



## BORMANN BCD4100 078456 Random Orbital Sander

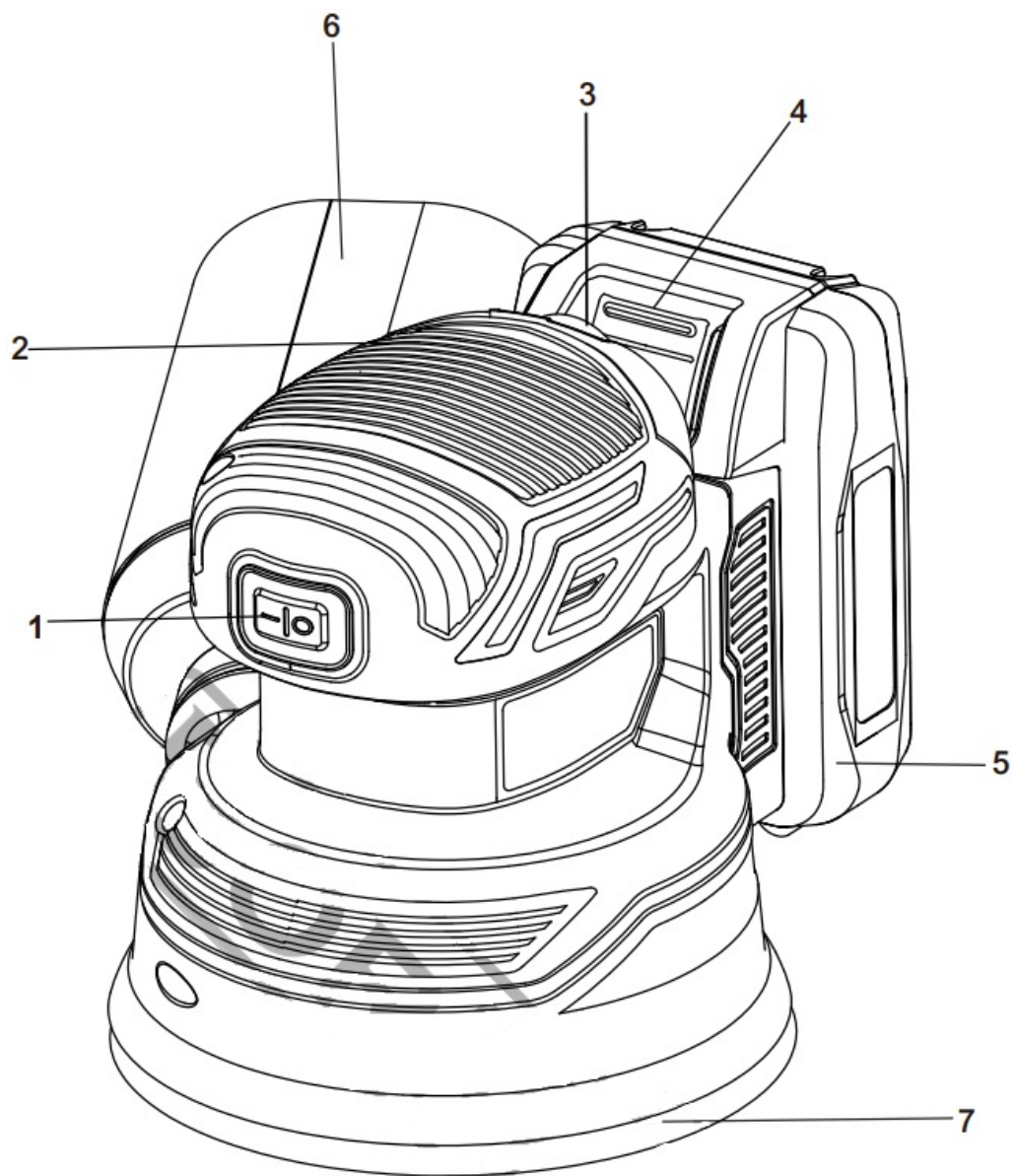


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## **PRODUCT OVERVIEW**

1. ON/OFF switch
2. Hand grip area
3. Variable speed control
4. Battery pack release button
5. Battery pack
6. Dust bag
7. Rotary sanding plate



## TECHNICAL DATA

BCD4100 – SET		
BCD26 40	Voltage	DC 20 V
	No load speed	6000-11000 rpm
	Oscillation diameter	2 mm
	Base size	125mm (5^ prime prime )

	Features	6-stage variable speed control, switch with dust proof cover, side dust tube providing higher dust collecting efficiency
BCD2601	Input voltage	230 V
	Output current	2.0 A
	Charging indicator lights	Yes
	Weight	0.275 kg
BCD2602	Voltage	18 V
	Battery capacity	2.0 Ah

- The manufacturer reserves the right to make minor changes to product design and technical specifications without prior notice unless these changes significantly affect the performance and safety of the products. The parts described/ illustrated in the pages of the manual that you hold in your hands may also concern other models of the manufacturer's product line with similar features and may not be included in the product you just acquired.
- To ensure the safety and reliability of the product and the warranty validity, all repair, inspection, repair or replacement work, including maintenance and special adjustments, must only be carried out by technicians of the authorized service department of the manufacturer.
- Always use the product with the supplied equipment. Operation of the product with non-provided equipment may cause malfunctions or even serious injury or death. The manufacturer and the importer shall not be liable for injuries and damages resulting from the use of non-conforming equipment.

## SAFETY INSTRUCTIONS

**Warning:** Read the manual before using this power tool. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury. After reading the

manual, store it in a safe place for future reference.

## **General power tool safety warnings**

### **Work area safety**

- Keep the work area clean and well lit. Dark or cluttered areas could lead to accidents.
- Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids or fumes, gases or dust. Power tools could create sparks which may ignite the gases or fumes.
- Keep children and bystanders at a safe distance while operating the power tool.

### **Electrical safety**

- Please make sure that power tool plugs match the outlet. Do not ever modify the plug in any way. Do not use adapter plugs with earthed power tools. Using unmodified plugs and matching outlets will reduce the risk of electric shock.
- Avoid body contact with earthed or grounded materials or objects, such as radiators, pipes, ranges and refrigerators.
- There is an tremendous risk of electric shock if your body is earthed or grounded.
- Do not expose power tools to rain or any other wet conditions. Water entering a power tool could increase the risk of electric shock.
- Do not abuse the power cord. Never use the cord for carrying, pulling or unplugging the electric tool. Keep the cord in a safe distance from heat, oil, sharp edges and any moving parts. Damaged or entangled cords will increase the risk of electric shock.
- When operating an electric power tool outdoors, use an extension cable which has the appropriate specifications for outdoor use. Use of a an extension cable suitable for outdoor use reduces the risk of electric shock.
- If operating a power tool in a damp location cannot be avoided, use a residual current device (RCD) protected supply. Use of an RCD reduces the risk of electric shock.

### **Personal safety**

- Stay alert, watch what you are doing and use common sense when operating the power tool. Do not use the power tool if you are feeling tired or are under the influence

of alcohol, drugs, or medication. A moment of inattention while operating the power tool may result in serious personal injury.

- Use personal protective equipment. Always wear eye protection. Protective equipment such as a dust mask, or hearing protection, non-skid safety shoes or protective helmets, used in appropriate conditions will reduce personal injuries.
- Prevent unintentional starting. Ensure the power switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the power tool. Carrying power tools with your finger on the power switch or connecting power tools that have the switch in the on position to a power source can lead to accidents.
- Remove any adjusting keys or wrenches before turning on the power tool. An adjusting key or a wrench left attached to a rotating part of the power tool may result in personal injury.
- Do not overreach. Keep balance and proper footing at all times. This helps the operator have better control of the power tool in unexpected situations.
- Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from any moving parts. Loose clothes, jewellery and/or long hair can be caught in moving parts.

## **Power tool use and care**

- Do not force the power tool. Use the correct power tool for the each application. The correct power tool will always do the job better and safer when used as intended.
- Do not use the power tool if the switch does not turn activate or deactivate it. Any power tool that cannot be controlled with the switch is extremely dangerous and must be repaired.
- Disconnect the main plug from the power source and/or the battery pack from the power tool before changing accessories, making any adjustments, or storing the power tool. Such preventive safety measures will reduce the risk of starting the power tool accidentally.
- When the power tool is not in use, store it out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to use and operate the power tool. Power tools are extremely dangerous in the hands of untrained users.
- Maintain the power tool. Check for misalignment or binding of moving parts, breakage of parts, leakage and any other issue that may affect the power tool's operation. If

damaged, please have the power tool repaired before use. Many accidents and injuries are caused by poorly maintained power tools.

- Keep the cutting parts of the power tool sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are more precise and easier to control.
- Always use the power tool, accessories and tool bits etc. in accordance with the instructions of this instruction manual, taking into account the working conditions and the work that is to be performed. Use of the power tool for applications different from those intended could result in personal injury or cause damage to the power tool.
- Keep the handles and any grasping surfaces of the power tool dry, clean and free of oil and grease. Slippery handles and grasping surfaces do not allow for safe handling of the tool in unexpected circumstances.

### **Battery tool use and care**

- Recharge the batteries only with the charger specified by the manufacturer. A charger that is used to charge unsuitable batteries can create a risk of fire.
- Use the power tool only with the specifically designated battery packs. Use of any other battery packs may create a risk of injury and fire.
- When the 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, seek medical help immediately. Liquid ejected from the battery may cause irritation or burns.

### **Service**

- Have the power tool serviced by qualified service personnel, using only identical replacement parts. This will ensure that the safety of the power tool is maintained.
- Never attempt to repair damaged battery packs on your own. Service of battery packs should only be performed by the manufacturer or authorized service technicians.

### **Safety instructions for the battery pack**

- Do not dismantle, open, smash or burn the battery pack.
- Do not short-circuit the battery pack. Do not store the battery pack inappropriately in a box or drawer where they may short-circuit each other or be short-circuited by conductive materials. 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.
- Do not expose the battery pack to sources of heat or fire.
- Avoid storage in direct sunlight.
- Do not subject the battery pack to mechanical shock.
- In the event of battery leaking, do not allow the liquid to come into contact with the skin or eyes. If contact has been made, wash the affected area with copious amounts of water and seek medical advice.
- Seek medical advice immediately if a battery pack has been swallowed.
- Keep the battery pack clean and dry.
- Wipe the battery pack terminals with a clean dry cloth if they become dirty.
- The battery pack needs to be charged before use.
- Use the correct charging procedure.
- After extended periods of storage, it may be necessary to charge and discharge the battery pack several times to obtain maximum performance.
- The battery pack performs optimally when it is operated at normal room temperature ( $20^{\circ}\text{C} \pm 5^{\circ}\text{C}$ ).
- Recharge only with the specified charger. Do not use any charger other than the one that is provided.
- Do not use any battery pack which is not designed for use with the equipment.
- Keep the battery pack out of the reach of children.
- Remove the battery from the equipment when not in use.
- Observe the plus (+) and minus (-) marks on the battery and ensure correct use.
- Make sure the battery is removed prior to changing accessories and before maintenance or repair work.
- Keep the battery away from microwaves and high pressure.

## **Safety instructions for the battery charger**



- Before charging, read the instructions.
- Children should be supervised to ensure that they do not play with the charger.
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- Do not charge a leaking battery.
- Do not use the charger outdoors when it's raining.
- Protect the charger from moisture.
- Do not short out the contacts of battery or charger.
- Respect the polarity “+/-” when charging.
- Do not open the unit and keep out of the reach of children.
- Do not charge the batteries of other manufacturers or any incompatible batteries.
- Ensure that the connection between the battery charger and battery is correctly positioned and is not obstructed by foreign bodies.
- Keep the charger clean and store in a dry and frost-free place.
- When charging batteries, ensure that the battery charger is in a well-ventilated area and away from flammable materials. Batteries can get hot during charging. Do not overcharge any batteries. Ensure that the charger is supervised while it is charging batteries.
- Do not recharge non-rechargeable batteries, as they can overheat and break.
- Use the charger in areas where the air temperature is between 18°C and 24°C in order to prolong its life and ensure optimal performance. Do not charge the battery pack in air temperatures below 0°C, or above 40°C as this can cause serious damage to the battery pack.

## **INTENDED USE**

The machine is intended for dry sanding of wood, plastic, filler and coated surfaces.

## **ASSEMBLY AND OPERATION INSTRUCTIONS**

### **Before operation**

#### **Charging the battery pack**

- If the battery pack becomes very hot you must remove the battery pack from the

charger and allow time for the battery to cool down before recharging.

- The battery is not charged when it leaves the plant. Therefore it must be fully charged before using the power tool for the first time.
- Charge the battery to reach full or no less than half charge before storage. If the tool will not be used for long periods of time, charge the battery every 3-6 months.

### Charging procedure (Fig. A)

1. Plug the charger into an appropriate outlet. The light will turn green.
2. Slide the battery pack into the charger, the light will turn red to indicate the charging process has started.
3. When charging is completed, the light will turn green. The pack is now fully charged, unplug the charger and remove the battery pack.

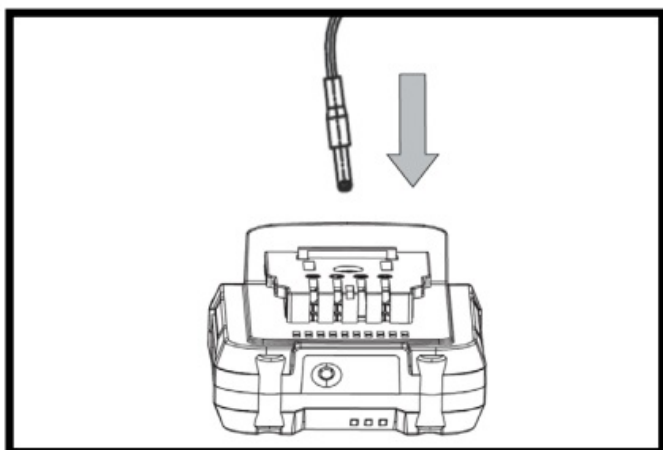




Fig. A

### Charging indicator

The charger is designed to detect some problems that can arise with battery packs. Indicator lights indicate problems (see table below). If this occurs, insert a new battery pack to determine if the charger is faulty. If the new battery charges correctly, then the original battery is defective and should be returned to a service center or recycling service center. If the new battery pack displays the same problem as the original battery Pack, have the charger tested at an authorized service center.

Light	Status
Red on ● 	Charging

Green on ● 

Fully charged

## Removing or installing the battery pack (Fig. B)

Depress the battery pack release button to release and slide the battery pack out from the tool. After recharging, slide it back into the tool. A simple push and slight pressure will be sufficient.

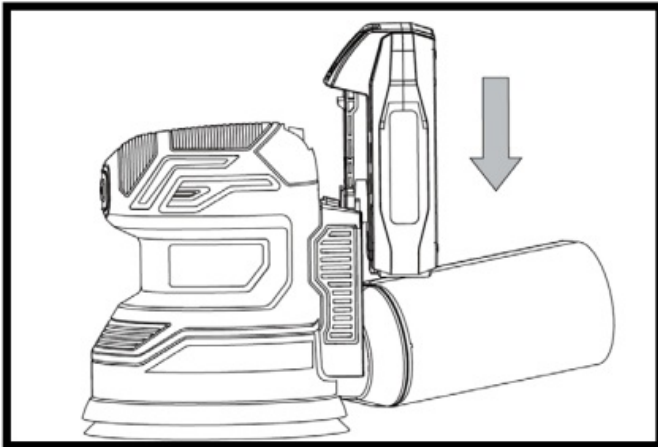


Fig. B

## Assembly

### Assembling the sanding paper (Fig. C)

1. Remove any dust or other objects from the sanding plate and sandpaper.
2. The sandpaper has dust extraction holes that must be aligned with the holes in the sanding plate, otherwise the dust extraction will not function.

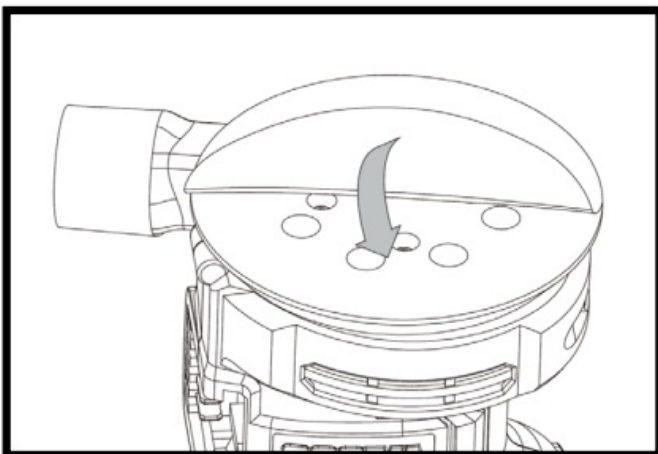


Fig. C

## Fitting and removing the dust bag (Fig. D)

## Attaching the dust bag

- The sander is equipped with a dust bag.
- To attach, slide the dust bag onto the dust outlet at the rear of the sander.

**Warning:** To protect your face and eyes from dust, never attempt to use the sander without the dust bag properly installed.

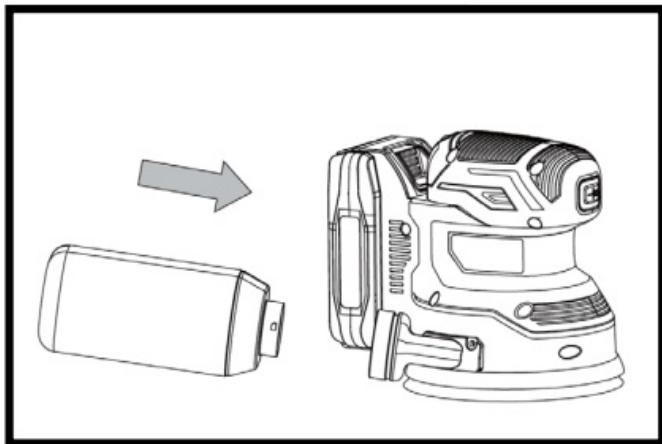


Fig. D

## Emptying the dust bag (Fig. E1, E2)

- For more efficient operation, empty the dust bag every 5-10mins.

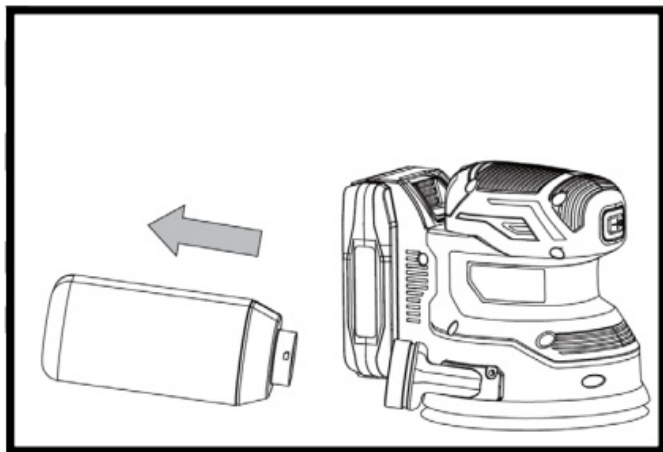


Fig. E1

- To empty the dust bag, first remove it from the dust extraction outlet, and then you can shake the dust out.

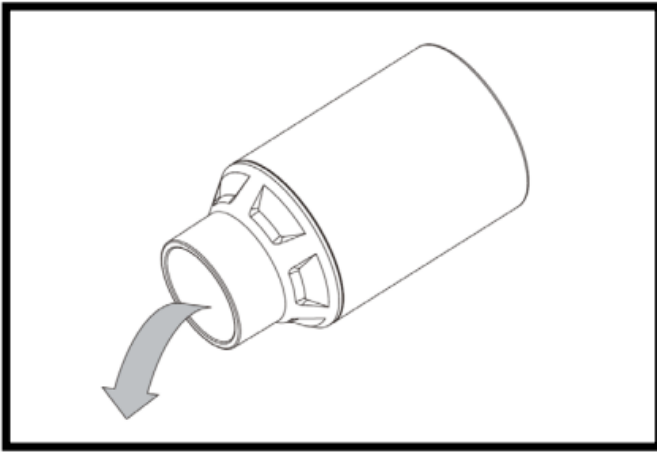


Fig. E2

### Attaching a dust collector vacuum to the sander (Fig. F)

- The sander is equipped with a vacuum adapter which is designed for collecting dust.
- Insert the vacuum adapter into the rear dust extraction outlet and ensure it is tightened securely. Then, connect the adapter to the hose of a vacuum cleaner.
- While using, first turn on the vacuum cleaner, and then turn on the sander.
- When you stop sanding, first turn off the sander, then turn off the vacuum cleaner.

**Note:** Always connect the adaptor with a 35mm vacuum hose.

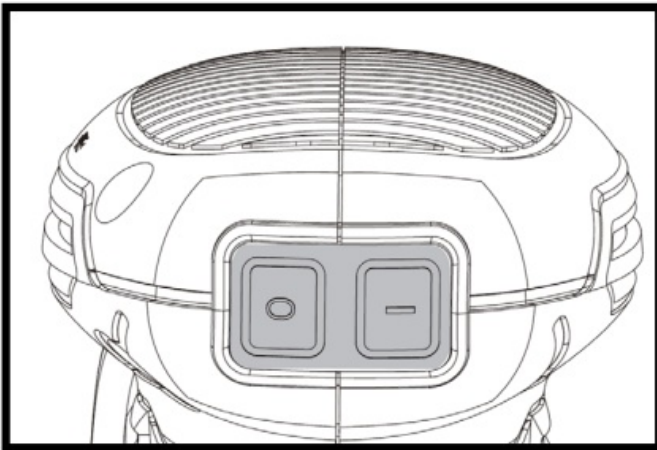


Fig. F

### Placing the polishing pad (Fig. G1, G2)

- The machine is equipped with a polishing pad.

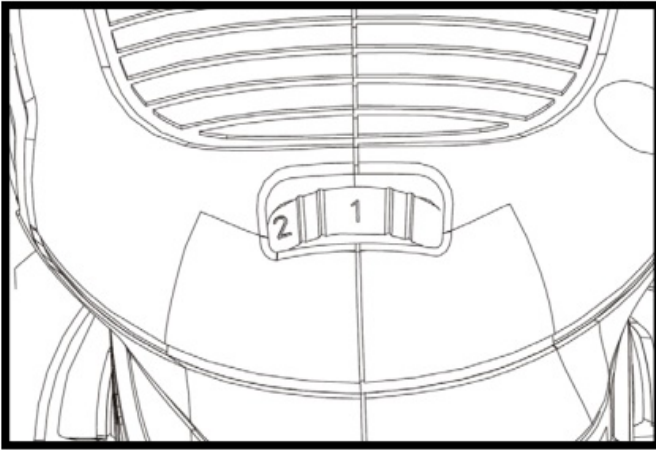


Fig. G1

- Place the polishing pad securely on the rotary plate and make sure it's centrosymmetric. Otherwise the polisher will vibrate intensely.

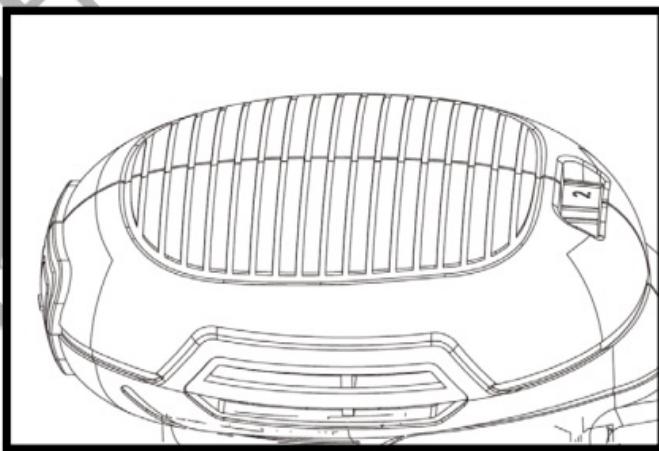


Fig. H

## Operation

### ON/OFF switch

- To turn on the sander, depress the protective cover over the switch at the position marked "1"
- To turn off the sander, depress the protective cover at the position marked "0".

### **Variable speed control**

- With the variable speed control, the required speed can be selected (also while the sander is turned on).
- The required speed is dependent on the material and is to be determined by a practical trial.

## **Hand grip area**

- The sander is designed to be held by the top of the main housing.

## **Using the sander**

- The workpiece to be sanded must be secured. If it is small or is likely to move during sanding, it must be held in a vise or suitably clamped.
- Be sure to hold the sander firmly whilst it is turned on and gently move it towards the surface of the work piece. Hold the sander so that it is flat on the workpiece and utilize slow, smooth and circular motions.
- Regularly check the condition of the sanding paper and replace when worn for best results.

## **Rough sanding**

- Attach a sand paper with coarse grain..
- Apply only light pressure on the workpiece to achieve increased material removal.

## **Fine sanding**

- Attach a sand paper with fine grain.
- Applying moderate pressure, move the machine in a circular pattern or alternately in lengthwise and crosswise directions over the workpiece.
- Do not tilt the machine to avoid leaving marks on the workpiece (e.g. when sanding veneer).
- After finishing the work, switch off the machine and lift it from the workpiece.

## **Orbital sanding**

- Guide the sander parallel to the working surface and move it in circles or in a cross pattern.
- Do not tilt the tool in order to avoid deep unwanted sanding marks.
- The amount of material removed is determined by the speed of the sanding disc and the grit size used. The speed of the sanding disc diminishes depending on the amount

of pressure applied to the workpiece with the sander.

- For best results, do not increase pressure on the tool, but use a coarser grit size.

### **Selecting the right sandpaper grit size**

- Depending on the task at hand, the operator may select coarse, medium or fine sandpaper grit size.
- Use coarse grits to sand down rough finishes, medium grit to smooth the work and fine grit to finish off.
- The higher the grade number, the finer the grit. For rough work start with a low grade of grit. (e.g. 60 grit) and change to a higher, finer grade (e.g. 120 grit) for finishing. If you use a fine grade for rough surfaces it will rapidly clog and need changing.
- It is best to make a trial run on a scrap piece of material to determine the best suited sandpaper grit size for a particular task.

### **Polishing pad**

- The polishing pad can be used for polishing surfaces with weathered paint or to remove scratches.
  - When polishing, select the minimum speed, otherwise the polisher will vibrate intensely.
1. Spread about a tablespoonful of polish evenly over the entire surface of the polishing pad.
  2. This first application should suffice for about 1/3 of the average surface applying it crosswise or with circular motion and moderate pressure.
  3. For the second and third applications of polish, repeat as above.

### **Note:**

- Do not overheat the surface.
- Do not allow the polishing pad to dry out on the surface, otherwise the surface can become damaged.
- Do not subject the surface to direct sunlight.



- Clean the polishing pad regularly to maintain good polishing results. Wash the polishing pad with a mild detergent and warm water.

## **TIPS FOR PROPER OPERATION**

- If the power tool becomes too hot, especially when used at low speed, set the speed to maximum and run it with no load for 2-3 minutes to cool the motor.
- Avoid prolonged usage at very low speeds.
- Always use sandpaper that is suitable for the material you want to sand.
- Always ensure that the workpiece is firmly held or clamped to prevent movement. Any movement of the workpiece may affect the quality of the sanding finish.
- Turn on the sander before sanding and turn it off only after you stop sanding.
- For the best results, sand Start sanding only after the sandpaper has been fitted on the sander.
- Empty the dust bag every 5 minutes or sooner to ensure efficient dust collection.

## **MAINTENANCE**

- The power tool requires no lubrication or maintenance.
- Do not attempt to repair any parts of the machine on your own.
- Never use water or chemical cleaners to clean the power tool. Wipe clean with a dry cloth.
- Always store the power tool in a dry place.
- Keep the motor ventilation slots clean.
- Keep the power tool free of dust.
- Occasionally you may see sparks going through the ventilation slots. This is normal and will not damage the power tool.

### **Note:**

- The ambient temperature range for the use and storage of the tool and battery is 0°C-45°C.

## **TROUBLESHOOTING**

- If the sander does not operate, check to see if the battery pack needs to be charged.
- If the sander cannot sand a surface properly, check the sandpaper. If the sandpaper

has been worn, replace it with a new sandpaper and try again.

- The sandpaper must be kept in a dry place. Do not allow the sandpaper to become damp.
- If the sander does not move smoothly, the sandpaper may be loose, damaged or wrinkled. Replace and try again.
- If a fault cannot be rectified return the sander to an authorized dealer for repair.

## **ENVIRONMENTAL DISPOSAL**

In order to avoid damages on transportation, the tool has to be delivered in solid packaging. Packaging as well as the unit and accessories are made of recyclable materials and can be disposed accordingly. The tool's plastics components are marked according to their material, which makes it possible to remove environmental friendly and differentiated because of available collection facilities.

### **Only for EU countries**



Do not dispose of electric tools together with household waste material!

In observance of European Directive 2002/96/EC on waste electrical and electronic equipment and its implementation in accordance with national law, electric tools that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility.

## **WARRANTY**

The power tools have been manufactured according to strict standards, set by our company, which are aligned with the respective European quality standards. The power tools of our company are provided with a warranty period of 24 months for non-professional use and 12 months for professional use. The warranty is valid from the date of purchase of the product. Proof of the warranty right is the purchase document of the tool (retail receipt or invoice). Under no circumstances shall the company cover the relevant cost of spare parts and respective required working hours unless a copy of the purchase document is presented. In case the repair has to be done by our service department the cost of transportation (to and from) is entirely borne by the sender (client). The tools must be

sent for repair to the company or to an authorized workshop in the appropriate way and means of transport.


## **WARRANTY EXEMPTIONS AND RESTRICTIONS:**

1. Spare parts that wear out naturally as a consequence of being used (brushes, cables, switches, chucks etc.).
2. Tools damaged as a result of non-compliance with the instructions of the manufacturer.
3. Tools poorly maintained.
4. Use of improper lubricants or accessories.
5. Tools given to third entities free of charge.
6. Damage due to an electrical connection at a voltage other than that indicated on the appliance plate.
7. Connection to a non-earthed power supply.
8. Change in current voltage.
9. Damage resulting from the use of salty water (e.g., washing machines, pumps).
10. Damage or malfunction resulting from improper cleaning procedure of the tool.
11. Contact of the tool with chemicals, or damage as a result of moisture or corrosion.
12. Tools that have been modified or opened by unauthorized personnel.
13. Broken parts/components as a result of inappropriate use.
14. Tools used for rent.

The warranty covers only the free of charge replacement of the component that presents a manufacturing defect or material failure. In case of lack of a specific spare part the company reserves the right to replace the tool with another corresponding model. After all warranty procedures have been concluded, the warranty period of the tool shall not be extended or renewed. Replacement of a spare part with repair charge is covered by a 1 year warranty of good operation, subject to compliance with the warranty terms. The spare parts or tools that are replaced remain in the possession of our company.

Requirements, other than those mentioned in this warranty form, regarding power tools repair or damage thereof, do not apply. Greek law and relative regulations apply to this warranty.


## **CUSTOMER SUPPORT**

The instructions manual is also available in digital format on our website [www.nikolaoutools.com](http://www.nikolaoutools.com). Find it by entering the product code in the Search "  " field.

[WWW.NIKOLAOOUTOOLS.COM](http://WWW.NIKOLAOOUTOOLS.COM)



## Documents / Resources

	<p><a href="#">BORMANN BCD4100 078456 Random Orbital Sander [pdf]</a> Instruction M anual</p> <p>BCD4100 078456, BCD4100 078456 Random Orbital Sander, Random O rbital Sander, Orbital Sander, Sander</p>
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## References

- [User Manual](#)

■ BORMANN

◆ BCD4100 078456, BCD4100 078456 Random Orbital Sander, BORMANN, Orbital Sander, Random Orbital Sander, sander

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