# **Training Manual**

## SelfCookingCenter® whitefficiency® (SCC\_WE)



#### General hints:



Isolate the appliance from mains supply before opening the appliance



When working with chemicals, i.e. aggressive cleaning materials always wear protective clothing, goggles and gloves!



After maintenance / repair the appliance must be checked for electrical safety in accordance with your national, state and local requirements!



Whenever working on any gas component like: Gas valve, gas blower and / or changing connected type of gas a detailed flue gas analysis MUST be done using adequate CO and CO<sub>2</sub> measuring equipment! This shall ONLY be done by trained technicians! Always check appliance for possible gas leakages!

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### **Parts location**



### **Parts location**





#### Differences from SCC\_WE (Index H) compared with SCC Index G

- 1. Unit self test after installation; all components are tested for correct function and determination of boiling point;
- 2. Steam mode preset to boiling point (no hot air supply), 30-130°C possible (86 266°F)
- 3. New humidity control (Clima valve) for advanced dehumidification
- 4. New fan motor rotates left right
- 5. New PCB and TFT touch display with Ethernet connection
- 6. Moistening nozzle integrated into hot air heating element flange of electric units
- 7. Modified cover for quenching box
- 8. Cooling fan is temperature controlled
- 9. Cleaning program "Light" is split into "Light Quick" duration approximately 1h 05min and "Light standard", duration approximately 1h 46min.
- 10. Operator and Application manuals are available on display;







Fan wheel speed setting



Cool Down



Steaming at boiling point (no hot air)

### **Survey Pictogram**







### Survey Pictogram

	Start Service Level	$\checkmark$	Confirm
1	Date and time		Operator and Application Manual
<b>BIART</b>	Start time		Safety advice
24 <sup>h</sup> 🍋	Time format 24h	+ care	CleanJet +Care
am.pm 24	Time format am / pm	CareControl	Care Control
<b>₩</b> C.1	Temperature setting °C - °F		
2	Half energy		
<b>1</b>	Setting ring tones		
	Show Mode (when in red)		
*	Display brightness		
	Sequence of levels		
	Number of levels		
	Factory settings - english, °C, 24 hours etc		
Δ	Delta T		
	Prozess abort key		

### **Function Key - Settings - Service - Communication**







During the production of steam, the concentration of minerals inside the steam generator will increase over time. These minerals settle on the heating elements and heat exchanger as well as the interior steam generator walls.

In order to reduce this effect the steam generator will be pumped off and flushed regularly depending on the duration of steam production. This process needs approximately 45 seconds. After emptying the steam generator it will be filled automatically with fresh water.

There are 4 conditions to start this SC Automatic:

- 1. Heating time of the steam generator must exceed 60 min.\* and
- 2. the temperature of the thermocouple steam generator must be below 65°C (149°F) and
- 3. the temperature of the thermocouple interior cabinet must be below 70°C (158°F) and
- 4. the unit is switched ON.



In case the unit is used permanently the above mentioned temperature conditions can not be met.

In this case the "forced SC Automatic" applies as follows:

1. The heating time of the steam generator reaches twice the set duration\*, e.g. 120 min. and

2. the unit door is open for longer than 30 seconds

\* The marked values can be changed in unit specific ranges using the diagnostic program.

After completion of the SC-Automatic the accumulated steam heating time is re-set to zero.

#### SC-Automatic does not replace the need for descaling and/or installing water treatment filter



### SCC\_WE Electric (Index H): Basic principle



- B1 Thermocouple interior cabinet
- B2 Thermocouple quenching
- B3.1-B3.6 Thermocouples core temperature
- B4 Thermocouple humidity
- B5 Thermocouple steam generator (preheat, 180°C (356°F) max)
- F3 Safety thermostat steam generator 160°C (320°F)
- F4 Safety thermostat interior cabinet 360°C (680°F)
- M1 Fan motor (Floor unit: top)
- M4 SC-pump
- M6 CleanJet pump
- M7 Motor drain valve / ball valve
- M12 Care pump
- S2 Level electrode
- S3 Door reed switch
- S11 CDS sensor
- S12 Micro switch drain valve
- P1 Differential Pressure sensor humidity
- Y1 Solenoid valve filling
- Y2 Solenoid valve quenching
- Y3 Solenoid valve moistening
- Y4 Solenoid valve Care
- Y5 Solenoid valve Clima

SCC 201/202 only:

M2 Fan motor bottom with jumper (Floor units only)

### Manual modes SCC\_WE / Boiling point recognition



#### Steam mode in relation to boiling point recognition

During self test (after initial installation) the unit will determine the installation altitude by water boiling point recognition.

As the boiling temperature declines with increasing altitude above sea level, the water boiling point determines the installation altitude.

During self test the steam production will be active until the quenching sensor B2 reaches 70°C (158°F). At this time the pcb will memorise the temperature measured by the interior cabinet sensor B1 as the boiling point temperature at the actual point of installation.

To run a manual cooking mode the following steps must be taken:

- 1. Cooking mode is selected.
- 2. Time or core temperature is selected.
- 3. Cabinet door is closed (door contact).

4. Fan motor is running (speed signal via bus).

5. In wet modes (Steam, Combination) the steam generator must be filled with water (level electrode)

6. In wet modes (Steam, Combination) the steam generator will be preheated

(thermocouple steam generator)

Mode	Temperature range	Responsible sensor	
	30° (87°) up to boiling point	Cabinet sensor B1 controls steam heating - Humidity setting not possible	
<b>S</b>	at boiling point	Cabinet sensor B1 controls steam heating - Humidity setting not possible	
	above boiling point up to 130°(266°)	Humidity control (P1, M1 rpm and B4) controls steam heating, Cabinet sensor B1 controls Hot air heating at 50%, (only possible when humidity is above 70%) - Humidity setting not possible	
	30° (87°) up to boiling point	Cabinet sensor B1 controls Hot air heating up to set temp.; Cabinet sensor B1 controls steam heating	
	above boiling point up to 300°(572°)	Cabinet sensor B1 controls Hot air heating up to set temp.; Humidity control (P1, M1 rpm and B4) controls steam heating,	
	30 - 300°C (86 - 572°F)	Alternating supply of steam and hot air depending on the reached temperature and humidity. - Humidity setting is possible	
	30 - 300°C (86 - 572°F)	Cabinet sensor B1 controls Hot air heating - Humidity setting is possible (humidity from food only)	

Quenching controlled by B2 at 80°C (176°F) Wet, 90°C (194°F) in Hot Air

### Selftest

1.0		
Selfttest	Selfttest	Selfttest
self test and adjust itself perfectly the set-up conditions and the altitu	<ul> <li>Your SCC will carry out an automatic self test and adjust itself perfectly to the set-up conditions and the altitude.</li> <li>To determine the optimum number of cleaner and rinse aid tablets, please specify whether the unit is connected to normal water or soft water. Please press the appropriate button</li> <li>Unit is connected to soft water (up to 8,75° e)</li> <li>Unit is connected to normal water (over 8,75° e)</li> </ul>	Your SCC will carry out an automatic self test and adjust itself perfectly to the set-up conditions and the altitude.
Start	Next	
	11:27 <b>3</b> Softwater: 7°dH, 12.5°F, 8.7°E, 125ppm, 1.25 mmol/l	11:27 🏹 ?

#### Self test

Note: Gas units: In case the unit was <u>NOT</u> delivered with the correct gas type configuration, it must be converted prior of starting the self test. Please refer to gas manual!

SCC\_WE and CM\_P units will run a automatic Self Test routine after installation.

This Self test will start under the condition, that the tempearture of B1, B2 and B4 are below  $40^{\circ}$ C ( $104^{\circ}$ F).

Additionally 1 flat and closed GN container (max 20mm) shall be inserted into the cabinet with the opening facing down at a height center to the fan wheel. (201 - 202: 2 fan wheels = 2x GN containers)

The self test comprises a component test, calibration and determination of the boiling point

After the component test (S2, M4, Y1-Y4, CDS) the calibration will start with the offset setting on P1 before the unit will determine the pressure values for all fan speeds and directions in cold and dry condiition. During step 200 the boiling point will be determined and stored. This is followed by P1 calculating the pressure values for all fan speeds and

directions in steam and later combination mode 170°C (338°F).



Should at a later point in time the unit be reinstalled at a altitude more than 300m different to the original installation height, a new self test should be initialized in order to determine the new boiling point. Such re-initialization can be be done in Basic settings, self test.

#### Calibration:

During a manual calibration only the P1 pressure values for cold (<40°C), steam (at boiling point) and combination (170°C) are calculated.

There will be NO determination of a new boiling point.

### Selftest

During the self test the individual component groups are indicated ticked off one by one. In case an error number is displayed switch the unit OFF and ON again to access Service level.

If the door contact, thermocouple interior cabinet, bus cable to motor or ignition box is defective, the selftest will be interupted

Note: During Self Test it is always possible to access the Service diagnostic mode!

Pre condition before Self test and Calibration				
	temperature of cooking cabinet sensor B1 is below 40°C (102°F)			
	temperature of quenching sensor B2 is below 40°C (102°F)			
	temperature of humidity sensor B4 is below 40°C (102°F)			
	door contact closed			
heating: OFF fan motor: OFF left side panel closed, interior cabinet clean, if possible dry; to achieve best calibration values insert a closed 20mm GN container with opening facing down onto the rail closest to the center of the fan wheel (201-202: 2 motors - 2x GN container)			possible dry; eed 20mm GN container to the center of the fan wheel	
Step	Function	possible error message	reason for error - remedy	
0	ready fo calibration		Any indicated error relates to the corresponding malibration step.	
10	checking calibration conditions	10	e.g. error 10 will be indicated, when the condition for calibra- tions is not given.	
20	Measuring Offset P1 with fan motor not turning			
100 - 115	pressure measurement cold table unit 61 - 102		16 steps for each fan motor, (32 steps with floor models), e.g. 100: running fan motor at constant speed "1" 101: store P1 value at this given speed	
100 - 131	pressure measurement cold floor unit 201 - 202			
200	steam heating up to boiling point without fan motor	200	e.g. error 200 is indicated, when the steam heating will not reach the necessary 70°C (158°F) to detremine the boiling	
202	steam heating with fan motor		point in the allocated time. Reason: e.g. SSR (energy optimising) or gas burner is not	
210 - 225	pressure measurement steam table unit 61 - 102		activated etc.	
210 - 241	pressure measurement steamfloor unit 201 - 202			
300	heating of cabinet to 193°C (380°F) followed by 60 sec. to 170°C (338°F) steady condition			
301 - 316	pressure measurement combi table unit 61 - 102	e.g. 302	e.g. error 302 is indicated, if sensor P1 does not give any or	
301 - 332	pressure measurement combi floor unit 201 - 202		Reason: P1 defective or hoses to P1 blocked by water.	
999	calibration sucessfull			
			These errors are indicated during the respective calibration step is running. After solving the problem the Selftest must be started again.	

### Humidity control SCC\_WE

In order to measure the humidity inside the interior cabinet the following pysical principle is used: When the fan wheel is turning, the rear fins create a differential pressure on pressure sensor p1 via the connecting hoses (inner and outer connection).

The pressure sensor P1 is supplied with 12V DC. When the fan wheel is at a stand still, the offset voltage is between 0,45 - 0,55V DC.

The differential pressure is dependent on:

- 1. The speed of the fan wheel
- 2. The temperature in the cabinet
- 3. The amount of humidity in the cabinet

The following rules apply:

The output voltage of P1 is higher when the fan wheel turns faster. The output voltage of P1 is higher when the cabinet temperature is lower. The output voltage of P1 is higher when the humidity in the cabinet is lower.

This differential pressure is converted into a dc voltage for processing by the pcb.

Sample: SCC\_WE 101E

NOTE: The given values are only average values and shall only demonstrate the relationship of pressure values P1 to change in speed, temperature and humidity.

	500 rpm	1000 rpm	1450 rpm	1550 rpm
Cold and dry	1,1V	2,2V	2,9V	3,1V
Warm and humid - Steam 100°C (212°F)	0,7V	1,7V	2,0V	2,2V
Hot and humid - Combination 180°C (	0,6V	1,5V	1,7V	1,9V



If the measured humidity value is too high, the clima valve Y5 will be activated and the closing disk will be lifted. The negative pressure behind the fan wheel will cause dry air from the kitchen be sucked into the cabinet. The humid air will be displaced and pushed through the cabinet drain into the quenching chamber.

This Clima valve also functions as the safety relief valve.

Cross section of the clima valve:



#### **Emergency humidity control:**

In case the differential pressure sensor P1 is defective (no signal), the steam generator will be activated by time control automatically to a humidity level of 60%. At the same time error "Service 36" will be shown.

Should the signal of P1 be out of the standard range (invalid signal), humidity will be controlled by the quenching sensor.

At the same time error "Service 37" will be shown.







#### Interface PCB A1

X7 X10 X102 X150 X151	Power input to ON/OFF switch Central dial Touch
X152 X153 X154 X155 X158	Data cable CPU (X107) Data cable TFT

Main PCB A2		
X1	Pressure sensor P1	- 12V DC
X2	Thermocouple B3.1 - 3.6 core probe	
X3	Thermocouple B1 cabinet	
X4	Thermocouple B2 quenching	
X5	Thermocouple B4 humidity	
X6	Thermocouple B5 steam generator	
X8	Loud speaker T2	- 12V AC
X11	Solenoid Y5 Clima	- 12V DC
X12	Level electrode S2	- 12V AC 600Hz
X13	Cabinet light	- 11.5V AC
X14	Power supply from transformer T1:	- 11.5V AC, 18V AC
X15	CDS Sensor	- 12V DC
X16		
X18	SC Pump M4, Cleanjet Pump M6	
X19	Solenoid Y1, Y2, Y3	
X20	Energy optimising (Sicotronic)	- link on 2-4
X21	230V Power input	
X23	UltraVent without Bus (USA only)	
X24	SSR	- 12V DC
X25	Drain valve M7, Micro switch S12	- 12V DC
X26		
X27	Door contact S3	- 12V DC
X29		
X30		
X51	Bus cable	
X54	USB connection	
X60	SD card slot	
X75	cooling fan M5, Care Pump M12, Soler	noid valve Y4
X106	Ethernet connection	
X107	Data cable Interface PCB (X153)	
F1	2A slow 230V power input X21	
F2	2A slow 230V power input X21	

LED Code CPU:

LED V10:	Internal power supply 3,3V processor ok
	if V10 off and V68 ok - change PCB
LED V68:	18V power supply from T1 ok
	if V68 off - check connection, change transformer T1

 $\bigwedge$ 

ONLY remove the SD card from the pcb, when the pcb must be replaced!

The SD card shall NOT be connected to any windows based reader or Computer! Doing so will damage the data structure on the SD card and your unit will no longer function!

The SD card on port X60 contains all unit specific information like energy type, unit size etc.

The SD card is unit specific and shall NOT be transferred from one unit to another!



Service part pcb's are sent without SD card. Should you need to replace an original pcb by a service part pcb, remove the SD card from the old pcb and insert it into the new pcb. The unit will not function if the SD card is not inserted.

This SD card is specially formatted and configured for use in the SCC\_WE unit. You can not replace it by a locally purchased SD card.

1	Software update		Only possible when SD card is properly inserted
2	PCB New - No SD card in- serted		Unit will not function
3	PCB new - Old SD card (standard service call)	1. A Contraction of the second	Upload icon key is shown, When pressing the icon for 10 seconds, data are copied from SD card to pcb
4	PCB old - New SD card (Service 19.1)		Data are copied automatically from pcb to SD card.
5	PCB new - SD card from other unit (only in case of emergency, e.g from unit from shown room, when no SD card is available as a service part)		Upload icon key is shown, When pressing respective key for 10 seconds, data are copied from SD card to pcb
6	a) SD card old - PCB from other unit (only in case of emergency, e.g from unit from shown room, when no PCB is available as a service part)		Upload icon and download icon keys are shown, Display: Please select for recovery: PCB was replaced (a)
	b) PCB old - SD card from other unit (only in case of emergency, e.g from unit from shown room, when no SD card is available as a service part)		SD card was replaced (b) When pressing respective key for 10 seconds, data are copied from pcb to SD card or vice versa.



#### NOTE: Emergency only!

A SD card from another unit can ONLY be used, when this unit is of the same size and energy (electric or gas)!

After using a new SD card (Case 5 and 6 (SD - card to unit) the Selftest must be re-activated in Basic Setting > Selftest.





On floor units with 2 motors the bottom motor carries a jumper for bus recognition. This jumper is part of the wiring harness.



Only when the motor is connected to mains supply the green LED will show and the bus signal can be processed.

Voltage L1-L2-L3	Motor 40.03.378 - Rotor black <b>100 - 250V</b> - 550W	Motor 40.03.513 - Rotor brown 200 - 250V - 700W	Motor 40.03.514 - Rotor brown 400 - 480V - 700W
3(N)AC 400V - 415V	61 -101 - 201	62 -102 - 202	
3AC 200V - 240V	61 -101 - 201	62 -102 - 202	
3AC 400V - 480V			61 - 202

**NOTE: Gas units 62, 102 and 202 for countries with voltage 3AC200-240V, USA / Japan etc:** Gas units 62, 102 and 202 must be connected to L1 - L2, because the fan motor **40.03.513** is running on 200 - 250V only.

When changing the fan motor, a new motor shaft gasket must always be used!

There are 4 different fan speeds. It is possible that the motor will reduce speed independently to avoid energy transfer by the rotating fan wheel.

The fan motor rotates clockwise - anticlockwise with a 120 second interval.

On floor units the bottom motor (with jumper) has a 60 second time lead in changing direction to the upper motor.

Blink code LED: Please refer to error messages!



### **Bus connection**





Bottom motor and bottom ignition box

The bus system is equipped with a 6-pol Mini-Fit plug system.

In the bus system the individual components have individual addresses. Each address only exists once in a unit.



The duplicated components in a floor unit, Fan motor bottom and Ignition box bottom are identified with a jumper on the component. This jumper is part of the control harnes.

The main pcb sends the action command via the bus cable.

Additionally the pcb receives information from the individual components via the same bus (e.g. rpm).

The connecting sequence for the components on the bus is not important and can be chosen freely.



Contactor with 12V DC coil



#### SSR with 12V DC control



#### SSR Test: Unit is switched ON and cabinet door is open L1 - L2 = 400V





Control of SSR steam element at 100% energy demand

Star connection 3(N)AC 400-480V

Control of SSR steam element at 50% energy demand Star connection 3(N)AC 400-480V





Control of SSR steam element at 100% energy demand Delta connection 3AC 200-240V

**Control of SSR steam element at 50% energy demand** Delta connection 3AC 200-240V





The supply air cooling fan for units 61 - 102 behind the control panel is controlled by a converter 230V AC - 24V DC.

The air filter under the control panel can be replaced by simply unlocking it from the base frame.

The cooling air is discharged through the bottom of the unit.

The supply air cooling fan 201-202 on the rear left back panel is controlled by a transformer pri. 230V AC, sek. 12V DC.

The air filter can only be changed after dislodging the protection cover and sliding it to the right side.

The cooling air is discharged through the top left side of the rear panel.



Both supply air cooling fans are equipped with a temperature sensor (NTC). This sensor measures the temperature at the position of the clima valve Y5. The speed of the cooling fan increases with increasing temperature.

This sensor can not be changed separately.

The DC (supply air) cooling fan always runs when either of the following conditions are given: B4 Temperature is above 130°C (266°F) or the CPU temperature is above 60°C (140°F) or any cooking process is selected.

Additional 230V cooling fans distribute the cooling air in the electrical cabinet and cool the SSRs.

If the pcb reaches a temperature of  $65^{\circ}$ C (149°F) - depending on unit type-, "Change air filter" will be displayed. If a temperature of  $80^{\circ}$ C (176°F) is reached, any running cooking mode or program will be terminated and error "Service 29" is displayed.



### Control of drain valve



When switching on the SCC unit the drain valve automatically starts to initialise, this means it tries to find the correct end position. This end position is the open position of the ball valve (position for cooking).

If this doesn't work, "Service 26" will be indicated (see also Basic Setting, t0 and t1, 1/4 and 3/4 turn)

- A: Position for cooking
- 1. Drain valve with motor and limit switch
- 2. CleanJet Pump
- 3. Waste water from quenching box
- 4. CleanJet solution from quenching box
- 5. Drain of the unit
- 6. CleanJet solution to cooking cabinet



B: Only during CleanJet and Care in certain process steps the drain valve will be closed (position CleanJet and Care)



In function test it is possible to rotate the drain valve manually clockwise or anti clockwise. This can be necessary if the drain valve is jammed.



The drain valve is in open position, when the micro switch S12 changes from 0 to 1 when opening in function mode.

The drain valve is in closed position, when the micro switch S12 changes from 0 to 1 when closing in function mode.

#### 1.Basics

During steam production the concentration of minerals in water of the steam generator increases. These minerals deposit in the steam generator and build up scale.

The build up of scale is influenced by the local water hardness and the individual usage of the unit. The SCC unit continuously calculates the scale amount inside the steam generator. This value is also used for calculating the number of indicated rinse tabs in CareControl.

#### 2. Function description

At the end of the SC-automatic the steam generator will be filled. Solenoid valve Y1 opens and water flows into the steam generator via the CDS sensor. During this filling phase S11 (CDS Sensor) creates pulses (1000 Pulses = 11). When the water reaches the level electrode S2, the filling will be stopped and the measured number of pulses are stored. The unit specific nominal filling volume is stored in the CPU and will be compared with the actual filling volume (calculated from the pulses).

The higher the difference between nominal- and actual filling volume, the more scale has built up in the steam generator and therefore also the number of indicated bars in the Care display increases.

When cleaning the unit regularly as requested, using the "CARE" tabs the built up of scale in the steam generator will be avoided and the CDS pulses remain constant.


# CareControl



The condition of the indication depends on: a: the use of the unit b: the cleaning behaviour of the customer c: the degree of scale in the steam generator (see information

### **Display Care**

1: very good care - only one green bar visible.

- 2: medium care yellow bars are visible
- 3: neglected care red bars are visible

The request for Clean+Care has been neglected several times.

Only regular cleaning will reduce the display to one green bar again.

# Display Clean

### Actual dirt status

- 1: Only green bars visible no cleaning necessary
- 2: Yellow bars visible CleanJet request will show soon
- 3: red bars visible Cleaning urgently required

CleanJet request is dependent on the usage pattern of the unit:

- SCC processes
- manual modes
- cooking programs
- duration
- temperatures

Using any of the Cleanjet programs: Quick, Save, Medium or Strong will reset the bars of the Display Clean to 1 green bar (starting with software version 05-00-09).



CleanJet +Care can only be started when the cabinet temperature is below 50°C (122°F).

### Sequence of Cleanjet Program Light, Medium, Strong

### Component test

- 1. SC pump is activated until level electrode senses low water.
- 2. Y1 filling solenoid is activated (control by CDS)
- 3. Y3 moistening solenoid is activated (control by CDS)
- 4. Y4 Care solenoid is activated (control by CDS)
- 5. Y1-Y3-Y4: all solenoid valves are switched off, CDS shall not send any pulses.

### **CleanJet Phase**

- 6. M7 drain valve closes
- Y3 moistening solenoid brings water into the quenching box (CDS controlled) (In case the moistening nozzle is blocked water is brought either by quenching solenoid Y2 (time based) or pumped from the steam generator into the quenching box (time based)
  depending on CJ step)
- 8. M6 Cleanjet pump pumps water through the cabinet (water flow is detected by amp draw of motor)
- 9. M7 drain valve opens and dirty water is released.(steps 6 9 are repeated dependent on cleanjet program light, medium or strong)

### Care Phase

- 10. Y4 Care solenoid fills care container twice with water. The water with the dissolved care chemical is pumped each time into the steam generator with the care pump M12.
- 11. M7 drain valve closes.
- 12. Y1 filling solenoid fills the steam generator with water up to the level electrode.
- 13. M4 SC pump is activated for a few seconds to pump some of the content of the steam generator into the quenching box.
- 14. Y1 filling solenoid refills the steam generator higher than the level electrode.
- 15. Y3 moistening solenoid tops up the quenching box.
- 16. SSR water in the steam generator is preheated up to 80°C (176°F)
- 17. M6 Cleanjet pump pumps water (rinse) through the cabinet.
- 18. M7 drain valve opens and water is released.
- 19. M4 SC pump empties steam generator.
- 20. Steam generator is flushed several times, cabinet will be steamed for a few minutes.

Depending on real steam production time or when the scale deposit inside the steam generator is below 4%, only a small number of Care Tabs is indicated and steps 12, 14, 16 and 19 are skipped (no descaling of steam generator, shorter CleanJet+Care process). The entire content of the steam generator is pumped into the quenching box.

Above 4% scale the Descaling tab (starting of descaling program)

will be shown under Service.

The customer will be informed that soon a descaling will be needed. This information can be quitted.

Reaching 16% the customer will be informed that descaling is urgently needed. This information will be active for 2 minutes



Cancel error indication by:

### Possible error messages during CleanJet +Care

Problem

Step 1:	Service 10	SC pump	Follow fault tree
Step 2:	Low water	Y1, water tap	Solve reason for low water indication (water tap etc)
Step 3:	Service 41	Y3, moistening blocked (CDS)	Rinse without tabs
Step 4:	Service 42	Y4, care valve blocked (CDS)	Rinse program
Step 5:	Service 43	Y1, Y3, Y4 valve leaking (CDS)	Rinse program
Step 12:	Service 40	Care pump, Care hose	Rinse program
Step 13:	Service 110	SC pump, level electrode	Abort program
Step 14:	Service 120	Care pump, level electrode	Abort program
Step 15:	Service 44	Steam heating (B1)	Rinse program

An interrupt of the CleanJet processes is possible.

The duration of the following interrupt program is approximately 27 minutes.

The cabinet will be flushed with CleanJet pump M6. The steam generator will be filled with the Care valve Y4. Then the steam generator will be emptied with SC Pump M4 and then overfilled with the solenoid valve filling Y1. Now the steam generator will be emptied once again with SC Pump M4 and then refilled. Finally there is a short steam phase (neutralisation of the steam generator).

### CleanJet interrupt program

Should a running CleanJet program be interrupted by power failure or the unit has intentionally been switched off, an ABORT program of approx. 27min must be started to bring the unit back into safe operation mode. This ABORT program can not be shortened or aborted again but must be completed successfully.



# Diagnose - Real Time Data - Content

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### **Running times**

In Running Times all times of actuators, cooking modes and switches are recorded.

# Diagnose - Running times - Content

ComponentsImageImageImageDoor openings S3ResetXXXXImageBall valve openings S12ResetXXXXImageSolenoid valve filling Y1ResetXXXX minImageSolenoid valve quenching Y2ResetXXXX minImageSolenoid valve moistening Y3ResetXXXX minImageSolenoid valve care Y4ResetXXXX minImageSolenoid valve care Y4ResetXXXXImageSolenoid valve care Y4ResetXXXX minImageSolenoid valve care Y4ResetXXXX minImageClanu L4 Pump M6ResetXXXX minImageResetXXXX minImageImageBall valve motor M7ResetXXXX minImageResetXXXX minImageImageModesImageImageImageImageImageImageImageModesImageImageImageImageImageImageImageModesImageImageImageImageImageImageImageVario steam modeImageImageImageVario steam mode<
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CleanJet "Save"     XXXX hrs       CleanJet "Medium"     XXXX hrs
CleanJet "Medium" XXXX hrs
CleanJet "Strong" XXXX hrs
Cool down XXXX hrs
Total running time unit XXXX hrs
Heating Running times
Steam heating time Reset XXXX hrs
Hot air heating time Reset XXXX hrs





### Service Error History

In Service Error History the error codes are listed with their time of first, last and quantity of occurance.

# Diagnose - Service error history - Content

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SCC Service Error History		first appearence	counter	last appearance
Service 10	SC pump	hr:min:sec dd:mm:vvvv	X times	time and date
Service 11	CDS sensor	hr:min:sec dd:mm:yyyy	X times	time and date
Service 12	CDS sensor without signal	hr:min:sec dd:mm:yyyy	X times	time and date
Service 13	Steam generator is not refilled during steam mode	hr:min:sec dd:mm:yyyy	X times	time and date
Service 14	Level electrode doesn`t recognise water;	hr:min:sec dd:mm:yyyy	X times	time and date
Service 16	Software structure	hr:min:sec dd:mm:yyyy	X times	time and date
Service 17	SD card	hr:min:sec dd:mm:yyyy	X times	time and date
Service 18	SD card	hr:min:sec dd:mm:yyyy	X times	time and date
Service 19.1	SD card.	hr:min:sec dd:mm:yyyy	X times	time and date
Service 20	Thermocouple defective	hr:min:sec dd:mm:yyyy	X times	time and date
Service 23	SSR Steam	hr:min:sec dd:mm:yyyy	X times	time and date
Service 24	SSR Hot air	hr:min:sec dd:mm:yyyy	X times	time and date
Service 25	No water flow detec- ted during CleanJet	hr:min:sec dd:mm:yyyy	X times	time and date
Service 26	Drain valve permanently closed	hr:min:sec dd:mm:yyyy	X times	time and date
Service 27	Drain valve doesn't close	hr:min:sec dd:mm:yyyy	X times	time and date
Service 28	Thermocouple B5 a	hr:min:sec dd:mm:yyyy	X times	time and date
Service 29	PCB temperature above 85°C (185°F)	hr:min:sec dd:mm:yyyy	X times	time and date
Service 30	Emergancy humidity control	hr:min:sec dd:mm:yyyy	X times	time and date
Service 31	Core probe faulty	hr:min:sec dd:mm:yyyy	X times	time and date
Service 32	Ignition box faulty	hr:min:sec dd:mm:yyyy	X times	time and date
Service 33	Ignition box faulty	hr:min:sec dd:mm:yyyy	X times	time and date
Service 34	Bus signal	hr:min:sec dd:mm:yyyy	X times	time and date
Service 35	Ultravent	hr:min:sec dd:mm:yyyy	X times	time and date
Service 36	P1 defective	hr:min:sec dd:mm:yyyy	X times	time and date
Service 37	P1 out of range	hr:min:sec dd:mm:yyyy	X times	time and date
Service 40	Care pump	hr:min:sec dd:mm:yyyy	X times	time and date
Service 41	Moistening valve	hr:min:sec dd:mm:yyyy	X times	time and date
Service 42	Care valve	hr:min:sec dd:mm:yyyy	X times	time and date
Service 43	Y1, Y3 or Y4 dleaking	hr:min:sec dd:mm:yyyy	X times	time and date
Service 44	steam heating	hr:min:sec dd:mm:yyyy	X times	time and date
Service 60	ignition box	hr:min:sec dd:mm:yyyy	X times	time and date
Service 63	selftest without water;	hr:min:sec dd:mm:yyyy	X times	time and date
Service 110	SC Pumpe	first appearence	counter	last appearance
Service 120	Level electrode	hr:min:sec dd:mm:yyyy	X times	time and date

# **Basic settings - Start**

	Function key	9	
	Settings		
	HACCP	Actual service messages	enter password
	Communication	1	
$\langle$	N	Unit data empty Steam generator	Q WERTZUIOP ASDFGHJKL YXCVBNM
	Display Configurator	descaling (>16%)	UK _+123 Äöüß
		Hotline Show mode	?∨⊅
		M ? ~	

### **Service Mode**



In order to store any changes made the unit must be switched off and on again.

# **Basic settings - Content**

Water	Status	Factory Setting, Detected values
CDS sensor	1000	1000
Volume steam generator new after manual descaling	XXI	
Volume steam generator new after steam generator replacement	XXI	
SC pump: set pump duration	X sec	
SC pump: mode	Continuous oder Puls	
SC pump: set interval time	X min	
Quenching temperature hot air	XX°C	
Quenching temperature steam	XX°C	
Cleanjet / Care		
Drain valve	Start	t1 XX s, t2 xx s
Steam corrosion control	"on" oder "off"	
Softwater	"on" oder "off"	
Care Control	Reset	
Phone numbers, UltraVent, Selftest		
Service Phone Setting	edit	
Chef line phone setting	edit	
Deactivate UltraVent	deact	
Selftest	off	
Deactivate interior light	on - off	
Gassystem	Data	
Gas type	Nat. H	
RPM Correction		Selftest - P1 cold - Factory value
Ultravent	on / off	
Gasblower speed steam	Start rpm XXXX (factory XXXX)	
Gasblower speed steam	Min rpm XXXX (factory XXXX)	
Gasblower speed steam	Max rpm XXXX (factory XXXX)	
Gasblower speed hot air top	Start rpm XXXX (factory XXXX)	
Gasblower speed hot air top	Min rpm XXXX (factory XXXX)	
Gasblower speed hot air top	Max rpm XXXX (factory XXXX)	
Gasblower speed hot air bottom	Start rpm XXXX (factory XXXX)	
Gasblower speed hot air bottom	Min rpm XXXX (factory XXXX)	
Gasblower speed hot air bottom	Max rpm XXXX (factory XXXX)	

# **Function test - Start**

	Function key				
	Settings		<b>2</b>		
	НАССР	Actual serv	vice messages	1	enter password
	Communication				
(	NR C	Unit data	empt Steam generator		Q WERTZUIOP ASDFGHJKL YXCVBNM
	Display Configurator		descaling (>16%)		UK_+123 Äöüß
		Hotline	Show mode		?∨⊅
		10	? 1		



# **Function test - Content**

	1			_
Heating/Motor	Status	Values		
Steam 50%	0 or 1	B5 = X°C	Start	
Steam 100%	0 or 1	B5 = X°C	Start	
Hot air 50%	0 or 1	B1 = X°C	Start	
Hot air 100%	0 or 1	B1 = X°C	Start	
Fan Motor top	Speed 1R	Actual Speed X rpm	Start	
Fan Motor top	Speed 1L	Actual Speed X rpm	Start	
Fan Motor top	Speed 3R	Actual Speed X rpm	Start	
Fan Motor top	Speed 3L	Actual Speed X rpm	Start	
Fan Motor bottom	Speed 1R	Actual Speed X rpm	Start	
Fan Motor bottom	Speed 1L	Actual Speed X rpm	Start	
Fan Motor bottom	Speed 3R	Actual Speed X rpm	Start	
Fan Motor bottom	Speed 3L	Actual Speed X rpm	Start	
Water/CleanJet	Status	Values		
Solenoid valve filling Y1	0 or 1	Level electrode S2: water or low water	Start	
SC Pump M4	0 or 1	Level electrode S2: water or low water	Start	
Solenoid valve quenching Y2	0 or 1	B2 = X°C	Start	
Solenoid valve moistening Y3	0 or 1		Start	
Care valve Y4 + Pump M12	0 or 1	Level electrode S2: water or low water	Start	
Cleanjet Pump M6	0 or 1		Start	
Drain valve motor M7 direction1	0 or 1	End switch S12: 0 or 1	Start	
Drain valve motor M7 direction2	0 or 1	End switch S12: 0 or 2	Start	
	1		1	
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Loudspeaker T2	0 or 1		Start	
Interior light	0 or 1		Start	
Display test			Start	
Ultravent	0 or 1		Start	
Gas Burner	Status	Values		
Gas steam blower Max	0 or 1	CO2: XX% Flame current: XX uA RPM:XXXX	Start	
Gas steam blower Start	0 or 1	CO2: XX% Flame current: XX uA RPM:XXXX	Start	
Gas steam blower Min	0 or 1	CO2: XX% Flame current: XX uA RPM:XXXX	Start	
Gas hot air blower top Max	0 or 1	CO2: XX% Flame current: XX uA RPM:XXXX	Start	
Gas hot air blower top Start	0 or 1	CO2: XX% Flame current: XX uA RPM:XXXX	Start	
Gas hot air blower top Min	0 or 1	CO2: XX% Flame current: XX uA RPM:XXXX	Start	
Gas hot air blower bottom Max	0 or 1	CO2: XX% Flame current: XX uA RPM:XXXX	Start	
Gas hot air blower bottom Start	0 or 1	CO2: XX% Flame current: XX uA RPM:XXXX	Start	
Gas hot air blower bottom Min	0 or 1	CO2: XX% Flame current: XX uA RPM:XXXX	Start	

# **Calibration - Start**

ŀ	Function key							
	Settings							
	НАССР		Actual serv	vice messages			enter password	
	Communication							
(	NR V	Unit	data	empt, Steam gene	erator		Q W E R T Z U I O P A S D F G H J K L Y X C V B N M	
	Display Configurator		START	descaling (>	•16%)		UK _+123 Äöüß	
		Hotlin	ne	Show mode			?∨⊅	
	Service Modus		M	?	S			
	Diagnostic		Calibration	1:				
	Basic Settings		Different for specific ter	ood items co mperature.	ok best at th	ieir spe	cific humidity level and	
			Vegetables are steamed, but roast is cooked at a specific humi- dity and mostly above 100°C (212°F)					
$\langle$	Calibration		To be able pressure v and combi	to achieve t alues for col nation e.g. 1	his task the d and dry (4 70°C / 338°	unit mu ·0°C / 1 F.	ust have stored specific 04°F), 100% steam	
			This basic tion or duri Card.	information ing manual c	is evaluated alibration ar	during nd store	"selftest" after installa- ed on the PCB and SD	

Manual calibration has to be done when any of the below listed service work has been carried out:

- 1. removing of fan wheel / motor
- 2. changing thermocouple B4
- 3. changing differential pressure sensor P1
- 4. installation of a Ultravent or extraction hood on top of the unit
- 5. installation as the lower unit of a Combi Duo after selftest as a single unit

Pre condition before calibration						
	temperature of cooking cabinet sensor B1 is below 40°C (102°F)					
	temperature of quenching sensor B2 is below 40°C (102°F)					
	temperature of humidity sensor B4 is below 40°C (102°F)					
	door contact closed					
	heating: OFF fan motor: OFF left side panel closed, interior cabinet clean, if possible dry; to achieve best calibration values insert a closed 20mm GN container with opening facing down onto the rail closest to the center of the fan wheel (201-202: 2 motors - 2x GN container)					
			1			
Step	Function	possible error message	reason for error - remedy			
0	ready fo calibration		Any indicated error relates to the corresponding malibration step.			
10	checking calibration conditions	10	e.g. error 10 will be indicated, when the condition for calibra- tions is not given.			
20	Measuring Offset P1 with fan motor not turning					
100 - 115	pressure measurement cold table unit 61 - 102		16 steps for each fan motor, (32 steps with floor models), e.g. 100: running fan motor at constant speed "1"			
100 - 131	pressure measurement cold floor unit 201 - 202		101: store P1 value at this given speed			
200	steam heating up to boiling point without fan motor	200	e.g. error 200 is indicated, when the steam heating will not reach the necessary 70°C (158°F) to detremine the boiling			
202	steam heating with fan motor		point in the allocated time. Reason: e.g. SSR (energy optimising) or gas burner is not			
210 - 225	pressure measurement steam table unit 61 - 102					
210 - 241	pressure measurement steamfloor unit 201 - 202					
300	heating of cabinet to 193°C (380°F) followed by 60 sec. to 170°C (338°F) steady condition					
301 - 316	pressure measurement combi table unit 61 - 102	e.g. 302	e.g. error 302 is indicated, if sensor P1 does not give any or any valid value at this time.			
301 - 332	pressure measurement combi floor unit 201 - 202		Reason: P1 defective or hoses to P1 blocked by water.			
999	calibration sucessfull					
			These errors are indicated during the respective calibration step is running. After solving the problem the Selftest must be started again.			

### Software version from 05-00-07:

Selfttest	In case the unit shall be connected as a show room unit (exhibition), it must be converted prior of starting the self test.				
Your SCC will carry out an automatic self test and adjust itself perfectly to the set-up conditions and the altitude.	In the first Sleft test display press Service Start key				
	Enter password TECLEVEL Diagnostic				
Start	Basic Settings				
11:27	Function Test				
	Calibration				
	1. Press " Process abort" key (all service keys will show again)				
	Show mode 2. Press show mode 10 seconds				
$\mathbf{A}$	3. Switch unit off and on again				

In case only diagnostic mode is shown after entering the password the unit was in a running process prior entering into service level.

Only at this same time the process abort key is shown.



Press process abort key. Now all components of Service Level are shown. NOTE: Any running process will be terminated automatically!



In case a service error is indicated, e.g. Service 34, the service start key is indicated at the same time.

The technician can always enter Diagnostic level via the service start key and password.

Display	Definition	Reason and remedy
Service 10	SC pump	Display 30 sec. after switch on Display can be cancelled SC-Automatic without function, water level always high check SC pump and drain hose SC pump.
Service 11	CDS sensor	Display 30 sec. after switch on Display can be cancelled Water level o.k. CDS sensor sends too many pulses Check level electrode and water path to steam generator for leakage
Service 12	CDS sensor wit- hout signal	Display 30 sec. after switch on Display can be cancelled Level electrode o.k. no signal from CDS Sensor (blocked?), low water pressure
Service 13	Steam generator is not refilled du- ring steam mode	Steam generator is not refilled during steam mode => foced filling check 0-1 signal of level electrode to PCB
Service 14	Level electrode doesn`t recognise water;	Appears for 30 sec. after switch ON Display can be cancelled by touch Level electrode no water sensing CDS sensor measured enough pulses; Possible reasons: water conductivity too low, osmosis water treatment
Service 16	Software structure	New software data structure for SD card is older than existing data structure on SD card.
Service 17	SD card	not initialised
Service 18	SD card	SD card defective
Service 19.1	SD card.	SD card not inserted
Service 20 -x-	Thermocouple defective Unit in emergan- cy mode, call service;	No function when thermocoule B1 defective. 1=cabinet B1 2=quenching B2 4= humidity B4 8= steam generator B5 (e.g. 20.12 = B4 + B5)
Service 23	SSR Steam short circuit	<ul> <li>Display at once when: Temp. B5 rises above 100°C (212°F) for 60sec.</li> <li>without energy demand</li> <li>Intermittent buzzer 30 sec</li> <li>Unit without function</li> </ul>
Service 24	SSR Hot air short circuit	<ul> <li>Display at once when: Temp. B1 rises by 100°C (appox. 210°F) without energy demand</li> <li>Intermittent buzzer 30 sec</li> <li>Unit without function</li> </ul>
Service 25	No water flow detected during CleanJet	<ul> <li>Display can be cancelled</li> <li>Remove container from cabinet</li> <li>during CleanJet+Care the fan motor does not an increase in power demand when water hits the fan wheel.</li> <li>check water pressure, water supply, moisteneing valve and nozzle and CDS sensor.</li> </ul>

Display	Definition	Reason and remedy
Service 26	Drain valve permanently closed	<ul> <li>Appears on time when CleanJet is selected</li> <li>Cooking not possible - drain closed</li> <li>Micro switch drain valve in permanent closed position</li> <li>Replace drain valve assembly</li> </ul>
Service 27	Drain valve doesn't close during initiali- sation	<ul> <li>Appears for 30 sec. after switch ON</li> <li>Display can be cancelled switch</li> <li>drain valve in permanent open position, CleanJet not possible</li> <li>Check micro switch drain valve</li> <li>Start rinse (abort) program</li> </ul>
Service 28	Thermocoup- le B5 above 180°C (356°F)	<ul> <li>Appears if temperature at thermocouple steam generator B5 is above 180°C (356°F)</li> <li>Indication goes off when temperature below 110°C (230°F)</li> </ul>
Service 29	PCB tempe- rature above 85°C (185°F)	<ul> <li>Appears on time after switch ON until temperature is low again</li> <li>Temperature PCB above 85°C</li> <li>Check air filter, cooling fan and control panel gasket</li> <li>Check for external heat sources</li> <li>check air escape openings</li> </ul>
Service 30	Unit running in emergancy humidity con- trol	<ul> <li>Appears for 30 sec. after switch ON</li> <li>Display can be cancelled</li> <li>Humidity control out of function</li> <li>Humidity emergency control active since more than 1 hour</li> </ul>
Service 31.xx buzzer soundsca 20x / 5 Sec	Core probe faulty	- Display 30 sec. after switch on - Display can be cancelled - Combination of faults possible i.e.: 10>2+8) - 1: shaft probe - 4: 4th probe - 16: 2nd probe - 16: 2nd probe
Service 32.0-1-2	Ignition box faulty	<ul> <li>Internal Ignition box error is existing longer than 30 sec.</li> <li>Change ignition box</li> <li>0: Ignition box top</li> <li>1: Ignition box bottom</li> <li>2: Both Ignition boxes</li> </ul>
Service 33.1- 2	Ignition box faulty	<ul> <li>Appears after 3x Reset command without positive result</li> <li>1: Ignition box top,</li> <li>2: Ignition box bottom</li> <li>Check ignition wire, ignition box gas valve and gas supply.</li> </ul>
Service 34.xx	Bus signal	<ul> <li>Indication in case of bus signal problems</li> <li>Main pcb can not communicate with the following parts</li> <li>Combination of faults possible i.e.: 10&gt;2+8</li> <li>1: Motor top - 2: Motor bottom</li> <li>4: Ignition module top - 8: Ignition module bottom</li> <li>Check bus cable plug and cable for connection and damage</li> <li>when installed as a gas unit B13 (with exhaust through chimney) check safety thermostat in draft diverter (Service 34.4, 34.8 or 34.12)</li> </ul>
Service 35	Connect Ultravent	Bus signal can not be processed; Connect UV to mains power,
Service 36	Differential pressure sen- sor P1 defec- tive	no signal output
Service 37	Differential pressure sen- sor P1 no in expected range	Differential pressure sensor P1 no in expected range, check connection of hoses.

# Error message Service 40 - 120, blink code motor

Display	Definition	Reason and remedy
Service 40	Care pump doesn`t fill enough into steam generator	<ul> <li>Care pump faulty or does not fill enough care solution into steam generator;</li> <li>After filling of the care solution into the steam generator the CDS sensor sends too many pulses until the level electrode recognises water. Check if the hose from the care pump outlet is not kinked;</li> <li>Cleanjet finishes without care phase;</li> <li>Reset error by successful completing rinse program;</li> </ul>
Service 41	Moistening without function	<ul> <li>Solenoid valve Y3 defective or moistening valve blocked; CDS does not send any pulses;</li> <li>Reset error by successful completing rinse program;</li> </ul>
Service 42	Care function not possible, solenoid Y4 defective	<ul> <li>Solenoid Y4 Care defective or hose to care container blocked or kinked; CDS does not send any pulses;</li> <li>Reset error by successful completing rinse program;</li> </ul>
Service 43	Y1, Y3 or Y4 do not close	<ul> <li>CDS sensor sends always pulses; Solenoid Y1, Y3 or Y4 is passing water</li> <li>Reset error by successful completing ABORT program;</li> </ul>
Service 44	No steam hea- ting during Cleanjet+Care	<ul> <li>No temperature raise above 60°C recognised by B1 during steaming time while being in Cleanjet phase</li> <li>Reset error by successful completing ABORT program;</li> </ul>
Service 55	Blink code motor top	see below
Service 56	Blink code motor bottom	see below
Service 60	Initialisation of igniti- on box incorrect Wrong rpm informa- tion for gas blower	Switch unit off and on again, run SD Repair program
Service 63	Unit had done a self- test without water;	Cool down uinit, make sure B1, B2 and B4 is below 40°C, In basi settings - Selftest set Selftest to ON and switch unit off and on again. Run Selftest
Service 110	SC Pumpe not working while care solution is inside steam generator.	<ul> <li>Malfunction of SC pump during the time when Care solution was inside the steam generator,</li> <li>Reset error by successful completing ABORT program;</li> </ul>
Service 120	Level electrode without signal while care solution is inside steam gene- rator.	<ul> <li>After operating care pump M12 (filling care solution into steam generator) and topping up with water the level electrode does not recognise water;</li> <li>Care Pump M12 or level electrode defective;</li> <li>Display only after twice starting filling solenoid Y1 yet no water is detected;</li> <li>Reset error by successful completing ABORT program;</li> </ul>

The error messages can be seen under Diagnostic, Service history.

Blink code Motor	Reason	Remedy
1x	Starting error	contact Rational, change motor
2x, 4x, 5x, 7x, 9x, 11x,	Motor defective	change motor
12x		
3x, 6x,	volatge error	check voltage supply, change motor
8x	possible starting error	check fan wheel for distortion, change motor
10x	only with 3AC motor	phase is missing
	40.03.514	



Only use the Original Rational USB Stick for Software update of SCC\_WE units. (Note: Most of the standard USB sticks can not be used for software update.) The Rational USB Stick can be ordered with service part number: 87.01.084.

Software can only be updated to a higher version.

### NOTE: The duration of a complete software update can last up to 10 miunutes!!

Please follow below instructions!

Software update can be done by the customer as follows::

Connect the USB stick with the USB interface at the bottom left hand corner of the control panel.



For standard update proceed as follows:

- 1. Switch unit on
- 2. Wait unitl the user interface is shown on the display.
- 3. Connect the USB stick with the latest software version with the USB interface at the bottom left hand corner of the control panel.
- 4. Switch unit off and on again.

The unit will display "Update"

Only remove the USB stick after the display has changed again to the standard SCC display.



Please always make sure your customer has the latest software version on his appliance.

### SCC Software update



### Service Web Site: https://portal.rational-online.com

Customer Service	Software update	Э	
Service parts			
Information			
Documentation	Description	File size	File format
SelfCooking Center®line			
Manuals	SCC_WE		
Checklists	Software SCC_WE 05-00-06	68779 KB	ZIP
Modification instruction	SCC WE Webupdate.exe	78 KB	ZIP
Technical Info			
Fault Finding	CM_P		
Software	Software CM_P C-2-00-01	151 KB	ZIP
Film and Animations	CM P Webupdate.exe	78 KB	ZIP

Internet connection Download Software.zip file Download SCC Webupdate .exe

Unzip downloaded Software to white-RATIONAL-USB stick. Stick format: FAT32 The stick shall not contain any other data!



Whe new software becomes available software can be updated on RATIONAL USB by using UPDATE SCC\_WE.exe file without login to service web site.

Update unit with RATIONAL USB stick.

# Download of service data

With this function all actual valid service data of the diagnose program can be downloaded onto a stick. This can be done during an active process or also if the unit is in standby (unit must be switched on). To get all data the download should be done during an active process.

The maximum number of download's on one SCC is 4 times within one our.



The file RAG\_xx\_yy\_SERVICE.txt is partitioned into the following block's:

- Common Information
- Basic settings
- Diagnostic Real time data
- Diagnostic-Service History-SCC
- Diagnostic-Service History-Gas
- Diagnostic-Running times

In case your service call is subject to an unknown error and / or the error is subject to application problems please always download also the HACCP data!



With the INFO download key complex unit data can be downloaded. These data can only be evaluated by Rational. The data time range for the download can be selected.

RAG_E62SH12022208034_2	012051509	92833_sei	rvice		
Date and Time	092835 22208034 0-10	58		8.7 s	
Drain Valve time1 Gas type		· · · · · · · · :	2	6.1 s 0	
		:			
Diagnostic-Real Time Data-Sensors	act	max	lim	Time Stam	p dim
Cabinet B1 Quenching B2	26.46 21.40	307.85 95.18	350 300		C C
Temperature PCB	35.34	81.11	80 2	0120514130	736 C
Diagnostic-Real Time Data-Clima	Status	Dry	We	t Combi	dim
Clima Status 1-L Clima Status 1-R	500 500	66444.68 63631.57	82813.0 85711.5	194368.20 992154.87	Pa Pa Pa
Clima Flap Y5 Clima Output P1 Clima Humidity	CLOSE 0.00 4.00	V %			
Diagnostic-Water, CJ/Care Motor/Switch	Status	Status	Statu	s dim	
Filling solenoid Y1 Volume Steam Generator (Norm Fill Calc): CleanJet Pump M6 Door Contact S3	0FF 5.48 0F 0FF	5.57 F	4.3	8 1	
Diagnostic-Service History-SCC	Firs	t time Q	uantity	Last	time
Service 10 Service 34	20111210 20111213	215318 084631	5 5	201204181 201204231	35651 31943
Diagnostic-Service History-Gas Top-Box	Firs	t time Q	uantity	Last	time
14	20120210	145254	3	201205161	35457
Diagnostic-Running Times-Components	Val	ue dim			
Door Opening S3 Ball Valve Openings S12	5 13	85 81			
Diagnostic-Running Times-Modes	Val	ue dim			
Hot Air Mode	1	92 h			

### Download of gas error data

### Gas Error Logger Burner Control 0

Indication of the last 14 gas-failures, generated by ignition box top)

Gas Error Logger Burner Control 1

Indication of the last 14 gas-failures, generated by ignition box bottom)

### Indication of ignition box error messages (1-32 is shown to the operator as "Reset"): 1 Hot air or Steam no gas, gas valve or electrode defective 14 Hot air gas valve control, change ignition box Hot air no flame because flame current is too low 19 check burner setting, flame current, ignition cable and plug wrong or no rpm signal from gas blower 20 Hot air check gas blower, power supply gas blower and control harness of gas blower 22 Hot air no flame after 5 ignition sequences no gas, gas valve or electrode defective 24 Steam gas valve control, change ignition box Steam no flame because flame current is too low 29 check burner setting, flame current, ignition cable and plug 30 Steam wrong or no rpm signal from gas blower check gas blower, power supply gas blower and control harness of gas blower 32 Steam no flame after 5 ignition sequences no gas, gas valve or electrode defective Possible failure in case of "Service 32"

33, 36		Change ignition box
35		Check frequency of main
38		CPU does not send any or correct rpm signal to ignition box; Switch unit off and
		on or run repair program for SD Card (SCC_WE) or EEPROM (CM_P)
39	Hot air	Check burner setting, ignition electrode and distance,
		and flame current
40	Hot air	Check ignition cable
42	Steam	Check burner setting, ignition electrode and distance,
		and flame current
43	Steam	Check ignition cable

### Is shown on display "Change polarity"

34

Change polarity of mains

### All other numbers (2-14, 21, 23, 25-28, 31): change ignition box



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HACCP Data will be available for approximately 10 days when the unit is used for 16 hours daily.

Should the daily usage be less than that the storage time will be extended accordingly.

Normally HACCP data can be downloaded onto any commercial USB memory stick.

- connect USB stick to unit interface

- select desired download period
- press download button

When the green tick mark shows on the writing symbol the download is finished.





### HACCP-Data are shown in the following format:

***	НАСС	P ***							
- , ,	Ch-nr.	>>210	<<			= batch (numt	number ber of sto	red cooking proc	cesses)
;	Туре	>>SC	C_61<<			= unit ty	ре	01	,
;	Serial n	r.>>E61	1SH1109	2534567<	<<	= Serial	number	of the unit	
;	Version	>>SCC	)	- (s/o/C)<	<<	= Softw	are versio	on of the unit	
						("C" ir	idicates,	delay of CleanJe	et request is activated
						Only o	chain unit	IS:	
						"s" or	"o" show	s unit ran on	
						(s) Su	pervisor-	or (o) Operator	mode.)
;	Time	>>201	1.09.20	12:27:26<	<	= Startir	ng date ai	nd time of the co	oking process
;	Progr.	>>Roa	ist<<			= Progra	am name	;	
						(manu	ial mode	was used, if ">>	<<" appears )
,	#1 : Ga	rtemp.	/ Ca	abinet terr	ıp.				
,	#2 : Ke	rntemp.	Soll /	core temp	o. target				
,	#3:Ke	rntemp	/ C	ore temp.					
;	#4 : Zei	t (Sta:IV	lin:Sek) /	time (n:n	nin:sec)				
,	#5: Ier	np. Einr	neit / t	emp. unit	L				
;	#0.EII	ergie Op	pi. /e	nergy 0p	l.				
,	#1. EII	ergie 17. #2	2 / e #۲	#⊿	#5	5 #6	#7		
, • мл			#3		π. ∩∩	, #0	$\pi i$	= used cooki	ing mode
, 1010	29	-	32	000.00.	00 C	_	_		ing mode
·M	ode CON	ЛВI	02	000.00.	04				
,	29	-	32	000:00:	04 C	-	-		
: M	ode HOT	AIR	-	000:00:	07				
,	29	-	32	000:00:	07 C	-	-		
	29	-	32	000:00:	11 C	-	-		
; en	ld							= End of coo	king process
B) A	Additiona	al indica	tions:						
	Progr.	>>SC(	C - Unive	rsal Roas	t<< =	Indicat	tion of se	lected SCC proc	ess
	Progr.	>>SC(	C - ~ porł	<<<	=	Copied	d SCC pr	ocess with new	name
	Door or	anad o	r Door cl	heed	= durino	. cookin	a process		
	Start (n	ower fai	led)	0000	= Power	r failure	longer th	an 15 minutes	
	end (HC		icu)			se term	inated wi	ith Home key	
	end (RF					ss tarm	inated w	ith arrow back k	<u>۵</u> \/
						ee tarm	inated be	an arrow back N	- y
	etart El	C					etartad		
	roctort (		2)			t after or		off or power fail	
	ond	FUVE	<b>\</b> )		- residi				
	CIIU					22 111121	ICU		



# Circuit diagram 101 Power 3NAC 400-415V



# Circuit diagram 101 Sensor



# Positionsliste Bill of material

Name	Artikelnr.	Artikelbezeichnung
Name	Item number	
-A1	42.00.081	Interface Platine
-A2	42.00.160	CPU SCC WE
-A2-F1/F2	3019.0120	Sicherung A2 - 2AT
-A2-F3	3019.0312	Sicherung A2 - 8AT
-R1	40.04.096	Thermoelement Garraiim

Name	Artikelnr.	Artikelbezeichnung				Module
Name	Item number			Item description		Modul
-A1	42.00.081	Interface Platine		Interface PCB		Modul 1
-A2	42.00.160	CPU SCC WE		CPU SCC WE		Modul 1
-A2-F1/F2	3019.0120	Sicherung A2 - 2AT		Fuse A2 - 2AT		Modul 1
-A2-F3	3019.0312	Sicherung A2 - 8AT		Fuse A2 - 8AT		Modul 3
-B1	40.04.096	Thermoelement Garraum		Thermocouple interior cab	inet	Modul 3
-B2	54.01.148	Thermoelement Ablöschung		Thermocouple quenching		Modul 3
-B3	40.01.604	Thermoelement Kerntempera	tur	Thermocouple core senso		Modul 3
-B4	40.00.290	Thermoelement Feuchte		Thermocouple humidity		Modul 3
-B5	40.04.106	Thermoelement Dampfgenera	itor	Thermocouple steam gene	rator	Modul 3
-F1/F2	4001.0224	Steuersicherung		Control fuse		Modul 1
-F3	40.01.329	Sicherheitstemperaturbegren: F Elek.:183°C/360°F	zer Gas:157°C/314°	Safety thermostat steam 314°F Elec.: 183°C/360°F	jenerator Gas: 157°C/	Modul 1
-F4	40.01.482	Sicherheitstemperaturbegrenz	zer 360°C/680°F	Safety thermostat interior	cabinet 360°C/680°F	Modul 1
-G1	40.03.257	Gleichrichter Kühllüfter		DC converter cooling fan		Modul 1
-H1	3024.0201	Garraumbeleuchtung		Interior cabinet light		Modul 3
-K1	40.03.696	Hauptschütz		Main contactor		Modul 1
-M1	40.03.378	Lüftermotor		Fan motor		Modul 1
-M12	56.00.451	Pumpe Pflegemittel		Care pump		Modul 1
-M4	44.00.207	SC-Pumpe		SC-pump		Modul 1
-M5	40.03.428	Kühllüfter		Cooling fan		Modul 1
-M6	56.00.185	CleanJet Pumpe SCC WE		CleanJet pump SCC WE		Modul 1
-M7	54.00.357	Kugelhahn Ablauf		Drain valve		Modul 3
-P1	3017.1011	Differenzdrucksensor		Differential pressure sens	Dr	Modul 3
ändorn poordatium	1100 00 00		SCC WE 101E		CCT00_0T	
	TTATIONIA		SCC WE TOTE			
Erzeuger	ADT	Spannung	<b>3NAC400 V 50</b>	/60 Hz   Versio	<b>1</b>	

# Circuit diagram Bill of material

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# Positionsliste Bill of material

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Name	Artikelnr.	Artikelbezeichnung				Module
Name	Item number			Item description		Modul
-R1	44.01.333	Dampfheizkörper		Heating element steam		Modul 2
-R2	44.01.337	Dampfheizkörper		Heating element steam		Modul 2
-R4	40.03.294	Heißluftheizkörper		Heating element hot air		Modul 2
-S1	техт	Ein/Aus Schalter		ON/OFF switch		Modul 1
-S11	50.01.523	CDS-Sensor		CDS-sensor		Modul 3
-S2	44.01.407	Niveauelektrode		Water level electrode		Modul 3
-S3	40.00.335	Türkontaktschalter		Door contact switch		Modul 3
-S6	40.00.404	Zentrales Einstellrad		Central dial		Modul 3
-T1	40.03.348	Steuertrafo		Control transformer		Modul 3
-T1-F1	3019.0120	Sicherung Steuertrafo T	L 2AT	Fuse control transformer T	2AT	Modul 3
-T1-F2	3019.0126	Sicherung Steuertrafo T	L 5AT	Fuse control transformer T	5AT	Modul 3
-T2	40.04.034	SCC WE: Lautsprecher /	CMP: Alarmsummer	SCC WE: Speaker / CMP: B	ızzer	Modul 3
-V1-V12	40.01.589	Leistungshalbleiter		Solid state relais		Modul 2
-M0	8801.0136	Anschlusskabel		Cable: power supply		Modul 1
-W11	40.03.531	Kabel: Garraumbeleucht	nng	Cable: interior cabinet light		Modul 3
-W17	40.03.446	Kabel: Steuerstamm		Cable: control harness		Modul 1
-W30	40.02.965	Kabel: Adapterkabel Pun	102 Pflegemittel 61-102	Cable: adapter care pump (	1-102	Modul 1
-W31	40.03.467	Kabel: Ein/Aus Schalter		Cable: ON/OFF switch		Modul 1
-Y1/Y3/Y4	50.01.050	Y1: Magnetventil Füllen Beschwadung / Y4: Pfleg	/ SCC WE Y3: lemittel	Y1: Solenoid valve filling / . moistening / Y4: care	SCC WE Y3:	Modul 1
-Y2	50.01.146	Magnetventil Ablöschung		Solenoid valve quenching		Modul 1
-Y5	22.00.725	Klimaventil		Clima valve		Modul 3
-Z1	40.02.424	Entstörfilter/Varistor		Electronic noise filter		Modul 1
ändora andratiss	100 00 00		SCC WE 101E			
Allueruligsuatulli	TTNZ'ON'NC		SCC ME TOTE		111-INI . 10-00/22	
Erzeuger	ADT	Spann	ung 3NAC400 V 50	/60 Hz Version	1	
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# Circuit diagram Bill of material

V02 en, SCC\_WE



### Circuit diagram 202 Power 3NAC 400-415V

# Circuit diagram 202 Heating 3NAC 400-415V


### Circuit diagram 202 Sensor



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Name	Artikelnr.	Artikelbezeichnu	bur				Module
Name	Item number			Item description			Modul
-A1	42.00.081	Interface Platine		Interface PCB			Modul 1
-A2	42.00.160	CPU SCC WE		CPU SCC WE			Modul 1
-A2-F1/F2	3019.0120	Sicherung A2 - 2A	T	Fuse A2 - 2AT			Modul 1
-A2-F3	3019.0312	Sicherung A2 - 8A	T	Fuse A2 - 8AT			Modul 3
-B1	40.03.528	Thermoelement G	arraum	Thermocouple inter	ior cabinet		Modul 3
-B2	54.01.254	Thermoelement A	blöschung	Thermocouple quen	iching		Modul 3
-B3	40.02.101	Thermoelement K	erntemperatur	Thermocouple core	sensor		Modul 3
-B4	40.00.399	Thermoelement Fe	euchte	Thermocouple hum	idity		Modul 3
-B5	40.04.107	Thermoelement D	ampfgenerator	Thermocouple stear	n generator		Modul 3
-F1/F2	4001.0224	Steuersicherung		Control fuse			Modul 1
-F3	40.01.329	Sicherheitstemper F Elek.:183°C/360	aturbegrenzer Gas:157°C/314 )°F	<ul> <li>Safety thermostat s</li> <li>314°F Elec.: 183°C</li> </ul>	steam generator Gas: 7 /360°F	157°C/	Modul 1
-F4	40.01.482	Sicherheitstemper	aturbegrenzer 360°C/680°F.	Safety thermostat i	nterior cabinet 360°C/	/680°F	Modul 1
-H1	3024.0201	Garraumbeleuchtu	bur	Interior cabinet ligh	lt		Modul 3
-H2	3024.0201	Garraumbeleuchtu	bur	Interior cabinet ligh	lt		Modul 3
-K1	40.03.666	Hauptschütz		Main contactor			Modul 1
-M1	40.03.513	Lüftermotor		Fan motor			Modul 1
-M11	40.03.425	Kühllüfter		Cooling fan			Modul 1
-M12	56.00.460	Pumpe Pflegemitt	el	Care pump			Modul 1
-M13	40.03.425	Kühllüfter		Cooling fan			Modul 1
-M14	40.03.425	Kühllüfter		Cooling fan			Modul 1
-M2	40.03.513	Lüftermotor 201/2	202 (unten)	Fan motor 201/202	(bottom)		Modul 1
-M4	44.00.207	SC-Pumpe		SC-pump			Modul 1
Änderungsdatur	n <b>30.08.2011</b>		Name SCC WE 202	ZE	Dokument-Nr. 78-	00725	
Erzeuger	ADT		Spannung 3NAC400 V	50/60 Hz	Version 1		
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### Circuit diagram Bill of material

V02 en, SCC\_WE

## Positionsliste Bill of material

Name	Artikelnr.	Artikelbezeichnu	bu					Module
Name	Item number			I	tem description			Modul
-M5	40.03.948	Kühllüfter		0	ooling fan			Modul 1
-M6	56.00.186	CleanJet Pumpe SC	CC WE	0	cleanJet pump SCC	C WE		Modul 1
-M7	54.01.291	Kugelhahn Ablauf			rain valve			Modul 3
-P1	3017.1011	Differenzdrucksens	sor		ifferential pressur	e sensor		Modul 3
-R1	44.01.336	Dampfheizkörper		<u> </u>	leating element st	eam		Modul 2
-R2	44.01.340	Dampfheizkörper		<u> </u>	leating element st	eam		Modul 2
-R3	44.01.340	Dampfheizkörper		<u> </u>	leating element st	eam		Modul 2
-R4	40.03.300	Heißluftheizkörper		<u> </u>	leating element ho	ot air		Modul 2
-R5 .	40.03.300	Heißluftheizkörper		<u> </u>	leating element ho	ot air		Modul 2
-S1	гехт	Ein/Aus Schalter		0	N/OFF switch			Modul 1
-S11	50.01.195	CDS-Sensor		0	DS-sensor			Modul 3
-S2	44.01.408	Niveauelektrode		~	Vater level electro	de		Modul 3
-S3	40.00.454	Türkontaktschalter			oor contact switch			Modul 3
-S6	40.00.404	Zentrales Einstellra	be	0	entral dial			Modul 3
-T1 .	40.03.348	Steuertrafo		0	ontrol transforme	L		Modul 3
-T1-F1	3019.0120	Sicherung Steuertr	afo T1 2AT-	<u> </u>	use control transf	ormer T1 2AT		Modul 3
-T1-F2	3019.0126	Sicherung Steuertr	afo T1 5AT-	UL.	use control transf	ormer T1 5AT		Modul 3
-T2	40.03.989	SCC WE: Lautspree	cher / CMP: Alarms	summer S	CC WE: Speaker /	/ CMP: Buzzer		Modul 3
-T4	40.03.772	Trafo Kühllüfter 20	1/202	Т	ransformer cooling	g fan 201/202		Modul 1
-V1-V12	40.01.589	Leistungshalbleiter		0	olid state relais			Modul 2
-W11	40.03.532	Kabel: Garraumbel	leuchtung	0	able: interior cabi	net light		Modul 3
-W16	40.03.978	Kabel: Klemmen/H	lauptschütz/SSR	0	able: terminal/ma	ain contactor/SSR		Modul 2
-W17	40.03.450	Kabel: Steuerstam	Е	0	able: control harn	less		Modul 1
Änderungsdatum	30.08.2011		Name	CC WE 202E		Dokument-Nr.	78-00725	
Erzeuger	ADT		Spannung <b>3</b>	NAC400 V 50/	60 Hz	Version	1	

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