

Thermetic

TILTING BOILING PANS, ROUND, GAS HEATED
(GU....., KU.....)



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US

OPERATING INSTRUCTIONS

FOR YOUR SAFETY

Do not store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance.

POUR VOTRE SÉCURITÉ

Ne déposez pas ou n'employez pas l'essence ou d'autres vapeurs ou liquides inflammables à proximité de ceci ou d'aucun autre appareil.

WARNING

Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this equipment.

AVERTISSEMENT

L'installation inexacte, l'ajustement, le changement, le service ou l'entretien peuvent causer des blessures matériels, des dommages ou la mort. Lisez les instructions d'installation, d'opération et d'entretien complètement avant d'installer ou entretenir cet équipement.

INSTRUCTION

Post in a prominent location instructions to be followed if the user smells gas. Consult the local gas supplier to obtain the information.

Présentez dans des instructions en avant d'un endroit d'être suivi si l'utilisateur sent le gaz. Consultez le fournisseur local de gaz pour obtenir l'information.

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I. GENERAL INFORMATION

1. INSTRUCTIONS FOR SAFETY AND USE

1.1 INSTALLATION AND INITIAL OPERATION

- ▲ The installation, adjustment and initial operation of the appliance must be carried out according to the manufacturer's instructions and only by an authorised specialist.
- ▲ Installations for the supply of electricity and gas must be carried out by approved specialists in compliance with specific national and local regulations. They bear the responsibility.
- ▲ The installation must conform with local codes, or in the absence of local codes, with the National Fuel Gas Code, **ANSI Z223.1/NFPA 54**, or the Natural Gas and Propane Installation Code, **CSA B1 49.1**.
- ▲ The appliance and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at pressures in excess of 1/2 psi (3.5 kPa)
- ▲ The appliance must not be placed in operation until the user has become familiar with its operation. The operating instructions and the related safety precautions must be followed precisely. Follow strictly the attention and warning label indications on the appliances.



1.2 OWNER'S OBLIGATIONS

- ▲ The manager is responsible for ensuring that all components relevant for safety are in perfect working order at all times. The operating condition of these components must be examined by an authorized technician at least once a year and any defects remedied if required.
- ▲ If the safety valve in the boiler blows off, after-sales service must be requested without delay to establish the cause and remedy it.
- ▲ Retain the manual for future reference.



1.3 USE AS PRESCRIBED

- ▲ The appliance must only be used for cooking food in commercial kitchens. The appliance has only been approved for supervised operation by trained persons.
- ▲ Closed containers (jars, cans, bottles, tubes, etc.) must not be heated owing to the danger of bursting and injuries.
- ▲ The appliance must not be filled above the level mark 4 cm below the boiler rim. Depending on the type of food to be cooked, filling must be less so as to prevent bubbling over.
- ▲ During operation, no objects are to be placed on the lid
- ▲ The safety valve on the outer jacket of the boiling pan must not be actuated by operators (lifting or turning the cap) because hot steam is released, causing injuries.



1.4 SAFETY-CONSCIOUS WORKING

- ▲ Devices on wheels set up in block configuration must be checked before each start-up whether the potential equalization is connected with the neighbour equipment. The connection may be done only by authorized technical personnel.
- ▲ Spraying the appliance or parts of it with a **high-pressure cleaning device** may cause malfunctions and is not to be done.
- ▲ The escape of burnable gases represents a fire and explosion hazard. Action in the case of a gas leak and a smell of gas:
 - No smoking, no fire
 - Do not operate electric switches or bells.
 - Close gas cylinder valves and the main gas valve on the appliance.
 - Ventilate the room thoroughly
 - Place the leaking gas cylinders upright in the open with valves closed.
- ▲ The waste-gas outlets of the roasting and baking oven become hot. Avoid touching them.
- ▲ The waste-gas outlets of the roasting and baking oven are not to be covered by any objects.
- ▲ Keep the appliance area free and clear from combustibles
- ▲ Do not obstruct the flow of combustion and ventilation air.
- ▲ To avoid damage to the appliance, do not let water flow from the mixer tap onto the cooking plates.
- ▲ When putting oil, fat, water or ingredients in the preheated hot boiler, they may splash - **danger of burning!**
- ▲ Always use the handle to open the cover. Note that while doing so, hot air or steam may flow out or hot fat may spit out - **danger of burning!**
- ▲ Keep your distance from the lid closing area when closing the lid - **danger of injury!**
- ▲ To avoid damage to the appliance the mixer tap outlet must be to the front before the lid is opened or closed.
- ▲ Cold food is not to be added to the unit for rethermalization while hot food is operating in a hot food holding mode.
- ▲ Take care when turning on the drain tap. Depending on the food to be cooked, the drain stream can have varied behaviour and Keep your distance when passing or driving by with a truck. The drain cock sticks out.
- ▲ Tilting is only to be carried out slowly to avoid the contents spilling over the rim.
- ▲ Hot steam can be expelled on opening the lid. Staff must take appropriate measures (stand well back) to avoid injuries.
- ▲ Appliances on wheels must be fastened with the wall.
- ▲ The area around the tilting boiling pan must be kept free. Tilting is only to take place with the lid fully open. - **danger of burning!**



1.5 AFTER-SALES SERVICE AND REPAIR

▲ Boiling pans of this design and operating mode do not require special acceptance tests. They are subjected to a pressure and operating test which meets the regulations on the manufacturer's premises. Recurrent pressure testing is not compulsory. To ensure the complete operating efficiency and safety of appliances, however, owners should arrange for personnel authorised by the manufacturer to check on all safety equipment and to conduct pressure tests at regular intervals.



▲ In the event of a permanent fault which interferes with operation, the appliance must be switched off and disconnected from the power supply.

▲ Repair, maintenance work and other adjustments are only to be carried out by an authorized specialist. The valid local and national regulations must be observed. This applies especially to burners, ignition, safety and control elements. Parts requiring replacement are only to be replaced by original spare parts. **Periodic tests for gas leaks must be carried out. A service contract is recommended.**

▲ Cleaning and maintenance must be done only when the heating surfaces are cold. Do not use inflammable liquids to clean the appliance.

▲ **An obligatory service check is required annually.**

2. TECHNICAL DATA

PNC Appliances	Appliance type	Width Depth Height		Power kW	Net weight kg	Kettle size	
		inch	mm			gal	lt.
9CHG583394	GU5COE0000	47.2	1200	18	195	21.1	80
9CHG583395	GU5EOE0000	35.4	900				
		35.4	900	21	270	26.4	100
9CHG583396	KU5HOE0000	51.2	1300	27	310	39.4	150
		39.4	1000				
		35.4	900				
9CHG83397	KU5KOE0000	59.1	1500	43	430	79.3	300
		39.4	1000				
		35.4	900				

3. GAS CONSUMPTION

Power	G20 (m ³ /h)	G25 (m ³ /h)	G30/31 (kg/h)
18	1.73	2.04	1.42
21	2.02	2.38	1.65
27	2.6	3.06	2.13
43	4.14	4.88	3.39

4. PACKAGING

All the packaging materials used are environmentally friendly. They may be burnt at an incineration plant or sent for recycling.

5. TESTS / CERTIFICATES

All gas appliances are tested according to the standards ANSI/NSF 4 - 2002 of Commercial Cooking, Rethermalization, and Powered Hot Food Holding and Transport Equipment and ANSI Z83.11-2002 and CSA 1.8-2002 of Gas Food Service Equipment.

The appliance noise level is negligible. The statutory guidelines are fulfilled; the sound pressure level is less than 70 dB (A).

6. SPECIFICATION PLATE

The specification plate (E) is located in each case inside and outside on the right of the control panel (C).

7. SERIAL NUMBER YWWXXXXX

The serial number of the appliance is marked on the type plate. The 8 digits give following information:

- Y last digit of the year of production
- WW week of production
- XXXXX running number

8. FURTHER DOCUMENTS

- Installation instruction
- Service manual
- Wiring diagram
- Spare parts list

II. OPERATING INSTRUCTIONS

1. DESCRIPTION

The round, tilting boiling pan is suitable to cook, saute, poach or steam all kinds of produce. The appliance is floor mounted on the two brackets or wall mounted on brackets and cross-beams.

The produce is uniformly heated in the base and side walls of the boiling pan by steam or hot water by an external jacket.

The appliance is totally constructed externally and internally of corrosion-resistant chrome nickel steel. The inner pan in which the food is contained is of chromium-nickel-molybdenum steel. The lid, mounted on the cross-beam is counterbalanced by a special hinge, i.e. it remains open in all positions set higher than 15° and closes at positions set at less than 15°.

A precise, state-of-the-art electronic microprocessor control system with digital preselection of temperature, cooking time and starting time ensures perfect adherence to the pre-programmed cooking functions.

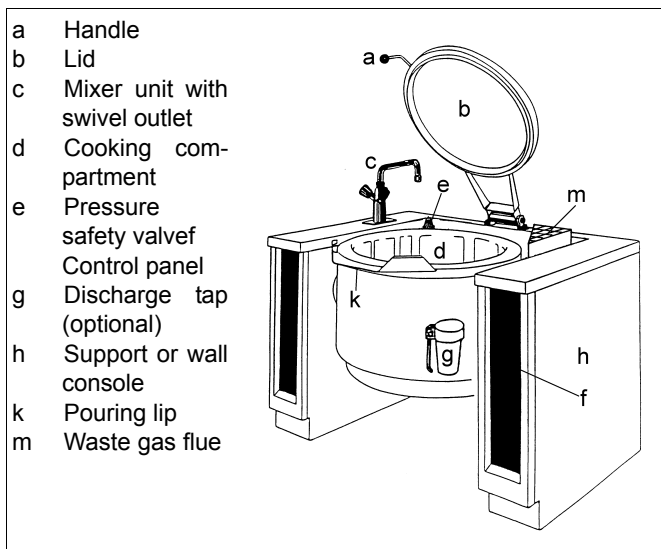


Fig. 1 Construction

2. INITIAL COMMISSIONING

The jacket is filled by the works with demineralised water. All pan models are supplied ready for use. Thoroughly wash out the cooking compartment with soapy water, rinse with fresh water and allow to dry. The appliance should then be heated for approx. 30 min. at a temperature setting of 100°C (212°F).

3. STANDBY

Check each time before use

The (optional) safety discharge tap must be correctly installed and closed. Operating elements and pressure gauge must not be damaged

Filling with produce

Fill with water via mixer unit or hose. The compartment must not be filled beyond the maximum capacity mark, 4 cm below the rim. If necessary and dependent on the food being cooked, a smaller amount of food must be used to prevent bubbling over.

Salt is only to be added in dissolved form. It must not be added to an empty pan. Use only a wood or plastic spatula for stirring.

Heating up times

After filling with liquid produce, the appliance can be switched on. The lid should be kept closed during heating to reduce energy losses and heating time. At full power, the maximum heating-up times from 20° to 90°C for pans full of water correspond to the values listed below. Heating-up times are

reduced when pans are only partially filled; when the pan is only half full, the heating-up time is reduced to approx. 65%. The heating up times are lower or identical to those for the fast cooking boiling pans. Whilst full power is required for initial heating, this is not the case for further cooking. The power requirements for cooking with lid open is many times that with the lid closed. The lid should therefore always remain closed during cooking.

Pan Capacity		Heating up times in minutes	
litres	gal		
80	21.1	24	19
100	26.4	30	21
150	39.4	34	23
300	79.3	45	30

0.8 bar (5.8 psi), overpressure, temperature 244°F (118°C)

4. AUTOMATIC CONTROL

The automatic controls can be fitted with more or fewer functions.

The following instructions explain all the possible functions.

4.1 Setting the clock

The clock time is shown on the **display (AZ)**.

Switch on the **power isolator (H)** (only available as an option) and the **control system switch (S)** by turning them from position 0 to I.

0 = Off

I = on

Then press and hold down **buttons (ZT)** and **(Q)**. After the second acoustic signal, the clock time can be set by turning the **knob (Z)**.

Turn right = increase

Turn left = reduction

Smallest change = 1 minute

After the time has been set, the **buttons (ZT)** and **(Q)** can be released again.

4.2 Starting

The pan must be in the horizontal position prior to starting, or the power supply must be disconnected.

Switch on the power isolator (H) (only available as an option).

Turn from position 0 to I.

0 = Off

I = on

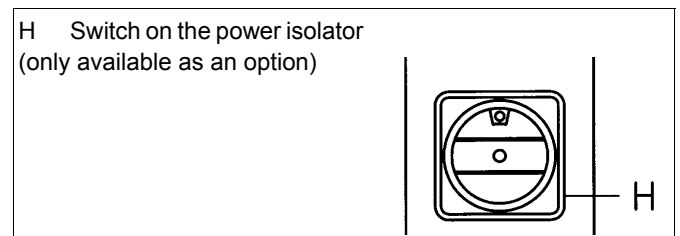


Fig. 2 Right-hand console (at the bottom)

4.3 Automatic cooking

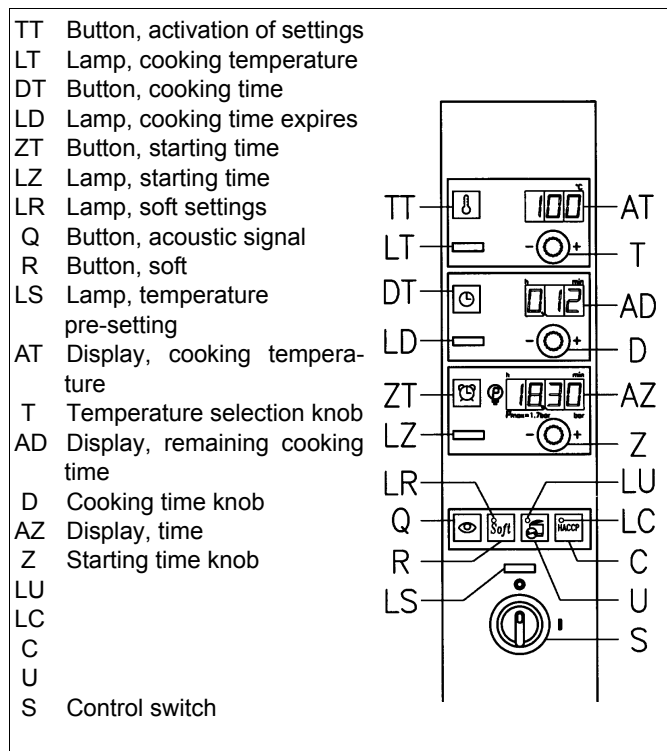


Fig. 3 Right console

Switching on

Switch on the control switch (S) turn from position 0 to I. This switches on the temperature pre-setting function. The lamp (LS) lights up.

0 = Off

I = On

Set the desired cooking temperature (flashing nominal value) with the temperature selection knob (T) on the display (AT).

Turn right = increase

Turn left = reduction

Smallest change = 1°C

Programming the cooking time and the starting time (or only one function).

Pressing the button (DT) switches on the programme for the cooking time (flashing nominal value). The desired cooking time is set with the cooking time knob (D) on the display (AD).

Turn right = increase

Turn left = reduction

Smallest change = 1 minute

The lamp (LD) only lights up when the desired temperature has been reached and the cooking time expires.

Pressing the button (ZT) switches on the programme for the starting point (flashing nominal value). Set the desired starting time with the starting time knob (Z) on the display (AZ)

Turn right = increase

Turn left = reduction

Smallest change = 1 minute

The acoustic signal will sound three times and the lamp (LZ) will light up when the starting time has been reached.

The following pre-programmed nominal functions

Cooking temperature

Cooking time

Starting time

are all activated by pressing the button (TT).

The following displays

Cooking temperature (AT)

Remaining cooking time (AD)

Clock time (AZ)

indicate the current value.

The lamp (LT) will continue to flash until the nominal cooking temperature is reached. It then stays on permanently.

4.4 Temperature and power settings

Temperature setting

If the nominal temperature set on the display (AT) is below the boiling point of water (26 - 212°F (97 - 100°C)), this temperature will be attained during heating up and then maintained at this value by the electronic controls and the careful supply of energy. The nominal temperature is not exceeded in this process.

When certain foods with poor conductivity are heated, such as sugar solutions, nominal temperature settings between 212 and 230°F (100 - 110°C) are required in order to achieve boiling. The correct setting is largely a matter of experience.

Power setting

Fixed power settings can also be programmed in using the electronic controller. In this case, the pre-set energy is supplied to the food after boiling point has been reached. Setting the controller to fixed power settings is done in order to enter the degree of boiling in the food individually, i.e. dependent on the type of food, the amount of food, the position of the lid, etc. The following fixed power settings can be entered on the display (AT):

Setting (AT)	Power %
L1	6
L2	12
L3	25
L4	37
L5	50
L6	62
L7	75
L8	87
L9	100

HOLD setting

The HOLD section is located above the power adjustment L1 - L9. The knob (T) is used to set a HOLD temperature between 122°F and 210°F (50 and 99°C).

HOLD temperature set: A three digit display (AT) indicates:

H for Hold,

22 - 85 the temperature between 122 and 185°F

03 -10 the temperature between 203 and 210°F (

Owing to the internal conversion in °C not every value is possible. The following settings are allowed:

Display	Hold-Temperature °F
H22	122
H31	131
H40	140
H49	149
H58	158
H67	167
H76	176
H85	185
H94	194
H03	203
H10	210

The programmed cooking process then operates as follows: the food is first heated to simmering temperature (approx. 212°F). When simmering temperature is reached, the energy supply is switched off. The food cools down and is then kept at the HOLD temperature that has previously been set.

4.5 Shutting down

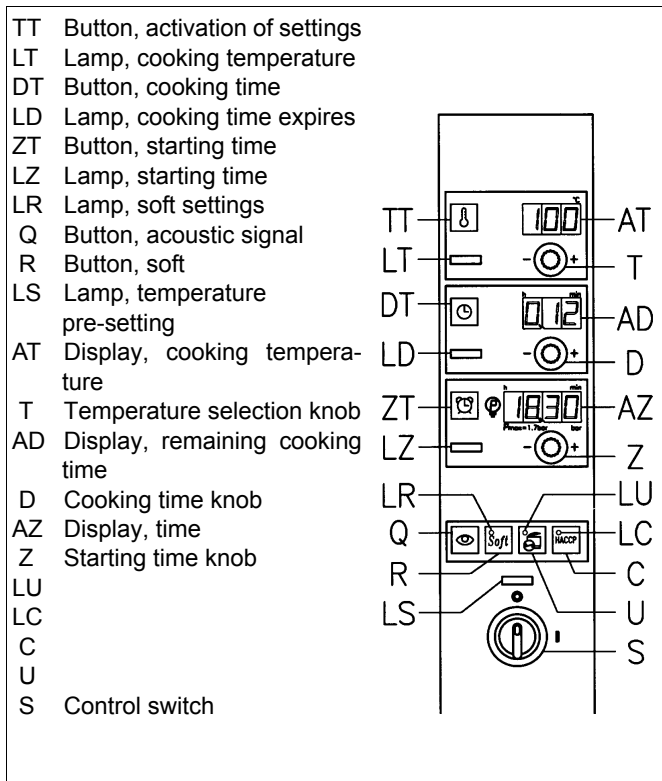


Fig. 4 Right console

An acoustic signal sounds when cooking is over. This is acknowledged by pressing the button (Q).

The power supply is then switched off.

All activated functions are subsequently switched off:

- Press the pre-set temperature button (TT) for some seconds.
Lamp (LT) goes out.
- Press the cooking time button (DT).
Lamp (LD) goes out.
- Press the starting time button (ZT).
Lamp (LZ) goes out.
- Switch off the Soft button (R), if this was activated.
- Switch off the control switch (S).
- Turn from position I to 0. Lamp (LS) goes out.
0 = Off
- Switch off the power isolator (H) (only available as an option).
- Turn from position I to 0.
0 = Off

After cooking has been completed, the control switch (S) is switched off.

- Turn from position I to 0.
The lamp (LS) goes out.
0 = Off

Switch off the power isolator (H) (only available as an option).

- Turn from position I to 0.
0 = Off

The appliance can be switched off before cooking has been completed.

If the function buttons (TT), (DT) and (ZT) are switched on and switching off is only done by means of the control switch (S), all the functions and previously set data for temperature, cooking time and starting time remain saved and active when the switch (S) is turned on again.

If the appliance develops a fault, the electrical switch in the building must also be switched off and the main gas valve must be closed.

4.6 Additional functions

SOFT

Pressing the Soft button (R) adapts the power supply to the food, i.e. reduces it. The lamp (LR) on the button (R) lights up if the soft setting has been switched on. The following functions are activated by pressing button (Q):

1. All displays
 - Food temperature (AT)
 - Cooking time (AD)
 - Starting time (AZ)
 flash indicating the nominal value that has been programmed in.
2. Acknowledgement of the acoustic signal when cooking has been completed.
3. Acknowledgement of error messages (see section 12, Troubleshooting).

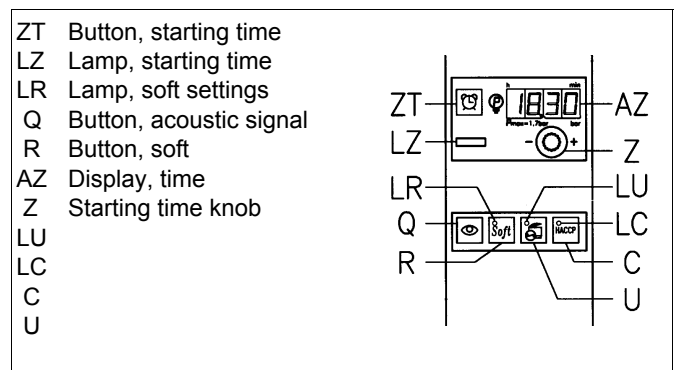


Fig. 5 Right console

Cooking using the SOFT setting

Normally (Soft setting deactivated), the food is heated up at maximum power and in the shortest possible heating-up time. This method of operation is suited to food with a high water content and which has good heat conductivity properties.

When maximum power is used to heat them up, viscous, pasty and difficult to heat food (dairy products) tends to dry out along the heated surface of the pan, to turn dark and to burn. When the Soft setting is activated, the heating power is automatically adapted via the temperature difference to the type of food. Heating-up times are extended a little although the pre-set temperature is reached without the food sticking or burning.

CLOCK TIME

Display (AZ) shows the clock time and display (AT) shows the actual temperature of the pan when the control switch (S) alone is switched on.

If the energy supply is switched on by the (TT) button, the actual temperature of the boiling pan is shown on the display (AT) and the excess pressure in the boiling pan jacket is shown in bar on the display (AZ). To emphasize the latter, a "P" is placed in front of the pressure value.

HACCP

Appliances can be optionally equipped with the program-linked cooking process procedure THERMACAM. Cooking processes can be programmed, analysed, logged and documented and are thus part of the HACCP system (HACCP = hazard analysis and critical control points).

- The program system is started by pressing the HACCP button (C).
- The lamp (LC) lights up.
- The number of the cooking program appears on the display (AZ): HP 00 to 99.
- The program number can be changed by turning the knob (Z).
- After setting the desired program, the cooking process is started by pressing the key (TT).
- The nominal temperature is shown on the display (AT) and

the cooking time appears on the display (AD).

- The program-linked cooking process is switched off by pressing the HACCP button (C). The appliance is then switched off according to 5.5.

A separate set of operating instructions contains information on the programming, analysing, logging and documenting of cooking processes using an external computer.

4.7 Altering the pan settings

Altering the nominal values while working

All the nominal values programmed in originally can be easily altered during the working process by setting the buttons for temperature (T), for the cooking time (D) and for the starting time (Z) to the new values. When the buttons are turned, the nominal value will appear flashing on the relevant display. If the nominal value is not altered for a few seconds, the display reverts to the actual value.

Altering the cooking programmes while working

Switching off the button (TT) will interrupt the heating/cooking process. Switching off the cooking time button (DT) reverts to continuous cooking. Switching off the starting time button (ZT) deletes the programmed-in starting time. The appliance can be started manually.

4.8 Tilting

MECHANICAL TILTING

The boiling pan is tilted with the help of an electric motor. It only works when the power isolator (H) (only available as an option) and the control switch (S) are switched on by turning from position 0 to I.

Lamp (LS) will light up.

Tilting at variable speed by turning the tilting knob (K):

Emptying the pan turn to the right

Tilting back turn to the left

Turning the knob further will accelerate the tilting function.

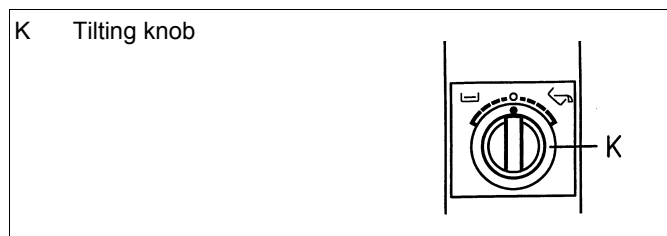


Fig. 6 Left-hand console (at the top)

Tilting is only to be activated with lid fully open and with the swivel outlet of the water mixing unit in the correct position (precisely towards the front) and where no object is present under the appliance in the tilting zone. The boiling pan is tilted down by turning tilting switch clockwise (to the right) and tilted up by turning it anticlockwise (to the left). Tilting at variable speed will only take place as long as the tilting switch (K) is held in the tilting position. On being released, the switch returns to the neutral, centre position and due to the drive self-locking, the boiling pan immediately comes to rest, whatever the position and filling level. The tilting motor is automatically switched off in the extreme positions of the boiling pan; the horizontal and fully tilted positions, so any further actuation of the tilting switch (K) has no effect.

The heating can no longer be operated with even the smallest degree of tilt from the horizontal.

Select the rate of tilting so that the produce is discharged in the region of the pouring lip. This is easy to do by varying the tilting speed. Avoid spillage of the contents over the rim of the boiling pan.

4.9 Switching off

The appliance is shut down by turning the power isolator (H) (available as an option) as well as the control switch (S) to zero. All lights will go out when this is done.

In the case of faults, the appliance must also be disconnected from all supply connections (mains supply, gas)

4.10 Power failure

The loss of mains electricity while a cooking pan is being used can result in cooking being halted or interrupted. Cooking staff are then required to make an additional intervention in the controls or to monitor further processing.

Power failure when:	The measure to be implemented to restart the cooking process after the mains supply has been restored
The cooking process is taking place	Press the key (TT)
The cooking process has been programmed with a starting time although this has not yet expired	After the mains supply has been restored, the starting time comes to an end and the heating process starts automatically without any intervention in the controls

5. ADDITIONAL EQUIPMENT (optional)

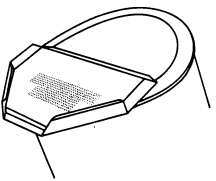
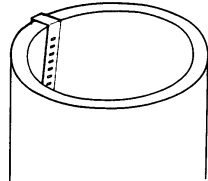
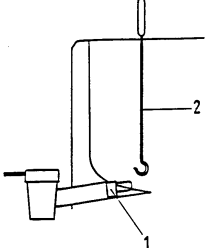
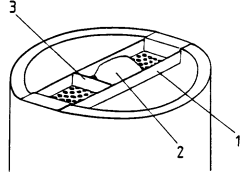
<p>Strainer The strainer appropriate for the size of pan is firmly inserted into the two retaining clips fitted to the sides of the pouring lip.</p>	
<p>Measuring rod The measuring rod with filling level marking is hung on the top rim of the pan. The scale has 5 or 10 litre graduation marks. The measuring rod must not be used at the same time as the stirrer as this may result in injury.</p>	
<p>Discharge strainer To prevent blocking the discharge tap when pouring liquids from the boiling pan, a discharge strainer (1) can be placed in the discharge pipe of the boiling pan. The strainer is fitted and removed with the aid of a hooked rod (2).</p>	
<p>Strainer for dough dumplings and scraper This accessory is for producing Knoepfli or dough dumplings. The strainer (1) is hung in the compartment. The dough (2) is placed in the strainer. Over the hot water in the compartment, the dough is pressed through the holes in the strainer by moving the scraper (3) back and forward to form droplets.</p>	

Fig. 7 Accessories

6. CLEANING

The appliance should be allowed to cool prior to cleaning.

Compartment

With normal use it is sufficient to clean the compartment with hot water with an added grease solvent. Next, rinse with clean hot water and dry with a cloth or absorbent paper. There is a risk of corrosion if water with a high-salt content and/or food are allowed to dry out in the pan.

Appliance casing

The appliance surfaces are of corrosion-free chrome nickel steel. They are to be washed down with hot soapy water containing a standard grease solvent cleaning agent and dried off.

General

Cleaning with steel brushes, wire or copper wool, products containing sand etc. is to be avoided as such media will destroy the surface and provide the opportunity for it to be attacked and start to corrode. Spraying the appliance or its parts with a water jet or high pressure cleaning equipment is harmful and can cause malfunctions. Such practice is therefore forbidden. The drain in the cover plate, the bottom grid or internal drain can be cleaned with a bottle brush.

Additional equipment, stirrer, strainer etc.

These loose parts are to be cleaned outside the boiling pan. Where dimensions allow, these can be washed in a suitable dishwasher.

Desinfection of scrapers:

The scrapers are locked to the stirrer with a bolt, which is located inside the food zone. These parts must be disinfected at regular intervals at temperatures above 179.6°F (82°C). Best is to accomplish the disinfection after every food preparation below 179.6°F (82°C).

7. TROUBLESHOOTING

Faults in the appliance are registered by the control electronics and shown on the display (AT) dependent on the type of fault by the letters A or E in combination with a double-digit number. When the fault occurs, an intermittent acoustic signal sounds, the power supply is interrupted and the lamp is switched off. Press button (Q) again to acknowledge the error message (acoustic signal).

Shut down the appliance if a continuous fault that prevents operation arises (see section 5.5 Shutting down). Summon the aftersales service to remedy the fault. Until this is done, the appliance must not be used and must be disconnected from the mains supply.

E1	Failure of food temperature sensor	Summon service agent and report reading
E2	Failure of jacket temperature sensor	Summon service agent and report reading
E3	Failure of deaeration food temperature sensor	Summon service agent and report reading
E5	Failure of control circuit board temperature sensor	Summon service agent and report reading
E6	Sensor J15 of produce temperature too high	Summon service agent and report reading
E7	Sensor J16 of jacket temperature too high	Summon service agent and report reading
E8	Jacket pressure too high	Summon service agent and report reading
E9	Failure of A/D converter	Summon service agent and report reading
E10	Safety thermostat for dry cycle protection has responded	Summon service agent and report reading
E11	Sensor of deaeration temperature too high	Summon service agent and report reading
E21	HACCP Master Personal Computer is not connected.	Discharge fault display and signal by pressing button (Q).
E22	HACCP COP485.1 Interface is not connected.	Discharge fault display and signal by pressing button (Q).
E23	HACCP configuration; EEPROM COP485.1 (memory chip) has found a reeding fault.	Discharge fault display and signal by pressing button (Q) and repair fault.
E24	HACCP configuration; EEPROM COP485.1 (memory chip) has found a spelling fault.	Discharge fault display and signal by pressing button (Q) and repair fault.
A2	Malfunction at burner ignition	Acknowledge the warning by pressing the button (Q). Start again by pressing the button (TT). Consider the delay time of 30 to 60 seconds.
A31	Advance warning: the water in the jacket is due for topping up	Acknowledge the warning by pressing the button (Q). The appliance can continue to be used. The warning is given whenever the appliance is reused. Summon service agent occasionally and report reading.

8. TREATMENT OF COMMERCIAL KITCHEN APPLIANCES

Commercial kitchen appliances are executed in corrosion resistant chrome nickel steels, material numbers 1.4301 and 1.4404.

The corrosion resistance of these steels is based on a passive layer formed on the surface with access to atmospheric oxygen. Accelerated formation or reformation of the passivity occurs by treating surfaces with running water containing oxygen. Aggressive media with a reducing effect (oxygen consuming) such as substances containing hydrochloric acid, chlorides and seasoning concentrates, mustard, vinegar essence, seasoning or spice tablets, salt solutions, etc., depending on concentration and temperature, can result in chemical damage or the destruction of the passive layer. Damage can also result from foreign rust (iron particles) due to the formation of galvanic elements and lack of oxygen (no air access or low oxygen water).

Therefore the following principles should be observed when working with high grade steel equipment:

1. Surfaces of equipment of corrosion resistant steel are always to be kept clean and exposed to the air. Remove covers from utensils when not in use to provide free air access. Regularly remove limescale, grease, starch and egg white deposits by cleaning. Corrosion can occur under these layers due to the absence of air exposure. Limescale can be removed with 10% acetic acid, 10% phosphoric acid or with suitable limescale removers available on the market.

2. Corrosion resistant steel objects must not be kept in long-term contact with acids, spices and seasonings, salt, etc. Also promoters of corrosion are acid vapours as produced during floor cleaning. Contact surfaces are to be rinsed off with fresh water. This applies after use, especially after cooking potatoes, noodles, rice etc. in salt water. Dried-on cooking water residues form high concentration salt solutions which can cause point corrosion. So, immediately after use, rinse cooking utensils in fresh water or keep filled with cold water to cool them. It is not advisable to use one utensil exclusively for cooking e.g. potatoes in salt water. For stainless steel it is beneficial to use utensils for different produce, e.g. for soups containing fat or acid-containing vegetables (such as sauerkraut, for example).

3. Stainless steel surfaces should, where possible, be protected from mechanical damage, especially from other metals. Corrosion can occur if stainless steel comes into contact with iron (steel wool, chips from pipes, water containing iron). New corrosion locations can be removed with a mild abrasive or fine emery cloth. Heavier corrosion can be washed off with a warm 2-5% solution of oxalic acid. Treatment with 10% nitric acid is necessary if this proves ineffectual. Due to the associated hazards, this type of cleaning is only to be carried out by suitably trained staff in compliance with the valid regulations.

4. No bleaching or chlorine-containing cleaning agents are to be used for cleaning. Utensils are to be thoroughly rinsed with water and dried after cleaning. The surfaces of appliances are of corrosion resistant chrome nickel steel. They are to be washed down with hot soapy water with the addition of a standard grease solvent. Avoid cleaning with steel brushes, steel wool, copper scouring pads or cloths, products containing sand, etc. as such media destroy the surfaces and create the conditions for corrosion formation. Spraying appliances or parts of appliances with a water jet or high pressure cleaning equipment is harmful and can cause malfunction. This is therefore prohibited.

Note:

The **type** and **concentration** of solvents used for cleaning the surfaces must comply with the code of the Federal Regulations 21 CFR Part 178.1010.