

**USER MANUAL FOR THE INSTANT HOT WATER UNIT**

**MOD. HT1800**



**READ CAREFULLY BEFORE USING THE DEVICE**

**Version 08/02**

## INSTRUCTIONS FOR THE INSTANT HOT WATER UNIT HT1800



### **Safety instructions (read carefully)**

Every electrical device must be used for its particular function only, respecting the manufacturer's instructions. Failure to adhere to the instructions could result in serious person injury, electric shock, fire or explosion.

The nowadays machines are normally produced according to the accident prevention regulations and are often homologated by qualified institutes for the safety, but nobody and nothing can save irresponsible users from danger.

Please, read carefully the following points and be sure to understand everything before using the machines. The following information signals potentially dangerous conditions to the operator or equipment.



#### **WARNING: Fire or Explosion Hazard.**

- Do not spray water near electrical outlets.
- Do not use the machine to spray or to suck dust, corrosive liquids (acids or bases) and explosive or inflammable liquids.
- Do not use the machine in an explosive atmosphere. This machine is not equipped with an explosion proof motor. The electric motor will spark when powered on which could cause a flash fire or explosion if machine is used in an area where flammable vapors/liquids or combustible dusts are present.
- Never use flammable liquids or operate machine in or near flammable liquids, vapors or combustible dusts.



#### **WARNING: Electrical Hazard.**

- Before putting the machine's plug in the current socket, check that the voltage available is the same indicated on the label of the machines.
- Be sure that the electrical system is well earthed and that it has a safety differential switch.
- Verify that the cable plug is complying with the outlet.
- Do not modify plug.
- Do not use adapters or multiple sockets, without knowing the electrical input of each user.
- If any electrical extension is used, check that it corresponds to the absorbed power of the machine and that the connection of the plug with the socket is complying and sealed.
- Take care of the electrical cable. It must be integral and protected from water, tears and chemical agents. Do not repair the cable in case of tears, but replace it with a new one. The cable must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.
- Do not pull the cable to drag the machine or to pull the plug out.
- Pull the plug out only when the machine is switched off.
- Do not handle the plug with wet hands.
- Unplug cable before servicing machine.



## **FOR SAFETY:**

- Do not let the machine being used by children and people unable to understand the danger connected with the use of electrical power.
- Do not bring the end of the suction hose or one of the accessories near your face or others', particularly near ears and eyes: the sucked air could seriously damage them.
- If the machine is used as a wet vacuum cleaner, you must check the level of water in the recovery tank, in order to prevent water from being sucked by the vacuum motor.
- If the chemical you are using produces foam, or if you are cleaning carpet previously treated with shampoo, you must put some antifoaming liquid into the recovery tank. In the long run, the foam sucked by the motor can damage it.
- In case of abnormal working (very noisy motor, not running pump, extreme temperature rise, or other suspicious signals) switch off the machine and pull the plug out.
- If foam or liquid escapes from the machine, switch machine off immediately.
- After using, store the machine, well cleaned, in a cool and dry place.
- In case the electrical fuse of the device intervenes, bring the device to an assistance center, in order to check why the fuse intervened, before replacing the fuse with a new one.

The manufacturer cannot be held responsible for any damage/injury caused to persons or property, because of the incorrect use of the machine due to procedures being used which are not specified in this instruction manual.

**Attention:** all the electrical repairs must be performed by qualified personal only!

**IMPORTANT NOTE:** Be sure that the socket you are using is able to provide all the electrical power required by the heater. In case the machine is provided with an electrical socket, be sure that the machine is able to supply the power required by the heater, in any condition. If the machine has several devices (pumps, vacuum motors, brush motors and so on), you must be sure that the machine is able to supply the heater with all the power it requires, also when ALL the electrical components of the machine are switched on. In particular, the electrical cable of the machine, its plug, the fuses and all the wires inside the machine must be sized in such a way that the additional power adsorbed by the heater will not create problems. Contact the machine manufacturer about this point. In case of doubt, insert the plug of the heater in an independent wall socket.



## **PROTECT THE ENVIRONMENT**

**Please dispose of packaging materials and old machine components in a safe environmentally way according to your local waster disposal regulations.**



**Always remember to recycle.**

### **Parts provided with the heater**

Provided with the heater you find the following parts, necessary to fix the heater on a Santoemma machine:

- 2 metal brackets, to fix the heater on the machines model Sabrina-Maxi, Serena-Silent or Grace.
- 1 metal bracket, to fix the heater on the machines model Elite-Silent or Powerful.
- 2 locking nuts diam.6, to fix the metal brackets on the device,
- 4 screws TC+ inox 4x20, used to fix the brackets to the control panel of the machine (only 2 of them are necessary to fix the heater on Elite-Silent or Powerful).

The heater is also provided with a piece of solution pipe able to bear water at high temperature. This pipe can be used to re-circulate the hot output water again into the solution tank (read the paragraph: “pre-heating with the re-circulation of water”), or it can be used to replace the solution pipe of the machine if this is not strong enough to bear hot water.

### **Connection for the models Sabrina-Maxi, Serena-Silent and Grace**

To fix the heater on one of the models Sabrina Maxi, Serena-Silent or Grace do the following:

1. Fix the 2 metal brackets on the control panel of the machine, using the 4 screws TC+ inox 4x20 provided in the kit, after unscrewing the 4 correspondent screws (TC+ inox 4x10) on the control panel.
2. Hang the heater on the 2 brackets, by inserting the screws coming out from the rear side of the heater into the holes of the 2 metal brackets, and tightening them with the 2 nuts diam.6.



### **Connection for the models Elite-Silent and Powerful**

To attach the device to the model Elite-Silent or Powerful, it is necessary to do the following operations:

1. Fix the 2 metal brackets on the control panel as indicated in the picture, by using 2 screws TC+inox 4x20.
2. Fix the device to the 2 metal brackets, vertically, as indicated in the picture. Hang the heater on the bracket by inserting the screws coming out of the rear side of the heater into the holes of the brackets. Lock the heater using the 2 nuts diam.6.



### **Preparation for work**

In order to start working with the instant hot water unit, proceed as follows:

1. Attach the device to the injection-extraction machine with the special metal brackets. This operation is very easy for a Santoemma machine. For machines of other brands, either you can use the heater as a separate unit, or you have to provide yourself with special brackets to attach it to the machine you already have.
2. Be sure the general switch of the device is in the OFF position.
3. Establish the hydraulic connection of the device to the machine, by inserting the male quick-disconnect coupling into the female quick-disconnect coupling, which is situated on the machine. In this way, the fresh water sprayed by the pump can go inside the hot water unit.
4. Connect the outlet of the hot water unit with the cleaning accessory, by using the solution pipe provided.
5. Switch on the pump and be sure that the solution is sprayed normally through the accessory, by acting on the solution valve.
6. Insert the plug of the heater into an electrical socket, which must be provided with grounding connection and adequate to the alimentation of the heater.
7. Switch on the heater, by putting the general switch in the ON position. By doing so, the correspondent green light will be switched on. Also the 2 lights (red and green) of the 2 thermal protections will be switched on.

8. Bring the water flow into action, by pressing the lever on the accessory: after about 30 seconds the coming out water will start heating, and it will reach its steady temperature after about 1 minute.

In normal conditions, both the green and red light of the thermal protections are switched on.

The RED light ON means that the resistor inside the heater is actually using electrical power, to heat the water. This light is connected to the adjustable thermostat situated on the head of the resistor. If, during the spraying of water, you close the solution valve on the accessory and therefore the water flow is stopped, then the heat produced by the resistor accumulates in the water inside the heater, which will consequently become warmer and warmer. In this condition, after about 30-40 seconds, the water becomes too hot and therefore the thermal protection of the heater intervenes, by switching off the heater. In this moment the red light will be switched off. At this point, if you activate the water flow, the temperature of the water inside the unit will decrease and after some seconds (30-40 seconds) the red light will switch on again and the heater will start again absorbing electrical power.

The GREEN light is connected to the emergency thermal protection that is situated inside the heater, on the external surface of the aluminum tank. This is tuned to open the electrical circuit at 70°C, with a tolerance of 4 degrees. The emergency thermal protection therefore intervenes only when, for any reason, the temperature of water becomes too high. When this happens, the green light switches off until the temperature decreases. In normal condition the green light must be always ON. If it switches OFF, then switch off the heater for some minutes and check that the water going into the heater from the machine is not too hot. Should the green light switch off repeatedly, contact the assistance service: it might be that the thermostat got broken.

**ATTENTION:**

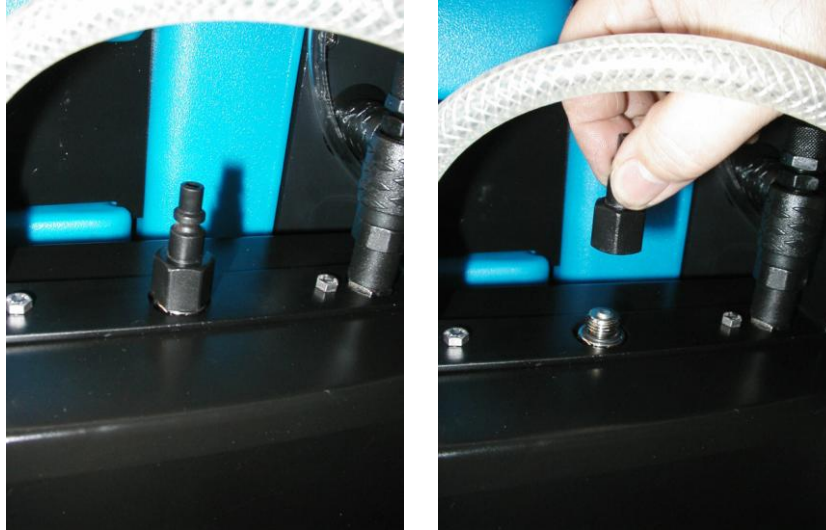
- If you want to stop spraying water for more than 30-40 seconds, then you have to switch off the heater by acting on the general switch.
- Do not let the heater work without water.
- Do not open the cover of the heater unit for any reason before removing the plug from the electrical socket.
- Do not act on the internal parts of the heater.
- For repairs contact qualified staff only!

**Pre-heating with the recirculation of water**

It is possible to pre-heat the water, by letting the warm water coming from the heater flow going into the solution tank of the machine. After some minutes of recirculation, the water in the solution tank becomes warm. In this way it is possible to obtain water at a higher temperature than simply by having water flowing only once through the heater.

In order to perform the recirculation, do the following:

1. Be sure that the pump of the machine is switched off and insert the solution pipe in the female quick disconnect coupling at the outlet of the heater.
2. Unscrew the special male coupling from the upper surface of the heater, and insert it in the quick disconnect female coupling that is located at the end of the solution pipe provided with the heater.



This operation allows the water to go out of the pipe, even if the pipe is not connected with any accessory.

3. Insert the not connected side of the pipe in the solution tank of the machine.
4. Switch on the water pump of the machine and the heater. In this way the water, warmed by the device, is sprayed again into the solution tank.
5. Let the heater warm the water for some minutes. In 10 minutes you can have 25 liters of water increasing temperature of 10 degrees ( $^{\circ}\text{C}$ ). In this condition the red light connected to the resistor will switch on. If the temperature of water becomes too high, then the red light will switch off. In this case, switch off the device.

Pay attention to prevent the solution pipe for recirculation from going out from the solution tank and also to prevent water from being sprayed outside the solution tank.

### **Maintenance operations**

The lime of water, which deposits inside the heater, provokes a decreasing of the performances of the device and may in time prevent its correct working.

Periodically, you must have some water re-circulate inside the heater, with an anti-lime chemical inside. We suggest to put a solution of water and anti-lime product inside the solution tank and have it circulating inside the heater, with the heater switched off, by using the provided re-circulation pipe.

**DICHIARAZIONE DI CONFORMITA' PER RISCALDATORE HT1800**

**DECLARATION OF CONFORMITY FOR THE HEATER HT1800**

**DECLARATION DE CONFORMITE POUR LE RECHAUFFEUR INSTANTANE HT1800**

**CE-KONFORMITÄTSBESCHEINIGUNG FÜR DEN DURCHLAUFERHITZER HT1800**

**DECLARACION DE CONFORMIDAD PARA EL CALENTADOR HT1800**

Noi / We / Nous / Wir / Nosotros:

**SANTOEMMA srl**  
**Via Piave 22/C**  
**20016 PERO (Milano)**

dichiaro sotto la nostra responsabilità che il prodotto:

declare under our responsibility that the product:

déclarons sous notre responsabilité que le produit:

erklären unter unserer eigenen Verantwortung, daß das Produkt:

declaramos bajo nuestra responsabilidad que el producto:

**Riscaldatore istantaneo mod. HT1800**

**Instant hot-water unit mod. HT1800**

**Réchauffeur instantané mod. HT1800**

**Durchlauferhitzer mod. HT1800**

**Calentador instantaneo mod. HT1800**

ai quali questa dichiarazione si riferisce, è in conformità alle seguenti Direttive Europee ad alle loro modifiche: CEE 73/23, CEE 89/336, CEE 93/68.

to which this documentation relates is in conformity with the following european Directives and their modifications: EC 73/23, EC 89/336, EC 93/68.

auquel cette déclaration se réfère, répond aux Directives européennes suivantes et à leurs modifications CEE 73/23, CEE 89/336, CEE 93/68.

auf das sich diese Bescheinigung bezieht, den folgenden Europäischen Richtlinien und ihren Änderungen entspricht: CEE 73/23, CEE 89/336, CEE 93/68.

a la que esta declaración se refiere se conforma con las siguientes directivas europeas y sus modificaciones: EC 73/23, EC 89/336, EC 93/68.

**Ing. Nicola Santoemma**