

PHDS 10-20V

EN

OPERATING MANUAL  
CORDLESS HAMMER DRILL



 TROTEC

**Table of contents**

**Notes regarding the operating manual..... 1**

**Safety ..... 2**

**Information about the device..... 6**

**Transport and storage..... 9**

**Start-up..... 10**

**Operation ..... 14**

**Available accessories..... 15**

**Errors and faults ..... 16**

**Maintenance ..... 17**

**Disposal ..... 17**

**Notes regarding the operating manual**

**Symbols**



**Warning of electrical voltage**

This symbol indicates dangers to the life and health of persons due to electrical voltage.



**Warning of explosive substances**

This symbol indicates dangers to the life and health of persons due to potentially explosive substances.



**Warning**

This signal word indicates a hazard with an average risk level which, if not avoided, can result in serious injury or death.



**Caution**

This signal word indicates a hazard with a low risk level which, if not avoided, can result in minor or moderate injury.

**Notice**

This signal word indicates important information (e.g. material damage), but does not indicate hazards.



**Info**

Information marked with this symbol helps you to carry out your tasks quickly and safely.



**Follow the manual**

Information marked with this symbol indicates that the operating manual must be observed.



**Wear ear protection**

Information marked with this symbol indicates that you should wear hearing protection.



**Wear safety glasses**

Information marked with this symbol indicates that you should wear eye protection.



**Wear a protective mask**

Information marked with this symbol indicates that you should wear a protective mask.

You can download the current version of the operating manual and the EU declaration of conformity via the following link:



PHDS 10-20V



<http://hub.trotec.com/?id=39789>

**Legal notice**

This release replaces all previous versions. No part of this publication may be reproduced without written permission from Trotec GmbH & Co. KG. The same applies for electronically processing, duplicating or spreading the publication. Subject to technical changes. All rights reserved. Trademarks are used without guarantee that they may be used freely and primarily following the spelling of the manufacturer. Product names are registered.

Changes to construction in the interests of constant improvements to the product, as well as changes to the shape and colour are reserved.

The scope of delivery may vary from product images. This document was created with all due care.

Trotec GmbH & Co. KG accepts no liability whatsoever for possible mistakes or omissions.

© Trotec GmbH & Co. KG

## Warranty and liability

The device complies with the fundamental health and safety requirements of the applicable EU regulations and was tested at the factory for perfect functionality multiple times.

However, if faults in the functionality occur and cannot be remedied with the measures in the chapter Errors and faults, please get in touch with your dealer or distributor.

When making a warranty claim, supply the device number (see the side of the device).

When manufacturer's instructions or legal regulations have not been followed, or after unauthorised changes to the device are made, the manufacturer is not responsible for the resulting damages. Changes to the device or unauthorised replacement of individual parts can drastically impact the electrical safety of this product and will result in the loss of the warranty. Liability does not extend to damages to people or property caused by the device being used other than as described in the instructions in this operating manual. Subject to changes to technical design and model changes as part of constant development and product improvement without prior notice.

No liability is accepted for damages resulting from improper use. In such a case, any warranty claims will be voided also.

## Safety

**Read this manual carefully before starting or using the device. Always store the manual in the immediate vicinity of the device or its site of use!**



### Warning

**Read all safety warnings and all instructions.**

Failure to follow the warnings and instructions may result in electric shock, fire and / or serious injury.

**Save all warnings and instructions for future reference.**

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.

Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

The term *power tool* used in the safety warnings refers to both mains-operated and battery-powered electric tools (with/without power cable).



### General Power Tool Safety Warnings – Work area safety

- **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
- **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.
- **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.



### General Power Tool Safety Warnings – Electrical safety

- **Power tool or power adapter plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
- **Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
- **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
- **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
- **If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.** Use of an RCD reduces the risk of electric shock.
- **Hold power tool by insulated gripping surfaces when performing an operation where the cutting accessory may contact hidden wiring or its own cord.** Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.

**General Power Tool Safety Warnings – Personal safety**

- **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.



**Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.



- **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.
- **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.
- **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** The use of a dust extraction system may reduce dust-related hazards.

**General Power Tool Safety Warnings – Power tool use and care**

- **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.
- **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- **Disconnect the plug from the power source and / or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
- **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
- **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.
- **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

**General Power Tool Safety Warnings – Service**

- **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.



### General Battery Pack / Charger Safety Warnings

- **Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.
- **When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects, that can make a connection from one terminal to another.** Shorting the battery terminals together may cause burns or a fire.
- **Recharge only with the charger specified by the manufacturer.** A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
- **Do not charge other battery packs.** The charger is only suitable for use with the supplied battery pack and with the voltages specified in the technical data. Otherwise, there is a risk of fire and explosion.
- **Under abusive conditions, liquid may be ejected from the battery.** Avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.
- **In case of damage and improper use of the battery, vapours may be emitted.** Provide for fresh air and seek medical help in case of complaints. The vapours can irritate the respiratory system.
- **Do not open the battery.** There is danger of a short circuit.
- **Do not short-circuit the battery.** There is danger of explosion.
- **Batteries must not be exposed to mechanical impacts.**
- **Protect electrical parts against moisture. To prevent an electric shock, never immerse them in water or other liquids during cleaning or operation.** Never hold the charger under running water. Please observe the instructions for cleaning and maintenance.
- The charger is only suited for indoor use.
- Keep the charger clean. Contamination entails a risk of electric shock.
- Do not operate the charger on highly combustible ground (e.g. paper, textiles etc.) or in an inflammable environment. The heat generated by the charger during charging entails a risk of fire.
- Only use the charger for charging the battery. The charger must not be used as power supply for the power tool.



### Device-specific safety warnings for cordless hammer drills



Wear eye and mouth protection when processing materials that may contain harmful substances (e.g. asbestos).



- **Use the additional handle for impact drilling.** Losing control of the power tool may result in personal injury.
- **Hold power tool by insulated gripping surfaces when performing an operation where the insertion tool may contact hidden wiring.** Contacting a live wire might energize exposed metal parts of the device and lead to an electric shock.
- **Use appropriate detection equipment to track down concealed supply lines or consult the local utility companies.** Contact with electrical lines may result in fire and electric shock. Damaging a gas line may lead to an explosion. Penetrating a water line causes property damage and may cause an electric shock.
- **Vibrations can be harmful to the human hand-arm system.** Keep the vibration exposure time to a minimum.
- **During operation hold onto the power tool with both hands.** Make sure that you stand firmly on the ground. It is safer to handle the power tool with two hands.
- **Secure the workpiece.** The grip of tensioning devices or a vice is more secure than holding the workpiece only by hand.
- **Before starting to work, always make sure that the insertion tool is firmly clamped inside the drill chuck.** Insertion tools that are not locked in place could be catapulted out of the power tool upon switch-on and lead to injuries.
- **Before switching on the power tool, ensure that the insertion tool can move freely.** If the device is switched on with a jammed insertion tool, the resulting forces can be extreme causing the device to kick out sideways.
- **Immediately switch off the power tool if the insertion tool gets jammed.** The power tool can lash out to the side owing to the forces that build up consequently.
- **Regularly check the drill chuck for wear or damage.**
- **Only start a percussive power tool while holding it against a workpiece (wall, ceiling, etc.).**
- **Wait until the power tool has come to a standstill, before putting it down.**
- **For any work on the device, as well as during transport or storage, set the switch for the rotational direction to centre position (locked).** This prevents unintentional starting of the power tool.

## Intended use

Only use the device PHDS 10-20V:

- for screwing in and loosening screws,
- for drilling in wood, plastic, ceramic and metal,
- for impact drilling in masonry, bricks and stone,

whilst adhering to the technical data (see operating manual).

We recommend using the power tool with original Trotec accessories.

## Personnel qualifications

People who use this device must:

- have read and understood the operating manual, especially the Safety chapter.

## Personal protective equipment



### **Wear hearing protection.**

Excessive noise can lead to hearing loss.



### **Wear eye protection.**

With it you protect your eyes from splintering, falling and flying pieces which could cause injuries.



### **Wear a dust mask.**

It saves you from inhaling harmful dusts generated when processing workpieces.



### **Wearing protective gloves.**

They protect your hands from burns, crushing injuries and skin abrasions.

## Residual risks



### **Warning of electrical voltage**

Electric shock from insufficient insulation.  
Check the device for damages and proper functioning before each use.  
If you notice damages, no longer use the device.  
Do not use the device when the device or your hands are damp or wet!



### **Warning of electrical voltage**

Work on the electrical components must only be carried out by an authorised specialist company!



### **Warning of electrical voltage**

Before any work on the device, remove the mains plug from the mains socket and the battery from the device! Hold onto the mains plug while pulling the power cable out of the mains socket.



### **Warning of electrical voltage**

There is a risk of a short-circuit due to liquids penetrating the housing!  
Do not immerse the device and the accessories in water. Make sure that no water or other liquids can enter the housing.



### **Warning of explosive substances**

Do not expose the battery to temperatures above 45 °C! Do not let the battery come into contact with water or fire! Avoid direct sunlight and moisture. There is a risk of explosion!



### **Warning of hot surface**



The insertion tool might still be hot after the application. Burn hazard when touching the insertion tool.

Do not touch the insertion tool bare-handed!  
Wear protective gloves!



### **Warning**



Toxic dusts!



The harmful / toxic dusts produced during operation pose of risk to the health of the operator and persons in the vicinity.

Wear eye protection and a dust mask!



### **Warning**

Do not process materials containing asbestos. Asbestos is considered carcinogenic.



### **Warning**

Make sure not to hit power, gas or water lines when working with a power tool. If necessary, use a pipe detector to check the wall you want to drill in or slit open.



### **Warning**

Risk of injuries caused by flying parts or bursting tool heads.



### **Warning**

Dangers can occur at the device when it is used by untrained people in an unprofessional or improper way! Observe the personnel qualifications!



### **Warning**

The device is not a toy and does not belong in the hands of children.



### **Warning**

Do not leave the packaging lying around. Children may use it as a dangerous toy.

**Warning**

The tool holder must be firmly locked in place before switching the device on, for an insufficiently or incorrectly clamped insertion tool could be catapulted out of the tool holder uncontrollably upon switch-on.

**Caution**

Vibration emissions can cause a health hazard if the device is used for an extended period of time or if it is not properly handled and maintained.

**Caution**

Keep a sufficient distance from heat sources.

**Notice**

To avoid damaging the gear, only change the rotational direction when the device is at a standstill.

**Notice**

Set the torque and rotational direction according to the operating mode. A wrong selection may damage the device.

**Notice**

If you store or transport the device improperly, the device may be damaged.

Note the information regarding transport and storage of the device.

## Information about the device

### Device description

The cordless hammer drill has two speed levels: while the first speed level is suitable for screwing, drilling and impact drilling can be performed using the second speed level.

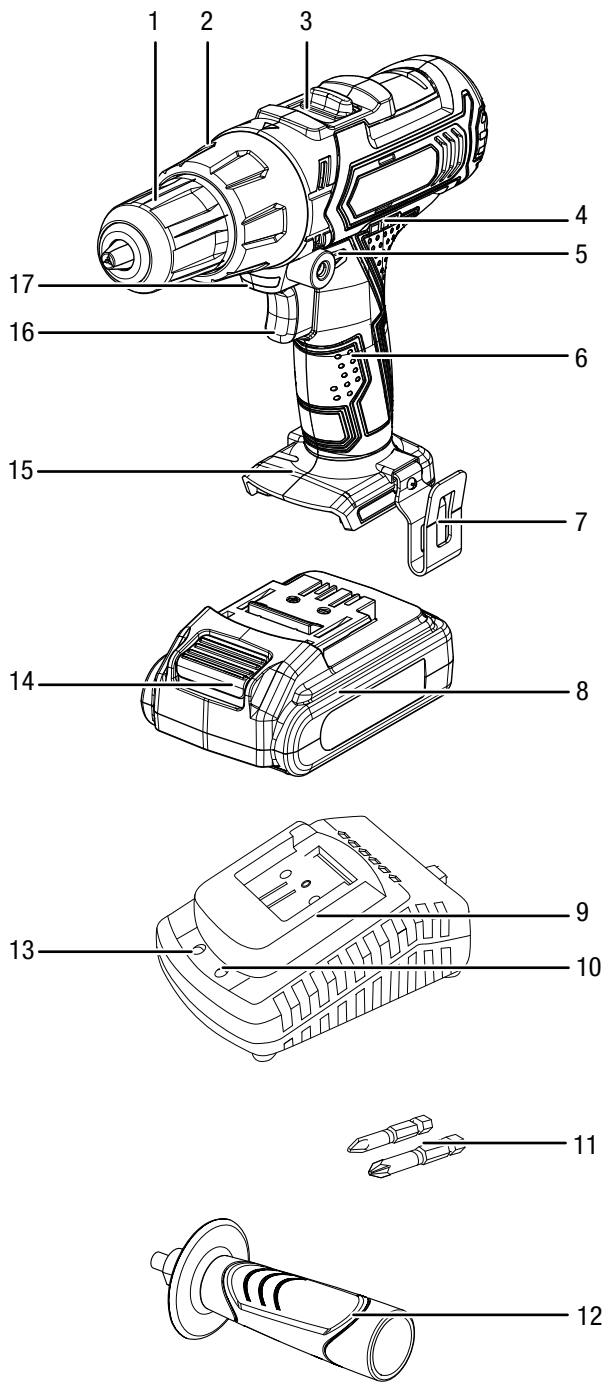
The integrated torque selection, including a setting each for drilling and impact drilling, allows you to use the optimum power for every application, adapted to the material and screw size.

The keyless drill chuck with automatic spindle lock further enables an easy and tool-free exchange of the insertion tools.

The integrated LED work lamp offers an improved illumination of the workpiece or working surface,

and the preassembled belt clip facilitates transport and provides faster access to the device.

**Device depiction**




No.	Designation
1	Keyless drill chuck
2	Torque selection
3	Gear selection (2 speed levels)
4	3-stage battery level indication
5	Clockwise / counter-clockwise rotation, lock
6	Handle
7	Belt clip
8	Battery
9	Quick charger
10	Green battery LED (quick charger ready for operation)
11	Bits
12	Anti-vibration handle
13	Red battery LED (battery charging)
14	Unlocking button
15	Battery holder
16	On / off switch (speed regulation)
17	LED work lamp

**Scope of delivery**

- 1 x Cordless hammer drill
- 1 x Rechargeable battery
- 1 x Charger
- 2 x Bits (50 mm)
- 1 x Belt clip
- 1 x Anti-vibration handle
- 1 x Transport case
- 1 x Manual



## Technical data

Parameter	Value
<b>Model</b>	<b>PHDS 10-20V</b>
Nominal voltage	20 V $\overline{---}$
Idle speed	
1st speed level	0 – 440 rpm
2nd speed level	0 – 1650 rpm
Impact frequency	0 – 26400 spm
Torque settings	20 +1 +1
Chucking range	Max. 13 mm
Max. drilling diameter	
wood	30 mm
metal	13 mm
masonry / bricks	15 mm
Max. torque	40 Nm
Weight	2 kg
<b>Battery</b>	<b>PHDS 10-20V DC</b>
Type	Li-ion
Nominal voltage	20 V $\overline{---}$
Capacity	1500 mAh
<b>Quick charger</b>	<b>PHDS 10-20V AC</b>
Input	
Nominal voltage	220 – 240 V ~ 50 Hz
Power input	45 W
Output	
Nominal voltage	20 V $\overline{---}$
Charging current	2.0 A
Charging time	1 h
Protection class	II / 
<b>Vibration information according to EN 60745</b>	
Vibration emission value screwing in metal ah=in	5.159 m/s <sup>2</sup>
Uncertainty K	1.5 m/s <sup>2</sup>
Vibration emission value impact drilling in brickwork ah=in	10.858 m/s <sup>2</sup>
Uncertainty K	1.5 m/s <sup>2</sup>
<b>Sound values according to EN 60745</b>	
Sound pressure level L <sub>pA</sub>	84 dB(A)
Sound power L <sub>WA</sub>	95 dB(A)
Uncertainty K	3 dB

## Information on noise and vibration:

- The vibration level specified in these instructions was determined by means of a measuring method standardized in EN 60745 and can be used for a device comparison. The specified vibration emission value may also be used for a preliminary assessment of the exposure.



### Caution

- Vibration emissions can cause a health hazard if the device is used for an extended period of time or if it is not properly handled and maintained.
- The vibration level will change depending on the application of the power tool and may in some cases differ from the value specified in these instructions. The vibration load may be underestimated if the power tool is used regularly in such a way. For a precise estimation of the vibration load during a certain work period, it is also important to consider the periods during which the device is switched off, or is running but not actually employed. This can reduce the vibration load over the entire work period significantly.



### Wear hearing protection.

Excessive noise can lead to hearing loss.

## Transport and storage

### Notice

If you store or transport the device improperly, the device may be damaged.

Note the information regarding transport and storage of the device.

### Transport

For transporting the device, use the transport case included in the scope of delivery in order to protect the device from external influences.

**Before** transporting the device, proceed as follows:

- Switch off the device by setting the switch for clockwise / counter-clockwise rotation to centre position (lock).
- Allow the device to cool down.
- Remove the battery from the device.
- Remove the tool from the tool holder.

The supplied Li-ion batteries are subjects to the requirements of dangerous goods legislation.

Observe the following when transporting or shipping Li-ion batteries:

- The user may transport the batteries by road without any additional requirements.
- If transport is carried out by third parties (e.g. air transport or forwarding company), special requirements as to packaging and labelling must be observed. This includes consulting a dangerous goods specialist when preparing the package.
  - Only ship batteries if their housing is undamaged.
  - Mask open terminals with tape and pack the battery in a way that it cannot move inside the packaging.
  - Please also observe any other national regulations.

### Storage

**Before** storing the device, proceed as follows:

- Switch off the device by setting the switch for clockwise / counter-clockwise rotation to centre position (lock).
- Allow the device to cool down.
- Remove the battery from the device.
- Remove the tool from the tool holder.
- Clean the device as described in the Maintenance chapter.
- For storing the device, use the transport case included in the scope of delivery in order to protect the device from external influences.
- Do not store Li-ion batteries which are completely discharged. Storing discharged batteries can lead to a deep discharge and thus damage the battery.

When the device is not being used, observe the following storage conditions:

- dry and protected from frost and heat
- ambient temperature below 40 °C
- protected from dust and direct sunlight inside the transport case

## Start-up

### Unpacking the device

- Take the transport case out of the packaging.



#### Warning of electrical voltage

Electric shock from insufficient insulation. Check the device for damages and proper functioning before each use.

If you notice damages, no longer use the device.

Do not use the device when the device or your hands are damp or wet!

- Check the contents of the transport case for completeness and look for damages.



#### Warning

Do not leave the packaging lying around. Children may use it as a dangerous toy.

- Dispose of the packaging material according to the national regulations.

### Charging the battery

#### Notice

The battery can be damaged in case of improper charging.

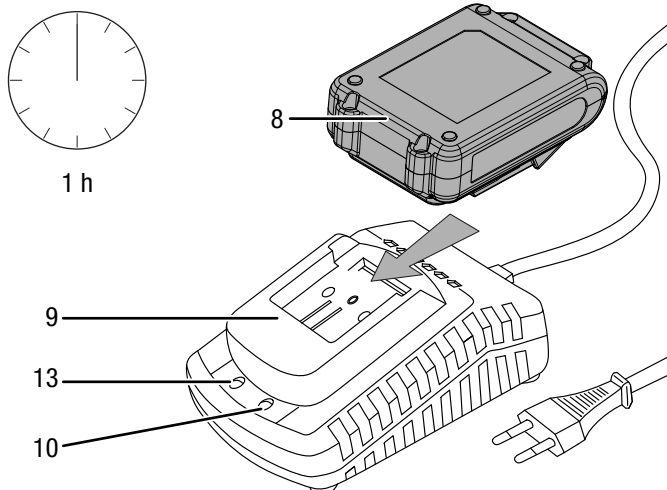
Remove the charger's mains plug before inserting or removing the battery.

Never charge the battery at ambient temperatures below 10 °C or above 40 °C.

The battery is partially charged upon delivery to avoid damage to the battery caused by a deep discharge.

Prior to initial start-up and when the battery is low (only the red LED in the battery level indication (4) is illuminated), the battery should be charged. To do so, please proceed as follows:

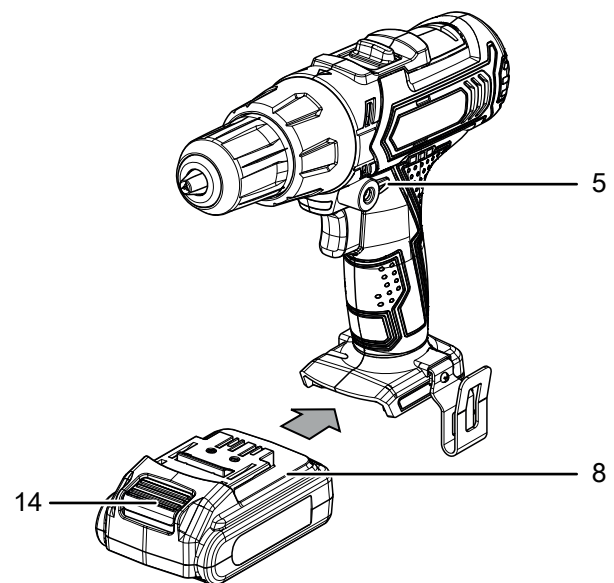
- Slide the battery (8) onto the quick charger (9) upside down until it locks in place.



- Insert the mains plug of the quick charger (9) into a properly fused mains socket.
  - ⇒ The red battery LED (13) lights up.
  - ⇒ Charging requires approx. one hour.
- Wait until the red battery LED (13) goes off and the green battery LED (10) lights up.
  - ⇒ The battery (8) is fully charged.
- Hold onto the mains plug while pulling the power cable of the quick charger (9) out of the mains socket.
  - ⇒ The battery (8) and the quick charger (9) may have become warm during charging. Allow the battery (8) to cool down to room temperature.
- Take the battery (8) out of the quick charger (9) by pressing and holding the unlocking button (14) and pulling the battery (8) off the quick charger (9).

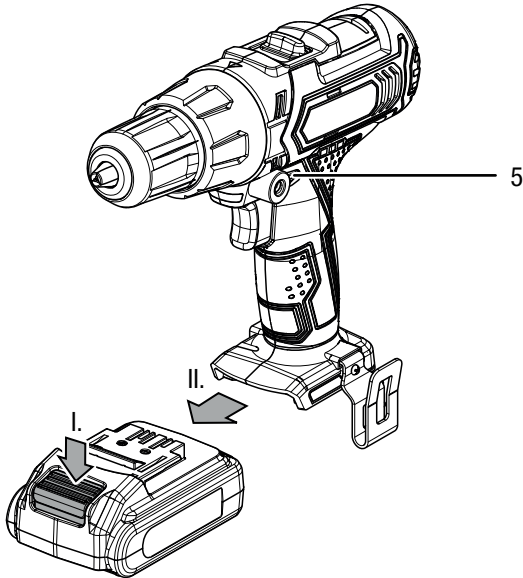
### Inserting the battery

- Set the switch for clockwise / counter-clockwise rotation (5) to centre position (lock).
- Slide the battery (8) onto the device until it locks in place.



**Removing the battery**

1. Set the switch for clockwise / counter-clockwise rotation (5) to centre position (lock).
2. Detach the battery (8) from the device by pressing and holding the unlocking button (14; I.) and pulling the battery off the device (II.).



3. If required, charge the battery (8) as described in the section *Charging the battery*.

**Checking the battery status**

The battery status is displayed as follows by the three LEDs of the battery level indication (4):

LED colour	Meaning
Green – Orange – Red	maximum charge / power
Orange – Red	medium charge / power
Red	weak charge – Recharge the battery.

1. Press the on / off switch (16).  
 ⇒ You can read the battery status from the battery level indication (4).

**Mounting the handle**



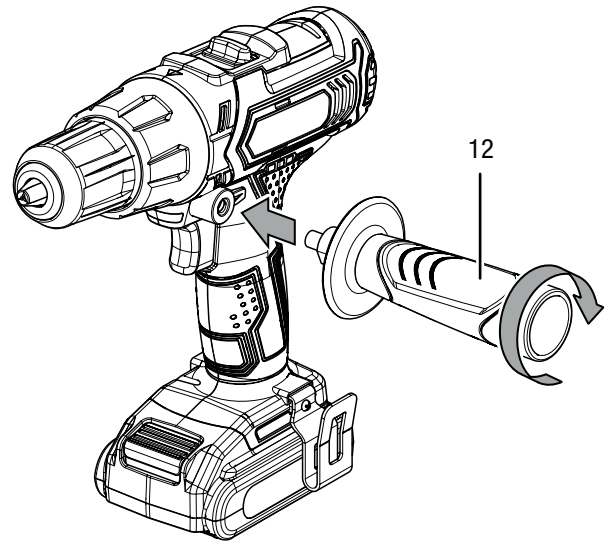
**Info**

Use the supplied anti-vibration handle for safe and precise guiding.

The anti-vibration handle (12) should be mounted before start-up.

To do so, please proceed as follows:

1. Screw the anti-vibration handle (12) clockwise into the threading either to the left- or right-hand side of the housing.



2. Check the anti-vibration handle (12) for tight fit.
3. For the disassembly unscrew the anti-vibration handle (12) counter-clockwise.

## Changing tools

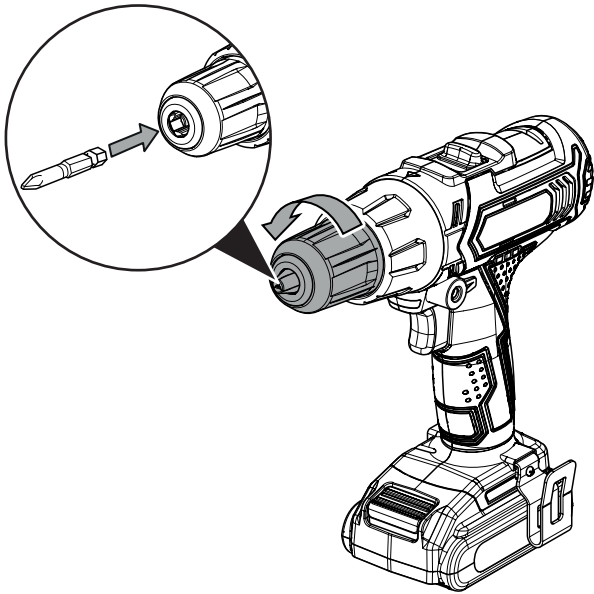


### Warning of electrical voltage

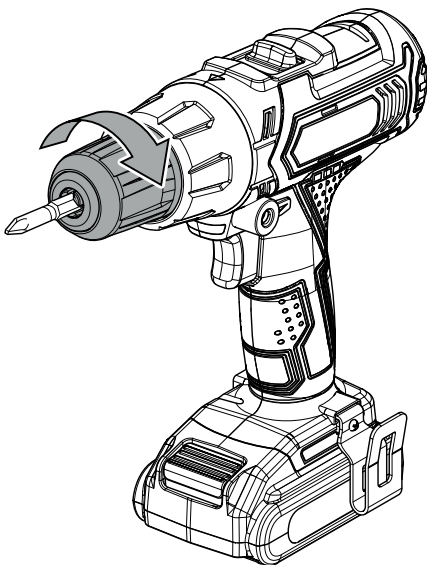
Before any work on the device, remove the battery!

The device is equipped with a fully automatic spindle lock. When the tool is at a standstill, the motor's drive train is locked so that the keyless drill chuck can be opened. Please proceed as follows to remove or insert tools:

1. Set the switch for clockwise / counter-clockwise rotation (5) to centre position (lock).
2. Turn the keyless drill chuck (1) counter-clockwise to open it.

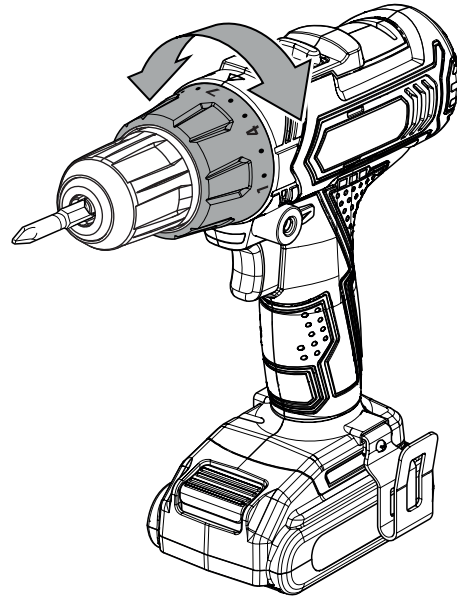


3. If necessary, take the (drill) bit out of the drill chuck.
4. Insert the appropriate (drill) bit into the drill chuck.
5. Tighten the keyless drill chuck (1) by turning clockwise.



## Torque selection / drilling setting

Using the torque selection, you can choose the desired, optimal torque setting.



- Select a low torque for smooth-running screws or soft materials.
- Select a high torque for tight screws and hard materials as well as for unscrewing.
- For drilling, select the drilling setting indicated by the symbol .
- For impact drilling, select the impact drilling setting indicated by the symbol **T**.



### Info

When unscrewing, note the setting of the rotational direction! On the clockwise / counter-clockwise rotation direction indicator (5) you can see in which direction the screws will be screwed.

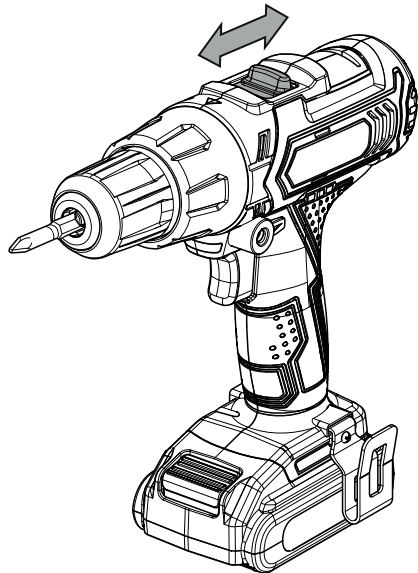
Do not use either (impact) drilling setting or **T** for screwing!

## Two-speed gear

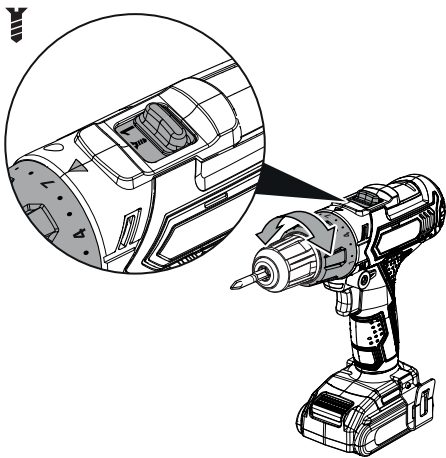
### Notice

Only use the gear selection when the device is at a standstill! Otherwise the device might be damaged.

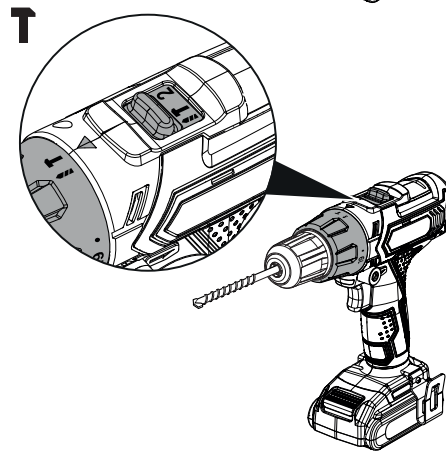
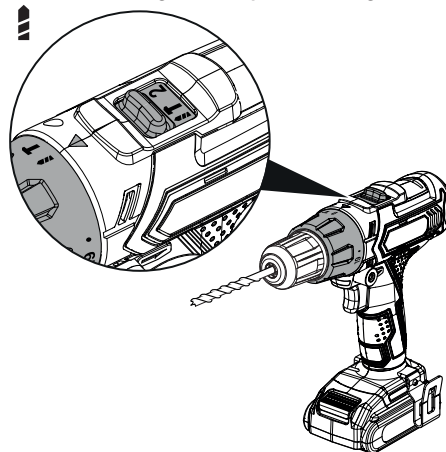
1. Slide the gear selection (3) to the desired position.



⇒ Speed level 1: Speed of up to 440 rpm, suitable for all screwing applications.



⇒ Speed level 2: Speed of up to 1650 rpm, suitable for drilling and impact drilling.



## Operation

### Tips and notes on handling the cordless hammer drill

#### General information:

- Check the tool in the keyless drill chuck for correct fit before every application. It must be firmly locked and centred in the drill chuck.
- Screw bits are marked with their size and shape. If you are unsure, check whether the bit can be firmly tightened in the keyless drill chuck without clearance.
- The centre position of the clockwise / counter-clockwise rotation switch (lock) is suited for work breaks or (drill) bit exchange.

#### Screws:

- In case of soft wood, screws can be screwed in without pre-drilling.
- In case of hard wood or large screws, it is recommended to use a drill for pre-drilling.
- When using countersunk screws, the drill hole should be countersunk beforehand.
- Especially smaller screws and bits may be damaged when selecting an excessive torque and / or speed at the tool.

#### Drilling in general:

- Take short breaks regularly during drilling. When doing so, take the drill bit out of the drill hole so that the drill bit can cool down.
- Secure the workpiece in a tensioning device or vice.
- Select the speed depending on the material characteristics and the size of the drill bit:
  - High speed for small drilling diameter or soft material
  - Low speed for large drilling diameter or hard material
- Use a suitable aid to mark the intended location of the drill hole.
- Select a low speed for spudding.

#### Drilling in metal:

- Use suitable metal drill bits (e.g. drill bits made of *high-speed steel* (HSS)).
- For larger drilling diameters, use a smaller drill bit for pre-drilling.
- To achieve ideal results, the drill bit should be cooled with a suitable lubricant.
- Metal drill bits may also be used for drilling in plastic.

#### Drilling in wood:

- Use drill bits suitable for wood.
- Place a block of wood under the workpiece or drill in from both sides so that the wood cannot break off when it is being drilled through.
- Use a wood drill bit with centring tip. For deep drill holes, use an auger bit; for large drilling diameters, use a Forstner bit.

#### Impact drilling in masonry / bricks:

- Use a drill bit suitable for masonry / bricks.

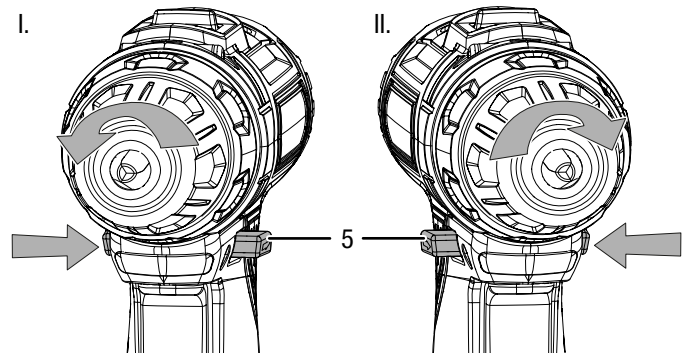
### Selecting the rotational direction

#### Notice

To avoid damaging the gear, only change the rotational direction when the device is at a standstill.

The motor's rotational direction can be changed by means of the switch for clockwise / counter-clockwise rotation (5).

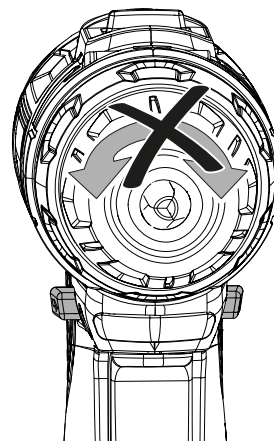
1. Press in the switch for clockwise / counter-clockwise rotation (5) on the side to which the motor shall rotate.



I. Screwing in

II. Unscrewing

2. Carry out a short test run to see whether the rotational direction matches the intended application. A wrong rotational direction may damage the tool and / or workpiece.
3. If required, set the switch for clockwise / counter-clockwise rotation (5) to centre position (lock) to block the on / off switch (16).

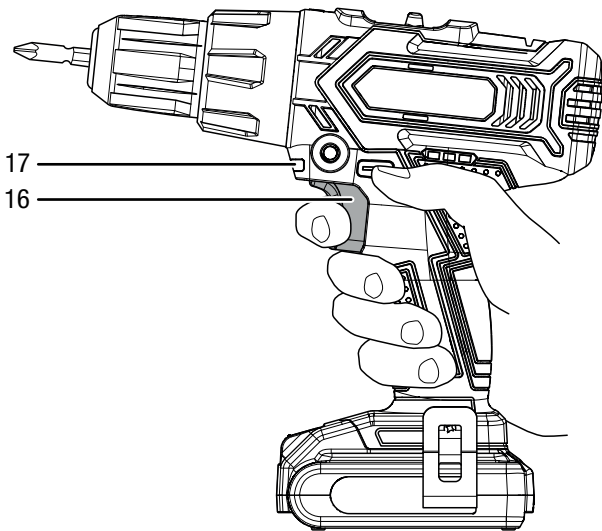


**Switching the device on and off**

Wear your personal protective equipment when working with the device.

The device has an infinitely variable speed control. The more firmly you push the on / off switch (16), the higher is the speed.

1. Check whether the tool clamped in and the torque setting selected are suitable for the intended application.
2. Check whether the workpiece is secured and the worktop prepared correspondingly.
3. Press and hold the on / off switch (16) during screwing or drilling.
  - ⇒ The device operates with the previously selected settings.
  - ⇒ The LED work lamp (17) is illuminated.



4. Let go of the on / off switch (16) to stop the device.
  - ⇒ The LED work lamp (17) turns off.



**Info**

The motor has an integrated brake that quickly stops the motor once you let go of the on / off switch (16).

**Shutdown**

1. Set the switch for clockwise / counter-clockwise rotation (5) to centre position (lock).
2. If required, allow the device to cool down.
3. Remove the battery from the device (see Start-up chapter).
4. Remove the tool from the device (see Start-up chapter).
5. Clean the device according to the Maintenance chapter.
6. Store the device according to the Storage chapter.

**Available accessories**



**Warning**

Only use accessories and additional equipment specified in the operating manual. Using insertion tools or accessories other than those specified in the operating manual may cause a risk of injury.

Accessories	Article number
Spare battery Multiflex 20V	6.200.000.301
Rock drill bit set, 15-piece	6.200.001.151
Screw bit set, 32-piece	6.200.001.001
Wood drill bit set, 15-piece	6.200.001.101
Metal drill bit set HSS, 15-piece	6.200.001.131



## Errors and faults

The device has been checked for proper functioning several times during production. If malfunctions occur nonetheless, check the device according to the following list.

Troubleshooting tasks which require the housing to be opened must only be carried out by a specialist dealer or by Trotec.

### Slight smoke or odour are emitted during first use:

- This is not a fault. These phenomena disappear after a brief runtime.

### The battery does not charge:

- Check whether the battery is correctly connected to the quick charger.  
Slide the battery into the quick charger in a way that the battery terminals engage in the quick charger. The battery must lock in place in the quick charger.
- Check the power connection.
- Check the power cable and mains plug for damages.
- Check the fuse (home).
- Check the quick charger for damages. Should the quick charger be damaged, stop using it. Contact the Trotec customer service.
- Check the battery terminals for dirt. Remove any dirt.
- The battery might be defective and have to be replaced. Only use batteries of the same type.

### The device does not start:



- The battery power might be too low. Recharge the battery.
- Check whether the battery is correctly connected to the device.  
Slide the battery onto the device in a way that the battery terminals engage. The battery must lock in place in the device.
- Check the position of the clockwise / counter-clockwise rotation switch. The switch must be pressed in all the way. If the clockwise / counter-clockwise rotation switch is in centre position (lock), the on / off switch is blocked.
- Check the battery terminals for dirt. Remove any dirt.



#### Info

Wait for at least 10 minutes before switching the device back on.

### The drill bit does not penetrate / hardly penetrates the material:

- Check whether the correct torque setting is selected. The setting for drilling  or impact drilling  should be selected.
- Check whether the correct speed level is selected. For drilling, you need to switch to the 2nd speed level.
- Check whether the correct drill bit is selected.
- Check whether the device is set to counter-clockwise rotation. For drilling, it is necessary to switch over to clockwise rotation.
- Check whether the characteristics of the material require the use of a rotary hammer.

### The on / off switch cannot be pressed:

- Check whether the clockwise / counter-clockwise rotation switch is in centre position (lock). Set the desired rotational direction to unlock the tool.

### The device becomes hot:

- Check whether the tool is suitable for the tasks to be carried out.
- Keep the venting slots clear to prevent the motor from overheating.



#### Info

Wait for at least 10 minutes before switching the device back on.

#### Notice

Wait for at least 3 minutes after maintenance and repair work. Only then switch the device back on.

### Your device still does not operate correctly after these checks?

Please contact the customer service. If necessary, bring the device to an authorized specialist electrical company or to Trotec for repair.

## Maintenance

### Activities required before starting maintenance



#### Warning of electrical voltage

Do not touch the mains plug or the battery with wet or damp hands.

- Switch off the device.
- Allow the device to cool down completely.
- Remove the battery from the device.



#### Warning of electrical voltage

**Maintenance tasks which require the housing to be opened must only be carried out by authorised specialist companies or by Trotec.**

### Notes on maintenance

Inside the device, there are no parts that need to be maintained or lubricated by the user.

### Cleaning

The device should be cleaned before and after each use.

#### Note:

The device does not have to be lubricated after cleaning.



#### Warning of electrical voltage

There is a risk of a short-circuit due to liquids penetrating the housing!

Do not immerse the device and the accessories in water. Make sure that no water or other liquids can enter the housing.

- Clean the device with a soft, damp and lint-free cloth. Ensure that no moisture enters the housing. Protect electrical components from moisture. Do not use any aggressive cleaning agents such as cleaning sprays, solvents, alcohol-based or abrasive cleaners to dampen the cloth.
- Dry the device and the bits with a soft cloth, lint-free cloth.
- Remove any drilling dust and, if applicable, wood chips from the keyless drill chuck.
- Keep the connecting terminals on the device, battery pack and charger clean.
- Keep the ventilation openings free from dust deposits to prevent overheating of the motor.

## Disposal



The icon with the crossed-out waste bin on waste electrical or electronic equipment stipulates that this equipment must not be disposed of with the household waste at the end of its life. You will find collection points for free return of waste electrical and electronic equipment in your vicinity. The addresses can be obtained from your municipality or local administration. For further return options provided by us please refer to our website [www.trotec24.com](http://www.trotec24.com). The separate collection of waste electrical and electronic equipment aims to enable the re-use, recycling and other forms of recovery of waste equipment as well as to prevent negative effects for the environment and human health caused by the disposal of hazardous substances potentially contained in the equipment. You are responsible for deleting any personal data stored on the waste equipment to be disposed of.



Li-Ion

In the European Union, batteries and accumulators must not be treated as domestic waste, but must be disposed of professionally in accordance with Directive 2006/66/EC of the European Parliament and of the Council of 6 September 2006 on batteries and accumulators. Please dispose of batteries and accumulators according to the relevant legal requirements.



Trotec GmbH & Co. KG

Grebener Str. 7  
D-52525 Heinsberg

☎ +49 2452 962-400

☎ +49 2452 962-200

✉ [info@trotec.com](mailto:info@trotec.com)

[www.trotec.com](http://www.trotec.com)