



FLOOR GRINDER

DELTA II

OWNER'S MANUAL AND PARTS BOOK



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1 Machine applications

Grinding of horizontal, dry floors such as concrete and steel surfaces with or without a coating and asphalt using CONTEC® grinding tools. The use of the machine outside is only possible in dry weather.

2 Technical data

	DELTA II
Grinding width	490 mm (19 in)
Width	66 cm (26 in)
Length	105 cm (41 in)
Hight	115 cm (45 in)
Weight	175 kg (385 lbs)
Hose ϕ	70 mm (2.86 in)
Motor	9.0 kW (12 hp)
Electric supply	230 V, 3 phases
Honda engine	-
Average value of acceleration a_{hv} *	4.3 m/s ²
Noise level L_{wa} *	99 dB(A)
Noise level Leq *	99 dB(A)

3 Safety Rules for Operating the DELTA Grinder

Intended application and operation:

Grinding of flat, horizontal, dry surfaces that are typically concrete, asphalt or steel and with or without a coating. For optimum performance and compatibility always use tools supplied by CONTEC®. Operation of the grinder outdoors is only permitted if the weather is dry.

Attention ! The DELTA floor grinders are constructed according to existing safety rules and regulations. These technical precautions must not be removed or changed under any circumstances. While operating the grinder the following points should also be kept in mind:

- 1 The floor grinder may only be operated by trained professionals. The operators have read and be familiar the contents of this manual.
- 2 The floor grinder must not be operated in areas where the hazard of explosion or fire exists.
- 3 The grinder should only be activated when the tools are lifted from the floor by the lifting device (Appendix diagram No. 63 and 65).
- 4 The tools and discs may be hot after use. Take care when changing them.
- 5 Never operate the floor grinder on a sloping surface.

- 6 Take care when moving the machine on a sloping surface, substantial rolling forces can be produced.
- 7 The hooks of a crane can only be placed in the lifting points.
- 8 The machine should always be stored in a warm, dry place when not in use.
- 9 The floor grinder may only be operated with the dust guard (Appendix diagram No.1).
- 10 Only CONTEC® original tools and spare parts are to be used.
- 11 The grinder should only be operated with all safety guards in position.
- 12 When changing tools, during transportation, cleaning, repair or maintenance the grinder must be disconnected from the mains.
- 13 The operator must never leave the machine unattended during operation.
- 14 Before leaving the machine all rotary parts must be brought to a standstill. Electric models must be disconnected from the power supply. Ensure the machine cannot roll or move by itself.
- 15 Never wear loose or badly fitting clothing. Flapping sleeves may be pulled into the machine causing serious injury.
- 16 The DELTA should be switched off immediately if unusual noises or vibrations are detected during the operating of the machinery. A thorough check must be carried out in order to detect the cause.
- 17 Check the power cables regularly as damage may have occurred while operating the machine. Always disconnect the cables before examination and treat all electrical parts with extreme care.
- 18 After any maintenance and adjustment all safety guards must be refitted.
- 19 Ear protectors must be worn.
- 20 Eye protectors must be worn.
- 21 Safety shoes with steel caps must be worn.
- 22 When operating the grinder produces large volumes of dust the grinder should be connected to a suitable dust collector.
- 23 Depending on the floor (floor coating) grinding can produce gases. The operator must be held responsible if the gases generated are hazardous and whether protection is necessary. Grinding floors containing asbestos is especially dangerous and can cause health problems. Special masks must be worn which keep the breathing air clean. A dust collector must be used and should be equipped with filters suitable for asbestos dust.
- 24 The floor must be brushed before grinding to prevent loose material collecting in the tools and then being thrown out with force. Anchor screws and bolts in the floor can also be seen better if the area is clean. If the grinding head strikes an anchor screw or bolt then serious damage can be caused to the machine and grinding head.

4 Operating and Grinding

Operating the DELTA has to be carried out according to the safety rules in Chapter 4.

Bring the grinder to the floor.

Connect a hose to the DELTA and to the dust collector. It is important, that the entire length of the hose has no holes and is completely air tight. Small holes or a bad connection can extremely decrease the performance

Check all the electric cables.

Connect the extension lead to the plug of the grinder. The power required is 230 V, 26 A, 3 phase.

Lift the tools from the floor using the lift bar (Appendix diagram No. 63 and 65).



If you start the machine with the grinding tools placed on the floor you may damage the discs and/or parts of the grinder.

Make sure the Star-Delta-Switch (Appendix diagram No. 225) is in the “0” position. Turn the motor switch (Appendix diagram No. 211) to position “ON”. Turn the “Star-Delta-Switch” in the “Star” position. The motor begins to turn. Make sure that the ventilator on the topside of the motor is turning in the correct direction as indicated by the arrow. If the motor rotates in the wrong direction, turn the switch back to the “0” position. Press the emergency STOP button (Appendix diagram No. 223) and disconnect the plug (Appendix diagram No. 219).

Switch the motor on. Make sure the motor is spinning in the correct direction. If not, two phases of the power supply have to be swapped with each other. The correct direction is indicated by an arrow on the motor fan.

Attention: Operating the machine with the motor spinning in the wrong direction can cause serious damage to the machine.

Restart the machine again and turn the “Star-Delta-Switch” (Appendix diagram No. 225) to position “Star”. The motor begins to turn. Wait until the motor is on full speed and then turn to position “Delta”. Now lower the grinding tools slowly and carefully on to the floor using the lifting device. Grinding is now possible.

5 Adjustments and Maintenance

5.1 Lifting Device

The Lifting device must be adjusted according to the type and individual wear and tear of the tools. The machine is lifted using a screw under the motor. The lift of the lifting device is approximately 5 cm. When the grinding tools are placed on the floor, the distance between the screw and the floor should be 2 cm. Adjust it by turning the screw in or out.

5.2 Height Adjustment of the Rear Wheel Wing

The rear wheel wing can be adjusted in two different ways to accommodate the different tools. The wing is secured to three points. Two on the frame itself and the other one to the Spindle nut. The actual height adjustment - fine and standard settings - of the grinding discs can be achieved by turning the hand wheel of the spindle. By turning the wheel the height can be set lengthways. Therefore avoiding uneven wear on the discs.

5.3 Shifting the rear wheel axis and thereby regulating the load on the discs and tools.

Different floors and different tools require different loads on the grinding discs. By shifting the rear wheel axis, this load can be altered. When the axis is fixed in the rear position, this allows the maximum load on the tools. The more forward position means less load. The rear wheel axis can be comfortably moved by loosening the two screws behind the rear wheels.

5.4 Belt tension

Loosen the four fixing screws of the motor. To do this you must remove the front belt cover and the cover behind the Spindle. By turning an M10 Nut on the rear side of the belt tensioner (metal plate underneath the motor Appendix diagram No. 101) the tension of the belt can be adjusted. The tooth belt of the DELTA II should be able to move halve a centimetre forwards and backwards half way between the pulley and the motor shaft.

6 Changing of the tools

Attention: Before working on the grinder bring the motor to a total stand still and disconnect from the power supply.

Attention: Tools can be hot after use.

- Tilt the machine onto the back wheels and rest it on the bar underneath the control panel.
- All brackets for segment plates (Appendix diagram No. 11) are secured to the tool brackets (Appendix diagram No. 3) by 3 Allen screws.
- By loosening the screws the discs can be removed.
- Check the grinding tool for wear or damage ready for the next application.
- Fix new tools according to the appendix „Tools“.

7 Appendix

Diagrams

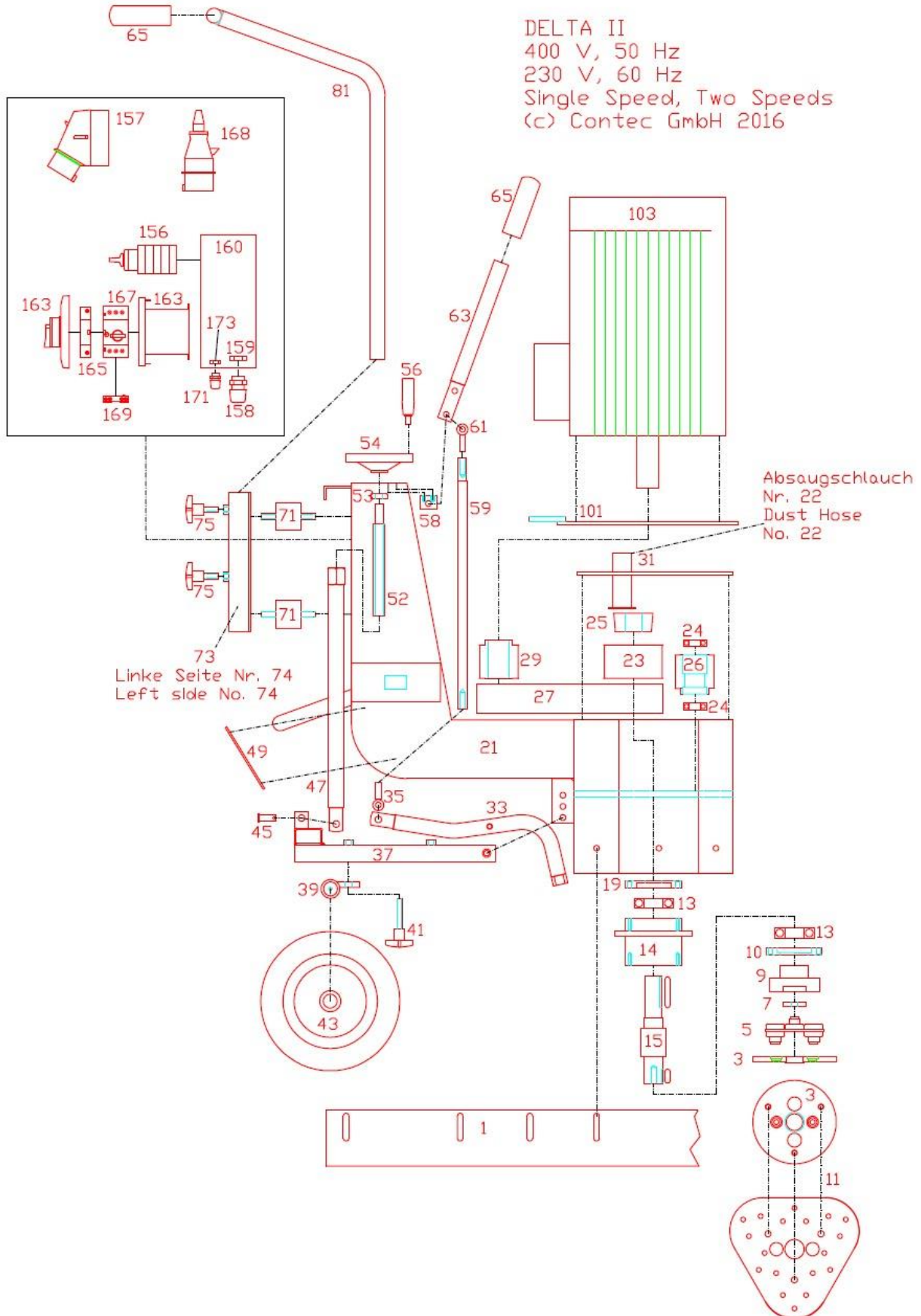
Wire diagram

Part list

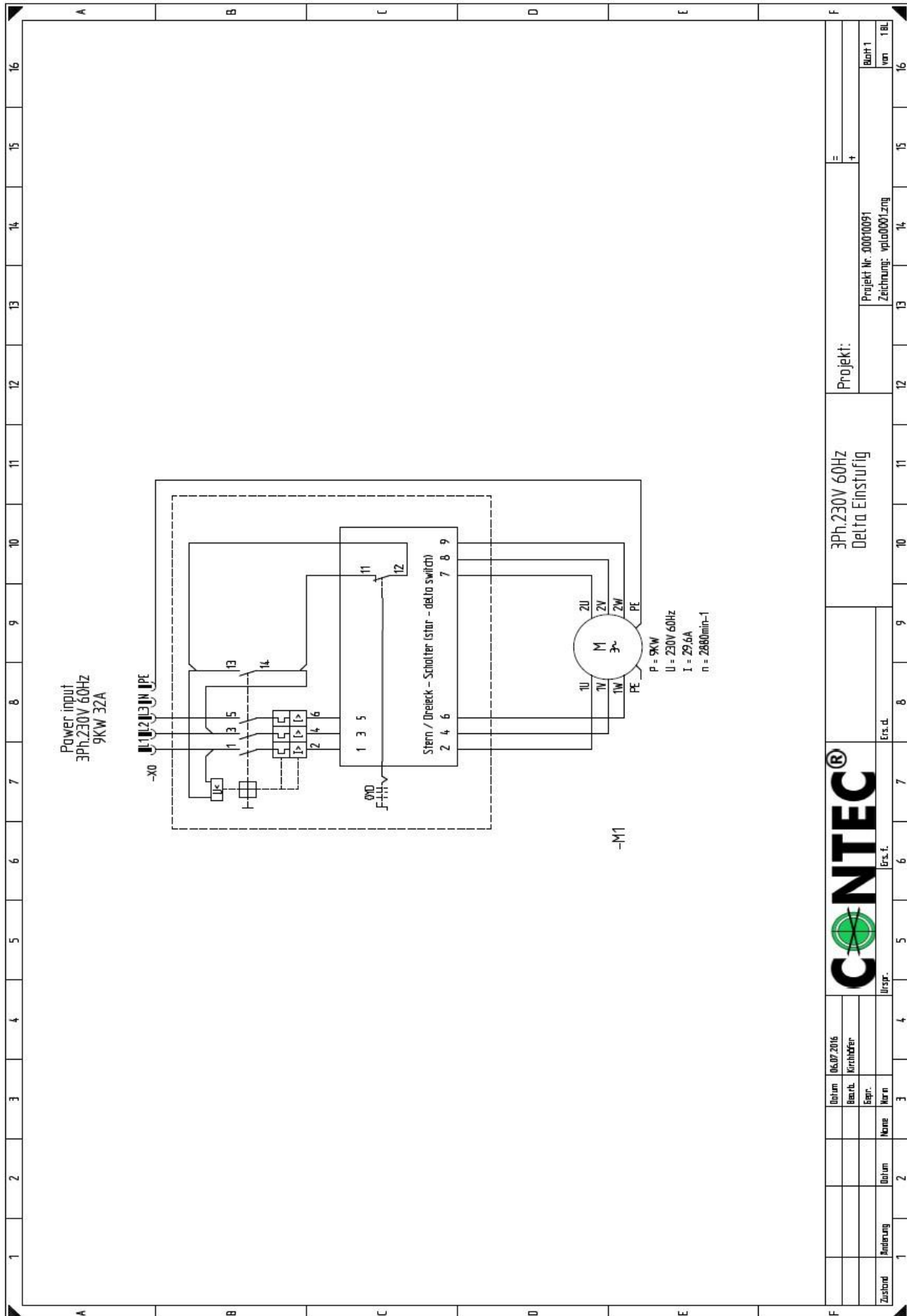


PARTS BREAKDOWN

PARTS LIST – DELTA II MAIN ASSEMBLY



DELTA II ELECTRICAL DIAGRAM



PARTS LIST – DELTA II

Item #	Part #	Description	Quantity
1	70-23-14-50	Rubber Sealing	1.00
3	14-17-10-05-N	Tool Bracket	2.00
5	90-25-10-01	Rubber Coupling	2.00
7	14-10-10-06	Spacer	2.00
9	14-17-10-08	Bracket for Coupling	2.00
10	14-17-10-04	Bottom Lid Bearing Housing	2.00
11	14-10-49-01	Bracket for Disc round	2.00
13	61-20-62-07	Bearing	4.00
14	14-17-10-02	Bearing Housing	2.00
15	14-17-10-01	Axis	2.00
19	14-17-10-03	Top Lid Bearing Housing	2.00
21	14-10-01-00	Machine Frame	1.00
22	70-25-01-70	Dust Hose	1.00
23	70-40-8M-50	Pulley Bearing Housing	2.00
24	61-20-60-04	Bearing	2.00
25	90-24-20-12-30	Taperlock	2.00
26	70-26-8M-50-U	Reverse Pulley	1.00
27	70-24-13-60	Belt	1.00
29	70-26-8M-50-38	Motor Pulley	1.00
31	14-10-02-00	Belt Cover	1.00
33	14-10-11-10	Lift Arm	1.00
35	61-50-10-41	Eye Screw	1.00
37	14-10-07-01	Swing Rear Axis	1.00
39	14-10-08-05	Axis	1.00
41	60-30-10-50	Cross Handle Screw	2.00
43	80-52-22-55	Wheel	2.00
45	60-33-12-25	Pin for lifting Rod	1.00
47	60-32-20-04	Spindel Pipe	1.00
49	14-10-04-01	Lid	1.00
52	18-10-05-02	Threaded Spindle	1.00
53	14-10-09-03	Spacer for Spindle	1.00
54	90-21-95-50	Level Adjustment Wheel	1.00
56	90-21-95-51	Knob for Handwheel	1.00
58	14-10-11-01	Bracket for Lift Pipe	2.00
59	14-13-11-03	Lifting Rod	1.00

61	61-50-10-40	Eye Screw	1.00
63	14-10-11-02	Lift Pipe	1.00
65	70-21-26-10	Rubber Grip	3.00
71	70-26-50-00	Rubber Block	4.00
73	14-10-05-01	Bracket for Handle right Side	1.00
74	14-10-05-00	Bracket for Handle left Side	1.00
75	60-30-10-30	Cross Handle Screw	4.00
81	14-10-06-01	Handle	1.00
101	14-10-03-01	Belt Tensioner	1.00
103	50-20-20-75-US	Motor	1.00
156	51-20-20-04	Star-Delta-Switch	1.00
158	50-20-23-M-25	Cable Gland	1.00
159	50-20-23-GM-M-25	Nut	1.00
160	50-10-10-41	Switch Box	1.00
163	50-10-10-01	Motor Protective Switch Box	1.00
165	51-20-30-04-US	Low Voltage Protective	1.00
167	51-20-30-32	Motor Prtective	1.00
168	50-20-20-30	Plug	1.00
169	50-20-10-07	Auxiliary Switch	1.00
171	50-20-23-M-16	Cable Gland	1.00
173	50-20-23-GM-M-16	Nut	1.00

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