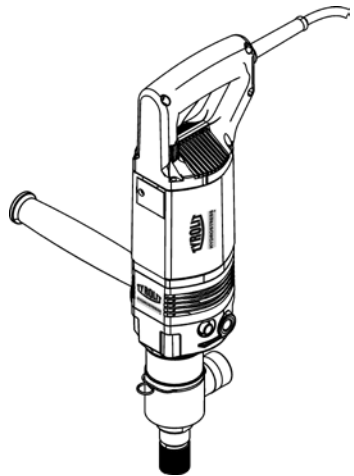




Instruction Manual

DME19DP ★★★

Index 001 as of Serial No. 830 794



Translation of the Original Instruction Manual

10997907 en / 23.11.2016



Congratulations!

You have opted to buy a tried and tested TYROLIT Hydrostress machine and therefore a leading technological standard. Only original TYROLIT Hydrostress spare parts guarantee quality and replaceability. If the maintenance work is neglected or carried out improperly we are unable to fulfil our guarantee undertaking. All repairs may only be carried out by trained, skilled personnel.

Our customer service is available to help you to keep your TYROLIT Hydrostress machines in perfect working order.

We wish you problem and fault-free working.

TYROLIT Hydrostress

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TYROLIT Hydrostress AG

Witzbergstrasse 18

CH-8330 Pfäffikon

Switzerland

Tel 0041 (0) 44 952 18 18

Fax 0041 (0) 44 952 18 00

www.tyrolit.ch

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Important Information




Before starting any work with or on the machine, this instruction manual, the safety instructions and the warnings must be read through carefully and observed.

Always store this instruction manual together with the machine.

Pictograms

Explanation of the pictograms on the dry drilling motor

 The CE mark on a product means that the product conforms with all the applicable European regulations and has been subjected to the prescribed conformity assessment procedures.



Environmentally friendly disposal of waste equipment

Waste equipment contains valuable recyclable materials which should be reused or recycled. Batteries, lubricants and similar materials must not be allowed to get into the environment.

Therefore, please dispose of waste equipment through suitable collection systems.



Wear hearing protection!

The typical A-weighted sound pressure level of this power tool is over 85 dB (A) – wear ear protectors when working with the tool!

Explanation of the pictograms used in the text



Danger!

This symbol means a direct pending danger or risk to the life and health of people of a general nature. Failure to note and follow these instructions results in severe health effects, through to life-threatening injuries.

▶ *This arrow indicates the appropriate precaution to you in order to avert the danger.*



Danger due to electricity!

This symbol means a direct pending danger or risk to the life and health of people due to electricity. Failure to note and follow these instructions results in severe health effects, through to life-threatening injuries.

▶ *This arrow indicates the appropriate precaution to you in order to avert the danger.*



Caution!

This symbol indicates a potentially dangerous situation. Failure to comply with these instructions can result in slight injuries or damage to property.

▶ *This arrow indicates the appropriate precaution to you in order to avert the danger.*



Please note!

This information provides you with recommendations for use and useful tips.

For your Safety

General Safety Instructions for Power Tools



WARNING

Read all the safety instructions and precautions.

Failure to observe the safety instructions and precautions can result in electric shock, fire and/or serious injuries.

Keep all safety instructions and precautions for future reference.

The term "power tool" used in the safety instructions refers to mains-operated power tools (with mains power lead) and battery-operated power tools (without mains power cable).

1) Safety at the place of work

- a) **Keep your work area clean and well illuminated.**
Untidiness and unlit work areas can result in accidents.
- b) **Never use the power tool in potentially explosive environments containing flammable liquids, gases or dusts.**
Power tools generate sparks which can ignite dust or vapours.
- c) **Keep children and other persons away from the power tool during use.**
A moment's distraction can cause you to lose control of the machine.

2) Electrical safety

- a) **The connecting plug of the power tool must fit in the plug socket. The plug must not be modified in any way. Do not use adapter plugs in conjunction with power tools with protective earth conductor.**
Unmodified plugs and properly fitting plug sockets reduce the risk of electric shock.
- b) **Avoid physical contact with earthed surfaces such as pipes, heaters, cookers and refrigerators.**
There is an increased risk of an electric shock if your body is earthed.
- c) **Keep power tools away from rain and moisture.**
The ingress of water into a power tool increases the risk of an electric shock.
- d) **Do misuse the cable in any way by using it to carry or hang up the power tool or to pull the plug out of the socket. Keep the cable away from heat, oil, sharp edges and moving machine parts.**
Damaged or kinked cables increase the risk of an electric shock.
- e) **When working with a power tool outdoors, use only extension leads that are suitable for outdoor use.**
Use of an extension lead suitable for outdoor use reduces the risk of electric shock.
- f) **If the use of the power tool in a damp environment is unavoidable, use a residual-current circuit breaker.**
Use of a residual-current circuit breaker (RCCB with 10 mA maximum tripping current) reduces the risk of an electric shock.

For your Safety

3) Safety of persons

- a) **Always work carefully, attentively and sensibly when using a power tool. Do not use the power tools if you are tired or are under the influence of drugs, alcohol or medication.**
A moment of inattention while using the power tool can result in serious injuries.
- b) **Wear personal protective equipment and always wear goggles.**
The wearing of personal protective equipment, such as dust mask, non-slip safety shoes, helmet or ear protectors, depending on the type and application of the power tools, reduces the risk of injuries.
- c) **Avoid accidental switching on of the power tool. Ensure that the power tool is switched off before connecting it to the mains power supply and/or connecting the battery and before picking up or carrying the tool.**
If you have your finger on the switch when carrying the power tool or you connect the tool to the power supply when it is switched on, this can lead to accidents.
- d) **Remove the adjusting tools or wrenches before switching on the power tool.**
A tool or wrench in a rotating part of the tool can result in injuries.
- e) **Avoid abnormal postures when working. Ensure you are standing firmly and maintain your balance at all times.**
This will enable you to control the power tool better in unexpected situations.
- f) **Wear suitable clothing. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.**
Loose clothing, jewellery and long hair can get caught in moving parts.
- g) **If dust extraction and collection devices can be installed, ensure that these are connected and are used correctly.**
Use of a dust extraction system can reduce the hazards caused by dust.

4) Using and handling the power tool

- a) **Do not overload the tool. Use the power tool intended for your work.**
You work better and safer within the given power range if you use the suitable power tool.
- b) **Do not use a power tool whose switch is defective.**
a power tool which can no longer be switched on or off is dangerous and must be repaired.
- c) **Remove the plug from the plug socket and/or remove the battery before carrying out tool adjustments, changing accessories or placing the tool aside.**
This precautionary measure prevents unintentional starting of the power tool.

For your Safety

- d) **Store power tools out of the reach of children when not in use. Do not allow people to use the tool unless they are familiar with it, or if they have not read this instruction manual.**
Power tools are dangerous if they are used by inexperienced people.
- e) **Maintain power tools with care. Check whether moving parts are in proper working order and do not jam, whether parts are broken or damaged in such a way that they impair the function of the power tool. Have damaged parts repaired before using the tool.**
Many accidents are caused by poorly serviced and maintained power tools.
- f) **Keep cutting tools sharp and clean at all times.**
Carefully maintained cutting tools with sharp cutting edges jam less easily and are easier to control.
- g) **Use the power tool, accessories, cutting tools, etc. in accordance with this instruction manual. Take into consideration the working conditions and the work to be carried out.**
Use of power tools for other than the intended applications can lead to dangerous situations.

5) Service

- a) **Have your power tool repaired only by qualified personnel and only using original spare parts.**
This will ensure that the safety of the power tool is maintained.

Machine-Specific Safety Instructions

➤ Operating personnel requirements

- **People below the age of 16 may not use the machine.**

➤ Workplace safety

- **Secure the work area behind holes (in walls, etc.) you are cutting too.**
Unsecured work areas can put you and other people at risk.
- **Watch out for open and concealed electricity cables, and water and gas pipes. Use suitable detectors to find concealed utility pipes and cables, or contact the local utility company for advice.**
Contact with electricity cables can cause fires and an electric shock. Damage to a gas pipe can cause an explosion. Penetrating a water pipe causes damage to property or could cause an electric shock.
- **Secure the workpiece.**
A workpiece securely held in clamping devices or a vice is more safely held than in the hand.
- **Avoid dust accumulation in the workplace.**
Dusts can easily ignite.
- **Ensure adequate ventilation in closed rooms.**
Risk due to dust emission and visual impairment.

For your Safety

- **Dust from materials such as coatings containing lead, several types of wood, minerals and metals can be harmful to health and cause allergic reactions, respiratory diseases and/or cancer.**
Asbestos-containing material may only be machined by specialists.
 - *Where possible use dust extraction suitable for the material.*
 - *Ensure the workplace is properly ventilated.*
 - *We recommend wearing a face mask respirator with filter class P2 or P3 (to EN 149:2001).**Observe the relevant regulations in your country for the materials to be machined.*
- **Do not use the power tool near flammable materials.**
Sparks could ignite these materials.
- **Avoid causing situations where other people can stumble or trip.**
Tripping over cables can cause serious injuries.

➤ Electrical safety

- **Check the power tool, connection cable and plug for damage before each use.**
A damaged machine is dangerous and no longer safety to operate.
- **Note the mains voltage! The power source voltage must match the details given on the rating plate of the power tool.**
- **If using the power tool with mobile generators, loss of power or atypical behaviour on switching on is possible.**
- **Do not use the power tool if the cable is damaged. Do not touch the damaged cable and disconnect the mains plug if the cable is damaged while you are working.**
Damaged cables increase the risk of an electric shock.
- **Only use extension cables suitable for the machine's power consumption and which have a minimum core cross-section of 1.5 mm². If you use a cable drum, always completely unwind the cable.**
The rolled up cable can heat up and start to burn.
- **Regularly clean the ventilation slots of your power tool by blowing it out. Never use liquids. Never insert screwdrivers or any other objects into the ventilation slits. Do not cover the ventilation slits.**
The motor fan draws dust into the housing and a large accumulation of metal dust can cause electrical hazards.
- **External electromagnetic interference (e.g. mains voltage fluctuations, electrostatic discharges) can cause the power tool to switch off automatically.**
In this case, switch off the power tool and then switch it back on again.

For your Safety

➤ Safety of people

- **Wear personal protective equipment and, depending on the work situation, use:**



Full-face protection, eye protection or safety glasses/goggles, hard hat and special apron

Protect yourself against debris thrown up by wearing a hard hat, safety goggles or face protection and wear an apron, if necessary.



Hearing protection

The typical A-weighted sound pressure level of this power tool is over 85 dB (A) while working with the tool.

If you are exposed to loud noise for lengthy periods, there is a risk of hearing damage or even hearing loss.



Dust mask, half-face filter mask or face mask respirator

Inhaling fine mineral dust can cause health damage. We recommend wearing a face mask respirator with filter class P2 or P3 (to EN 149:2001).

Dry drilling: *Work with diamond dry core bits is a grinding process in which very fine dust is produced. When drilling materials containing quartz the risk of silicosis is very high; therefore, the machine may therefore only be used in conjunction with the mounted extraction tube and a suitable dust extractor.*



Anti-vibration safety gloves

With an action value A (8) for arm-hand vibrations of over 2.5 m/s², the wearing of anti-vibration safety gloves is recommended.

Vibrations can cause health damage.



Non-slip safety footwear

- **Ensure other people keep a safe distance from your work area. Any person entering the work area must be wearing personal protective equipment.**
Broken pieces of the workpiece or broken insert tools can fly off and cause injuries, even outside the immediate work area.
- **Hold the tool at the insulated gripping surfaces only when carrying out work during which the insert tool can hit concealed electricity cables or the tool's own mains power lead.**
Contact with a live conductor can also energise metal parts of the tool and cause an electric shock.
- **Keep the mains power lead away from rotating insert tools.**
If you lose control of the tool, the mains power lead can be cut or caught and your hand or arm can be pulled into the rotating tool.

For your Safety

- **Never put down the power tool until the insert tool has come to a complete standstill.**
The rotating insert tool can come into contact with the surface on which the power tool is placed, which could cause you to lose control of the power tool.
- **Do not leave the power tool running while you are carrying it.**
Your clothing can get caught by inadvertent contact with the rotating insert tool and the insert tool can drill into your body.
- **If the machine is switched on, do not direct insert tools towards your own or other people's bodies. Do not touch or take hold of the tools.**
- **Unlock the ON/OFF switch and move it into the OFF position if the power supply is interrupted, e.g. due to power failure or disconnecting the mains plug.**
This prevents uncontrolled restarting.

➤ Hazards when using and handling the power tool

- **If the machine is used for hand-held drilling, always hold both handles firmly when switching on and while working with the machine. (The additional handle must be tightly screwed onto the drill!). When switching on and while working with the machine, expect reaction torques (e.g. due to sudden jamming or breakage of the insert tool).**
- **The On / Off switch must not be locked if using the drill for hand-held drilling.**
- **Do not use any accessories, which have not been especially provided and recommended for this power tool by the manufacturer.**
Just because you can attach the accessories to your power tool is not a guarantee of safe use.
- **The allowable speed of the insert tool must be at least as high as the maximum speed given on the power tool.**
Accessories which rotate faster than approved can break and fly off the tool.
- **Change insert tools carefully and only use the mounting tools provided, if they are in perfect condition. Disconnect the mains plug before changing the insert tool.**
Use of the mounting tool provided prevents damage to the power tool and insert tool.
- **Never use damaged insert tools. Before each use, check insert tools for splinters and cracks. If the power tool or insert tool is dropped or falls, check whether it is damaged, or use an undamaged insert tool. If you have checked and inserted the insert tool, keep yourself and other people nearby outside the plane of the rotating insert tool and let the power tool run at maximum speed for one minute.**
Most damaged insert tools break during this test period.
- **Do not expose power tools to extreme heat and cold.**
Mechanical and electrical damage can occur during extreme heat and/or cold.

For your Safety

- **Allow the insert tools, tool holders and other parts cool in the immediate vicinity of the work area after use.**
The machines can be very hot after use, do not touch the parts, risk of injuries.
- **Additional signs or other, non-TYROLIT-specific parts may not be screwed or riveted onto the motor, handle, gearbox or protective housing.**
This could damage the power tool and cause malfunctions.
- **Never place your hand near rotating insert tools.**
The insert tool can move across your hand during kickback.
- **Avoid unnecessary noise emissions.**
- **Note and follow the safety and work instructions for the accessories used.**

➤ Service / Maintenance / Repair

- **Have the power tool checked if it has been dropped or become wet.**
A possibly damaged power tool is dangerous and no longer safe to operate. Have the power tool checked by our customer service department or a workshop authorised by TYROLIT before further use.
- **Repair and maintenance work may only be carried out by a workshop authorised by TYROLIT.**
Otherwise all liability and warranty claims against TYROLIT expire.
- **Ensure that original TYROLIT spare parts and original TYROLIT accessories only are used when needed.**
Original parts are available from authorised dealers. Use of non original parts can cause damage to the machine and an increased risk of accidents.
- **Regular servicing by TYROLIT or a servicing and repair firm authorised by TYROLIT is a specified requirement.**
Many accidents are caused by poorly serviced and maintained power tools.

Technical Characteristics

Technical specifications

Dry drilling motor	DME19DPP	
Operating voltage (V / Hz)	~230 / 50-60	~110 / 50-60
Power consumption (watt)	1800	
Protection class	two / II	
speed (min ⁻¹)	1150	
Impact frequency (imp)	28000	
Core bit diameter min./ max. (mm)	52 / 162	
Bit holder (inch)	1¼ UNC and G½	
Weight (kg)*	5.2	
Speed electronics	Yes	
L _{pA} (sound pressure) dB (A) **	K = 3 dB	92
L _{WA} (sound power) dB (A) **		99
Vibration measurement (m/s ²)**	K = 1.5 m/s ²	5.5

* Weight according to EPTA procedure 01/2003.

** Noise and vibration values to EN 60745.

Machine characteristics

The dry drilling motor has especially developed electronics with soft start. It monitors the speed and the red / green indicator lights help to achieve the most favourable work progress and therefore tool-protecting working conditions.

Visual display

Green: Speed for optimum drilling performance

green / red: Speed within the limit range

Red: Speed too low – stopping

If this warning signal is ignored, i.e. the feed is not reduced, the electronics switch off on overload. After the core bit has stopped, remove it from the drill hole. The machine can be immediately restarted.

The machines are also equipped with a soft impact mechanism. It protects the diamond segments of the core bits, allows faster working and carries the drill dust away from the diamond segments, which in turn enables a longer tool life for the diamond core bits.

Declaration of Conformity



Dry drilling motor DME19DPP

We confirm with sole responsibility that this machine conforms to the following directives and standards

Applied directive(s)

2006/42/EC; 2014/30/EU; 2011/65/EU

Applied standards

EN 60745

TYROLIT Hydrostress AG

Witzbergstrasse 18
CH-8330 Pfäffikon
Switzerland

Pfäffikon, 19.12.2014

Pascal Schmid
Head of Development

Scope of Supply

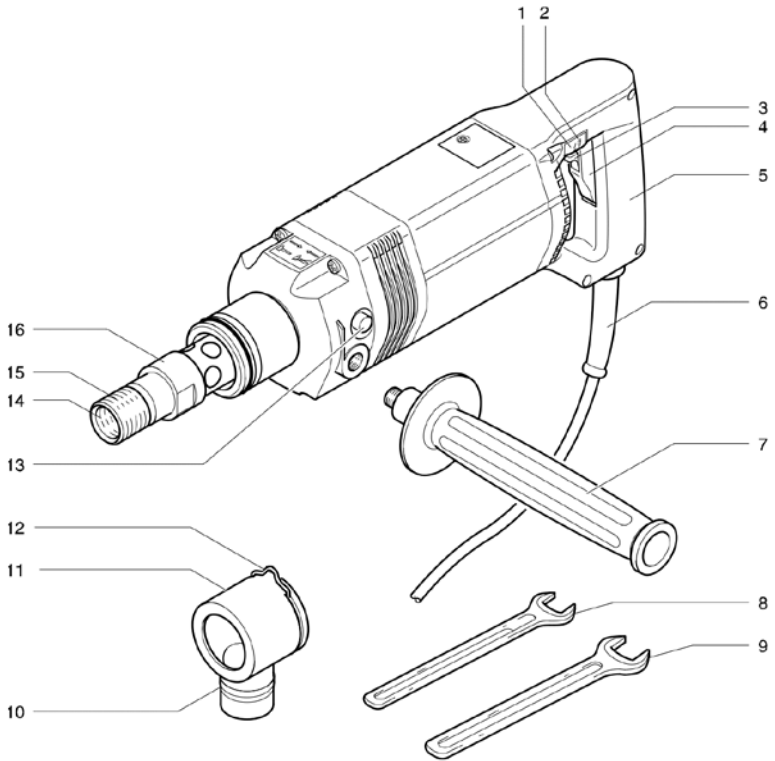
Please refer to the enclosed delivery note for the individual scope of supply of a customer-specific order.

Please refer to the table below for the scope of supply of basic models. Please contact your dealer if parts are missing or damaged

Diamond drill	TYROLIT Number	Version 230 V	Version 110 V	Accessories • Centring tip • Extraction tube	Machine case
DME19DPP	10988200	x		x	x
	10987700		x	x	x

x = included in scope of supply

Machine Parts and Controls



- 1 Green LED
- 2 Red LED
- 3 Lock for ON / OFF switch
- 4 ON / OFF switch
- 5 Handle
- 6 Connection cable
- 7 Additional handle (can be mounted for left and right-handed persons)
- 8 Open-ended spanner SW36
- 9 Open-ended spanner SW41
- 10 Extraction tube
- 11 Clip for fastening extraction tube
- 12 Socket for dust extractor hose connection
- 13 Soft impact feature ON / OFF switch
- 14 Internal thread G $\frac{1}{2}$ "
- 15 External thread 1 $\frac{1}{4}$ " UNC
- 16 Output shaft

Tools and Accessories

Accessories:

- Centring tip (450 mm long) TYROLIT No. 10995373
- Centring tip (250 mm long) TYROLIT No. 10997916
- Centring wingnut*
- Extraction pin G½ TYROLIT No. 10995156
- ModulDrill collar adapter plate TYROLIT No. 10995087
- O-rings, replacement TYROLIT No. 10995372
- Sharpening plate TYROLIT No. 497322
- Chisel TYROLIT No. 980304

* depending on diameter of the core bit - see TYROLIT catalogue

Tools:

- Open-ended spanner SW36 TYROLIT No. 973777
- Open-ended spanner SW41 TYROLIT No. 973779

Intended Use

The dry drilling motor may only be used for dry drilling.

The dry drilling motor is designed both for hand-held mode and for use with a drill stand.

The dry drilling motor is intended to be used for drilling and cutting holes for junction boxes in mineral materials such as concrete, reinforced concrete, clay bricks, lime-sand blocks or undressed stone.



Please note!

*The following materials may **not** be drilled: wood, metal and glass, etc.*

Before Starting Work

Note and follow the following points before each use to ensure safe working with the dry drilling motor:

- Read through all safety instructions and warnings in this instruction manual.
- Check whether the voltage on the rating plate is identical with the mains voltage.
- Before each use, check the dry drilling motor, connection cable, plug and tight fit of the core bit.
- Use diamond dry core bits recommended by TYROLIT only.
- Inform and consult the responsible structural engineer, architect or the responsible site engineer about planned drilling. Cut through reinforcement only with the approval of a structural engineer.
- Before drilling holes drilling objects, check the rooms concerned for obstructions and block off this area. Use formwork to secure the drill core against falling.
- Always note the thread dimension of the diamond dry core bit arbor. The thread of the diamond dry core bits must fit on the thread of the dry drilling motor ($G\frac{1}{2}$ " internal thread or $1\frac{1}{4}$ " UNC external thread) without any clearance. Do not use reducers or adaptors to fit the diamond dry core bits.
- Visually inspect the condition of the diamond dry core bit.



Please note!

- Damaged diamond dry core bits may not be used and must be replaced immediately.
- The additional handle must be tightly screwed onto the drill for hand-held drilling.
- Wear protective clothing such as hard hat, hearing protection, face protection or safety goggles, suitable half-face filter mask, slip-resistant safety footwear and if necessary an apron.
- **Fitting/dismantling the extraction tube** (Figure 1)

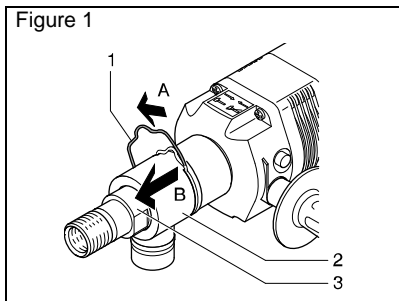
The extraction tube must be fitted for drilling (Figure 1) to enable a suitable dust extractor to be connected.



Danger!

Risk of fatal injuries due to electric shock.

► *Disconnect the mains plug before carrying out any work on the dry drilling motor.*



Dismantle extraction tube (Figure 1):

- Press the spring clip (1) in the direction of the arrow (A) until the legs of the clip unlatch from the groove of the gearbox extension.
- Remove the extraction tube (2) from the front (B) above the output shaft (3).

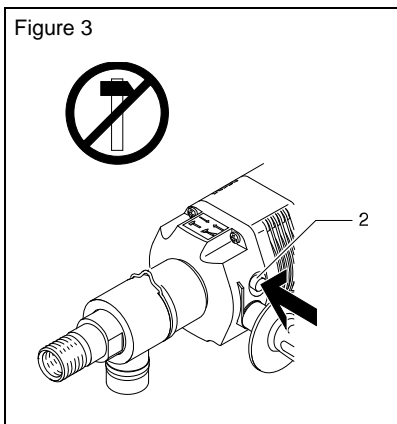
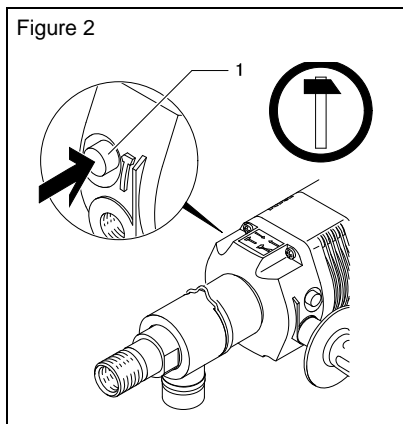
Before Starting Work

Switching soft impact feature on and off (Figure 2 and Figure 3)



Attention!

Only press the soft impact feature ON / OFF changeover switch if the power tool is switched off.



Switch the drill's soft impact feature on or off, depending on the material to be drilled (Figure 2 and Figure 3).

Drilling with soft impact:

Concrete and other hard materials.

Drilling without soft impact feature: abrasive materials and materials with low hardness.

- Switch on soft impact feature: Pull the diamond dry core bit towards the front and hold tight. Press the side of the soft impact switch marked green (1) (Figure 2).
- Switch off soft impact feature: Pull the diamond dry core bit towards the front and hold tight. Press the side of the soft impact switch marked black (2) (Figure 3).



• **Danger!**

Risk of fire if cable drums used.

► If cable drums are used, ensure the cable is completely unwound. The rolled up cable can heat up and start to burn.

Operation and Control

Fitting or replacing the diamond dry core bit (Figure 4)

The diamond dry core bit is chosen for the required drilling diameter and is screwed onto the G $\frac{1}{2}$ " internal thread or 1 $\frac{1}{4}$ " UNC external thread of the output shaft.



Please note!

If the dry drilling motor is used in a drill stand, the machine must be fixed in the motor collar before the diamond dry core bit is fitted.



Danger!

Risk of fatal injuries due to electric shock.

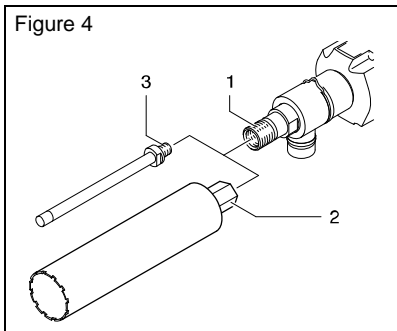
► *Disconnect the mains plug before carrying out any work on the dry drilling motor.*



Danger!

Risk of injury due to hot core bits.

► *The diamond dry core bit can get hot if used for a lengthy time. Wear safety gloves when changing the hot core bit or allow the core bit to cool first.*



- Screw the diamond dry core bit (2) onto the 1 $\frac{1}{4}$ " UNC external thread or the diamond dry core bit (3) into the G $\frac{1}{2}$ " internal thread of the drive shaft (1), up to the limit stop.
- Use an open-ended spanner SW 36 to hold the drive shaft tight (1).
- Tighten the diamond dry core bit (2) using an open-ended spanner SW 41.
- Tighten the diamond dry core bit (3) using an open-ended spanner SW 22 or SW 24.



Please note!

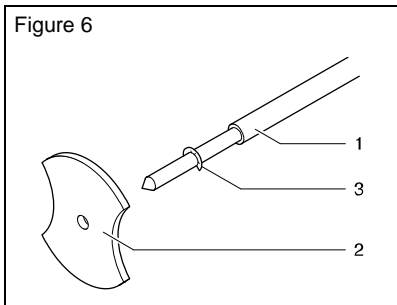
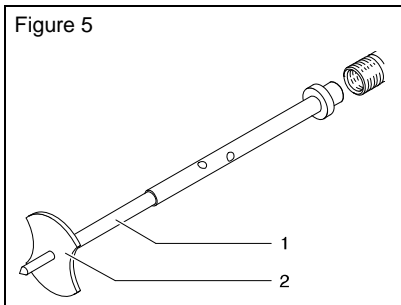
Check the fit and condition of the diamond dry core bit. A damaged diamond dry core bit may not be used and must be replaced immediately.

Operation and Control

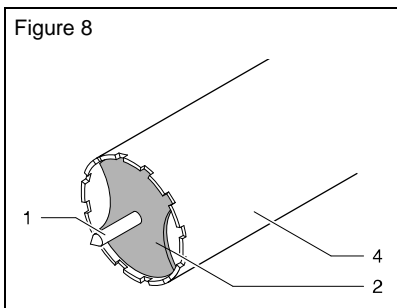
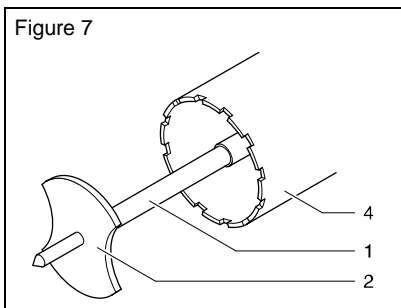
Hand-held drilling

Using the centring tip (Figure 5 to Figure 8)

The centring tip can only be used with diamond dry core bits, which are screwed onto the 1/4" UNC external thread of the output shaft.



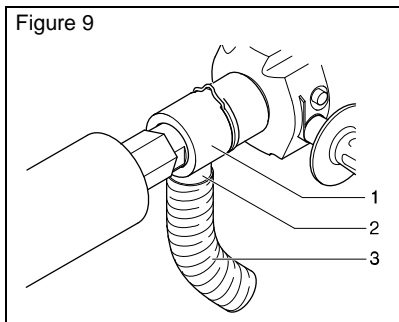
- Select a TYROLIT centring wingnut (2) according to the diamond dry core bit diameter and push onto the centring tip (1) up to the lock washer (3).



- Push the centring tip (1) with the centring wingnut (2) through the diamond dry core bit (4) and into the output shaft.
- Figure 8 shows the correct fit of the centring tip (1) with the centring wing nut (2) in the diamond dry core bit (4).

Operation and Control

Connecting the dust extractor to the extraction tube (Figure 9)



- Check the dust extractor function and then push the dust extractor hose (3) firmly onto the socket (2) of the extraction tube (1).



Please note!

Greater effort may be required to push on the suction hose in cold ambient temperatures.

Switching on the dry drilling motor and drilling

Before starting up the dry drilling motor, check all the points described in the “Before starting work” chapter (see pages 16 and 17).

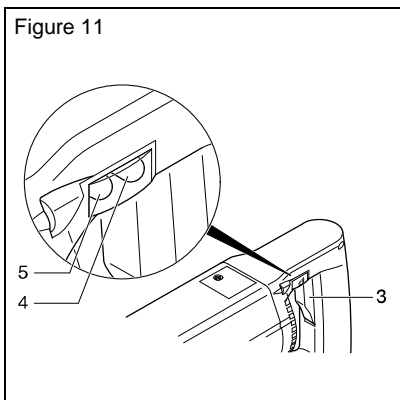
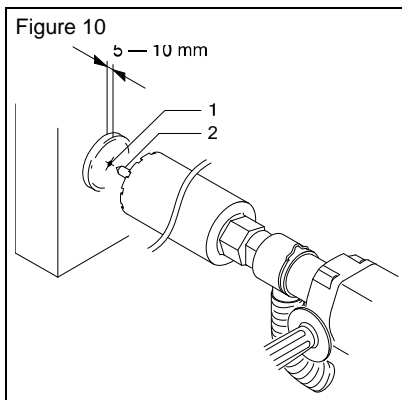
Drilling a centring hole (Figures 10 and 11)



Attention!

The diamond dry core bit can be irreparably damaged by overheating or jamming in the core drill hole.

- ▶ A suitable dust extractor must be connected to the dry drilling motor.



Operation and Control

- Mark the hole centre.
- Switch on the dust extractor connected to the extraction tube.
- Always hold on tight to both handles of the dry drilling motor with two hands.
- Position the centring pin (2) on the marked hole centre (1) with light pressure. The diamond dry core bit must not touch the stone!
- Press the ON / OFF switch (3) to switch on the dry drilling motor (Figure 11).



Please note!

The ON / OFF switch must not be locked for hand-held drilling.

- Drill until the diamond dry core bit is centred approx. 5 – 10 mm deep in the wall (Figure 10).
- Switch off the machine and after the diamond dry core bit has come to a stop, remove the centring bit from the core bit.

Finishing the drilled hole



• **Attention!**

The cutters of the diamond dry core bit are easily damaged beyond repair by overheating or canting in the core drillhole.

► *The feed can only be as high as the diamond dry core bit can wear away the material. Therefore, do not exert too large a force on the diamond dry core bit and avoid canting.*

- Leave the dust extractor connected to the extraction tube switched on.
- Feed the diamond dry core bit into the pre-centred hole.
- Switch on the dry drilling motor.
- Continue drilling with a uniform, light feed pressure.



• **Please note!**

When larger drilled depths are reached the diamond dry core bit increasingly becomes sucked into the hole by the connected dust extractor. This effect is due to the increasing tightness of the suction (vacuum) with increasing drilled depth. This suction force increases the feed force of the drill and at larger drilled depths can rise so far that the speed of the drill drops too far and the electronics switches off (overload). In this case, stop pressing the drill against the wall with the handles, and instead hold it lightly against the suction force.

- Pull back the diamond dry core bit a little now and again so that the drill dust can be removed.
- After every 10 cm drilled depth, remove the core bit from the drill hole and remove the drill dust on the core bit; use a piece of soft wood or plastic to carefully knock the diamond dry core bit, to remove any drill dust stuck to it.
- If the feed is too fast the red LED (4) lights up. You must then immediately reduce the feed until the green LED (5) lights up again (Figure 11, page 20).
If this warning signal is ignored, i.e. the feed is not reduced, the electronics switch off the dry drilling motor on overload.

The drilling process can then be started and continued as described above.



• **Danger!**

Falling drill cores can cause severe injuries!

► *If drilling openings through objects, always check the rooms below or behind and block off the danger zone. Use formwork to secure the drill core against falling.*

Operation and Control

Ending the drilling process (Figure 11, page 20)



• **Attention!**

The cutters of the diamond dry core bit can be easily damaged beyond repair if they get stuck in the core drillhole.

► *Do not switch off the dry drilling motor until the rotating diamond dry core bit has been completely removed from the masonry.*

The dry drilling motor switches off as soon as the ON / OFF switch (3) is released.

Removing drill core (Figure 12)

Through-hole:



Caution!

Risk of deformation or fracture!

► Do not hit the diamond dry core bit with hard objects!

If the drill core is stuck in the diamond dry core bit, knock the diamond dry core bit with a soft piece of wood or plastic to loosen the drill core.

Non through-hole (blind hole):

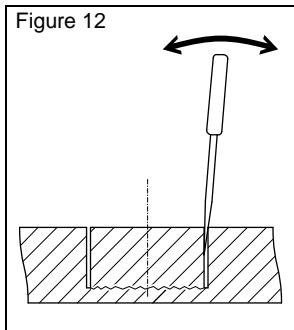


Caution!

Risk of fracture of the diamond dry core bit's cutting segments and/or damage to the machine!

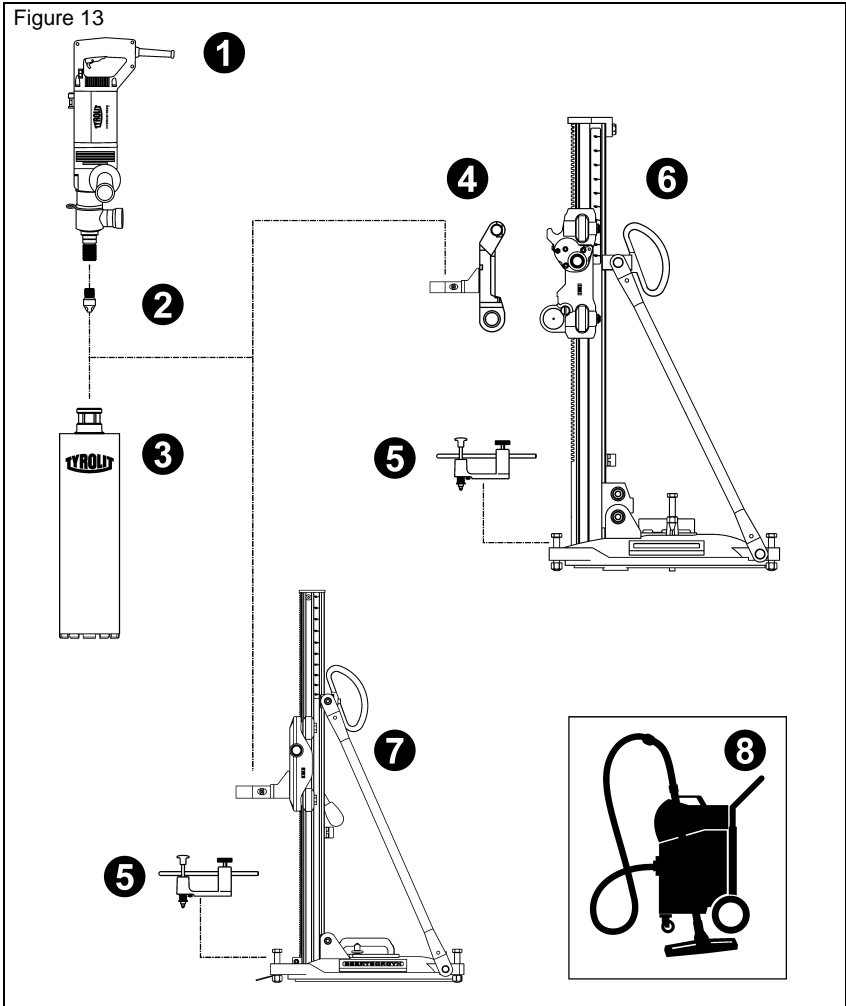
► *Never use the diamond dry core bit to break out the drill core.*

Use a suitable tool, e.g. chisel, TYROLIT chisel hammer (TYROLIT No. 980304) or TYROLIT breaking out tool to break out the drill core in the stone.



Stand-guided core drilling

Figure 13



- ① DME19DP dry drilling motor★★★
- ② Extraction pin
- ③ TYROLIT diamond dry core bit
- ④ ModulDrill collar adapter plate
- ⑤ Drill core centring
- ⑥ Drill stand with ModulDrill drilling motor holder
- ⑦ Drill stand with collar drilling motor holder
- ⑧ Dry vacuum cleaner*

* Our recommendation for a dry vacuum cleaner:

Max. air flow > 60 l/s
 Max. vacuum > 20 kPa
 Automatic filter cleaning

Handling diamond dry core bits

A "soft" diamond dry core bit is used for hard stone, so that the diamond splinters are quickly freed from the segments during the drilling process.

If extraction is not used during machining, the diamond dry core bit increasingly rubs against "soft" drill dust. The core bit segments heat as a result, they become soft and the diamond splinters sink into the substrate. The diamond dry core bit becomes less sharp. The cutting performance weakens and the user increases the pressure on the diamond dry core bit, which in turn increases the effect. After drilling a few holes, the core bit segments are "glazed" or they tear off at the least resistance in the stone and the diamond dry core bit must be replaced.

Sharpening the diamond dry core bit on a sharpening plate or a soft stone between drilling enables sunken in diamonds to be re-released and the diamond dry core bit is sharp again. To extend the life of the diamond dry core bit and keep the cutting speed high, cooling by extraction is necessary for the diamond dry core bit.

Cleaning



Danger!

Risk of fatal injuries due to electric shock.

► *Disconnect the mains plug before carrying out any work on the dry drilling motor.*

The machine must be cleaned after each drilling work session.

- Rub down the dry drilling motor carefully and blow out with compressed air.
- Lightly grease the thread of the core bit holder.
- If used, carefully clean the drill stand and blow out with compressed air. Lightly grease the spindle head guideway and feed speed adjustment.
- Ensure handles are dry and free of grease.

Maintenance



Danger!

Risk of fatal injuries due to electric shock.

► *Disconnect the mains plug before carrying out any work on the dry drilling motor.*

The dry drilling motor must be serviced at least once a year. Further, servicing will be necessary depending on the wear of the carbon brushes.

Only servicing and repair firms authorised by TYROLIT may carry out maintenance on the machine. Ensure that original TYROLIT spare parts and original TYROLIT accessories only are used.



TYROLIT Hydrostress AG

Witzbergstrasse 18

CH-8330 Pfäffikon

Switzerland

Tel. 0041 (0) 44 952 18 18 Fax 0041 (0) 44 952 18 00

www.tyrolit.ch