



Original in English language

OPERATING INSTRUCTIONS BGS-250

VERSION 1.7





Inspection comments

Inspection before initial operation on:	_____
By:	_____
Date of initial operation:	_____
Serial number & Year of manufacture:	_____

Recurring inspections / maintenance log

Date / Hour counter	Findings	Repairs / Cleaning	Test on	By*

*Competent person



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1. Introduction

Before use, operators must be provided with information, instruction and training for the use of the machine and the substances for which it is to be used, including the safe method of removal and disposal of the material collected. All persons who are working with or maintaining this machine must read the manual carefully and understand it fully. In case you sell the unit, hand it on to the next owner.

Keep this manual always with the machine, to enable it to be referred to at any time.
Any other work not covered by this operating manual must not be carried out.

This machine is designed for industrial use by professionals. Only authorized and trained personnel may operate this machine. This machine is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge. **Blastrac BV** offers a course on the use of the machine in order to make the operating and maintenance personnel familiar with all elements of the machine. Always use common sense when working with machines.

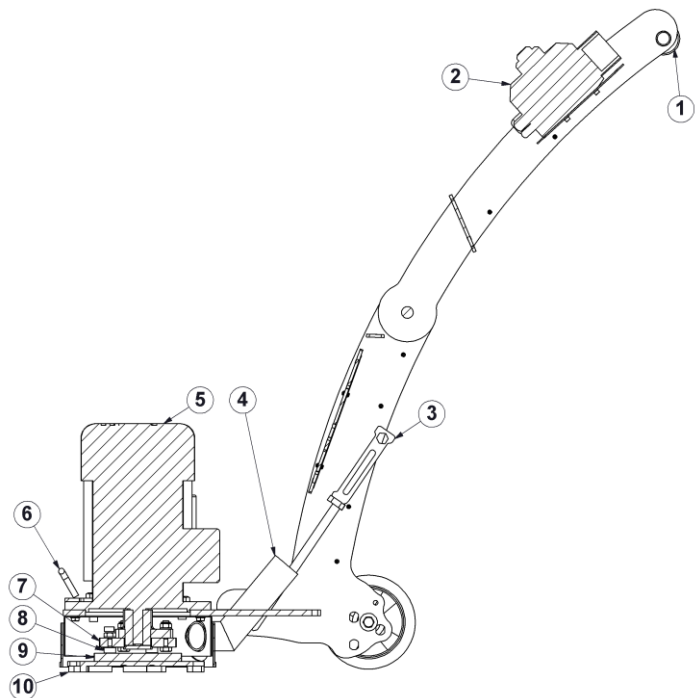
2. Machine description

The BGS-250 is an electric driven floor grinding machine for treating horizontal surfaces. The machine has a rotating adapter plate where the diamond or multiflail disc can be fixed on. The rotating parts are covered by a sliding protection cap with a connection for a dust hose. The machine may not be used without an adequate dust extraction system. A specially designed Blastrac dust collection system ensures dust-free operation of the machine and clean air at the workspace.

Application

The BGS-250 can be used on almost any floor to plane, to make ready for coatings, or to remove coatings or glue residues. This machine may not be used on wood.

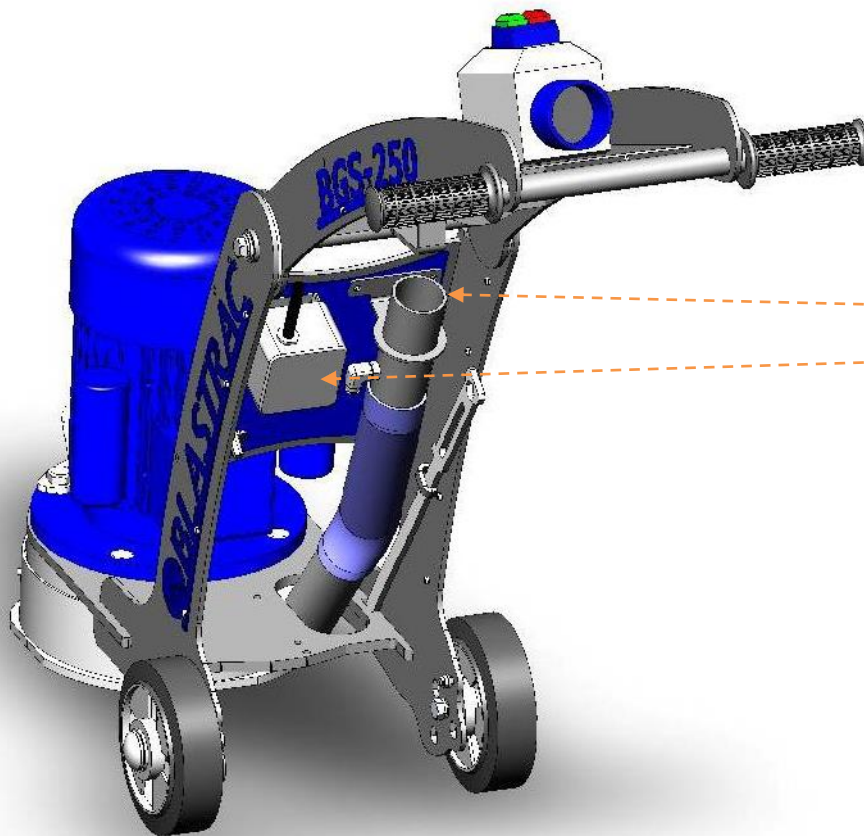
1	Handgrip
2	On/Off emergency switch
3	Banning tool
4	Dust hose connection
5	Grinding motor
6	Lifting handle
7	Flexible coupling
8	Coupling
9	Adapter plate
10	Cutter plate / Diamond plate





2.1 Asbestos version BGS-250A

The BGS-250A can be used to remove material which can be potentially dangerous for health, for example asbestos. The BGS-250A has an additional safety feature: the under pressure meter (differential pressure switch) which monitors the suction power of the dust collector. If the connected dust collector does not have enough suction power or it is turned off, the machine will turn off automatically. The machine can only be operated when the suction power is adequate to ensure that there is no release of asbestos fibres into the air.



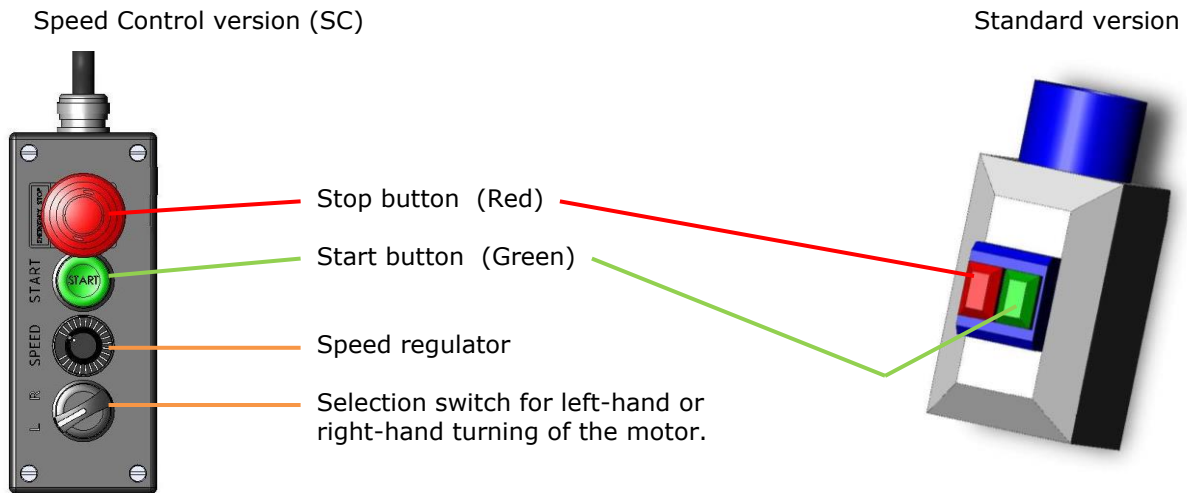
Connection for dust hose
Under pressure meter / differential pressure switch



2.2 Speed Control version BGS-250SC

The BGS-250 SC has two extra options:

- Regulate the grinding speed
- Change the turning direction of the motor.



Accessory's

There are several types of discs that may be used on this machine.

The discs that can be used are:

BG707101	Premium Ninja disc hard Blue
BG707102	Premium Ninja disc middle Green
BG707103	Premium Ninja disc soft red

E04045	Cutter plate
E04045/1	Refill set for multiflail disc



3. Safety



Warning!

Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire, explosions and / or serious injuries.

Only authorized and trained personnel may operate this machine. This machine is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge.

It is the responsibility of the user to analyse the surface to be treated. The surface may not contain any substances which could pose a fire-, explosion- or health risk when treated. The user should make a risk assessment on the basis of the information obtained about the surface to be treated and take proper precautions for the work to be performed.

In case of any inappropriate usage, improper operation or repair, the producer shall be exempt from liability.

3.1 Work area safety

- a) Do not use the machine in rain, damp or wet locations.
- b) Avoid dangerous environments: do not work in the presence of explosive atmospheres, in the presence of flammable liquids, gases or dust. Remove materials or debris that may be ignited by sparks.
- c) In some cases sparks could be created by grinding.**
- d) The surface to be treated must be clean, make sure to remove all stones, screws etc..**
Any stones, screws, bolts, pieces of wire etc. could cause serious damage to the machine if it gets inside the machine!
- e) Make sure there is enough ambient light on the work area. Cluttered or dark areas invite accidents.
- f) Keep children and bystanders away while operating the machine. They are likely not to foresee the potential dangers of the machine. Distractions could cause you to lose control of the machine.
- g) Persons who are not operating the machine must not be permitted to stay in the surrounding area of at least 5 meter from the machine.
- h) Never use the machine when the surface is not clear and if there is a risk of stumbling or tripping.
- i) Remove electrical cables and dust hose(s) from the surface to be treated.
- j) Make sure that there are no cables or hoses in the driving direction of the machine.
- k) Make sure that there is nothing standing or situated on the surface to be treated.
- l) Never stay in the rain with the machine.**
- m) Check if there are any obstacles that can snag the cables when the machine is moving.
- n) Remove all objects from the surface that can damage the machine. Remove reinforcing steel or other objects protruding from the surface in order to prevent damage to the compounds or diamond discs.
- o) Warning! Make sure that the surface to be treated does not contain dangerous materials such as:**
 - **combustible or explosive dusts or substances.**
 - **carcinogenic or pathogenic substances.** (Except for the Asbestos version.)
- p) It is necessary to provide for an adequate air change rate L in the room if the exhaust air is returned to the room. Comply with the National regulations.
- q) Secure the work area around the machine in public areas providing an adequate safety distance from the machine. Use a red and white safety chain and danger sign to enclose the work area.

3.2 Electrical safety

- a) Use only extension cables for extending the main cable that are sized and marked in accordance with the overall power consumption of the machine. Do not use damaged extension cables.
- b) Electrical cables must be rolled entirely off of the reels.
- c) Any damage to the electric cables and/or electrical components is not permitted.
- d) The voltage on the identification plate must comply with the power supply.
- e) Use an electrical power supply connection with earth connection and earth leakage circuit breaker.
- f) The circuit breaker of the power supply must have a "D" characteristic. Circuit breakers with a "C" or "B" characteristic can give problems when switching the machine on.
- g) Keep the machine original; The machine is always equipped with an earthed connection, do not change this** and always use earthed cables with an earthed plug.
- h) Inspect and test the electrical components regularly. The electrical components have to satisfy with the requirements set out in the harmonised norm EN60204-1.
- i) Always call a skilled electrician or your distributor when you have questions about the safety of the electrical components.



- j) Work on electrical equipment or operating materials may only be undertaken by a skilled electrician or by trained persons under the guidance and supervision of a skilled electrician as well as in accordance with the electrical engineering regulations.
- k) Always use tools that are insulated against voltages.
- l) Do not abuse the cables. Never use the cables for carrying, pulling or unplugging the machine. Keep cables away from heat, oil, sharp edges or moving parts. Damaged or entangled cables increase the risk of electric shock. Do not fold the cable or clamp it.
- m) Don't pull out the power supply cable out by the wire, but by the connector.
- n) Be careful with water on the treated surface. Electrical cables must not come into contact with water.
- o) During a long standstill of the machine, pull out the main plug.
- p) If the machine is to be operated using power from a generator, the generator must be operated in accordance with the current legal regulations and directives in force. (this applies to the protective earth conductor in particular) in order to ensure that all safety devices are functioning and to eliminate possible damage to electrical components.

3.3 Personal safety

a) Always wear Personal Protective Equipment while working with the machine.

- Dust mask class FFP3 or higher
 - Ear protection
 - Safety glasses with lateral protection
 - Protecting gloves
 - Safety shoes
- b) Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.
 - c) Personnel must tie back long hair and not wear loose clothing or jewellery including rings.
 - d) Stay alert, watch what you are doing and use common sense when operating the machine.
 - e) Always seek professional medical attention immediately in case of injury.
 - f) All persons surrounding the machine should wear Personal Protective Equipment.

3.4 Machine safety general

- a) Safety functions and operating functions must work correct.
- b) No loose bolts and nuts permitted.
- c) Never operate machine without the guards and/or safety devices in place.
- d) Never change anything on the safety devices on the machine!
- e) Do not use the machine when it is damaged.
- f) Do not **open** or **remove protective guards** while driving gears are running.
- g) The machine, specially the handle grips must be dry and free of fats/oils.
- h) All repair work has to be done by qualified Blastrac personnel, this guarantees a safe and reliable machine.
- i) **Always use original Blastrac spare parts, grinding disks and polishing pads.** This will ensure the best performance.
Only original parts meet the factory specifications and quality. Otherwise Blastrac BV cannot guarantee the safety of the machine.
The part numbers can be found in the Service Manual.
- j) Check the rotating direction of the motor before operation. The correct direction is given with an arrow on the housing of the motor.
- k) If **safety-critical changes** occur to the machine or its working method, the machine must be **shut down immediately!** The cause of the fault must be established, and rectified.
- l) In the event of **operational malfunctions** the machine must be **shut down immediately** and secured!
- m) **Never use the machine without a suitable (Blastrac) dust collector!**

3.5 Grinding safety

- a) The machine contains rotating parts, which are protected with a sliding cover. Always leave the diamond disc on the floor while the motor is turning.
- b) The flexible coupling can become worn out with use, because of this there can be higher vibrations than normal. Check for this reason the flexible coupling for deformation and damage before every use.
- c) Do not let the machine rest on the diamond disc or coupling when it is not in use, this will cause deformation to the flexible coupling.
- d) Make sure the diamond disc is not damaged or worn out.
- e) Always pull out the main plug before u start changing the grinding disks or polishing pads.



- f) When mounting or removing a diamond disc; lay down the machine so it is lying on the handle. Make sure the machine will not fall back down. A second person can hold the handle down, to make sure it will not fall back down.
- g) When changing the disks you should wear Personal Protective Equipment like a dust mask, safety goggles, gloves, protective shoes, and close fitting protective clothing.
Use the vacuum cleaner while changing the discs to prevent excessive dust.
- h) Caution! The grinding disc will heat up during grinding, don't risk getting burned, always wear protective gloves when handling them!**
 - i) The machine contains rotating parts; because of this **never** pull the machine backwards with a turning motor.
 - j) Be careful with the machine and pull or let down the machine slowly, big shocks can damage the electrical parts.

3.6 Dustcollector safety

- a) Always use a Blastrac dust collector to ensure a dust-free operation of the machine and clean air at the workspace. Also the airflow helps to cool the machine and prevents overheating.
- b) When working on or around **carcinogenic or pathogenic substances**, the dust collector must be fitted with a HEPA filter.
- c) Read the operating instructions of the dust collector before using it.
- d) The dust container/bag of the dust collector must be emptied regularly. Comply with the local waste treatment regulations considering the removed material.
- e) The dust hose must be connected properly with a hose clamp and industrial tape.
- f) The dust hose must be undamaged and free of obstructions.
- g) Always switch on the dust collector first!

3.7 Asbestos safety

- a) Always check and comply with the local authorities and regulations!**
- b) Employees that are responsible for the execution of the asbestos removal must be trained and certified accordingly.
- c) Operators and other third parties that are involved in asbestos removal and in that context are present in the work area must have sufficient knowledge of the risks with respect to asbestos.
- d) Such persons must (according to the labour regulations) proven to be instructed (information and education) about the health risks of working with (or at) asbestos (removal) and the measures for personal protection with regard to possible exposure to asbestos.
- e) The operator must know the usual procedures when leaving the working area, including the visual inspection and cleaning of the machine being used.
- f) The operator must use respiratory protection which is sufficient for work with asbestos, and must have knowledge of the correct HEPA filters that are to be used.
- g) If there is a possibility that asbestos fibres are released, they shall be collected at the exit or point of origin and then be disposed of without risk to human and environment according to the local regulations.
- h) If it is not possible to completely collect the contaminants, additional ventilation and filtration measures must be taken.
- i) At the end of work the complete machine including the dust collector, tools, work equipment and the work area must be carefully cleaned according to local regulations.
- j) Objects contaminated with asbestos fibres that cannot be cleaned must be moistened and eliminated properly. After cleaning the work area must be adequately ventilated.
- k) Extracted air must be guided and cleaned so that asbestos fibres are not released into the breathing air of other employees.
- l) The dust produced and collected must be transported in dustproof containers. Decanting is not permitted.
- m) The extracted air which is released back into the outside air may not exceed a fibre content of 1000 F/m³.
- n) The dust collector must be a type-approved industrial vacuum cleaner or dust collector with HEPA filter and meet this criterion.
- o) It must be ensured that the working area is supplied with sufficient outdoor air (fresh air).
- p) For activities involving materials containing asbestos, a recirculation of purified air in the work area are not allowed. The following activities with the industrial vacuum cleaner or dust collector recirculation of purified air are permitted: **1:** Activities involving low exposure according to TRGS 519, Number 2.8 confined spaces or small-scale work to TRGS 519, Section 2.10, and **2:** cleaning.
- q) the outside of the machine should be decontaminated by cleaning and vacuuming methods, de-dusted before being taken out from the hazardous zone. All parts of the machine must be considered as contaminated when they are removed from the hazardous zone and appropriate actions must be taken to prevent dust from dispersing.



- r) The machine is to be serviced and cleaned, as often as is required, but at least once a year, and if necessary, repaired by a competent person (see qualification TRGS 519, Number 5.3, paragraph 2) and checked by a maintenance company. The test result must be provided on request.
- s) The machine and dust collector used in the black area may only operate in the white area after complete cleaning, including the motor housing. For engines with bypass cooling the cooling air ducts have to be clean.
- t) When maintenance or repair procedures are carried out, all the contaminated elements that cannot be properly cleaned, must be destroyed.
- u) These elements must be disposed of in sealed bags according to the applicable regulations and in accordance with the local laws governing the disposal of such material. This procedure must also be followed when the filter has to be disposed.

3.8 Maintenance safety

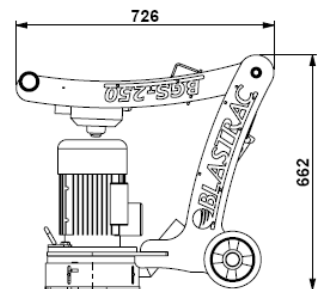
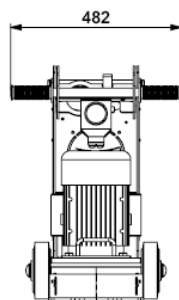
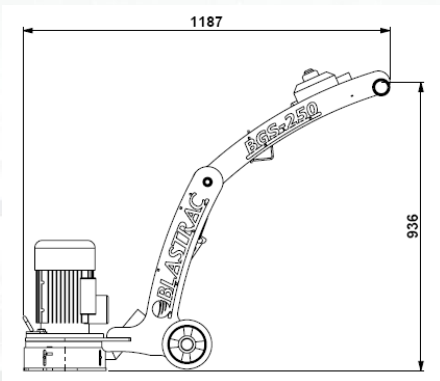
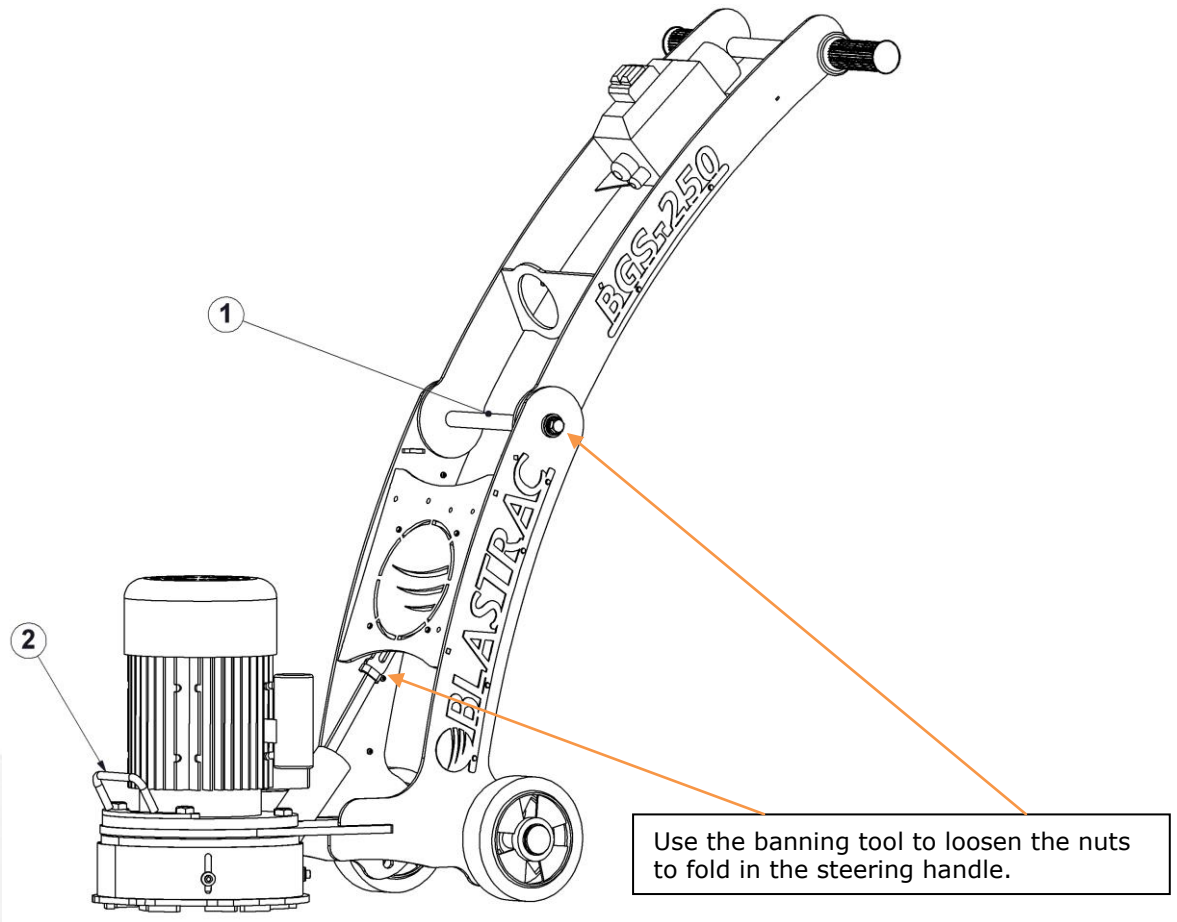
- a) Pull out the main plug before starting inspections and repairing on the machine.
- b) Wait for standstill of all drives before any inspections, adjustments and/or maintenance work is started.
- c) Block machine in stable position before doing any maintenance work.
- d) Failures due to inadequate or incorrect maintenance may generate very **high repair costs** and long standstill periods of the machine. **Regular** maintenance therefore is imperative.
- e) Operational safety and service life of the machine depends, among other things, on proper maintenance.
- f) Prevent premature wear by keeping the machine as dust free as possible. Clean the machine for this reason regularly with a dust collector and non-aggressive materials. Never use a high pressure water cleaner to clean the machine.
- g) Do not use any **aggressive** cleaning materials!
- h) Use lint-free **cleaning cloths!**
- i) It is advisable to stock all spare parts or wear parts that cannot be supplied quickly. As a rule, production standstill periods are more expensive than the cost for the corresponding spare part.
- j) To allow the user to carry out maintenance operations, the machine must be disassembled, cleaned and inspected as far as reasonably possible, without causing hazards for the maintenance staff or other people.
- k) The suitable precautions include decontamination before disassembling the machine, adequate filtered ventilation of the exhaust air from the room in which it is disassembled, cleaning of the maintenance area and suitable personal protection equipment.

3.9 Transport safety

- a) Be aware of your surroundings and machine operating level. Do not side hill, do not run on steep incline, this could cause machine to tip over.
- b) The net weight of the BGS-250 is 58 - 66 kg. Use a crane or lift when transporting the machine, use the lifting eye of the machine.
- c) Before every use check the lifting eye and welds for: deformation, damages, cracks, corrosion and wear.
- d) Hold on to the steering handle until the machine is off the ground.
- e) When lifting the machine from the ground, always use the lowest lifting speed. The cables must first be tensioned at this speed; they must not be slack when the machine is lifted from the ground.
- f) During hoisting make sure to be at a safe distance from the machine with the most optimal view on the machine and working environment.
- g) Never stand directly below the machine.
- h) When transporting the machine do so in such a manner that damage due to the effects of the use of force or incorrect loading and unloading is avoided.
- i) The lifting eye can also be used to fasten the machine on a pallet or during transport.
- j) Always drive backwards when driving up to a ramp or grade, and forwards when driving off the ramp.
- k) Chock wheels for transport.
- l) Do not let the machine rest on the diamond disc or coupling when it is not in use, this will cause deformation to the flexible coupling.
- k) Don't leave the machine unsecured on jobsites.
- l) Park the machine always on a flat horizontal and levelled surface.
- m) Make sure the electrical cable and dust hose are disconnected before transport.
- n) Store the cleaned and dry machine in a humid free room. Protect the electrical motor from moisture, heat dust and shocks.
- o) Never use the machine for lifting persons or items.
- p) It is not allowed to lift this machine with 2 persons.



q) Only lift the machine up by the points 1 and 2 as shown in the picture below.





3.10 Signs on the machine

The following stickers are placed on the machine. Meanings of these symbols are:



! Danger Hazardous voltage in motor even when solid state controller is OFF. Disconnect main power before servicing motor, controller or associated wiring.



Warning! Hot surface.



Wear a dust mask class FFP2 or higher.



Hearing protection is obliged.



Safety glasses with lateral protection are obliged.



CE-mark on this machine.



Wear protecting gloves.

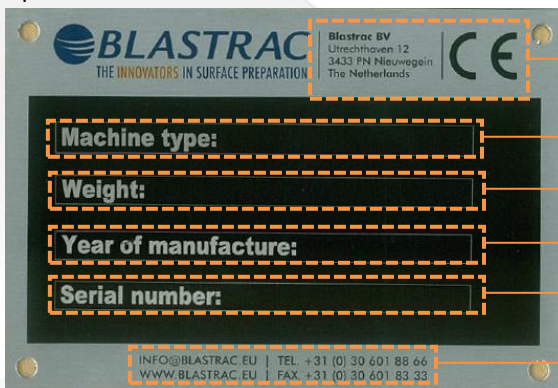


Safety shoes obliged.



Consult the manual before operating the machine.

Type plate:



Name, address and CE mark.

The machine type.

The net weight of the machine in kilogram.

The year of manufacture.

The serial number of the machine.

Email address, Website, Telephone & fax number.

EU Declaration of Conformity:





4. Initial operation

Before using the machine it is essential to inspect the machine.
It is not permitted to use the machine if the machine safety is not according to the checkpoints below.
Before switching on the machine make sure that no-one can be endangered when the machine starts up!

4.1 Checkpoints power supply

- Use only extension cables for extending the main cable that are sized and marked in accordance with the overall power consumption of the machine.
- Electrical cables must be fully unwound from their reels.
- No damage is permitted for electrical cables.
- Use an electrical power supply connection with earth connecting.
- Make sure the power supply is in accordance with the machine specifications.
- The circuit breaker of the power supply must have a "D" characteristic. Circuit breakers with a "C" or "B" characteristic can give problems when switching the machine on.
- If the machine is to be operated using power from a generator, the generator must be operated in accordance with the current legal regulations and directives in force. (this applies to the protective earth conductor in particular) in order to ensure that all safety devices are functioning and to eliminate possible damage to electrical components.

4.2 Checkpoints of machine

- Safety functions and operating functions must work correctly.
- Check all screws and other fasteners for tightness. No loose bolts and/or nuts are permitted.
- Check the electrical components, cables and connections for wear and/or damages.
- Dust hose connections must be reliable: use hose clamps and industrial tape.
- Dust hoses must be undamaged and free of obstructions.
- Make sure that the dust bin / bigbag of the dust collector is empty and connected properly.
- The flexible coupling is not deformed or damaged.
- The diamond / multiflail disc is not damaged.

4.3 Checkpoints of work area

- Before grinding, clean the surface to be treated. There should not be any trash, stones, cloths, or oil on the surface.
- Remove all objects from the surface that can damage the machine. Remove reinforcing steel or other objects protruding from the surface in order to prevent damage to the machine.
- When working with the Asbestos version, check and comply with the local regulations!

4.4 Manual moving of the machine

To move the machine press down the handgrips of the machine until the front part rises from the ground. It can now be pushed around on its wheels.

The machine should only be moved around when the dust hose and power supply cable are disconnected.

Be careful! Make sure nobody's feet get under the wheels. Wear appropriate safety shoes when you drive the machine to or from the work area.

WARNING! Always make sure all rotating parts have come to a complete standstill before moving around the machine.



4.5 Changing the diamond disc

Read chapter 3 “**Safety**” before changing the disk.

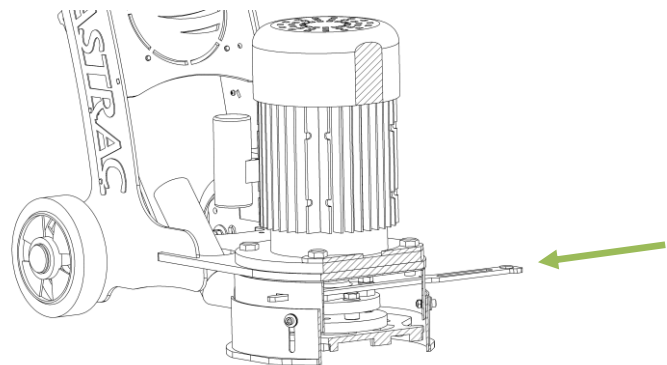
Warning! **Always wear Personal Protective Equipment!**
The dust can be hazardous to the health! Wear a dustmask!
The disk can get hot! Don't risk burning your hands! Wear protective gloves!

- Pull out the mains plug before you start
- Always wear gloves and a **dust mask** of at least **class FFP3**
- Use an extra vacuum cleaner in order to work as dust free as possible



Removing the diamond disc

- Read chapter 3 Safety.
- Make sure the machine cannot start up, unplug the power supply plug.
- Lay down the machine so it is lying on the handle. Make sure the machine will not fall back down. A second person can hold the handle down, to make sure it will not fall back down.
- Block the rotation of the disc, use the special tool.
- Loosen the 4 bolts with an appropriate key.
- Remove the diamond or multiflail disc.



Slide the special tool through the slots.

Mounting the diamond disc

- Read chapter 3 Safety.
- Make sure the machine cannot start up, unplug the power supply plug.
- Lay down the machine so it is lying on the handle. Make sure the machine will not fall back down. A second person can hold the handle down, to make sure it will not fall back down.
- Block the rotation of the disc, use the special tool.
- Fix the diamond or multiflail disc underneath the adapter plate and turn the 4 bolts with an appropriate key tight.



5. Operating

During operating the machine, the following additional safety instructions must be followed closely. Before switching on the machine make sure that no-one can be endangered when the machine starts up. Make sure that no vehicles, such as forklift trucks and other equipment run over the electric cable and the dust hose.

5.1 Before switch on

Checking the turning direction of the motor

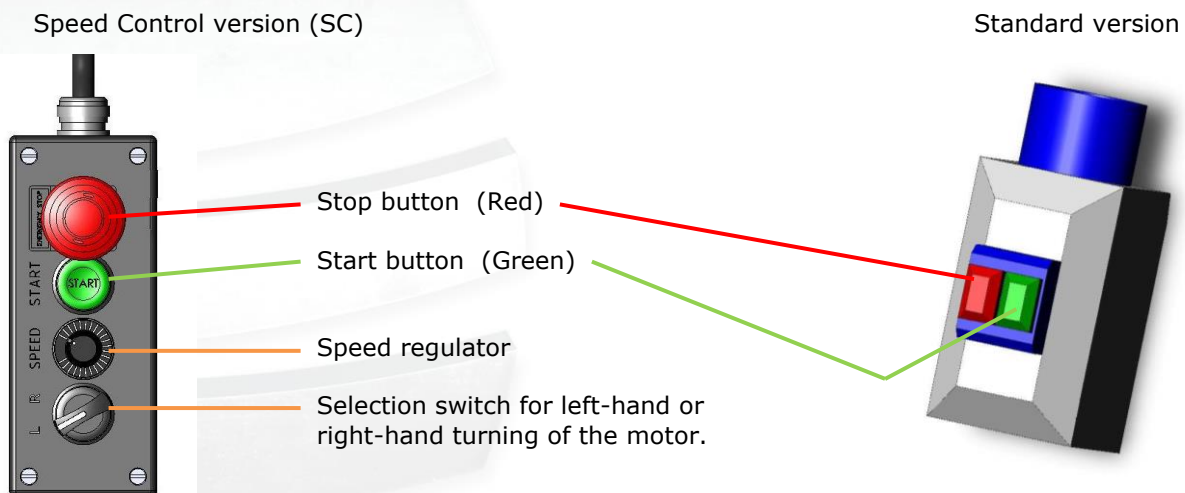
- Push down on the handle of the machine so that the diamond disc is off the ground, but the protection cap stays in contact with the floor.
- Start the machine for a few seconds by pressing the green START-button.
- Stop the machine by pressing the red STOP-button.
- Check the rotating direction of the motor (the correct direction is indicated with an arrow). The fan has to turn clockwise when looking on top of the fan.

Correcting the turning direction of the motor (SC version)

- Switch off the motor.
- Wait for a complete standstill of all drives.
- Use the selection switch for left-hand or right-hand turning of the motor.

5.2 Switch on the machine

- Turn on the dust collector before switching the machine on.
- Connect the dust hose with the machine, use clamps and industrial tape.
- Stand behind the machine.
- Push down the handle of the machine so that the diamond disc is off the ground, but the protection cap stays in contact with the floor.
- Push the green button on the electrical box
- Let down the machine till the diamond disc hits the floor.
- Start grinding.



5.3 Switch off the machine

- Push the red button on the electrical box
- Wait until the machine stops rotating before laying down the machine on the handle.
- Pull out the power supply.
- Shut down the dust collector.



5.4 Asbestos version

The BGS-250A (asbestos version) can be used to remove **carcinogenic or pathogenic substances** which are dangerous for health, for example asbestos.

To ensure the safety of the operator, the BGS-250A has an extra safety mechanism. The differential pressure switch which monitors the suction power of the dust collector.

Safety functions:

1. The grinding machine can only be operated when a dust collector with sufficient suction power is connected and turned on.
2. If the connected dust collector does not have enough suction power or it is turned off, the grinding machine will not turn on.
3. If the connected dust collector loses its suction power or it is turned off during grinding, the grinding machine will turn off automatically. (To ensure that there is no release of asbestos fibres into the air.)

The machine may only be used with asbestos when a dust collector with HEPA filter is properly connected.

The differential pressure switch is an adjustable gas-differential pressure switch as per EN 1854. The reference value (switching point) is adjusted on a setting wheel provided with a scale inside the box.

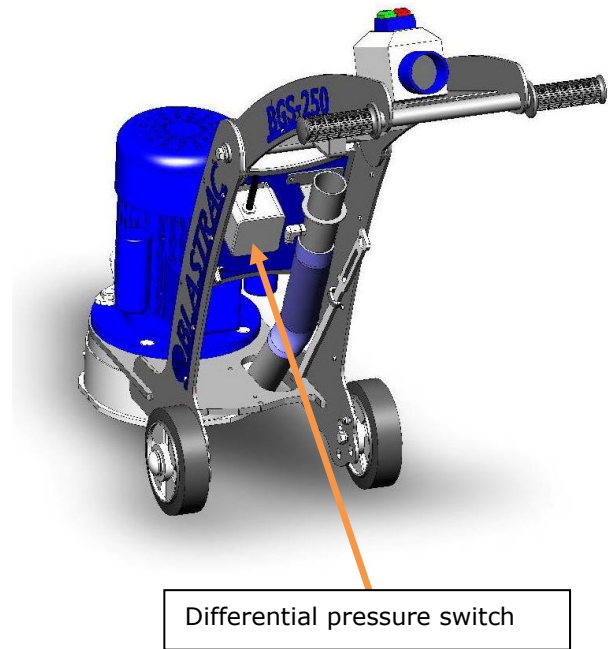
The differential pressure switch is set at -10mbar.

The differential pressure acts on the membrane, pressing it against the force of the adjusting spring and against the microswitch. The pressure switch operates without outside power. The switching apparatus reacts to the difference in pressure between the two pressure chambers and, if the pressure drops below the setpoint, switches the electrical circuit off. The pressure difference is measured inside the dust hose connection and on the side of the box. The measuring points may not be closed. The differential pressure switch is protected with a filter, never use the machine without the filter in place. The filter has to be replaced at least once a year, by a competent person.

Always check if the differential pressure switch works correct before grinding work starts:

1. Make sure the machine stands on its machine support.
2. Connect the machine with a dusthose to the dust collector. The dust hose must be undamaged and free of obstructions. It must be connected properly with hose clamps and industrial tape.
3. Turn on the dust collector, the green control light on the grinding machine will light up.
4. Turn the grinding machine on. (See chapter "Troubleshooting" if the machine won't start)
5. Turn the dust collector off, the grinding machine should automatically turn off. If the grinding machine does not turn off automatically, the filter and air hoses should be checked for clogging and the differential pressure switch should be checked for the correct setting.

Clean the pressure switch with a damp cloth only. Work on the pressure switch may only be performed by specialist staff. Do not allow condensate to flow into the equipment. In case of sub-zero temperatures, malfunction or equipment failure may be possible due to icing. Avoid silicone oils and volatile silicones (siloxanes) in the environment, malfunction / failure possible. If these instructions are not heeded, the result may be personal injury or damage to property.



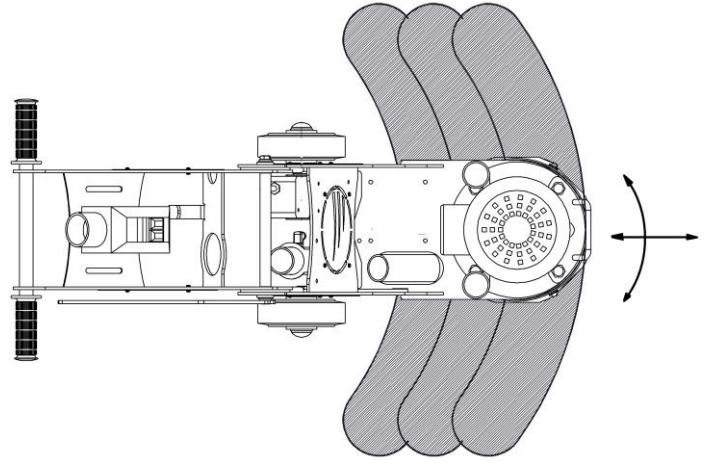


5.5 Operating during grinding

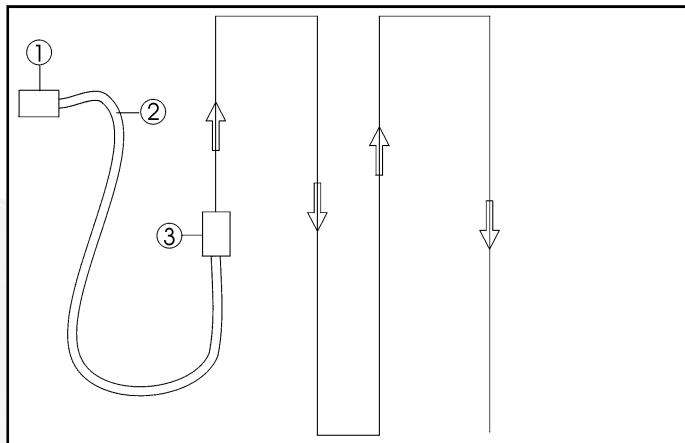
To get an optimum result during grinding, the machine may not stand still.

The machine must always be in movement so it does not grind too deep into the floor.

Move the machine from left to right and from forward to backwards to get a nice flat result.



Carry out grinding in parallel tracks in such way that the dust hose and electric cable do not become twisted. The next figure shows the recommended grind paths leading away from the dust collector.



1	Dust collector
2	Dust hose and electric cable
3	Grinding machine

The advancing speed depends on the material of the surface to be treated and the desired profiling.

Regularly check the contents of the dust collector. Always wear a dust mask of at least class FFP3 when emptying the dust bin or changing the dustbag /bigbag. Observe and obey the local waste disposal regulations!

Make sure that no vehicles, such as forklift trucks and other equipment run over the electric cable and the dust hose.

For soft floors it is recommended to work on high disc speed, for hard floors and the first steps of polishing it is recommended to grind with low speed of the tools.

Contact our experts at Blastrac for the correct application of the different tools and their corresponding working speeds.

In case of emergency or operating trouble, like vibrations or strong noises, switch the machine off immediately by hitting on the OFF-button!



6. Maintenance

Pay attention to Chapter 3 "**Safety**" during maintenance and repair works.

Failures due to inadequate or incorrect maintenance may generate very **high repair costs** and long standstill periods of the machine. **Regular** maintenance therefore is imperative.

Operational safety and service life of the machine depends, among other things, on proper maintenance.

The following table shows recommendations about time, inspection and maintenance for the normal use of the machine.

Operating hours/ time period	Inspection points, maintenance instructions
12 h after repairing	Check all accessible screw connections for tight seat.
Every 3 hour	Check the contents of the dust collector.
Daily and prior to starting work	Check that all safety devices working adequate. Check the electric connections for sediments of dirt or foreign bodies. Check the electric motors for dirt and other contaminants. Check the function of the residual current operated device. Check the hose connections for tightness and fixed seat. Check all hoses on the machine for damages or leakage. Make sure that the dust bin is emptied Check the diamond disk and flexible coupling for damages and wear. Check whether or not, there are any foreign matter in the coupling of the grinding disc
Every 3 months	Clean the machine with a dust collector and a damp lint-free cloth.
Annually	Full overhaul and cleaning of the complete machine. Replacement of the diff. pressure switch filter. (For BGS-250A)

The time indications are based on uninterrupted operation. When the indicated number of working hours is not achieved during the corresponding period, the period can be extended. However a full overhaul must be carried out at least once a year.

Due to different working conditions it can't be foreseen how frequently inspections for wear check's, inspection, maintenance and repair works ought to be carried out. Prepare a suitable inspection schedule considering your own working conditions and experience.

Pay attention to unusual noises or strong vibrations. Check for the cause of every big change. Call a technician if you have doubts about the cause or when a repair without a technician seems not possible without damages. Only use genuine Blastrac spare parts.

Generally the grinding machine requires very little special attention regarding its maintenance. After using the machine, clean the machine with the dust collector, so there is no dust on or in the machine. See to it that any wastes or fibre residues do not remain in the area of the grinding disc. Our specialists will be happy to assist you with more advice.

Prior to any repair works on the machine and its drives, secure the machine against unintentional switching on. Put the machine to its safety off position. The machine is in a safe condition when it cannot generate any hazard.

Follow additional operating and maintenance instructions of Original Equipment Manufacturer if included during your service and maintenance work.



Further is advised:

Store the cleaned and dry machine in a dry and humid free room. Protect the electrical motors from moisture, heat, dust and shocks.

All repair work must to be done by qualified Blastrac personnel, this to guarantee a safe and reliable machine.

Any guarantee on the machine is expired when:

- Non original Blastrac parts have been used
- Repair work is not done by qualified Blastrac personnel
- Changes, add on's or conversions are undertaken without written permission of Blastrac BV

Screws, bolts etc. that have been removed must be replaced with those of the same quality, strength, material and design.

Do not weld, flame cut or perform grinding works on or near the machine. Danger of fire or explosion exists! Provide adequate ventilation when working in a confined space.

Secure the maintenance area if necessary.

Work only with original Blastrac parts.

Check regularly to see if the diamond disc is in good condition. Replace immediately the diamond disc when this is damaged or worn out.

Check if the flexible coupling is stiff enough, after every 2 diamond disc changes. Replace if any deformation or damage is found, replace the coupling after use of 7 diamond discs.

Unusual vibrations on the machine check immediately the diamond disc and flexible coupling

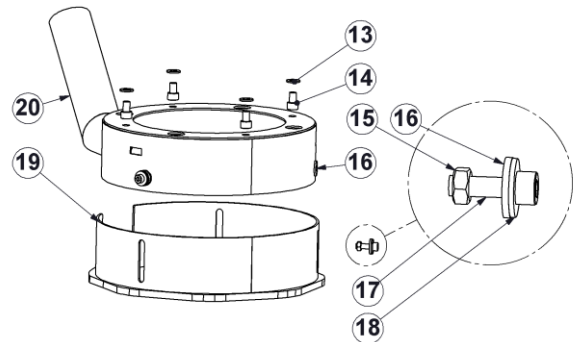
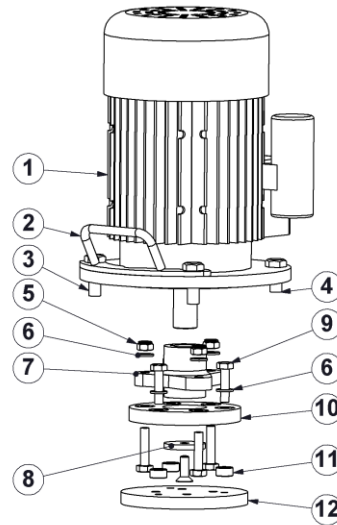
6.1 Replacing the flexible coupling:

- Pull out the main plug
- Remove the diamond disc
- Remove the protection cap
- Loose the bolts of the adapter plate and the flexible coupling
- Take a new flexible coupling and assemble this together with the adapter plate on the fixed coupling on the motor axle
- Assemble the protection cap

Prevent premature wear by keeping the machine as dust free as possible. Clean the machine for this reason regularly with a dust collector

Clean the machine every day with air and non-aggressive materials. Never use a high pressure water cleaner to clean the machine.

Remove the diamond disc after using the machine.



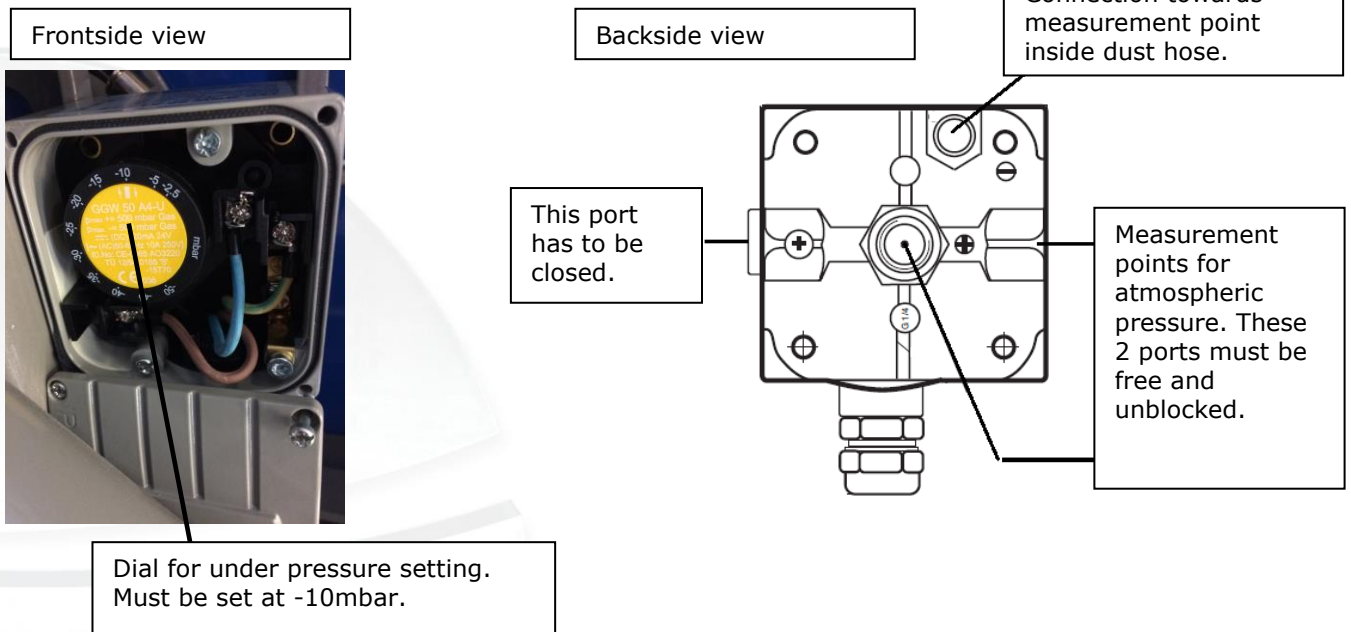


6.2 Other maintenance

Check the seals for wear, and replace them at the time when they no longer provide a good seal against dust emissions from the machine, by this action damage to the surrounding workspace is avoided, and consequently saves additional charges from the job client.

6.3 Differential pressure switch

- Work on the pressure switch may only be performed by specialist staff.
- Make sure the machine is disconnected from the power mains before opening the pressure switch!
- The differential pressure switch may only be cleaned with a damp cloth.
- Avoid dust deposits on and around the switch.
- Do not allow condensate to flow into the equipment. In case of sub-zero temperatures, malfunction or equipment failure may be possible due to icing.
- Make sure that the seal surfaces are clean!
- On completion of work on the pressure switch, perform a function test.
- Avoid silicone oils and volatile silicones (siloxanes) in the environment. Malfunction / failure possible.
- If these instructions are not heeded, the result may be personal injury or damage to property.



Filter for differential pressure switch

The filter for the differential pressure switch has to be replaced at least once per year, by a competent person. This element must be disposed of in sealed bag according to the applicable regulations and in accordance with the local laws governing the disposal of such material.



E10318
Filter for under pressure meter



6.4 Frequency inverter

Caution! Work on the frequency inverter(23) by unqualified personnel or failure to comply with warnings can result in severe personal injury or serious damage to material.

Only qualified Blastrac personnel trained in the setup, installation, commissioning, operation and repair of the product should carry out work on the frequency inverter(23).

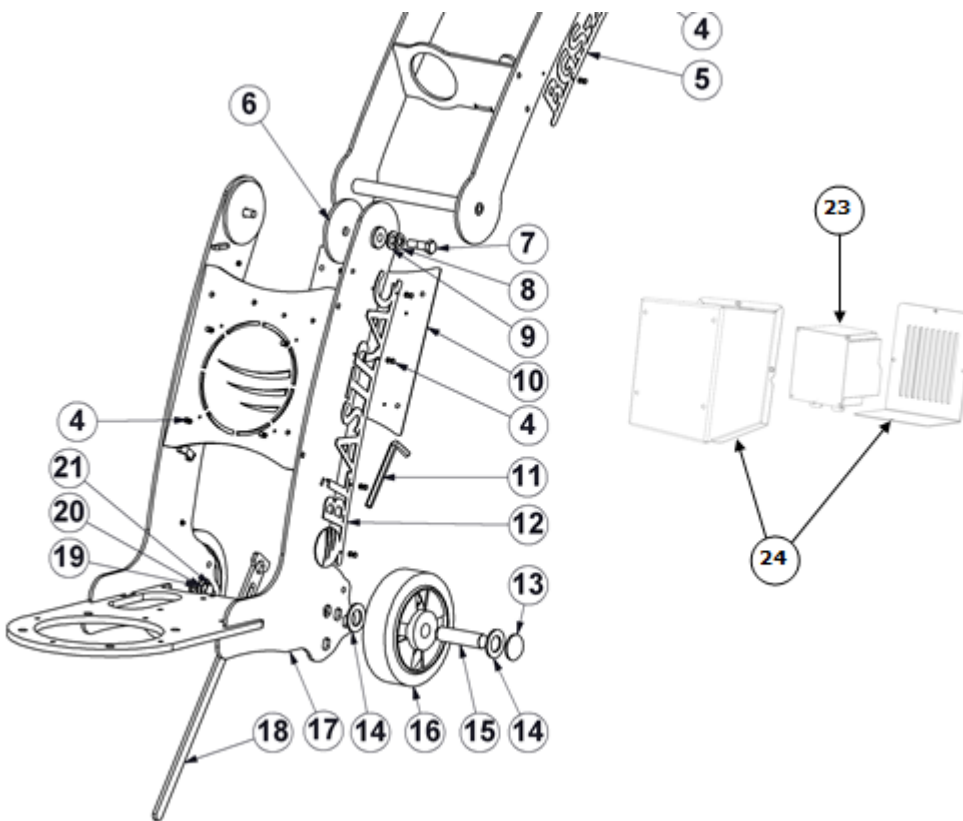
! Risk of electric shock. The DC capacitors remain charged for 15 minutes after power has been removed. It is not permissible to open the equipment until 15 minutes after the power has been removed.

! Caution. Do not perform a voltage test on parts inside the inverter. High voltage can destroy the semiconductor components.

If there is a problem with the frequency inverter, observe the error display, write down the error code and contact Blastrac.

Always mention the serial number and year of manufacture of the grinding machine, they can be found on the typeplate of the machine.

Do not attempt to open the frequency inverter.





The following failure codes indicate problems (TECO)



Display	Content	Cause	Corrective action
-LV- -LU-	Voltage too low when stopped	Power voltage too low	Check if the power voltage is correct
-OH- / OH-C -OH- OH-C	The inverter is overheated	Ambient temperature is too high	Improve the ventilation conditions, let the machine cool off.
OV-C OU-C	Excessive Voltage during operation/ deceleration	Power voltage varies widely (fluctuates)	Check power supply
-PF- PF	Input phase Loss	Abnormal fluctuations in the main circuit voltage	1.Check the main circuit power supply wiring. 2.Check the power supply voltage
OL1 OL1	Motor overload	Loading too large	Work being performed is too heavy.
OL2 OL2	Inverter overload	Excessive Load	Work being performed is too heavy.
LV-C LU-C	Voltage too low during operation	1.Power voltage too low 2.Power voltage varies widely (fluctuates)	Improve power quality

For all other failure codes: write down the failure code and serial number of the grinding machine. Stop the machine and contact Blastrac.



7. Troubleshooting

Fault	Possible cause	Remedy
Excessive vibration And / or unusual noises	Imbalance due to worn or broken grinding tools. Defective bearing. Debris deposit on the coupling.	Replace all worn or broken parts. Check the bearing on the axle drive shaft and replace if necessary. Clean the coupling.
Reduced or no grinding performance	Grinding tools have reached the maximum permissible wear. Inappropriate grinding tool for the application.	Replace the worn parts. Replace the grinding tools with appropriate grinding tools for the surface to be treated.
Motor does not switch on	Missed phase Defective Component.	Check the mains power supply and next switch on again. Find fault and replace defective component.
Motor triggers while running	Motor protections switch triggered because of overload . Motor has a defect.	Reduce additional load . Check the motor.
(For Asbestos-version) Machine will not start, green control light is turned OFF	The differential pressure switch prevents machine from starting up, because: the connected dust collector does not have enough suction power, or it is turned off. The dust hose is blocked or damaged. The measuring points are blocked. The air hoses are blocked or twisted. The filter is clogged. The setpoint of the differential pressure switch is incorrect.	Check the dust collector. Check the dust hose and the connections. Check the measuring point inside the dusthose connection. Check the measuring point at the back of the differential pressure switch Check the air hoses and connections. Check and replace the filter if necessary. Check the settings of the differential pressure switch, must be set at -10mbar.
(For Asbestos-version) Machine will not start, green control light is turned ON	The differential pressure switch is <u>not</u> the problem.	Check the motor and other components.

Old equipment contains valuable materials which are valuable for re-processing. **The machine parts must not be thrown away in the normal household waste**, but should be disposed of at a suitable proper collection system, e. g. via your communal disposal location. This way the materials can be re-used in an environmentally responsible manner.



8. Technical data

	BGS-250 230V 50Hz / 60 Hz	BGS-250 400V	BGS-250 110V	BGS-250 SC 1x 230V / 50Hz
Power consumption	2,2 kW	3,0 kW	1,3 kW	2,2 kW
Electrical connection	230V – 50 / 60 Hz	400V	110V / 50 Hz	230V – 50 Hz
Amperage	15,2A / 13A	6,8A	19,6A	9A
Diameter diamond disc	Ø 250 mm	Ø 250 mm	Ø 250 mm	Ø 250 mm
Working width	250 mm	250 mm	250 mm	250 mm
Rotation speed	1440 min ⁻¹	1440 min ⁻¹	800 min ⁻¹	580-1440 min ⁻¹
Length	1187 mm	1187 mm	1187 mm	1187 mm
Width	482 mm	482 mm	482 mm	482 mm
Height	936 mm	936 mm	936 mm	936 mm
Weight	58 kg	58 kg	58 kg	66 kg
Noise level	82dB(A)	82dB(A)	82dB(A)	82dB(A)
Hand-arm vibration level	Less than 2,5 m/s ²	Less than 2,5 m/s ²	Less than 2,5 m/s ²	Less than 2,5 m/s ²
Dust hose connection	51 mm Ø	51 mm Ø	51 mm Ø	51 mm Ø
Suitable filter unit	Contact Blastrac BV We will assist you with a good advice	Contact Blastrac BV We will assist you with a good advice	Contact Blastrac BV We will assist you with a good advice	Contact Blastrac BV We will assist you with a good advice

Design and specifications are subject to change without notice by Blastrac BV.

IMPORTANT NOTE:

The indicated values are measured on new machines. Sound and vibration levels will vary in different circumstances. Area influences like open outside or closed inside space, ambient temperature, the surface to be treated, etc. will give different values at all time.

The declared vibration and sound emission levels represent the main applications of the machine. However if the machine is used with different accessories or poor maintenance, the vibration and sound emissions may differ. The values may be used for a preliminary assessment of exposure.

For a precise estimate of the vibration and sound load, the times should also be considered during which the machine is switched off or even running, but not actually in use. This may significantly decrease the exposure level over the total working period.

The motor integrated in this product is exempted from the ecodesign requirements for electric motors 2019/1781 as the application of the product is hand-guided equipment, in accordance with Article 2(2).

Despite the fact that this guide is made with care, Blastrac takes no liability for errors in the manual and the possible consequences. We are naturally very interested in your findings and additions.

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