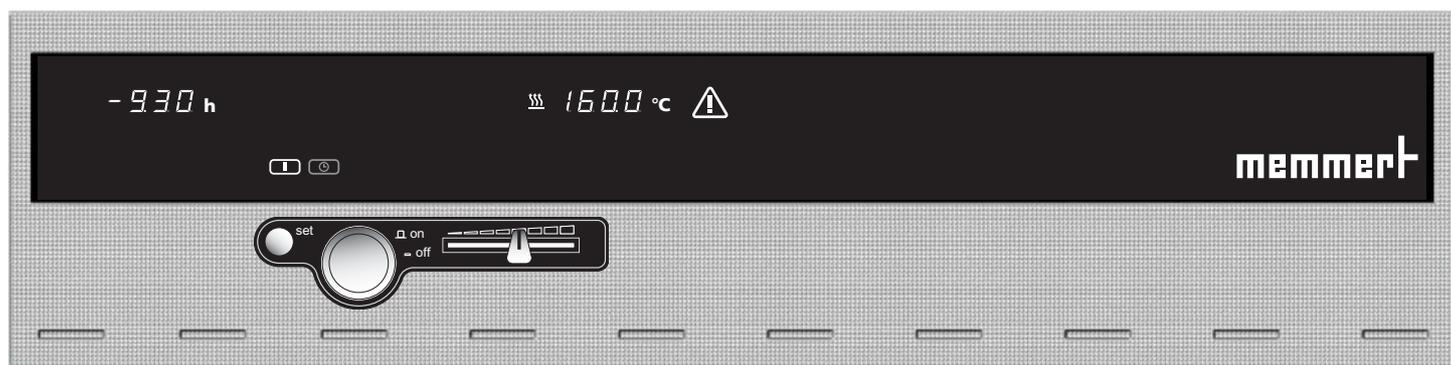


U → **Universal ovens**

I → **Incubators**

S → **Sterilisers**

Service Instructions



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2. Safety notes



Always before dismantling the equipment – pull out the mains supply plug!



Work involving opening the housing must only be carried out by a qualified electrical technician!



Please observe the safety notes and instructions in the Operating Instructions supplied with the equipment!



Dismantling the equipment may give access to unfinished metal edges, therefore always wear gloves during all work!



Observation of the notes in these Service Instructions is essential for correct operation of the oven. Disregarding these instructions results in exclusion of warranty, guarantee and damage claims!



On first start-up after any maintenance or repair the equipment should not be left unsupervised until steady conditions have been reached!

3. Repair instructions

These instructions describe service and maintenance operations as well as steps for dismantling of BASIC, EXCELLENT and PERFECT ovens.

Unless otherwise described, assembly takes place in the reverse order.

Alterations in technical matters are reserved. Measurements are not binding.

4. Fault finding and error messages

Fault details	Fault cause	Fault rectification	Section
General faults			
Controller display remains dark	Fuse 100 mA (80 mA) has blown	Check fuse and replace if nec.	Section 9
	Main fuse 15 A has blown	Check fuse and replace if nec.	Section 9
	Power unit faulty	Replace power unit	Section 8
Temperature can not be set and oven can not be operated by turn control.	Turn control faulty	Replace main switch module incl. turn control	Section 10
	Oven "blocked" by UserID card	Unblock using UserID card	siehe Betriebsanleitung
Error messages in monitor indication			
Warning – symbol  alight continuously	Mechanical-action temperature limiter has switched off the heating	<ul style="list-style-type: none"> - Switch off oven and allow to cool down. - Check Pt100 temperature probe. - Check temperature limiter - The oven is again ready for operation only after fault has been rectified and the oven has cooled down. 	Section 14
Warning – symbol  flashing	Monitor controller has switched off the heating because temperature difference between working controller and monitor controller is too small.	Increase temperature difference between monitor temperature and working temperature. If nec. replace Pt100 temperature probe on monitor controller	Section 16
Error message „E-3“	Pt100 temperature probe of monitor controller is faulty.	Replace Pt100 temperature probe of monitor controller on connector J3	Section 16
Error message „E-3“ alternating with temperature display	Pt100 temperature probe of monitor controller is faulty. Monitor controller operates in emergency mode with temperature value of working controller Pt100 temperature probe	Replace Pt100 temperature probe of monitor controller on connector J3.	Section 16
Error message in timer display			
Error message „E-0“	Serious configuration error (e.g. incorrect oven type or incorrect temperature range)	Replace controller	Section 11-13
Error message „CONF“ (display only appr. 10 sec after switching on)	Checksum error (error on storing the setpoints, e.g. fan speed)	The fault can be rectified by the controller itself after repeating the storage function of a setpoint parameter. If the fault is repeated or can not be rectified, the controller has to be replaced	Section 11-13
Error message „E-L1“ in timer display	Interruption in communication to power unit	Check connecting cable. If nec. replace power unit	Section 8
Error messages in temperature display			
Error message „E-3“	Pt100 temperature probe of working controller faulty	Replace Pt100 temperature probe of working controller on connector J4	Section 16
Error message „E-3“ alternating with temperature display	Pt100 temperature probe of working controller is faulty. Working controller operates in emergency mode with the temperature value of monitor controller Pt100 temperature probe.	Replace Pt100 temperature probe of working controller on connector J4.	Section 16
Error message „E-1.1“	Power unit triac 1 faulty	Replace power unit	Section 8
Error message „E-1.2“	Power unit triac 2 faulty	Replace power unit	Section 8
Error message „E-2.1“	Power unit faulty	Replace power unit	Section 8
Error message „E-2.2“	Power unit faulty	Replace power unit	Section 8

4.1 Additional error messages on 3-phase ovens (Model Uxx 700-800)

Error messages in timer display			
Error message „E-L1“ in timer display	Communication to power unit phase L1 address#0 interrupted	Check fuse. Check connecting cable. If nec. replace power unit	Section 8
Error message „E-L2“ in timer display	Communication to power unit phase L2 address#1 interrupted	Check fuse. Check connecting cable. If nec. replace power unit	Section 8
Error message „E-L3“ in timer display	Communication to power unit phase L3 address#2 interrupted	Check fuse. Check connecting cable. If nec. replace power unit	Section 8
Error message „E-LA“	Communication to all power units interrupted	Check fuse Check connecting cable Check coding switch setting If nec. replace power unit If nec. replace controller	Section 8 Section 11-13
Error messages in temperature display			
Error message „E-1.1“	Power unit phase L1 address #0 triac 1 faulty	Replace power unit phase L1 address #0	Section 8
Error message „E-1.2“	Power unit phase L1 address #0 triac 2 faulty	Replace power unit phase L1 address #0	Section 8
Error message „E-1.3“	Power unit phase L2 address #1 triac 1 faulty	Replace power unit phase L2 address #1	Section 8
Error message „E-1.4“	Power unit phase L2 address #1 triac 2 faulty	Replace power unit phase L2 address #1	Section 8
Error message „E-1.5“	Power unit phase L3 address #2 triac 1 faulty	Replace power unit phase L3 address #2	Section 8
Error message „E-1.6“	Power unit phase L3 address #2 triac 2 faulty	Replace power unit phase L3 address #2	Section 8
Error message „E-2.1“	Power unit faulty	Replace power unit	Section 8
Error message „E-2.2“	Power unit faulty	Replace power unit	Section 8
Error message „E-2.3“	Power unit faulty	Replace power unit	Section 8
Error message „E-2.4“	Power unit faulty	Replace power unit	Section 8
Error message „E-2.5“	Power unit faulty	Replace power unit	Section 8
Error message „E-2.6“	Power unit faulty	Replace power unit	Section 8

5. Tools required

Torx screwdriver size 8 and 10

Phillips screwdriver

Side-cutter pliers

Flat pliers for pulling off the connecting cables

Socket keys/spanners SW5.5 SW10 SW13

Hexagon socket driver 2 mm for door hinge

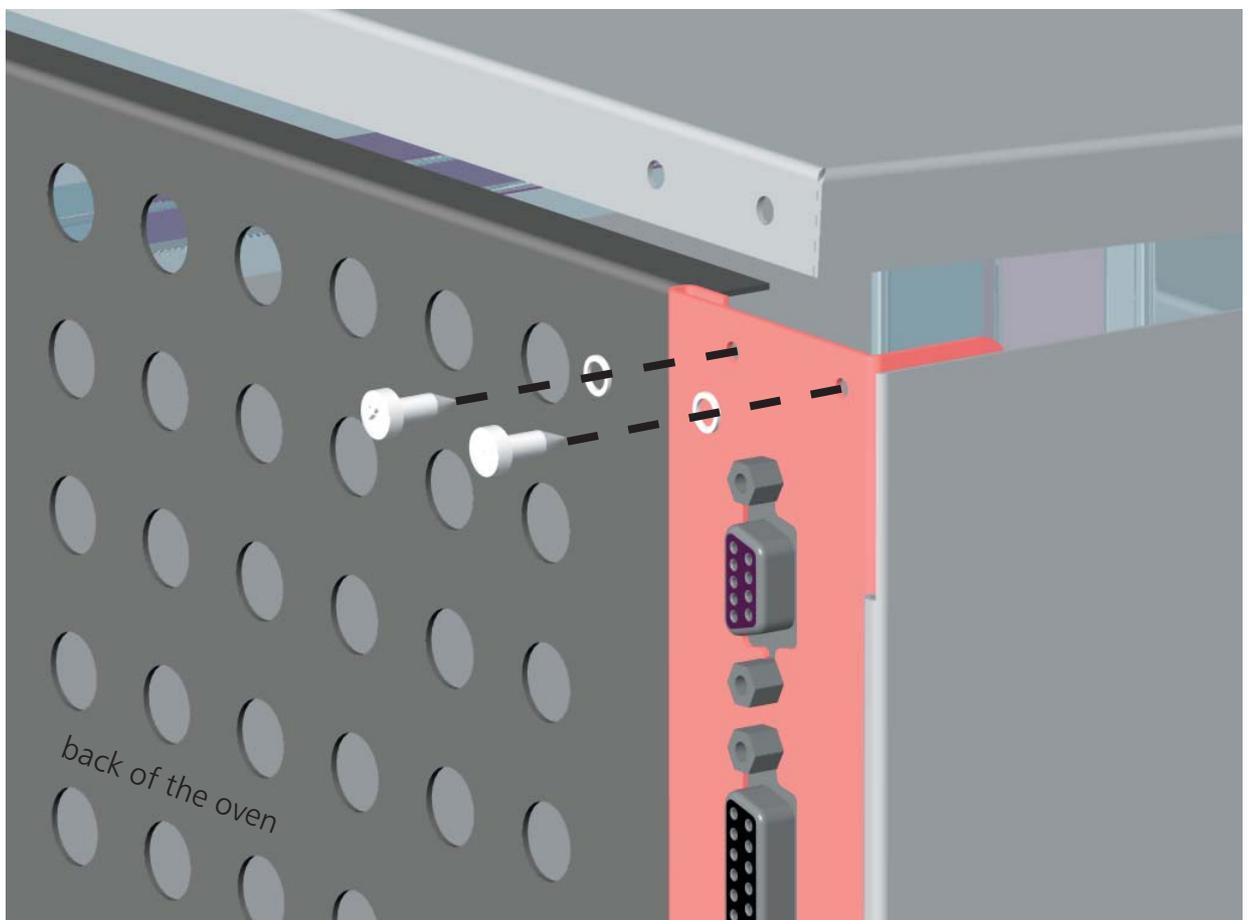
Multimeter with voltage and resistance ranges

Cable binder

Adhesive tape for identifying cables and assemblies

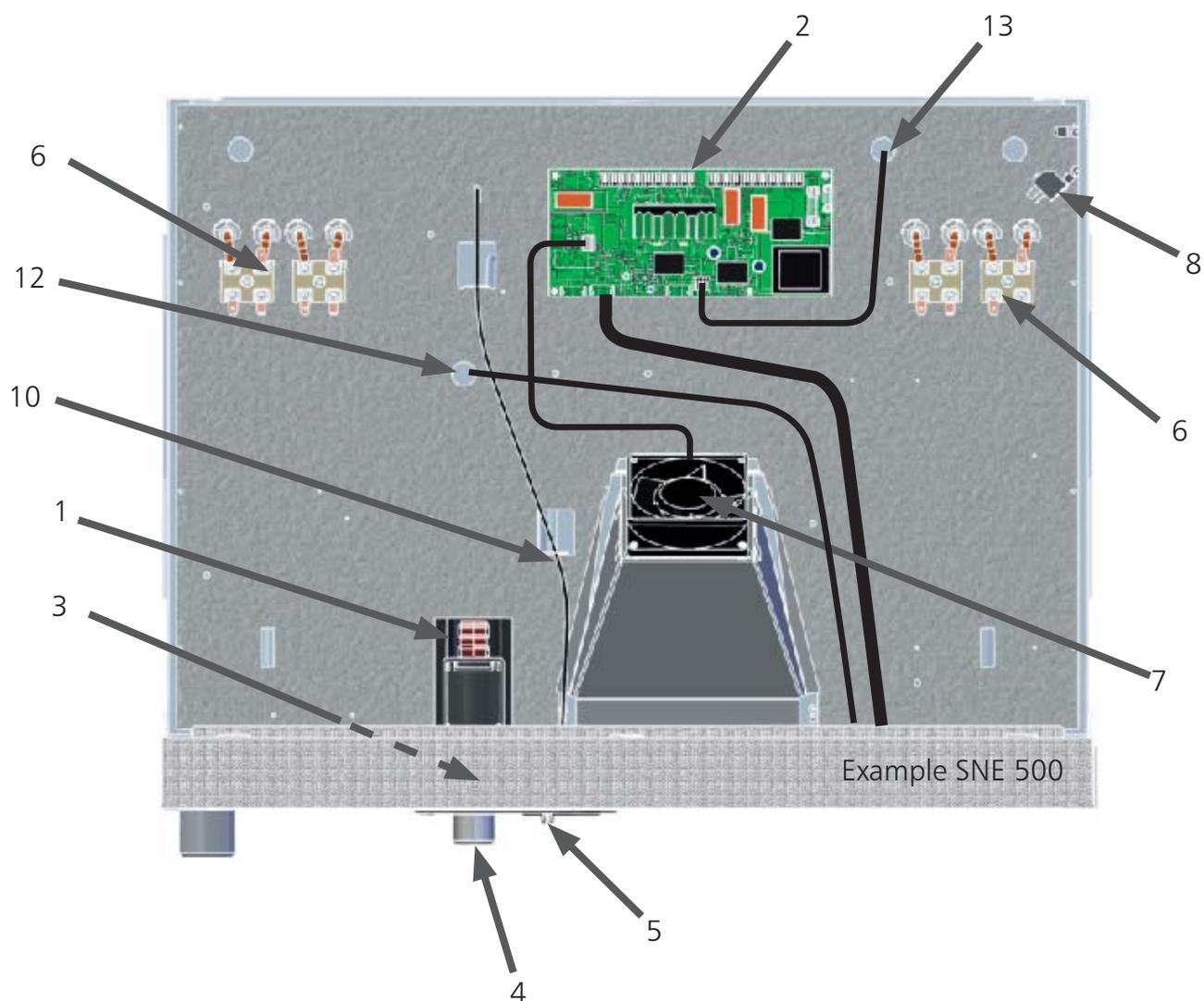
6. Removing the housing cover

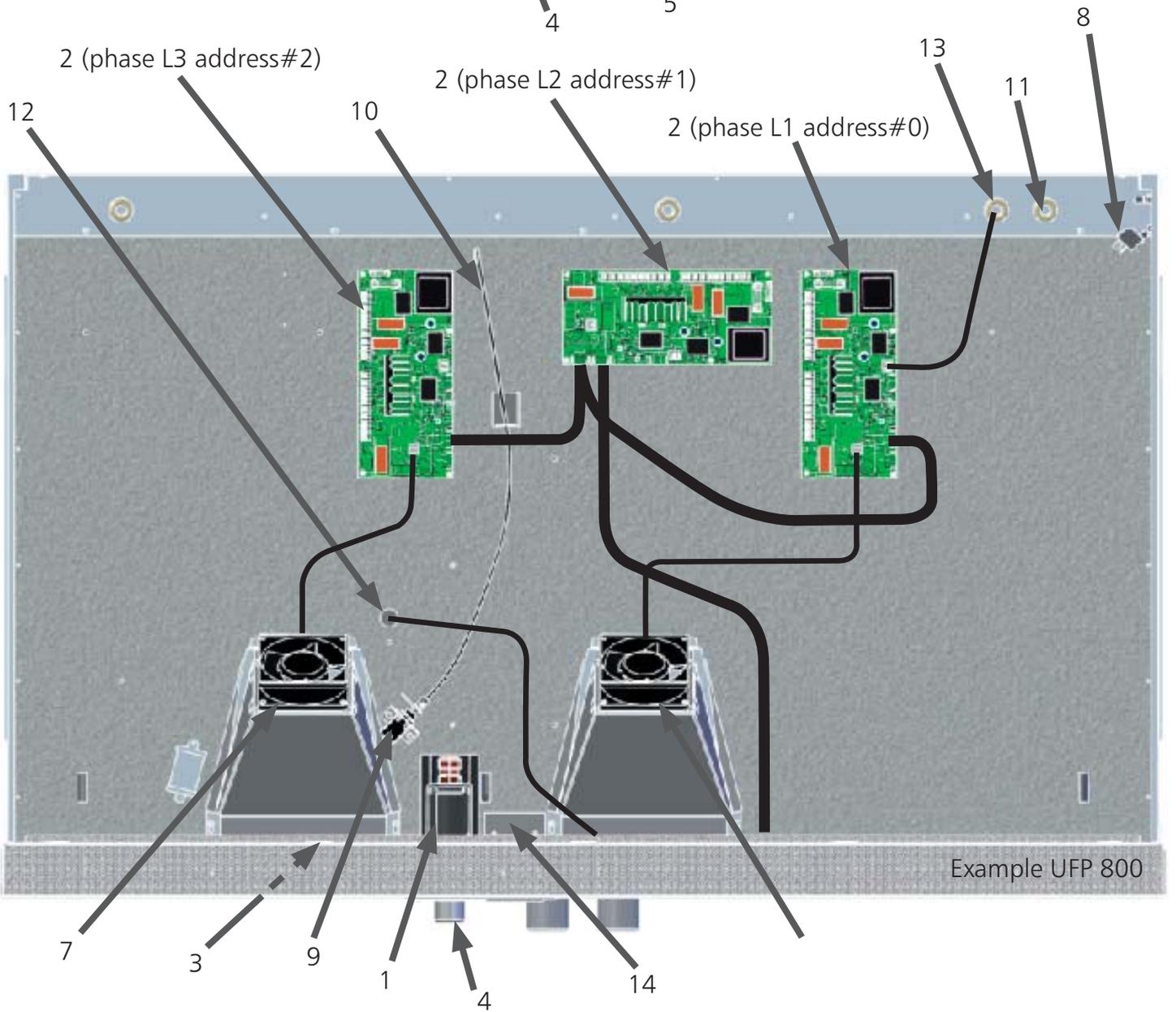
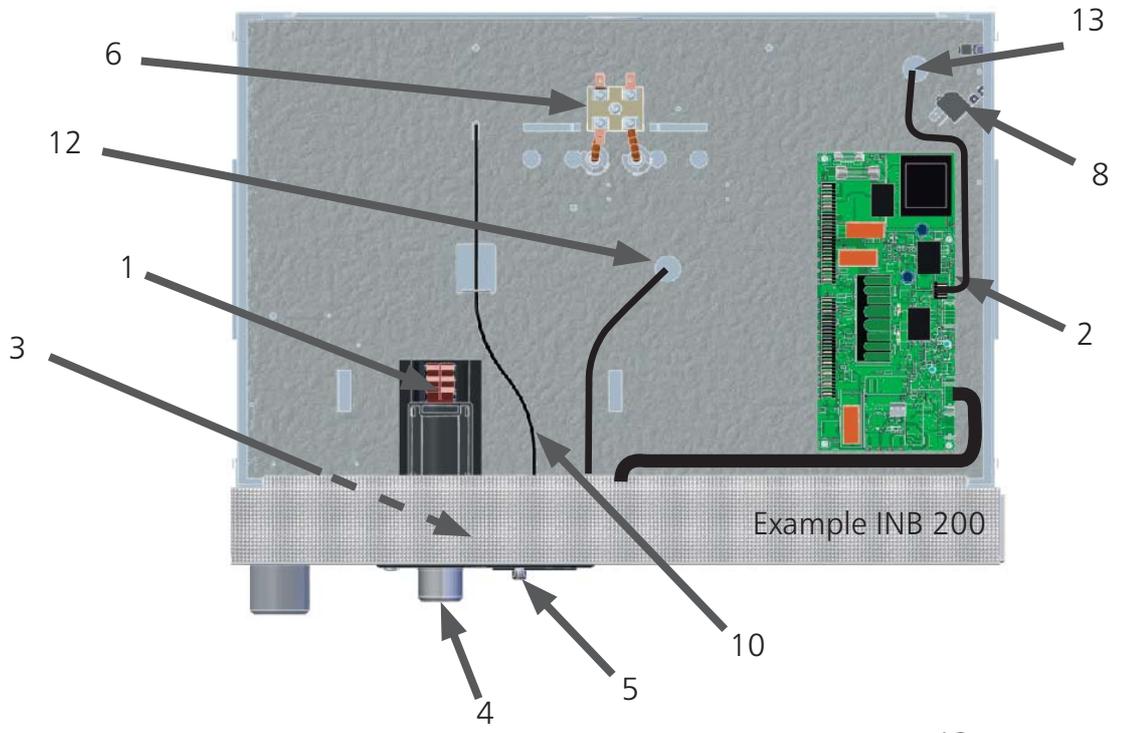
- Pull off the mains plug !
- Unscrew 4 screws on the back of the oven
- Slightly raise the cover at the back and pull out towards the back
- During re-assembly, check that there are spring washers underneath the screws in order to ensure secure protective earth connection to the cover



7. Overall view control chamber

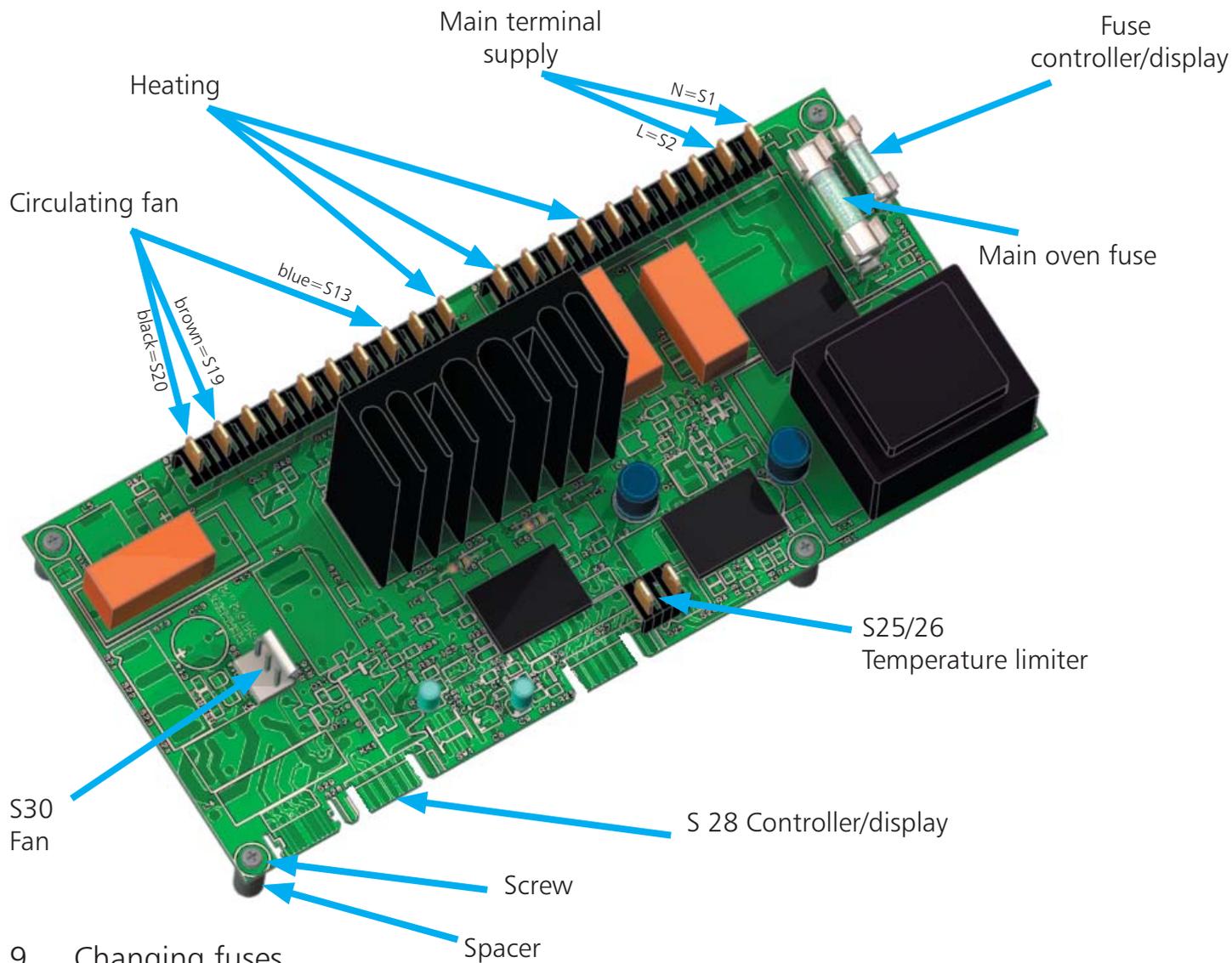
- 1 = main switch
- 2 = power unit
- 3 = controller (see also Section 11-13)
- 4 = turn control
- 5 = air flap (xxB/xxE)
- 6 = heater terminals
- 7 = control chamber fan (not on xxB and lxx)
- 8 = main connection terminal
- 9 = air flap servo (P only)
- 10 = air flap spindle
- 11 = feed-through heating (600 – 800)
- 12 = feed-through Pt100 temperature probe
- 13 = feed-through temperature limiter
- 14 = chip card reader (xxP only)





8. Replacing the power unit

- Pull out the mains supply plug!
- Remove the housing cover
- Pull off all cables from power unit
- (if nec. apply markers to unmarked cables)
- Release 4 screws from power unit (ensure that spacers are not lost)



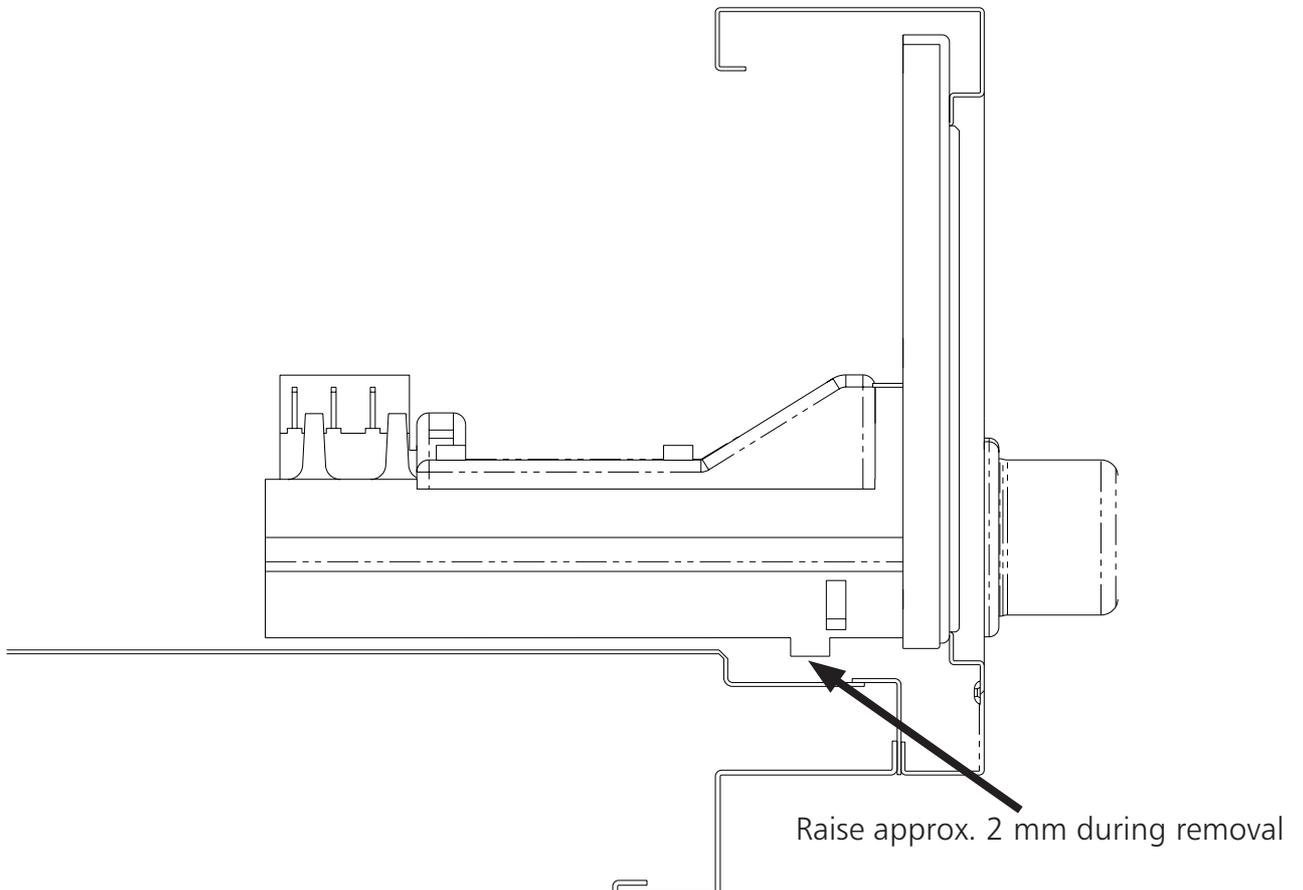
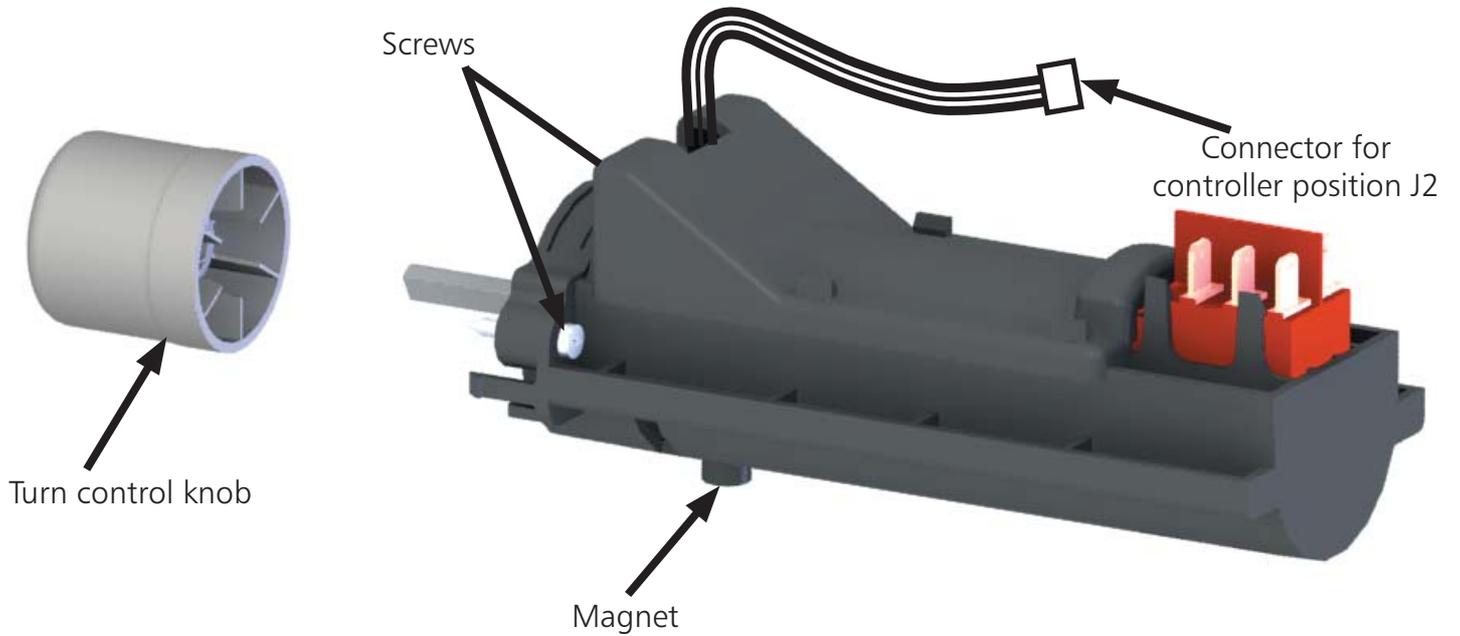
9. Changing fuses

- Pull out the mains supply plug !
- Remove the housing cover
- The two fuses are located on the power unit (see above)
- Check the fuse resistance with a continuity tester.
- If the fuse is OK the resistance is only a few Ohm.
- To change the fuse, place an insulated screwdriver from the side underneath the fuse and twist it to lift out the fuse from its holder. Push the new fuse from above into the holder.

Main oven fuse: 15 A fast 32 x 6.3 mm (American)
Fuse controller/display: EXCELLENT / PERFECT 100 mA slow 20 x 5 mm
BASIC 80 mA slow 20 x 5 mm

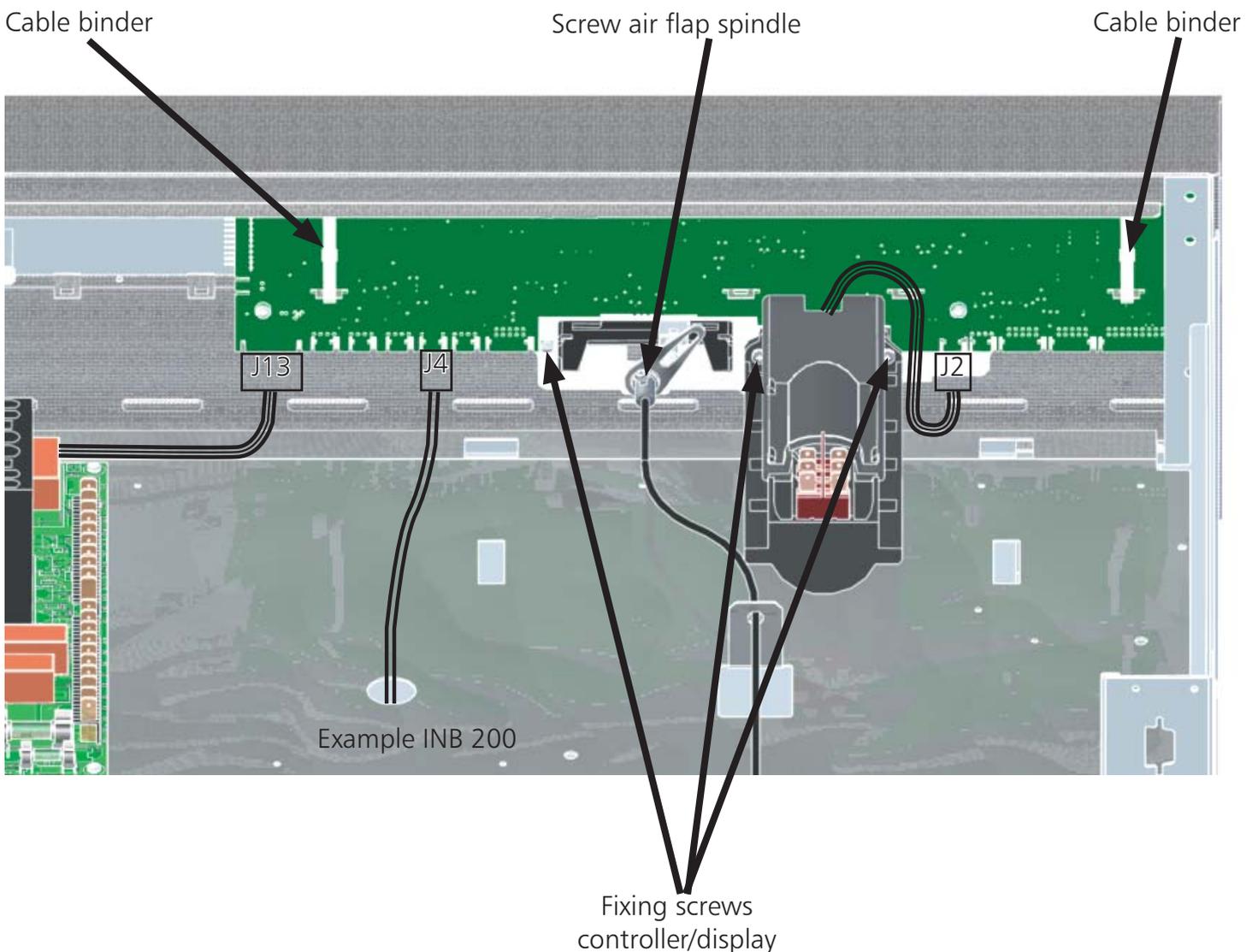
10. Replacing main switch module incl. turn control

- Pull out the mains supply plug!
- Remove the housing cover
- Pull off turn control knob
- Pull off connector (4-pin) from controller position J2
- Unscrew Phillips headed screws (2x) from main switch module
- Pull out main switch module towards the back (slightly raise the main switch module – note magnet on module underside)



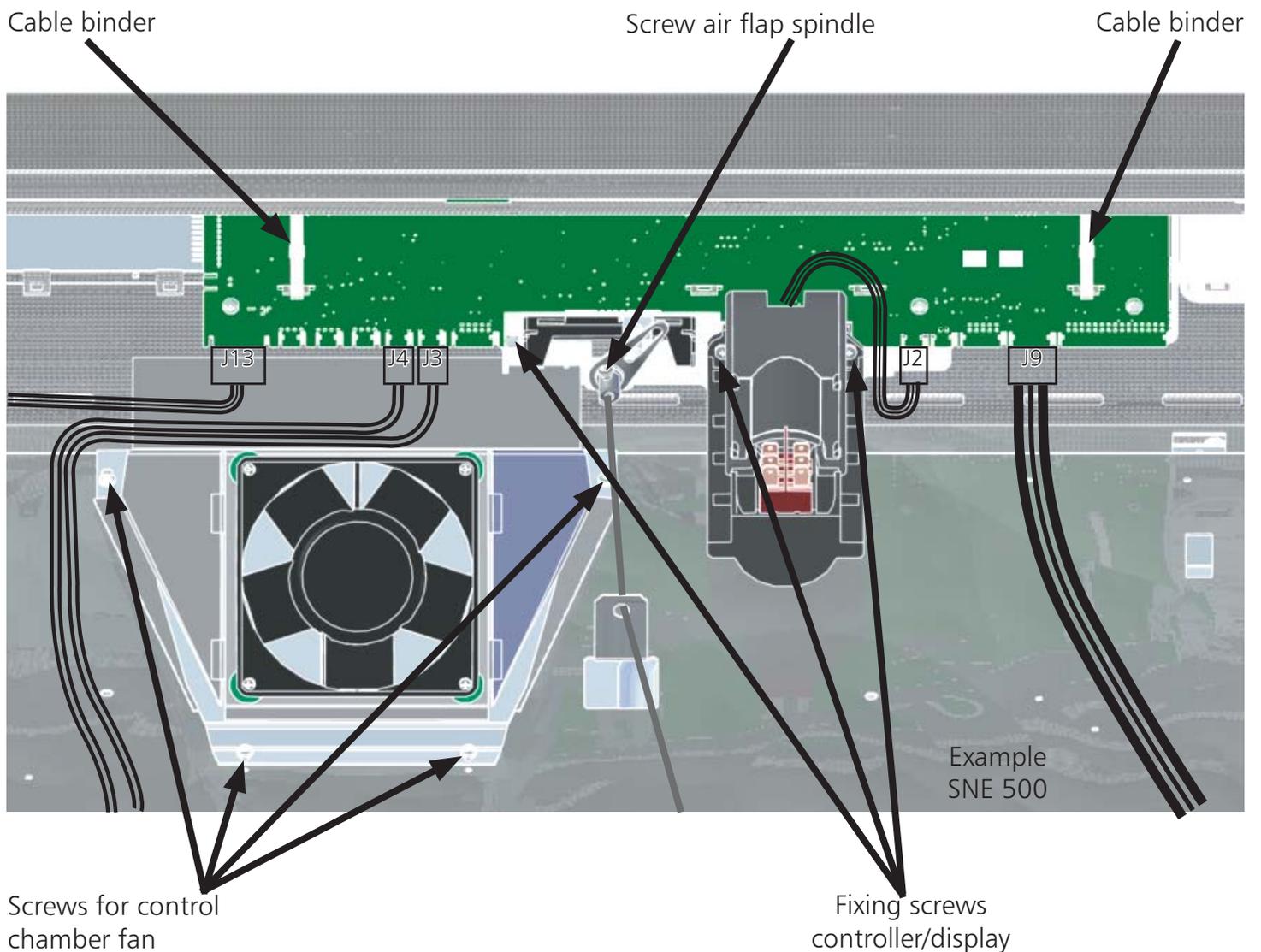
11. Replacing controller (BASIC)

- Pull out the mains supply plug!
- Remove the housing cover
- Pull off the turn control knob towards the front
- Cut the cable binder with the side cutters and remove it
- Release the screw from the air flap spindle and remove the spindle
- Disconnect the cable (8-way) for power supply from controller location J13
- Remove connector (4-pin) for Pt100 working controller from controller location J4
- Remove connector (4-pin) for main switch from controller location J2
- Release three fixing screws (see ill.)
- Remove the controller towards the back



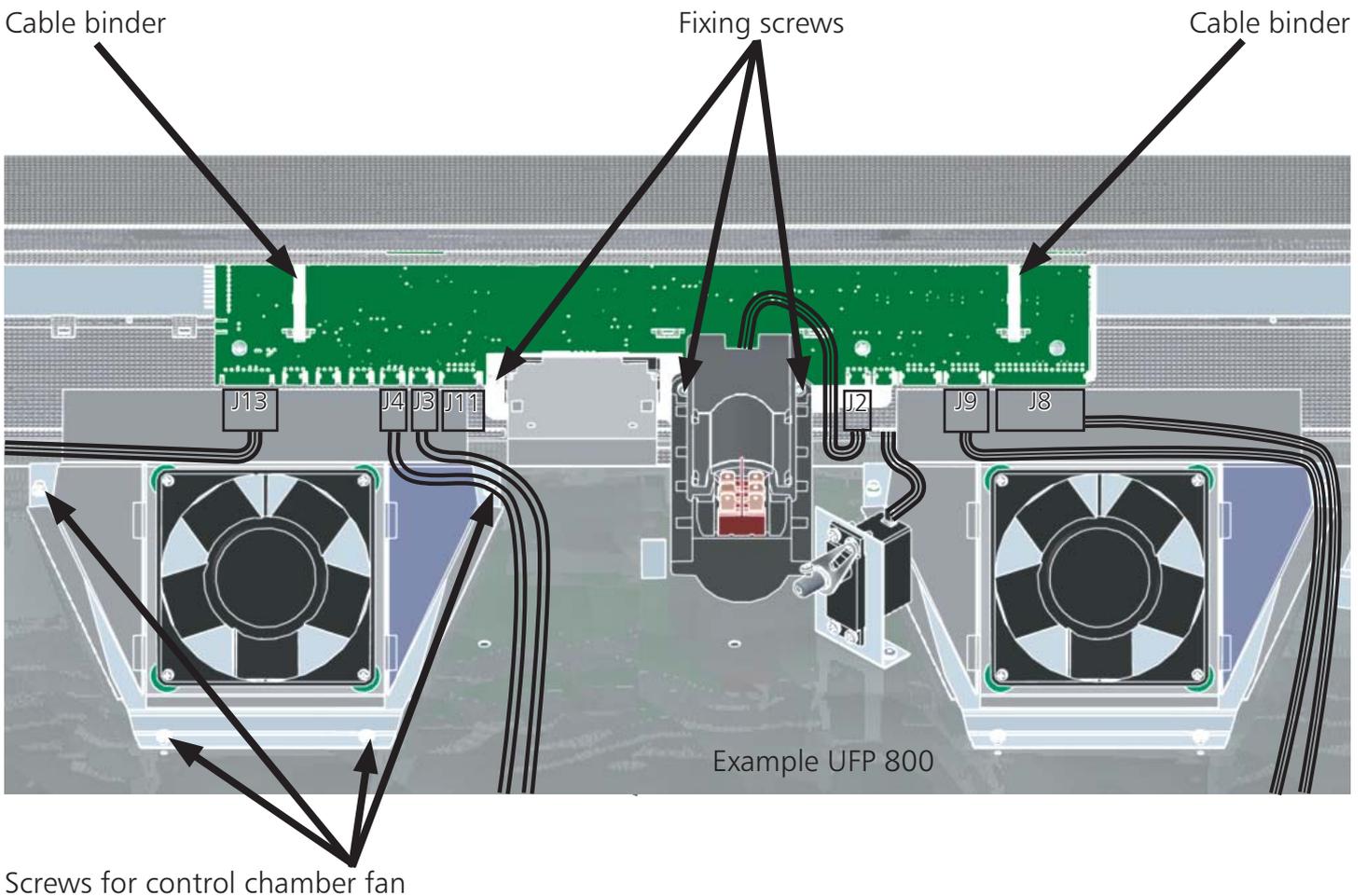
12. Replacing controller (EXCELLENT)

- Pull out the mains supply plug!
- Remove the housing cover
- Pull off the turn control knob towards the front
- On 250°C/300°C ovens (UNE, UFE, SNE, SFE) unscrew the control chamber fan
- Cut the cable binder with the side cutters and remove it
- Release the screw from the air flap spindle and remove the spindle
- Disconnect the cable (8-way) for power supply from controller location J13
- Remove connector (4-pin) for Pt100 monitor controller from controller location J3
- Remove connector (4-pin) for Pt100 working controller from controller location J4
- Remove connector (10-pin) for RS232 interface from controller location J9
- Remove connector (4-pin) for main switch from controller location J2
- Release three fixing screws (see ill.)
- Remove the controller towards the back



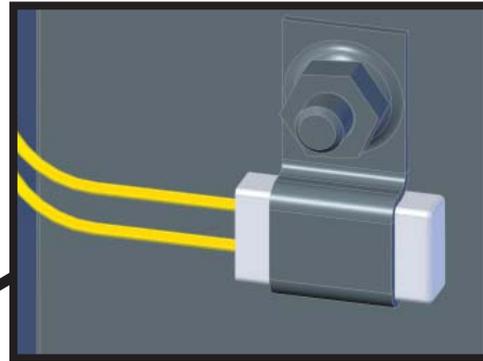
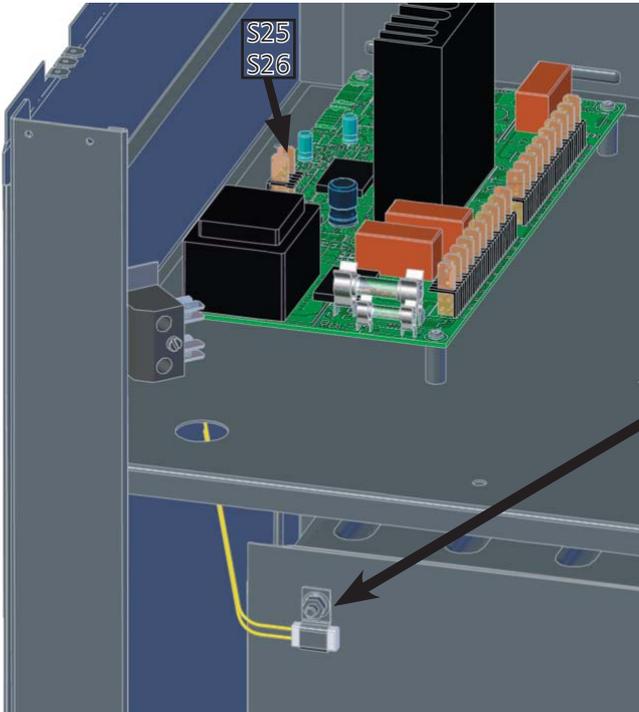
13. Replacing controller (PERFECT)

- Pull out the mains supply plug!
- Remove the housing cover
- Pull off the turn control knob towards the front
- On 250°C/300°C ovens (UNP, UFP, SNP, SFP) unscrew the control chamber fan
- Cut the cable binder with the side cutters and remove it
- Disconnect the cable (8-way) for power supply from controller location J13
- Remove connector (4-pin) for Pt100 monitor controller from controller location J3
- Remove connector (4-pin) for Pt100 working controller from controller location J4
- Remove connector (10-pin) for RS232 interface from controller location J9
- Remove connector (30/22-pin) for printer interface from controller location J8
- Remove connector (4-pin) chip card reader from controller position J11 and disengage it
- Remove connector (4-pin) air flap service from controller position J1
- Remove connector (4-pin) for main switch from controller location J2
- Release three fixing screws (see ill.)
- Remove the controller towards the back

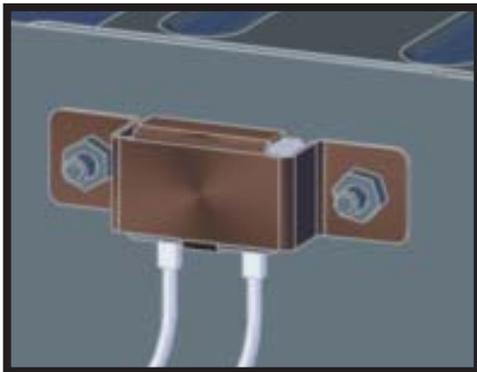


14. Replacing temperature limiter TB

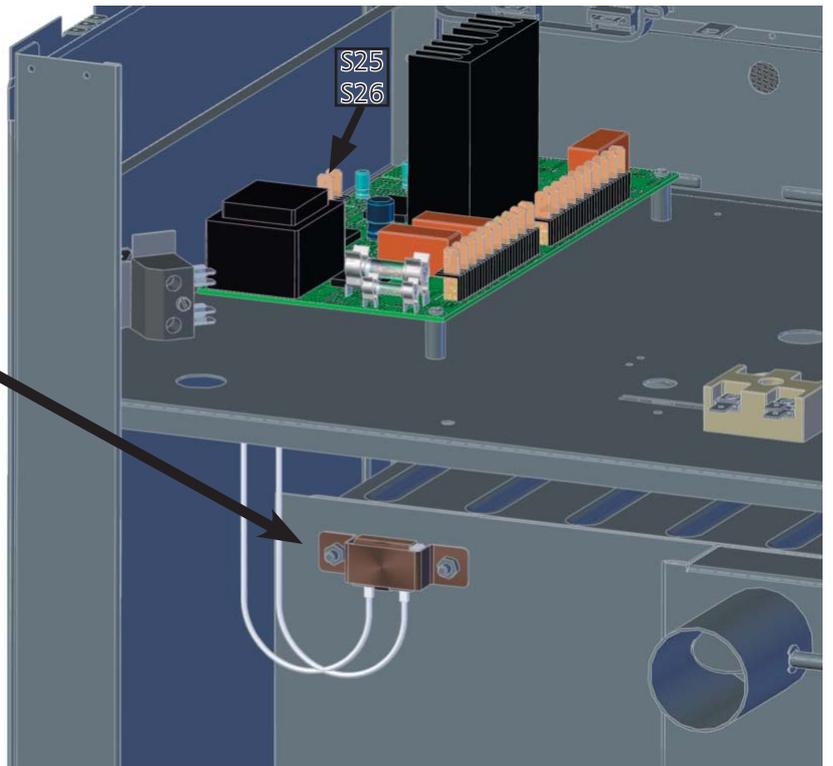
- Pull out the mains supply plug!
- Remove the housing cover
- Disconnect the earth connection on the back panel and pull out the back panel upwards.
- Expose insulation
- Unscrew mounting for TB
- Pull off temperature limiter from power unit S25 and S26 (see Section 8)



Temperature limiter
(80°C)

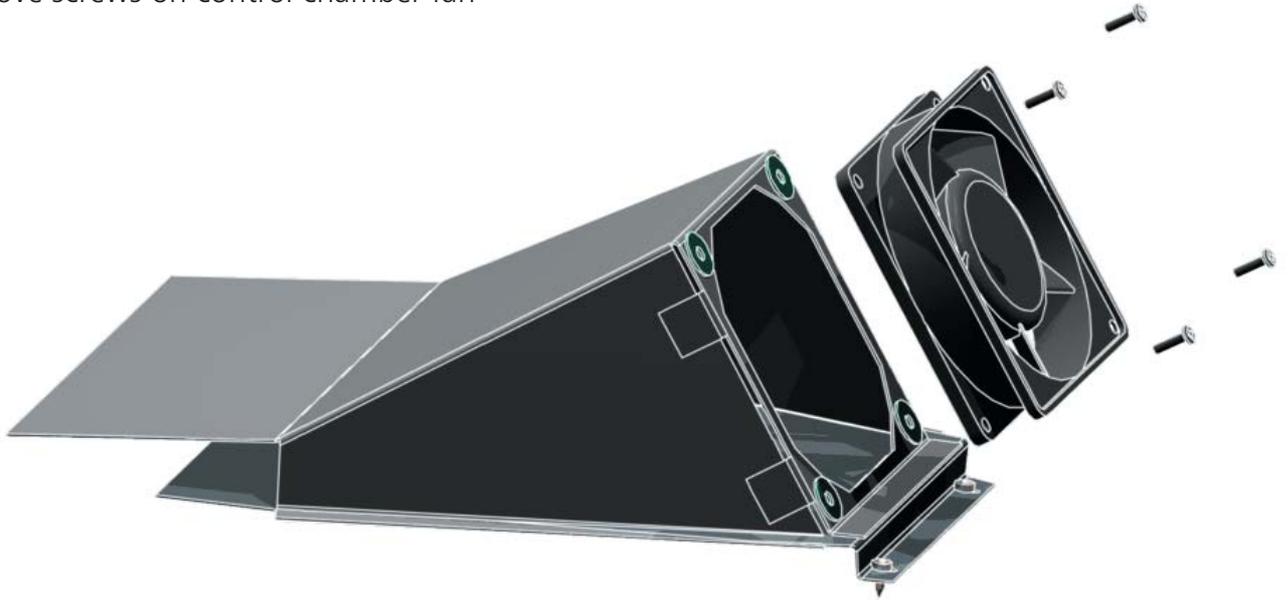


Temperature limiter
(230°C / 260°C / 320°C)



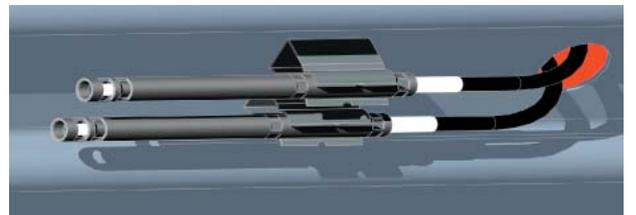
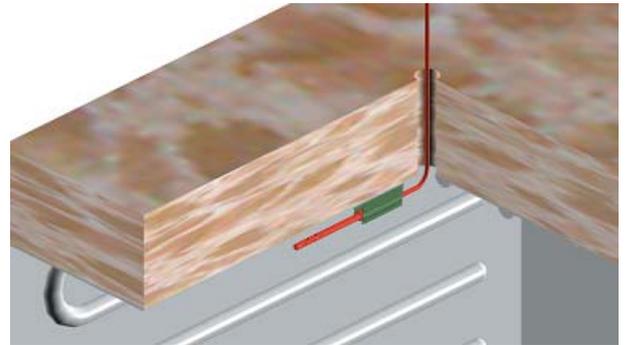
15. Replacing control chamber fan

- Pull out the mains supply plug!
- Remove the housing cover
- Pull off the chamber cabinet fan from the power unit location S30 (see Section 8)
- Remove screws on control chamber fan



16. Replacing Pt100 temperature probe

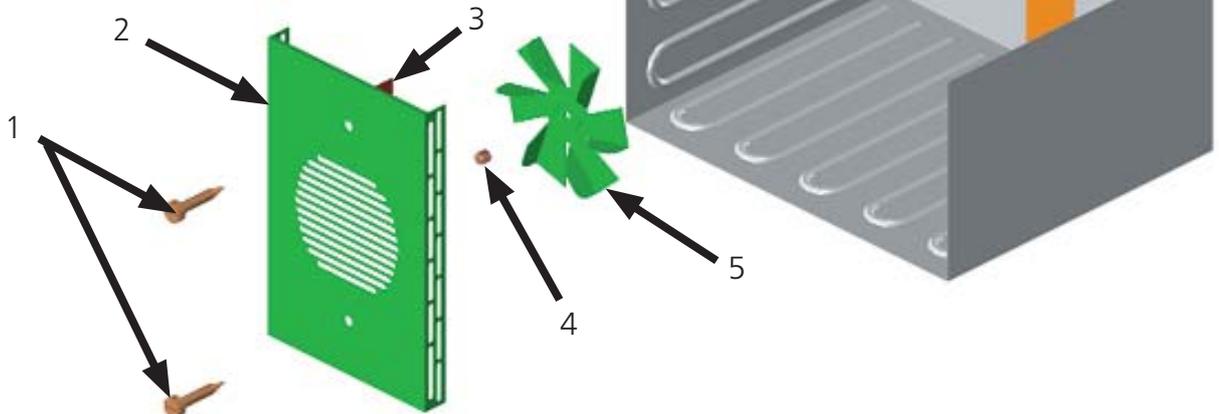
- Pull out the mains supply plug!
- Remove the housing cover
- The temperature probe can be carefully slid out of the clamp towards the back and threaded upwards through the working chamber ceiling
- Probe for working controller:
 - pull off Pt100 probe from 4-pin controller location J4 (see Section 11-13)
- Probe for monitor controller:
 - Pull of Pt 100 probe from 4-pin controller location J3 (see Section 11-13)
- Cut the cable binder with the side cutters and replace the Pt100 probe



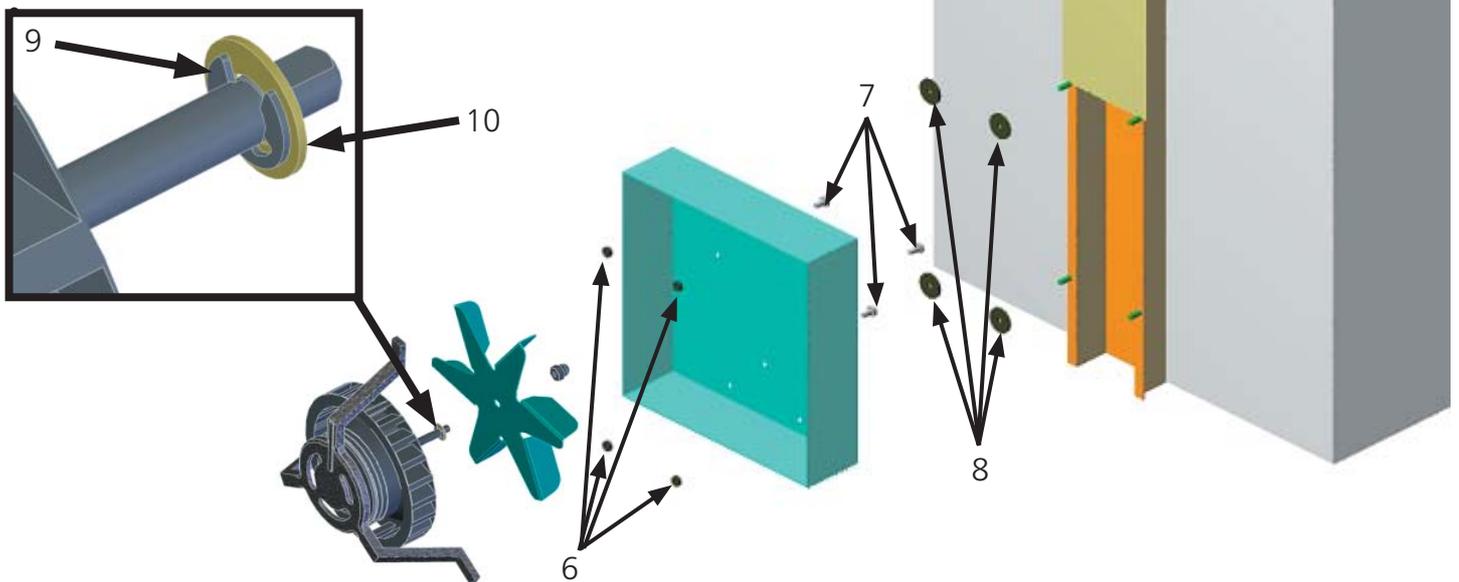
Warning!!
Ensure that the Pt100 probe is fitted correctly in its clip!
Pt100 probe must be secured level at the back in the clip.

17. Changing the circulating fan motor

- Pull out the mains supply plug!
- Remove the housing cover
- To replace the circulating fan motor it is first necessary to take off the fan duct cover (2) in the working chamber after releasing the two screws (1).
- The fan disc (5) can be pulled off after removing the cap nut (4)
(Note! left-hand thread)



- Disconnect the earth connections on the back panel and pull out the back panel upwards
- Disconnect the earth connection and cable connection from the motor at the power unit (see Section 8)
- After releasing the hexagon nuts (6) the motor baseplate has to be removed together with the fan motor.
- On the back of the motor baseplate the screws (7) can now be unscrewed and the motor pulled out.



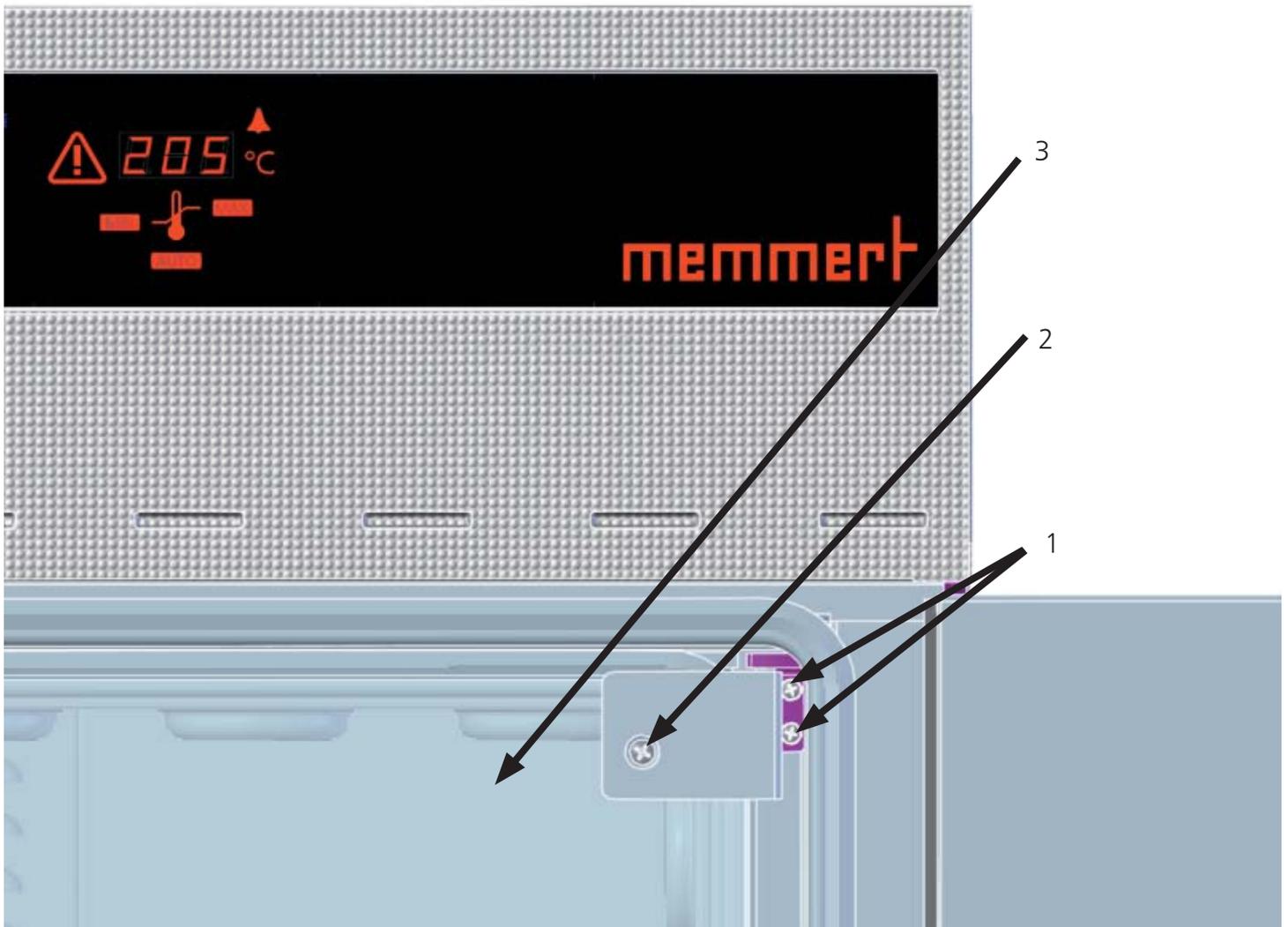
During assembly it is necessary to ensure that the spacers (8) are again positioned between motor baseplate and working chamber back wall. Ensure that the air guide (3) is directed upwards and that the lockwasher (9) and brass washer (10) are fitted as shown.

18. Adjusting and dismantling the inner door on incubators (lxx)

- Release the screws (1), do not unscrew the screws completely, otherwise the fixing block (inside) drops down.
- Adjust the inner door (3) and tighten the screws (1) again.
- Check screw (2) and tighten if necessary.

If the fixing block has dropped down, access to it is obtained by pulling out the side panel so that it can be fitted again.

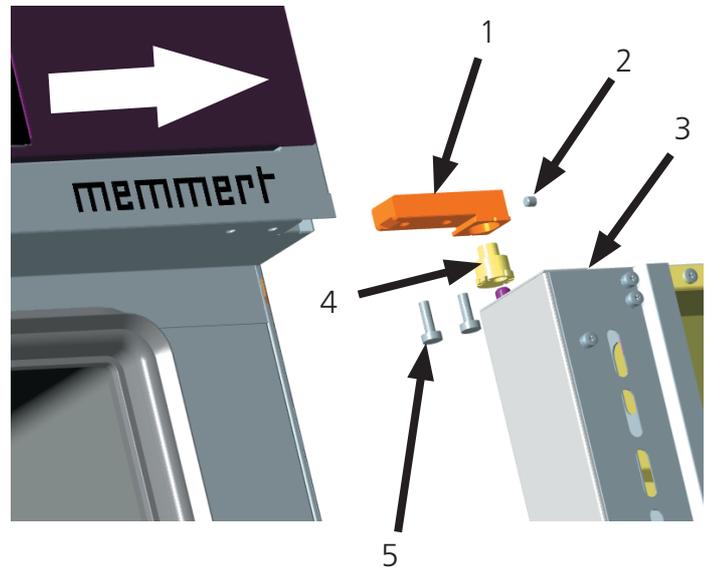
To dismantle the inner door, release the screw (2) (hold with a spanner), tilt the glass door to the front and lift it out of the bottom hinge.



19. Door – maintenance and adjustment

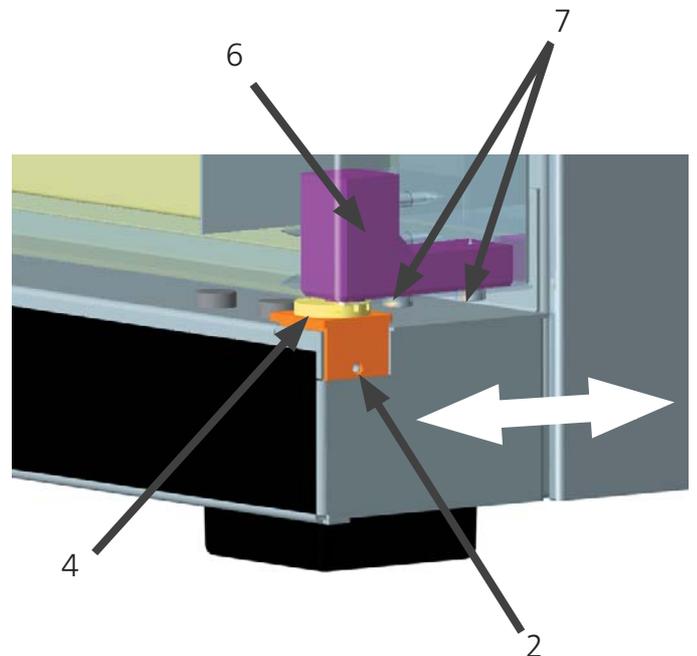
19.1. Dismantling the door

- Release the screws (5).
- Pull out the door (3) horizontally in the direction of the arrow.
- When re-fitting the door, note the following:
- Apply thin Silicone grease to the moving parts of the door hinges (see also Operating Instructions "Maintenance")
- Place a special washer at the bottom door hinge between excentric (4) and door.
- When re-fitting the door, ensure that the adjusting notch of the excentric (4) is towards the front.
- Replace the screws (5) and tighten them.

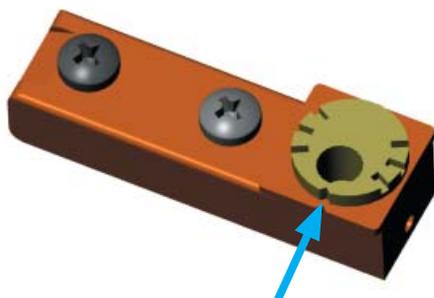


19.2. Adjusting the door

- The top part (6) of the door hinge can be moved slightly in the direction of the arrow after releasing two screws (7) on the top or bottom of the door.
- The door can be adjusted after releasing the socket screw (2) by rotating the excentric (4) with a screwdriver.
- NOTE! Screw (2) is locked with adhesive. It can be released by a sharp tug using a hexagon socket key.
- Apply fresh adhesive to screw (2) and tighten it.



Details of excentric:



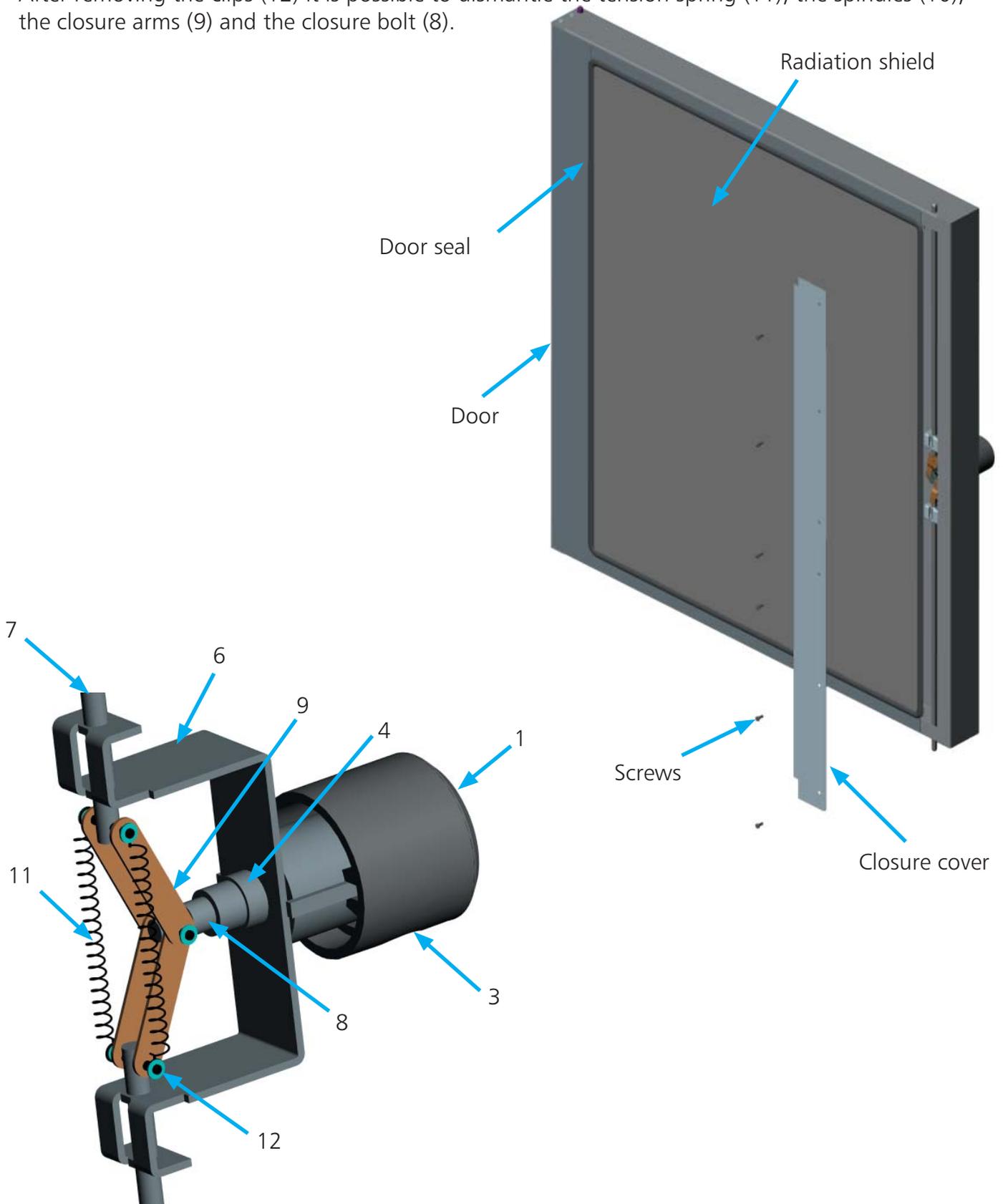
Excentric set to the front
factory-setting

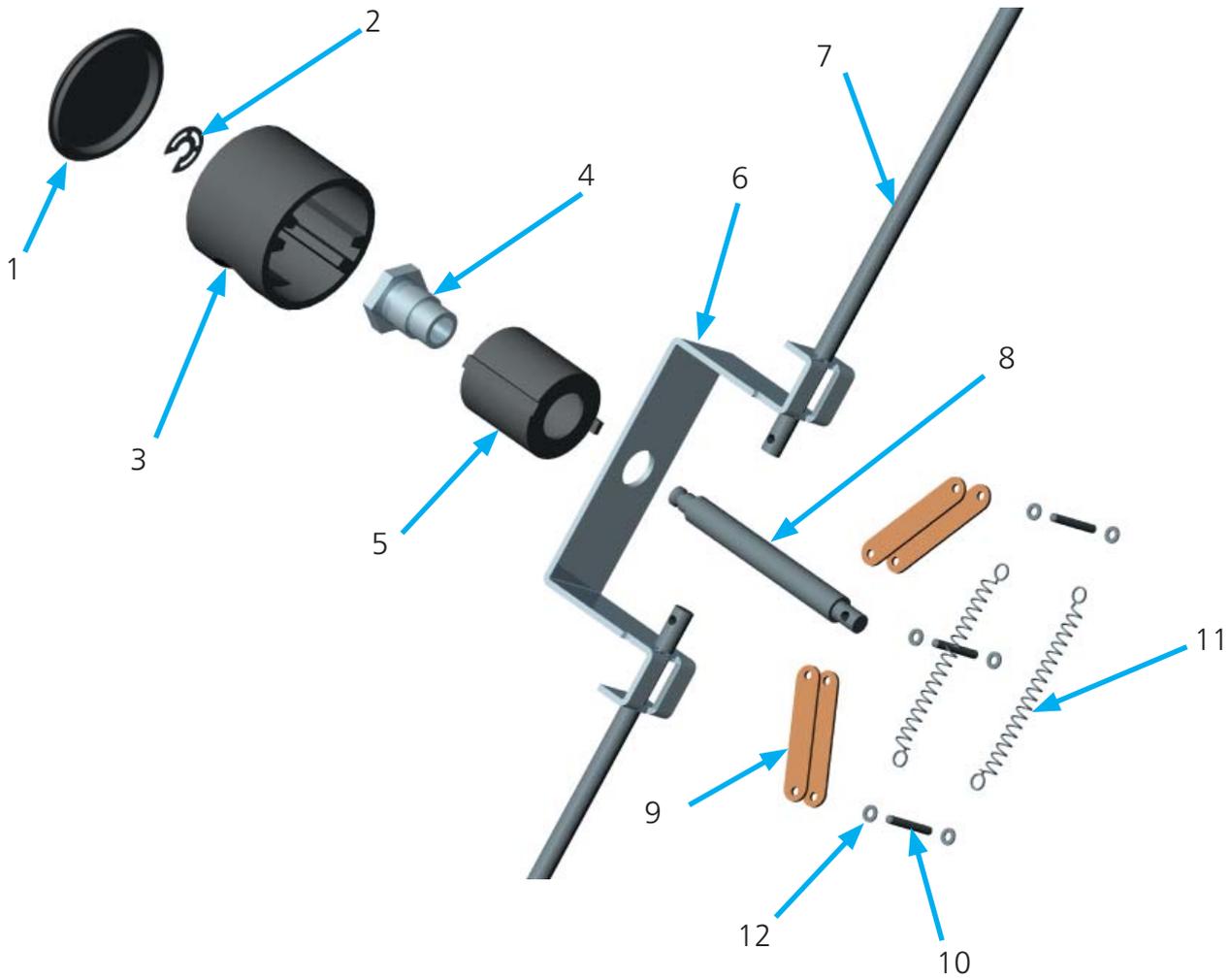


Excentric set to the right,
the door is moved to the right

19.3. Door closure – maintenance and dismantling

- Release the screws and remove the closure cover. (On Models 600-800 there is no closure cover, only unscrew and lift the radiation shield)
- On back-ventilated doors the insulation has to be removed completely and the air guides removed.
- The door closure can now be dismantled in the order 1 to 5
- After removing the clips (12) it is possible to dismantle the tension spring (11), the spindles (10), the closure arms (9) and the closure bolt (8).

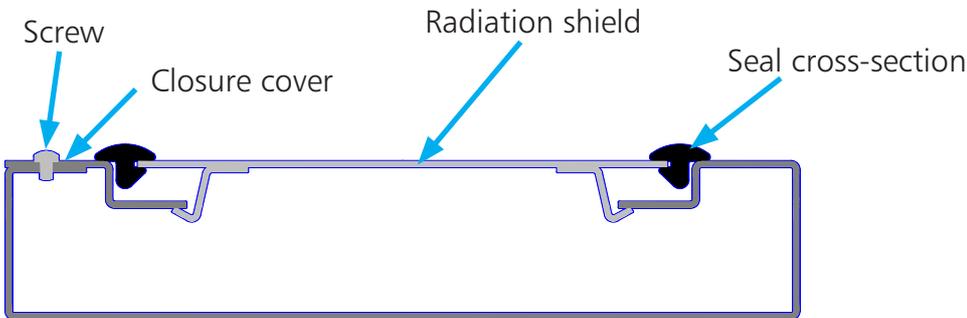




- 1 Door handle cap
- 2 Clip (large)
- 3 Door handle
- 4 Guide screw
- 5 Socket
- 6 Closure bracket
- 7 Closure rods
- 8 Closure bolt
- 9 Closure bars (brass)
- 10 Spindles
- 11 Tension spring
- 12 Clips (small)

20. Replacing the door seal

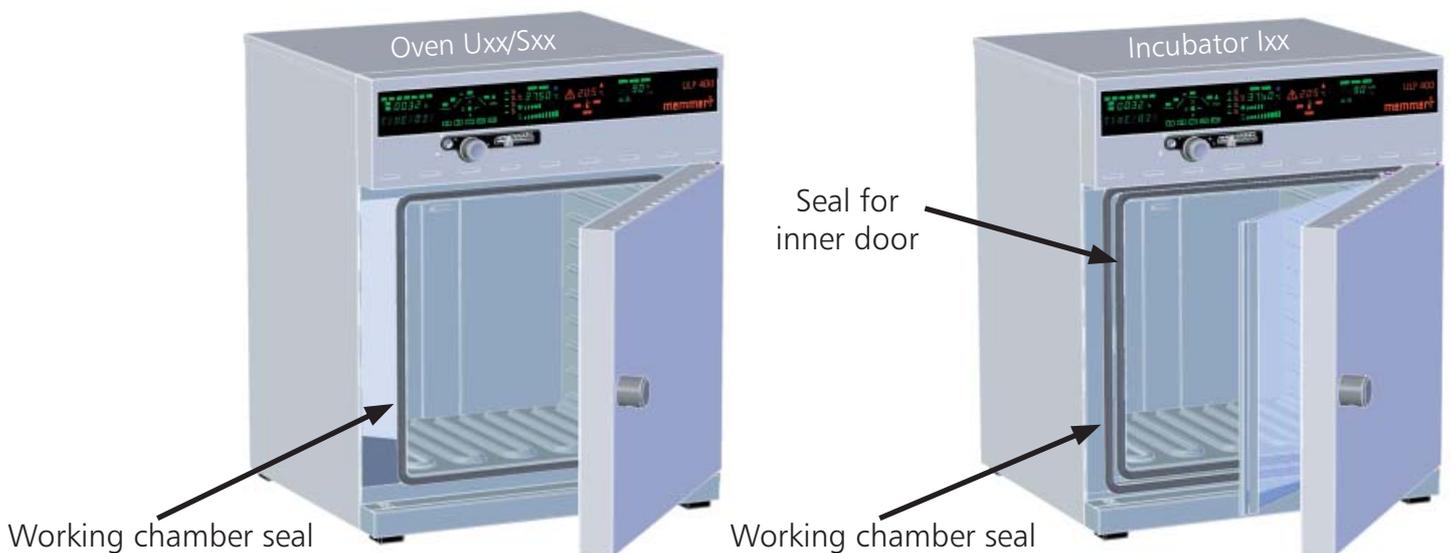
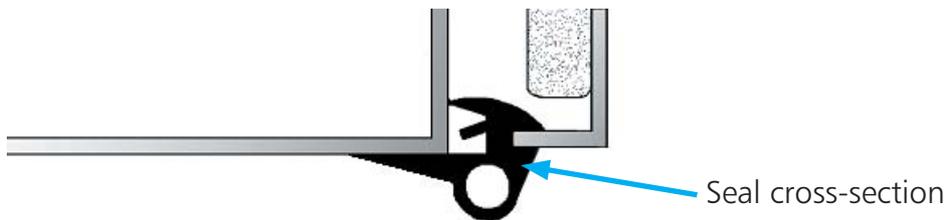
- Dismantle the closure cover (see Section 19.3)
- Raise the radiation shield and remove the old seal.
- (on Model 600-800 release the screws on the radiation shield)
- Cut the new door seal at the ends according to the old seal and slide it on the radiation shield.
- Fit the radiation shield and press it down.
- (On Model 600-800 fit the radiation shield (left with contact strip) and screw it down.)



21. Changing the working chamber seal

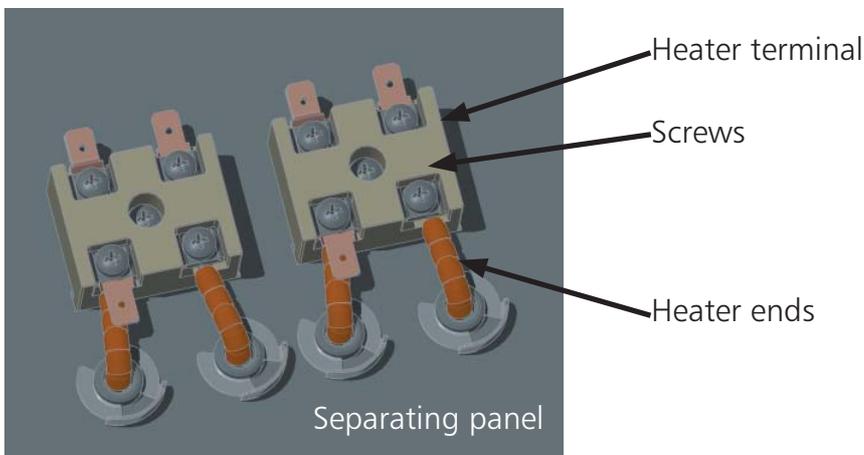
Incubators lxx have two seals

- After opening the door the seals can be pulled out and the new seal inserted.
- The pre-cut length of the seal should be pushed into the interspace without tension and can be shortened a little if necessary.



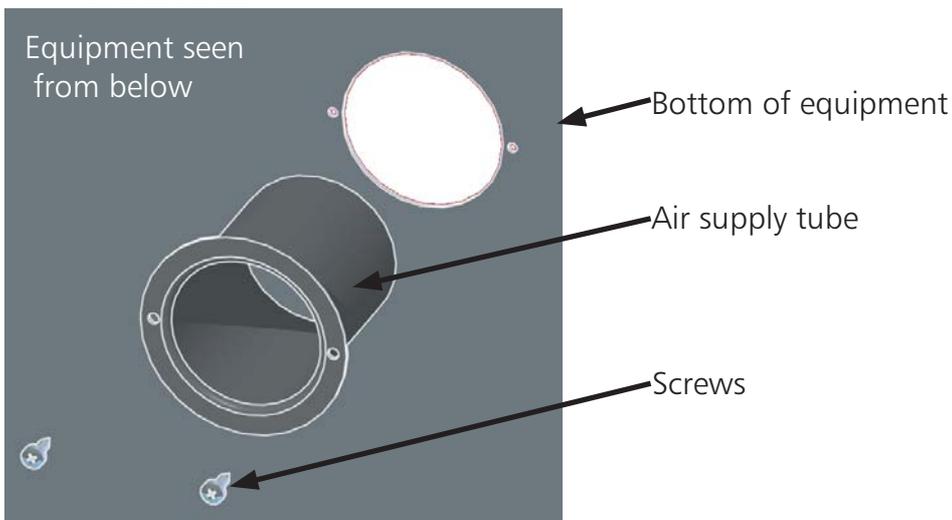
22. Replacing the heating

- Pull out the mains supply plug!
- Remove the housing cover
- Dismantle the door (see Section 19.1)
- On incubators dismantle the inner door (see Section 18)
- Take off the earth connections from the side panels and back panel.
- Pull out side panels and back panel upwards
(on Model 700/800 unscrew all screws on the back panel)
- Disconnect the adjustment spindle for the vent tube at the controller (see Section 11-13)
- Dismantle the temperature probes (see Section 16)
- Disconnect the electrical connections from the main terminals and the controller (see Section 7)
- Dismantle the main switch module (see Section 10)
- Disconnect the end of the heater from the heater terminals (and on Model 600-800 unscrew the terminal holder on the back panel of the working chamber)

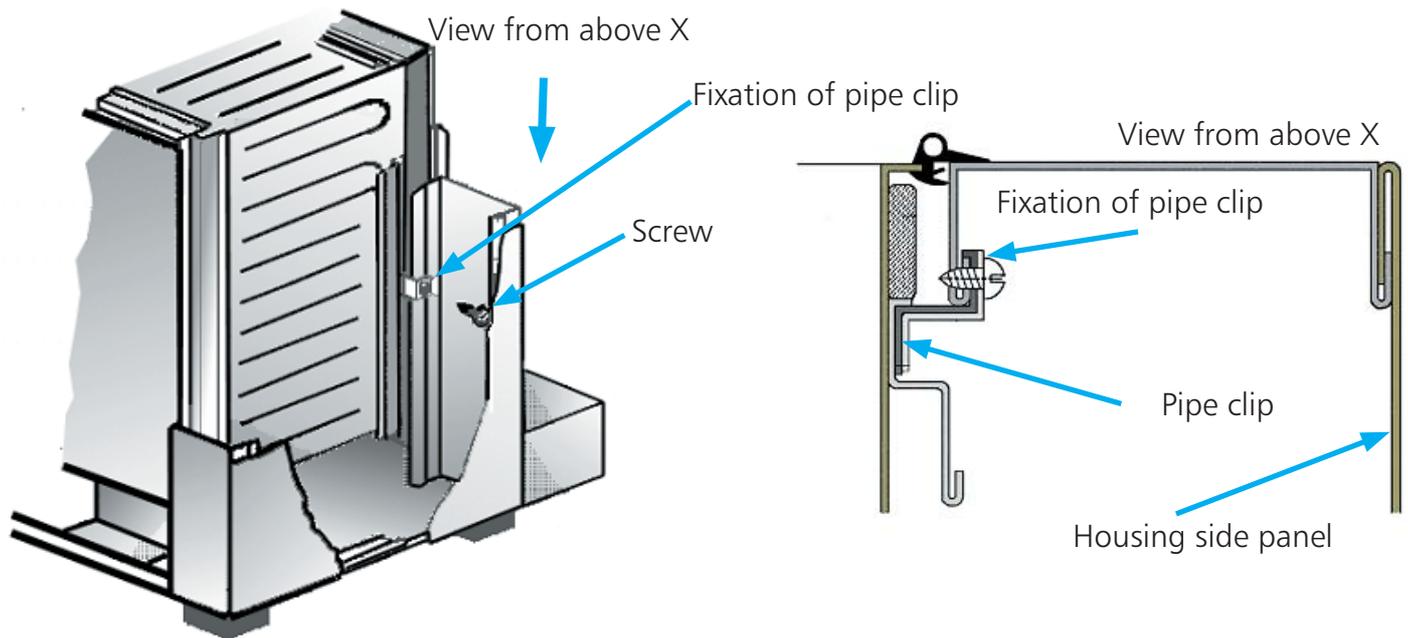


On models 100-500 the heater terminals are inside the switching chamber at the top. On Models 600-800 the heater terminals are located on the back left and right on a terminal carrier

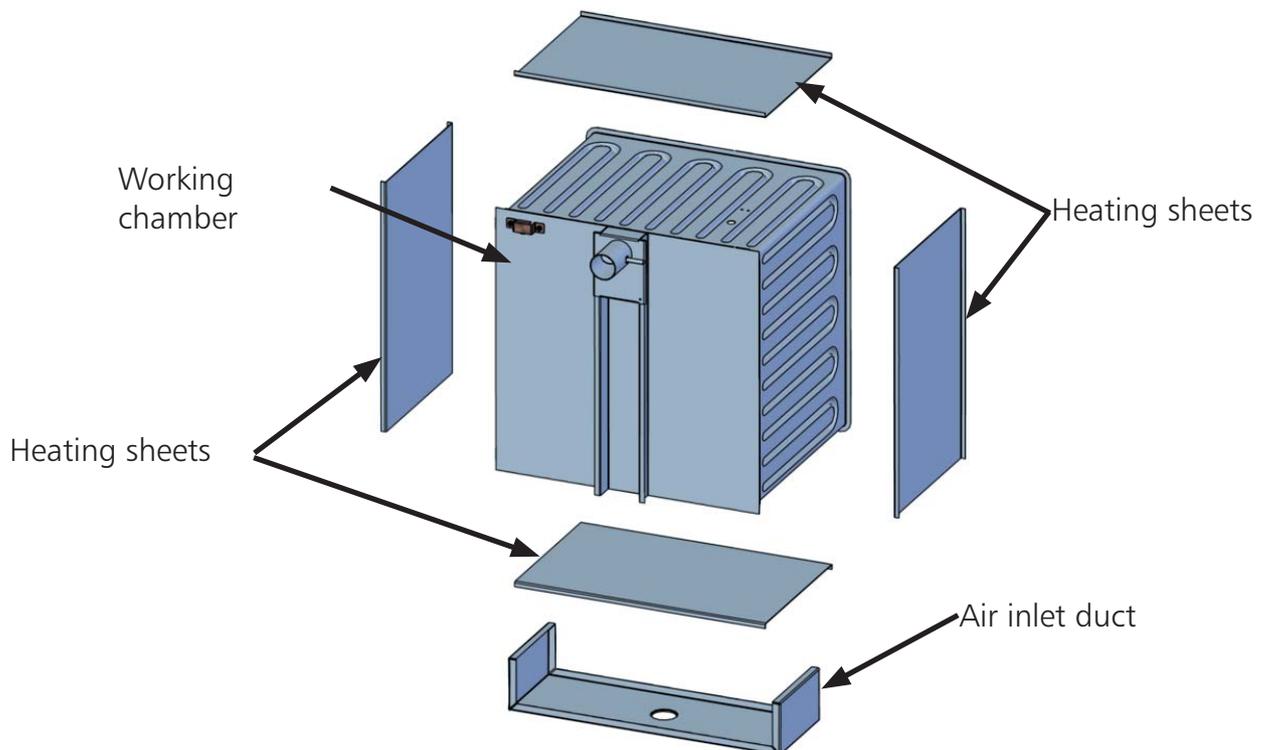
- Unscrew the separating panel
- Remove the insulating mats
- Dismantle the circulating fan motor (see Section 17)
- Release the screw for the air supply tube in the bottom of the unit and take out the air supply tube downwards.



- Pull out working chamber seal (see Section 21)
- Remove fixation of pipe clip
- Expose pipe clip by pressing against the chamber inner walls

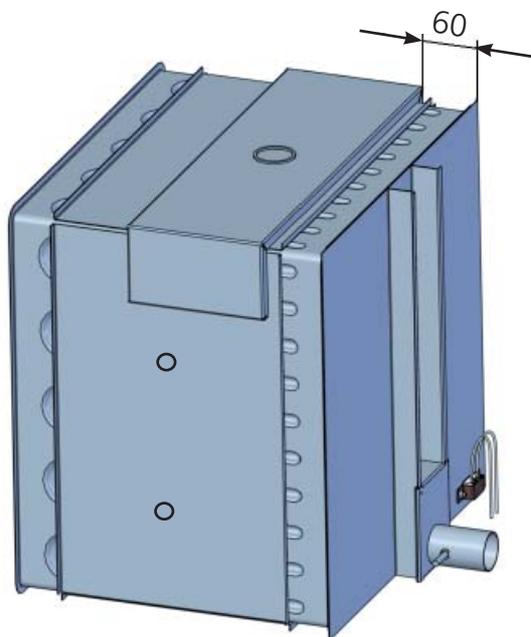


- Take working chamber out of the housing cage towards the back
- After removing the working chamber, remove foil from inlet air duct
- Dismantle inlet air duct and heating sheets by releasing the nuts, and change the heating according to the heating diagram



- Arrange the heating elements accurately – it is essential to note the length of the heater ends from the diagram!
- Secure the newly fitted heating coil with aluminium adhesive tape (supplied with the new heating elements)

- During assembly the air supply duct is affixed to the working chamber with aluminium foil and adhesive as previously. (Apply adhesive with brush on foil and air inlet duct, wait approx. one minute and then assemble the parts)
- Stick the air supply duct on the chamber with a spacing of 60 mm. (On Model 100 the air inlet duct is affixed centrally)



- Press the foil down with a cloth and rub it firmly.
- During assembly, ensure that the pipe clips are not bent.

22. Wiring diagram

N1	Temperaturregler 55161	N1	controller module 55161
N2	Leistungsteil 55162	N2	power board 55162
N3	Leistungsteil 55162	N3	power board 55162
N4	Leistungsteil 55162	N4	power board 55162
N5	Chipkartenlesegerät	N5	chip card reader
N6	Luftklappenservo	N6	air valve servo
N7+N9	Schaltnetzteil SP200 24V / 200W	N7+N9	logical pc board SP200 24V / 200W
N8+N10	Peltiermodul mit Lüftermotoren <small>FP 400-500: AA-081-24-12-00-ME FP 200-300: AA-084-24-12-00-ME</small>	N8+N10	peltiermodule with fan <small>FP 400-500: AA-081-24-12-00-ME FP 200-300: AA-084-24-12-00-ME</small>
S1	Hauptschalter	S1	main switch
S2	mech. Temperaturbegrenzer	S2	mech. Temperature limiter
S3	mech. Temperaturbegrenzer (ICP) 135°C	S3	mech. Temperature limiter (ICP) 135°C
B1	Temperatursensor PT100	B1	temperature probe PT100
B2	Temperatursensor PT100	B2	temperature probe PT100
B3	Drucksensor 1-1100mb	B3	pressure probe 1-1100mb
B11	VO-Thermoblech mit PT100	B11	VO-thermotray with PT100
B12	VO-Thermoblech mit PT100	B12	VO-thermotray with PT100
B13	VO-Thermoblech mit PT100	B13	VO-thermotray with PT100
B14	VO-Thermoblech mit PT100	B14	VO-thermotray with PT100
X1	SUB-D 9-pol. - RS-232	X1	9 channel socket connector - RS-232
X2	SUB-D 25-pol. - Drucker	X2	25 channel socket connector - printer
X3	Buchse VO 3pol. - Pumpensteuerung	X3	3 channel socket purge funktion - pump controll
X4	Steckverteiler	X4	connectorblock
X5-6	Steckverteiler	X5-6	connectorblock
X11	Flanschdose	X11	socket for thermotray
X12	Flanschdose	X12	socket for thermotray
X13	Flanschdose	X13	socket for thermotray
X14	Flanschdose	X14	socket for thermotray
X21-26	Buchse 3pol. potentialfreier Schaltkontakt	X21-26	3 channel socket for volt free contact
M1	Umluftmotor <small>(Modell 200-400) R2K-150 (Modell 500-800) R2E-150 (Modell 700-900) R2E-180</small>	M1	motor for air circulation <small>(Modell 200-400) R2K-150 (Modell 500-800) R2E-150 (Modell 700-900) R2E-180</small>
M2	Umluftmotor R2E-180	M2	motor for air circulation R2E-180
M3+M4	Schaltraumlüfter 3414H	M3+M4	fan for cooling 3414H
K1	Schalterschütz 3TG 1010-1A/2	K1	contactor 3TG 1010-1A/2
R1-R6	Heizung	R1-R6	heating elements
Y1	Magnetventil Edelstahl	Y1	magnetic valve stainless steel
Y2	Magnetventil Messing	Y2	magnetic valve brass
Y3	Magnetventil Messing	Y3	magnetic valve brass
C1	Kondensator 6 uF	C1	capacitor 6 uF
J15	Sensorleiterplatte für Drehgeber 55161-B	J15	sensor for main switch 55161-B
H1-H2	Innenbeleuchtung	H1-H2	interior lightning
H4	Zusätzliche Hupe (option)	H4	additional buzzer (option)

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alle Modelle
Geräteliste
Wiring diagram

ab Geräte-Nr.
from no. -----

230 V / 50Hz

Schutzklasse nach
safety device according to

Zeichnungs-Nr.
plan no.
Seite 1 von 1 D09749
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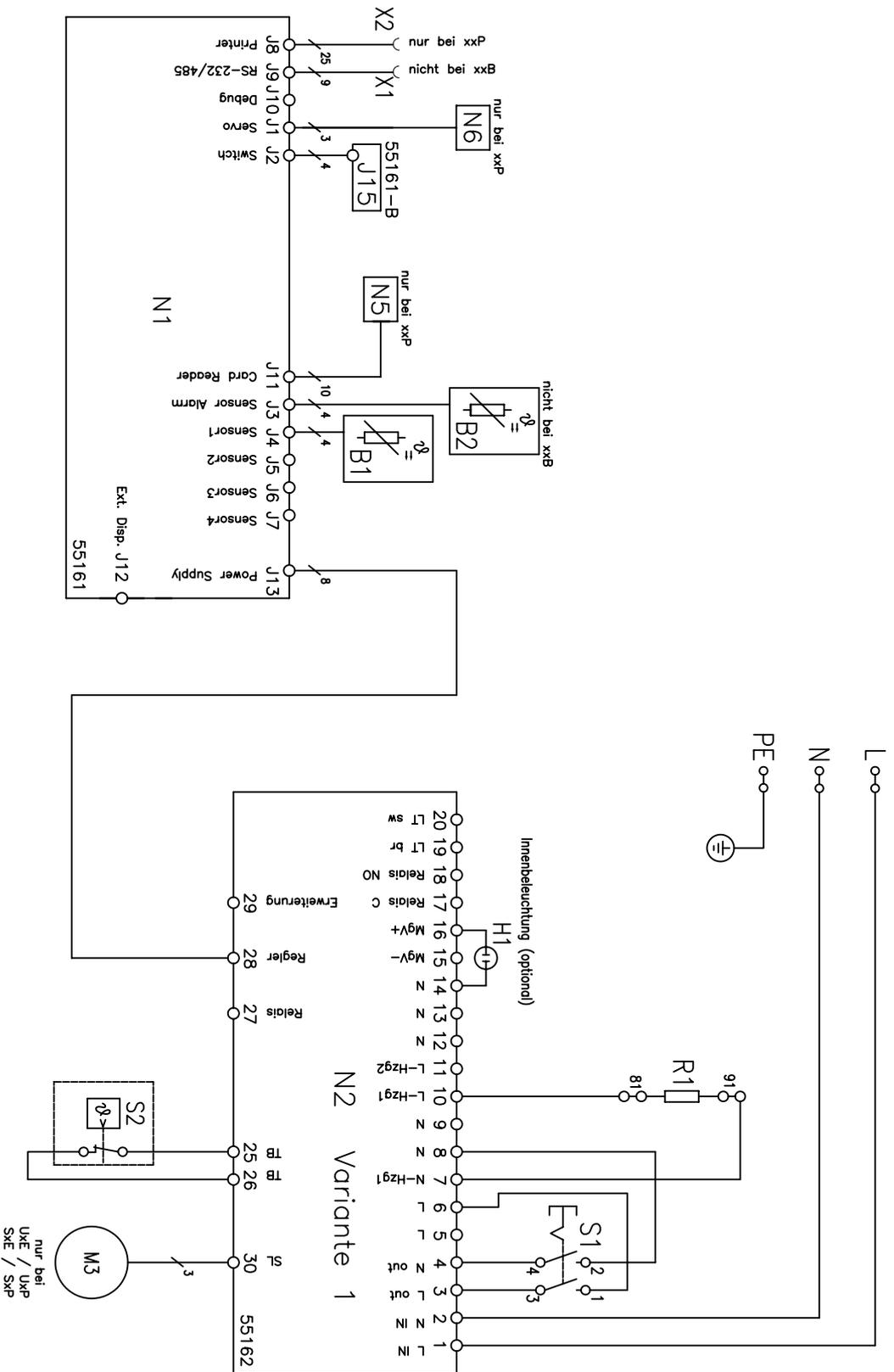
N1	Régulateur de température 55161	N1	Regulador de temperatura 55161
N2	Module de puissance 55162	N2	Etapa de potencia 55162
N3	Module de puissance 55162	N3	Etapa de potencia 55162
N4	Module de puissance 55162	N4	Etapa de potencia 55162
N5	Lecteur de carte à puce	N5	Aparato lector de tarjetas chip
N6	servomécanisme du clapet d'air	N6	Servo de la trampilla del aire
N7+N9	bloc secteur de commutation SP200 24V / 200W	N7+N9	Fuente de alimentación conmutable SP200 24V / 200W
N8+N10	module Peltier avec moteur de ventilation <small>IPP 400-500: AA-081-24-12-00-ME IPP 200-300: AA-054-24-12-00-ME</small>	N8+N10	Módulo Peltier con motores de ventilación <small>IPP 400-500: M-061-24-12-00-ME IPP 200-300: M-064-24-12-00-ME</small>
S1	commutateur principal	S1	Interruptor principal
S2	dispositif de sécurité mécanique TB	S2	Limitador de temperatura mec.
S3	dispositif de sécurité mécanique (ICP) 135°C	S3	Limitador de temperatura mec. (ICP) 135°C
B1	thermosonde PT100	B1	Sensor de temperatura PT100
B2	thermosonde PT100	B2	Sensor de temperatura PT100
B3	capteur de pression 1-110mb	B3	Sensor de presión 1-1100mb
B11	thermoplateau VO avec PT100	B11	Chapa térmica VO con PT100
B12	thermoplateau VO avec PT100	B12	Chapa térmica VO con PT100
B13	thermoplateau VO avec PT100	B13	Chapa térmica VO con PT100
B14	thermoplateau VO avec PT100	B14	Chapa térmica VO con PT100
X1	SUB-D 9-pol. - RS-232	X1	Conector Sub-D 9 polos - RS-232
X2	SUB-D 25-pol. - imprimante	X2	Conector Sub-D 25 polos - printer
X3	Douille VO 3pol pilotage pompe	X3	Hembrilla VO 3 polos - pump control
X4	bloc de connexion	X4	Distribuidor enchufable
X5-6	bloc de connexion	X5-6	Distribuidor enchufable
X11	prise pour thermoplateau	X11	Caja de brida
X12	prise pour thermoplateau	X12	Caja de brida
X13	prise pour thermoplateau	X13	Caja de brida
X14	prise pour thermoplateau	X14	Caja de brida
X21-26	douille 3pol pour commutation hors potentiel	X21-26	Hembrilla 3 polos para contacto de conmutación libre de potencial
M1	moteur turbine de brassage <small>(Modell 200-400) R2K-150 (Modell 500-800) R2E-150 (Modell 700-800) R2E-180</small>	M1	Motor de recirculación <small>(Modelo 200-400) R2K-150 (Modelo 500-800) R2E-150 (Modelo 700-800) R2E-180</small>
M2	moteur turbine de brassage R2E-180	M2	Motor de recirculación R2E-180
M3+M4	ventilateur compartiment technique 3414H	M3+M4	Ventilador de la sala de conexión 3414H
K1	contacteur 3TG 1010-1A12	K1	Contacto 3TG 1010-1A12
R1-R6	éléments de chauffe	R1-R6	Radiador
Y1	électrovanne inox	Y1	Electroválvula de acero inoxidable
Y2	électrovanne laiton	Y2	Electroválvula de latón
Y3	électrovanne laiton	Y3	Electroválvula de latón
C1	condensateur 6µF	C1	Condensador 6 uF
J15	platine pour bouton rotateur 55161-B	J15	Placa de circuitos impresos del sensor para el encoder giratorio 55161-B
H1-H2	éclairage intérieur	H1-H2	Iluminación interior
H4	avertisseur additionnel (option)	H4	Bocina adicional (opcional)

Situation: 10.05.2005

Estado: 10.05.2005

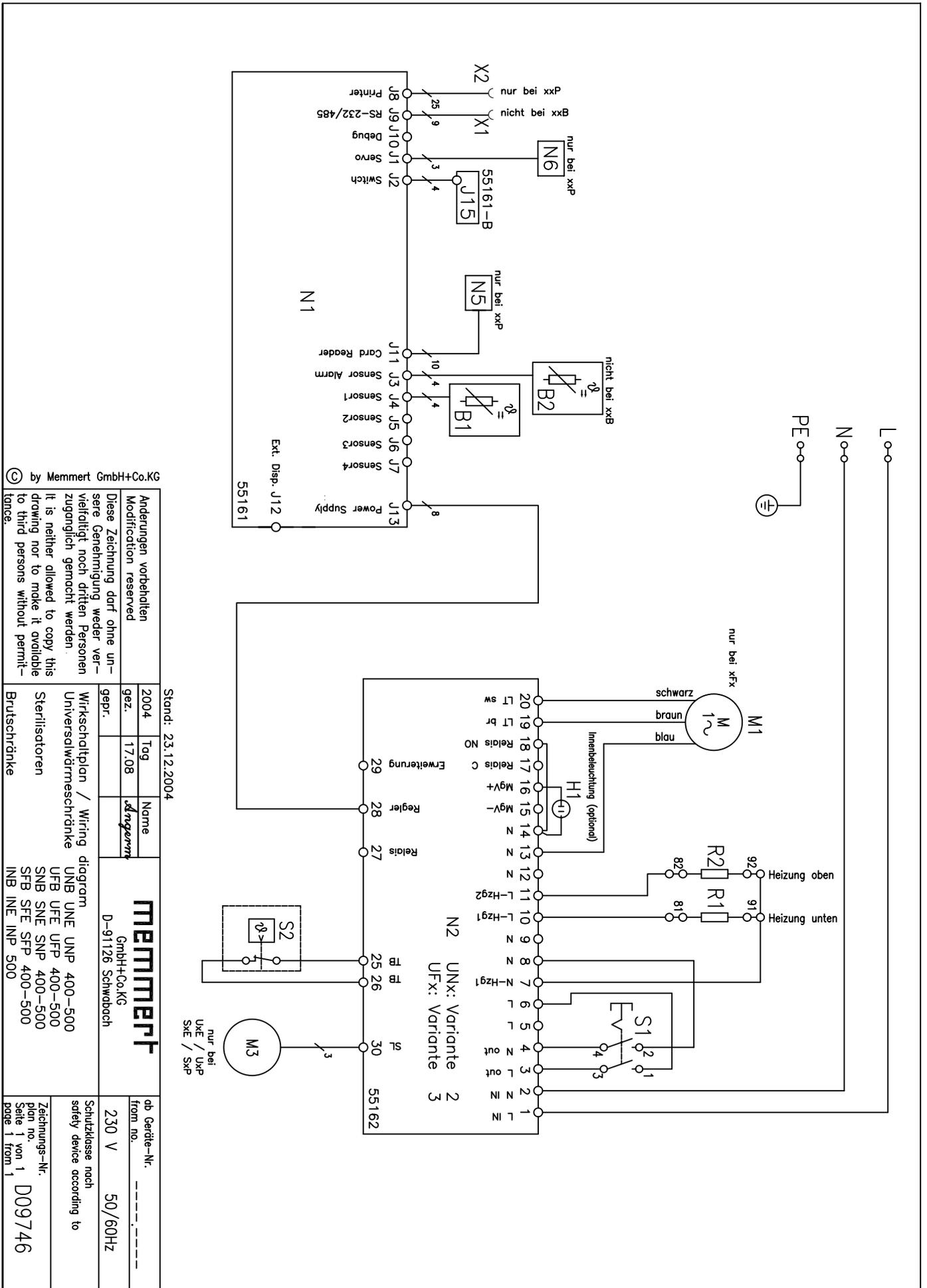
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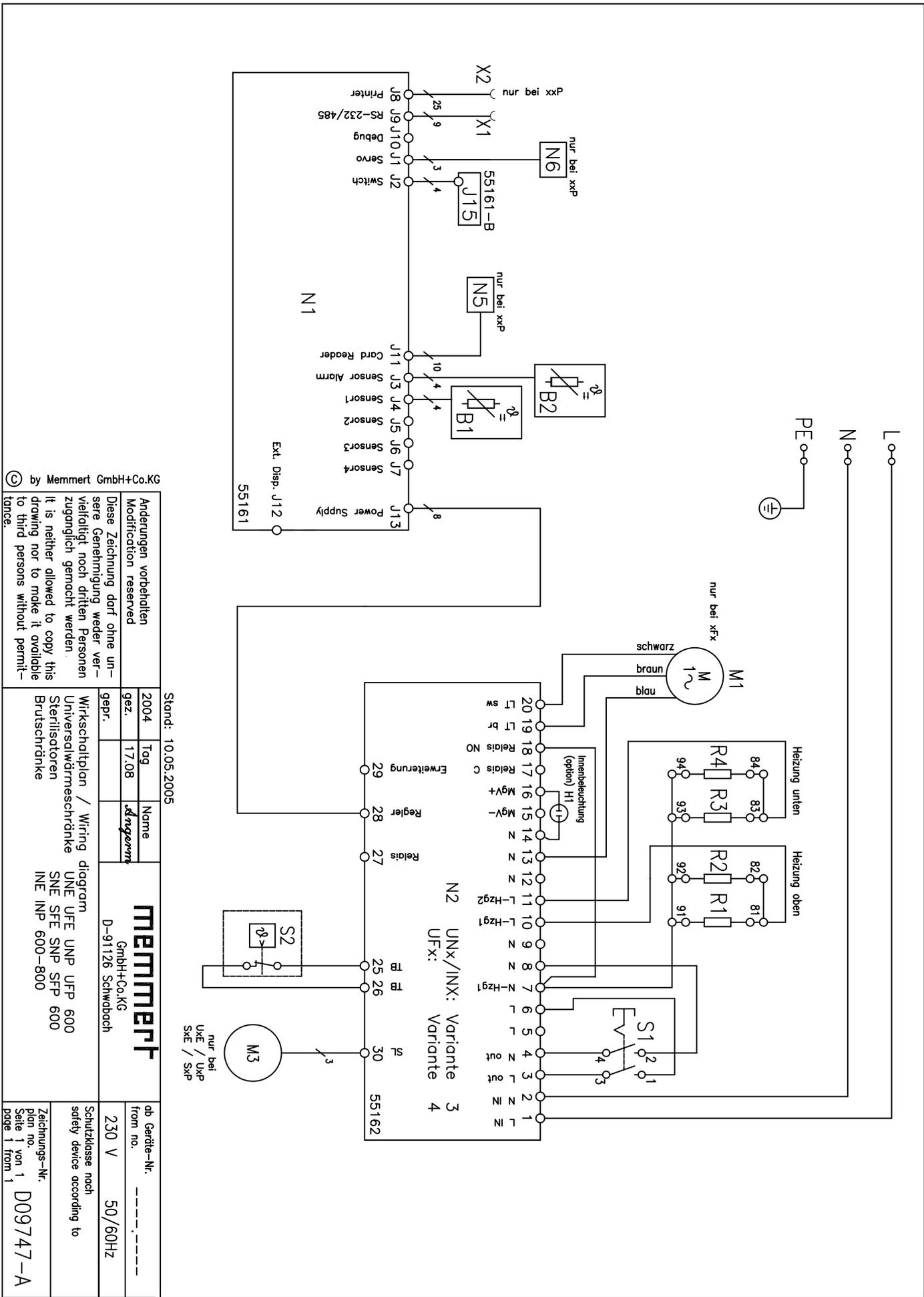
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Wirkschalplan / Wiring diagram
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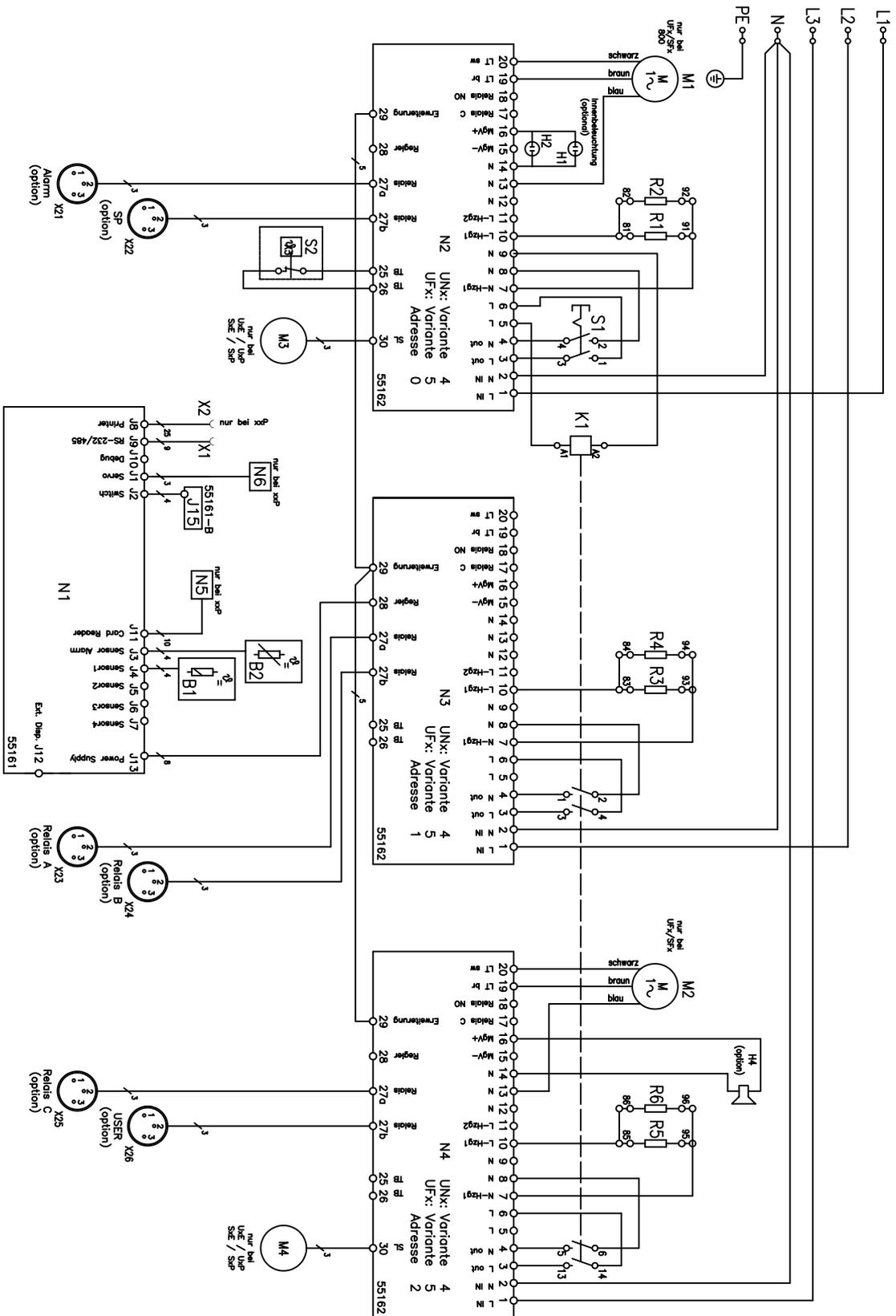
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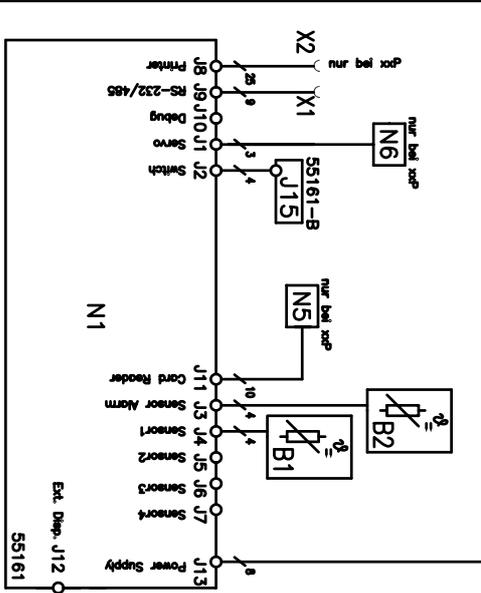
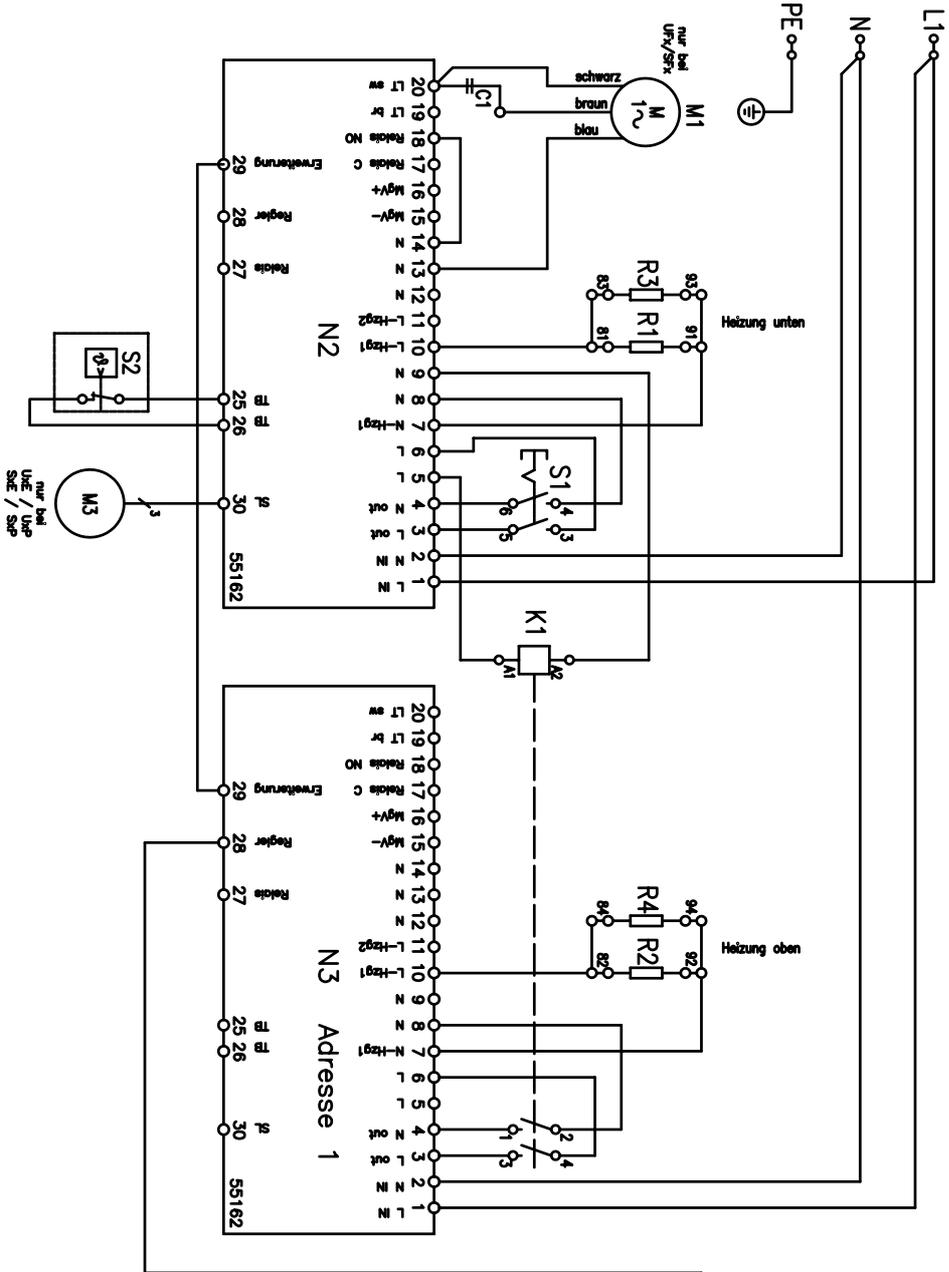
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	UNX SNX	UFX SFX
N2	Variante 2	Variante 3
N3	Variante 4 Adresse 1	Variante 4 Adresse 1



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2004	Tag	Nr.		115 V	50/60Hz
2004	17.08			Schutzklasse nach safety class according to IEC 60335-1	
Wirtschaftsplan / Wiring diagram Universaldrehmaschine Serielladoren			Urk. 500+600 / 115V Ser. 500+600	Zustimmungs-Nr. Datei von 1 009753-A	

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25. Address and customer service

MEMMERT GmbH+Co.KG
PO Box 17 20
91107 Schwabach

Äußere Rittersbacherstr. 38
91126 Schwabach
Germany

Phone: 00 49 9122 / 925-0
Fax: 00 49 9122 /14585
E-mail: sales@memmert.com
Internet: www.memmert.com

Customer service:
Phone: 00 49 9122 / 925-143
or 00 49 9122 / 925-126
E-mail: service@memmert.com

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