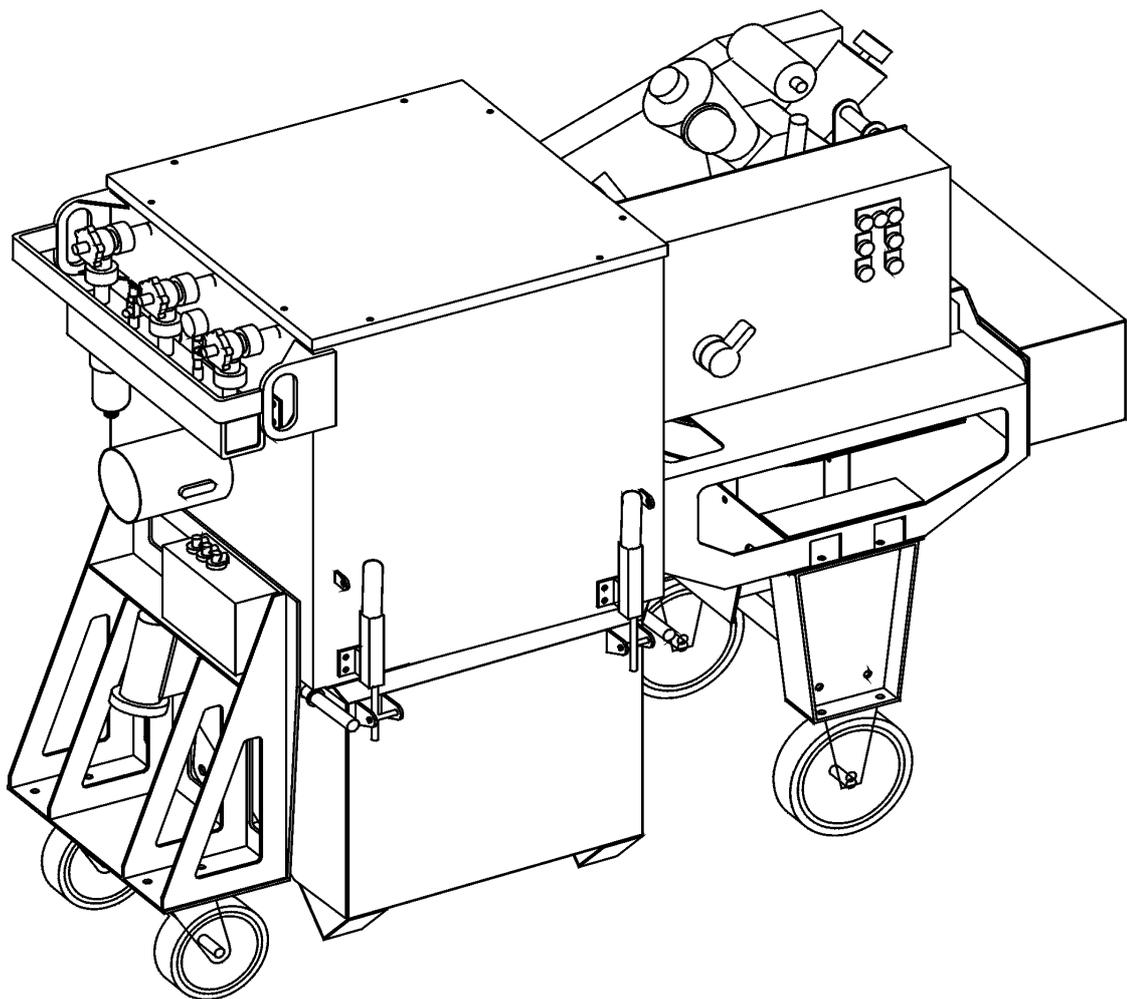


Operating Instructions

854DC/DCI/DCS



 **BLASTRAC**

MAN-854-EN

Blastrac BV

Nieuwegein, The Netherlands

23-02-2009

Subject:
854DC(S)(I) Vibration and noise levels

Vibration level:

Not applicable on dust collector units in general by the nature of use.
(you don't hold or touch the machine for longer periods during the use)

Allows continuously use.

Noise level: (under load)
76 dBa

IMPORTANT NOTE:

Sound levels can vary in different circumstances, area influences like open outside or closed inside space, the surface to be treated etc. will give different values at all time.

Even though there is no direct need for operators to wear ear protection, we however strongly recommend to use ear protection at anytime whilst using this equipment.

Blastrac BV

Utrechthaven 12

3433 PN Nieuwegein

THE NETHERLANDS

T +31(0)30 - 601 88 66

F +31(0)30 - 601 83 33

E info@blastrac.nl

I www.blastrac.com



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Contents Chapter 1

- 1.1 Rating
- 1.2 Unit specifications
- 1.3 Operative range and correct usage
- 1.4 Stand-by power supply
- 1.5 Machine type designation



Technical data

1.1 Rating

Unit / designation: **Blastrac** dust collector

Machine type 854DC/DCI/DCS

Manufacturer **Blastrac BV**
Utrechthaven 12
NL-3433PN Nieuwegein
THE NETHERLANDS



Technical data

1.2 Unit specifications

Technical data

Dust collector	854DC	854DCI	854DCS
Power consumption Compressor	1,5 kW	1,5 kW	1,5 kW
Power consumption Fan	4,0 kW	4,0 kW	4,0 kW
Power consumption Dust collector	5,5 kW	5,5 kW	5,5 kW
Input current Compressor	max. 3,2A	max. 3,2A	max. 3,2A
Input current Fan	max. 7,9A	max. 7,9A	max. 7,9A
Input current Dust collector	max. 12,0A	max. 12,0A	max. 12,0A
Rated speed Compressor	2850 min ⁻¹	2850 min ⁻¹	2850 min ⁻¹
Rated speed Fan	2890 min ⁻¹	2890 min ⁻¹	2890 min ⁻¹
Enclosure Compressor	IP 54	IP 54	IP 54
Enclosure Fan	IP 54	IP 54	IP 54
Connected loads	400V, 50Hz, 32A CEE Plug	400V, 50Hz, 16A CEE Plug	400V, 50Hz, 63A CEE Plug
Dust hose connection	150 mm Ø	150 mm Ø	150 mm Ø
Dust hose length	20 m	20 m	20 m
Pressure adjusting Compressor	6-7 bar	6-7 bar	6-7 bar
Pressure differential Filtersurface (MAX)	50-150 mm/WS 2-6 inch/ WG	50-150 mm/WS 2-6 inch/ WG	50-150 mm/WS 2-6 inch/ WG
Dedusting interval	10-15 s	10-15 s	10-15 s
Airflow	1250 m ³ /h	1250 m ³ /h	1250 m ³ /h

Connected loads (electrical system):

The indicated input current values correspond to the nominal current values of the motors working under full load. These values are not achieved under normal operating conditions.

Technical data

Dimensions:

	Dust collector 854DC/DCI/DCS	
Length	2000	mm
Width	900	mm
Height	1500	mm
Weight	550	kg

1.3 Operative range and correct usage



The dust collector 854DC/DCI/DCS is exclusively designed to be used with Blastrac equipment only.

It is designed to vacuum dry dust specified to be Class L. (E DIN IEC 61J/94 CD)

The Filtermaterial FA 6176 is certified to DIN/EN DUST CLASSIFICATION CLASS L and M.

Do not use this equipment on applications where you expect dust that is classified to be harmful. If you feel uncertain ask local authorities for assistance.

The manufacturer will not be liable for damage resulting out of from incorrect use.

In these cases the user assumes all risks.

Dust collector 854DC:

The dust collector 854DC is exclusively designed to be used with the blast cleaning machine 1-15D.

Dust collector 854DCI:

The dust collector 854DCI is exclusively designed to be used with the blast cleaning machine 2-30DS. Make sure that the blast cleaning machine and the dust collector will be separate connected to the site supply, consequently the turn direction of both machines must be verified.

Dust collector 854DCS:

The dust collector 854DCS is exclusively designed to be used with the blast cleaning machine 2-30D and 1-15DS.

Technical data

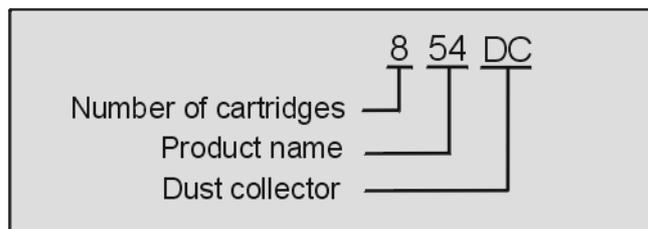
1.4 Stand-by power supply (Generator)

If the dust collector 854DC/DCI/DCS is operated using a generator, this generator must be operated in accordance with the current VDE directives (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.



1

1.5 Machine type designation



Contents Chapter 2

- 2.1 Warnings and symbols
- 2.2 Organisational measures
- 2.3 Personnel selection and qualification
- 2.4 Safety precautions applicable to some operating sequences
- 2.5 Special work within the scope of use of the dust collector and maintenance activities as well as repairs during operation
- 2.6 Precautions applicable to some particular dangerous categories
- 2.7 Oils, greases and other chemical substances
- 2.8 Safety off position
- 2.9 Particular dangerous aspects of the equipment
Safety regulations Electric
- 2.10 Regulations
- 2.11 Pay attention to the order of the following five golden rules

Safety instructions

2.1 Warnings and symbols

The following denominations and symbols are used in the Operating Instructions to highlight areas of particular importance:

2



Symbol of operational safety.
 In these Operating Instructions this symbol will be shown next to all safety precautions that are to be taken in order to ensure prevention to life and injury. Follow these instructions and take special care in these circumstances. In addition to these instructions, the general safety precautions and accident prevention guidelines are also to be followed.



Particular details regarding the economical use of the dust collector.



Information, instructions and restrictions with regard to possible risks to persons or to extensive material damages.

Safety instructions

Warning against dangerous voltages.



Indications relating to protective devices in electrical appliances.



2

Indications where consultation with the manufacturer of the dust collector is required.



Instructions relating to periodical checks.



Reference to important instructions contained in the Operating Instructions.



Safety instructions

2.2 Organisational measures



2 The **Operating Instructions** are to be kept **near the location where the dust collector** is located and must be **within reach at all times!**

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 as well as compliance with traffic regulations.

The Operating Instructions must be **supplemented** by **instructions** including the duty to **supervise** and **report** relating to **particular working practices**, for example work organisation, work procedures and personnel allocation.



Personnel entrusted with working with the dust collector must have read the **Operating Instructions** before starting work, in particular the **Safety Instructions** chapter. To read these instructions during work is too late. This particularly applies to incidental activities such as setting up the equipment, carrying out maintenance work or training staff to work with the **dust collector**.

From time to time the working practices of the staff are to be **checked** regarding awareness of **safety and hazards**.

Personnel must tie back long hair and not wear loose clothing or jewellery including rings. There is a risk of injury through getting stuck or being drawn into moving machinery.



Use **personnel protection equipment** if necessary or required by regulations! Take notice of **all** safety and hazard notices on the dust collector!

All **safety and hazard notices** at or on the dust collector must be kept complete and **legible!**

Safety instructions

If **safety-critical changes** occur to the **dust collector** or its working method, the **dust collector** must be **shut down immediately!** The cause of the fault must be established immediately!

Changes, add-ons or conversions to the **dust collector** which might impair safety must not be undertaken **without the manufacturer's permission!**

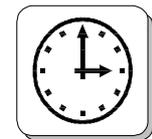


2

This applies in particular to the fitting and adjustment of safety devices as well as to welding on load-bearing parts.

Spare parts must comply with the technical requirements specified by the manufacturer. This is always guaranteed if original spare parts are used.

Intervals for recurring **checks and inspections** specified in these Operating Instructions must be complied with!



To perform maintenance work correctly it is imperative to be equipped with the proper tools for the task in question.

The **location** and the operation of **fire extinguishers** must be made known on each building site!

Take note of the facilities for reporting and fighting fires!

2.3 Personnel selections and qualification

Fundamental duties :

Work on the **dust collector** may only be undertaken by **reliable personnel. Note the statutory minimum age!**

Only trained personnel may be deployed. Specify clearly the responsibilities of personnel for operation, setting up, servicing and maintenance work!

Make sure that only **authorised** personnel operate or work on the **dust collector!**

Define responsibilities of the equipment operator also regarding to **traffic safety regulations** and empower him to decline instructions from third parties which are not complying with the safety requirements!

Safety instructions

Personnel being trained or made acquainted with the equipment may **only** be deployed on the **dust collector under constant supervision of an experienced person!**

2



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**.

2.4 Safety precautions applicable to some operating sequences

Standard operation

Ban any method of working that **impairs safety!**

Some measures have to be taken in order to operate the **dust collector** in **safe and operative conditions!**



Only operate the **dust collector** when all **safety devices** and related **safety equipment**, e.g. detachable **safety devices**, emergency stops, sound insulations and suction devices are present and **operational!**

Check the **dust collector** visually for any **damage** and **defects** at least once a day!

If alterations or changes appear (inclusive of operating performance), inform immediately the responsible!

Shut down immediately the dust collector and secure it, if necessary!

In the event of **operational malfunctions** the **dust collector** must be **shut down immediately** and secured!



Do not work with the **Blastrac** dust collector when it **rains** or on **moist surfaces! Do not expose** the filter cartridges to **moisture!**

Safety instructions

Faults must be immediately rectified!

Carry out the switch on and off operations and pay attention to control display according to the operation manual!

Before switching on the **dust collector** make sure that no-one can be endangered when the **dust collector** starts up!

Do not switch off or remove the exhaust and ventilation devices when the **dust collector** is running!



2.5 Special work within the scope of use of the dust collector and maintenance activities as well as repairs during operation

Adjustment, servicing and inspection work and time limits specified in these Operating Instructions as well as any information on the replacement of parts and equipment must be **undertaken and/or complied with!**



These activities may only be undertaken by **qualified personnel**.

The **operator has to be informed** about all kind of **maintenance works** before starting the process!

Nominate a responsible person!

At all works that are related to normal operation, conversion of tools adjustment of the dust collector and its safety devices as well as before inspection, maintenance and repair all ON and OFF functions have to be carried out according the operation manual and advises for maintenance and repair.

Secure the maintenance area, if necessary!

If the dust collector is switched off in order to do maintenance, repair or adjustment it has to be secured against unintended restart.

Switch OFF and disconnect it from the power supply and secure **the main switch** with a **padlock**.

Safety instructions

Always dispose the contents of the **dust bin** of the dust collector before **loading** it on van or truck. Observe the **waste disposal regulations**, in uncertain situation ask your next policy level.

2



Use only extension cable for extending the main cable that are sized and marked in accordance with the overall power consumption of the dust collector and of the connected blast cleaning machine and the valid VDE guidelines.



All persons in the proximity of the dust collector, when it is working, must wear safety glasses with lateral protection and safety shoes. The operator is obliged to wear close-fitting protective clothing.

Do not use any **aggressive** cleaning materials!
Use lint-free **cleaning cloths!**

Always tighten any screw connections that are undone during servicing and maintenance work!

If **safety devices** need to be taken off or **dismantled** during service and repair, these **safety devices** must be **reinstalled** and inspected immediately after completion of the servicing and repair work.

Make sure that process materials and replaced parts are disposed of safely and in an environmentally-friendly manner!

2.6 Precautions applicable to some particular dangerous categories

Gases, Dust, Steam, Smoke



Do not weld, flame cut or perform grinding works on the dust collector without express authorization. It exists danger of fire or explosion!

Only work when the dust collector has been **switched off** and is in the **safety off position**.



Before welding, flame cutting or grinding, remove all dust and combustible materials from the dust collector and from the area and provide adequate **ventilation** (risk of explosion)!

Safety instructions

When working in a confined space, adhere to the appropriate national safety regulations!

Switch off the connected dust collector.

Place fire extinguishers and fire blankets within easy reach of potential fire hazards.



2.7 Oils, greases and other chemical substances

If you use oils, fats and other chemical substances observe the safety regulations in force!

2.8 Safety off position

Definition:

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

Putting the equipment in the Safety off position means:

- Put the connected blast cleaning machine in the safety off position according to the instructions.**
- Switch off the fan.**
- Switch off the compressor.**
- Wait for standstill of all drives.**
- Pull out main plug.**
- Secure main switch with a padlock.**

Safety instructions

2.9 Particular dangerous aspects of the equipment

2



Any dust collector, if it is **not used according to the regulations**, may be **hazardous** for operating, setting-up and service personnel. The **operating authority** is responsible for **compliance with the safety regulations** during operation and maintenance of **safety devices** supplied with the dust collector as well as the provision of appropriate additional safety devices!

Dangerous aspects of the equipment are:

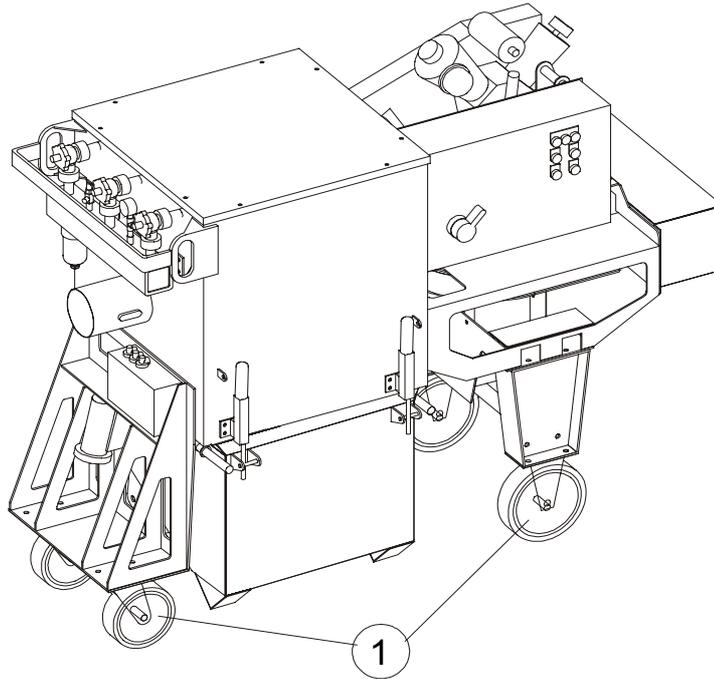


Fig 2.1

1 Wheels

Safety instructions

2.10 Regulations

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**.



2

The electrical equipment for the plant must be **inspected regularly**. Defects such as **loose** connections or **scorched** cables must be rectified **immediately**. **Call a skilled electrician or our Customer Services**.

Be sure that the operators and maintenance personnel are familiar with the following:

- Lubrication, cleaning and repair works can only be done when the dust collector is in **standstill**.
- Make sure that the dust collector can not be set working during the duration of the works.
- Do not **open** or **remove protective guards** while driving gears are running.
- Once cleaning, lubrication or repair works are finished do not forget to **fix** again the **safety devices**.
- Do not touch any moving parts or stand in their path
- After cleaning, lubrication and repair works and before starting the dust collector, be certain that any person is in a dangerous area.

A second person must be at side in order to manipulate the emergency switch or rather the main switch with **overvoltage release** if maintenance or repair requires working on live parts.

The work area must be blocked off using a red and white **safety chain** and a danger sign. Use a tool that is **insulated against voltages**.

Only start work once you are familiar with the **electrical engineering regulations** that apply to your area.

Safety instructions

2.11 Pay attention to the order of the following five golden rules

1. Disconnect all
2. Secure it against unintended restart
3. Check that there is any electric tension
4. Earthing and short-circuiting
5. Put a barrier or cover neighbouring under voltage standing parts

The rules 4 and 5 are only prescribed for equipment over 1000 V.

Do not be persuaded by **third parties** to give up the required **switching-off** while repairing. The above-mentioned meanings of work do not include the troubleshooting, so measurement.

Only use voltage seekers that **comply with the regulations** when troubleshooting. From time to time check voltage seekers to ensure that they are operationally efficient.

Only use tools that are in **good operating condition**. Damaged tools should be **immediately repaired or replaced**.

Use the available **personnel protection equipment** and **safety clothes** to protect you when you are working (e.g. safety glasses, safety gloves safety shoes, etc.).

Contents Chapter 3

- 3.1 Operating Manual
- 3.2 Care and maintenance
- 3.3 Scope of supply
- 3.4 Description
- 3.5 Control box
- 3.6 The suction air system



General

3.1 Operating manual

This manual has been written to support the operating personnel on learning the functioning of the dust collector and to guarantee optimum operation and maintenance.



Therefore it is important that all persons operating and maintaining the dust collector read this manual carefully and understand it fully.

The supplied dust collector has been manufactured for being employed in the user's country. All descriptions and notes have been formulated in the language of the user's country or in English in accordance with the statutory regulations, or shown as pictograms. If the customer deploys personnel with little knowledge of the language of the user's country, appropriate instruction and training must be provided.



Before using the dust collector personnel must be familiar with how to operate the machine, with all important components, with the method of working and with its dimensions.



Blastrac BV offers a course on the use of the dust collector in order to make the operating and maintenance personnel familiar with all elements of the dust collector.

Initial commissioning of the dust collector must be carried out very carefully. The dust collector operator must fully understand the sequence of commissioning of the individual parts and their functioning.

3.2 Care and maintenance



Special attendance and regular maintenance of the dust collector are imperative for functioning and safety.

3.3 Scope of supply

Scope of supply of the dust collector:

- Dust collector (854 DC/DCI/DCS)
- Operating Manual 2 x

3.4 Description

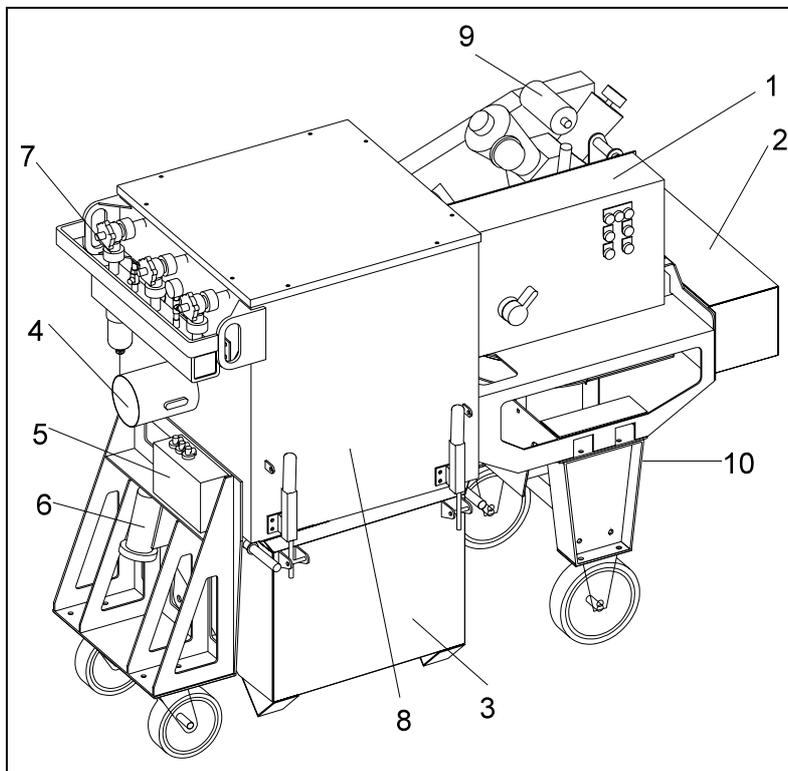


Fig. 3.1

- | | | | |
|---|--|----|--------------------------------|
| 1 | Control box | 6 | Socket blast cleaning machine |
| 2 | Silencer assembly | 7 | Pressure tank with valves |
| 3 | Hopper | 8 | Filter housing with cartridges |
| 4 | Connection blast cleaning machine (DC/DCS) | 9 | Compressor |
| 5 | Dedusting control box | 10 | Fan |

General

3.5 Control box

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

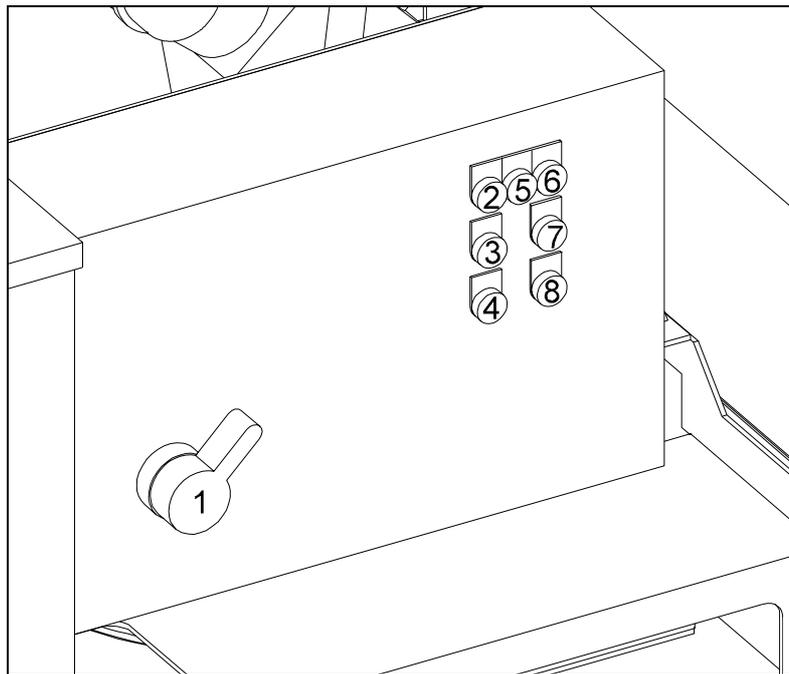


Fig. 3.2

- | | | | |
|---|---------------------------|---|-------------------------------|
| 1 | Main switch | 5 | Control lamp motor protection |
| 2 | Control lamp "compressor" | 6 | Control lamp "Fan" |
| 3 | Button "Compressor ON" | 7 | Button "Fan ON" |
| 4 | Button "Compressor OFF" | 8 | Button "Fan OFF" |

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 ON/OFF, Control lamp

Pressing the button "ON" switches the compressor on, the control lamp shines. Pressing the button "OFF" switches the compressor off.

Button Fan ON/OFF, Control lamp

Pressing the button "Fan ON" switches the fan on, the white control lamp shines. Pressing the button "Fan OFF" switches the fan off.

Control lamp motor protection

This lamp shines when the whole electric will be switched off due to an overload of one motor.

3

Phase inverter switch

This switch is located on the control box. Set the main switch in position "0" and open the control box door. Now you can adjust the turning direction at the phase inverter switch.

3.6 The suction air system

The air streaming 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

General

Motor output: 4 kW
Air throughput: 1250 m³/h
Connected cable length:: 20 m

Dust hose
Length: 20 m
Diameter: 150 mm

3



All connection points must be sealed carefully and the dust hose must be fixed with hose clamps!

The filter housing must be sealed properly and all sealings must be in good condition!

If dust leaves the dust collector instead of clean air, this is a sign that the filter cartridges are either damaged or not fixed correctly inside the filter chamber.

The air streams through the dust collector as follows:

- The air stream then flows through the approx. 20 m long flexible dust hose taking dust and fine particles with it.
- The air stream now enters the filter chamber of the dust collector where the dust and the fine particles are separated from the air. The cleaned air is then fed into the environment again.

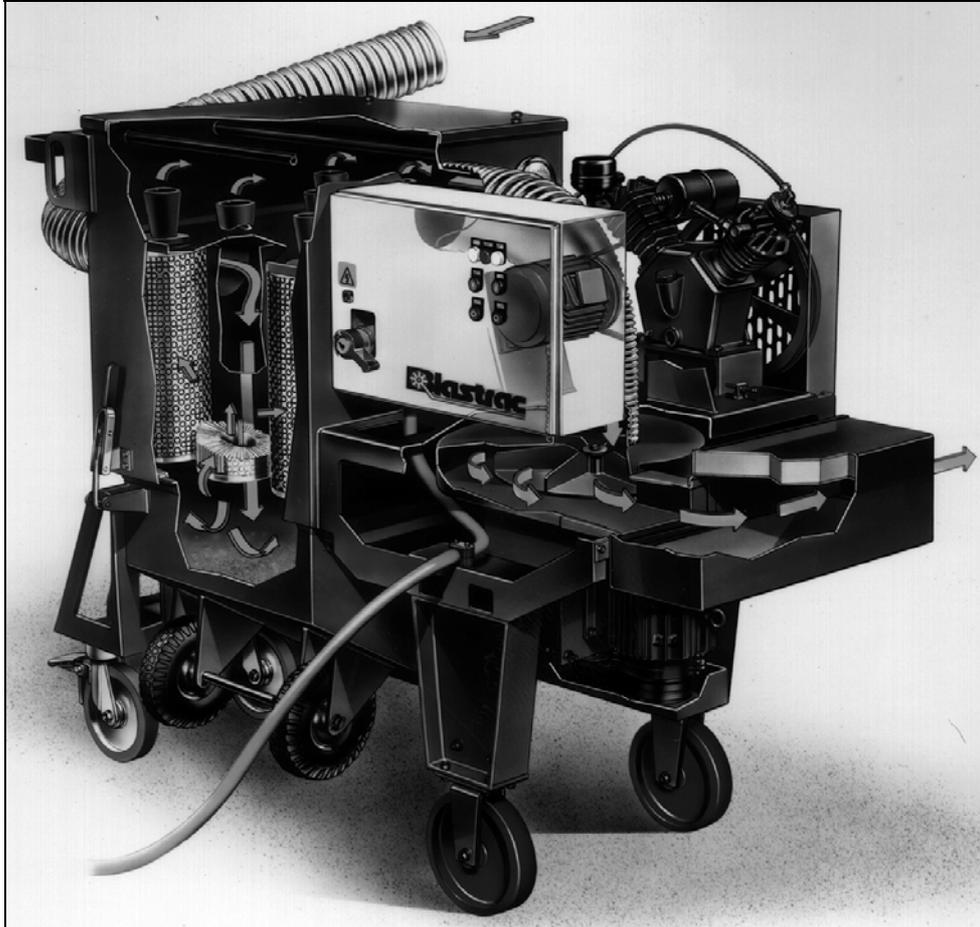


Fig. 3.3

3

Contents Chapter 4

4.1 General information

4.2 Transport

4.3 Operation

4.4 Unit specifications



Transport

4.1 General information



Before the dust collector is used for the first time, **Blastrac** authorised dealers offer a course to familiarise maintenance and operating personnel with all elements of the dust collector. We are not liable for damage caused by incorrect use of the dust collector by personnel not trained by **Blastrac**.

4.2 Transport

When transporting the dust collector proceed in such a manner that damage due to the effects of the use of force or incorrect loading and unloading is avoided.

4



Remove the dust from the dust collector before it is transported. The dust collector may only be lifted by using the suspension eyelets. The weight and dimensions of the dust collector are shown in Chapter 1 "Technical data".

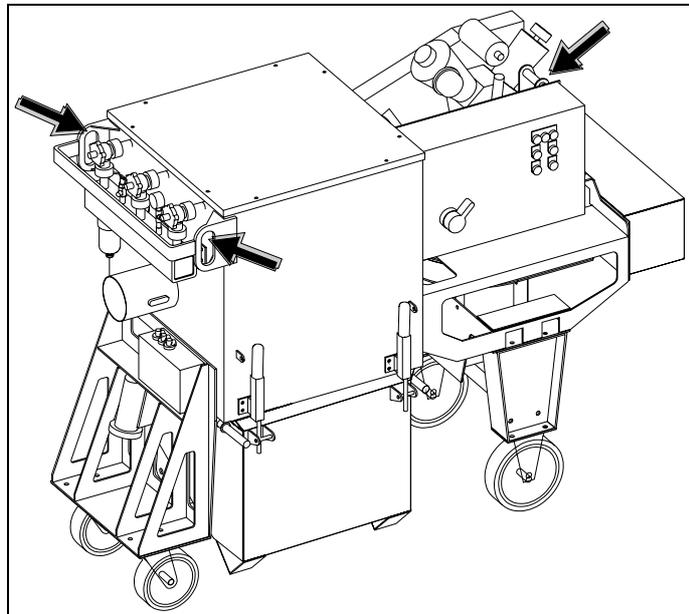


Fig. 4.1

4.3 Operation

The machine is operated in accordance with the instructions given in Chapter 5 "Initial operation".

4.4 Unit specifications

Dimensions

The main dimensions and unit specifications of the dust collector when assembled are shown in Chapter 1 "Technical data".

A grey right-angled triangle pointing to the left, with the number "4" inside it.**4**

Contents Chapter 5

5.1 Preparations for initial operation

5.2 Initial operation

Initial operation

5.1 Preparations for initial operation



Before switching on make sure that all existing protective housings are mounted and that the dust collector is connected correctly.

Handle all plugs, cables, hoses and operating devices with care. Avoid any contact with live wires.

Works on the electrical system must only be carried out by qualified specialists.



Regular inspection is important in order to avoid downtimes of your dust collector. Carry out the following checks before any start-up:

- Check whether all dust collector parts are assembled safely and correctly.
- Check all screws and other fasteners for tight seat
- Check the tightness of the hose connections and the condition of the hose to the filter.
- Check the electrical connections for dirt and foreign body deposits.
- Check the electrical motors for dirt and other contaminants.



Before start-up the operating personnel must be familiar with the safety regulations given in this manual.

- Check the main power cable and the dust hose for damage. Replace or repair all damaged parts before starting the machine.

Initial operation

- Connect the blast cleaning machine and the dust collector with the dust hose. Use hose clamps at the connections.
- Connect the electric cable of the filter unit with the site supply. Make sure that you use the correct electric supply (Chapter 1.2).

Press the test button to check the function of the residual current operated device!

- Check that the dust container of the dust collector is empty.



5.2 Initial operation

All persons in the proximity of the dust collector must wear ear protectors, safety glasses with lateral protection as well as safety shoes. The operator is obliged to wear close-fitting protective clothing.



5

The start of the dust collector is effected in the following sequence:

1 Switching on of the dust collector

- Main switch of the dust collector "ON"
- Compressor "ON"
- Fan "ON"
- Check the turning direction of the filter and compressor motor.

The correct turning direction is indicated by the arrow on the belt guard of the compressor.

Initial operation

How to correct the turning direction of the driving motors

- Switch off the driving gears.
- Switch off the main switch.
- Open the control box of the dust collector.
- Set the inverter switch to the opposite position
- Close the control box
- Check again the turning direction of the driving gears.
- The initial operations take place in accordance with the chapter "Initial operation" of the operating manual of the blast cleaning machine.

5



The dust container of the dust collector must be emptied regularly.

Contents Chapter 6

- 6.1 Operation
- 6.2 Empty the hopper
- 6.3 Switching-off the dust collector
- 6.4 Trouble shooting
- 6.5 Safety shutdown
- 6.6 Restarting after a fault
- 6.7 Proceedings- prior and after a stationary period

Operation

6.1 Operation

Normal start-up and operation of the dust collector 854DC/DCI/DCS is no different from the procedure described in Chapter 5 "Initial operation".

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

6.2 Empty the hopper

The level of the hopper must be regularly checked. The periods are dependent on the surface to be cleaned.



Safety precaution: Pay attention to the increased weight of the hopper when you loose the hopper toggle clamp. Loose the clamp with caution!

6

6.3 Switching-off the dust collector

- After finishing the blast cleaning process, the dust collector must run several minutes to dedust the filter cartridges.
- After several minutes press the push buttons " Fan OFF" and "Compressor OFF".
- Set the main switch of the filter unit to "OFF".



Make sure that all turning dust collector parts have come to standstill before any inspection or maintenance works are started.

When the **Blastrac** dust collector is put out of operation for a longer period of time, pull out the mains plug and cover the dust collector with a plastic foil.

6.4 Trouble shooting

Irrespective of the following information, the local safety regulations are valid in any case for the operation of the dust collector.

First put the dust collector to its **Safety off position**. Afterwards start searching for the fault.



6.5 Safety shutdown

The dust collector has to be into its **“Safety off position”** before starting repair works. See Chapter 2.5 “Safety instructions”.



6.6 Restarting after a fault

See Chapter 5 “Initial operation”.



6

All persons in the proximity of the dust collector must wear ear protectors, safety glasses with lateral protection as well as safety shoes. The operator is obliged to wear close-fitting protective clothing.



6.7 Proceedings- prior and after a stationary period

Standstill of the machine for a maximum of 3 months.

Before a long standstill period

- Switch off the dust collector. (See chapter 6.4)
- Protect the electric motors from moisture, heat, dust and shocks.



Operation

- Clean the machine and cover it with a plastic foil.
- Preserve bright parts of the dust collector with Tectyl 506, for example, or a similar preservative.

After a long standstill period

See Chapter 5 "Initial operation"

Contents Chapter 7

- 7.1 Recommendations
- 7.2 Maintenance and inspection list
- 7.3 Repairing
- 7.4 V-belt
- 7.5 Mounting V-belt
- 7.6 V-belt tension
- 7.7 Taper-Adaptar sleeve
- 7.8 Replacing the filter cartritges



Maintenance

7.1 Recommendations



Pay attention to Chapter 2 "**Safety information**" 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.

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.

7



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.



Follow additional operating and maintenance of OEM if included during your service and maintenance work.

Maintenance

7.2 Maintenance and inspection list

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.

7

7.3 Repairing

As already mentioned in Chapter 5 “Initial operation” we recommend to execute the first repair works on the dust collector having support of **Blastrac** personnel. Doing this together, your maintenance personnel gets the opportunity to be trained intensely.



We will describe only regular maintenance works that could occur within the bounds of regular maintenance or work that is required to replace wear parts.

If you replace parts yourself for specific reason, the following instructions and work sequence have to be observed.

Maintenance



You should also stock all spare 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.

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



Prior to any repair works on the dust collector and its drives, secure the dust collector against unintentional switching-on. Pull out the mains plug in order to do this.

7.4 The V-belt

The V-belt drive is designed for the installed driving power. To force a higher output through an excessive high tension of the V-belt will break the belt, damage bearings and cause losses of the total efficiency. Too low belt tension will cause slipping with the result of a very high temperature of the V-belt a premature destruction of it. Temperatures over 70° for a longer period will decrease the working life and the efficiency of the V-belt. 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-belt. Soiling due to oil, grease or chemicals have to be avoided.

In order to get perfect power transmission the V-belt drive has to be checked regularly.

Maintenance

7.5 V-belt mounting

Remove the belt guards only when the driving motors are in standstill and the main switch of the blast cleaning machine is secured.



Reduce the distance between the driving motor and the bearing to release the tension of the V-belt drive.

Put on 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.

7.6 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 or scarifying drums.

Check the tension of the V-belt by pressing the thumb on the belt. The belt has the correct tension if you could press it in for approx. 10-15 mm (Fig. 7.6).

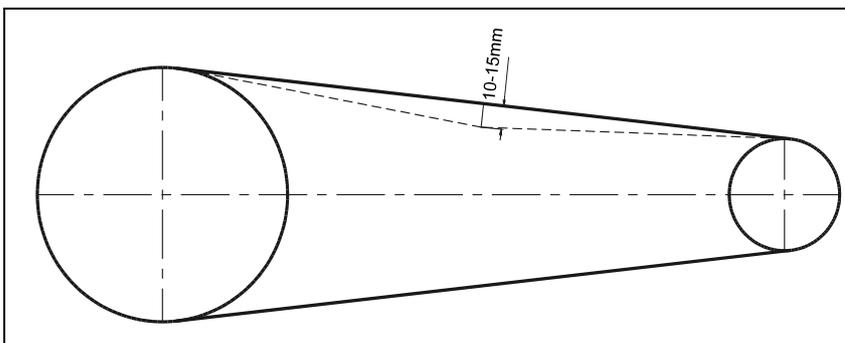


Fig. 7.1

Maintenance

7.7 Taper-Adapter sleeve

Hubs will be fixed like a shrunk-on fit on shafts with the help of taper adapter sleeves. To assembly and disassembly it you need only a screw driver DIN 911 (allan key). The same set screw or rather the same screws serve to loose and to stretch.

The taper – adapter sleeve are inside cilindric, outside cone shaped and slotted along the legth. The smaller sleeves have in the big face 2 and 3 cilindric blind holes parallel to the axis. One half lies on the material of the sleeves and the other half lies in the hub and have threads.

Set screws or rather screws will be screwed in with a allan key to the stop in the face bores. When the screws are powerful tightened, the hub will be drawn on the shaped sleeve and the sleeve will be pressed with force on the shaft.

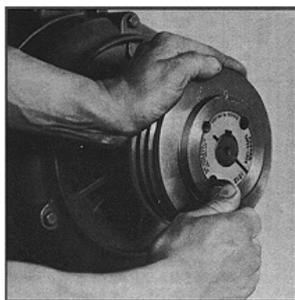


fig. 7.2

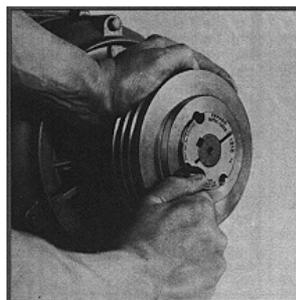


fig. 7.3

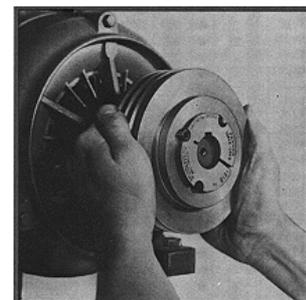


Fig. 7.4

Dismount:

Dismount the screws of the belt-pulleys. Lubricate the threads and the coned point of one screw and turn it in the bore, as described in the figure.

Screw down the screws until the sleeve sits loose in the belt pulley and consequently the structural components are loose on the shaft.

Remove the belt-pulley and the sleeve from the shaft.

Mount:

Make sure that all surfaces they lie superpose are dirt and oil free. Set the sleeve in the belt pulley.

Lubricate a little the screws and insert it in the designated tap hole.

Clean the shaft and push the pulley with the sleeve, as a unit, on the shaft and set the structural components. Make sure that the sleeve will be first tightened on the shaft and then the belt pulley lifted up by the sleeve.

Use a Allan key to tighten the screws progressively and alternately.

Hit with a hammer the face of the sleeve to make sure that it is seated axial in the pulley. (Use a drift to avoid damages.)

Now tighten the screws. Hammer and tighten alternately until the screws are tight.

7.8 Replace the filter cartridges

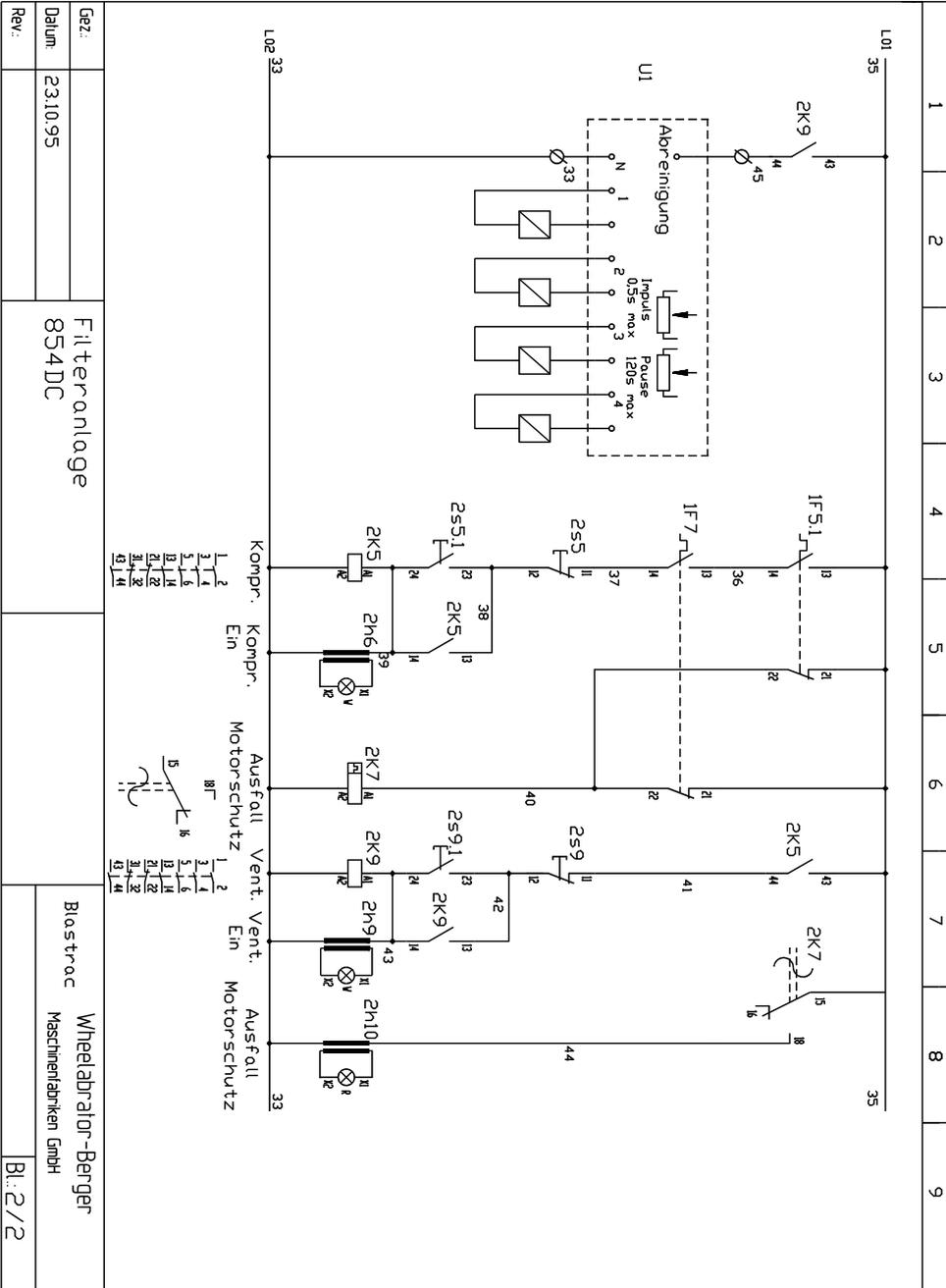
By mounting new filter cartridges pay attention that their gasket at the upper side lies firm at the sheet steel of the filter chamber. A tilt of the filter cartridge result in leakage and they suction contaminants in the clean part and consequently blow they backwards in the outer air.



Contents Chapter 8

- 8.1 Electric circuit diagrams 854DC
- 8.2 Electric circuit diagrams 854DCI
- 8.3 Electric circuit diagrams 854DCS

Electrical systems



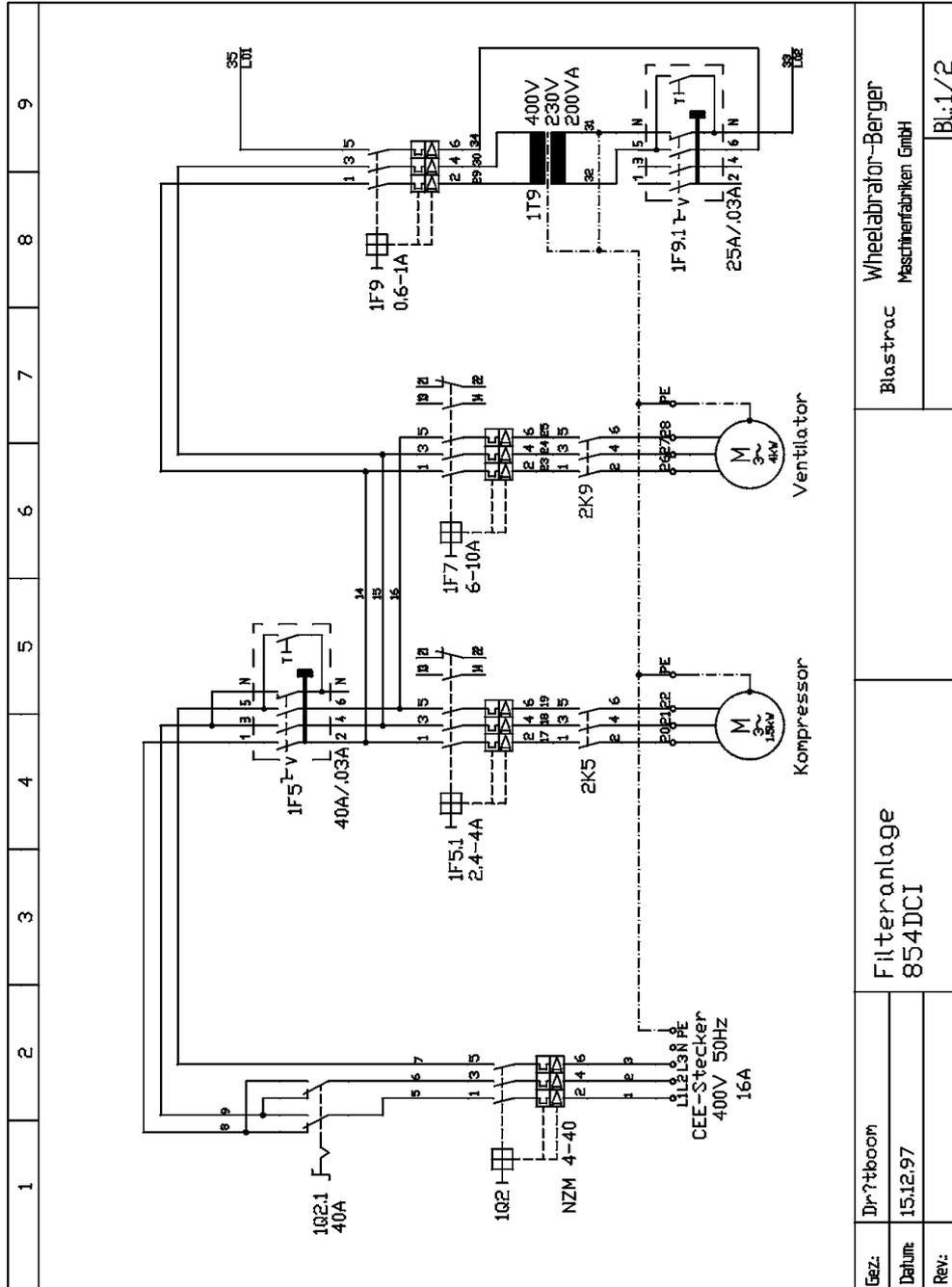
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Datum:	23.10.95	854DC	
Rev:			

Blastrac	Wheeldrator-Berger
Maschinenfabriken GmbH	Bl.: 2/2



Electrical systems

8.2 Electric circuit diagrams 854DCI

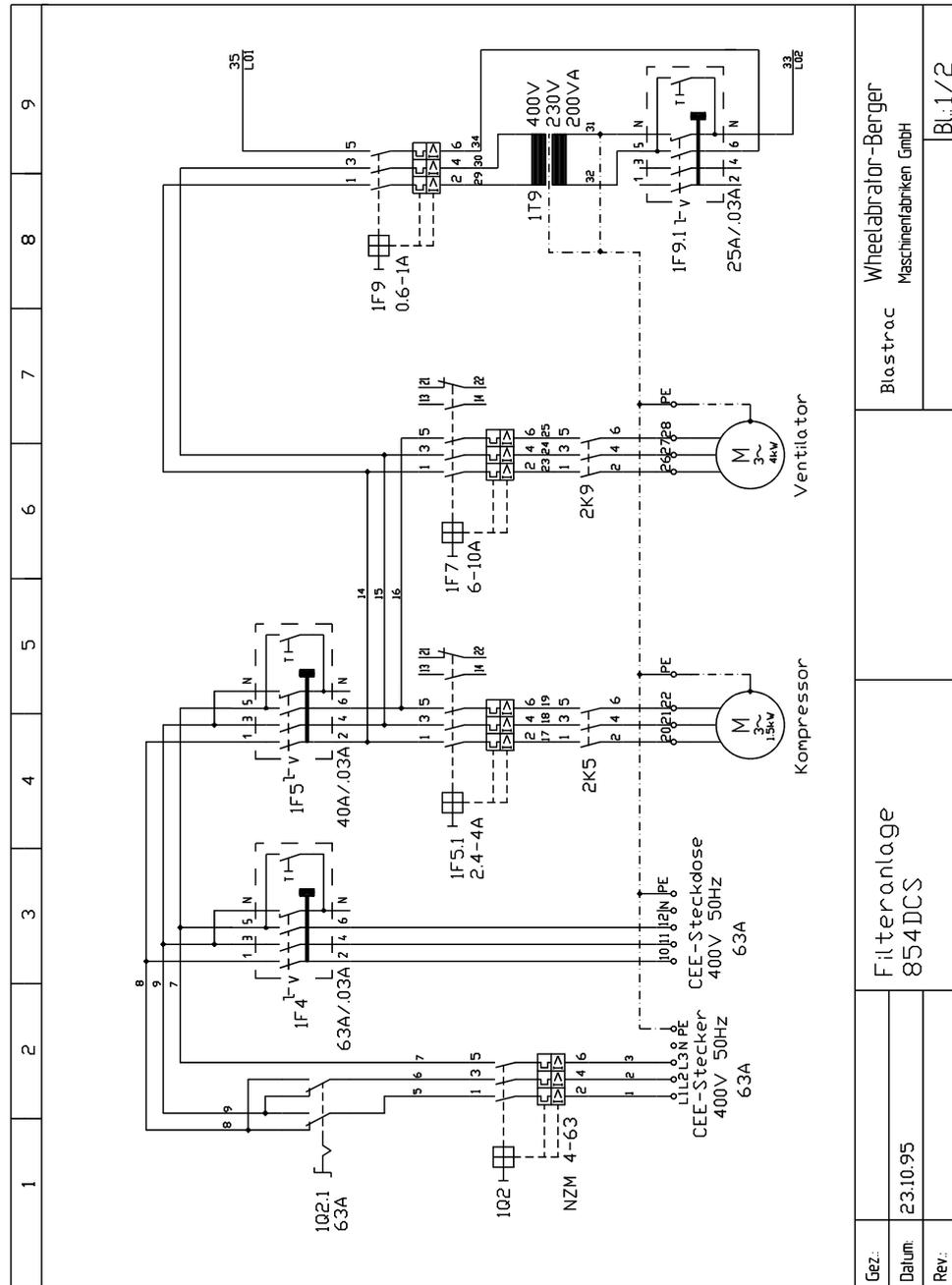


Bez:	Dr. Ttboom	Filteranlage 854DCI	Blastrac	Wheelerlabor-Berger Maschinenfabriken GmbH	Bl.: 1/2
Datum:	15.12.97				
Rev:					



Electrical systems

8.3 Electric circuit diagrams 854DCS



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Rev.:								

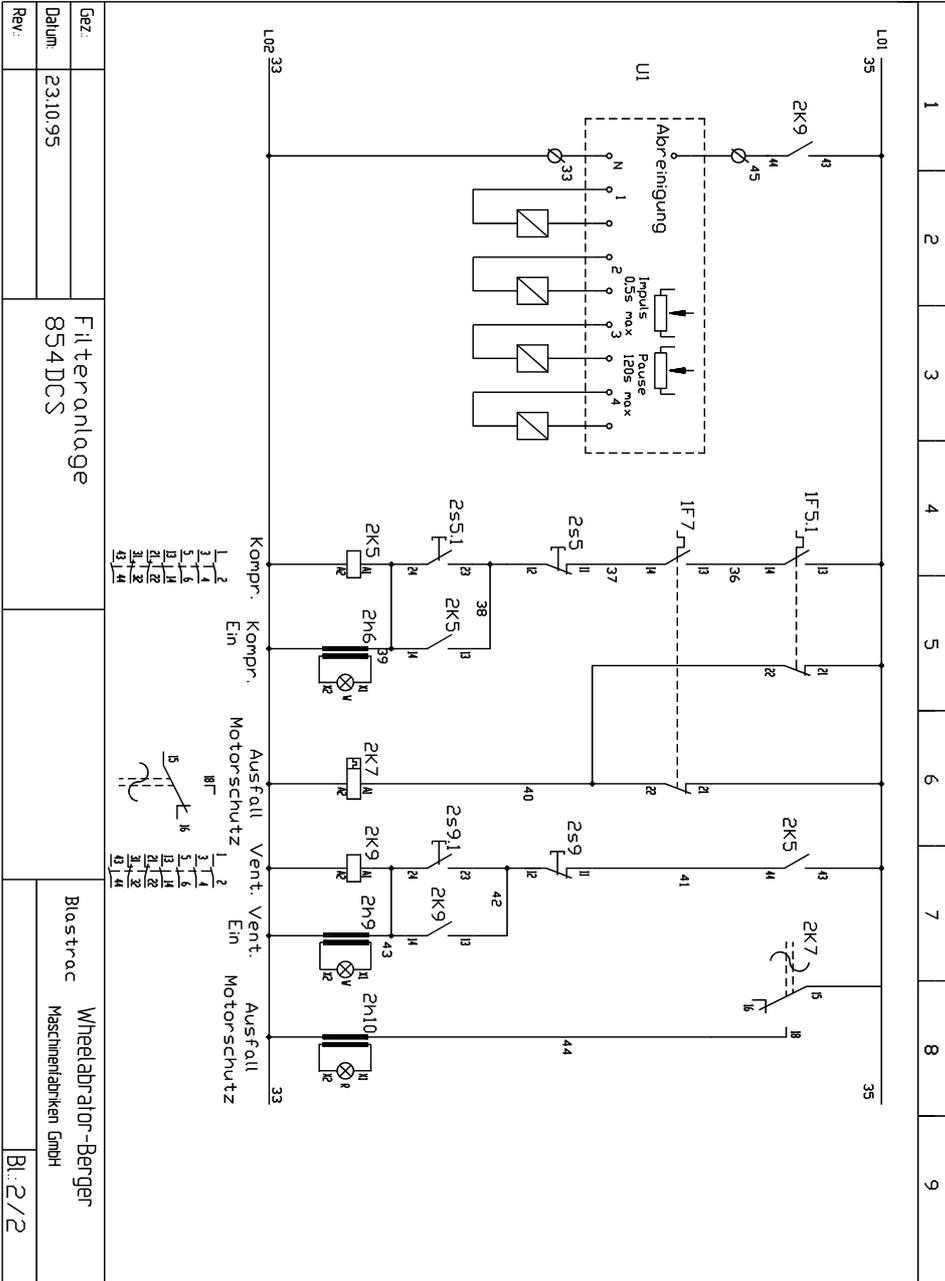
Blastrac	Wheelabrator-Berger Maschinenfabriken GmbH
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Filteranlage 854DCS	
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Electrical systems



G&Z:	Filteranlage	Bl.: 2/2
Datum:	854DCS	
Rev.:		

Blastrac
Wheelabrator-Berger
Maschinenfabriken GmbH



Contents Chapter 9

9.1 Fault diagnosis - dust collector

9.2 Fault diagnosis electrical system

Fault diagnosis

9.1 Fault diagnosis - dust collector



Prior to any repair works on the equipment or its drives the equipment must be secured against unintentional switching-on. Put the machine to its Safety off position.

Fault	Possible cause	Remedy
Unusual noises.	To little clearance or wrong adjustment of the rotating parts.	Check the adjustment of the rotating parts. Check screws and all parts for tight seat.
To low pressure or any pressure.	Check the whole pneumatic system for leaks. Check the tension of the V-belt compressor.	Stop up the leaks or replace the damaged components. Stretch the V-belt
Any suction power.	Dirty filter cartridge. Check the tension of the V-belt fan. Foreign air through leaks in the hopper or in the housing cover seal.	Clean or replace the filter cartridge. Stretch the V-belt.. Replace the seal.
Bad or any dedusting.	To low pressure. Dedusting timer card or solenoid valve defective.	See over. Replace defective parts.
Loud running noises.	It is missing grease in fan bearing. Silencer assembly defective.	Lubricate the fan bearing. Replace it

Fault diagnosis

9.2 Fault diagnosis electrical-system

Prior to any repair works on the equipment or its drives the equipment must be secured against unintentional switching-on. Put the machine to its Safety off position..



Fault	Possible cause	Remedy
Compressor or fan does not switch on.	Motor protections switch triggered.	Check the mains power supply and next switch on again.
Control lamp for motor protection switch flashes.	Motor protections switch triggered. Overload current because of defective equipment (Motor, etc).	Switch on again the motor protections. Have the unit checked by an electrician.
Control switches off while working.	Dust collector safety fuse or residual current operated device have triggered. Connection cable is defective. Main switch of the dust collector switches off due to overload.	Have the unit checked by an electrician. Replace the cable. Main switch "Off", with fault, have the unit checked by an electrician.

Note: If the motor protection switches of the blast wheel motor have been triggered by overload, they can be switched on again after a short cooling down period.

Contents Chapter 10

10.1 Spare parts

Spare parts

10.1 Spare parts list for dust collector 854DC/DCI/DCS

Compressor unit

Item	Part-No.	Description	Cty.
1	492425	Silencer assembly	1
2	491837	Filter gauge	1
3	001356	Motor-Compressor	1
4	491824	Pulley Compressor-Motor	1
5	490698	Compressor	1
6	491825	Belt compressor	1
7	001244	Suction filter compressor	1
	B21750	Nonreturnvalve for delivery pipe	1

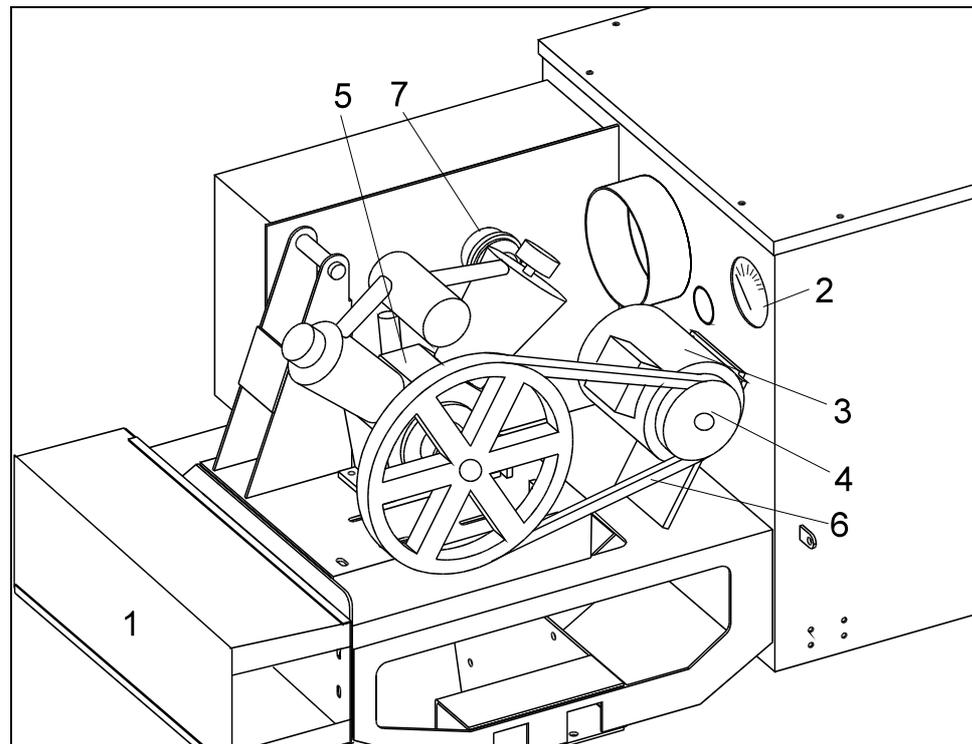


Fig. 10.1

Control unit

Item	Part-No.	Description	Qty.
1	001134	Membrane valve	3
	001133	Membrane for membrane valve	1
2	490691	Unloader valve Compressor	1
3	126814	Pressure gauge	1
4	483468	Safety valve	1
5	B21604	Water separator	1
6	001144	Aspiration port with valve	1
7	453842	Timer board dedusting	1
8	001298	Solenoid valve dedusting	3
9	001027	Socket CEE 63 A for 854DCS	1
	001006	Socket CEE 32 A for 854DC	1
10	484951	Drain valve	1

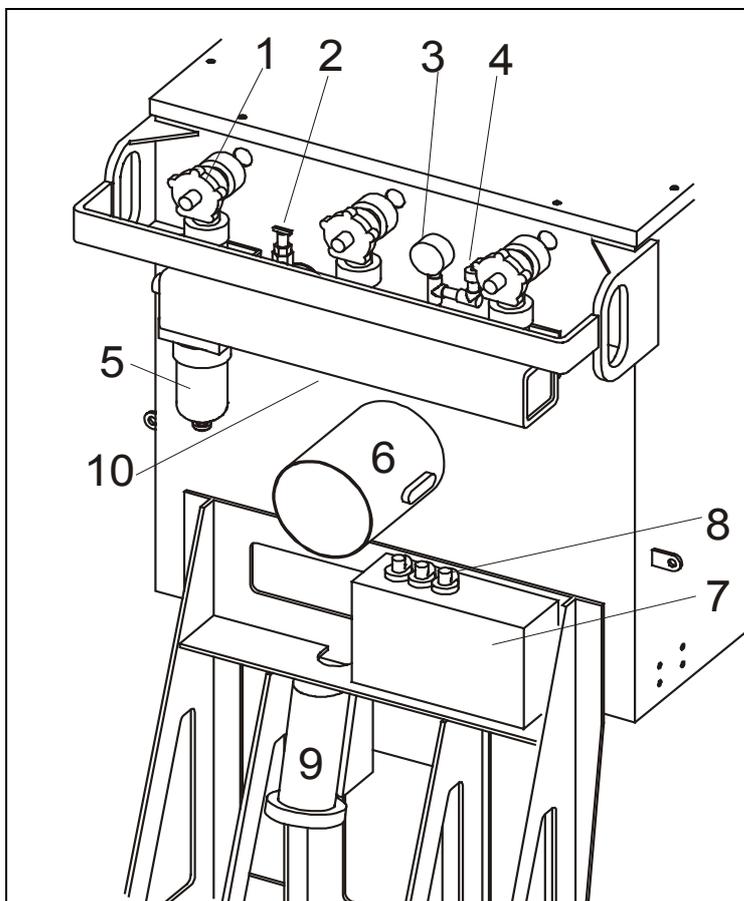


Fig. 10.2

Spare parts

Item	Part-No.	Description	Qty.
1	490099	Belt guard compressor	1
2	490697	Castor wheel	2
3	490695	Idler wheel	2
4	979425	Hopper	1
	980110	Hopper wheel	2
5	B20092	Hopper handle	2
4a	B20932	Hopper complete	1
6	001229	Control panel	1
7	426450	Hopper toggle clamp	4
	001112	Dust hose	20m
	001109	Dust hose clamp	2

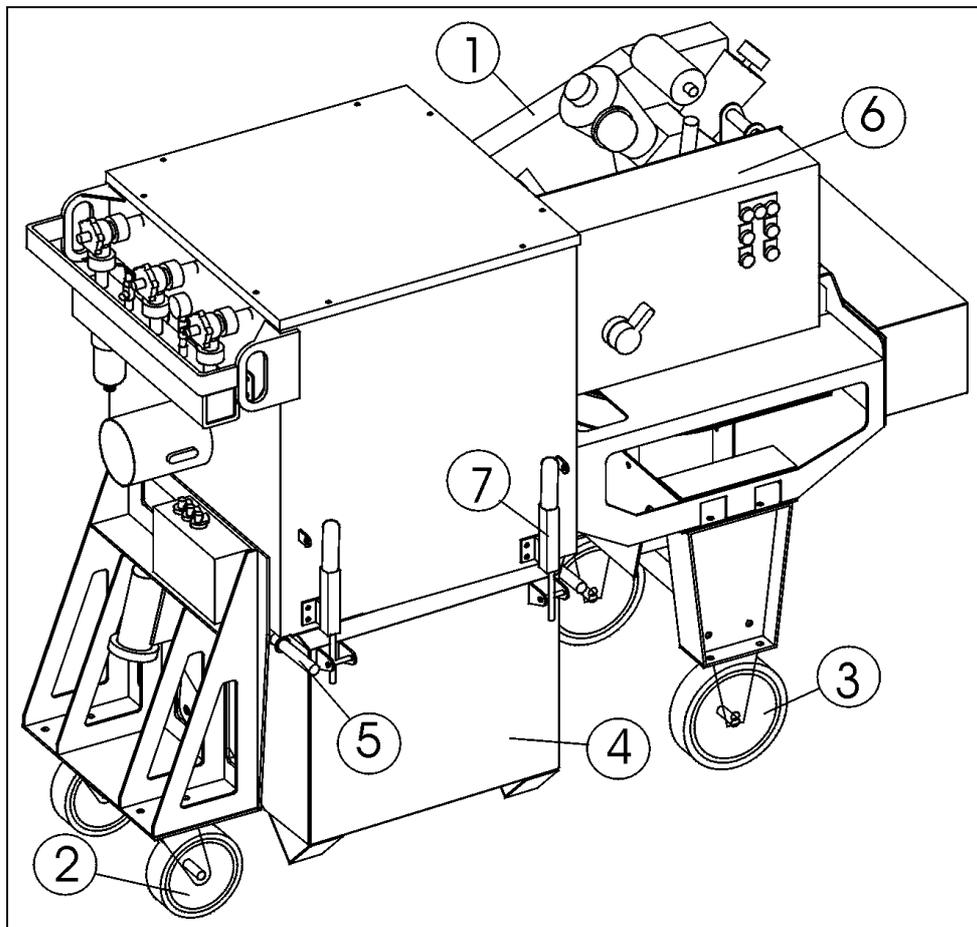


Fig. 10.3

Spare parts

Fan unit

Item	Part-No.	Description	Qty.
1	976663	Fan housing	1
2	B21967	Motor bracket	1
2a		Motor bracket	1
3	B21964	Belt guard fan	1
3a	001402	Belt guard fan	1
4	E00369	Flange motor fan	1
4a	004000	Motor fan	1
5	B21966	Motor flange plate	1
6	493399	Fan	1
7	B21266	Fan shaft	1
8	B21798	Seal ring	2
9	B21796	Adapter sleeve	2
10	B21797	Sleeve	4
11	001075	Bearing housing	2
12	B21795	Bearing	2
13	976659	Fan shaft pulley	1
14	976658	Fan shaft adapter pulley	1
15	001245	V-Belt	2
16	001072	Fan motor adapter sleeve	1
17	976656	Fan motor pulley	1
18		Cover terminal box flange motor	1
	001309	cover terminal box motor	1

Spare parts

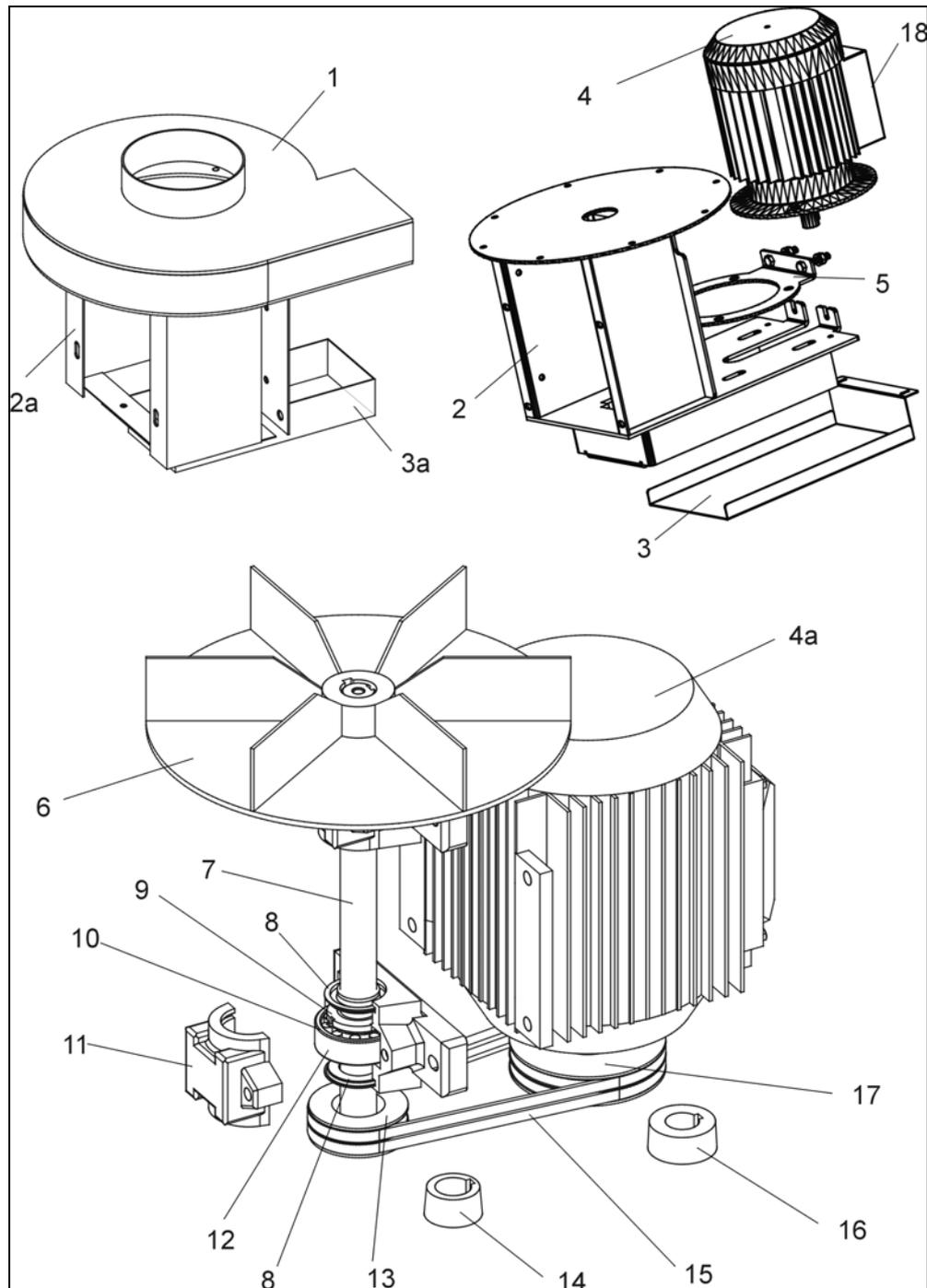


Fig. 10.4

Filter cartridge

Item	Part-No.	Description	Qty..
1	001403	Venturi filter cartridge	8
2	739205	Rod	8
3	490803-1	Filter cartridge	8
4	B21163	Rod seal	8
5	000123	Wing nut M10	8

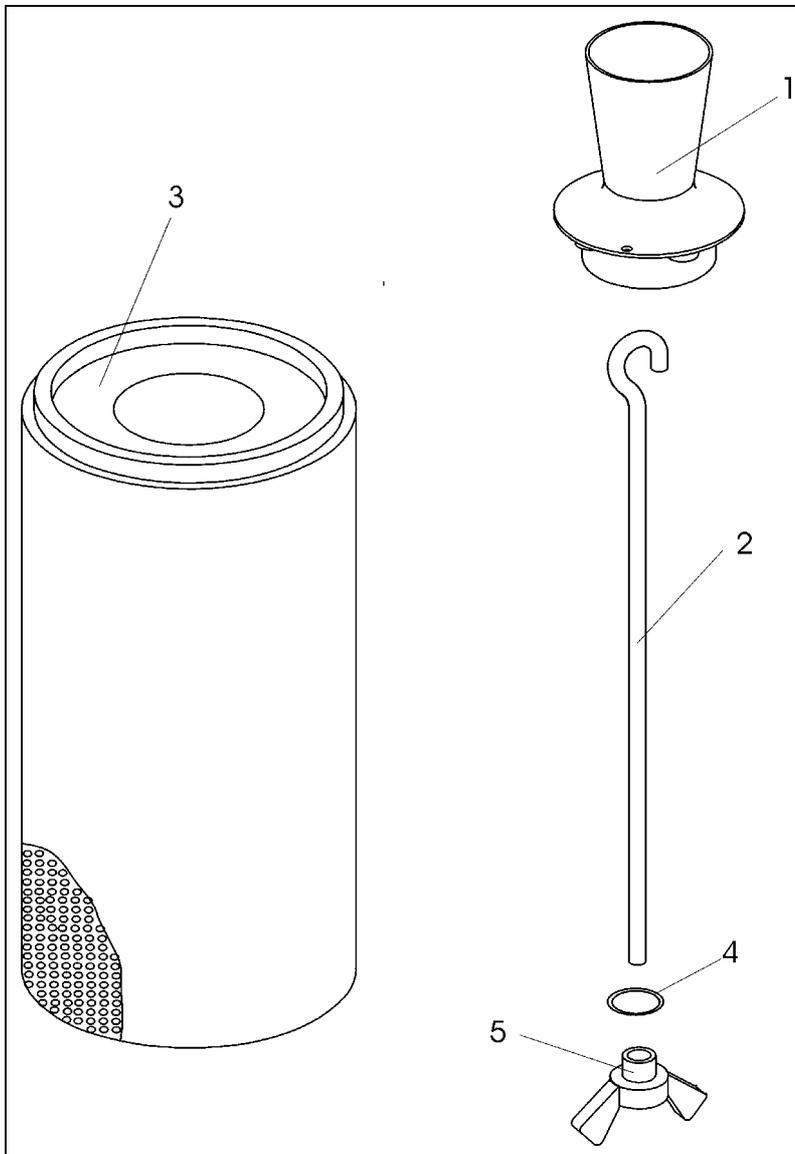


Fig. 10.5