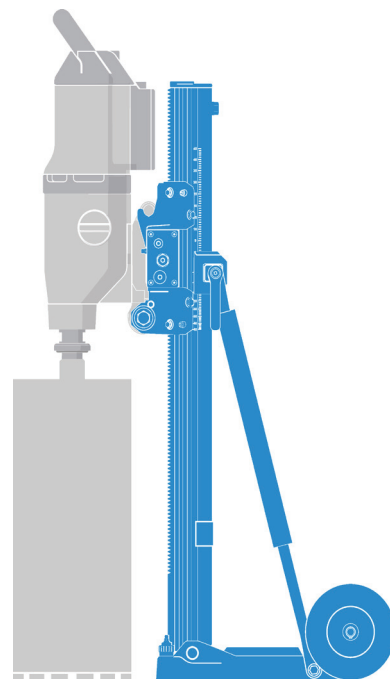




OPERATING INSTRUCTIONS

DRA400 Mk II

Index 000



Congratulations!

You have chosen tried and tested Tyrolit Hydrostress equipment that sets technological standards for the industry. Only original TYROLIT Hydrostress spare parts guarantee quality and interchangeability. If maintenance work is neglected or not performed correctly, we cannot cover our warranty obligations. All repairs must be performed by trained specialist personnel only.

Our Customer Service is at your disposal to help keep your Tyrolit Hydrostress equipment in perfect condition.

We wish you smooth, trouble-free working.

Tyrolit Hydrostress

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1 Safety



INFORMATION

This instruction booklet is just part of the documentation for the drill rig. This booklet is only complete together with the "Core drilling safety manual/system manual."



DANGER

Death or severe injury can result if the safety information in the "Core drilling safety manual/system manual" is not observed.

- ▶ Ensure that the "Core drilling safety manual/system manual" has been read and understood.



DANGER

Death or serious injury if the machine starts up unexpectedly!

- ▶ Before switching on the system, make sure that there are no persons in the danger zones.
- ▶ Switch off the system before connecting or disconnecting cables and hoses.
- ▶ Switch off the system when leaving and secure it against being switched on again.

Death or serious injury can result if the drill bit continues running in the event of an accident.

- ▶ Ensure that the ON / OFF switch can be reached quickly.

Electric shock from live cables and plugs!

- ▶ Switch off the drill motor before connecting or disconnecting cables.

Fire hazard due to incorrect mains voltage!

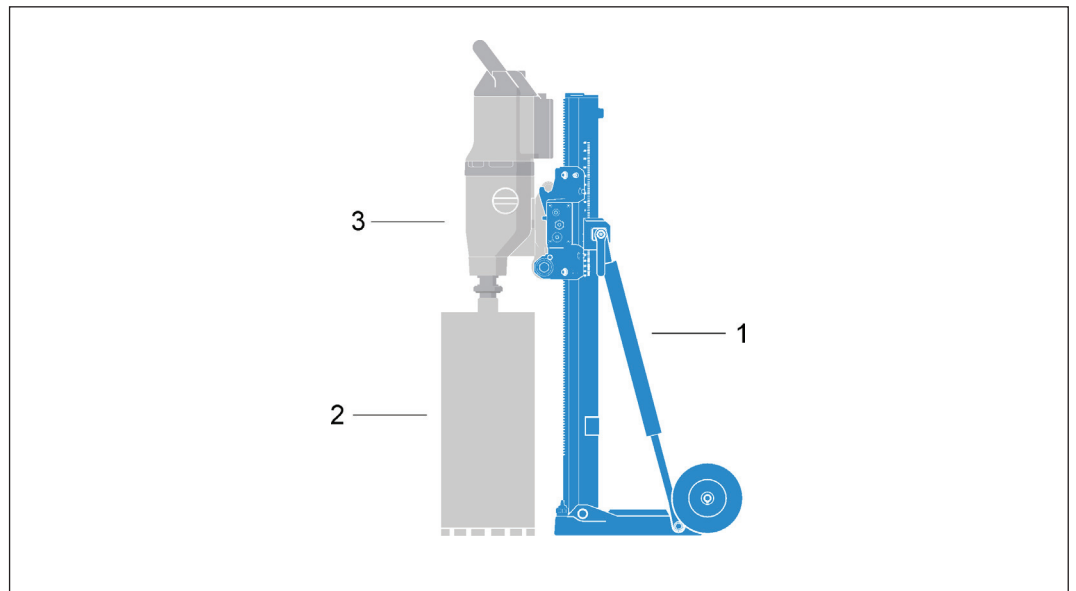
- ▶ Ensure that the mains voltage and mains frequency match the mains setting of the drill motor.

2 Description

2.1 Core drilling systems

- 2.1.1** The DRA400 Mk II drill rig can be supplemented with suitable TYROLIT Hydrostress components to create an electric or hydraulic core drilling system.

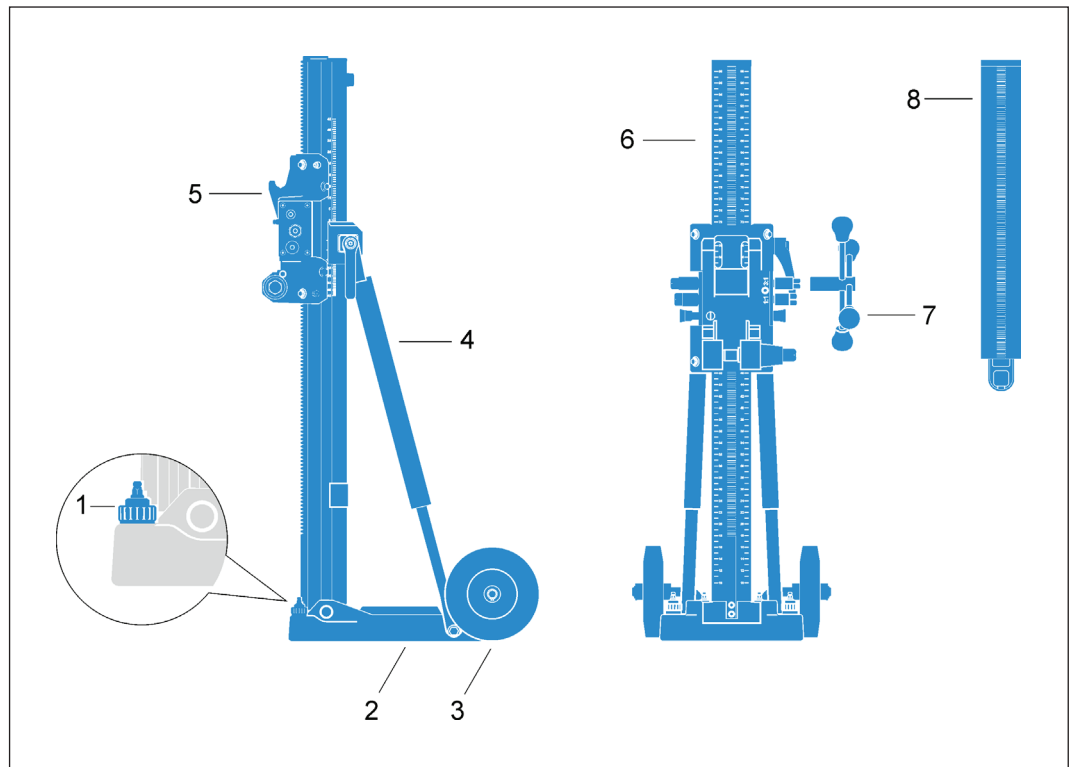
Electric core drilling system



Electric core drilling system with universal motor

- 1 DRA400 Mk II drill rig
- 2 Drill bit
- 3 Electric drill motor

2.2 Main components



Main components

- | | |
|------------------------------|-----------------------------------|
| 1 Adjustable foot | 5 Support |
| 2 Chassis | 6 Guide rail with scale |
| 3 Trolley chassis (optional) | 7 Handwheel |
| 4 Support rods | 8 Guide rail extension (optional) |



DANGER **Serious injury due to deformation!**

- Do not use more than one extension (8) without additional support.

3 Assembly

3.1 Drill motor interface



INFORMATION

The ModulDrill mounting plate is firmly connected to the support by means of an eccentric shaft.

3.1.1 Installing the drill motor

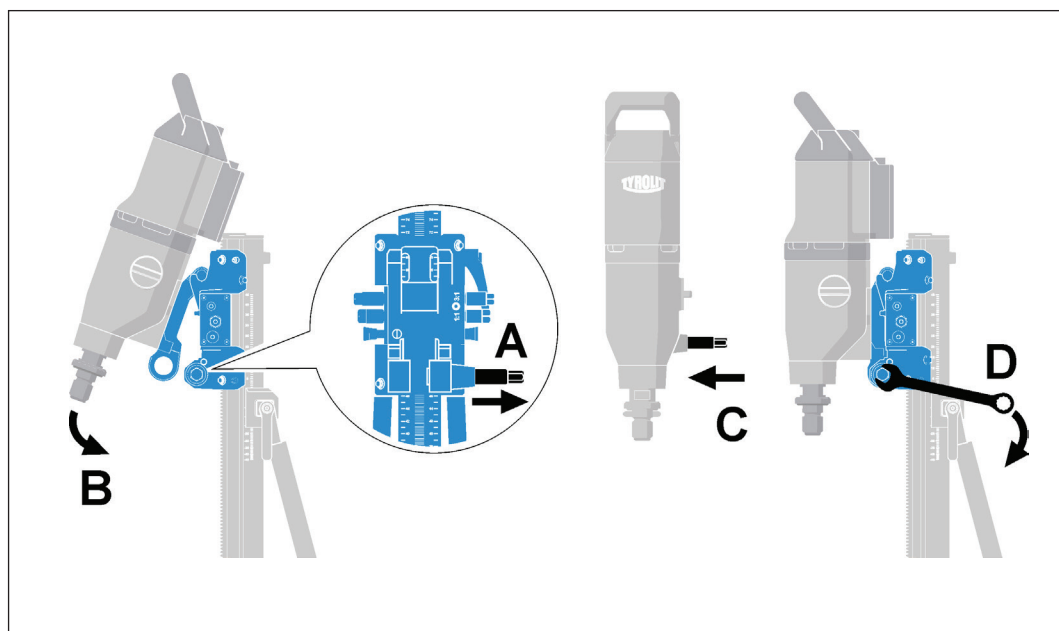
✓ Tool

Open-end spanner



19 mm

Tyrolit No. 973784



Installing the drill motor

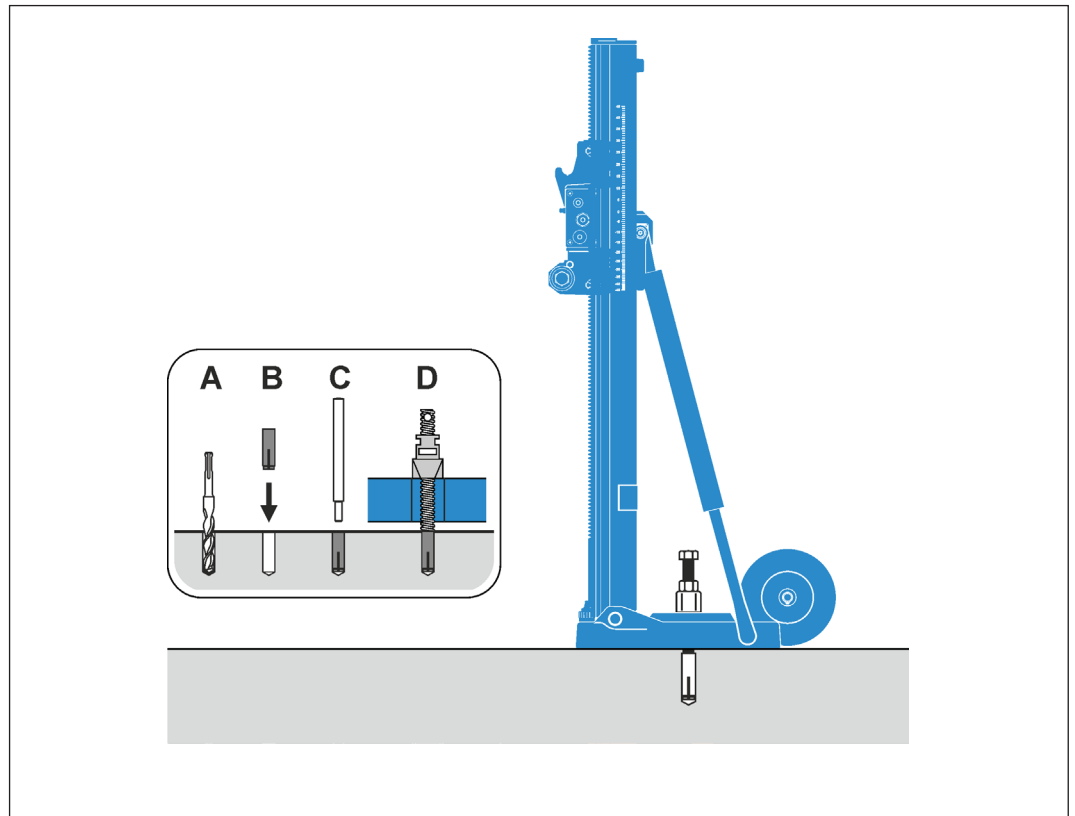
3.2 Substrate interface

3.2.1 Dowel fixing



INFORMATION

The DRA400 Mk II drill rig can be firmly connected to the substrate using a dowel fixing.



Dowel fixing

Proceed as follows:

- ▶ Place the substrate-specific mounting anchors according to the mounting anchor manufacturer.
- ▶ Screw in the mounting elements.
- ▶ Attach the core drill rig loosely.
- ▶ Align the drill rig using the spirit level. The drill rig must be positioned at an angle of 90° to the substrate for vertical drilling.
- ▶ Connect the core drill rig firmly to the surface using the mounting elements.
- ▶ Check the mounting of the core drill rig.

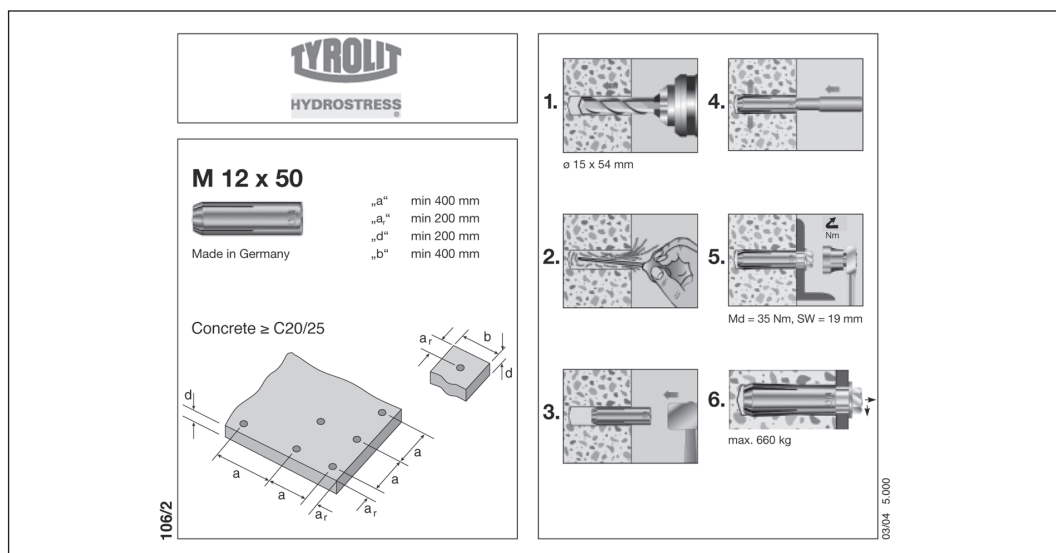


INFORMATION

Substrate-specific mounting elements must be used for mounting core drill rigs. The installation instructions of the anchor manufacturer must be observed when installing the anchors.

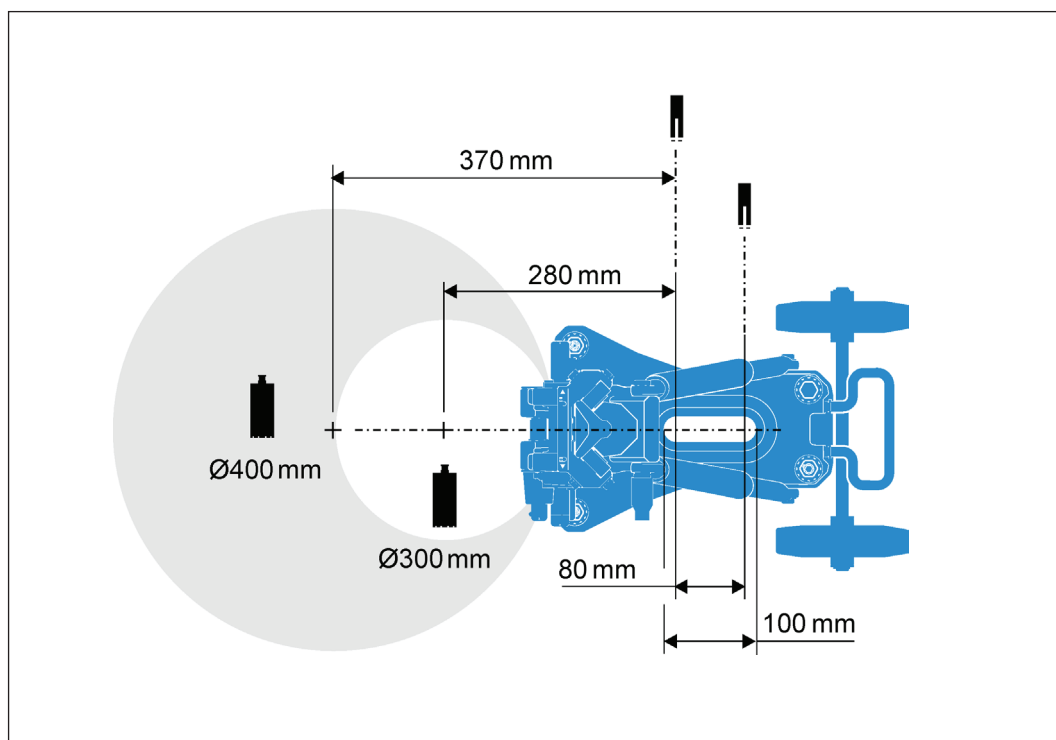
Example:

Anchor leaflet



Mounting instructions

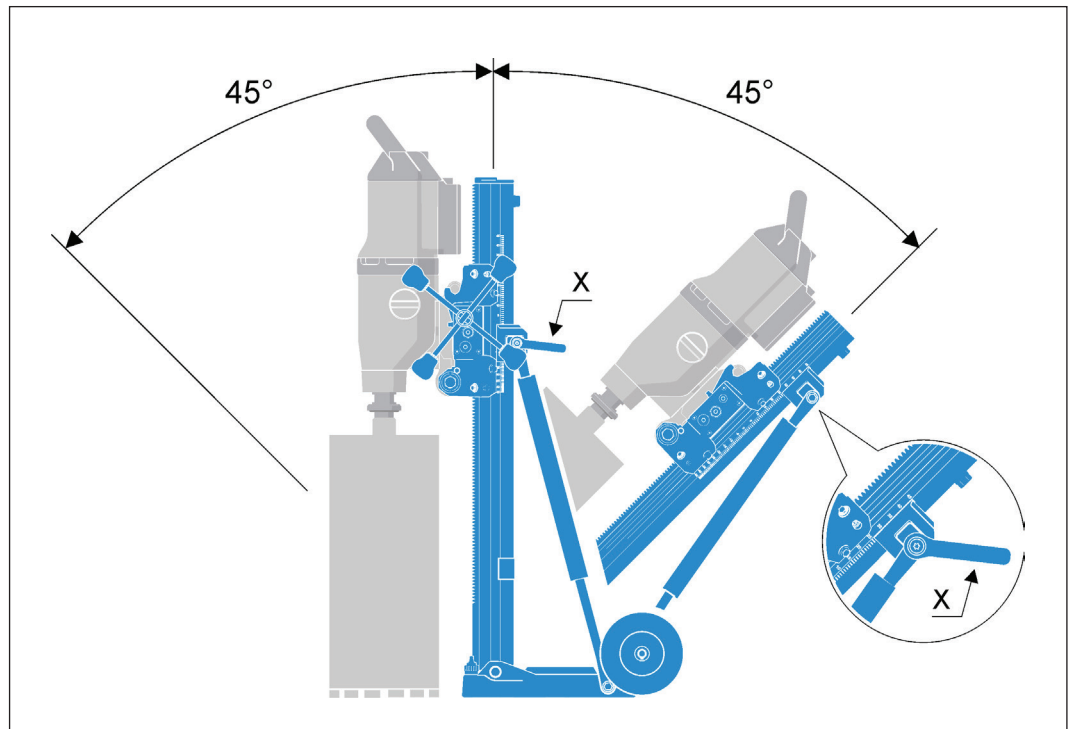
3.2.2 Anchor dimensions



Anchor dimensions

4 Settings

4.1 Inclined position



Inclined position

Proceed as follows:

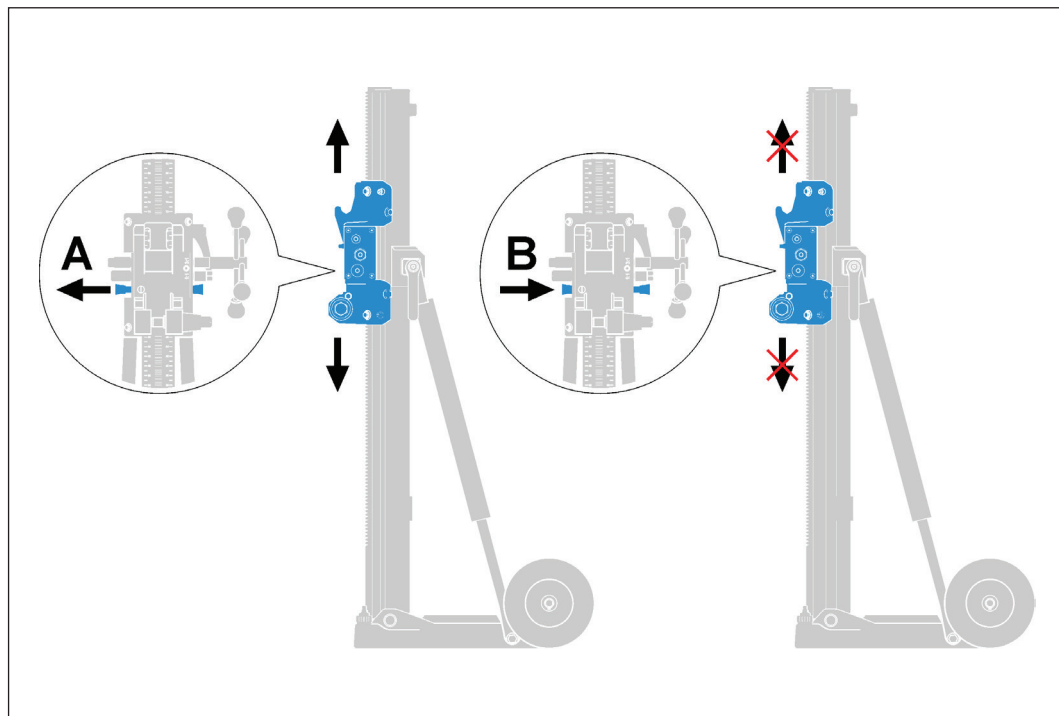
- ▶ Loosen the lever (X).
- ▶ Tilt the guide rods to the desired inclined position.
- ▶ Tighten the lever (X) again.

4.2 Locking support



INFORMATION

The support can be blocked by the locking shaft. The locking shaft can be operated without tools.



Locking the support

A Support not blocked

B Support blocked

4.3 Roller adjustment



INFORMATION

The guide rollers can be adjusted and locked via two eccentric shafts on one side of the support.

✓ Tool

Open-end spanner



10 mm

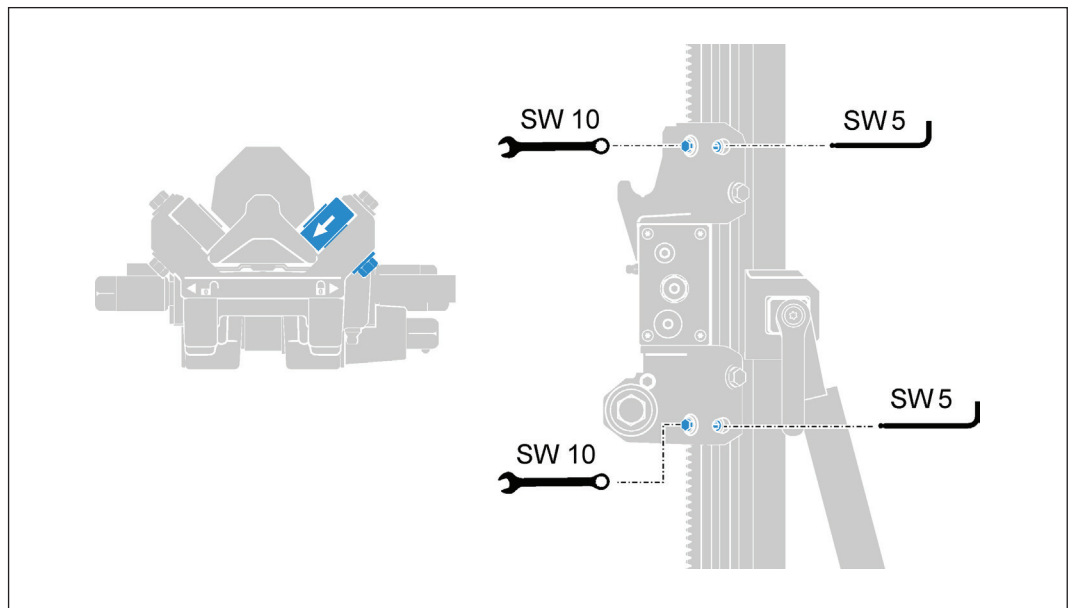
Tyrolit No. 10995777

Allen key



5 mm

Tyrolit No. 973791



Adjusting the guide rollers

Proceed as follows:

- ▶ Release the locking mechanism using a 5 mm Allen key.
- ▶ Turn the eccentric shaft using a 10 mm open-end spanner until the guide rollers are in contact with the rail and then pretension slightly.
- ▶ Tighten the locking mechanism again using a 5 mm Allen key.

5 Servicing and maintenance

5.1 Maintenance table

Servicing and maintenance table							
		Each time before putting into operation	After the end of work	Weekly	Yearly	If problems occur	If damage occurs
Drill rig	► Wash off with water		X			X	X
	► Lubricate adjustable feet			X		X	X
	► Tighten loose bolts and nuts	X					
	► Lubricate trunnion	X		X			
Support	► Tighten loose bolts and nuts	X				X	X
	► Check that the rollers can rotate and adjust if necessary	X					
	► Relubricate gearbox			X			
Service	► Have it carried out by TYROLIT Hydrostress AG or by an authorised representative.	First service after 100 operating hours Each subsequent service after 200 operating hours					

6 Troubleshooting

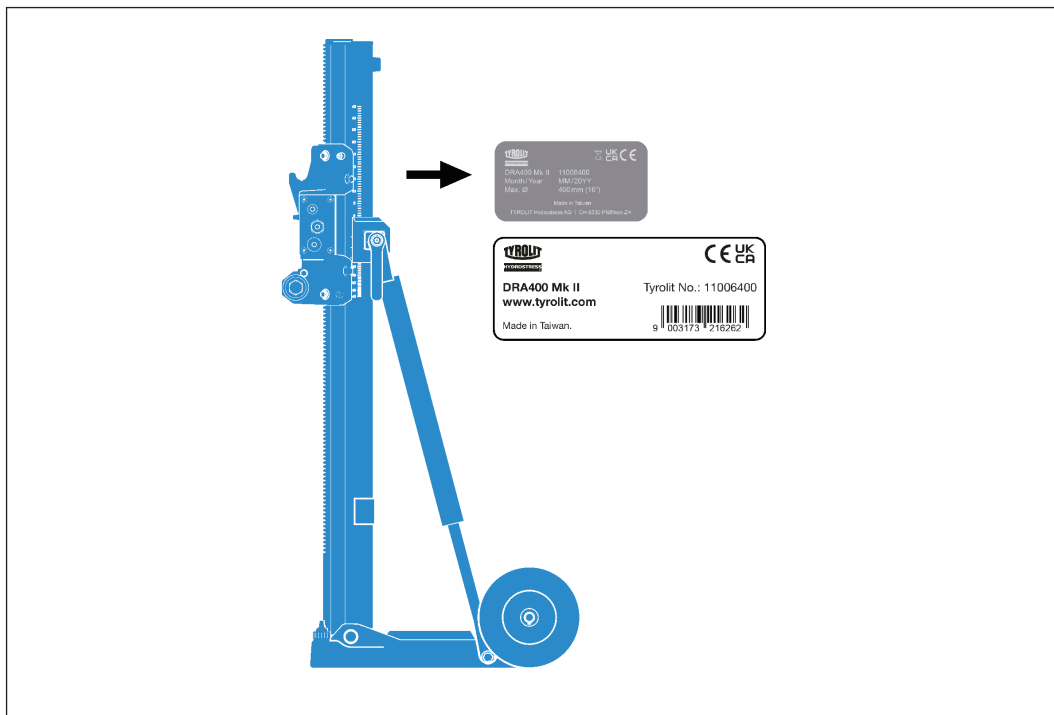
Troubleshooting		
Problem	Possible cause	Remedy
Diamond coring bit jammed	Diamond coring bit slips due to poor mounting of the guide columns or the drill rig base	► Loosen and pull out the diamond core bit. Break carot and improve drill rig mounting
	Diamond coring bit out of true due to excessive play in the rollers	► Loosen drill rig and readjust roller guides
	Drill segments are worn (no cutting clearance available)	► Replace drill bit
Heavy wear on the drill bit tube	Poor guidance of the diamond core bit in the drill hole	► Adjust rollers
	Drill motor bearing defective	► Replace drill motor ► Contact TYROLIT Hydrostress AG customer service.
Feed jams along the entire length of the guide	Rollers are set too tight	► Adjust rollers
Drill bit is difficult to centre	Diamond coring bit slips due to poor mounting of the drill rig	► Improve drill rig mounting
	Diamond coring bit out of true due to excessive play in the roller guides	► Adjust rollers
	Poor true running of the drill bit	► Replace drill bit ► Using TYROLIT diamond tools
Adjustable feet are difficult to turn or cannot be turned at all	Thread not lubricated	► Lubricate adjustable feet
	Adjustable feet damaged	► Replace adjustable feet
Angle adjustment mechanism jammed	Wedges dirty	► Dismantle and clean the clamping device
Drill rig is difficult to tilt or cannot be tilted at all	Support rods bent or damaged	► Replace support rods



INFORMATION

If you were unable to remedy the fault, call our Service Centre (see manufacturer's address on the back of the cover page).

To ensure quick and professional troubleshooting, please prepare as follows before calling:



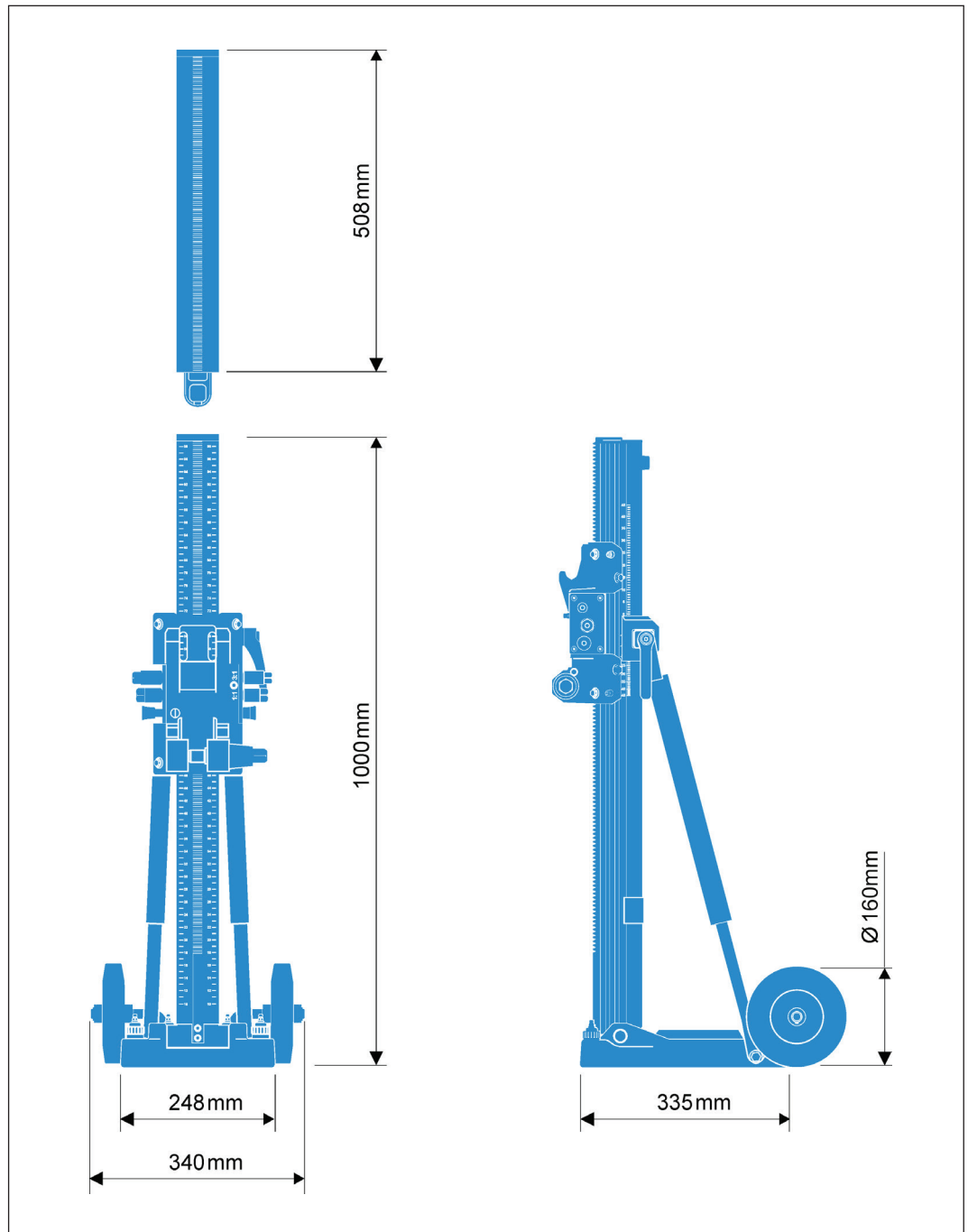
Type plate

Proceed as follows:

- Try to describe the fault as precisely as possible.
- Make a note of the type and index designation of your equipment (type plate).
- Have the operating instructions to hand.

7 Technical data

7.1 Dimensions



Dimensions

7.2 Weight

Weights	
DRA400 Mk II	
Weight (without handwheel)	18.7 kg

7.3 Diamond tools

Drill bits	
DRA400 Mk II	
Drilling diameter range without distance plate	Up to Ø300 mm
Drilling diameter range with distance plate +180 mm	Up to Ø400 mm

7.4 Design

Design	
DRA400 Mk II	
Foot	Dowel foot made of aluminium
Feed	By means of a handwheel
Feed gear	1:1 or 1:3
Diagonal adjustment	-45° / - 45°
Adjustable feet	Micro
Drill motor mount	ModulDrill - quick clamping system

8 EC Declaration of Conformity

Designation	Drill rig
Type designation	DRA400 Mk II

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

Applicable directives

Machinery Directive 2006/42/EC

Applicable standards

EN 12100:2010	Safety of machinery - General design principles - Risk assessment and risk minimisation
EN 12348:2000 + A1:2009	Core drilling machines on rigs - safety

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Pfäffikon, 28.01.2025

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Managing Director Technology



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Our **worldwide subsidiary companies** can be found
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