

SERVICE MANUAL

MULTI DECK SPACE SAVER MDS 34-2

Version

Pass through 2 level



MDS 34-2



MDS 34-2 with TDR 5 P

- 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 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
08/2014	01/08/2014	First release.
04/2017	01/04/2017	Replacement of EKC to ERC thermostat. Update electric diagrams. Various small updates.

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GENERAL TECHNICAL DATA



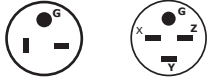


This manual covers the Multi Deck 34-2. This is a 2 level Hot Merchandiser cabinet. The cabinets comes in 1 size: 33 3/4 inch wide and 45 inch high.

The combination with a stacked rotisserie comes in 3 versions:

- MDS 34-2 stacked with a TDR 5 P 78 3/4 inch high. 2 separate connection cables.
- MDS 34-2 stacked with a TDR 5 M 78 3/4 inch high. 2 separate connection cables.
- MDS 34-2 stacked with a TG 110 M 37 1/3 inch high. 2 separate connection cables.

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	MDS 86-2	TDR 5 P / M	MDS 86-2 + TDR 5	TG 110 M	MDS 86-2 + TG 110
Power (W)	3200	6600	3200 + 6600	5200	3200 + 5200
Fuses needed with power connection 1~ 208 V, 60 Hz	1x 16 A	–	1x 16 A	–	1x 16 A
Fuses needed with power connection 3~ 208 V, 60Hz	–	3x 20 A	3x 20 A	3x 16 A	3x 16 A
Standard plug from factory (NEMA)	6 - 20P 	15 - 30P 	6 - 20P + 15 - 30P 	15 - 20P 	6 - 20P + 15 - 20P 
Net weight (lbs)	341	287	628	165	506
Gross weight (kg)	346	335	681	194	540
Height (inch)	45"	35 3/4"	78 3/4"	29 1/2"	73 1/4"
Width (inch)	33 3/4"	33"	33 3/4"	32 1/2"	33 3/4"
Depth (inch)	35 3/4"	30 3/8"	35 3/4"	19 3/4"	35 3/4"

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.
- Field service grounding kit.

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.

COVER PLATE TOP BACKSIDE

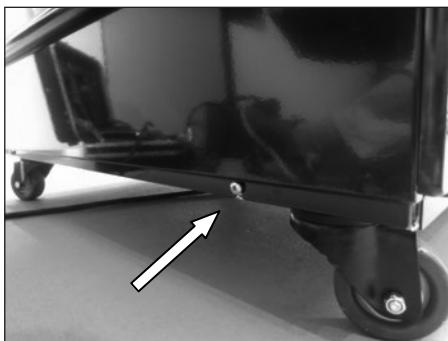

1. Remove the 2 plastic plugs on the backside that cover the screws.
2. Remove the 2 screws behind the plastic plugs.
3. Open the top swingdoor and reach inside to remove the 2 knurled screws on the top on the inside.
4. Lift the cover plate out.
5. Reverse the procedure to install.



Note: The plastic plugs can not be re-used, so you have to replace them.

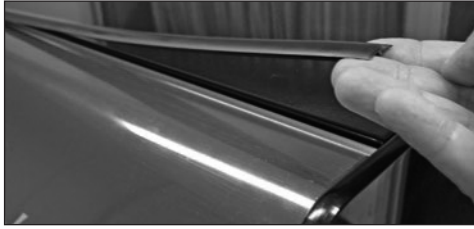
COVER PLATE BOTTOM BACKSIDE


1. Remove the plastic plugs on the back side that cover the screws.
2. Remove the screws on the top side of this panel.
3. Loosen the screws on the bottom side that secure the panel and remove the panel.
4. Reverse the procedure to install.



Note: The plastic plugs can not be re-used, so you have to replace them.

COVER PLATE TOP



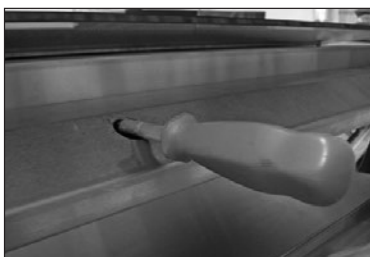
1. Remove the rubber rail profile on the top side.
2. Remove the cover plate top backside according prior procedure.
3. Remove the 2 screws on the top of the backside under the fat drip strip that secure the top plate and remove the top plate.
4. Reverse the procedure to install.

MAGNETS OF TOP SWINGDOOR



1. Remove the cover plate top backside according prior procedure.
2. Remove the cover plate top backside according prior procedure.
3. Squeeze the flexible lip of the magnet and press the magnet out of the holder.
4. Reverse the procedure to install.

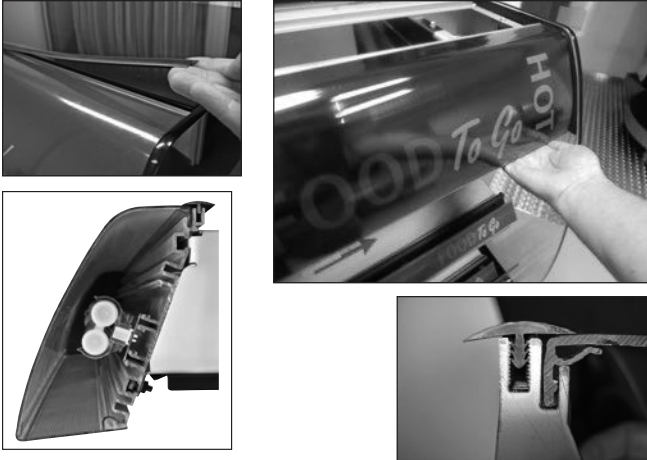
MAGNETS OF BOTTOM SWINGDOOR



1. Open the bottom swingdoor and remove the 3 screws (see arrow) under the cover profile of the swingdoor.
2. Remove the 2 plastic plugs of the cover plate on the top backside.
3. Loosen the 2 screws through the big holes and remove the profile.
4. Squeeze the flexible lip of the magnet and press the magnet out of the holder.
5. Reverse the procedure to install.

Note: The plastic plugs can not be re-used, so you have to replace them.

DISPLAY / ILLUMINATION



1. Remove the plastic rail profile on the top side.
2. Pull, with both hands, on the bottom side of the plastic cover to remove the cover out of the "click system". Remove the total length out of the click system.
3. Lift the top side out of the Aluminium rail and remove the display.
4. Replace lamp.
5. Reverse the procedure to install.

LAMP HOLDER ON SHELF



1. Remove the transparent price rail. Lift this up on the edge and remove this from the holder. Now slide the rail out to the side.
2. Remove the screws on top of the lamp holder.
3. Bend the lamp holder profile open. This is a special construction that enables you to open and close this profile.
4. Loosen the blocking clips on the sides of the lamp holder en lift the holder out.
5. Remove the wiring from the holder.
6. Reverse the procedure to install.

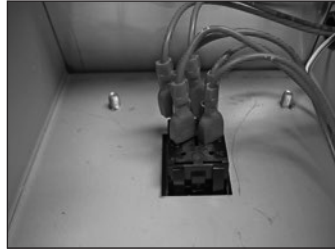
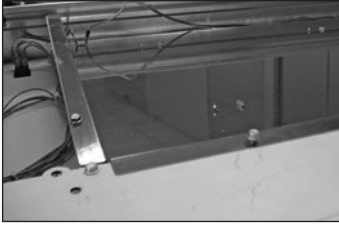
Note: If the lamp holder profile breaks, just screw it back on again.

LAMP HOLDER IN TOP CEILING



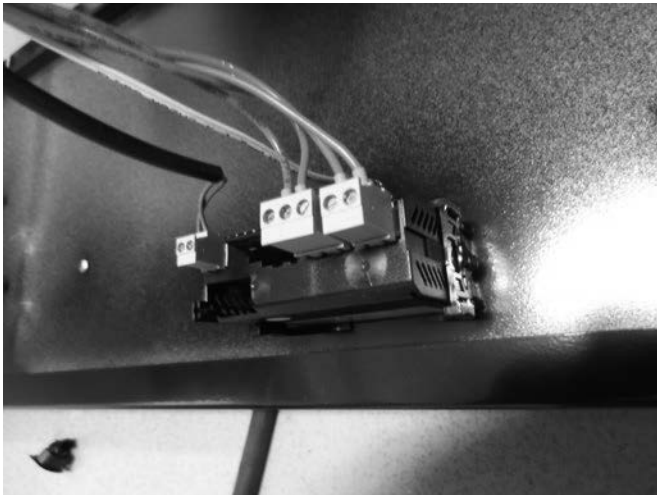
1. Remove the top cover according prior procedure.
2. Loosen the blocking clips on the sides of the lamp holder en lift the holder out.
3. Remove the wiring from the holder.
4. Reverse the procedure to install.

TUMBLE SWITCH ON/OFF



1. Remove the top cover according prior procedure.
2. Remove the wiring from the switch and remove the switch downwards by squeezing the clamps on both sides.
3. Reverse the procedure to install.

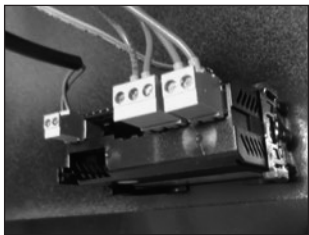
DANFOSS THERMOSTAT



1. Remove the bottom plate on the backside according prior procedure.
2. Remove the wiring from the thermostat.
3. Loosen the blocking clips on the side of the thermostat and remove the thermostat.
4. Reverse the procedure to install.

Note: When changing the thermostat verify all parameters after installation. Start with parameter 07 by setting it to heating HE.

SENSOR OF DANFOSS THERMOSTAT

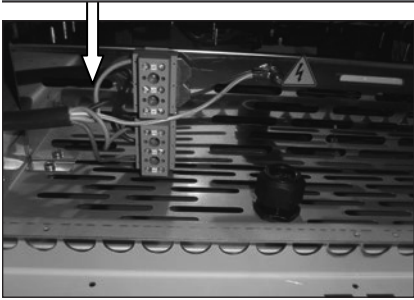


1. Remove the bottom plate on the backside according prior procedure.
2. Remove the wiring from the sensor on the Danfoss thermostat.
3. Remove the 2 screws that secure the bottom front panel and remove this panel.
4. Remove the screw that secures the holder of the sensor and remove the holder and brass spacers.
5. Remove the sensor out of the holder.
6. Reverse the procedure to install.

Note 1: The sensor is clamped on the holder with the top recess.

Note 2: Replace the 2 brass distance spacers between the holder and the bottom side of the shelf.

CONTACTOR/ELECTRONIC BALLAST/INTERFERENCE FILTER



prior procedure.

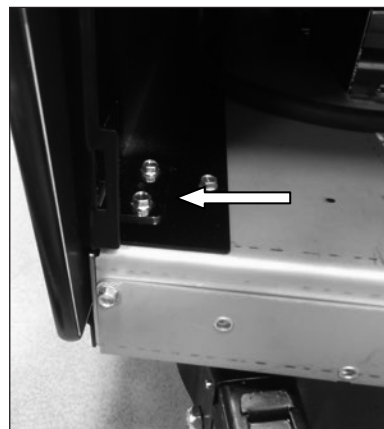
2. Remove the 2 screws that secure the electric connection box and lift out this box.
3. Remove the contactor from the rail and remove the wiring.
- 3a. Remove the screws of the ballast and remove the wiring.
- 3b. Remove the screws of the filter and remove the wiring.
4. Reverse the procedure to install.

SIDE GLASS

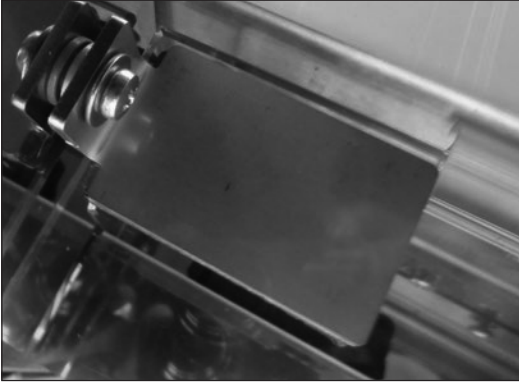


1. Remove the bottom backpanel, the bottom front panel and the top cover plate according prior procedures.
2. Remove the 3 bolts that secure the vertical rear panel and remove the panel.
3. Remove the bolts that secure the 4 brackets on the glass on the front (see arrows), back and top side and remove the glass.
4. Reverse the procedure to install.

Note: Replace the bumper on the new glass, if present.



SWING DOOR

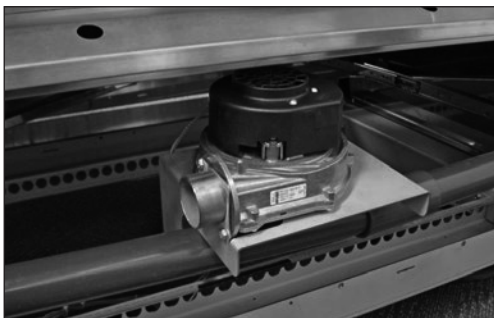
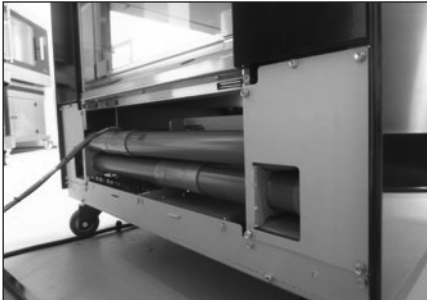


1. Open the swing door and remove the screws that secure the door hinges and remove the door.

Note 1: The doors are delivered as a total assembly with glass, closing profile, hinges and handle.

Note 2: The hinge is fixed with a screw M5x16 and a washer M5.

BLOWER



1. Remove the cover plate top on the backside, the cover plate bottom on the backside and the vertical rear panels on the backside according prior procedures.
2. Remove the bolts that secure the bottom clamp plate on the backside and remove the plates.
3. Remove the bolts that secure the base plate of the blower and remove this plate including the blower. Take care that the connections of the air tubes on the blower are loose.
4. Slide the upper tubes in the horizontal tee-joint as far as possible to the outside.
5. Pull the upper tee-joint towards yourself to loosen the joints and remove the tee-joint and the 2 horizontal tubes.
6. Lift the base plate with the blower outside the unit and remove the wiring of the blower.
7. Remove the bolts that secure the blower on the base plate and remove the blower.
8. Reverse the procedure to install.

TOP PLATE OF THE SHELF

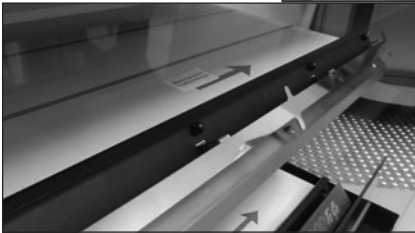
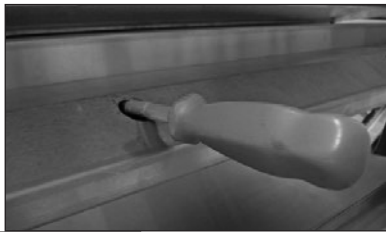
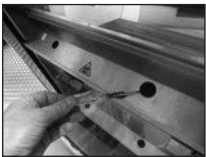


plate on the bottom backside according prior procedure.

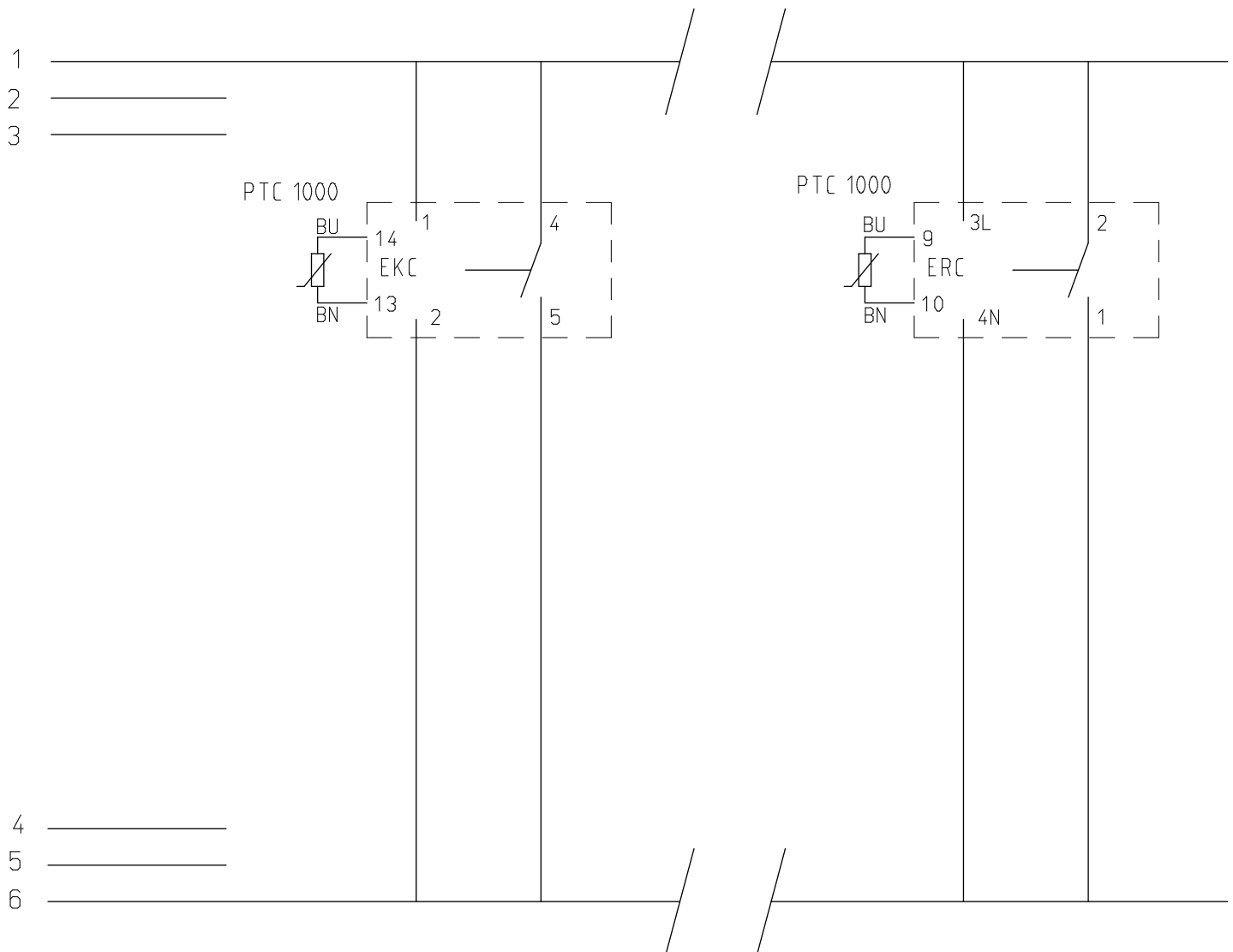
2. Remove the 3 screws under the base profile.
3. Remove the 2 plastic plugs of the cover plate on the top backside.
4. Loosen the 2 screws through the big holes and remove the profile by lifting it up.
5. Remove the transparent price rail according prior procedure.
6. Remove the 4 plastic caps on the nuts on the front side of the shelf and remove the bolts and nuts.
7. Remove the 2 screws on the back side that secure the top plate of the shelf and remove the plate by lifting it up from the back and remove the plate to the front side.

Note: When replacing the plate make sure the rubber profiles are in place.

CHANGING DANFOSS EKC TO ERC THERMOSTAT

Instructions for exchanging Danfoss EKC to ERC thermostat

The wiring connection numbers 1-4-2-5-13-14 on the Danfoss EKC thermostat are different than the wiring connections 3L-2-4N-1-9-10 on the ERC thermostat. keep this in mind when you change the EKC for the ERC thermostat. See also the drawing below.



For adjusting instructions and parameter settings see electrical tests on pages 16 till 18.

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 from the connecting block.

Type	Wattage/Voltage	Resistance Ω -0% + 10%	Current A
MDS 34-2	600 / 208	72.1	2.9

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, BLOWER AND TRANSFORMER TEST

Note: When testing the resistance remove the wiring.

Type	Description	Voltage	Resistance
MD 34-2	Contactor	208 V	Resistance of coil (A1 - A2) ~ 525 Ω
MD 34-2	Blower See picture below	120 V	Between 1-2 ~3.5 M Ω
MD 34-2	Transformer	208 / 120 V	Between orange and brown wire ~5.0 Ω Between red and red wire ~2.5 Ω Between all other combinations infinite




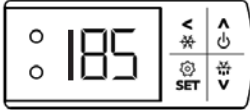





ADJUSTING DANFOSS ERC 211 THERMOSTAT

In order to adjust the thermostat, first open the panel on the backside with the key.

Adjusting Danfoss ERC211 thermostat


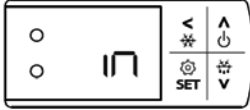




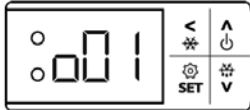




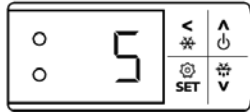




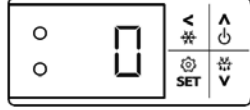


Changing temperature setpoint

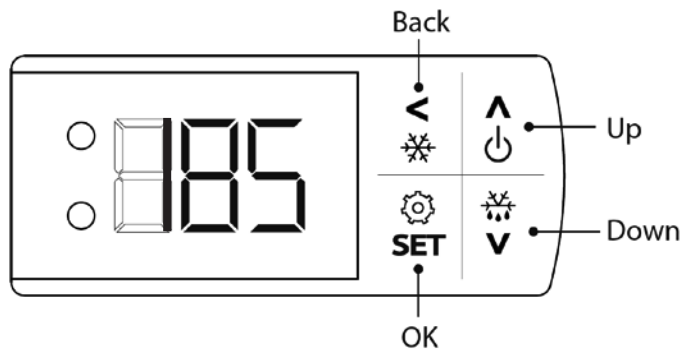
Example screens

1. Press  to access setpoint mode	
2. Change value with  or 	
3. Press  to confirm	
When no key is pressed after last confirmation, the system goes back to normal operation after 10 seconds	

Programming menu

Example screens

1. Press  for 3 seconds to access the menu	
2. Scroll through parameter groups with  and 	
3. Select parameter group with 	
4. Scroll through parameter names with  and 	
5. Press  to read out the value	
6. Change value with  and 	
7. Press  to confirm	
8. Press  to select the next parameter and follow instruction 3 to 7	
Use  to go back in the parameter groups and once more to leave the programming menu	

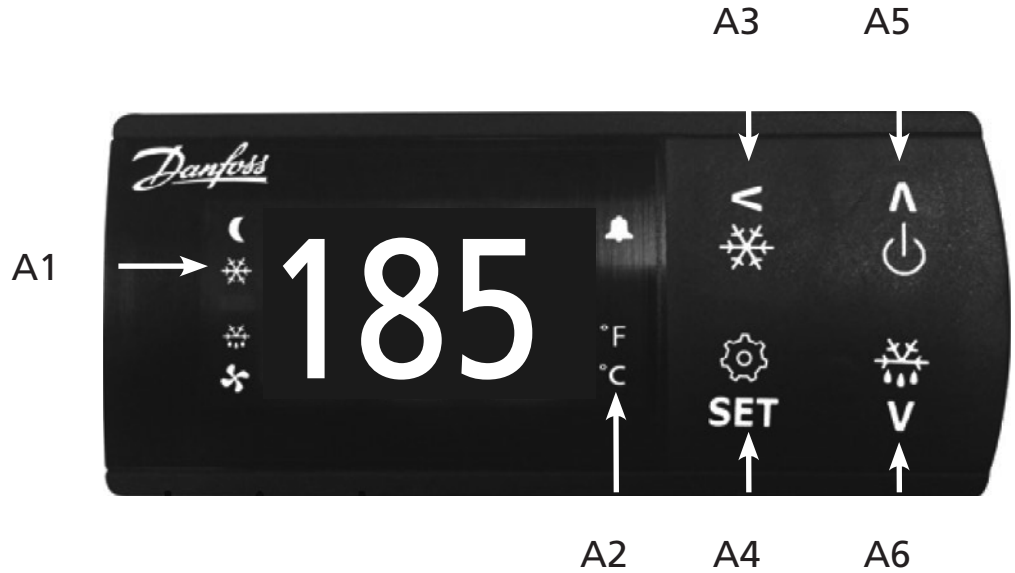


Note! Change r05 first and r03 after!

r00	Temperature set point	185	°F
r01	Differential	2	°F
r02	Min set point limitation	32	°F
r03	Max set point limitation	210	°F
r04	Display offset	0	°F
r05	Display unit (°C/°F)	°F	
r09	Calibration of Sair	-20.7	°F
r12	Main switch	1	
r13	Night set back	0	
r40	Thermostat reference displacement	0	
r96	Pull-down duration	0	
r97	Pull-down limit temperature	0	
A03	Delay for temperature alarm (normal conditions)	30	min
A12	Delay for temperature alarm (pull down/start-up/defrost)	60	min
A13	High temperature alarm limit	212	°F
A14	Low temperature alarm limit	-22	°F
A27	DI1 delay	30	min
A37	Condenser high alarm limit	176	°F
A54	Condenser high block limit	185	°F
A72	Voltage protection enable	no	
A73	Minimum cut-in voltage	0	V
A74	Minimum cut-out voltage	0	V
A75	Maximum voltage	270	V
d01	Defrost method (no=no defrost, nAt=natural)	no	
d02	Defrost stop temperature	40	°F
d03	Defrost Interval	8	hr.
d04	Max. defrost time	30	min
d05	Defrost delay at power up	0	min
d06	Drip delay	0	min

d10	Defrost stop sensor (non=time, Air=Sair)	non	
d18	Compressor accumulated	0	hr.
d30	Defrost delay after pull-down	0	min
c01	Compressor minimum ON time	0	min
c02	Compressor minimum OFF-time	0	min
c04	Compressor OFF delay	0	sec
c70	Zero crossing selection	yES	
o01	Delay of outputs	0	sec
o02	DI1 configuration	oFF	
o03	Serial address	0	
o05	Password	no	
o06	Sensor type selection (n5=NTC5 K, n10=NTC10 K, Ptc=PTC, Pt1=Pt1000)	Ptc	
o07	Cooling/heating (rE=refrigeration / Ht=heat)	Ht	
o15	Display resolution (°C)	0.1	
o23	Relay counter	0	
o61	Predefined applications	AP0	
o67	Save settings as factory	no	
o91	Display at defrost	d	
P73	DI1 input polarity	no	
P76	Keyboard lock enable	no	
u01	Air temperature (Sair)	-	°F
u02	Read the present regulation refer- ence	-	
u10	DI1 input	-	
u13	Status of night operation	-	
u58	Compressor relay status	-	-
u80	Firmware version readout	-	

ERROR CODES ERC 211



- A1 Heating on/off
- A2 Indication °C or °F
- A3 Back key
- A4 OK/set key
- A5 Up key
- A6 Down key

If the elements are switched on, the indicator lamp A1 will go on.

Error codes on display:

E29: PT sensor broken or wiring problem sensor.

A01: High temperature alarm.

A02: Low temperature alarm.

A99: High voltage alarm.

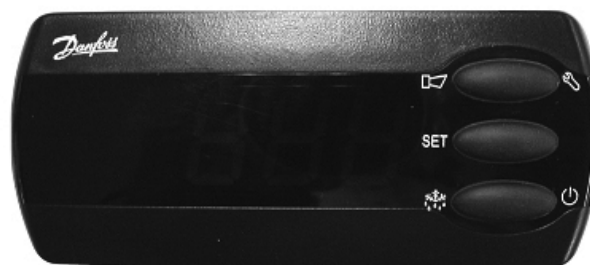
AA1: Low voltage alarm.

oFF: Main switch alarm. Check parameter r12.

Wrong temperature displayed: Wrong type of sensor selected. Check o06.

When reporting error codes the unit is switched in stand-by mode and cannot be used until the problem is resolved.

ADJUSTING DANFOSS EKC 102A THERMOSTAT TILL SERIAL NUMBER 100080607



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 (r01).
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 key 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 1 (°F) 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 TILL SERIAL NUMBER 100080607
Parameters Danfoss EKC 102A thermostat

			MDS 86-2
	Setpoint	°F	185
r01	Differential	°F	2
r02	Higher setpoint limit	°F	210
r03	Lower setpoint limit	°F	32
r04	Off-set temperature indication	°F	0
r05	Temperature unit (°C / °F)	°F	°F
r09	Correction of signal from air output	°F	-18
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 (0 = none)		0
d02	Defrost end temperature	°F	40
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		-

Note: r09 is a compensation when using a long sensor cable. That means that the sensor registrates/works actually 18° higher then the setpoint. So temp. regulation is in fact on 185 + 18.

CONTROL LOCATIONS MDS 34-2



on/off switch
On the front side.

operation panel TDR P



thermostat EKC 211 or EKC 102A (till serial nr. 100080607)

TROUBLESHOOTING

TROUBLE SHOOTING MULTI DECK SPACE SAVER MDS 34-2

Symptom	Possible causes
No power to cabinet controls.	<ol style="list-style-type: none"> 1. Main breaker open. 2. Fuse F1 or F2 broken. 3. Wiring loose.
Main fuse or breaker blows.	<ol style="list-style-type: none"> 1. Wiring incorrectly. 2. Heating element shorted. 3. Blower shorted. 4. 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. 5. Wiring in faston broken.
No heating.	<ol style="list-style-type: none"> 1. Heating element malfunction. 2. Relay K1 malfunction. 3. Wiring loose. 4. Thermostat malfunction. 5. Sensor malfunction. 6. Sensor wiring loose.
Unit does not reach desired temperature.	<ol style="list-style-type: none"> 1. Heating element(s) malfunction. 2. Strong air current along the unit. 3. Burned contact on contactor K1. 4. Air leak in PVC air flow system. 5. Sensor malfunction. 6. Blower malfunction.
No indication on electronic thermostat.	<ol style="list-style-type: none"> 1. Electronic thermostat malfunction. 2. Fus F1 or F2 broken. 3. Wiring loose.
Blower motor does not run.	<ol style="list-style-type: none"> 1. Ring core transformer malfunction. 2. Motor inoperative. 3. Fuse F1 broken. 4. Wiring loose.

ANALYTIC TROUBLESHOOTING

SERVICING AND REPAIRING THE MULTI DECK SPACE SAVER MDS 34-2

This is an analytic description for servicing and repairing all major parts of the Multi Deck 60, 100 and 120 - 3 and 5 level. 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.

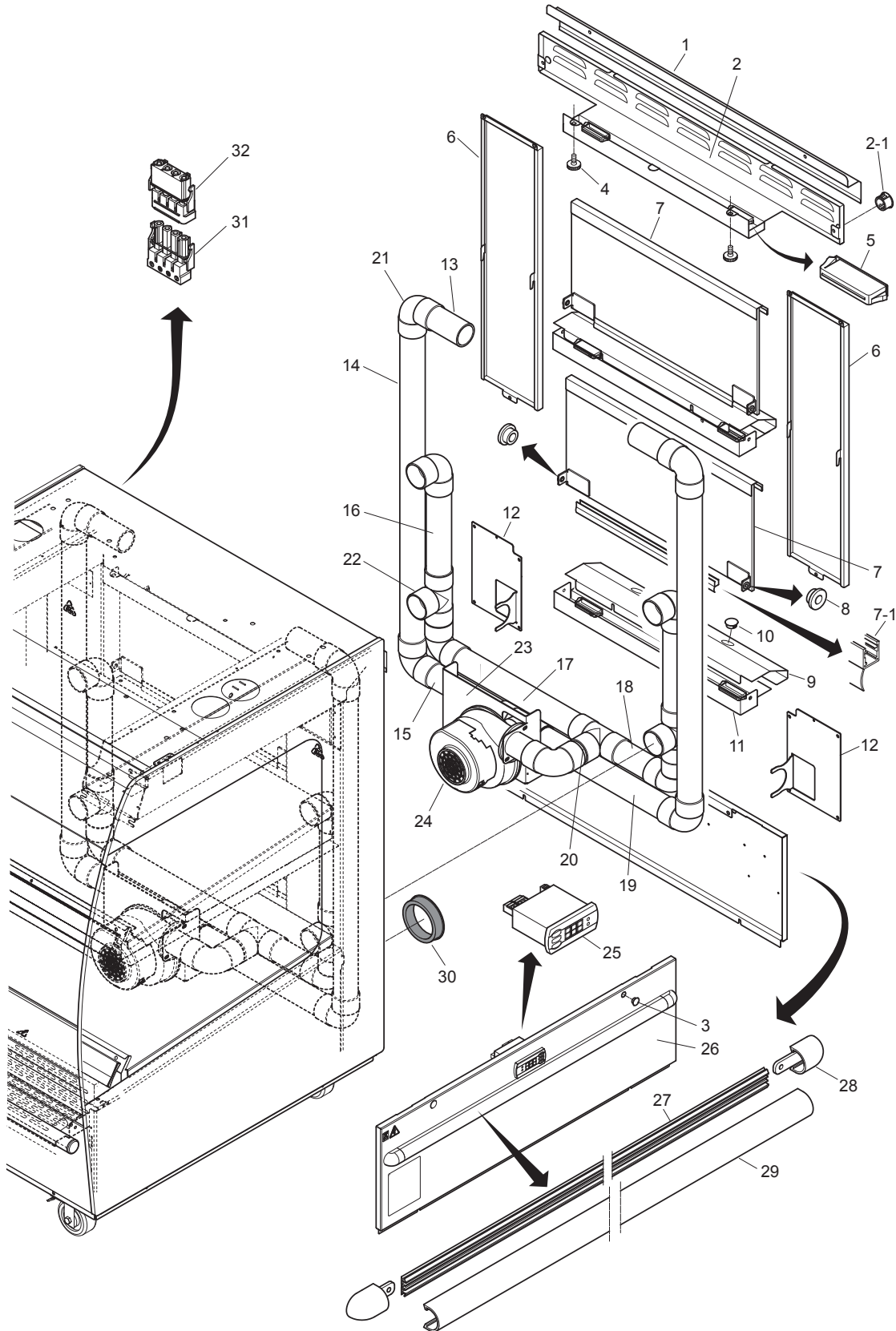
Description of part	Symptoms	Possible causes	Solving: checking / action
Contactator	Contactator does not come in.	Wiring. Coil malfunction. Contact burned.	Check the wiring. Check resistance of coil. This should be $\pm 525\Omega$. See also table page 13. Check the contacts.
Heating element	The cabinet is not reaching the adjusted temperature	Wiring. Element malfunction.	Check the wiring. Check the power on the element. Check current with AC current tester. See table on page 15.
Tumble switch	Light and heating does not switch on	Wiring. Contact burned.	Check the wiring. Check the voltage on "in"- and "output".
Electronic ballast	Light does not switch on	Wiring. Ballast malfunction.	Check the wiring. Replace ballast.
lamp(s)	Light does not switch on	Wiring. Lamp(s) broken.	Check the wiring. Replace lamp(s).

<p>Electronic thermostat</p>	<p>Display does not light up The cabinet is not reaching the adjusted temperature or does not heat up at all</p>	<p>Wiring. Loose sensor. Thermostat malfunction. Thermostat settings.</p>	<p>Check the wiring. Check sensor. Replace thermostat. Check parameters.</p>
<p>PTC 1000 sensor</p>	<p>The cabinet is not reaching the adjusted temperature or does not heat up at all The cabinet becomes too hot</p>	<p>Broken sensor. Loose sensor. Broken sensor. Sensor shorted.</p>	<p>Replace sensor. Check wiring. Replace sensor. Check wiring.</p>
<p>Ringcore transformer</p>	<p>Blower motor doesn't run</p>	<p>Wiring. Transformer malfunction.</p>	<p>Check the wiring. Check the power on the transformer. Check the 120V outgoing signal on the transformer. Check the resistance of the coils: Between the brown and orange wire 5.6Ω. See also table page 13. Between the red and red wire 3.1Ω. See also table page 15.</p>
<p>Blower heating system</p>	<p>Blower doesn't run Main fuse burned</p>	<p>Wiring. Cooling. Short circuit in coil to earth.</p>	<p>Check wiring. Check voltage on blower. Check cooling of motor. Check if unit is close to another heat source. Check insulation value of coil with a Megger on max. 500V Minimum value is 0.5MΩ</p>

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EXPLODED VIEWS & PART LISTS

MULTI DECK 34-2 BACKSIDE

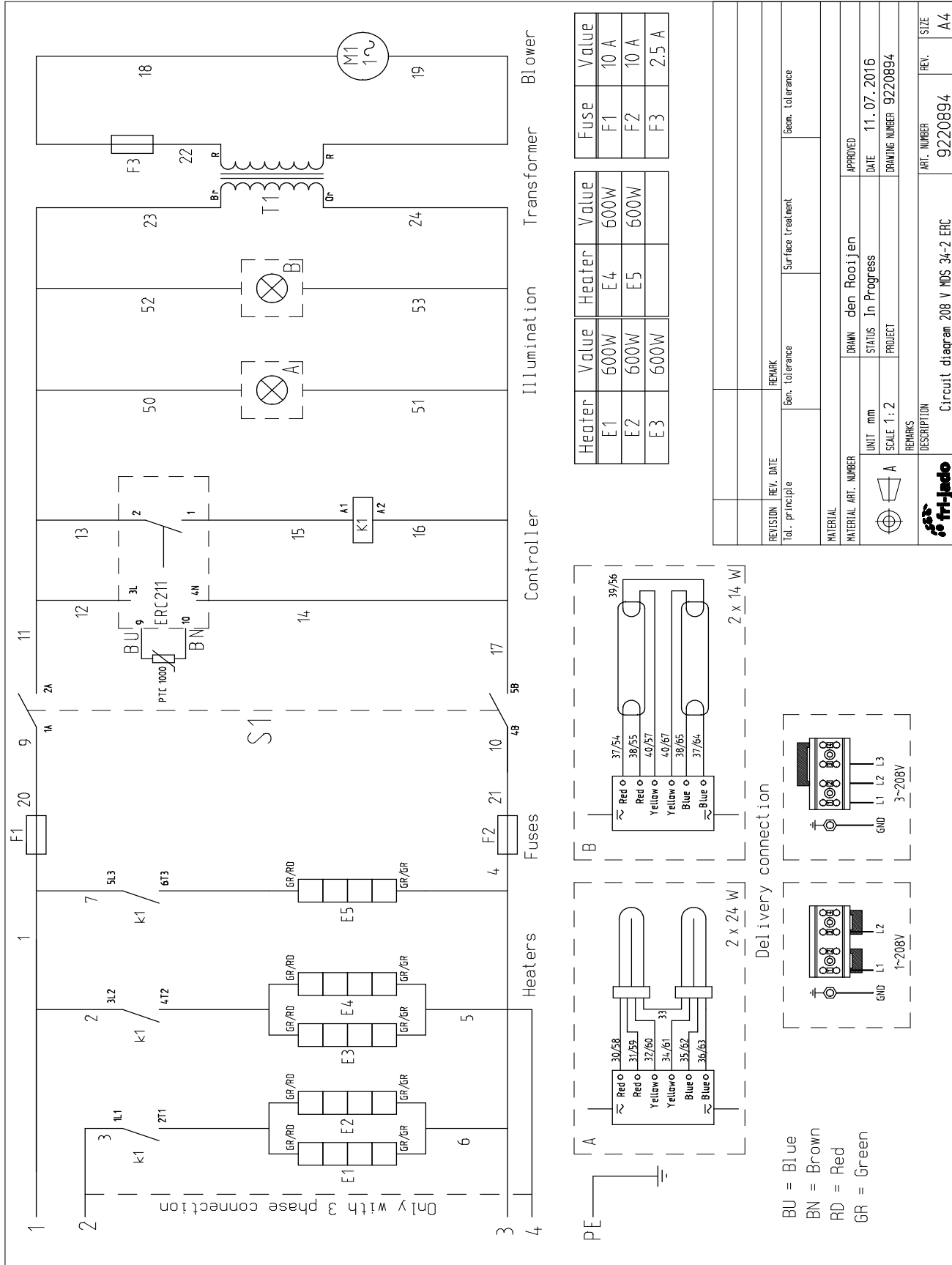


Item	Part number	Qty	Description
1	9226374	1	Fat drip strip
2	9227324S	1	Cover plate back top 86
2-1	9281039	2	Sealing plug ø14,3 mm black
3	9281039	2	Sealing plug ø14,3 mm black
4	4280560	2	Screw knurled
5	3701025	4	Magnetic lock type 200
6	9226220	2	Panel column 2
7	9220322	2	Ass. flap door 86
7-1	9221056	0.4 mtr	Profile sealing, with side lip 180
8	0602072	4	Collar bearing 6/10 x 6 brass
9	9227319	2	Cover plate flap door 86
10	9172419	4	Plug blind, ø25.1mm hole ø20,6 mm
11	9227320	2	Support flap door 86
12	9226237	2	Bracket back panel bottom
13	9223250	2	Suction tube L= 113 mm
14	9223292	2	Suction tube 2L L= 790 mm
15	9223238	1	Tube suction bottom left
16	9223293	2	Tube inlet 2 level L= 250 mm
17	9223236	1	Tube exhaust bottom L= 398 mm
18	9223308	1	Tube suction L= 140 mm
19	9223297	1	Tube suction bottom right
20	9223241	1	Tube connection L= 60 mm
21	9281032	9	Elbow 90° 50 mm (F-F)
22	9281033	4	PVC tee 50 mm (F-F-F)
23	9220511	1	Ass support fan
24	9191280	1	Radial fan 120 V RG128/1300-3612UL
25	9221109S	1	Thermostat ERC 211
26	9227325	1	Cover plate back bottom 86
27	9223094	1	Bumper basic profile 86
28	9221066	2	End cap black
29	9223095	1	Bumper cover profile 86 L= 748 mm
30	9281021	1	Tule feedthrough
31	9221036	5	Plug 4-pole NAS 41 W
32	9221037	5	Socket 4-pole NAS 42 WH

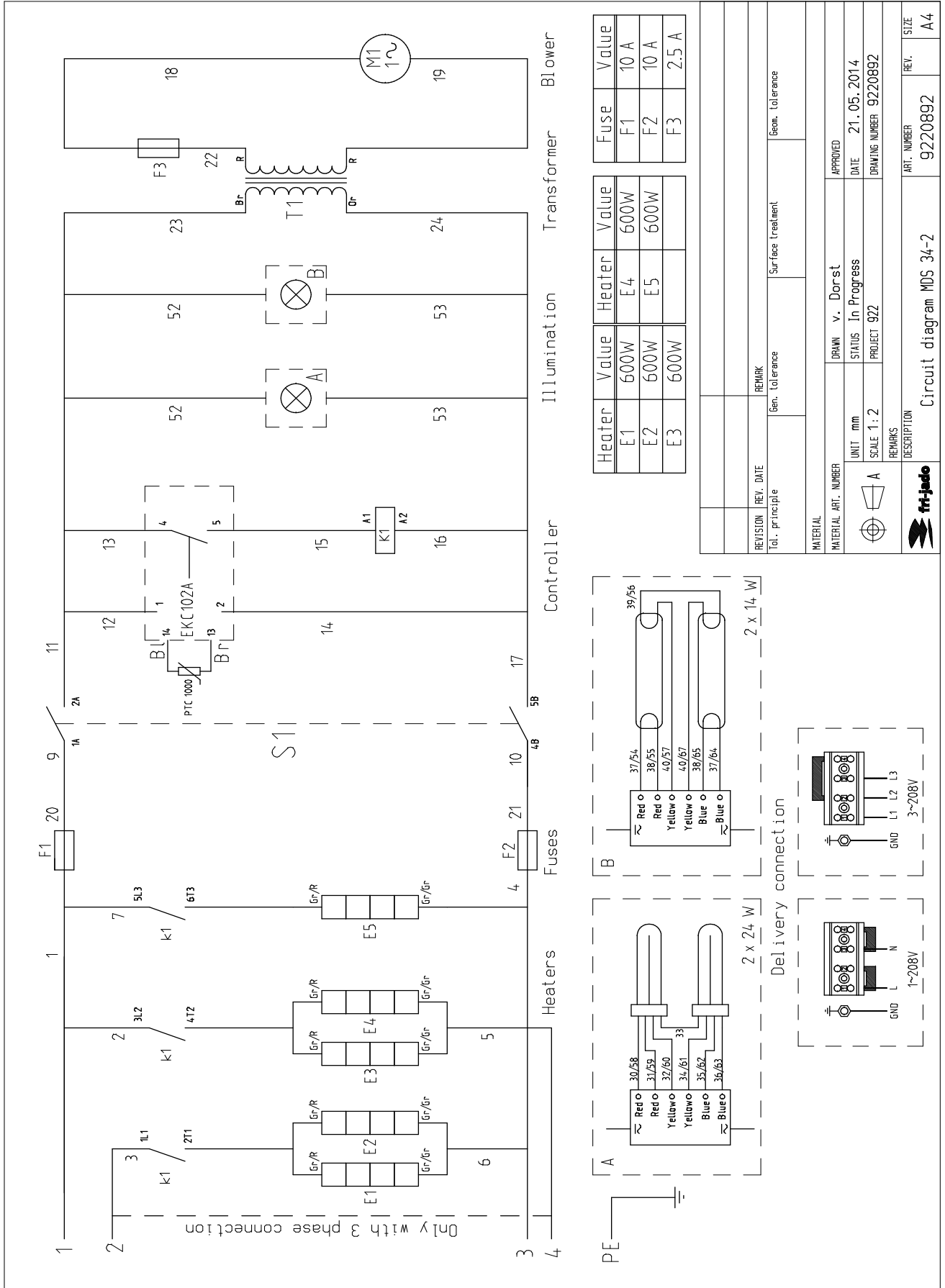
Item	Part number	Qty	Description	Item	Part number	Qty	Description
41	9220317	1	Ass. shelf 86	66	9223274	1	Bumper tube 86
41-1	9227402	1	Top shelf 86	67	2103209	2	Round ribbed insert ø30mm black
41-2	9222450	2	Heating element 600 W 208 V	68	9172401	1	Power cord L=100inch NEMA 6-20P
41-3	9227355	1	Support pricerail 86	69	9261022	1	Cable gland M25
41-4	9222522	1	Fotoprint Hot 86	70	9261023	1	Nut for cable gland
41-5	9223268	1	Pricerail 86	71	9044564	1	Terminal block G10/3 1-2-3, polyamide
41-6	9227321	1	Armature 86	72	9044572	1	Terminal block G10/3 4-5-6, polyamide
41-7	9221025	2	Lamp base G5 piercing	73	9222076	1	Strain relief M20
41-8	9271000	1	Tube light 5 14W 830 foodsave	74	9222077	1	Nut for cable gland
41-9	9226238	2	Strip air blocking	75	9227366	1	Box electricity
41-10	4280560	4	Screw knurled	76	9070840	4	Grommet SB-1093-15 black polyamide
42	9220311	1	Ass. shelf bottom 86	77	9191204	1	Terminal block G10/4 1-2-3-4
42-1	9227402	1	Top shelf 86	78	9221069	1	Ballast TL 1 or 2 F28T5, F21T5, F14T5 HE
42-2	9222450	2	Heating element 600 W 208 V	79	9222064	2	Ballast PLL ExUr 239.002
42-3	9227355	1	Support pricerail 86	80	9222302	1	Ring core transformer 208 - 120 V
42-4	9222522	1	Fotoprint Hot 86	81	3500069	1	Contactora ABB A-09-40-00 230V
42-5	9223268	1	Pricerail 86	82	8033659	1	Terminal block 9-pole OK501/9 6xGEC/3xABC
42-6	9224718	1	Holder sensor, thermostat	83	9281021	1	Tule feedthrough
43	9221011	1	Sensor PTC 1000	84	9223281	1	Base profile top light 86
44	0602072	2	Collar bearing 6/10 x 6 brass	85	9227316	1	Support plate drawer 86
45	9227350	1	Cover plate top 86	86	9172065	2	Swivel castor LPHD 80KM RO
46	9227351	1	Cover plate element 86	87	9172066	2	Swivel castor with brake, LHCD 80KM RO SP TS
47	9222450	1	Heating element 600 W 208 V	88	9191204	1	Terminal block G10/4 1-2-3-4, polyamide
48	9181008	1	Switch black 1-0 250 volt 22 x 30	89	9110250	2	Fuse SC10 300V
49	9221025	2	Lamp base G5 piercing	90	9181049	1	Fuse SC2.5 Bussmann
50	9271000	1	Tube light 5 14W 830 foodsave	91	9044205	2	Holder fuse HPS-EE, for SC fuse
51	9221030	2	Lamp holder 2G11	92	9229801	1	Temperature indicator, ass.
52	9221065	2	Lamp PLL 4-pins 24W	92-1	9221048	1	Thermometer 30-250°F + C NSF TF01-058KF
53	9222210	2	Support lamp PLL				
54	9224721	1	Mounting plate lamp support PLL				
55	9223284	1	T-profile 86				
56	9222521	1	Slide top light				
57	9223277	1	Cover profile armature				
58	9220655	1	Ass. glued side glass left				
59	9220645	1	Ass. glued side glass, right				
60	9222516	1	Childguard 86				
61	9221012	0,8 mtr	Plastic profile				
62	9223261	1	Childguard holder 86				
63	9227354	1	Cover plate drawer top 86				
64	9227317	1	Front 86				
65	9293010	2	Spacer, handle				

ELECTRICAL DIAGRAMS

CIRCUIT DIAGRAM MULTI DECK SPACE SAVER 34-2



CIRCUIT DIAGRAM MULTI DECK SPACE SAVER 34-2 TILL SERIAL NUMBER 10080607



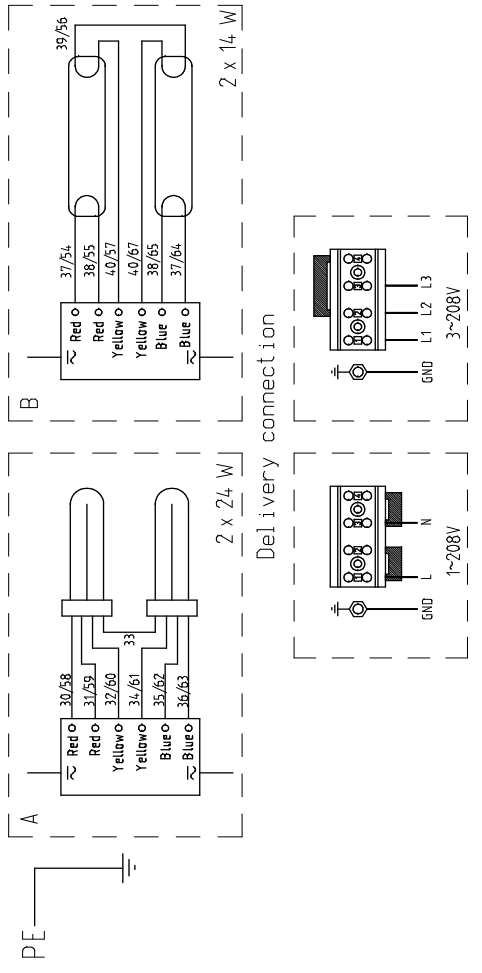
Heater	Value	Heater	Value	Fuse	Value
E1	600W	E4	600W	F1	10 A
E2	600W	E5	600W	F2	10 A
E3	600W			F3	2.5 A

REVISION	REV. DATE	REMARK
		Gen. Tolerance
		Surface treatment
		Geom. tolerance

MATERIAL	REVISION	REV. DATE	REMARK
			Gen. Tolerance
			Surface treatment
			Geom. tolerance

MATERIAL ART. NUMBER	DRAWN	v. Dorst	APPROVED
		In Progress	
	UNIT mm	STATUS	DATE 21.05.2014
	SCALE 1:2	PROJECT	DRAWING NUMBER 9220892
	REMARKS		
	DESCRIPTION		

ART. NUMBER	REV.	SIZE
9220892		A4



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For technical support call:	877 374-5236
For parts call:	877 392-7851

