Operating Manual
317DCP

BLASTRAC

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BLASTRAC

Contents Chapter 1

Technical data

1

1.1 Rating

Unit / Designation: **Blastrac** dust collector

Machine type: **317DCP**

Manufacturer:

Blastrac BV

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1.2 Unit specifications

Technical data

Dust collector	**317DCP**
Power consumption compressor	1,2 kW
Power consumption motor	3,35 kW with 2 turbines 4,45 kW with 3 turbines
Input current Compressor	max. about 3,2 A
Input current motor	10 A with 2 turbines 15 A with 3 turbines
Connected loads	230 V, 50Hz, 16A CEE
Dust hose connection	70 mm Ø
Dust hose length	10 m
Dedusting interval	10-15 s
Airflow	540 m³/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.

Dimensions:

	Dust collector 317DCP	
Length	950	mm
Width	700	mm
Height	1500	mm
Weight	115	kg

1.3 Operative range and correct usage

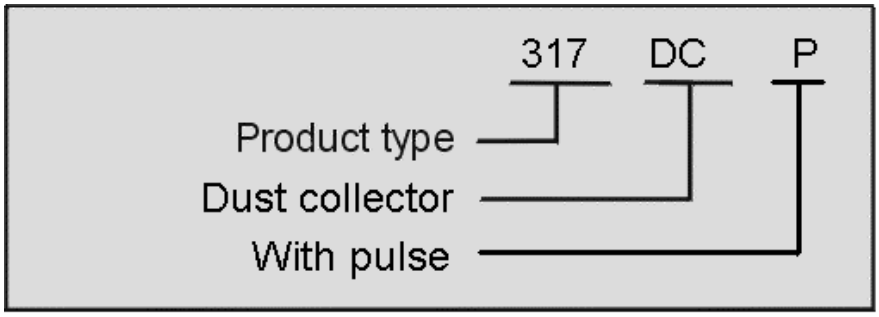
The dust collector 317DCP is exclusively designed to be used with Blastrac machines. It is only allowed to vacuum dry dust. The manufacturer will not be liable for damage resulting from such incorrect usage. In these cases the user assumes all risks

1.4 Stand-by power supply (Generator)

1

If the dust collector 317DCP 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.

1.5 Machine type designation



1.6 Informations for the operator

The dust container of the dust collector must be emptied regularly. Observe the **waste disposal regulations,** in uncertain situation ask your next policy level.

Contents Chapter 2

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.

Warning against dangerous voltages.

Indications relating to protective devices in electrical appliances.

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.

2.2 Organisational measures

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.

Safety instructions

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.

2

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**!

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!**

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 selection and qualification

Fundamental duties :

Work on the **dust collector** may only be undertaken by **reliable personnel**.

Only trained personnel may be deployed. **Note the statutory minimum age!** 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!

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

2.4 Safety precautions applicable to normal operation

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

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**!!

2

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

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

Secure the **work area** around the dust collector in **public areas** providing a **safety distance** of at least 2 m from the dust collector.

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!

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.

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

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

Mechanical servicing work:

Put the machine in the **Safety off position** as described in chapter 2.6 for any servicing work on the machine.

Please follow any special **safety instructions** in the various chapters on servicing the machine.
See chapter 7.

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**.

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 safety and in an environmentally-friendly manner!

Electrical servicing work:

Make sure that electrical components used for replacement purposes comply with the original parts and are correctly adjusted if necessary.

Regarding the safety advice see also chapter 2.8 "Safety regulations electric".

2.6 Safety off position

Definition:

2

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

Putting the equipment in the Safety off position means:

- ❒ **Switch off the dust collector**.
- ❒ **Wait for standstill of all drives**.
- ❒ **Pull out mains plug.**

2.7 Particular dangerous aspects of the equipment

Any dust collector, if it is **not used according 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!

2.8 Safety regulations Electric

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**.

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

The electrical equipment for the plant must be **inspected regularly**. Please note in particular the ***specified recurring inspections*** according ***VBG 4*****.** Defects such as **loose** connections or **scorched** cables must be rectified **immediately**. **Call a skilled electrician or our Customer Services.**

A **second** person must be at side in order to unplug or to control the emergency stops 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.

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.

Notes

Contents Chapter 3

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.

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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 (317DCP)
- ❒ Operating Manual 1 x

3.4 Description

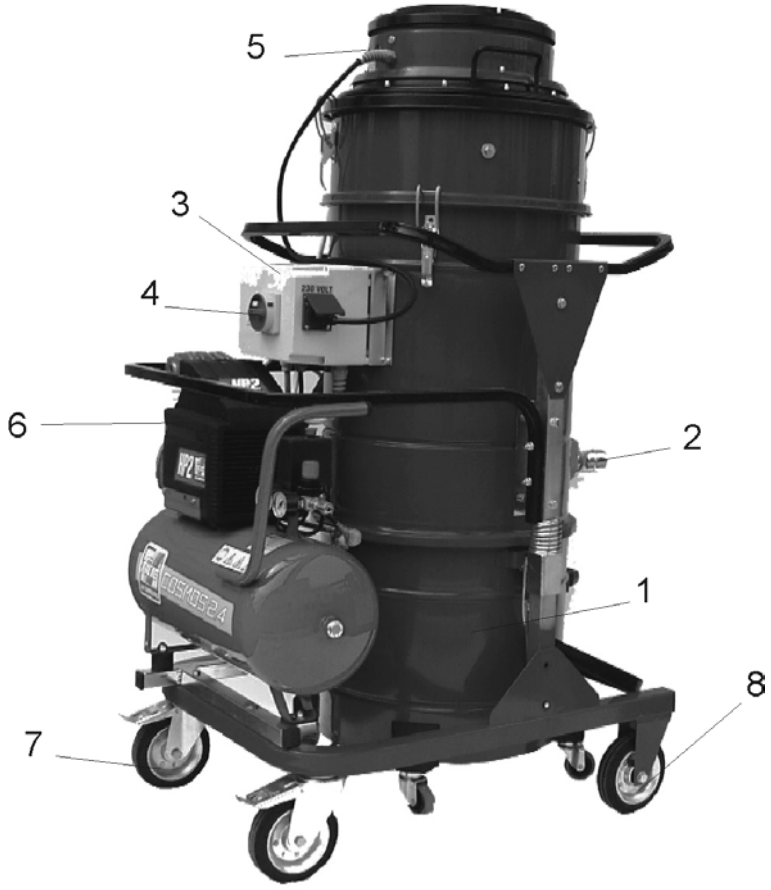

Fig. 3.1

1	Hopper	5	On-off button
2	Connection dust hose	6	Compressor
3	Control box	7	Swivel castor (with brake)
4	Main switch	8	Wheel

3.5 Control box

Main switch

"1" = Control ON.

"O" = Control OFF

3

ON - OFF Button

To switch ON

To switch OFF

(It will only functions if the main switch is ON.)

3.6 The suction air system

The air streaming through the complete system during the application of the blast cleaning machine or rather the scarifier 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

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. 10 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.

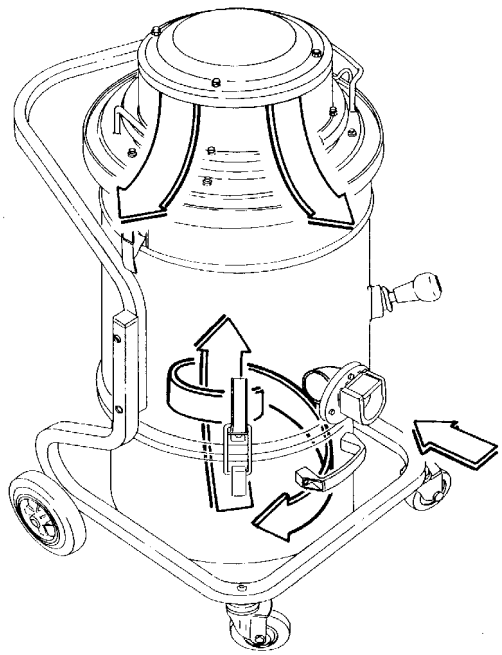

Fig. 3.2

Notes

Contents Chapter 4

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.

Remove the dust from the dust collector before it is transported. The dust collector may only be lifted and tightend by the housing frames. 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“.

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Transport

Notes

Contents Chapter 5

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.

Eine 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.

❒ Connect the **Blastrac** dust collector and the **Blastrac** machine collector with the dust hose. Use hose clamps at the connections.

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

5.2 Initial operation

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

Switching on of the dust collector

Connect the dust collector to the power supply, and check if the voltage and the frequency coincide with the specifications indicated on the type plate.

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

❒ Turn the main switch into position "I".

❒ Press the ON - Button.

The dust container of the dust collector must be emptied regularly. Observe the **waste disposal regulations,** in uncertain situation ask your next policy level.

Notes

Contents Chapter 6

6.1 Operation

Normal start-up and operation of the dust collector 3507DC 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 Switching-off the dust collector

- ❒ Press the OFF-button to switch off the dust collector..
- ❒ Set the main switch of the dust collector to "0".
- ❒ Pull out the mains plug from the socket.

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

6.3 Empty the hopper

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

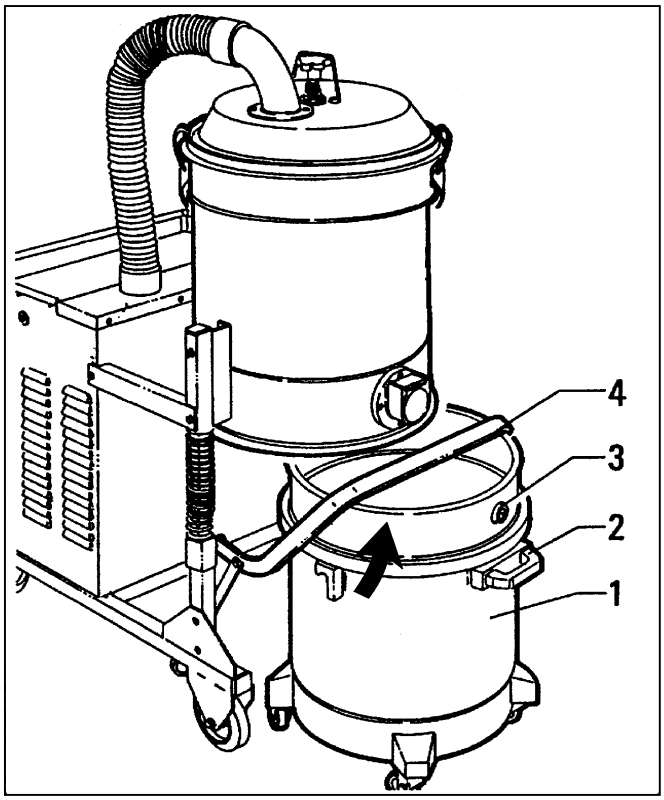

Fig. 6.1

- ❒ After finishing the blast cleaning process or rather the scarifying process, the dust collector must run several minutes to dedust the filter cartridges.
- ❒ After a several minutes set the main switch of the dust collector to "0".
- ❒ Wait a few minutes so that the dust falls on the bottom of the dust bin.
- ❒ Pull the sliding handle (Item 4) about 180° upwards, see arrow. The dust bin (Item 1) will let down.
- ❒ Hold the handle of the bin (Item 2) to take it out and to empty it.
- ❒ Then install the dust bin again. The handle (Item 2). must point forwards. Next put the sliding handle (Item 4) in the initial position.

6.4 Troubleshooting

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".

6.7 Proceedings prior and after a stationary period

Before a long standstill period

- ☑ 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

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.

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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..

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

7.2 Maintenance and inspection list

Operating hours/ time period	Inspection points, maintenance instructions
12 h after repairing	Check all safety devices working adequate. Check all accessible screw connections for tight seat.
Daily and prior to starting work	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. Check compressor oil level.
Annually	Full overhaul and cleaning of the complete dust collector.

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.

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 Replace the filter cartridges

Disassembly of the filter cartridges:

- ❒ Switch off the dust collector and then unplug the mains plug. **Safety off position**
- ❒ Loose the clamps (1).
- ❒ Disconnect the control line (2) from the compressed air system.
- ❒ Unplug the dedusting system from the socket (4).
- ❒ Pull out the plug for the motor. (3)
- ❒ Pull out the hose by grapping the handles. (5)
- ❒ Lift carefully up the upper part with the 2 handles (1) of the dust collector.
- ❒ Each filter cartridge is individually fixed to one threaded rod and secured with a wing nut. Hold up the filter cartridge with a hand to loose the wing from the threaded rod. Now you can pull out the filter cartridges downwards.
- ❒ **The filter cartridges that contain toxic or dangerous dust must not be thrown away in the refuse. They have to be dispose in a place where they have a licence to waste special refuse.**

Fig. 7.1

Mount of the filter cartridges:

- ❒ Fix the new filter cartridges to the threaded rod with the wing nut. While mounting the new filter cartridges, make sure that they sit close with the gasket on the top of the filter housing. A tilt of the filter cartridge results in leakage and they suction contaminants in the clean part and consequently blow them backwards in the outer air.

- ❒ Let carefully down the upper part of the dust collector to the filter housing. Pay attention that the rubber gasket sits correct and the 2 stripes are correctly against each other. (6)

Maintenance

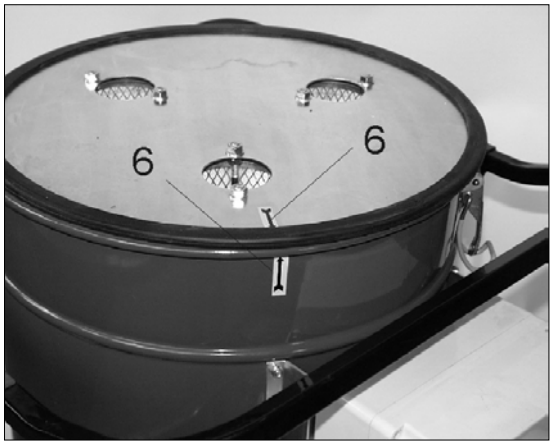

Fig. 7.2

- ❒ Mount the dust hose with the hose clamps (3) at the aspiration port.
- ❒ Plug the dedusting system (4) to the socket again.
- ❒ Connect the control line (2) to the compressed air system
- ❒ Fix the clamps (1).

Notice to **Blastrac** dust collector 317DCP.
Replace the damaged filter cartridges only by genuine parts.
Blastrac admits any liability concerning the correct function of the equipment, if you use other products.

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7.5 Compressor and accessories

Check oil level and fill in oil.

Check daily and before every start-up the oil level with the oil-leveller (2).

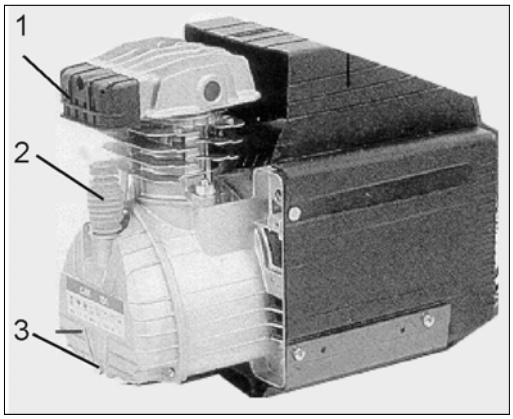

Fig. 7.3

1) Suction-filter 2) Oil-leveller 3) Oil drain plug

When the oil level has reached the mark below of the oil-leveller (2), you have to refill oil according to the oil recommendations. Never refill oil over the upper mark of the oil-leveller.

7

Refilling oil

❒ Switch off the dust collector and then unplug the mains plug.
Safety off position

❒ Refill oil up to the maximum oil level (2).

The maximum oil level will be reached after a few minutes, because the oil must flow through the crankcase first.

Oil change

The oil must be changed when the compressor has still the working temperature.

Risk of burn if you touch hot oil or hot components.

The oil must be changed after 50 working hours first.

Maintenance

The oil has to be changed every 200 working hours or at least one time per year.

If the oil contains condensation water, because of the adverse working conditions, you have to change it immediately. In this case the oil-level glass shows a milky colour.

Fill in motor oil with a viscosity index **VG30 according to DIN 51 562** in case of normal working conditions.

❒ Switch off the dust collector and then unplug the mains plug.
Safety off position

❒ Make available an oilpan.

The waste oil must be collected and disposed according to the environmental protection rules.

❒ Loose the waste oil screw (3) to let out the oil into the oilpan.

❒ Clean the crankcase with a little quantity of new oil.

❒ Fit the waste oil screw (3) again.

❒ Fill in new oil.

7

Clean and replace the suction filter

The replaceable filter element (2) is made of foamed material.
If there is a dustfall on the filter element, you have to clean it immediately.

Every 50 hours the suction filter has to be cleaned with air pressure.

If the suction filter has been cleaned many times, there is a change that it won't work properly. In that case you have to replace the filter.

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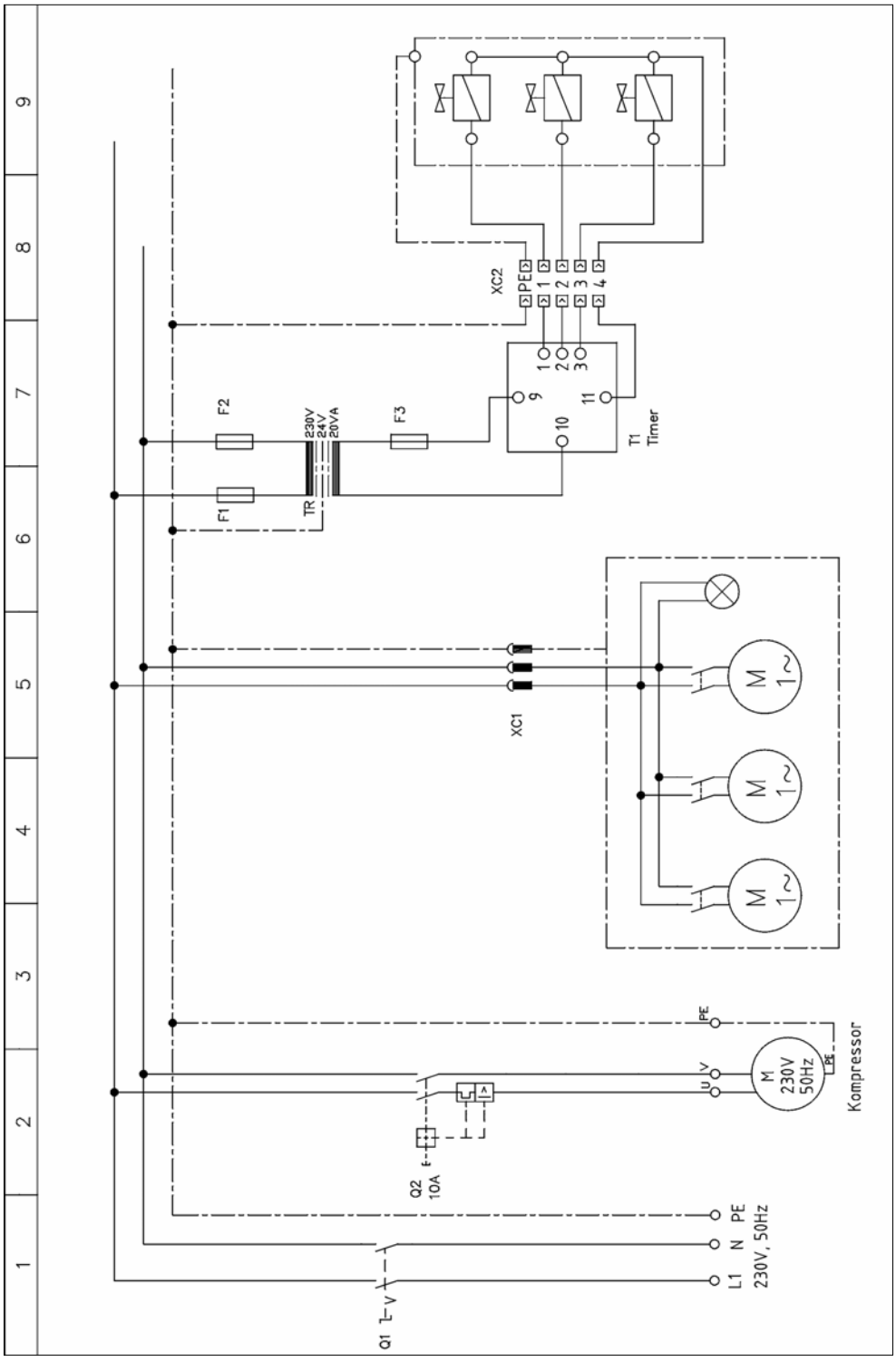
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1 2 3
9 10 11
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F2
F1
F3
TR
230V
24V
20VA
XC1
M 1~
M 1~
M 1~
PE
U V
M 230V 50Hz
Kompressor
Q2 10A
Q1
L1 N PE
230V, 50Hz

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Contents Chapter 9

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
The dust collector does not start.	Any power supply	Check if by the outlet box carries current. Check the socket and the cable of the dust collector for damages. Have the unit checked by an electrician.
The r.p.m. of the dust collector increase.	Filter cartridges are clogged. Suction hose is clogged.	Replace the filter cartridges. Check and clean the hose assembly.
The dust collector loses dust.	Filter cartridges are damaged.	Replace the filter cartridges.
The compressor consumes too much oil.	Too low oil viscosity. Crankcase ventilation is damaged.	Fill the correct oil (see chapter 7.4). Clean or replace the crankcase ventilation.

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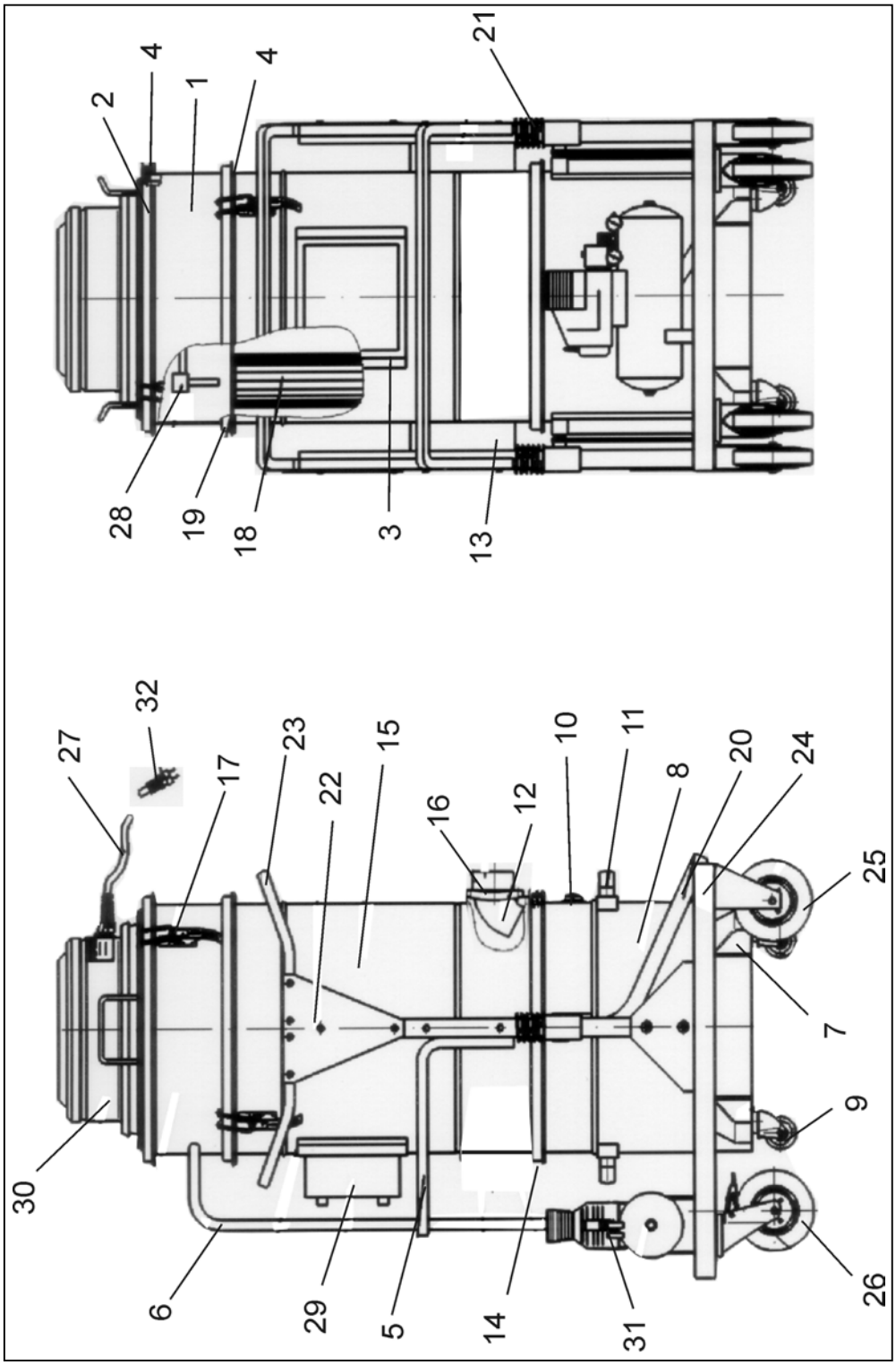
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Fig. 10.1

Item	Part-No.	Qty.	Description
1	CF811072	1	Absolute filter housing
2	CF815003	1	Iron filter ring D. 460
3	CF816146	1	Support electric board box
4	CF817026	2	Gasket D460
5	CF818234	1	Protection bail for compressor
6	CF824063	1	Pipe D19x6
7	CF817021	4	Plate for wheelholder
8	CF830009	1	Dustcontainer
9	CF840001	4	Movable castor
10	CF840021	1	View window dustcontainer
11	CF840205	2	Hinge bolt for dustcontainer
12	CF812013	1	Aluminium defelector D70
13	CF814018	2	Holder for filter chamber
14	CF817007	1,5m	Dustring dustcontainer
15	CF831096	1	Container filter x 3307
16	CF832178	1	Inlet 70 mm w/screws & nuts
17	CF836028	4	Bin clip for iron cap
18	490803-1	3	Cartridge filter 854/554
19	CF833166	1	Absorption for filter-cartridge
20	CF814054	1	Handle for dustcontainer
21	CF814136	2	Spring lever dustcontainer
22	CF818299	2	Mounting plate
23	CF818300	2	Handle
24	CF836061	1	Undercarriage
25	CF840048	2	Wheel Dia.150mm with bearing
26	CF840049	2	Wheel Dia.150mm+brakes+bearings
27	B21768	1m	Power supply line
28	CF840330	3	Airvalve 24V
29	CF841087	1	Electro box mod.317
30	CF853302	1	Motorhead comp. 317DC(P)
31	CF856022	1	Compressor 25Lt 2Hp single phase
32	001205	1	Plug 230V
o. Ab.	CF839001	3	Switch
o. Ab.	001711	3	Suction motor
o. Ab.	CF839533	1	Anitnoise condenser
o. Ab.	B21768	10m	Power supply line