









# **ENGLISH** (Original instructions)

## Explanation of general view

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### **SPECIFICATIONS**

Model		M8700
Capacities	Concrete	22 mm
	Core bit	54 mm
	Diamond core bit (dry type)	65 mm
	Steel	13 mm
	Wood	32 mm
No load speed (min <sup>-1</sup> )		0 – 1,100
Blows per minute		0 – 4,350
Overall length		362 mm
Net weight		2.5 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 01/2003

ENE042-1

# Intended use

The tool is intended for hammer drilling and drilling in brick, concrete and stone.

It is also suitable for drilling without impact in wood, metal, ceramic and plastic.

ENF002-2

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.

GEA010-1

# **General Power Tool Safety Warnings**

MARNING 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.

GEB007-7

## **ROTARY HAMMER SAFETY WARNINGS**

- Wear ear protectors. Exposure to noise can cause hearing loss.
- Use auxiliary handle(s), if supplied with the tool. Loss of control can cause personal injury.

- Hold power tool by insulated gripping surfaces, when performing an operation where the cutting accessory may contact hidden wiring or its own cord. Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.
- Wear a hard hat (safety helmet), safety glasses and/or face shield. Ordinary eye or sun glasses are NOT safety glasses. It is also highly recommended that you wear a dust mask and thickly padded gloves.
- Be sure the bit is secured in place before operation.
- Under normal operation, the tool is designed to produce vibration. The screws can come loose easily, causing a breakdown or accident. Check tightness of screws carefully before operation.
- In cold weather or when the tool has not been used for a long time, let the tool warm up for a while by operating it under no load. This will loosen up the lubrication. Without proper warm up, hammering operation is difficult.
- Always be sure you have a firm footing.
  Be sure no one is below when using the tool in high locations.
- 9. Hold the tool firmly with both hands.
- 10. Keep hands away from moving parts.
- Do not leave the tool running. Operate the tool only when hand-held.
- Do not point the tool at any one in the area when operating. The bit could fly out and injure someone seriously.
- Do not touch the bit or parts close to the bit immediately after operation; they may be extremely hot and could burn your skin.

 Some material contains chemicals which may be toxic. Take caution to prevent dust inhalation and skin contact. Follow material supplier safety data.

# 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 (Fig. 1)

# **↑** CAUTION:

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

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.

# Reversing switch action (Fig. 2)

#### **⚠** CAUTION:

- Always check the direction of rotation before operation.
- 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.
- If the switch trigger can not be depressed, check to see that the reversing switch is fully set to position < (A side) or (B side).

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

#### Selecting the action mode (Fig. 3)

This tool employs an action mode changing knob. Select one of the two modes suitable for your work needs by using this knob.

For rotation only, turn the knob so that the arrow on the knob points toward the  $\frac{2}{3}$  symbol on the tool body.

For rotation with hammering, turn the knob so that the arrow on the knob points toward the  $\ensuremath{\mathfrak{P}\!\!1}$  symbol on the tool body.

# **⚠** CAUTION:

- Always set the knob fully to your desired mode symbol.
  If you operate the tool with the knob positioned half-way between the mode symbols, the tool may be damaged.
- · Use the knob after the tool comes to a complete stop.

# Torque limiter

The torque limiter will actuate when a certain torque level is reached. The motor will disengage from the output shaft. When this happens, the bit will stop turning.

## **⚠** CAUTION:

- As soon as the torque limiter actuates, switch off the tool immediately. This will help prevent premature wear of the tool.
- Bits such as hole saw, which tend to pinch or catch easily in the hole, are not appropriate for this tool. This is because they will cause the torque limiter to actuate too frequently.

#### **ASSEMBLY**

#### **!** CAUTION:

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

### Side grip (auxiliary handle) (Fig. 4)

### **⚠** CAUTION:

Always use the side grip to ensure operating safety.

Install the side grip so that the protrusions on the grip fit in between the grooves on the tool barrel. Then tighten the thumb screw to fix the grip at the desired position. It may be swung 360° so as to be secured at any position.

### Bit grease

Coat the bit shank head beforehand with a small amount of bit grease (about 0.5 - 1 g).

This chuck lubrication assures smooth action and longer service life.

#### Installing or removing the bit

Clean the bit shank and apply bit grease before installing the bit. **(Fig. 5)** 

Insert the bit into the tool. Turn the bit and push it in until it engages. (Fig. 6)

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

To remove the bit, pull the chuck cover down all the way and pull the bit out. (Fig. 7)

## Depth gauge (Fig. 8)

The depth gauge is convenient for drilling holes of uniform depth. Loosen the thumb screw and adjust the depth gauge to the desired depth. After adjusting, tighten the thumb screw firmly.

#### NOTE:

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

### **OPERATION**

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

# Hammer drilling operation (Fig. 9)

Set the action mode changing knob to the \( \mathbb{T} \) symbol. Position the 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 bit partially from the hole. By repeating this several times, the hole will be cleaned out and normal drilling may be resumed.

Set the action mode changing knob to the TB symbol.

## **⚠** CAUTION:

• There is 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 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.

#### NOTE:

 Eccentricity in the bit rotation may occur while operating the tool with no load. The tool automatically centers itself during operation. This does not affect the drilling precision.

### Drilling in wood or metal (Fig. 10)

Use the optional drill chuck assembly. When installing it, refer to the section "Installing or removing the bit".

#### **⚠** CAUTION:

 Never use "rotation with hammering" when the drill chuck is installed on the tool. The drill chuck may be damaged.

Also, the drill chuck will come off when reversing the

- 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 breakthrough. 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.

## Diamond core drilling

When performing diamond core drilling operations, always set the change lever to the  $\frac{1}{2}$  position to use "rotation only" action.

# **A** CAUTION:

 If performing diamond core drilling operations using "rotation with hammering" action, the diamond core bit may be damaged.

#### MAINTENANCE

#### **⚠** CAUTION:

- Always be sure that the tool is switched off and unplugged before attempting to perform inspection or maintenance.
- 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 Service Centers, always using Makita replacement parts.

ENG905-1

#### Noise

The typical A-weighted noise level determined according to EN60745:

Sound pressure level ( $L_{pA}$ ): 90 dB (A) Sound power level ( $L_{WA}$ ): 101 dB (A) Uncertainty (K): 3 dB (A)

#### Wear ear protection

ENG900-1

#### Vibration

The vibration total value (tri-axial vector sum) determined according to EN60745:

Work mode: hammer drilling into concrete Vibration emission ( $a_{h,\,HD}$ ): 15.5 m/s<sup>2</sup> Uncertainty (K): 1.5 m/s<sup>2</sup>

Work mode: drilling into metal Vibration emission  $(a_{h,\,D})$ : 3.0 m/s<sup>2</sup> Uncertainty (K): 1.5 m/s<sup>2</sup>

ENG901-1

- The declared vibration emission value has been measured in accordance with the standard test method and may be used for comparing one tool with another.
- The declared vibration emission value 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 emission value depending on the ways in which the tool is used.
- 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).

## For European countries only

## **EC Declaration of Conformity**

# Makita declares that the following Machine(s):

Designation of Machine:

Rotary Hammer

Model No./ Type: M8700

# Conforms to the following European Directives:

2006/42/EC

They are manufactured in accordance with the following standard or standardized documents:

EN60745

The technical file in accordance with 2006/42/EC is available from:

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1.12.2014 Yasushi Fikaji

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