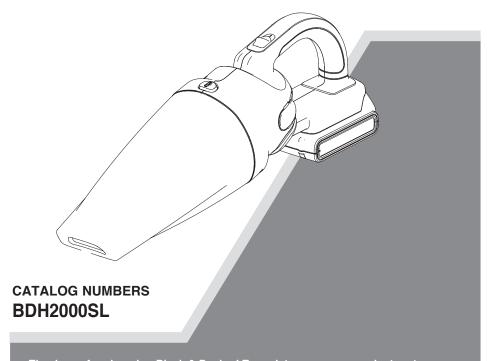


# **20V MAX\* CORDLESS HAND VAC**INSTRUCTION MANUAL



Thank you for choosing Black & Decker! To register your new product go to www.BlackandDecker.com/NewOwner

#### PLEASE READ BEFORE RETURNING THIS PRODUCT FOR ANY REASON.

If you have a question or experience a problem with your Black & Decker purchase, go to http://www.blackanddecker.com/instantanswers

If you can't find the answer or do not have access to the Internet, call 1-800-544-6986 from 8 a.m. to 5 p.m. EST Mon. - Fri. to speak with an agent.

Please have the catalog number available when you call.

#### SAVE THIS MANUAL FOR FUTURE REFERENCE.

VEA EL ESPANOL EN LA CONTRAPORTADA. INSTRUCTIVO DE OPERACIÓN, CENTROS DE SERVICIO Y PÓLIZA DE GARANTÍA. ADVERTENCIA: LÉASE ESTE INSTRUCTIVO ANTES DE USAR EL PRODUCTO.

\*Maximum initial battery pack voltage (measured without a workload) is 20 volts. Measured under a workload, nominal voltage is 18.

#### SAFETY GUIDELINES - DEFINITIONS

It is important for you to read and understand this manual.

The information it contains relates to protecting YOUR SAFETY and PREVENTING PROBLEMS. The symbols below are used to help you recognize this information.

⚠ DANGER: Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ **WARNING:** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

 $^{\Lambda\!\Lambda}$  **CAUTION:** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

**NOTICE:** Used without the safety alert symbol indicates potentially hazardous situation which, if not avoided, may result in property damage.

#### IMPORTANT SAFETY INSTRUCTIONS

When using an electrical appliances, basic precautions should always be followed. including the following:

#### READ ALL INSTRUCTIONS BEFORE USING THIS APPLIANCE.

⚠ WARNING: Read all safety warnings and all instructions. Failure to follow the warnings and instructions listed below may result in electric shock, fire and/or serious injury.

⚠ WARNING: Some household dust contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm such as asbestos and lead in lead based paint.

⚠ **WARNING:** To reduce the risk of fire, electrical shock or injury:

⚠ WARNING: To reduce the risk of electric shock – Do not use outdoors or on wet surfaces.

- Do not allow to be used as a toy. Close attention is necessary when used by or near children.

- Use only as described in this manual. Use only manufacturer's recommended attachments.
  Do not use with damaged cord or plug. If appliance is not working as it should, has been dropped, damaged, left outdoors, or dropped into water, return it to a service center.
  Do not pull or carry by cord, use cord as a handle, close a door on cord, or pull cord around sharp edges or corners. Do not run appliance over cord. Keep cord away from heated surfaces.

- Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.
  Do not handle charger, including charger plug, and charger terminals with wet hands.
  Do not put any object into openings. Do not use with any opening blocked; keep free of dust, lint, hair, and anything that may reduce air flow.
  Keep hair, loose clothing, fingers, and all parts of body away from openings and
- moving parts.
- Use extra care when cleaning on stairs.
- Do not use to pick up flammable or combustible liquids, such as gasoline, or use in areas where they may be present.
- Do not pick up anything that is burning or smoking, such as cigarettes, matches, or hot ashes.
- Do not use without dust bag and/or filters in place.
- Do not charge the unit outdoors.
- Use only the charger supplied by the manufacturer to recharge.
- Do not incinerate the appliance even if it is severely damaged. The batteries can
- This appliance is intended for household use only and not for commercial or industrial use.
- Shock Hazard. To protect against risk of electrical shock, do not put unit or charging base in water or other liquid.
- Do not allow the cord to hang over the edge of a table or counter or touch hot surfaces. The unit should be placed or mounted away from sinks and hot surfaces.
- Plug the charger directly into an electrical outlet.
- Use the charger only in a standard electrical outlet (120V/60Hz).
- Unplug the charger from outlet before any routine cleaning or maintenance.
- This product includes rechargeable Lithium-Ion batteries. Do not incinerate batteries as they will explode at high temperatures.

- If battery contents come into contact with the skin, immediately wash area with mild soap and water. If battery liquid gets into the eye, rinse water over the open eye for 15 minutes or until irritation ceases. If medical attention is needed, the battery electrolyte for Lithiumlon batteries is composed of a mixture of liquid organic carbonates and lithium salts.
- Do not look into the air vents when the unit is switched on, as sometimes
  there is a possibility of small debris being discharged from the air vents, especially
  after cleaning / replacement of the filters as debris inside the unit can be disturbed.

#### **Symbols**

 The label on your tool may include the following symbols. The symbols and their definitions are as follows:

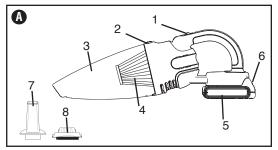
Vvolts	Aamperes
Hzhertz	Wwatts
minminutes	$\sim$ or ACalternating current
or DCdirect current  UClass I Construction	n <sub>o</sub> no load speed
UClass I Construction	🖶earthing terminal
(grounded)	${\mathbb A}$ safety alert symbol
□Class II Construction	/min or rpmrevolutions or reciprocation
(double insulated)	per minute

#### SAVE THESE INSTRUCTIONS

### PRODUCT FEATURES

#### Figure A

- On/Off switch
- 2. Release button
- 3. Dust bowl
- Filter
- 5. Slide pack battery
- 6. Battery release button
- 7. Crevice tool
- 8. Brush tool



#### IMPORTANT SAFETY INSTRUCTIONS FOR BATTERY CHARGERS

**SAVE THESE INSTRUCTIONS:** This manual contains important safety instructions for battery chargers.

**AWARNING:** Before using charger, read all instructions and cautionary markings on charger, battery pack, and product using battery pack.

**△WARNING:** Shock hazard. Do not allow any liquid to get inside charger.

**△CAUTION:** Burn hazard. To reduce the risk of injury, charge only designated *Black* & *Decker* batteries. Other types of batteries may burst causing personal injury and damage.

⚠CAUTION: Under certain conditions, with the charger plugged in to the power supply, the charger can be shorted by foreign material. Foreign materials of a conductive nature such as, but not limited to, steel wool, aluminum foil, or any buildup of metallic particles should be kept away from charger cavities. Always unplug the charger from the power supply when there is no battery pack in the cavity. Unplug charger before attempting to clean.

#### **MWARNING:**

- DO NOT attempt to charge the battery pack with any chargers other than the ones in this manual. The charger and battery pack are specifically designed to work together.
- These chargers are not intended for any uses other than charging designated Black & Decker rechargeable batteries. Any other uses may result in risk of fire, electric shock or electrocution.
- · Do not expose charger to rain or snow.
- Pull by plug rather than cord when disconnecting charger. This will reduce risk of damage to electric plug and cord.
- Make sure that cord is located so that it will not be stepped on, tripped over, or otherwise subjected to damage or stress.
- Do not use an extension cord unless it is absolutely necessary. Use of improper extension cord could result in risk of fire, electric shock, or electrocution.

An extension cord must have adequate wire size (AWG or American Wire Gauge)
for safety. The smaller the gauge number of the wire, the greater the capacity of the
cable, that is 16 gauge has more capacity than 18 gauge. When using more than one
extension to make up the total length, be sure each individual extension contains at
least the minimum wire size.

**Recommended Minimum Wire Size for Extension Cords** 

Total L	ength of Co	rd				
25 ft.	50 ft.	75 ft.	100 ft.	125 ft.	150 ft.	175 ft.
7.6 m	15.2 m	22.9 m	30.5 m	38.1 m	45.7 m	53.3 m
Wire Siz	ze AWG					
18	18	16	16	14	14	12

- Do not place any object on top of charger or place the charger on a soft surface that might block the ventilation slots and result in excessive internal heat. Place the charger in a position away from any heat source. The charger is ventilated through slots in the top and the bottom of the housing.
- Do not operate charger with damaged cord or plug have them replaced immediately.
- Do not operate charger if it has received a sharp blow, been dropped, or otherwise damaged in any way. Take it to an authorized service center.
- Do not disassemble charger; take it to an authorized service center when service or repair is required. Incorrect reassembly may result in a risk of electric shock, electrocution or fire.
- Disconnect the charger from the outlet before attempting any cleaning. This will reduce the risk of electric shock. Removing the battery pack will not reduce this risk.
- NEVER attempt to connect 2 chargers together.
- The charger is designed to operate on standard household electrical power (120 Volts). Do not attempt to use it on any other voltage.

## SAVE THESE INSTRUCTIONS Important Safety Instruction for Battery Packs

**AWARNING:** For safe operation, read this manual and manuals originally supplied with tool before using the charger.

The battery pack is not fully charged out of the carton. Before using the battery pack and charger, read the safety instructions below. Then follow charging procedures outlined.

#### READ ALL INSTRUCTIONS

- Do not incinerate the battery pack even if it is severely damaged or is completely worn out. The battery pack can explode in a fire. Toxic fumes and materials are created when battery packs are burned.
- Do not charge or use battery in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Inserting or removing the battery from the charger may ignite the dust or fumes.
- If battery contents come into contact with the skin, immediately wash area with mild soap and water. If battery liquid gets into the eye, rinse water over the open eye for 15 minutes or until irritation ceases. If medical attention is needed, the battery electrolyte for Li-ion batteries is composed of a mixture of liquid organic carbonates and lithium salts.
- Contents of opened battery cells may cause respiratory irritation. Provide fresh air. If symptoms persist, seek medical attention.
- **WARNING:** Burn hazard. Battery liquid may be flammable if exposed to spark or flame.
- Charge the battery packs only in Black & Decker chargers.
- DO NOT splash or immerse in water or other liquids. This may cause premature cell failure.
- Do not store or use the tool and battery pack in locations where the temperature may reach or exceed 105°F (40°C) (such as outside sheds or metal buildings in summer).
- AWARNING: Never attempt to open the battery pack for any reason. If battery pack case is cracked or damaged, do not insert into charger. Do not crush, drop or damage battery pack. Do not use a battery pack or charger that has received a sharp blow, been dropped, run over or damaged in any way (i.e., pierced with a nail, hit with a hammer, stepped on). Damaged battery packs should be returned to service center for recycling.
- AWARNING: Fire hazard. Do not store or carry battery so that metal objects can contact exposed battery terminals. For example, do not place battery in aprons, pockets, tool boxes, product kit boxes, drawers, etc., with loose nails, screws, keys, etc Transporting batteries can possibly cause fires if the battery terminals

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inadvertently come in contact with conductive materials such as keys, coins, hand tools and the like. The US Department of Transportation Hazardous Material Regulations (HMR) actually prohibit transporting batteries in commerce or on airplanes (i.e., packed in suitcases and carry-on luggage) UNLESS they are properly protected from short circuits. So when transporting individual batteries, make sure that the battery terminals are protected and well insulated from materials that could contact them and cause a short circuit. NOTE: LI-ION batteries should not be put in checked baggage.

#### **Storage Recommendations**

1. The best storage place is one that is cool and dry away from direct sunlight and excess heat or cold.

Long storage will not harm the battery pack or charger.

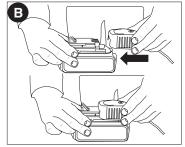
#### **CHARGING PROCEDURE**

The standard charger provided will charge a fully depeleted battery in about 4 hours.

- 1. Plug the charger into an appropriate outlet before inserting the battery pack.
- 2. Insert the battery pack into the charger as shown in figure B.

3. The green LED will flash indicating that the battery is being charged.

4. The completion of charge is indicated by the green LED remaining on continuously. The pack is fully charged and may be used at this time or left on the charger.



Recharge discharged batteries as soon as possible after use or battery life may be greatly diminished.

Leaving the battery in the charger

The charger and battery pack can be left connected with the green LED glowing indefinitely. The charger will keep the battery pack fresh and fully charged.

Important Charging Notes

1. Longest life and best performance can be obtained if the battery pack is charged when the air temperature is between 65°F and 75°F (18°- 24°C). DO NOT charge the battery pack in an air temperature below +40°F (+4.5°C), or above +105°F (+40.5°C). This is important and will prevent serious damage to the battery pack.

2. The charger and battery pack may become warm to touch while charging. This is a normal condition, and does not indicate a problem. To facilitate the cooling of the battery pack after use, avoid placing the charger or battery pack in a warm environment such as in a metal shed, or an uninsulated trailer.

3. If the battery pack does not charge properly:

a. Check current at receptacle by plugging in a lamp or other appliance

- b. Check to see if receptacle is connected to a light switch which turns power off when you turn out the lights.
- Move charger and battery pack to a location where the surrounding air temperature is approximately 65°F - 75°F (18°- 24°C).
- d. If charging problems persist, take the tool, battery pack and charger to your local service center.
- 4. The battery pack should be recharged when it fails to produce sufficient power on jobs which were easily done previously. DO NOT CONTINUE to use under these conditions. Follow the charging procedure. You may also charge a partially used pack whenever you desire with no adverse affect on the battery pack.
- 5. Foreign materials of a conductive nature such as, but not limited to, steel wool, aluminum foil, or any buildup of metallic particles should be kept away from charger cavities. Always unplug the charger from the power supply when there is no battery pack in the cavity. Unplug charger before attempting to clean.
- 6. Do not freeze or immerse charger in water or any other liquid.
- **AWARNING:** Shock hazard. Do not allow any liquid to get inside charger. Never attempt to open the battery pack for any reason. If the plastic housing of the battery pack breaks or cracks, return to a service center for recycling.

INSTALLING AND REMOVING THE BATTERY

⚠ WARNING: Make certain the vac is switched off before

removing or installing battery.

TO INSTALL BATTERY PACK: Insert battery pack into the vac until an audible click is heard (Figure C). Make sure battery pack is fully seated and fully latched into position. TO REMOVE BATTERY PACK: Depress the battery release button (6) as shown in Figure C and pull battery pack out of the vac.

# C C

#### OPERATION

FIGURE D

NOTE: THIS PRODUCT IS FOR DRY PICK-UP ONLY.

- To switch the vac on, slide the on/off switch forward.
- To switch the vac off, slide the on/off switch back.

#### **ASSEMBLY**

#### FIGURE E

- Remove the dust bowl by pressing the dust bowl release button and pulling the bowl down and out.
- Remove the filter by pulling it out of the dust bowl.
- Install the filter into the dust bowl by aligning the filter triangle with the dust bowl triangle and placing it firmly into position as shown in **figure F**.

**NOTE:** It is very important that the filter is correctly in position before use.

• To install the dust bowl, place it back onto the front of the unit and click firmly into position.



- The brush tool (9) has a brush that can be used for dusting and upholstery cleaning.
- The crevice tool (8) allows for vacuuming in narrow and hard to-reach places.
- · To attach an accessory, press the accessory into dust bowl.
- To remove an accessory, pull the accessory out of the dust bowl.

#### **CLEANING THE PRODUCT**

⚠ **WARNING:** Never use this cordless hand vacuum without its filters.

**NOTE:** The filter is re-usable, do not confuse them with disposable dust bags, and do not throw it away when the product is emptied. We recommend that you replace the filter every 6-9 months.

**IMPORTANT:** Maximum dust collection will only be obtained with clean filters and an empty dust bowl. If dust begins to fall back out of the product after it is switched off, this indicates that the bowl is full and requires emptying.

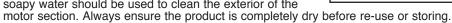
Remove the filter and shake or lightly brush any loose dust off the filter.

Empty the dust from the bowl and wash if necessary.

 Wash the filter regularly using warm, soapy water as shown in figure G. Ensure that it is completely dry before using again.

**NOTE:** The cleaner the filter is, the better the product will perform.

- The dust bowl can also be washed in warm soapy water as shown in **figure G**. Ensure that it is dry before
- re-attaching.Never immerse the product in water. A damp cloth and soapy water should be used to clean the exterior of the



#### **RUN TIME**

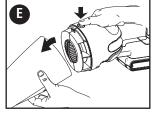
- When fully charged, the average effective usage times are between 10-15 minutes.
- It may take several chargings before these times can be achieved.

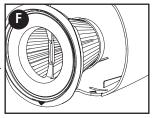


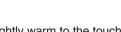
If the product does not work, check the following:

- The charger was correctly plugged in for recharge. (It feels slightly warm to the touch.)
- The charger cord is not damaged and is correctly attached to the base.
- The charger is plugged into a working electrical outlet.









	TROUBLESHOOTING	
<u>Problem</u>	Possible Cause	Possible Solution
<ul> <li>Unit will not start.</li> </ul>	<ul> <li>Battery not installed properly.</li> </ul>	<ul> <li>Check battery installation.</li> </ul>
	Battery not charged.	<ul> <li>Check battery charging requirements.</li> </ul>
Battery will not charge.	Battery not inserted into charger.	<ul> <li>Insert battery into charger until red LED appears.</li> </ul>
	Charger not plugged in.	<ul> <li>Plug charger into a working outlet. Refer to "Important Charging Notes" for more details.</li> <li>Check current at receptacle by plugging in a lamp or other appliance.</li> <li>Check to see if receptacle is</li> </ul>
		connected to a light switch which turns power off when you turn out the lights.
	Surrounding air temperature too hot or too cold.	• Move charger and tool to a surrounding air temperature of above 40 degree F(4,5°C) or below 105 degree F (+40,5°C).

CURL FOLLOOTING

For assistance with your product, visit our website **www.blackanddecker.com** for the location of the service center nearest you or call the BLACK & DECKER help line at **1-800-544-6986**.

#### **ACCESSORIES**

The performance of your apliance depends on the accessory used. Black & Decker accessories are engineered to high quality standards and are designed to enhance the performance of your apliance.

Filter accessory number VF200SP.

#### **MAINTENANCE**

Use only mild soap and damp cloth to clean the vac. Never let any liquid get inside the vac; never immerse any part of the vac into a liquid.

**NOTE:** Make sure the vacuum is completely dry before using it.

**IMPORTANT:** To assure product SAFETY and RELIABILITY, repairs, maintenance and adjustment (other than those listed in this manual) should be performed by authorized service centers or other qualified service organizations, always using identical replacement parts.

#### THE RBRC™ SEAL

The RBRC™ (Rechargeable Battery Recycling Corporation) Seal on the lithium-ion battery (or battery pack) indicates that the costs to recycle the battery (or battery pack) at the end of its useful life have already been paid by Black & Decker. In some areas, it is illegal to place spent lithium-ion batteries in the trash or municipal solid waste stream and the RBRC program provides an environmentally conscious alternative. RBRC in cooperation with Black & Decker and other battery users, has established programs in the United States and Canada to facilitate the collection of spent lithium-ion batteries. Help protect our environment and conserve natural resources by returning the tool to an authorized Black & Decker service center for recycling. You may also contact your local recycling center for information on where to drop off the spent battery, or call **1-800-8-BATTERY**.

This Class B digital apparatus complies with Canadian ICES-003.

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**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.
 Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This Class B digital apparatus complies with Canadian ICES-003.

#### SERVICE INFORMATION

All Black & Decker Service Centers are staffed with trained personnel to provide customers with efficient and reliable power tool service. Whether you need technical advice, repair, or genuine factory replacement parts, contact the Black & Decker location nearest you. To find your local service location, call: 1-800-544-6986 or visit www.blackanddecker.com

#### THREE-YEAR LIMITED GUARANTEE

Black & Decker (U.S.) Inc. guarantees this product to be free from defects in material or workmanship for a period of three (3) years following the date of purchase, provided that the product is used in a home environment. This limited guarantee does not cover failures due to abuse, accidental damage or when repairs have been made or attempted by anyone other than Black & Decker and its Authorized Service Centers. A defective product meeting the guarantee conditions set forth herein will be replaced or repaired at no charge in either of two ways: The first, which will result in exchanges only, is to return the product to the retailer from whom it was purchased (provided that the store is a participating retailer). Returns should be made within the time period of the retailer's policy for exchanges. Proof of purchase may be required. Please check with the retailer for its specific return policy regarding time limits for returns or exchanges. The second option is to take or send the product (prepaid) to a Black & Decker owned or authorized Service Center for repair or replacement at Black & Decker's option. Proof of purchase may be required. Black & Decker owned and authorized service centers are listed online at www.blackanddecker.com.

This gaurentee does not apply to accessories. This gaurentee gives you specific legal rights and you may have other rights which vary from state to state. Should you have any questions, contact the manager of your nearest Black & Decker Service Center. This product is not intended for commercial use, and accordingly, such commercial use of this product will void this guarantee. All other guarentees, express or implied, are hereby disclaimed.

**LATIN AMERICA:** This guarantee does not apply to products sold in Latin America. For products sold in Latin America, check country specific guarantee information contained in the packaging, call the local company or see the website for such information.

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701 E. Joppa Rd.
Towson, MD 21286 U.S.A.

