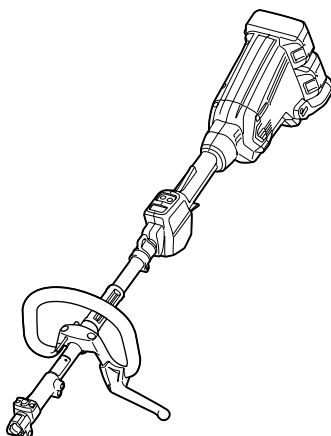




EN	Cordless Multi Function Power Head	INSTRUCTION MANUAL	5
FR	Moteur Multi-Fonctions Sans Fil	MANUEL D'INSTRUCTIONS	15
DE	Multifunktions-Antrieb	BETRIEBSANLEITUNG	26
IT	Testa motorizzata multifunzione a batteria	ISTRUZIONI PER L'USO	37
NL	Multifunctioneel accuaandrijfsysteem	GEBRUIKSAANWIJZING	48
ES	Herramienta Multifuncional Inalámbrica	MANUAL DE INSTRUCCIONES	59
PT	FERRAMENTA MULTIFUNCIONAL A BATERIA	MANUAL DE INSTRUÇÕES	70
DA	Akku flerfunktions motorhoved	BRUGSANVISNING	80
EL	Φορητή πολυλειτουργική ηλεκτρική κεφαλή	ΕΓΧΕΙΡΙΔΙΟ ΟΔΗΓΙΩΝ	90
TR	Kablosuz Çok Fonksiyonlu Akülü Kafa	KULLANMA KILAVUZU	101

DUX60



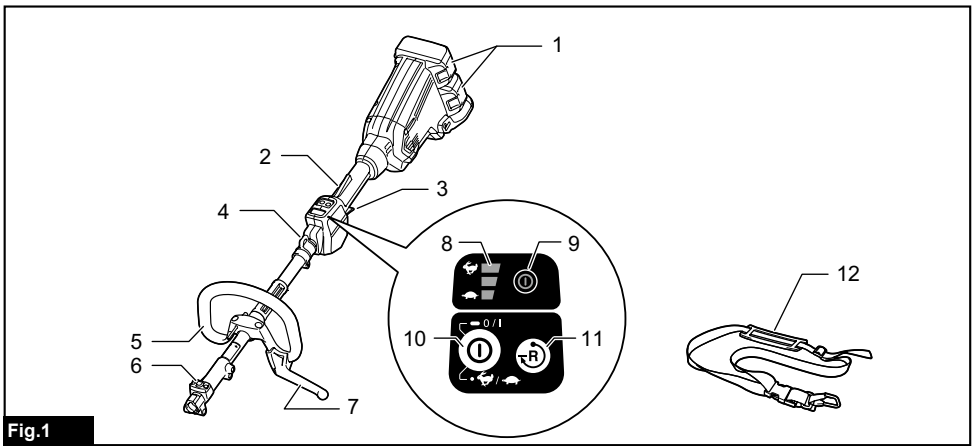


Fig.1

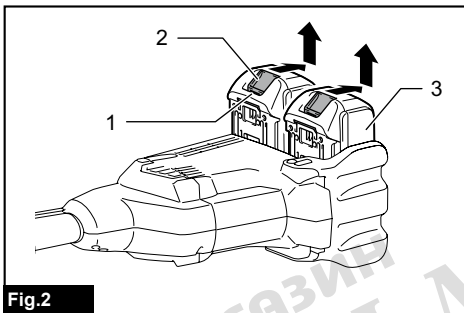


Fig.2

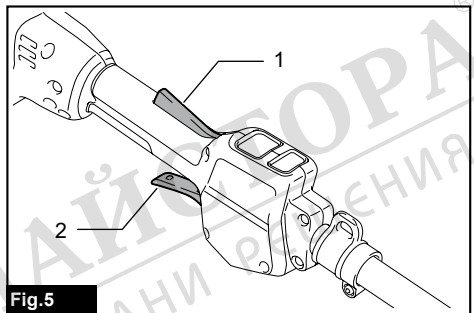


Fig.5

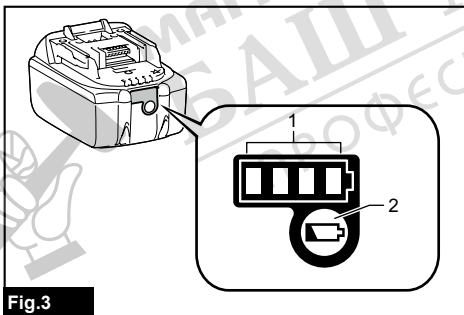


Fig.3

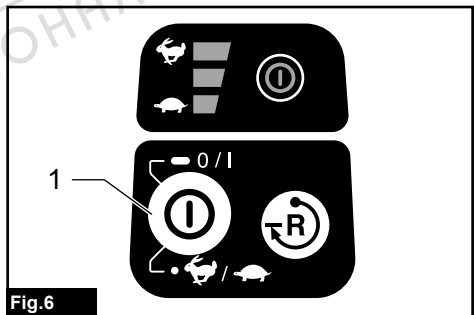


Fig.6

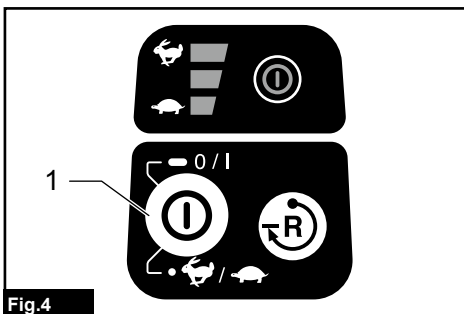


Fig.4

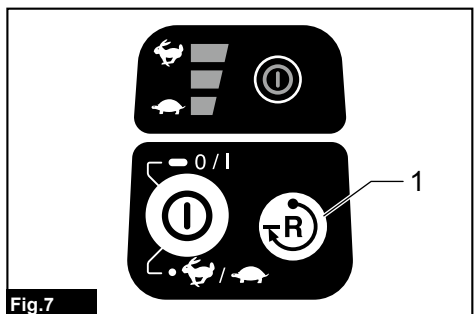
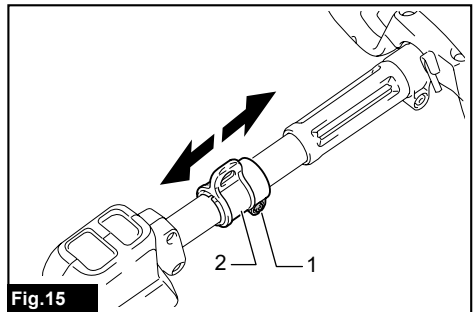
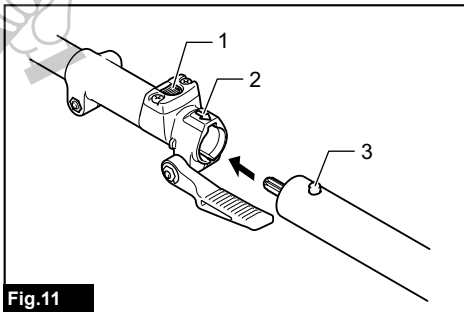
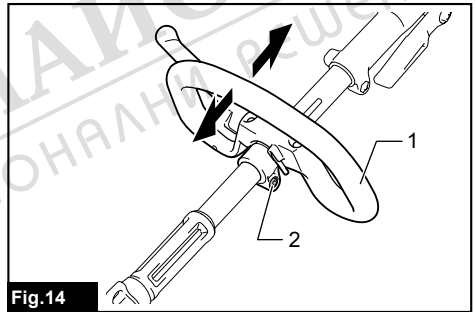
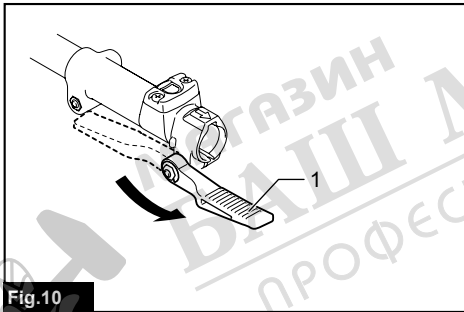
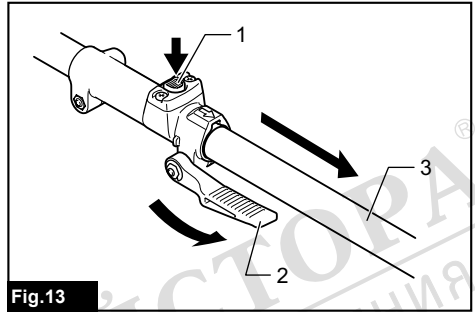
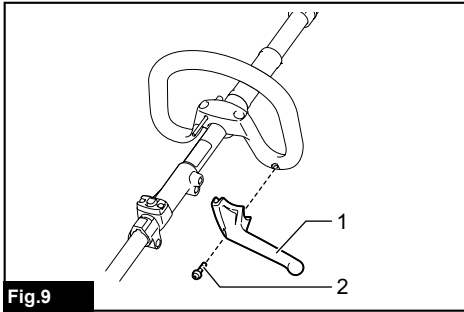
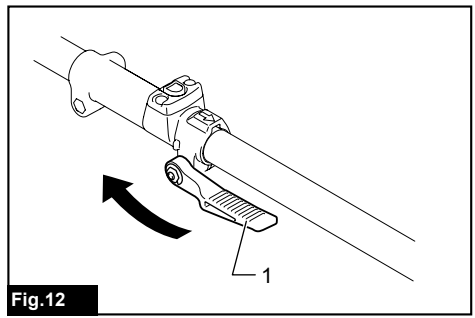
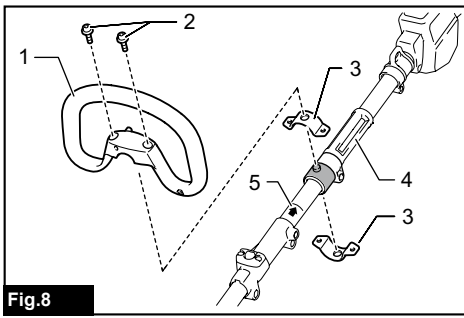


Fig.7



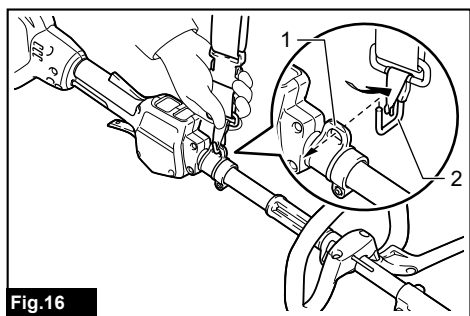


Fig.16

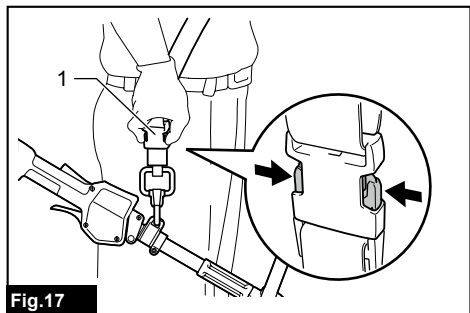


Fig.17

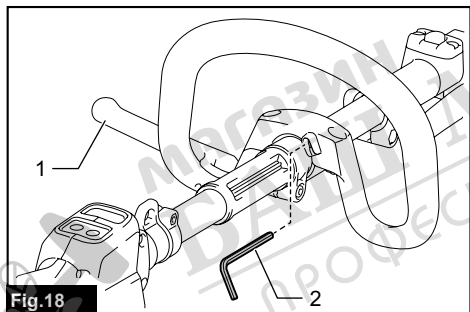


Fig.18

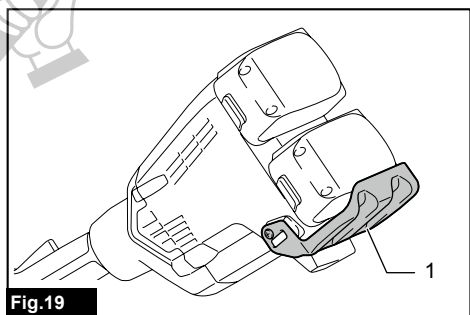


Fig.19

SPECIFICATIONS

Model:		DUX60
No load speed (without attachment)	Low	0 - 5,700 min ⁻¹
	Medium	0 - 8,200 min ⁻¹
	High	0 - 9,700 min ⁻¹
Overall length		1,011 mm
Rated voltage		D.C. 36 V
Net weight		5.1 kg - 11.7 kg

- 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.
- The weight may differ depending on the attachment(s), including the battery cartridge. The lightest and heaviest combinations, according to EPTA-Procedure 01/2014, are shown in the table.

Applicable battery cartridge and charger

Battery cartridge	BL1815N / BL1820B / BL1830B / BL1840B / BL1850B / BL1860B
Charger	DC18RC / DC18RD / DC18RE / DC18SD / DC18SE / DC18SF / DC18SH / DC18WC

- Some of the battery cartridges and chargers listed above may not be available depending on your region of residence.

⚠WARNING: Only use the battery cartridges and chargers listed above. Use of any other battery cartridges and chargers may cause injury and/or fire.

Recommended cord connected power source

Cord connected battery pack	BL36120A
Portable power pack	PDC01 / PDC1200

- The cord connected power source(s) listed above may not be available depending on your region of residence.
- Before using the cord connected power source, read instruction and cautionary markings on them.

No load speed with attachment

Model	Rotation speed		
	Low	Medium	High
EM401MP	0 - 4,200 min ⁻¹	0 - 6,000 min ⁻¹	0 - 7,100 min ⁻¹
EM404MP / EM406MP	0 - 3,500 min ⁻¹	0 - 5,000 min ⁻¹	0 - 6,000 min ⁻¹
EM407MP	Upper blade	0 - 220 min ⁻¹	0 - 310 min ⁻¹
	Lower blade	0 - 470 min ⁻¹	0 - 670 min ⁻¹
EM408MP / EM409MP	0 - 4,200 min ⁻¹	0 - 6,000 min ⁻¹	0 - 7,100 min ⁻¹
EN401MP / EN410MP / EN420MP (Strokes per minute)	0 - 2,400 min ⁻¹	0 - 3,400 min ⁻¹	0 - 4,000 min ⁻¹
EY401MP (chain speed)	0 - 12 m/s	0 - 17 m/s	0 - 20 m/s
EY403MP (chain speed)	0 - 11 m/s	0 - 16 m/s	0 - 19 m/s
KR400MP	0 - 160 min ⁻¹	0 - 230 min ⁻¹	0 - 280 min ⁻¹
KR401MP	0 - 130 min ⁻¹	0 - 190 min ⁻¹	0 - 230 min ⁻¹
EE400MP	0 - 2,800 min ⁻¹	0 - 4,000 min ⁻¹	0 - 4,700 min ⁻¹
EJ400MP	0 - 1,600 min ⁻¹	0 - 2,300 min ⁻¹	0 - 2,800 min ⁻¹
BR400MP	0 - 130 min ⁻¹	0 - 190 min ⁻¹	0 - 230 min ⁻¹
SW400MP	0 - 130 min ⁻¹	0 - 190 min ⁻¹	0 - 230 min ⁻¹

Model	Rotation speed		
	Low	Medium	High
UB400MP	0 - 5,700 min ⁻¹	0 - 7,850 min ⁻¹	0 - 8,250 min ⁻¹
UB401MP	0 - 5,700 min ⁻¹	0 - 7,850 min ⁻¹	0 - 8,250 min ⁻¹
UB402MP	0 - 5,700 min ⁻¹	0 - 8,100 min ⁻¹	0 - 9,600 min ⁻¹
PF400MP	0 - 5,600 min ⁻¹	0 - 8,100 min ⁻¹	0 - 9,100 min ⁻¹

Approved attachment

Type	Model
Brushcutter attachment	EM401MP / EM404MP
String trimmer attachment	EM406MP
Rotary scissors attachment	EM407MP
Grass trimmer attachment	EM408MP / EM409MP
Hedge trimmer attachment	EN401MP / EN410MP
Ground trimmer attachment	EN420MP
Pole saw attachment	EY401MP / EY403MP
Cultivator attachment	KR400MP / KR401MP
Edger attachment	EE400MP
Coffee harvester attachment	EJ400MP
Shaft extension attachment	LE400MP
Power brush attachment	BR400MP
Power sweep attachment	SW400MP
Blower attachment	UB400MP / UB401MP / UB402MP
Pump attachment	PF400MP

Symbols

The followings show the symbols which may be used for the equipment. Be sure that you understand their meaning before use.



Read instruction manual.



Take particular care and attention.



Do not expose to moisture.



Only for EU countries

Due to the presence of hazardous components in the equipment, waste electrical and electronic equipment, accumulators and batteries may have a negative impact on the environment and human health.

Do not dispose of electrical and electronic appliances or batteries with household waste!

In accordance with the European Directive on waste electrical and electronic equipment and on accumulators and batteries and waste accumulators and batteries, as well as their adaptation to national law, waste electrical equipment, batteries and accumulators should be stored separately and delivered to a separate collection point for municipal waste, operating in accordance with the regulations on environmental protection.

This is indicated by the symbol of the crossed-out wheeled bin placed on the equipment.

Intended use

This cordless multi function power head is intended for driving an approved attachment listed in the section "SPECIFICATIONS" of this instruction manual. Never use the unit for the other purpose.

⚠ WARNING: Read the instruction manual of the attachment as well as this instruction manual before using. Failure to follow the warnings and instructions may result serious injury.

Noise

Attachment		Sound pressure level average		Sound power level average		Applicable standard
		L _{PA} (dB (A))	Uncertainty K (dB (A))	L _{WA} (dB (A))	Uncertainty K (dB (A))	
EM401MP (as a brushcutter)		78.5	1.0	90.2	1.5	EN11806
EM401MP (as a string trimmer)	Nylon cutting head	84.3	0.6	93.3	1.6	EN50636-2-91
	Plastic blade	77.0	1.7	88.5	1.8	EN50636-2-91
EM404MP (as a brushcutter)		82.5	2.2	93.3	2.9	EN11806
EM404MP (as a string trimmer)	Nylon cutting head	84.7	2.3	92.8	1.6	EN50636-2-91
	Plastic blade	76.0	1.8	87.7	1.5	EN50636-2-91
EM406MP	Nylon cutting head	84.7	2.5	93.5	2.2	EN50636-2-91
	Plastic blade	77.0	1.9	85.6	2.0	EN50636-2-91
EM407MP		83.2	3.9	99.3	2.5	ISO22868 (ISO11806-1)
EM408MP (as a brushcutter)		79.9	2.6	94.5	2.0	ISO22868 (ISO11806-1)
EM408MP (as a string trimmer)	Nylon cutting head	79.0	2.6	91.8	1.7	ISO22868 (ISO11806-1)/ EN50636-2-91
	Plastic blade	80.1	0.7	91.0	1.6	ISO22868 (ISO11806-1)/ EN50636-2-91
EM409MP	Nylon cutting head	79.9	2.3	92.7	0.9	ISO22868 (ISO11806-1)/ EN50636-2-91
	Plastic blade	80.3	0.9	91.2	2.2	ISO22868 (ISO11806-1)/ EN50636-2-91
EN401MP		82.0	3.0	93.0	3.0	EN62841-4-2
EN401MP + LE400MP		82.0	3.0	93.0	3.0	EN62841-4-2
EN410MP		77.0	3.0	88.0	3.0	EN62841-4-2
EN410MP + LE400MP		77.0	3.0	88.0	3.0	EN62841-4-2
EN420MP		83	3.0	94	3.0	EN62841-4-2
EY401MP		92.5	1.4	101.9	1.4	ISO11680-1
EY401MP + LE400MP		86.6	1.0	101.2	1.0	ISO11680-1
EY403MP		96	3	105	3	ISO22868 (ISO11680-1)
EY403MP+LE400MP		96	3	105	3	ISO22868 (ISO11680-1)
KR400MP		76.7	2.2	84.2	1.0	EN709
KR401MP		73.1	1.4	84.2	1.8	EN709
EE400MP		74.8	1.5	88.2	2.6	ISO11789
EJ400MP		87.4	1.4	94.5	1.3	ISO10517
EJ400MP + LE400MP		85.6	1.0	95.5	1.3	ISO10517
BR400MP		79.5	0.9	89.0	0.7	EN60335-2-72
SW400MP		80.1	1.8	88.8	0.7	EN60335-2-72
UB400MP		89.8	0.4	100.4	0.8	EN50636-2-100
UB401MP		83.4	1.1	94.1	0.8	EN50636-2-100
UB402MP		80.5	1.6	90.2	1.7	EN50636-2-100
PF400MP		81	6	87	3	ISO11201 / ISO3744

- Even if the sound pressure level listed above is 80 dB (A) or less, the level under working may exceed 80 dB (A). Wear ear protection.

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.

Vibration

Attachment		Left handle (Front grip)		Right handle (Rear grip)		Applicable standard
		ah (m/s ²)	Uncertainty K (m/s ²)	ah (m/s ²)	Uncertainty K (m/s ²)	
EM401MP (as a brushcutter)		3.0	1.5	≤ 2.5	1.5	EN11806
EM401MP (as a string trimmer)	Nylon cutting head	5.0	1.5	≤ 2.5	1.5	EN50636-2-91
	Plastic blade	≤ 2.5	1.5	≤ 2.5	1.5	EN50636-2-91
EM404MP (as a brushcutter)		3.0	1.5	≤ 2.5	1.5	EN11806
EM404MP (as a string trimmer)	Nylon cutting head	3.0	1.5	≤ 2.5	1.5	EN50636-2-91
	Plastic blade	≤ 2.5	1.5	≤ 2.5	1.5	EN50636-2-91
EM406MP	Nylon cutting head	2.5	1.5	≤ 2.5	1.5	EN50636-2-91
	Plastic blade	4.0	1.5	≤ 2.5	1.5	EN50636-2-91
EM407MP		≤ 2.5	1.5	≤ 2.5	1.5	ISO22867 (ISO11806-1)
EM408MP (as a brushcutter)		≤ 2.5	1.5	≤ 2.5	1.5	ISO22867 (ISO11806-1)
EM408MP (as a string trimmer)	Nylon cutting head	≤ 2.5	1.5	≤ 2.5	1.5	ISO22867 (ISO11806-1)
	Plastic blade	≤ 2.5	1.5	≤ 2.5	1.5	ISO22867 (ISO11806-1)
EM409MP	Nylon cutting head	≤ 2.5	1.5	≤ 2.5	1.5	ISO22867 (ISO11806-1)
	Plastic blade	≤ 2.5	1.5	≤ 2.5	1.5	ISO22867 (ISO11806-1)
EN401MP		5.5	1.5	3.5	1.5	EN62841-4-2
EN401MP + LE400MP		5.5	1.5	4.0	1.5	EN62841-4-2
EN410MP		4.0	1.5	2.5	1.5	EN62841-4-2
EN410MP + LE400MP		4.5	1.5	2.5	1.5	EN62841-4-2
EN420MP		6.5	1.5	4.0	1.5	EN62841-4-2
EY401MP		2.5	1.5	≤ 2.5	1.5	ISO11680-1
EY401MP + LE400MP		5.5	1.5	≤ 2.5	1.5	ISO11680-1
EY403MP		2.7	1.5	≤ 2.5	1.5	ISO22867 (ISO11680-1)
EY403MP+LE400MP		3.0	1.5	≤ 2.5	1.5	ISO22867 (ISO11680-1)
KR400MP		≤ 2.5	1.5	≤ 2.5	1.5	EN709
KR401MP		≤ 2.5	1.5	≤ 2.5	1.5	EN709
EE400MP		≤ 2.5	1.5	≤ 2.5	1.5	ISO11789
EJ400MP		4.0	1.5	3.0	1.5	ISO10517
EJ400MP + LE400MP		4.5	1.5	3.0	1.5	ISO10517
BR400MP		≤ 2.5	1.5	≤ 2.5	1.5	EN60335-2-72
SW400MP		2.6	1.5	2.6	1.5	EN60335-2-72
UB400MP		4.5	2.0	≤ 2.5	1.5	EN50636-2-100
UB401MP		3.6	1.7	≤ 2.5	1.5	EN50636-2-100
UB402MP		≤ 2.5	1.5	≤ 2.5	1.5	EN50636-2-100

Attachment	Left handle (Front grip)		Right handle (Rear grip)		Applicable standard
	ah (m/s ²)	Uncertainty K (m/s ²)	ah (m/s ²)	Uncertainty K (m/s ²)	
PF400MP	≤ 2.5	1.5	≤ 2.5	1.5	ISO22867

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).

Declarations of Conformity

For European countries only

The Declarations of conformity are included in Annex A to this instruction manual.

SAFETY WARNINGS

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.

Important safety instructions for battery cartridge

- Before using battery cartridge, read all instructions and cautionary markings on (1) battery charger, (2) battery, and (3) product using battery.
- Do not disassemble or tamper with the battery cartridge. It may result in a fire, excessive heat, or explosion.
- If operating time has become excessively shorter, stop operating immediately. It may result in a risk of overheating, possible burns and even an explosion.
- If electrolyte gets into your eyes, rinse them out with clear water and seek medical attention right away. It may result in loss of your eyesight.
- Do not short the battery cartridge:
 - Do not touch the terminals with any conductive material.
 - Avoid storing battery cartridge in a container with other metal objects such as nails, coins, etc.
 - Do not expose battery cartridge to water or rain.

A battery short can cause a large current flow, overheating, possible burns and even a breakdown.

- Do not store and use the tool and battery cartridge in locations where the temperature may reach or exceed 50 °C (122 °F).
- Do not incinerate the battery cartridge even if it is severely damaged or is completely worn out. The battery cartridge can explode in a fire.
- Do not nail, cut, crush, throw, drop the battery cartridge, or hit against a hard object to the battery cartridge. Such conduct may result in a fire, excessive heat, or explosion.
- Do not use a damaged battery.
- The contained lithium-ion batteries are subject to the Dangerous Goods Legislation requirements.

For commercial transports e.g. by third parties, forwarding agents, special requirement on packaging and labeling must be observed.

For preparation of the item being shipped, consulting an expert for hazardous material is required. Please also observe possibly more detailed national regulations.

Tape or mask off open contacts and pack up the battery in such a manner that it cannot move around in the packaging.

- When disposing the battery cartridge, remove it from the tool and dispose of it in a safe place. Follow your local regulations relating to disposal of battery.
- Use the batteries only with the products specified by Makita. Installing the batteries to non-compliant products may result in a fire, excessive heat, explosion, or leak of electrolyte.
- If the tool is not used for a long period of time, the battery must be removed from the tool.
- During and after use, the battery cartridge may take on heat which can cause burns or low temperature burns. Pay attention to the handling of hot battery cartridges.
- Do not touch the terminal of the tool immediately after use as it may get hot enough to cause burns.
- Do not allow chips, dust, or soil stuck into the terminals, holes, and grooves of the battery cartridge. It may cause heating, catching fire, burst and malfunction of the tool or battery cartridge, resulting in burns or personal injury.

17. Unless the tool supports the use near high-voltage electrical power lines, do not use the battery cartridge near high-voltage electrical power lines. It may result in a malfunction or breakdown of the tool or battery cartridge.
18. Keep the battery away from children.

SAVE THESE INSTRUCTIONS.

⚠ CAUTION: Only use genuine Makita batteries. Use of non-genuine Makita batteries, or batteries that have been altered, may result in the battery bursting causing fires, personal injury and damage. It will also void the Makita warranty for the Makita tool and charger.

Tips for maintaining maximum battery life

1. Charge the battery cartridge before completely discharged. Always stop tool operation and charge the battery cartridge when you notice less tool power.
2. Never recharge a fully charged battery cartridge. Overcharging shortens the battery service life.
3. Charge the battery cartridge with room temperature at 10 °C - 40 °C (50 °F - 104 °F). Let a hot battery cartridge cool down before charging it.
4. When not using the battery cartridge, remove it from the tool or the charger.
5. Charge the battery cartridge if you do not use it for a long period (more than six months).

PARTS DESCRIPTION

► Fig.1

1	Battery cartridge	2	Lock-off lever	3	Switch trigger	4	Hanger
5	Handle	6	Release button	7	Barrier (country specific)	8	Speed indicator
9	Power lamp	10	Main power button	11	Reverse button	12	Shoulder harness

FUNCTIONAL DESCRIPTION

⚠ WARNING: Always be sure that the tool is switched off and the battery cartridge is removed before adjusting or checking function on the tool. Failure to switch off and remove the battery cartridge may result in serious personal injury from accidental start-up.

Installing or removing battery cartridge

⚠ CAUTION: Always switch off the tool before installing or removing of the battery cartridge.

⚠ CAUTION: Hold the tool and the battery cartridge firmly when installing or removing battery cartridge. Failure to hold the tool and the battery cartridge firmly may cause them to slip off your hands and result in damage to the tool and battery cartridge and a personal injury.

► Fig.2: 1. Red indicator 2. Button 3. Battery cartridge

To remove the battery cartridge, slide it from the tool while sliding the button on the front of the cartridge.

To install the battery cartridge, align the tongue on the battery cartridge with the groove in the housing and slip it into place. Insert it all the way until it locks in place with a little click. If you can see the red indicator as shown in the figure, it is not locked completely.

⚠ CAUTION: Always install the battery cartridge fully until the red indicator cannot be seen. If not, it may accidentally fall out of the tool, causing injury to you or someone around you.


⚠ CAUTION: Do not install the battery cartridge forcibly. If the cartridge does not slide in easily, it is not being inserted correctly.

Tool / battery protection system

The tool is equipped with a tool/battery protection system. This system automatically cuts off power to the motor to extend tool and battery life. The tool will automatically stop during operation if the tool or battery is placed under one of the following conditions:

Status	Indicator lamps		
	<input type="checkbox"/> On	<input type="checkbox"/> Off	<input type="checkbox"/> Blinking
Overload			
Overheat			
Over discharge			


Overload protection

If the tool is overloaded by entangled weeds or other debris,  and the middle indicators start blinking and the tool automatically stops. In this situation, turn the tool off and stop the application that caused the tool to become overloaded. Then turn the tool on to restart.

Overheat protection for tool or battery

When a over heating occurs, all speed indicators blink. If the overheating occurs, the tool stops automatically. Let the tool and/or battery cool down before turning the tool on again.

Overdischarge protection



















When the battery capacity becomes low, the tool stops automatically and  indicator blinks. If the tool does not operate even when the switches are operated, remove the batteries from the tool and charge the batteries.

Indicating the remaining battery capacity

Only for battery cartridges with the indicator

► Fig.3: 1. Indicator lamps 2. Check button

Press the check button on the battery cartridge to indicate the remaining battery capacity. The indicator lamps light up for a few seconds.

Indicator lamps			Remaining capacity
 Lighted	 Off	 Blinking	
			75% to 100%
			50% to 75%
			25% to 50%
			0% to 25%
			Charge the battery.
 	 	 	The battery may have malfunctioned.

NOTE: Depending on the conditions of use and the ambient temperature, the indication may differ slightly from the actual capacity.

NOTE: The first (far left) indicator lamp will blink when the battery protection system works.

Main power switch

⚠ WARNING: Always turn off the main power switch when not in use.

To stand by the tool, press the main power button until the main power lamp lights up. To turn off, press the main power button again.

► Fig.4: 1. Main power button

NOTE: The main power lamp blinks if the switch trigger is pulled under unoperable conditions. The lamp blinks if you turn on the main power switch while holding down the lock-off lever and the switch trigger.

NOTE: This tool employs the auto power-off function. To avoid unintentional start up, the main power switch will automatically shut down when the switch trigger is not pulled for a certain period after the main power switch is turned on.

Switch action

⚠ WARNING: For your safety, this tool is equipped with lock-off lever which prevents the tool from unintended starting. NEVER use the tool if it runs when you simply pull the switch trigger without pressing the lock-off lever. Return the tool to our authorized service center for proper repairs BEFORE further usage.

⚠ WARNING: NEVER tape down or defeat purpose and function of lock-off lever.

⚠ CAUTION: Before installing the battery cartridge into the tool, always check to see that the switch trigger actuates properly and returns to the "OFF" position when released.

NOTICE: Do not pull the switch trigger hard without pressing the lock-off lever. This can cause switch breakage.

To prevent the switch trigger from being accidentally pulled, a lock-off lever is provided.

► Fig.5: 1. Lock-off lever 2. Switch trigger




To start the tool, turn on the main power switch and grasp the handle (the lock-off lever is released by the grasp) and then pull the switch trigger. Tool speed is increased by increasing the pressure on the switch trigger. To stop the tool, release the switch trigger.

Speed adjusting

You can adjust the tool speed by tapping the main power button.

Each time you tap the main power button, the level of speed will change.

► **Fig.6:** 1. Main power button

Indicator	Mode
	High
	Medium
	Low

Reverse button for debris removal

⚠ WARNING: Switch off the tool and remove the battery cartridge before you remove entangled weeds or debris which the reverse rotation function can not remove. Failure to switch off and remove the battery cartridge may result in serious personal injury from accidental start-up.

This tool has a reverse button to change the direction of rotation. It is only for removing weeds and debris entangled in the tool.

To reverse the rotation, tap the reverse button and pull the trigger when the tool's head is stopped. The power lamp starts blinking, and the tool's head rotates in reverse direction when you pull the switch trigger.

To return to regular rotation, release the trigger and wait until the tool's head stops.

► **Fig.7:** 1. Reverse button

NOTE: During the reverse rotation, the tool operates only for a short period of time and then automatically stops.

NOTE: Once the tool is stopped, the rotation returns to regular direction when you start the tool again.

NOTE: If you tap the reverse button while the tool's head is still rotating, the tool comes to stop and to be ready for reverse rotation.

Electronic torque control function

The tool electronically detects a sudden drop in the rotation speed which may cause a kickback. In this situation, the tool automatically stops to prevent further rotation of cutting tool. To restart the tool, release the switch trigger. Clear the cause of sudden drop in the rotation speed and then turn the tool on.

NOTE: This function is not a preventive measure for kickbacks.

ASSEMBLY

⚠ WARNING: Always be sure that the tool is switched off and battery cartridge is removed before carrying out any work on the tool. Failure to switch off and remove the battery cartridge may result in serious personal injury from accidental start-up.

⚠ WARNING: Never start the tool unless it is completely assembled. Operation of the tool in a partially assembled state may result in serious personal injury from accidental start-up.

Mounting the handle

Attach the handle with supplied clamps and bolts. Make sure that the handle is located between the spacer and the arrow mark. Do not remove or shrink the spacer.

► **Fig.8:** 1. Handle 2. Hex socket bolt 3. Clamp 4. Spacer 5. Arrow mark

Attach the barrier (country specific) to the handle using the screw on the barrier. Once assembled, do not remove the barrier.

► **Fig.9:** 1. Barrier 2. Screw

Mounting the attachment pipe

⚠ CAUTION: Always check that the attachment pipe is secured after installation. Improper installation may cause the attachment falling off from the power unit and cause personal injury.

Mount the attachment pipe to the power unit.

1. Turn the lever of the power unit toward the attachment side.

► **Fig.10:** 1. Lever

2. Remove the cap of the attachment. Align the pin with the arrow mark and insert the attachment pipe until the release button pops up.

► **Fig.11:** 1. Release button 2. Arrow mark 3. Pin

3. Turn the lever toward the power unit side.

► **Fig.12:** 1. Lever

Make sure that the surface of the lever is parallel to the pipe.

To remove the pipe, turn the lever toward the attachment side and pull the pipe out while pressing down the release button.

► **Fig.13:** 1. Release button 2. Lever 3. Pipe

Adjusting the handle/hanger position

Adjust the handle and hanger position to obtain comfortable handling of the tool.

Loosen the hex socket head bolt on the handle. Move the handle to a comfortable working position and then tighten the bolt.

► **Fig.14:** 1. Handle 2. Hex socket head bolt

Loosen the hex socket head bolt on the hanger. Move the hanger to a comfortable working position and then tighten the bolt.

► **Fig.15:** 1. Hex socket head bolt 2. Hanger

Attaching shoulder harness

⚠ WARNING: Be extremely careful to maintain control of the tool at all times. Do not allow the tool to be deflected toward you or anyone in the work vicinity. Failure to keep control of the tool could result in serious injury to the bystander and the operator.

⚠ CAUTION: Always use the shoulder harness attached. Before operation, adjust the shoulder harness according to the user size to prevent fatigue.

⚠ CAUTION: When you use the tool in combination of the backpack-type power supply such as portable power pack, do not use the shoulder harness included in the tool package, but use the hanging band recommended by Makita.

If you put on the shoulder harness included in the tool package and the shoulder harness of the backpack-type power supply at the same time, removing the tool or backpack-type power supply is difficult in case of an emergency, and it may cause an accident or injury. For the recommended hanging band, ask Makita Authorized Service Centers.

Put the shoulder harness on your left shoulder by putting your head and right arm through it. Keep the tool on your right side.

After putting the shoulder harness, attach it to the tool by connecting the buckles provided on both the tool hook and the harness. Be sure that the buckles click and lock completely in place.

Adjust the strap to the suitable length for your operation.

► **Fig.16:** 1. Hanger 2. Hook

The buckle is provided with a means of quick release which can be accomplished by simply squeezing the sides and the buckle.

► **Fig.17:** 1. Buckle

Hex wrench storage

⚠ CAUTION: Be careful not to leave the hex wrench inserted in the tool head. It may cause injury and/or damage to the tool.

When not in use, store the hex wrench as illustrated to keep it from being lost.

► **Fig.18:** 1. Handle 2. Hex wrench

MAINTENANCE

⚠ WARNING: Always be sure that the tool is switched off and battery cartridge is removed before attempting to perform inspection or maintenance on the tool. Failure to switch off and remove the battery cartridge may result in serious personal injury from accidental start-up.

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

Battery guard

⚠ WARNING: Do not remove the battery guard. Do not use the tool with the battery guard removed or damaged. Direct impact to the battery cartridge may cause battery malfunction and result in injury and/or fire. If the battery guard is deformed or damaged, contact your authorized service center for repairs.

► **Fig.19:** 1. Battery guard

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

TROUBLESHOOTING

Before asking for repairs, conduct your own inspection first. If you find a problem that is not explained in the manual, do not attempt to dismantle the tool. Instead, ask Makita Authorized Service Centers, always using Makita replacement parts for repairs.

State of abnormality	Probable cause (malfunction)	Remedy
Motor does not run.	Battery cartridge is not installed.	Install the battery cartridge.
	Battery problem (under voltage)	Recharge the battery. If recharging is not effective, replace battery.
	The drive system does not work correctly.	Ask your local authorized service center for repair.
Motor stops running after a little use.	Rotation is in reverse.	Change the direction of rotation with the reversing switch.
	Battery's charge level is low.	Recharge the battery. If recharging is not effective, replace battery.
	Overheating.	Stop using of tool to allow it to cool down.
It does not reach maximum RPM.	Battery is installed improperly.	Install the battery cartridge as described in this manual.
	Battery power is dropping.	Recharge the battery. If recharging is not effective, replace battery.
	The drive system does not work correctly.	Ask your local authorized service center for repair.

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.

Refer to "Approved attachment" section for the applicable models for this tool.

- Edger attachment
- Brushcutter attachment
- String trimmer attachment
- Rotary scissors attachment
- Grass trimmer attachment
- Hedge trimmer attachment
- Ground trimmer attachment
- Pole saw attachment
- Coffee harvester attachment
- Cultivator attachment
- Shaft extension attachment
- Power brush attachment
- Power sweep attachment
- Blower attachment
- Pump attachment
- Makita genuine battery and charger

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