



OPERATING MANUAL BDC-955

VERSION 2.1

**EC DECLARATION OF CONFORMITY**

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

BLASTRAC B.V.

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

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

Model: *Blastrac* **BDC-955-0000** **Serial number:** *xxxxxxx*

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 292-1, NEN-EN 60335-1, NEN-EN 60335-2-69, NEN-EN 55014, NEN-EN 55014-2 and NEN-EN 61000-3-2

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1. Introduction

It is important that all persons who are working or maintaining this machine read the manual carefully and understand it fully.

Keep this manual near to the machine, so it can always be consulted.

Only authorized and trained personnel may operate this machine.

2. Machine description

The Blastrac dust collector BDC-955 can only be used for dry cleaning.
It should **only be** used for removing **not-inflammable dust or substances**.
The BDC-955 must **not** be used for **carcinogenic or asbestos substances**.

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

Classification acc. standard EN 60335-2-69 – Annexe AA		
Type	Class	Designation
BDC-955	M	(Medium risk) for separating dust with an exposure limit value of over 0,1 mg/m ³ , depending on the volume occupied.

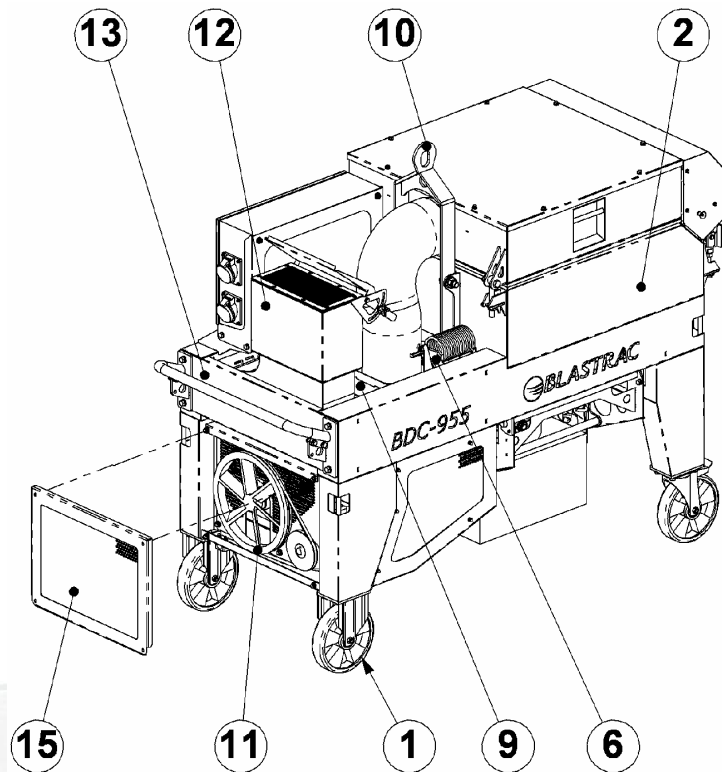
Dust emissions into the environment	
Class	Value of performance
L	Retains at least 99,1 % of particles measuring $\geq 3 \mu\text{m}$
M	Retains at least 99,9 % of particles measuring $\geq 3 \mu\text{m}$
H	Class H13 HEPA filter in accordance with EN1822

The BDC-955 is available in 2 versions: 400-440 Volt 50 and 60Hz version.

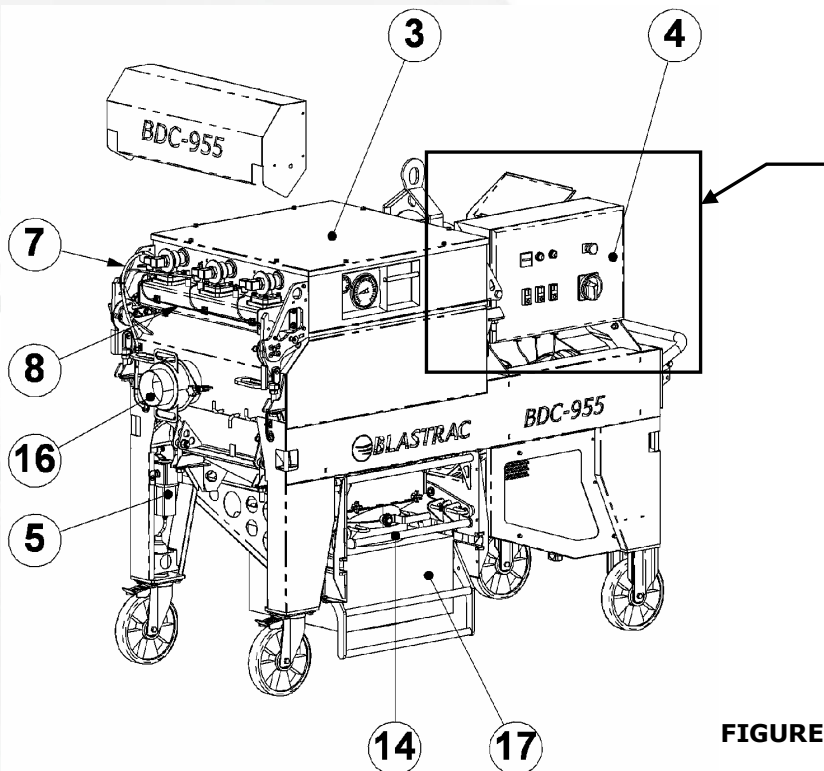
Application

The BDC-955 is especially designed to be used in combination with Blastrac Blasting machines and scarifiers.

Contact Blastrac B.V. for the correct execution and combinations.



ITEM	DESCRIPTION
1	WHEELS
2	FILTER CHAMBER
3	PULSE CHAMBER
4	CONTROL PANEL
5	WATER SEPARATOR
6	AIR PISTOL
7	PULSE SYSTEM
8	PULSE CONTROL
9	FAN UNIT
10	HOIST BEAM
11	COMPRESSOR
12	SILENCER
13	END PART
14	DISCHARGE & BAG UNIT
15	COVERS
16	HOSE ADAPTER
17	BIG BAG



FOR DETAIL OF CONTROL PANEL, SEE FIGURE 2.2

FIGURE 2.1 – MACHINE OVERVIEW

**FILTER CHAMBER**

Contains 9 filter cartridges for the separation of dust from the airflow.

PULSE CHAMBER

Separates the filter chamber from the 'clean air' side and seals the filtercartridges.

CONTROL PANEL

Controls the functioning of the dustcollector and powersupply to the applications (see figure 2.2).

WATER SEPARATOR

Separation of water from the pulse system. The separator drains automatically. Optional a small bottle (approx. 20 – 30 c.c.) can be placed in the holder below the separator, in order to prevent the fluid contaminating the floor.

AIR PISTOL

Accessory for cleaning the dustcollector.

PULSE SYSTEM

For pulse cleaning of. Increases life-time of the filtercartridges by pulse cleaning.

PULSE CONTROL

Controls the pulse valves.

FAN UNIT

Creates an airflow for a correct functioning of the combined application.

The air flow through the complete system during the application of the blast cleaning machine and the dust collector has the following functions:

- Cooling of the blast wheels
- Cooling of the abrasive
- Transport of the abrasive
- Transport of dust through the system
- Separation of dust from the re-useable abrasive
- Transport of dust to the dust collector

HOIST BEAM

Single hoisting point for transport of the dustcollector.

COMPRESSOR

Feeds the pulse system with compressed air.

SILENCER

Sound damping air outlet with integrated air-flow control valve.

END PART

Cable support.



DISCHARGE & BAG UNIT

For dust discharge and handling of the dustbags. The discharge tray has an integrated valve which enables continuous working with the combined application.

HOSE ADAPTER

Accessory which enables connection of a 5" (130 mm.) suction hose, instead of the standard 6" (150 mm.) hose.

BIG BAG

Captures and simplifies a hygienic transport of the processed dust. 1 dustbag is delivered with the dustcollector. The dustbags are sold separately in sets of 50 pieces (part E06311).

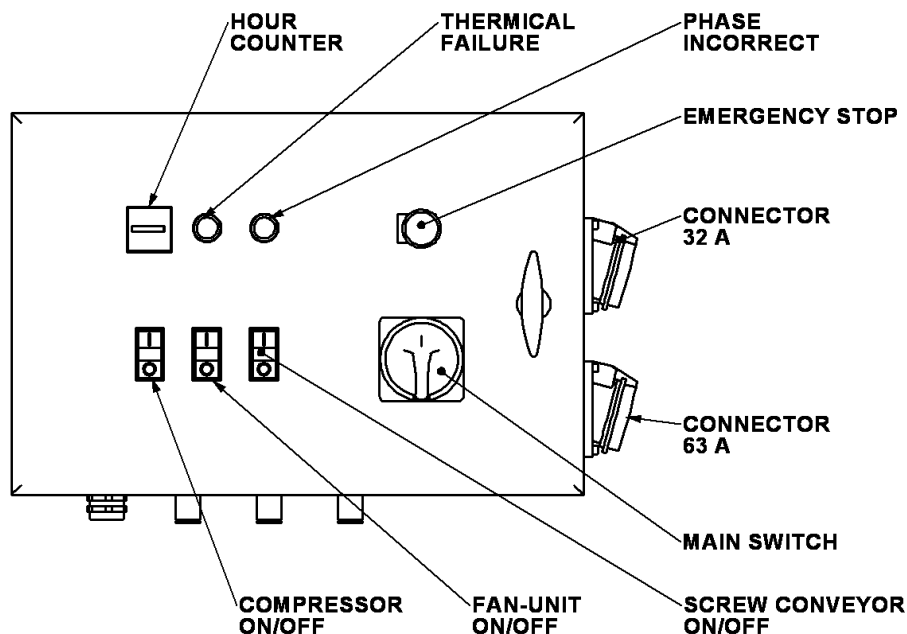


FIGURE 2.2 - DETAIL OF CONTROL PANEL

Main switch

The main switch is located on the main box. It has to be switched on before operating the dust collector and the blast cleaning machine.

Button Compressor/Fan ON/OFF

Pressing the button "ON" switches the compressor / fan on, pressing the button "OFF" switches the compressor and the fan off.

Button Screwconveyor ON/OFF (optional)

Pressing the button "ON" switches the (optional) screw conveyor on, pressing the button "OFF" switches the compressor and the fan off.

Control lamp Thermal failure

This lamp shines when the machine is overloaded.

Control lamp Phase incorrect

This lamp shines when there is a failure with the phases.



Emergency shutdown switch

Red mushroom-shaped press switch onto a yellow background. Pressing this switch immediately stops the power supply to all units of the machine, shut down switch requires re-setting after it has been used.

Connectors

Enables the connection of an application, e.g. a Blastrac blasting – or scarifying machine.

Hour counter

Shows the working time of the Dustcollector in hours. Registration of the working hours enables to follow a correct maintenance schedule.

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 that it may always be consulted.

Safety precautions – general

- It should **only** be used for removing **not-inflammable dust or substances**.
- The unit should not be used near flammable gasses or substances.
- The BDC-955 must **not** be applied for **carcinogenic or asbestos substances**.
- Packing material, like plastic bags, should not be in reach of children's with regard of asphyxiation danger.
- The voltage on the identification plate must comply with the power supply.
- Do not use the unit when it is damaged.
- Do not use damaged extension cables.
- Do not pull the power supply cable over sharp edges, fold the cable or clamp it.
- Never use this machine for sucking water or liquids.
- Acids, acetone or solvents can damage the machine.
- During a standstill of the machine, pull out the plug.
- Don't pull out the power supply cable out by the wire, but by the connector.
- Use only original Blastrac parts.
- The dust collector must be yearly overhauled by a skilled technician.

Safety precautions – with regard to transport

Remove the dustbag from the dust collector and close the discharge valve before it is transported. Close the silencer valve outlet of the dust collector. The dust collector may only be lifted by using the (single point) hoisting beam. It may be tightened by fastening straps to the indicated points on the housing frame (see chapter 2). The weight and dimensions of the dust collector are shown in Chapter 7 "Technical data".

- When transporting the dust collector do so in such a manner that damage due to the effects of the use of force or incorrect loading and unloading is avoided.
- Before the dust collector is removed from the hazardous zone, take precautions to prevent dust from escaping. Always close the inlet of the dust collector with the appropriate plug



Safety precautions – with regard to maintenance

- 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.
- 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.
- The external parts of the dust collector must 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.
- When maintenance or repair procedures are carried out, all the contaminated elements that cannot be properly cleaned, must be destroyed.
- 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 filters have to be disposed.
- Compartments that are not dust-tight must be opened with suitable tools and thoroughly cleaned.

Safety regulations

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.

- Persons who are not operating the machine must not be permitted to stay in the surrounding area of the machine.
- Don't change anything on the machine. Use always cables which are approved and safety earthed (extend) cables. The machine is always equipped with an earthed connection, do not change this and use always earthed cables with an earthed plug.
- Connect the main power supply cable to an installation with an earth leakage circuit breaker.
- Inspect and test the electrical components regularly. The electrical components have to satisfy to the requirements which apply to these components.
- Always call a skilled electrician or your distributor 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 repair operations on the machine.
- Never operate the machine when the surface is wet.
- Never use the machine in the rain.



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.

Checkpoints of electrical safety

- 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 rolled entirely off of the reels.
- Any damage to electric cables is not permitted
- Use an electrical power supply connection with earth connection.
- The main switch of the machine should be put to 'Off' before connecting to the power supply.

5. Operation

Switch on the machine

- Connect the dust hose to the machine.
- Attach a dustbag in the bag lifting system and secure the opening of the bag to the discharge outlet with the belt.
- Open the valve of the discharge (handle position up)
- Make sure the switches of the dust collector are in "Off" position.
- Connect the dust collector to the power supply.
- Switch on first the compressor motor.
- Secondly switch on the fan motor.
- Start working with the machine.

Work with the machine

- Regular check the contents of the dust-bag. When full, proceed with 'Exchanging the dust-bag'.
- Read-out the pressure indicators on the pulse chamber regular and check for a functional pulse-cleaning on the dust-collector.

Interrupting work

- When temporarily interrupting the work (1/2 hour – 1 hour), turn-off the fan-unit only. 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, first switch-off the fan-unit. Let the pulse-cleaning cycle run for +/- 5 minutes. Switch-off the compressor unit and Main-switch.
- Disconnect the power-supply cable.
- Prevent un-authorized persons from getting access to the dust-collector or take measurements to prevent un-authorized working with the equipment.



Exchanging the dustbag

The dust-bag can be replaced during working with the dust-collector by closing the valve on the discharge-outlet. The capacity of the discharge-bin enables continuation of the working process.

- Check regularly the level of the dust-bag. The periods of checking depends on the surface to be cleaned.
- When the dust-bag is full, close the valve of the discharge-outlet (valve handle horizontal).

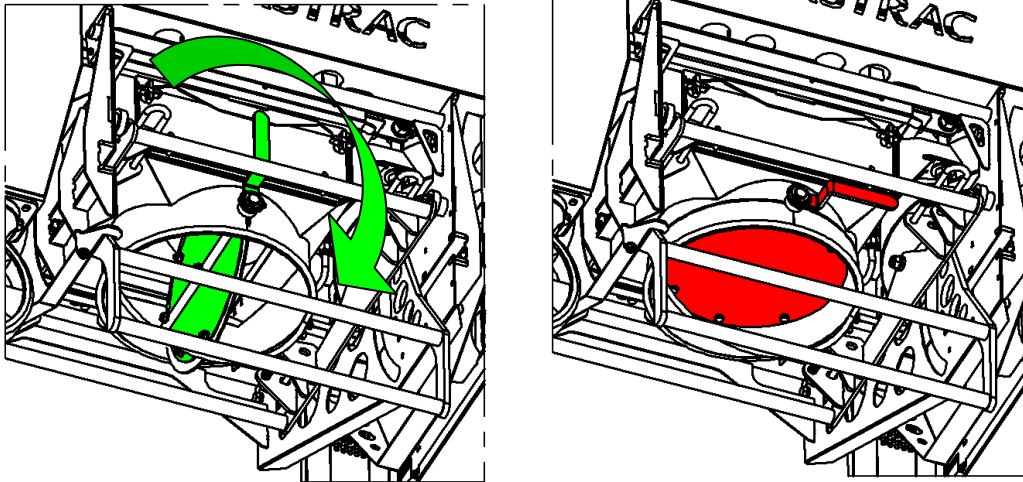


FIGURE 5.1

- Loosen the belt of the bag-inlet.
- Seal the bag-inlet by means of the chords on the bag.
- Slowly drop the bag on the ground by tilting the bag lifting handle up.

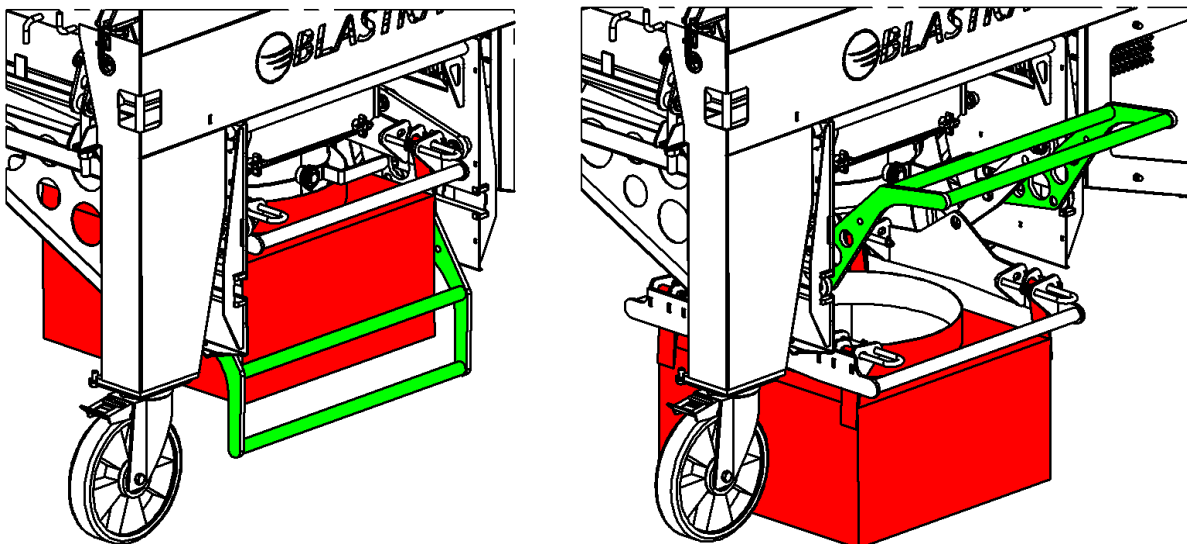


FIGURE 5.2

- Remove the straps out of the lifting unit and replace the full bag by a new.
- Lift-up and seal the bag with the belt.
- Open the valve of the discharge-outlet (valve handle vertical).
- Dispose the full bag. Observe the waste disposal regulations; in uncertain situation ask your next policy level.



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 hose to the filter for damages. Make sure that the dust bin of the filter is emptied Check the electric connections for sediments of dirt or foreign bodies. Check the electric motors for dirt and other contaminants.
Annually	Full overhaul and cleaning of the complete dust collector.
After 50 working hours	Change compressor oil.
After 300 working hours, using mineral oil	Change compressor oil.
After 900 working hours, using synthetic oil	Change compressor oil.

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.

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

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.

Follow additional operating and maintenance of OEM 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

Filter replacement

- 1 Switch off the dust collector and pull out the power supply.
- 2 Loosen the top bolts of the hoisting beam (do not remove them).
- 3 Loosen the hose on pulse-chamber.
- 4 Loosen the bolts of the pulse-chamber at the hinge position.
- 5 Loosen the nuts of the eye-bolts (do not remove them) and swap the eye-bolts up.
- 6 Rotate the center-handles left & right up, to ease tilting the pulse-chamber up.
- 7 Remove the safety (quick release) pins.

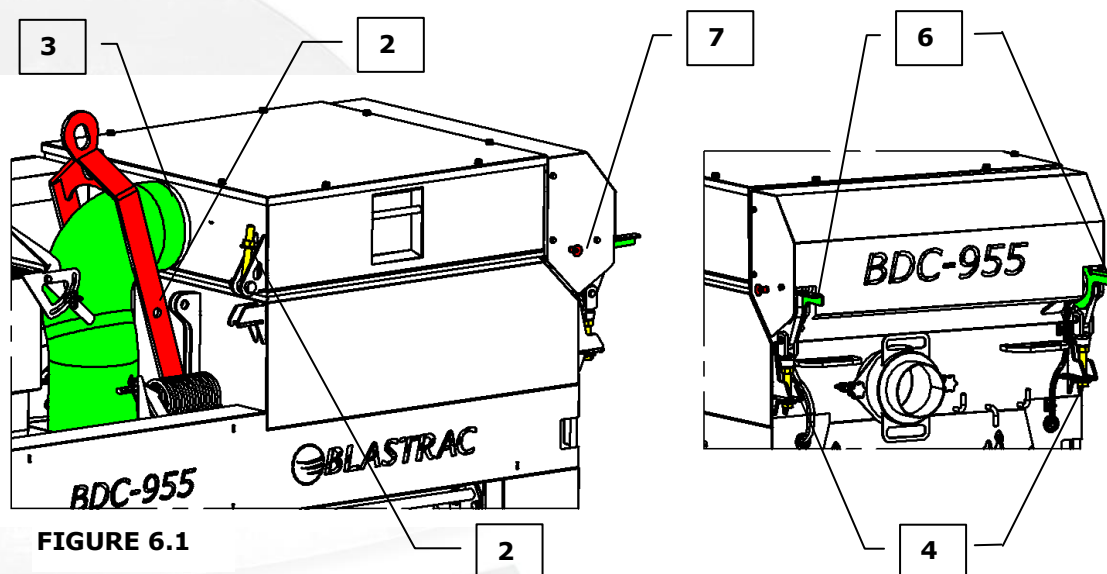


FIGURE 6.1

- 8 Lift the pulse chamber up.
- 9 Lock the pulse chamber in upward position by inserting the quick-release pins at the original position.
- 10 Replace the filter-cartridges.

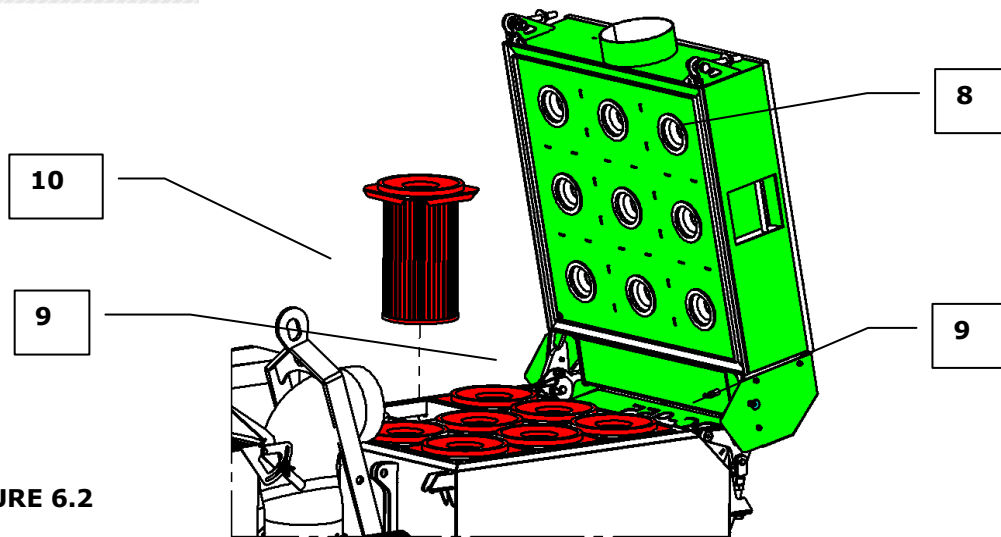


FIGURE 6.2

- 11 Follow above given procedures in reverse to restore the pulse-chamber position. Carefully and evenly tension (in cross-direction) the bolts and nuts in order to obtain an adequate sealing. Torque the tension devices with 26 up to 30 Nm.
- 12 When hose and hoisting beam are mounted back in position, start the fan-unit. Due to the vacuum in the filter-unit the pulse-chamber may slightly be pressed further in its sealing.
- 13 Check and re-tension the pulse-chamber when necessary.
- 14 Continue work with the dust-collector.

Pulse system

The Dust collector is provided with a air pulse cleaning system which increases the life of the filter cartridges.

The system works by use of pressurized air, built up by a belt driven compressor
The air is leaded through a waterseparator to the pulse system.

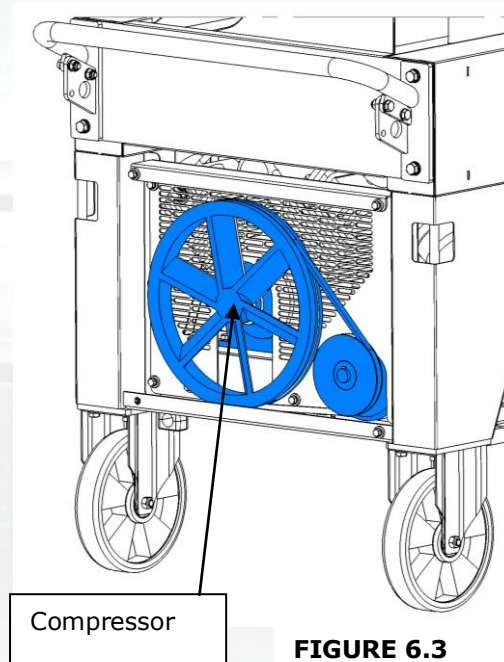


FIGURE 6.3

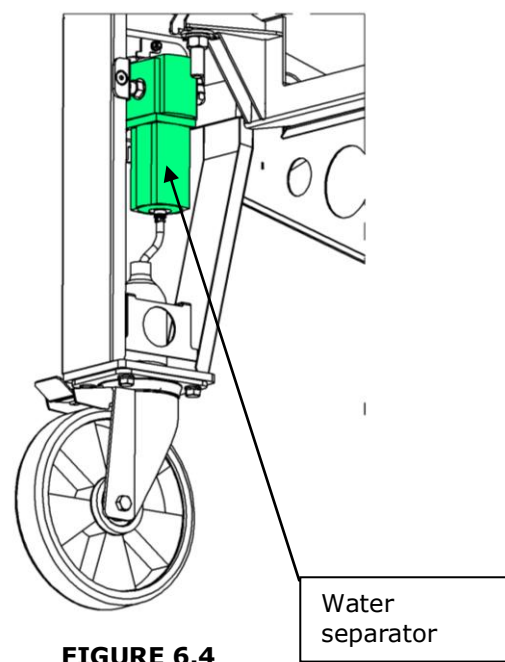


FIGURE 6.4



The conditioned air then passes a control valve (see fig. 6.5), which regulates the systems pressure , and then builds up pressure in the pulse tank.

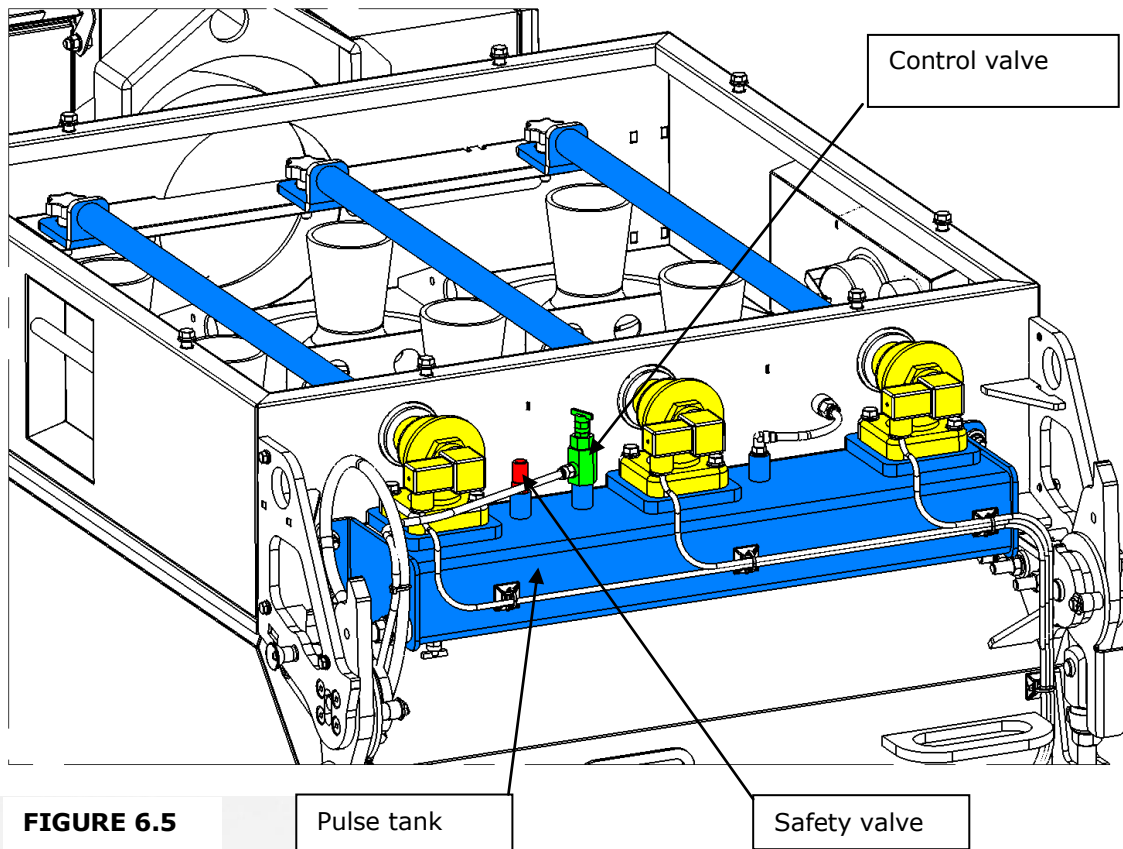


FIGURE 6.5

Normally the pressure in the system lies between 6 and 7 bar. The safety valve mounted on the pulse tank is activated at approximately 10 bar. This provision is to ensure that when there is a defect in the Control valve, the pressure in the pulse tank remains within safe limits.

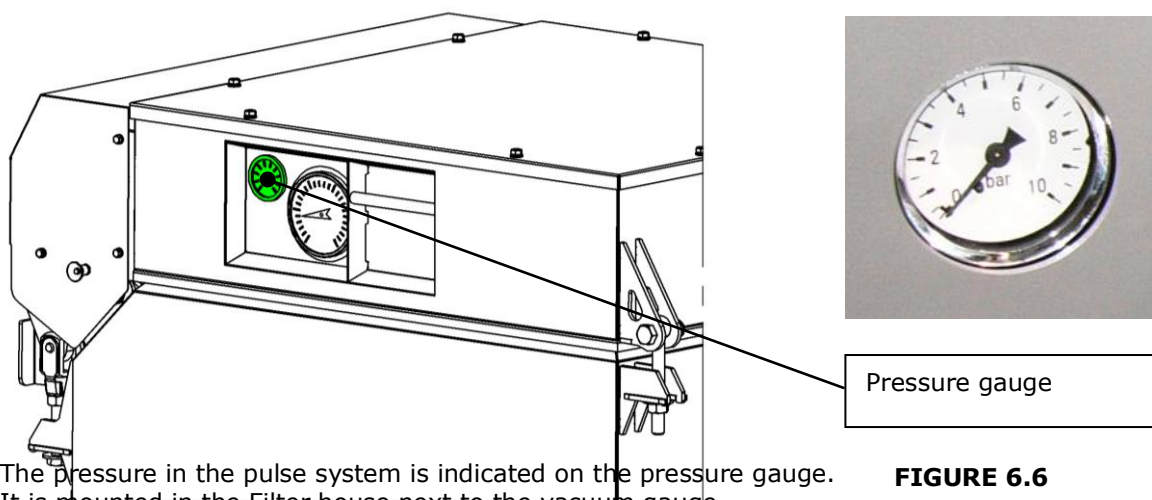


FIGURE 6.6

The pressure in the pulse system is indicated on the pressure gauge. It is mounted in the Filter house next to the vacuum gauge. If the pressure of 7 bar is not reached, it is possible that either the filter of the water separator or the air filter of the compressor is dirty. For maintenance instructions on the **waterseparator** and the **compressor** see the applicable paragraphs.



If inspection on the waterseparator or compressor shows no dirty filter, 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.

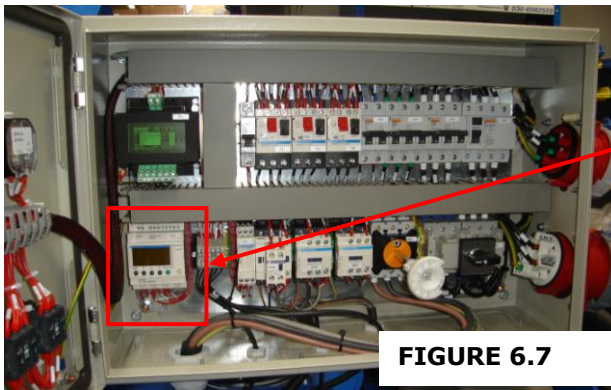


FIGURE 6.7



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

Water separator

Periodically check the level indicator of the waterseparator.

If there is condensate level approximately 10 mm below the level indicator marking (see figure 6.8) then either press in or turn the outlet ring as shown on figure 6.9 .



FIGURE 6.8

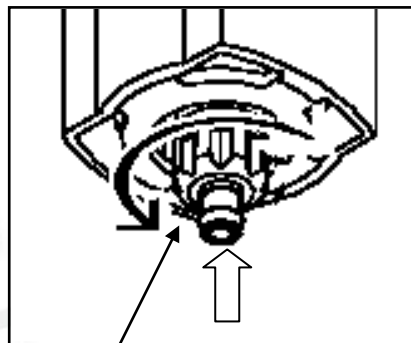


FIGURE 6.9

Outlet ring

Level indicator marking



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

Push unlocking slide down and turn filter bowl in anti-clockwise direction. Then pull filter bowl away from the separator.

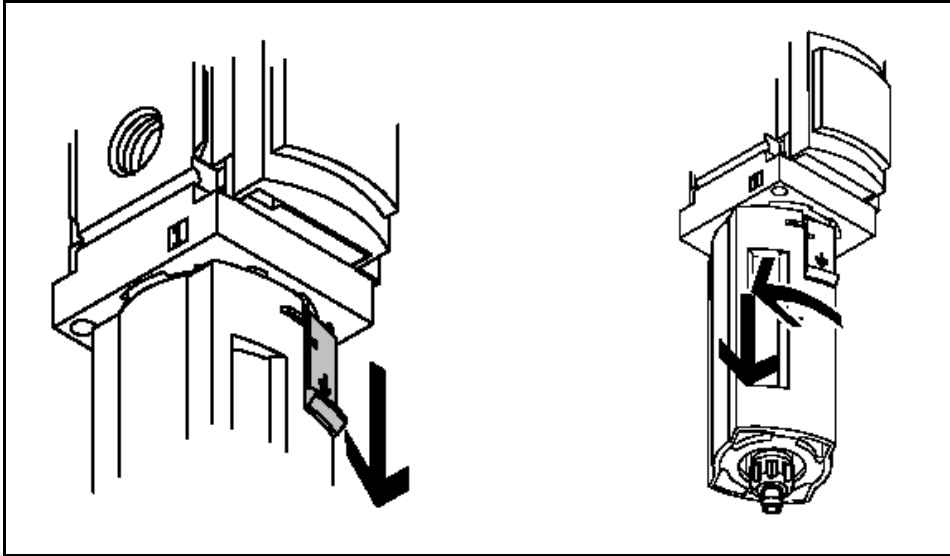


FIGURE 6.10

Turn the filter screw loose and replace the dirty filter by a new one as shown on figure 6.11 . Hold the new filter element only at the lower end .

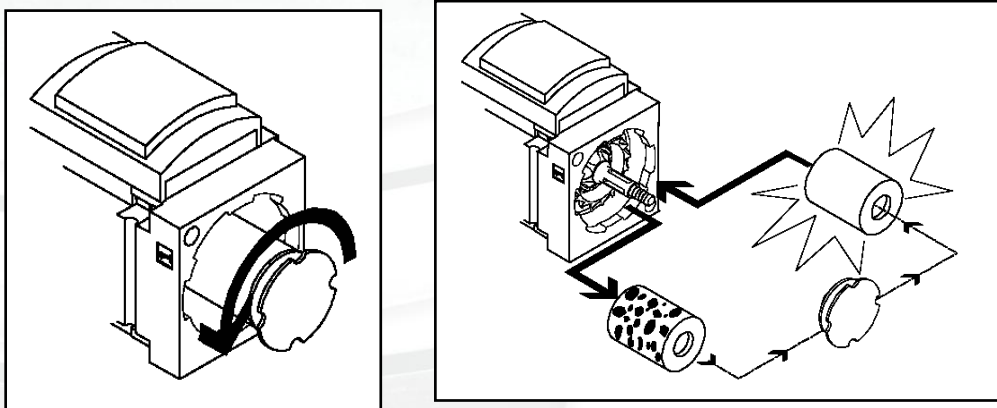


FIGURE 6.11

Fasten the filter screw and place the filter bowl back . Make sure the locking pin points towards the large recess (see figure 7.10.5).

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

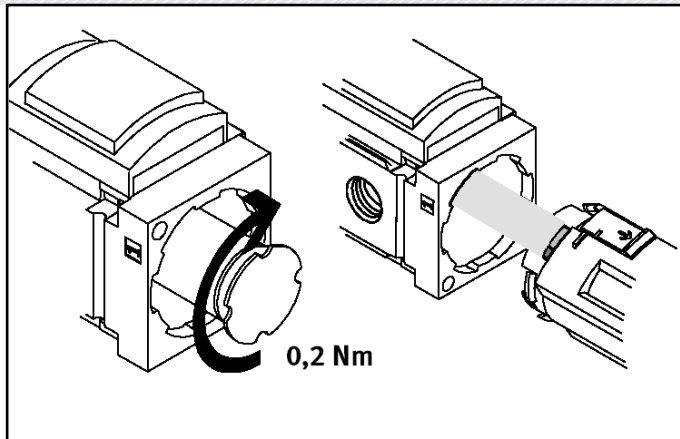


FIGURE 6.12

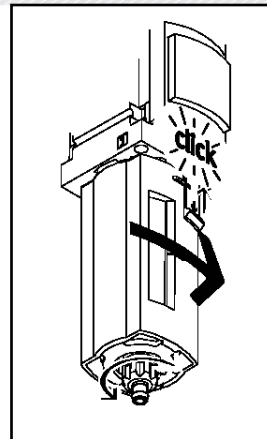


FIGURE 6.13

Compressor

The oil level and air filter of the compressor should periodically be inspected acc. to the inspection table given values.

Replacement or cleaning of the air filter is depending on the environment in which the Dust collector is operating.

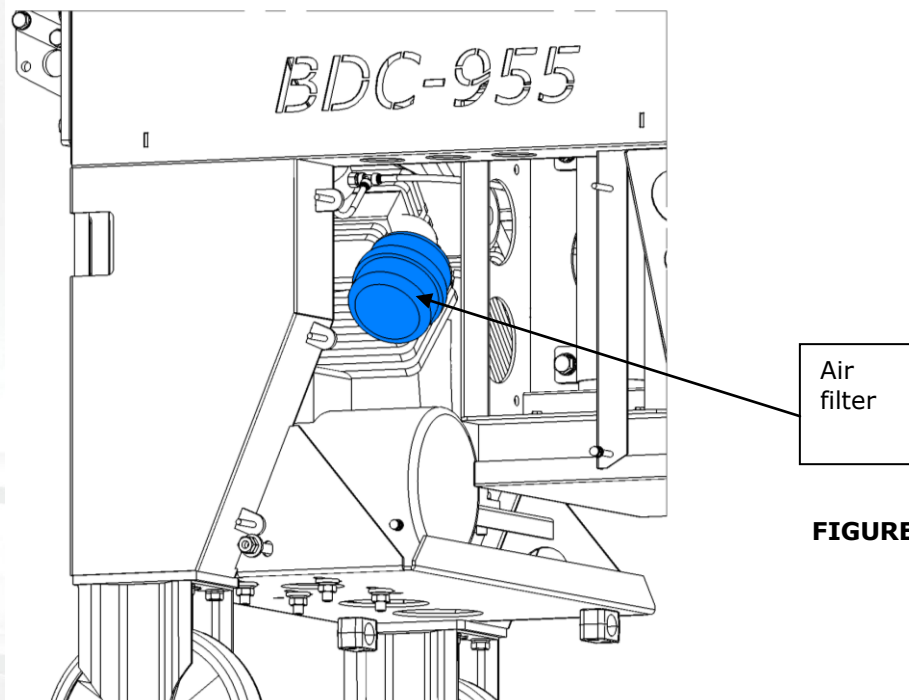


FIGURE 6.14



The height of the oil level oil level must lay on approximately half of the oil level indicator , about 0,25 liter.

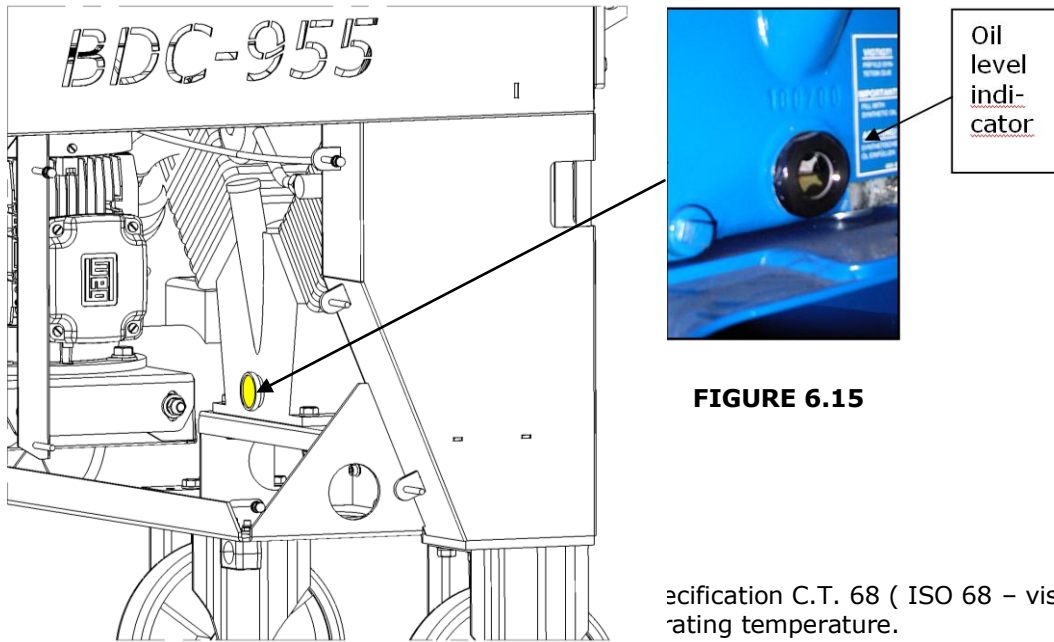


FIGURE 6.15

specification C.T. 68 (ISO 68 – viscosity) .
operating temperature.

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F

7. Technical data

	BDC-955
Power consumption	5.5 kW
Electrical connection / fuel	400-440V / 50-60Hz
Air stream (hose end)	1324 m ³ /hr
Dust hose connection	Ø130 - 150 mm
Total filter surface	36m ²
Length	980 mm
Width	820 mm
Height	1500 mm
Weight, with cable (/ cable loose)	552 kg (/ 538 kg)
Noise level (at 1 mtr. distance)	Up to 95 dB(A)

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



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