

OPERATING MANUAL EBE-500E Global

VERSION 2.0

**EC DECLARATION OF CONFORMITY**

in accordance with Appendix II sub A of Directive 2006/42/EC

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Declare under our sole responsibility that the machine as described below conforms with the Health and Safety requirements of the European Directive of the machine Safety.

In case of changes to the machine without our written authorization this declaration loses its validity.

Model: **BLASTRAC 500E Global**

Serial number:

1. satisfies the conditions set out in the Machine Directive (Directive 2006/42/EC); Low voltage directive (2006/95/EC, as last amended; EMC directive 2004/108/EC, as last amended)
2. satisfies the following harmonized standards:
NEN-EN 349, NEN-EN 418, NEN-EN 294 and NEN-EN 60204

Nieuwegein


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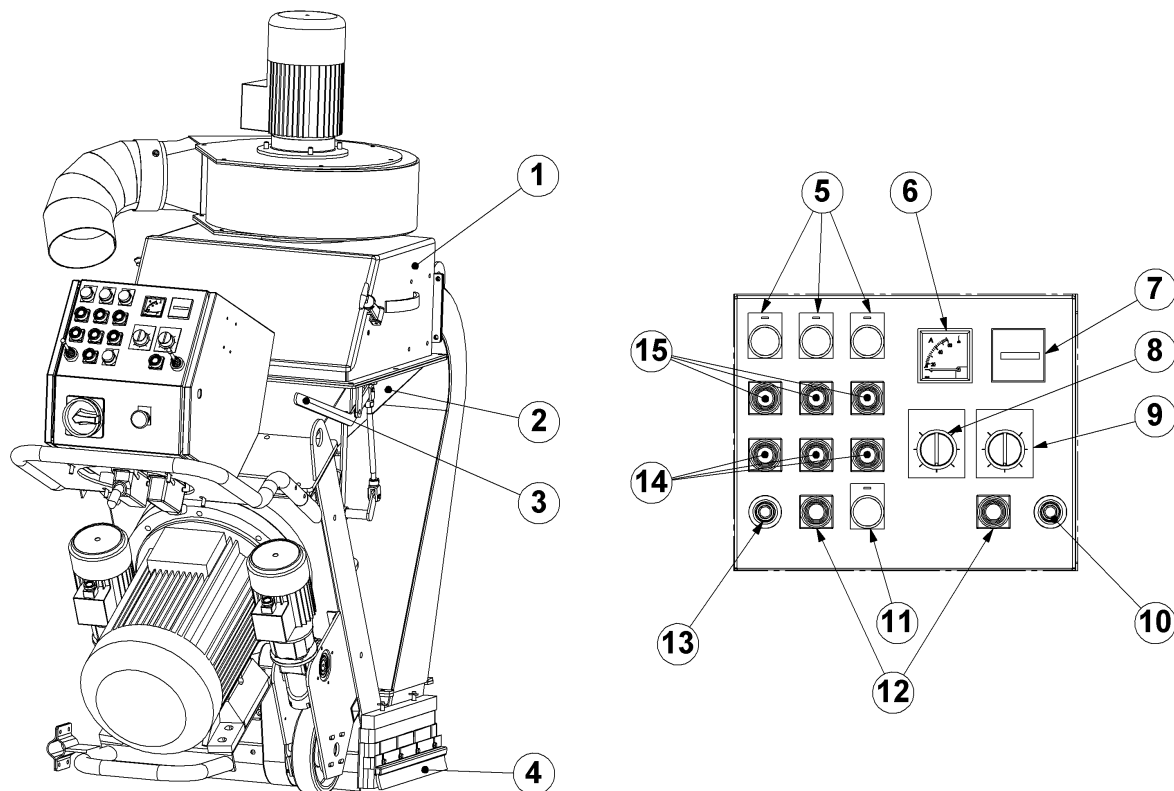


1. Introduction

It is important that all persons who are working with or maintaining this machine must read the manual carefully and understand it fully. Keep this manual near to the machine, to enable it be referred to at any time. Only authorized and trained personnel may operate this machine.

2. Machine description

The **Blastrac** blast cleaning machine 500E Global is a downward blasting machine with a closed abrasive circuit designed for the pre-treatment of horizontal surfaces. The bouncing impact of metallic abrasive onto the surface to be treated thoroughly removes surface contaminants, coats of paint, sealants and thin coatings. A suitable filter unit must be connected to the machine in order to separate the dust from the abrasive. A specially designed dust collection system ensures dust-free operation of the machine and clean air at the workspace.



1	Separator	6	Ammeter	11	Control light Voltage
2	Hopper	7	Hour counter	12	Drive motor L or R Stop
3	Shot valve handle	8	Speed control	13	Joystick drive motor left
4	Brush sealing	9	Tracking	14	Push buttons OFF: Drive/fan motor/blast motor
5	Control lights	10	Joystick drive motor right	15	Push buttons ON: Drive/fan motor/blast motor



3. Safety

Before operating the machine, the personnel must be familiar with the safety instructions given in this manual. Keep this manual near to the machine, so it can always be consulted.

Safety precautions

- The surface to be treated must be swept clean to remove stones, screws etc.
- Never use the machine when the surface is not clear and if there is a risk of tripping.
- Make sure there is not any water on the surface to be treated.
- Don't get disturbed during the activities.
- Remove any trailing electrical cables or dust hoses from the surface to be treated.
- Always switch on the dust collector.

Safety regulations

- Persons who do not operate the machine are not permitted to stay in the surrounding of the machine. Don't leave children anyway.
- Keep the machine original; Use cables who are approved and not damaged. Never remove the earth connecting of the supply cable and machine. Use only cables with earth wire and connectors with a earth connecting.
- Connect main power supply cable to a installation with a earth leakage circuit breaker.
- Inspect and test the electrical components of the machine regularly. This electrical components have to satisfy to the requirements EN60204-1.
- Always call a skilled electrician when you have questions about the safety of the electrical components.
- 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.
- Pull out the main plug during inspections and repairing on the machine.
- Never operate the machine when workplace is wet.
- Never stay in the rain with the machine.
- Never lift the blast head during blasting.

The following sticker is placed on the machine.



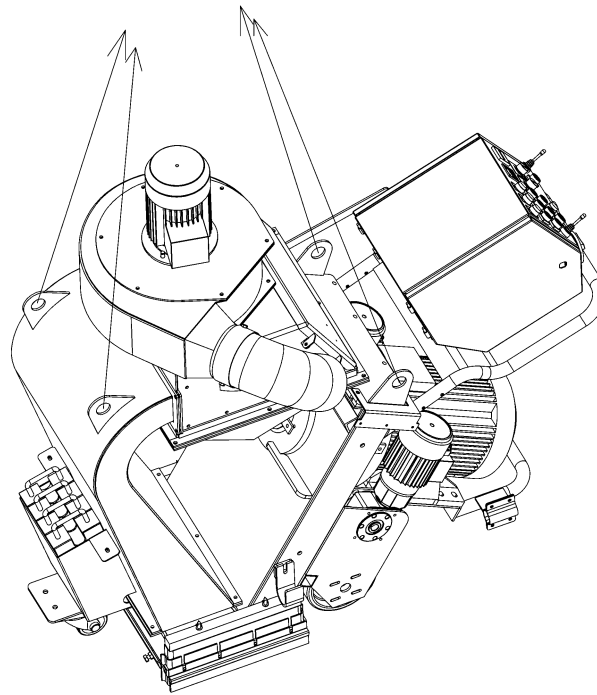
Meanings of these symbols are:

- Ear protection is obliged
- Safety glasses with lateral protection are obliged
- CE-mark on this machine
- Safety shoes obliged
- Consult the manual before operating the machine

Personnel must tie back long hair and not wear loose clothing or jewellery including rings. Wear gloves and dust mask during operating the machine.

**Safety instructions**

- Abrasive can escape from the sides of the blast head at high speed. Wear safety glasses with lateral protection and close-fitting protective clothing.
- The machine, specially the handle grip must be free of fats and has to be dry.
- The dust container / bag of the filter unit must be emptied regularly. Comply with the local waste treatment regulations considering the removed material.
- The weight of the 500E Global is 650 kg. By transport the machine with a crane or lift, use the lifting eyes of the machine.





4. Initial operation

Before using the machine it is of great importance to inspect the machine.
It is not permitted to use the machine if the machine safety is not according the checkpoints below.

Check points 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 unwind of them reels.
- No damage is permitted for electrical cables.
- Use a electrical power supply connection with earth connecting.

Check points of machine

- Safety functions and operating functions must work correct.
- Check the following parts for damage and wear: blastwheel, feedspout, liners, magnet- and brush sealing.
- No loose bolts and nuts permitted
- No any damage of electrical components permitted.
- Dust hose must be undamaged and the connection must be reliable.
- Check de parts of the separator on wear and defects. Remove foreign bodies and dust deposits.



5. Operating

During operating the 500E Global, the following additional safety instructions must be followed closely.

Before switch on

- Check the distance from brush sealing to the floor. This may be max. 1 mm.
- Fill the separator equally with the selected abrasive up to the bottom of the separator tray. The abrasive valve must be closed whilst doing this.
- Connect the blast machine and filter unit with the dust hose. This connection must be reliable.
- Connect the power supply cable of the filter unit with the generator. Be sure that electrical power supply is correct.

Switch on the machine

- Before switch on the blast machine, switch on the filter unit.
- Press the green push button "Blast wheels ON" and check the rotating direction of the blast motor. The correct direction is given with a arrow on the housing of the motor.
- Select the speed using the speed control knob. (item 8 of machine description)
- When the machine is traveling open the abrasive valve. Observe the ammeter. It may indicate the full load amperage. After having blasted aprox. 2 m, close the abrasive valve, stop the machine and check the blasted surface.
- If the 'hotspot' is too much on the right, turn clockwise the cage a little bit. Never adjust the cage during blasting.

Switch off the machine

- Close the abrasive valve.
- Stop the drive motors.
- Switch off the blast motor
- Switch off the fan motor
- Switch the main switch to position "OFF"
- Pull out the connector of the main power supply of the machine.
- Switch off the filter unit.
- Wait for standstill of all drives before any inspection or maintenance works are started.



6. Maintenance

Changing the liners

- Loose the bolts of the top liner cover and remove the cover and top liner.
- Loosen the nuts of the side liners. Take them out of the housing.

To mount the liners, keep on the following sequence:

- Replace all worn items.
- Clean the liners and the inside of the blast housing thoroughly.
- Re-assemble the machine in reverse order, using kit between the top liner and the side liners, and between the top liner and the front and rear plates of the blast housing.
- Make sure that the top liner sits close at the edges of the side liners.

Changing the blast wheel blades and impeller

- Remove the abrasive storage hopper.
- Remove the cage clamps and cage.
- Block the blast wheel and remove the central fixing bolt.
- Remove the impeller using a wooden or brass drift.
- Remove the top liner cover and remove the top liner using a screwdriver or a crowbar.
- Clean the blast wheel and the blades with air.
- Through the opening of the blast housing: use a wooden or brass drift to tap out all six blades from the blast wheel towards the center of the blast wheel.

Use a new central fixing bolt when mounting new blast wheel blades.

Replace the blades with six new ones and re-assemble the machine in reverse order. Note: blast wheel blades must be replaced as a set. Replacing only some of the blades can cause imbalance of the blast wheel.

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

Store the cleaned machine in a dry room. Protect the electrical motors from moisture, heat dust and shocks. Remove the abrasive out of the abrasive storage hopper.

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

Any guarantee on the machine is expired when:

- By not using original Blastrac spare parts and abrasive.
- When repair work is not done by qualified Blastrac personnel.
- When changes, add-ons or conversions are undertaken without written permission of Blastrac BV.



7. Selection of abrasive

Media nr. 2

Is often used when the surface is only subsequently sealed.

- creates fine profiles, e.g. on vacuum concrete and non-glazed tiles
- removes thin layers of rust on steel surfaces
- removes thin layers of paint

Media nr. 3

– creates a fine to medium texture on concrete.

- removes glazing from tiles prior to subsequently coating with antiskid floor sealings
- removes old impregnations and coatings about 1 mm thick

Media nr. 4

Standard abrasive, suitable for about 50-60 % of all applications. Creates a medium profile on concrete. Fulfills the same purpose as Media No. 3 when a higher speed of the machine is required, e.g. on asphalt, in order to keep the thermal load low.

- removes laitance from new concrete
- roughening of smooth concrete or natural stone
- removes coatings with a thickness of 1-3 mm
- cleaning of steel surfaces

Media nr. 5

This media is used to create a coarse profile or to increase the work speed in the case of surfaces hard to treat.

- removes sediments on concrete prior to coating
- removes thick paint coatings or rust from steel surfaces, bridges, tanks, etc.
- removes flexible coatings on parking house decks
- removes road markings and retexturing of asphalt and concrete roads

Media nr. 8

Only as an addition to Media No. 3, No. 4 and No. 5 with maximum 30% content.

Media No. 8 should never be used without blending since otherwise the wear in the machine as a whole would increase disproportionately.

- removes polyurethane coatings
- removes adhesive remnants
- removes rubber deposits
- penetrates coatings hard to remove
- also suitable to be used on steel for extraordinary roughness

8. Technical data

	EBE 500E Global
Power consumption blast motor	18.5KW
Electrical connection (voltage is given on the control box)	400-480V / 60Hz, 63A
Blast width	500 mm
Drive speed	0 – 15 m/min
Length	1560 mm
Width	750 mm
Height	1650 mm
Weight	650 kg
Noise level (under load)	92dB(A)
Vibration level	1.2 RMS Allows >8 hrs. of working with the mentioned equipment without having to use anti vibration precaution measures.
Dust hose connection	Ø150 mm
Recommended filter unit	Contact Blastrac BV for a suitable filter unit

The electrical diagrams of the electrical system are placed inside of the control panel.

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



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