

EN

ORIGINAL INSTRUCTIONS  
CORDLESS GRINDER



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**Notes regarding the instructions**


**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 of hot surface**  
 This symbol indicates dangers to the life and health of persons due to hot surface.


 **Warning of sharp object**  
 This symbol indicates dangers to the life and health of persons due to pointed objects.


 **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.


**Note**  
 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 instructions must be observed.

 **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.

 **Wear protective clothing**  
 Information marked with this symbol indicates that you should wear protective clothing.

 **Wear protective gloves**  
 Information marked with this symbol indicates that you should wear protective gloves.

You can download the current version of the instructions via the following link:



PMTS 01-12V



<https://hub.trotec.com/?id=45866>

## Safety

### General Power Tool Safety Warnings



#### Warning

**Read all safety warnings and all instructions.** Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.  
**Save all warnings and instructions for future reference.**

The term "*power tool*" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.



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

- **Keep work area clean and well lit.** Clutter or dark areas invite accidents.
- **Do not operate power tools in explosive atmosphere, 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 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.



#### 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 protective mask, non-skid safety shoes, hard hat, hearing protection or tight-fitting protective clothing 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.** Use of dust collection can 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 device or these instructions to operate the device.** 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. Take 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.



### Use and handling of the battery tool

- **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.
- **Use power tools only with specifically designed 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.

- **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.



### 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 Power Tool Safety Warnings – Charger use and care

- **This charger 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.
- **Never insert non-rechargeable batteries into the charger.** A charger that is suitable for one type of battery pack may create a risk of fire and explosion, when used with another battery pack or non-rechargeable batteries.
- Only use the charger “PMTS 01-12V AC” for charging the Li-Ion battery “PMTS 01-12V DC” with a capacity of 2.0 Ah (3 rechargeable cells). The battery voltage must match the battery charging voltage of the charger.



### Safety Warnings Common for Grinding, Sanding, Wire Brushing, Polishing or Abrasive Cutting-Off Operations

- **This power tool is intended to function as a grinder, sander, wire brush, polisher or cut-off tool. Read all safety warnings, instructions, illustrations and specifications provided with this power tool.** Failure to follow all instructions listed below may result in electric shock, fire and / or serious injury.
- **Do not use accessories which are not specifically designed and recommended by the tool manufacturer.** Just because the accessory can be attached to your power tool, it does not assure safe operation.
- **The rated speed of the accessory must be at least equal to the maximum speed marked on the power tool.** Accessories running faster than their rated speed can break and fly apart.

- **The outside diameter and the thickness of your accessory must be within the capacity rating of your power tool.** Incorrectly sized accessories cannot be adequately guarded or controlled.
- **Abrasive wheels, abrasive rolls or other accessories must fit exactly on the grinder spindle or collet chuck of your power tool.** Accessories that do not precisely match the holder of the power tool will run out of balance, vibrate excessively and may cause loss of control.
- **Wheels, abrasive cylinders, cutting tools or other accessories mounted on a mandrel must be fully inserted into the collet chuck or jaw chuck. The “protrusion” or the exposed part of the mandrel between the abrasive accessory and the collet chuck or jaw chuck must be minimal.** If the mandrel is not sufficiently tensioned or the abrasive accessory protrudes too far forward, the accessory may become loose and be ejected at high speed.
- **Do not use a damaged accessory. Before each use inspect the accessory such as abrasive wheels for chips and cracks, abrasive rolls for cracks, tear or excess wear, wire brushes for loose or cracked wires. If power tool or accessory is dropped, inspect for damage or install an undamaged accessory. After inspecting and installing an accessory, position yourself and bystanders away from the plane of the rotating accessory and run the power tool at maximum no-load speed for one minute.** Damaged accessories will normally break apart during this test time.
- **Wear personal protective equipment. Depending on application, use face shield, safety goggles or safety glasses. As appropriate, wear dust mask, hearing protectors, gloves and workshop apron capable of stopping small abrasive or workpiece fragments.** The eye protection must be capable of stopping flying debris generated by various operations. The dust mask or respirator must be capable of filtering particles generated by your operation. Prolonged exposure to high intensity noise may cause hearing loss.
- **Keep bystanders a safe distance away from work area. Anyone entering the work area must wear personal protective equipment.** Fragments of workpiece or of a broken accessory may fly away and cause injury beyond immediate area of operation.
- **Only hold the power tool by its insulated gripping surfaces when performing an operation where the accessory may contact hidden wiring.** Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.
- **Always hold onto the power tool firmly when starting it.** When running up to full speed, the reaction torque of the motor can cause the power tool to twist.
- **If possible, use clamps to hold the workpiece in place. Never hold a small workpiece in one hand and the power tool in the other while using it.** Tightly clamping small workpieces allows you to have both hands free and to have better control of the power tool. When removing round workpieces such as wooden dowels, bar stock or pipes, they tend to roll away, causing the accessory to jam and be catapulted towards you.
- **Never lay the power tool down until the accessory has come to a complete stop.** The spinning accessory may grab the surface and pull the power tool out of your control.
- **After changing accessories or making adjustments to the device, firmly tighten the collet chuck nut, the jaw chuck or other fixing elements.** Loose fixing elements can shift unexpectedly and cause loss of control; and rotating components that are not attached will be forcefully ejected.
- **Do not run the power tool while carrying it at your side.** Accidental contact with the spinning accessory could snag your clothing, pulling the accessory into your body.
- **Regularly clean the power tool's air vents.** The motor's fan will draw the dust inside the housing and excessive accumulation of powdered metal may cause electrical hazards.
- **Do not operate the power tool near flammable materials.** Sparks could ignite these materials.
- **Do not use accessories that require liquid coolants.** Using water or other liquid coolants may result in electrocution or shock.



### Kickback and Related Warnings

A kickback is a sudden reaction to a pinched or snagged rotating wheel, abrasive wheel, abrasive belt, brush or any other accessory. Pinching or jamming causes rapid stalling of the rotating accessory. This will accelerate an uncontrolled power tool towards the direction opposite of the accessory's rotation.

For example, if an abrasive wheel is snagged or pinched by the workpiece, the edge of the wheel that is entering into the pinch point can dig into the surface of the material causing the wheel to climb out or kick out. The wheel may either jump toward or away from the operator, depending on direction of the wheel's movement at the point of pinching. Abrasive wheels may also break under these conditions.

Kickback is the result of power tool misuse and/or incorrect operating procedures or conditions. Kickback can be avoided by taking proper precautions as given below.

- **Maintain a firm grip on the power tool and position your body and arm to allow you to resist kickback forces.** The operator can control kickback forces, if proper precautions are taken.
- **Never place your hand near the rotating accessory.** Accessory may kickback over your hand.
- **Use special care when working corners, sharp edges etc. Avoid bouncing and snagging the accessory.** Corners, sharp edges or bouncing have a tendency to snag the rotating accessory. The result would be a loss of control or kickback.
- **Do not attach a saw chain woodcarving blade or toothed saw blade.** Such blades create frequent kickback and loss of control.
- **Always move the accessory into the material in the same direction in which the cutting edge leaves the material (corresponds to the same direction in which the chips are ejected).** Guiding the power tool in the wrong direction causes the cutting edge of the accessory to climb out of the workpiece, which will pull the power tool in that feed direction.
- **Always clamp the workpiece firmly when using rotary files, cutting wheels, high-speed milling tools or carbide milling tools.** If these accessories become only slightly jammed in the groove, they will get caught and may cause a kickback. If a cutting wheel gets caught, it usually breaks. If rotary files, high-speed milling tools or carbide milling tools get caught, the tool insert may be ejected from the groove and cause loss of control of the power tool.
- **Do not position your hand in line with and behind the rotating cutting wheel.** When the wheel, at the point of operation, is moving away from your hand, the possible kickback may propel the spinning wheel and the power tool directly at you.
- **When wheel is binding or when interrupting a cut for any reason, switch off the power tool and hold the power tool motionless until the wheel comes to a complete stop. Never attempt to remove the cut-off wheel from the cut while the wheel is in motion otherwise kickback may occur.** Investigate and take corrective action to eliminate the cause of wheel binding.
- **Do not restart the cutting operation in the workpiece. Let the wheel reach full speed and carefully re-enter the cut.** The wheel may bind, walk up or kickback if the power tool is restarted in the workpiece.
- **Support panels or any oversized workpiece to minimize the risk of wheel pinching and kickback.** Large workpieces tend to sag under their own weight. Supports must be placed under the workpiece near the line of cut and near the edge of the workpiece on both sides of the wheel.
- **Use extra caution when making a pocket cut into existing walls or other blind areas.** The protruding wheel may cut gas or water pipes, electrical wiring or objects that can cause kickback.



#### **Safety Warnings Specific for Wire Brushing Operations**

- **Be aware that wire bristles are thrown by the brush even during ordinary operation. Do not overstress the wires by applying excessive load to the brush.** The wire bristles can easily penetrate light clothing and/or skin.
- **Let brushes run at operating speed for at least one minute before starting work. Make sure that during this time no other person is standing in line with the brush.** During the start-up time, loose wire bristles may fly.
- **Direct the rotating wire brush away from yourself.** When working with these brushes, small particles and tiny bits of wire may fly at high speed and penetrate the skin.



#### **Safety Warnings Specific for Grinding and Abrasive Cutting-Off Operations**

- **Only use abrasives approved for your power tool and for the recommended applications. Example: do not grind with the side of cut-off wheel.** Cutting discs are designed for material removal using the edge of the disc. Exerting force to the sides of these abrasives may break them.
- **For conical and straight abrasive pencils with a thread, only use undamaged mandrels of the correct size and length without an undercut on the shoulder.** Suitable mandrels reduce the risk of breakage.
- **Do not "jam" the cut-off wheel or apply excessive pressure. Do not attempt to make an excessive depth of cut.** Overstressing the wheel increases the loading and susceptibility to twisting or binding of the wheel in the cut and the possibility of kickback or wheel breakage.

## Intended use

Only use the device PMTS 01-12V:

- Drilling into wood or metal
- Milling into wood or plastics
- For sawing and cutting
  - Wood
  - Plastics
  - Non-ferrous metals
  - Fixing elements  
(e.g. screws, nails, clamps etc.)
- For sanding small, dry areas
- Engraving
  - Metal
  - Plastics
  - Glass
  - Ceramics
  - Wood
  - Leather
- Polishing

observing the technical data provided.

We recommend using the power tool with original Trotec accessories.

## Foreseeable misuse

Do not use the device for:

- cutting up tiles
- sawing large screws or stainless steel
- processing workpieces requiring a continuous water supply
- drilling into concrete or natural stone

Only use the device in weatherproof surroundings.

Any other use than the one described in the chapter "Intended use" is regarded as reasonably foreseeable misuse.

## Personnel qualifications

People who use this device must:

- be aware of the dangers that occur when working with electric devices in damp areas.
- have read and understood the instructions, especially the Safety chapter.

## Safety signs and labels on the battery and the charger

### Note

Do not remove any safety signs, stickers or labels from the device. Keep all safety signs, stickers and labels in legible condition.

The following safety signs and labels are attached to the battery:



### Warning of explosion risk!

These symbols indicate the following:



Do not expose the battery pack or tool to fire or excessive temperature! Do not let the battery come into contact with water or fire! Avoid direct sunlight and moisture. There is a risk of explosion!

Never charge the battery at ambient temperatures below 10 °C or above 40 °C. Charging improperly or at temperatures outside the specified range may damage the battery and increase the risk of fire.



### Observe the correct disposal of the battery!

This symbol indicates the following:

Ensure that the battery is disposed of correctly and never dispose of it in waste water or public waters. The battery contains irritating, caustic and toxic substances that pose significant risks to people and the environment.

The following safety signs and labels are attached to the charger:



This symbol indicates the following:

Read the instructions or operating manual before charging the battery.



This symbol indicates the following:

Only use the charger for charging the battery in dry interior spaces. Do not charge the device outdoors.

## Personal protective equipment



### Wear eye protection.

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



### Wear a protective mask.

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



### Wear protective gloves.

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



### Wear tight-fitting protective clothing.

This protects you from the draw-in and entanglement hazard posed by rotating parts.

**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 of sharp object**



Parts of the saw blade are sharp. Risk of injuries if handled without due care.  
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**

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



**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.

**Note**

If you store or transport the device improperly, the device may be damaged.  
Note the information regarding transport and storage of the device.

**Behaviour in the event of an emergency / emergency stop function**

Emergency stop:

Removing the battery results in the function of the device stopping immediately. Leave the battery out in order to secure the device against accidental switch-on.

Behaviour in the event of an emergency:

1. Switch the device off.
2. In the event of an emergency, remove the battery from the device: Hold the release button of the battery and pull the battery off the device as described in chapter "Removing the battery".
3. Do not insert the battery if the device is defective.



## Information about the device

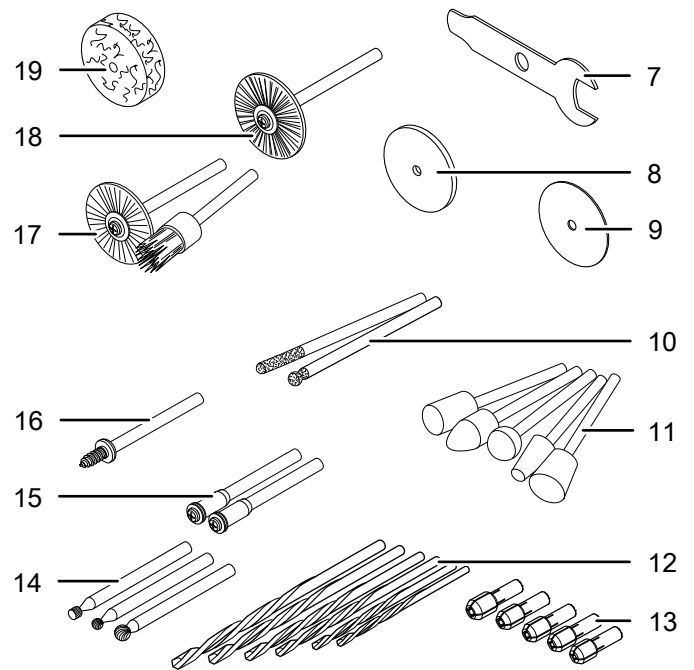
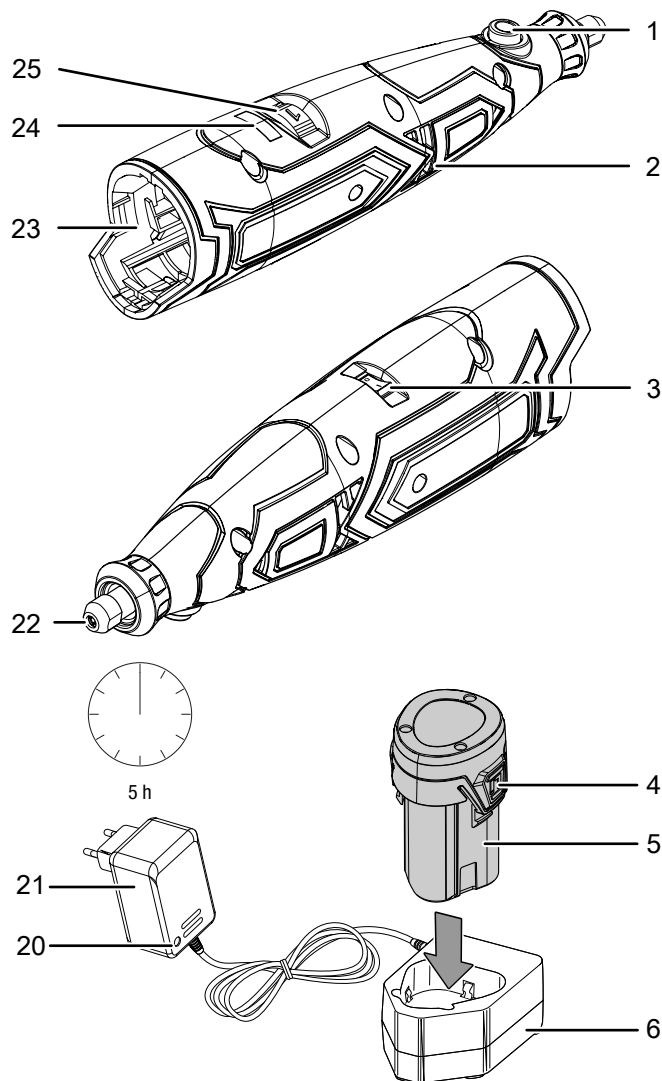
### Device description

The cordless grinder PMTS 01-12V is a high-precision tool for performing especially fine and detailed tasks in the fields of drilling, milling, cutting, engraving or polishing. It is ideally suited for tasks like for example: model construction and the use in wood and metal processing or for polishing jewellery.

For material-compatible working, the rated speed can be selected in seven stages within a range of 5,000 rpm to 25,000 rpm at the setting wheel.

The device is equipped with a battery level indication that allows you to monitor the battery charging status during operation at any time.

### Device depiction








No.	Designation
1	Spindle lock
2	Venting slots
3	On/off switch
4	Release button
5	Battery
6	Quick charger
7	Wrench
8	Cutting wheels
9	Abrasive wheels
10	Engraving bits, diamond-tipped
11	Aluminium oxide grinding head (different types)
12	HSS twist drill bit set, 1 mm to 3.2 mm
13	Collet chuck set, 1 mm to 3.2 mm
14	Milling cutters (various shapes)
15	Mandrel for cutting discs/abrasive wheels
16	Mandrel for polishing attachments
17	Plastic brushes (various shapes)
18	Brass brush
19	Polishing attachments
20	Battery LED red: battery charging green: quick charger ready for operation
21	Power adapter
22	Tool holder with clamping nut
23	Battery holder
24	Battery level indication
25	Setting wheel for speed selection

### Scope of delivery

- 1 x device PMTS 01-12V
- 1 x wrench
- 4 x abrasive wheel
- 16 x cutting wheel
- 2 x engraving bit diamond-tipped
- 5 x aluminium oxide grinding head
- 1 x collet chuck 1.0 mm
- 1 x collet chuck 1.6 mm
- 1 x collet chuck 2.0 mm
- 1 x collet chuck 2.4 mm
- 1 x collet chuck 3.2 mm
- 2 x HSS twist drill bit 1.0 mm
- 1 x HSS twist drill bit 1.6 mm
- 1 x HSS twist drill bit 2.0 mm
- 1 x HSS twist drill bit 2.4 mm
- 1 x HSS twist drill bit 3.2 mm
- 3 x milling cutter
- 2 x mandrel for cutting/abrasive wheels
- 1 x mandrel for polishing attachment
- 2 x plastic brush
- 1 x brass brush
- 3 x polishing attachment
- 1 x storage box
- 1 x manual

### Technical data

Parameter	Value
<b>Model</b>	<b>PMTS 01-12V</b>
Nominal voltage	12 V $\text{---}$
Rated speed	5,000 – 25,000 rpm
Threaded rod	M8
<b>Max. rated capacity of the accessories</b>	
Working head diameter	32 mm
Drill bits	3.2 mm
Drill chuck	3.2 mm
Polishing discs	25 mm
Cutting wheels	24 mm
Abrasive wheels	20 mm
Brushes	22 mm
Weight	420 g
<b>Battery</b>	<b>PMTS 01-12V DC</b>
Type	Li-ion
Nominal voltage	12 V $\text{---}$
Nominal capacity	2 Ah
Rechargeable cells	3
Capacity	24 Wh
<b>Power adapter and quick charger</b>	<b>PMTS 01-12V AC</b>
Power adapter	SMPS Switching Power supply 
Transformer	Safety transformer 
<b>Input</b>	
Nominal voltage	100 – 240 V / 50 Hz
Power input	30 W
<b>Output</b>	
Nominal voltage	13 V $\text{---}$ 
Charging current	0.45 A
Fusing 	1 A (slow-blowing)
Charging time	5 h
Protection class	II (double insulation) / 
<b>Sound values according to EN 60745</b>	
Sound pressure level	67 dB (A)
Sound power level	78 dB (A)
Uncertainty K	3 dB
<b>Vibration information according to EN 60745</b>	
Vibration emission value $a_h$	0.916 m/s <sup>2</sup>
Uncertainty K	1.5 m/s <sup>2</sup>

### 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.

## Transport and storage

### Note

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

Note the information regarding transport and storage of the device.

### Transport

**Before** transporting the device, observe the following:

- Switch off the device.
- Hold onto the mains plug while pulling the power cable of the charger out of the mains socket.
- Remove the tool from the tool holder.
- 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, observe the following:

- Switch off the device.
- Hold onto the mains plug while pulling the power cable of the charger out of the mains socket.
- Remove the tool from the tool holder.
- Allow the device to cool down.
- Remove the battery from the device.
- Clean the device as described in the Maintenance chapter.
- 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 45 °C
- Protected from dust and direct sunlight
- Store the insert tools and other accessories in the storage box.

## Start-up

### Unpacking the device

- Take the device and the accessories 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 for completeness and look for damages.



#### Warning

Risk of suffocation!

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

### Note

The battery can be damaged in case of improper charging.

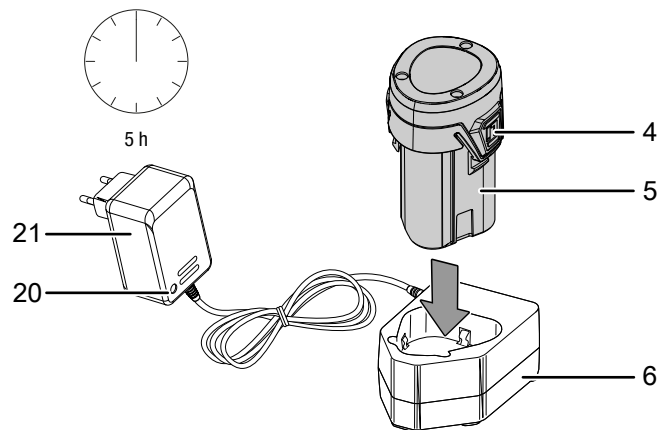
Remove the charger's mains plug before inserting or removing the battery.

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.

The battery should be charged prior to initial start-up and when the battery is low (the LED of the battery level indication (20) is illuminated in red). To do so, please proceed as follows:

1. Slide the battery (5) onto the quick charger (6) as depicted until the battery locks in place.

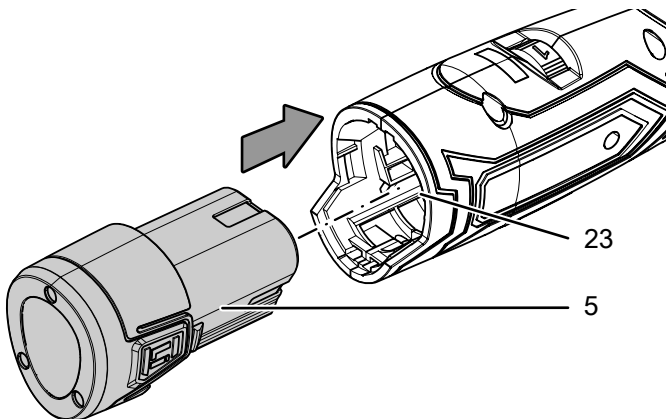


2. Insert the mains plug of the quick charger (6) into a properly fused mains socket.
  - ⇒ The battery LED (20) is illuminated in red.
  - ⇒ Charging requires approx. five hours.
3. Wait until the red battery LED (20) goes off and the green battery LED (20) lights up.
  - ⇒ The battery (5) is fully charged.
4. Hold onto the mains plug (21) while pulling the power cable of the quick charger (6) out of the mains socket.
  - ⇒ The battery (5) and the quick charger (6) may have become warm during charging.

Allow the battery (5) to cool down to room temperature.
5. Take the battery (5) out of the quick charger (6) by pressing and holding the release button (4) and pulling the battery (5) off the quick charger (6).

### Inserting the battery

1. Slide the battery (5) into the holder (23) until it locks in place.



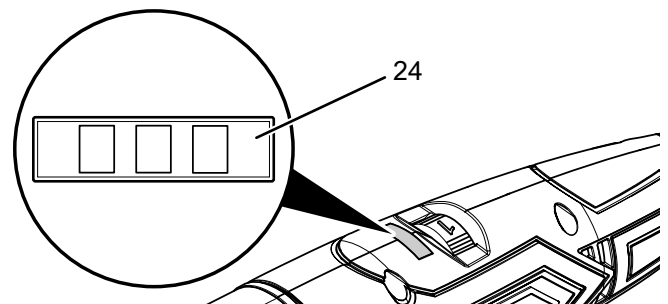
### Checking the battery charging status

The device is equipped with an integrated battery level indication.

The battery status is displayed as follows by the three LEDs of the battery level indication (24):

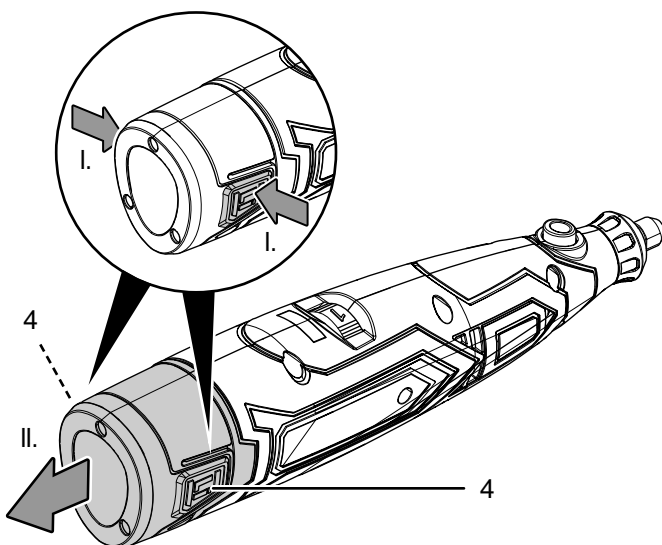
LED colour	Meaning
Green – Orange – Red	maximum charge / power
Orange – Red	medium charge / power
Red	weak charge – Recharge the battery.

1. Switch the device on.  
⇒ You can read the battery status from the battery level indication (24).



### Removing the battery

1. Detach the battery (5) from the device by pressing and holding the unlocking button (4, I.) and pulling the battery off the device (II.).



2. If required, charge the battery (5) as described in the section *Charging the battery*.

**Replacing the collet chuck**



**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.



**Wear protective gloves**

Wear appropriate protective gloves when inserting or exchanging tools.

**Note**

Never actuate the spindle lock (1) button while the tool is running! This may damage the tool.

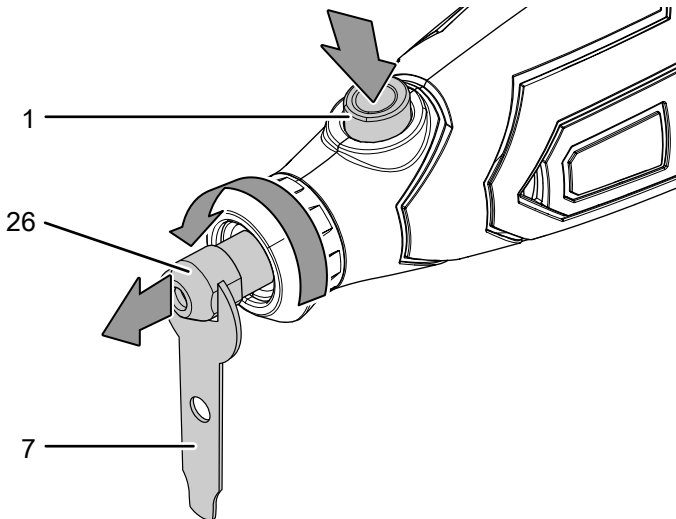


**Info**

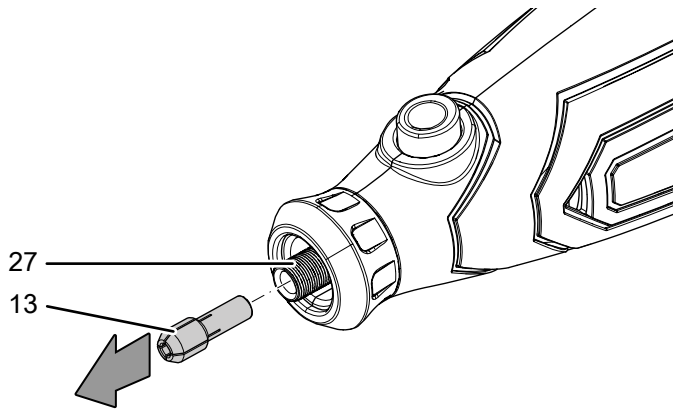
If, for example, you would like to use a twist drill bit or another tool with a different shank diameter than the last one used, the collet chuck must be changed.

Please proceed as follows:

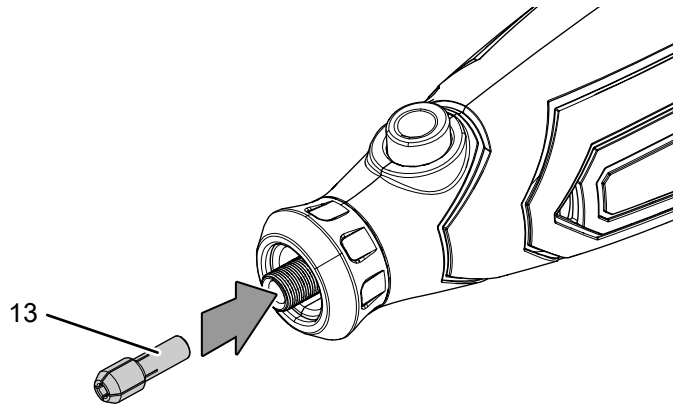
1. Press the spindle lock (1) button and keep it pressed.
2. Slowly rotate the tool holder (22) to the locking point until the locking mechanism is latched.
3. Unscrew the clamping nut (26) in counter-clockwise direction using the wrench (7).



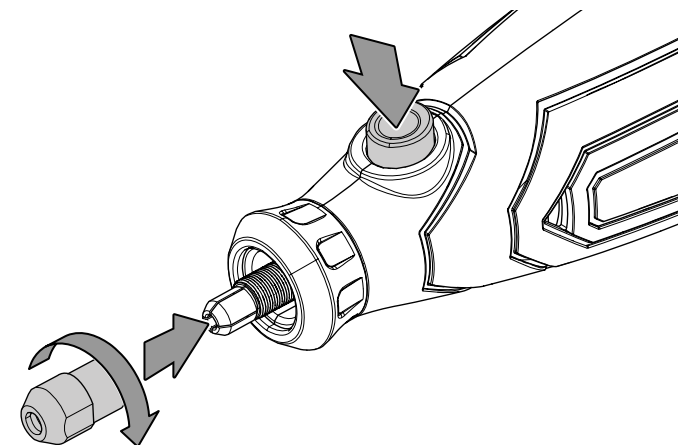
4. Remove the collet chuck (13) from the collet chuck holder (27).



5. Insert a collet chuck (13) into the collet chuck holder (27) that matches the inserted accessory.



6. Screw the clamping nut (26) onto the collet chuck holder in clockwise direction (27) and tighten the clamping nut (26) using the wrench (7). Then let go of the spindle lock (1).



## Tool change



### Wear protective gloves

Wear appropriate protective gloves when inserting or exchanging tools.

### Note

Never actuate the spindle lock (1) button while the tool is running! This may damage the tool.

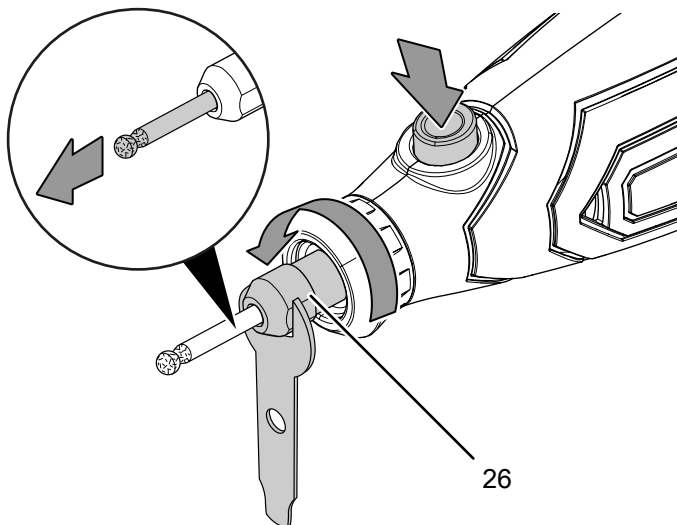


### Info

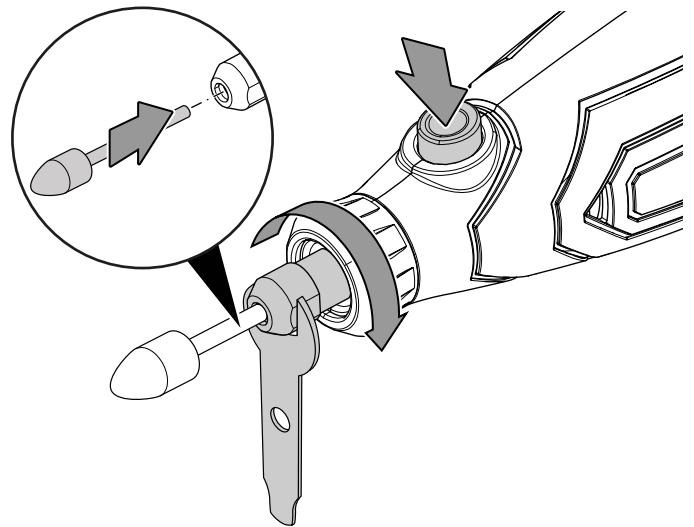
Before changing the tool, check whether the suitable collet chuck is mounted and replace it, if necessary.

In order to change the tool, proceed as follows:

1. Press the spindle lock (1) and keep it pressed.
2. Slowly rotate the tool holder (22) to the locking point until the locking mechanism is fixed.
3. Unscrew the clamping nut (26) using the wrench (7) by turning it in counter-clockwise direction. It is not necessary to fully unscrew the clamping nut.
4. Remove the tool from the tool holder (22), if any.



5. Insert the tool required into the tool holder (22).



6. Tighten the clamping nut (26) using the wrench (7) and let go of the spindle lock (1).
7. Make sure that the tool is attached securely.

**Using a tool with mandrel**

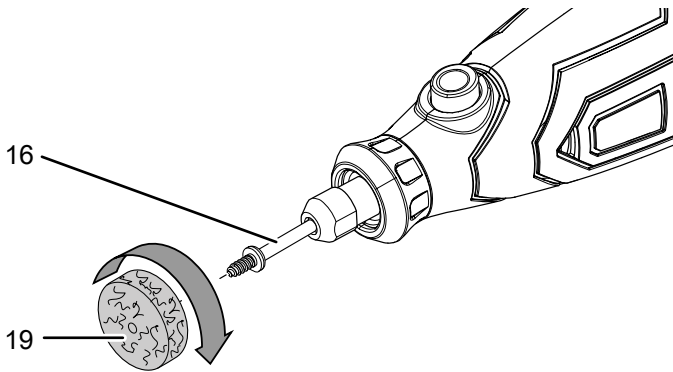
The following tools are mounted by means of a corresponding mandrel:

- Polishing attachments (19)
- Cutting discs (8)
- Abrasive wheels (9)

To mount the tool on the mandrel, please proceed as follows:

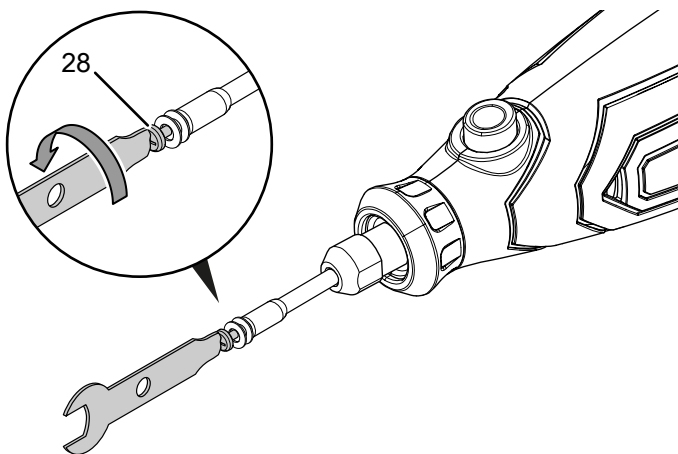
*Polishing attachments:*

1. Insert the mandrel for polishing attachments (16) into the device as described in the chapter "Tool change".
2. Press the spindle lock (1) button and keep it pressed.
3. Screw the polishing attachment (19) onto the thread of the mandrel in clockwise direction and then let go of the spindle lock (1) button again.

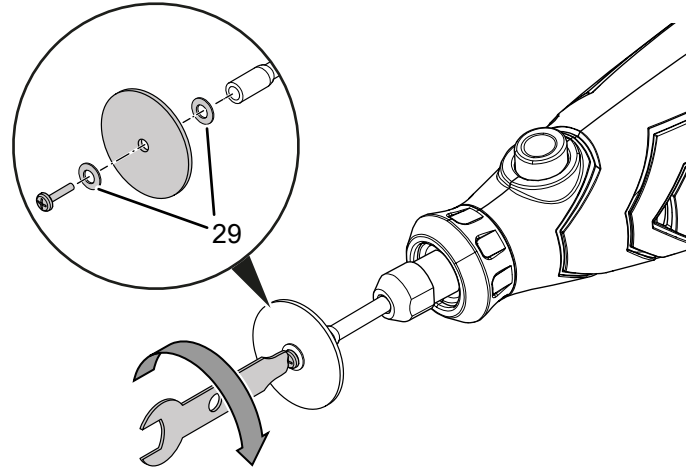


*Cutting discs/abrasive wheels:*

1. Insert the mandrel for cutting discs/abrasive wheels (15) into the device as described in the "Tool change" chapter.
2. Press the spindle lock (1) button and keep it pressed.
3. Unscrew the screw (28) from the mandrel by turning the screw in counter-clockwise direction.



4. Place a cutting disc (8) or abrasive wheel (9) between the two washers (29) onto the screw (28) and tighten it to the mandrel again in clockwise direction.



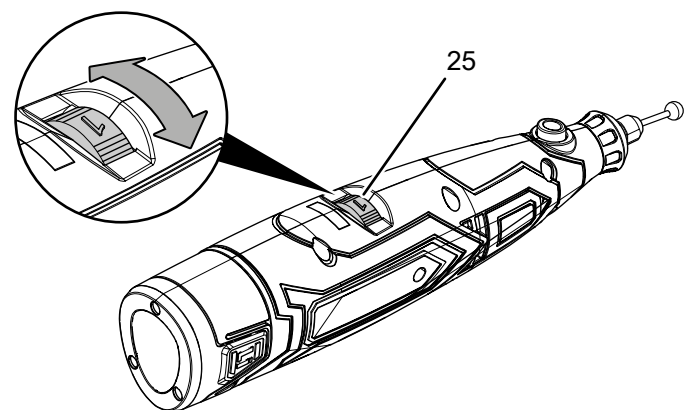
5. Release the button of the spindle lock (1) again.

**Speed selection**

The required speed depends on the material and the operating conditions and can be determined by way of field-testing. For most tasks like for example sawing, cutting and grinding harder materials such as wood or metal, we recommend using the **MAX** speed level. Some materials (certain plastics and soft metals), however, may be damaged by the heat generated at a high speed and should therefore be processed at a correspondingly lower speed.

The setting range covers the levels MIN, 1 – 5 and MAX (5,000 – 25,000 rpm). You can change the preselected speed level at any time.

1. Turn the setting wheel (25) to the desired speed level.





### Tips and notes for selecting the correct speed level

- Select a high speed level for cutting, forming, chamfering or milling grooves in the wood, and for sanding or grinding wood or metal.
- If you wish to cut plastics or other materials with a low melting point, select a low speed level.
- For drilling into wood, select a low speed level, in order to prevent the tool from being overheated
- For polishing, buffing and cleaning with a wire brush, select the lowest speed level 1 or MIN, in order to prevent the brush from damage by bristles coming loose from the brush holder.
- For milling or drilling into non-ferrous metals, e.g.: aluminium, copper, lead, zinc alloys, select a low speed level. Additionally use a cutting oil or another suitable lubricant (not water) in order to prevent chips from settling on the cutting edges of the tool, and to prevent the tool from being overheated.

As an orientation for selecting the right speed level, you can use the table below:

Speed	Speed
Min	5,000 rpm
1	9,000 rpm
2	15,000 rpm
3	17,000 rpm
4	20,000 rpm
5	22,000 rpm
Max	25,000 rpm



#### Info

Even with lower speed values, you should work without pressure. Applying higher pressure to the workpiece will not improve the result. Use a different tool or another speed setting to obtain the desired result.

## Operation

### Tips and notes on handling the cordless grinder

#### General information:

- Keep the venting slots clear to prevent the motor from overheating.
- Check the tool in the tool holder for proper fit before every application. The tool must be firmly locked in place in the tool holder.
- Before every application, make sure that you have selected the correct tool and the correct speed for the intended use. By adapting the speed to the task you have planned and to the m to be machined, better results can be obtained.
- Always hold the tool away from your face. Parts of damaged accessories might come loose when high speeds are reached.
- Before using the tool, you should get a feel for the tool. Take the tool into your hand and familiarize yourself with its weight and centre of gravity. Use some scrap material to practise a bit and to learn how the tool responds with different speed settings.
- For tasks requiring precision, like for example engraving, polishing or sanding, you can also hold the tool between your thumb and index finger like a pen. The tapering of the housing on the lower part of the tool serves this purpose.

#### Cutting:

- Only use intact, flawless cutting discs. Bent, blunt or otherwise damaged cutting discs could break.
- Never use the cutting disc for roughing!
- Only advance moderately during operation and make sure that the cutting disc does not get jammed.
- Do not slow down the decelerating cutting disc by pressing against the side of the disc.
- Always move the cutting disc through the workpiece in reverse rotation.
- Hold onto the tool with both hands.

#### Sanding:

- Maintain a consistent grinding pressure to increase the lifetime of the abrasive wheels and abrasive belts.
- You'll obtain better results if the machining process not only involves one single work cycle, but if you move over the surface several times with the tool.

**Milling:**

- Provide for an even forward motion to prevent overheating of the milling cutter.
- Hold onto the tool with both hands.

**Engraving:**

- Guide the engraving bit over the workpiece applying light grinding pressure.
- Preferably use excess material to test the feed rate.

**Polishing:**

- When you polish the workpiece, guide the tool over the workpiece only applying light grinding pressure.

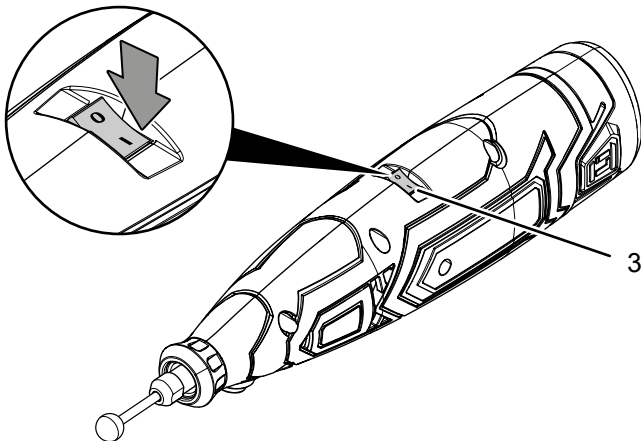
**Applying the stainless steel brush / plastic brush**

- When you polish the workpiece, guide the tool over the workpiece only applying light grinding pressure.
- For polishing, buffing or cleaning with a stainless steel brush or plastic brush, select the lowest speed level 1 to prevent the brush and material from damage.

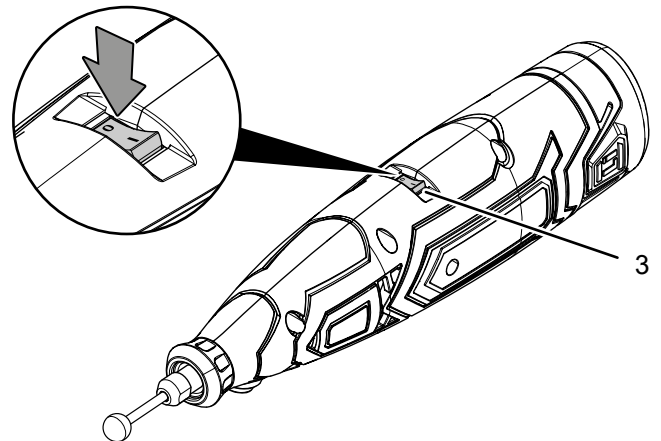
**Switching the device on and off**

Wear your personal protective equipment when working with the device.

1. Check whether the fixed tool and the speed set are suitable for the intended application.
2. Check whether the workpiece is secured and the worktop prepared correspondingly.
3. Switch the device on by setting the on/off switch (3) to position I.



4. Switch the device off by setting the on/off switch (3) to position 0.



**Operating mode: Cutting**

For cutting and cutting to length materials like for instance wood, plastics, aluminium, brass or metal as well as protruding nails or screws:

- use the cutting discs (8)

**Operating mode: Sanding**

For sanding wood, metal or steel:

- use the abrasive wheels (9)

For grinding rock or ceramic:

- use the aluminium oxide grinding heads (11)

**Operating mode: Milling**

For milling grooves, milling out moulds, apertures or feedthroughs in wood or plastics:

- use the milling cutter for grooves (14)

For recessing or grooving material, e.g. when machining jewellery:

- use the milling cutter with the ball head (14)

**Operating mode: Engraving**

For creating engravings in materials like metal, plastics, glass, ceramic, wood or leather:

- use the diamond-tipped engraving bits (10)

**Operating mode: Polishing**

For polishing plastics or precious metals like gold and silver:

- use the polishing attachments (19)

**Operating mode: Rust removal**

For remove rust from damaged areas, for instance in the motor vehicle sector:

- use the brass brush (18)

**Operating mode: Cleaning**

For gently cleaning the surfaces:

- uses the plastic brush (17)

### Operating mode: Drilling

For drilling holes (1 mm to 3.2 mm) into metal, wood or plastics:

- use the HSS twist drill bits (12)

### Further accessories for any other applications

Note that the maximum diameter of **combined abrasive accessories**, as well as **abrasive cones and abrasive pencils** must not exceed 55 mm, and that the maximum diameter of sandpaper sanding accessories must not exceed 80 mm.

### Shutdown



#### Warning of electrical voltage

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

- Switch off the device.
- Hold onto the mains plug while pulling the power cable of the charger out of the mains socket.
- If required, allow the device to cool down.
- Remove the battery from the device (see Start-up chapter).
- Remove the tool from the device (see Start-up chapter).
- Clean the device according to the Maintenance chapter.
- Store the device according to the Transport and storage chapter.

### Available accessories



#### Warning

Only use accessories and additional equipment specified in the instructions.

Using insertion tools or accessories other than those specified in the instructions may cause a risk of injury.

Designation	Article number
Spare battery 12V / DC 2.0 Ah	6.200.000.102
Charger PMTS 01-12V AC	7.430.001.267
Cordless grinder accessories set 282-piece	6.210.000.301

### 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 an authorized specialist electrical company or by Trotec.

#### Light smoke or odour is emitted during the first use:

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

#### The battery does not charge:

- Check whether the battery is inserted correctly in 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 damage.
- Check the on-site fusing.
- Check the quick charger for damage. If the quick charger is 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 battery terminals for dirt. Remove any dirt.



#### Info

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

**The device becomes hot:**

- Make sure not to exert too much pressure on the device during grinding.
- Select a lower speed by turning the setting wheel for speed selection (25) to a low level.
- 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.

**The tool is loose:**

- Make sure that the clamping nut (26) is tightened properly to the tool holder.

**The cutting disc has difficulties with penetrating the material to be processed or the cutting performance of the abrasive wheel is insufficient:**

- Check whether the chosen tool is suitable for the material to be processed.
- Check the set speed; it must be suitable for both the tool and the material.
- Select a higher speed by turning the setting wheel for speed selection (25) to a higher level.
- If the cutting disc or abrasive wheel is worn, replace it with a new one.

**Note**

Wait for at least 10 minutes after maintenance and repair work. Only then switch the device back on.

**The device still does not operate correctly after these checks:**

Please contact the customer service. If necessary, bring the device to an authorised 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 the device off.
- 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. Make sure 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 with a soft, lint-free cloth.
- Remove any abrasive dust and, if applicable, wood chips from the tool holder.
- Keep the connecting terminals on the device and charger clean.
- Keep the ventilation openings free from dust deposits to prevent overheating of the motor.

## Disposal

Always dispose of packing materials in an environmentally friendly manner and in accordance with the applicable local disposal regulations.



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. You can also find out about other return options that apply for many EU countries on the website <https://hub.trotec.com/?id=45090>. Otherwise, please contact an official recycling centre for electronic and electrical equipment authorised for your country.

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.



**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.

### Only for United Kingdom

According to Waste Electrical and Electronic Equipment Regulations 2013 (2013/3113) and the Waste Batteries and Accumulators Regulations 2009 (2009/890), devices that are no longer usable must be collected separately and disposed of in an environmentally friendly manner.

## Declaration of conformity

Declaration of conformity in accordance with the EC Machinery Directive 2006/42/EC, Annex II, Part 1, Section A

We – Trotec GmbH – declare in sole responsibility that the product designated below was developed, constructed and produced in compliance with the requirements of the EC Machinery Directive in the version 2006/42/EC.

**Product model / Product:** PMTS 01-12V

**Product type:** cordless grinder

**Year of manufacture as of:** 2022

### Relevant EU directives:

- 2011/65/EU: 01/07/2011
- 2012/19/EU: 24/07/2012
- 2014/30/EU: 29/03/2014
- 2015/863/EU: 31/03/2015

### Applied harmonised standards:

- EN 60745-1:2009 + A11:2010
- EN 60745-2-23:2013

### Applied national standards and technical specifications:

- EN IEC 55014-1:2021
- EN IEC 55014-2:2021

### Manufacturer and name of the authorised representative of the technical documentation:

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E-mail: [info@trotec.de](mailto:info@trotec.de)

Place and date of issue:

Heinsberg, 11.04.2022



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