

Bona Edge

Manual and safety instructions




AM0003135 | AM0003196 | AMO230009.3 | AMO230010.3 | AMO230018.3

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TECHNICAL DATA

Bona AB Sweden www.bona.com made in Sweden				
Machine type Floor sander Bona Edge AMO2300cc.3	Year-week	Motor power: 2,0 kW	Insulation F	
Machine No:	Voltage: 230 V 50 Hz	Rated current: 10,0 A	Weight: 13,5 kg	

	EU	USA
Motor type:	1-phase	1-phase
Voltage (+/- 10%):	230V	115V
Frequency:	50 Hz	60 Hz
Power:	2,0 kW	2,68 hP
Rated current:	10A	15A
Recommended fuses:	10A	20A
Isolation class:	F	F
Safety class:	IP54	IP54
Sanding disc speed:	Ca 3 000 rpm normal load	Approx. 3 000 rpm normal load
Illumination:	20W halogen	20W halogen
Total weight:	12,5kg -15,5kg	27,5 lbs – 34lbs
Dust discharge:	<1 mg/m ³ air	<1 mg/m ³ air
Abrasive disc diameter:	178mm	7"
Sanding arm length:	130mm, 220mm alt. 330mm	5", 9" or 13"
Sanding arm height:	51mm	~2"
Hour meter	99 999 hours	99 999 hours

Noise measurement according to SS-EN ISO 3746:1995 & SS-EN ISO 11202:1995:			
	Abrasive 80		
Noise level:	91,6 dB(A)		
Calculated sound effect:	98,2 dB		
Vibration measurements according to SS-EN ISO 5349-2:2001:			
	X	Y	Z
Vibrations RMS (m/s ²)	1,1	1,1	0,8
Vibrations vector sum (m/s ²)	1,7		
<small>According to used standard SS-EN ISO 3746:1995 is the maximum standard deviation of reproducibility 3dB, defined in 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.</small>			

We congratulate you on your choice of a new Bona Edge sanding machine.

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 of wooden floors!

The machine may only be used by authorised 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 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.

Dispose of the contents in the dust bag when the bag is one-third full. After you have finished sanding, the dust bag must be emptied and the contents must be stored in a safe place outdoors due to fire hazard. Never leave a dust bag containing sanding dust unattended. Never empty the contents in an open fire.

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 power 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 authorised 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 power cable to the machine from the power point.

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

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 power cable.

In order to prevent unintentional start of the machine, the power cable must be removed when the machine is not used and during service.

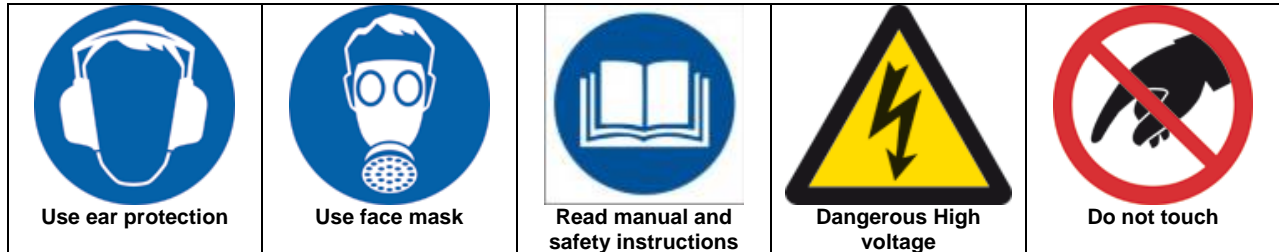
Use of the machine with a damaged power cable can cause electric shock. Do not pull the machine by the power cable. Movable parts of the machine can cause serious personal injury and/or material damage. Keep hands, feet and loosely fitting clothing away from all movable parts of the grinder.

If an edge floor grinder is used without all protection 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 a tool is 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 power cables. Use the correct power cable with the correct length (see accessories list). Never carry the machine by the power cable. Never pull power cables from the machine or wall socket with strong movements. Protect the power cables against heat, oil and sharp edges. Power cables longer than 10m should not be used.

Remove the power cable 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 authorised 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 cables 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 the 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 unauthorised persons away from the work site. Do not allow unauthorised persons to come into contact with the machine or power cables.

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 unauthorised persons can cause damage or accidents. If service and repairs are performed by unauthorised persons, the warranty may become invalid. Service and repairs must be performed by Bona or retailers authorised 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 judgement 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 Edge is a high quality machine and is tested by authorised test personnel 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, motor, tension device, sanding drum 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 Edge and other machines in our product range.

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

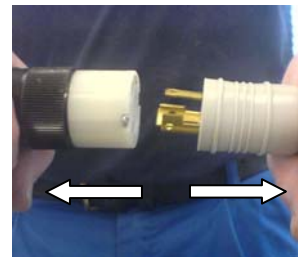
During the factory warranty period, service or repairs may only be carried out upon approval by a manager at Bona Division Sanding and only performed by staff at Bona AB or approved staff at Bona AB Division Sanding.

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 authorised technician who has experience and knowledge concerning safety regulations.

SERVICE AND MAINTENANCE

All maintenance must be done on neutral machine!

Unplug from the wall outlet. Check cable and connectors regularly. Always replace a damaged cord (slots, jacks or cable connections) with a new original cable.



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.

Machine use:

The machine is intended for the edge sanding of wooden floors, parquet floors as well as cork floors. It maybe used on newly laid and untreated floors and existing floors that have been treated with lacquer or oil.

The main function of the machine is to serve as a complement to a belt or a drum sander for sanding edges.

The machine is designed in accordance with latest information regarding ergonomics, safety and efficiency. The machine has been thoroughly checked and approved before leaving the factory.

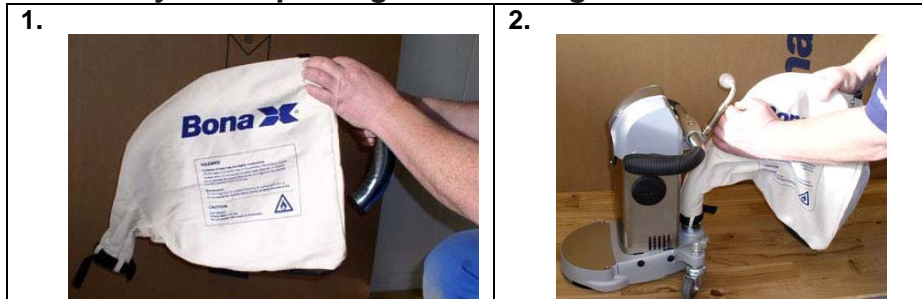


Working method

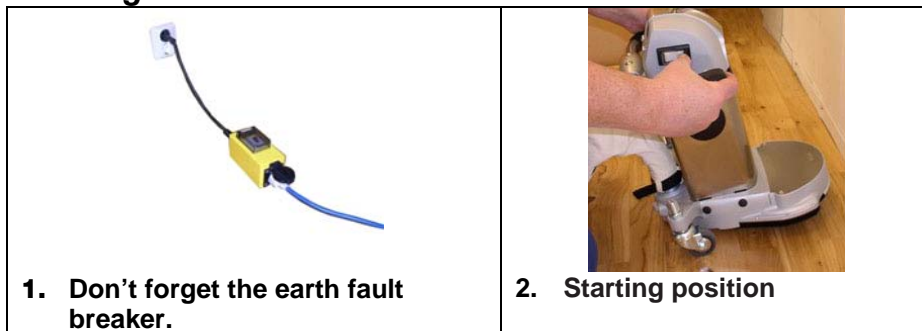
When sanding hold the machine, use both handles and move the machine in circles in the direction of rotation over the surface which is to be sanded. It is important that the machine rests on three points, both the wheels and the sanding disc. The best result is obtained by letting the machine work with its own weight. When using fine abrasives you must be careful not to make any burn marks due to high friction created.

In addition to the points noted the sanding must be adapted to the type, patter and composition of the floor.

Assembly and replacing the dust bag



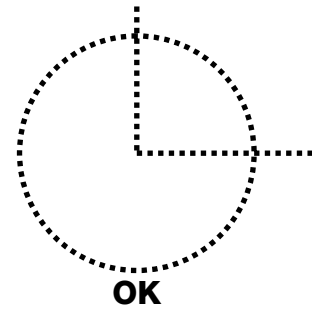
Starting



Wheel adjustment



The distance between the underside of the motor bracket and the floor should be approx. 83 mm on the left side and 75 mm on the right for standard arm.



Footprint should be as above to get the best result.

Note! If the whole disc is flat and in full contact with the floor it will create excessive resistance in the motor, leave circular scratch marks, and the machine will be hard to handle.

Handle adjustment

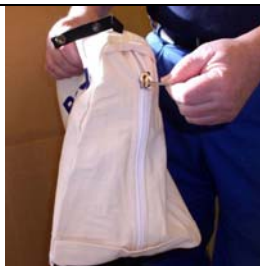


1. The angle of the handles can be adjusted for a more comfortable working position. Use Torx wrench T30.

Dust collection



1. For minimal dust discharge Bona's original dust bags shall always be used. The dust bag must be emptied when it is filled to max 1/3.






2. When emptying the dust bag, remove the dust tube, together with the dust bag, completely, open the zipper and empty the contents.

Changing sanding material

N.B. Changing sanding material must be made on an unconnected machine!




Never start the machine before a sanding disc is attached.

 <ol style="list-style-type: none"> 1. Lay the edge sander carefully on its left side. Regularly check the sanding disc. If the sanding disc is worn out or has become clogged by lacquer or paint, the sanding result deteriorates and the surface of wood may become discoloured. 	 <ol style="list-style-type: none"> 2. Always use Bona's sanding discs of the correct size and stable rear side. Only abrasive paper suitable for sanding of wooden floors should be used. 	 <ol style="list-style-type: none"> 3. Check that the sanding disc is centred.
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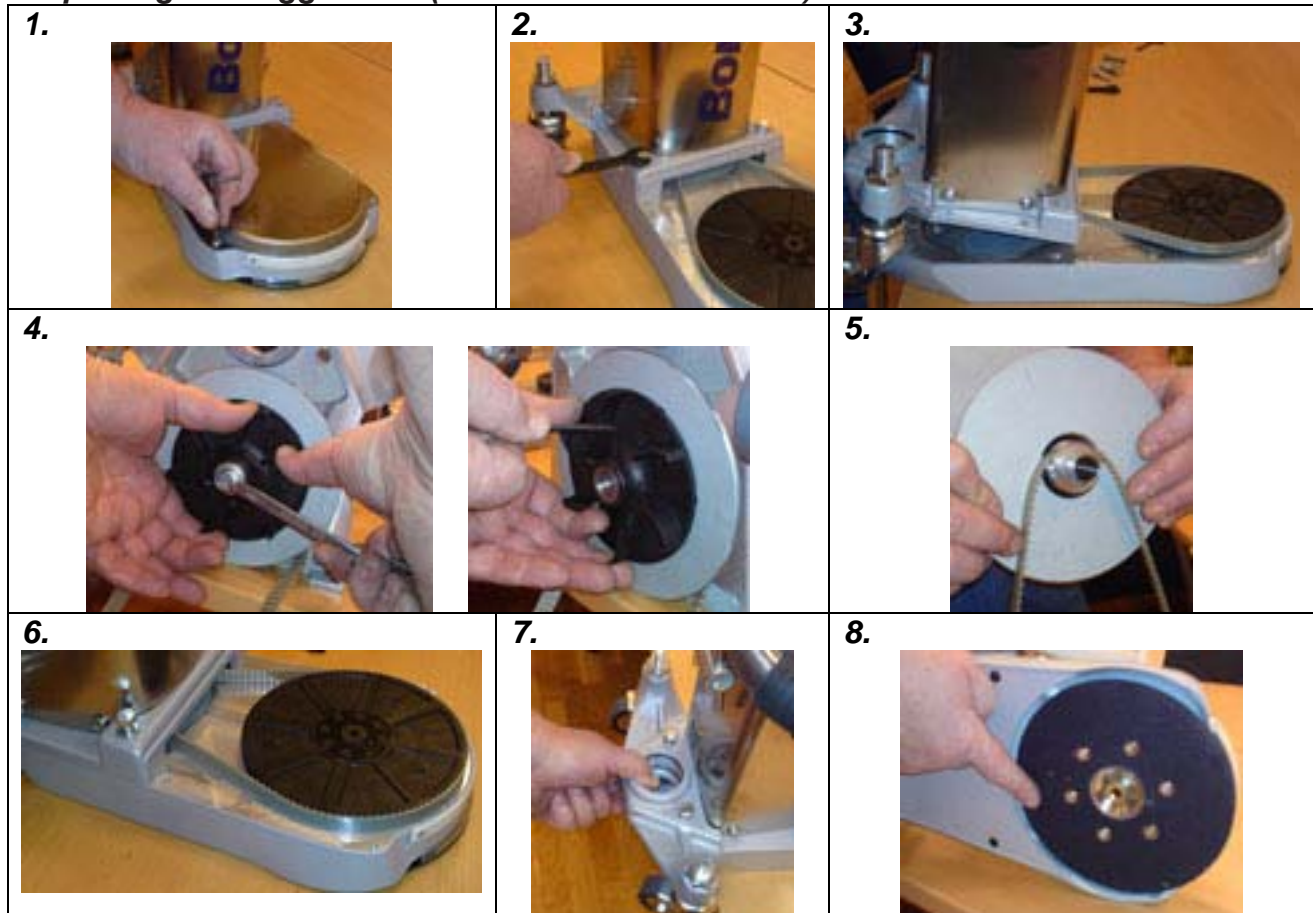
Changing sanding disc with hole

 <ol style="list-style-type: none"> 1. Removing sanding disc with hole. Use box spanner NV17.

Changing velcro disc

 <ol style="list-style-type: none"> 1. If the Velcro disc is worn, scrape the disc off with a knife. 	 <ol style="list-style-type: none"> 2. Clean the steel disc with alcohol or similar. Glue a new Velcro disc on the steel plate. 	 <ol style="list-style-type: none"> 3. Check that the disc is positioned. A disc that is not centred may cause unbalances and vibrations.
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Replacing the cogged belt (220mm and 330mm arm).



1. Remove the 4 belt cover screws.
2. Remove the 4 bolts by the motor bracket.
3. Lift the motor bracket of the sanding arm.
4. Remove the screw and washer, loosen the stop screw and then remove the fan together with the plate.
5. Fit a new cogged belt on the small pulley. Then fit the pulley & fan along with the plate on motor shaft. Make sure that the plate is not clamped between the motor bracket and the sanding arm.
6. Fit the cogged belt on the big pulley.
7. Refit the bolts without tighten them. Tighten the cogged belt tension by pulling the motor bracket backwards relative to the arm.
8. Make sure the fan and belt go freely by spinning the sanding disc. Tighten the bolts. Refit the belt cover.

Changing the cogged belt (130mm arm)







 <p>1. Undo the 2 belt cover screws.</p>	 <p>2. Loosen the 4 bolts in the motor bracket.</p>	 <p>3. Remove the pulley screw.</p>
 <p>4. Gently tap with a centre punch to loosen the pulley.</p>	 <p>5. Remove the sanding arm</p>	
 <p>6. Remove screw and washer as well as the stop screw keeping the ventilator and the cover plate on motor shaft.</p>	 <p>7. Remove the pulley/ventilator together with the V-belt and cover plate.</p>	
 <p>8. Mount a new belt together with the ventilator and cover plate.</p>	 <p>9. Make sure that the cover plate is fitted right in its position.</p>	

 <p>10. Tighten the screw and washer as well as the stop screw</p>		 <p>11. Place the pulley in its right position.</p>
 <p>12. Remount the sanding arm.</p>	 <p>13. Replace the four screws. N.B. Do <u>not</u> tighten the screws!</p>	 <p>14. Place a screwdriver in the hole and press forward to tighten the belt.</p>
 <p>15. Tighten the four screws while holding the sanding arm in its position.</p>	 <p>16. Remount the Velcro disc, pulley screw and the nut for the Velcro disc. N.B. Tighten the pulley screw very hard!! Remount the belt cover.</p>	

Changing to an other sanding arm.

Proceed in the same way as for changing the cogged belt.

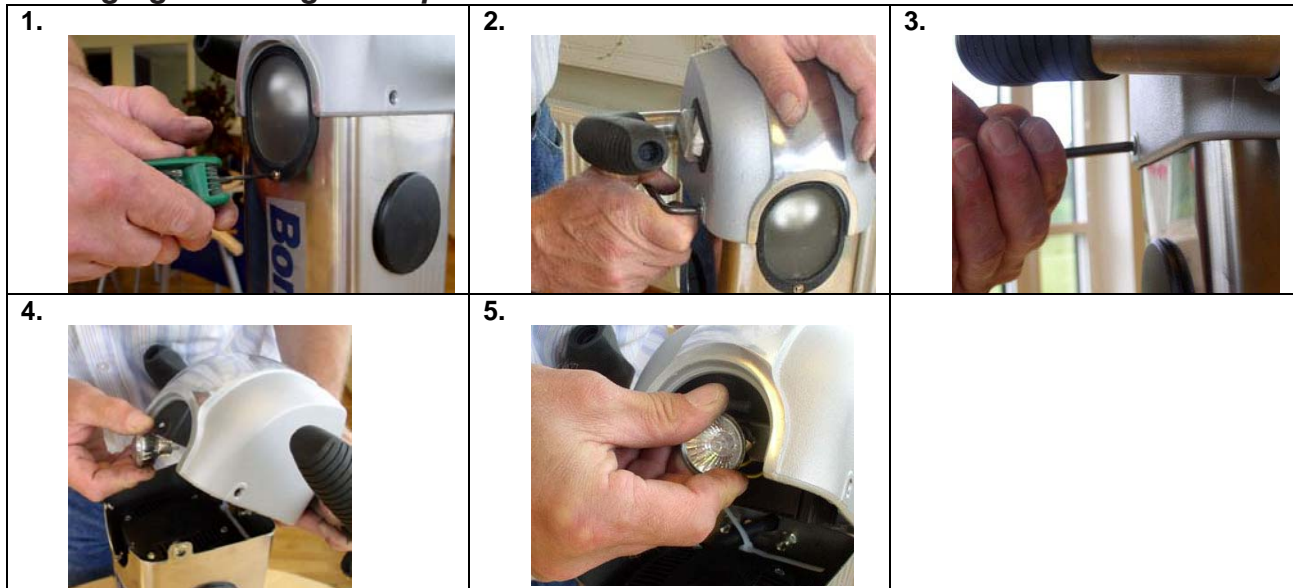
Replacing the brushes

 <p>1. Regularly check the carbon brushes. The brushes were out more quickly at higher loads. And should be changed in pairs after approx. 100 hours normal operating time. Open the brush cover with i.e. a coin</p>	 <p>2. Remove the brush cover.</p>	 <p>3.</p>
 <p>4. Replace the brush and put the covers back on.</p>		 <p>5. The brushes stops automatically and can not be worn out below the marking.</p>

Hour meter



Changing the halogen lamp.



Changing the Wheels



Trouble shooting		
Problem	Cause/Fault	Action
The machine doesn't start	No power Broken cable. Rotation of the disc is impossible	<i>Change to another wall socket. Change the cable. Rotate the sanding disc, remove possible blockages. Check that the ventilator runs smoothly.</i>
The sanding disc doesn't rotate.	The cogged belt is broken/worn out.	<i>Change cogged belt and if necessary change the pulley.</i>
The machine is faltering.	The carbon brushes are worn out. The carbon brackets are broken. The carbon brushes are binding	<i>Change the carbon brushes. Change the carbon brushes. Clean the carbon brush channel or change the carbon brackets.</i>
The machine is heavily vibrating	Off centre sanding disc Damaged ventilator.	<i>Centre the sanding disc. Change the ventilator</i>
Uneven sanding.	Badly adjusted wheels. Unevenly worn wheels The wheels are binding. The sanding disc is loose. Binding sanding disc. The steel disc is faltering.	<i>Adjust the wheels. Change the wheels. Clean or change the wheels. Fix or adjust the disc Change the Velcro disc or change the screw Change the steel plate.</i>
The lamp is not working	The lamp is damaged	<i>Change the lamp.</i>



Manufacturer:

Bona®
division Sanding

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Please visit: www.bona.com/compliance for more information about the Waste Electrical and Electronic Equipment (WEEE) Directive.

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EU assurance of conformity

As per directive 2006/42/EC, Annex 2A

We hereby guarantee that Bona FlexiDrum with article number:

- AM0003135 | AM0003196 | AMO230009.3 | AMO230010.3 | AMO230018.3 beginning from serial number 1001AMO230001

fulfils the requirements in the Council's directives:

- 2006/42/EC 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 2768-1	General tolerances for linear measurements and angle measurements without direct tolerance specifications.
SS-ISO 1940-1	Balancing requirement of rotors in stable state - Determination and verification of balancing tolerances
SS-EN ISO 13920	Welding - General tolerances for welded constructions - Dimensions for lengths and angles – Form and position
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
SS-EN ISO 8062 -1,-3	Geometric product specifications (GPS) - Dimension tolerances and geometric tolerances for moulding – Part 1: Glossary - Part 3: Geometric tolerances and machining castings

SMP, The Swedish Machinery Institute
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SE-754 50 Uppsala
Sweden

has carried out voluntary type approval
certificateno: SEC/09/2147

Fjugesta, 2010-08-16
Lasse Waineby
R&D Manager
Telefon nr: +46 40 387 392

Sign:



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(The undersigned is authorized to compile the technical documentation)