# STEAM'ST <br> Specification, Installation and operational Manual 

## SMS-RANGE

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## Specification and Summery

## Features

- Limited 5 year warranty
- Stainless Steel Tank Construction
- Intelligent Control Communication
- Auto Drain
- Safety Overheat Protection
- Can Link Two Generators Together


## Box components

Generator, SMS Control, Steamhead, lever valve, light cable.
NOTE: Cable not included for joining two generators. (Grey cable on generator)


| Product Number | Kw Rating | Max. Adj, Cu. M. <br> Range* $^{*}$ | Volts/Phase/Max. <br> Amps | Dimensions <br> $\mathbf{L} \mathbf{x ~ W ~ x ~ H ~ H ~}$ |
| :---: | :---: | :---: | :---: | :---: |
| SMS-4.5 | 4.5 kW | $3.5 \mathrm{~m}^{3}$ | $220-240 \mathrm{v} / 1 / 20.5 \mathrm{~A}$ | $372 \times 162 \times 333 \mathrm{~mm}$ |
| SMS-6 | 6 Kw | $5.8 \mathrm{~m}^{3}$ | $220-240 \mathrm{v} / 1 / 27.3 \mathrm{~A}$ | $372 \times 200 \times 333 \mathrm{~mm}$ |
| SMS-9 | 9 kW | $10.3 \mathrm{~m}^{3}$ | $220-240 \mathrm{v} / 1 / 41 \mathrm{~A}$ | $372 \times 200 \times 333 \mathrm{~mm}$ |

*Refer to sizing guidelines to accurately determine the proper size generator for the installation.

## Required Electrical Service

Dedicated circuit required. See specification chart for proper electrical requirements

## Product Information

Water Supply - $1 / 2^{\prime \prime}$ BSP male thread
Steam Outlet - 4.5kw ½" BSP male thread
6 kW and bove $3 / 4$ " BSP male thread
Drain Outlet - $1 / 2$ " BSP male thread
Clean Outlet -1⁄2" BSP male thread

## Generator Weight

$4.5 \mathrm{~kW}-11.4 \mathrm{~kg} \quad 9 \mathrm{~kW}-12.9 \mathrm{~kg}$
6kW 12.2kg

## Installation Notes

For optimum performance, the steam generator should be mounted as close as possible to the steam room. Generator to control distance is 6 m (Extension Cable available upon request)

Do NOT install inside the steam room or near flammable materials such as paints, thinners, gasoline, etc.

Steam Generators must NOT be installed outdoors, in moist humid areas, in areas prone to freezing, or extreme heat such as an unventilated attic. To do so will void the warranty.

Steamhead to be mounted 300 mm to 450 mm from floor
Page 3 150mm left side clearance for plumbing and electrical and 150 mm top access for servicing


## 4.5kW



## Controller Specification

Controller Information - SMS-CONTROL
Preset time and programmable temperature
Digital display of ambient, set temperature and time remaining

Icons for temp adjustment, time adjustment, manual drain, light and power on

## Dimensions

L $141.20 \mathrm{~mm} \times \mathrm{H} 111.20$
Package includes
Controller, control cable, Sticky pad, back box, surface mount trim and temperature sensor


## Notes

## First Fix -

- Control should be installed 1.2 m from floor
- If controller is inside the steam room no need to use temperature sensor
- If controller is outside the steam room or close to steam outlet, run the temperature sensor cable through conduit pipe to the controller (Sensor connects into back of the control)
- Run black control cable through conduit pipe from generator to steam room

Note: If you are using two generators together you will need to link the grey cable from one generator to the black control cable on the secondary generator. (Refer to Internal diagram)

## Plumbing \& Generator Location

The Steamist SMS Generator comes factory assembled carefully wired and tested.

Warning: All electrical power should be turned OFF when working with the steam generator

Important: The plumbing installation must conform to local and national code of practice

## 1.Pre-Installation

a) Be sure that the proper size Steam Generator has been selected by using the sizing page in the "The Generator Sizing Guide"

CAUTION: An improperly sizes Steam Generator may Not produce the amount of steam necessary to reach selected temperature
b) For optimum performance, the Steam Generator should be located as close as possible to the Steamroom, Shower or tub enclosure using a $3 / 4$ " copper pipe (1/2" acceptable on 4.5 kW ) If the steam pipe exceeds 3 meters, it should be insulated using appropriate pipe insulation rated for minimum of 100 ${ }^{\circ} \mathrm{C}$ Maximum steam pipe distance should not exceed a total of 15 liner meters.

CAUTION: Do NOT install near flammable material such as paints, thinners, gasoline, etc.

CAUTION: Steam Generators must NOT be installed outdoors, in moist humid areas, in areas prone to freezing, or extreme heat such as an unventilated attic. To do so will void the warranty.

## 2. Plumbing First-Fix

Plumbing rough-in is required for the water supply and steam line; this should be completed before the walls are closed. For operation, the "SMS" Steam Generator requires a 15 mm . copper tubing to the fitting on the generator for water inlet and a 22 mm copper pipe for steam outlet.
a) Water Inlet - First fix a water line, (3 bar max) to the hot or cold supply. An isolating valve with a 15 mm connection to the steam generator is to be provided at the generator location
b) Steam Outlet - First fix in the steam line using a 22 mm Copper tube with sweated or compression brass fittings only. Do NOT use plastic pipe or fittings. Do not use any pushfit, snap-fit or anything else that is not specifically rated for $100^{\circ} \mathrm{C}$ steam. Do NOT use Black Iron or Galvanized pipe to avoid rust and discoloration to steam room. The steam head location should be 300 mm 450 mm above the steam room floor or 150 mm above a rim of a bathtub and as far from the seating area and user control as possible
c) Drain Pipe - Rough in the drain pipe to an open drain using 15 mm copper pipe.
do NOT connect the drain pipe to the steam line (If unable to connect to a drain, cap the outlet with a $1 / 2^{\prime \prime}$ brass cap, cannot be left un-plumbed or capped.)
d) Clean Outlet - Install supplied ball valve and plumb into an open drain using 15 mm copper pipe. (If unable to connect to a drain, cap the outlet with a $1 / 2^{\prime \prime}$ brass cap, cannot be left un-plumbed or capped)

CAUTION: Do Not install a shutoff valve in the steam line. Do NOT create traps or valleys in this line which would trap condensation and block the flow of steam. The steam pipe should be pitched toward the Steam Generator allowing condensation to run back toward the Steam Generator (preferred), or toward the steamhead. If the steam generator is equipped with a drain valve, do NOT connect the drain pipe to the ctoam lino

## Plumbing \& Generator Diagram

## 3. Steam Generator Installation

The Steam Generator should be mounted in a location convenient for hook-up and service by the plumber and electrician

CAUTION: The Steam Generator is designed to be used ONLY in an upright and level position; to do otherwise would damage the unit and void the warranty
a) The Steam Generator can be mounted to a wall or set on the floor. However, the unit must be secured. To secure the unit to a vertical wall, remove the the four screws removing the top cover. Then Located inside the cabinet near the top left and right corners are mounting holes to secure generator. Then place top cover back and secure.
b) Connect the $1 / 2^{\prime \prime}$ water inlet to a shut off valve as described in diagram below figure 1. The valve must be kept in an open position during normal operation. In an area where water hammer is a problem install a water hammer arrestor in the line
c) Connect the steam line from rough-in location described in Figure 1 to the $3 / 4^{\prime \prime}$ nipple on the Steam Generator using a union
d) We recommend installing a $3 / 4$ " BSP equal tee along with a $3 / 4$ " plug on the steam outlet connection to allow for descaling
e) Connect the $1 / 2^{\prime \prime}$ drain outlet to an open drain. (If unable to connect to a drain, cap the outlet with a $1 / 2^{\prime \prime}$ female brass cap, this cannot be left un-plumbed or capped.)
f) Connect the $1 / 2^{\prime \prime}$ clean outlet to the supplied lever valve and plumb to an open drain (If unable to connect to a drain, use a $1 / 2^{\prime \prime}$ male brass plug into the lever valve, this cannot be left un-plumbed or capped.)

Figure 1 - Plumbing Diagram

## Plumbing Typical Installation Diagram



IMPORTANT
Run the Control Cable through a 3/4" Conduit


Steam Outlet Pipe - Use 22 mm copper pipe
Caution: Do NOT install a shutoff valve on the steam outlet pipe. Do NOT create traps or valleys in the line which would prevent flow of steam. The steam outlet pipe should be pitched towards the steam generator (Preferred) allowing condensation to run back into the Steam Generator or towards the steamhead. If the steam pipe exceeds 3 meters. Use appropriate pipe installation rater for minimum of 100 degree Celsius.

Important: Unions MUST be use on the steam line and Drain line.

## Control Installation Diagram

A. Recess mount controller into solid walls using wall box


Temperature Sensor only required if
the Control cannot be installed inside the steam room

B. Recess mount controller for stud walls

Temperature sensor only required if the Control cannot be installed inside the steam room


Cut out dimensions for Controller


Apply the sticky pad to the edge on the back of the controller. Silicone to be applied (Not Supplied)


$$
\begin{array}{ll}
\text { 1.2-1.5 meters } & \text { Put the control panel } \\
\text { from floor } & \text { into the wall box }
\end{array}
$$

## C. Surface mounting controller with surface



Drill a hole for the control cables $28 \mathrm{~mm}-30 \mathrm{~mm}$ Recommended


Apply the sticky pad to the back of the controller. Silicone to be applied (Not Supplied)

Please Note: Temperature Sensor only required if the Controller cannot be installed inside the steam room

## Control Operation

CAUTION: When joining cables check male and female connection arrows are in-line to avoid damage to internal pins.

1. Power On/Off Touch Button - Press and generator will begin producing steam in a few minutes.

2 \& 3. Up/Down Touch Button - Press to adjust the temperature setpoint
4. Celsius / Fahrenheit Indicator
5. Temperature Display
6. Time Display
7. Time Unit

8 \& 11 Time Up/Down Touch Button Press to adjust the remaining steam
 time

## 9. Manual Drain

10. light - press to turn on/off steam light

Operation: Make sure the water and power are turned on. Simply press the Power touch button to begin the previously programmed cycle. Pressing the Power touch button, a second time will cancel the steam cycle. After a cycle is started it will take a few minutes for the Steam Generator to heat up and begin producing steam. During operation the display will show the ambient room temperature.

Programming: Adjustments can be made to the temperature control after pressing the power touch button to start the steam cycle. To adjust the temperature simply press the temperature + or temperature - touch button. All changes made to the temperature control are stored in memory until changed again. Temperature range is $35^{\circ} \mathrm{C}-68^{\circ} \mathrm{C}$

## Additional Features

Memory: The Temperature setpoint is retained even if there is a power failure.

Fahrenheit / Celsius: The temperature display can be changed by pressing and holding icon 3 for 2 seconds when control is off (Steam cycle not started) The display indicator will then change current setting " $C$ " to " $F$ " and then alternate when the change is complete.

Note: When Steam cycle has finished auto drain (if plumbed) to drain will commence 10 minutes after shut off and remain open for 7 minutes until completion.

Error Codes - See page 12

## Electrical Installation

Steamist "SMS" Generator -Operates with one control located inside or outside the steamroom. The Generator is small enough in size to be tucked away using very little space in a vanity, closes, basement, or an insulated attic, but large enough to provide steam for more residential steam rooms.

Steamist "SMS" Generator Steambath Generator comes factory assembled, carefully wired and tested.

## 1. Pre-Installation

a) Proper electrical supply (208 or 240 Volt): See rating label on Steam Generator and Chart on page 13. Determine proper size of wire, voltage, amperage, and phase for the Steam Generator. $90^{\circ} \mathrm{C}$ copper wire is required for generator connection.
b) Dedicated overcurrent protection device, such as an inline fuse/circuit breaker required: Fuse/circuit breaker to be installed must be sized in accordance with chart on back page. Do NOT install a GFI (Ground Fault Interrupter) to this equipment c) Route power supply cable to the location where the Steam Generator will be installed (before walls are closed).
2. Electrical First Fix
a) Install appropriate power cable to the location the Steam Generator will be installed. If receptacle is desired, mount the box for the isolating switch close to the Steam Generator. NOTE: The plug and receptacle require a rating of no less than 250 V and proper amperage. Refer to chart on page 13 for amperage rating.
3. Steam Generator Electrical Installation

WARNING: All power to the steam generator must be turned off
d) Remove the four screws holding the top access panel and remove
a) Strip back power cable's outer insulation jacket eight inches and insert into Steam Generator. Strip back insulation $1 / 2$ " from the three (3) incoming wires (one power/ live, one neutral and one ground)
b) Connect incoming ground wire to floating green pigtail labelled "GND.

CAUTION: Be sure the ground wire does not come in contact with a live electrical part
c) Connect incoming live to terminal block labelled " L " and neutral to labelled connection "N"


Internal wiring diagram of steam generator $4.5 \mathrm{~kW}-6 \mathrm{~kW}$
(220V/1Phase

| Product Number | Kw Rating | Max. Adj, Cu. M. <br> Range* | Volts/Phase/Max. <br> Amps | Dimensions <br> $\mathbf{L} \mathbf{x W ~ W ~ \mathbf { ~ H ~ }}$ |
| :---: | :---: | :---: | :---: | :---: |
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## Checklist

- The proper size generator has been selected by using the generator sizing guide in the Steamist Brochure

CAUTION: An improperly sized Steam Generator will NOT produce the amount of steam necessary to reach selected temperature.

- The Steam Generator is installed in an upright position
- Correct electrical wire and circuit breaker has been used
- The circuit breaker is NOT a GFI (Ground Fault Interrupter) type.
- The Steam Generator is properly grounded.
- The circuit breaker or isolator switch is on.
- Water supply to the generator is on


## Cleaning Process \& Trouble Shooting



## Trouble Shooting \& Error Codes

EO: The temperature sensor has open circuit
Water level sensor failure, check the control cable connection between the control panel to steam generator is loose or not.

E02: The temperature sensor is short circuit
E03: Signal transfer fault between pain panel and sub-panel.
E04: Signal transfer fault between control panel and steam generator
E12. E22, E32, E42: water inlet takes over 2 minutes
E13, E23, E33, E43: water inlet tank blockage
E15, E25, 35, E45: Auto. High limit trips.

## Common Trouble Shooting Solutions

| Faults | Cause of faults | Trouble-Shooting Methods |
| :--- | :--- | :--- |
| Generator not <br> working with power <br> switch on | Check green light is on, on circuit board - If <br> not check power connections and fuse <br> Green light on, check cable between <br> Generator and control | Change main fuse on circuit board 0.8a/250v <br> Tighten loose connection |
| Trip or fuse tripping <br> out | Check for water ingress on control and <br> connections | Change cable if pins inside are damaged |
| No steam only hot <br> water through <br> steamhead | Water level probe faulty | Element reading ohms - replace element |
| No display on control <br> panel | The power connection cable between <br> ne steam | Renerator and control |



| Generator Case | Water Drain Valve | $(13)$ | L \& N Terminal Block |
| :---: | :---: | :---: | :---: |
| Installation Mounts | Water Inlet Tank | (14) | Fuse |
| PCB Circuit Board | Main Water Tank | (15) | Earth Terminal Block |
| Steam Outlet Pipe | Heating Element | $(16)$ | Relay |
| Pressure Relief Valve | $105^{\circ} \mathrm{C}$ Hi-Temp Sensor | $(17)$ | Water Level Sensor |
| Solenoid Valve | Transformer | $(18$ | Manual Water Drain |

