

SERVICE MANUAL

MULTI DECK HOT MERCHANDISERS WITH IMPROVED AIR TECHNOLOGY

MULTI DECK 60 ESSENTIAL - 4 LEVEL
MULTI DECK 100 ESSENTIAL - 4 LEVEL
MULTI DECK 60 TRANSPARENT LIGHT BOX
MULTI DECK 100 TRANSPARENT LIGHT BOX
MULTI DECK 120 TRANSPARENT LIGHT BOX
CLASSIC DECK HOT MERCHANDISER



Multi Deck 60 Essential



Multi Deck 100 Essential



Multi Deck 120 transparent



Classis Deck Hot

- 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 trianing 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 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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Versions		
Version	Issue date dd/mm/yy	Remarks
07/2015	01/07/2015	MD 60 and 100 Essential added. Glass front doors added. Update exploded views. Various updates.

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GENERAL TECHNICAL DATA

This manual covers the Multi Deck 60, 100 and 120 Hot and the Classic Deck Hot series merchandiser cabinets. The cabinets come in three sizes, 60, 100 and 120 centimeter.

- Multi Deck 60 Hot - Merchandiser 620 mm wide.
- Classic Deck Hot - Merchandiser 620 mm wide.
- Multi Deck 100 Hot – Merchandiser 1000 mm wide.
- Multi Deck 120 Hot – Merchandiser 1240 mm wide.

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 60 Hot	Classic Deck Hot	MD 100 Hot	MD 120 Hot
Power (W)	3200	3200	3700	4400
Fuses needed with power connection 230V, 1N ~ 50Hz (1 phase with zero)	1x 16 A	1x 16 A	1x 20 A	1x 20 A
Fuses needed with power connection 400V, 3N ~ 50Hz (3 phases with zero)	–	–	3x 16 A	3x 16 A
Fuses needed with power connection 400V, 3 ~ 50Hz (3 phases without zero)	–	–	3x 16 A	3x 16 A
Standard plug from factory single pole	16 A	16 A	–	–
Standard plug from factory 5-pole According IEC309 and CEE-form	–	–	16 A 3P+N+E	16 A 3P+N+E
Net weight (kg)	250	250	310	345
Gross weight (kg)	325	325	390	430
Height (mm)	1912	1912	1912	1912
Width (mm)	620	620	1000	1240
Depth (mm)	948	1035	948	948

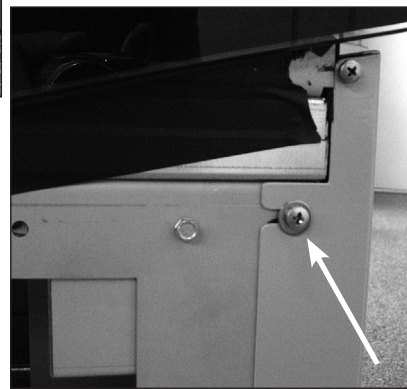
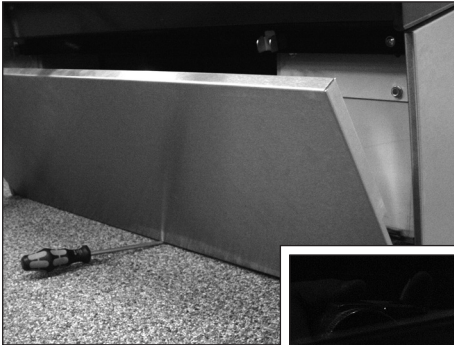
Tools

- 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.

REMOVAL AND REPLACEMENT OF PARTS

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.

PANELS BOTTOM SIDE (MULTI DECK 60/100/120)



1. Remove panel on the front side by lifting it up with a screwdriver.
2. Slide the side panels backwards and remove these panels.
3. Loosen the screws from the back panel and lift this panel out.
4. Reverse the procedure to install.

PANELS BOTTOM SIDE (CLASSIC DECK)



1. Slide stainless steel bottom panel towards yourself and remove this.
2. Loosen the screws on the backside for the side panels and remove both panels.
3. Remove the screws from the front panel and remove the panel.
4. Reverse the procedure to install.

BACK PANEL ON BOTTOM SIDE (CLASSIC DECK)



1. Remove the panels on bottom side according prior procedure.
2. Loosen the screws that secure the back panel and remove this panel.

COVER PLATE ON FIELD WIRING BOX



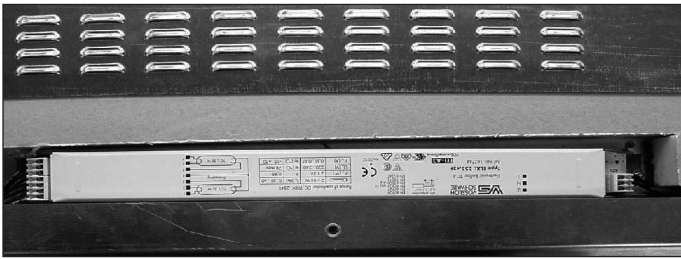
1. Remove all panels on the bottom side and the back panel on bottom side according prior procedures.
2. Remove the screws that secure the box and remove the cover plate.
3. Reverse procedure to install.

ILLUMINATION/TUMBLE SWITCH

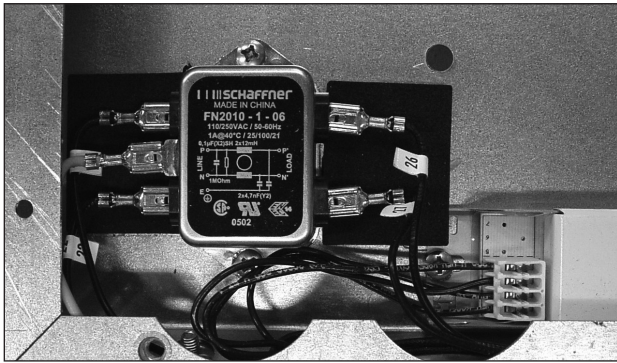


1. Remove the socket screws on the top side and turn light fixture towards yourself.
2. Replace lamp.
3. Remove wiring from switch and remove the switch by pushing the clamps on both sides.
4. Reverse the procedure to install.

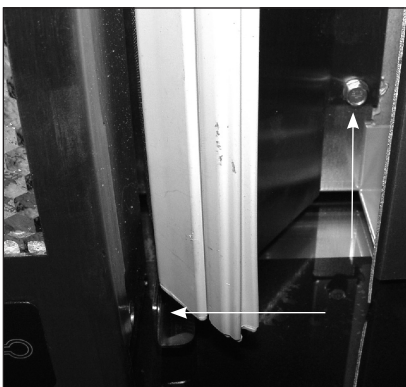
ELECTRONIC BALLAST/INTERFERENCE FILTER



1. Remove the screws on the top side and remove cover panel.
2. Remove the nuts on the ballast and remove the wiring.
- 2a. Remove the screws on the filter and remove this filter.
3. Reverse the procedure to install.



ROLLER BLIND



1. Remove the 2 socket screws and 3 screws on the inside and remove the roller blind.
2. Place roller blind on a table and secure this with a clamp.
3. Loosen the socket screws and slide the blind upwards. Release the tension on the blind by turning it anti clockwise until the tension is low.
4. Place the new blind with the pin in the holder. Put tension on the blind by turning this clockwise for 14 rotations (blind with part nr. 9222038 needs 22 rotations).
5. Replace mounting plate and bearing on the new blind.
6. Reverse the procedure to install.



BACK PANELS



1. Remove the screws that secure the back panel and remove this panel.
2. Remove the insulation.
3. Remove the screws that secure the cover panel and remove this panel.
4. Reverse the procedure to install.



THERMOSTAT (DANFOSS)

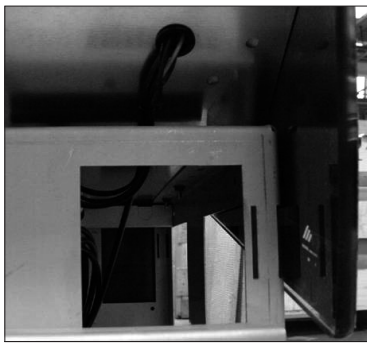
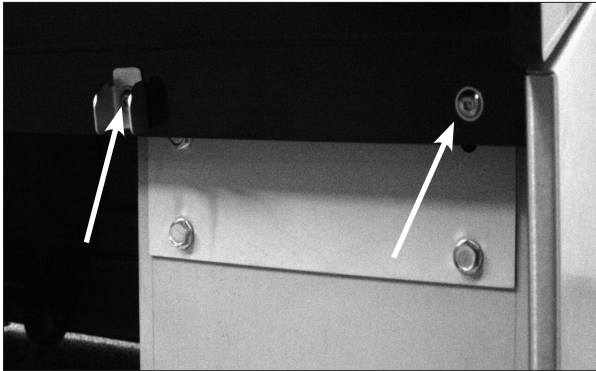
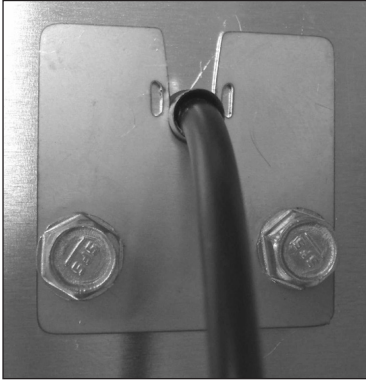


1. Remove the price rail assembly.
2. Remove the socket screws that secure the fastening plate and remove the fastening plate.
3. Loosen the blocking clips on the sides of the thermostat and remove thermostat from housing.
4. Remove the wiring from the thermostat.
5. Reverse the procedure to install.



Note: When changing the thermostat, first always change parameter 07 to heating HE.

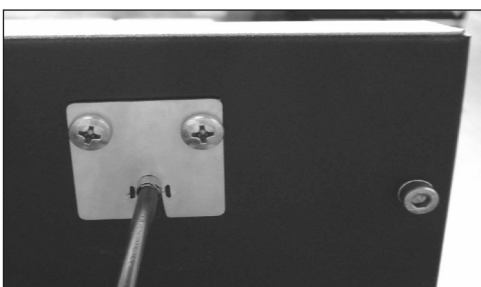
SENSOR DANFOSS THERMOSTAT MD 60 AND CLASSIC DECK



1. Remove the thermostat according prior procedure.
2. Remove the back panels + insulation + cover panel.
3. Remove the panels on the bottom side.
4. Remove the bolts that secure the holder and remove the holder with sensor.
5. Remove the screws on the front panel and remove this panel.
6. Lead sensor through the grommet and lead the sensor to the back side.
7. Reverse the procedure to install.

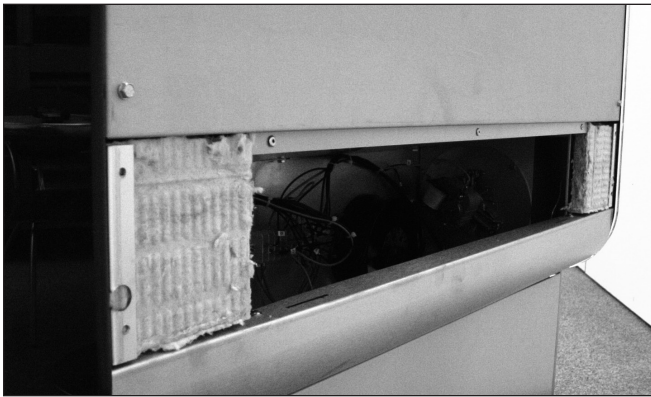
Note: See to it that the sensor is placed straight inside the chamber.

SENSOR DANFOSS THERMOSTAT MD 100 - 120

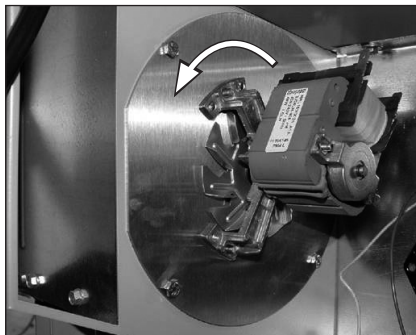
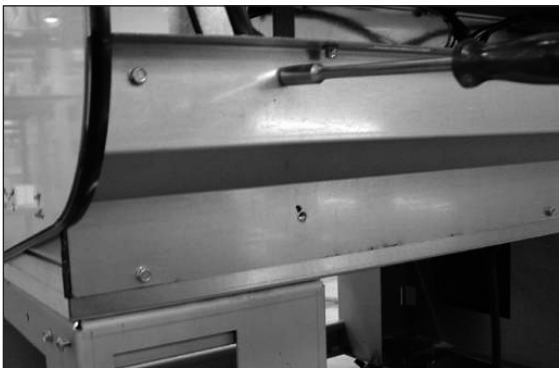


1. Remove the thermostat according prior procedure.
2. Remove the wiring of the sensor on the thermostat.
3. Remove the bottom shelf. Don't forget to pull the plug out of the socket on the left hand backside.
4. Remove the screws that secure the holder and remove the holder with sensor.
5. 4. Reverse the procedure to instal.

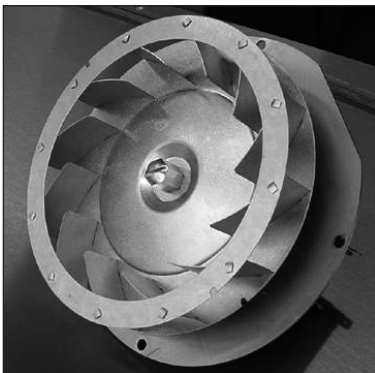
BLOWER SHELF HEATING



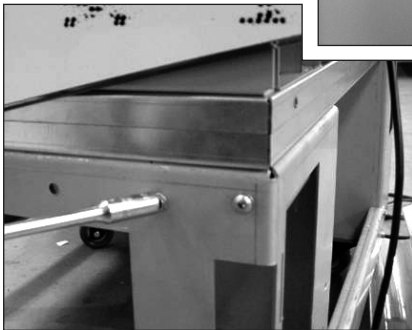
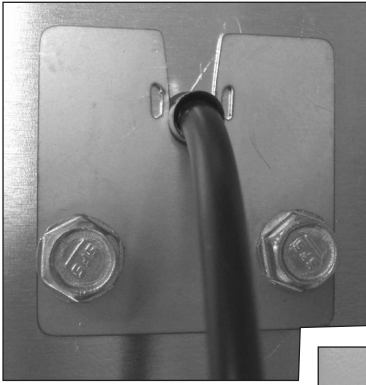
1. Remove the electric panel and all panels on the bottom side according prior procedures.
2. Remove the socket screws from the bended plate and fastening plate and remove these plates.
3. Remove the wiring from the blower.
4. Remove the bolts on the round mounting plate and remove the blower.
5. Remove the nut on the fan blade and remove fan blade. (Left handed threads).
6. Remove the screws that hold the blower and remove the blower from the round mounting plate.
7. Reverse the procedure to install.



Turning direction anti-clockwise

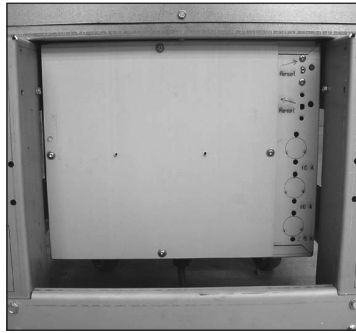


HEATING ELEMENT MD 60 AND CLASSIC DECK



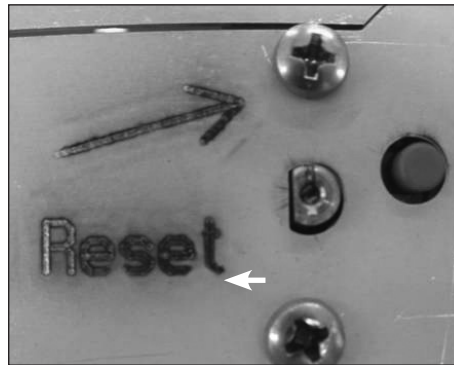
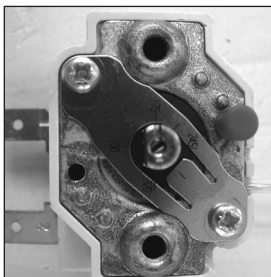
1. Remove the back panels, insulation, cover plate and the thermostat sensor according prior procedures.
2. Remove all the panels on the bottom side side + the back panel on bottom side according prior procedures.
3. Remove the bended plate and fastening plate on the back side according prior procedures.
4. Remove the small cover plate on the back side.
5. Remove the bolts that hold the cover tray on the element and remove the tray.
6. Remove the wiring on the heating element.
7. Remove the nut that secures the element and remove the element from the inside.
8. Reverse the procedure to install.

SAFETY THERMOSTAT (RESET)



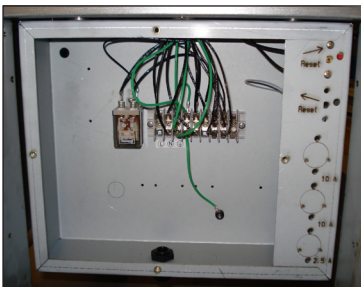
1. Remove the electric panel, back panels, insulation and cover plate, and the cover plate on the field wiring box according prior procedures.
2. Remove the sensor from the clip.
3. Remove the wiring on the thermostat.
4. Remove the screws that secure the thermostat and remove the thermostat.
5. Reverse procedure to install.

Note: Set the thermostat on 175°C.



Reset button

RELAY / CONTACTOR



Md 60 and Classic Deck (till serial nr. 100047340)

1. Remove all panels on the bottom side, the back panel on bottom side and the cover plate on the field wiring box according prior procedures.
2. Remove the wiring from the relay.
3. Remove the screws that secure the relay and remove the relay.
4. Reverse procedure to install.



Md 60-100-120 and Classic Deck

REPLACING SIDE GLASS

- **Remove all traces of glass and silicone past.**



- Remove the product stopper from the bottom plate.
 - Take out the honeycomb profile and retainer.
 - Remove the bottom plate.
- The attachment brackets are visible.



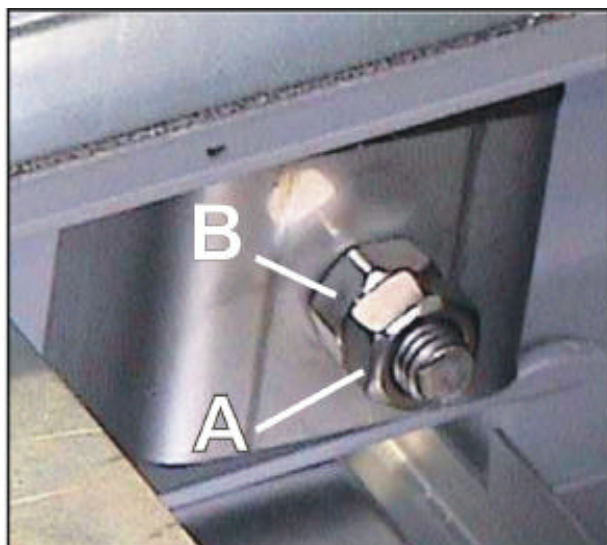
- Remove the six screws from the top plate.
- Remove the top plate.



- Remove the insulation plates.



The attachment brackets are visible.

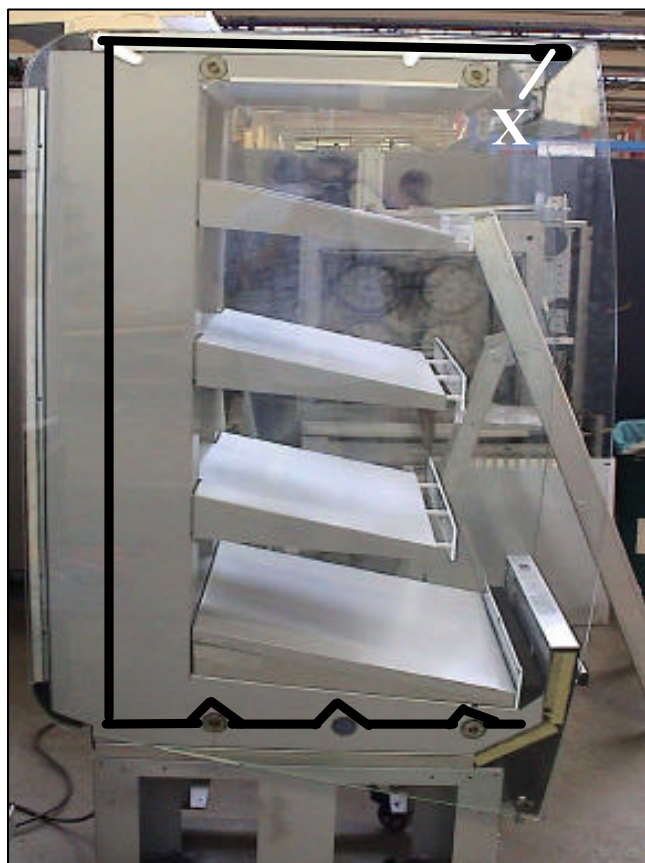


Remove the old notches that were glued to the glass by taking them from the attachment brackets.

Use two spanners to proceed as follows:

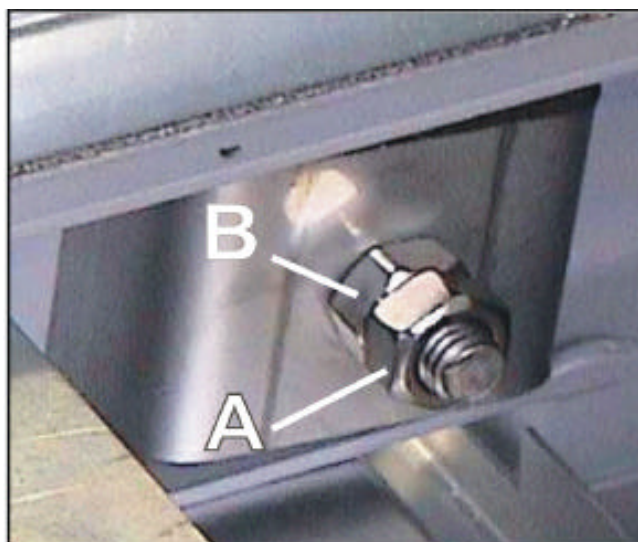
- Hold nut B with one spanner.
- Detach nut A with the other spanner.
- Remove the brackets and the old notches.

Putting the new glass in place



- Thoroughly clean the side and remove any traces of fat.
-
- Glue a piece of foam of 1/8". (X) on the top side.
- Apply silicone paste following the pattern as shown in above picture.
- Position the notches which are glued to the glass in the holes.
- Put the brackets on the threaded studs.

- Attach all nuts B by hand.
- Hold nut B in position using a spanner.
- Tighten nut A firmly using a spanner.



- **Put the insulation plates in the top !**
- Apply the top plate.
- Put the screws in the top plate
- Put the bottom plate in the unit.
- Position the honey comb profile with the retainer in the opening.
- Place the product stopper in the channel in the bottom plate.

MOUNTING INSTRUCTION GLASS DOOR(S)

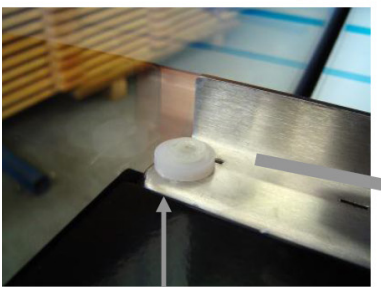
Note: The models MD 100 and 120 have double glass doors. See also next page.

MD 60 – MODEL

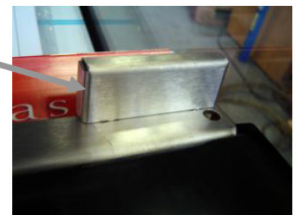
With glass front door



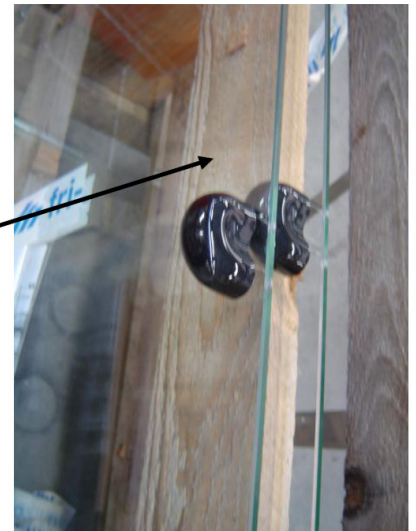
1x



1 + 1

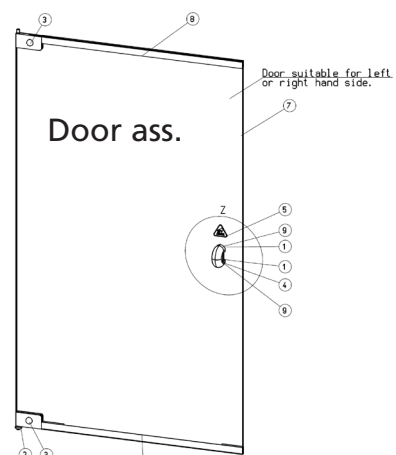
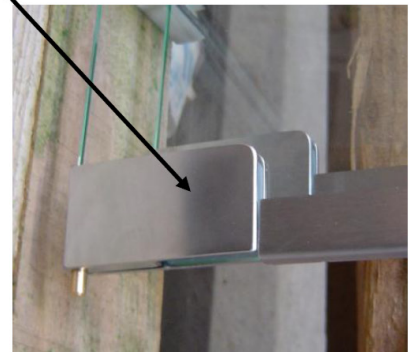
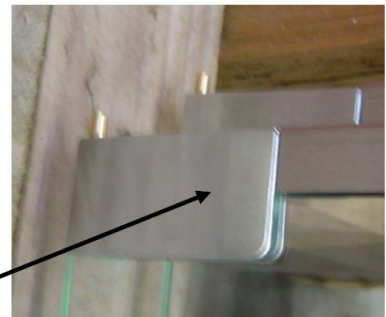


Place warning label near
Door handle



Protective damper between glass
Side panel and front door

Part nr.	Description
9220084S	Front door ass. MD 60
9220085S	Front door ass. MD 100
9220086S	Front door ass. MD 120
9220078S	Door ass. MD 60
9220077S	L or R door ass. MD 100
9220076S	L or R door ass. MD 120



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.

HEATING ELEMENT TEST

Note: When testing the resistance of the element remove the wiring.

Type	Wattage/Voltage	Resistance Ω -5% + 10%	Current A
MD 60 +Classic Deck	1500 / 230	35.3	6.5
MD 100	900 / 230	58.8	3.9
MD 120	1060 / 230	50.0	4.6

PTC 1K SENSOR TEST

Temperature		Resistance
°F	°C	± 10 Ohms
60	16	930
70	21	970
80	27	1016
90	32	1056
100	38	1107
125	52	1227
150	65	1347
200	94	1636
250	121	1935

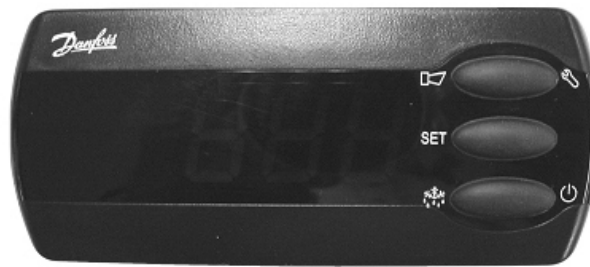
1. Remove the right side panel according prior procedure.
2. Remove the wiring from the sensor.
3. Connect a temperature sensor to the probe for comparison.
4. Test the probe with an Ohmmeter.

CONTACTOR AND BLOWER TEST

Note: When testing the resistance remove the wiring.

Type	Description	Voltage	Resistance
MD 60-100-120	Contactora ABB	230 V	Resistance of coil (A1 - A2) ~ 525 Ω
MD 60-100-120	Blower	230 V	~55 Ω

ADJUSTING DANFOSS EKC 102A THERMOSTAT



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

Changing set point

1. Press the middle button until the temperature value is shown.
2. Change value with upper or lower button.
3. Press the middle button to confirm.

Setting internal parameters

1. Press the upper button for 3 seconds. In display the first parameter appears (ro1).
2. Press the middle button to read out value.
3. Change value with upper or lower button.
4. Press the middle button to confirm.
5. Press the lower button for the next parameter. Follow instructions 2 to 4.

When no button is pressed after last confirmation, system goes back to normal operation mode after 20 seconds.

Replacing of thermostat

When you install a new thermostat, then always change parameter r05 first to 0 (°C) and change parameter o07 to HE. Otherwise some other parameters cannot be changed to the desired value. Otherwise some other parameters cannot be changed to the desired value. You can run through the parameters with the up or down keys, once you are inside the parameter settings.

Options

1. Return to factory settings. Turn the power off. Press and hold the upper and lower button and switch the power on at the same time.
2. Actual temperature of sensor 1 (Thermostat). Press up key shortly 2 times.

Error codes on display

E1: Fault in controller.

E29: Cabinet sensor broken or wiring problem sensor.

ADJUSTING DANFOSS EKC 102A THERMOSTAT (CONTINUED)

Parameters Danfoss EKC 102A thermostat

			MD 60-100-120 CLD 60
	Setpoint	°C	85
r01	Differential	°C	1
r02	Higher setpoint limit	°C	99
r03	Lower setpoint limit	°C	0
r04	Off-set temperature indication	°C	-5
r05	Temperature unit (°C / °F)	°C	°C
r09	Correction of signal from air output	°C	0
r12	Start / stop of temperature control		1
c01	Minimum "ON" time compressor	min	0
c02	Minimum "OFF" time compressor	min	0
c30	Reversed function of relay contact		OFF
d01	Defrost method (EL / OFF)		OFF
d02	Defrost end temperature	°C	6
d03	Defrost interval	hour	8
d04	Maximum defrost time	min	45
d05	"ON" delay after defrost	min	0
d10	Defrost sensor (0=time, 1=air)		0
d13	Defrost at start up		no
o01	Output delay after start up	sec	0
o05	Access code all settings		0
o06	Sensor type		ptc
o07	Warm (HE) / cold (rE)		HE
o15	Step value display (yes = 0.5°C / no = 1°C)		no
o67	Store current parameter as factory default		OFF
u58	Status relay 1		-

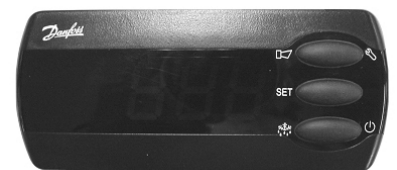
CONTROL LOCATIONS



light switch



heating switch



thermostat EKC 102A

TROUBLESHOOTING

TROUBLE SHOOTING MULTI DECK 60/100/120 AND CLASSIS DECK HOT

Symptom	Possible causes
No power to cabinet controls.	1. Main breaker open. 2. Wiring loose.
Main fuse or breaker blows.	1. Wiring incorrectly. 2. Heating element shorted. 3. Wiring shorted.
Illumination does not work. Note: On MD 100 + 120 lamps are connected in series.	1. Lamp malfunction. 2. Tumble switch malfunction. 3. Electronic ballast malfunction. 4. Wiring loose.
No heating.	1. Heating element malfunction. 2. Relay K1 malfunction. 3. Security thermostat tripped. 4. Wiring loose. 5. Thermostat malfunction. 6. Sensor malfunction. 7. Sensor wiring loose.
Security thermostat tripped.	1. Blower for heating malfunction. 2. Setting of thermostat. 3. Thermostat malfunction.
No indication on electronic thermostat.	1. Electronic thermostat malfunction. 2. Wiring loose.
Temperature indication on electronic thermostat is higher than actual temperature of the shelves.	1. Parameter o06 of electronic thermostat adjusted on Pt instead of Ptc.
Blower motor does not run.	1. Wiring loose. 2. Motor inoperative.

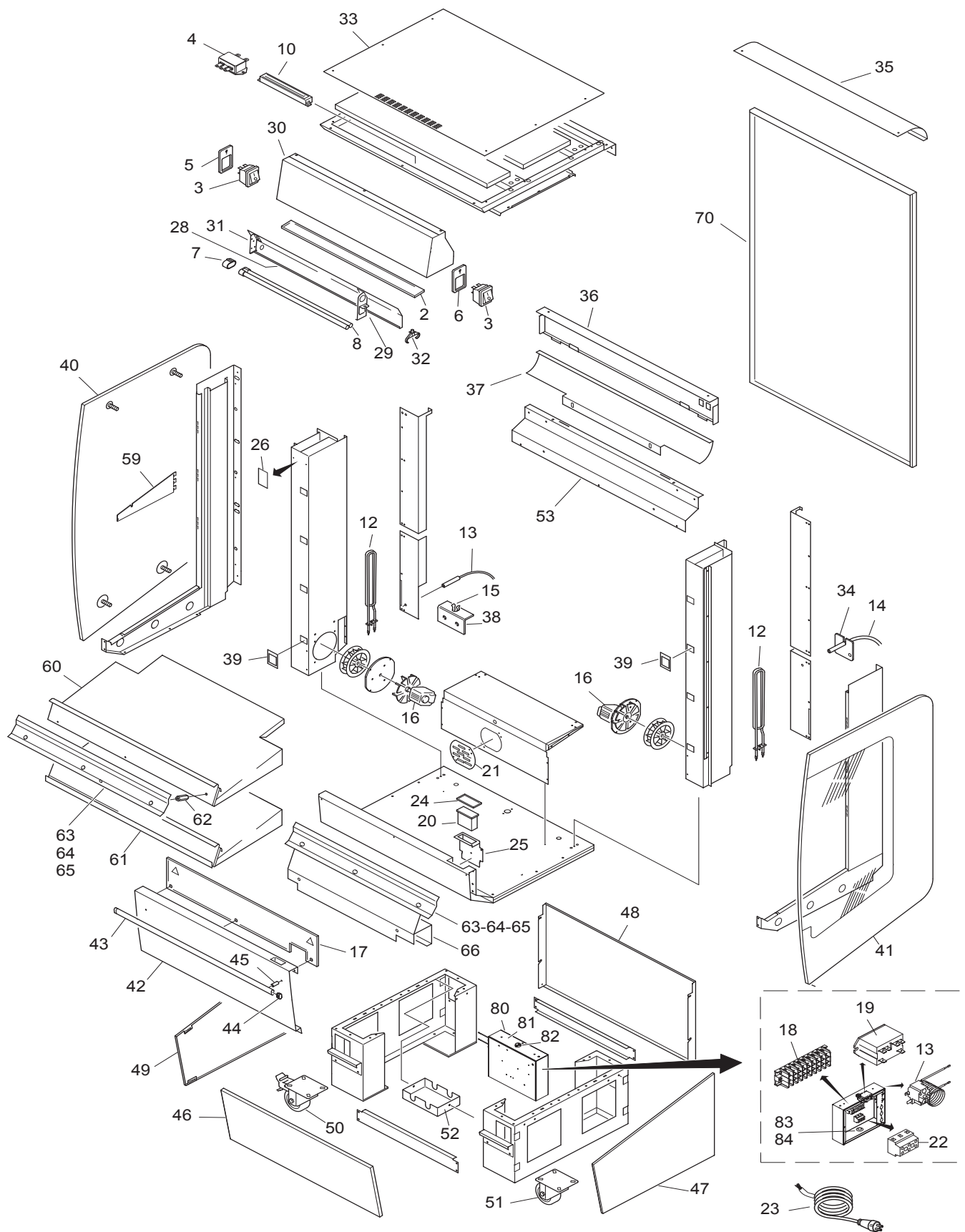
This is an analytic description for servicing and repairing all major parts of the Multi Deck 60, 100 and 120 Hot and Classic Deck Hot. It consists of 4 basic steps to recognize and solve the problems:

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 21 of this manual.

Description of part	Symptoms	Possible causes	Solving: checking / action
Relay K1 MD 60 and CLD 60	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
Contactor K1 MD 100 and 120	Contactor does not come in.	Wiring	Check the wiring
		Coil malfunction	Check resistance of coil. This should be $\pm 525\Omega$
		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
PLL lamp(s)	Light does not switch on	Wiring	Check the wiring
		Lamp(s) broken	Replace lamp(s)
Security thermostat	No illumination and no indication on electronic thermostat	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 wiring	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

EXPLODED VIEWS & PART LISTS

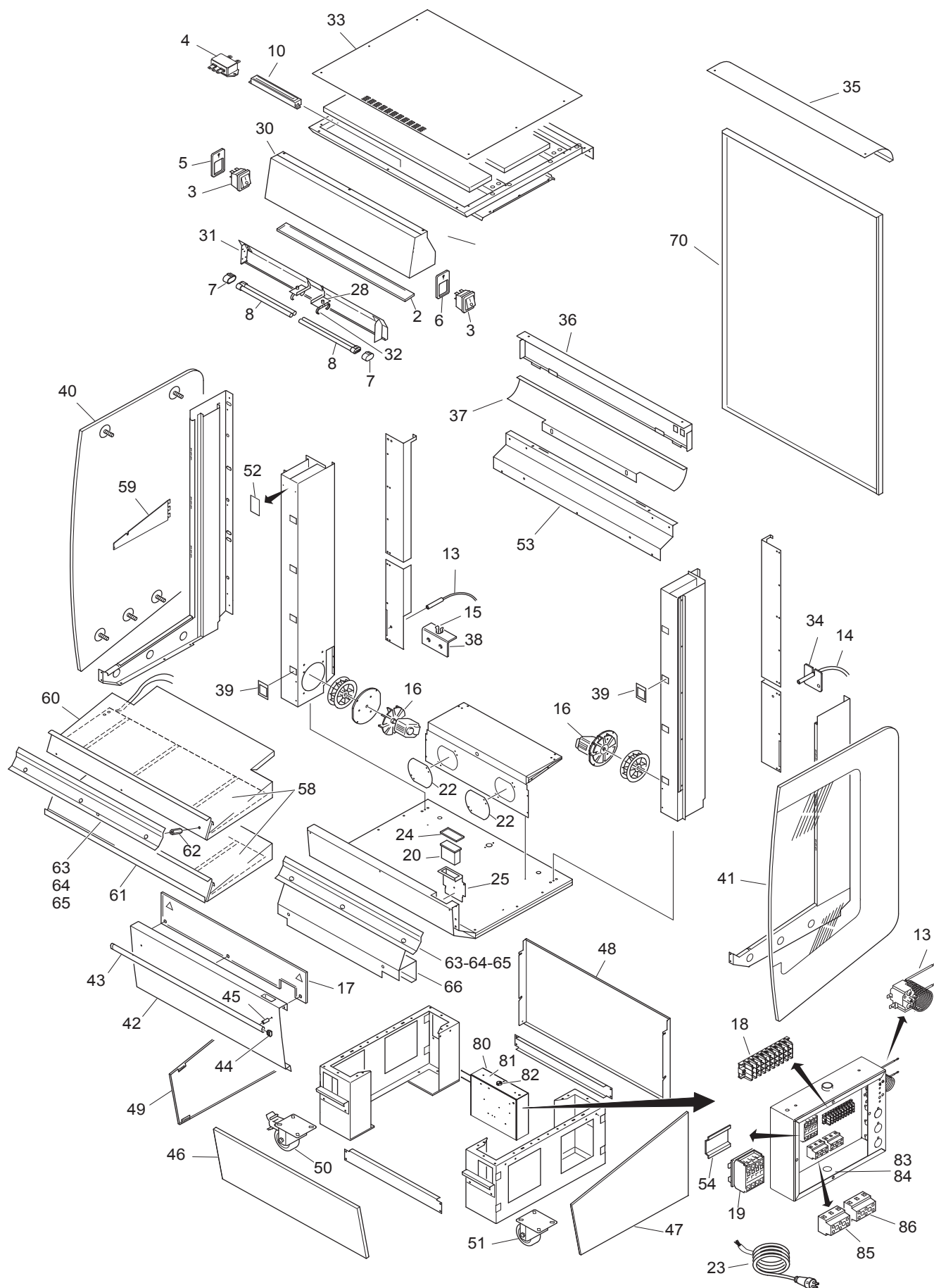
MULTI DECK 60 ESSENTIAL



Item	Part number	Qty	Description
2	9222011	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	9160019	1	Lamp, PLL 55 W
10	9221015	1	Ballast, 1x 55 W
12	9222000	2	Heating element, 1500 W
13	3500037	1	Thermostat with reset, 100-320 °C
14	9221011	1	Temperature sensor
15	9110072	1	Cable clamp
16	9221000	2	Blower
17	9222144	1	Child guard
18	8033659	1	Connecting block, 9-pol.
19	3500069	1	Contact
20	9221009	1	Thermostat, Danfoss
21	9225419	1	Cover plate
22	9044564	1	Connecting block 1,2,3
23	9091383	1	Connecting cable with plug
24	9222015	1	Protection plate, thermostat
25	9224089	1	Bracket, thermostat
26	9110810	1	Indication plate
28	9225083	1	Mounting plate, lamp brackets
29	9224113	1	Bracket for support lamp
30	9225086	1	Light box
31	9224067	1	Bracket, lampholder
32	9222210	1	Support, lamp PLL
33	9225087	1	Top plate
34	9224121	1	Sensor holder
35	9225070	1	Top plate, bended
36	9225076	1	Panel
37	9225071	1	Bottom plate, bended
38	9224097	1	Bracket, temperature probe
39	9222048	8	Rubber gasket
40	9220048S	1	Glass panel, left, ass.
41	9220049S	1	Glass panel, right, ass.
42	9225029	1	Front plate bottom
43	9223053	1	Bumper
44	9171014	2	Plug
45	9172300	3	Spacer
46	9225025	1	Front panel, underframe
47	9224028	1	Right side panel, underframe
48	9225026	1	Rear panel, underframe
49	9224027	1	Left side panel, underframe
50	9172066	2	Castor with brake
51	9172125	2	Castor without brake
52	9224092	2	Protection plate electricity
53	9225074	1	Cover plate
59	9224005	6	Shelf support
60	9220025	3	Shelf, ass.

Item	Part number	Qty	Description
61	9220026	1	Bottom shelf, ass.
62	9070793	9	Spacing pin, 3D nut M6
63	9226106	4	Holder, price rail
64	9223024	4	Price rail, transparent
65	9223014	4	Dia strip, price rail
66	9220027	1	Profile ass. for price rail
70	9225077	1	Rear plate
80	9224102	1	Cover, box
81	9224101	1	Connection box
82	9070840	1	Grommet
83	9222076	1	Strain relief
84	9222077	1	Connector

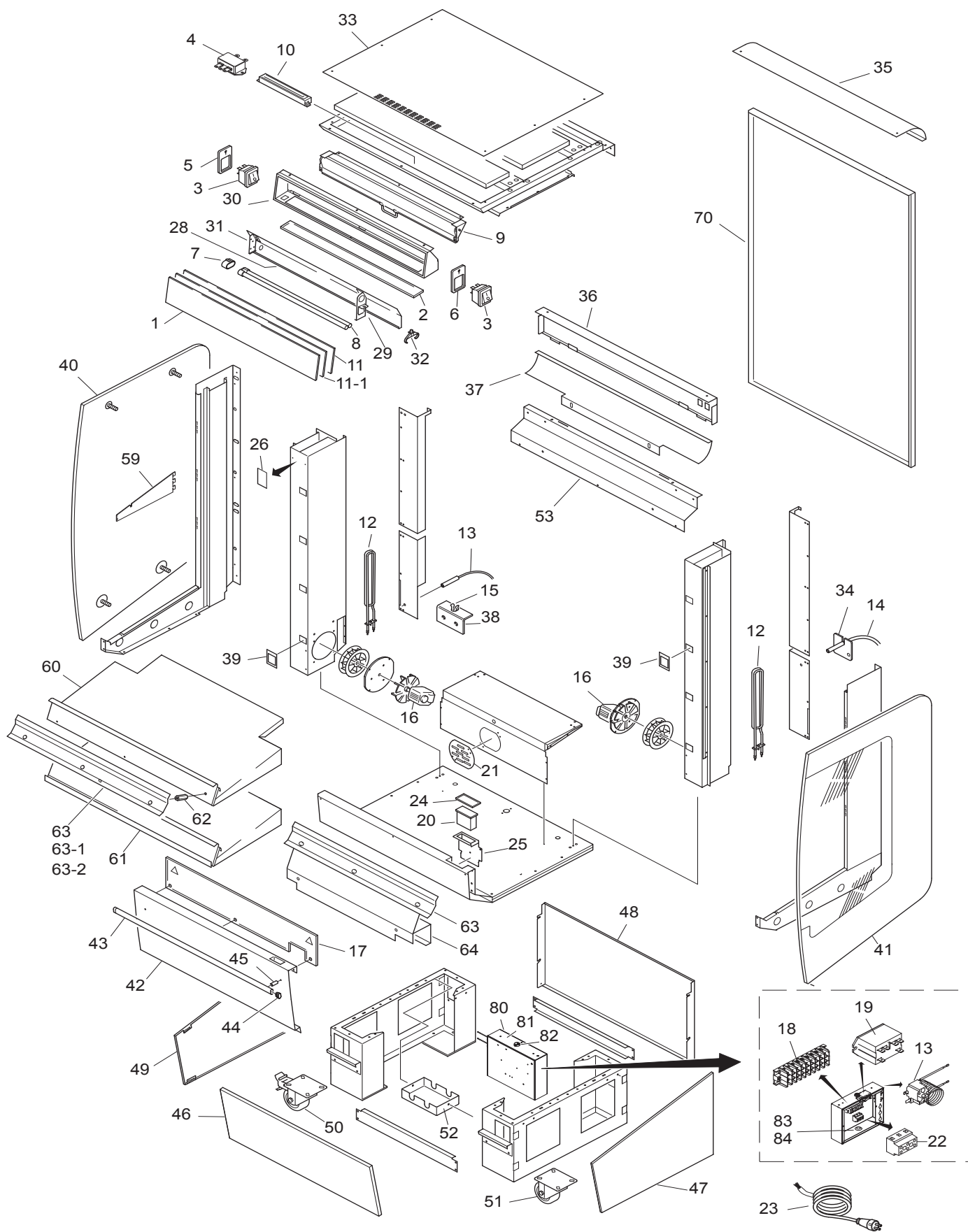
MULTI DECK 100 ESSENTIAL



Item	Part number	Qty	Description
2	9222032	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	2	Lamp holder
8	9221006	2	Lamp, PLL 36 W
10	9221014	1	Ballast, 2x 36 W
13	3500037	1	Thermostat with reset, 100-320 °C
14	9221011	1	Temperature sensor
15	9110072	1	Cable clamp
16	9221000	2	Blower
17	9222145	1	Child guard
18	8033659	1	Connecting block, 9-pol.
19	3500069	1	Contacteur
20	9221009	1	Thermostat, Danfoss
21	9225418	2	Cover plate
22	8031364	2	Grid, blower
23	9070028	1	Connecting cable with plug
24	9222015	1	Protection plate, thermostat
25	9224089	1	Bracket, thermostat
26	9044564	1	Connecting block, 1,2,3
27	9044572	1	Connecting block, 4,5,6
28	9224583	1	Mounting plate, lamp brackets
29	9224114	1	Bracket for support lamp
30	9224585	1	Light box
31	9224067	2	Bracket, lampholder
32	9222210	1	Bracket, lamp
33	9224587	1	Top plate
34	9224121	1	Sensor holder
35	9224570	1	Top plate, bended
36	9224577	1	Panel
37	9224571	1	Bottom plate, bended
38	9224097	1	Bracket, temperature probe
39	9222048	8	Rubber gasket
40	9220048S	1	Glass panel, left, ass.
41	9220049S	1	Glass panel, right, ass.
42	9224529	1	Front plate bottom
43	9223064	1	Bumper
44	9171014	2	Plug
45	9172300	3	Spacer
46	9224525	1	Front panel, underframe
47	9224028	1	Right side panel, underframe
48	9224526	1	Rear panel, underframe
49	9224027	1	Left side panel, underframe
50	9172066	2	Castor with brake
51	9172065	2	Castor without brake
52	9110810	1	Indication plate
53	9224574	1	Cover plate
54	9077088	1	Rail
55	9281011	1	Plug

Item	Part number	Qty	Description
56	9281008	1	Socket
58	9222408	4	Heating element, 900 W
59	9224005	6	Shelf support
60	9220035	3	Shelf ass., incl. heating element
61	9220036	1	Bottom shelf ass., incl. heating element
62	9070793	9	Spacing pin, 3D nut M6
63	9227023	4	Holder, price rail
64	9223025	4	Price rail, transparent
65	9223016	4	Dia strip, price rail
66	9220028	1	Profile ass. for price rail
70	9224578	1	Rear plate
80	9224102	1	Cover, box
81	9224101	1	Connection box
82	9070840	1	Grommet
83	9261022	1	Strain relief PG 13,5
84	9261023	1	Connector
85	9044564	1	Connecting block 1,2,3
86	9044572	1	Connecting block 4,5,6

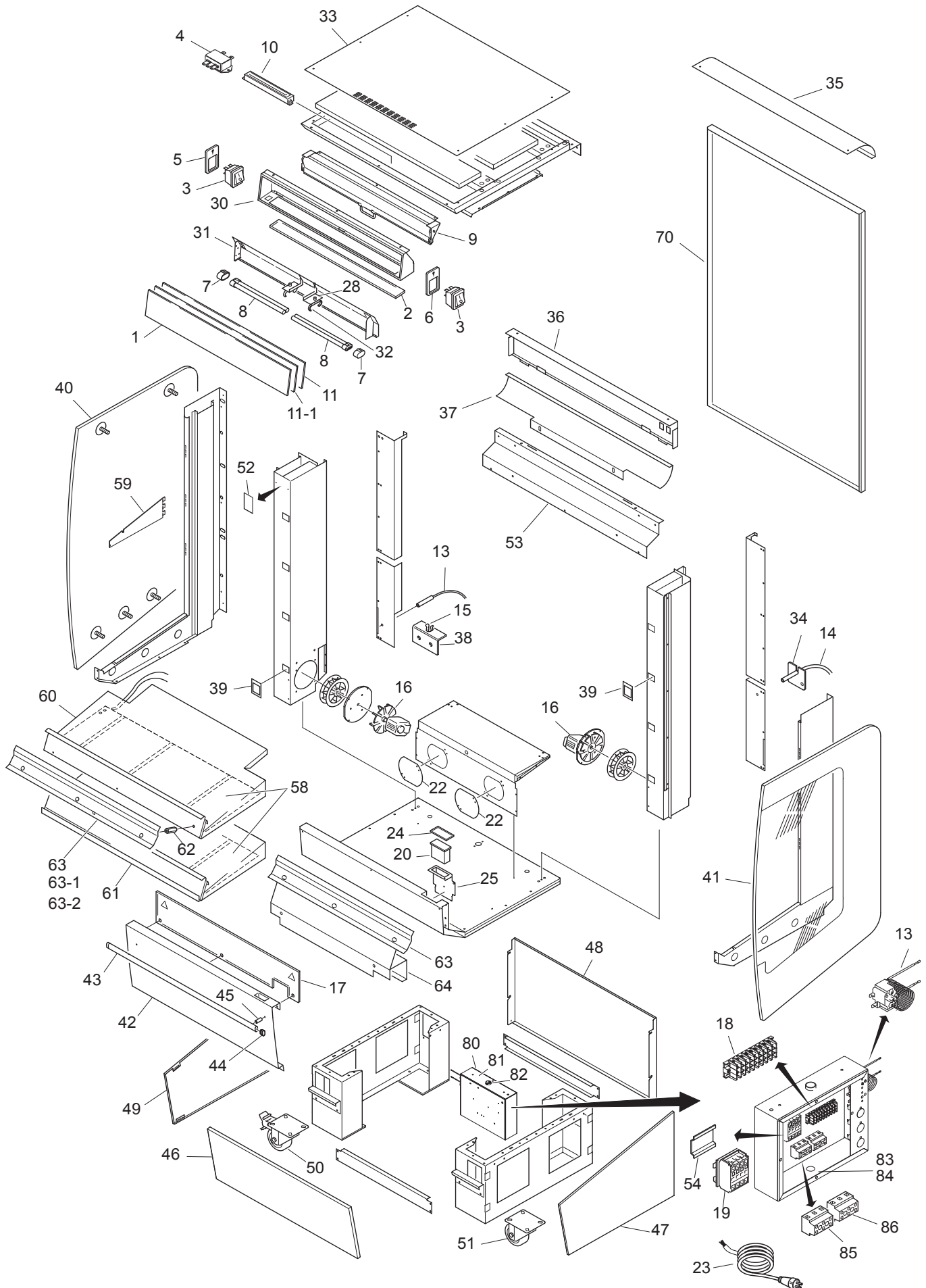
MULTI DECK 60 TRANSPARENT LIGHT BOX



Item	Part number	Qty	Description
1	9222012	1	Protection plate dia, transparent
2	9222011	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	9160019	1	Lamp, PLL 55 W
9	9222036	1	Night roller-blind
10	9221015	1	Ballast, 1x 55 W
11	9222013	1	Protection plate, dia, opal
11-1	9223010	1	Dia strip
12	9222000	2	Heating element, 1500 W
13	3500037	1	Thermostat with reset, 100-320 °C
14	9221011	1	Temperature sensor
15	9110072	1	Cable clamp
16	9221000	2	Blower
17	9222144	1	Child guard
18	8033659	1	Connecting block, 9-pol.
19	3500069	1	Contact
19A	3500187	1	Relay (till serial nr. 100047340)
20	9221009	1	Thermostat, Danfoss
21	9225419	1	Cover plate
22	9044564	1	Connecting block 1,2,3
23	9091383	1	Connecting cable with plug
24	9222015	1	Protection plate, thermostat
25	9224089	1	Bracket, thermostat
26	9110810	1	Indication plate
28	9225083	1	Mounting plate, lamp brackets
29	9224113	1	Bracket for support lamp
30	9225086	1	Light box
31	9224067	1	Bracket, lampholder
32	9222210	1	Support, lamp PLL
33	9225087	1	Top plate
34	9224121	1	Sensor holder
35	9225070	1	Top plate, bended
36	9225076	1	Panel
37	9225071	1	Bottom plate, bended
38	9224097	1	Bracket, temperature probe
39	9222048	8	Rubber gasket
40	92200485	1	Glass panel, left, ass.
41	92200495	1	Glass panel, right, ass.
42	9225029	1	Front plate bottom
43	9223053	1	Bumper
44	9171014	2	Plug
45	9172300	3	Spacer
46	9225025	1	Front panel, underframe
47	9224028	1	Right side panel, underframe
48	9225026	1	Rear panel, underframe
49	9224027	1	Left side panel, underframe
50	9172066	2	Castor with brake

Item	Part number	Qty	Description
51	9172125	2	Castor without brake
52	9224092	2	Protection plate electricity
53	9225074	1	Cover plate
59	9224005	6	Shelf support
60	9220025	3	Shelf, ass.
61	9220026	1	Bottom shelf, ass.
62	9070793	9	Spacing pin, 3D nut M6
63	9226106	4	Holder, price rail
63-1	9223024	4	Price rail, transparent
63-2	9223014	4	Dia strip, price rail
64	9220027	1	Profile ass. for price rail
70	9225077	1	Rear plate
80	9224102	1	Cover, box
81	9224101	1	Connection box
82	9070840	1	Grommet
83	9222076	1	Strain relief
84	9222077	1	Connector

MULTI DECK 100 / 120 TRANSPARENT LIGHT BOX

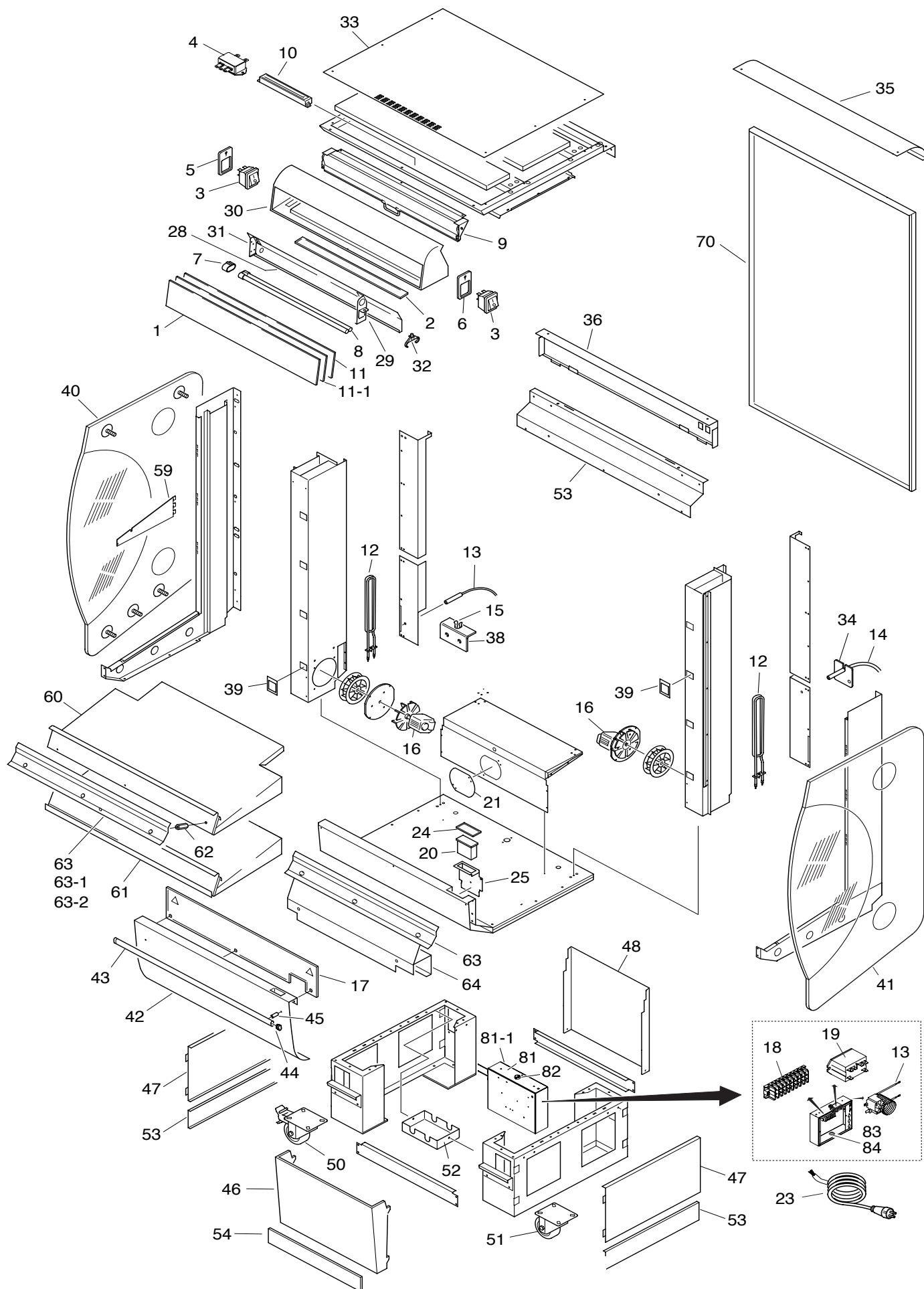


Item	Part number	Model	Qty	Description	Item	Part number	Model	Qty	Description
1	9222033	MD100	1	Protection plate dia, transparent	34	9224121	MD100-120	1	Sensor holder
1	9222007	MD120	1	Protection plate dia, transparent	35	9224570	MD100	1	Top plate, bended
2	9222032	MD100	1	Protection plate, illumination inside	35	9224070	MD120	1	Top plate, bended
2	9222006	MD120	1	Protection plate, illumination inside	36	9224577	MD100	1	Panel
3	9181008	MD100-120	2	Switch, tumble	36	9224076	MD120	1	Panel
4	9221013	MD100-120	1	Interference filter	37	9224571	MD100	1	Bottom plate, bended
5	9181071	MD100-120	1	Sticker, light	37	9224071	MD120	1	Bottom plate, bended
6	9181072	MD100-120	1	Sticker, heat	38	9224097	MD100-120	1	Bracket, temperature probe
7	9082897	MD100-120	2	Lamp holder	39	9222048	MD100-120	8	Rubber gasket
8	9221006	MD100	2	Lamp, PLL 36 W	40	9220048S	MD100-120	1	Glass panel, left, ass.
8	9160019	MD120	2	Lamp, PLL 55 W	41	9220049S	MD100-120	1	Glass panel, right, ass.
9	9222037	MD100	1	Night roller-blind	42	9224529	MD100	1	Front plate bottom
9	9222070	MD 120	1	Night roller-blind	42	9224029	MD120	1	Front plate bottom
10	9221014	MD100	1	Ballast, 2x 36 W	43	9223064	MD100	1	Bumper
10	9181009	MD120	1	Ballast, 2x 55 W	43	9223003	MD120	1	Bumper
11	9222034	MD100	1	Protection plate, dia, opal	44	9171014	MD100-120	2	Plug
11	9222008	MD120	1	Protection plate, dia, opal	45	9172300	MD100-120	3	Spacer
11-1	9223012	MD100	1	Diastrip	46	9224525	MD100	1	Front panel, underframe
11-1	9223013	MD120	1	Diastrip	46	9224025	MD120	1	Front panel, underframe
13	3500037	MD100-120	1	Thermostat with reset, 100-320 °C	47	9224028	MD100-120	1	Right side panel, underframe
14	9221011	MD100-120	1	Temperature sensor	48	9224526	MD100	1	Rear panel, underframe
15	9110072	MD100-120	1	Cable clamp	48	9224026	MD120	1	Rear panel, underframe
16	9221000	MD100-120	2	Blower	49	9224027	MD100-120	1	Left side panel, underframe
17	9222145	MD100	1	Child guard	50	9172066	MD100-120	2	Castor with brake
17	9222143	MD120		Child guard	51	9172065	MD100-120	2	Castor without brake
18	8033659	MD100-120	1	Connecting block, 9-pol.	52	9110810	MD100-120	1	Indication plate
19	3500069	MD100-120	1	Contactor	53	9224574	MD100	1	Cover plate
20	9221009	MD100-120	1	Thermostat, Danfoss	53	9224074	MD120	1	Cover plate
21	9225418	MD100-120	2	Cover plate	54	9077088	MD100-120	1	Rail
22	8031364	MD100-120	2	Grid, blower	55	9281011	MD100-120	1	Plug
23	9070028	MD100-120	1	Connecting cable with plug	56	9281008	MD100-120	1	Socket
24	9222015	MD100-120	1	Protection plate, thermostat	58	9222408	MD100	4	Heating element, 900 W
25	9224089	MD100-120	1	Bracket, thermostat	58	9222403	MD120	4	Heating element, 1060 W
26	9044564	MD100-120	1	Connecting block, 1,2,3	59	9224005	MD100-120	6	Shelf support
27	9044572	MD100-120	1	Connecting block, 4,5,6	60	9220035	MD100	3	Shelf ass., incl. heating element
28	9224583	MD100	1	Mounting plate, lamp brackets	60	9220037	MD120	3	Shelf ass., incl. heating element
28	9224083	MD120	1	Mounting plate, lamp brackets	61	9220036	MD100	1	Bottom shelf ass., incl. heating element
29	9224114	MD100-120	1	Bracket for support lamp	61	9220038	MD120	1	Bottom shelf ass., incl. heating element
30	9224586	MD100	1	Light box	62	9070793	MD100-120	9	Spacing pin, 3D nut M6
30	9224086	MD120	1	Light box	63	9227023	MD100	4	Holder, price rail
31	9224067	MD100-120	2	Bracket, lampholder	63	9224099	MD120	4	Holder, price rail
32	9222210	MD100-120	1	Bracket, lamp	63-1	9223025	MD100	4	Price rail, transparent
33	9224587	MD100	1	Top plate	63-1	9223026	MD120	4	Price rail, transparent
33	9224087	MD120	1	Top plate	63-2	9223016	MD100	4	Dia strip, price rail
					63-2	9223017	MD120	4	Dia strip, price rail

Item	Part number	Model	Qty	Description
64	9220028	MD100	1	Profile ass. for price rail
64	9220029	MD120	1	Profile ass. for price rail
70	9224578	MD100	1	Rear plate
70	9224077	MD120	1	Rear plate
80	9224102	MD100-120	1	Cover, box
81	9224101	MD100-120	1	Connection box
82	9070840	MD100-120	1	Grommet
83	9261022	MD100-120	1	Strain relief PG 13,5
84	9261023	MD100-120	1	Connector
85	9044564	MD100-120	1	Connecting block 1,2,3
86	9044572	MD100-120	1	Connecting block 4,5,6

EMPTY PAGE

CLASSIC DECK

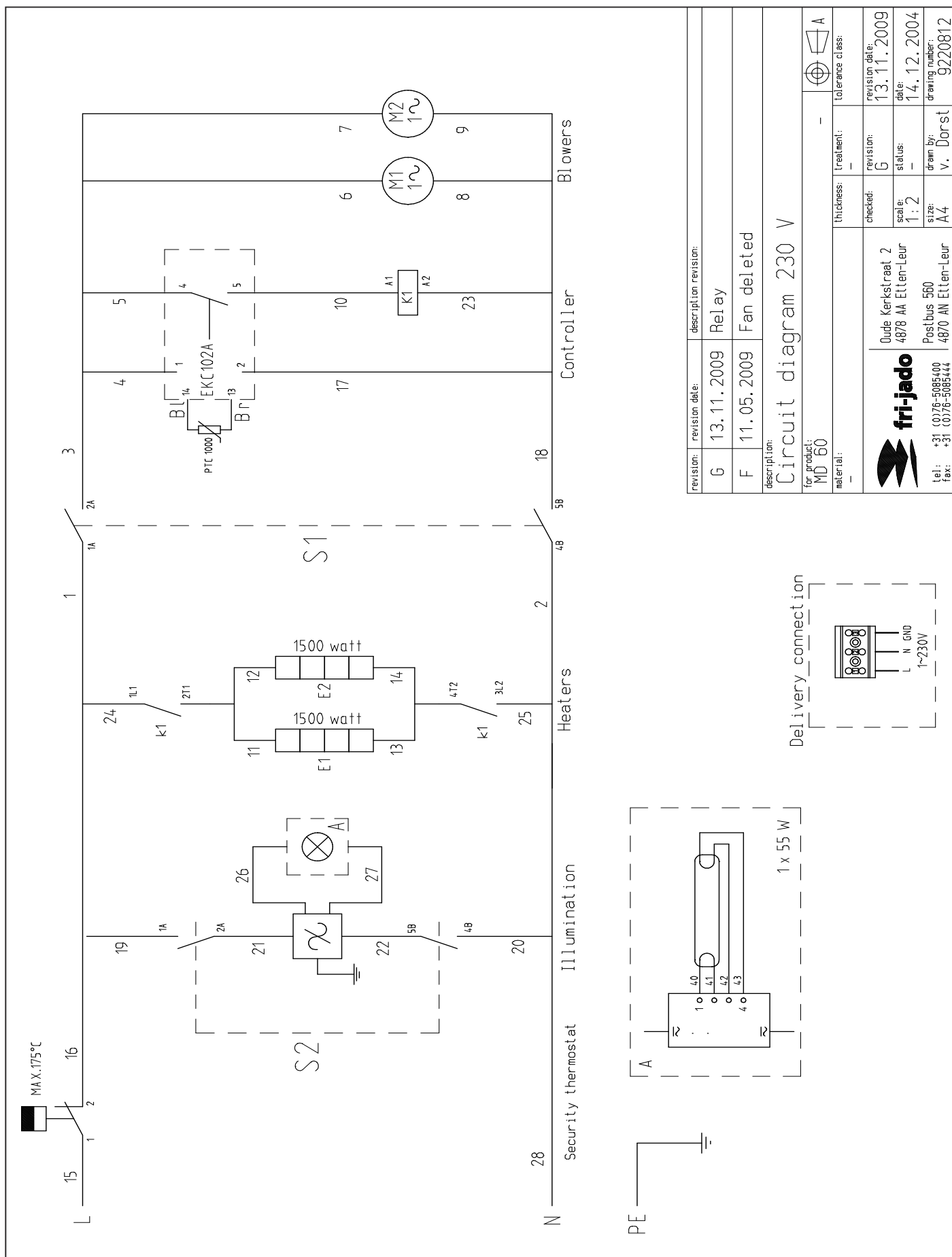


ITEM	PART NO	QTY	Description
1	9222109	1	Protection plate dia, transparent
2	9222011	1	Protection plate, illumination inside
3	9181008	2	Switch, tumble
4	9221013	1	Interference filter
5	9181071	1	Sticker, light
6	9181072	1	Sticker, heat
7	9082897	1	Lamp holder
8	9160019	1	Lamp, PLL 55 W
9	9222036	1	Night roller-blind
10	9221015	1	Ballast, 1x 55 W
11	9222110	1	Protection plate, dia, opal
11-1	9223011	1	Diastrip
12	9222000	2	Heating element, 1500 W
13	3500037	1	Thermostat with reset, 100-320 °C
14	9221011	1	Temperature sensor
15	9110072	1	Cable clamp
16	9221000	2	Blower
17	9222144	1	Child guard
18	8033659	1	Connecting block, 9-pol.
19	3500187	1	Relay
20	9221009	1	Thermostat, Danfoss
21	9225419	1	Cover plate
23	9091383	1	Connecting cable with plug
24	9222015	1	Protection plate, thermostat
25	9224089	1	Bracket, thermostat
28	9225083	1	Mounting plate, lamp brackets
29	9224113	1	Bracket for support lamp
30	9226030	1	Light box
31	9224067	1	Bracket, lampholder
32	9222210	1	Support, lamp PLL
33	9225087	1	Top plate
34	9224121	1	Sensor holder
35	9225070	1	Top plate, bended
36	9225076	1	Panel
38	9224097	1	Bracket, temperature probe
39	9222048	8	Rubber gasket
40	9220044S	1	Glass panel, left, ass.
41	9220045S	1	Glass panel, right, ass.
42	9226029	1	Front plate bottom
43	9223053	1	Bumper
44	9171014	2	Plug
45	9172300	3	Spacer
46	9226027	1	Front panel underframe
47	9226024	2	Side panel underframe
48	9226026	1	Rear panel underframe
50	9172066	2	Castor with brake
51	9172125	2	Castor without brake
52	9224092	2	Protection plate electricity
53	9226025	2	Plinth
54	9226028	1	Plinth
55	9225074	1	Cover plate

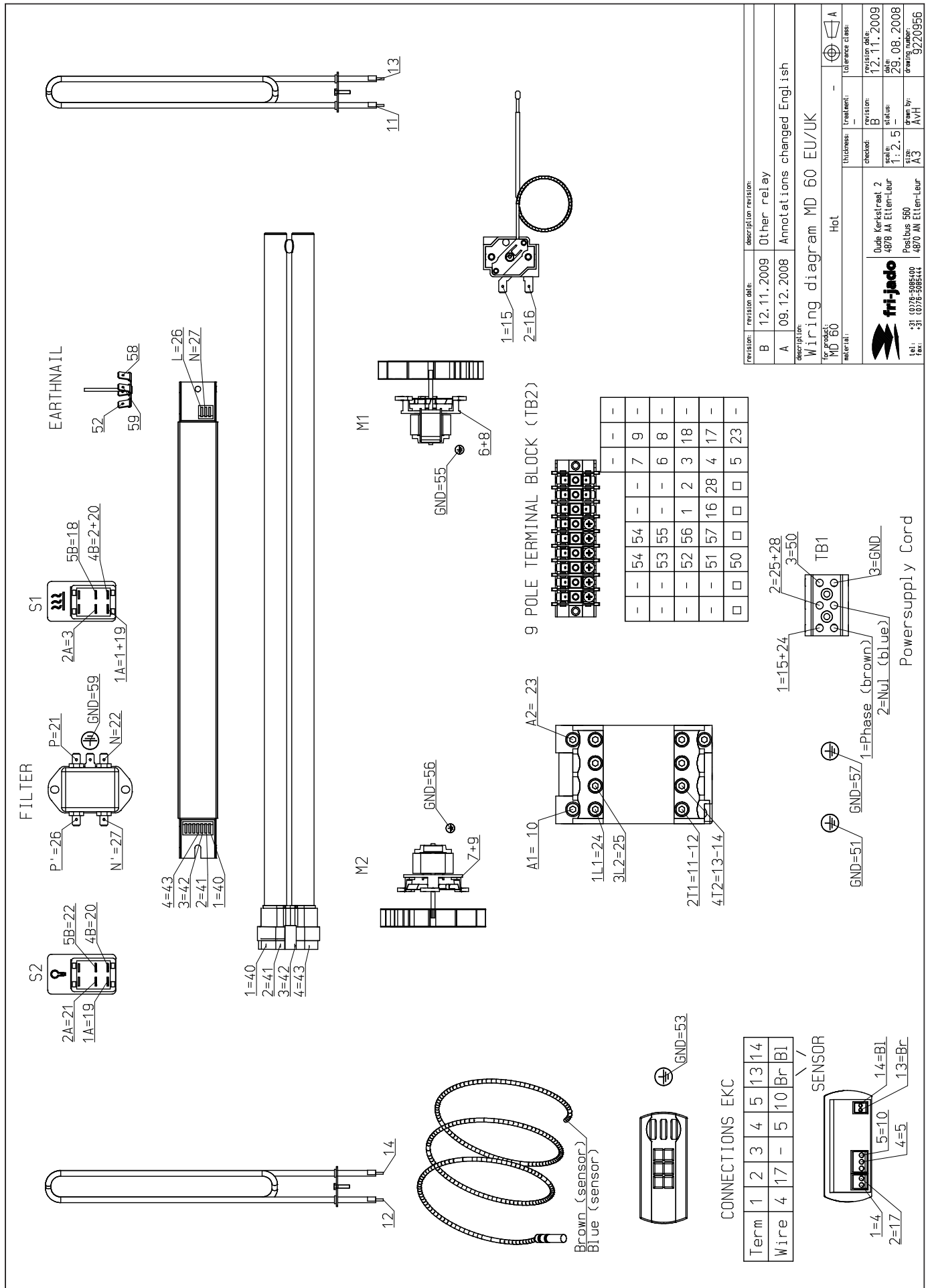
ITEM	PART NO	QTY	Description
59	9224005	6	Shelf support
60	9220025	3	Shelf
61	9220026	1	Bottom shelf
62	9070793	9	Spacing pin, 3D nut M6
63	9226023	3	Holder, price rail
63-1	9223024	3	Price rail, transparent
63-2	9223014	3	Dia strip, price rail
64	9220027	1	Profile ass. for price rail
70	9225077	1	Rear plate
81	9224101	1	Connection box
81-1	9224102	1	Cover, box
82	9070840	1	Grommet
83	9222076	1	Strain relief
84	9222077	1	Connector

ELECTRICAL DIAGRAMS

CIRCUIT DIAGRAM MULTI DECK 60 HOT & CLASSIC DECK HOT



WIRING DIAGRAM MULTI DECK 60 HOT & CLASSIC DECK HOT



MAX. 175°C

1 2 3 4 5 6

15 24 32 5L3 k1 6T3 E1 E2 E3 E4 2x900W 2x900W 2x900W 2x900W 8T4 k1 7L4 3L2 25 33 2

1A 2A 3 4 5 6 7 8 9

19 21 26 27 20

S2 A

S1

PTC 1000

EKC 102A

B1 14 13 B 2 17 10 23

A1 A2 K1

M1 1~ 8

M2 1~ 9

Heaters

Security thermostat

Illumination

Blowers

Delivery connection

Standard

3~230V 3N~400V 1N*230V

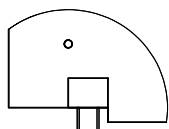
2 x 36 W

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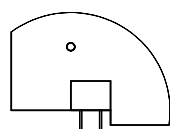
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PE

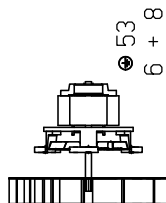
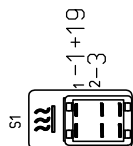
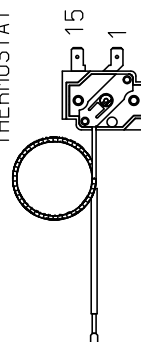
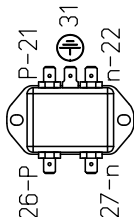
HEATER



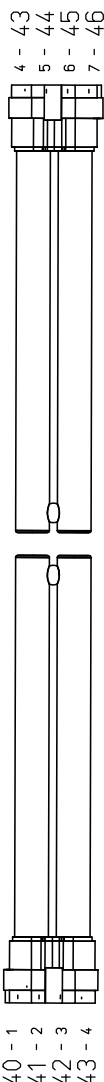
WT/BL (2)



WT/BL (2)


$$\begin{array}{r} 8 \\ + \\ 53 \\ \hline 61 \end{array}$$

$$\begin{array}{r} 2+20-4 \\ 18-5 \end{array} \quad \begin{array}{c} \boxed{\begin{array}{cc} 1-1+19 \\ 2-3 \end{array}} \end{array}$$


L-26



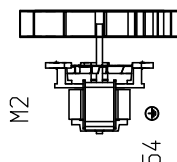
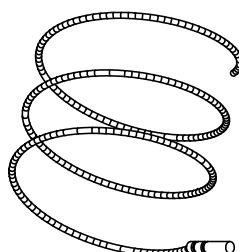
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4 - 43

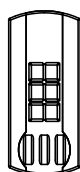
5 - 44

6 - 45

7 - 46


$$79 + 54 = 133$$


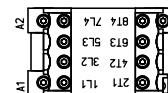
RE (SENSOR)
BL (SENSOR)



Connections EKC

Term	1	2	3	4	5	13	14	
Wire	4	17	-	5	10	BL	RE	16

CONNECTIONS RELAY
Contact - Wire



CONNECTIONS RELAY
Contact - Wire
1L1 - 24
3L2 - 25
5L3 - 32
7L4 - 33
A1 - 10
A2 - 23

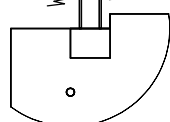
9 POLE CONNECTIONBLOK (TB2)

[illegible]

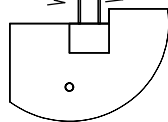
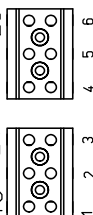
EARTHNAIL



55



WT/BL (1)


$$\frac{WT/BL(1)}{WT/BL/RE}$$
CONNECTIONBLOK (TB1)

2T1 - WT/BL(1)
4T2 - WT/BL/RE(1)
6T3 - WT/BL(2)
8T4 - WT/BL/RE(2)
A2 - X

revision:	revision date:	description revision:
A	12.12.2008	changing to English
description: WIRING DIAGRAM MD100 UK STD		
for product: MD 100		
material:	UK	-
thickness:	1	tolerance:
checked:	A	revision date:
scale:	1:2,5	date:
status:	2	29.08.2008
drawn by:	AWH	drawing number:
size:	A3	07200A3R

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revision:	revision date:	description revision:
C	25.05.2009	Standardised EU models
B	07.10.2008	Four elements instead of eight

description:
Circuit diagram 230V

for product:
MD 120

material:	thickness:	treatment:	tolerance class:
-	-	-	A

checked:	revision:	revision date:
	C	25.05.2009

scale:	status:	date:
1:2	-	21.08.2008

size:	drawn by:	drawing number:
A4	v. Dorst	9220835

The diagram illustrates the wiring for the MD120 UK STD unit. Key components and their connections are as follows:

- HEATER:** Two heaters are shown, each with two terminals labeled WT/BL (2) and WT/BL/RE (2).
- EARTH NAIL:** A single terminal labeled 28.
- FILTER:** A component with terminals 26-P, 27-n, 31, and 22-5.
- BALLAST:** A component with terminals 40-1, 41-2, 42-3, 43-4, 44-5, 45-6, and 46-7.
- RELAY:** A component with terminals 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.
- CONNECTIONS RELAY:** A component with terminals 1L1, 1L2, 1L3, 1L4, 1L5, 1L6, 1L7, 1L8, 1L9, 1L10, 1L11, 1L12, 1L13, 1L14, 1L15, 1L16, 1L17, 1L18, 1L19, 1L20, 1L21, 1L22, 1L23, 1L24, 1L25, 1L26, 1L27, 1L28, 1L29, 1L30, 1L31, 1L32, 1L33, 1L34, 1L35, 1L36, 1L37, 1L38, 1L39, 1L40, 1L41, 1L42, 1L43, 1L44, 1L45, 1L46, 1L47, 1L48, 1L49, 1L50, 1L51, 1L52, 1L53, 1L54, 1L55, 1L56, 1L57, 1L58, 1L59, 1L60, 1L61, 1L62, 1L63, 1L64, 1L65, 1L66, 1L67, 1L68, 1L69, 1L70, 1L71, 1L72, 1L73, 1L74, 1L75, 1L76, 1L77, 1L78, 1L79, 1L80, 1L81, 1L82, 1L83, 1L84, 1L85, 1L86, 1L87, 1L88, 1L89, 1L90, 1L91, 1L92, 1L93, 1L94, 1L95, 1L96, 1L97, 1L98, 1L99, 1L100.
- CONNECTIONS EKC:** A component with terminals 1, 2, 3, 4, 5, 10, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.
- CONNECTIONSBLOK (TB1):** A component with terminals 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.
- CONNECTIONSBLOK (TB2):** A component with terminals 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.
- WIRING DIAGRAM MD120 UK STD:** A diagram showing the internal wiring of the unit, including the heater, filter, ballast, relay, and connections.

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