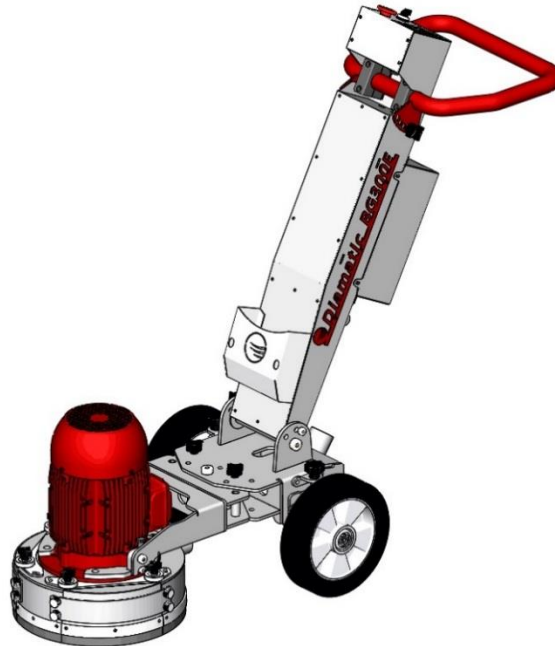


## *BG-300E*

Original Operating Instructions  
Version 1.0



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## 1. Introduction

It is important that all persons who are working or maintaining with this machine will read the manual carefully and understand it fully. Keep this manual near the machine, so it can always be consulted.  
Only authorized and trained personnel may operate this machine.

## 2. Machine Description

The BG-300E is an electric driven floor grinding machine for treating horizontal surfaces, especially for edge grinding.

- Closed circuit which is almost dust free, when connected to an appropriate Diamatic dust collector.
- Single-head grinding machine for processing work area edges and corners.
- To be used with standard cup wheel and Ring polishing pad 180 mm.
- Can do grinding and polishing both, Easy to transport, ready to work.
- The grinding arm is vertical adjustable and can be switched to the left or right.
- Grinding head is protected by a rubber buffer, Ergonomic design and user friendly control panel.
- Heavy duty professional equipment 230V, easy to plug in on every jobsite.
- Several optional grinding discs for an optimized use in every specific application.

## 3. Safety

Before operating the machine, the personnel must be familiar with the safety instructions given in this manual. Keep this manual near to the machine, so it can always be consulted.

### Safety precautions

- The surface to be treated must be swept clean to remove stones, screws etc.
- Never use the machine when the surface is not clear and if there is a risk of tripping.
- Make sure there is not any water on the surface to be treated.
- Remove any trailing electrical cables and or dust hoses from the surface to be treated
- Always use a dust collector
- Don't get disturbed during the activities.
- 

### Safety regulations

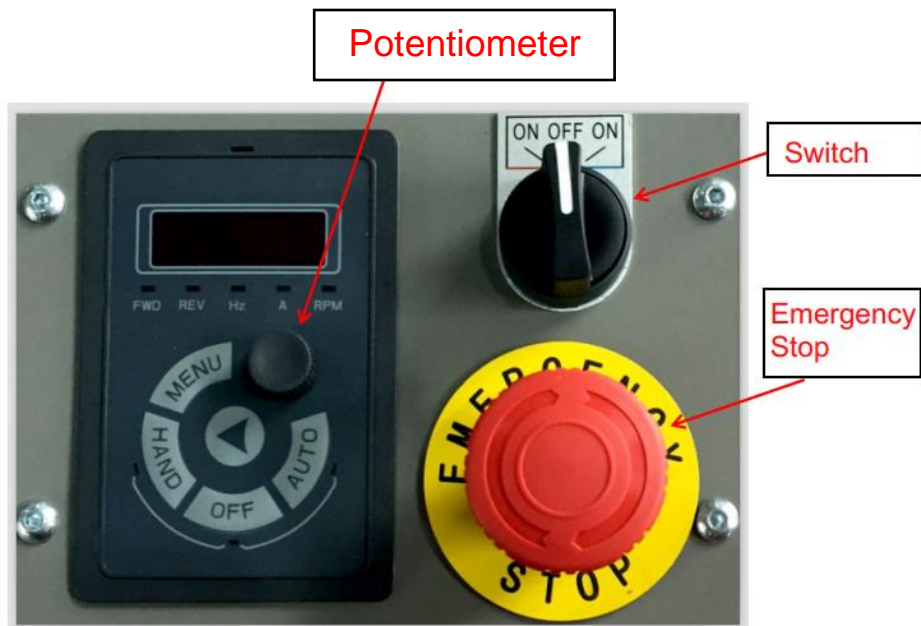
- Persons who are not operating the machine must not be permitted to stay in the surrounding area of the machine.
- Don't change anything on the machine. Use always cables which are approved and safety earthed (extend) cables. The machine is always equipped with an earthed connection, do not change this and use always earthed cables with an earthed plug.
- Connect main power supply cable to an installation with an earth leakage circuit breaker.
- Inspect and test the electrical components regularly. The electrical components have to satisfy to the requirements which apply to these components.
- Always call a skilled electrician or your distributor when you have questions about the safety of the electrical components.

- Work on electrical equipment or operating materials may only be undertaken by a skilled electrician or by trained persons under the guidance and supervision of a skilled electrician as well as in accordance with the electrical engineering regulations.
- Pull out the main plug during inspections and repairing on the machine.
- Never operate the machine when the surface is wet.
- Never use the machine in the rain.
- The machine contains rotating parts, so always leave the diamond disc on the floor while the motor is turning.
- The flexible coupling can become obsolete with use, because of this there can be higher vibrations than normal. Check for this reason regularly the flexible coupling.

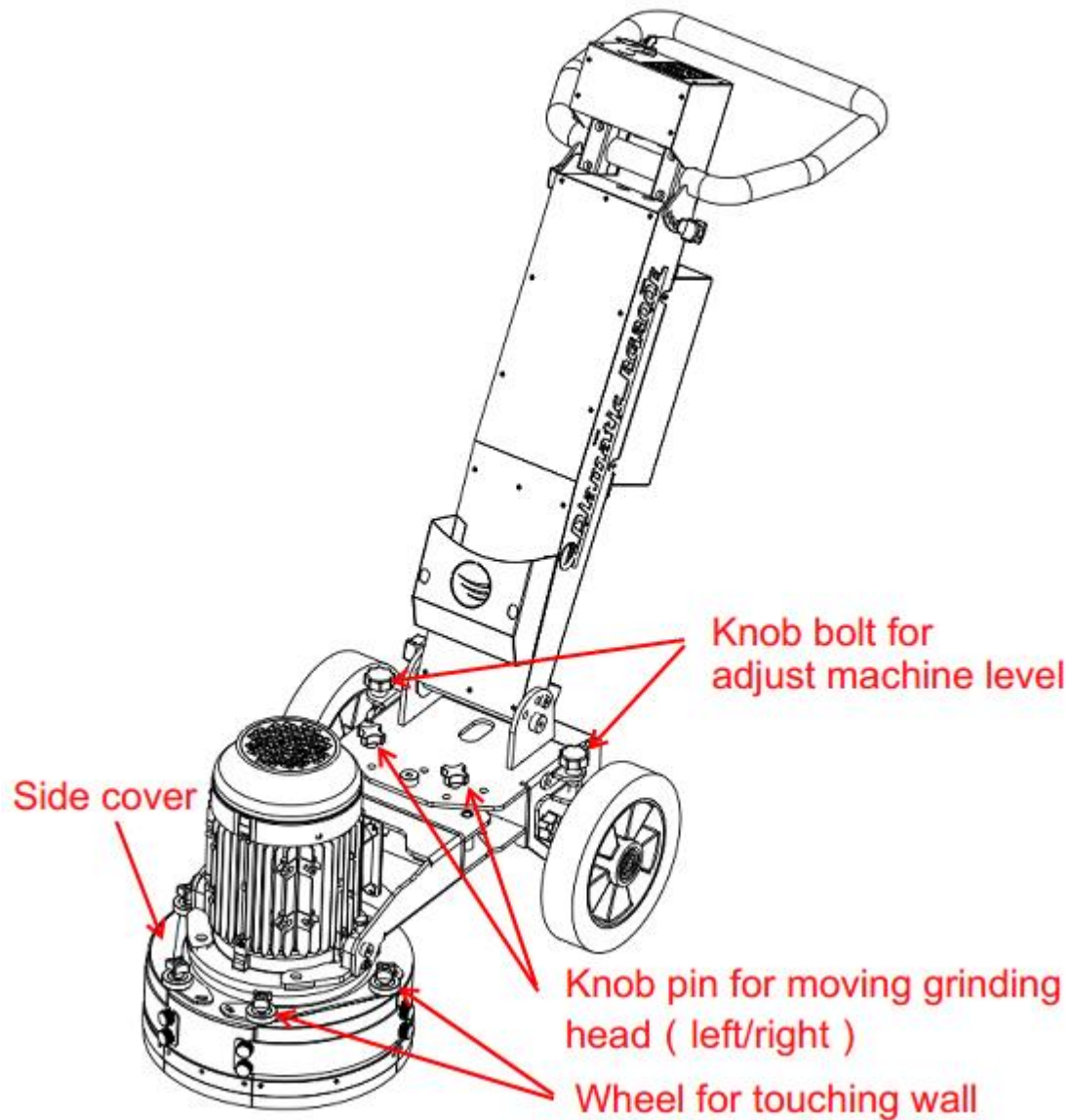
## 4. Operating

Please read this manual carefully before operating the machine.

1. Adjust the handle to suitable height to operate the machine comfortably;
2. Install grinding / polishing tool. Make sure machine is disconnected from power and the E-stop is engaged. Placing the machine into a zero mechanical state. BG-300E is equipped with 2 types of adapter plate, one is with magnetic buttons for installing diamond wings for grinding, and another is with Velcro for connecting resin pads for polishing.  
In the initial state, adapter plate with Velcro(GE0046) is bolted on adapter plate with magnetic buttons(GE0005.04), see 7.4 spare part list.
3. Connect the dust hose to the port on BMG-300E and the dust collector;
4. Turn on dust collector;
5. To turn on BG-300E. Pull out emergency button, turn on the switch to start the machine.
6. Rotate the potentiometer to adjust the rotation speed of grinding disc. Speed adjustable range is 0 – 1000rpm(2.2kW) / 0 – 1500rpm(4.0kW).
7. Turn off the machine. Press the emergency button to turn off machine



8. Turn the knob bolt to adjust machine level;
9. Before grinding the wall edge, please adjust the grinding head to left or right as needed. Take off the knob pins and move the head to left or right, then put the pins back to fix the head. Take off the corresponding side cover.



## 5. Maintenance

Work only with original Diamatic parts.

Check regularly to see if the diamond disc is in good condition. If the diamond disc is damaged or worn out, replace immediately.

Check if the flexible coupling is stiff enough, after every 2 set of diamond wings/resin pad changes. Replace if any deformation or damage is found, replace the coupling after use of 7 diamond discs.

Unusual vibrations on the machine check immediately the diamond disc and flexible coupling

Replacing the flexible coupling:

- Pull out the main plug
- Remove the diamond disc
- Loosen the bolts of the adapter plate and the flexible coupling
- Take a new flexible coupling and assemble this together with the adapter plate on the fixed coupling on the motor axle
- Assemble the brush seal.

Prevent premature wear by keeping the machine as dust free as possible. Clean the machine for this reason regularly with a dust collector

Clean the machine every day with air and non-aggressive materials. Never use a high pressure water cleaner to clean the machine.

Remove the diamond disc after using the machine

Store the cleaned and dry machine in a dry and humid free room. Protect the electrical motor from moisture, heat, dust and shocks.

All repair work must to be done by qualified Diamatic personnel, this to guarantee a safe and reliable machine.

Any guarantee on the machine is expired when:

- Non-original Diamatic parts and diamond discs have been used
- Repair work is not done by qualified Diamatic personnel
- Changes, additions or conversions are undertaken without written permission of Diamatic.

## 6. Settings Frequency Invertor

Please read the operating manual before setup the frequency invertor.

Par. No.	Name	Range	Unit	Setup
C00.33	LCP display option	0~4095		2
C00.40	HAND key option	0: Disabled; 1: Enable		1 (Default)
C00.41	OFF key option	0: Disabled; 1: Enable; 2: Enabled reset only		1
C00.47	LCP Potentionmeter Step	0: 0.1; 1: 1; 2: 10		1 (Default)
C01.20	Motor power	Motor dependant	kW	2.2 or 4.0
C01.22	Motor Voltage	50~1000	V	220/230 380/400/440/460
C01.23	Motor frequency	20~400	Hz	50 or 60
C01.24	Motor Current	Motor dependant	A	Motor dependant as voltage
C01.25	Motor speed	100~9999	rpm	1000 or 1500
C01.39	Motor poles	2~100	P	6 (2.2kW motor) 4 (4.0kW motor)
C03.00	Reference Range	0: 0 ~ Max; 1: -Max~+Max		1
C03.03	Maximum reference	0.000~4999.00		50 (Default)
C03.15	Reference Source 1	0: no function; 1: terminal VI; 2: terminal AI; 8: pulse input DI4; 11: local bus; 21: LCP potentionmeter		21
C03.41	Motor speed up time	0.05~3600.00	s	5
C03.42	Motor speed down time	0.05~3600.00	s	8
C04.16		0~1000	%	1000 (Default)
C04.17		0~1000	%	1000 (Default)
C04.18	Current limit	0~300	%	280
C05.10	Terminal FOR	0: no operation; 1: reset; 6:		6
C05.12	Terminal DI1	Stop inverse 9:Latched start;		9
C05.13	Terminal DI2	37: Latched reversing		37
C06.81	LCP pot. Min. Refer.	-4999.00~4999.00		-50
C14.18	Delay time of Auto Restart When power again	0~3600	s	3600
C14.22	Operation mode	0: normal operation; 2: Initialization; 3: Backing user settings; 4: Recover user settings		Dependant

## 7. Technical Data

	<b>BG-300E</b>	
<b>Motor power</b>	<b>2.2 kW –three phase</b>	<b>4.0kW</b>
<b>Power supply</b>	<b>230V single phase</b>	<b>230V, 400V, 460V, 50/60Hz, three phase</b>
<b>Adapter Disc</b>	<b>Ø 300mm</b>	
<b>Disc speed</b>	<b>0-1000rpm adjustable</b>	<b>0-1500rpm adjustable</b>
<b>Length</b>	<b>130 cm</b>	
<b>Width</b>	<b>45cm</b>	
<b>Height</b>	<b>110 cm</b>	
<b>Weight</b>	<b>85 kg</b>	<b>90kg</b>

Design and specifications are subject to change without notice by Diamatic.



## 8. Spare Parts

### 8.1 BG-300E upper

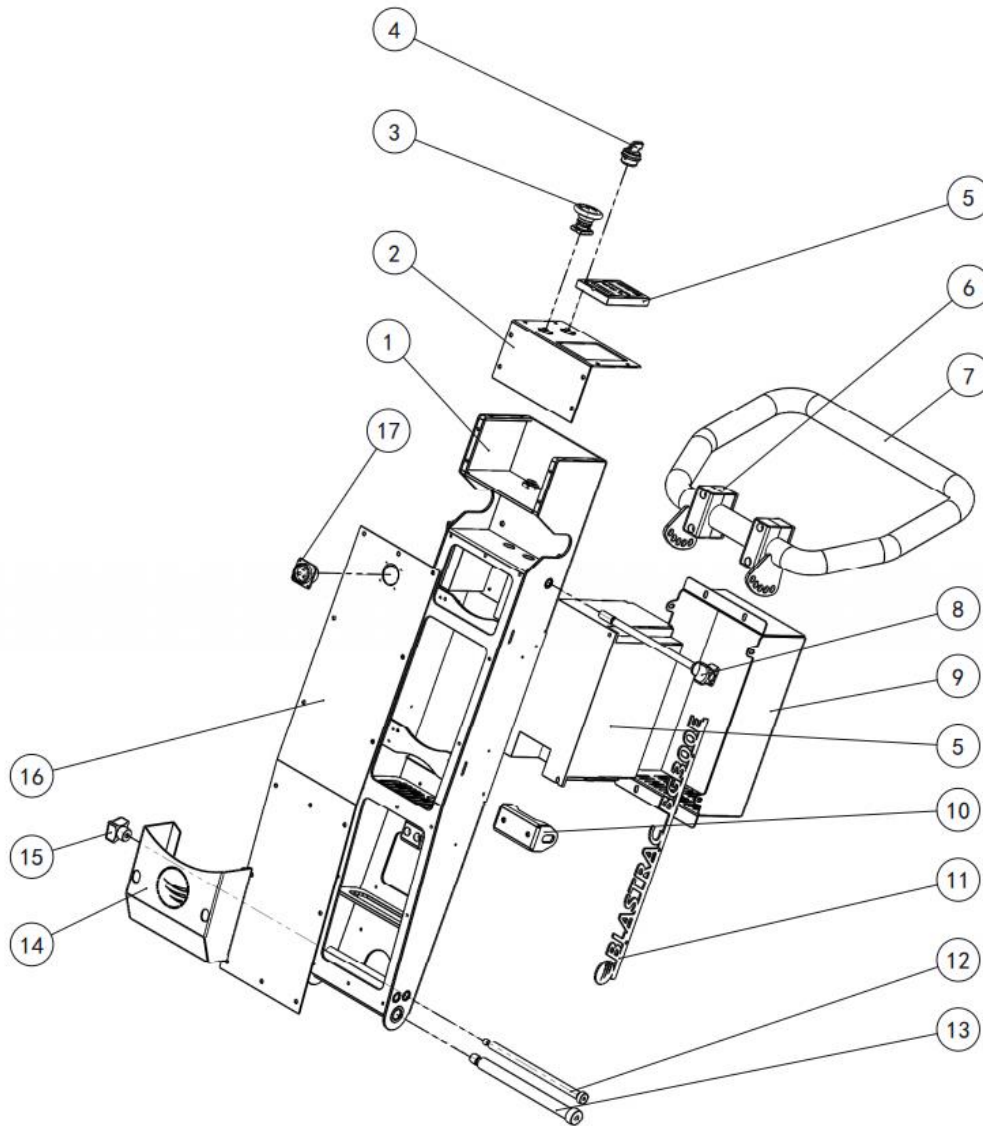


Table 8.1: BG-300E upper

No.	Item number	Description	QTY
1	GE0006	Steer handle	1
2	GE0013	Control top plate	1
3	ME0310	Emergency stop switch	1
4	ME0311	Switch	1
5	GE0051	Frequency invertor 3x380V-460V	1
	GE0065	Frequency invertor 1x220V	1
	GE0068	Frequency invertor 3x220V-240V	1
6	ME0209	Pipe clamp	2
7	GE0007	Handle weldment	1
8	GE0030	JB 7247.3-1994 M10	2
	Stud bolt GB/T 953-1988 M10X220-Q	Stud bolt long	1
9	GE0016	Control box	1
10	GE0045	Swing arm	1
11	GE0010	Logo Diamatic BG-300E	2
	GE0068	Logo Diamatic BG-300F	
12	bolt GB/T 5281-1985 D10X185	Shoulder bolt	1
13	bolt GB/T 5281-1985 D16X185	Shoulder bolt	1
14	GE0059	Tool box	1
15		Nut JB 7247.3-1994 M8	1
16	GE0021	Socket mounting plate	1
17	GE0039	Connector 220V male	1
	GE0040	Connector 220V female	1

## 8.2 BG-300E wheel rack unit

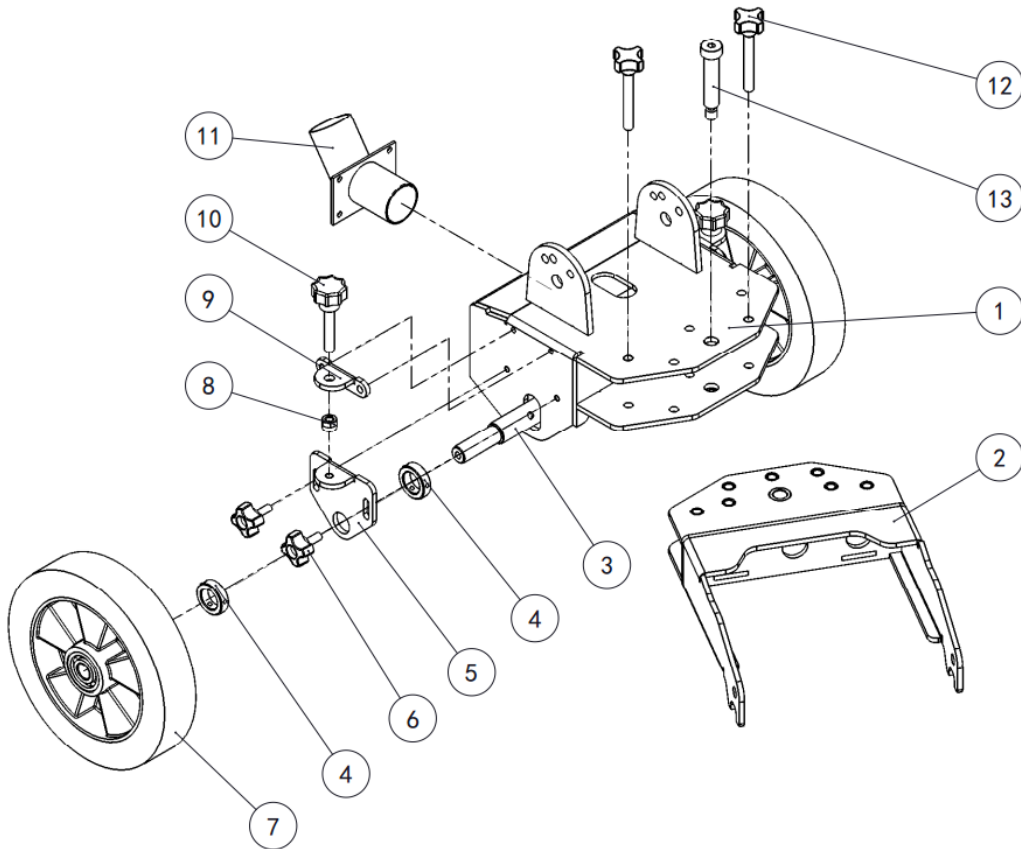


Table 8.2: BG-300E wheel rack unit

No.	Item number	Description	QTY
1	GE0001	Upper frame	1
2	GE0002	Frame	1
3	GE0012	Wheel axle	1
4	GE0011	Wheel axle sleeve	4
5	GE0018	Wheel height adjustment plate	2
6	GE0037	Star bolt M8x20	4
7	980110	Wheel 250x50x ( 60 )	2
8	Nut GB/T6128-2000 M8	Nut	2
9	GE0019	Wheel height adjustment fixing plate	2
10	GE0034	Star knob bolt M10x60	2
11	GE0009	Dust pipe	1
12	E03550	Locking pin compl.	2
13	Bolt GB/T 5281-1985 D16X70	Shoulder bolt	1

## 8.3 BG-300E grinding head unit

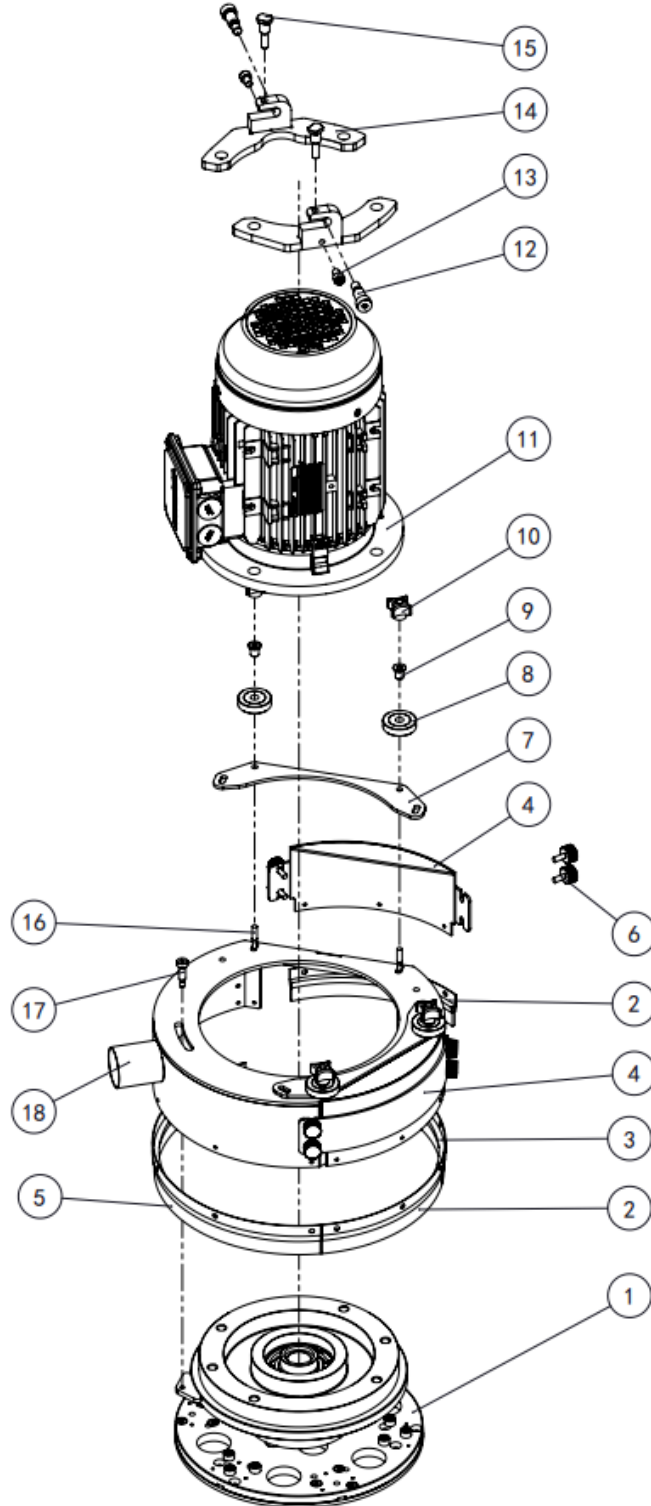


Table 8.3: BG-300E grinding head unit

No.	Item number	Description	QTY
1	GE0005	Grinder disc unit	1
2	GE0036	Brush flex part 03	2
3	GE0028	Brush flex part 02	1
4	GE0008	Cover side	2
5	GE0027	Brush flex part 01	1
6	bolt GB/T 834-1988 M6x16	bolt	4
7	GE0017	Roller mounting plate	2
8	GE0038	Bearing $\Phi 10 \times \Phi 40 \times 10$	4
9	GE0015	Bearing sleeve	4
10	GE0029	Star bolt JB 7247.3-1994 M6	4
11	GE0048-1	Motor 2.2kW-100L-6P 230V/400V/460V	1
	GE0070-1	Motor 4.0kW-100L-4P-B5T-IE2 400V 50Hz	1
	GE0070-2	Motor 4.0kW-100L-4P-B5T-IE2 230V/460V 60Hz	1
12	bolt GB/T 5281-1985 D13X20	Shoulder bolt	2
13	bolt GB/T 70.1-2000 M8X10	bolt	2
14	GE0003	Upper coupling	1
15	GE0020	Disc knob	2
16	bolt GB/T 12-1988 M6X35	Bolt	4
17	bolt GB/T 5281-1985 D8X25	Shoulder bolt	1
18	CNP/GE0004	Housing	1

## 8.4 GE0005 Grinder disc unit

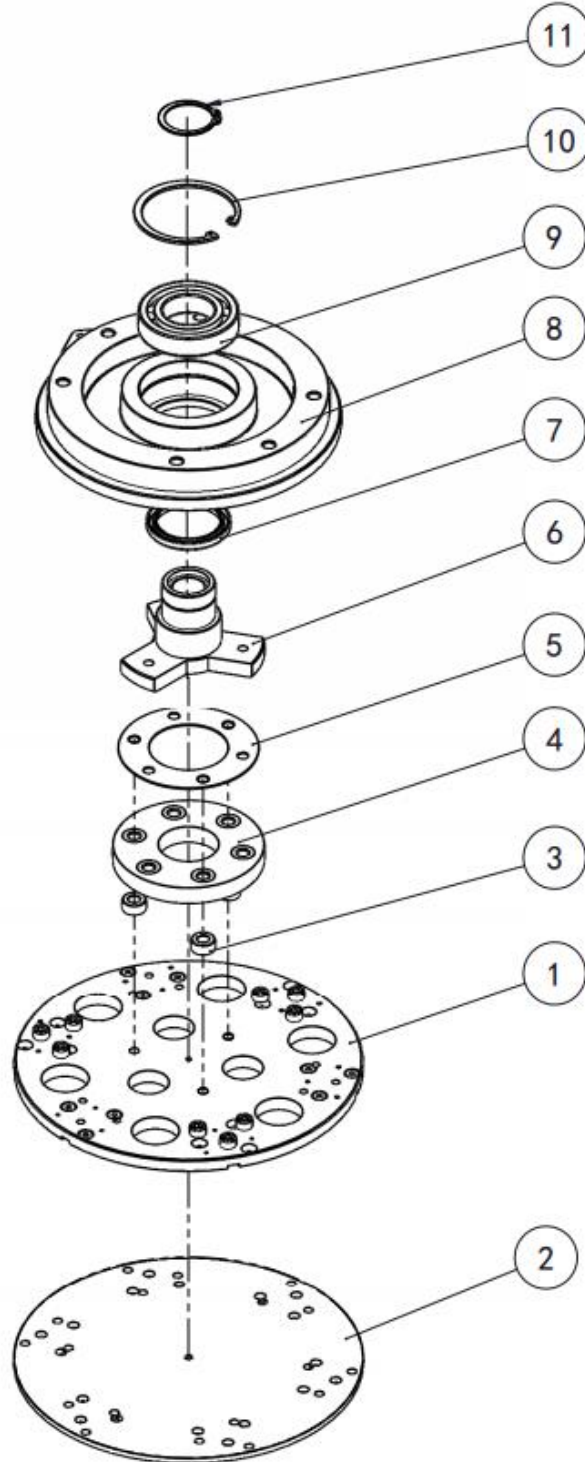


Table 8.4: GE0005 Grinder disc unit

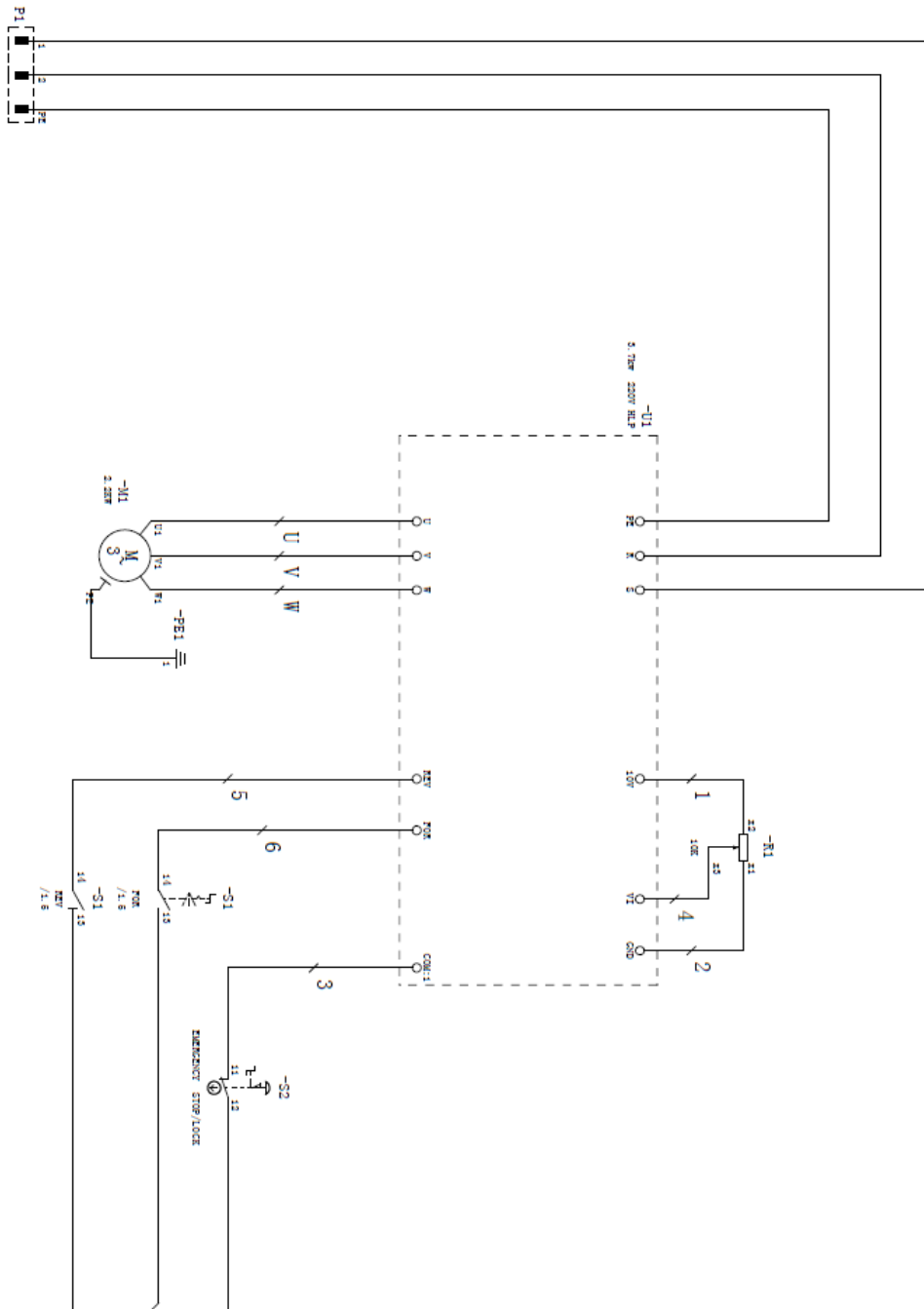
No.	Item number	Description	QTY
1	GE0005.04	Adapter plate for wings	1
2	GE0046	Adapter D300 with Velcro backing	1
3	E03250	Spacer ring	3
4	0001182	Flexible coupling	1
5	GE0014	Plate	1
6	GE0005.01	Shaft unit	1
7	GE0024	Oil seal 55x72x8	1
8	GE0005.03	Bearing house	1
9	GE0022	Bearing	1
10	GB/T 893.1-1986 85	inner retaining clip	1
11	GB/T 894.1-1986 45	outer retaining clip	1



## Electrical Schematic

### 230 V 60HZ Single Phase Wiring Schematic

230V 60hz Single Phase



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# DIAMATIC® PRODUCT WARRANTY

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## STANDARD EQUIPMENT PRODUCTS

Diamatic warrants its **DIAMATIC** standard equipment products against defects in material and workmanship under normal and proper use for a period of **2 years** from the date of delivery or, in the case of Rental Fleet Machines, 180 days from the date of assignment to a Rental Fleet. Diamatic makes this warranty only to the buyer who purchases the products directly from Diamatic or its authorized distributor. This warranty does not include expendable parts such as, but not limited to, diamonds, wear parts, couplers, and diamond plates.

**The buyer must register the product with the warranty card. This warranty card must be mailed to Diamatic within 45 days after taking delivery of the Diamatic machine to receive full warranty. Any machine not registered under warranty through Diamatic will only receive a 6 month warranty period from the date of delivery.**

### Warranty Terms and Conditions:

1. Diamatic's obligation under this warranty is limited to the replacement or repair, at Diamatic's option, of products and does not include, labor, the cost of transportation, loss of operating time, or normal maintenance services.
2. This warranty does not apply to failure occurring as a result of abuse, misuse, negligence, corrosion, erosion, normal wear and tear, alterations or modifications made to products without express written consent of Diamatic.
3. The buyer must submit all warranty claims no later than thirty (30) days after buyer becomes aware of the basis for any such claim, or should have become aware of the basis for any such claim in the exercise of reasonable diligence.

To return parts for warranty consideration, please call Diamatic Customer Service at **866-295-5512**.

Our customer service representative will obtain the necessary information to complete the Diamatic Returned Merchandise Authorization (RMA) Form. Diamatic will then send the RMA form to the customer authorizing the return of the parts for warranty evaluation.

The parts must be received within sixty (60) days following the RMA origination date or the warranty claim will be denied. Once the parts are received they will be evaluated for warranty.

If the customer cannot wait for the evaluation/replacement of the parts during this process, the customer must issue a new purchase order to Diamatic for the replacement parts before they can be shipped. Once the evaluation process is complete and parts are deemed a valid warranty claim, a credit will be issued against this invoice.

4. The buyer may not return Diamatic products without Diamatic's written authorization to do so.
5. Diamatic reserves the right to inspect and determine the scope of its warranty responsibilities for any returned Diamatic products.
6. Diamatic makes no warranty with respect to accessories it does not manufacture, including but not limited to, engines, motors, batteries, tires and all other parts. See component manufacture warranty.
7. Diamatic reserves the right to make product changes or improvements without prior notice and without undertaking any obligation such changes or improvements on previously sold products.
8. The above warranty conditions can only be altered by Diamatic. Diamatic must confirm alterations in writing for each specific transaction.
9. Diamatic reserves the right to modify this warranty for used or demo products on an individual transaction basis. Diamatic will include warranty modifications on its invoices for used or demo products
10. DIAMATIC DOES NOT AUTHORIZE ANY PERSON, REPRESENTATIVE OR SERVICE OR SALES OUTLET TO MAKE ANY WARRANTY DIFFERENT FROM THIS PRODUCT WARRANTY.
11. EXCEPT FOR ITS PRODUCT REPAIR OR REPLACEMENT OBLGATIONS DESCRIBED IN THIS PRODUCT WARRANTY, UNDER NO CIRCUMSTANCES SHALL DIAMATIC BE LIABLE TO THE BUYER OR ANY OTHER PERSON FOR ANY DIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THE DIAMATIC PRODUCT OR FOR ANY SPECIAL OR CONSEQUENTIAL DAMAGES OF ANY CHARACTER, INCLUDING WITHOUT LIMITATIONS, DAMAGES FOR ANY LOSS OF GOODWILL, WORK STOPPAGE, OR ANY AND ALL OTHER COMMERCIAL DAMAGES OR LOSSES.
12. DIAMATIC MAKES NO OTHER PRODUCT WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

**Diamatic® Warranty Registration Card**

**NOTICE!**

**TO THE DELIVERING DISTRIBUTOR OR END USER**

To ensure the proper warranty coverage is extended to the owner of this machine, fill out the attached card **COMPLETELY** and **ACCURATELY** and return to Diamatic.

**The warranty period will start on the delivery date entered below.**

The distributor or the end user must prepare the machine warranty information card when the machine is delivered. Return of the warranty card will extend the warranty period to **2 years** from the date entered below. **Failure to comply will make any and all warranties on the equipment void after 6 months.**

**USER'S REFERENCE INFORMATION**

Delivery Date _____	Machine Model No. _____
Delivering Distributor's Name and Address _____	Machine Serial No. _____
_____	Modifications _____
_____	_____
_____	_____
_____	_____
Signature of Delivering Distributor's Representative _____	_____

Blastrac is a registered trademark of Blastrac, NA  
Fold and Detach Here

**Warranty Registration Card**

**IMPORTANT!** To ensure that your Diamatic® machine is covered under warranty, please fill in the following information completely and mail or fax it to:

**Diamatic, 5220 Gaines Street, San Diego, CA 92110**

Fax 619-295-0754

(Please print legibly)

Company \_\_\_\_\_

Address \_\_\_\_\_

City, State, & Zip \_\_\_\_\_

Telephone No. \_\_\_\_\_ Contact Person \_\_\_\_\_

Date of Purchase \_\_\_\_\_ Date Received \_\_\_\_\_

Machine Model No. \_\_\_\_\_ Serial No. \_\_\_\_\_

Distributor Name \_\_\_\_\_

End User Name \_\_\_\_\_

End User E-mail \_\_\_\_\_