User Manual

Skin Drum T3

Jasopels
–professionel til skindet

1. Declaration of Conformity

EU Declaration of Conformity

Manufacturer:	Jasopels A/S	Tel. +45 76 94 35 00
Address:	Fabriksvej 19	DK-7441 Bording

Machine:	Self-emptying Skin Drum T3
Type:	29-0000

Jasopels A/S declares that this product is in accordance with the following EU directives:

89/336 EEC
98/37 EEC

Furthermore, we declare that the following harmonized standards have been applied:

EN 60204-1
EN 983

Place and date:	Bording, July 1, 2009
Name:	CEO Poul Bach

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Sales: tel. +45 9842 0566 ♦ fax +45 9843 8000 ♦ Service: tel. +45 9843 9966

2. Table of contents

3. Preface

- This User Manual is an important part of your new machine. Read the manual thoroughly and use it as a reference book.

- This manual contains important information about safety and the correct use of the machine.

- The manual should be stored with the machine. It is important that the user manual is supplied with the machine upon resale and lending.

- The user of the machine must make sure that the operator, service personnel and others who have access to the machine have been instructed in the correct use and handling of the machine. Refer to this user manual for further information.

- Unauthorized modifications, additions or changes to the machine are not allowed for the sake of overall safety. Neither the manufacturer nor the supplier can be held liable for damages incurred as a result of the above. All and any risks in the case of such misuse are the end user's alone.

4. Symbol explanation

Please read this user manual and follow the included instructions. In order to emphasize certain information, the following expressions are used:

- Note!

A triangle with an exclamation mark is a symbol that warns you of important instructions or information concerning this machine.

- Danger!

A triangle with a flash of lightning is a symbol that warns you of “High Voltage”.

- Warning!

A triangle warning you of entanglement and crush hazard.

5. Introduction of the machine

- The BS Self-Emptying Skin Drum type 3 has been designed for tumbling of mink skins.

- The machine has been designed and developed in a way that allows the user to reduce the personnel's engagement in skin tumbling to the absolute minimum.

- The machine has been designed to tumble around 80 males or 110 females at a time. It is recommended to use 23-30 kg of sawdust for that.

- The newly developed control system, which is an integral part of the machine, has made it possible to have the machine work in manual and automatic mode.

- Manual work mode: When the operator has filled the drum with skins and sawdust, he or she needs to set the tumbling times, close the lid and then the drum can be started. The drum will now carry out the tumbling process itself, after which the sawdust will be removed from the drum (under it). Finally, the skins will be removed from the drum (at the end of the drum).

- Automatic work mode: The T3 Skin Drum can be integrated into the BS Skin Moving System.

Note!

- Make sure you have read this manual before you start using the machine.
- The user of the machine must make sure that the operator, service personnel and others who have access to the machine have been instructed in the correct use and handling of the machine.
- The machine may only be used for the purpose it has been designed for.
- If any problems should occur with the machine or its operation, they must not be fixed before the machine is properly switched off, unless a correction can be made via the machine's control buttons.
- The user manual should always be kept available for the operator.

6. Start-up

- Before start-up the machine must be placed on a firm and level floor and leveled. The machine must not wobble. Any torsion of the frame structure can cause problems when one end of the drum is lifted during emptying.

- The manufacturer has equipped the machine with a 5-pin 16 A CEE plug at the end of the power cable. It is to be connected to an outlet with 3P+N+PE. A compressed air filter with a quick release coupling has been installed on the drum's frame (behind the control box), where the compressor's air hose is to be connected.

- It is important to make sure that the drum's direction of rotation is correct. To do that, close the loading lid and activate the **START** button. The lid should now move upwards. If this – contrary to your expectations – is not the case, stop the drum immediately by pressing the **STOP** button. Interchange the two phases located on the thermo relay (fig. 5.5) and repeat the test.

DANGER!

Always disconnect the machine's compressed air and electrical power supply before maintenance, cleaning and other service activities are performed on the machine.

- The Skin Drum is now ready to be used.

In order to avoid potential damage to the control unit's microcontrollers and the rest of the machine's electrical system due to thunderstorms, it is recommended to disconnect the machine from its electrical power source whenever it is not being used.

7. Operation

After you have connected the Skin Drum, it is ready to be used.
To open the lid set the function switch in the **Man** position. After that the lid can be operated using the **Man Lid** button.
Fill the drum with skins and sawdust (preferably heated to around 36-38°C). Around 25-30 kg of sawdust for 80 male or 140 female skins per tumbling.

Fig. 1 Control panel

Drum time is the time during which the skins and sawdust are in the closed part of the drum. The time can be set using the switch in 4-minute intervals, between 4 and 32 minutes.
When drum time is up, one of the drum's ends Is lifted and the movable end wall inside it is moved automatically. When this happens, the skins are moved to the open part of the drum and the sawdust falls out under the drum. Shortly after that the drum end is lowered again.
Net time can be set using the switch in ½-minute intervals, between ½ and 4 minutes.
The drum is activated using the black button (**Man Start**). When the net time is up, one of the drum's ends is lifted again, the movable end wall is moved all the way and the skins are removed from the drum (under it).
Shortly after the movable end wall is moved back to its original position, the drum end is lowered again and it stops in its initial position with the lid open. It is now ready for the next cycle.

If you want to interrupt the drum time and switch to net time or empty the drum 'right here and right now', you can activate the Step/Start button for at least 3 seconds in order to switch to the next process.

Example:

The drum is set to 20 minutes of drum time and 2 minutes of net time. 10 minutes after the drum has been started you want to switch to net time. You need to activate the green Step/Start button for at least 3 seconds, after which one of the drum ends will be lifted and the movable end wall will be moved. If you want to interrupt the net time and start emptying, activate the button again for 3 seconds. The drum end will be lifted and the movable end wall will be moved again.
The drum can be stopped at any time by pressing the red **EMERGENCY STOP** button.
Resuming work after an EMERGENCY STOP is done in the following way: turn the red part of the button a little, counter-clockwise, which will make it spring back a little. The position of the lid can be reset by pressing the Step/Start button, which will cause the drum to rotate and stop in its initial position.
The drum can now be started normally, i.e. using the **Man Start** button.

8. Maintenance

DANGER!

Always disconnect the machine's air and electrical power supply before maintenance, cleaning and other service activities are performed on the machine.

- The compressed air filter's water separator can be emptied by pressing the button under the glass until the glass is empty. The water separator can also empty itself if the air tube on the quick release coupling is removed.
- The ends of the drums are supported on bearings. These bearings need to be lubricated once a week using a lubricating device.

DANGER!

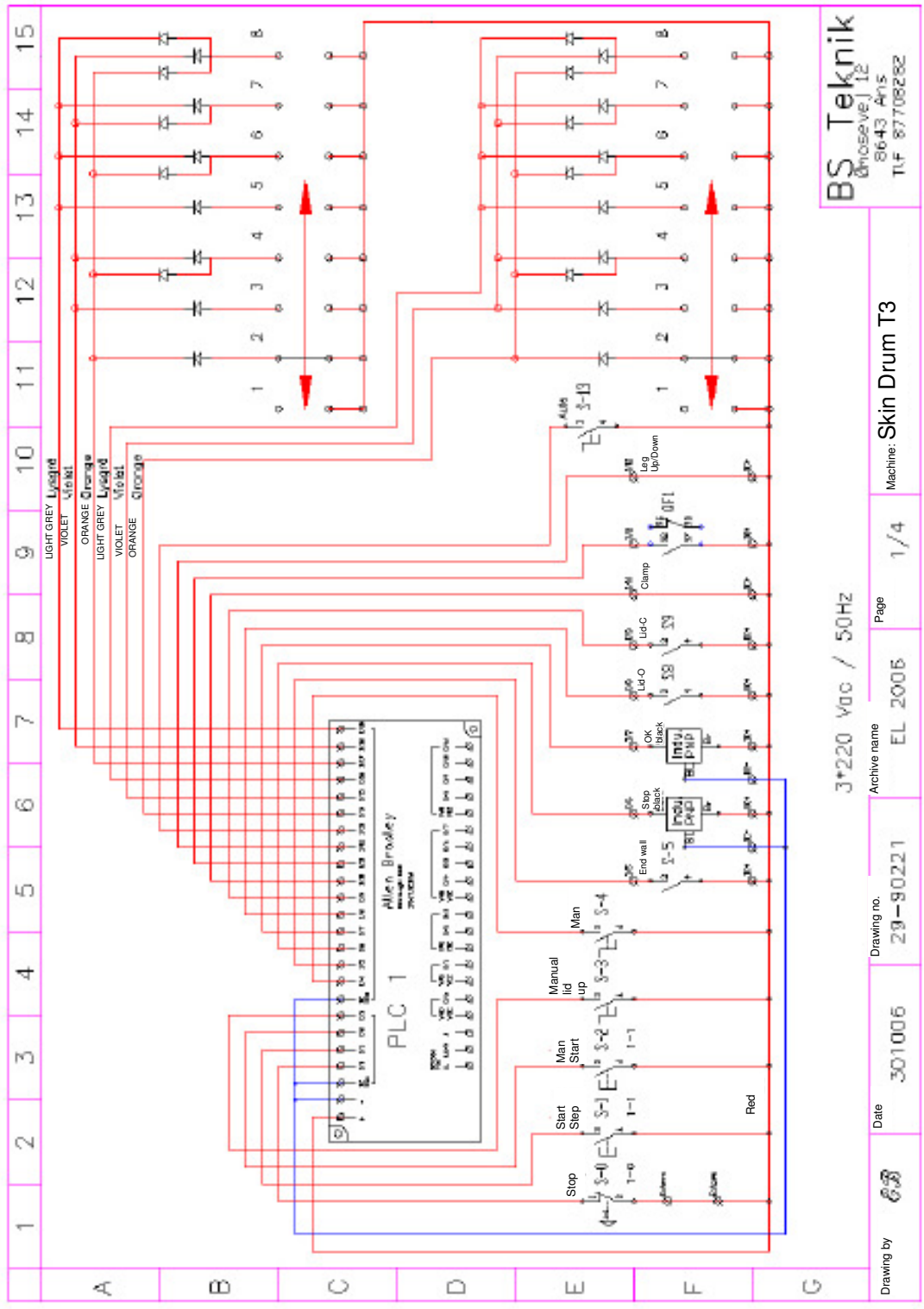
If you need to do maintenance work inside the drum, the power cable and air hose MUST be disconnected before you start.

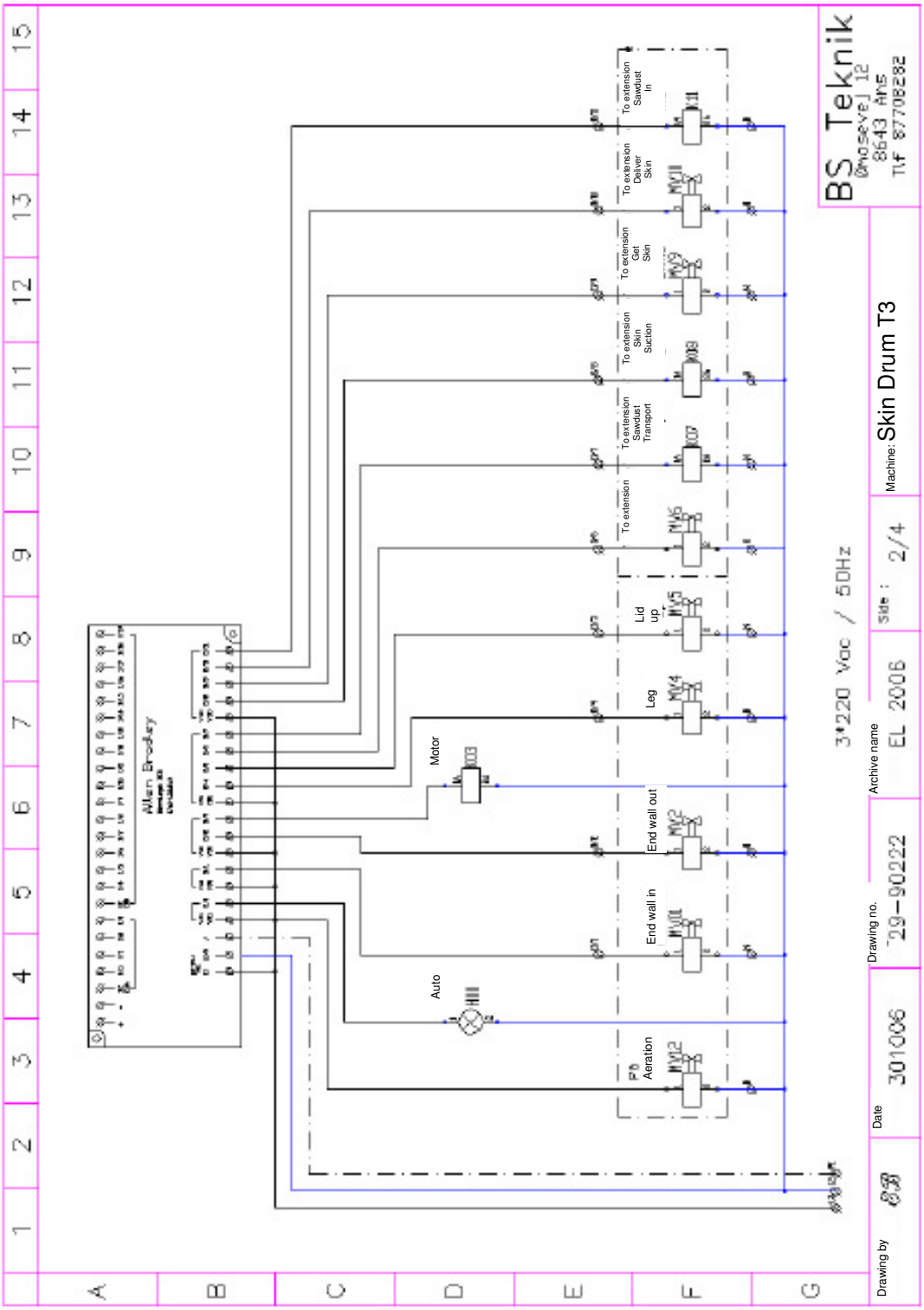
Fig. 2 Compressed air filter and lubricating device

9. Technical data

- Electrical connection: 3 x 400 V+N+PE 5-pin CEE plug
- Power consumption: 3,7 A
- Air connection: Quick release coupling
- Air consumption: Max. 8 bar 1 l/min
- Dimensions
  - Height: 200 cm
  - Length: 269 cm
  - Width: 126 cm

10. Circuit and airflow diagram

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8643 Ans
Tlf 87708282
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Side : 2/4
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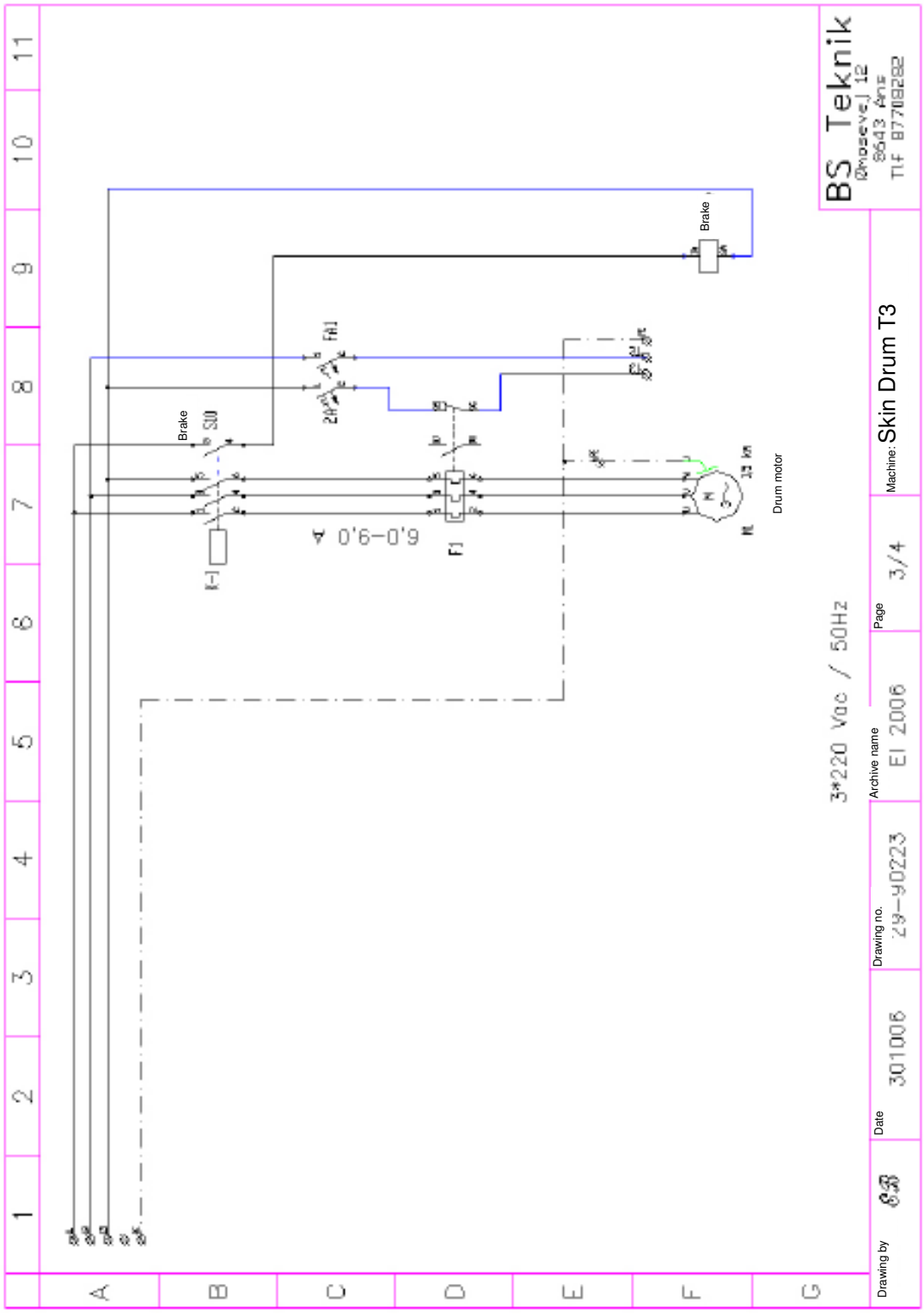
3*220 Vac / 50Hz
Main Breaker
Motor
Auto
Aeration
End wall in
End wall out
Leg
Lid up
To extension
To extension Sawdust Transport
To extension Skin Suction
To extension Get Skin
To extension Deliver Skin
To extension Sawdust In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Brake
Drum motor
Brake
SU0
F1
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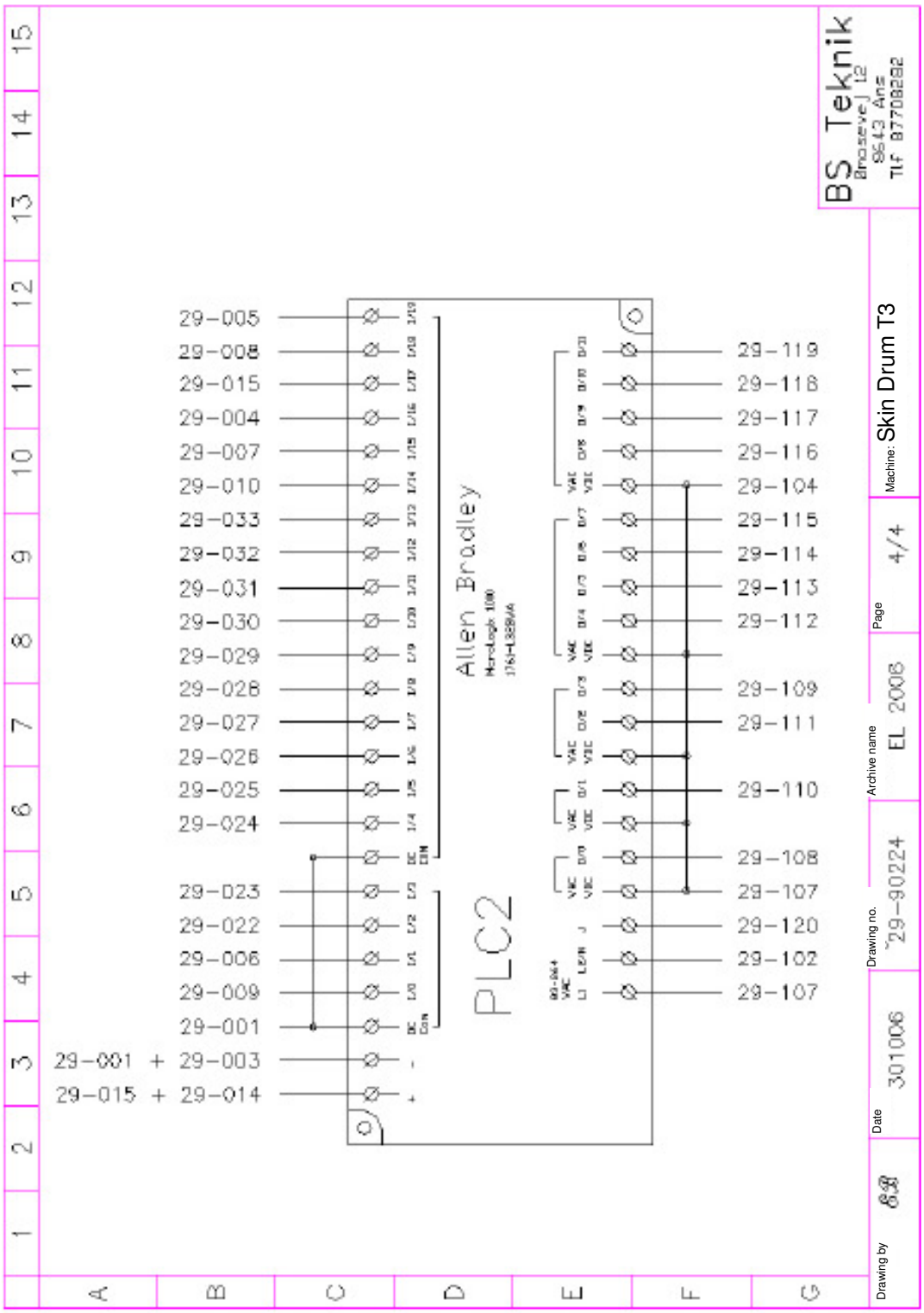
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PLC2
29-005
29-008
29-015
29-004
29-007
29-010
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29-026
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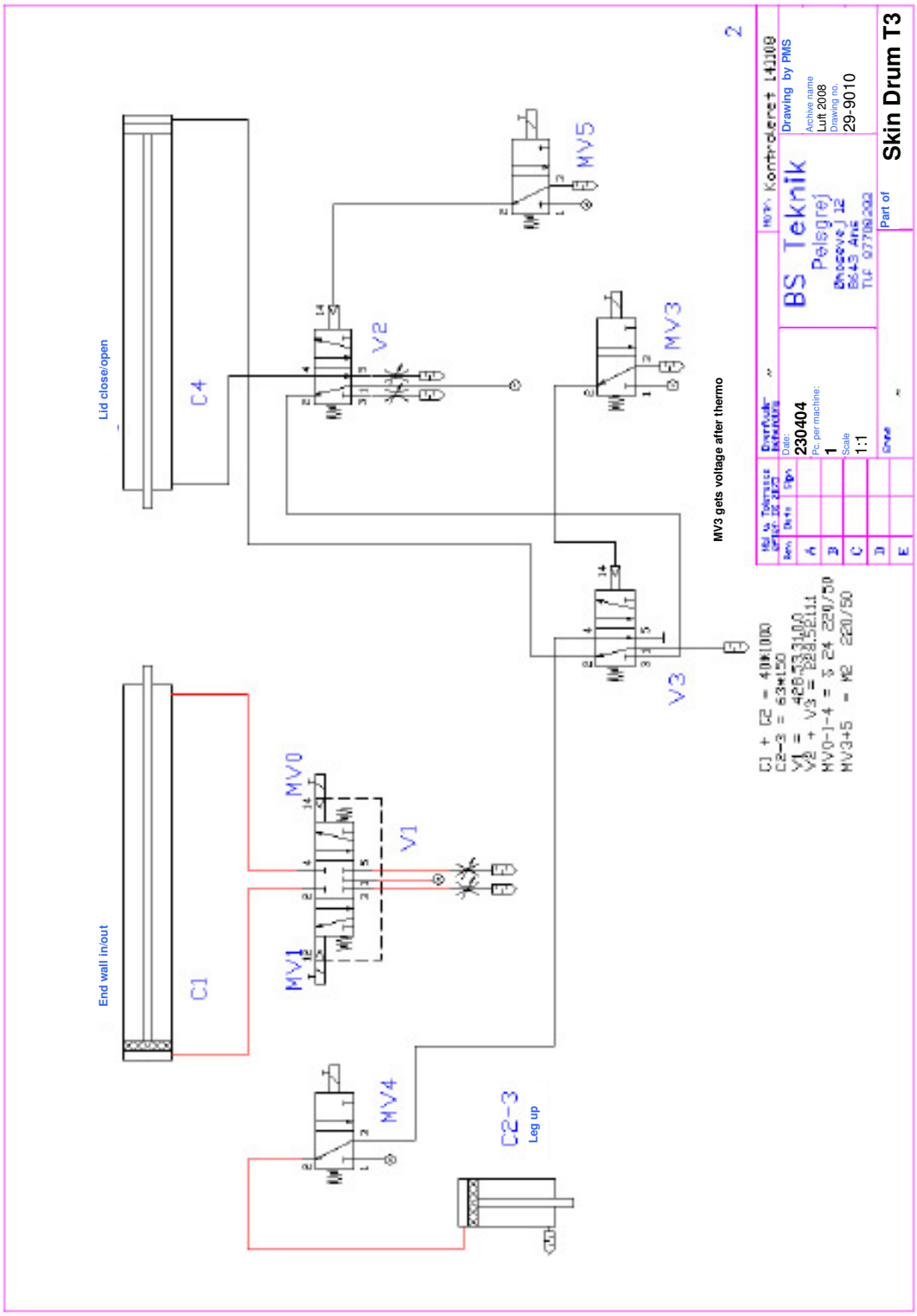
Lid close/open
C4
V2
MV5
MV3
MV3 gets voltage after thermo
V3
End wall in/out
C1
MV0
V1
MV1
MV4
C2-3
Leg up
Skin Drum T3
Drawing by PMS
BS Teknik
Pelsgrej
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Luft 2008
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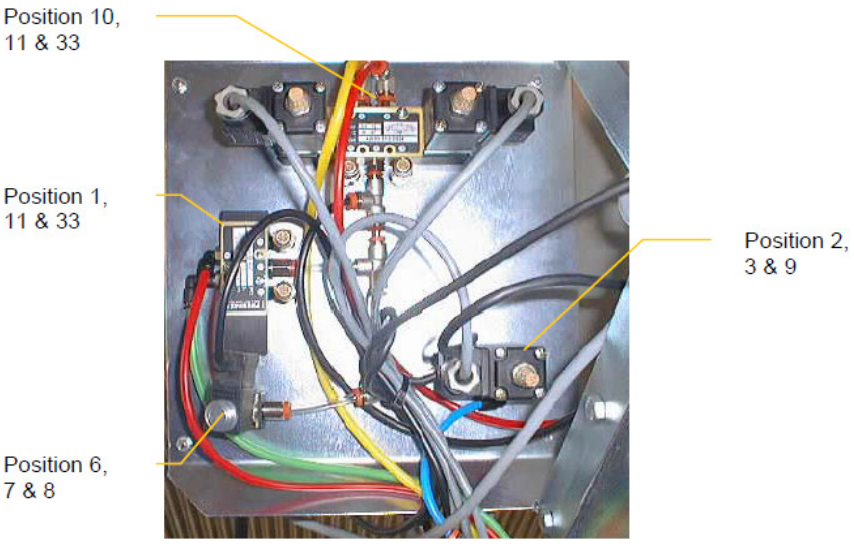
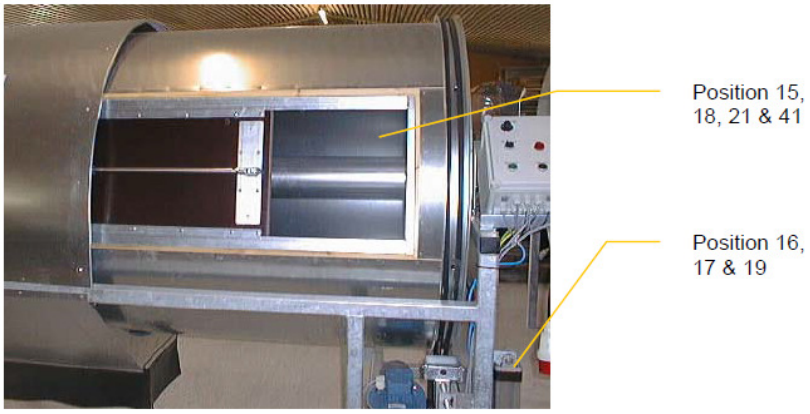
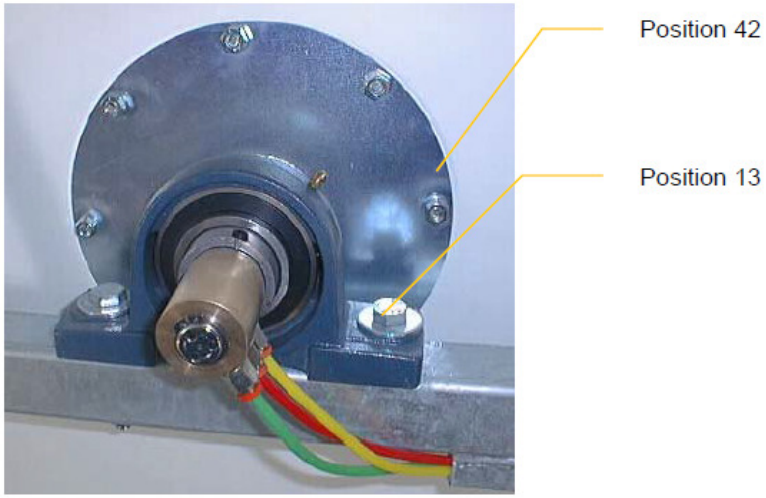
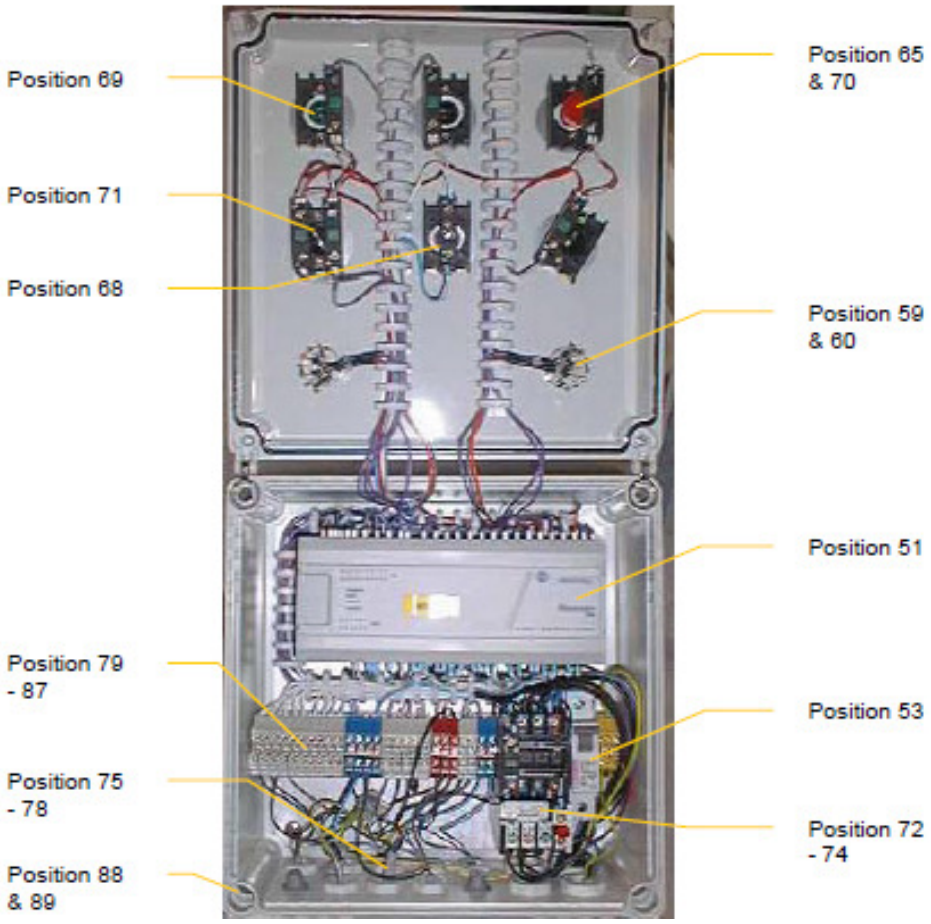
230404
Pc. per machine:
1
Scale
1:1
Part of

11. Spare parts list





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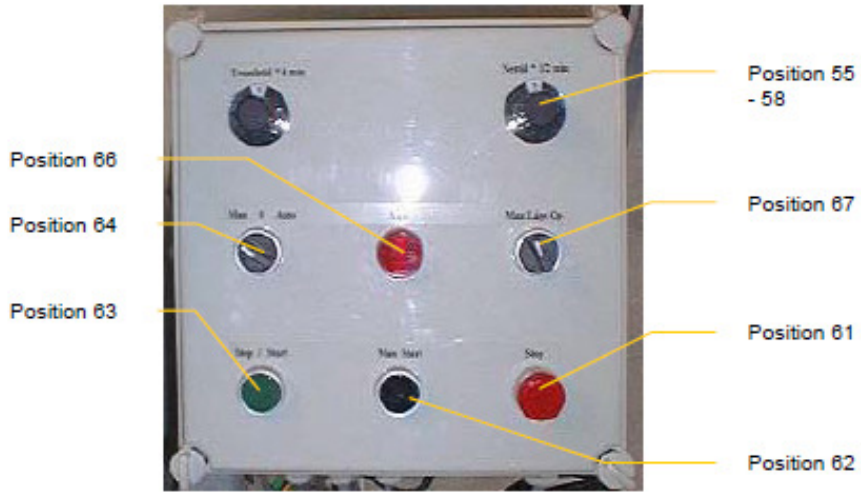
Position 72
- 74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Position 63
Position 55
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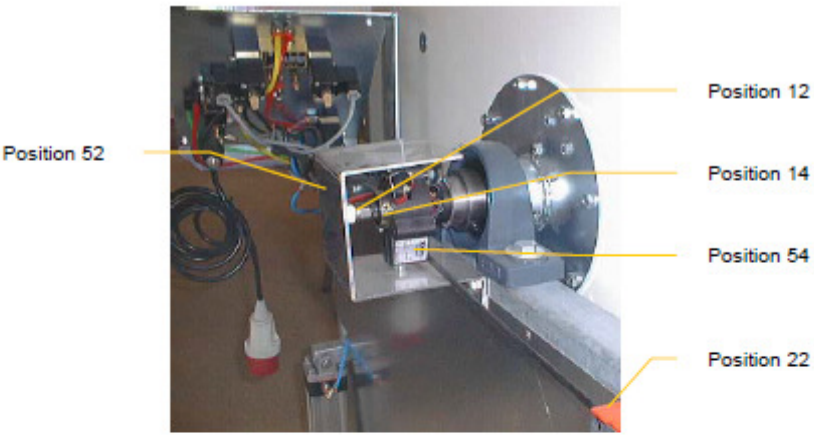
Position 67
Position 61
Position 62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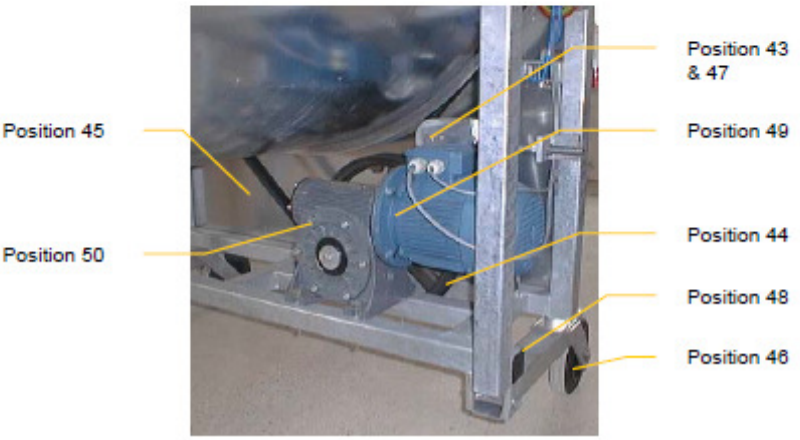
Position 12
Position 14
Position 54
Position 22


Position 45
Position 50
Position 43
& 47
Position 49
Position 44
Position 48
Position 46

List of spare parts – Skin Drum			
Pos.	Name	Pc.	Order no.
1	228,52,11, 1 pneumatically operated valve	1	5911-5228521101
2	300,04,90 Base 90 gr	1	5911-5013000490
3	300,11,00 Terminal box	3	5911-5013001100
4	305,90,00 Base 90 gr M5	1	5911-5023059000
5	305,11,00 Terminal box	1	5911-5023051100
6	Terminal with cable 600mm	1	5911-5023051106
7	M 2 pilot NC	1	5911-5023051262
8	MB 58, 230/50-60 Hz coil	1	5911-5023051258
9	S 24 240/50 magnet valve	1	5911-5013001124
10	428,53,31,0,0 (220/50)	1	5911-54285331001
11	6,06,18 sounds absorber SCQ-18	2	5911-3970530012
12	Rotary coupler RTJ 1/8 x 1/8	1	5911-3511101101
13	Triplex air swivel	1	5150-00298050
14	Carbon holder shaft	1	5150-00291035
15	VDMA Ø40-1000 Cylinder	2	5912-32240999
16	VDMA Ø63-0150 um	2	5912-32263150
17	VDMA mounting Ø63 B	2	5912-590632003
18	Fork M 12*1,25	2	5912-59012125
19	Fork M 16*1,5	2	5912-59016150
20	Base mounting for 40mm VDMA	2	5912-39040001
21	Reed switch DSM1-C525 NO	3	5923-80950002202
22	Filter 1/4 100	1	5914-32001510
23	Outer fitting R1-4-1/8	1	5913-302001002
24	Straight fitting R1-6-1/8	8	5913-302001007
25	Straight fitting R1-6-1/4	2	5913-302001008
26	Angle fitting R4-6	8	5913-302004003
27	T-fitting R5-6	3	5913-302005003
28	Base R6-4-1/8	1	5913-302006002
29	Base R6-6-1/8	8	5913-302006007
30	Base R6-6-1/4	0	5913-302006008
31	Rotary angle fitting low 6 ¼	8	5913-431990613
32	Conical bushing A4-3/8-1/8	4	5913-722104002
33	Angle fitting A10-1/8-1/8	4	5913-722110001
34	**Blow-off throttle** SVE-1/8	4	5911-3970520001
35	Quick release coupling male 1/4 **insertion nipple**	1	5915-790872513
36	Air tube PE 6/4 natural	4	5915-119991024
37	Air tube PE 6/4 black	4	5915-119991023
38	Air tube PE 6/4 yellow	4	5915-119991026
39	Air tube PE 6/4 red	4	5915-119991027
40	Air tube PE 6/4 green	4	5915-119991025
41	PAP 5+3+ P10 Glacier bearing	2	5940-10015030
42	Base bearing for drum – UCP 210	2	5940-10410210
43	**Bearings for tightening roller**	2	5940-10620403
44	Belt pulley SPB 355-2	1	5962-1263020355
45	V-belt B173	2	5961-00054394
46	Loose wheel PRO 200*50 – 20*58	2	5280-00201060
47	Ø82*98 Stellalon S.20 for bearings 6204	1	5280-5082098
48	50*50*2 plastic plug, black	8	5290-70505040
49	Electric motor 1,5 KW 2800 RPM brake	1	5931-70150205
50	Gear LPC 87-40-200-Ø24-Ø35	1	5935-13874020035
51	Microcontroller Micrologix 1000	1	5921-14000120

52	Inductive sensor Ø18 PNP NO no screen	2	5923-14002230
53	Etimat C2A 1P 10kA	1	5922-54005210
54	Bosch 1 ST/PC carbon holder + collector ring	1	5150-00296010 +5150-00296008
55	KNP 2021603 R-21 Button 21/6mm black	2	5924-60002160
56	KNP 4621010 R-21 No. -pulley 0-11	2	5924-60012111
57	KNP 4721023 R-21 stator for no. -pulley	2	5924-60012199
58	KNP 3021103 R-21 cover/lid, black	2	5924-60012100
59	**D-switch** 1 **section** 1*12 Ø10/6	2	5924-60111210
60	Led 4001	24	5924-600014004
61	B & J mushroom-shaped button, red, 28 mm Stop Arret.	1	5924-74010030
62	B & J press. head flat black	1	5924-74010060
63	B & J press. head flat green	1	5924-74010090
64	B & J handle 1-0-2	2	5924-74010110
65	B & J extension press. base, red	1	5924-74010160
66	B & J lamp head, plastic, red	1	5924-74010240
67	B & J switch 0-1	1	5924-74010100
68	B & J lamp bracket	1	5924-74010230
69	B & J coupling element	6	5924-74011015
70	B & J contact element 1NC	1	5924-74011020
71	B & J contact element 1 NO	4	5924-74011030
72	B & J contactor K2-12A01-230V 5,5kW	1	5925-14020030
73	B & J element 1 NO HN10	1	5925-14020110
74	B & J thermo overload relay 2,7-4,0 A	1	5925-34022070
75	ETA cabinet B3000*A3000*D150	1	5926-14300329
76	Fibox lid screw – OUT OF STOCK	0	HS10255
77	Fibox lid 28*28*3 with hinge – OUT OF STOCK	0	EKO30-G2FSH
78	Mounting plate 28*28 – OUT OF STOCK	0	EKOVT
79	Through-connectors WK 4U Grey	5	5927-14080000
80	Through-connectors WK 4U Red	3	5927-14080010
81	Through-connectors WK 4U Yellow	4	5927-14080020
82	Through-connectors WK 4U Blue	5	5927-14080030
83	End plate AP2,5-4 Grey	4	5927-14080050
84	Fuse holder for WK4TKG-U	1	5927-14080062
85	End plate for WK4TKG-U	1	5927-14080064
86	Limit switch s 35	1	5927-14080072
87	DIN rail with holes TS35/F6	0,25	5926-33500000
88	CEE plug 16A 3P+N+J phase inverter	1	5927-41090510
89	Screwed glands PG7	4	5927-67000700
90	Screwed glands PG9	1	5927-67000900
91	Screwed glands PG11	1	5927-67001100
92	Screwed glands PG13,5	2	5927-67001300
93	Nut PG7	4	5927-64107110
94	Nut PG9	1	5927-64109110
95	Nut PG11	1	5927-64111110
96	Nut PG13,5	2	5927-64113110
97	PKAJ, plastic, black 5*1,5mm2	3	5927-74100120
98	Y-JZ control cable 3*0,75	1,5	5927-74100320
99	Y-JZ control cable 4*1,5	3,2	5927-74100330

12. Troubleshooting

This chapter describes some problems that may occur and that can be fixed right away by the operator. In the case of problems that cannot be fixed by the operator it is recommended to contact the Jasopels Service Department for further assistance.

DANGER!

Always disconnect the machine's electrical power and air supply before maintenance, cleaning and other service activities are performed on the machine.

Error
The belts are making a howling noise!
Solution:
When the belts become too dry, they can begin to make a noise.

- Moisten the belts with water or rub stearine on the drum's belt pulley.

Error
The drum won't start!
Solution:

- Make sure that the lid is closed all the way – it could happen that there is sawdust squeezed by the lid's edge.

- If the lid is closed al the way, open the control cabinet and check whether the light is on in lead-in 8 on the PLC. If the light in lead-in 8 is not on, the Reed switch on the lid cylinder needs to be adjusted. If adjusting the Reed switch does not help, it may be the case that it is defective. Replace it or call Jasopels' Service Department.

Error
The drum won't stop!
Solution:
As described in the chapter on the machine's operation, the drum is supposed to stop in its initial position when the tumbling time is up and the drum has been emptied. It is the inductive sensing device together with the sensing plate at the movable end wall of the drum that determines the lid's position when the drum stops.

When the switch (fig. 1.1) is set to 9, the tumbling time is set to one hour.

- If the sensing plate is missing, the drum will not stop after the emptying process is completed.

- If the inductive sensor is damaged or incorrectly adjusted so the distance between it and the sensing plate is too big, the drum will not stop. On the sensor there are two nuts that need to be adjusted so that the distance between the sensing plate and the end of the sensor is about 3-4 mm. The sensor is adjusted correctly if the little light at the end of the sensor's wire blinks every time the sensing plate passes the sensor.

- If the end of the sensor has been deformed after having been too close to the drum, it may be damaged. In this case you will not see the light at the end of the sensor blink when the sensing plate passes.

DANGER!

If you need to do maintenance work inside the drum, the power cable MUST be removed from the wall outlet before you start.

13. User's notes