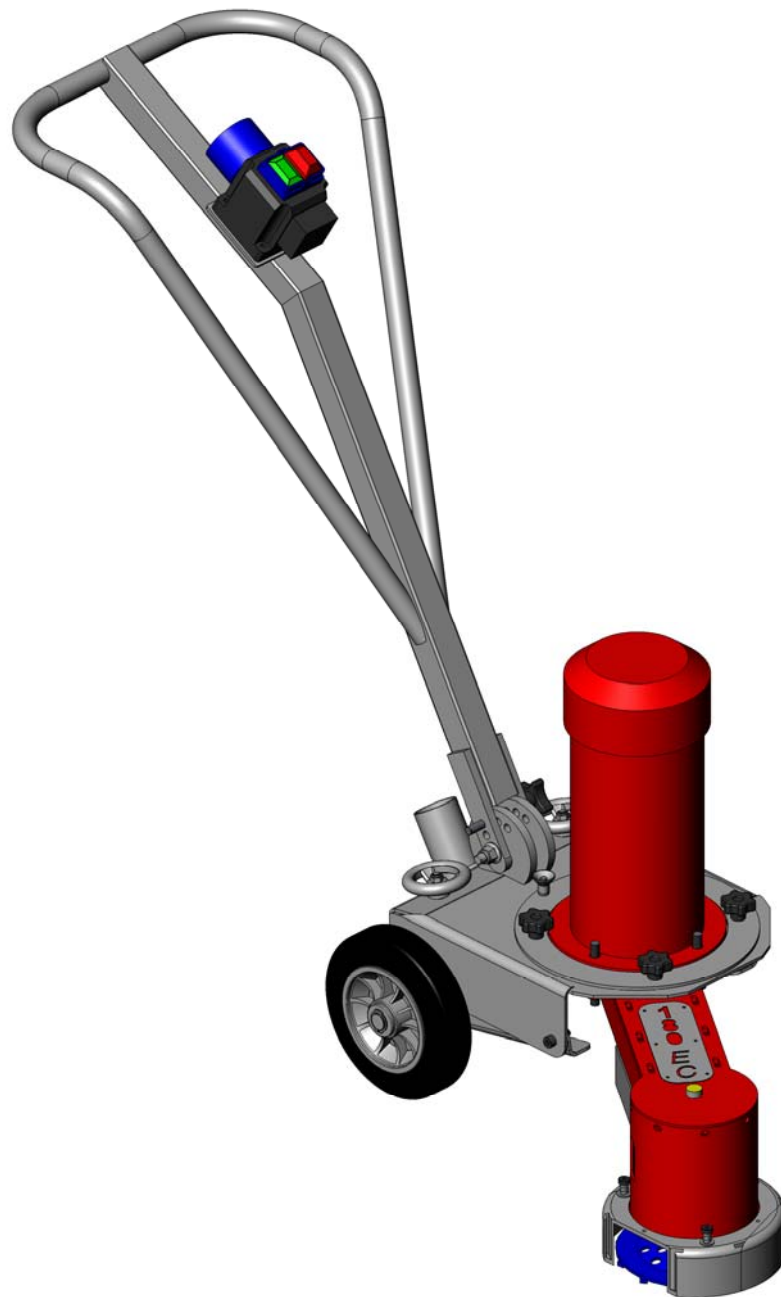


# Operating Manual

## BG-180EC



# Diamatic



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Technical data	1
Safety instructions	2
General	3
Transport	4
Initial operation	5
Operation	6
Maintenance	7
Electrical systems	8
Fault diagnosis	9
Spare parts	10



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**BG-180EC**

---

**Operating Manual**

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**Technical Data**

---



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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



**Diamatic**

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## Operation Manual

**BG-180EC**

---

## Technical Data

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---

### 1.1 Rating

---

Unit / Designation: Grinding machine

Machine type: **BG-180EC**

Manufacturer:



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### 1.2 Unit specifications

---

Technical data:

<b>Grinding machine</b>	<b>BG-180EC</b>
Power consumption	2,2 KW
Connected loads 2,2 KW	220V single phase, 12,9A
Power consumption	1,5 KW 50Hz/60Hz
Connected loads 1,5 KW	110V single phase 12,9A / 18A



Dimensions:

	<b>BG-180EC</b>
Length	1300 mm
Width	430 mm
Height	1000 mm
Weight	58 kg

A small grey right-angled triangle pointing to the right, with the number "1" inside it.

---

### 1.3 Operative range and correct usage

---

**The grinding machine BG-180EC is exclusively designed to process horizontal surfaces. The machine must not be used for other purposes. The manufacturer will not be liable for damage resulting from incorrect usage. In these cases the user takes responsibility for all risks.**



---

### 1.4 Stand-by power supply (Generator)

---

**If the grinding machine BG-180EC is to be operated using power from a generator, the generator must be operated in accordance with the current EN-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.**





**Diamatic**

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**Operation Manual**

**BG-180EC**

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**Technical Data**

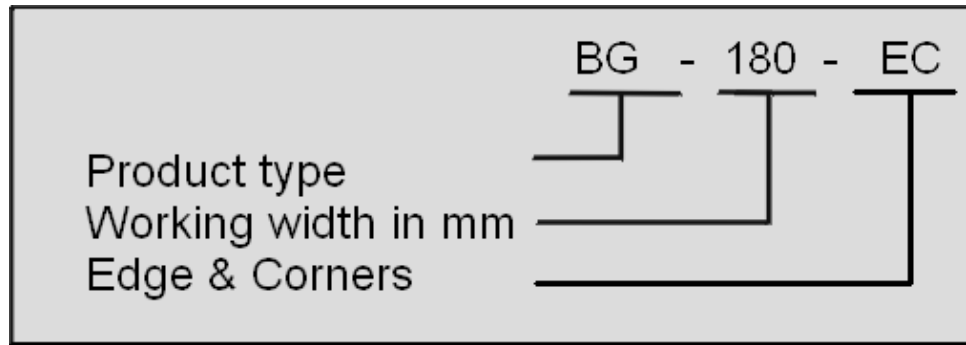
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**1.5 Machine type designation**

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1





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**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 equipment and maintenance activities as well as repairs during operation

2.6 Definition of the Safety off position

2.7 Particular dangerous aspects of the equipment

2.8 Electrical engineering regulations



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**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 equipment.**



**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.**

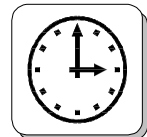


2

**Indications where consultation with the manufacturer 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 machine** is being operated, and must be **within reach at all times!**

In addition to these Operating Instructions general and legal regulations regarding accident prevention and environmental protection must be complied with as per local regulations.

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 other **instructions**, including the duty to **supervise** and **report** incidents relating to **particular working practices**, for example work organisation, work procedures and personnel safety.

Personnel entrusted with working with the machine must read the **Operating Instructions** before starting work, in particular the **Safety Instructions** chapter. To read these instructions after work as commenced 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 machine.

From time to time the working practices of the operators are to be checked by a supervisor especially to the items regarding awareness of **safety, and hazards**.

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



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

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



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

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

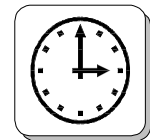


2

This applies in particular to the fitting and adjustment of safety devices.

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 work site!



Take note of the facilities for reporting of, and fighting fires!

---

### 2.3 Personnel selection and qualification

---

Fundamental duties:

Work on the machine may only be undertaken by **trained personnel**.

Only trained personnel may be employed. **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 machine!



Safety Advice

---

Define responsibilities of the machine operator, with regard to traffic **safety regulations**, and inform him not to take instructions from third parties who may not be complying with the local safety requirements!

Personnel who are being trained to operate equipment, may only use the machine **under constant supervision of an experienced person!**

2



Work on **electrical** equipment, may only be undertaken by a **skilled electrician** or by **trained** persons under the **supervision** of a **skilled electrician**, as well as in accordance with the local **electrical engineering regulations**.

---

2.4 Safety precautions applicable to some operating sequences

---

Do not allow any method of working that **impairs safety!**

Recognised official procedures have to be used, to ensure the machine is operated in a safe, and best conditions.



Only operate the machine when all **safety devices**, and related **safety equipment**, are present and **operational!**

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

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



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



Faults must be immediately rectified!

Carry out the switch on, and switch off, operations in accordance with the operation manual!

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

Do not switch off, or remove the exhaust, and or the ventilation devices whilst the machine is running!

All persons in the proximity of the machine, must wear ear protectors and safety shoes. In addition the machine operator, must wear close-fitting protective clothing.



Use only extension cables, that are used 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 equipment 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 before carrying out any servicing work on the machine.

Follow any special **safety instructions** in the chapters on servicing the machine. **See chapter 7.1 - 7.9.**

**Adjustment, servicing and inspection work on the period of 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**.





---

**Safety Advice**

---

The **operator must to be given information** about **maintenance and work procedures**, before starting the cleaning process!

**Procedures** that are related to normal operation. Methods of tools adjustment on the machine, and its safety devices, all **“ON and OFF”** functions that have to be carried out according to the operation manual, and methods for maintenance and repair.

If the equipment is switched off in order to carry out maintenance, repair, or adjustment it must be secured against unintended restart.

**Switch OFF and disconnect** it from the power supply.

See **Chapter 2.6 Safety off position** for specific details.

**Always dispose** the contents of the **dust bin** or of a connected dust collector before **loading** the machine onto a vehicle.

Observe the **local waste disposal regulations**, in uncertain situations ask the next higher authority.

Do not use any **aggressive** cleaning materials!

Use lint-free **cleaning cloths!**

Always make sure to tighten any screw connections that are loosened 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!**



Work on **electrical** equipment, may only be undertaken by a **skilled electrician** or by **trained** persons under the **supervision** of a **skilled electrician**, as well as in accordance with the local **electrical engineering regulations**.

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



---

## 2.6 Definition of the Safety off position

---

### Definition:

The machine is in a safe condition where it cannot be of any hazard.

A small grey right-angled triangle pointing to the right, with the number "2" inside it in a white, bold, sans-serif font.

Putting the equipment in the Safety off position involves:

- Switch off the machine.**
- Switch off the dust collector (if being used).**
- Wait for all drives to stop.**
- Pull out mains plug.**
- Secure against unintended restart.**

---

## 2.7 Particular dangerous aspects of the equipment

---

Any machine, 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, and for the use of safety **devices** supplied with the machine, as well as the provision of appropriate additional safety devices!





---

## 2.8 Electrical engineering regulations

---

2



Work on **electrical** equipment, may only be undertaken by a **skilled electrician** or by **trained** persons under the **supervision** of a **skilled electrician**, as well as in accordance with the local **electrical engineering regulations**.



Use only extension cables, that are used 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**. 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 in attendance whilst the electrical engineer is working on the equipment.

The work area must be secured against any third party entering the work area, by means of a red and white **safety chain** and a danger sign. Use only tools that are insulated against electricity.

**Only** start work after you are familiar with the **electrical engineering regulations** that apply to the local 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.



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**Contents Chapter 3**

---

3.1 Range of application

3.2 Scope of supply

3.3 Description of the machine

3.4 Operating elements

3.5 Electric components

3.6 Driving part

3.7 Edge grinding

3.8 Care and maintenance





**Diamatic**

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## Operating Manual

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**BG-180EC**

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### General

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#### 3.1 Range of application

---

Typical range of application of the BG-180EC are for example:

- To remove undulated concrete surfaces
- To prepare the surface for coatings
- To polish the surface
- To remove coating defects
- To remove glue residue
- To remove coating from wood floors
- To renovate wood floors for new coating

---

#### 3.2 Scope of supply

---

Scope of supply of the machine:

- Grinding machine (BG-180EC)
- Dust hose (Option)
- Operating manual (1x)

3



3.3 Description of the machine

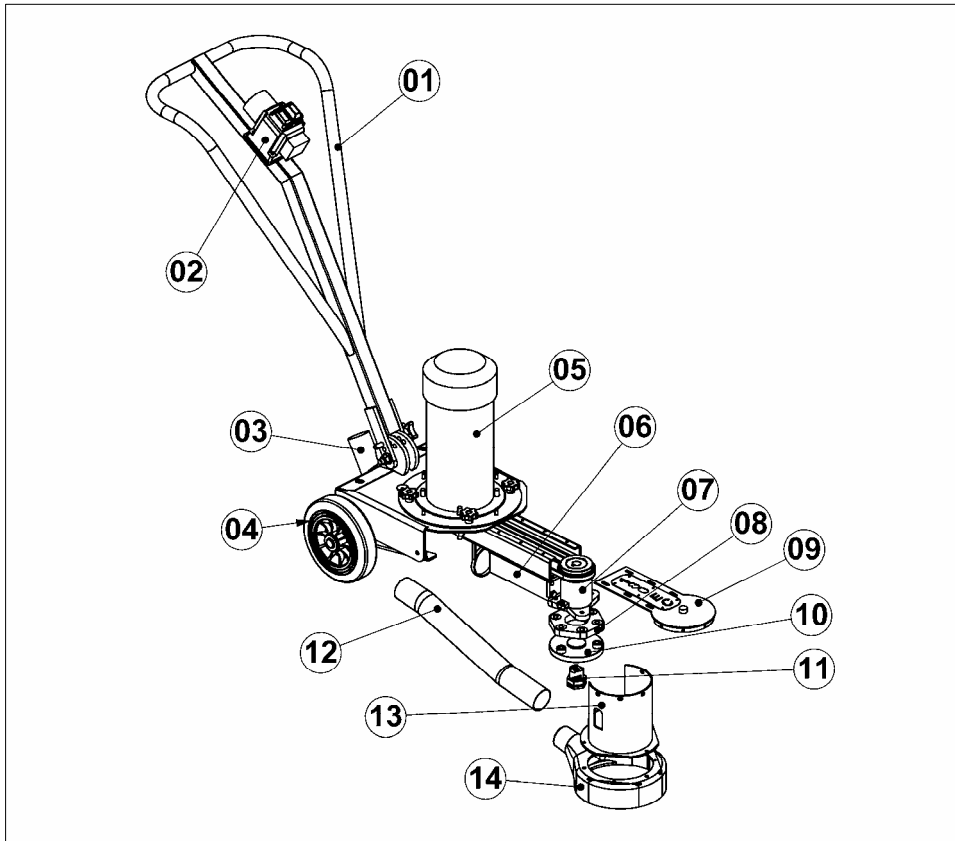


Fig. 3.1

1	Steer	6	Weight block	11	Diamond plate nut
2	Switch	7	Bearing house	12	Dusthose
3	Dusthose connection	8	Buffer	13	Cover
4	Wheel	9	Cover	14	Dustcap
5	Motor 2,2 kW	10	Adapter diamond		

The BG-180EC can process an output width of 180 mm, and gives excellent performance due to its high economic efficiency and easy handling.

The machine is capable to levelling uneven and undulating floors and edges, this process is suitable for an optimisation of surfaces, concrete polishing, wood sanding and removing tiger striping after shot blasting.

Alternatively the machine can be used to smooth floor surfaces as a preparation operation for coatings to be applied.

Depending on the application the diamond disc holder can be fitted with several different types of diamond-grinding discs.

The number of revolutions the tools run at are 2800 revs/min.

**3.4 Operating elements**

**Handgrip and Operating lever**

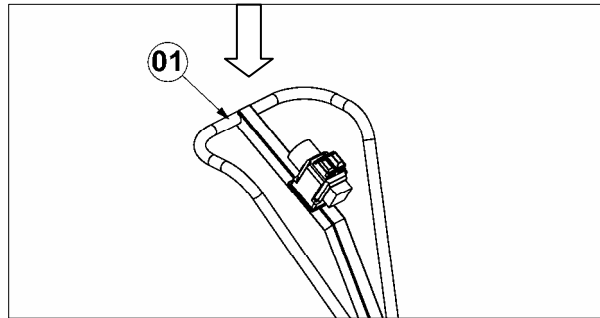


Fig. 3.2

Before Switching on the BG-180EC, the front part of the grindingmachine must be lifted by pushing the handgrip (1) down to floor level till the machine is approximately 10cm from the ground.

**3.5 Electric components**

The Switch box is equipped with all control elements and instruments to monitor the grinding machine.

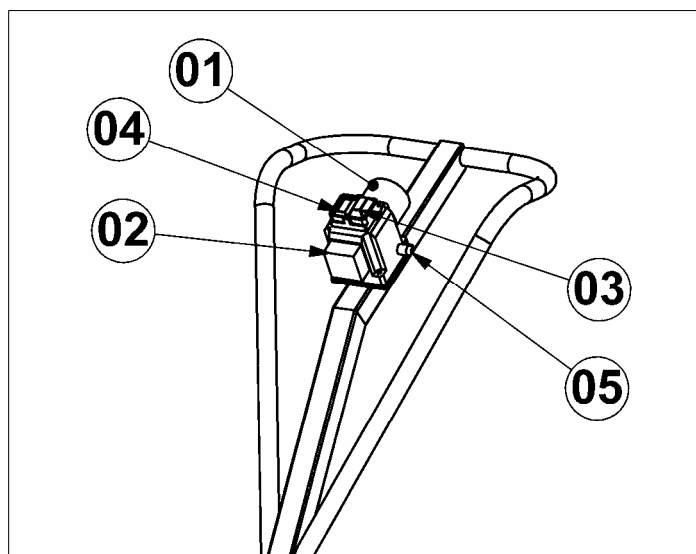


Fig. 3.3

- |   |                               |   |              |   |                        |
|---|-------------------------------|---|--------------|---|------------------------|
| 1 | Electrical inlet power supply | 3 | Stop button  | 5 | Terminal safety switch |
| 2 | Electrical inlet motor        | 4 | Start button |   |                        |



---

**Stop button**

---

The red button will stop the machine.

---

---

**Start button**

---

By pressing the green button, the motor will start.

---

---

**Terminal safety switch**

---

The terminal safety switch will turn off the motor when the motor is over overloaded. When the motor is overloaded, wait a few seconds and press the safety switch in and the motor can be restarted.





**General**

**3.6 Driving part**

The axle in the bearing house is driven by the motor true a belt. Under the axle there is a buffer and an adapter diamond. The diamond plates will be fitt under the adapter diamond with the arbor en blade nut.

3

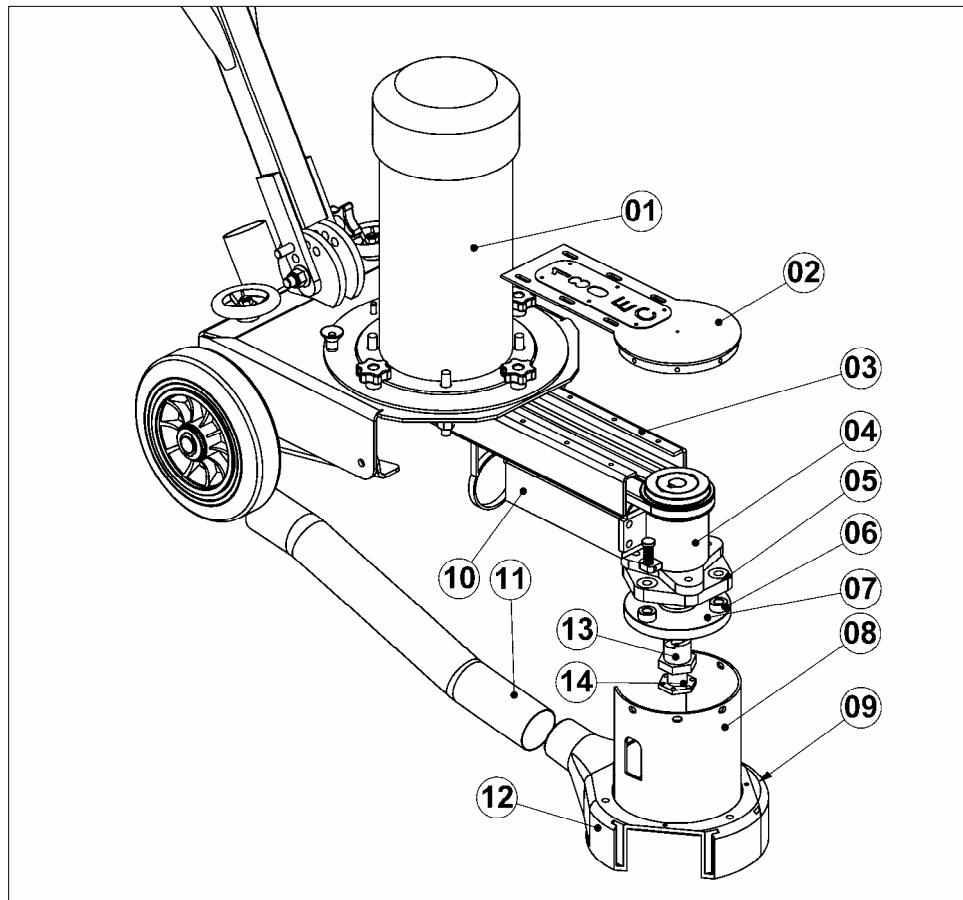


Fig. 3.4

- |   |               |    |                 |    |           |
|---|---------------|----|-----------------|----|-----------|
| 1 | Motor 2,2Kw   | 6  | Spacer ring     | 11 | Dusthose  |
| 2 | Cover         | 7  | Adapter diamond | 12 | Dustcap   |
| 3 | Frame arm     | 8  | Cover           | 13 | Arbor nut |
| 4 | Bearing house | 9  | Corner caps     | 14 | Blade nut |
| 5 | Buffer        | 10 | Weight block    |    |           |



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**3.7 Edge grinding**

---



The machine is build to grind edges. By sweeping the frame arm to the left or the right, and take out one of the two cornercaps you can grind the edges.

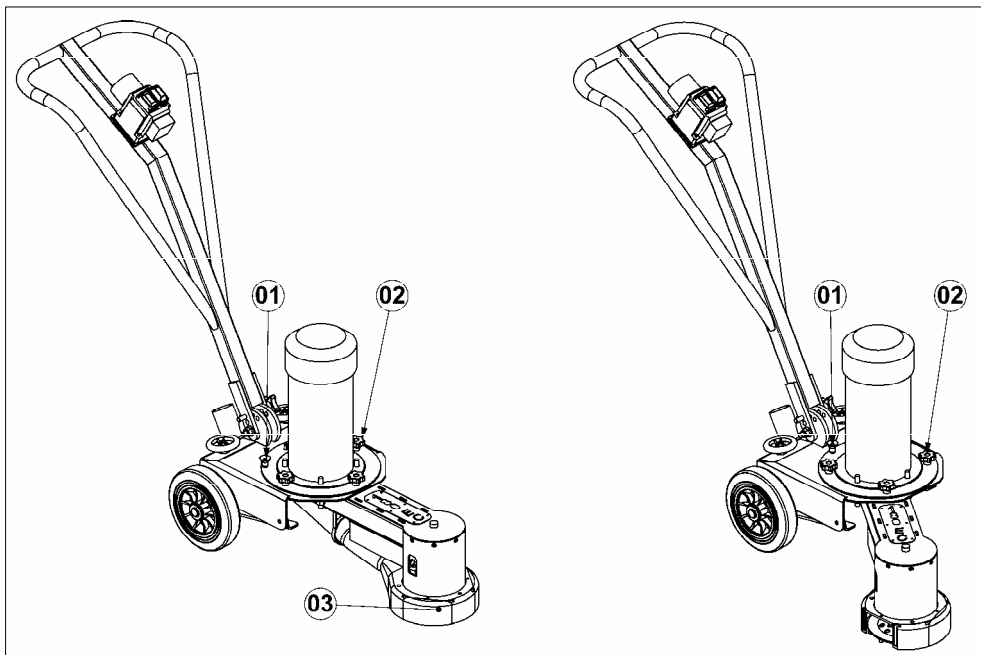


Fig. 3.5

- |   |                   |   |           |
|---|-------------------|---|-----------|
| 1 | Quick release pin | 3 | Cornercap |
| 2 | Knob              |   |           |



---

**3.8 Care and maintenance**

---



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

Pay attention to unusual noises or strong vibrations. Check for the cause of every big change. Call a technician if you have doubts about the cause or when a repair without a technician seems not possible without damages. Only use genuine parts

Generally the grindingmachine BG-180EC requires very little special attention regarding its maintenance.

After using the BG-180EC, clean the machine with air pressure, so there is no dust on the machine.

See to it that any wastes or fibre residues do not remain in the area of the grinding disc.

Dependent on the use of the machine the pulley should be checked about every 200 hours.

Before using the machine you should always check for the correct seat of all screws and connection points.



When no original components / wear parts are used, every revendication on guarantee expires.



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**Contents Chapter 4**

---

- 4.1 Unit specifications
- 4.2 Manual mode of moving the machine
- 4.3 Transport with cranes or lifts
- 4.4 Transport of the machine with vehicle
- 4.5 Operation of the machine while grinding





**Diamatic**

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## Operating Manual

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**BG-180EC**

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## Transport

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### 4.1 Unit specifications

---

<b>Model variant</b>	<b>BG-180EC</b>
Dimensions in mm	1300 x 430 x 1000
Weight	58 kg

---

### 4.2 Manual mode of moving the machine

---

To move the machine press down the handgrips see fig.4.1 of the machine until the front part rises approximately 10 cm from the ground.

It can now be pushed around on its wheels.

The machine can only be moved around after attachments are disconnected, such as.

- Generator, (if being employed)
- Dust collection unit, (optional)

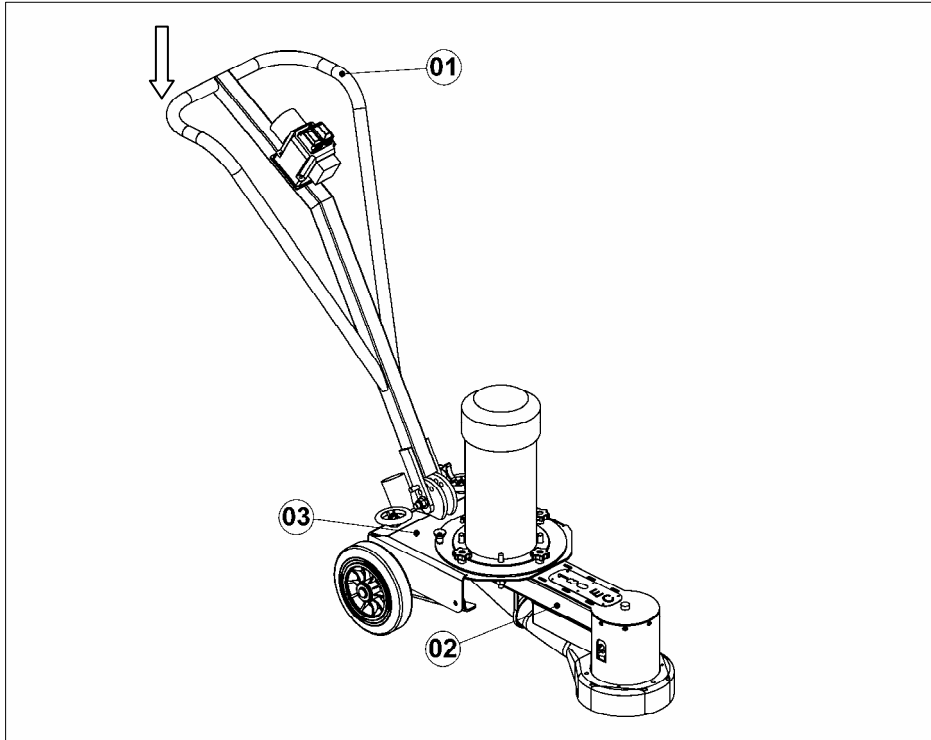


Fig. 4.1

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### 4.3 Transport with cranes or lifts

---

If the machine is to be transported by the means of a crane or a fork lift truck, make sure that the lifting means is of sufficient capacity to lift the weight of the machine, this gross weight is shown in **chapter 4.1 “Unit specifications”**, and also shown on the shield-type bolted to the machine.

Fasten any lifting slings to the points (2) or (3) on the machine frame, these points are also suitable as a fixing point for fastenings, during transportation of the machine on a vehicle.



**Transport**

---

---

**4.4 Transport of the machine with vehicle**

---



When transporting the machine in a vehicle drive in such a manner that damage due to the effects of the use of force or incorrect loading and unloading is avoided. Secure the machine with a tightening load strap over the lower frame (3) and frame arm (2). Use at least two straps, and tighten down with the load straps to the bodywork of the vehicle.

---

**4.5 Operation of the machine while grinding**

---

The machine will be operated while grinding in accordance with the instructions given in Chapter 5.2"Initial operation".

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**BG-180EC**

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**Operating Manual**

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**Initial operation**

---



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**Contents Chapter 5**

---

5.1 Preparation for initial operation

5.2 Initial operation

5.3 Grinding of edges





Initial operation

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---

5.1 Preparation for initial operation

---



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



- ☑ Put the grinding machine and the filter unit on to the surface to be processed.
- ☑ Fit the appropriate diamond grinding disc that is required for this particular process. Please read **chapter 7 “Maintenance”** of this manual.
- ☑ By using the correct cables, connect the machine and the dust collector to the electricity supply point, these electric supply points should be protected and equipped with a FI-switch. (Residual current operated device). In case of doubt ask the local safety officer.
- ☑ Check the extension cable for external damages.
- ☑ Check the dust hose for damages
- ☑ Connect the grindingmachine and the dust collector unit with the flexible dust hose. Use hose clamps at the connections.
- ☑ Make sure the dust bin of the dust collector unit is empty.

If problems with the current supply arise during the assembly or the start up, call a qualified person for help. Work on electrical equipment may only be undertaken by qualified personnel.



Any machine, if it is **not used according the regulations**, may be **hazardous** to the 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 machine as well as the provision of appropriate additional safety devices!



## 5.2 Initial operation

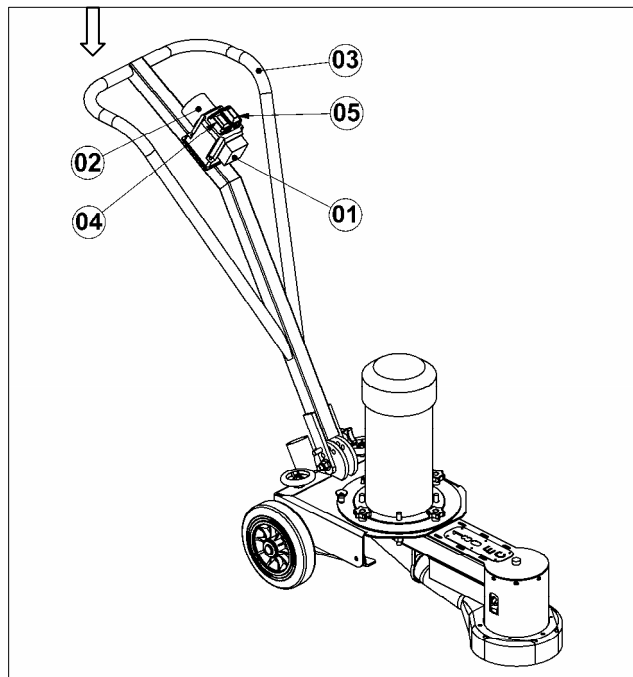


Fig. 5.1

The start up the machine by taking actions in the following sequence:

### 1 Switching on the grinding machine

- Connect the motor to the electrical inlet (1) of the switch.
- Connect the machine to the electrical inlet with an extension cable (CEE 16 Amp) (2).
- Press down both handgrips (3) until the front part rises approximately 10 cm from the ground:
- Push the start button. (4).
- Now let down the grinding disc on the surface and begin the grinding work. Move the machine slowly forwards or reverse dependent on the grinding work. (See chapter 6).

### 2 Switching off the grinding machine

- Push the off button on the power box (5).



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**5.3 Grinding of edges**

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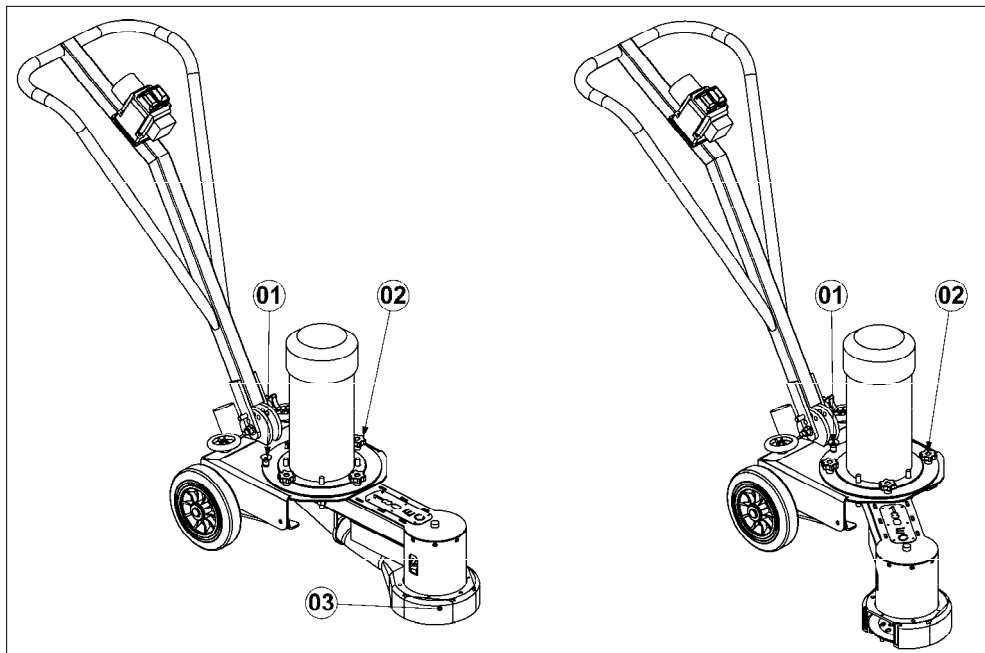


Fig. 5.2

Switching the frame arm by taking actions in the following sequence:

**1 Switching on the grinding machine**

- ☑ Disconnect the power supply.
- ☑ Loose the tension on the three knobs (02).
- ☑ Take out the quick release pin (01) and turn the frame arm till the quick release pin (01) fits in another gap.
- ☑ Tension the three knobs (02)
- ☑ Take out one of the two cornercaps (03) for grinding along edges.



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**Contents Chapter 6**

---

- 6.1 Operation
- 6.2 Switching-off the machine
- 6.3 Trouble Shooting
- 6.4 Safety shutdown
- 6.5 Restarting after a fault
- 6.6 Proceedings- prior and after stationary period



---

6.1 Operation

---



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

Only trained personnel may be employed. **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 machine!



A regular inspection is necessary to prevent downtimes of your grindingmachine. **See chapter 7 "Maintenance"**.

Pay attention to following aspects during operation of the **BG-180EC**

Before beginning the grinding work, check daily for regular tightness of all fasteners, especially those of the driving and handling devices.

Before switching on, make sure that all protective housings are fitted and the dust collector unit is correctly connected.

Handle all plugs, cables, hoses and operating elements careful. Avoid the contact with live wire.

Before grinding, clean the surface to be treated with a broom. There should not be any trash like stones, cloths, or standing liquid on the surface.

Proud up stands, like concrete reinforcing steel or other objects, should be removed from the work surface to prevent damage to the machine seals, or to the diamond discs.

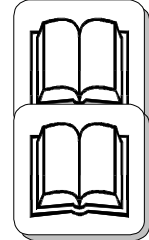


By using the dust collector unit observe the specially worker's protection rules, and also the local regulations regarding waste disposal.



The normal start up of the BG-180EC in the daily operation does not differ from the described process in chapter 5.2 "Initial operation".

If there are doubts how to start up the machine, read chapter 5.1 and 5.2 of this operating manual.



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

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## 6.2 Switching-off the machine

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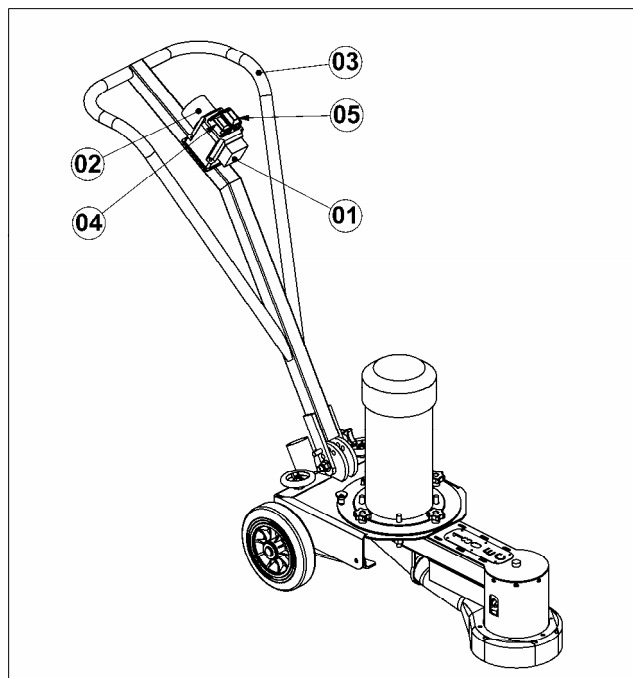


Fig. 6.1

- Push the off button on the power box (5).



---

### 6.3 Trouble shutdown

---



In case of emergency or operating trouble, like vibrations or strong noises, switch the machine off immediately by hitting on the OFF-button (5).

---

### 6.4 Safety shutdown

---



The machine has to be into its **"Safety off position"** before starting repair works. See Chapter 2.6.



Before carrying out some inspection or maintenance works make sure that all turning machine parts are stopped. Observe the "Safety off position, chapter 2.6.

Irrespective of the information of chapter 7 about repair or maintenance works, the local safety regulations are valid in all cases regarding the operation of the machine.

---

### 6.5 Restarting after a fault

---



Especially observe the regulations of the VBG 4 and also VDE 0701 regarding the necessary measures and measurement to be taken after repair works to the electrical devices. See also chapter 5.2 "Initial operation".



---

**6.6 Proceedings- prior and after stationary period**

---

**1 Before a long stand still period**

If the grinding machine will be out of action during a long period observe following aspects:

- Clean the machine and cover it with a plastic foil.
- Protect the electric motors from moisture, heat, dust and shocks.

**2 After a long stand still period**

See Chapter 5 "Initial operation".





---

**Contents Chapter 7**

---

- 7.1 Recommendations
- 7.2 Maintenance and inspection list
- 7.3 Repairing
- 7.4 Grinding disc replacement / assembly
- 7.5 Machine maintenance
- 7.6 Bearing house maintenance
- 7.7 Other maintenance



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7.1 Recommendations

---



**Prior to any repair works on the machine and its drives, secure the machine against unintentional switching-on. Put the machine to its safety off position. Chapter 2.6**

Failures, due to inadequate or incorrect maintenance may generate very **high repair costs** and long stand still periods of the machine. **Regular** maintenance therefore is imperative.

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

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

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 cannot be foreseen how frequently inspections for wear checks, inspection, maintenance and repair work should be carried out. Prepare a suitable inspection schedule considering known working conditions and experience.

Our specialists will be happy to assist with more advice.



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

**Pay attention to special notice, given by instructions for electric-motors or combustion engines.**



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**7.2 Maintenance and inspection list**

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<b>Operating hours/ time period</b>	<b>Inspection points, and maintenance instructions</b>
12 h after repairing	Check all accessible screw connections for tightness.
Daily and prior to starting work	Clean the machine with air pressure Check all safety devices are working correctly Check the power supply cable for damages. Check the hose to the dust collector for damage. Check whether or not, there are any foreign matter in the coupling of the grinding disc. Check the grinding disc and the coupling for wear. Check the tension of the V-belt, adjust as is required. Check the dust cap for damage
Quarterly	Clean the machine with a damp cloth.
Annually	Full overhaul and cleaning of the complete machine. Replacement of the pulley parts. (about 200hours)



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### 7.3 Repairing

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As previously mentioned in Chapter 5 “Initial operation” we recommend to execute the first repair works on the machine by having support of **Diamatic** personnel, by taking this advice, maintenance personnel gets the opportunity to be trained by an expert on the machine.

Only repair work that could occur within the bounds of regular operation of the machine, or work that is required to replace wear parts, will be described.

If parts are replaced by yourself for a specific reason, the following instructions and work sequence should be observed.



It would be advisable to stock all spare or wear parts that cannot be obtained 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 machine and its drives, secure the machine against unintentional switching-on. See chapter 2.6.

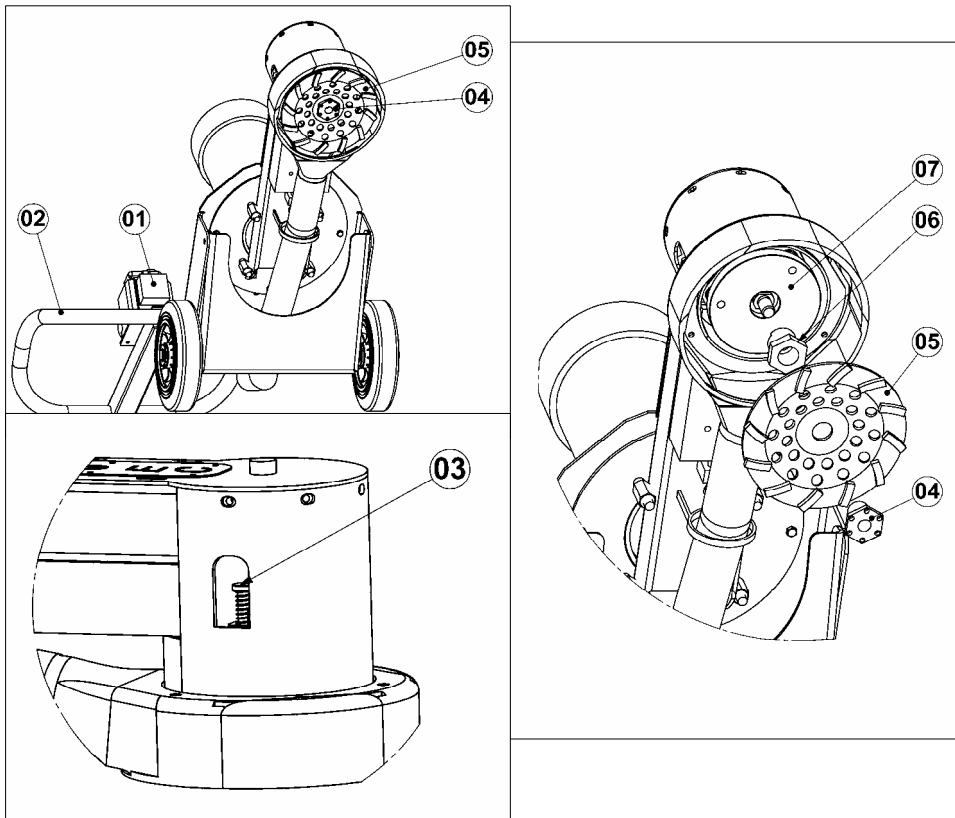
When no original components / wear parts are used, every revendication on guarantee expires.



**7.4 Grinding disc replacement / assembly**

**Disassembly:**

- 1 Make sure that the power supply is disconnect from the electrical inlet (01).
- 2 Tilt the machine to the back with the help of the handgrips (02) and lay it down on the steer (02).
- 4 Push the lock pin (03) down till the disc (05) blockade.
- 5 Loose the blade nut (04) and remove the diamond disc (05) and arbor nut (06)



**Assembly:**

- 7 Clean the adapter diamond (07)
- 8 Place the arbor nut (06) on the adapter diamond (07)
- 9 Place the diamond disc (05) on the arbor nut (06) and turn the blade nut (04) on till the disc begins to turn.
- 10 Push the lock pin (03) down till the disc blockade and turn the blade nut (04)
- 11 Tilt the machine forwards.

When replacing the grinding disc, also check the condition of the drive pulley and the diamond tool holders.  
Always replace any worn screws.



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**7.5 Machine maintenance**


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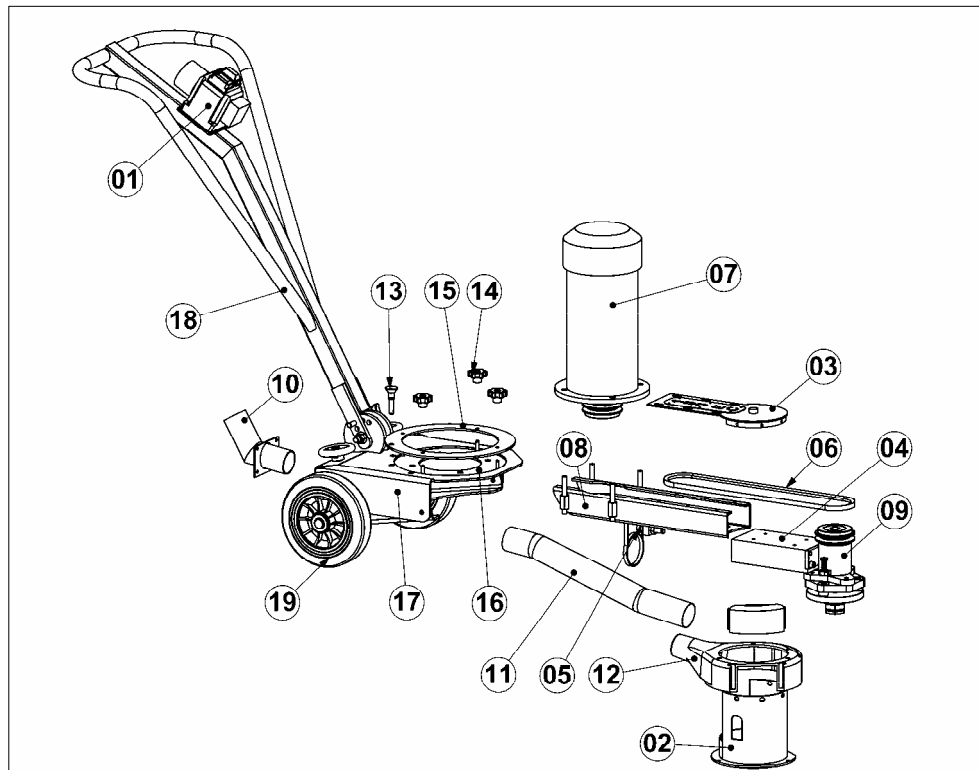


Fig. 7.2

**Disassembly:**

- Make sure that the power supply is disconnect from the electrical inlet (01)
- Take of the cover (02) and (03) and loose the bolts from the weight block (04) and (05)
- Unscrew the bolts of the dusthose connector (10) so the dusthose (11) and the dustcap (12) can be removed.
- Take off the v-belt (06) from the bearing house (09) and remove the motor (07) so the frame arm (08) with the bearing house (09) can be disassembled
- By removing the quick release pin (13) and the knobs (14) the upper (15) and under plate (16) can be disassembled.
- The wheels (19), steer (18) and frame (17) can now be disassembled.

**Assembly:** Assemble the parts in the reverse order that they have been disassembled.



## 7.6 Bearing house maintenance

Prior to any repair works being carried out on the machine or its drives, secure the machine against unintentional switching-on. See chapter 2.6.

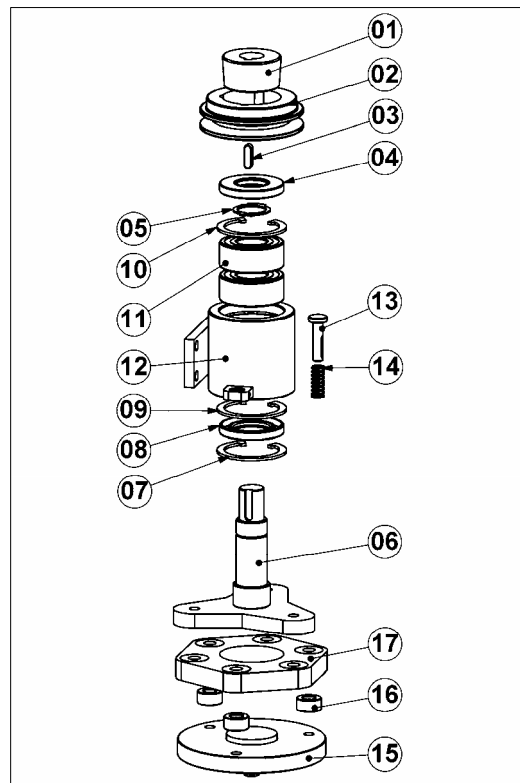


Fig. 7.3

### Disassembly:

- Take off the taperlock bush (01) with the pulley (02) and key (03)
- The adapter diamond (15), spacer rings (16) and buffer (17) can be unscrewed from the axle
- Remove the v-ring seal (04) and the retaining ring (05)
- Disassemble the axle (06) from the bearing house (12)
- Take off the retaining ring (07) v-ring seal (08) retaining ring (09) & (10) and remove the bearing (11) out of the bearing house (12)
- The lock pin (13) and the spring (14) can always be disassembled

**Assembly:** Make sure that the bearings (11) and bearing house (12) are clean and rub the bearings (11) in with a few drops of **loctite 641**.

Assemble the parts in the reverse order that they have been disassembled.



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### 7.7 Other maintenance's

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Check the seals for wear, and replace them at the time when they no longer provide a good seal against dust emissions from the machine, by this action damage to the surrounding workspace is avoided, and consequently saves additional charges from the job client.



Clean the machine with a damp cloth.

Do not use high pressure water for cleaning the machine!

Apply Oil to the adjusting pin of the operating lever, and other moving parts with clean oil can at regular intervals.

When no original components / wear parts are used, every revendication on guarantee expires.



Always put a diamond disc or blade nut under the adapter diamond when the machine stands still.



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**Contents Chapter 8**

---

8.1 Directions for electrical engineering

8.2 Electric circuits diagram of E00587-1    230V / 12.9A / 50Hz

8.3 Electric circuits diagram of E01532    110V / 28.0A / 50Hz



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### 8.1 Directions for electrical engineering

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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.



Order the electric items with reference to the circuit diagrams in chapter 8.1 or call a Diamatic service centre.



Observe the regulations of the VBG 4 and also of the VDE0701. (Measurement after maintenance and repair works).

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**BG-180EC**

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**Operating Manual**

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**Electrics**

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**8.2 Electric circuits diagram of E00587-1 230V / 12.9A / 50Hz**

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**PROJECT**

Client : BLASTRAC BV  
 Name : E00587-1

Particulars:

**SUPPLIER**

Order number :

Supplier : BLASTRAC BV  
 Contact :  
 Telephone : +31(0)30-6018866  
 Telefax : +31(0)30-6018333  
 Email :

**DATA**

Arch.number : PJ07.03297T1CF  
 Calc.number :  
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Start of project : 04.07.2007  
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Highest page number : 12  
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Revision page		Start	04.07.2007	BLASTRAC BV E00587-1		Frontpage	Arch.nr.	PJ07.03297T1CF	=
Eng.		Eng.	RJO				Draw.nr.	PJ07.03297T1CF	Pages
Revision date	04.07.2007	Print	04.07.2007						
Revision doc.	A	Status	Certified Final						





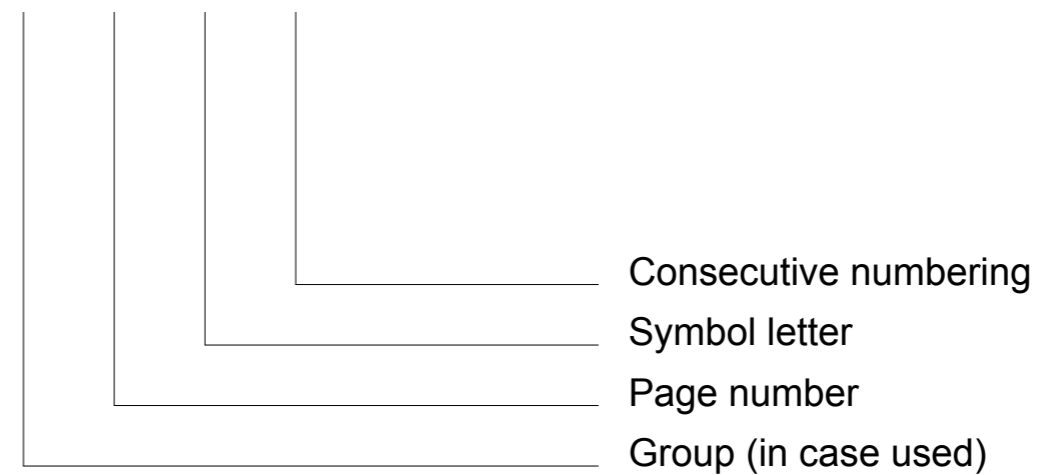
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Main-voltage:

- L1 -Black
- L2 -Black
- L3 -Black
- PE / ⊕ -Yellow / Green

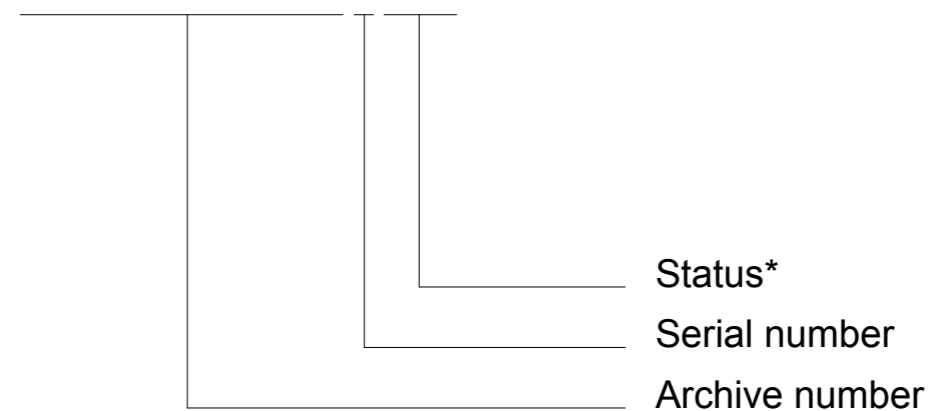
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




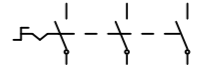




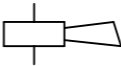
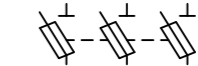



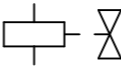


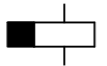
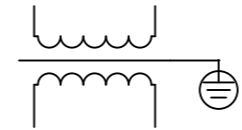
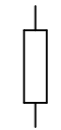

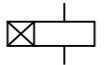
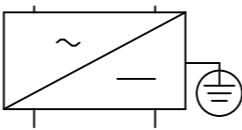
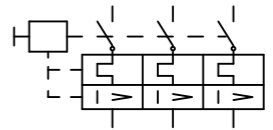

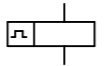


















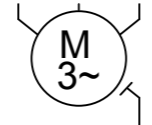
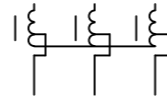
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\* Status DR: Draft  
 FA: For approval  
 CF: Certified final

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Revision date	04.07.2007	Print	04.07.2007						4
Revision doc.	A	Status	Certified Final						

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		Rotary switch NO / NC			Level switch NO / NC		Horn		Fuses load divider
		Contact NO / NC			Relay		Valve		Diode module
		NO Contact Cut-in delayed			Relay Time delayed on drop-out		Transformer		Resistance
		NC Contact Cut-in delayed			Relay Time delayed on pick-up		Direct voltage supply		Motor safety switch
		NO Contact Drop-out delayed			Relay Impulse		Terminal clamps		Final switch NO / NC
		NC Contact Drop-out delayed			Ammeter		Fuses		
		Emergency stop NC			Voltmeter		Fuse terminal		
		Contact NO / NC Thermal			Working hour counter		Earth-leakage switch Earth-leakage protection		
		Key switch NO / NC			Current coil		Installation automatic Short-circuit and overcurrent protection		
		Thermostat NO / NC			Motor		Autotransformer		

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Eng.		Eng.	RJO
Revision date	04.07.2007	Print	04.07.2007
Revision doc.	A	Status	Certified Final

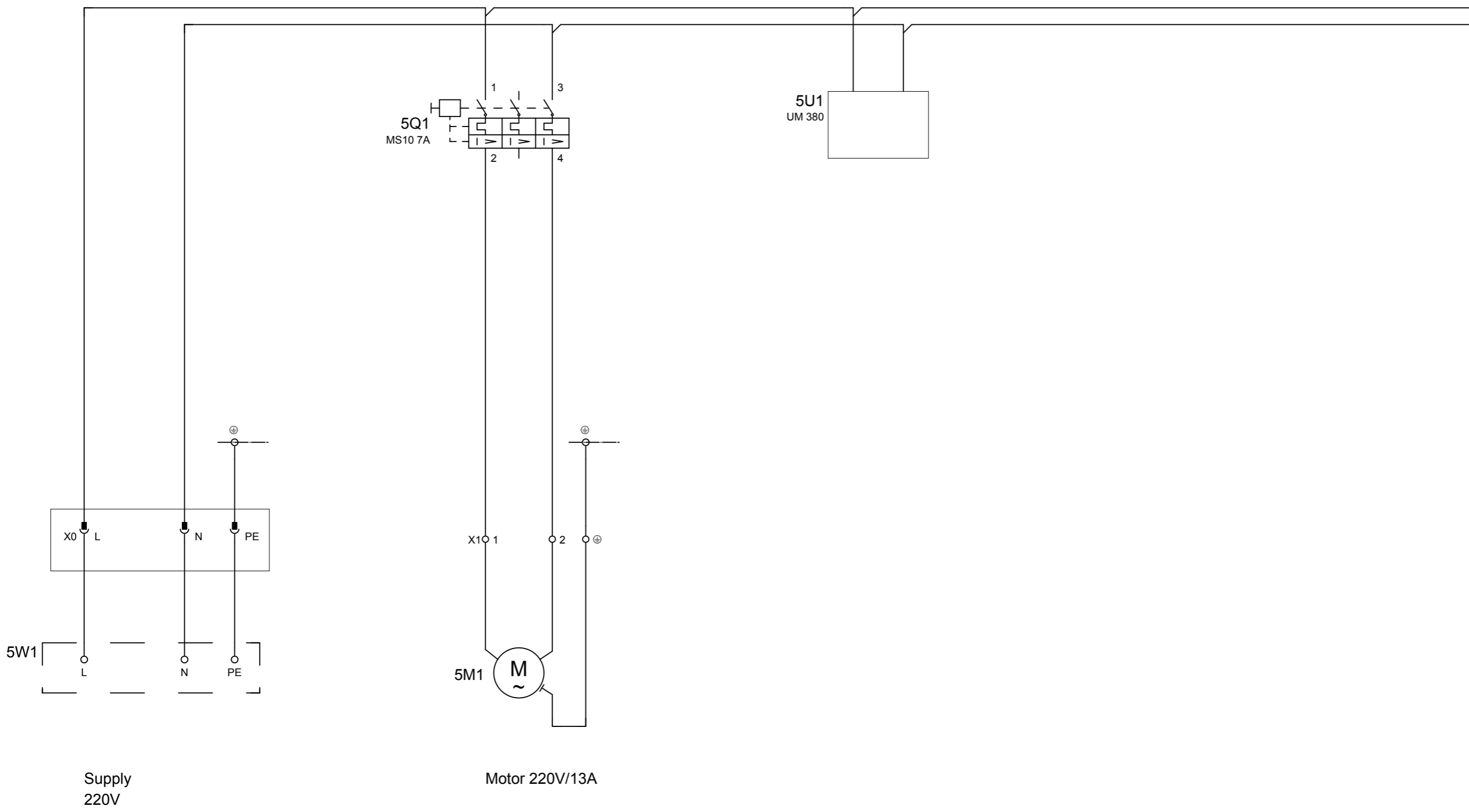
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E00587-1



Symbol explanation

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Draw.nr.	PJ07.03297T1CF	+

Pages	8	Page	5
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Revision page		Start	04.07.2007
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Revision date	04.07.2007	Print	04.07.2007
Revision doc.	A	Status	Certified Final

BLASTRAC BV  
E00587-1



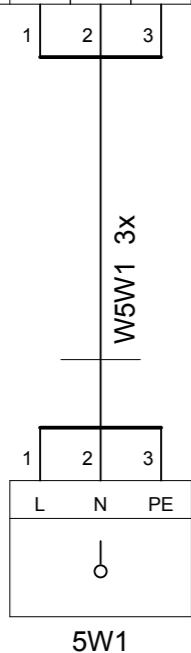
Main-voltage

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Pages	8	Page	10
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# X0

Internal connection	5Q1:1	5Q1:3	⊕
Bridges			
Terminal	L	N	PE



Revision page		Start	04.07.2007
Eng.		Eng.	GKU
Revision date	04.07.2007	Print	04.07.2007
Revision doc.	A	Status	Certified Final

BLASTRAC BV  
E00587-1



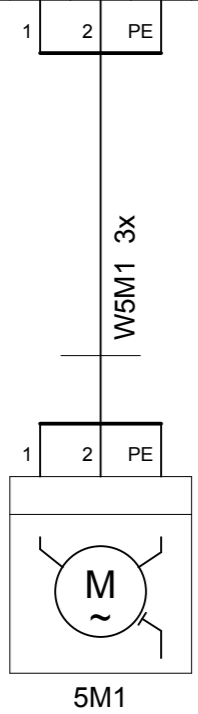
Plug X0

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Draw.nr.	PJ07.03297T1CF	+

Pages	8	Page	11
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# X1

Internal connection	5Q1:2	5Q1:4	⊕
Bridges			
Terminal	1	2	⊕



Motor



**Diamatic**

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**Operating Manual**

**BG-180EC**

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**Electrics**

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**8.3 Electric circuits diagram of E01532**

**110V / 28.0A / 50Hz**

---

### PROJECT

Client :  
Name : E01532

Particulars:

### SUPPLIER

Draw.number : PJ07.03296T1FA  
Order number :

Supplier : ART 4 Techn. Systems BV  
Contact : Mr. R v/d Grint  
Telephone : +31(0)35-5822468  
Telefax : +31(0)35-6424860  
Email : rvdgrint art4.nl

### DATA

Arch.number : PJ07.03296T1FA  
Calc. number :  
Status : For approval

Start of project : 04.07.2007  
Latest change : 04.07.2007 ( GKU )

Highest page number : 10  
Number of pages : 6





### Wire color:

#### Main-voltage:

L1	-Black
L2	-Black
L3	-Black
N	-Light blue
PE / ⊕	-Yellow / Green

#### Control-voltage alternating-voltage (AC)

Phase	-Red
Hook-up wire	-Red
ero	-Violet

#### Control-voltage direct-voltage (DC)

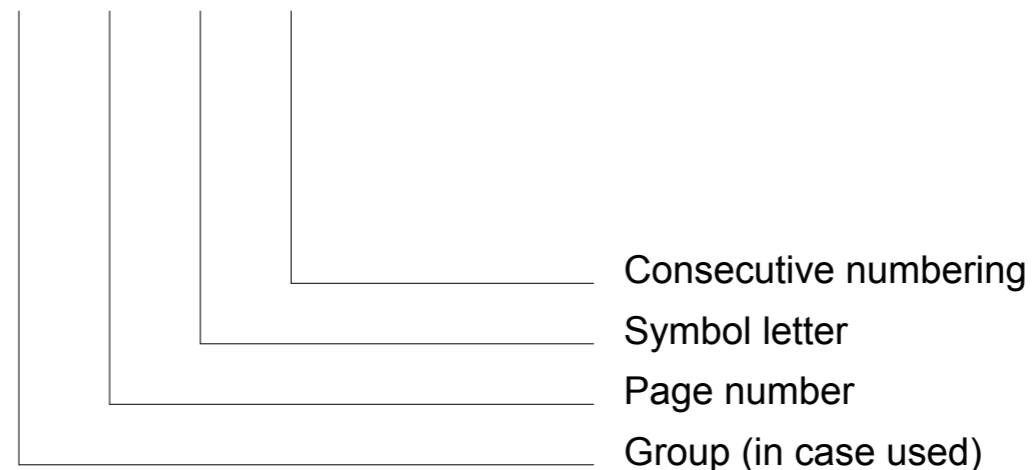
(+)	-Dark blue
Hook-up wire	-Dark blue
(-)	-Grey

#### Potential free and stranger-voltage:

Potential free	-Orange
Test lead	-White

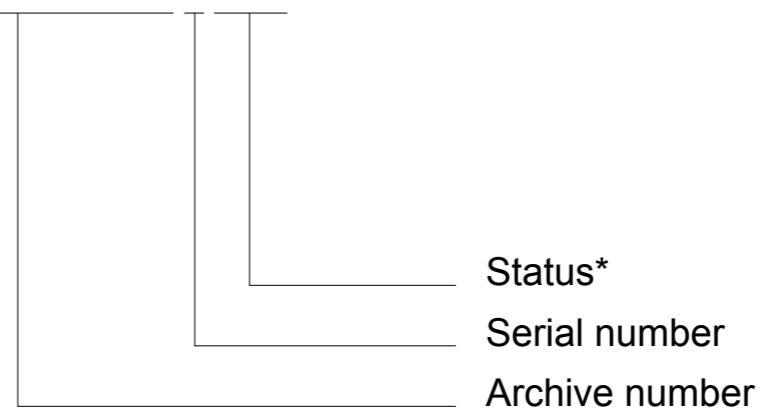
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




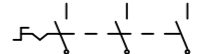




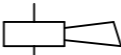
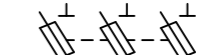



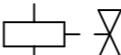



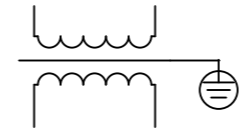
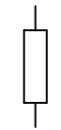

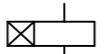
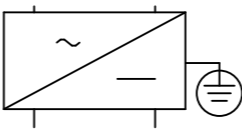
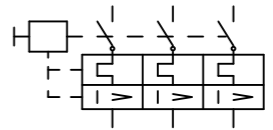

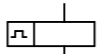




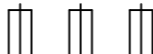













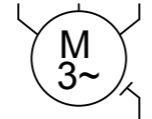
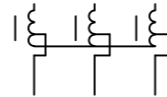


### Archive number explanation:

PJ01.01234T1DR



\* Status  
DR: Draft  
FA: For approval  
CF: Certified final

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		Pushbutton NO / NC			Pressure switch NO / NC		Pilot light		Main switch
		Rotary switch NO / NC			Level switch NO / NC		Horn		Fuses load divider
		Contact NO / NC			Relay		Valve		Diode module
		NO Contact Cut-in delayed			Relay Time delayed on drop-out		Transformer		Resistance
		NC Contact Cut-in delayed			Relay Time delayed on pick-up		Direct voltage supply		Motor safety switch
		NO Contact Drop-out delayed			Relay Impulse		Terminal clamps		Final switch NO / NC
		NC Contact Drop-out delayed			Ammeter		Fuses		
		Emergency stop NC			Voltmeter		Fuse terminal		
		Contact NO / NC Thermal			Working hour counter		Earth-leakage switch Earth-leakage protection		
		Key switch NO / NC			Current coil		Installation automatic Short-circuit and overcurrent protection		
		Thermostat NO / NC			Motor		Autotransformer		

Revision page		Start	04.07.2007
Eng.		Eng.	GKU
Revision date		Print	04.07.2007
Revision doc.		Status	For approval

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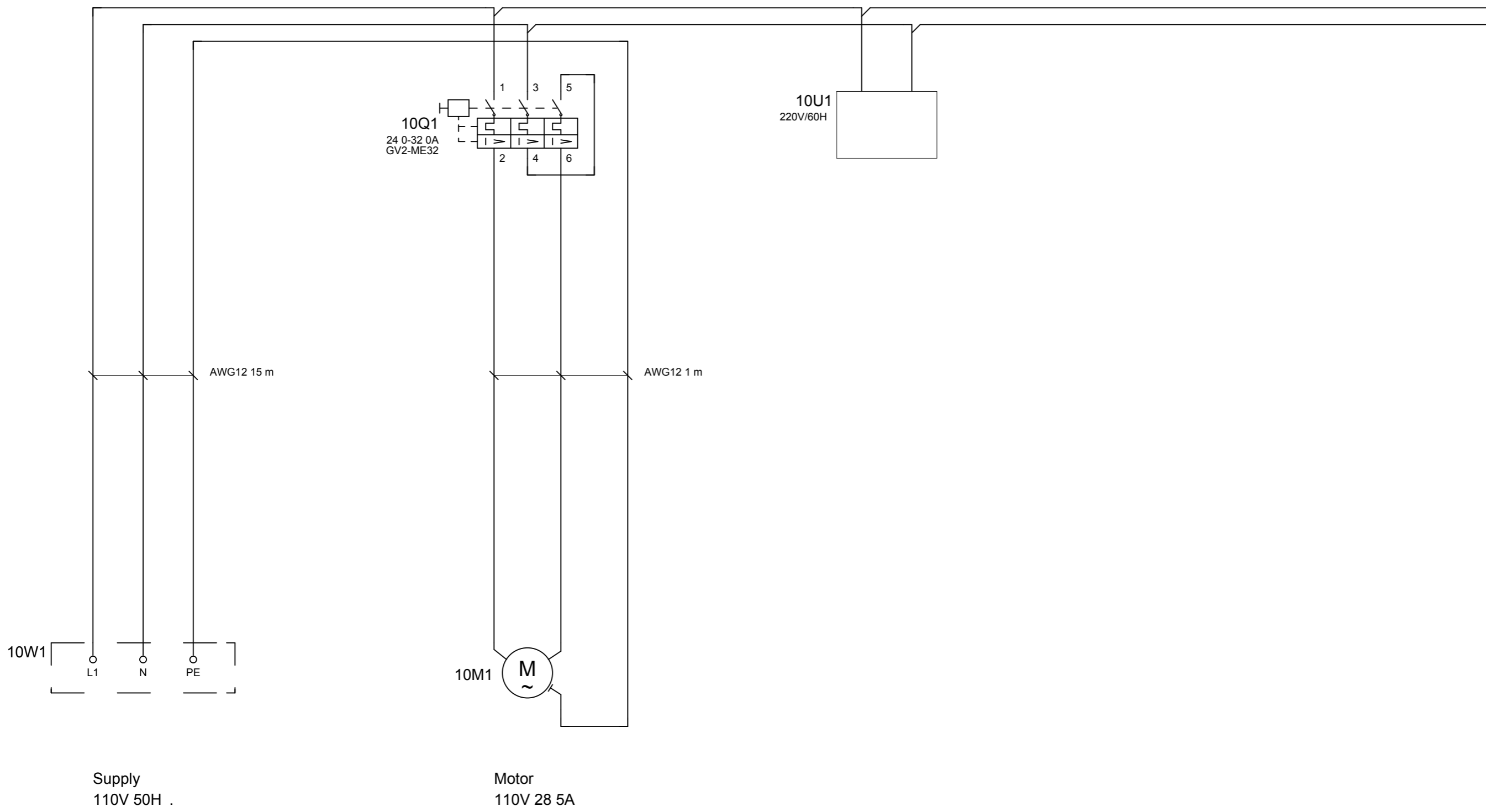


Symbol explanation

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Pages	Page
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**BG-180EC**

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**Operating Manual**

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**Fault diagnosis**

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**Contents Chapter 9**

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9.1 Fault diagnosis - grinding machine

9.2 Fault diagnosis electrical system



Fault diagnosis

9.1 Fault diagnosis – grinding machine



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

Fault	Possible cause	Remedy
Excessive vibration	Imbalance due to worn or broken grinding tools.	Replace all worn or broken parts
	PU-belt is too tight	release the tension of the upper belt
Unusual noises	Defective bearing	Check the bearing on the axle drive shaft and replace if necessary.
	Wrong tension of the V-belt	Check the tension of the V-belt, replace the V-belt if necessary
	Defective motor bearing	Change the motor
	Debris deposit on the coupling	Clean the coupling
Reduced or no grinding performance	Grinding tools have reached the maximum permissible wear	Replace the worn parts
	Inappropriate grinding tool for the application	Replace the grinding tools with appropriate grinding tools for the surface to be treated
	Too low tension of the V-belt	Re-tension the V-belt



9.2 Fault diagnosis electrical-system

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.



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



Fault	Possible cause	Remedy
Motor does not switch on	Missed phase	Check the mains power supply and next switch on again
	Defective Component	Fault finding and replace defective component
Motor triggers while running	Motor protections switch triggered because of overload	Reduce additional load
	Motor have a defect	Check the motor



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**BG-180EC**

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**Operating Manual**

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**Spare Parts**

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**Contents Chapter 10**

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10.1 Spares Parts List BG-180EC



**Spare Parts**

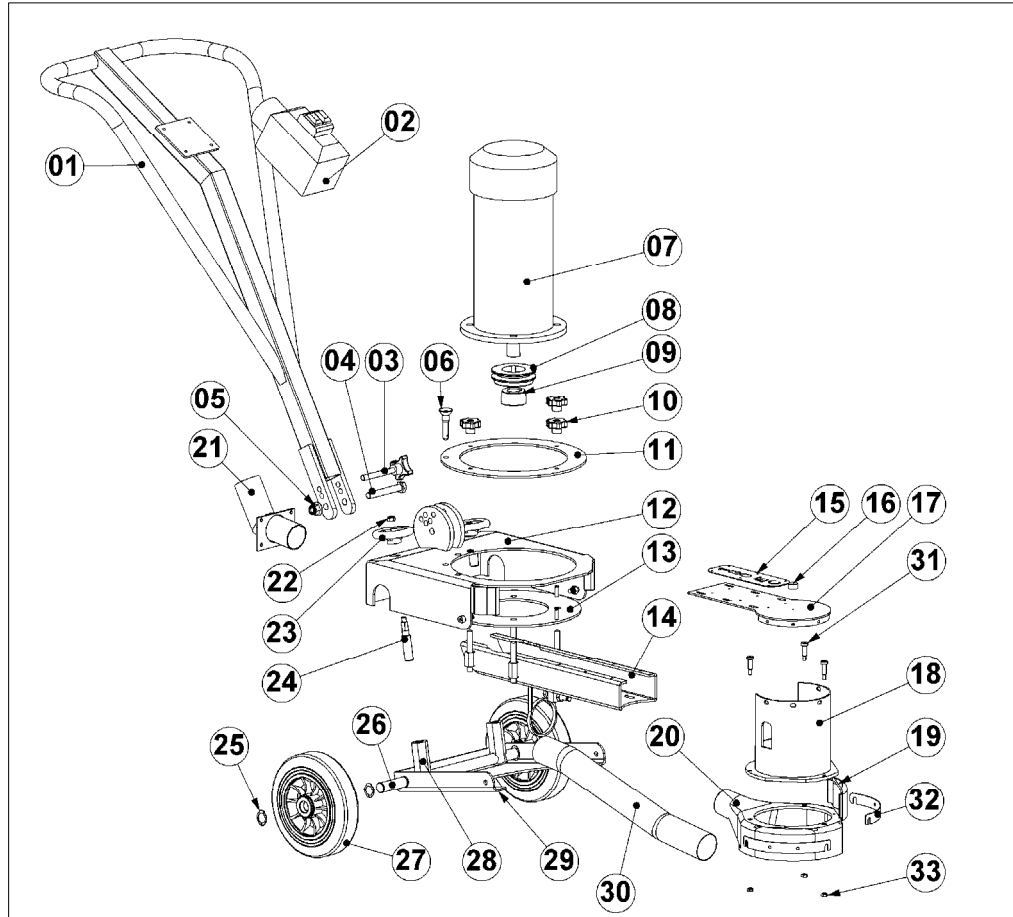


Fig. 10.1

Item	Part no.	Description	Qty.
1	E03287	Steer	1
2	E00587_1	Switch incl breaker 230V / 50Hz	1
	E01532	Electro kit 110V / 50Hz	1
3	E03550	Locking pin compl	1
4	BE0059	M12x80 hexagon bolt	1
5	BE0073 / BE0026	M12 lock nut + washer	1
6	478198	Quick release pin	1
7	E02062	Motor 2,2kW / 230V / 50Hz	1
	E03562	Motor 1,5kW / 110V / 50Hz	1
8	E03259	Pulley 230V / 50Hz	1
	E03263	Pulley 110V / 50Hz	1



9	E01560	Taperlock bush 230V / 50Hz	1
	E03517	Taperlock bush 110V / 50Hz	1
10	BE0078	M6 knob	3
11	E03278	Upper plate	1
12	E03272	Upper frame	1
13	E03279	Under plate	1
14	E03277	Frame arm	1
15	E03239	Plate	1
16	E03563	Leveller	1
17	E03241	Cover	1
18	E03688	Cover	1
19	E03692	Corner caps	2
20	E03695	Dustcap	1
21	E03294	Dustpipe	1
22	BE0048	M8 lock nut	2
23	E03506	Handwheel	2
24	E03289	Adjustable bolt	2
25	BE0074	Retaining ring	6
26	E03276	Wheel axle	1
27	E03253	Wheel	2
28	E03288	Adjustable block	2
29	E03271	Underplate frame	1
30	004583	Dusthose	0,5m
31	E00477	Hexagon socket head shoulder bolt	3
32	E03802	Corner strip	2
33	BE0018	M6 nut	3

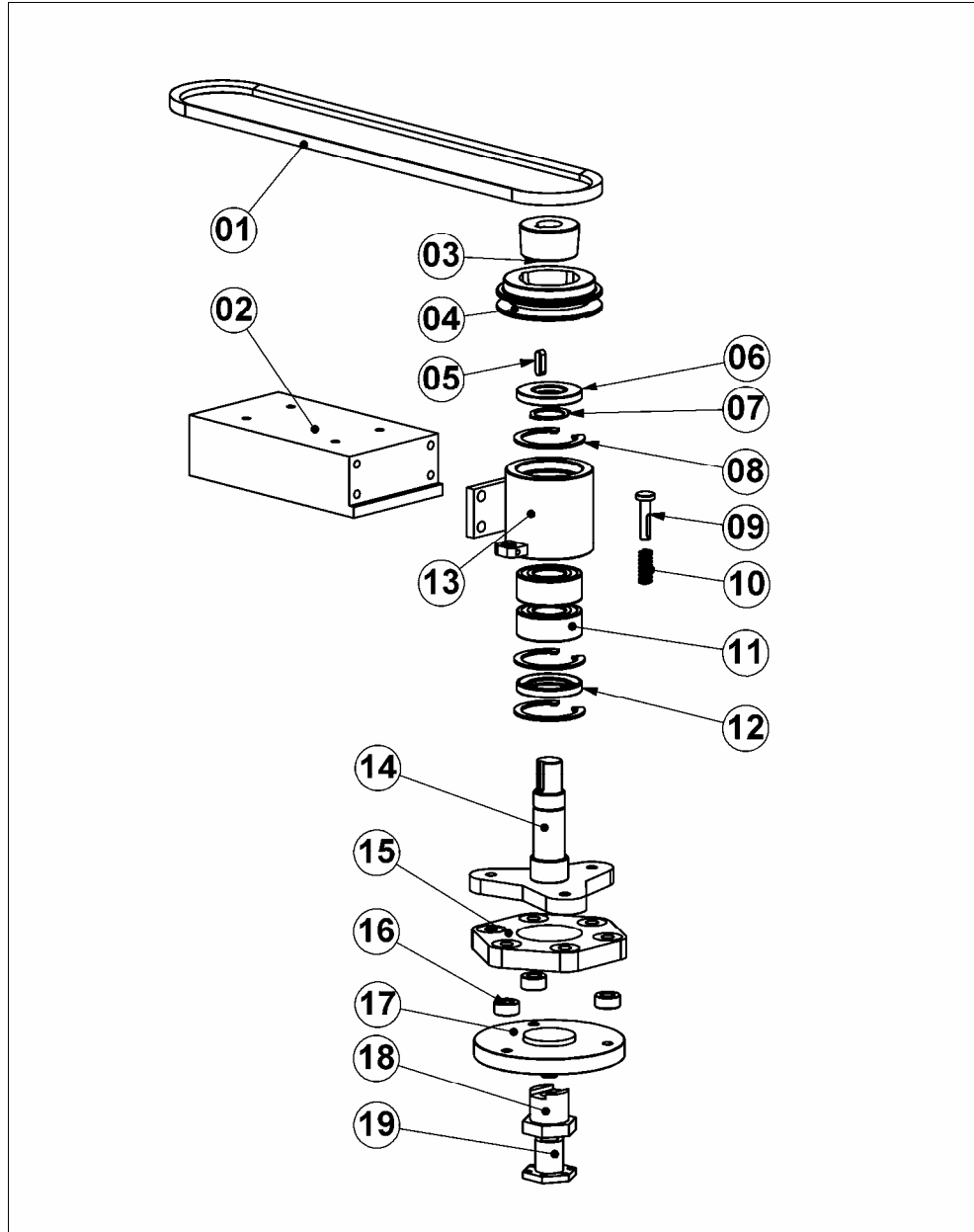


Fig. 10.2



Item	Part no.	Description	Qty.
1	DG16	Belt 230V / 50Hz	1
	E00269	Belt 110V / 50Hz	1
2	E03564	Weight block	1
3	E03518	Taperlock bush	1
4	E03263	Pulley	1
5	BE0079	Key	1
6	E03247	Radial shaft seal	1
7	BE0076	Retaining ring	1
8	BE0077	Retaining ring	3
9	E03264	Lock pin	1
10	E03705	Spring	1
11	E03245	Bearing	2
12	E03566	Radial shaft seal	1
13	E03243	Bearing house	1
14	E03244	Drive axle	1
15	000118	Flexible coupling	1
16	E03250	Spacer ring	3
17	E03242	Adapter diamond	1
18	ST-91599	Arbor nut	1
19	ST-91588	Blade nut	1
	<b>Nuts for higher diamond wheels</b>		
18	ST-91587	Arbor nut	1
19	ST-91585	Blade nut	1