

# Bona® FlexiSand Power Drive™

Operating Manual



**Bona®**



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|                               |                                                                                      |
|-------------------------------|--------------------------------------------------------------------------------------|
| Motor type:                   | 1 phase                                                                              |
| Voltage (± 5%):               | 220-230                                                                              |
| Frequency:                    | 60 Hz                                                                                |
| Power:                        | 1.9kW 2.6 HP                                                                         |
| Rated current:                | 13A                                                                                  |
| Safety devices:               | 16A overload switch (manual reset),<br>thermal protection in motor (automatic reset) |
| Recommended fuses:            | 15A                                                                                  |
| Capacitors:                   | 50+160µF                                                                             |
| Motor insulation class:       | F                                                                                    |
| Protection class:             | IP44                                                                                 |
| Final drive speed (unloaded): | 155 rpm                                                                              |
| Total weight:                 | 111 lbs (50.35 kg)                                                                   |
| Diameter of disc:             | 16" (407mm)                                                                          |
| Hour counter:                 | <99,999 hours                                                                        |
| Height/Width/Depth:           | 46"/19.5"/25.2" (1170mm/490mm/640mm)                                                 |

We congratulate you on your purchase of the Bona® FlexiSand Power Drive™, a powerful and versatile machine for sanding, cleaning, buffing, and oiling wooden floors! With the Bona® FlexiSand Power Drive™ attached, you are able to perform direction-free sanding to bare wood. Four counter-rotating discs provide a high cut rate which can reach very close to the wall and as such reduces the need for edge sanding.

Carefully read through the entire user manual before you begin working with the machine. This machine is intended for professional or commercial use.

# Material Specification

| Standard (included on delivery) |                                 |                                |
|---------------------------------|---------------------------------|--------------------------------|
| Key                             | Article                         | Article Number                 |
| A                               | Bona® FlexiSand Power Drive™    | AM0310002.2                    |
| B                               | Bona® Pad Driver                | AS0312511                      |
| C                               | Dust skirt                      | AS0312102                      |
| D                               | Dust tube                       | AS0316650                      |
| E                               | Extension cable 50 ft (15.2m)   | AS0904015                      |
| F                               | Face mask, ear caps (compl.)    | AS0991232                      |
| G                               | Box spanner (tool)              | AS0990640 - L Type Wrench 19mm |
| H                               | Bona® Power Drive™              | AS0312540                      |
| I                               | User manual & instruction guide | N/A                            |



|                                                                                     | Article                                                                 | Application                                                                                                                                              | Recommended<br>Abrasives & Equipment                                                                    |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|    | Bona® Pad Drive™, 16"<br>Included on delivery<br>Art. nr. AS0312511     | Standard drive plate for a wide variety of jobs. Equip with a suitable pad for cleaning, oiling, buffing and fine sanding of untreated and treated wood. | Bona® Abrasive Pads<br>Bona® Screen<br>Bona® Double Sided Sanding Discs<br>Bona® Cloths                 |
|    | Bona® FlexiSand Power Drive™<br>4 x 150mm<br>Art. nr. AS0312540         | Geared drive plate for high-power wood sanding. Removes old lacquer and paint coatings while flattening the surface for a perfectly smooth finish.       | Bona® GREEN Ceramic Abrasives<br>Bona® BLUE Abrasives<br>Bona® SiC Abrasives<br>Bona® Diamond Abrasives |
|    | Internal Spur Gear<br>Art. nr. AS0312082                                | Spur gear for the Bona® Power Drive™                                                                                                                     | N/A                                                                                                     |
|  | Bona® Multi Disc™<br>6 x 150mm<br>Art. nr. AS0312520                    | Fine sanding of wooden floors. Suitable as a final finish after belt sanding.                                                                            | Bona® GREEN Ceramic Abrasives<br>Bona® BLUE Abrasives<br>Bona® SiC Abrasives<br>Bona® Diamond Abrasives |
|  | LED Lamp<br>Art. nr. AS0319070<br>FlexiSand™ Working Lamp<br>220V/60 Hz | For better visibility while sanding. The sanding result becomes easier to see.                                                                           | N/A                                                                                                     |

# Safety Instructions

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**DANGER** means: You or other staff can suffer a serious injury or death if the instructions marked with **DANGER** on this machine or in these user instructions are ignored or not followed. Read the entire user manual before you use the machine.



**WARNING** means: You or other staff can suffer an injury if the instructions marked with **WARNING** on this machine or in this user manual are ignored or not followed. The machine or other property may also be damaged if instructions marked with **WARNING** are ignored.

Read through the safety instructions carefully and inform your employees and users so no one comes to harm when using the machine. Then, save the instructions. The manufacturer is not liable for personal injury or machine damage due to incorrect operation of the machine. The machine may only be used by authorized persons that have been trained in its function.

**Voltage:** Make sure the voltage stated on the machine's rating plate corresponds to the voltage in the power outlet before you start the machine.

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**NOTE:** The reading and understanding of the Owner's Manual is imperative prior to operating this machine. If you or your operator(s) cannot read English, have this manual explained fully before attempting to operate this machine. Children should be supervised to ensure that they do not play with the appliance. This machine is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge.

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Under adverse conditions, a mixture of dust and air can be explosive. Sanding/polishing wooden floors can create an environment that can be explosive. The safety routines below must be followed:

- Cigarette lighters, control lamps and all other sources of ignition can cause explosions if they are active during sanding. All sources of ignition should be extinguished or, if possible, removed completely from the work area.
- In work areas with poor ventilation, an explosive environment can occur if certain flammable materials (solvents, thinners, alcohol, fuel, certain polishes, wood dust, etc) are in the atmosphere. Floor grinders can cause slightly flammable materials and vapors to burn. Read the manufacturer's label on all chemicals to be used so that you can determine the flammability. Ensure that the work area always has good ventilation.
- Hitting a nail during sanding can produce sparks and cause an explosion or fire. Always use a hammer to pound in any metal pieces before sanding the floor. Always keep a fire extinguisher (ABC-class or water) available.

Use of a machine that is not complete or that is not fully mounted can result in personal injury or damage to property. Never use these machines before they are fully mounted. Ensure that all fastening devices are fixed. Make adjustments as defined in the machine specifications.



## Never remove or disable the ground in the electric cable.

Consult an electrician if the ground is missing or if you suspect that your circuit is not properly grounded.

There is a risk of electric shock if the machine is used in a circuit that breaks repeatedly or is under-sized. Allow an authorized electrician to control the fuse, breaker or power supply.

There is a risk of personal injury if the grinder runs over and damages the cord. Ensure that the cord does not come into contact with the sanding disc. Always lift the cord over the machine and grind in a direction away from the cord. Do not pull the machine by the cord.

Always use a ground that breaks the current immediately in the event of a fault in the electrical system or in the extension cord.

**In order to prevent unintentional start of the machine, the power cord must be removed when the machine is not in use or during service.**

Moving parts of the machine can cause serious personal injury and/or material damage. Keep hands, feet and loosely fitting clothing away from all moving parts of the grinder.



Read the instructions contained in this user and maintenance manual before using the machine.



Hearing protection during use is recommended.



Protection of the airways during use is recommended.



Hazard due to electricity.



Hazard due to moving parts.



Because dust from sanding (red lead, certain types of wood and metal) is hazardous to health, a face mask of at least class P2 must be used.

There is a risk of damage to the eyes and/or body if protective clothing and/or protective equipment is not used during sanding. Always use protective glasses, protective clothing, ear protection and a face mask of at least class P2 during sanding.

## Safety Instructions (Cont.)

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To minimize dust in the environment use a vacuum cleaner intended for wood dust. The air flow on the vacuum cleaner should be at least 245m<sup>3</sup>/h. We ***strongly*** recommend the Bona® DCS™ for best results.

Store contained wood dust outdoors in a safe place due to the risk of fire. Never leave contained wood dust unsupervised.

Always keep a fire extinguisher (ABC-class or water) available.

Take precautionary measures to ensure that the machine is not damaged during transport.

Be careful with cords. Use the correct power cord with the correct length (see accessories list). Never carry the machine by the cord. Never pull power cords from the machine or wall socket with strong movements. Protect the power cords against heat, oil and sharp edges. Power cords longer than 50 ft (15.24m) should not be used.

Remove the power cord from the machine when it is not in use. Ensure that the machine does not start unintentionally. Never carry a connected machine. Ensure that the breaker is not on once the machine is connected to a power socket. Never use the machine if the start handle does not function as it should.

Inspect the machine regularly. If you discover damaged parts, replace them at once. If necessary, contact Bona or staff approved by Bona.

Because this construction is in many ways unique, use of other spare parts and accessories than Bona® original spare parts can cause a risk of personal injury and/or damage to the machine.

Ensure that the machine is always in good condition. Keep the machine clean for better and safer use. Follow the instructions concerning the replacement of accessories. Inspect the power cords regularly. Repair or replace defective parts if they are damaged.

Store the machine in a dry and locked area when not in use.

Do not forget to put on the tool before you start the machine. Always check that the sanding paper is correctly adjusted before you begin sanding.

Keep unauthorized persons away from the work site. Do not allow unauthorized persons to come into contact with the machine or power cords.

Do not misuse the machine. The machine works better when it is used according to its capacity and design. Allow the motor to "rest" during periods of heavier use. The motor will cool better, thus increasing its lifespan.



Never use a machine for anything else or use accessories other than those described in this manual.

Service or repairs performed by unauthorized persons can cause damage or accidents. If service and repairs are performed by unauthorized persons, the warranty may become invalid. Service and repairs must be performed by Bona or staff approved by Bona.

Be aware when you work. Use common sense. Do not use the machine if you are tired, have consumed alcohol or have taken medication that can affect your judgment or your body control. Due to the potential fire hazard involved with sanding dust, smoking is not permitted while sanding.

Always use a grounded circuit breaker.

## Maintenance, Service & Repairs

Always disconnect the power cable to the machine before it is cleaned, tools are changed, maintenance is performed or when worn parts are replaced.

### Maintenance

To keep the machine in a safe and functioning condition, perform maintenance on the machine regularly.

#### Daily maintenance

- Remove accessories when not in use
- Use compressed air and a vacuum cleaner to remove dust after each use
- Wipe the machine and cord off with a clean cloth
- Check start and stop function
- Check cord and plug

#### Every 250 work hours or at least once a year

- Wheels
- Cable stand
- Dust skirt
- Micro switches
- Motor and gearbox
- Handle shaft function including hydraulic system

# Maintenance, Service & Repairs (Cont.)

## Service

The Bona® FlexiSand Power Drive™ is a high quality machine and is tested by authorized test staff at the factory before delivery. However, electrical and mechanical parts wear down and age during long-term use.

Only Bona's original parts may be used because the machine is considered unique, otherwise safety functions can become impaired.

When you contact Bona or staff approved by Bona in the event of a fault or to order spare parts, always specify the type and serial number of your machine. This information is located on the data plate of the machine.

The machine may never be cleaned using a high-pressure washer or hose.

## Spare parts and exploded views

On the Internet you will find a list of spare parts and exploded views for the Bona® FlexiSand Power Drive™ and other machines in our product range. Visit <http://spareparts.bona.com/>

During the factory warranty period, repairs may only be carried out by Bona or staff approved by Bona. Other repairs (after the warranty period) of mechanical or electrical parts on the machine may only be carried out by Bona AB or staff approved by Bona AB who has experience and knowledge concerning safety regulations.

## Warranty

There is a 24 month factory warranty (from the date of invoice) against material and manufacturing faults.

In the event of a warranty claim, the machine or agreed upon part must be returned to Bona or staff approved by Bona with paid freight for warranty testing and for potential repair or replacement under warranty.

During the factory warranty period, repairs may only be carried out by Bona or staff approved by Bona. We do not undertake any other form of compensation or liability to damages.

### THE WARRANTY DOES NOT COVER

- Consumable materials such as wheels, electrical cables, abrasives, lamps, etc.
- Indirect damage, damage and errors that occur due to external damage, accidents, and/or repairs performed outside of our knowledge and approval, or damages for another reason outside of our control.
- Transport damage or transport costs. In the event of transport damage it is up to the receiver to contact the relevant transport company for compensation.
- Cases of incorrect use, overloading, carelessness or poor maintenance
- The use of parts produced by another company outside of our control.
- Electrical components, if the voltage variations are beyond those set out in the technical specification.
- If payment for the machine is not made according to the agreement.

## Bona® FlexiSand Power Drive™ in General

The operation of the Bona® FlexiSand Power Drive™ is subject to applicable national regulations.

Beyond the user manual and the applicable rules in the country for preventing accidents, the applicable technical trade provisions for safety and professional work methods must be followed.

### Normal use

The Bona® FlexiSand Power Drive™ is only intended for indoor use at temperatures between 10°C (50°F) and 35°C (95°F) and in good lighting. When you work with the machine, be observant of the surroundings and particularly persons nearby. Do not use the machine around children. The manufacturer is not responsible for injuries that occur via such use. In this case, the user assumes full risk. In addition to the normal usage instructions, the manufacturer's care and maintenance instructions must also be followed.

The manufacturer is not liable for any damage to the machine resulting from prohibited changes. The manufacturer is not liable for damage to the machine or to the floor covering to be sanded.



The machine is only intended for work on level surfaces with a maximum slope of 2%. The machine is not intended for pure concrete sanding. Never run the machine over power cables, or you may risk a short circuit.

## Bona® FlexiSand Power Drive™ in General (Cont.)

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### Normal use (cont.)

The user is expressly obliged only to use the machine in accordance with this manual. If the machine is used in any other manner, this is solely at the user's own risk. The manufacturer's liability ceases fully in this case.

The machine may not be used in areas where explosive or flammable substances are stored or manufactured (petrol, thinners, fuel oil, solvents, etc.). The machine's electrical components and mechanical parts can cause these substances to ignite.

Never work with worn, damaged or incorrect equipment, which can cause damage to the floor.

The power cable with extension may not exceed 50 ft (15.24m). Longer lengths should incorporate the Bona® Power Station™.

### Risks

When the machine is not in use, the power cable must be disconnected from the wall socket in order to prevent damage to the floor and unlawful use. For transport in lifts, the applicable user and safety instructions must be followed, especially where load capacity is concerned. In order to prevent unauthorized use of the machine, it must always be stored in a suitable location. Regularly check the power cable and the machine for wear or aging.

## Handling

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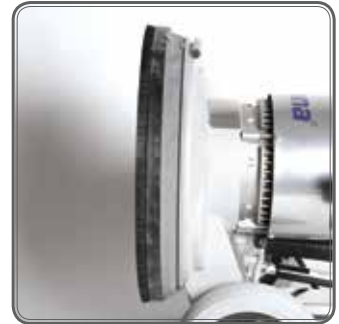
The Bona® FlexiSand Power Drive™ can be used for many different types of floor preparation/sanding depending on the type of drive plate mounted to the machine. As a standard, one Drive Plate is included on delivery which can be used to drive nylon pads, screens and abrasives, etc. Always use a soft pad underneath the Drive Plate before attaching screens and abrasives. Never use the Drive Plate directly towards the floor.

For instructions on using another drive plate, see the instructions for that drive plate.

## Assembling the dust skirt

Place the dust skirt in the intended notch on the rubber strip.

Never use the dust skirt when oiling. Always remove the skirt when transporting the machine.



## Assembling the FlexiSand Power Drive™

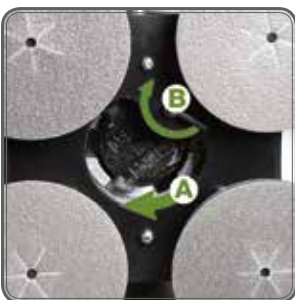
- 1) Take the Internal Spur Gear (A), place it against the chassis and align it with the screw holes on the underside of the machine (B). Screw the self-tapping screws provided into the prepared fixing points as seen in the picture.



- 2) Ensure that the screws are tight and flat against the cogged ring.



- 3) To install the Power Drive™ drive plate, place the drive plate into position and turn it to engage the interlock (A). Once it is in place, turn the small flat paddle lever (B) to make sure that it is bolted into place.



- 4) To remove the Power Drive™ drive plate, turn the paddle lever so it is in the unlocked position (A). Place the tip of the supplied box spanner between the driving axle and drive plate bracket, then push against the drive plate to release the interlock (B). Turn one of the sanding discs counterclockwise until the drive plate can be freed.



## Handling (Cont.)

### Attaching dust containment

Attach the dust containment hose to the dust tube on the Bona® FlexiSand Power Drive™. If using Bona® DCS™, connect DCS™ cuff to dust tube and fasten with provided clamp.



The air flow on the vacuum should be at least 245m³/h.

### Using the FlexiSand Power Drive™

Lower the handles to a comfortable working position by pressing the button located on the top of the handle. The handle should be held at approximately chest height and not taken down to waist height as is normal with other work using a buffing machine.



### Using the FlexiSand Power Drive™ (cont.)

- 1) If you have not already, press the button on the top of the handle then lower the handle shaft to a comfortable working position. The shaft must be lowered at least 10° or the machine will not start.



- 2) Press and hold one of the buttons (A) to activate the switch lock.



- 3) Press the start handle. Once the start handle is pressed down the switch lock button can be released.



If the machine becomes difficult to handle, release the start handles and the machine will stop immediately.

### **WARNING**

If you have not operated a Bona® FlexiSand Power Drive™ previously, ensure that no one or nothing is nearby before you start the machine.

Remember to connect the machine to a Bona® DCS™ or other suitable vacuum system before starting work.

## Handling (Cont.)

### Using the FlexiSand Power Drive™ (cont.)

The FlexiSand Power Drive™ system is not used like a 'normal' buffing machine with the handles held at the waist and the machine moving from side to side when sanding. The counter-rotating cog construction of the Bona® FlexiSand Power Drive™ equalizes the sanding force so that the machine stands more or less still during operation and is controlled by simply walking backwards and forwards in the same way as a belt sander is used.



It is important to make sure that the sanding is carried out in a methodical fashion to ensure that all areas of the floor surface are sanded equally. Although the FlexiSand Power Drive™ can be used in any direction on the floor, making it ideal for patterned floor, for the best results on a strip or plank floor walk forwards and backwards with the grain of the wood in a slow, steady manner.

### The sanding process

The Bona® FlexiSand Power Drive™ system is designed to be used in a variety of different sanding situations. However, it is not designed to replace a traditional belt sanding machine and where a floor is uneven due to cupping or similar issues it is recommended that an initial sanding using a belt sander with a 36/40 grit belt is made. For other sanding operations, the following methods are suggested:

#### To remove finish from a coated floor:

- 1) Start sanding with Bona GREEN Ceramic abrasives, grit 36 – 60 depending on how aggressive you need to be to remove old finish and stain. Check the abrasives frequently and replace as required to maintain a full, aggressive cut.
- 2) After using Bona GREEN Ceramic abrasives on the coarse – medium cuts, switch to Bona BLUE abrasives for the medium – fine cuts along with the ¼" Intermediate Pads: 60 – 120 grits.
- 3) For final cut, use Bona BLUE abrasives in either grit 100 or 120 along with the ¼" Intermediate Pads to final prep flooring surface for a sealer coat.
- 4) For a final cut for a stained floor, Black 120 grit with the ¼" Intermediate Pad is recommended.

*Disclaimer: Depending on the specie or flooring type being sanded (strip vs. parquet or multi-specie), extra steps or variations of the steps listed above may be required. You may also want to use the ¼" Intermediate Pads on all sanding steps to minimize scratch depth and bouncing or hopping of the Bona® FlexiSand Power Drive™. Contact your local Bona Territory Manager or Technical Services with questions.*

### The sanding process (cont.)

#### To sand after a belt sander has been used:

Follow the same process as noted on the previous page. If belt sanding has been carried to a higher grit, such as 80 grit, then simply use the FlexiSand Power Drive™ system for the final sanding.

#### When sanding prior to staining:

It is important that scratches are not left on the floor as the staining process will highlight any remaining scratches. The Bona® FlexiSand Power Drive™ is perfect for the final preparation before staining. The final sanding grit required for the Bona® stain systems will be noted in the appropriate data sheet.

#### Bona® Interface Pads:

The Bona® FlexiSand Power Drive™ as supplied has 4 x 150mm grinding pads that provide uniform sanding on a hardwood floor. However, if the floor is uneven then the machine may 'jump' a little when sanding to bare wood. A 1/4" intermediate pad may be used to stabilize sanding. Some movement is normal during rough sanding and can indicate that more sanding is needed to get the surface flat. Another issue that may be faced is that on soft wood species 'dish out' of the wood grain can sometimes happen.

To reduce the possibility of these issues, 4 x 6" (150mm), .25" (5mm) thick Interface Pads are supplied with the FlexiSand Power Drive™. To fit them, first make sure that the grinding plate is clean. Place the Interface Pad onto it with the soft dark black side facing towards the machine with the hook and loop side facing outwards. Then, apply the required Bona® abrasive disc.

Using the Interface Pads will allow the FlexiSand Power Drive™ to follow the contours of the floor more efficiently, making the sanding process easier and more comfortable.

### Transport position

1) Remove the drive plate.



2) Tip the machine backwards and remove the dust skirt.



Always remove the dust skirt and the drive plate or sanding disc before transportation. Always vacuum and clean machine after use. When transporting the machine via vehicle, make sure that the machine is securely fastened through the wheels to avoid movement.

## Additional Notes

[illegible]

