

# Thermetic

**TILTING PRESSURE BRAISING PANS, ELECTRIC  
(GX.....)**



**US**

**OPERATING AND SAFETY INSTRUCTIONS**



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## **CONTENTS**

<b>I</b>	<b>GENERAL INFORMATION .....</b>	<b>3</b>
1.	INSTRUCTIONS FOR SAFETY AND USE .....	3
2.	TECHNICAL DATA .....	4
3.	PACKAGING .....	4
4.	TESTS / CERTIFICATES .....	4
5.	SPECIFICATION PLATE .....	4
6.	SERIAL NUMBER YWWXXXXX .....	4
7.	FURTHER DOCUMENTS .....	4
<b>II</b>	<b>OPERATING INSTRUCTIONS .....</b>	<b>5</b>
1.	DESCRIPTION/ CONSTRUCTION .....	5
2.	INITIAL OPERATION .....	5
3.	STANDBY .....	5
4.	AUTOMATIC CONTROL .....	6
5.	LID LOCK .....	8
6.	ADDITIONAL EQUIPMENT .....	10
7.	WORKING RULES .....	10
8.	CLEANING .....	13
9.	TROUBLESHOOTING .....	13
10.	TREATMENT OF COMMERCIAL KITCHEN APPLIANCES .....	13



## 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 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.



#### 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.
- ▲ During pressureless cooking the filling of the appliance must never rise above 1.6" (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 pressure cooking the pan must be only half or less filled.
- ▲ This appliance must not be used for deep fat frying purposes. Do not use large quantities of oil. The appliance must not be operated close to materials and vapours which constitute a fire hazard.
- ▲ During operation, no objects are to be placed on the lid



#### 1.4 SAFETY-CONSCIOUS WORKING

- ▲ Overheated oil can self-ignite. Never leave braising oil unattended.
- ▲ Never quench burning oil with water, but smother the flames with the cover or a wet cloth.
- ▲ 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.



- ▲ 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.
- ▲ 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.
- ▲ 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!**
- ▲ If the operator observes the change in the lock, the lid must not be closed and the appliance must not be used for pressure cooking. The Customer Service must be contacted immediately.
- ▲ 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.
- ▲ Appliances on wheels must be fastened with the wall.



#### 1.5 AFTER-SALES SERVICE AND REPAIR

- ▲ 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	Feet, Wheel	Electr. Power	Boiler
		Depth Height	Height		size
		inch (mm)		kW	lt (gal)
9CHG583299	GXWBOE0000	47.2	7.9 (200)	12.2	60
9CHG583300	GXXBOE0000	35.4			(15.9)
9CHG583301	GXYBOE0000	27.6			
9CHG583302	GXWDOE0000	(1200			90 (23.8)
9CHG583303	GXXDOE0000	900			
9CHG583304	GXYDOE0000	700)			
9CHG583305	GXWEOE0000	63		18.2	100
9CHG583306	GXXEOE0000	35.4			(26.4)
9CHG583307	GXYEOE0000	27.6			
9CHG583308	GXWHOEO000	(1600			150 (39.6)
9CHG583309	GXXHOEO000	900			
9CHG583310	GXYHOEO000	700)			

**3. PACKAGING**

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

**4. TESTS / CERTIFICATES**

All electrical appliances are UL 197 and NSF/ANSI 4-2002 and NSF/ANSI 8-2002 tested.

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

**5. SPECIFICATION PLATE**

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

**6. 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

**7. FURTHER DOCUMENTS**

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

**II. OPERATING INSTRUCTIONS**

**1. DESCRIPTION/ CONSTRUCTION**

The tilting pressure braising pan with polished chromium nickel steel plated bottom essentially serves three purposes, which can also be combined with one another:

- Roasting, Browning, Stewing, Preparation of sauces
- Cooking, Pressure cooking, Sauteing, Steaming, Boiling
- Pressureless steaming, Pressure steaming, Braising

**TILTING PRESSURE BRAISING PAN**

The appliance is totally constructed externally and internally of corrosion-resistant chrome nickel steel. The appliance is floor mounted on the two consoles. The pan is supported on bearings which allow it to tilt. Precise amounts of food can be poured out of the pan by turning the knob of the appliance which features motorized tilting. A precise, state-of-the-art electronic microprocessor control system with digital preselection of temperature, cooking time, starting time and steam condensation ensures perfect adherence to the pre-programmed cooking functions. The methods used for roasting and cooking are the same as those in normal roasting pans or cooking appliances. The steaming procedure refers to gentle, rapid and uniform cooking alternatively without pressure in the temperature range up to 212°F (100°C) or under saturated steam pressure of 0,4 bar (228°F, 109°C) positive pressure. The cooking time decrease sharply with increasing cooking temperature:

Temperature	212°F (100°C)	228°F (109°C)
Pressure	0	5.8 psi (0,4 bar)
Cooking time %	100	54

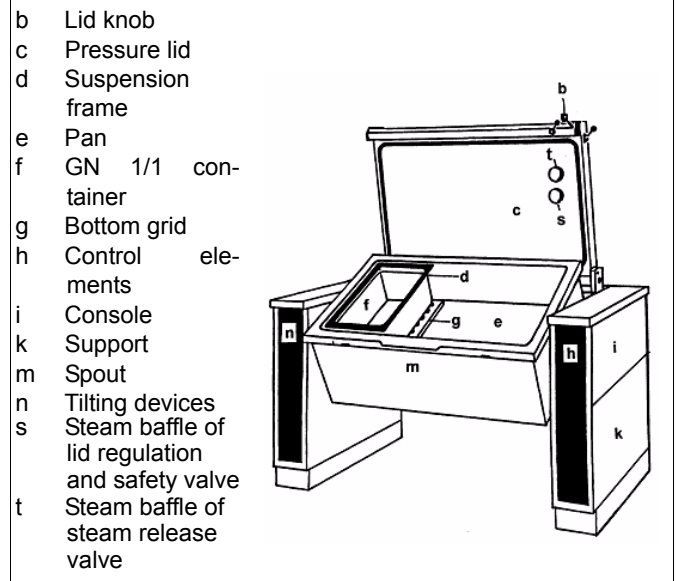
The pan can be loaded with the following Gastro-Norm containers of size GN1/1:

Type	Number GN 1/1	max.depth of the containers mm
60 LT	2	150
90 LT	2	250
100 LT	3	150
150 LT	3	250

Depending on the type of food, perforate or imperforate containers are used. The former are most frequently used for steaming. Perforated containers are used for food from which the water is to be removed (e.g. vegetables). Imperforate containers are for food which is to remain moist in the water. The containers are either placed directly on the inserted perforated base or are hung in the frames provided. The appliance must not be used for deep fat frying.

**Technical data:**

Type	El. power rating	Cooking area mm	Capacity	
	kW		lt	gal
60 LT	12,2	620 x 490 x 220	67	17.7
90 LT	12,2	620 x 490 x 290	94	24.8
100 LT	18,2	990 x 490 x 220	104	27.5
150 LT	18,2	990 x 490 x 290	145	38.3



**Fig. 1 Construction**

**2. INITIAL OPERATION**

Thoroughly wash the entire pan with hot soapy water, rinse it with clean water and allow it to dry. The new pan should then be heated up at a temperature of 320°F (160°C) for about 30 minutes.

Tilting pans with polished steel bottoms should additionally be treated as follows: load the cold pan with good quality roasting fat (lard, butter) and about 2" thick raw potato slices. Then lightly roast the potato slices for about 60 minutes, turning them several times. As a result of this treatment, the bottom loses its metallic flavour. Empty the pan and rub it thoroughly with a dry cloth or absorptive paper.

Do not use oil or vegetable fat for the above procedure.

**3. STANDBY**

**Check each time before use:**

- ⇒ The lid regulation and safety valve must be built in correctly.
- ⇒ Operating elements must not be damaged.
- ⇒ The correct function of the lid lock elements must be checked.

**Filling**

Fill with water via mixer unit or hose. Maximum fillings see chapter „Filling“. 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 time**

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 68°F (20°) to 194°F (90°C) for pans full of water correspond to the values listed below. Heating-up times are reduced when pans are only partially filled. 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.

The heating-up time in (minutes) for an empty pan from 68°F (20°) to 446°F (230°C) is approx.:

Type	Pan empty	Water 100%	Water 50%
60 LT	14	30	17
90 LT	14	45	24
100 LT	15	34	20

150 LT	15	50	28
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**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 **control system switch (S)** by turning them from position 0 to I.

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

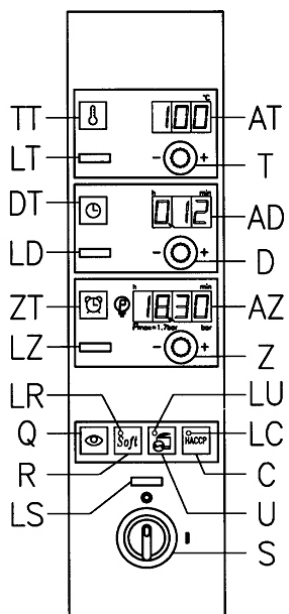
After the time has been set, the **buttons (ZT)** and **(Q)** can be released again.

**4.2 Starting**

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

**4.3 Automatic cooking**

- TT Button, activation of settings
- LT Lamp, cooking temperature
- DT Button, cooking time
- LD Lamp, cooking time expires
- ZT Button, starting time
- LZ Lamp, starting time
- LR Lamp, soft settings
- Q Button, acoustic signal
- R Button, soft
- LS Lamp, temperature pre-setting
- AT Display, cooking temperature
- T Temperature selection knob
- AD Display, remaining cooking time
- D Cooking time knob
- AZ Display, time
- Z Starting time knob
- S Control switch



**Fig. 2 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°F

**Programming the cooking time, the starting time and steam condensation in the compartment** (or only one function). The starting-time programme only exists as an option.

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.

**Steam condensation (optional)** is pre-programmed by pressing button (V).

The following pre-programmed nominal functions

- Cooking temperature
- Cooking time
- Starting time
- Steam condensation

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.

When illuminated, this lamp (LV) indicates that steam condensation is switched on. When cooking is completed, steam condensation will start automatically and will remain in operation until the pressure in the appliance has been reduced to normal. The lamp (LV) will flash during the cooling phase.

**4.4 Shutting down**

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) extinguishes.
- Press the cooking time button (DT).  
Lamp (LD) extinguishes.
- Press the starting time button (ZT).  
Lamp (LZ) extinguishes.  
(Starting-time programme exists as an option)
- Press the button for steam condensation (V).  
The lamp (LV) will extinguish.
- Switch off the Soft button (R), if this was activated.
- Switch off the control switch (S).  
Turn from position I to 0.  
Lamp (LS) extinguishes.
- 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.
- 0 = Off
- The lamp (LS) extinguishes.
  - 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.

**4.5 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).

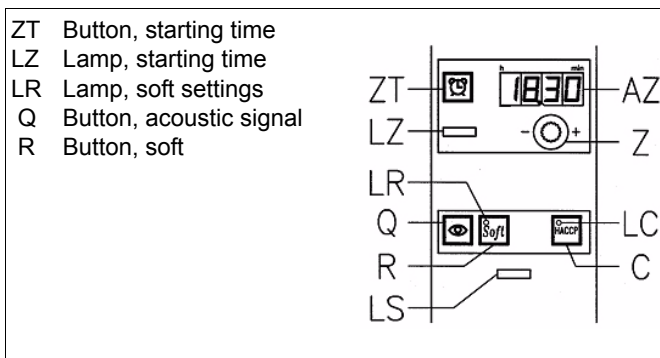


Fig. 3 Right console

**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.

**HACCP**

Appliances can be optionally equipped with the program-linked cooking process procedure THERMACAM. Cooking processes can be programmed, analyzed, 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 4.4.

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

**4.6 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.

**Manual cooling**

If steam condensation is not to be automated using the programme, cooling can be switched on manually when cooking is completed. However, it is necessary to determine the start and duration of cooling manually. Procedure: halt the cooking process by deactivating the button (TT); the cooling is switched on by pressing button (V); lamp (LV) will flash. Deactivate button (V) to turn off the cooling again. Lamp (LV) will extinguish.

**4.7 Tilting**

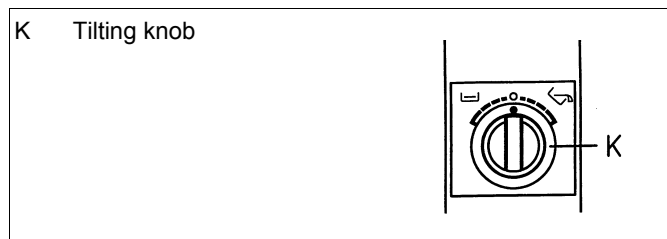
**MECHANICAL TILTING**

The pan is tilted with the help of an electric motor. It only works when the **control switch (S)** are switched on by turning from position 0 to I.

- 0 = Off
- I = On

**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. 4 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 pan is tilted down by turning tilting switch clockwise (to the right) and tilted up by turning it anti clockwise (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 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.

**4.8 Temperature settings**

**Temperature setting**

Dependent on the cooking functions required, the temperature selection button (T) on the display (AT) is used to set the following recommended temperatures:

- Cooking 68° - 212°F (20° - 100°C)
- Pressure-cooking 230° - 394°F (110° - 250°C)
- Braising 356° - 394°F (180° - 250°C)

When pressure-cooking, select lower heating-up temperatures (110°C) for low food quantities and higher temperatures (250°C) for larger food quantities. If the desired value set exceeds 230°F (110°C), this display will automatically revert to the temperature < 230°F (110°C) when the working pressure is reached. Any change to the desired value can then only be made to set lower temperatures. Any new temperature value setting can only be entered again after the appliance has been switched off.

**Cooking with pressure**

After filling with water and food (either directly into the water or in insert containers) adjust the temperature to 230°F (110°C) and switch on the pan. The appliance starts to heat. Afterwards close the lid. The generated steam will press the remaining air out of the pan. Therefore, the lid regulation and safety valve must remain open (handle in position A) until only steam evaporates out of the valve opening. Now, the valve is to be closed (i.e. handle is to be moved to position B). Within

the pan, the pressure will be increased to 0,45 bar (corresponding to 228°F (109 °C)) and remains constant. When the heating is switched off, by hand or automatically, the pan should be cooled during about 4-6 minutes, in order to decompose the steam and the pressure

**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 extinguish when this is done.

In the case of faults, the appliance must also be disconnected from the electric supply connection.

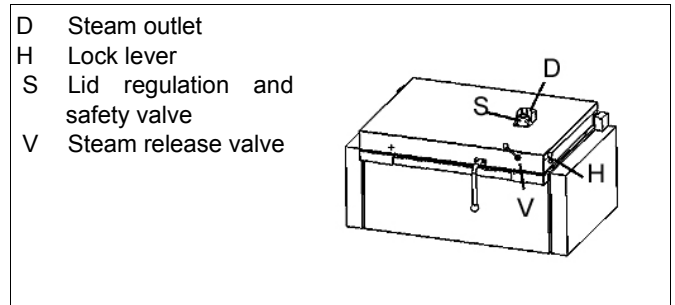
**4.10 Power failure**

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. LID LOCK**

**5.1 Lid elements**



**Fig. 5 Pressure lid - Locking**

**H Lock lever**

Causes the lock hook to snap in.

**S Lid regulation and safety valve**

Combined valve for manual operation and as safety valve (blows off automatically at pressures above 6.5 psi (0.45 bar)).

Position:

**D Steam outlet**

The condensed steam flows out through this canalization.

**V Steam release valve with safety lock**

This valve predominantly has a safety function. With the valve open, steam pressure for cooking cannot build up in the cooking vessel. The steam release valve can be closed only when the lid is properly closed and the lock mechanism is correctly snapped in. Only then it is possible to build up the steam pressure in the appliance.

**Caution:**

**At the steam outlet (D/ Fig. 5) large amounts of steam blow out.**

## 5.2 Closing and opening the lid

The lid of the tilting braising pan is a fast-action lock of a pressure vessel. This lock must be operated with care.

### 5.2.1 Closing

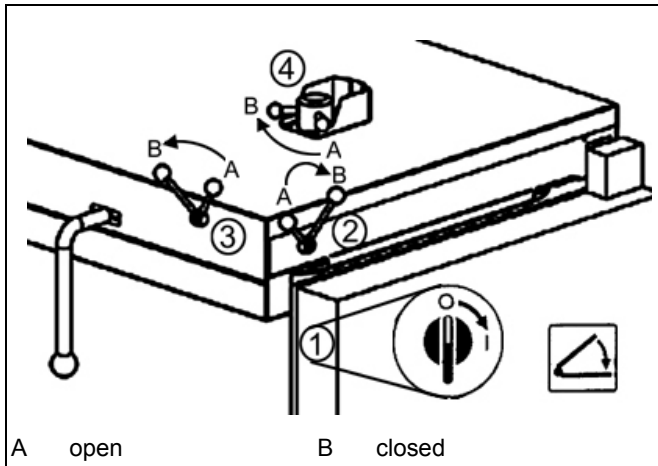


Fig. 6 Pressure lid - Closing

⇒ The pan must be brought to the horizontal position.

①:

⇒ The appliance must be heated up and the cooking process started with the lid open. Before the lid is closed, the food should be boiled at least once (owing to burning).

⇒ The upper edge of the pan and the seal must be clean and free from food residues.

⇒ Before closing the lid, it must be ensured that the locking lever, the lever of the steam release valve, and the lever of the lid regulation and safety valve are in position A (open).

⇒ The swivel arm of the mixing faucet for the water must point to the front.

②:

⇒ Press the lid downwards onto the pan by means of the lid knob and at the same time move the lock lever from the open position A backwards to the closed position B.

③:

⇒ Turn the lever of the steam release valve from the open position A to the closed position B. The lid is thus closed and ready for pressure cooking.

④:

⇒ The lid regulation and safety valve must be closed (lever position B).

### Pressureless cooking

When the appliance is used as a normal pan or open cooking vessel, the lid is placed loosely (on its own weight) on the pan without being locked.

### 5.2.2 Opening

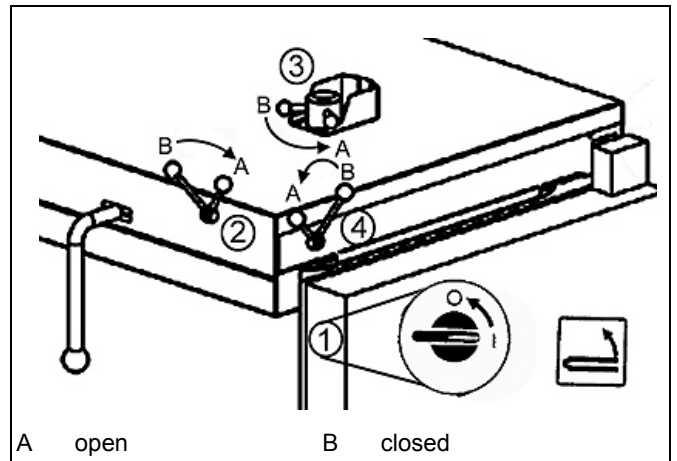


Fig. 7 Pressure lid - Opening

⇒ Before the lid is opened, the operator must ensure that there is no longer any pressure in the cooking space. This is done as follows:

①:

⇒ Turn off energy supply to the appliance by turning the time setting switch (3) and the temperature setting switch (1) to zero.

②:

⇒ Slowly open the steam release valve from position B to position A.

③:

⇒ Slowly open the lid regulation and safety valve by bringing the grip from position B to position A.

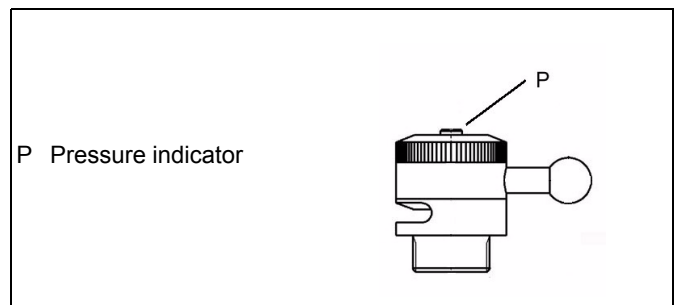


Fig. 8 Lid regulation and safety valve

Wait until the pressure indicator (pivot P on the top of the lid regulation and safety valve, Fig. 8) reaches its lowest position, which corresponds to a pressure of 0.6 psi (0.04 bar).

Again wait until:

⇒ no further liquid

⇒ no further water

⇒ no further steam

escapes through the upward-pointing opening of the lid regulation and safety valve.

④:

⇒ Push the lid downwards onto the pan by means of the lid knob and at the same time move the lock lever from the closed position B forwards to open position A.

⑤:

As there is still a residual pressure again wait until:

⇒ no further liquid

⇒ no further water

⇒ no further steam

comes out.

⇒ Hold the lid by the knob and carefully open.

**Note:**

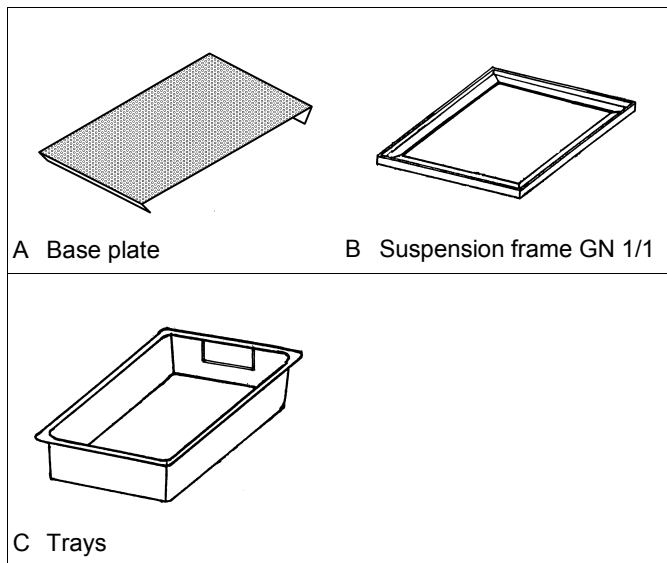
The manual force on the knob should not exceed 25 kg.

**Safety information**

When the lid is opened, it should be noted that hot vapors may flow out or hot fat may splash out. Staff must take this into account by means of appropriate measures (standing far away, holding lid by knob) in order to avoid injuries.

After cooking with the lid closed, either pressureless or under pressure, the lid must not be opened until the pressure has been completely released from the appliance. Particular care is required if the food froths. If the lid is opened when there is a small residual positive pressure, hot food may flow out and injure the operator.

**6. ADDITIONAL EQUIPMENT**



**Fig. 9 Accessories**

**Perforated base plate (Fig. 9A)**

Baskets and other inserts can be placed on the base plate.

**Suspension frame GN1/1 (Fig. 9B)**

Support of perforated and not perforated trays GN1/1.

**Trays GN1/1**

Perforated and not perforated trays GN1/1.

**7. WORKING RULES**

**7.1 Filling**

**7.1.1 Pressureless cooking**

Throughout the complete cooking process the level of the liquid food may never rise above 1.6" (4 cm) below the pan edge. During operation, the lid must be closed, but not locked.

For the "Cook" function (temperature setting up to 212°F (100°C)) to operate correctly, the pan must be filled with food to a depth of at least 1.5" (3 - 4 cm) to prevent the food from being burnt. The SOFT function should be activated if the pan is filled with less food.

**7.1.2 Pressure cooking**

Depending on the type of liquid food, i.e. smaller or greater tendency to froth and boil over, the pan must be only half filled to allow sufficient steam to remain above the food.

**7.1.3 Pressure steaming**

When inserted containers are used, water is poured in only to below the bottom grid, i.e. level about 1" (2 cm).

**Safety information**

▲ During pressureless cooking the filling of the appliance must never rise above 1.6" (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 pressure cooking the pan must be only half or less filled.

**7.2 Use as pan:**

Cooking process	Food	Temperature		Comments
		pressureless	with pressure	
Sauteing, brief roasting	Escalope, steaks, diced meat, shredded meat	374°F (190°C)		Cover opened
Roasting	Pieces of meat	initially 391°F (200°C) then 230-320°F (110-160°C)		Cover opened
Stewing, braising	White meat, poultry	initial roasting 392°F (200°C)		Cover opened
		glazing 392°F (200°C)		Cover closed
Steaming, glazing	Vegetables	284-320°F (140-160°C)		Cover closed
Poaching, light browning	Poultry	initially (284-320°F (140-160°C)) then 176°F (80°C)		Cover closed

When laying meats to be fried on the pan bottom, the sensitive regulation must be watched. The temperature of the pan bottom will stay equally the same, that is when laid in the middle of the pan. To begin it is necessary that placing takes place partially in the middle.

**Sticky food**

To prevent the food from sticking to the bottom of the pan, the following procedure can be applied:

Mix about 2 kg of unpeeled, uncleaned slices of potatoes with about 2 kg of salt and spread out this mixture on the empty cold bottom of the pan. Afterwards, heat up the pan gradually to the maximum heat during one hour. Then let it slowly cool, without quenching it with water.

**7.3 Use as cooking appliance, pressureless or with pressure**

Cooking process	Food	Temperature		Remark
		pressureless	with pressure	
Cooking	Meat, Vegetables, Potatoes, Rice, Sauces, Noodles, Clear broth	212°F (100°C)	225°F (107°C)	with or without inserted containers, suspension frames and bottom grid
Steaming	Meat, Vegetables, Fish, Eggs, Fruit	212°F (100°C)	225°F (107°C)	with or without inserted containers, suspension frames and bottom grid
Thawing of frozen food	Vegetables, Rice, Meat, Fruit	212°F (100°C)	225°F (107°C)	with or without inserted containers, suspension frames and bottom grid

**Cooking times**

The total cooking time for a food is composed of three phases.

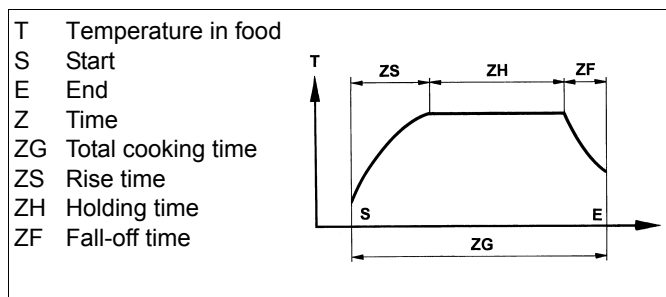


Fig. 10 Cooking times

## 7.4 Some cooking instructions

### 7.4.1 Meat

In all methods for preparing meat together with a sauce, for example pot roasts, goulash, stews, various jugged meats, braised beef, etc., the meat must first be individually browned, i.e. roasted without pressure. The meat is then cooked with the sauce in the same appliance under pressure.

Guide times for cooking under pressure after closing the valve.

Beef	15 - 20 min
Pork	10 - 15 min
Stewed beef dumplings	25 - 35 min
Beef goulash	30 - 40 min
Beef stew, depending on size of pieces	50 - 70 min
Salted or smoked beef tongue	60 - 90 min
Smoked pork, depending on size of pieces	30 - 40 min
Boiling beef, depending on size of pieces	60 - 90 min
Boiled chicken, depending on size of pieces	40 - 50 min
Jugged venison	40 - 50 min
Jugged venison or jugged pork	50 - 60 min

About 15 minutes before the end of the cooking time, switch off the heating and allow the meat to stand (cooking times must be observed).

### 7.4.2 Cooking ham

Bring the water to the boil, place ham in to water and close the lid. Turn temperature controller to 167°F (75°C) and allow to cook overnight.

### 7.4.3 Hungarian goulash with boiled potatoes and vegetables

20 kg	beef
500 g	lard
10 kg	onions
200 g	paprika, salt, pepper
900 g	tomato puree
4 l	red wine
5 l	water
8 kg	potatoes

- ⇒ Preheat the pan without bottom grid to 482°F (250°C).
- ⇒ Heat fat.
- ⇒ Thoroughly brown the meat.
- ⇒ Add onions and boil down.
- ⇒ Add paprika, salt, pepper and tomato puree.
- ⇒ Add 4 l of red wine and 5 l of water.
- ⇒ Close the lid. Leave lid regulation and safety valve open (position A).
- ⇒ Wait until steam escapes from lid regulation and safety valve. Close the valve (position B).
- ⇒ Set cooking time at 25 min.

- ⇒ After the signal has been given, open steam release valve (V).
- ⇒ Open lid and season goulash again quickly.
- ⇒ Place potatoes/vegetables in perforated GN containers in the retaining grid of the pan. (Note size of potato/vegetable pieces.)
- ⇒ Close lid. Open lid regulation and safety valve (position A).
- ⇒ Wait until steam escapes from the safety valve. Close lid regulation and safety valve (position B).
- ⇒ Set cooking time to 8 min.
- ⇒ In the case of sensitive vegetables, continue cooking without pressure.
- ⇒ After the signal has been obtained, wait until no more pressure is in the vessel or open steam release valve (V).
- ⇒ Open lid.

### 7.4.4 Vegetables

Cooking times for cooking under pressure in the containers after closing the valve

Fresh artichokes	20 - 30 min
Beans	8 - 12 min
Peas	5 - 8 min
Carrots, depending on size when cut	10 - 15 min
Cabbage or Savoy cabbage, cut	15 - 25 min
Kohlrabi, cut	15 - 20 min
Celery, cut	10 - 15 min
Fennel	15 - 20 min
Chicory	8 - 12 min
Jacket potatoes, depending on size	18 - 25 min
Boiled potatoes, cut	10 - 15 min
Red beets, depending on size	70 - 90 min
Cauliflower, Brussel sprouts, broccoli	4 - 6 min
Frozen vegetables, steam very carefully	5 - 10 min

### 7.4.5 Poaching terrines

- ⇒ Fill water up to the bottom plate and bring to the boil.
  - ⇒ Place terrines on top, close lid and lock. The valve remains slightly open in position A. T
  - ⇒ Turn the temperature to 185°F (85°C) and allow to cook.
  - ⇒ According to size, try after 40 minutes, to see if it is done.
- Puddings can be poached in the same way.

### 7.4.6 Steamed red cabbage

Marinate the chopped red cabbage on the previous evening with red wine, chopped apples, onions and vinegar.

Place the marinated red cabbage in the pressure braising pan and allow to cook. Add the marinade. If necessary add a little broth, allow everything to boil and stir thoroughly with a spatula.

- ⇒ Close the lid and close the lid valve.
- ⇒ Set temperature regulator to 230°F (110°C).
- ⇒ After 10 minutes, set temperature regulator to 212°F (100°C)
- ⇒ Cooking time 40 - 60 minutes.

### 7.4.7 Mixed vegetables

- 20 kg of carrots, leeks, Chinese cabbage, celery
- ⇒ Preheat the pan to 302°F (150°C). Set time switch to 30 min.
- ⇒ Fill water up to below the bottom plate.
- ⇒ Place vegetables in perforated GN containers. Lightly salt.
- ⇒ Close lid. Leave safety valve open (position A).

**Very important:**

The cooking area must be thoroughly vented, otherwise poor results will be obtained (irregular cooking result).

- ⇒ Wait until steam escapes from the lid regulation and safety valve. Close lid regulation and safety valve (position B).
- ⇒ Set cooking time to 4 min. (There is no need to set the temperature. Pressure is automatically regulated).
- ⇒ After the signal has been obtained, wait until no more pressure is in the vessel or open the steam release valve (V).
- ⇒ Open lid.

Food quality: Fresh or dried

Ripeness

Size of the pieces: Small pieces reduce the cooking time

Quantity: The larger the batch, the longer the heat-up time

Food temperature: Cold room or room temperature

The enjoyment value of the food will be influenced only to a very small extent, if at all, by the choice of the cooking temperature and whether cooking is carried out with or without pressure.

**7.4.8 Rice**

20 kg 330 portions of 60 g each  
500 portions of 40 g each

- ⇒ Preheat pan to 302°F (150°C). Set time switch to 30 min.
- ⇒ Introduce water until level with bottom grid. Then fill in a ratio of 1:2 with water and add salt.
- ⇒ Introduce rice in perforated GN container.
- ⇒ Bring water to the boil with the lid open.
- ⇒ Stir the rice.
- ⇒ Close lid. Leave safety valve open (position A).
- ⇒ Thoroughly vent pan until steam escapes from the safety valve.
- ⇒ Close safety valve (position B).
- ⇒ Set cooking time to 8.5 min.
- ⇒ After the signal has been obtained, wait until no more pressure is in the vessel or open the steam release valve (V).
- ⇒ Open lid.

**7.4.9 Jacket potatoes/Asparagus/Broccoli**

- ⇒ Preheat pan to 302°F (150°C). Set time switch to 30 min.
- ⇒ Introduce water up to below bottom plate.
- ⇒ Introduce potatoes into perforated GN containers and place in the pan.
- ⇒ Close lid. Leave lid regulation and safety valve open (position A).
- ⇒ Thoroughly vent pan until steam escapes from lid regulation and safety valve.
- ⇒ Close regulation and regulation and safety valve (position B).
- ⇒ Set cooking time:
  - Jacket potatoes 18 min
  - Asparagus 5.5 min
  - Broccoli 4.5 min
- ⇒ After a signal has been obtained, wait until no more pressure is in the vessel or open the steam release valve (V).
- ⇒ Open lid.

**7.4.10 Gravy**

- ⇒ Preheat pan to 302°F (150°C).
- ⇒ Add a little fat and brown the bones.
- ⇒ Add Mirepoix and lightly roast.
- ⇒ Add a little water and then fill up with water.
- ⇒ Add spices.
- ⇒ Cook under pressure for 40 min.
- ⇒ then boil down for 10 min with the lid open.

**7.4.11 General**

The described cooking times are guide values and will be influenced by the factors listed below. The user of the appliance must take these deviations into account.

### 8. CLEANING

Before being cleaned, the appliance must be switched off and allowed to cool.

#### Pan with a polished steel bottom

Do not use water for cleaning. This would cause the food to stick to the pan, which in turn would necessitate a treatment as described in chapter 10. Clean the pan by rubbing it with a dry cloth or with absorptive paper.

#### Pan with a chrome nickel steel plated bottom

In general it suffices to clean the pan with hot water, a standard grease solvent, and a brush. Afterwards, rinse the pan with hot water and rub it dry with a cloth or absorptive paper.

#### Cover, lid and panels

The cover, lid and panels are made of stainless chrome nickel steel. Clean them with hot soapy water and a standard grease solvent and rub them dry.

#### In general

Do not clean the appliance with steel brushes, steel wool, copper cloths, abrasive products, etc., as these would destroy the metal surfaces and thus facilitate corrosion.

The appliance must not be cleaned with high pressure cleaners or water jets, owing to the danger of malfunctions.

#### Lid regulation and safety valve

This valve must be cleaned after every cooking process.

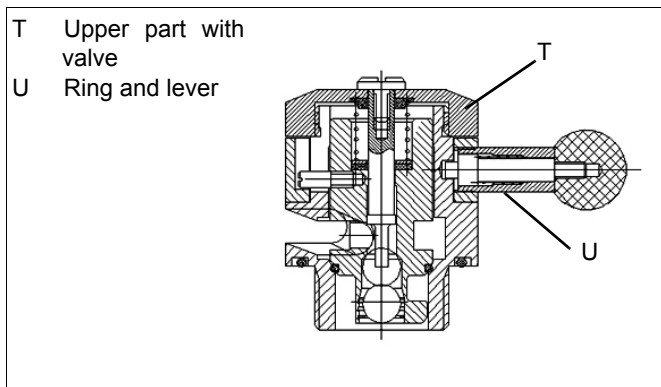


Fig. 11 Lid regulation and safety valve- Cleaning

- ⇒ Screw off the upper part T and remove the upper part with the complete valve
- ⇒ Remove the ring with the lever U

### 9. 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 after sales 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 produce temperature sensor	Summon service agent and report reading
E2	Failure of bottom temperature sensor	Summon service agent and report reading
E4	Failure of steam condensation 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 is too high	Summon service agent and report reading

E7	Sensor J16 of bottom temperature is too high	Summon service agent and report reading
E9	Failure of analogue/digital converter	Summon service agent and report reading
E10	Safety thermostat for dry cycle protection has responded	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 Interface COP485.1 is not connected.	Discharge fault display and signal by pressing button (Q).
E23	HACCP configuration; EEPROM COP485.1 (memory chip) has found a reading 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.

### 10. 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 lime scale, grease, starch and egg white deposits by cleaning. Corrosion can occur under these layers due to the absence of air exposure. Lime scale can be removed with 10% acetic acid, 10% phosphoric acid or with suitable lime scale 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 vapors 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.