THE INNOVATORS IN SURFACE PREPARATION

BLASTRAC

SERVICE MANUAL BMG-580PRO

VERSION 2.0

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Index

1. Tools

Diamag grinding wings

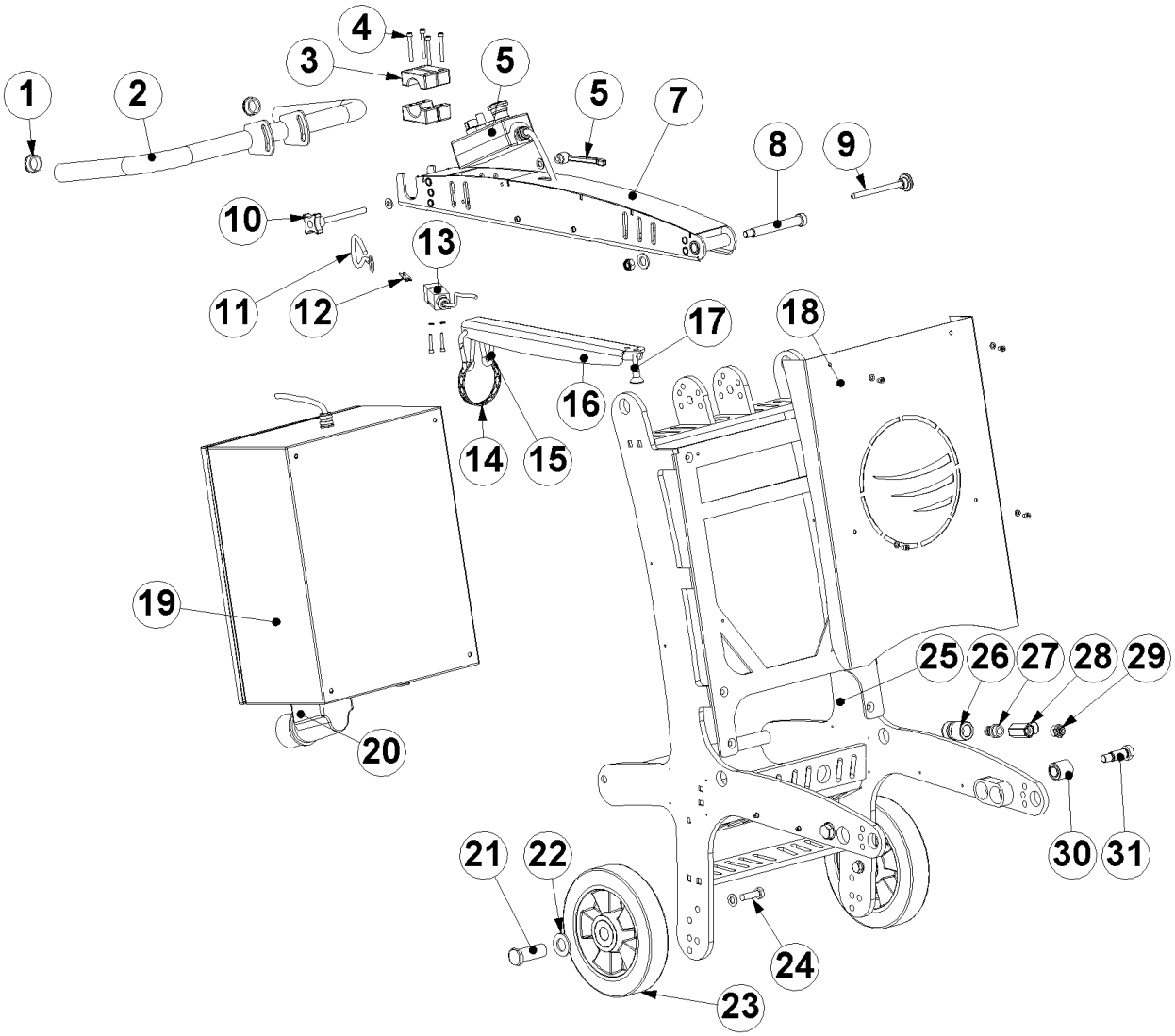
Part number	Description	Remarks	Qty.
BG707301	Diamag wing red box 9 pieces 18/20		1
BG707302	Diamag wing red box 9 pieces 30/40		1
BG707303	Diamag wing red box 9 pieces 60/80		1
BG707304	Diamag wing red box 9 pieces 120/150		1
BG707311	Diamag wing green box 9 pieces 18/20		1
BG707312	Diamag wing green box 9 pieces 30/40		1
BG707313	Diamag wing green box 9 pieces 60/80		1
BG707314	Diamag wing green box 9 pieces 120/150		1
BG707321	Diamag wing blue box 9 pieces 18/20		1
BG707322	Diamag wing blue box 9 pieces 30/40		1
BG200997/SET	Wing PCD split	set of 9	1
BG200999/SET	Wing PCD 2 x ¼	set of 9	1
E06862/SET	Bush hammer	set of 9	1

Diamag polishing dots

Part number	Description	Remarks	Qty.
BG200982	Dry polishing dot black #100		9
BG200983	Dry polishing dot blue #200		9
BG200984	Dry polishing dot red #400		9
BG200985	Dry polishing dot white #800		9
BG200986	Dry polishing dot yellow #1500		9
BG200987	Dry polishing dot green #3000		9
BG7170100	Diamag High rpm resindot black #100	set of 9	1
BG7170200	Diamag High rpm resindot blue #200	set of 9	1
BG7170400	Diamag High rpm resindot red #400	set of 9	1
BG7170800	Diamag High rpm resindot white #800	set of 9	1
BG7171500	Diamag High rpm resindot yellow #1500	set of 9	1
BG7173000	Diamag High rpm resindot green #3000	set of 9	1
BG7110050	Diamag wet polishing dot orange #50	set of 9	1
BG7110100	Diamag wet polishing dot black #100	set of 9	1
BG7110200	Diamag wet polishing dot blue #200	set of 9	1
BG7110400	Diamag wet polishing dot red #400	set of 9	1
BG7110800	Diamag wet polishing dot white #800	set of 9	1
BG7111800	Diamag wet polishing dot yellow #1800	set of 9	1
BG7113000	Diamag wet polishing dot green #3000	set of 9	1

2. Spare parts

Frame complete



Item	Part number	Description	Remarks	Qty.
1	BE0643	Tube cap round		2
2	BG005845/BL	Handle for steer		1
3	BE0191	M6x50 hexagon socket head bolt	DIN 912	4
4	999-9156	Pipe clamp (set)		2
5	E07882	Operating box complete	Speed control	1
	E06861	Operating box complete	Star/delta	1
	E01543	Emergency stop		
	E01318	Start button		
	E01351/1	Potentio meter (speed switch)		
	E01323	Left / right switch		
	E05130	Make contact (green)		
	E05131	Brake contact (red)		
6	BE0641	M10 clamp lever		1
7	BG005835	Steer handle		1
8	BE0640	M12 hexagon shoulder screw		1
9	BG11751-1	Handle locking pin		1
10	E06860	Clamping pin steer		1
11	BG11758	Cord for deadman switch		1
12	BG11759	Key for deadman switch		1
13	BG11760	Deadman switch		1
14	E07008	Chain (11links)		1
15	BE0653	Hook		2
16	E06883	Swing arm for dusthose		1
17	478198	Quick release pin		1
18	BG005838	Cover plate electro box		1
19	BG11915	Electrobox 7,5kW complete		1
	BG11915/UL	Electrobox 7,5kW complete 230UL		1
20	E05135	Electrical inlet 3x400V 32A		1
	E05136	Electrical inlet 3x230V 32A		1
21	BG11765	Bolt for wheel		2
22	BE0645	M24 plain washer		2
23	E01491	Wheel		2
24	BE0036	M12x40 hexagon head bolt		2
25	BG005825	Frame		1
26	E06286	Water coupling		1
27	E06285	Waterhose connection		1
28	E06282	Ball valve mini		1
29	E06279	Water reducing coupling		1
30	E01492	Megi bush		2
31	BG11752	Hinge bolt		2
	E06891_BL	580PRO logo blue		2
	E06819	Blastrac logo		4

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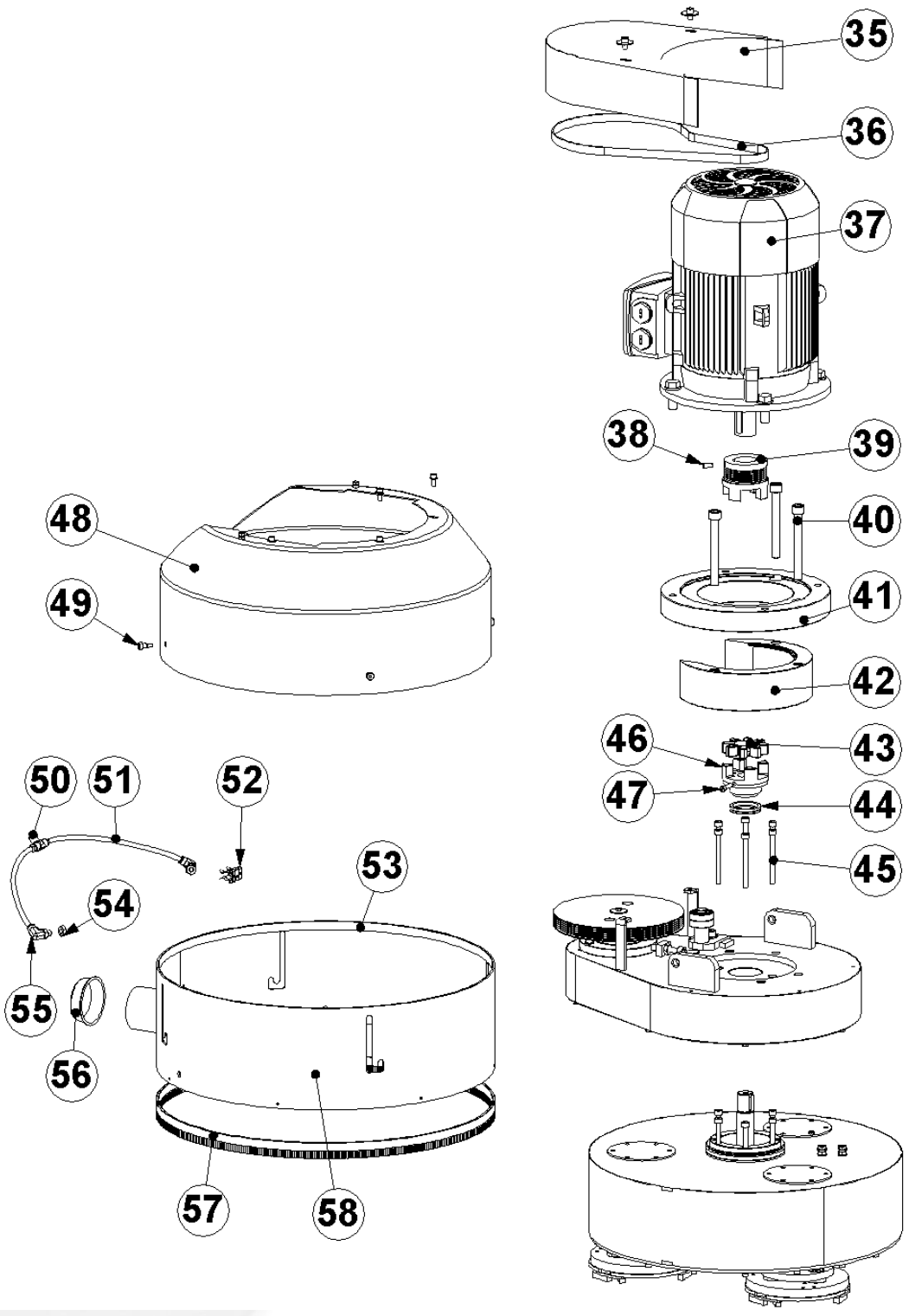
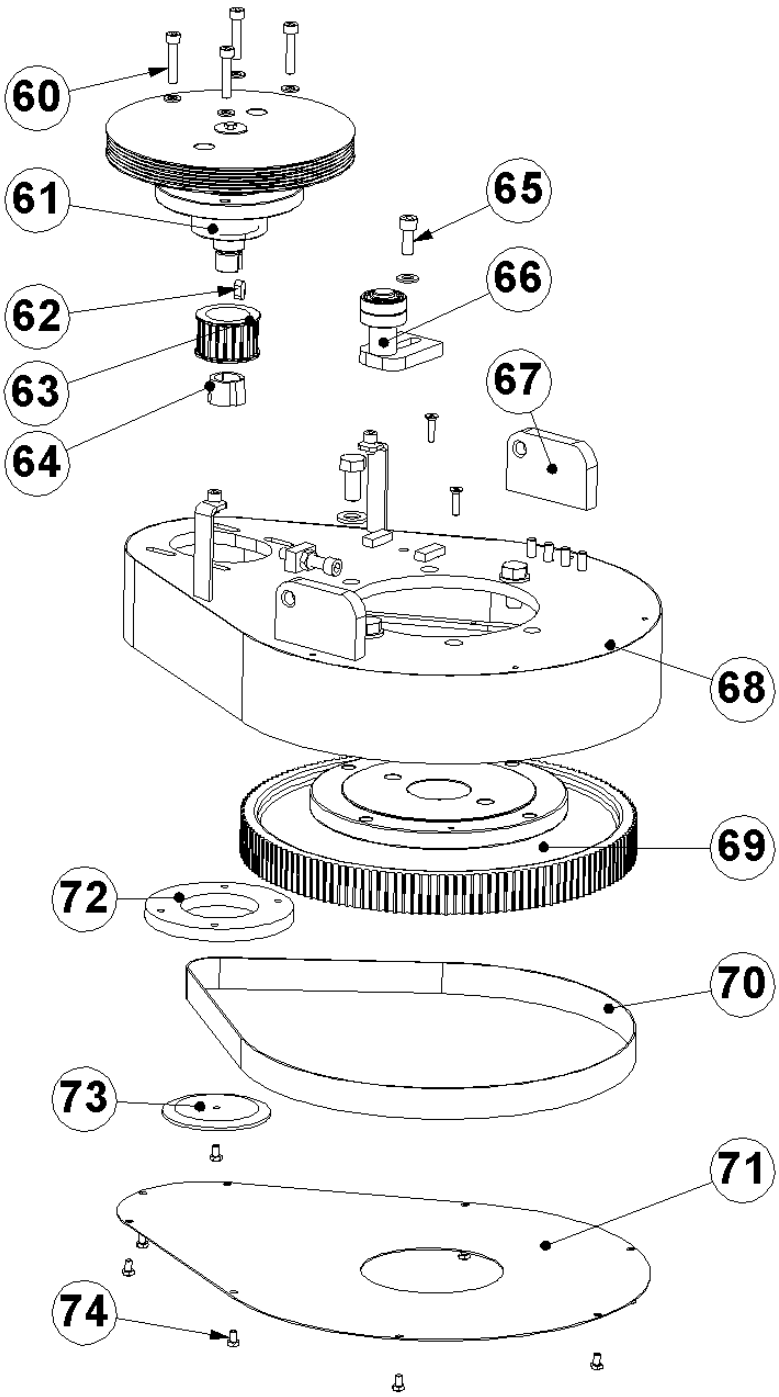
Machine complete



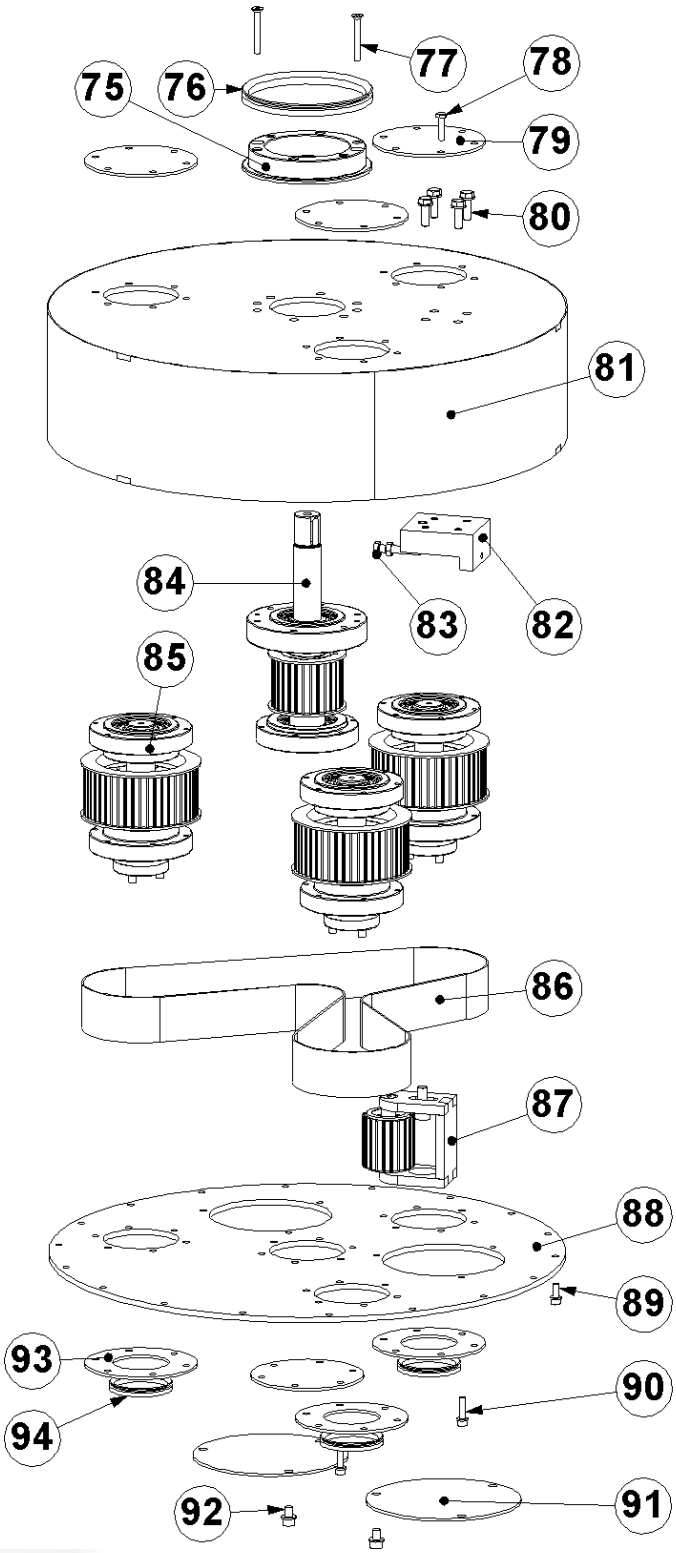
Item	Part number	Description	Remarks	Qty.
35	BG005847	Protection cap		1
36	BG11924	Upper belt		1
37	BG11960	Motor 400V/690V		1
	BG11960-1	Motor 230V/400V		1
38	BE0654	M8x16 set screw	DIN 916	4
39	BG005808_2	Coupling upper part		1
40	BE0646	M14x120 hexagon socket head bolt	DIN 912	3
41	BG005810	Flange motor seat		1
42	BG005811	Motor seat		1
43	BG005844	Coupling plastic star		1
44	BG11829	V-seal		1
45	BE0647	M8x90 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	BG005839-1	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		2m
54	E06293	Nut for knee coupling		2
55	E06280	Water knee coupling		2
56	E04551	Plastic cap		1
57	BG005849	Brush for floating shroud		1
58	BG005855	Floating shroud		1

Upper drive



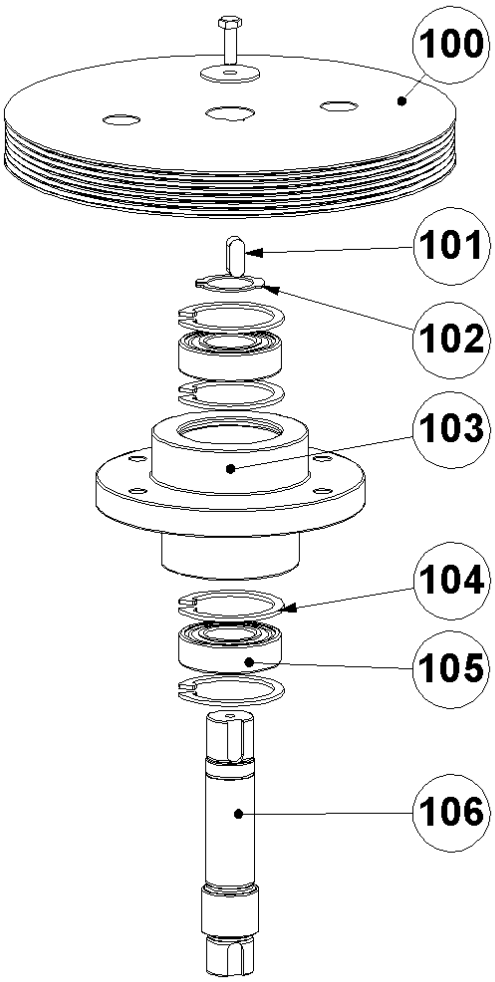
Item	Part number	Description	Remarks	Qty.
60	BE0631	M8x40 hexagon socket head bolt	DIN 7984	4
61	BG005856	Contra pulley		1
62	BE0648	Key 8x7x18	DIN 6885A	1
63	BG005805-1	Pulley		1
64	E01560	Taperlock		1
65	BE0443	M10x25 hexagon socket head bolt		
66	BG005860	Upper tensioner		1
67	BG005813	Holder		2
68	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

Lower drive



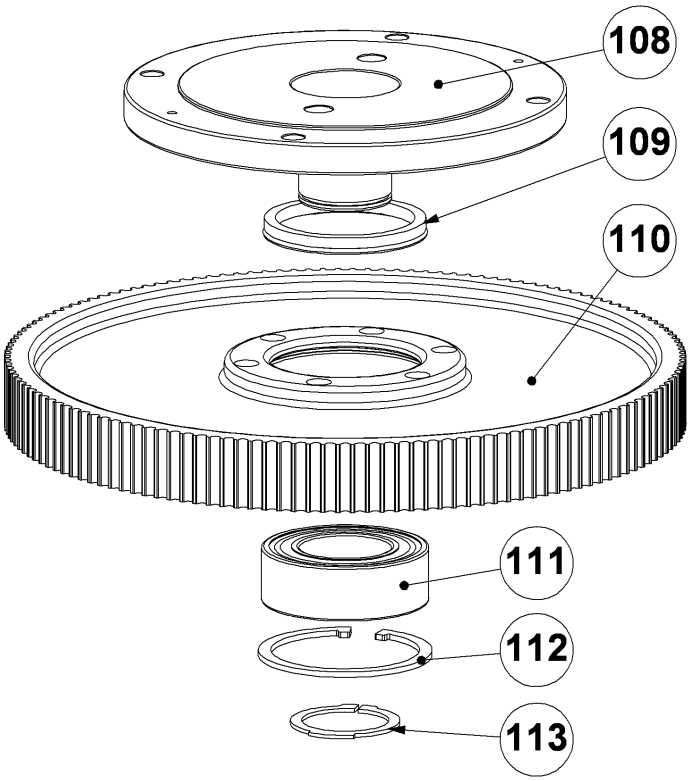
Item	Part number	Description	Remarks	Qty.
75	BG005814	Ring		1
76	BG11849	V-seal		1
77	BE0617	M6x50 countersunk screw	DIN 7991	2
78	BE0051	M6x25 hexagon head bolt	DIN 933	18
79	BG005827	Cover		4
80	BE0030	M8x25 hexagon head bolt	DIN 933	4
81	BG005822-1	Housing complete		1
82	BG005832-1	Holder		1
83	BE0090	M8x40 hexagon head bolt	DIN 933	1
84	BG005858	Drive pulley		1
85	BG005859	Pulley		3
86	BG11905	Lower belt		1
87	BG005861	Lower tensioner		1
88	BG005824	Lower plate 580PRO		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

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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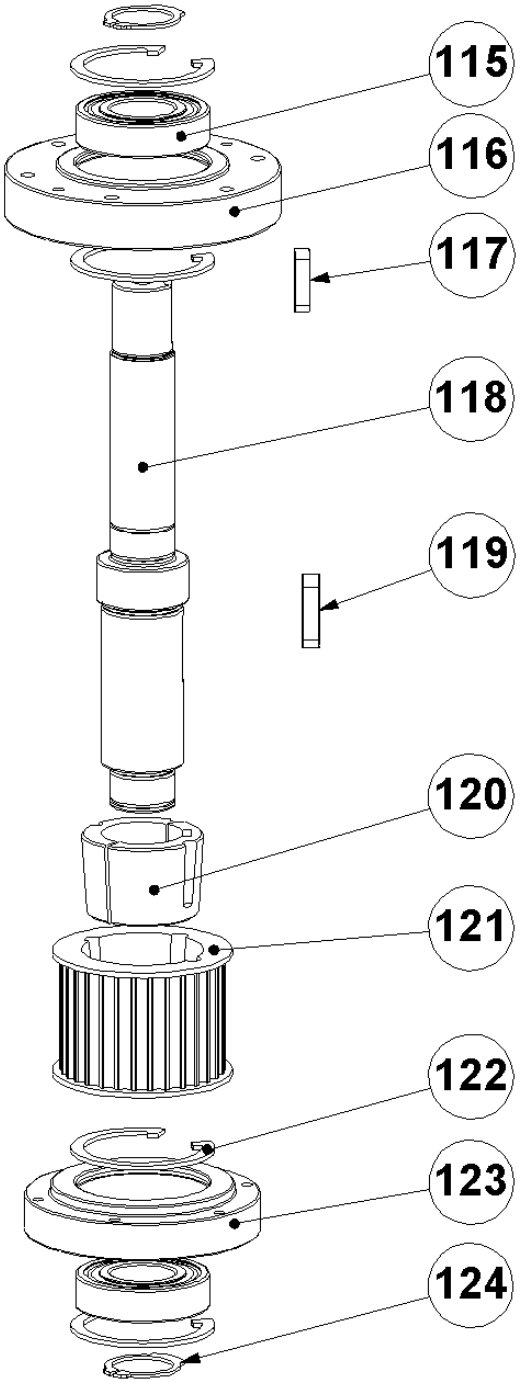
Drive pulley BG005858



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

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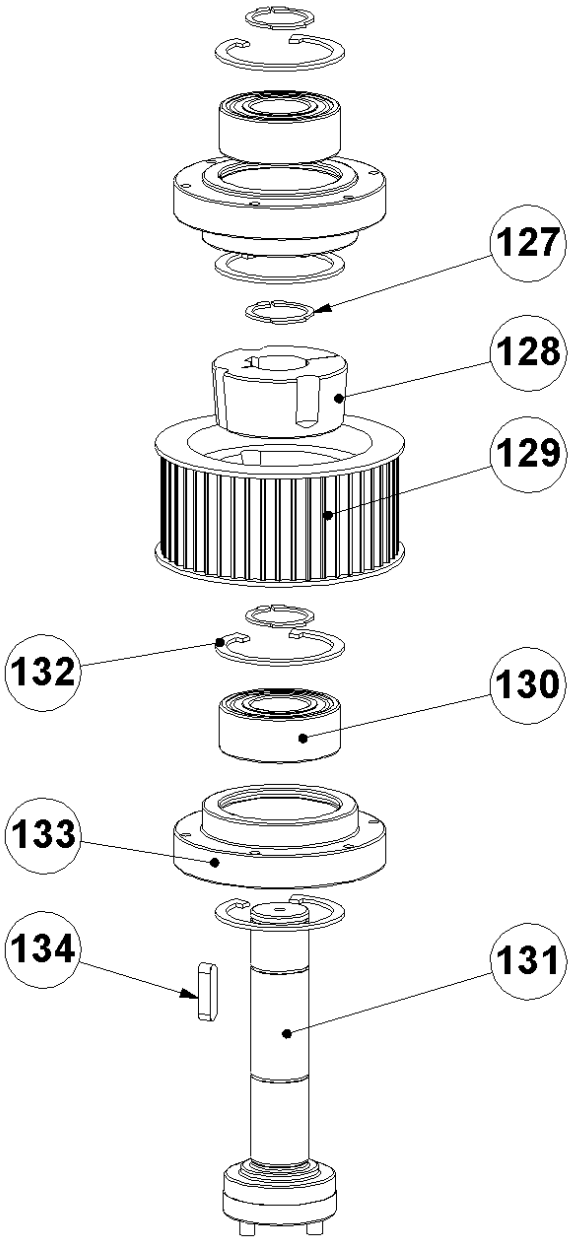
Pulley (3x) BG005859



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		2
134	BE0256	Key 8x7x30	DIN 6885A	1

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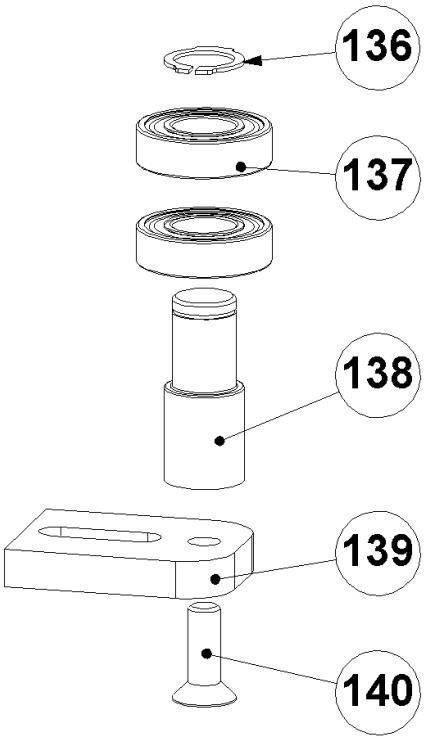
Upper tensioner BG005860



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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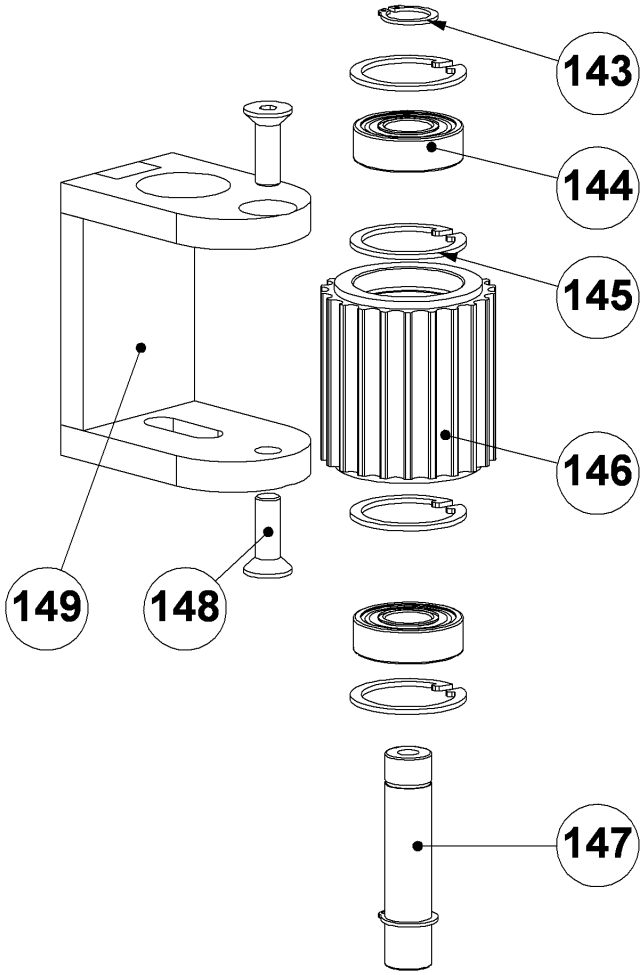
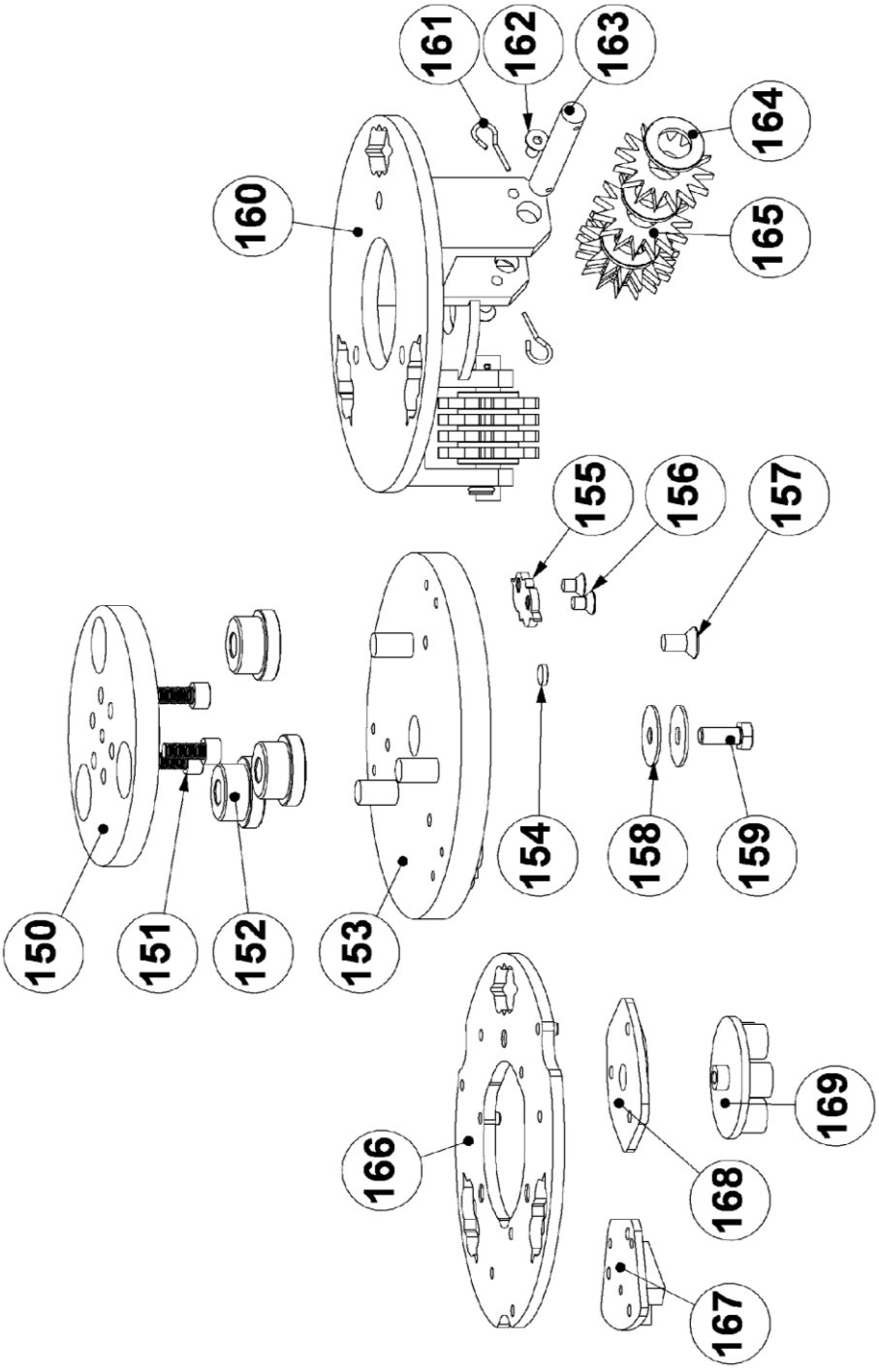
Lower tensioner BG005861



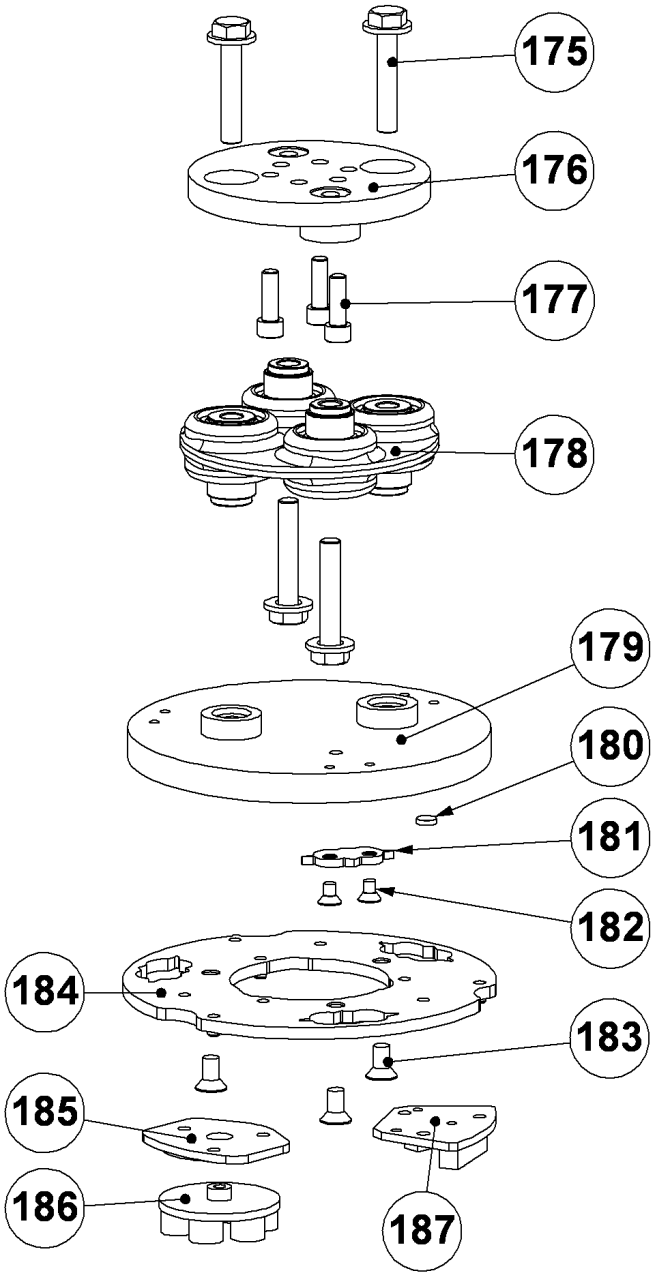
Item	Part number	Description	Remarks	Qty.
143	BE0070	Retaining ring for shaft Ø15	DIN 471	2
144	BG11792	Bearing		2
145	BE0618	Retaining ring for bore Ø35	DIN 472	4
146	BG005836	Pulley		1
147	BG005837	Axle tensioner		1
148	BE0458	M8x25 countersunk screw	DIN 7991	2
149	BG005833	Tensioner		1

Buffer plate for surface preparation (3x)



Item	Part number	Description	Remarks	Qty.
150-159	BG18550007-1	185mm diamond holder complete		1
153-157	BG185500071-1	185mm diamond holder		1
150	BG11805	Buffer plate		1
151	BE0204 + BE0584	M8x25 hexagon socket head bolt small + M8 spring washer small	DIN 7984 DIN 7980	3
152	BG11806	Buffer soft		3
153	BG11809-1	185mm diamond holder only		1
154	E06446	Magnet		3
155	BG11811	Centering star		3
156	BG11810	M6x10 countersunk screw	DIN 7991	6
157	BE0456	M8x16 countersunk screw	DIN 7991	3
158	BE0314	M8x30x1,5 washer		2
159	BE0030	M8x25 hexagon head bolt	DIN 933	1
160-165	BG300118	185mm cutter housing complete		1
160	BG300505-1	185mm cutter housing		1
161+162	BG300133	Locking pin & screw		6
163	BG300130	Axle		3
164	MPL48	Washer		15
165	BG300109	Cutter		12
166	E07185	DIAMAG 185mm adapter plate		1
	BG200994	Plate for wings 185mm		1
	BG200989	Dry polish dot holder 185mm		1
167		DIAMAG grinding wings		3
168	E06447	DIAMAG adapter plate for dots		3
169		Dry polish dots		3
	E07460	Cutterplate c.w. bush hammer 185		3

Buffer plate for polishing (3x)



Item	Part number	Description	Remarks	Qty.
175	BE0579	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	BG1852002-1	Flexplate 185mm diamond side		1
179	BG18520021-1	Flexplate 185mm 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	E07185	DIAMAG 185mm adapter plate		1
	BG200994	Plate for wings 185mm		1
	BG200989	Dry polish dot holder 185mm		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

- Running number
- Symbol letter
- Schedule page

CORE CODE

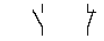
11 11

- Running number

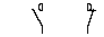
DRAWING NUMBER

PJ##.####.##

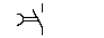
- Revision number
- Archive number
- Year



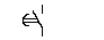
auxiliary contact — hulpcontact



Power contact — vermogenscontact



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



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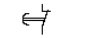
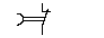
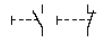


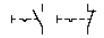
NC contact, opens with time delay — verbreekcontact, vertraagd open



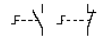
NC contact, closes with time delay — verbreekcontact, vertraagd sluitend



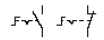
Pushbotton rebound — drukknop terugverend



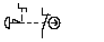
Pushbotton locking — drukknop blijvend



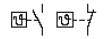
Rotary switch rebound — tip draaischakelaar



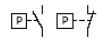
Rotary switch locking — draaischakelaar



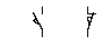
Emergency stop rotary unlock — noodstop met draaibare vrijgave



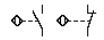
Thermostatic switch — thermostaat hygrostaat



Pressure switch — drukschakelaar



Limit switch — eindschakelaar



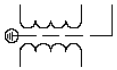
Proximity switch — naderingsschakelaar

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

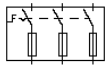
Tube light — TL verlichting

Resistor / Heating — weerstand verwarming

Socket — wandcontactdoos

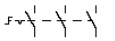
Current transformer — stroomtransformator

Safety fuse — smeltveiligheid



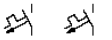
Fused switch, three-pole — schakelbare scheider

Fused disconnect, three-pole — scheider "klapbak"

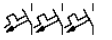


Main switch — hoofdschakelaar

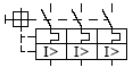
Circuit breaker, single-pole — installatieautomaat 1-polig



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

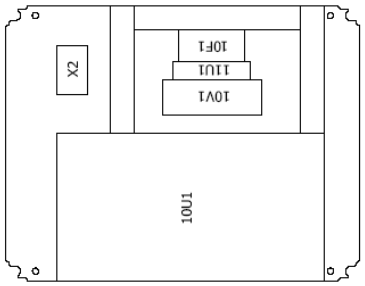
Resistor with movable contact — regelbare weerstand

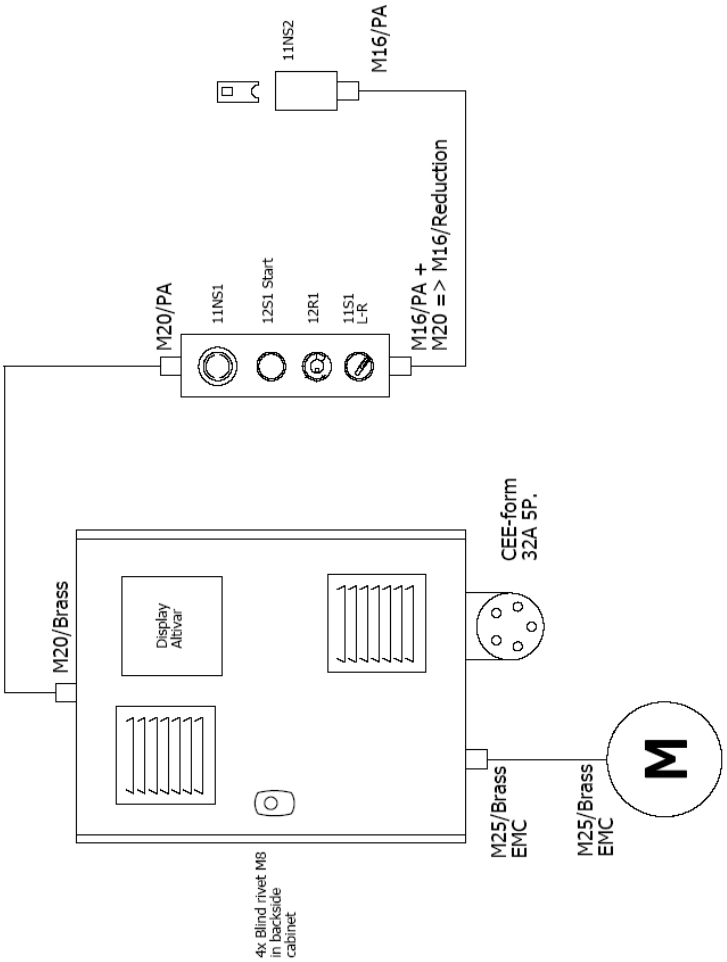
Terminal — rijgklem

Terminal with fuse — rijgklem met zekering

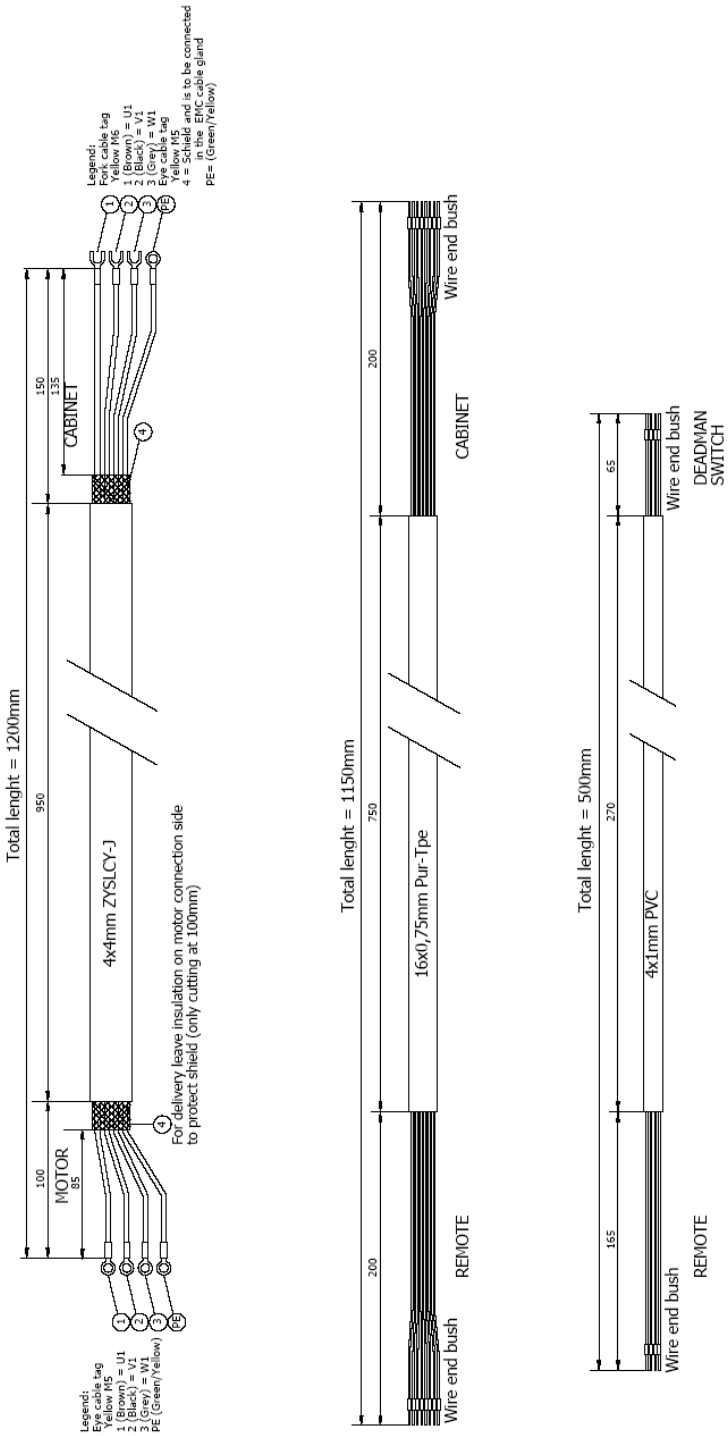
Rectifier — gelijkrichter

BLASTRAC

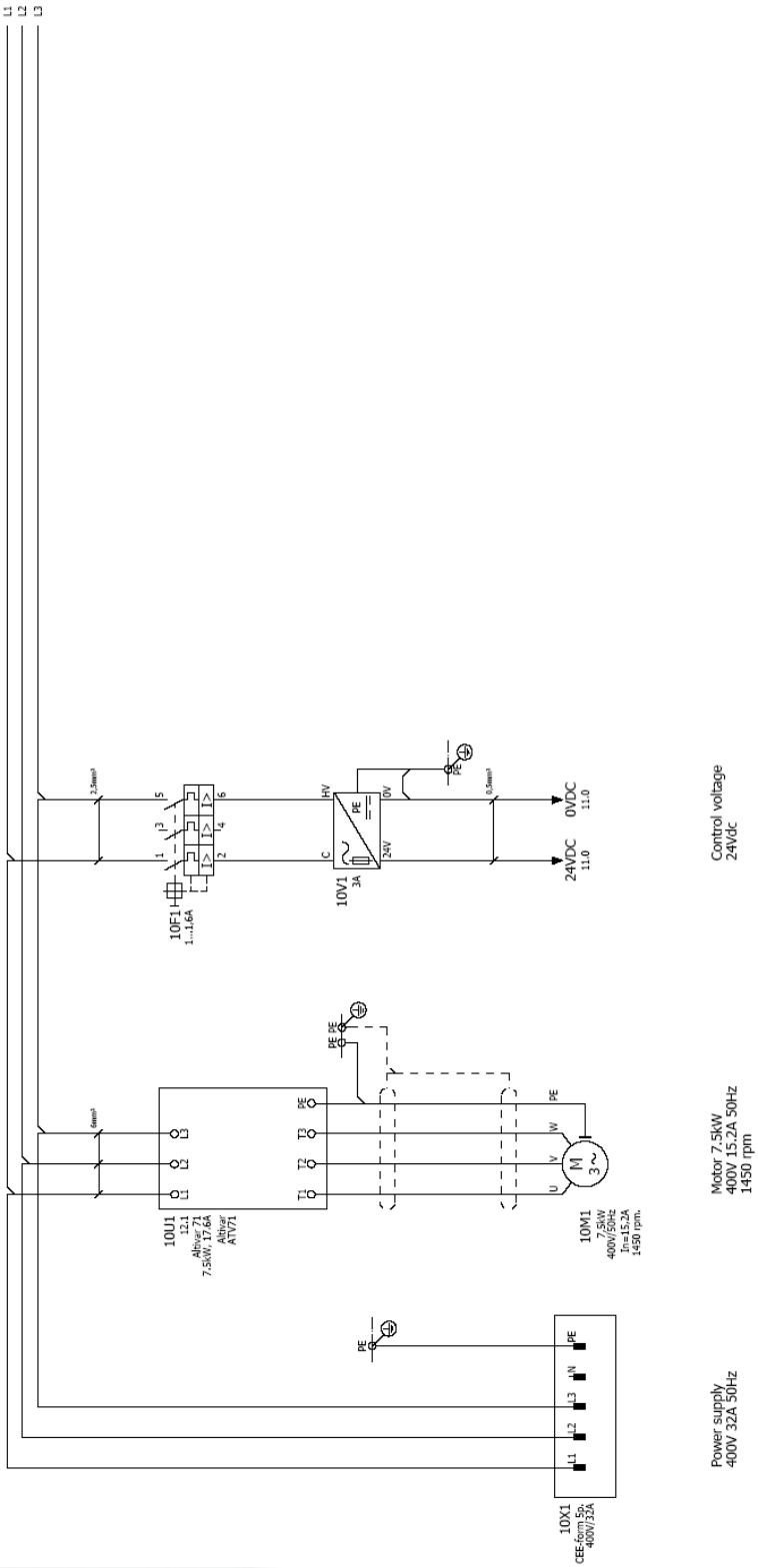

X2
10F1
11U1
10V1
10U1


11NS2
M16/PA
M16/PA +
M20 => M16/Reduction
M20/PA
11NS1
12S1 Start
12R1
11S1
L-R
CEE-form
32A 5P.
M20/Brass
Display
Altivar
M25/Brass
EMC
M25/Brass
EMC
M
4x Blind rivet M8
in backside
cabinet

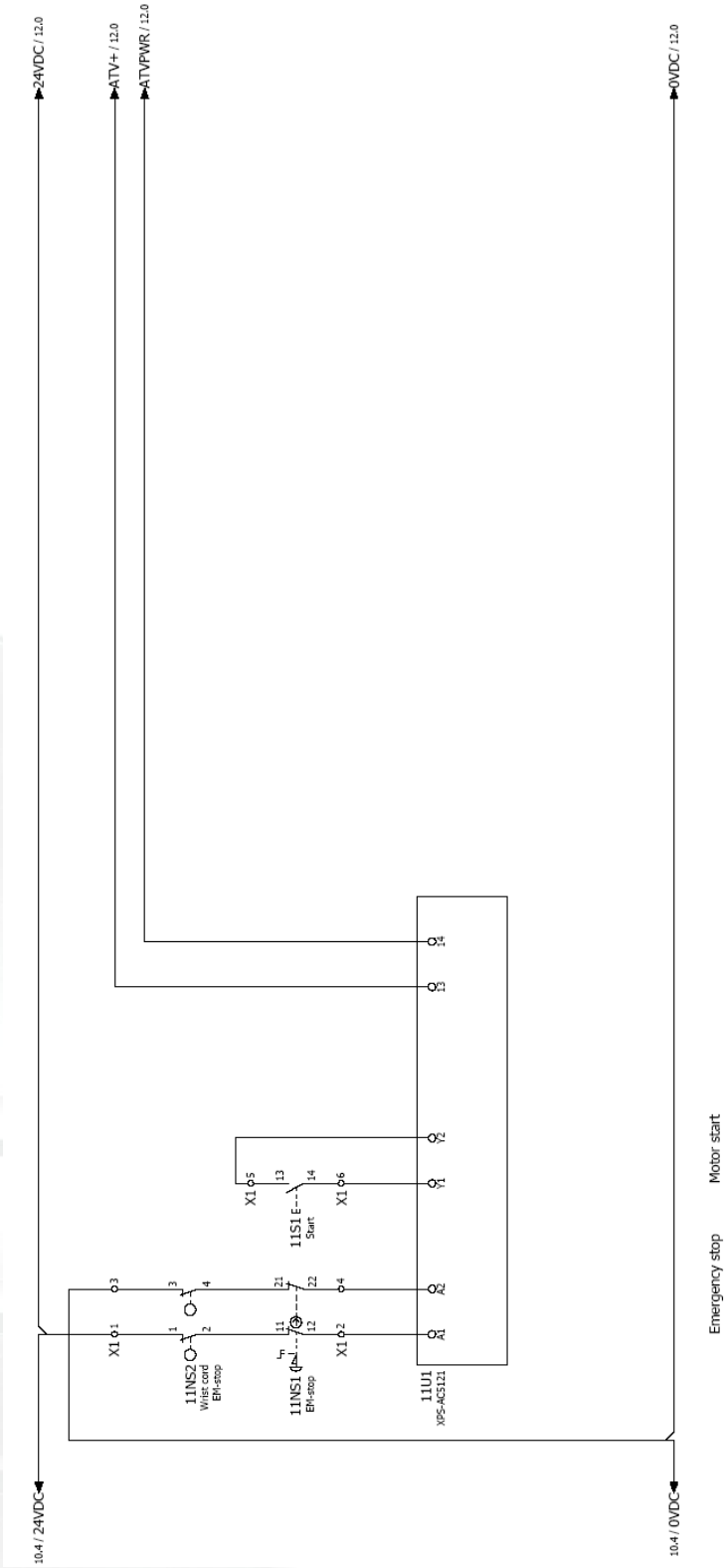
BLASTRAC

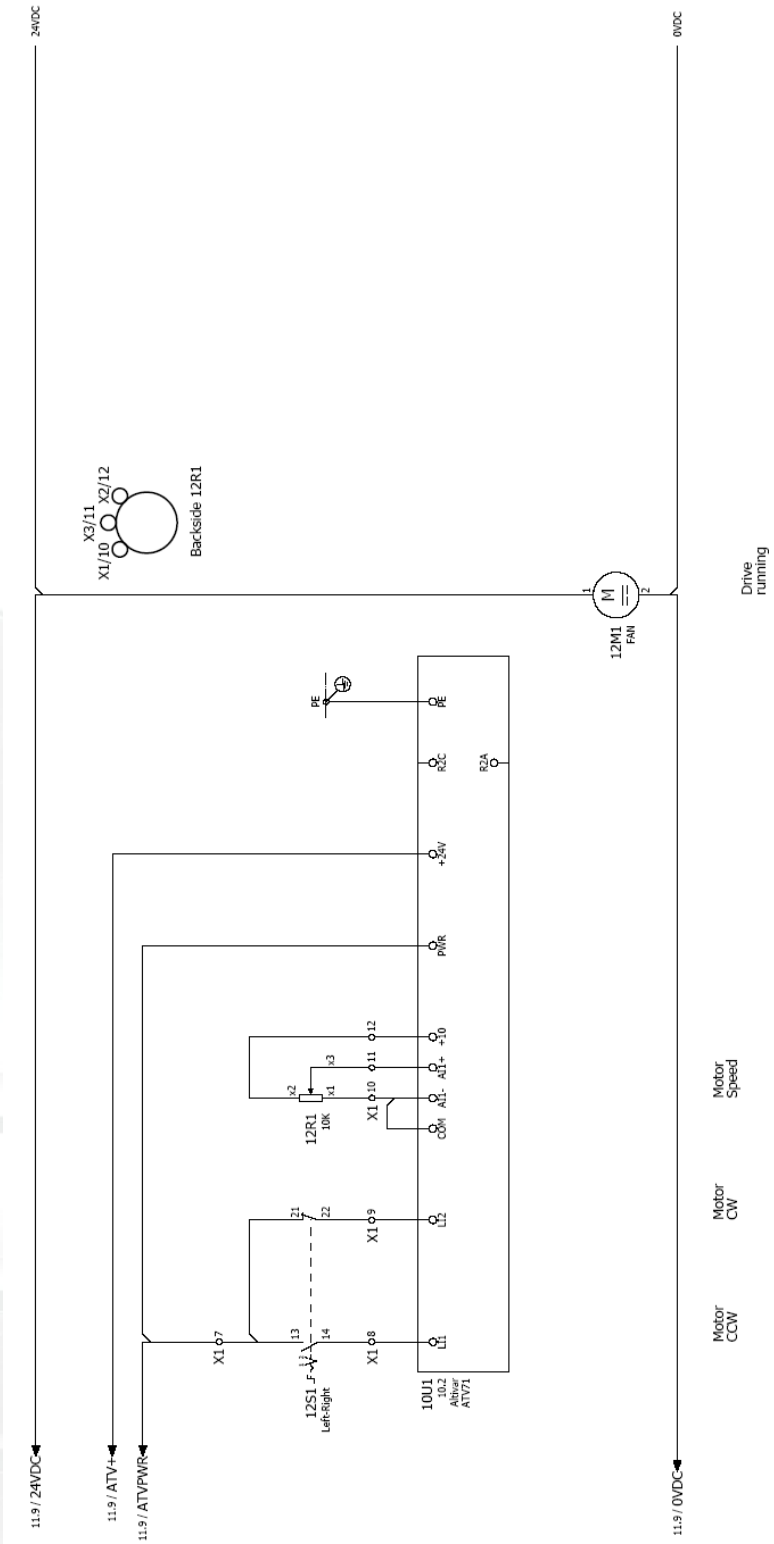

Legend:
Eye cable tag
Yellow M5
1 (Brown) = U1
2 (Black) = V1
3 (Grey) = W1
PE (Green/Yellow)
Legend:
Fork cable tag
Yellow M5
1 (Brown) = U1
2 (Black) = V1
3 (Grey) = W1
Eye cable tag
Yellow M5
4 = Schield and is to be connected
to male EMC cable gland
PE= (Green/Yellow)
Total lenght = 1200mm
100
950
150
135
MOTOR
85
CABINET
4x4mm ZYSLCY-J
For delivery leave insulation on motor connection side
to protect shield (only cutting at 100mm)
Total lenght = 1150mm
200
750
200
16x0,75mm Pur-Tpe
CABINET
REMOTE
Wire end bush
Wire end bush
Total lenght = 500mm
165
270
65
4x1mm PVC
DEADMAN
SWITCH
REMOTE
Wire end bush
Wire end bush

BLASTRAC


L1
L2
L3
10F1
1.1...1.6A
10V1
3A
HV
0V
24V
PE
0VDC
11.0
24VDC
11.0
Control voltage
24Vdc
10U1
12.1
Altivar 71
7.5kW, 17.6A
Altivar
ATV71
10M1
7.5kW
400V 50Hz
15.2A
1450 rpm.
Motor 7.5kW
400V 15.2A 50Hz
1450 rpm
10X1
CEE-form 5p.
400V/32A
Power supply
400V 32A 50Hz

BLASTRAC


24VDC / 12.0
ATV+ / 12.0
ATVPWR / 12.0
0VDC / 12.0
Motor start
Emergency stop
11S1
Start
11NS2
Wrist cord
EM-stop
11NS1
EM-stop
11U1
XPS-AC5121
10.4 / 24VDC
10.4 / 0VDC


24VDC
0VDC
X3/11
X2/12
X1/10
Backside 12R1
12M1
FAN
Drive running
PE
R2C
R2A
+24V
PWR
+10
AI1+
AI1-
COM
12R1
10K
X1
LI2
LI1
12S1
Left-Right
10U1
10.2
Altivar
ATV71
Motor Speed
Motor CW
Motor CCW
11.9 / 24VDC
11.9 / ATV+
11.9 / ATVPWR
11.9 / 0VDC

Terminal diagram

function text									Cable name	Strip X1 Terminal 24Vdc					Cable name						Page / column
									cable type	Target designation	Connection point	terminal	jumper	Target designation	Connection point	cable type					
												PE	,	10U1	PE						12.5
Emergency stop										11NS2	1	1	,	10V1:10U1	24V:R2C						11.1
=										11NS1	12	2	,	11U1	A1						11.1
=										11NS2	3	3	,	10V1:12M1	0V:PE:2						11.1
=										11NS1	22	4	,	11U1	A2						11.1
Motor start										11S1	13	5	,	11U1	Y2						11.2
=										11S1	14	6	,	11U1	Y1						11.2
Motor CCW										12S1	13	7	,	11U1	14						12.1
=										12S1	14	8	,	10U1	LI1						12.1
Motor CW										12S1	22	9	,	10U1	LI2						12.2
Motor Speed										12R1	x1	10	,	10U1	AI1-						12.2
=										12R1	x3	11	,	10U1	AI1+						12.3
=										12R1	x2	12	,	10U1	+10						12.3

Parts list

device tag	Quantity	designation	Type number	part number
CAB	1	Steel enclosure 500x400x250 with mounting plate 450x350	83324 STEEL	83324
CAB	1	Blind rivet M8x16	Blindklinkmoer M8	POPBC M8x16 st verzinkt
PG	2	Cable Gland M25*1.5 Nickel-plated EMC	50.625 M/EMV	50.625 M/EMV
PG	2	Locknut M25*1.5 Nickel-plated EMC	50.225 M/POT	50.225 M/POT
PG	1	Cable Gland M20*1.5 Nickel-plated	WARTEL L-M20*1.5	50.620 M-L
PG	1	Locknut M20*1.5 Nickel-plated	WARTELMOER M20	50.220 M
PG	1	Cable Gland M20*1.5	WARTEL PA M20*1.5	50.620 PA7035
PG	2	Locknut M20*1.5	WARTELMOER M20	50.220 PA7035
PG	2	Cable Gland M16*1.5	WARTEL PA M16*1.5	50.616 PA7035
PG	1	Locknut M16*1.5	WARTELMOER M16	50.216 PA7035
PG	1	Reduction M20 -> M16*1.5	Reduction PA M20->M16*1.5	M20M16PA
CRB	1	Enclosure RAL7035/7016 for 4 buttons	XAL D04	XAL D04
10X1	1	32A CEE-form male wall outlet socket 6h	G52S30 6h	G52S30
10U1	1	Altivar 71 Variable Speed Drive	ATV71HU75N4	ATV71HU75N4
10F1	1	Transformer circuit breaker 1...1.6A	GV2 RT06	GV2RT06
10V1	1	Power Supply 400/24V 3A	ABL8RPS24030	ABL8RPS24030
11U1	1	Emergency stop relay	XPS-ACS121	XPS-ACS121
11NS2	1	Safety switch + Pin	XCS-PA792 + XCS-Z11	XCS-PA792 + XCS-Z11
11NS1	1	Emergency stop	ZB5 AS844	ZB5 AS844
11NS1	2	element NC XAL	ZEN L1121	ZEN L1121
11S1	1	Pushbutton GREEN "START"	ZB5 AA333	08.01.0237
11S1	1	element NO XAL	ZEN L1111	ZEN L1111
12S1	1	Switch handle	ZB5 AD2	ZB5 AD2
12S1	1	element NC XAL	ZEN L1121	ZEN L1121
12S1	1	element NO XAL	ZEN L1111	ZEN L1111
12R1	1	Trim-pot 10K	Potmeterset 10K ZB4	Potmeterset 10K ZB4
12R1	1	Pot.meter	ZB5 AD912	ZB5 AD912
12M1	1	Fan	FAN 8314	FAN 80*80*32 24VDC
12M1	1	Fan filter		221-336 kast kl.beh.
12M1	1	Fan finger guard		250-1612 kast kl.beh.
X1	2	End bracket	WEID ZEW 35	9540000000
X1	1	2 Wire PE terminal 2.5mm²	WEID ZPE 2.5/	1608640000
X1	12	2 Wire terminal 2.5mm²	WEID ZDU 2.5	1608510000
X1	1	End plate ZDU 2.5	WEID ZAP/TW 1	1608740000

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

- Running number
- Symbol letter
- Schedule page

CORE CODE

11 11

- Running number

DRAWING NUMBER

PJ##.####.##

- Revision number
- Archive number
- Year

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

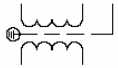
Proximity switch — naderingsschakelaar

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

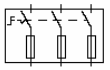
Tube light — TL verlichting

Resistor / Heating — weerstand verwarming

Socket — wandcontactdoos

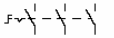
Current transformer — stroomtransformator

Safety fuse — smeltveiligheid



Fused switch, three-pole — schakelbare scheider

Fused disconnect, three-pole — scheider "klapbak"

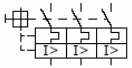


Main switch — hoofdschakelaar

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

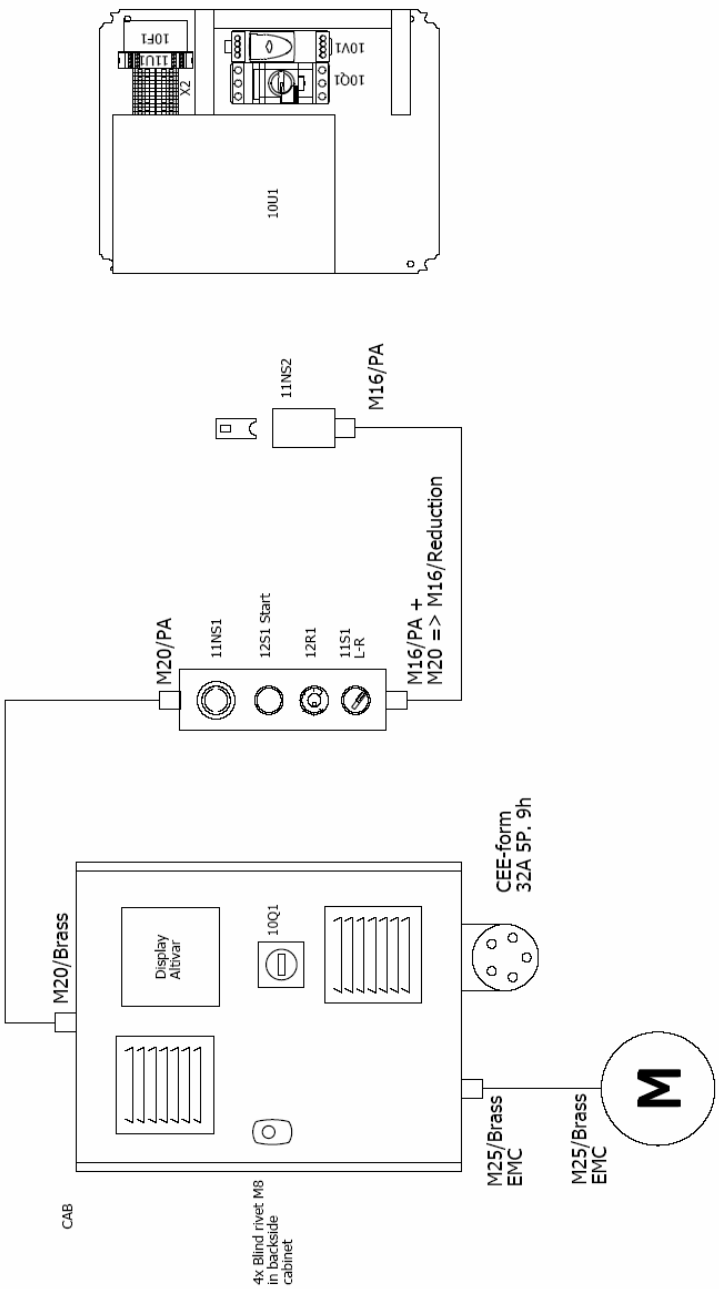
Resistor with movable contact — regelbare weerstand

Terminal — rijgklem

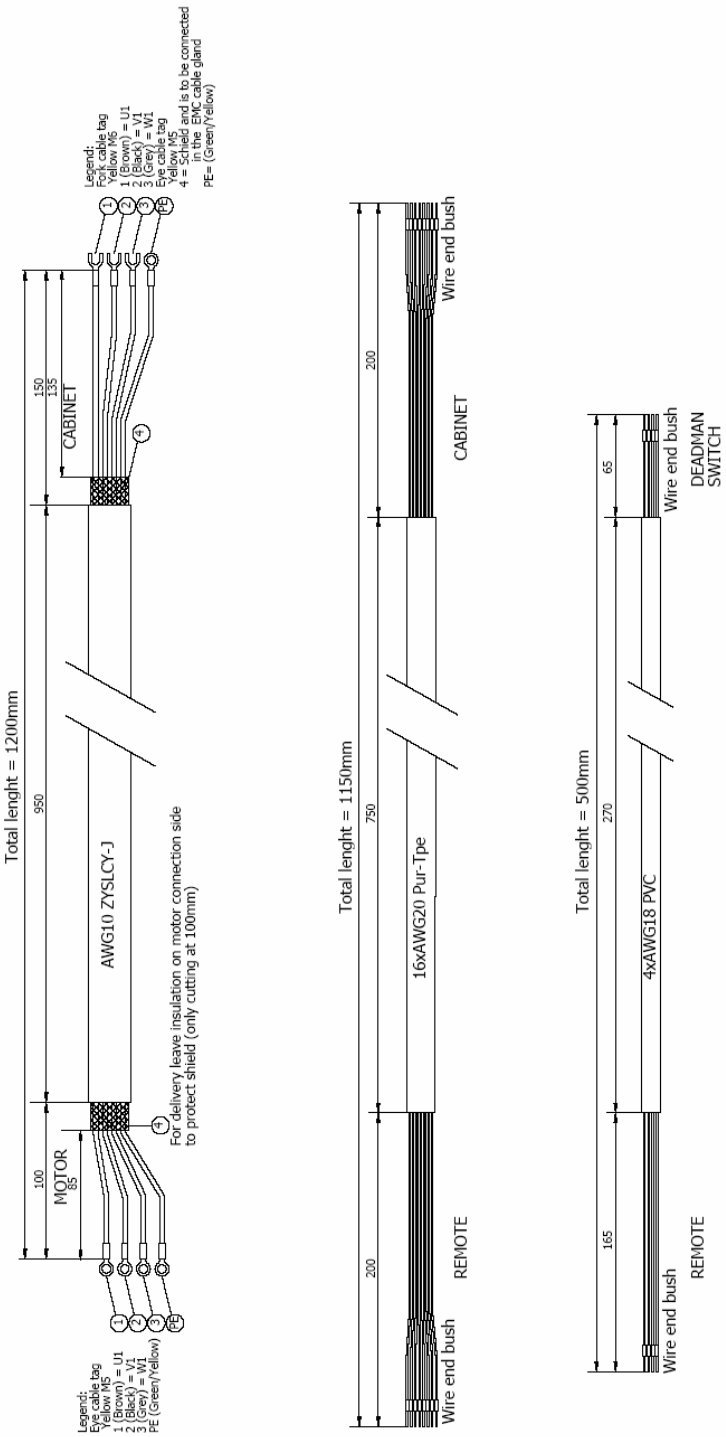
Terminal with fuse — rijgklem met zekering

Rectifier — gelijkrichter

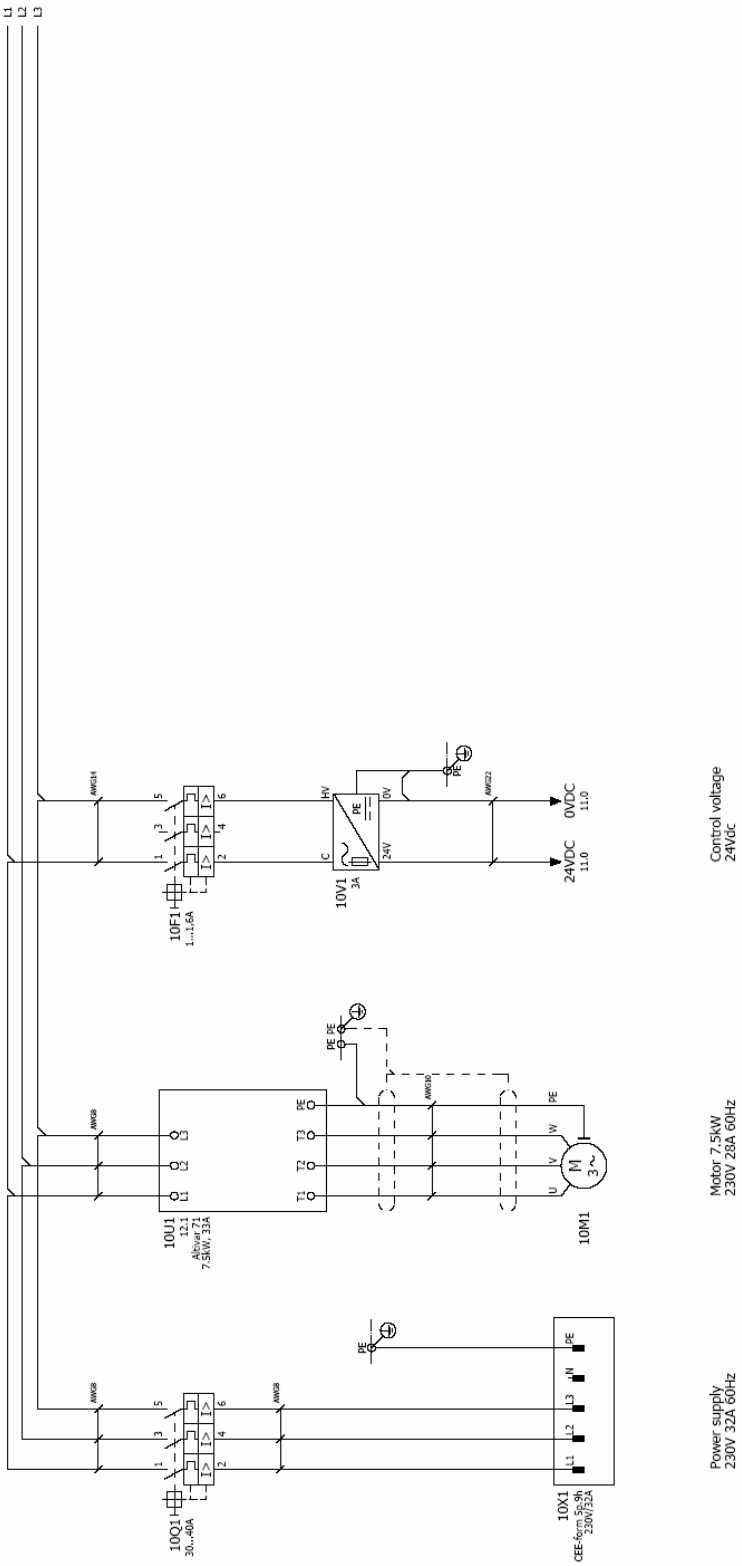
BLASTRAC


10F1
X2
10V1
10Q1
10U1
11NS2
M16/PA
M16/PA +
M20 => M16/Reduction
M20/PA
11NS1
12S1 Start
12R1
11S1
L-R
CEE-form
32A 5P. 9h
M20/Brass
Display
Altivar
10Q1
M25/Brass
EMC
M25/Brass
EMC
M
CAB
4x Blind rivet M8
in backside
cabinet

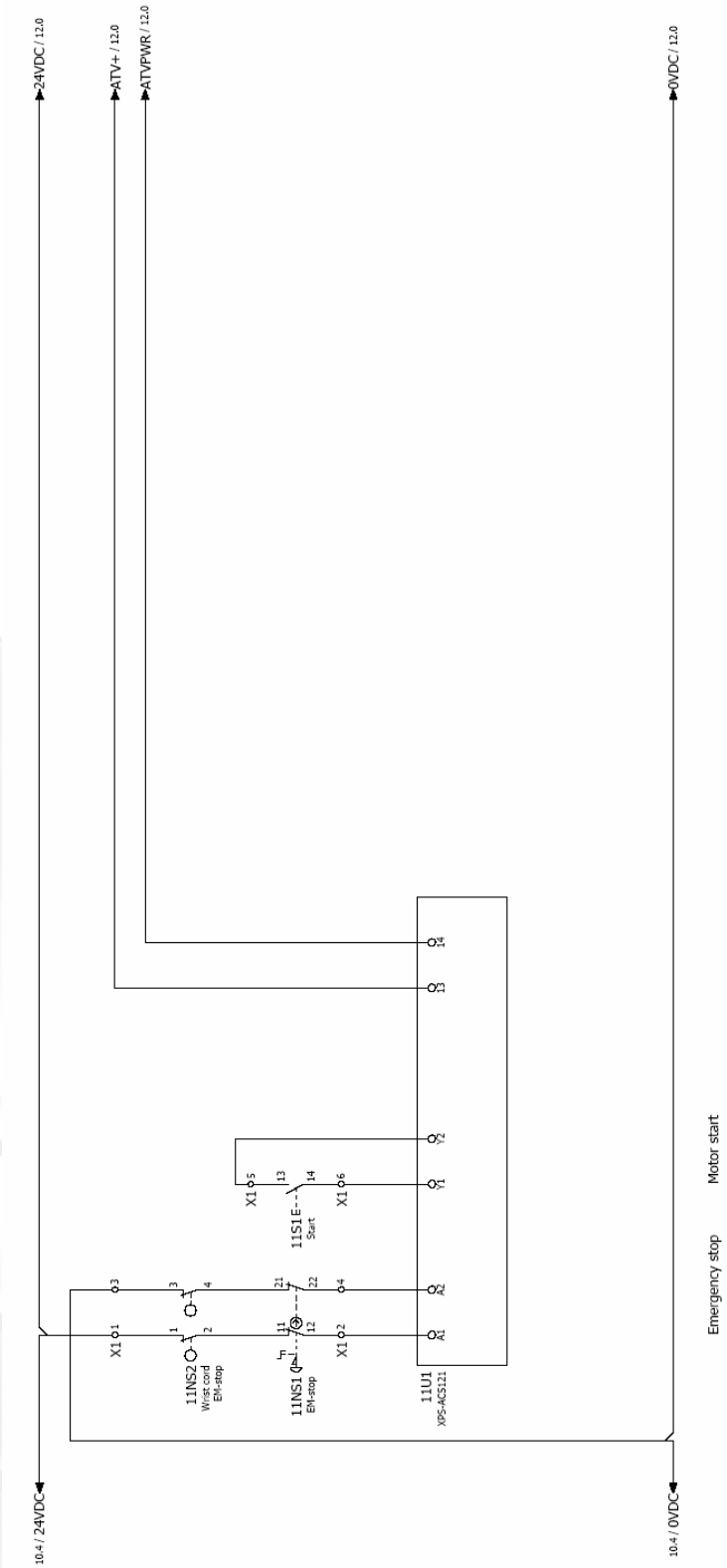
BLASTRAC


Legend:
Eye cable tag
Yellow M5
1 (Brown) = U1
2 (Black) = V1
3 (Grey) = W1
PE (Green/Yellow)
Total lenght = 1200mm
100
MOTOR
85
950
AWG10 ZYSLCY-J
150
135
CABINET
For delivery leave insulation on motor connection side
to protect shield (only cutting at 100mm)
Legend:
Fork cable tag
Yellow M5
1 (Brown) = U1
2 (Black) = V1
3 (Grey) = W1
Eye cable tag
Yellow M5
4 = Shield and is to be connected
in the EMC cable gland
PE= (Green/Yellow)
Total lenght = 1150mm
200
750
16xAWG20 Pur-Tpe
200
Wire end bush
REMOTE
CABINET
Wire end bush
Total lenght = 500mm
165
270
4xAWG18 PVC
65
Wire end bush
REMOTE
Wire end bush
DEADMAN
SWITCH

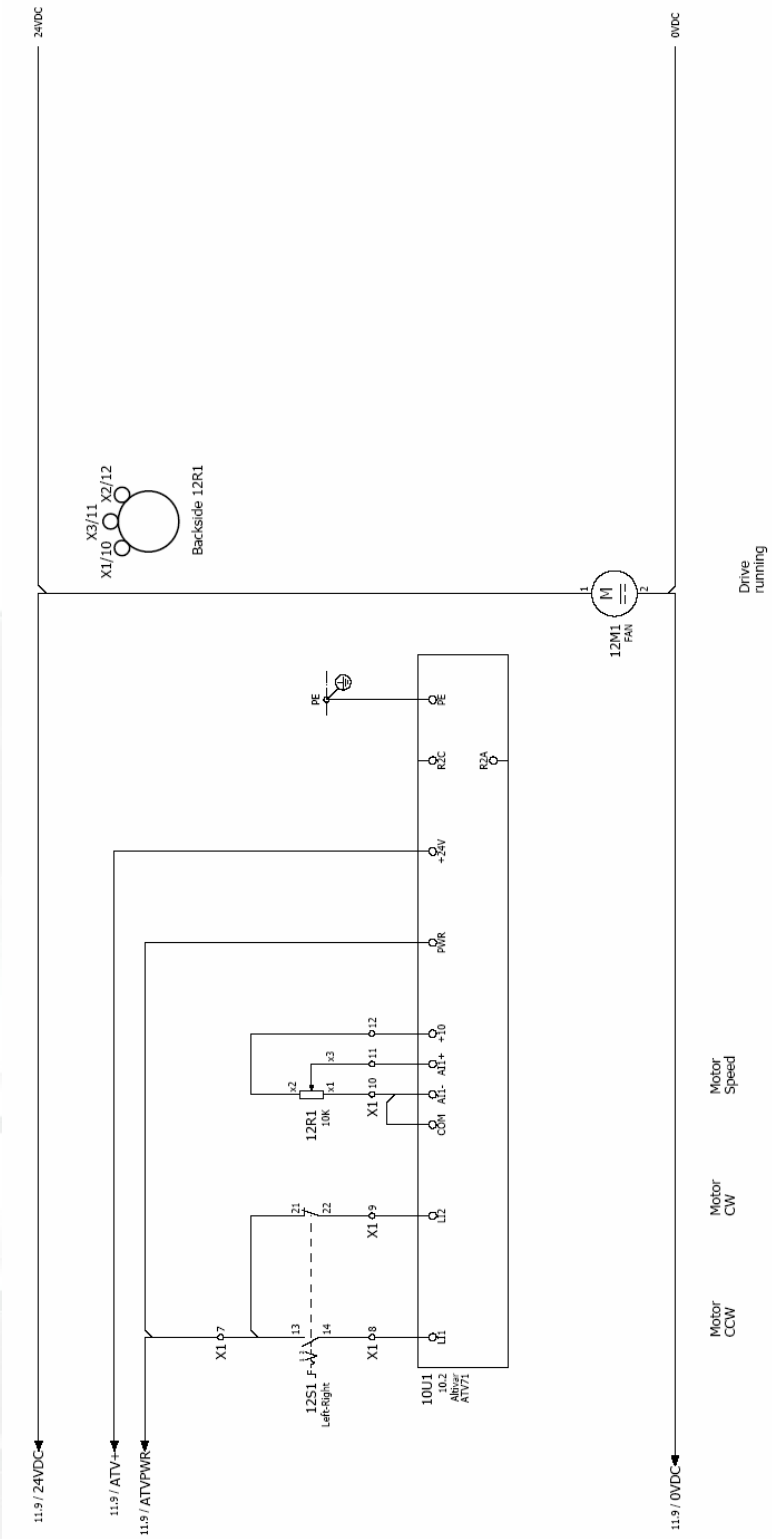
BLASTRAC


L1
L2
L3
10F1
1...1.6A
10V1
3A
0VDC
11.0
24VDC
11.0
Control voltage
24Vdc
10U1
Altivar 71
7.5kW, 32A
10M1
Motor 7.5kW
230V 28A 60Hz
10Q1
30...40A
10X1
CEE-form 5p.9h
230V/32A
Power supply
230V 32A 60Hz

BLASTRAC


24VDC / 12.0
ATV+ / 12.0
ATVPWR / 12.0
0VDC / 12.0
10.4 / 24VDC
10.4 / 0VDC
11INS2
Wrist cord
EM-stop
11INS1
EM-stop
11S1E
Start
11U1
XPS-ACS121
Emergency stop
Motor start

BLASTRAC


24VDC
0VDC
X3/11
X2/12
X1/10
Backside 12R1
12M1
FAN
Drive
running
PE
R2C
R2A
+24V
PWR
+10
AI1+
AI2-
COM
12R1
10K
X1
LI2
LI1
12S1 F-W-R
Left-Right
10U1
10.2
Altivar
ATV71
Motor
Speed
Motor
CW
Motor
CCW
11.9 / 24VDC
11.9 / ATV+
11.9 / ATVPWR
11.9 / 0VDC

Terminal diagram

function text									Cable name	Strip X1 Terminal 24Vdc						Cable name						Page / column
									cable type	Target designation	Connection point	terminal	jumper	Target designation	Connection point	cable type						
												PE	,	10U1	PE							12.5
Emergency stop										11NS2	1	1	,	10V1;12M1	24V;1							11.1
=										11NS1	12	2	,	11U1	A1							11.1
=										11NS2	3	3	,	10V1;12M1	0V;PE;2							11.1
=										11NS1	22	4	,	11U1	A2							11.1
Motor start										11S1	13	5	,	11U1	Y2							11.2
=										11S1	14	6	,	11U1	Y1							11.2
Motor CCW										12S1	13	7	,	11U1;10U1	14;PWR							12.1
=										12S1	14	8	,	10U1	LI1							12.1
Motor CW										12S1	22	9	,	10U1	LI2							12.2
Motor Speed										12R1	x1	10	,	10U1	AI1-							12.2
=										12R1	x3	11	,	10U1	AI1+							12.3
=										12R1	x2	12	,	10U1	+10							12.3

Parts list

device tag	Quantity	designation	Type number	part number
CAB	1	Steel enclosure 500x400x250 with mounting plate 450x350	83324 STEEL	83324
CAB	1	Blind rivet M8x16	Blindklinkmoer M8	POPBC M8x16 st verzinkt
PG	2	Cable Gland M25*1.5 Nickel-plated EMC	50.625 M/EMV	50.625 M/EMV
PG	2	Locknut M25*1.5 Nickel-plated EMC	50.225 M/POT	50.225 M/POT
PG	1	Cable Gland M20*1.5 Nickel-plated	WARTEL L-M20*1.5	50.620 M-L
PG	1	Locknut M20*1.5 Nickel-plated	WARTELMOER M20	50.220 M
PG	1	Cable Gland M20*1.5	WARTEL PA M20*1.5	50.620 PA7035
PG	2	Locknut M20*1.5	WARTELMOER M20	50.220 PA7035
PG	2	Cable Gland M16*1.5	WARTEL PA M16*1.5	50.616 PA7035
PG	1	Locknut M16*1.5	WARTELMOER M16	50.216 PA7035
PG	1	Reduction M20 -> M16*1.5	Reduction PA M20->M16*1.5	M20M16PA
CRB	1	Enclosure RAL7035/7016 for 4 buttons	XAL D04	XAL D04
10X1	1	32A CEE-form wall outlet socket 9h IP44	ABL G52S22	G52S22
10Q1	1	Motor circuit breaker 40A 3p	TELE GV3-P40	GV3 P40
10U1	1	Frequency controller 7.5kW	ATV71 HU75 M3	ATV71 HU75 M3
10F1	1	Transformer circuit breaker 1..1.6A	GV2 RT06	GV2RT06
10V1	1	Power Supply 400/24V 3A	ABL8RPS24030	ABL8RPS24030
11U1	1	Emergency stop relay	XPS-AC5121	XPS-AC5121
11NS2	1	Safety switch + Pin	XCS-PA792 + XCS-Z11	XCS-PA792 + XCS-Z11
11NS1	1	Emergency stop	ZB5 AS844	ZB5 AS844
11NS1	2	element NC XAL	ZEN L1121	ZEN L1121
11S1	1	Pushbutton GREEN "START"	ZB5 AA333	08.01.0237
11S1	1	element NO XAL	ZEN L1111	ZEN L1111
12S1	1	Switch handle	ZB5 AD2	ZB5 AD2
12S1	1	element NC XAL	ZEN L1121	ZEN L1121
12S1	1	element NO XAL	ZEN L1111	ZEN L1111
12R1	1	Trim-pot 10K	Potmeterset 10K ZB4	Potmeterset 10K ZB4
12R1	1	Pot.meter	ZB5 AD912	ZB5 AD912
12M1	1	Fan 24Vdc	FAN 8314	FAN 80*80*32 24VDC
12M1	1	Fan filter		221-336 kast kl.beh.
12M1	1	Fan finger guard		250-1612 kast kl.beh.
X1	2	End bracket	WEID ZEW 35	9540000000
X1	1	2 Wire PE terminal 2.5mm²	WEID ZPE 2.5/	1608640000
X1	12	2 Wire terminal 2.5mm²	WEID ZDU 2.5	1608510000
X1	1	End plate ZDU 2.5	WEID ZAP/TW 1	1608740000

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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