



Operating manual

Version 1.0.1

Drill bit grinder

OPTIgrind®
GQ-DIB

314 0020



1 Safety

- 1.1 Safety instructions (warning notes)
 - 1.1.1 Classification of hazards
 - 1.1.2 Other pictograms
- 1.2 Intended use
- 1.3 Reasonably foreseeable misuses
- 1.4 Technical data

2 Scope of delivery and assembly

3 Operation

- 3.1 Regrinding spiral drill
 - 3.1.1 Presetting
 - 3.1.2 Grinding
 - 3.1.3 Tip shaping for wood drills

4 Maintenance

- 4.1 Replacing of the grinding disk
- 4.2 Troubleshooting
- 5.1 Copyright
- 5.2 Liability claims for defects / warranty
- 5.3 Note regarding disposal / options to reuse:
 - 5.3.1 Decommissioning
 - 5.3.2 Disposal of the packaging of new devices
 - 5.3.3 Disposal of electrical and electronic components
- 5.4 Disposal via municipal collecting points
- 5.5 Product follow-up
- 5.6 EC - Declaration of Conformity

6 Ersatzteile - Spare parts

- 6.1 Ersatzteilzeichnung - Drawing spare parts - GQ-D13
 - 6.1.1 Ersatzteilliste - Spare part list - GQ-D13
- 6.2 Schaltplan - Wiring diagram

Preface

Dear customer,

Thank you very much for purchasing a product made by OPTIMUM.

OPTIMUM metal working machines offer a maximum of quality, technically optimum solutions and convince by an outstanding price performance ratio. Continuous enhancements and product innovations guarantee state-of-the-art products and safety at any time.

Before commissioning the machine please thoroughly read these operating instructions and get familiar with the machine. Please also make sure that all persons operating the machine have read and understood the operating instructions beforehand. Keep these operating instructions in a safe place nearby the machine.

The operating instructions include indications for safety-relevant and proper installation, operation and maintenance of the machine. The continuous observance of all notes included in this manual guarantee the safety of persons and of the machine.

The manual determines the intended use of the machine and includes all necessary information for its economic operation as well as its long service life.

In the paragraph "Maintenance" all maintenance works and functional tests are described which the operator must perform in regular intervals.

The illustration and information included in the present manual can possibly deviate from the current state of construction of your machine. Being the manufacturer we are continuously seeking for improvements and renewal of the products. Therefore, changes might be performed without prior notice. The illustrations of the grinding machine may be different from the illustrations in these instructions with regard to a few details. However, this does not have any influence on the operability of the grinding machine. Therefore, no claims may be derived from the indications and descriptions. Changes and errors are reserved!

Your suggestion with regard to these operating instructions are an important contribution to optimising our work which we offer to our customers. For any questions or suggestions for improvement, please do not hesitate to contact our service department.

If you have any further questions after reading these operating instructions and you are not able to solve your problem with a help of these operating instructions, please contact your specialised dealer or directly the company OPTIMUM.

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1 Safety

Glossary of symbols

	gives further advice
	calls on you to act
	enumerations

This part of the operating instructions

- explains the meaning and use of the warning notices included in these operating instructions,
- defines the intended use of the grinding machine,
- points out the dangers that might arise for you or others if these instructions are not observed,
- informs you about how to avoid dangers.

In addition to these operation instructions, please observe

- the applicable laws and regulations,
- the legal regulations for accident prevention,
- the prohibition, warning and mandatory signs as well as the warning notes on the grinding machine.

1.1 Safety instructions (warning notes)

1.1.1 Classification of hazards

We classify the safety warnings into various levels. The table below gives an overview of the classification of symbols (ideogram) and the warning signs for each specific danger and its (possible) consequences.

Ideogram	Warning alert	Definition / consequence
	DANGER!	Threatening danger that will cause serious injury or death to people.
	WARNING!	A danger that might cause severe injury to the personnel or can lead to death.
	CAUTION!	Danger or unsafe procedure that might cause injury to people or damage to property.
	ATTENTION!	Situation that could cause damage to the grinding machine and product and other types of damage. No risk of injury to people.
	INFORMATION	Application tips and other important or useful information and notes. No dangerous or harmful consequences for people or objects.

1.1.2 Other pictograms



1.2 Intended use

The drill bit grinder must only be used to regrind spiral drills. The use of coolant is forbidden and no longer required. The drill bit grinder is not intended for outdoor use. If the drill bit grinder is used in any way other than described above, modified without the approval of the company Optimum Maschinen Germany GmbH or used in any other way than the drill bit grinder is being used improperly.

We will not be held liable for any damages resulting from any operation which is not in accordance with the intended use. We imperatively point out that due to any constructive, technical or process control modifications which are not authorized by Optimum Maschinen Germany GmbH the warranty will also be come null and void.

It is also part of intended use that you

- observe the operating values of the drill bit grinder,
- the operating manual is observed,
- observe the cleaning intervals,
- the drill bit grinder is not used in continuous operation.



WARNING!

Heaviest injuries through improper use.



ATTENTION!

If the grinding machine is not used as intended or if the safety directives or the operating instructions are ignored the liability of the manufacturer for any damages to persons or objects resulting hereof is excluded and the claim under guarantee is becoming null and void!

1.3 Reasonably foreseeable misuses

- Any other use as the one determined under the "Intended use" or any use beyond the described use shall be deemed as not in conformity and is forbidden.
- The operation of the machine without the prescribed safety equipment is not permitted. Any other use has to be discussed with the manufacturer.
- With the drill bit grinder twist drills may only be sharpened in the dry state. In order to avoid misuses it is necessary to read and understand the operating instructions before the first commissioning.
- The drill bit grinder is not suitable for continuous operation. If the engine gets overheated due to excess temperatures, it will get automatically switched off. In such a case, let the appliance cool down.



WARNING!

Keep the drill bit grinder always out of children's reach and secure the openings after the completion of your work with the protective covers.



WARNING!

Stay always in the near of the drill bit grinder until the drill bit grinder has stopped and the plug was pulled.



WARNING!

Before switching on the drill bit grinder, make sure that there are,

- no dangers generated for persons,
- no objects are damaged.



WARNING!

Fire and explosion due to sparks. Do not operate the drill bit grinder nearby combustible or explosive material.

Avoid any risky working practices:

- Make sure that nobody is endangered by your work.
- Wear safety goggles.
- The instructions mentioned in these operating instructions have to be strictly observed during assembly, operation and cleaning.
- Do not work on the drill bit grinder, if your concentration is reduced, for example, because you are taking medication.

1.4 Technical data

Electrical connection	230 V ~ 50Hz , 80 watt
Speed superabrasive product	4200 min ⁻¹
Grinding disk	Steel disc, coated with cubic crystalline boron nitride
Maximal constant load	5 minutes
Max. grinding speed [m/s]	17
Point angle fixed	118°
Grinding capacity of spiral drill	Ø 3mm - Ø 13mm
Dimensions, height [mm]	150
Dimensions, depth [mm]	140
Dimensions, width [mm]	290
Net weight [kg]	2.5
Gross weight [kg]	3
Dimension of the packing L x W x H [mm]	230 x 195 x 165
Environmental conditions Temperature	+5 to +40 °C
Environmental conditions Humidity	max. 70%
General environmental conditions	not be used outdoors
Protection type	IP20



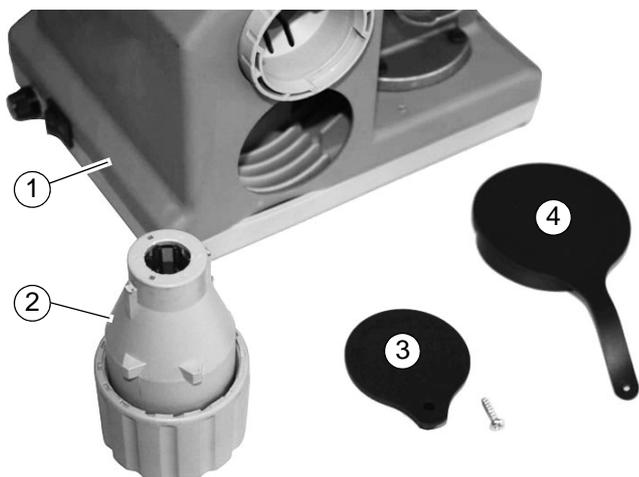
CAUTION!



Depending on the overall noise exposure and the basic limit values the user has to wear an appropriate hearing protection. We generally recommend to use a noise protection and a hearing protection.

2 Scope of delivery and assembly

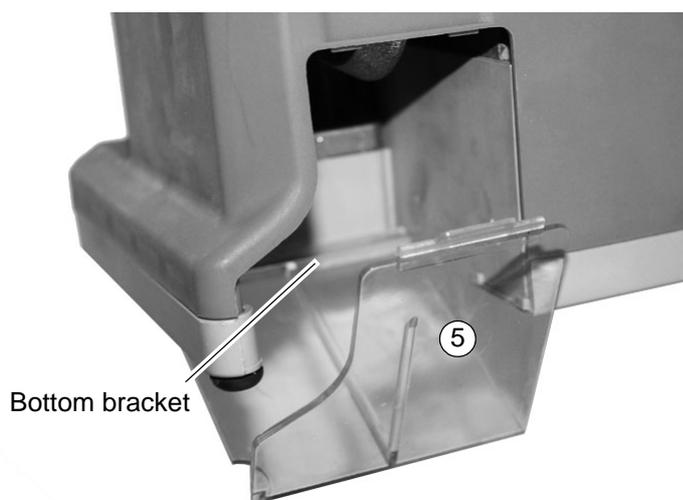
When the drill bit grinder is delivered, check immediately that the machine has not been damaged during transport and that all components are included. To do so take all parts out of the packaging and compare the parts with the figures below. Screw the two protective cap (3) and (4) fixed to the housing and attach the dust cover (5) into the rear opening.



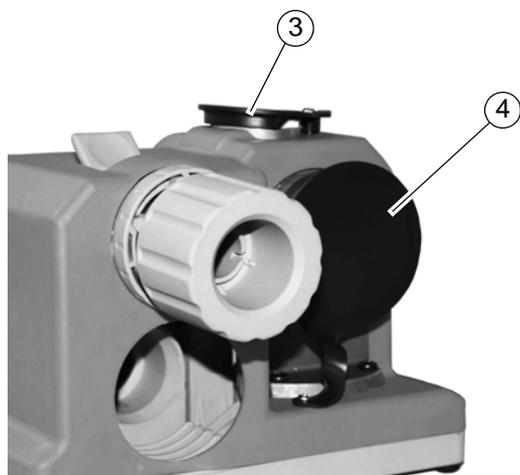
1	Drill bit grinder	2	Chuck
3	Protective cap above	4	Front protective cap
5	Dust cover		

**ATTENTION!**

In case of wrong and improper storage electrical and mechanical machine components might get damaged and destroyed. Store the drill bit grinder only under the intended environmental conditions as prescribed in the technical data.

3 Operation

Bottom bracket



2	Chuck
6	Alignment hole
7	Opening to regrind spiral drills
9	ON/OFF switch
10	Alignment button
11	Tip shaping hole

3.1 Regrinding spiral drill

A drill that is ground adequately is characterised by the following:

- Pointed tip in the centre of a wood drill.
- Drilling bit with two sharp and identically sized sides at metal drills.
- Two rear edges that are slightly lower than the front edges of the drilling bit.

If your drill does not have the characteristics above, it must be ground.

3.1.1 Presetting

Take the chuck (2) to your hand and insert it in the alignment hole guide (6).

Open the chuck by turning left so that the drill you want to grind can be inserted in it.

Press the alignment button to open the adjustable jaws (10). Now the drill can be inserted until it stops in between the adjustable jaws.

Release slowly the alignment button (10) so that the closing adjustable jaws grasp the drill above the work holding slot and set the position in this way.



Clip

Close the chuck again by turning it right and take out of the alignment hole.

Tighten the chuck ② a little bit more now.

3.1.2 Grinding



Use protective glasses!



Start the drill bit grinder using the On/Off button.

Now turn the chuck with light pressing to the right and left stop so that noise made during the grinding process is significantly reduced.

Take the chuck out of the guide, turn by 180° and repeat the grinding process.

Switch the drill grinder off by the On/Off button. Let the grinding disc stop before removing the chuck.

3.1.3 Tip shaping for wood drills



Only for wood drills!



Start the drill bit grinder using the On/Off button. Insert the chuck with a drill made ready in step "Grinding" in the tip shaping hole ①.

Now turn the chuck with light pressing to the right and left stop so that noise made during the grinding process is significantly reduced. Take the chuck out of the guide, turn by 180° and repeat the tip shaping process.

Switch the drill grinder off by the On/Off button.

Let the grinding disc stop before removing the chuck. Make sure the drill tip shape is adequate, which is characterised by a sharp point in the centre of the drill.

After your work, secure the openings again with the protective caps and pull the plug.

4 Maintenance



WARNING!



Only work on the drill bit grinder when the mains plug is disconnected.

4.1 Replacing of the grinding disk

→ Unscrew the hexagon bolt. The screw is unscrewed counter-clockwise (ordinary right-handed thread).

→ Pull off the grinding disc from the shaft by hand. If it is not possible to pull off the grinding disc by hand there is deposited grinding dust between the shaft and the hole of the grinding disc which you can moisten with a bit of oil.

→ The elimination of defects is done by your dealer.



ATTENTION!

The use of solvents will damage the drill grinder.

Use only mild cleaning agent.

4.2 Troubleshooting

Failures	Cause/ possible effects	Solution
Device does not work	<ul style="list-style-type: none"> Unit fuse blown 	<ul style="list-style-type: none"> Replace the micro-fuse 2A
Reground drill is not good	<ul style="list-style-type: none"> Worn grinding wheel 	<ul style="list-style-type: none"> Replace grinding wheel

5 Appendix

5.1 Copyright

This document is copyright. All derived rights are also reserved, especially those of translation, re-printing, use of figures, broadcast, reproduction by photo-mechanical or similar means and recording in data processing systems, neither partial nor total.

Subject to technical changes without notice.

5.2 Liability claims for defects / warranty

Beside the legal liability claims for defects of the customer towards the seller the manufacturer of the product, OPTIMUM GmbH, Robert-Pfleger-Straße 26, D-96103 Hallstadt, does not grant any further warranties unless they are listed below or had been promised in the frame of a single contractual agreement.

- The processing of the liability claims or of the warranty is performed as chosen by OPTIMUM GmbH either directly or through one of its dealers. Any defective products or components of such products will either be repaired or replaced by components which are free from defects. The property of replaced products or components passes on to OPTIMUM Maschinen Germany GmbH.
- The automatically generated original proof of purchase which shows the date of purchase, the type of machine and the serial number, if applicable, is the precondition in order to assert liability or warranty claims. If the original proof of purchase is not presented, we are not able to perform any services.
- Defects resulting of the following circumstances are excluded from liability and warranty claims:
 - Using the product beyond the technical options and proper use, in particular due to overstraining of the machine.
 - Any defects arising by one's own fault due to faulty operations or if the operating manual is disregarded.
 - Inattentive or incorrect handling and use of improper equipment.
 - Non-authorized modifications and repairs.
 - Insufficient installation and safeguarding of the machine
 - Disregarding the installation requirements and conditions of use.
 - Atmospheric discharges, overvoltage and lightning strokes as well as chemical influences.
- The following items are as well not subject to the liability or warranty claims:
 - Wearing parts and components which are subject to a standard wear as intended such as e.g. V-belts, ball bearings, illuminants, filters, sealings, etc.
 - Non reproducible software errors
- Any services which OPTIMUM GmbH or one of its agents performs in order to fulfill in the frame of an additional guarantee are neither an acceptance of the defects nor an acceptance of its obligation to compensate. Such services do neither delay nor interrupt the warranty period.
- Place of jurisdiction among traders is Bamberg.
- If one of the above mentioned agreements is totally or partially inefficient and/or null, it is considered as agreed what is closest to the will of the warrantor and which remains in the framework of the limits of liability and warranty which are predefined by this contract.

5.3 Note regarding disposal / options to reuse:

Please dispose of your device environmentally friendly by disposing of scrap in a professional way.

Please neither throw away the packaging nor the used machine later on, but dispose of them according to the guidelines established by your city council/municipality or by the corresponding waste management enterprise.

5.3.1 Decommissioning



CAUTION!

Immediately decommission used machines in order to avoid later misuse and endangering of the environment or of persons.

- **Disconnect the plug from the power supply.**
- **Cut the connection cable.**
- **Remove all environmentally hazardous operating fluids from the used device.**
- **If applicable remove batteries and accumulators.**
- **Disassemble the machine if required into easy-to-handle and reusable assemblies and component parts.**
- **Supply the machine components and operating fluids to the provided disposal routes.**

5.3.2 Disposal of the packaging of new devices

All used packaging materials and packaging aids of the machine are recyclable and generally need to be supplied to the material reuse.

The packaging wood can be supplied to the disposal or the reuse.

Any packaging components made of cardboard box can be chopped up and supplied to the waste paper collection.

The films are made of polyethylene (PE) and the cushion parts are made of polystyrene (PS). These materials can be reused after reconditioning if they are forwarded to a collection station or to the appropriate waste management enterprise.

Supply the packaging material only correctly sorted, so that it is possible to directly supply it to the reuse.



INFORMATION

Please take care in your interest and in the interest of the environment that all component parts of the machine are only disposed of in the intended and admitted way.

Please note that the electrical devices include lots of reusable materials as well as environmentally hazardous components. Account for separate and professional disposal of the component parts. In case of doubt, please contact your municipal waste management. If appropriate, call on the help of a specialist waste disposal company for the treatment of the material.

5.3.3 Disposal of electrical and electronic components

Please make sure that the electrical components are disposed of professionally and according to the legal regulations.

The device includes electric and electronic components and must not be disposed of with the rubbish. According to the European directive 2002/96/EG regarding electrical and electronic used devices and the execution of national rights used electrical tools and electrical machines need to be collected separately and be supplied to an environmentally compatible reuse.

Being the machine operator you should obtain information regarding the authorized collection or disposal system which applies for your company.

Please make sure that the batteries and/or accumulators are disposed of in a professional way according to the legal regulations. Please only throw discharged batteries in the collection boxes in shops or at municipal waste management companies.

5.4 Disposal via municipal collecting points

Disposal of used electrical and electronic components (Applicable in the countries of the European Union and other European countries with a separate collecting system for those devices).



The sign on the product or on its packing indicates that the product must not be handled as common household waste, but that it needs to be delivered to a central collection point for recycling. Your contribution to the correct disposal of this product will protect the environment and the health of your fellow men. The environment and the health are endangered by incorrect disposal. Recycling of material will help to reduce the consumption of raw materials. Your District Office, the municipal waste collection station or the shop where you have bought the product will inform you about the recycling of this product.

5.5 Product follow-up

We are required to perform a follow-up service for our products which extends beyond shipment.

We would be grateful if you could send us the following information:

- Modified settings
- Any experiences with the grinding machine which might be important for other users
- Recurring failures of the grinding machine.

5.6 EC - Declaration of Conformity

Machinery Directive 2006/42/EC Annex II 1.A

**The manufacturer /
retailer:** Optimum Maschinen Germany GmbH
Dr.-Robert-Pfleger-Str. 26
D - 96103 Hallstadt

hereby declares that the following product,

Product designation: Drill bit grinder

Type designation: GQ-D13

Serial number: _ _ _ _ _

Year of construction: 20__

Drill bit grinder for sharpening of twist drills up to 13mm, which meets all the relevant provisions of the above mentioned Directive 2006/42/EC as well as the other directives applied (below) including at the time this statement applicable changes.

The following other EC Directives were applied:

EMC Directive 2004/108/EC

Low Voltage Directive 2006/95/EC

RoHS Directive 2011/65/EC

The safety objective meet the requirement of EC Directive 2006/95/EC

The following harmonized standards were applied:

EN 55014-1:2006 Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission (CISPR 14-1:2005)

EN 55014-2:1997/A1:2001 Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 2: Immunity - Product family standard (CISPR 14-2:1997/A1:2001)

EN 60204-1:2006/A1:2009 Safety of machinery - Electrical equipment of machines - Part 1: General requirements (IEC 60204-1:2005/A1:2008)

EN 60204-1:2006/AC: 2010 Safety of machinery - Electrical equipment of machines - Part 1: General requirements (IEC 60204-1:2005 (modified))

EN 61029-2-4:2011 Safety of transportable motor-operated electric tools - Part 2-4: Particular requirements for bench grinders (IEC 61029-2-4:1993, modified + A1:2001, modified)

EN ISO 12100:2010 Safety of machinery - General principles for design - Risk assessment and risk reduction (ISO 12100:2010)

EN 50581:2012 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

Person responsible for the document: Kilian Stürmer, Phone: +49 (0) 951 - 96555 - 800

Address: Dr.-Robert-Pfleger-Str. 26
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Kilian Stürmer
(CEO / Managing director)
Hallstadt, 2013-12-12



6 Ersatzteile - Spare parts

6.1 Ersatzteilzeichnung - Drawing spare parts - GQ-D13

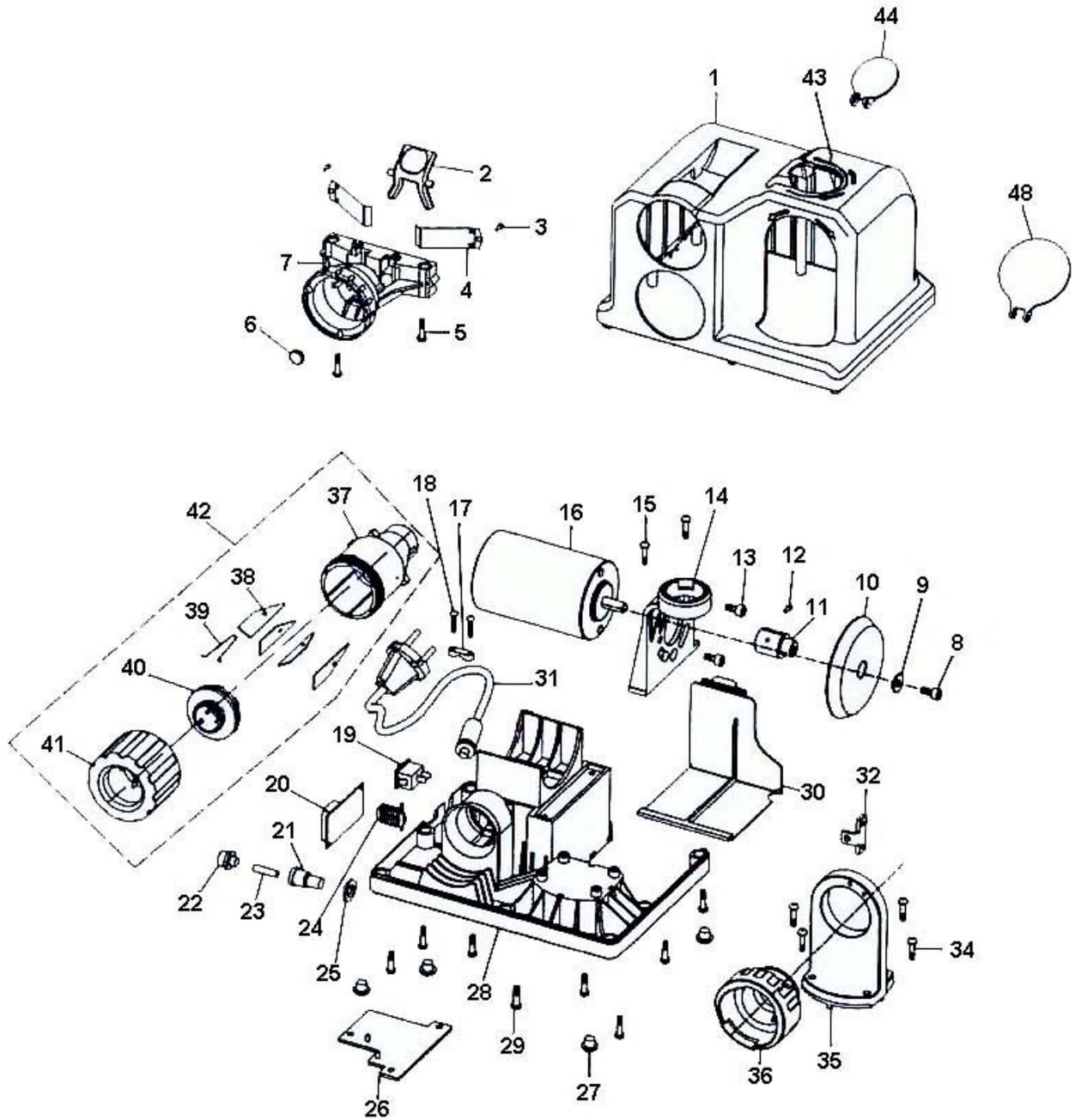


Abb. 6-1: Ersatzteilzeichnung - Drawing spare parts GQ-D13

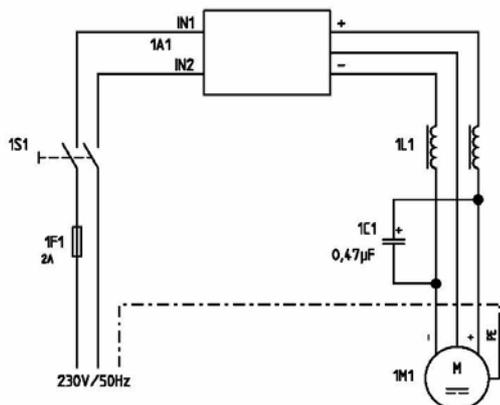
6.1.1 Ersatzteilliste - Spare part list - GQ-D13

Pos.	Bezeichnung	Designation	Menge Qty.	Artikelnummer Item no.
1	Gehäuse oben	Top Housing	1	031400201
2	Klemmtaster	Clamping button	1	031400202
3	Schraube	Screw	2	
4	Federblatt	Spring leaf	2	031400204
5	Schraube	Screw	2	
6	Endpunkt	Terminal	1	031400206



Pos.	Bezeichnung	Designation	Menge	Artikelnummer
			Qty.	Item no.
7	Befestigungsregal	Fixing shelf	1	031400207
8	Schraube	Screw		
9	Scheibe	Washer	1	
10	Schleifscheibe	Grinding Wheel	1	3140021
11	Wellenzapfen	Shaft extension	1	0314002011
12	Schraube	Screw	1	
13	Schraube	Screw		
14	Stellungsring	Positioner	1	0314002014
15	Schraube	Screw		
16	Motor	Motor	1	0314002016
17	Klemmbügel Kabel	Wire Restraining	1	0314002017
18	Schraube	Screw		
19	Ein-Aus Schalter	ON-OFF switch	1	031400201S1
20	PCB	PCB	1	031400201A1
21	Sicherungsgehäuse	Fuse block	1	0314002021
22	Mutter für Sicherung	Nut for fuse	1	0314002022
23	Feinsicherung	Fuse	1	031400201F1
24	induktiver Blindwiderstand	Inductance	1	031400201L1
25	Klemmmutter für Sicherungsblock	Locknut for fuse block	1	0314002025
26	Abdeckung	Cover	1	0314002026
27	Gummifuß	Cushion	4	0314002027
28	Gehäuse unten	Base	1	0314002028
29	Schraube	Screw	11	
30	Staubschutzdeckel	Dust cover	1	0314002030
31	Anschlusskabel	Cord	1	0314002031
32	Anschlusskonsole	Connector Board	1	0314002032
34	Schraube	Screw	4	
35	Konsole	Console	1	0314002035
36	Stützsockel	Stand socket	1	0314002036
37	Stellungsring für Klemmstreifen	Positioner for blade	1	0314002037
38	Halter Klemmung	Blade Holder	6	0314002038
39	Stahlfeder	Steel Spring	6	0314002039
40	Druckring	Transition Tube	1	0314002040
41	Klemmmutter	Locknut	1	0314002041
42	Klemmhalter vollständig (beinhaltet 35,36,37,38,39)	Tool holder complete (Includes 35,36,37,38,39)	1	0314002042
43	Führungsring	Guide ring	1	0314002043
44	Abdeckkappe oben	Cover above	1	0314002044
48	Abdeckkappe unten	Cover below	1	0314002048

6.2 Schaltplan - Wiring diagram



Pos.	Bezeichnung	Designation	Menge	Artikelnummer
			Qty.	Item no.
1S1	Schalter Ein-Aus	Switch On-Off	1	031400201S1
1F1	Feinsicherung 2A - 250V	Fuse 2A - 250V	1	031400201F1
1M1	Motor	Motor	1	03140020M1
1L1	induktiver Blindwiderstand	Inductance	1	031400201L1
1C1	Kondensator	Condenser	1	031400201C1
1A1	PCB	PCB	1	031400201A1