

Bona FlexiSand

Manual and safety instructions



AMO310000 | AMO310010


Bona[®]

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Technical data

Bona FlexiSand

Manufacturer: BONA AB Sweden www.bona.com				
Machine type Bona FlexiSand AMO310000	Year-week	Motor power: 1,1 kW	Insulation F	
Machine No: 0901AMO310XXX	Voltage: 230 V 50 Hz	Rated current: 8,0 A	Weight: 45 kg	

	EU	USA
Motor type:	1 phase	1 phase
Voltage (+/- 10%):	230VAC	120VAC
Frequency:	50/60 Hz	60Hz
Power:	1,1kW	1.5 HP
Rated current:	8A	15A
Recommended fuses:	10A (slow fuse)	15A
Insulation class:	F	F1
Protection class:	IP54	IP54
Abrasive disc speed: (unloaded)	350/225 rpm.	175 rpm.
Total weight:	40kg (45kg with extra weight on the motor)	101.41 lbs.
Diameter of disc:	407mm	16"
Hour counter	<99 999 hours	<99 999 hours
Height/Width/Depth	1170mm/ 490mm/ 640mm	46"/ 19,3"/ 25,2"

Noise measurement according to SS-EN ISO 3746:1995 & SS-EN ISO 11202:1995:

	Pad + Screen 100	Pad	Abrasive 100
Noise level:	80,0 dB(A)	71,3 dB(A)	82,2 dB(A)
Calculated sound effect:	94,7 dB	80,1 dB	95,6 dB

Vibration measurements according to SS-EN ISO 5349-2:2001:

	X	Y	Z	X	Y	Z	X	Y	Z
Vibrations RMS (m/s²)	0,96	1,1	1,5	1,3	1,3	1,8	0,9	1,0	1,1
Vibrations vector sum (m/s²)	2,1			2,6			1,7		

According to used standard SS-EN ISO 3746:1995 is the highest standard discrepancy for reproducing 3 dB defined, according to ISO 7574-1.

According to Swedish Work Environment Authority the measure uncertainty at vibrations measurements estimated to 20-40%.

The thing that contributes to the measuring uncertainty is the transfer of vibrations to the accelerometer.

We congratulate you to the choice of your new Bona FlexiSand for sanding, oiling and polishing!

Carefully read through the entire user manual before you begin working with the machine. If anything is unclear, turn to your reseller with confidence or to Bona AB.

Safety instructions

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 is only built for sanding, oiling and polishing of wooden floors!

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.

NOTE! It is obligatory to read and understand the user manual before the machine is used.



DANGER means that 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 are not followed. Read the entire user manual before you use the machine.



WARNING means that 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.



Under adverse conditions, a mixture of dust and air can be explosive. Sanding/polishing of 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, that is to say solvents, thinners, alcohol, fuel, certain polishes, wood dust and other flammable materials are in the atmosphere. Floor grinders can cause slightly flammable materials and vapours 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 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 adjustment as per the machine specifications.

NOTE! Never remove or disable the earth lead in the electric cable. Consult an electrician if the earth lead is missing or if you suspect that your circuit is not properly earthed.

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

The operator or other persons present can be injured if the power to the machine is connected while maintenance is performed. Always remove the cord to the machine from the power point.

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.

Always use an earth fault breaker 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 used and during service.

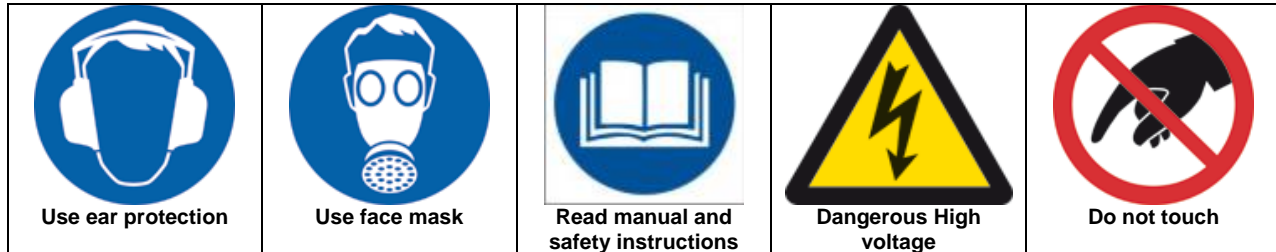
Use of the machine with a damaged cord can cause electric shock. Do not pull the machine by the cord. Movable parts of the machine can cause serious personal injury and/or material damage. Keep hands, feet and loosely fitting clothing away from all movable parts of the grinder.

If a floor grinder is used without all protection, discs or covers in place it may lead to personal injury or material damage. The operator or other persons present can be injured if the power to the machine is connected while maintenance is performed, or while tools are changed.



Because dust from sanding (i.e. red lead, certain types of wood and metals) are 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.



For minimized dust environment use a vacuum cleaner intended for wooden dust.

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

We strongly recommend Bona DCS system for best result.

Store contained wooden dust outdoors in a safe place, due to the risk of fire. Never leave contained wooden dust without supervision.

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 10m 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 the manufacturer, an authorized reseller or service partner. Note! Because of 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 the handle clean and free from grease.

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. Use fuses with the correct ampere number in relation to the motor.

Never use a machine for anything else other than sanding, polishing and oiling of wooden floors.

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 retailers authorized 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 earth fault breaker!



Repairs, Service and Maintenance

Service

Bona FlexiSand 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.

In order to keep the machine in a safe and functioning condition, service must be performed every 250 work hours or at least once a year. This service includes control of wheels, cable stand, dust skirt sanding disc and coal brushes. Motor, micro switches and handle shaft function is controlled.

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

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

When you contact us 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 type sign 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 Bona FlexiSand and other machines in our product range.

The address is: <http://spareparts.bona.com/>

During the factory warranty period, service or repairs may only be carried out upon approval by a manager at Bona Division Sanding and only performed by staff at Bona AB or approved staff at Bona AB Division Sanding.

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

Warranty

A 24 month factory warranty (from the date of invoice) against material and manufacturing faults applies to Bona Division Sanding's own manufactured machines and Bona DCS with accessories manufactured after 01-01-2008.

Bona Division Sanding pledges to rectify material and manufacturing faults free of charge provided that the machine, with paid freight, is sent to us with the relevant warranty claim form describing the fault.

The factory warranty only covers new sales.

We do not undertake any other form of compensation or liability to damages.

Transport damage or transport costs will not be compensated. In the event of transport damage it is up to the receiver to contact the relevant transport company for compensation.

The warranty does NOT cover faults that have occurred via normal wear, incorrect spare parts, carelessness, incorrect use, procedures without Bona Division Sanding's approval or that the machine is connected to incorrect current.

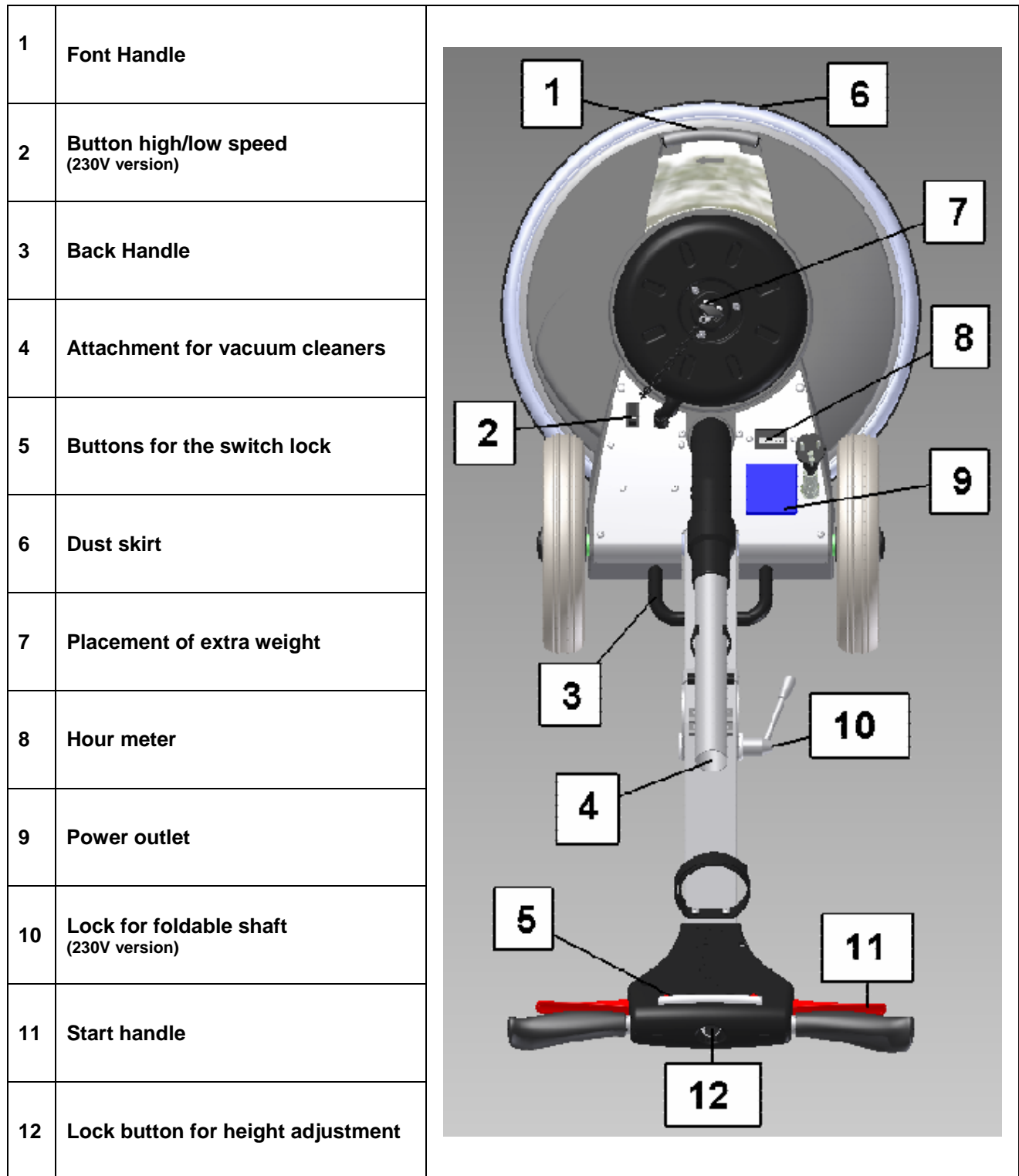
THE WARRANTY DOES NOT COVER:

- Consumable materials such as wheels, electric cables, abrasives, lamps, coal brushes, etc.
- Indirect damage, damage and errors that occur due to external damage, accidents, poor maintenance, overload, repairs performed outside of our knowledge and approval, or damages for another reason outside of our control.
- With the use of parts produced by another company outside of our control.
- Electrical components with current variations beyond what has been specified in the manual.
- If payment for the machine is not made according to agreement

In the event of a warranty claim, the machine or the agreed part must be returned to us or our dealer for warranty testing and for potential warranty repair or replacement.

During the factory warranty period, service or repairs may only be carried out upon approval by a manager at Bona Division Sanding and only performed by staff at Bona AB or approved staff at Bona AB Division Sanding.

Bona FlexiSand in general



The operation of Bona FlexiSand is subject to applicable national regulations.

Beyond the user manual and the applicable rules for the country for preventing accidents, the applicable technical trade provisions for safety and professional work methods must be followed. Work methods that can set safety out of focus may not occur.

Normal use

Bona FlexiSand is only intended for indoor use at temperatures between +10°C (50°F) and +35°C (95°F) and in good lighting.

If it is used in any other manner, this is against applicable provisions.

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.

Warning! The machine is only intended for work on level surfaces with a maximum slope of 2%.

Warning! The machine is not intended for pure concrete sanding.

Warning! Never run the machine over power cables. Danger of short circuit.

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 (such as 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.

Always use earth fault breaker!

The power cable with extension may not exceed 10 m!

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.

Sanding

Example of when a Bona FlexiSand is most suited:

If you want to apply an additional layer of varnish over already applied varnish, you must nap up the surface somewhat in order for the new layer to adhere. See the product information for Bona Prep for further varnish layers.

Sanding with a belt/roller sander and edge machine can leave uneven areas in the floor surface depending on different sanding methods. Sometimes these can be seen with oiling, staining or in darker parts of the floor. Sanding with Bona FlexiSand evens out these differences and gives an even floor a perfect surface.

When the first layer of varnish on clean wood has dried, sometimes wood may rise, thus resulting in an uneven surface. This can be removed using a Bona Scrad or other abrasive screen that provides an even surface. This also applies if dust, dirt, etc. have ended up in the coating during drying.

Remember the following:

The sanding capacity is lower than for a belt or drum sander, depending upon lower weight.

There is actually no recommended motion pattern, when using Bona FlexiSand, but it is advisable to sand across the wood pattern.

If additional fine sanding is desired, then Bona Scrad system is a perfect choice.

Remember that too much fine sanding can “polish” the floor so that the varnish or oil has a difficult time penetrating deeply. The recommendation is not to use finer than 150 grain on wood – with the exception of the Bona Scrad system.

Bona Scrad is a thin brown pad, approx. 380 grain, which is used together with a small sanding paper in the form of a triangle. Fix the sand paper to the pad so that the tip points toward the middle. Try to centralize the Scrad as much as possible in order to avoid vibrations and wobbling.

Handling

Working with Floor Pads

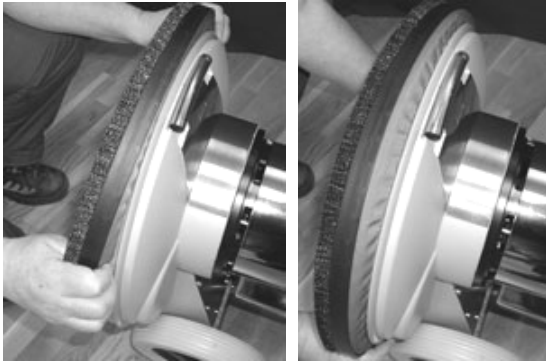
Bona FlexiSand is a perfect machine for treating wood floors with oil. The lower speed is used in order to work the oil into the wood and the higher speed when polishing. Remember to always follow the oil manufacturer's instructions.

If you use Bona FlexiSand for both sanding and oiling remember to clean the machine thoroughly between the different tasks.

Colors and purpose of Floor Pads:

White - buffing oil, underlay
Tan - coarser buffing, cleaning
Red - cleaning, oil application
Green - coarse cleaning
Brown - extremely fine sanding
Black - fine sanding

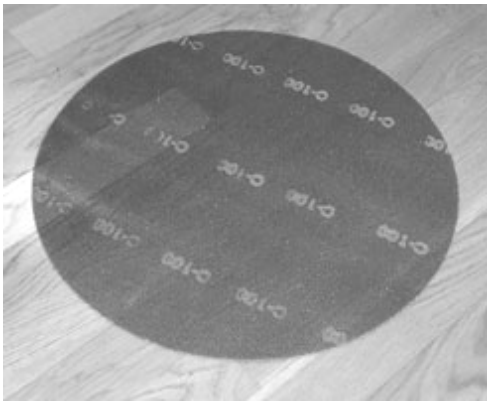
Assembling the dust skirt



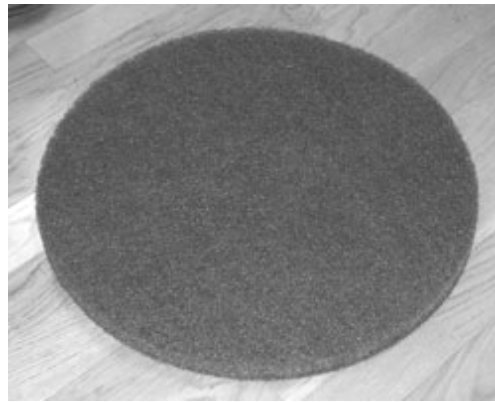
Place the dust skirt in the intended notch on the rubber strip.

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

Working with Sanding Screens (Diameter 407mm (16"), Grit size P60-P220)



1. Place the sanding Screen on the floor.



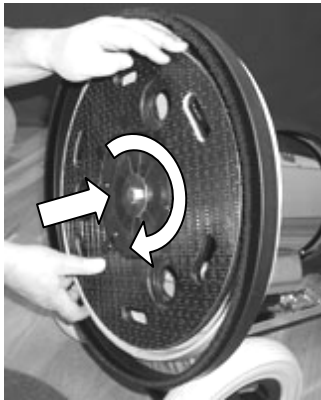
2. Place the sanding pad over the Screen.



3. Mount the sanding disc.
NOTE! Mount counterclockwise!



4. Place the machine over the sanding pad.

Working with abrasives (Diameter 407mm (16"), Grit size P16-P220)

1. Mount the sanding disc, loosen the centre screw.
NOTE! Loosen clockwise!



2. Mount the rubber pad.



3. Place the abrasive.



4. Tighten the centre screw.
NOTE! Tighten counter clockwise!





Adjusting the handle shaft

1. Press the button located on the top of the handle.



2. Lower the handle shaft to the desired position. The lower position with relaxed arms, the easier the machine will be to handle. Release the button.

Starting the machine

	
1. Press in the button located on the top of the handle.	2. Lower the handle shaft to the desired position. The machine will not start if the shaft is not lowered at least 10°..
	
3. Press one of the buttons for the switch lock.	4. Then press the start handle to start, release the switch lock button.

Carefully lift the handle and the machine will move to the right. If the handle is lowered then the machine will move to the left. Find a balanced position on the machine and use small up and down motions when you start to prevent that the machine travels.

If the machine becomes difficult to handle, release the start handle and the machine will stop directly!

Moving backward or forward is normally achieved by going in the desired direction. If you want more power then tip the buffer slightly sideways. To the right, it will move backwards and to the left, forwards.

If you hold the handle in mid-position the machine will work on the spot.

Warning! *If you have not operated a Bona FlexiSand previously!*

Ensure that no one or nothing is nearby before you start the machine.

Test first on a large empty surface with only a pad, this makes the machine easier to maneuver.

DuoSpeed (only 230V, EU)**Position I = LOW**

The sanding disc rotates at a speed of 225 rpm when idling.
N.B.! The speed decreases when loaded!

Intended for use when oiling, polishing and sanding wooden floors

Position II = HIGH

N.B.! The speed decreases when loaded!

The sanding disc rotates at a speed of 350 rpm when idling.

Intended for use when polishing and sanding wooden floors.

Single speed (only 115V, USA)

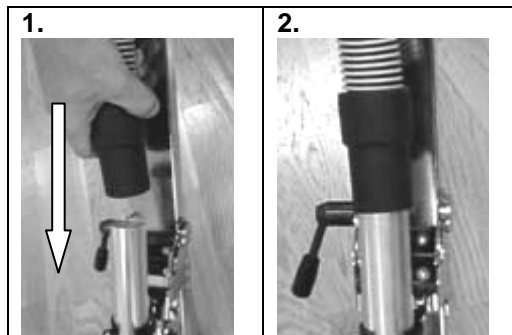
The sanding disc rotates at a speed of 175 rpm when idling

Intended for use when oiling, polishing and sanding wooden floors

Attaching a vacuum cleaner.

For minimized dust environment use a vacuum cleaner intended for wooden dust.
Just attach the vacuum cleaners hose to the 38mm tube on the Bona FlexiSand.

The air flow on the vacuum cleaner should at least be 245m³/h.
We strongly recommend the Bona DCS system for best result.



Changing the coal brushes (only 230V, not 115V)

Must be done after approx. 700 hours

Remember to remove the power cable from the machine before service!**1. Remove any extra weight.****2. Loosen the screws on the motor cover.****3. Remove the motor cover.****4. Remove the screws.****5. Carefully loosen the spring.****6. Replace the carbon brushes.**
NOTE! Always replace all 4 brushes on the motor!**7. Replace the spring and tighten the screw.**
NOTE! Check to ensure all springs are in place and that screws are tightened!**8. Replace the cover.**

Transport position



1. Tip the machine backwards and remove the dust skirt.



2. Remove the sanding disc.

EU



3. a) Raise the handle to an upright position, pull out the front carry handle and fold the handle shaft.

EU



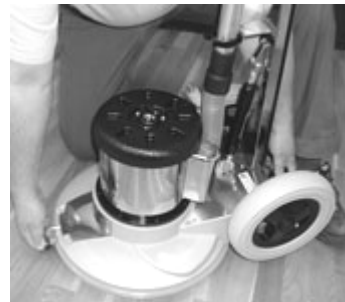
4. a) Grip the machine as per the photo.

USA



3. b) Raise the handle to an upright position, pull out the front carry handle.

USA



4. a) Grip the machine as per the photo.

NOTE! Always remove the dust skirt and the sanding disc before transportation!

When transporting the machine on a vehicle, make sure that the machine is securely fasten through the wheels to avoid movement!



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Bona[®]
Division Sanding

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Manual Edition1.0

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EU assurance of conformity

As per directive 98/37/EC, appendix IIA and 2006/42/EC applying after 2009-12-29

We hereby guarantee that Bona FlexiSand with article number:

- AMO310000 beginning from serial number 0901AMO310001
- AMO310010 beginning from serial number 0901AMO310001

fulfils the requirements in the Council's directives:

- 98/37/EC, and 2006/42/EC applying after 2009-12-29, on machines.
- 2006/95/EEC regarding electrical equipment intended for use within certain voltage tolerances,
- 2004/108/EEC regarding electromagnetic compatibility, including applicable amendments.

The following norms have been used as guidelines when designing the machines:

SS-ISO 1940-1	Balancing requirement of rotors in stable state - Determination and verification of balancing tolerances
SS-EN ISO 14121-1	Machine safety – Principles for risk assessment
SS-EN ISO 12100 -1,-2	Machine safety – Fundamental terms, general construction principles
SS-EN ISO 13857	Machine safety - Safety distances to prevent hazard zones being reached by upper and lower limbs
SS-ISO 60204-1	Machine safety - Electrical equipment of machines – Part 1: General requirements
SS EN 55014 -1, -2	Electrical household appliances, electrical tools and similar articles - Electromagnetic compatibility (EMC), Part 1: Emission Part 2: Immunity
SS-EN 61000-3-2	- Electromagnetic compatibility (EMC), Part 3-2: Limits - Limits for overtones caused by apparatuses with saturation current max. 16 A per phase
SS-EN 61000-6-2	- Electromagnetic compatibility (EMC), Part 6-2: General requirements - Immunity in equipment in an industrial environment

SMP, The Swedish Machinery Institute has carried out voluntary type approval
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 Sweden

Fjugesta, 25 August 2009

Lasse Waineby

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