TYROLIT Hydrostress AG after-sales service
	Faulty power supply	▶ Check power supply
	Electric motor or electronics faulty	▶ Contact TYROLIT Hydrostress AG after-sales service
Electrical tool starts up and then switches off again	Fuse in the power supply on the building site trips	▶ Fuse too weak, replace power supply
Motor running but disk grinding ring not rotating	Defective gears	▶ Contact TYROLIT Hydrostress AG after-sales service
Disk grinding ring does not rotate	Disk grinding ring not correctly fitted to profiled drive roller	▶ Fit disk grinding ring correctly
	Drive rollers soiled	▶ Clean drive rollers
Disk grinding ring rotating too slowly	Drive rollers worn	▶ Replace drive rollers
	Faulty roller bearings	▶ Replace roller bearings
	Insufficient motor power	▶ Check motor
	Roller pre-tensioner not engaged	▶ Check roller pre-tensioner
Disk grinding ring jumping out	Roller clearance too great	▶ Check roller pre-tensioner
	Drive rollers worn	▶ Replace drive rollers
	Disk grinding ring damaged	▶ Replace disk grinding ring
	Roller pre-tensioner not engaged	▶ Check roller pre-tensioner
Disk grinding ring warped	Disk grinding ring not sufficiently cooled	▶ Endure water cooling present/functioning
		▶ Replace disk grinding ring
Diamond segments breaking off	Disk grinding ring warped	▶ Replace disk grinding ring
	Hard resistance in workpiece	▶ Replace disk grinding ring
	Segments not properly soldered or welded	▶ Replace disk grinding ring
Disk grinding ring slipping	Driver rollers not sliding properly in housing (insufficient contact between disk grinding ring and drive rollers)	▶ Check roller pre-tensioner
	Drive rollers worn (e.g. by chafing abrasion and insufficient water supply)	▶ Replace drive rollers
	Shoulders of drive rollers worn by more than 50%	▶ Replace drive rollers
	Inner edge and guide groove of disk grinding ring worn (insufficiently rinsed-out abrasion dust or worn drive rollers)	▶ Replace drive rollers

Faults		
Fault	Possible cause	Solution
No water emerging at disk grinding ring	Water line blocked	▶ Clean the water line
	Water valve on feed line closed	▶ Open water valve
	Insufficient water pressure	▶ Ensure minimum water pressure of 3 bar
Sparks coming out of side of disk grinding ring	Insufficient water supply	▶ Check water supply and increase

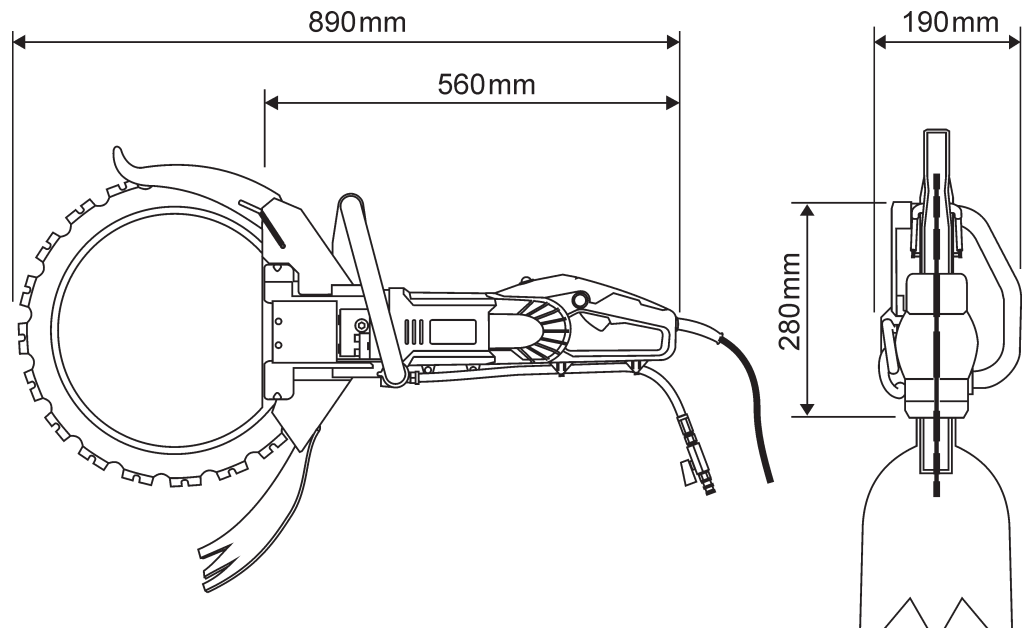
8.1 Recycling waste



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.

9 Technical data

9.1 Dimensions



Measurements in mm

9.2 Ring saw

Dimensions and weights	
Parameter	Value
Weight (without disk grinding ring)	13.5 kg
Width	190 mm
Height	280 mm
Length (without disk grinding ring)	560 mm

Sound emission (EN ISO 3744)	
Parameter	Value
Sound pressure level L_{pA}	90.4 dB (A)*
Maximum sound pressure level L_{pCpeak}	120 dB
Sound power level L_{wA}	110.4 dB (A)*

* Conditions for the measurement:
Disk grinding ring \varnothing 400 mm (16") not in cutting operation under full load

Vibration (EN ISO 5349)	
Parameter	Value
Total vibration value a_{hv}	<7.0 m/s ²
Uncertainty K	1.5 m/s ²

9.3 Motor

Electric motor	HRE400★★★ / 110 V		HRE400★★★ / 230 V	
Nominal voltage	110 V		230 V	
Frequency	50 Hz	60 Hz	50 Hz	60 Hz
Nominal power	1700 W		2800 W	
Disk ring speed	Max. 2600 rpm			
Peripheral speed	Max. 40 m/s			
Motor cooling	Air			
Application	Wet			
Personal residual current protective device PRCD	Yes			
Protection class	I			
Degree of protection	IP20			
Ambient temperature	Max. 40°C			
Weight	13.7 kg		13.6 kg	

9.4 Water supply

Water supply	
Parameter	Value
Working pressure	Min. 3 bar Max. 6 bar
Flow rate	Min. 4 l/min
Temperature	Max. 25 °C

9.5 Disk grinding ring and cutting depth

9.5.1 Disk grinding ring

Disk grinding ring	
Parameter	Value
Diameter (max.)	406 mm (16")
Cooling	Water cooling

9.5.2 Cutting depth

Cutting depth	
Disk grinding ring diameter	Cutting depth
406 mm (16")	317 mm
305 mm (12")	216 mm

10 EC Declaration of Conformity

Description	Ring saw, electric
Type designation	HRE400 ★★★

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

Directive applied

2006/42/EC	17.05.2006
2014/30/EU	26.02.2014

Applied standards

EN ISO 12100:2010
 EN 60745-1:2009 + A11:2010
 EN 55014-1:2006 + A1:2009 + A2:2011
 EN 55014-2:1997 + A1:2001 + A2:2008
 EN 61000-3-2:2006 + A1:2009 + A2:2009
 EN 61000-3-3:2013

Manufacturer:

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 Switzerland

Authorised representative for technical documentation:

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 Pascal Schmid
 Head of Development
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Pfäffikon, 16/03/2016



Pascal Schmid
 Head of Development



Notes: