



SERVICE MANUAL Diamatic 555

VERSION 1.7
From serial number 21853B and up.

FOR MORE INFORMATION VISIT WWW.DIAMATICUSA.COM

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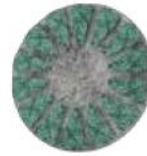
1. Tools & Accessories



<p>E07185-1 DIAMAG ADAPTER PLATE Ø185 MM</p>	<p>BG707321 #18 - 20 BG707322 #30 - 40 BLUE GRINDING WING</p>	<p>BG707311 #18 - 20 BG707312 #30 - 40 BG707313 #60 - 80 BG707314 #120 - 150 GREEN GRINDING WING</p>	<p>BG707301 #18 - 20 BG707302 #30 - 40 BG707303 #60 - 80 BG707304 #120 - 150 RED GRINDING WING</p>	<p>BG707341-2 #30 - 40 BLACK GRINDING WING</p>
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<p>E10691 DIAMAG ADAPTER PLATE WINGS PCD Ø185 MM</p>	<p>BG200997-1/SET PCD GRINDING WING BG200999-1/SET PCD GRINDING WING 2 X 1/4 BG200995-1/SET PCD GRINDING WING 1 X 1</p>	<p>E07459 ROTARY PLATE ONLY Ø185 MM E07460 PLATE Ø185 MM COMPLETE WITH BUSH HAMMER ROLLERS BG300118-1 PLATE Ø185 MM COMPLETE WITH STAR WHEELS</p>	<p>E09119-2H BUSH HAMMER ROLLER Ø50 MM BG300109 CUTTER WHEEL Ø50 MM</p>
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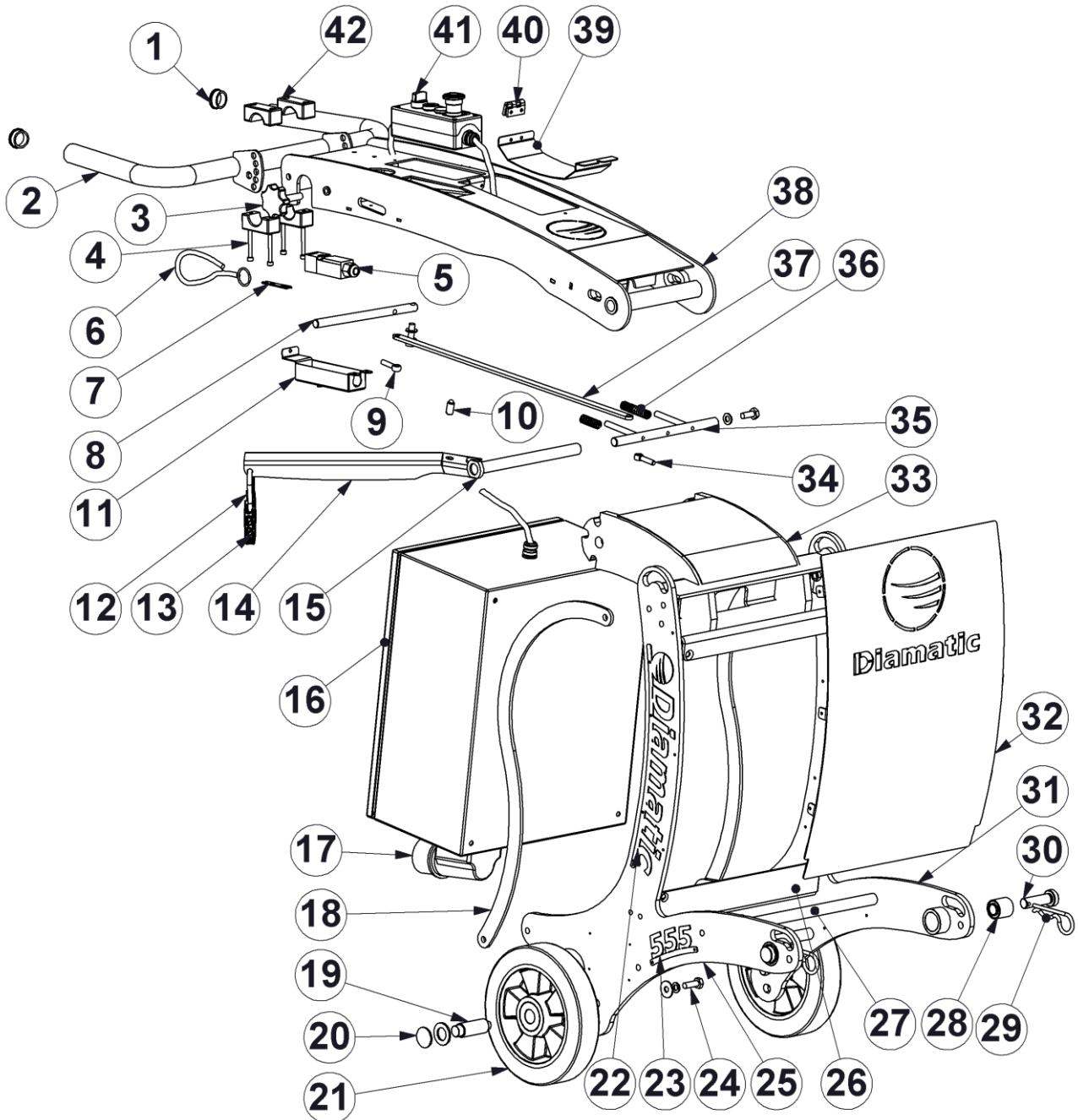
<p>E09399/FINE VELCRO PLATE Ø185 MM For Polishing pads E09399/COARSE VELCRO PLATE Ø185 MM For Maintenance pads</p>	<p>BG185001 #40 #1 - orange BG185002 #100 #2 - Black BG185003 #200 #3 - Blue BG185004 #400 #4 - Red BG185005 #800 #5 - White BG185006 #1500 #6 - Yellow BG185007 #3000 #7 - Green POLISHING PADS Ø185 MM</p>	<p>BG185M004 #400 #4 BG185M005 #800 #5 BG185M006 #1500 #6 BG185M007 #3000 #7 MAINTENANCE PADS Ø185 MM</p>	<p>005014SR 10 M SUCTION HOSE Ø76 MM</p>
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See the service manual for all spare parts and visit our website for the complete list of all accessories, grinding tools, polishing pads and bush hammers.



2. Spare parts

Fig. 01 Frame complete





Frame complete

Item	Part number	Description	Remarks	Qty.
1	BG005841_7	Tube cap round		2
2	E11229_RD	Steer handle		1
3	BE0721	Knob M10		2
4	BE0191	M6x50 hexagon socket head bolt	DIN 912	4
5	BG11760	Deadman switch		1
6	BG11758	Cord for deadman switch		1
7	BG11759	Key for deadman switch		1
8	E11227	Unlocking handle		1
9	BE0702	M8x40 eye bolt		2
10	E11284	M12x22 Resilient pressure piece		1
11	E11226	Deadman switch cover		1
12	BE0653	Hook		2
13	E07008	Chain (11links)		1
14	E11222	Hose arm		1
15	E11228	Handle mounting shaft		1
16	E10853	Electrobox 5,5kW 1x230V		1
	E12458	Electroset 1x230V 5.5kW	Keypad	1
17	BG11920/32	Electrical inlet 32A		1
18	E11217	Electrobox bumper strip		1
19	E11236	Wheel shaft - BMG		2
20	BE0097	Starlock ring diam.20 with cap		2
21	E01491	Wheel		2
22	E11231	Diamatic logo red		2
23	E11059_RD	555 logo red		2
24	BE0040	M10x30 bolt		2
25	E11215	Right side of frame		1
26	E11230	Bottom electrobox bracket		1
27	E11218	Stiffening shaft		3
28	E01492	Megi bush		2
29	E11119	Spring lock 5mm		2
30	E11121	Hinge bolt		2
31	E11216	Left side of frame		1
32	E11235	Front cover Diamatic		1
33	E11219	Handle mounting bracket		1
34	BE0702	M8x40 eye bolt		2
35	E11220	Locking shaft		1
36	E09237	Spring 14, 8x64x2,0		2
37	E10380	Push strip		1
38	E11221	Main handle		1
39	E11224	Control box cover		1
40	E11124	Hinge 40x40		1
41	E06861	Operating box complete	Star/delta	1
	E07882	Operating box complete	Speed control	1
	E01543	Emergency stop		
	E00360	Signal light red complete		
	E01318	Start button		
	E01323	Left/right switch		
	E05130	Make contact (green)		
	E05131	Potential meter complete (speed switch)		
42	999-9156	Pipe clamp set		2



Fig. 01.2

Handle complete for Keypad

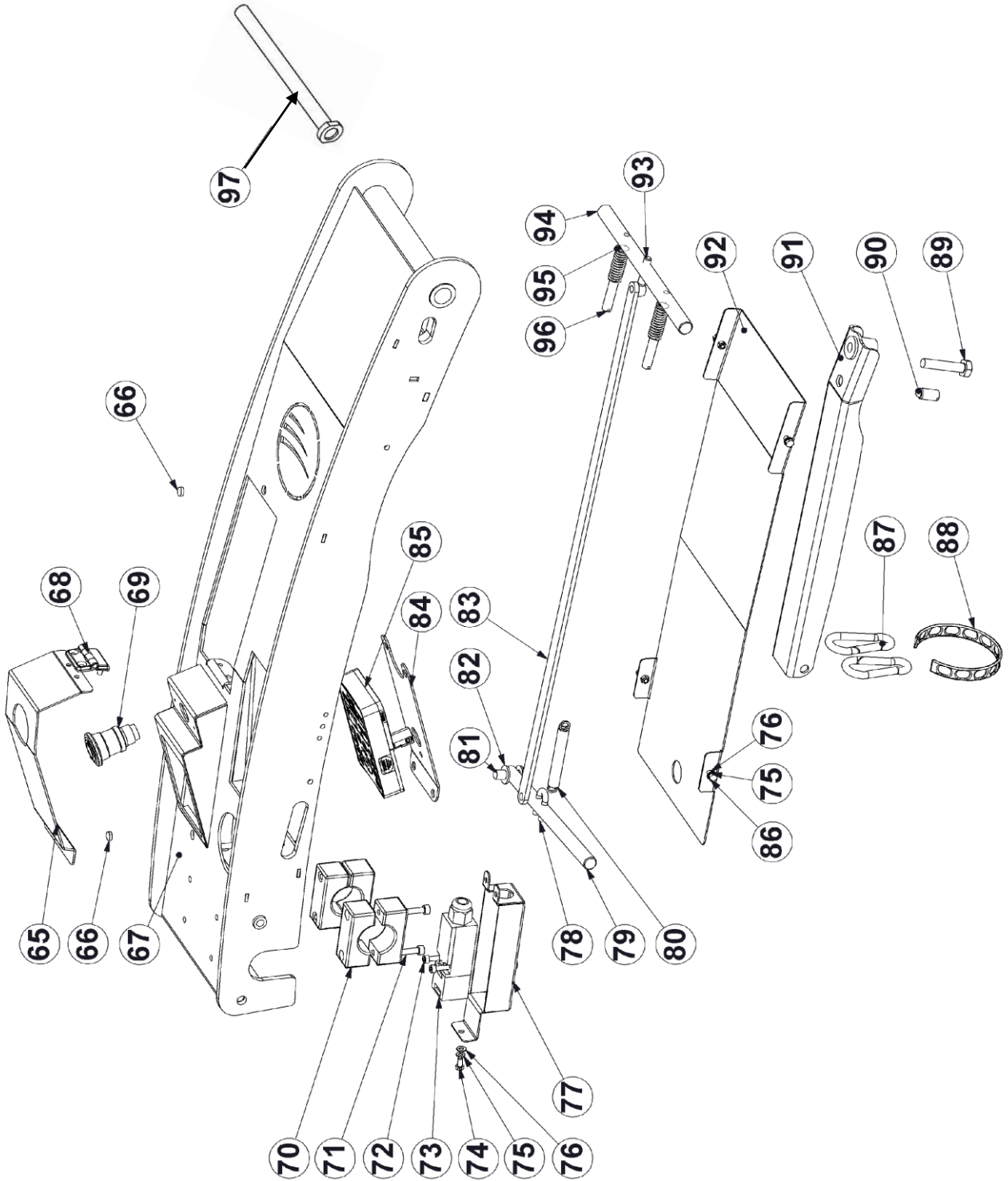


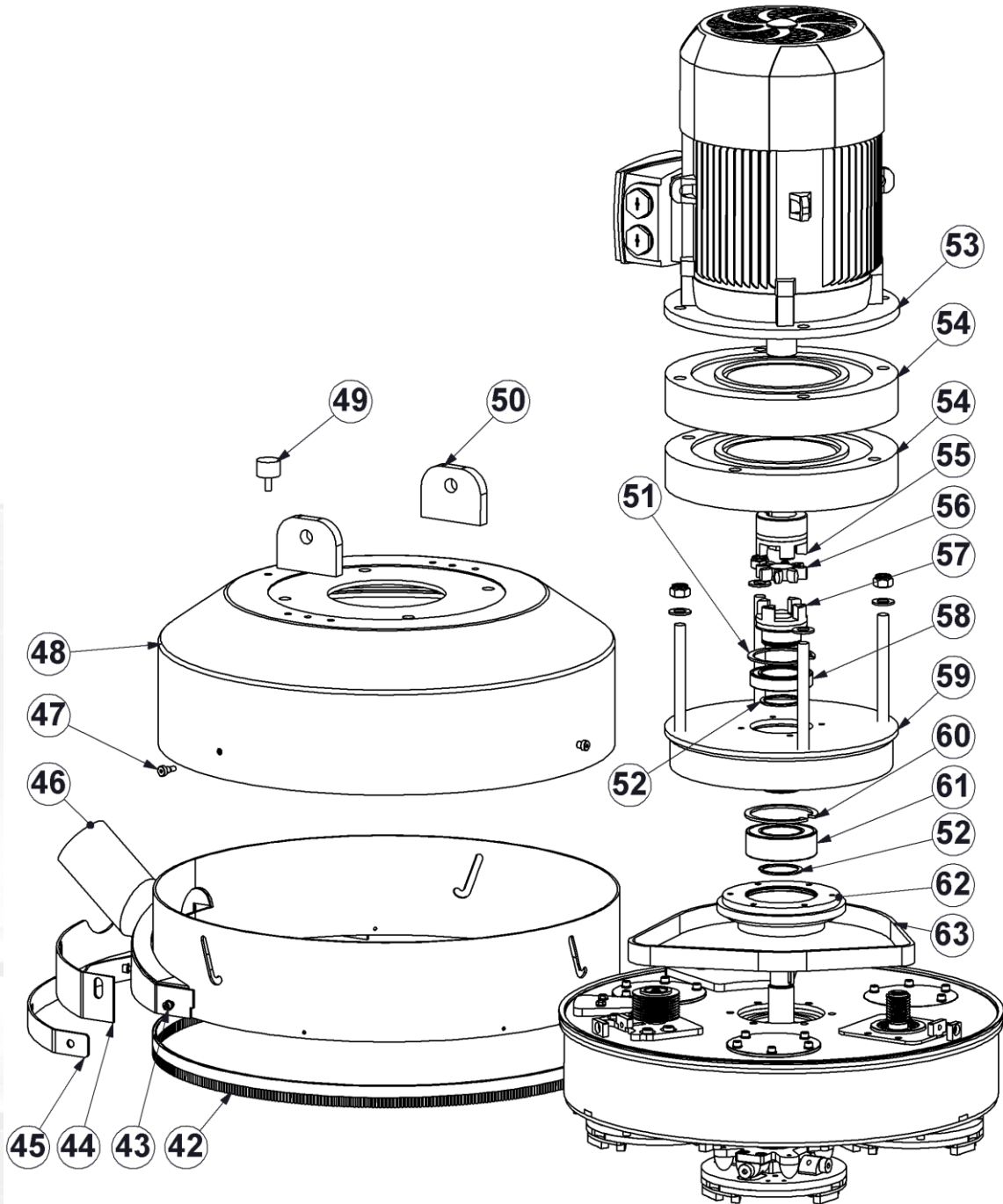


Fig. 01.2 Handle complete for Keypad

Item	Part number	Description	Remarks	Qty.
65	E12380	Keypad cover		1
66	E06446	Magnet		2
67	E12375	Handle		1
68	E12404	Hinge		1
-	BE0952	M5x16 Countersunk head screw	Not shown	2
-	BE0901	M5 Hex Flangelocknut/ins	Not shown	4
69	E13002	Emergency stop		1
70	999-9156	Pipe clamb (set) 35mm		2
71	BE0191	M6x50 Hexagon socket head		4
72	BE0184	M5x30 Hexagon socket head		2
73	BG11760	Deadman switch		1
74	BE0180	M5x12 Hexagon Socket Head cap	DIN912	1
75	BE0310	M5 Spring lock washer		5
76	BE0304	M5 Washer		5
77	E11226	Deadman switch cover		1
-	BE0901	M5 Hex Flangelocknut/ins	Not shown	2
78	BE0712	Wire rope clamp 8mm DIN741_555		1
79	E11227	Unlocking handle		1
80	E10388	Tension spring		1
81	BE0054	M10x30 Hexagon Socket Head Cap		1
82	BE0004	M10 Washer		2
83	E10380	Push strip		1
84	E12379	Cover plate		1
-	BE1066	M6 Self-locking hex flange nut	Not shown	4
85	E12369	Keypad		1
86	BE0180	M5x12 Hexagon Socket Head cap	DIN912	4
-	BE0304	M5 Washer		4
87	BE0653	Snap hook		2
88	E07008	Chain for dusthose	11 links / 36 cm	1
89	BE0232	M10x50 hexagon bolt		1
90	E11284	M12x22 Resilient pressure piece		1
-	BE0075	M12 Hexagon nut (low)	Not shown	1
91	E11222	Hose arm		1
92	E11557	Cover steer handle		1
93	BE0702	M8x40 eye bolt		1
94	E11220	Locking axle		1
95	E09237	Spring 14,8x64x2,0		2
96	E10556	Spring axle		2
97	E11228	Handle mounting shaft		1
-	BE0580	M10x20 hex. socket head cap s. DIN912	Not shown	2
-	BE0006	M10 spring lock washer DIN127B	Not shown	2
-	BE0062	Washer M10x30x1,5	Not shown	2



Fig. 02 Machine complete



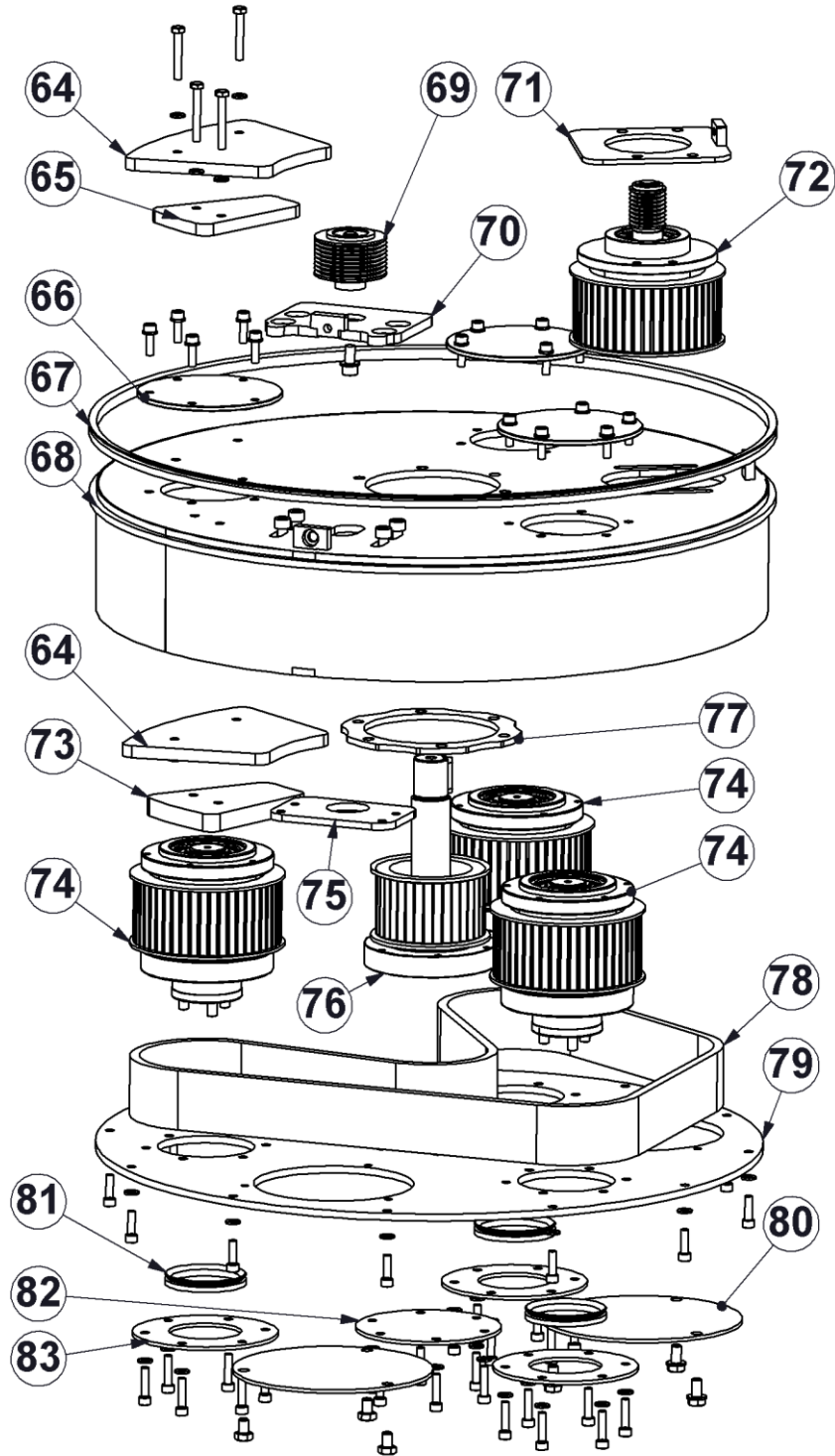


Machine complete

Item	Part number	Description	Remarks	Qty.
42	BG-BRUSH20mm	Synth. Brush for 550		2m
43	BE0020	M6x20 Hexagon socket head cap		4
44	E11028	Rubber seal of floating shroud		1
45	E11027	Tightening steel strip		1
46	E11014	Floating shroud BMG-55		1
47	BE0642	M6 8x8 hex. Socket head shoulder		1
48	E11008	Protection cover BMG-555		1
49	E11187	Rubber bumper 30-20		1
50	E11120	Holder		2
51	BE0107	Retaining ring for bore Ø 80mm		1
52	BE0126	Retaining ring for shaft Ø 50mm	DIN 471	2
53	E07277/Dual/RD	Motor 5,5kW 3x230/400/1500rpm B5	1500RPM	1
54	E10231	Fill-up block steel	1x on 230V version	2
	E10231-ALU	Fill-up block aluminium for 1x230V	Only on 230V version	1
56	E11012_2	Spider for totex 28		1
57	E11012_1	Bottom coupling		1
58	E11058	Bearing		1
59	E11010	Main pulley-BMG-555		1
60	E03993	Retaining ring for bore Ø 90mm		1
61	E11057	Bearing		1
62	E06048	Central bearing housing top		1
63	E11030	Top drive belt		1



Fig. 03 Upper & Lower Drive system



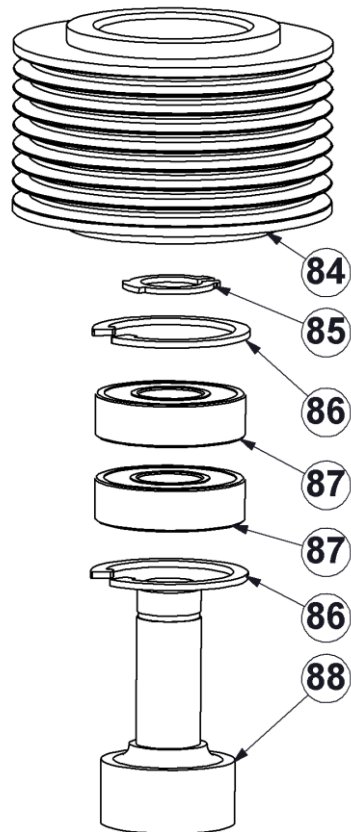


Drive system

Item	Part number	Description	Remarks	Qty.
64	E11181	Balancing plate		2
65	E11182	Balancing plate-2		1
66	E11029	Plug for bearing housing		3
67	E11013	V-seal Low drive BMG-555		1
68	E09985	Housing BMG-555		1
69	E11061	Tension pulley assembly BMG-555		1
70	E11047	Cover plate tension pulley BMG-555		1
71	E11044	Cover plate contra pulley BMG-555		1
72	E11060	Contra pulley axle assembly BMG-555		1
73	E11183	Balancing plate-3		1
74	E11022	Pulley complete BMG-555		3
75	E11175	Tension pulley mount ring		1
76	E11006	Drive pulley compl.BMG-555		1
77	E01503	Centre ring		1
78	BG11905	HDT belt - drive		1
79	E11034	Lower plate BMG-555		1
80	BG007850	Inspection cover		2
81	BG11797	V-seal		3
82	BG005827	Cover		1
83	BG005826	Ring		3



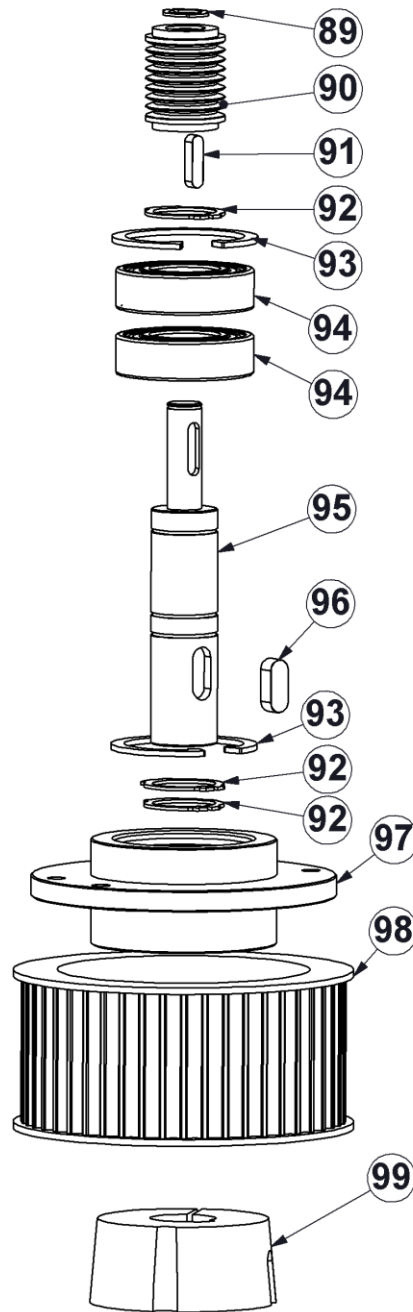
Fig. 04 Tension pulley assembly - E11061



Item	Part number	Description	Remarks	Qty.
84	E06051	Pulley		1
85	BE0129	Retaining ring for shaft \varnothing 12	DIN 471	1
86	BE0128	Retaining ring for bore \varnothing 28	DIN 472	2
87	E06203	Bearing		2
88	E11046	Tension pulley axle (PK belt BMG-555)		1



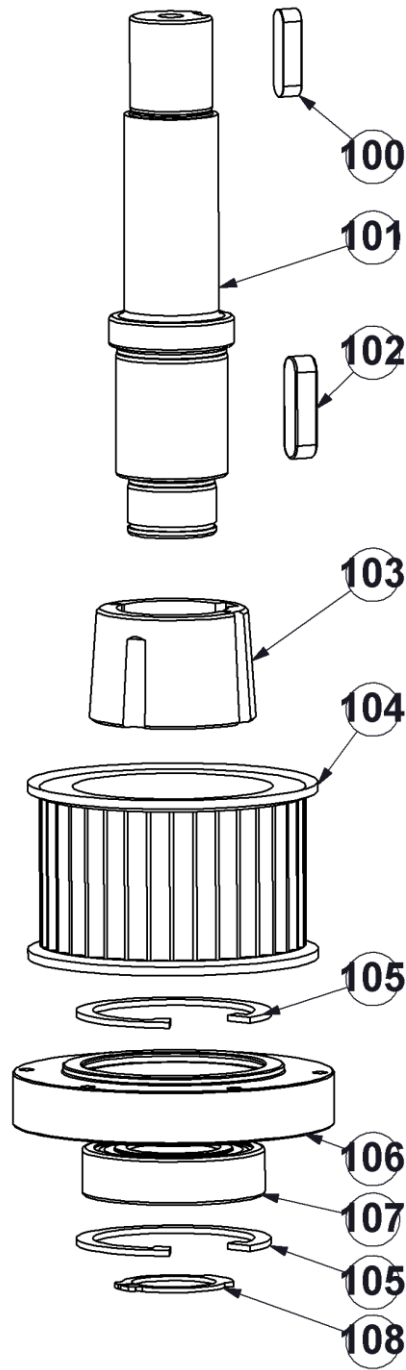
Fig. 05 Tension pulley assembly – E11060



Item	Part number	Description	Remarks	Qty.
89		Retaining ring for shaft Ø 13	DIN 471	1
90	E06050	Pulley		1
91		Key 5x5x20	DIN 6885A	1
92	BE0076	Retaining ring for shaft Ø 25	DIN 471	3
93	BE0077	Retaining ring for bore Ø 52	DIN 472	2
94	222-2321-E	Bearing		2
95	E09986	Contra pulley axle – BMG-555		1
96	BE0109	Key 8x7x20	DIN 6885A	1
97	E11005	Bearing housing contra pulley – BMG-555		1
98	RB165-2	Pulley		1
99	E11062	Taper lock		



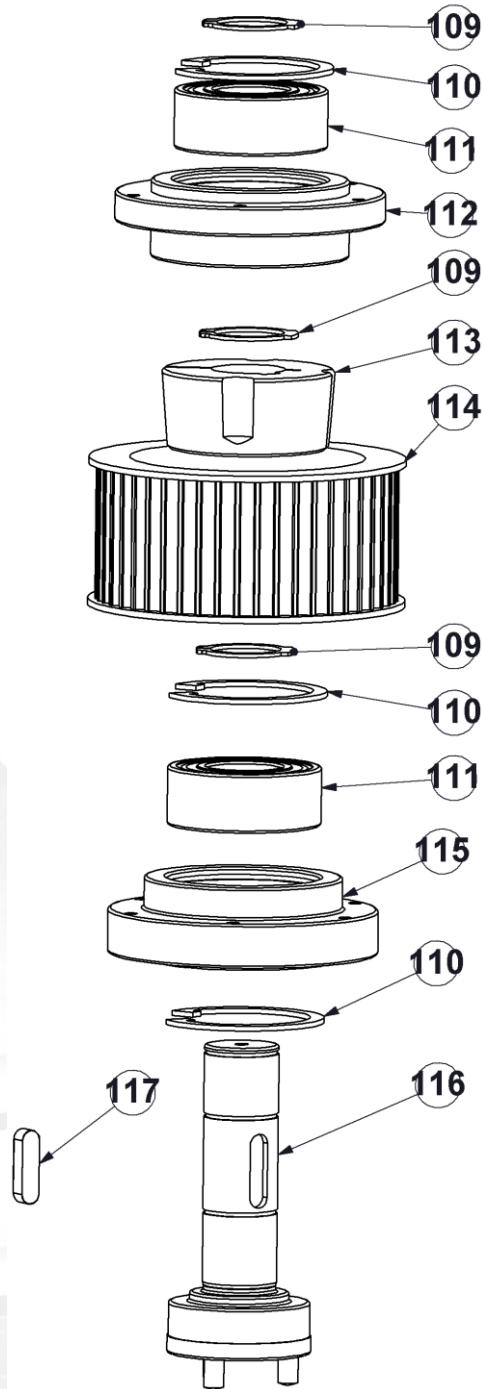
Fig. 06 Drive pulley E11006



Item	Part number	Description	Remarks	Qty.
100	BE0256	Key 8x7x30	DIN 6885A	1
101	E11011	Central axle BMG-555		
102		Key 10x8x35	DIN 6885A	1
103	E00718	Taper lock		1
104	E10312	Pulley		1
105	E00951	Retaining ring for bore Ø 62	DIN 472	2
106	E11040	Bearing house		1
107	B20404	Bearing		1
108	B21631	Retaining ring for shaft Ø 30	DIN 471	1



Fig. 07 Pulley (3x) E11022

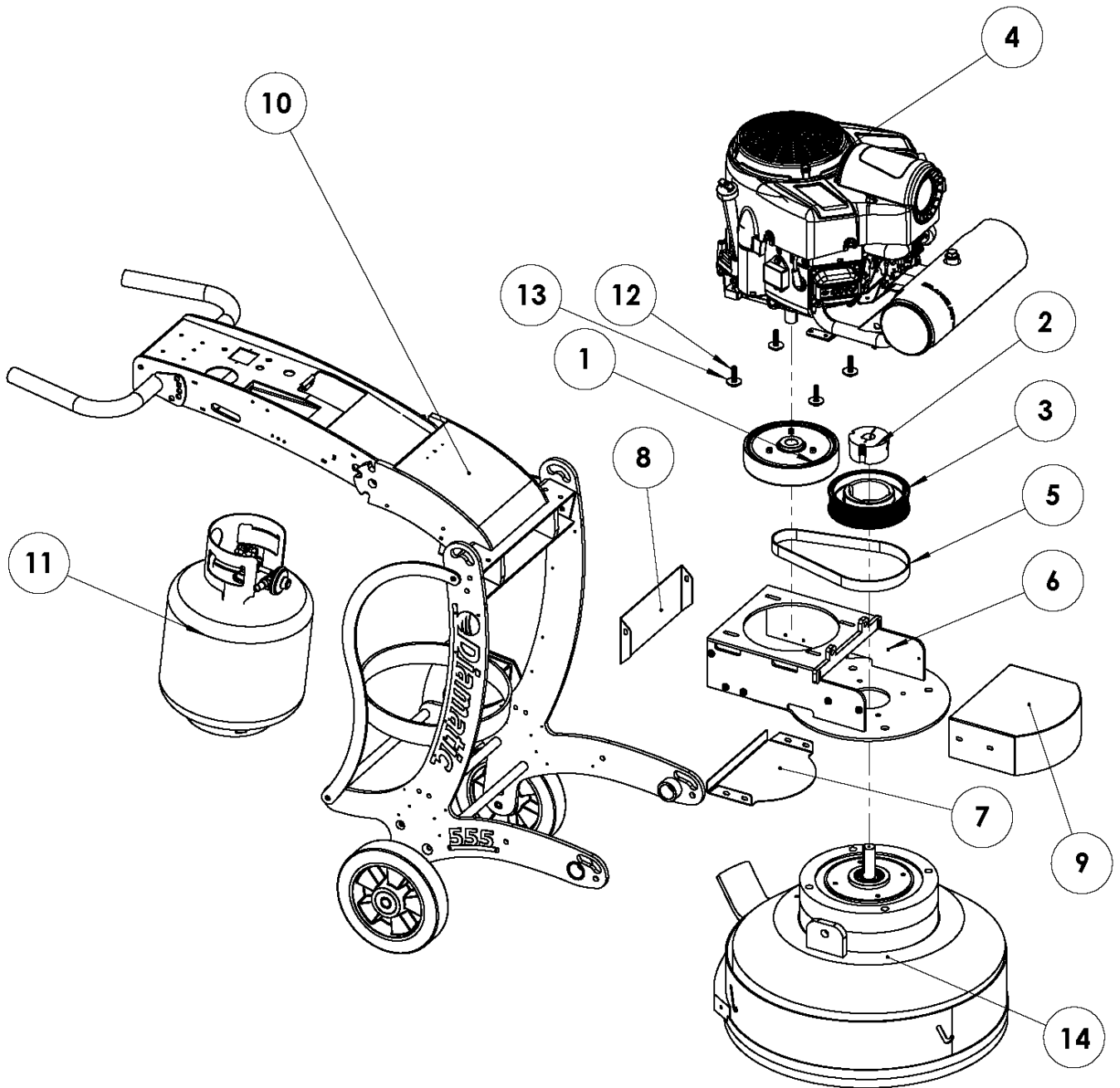


Item	Part number	Description	Remarks	Qty.
109	B21631	Retaining ring for shaft Ø30	DIN 471	3
110	E00951	Retaining ring for bore Ø62	DIN 472	3
111	BG11817	Bearing		2
112	E11023	Bearing housing		
113	RB100A3-350	Taper lock		1
114	RB165-2	Pulley		1
115	BG005817	Bering housing		1
116	E09992	Axle pulley compl. BMG-555		1
117	BE0256	Key 8x7x30	DIN 6885A	1



3. 555-P Spare Parts

Fig. 08 Engine Mount

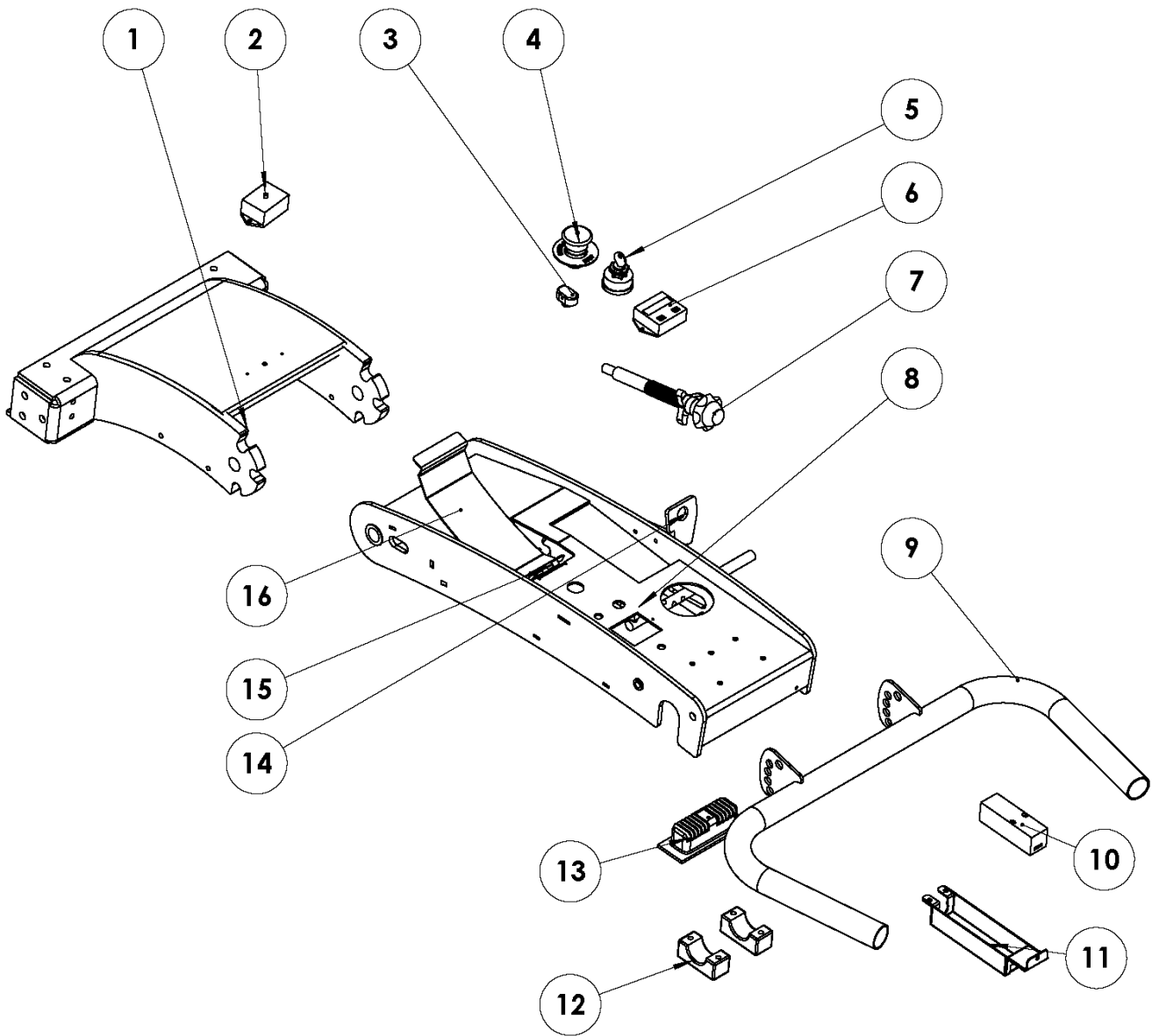




Item	Part number	Description	Remarks	Qty.
1	LP555001	Clutch for 555		1
2	LP555003	Taper lock 555-propane		1
3	LP555002	8mx_67s_36 gear 555		1
4	MP10005	20 HP 656cc Briggs LP		1
5	LP555004	Belt		1
6	LP555012	Engine mount		1
7	LP555020	Lower belt guard/rear		1
8	LP735022	Upper belt guard / rear		1
9	LP555021	Belt guard / front		1
10	BMG-555-9000/RD	Frame		1
11	MP10019	20lb Vapor Draw Propane Tank		1
12	13109	HBOLT 0.3750-16x1.5x1.5-S		4
13	1133219	Wide FW 0.375		4
14	n/a	Lower drive assembly		1



Fig. 09 Handle Breakout

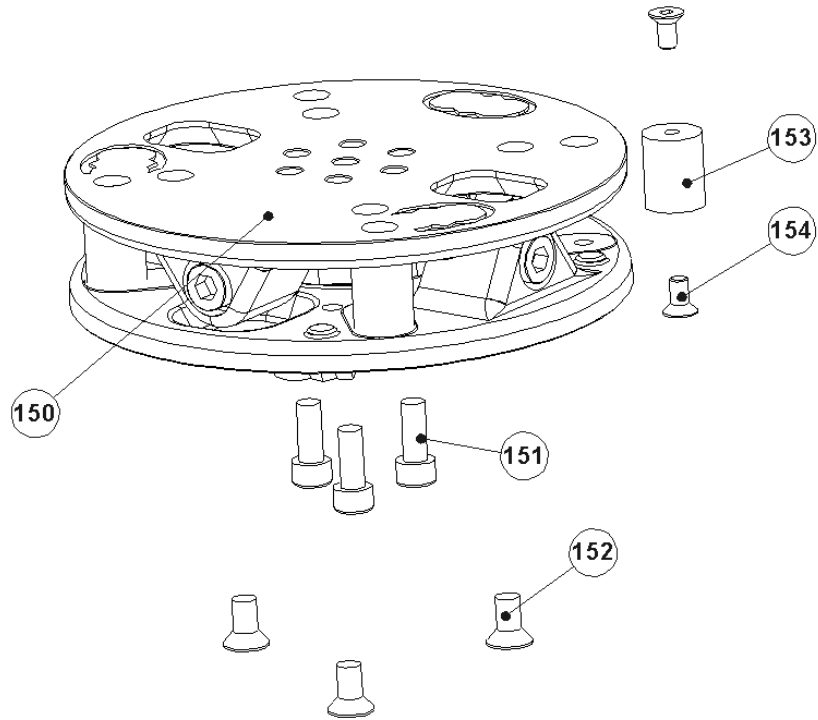


Item	Part number	Description	Remarks	Qty.
1	E11219	Handle mounting bracket		1
2	LP735069	Emissions light		1
3	LP555007	Light switch		1
4	LP735017	Emergency stop		1
6	MP10010	Tachometer		1
6	MP10011	Ignition switch		1
7	LP735008	Throttle cable		1
8	E12375-S	Handle		1
9	E11229_BL	Steerhandle		1
10	BG11760	Deadman switch		1
11	E11226	Deadman bracket		1
12	999-9156	Pipe clamp 35mm (set)		4
13	LP555009	Light (under handle)		1
15	E11124	Hinge 40x40		1
16	E11224	Control box cover		1

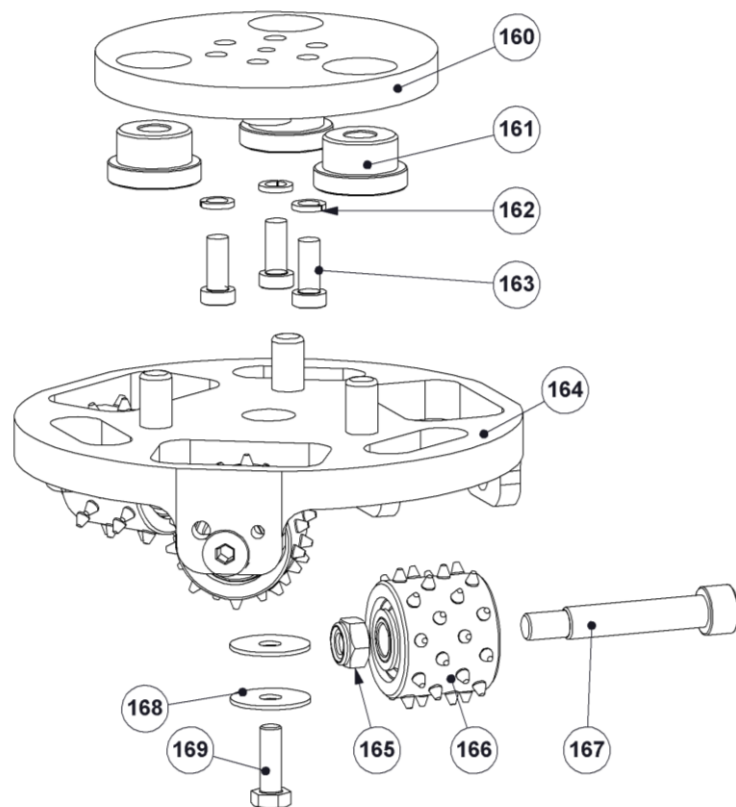


3. Tool plates

E10172-185 Buffer plate 185mm complete (3x per machine)



E12112 Bush hammer set up - 185mm (3x per machine)





Tool plates

Buffer plates (E10172-185) will only be supplied as complete set

Item	Part number	Description	Remarks	Qty.
150	E10172-185	185mm buffer system		3
151	BE0011	M8x20 hexagon socket head cap screw		3
152	BE0456	M8x16 hexagon countersunk screw		3
153	E12065	Shock absorber		4 / 8
154	BE0187	M6x12 hexagon countersunk screw		8 / 16
160-169	E12112	185mm Bush hammer set up 555		1
160	BG11805	Buffer plate		1
161	BG11806	Buffer soft blue		3
162	BE0584	M8 spring lock washer small		3
163	BE0725	M8x20 hexagon socket thin head cap		3
164	E07459	Cutterplate 185mm only		1
165	BE0023	M10 locking nut		3
166	E09119-2H	Bush hammer heavy incl. bolt & nut		3
167	BE0723	M10 12x55 hexagon socket head cap screw		3
165-167	E09119-2H	Bush hammer heavy incl. bolt & nut		3
	E09119-2H/SET9	Bush hammer set of 9		
	E09119-2H/SET15	Bush hammer set of 15		
168	BE0314	M8x30 plain washer		2
169	BE0030	M8x25 hexagon head screw		1
164-167	E07460	Cutter plate c.w. bush hammer 185		1
	BG300118-1	Cutter plate c.w. star wheels		1
	E07185-1	DIAMAG 185mm adapter plate		1
	E09399/fine	Velcro plate 185mm fine		1
	E09399/coarse	Velcro plate 185mm coarse		1
	E10691	185mm Diamag PCD plate		1
	BG200994	Plate for wings 185mm		1
	BG200989	Dry polish dot holder 185mm		1
	E06447	DIAMAG adapter plate for dots		3
	BG185001 – BG185007	Polishing pads 185mm		1
	BG185M004 – BG185M007	Maintenance pads 185mm		1



5. Fault diagnose frequency drive

For a complete overview of faults and how to resolve them, scan the QR code which is on the front of the frequency drive.

Does the inverter shows an "INF" fault, reset the machine.
If the machine does not work after that, call you distributor.

To reset the machine, put out the power supply and wait 5 minutes.
Then start up the machine again. Call a technician if the machine still not works.

Fault	Name	Probable cause	Remedy
R I 2 F	[AI2 input]	<ul style="list-style-type: none"> Non-conforming signal on analog input AI2 	<ul style="list-style-type: none"> Check the wiring of analog input AI2 and the value of the signal
R n F	[Load slipping]	<ul style="list-style-type: none"> The encoder speed feedback does not match the reference 	<ul style="list-style-type: none"> Check the motor, gain and stability parameters Add a braking resistor Check the size of the motor/drive/load Check the encoder's mechanical coupling and its wiring
b D F	[DBR overload]	<ul style="list-style-type: none"> The braking resistor is under excessive stress 	<ul style="list-style-type: none"> Check the size of the resistor and wait for it to cool down Check the [DB Resistor Power] (brP) and [DB Resistor value] (brU) parameters, page 211
b r F	[Brake feedback]	<ul style="list-style-type: none"> The brake feedback contact does not match the brake logic control 	<ul style="list-style-type: none"> Check the feedback circuit and the brake logic control circuit Check the mechanical state of the brake
b U F	[DB unit sh. Circuit]	<ul style="list-style-type: none"> Short-circuit output from braking unit 	<ul style="list-style-type: none"> Check the wiring of the braking unit and the resistor Check the braking resistor
C r F 1	[Precharge]	<ul style="list-style-type: none"> Load relay control fault or charging resistor damaged 	<ul style="list-style-type: none"> Switch the drive off and then back on again Check the internal connections
C r F 2	[Thyr. soft charge]	<ul style="list-style-type: none"> DC bus charging fault (thyristors) 	<ul style="list-style-type: none"> Inspect/repair the drive
E C F	[Encoder coupling]	<ul style="list-style-type: none"> Break in encoder's mechanical coupling 	<ul style="list-style-type: none"> Check the encoder's mechanical coupling
E E F 1	[Control Eeprom]	<ul style="list-style-type: none"> Internal memory fault, control card 	<ul style="list-style-type: none"> Check the environment (electromagnetic compatibility) Turn off, reset, return to factory settings
E E F 2	[Power Eeprom]	<ul style="list-style-type: none"> Internal memory fault, power card 	<ul style="list-style-type: none"> Inspect/repair the drive
E n F	[Encoder]	<ul style="list-style-type: none"> Encoder feedback fault 	<ul style="list-style-type: none"> Check [Number of pulses] (PGI) and [Encoder type] (EnS), page 22 Check that the encoder's mechanical and electrical operation, its power supply and connections are all correct If necessary, reverse the direction of rotation of the motor ([Output Ph rotation] (PHr) parameter, page 88) or the encoder signals
F C F 1	[Out. contact. stuck]	<ul style="list-style-type: none"> The output contactor remains closed although the opening conditions have been met 	<ul style="list-style-type: none"> Check the contactor and its wiring Check the feedback circuit



Fault	Name	Probable cause	Remedy
HdF	[IGBT desaturation]	<ul style="list-style-type: none"> Short-circuit or grounding at the drive output 	<ul style="list-style-type: none"> Check the cables connecting the drive to the motor, and the insulation of the motor Perform the diagnostic tests via the [1.10 DIAGNOSTICS] menu
ILF	[Internal com. link]	<ul style="list-style-type: none"> Communication fault between option card and drive 	<ul style="list-style-type: none"> Check the environment (electromagnetic compatibility) Check the connections Check that no more than 2 option cards (max. permitted) have been installed on the drive Replace the option card Inspect/repair the drive
Inf 1	[Rating error]	<ul style="list-style-type: none"> The power card is different from the card stored 	<ul style="list-style-type: none"> Check the reference of the power card
Inf 2	[Incompatible PB]	<ul style="list-style-type: none"> The power card is incompatible with the control card 	<ul style="list-style-type: none"> Check the reference of the power card and its compatibility
Inf 3	[Internal serial link]	<ul style="list-style-type: none"> Communication fault between the internal cards 	<ul style="list-style-type: none"> Check the internal connections Inspect/repair the drive
Inf 4	[Internal MFG area]	<ul style="list-style-type: none"> Internal data inconsistent 	<ul style="list-style-type: none"> Recalibrate the drive (performed by Schneider Electric Product Support)
Inf 5	[Internal-option]	<ul style="list-style-type: none"> The option installed in the drive is not recognized 	<ul style="list-style-type: none"> Check the reference and compatibility of the option
Inf 7	[Internal-hard init.]	<ul style="list-style-type: none"> Initialization of the drive is incomplete 	<ul style="list-style-type: none"> Turn off and reset
Inf 8	[Internal-ctrl supply]	<ul style="list-style-type: none"> The control power supply is incorrect 	<ul style="list-style-type: none"> Check the control power supply
Inf 9	[Internal- I measure]	<ul style="list-style-type: none"> The current measurements are incorrect 	<ul style="list-style-type: none"> Replace the current sensors or the power card Inspect/repair the drive
Inf A	[Internal-mains circuit]	<ul style="list-style-type: none"> The input stage is not operating correctly 	<ul style="list-style-type: none"> Perform the diagnostic tests via the [1.10 DIAGNOSTICS] menu Inspect/repair the drive
Inf b	[Internal- th. sensor]	<ul style="list-style-type: none"> The drive temperature sensor is not operating correctly 	<ul style="list-style-type: none"> Replace the temperature sensor Inspect/repair the drive
Inf C	[Internal-time meas.]	<ul style="list-style-type: none"> Fault on the electronic time measurement component 	<ul style="list-style-type: none"> Inspect/repair the drive
Inf E	[Internal- CPU]	<ul style="list-style-type: none"> Internal microprocessor fault 	<ul style="list-style-type: none"> Turn off and reset. Inspect/repair the drive
OCF	[Overcurrent]	<ul style="list-style-type: none"> Parameters in the [SETTINGS] (SEt-) and [1.4 MOTOR CONTROL] (drC-) menus are not correct Inertia or load too high Mechanical locking 	<ul style="list-style-type: none"> Check the parameters Check the size of the motor/drive/load Check the state of the mechanism
P r F	[Power removal]	<ul style="list-style-type: none"> Fault with the drive's "Power removal" safety function 	<ul style="list-style-type: none"> Inspect/repair the drive
SCF 1	[Motor short circuit]	<ul style="list-style-type: none"> Short-circuit or grounding at the drive output 	<ul style="list-style-type: none"> Check the cables connecting the drive to the motor, and the insulation of the motor Perform the diagnostic tests via the [1.10 DIAGNOSTICS] menu
SCF 2	[Impedant sh. circuit]	<ul style="list-style-type: none"> Significant earth leakage current at the drive output if several motors are connected in parallel 	<ul style="list-style-type: none"> Reduce the switching frequency Connect chokes in series with the motor
SCF 3	[Ground short circuit]		
SDF	[Overspeed]	<ul style="list-style-type: none"> Instability or driving load too high 	<ul style="list-style-type: none"> Check the motor, gain and stability parameters Add a braking resistor Check the size of the motor/drive/load
SPF	[Speed fdbck loss]	<ul style="list-style-type: none"> Encoder feedback signal missing 	<ul style="list-style-type: none"> Check the wiring between the encoder and the drive Check the encoder
t n F	[Auto-tuning]	<ul style="list-style-type: none"> Special motor or motor whose power is not suitable for the drive Motor not connected to the drive 	<ul style="list-style-type: none"> Check that the motor/drive are compatible Check that the motor is present during auto-tuning If an output contactor is being used, close it during auto-tuning



Fault	Name	Probable cause	Remedy
R P F	[Application fault]	<ul style="list-style-type: none"> Controller inside card fault 	<ul style="list-style-type: none"> Please refer to the card documentation
b L F	[Brake control]	<ul style="list-style-type: none"> Brake release current not reached Brake engage frequency threshold [Brake engage freq] (bEn) only regulated when brake logic control is assigned 	<ul style="list-style-type: none"> Check the drive/motor connection Check the motor windings Check the [Brake release I FW] (Ibr) and [Brake release I Rev] (Ird) settings, page 148. Apply the recommended settings for [Brake engage freq] (bEn)
C n F	[Com. network]	<ul style="list-style-type: none"> Communication fault on communication card 	<ul style="list-style-type: none"> Check the environment (electromagnetic compatibility) Check the wiring Check the time-out Replace the option card Inspect/repair the drive
C D F	[CAN com.]	<ul style="list-style-type: none"> Interruption in communication on the CANopen bus 	<ul style="list-style-type: none"> Check the communication bus Check the time-out Refer to the CANopen user's manual
E P F 1	[External flt-LI/Bit]	<ul style="list-style-type: none"> Fault triggered by an external device, depending on user 	<ul style="list-style-type: none"> Check the device, which caused the fault, and reset
E P F 2	[External fault com.]	<ul style="list-style-type: none"> Fault triggered by a communication network 	<ul style="list-style-type: none"> Check for the cause of the fault and reset
F C F 2	[Out. contact. open.]	<ul style="list-style-type: none"> The output contactor remains open although the closing conditions have been met 	<ul style="list-style-type: none"> Check the contactor and its wiring Check the feedback circuit
L C F	[input contactor]	<ul style="list-style-type: none"> The drive is not turned on even though [Mains V. time out] (LCt) has elapsed 	<ul style="list-style-type: none"> Check the contactor and its wiring Check the time-out Check the line/contactor/drive connection
L F F 2 L F F 3 L F F 4	[AI2 4-20mA loss] [AI3 4-20mA loss] [AI4 4-20mA loss]	<ul style="list-style-type: none"> Loss of the 4-20 mA reference on analog input AI2, AI3 or AI4 	<ul style="list-style-type: none"> Check the connection on the analog inputs
D b F	[Overbraking]	<ul style="list-style-type: none"> Braking too sudden or driving load 	<ul style="list-style-type: none"> Increase the deceleration time Install a braking resistor if necessary Activate the [Dec ramp adapt.] (brA) function, page 127, if it is compatible with the application
D H F	[Drive overheat]	<ul style="list-style-type: none"> Drive temperature too high 	<ul style="list-style-type: none"> Check the motor load, the drive ventilation and the ambient temperature. Wait for the drive to cool down before restarting
D L F	[Motor overload]	<ul style="list-style-type: none"> Triggered by excessive motor current 	<ul style="list-style-type: none"> Check the setting of the motor thermal protection, check the motor load. Wait for the drive to cool down before restarting
D P F 1	[1 output phase loss]	<ul style="list-style-type: none"> Loss of one phase at drive output 	<ul style="list-style-type: none"> Check the connections from the drive to the motor



Fault	Name	Probable cause	Remedy
D P F 2	[3 output phase loss]	<ul style="list-style-type: none"> Motor not connected or motor power too low Output contactor open Instantaneous instability in the motor current 	<ul style="list-style-type: none"> Check the connections from the drive to the motor If an output contactor is being used, parameterize [Output Phase Loss] (OPL) = [Output out] (OAC), page 201 Test on a low power motor or without a motor: In factory settings mode, motor phase loss detection is active [Output Phase Loss] (OPL) = [Yes] (YES). To check the drive in a test or maintenance environment, without having to use a motor with the same rating as the drive (in particular for high power drives), deactivate motor phase loss detection [Output Phase Loss] (OPL) = [No] (nO) Check and optimize the following parameters: [IR compensation] (UFR), page 70, [Rated motor volt.] (UnS) and [Rated mot. current] (nCr), page 85, and perform [Auto tuning] (tUn), page 88
D S F	[Mains overvoltage]	<ul style="list-style-type: none"> Mains voltage too high Disturbed mains supply 	<ul style="list-style-type: none"> Check the mains voltage
D t F 1	[PTC1 overheat]	<ul style="list-style-type: none"> Overheating of the PTC1 probes detected 	<ul style="list-style-type: none"> Check the motor load and motor size Check the motor ventilation Wait for the motor to cool before restarting Check the type and state of the PTC probes
D t F 2	[PTC2 overheat]	<ul style="list-style-type: none"> Overheating of the PTC2 probes detected 	
D t F L	[LI6=PTC overheat]	<ul style="list-style-type: none"> Overheating of PTC probes detected on input LI6 	
P t F 1	[PTC1 probe]	<ul style="list-style-type: none"> PTC1 probes open or short-circuited 	<ul style="list-style-type: none"> Check the PTC probes and the wiring between them and the motor/drive
P t F 2	[PTC2 probe]	<ul style="list-style-type: none"> PTC2 probes open or short-circuited 	
P t F L	[LI6=PTC probe]	<ul style="list-style-type: none"> PTC probes on input LI6 open or short-circuited 	
S C F 4	[IGBT short circuit]	<ul style="list-style-type: none"> Power component fault 	<ul style="list-style-type: none"> Perform a diagnostic test via the [1.10 DIAGNOSTICS] menu Inspect/repair the drive
S C F 5	[Motor short circuit]	<ul style="list-style-type: none"> Short-circuit at drive output 	<ul style="list-style-type: none"> Check the cables connecting the drive to the motor, and the motor's insulation Perform diagnostic tests via the [1.10 DIAGNOSTICS] menu Inspect/repair the drive
S L F 1	[Modbus com.]	<ul style="list-style-type: none"> Interruption in communication on the Modbus bus 	<ul style="list-style-type: none"> Check the communication bus Check the time-out Refer to the Modbus user's manual
S L F 2	[PowerSuite com.]	<ul style="list-style-type: none"> Fault communicating with PowerSuite 	<ul style="list-style-type: none"> Check the PowerSuite connecting cable Check the time-out
S L F 3	[HMI com.]	<ul style="list-style-type: none"> Fault communicating with the graphic display terminal 	<ul style="list-style-type: none"> Check the terminal connection Check the time-out
S r F	[Torque time-out]	<ul style="list-style-type: none"> The time-out of the torque control function is attained 	<ul style="list-style-type: none"> Check the function's settings Check the state of the mechanism
S S F	[Torque/current lim]	<ul style="list-style-type: none"> Switch to torque limitation 	<ul style="list-style-type: none"> Check if there are any mechanical problems Check the parameters of [TORQUE LIMITATION] (tLA-) page 174, and the parameters of fault [TORQUE OR I LIM. DETECT.] (tId-), page 210
t J F	[IGBT overheat]	<ul style="list-style-type: none"> Drive overheated 	<ul style="list-style-type: none"> Check the size of the load/motor/drive Reduce the switching frequency Wait for the motor to cool before restarting



Fault	Name	Probable cause	Remedy
C F F	[Incorrect config.]	<ul style="list-style-type: none"> Option card changed or removed Control card replaced by a control card configured on a drive with a different rating The current configuration is inconsistent 	<ul style="list-style-type: none"> Check that there are no card errors In the event of the option card being changed/removed deliberately, see the remarks below Check that there are no card errors In the event of the control card being changed deliberately, see the remarks below Return to factory settings or retrieve the backup configuration, if it is valid (see page 223)
C F I	[Invalid config.]	<ul style="list-style-type: none"> Invalid configuration The configuration loaded in the drive via the bus or communication network is inconsistent 	<ul style="list-style-type: none"> Check the configuration loaded previously Load a compatible configuration
H C F	[Cards pairing]	<ul style="list-style-type: none"> The [CARDS PAIRING] (PPI-) function, page 212, has been configured and a drive card has been changed 	<ul style="list-style-type: none"> In the event of a card error, reinsert the original card Confirm the configuration by entering the [Pairing password] (PPI) if the card was changed deliberately
P H F	[Input phase loss]	<ul style="list-style-type: none"> Drive incorrectly supplied or a fuse blown Failure of one phase 3-phase ATV71 used on a single-phase line supply Unbalanced load <p>This protection only operates with the drive on load</p>	<ul style="list-style-type: none"> Check the power connection and the fuses Use a 3-phase mains supply Disable the fault by [Input phase loss] (IPL) = [No] (nO) (page 202)
U S F	[Undervoltage]	<ul style="list-style-type: none"> Line supply too low Transient voltage dip Damaged pre-charge resistor 	<ul style="list-style-type: none"> Check the voltage and the parameters of [UNDERVOLTAGE MGT] (USb-), page 205 Replace the pre-charge resistor Inspect/repair the drive

