Operating Manual

Kettle model:

-MaxiMix QuickChill / OptiMix QuickChill (AutoTemp 56)

-MultiMix / OptiMix / MaxiMix (AutoTemp 36 / 56)

-Multi / Opti / Maxi (AutoTemp 32)

-EasyMix (AutoTemp 36)

-Easy / EasyMobil / EasyStand (AutoTemp 32)

Valid through Software version 1.9

"Original instructions"

Document 10000028013-DOC-000-00-EN

Manufacturer: Jøni A/S

Table of contents

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Foreword

This manual contains operating instructions for the appliance.

The 'Installation Instructions' and 'Service Instructions' folders contain additional information about the appliance.

Please contact your dealer if you have any further questions concerning the appliance.

This manual has been optimized for colour printing

Before use

Please read this user manual carefully before using the appliance for the first time. This will ensure that you know how to use the appliance correctly and are aware of the necessary safety precautions to protect both the user and the appliance itself.

General

Purpose

The kettle must be stored and used indoors.

The appliance is intended for professional use in connection with heating, cooking, stirring and other similar food preparation processes.

The appliance must not be used for other purposes, including heating of acids or other chemical substances.

Certain functions described in this operating manual are based on a particular controller or additional equipment for the appliance.
Not all sections are relevant to your appliance.

It is the responsibility of the user to ensure that all users receive the necessary instructions when using the appliance, so that they can operate the appliance safely and without risk of personal injury or damage to the appliance.

The appliance can be used by children aged 8 and by persons with physical disabilities, reduced senses, mental retardation or lack of experience and knowledge, if they use the device under supervision or have been instructed for safe use of the appliance and understand the hazards associated with it.

Children are not allowed to play with the appliance.

The environment

The appliance has been designed and manufactured in an environmentally friendly way.

Virtually all the materials used can be recycled, and the manufacturing process was carried out with a focus on minimising the release of environmentally harmful substances into the environment as well as the recycling of raw materials to the maximum extent.

Fire extinguishing

Burning appliances should be extinguished with carbon dioxide (Co2)

Burning oil, food or similar can be extinguished with a fire blanket.

Symbol explanation

⚠ **CAUTION!**

Warnings concerning possible damage to the appliance, injury to people, etc., are written in this format and marked with the above symbol.

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> **NOTICE!**
>
> **Special conditions to be observed when using the appliance, to ensure safe and trouble-free operation, is written in this format and marked with the symbol above**
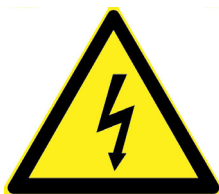
The following symbols, depending on the model, can be found on the device:

Fig. 0-1 Earth bonding

Earth bonding.
Is placed near the connection for earth bonding.


Fig. 0-2 Dangerous Electrical Voltage

Dangerous Electrical Voltage.
Is located on covers of components with dangerous electrical voltage.

Controller

The controller's functions are shown on the display gathered in function groups to make operation simple and clear.

Below the display, there are a number of function buttons. The number of function buttons depends on the appliance configuration.

Function keys
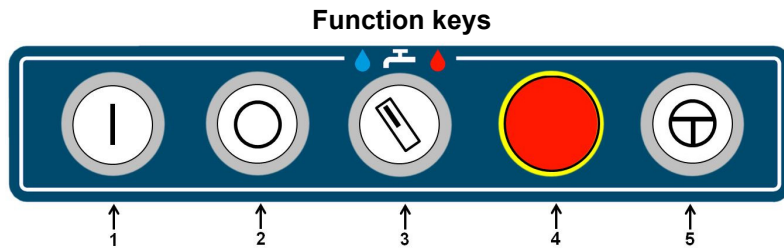
1   Control on
2   Control off
3   Switch between hot and cold water filling (Accessory)
4   Emergency stop (Only for kettles with mixer)
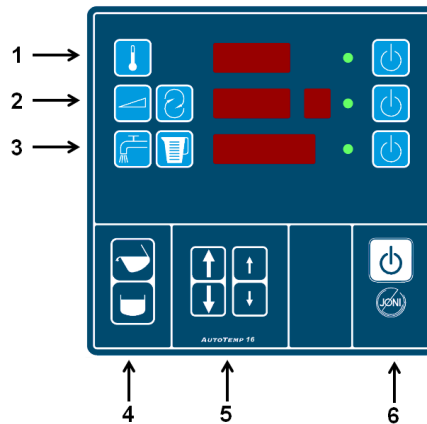5   SlowMix (Accessory)

AutoTemp 16

Fig. 0-3 Controller AutoTemp 16

1   Heating functions
2   Stirrer functions
3   Water filling functions
4   Keys for tilt operation
5   Arrow keys
6   "Standby" key

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AutoTemp 32

Fig. 0-4 Controller AutoTemp 32
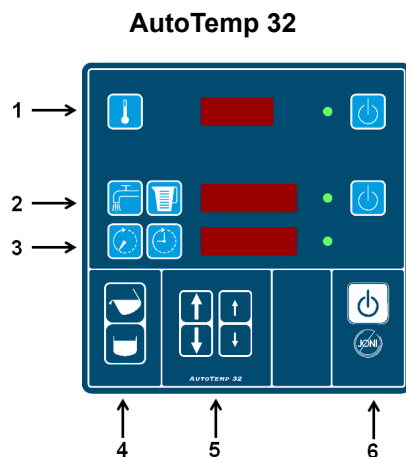
1 Heating functions
2 Water filling functions
3 Timer functions
4 Keys for tilt operation
5 Arrow keys
6 "Standby" key

AutoTemp 36

Fig. 0-5 Controller AutoTemp 36

1 Heating and chilling functions
2 Stirrer functions
3 Water filling functions
4 Timer functions
5 Keys for tilt operation
6 Arrow keys
7 Keys and LED's for heating and chilling modes
8 "Standby" key

AutoTemp 56

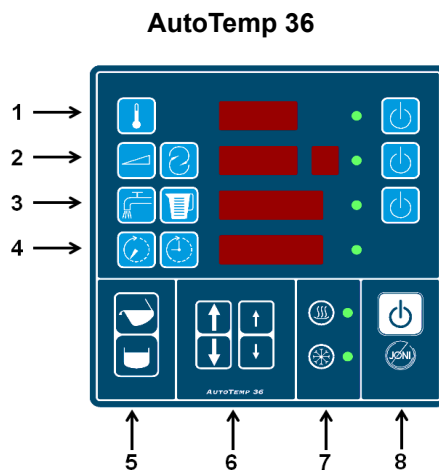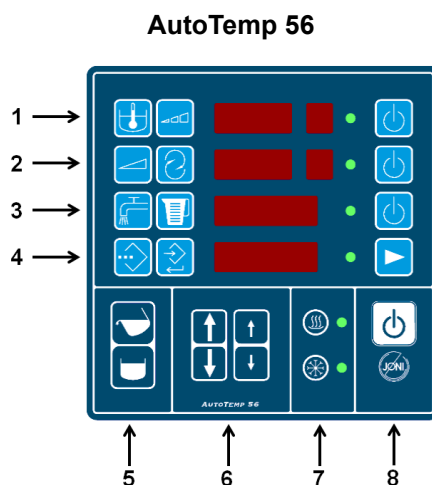*Fig. 0-6 Controller AutoTemp 56*

1   Heating and chilling functions
2   Stirrer functions
3   Water filling functions
4   Program functions
5   Keys for tilt operation
6   Arrow keys
7   Keys and LED's for heating and chilling modes
8   "Standby" key

General control methodology

In general, a function key is pressed so that the associated display flashes, indicating that the value can be altered using the arrow keys. The large arrows change the value in large steps and the small arrows change the value in small steps. If the key is held down, the value will increase/decrease at an increasing rate. This enables the required setting to be achieved by simply pressing a few keys.
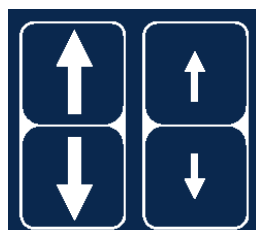
Fig. 0-7

For all relevant function groups there is an ON/OFF key ⏻ and an LED.

Pressing ⏻ alternately activates and deactivates the function.

The LED will illuminate when the function is activated.

Parameter settings

The operation of the kettle depends on a number of parameters, e.g. the volume of the kettle, which must be set correctly in order for the kettle to work. These parameters are set in the sections 'User menu' and 'Factory settings menu'.

Error codes

The system continually monitors many factors in order to protect the machine and the user. If the machine detects a fault, an error code will be shown, as described in the section Error codes

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Operation

⚠️ **CAUTION!**

When using the kettle, both the intended purpose of the kettle and the safety instructions must be followed

⚠️ **CAUTION!**

The kettle must not be left unattended when in use.

⚠️ **CAUTION!**

The kettle must be operated from the front.

⚠️ **CAUTION!**

Should a hazardous situation occur at the appliance, turn off the safety switch immediately.

⚠️ **CAUTION!**

If error code E99 is shown, the pressure in the kettle is too high and the heating power supply to the kettle must be turned off immediately. Disconnect the power supply at the main switch immediately and make sure that the kettle is repaired before taken into use again.

⚠️ **CAUTION!**

If a dangerous situation should arise involving the kettle, press the emergency stop button immediately. This will stop all functions. The power is applied again by manually turning the emergency stop button.
(This only applies to kettles with a stirrer)

⚠️ **CAUTION!**

Always ensure kettle is sufficiently clean before use.

⚠️ **CAUTION!**

Never touch the top or inside of the kettle without first checking whether it is hot, as a kettle that is in use can become so hot that anyone touching it risks a burn injury.

⚠️ **CAUTION!**

A kettle which has been in use will cool down very slowly and anyone touching it risks a burn injury long after it has been switched off. The control panel does not give any warning of this.

⚠️ **CAUTION!**

Be careful when the contents of the kettle are boiling. Splashes from the kettle and over boiling liquids may burn or scald anyone nearby.

⚠️ **CAUTION!**

Do not use abrasive tool of metal for stirring.

> ⚠️ **CAUTION!**

Valves on the kettle bowl must not be opened, when the kettle is pressurized.

> ⚠️ **CAUTION!**

For safety reasons, the kettle must not be filled to within 5 cm from the rim. Otherwise, there is an increased risk of over boiling and emptying the kettle will be difficult.

> ⚠️ **CAUTION!**

During use, no steam may be discharged from the safety valve. If this happens, disconnect the power supply at the main switch immediately and make sure that the kettle is repaired before taken into use again.

> ⚠️ **CAUTION!**

During normal use, hot air/steam will be discharged from the venting valve. In the event of a fault, steam may be discharged from the safety valve.
Note that any steam that is discharged could cause burn injuries.

> ⚠️ **CAUTION!**

Connections between the steam jacket and the outside must not be blocked. This applies, for example, to the safety valve, venting valve, vacuum valve and level valves.

> ⚠️ **CAUTION!**

It is forbidden to stay behind the kettle, when it is in use.

> ⚠️ **CAUTION!**

The kettle must not be moved when its contents are so hot that there is a risk of scalding.

> ⚠️ **CAUTION!**

If a dangerous situation should arise involving the kettle, press the emergency stop button immediately. This will stop all functions. The power is applied again by manually turning the emergency stop button.
(This only applies to kettles with a stirrer)

> ⚠️ **CAUTION!**

Stainless steel surfaces are protected by a thin layer of chromoxide, which is vulnerable to damage by use of steel implements and exposure to chlorine, as found in normal kitchen salt for example.
Never add salt to cold water in a kettle. Wait until the water is hot, when the salt will dissolve. This will prevent salt crystals settling at the bottom of the kettle where they can damage the chromoxide layer, exposing the steel to corrosion.

> ⚠️ **CAUTION!**

If the kettle is on castors, the castor brakes must be engaged when the kettle is in use.

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Fig. 0-8 Castor brakes disengaged

Fig. 0-9 Castor brakes engaged

Switching the kettle on and off

Turn power supply on by turning the handle clockwise to position 'I'.

Fig. 0-10 On

Turn power supply off by turning the handle anticlockwise to position '0'.

Fig. 0-11 Off

The kettle's controller is switched on by pressing ① and switched off by pressing ◎.

When the control is turned on, it can be put into "Standby"-mode by pressing ⏻, thereby minimizing the power consumption and the control will remember its initialization status.

On kettles with compressed air, the compressed air supply must be opened in order for the kettle to function.

If a requirement for an access code has been activated in the user menu in order to switch the kettle on, the heating display will show 'PAS', and a four digit access code must be entered in order to activate the kettle.

The code will be shown in the water display and is set using the arrow keys. The large arrows alter the code by 100 and the small arrows alter the code by 1.

When the access code has been selected, press water-

If the code is correct, the kettle will be activated. If it is incorrect, error code U01 will be shown for three seconds, after which another attempt can be made.

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Tilting function

⚠ **CAUTION!**

Due to the risk of crushing injuries, it is forbidden to stay behind or below the kettle, when the tilting function is operated.

⚠ **CAUTION!**

Due to the risk of crushing injuries, no hands or fingers may be placed between any fixed or moving components, when the tilting function is operated.

⚠ **CAUTION!**

The kettle must be emptied carefully, taking into account the risk of scalding and other factors such as the size and capacity of the floor grates, etc.

⚠ **CAUTION!**

When emptying the kettle, keep clear of the front of the kettle, as the pouring lip and any splashing liquids could cause scalding. Ensure there is sufficient space to evacuate the danger zone.

⚠ **CAUTION!**

There must always be open space around the moving components of the kettle, when it is being tilted.

⚠ **CAUTION!**

The lid must be open before the kettle is tilted.

The kettle will tilt when ⬒ is pressed and returne when ⬓ is pressed. The kettle wil only tilt when the keys are pressed. The kettle wil stop in both outher positions or the keys are released.

The kettle will stop automatically when it is fully tilted.

When the key is released, the kettle will remain in its current position, unless the 'automatic return tilt' function is activated in the user menu. After a pre selected number of seconds, the kettle will then return for a pre selected number of seconds. This does not however apply when the kettle is only slightly tilted or when it is fully tilted.

NOTICE!

This function is very useful when emptying the contents of the kettle into smaller containers.

Adjusting the heat

<table>
<tr><td>NOTICE!</td></tr>
</table>

When the kettle is heating, pressure is built up inside the jacket. This pressure can be observed at the pressure gauge at the rear of the kettle.

Automatic water level control in steam generator

Water level in the steam generator is monitored by the kettle control system. Water will be added automatically if necessary to maintain the correct level.

Manual draining of condensate

Steam-heated kettles only

Under normal operating conditions, condensate is bled off automatically.

Under certain conditions or as a result of incorrect installation, condensate can build up in the bottom of the kettle.

This causes a loud noise when steam is passed through the condensat.

In such instances, the condensate can be drained through a valve at the bottom of the kettle jacket.

Fig. 0-12 Valve for condensate out

<table>
<tr><td>⚠ CAUTION!</td></tr>
</table>

Beware of hot steam/water when valve is opened!

Step	Action	
1	Switch off the heating and position the kettle vertically.	
2	Wait until pressure in the steam chamber reaches 0 bar.	

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3	Open valve to bleed condensate.	
4	Close valve when condensate flow stops.	

The kettle is now ready to heat.

AutoTemp 16, 32 and 36

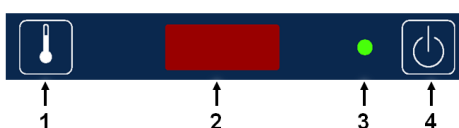The heat is adjusted using the part of the panel shown in the following illustration.

Fig. 0-13 Adjusting the heat, AutoTemp 16, 32 og 36

1   Key for jacket temperature
2   Display for jacket temperature
3   LED for heating and chilling on
4   Key for heating chilling on/off

Generally, the display will show the actual jacket temperature. The temperature set point for the steam jacket is set by pressing 🌡 sso that the display flashes. Set the temperature set point using the arrow keys.

The function will be exited automatically after three seconds without a key press or if another function is selected.

AutoTemp 56

NOTICE!

To get a more exact temperature measuring on AutoTemp 56, it's important to activate the stirrer with scrapers. Stirring ensures a more even temperature distribution.

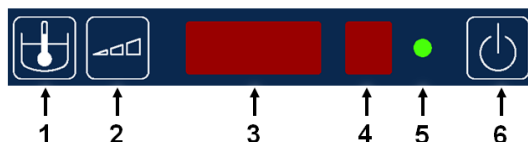The heat is adjusted using the part of the panel shown in the following illustration.

Fig. 0-14 Adjusting the heat, AutoTemp 56

1   Key for food temperature
2   Key for heating power
3   Display for food temperature
4   Display for heating power
5   LED for heating and chilling on
6   Key for heating and chilling on/off

By default, the display will show the actual food temperature. The set point for food temperature is set by pressing 🌡 so that the display flashes. Set the temperature set point using the arrow keys.

The function will be exited automatically after three seconds without a key press or if another function is selected.

The required heating power is set by pressing ◾ so that the display flashes. Set the required power using the arrow keys.

The function will be exited automatically after three seconds without a key press or if another function is selected.

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> **NOTICE!**
>
> **The heating power function is used to determine the temperature of the steam jacket based on the food temperature, and therefore how powerful the heating should be.**
> **As the food is heated, the temperature of the jacket will automatically increase.**
> **Lower power gives gentler heating but a longer heating time.**
> **Higher power gives less gentle heating but a shorter heating time.**
> **When power step 9 is selected, the temperature of the jacket will be set to maximum and the heating time will be the shortest possible.**

General

The heating power supply is switched on/off by pressing [⏻]. The LED will illuminate when the heating is switched on.

To ensure that the food is heated uniformly and quickly, it should be stirred whenever possible. This also gives an even distribution of heat, and therefore better temperature measurement to control the heating process.

The kettle must be in the vertical position in order to heat its contents. If this is not the case, error code U10 will be shown and the LED will flash until the kettle has returned to the vertical position or the heating has been switched off. If the kettle is vertical again within two minutes, the heating will be switched on automatically. If it takes longer than this, the heating must be switched on manually.

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Chilling

AutoTemp 36 and 56

> ⚠️ **CAUTION!**
>
> **Watch out for discharging water/steam from the bottom of the kettle when the chilling function is activated.**

The chilling function is used to chill the contents of the kettle.

In technical terms, there are two solutions:

- Tap water is let in through the steam jacket from where it flows to the floor grate.
- Chilled water is pumped from an ice bank / chilled water tank through the steam jacket and back to the ice bank.

In both cases, the steam jacket is filled with water until the temperature of the jacket is decreases to 80ºC, before the chilling process is started. This ensures that there is no pressure in the kettle when the chilling process is started.

Chilling mode

The kettle's function depends on whether it is in heating mode or chilling mode. The control panel indicates which mode is active.
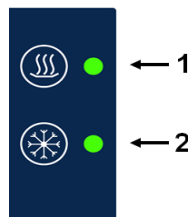

Fig. 0-15 Key and LED for chilling

1   LED for heating mode
2   LED for chilling mode

The kettle is switched to chilling mode by pressing ❄ and holding the key down for three seconds until the LED for heating mode extinguishes and the LED for chilling mode illuminates. If the user attempts to switch to chilling mode and chilling mode has not been activated in the factory settings menu, error code U40 will be shown.

> **NOTICE!**
>
> **When chilling, depending on the contents of the kettle and stirring there may be a difference between the temperature shown in the display and the actual temperature of the food.**
> **It is therefore important to check the temperature of the food with another temperature measurement directly in the food.**

Setting the set point for food temperature

With the AutoTemp 36 controller, the user cannot set the set point for food temperature, only start and stop the chilling process.

With the AutoTemp 56 controller, both the set point for food temperature and the required chilling intensity can be set.

The set point for food temperature is set by pressing 🌡 so that the display flashes. Set the temperature set point using the arrow keys.The function will be exited automatically after three seconds without a key press or if another function is selected.

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To ensure that the food is at the temperature set point, it may be necessary to set the set point for food temperature lower, e.g. to 1 ºC.

Starting and stopping chilling

Chilling is started/stopped by pressing ⏻.The LED will illuminate when chilling is switched on.

The kettle must be in the vertical position in order to chill. If this is not the case, error code U11 will be shown and the LED will flash until the kettle has returned to the vertical position or chilling has been switched off. If the kettle is returned to vertical position within two minutes, chilling will be switched on automatically again. If it takes longer than this, chilling must be switched on manually again.

The kettle's chilling function works best when the contents of the kettle are stirred during chilling. This ensures uniformly distribution of cooling throughout the food.

Setting water consumption for chilling AutoTemp 56

This function is used to set the intensity of the chilling. The lower the value that is selected, the smaller the quantity of water that passes through the steam jacket and the longer the chilling process will last. When power step 9 is selected, the flow rate will be set to maximum and the chilling time will be the shortest possible.

The required chilling power is set by pressing ▣ so that the display flashes. Set the required power using the arrow keys.The function will be exited automatically after three seconds without a key press or if another function is selected.

Setting water consumption for chilling AutoTemp 36

The required chilling power is set in the user menu point 5.1.

By this feature, when using open cooling, water consumption can be significantly reduced.

Heating mode

The kettle is switched to heating mode by pressing ♨ and holding the key down for three seconds until the LED for chilling mode extinguish.

The kettle now performs an initialisation which takes several minutes, as the steam jacket must be emptied of water. During this period, the LED next to ♨ flashes and the kettle can neither heat nor chill.

When the initialisation is complete and the kettle is ready to heat, the LED next to ♨ will illuminate.

AutoTemp 16 and 32

The chilling function is used to chill the contents of the kettle. Chilling takes place by letting water through the steam jacket down to the floor grate.

The kettle's chilling function works best when the contents of the kettle are stirred during chilling. This ensures uniformly distribution of cooling throughout the food.
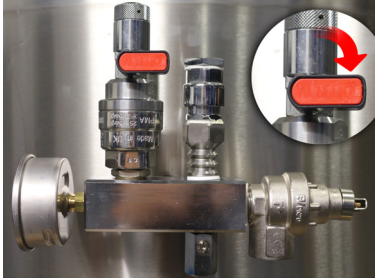
NOTICE!

When chilling, depending on the contents of the kettle and stirring there may be a difference between the temperature shown in the display and the actual temperature of the food.
It is therefore important to check the temperature of the food with another temperature measurement directly in the food.

Start chilling

⚠ **CAUTION!**
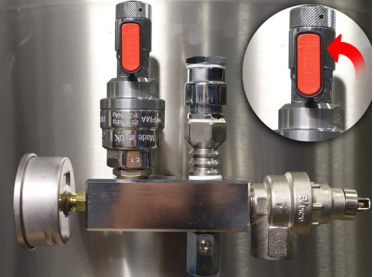
Watch out for discharging steam/hot water when the valve for chilling water out is opened!

Step	Action	
1	Switch off the heating and position the kettle vertically.	
2	Set the selector switch to chill and wait until the pressure in the steam jacket is app. 0 bars	
3	Open the valve for chilled water out.	
4	Close the kettle's venting valve. This is located on the back of the kettle and is open during normal use.	

The water runs through the steam jacket, thereby chilling the content of the kettle, and out through the valve "chilled water out".

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End chilling

Step	Action	
1	Shut off the water supply to the kettle's steam generator by setting the selector switch to heating.	
2	Close the valve for chilling water out.	
3	Open the kettle's venting valve.	
4	Open the valve for water level and allow the excess water to drain out.	

5	Close the valve for water level when no more water is draining out.	

The kettle is now ready for heating.

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Filling the kettle with water

⚠️ **CAUTION!**

Use caution, the water can be hot and pose a risk of burns.

The water filling function is adjusted using the part of the panel shown in the following illustration.

Fig. 0-16 Filling the kettle with water, AutoTemp 32, 36 and 56

1   Key for manual water filling
2   Key for automatic water filling
3   Display for water quantity or time
4   LED for water on
5   Key for water on / off

Automatic water filling

This function enables a particular quantity of water to be added to the kettle.

The function depends on whether the kettle is fitted with a water flow meter.

Automatic water filling with a water flow meter
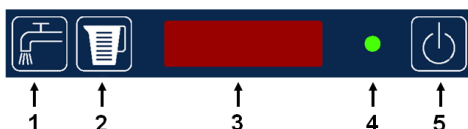
With this method, a water flow meter is fitted to the kettle, so that the controller accurately measures how much water is added to the kettle

Automatic water filling without a water flow meter

In this case, the method is selected in the user menu:

• Estimated water quantity.

   much water that flows into the kettle in one minute. Based on this value, the required number of litres is converted to the number of minutes that the solenoid valve should remain open.The advantage of this method is that the required quantity can be set without purchasing any additional equipment. The disadvantage is that the measurement will be imprecise if the water pressure fluctuates.

• Time-specific measurement (Default setting).
   With this method, the user specifies how long time the solenoid valve should remain open. When this time has elapsed the solenoid valve will be closed.The advantage of this method is that it is easy to understand. The disadvantages are that the quantity will depend on the water pressure and that setting the time correctly requires practice.

Operating the water flow meter and estimated water quantity

Press 📋 so that the display flashes and set the required quantity using the arrow keys. The quantity is set to one decimal with a maximum value equal to the volume of the kettle.

The large arrows change the set quantity by 10 litres and the small arrows change the quantity by 0.1 litres until the value has been changed by 1 litre, after which it will start to change by 1 litre at a time.

The function will be exited automatically after three seconds without a key press or if another function is selected.

The display will now show the required quantity. If you want to adjust the required quantity you must press 📋 again.

Start the filling of the required quantity by pressing 🔘 so that the LED illuminates and the quantity is counted down. Filling will stop automatically when the required quantity reaches 0.

The filling process can be interrupted by pressing 🔘 sagain so that the LED extinguishes. The remaining quantity can now be adjusted using the arrows.

The display will automatically disappear after 10 minutes without use or if 📋 is held down for three seconds..

Operation of time-specific measurement

Press 📋 so that the display flashes and set the required time using the arrow keys. The time is set in minutes and seconds. The large arrows change the minutes by 1 and the small arrows change the seconds by 1.

The function will be exited automatically after three seconds without a key press or if another function is selected.

The display will now show the required time. If you want to adjust the required time you must press 📋 again.

Start the filling process for the required time by pressing 🔘 so that the LED illuminates and the quantity is counted down. Filling will stop automatically when the required time reaches 0.

The filling process can be interrupted by pressing 🔘 again so that the LED extinguishes. The remaining time can now be adjusted using the arrows.

The display will automatically disappear after 10 minutes without use or if 📋 is held down for three seconds.

Manual water filling

This function enables the user to fill the kettle with water by holding down a key.

When 🚰 is pressed, water will be added to the kettle. The quantity added or time will be counted on the display, depending on the settings.

Filling will stop when 🚰 is released.

If 🚰 is pressed again within three seconds, the counting of the quantity added will continue.

If 🚰 is not pressed again within three seconds, the function will be exited and any set quantity will be shown on the display.

AutoTemp 16

Water filling is controlled using the part of the panel shown in the following illustration.

Fig. 0-17 Water filling, AutoTemp 16

1   Key for manual water filling
2   Key for continuous water filling

Manual water filling

This function enables the user to fill the kettle with water by holding down a key.

When 🚰 is pressed, water will be added to the kettle.

Filling will stop when 🚰 is released.

Continuous water filling

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This function enables the user to fill the kettle with water without holding down a key.

Water filling will start when 🗐 is pressed.

Filling will stop when 🗐 is pressed again.

Switch between hot and cold water filling

The switch is optional
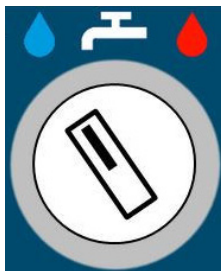
Fig. 0-18 Switch between hot and cold water filling

The switch switches between filling of hot and cold water

When the switch is to the left side 🞈 cold water is chosen.

When the switch is to the right side 🞈 hot water is chosen

Timer

Only applies to AutoTemp 32 and 36
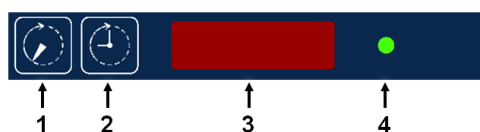
Fig. 0-19 Timer, AutoTemp 32 and 36

1 Key for timer signal
2 Key for time signal
3 Display for remaining time/time
4 LED for timer on

The Timer function enables the heating/chilling function to be switched off either at a particular time or after a remaining period of time. The beeper and display are also activated and the LED will flash.

The signal lasts for ten seconds, but can be stopped by pressing either ⊘ or ⊕.

If the Timer function is not active, the current time will be shown on the display.

The Timer is activated automatically if a time or remaining time is set. The LED will illuminate when the function is activated.

The Timer is deactivated by holding down ⊕ or ⊘ for three seconds.

Setting the time for the signal

Press ⊕ so that the display and LED flash slowly. Set the required time using the arrow keys.

If the Timer function is active, the current signal time will be shown.

The function will be exited automatically after three seconds without a key press or if another function is selected.

Setting the remaining time before the signal

Press ⊘ so that the display and LED flash slowly. Set the required time using the arrow keys.

If the Timer function is active, the current remaining time will be shown.

The function will be exited automatically after three seconds without a key press or if another function is selected.

we know what's cooking

Stirrer

Only applies to AutoTemp 16, 36 and 56

⚠ **CAUTION!**

Never put your hands, fingers or objects down into the kettle when the stirrer is switched on.

⚠ **CAUTION!**

Never touch the stirrer connection or shaft when the stirrer is operating.

⚠ **CAUTION!**

Adjust the speed of the stirrer according to how full the kettle is, so that the contents do not splash over. Always increase speed slowly.

⚠ **CAUTION!**

Do not lean in over the stirrer with loose hanging clothing, scarves, ties, long hair, etc.

⚠ **CAUTION!**

Never use scrapers with any visible damages or colour alterations.

⚠ **CAUTION!**

The stirrer must only be used with a closed lid.
This does not however apply to the SlowMix function (Additional equipment)

⚠ **CAUTION!**

Stop the stirrer and wait until the stirrer tool is stopped, before opening the lid.

⚠ **CAUTION!**

If the stirrer is able to operate with an open lid, the kettle's controller has a critical fault.
If this is the case, the use of the kettle must be stopped immediately.
Disconnect the power supply to the kettle at the main switch and contact your service company.
This does not however apply to kettles fitted with SlowMix (Additional equipment).

⚠ **CAUTION!**

If the stirrer on kettles with the Slow Mix additional equipment is able to continue operating at more than 20 revolutions per minute (RPM), the kettle's controller has a critical fault.
If this is the case, the use of the kettle must be stopped immediately.
Disconnect the power supply to the kettle at the main switch and contact your service company.

The stirrer enables the food to be stirred mechanically, so that manual stirring is unnecessary.Stirring can be used for mashed potatoes, thicken sauces, etc. but as stirring also gives an even and faster heating/cooling of the kettle contents, it should almost always be used.During clockwise stirring, the stirrer tool scrapes against the sides/bottom of the kettle, thus having maximum effect.During anticlockwise stirring, the stirrer tool does not touch the sides/bottom of the kettle, and therefore has less effect. This is used when gentle stirring is required or if the contents of the kettle are very viscous and difficult to stir.For safety reasons, the stirrer can only be used when the lid is closed. If the stirrer is activated when the lid is

open, an error code will be shown. If the kettle is fitted with SlowMix, the stirrer can however rotate slowly when the lid is open and the kettle is tilted.The fan in the bottom of the kettle allows the stirrer motor to be cooled. It ventilates the air when the stirrer is operating or the jacket temperature exceeds 40 ºC.

Fitting a stirrer/cleaning tool

Before the stirrer is started, it is important that the tool is mounted correctly in the kettle. This procedure is described below.

1) 1.Tilt the kettle bowl so that it is horizontal.
2) Push the tool in over the shaft of the stirrer.
   Make sure that the bottom scraper on the stirrer is on the right-hand side and hangs down. The side scraper should be on the left-hand side and point upwards.
   Make sure that the brushes on the cleaning tool are pressed into place on the rails.
   If necessary, place the tool on a height-adjustable trolley, which can be pushed in front of the kettle. This minimises the need for lifting.
3) Tilt the kettle bowl so that it is vertical.
4) Attach the tool by tapping the lifting handle down to a horizontal position.

The stirrer is now ready for use.

After use, remove the tool by reversing the above procedure.

Fig. 0-20 Tool is pulled out

NOTICE!

With slow stirring in tough content, it can happen that the motor gets overloaded and comes up with the Error E70.
When stirring in tough content, it's best to use program 2 or 4.

Operating the stirrer

The stirrer is controlled using the part of the panel shown in the following illustration.

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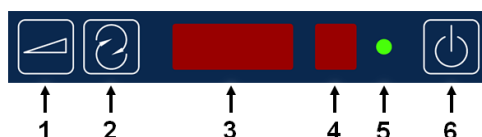
Fig. 0-21 Stirrer

1   Key for revolutions per minute (RPM)
2   Key for stirring pattern
3   Display for RPM
4   Display for stirring pattern
5   LED for stirrer on
6   Key for stirrer on/off

The displays are generally turned on by pressing ⊿, ⊘ or ⏻. The displays are turned off again after 10 minutes without use.

The required RPM is specified by pressing ⊿, so that the display flashes, and setting the value using the arrow keys. The large arrows alter the value by 10 and the small arrows alter the value by 1.

The required stirring pattern is specified by pressing ⊘, so that the display flashes, and setting the value using the arrow keys. The large arrows jump to the first or last stirring pattern, and the small arrows jump to the next/previous stirring pattern.

Stirring patterns containing pauses, the length of the pause is depending of the speed of the stirrer. This means that with a high RPM the pause will be short, and with a low RPM the pause will be long. This ensures that the stirring patterns work optimally at all speeds.

For safety reasons, the stirrer accelerates/decelerates at 20 RPM each second.
If the lid is opened, the stirrer will however stop quickly.The following table shows the stirring patterns and suggested usage.The right-hand column shows the maximum RPM for each stirring pattern. For programmes where this is not specified, the value from the factory setting menu will apply. If a stirring pattern is selected where the set RPM is not permitted, the RPM will be reduced to the maximum permitted value.

Stirring pattern	Use	Function	Max.
C	Used together with the stirring tool. (The cleaning tool is additional equipment)	Stirring with frequent directional changes.	60
0	Used when connecting/disconnecting the stirring tool.	Small steps in both directions. Operated using the arrow keys.	5
1	Sauces, soup, porridge, etc. with low RPM. Used with high RPM to whip the kettle contents and to make mashed potato, etc light.	Continuous stirring with scraper (clockwise).	-
2	Gravy, cold sauces, etc.	Stirring with directional changes. 10 revolutions clockwise, 2 revolutions pause, 5 revolutions counter clockwise, 2 revolutions pause, etc.	80

3	Mash potatoes, mix sauces, etc.	Stirring with directional changes. 4 revolutions clockwise, ½ revolution pause, 3 revolutions counter clockwise, ½ revolution pause, etc.	30-55[a]
4	Casserole dishes, etc. which require careful stirring at regular intervals.	Stirring with directional changes. 3 revolutions clockwise, 50 revolutions pause, 3 revolutions counter clockwise, 50 revolutions pause, etc.	80
5	Used when the effect of the scrapers is not wanted.	Continuous stirring without scrapers (counter clockwise).	-
6	Used to optimize the chilling process	Stirring with directional changes. 20 revolutions clockwise, 0,5 revolutions pause, 2 revolutions counter clockwise, 0,5 revolutions pause etc.	-

a. The maximum speed is limited to the range in which the stirrer has greatest power. This depends on the type and size of the kettle.

PowerMix

The PowerMix function enables a quick and easy switch to be made to a stirring pattern which mixes the contents of the kettle. This can be used, for example, when thickening or adding other ingredients.

Press ⏻ and hold down the key. After one second, the stirring pattern will switch to P.

When the key is released, the stirrer will switch back to the stirring pattern and RPM it had before the key was pressed. The RPM of the PowerMix function is set in the user menu.

Inspection hatch

The inspection hatch is used to add ingredients to the kettle while the stirrer is rotating.

The cover for the inspection hatch is removed by grabbing the handle, push the inspection hatch free of the small brackets and lift it away.

The cover for the inspection hatch is attached in reverse order.

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Fig. 0-22 Lid with inspection hatch

SlowMix

Additional equipment

The SlowMix function enables the contents of the kettle to be stirred slowly when the lid is opened. It can be used, for example, to spread the contents evenly when the kettle is emptied.

To activate SlowMix, open the lid completely. The symbol "L" is shown in the display for the stirring pattern. The speed is chosen by pressing ⬗, untill the display is flashing. Then the value can be adjusted by pressing the arrow keys ⬗.
SlowMix is activated by pressing and hold the function button for SlowMix ⊕.

SlowMix will stop when the function button for SlowMix ⊕ is released.

"Default" stirrer rpm for SlowMix, can be adjusted in the user menu.

Cleaning tool

Additional equipment

The cleaning tool can be used to loosen the dirt on the inside of the kettle.The cleaning tool is fitted in the kettle in the same way as the normal tool. The kettle is filled about one-third with water mixed with detergent and the stirring tool is started on stirring pattern C.The removable brushes on the cleaning tool can be cleaned in a dishwasher.

Programs

Only applies to AutoTemp 56
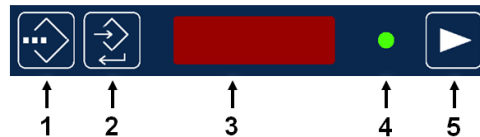
Fig. 0-23 Programs

1   Key for program selection/interruption
2   Key for correct program/confirm value
3   Display for program and variant
4   LED for program on
5   Key for program start

Selecting the program and variant

Press ⬡ so that the display flashes and select the program using the large arrows and the variant using the small arrows.

Changing the variant

Press ⬡ to alter the program and the variant shown in the program display.

The water display now shows that the first parameter is being set. The program display shows the associated value that is being set with the arrow keys.

When the value has been set correctly, the value is confirmed by pressing ⬡. The water display then switches to the next parameter. When the value of the last parameter has been confirmed, the new values are saved and the program display flashes '----'.

The Program function is used when the kettle is to carry out a series of processes automatically. This could, for example, be cooking at a given temperature for a given period of time and then keeping the contents warm at a lower temperature

The word Pause in the tables below indicates that the control system is waiting for the next action to be performed. One or more functions can be active in this period.

A program is pre-defined through a series of actions, e.g. program 4:

Step	Action
1	Switch to heating mode
2	Pause until the required time
3	Add water to the kettle
4	Set the set point for food temperature and heating power
5	Switch on heating
6	Set stirring pattern and stirring RPM. Switch on the stirrer
7	Pause for the required time
8	Set new food temperature and new heating power
9	Set new stirring pattern and new stirring RPM

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The user must set the relevant parameters to enable the kettle to execute a program. In this example, the following parameters must be set:

- When the process should start?
- How much water should be added to the kettle?
- What temperature should be set?
- What speed and stirring pattern should be used?
- Heating time at first given temperature
- Heat temperature thereafter?
- What speed and stirring pattern should be used thereafter?

A set of parameters is called a variant of the program and 10 variants can be saved for each program.

The same programs can therefore be executed with different sets of values. For example, variant number 1 could start at 05.00, add 50litres of water to the kettle and heat it to 90 ºC, for 12 minutes and thereafter at 80 ºC, while variant number 2 could start at 06.00, add 30litres of water to the kettle and heat it to 50 ºC for 20 minutes and thereafter at 90 ºC.

Program 4 can be set up in the following table:

Step	Action	Parameter	Variant 1	Variant 2
1	Switch to heating mode			
2	Pause until the required time	P02.1 Time	05.00	06.00
3	Add water in required quantity	P03.1 Water quantity	50	30
4	Set the set point for food temperature and heating power	P04.1 Food temperature P04.2 Heating power	90 9	50 1
5	Switch on heating			
6	Set stirring pattern and stirring RPM. Switch on the stirrer	P06.1 Stirring pattern P06.2 Stirring rate	1 75	3 50
7	Pause for required time	P07.1 Time	12	20
8	Set the set point for food temperature and heating power	P08.1 Food temperature P08.2 Heating power	80 7	90 9
9	Adjust new stirring pattern and stirring RPM. Switch on the stirrer	P09.1 Stirring pattern P09.2 Stirring rate	30 2	20 3

Example of setting up a program

If program 4 is to be setup, the procedure would be as follows:

Step	Action	Parameter
1	Switch to heating mode	
2	Pause until set time is reached	P02.1 Time
3	Add water in required quantity	P03.1 Water quantity
4	Set the set point for food temperature and heating power	P04.1 Food temperature P04.2 Heating power
5	Switch on heating	
6	Set stirring pattern and stirring RPM Switch on the stirrer	P06.1 Stirring pattern P06.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped.
7	Pause for required time	P07.1 Time

8	Set the set point for food temperature and heating power	P08.1 Food temperature P08.2 Heating power
9	Set stirring pattern and stirring RPM Switch on the stirrer	P09.1 Stirring pattern P09.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped.

1) Press ⊡ so that the program display flashes and select program 4 using the large arrows and the variant using the small arrows.

2) Press ⊡ tweice to alter parameter P02.1. The water display shows P02.1. The time is set in the program display using the arrow keys. Press ⊡ when the value has been set.

3) The water display shows P03.1. The water quantity is set in the program display using the arrow keys. Press ⊡ when the value has been set.

4) The water display shows P04.1. The food temperature is set in the program display using the arrow keys. Press ⊡ when the value has been set.

5) The water display shows P04.2. The heating power is set in the program display using the arrow keys. Press ⊡ when the value has been set.

6) The water display shows P06.1. The stirring pattern is set in the program display using the arrow keys. Press ⊡ when the value has been set. If stirring pattern 0 is selected, skip this step and jump to P07.1

7) The water display shows P06.2. The Stirring rate is set in the program display using the arrow keys. Press ⊡ when the value has been set.

8) The water display shows P07.1. The time is set in the program display using the arrow keys. Press ⊡ when the value has been set.

9) The water display shows P08.1. The food temperature is set in the program display using the arrow keys. Press ⊡ when the value has been set.

10) The water display shows P08.2. The heating power is set in the program display using the arrow keys. Press ⊡ when the value has been set.

11) The water display shows P09.1. The stirring pattern is set in the program display using the arrow keys. Press ⊡ when the value has been set. If stirring pattern 0 is selected, skip this step and jump to step 13.

12) The water display shows P09.2. The Stirring rate is set in the program display using the arrow keys. Press ⊡ when the value has been set.

13) The program display flashes '----' and the new values are saved.

14) Press ▶ to start the program.

Running the program

Press ▶ to start the program and the variant that is shown in the program display. The LED will illuminate while the program is being run.

Press ⊡ and hold the key down for three seconds to stop the program. The LED will extinguish when the program is cancelled.

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If a program is cancelled, all functions will continue in their current mode. This means that no functions will be activated/deactivated.When a program is running, it will respond to manual key presses. This has three important consequences:

- The kettle can be used normally whilst the program is running. The user can therefore add water to the kettle or adjust the temperature if desired while the program is running.
- Many aspects of the program execution can be altered. If for example the program switches on the heating and the user then turns it off again by pressing ⏻ for the heating, the kettle will not heat its contents. If the next step depends on a particular temperature, the program will not continue to the next step.
- If the given action is impossible, the program will continue. If for example the program is set to start the stirrer but the lid is open, the stirrer will switch to pause mode and the program will continue.

It is important to be aware of the operation of the kettle when it is running a program, so as not to accidentally cancel an operation.

Generally the program display shows the time.

If 🔄 is pressed, the active program and variant will be shown.

If 🔀 is pressed, the remaining time for the current program step will be shown.

The remaining time can be adjusted using the arrows.If the current program step has no remaining time, '----' will be shown in the program display.

If ▶ is pressed, the active program step will be shown.

Programs for AutoTemp 56

The following tables describe the function of each program and the parameters that must be set.

Program 1

This program stops the heating and stirrer and activates the beeper when the required time has elapsed.

Step	Action	Parameter
1	Pause for required time	P01.1 Time
2	Turn off heating	
3	Switch off the stirrer	
4	Activate beeper	

Program 2

This program stops the heating and stirrer and activates the beeper when the required time has been reached.

Step	Action	Parameter
1	Pause until set time is reached	P01.1 Time
2	Turn off heating	
3	Switch off the stirrer	
4	Activate beeper	

Program 3

This program starts the heating and stirrer. After the required period of time, the temperature set point, heating power, stirring pattern and RPM are altered. This could be used, for example, for cooking followed by warm-keeping.

| Step	Action	Parameter
1	Switch to heating mode	
2	Set the set point for food temperature and heating power	P02.1 Food temperature P02.2 Heating power
3	Switch on heating	
4	Set stirring pattern and stirring RPM Switch on the stirrer	P04.1 Stirring pattern P04.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped
5	Pause for required time	P05.1 Time
6	Set the set point for food temperature and heating power	P06.1 Food temperature P06.2 Heating power
7	Set stirring pattern and stirring RPM Switch on the stirrer	P07.1 Stirring pattern P07.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped

Program 4

This program adds water to the kettle and starts the heating and stirrer at a set time. After the required period of time, the temperature set point, heating power, stirring pattern and RPM are altered. This could be used, for example, to automatically start cooking followed by warm-keeping.

Step	Action	Parameter
1	Switch to heating mode	
2	Pause until set time is reached	P02.1 Time
3	Add water in required quantity	P03.1 Water quantity
4	Set the set point for food temperature and heating power	P04.1 Food temperature P04.2 Heating power
5	Switch on heating	
6	Set stirring pattern and stirring RPM Switch on the stirrer	P06.1 Stirring pattern P06.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped.
7	Pause for required time	P07.1 Time
8	Set the set point for food temperature and heating power	P08.1 Food temperature P08.2 Heating power
9	Set stirring pattern and stirring RPM Switch on the stirrer	P09.1 Stirring pattern P09.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped.

Program 5

The program stirs the contents of the kettle for a set period of time. The kettle then stirs at a second RPM setting and stirring pattern for a set period of time. The stirrer is then stopped and the beeper activated.This program could be used, for example, to stir desserts, etc., where the stirring rate or pattern needs to be altered during the process.

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Step	Action	Parameter
1	Set stirring pattern and stirring RPM Switch on the stirrer	P01.1 Stirring pattern P01.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped.
2	Pause for required time	P02.1 Time
3	Set stirring pattern and stirring RPM Switch on the stirrer	P03.1 Stirring pattern P03.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped
4	Pause for required time	P04.1 Time
5	Switch off the stirrer	
6	Activate beeper	

Program 6 (Only with the additional equipment for chilling)

The program chills and stirs the contents of the kettle for a set period of time. The chilling and stirrer is then stopped and the beeper activated.This could be used to chill and stir a pre-prepared meal.

Step	Action	Parameter
1	Switch to chilling mode	
2	Set the set point for food temperature and chilling power	P02.1 Food temperature P02.2 Chilling power
3	Switch on chilling	
4	Set stirring pattern and stirring RPM Switch on the stirrer	P04.1 Stirring pattern P04.2 Stirring rate Hvis Stirring pattern 0 væl¬ges, springes dette trin over.
5	Pause for required time	P05.1 Time
6	Switch off chilling	
7	Switch off the stirrer	
8	Activate beeper	

Program 7 (Only with the additional equipment for chilling)

The program chills and stirs the contents of the kettle until a set food temperature has been reached. The chilling and stirrer is then stopped and the beeper activated.This could be used to chill and stir a pre-prepared meal.

Step	Action	Parameter
1	Switch to chilling mode	
2	Set the set point for food temperature and chilling power	P02.1 Food temperature P02.2 Chilling power
3	Switch on chilling	
4	Set stirring pattern and stirring RPM Switch on the stirrer	P04.1 Stirring pattern P04.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped

5	Pause until the set point for food temperature has been reached	
6	Switch off chilling	
7	Switch off the stirrer	
8	Activate beeper	

Program 8 (Only with the additional equipment for chilling)

This program starts the heating function and stirrer. After the required period of time, the temperature set point, heating power, stirring pattern and RPM are altered. After a period of time, chilling to a temperature set point is started. When this temperature has been reached, the chilling function and the stirrer are stopped and the beeper is activated.This could be used, for example, for cooking followed by warm-keeping and chilling.

Step	Action	Parameter
1	Switch to heating mode	
2	Set the set point for food temperature and heating power	P02.1 Food temperature P02.2 Heating power
3	Switch on heating	
4	Set stirring pattern and stirring RPM Switch on the stirrer	P04.1 Stirring pattern P04.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped
5	Pause for required time	P05.1 Time
6	Set the set point for food temperature and heating power	P06.1 Food temperature P06.2 Heating power
7	Set stirring pattern and stirring RPM Switch on the stirrer	P04.1 Stirring pattern P04.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped
8	Pause for required time	P08.1 Time
9	Switch to chilling mode	
10	Set the set point for food temperature and chilling power	P10.1 Food temperature P10.2 Chilling power
11	Switch on chilling	
12	Set stirring pattern and stirring RPM Switch on the stirrer	P12.1 Stirring pattern P12.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped
13	Pause until the set point for food temperature has been reached	
14	Switch off chilling	
15	Switch off the stirrer	
16	Activate beeper	

Program 9 (Only with the additional equipment for chilling)

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This program adds water to the kettle and starts the heating function and stirrer at a set time. After the required period of time, the temperature set point, heating power, stirring pattern and RPM are altered. After a period of time, chilling to a temperature set point is started. When this temperature has been reached, the chilling function and the stirrer are stopped and the beeper is activated.This program could be used, for example, to automatically start cooking followed by warm-keeping and chilling.

Step	Action	Parameter
1	Switch to heating mode	
2	Pause until set time is reached	P02.1 Time
3	Add water in required quantity	P03.1 Water quantity
4	Set the set point for food temperature and heating power	P04.1 Food temperature P04.2 Heating power
5	Switch on heating	P05.1 Time
6	Set stirring pattern and stirring RPM Switch on the stirrer	P06.1 Stirring pattern P06.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped
7	Pause for required time	P07.1 Time
8	Set the set point for food temperature and heating power	P08.1 Food temperature P08.2 Heating power
9	Set stirring pattern and stirring RPM Switch on the stirrer	P09.1 Stirring pattern P09.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped
10	Pause for required time	P10.1 Time
11	Switch to chilling mode	
12	Set the set point for food temperature and chilling power	P12.1 Food temperature P12.2 Chilling power
13	Switch on chilling	
14	Set stirring pattern and stirring RPM Switch on the stirrer	P14.1 Stirring pattern P14.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped
15	Pause until the set point for food temperature has been reached	
16	Switch off chilling	
17	Switch off the stirrer	
18	Activate beeper	

Program 10 (Only with the additional equipment for chilling)

This program chills the contents of the kettle and switches to heating after a set period of time. After the required period of time, the temperature set point, heating power, stirring pattern and RPM are altered. After a period of time, chilling to a temperature set point is started. When this temperature has been reached, the chilling function and the stirrer are stopped and the beeper is activated.This can be used to keep the contents of the kettle cold, automatic cooking with subsequent warm keeping followed by chilling.

Step	Action	Parameter
1	Switch to chilling mode	

2	Set the set point for food temperature and chilling power	P02.1 Food temperature P02.2 Chilling power
3	Switch on chilling	
4	Set stirring pattern and stirring RPM Switch on the stirrer	P04.1 Stirring pattern P04.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped
5	Pause for required time	P05.1 Time
6	Switch to heating mode	
7	Set the set point for food temperature and heating power	P07.1 Food temperature P07.2 Heating power
8	Switch on heating	
9	Set stirring pattern and stirring RPM Switch on the stirrer	P09.1 Stirring pattern P09.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped
10	Pause for required time	P10.1 Time
11	Set the set point for food temperature and heating power	P11.1 Food temperature P11.2 Heating power
12	Set stirring pattern and stirring RPM Switch on the stirrer	P12.1 Stirring pattern P12.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped
13	Pause for required time	P13.1 Time
14	Switch to chilling mode	
15	Set the set point for food temperature and chilling power	P15.1 Food temperature P15.2 Chilling power
16	Switch on chilling	
17	Set stirring pattern and stirring RPM Switch on the stirrer	P17.1 Stirring pattern P17.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped
18	Pause until the set point for food temperature has been reached	
19	Switch off chilling	
20	Switch off the stirrer	
21	Activate beeper	

Program 11 (Only with the additional equipment for chilling)

This program starts the heating function and stirrer. After the required period of time, the temperature set point, heating power, stirring pattern and RPM are altered. After a period of time, chilling to a temperature set point is started. When this temperature has been reached, the chilling function and the stirrer continues and the beeper is activated. This could be used, for example, for cooking followed by warm-keeping and chilling.

Step	Action	Parameter
1	Switch to heating mode	

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2	Set the set point for food temperature and heating power	P02.1 Food temperature P02.2 Heating power
3	Switch on heating	
4	Set stirring pattern and stirring RPM Switch on the stirrer	P04.1 Stirring pattern P04.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped
5	Pause for required time	P05.1 Time
6	Set the set point for food temperature and heating power	P06.1 Food temperature P06.2 Heating power
7	Set stirring pattern and stirring RPM Switch on the stirrer	P07.1 Stirring pattern P07.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped
8	Pause for required time	P08.1 Time
9	Switch to chilling mode	
10	Set the set point for food temperature and chilling power	P10.1 Food temperature P10.2 Chilling power
11	Switch on chilling	
12	Set stirring pattern and stirring RPM Switch on the stirrer	P12.1 Stirring pattern P12.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped
13	Pause until the set point for food temperature has been reached	
14	Activate beeper	

Program 12

This program starts the heating and stirrer. When the required temperature has been reached, the temperature set point, heating power, stirring pattern and RPM are altered. After the required period of time, the temperature set point, heating power, stirring pattern and RPM are altered again. This could be used, for example, for heating up, cooking, followed by warm-keeping.

Step	Action	Parameter
1	Switch to heating mode	
2	Set the set point for food temperature and heating power	P02.1 Food temperature P02.2 Heating power
3	Switch on heating	
4	Set stirring pattern and stirring RPM Switch on the stirrer	P04.1 Stirring pattern P04.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped.
5	Pause for required temperature	
6	Set the set point for food temperature and heating power	P06.1 Food temperature P06.2 Heating power

7	Set stirring pattern and stirring RPM Switch on the stirrer	P07.1 Stirring pattern P07.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped.
8	Pause for required time	P08.1 Time
9	Set the set point for food temperature and heating power	P9.1 Food temperature P9.2 Heating power
10	Set stirring pattern and stirring RPM Switch on the stirrer	P010.1 Stirring pattern P010.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped.
11	Pause for required time	P011.1 Time
12	Activate beeper	

Program 13

This program adds water to the kettle and starts the heating and stirrer at a set time. When the required temperature has been reached, the temperature set point, heating power, stirring pattern and RPM are altered. After the required period of time, the temperature set point, heating power, stirring pattern and RPM are altered again. This could be used, for example, to automatically start heating up, cooking fol-lowed by warm-keeping.

Step	Action	Parameter
1	Switch to heating mode	
2	Pause for required time	P02.1 Time
3	Add water in required quantity	P03.1 Water quantity
4	Set the set point for food temperature and heating power	P04.1 Food temperature P04.4 Heating power
5	Switch on heating	
6	Set stirring pattern and stirring RPM Switch on the stirrer	P06.1 Stirring pattern P06.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped..
7	Pause until the set point for food temperature has been reached	
8	Set the set point for food temperature and heating power	P08.1 Food temperature P08.2 Heating power
9	Set stirring pattern and stirring RPM Switch on the stirrer	P09.1 Stirring pattern P09.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped..
10	Pause for required time	P010.1 Time
11	Set the set point for food temperature and heating power	P11.1 Food temperature P11.2 Heating power
12	Set stirring pattern and stirring RPM Switch on the stirrer	P012.1 Stirring pattern P012.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped..
13	Pause for required time	P013.1 Time

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14	Activate beeper	

Program 14 (Only with the additional equipment for chilling)

This program starts the heating function and stirrer. When the required temperature has been reached, the temperature set point, heating power, stirring pattern and RPM are altered. After the required period of time, the temperature set point, heating power, stirring pattern and RPM are altered again. After a period of time, chilling to a temperature set point is started. When this temperature has been reached, the chilling function and the stirrer are continues and the beeper is activated.This could be used, for example, for heating up, cooking followed by warm-keeping and chilling.

Step	Action	Parameter
1	Switch to heating mode	
2	Set the set point for food temperature and heating power	P02.1 Food temperature P02.2 Heating power
3	Switch on heating	
4	Set stirring pattern and stirring RPM Switch on the stirrer	P04.1 Stirring pattern P04.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped..
5	Pause until the set point for food temperature has been reached	
6	Set the set point for food temperature and heating power	P06.1 Food temperature P06.2 Heating power
7	Set stirring pattern and stirring RPM Switch on the stirrer	P07.1 Stirring pattern P07.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped..
8	Pause for required time	P08.1 Time
9	Set the set point for food temperature and heating power	P09.1 Food temperature P09.2 Heating power
10	Set stirring pattern and stirring RPM Switch on the stirrer	P010.1 Stirring pattern P010.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped..
11	Pause for required time	P11.1 Time
12	Switch to chilling mode	
13	Set the set point for food temperature and chilling power	P13.1 Food temperature P13.2 Køletrin
14	Switch on chilling	
15	Set stirring pattern and stirring RPM Switch on the stirrer	P12.1 Stirring pattern P12.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped..
16	Pause until the set point for food temperature has been reached	
17	Activate beeper	

Program 15 (Only with the additional equipment for chilling)

This program chills the contents of the kettle. At a set time it switches to heating. When the required temperature has been reached, temperature set point, heating power, stirring pattern and RPM are altered. After the required period of time, the temperature set point, heating power, stirring pattern and RPM are altered again. After a period of time, the beeper is activated.This can be used to keep the contents of the kettle cold, automatic heat up, cooking with subsequent warm keeping.

Step	Action	Parameter
1	Switch to chilling mode	
2	Set the set point for food temperature and chilling power	P02.1 Food temperature P02.2 Chilling power
3	Switch on chilling	
4	Set stirring pattern and stirring RPM Switch on the stirrer	P04.1 Stirring pattern P04.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped..
5	Pause until set time is reached	P05.1 Time
6	Switch to heating mode	
7	Set the set point for food temperature and heating power	P07.1 Food temperature P07.2 Heating power
8	Switch on heating	
7	Set stirring pattern and stirring RPM Switch on the stirrer	P07.1 Stirring pattern P07.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped.
8	Pause for required time	P08.1 Time
9	Set stirring pattern and stirring RPM Switch on the stirrer	P09.1 Stirring pattern P09.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped..
10	Pause until the set point for food temperature has been reached	
11	Set the set point for food temperature and chilling power	P11.1 Food temperature P11.2 Chilling power
12	Set stirring pattern and stirring RPM Switch on the stirrer	P12.1 Stirring pattern P12.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped..
13	Pause for required time	P013.1 Time
14	Set the set point for food temperature and heating power	P014.1 Food temperature P014.2 Heating power
15	Set stirring pattern and stirring RPM Switch on the stirrer	P15.1 Stirring pattern P15.2 Stirring rate If stirring pattern 0 is selected, this step will be skipped..
16	Pause for required time	P016.1 Time
17	Activate beeper	

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Additional equipment

⚠️ **CAUTION!**

Additional equipment can become hot when in use. Always wear gloves when operating/handling.

Sieve plate

⚠️ **CAUTION!**

Keep clear of the front of the kettle when it is being tilted, as hot liquids can splash as they are poured from the kettle.

⚠️ **CAUTION!**

It is important that the sieve plate is in contact with the pouring lip throughout its entire length and that the correct size of plate is used.

Fig. 0-24 Sieve plate

The sieve plate is used for straining liquids from solids in the kettle.

The sieve plate is placed in the pouring lip of the kettle and the kettle is then tilted.

Pouring plate

⚠️ **CAUTION!**

The pouring plate is used when more controlled emptying is required, i.e. when pouring into small containers.

⚠️ **CAUTION!**

The pouring plate is placed into the pouring lip and the kettle is tilted.

Fig. 0-25 Pouring plate

The pouring plate is used when more controlled emptying is required, i.e. when pouring into small containers.

The pouring plate is placed into the pouring lip and the kettle is tilted.

Cooking basket

> ⚠ **CAUTION!**
>
> **Do not fill the basket too much or use lifting equipment to avoid heavy lifting and back injuries.**

Fig. 0-26 Cooking basket

Cooking baskets are to be used , when you want to lift the food out of the kettle. The handles coming along with the basket are hooked on to the basket and the basket is lifted out of the kettle. According to the size of the kettle the baskets can be divided in more layers and possible in halves and quarters.

Measuring rod

> ⚠ **CAUTION!**
>
> **The measuring rod must not be used together with the stirrer.**

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Fig. 0-27 Målepind

The measuring rod is used to measure the volume in the kettle.

Output for temperature logging

> **NOTICE!**
>
> **When chilling, depending on the contents of the kettle and stirring there may be a difference between the temperature shown in the display and the actual temperature of the food.**
> **It is therefore important to check the temperature of the food with another temperature measurement directly in the food.**

> **NOTICE!**
>
> **To ensure an even temperature distribution in the food, it is important to stir the food well. Use stirrer with scrapers.**

> **NOTICE!**
>
> **Jøni A/S do only install a sensor in the kettle. End-users have to connect this sensor, to a monitoring and data logging system of their own choice.**

This function enables the food temperature to be saved electronically. The temperature is measured on the steel jacket immediately on the other side of the food. The sensor is insulated from other direct heat/cold sources.

It is possible to get a signal from the kettle when the cooling or heating is active. This signal can be used to start a data logger, so you are sure to get the relevant data.

Spray gun

> ⚠ **CAUTION!**
>
> **Water from the spray gun must not be used for food preparation.**

> ⚠ **CAUTION!**
>
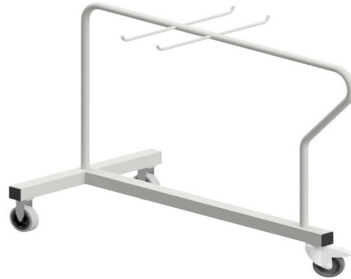> **Always close the mixing tap after using the spray gun.**

> ⚠ **CAUTION!**
>
> **Be careful, the water can be hot and poses a risk of scalding**

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> ⚠️ **CAUTION!**

Do not spray on humans

The spray gun is used to clean the kettle.

Tool trolley

Fig. 0-28 Tool trolley

The trolley is used to store equipment such as: Mixing tool, cleaning tool, sieve plate pouring plate, which can hang on the pegs of the trolley

Foot pedal

> *NOTICE!*

If the foot pedal is pressed hard to the bottom, the panic stop of the appliance will be activated.

> *NOTICE!*

SlowMix can only be used if the SlowMix feature is installed on the appliance.

> *NOTICE!*

Foot pedal can only be paired for one function at a time.

Foot pedal allows you to control these 4 functions. Tilt, tilt-return, water filling and SlowMix.

Fig. 0-29 Footpedal

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The foot pedal is operated by placing the foot pedal on a flat solid surface.

Insert the foot so that it hits the activation pole and the foot is then pressed downwards towards the pedal to activate the switch.

The foot pedal is deactivated by lifting the foot away from the pedal.

Tilt

The conditions for tilt must be met as specified in Tilting function, for tilt to be enabled with foot pedal.

Foot pedal is "paired" to the Tilt-function by pressing the key 🥣 and hold the key while the foot pedal is activated.

Then the Tilt will be activated every time the foot pedal is activated.

"Paring" ends if the foot pedal has not been activated for 60 seconds, "pairing" to another function is made or if the controll is put into "standby" ⏻ or if the appliance is switched off by pressing function-key ◎.

Tilt-return

The conditions for tilt-return must be met as specified in   Tilting function, for tilt-return to be enabled with foot pedal.

Foot pedal is "paired" to the tilt-return-function by pressing the key 🥣 and hold the key while the foot pedal is activated.

Then the tilt-return will be activated every time the foot pedal is activated.

"Paring" ends if the foot pedal has not been activated for 60 seconds, "pairing" to another function is made or if the controll is put into "standby" ⏻ or if the appliance is switched off by pressing function-key ◎.

Water filling

The conditions for water filling must be met as specified in   Filling the kettle with water, for water filling to be enabled with foot pedal.

Foot pedal is "paired" to the water filling-function by pressing the key 🚰 and hold the key while the foot pedal is activated.

Then the water filling will be activated every time the foot pedal is activated.

"Paring" ends if the foot pedal has not been activated for 60 seconds, "pairing" to another function is made or if the controll is put into "standby" ⏻ or if the appliance is switched off by pressing function-key ◎.

SlowMix

The conditions for SlowMix must be met as specified in   SlowMix, for SlowMix to be enabled with foot pedal.

Foot pedal is "paired" to the water filling-function by pressing the function-key ⊕ and hold the key while the foot pedal is activated.

Then the SlowMix will be activated every time the foot pedal is activated

"Paring" ends if the foot pedal has not been activated for 60 seconds, "pairing" to another function is made or if the controll is put into "standby" ⏻ or if the appliance is switched off by pressing function-key ◎.

Drain valve type Echtermann

⚠ **CAUTION!**

Check that the valve and any additional connections, such as pumps and hoses are connected correctly, before the handle is operated.

⚠ **CAUTION!**

Open the valve slowly and be careful about the warm content of the appliance.

⚠ **CAUTION!**

Be aware that there may be food inside the valve, that is not prepared as the rest of the content.

⚠ **CAUTION!**

Always check the valve gaskets for damage. If there is any damage, do not use the valve before replacing the gaskets.

NOTICE!

To completely empty the kettle, it must be fully tilted.

Drain valve, mounted in the front of the kettle, makes it possible to drain liquid content through the tap.

Fig. 0-30 Drain valve type Echtermann

⚠ **CAUTION!**

The valve gaskets must be lubricated every time before use, with special fitting grease.

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Mounting Drain valve type Echtermann
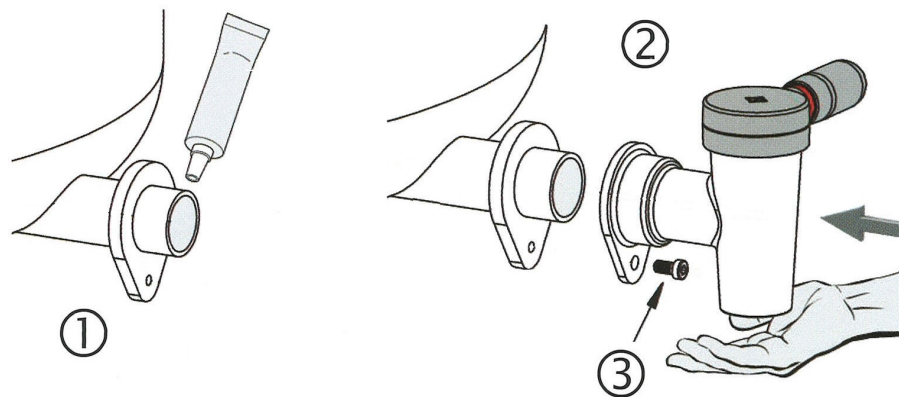
Fig. 0-31 Mounting Drain valve type Echtermann

1   Lubricate mounting stud with special fitting grease.
2   Mount the valve so that the outlet points vertically to the floor.
3   The valve is secured with an M8 bolt.

Operating drain valve type Echtermann

Fig. 0-32 Operating drain valve type Echtermann

1   The handle is pulled out to unlock the valve.
2   The Handle is turned 180° to open or close the valve.
3   The valve is shown in open position.

Lubrication drain valve type Echtermann

Fig. 0-33 Lubrication drain valve type Echtermann

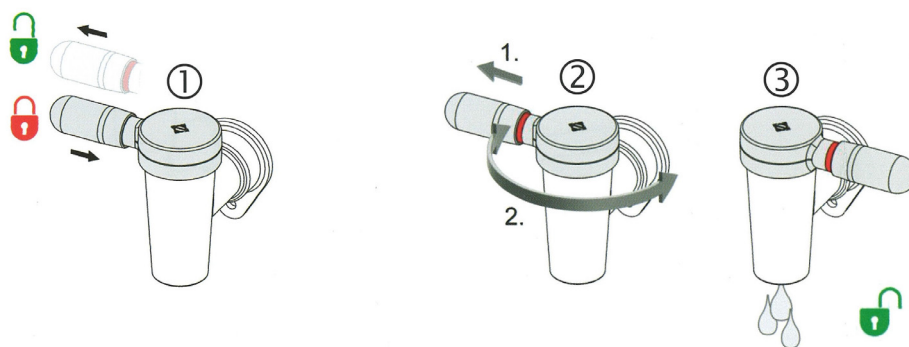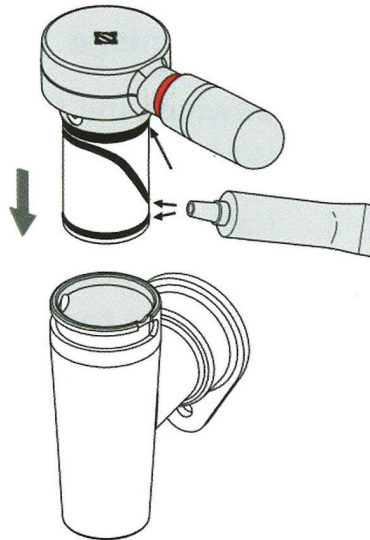The valve gaskets must be lubricated every time before use, with special fitting grease.

NOTICE!

The valve gaskets is considered as a wear part and should be replaced if any visible signs of damage occurs.

Drain valve type Butterfly valve

⚠ **CAUTION!**

Check that the valve and any additional connections, such as pumps and hoses are connected correctly, before the handle is operated.

⚠ **CAUTION!**

Open the valve slowly and be careful about the warm content of the appliance.

⚠ **CAUTION!**

Be aware that there may be food inside the valve, that is not prepared as the rest of the content.

⚠ **CAUTION!**

Always check the valve gaskets for damage. If there is any damage, do not use the valve before replacing the gaskets.

NOTICE!

To completely empty the kettle, it must be fully tilted.

Butterfly valve, mounted in the front of the kettle, makes it possible to drain liquid content through the valve.

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Fig. 0-34 Butterfly valve type ISO

Operate to open the butterfly valve

Fig. 0-35 Operate to open the butterfly valve

1   The handle is pulled out to unock the valve.
2   Handle is turned 90° away fom the kettle to open the valve and when the handle is released, then the handle is locked.

Fig. 0-36 Open butterfly valve
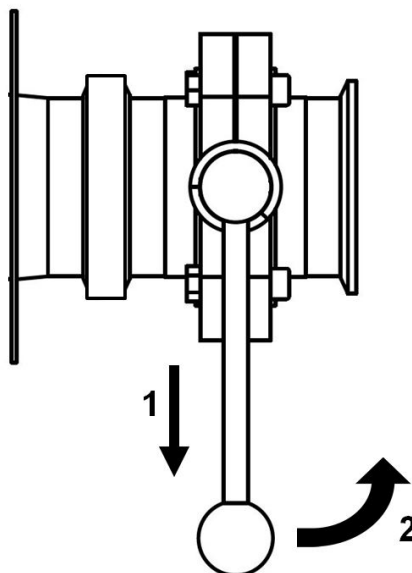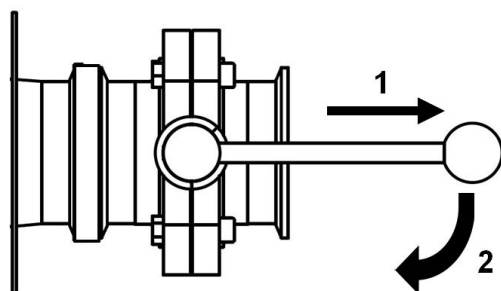
Operation to close the butterflyvalve

Fig. 0-37 Operation to close the butterflyvalve

1   The handle is pulled out to unock the valve.
2   Handle is turned 90° towards the kettle to open the valve and when the handle is released, then the handle is locked
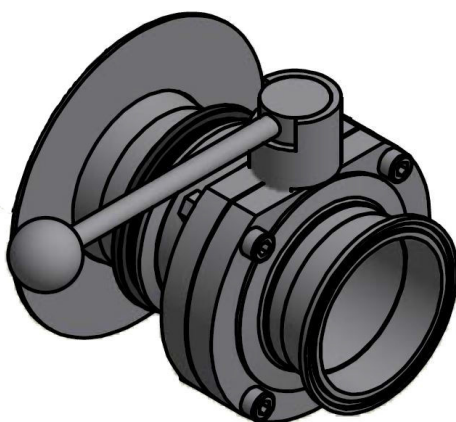

Fig. 0-38 Closed butterflyvalve

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User menu and factory settings menu

The kettle's control system depends on a number of parameters which must be set correctly in order for the kettle to work. These parameters are set in the user menu and the factory settings menu. Only the parameters that are relevant to the control of the kettle will be shown.As the parameters in the factory settings menu have an effect on parameters in the user menu, changes must first be made in the factory settings menu.In 'Factory data', users can view the parameters that are set at the factory. Before changing any parameters, you must be certain that you understand the consequences. If you are unsure, contact your service partner for more information.

Factory settings menu

This group of parameters is set at the factory, so that the settings are appropriate for the kettle's configuration. Furthermore parameters of a more technical kind can be found which normally do not need to be set.

These parameters will only need to be set in special circumstances such as when a printed circuit board needs to be replaced.

The factory setting menu is activated by switching off the kettle by pressing ⏻ and then pressing ⏻ and ⬇ simultaneously and holding them down for 10 seconds. ⬆ and ⬇ must then be pressed simultaneously within three seconds.

With the AutoTemp 32, 36, and 56 controllers, the current menu item is shown in the temperature display, while the water display shows the current value. The value is set using the arrow keys and saved by pressing water-⏻.

With the AutoTemp 16 control, the current menu item and the associated value are shown alternately in the temperature display. The value is set using the arrow keys and saved by pressing heating- ⏻.

When a value has been saved, the next menu item will appear. The factory settings menu is exited when the last parameter has been saved and the display shows '---'.

The factory settings menu will be cancelled if the user presses ⏻ or if no key is pressed for two minutes.

Item	Description	Selection
00.0	Shows program	
00.1	Shows program version	
51.0	Select whether the units are to be altered	0 = No 1 = Yes Select 1 if 51.1 and 51.2 are to be shown.
51.1	Select temperature unit	1 = Celsius 2 = Fahrenheit
51.2	Select water quantity unit	1 = Liter 2 = UK Gallon 3 = US Gallon
52.0	Select kettle volume	20-600
53.0	Select heating type	1 = Heated by electricity 2 = Heated by direct steam
54.0	Select the maximum permissible Yescket temperature	1 - 120° celsius 33 - 248° fahrenheit

56.0	Select lid type	0 = separate lid/hinged lid without switch 1 = Hinged lid with switch
60.1	Select safety factor for maximum opening time of solenoid valve	2.0 - 5.0 1.0 corresponds to 12 litres/minute through the valve.
60.2	Select whether a water flow meter has been fitted	0 = No 1 = Yes
70.0	Select the method for tilting the kettle	0 = No tilt 1 = Electric tilt (actuator) 2 = Hydraulic tilt
80.0	Select whether temperature corrections are to be altered	0 = No 1 = Yes Select 1 if 80.1 - 80.6 are to be shown.
80.1	Select correction for Yescket temperature at 10° Celsius/50° Fahrenheit	Celsius: -5.0 - +5.0 Fahrenheit: -9.0 - +9.0
80.2	Select correction for Yescket temperature at 100° Celsius/212° Fahrenheit	Celsius: -5.0 - +5.0 Fahrenheit: -9.0 - +9.0
80.5	Select correction for food temperature at 10° Celsius/50° Fahrenheit	Celsius: -5.0 - +5.0 Fahrenheit: -9.0 - +9.0
80.6	Select correction for food temperature at 100° Celsius/212° Fahrenheit	Celsius: -5.0 - +5.0 Fahrenheit: -9.0 - +9.0
85.0	Select chilling type	0 = No chilling/manual chilling 1 = Automatic chilling without recirculation of water 2 = Automatic chilling with recirculation of coolant.
90.1	Select stirrer gearing factor (1:X)	10.0 - 50.0 This parameter must have the value specified in 'Factory data'.
90.2	Select the maximum RPM for the stirrer	50-155 This parameter must not be set higher than specified in 'Factory data'
90.1	Select whether the kettle is fitted with Foot pedal	0 = No 1 = Yes
91.0	Select whether the kettle is fitted with SlowMix	0 = No 1 = Yes

User menu

The user can set this group of parameters to optimise the operation of the kettle to suit his or her needs. The user menu is activated by switching off the kettle by pressing ⏻ and then pressing ⏻ and ⬆ simultaneously and holding them down for 5 seconds.

With the AutoTemp 32, 36, and 56 controllers, the current menu item is shown in the temperature display, while the water display shows the current value. The value is set using the arrow keys and saved by pressing water-⏻.

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With the AutoTemp 16 control, the current menu item and the associated value are shown alternately in the temperature display. The value is set using the arrow keys and saved by pressing heating- ⏻ .

When a value has been saved, the next menu item will appear.The user menu is exited when the last parameter has been saved and the display shows '---'.The user menu will be cancelled if the user presses ⏻ or if no key is pressed for two minutes.

Item	Description	Selection
00.0	Shows software	
00.1	Shows software version	
1.0	Should the access code function be active?	0 = Inactive 1 = Active
1.1	Select access code	0000-9999 This item is only shown if 1.0 = 1
2.1	Select return tilt time	0.0 - 3.0 seconds. 0.0 = Off
2.2	Select the delay before return tilt is activated	0.0 - 3.0 seconds This item is only shown if 2.1 is set to be greater than 0.0
3.1	Is water filling permitted with the kettle tilted?	0 = No 1 = Yes
3.2	Is water filling permitted with a closed lid?	0 = No 1 = Yes
4.0	Specify method used to control water quantity. Only relevant when factory settings menu item 60.2 = 0	1 = Estimated water quantity 2 = Time
4.1	Specify the conversion factor from quantity of water to minutes. Only relevant when user menu item 4.0 = 1.	1.0 – 999.9 units, e.g. litre/minute. Adjust until the water quantity is appropriate.
4.2	Select the number of impulses from the water flow meter per litre. Only relevant when factory settings menu item 60.2 = 1.	0.1 - 999.9 Adjust until the quantity is appropriate. See the formula for calculating a new constant in the service instructions.
4.3	Specify the factor for the number of impulses from the water flow meter selected in the user menu, item 4.2	1.0 - 100.0
5.1	Select the chilling power for water-saving chilling	1-9 When this value is set to 9, the water quantity will not be reduced.
6.1	Select the RPM for PowerMixing	5 - 80 RPM
6.2	Select the RPM for SlowMix Only relevant if factory settings menu item 91.0 = 1.	5 - 30 RPM
7.0	Select the type of acoustic signal	0 = No signal 1 = Beeper sounds periodically

8.0	Specify whether programs are to be written to the internal memory. This must be performed when commissioning new controllers. The programs will then be generated and all variants will be set to their default values. Make sure that all items in the factory settings menu are set correctly before this item is carried out.	0 = No 1 = Yes

Adjusting the clock

Press ⬆️ and ↪️ (AutoTemp 56) or 🕐 and ⏰ (AutoTemp 32 and 36)) simultaneously and hold them down. After five seconds the display will start to flash and the LED will flash rapidly. You can now set the clock using the arrow keys. The function will be exited automatically after five seconds without a key press or if another function is selected..

Error codes

The system continually monitors many parameters in order to protect both the machine and the user. If the system detects an error condition, an error code will be shown. If there are several simultaneous errors, the error codes will be shown alternately.

The 'Service Manual' folder contains more information on troubleshooting the device.

> ⚠️ **CAUTION!**
>
> **Servicing must only be carried out by qualified technicians.**

> ⚠️ **CAUTION!**
>
> **Before servicing or repairs are carried out, the electrical supply for the kettle must be isolated by the power on/off switch and locked with a padlock if necessary**

User messages

If the user attempts to perform an action which is not permitted, an error code will be shown and the LED will flash slowly. The error code will generally disappear by itself when the error condition ceases, i.e. the lid is opened or the key is released.

Error code	Description
U01	Incorrect access code entered
U10	The heating cannot be switched on, as the kettle is tilted.
U11	The chilling cannot be switched on, as the kettle is tilted.
U12	Water filling is not permitted, as the kettle is tilted.
U13	Testing of safety pressure switch and safety valve is in pause mode, as the kettle is tilted.
U14	The stirrer cannot be switched on, as the kettle is tilted.
U15	Initialization is paused, as the kettle is tilted.
U20	Water filling is not permitted, as the lid is closed.
U21	The kettle cannot be tilted, as the lid is closed.

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U23	The stirrer cannot be switched on, as the lid is open.
U30	The kettle cannot tilt, as the motor's duty factor has been exceeded. Wait approx. 30 seconds and tilt again. After 4 minutes, the tilt motor's intermittence will be reset.
U40	Chilling mode cannot be activated, as the kettle is not fitted with the chilling function.
U41	Testing of safety pressure switch and safety valve is not possible, as the kettle is in chilling mode.
U42	The heating function cannot be used until the kettle initialisation has been performed. Wait until the initialisation has been completed.
U49	The function foot pedal is not selected.

Error messages

If a system error occurs, an error code will be shown and the LED will flash rapidly. The error code will normally not disappear until the controller is switched off and may require a service inspection.

If such an error occurs, the kettle cannot be put into "Standby"-mode, but has to be switched off on the function key ⊚.

Error code	Description
E50	Food temperature < -10°C Check the sensor and ensure that the sensor wires are not short-circuited.
E51	Food temperature > 130°C Check the sensor and ensure that the sensor wires are still connected.
E55	Jacket temperature < -10°C Check the sensor and ensure that the sensor wires are not short-circuited.
E56	Jacket temperature > 130°C Check the sensor and ensure that the sensor wires are still connected.
E57	Steam temperature < -10°C Check the sensor and ensure that the sensor wires are not short-circuited.
E58	Steam temperature > 130°C Check the sensor and ensure that the sensor wires are still connected.
E60	Safety stop of water filling using water flow meter, as no signals have been received from the water flow meter. Check the water supply and the water flow meter and its electrical connections.
E61	Safety stop of water filling using water flow meter, as the measured water quantity is below the minimum value permitted by the safety factor. Check the water supply and the water flow meter and its electrical connections.
E62	Safety stop of manual water filling without a water flow meter, as the maximum opening time has been exceeded.
E63	Safety stop of continuous water filling, as the maximum opening time has been exceeded.
E70	The stirrer cannot be switched on, as the frequency inverter is giving an error. Wait until the error disappears by itself. This can last1 to 10 minutes. Wait until the stirrer motor cools if it has been subjected to a heavy load. This will last slightly longer and the power supply to the kettle should be isolated at the supply isolator for about 30 seconds in order to remove the error. Reset all errors on the frequency inverter by disconnecting the power to the kettle at the dis-connector switch. Check the fuse upstream the frequency inverter. Check that the fan in the bottom of the kettle operates when the stirrer is operating.
E75	A key has been pressed for an abnormally long time. The membrane keypad may be defective. Isolate the power to the kettle for 10 seconds and try again.
E76	1.0 bar pressure switch has been switched off for too long.
E77	Air pressure is below the allowed level.
E79	E99 occurred during the initial chilling.
E80	E99 occurred without 1.0 bar pressure switch has switched off.
E81	E99 occurred during the heating mode.
E82	E99 occurred during chilling function.

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E83	E99 occurred during emptying function.
E84	E99 occurred during filling of water to level.
E85	E99 occurred during filling of water to remove pressure.
E86	Timeout on 'remove pressure' during initialization.
E87	Timeout on emptying during initialization.
E88	Timeout on 'remove pressure' during pre-cooling.
E89	Tilt-switch is not activated even tough the key for Tilt has been pressed for more than 5 seconds.
E90	The level sensor has detected a low water level in the kettle with a closed system. Add more water.
E91	The level sensor has detected a low water level. Filling with water for the maximum permitted time has not produced a normal water level. Check the water supply to the machine and the strainer, solenoid valve, hoses and level sensor.
E95	Error in internal memory. Execute item 8.0 in the user menu.
E96	Software error. Isolate the power to the kettle for 10 seconds and try again.
E97	Software error. Isolate the power to the kettle for 10 seconds and try again.
E98	Software error. Isolate the power to the kettle for 10 seconds and try again.
E99	The safety contactor has been disconnected. This may be due to either the safety temperature limiter or the safety pressure switch has tripped. Reset safety temperature limiter (dry-boiling thermostat). Two types are used. See service manual. Check the pressure by reading the pressure gauge. Isolate the power to the kettle until the pressure drops below 0.7 bar and switch the kettle on again.

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Cleaning

> **NOTICE!**
>
> When cleaning the drain valve, take care to clean the valve and connecting pipe to the kettle.

> **NOTICE!**
>
> Drain- / Butterfly valve must be lubricated with special fitting grease, every time it's cleaned or dismantled.

> ⚠ **CAUTION!**
>
> Never leave any remains of cleaning water in the kettle bowl. Even small drops can damage the steel. The kettle should always be tilted fully after cleaning and the bowl dried off.

> ⚠ **CAUTION!**
>
> Never use ordinary steel wool to clean the kettle. Steel wool made of stainless steel may be used.

> ⚠ **CAUTION!**
>
> Always use personal protection equipment as recommended by the manufacturer of the detergents..

> ⚠ **CAUTION!**
>
> Never use a high pressure cleaner or water hoses to clean the kettle.

> ⚠ **CAUTION!**
>
> Never use detergent containing chlorine as chlorine will corrode the materials.

> **NOTICE!**
>
> In the following, cleaning detergent from manufacturer Ecolab is recommended, but equivalent products can be used as well.

The kettle should not be flushed directly, but should be rinsed lightly. Water must not penetrate the kettle or pillars.

For the kettle and separate parts the following cleaning procedure is recommended:

1) Wash the kettle for remnants of food.
2) Apply detergent manually e.g. Ecolab Sopal or lay out foam e.g. Ecolab Sopal.
3) Leave the detergent to work for the recommended time.
4) Wash thoroughly with water.
5) Disinfect the kettle by applying e.g. Ecolab Sirafan.
6) Leave the product to work for the recommended time.
7) Wash thoroughly with water.

Parts of stainless steel can be cleaned with a non-abrasive nylon sponge or similar. Parts of synthetic material such as electrical operating handles, membrane keypads, etc. must be cleaned with a cloth.

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> **NOTICE!**

Extreme care must be taken when cleaning the drain cock/valve and the passage in the kettle.

> **NOTICE!**

If the kettle is equipped with a rotatable lid (additional equipment), the lid can be placed in various positions, to ease accessibility for the whole surface.
To rotate the lid, open it and pull down the brim.

Any superficial deposits forming on the surface of the steel, which cannot be removed using either normal detergents or a non-abrasive nylon sponge, can be removed using an abrasive material with a grain size of 400.

> **NOTICE!**

The first time the kettle is taken into use and when the kettle has not been used for a longer period of time, it has to be cleaned before use. The same applies to the below mentioned loose parts.

> **NOTICE!**

The kettle must be cleaned after use.

When the kettle is not be used for a longer period of time or to treat the stainless steel a Ecolab Cromol can be used.

Separate parts

Separate parts such as sieve plate, pouring plate, measuring rod, stirrer tool, scrapers, cooking basket and cover for inspection hatch, etc., can be cleaned in a dishwasher.The scrapers must only be cleaned with detergent intended for plastic. Never use granules to clean the scrapers or other parts of synthetic material.

> **NOTICE!**

When cleaning the stirrer tool, ensure that the inside of the tool is also cleaned. This can be done using a tube brush.

After cleaning the above mentioned utensils must be stored hygienically correct in an advised place.

Safe disposal of food

Food must be disposed of according to national and local laws and regulations.
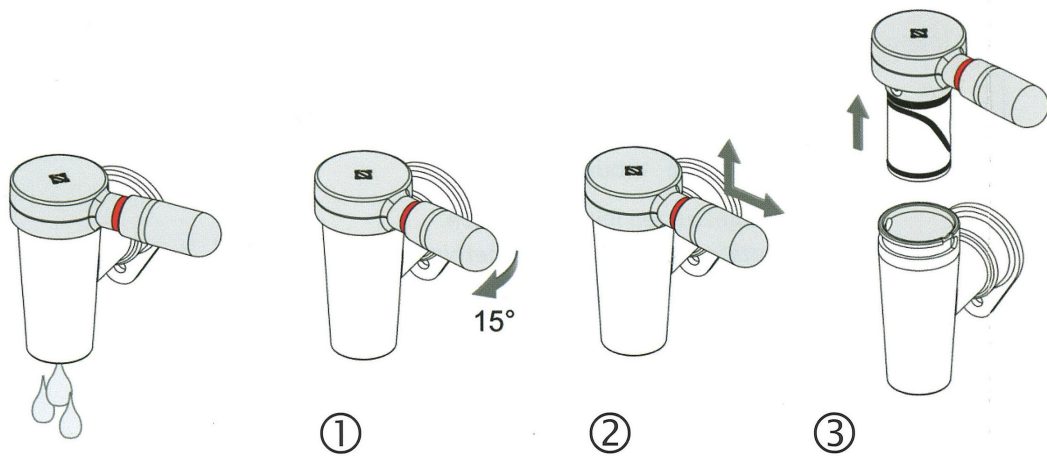
Cleaning Drain valve type Echtermann

Fig. 0-39 Dismantle drain valve

1   The Handle on the open valve is turned 15°.
2   The handle is pulled outwards and upwards.
3   The insert is lifted out of the valve and is ready for cleaning.

The drain valve is assembled in reverse order of the above.
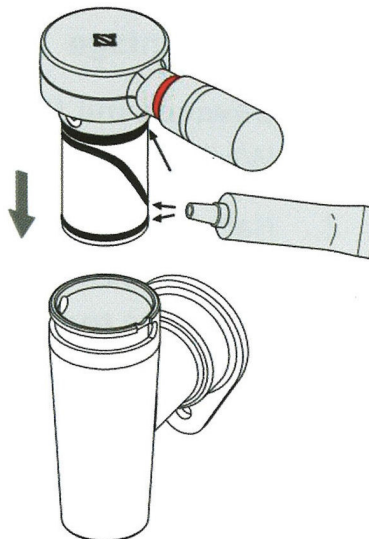
Lubrication drain valve type Echtermann

Fig. 0-40 Lubrication drain valve type Echtermann

The valve gaskets must be lubricated every time before use, with special fitting grease.

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Maintenance

The kettle needs careful maintenance for maximum reliability. Essential maintenance which must be carried out by the owner/user of the machine is described below. Failure to follow these instructions will release the manufacturer from any liability.

> ⚠ **CAUTION!**
>
> **During the heating process, steam pressure is generated inside the jacket and it is therefore important to exercise caution when maintaining the appliance. This can be ensured by following the instructions in this section and by only using suitably trained service technicians for servicing the kettle.**

Monthly maintenance

> **NOTICE!**
>
> **This maintenance can be undertaken by the daily user.**

> ⚠ **CAUTION!**
>
> **Take care to avoid discharging steam when the safety valve is opened**

The safety valve must be operated every month to ensure that it is operating correctly and that it has not become jammed as a result of lime scale deposits, etc. Check that the pressure inside the kettle is zero using the kettle's pressure gauge before opening and closing the safety valve.

Raise handle fully to open the valve. Lower to close the valve.

Fig. 0-41 Safety valve closed

Fig. 0-42 Safety valve open

Annual maintenance

The scraper is a wear part which must be inspected for visible damages, such as notches or changes in the surface, black spots or major discoloring, bubbles or deformations. If damaged, the scraper is to be replaced.

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Annual maintenance

This maintenance must be performed by skilled technicians.

1) Check that the appliance is still firmly attached to the floor.
2) Check that the top of the kettle is horizontal in the normal position.
3) If the kettle has been fitted with a hinged lid, check that the lid closes correctly.
4) Check that all electric operating handles, control lamps, etc. are intact
5) Check that there are no loose components and that there is no wear or other circumstances which could affect the safety of the kettle.
6) Check that no water has seeped into the pillars, where it could cause damage. Any water in the bottom of the pillars must be removed.
7) Check that the gaskets on the front and rear covers are intact.
8) Check that the seals between the floor and pillars are intact.
9) Check that the water installations in the kettle's pillars are not leaking.
10) Check that the controllable non-return valve in the water line to the steam generator is working. See the "Service Manual" for further instructions.
(This point does not apply to steam-heated kettles, not fitted with the chilling function).
11) Checking dry-boiling thermostat.
The thermostat is located at the rear, bottom of the kettle and marked 'Reset'. Unscrew the plastic cap and check for damage and leaks.
(This point does not apply to steam-heated kettles).

Fig. 0-43 Sign dry-boiling thermostat

12) As rubber hoses even under the most optimal conditions, have a limited lifespan, it is important to check all hoses for cracks, chinks and rivets and blisters and the conditions of hose clips. To ensure optimum reliability hoses that show signs of the above mentioned flaws must be replaced.
13) Shut off the water and clean the strainers, which are located before the solenoid valves.

It may be necessary to clean the strainers more frequently.

14) Remove any sediment/lime scale deposits in the steam generator and level switch chamber.
This is particularly important on kettles with chilling, as the water in the steam generator is often replaced.
15) Check that the pressure gauge reads 0 bar when the kettle is cold.
16) Check that the vacuum valve is working correctly.Heat an empty kettle until the pressure reaches 0.8 – 1.0 bar. Then switch off the heat and fill the kettle with cold water, so that it is cooled.The negative pressure can be read on the pressure gauge and must not exceed -0.3 bar.
17) Check that the pressure gauge reads 0.9 - 1.0 bar when the kettle is empty and has been standing at maximum temperature for approximately 5 minutes.
18) On kettles with a stirrer, check that the stirrer stops when the lid is opened.
19) On kettles fitted with a stirrer and the SlowMix option, check the operation of the safety relay as de-

scribed in the service instructions.

20) Clean/replace air filter on pillars with ventilation. Not all kettles have pillars with ventilation.

21) Check the safety pressure switch and the safety valve according to chapter: Testing the safety pressure switch and the safety valve.

Testing the safety pressure switch and the safety valve

⚠ **CAUTION!**

If national regulations deviate from the following, the national regulations must always be followed. Please check with the National Working Environment Authorities, which regulations has to be followed.

⚠ **CAUTION!**

This test must only be performed by skilled technicians, with knowledge of the appliance.

⚠ **CAUTION!**

A separate control pressure gauge must be fitted during the test procedure.

⚠ **CAUTION!**

Take care to avoid discharging steam from the safety valve.

⚠ **CAUTION!**

The pressure inside the kettle must never exceed 1.7 bar. The test must be terminated immediately if the pressure exceeds this value

Before the kettle is used for the first time and at least annually thereafter, a test must be performed to ensure that the safety pressure switch and the safety valve are working correctly.A record must be kept of this test. The enclosed 'Inspection record", can be used for this purpose.

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Testing electrically heated kettles

The kettle must be in the vertical position and in heating mode when this test is performed.

1) Install a separate control pressure gauge on the test flange at the rear of the kettle. Open the test flange valve.
   Make sure that the pressure gauge can be observed, while the test is being performed
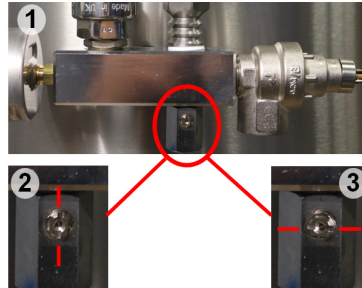

Fig. 0-44 Test flange valve

1   Test flange valve
2   Test flange valve open
3   Test flange valve closed

2) Remove the front cover for the mounting pillar, to gain free access to test button "S2"
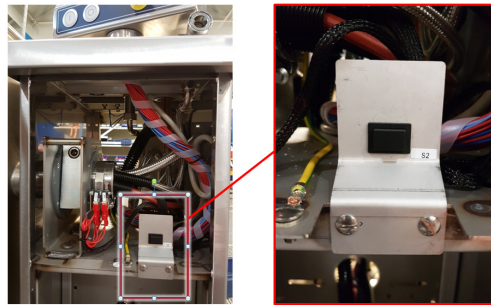   The placement of the button differs from model to model, but it's alway labeled "S2"

Fig. 0-45 Test button "S2"

3) Empty the contents of the kettle and turn the heat to its highest setting. Wait until the pressure in the steam jacket is 0.9 – 1.0 bar.

4) Press heat function key ⬚ (AutoTemp 56) or ⬚ (AutoTemp 16, 32 and 36) and heating on/off key ⬚ simultaneously and hold the two keys down throughout the entire process. After 5 seconds, the LED will start to flash rapidly.
   Heat will now be supplied to the kettle.

5) Deactivation of the safety pressure switch is indicated by the temperature flashing in the display. This occurs at approximately 1.2 bar.

6) Press test button "S2" and also hold this down throughout the rest of the process.

7) Continue the heating process by holding down all three keys. The safety valve should now activate at around 1.3 bar.

8) Continue heating and check that the pressure does not exceed 1.43 bar.

9) Release the test button "S2" when you are certain that the pressure is no longer rising.

10) Release the two other keys.

11) Wait for the kettle to cool down. When the safety pressure control activates at approximately 0.8 bar, the safety valve will close. The kettle will then be ready for use again.

⚠ **CAUTION!**

If the kettle is switched off before the safety pressure control is engaged error E99 will occur. The procedure is then to switch of the supply to the kettle and wait until the pressure has dropped to below 0.8 bar.

Testing steam-heated kettles

On steam-heated kettles, a check must be performed to ensure that the safety valve and reduction valve on the fixed installation upstream of the kettle is working correctly. The procedure for this test depends on the fixed installation.A check must also be made to ensure that the safety pressure switch on the kettle is operating correctly. This can only be done by increasing the pressure in the kettle.Refer also to the regulations for the fixed installation.

NOTICE!

The valve on the kettle is an over-pressure valve and must not be considered as a safety valve which must be placed in the fixed installation.

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