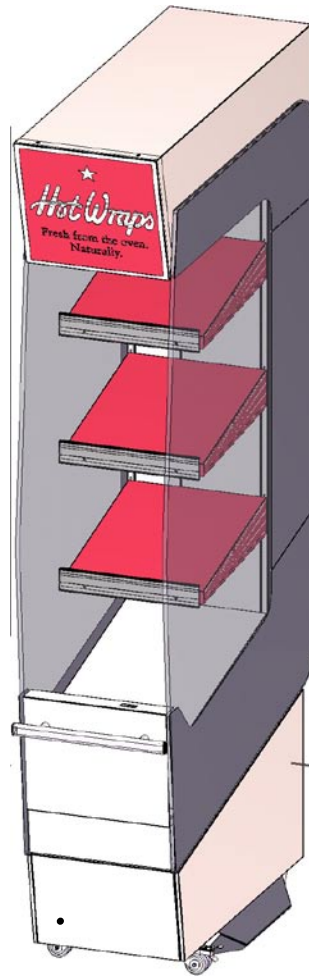


SERVICE MANUAL

MULTI DECK 35 HOT MERCHANDISER



Multi Deck 35 Pret a Manger

- NOTICE -

This manual is prepared for the use of trained Service Technicians and should not be used by those not properly qualified. If you have attended a training for this product, you may be qualified to perform all the procedures in this manual.

This manual is not intended to be all encompassing. If you have not attended a training for this product, you should read, in its entirety, the repair procedure you wish to perform to determine if you have the necessary tools, instruments and skills required to perform the procedure. Procedures for which you do not have the necessary tools, instruments and skills should be performed by a trained technician.

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GENERAL TECHNICAL DATA

This manual covers the Multi Deck 35 Hot series merchandiser cabinets.

All of the information, illustrations and specifications contained in this manual are based on the latest product information available at the time of printing.

TECHNICAL DATA

Type	MD 35 Hot
Power (W)	1870
Fuses needed with power connection 230V, 1N ~ 50Hz (1 phase with zero)	1x 10 A
Standard plug from factory single pole	13 A
Net weight (kg)	230
Gross weight (kg)	305
Height (mm)	2014
Width (mm)	350
Width with side skirts (mm)	443
Depth (mm)	989

Tools

- Standard set of tools.
- Metric wrenches, sockets and hex socket key wrenches.
- Multi-meter and AC current clamp meter.
- Insulation value tester (Megger)
- Temperature tester.

ELECTRICAL TESTS AND SERVICE PROCEDURES

WARNING: Disconnect the electrical power to the machine at the main circuit box. Place a tag on the circuit box indicating the circuit is being serviced.

ADJUSTING DANFOSS THERMOSTAT


Note: In order to adjust the thermostat, first remove the thermostat according prior procedure.

Changing set point

1. Press both keys together. Set point appears in display and is blinking.
2. Change value with top or bottom key.
3. Press both keys again to confirm. When no key is pressed after last confirmation, system goes back to normal operation mode after 25 seconds.

Setting internal parameters

1. Press top key for 2 seconds. In display the first parameter appears.
2. Select parameter with bottom or top key.
3. Press both keys together to read out value.
4. Change value with top or bottom key.
5. Press both keys again to confirm. When no key is pressed after last confirmation, system goes back to normal operation mode after 25 seconds.

Replacing of thermostat

When installing a new thermostat, always change parameter o7 first to HE. Otherwise some other parameters cannot be changed to the desired value.

ADJUSTING DANFOSS THERMOSTAT (CONTINUED)

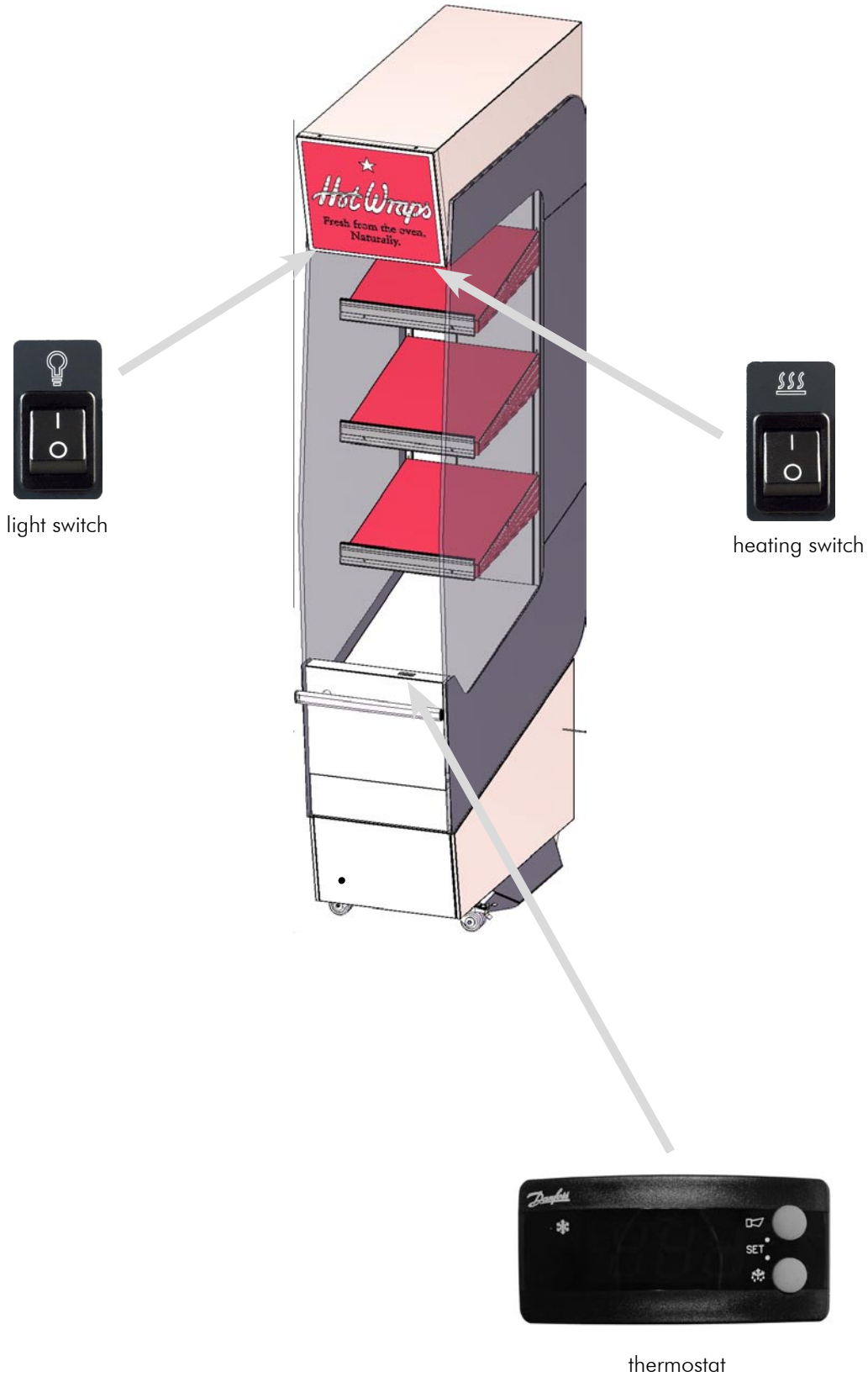
Error message on display

Er: Temperature sensor broken or wiring problem sensor.

Parameters Danfoss thermostat

Parameter	Description		Multi Deck MD 35	Standard value from supplier
	Setpoint	°C	90	0
r1	Switching differential	°K	1	2
r2	Maximum setpoint	°C	99	50
r3	Minimum setpoint	°C	0	-60
r4	Off-set temp. sensor	°K	-5	0.0
o7	Function: Cooling/heating	rE / HE	HE	rE

CONTROL LOCATIONS



TROUBLESHOOTING

TROUBLE SHOOTING MULTI DECK 35 HOT

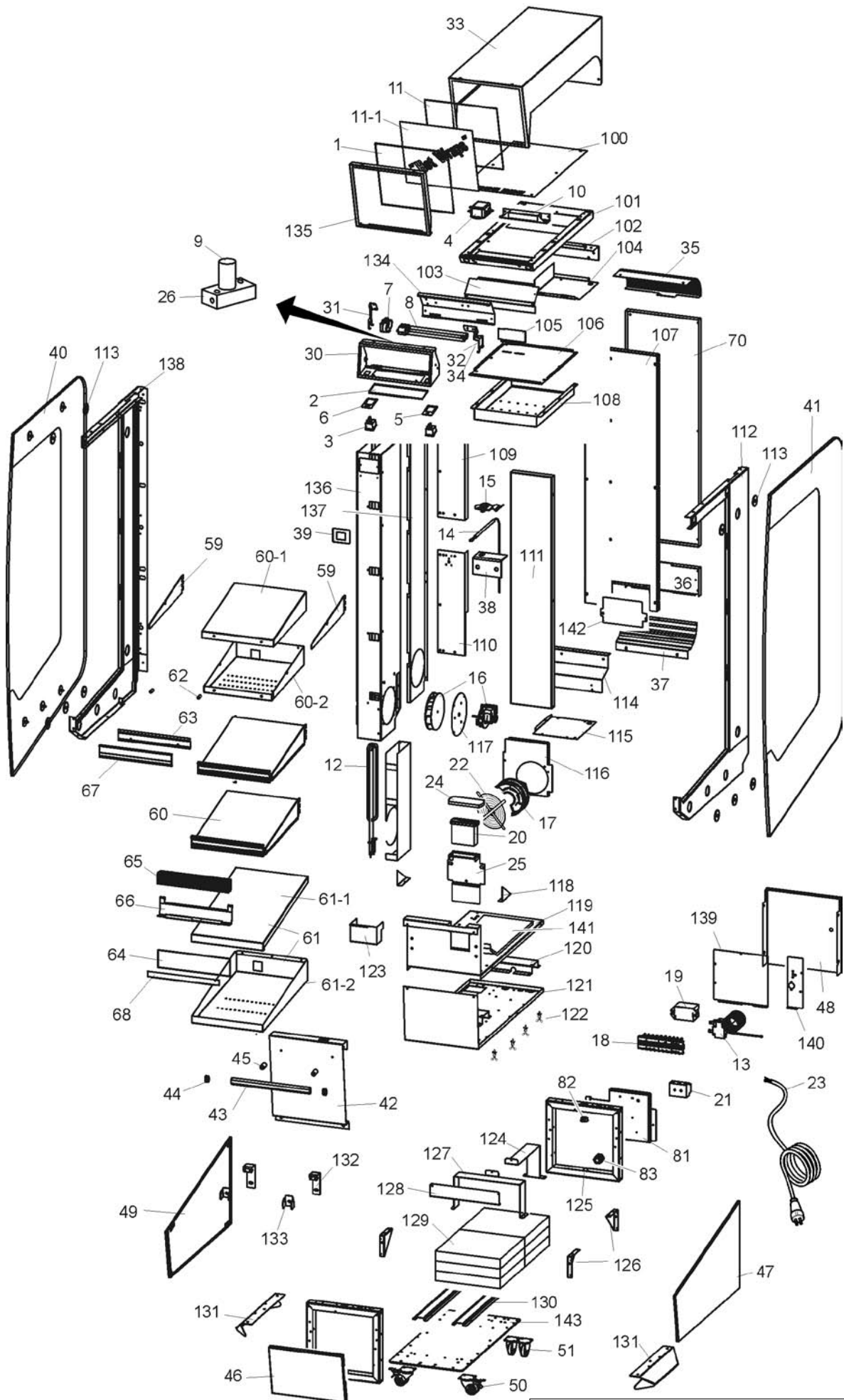
Symptom	Possible causes
No power to cabinet controls.	<ol style="list-style-type: none"> 1. Main breaker open. 2. Wiring loose.
Main fuse or breaker blows.	<ol style="list-style-type: none"> 1. Wiring incorrectly. 2. Heating element shorted. 3. Wiring shorted.
Illumination does not work.	<ol style="list-style-type: none"> 1. Lamp malfunction. 2. Tumble switch malfunction. 3. Electronic ballast malfunction. 4. Wiring loose.
No heating.	<ol style="list-style-type: none"> 1. Wiring loose. 2. Heating element malfunction. 3. Relay K1 malfunction. 4. Security thermostat tripped. 5. Wiring loose. 6. Thermostat malfunction. 7. Sensor wiring loose.
Security thermostat tripped.	<ol style="list-style-type: none"> 1. Blower for heating malfunction. 2. Setting of thermostat. 3. Thermostat malfunction.
No indication on electronic thermostat.	<ol style="list-style-type: none"> 1. Electronic thermostat malfunction. 2. Wiring loose.
Blower motor does not run.	<ol style="list-style-type: none"> 1. Wiring loose. 2. Motor inoperative.

This is an analytic description for servicing and repairing all major parts of the Multi Deck 35 Hot. It consists of 4 basic steps to recognize and solve the problems:

1. Symptoms.
2. Possible causes.
3. Solving of the problem: checking/action.
4. Replacing of parts and testing:
 - a. Replacing is described in this service manual.
 - b. For testing see control locations on page 17 of this manual.

Description of part	Symptoms	Possible causes	Solving: checking / action
Relay K1	Relay does not come in.	Wiring	Check the wiring
		Coil malfunction	Check resistance of coil. This should be $\pm 7.0K\Omega$
		Contact burned	Check the contacts
Heating element	The cabinet is not reaching the adjusted temperature	Wiring	Check the wiring
		Element malfunction	Check the power on the element
Tumble switch	Light or heating does not switch on	Wiring	Check the wiring
		Contact burned	Check the voltage on "in"- and "output".
Electronic ballast	Light does not switch on	Wiring	Check the wiring
		Ballast malfunction	Replace ballast
PL lamp(s)	Light does not switch on	Wiring	Check the wiring
		Lamp(s) broken	Replace lamp(s)
Security thermostat	The cabinet is not reaching the adjusted temperature	Wiring	Check the wiring
		Security thermostat switched off	Reset thermostat
		Security thermostat malfunction	Replace thermostat
Electronic thermostat	Display does not light up	Wiring	Check the wiring
	The cabinet is not reaching the adjusted temperature or does not heat up at all	Loose sensor	Check sensor
		Thermostat malfunction	Replace thermostat
PTC 1000 sensor	The cabinet is not reaching the adjusted temperature or does not heat up at all	Broken sensor	Replace sensor
		Loose sensor	Check wiring
	The cabinet becomes too hot	Broken sensor	Replace sensor
		Sensor shorted	Check wiring
Blower(s) on heaters	Security thermostat switched off	Wiring	Check wiring
			Check voltage on blower
		Blower malfunction	Check for blockage
			Replace blower
Blower(s) air curtain	The cabinet is not reaching the adjusted temperature	Wiring	Check wiring
			Check the voltage on blower
		Blower malfunction	Check for blockage
			Replace blower

EXPLODED VIEWS & PARTLISTS



Multi Deck 35 Hot Assembly Drawing

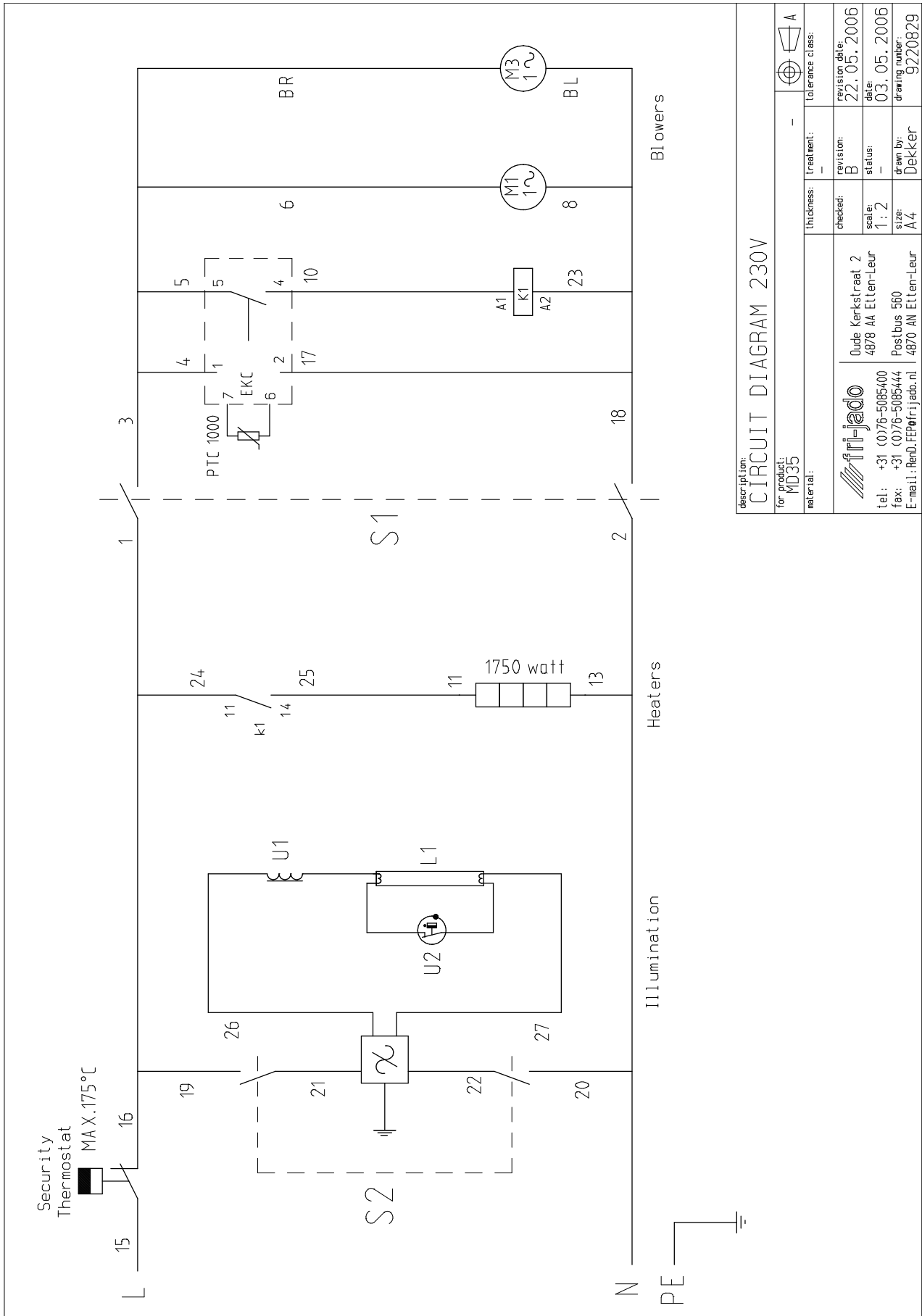
ITEM	PART NO	QTY	DESCRIPTION
1	9222118	1	Protection plate dia, transparent
2	9222078	1	Protection plate, illumination inside
3	9181008	2	Switch, tumble
4	9221013	1	Interference filter
5	9181071	1	Sticker, light
6	9181072	1	Sticker, heat
7	9082897	1	Lamp holder
8	9222088	1	Lamp, PLL 55 W
9	2007456	1	Starter, S10
10	2007260	1	Ballast, L18, 230V 50Hz
11	9222119	1	Protection plate, dia, opal
11-1	9225667	1	Diastrip
12	9222014	2	Heating element, 1750W 230V
13	3500037	1	Thermostat with reset, 100-320 °C
14	9221011	1	Temperature sensor
15	9073181	2	Holder, temperature sensor 1/8x4mm
16	9221000	1	Blower
17	9221001	1	Blower
18	8033659	1	Connecting block, 9-pol.
19	3500187	1	Relay, 230V 30A
20	9221009	1	Thermostat, Danfoss EKC102A
22	8031364	1	Grid, blower
23	3501008	1	Connecting cable with plug UK 13Amps
23	9091383	1	Connecting cable with Euro plug
24	9222015	1	Protection plate, thermostat
25	9225656	1	Bracket, thermostat
26	9086192	1	Holder, starter
30	9225619	1	Light box
31	9225621	1	Bracket, lampholder
32	9225622	1	Bracket, lamp
33	9225665	1	Top plate
34	9222210	1	Lamp protection, plastic
35	9225618	1	Top plate, bended
36	9225617	1	Panel, lower rear
37	9225644	1	Bottom plate, bended
38	9224097	2	Bracket, temperature probe
39	9222048	8	Rubber gasket
40	9220048	1	Glass panel, left, ass.
41	9220049	1	Glass panel, right, ass.
42	9225641	1	Front plate bottom, SS
42	9225664	1	Front plate bottom, Ral 1015
43	9223028	1	Bumper
44	9171014	2	Plug
45	9172300	2	Spacer
46	9225637	1	Front panel underframe, SS
46	9225661		Front panel underframe, Ral 1015
47	9225639	1	Right side panel underframe,SS
47	9225662		Right side panel underframe,Ral1015
48	9225638	1	Rear panel underframe
49	9225640	1	Left side panel underframe,SS

ITEM	PART NO	QTY	DESCRIPTION
49	9225663		Left side panel underframe, Ral 1015
50	9222091	2	Castor with brake
51	9222090	2	Castor without brake
59	9224005	6	Shelf support
60		3	Shelf
60-1	9225630	3	Shelf, top plate, SS
60-1	9225659	3	Shelf, top plate, Ral 3003
60-2	9225631	3	Shelf, bottom plate
61		1	Bottom shelf
61-1	9225633	1	Bottom shelf, top plate, SS
61-1	9225660	1	Bottom shelf, top plate, Ral 1015
61-2	9225632	1	Bottom shelf, bottom plate
62	9223007	9	Spacing pin, 3D nut M6
63	9225636	3	Holder, price rail
64	9222081	1	Productstopper , bottom, perspex
65	9222092	1	Air divider, honeycomb
66	9225635	1	Bracket, honeycomb
67	9223072	3	Price rail, transparent
68	9225634	1	Holder, productstopper
70	9225616	1	Rear plate
81	9225646	1	electra panel
82	9070840	1	Grommet
83	9150195	1	Strain relief PG 13,5
100	9225629	1	Top plate
101	9225623	1	Frame, top plate
102	9225624	1	Bracket
103	9225626	1	Air guiding plate, top
104	9225625	1	Air guiding plate, top rear
105	9225627	1	Air guiding plate
106	9225628	1	Air guiding plate
107	9225615	1	Inner panel
108	9225643	1	Air exit, top
109	9224030	1	Upper cover plate, column
110	9225654	1	Lower cover plate, column
111	9225615	1	Rear panel, inner, SS
111	9225657	1	Rear panel, inner, Ral 1015
112	9220433	1	Frame, right hand side
113	9224065	10	Mounting washer, glass
114	9225614	1	Bended plate, rear
115	9225610	1	Cover plate blower
116	9225609	1	Blower plate
117	9224041	1	Mounting plate blower
118	9225651	2	Lid, (anti air leak)
119	9225606	1	Bottom plate, inner
120	9225607	2	Beam
121	9225605	1	Bottom plate, outer
122	9221018	4	Binding clip, 3,8 - 6,4
123	9225604	1	Cover plate, heating element
124	9225648	1	Clamp plate, brick
125	9225601	2	Frame
126	9225650	3	Prop

ITEM	PART NO	QTY	DESCRIPTION
127	9225649	1	Clamp plate, brick
128	9225647	1	Bracket, brick
129	9222089	6	Brick, 30x30x4,5 cm
130	9225603	2	Beam, bottom
131	9225645	2	Stabilizer bracket
132	9225642	2	Bracket, front
133	9224019	2	Bracket
134	9225620	1	Base plate illumination
135	9225666	1	Display frame
136	9220462	1	Air column, SS
136	9220435	1	Air column, Ral 1015
137	9224032	1	Partition plate
138	9220434	1	Frame, left
139	9225652	1	Cover plate electra
140	9225653	1	Mounting plate fuse
141	9225670	1	Heat shield bottom.
142	9225669	1	Cover plate service access
143	9225600	1	Bottom plate underframe
1000	4302196		Isolation tape, roll 15mtr, 50x3mm
1000	4302373		Sealant, Dowcorning 732
1000	8072037		Isolation panel PU 865x1333x30
1000	8072098		Name plate Fri-Jado
1000	9004718		Isolation plate type 520, 1000x700x22
1000	9070793		Connection nut, M6x18
1000	9110103		Isolation plate ConlitP756, 1800x900x15
1000	9123148		Label, High temperature
1000	9221010		Cell rubber, roll 25mtr, 15x2mm
1000	9221019		Isolation plate Insulfoam HT034, 122x244x12
1000	9222057		Transport protection strip, lower
1000	9222058		Transport protection strip, upper

CIRCUIT DIAGRAMS

CIRCUIT DIAGRAM MULTI DECK 35 HOT



Description:		CIRCUIT DIAGRAM 230V	
for product:	MD35	material:	
thickness:	-	treatment:	-
checked:	B	revision date:	22.05.2006
scale:	1:2	date:	03.05.2006
size:	A4	drawn by:	Dekker
		drawing number:	9220829
		Oude Kerkstraat 2 4878 AA Elten-Leur Tel: +31 (0)76-5085400 Fax: +31 (0)76-5085444 E-mail: RebD.FE@fri-jado.nl 4870 AN Elten-Leur	

