**Instruction Manual** 



# **CORDLESS ROTARY HAMMER**



**CAUTION:** Before using this tool, please read this manual completely, and follow all operating safety measures.

SAFETY
ASSEMBLY
OPERATION
MAINTENANCE

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#### SAFETY & INTERNATIONAL SYMBOLS

The following table depicts and describes Safety and International symbols and pictographs that may appear on this product. Read, understand, and follow all instructions on the machine and in the instruction manual for complete safety, assembly, operating, maintenance, and repair information before attempting to assemble and operate.



Caution / Warning.



To reduce the risk of injury, user must read instruction manual.



Wear eye protection.



Wear hearing protection.



Wear a dust mask.



Wear protective gloves.



Wear sturdy, non-slip footwear.



Do not use in rain or wet conditions.



Do not dispose of battery packs in rivers or immerse in water.



Do not dispose of battery packs in fire. They will explode and cause injury.



Use the battery in a maximum temperature of 122°F (50°C).



Do not disassemble, crush, heat above 212°F (100°C); Never expose the battery to microwaves or high pressures.



Keep bystanders a safe distance away from the work area.



Indoor use only. Only use battery charger indoors.

### SAFETY INSTRUCTIONS

### GENERAL POWER TOOL SAFETY WARNINGS

### A WARNING!

### 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.

### 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.

#### 1. Work Area Safety

- a. Keep work area clean and well lit. Cluttered or dark areas invite accidents.
- b. 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.
- c. Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.
- 2. Electrical Safety
- a. 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.
- b. 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.
- c. Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
- d. 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.
- e. 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.

f. If operating a power tool in a damp location is unavoidable, use a ground fault circuit interrupter (GFCI) protected supply. Use of a GFCI reduces the risk of electric shock.

#### 3. Personal Safety

- a. 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.
- b. Use personal protective equipment. Always wear eye protection. Protective equipment such as a dust mask, non-skid safety shoes, hard hat or hearing protection used for appropriate conditions will reduce personal injuries.
- c. 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 energizing power tools that have the switch on invites accidents.
- d. 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.
- e. Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
- f. Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.
- g. 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.
- h. Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles. A careless action can cause severe injury within a fraction of a second.
- 4. Power Tool Use and Care
- a. 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.

- b. 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.
- c. Disconnect the plug from the power source and/or remove the battery pack, if detachable, 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.
- d. 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.*
- e. Maintain power tools and accessories. 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.
- f. Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- g. 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.
- h. Keep handles and grasping surfaces dry, clean and free from oil and grease. Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.
- 5. Battery Tool Use and Care
- a. 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.
- b. Use power tools only with specifically designated battery packs. Use of any other battery packs may create a risk of injury and fire.

- c. 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.
- d. 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.
- e. Do not use a battery pack or tool that is damaged or modified. Damaged or modified batteries may exhibit unpredictable behavior resulting in fire, explosion or risk of injury.
- f. Do not expose a battery pack or tool to fire or excessive temperature. Exposure to fire or temperature above 265 °F (130 °C) may cause explosion.
- g. Follow all charging instructions and do not charge the battery pack or tool outside the temperature range specified in the instructions. Charging improperly or at temperatures outside the specified range may damage the battery and increase the risk of fire.
- 6. Service
- a. 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.
- b. Never service damaged battery packs. Service of battery packs should only be performed by the manufacturer or authorized service providers.

#### ROTARY HAMMER SAFETY WARNINGS

- **1. Wear ear protectors.** *Exposure to noise can cause hearing loss.*
- 2. Use auxiliary handle(s), if supplied with the tool. Loss of control can cause personal injury.
- **3. Brace the tool properly before use.** This tool produces a high output torque and without properly bracing the tool during operation, loss of control may occur resulting in personal injury.
- 4. Hold the power tool by insulated gripping surfaces, when performing an operation

where the cutting 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.* 

- **5.** Never operate at higher speed than the maximum speed rating of the drill bit. At higher speeds, the bit is likely to bend if allowed to rotate freely without contacting the workpiece, resulting in personal injury.
- 6. Always start drilling at low speed and with the bit tip in contact with the workpiece. At higher speeds, the bit is likely to bend if allowed to rotate freely without contacting the workpiece, resulting in personal injury.
- 7. Apply pressure only in direct line with the bit and do not apply excessive pressure. Bits can bend, causing breakage or loss of control, resulting in personal injury.

#### VIBRATION + NOISE REDUCTION

To reduce the impact of noise and vibration emission, limit the time of operation, use lowvibration and low-noise operating modes as well as wear personal protective equipment. Consider the following points to minimize the vibration and noise exposure risks.

- Only use the product as intended by its design and these instructions.
- Ensure that the product is in good condition and well-maintained.
- Use correct attachments for the product and ensure they are in good condition.
- Keep a tight grip on the handles/grip surface.
- Maintain this product by these instructions and keep it well-lubricated (where appropriate).
- Plan your work schedule to spread any high-vibration tool use across a longer period.

#### EMERGENCY

Familiarize yourself with the use of this product using this instruction manual. Memorize the safety directions and follow them to the letter. This will help to prevent risks and hazards.

 Always be alert when using this product, so that you can recognize and handle risks early. Fast intervention can prevent serious injury and damage to property.

 Switch off the product and remove the battery pack if there are malfunctions.
 Have the product checked by a qualified professional and repaired, if necessary before you operate it again.

### **RESIDUAL RISKS**

Even if you are operating this product in accordance with all the safety requirements, potential risks of injury and damage remain. The following dangers can arise in connection with the structure and design of this product:

- Health defects resulting from vibration emission if the product is being used over long periods of time or not adequately managed and properly maintained.
- 2. Injuries and damage to property due to broken cutting attachments or the sudden impact of hidden objects during use.
- 3. Danger of injury and property damage caused by flying objects.
- 4. Prolonged use of this product expose the operator to vibrations and may produce 'whitefinger' disease. In order to reduce the risk, please wear gloves and keep your hands warm. If any of the 'whitefinger' symptoms appear, seek medical advice immediately. 'Whitefinger' symptoms include: numbness, loss of feeling, tingling, pricking, pain, loss of strength, changes in skin colour or condition. These symptoms normally appear in the fingers, hands or wrists. The risk increases at low temperatures.

# WARNING!

This product produces an electromagnetic field during operation! This field may under some circumstances interfere with active or passive medical implants! To reduce the risk of serious or fatal injury, we recommend persons with medical implants to consult their doctor and the medical implant manufacturer before operating this product!

# SAVE THESE INSTRUCTIONS INTENDED USE

The product is intended for hammer drilling and drilling in brick, concrete and stone as well as for chiselling work. It is also suitable for drilling without impact in wood, metal, ceramic and plastic.

### KNOW YOUR UNIT



APPLICATIONS Model: PDRX2-M4-EU As a rotary hammer: Hammer drilling and drilling in brick, concrete and stone as well as for chiselling work.

1	Chuck Cover
2	Forward/Reverse Switch
З	Variable Speed Trigger
4	Main Handle
5	Work Lamp
6	Mode Selector

### SPECIFICATIONS\*

Model	PDRX2-M4-EU
Voltage	18 V - (20 V - Max*)
Motor Type	Brushless
Joules	2.0 J
No Load Speed	0-980 RPM
Blows Per Minute	0-4350 BPM
Drilling Capacity	Concrete: 24 mm Steel: 13 mm Wood: 27 mm
Weight (tool only)	2.9 kg

\*20V Max battery, maximum initial battery voltage (measured without a workload) is 20V. The nominal voltage is 18V.

# **I** NOTE:

Only use following batteries: B2OX2, B25X2, B4OX2, B5OX2, B6OX2, B8OX2 and chargers: CHX2-L1-EU, CHX2, CHQX2, CHQX2-M-EU, CHDX2-M-EU.

### ASSEMBLY

- 1. Unpack all parts and lay them on a flat, stable surface:
- 2. Remove all packing materials and shipping devices, if applicable.
- 3. The scope of delivery varies depending on the country and purchased variant:
- Cordless rotary hammer x1
- Auxiliary handle x1
- Depth gauge x1
- Battery pack x2
- Charger x1
- Tool bag x1
- Instruction manual x1
- If you find that parts are missing or show damage, do not use the product and contact your dealer. Using an incomplete or

damaged product represents a hazard to people and property.

5. Ensure that you have all the accessories and tools needed for assembly and operation. This also includes suitable personal protective equipment.

### 



Wear protective gloves for this assembly work and always lay the product on a flat and stable surface while assembling.

Follow the assembly instructions step-by-step and use the pictures provided as a visual guide to easily assemble the product! Do not insert the battery pack before the power tool is completely assembled or adjusted!

The tool is available with and without a dust cup. You can select the following steps in accordance with your actual purchase and purpose.

### INSTALLING/REMOVING THE AUXILIARY HANDLE

### A WARNING!

To prevent accidental starting that could cause serious personal injury, always remove the battery pack from the tool when installing or adjusting the auxiliary handle.

Loosen the auxiliary handle and install it until the ring fits in between the grooves in the tool barrel. Then tighten the auxiliary handle at the desired position. It may be swung 360° so as to be secured at any position.

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\_\_\_\_Fig. 1



The left handle applies only to the tool with a dust cup and the right handle applies only to the tool without a dust cup.

### INSTALLING/REMOVING THE DUST CUP

Use the dust cup to prevent dust from falling over the tool and on yourself when performing overhead drilling operations.

To install, align and fit the release tabs with the slots in the auxiliary handle. To remove, press the two release tabs and pull the dust cup out.



# **I**NOTE:

The above Installation applies only to the tool with a dust cup.

# INSTALLING/REMOVING THE BIT

#### To install:

Insert the bit into the tool. Turn the bit and push it in until it engages.

If the bit cannot be pushed in, remove the bit. Pull the chuck cover down a couple of times. Then insert the bit again. Turn the bit and push it in until it engages.





The Installation of the dust cup is available in two types. You can choose to install the dust cup with the auxiliary handle.





\_\_\_\_\_Fig. 5 \_\_\_\_\_



After installing, always make sure that the bit is securely held in place by trying to pull it out.

#### To remove:

To remove the bit, pull the chuck cover down all the way and pull the bit out.



\_\_\_\_\_Fig. 6



\_\_\_\_\_Fig. 7



Fig. 4 and Fig. 6 apply to the tool without a dust cup and Fig. 5 and Fig. 7 apply to the tool with a dust cup.

### INSTALLING THE DEPTH GUAGE

The depth gauge is convenient for drilling holes of uniform depth. Press the auxiliary handle button and insert the depth gauge into the hole in the auxiliary handle. Adjust the depth gauge to the desired depth and release the auxiliary handle button.

Depth Gauge





Fig. 8 applies to the tool without a dust cup and Fig. 9 applies to the tool with a dust cup.

# A WARNING!

Make sure the depth gauge is well engaged.

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The depth gauge cannot be used at the position where the depth gauge strikes against the gear housing.

#### INSTALLING/REMOVING THE BATTERY PACK

#### To install:

Align and slide the battery pack onto the slots of the battery docking port until it locks in place.



#### To remove:

Press the battery-release button and remove the battery pack from the product.





Refer to the manuals for the charger and battery pack for more details.

#### **OPERATION**

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Inspect the tool for complete installation. Operating with any missing or damaged parts or accessories can result in serious injury.

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Always wear eye, hearing, hand protection to reduce the risk of injury when operating the tool. Keep all parts of your body away from the rotating bit.

### **ROTATION DIRECTION**

The tool runs forward or backward for driving the bit in or out. It is controlled by the forward/reverse switch.

Depress the forward/reverse switch from A side for reverse rotation. On the contrary, depress the switch from B side for forward rotation. To prevent intentional start when tool is not in use, turn the forward/reverse switch to the neutral position to lock the trigger.

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Do not change rotation direction while the product is running. Wait for a complete stop before adjusting setting.



ACTION MODE

#### **Rotation only**

For drilling in wood, metal or plastic materials, use a proper drill chuck adapter and depress the lock button and rotate the mode selector to the symbol and.

Use a twist drill bit or wood bit.



.Fig. 13 \_

6	Mode Selector
6-1	Lock Button

#### **Rotation with hammering**

For drilling in concrete, masonry, etc., depress the lock button and rotate the mode selector to the symbol Use a tungsten-carbide tipped bit.



#### Hammering only

For chipping, scaling or demolition operations, depress the lock button and rotate the mode selector to the symbol  $\mathcal{V}$ .

Use a bull point, cold chisel, scaling chisel, etc.



#### Bit angle (when chipping, scaling or demolishing)

The bit can be secured at the desired angle. To change the bit angle, depress the lock button and rotate the mode selector to the symbol  $\mathcal{Q}$ . Turn the bit to the desired angle.

Depress the lock button and rotate the mode selector to the symbol **T**. Then make sure that the bit is securely held in place by turning it sliahtly.



### SWITCHING ON/OFF WARNING!

Always grip the auxiliary handle and main handle by both hands during operation.

# VARNING!

Always check the direction of rotation before operation.

- 1. To start the tool, pull the variable speed trigger. Tool accelerates when increasing pressure on the trigger.
- 2. To stop the tool, release the trigger.



## **WARNING**

Always lock the variable speed trigger during work breaks and after finishing work.

#### WORK LAMP

The product is designed with a Lamp for working in dim areas. It lights up when the trigger is pulled and goes out automatically after the trigger is released.



#### **GENERAL OPERATION**

#### Drilling in wood or metal

Use a proper drill chuck adapter. Set the mode selector to the symbol  $\Delta \Delta U$ 

- Never use "Rotation with hammering" when the drill chuck adapter is installed on the tool. The adapter may be damaged. Also, the adapter will come off when reversing the tool.
- Pressing excessively on the tool will not speed up the drilling. In fact, this excessive pressure will only serve to damage the tip of your bit, decrease the tool performance and shorten the service life of the tool.

- There is a tremendous twisting force exerted on the tool/bit at the time of hole break-through. Hold the tool firmly and exert care when the bit begins to break through the workpiece.
- A stuck bit can be removed simply by setting the reversing switch to reverse rotation in order to back out. However, the tool may back out abruptly if you do not hold it firmly.
- Always secure small workpieces in a vise or similar hold-down device.

*n*n 1

#### Hammer drilling operation

Set the mode selector to the symbol  $\overleftarrow{\Box}$ .

Position the bit at the desired location for the hole, then pull the trigger.

Do not force the tool. Light pressure gives best results. Keep the tool in position and prevent it from slipping away from the hole. Do not apply more pressure when the hole becomes clogged with chips or particles. Instead, run the tool at an idle, then remove the bit partially from the hole. By repeating this several times, the hole will be cleaned out and normal drilling may be resumed.

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There is a tremendous and sudden twisting force exerted on the tool/bit at the time of hole break-through, when the hole becomes clogged with chips and particles, or when striking reinforcing rods embedded in the concrete. Always use the auxiliary handle and firmly hold the tool by both auxiliary handle and main handle during operations. Failure to do so may result in the loss of control of the tool and potentially severe injury.

#### Chipping/Scaling/Demolition

Set the mode selector to the symbol  $\widehat{\mathcal{V}}.$ 

Hold the tool firmly with both hands. Turn the tool on and apply slight pressure on the tool so that the tool will not bounce around, uncontrolled. Pressing very hard on the tool will not increase the efficiency.

### MAINTENANCE

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Only perform cleaning and maintenance according to these instructions! All further works must be performed by an Authorized Service Center.

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TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION: Make sure the battery pack is removed before performing any procedure in this section.

TO PREVENT SERIOUS INJURY FROM TOOL FAILURE: Do not use damaged equipments. If abnormal noise or vibration occurs, have the problem corrected before further use. There are no user-serviceable parts in your power tool. If any of following condition are found, stop using it and send it to the authorized service center for repair.

- Leaking, swollen, or cracked battery pack.
- Loose hardware.
- Misalignment or binding of accessories.
- Cracked or broken parts.
- Any other condition that may affect its safe operation.

#### CLEANING

- 1. Clean dust and debris from air vents.
- 2. Keep the handle clean, dry, and free of oil or grease.
- 3. Make sure the chuck is free of debris.
- 4. Remove stubborn dirt from housing with high-pressure air (max. 3 bar).
- 5. Never immerse your tool in liquid or allow a liquid to flow inside them.

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Do not use chemical, alkaline, abrasive, or other aggressive detergents or disinfectants to clean this product as they might be harmful to its surfaces.

#### TRANSPORTATION

- 1. Only carry by its handle.
- 2. Protect from any heavy impact or strong vibrations which may occur during transportation in vehicles.
- 3. Secure to prevent it from slipping or falling over.

### STORAGE

- 1. Clean thoroughly as described above.
- Store in a dark, dry, frost-free, and wellventilated area that is inaccessible to children. The recommended storage temperature for tools and the batteries is 50°F - 78.8°F (10°C ~ 26°C).
- 3. Use the original package for storage or cover it with a suitable cloth to protect it against dust.

### DISPOSAL

Waste products should not be disposed of with household waste. Please recycle where facilities exist. Check with your local authority or retailer for recycling advice. Dust may be produced by the tool during operation, users should clean these objects to protect the environment.



Electrical products should not be discarded with household products. Used electrical products must be collected separately and disposed of at collection points provided for this purpose. Talk with your local authorities or dealer for advice on recycling.

#### TROUBLESHOOTING

Suspected malfunctions are often due to causes that the users can fix themselves. Therefore, troubleshoot the product using this section. In most cases the problem can be solved quickly.

PROBLEM	POSSIBLE CAUSE	SOLUTION
Product does not start	Forward/reverse switch at center locking position	Push forward/reverse switch to proper side
	Battery pack not properly attached	Attach properly
	Battery pack discharged	Charge the battery pack
Product does not reach full power	Battery pack capacity too low	Charge the battery pack
	Battery pack reaches its life cycle	Replace with new battery pack
Unsatisfactory result	Drill bit is dull/damaged	Replace with new one
	Drill bit is not suitable for intended operation	Use proper drill bit