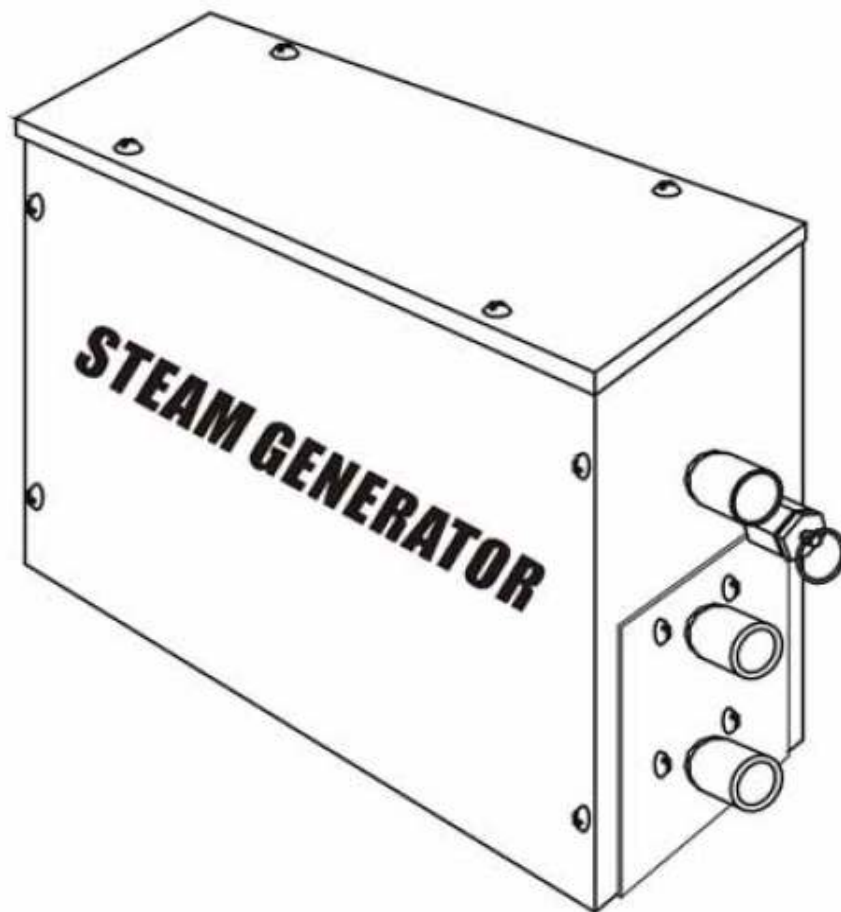


Powerful Steam Generator

Smart F-65

(Auto-drain Series)



User Manual



Dear Customers,

Thank you for using **Smart F-65** Powerful Steam Generator for your dream steam room. It consists of two parts: computerized control panel and powerful steam generator. You could set up the steam temperature and time you desire easily. Besides, the steam generator has been equipped with overheat & dry-burnt protections and safety valve. They prevent the steam generator from dry-burnt and makes it work at a normal air pressure. Considerable design, stable performance, easy installation, what is more, sanitation, comfort are the best words to describe **F-65** steam generators. These advanced steam equipments would be the first choice for modern house, hotel, health club and recreation centre, rehabilitation centre. You will be satisfied with the noticeable effects on pain relief, weight control, skin stimulation and stress reduction due to an increased blood circulation got from Steam Bath.

According to different output request, **F-65** is available from 3kw to 18kw. We invite you to experience the amazing effect **F-65** powerful steam generators bring you now!

Sincerely,

TABLE OF CONTENT

Warnings -----	1
Generator Installation-----	1
Control Panel Installation-----	4
Test Instruction -----	5
Operation Instruction -----	10
Maintenance -----	12
FAQ -----	12
Technical Parameter -----	14
Attached Drawings -----	16

Warning

Steam Generator Installation

NOTE: Install an exhaust fan the steam room in case that it can expel the excessive steam from the shower room.

1. Choose a right location. (Some locations recommended to customers)

- A: Pitch steam line back towards generator and avoid perfectly level plumbed lines to avoid remnant water in the steam pipeline.
- B: It is advised that the steam pipes should be within 3~6m. Take measures to well insulate the pipes if they run exceeds 10 feet or are exposed to cold areas.
- C: Reduce the amount of flex conduit. Steam line can not run down and then up.
- D: The steam outlet should be installed 300mm high from the earth and 150mm high from the bathtub. (See figure 3)
- E: Install the steam generator in the dry well ventilation area. There are some ideal locations near the steam room, such as cabin, closet, basement, the spare place under the stair and so on. (See figure 2)
- F: Accesses to the steam generator should be unobstructed and allow for easy approach.
- G: Choose suitable location for regular water-drain from steam generator. (See figure 3)
- H: The installation space is recommended larger than 0.25M³.

2. Installation of steam generator.

A: There are two fixing holes at the back cover of generator for installation. Drill two 8mm diameter holes perfect levelled in a distance of 260mm on the wall. Insert cap nut into the holes, then slide two bolts 4mm in diameter and 1.5 inch in length into the nuts until it is tight against to the wall.

B: Hang the steam generator up on the wall with bolts.

⚠ CAUTION: 1. The F-65 steam generator must be installed indoor to avoid frost in the winter.
2. Make sure the steam generator keep horizontal and be held firmly.
3. Covering causes fire risk.

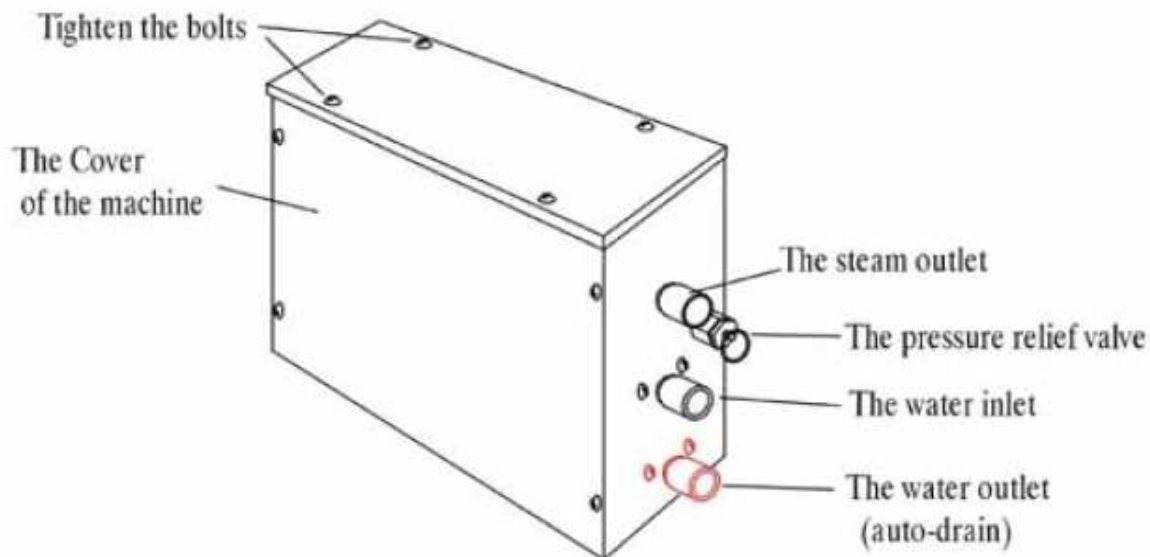


Figure 1 F-65 series steam generators

3. Piping Installation.

NOTE: 1. Access to water source should not be obstructed.

2. Make sure that within the water lines there is not any debris..

A: Water line installation (See figure 3)

Install a 1/2" ball valve to 1/2" cold water line. And then connect a 1/2" metal tube to it. Then make the final connection: connect the tube to the water inlet.

(NOTE :Place waterproof tape to the piping before each step of connection.)

B: Steam line installation (See figure 3)

A) Steam outlet :

Run a 1/2" pipe to a 1/2" copper or brass drop elbow, and then install a 1/2" steam lines to the drop elbow. Choose suitable length of pipe according to different locations.

B) Shower area :

Drill a 1-3/8" diameter hole on the wall for the steam outlet line in the shower area. Insert the steam outlet line (10mm long) into the wall and make sure the edge of the line be flush with finished wall. (See figure 3)

⚠ CAUTION :

- 1. Do not plumb a trap the pressure relief valve into the steam lines. It can be hazardous, should the steam outlet be capped off or obstructed.**
- 2. Do not locate the steam outlet near a seat or bench, hot steam will burn you..**
- 3. To ensure that no moisture gets into the wall, place some waterproof tape to the piping which run across the wall.**

C: Steam head installation (See figure 3)

Place some waterproof silicone to groove of the steam head. Slide the steam head into the housing and make sure the edge be flush with finished wall and the steam outlet channel is facing downwards.

- NOTE: 1. Make sure plumbings and unions are well insulated with tape or silicone to avoid steam leakage.**
- 2. Make sure no steam emits from the steam room when having steam bath and door is well closed.**

D: Water outlet installation (See figure 3)

Install a 1/2" brass pipe to water outlet. Pitch the water outlet line back towards generator and avoid perfectly level plumbed lines.

4. Test Instruction of Adjustable Pressure Relief Valve

▲ CAUTION:

Do not regulate or disassemble pressure relief valve without the instruction from plumbers or technicians.

- A: Adjustable pressure relief valve is a safety device used to relieve the excessive pressure in inner tank of steam generator due to various reasons.
- B: The rated pressure ranges from 0.6 to 3.5 kg/cm². The rated pressure will increase when it be tightened clockwise.
- C: The adjustable pressure relief valve is preset 0.7 kg/cm² as its rated pressure .


5. Electrical Installation

▲ CAUTION: All electrical work should be performed by a licensed electrician.

A: Power cable connection (See attached wiring diagram)

Connect power cable (composed with 5 wires in different colours) emits from junction box in generator to 3-phase power source, the white wire to Neutral wire, brown, blue, black ones respectively go to L1, L2, L3 phase power source, and the last wire (alternates with yellow and green in colour) to grounding.

B: Mood light connection

Connect lighting wire (packed with control panel in a small box) to the cord (labeled ) emits from junction box in generator. Route it properly and then weld the other end of the lighting wire with a 36V/40W bulb. You are strongly recommended to apply a bulb with output not bigger than 45W.

Installation Instruction for Control

▲ CAUTION:

Conductor cable of the control must not be installed with other electrical wires in the same slot and avoid unexpected interference.

1. Locating Control Panel

▲CAUTION: The steam control panel' s water proof grade is IPX4. Don' t install it beneath the water pipe and near the water accesses.

- A: The control can be installed in or out of the steam room.
- B: Take careful consideration about easy access to control and suitable wiring connection. It is advised to place the control at a height between 1.2m and 1.5m.
- C: Notch a square recess for installing the control on the wall. Please note that the edge of control should be flush with finished wall. In addition to this, you could stick it onto the wall directly, and no need to open a recess. Be sure it is fixed firmly. (See figure 4)

2. Locating Temperature Sensor

- A: Locate the temperature sensor at the height between 1.2m and 1.5m from ground to secure detect accuracy. As well, don' t fix it near the door of steam room.
- B: Drill a 12mm diameter hole on the wall to locate the temp sensor..
- C: Insert the temp sensor to the temp sensor holder and fix it in the hole. Be sure the temp sensor have a good contact with the indoor air. (See figure 4)

3. Connecting Control Cable

- A: There is a computer control cable exits from control panel, 5m in length. Connect it to the wire from the hole of generator well.
- B: Run the computer control cables well in a pipe when installing. Let the cables exceed a certain length than the pipe for the sake of any modification in installation.




4. Installing The Control

Rip off the adhesive paper at the back of control. Locate the control into the recess. Fix it firmly using screws and waterproof silicone. You may need to wipe away any excess silicone. Keep the control panel welled leveled with the wall until it is tight against the finished wall. (See figure 4)

Test Instruction

NOTE: Be sure water supply keeps on delivering when generator is on operation.

- A: Be sure power is on (indicator lamp on control panel lights up) and water is turned on to the generator.

- B: Be sure the pressure relief valve has been set up its rating at about $0.7\text{kg}/\text{cm}^2$.
- C: Press  button on the control to activate the whole system. Power indicator LED goes out. LED screen shows ambient temperature. After around 1 to 2 minutes, steam emits.
- D: Press  button again while steam is emitting. Power indicator LED should be lit. Steam stops and screen no longer displays ambient temperature. Water in generator tank would be drained out automatically.
- E: Once again press  button, power indicator LED goes out. Screen displays ambient temperature and steam emits within 1 minute. System would refill water every two minutes. Meanwhile indicator LED flickers. Steam keeps on exiting but with fewer volume than before. About 10 seconds later, the volume of steam recovers to normal. The value of displayed temperature increases as temperature in steam room increases, until ambient temperature reaches required steam temperature, and unit stops producing steam.
- F: Generator stops functioning when steam preset time is over.
- G: With regard to steam temperature and time, users could preset steam time and temperature on the control when control panel has been activated according to different requirement on steam time and temperature. (refer to the operation instruction)

If you have performed all the above steps and all the functions tested worked properly, drain out all the water in generator before offering it to users. Please remind users do not adjust or disassemble pressure relief valve without any guide from technicians.

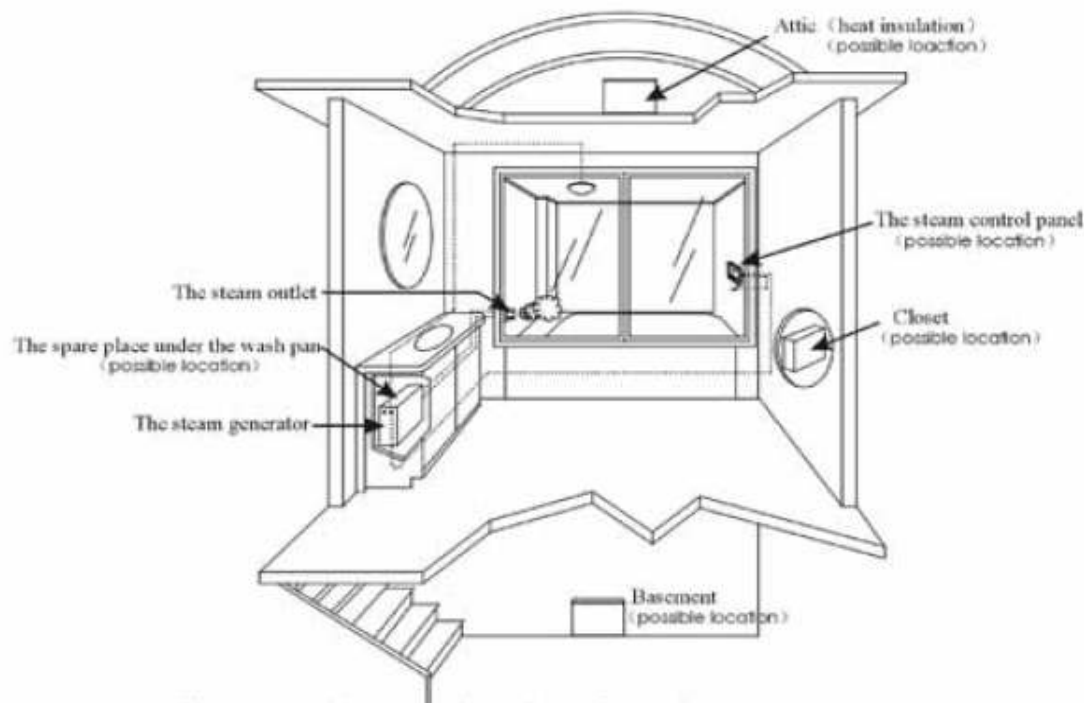


Figure 2 installation drawing of the steam generator

User Manual

Generator Maintenance Instruction

▲ CAUTION: STEPON recommends one power drain after each steam bath.

- A: Make sure water be drained out thoroughly before shut off power supply after each steam bath.
- B: Clean cold water supply line annually to make sure no debris in the pipes.
- C: Annual check to generator, steam head, steam outlet, and all plumbing. Make sure no damage, defect or leakage on them.
- D: Check all control cord and plug connection. Make sure no damage to cables due to pinch, stretch, nail, wedge or damage from heat.
- E: Keep monthly check on water tank and heaters. Make sure no heavy scale forms in and to them. If yes, clean the scale at once.
- F: Clean water level probe once on monthly basic.

FAQ

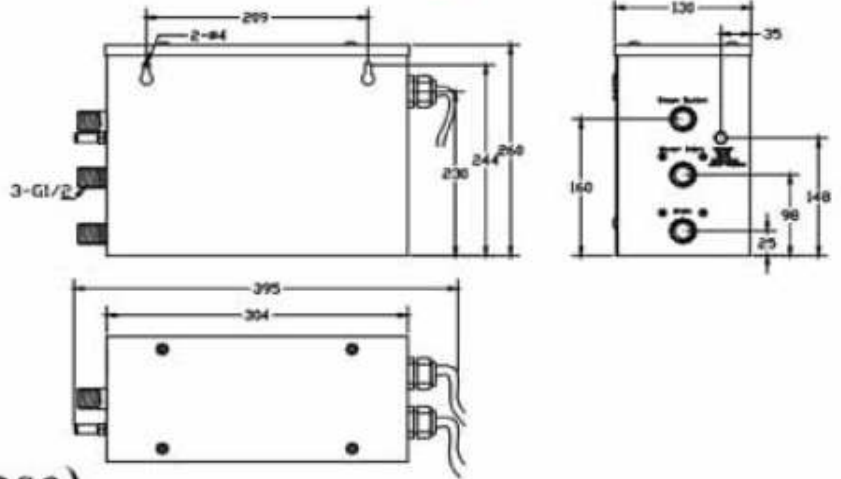
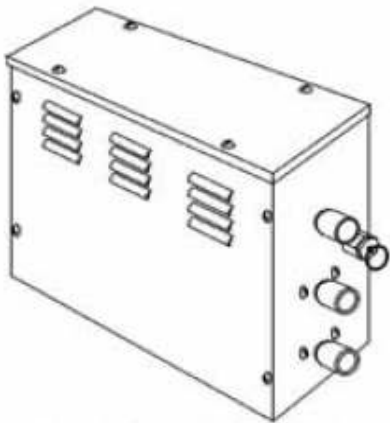
In order to use the steam room well, some common malfunctions and solutions as follow.

Malfunctions	Reasons	Solutions
Circuit breaker functions continuously.	A: The line connections are damp or damaged B: Heating elements are damaged.	A: Check the line connectors. Use the air blower if they are damp. B: Replace heating elements.
No display on control panel	A: The power is not properly connected, else the mains are not plugged well. B: PCB malfunctions	A: Have a check on the connection between female plug of control cord of control panel and male plug from junction box. B: Change the PCB board.
Water leakage	A: The tube connectors are loosen or broken. B: Water inlet and outlet valves are leak.	A: Tighten the tube connectors, change the broken tube. B: Replace valves.

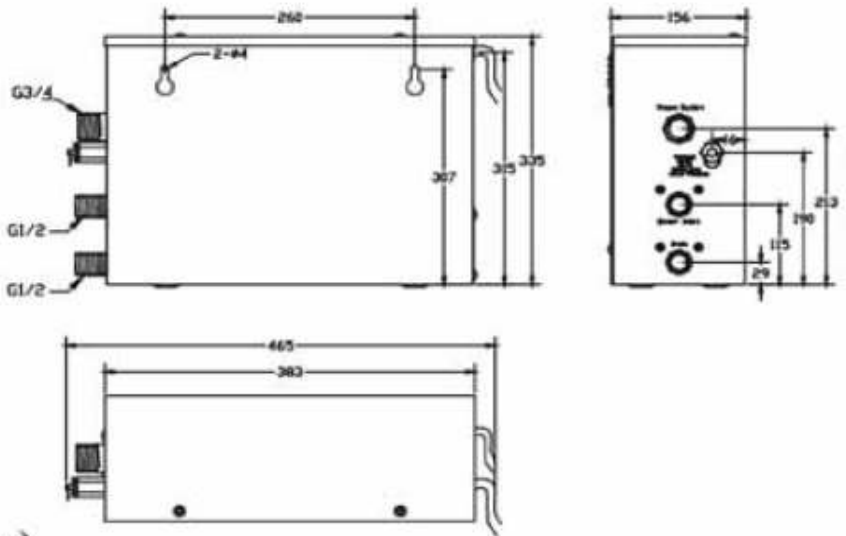
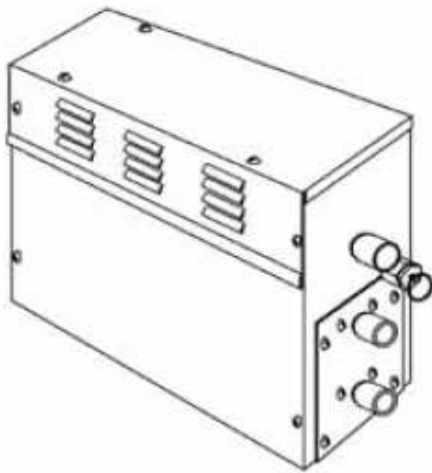
User Manual

Malfunctions	Reasons	Solutions
No water drained out after unit is deactivated.	A: There are debris in the pipes. B: Water outlet valve is broken.	A: Clean the pipes. B: Replace water outlet valve.
Mood light is unavailable.	A: Lamp is broken. B: Connection is not plugged well C: Wrong specification of lamp has been used.	A: Replace the broken lamp. B: Make sure all connections are well plugged. C: Use 36V/40W bulb instead.
Hot water goes out instead of steam.	Water outlet valve is broken.	Replace water outlet valve.
No steam emits when unit is activated.	A: No electricity. B: No water. C: Requested temperature is lower than ambient temperature. D: Malfunction of PCB	A: Make sure there is electricity. B: Make sure water is turned on. C: Reset the desired temperature. D: Contact dealer.
No steam emits and noise in the tank.	Steam pipes are jacted.	Cut off power supply and have a check on the pipes.

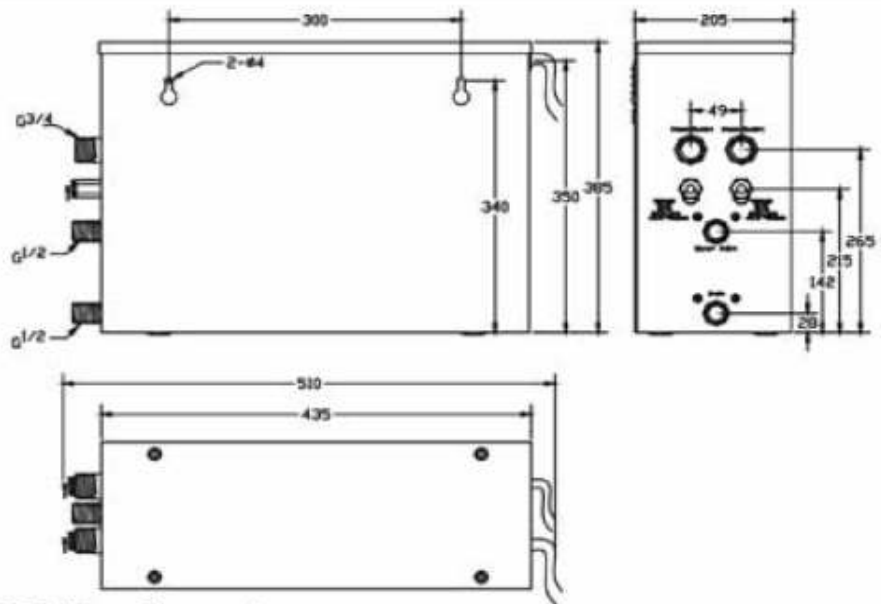
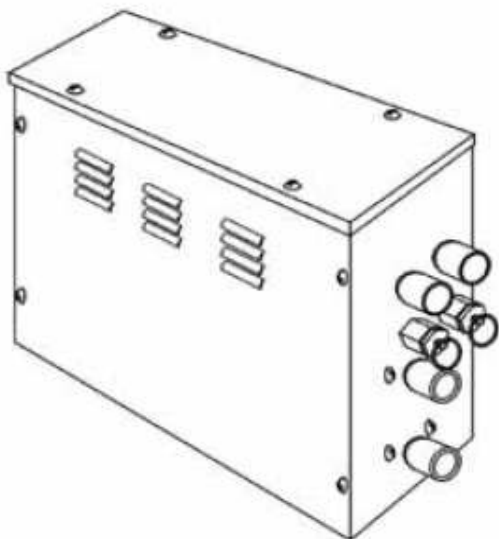
User Manual



3kW/4.5kW (220V/1 phase)



6kW/9kW (380V/3 phase)



12kW/15kW/18kW (380V/3 phase)

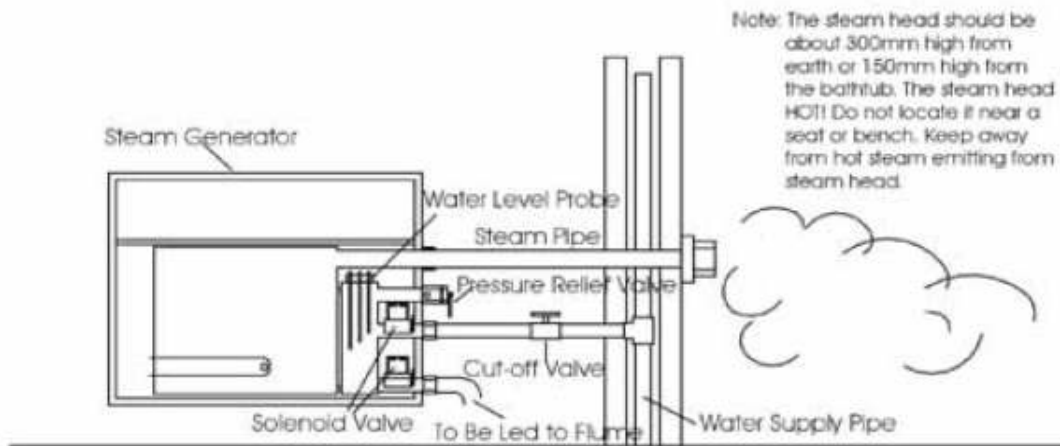


Figure 3 Steam Generator Installation

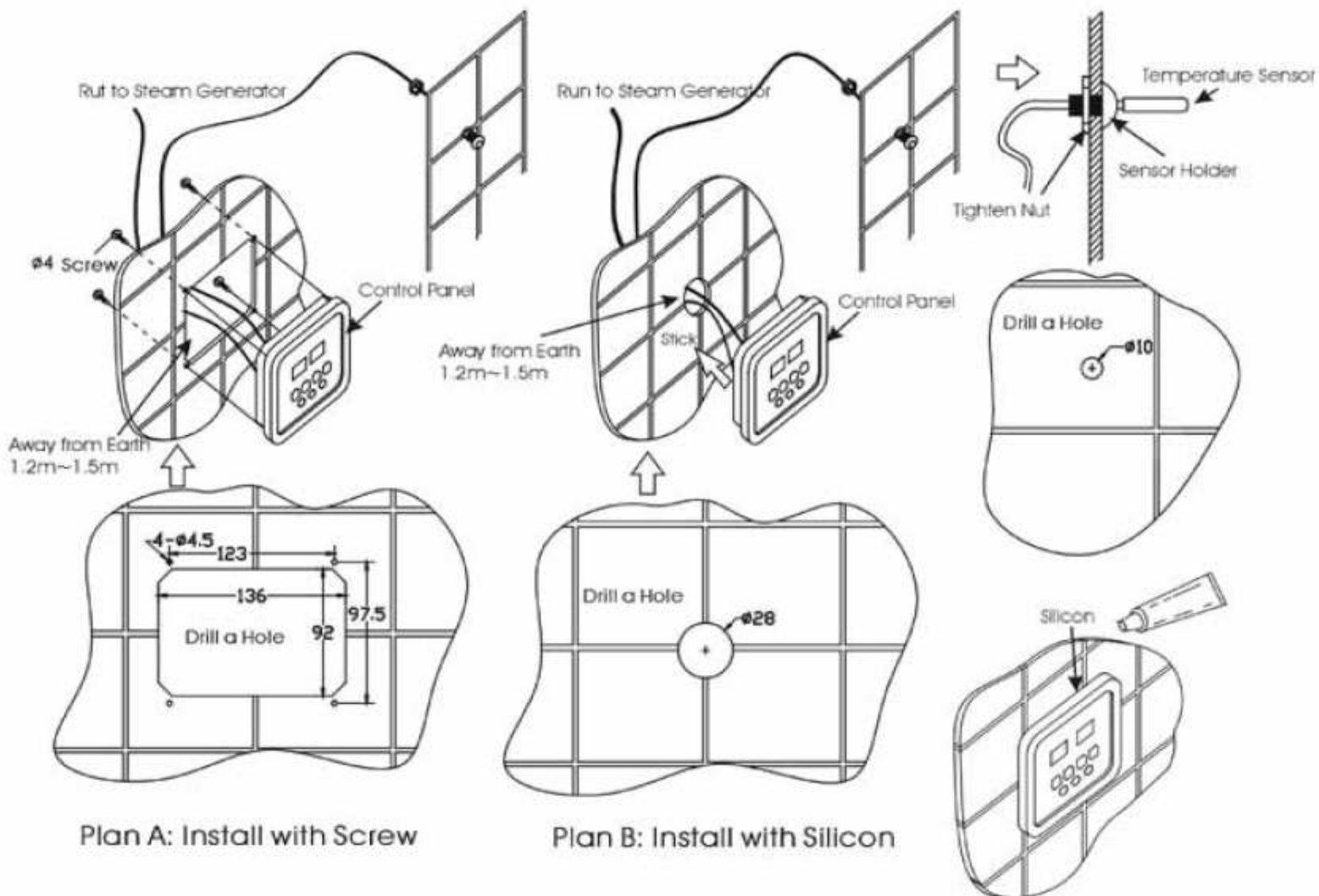


Figure 4 Control and Temperature Sensor Installation

