THE INNOVATORS IN SURFACE PREPARATION

BLASTRAC

SERVICE MANUAL BMG-735RS

VERSION 1.4

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Index

1. Tools

Diamag grinding wings & Accessories

E07240-2
DIAMAG
ADAPTER PLATE
Ø240 MM

BG707321 #18 - 20
BG707322 #30 - 40
BLUE GRINDING WING

BG707311 #18 - 20
BG707312 #30 - 40
BG707313 #60 - 80
BG707314 #120 - 150
GREEN GRINDING WING

BG707301 #18 - 20
BG707302 #30 - 40
BG707303 #60 - 80
BG707304 #120 - 150
RED GRINDING WING

BG707341-2 #30 - 40
BLACK GRINDING WING

E10692
DIAMAG
ADAPTER PLATE
WINGS PCD
Ø240 MM

BG200997-1/SET
PCD SPLIT WING
BG200995-1/SET
PCD 1x1 WING

E09580 ROTARY PLATE
ONLY Ø240 MM
E10240 PLATE Ø240 MM
COMPLETE WITH
BUSH HAMMER ROLLERS
E10240/SW PLATE
Ø240 MM COMPLETE
WITH STAR WHEELS

E09119-1
BUSH HAMMER
ROLLER
Ø50 MM
BG300109
CUTTER WHEEL
Ø50 MM

E09368/FINE
VELCRO PLATE Ø240 MM
For Polishing pads

E09368/COARSE
VELCRO PLATE Ø240 MM
For Maintenance pads

BG240001 #40 #1 - orange
BG240002 #100 #2 - Black
BG240003 #200 #3 - Blue
BG240004 #400 #4 - Red
BG240005 #800 #5 - White
BG240006 #1500 #6 - Yellow
BG240007 #3000 #7 – Green

POLISHING PADS Ø240 MM

BG240M004 #400#4
BG240M005 #800#5
BG240M006 #1500 #6
BG240M007 #3000 #7

MAINTENANCE PADS Ø240 MM

005014
10 M SUCTION HOSE
Ø76 MM

E07000
FRONT– TRANSPORT WHEELS
(STANDARD WITH BMG-735RS)

E07061
REMOTE CONTROL

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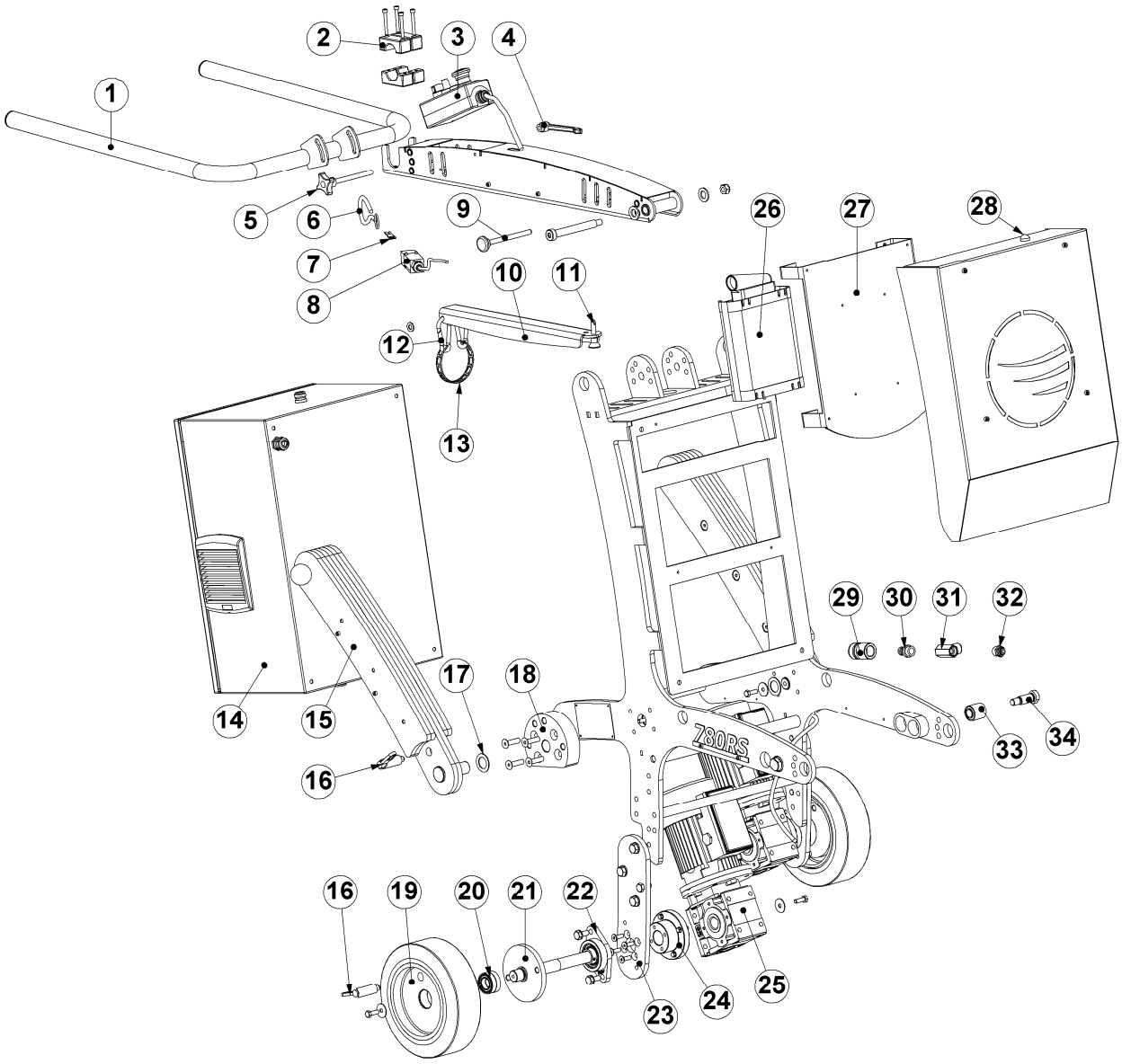
2. Spare parts

Frame complete



Item	Part number	Description	Remarks	Qty.
1	E07032/BL	Handle for steer long		1
2	999-9156	Pipe clamp (set)		2
3	E07882	Operating box complete		1
	E01543	Emergency stop		
	E01318	Start button		
	E01351	Potentio meter complete (speed switch)		
	E01323	Left / right switch		
	E05130	Make contact (green)		
	E05131	Brake contact (red)		
4	BE0641	M10 clamp lever		1
5	E06860	Clamping pin steer		1
6	BG11758	Cord for deadman switch		1
7	BG11759	Key for deadman switch		1
8	BG11760	Deadman switch		1
9	BE0674	Handle locking pin		1
10	E06883	Swing arm for dusthose		1
11	478198	Quick release pin		1
12	BE0653	Hook		2
13	E07008	Chain (11links)		1
14	E07204	Electrobox 15kW complete		1
	E07204/UL230	Electrobox 15kW complete 230UL		1
	E07204/UL480	Electrobox 15kW complete 480UL		1
15	E07065	Weight set right		1
	E07066	Weight set left		1
16	E06994-1	Fast locking pin		4
17	E07077	Slide ring		4
18	E07076	Adjust block		2
19	E07049	Traction wheel		2
20	E07057	Bearing		4
21	E07055	Wheel axle		2
22	E07058	Bearing		2
23	E07054	Drive support right		1
	E07053	Drive support left		1
24	E07036	Mounting bush		2
25	E07052/BL	Drive motor		2
26	E07060	Receiver		1
27	E07078	Receiver mount plate		1
28	E07808	Receiver antenna		1
29	E06286	Water coupling		1
30	E06285	Waterhose connection		1
31	E06282	Ball valve mini		1
32	E06279	Water reducing coupling		1
33	E01492	Megi bush		2
34	BG11752	Hinge bolt		2
	E07035	Frame		1
	BG005835	Steer handle		1
	E07083	Frontplate electrobox RS		1
	E07061	Remote transmitter		1

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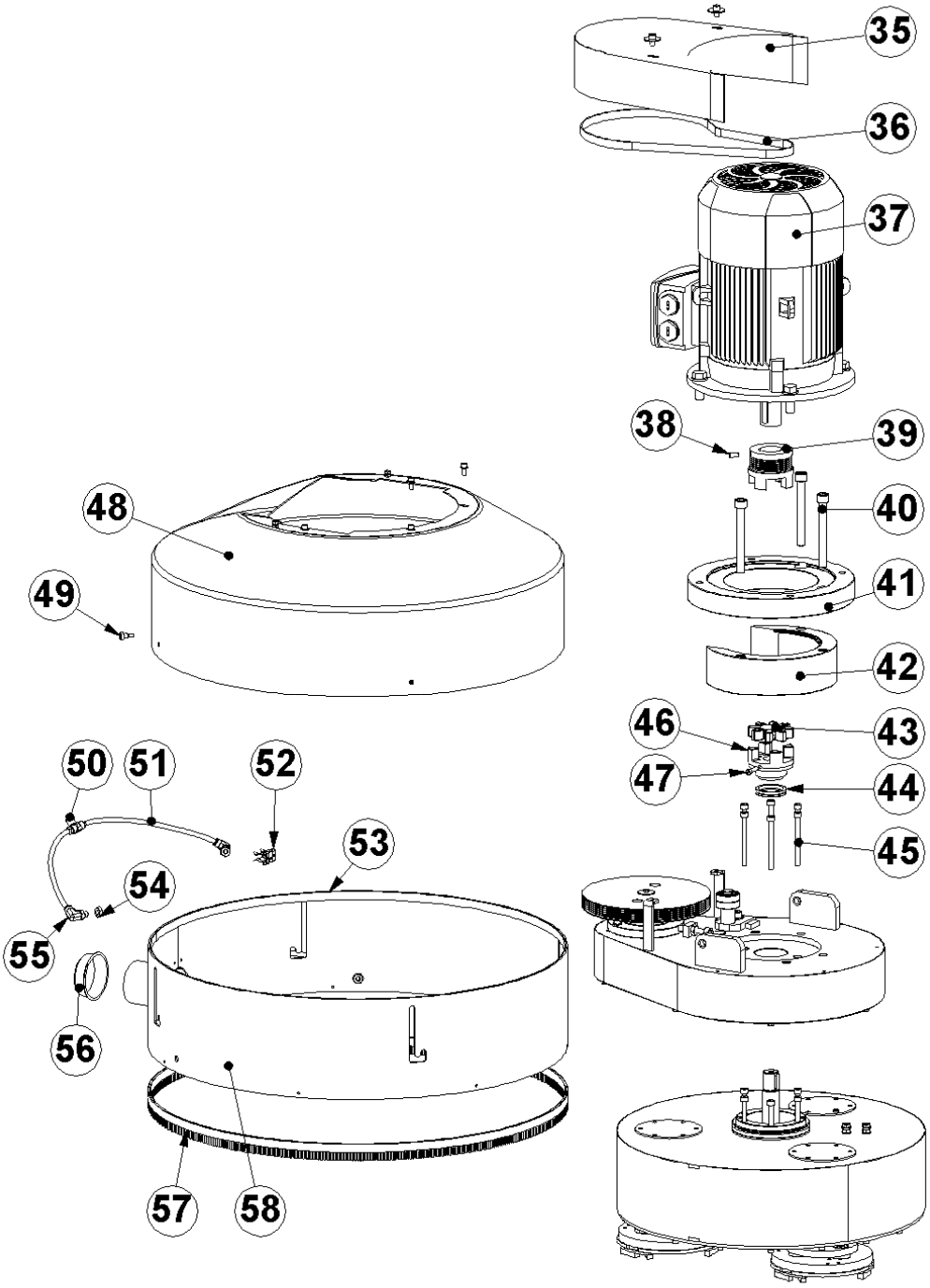
Machine complete



Item	Part number	Description	Remarks	Qty.
35	BG005847	Protection cap		1
36	BG11924	Upper belt		1
37	BG11923-1IE2	Motor 230V/400V		1
38	BE0654	M8x16 set screw	DIN 916	4
39	BG007808_2	Coupling upper part		1
40	BE0656	M14x140 hexagon socket head bolt	DIN 912	3
41	BG007810	Flange motor seat		1
42	BG007811	Motor seat		1
43	BG005844	Coupling plastic star		1
44	BG11829	V-seal		1
45	BE0635	M8x110 hexagon socket head bolt	DIN 912	6
46	BG007808_1	Coupling under part		1
47	BE0188	M6x25 hexagon socket head bolt	DIN 912	1
48	BG007339	Protection cover		1
49	BE0655	M6x12 hexagon shoulder screw		4
50	E06281	Water T-coupling		1
51	E06278	Waterhose		1,5m
52	E06276	Pipe clamp		2
53	E06897	Slide strip		2,5m
54	E06293	Nut for knee coupling		2
55	E06280	Water knee coupling		2
56	E04551	Plastic cap		1
57	BG007349	Brush for floating shroud		1
58	BG007355	Floating shroud		1

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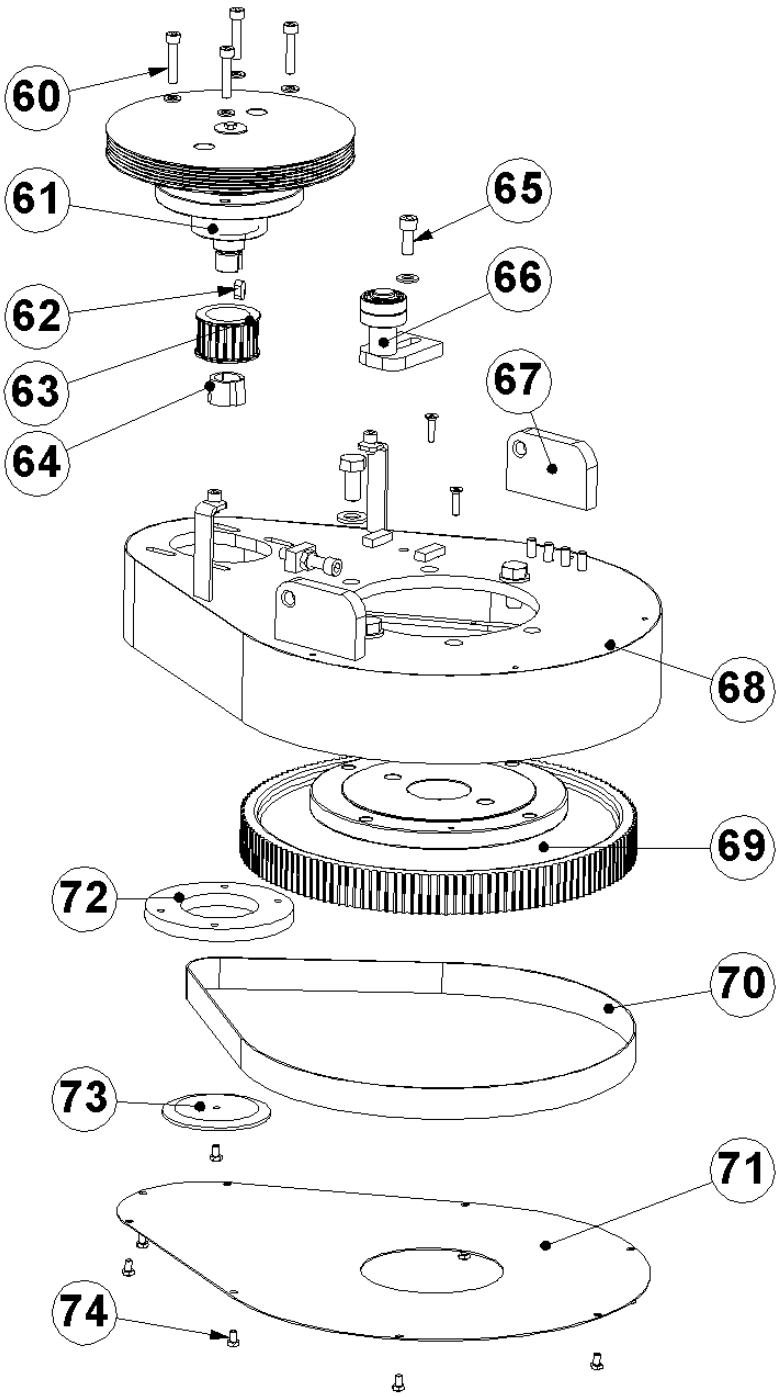
Upper drive



Item	Part number	Description	Remarks	Qty.
60	BE0631	M8x40 hexagon socket head bolt	DIN 7984	4
61	BG005856	Contra pulley		1
62	BE0648	Key 8x7x18	DIN 6885A	1
63	BG005805-1	Pulley		1
64	E01560	Taperlock		1
65	BE0443	M10x25 hexagon socket head bolt		
66	BG005860	Upper tensioner		1
67	BG005813	Holder		2
68	BG005809	Motorplate complete		1
69	BG005857	Centre pulley		1
70	BG11904	Middle belt		1
71	BG005834	Lower plate upper drive		1
72	BG005807	Ring		1
73	BG007804	Flange		1
74	BE0350	M6x10 hexagon head screw		8

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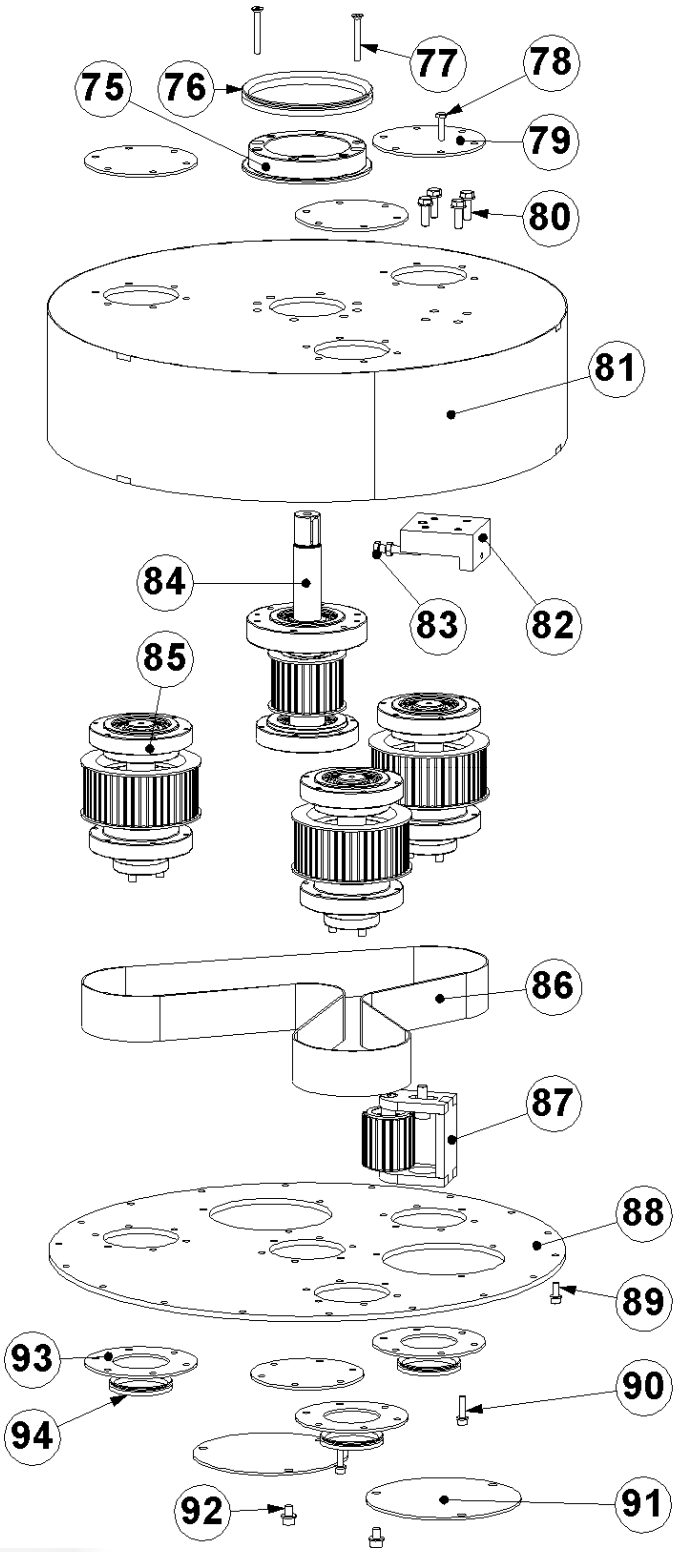
Lower drive



Item	Part number	Description	Remarks	Qty.
75	BG005814	Ring		1
76	BG11849	V-seal		1
77	BE0617	M6x50 countersunk screw	DIN 7991	2
78	BE0051	M6x25 hexagon head bolt	DIN 933	18
79	BG005827	Cover		4
80	BE0030	M8x25 hexagon head bolt	DIN 933	4
81	BG007322	Housing complete		1
82	BG005832-1	Holder		1
83	BE0090	M8x40 hexagon head bolt	DIN 933	1
84	BG005858	Drive pulley		1
85	BG005859	Pulley		3
86	BG11940	Lower belt		1
87	BG005861	Lower tensioner		1
88	BG007324	Lower plate 735PRO		1
89	BE0035	M6x16 hexagon socket head bolt	DIN 912	18
90	BE0188	M6x25 hexagon socket head bolt	DIN 912	24
91	BG007850	Inspection cover		2
92	BE0082	M8x12 hexagon socket head bolt	DIN 912	6
93	BG0005826	Ring		3
94	BG11797	V-seal		3

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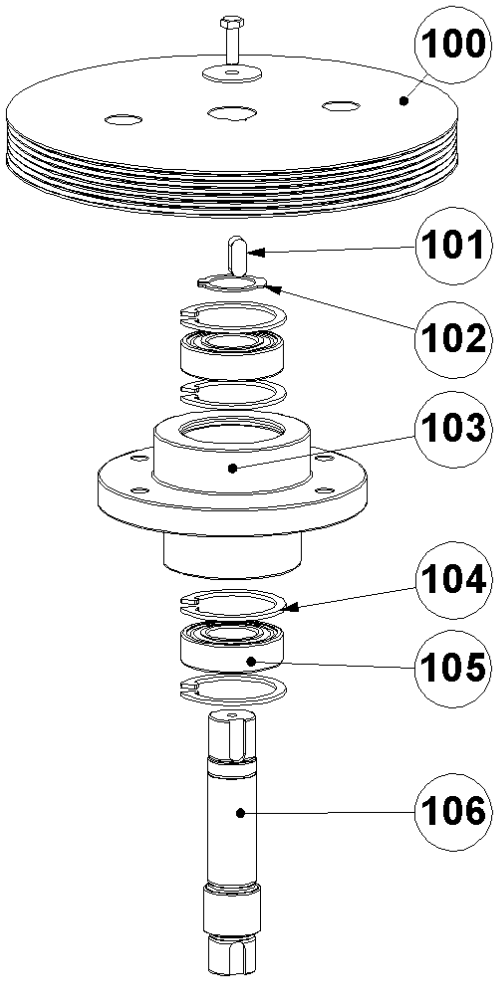
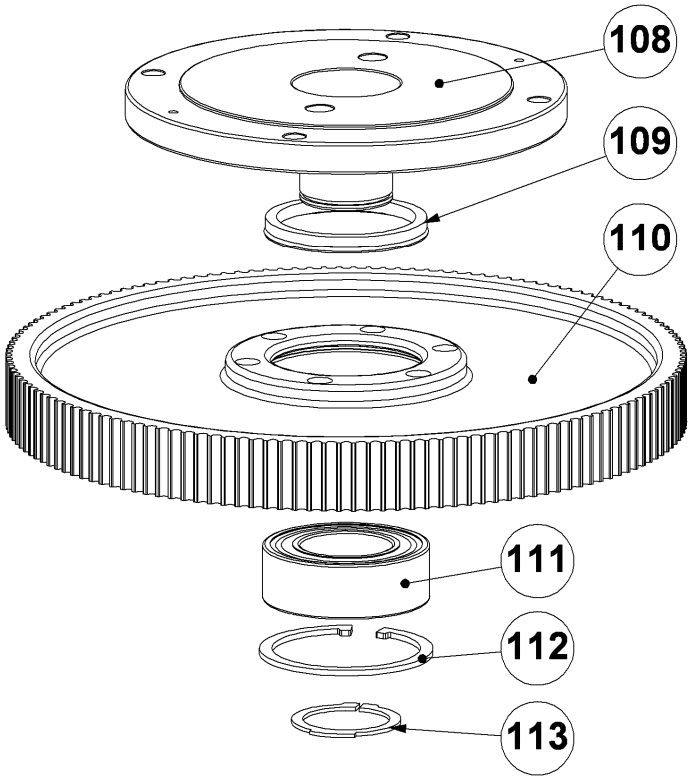
Contra pulley BG005856



Item	Part number	Description	Remarks	Qty.
100	BG005803	Belt pulley		1
101	BE0109	Key 8x7x20	DIN 6885A	1
102	BE0076	Retaining ring for shaft Ø25	DIN 471	1
103	BG005802	Bearing house		1
104	BE0077	Retaining ring for bore Ø52	DIN 472	4
105	222-2331-E	Bearing		2
106	BG005801	Axle		1

Centre pulley BG005857



Item	Part number	Description	Remarks	Qty.
108	BG005812	Sprocket		1
109	E03703	V-seal		1
110	BG005806	Pulley		1
111	E01490	Bearing		1
112	E03993	Retaining ring for bore Ø90	DIN 472	1
113	BE0126	Retaining ring for shaft Ø50	DIN 471	1

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Drive pulley BG005858

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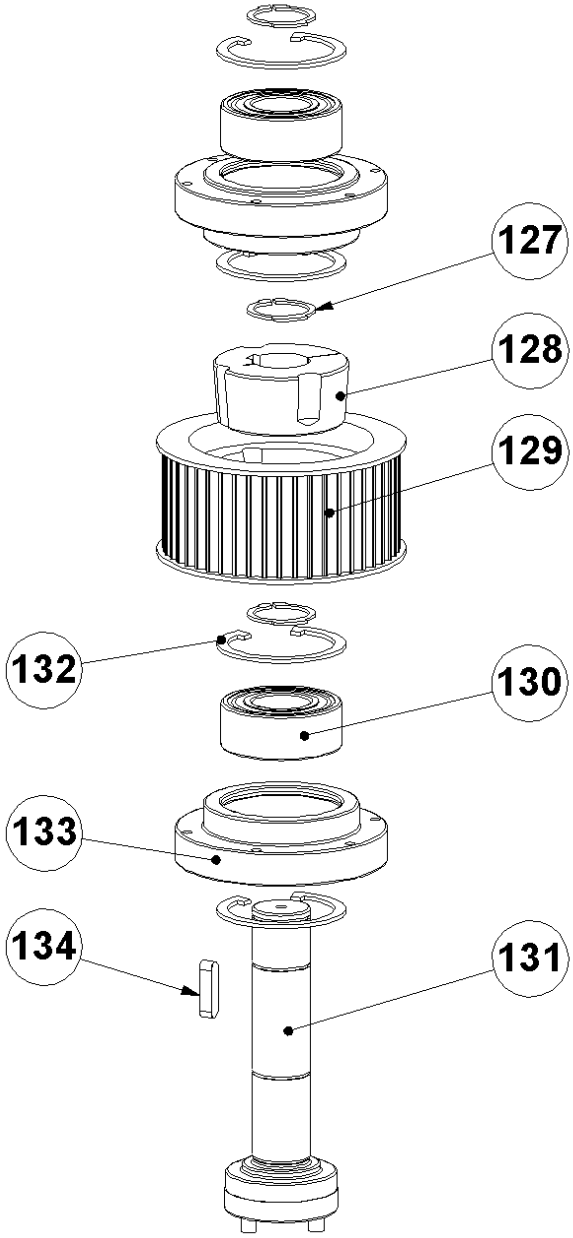
Item	Part number	Description	Remarks	Qty.
115	B20404	Bearing		2
116	BG005815	Bearing house		1
117	BE0256	Key 8x7x30	DIN 6885A	1
118	BG005818	Axle		1
119	BE0269	Key 10x8x32	DIN 6885A	1
120	E00718	Taperlock		1
121	BG005820	Pulley		1
122	E00951	Retaining ring for bore Ø62	DIN 472	4
123	BG005821	Bearing house		1
124	B21631	Retaining ring for shaft Ø30	DIN 471	2

Pulley (3x) BG005859



Item	Part number	Description	Remarks	Qty.
127	B21631	Retaining ring for shaft Ø30	DIN 471	3
128	RB100A3-350	Taperlock		1
129	RB165-2	Pulley		1
130	BG11817	Bearing		2
131	BG005816	Axle		1
132	E00951	Retaining ring for bore Ø62	DIN 472	4
133	BG005817	Bearing house		1
134	BE0256	Key 8x7x30	DIN 6885A	1

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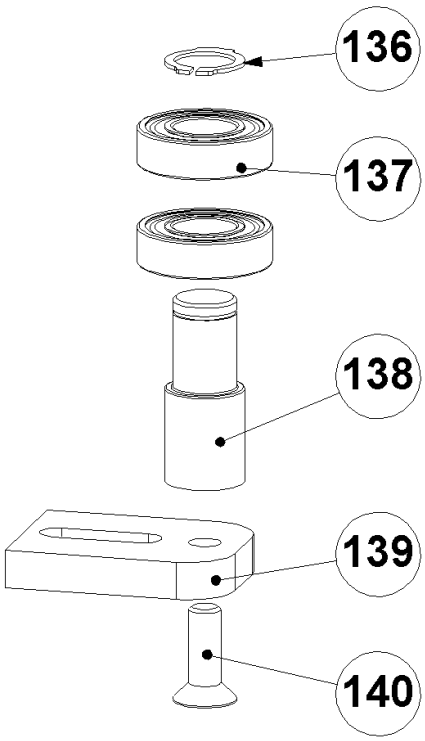
Upper tensioner BG005860



Item	Part number	Description	Remarks	Qty.
136	BE0074	Retaining ring for shaft Ø20	DIN 471	1
137	222-2245	Bearing		2
138	BG005830	Axle for tensioner		1
139	BG005831	Tension plate		1
140	BE0130	M10x25 countersunk screw	DIN 7991	1

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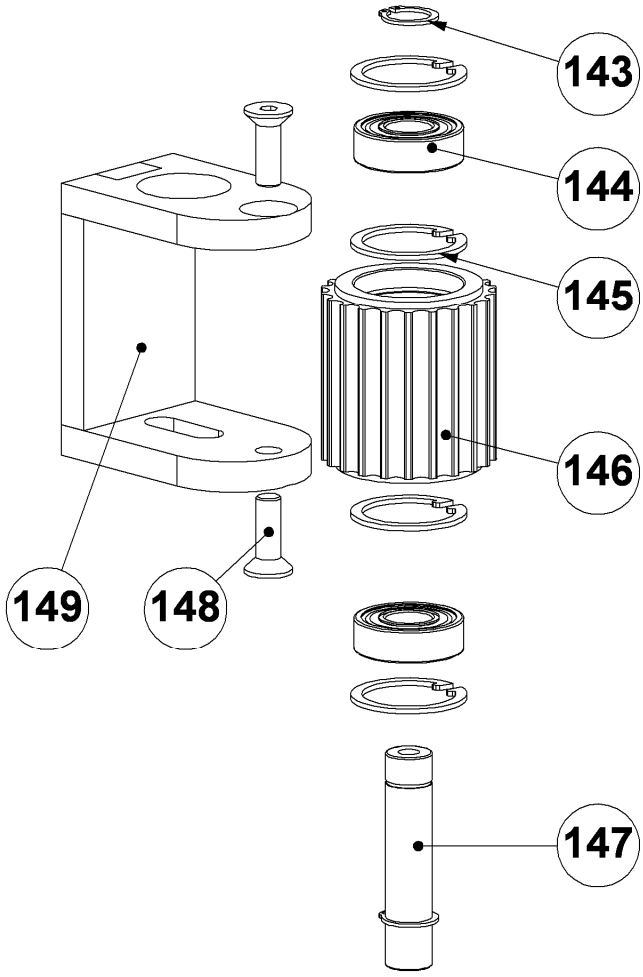
Lower tensioner BG005861



Item	Part number	Description	Remarks	Qty.
143	BE0070	Retaining ring for shaft Ø15	DIN 471	2
144	BG11792	Bearing		2
145	BE0618	Retaining ring for bore Ø35	DIN 472	4
146	BG005836	Pulley		1
147	BG005837	Axle tensioner		1
148	BE0458	M8x25 countersunk screw	DIN 7991	2
149	BG005833	Tensioner		1

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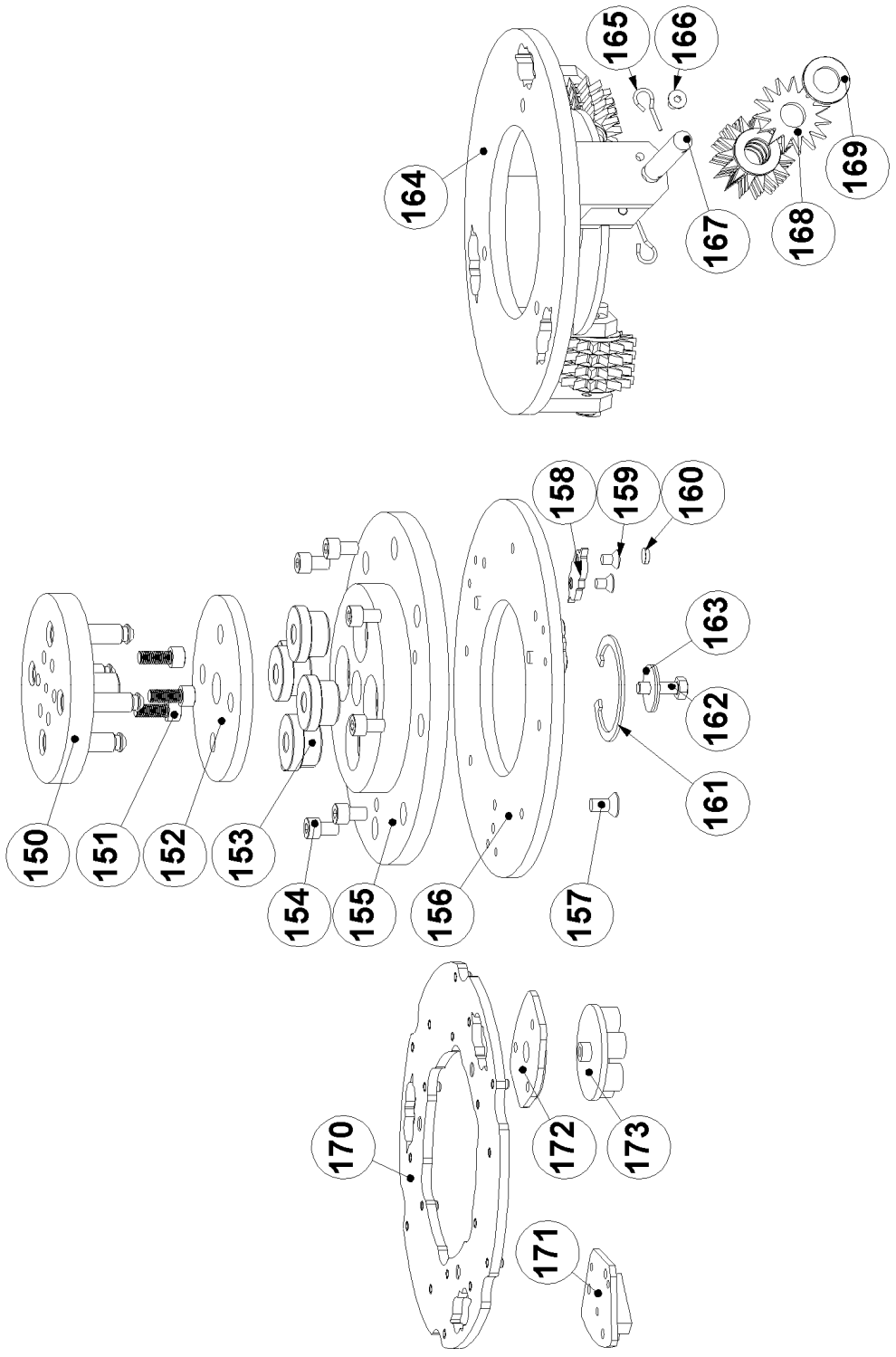
Buffer plate for surface preparation (3x)



Item	Part number	Description	Remarks	Qty.
153-160	BG240190-1	240mm diamond holder complete		1
156-160	BG2401901-1	240mm diamond holder		1
150	BG11880-HD	Fork		1
151	BE0204 + BE0584	M8x25 hexagon socket head bolt small + M8 spring washer small	DIN 7984 DIN 7980	3
152	BG11879	Buffer disc		1
153	BG11878	Buffer hard		4
154	BE0082	M8x12 hexagon socket head bolt	DIN 912	8
155	BG11877	Magnet plate holder 240mm		1
156	BG2401901-1	Only complete with parts 157 - 160		1
157	BE0456	M8x16 countersunk screw	DIN 7991	3
158	BG11811	Centering star		3
159	BG11810	M6x10 countersunk screw	DIN 7991	6
160	E06446	Magnet		3
161	BE0608	Retaining ring for bore Ø58	DIN 472	1
162	BE0030	M8x25 hexagon head bolt	DIN 933	1
163	BE0314	M8x30x1,5 washer		2
164-169	BG300117	240mm cutter housing complete		1
164	BG300501-1	185mm cutter housing		1
165+166	BG300133	Locking pin & screw		6
167	BG300130	Axle		3
168	BG300109	Cutter		12
169	MPL48	Washer		15
170	E07240	DIAMAG 240mm adapter plate		1
	BG200993-1	Plate for wings 240mm		1
	BG200988-1	Dry polish dot holder 240mm		1
171		DIAMAG grinding wings		3
172	E06447	DIAMAG adapter plate for dots		3
173		Dry polish dots		3

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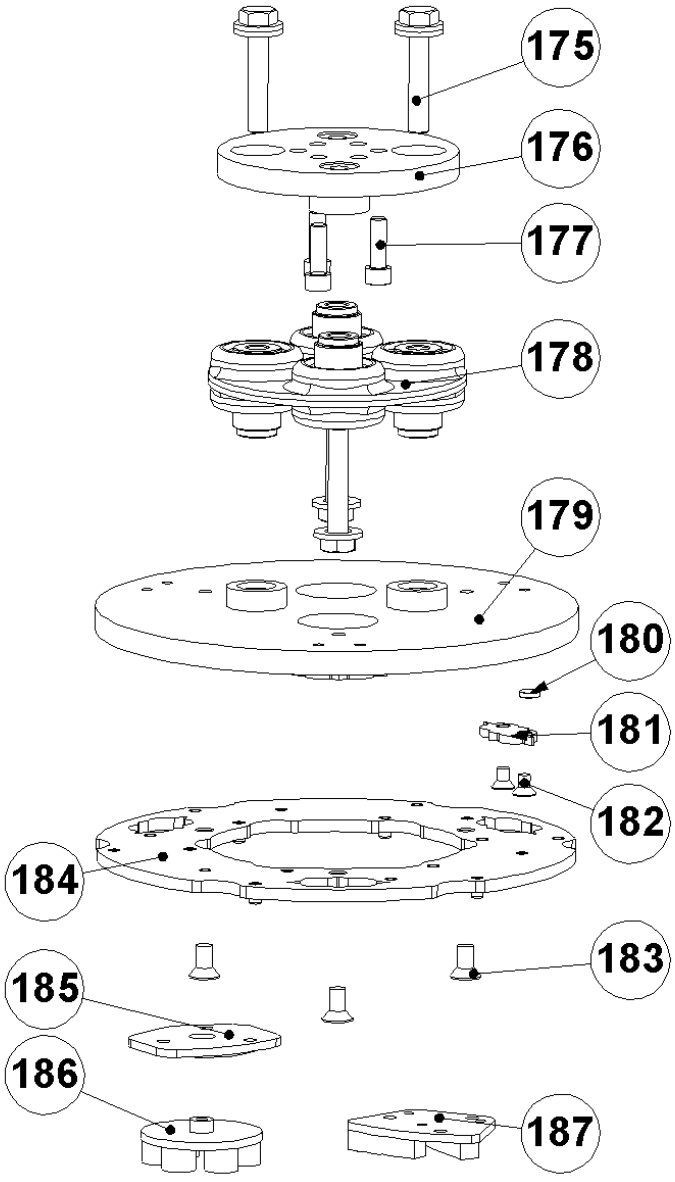
Buffer plate for polishing (3x)



Item	Part number	Description	Remarks	Qty.
175	BE0589	7/16 x 2"½ hexagon UNC bolt		4
176	BG2402001	Flexplate adapter for axle		1
177	BE0012	M8x25 hexagon socket head bolt	DIN 912	3
178	BG400310	Morflex coupling		1
179-182	BG2402002-1	Flexplate diamond holder		1
179	BG24020021-1	Flexplate diamond holder only		1
180	E06446	Magnet		3
181	BG11811	Centering star		3
182	BG11810	M6x10 countersunk screw		6
183	BE0456	M8x16 countersunk screw	DIN 7991	3
184	E07240	DIAMAG 240mm adapter plate		1
	BG200993-1	Plate for wings 240mm		1
	BG200988-1	Dry polish dot holder 240mm		1
185		DIAMAG grinding wings		3
186	E06447	DIAMAG adapter plate for dots		3
187		Dry polish dots		3

WIRE COLOR

Main Voltage 400V

Phase	Colors
L1	- Black
L2	- Black
L3	- Black
Earth / PE	- Yellow/Green

Control Voltage

Plus (24VDC)	- White
Hook-up wire	- White
Minus / Ground (24VDC)	- White

SYMBOL CODE

11 F 11

- 11 - Schedule page
- F - Symbol letter
- 11 - Running number

CORE CODE

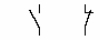
11 11

- 11 - Running number

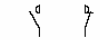
DRAWING NUMBER

PJ##.####.##

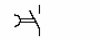
- PJ## - Year
- #### - Archive number
- ## - Revision number



auxiliary contact — hulpcontact

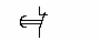


Power contact — vermogenscontact

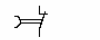


NO contact, opens with time delay — maakcontact, vertraagd open

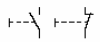
NO contact, closes with time delay — maakcontact, vertraagd sluitend



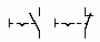
NC contact, opens with time delay — verbreekcontact, vertraagd open



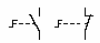
NC contact, closes with time delay — verbreekcontact, vertraagd sluitend



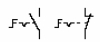
Pushbotton rebound — drukknop terugverend



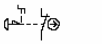
Pushbotton locking — drukknop blijvend



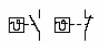
Rotary switch rebound — tip draaischakelaar



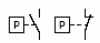
Rotary switch locking — draaischakelaar



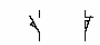
Emergency stop rotary unlock — noodstop met draaibare vrijgave



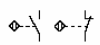
Thermostatic switch — thermostaat hygrostaat



Pressure switch — drukschakelaar



Limit switch — eindschakelaar



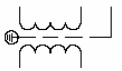
Proximity switch — naderingsschakelaar

signal light — signaallamp

horn — hoorn

apm.meter — amperemeter

runninghour counter — urenteller



transformer — transformator

Contactor coil relay coil — spoel

Contactor/relay coil, with pick-up delay — Spoel met opkomvertraging

Contactor/relay coil, with drop-out delay — spoel met afvalvertraging

Contactor pulse coil relay pulse coil, — spoel puls

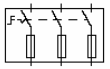
Tube light — TL verlichting

Resistor / Heating — weerstand verwarming

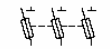
Socket — wandcontactdoos

Current transformer — stroomtransformator

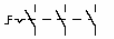
Safety fuse — smeltveiligheid



Fused switch, three-pole — schakelbare scheider

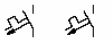


Fused disconnect, three-pole — scheider "klapbak"

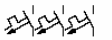


Main switch — hoofdschakelaar

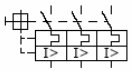
Circuit breaker, single-pole — installatieautomaat 1-polig



Circuit breaker, two-pole — installatieautomaat 2-polig



Circuit breaker, three-pole — installatieautomaat 3-polig



Power circuit breaker motor overload switch with switch mechanism — motorbeveiligingsschakelaar

Valve — elektrisch bediende klep

Resistor with movable contact — regelbare weerstand

Terminal — rijgklem

Terminal with fuse — rijgklem met zekering

Rectifier — gelijkrichter

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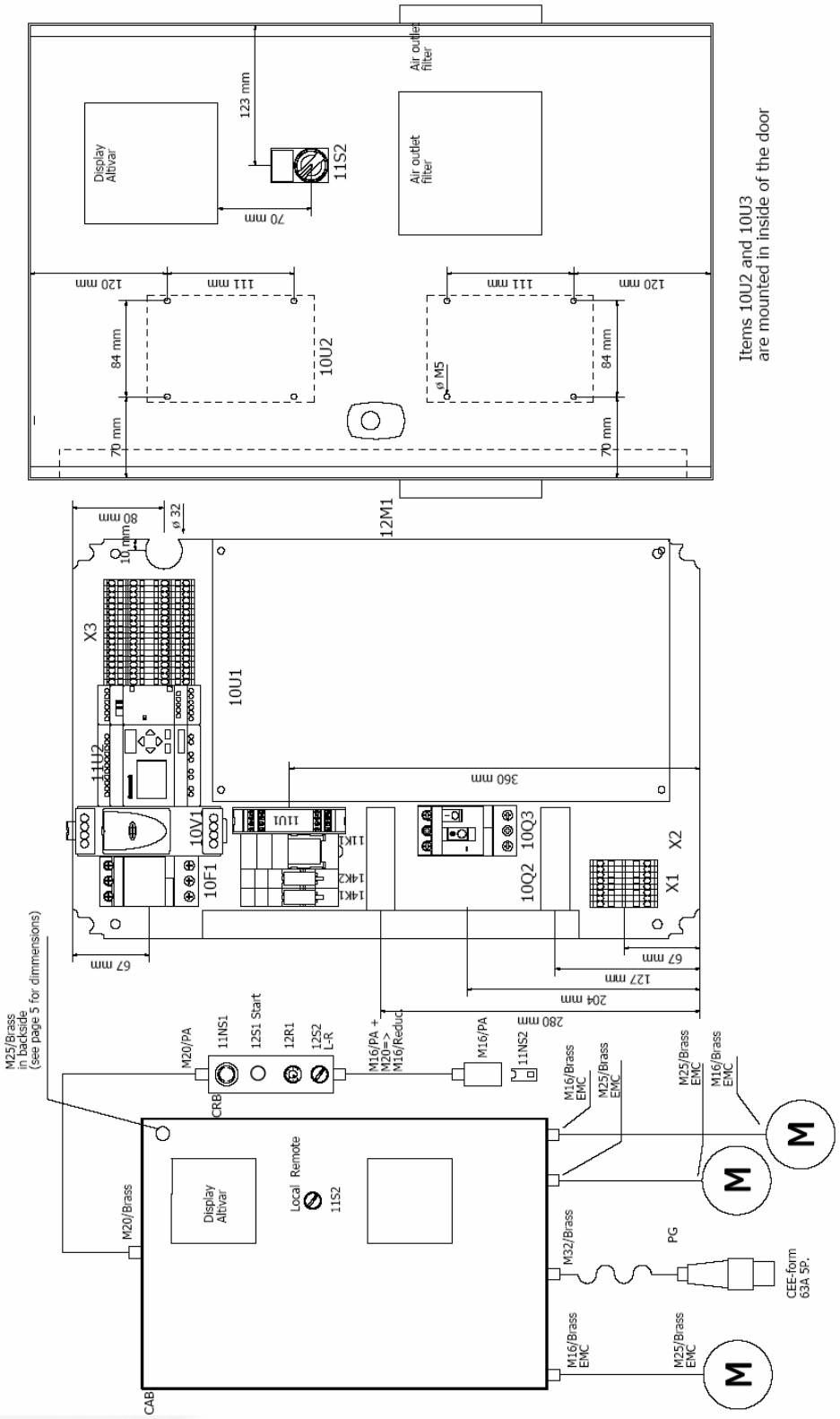
Air outlet filter
123 mm
Display Altivar
11S2
70 mm
Air outlet filter
120 mm
111 mm
111 mm
120 mm
84 mm
10U2
ø M5
84 mm
70 mm
70 mm
Items 10U2 and 10U3 are mounted in inside of the door
12M1
80 mm
10 mm
ø 32
X3
10U1
11U2
360 mm
10V1
11U1
10F1
14K2
14K1
10Q2
10Q3
X2
X1
67 mm
127 mm
204 mm
280 mm
M25/Brass in backside (see page 5 for dimensions)
M20/PA
11NS1
12S1 Start
12R1
12S2 L-R
M16/PA + M20=> M16/Reduc
M16/PA
11NS2
M16/Brass EMC
M25/Brass EMC
M25/Brass EMC
M16/Brass EMC
CRB
M20/Brass
Display Altivar
Local Remote
11S2
M32/Brass
PG
CEE-form 63A 5P.
M16/Brass EMC
M25/Brass EMC
CAB

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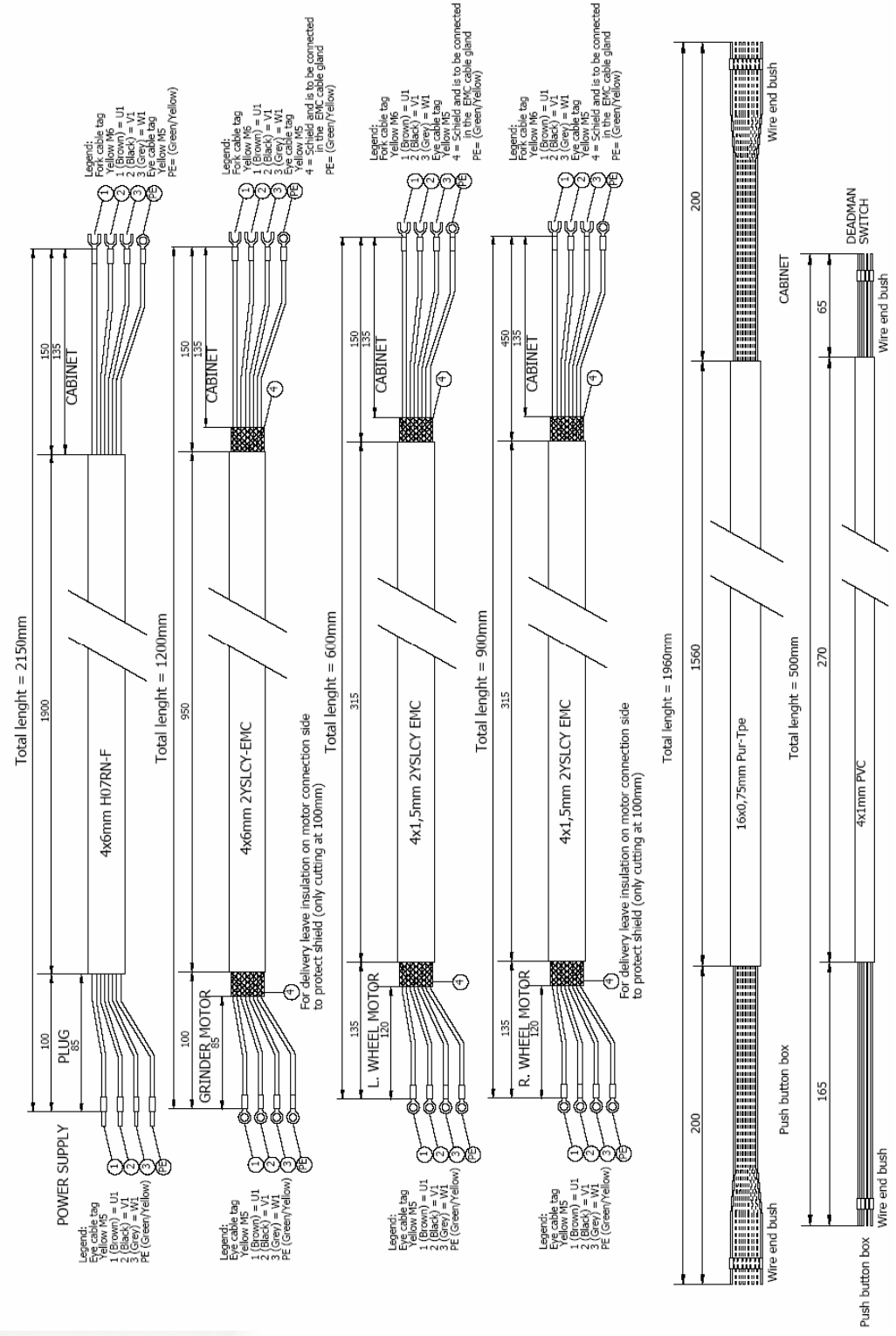
POWER SUPPLY
PLUG
CABINET
4x6mm H07RN-F
Total lenght = 2150mm
GRINDER MOTOR
4x6mm 2YSLCY-EMC
Total lenght = 1200mm
L. WHEEL MOTOR
4x1,5mm 2YSLCY EMC
Total lenght = 600mm
R. WHEEL MOTOR
4x1,5mm 2YSLCY EMC
Total lenght = 900mm
16x0,75mm Pur-Tpe
Total lenght = 1960mm
4x1mm PVC
Total lenght = 500mm
DEADMAN SWITCH
Push button box
Wire end bush
For delivery leave insulation on motor connection side to protect shield (only cutting at 100mm)
Legend:
Eye cable tag
Yellow M5
1 (Brown) = U1
2 (Black) = V1
3 (Grey) = W1
PE (Green/Yellow)
Fork cable tag
Yellow M6
4 = Schield and is to be connected in the EMC cable gland
PE= (Green/Yellow)

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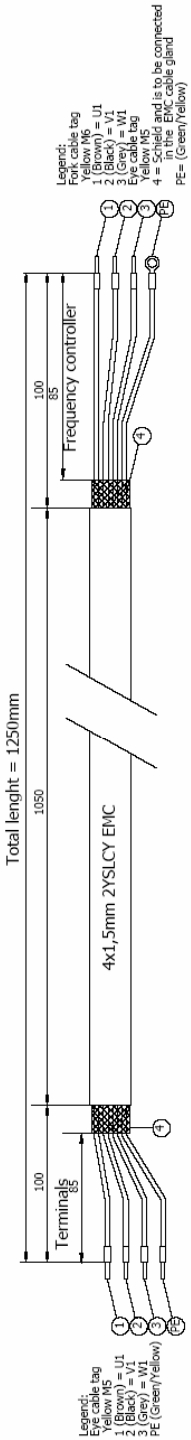
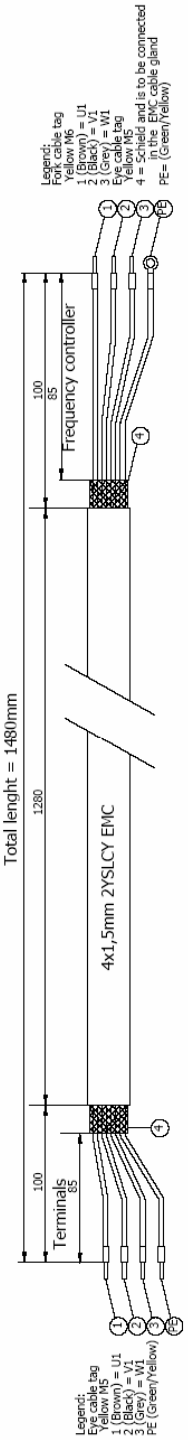

Total lenght = 1250mm
100
85
Terminals
1050
4x1,5mm 2YSLCY EMC
100
85
Frequency controller
Legend:
Eye cable tag
Yellow M5
1 (Brown) = U1
2 (Black) = V1
3 (Grey) = W1
PE (Green/Yellow)
Legend:
Fork cable tag
Yellow M6
1 (Brown) = U1
2 (Black) = V1
3 (Grey) = W1
Eye cable tag
Yellow M5
4 = Schield and is to be connected
in the EMC cable gland
PE= (Green/Yellow)


Total lenght = 1480mm
100
85
Terminals
1280
4x1,5mm 2YSLCY EMC
100
85
Frequency controller
Legend:
Eye cable tag
Yellow M5
1 (Brown) = U1
2 (Black) = V1
3 (Grey) = W1
PE (Green/Yellow)
Legend:
Fork cable tag
Yellow M6
1 (Brown) = U1
2 (Black) = V1
3 (Grey) = W1
Eye cable tag
Yellow M5
4 = Schield and is to be connected
in the EMC cable gland
PE= (Green/Yellow)

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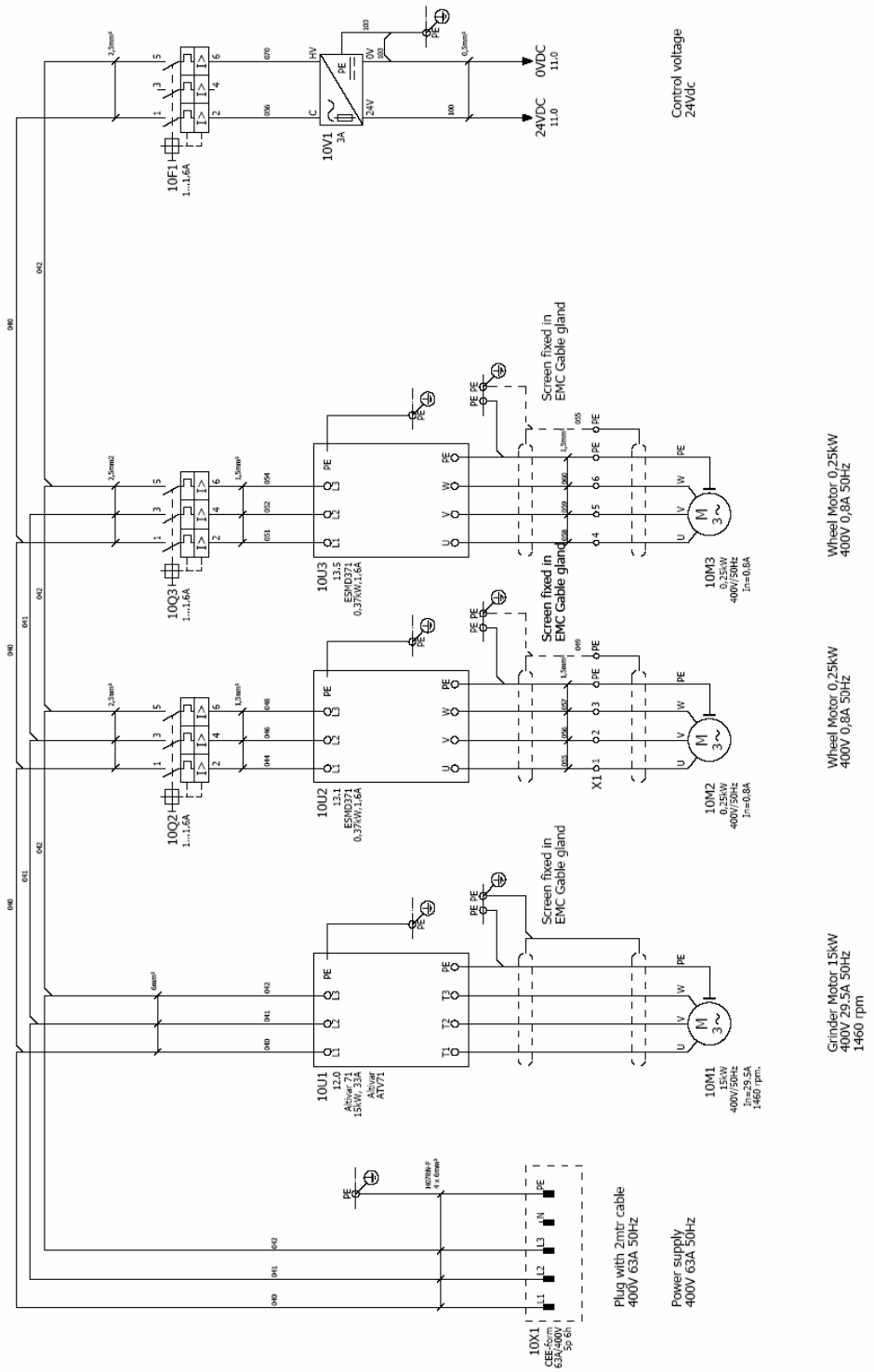
Control voltage
24Vdc
0VDC
11.0
24VDC
11.0
10F1
1...1.6A
10V1
3A
Screen fixed in
EMC Gable gland
10U3
13.5
ESMD371
0.37kW/1.8A
10M3
0.25kW
400V/50Hz
In=0.8A
Wheel Motor 0,25kW
400V 0,8A 50Hz
10Q3
1...1.6A
10U2
13.1
ESMD371
0.37kW/1.8A
X1
10M2
0.25kW
400V/50Hz
In=0.8A
Wheel Motor 0,25kW
400V 0,8A 50Hz
10Q2
1...1.6A
10U1
12.0
Altivar 71
15kW/20.5A
ATV71
10M1
15kW
400V/50Hz
In=29.5A
1460 rpm.
Grinder Motor 15kW
400V 29.5A 50Hz
1460 rpm
10X1
CEE-form
63A-400V
5p 6h
Plug with 2mtr cable
400V 63A 50Hz
Power supply
400V 63A 50Hz

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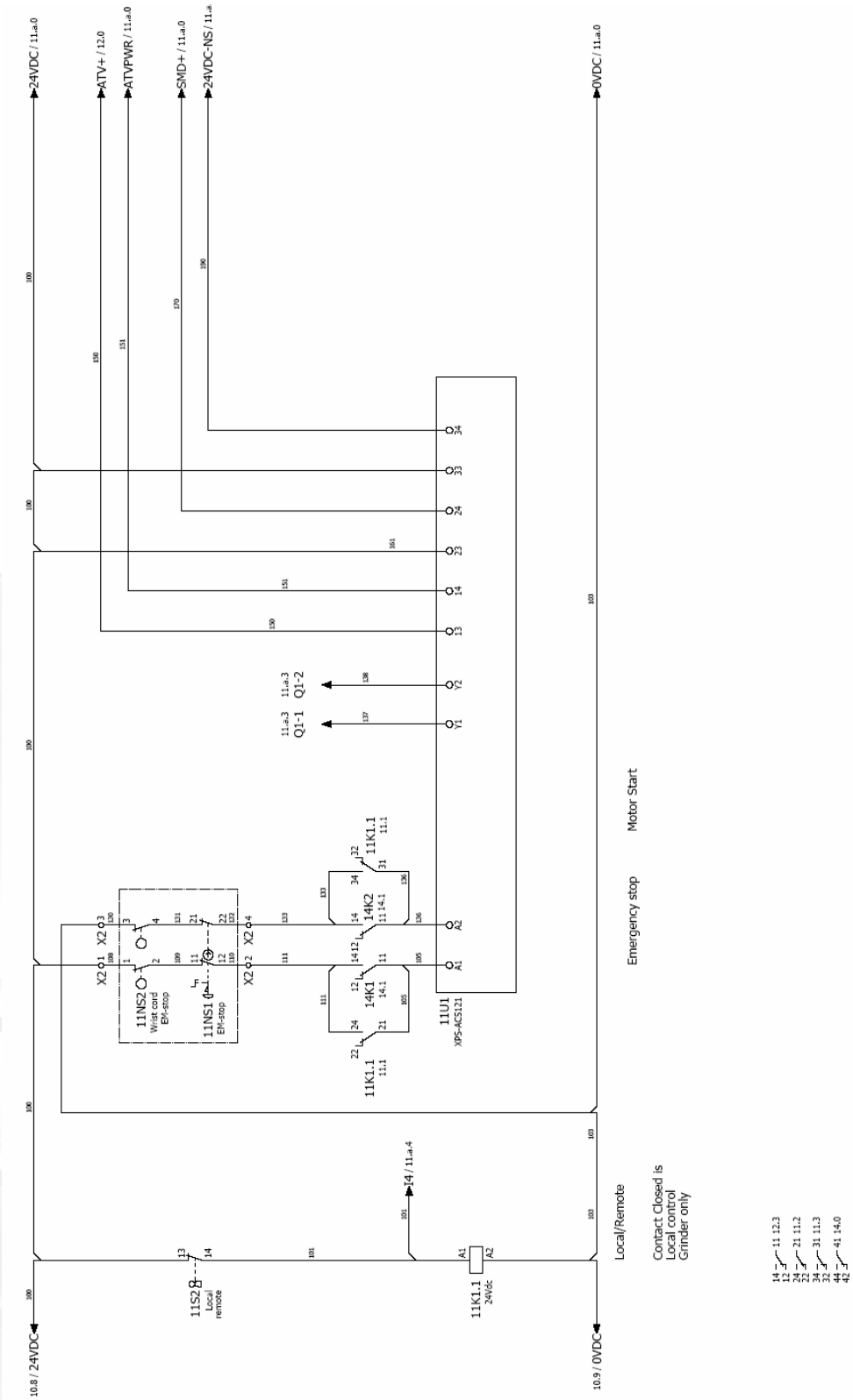
24VDC / 11.a.0
ATV+ / 12.0
ATVPWR / 11.a.0
SMD+ / 11.a.0
24VDC-NS / 11.a
0VDC / 11.a.0
11NS2
Wrist cord
EM-stop
11NS1
EM-stop
11K1.1
14K2
14K1
11U1
XPS-AC5121
Q1-2
Q1-1
Emergency stop
Motor Start
11S2
Local
remote
Local/Remote
Contact Closed is
Local control
Grinder only
11K1.1
24Vdc
10.8 / 24VDC
10.9 / 0VDC

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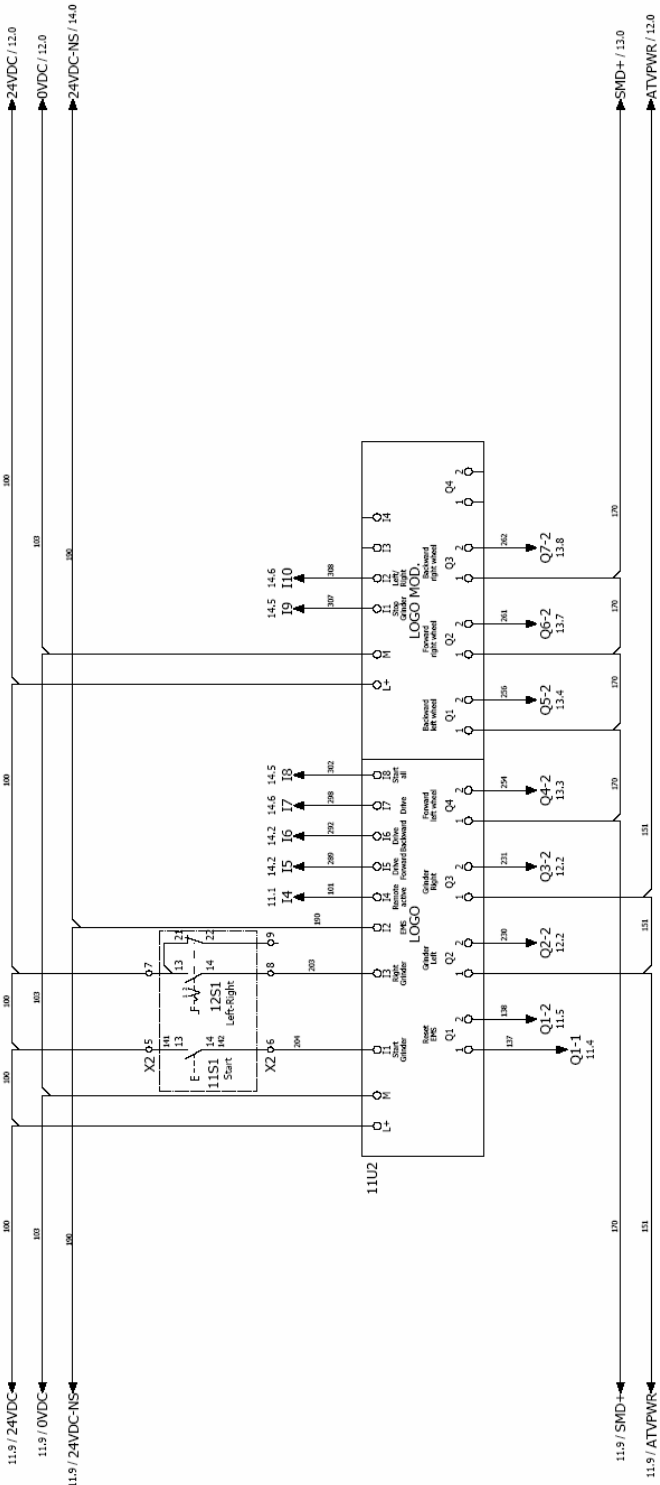
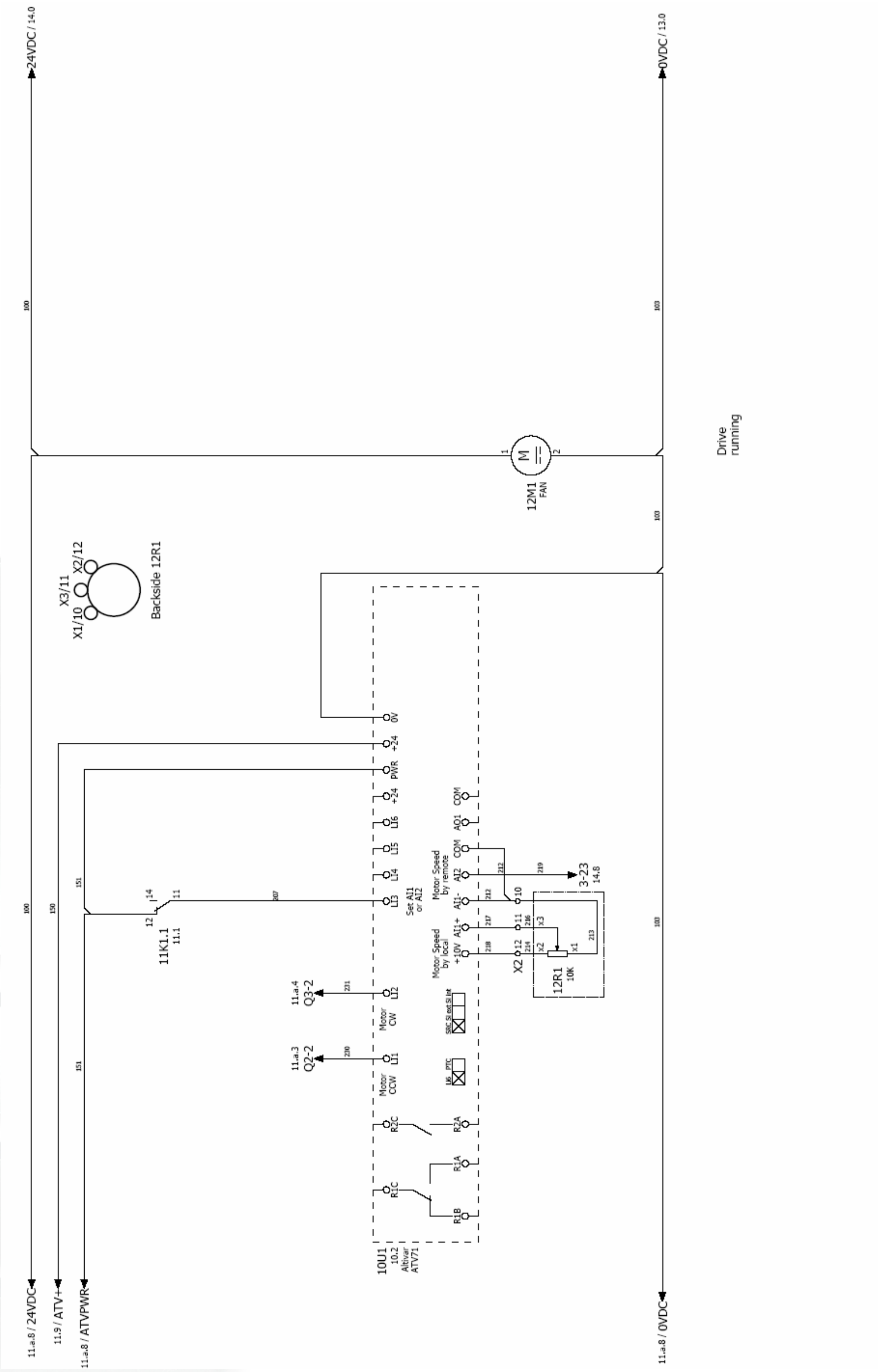

24VDC / 12.0
0VDC / 12.0
24VDC-NS / 14.0
SMD+ / 13.0
ATVPWR / 12.0
11U2
LOGO
LOGO MOD.
11S1
Start
12S1
Left-Right
Q1-1
11.4
Q1-2
11.5
Q2-2
12.2
Q3-2
12.2
Q4-2
13.3
Q5-2
13.4
Q6-2
13.7
Q7-2
13.8
11.9 / 24VDC
11.9 / 0VDC
11.9 / 24VDC-NS
11.9 / SMD+
11.9 / ATVPWR

BLASTRAC


24VDC / 14.0
0VDC / 13.0
Drive running
X1/10
X3/11
X2/12
Backside 12R1
12M1
FAN
11K1.1
10U1
10.2
Altivar
ATV71
12R1
10K
11.a.8 / 24VDC
11.9 / ATV+
11.a.8 / ATVPWR
11.a.8 / 0VDC

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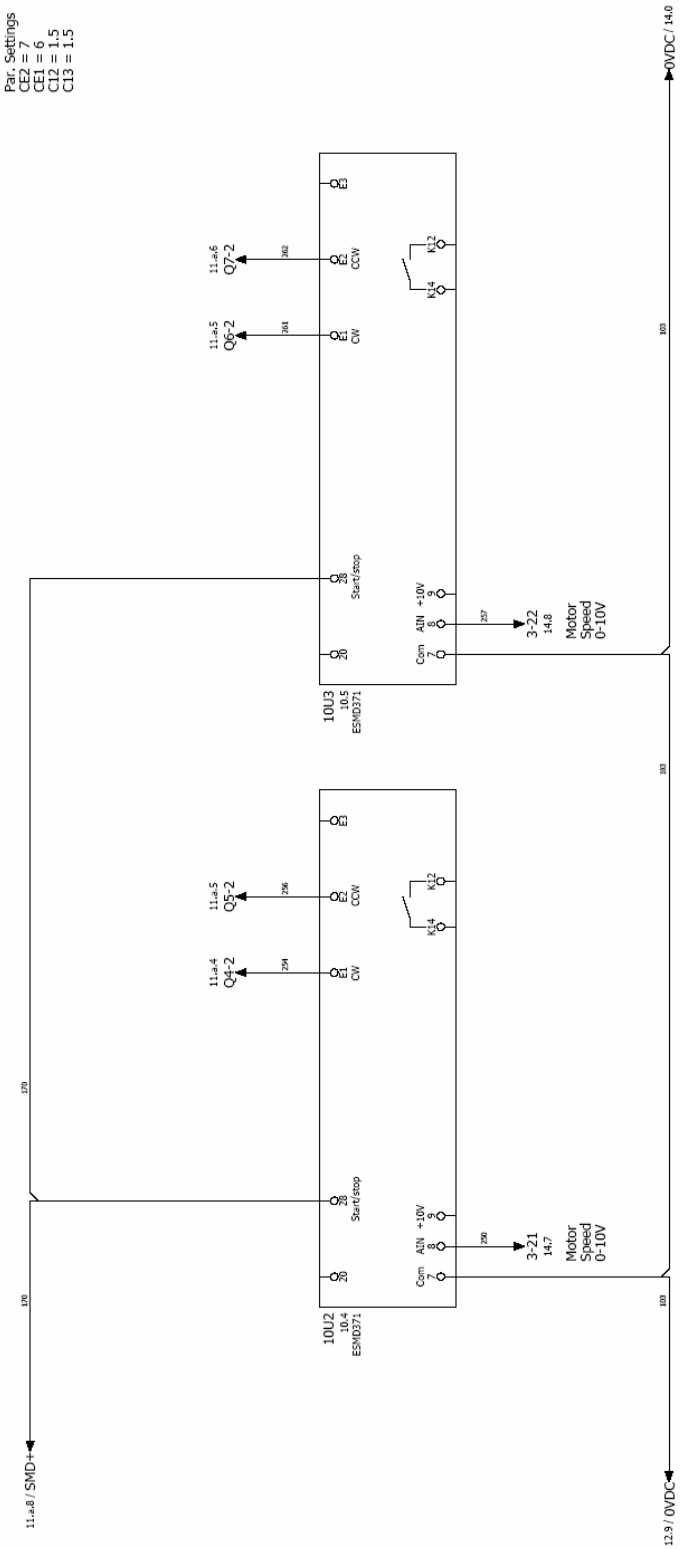
Par. Settings
CE2 = 7
CE1 = 6
C12 = 1.5
C13 = 1.5
0VDC / 14.0
11.a.6
Q7-2
11.a.5
Q6-2
E3
E2
CCW
E1
CW
K12
K14
28
Start/stop
20
AIN +10V
Com
3-22
14.8
Motor Speed 0-10V
10U3
10.5
ESMD371
11.a.5
Q5-2
11.a.4
Q4-2
3-21
14.7
10U2
10.4
11.a.8 / SMD+
12.9 / 0VDC

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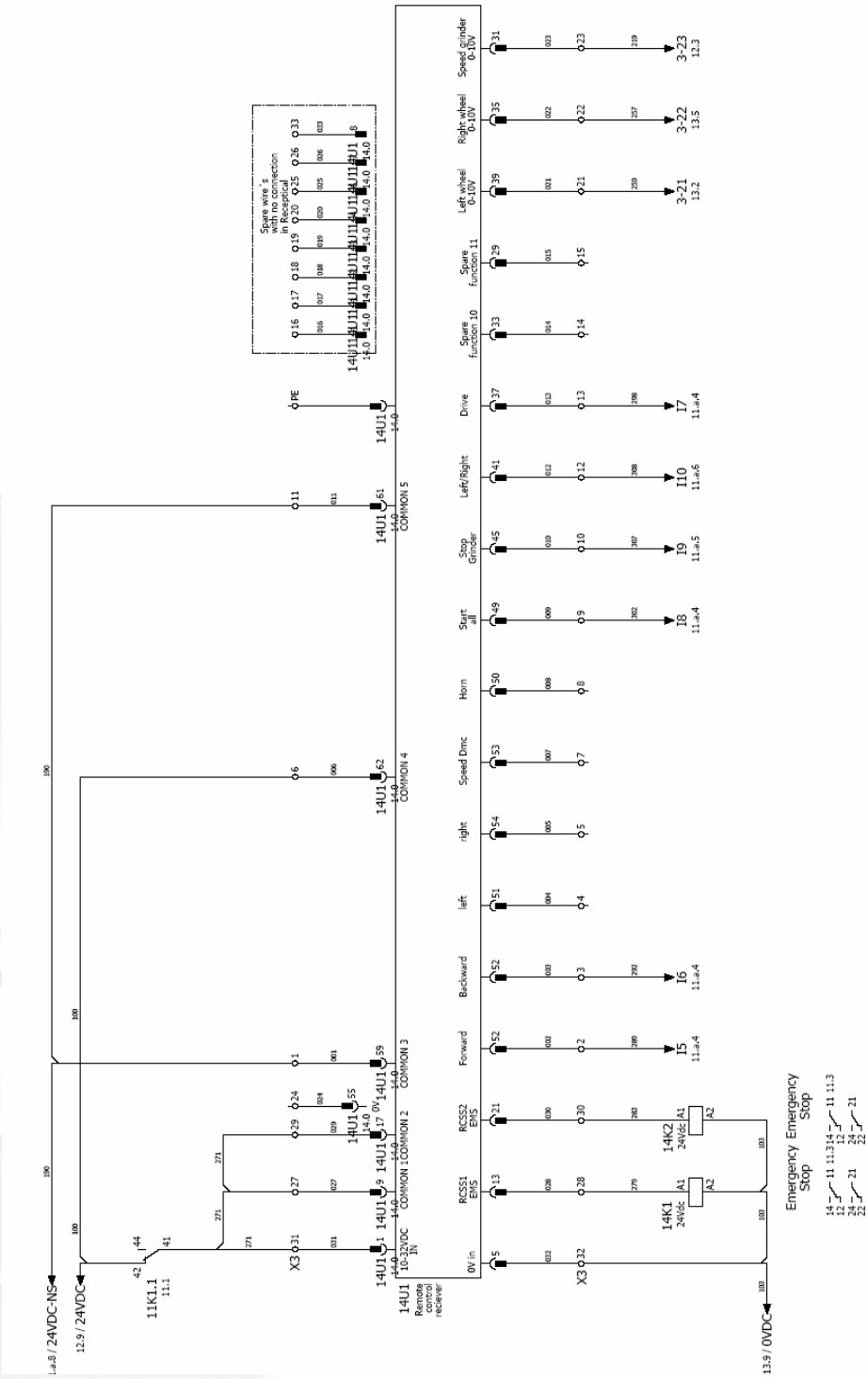
Spare wire is with no connection in Receptical
14U1 10-32VDC IN
Remote control reciever
COMMON 1
COMMON 2
COMMON 3
COMMON 4
COMMON 5
11K1.1
14K1 24Vdc
14K2 24Vdc
Emergency Stop
Emergency Stop
Speed grinder 0-10V
Right wheel 0-10V
Left wheel 0-10V
Spare function 11
Spare function 10
Drive
Left/Right
Stop Grinder
Start all
Horn
Speed Dmc
right
left
Backward
Forward
RGSS2 EMS
RGSS1 EMS
0V in
PE
12.9 / 24VDC
13.9 / 0VDC

Terminal diagram

function text									Cable name	Strip X1						Cable name						Page / column
									cable type	Target designation	Connection point	terminal	jumper	Target designation	Connection point	cable type						
Wheel Motor 0,25kW 400V 0,8A 50Hz										10M2	U	1	,	10U2	U							10.4
=										10M2	V	2	,	10U2	V							10.4
=										10M2	W	3	,	10U2	W							10.4
=										10M3	U	4	,	10U3	U							10.6
=										10M3	V	5	,	10U3	V							10.6
=										10M3	W	6	,	10U3	W							10.6
=										10M2	PE	PE	,	10U2	PE;PE							10.5
=												PE	,									10.5
=										10M3	PE	PE	,	10U3	PE;PE							10.6
=												PE	,									10.6

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Terminal diagram

Strip
X2
Terminals 24Vdc

function text	Target designation	Connection point	terminal	jumper	Target designation	Connection point	Page / column
Emergency stop	11NS2	1	1	.	11S2;11U1	13;23	11.3
=	11NS1	12	2	.	14K1	14	11.3
=	11NS2	3	3	.	11K1.1;11U2	A2;M	11.3
=	11NS1	22	4	.	14K2	14	11.3
	11S1	13	5	.	11U2	L+	11.a.3
	11S1	14	6	.	11U2	I1	11.a.3
	12S1	13	7	.	11U2	L+	11.a.3
	12S1	14	8	.	11U2	I2	11.a.3
	12S1	22	9	.			11.a.3
Motor Speed by local	10U1	+10V	12	.	12R1	x2	12.3
=	10U1	AI1+	11	.	12R1	x3	12.3
Set AI1 or AI2	10U1;10U1	AI1-;COM	10	.	12R1	x1	12.3

Terminal diagram

function text									Cable name	Strip X3						Cable name						Page / column
									cable type	Target designation	Connection point	terminal	jumper	Target designation	Connection point	cable type						
										14U1	59	1		11U2	I3							14.2
											52	2		11U2	I5							14.2
											52	3		11U2	I6							14.2
											51	4										14.3
											54	5										14.3
										14U1	62	6		11K1.1	42							14.4
											53	7										14.4
											50	8										14.4
											49	9		11U2	I8							14.5
											45	10		11U2	I1							14.5
										14U1	61	11										14.5
											41	12		11U2	I2							14.6
											37	13		11U2	I7							14.6
											33	14										14.6
											29	15										14.7
												16		14U1	1							14.6
												17		14U1	1							14.7
												18		14U1	2							14.7
												19		14U1	3							14.7
												20		14U1	4							14.7
											39	21		10U2	8							14.7
											35	22		10U3	8							14.8
											31	23		10U1	AI2							14.8
										14U1	55	24										14.1
												25		14U1	6							14.7
												26		14U1	7							14.8
										14U1	9	27		11K1.1	41							14.1
											13	28		14K1	A1							14.1
										14U1	17	29										14.1
											21	30		14K2	A1							14.1
										14U1	1	31		11K1.1	41							14.0
											5	32		10U3;14K1	7;A2							14.0
												33		14U1	8							14.8
										14U1		PE										14.6

Parts list

Blastrac rev1 F01_001

device tag	Quantity	designation	Type number	Brand	Blastrac number
CAB	1	Enclosure 400x600x300 with mounting plate 350x550	84002 - ENNW09120029	SAR	
CRB	1	Enclosure RAL7035/7016 for 4 buttons	XAL D04	TEL	
10X1	1	63A CEE-form Plug 6h IP67	ABL 553S35	ABL	
10U1	1	Altivar 71 Variable Speed Drive	ATV71HD1SN4	SE	3-phase supply voltage: 380...480V 50/60Hz
10U2	1	Frequency inverter	ESMD371L4TXA	LENZE	
10Q2	1	Motor circuit breaker	GV2 ME06	TEL	
10U3	1	Frequency inverter	ESMD371L4TXA	LENZE	
10Q3	1	Motor circuit breaker	GV2 ME06	TEL	
10F1	1	Mot.Th/Magn.bev. 1.0-1.6 A			E01322
10V1	1	Power Supply 400/24V 3A	ABL8RPS24030	SCHN	
11S2	1	Key-lock switch	ZB5.AFDD	TEL	
11S2	1	element NC with mountingbase	ZB5 AZ102	TEL	
11S2	1	Legend holder	ZBZ 35	SCHN	
11K1.1	1	Interface relay 4xCO 24Vdc	MY4.IN1-D2 24VDC	OMR	
11K1.1	1	Clip and Release lever	PYC-35	OMR	
11K1.1	1	RELAIS SOCKET	PYF-14-ESS	OMR	
11U1	1	Emergency stop relay	XPS-ACS121	SCHN	
11NS2	1	Safety switch + Pin	XCS-PA792 + XCS-Z11	TEL	
11NS1	1	Emergency stop	ZB5 AS844	TEL	
11NS1	2	element NC XAL	ZEN L1121	TEL	
11U2	1	PLC logo	SIEM 6ED1052-1MD00-0BA5	SIE	
11U2	1	Siemens logo Memory Module Brown	SIEM 6ED1056-5CA00-0BA0	SIE	
11U2	1	PLC logo expansion module	SIEM 6ED1055-1MB00-0BA0	SIE	
11S1	1	Pushbutton GREEN "START"	ZB5 AA333	TEL	
11S1	1	element NO XAL	ZEN L1111	TEL	
12S1	1	Switch handle	ZB5 AD2	TEL	
12S1	1	element NC XAL	ZEN L1121	TEL	
12S1	1	element NO XAL	ZEN L1111	TEL	
12R1	1	Trim-pot 10K	Potmeterset 10K ZB4	GEN	
12R1	1	Pot.meter	ZB5 AD912	TEL	
12M1	1	Fan 24Vdc	FAN 8314	EBM	
12M1	1	Fan filter		EBM	
12M1	1	Fan finger guard		EBM	
14U1	1	Antenna Cable RP-SMAm CONT 1M	942252-0216	AKE	
14U1	1	Battery for MC98	932482-000	AKE	
14U1	1	Bøklt for MC98	932523-000	AKE	
14U1	1	Charger for Battery MC98 of the MC98 transm	5926862-000	AKE	
14U1	1	Radio control Transmitter MC98	942649-000	AKE	
14U1	1	Radio control Reciever T-Rx 1500	T-Rx 1500	AKE	
14U1	1	Antenna Cable RP-SMAm CONT 1M	942316-000	AKE	
14K1	1	Interface relay 2xCO 24Vdc	G2R-2-SNDI-24	OMR	
14K1	1	Clip and Release lever	P2CM-S	OMR	
14K1	1	Relay socket	P2RF-08-E	OMR	
14K2	1	Interface relay 2xCO 24Vdc	G2R-2-SNDI-24	OMR	
14K2	1	Clip and Release lever	P2CM-S	OMR	
14K2	1	Relay socket	P2RF-08-E	OMR	
X1	1	End plate ZDU 2.5	WEID ZAP/TW 1	WEI	
X1	6	2 Wire terminal 2.5mm²	WEID ZDU 2.5	WEI	
X1	1	End bracket	WEID ZEW 35	WEI	
X1	4	2 Wire PE terminal 2.5mm²	WEID ZPE 2.5/	WEI	
X2	2	End bracket	WEID ZEW 35	WEI	
X2	1	Double level PE terminal 2.5mm²	WEID ZDK 2.5PE	WEI	
X2	6	Double level terminal 2.5mm²	WEID ZDK 2.5	WEI	
X2	1	End plate ZDU 2.5	WEID ZAP/TW ZDK2.5-DB	WEI	
X3	1	End plate ZDU 2.5	WEID ZAP/TW ZDK2.5-DB	WEI	
X3	17	Double level terminal 2.5mm²	WEID ZDK 2.5	WEI	

Parts list

Blastrac rev1 F01_001

device tag	Quantity	designation	Type number	Brand	Blastrac number
X3	1	Double level PE terminal 2.5mm²	WEID ZDK 2.5PE	WEI	
X3	2	End bracket	WEID ZEW 35	WEI	

4. Fault diagnose frequency drive

For a complete overview of faults and how to resolve them, check the operating manual of the frequency drive or the CD, which are delivered with the machine.

If you put the CD in the computer, it will automatically go to the manuals.

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
AI2F	[AI2 input]	• Non-conforming signal on analog input AI2	• Check the wiring of analog input AI2 and the value of the signal
AnF	[Load slipping]	• The encoder speed feedback does not match the reference	• 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
bOF	[DBR overload]	• The braking resistor is under excessive stress	• 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
brF	[Brake feedback]	• The brake feedback contact does not match the brake logic control	• Check the feedback circuit and the brake logic control circuit • Check the mechanical state of the brake
bUF	[DB unit sh. Circuit]	• Short-circuit output from braking unit	• Check the wiring of the braking unit and the resistor • Check the braking resistor
CrF1	[Precharge]	• Load relay control fault or charging resistor damaged	• Switch the drive off and then back on again • Check the internal connections • Inspect/repair the drive
CrF2	[Thyr. soft charge]	• DC bus charging fault (thyristors)	
ECF	[Encoder coupling]	• Break in encoder's mechanical coupling	• Check the encoder's mechanical coupling
EEF1	[Control Eeprom]	• Internal memory fault, control card	• Check the environment (electromagnetic compatibility) • Turn off, reset, return to factory settings • Inspect/repair the drive
EEF2	[Power Eeprom]	• Internal memory fault, power card	
EnF	[Encoder]	• Encoder feedback fault	• Check [Number of pulses] (PGI) and [Encoder type] (EnS), page 72 • 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
FCF1	[Out. contact. stuck]	• The output contactor remains closed although the opening conditions have been met	• Check the contactor and its wiring • Check the feedback circuit

Fault	Name	Probable cause	Remedy
HdF	[IGBT desaturation]	• Short-circuit or grounding at the drive output	• 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]	• Communication fault between option card and drive	• 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
InF1	[Rating error]	• The power card is different from the card stored	• Check the reference of the power card
InF2	[Incompatible PB]	• The power card is incompatible with the control card	• Check the reference of the power card and its compatibility
InF3	[Internal serial link]	• Communication fault between the internal cards	• Check the internal connections • Inspect/repair the drive
InF4	[Internal MFG area]	• Internal data inconsistent	• Recalibrate the drive (performed by Schneider Electric Product Support)
InF6	[Internal-option]	• The option installed in the drive is not recognized	• Check the reference and compatibility of the option
InF7	[Internal-hard init.]	• Initialization of the drive is incomplete	• Turn off and reset
InF8	[Internal-ctrl supply]	• The control power supply is incorrect	• Check the control power supply
InF9	[Internal- I measure]	• The current measurements are incorrect	• Replace the current sensors or the power card • Inspect/repair the drive
InFA	[Internal-mains circuit]	• The input stage is not operating correctly	• Perform the diagnostic tests via the [1.10 DIAGNOSTICS] menu • Inspect/repair the drive
InFb	[Internal- th. sensor]	• The drive temperature sensor is not operating correctly	• Replace the temperature sensor • Inspect/repair the drive
InFC	[Internal-time meas.]	• Fault on the electronic time measurement component	• Inspect/repair the drive
InFE	[internal- CPU]	• Internal microprocessor fault	• Turn off and reset. Inspect/repair the drive
OCF	[Overcurrent]	• Parameters in the [SETTINGS] (SEt-) and [1.4 MOTOR CONTROL] (drC-) menus are not correct • Inertia or load too high • Mechanical locking	• Check the parameters • Check the size of the motor/drive/load • Check the state of the mechanism
PrF	[Power removal]	• Fault with the drive's "Power removal" safety function	• Inspect/repair the drive
SCF1	[Motor short circuit]	• Short-circuit or grounding at the drive output • Significant earth leakage current at the drive output if several motors are connected in parallel	• 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 • Reduce the switching frequency • Connect chokes in series with the motor
SCF2	[Impedant sh. circuit]		
SCF3	[Ground short circuit]		
SOF	[Overspeed]	• Instability or driving load too high	• Check the motor, gain and stability parameters • Add a braking resistor • Check the size of the motor/drive/load
SPF	[Speed fdback loss]	• Encoder feedback signal missing	• Check the wiring between the encoder and the drive • Check the encoder
tnF	[Auto-tuning]	• Special motor or motor whose power is not suitable for the drive • Motor not connected to the drive	• 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
APF	[Application fault]	• Controller Inside card fault	• Please refer to the card documentation
bLF	[Brake control]	• Brake release current not reached • Brake engage frequency threshold [Brake engage freq] (bEn) only regulated when brake logic control is assigned	• 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)
CnF	[Com. network]	• Communication fault on communication card	• Check the environment (electromagnetic compatibility) • Check the wiring • Check the time-out • Replace the option card • Inspect/repair the drive
COF	[CAN com.]	• Interruption in communication on the CANopen bus	• Check the communication bus • Check the time-out • Refer to the CANopen user's manual
EPF1	[External flt-LI/Bit]	• Fault triggered by an external device, depending on user	• Check the device, which caused the fault, and reset
EPF2	[External fault com.]	• Fault triggered by a communication network	• Check for the cause of the fault and reset
FCF2	[Out. contact. open.]	• The output contactor remains open although the closing conditions have been met	• Check the contactor and its wiring • Check the feedback circuit
LCF	[input contactor]	• The drive is not turned on even though [Mains V. time out] (LCt) has elapsed	• Check the contactor and its wiring • Check the time-out • Check the line/contactor/drive connection
LFF2 LFF3 LFF4	[AI2 4-20mA loss] [AI3 4-20mA loss] [AI4 4-20mA loss]	• Loss of the 4-20 mA reference on analog input AI2, AI3 or AI4	• Check the connection on the analog inputs
ObF	[Overbraking]	• Braking too sudden or driving load	• 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
OHF	[Drive overheat]	• Drive temperature too high	• Check the motor load, the drive ventilation and the ambient temperature. Wait for the drive to cool down before restarting
OLF	[Motor overload]	• Triggered by excessive motor current	• Check the setting of the motor thermal protection, check the motor load. Wait for the drive to cool down before restarting
OPF1	[1 output phase loss]	• Loss of one phase at drive output	• Check the connections from the drive to the motor

Fault	Name	Probable cause	Remedy
OPF2	[3 output phase loss]	• Motor not connected or motor power too low • Output contactor open • Instantaneous instability in the motor current	• Check the connections from the drive to the motor • If an output contactor is being used, parameterize [Output Phase Loss] (OPL) = [Output cut] (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 86
OSF	[Mains overvoltage]	• Mains voltage too high • Disturbed mains supply	• Check the mains voltage
OtF1	[PTC1 overheat]	• Overheating of the PTC1 probes detected	• 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
OtF2	[PTC2 overheat]	• Overheating of the PTC2 probes detected	
OtFL	[LI6=PTC overheat]	• Overheating of PTC probes detected on input LI6	
PtF1	[PTC1 probe]	• PTC1 probes open or short-circuited	• Check the PTC probes and the wiring between them and the motor/drive
PtF2	[PTC2 probe]	• PTC2 probes open or short-circuited	
PtFL	[LI6=PTC probe]	• PTC probes on input LI6 open or short-circuited	
SCF4	[IGBT short circuit]	• Power component fault	• Perform a diagnostic test via the [1.10 DIAGNOSTICS] menu • Inspect/repair the drive
SCF5	[Motor short circuit]	• Short-circuit at drive output	• 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
SLF1	[Modbus com.]	• Interruption in communication on the Modbus bus	• Check the communication bus • Check the time-out • Refer to the Modbus user's manual
SLF2	[PowerSuite com.]	• Fault communicating with PowerSuite	• Check the PowerSuite connecting cable • Check the time-out
SLF3	[HMI com.]	• Fault communicating with the graphic display terminal	• Check the terminal connection • Check the time-out
SrF	[Torque time-out]	• The time-out of the torque control function is attained	• Check the function's settings • Check the state of the mechanism
SSF	[Torque/current lim]	• Switch to torque limitation	• Check if there are any mechanical problems • Check the parameters of [TORQUE LIMITATION] (tLA-) page 171 and the parameters of fault [TORQUE OR I LIM. DETECT.] (tId-), page 210)
tJF	[IGBT overheat]	• Drive overheated	• 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
CFF	[Incorrect config.]	• Option card changed or removed	• Check that there are no card errors • In the event of the option card being changed/removed deliberately, see the remarks below
		• Control card replaced by a control card configured on a drive with a different rating	• Check that there are no card errors • In the event of the control card being changed deliberately, see the remarks below
		• The current configuration is inconsistent	• Return to factory settings or retrieve the backup configuration, if it is valid (see page 223)
CFI	[Invalid config.]	• Invalid configuration The configuration loaded in the drive via the bus or communication network is inconsistent	• Check the configuration loaded previously • Load a compatible configuration
HCF	[Cards pairing]	• The [CARDS PAIRING] (PPI-) function, page 212, has been configured and a drive card has been changed	• 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
PHF	[Input phase loss]	• Drive incorrectly supplied or a fuse blown • Failure of one phase • 3-phase ATV71 used on a single-phase line supply • Unbalanced load This protection only operates with the drive on load	• 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)
USF	[Undervoltage]	• Line supply too low • Transient voltage dip • Damaged pre-charge resistor	• Check the voltage and the parameters of [UNDERVOLTAGE MGT] (USb-), page 205 • Replace the pre-charge resistor • Inspect/repair the drive

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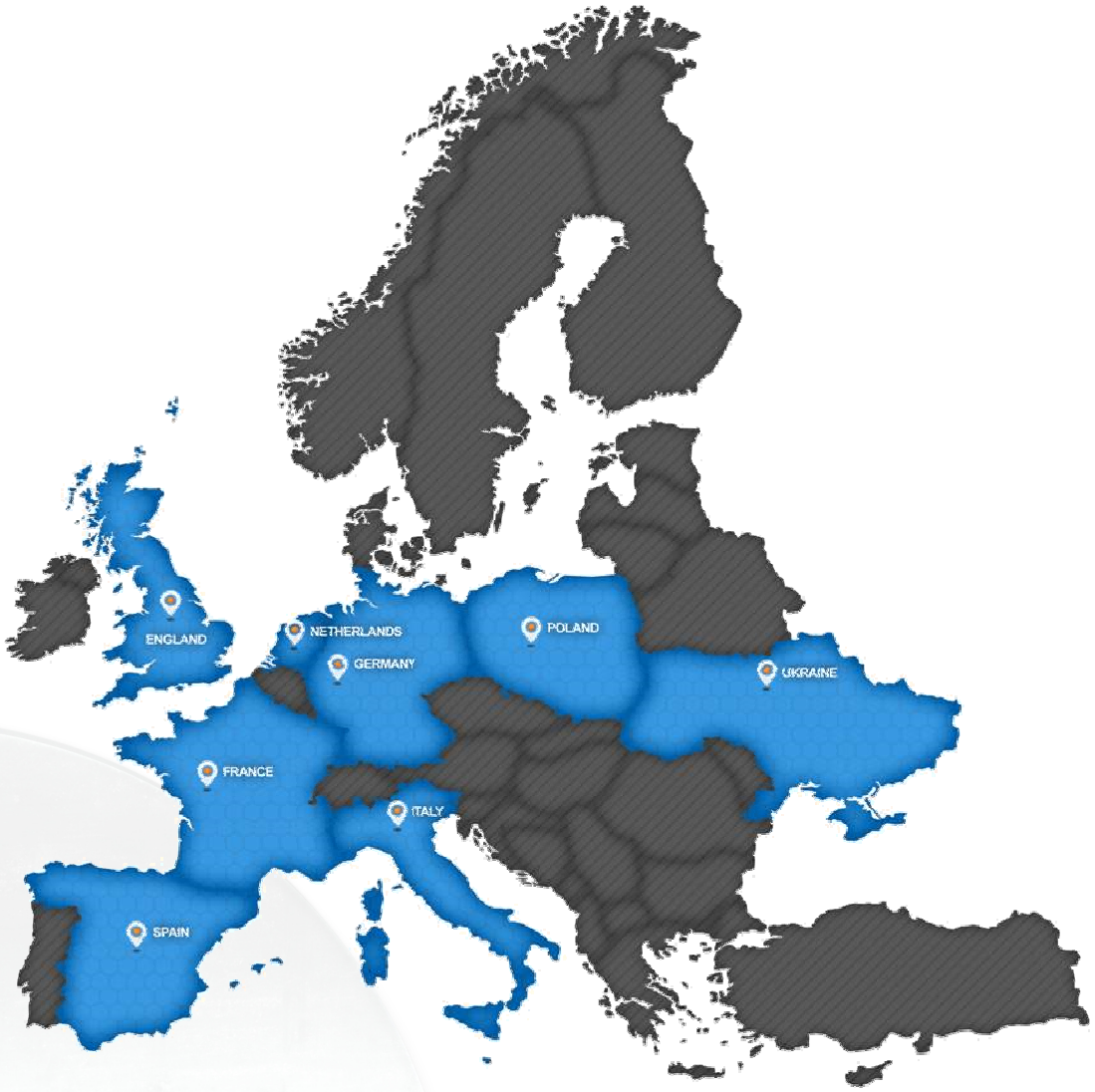

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