User Guide

Sauna heater and digital control panel

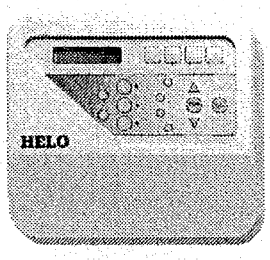
User Guide for the following models

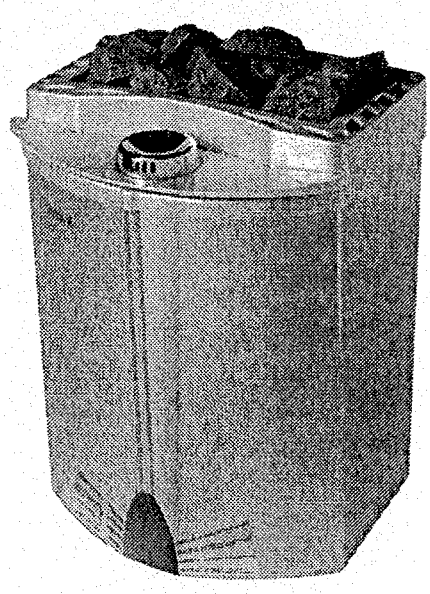
Automatically filled water tank:
1712-60-010420 (6,0 kW)
1712-80-010420 (8,0 kW)
1712-90-010420 (9,0 kW)

Manually filled water tank:
1712-60-120420 (6,0 kW)
1712-80-120420 (8,0 kW)
1712-90-120420 (9,0 kW)

Digital Control Panel:
1418-2-150504

helo





Thank you for choosing quality products from Helo Ltd

We think that our products will live up to your expectations and give you many hours of enjoyment in your sauna. We want you, your family and your friends to have many comfortable sauna baths and at the same time find new ways to enjoy sauna bathing. We have taken modern trends on sauna bathing into consideration and equipped the sauna heater with many usable and unique functions. Among other things, the control panel has four memory buttons, which can be pre-programmed to your personal favourite sauna bath. Read this user guide carefully; It is divided into two separate sections. The first is for you as a user and the second is for the installer.

Helo Oy is the world-leading producer of products for saunas and steam saunas. We develop, produce and market products for saunas and steam saunas through out the world. Helo has the largest factories of sauna products in the world (Finland, Germany and USA) and a well-developed network of retailers, both nationally and internationally. Our product range consists of sauna and steam rooms, electric and wood heaters, control panels and sauna accessories.

User Guide Sauna heater and Digital control panel
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Quick Reference Guide

In the following quick reference guide we provide important information for you as a user. You will find more information about each function in the contents list on page 5.

Set the language in the control panel

1. Push **ON/OFF** button
2. Push **PROG/OK** for three seconds
3. Push **PROG/OK**
4. Choose the language with arrow buttons
5. Save the setting with **PROG/OK**

Set the time in the control panel

1. Push **ON/OFF** button
2. Push **PROG/OK** for three seconds
3. Set the time with arrow buttons
4. Save the setting with **PROG/OK**

Turn on the sauna

Example: Sauna with steam

1. Push **ON/OFF** button
2. Push button **SAUNA WITH STEAM**
3. Push button **START TIME**
4. Set **START TIME** with arrow buttons
5. Save the setting with **PROG/OK**
6. Push **DURATION** button
7. Set **DURATION** with arrow buttons
8. Save the setting with **PROG/OK**
9. Push **TEMPERATURE** button
10. Set **TEMPERATURE** with arrow buttons
11. Save the setting with **PROG/OK**
12. Push **HUMIDITY** button
13. Set **HUMIDITY** with arrow buttons
14. Save the setting with **PROG/OK**
15. End programming and start the sauna by pushing **PROG/OK**

Turn off the sauna

1. Push **START/STOP** button
2. Push **ON/OFF** button

Turn on the sauna with a memory button

1. Push **ON/OFF** button
2. Push one of the memory buttons (1-4)

Turn on the sauna light and the fan

1. Push following buttons:

   Light *Fan*

2. Turn off the light and fan by pushing each button for three seconds.

Program a memory button

Example: Normal Sauna

1. Push **ON/OFF** button
2. Push **NORMAL SAUNA** button
3. Push **DURATION** button
4. Set **DURATION** with arrow buttons
5. Save the setting with **PROG/OK**
6. Push **TEMPERATURE** button
7. Set **TEMPERATURE** with arrow buttons
8. Save the setting with **PROG/OK**
9. Choose a memory button (1-4) for your settings.
10. Save the setting with **PROG/OK**
11. End programming with **PROG/OK**

Alarm

In an alarm situation, the control panel stops the heater, and the cause of the mailfunction is shown on the display of the control panel. Check the alarm and restart the sauna heater. The reasons for alarm situations can be:

- *Broken sensor cable*
- *Short circuit in sensor cable*
- *Broken humidity sensor*
- *Empty water tank*

The display shows following information during the alarms (read more about alarms on page 22).

ALARM
T1 CABEL OFF

ALARM
T2 CABEL OFF

ALARM
OFFSET T1

ALARM
OFFSET T2

STEAM SAUNA
FILL WATER TANK

ALARM
OFFSET STEAM

Maintenance

Water tank

The water tank should be drained after using the sauna. Remove inpurities with solvent and a hard brush.

⚠ *Warning!*

Be careful when emptying the water tank. The water has a temperature of 100°C.

Sauna stones

Brush and rinse the sauna stones to remove before placing them in the stone compartment. When the stones begin to crumble, replace them as soon as possible.

The sauna

The sauna should be kept clean to prevent odours. Remove any stains of water and salt with the help of a gentle soap and water. Furthermore, be careful not to keep laundry and other combustible material close to the heater.

Short facts about the sauna heater

Output:	6 – 9 kW
Sauna volume:	5 – 14 m³
Amount of stones:	23 kg

Information for the user

This user guide helps you to understand and use your new sauna products. Please read this user guide carefully and take special note of warnings.

The user guide is divided into two sections: **Information for the user** and **Information for the installer**. You, as a user, receive a comprehensive description of the features of a sauna heater, how to use the control panel and what you should keep in mind regarding maintenance.

If you have questions or if you need help with the products, please consult your local retailer.

Certain parts of the user guide are of particular importance. To highlight these parts we use the following symbols:

Warning

Observe

Tips and advice

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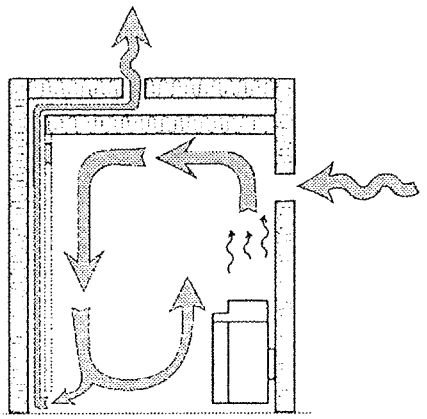
Observe!

- Before you turn on the sanua heater, ensure that the sauna is ready to be used.
- Do not install more than one heater in the sauna room.
- The installation and connection of electrical equipment may be carried out by an authorised electrician only.

This is how sauna works

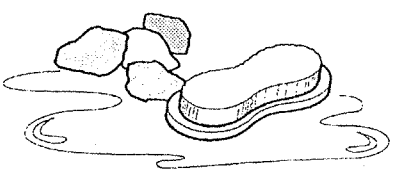
Sauna functions in the same way as any room in your house. Radiators in a room make sure that the room temperature is maintained at the desired temperature. Ventilation lets fresh air in and spent air is lead out. A sauna works in the same way. However, there are a few parameters that must be correct for a sauna to function optimally. The most important relationship is between the output of the heater and the volume of the sauna room. If the power of the heater and the volume of the room don't match, it can cause the sauna to heat up too quickly or the heater to overload.



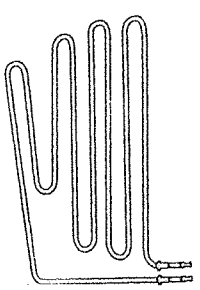
Example of the correct ventilation in the sauna. Read more about ventilation on page 25.

Heating elements and stones

In the heater there are stainless steel elements which radiate heat. The heat is absorbed into stones which are placed in the heater. The stones help to keep an even temperature in the sauna. The stone compartment should be airy: The larger stones are placed on the bottom and the smaller stones on top. The stones should cover the heating elements completely. After some time of usage it may appear that the amount of stones has diminished; some stones may crack and then pack tighter together. This reduces the air circulation in the heater, and it takes longer time to heat up the sauna. A good rule of thumb is: if you use your sauna once a week you need to repack the stones once a year. Twice a week means repacking twice a year and so on. Replace cracked, brown or discoloured stones. We recommend that you brush and rinse grit from the sauna stones before you place them in the heater.



Brush grit from the sauna stones before you place them in the heater.

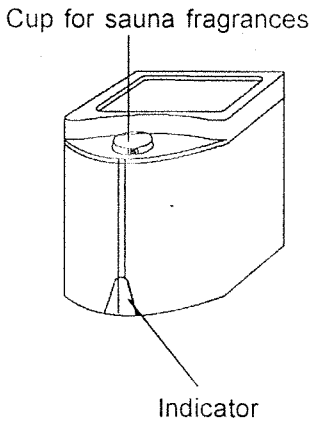


The heating elements heat the stones in the sauna heater.

The sauna heater

Sauna heater

The sauna heater, with its design and technology, offers unique qualities. The sauna heater can be used in two different modes; *normal sauna* and *sauna with varying humidity*. The settings are made from the digital control panel. A water tank placed in the front, produces extra steam in the sauna room. The steam increases your wellbeing and it has positive effects on your skin and health. The tank can be filled with water; manually or automatically (see the picture). An indicator shows the water level in the tank. The indicator is placed in a plastic tube in front of the heater. At the top of the tank there is a cup where you can put sauna fragrances.

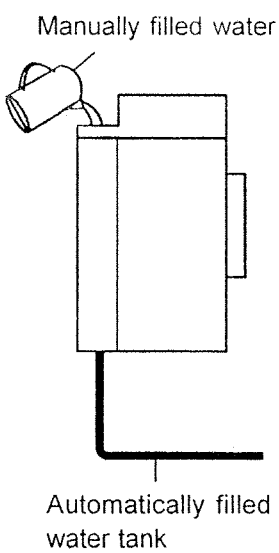


Automatically filled water tank

The heaters have automatically filled water tanks. It means that the heater is connected to water supply and water is fed to the tank via an electronic valvet.

Manually filled water tank

The heaters are manually fed. Remove the mantle and fill the tank with water using a can.

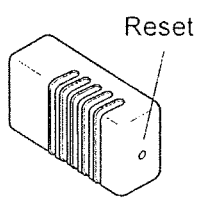


Sensors

Inside the sauna room there are two sensors; one *temperature sensor* and one *humidity sensor*. The sensors are mounted by an installer and they are placed at specific locations in the sauna depending on the task.

Temperature sensor OLET 19 (T1)

The temperature sensor is connected to the control panel and the sauna heater. The sensor registers the temperature in the room and sends signals to the heater for more or less output. The sensor also protects the sauna against overheating. In the event of overheating, the heater is turned off (see Alarm on page 22). The function of the sensor is to turn off the entire output of the heater if the temperature of the heater gets too high.



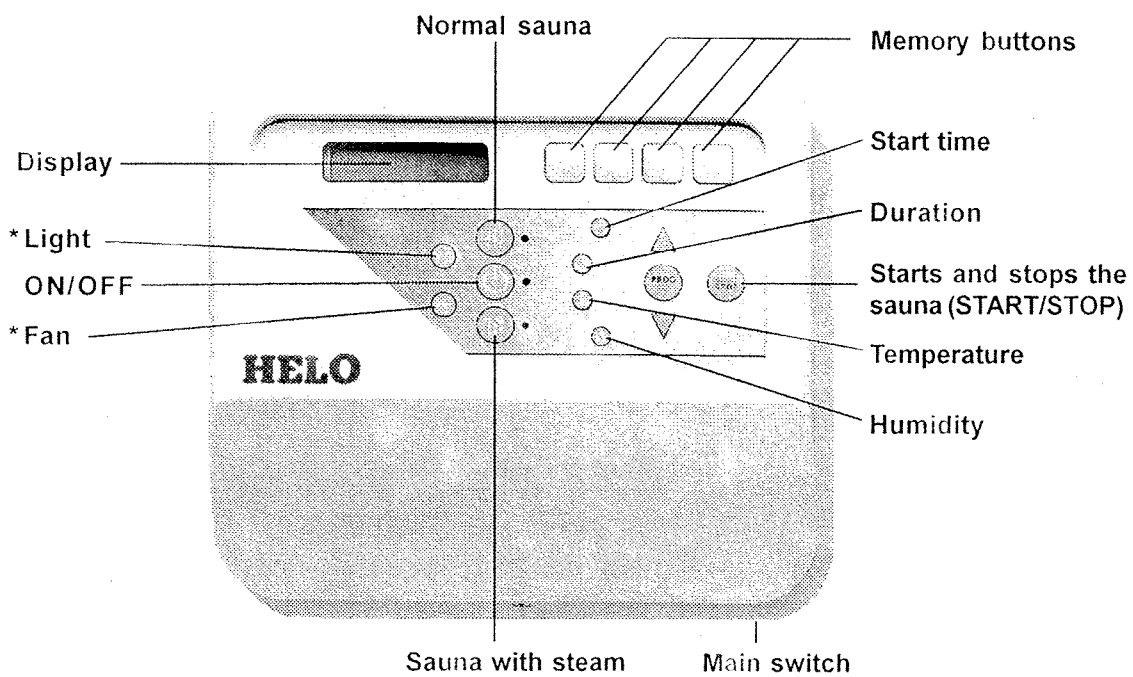
Temperature sensor

When the temperature has fallen, the sensor can be reset by pushing the reset button with a screwdriver. Before you reset the sensor the cause of the fault must be corrected. The temperature sensor is mounted by an installer directly over the heater, 40 mm from the ceiling. Deviations from the given distances can cause a fire hazard.

Humidity sensor OLET 18 (T2)
The humidity sensor is connected to the control panel and the sauna heater. The sensor measures the humidity that has been set in the control panel. It is mounted by an installer on the opposite wall of the heater. It is placed 500 mm from the ceiling.

Digital control panel
Via a control panel, the user sets temperature, start time, steam and duration. The control panel is mounted on the wall outside the sauna. The programming of the time and language is easily done by you or the installer.

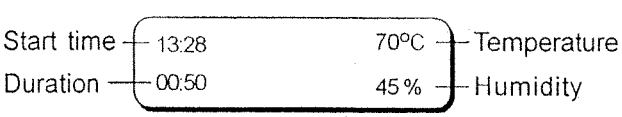
The control panel



The button PROG OK

- Increases the value
- Pages the menu and saves the settings
- Decreases the value

Display



Observe

* If light and fan have been connected to the control panel, you can use them with the appropriate buttons. If they are not connected, contact your retailer or a certified electrician.

You can change the settings of the control panel (clock and language) by pushing the button **prog ok** for three seconds when the panel is not on.

Tips and advice

The control panel gives you the opportunity to set four individual sauna baths. We recommend that you use the memory buttons. Read more on page 15.

Functions of the control panel

With the control panel, you set the time for the heater to start, duration of the sauna, the humidity and the temperature. You can also choose if you want a sauna with or without steam. It is also possible to program four memory buttons for individual sauna baths.

Functions of the control panel:

1. *Menu*
2. *Set the time and choose language*
3. *Turn on the sauna*
   - *With timer*
   - *With memory button*
   - *With last used sauna program*
4. *Change the settings during the sauna bath*
5. *Program and activate the memory buttons*
6. *Calibrate the temperature*
7. *Calibrate the humidity*
8. *Activate SmartSauna*
9. *Drying program*
10. *Turn on the light and fan*
11. *Lock the control panel*
12. *Lock the light and/or the fan function*

Tips and advice

Memory buttons:
We recommend that you take advantage of the memory buttons when using your sauna. You can easily program your preferences with separate buttons. When it is time to take a sauna bath you activate them with a single push. Each memory button has preset values when the control panel is delivered from the factory. Read more about memory buttons on page 15.

Basic settings:
Before you use the sauna, you need to set the basic settings on the control panel. These basic settings are setting the time and choosing the language. Read more about basic settings on page 11.

Menu

In the menu you make all the basic settings. Basic settings are, for example, to set the time, choose language, calibrate temperature and humidity. Set the basic settings before you have your first sauna bath. Thereafter you never have to do them again, except for setting the time after a power failure. A power failure longer than 20 minutes erases the time settings. All the other settings are saved in a permanent memory.

Observe:
If no changes are made in the menu within five seconds, the control panel will return to the basic setting. The display shows:

Use the menu

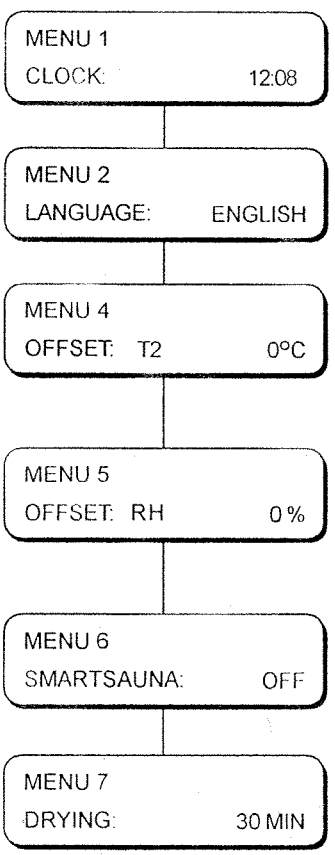
1. Push **ON/OFF** button
2. Push **PROG OK** for three sec.

   The display shows:

3. Page down to the menu with **PROG OK**

4. Change the settings with arrow buttons
5. Save the settings with **PROG OK**

The control panel contains the following menus



Menu 1: CLOCK
Set the correct time in the control panel. Correct time is important if you want to use the timer. Read more on page 11.

Menu 2: LANGUAGE
Choose language in the control panel. You can choose between English, Swedish, German, Finnish and Dutch. Read more on page 11.

Menu 4: OFFSET T2
If the thermometer inside the sauna room doesn't show the same temperature as the control panel, you can do a re-calibrate. Read more on page 16.

Menu 5: OFFSET RH
If the hygrometer inside the sauna room doesn't show the same humidity as the control panel, you can do a re-calibrate. Read more on page 17.

Menu 6: SMARTSAUNA
The function SmartSauna measures the temperature in the sauna room and calculates the heating time for the sauna heater. Read more on page 18.

Menu 7: Drying
The function Drying is an automatic program that starts after every steam sauna bath. Read more on page 18.

Set the time and choose the language

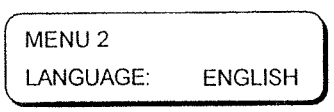
The basic settings must be completed in the control panel. It means setting the clock and choosing the correct language. Activate the setting menu by pushing the button **PROG OK** for about three seconds. If no button is pushed within five seconds the control panel will automatically return to the basic setting. If a change is made, it must be confirmed with the **PROG OK** button before the control panel resumes off-mode, otherwise the change is not saved.

Set the time

1. Push **ON/OFF** button
2. Push **PROG OK** for three seconds
   The display shows:
3. Set the time with arrow buttons
4. Confirm the new time with **PROG OK**

Choose language

1. Push **ON/OFF**
2. Push **PROG OK** for three seconds
3. Page to Menu 2 with **PROG OK**
   The display shows:
4. Choose the new language with arrow buttons
5. Confirm the new language with **PROG OK**



Observe

If there is a power failure of more than 20 minutes, the time is deleted from the control panel. You the have to reprogram the setting.

The control panel has five languages to choose from: Finnish, English, Swedish, German and Dutch.

Tips and advice

By holding the arrow button pressed the values are paged up or down rapidly.

Turn on the sauna

The control panel gives you several options how to turn on the sauna. The options are:
- *With a timer*
- *With a memory button*
- *With last used program.*

You can also choose between normal and steam sauna bath.

Observe

Before you turn on the sauna heater you must check that the sauna is ready to be used.

With a timer

Example: Sauna with steam

You want to have a sauna with steam. The time is 12:10 and you want the sauna heater to start heating at 18:00. You want a temperature of 75°C, duration of 50 minutes and humidity of 35 %. Menu 4 - SmartSauna - is set to OFF.

1. Push **ON/OFF**
   The background light is lit
2. Push **SAUNA WITH STEAM**
   The display shows earlier chosen settings, for example:

16:00	70°C
00:20	45 %

3. Push **START TIME** button
4. Change the start time to 18:00 with arrow buttons
5. Save the setting with **PROG OK**
6. Push **DURATION** button
7. Change the duration to 00:50 with arrow buttons
8. Save the setting with **PROG OK**
8. Push **TEMPERATURE** button
9. Change the temperature to 75°C with arrow buttons
10. Save the setting with **PROG OK**
11. Push **HUMIDITY** button
12. Change the humidity to 35 % with arrow buttons
13. Save the setting with **PROG OK**
    The display shows:

18:00	75°C
00:50	35 %

14. Activate the settings with **START STOP**
    The display shows:

12:10
18:00 STEAM

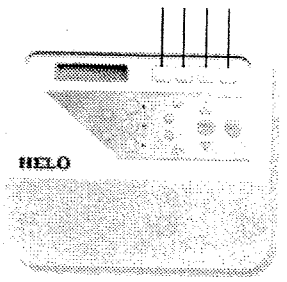
Turn off the sauna

If you wish to turn off the sauna before or during the sauna bath, you can push the button START STOP.

With a memory button

The digital control panel has four memory buttons. You have the opportunity to set four individual sauna bath programs. Each program has its owns settings, and you activate them with just a push of a button.

Memory buttons



When the control panel is delivered from Saunatec the memory buttons are pre-set. However, you can change the settings so that you get the sauna bath of your choice. Set the temperature and duration of the sauna heater according to earlier instructions (see page 15).

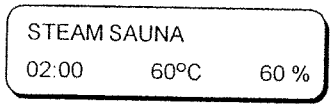
The preset values of the memory buttons are:

Button 1: Duration two hours, temperature 70°C
Button 2: Duration two hours, temperature 80°C
Button 3: Duration two hours, temperature 50°C, humidity 50 %
Button 4: Duration two hours, temperature 60°C, humidity 60 %

Turn on the sauna with a memory button:

Menu 4 - SmartSauna - is set to OFF.

1. Push **ON/OFF** ⏻
   The background lighting is lit
2. Push one of the memory buttons (1-4) 4
   The display shows the settings for memory button 4:
   The heater starts heating immediately.



Turn off the sauna

If you wish to turn off the sauna before or during the sauna bath, you can push the button START STOP.

With the last used program

To turn on the sauna with the last used program means that you will use the same settings in the control panel as you had in your previous sauna bath.

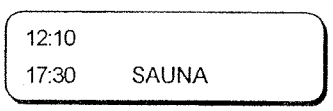
To turn on the sauna with the last used program:
Menu 4 - SmartSauna - is set on OFF.

1. Push **ON/OFF**
   The background lighting is lit
2. Push **NORMAL SAUNA** or **SAUNA WITH STEAM**
   The display shows (Normal Sauna)

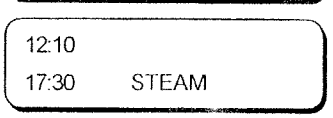
   The display shows (Sauna with steam)

3. Turn on the sauna with **START STOP**

   The display shows (Normal Sauna)

   The display shows (Sauna with steam)

The menu shows that the time is 12:10 and the heater turns on at 17:30.

Turn off the sauna

If you wish to turn off the sauna before or during the sauna bath, you can push the button START STOP.

Change the settings during the sauna bath

You can change the settings in the control panel during the sauna bath. You may wish to change the temperature, duration or humidity during a sauna bath. Changing the settings during the bath doesn't effect the memory buttons. The changes are only valid for the current bath.

Change the temperature

1. Push **TEMPERATURE** button
2. Change the temperature with arrow buttons
3. Save the new setting by pushing **PROG OK**

Change the duration

1. Push **DURATION** button
2. Change the duration with arrow buttons
3. Save the new setting by pushing **PROG OK**

Change the humidity

1. Push **HUMIDITY** button
2. Change the humidity with arrow buttons
3. Save the new setting by pushing **PROG OK**

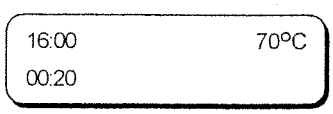
Program and activate the memory buttons

The digital control panel has four memory buttons. You have the opportunity to set four individual sauna bath programs. Each program has its owns settings, and you activate them with just a push of a button.

Program a memory button

Example: Normal sauna with a duration 50 min, temperature 75°C and SmartSauna OFF.

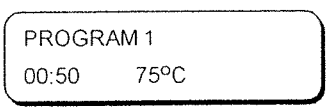
1. Push **ON/OFF**
   The background lighting is lit
2. Push button **NORMAL SAUNA**
   The display shows the earlier settings, for example:



Observe:
The start time that shows in the display is not saved on the memory button.

3. Push button **DURATION**
4. Change the duration to 00:50 with arrow buttons
5. Save the setting with **PROG OK**
6. Push button **TEMPERATURE**
7. Change the temperature to 75°C with arrow buttons
8. Save the setting with **PROG OK**
   The display shows:

9. Push a memory button (1-4) to save your settings (1)
   The display shows

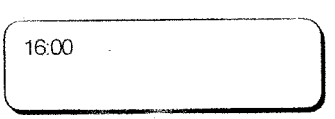


10. End the programing by pushing
    twice on **PROG OK** x 2
    or
11. Push once on **PROG OK** and make new settings in the display and save them on the other memory buttons.
12. End the programing by pushing **PROG OK** twice x 2

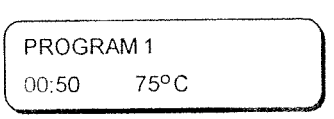
Check memory button

You can easily check the settings on every memory button.

1. Make sure that the control panel is on off-mode
   The display shows:



2. Push a memory button and read the settings (1)
   The display is lit



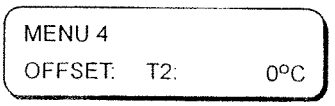
Calibrate the temperature

If the thermometer inside the sauna does not show the same temperature as the value that has been set on the control panel, you can make calibration (Offset): You adjust the control panel and the thermometer to the same levels. The reason for temperature difference is the fact that the temperature varies in different parts of the sauna.

Example

Your thermometer inside the sauna shows 84°C and your control panel is set on 80°C. The difference is thus + 4°C. By setting OFFSET: T2 on – 4°C, the control panel will show the right temperature.

1. Push **ON/OFF**
2. Push **PROG OK** for three sec.
3. Page to Menu 4 with **PROG OK**
   The display shows:
4. Calibrate the temperature with arrow buttons
5. Confirm the calibration with **PROG OK**



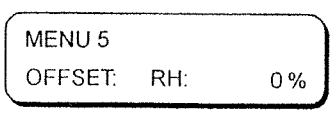
Calibrate the humidity

If the hygrometer inside the sauna does not show the same humidity as the value that has been entered on the control panel, you can make calibration (Offset): You adjust the control panel and the hygrometer to the same levels. The reason for humidity (%) difference is the fact that the humidity varies in different parts of the sauna.

Example

Your hygrometer inside the sauna shows 40 % and your control panel is set on 35 %. The difference is thus + 5 %. By setting OFFSET: RH on – 5 % the control panel will show the right humidity.

1. Push **ON/OFF**
2. Push **PROG OK** for three sec
3. Page to Menu 5 with **PROG OK**
   The display shows:
4. Calibrate the humidity with arrow buttons
5. Confirm the calibration with **PROG OK**



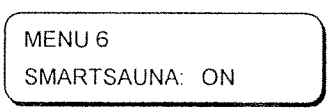
Activate SmartSauna

Smartsauna is a function that measures the temperature in the sauna and calculates the length of time the heater will take to heat the sauna to the set temperature. The function only works when it is activated, together with a time setting.

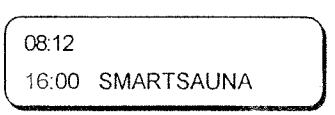
Example:

You have had a hard day at work and wish to relax with a sauna bath directly after you come home. You arrive at 16:00 and you want the sauna to be ready for you. By activating the function SmartSauna the control panel calculates when the heater should turn on, in order to warm up the sauna to the temperature you have chosen on the control panel.

1. Push **ON/OFF**
2. Push **PROG OK** for three seconds
3. Page to Menu 6 with **PROG OK**
   The display shows:



4. Activate the function SmartSauna (On) with arrow buttons
5. Confirm setting with **PROG OK**
6. Enter the start time 16:00, temperature and duration.
   Enter also possible humidity. Follow the instructions under the heading "Turn on the sauna" on page 12.
7. Save the settings with **START STOP**
   The display shows (without steam):



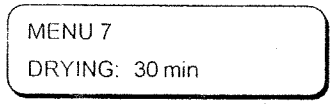
   The display shows (with steam):

Drying program

An automatic drying program starts after you have finished a steam sauna bath. The program is designed to remove humidity from the room by ventilation. In Menu 7 you can choose if the drying program should be on for 30 or 60 minutes. The temperature is always set to 80°C and the rotation speed of the fan is set to 100 %. During the drying program, the display shows drying time, temperature and measured humidity. When the drying program is finished the control panel returns to the basic setting and the fan is turned off.

Set the drying time:

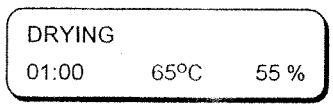
1. Push **ON/OFF**
2. Push **PROG OK** for three seconds
3. Page to Menu 7 with **PROG OK**
   The display shows:



4. Set the drying time (30 or 60 min) with arrow buttons
5. Confirm the setting with **PROG OK**

The display during the drying program:

(60 minutes have been chosen)



Turn off the program during the drying:

1. Push **ON/OFF**

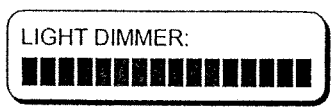
Turn on the light and the fan

The light and fan are easily activated from the control panel. The intensity of the light and the rotation speed of the fan can also be adjusted.

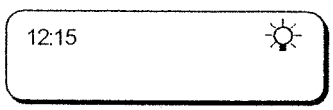
Turn on and adjust the light

The light can be turned on when the control panel is in either off-mode or on-mode.

1. Push button **LIGHT**
   The display shows:



2. Adjust the intensity of the light with arrow buttons
   The upper arrow increases the intensity while the lower arrow decreases the intensity.
3. The adjustment is saved if no button is pressed for five secounds.
   The display shows:



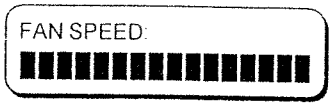
Turn off the light

1. Push button **LIGHT** for three seconds.

Activate and adjust the ventilation

The fan can be activated when the control panel is in either on-mode or off-mode.

1. Push button **FAN**
   The display shows:



2. Adjust the rotation speed with arrow buttons
   The upper arrow increases the speed while the lower arrow decreases the speed.

3. The adjustment is saved if no button is pressed for five secounds.
   The display shows:

Turn off the VENTILATION

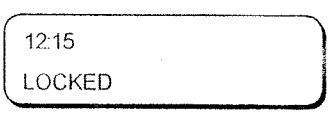
1. Push button **FAN** for three seconds.

Lock the control panel

When the control panel is locked it is not possible to turn on the heater. This might be suitable when you wish to limit control of the sauna, for example when children are playing nearby and you want to prevent the heater being turned on by mistake. The buttons don't work (exept for the arrow buttons) in the lock-mode. Don't wait too long (maximum two seconds) between each button-push when activating/deactivating the lock.

Make sure that the control panel is in off-mode when you are locking the control panel.

1. Push upper arrow button
2. Push lower arrow button
3. Push button **VENTILATION**
   The display shows:



Undo the lock:

Undo the lock with the same instruction that was described above.

Lock the light and/or the fan

When the fan or light is locked, it is impossible to cut off the ventilation or turn off the light in the sauna. It is also impossible to execute any other function in the control panel. The light cannot be turned off and the ventilation cannot be cut off before the lock has been undone. Don't wait too long (maximum two seconds) between each button-push when activating/deactivating the lock.

Lock the light

Make sure that the control panel is in off-mode before you lock the light.

1. Push button **LIGHT**
   Wait for the adjustment-mode to disappear before you continue the instruction
1. Push upper arrow button
2. Push lower arrow button
   The display shows:

Undo the lock:

Undo the lock with the same instruction that was described above.

Lock the ventilation

Make sure that the control panel is in off-mode before you lock the ventilation.

1. Push button **FAN**
   Wait for the adjustment-mode to disappear before you continue the instruction
1. Push upper arrow button
2. Push lower arrow button
   The display shows:

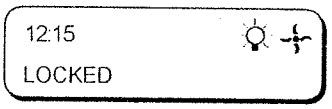
Undo the lock:

Undo the lock with the same instruction that was described above.

Lock the light and the ventilation at the same time

Make sure that the control panel is in off-mode before you lock the light and the ventilation.

1. Push buttons **LIGHT** and **FAN** and
   Wait for the adjustment-mode to disappear before you continue the instruction
2. Push upper arrow button
3. Push lower arrow button
   The display shows:



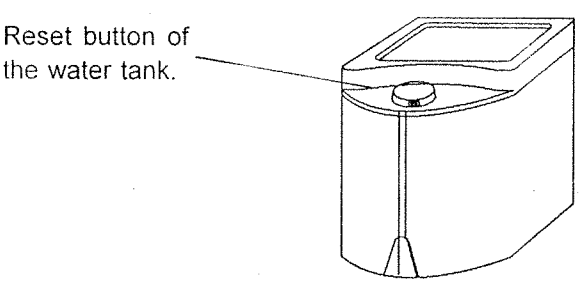
Undo the lock:

1. Push upper arrow button
2. Push lower arrow button

Alarm

In an alarm situation, the control panel stops the heater, and the cause for the alarm is shown on the display of the control panel. Check the alarm and restart the sauna heater. An alarm can be triggered by the following reasons:

Alarm	Display	Action
The cable of the temperature sensor is broken.	ALARM T1 CABEL OFF ALARM T2 CABLE OFF	Check the cable to and from the sensor.
The temperature sensor is triggered.	ALARM OFFSET OF T1 ALARM OFFSET OF T2	Check the cause. Reset the sensor, OLET 19 (T1), by pushing the reset button with a screwdriver.
The water tank is empty.	STEAM SAUNA FILL THE TANK	Fill the tank with water.
The sensor in the water tank is triggered due to low level of water in the tank.	ALARM OFFSET STEAM	Turn off the control panel, fill the tank with water and push the reset switch. See the picture.



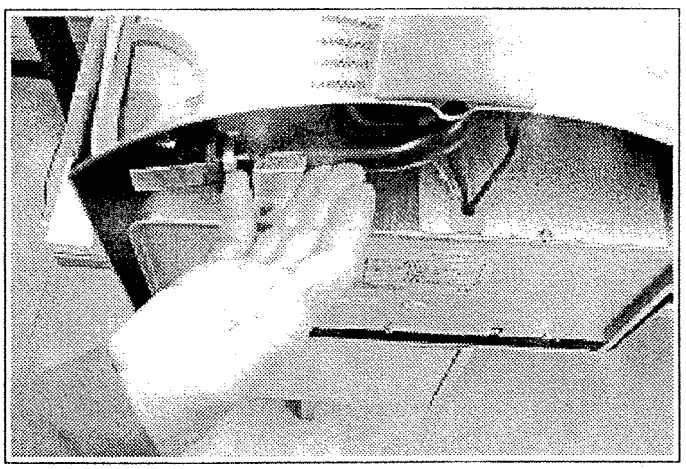
Maintenance

The water tank

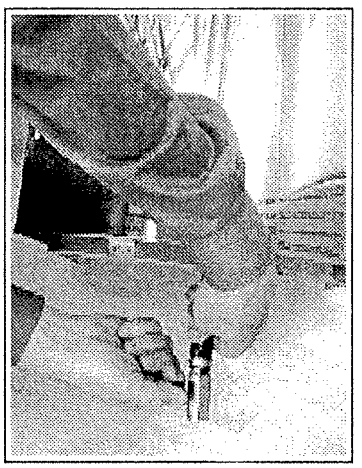
The water tank should be drained after every sauna bath. After a while you will probably find inpurities on the inside of the water tank. The tank should therefore be cleaned 1-2 times every six months. Use a hard brush to clean the inside of the tank. Mix a litre of solvent (citric acid) and water and pour it into the tank. Turn on the sauna heater and make sure that the inpurities disappear. End the cleaning by restarting the heater using only water.

Warning

Be careful when emptying the water tank. The water has a temperature of 100°C. The hose should be pointed down when the hot water is let out from the tank.



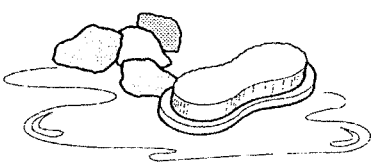
Picture from below:
Remove the hose and point it in vertical direction.



Point the hose in a vertical direction and into a bucket when you are opening the tap. Be careful. The water is very hot.

Sauna stones

We recommend that you brush and rinse grit from the sauna stones before placing them in the stone compartment. If the stones begin to crumble, replace them as soon as possible. Read more about sauna stones on page 6.



The sauna

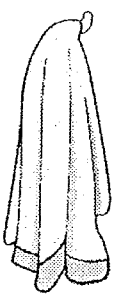
The sauna should be kept clean to prevent odours, just like the bathroom. Remove any stains of water and salt with a gentle soap and water. Furthermore, be careful not to keep laundry and other combustible material close to the heater.

Vent

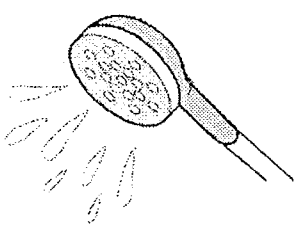
In the sauna there is a vent (outlet vent) that releases warm air. Clean the outlet vent with water and a gentle soap once or twice a year.

General information about sauna bathing

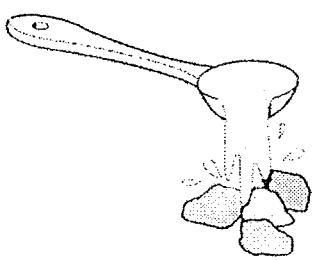
- Allow yourself plenty of time when you take a sauna bath. You should not feel hurried. To take a sauna bath should be a pleasure.
- Take a shower before entering the sauna. If the situation requires that you wear a towel, it should not be too tight.
- Take a break after 10–15 minutes. Leave the sauna, enjoy a cool shower and relax. Repeat this procedure if you feel like it.
- Many feel that the most pleasurable part of sauna bathing is "sprinkling water" on the hot stones of the heater, which means that a few scoops of water are ladled over the hot stones. The cloud of hot steam that is formed is called "löyly" and is considered the soul of the sauna.



Use a towel if the situation calls for it.

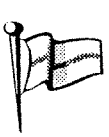


Take a shower before entering the sauna.



Increase the moisture by ladling water on the stones.

Examples of different baths



Finnish sauna

A Finnish sauna is humid and has relatively high temperature. This is achieved by ladling water on the stones. After a Finnish sauna bath you feel clean and relaxed. To achieve this:

1. *Set the temperature between 70 and 80°C.*
2. *Ladle water on the stones until the humidity is ca 20 %.*
3. *Take a sauna bath for 10–15 minutes or as long as you feel comfortable.*
4. *Take a break of about 5 minutes. Cool down and drink fluids.*
5. *Repeat this procedure as many times as you like.*

Moist sauna

A moist sauna means higher humidity and lower temperature. This is achieved by ladling water on the stones. After a humid sauna bath you feel clean and refreshed. To achieve this:

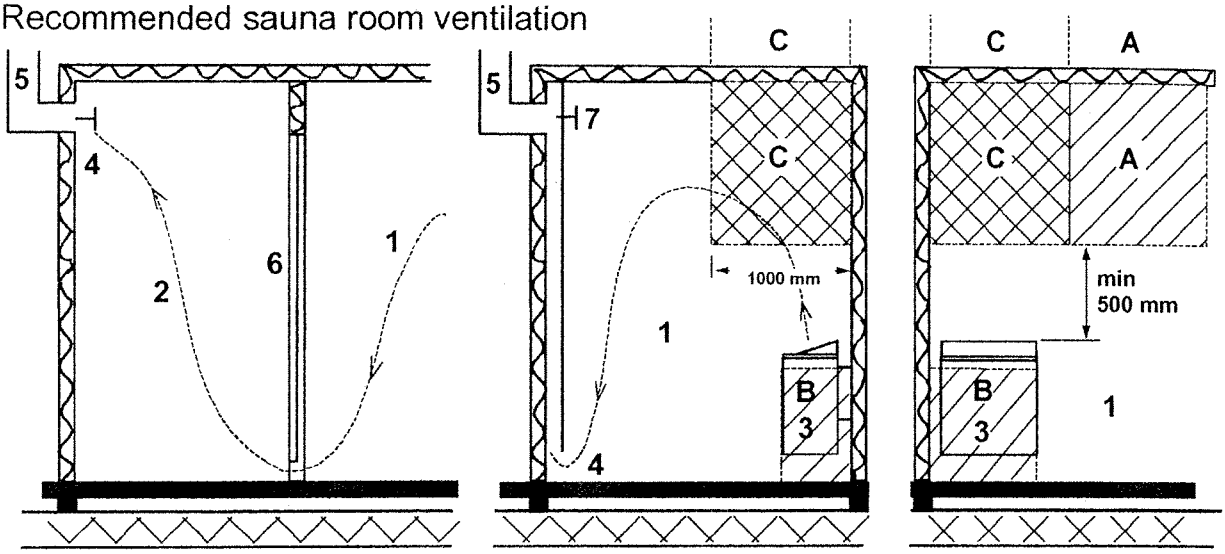
1. *Set the temperature at about 60°C*
2. *Ladle water until the humidity is ca 40 %.*
3. *Take a sauna bath for 15–20 minutes or as long as you feel comfortable. Drink fluids.*
4. *Repeat this procedure as many times as you like.*

Dry sauna

A dry sauna has high temperature and low humidity. In this case, do not ladle water on the stones. After a dry sauna bath you feel calm and harmonious. To achieve this:

1. *Set the temperature between 85 and 90°C. Humidity 5–10 %.*
2. *Take a sauna bath for 15–20 minutes or as long as you feel comfortable.*
4. *Take a break of about 5 minutes. Cool down and drink fluids.*
5. *Repeat this procedure as many times as you like.*

Recommended sauna room ventilation



1. Sauna room
2. Washroom
3. Electric sauna heater
4. Exhaust valve
5. Exhaust flue or channel
6. Door to the sauna room
7. A ventilation valve can be installed here to be kept closed while the sauna is heated and during bathing.

Inlet vent can be positioned in the A zone. Make sure the incoming fresh air will not interfere with (i.e. cool down) the sauna heater's thermostat near the ceiling.

The B zone serves as the incoming air zone, if the sauna room isn't fitted with forced ventilation. In this case, the exhaust valve is installed min 1m higher than the inlet valve.

DO NOT ISTALL INLET VALVE WITHIN ZONE C, IF THE SAUNA HEATER'S CONTROL THERMOSTAT IS LOCATED AT THE SAME ZONE.

Information for the installer

This user guide gives you answers on how to install electrical cables and the control panel in the sauna. We want you to read the ENTIRE user guide, both sections: **Information for the user** and **Information for the installer**. We feel that even an installer benefits from the information directed to the user. Be sure to read all the Observe- and Warning-columns.

The user guide applies to the following heater models:

Automatically filled water tank:

1712-60-010420 (6,0 kW)
1712-80-010420 (8,0 kW)
1712-90-010420 (9,0 kW)

Manually filled water tank:

1712-60-120420 (6,0 kW)
1712-80-120420 (8,0 kW)
1712-90-120420 (9,0 kW)

Some parts of the user guide are of particular importance. We use the following symbols:

Warning

Observe

Tips and advice

Table of contents for the installer

Information for the user 3-26
Important information for the installer 28
Checklist 28
Parts included in the delivery 29
Summary of the electrical and water connections 30
Install the heater and temperature sensor 31
Connect the electricity 34
Install and program the control panel 36
Cable packing in the control panel 36
Test the sauna and make safety measurements 37

Important information for the installer

This user guide is an important tool for you who will mount and install the sauna heater. There are several installation dimensions that must be followed exactly due to safety requirements. If you have any questions during the installation we recommend you to to contac your retailer.

When the mounting and installation are completed, we would like you to give this user guide to the user. Do not throw it away but make sure that the user gets the user guide in order to be able to use the digital control panel. Use the checklist to be sure that all the steps in the installation process have been completed.

Observe!

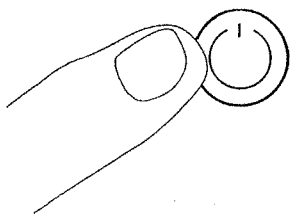
- Follow the installation dimensions given in this user guide.
- Make sure that the wall behind the heater, to which the screws are to be fixed, is strengthened with wood.
- Only one heater may be installed in the sauna room.
- The sauna heater must not be installed in a wall, alcove or surrounded by close structures.
- A certified electrician, in accordance with the valid regulations, must do all the electrical connections.

Checklist

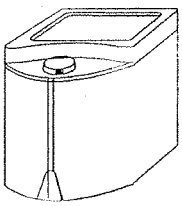
1. Read this user guide carefully
2. Check that all the parts are delivered
3. Connect the electrical cables to the heater (page 34)
4. Install the heater in the sauna (page 32)
5. Install the temperature sensors in the sauna (page 32)
6. Install the control panel on the wall (page 36)
7. Connect electrical cables to the control panel (pages 35-37)
8. Test the sauna and make the necessary safety measurements (page 37)
9. Give this user guide to the user after finishing the installation

Observe!

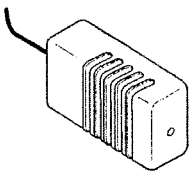
Before you turn on the heater with the control panel, make sure that you have gone through all the steps in the check list and that the sauna is ready to be used.



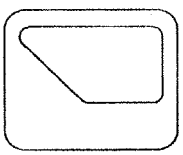
Parts included in the delivery



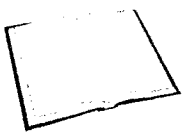
Sauna heater
1 pc



Sensors with cables
Temperature sensor OLET 19 and humidity sensor OLET 18
2 pc



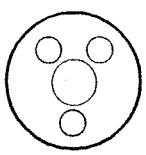
Digital control panel
1 pc



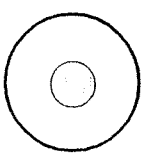
User Guide
1 pc

Observe!

If any of the parts are missing in delivery, contact your retailer.



Cable packing
1 pc



Cable packing
4 pc

Screw for the sensors, 3 x 20 mm
4 pc

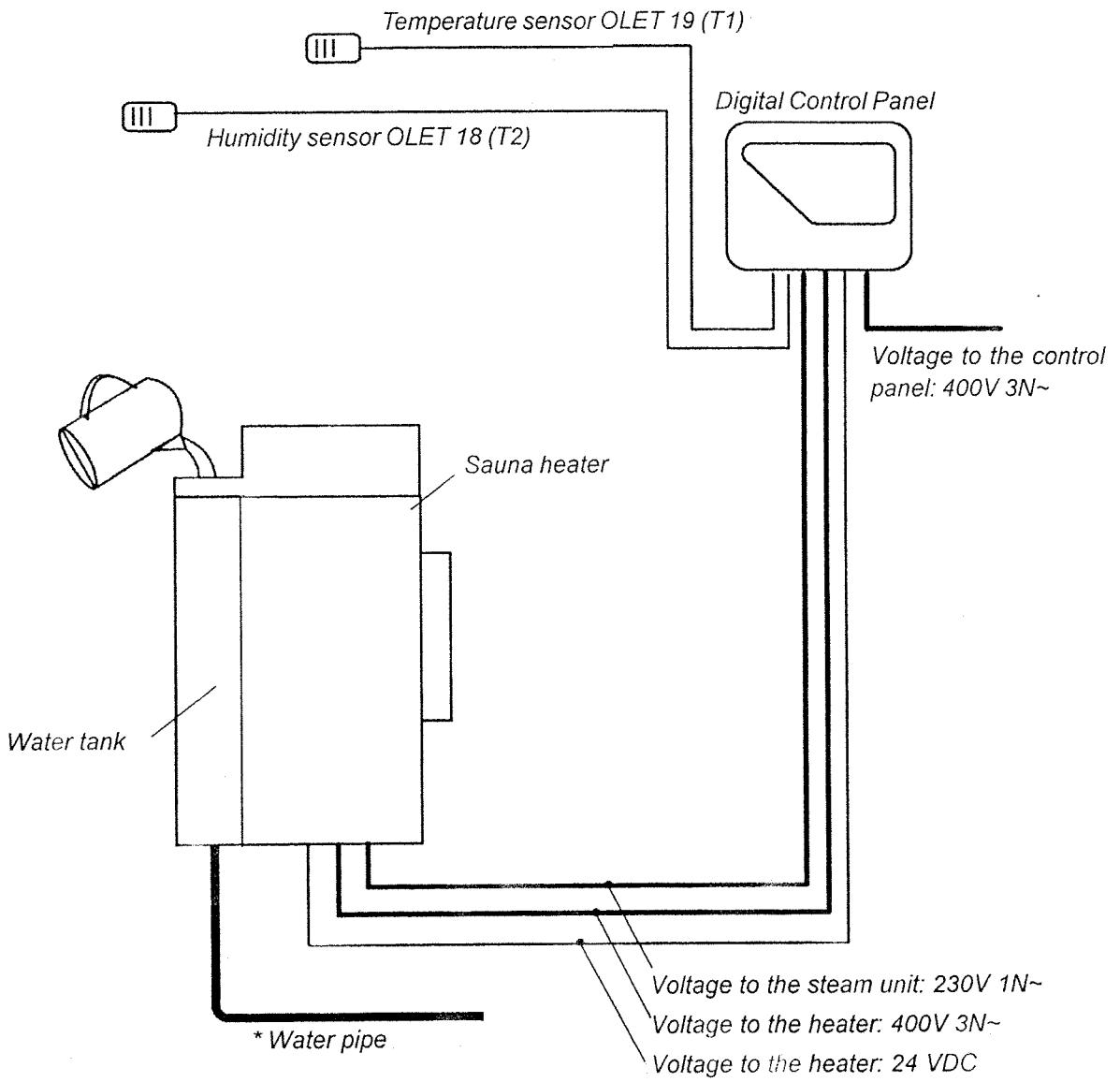
Screw for the control panel, 4 x 25 mm
3 st

Metal screw for the sauna heater, 6 x 40 mm
2 pc

Metal screw for the sauna heater, 6 x 16 mm
2 pc

Summary of the electrical and water connections

The picture below shows a plan of the electrical and water connections for the sauna heater and control panel.



**** Automatically filled water tank is available for the following models:***

1712-60-010420 (6,0 kW)
1712-80-010420 (8,0 kW)
1712-90-010420 (9,0 kW)

Install the heater and temperature sensor

There are precise requirements for installation of the heater. The different models of sauna heaters have their own specific installation dimensions, and these must be followed exactly due to safety reasons.

The heater can only be wall mounted. In the following pages you will find sketches for placing the heater in the sauna room and different options to mount the temperature sensor. The installation dimensions are exact – they may not be deviated from. Observe that you should not install the heater until you have connected all the cables (more information on page 34).

Install the heater:

1. Study the installation dimensions in the pictures and the table.
2. Mark the walls and floors where the equipment should be mounted and holes should be drilled.
3. Make four holes in the wall. Use a 3,5 mm drill.
4. Place the heater in its place.
5. Fasten the heater on the wall. Use the metal screws.

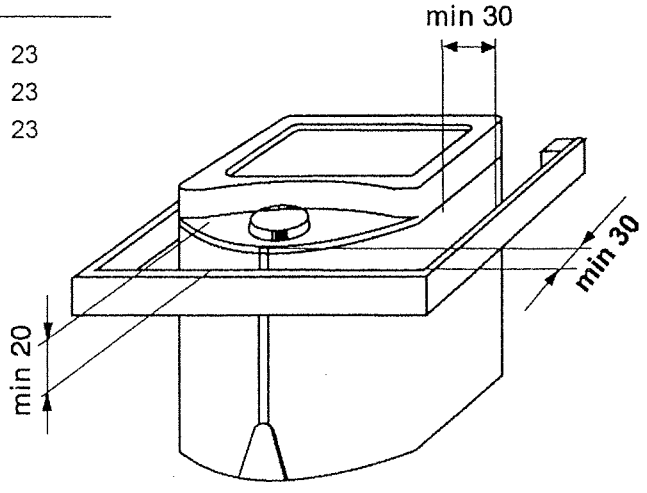
Facts and installation measuremets

Output heater (kW)	Volume sauna room (m^3)	Height sauna room (mm)	To the side wall **A** (mm)	In front of the heater, **D** (mm)	To the ceiling **F** (mm)
6,0	5-9	1900	70	100	1250
8,0	8-12	1900	100	150	1250
9,0	9-13	1900	100	200	1250

To the floor **K** (mm)	Wall **B** (mm)	Wall **J** (mm)	Stone (kg)
120	90	390	23
150	120	420	23
150	125	420	23

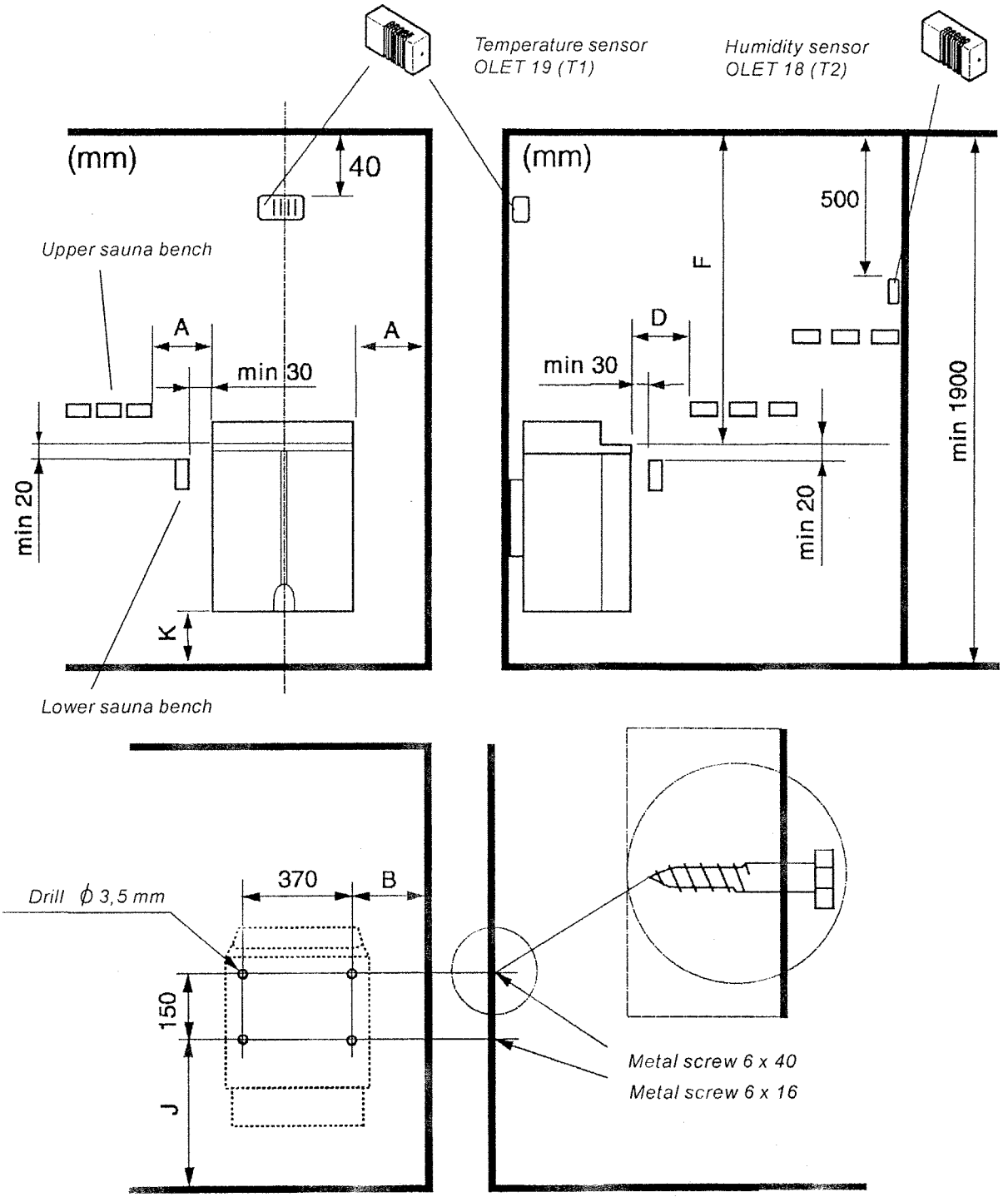
Sauna heater measurement

Width: 420 mm
Height: 580 mm
Depth: 390 mm (6,0 kW)
410 mm (8,0-9,0 kW)



Wall mounting

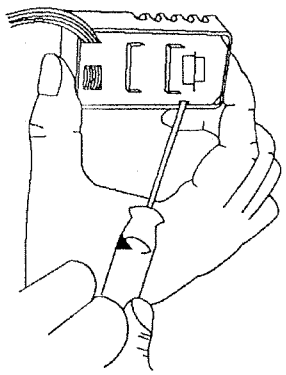
All measures are in millimetres (mm).



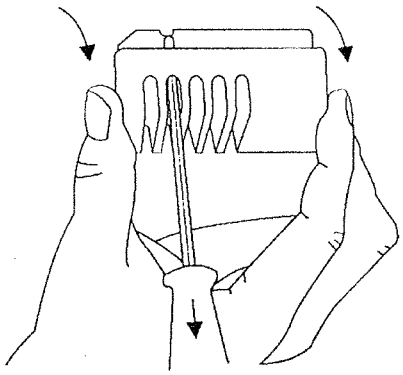
Install the temperature and humidity sensor

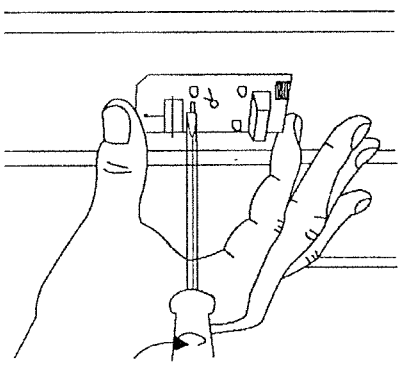
1. Mark the spot on the sauna wall where the sensor should be placed. Study the illustrations on page 32.
2. Remove the cover of the sensor with a screwdriver. See pictures 1 and 2.
3. Screw the sensor to the wall with the metal screws, 3 x 20 mm. See picture 3.
4. Replace the cover of the sensor. See picture 4.

Picture 1

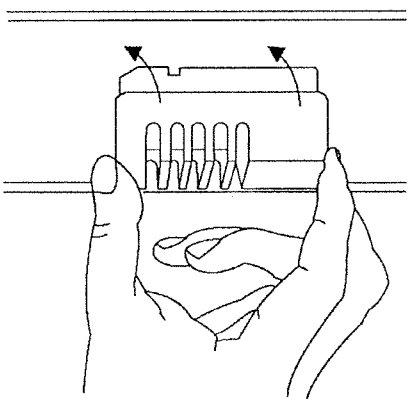


Picture 2





Picture 3



Picture 4

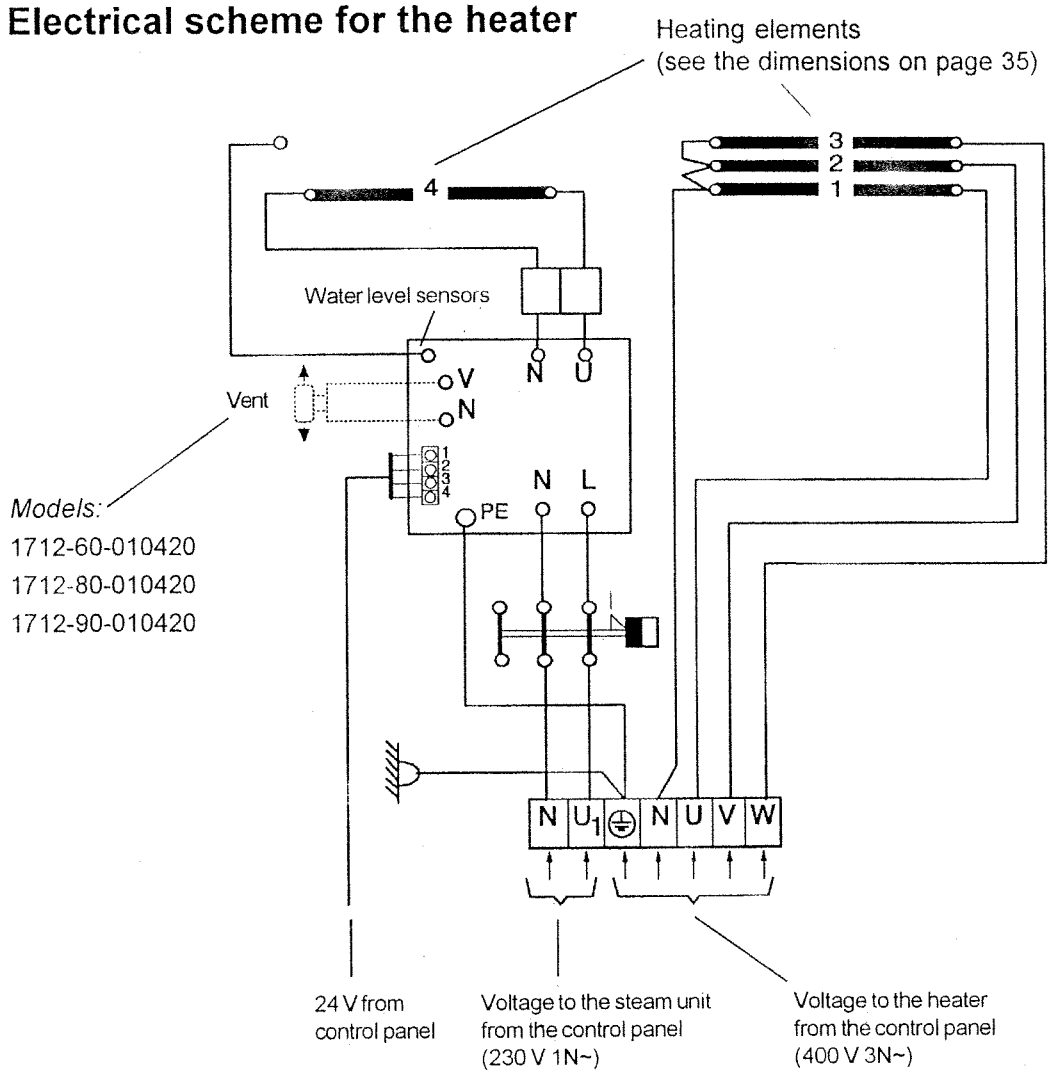
Connect the electricity

Connecting the electricity is the most important part of the installation of a sauna heater. Only certified electricians may install the sauna heater. The heater should be connected half-fasten to the electricity supply. You must use a standard cable HO7RN-F, 245 IEC66 or similar (example RHH or VSN) when you connect the heater to the electricity supply. All cables that are connected in the heater, control panel or the lamp must be of the same model and dimension.

Connect electrical cables

1. Lay the heater down and unscrew the bottom plate.
2. Connect the cable between the control panel and the sauna heater (400V 3N~).
3. Connect the cable between the control panel and the sauna heater (24V).
4. Connect cable between the control panel and the steam unit (230V 1N~).
5. Shorten the cables if they are to long.
6. Fasten the bottom plate and lift up the heater.

Electrical scheme for the heater



Connection to the electricity supply

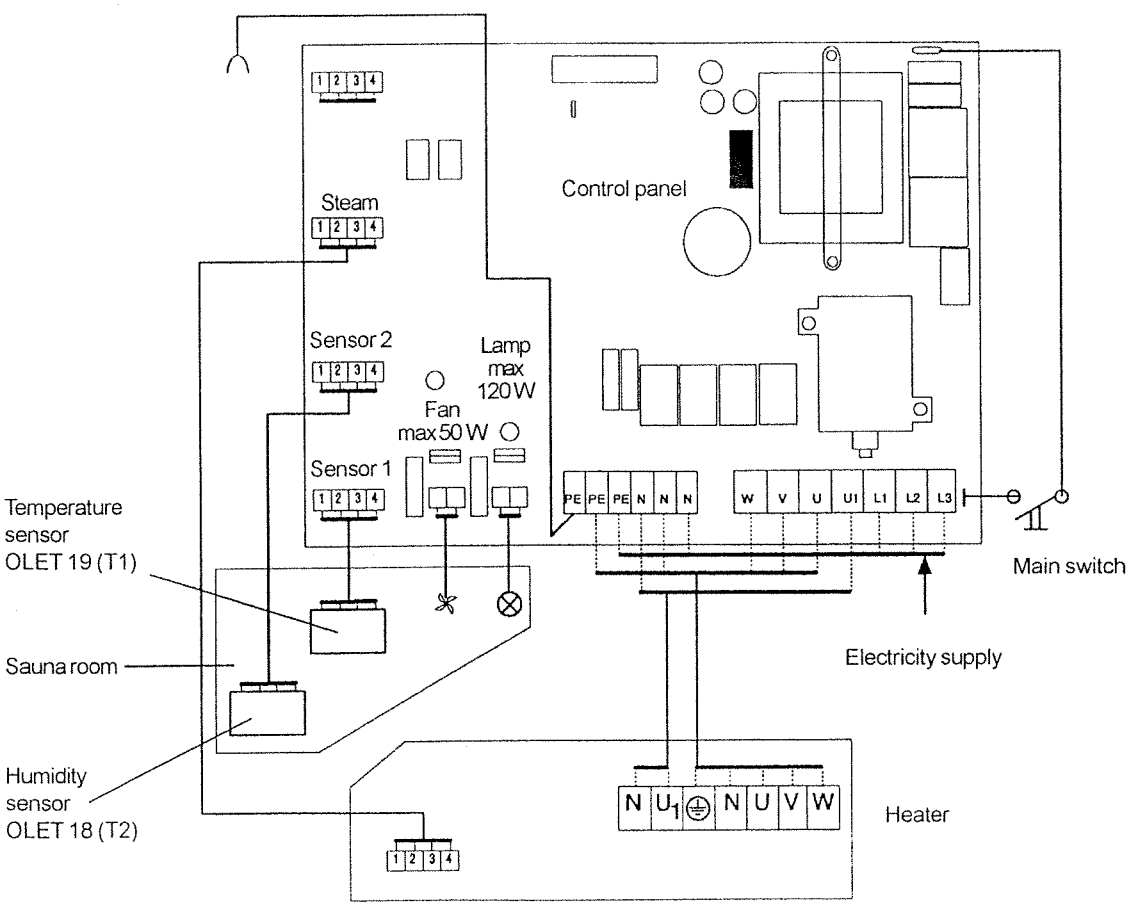
Output (kW)	Fuse (A)	Heater connection HO7RN-F, 245 IEC66 (example RHH el. VSB) (mm^2)	Steam unit HO7RN-F, 245 IEC66 (example RHH el. VSB) (mm^2)
6,0	3 x 10	5 x 1,5	2 x 1,5
8,0	3 x 16	5 x 2,5	2 x 2,5
9,0	3 x 16	5 x 2,5	2 x 2,5

Heating element

Output (kW)	**Heating element** (230 V)				
	SEPC 64 2000 W	SEPC 65 2670 W	SEPC 65B 3000 W	SEPC 65C 3300 W	SEPC 142 2250 W
6,0	1,2,3				4
8,0		1,2,3			4
9,0		1	2	3	4

See the numbering of the heating elements in the electricity scheme on page 34.

Electrical scheme for the control panel

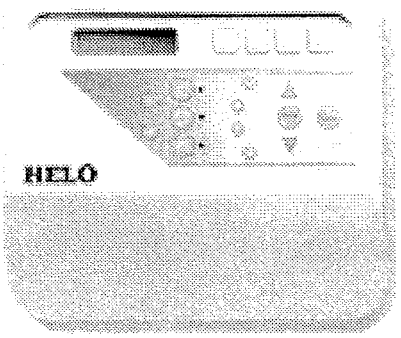


Install and program the control panel

The control panel has several holes in the back. These holes are used to mount the control panel outside the sauna. When the control panel is installed you have to set a number of basic settings on the display. The basic settings include among other things setting the time and choosing the language.

Control panel measurement

Width: 250 mm
Height: 222 mm
Depth: 80 mm

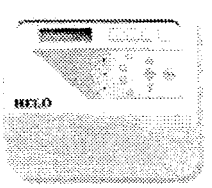


Install the control panel

1. Mark on the wall where the control panel should be installed.
2. Unscrew and remove the lid.
3. Lead the cable through the control panel so that it's placed before the lid is put back on
(see page 37).
4. Set the metal screw 4 x 25 mm in the wall and hang the control panel on the middle screw.
5. Install the control panel on the wall with the screws 4 x 25 mm. The screws should be placed in the two holes at the bottom of the control panel.
6. Put the lid back.

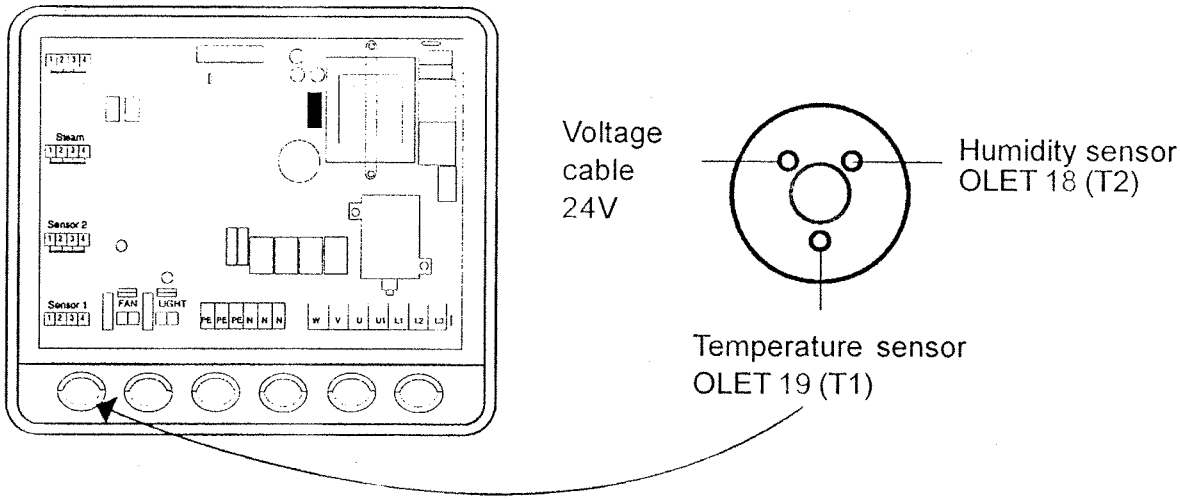
Program the control panel

The basic settings are to be done by the installer. They include setting the clock and choosing the language. After a power failure of more than 20 minutes the time setting is deleted. In this case the user must reset the timer setting.



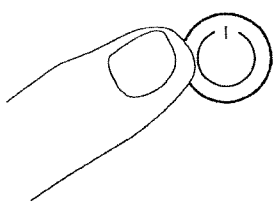
Instructions to program the basic settings of the control panel are on page 11.

Cable packing in the control panel



Test the sauna and make safety measurements

When the installation is done and you have run through all the steps in the checklist, the only thing that remains is to test the sauna and make the safety measurements. The purpose of the testing is to find out if there are any faults in the heater or the control panel.



The last step of the checklist is to test the sauna and run through safety measurements.

Check the following when testing

1. That the display of the control panel is working.
2. That all the heating elements are warming up.
3. That fan and light work when activated.
4. That the steam unit is working.

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