

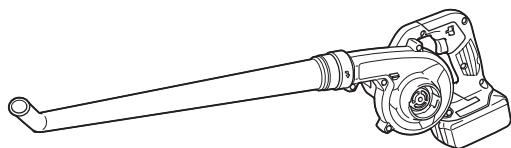
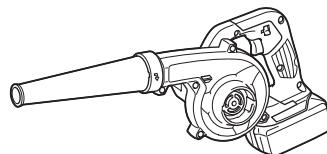
INSTRUCTION MANUAL



Cordless Blower

DUB185

DUB186



Read before use.

SPECIFICATIONS

Model:		DUB185	DUB186
Capacities	Air volume	0 - 3.2 m ³ /min	
	Air speed (average)	0 - 81 m/s	0 - 56 m/s
	Air speed (max.)	0 - 98 m/s	0 - 68 m/s
Overall length		517 mm *1	861 mm *2
Rated voltage		D.C. 18 V	
Net weight	With nozzle	1.6 - 2.1 kg	-
	With garden nozzle	-	1.6 - 2.1 kg

*1. With nozzle and battery cartridge, and without dust bag.

*2. With garden nozzle and battery cartridge, and without dust bag.

- 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 combination, according to EPTA-Procedure 01/2014, are shown in the table.

Applicable battery cartridge and charger

Battery cartridge	BL1815N / BL1820 / BL1820B / BL1830 / BL1830B / BL1840 / BL1840B / BL1850 / BL1850B / BL1860B
Charger	DC18RC / DC18RD / DC18RE / DC18SD / DC18SE / DC18SF / DC18SH

- 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 battery adapter

Battery adapter	PDC01
-----------------	-------

- The battery adapter(s) listed above may not be available depending on your region of residence.
- Before using the battery adapter, read instruction and cautionary markings on the battery adapter.

Symbols

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

	Take particular care and attention.
	Read instruction manual.
	Keep hands away from rotating parts.
	Long hair may cause entanglement accident.
	Keep bystanders away.
	Wear eye and ear protection.
	Do not expose to moisture.



Ni-MH
Li-Ion

Only for EU countries
Do not dispose of electric equipment or battery pack together with household waste material!
In observance of the European Directives, on Waste Electric and Electronic Equipment and Batteries and Accumulators and Waste Batteries and Accumulators and their implementation in accordance with national laws, electric equipment and batteries and battery pack(s) that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility.

Intended use

The machine is intended for blowing and vacuuming.

Noise

The typical A-weighted noise level determined according to EN62841-1:

Model DUB185

Sound pressure level (L_{PA}) : 83 dB(A)

Sound power level (L_{WA}) : 94 dB (A)

Uncertainty (K) : 3 dB(A)

The typical A-weighted noise level determined according to EN50636-2-100:

Model DUB186

Sound pressure level (L_{PA}) : 82.5 dB(A)

Uncertainty (K) : 2.3 dB(A)

Sound power level (L_{WA}) : 92.4 dB (A)

Uncertainty (K) : 2.8 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 EN62841-1:

Model DUB185

Work mode: operation without load

Vibration emission (a_v) : 2.5 m/s² or less

Uncertainty (K) : 1.5 m/s²

The vibration total value (tri-axial vector sum) determined according to EN50636-2-100:

Model DUB186

Work mode: operation without load

Vibration emission (a_v) : 2.5 m/s² or less

Uncertainty (K) : 1.5 m/s²

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).

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.

Work area safety

1. **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
2. **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.
3. **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

Electrical safety

1. **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.
2. **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.
3. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
4. **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.
5. **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.
6. **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.
7. **Power tools can produce electromagnetic fields (EMF) that are not harmful to the user.** However, users of pacemakers and other similar medical devices should contact the maker of their device and/or doctor for advice before operating this power tool.

Personal safety

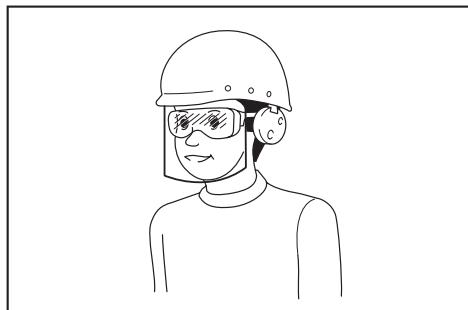
1. **Stay alert, watch what you are doing and use common sense when operating a power tool.** Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating power tools may result in serious personal injury.
2. **Use personal 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.

EC Declaration of Conformity

For European countries only

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

3. **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.
4. **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.
5. **Do not overreach.** Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
6. **Dress properly.** Do not wear loose clothing or jewellery. Keep your hair and clothing away from moving parts. Loose clothes, jewellery or long hair can be caught in moving parts.
7. **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.
8. **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.
9. **Always wear protective goggles to protect your eyes from injury when using power tools.** The goggles must comply with ANSI Z87.1 in the USA, EN 166 in Europe, or AS/NZS 1336 in Australia/New Zealand. In Australia/New Zealand, it is legally required to wear a face shield to protect your face, too.



It is an employer's responsibility to enforce the use of appropriate safety protective equipments by the tool operators and by other persons in the immediate working area.

Power tool use and care

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

4. **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.
5. **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.
6. **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
7. **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.
8. **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.
9. **When using the tool, do not wear cloth work gloves which may be entangled.** The entanglement of cloth work gloves in the moving parts may result in personal injury.

Battery tool use and care

1. **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.
2. **Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.
3. **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.
4. **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.
5. **Do not use a battery pack or tool that is damaged or modified.** Damaged or modified batteries may exhibit unpredictable behaviour resulting in fire, explosion or risk of injury.
6. **Do not expose a battery pack or tool to fire or excessive temperature.** Exposure to fire or temperature above 130 °C may cause explosion.
7. **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.

Service

1. **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.
2. **Never service damaged battery packs.** Service of battery packs should only be performed by the manufacturer or authorized service providers.
3. **Follow instruction for lubricating and changing accessories.**

Cordless Blower Safety Instructions

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.

Training

1. Read the instructions carefully. Be familiar with the controls and the correct use of the machine.
2. Never allow children, persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge or people unfamiliar with these instructions to use the machine. Local regulations may restrict the age of the operator.
3. Never operate the machine while people, especially children, or pets are nearby.
4. Keep in mind that the operator or user is responsible for accidents or hazards occurring to other people or their property.

Preparation

1. Always wear substantial footwear and long trousers while operating the machine.
2. Do not wear loose clothing or jewellery that can be drawn into the air inlet. Keep long hair away from the air inlets.
3. Always wear protective goggles to protect your eyes from injury when using power tools. The goggles must comply with ANSI Z87.1 in the USA, EN 166 in Europe, or AS/NZS 1336 in Australia/New Zealand. In Australia/New Zealand, it is legally required to wear a face shield to protect your face, too.



It is an employer's responsibility to enforce the use of appropriate safety protective equipment by the tool operators and by other persons in the immediate working area.

4. To prevent dust irritation the wearing of a face mask is recommended.
5. While operating the machine, always wear non-slip and protective footwear. Non-skid, closed-toed safety boots and shoes will reduce the risk of injury.
6. 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.

Operation

1. Switch off the machine and remove the battery cartridge and make sure that all moving parts have come to a complete stop
 - whenever you leave the machine.
 - before clearing blockages.
 - before checking, cleaning or working on the machine.
 - if the machine starts to vibrate abnormally.
 - whenever you convert the machine from blower to vacuum, and vice versa.
2. Operate the machine only in daylight or in good artificial light.
3. Do not overreach and keep proper balance and footing at all times.
4. Always be sure of your footing on slopes.
5. Walk, never run.
6. Keep all cooling air inlets clear of debris.
7. Never blow debris in the direction of bystanders.
8. Operate the machine in a recommended position and on a firm surface.
9. Do not operate the machine at high places.
10. Never point the nozzle at anyone in the vicinity when using the machine.
11. Never block suction inlet and/or blower outlet.
 - Be careful not to block suction inlet or blower outlet with dust or dirt when operating in dusty area.
 - Do not use nozzles other than the nozzles provided by Makita.
 - Do not use the blower to inflate balls, rubber boat or the similar.
12. Do not operate the machine near open window, etc.
13. Operating the machine only at reasonable hours is recommended - not early in the morning or late at night when people might be disturbed.
14. Using rakes and brooms to loosen debris before blowing is recommended.
15. If the machine strikes any foreign objects or should start making any unusual noise or vibration, immediately switch off the machine to stop it. Remove the battery cartridge from the machine and inspect the machine for damage before restarting and operating the machine. If the machine is damaged, ask Makita Authorized Service Centers for repair.
16. Do not insert fingers or other objects into suction inlet or blower outlet.
17. Prevent unintentional starting. Ensure the switch is in the off-position before inserting battery cartridge, picking up or carrying the machine. Carrying the machine with your finger on the switch or energizing the machine that has the switch on invites accidents.
18. Never blow or vacuum dangerous materials, such as nails, fragments of glass, or blades.
19. Do not operate the machine near flammable materials.
20. Avoid operating the machine for a long time in low temperature environment.

Maintenance and storage

1. Keep all nuts, bolts and screws tight to be sure the machine is in safe working condition.
2. If the parts are worn or damaged, replace them with parts provided by Makita.

- Store the machine in a dry place out of the reach of children.**
- When you stop the machine for inspection, servicing, storage, or changing accessory, switch off the machine and make sure that all moving parts come to a complete stop, and remove the battery cartridge. Cool down the machine before making any work on the machine. Maintain the machine with care and keep it clean.**
- Always cool down the machine before storing.**
- Do not expose the machine to rain. Store the machine indoors.**
- When you lift the machine, be sure to bend your knees and be careful not to hurt your back.**

Battery tool use and care

- 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.
- Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.
- 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.
- 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.
- Do not use a battery pack or tool that is damaged or modified.** Damaged or modified batteries may exhibit unpredictable behaviour resulting in fire, explosion or risk of injury.
- Do not expose a battery pack or tool to fire or excessive temperature.** Exposure to fire or temperature above 130 °C may cause explosion.
- 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.

Electrical and battery safety

- Do not dispose of the battery(ies) in a fire.** The cell may explode. Check with local codes for possible special disposal instructions.
- Do not open or mutilate the battery(ies).** Released electrolyte is corrosive and may cause damage to the eyes or skin. It may be toxic if swallowed.
- Do not charge battery in rain, or in wet locations.**
- Do not charge the battery outdoors.**
- Do not handle charger, including charger plug, and charger terminals with wet hands.**
- Avoid dangerous environment.** Don't use the tool in dump or wet locations or expose it to rain. Water entering the tool will increase the risk of electric shock.

Service

- 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.
- Never service damaged battery packs.** Service of battery packs should only be performed by the manufacturer or authorized service providers.

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.

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 battery cartridge.**
- 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 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.**
- Be careful not to drop or strike battery.**
- 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.**

- 12. 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.
- 13. If the tool is not used for a long period of time, the battery must be removed from the tool.**

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

- Charge the battery cartridge before completely discharged. Always stop tool operation and charge the battery cartridge when you notice less tool power.
- Never recharge a fully charged battery cartridge. Overcharging shortens the battery service life.
- 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.
- Charge the battery cartridge if you do not use it for a long period (more than six months).

ASSEMBLY

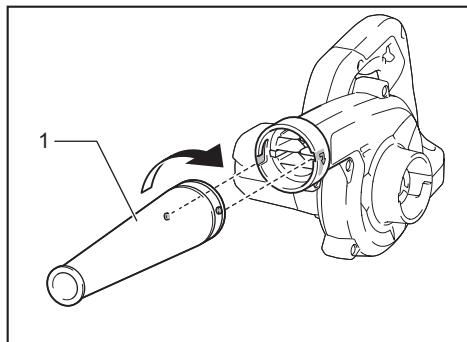
CAUTION: Always be sure that the machine is switched off and the battery cartridge is removed before carrying out any work on the machine.

Assembly for blowing

Installing or removing the nozzle

Optional accessory for DUB186

Align the protrusions on the nozzle with the grooves on the main unit, then insert the nozzle into the main unit, and then turn it to lock it into place.

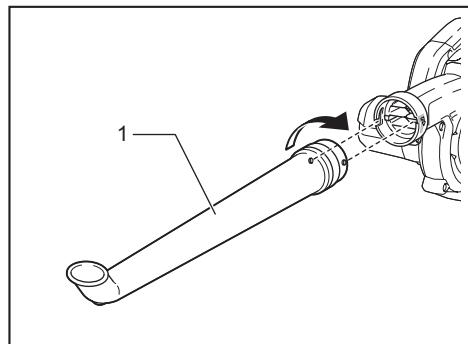


To remove the nozzle, perform the installation procedure in reverse.

Installing or removing the garden nozzle

Optional accessory for DUB185

Align the protrusions on the garden nozzle with the grooves on the main unit, then insert the garden nozzle into the main unit, and then turn it to lock it into place.



To remove the garden nozzle, perform the installation procedure in reverse.

Installing or removing the long nozzle

Optional accessory for DUB185 / DUB186

Install the long nozzle in the same way as the nozzle. To remove the long nozzle, perform the installation procedure in reverse.

Installing or removing the tapered nozzle

Optional accessory for DUB185 / DUB186

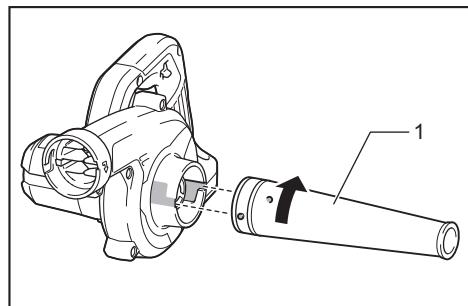
Attach the tapered nozzle to the nozzle, and then install the nozzle to the main unit. To remove the tapered nozzle, perform the installation procedure in reverse.

Assembly for vacuuming

Installing or removing the nozzle

Optional accessory for DUB186

Align the protrusions on the nozzle with the grooves on the main unit, then insert the nozzle into the main unit, and then turn it to lock it into place.

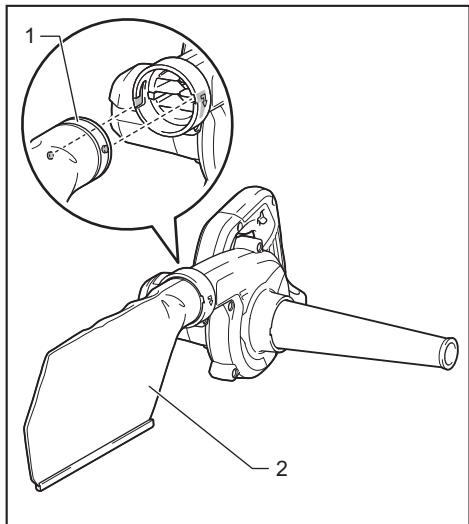


To remove the nozzle, perform the installation procedure in reverse.

Installing or removing the dust bag

Optional accessory for DUB185 / DUB186

Align the protrusions on the joint of dust bag with the grooves on the main unit, then insert the joint into the main unit, and then turn it to lock it into place.



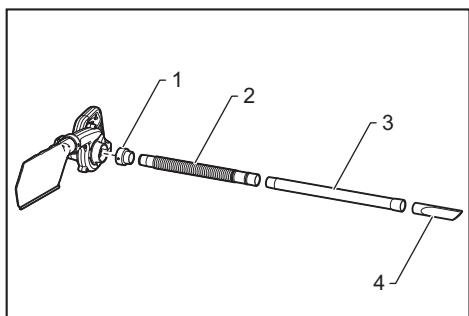
► 1. Joint 2. Dust bag

To remove the dust bag, perform the installation procedure in reverse.

Installing or removing the flexible hose set

Optional accessory for DUB185 / DUB186

Attach the joint, hose, pipe, and sash nozzle to the main unit in order.



► 1. Joint 2. Hose 3. Pipe 4. Sash nozzle

To remove the flexible hose set, perform the installation procedure in reverse.

FUNCTIONAL DESCRIPTION

CAUTION: Always be sure that the machine is switched off and the battery cartridge is removed before adjusting or checking function on the machine.

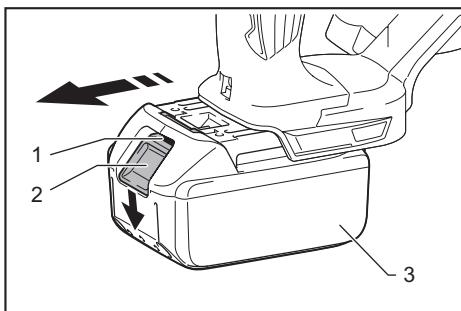
Installing or removing battery cartridge

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

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

CAUTION: Always install the battery cartridge fully until the red indicator cannot be seen. If not, it may accidentally fall out of the machine, 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.



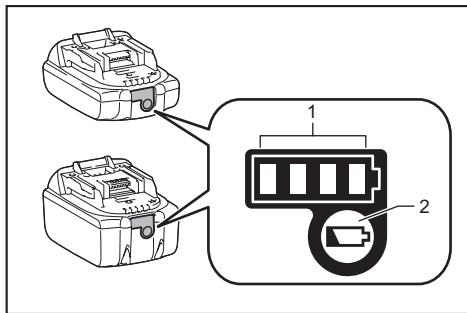
► 1. Red indicator 2. Button 3. Battery cartridge

To remove the battery cartridge, slide it from the machine 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 on the upper side of the button, it is not locked completely.

Indicating the remaining battery capacity

Only for battery cartridges with the indicator



- 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.

Machine/battery protection system

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

Overload protection

When the machine or battery is operated in a manner that causes it to draw an abnormally high current, the machine automatically stops without any indication. In this situation, turn the machine off and stop the application that caused the machine to become overloaded. Then turn the machine on to restart.

Overheat protection

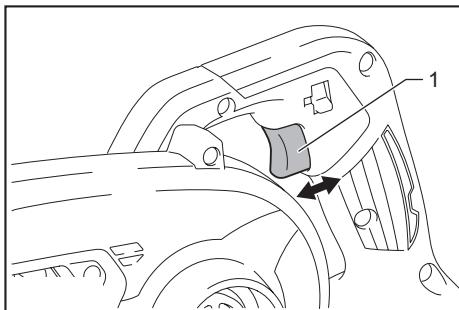
When the machine or battery is overheated, the machine stops automatically. In this case, let the machine and battery cool before turning the machine on again.

Overdischarge protection

When the battery capacity is not enough, the machine stops automatically. In this case, remove the battery from the machine and charge the battery.

Switch action

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



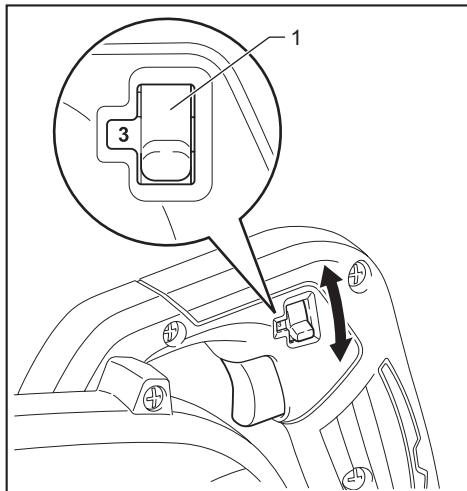
- 1. Switch trigger

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

NOTICE: If the machine has been operated continuously until the battery has become empty, rest the machine for at least 15 minutes before operating the machine with a fresh battery.

NOTE: When you start pulling the switch trigger, electronic sound may be emitted from the machine, but it does not mean a malfunction of the machine.

Speed adjusting dial



► 1. Speed adjusting dial

The speed can be changed by turning the speed adjusting dial to a given number setting from 1 to 3. Higher speed is obtained when the dial is turned in the direction of number 3. And lower speed is obtained when it is turned in the direction of number 1. Refer to the table for the relationship between the number settings on the dial and the speed.

Number	Speed
3	High
2	Medium
1	Low

NOTICE: When turning the dial, be sure to completely release the switch trigger. Otherwise, the machine may be damaged.

OPERATION

CAUTION: Do not place the machine on the ground while it is switched on. Sand or dust may enter from suction inlet and cause a malfunction or personal injury.

Blower operation

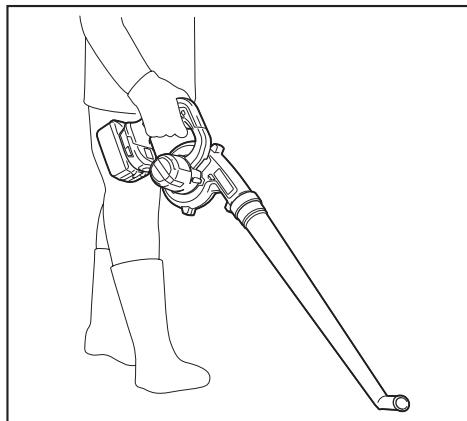
CAUTION: When performing the blower operation, be sure to remove the dust bag from the machine, and attach the nozzle in place for blowing.

Hold the machine firmly with a hand and perform the blowing operation by moving it around slowly. When blowing around building, big stone or vehicle, direct the nozzle away from them. When performing an operation in a corner, start from the corner and then move to wide area.

For DUB185



For DUB186



Vacuuming operation

CAUTION: When performing the vacuuming operation, be sure to attach the dust bag and nozzle in place to the machine.

CAUTION: Check the dust bag frequently for wear or deterioration.

CAUTION: Be sure to fasten the fastener of the dust bag before operating the machine.

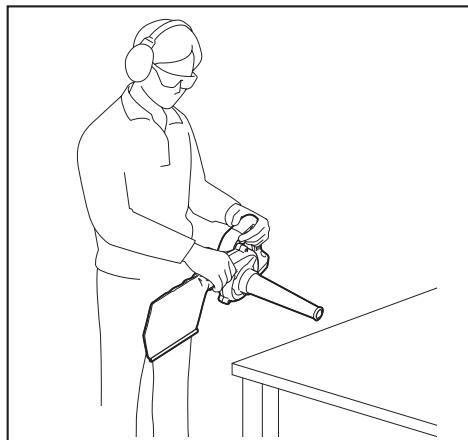
CAUTION: Always switch off the machine before opening or fastening the fastener of the dust bag.

NOTICE: When performing the vacuuming operation, do not use the garden nozzle. The materials sucked may be clogged, and cause a malfunction of the machine.

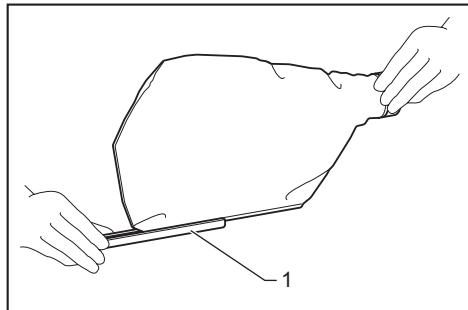
NOTICE: Do not allow wet materials, such as wet leaves, and foreign materials, such as large wood chips, metals, glass, pebbles, etc., to be sucked into the machine. Otherwise, a malfunction may occur.

NOTICE: Empty the dust bag before it becomes full. Otherwise, a malfunction may occur.

Hold the machine with both hands. While operating the machine, adjust the switch trigger so that the suction force is appropriate for the work location and conditions.



Empty the dust bag before it becomes too full by removing the dust bag from the machine, and then removing the fastener.



► 1. Fastener

MAINTENANCE

CAUTION: Always be sure that the machine is switched off and the battery cartridge is removed before attempting to perform inspection or maintenance.

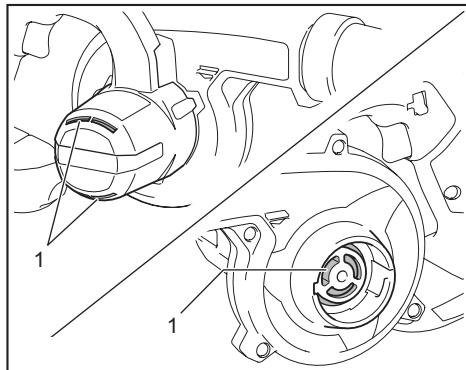
To maintain product SAFETY and RELIABILITY, repairs, any other maintenance or adjustment should be performed by Makita Authorized or Factory Service Centers, always using Makita replacement parts.

Cleaning the machine

Clean the machine by wiping off dust with a dry cloth or one dipped in soapy water and wrung out.

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

Remove dust or dirt from the suction inlets.



► 1. Suction inlet

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 machine. 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.	Battery's charge level is low.	Recharge the battery. If recharging is not effective, replace battery.
	Overheating.	Stop using the machine to allow it to cool down.
The machine does not reach the maximum speed.	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.
Abnormal vibration: ⇒ stop the machine immediately!	The drive system does not work correctly.	Ask your local authorized service center for repair.
Motor cannot stop: ⇒ Remove the battery immediately!	Electric or electronic malfunction.	Remove the battery and ask your local authorized service center for repair.

OPTIONAL ACCESSORIES

⚠ CAUTION: These accessories or attachments are recommended for use with your Makita product 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.

- Nozzle
- Garden nozzle
- Dust bag
- Long nozzle
- Tapered nozzle set
- Flexible hose set
- Makita genuine battery and charger

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

Makita Europe N.V.

Jan-Baptist Vinkstraat 2,
3070 Kortenberg, Belgium

Makita Corporation

3-11-8, Sumiyoshi-cho,
Anjo, Aichi 446-8502 Japan

www.makita.com

885777-222
EN
20191129

**DC18SD**

Battery Charger

Chargeur

Cargador de Baterías

Symbols

The followings show the symbols used for the charger and battery. Be sure that you understand their meaning before use.

Symboles

Nous donnons ci-dessous les symboles utilisés pour le chargeur et la batterie. Assurez-vous que vous en avez bien compris la signification avant d'utiliser l'outil.

Símbolos

A continuación se muestran los símbolos utilizados con el cargador y la batería. Asegúrese de que entiende su significado antes de usarla.



- Ready to charge
- Prêt à recharger
- Preparación para la carga



- Charging
- En charge
- Cargando



- Charging complete
- Recharge terminée
- Completada la carga



- Delay charge (too hot or too cold battery)
- Charge différée (batterie trop chaude ou trop froide)
- Retraso de la carga (batería muy caliente o muy fría)



- Defective battery
- Batterie défectueuse
- Batería defectuosa



- Do not short batteries.
- Ne jamais court-circuiter les bornes d'une batterie.
- No provoque un cortocircuito en las baterías.

IMPORTANT: Read Before Using.

IMPORTANT : Lire ce qui suit avant d'utiliser cet outil.

IMPORTANTE: Leer antes de usar.

Specifications

Model	DC18SD
Input	A.C. 120 V 50 – 60 Hz
Output	D.C. 7.2 V – 18 V
Weight	0.59 kg (1.30 lbs)

- Manufacturer reserves the right to change specifications without notice.
- Note: Specifications may differ from country to country.
- Weight according to EPTA-Procedure 01/2003.

IMPORTANT SAFETY INSTRUCTIONS

CAUTION:

- SAVE THESE INSTRUCTIONS** — This manual contains important safety and operating instructions for battery charger.
- Before using battery charger, read all instructions and cautionary markings on (1) battery charger, (2) battery, and (3) product using battery.
- CAUTION** — To reduce risk of injury, charge only MAKITA rechargeable batteries marked on the charger label. Other types of batteries may burst causing personal injury and damage.
- Non-rechargeable batteries cannot be charged with this battery charger.
- Use a power source with the voltage specified on the nameplate of the charger.
- Do not charge the battery cartridge in presence of flammable liquids or gases.
- Do not expose charger to rain or snow.
- Never carry charger by cord or yank it to disconnect from receptacle.
- After charging or before attempting any maintenance or cleaning, unplug the charger from the power source. Pull by plug rather than cord whenever disconnecting charger.
- Make sure cord is located so that it will not be stepped on, tripped over, or otherwise subjected to damage or stress.
- Do not operate charger with damaged cord or plug. If the cord or plug is damaged, ask Makita authorized service center to replace it in order to avoid a hazard.
- Do not operate or disassemble charger if it has received a sharp blow, been dropped, or otherwise damaged in any way; take it to a qualified serviceman. Incorrect use or reassembly may result in a risk of electric shock or fire.
- The battery charger is not intended for use by young children or infirm persons without supervision.
- Young children should be supervised to ensure that they do not play with the battery charger.
- Do not charge battery cartridge when room temperature is BELOW 10°C (50°F) or ABOVE 40°C (104°F). At the cold temperature, charging may not start.
- Do not attempt to use a step-up transformer, an engine generator or DC power receptacle.
- Do not allow anything to cover or clog the charger vents.

FCC CAUTION:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help

Charging

1. Plug the battery charger into the proper AC voltage source. Charging light will flash in green color repeatedly.
2. Insert the battery cartridge into charger until it stops adjusting to the guide of charger. Terminal cover of charger can be opened with inserting and closed with pulling out the battery cartridge.
3. When the battery cartridge is inserted, the charging light color will change from green to red and charging will begin. The charging light will keep lighting up lit steadily during charging. One red charging light indicates charged condition in 0 – 80% and red and green ones indicate 80 – 100%.
4. With finish of charge, the charging lights will change from red and green ones to green one.
5. Charging time varies by temperature (10°C (50°F) – 40°C (104°F)) that battery cartridge is charged at and conditions of the battery cartridge, such as a battery cartridge which is new or has not been used for a long period of time.
6. After charging, remove the battery cartridge from charger and unplug the charger.

NOTE:

- The battery charger is for charging Makita-battery cartridge. Never use it for other purposes or for other manufacturer's batteries.
- When you charge a battery cartridge which is new or has not been used for a long period of time, it may not accept a full charge until after discharging it completely and recharging a couple of times. (Ni-MH battery only)
- If charging light may flash in red color, battery condition is as below and charging may not start.
 - Battery cartridge from just-operated tool or battery cartridge that has been left in a location exposed to direct sunlight for a long time.
 - Battery cartridge that has been left for a long time in a location exposed to cold air.
- Charging will begin after the battery cartridge temperature reaches the degree at which charging is possible.
- If the charging light flashes alternately in green and red color, charging is not possible. The terminals on the charger or battery cartridge are clogged with dust or the battery cartridge is worn out or damaged.
- DC18SD battery charger cannot use with INTERCHANGEABLE ADAPTER (ADP01, 04) and REFRESHING ADAPTER (ADP02, 03).

Voltage	9.6 V	12 V	14.4 V	Capacity (Ah)	Charging time (Minutes)
Number of cells	8	10	12		
Ni-MH Battery cartridge	BH9020A	—	—	2.0	40
	—	BH1220C	—	2.0	40
	—	—	—	2.7	55
	BH9033A	—	—	3.3	70
	—	BH1233C	—	3.3	70

Voltage	14.4 V	18 V	14.4 V	18 V	Charging time (Minutes)
Number of cells	4	5	8	10	
Li-ion Battery cartridge	BL1415NA	BL1815N	—	—	30
	—	BL1820B	—	—	45
	—	—	BL1430/ BL1430B	BL1830/BL1830B	60
	—	—	—	BL1840B	90
	—	—	—	BL1850B	110
	—	—	BL1460A	BL1860B	130

Note:

- It may take longer than the above charging time because of the optimal charging selected according to the temperature (10°C (50°F) – 40°C (104°F)), conditions of battery cartridge and maintenance charge.

Spécifications

Modèle	DC18SD
Entrée.....	C.A. 120 V 50 – 60 Hz
Sortie.....	C.C. 7,2 V – 18 V
Poids	0,59 kg (1,30 lbs)

• Le fabricant se réserve le droit de modifier sans avertissement les spécifications.

• Remarque : Les spécifications peuvent varier selon les pays.

• Poids selon la procédure EPTA 01/2003.

LES CONSIGNES DE SECURITE IMPORTANTES

ATTENTION :

- 1. CONSERVEZ CES INSTRUCTIONS** — Ce manuel renferme des consignes de sécurité et d'utilisation importantes pour le chargeur de batterie.
2. Avant d'utiliser le chargeur de batterie, lisez toutes les étiquettes d'instruction et de précaution apposées sur (1) le chargeur de batterie, sur (2) la batterie et sur (3) le produit utilisant la batterie.
3. ATTENTION — Pour réduire le risque de blessure, ne chargez que les batteries rechargeables MAKITA qui figurent sur l'étiquette du chargeur. Les autres types de batteries peuvent causer des blessures et entraîner des dommages en explosant.
4. Il n'est pas possible de charger des batteries de type non rechargeable avec ce chargeur.
5. Utilisez une source d'alimentation dont la tension correspond à celle spécifiée sur la plaque signalétique du chargeur.
6. Ne chargez pas la cartouche de batterie en présence de liquides ou gaz inflammables.
7. N'exposez pas le chargeur à la pluie ou à la neige.
8. Évitez de transporter le chargeur en le tenant par son cordon d'alimentation, et de tirer directement sur le cordon pour le débrancher.
9. Après avoir chargé la batterie ou avant d'y effectuer tout travail d'entretien ou de nettoyage, débranchez le chargeur de sa source d'alimentation. Pour débrancher le chargeur, tirez toujours le cordon par sa fiche, non par le cordon lui-même.
10. Assurez-vous que le cordon n'est pas placé de façon à être piétiné, à faire trébucher quelqu'un ou à subir quelque dommage ou tension que ce soit.
11. N'utilisez pas le chargeur avec un cordon ou une fiche endommagé. Si le cordon ou la fiche est endommagé, faites-le remplacer dans un centre de service agréé Makita pour éviter tout danger.
12. Évitez d'utiliser ou démonter le chargeur après qu'il ait reçu un choc violent, ait été échappé ou ait subi quelque dommage que ce soit. Portez-le chez un réparateur qualifié. Une utilisation ou un remontage maladroit peut entraîner un risque de choc électrique ou d'incendie.
13. Ce chargeur ne doit pas être utilisé sans supervision par les jeunes enfants et par les personnes handicapées.
14. Les jeunes enfants doivent être surveillés pour s'assurer qu'ils ne jouent pas avec le chargeur.
15. Ne chargez pas la batterie lorsque la température de la pièce est INFÉRIEURE à 10 °C ou SUPÉRIEURE à 40 °C. À basse température, la charge risque de ne pas démarrer.
16. Ne tentez pas d'utiliser un transformateur élévateur, un groupe électrogène ou une prise de courant continu.
17. Ne laissez rien recouvrir ou boucher les ouvertures du chargeur.

AVERTISSEMENT DE LA FCC :

Les changements ou modifications non approuvés expressément par la partie responsable de la conformité peuvent priver l'utilisateur de son droit d'usage de l'équipement.

NOTE : Cet équipement a fait l'objet d'essais et a été jugé conforme aux limites pour appareil numérique de classe B, en conformité à la section 15 des Règlements de la FCC. Ces limites sont conçues pour assurer une protection raisonnable contre le brouillage préjudiciable dans une installation résidentielle. Cet équipement génère, utilise et peut rayonner de l'énergie de fréquence radio et, s'il n'est pas installé et utilisé conformément aux instructions, peut causer du brouillage préjudiciable sur les communications radio. Toutefois, rien ne garantit qu'il n'y aura pas de brouillage dans une installation particulière.

Si cet équipement cause du brouillage préjudiciable sur la réception de la radio ou de la télévision, ce qui peut être vérifié en allumant et éteignant l'équipement, il est suggéré à l'utilisateur d'essayer d'annuler le brouillage en prenant une ou plusieurs des mesures suivantes :

-Réorienter ou repositionner l'antenne de réception.

-Augmenter la distance qui sépare l'équipement du récepteur.

-Brancher l'équipement sur la prise de courant d'un circuit différent de celui où le récepteur est branché.

-Pour obtenir de l'aide, consulter le détaillant ou un technicien radio/TV expérimenté.

Charge

1. Branchez le chargeur sur une source d'alimentation secteur dont la tension est adéquate. Le témoin de charge clignote en vert de manière répétée.
2. Insérer la batterie dans le chargeur jusqu'à ce qu'elle s'arrête, ajustée sur le guide du chargeur. Le couvre-bornes du chargeur peut être ouvert en insérant la batterie, et fermé en la retirant.
3. Lorsque vous insérez la batterie, la couleur du témoin de charge passe du vert au rouge et la charge commence. Le témoin de charge demeure allumé sans clignoter pendant la charge. Un témoin de charge rouge indique une charge de 0% à 80%, tandis qu'un témoin allumé en rouge et un autre en vert indiquent une charge de 80% à 100%.
4. Lorsque la charge est terminée, les deux témoins de charge (rouge et vert) sont remplacés par un témoin vert.
5. Le temps de charge varie suivant la température environnante (10°C (50°F) – 40°C (104°F)) à laquelle s'effectue la charge de la batterie, et suivant l'état de la batterie, comme par exemple si elle est neuve ou si elle est restée inutilisée pendant longtemps.
6. Après la charge, retirez la batterie et débranchez le chargeur.

NOTE :

- Le chargeur de batterie est conçu pour les batteries Makita. Ne jamais l'utiliser à d'autres fins ou avec les batteries d'autres fabricants.
- Lorsque vous chargez une cartouche de batterie neuve ou restée inutilisée pendant une période prolongée, il se peut que vous deviez la décharger complètement et la recharger à quelques reprises avant qu'elle n'accepte une charge complète. (Batterie au Ni-MH seulement)
- Si le témoin de charge clignote en rouge, l'état de la batterie est tel qu'indiqué ci-dessous et il se peut que la charge ne commence pas.
 - Cartouche de batterie d'un outil qui vient tout juste d'être utilisé, ou cartouche de batterie qui a été laissée longtemps dans un endroit exposé directement aux rayons du soleil.
 - Cartouche de batterie qui a été laissée longtemps dans un endroit exposé à de l'air froid.
- La charge commencera lorsque la température de la cartouche de batterie aura atteint le degré pour lequel la charge est possible.
- Si le témoin de charge clignote alternativement en vert et en rouge, la charge n'est pas possible. Les bornes du chargeur ou de la batterie sont alors bloquées par la poussière, ou bien la batterie est soit usée, soit endommagée.
- Le chargeur de batterie DC18SD ne peut pas être utilisé avec l'ADAPTATEUR INTERCHANGEABLE (ADP01, 04) ou l'ADAPTATEUR DE REGENERATION (ADP02, 03).

Tension	9,6 V	12 V	14,4 V	Capacité (Ah)	Temps de charge (en minutes)
Nombre de cellules	8	10	12		
Cartouche de batterie au Ni-MH	BH9020A	—	—	2,0	40
	—	BH1220C	—	2,0	40
	—	—	—	2,7	55
	BH9033A	—	—	3,3	70
	—	BH1233C	—	3,3	70

Tension	14,4 V	18 V	14,4 V	18 V	Temps de charge (en minutes)
Nombre de cellules	4	5	8	10	
Cartouche de batterie au Li-ion	BL1415NA	BL1815N	—	—	30
	—	BL1820B	—	—	45
	—	—	BL1430/BL1430B	BL1830/BL1830B	60
	—	—	—	BL1840B	90
	—	—	—	BL1850B	110
	—	—	BL1460A	BL1860B	130

Note :

- La charge complète peut prendre plus de temps que le temps indiqué ci-dessus, en raison de la température (10 °C (50 °F) – 40 °C (104 °F)), de l'état de la batterie ou de la charge d'entretien.

ESPAÑOL

Especificaciones

Modelo	DC18SD
Entrada.....	120 V ~ 50 – 60 Hz
Salida	7,2 V cc – 18 V cc
Peso	0,59 kg (1,30 lbs)

- El fabricante se reserva el derecho a cambiar las especificaciones sin aviso.
- Nota: Las especificaciones podrán cambiar de un país a otro.
- Peso de acuerdo con el procedimiento EPTA 01/2003.

INSTRUCCIONES DE SEGURIDAD IMPORTANTES

PRECAUCIÓN:

1. GUARDE ESTAS INSTRUCCIONES

- Este manual contiene instrucciones de seguridad y de funcionamiento importantes para el cargador de baterías.
2. Antes de utilizar el cargador de baterías, lea todas las instrucciones e indicaciones de precaución sobre (1) el cargador de baterías, (2) la batería, y (3) el producto con el que se utilice la batería.
 3. PRECAUCIÓN — Para reducir el riesgo de sufrir heridas, cargue solamente las baterías recargables MAKITA marcadas en la etiqueta de cargador. Otros tipos de baterías podrán explotar y ocasionar heridas personales y daños.
 4. Con este cargador de baterías no se pueden cargar baterías no recargables.
 5. Utilice una fuente de alimentación cuya tensión sea igual a la especificada en la placa de características del cargador.
 6. No cargue el cartucho de batería en presencia de líquidos o gases inflamables.
 7. No exponga el cargador a la lluvia ni a la nieve.
 8. No coja nunca el cargador por el cable ni tire del cable para desconectarlo de la toma de corriente.
 9. Después de la carga o antes de intentar cualquier mantenimiento o limpieza, desconecte el cargador de la toma de corriente. Tire de la clavija y no del cable siempre que quiera desconectar el cargador.
 10. Asegúrese de que el cable quede tendido de forma que no lo pueda pisar, tropezar con él, ni que esté sometido a daños o desgaste de ningún tipo.
 11. No utilice el cargador si su cable o clavija están dañados. Si el cable o la clavija están dañados, pida a un centro de servicio autorizado de Makita que los reemplace para evitar riesgos.
 12. No utilice ni desarme el cargador si este ha recibido un fuerte golpe, lo ha dejado caer, o si se ha dañado de cualquier otra forma; llévelo a un técnico cualificado para que se lo arregle. Una utilización o montaje de sus piezas incorrecto podrá acarrear un riesgo de descarga eléctrica o incendio.
 13. El cargador de baterías no ha sido pensado para ser utilizado por niños pequeños ni personas frágiles sin supervisión.
 14. Los niños pequeños deberán ser supervisados para asegurarse de que no juegan con el cargador de baterías.
 15. No cargue el cartucho de batería cuando la temperatura esté por DEBAJO de los 10°C o por ENCIMA de los 40°C. A baja temperatura, es posible que la carga no se inicie.
 16. No intente utilizar un transformador elevador de tensión, un generador a motor ni una toma de corriente de corriente continua.
 17. No permita que cosa alguna tape u obstruya los orificios de ventilación del cargador.

PRECAUCIÓN DE LA FCC:

Los cambios o modificaciones que no hayan sido expresamente aprobados por la parte responsable del cumplimiento podrían anular la autoridad del usuario para operar este equipo.

NOTE: Este equipo fue sometido a pruebas y se ha comprobado que cumple con los límites para un dispositivo digital Clase B, conforme a lo dispuesto en la parte 15 de las Normas de la FCC. Estos límites están diseñados para proporcionar una protección razonable contra una interferencia dañina en una instalación residencial. Este equipo genera, usa y puede irradiar energía de radiofrecuencia y, si no se instala y se usa de acuerdo con las instrucciones, puede causar una interferencia dañina a las radiocomunicaciones. Sin embargo, no hay ninguna garantía de que la interferencia no ocurrirá en una instalación en particular.

Si este equipo llega a causar una interferencia dañina a la recepción de radio o televisión, lo cual puede determinarse encendiéndolo y apagando el equipo, el usuario deberá intentar corregir la interferencia tomando una o varias de las siguientes medidas:

- Reorientar o reubicar la antena receptora.
- Aumentar la separación entre el equipo y el receptor.
- Conectar el equipo a una toma de corriente en un circuito distinto al cual esté conectado el receptor.
- Consultar al distribuidor o a un técnico experto en radio/TV para solicitar asistencia.

Carga

- Conecte el cargador de baterías en una toma de corriente de la tensión de CA apropiada. La luz de carga parpadeará en color verde repetidamente.
- Inserte el cartucho de batería en el cargador hasta que haga tope ajustándose a la guía del cargador. La tapa del terminal del cargador se abre al insertar el cartucho de batería y se cierra al sacarlo.
- Cuando se inserte el cartucho de batería, el color de la luz de carga cambiará de verde a rojo y comenzará la carga. La luz de carga se mantendrá encendida continuamente durante la carga. Una luz de carga roja indica una condición de carga del 0 – 80% y roja y verde indican del 80 – 100%.
- Una vez finalizada la carga, las luces de carga cambiarán de rojo y verde a sólo verde.
- El tiempo de carga varía en función de la temperatura (10°C (50°F) – 40°C (104°F)) a la que se carga el cartucho de batería y las condiciones del cartucho de batería, tal como si es un cartucho de batería nuevo o no ha sido utilizado durante un período de tiempo largo.
- Después de cargar, extraiga el cartucho de batería del cargador y desconecte el cargador.

NOTAS:

- El cargador de baterías es sólo para cargar cartuchos de batería Makita. No lo utilice nunca con otros fines ni para baterías de otros fabricantes.
- Cuando cargue un cartucho de batería que sea nuevo o que no haya sido utilizado durante un largo período de tiempo, es posible que no acepte una carga completa hasta después de haberlo descargado completamente y vuelto a cargar unas cuantas veces. (Batería Ni-MH solamente)
- Si la luz de carga parpadea en color rojo, la condición de la batería será como se indica abajo y es posible que la carga no se inicie.
 - Cartucho de batería de una herramienta recién utilizada o un cartucho de batería que ha sido dejado en un sitio expuesto a la luz directa del sol durante largo tiempo.
 - Cartucho de batería que ha sido dejado durante largo tiempo en un sitio expuesto a aire frío.La carga comenzará después de que la temperatura del cartucho de batería alcance el grado al cual es posible cargar.
- Si la luz de carga parpadea alternativamente en color verde y rojo, la batería no se podrá cargar. Los terminales del cargador o de la batería estarán obstruidos con polvo o el cartucho de batería estropeado o dañado.
- El cargador de baterías DC18SD no puede utilizarse con el ADAPTADOR INTERCAMBIABLE (ADP01, 04) ni con el ADAPTADOR DE REFRESCO (ADP02, 03).

Tensión	9,6 V cc	12 V cc	14,4 V cc	Capacidad (Ah)	Tiempo de carga (minutos)
Número de celdas	8	10	12		
Cartucho de batería Ni-MH	BH9020A	—	—	2,0 Ah	40 min
	—	BH1220C	—	2,0 Ah	40 min
	—	—	—	2,7 Ah	55 min
	BH033A	—	—	3,3 Ah	70 min
	—	BH1233C	—	3,3 Ah	70 min

Tensión	14,4 V cc	18 V cc	14,4 V cc	18 V cc	Tiempo de carga (minutos)
Número de celdas	4	5	8	10	
Cartucho de batería Li-ion	BL1415NA	BL1815N	—	—	30 min
	—	BL1820B	—	—	45 min
	—	—	BL1430/ BL1430B	BL1830/BL1830B	60 min
	—	—	—	BL1840B	90 min
	—	—	—	BL1850B	110 min
	—	—	BL1460A	BL1860B	130 min

Nota:

- Es posible que el tiempo de carga sea más largo que el indicado arriba debido a que la carga óptima se selecciona en función de la temperatura (10°C (50°F) – 40°C (104°F)), las condiciones del cartucho de batería y la carga de mantenimiento.

Makita Corporation
3-11-8, Sumiyoshi-cho,
Anjo, Aichi 446-8502 Japan

884760M947

IDE

www.makita.com