



Original instructions
OPERATING INSTRUCTIONS BDC-655 EX
VERSION 1.3





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.

2. Machine description

The BDC-655 EX is not an ATEX-machine. The BDC-655 EX is a machine with ATEX certified components. The **Blastrac** dust collector BDC-655 EX is a high performance machine which is exclusively designed and built to be used in combination with Blastrac machines. It is equipped with 6 pieces of specially designed high quality Blastrac cartridge filters. The Blastrac dust collector BDC-655 EX can **only** be used for **dry cleaning**. It should **only be** used for removing **noncombustible/non-explosive dust or substances**. The BDC-655 EX must **not** be used for **pathogenic or carcinogenic or asbestos substances**. Do not use the machine in the presence of dangerous atmospheres. The machine may not be used for other purposes. The manufacturer will not be liable for damage resulting from incorrect usage, in these cases the user assumes all risks. The specially designed Blastrac dust collection system ensures dust-free operation of the machine and clean air at the workspace.

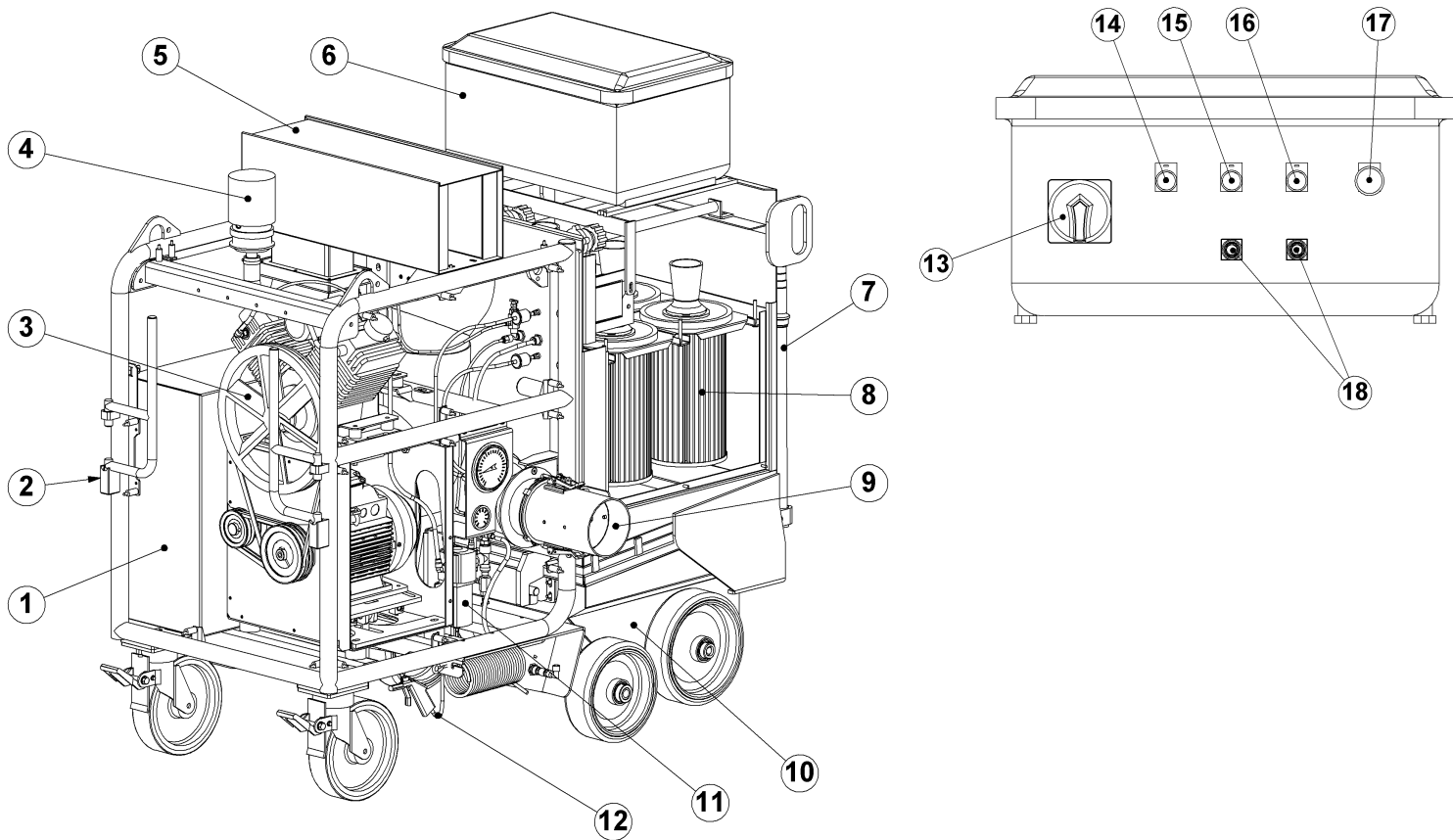
The machine is designed for usage in conditions according to classification **M** (see below).

Classification acc. standard EN 60335-2-69 – Annexe AA	
Class	Designation
L	(light hazard) suitable for separating dust with a limit value of occupational exposure of greater than 1 mg/m ³ ;
M	(medium hazard) for separating dust with a limit value of occupational exposure not less than 0,1 mg/m ³
H	(high hazard) for separating all dusts with all limit values of occupational exposure, including carcinogenic and pathogenic dusts.

Dust emissions into the environment	
Class	Value of performance
L	Retains at least 99 % of Most Penetrating Particle Size (MPPS) 0.3 µm
M	Retains at least 99,9 % of Most Penetrating Particle Size (MPPS) 0.3 µm
H	Retains at least 99,995 % of Most Penetrating Particle Size (MPPS) 0.3 µm

Application

The BDC-655 EX is especially designed to be used in combination with Blastrac machines. Contact Blastrac B.V. for the correct execution and combinations.



1	Tool box	10	Dust bin
2	Cable support	11	Water separator
3	Compressor	12	Air pistol
4	Air filter compressor	13	Main power switch
5	Silencer	14	Control light Phase incorrect
6	Control box (ATEX)	15	Control light Compressor / Fan running
7	Handle dust bin	16	Control light Motor failure
8	Filter cartridges	17	Emergency stop
9	Dust hose connection	18	Compressor / Fan On & Off

The dust extractor is provided with an air pulse cleaning system which increases the life of the filter cartridges. This system works by use of pressurized air, built up by a belt driven compressor. The air is led through a water separator to the pulse system.

The conditioned air then passes a control valve which regulates the system pressure, and then builds up pressure in the pulse tank.

The pressurized air is used to generate a pulse of air which cleans the filters from the inside. With every pulse of the pulse system all dust and particles are released from the filter surface and end up in the dust bin.

In the case of dust harmful to health, contact the local health and safety authorities, and observe national regulations in force both during use and disposal.

In addition to the Operating Instructions general and legal regulations regarding accident prevention and environmental protection must be complied with and indicated!

Such duties may for example relate to the handling of hazardous substances or to the provision and wearing of personal protection equipment.



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.

The machine should not be used in the presence of an explosive atmosphere.

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 or explosion risk when treated. It is also the responsibility of the user to make a risk assessment on the basis of this information and take proper precautions for the work to be performed. Using this machine in an ATEX-environment is at the own risk of the user.

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.

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) 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!
- d) Make sure there is enough ambient light on the work area. Cluttered or dark areas invite accidents.
- e) 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.
- f) 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.
- g) Never use the machine when the surface is not clear and if there is a risk of stumbling or tripping.
- h) Remove electrical cables and dust hose(s) from the surface to be treated.
- i) Make sure that there are no cables or hoses in the driving direction of the machine.
- j) Make sure that there is nothing standing or situated on the surface to be treated.
- k) Make sure the machine can travel over all inequalities on the surface, small inequalities like weld seams or (floor) joints are no barriers for the machine.
- l) Never operate the machine when workplace is wet. 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) 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.
- o) It is necessary to provide for an adequate air change rate L in the room if the exhaust air from the dust collector is returned to the room. Comply with the National regulations.

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) If the power supply cable or plug is damaged, it must be replaced immediately. Only use original Blastrac parts.
- e) The voltage on the identification plate must comply with the power supply.
- f) The extension lead may only be used for Blastrac machines with the correct power consumption.
- g) Use an electrical power supply connection with earth connection and earth leakage circuit breaker.
- h) 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.
- i) **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.



- j) Inspect and test the electrical components regularly. The electrical components have to satisfy with the requirements set out in the harmonised norm EN-IEC 60204-1.
- k) Always call a skilled electrician or your distributor when you have questions about the safety of the electrical components.
- l) 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.
- m) Always use tools that are insulated against voltages.
- n) 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.
- o) Don't pull out the power supply cable out by the wire, but by the connector.
- p) Be careful with water on the treated surface. Electrical cables must not come into contact with water.
- q) The main power switch on the machine must be in the "Off" position before connecting to the power supply.
- r) During a long standstill of the machine, pull out the main plug.
- s) 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 unit when it is damaged.
- f) Do not **open** or **remove protective guards** while driving gears are running.
- g) Hoses and pipe work can be under high pressure. The temperature can be above 37° C. Use only hoses and pipe work that are sized and marked in accordance with the machine's overall power consumption.
- h) The machine, specially the handle grips must be free of fats/oils and have to be dry.
- i) All repair work has to be done by qualified Blastrac personnel, this guarantees a safe and reliable machine.
- j) Always use original Blastrac spare parts and filters. 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.
- k) Check the rotating direction of the motor before operation. The correct direction is given with an arrow on the housing of the motor.
- l) 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.
- m) In the event of operational malfunctions the machine must be shut down immediately and secured!



3.5 Dust collector safety

- a) The Blastrac dust collector can **only** be used for **dry cleaning**.
- b) It should **only** be used for removing **noncombustible/non-explosive dust or substances**.
- c) The machine may **not** be used for **pathogenic or carcinogenic or asbestos substances**.
- d) Do not use the machine in the presence of dangerous atmospheres like flammable gasses or dusts.
- e) The machine is designed for usage in conditions according to classification **M**.
- f) The dust hose must be undamaged and free of obstructions. It must be connected properly with hose clamps and industrial tape.
- g) Do not point hose at people or animals.
- h) Never use this machine for sucking water or liquids.
- i) Acids, acetone or solvents can damage the machine.
- j) Never use the machine without the filters in place!
- k) Never use the machine without the dustbin attached.
- l) Regularly check the contents of the dust-bin. Always wear a **dust mask of at least class FFP3** when emptying the dust bin / changing the filters. Comply with the local waste treatment regulations considering the removed material.
- m) Regularly use the air pistol and drain valve to remove water from the pressure tank.
- n) When temporarily interrupting the work (1/2 hour – 1 hour), only close the butterfly valve. Pulse cleaning of the filter system will continue and will increase the life-time of the filter cartridges.
- o) During a longer stand still of the dust collector, close the butterfly valve and let the pulse cleaning cycle run for +/- 5 minutes. Switch off the compressor and Main-switch. Remove water from the air tank.
- p) Close the butterfly valve of the inlet when the machine is turned off. This prevents moisture, dust and other contaminants to enter the machine.
- q) If dust leaves the filter unit instead of clean air, this is a sign that the filter cartridges are damaged or not fixed correctly inside the chamber. Do not proceed! Rectify immediately!
- r) When a filter is leaking it has to be replaced. The compartment above the filters and silencer also have to be cleaned thoroughly.
- s) Compartments that are not dust-tight must be opened with suitable tools and thoroughly cleaned.
- t) Operators should observe all safety regulations appropriate to the materials being handled.
- u) Make sure the machine is parked on a flat and horizontal surface before operation.
- v) The machine must be braked by actuating the levers on the wheels with brakes.
- w) Do not allow the operation of the machine while it is moving, during operation the machine must be braked.

3.6 Maintenance safety

- a) Pull out the power plug and place it in sight, 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) Use the manual drain of the water separator to depressurize the air pressure tank before maintenance.
- e) **WARNING!** Do not weld, flame cut or perform grinding works on or near the dust collector. Danger of fire or explosion exists!
- f) To allow the user to carry out maintenance operations, the dust collector must be disassembled, cleaned and inspected as far as reasonably possible, without causing hazards for the maintenance staff or other people.
- g) The suitable precautions include: decontamination before disassembling the dust collector, 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.
- h) When maintenance or repair procedures are carried out, all the contaminated elements that cannot be properly cleaned, must be destroyed.
- i) 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.
- j) This procedure must also be followed when the filters have to be disposed.
- k) Use only original Blastrac filters and spare parts.
- l) 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.
- m) 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.

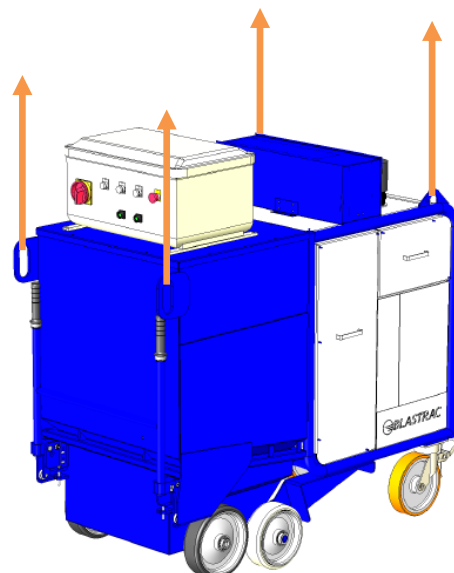


- n) Operational safety and service life of the machine depends, among other things, on proper maintenance.
- o) Prevent premature wear by keeping the machine as dust free as possible. Clean the machine for this reason regularly with a dust collector and non-aggressive materials. Never use a high pressure water cleaner to clean the machine.
- p) The dust collector must be yearly overhauled by a skilled technician.

3.7 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) Remove the dust from the dust collector before the dust collector is transported.
- c) Always dispose the contents of the dust collector before the end of the working day. Observe the local waste disposal regulations!
- d) Before the dust collector is removed from the hazardous zone, take precautions to prevent dust from escaping.
- e) For class H and M machines, 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 dust collector must be considered as contaminated when they are removed from the hazardous zone and appropriate actions must be taken to prevent dust from dispersing.
- f) Always close the inlet of the dust collector using the butterfly valve or appropriate plug when the dust hose is disconnected.
- g) Make sure the dust hoses are disconnected and put away properly before transport.
- h) The weight of the BDC-655 is 665 kg. Use a crane or lift when transporting the machine, use the lifting eye of the machine.
- i) Before every use check the lifting eyes and welds for: deformation, damages, cracks, corrosion and wear.
- j) 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.
- k) During hoisting make sure to be at a safe distance from the machine with the most optimal view on the machine and working environment.
- l) Never stand directly below the machine.
- m) Never use the machine for lifting persons or items.
- n) 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.
- o) The lifting eyes can also be used to fasten the machine on a pallet or during transport.
- p) Always drive backwards when driving up to a ramp or grade, and forwards when driving of the ramp.
- q) Chock wheels for transport, use the brakes on the wheels.
- r) Don't leave the machine unsecured on jobsites.
- s) Park the machine always on a flat horizontal and levelled surface.
- t) Make sure the electrical cable and dust hose are disconnected before transport.
- u) Never use the machine for lifting persons or items.
- v) Store the cleaned and dry machine in a humid free room. Protect the electrical motor from moisture, heat dust and shocks.

Only lift the machine on the 4 lifting points as shown in the picture below.





3.8 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.



Forbidden to lift persons.



Lifting point.

The EC DoC of the control box is stored inside the control box.

BDC-655/EX
BDC655-0000-EXP (400-480V 50Hz)
BDC655-0006-EXP (400-480V 60Hz)



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.

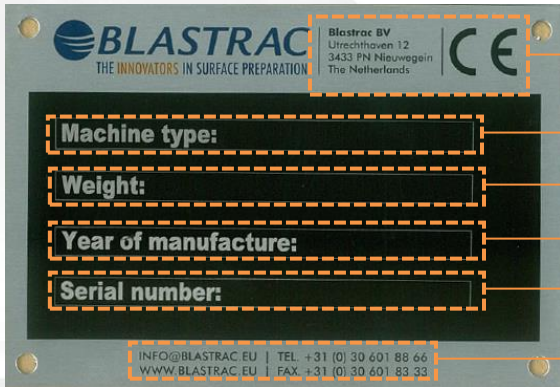


Safety shoes obliged.



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. Before 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 the checkpoints below.

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 unwind of them reels.
- No damage is permitted for electrical cables.
- Use an electrical power supply connection with earth connecting.
- The main switch of the machine should be put to 'Off' before connecting to the power supply.
- 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 correct.
- 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 connection must be reliable: use hose clamps and industrial tape.
- Dust hoses must be undamaged and free of obstructions.
- Make sure that the dust bin is empty and connected properly.
- If dust leaves the filter unit instead of clean air, this is a sign that the filter cartridges are damaged or not fixed correctly inside the chamber. Do not proceed! Rectify immediately!
- All water must be removed from the air pressure tank. Excessive water can have a negative impact on the pulse power and shortens the life-time of the filter cartridges.
- Check all air hoses for leakage.
- Make sure the machine is parked on a flat and horizontal surface before operation.
- The machine must be braked by actuating the levers on the wheels with brakes.
- Do not allow operation of the machine while it is moving, during operation the machine must be braked.



4.3 Control box

The control box is equipped with all control elements and instruments for monitoring and controlling the dust collector.



1	Main power switch / Change phase sequence	6	Type plate of certified ATEX electrobox
2	Warning light "PHASE INCORRECT"	7	Green button COMPRESSOR / FAN ON
3	Indication light "COMPRESSOR / FAN RUNNING"	8	Red button COMPRESSOR / FAN OFF
4	Warning light "MOTOR FAILURE"	9	Extension lead max. 32 Amp.
5	Emergency shutdown button		

1. Main power switch / Change phase sequence

The main power switch has to be switched OFF before connecting the machine to the power supply. It has to be switched ON before operating the machine and the use of the extension lead. The switch is also used to set the correct phase sequence.

2. Phase sequence Control light

This red light shines when the phases of the power supply are incorrect. Use the Main power switch / Change phase sequence (1) to alter the phase sequence.

3. Indication light "COMPRESSOR / FAN RUNNING"

When lit it indicates that the compressor and fan are running.

4. Warning light "MOTOR FAILURE"

This light shines when the whole electric system is switched off due to an overload of one motor.

5. Emergency shutdown button

Red mushroom-shaped emergency shutdown push button, this button cuts off all power to the machine and the extension lead. Turn to unlock.

6. Type plate of certified ATEX electrobox

The typeplate indicates the degree of protection for ATEX environments, serial number, CE-mark, EC-type Examination Certificate number according to Directive 94/9/EC, the Notified Body used for examination, etc.

7. Green button COMPRESSOR / FAN ON

Pressing the green button switches the compressor and fan on.

8. Red button COMPRESSOR / FAN OFF

Pressing the red button switches the compressor and fan off.

9. Extension lead

The extension lead on the BDC-655 EX may only be used for Blastrac machines with max. 32 Ampere power consumption. Connection value: Vacuum cleaner + connected unit, maximum 50A.



4.4 Transport

Please read chapter 3.7 "Transport safety"

Be careful! Make sure nobodies feet get under the wheels. Wear appropriate safety shoes when you drive the machine to or from the work area.

Remove the dust from the dust collector before it is transported. The dust collector may only be lifted by using the lifting points. The weight and dimensions of the dust collector are shown in the chapter "Technical data".

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

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

WARNING! Always make sure all rotating parts have come to a complete standstill and there is no more pressure in de air tank before moving the machine around.





5. Operation

5.1 Before switch on

Extension lead

The extension lead on the machine may only be used as an extension lead for Blastrac machines. Contact Blastrac for the correct combinations.

The extension lead on the vacuum cleaner will only be live when the mains plug is plugged in, and the main power switch is turned ON. Connection value: Vacuum cleaner + connected unit, maximum 50A.

CAUTION! Machines must be switched off when they are connected.

5.2 Starting / stopping the machine

- Connect the dust hose to the machine.
- Connect the dust collector to the power supply.
- Switch on the main switch.
- Switch on the compressor and fan motor.
- Carry out this actions in opposite sequence to stop the machine.

5.3 Work with the machine

- Regularly check the contents of the dust-bin. Always wear a **dust mask of at least class FFP3** when emptying the dust. Observe and obey the local waste disposal regulations!
- Regularly open the drain valve of the water separator to remove water from the air tank.

5.4 Interrupting work

- When temporarily interrupting the work (1/2 hour – 1 hour), only close the butterfly valve. The dust collector must run several minutes to dedust the filter cartridges. Pulse cleaning of the filter system will continue and will increase the life-time of the filter cartridges.
- During a longer stand still of the dust collector, close the butterfly valve and let the pulse cleaning cycle run for +/- 5 minutes. Turn the machine off. Remove water from the air tank.
- Close the butterfly valve of the inlet when the machine is turned off. This prevents moisture, dust and other contaminants to enter the machine.
- Disconnect the power-supply cable.
- Prevent unauthorized persons from getting access to the dust collector or take measures to prevent unauthorized working with the equipment.

5.5 Emptying the dust bin

Operators should observe all safety regulations appropriate to the materials being handled.

ATTENTION! Wear a dust mask of at least class FFP3!

The level of the dustbin must be regularly checked. The periods are dependent on the type of surface preparation being carried out.

WARNING: Pay attention to the increased weight of the dustbin when you empty it!



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 dust collector. **Regular** maintenance therefore is imperative.

Operational safety and service life of the dust collector depend, among other things, on proper maintenance.

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

Operating hours/ time period	Inspection points, maintenance instructions
12 h after repairing	Check all accessible screw connections for tight seat.
Daily and prior to starting work	Check all safety devices working adequate. Check the function of the residual current operated device. Check the hose connections for tightness and fixed seat. Check the hoses on the machine for damages or leakage. Make sure that the dust bin is emptied. Make sure there is no water in the air pressure tank. Check the electric connections for sediments of dirt or foreign bodies. Check the electric motors for dirt and other contaminants.
Every week	Check the oil level and quality of the compressor.
Every 3 months	Clean the upper section of the filter unit. Clean or replace the air filter of the compressor. Clean or replace the filter inside the water separator. Check the tension of the V-belts.
Annually	Full overhaul and cleaning of the complete dust collector. Oil change of the compressor.

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 and a technical inspection must be carried out at least once a year, consisting of inspection of filters for damage, air tightness of the machine and proper function of the control mechanism. This technical inspection shall be carried out by the manufacturer or an instructed person.

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.

Prior to any repair works on the dust collector and its drives, secure the dust collector against unintentional switching on. Put the dust collector to its safety off position. Also make sure there is no air pressure on the pulse system.

The machine is in a safe condition when it cannot generate any hazard.



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

Our specialists will be happy to assist you with more advice.

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 dust collector. Danger of fire or explosion exists! Provide adequate ventilation when working in a confined space. Secure the maintenance area if necessary.



6.1 When to change the filters?

If the dust collector loses suction power first try the following before continuing:

1. Check if the butterfly valve on the inlet is fully opened.
2. Ensure that the compressor is fully pressurized and then turn it off. Remove all moisture from the compressed air tank by using the drain valve of the water separator. Turn on the compressor again until it is fully pressurized, now use the air gun to completely empty the pressure tank.
3. Close the butterfly valve and only turn on the compressor, keep the fan unit turned off. Let the machine pulse for about a half an hour. This action will clean the filters from the inside.

When the machine still does not perform adequately, the filters probably need to be exchanged.

6.2 Filter replacement

Read chapter 3 Safety before changing the filters.

Operators should observe any safety regulations appropriate to the materials being handled.

Observe the national regulations in force both during exchange and disposal of the old filters.

Warning! Always wear Personal Protective Equipment, the dust can be hazardous to the health!

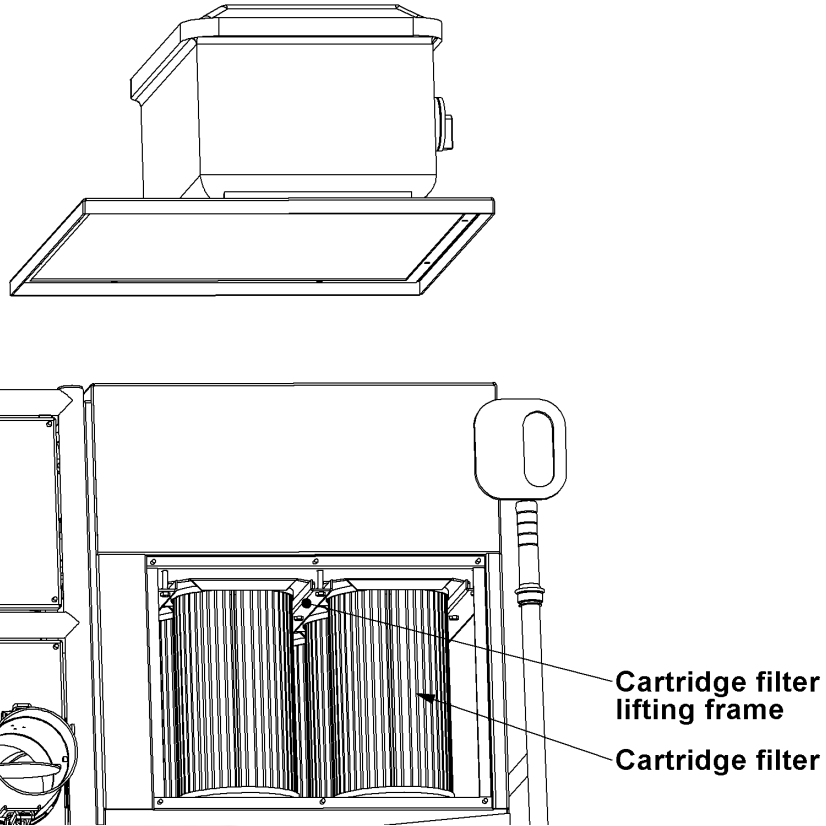
- Pull out the mains plug before you start
- Always wear gloves and a **dust mask** of at least **class FFP3**
- Use an extra vacuum cleaner in order to work as dust free as possible



Make sure you have enough sturdy plastic bags or use big bags for the disposal of the old filters. Observe the national regulations in force both during exchange and disposal of the old filters.

When mounting new filter cartridges pay attention that their gaskets at the upper side lies firm at the sheet steel of the filter chamber. A tilt of the filter cartridge results in leakage and contaminants will be sucked in the clean part and consequently will blow them backwards in the outer air.

Through the access at the top of the filter house, unscrew the wing nuts of the lifting frame.



If the silencer blows out dust, stop the machine immediately!

This means probably that a filter is damaged or not fitted properly inside the filter chamber. Check the filters and replace if necessary.

When a filter was damaged, has leaked or was mounted incorrect, it has to be replaced. The compartment above the filters, the connecting air hoses and the silencer also have to be cleaned thoroughly.

Continuing work with a broken/leaking filter can cause serious damage to the machine and is a health hazard!

Never expose the filter cartridges to moisture!

Blastrac Cartridge Filter
IFA/BIA certificate M-class

Order nr. E10601



6.3 Pulse system

The Dust collector is provided with an air pulse cleaning system which increases the life of the filter cartridges and ensures a constant suction power.

The system works by use of pressurized air, built up by a compressor.

The air is led through a water separator to the pulse system.

The cooled air passes a control valve, which regulates the systems pressure , and then builds up pressure in the pulse tank.

Normally the pressure in the system lies between 6 and 7 bar. The safety control valve is activated above 7 bar.

This provision is to ensure that the pressure in the pulse tank remains within safe limits.

If the pressure of 6 bar is not reached, it is possible that either the filter of the water separator or the air filter of the compressor is dirty.

If inspection of the water separator and compressor shows no abnormalities, it is possible that either there is a leakage in the air tubing, or the control valve is defect. In that case replace the defective parts or have it checked by Blastrac.

When there is pressure but the pulse system does not function, there might be a problem in the electrical system which controls the pulsing system. Check the wiring and the PLC-settings.



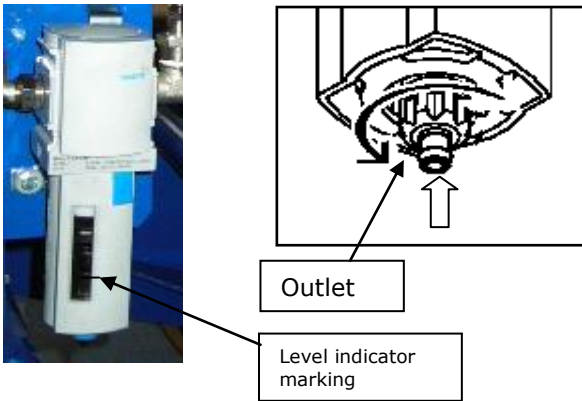
PLC timer unit

Advised is to take contact with Blastrac Support in order to prevent operational problems.



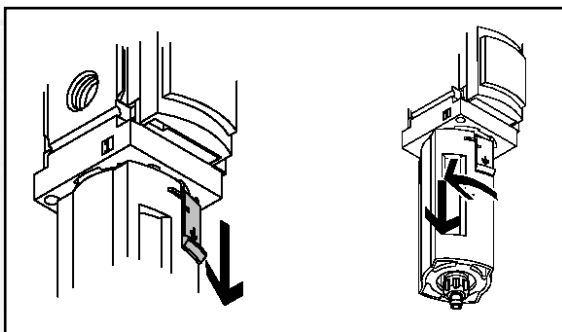
6.4 Water separator

Periodically check the level indicator of the water separator.
 The water separator filters dirt particles, oil and water from the air.
 It is recommended to replace the filter after every 200 operating hours.



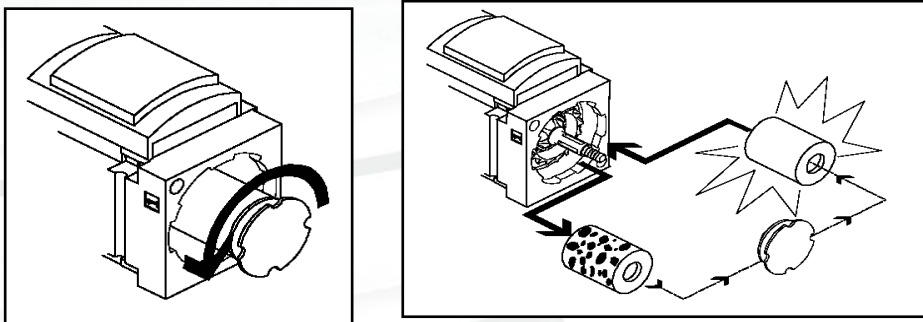
If there is condensate level approximately 10 mm below the level indicator marking (see figure) then either press in or turn the outlet ring as shown on figure.

In case of less air flow as mentioned in the paragraph above, replace the filter of the water separator as following:

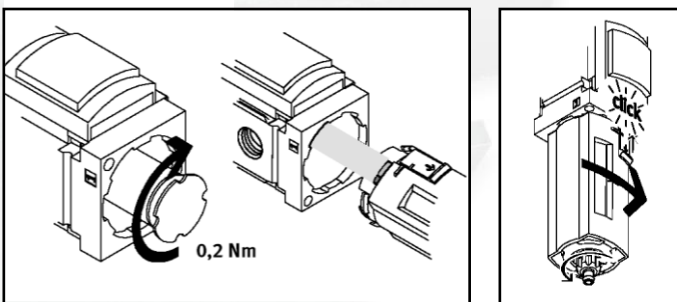


Push unlocking slide down and turn filter bowl in counter clockwise direction.

Then pull filter bowl away from the separator.



Turn the filter screw loose and replace the dirty filter by a new one as shown in the figure. Hold the new filter element only at the lower end.



Fasten the filter screw and place the filter bowl back . Make sure the locking pin points towards the large recess.

When fastening the filter bowl, make sure you hear a clear snap.



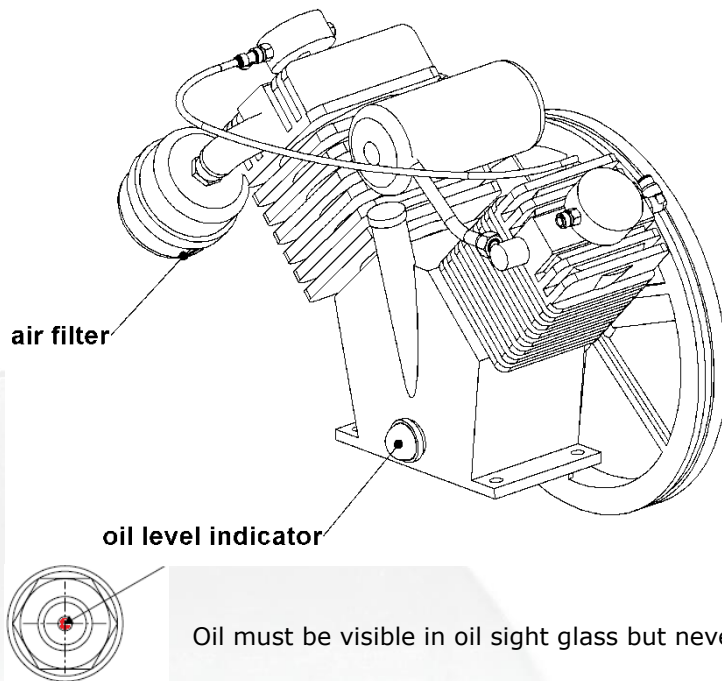
6.5 Compressor

The oil level and the air filter of the compressor should be inspected once per week. The interval for replacement or cleaning of the air filter of the compressor is depending on the environment in which the machine is operating. Only use air to clean the air filter. Replace the air filter at least once every ½ year or approximately 1000 working hours.

The red point on the oil level glass indicates the normal oil level. (About 0.25 liter.)

The oil in the crank case lubricates all moving parts so that no other lubrication is necessary.

The oil in the compressor should be clear and transparent. If the oil is dark and dirty it has to be replaced.



Oil must be visible in oil sight glass but never above or below the red point.

Oil change

Carry out the first oil change after 50 working hours, then after 900 working hours when using synthetic oil, and after 300 working hours when using mineral oil. Please note that oil change must be carried out at least once a year.

Use only oil especially intended for compressors, according specification C.T. 68 (ISO 68-viscosity).

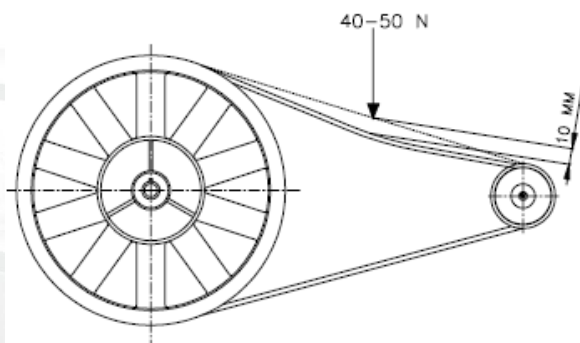
Blastrac Compressor oil – Part nr. E00498

Prior to draining off the oil, the compressor unit should have operating temperature.

Check oil level 2 or 3 minutes after stopping.

The compressor is factory filled with synthetic oil. Because of the rough conditions Blastrac recommends to use synthetic oil.

After approximately 20 operating hours check the belt tension of the compressor. When the tension is too low the belt will slip and when the tension is too high, the belt may break and cause damage to the bearings.



When the belt can be pressed in by hand 5 - 10mm, it has the correct tension. (At +/- 10 kg pressure)

If the compressor does not attain the required working pressure or becomes too hot, check the following:

- Suction filter
- V-belt tension
- Oil level and quality of oil
- Leaks in the system
- Dirty cooling ribs
- Valves and seals
- Rotating direction of the flywheel
- Loose bolts
- Non-return valve
- Drain valve for water release

IMPORTANT Make sure the compressor cannot turn on and make sure there is no pressure in the system before dismantling any part of the compressor.

6.6 The V-belts

The V-belt drive is designed for the installed driving power. To force a higher output through an excessive high tension of the V-belts will result in broken belts, damage to the bearings and causes loss of the total efficiency. Too low belt tension will cause slipping with the result of a very high temperature of the V-belt and a premature destruction of it. Temperatures over 70° for a longer period will decrease the working life and the efficiency of the V-belts. The grooves of the V-belt pulleys must be free of rust, fat and dirt and must not show any damages. The use of belt wax or similar substances in order to increase the friction coefficient is not necessary and it damages the V-belts. Soiling due to oil, grease or chemicals have to be avoided.

In order to get perfect power transmission the V-belt drives have to be checked every 3 months.

6.7 V-belt mounting

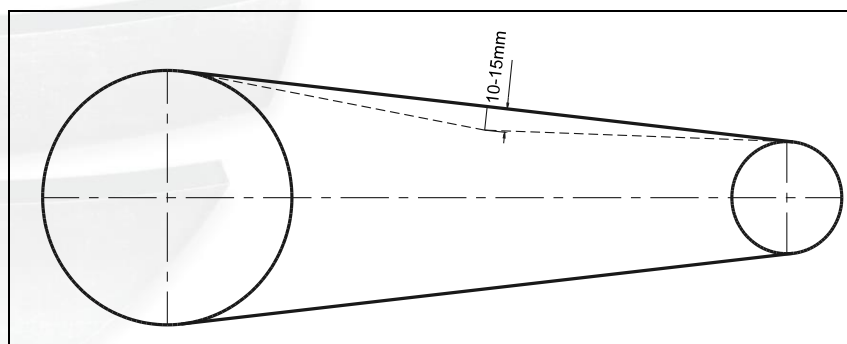
Remove the belt guard only when the driving motor is in standstill and the power supply cable of the machine is disconnected from the power source.

- Reduce the distance between the driving motor and the bearing to release the tension of the V-belt drive.
- Carefully put the V-belt in the grooves of the V-belt pulley by hand and without using the force.
- Increase the distance between the driving motor and the bearing to stretch the V-belt as following described.
- Fix the required driving gear guards.

6.8 V-belt tension

The correct V-belt tension is of utmost importance in order to obtain a perfect power transmission and to reach the usual working life of the V-belt. Too low or too high tension causes frequently a premature breakdown of the V-belt. Excessive belt tension results in damaged bearings at drives.

Check the tension of the V-belt by pressing the thumb on the belt. The belt has the correct tension if you can press it in about 10-15 mm at approx. 10 kg. pressure.





7. Troubleshooting

Prior to any repair works on the equipment or its drives the equipment must be secured against unintentional switching-on. Disconnect the power supply.

Fault	Possible cause	Remedy
Unusual noises	To little clearance or wrong adjustment of the rotating parts Too little grease in the bearing Silencer assembly defective	Check the alignment and adjustment of the rotating parts. Check screws and all parts for tight seat. Lubricate the bearing. Check and replace if needed.
Too low or no pressure	Check the whole pneumatic system for leaks. Dirty airfilter.	Fill the leaks or replace the damaged components. Clean or replace the air filter of the compressor.
Bad or no filter cleaning	Pressure too low. Pulse timer / PLC defective or wrong settings.	See above. Contact Blastrac.
No suction power	Dirty filter cartridges. Foreign air leaks in the dust container. Obstructed or ripped dust hose. Check the tension of the blower/fan V-belt.	Clean or replace the filter cartridges. Check the alignment or replace the seal. Check and replace if necessary. Adjust the tension of the V-belt.
Motor failure warning light is lit	The motor protection switch was triggered, for example: caused by wrong power supply or defective equipment.	Check the power supply for the correct voltage and Hertz. Call for a skilled electrician to check the motor protection switch inside the electrobox.
Phase sequence warning light is lit	The phases of the power supply are connected wrong.	Call for a skilled electrician to change the phase inversion switch inside the electrobox.

Note: If a motor protection switch has been triggered by overload, it can be switched on again after a short cooling down period.



8. Technical data

	BDC-655 EX 50Hz	BDC-655 EX 60Hz
Power consumption	5.5 kW	5.5 kW
Connection Load	400-480V, 50Hz 63A CEE plug	400-480V, 60Hz 63A CEE plug
Supply cable	4 x 16mm ² (15m)	4 x 16mm ² (15m)
Available plug connections	5 pole / 63 Ampere	5 pole / 63 Ampere
Air stream (hose 5" at the end)	1250 m ³ /hr	1250 m ³ /hr
Dust hose connection	Ø130 / Ø150 mm	Ø130 / Ø150 mm
Dust bin capacity	100 L	100 L
Length	1686 mm	1686 mm
Width	795 mm	795 mm
Height	16440 mm	16440 mm
Weight	665 kg	665 kg

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

IMPORTANT NOTES:

The indicated values are measured on new machines. Noise level will vary in different circumstances. Area influences like open outside or closed inside space, daily use, poor maintenance, etc. will give different values at all time and could increase the exposure level over the total working period.

The values may be measurements from a representative sample of technically comparable machinery. The values may be used for a preliminary assessment of exposure.

Always use ear protection when working with this machine.

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.

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. No part of this publication may be reproduced and / or published in print, photocopy, or other form without prior permission by Blastrac.

The original Operating Instructions are in the English language. Any other language is a translation of the original version.



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