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Herb Steam Generator Manual



Please read the manual carefully before installation and keep the manual for further reference

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Introduction

Thank you for choosing this Steamtec herb steam generator which with well-designed structure, steady performance and convenient installation. Compared with traditional steam generator, Steamtec herb steam generator made an great improvement which can support all kinds of water including pure and snow water. The steam generator is designed to remove tiredness, relax muscles and stimulate blood circulation, and this is very recommend for residential use. This manual is an instruction for steam generator user, management and installation personnel. For proper installation, operation, maintenance, and the safety of customer as well, please read this instructions carefully and keep it for further reference.

ATTENTION

- Elderly, pregnant women, heart disease, high blood pressure, diabetes and other diseases patients are NOT allowed to use this equipment.

- NO smoking, NO alcohol, do NOT exercise when taking the steam bath.
- When feeling discomfort, nausea or fatigue, please get out the steam room immediately.
- Please take care of your children when taking the steam bath.
- A ventilation fan is required for the steam room.

WARNING

- This appliance is not intended for use by person with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

- Children should be supervised to ensure that they do not play with the appliance.

- Check steam room before restart the controller.

- This steam generator is for heating up the steam room, please don't change its functions or usage by yourself, unless under the help or the guide of someone who can be responsible for the safety.

- This steam generator can be used for residential use or regular commercial use.

Semi-automatic type

Steam generator, 2KW / 1 unit 110V power line with plug, 1.5mm2/1 unit Temperature sensor, 5m / 1 unit 1/2" manually drain valve / 1 unit Safety valve / 1 unit Herb lid / 1 unit Herb container / 1 unit Manual / 1 unit

Model	Power (KW)	Phase	Voltage (V) / Current (A)	Heating elements (N*kW)	Power line (N*mm2)	Breaker (A)	Dimension (L*W*H) (mm)
Steamtec PGN-20	2.0	Single phase	110 / 9	1*2	3*1.5	16	450*120* 309

Notice:

The rated power is measured under European style single phase 230V, therefore the actual operating power under single phase 110-120V, 50/60Hz may be different from the rated value.

Please note the ground line should not less than 1.0mm2, the fire line and null line should not less than 1.5mm2.



- 1. Herb lid
- 2. Herb container
- 3. Steam generator cover
- 4. Switching power supply
- 5. Main PCB
- 6. Relay
- 7. High-temperature protection
 8. Heating element
- 9. Temperature sensor
- 10. Power interface

- 11. Right side cover
- 12. Front cover
- 13. Inner water tank
- 14. Drain valve
- 15. Lack of water protection
- 16. Water level observe window
- 17. Safety valve
- 18. Steam outlet
- 19. Left side cover

Controller Function

1. ON/OFF button 2. Set button 3. "UP" button 4. "DOWN" button 6. Status indicating light



Figure 2

Operating instructions

After installed correctly, please unscrewing the herb lid, adding water until to the "High water level", put some herb into the herb container, then screw up the herb lid. After turn off the steam generator, please drain it manually.

Steam generator operation instructions:

(1)Plug in the power line, press the ON/OFF switch on the bottom of the right side cover, the LED lamp for observe the water level will on. The LED display will show "88" for one second, after that, it will beeps twice, then the machine come into the standby mode.

(2) Press the button **1** on the controller to turn on the steam generator, the LED display will show current steam room temperature.

(3) Default working temperature is 43 C°, default working time is 45 minutes. Temperature setting range: $1^{\circ} \sim 100^{\circ}$.

Working time setting range: 1~60 minutes or long-term working mode (the LCD will display CH).

System have memory for all the settings, if you want to adjust your setting, please follow below steps:

Adjust temperature: turn on the steam generator, the LED display shows the current steam room temperature. Press the button **2** for one time, the LED display begin to flicker and shows the default 43 (or the last time temperature you set). Then press button **3** or **4** to adjust the value (Attention, you can only adjust when the LED display flickering). After adjust to the temperature you want, just waiting for 3 seconds, don't press any button. After three seconds the LED display will not flicker any more, and it will show the current steam room temperature again. This means you have finished the temperature setting.

Adjust working time: turn on the steam generator, the LED display is the current steam room temperature. Press the button **2** for twice continuously (must be continuously pressing), the LED display begin to flicker and shows the default 45 (or the last time working time you set). Then press button **3** or **4** to adjust the value (Attention, you can only adjust when the LED display flickering). After adjust to the working time you want, just waiting for 3 seconds, don't press any button. After three seconds, the LED display will not flicker any more, and it will show the current steam room temperature again. This means you have finished the working time setting. If you keep press button **3** when it's already 60 minutes, then will go to the long-term model, the LED display will show as " CH".

Turn-on at a set time: turn on the steam generator, the LED display is the current steam room temperature. Press the button for thrice continuously (must be continuously pressing), the LED display shows "-0" and flickering, this is the default working time, means waiting for "0" hour before the steam generator start to work. Waiting time setting range: 1-8 hours. Press button **3** or **4** to adjust the value (Attention, you can only adjust when the LED display flickering). After adjust to the working time you want, just waiting for 3 seconds, don't press any button. After three seconds, the LED display will not flicker any more, and it will shows "dd". After 5 minutes, the machine will go into "count down", if the set value is "4" hour, then the LED display shows "-4", the LED display showing number changes as times goes on, it always showing the currently waiting time. After time arrived, the LED display change to show the current steam room temperature, and the **6**. Status indicating light on, machine begin to work.

A. How to cancel the "Turn-on at a set time" function ?

Press the button **1** on the controller to turn on the steam generator, then canceled the "Turnon at a set time" function . And machine begins to work immediately.

B. How to change the waiting time of the "Turn-on at a set time" function?

Press the button **1** on the controller to turn on the steam generator, then press the button **2** for thrice continuously to change the setting.

(4) The steam generator with Low water level protection, dual high-temperature protection.

Warning: Please pull out the plug when don't use it, especially in rainy and thunderstorm season.

Steam Generator Circuit Diagram

Semi-automatic type steam generator Figure 3



- 1. Main PCB
- Switching power supply
 Aviation socket for temp. Sensor
- 4. Power interface
- 5. Heating elements

- 6. High-temperature protection
- 7. Relay
- 8. Lack of water protection
- 9. LED lamp for observe the water level

CHAPTER 2 INSTALLATION AND CAUTIONS

• Installer must have a professional qualification certificate

• If the generator is installed at a place where difficult for customer access, the water supply valve must be easy to access for emergencies.

• The solenoid valve can endure maximum 0.2MPa (2kg/cm2) water pressure. To protect the solenoid valve from extremely high water pressure, please turn down the inlet slightly or install water pressure relieving valve.

• GFCI must be installed on the power supply, and the power supply, power wire, fuse and breaker must comply with the nameplate one the unit and table 1 in this manual.

• Do not install saddle-backed or needle valves on the inlet. Please dredge and clean the pipe before installation.

• No block valve should be installed in the steam pipelines. Strictly no blocked or blended pipe, otherwise have negative effect on the flow of steam and condensate. The steam pipelines should be installed with a slight angle so that the condensate can flow back to the generator or the steam head.

• Steam generator should be installed indoor to avoid frozen. The generator should be installed and leveled with the arrow pointing upward at an easy-access place, otherwise do not switch on.

• The steam pipeline must be metal pipe, suggest copper pipes or stainless steel pipe. All other material such as plastic, acrylic should not be used since they cannot endure 1500 or higher temperature.

• All inlet and apertures should be sealed to prevent any leakage of steam and to protect the generator and customers.

• Draining water to the steam room from the water tank may cause serious scald and damage the steam room.

1. Selecting the proper steam generator:

In order to achieve comfort and relaxation, as well as energy efficiency, the selection of the correct steam generator model and size are as critical as design of the steam room itself. The power supply and circuit protector should be carefully checked to match the parameters of the generator. Please referring to the table 1 & its notice and select the suitable model for your specification.

2. Installation of steam generator

• Switch off all power supply before installation, and check whether you have the correct model for your steam room according to table 1.

• A manual resetting 110C° temperature control switch (high-temperature protection) is installed in the steam generator for over-heat protection. If temperature of inner tank exceeds 110C° accidentally, the switch (high-temperature protection) will automatically disconnect power supply to main board. In this case, it is necessary to cut off the power supply of the steam generator, and then carefully check heating elements, relay and water inlet pipeline after steam generator completely cooling-down. This manual resetting temperature control switch (high-temperature protection) could only be manually reset after the fault has been located and solved. • Do not install the generator in the outdoors or in any wet/ moist place, freezing, or corrosive place. Do not install the generator near to inflammables such oil paint, diluents and fuel. Be alert to the steam pipeline and safety valve since the high temperature of steam is dangerous to customers.

• The steam generator must be level installed.

• The steam generator should be installed in some dry and well-ventilated place. It can be installed either on the wall or on the ground, but must be well fixed. Install the steam generator as close to the steam room as possible, such as in the closet, under the washing basin or in the basement.

i. Install the generator on the wall: drill two small holes with diameter of 8mm on the wall, insert the expansion screws and then hang the generator on those screws.

ii. Install the generator on the ground or deck: Install the frame on the site and then screw the generator into the frame.

iii. For better service and maintenance, please install the generator with the nameplate face to front and leave more than 250mm space around the generator.

3. Installation of temperature sensor

The temperature sensor is used to measure the temperature inside the steam room, so that the generator can work automatically according to the pre-set temperature and maintain the room temperature constant. The installation height of the sensor should be about 1.2 II.5 m from ground. Please drill a hole (diameter 16mm), and then nail down the sensor in the steam room, pull the sensor wire through the wire pipe then connect to the aviation socket (2-Pin) aside of the Power interface on the bottom of the right side cover..

Caution: The temperature wire should NOT be parallel to or intersect with the power wire.

Caution: The temperature sensor should NOT be installed on the side of the wall which is behind the door when the door is opened.



4. Installation of pipeline

Warning:

• If the steam generator is installed at a place where difficult for customer access, the water inlet valve must be easy to access for emergencies.

• Draining water to the steam room from the water tank may cause serious scald and damage the steam room. A separate draining pipe is required to drain water to the drainage.

• All inlet water pipes and steam pipelines should be built according to the National Standard and this should be done before sealing the wall.

Steam outlet pipe: use no less than 1/2" diameter explosion-proof stainless steel hose / stainless steel pipe / copper pipe, connect one side on the steam pipe, another side connect to the steam generator steam outlet valve. The pipe should be less than 3 meters long and minimize the number of elbows, otherwise heat isolating methods should be implemented.

Drain pipe : use no less than 1/2" diameter stainless steel pipe / copper pipe, connect one side to the steam generator drain valve, another side connect to the drainage ditch. When installing the drain pipes, should have some slope to avoid hydrops, make sure water can drain out smoothly.

Safety valve: please use 1/2' diameter pipe, one side connected with the safety valve, another side also should connect to the drainage ditch.

Steam head: The height of steam nozzle is about 300mm from the ground, and the steam nozzle should away from people sitting position more than 150mm. The nozzle of the steam nozzle should face down.

5. Electrical installation

Warning

All circuits should be installed by licensed electricians and conform to local and national codes.
Power supply must be cut off before installation / maintenance and repair.

Press the on/off button on the generator can not cut power from the supply, please pull out the plug.

• No additional power supply or wire is allowed to connect to the generator. Do not connect the ground wire to the neutral wire.

• Only the original parts and elements from our factory are allowed to be used in installation, operation, maintenance and repair.

• After the installation of the pipeline and electrical circuits, careful checking must be performed before switch on the steam generator.

• The steam generator has been carefully installed / checked and tested in factory, thus customer only need to install the power wire and temp sensor.

Attention:

• Check whether the local voltage is (110-120V). Refer to the nameplate on the machine or the data in Table 1 on the machine.

• According to local requirements and with reference on Table 1, select the suitable fuse or circuit breaker.

• According to local requirements and with reference to Table 1, select the suitable power line.

• Please install wall mounted single-phase three-wire standard universal socket (single phase 110-120V). Plug in, then do the preparation before turn on the machine, especially make sure the water is close but no more than the high water level.

CHAPTER 3 MAINTENANCE

1. As leakage of the steam will damage the equipment. To prevent any hazard, steam generators, steam head, parts and pipe line connections should be checked regularly.

2. Clean the solenoid valve, magnetizer and all the other sets in the pipe line regularly according to the local water quality and operating frequency of the steam generator.

3. When the steam generator has worked for sometime, check the equipment to see whether it's over heated, check the stability and corrosion of all the wire plugs.

4. Replace the heating elements: Turn off the power, unplug the power wire, and remove the steam generator front cover when the generator completely cools down. Label (better take photos) the wires connect to the heating elements which need to be replaced, and then removal the wires. Unscrew the heating elements and take it out. Clear the scale in the water tank, putting the rubber rings on the heating elements, and then screw the new heating elements in. (Attention: airproof gasket on the heating elements should be pressed firmly without reversion). Plug back all the wires, check the label or photos, make sure the heating elements are properly connected, then put on the steam generator front cover.

5. Replace the main board: Turn off the power, unplug the power wire, and remove the front cover when the generator completely cools down. Label (better take photos) the wires which connect the upper part of the main board. Unplug these wires on the main board and take off the main board carefully, then reconnected with same model new main board. Compare with the photos, make sure it has been reconnected correctly.

6. Replace the relay: Turn off the power unplug the power wire, and remove the front cover when the generator completely cools down. Label (better take photos) the wires which connect the upper part of the relay. Unplug all the wires on the relay. Label (better take photos) all the wires on the relay and remove the relay carefully. then reconnected the same model new relay.

7. Replace the water inlet valve (for automatic model only), Turn off the power, unplug the power wire, and disconnect from the power and water supply. Remove the water supply pipelines after the generator completely cools down. Then remove the front cover, take off the hose, wires and screws so that the faulty valve could be removed. Finally please install the replacing valve carefully.

8. Replace the water level sensor: Turn off the power unplug the power wire, and remove the front cover and left side cover on the equipment when the generator cools down. Special care should be taken to the plugs of the water level sensor corresponding to the blue wire, the red wire and the white wire respectively. Take off all the wires, screw out the water level sensor, and screw in the new water level sensor. Finally reconnect the wires (all wire must be plugged back to the right place.).

9. Replace the drain valve (for automatic type only) : Turn off the power unplug the power wire, and water inlet, removal the water inlet (for semi-automatic, no need) when the generator cools down, then take off the aviation plug for the temperature sensor. After that you can unscrewing the broken drain valve. Install the new drain valve, please repeat the same procedures, also put the aviation plug , water inlet and cover back, but in reverse order.

- Cut off the power supply before any maintenance.
- Test the equipment after maintenance.

CHAPTER 4 TROUBLESHOOTING

Repair can only be performed by qualified professionals, for more services or technical helps please contact the dealer.

Steamtec model steam generator has self-diagnose function, and some common faults will be displayed on the LED display if occur.

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Code	Meaning	Diagnose and Solution
-L	Open circuit on the temperature sensor, and the buzzer ring.	Check if the temperature sensor wire disconnection.
-н	Short circuit on the temperature sensor, and the buzzer ring.	Check if the temperature sensor wire get short.
	If the Status indicating light on, while no steam comes out.	Check if lack of water (for the semi-auto model).

When there are some other symptoms that make the machine can not work normally, you can following below methods to check and diagnose:

1. If water level normal, but not heating. Firstly please check the high-temperature protection (manual resetting temperature control switch), to check if it has disconnected. If disconnected, please reset it; If normal, then please check the lack of water protection, the heating elements or the relay board, to check if these parts are broken or not.

2. When the steam generator working, if lots of water come out from the steam head, please check if the water level exceed high-water-level.

- Cut off the power supply before any fault diagnosis .
- Please ref to the wiring diagram on this manual.

If above methods still can't solve the problem, or because some other problems that the machine can't work, please contact with us.

CHAPTER 5 WARRANTY AND SERVICES

• Limited warranty is offered to all customers.

• Our company has the right to decide whether to repair or to change. Approval must be obtained from our company before shipping back the product. The customer has to pay for the transportation fee and any parts fee beforehand.

1. Any clause reminded in the manual is not covered by the warranty.

2. This warranty does not cover any defect, malfunction or failure cased by, or resulting from unauthorized installation, maintenance and repair; improper power supply, and any action which violates the manual.

3. Warranty is only for the company's products. Damage caused by accident, misusing of chemistry products, or any other reason which are beyond our company's responsibilities will not be covered. Any product whose label, nameplate has been removed, altered, damaged is not covered either.

4. Using in a salty environment or any other extreme, corrosive condition which is not suit for stainless steel is not covered by the warranty.

5. After the free warranty period, services are still available if all cost is covered by the customer.

6. Our company is not responsible for any direct or indirect damage caused by the steam generator.

7. Please contact our dealer for further information and more details if needed.