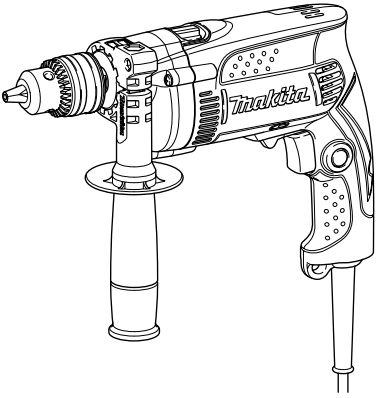
HP1630
HP1631



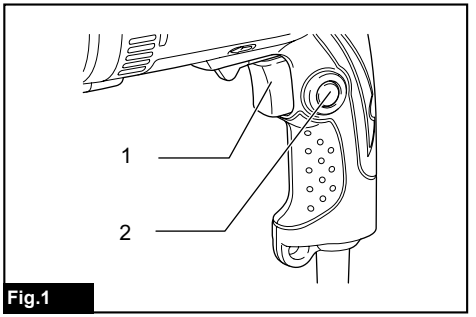
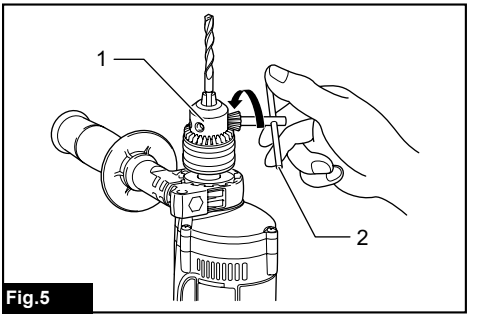


Fig.1



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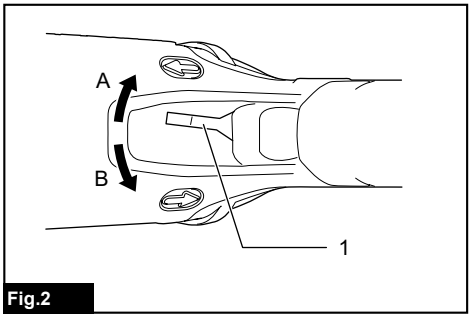
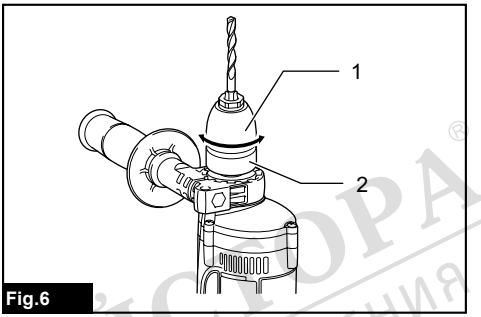


Fig.2



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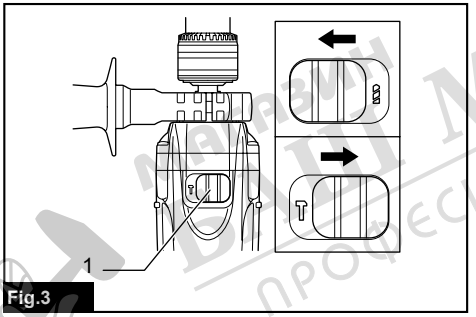
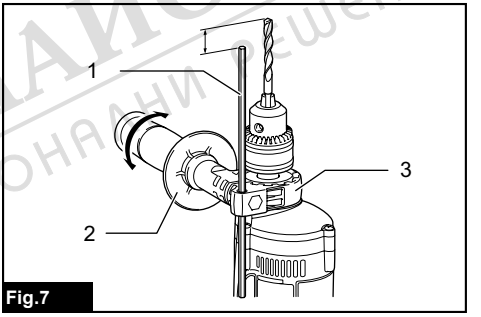


Fig.3



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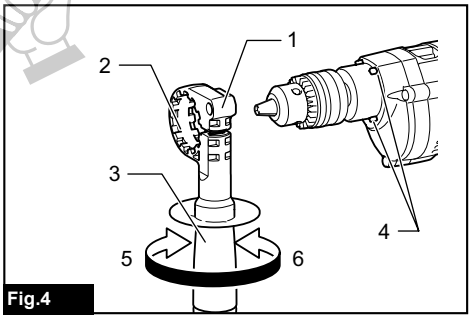
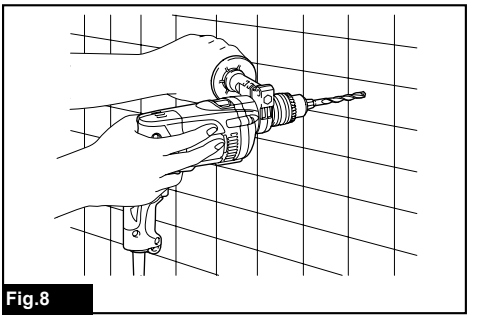


Fig.4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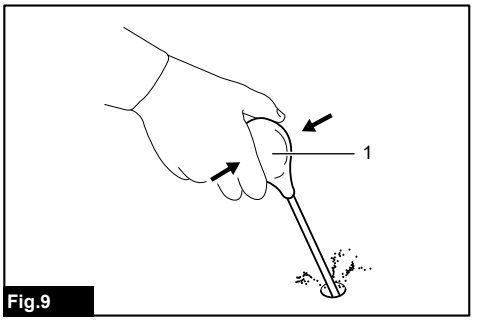

Fig.9

SPECIFICATIONS

Model:		HP1630	HP1631
Capacities	Concrete	16 mm	
	Steel	13 mm	
	Wood	30 mm	
No load speed		0 - 3,200 min^{-1}	
Blows per minute		0 - 48,000 min^{-1}	
Overall length		296 mm	295 mm
Net weight		2.1 kg	2.0 kg
Safety class		⧈/II	

- Due to our continuing program of research and development, the specifications herein are subject to change without notice.
- Specifications may differ from country to country.
- Weight according to EPTA-Procedure 01/2014

Intended use

The tool is intended for impact drilling in brick, concrete and stone as well as for drilling without impact in wood, metal, ceramic and plastic.

Power supply

The tool should be connected only to a power supply of the same voltage as indicated on the nameplate, and can only be operated on single-phase AC supply. They are double-insulated and can, therefore, also be used from sockets without earth wire.

Noise

The typical A-weighted noise level determined according to EN62841-2-1:
Sound pressure level (L_{pA}) : 97 dB(A)
Sound power level (L_{WA}) : 108 dB (A)
Uncertainty (K) : 3 dB(A)

NOTE: The declared noise emission value(s) has been measured in accordance with a standard test method and may be used for comparing one tool with another.

NOTE: The declared noise emission value(s) may also be used in a preliminary assessment of exposure.

⚠***WARNING:*** **Wear ear protection.**

⚠***WARNING:*** **The noise emission during actual use of the power tool can differ from the declared value(s) depending on the ways in which the tool is used especially what kind of workpiece is processed.**

⚠***WARNING:*** **Be sure to identify safety measures to protect the operator that are based on an estimation of exposure in the actual conditions of use (taking account of all parts of the operating cycle such as the times when the tool is switched off and when it is running idle in addition to the trigger time).**

Vibration

The vibration total value (tri-axial vector sum) determined according to EN62841-2-1:
Work mode: impact drilling into concrete
Vibration emission ($a_{h,ID}$) : 17.4 m/s^2
Uncertainty (K) : 1.5 m/s^2
Work mode: drilling into metal
Vibration emission ($a_{h,D}$) : 2.5 m/s^2 or less
Uncertainty (K) : 1.5 m/s^2

NOTE: The declared vibration total value(s) has been measured in accordance with a standard test method and may be used for comparing one tool with another.

NOTE: The declared vibration total value(s) may also be used in a preliminary assessment of exposure.

⚠***WARNING:*** **The vibration emission during actual use of the power tool can differ from the declared value(s) depending on the ways in which the tool is used especially what kind of workpiece is processed.**

⚠***WARNING:*** **Be sure to identify safety measures to protect the operator that are based on an estimation of exposure in the actual conditions of use (taking account of all parts of the operating cycle such as the times when the tool is switched off and when it is running idle in addition to the trigger time).**

EC Declaration of Conformity

For European countries only

The EC declaration of conformity is included as Annex A to this instruction manual.

General power tool safety warnings

⚠***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.

Hammer drill safety warnings

Safety instructions for all operations

1. **Wear ear protectors when impact drilling.** Exposure to noise can cause hearing loss.
2. **Use the auxiliary handle(s).** Loss of control can cause personal injury.
3. **Hold the power tool by insulated gripping surfaces, when performing an operation where the cutting accessory may contact hidden wiring or its own cord.** Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.
4. **Always be sure you have a firm footing. Be sure no one is below when using the tool in high locations.**
5. **Hold the tool firmly with both hands.**
6. **Keep hands away from rotating parts.**
7. **Do not leave the tool running. Operate the tool only when hand-held.**
8. **Do not touch the drill bit or the workpiece immediately after operation; they may be extremely hot and could burn your skin.**
9. **Some material contains chemicals which may be toxic. Take caution to prevent dust inhalation and skin contact. Follow material supplier safety data.**
10. **If the drill bit cannot be loosened even you open the jaws, use pliers to pull it out.** In such a case, pulling out the drill bit by hand may result in injury by its sharp edge.

Safety instructions when using long drill bits

1. **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.
2. **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.
3. **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.

SAVE THESE INSTRUCTIONS.

⚠*WARNING:* DO NOT let comfort or familiarity with product (gained from repeated use) replace strict adherence to safety rules for the subject product. MISUSE or failure to follow the safety rules stated in this instruction manual may cause serious personal injury.

FUNCTIONAL DESCRIPTION

⚠*CAUTION:* Always be sure that the tool is switched off and unplugged before adjusting or checking function on the tool.

Switch action

⚠*WARNING:* Before plugging in the tool, always check to see that the switch trigger actuates properly and returns to the "OFF" position when released.

► **Fig.1: 1.** Switch trigger **2.** Lock button

To start the tool, simply pull the switch trigger. Tool speed is increased by increasing pressure on the switch trigger. Release the switch trigger to stop.

For continuous operation, pull the switch trigger, push in the lock button and then release the switch trigger. To stop the tool from the locked position, pull the switch trigger fully, then release it.

⚠*CAUTION:* Switch can be locked in "ON" position for ease of operator comfort during extended use. Apply caution when locking tool in "ON" position and maintain firm grasp on tool.

Reversing switch action

⚠*CAUTION:* Always check the direction of rotation before operation.

⚠*CAUTION:* Use the reversing switch only after the tool comes to a complete stop. Changing the direction of rotation before the tool stops may damage the tool.

⚠*CAUTION:* If the switch trigger can not be depressed, check to see that the reversing switch is fully set to the position ⇦ (A side) or the position ⇨ (B side).

► **Fig.2: 1.** Reversing switch lever

This tool has a reversing switch to change the direction of rotation. Move the reversing switch lever to the position ⇦ (A side) for clockwise rotation or to the position ⇨ (B side) for counterclockwise rotation.

Selecting the action mode

⚠*CAUTION:* Always slide the action mode changing lever all the way to your desired mode position. If you operate the tool with the lever positioned halfway between the mode symbols, the tool may be damaged.

► **Fig.3: 1.** Action mode changing lever

This tool has an action mode changing lever. For rotation with hammering, slide the action mode changing lever to the right (symbol). For rotation only, slide the action mode changing lever to the left (symbol).

ASSEMBLY

⚠*CAUTION:* Always be sure that the tool is switched off and unplugged before carrying out any work on the tool.

Installing side grip (auxiliary handle)

⚠*CAUTION:* Always be sure that the tool is switched off and unplugged before installing or removing the side grip.

► **Fig.4:** **1.** Grip base **2.** Teeth **3.** Side grip (auxiliary handle) **4.** Protrusion **5.** Loosen **6.** Tighten

Always use the side grip to ensure operating safety. Install the side grip so that the teeth on the grip fit in between the protrusions on the tool barrel. Then tighten the grip by turning clockwise at the desired position. It may be swung 360° so as to be secured at any position.

Installing or removing drill bit

⚠*CAUTION:* Always be sure that the tool is switched off and unplugged before installing or removing the drill bit.

For model HP1630

► **Fig.5:** **1.** Drill chuck **2.** Chuck key

To install the drill bit, place it in the drill chuck as far as it will go. Tighten the chuck by hand. Place the chuck key in each of the three holes and tighten clockwise. Be sure to tighten all three chuck holes evenly.

To remove the drill bit, turn the drill chuck key counterclockwise in just one hole, then loosen the chuck by hand.

For model HP1631

► **Fig.6:** **1.** Sleeve **2.** Ring

Hold the ring and turn the sleeve counterclockwise to open the chuck jaws. Place the drill bit in the drill chuck as far as it will go. Hold the ring firmly and turn the sleeve clockwise to tighten the chuck.
To remove the drill bit, hold the ring and turn the sleeve counterclockwise.

Depth gauge

Optional accessory

► **Fig.7:** **1.** Depth gauge **2.** Side grip **3.** Grip base

The depth gauge is convenient for drilling holes of uniform depth. Loosen the side grip and insert the depth gauge into the hole in the grip base. Adjust the depth gauge to the desired depth and tighten the side grip firmly.

NOTE: Make sure that the depth gauge does not touch the main body of the tool when attaching it.

OPERATION

⚠*CAUTION:* Always use the side grip (auxiliary handle) and firmly hold the tool by both side grip and switch handle during operations.

► **Fig.8**

Hammer drilling operation

⚠*CAUTION:* There is tremendous and sudden twisting force exerted on the tool/drill 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 side grip (auxiliary handle) and firmly hold the tool by both side grip and switch handle during operations.** Failure to do so may result in the loss of control of the tool and potentially severe injury.

When drilling in concrete, granite, tile, etc., move the action mode changing lever to the position of symbol to use "rotation with hammering" action.
Be sure to use a tungsten-carbide tipped drill bit.
Position the drill bit at the desired location for the hole, then pull the switch 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 drill bit partially from the hole. By repeating this several times, the hole will be cleaned out and normal drilling may be resumed.

Blow-out bulb

Optional accessory

► **Fig.9:** **1.** Blow-out bulb

After drilling the hole, use the blow-out bulb to clean the dust out of the hole.

Drilling operation

⚠*CAUTION:* 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 drill bit, decrease the tool performance and shorten the service life of the tool.

⚠*CAUTION:* Hold the tool firmly and exert care when the drill bit begins to break through the workpiece. There is a tremendous force exerted on the tool/drill bit at the time of hole break through.

⚠*CAUTION:* A stuck drill 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.

⚠*CAUTION:* Always secure workpieces in a vise or similar hold-down device.

When drilling in wood, metal or plastic materials, slide the action mode changing lever to the position of symbol to use "rotation only" action.

Drilling in wood

When drilling in wood, the best results are obtained with wood drills equipped with a guide screw. The guide screw makes drilling easier by pulling the drill bit into the workpiece.

Drilling in metal

To prevent the drill bit from slipping when starting a hole, make an indentation with a center-punch and hammer at the point to be drilled. Place the point of the drill bit in the indentation and start drilling.
Use a cutting lubricant when drilling metals. The exceptions are iron and brass which should be drilled dry.

MAINTENANCE

⚠***CAUTION:*** **Always be sure that the tool is switched off and unplugged before attempting to perform inspection or maintenance.**

NOTICE: **Never use gasoline, benzine, thinner, alcohol or the like. Discoloration, deformation or cracks may result.**

To maintain product SAFETY and RELIABILITY, repairs, carbon brush inspection and replacement, any other maintenance or adjustment should be performed by Makita Authorized or Factory Service Centers, always using Makita replacement parts.

OPTIONAL ACCESSORIES

⚠***CAUTION:*** **These accessories or attachments are recommended for use with your Makita tool specified in this manual.** The use of any other accessories or attachments might present a risk of injury to persons. Only use accessory or attachment for its stated purpose.

If you need any assistance for more details regarding these accessories, ask your local Makita Service Center.

- Drill bits
- Blow-out bulb
- Safety goggles
- Keyless drill chuck 13
- Chuck key
- Grip assembly
- Depth gauge

NOTE: Some items in the list may be included in the tool package as standard accessories. They may differ from country to country.