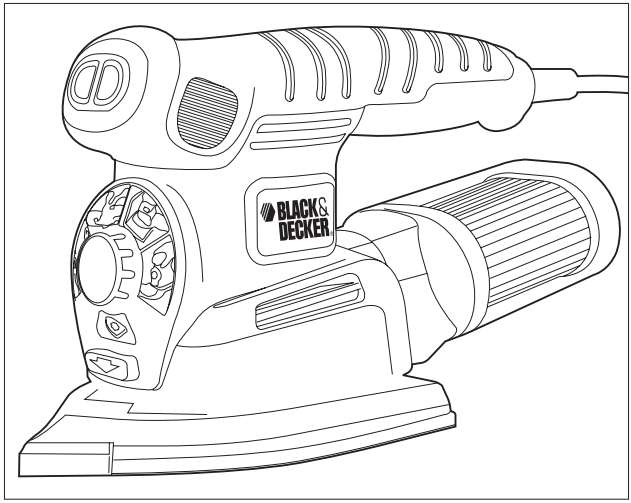
BLACK&DECKER®

SMART SELECT MULTI- SANDER

INSTRUCTION MANUAL

Catalog Number MS2000



Thank you for choosing Black & Decker!

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.

⚠ **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.

General Safety Rules

⚠**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

The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

1) WORK AREA SAFETY

a) Keep work area clean and well lit. *Cluttered or dark areas invite accidents.*

b) 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.*

c) Keep children and bystanders away while operating a power tool. *Distractions can cause you to lose control.*

2) ELECTRICAL SAFETY

a) 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.*

b) 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.*

c) Do not expose power tools to rain or wet conditions. *Water entering a power tool will increase the risk of electric shock.*

d) 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.*

e) 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.*

f) If operating a power tool in a damp location is unavoidable, use a ground fault circuit interrupter (GFCI) protected supply. *Use of a GFCI reduces the risk of electric shock.*

3) PERSONAL SAFETY

a) 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.*

b) Use personal protective equipment. Always wear eye protection. *Protective equipment such as dust mask, nonskid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal* injuries.

c) 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 energizing power tools that have the switch on invites accidents.*

d) 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.*

e) Do not overreach. Keep proper footing and balance at all times. *This enables better control of the power tool in unexpected situations.*

f) Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts. *Loose clothes, jewelry or long hair can be caught in moving parts.*

g) 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.*

4) POWER TOOL USE AND CARE

a) 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.*

b) 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.*

c) Disconnect the plug from the power source and/or the battery pack 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.*

d) 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.*

e) Maintain power tools. 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.*

f) Keep cutting tools sharp and clean. *Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.*

g) 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.*

5) SERVICE

a) 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.*

SPECIFIC SAFETY RULES

- **Hold power tools by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord.** Contact with a "live" wire will make exposed metal parts of the tool "live" and shock the operator.
- **Always use proper eye protection and a respirator when sanding.**
- **Sanding of lead-based paint is not recommended.** See **Sanding Lead Based Paint** for additional information before sanding paint.
- **Clean your tool out periodically.**
- **Store sander with one of the platens in place.**
- **Keep hands away from spindle area on unit.**
- **Do not turn Smart Select knob when unit is running.**
- **Do not rest fingers on platen during use.**

⚠ **WARNING: Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:**

- lead from lead-based paints,
- crystalline silica from bricks and cement and other masonry products, and
- arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

- **Avoid prolonged contact with dust from power sanding, sawing, grinding, drilling, and other construction activities. Wear protective clothing and wash exposed areas with soap and water.** Allowing dust to get into your mouth, eyes, or lay on the skin may promote absorption of harmful chemicals.

⚠ **WARNING: Use of this tool can generate and/or disperse dust, which may cause serious and permanent respiratory or other injury**. Always use NIOSH/OSHA approved respiratory protection appropriate for the dust exposure. Direct particles away from face and body.

⚠ **WARNING: ALWAYS use safety glasses. Everyday eye glasses are NOT safety glasses. Also use face or dust mask if cutting operation is dusty. ALWAYS WEAR CERTIFIED SAFETY EQUIPMENT:**

- *ANSI Z87.1 eye protection (CAN/CSA Z94.3)*
- *ANSI S12.6 (S3.19) hearing protection*
- *NIOSH/OSHA/MSHA respiratory protection*

Symbols

The label on your tool may include the following symbols.

V ..... volts	*A ..... amperes*
Hz ..... hertz	*W ..... watts*
min ..... minutes	∼ *..... alternating current*
⎓ *..... direct current*	n_o *..... no load speed*
⧈ *..... Class II Construction*	⏚ *..... earthing terminal*
⚠ *..... safety alert symbol*	*.../min .....revolutions or reciprocations per minute*

Extension Cords

When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. The following table shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gage. The smaller the gage number, the heavier the cord.

Recommended Minimum Wire Size for Extension Cords

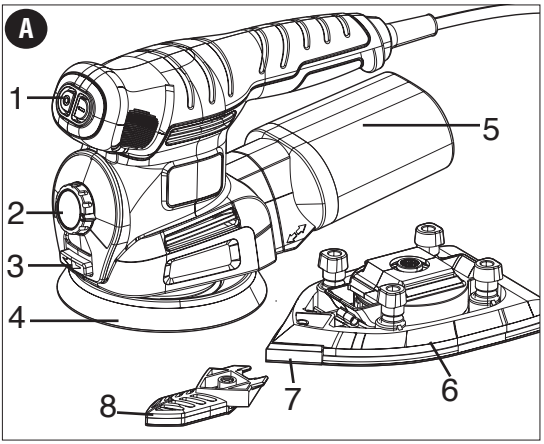
Total Length of Cord						
25 ft.	50 ft.	75 ft.	100 ft.	125 ft.	150 ft.	175 ft.
7.6 m	15.2 m	22.9 m	30.5 m	38.1 m	45.7 m	53.3 m
Wire Size AWG						
18	18	16	16	14	14	12

Motor

Be sure your power supply agrees with nameplate marking. 120 Volts AC only means your tool will operate on standard 60 Hz household power. Do not operate AC tools on DC. A rating of 120 volts AC/DC means that your tool will operate on standard 60 Hz AC or DC power. This information is printed on the nameplate. Lower voltage will cause loss of power and can result in over-heating. All Black & Decker tools are factory-tested; if this tool does not operate, check the power supply.

Functional Description - Figure A

1. On/off switch
2. Smart Select dial
3. Release button
4. Random orbit sanding base
5. Dust canister
6. Large detail sanding base
7. Sanding base tip
8. Detail finger attachment



Sanding

Lead based Paint

Sanding of lead based paint is NOT RECOMMENDED due to the difficulty of controlling the contaminated dust. The greatest danger of lead poisoning is to children and pregnant women.

Since it is difficult to identify whether or not a paint contains lead without a chemical analysis, we recommend the following precautions when sanding any paint:

Personal Safety

- No children or pregnant women should enter the work area where the paint sanding is being done until all clean up is completed.
- A dust mask or respirator should be worn by all persons entering the work area. The filter should be replaced daily or whenever the wearer has difficulty breathing.
  NOTE: Only those dust masks suitable for working with lead paint dust and fumes should be used. Ordinary painting masks do not offer this protection. See your local hardware dealer for the proper (NIOSH approved) mask.
- NO EATING, DRINKING or SMOKING should be done in the work area to prevent ingesting contaminated paint particles. Workers should wash and clean up BEFORE eating, drinking or smoking. Articles of food, drink, or smoking should not be left in the work area where dust would settle on them.

Environmental Safety

- Paint should be removed in such a manner as to minimize the amount of dust generated.
- Areas where paint removal is occurring should be sealed with plastic sheeting of 4 mils thickness.
- Sanding should be done in a manner to reduce tracking of paint dust outside the work area.

Cleaning and Disposal

- All surfaces in the work area should be vacuumed and thoroughly cleaned daily for the duration of the sanding project. Vacuum filter bags should be changed frequently.
- Plastic drop cloths should be gathered up and disposed of along with any dust chips or other removal debris. They should be placed in sealed refuse receptacles and disposed of through regular trash pick-up procedures. During clean up, children and pregnant women should be kept away from the immediate work area.
- All toys, washable furniture and utensils used by children should be washed thoroughly before being used again.

Introduction

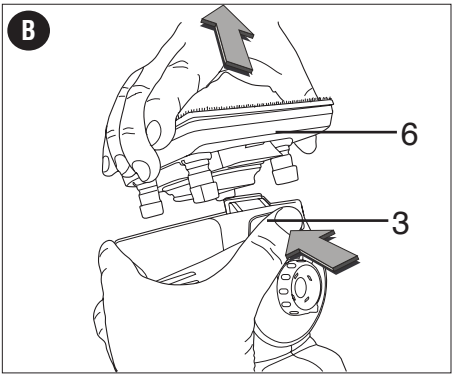
The MS2000 is a complete sanding kit that allows you to choose between 4 different sanding configurations to do a variety of tasks. Combining the versatility with the Smart Select™ feature, the sander gives you optimal results.

Assembly

⚠**Warning: Before assembly, make sure that the tool is switched off and unplugged.**

Removing sanding bases - Figure B

- To remove the sanding base, press the release button (3) and pull the base (6) off the tool.

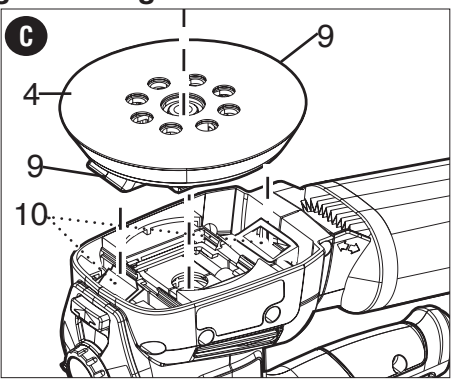


Random orbit sanding base

With this sanding base, you can use the tool as a random orbit sander.

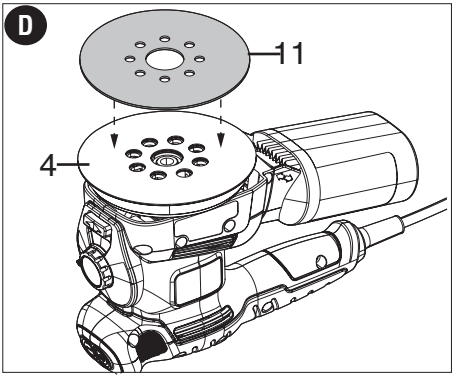
Attaching the random orbit sanding base - Figure C

- Hold the tool and the sanding base (4) facing upwards as shown in figure C.
- Align the dust openings (9) in the sanding base with the dust openings (10) in the tool base.
- Press in on the sanding base until you hear it click into place.



Fitting sanding sheets - Figure D

- Hold the tool with the sanding base (4) facing upwards.
- Place the sanding sheet (11) onto the sanding base (4) making sure the holes in the sheet line up with the holes in the base.

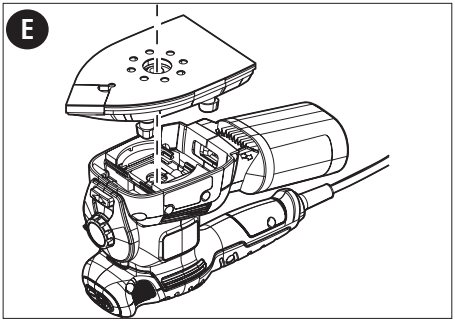


Large detail sanding base

With this sanding base, you can use the tool as a detail sander or a flush sander.

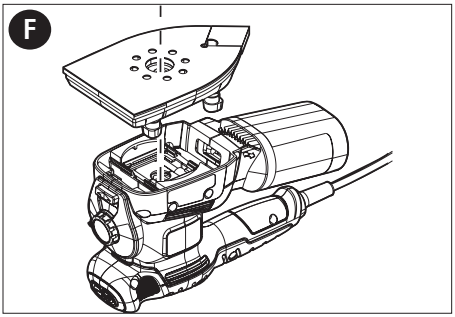
Attaching the large detail sanding base - Figures E & F

For detail sanding, the pointed end should face forward as in figure E.



For sanding large areas, the pointed end should face to the back as in figure F.

- Attach the sanding base as described above under “Attaching the random orbit sanding base”
- Press in on the sanding base until you hear it click into place.

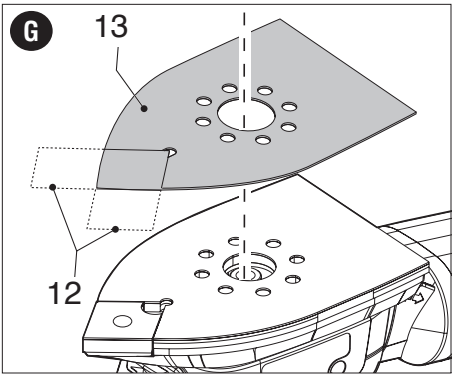


Fitting sanding sheets - Figure G

- Detach the two diamond-shaped tips (12) from the sanding sheet (13).
- Hold the tool with the sanding base facing upwards.
- Place the sanding sheet (13) onto the sanding base, making sure that the holes in the sheet line up with the holes in the base.

The diamond-shaped tip (12) can be reversed and replaced when worn.

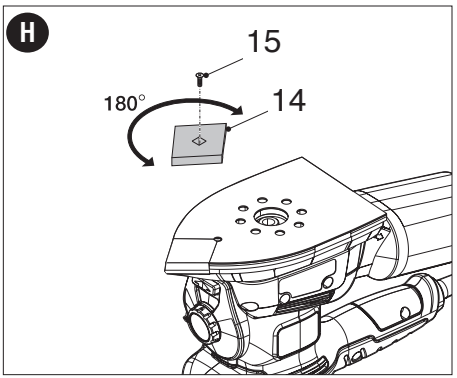
- When the front part of the tip is worn, detach it from the sheet, reverse it and press it onto the sanding base again.
- When the whole tip (12) is worn, remove it from the sanding base and fit a new tip (12).



Tip of the sanding base - Figure H

When the sanding tip (14) is worn, it can be reversed as shown in figure H.

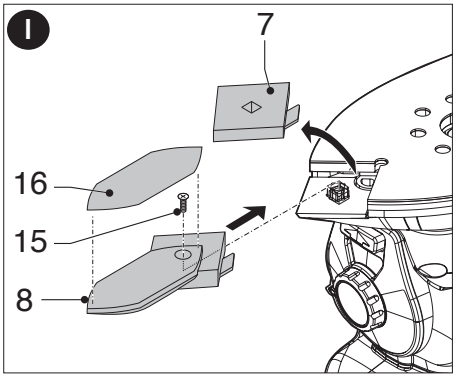
- The tip (14) can be removed and reversed.



Finger attachment - Figure I

The finger attachment is used for fine detail sanding.

- Remove the screw (15).
- Remove the sanding holder tip (7) from the sanding base.
- Fit the finger attachment (8) onto the sanding base.
- Fit and tighten the screw (15).
- Fit the appropriate sanding sheet (16) onto the finger attachment.



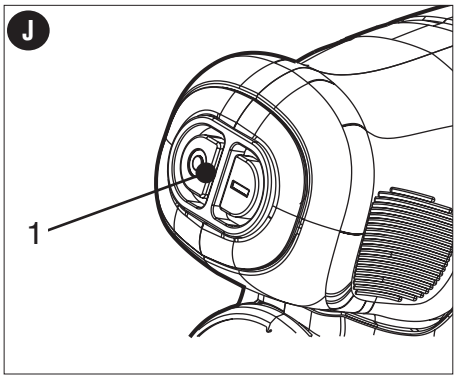
Operation

Let the tool work at its own pace. Do not overload.

⚠**Warning:** Do not cover the ventilation slots when using the tool. Make sure that the sanding base is flat on the workpiece.

Switching on and off - Figure J

- To switch the tool on, set the on/off switch (1) to position I.
- To switch the tool off, set the on/off switch to position O.



Smart Select Technology - Figure K

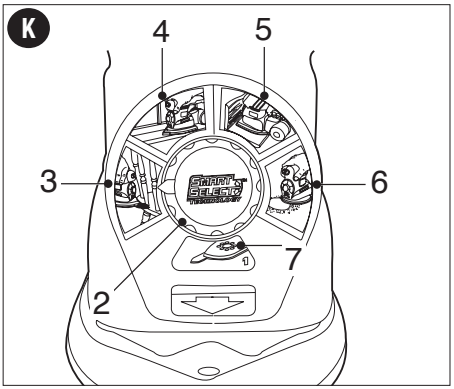
This sander is fitted with a smart select dial (2) which depicts various sanding applications. They are used to select the proper operating mode for your particular sanding application.

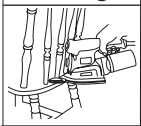
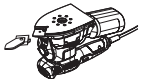
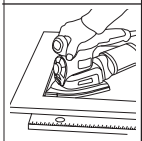
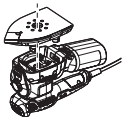
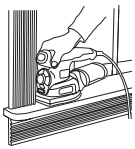
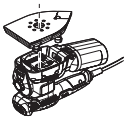
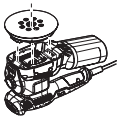
Step 1: Using the Smart Select dial (2) choose the application that you are going to perform; detail sanding (3), corner sanding (4), flush sanding (5), random orbit sanding (6).

Step 2: Once your application is selected, the window below (7) will recommend the correct base that should be used and identifies the corresponding sanding speed (which is automatically set for you).

Step 3: Snap on the recommended base (using the picture and color recommendation in window 7).

Note: You can override the speed at anytime by moving the Smart Select dial clockwise for increased speed.



SMART SELECT TECHNOLOGY CHART				
Setting	**Application**	**Recommended Base**	**Base Color**	**Speed Setting**
	Sanding tight and hard to reach areas. Light, detail sanding.	Detail finger attachment 	Orange	(1) Low
	Sanding areas with corners. Paint / Stain removal. Surface preperation for painting.	Large detail base - tip facing forward 	Blue	(1) Low
	Flush sanding - up to the edge. Sanding doors and window frames. Paint / Stain removal.	Flush sanding base - 90º edge facing forward 	Blue	(2) High
	Sanding large areas. Remove the most amount of material quickly. Paint / Stain removal. Surface preperation for painting.	Random orbit base 	Green	(2) High

Automatic brake system (ABS)

This tool has an automatic brake system. When the tool is not on the work surface, this feature keeps the speed of the disc below the speed of the motor. When the tool is switched off, the disc will stop very quickly.

Dust Collection

⚠ **WARNING:** Collected sanding dust from sanding surface coatings (polyurethane, linseed oil, etc.) can self-ignite in sander dust canister or elsewhere and cause fire. To reduce risk, empty canister frequently and strictly follow sander manual and coating manufacturer's instructions.

⚠ **CAUTION:** When working on metal surfaces, do not use the dust canister or a vacuum cleaner because sparks are generated. Wear safety glasses and a dust mask. Due to the danger of fire, do not use your sander to sand magnesium surfaces. Do not use for wet sanding.

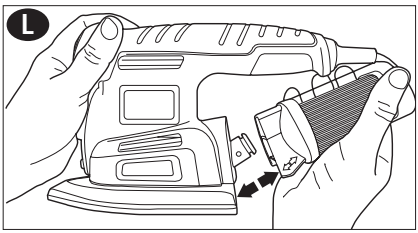
Dust canister - Figure L

Attaching and removing:

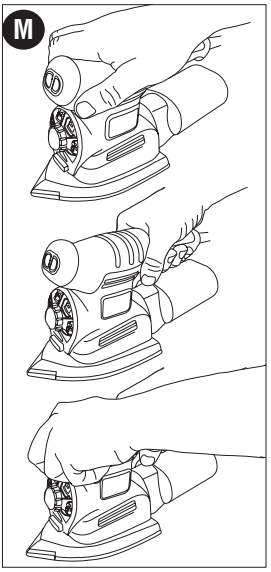
- Fit the dust canister over the dust extraction outlet. To remove the canister, pull it out to the rear and off the outlet.

Emptying:

- Remove canister and shake out debris over a trash can.



Hints for optimum use



- For user comfort, the tool can be operated with one hand or two as shown in **figure M**. Do not place your hands over the ventilation slots.
- Do not exert too much pressure on the tool.
- Regularly check the condition of the sanding sheet. Replace when necessary.
- Always sand with the grain of the wood.
- When sanding new layers of paint before applying another layer, use extra fine grit.
- On very uneven surfaces, or when removing layers of paint, start with a coarse grit. On other surfaces, start with a medium grit. In both cases, gradually change to a fine grit for a smooth finish.

Maintenance

Your tool has been designed to operate over a long period of time with a minimum of
maintenance.

Continuous satisfactory operation depends upon proper tool care and regular cleaning.

- Clear the cooling vents and slots with a clean, dry paint brush.
- Clean the housing with a clean, damp cloth. Do not use solvents.

Accessories

Recommended accessories for use with your tool are available at extra cost from your local dealer or authorized service center.

⚠ **WARNING:** The use of any accessory not recommended for use with this tool could be hazardous.

TROUBLESHOOTING

Problem	Possible Cause	Possible Solution
• Unit will not start.	• Cord not plugged in.	• Plug tool into a working outlet.
• Circuit fuse is blown.	• Replace circuit fuse.	(If the product repeatedly causes the circuit fuse to blow, discontinue use immediately and have it serviced at a Black & Decker service center or authorized servicer.)
	• Circuit breaker is tripped.	• Reset circuit breaker.(If the product repeatedly causes the circuit breaker to trip, discontinue use immediately and have it serviced at a Black & Decker service center or authorized servicer.)
	• Cord or switch is damaged.	