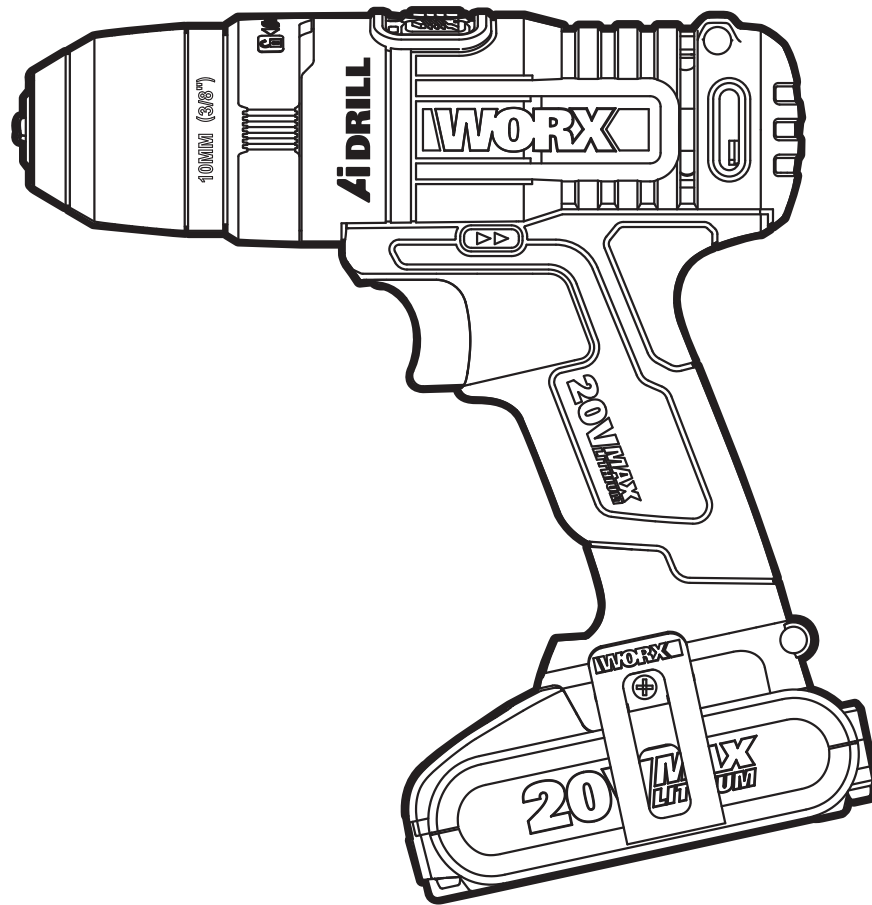


# WORX®



**20V MAX**  
LITHIUM

## **SAFETY AND OPERATING MANUAL**

### **ORIGINAL INSTRUCTIONS**

**Lithium-Ion Cordless Drill/Driver**  
**WX178 WX178.1 WX178.2 WX178.3 WX178.4 WX178.9**

# GENERAL POWER TOOL SAFETY WARNINGS



**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.**

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 residual current device (RCD) protected supply.** Use of an RCD 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 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 energising 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 jewellery. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewellery 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.
- ## 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 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.
  - 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. 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.

## 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.

## 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.

## DRILL SAFETY WARNINGS

- 1. Wear ear protectors when impact drilling.** 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. Hold 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.

## SAFETY WARNINGS FOR BATTERY PACK













- a) Do not dismantle, open or shred cells or battery pack.**
- b) Do not short-circuit a battery pack. Do not store battery packs haphazardly in a box or**










**drawer where they may short-circuit each other or be short-circuited by conductive materials.**

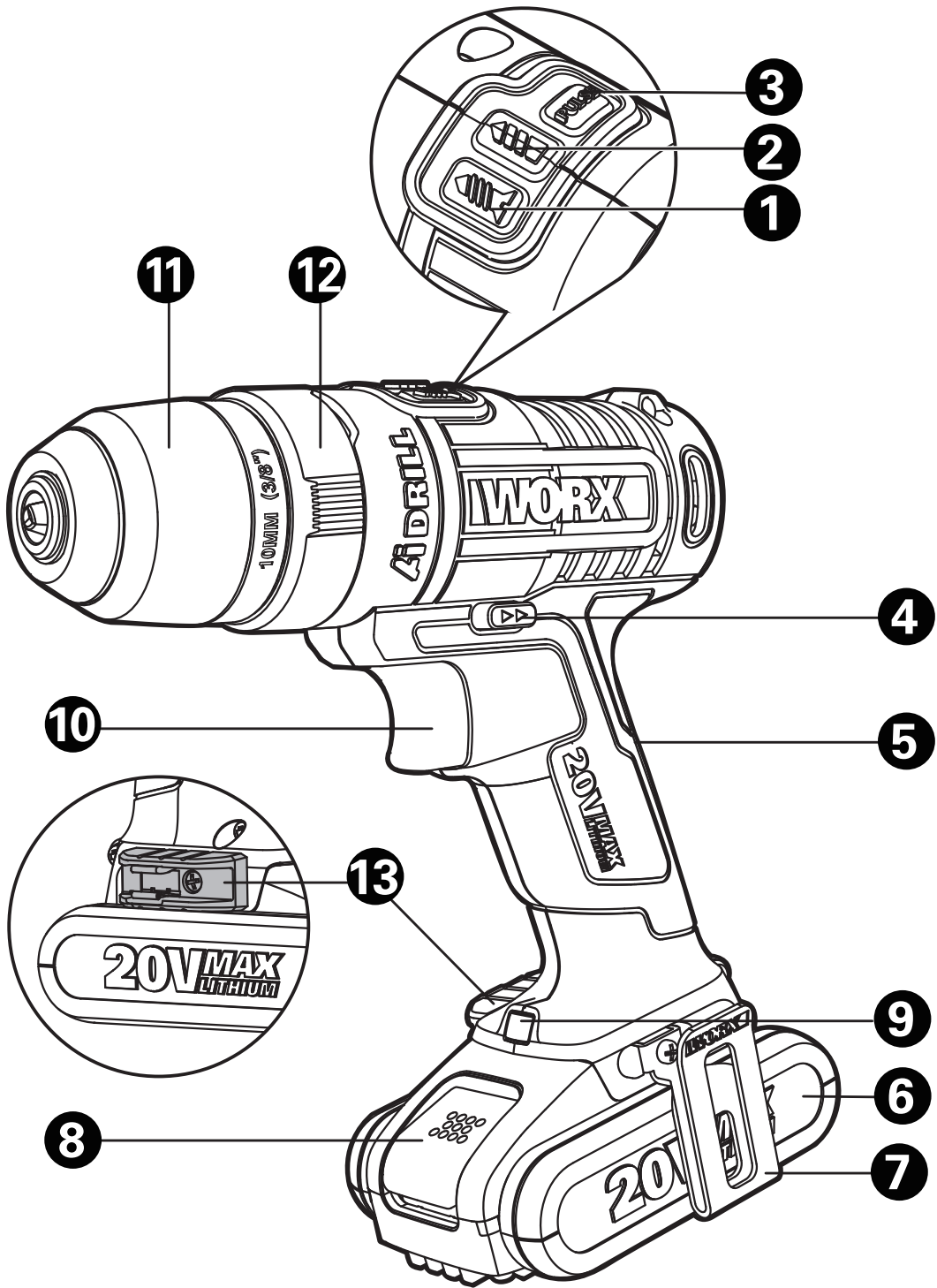
When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects, that can make a connection from one terminal to another. Shorting the battery terminals together may cause burns or a fire.

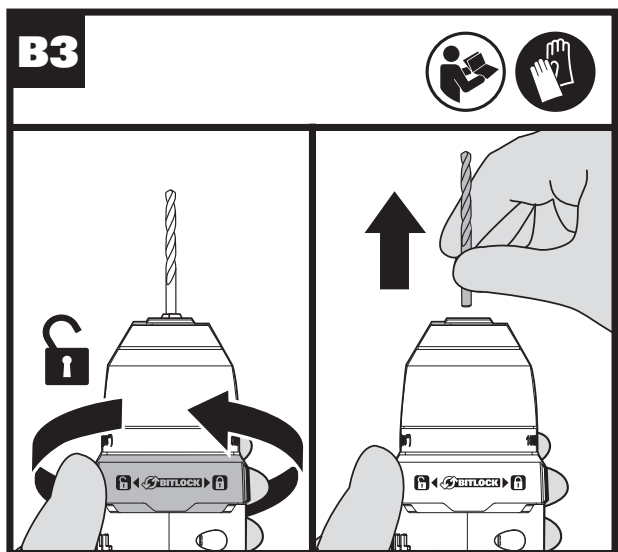
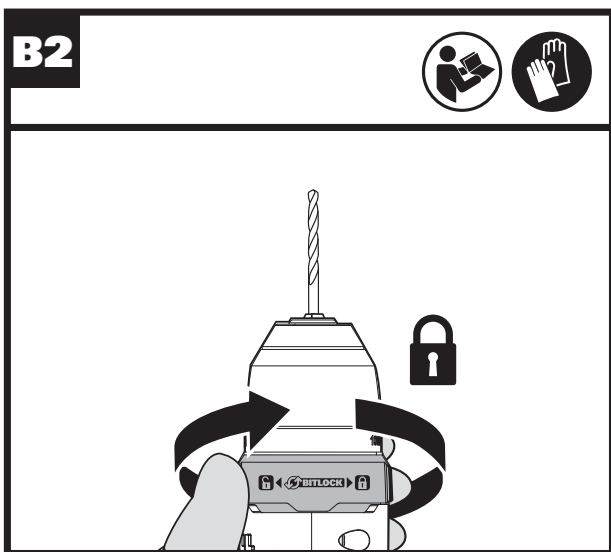
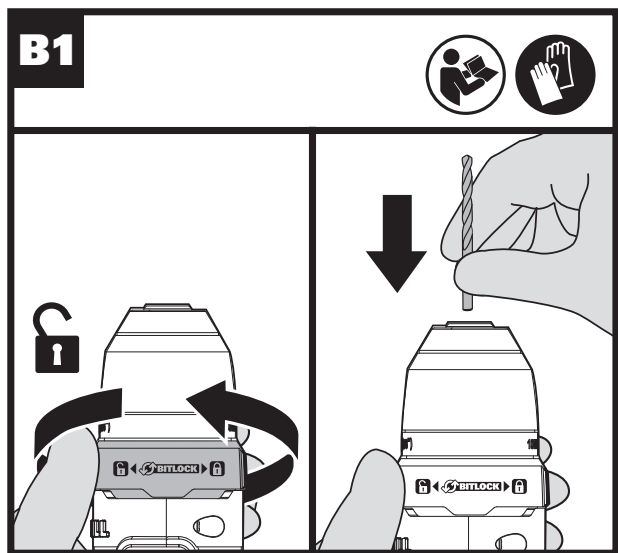
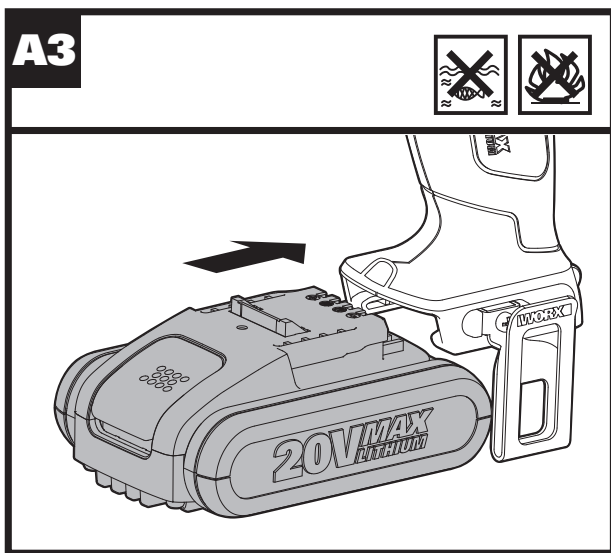
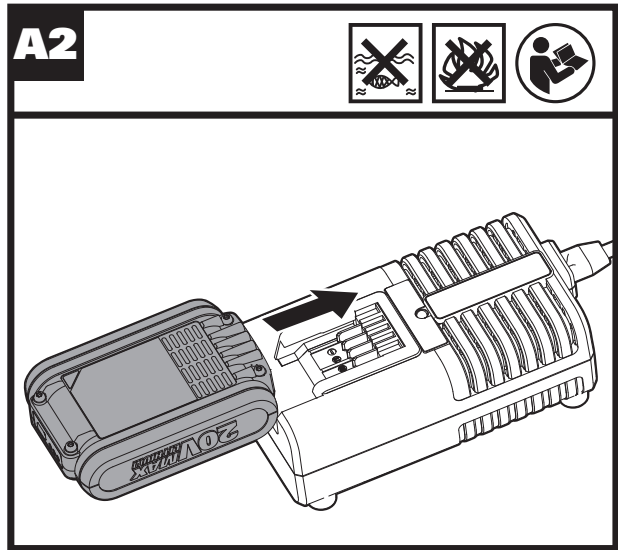
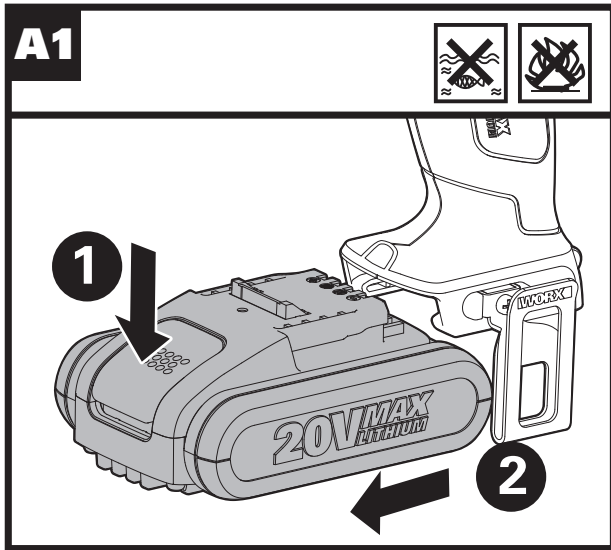
- c) Do not expose battery pack to heat or fire. Avoid storage in direct sunlight.**
- d) Do not subject battery pack to mechanical shock.**
- e) In the event of battery leaking, do not allow the liquid to come into contact with the skin or eyes. If contact has been made, wash the affected area with copious amounts of water and seek medical advice.**
- f) Seek medical advice immediately if a cell or battery pack has been swallowed.**
- g) Keep battery pack clean and dry.**
- h) Wipe the battery pack terminals with a clean dry cloth if they become dirty.**
- i) Battery pack needs to be charged before use. Always refer to this instruction and use the correct charging procedure.**
- j) Do not maintain battery pack on charge when not in use.**
- k) After extended periods of storage, it may be necessary to charge and discharge the battery pack several times to obtain maximum performance.**
- l) Battery pack gives its best performance when it is operated at normal room temperature (20°C ± 5°C).**
- m) When disposing of battery packs, keep battery packs of different electrochemical systems separate from each other.**
- n) Recharge only with the charger specified by WORX. Do not use any charger other than that specifically provided for use with the equipment.** A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
- o) Do not use any battery pack which is not designed for use with the equipment.**
- p) Keep battery pack out of the reach of children.**
- q) Retain the original product literature for future reference.**
- r) Remove the battery from the equipment when not in use.**
- s) Dispose of properly.**

# SYMBOLS

	To reduce the risk of injury, user must read instruction manual
	Warning
	Wear ear protection
	Wear eye protection
	Wear dust mask
	Do not expose to rain or water
	Do not burn
	Wear protective gloves
	Li-Ion battery This product has been marked with a symbol relating to 'separate collection' for all battery packs and battery pack. It will then be recycled or dismantled in order to reduce the impact on the environment. Battery packs can be hazardous for the environment and for human health since they contain hazardous substances.
	Drilling
	Screwdriving
	Wood

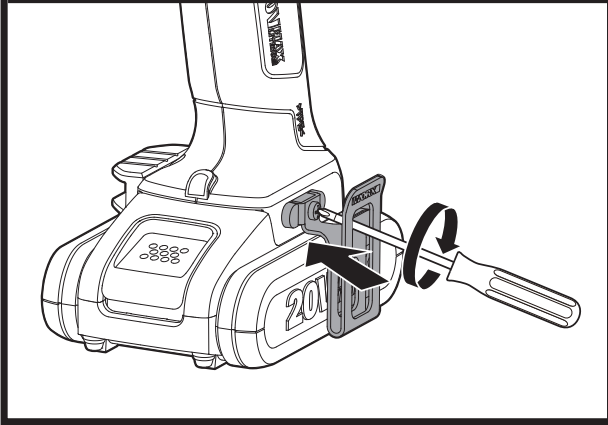
	Metal
	Steel pipe
	Ceramic tile
	Stripped screw
	Lock
	Unlock
	High speed
	Low speed
	Waste electrical products must not be disposed of with household waste. Please recycle where facilities exist. Check with your local authorities or retailer for recycling advice.
	<b>xINR18/65-y:</b> Cylindrical lithium Ion battery cells with max diameter of 18mm and max height of 65mm; "x" represents a number cells serial connected, blank if 1; "-y" represents a number of cells paralleled connected, blank if 1.



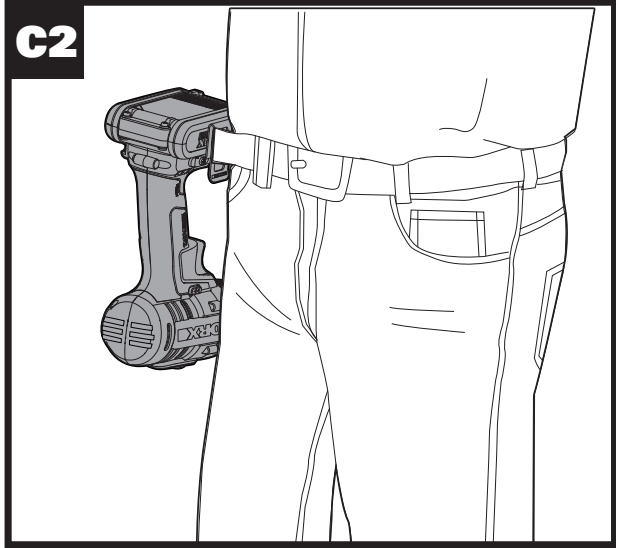




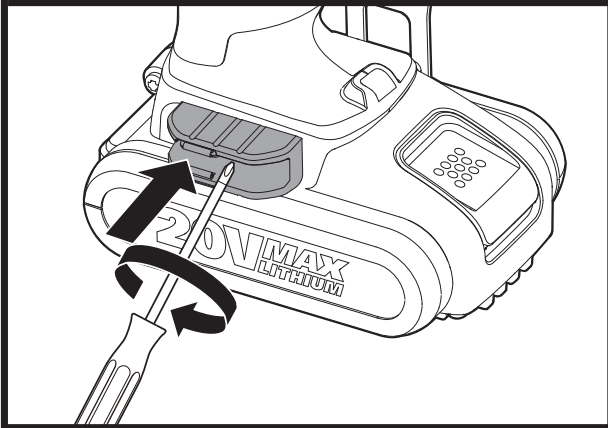
**C1**



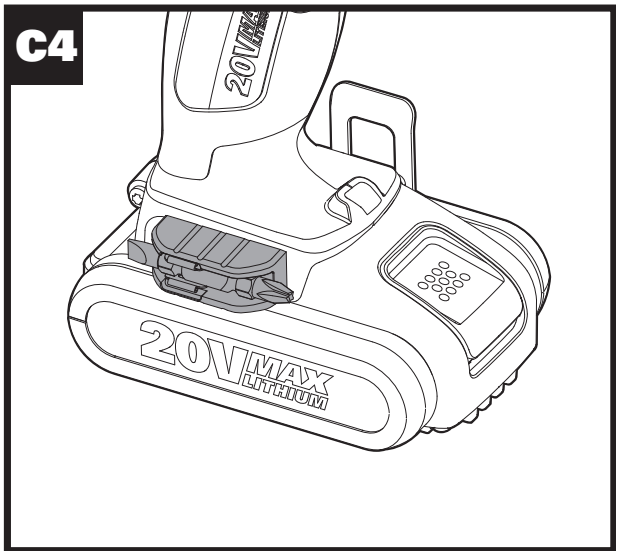
**C2**



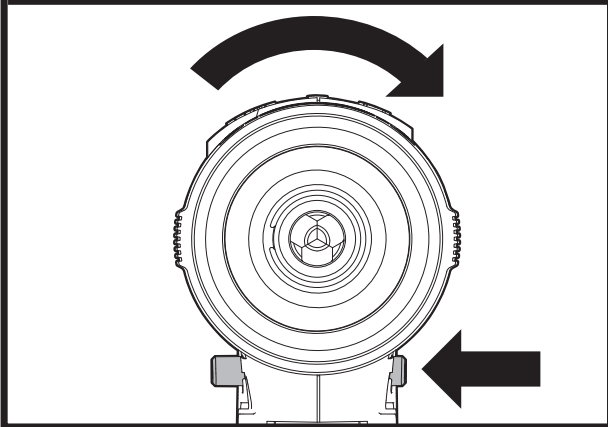
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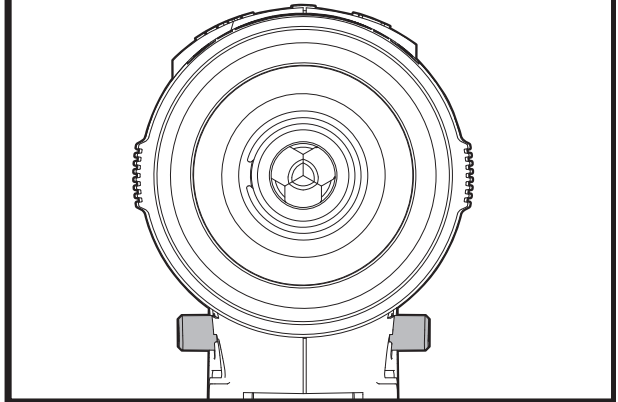
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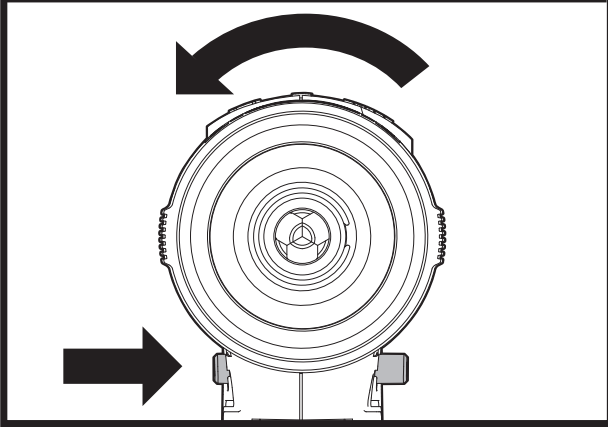
**D1**



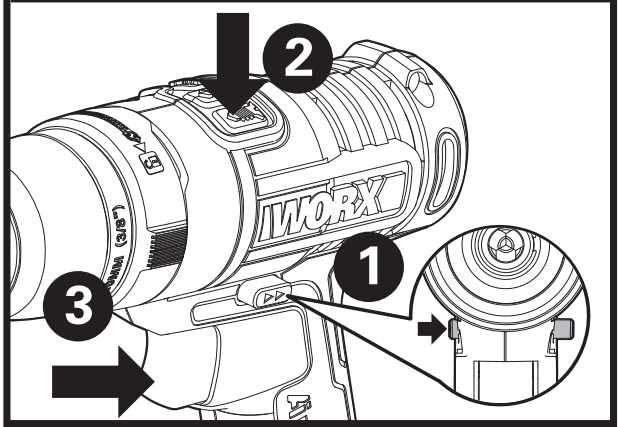
**D2**



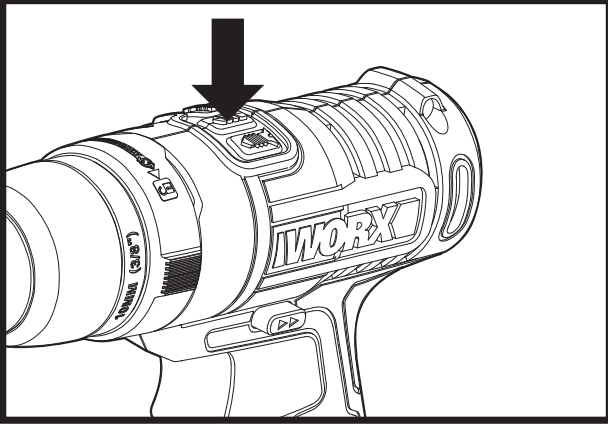
**D3**



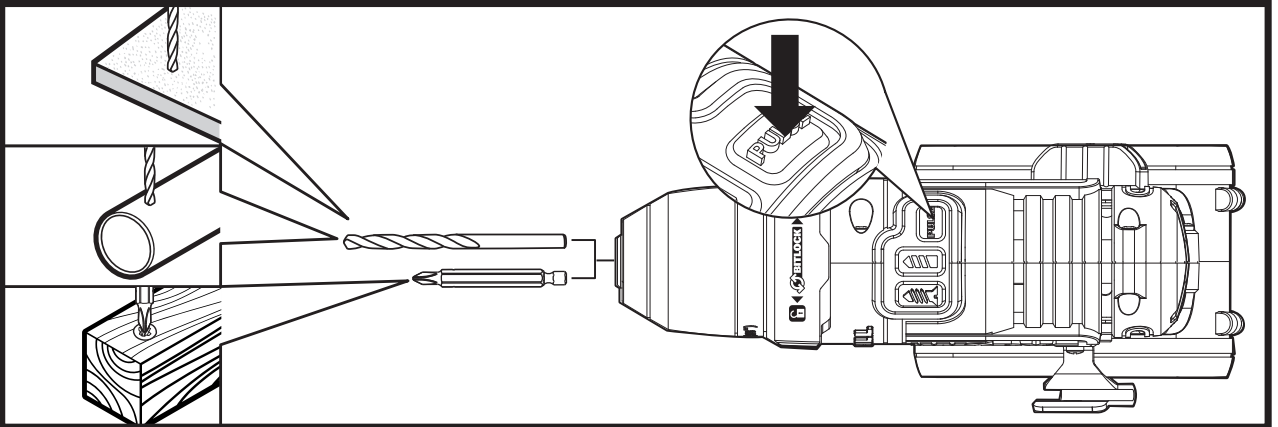
**E**



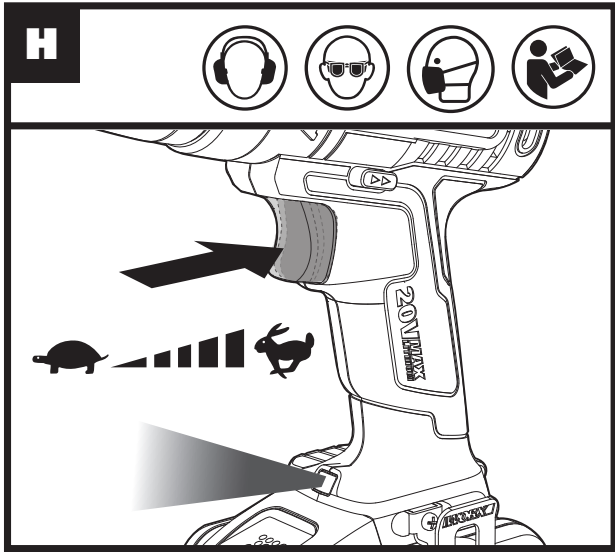
**F**



**G**







1. DRIVE MODE WITH SAFE DRIVE™
2. DRILL MODE
3. PULSE ASSIST
4. FORWARD/REVERSE ROTATION SWITCH
5. SOFT GRIP HANDLE
6. BATTERY PACK\*
7. BELT HOOK
8. BATTERY PACK RELEASE BUTTON
9. LED LIGHT
10. VARIABLE SPEED SWITCH
11. CHUCK
12. BIT LOCK™ SWITCH
13. BIT CLIP

\* Not all the accessories illustrated or described are included in standard delivery.

## TECHNICAL DATA

Type WX178 WX178.1 WX178.2 WX178.3  
WX178.4 WX178.9 (1-designation of  
machinery, representative of Cordless Drill)

10


	WX178 WX178.1 WX178.2 WX178.3 WX178.4	WX178.9
Charger voltage	100-240V ~50/60Hz	/
Battery capacity	2.0Ah	/
Charging time	1hr	/
Rated voltage	20V $\equiv$ Max**	
No load speed	0-800/min	
Max torque	20N.m	
Chuck capacity	10mm	
Max. drilling capacity	Steel	10mm
	Wood	25mm
Machine weight	1.3kg	0.93kg

\*\*Voltage measured without workload. Initial battery voltage reaches maximum of 20 volts. Nominal voltage is 18 volts.

## NOISE INFORMATION

A weighted sound pressure	$L_{pA}$ : 80.5dB(A)
A weighted sound power	$L_{WA}$ : 91.5dB (A)

$K_{PA}$  &  $K_{WA}$  3.0dB (A)


Wear ear protection when sound pressure is over 80dB(A) 

## VIBRATION INFORMATION

Vibration total values (triax vector sum) determined according to EN 60745:

Drilling into metal	Vibration emission value $a_{h,D} = 2,675m/s^2$
	Uncertainty K = 1,5m/s <sup>2</sup>
Screw driving without impact	Vibration emission value $a_h = 1,831m/s^2$
	Uncertainty K = 1,5m/s <sup>2</sup>

The declared vibration total value may be used for comparing one tool with another, and may also be used in a preliminary assessment of exposure.

 **WARNING:** The vibration emission value during actual use of the power tool can differ from the declared value depending on the ways in which the tool is used dependant on the following examples and other variations on how the tool is used:


How the tool is used and the materials being cut or drilled.

The tool being in good condition and well maintained  
The use the correct accessory for the tool and ensuring it is sharp and in good condition.

The tightness of the grip on the handles and if any anti vibration accessories are used.

And the tool is being used as intended by its design and these instructions.

**This tool may cause hand-arm vibration syndrome if its use is not adequately managed.**

 **WARNING:** To be accurate, an estimation of exposure level in the actual conditions of use should take account of all parts of the operating cycle such as the times when the tool is switched off and when it is running idle but not actually doing the job. This may significantly reduce the exposure level over the total working period.

Helping to minimize your vibration exposure risk. ALWAYS use sharp chisels, drills and blades. Maintain this tool in accordance with these instructions and keep well lubricated (where appropriate).

If the tool is to be used regularly then invest in anti vibration accessories.

Plan your work schedule to spread any high vibration tool use across a number of days.

**Lithium-Ion Cordless Drill/Driver**  
**WX178 WX178.1 WX178.2 WX178.3 WX178.4 WX178.9**

## ACCESSORIES

	WX178	WX178.1	WX178.2
Double ended bits (PH2/SL5.5)	1	1	1
Battery pack (WA3551.1)	1	2	1
Charger(WA3860)	1	1	1
Bit clip	1	1	1
Hook	1	1	1
Multi-purpose drill bits*	/	/	3
Roll-up drill bits kit	/	/	/

	WX178.3	WX178.4	WX178.9
Double ended bits (PH2/SL5.5)	1	1	1
Battery pack (WA3551.1)	2	2	/
Charger(WA3860)	1	1	/
Bit clip	1	1	1
Hook	1	1	1
Multi-purpose drill bits*	3	3	/
Roll-up drill bits kit	/	30	/

\*Innovative drill bits for steel, wood, masonry, uPVC, ceramics and concrete multi-layered materials.

We recommend that you purchase your accessories listed in the above list from the same store that sold you the tool. Refer to the accessory packaging for further details. Store personnel can assist you and offer advice.

## OPERATING INSTRUCTIONS



**NOTE:** Before using the tool, read the instruction book carefully.

### INTENDED USE

The machine is intended for driving in and loosening fasteners as well as for drilling in wood, metal and plastic.

## ASSEMBLY AND OPERATION

ACTION	FIGURE
<b>BEFORE OPERATION</b>	
Removing the Battery Pack	See Fig. A1
Charging the Battery Pack	See Fig. A2
Installing the Battery Pack	See Fig. A3
<b>ASSEMBLY</b>	
--Inserting the Bits	See Fig. B1 B2
--Removing the Bits	See Fig. B3
Assembling the belt hook and bit clip	See Fig. C1,C2, C3,C4
<b>OPERATION</b>	

### Bit Lock™ Adjustment

The Bit Lock™ switch (12) equipped in this tool can release or grab a bit very quickly and automatically. This can be realized by rotating the Bit Lock™ ring clockwise or counterclockwise.



**WARNING:** Always ensure the bit is secure before starting the tool. Damage to the Chuck or a loose bit may cause possible personal injury.

**NOTE:** When the chuck jaws become fully opened or closed, the clutch will activate, making a clicking sound. This sound is normal.

If the Bit Lock™ Switch (12) does not operate, confirm the battery is charged and depress the trigger briefly. Keep drill tilted upward when adjusting the chuck to prevent bit from falling out.

### Forward/Reverse Rotation Switch



**WARNING:** Never change the direction of rotation when the Chuck is rotating. Wait until it has stopped!

See Fig. D1, D2, D3

### Function Mode Selection

Press the function button to select operation mode. The button will illuminate in blue for a few seconds. Depress the Variable Speed Switch (10) slightly to illuminate the function button again.

Drive Mode with Safe drive™

- When driving a screw, the tool will automatically stop as the screw head becomes flush with surface of workpiece. If a deeper screw is desired, continue to fully depress the Variable Speed Switch (10). The tool will make slow rotations to drive the screw deeper.
- Once the desired depth is reached, please release the Variable Speed Switch (10).

**NOTE:**


1. If the tool stops sooner than desired, release the Variable Speed Switch (10) and press it again.
2. Safe drive™ function cannot be activated unless the variable speed switch (10) has achieved the maximum speed.

See Fig. E

Drill Mode

See Fig. F

Pulse Assist


 **WARNING:** Do not work for long periods with the Pulse Assist activated as the motor can be overheated.

**NOTE:** Pulse Assist is very effective to prevent stripping screws, removing stubborn screws and to prevent the bit tip from walking when drilling on smooth surfaces. When the Pulse Assist is activated, it can be switched with the drill/drive mode.

- Make sure the Forward/Reverse Rotation Switch (4) is pushed to the left or right and the Pulse Assist is selected.
- Press the Variable Speed Switch (10), the tool will begin to rotate at a controllable pace.

See Fig. G

Variable Speed Switch

 **WARNING:** Do not operate for long periods at low speed because excess heat will be produced internally.

See Fig. H

Using the LED light

To turn on the light, press the Variable Speed Switch (10) and make sure the Forward/Reverse Rotation Switch (4) is on right or left position. When you release the Variable Speed Switch (10), the light will go off after a moment. The LED Light is also a battery capacity indicator. It will flash when power gets low. The tool and battery pack are equipped with a protection system. When the LED Light is quickly flashing, the system will automatically cut power to the tool to extend battery life. The tool will automatically stop during operation if the tool and/or battery pack are placed under one of the following conditions:

See Fig. H

- **Overloaded:** The tool is operated in a manner that causes it to draw an abnormally high current. In this situation, release the Variable Speed Switch on the tool and stop the application that caused the tool to become overloaded. Then pull the Variable Speed Switch again to restart.
- **Overheated:** Under the condition above, if the tool does not start, the tool and Battery Pack are overheated. Let the tool and Battery Pack cool before pulling the Variable Speed Switch again.
- **Low battery voltage:** The remaining Battery capacity is too low and the tool will not operate. Remove and recharge the Battery Pack.

## TROUBLESHOOTING

### 1. WHY DOES THE DRILL NOT TURN ON WHEN YOU PRESS THE SWITCH?

The Forward/Reverse Rotation Switch, which is on top of the trigger, is positioned in the lock function. Unlock the Forward/Reverse Rotation Switch by putting it into the required rotation position. Push the trigger and the drill will start to rotate.

### 2. REASONS FOR DIFFERENT BATTERY PACK WORKING TIMES

Charging time problems, and having not used a Battery Pack for a prolonged time will reduce the Battery Pack working time. This can be corrected after several charge and discharge operations by charging & working with your drill. Heavy working conditions such as large screws into hard wood will use up the Battery Pack energy faster than lighter working conditions. Do not re-charge your Battery Pack below

32°F (0°C) and above 113°F (45°C) as this will affect performance.

### **3. THE BIT LOCK™ SWITCH WILL NOT ROTATE.**

Pull the trigger and have the drill rotate briefly. The Bit Lock™ Switch ring should release and operate as normal .

## **MAINTENANCE**

**Remove the battery pack from the tool before carrying out any adjustment, servicing or maintenance.**

Your tool requires no additional lubrication or maintenance.

There are no user serviceable parts in your power tool. Never use water or chemical cleaners to clean your power tool. Wipe clean with a dry cloth. Always store your power tool in a dry place. Keep the motor ventilation slots clean. Keep all working controls free of dust. Occasionally you may see sparks through the ventilation slots. This is normal and will not damage your power tool.

## **ENVIRONMENTAL PROTECTION**



Waste electrical products must not be disposed of with household waste. Please recycle where facilities exist. Check with your local authorities or retailer for recycling advice.

## **DECLARATION OF CONFORMITY**

We,  
Positec PowerTools (Europe) Ltd,  
PO Box 6242, Newbury, RG14 9LT, UK

Declare that the product,  
Description **Battery-powered Drill**  
Type **WX178 WX178.1 WX178.2 WX178.3  
WX178.4 WX178.9 (1-designation of machinery, representative of Battery-powered Drill)**  
Function **Drilling/Tightening and loosening screws, nuts**

Complies with the following Directives,  
**2006/42/EC**  
**2011/65/EU**  
**2014/30/EU**

Standards conform to  
**EN 55014-1**  
**EN 55014-2**  
**EN 60745-1**  
**EN 60745-2-1**  
**EN 60745-2-2**

The person authorized to compile the technical file,  
**Name Jim Kirkwood**  
**Address Positec Power Tools (Europe)Ltd,**  
**PO Box 6242, Newbury, RG14 9LT, UK**

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Suzhou 2017/07/05  
Allen Ding  
Deputy Chief Engineer, Testing & Certification

**Lithium-Ion Cordless Drill/Driver**  
**WX178 WX178.1 WX178.2 WX178.3 WX178.4 WX178.9**



### **After-sales Service and Application**

At [www.worx.com](http://www.worx.com) you can order spare parts or arrange the collection of a product in need of servicing or repair.

Tel. Service: 0345 202 9679

E-Mail: [customerservices@worxtools.com](mailto:customerservices@worxtools.com)

**[www.worx.com](http://www.worx.com)**

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